Full wwPDB EM Validation Report

Mar 7, 2026 – 02:40 AM UTC

PDB ID	:	4UJD / pdb_00004ujd
EMDB ID	:	EMD-2682
Title	:	mammalian 80S HCV-IRES initiation complex with eIF5B PRE-like state
Authors	:	Yamamoto, H.; Unbehaun, A.; Loerke, J.; Behrmann, E.; Marianne, C.; Burger, J.; Mielke, T.; Spahn, C.M.T.
Deposited on	:	2014-06-18
Resolution	:	8.90 Å(reported)
Based on initial model	:	4CXC

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 (i) 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 (1)) were used in the production of this report:

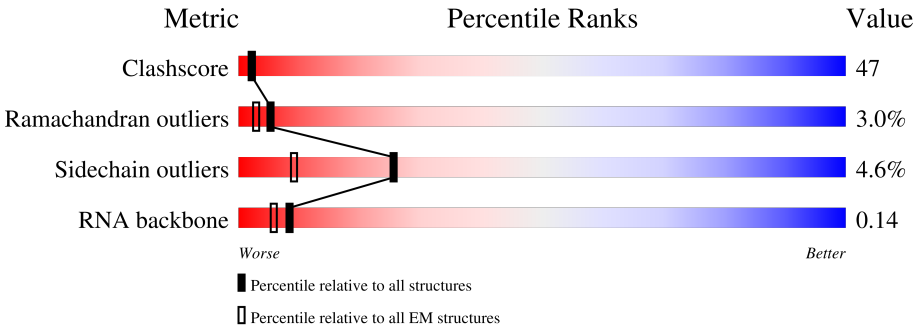
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data 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

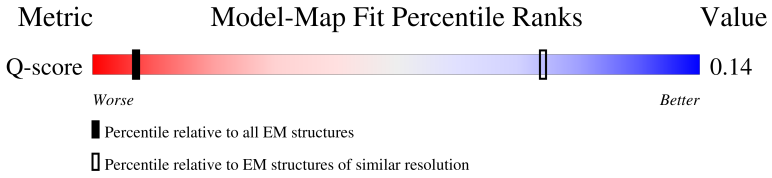
1 Overall quality at a glance (i)

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

The reported resolution of this entry is 8.90 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	258 (8.40 - 9.40)

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	A2	5025	8% 7% 28% 36% • 28%
2	A3	194	6% 8% 37% 35% • 19%
3	A4	121	12% 36% 50% ••

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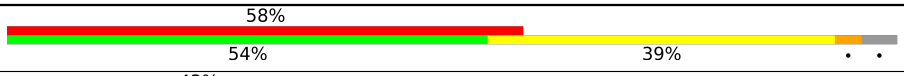
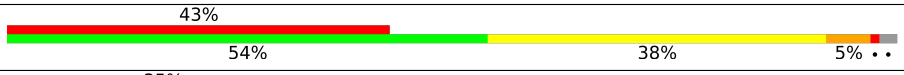
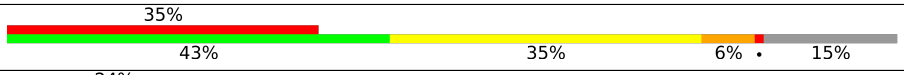
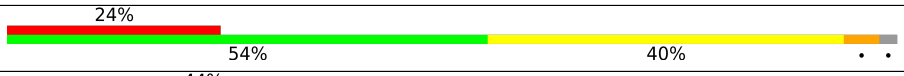
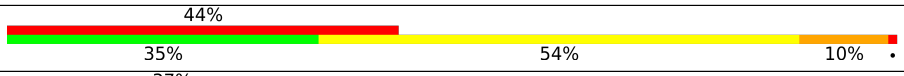
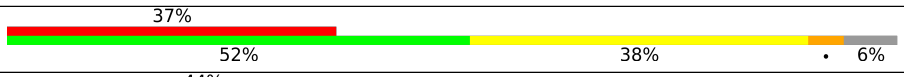
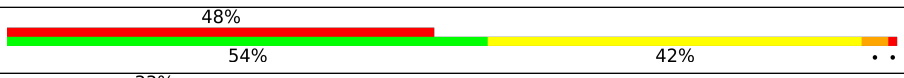
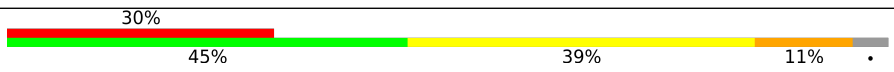
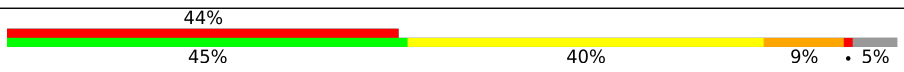
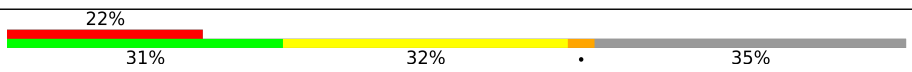
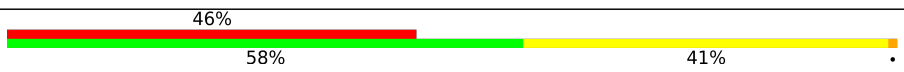
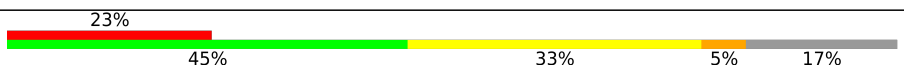
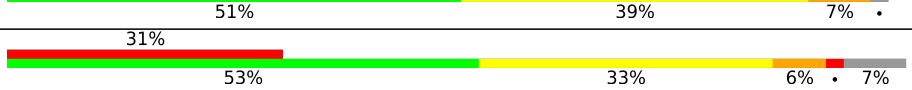
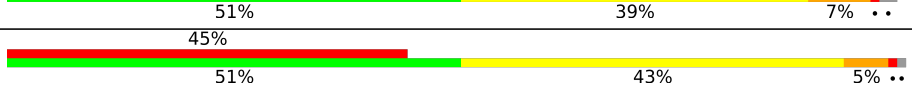
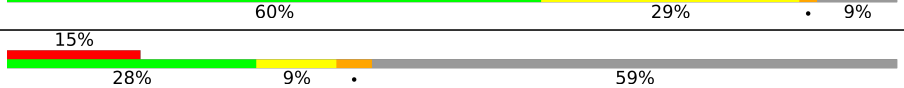
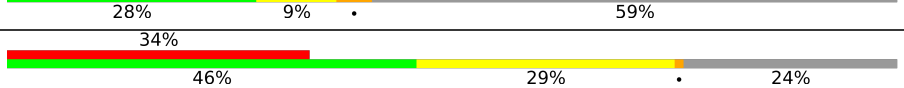
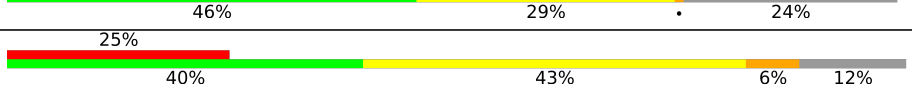
Mol	Chain	Length	Quality of chain
4	AA	257	
5	AB	403	
6	AC	427	
7	AD	297	
8	AE	158	
9	AF	248	
10	AG	266	
11	AH	192	
12	AI	214	
13	AJ	178	
14	AL	211	
15	AM	215	
16	AN	204	
17	AO	203	
18	AP	184	
19	AQ	188	
20	AR	196	
21	AS	176	
22	AT	160	
23	AU	128	
24	AV	140	
25	AW	157	
26	AX	156	
27	AY	145	
28	AZ	136	

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Mol	Chain	Length	Quality of chain
29	Aa	148	33% 53% 42%
30	Ab	159	18% 24% 16% 57%
31	Ac	115	32% 45% 42% 10%
32	Ad	125	26% 58% 29% 13%
33	Ae	135	40% 56% 33% 6% 5%
34	Af	110	45% 40% 43% 10% 5%
35	Ag	117	51% 42% 48% 9%
36	Ah	123	31% 57% 37% 5%
37	Ai	105	31% 50% 35% 6% 8%
38	Aj	97	22% 42% 38% 7% 12%
39	Ak	70	51% 50% 46%
40	Al	51	39% 73% 24%
41	Am	128	14% 22% 18% 59%
42	An	25	36% 64% 36%
43	Ao	106	39% 58% 40%
44	Ap	92	46% 59% 36%
45	At	137	47% 39% 47% 8% 5%
46	Au	210	100% 48% 44% 8%
47	BA	76	34% 13% 61% 25%
48	BB	627	48% 27% 57% 12%
49	BC	504	32% 9% 18% 17% 8% 48%
50	C1	1869	13% 6% 38% 48% 7%
51	CA	295	37% 40% 31% 26%
52	CB	264	42% 30% 42% 7% 19%
53	CC	293	35% 47% 25% 24%

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Mol	Chain	Length	Quality of chain
54	CD	243	56% 51% 32% 5% 13%
55	CE	263	43% 52% 40% 5%
56	CF	204	47% 42% 44% 6% 8%
57	CG	249	45% 49% 37% 7% 7%
58	CH	194	65% 43% 52%
59	CI	208	47% 47% 45% 7%
60	CJ	194	27% 48% 37% 7% 8%
61	CK	165	43% 29% 22% 5% 43%
62	CL	158	55% 51% 36% 5% 8%
63	CM	132	91% 53% 32% 5% 9%
64	CN	151	49% 52% 40% 6%
65	CO	151	47% 51% 34% 5% 9%
66	CP	145	52% 40% 37% 19%
67	CQ	146	49% 51% 41% 5%
68	CR	135	48% 42% 32% 7% 19%
69	CS	152	45% 47% 38% 9% 7%
70	CT	145	41% 43% 51%
71	CU	119	59% 34% 45% 5% 15%
72	CV	83	60% 63% 35%
73	CW	130	49% 47% 48%
74	CX	143	54% 48% 41% 6%
75	CY	133	29% 53% 31% 7% 8%
76	CZ	125	38% 28% 27% 6% 39%
77	Ca	115	61% 26% 48% 8% 17%
78	Cb	84	60% 54% 38% 5%

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Mol	Chain	Length	Quality of chain
79	Cc	69	68% 38% 43% 9% 10%
80	Cd	56	38% 36% 54% 5%
81	Ce	59	51% 58% 27% 14%
82	Cf	156	38% 21% 17% 61%
83	Cg	317	65% 58% 37%

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
84	GNP	BB	2435	-	-	X	-

2 Entry composition

There are 85 unique types of molecules in this entry. The entry contains 223911 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 28S Ribosomal RNA.

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

- Molecule 2 is a RNA chain called 5.8S Ribosomal RNA.

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

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

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

- Molecule 4 is a protein called 60S RIBOSOMAL PROTEIN L8.

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

- Molecule 5 is a protein called 60S RIBOSOMAL PROTEIN L3.

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

- Molecule 6 is a protein called 60S RIBOSOMAL PROTEIN L4.

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

- Molecule 7 is a protein called 60S RIBOSOMAL PROTEIN L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AD	290	Total	C	N	O	S	0	0
			2362	1489	431	428	14		

- Molecule 8 is a protein called 60S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms				AltConf	Trace
8	AE	158	Total	C	N	O	0	0
			1287	834	238	215		

- Molecule 9 is a protein called 60S RIBOSOMAL PROTEIN L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AF	234	Total	C	N	O	S	0	0
			1950	1252	376	313	9		

- Molecule 10 is a protein called 60S RIBOSOMAL PROTEIN L7A.

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

- Molecule 11 is a protein called 60S RIBOSOMAL PROTEIN L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AH	192	Total	C	N	O	S	0	0
			1536	965	286	279	6		

- Molecule 12 is a protein called 60S RIBOSOMAL PROTEIN L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AI	196	Total	C	N	O	S	0	0
			1605	1022	308	263	12		

- Molecule 13 is a protein called 60S RIBOSOMAL PROTEIN L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AJ	170	Total	C	N	O	S	0	0
			1363	861	254	242	6		

- Molecule 14 is a protein called 60S RIBOSOMAL PROTEIN L13.

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

- Molecule 15 is a protein called 60S RIBOSOMAL PROTEIN L14.

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

- Molecule 16 is a protein called 60S RIBOSOMAL PROTEIN L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AN	204	Total	C	N	O	S	0	0
			1709	1077	360	267	5		

- Molecule 17 is a protein called 60S RIBOSOMAL PROTEIN L13A.

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

- Molecule 18 is a protein called 60S RIBOSOMAL PROTEIN L17.

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

- Molecule 19 is a protein called 60S RIBOSOMAL PROTEIN L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	AQ	184	Total	C	N	O	S	0	0
			1494	933	311	245	5		

- Molecule 20 is a protein called 60S RIBOSOMAL PROTEIN L19.

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

- Molecule 21 is a protein called 60S RIBOSOMAL PROTEIN L18A.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	AS	173	Total	C	N	O	S	0	0
			1439	916	280	233	10		

- Molecule 22 is a protein called 60S RIBOSOMAL PROTEIN L21.

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

- Molecule 23 is a protein called 60S RIBOSOMAL PROTEIN L22.

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

- Molecule 24 is a protein called 60S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	AV	128	Total	C	N	O	S	0	0
			964	610	181	168	5		

- Molecule 25 is a protein called 60S RIBOSOMAL PROTEIN L24.

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

- Molecule 26 is a protein called 60S RIBOSOMAL PROTEIN L23A.

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

- Molecule 27 is a protein called 60S RIBOSOMAL PROTEIN L26.

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

- Molecule 28 is a protein called 60S RIBOSOMAL PROTEIN L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	AZ	136	Total	C	N	O	S	0	0
			1115	719	209	183	4		

- Molecule 29 is a protein called 60S RIBOSOMAL PROTEIN L27A.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Aa	147	Total	C	N	O	S	0	0
			1162	736	237	186	3		

- Molecule 30 is a protein called 60S RIBOSOMAL PROTEIN L29.

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

- Molecule 31 is a protein called 60S RIBOSOMAL PROTEIN L30.

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

- Molecule 32 is a protein called 60S RIBOSOMAL PROTEIN L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Ad	109	Total	C	N	O	S	0	0
			905	570	174	159	2		

- Molecule 33 is a protein called 60S RIBOSOMAL PROTEIN L32.

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

- Molecule 34 is a protein called 60S RIBOSOMAL PROTEIN L35A.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Af	107	Total	C	N	O	S	0	0
			866	550	172	141	3		

- Molecule 35 is a protein called 60S RIBOSOMAL PROTEIN L34.

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

- Molecule 36 is a protein called 60S RIBOSOMAL PROTEIN L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Ah	122	Total	C	N	O	S	0	0
			1015	641	205	168	1		

- Molecule 37 is a protein called 60S RIBOSOMAL PROTEIN L36.

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

- Molecule 38 is a protein called 60S RIBOSOMAL PROTEIN L37.

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

- Molecule 39 is a protein called 60S RIBOSOMAL PROTEIN L38.

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

- Molecule 40 is a protein called 60S RIBOSOMAL PROTEIN L39.

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

- Molecule 41 is a protein called UBIQUITIN-60S RIBOSOMAL PROTEIN L40.

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

- Molecule 42 is a protein called 60S RIBOSOMAL PROTEIN L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	An	25	Total	C	N	O	S	0	0
			240	145	64	28	3		

- Molecule 43 is a protein called 60S RIBOSOMAL PROTEIN L36A.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Ao	106	Total	C	N	O	S	0	0
			871	547	176	141	7		

- Molecule 44 is a protein called 60S RIBOSOMAL PROTEIN L37A.

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

- Molecule 45 is a protein called 60S RIBOSOMAL PROTEIN L28.

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

- Molecule 46 is a protein called 60S RIBOSOMAL PROTEIN L10A.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	Au	210	Total	C	N	O	S	0	0
			1622	990	278	348	6		

- Molecule 47 is a RNA chain called TRNA.

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

- Molecule 48 is a protein called EIF5B.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	BB	611	Total	C	N	O	S	0	0
			4846	3084	834	906	22		

- Molecule 49 is a RNA chain called HCV-IRES.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	BC	261	Total	C	N	O	P	0	0
			5574	2485	1001	1828	260		

- Molecule 50 is a RNA chain called 18S Ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	C1	1742	Total	C	N	O	P	0	0
			37159	16589	6665	12164	1741		

- Molecule 51 is a protein called 40S RIBOSOMAL PROTEIN US2.

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

- Molecule 52 is a protein called 40S RIBOSOMAL PROTEIN ES1.

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

- Molecule 53 is a protein called 40S RIBOSOMAL PROTEIN US5.

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

- Molecule 54 is a protein called 40S RIBOSOMAL PROTEIN US3.

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

- Molecule 55 is a protein called 40S RIBOSOMAL PROTEIN ES4.

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

- Molecule 56 is a protein called 40S RIBOSOMAL PROTEIN US7.

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

- Molecule 57 is a protein called 40S RIBOSOMAL PROTEIN ES6.

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

- Molecule 58 is a protein called 40S RIBOSOMAL PROTEIN ES7.

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

- Molecule 59 is a protein called 40S RIBOSOMAL PROTEIN ES8.

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

- Molecule 60 is a protein called 40S RIBOSOMAL PROTEIN US4.

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

- Molecule 61 is a protein called 40S RIBOSOMAL PROTEIN ES10.

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

- Molecule 62 is a protein called 40S RIBOSOMAL PROTEIN US17.

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

- Molecule 63 is a protein called 40S RIBOSOMAL PROTEIN ES12.

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

- Molecule 64 is a protein called 40S RIBOSOMAL PROTEIN ES15.

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

- Molecule 65 is a protein called 40S RIBOSOMAL PROTEIN ES11.

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

- Molecule 66 is a protein called 40S RIBOSOMAL PROTEIN US19.

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

- Molecule 67 is a protein called 40S RIBOSOMAL PROTEIN US9.

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

- Molecule 68 is a protein called 40S RIBOSOMAL PROTEIN ES17.

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

- Molecule 69 is a protein called 40S RIBOSOMAL PROTEIN US13.

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

- Molecule 70 is a protein called 40S RIBOSOMAL PROTEIN ES19.

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

- Molecule 71 is a protein called 40S RIBOSOMAL PROTEIN US10.

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

- Molecule 72 is a protein called 40S RIBOSOMAL PROTEIN ES21.

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

- Molecule 73 is a protein called 40S RIBOSOMAL PROTEIN US8.

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

- Molecule 74 is a protein called 40S RIBOSOMAL PROTEIN US12.

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

- Molecule 75 is a protein called 40S RIBOSOMAL PROTEIN ES24.

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

- Molecule 76 is a protein called 40S RIBOSOMAL PROTEIN ES25.

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

- Molecule 77 is a protein called 40S RIBOSOMAL PROTEIN ES26.

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

- Molecule 78 is a protein called 40S RIBOSOMAL PROTEIN ES27.

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

- Molecule 79 is a protein called 40S RIBOSOMAL PROTEIN ES28.

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

- Molecule 80 is a protein called 40S RIBOSOMAL PROTEIN US14.

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

- Molecule 81 is a protein called 40S RIBOSOMAL PROTEIN ES30.

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

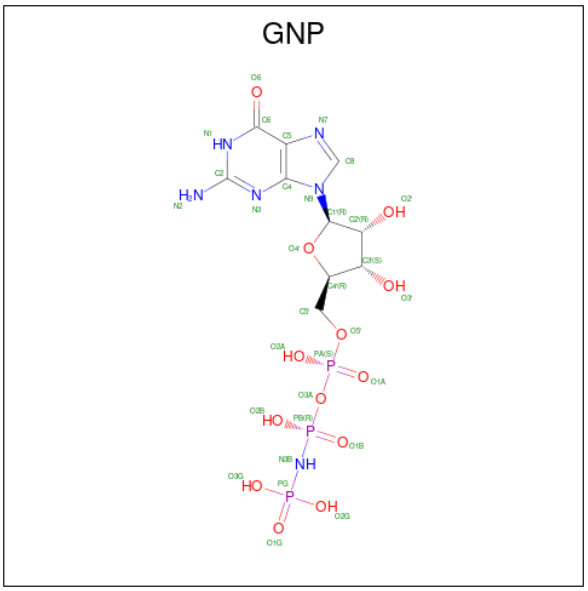
- Molecule 82 is a protein called 40S RIBOSOMAL PROTEIN ES31.

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

- Molecule 83 is a protein called 40S RIBOSOMAL PROTEIN RACK1.

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

- Molecule 84 is PHOSPHOAMINOPHOSPHONIC ACID-GUANYLATE ESTER (CCD ID: GNP) (formula: $C_{10}H_{17}N_6O_{13}P_3$).



Mol	Chain	Residues	Atoms					AltConf
84	BB	1	Total	C	N	O	P	0
			32	10	6	13	3	

- Molecule 85 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

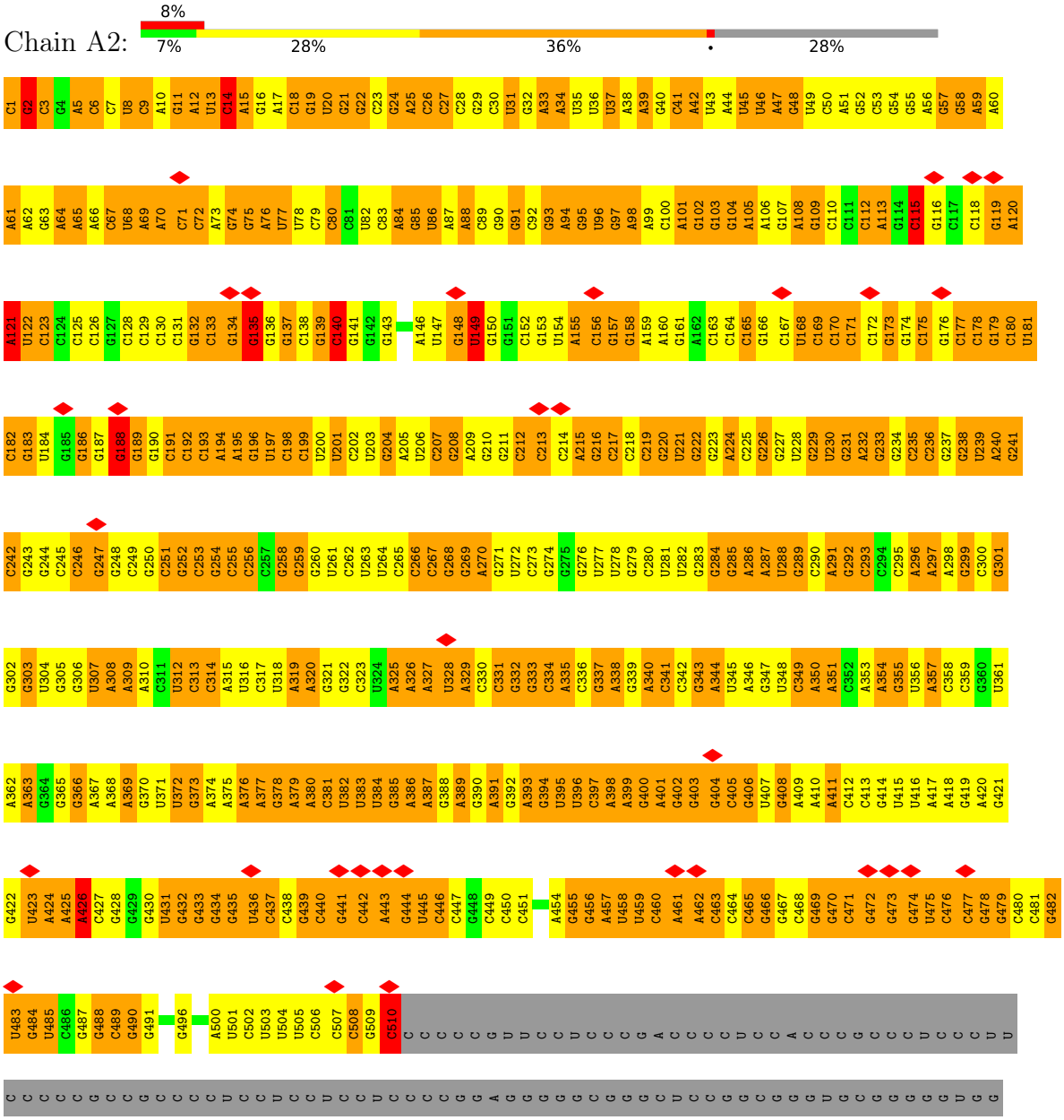
Mol	Chain	Residues	Atoms		AltConf
85	BB	1	Total	Mg	0
			1	1	

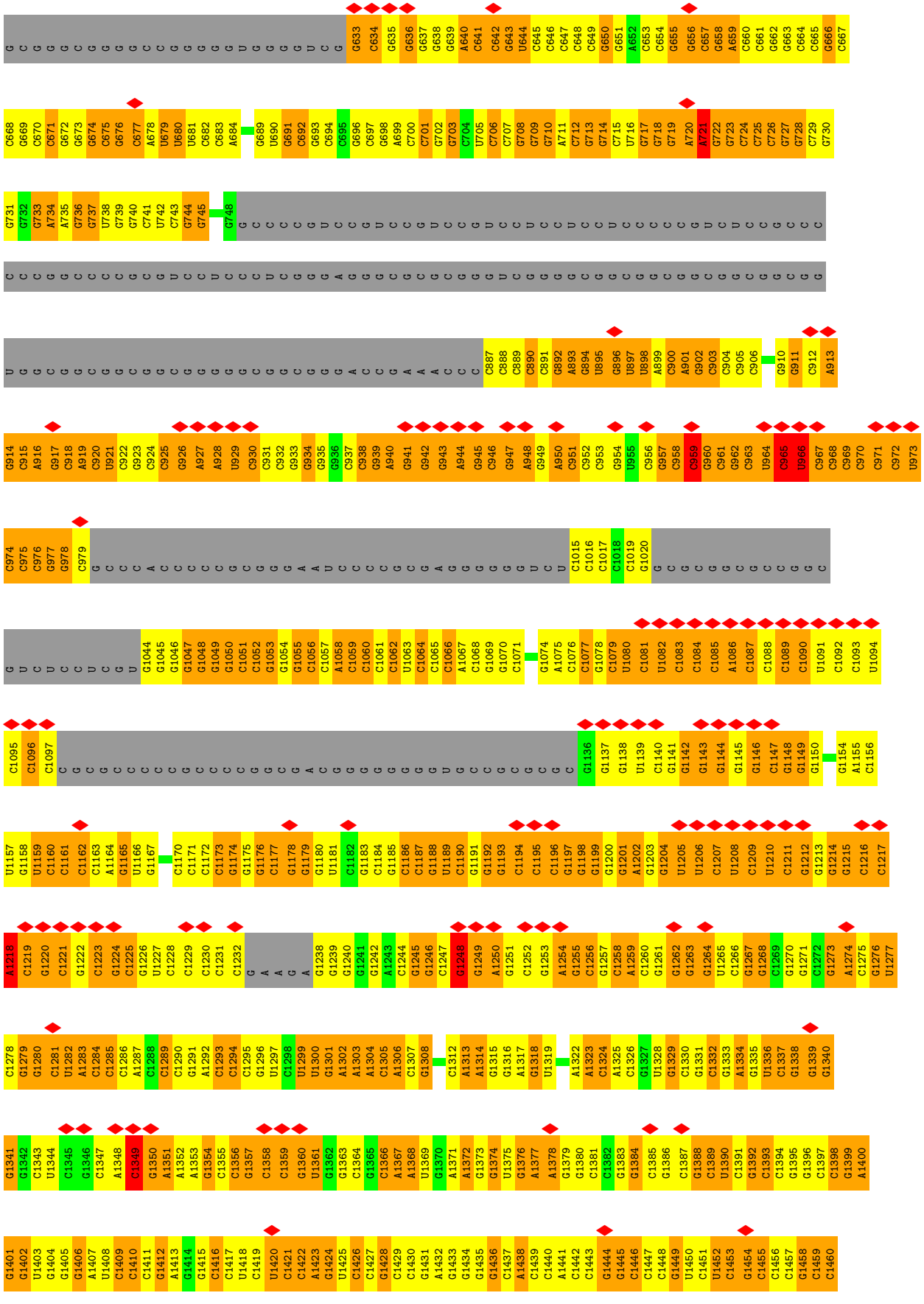
3 Residue-property plots (i)

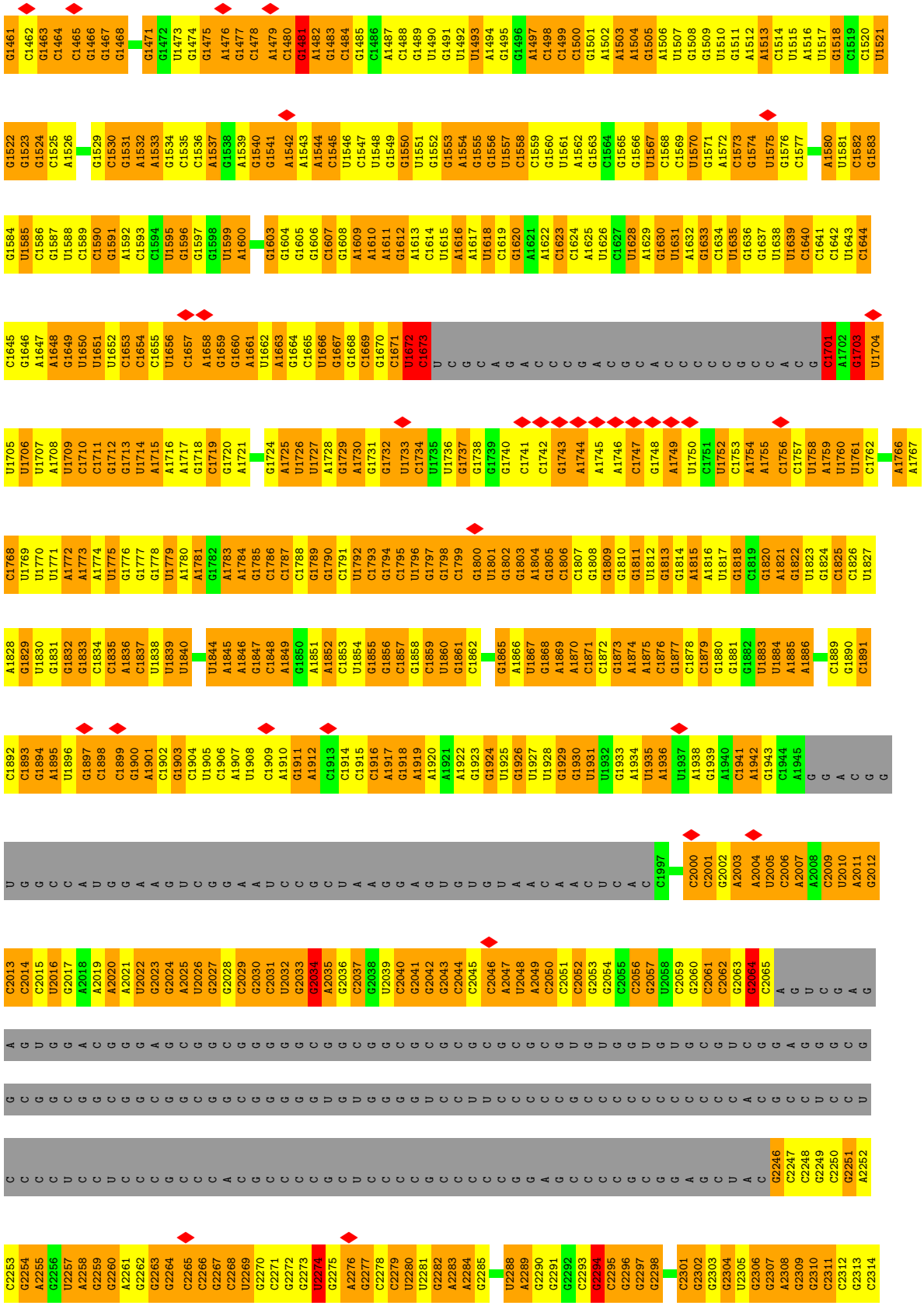
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

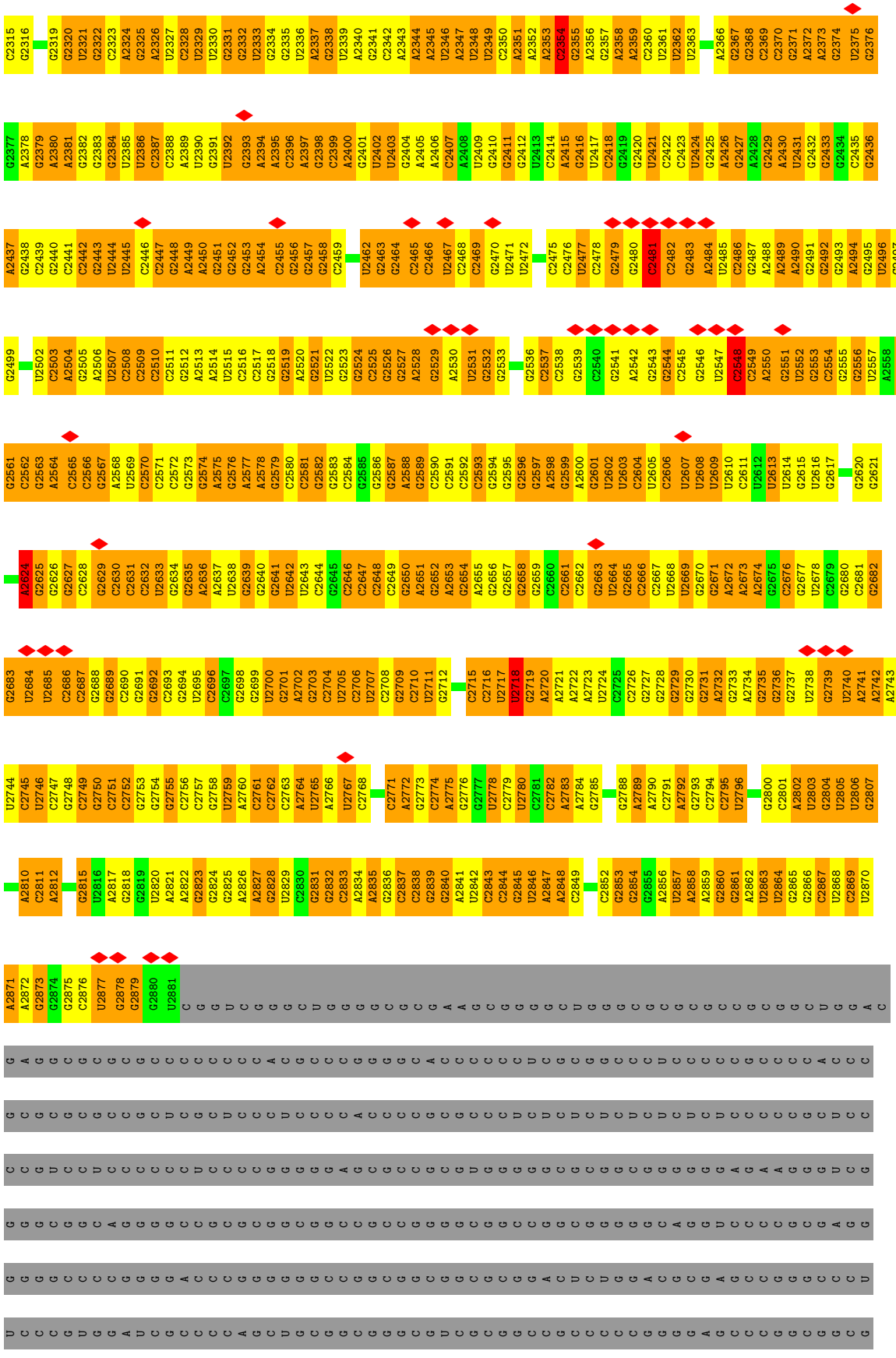
- Molecule 1: 28S Ribosomal RNA

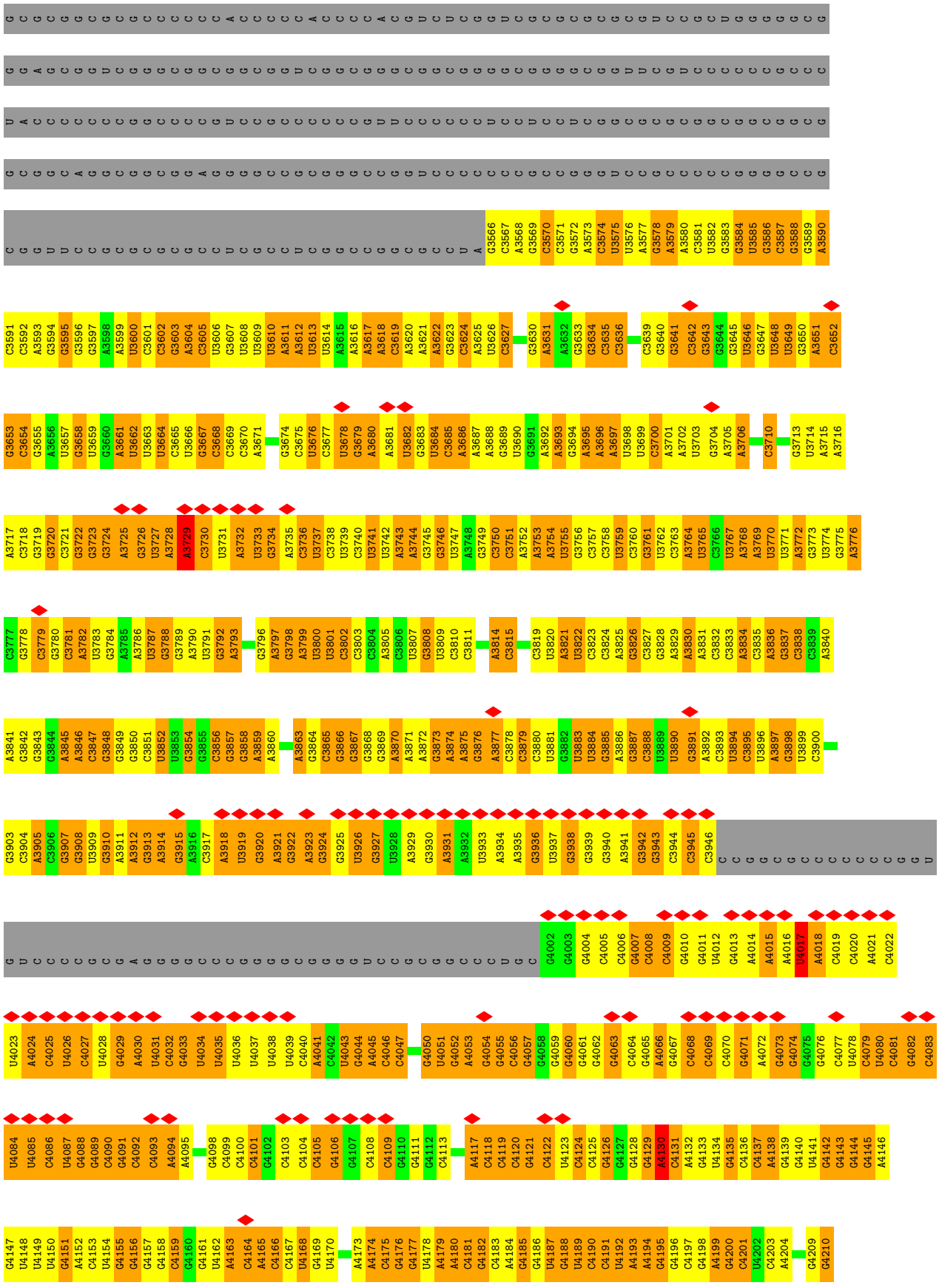
Chain A2:

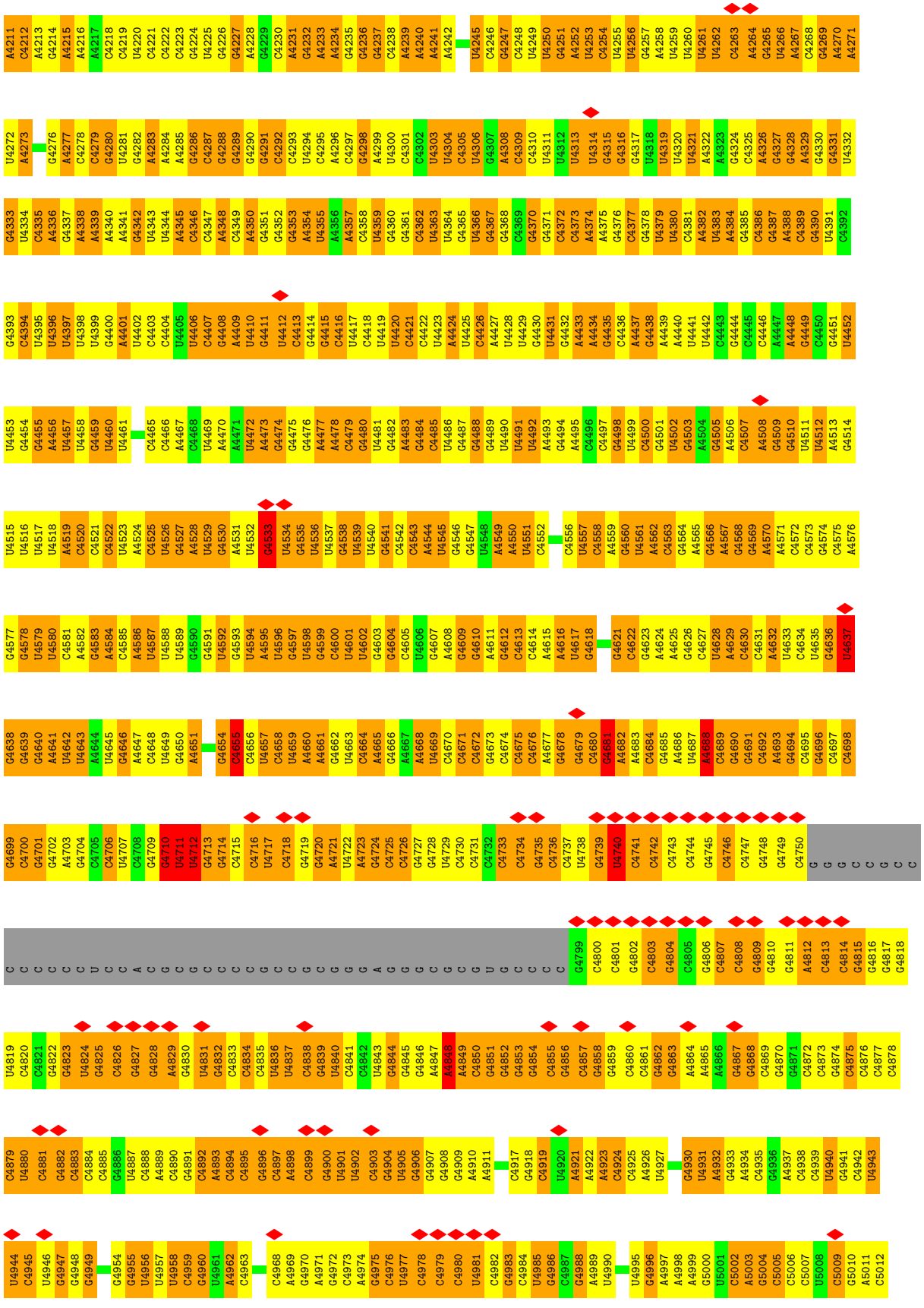


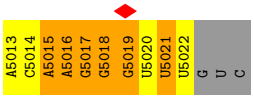






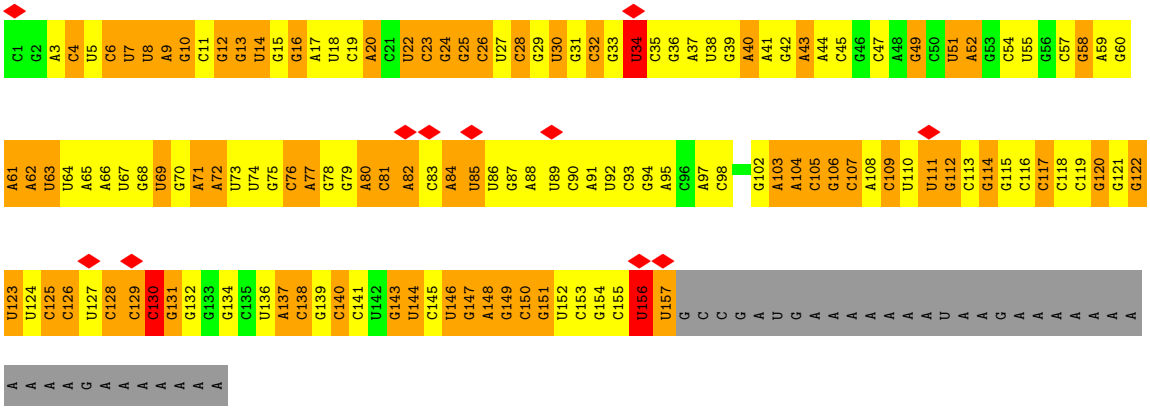






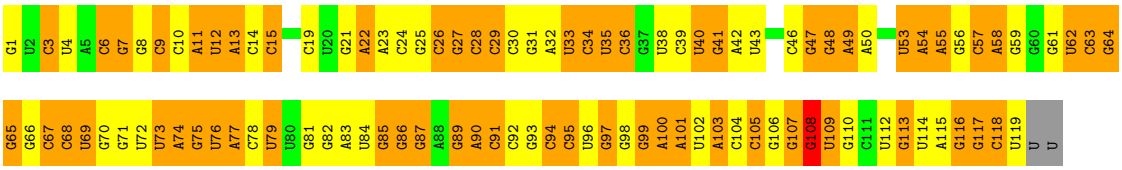
• Molecule 2: 5.8S Ribosomal RNA

Chain A3:



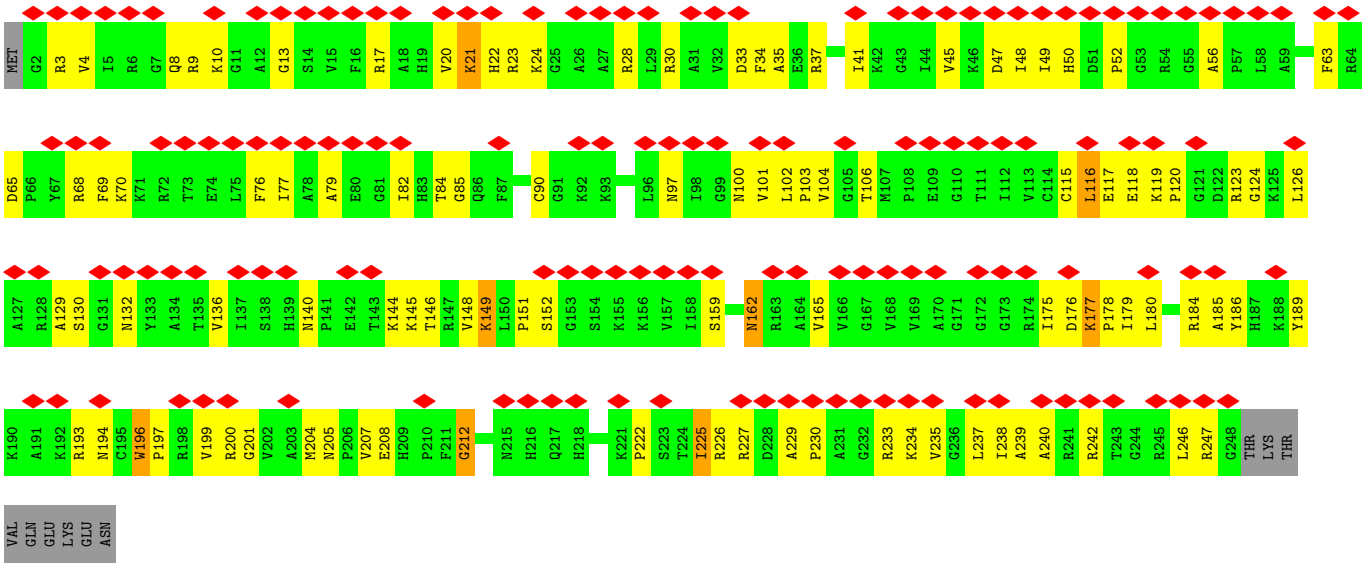
• Molecule 3: 5S Ribosomal RNA

Chain A4:



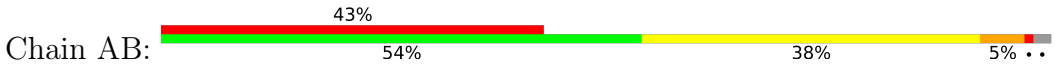
• Molecule 4: 60S RIBOSOMAL PROTEIN L8

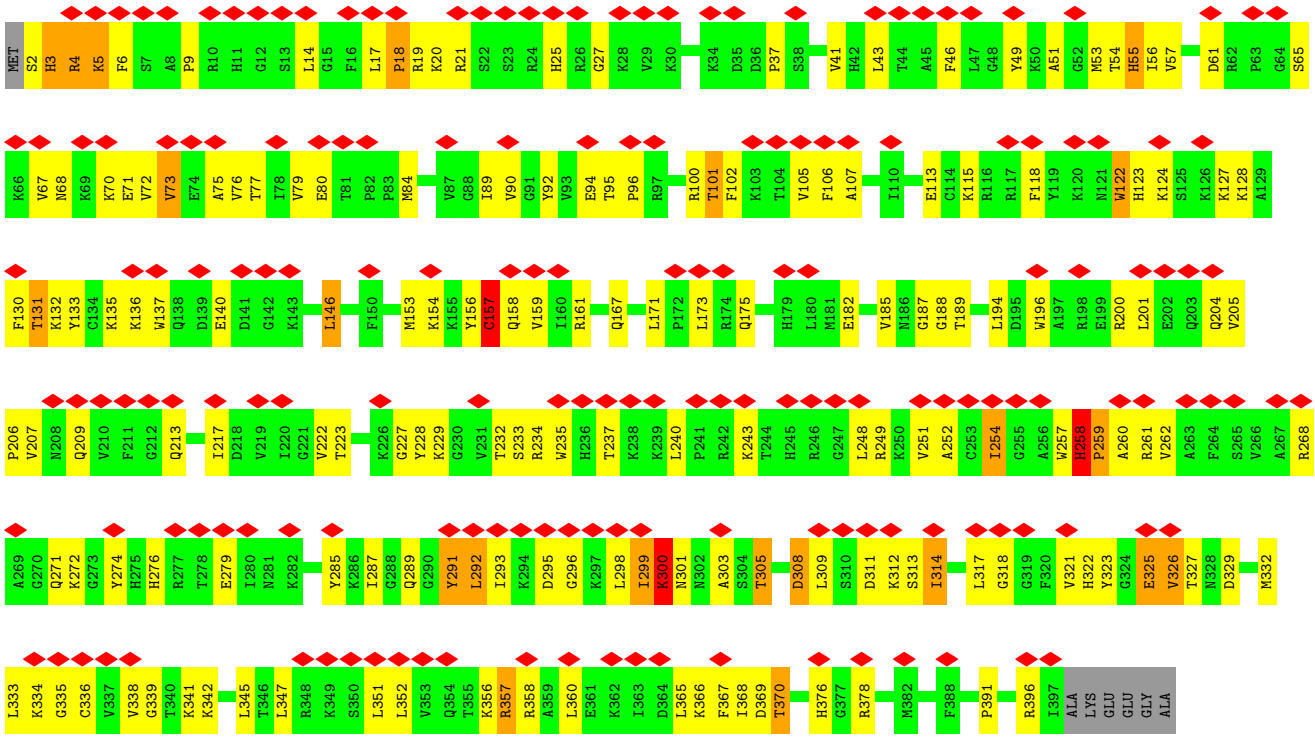
Chain AA:



• Molecule 5: 60S RIBOSOMAL PROTEIN L3

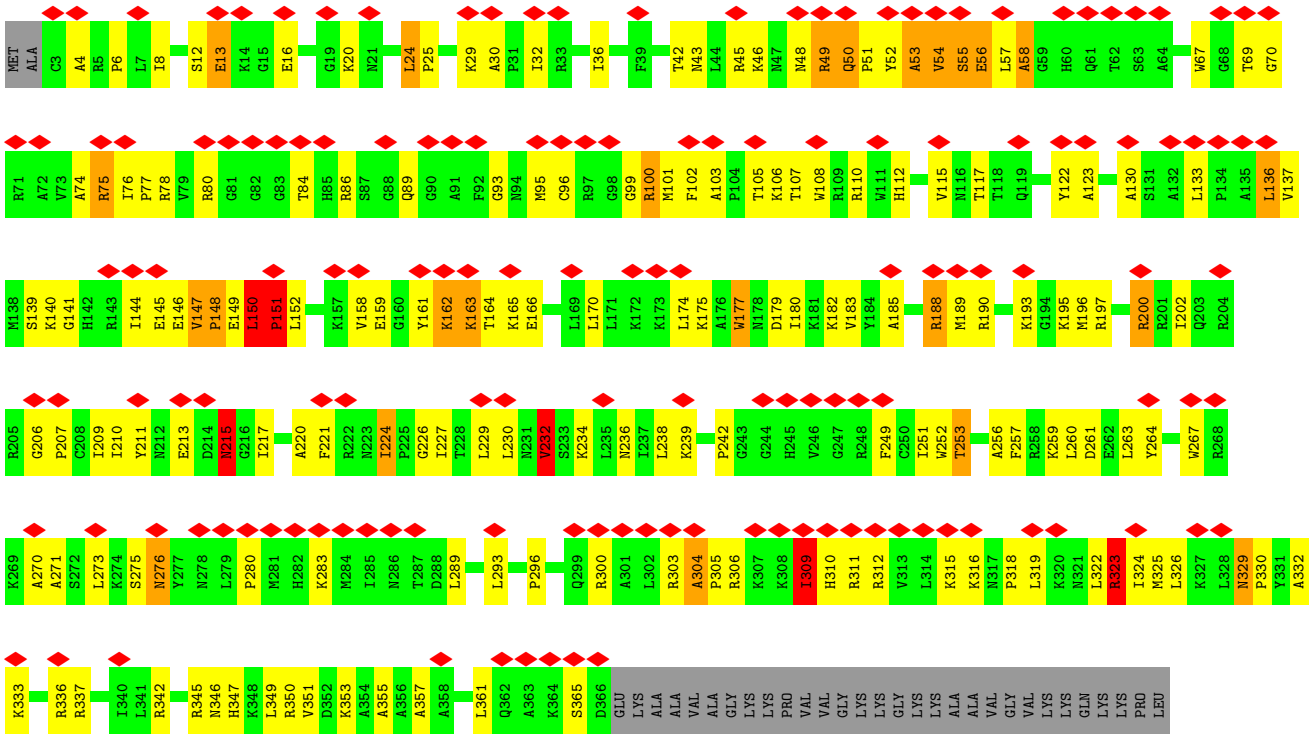
Chain AB:





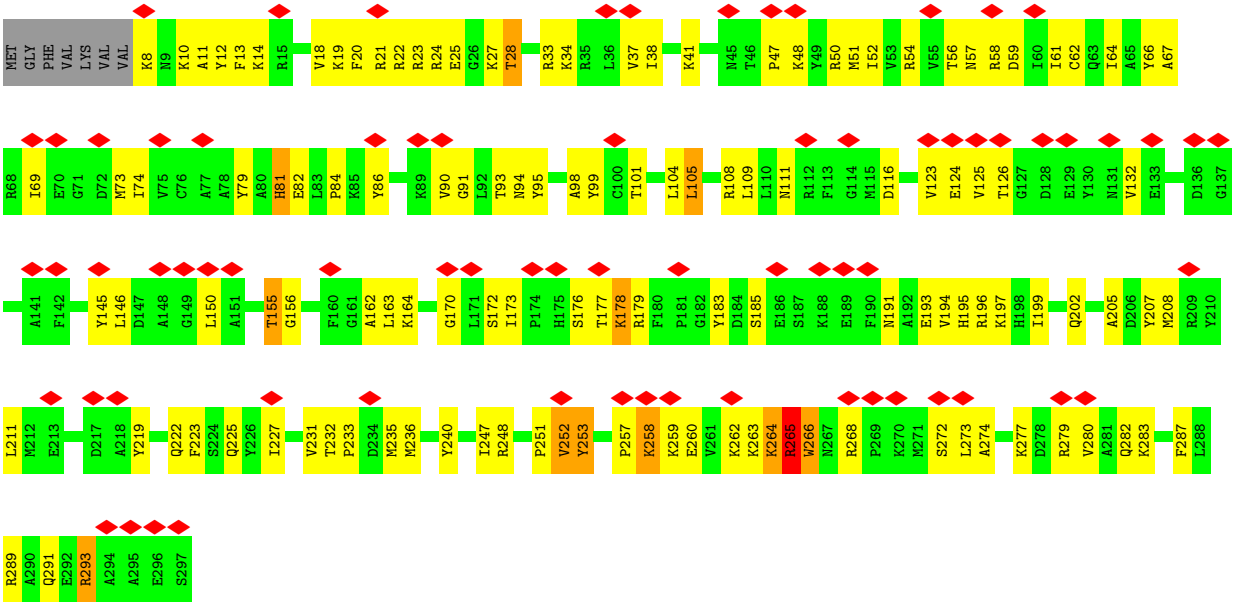
• Molecule 6: 60S RIBOSOMAL PROTEIN L4

Chain AC:



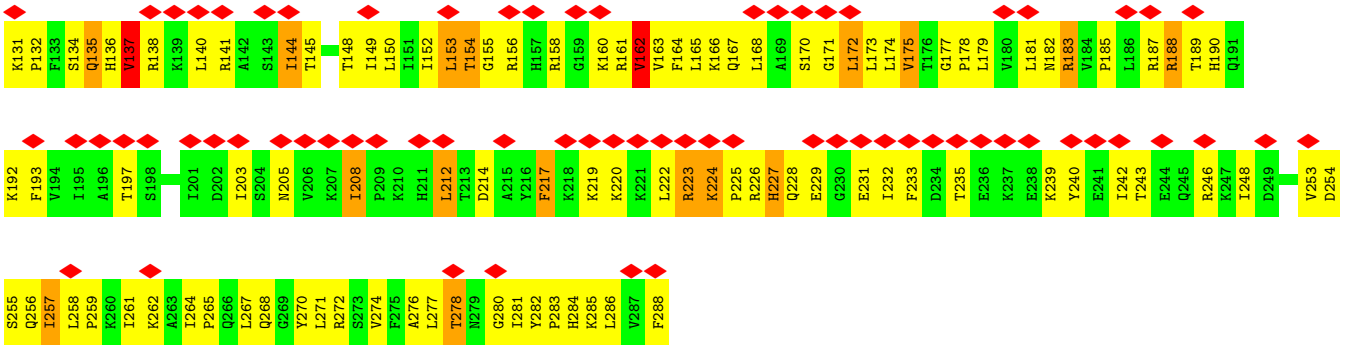
• Molecule 7: 60S RIBOSOMAL PROTEIN L5

Chain AD:



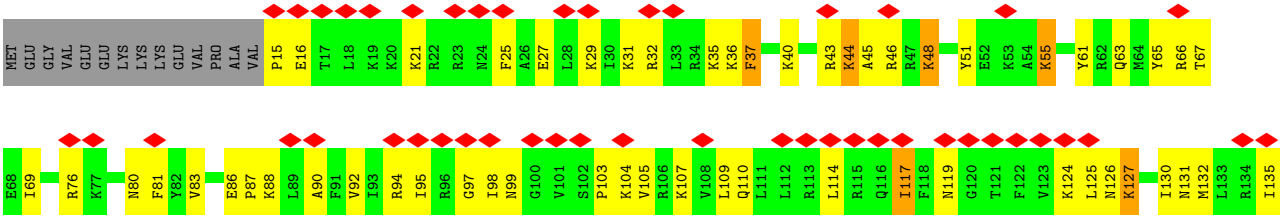
• Molecule 8: 60S RIBOSOMAL PROTEIN L6

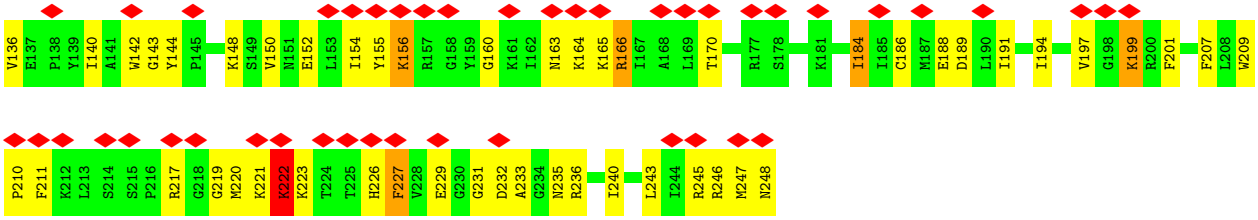
Chain AE:



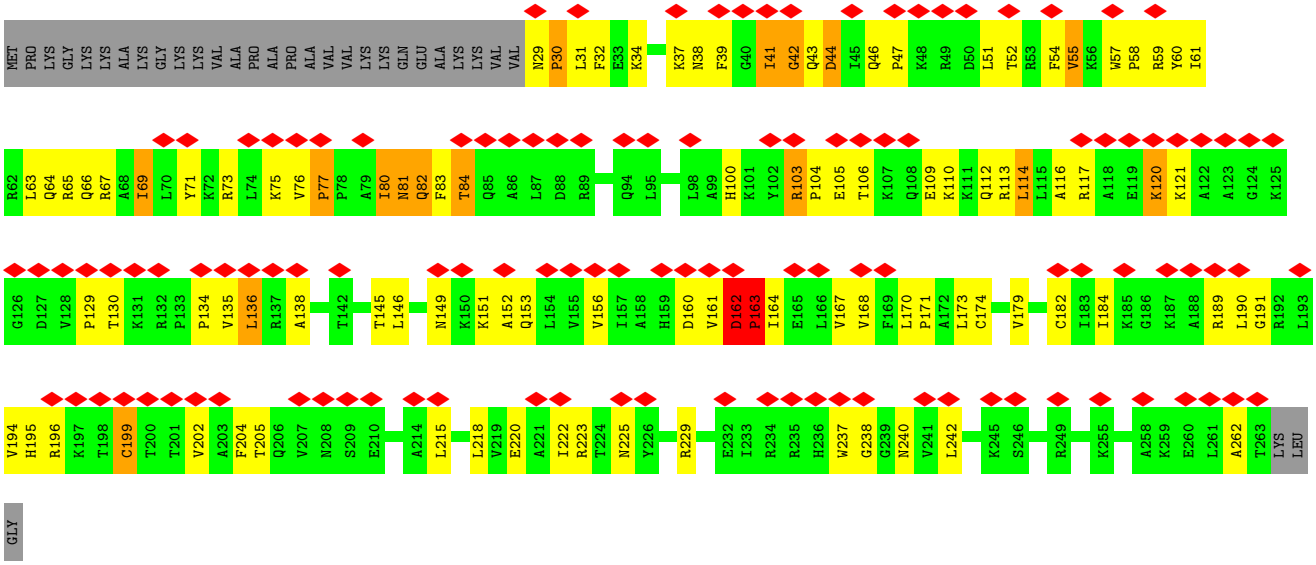
• Molecule 9: 60S RIBOSOMAL PROTEIN L7

Chain AF:

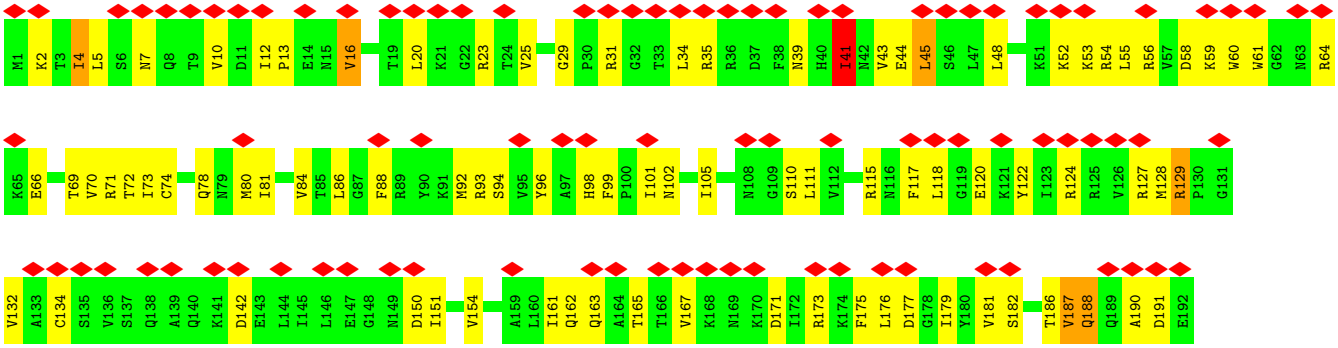




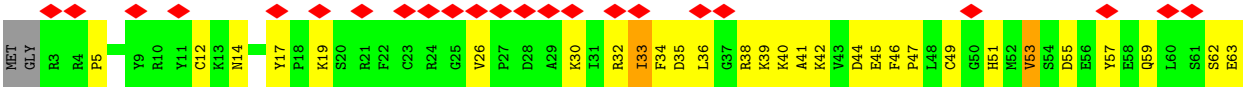
• Molecule 10: 60S RIBOSOMAL PROTEIN L7A

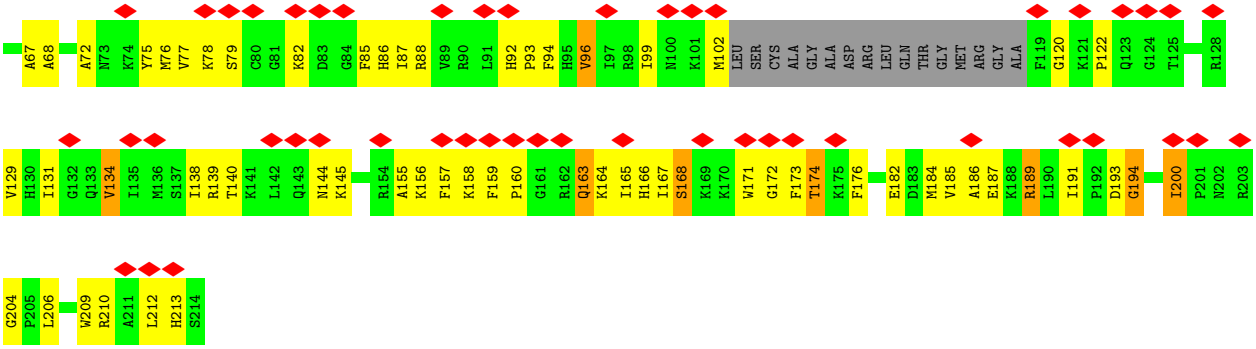


• Molecule 11: 60S RIBOSOMAL PROTEIN L9



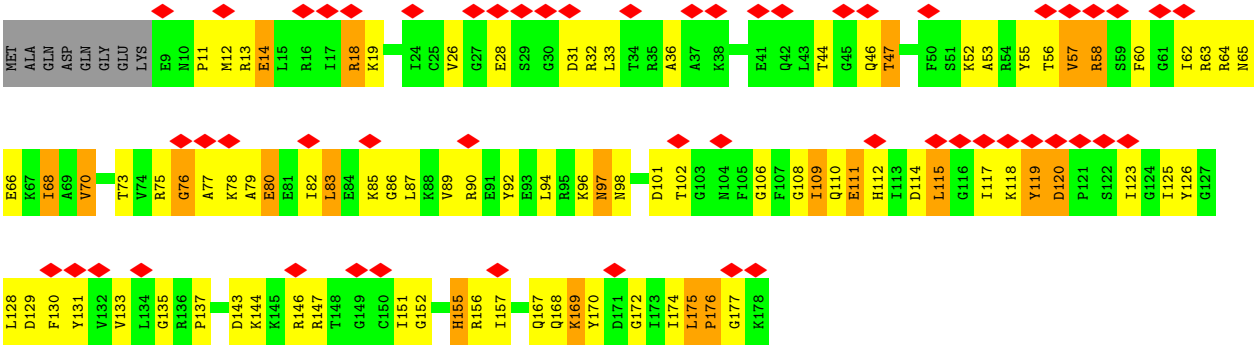
• Molecule 12: 60S RIBOSOMAL PROTEIN L10





• Molecule 13: 60S RIBOSOMAL PROTEIN L11

Chain AJ:

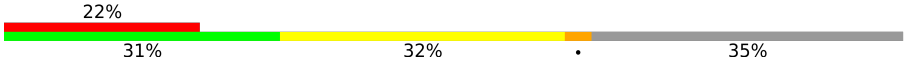


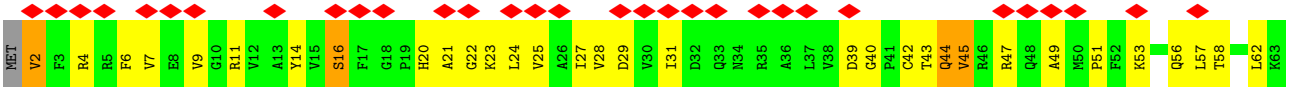
• Molecule 14: 60S RIBOSOMAL PROTEIN L13

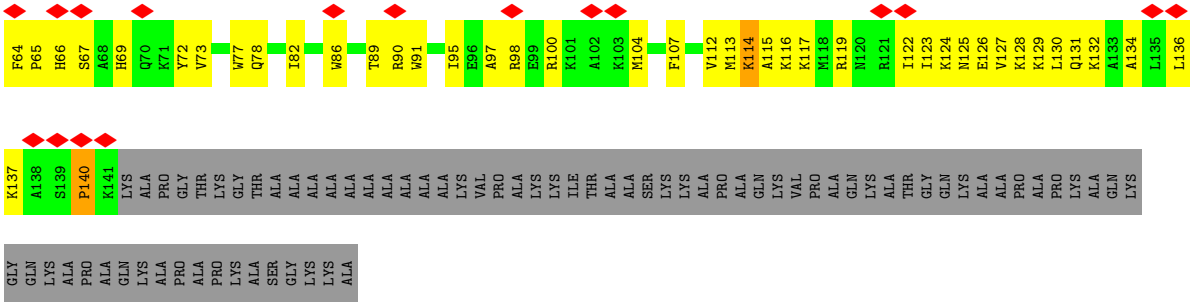
Chain AL:

• Molecule 15: 60S RIBOSOMAL PROTEIN L14

Chain AM:

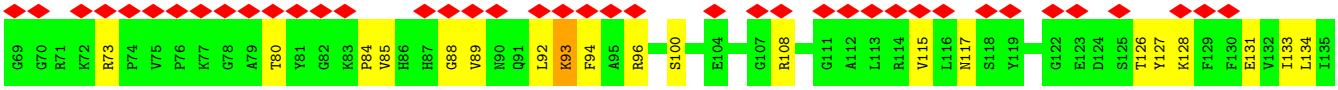


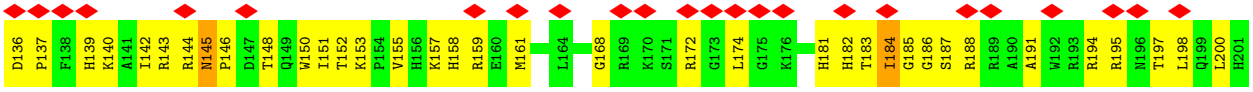




• Molecule 16: 60S RIBOSOMAL PROTEIN L15

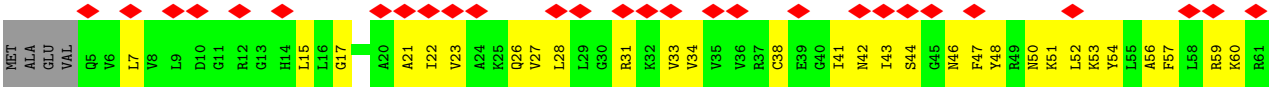
Chain AN:

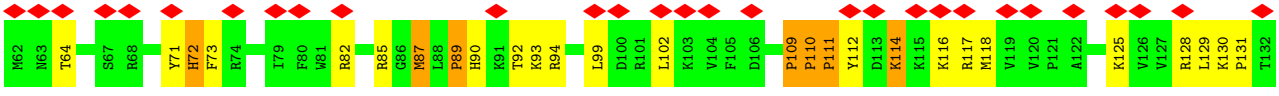


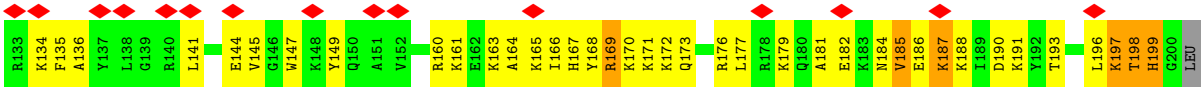


• Molecule 17: 60S RIBOSOMAL PROTEIN L13A

Chain AO:

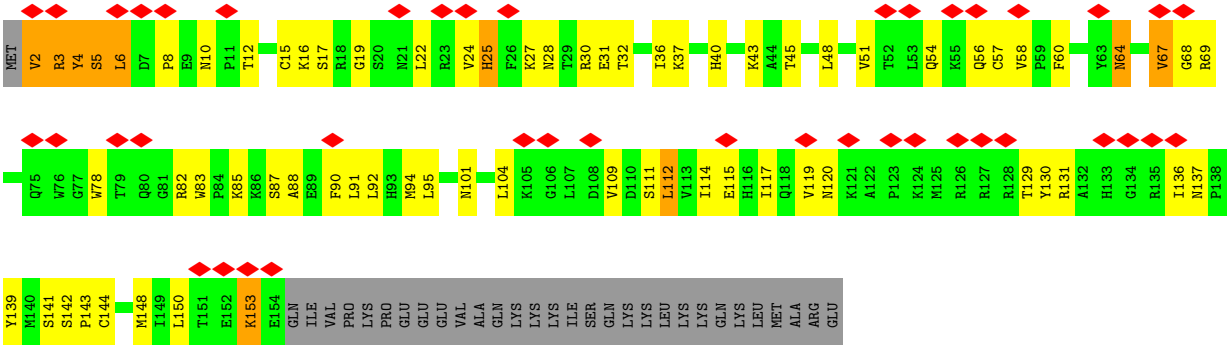






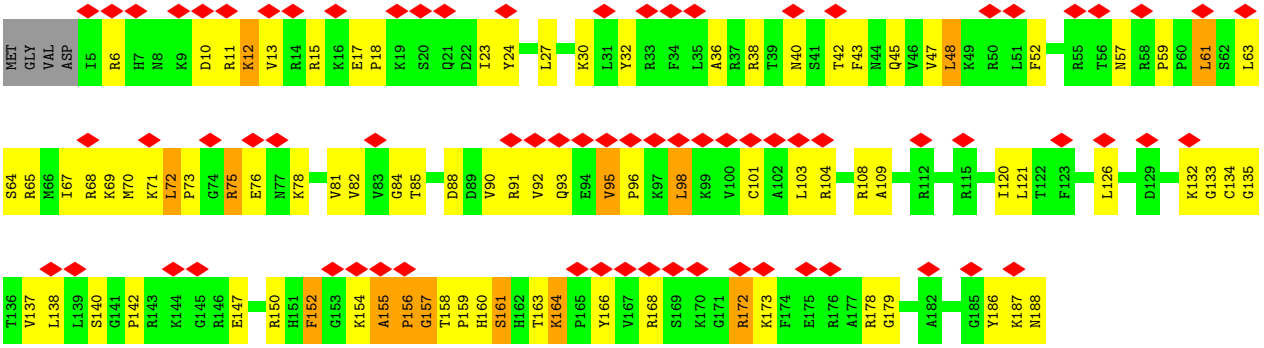
• Molecule 18: 60S RIBOSOMAL PROTEIN L17

Chain AP:



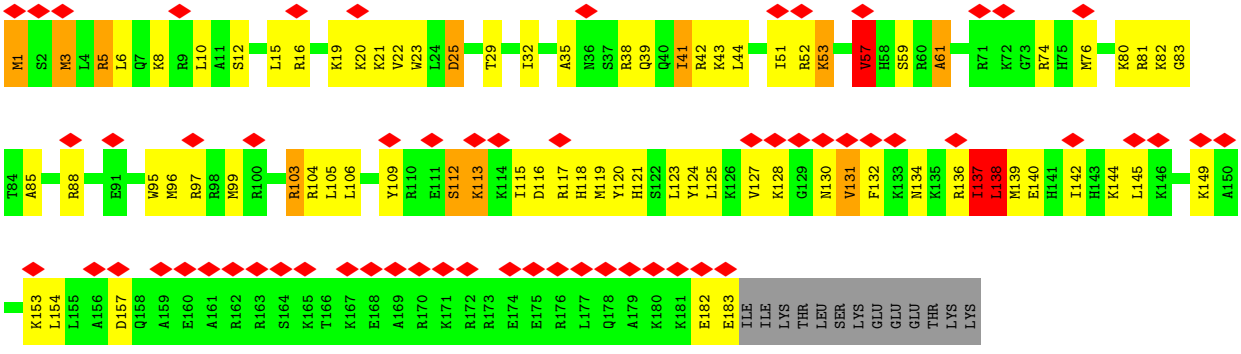
• Molecule 19: 60S RIBOSOMAL PROTEIN L18

Chain AQ:



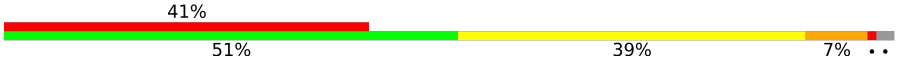
• Molecule 20: 60S RIBOSOMAL PROTEIN L19

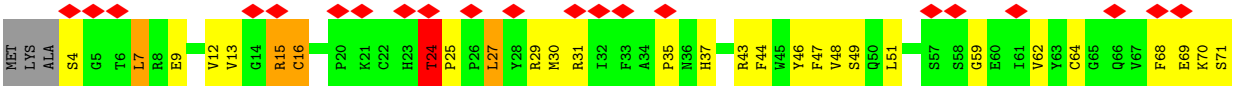
Chain AR:

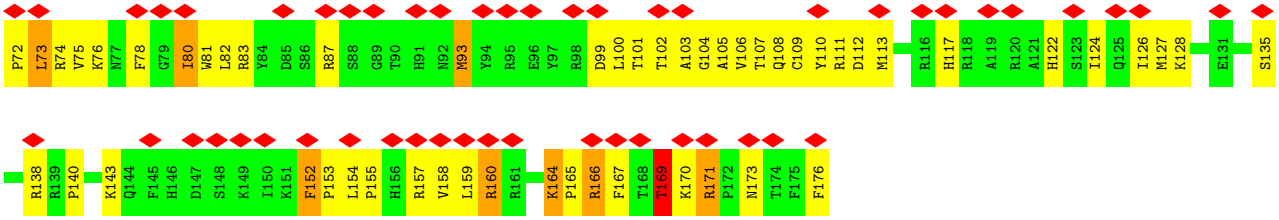


• Molecule 21: 60S RIBOSOMAL PROTEIN L18A

Chain AS:

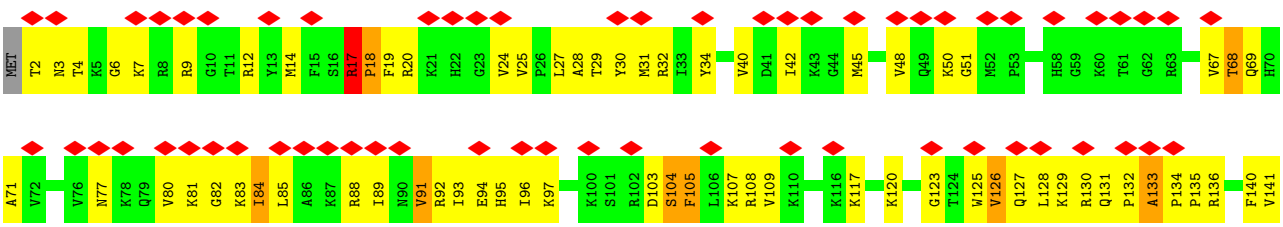


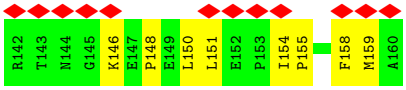




• Molecule 22: 60S RIBOSOMAL PROTEIN L21

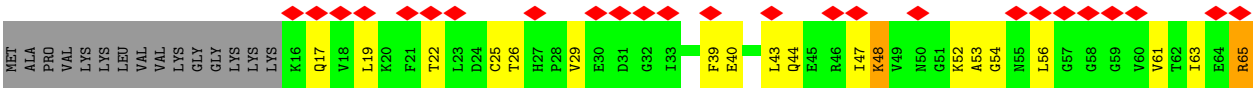
Chain AT:

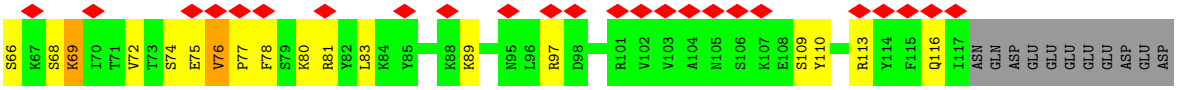




• Molecule 23: 60S RIBOSOMAL PROTEIN L22

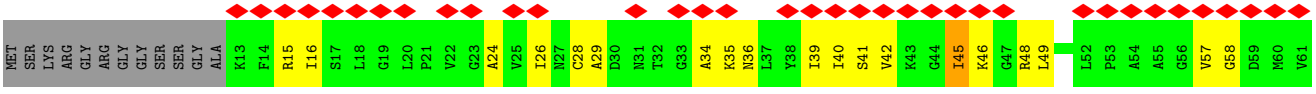
Chain AU:

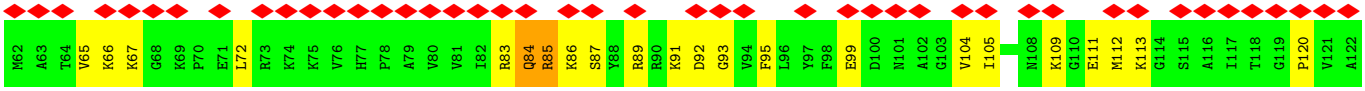


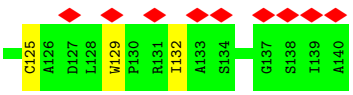


• Molecule 24: 60S RIBOSOMAL PROTEIN L23

Chain AV:

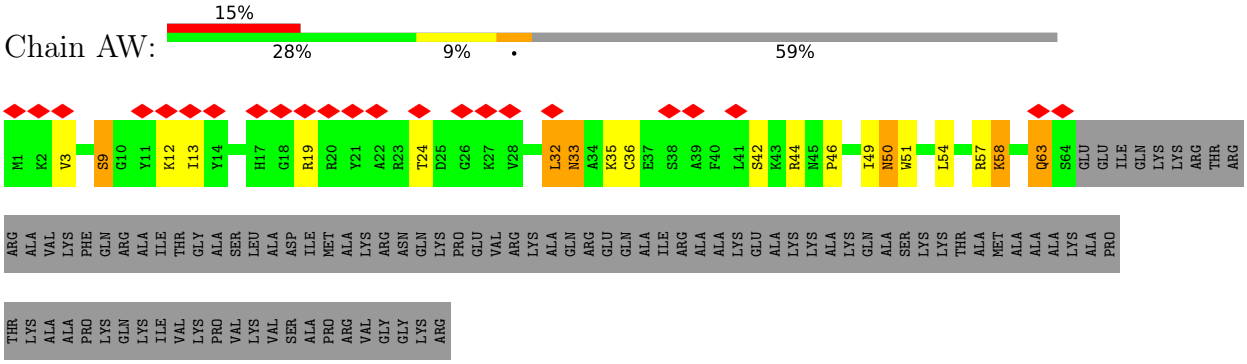






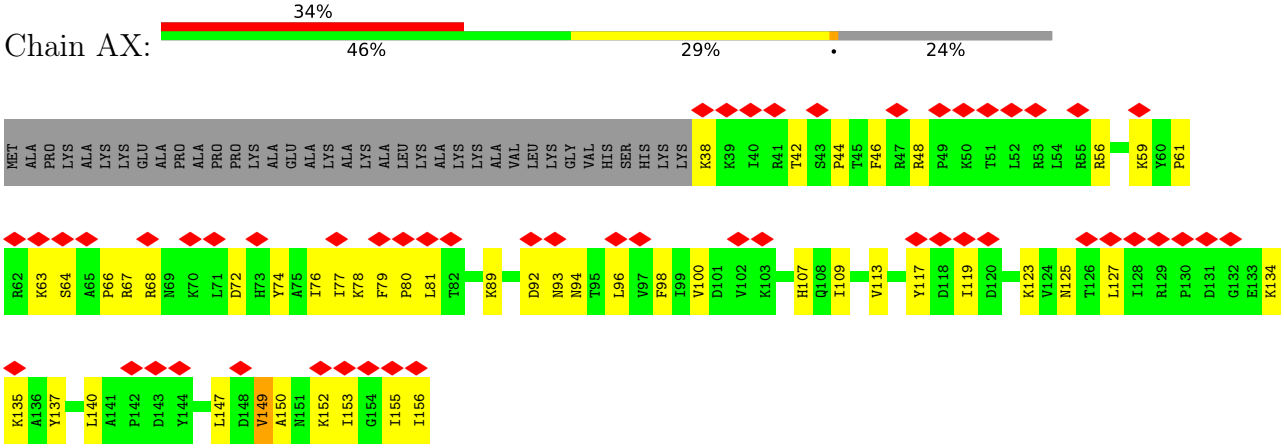
• Molecule 25: 60S RIBOSOMAL PROTEIN L24

Chain AW:



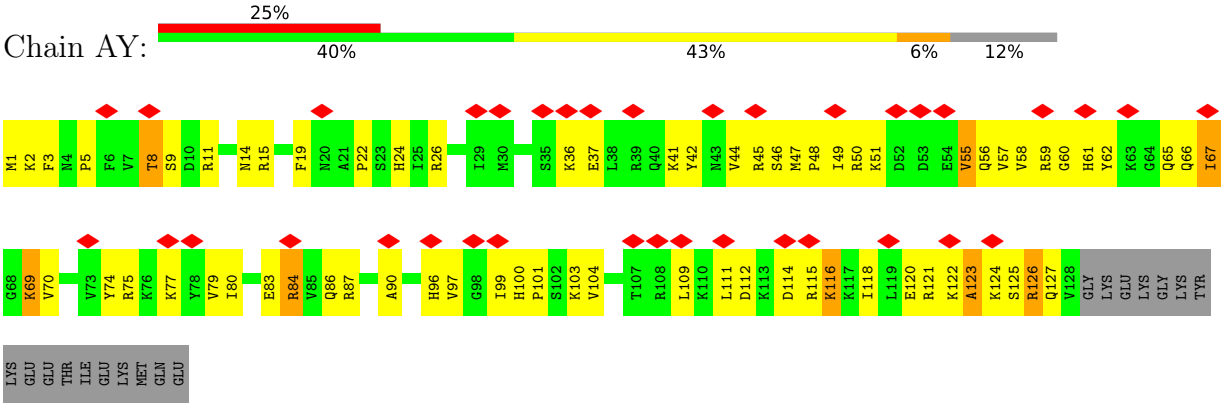
• Molecule 26: 60S RIBOSOMAL PROTEIN L23A

Chain AX:



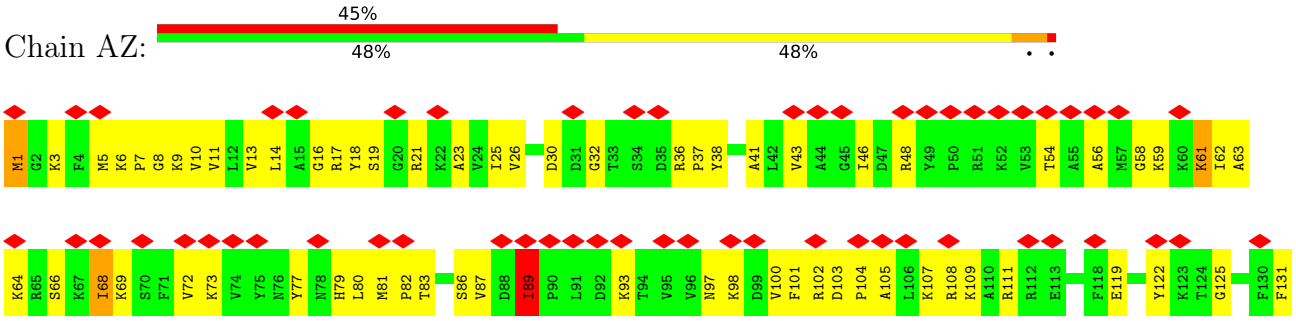
• Molecule 27: 60S RIBOSOMAL PROTEIN L26

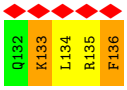
Chain AY:



• Molecule 28: 60S RIBOSOMAL PROTEIN L27

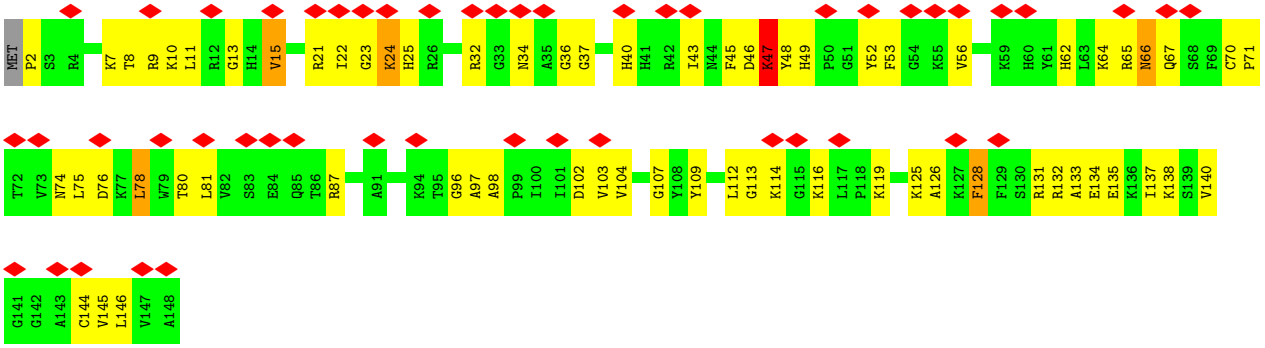
Chain AZ:





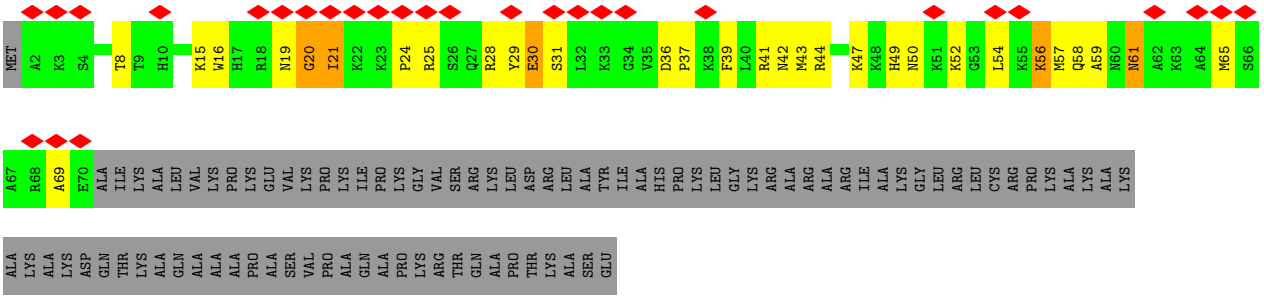
• Molecule 29: 60S RIBOSOMAL PROTEIN L27A

Chain Aa:



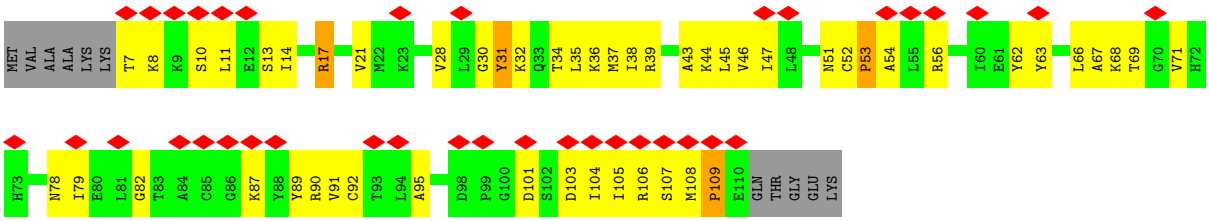
• Molecule 30: 60S RIBOSOMAL PROTEIN L29

Chain Ab:



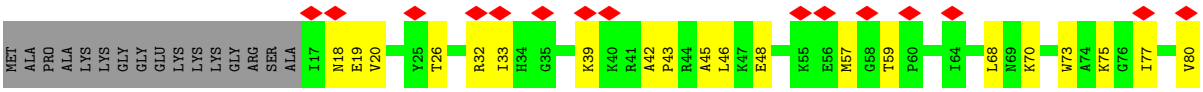
• Molecule 31: 60S RIBOSOMAL PROTEIN L30

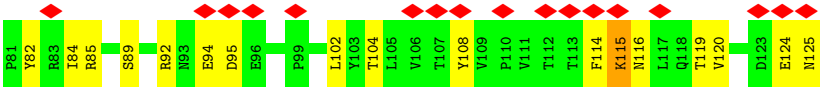
Chain Ac:



• Molecule 32: 60S RIBOSOMAL PROTEIN L31

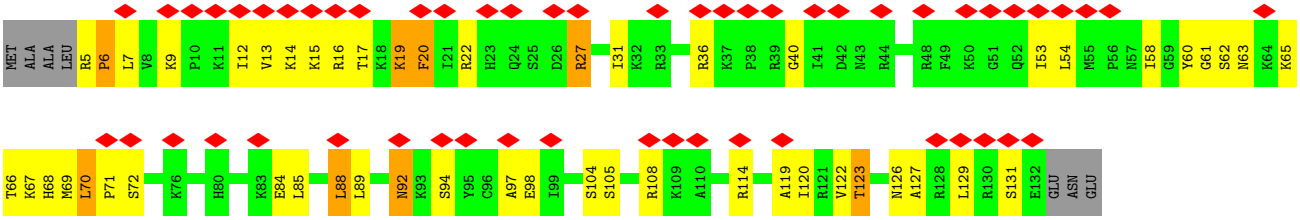
Chain Ad:





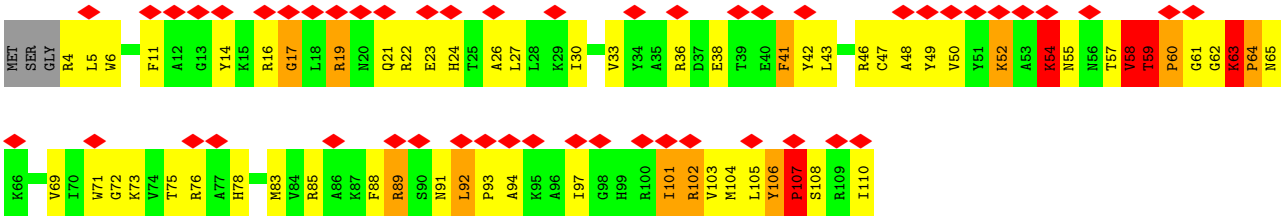
• Molecule 33: 60S RIBOSOMAL PROTEIN L32

Chain Ae:



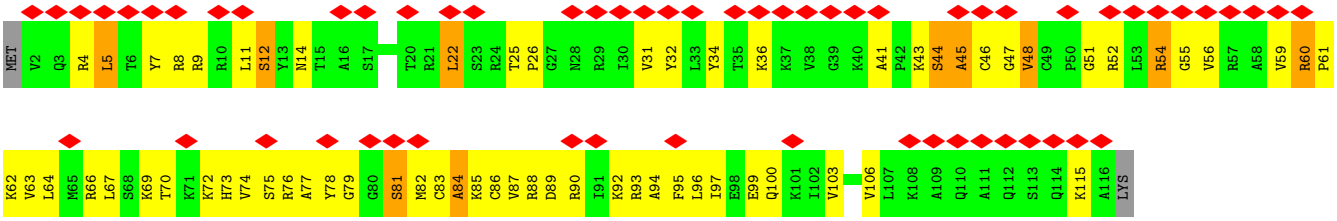
• Molecule 34: 60S RIBOSOMAL PROTEIN L35A

Chain Af:



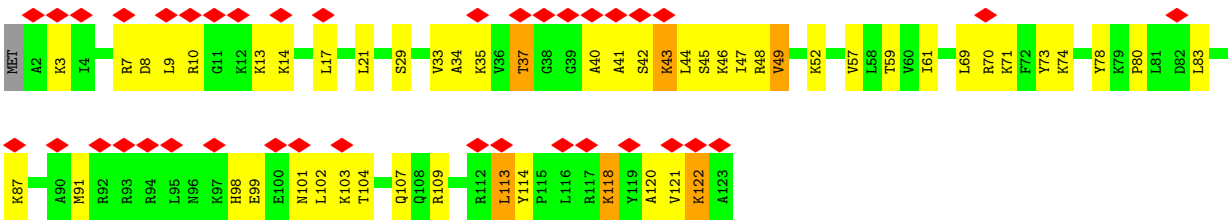
• Molecule 35: 60S RIBOSOMAL PROTEIN L34

Chain Ag:



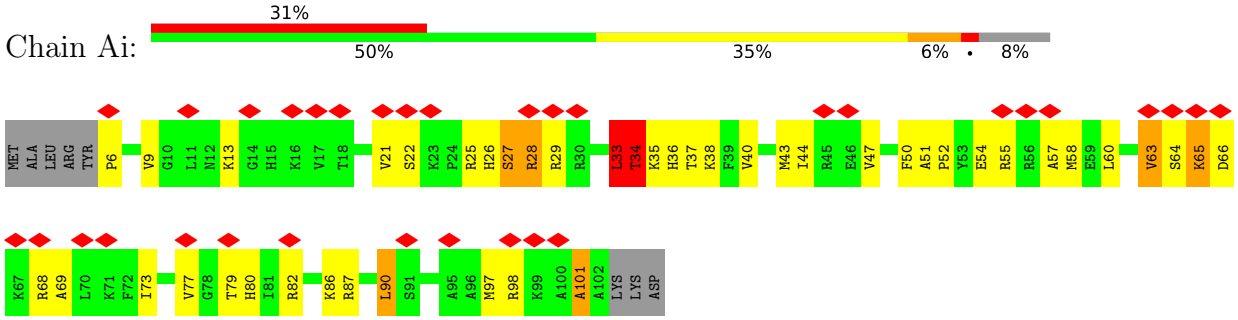
• Molecule 36: 60S RIBOSOMAL PROTEIN L35

Chain Ah:



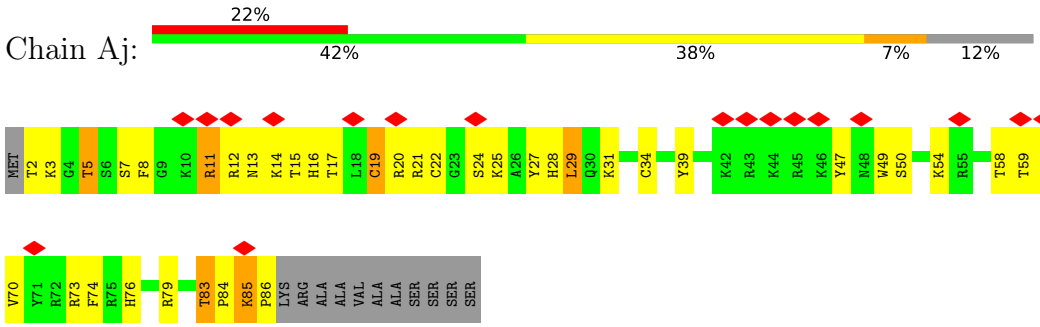
• Molecule 37: 60S RIBOSOMAL PROTEIN L36

Chain Ai:



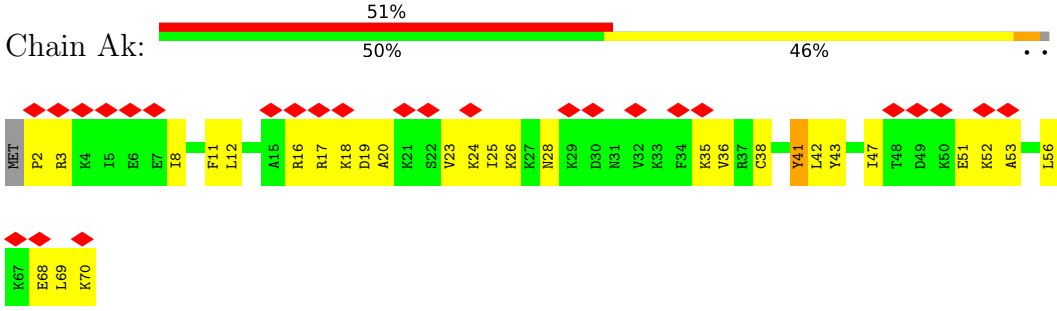
• Molecule 38: 60S RIBOSOMAL PROTEIN L37

Chain Aj:



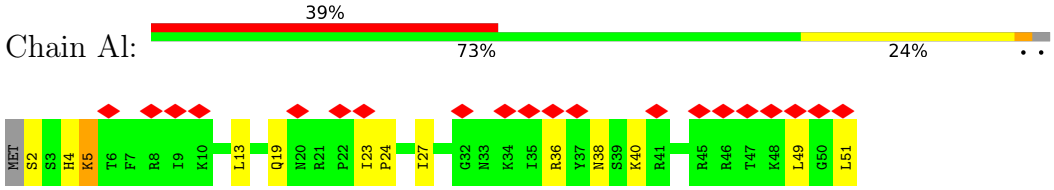
• Molecule 39: 60S RIBOSOMAL PROTEIN L38

Chain Ak:



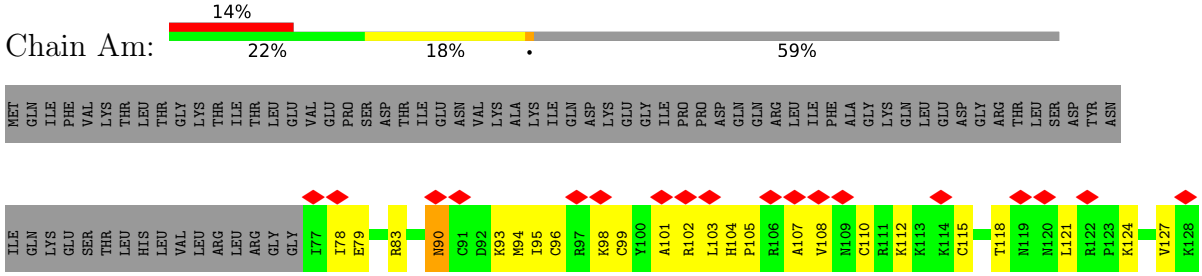
• Molecule 40: 60S RIBOSOMAL PROTEIN L39

Chain Al:



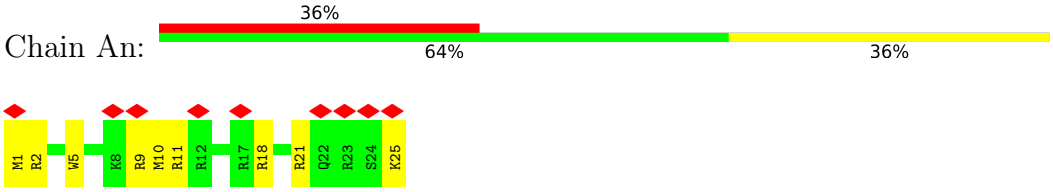
• Molecule 41: UBIQUITIN-60S RIBOSOMAL PROTEIN L40

Chain Am:



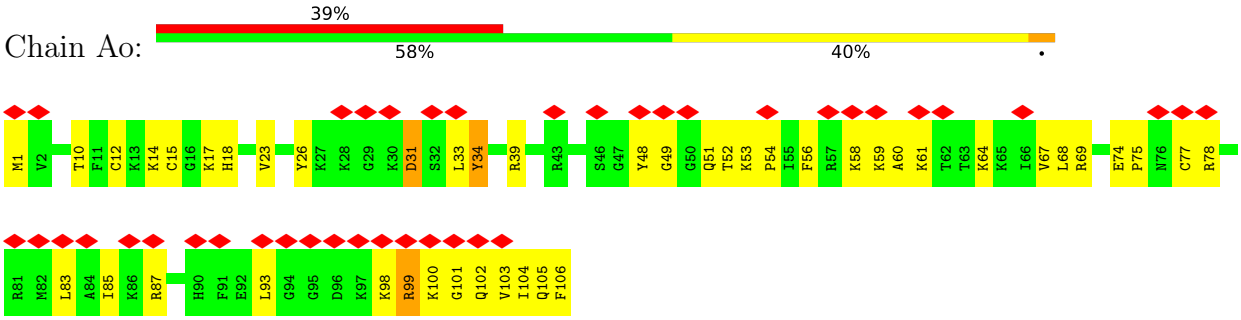
• Molecule 42: 60S RIBOSOMAL PROTEIN L41

Chain An:



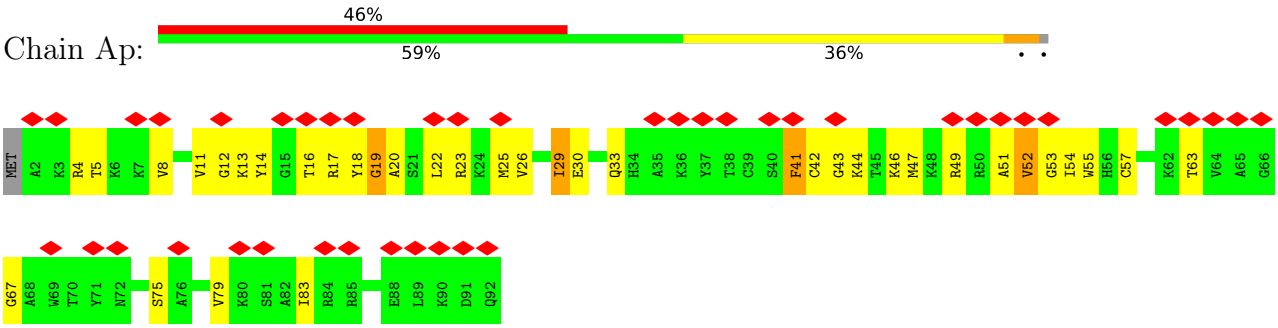
• Molecule 43: 60S RIBOSOMAL PROTEIN L36A

Chain Ao:



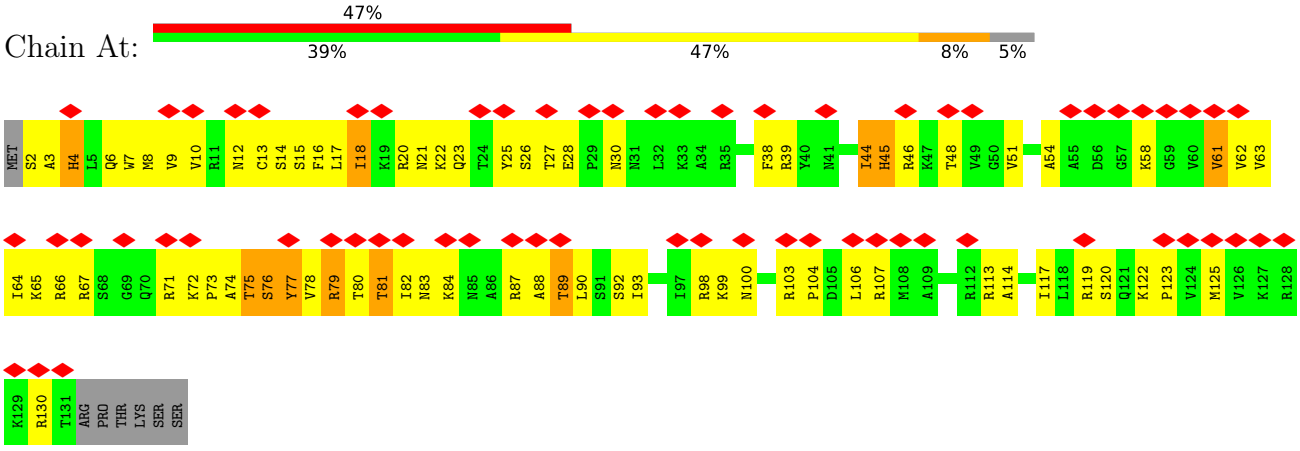
• Molecule 44: 60S RIBOSOMAL PROTEIN L37A

Chain Ap:



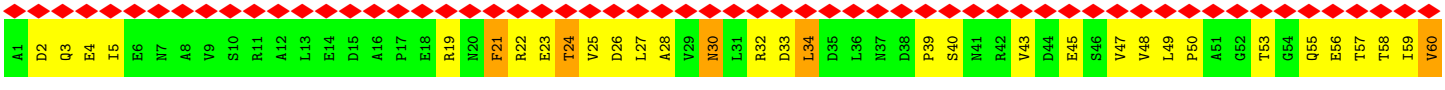
• Molecule 45: 60S RIBOSOMAL PROTEIN L28

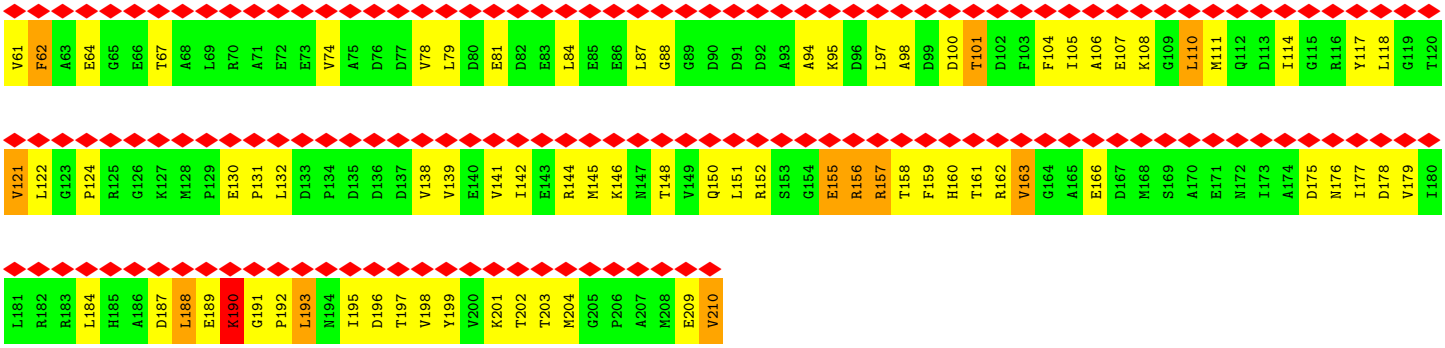
Chain At:



• Molecule 46: 60S RIBOSOMAL PROTEIN L10A

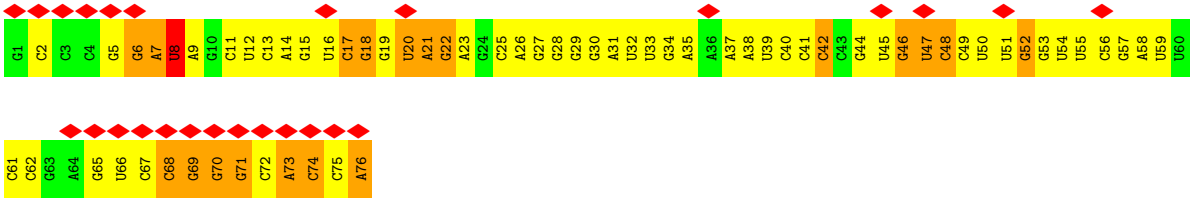
Chain Au:





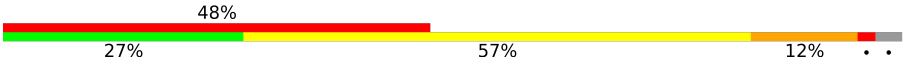
• Molecule 47: TRNA

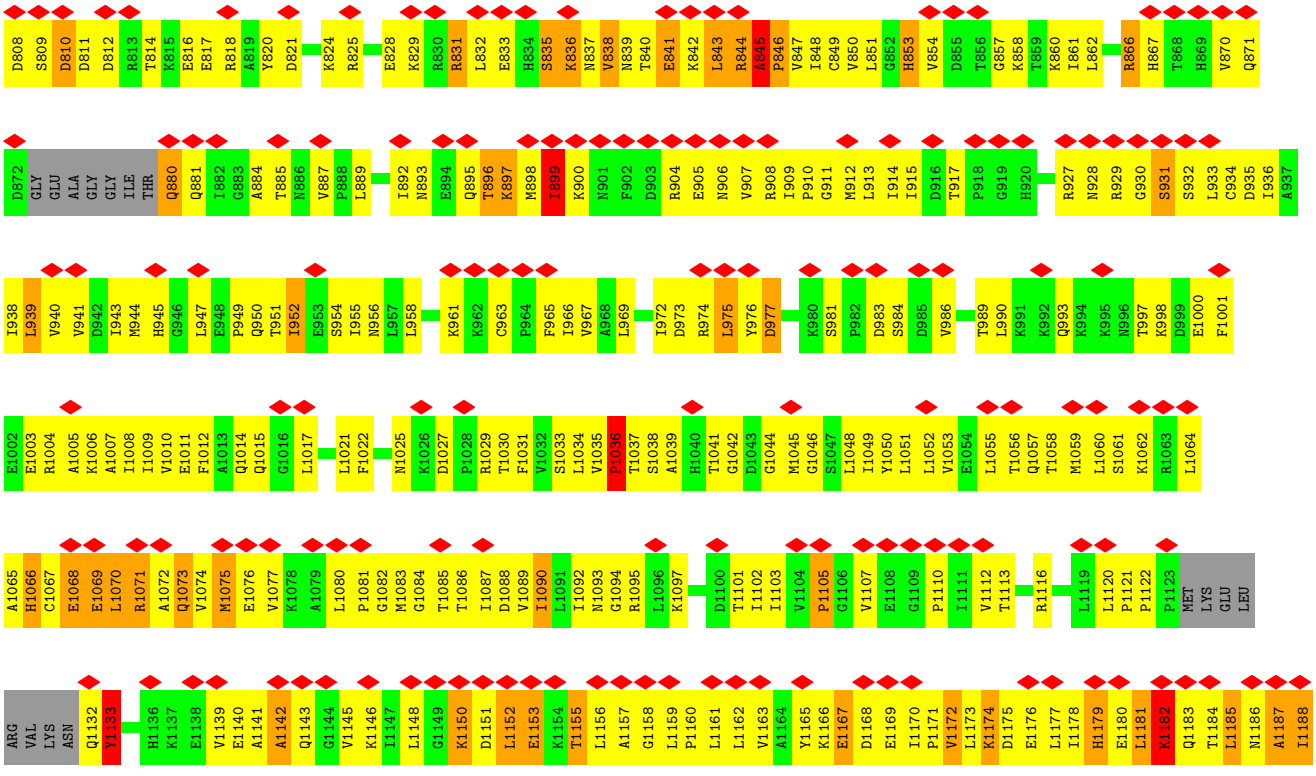
Chain BA:

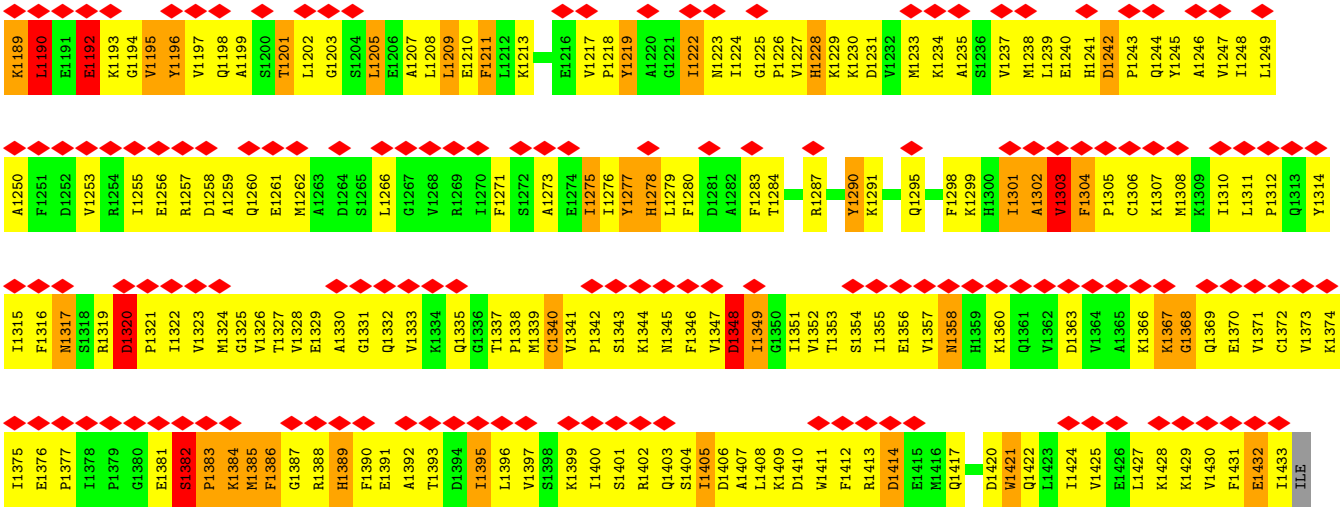


• Molecule 48: EIF5B

Chain BB:

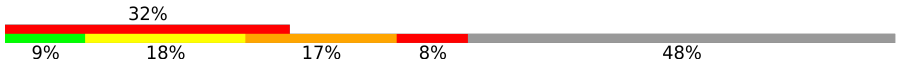


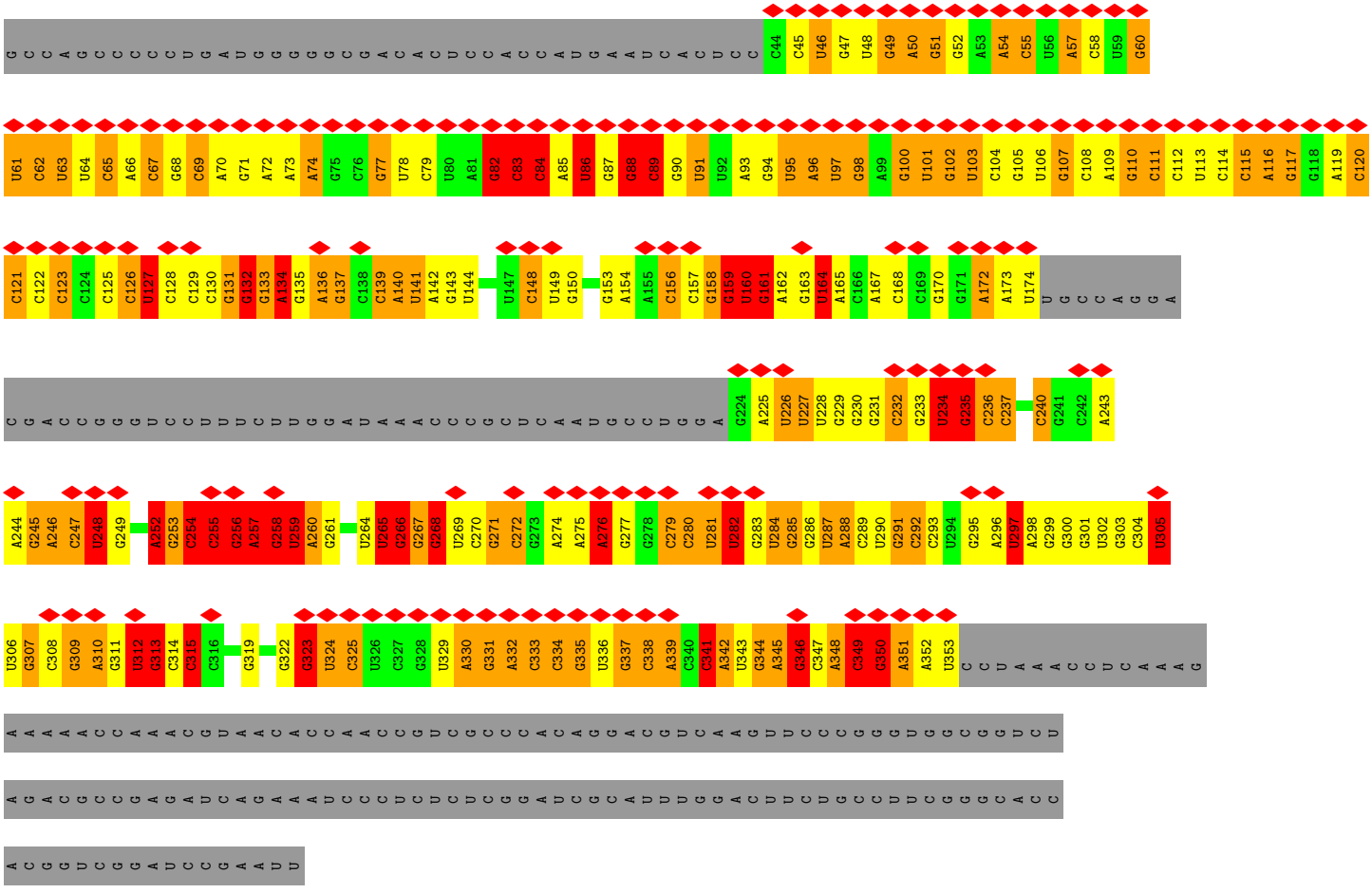




• Molecule 49: HCV-IRES

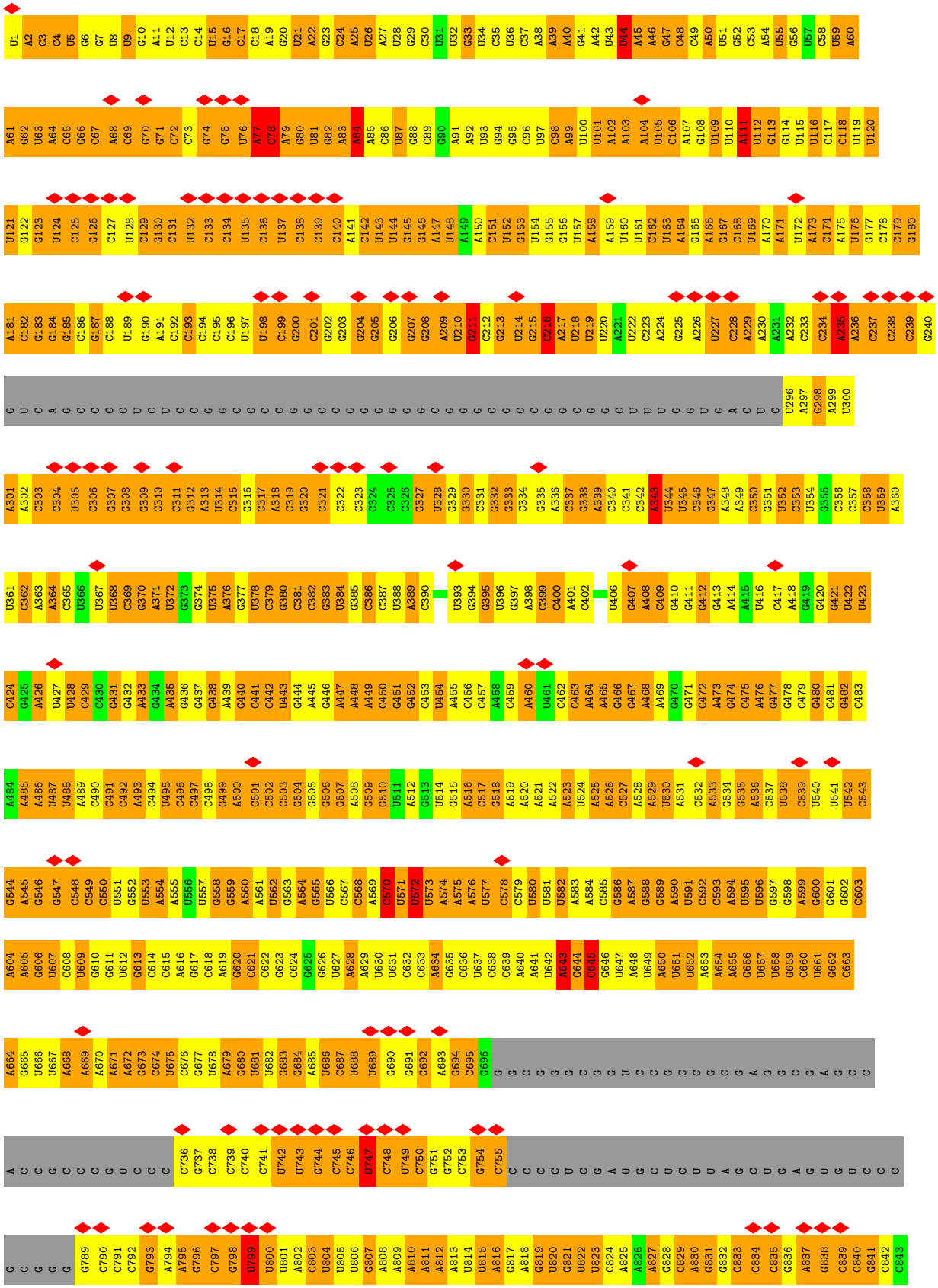
Chain BC:

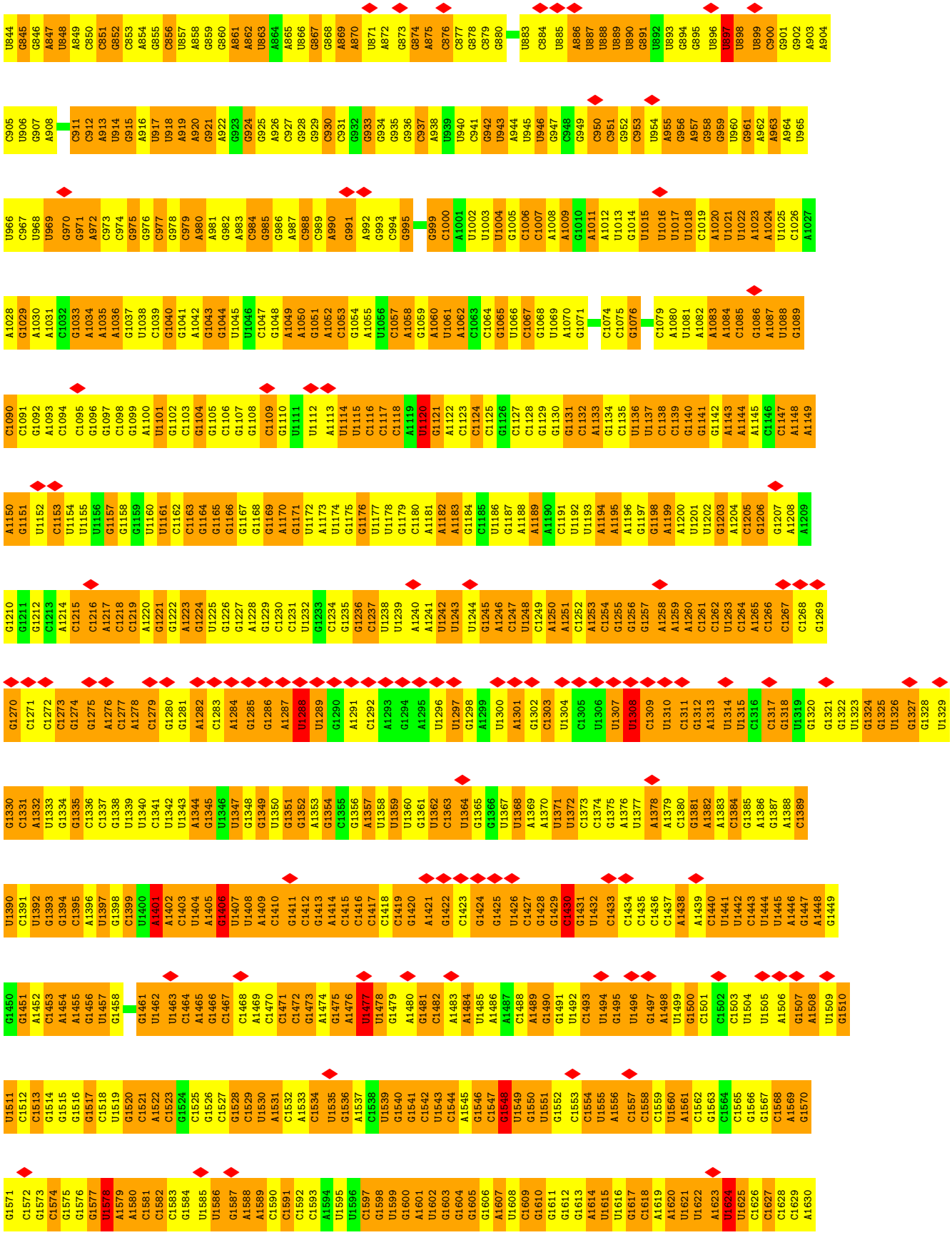


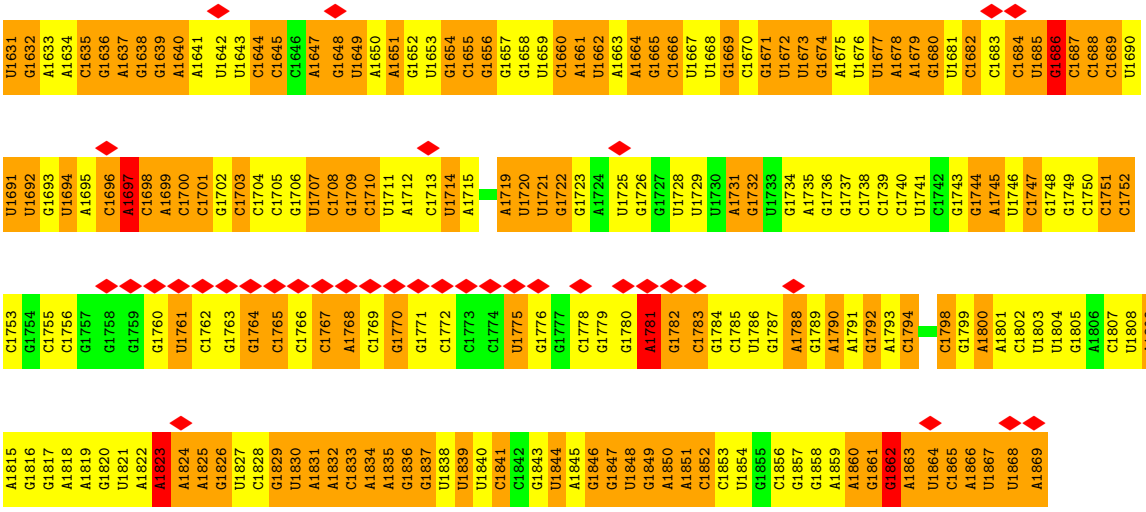


• Molecule 50: 18S Ribosomal RNA

Chain C1:

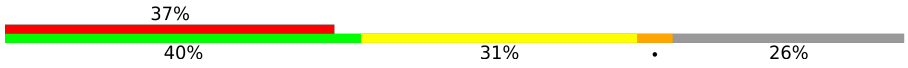


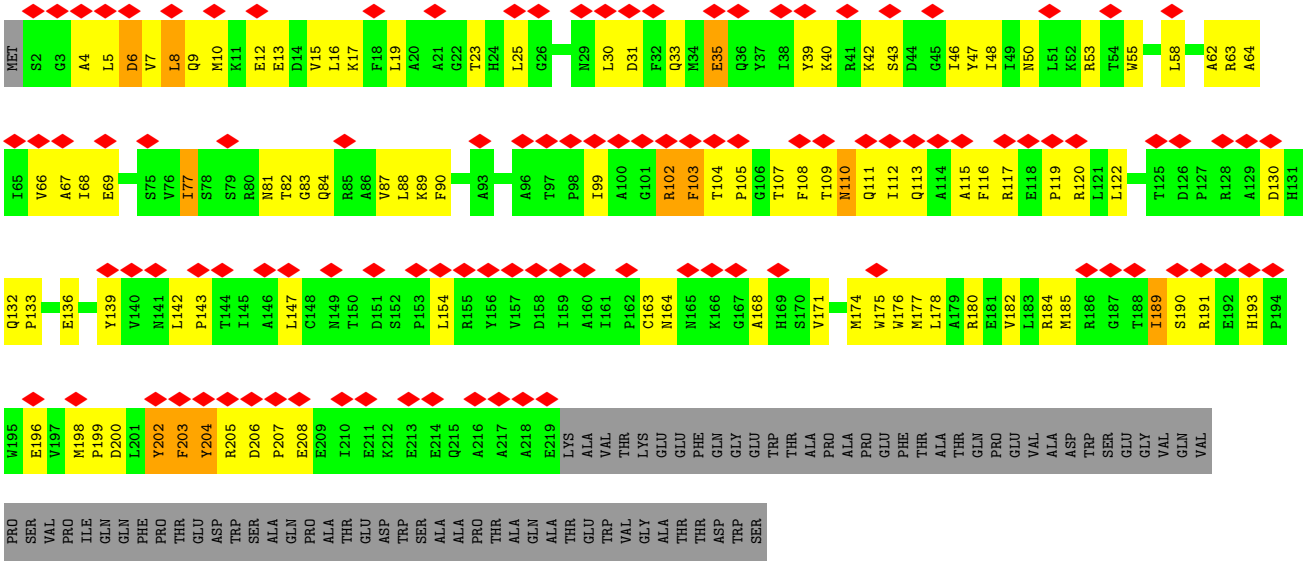




• Molecule 51: 40S RIBOSOMAL PROTEIN US2

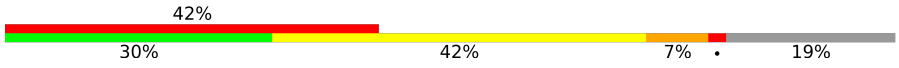
Chain CA:

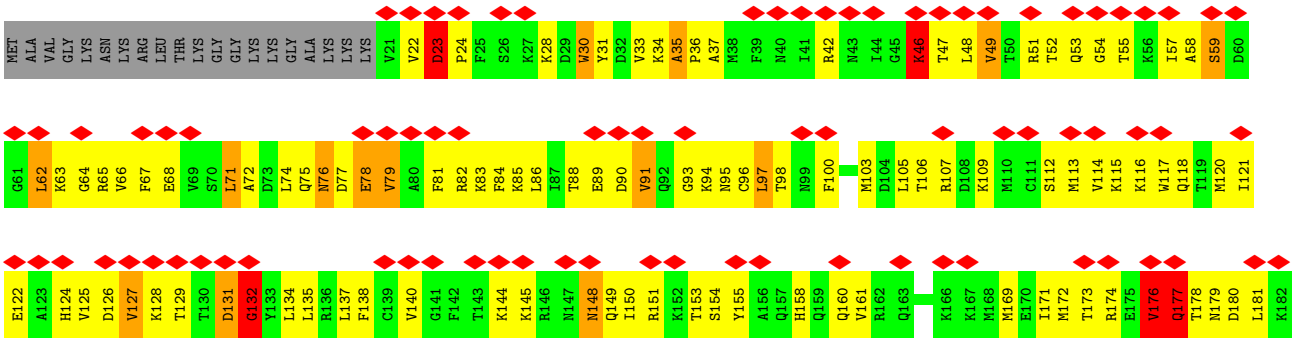


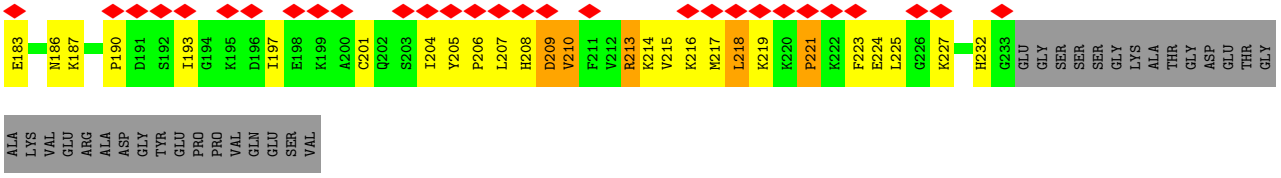


• Molecule 52: 40S RIBOSOMAL PROTEIN ES1

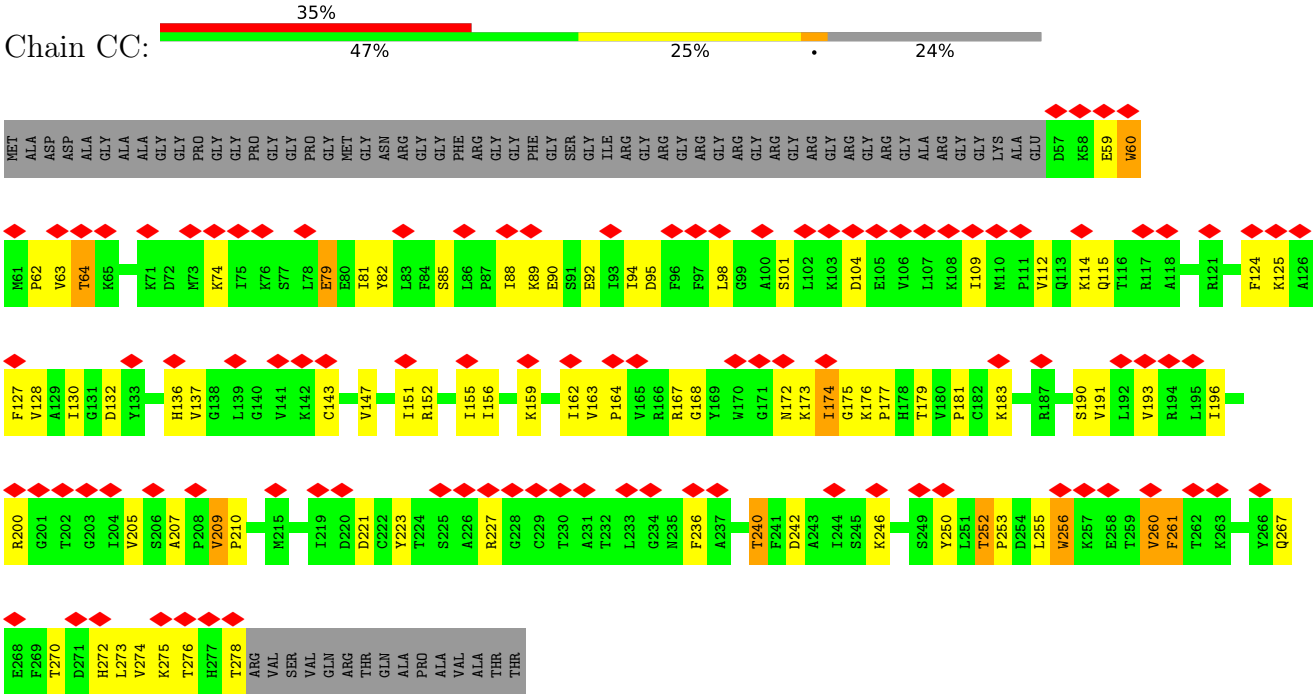
Chain CB:



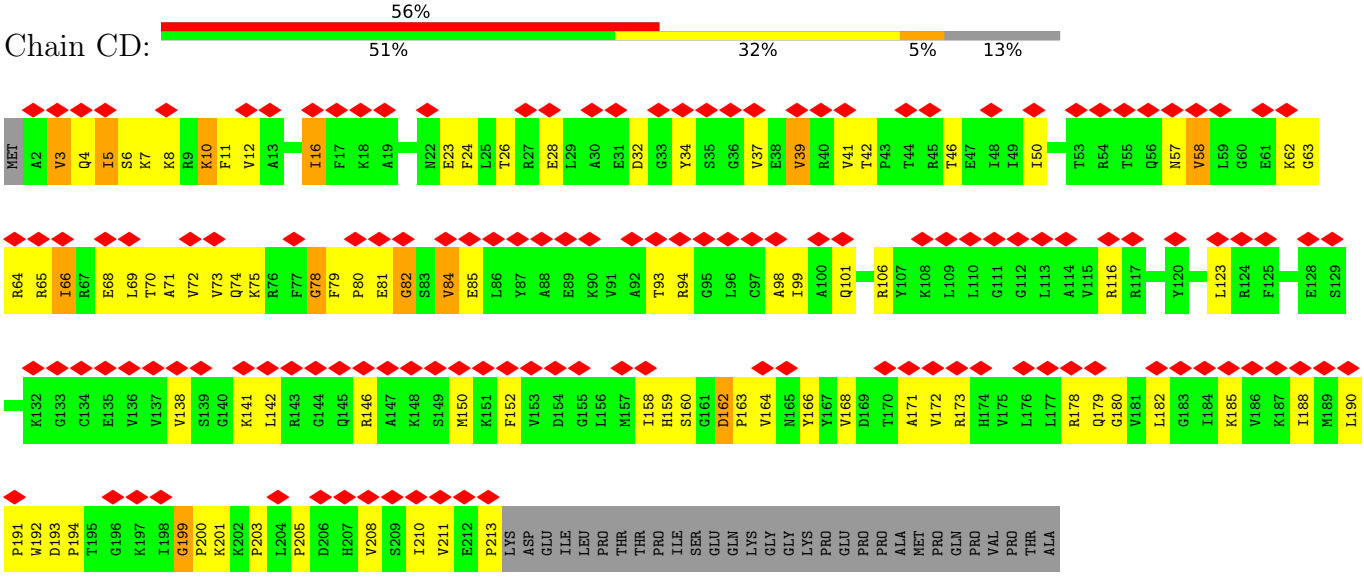




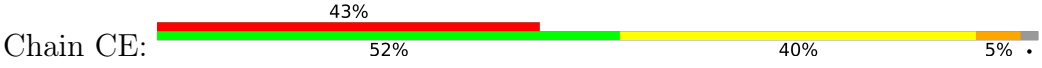
• Molecule 53: 40S RIBOSOMAL PROTEIN US5

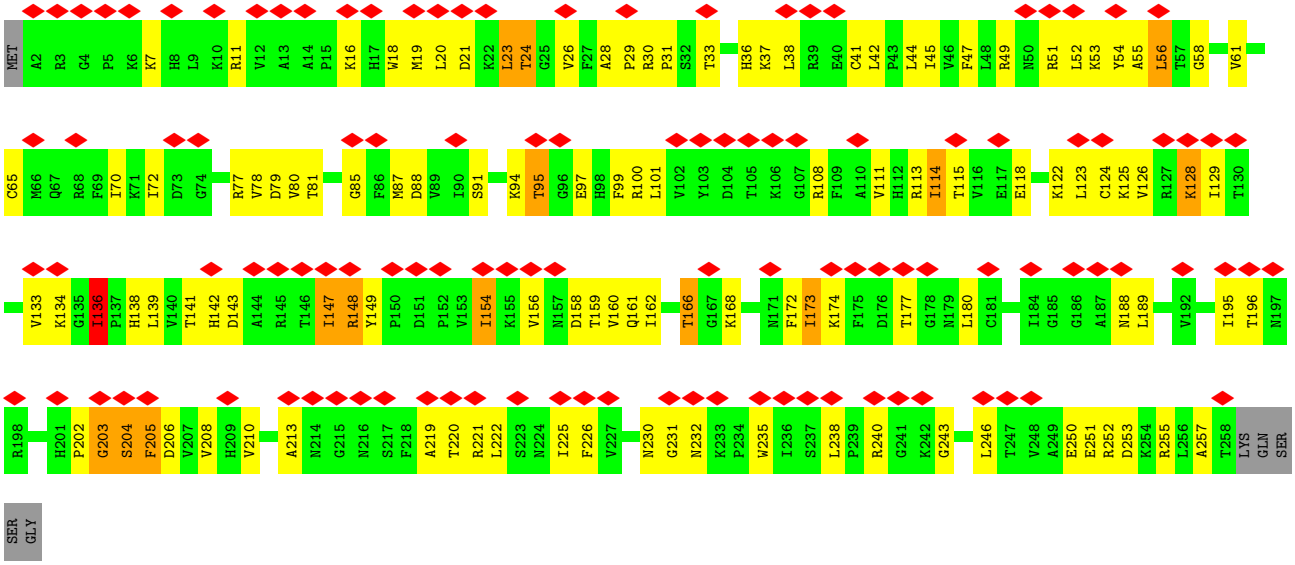


• Molecule 54: 40S RIBOSOMAL PROTEIN US3



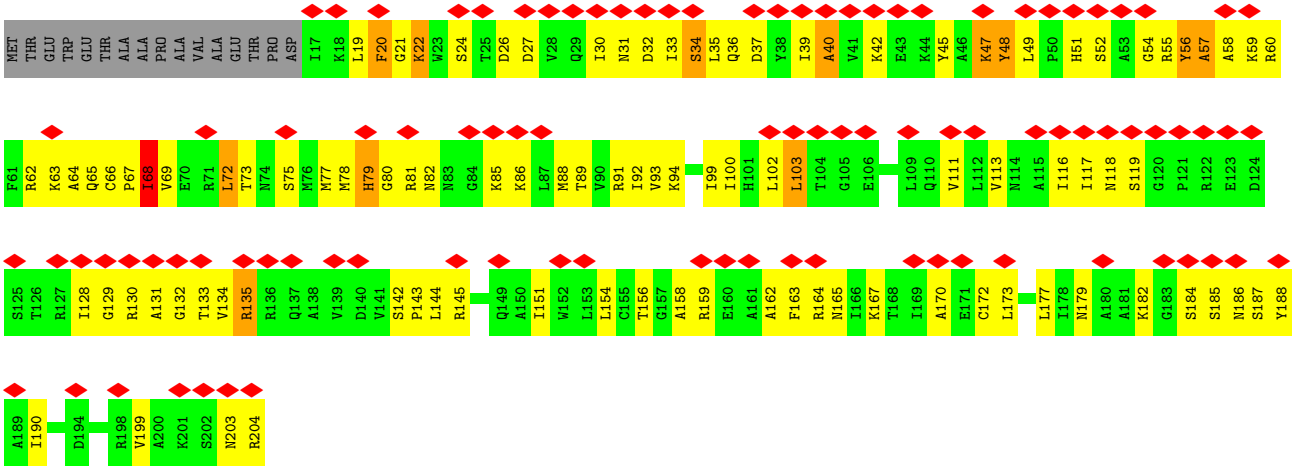
• Molecule 55: 40S RIBOSOMAL PROTEIN ES4





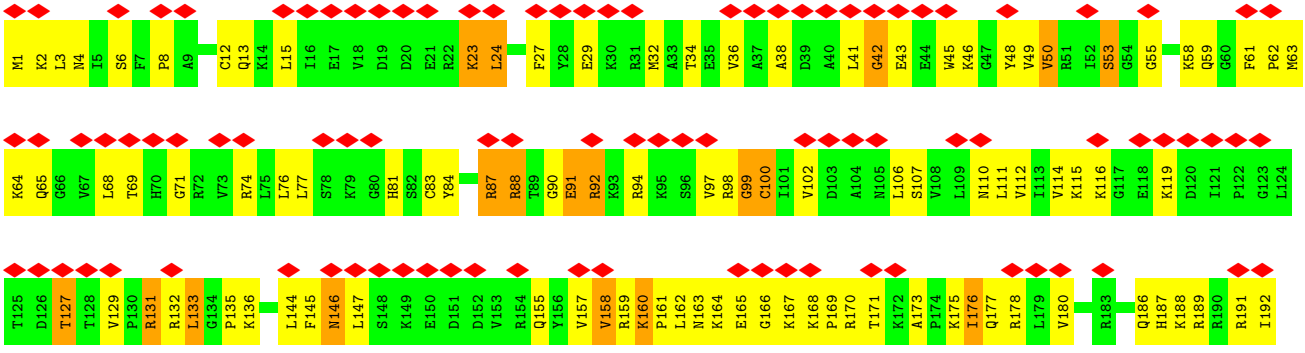
• Molecule 56: 40S RIBOSOMAL PROTEIN US7

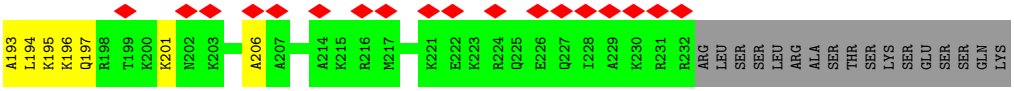
Chain CF:



• Molecule 57: 40S RIBOSOMAL PROTEIN ES6

Chain CG:



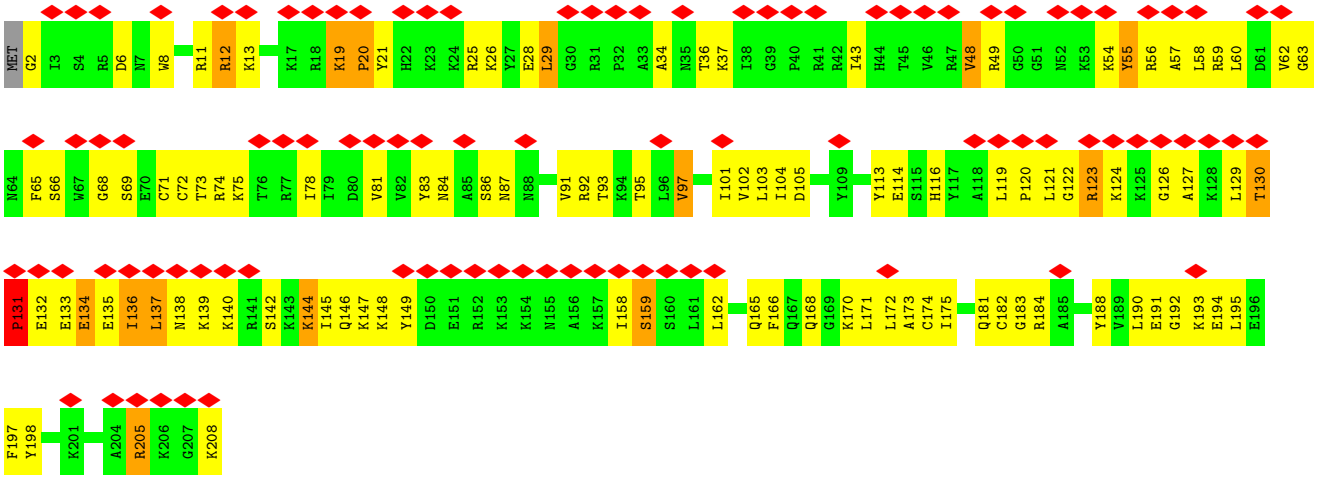


• Molecule 58: 40S RIBOSOMAL PROTEIN ES7

Chain CH:

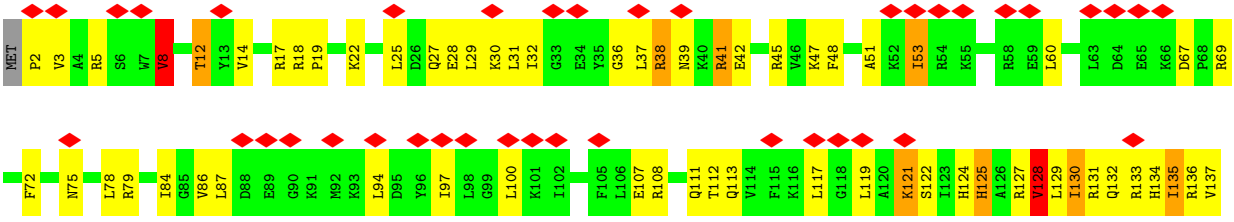
• Molecule 59: 40S RIBOSOMAL PROTEIN ES8

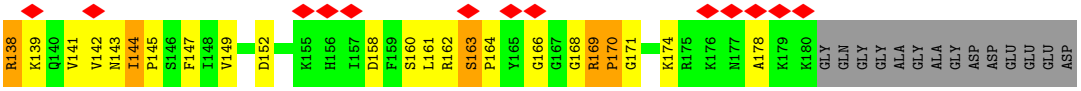
Chain CI:



• Molecule 60: 40S RIBOSOMAL PROTEIN US4

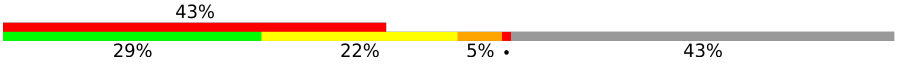
Chain CJ:

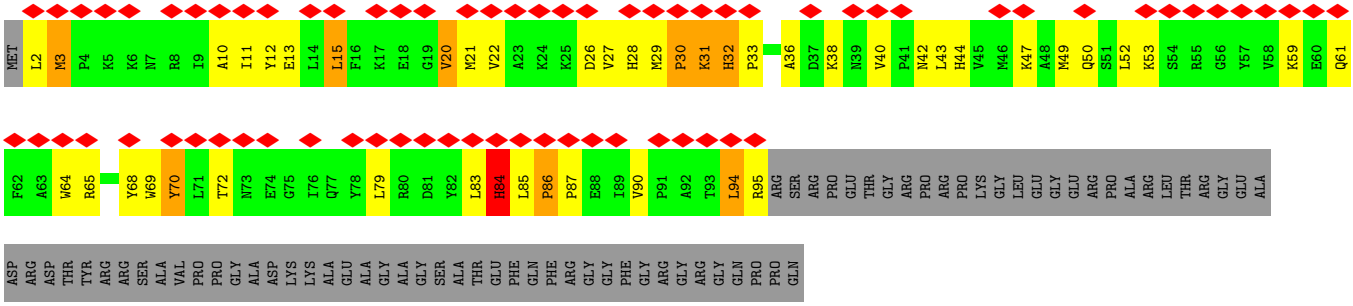




• Molecule 61: 40S RIBOSOMAL PROTEIN ES10

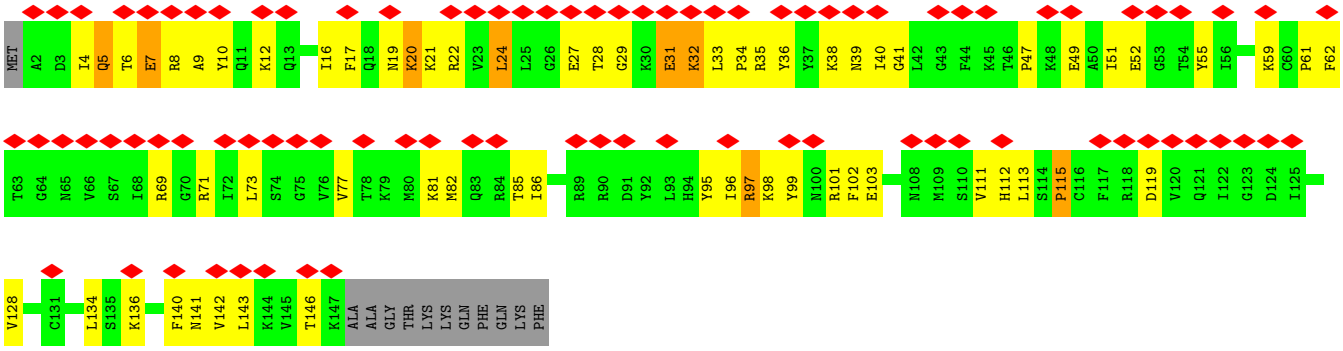
Chain CK:





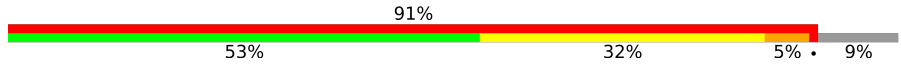
• Molecule 62: 40S RIBOSOMAL PROTEIN US17

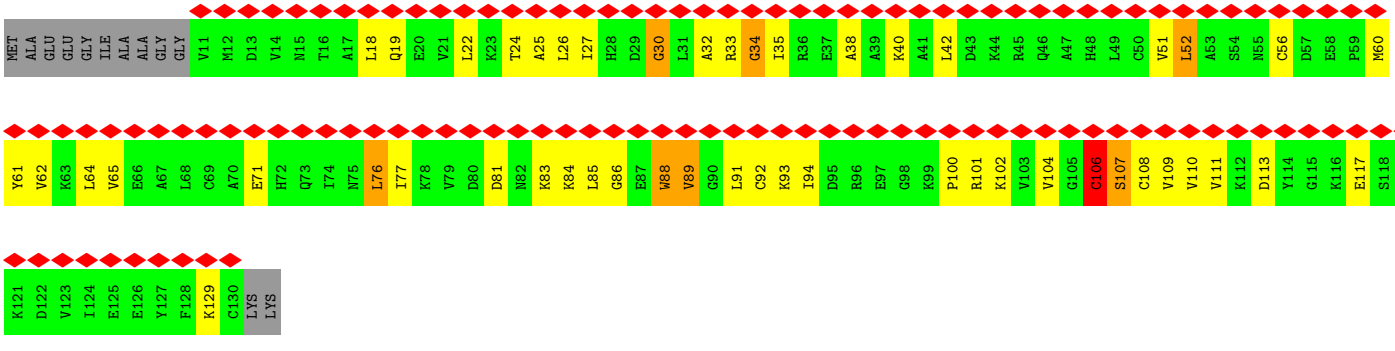
Chain CL:



• Molecule 63: 40S RIBOSOMAL PROTEIN ES12

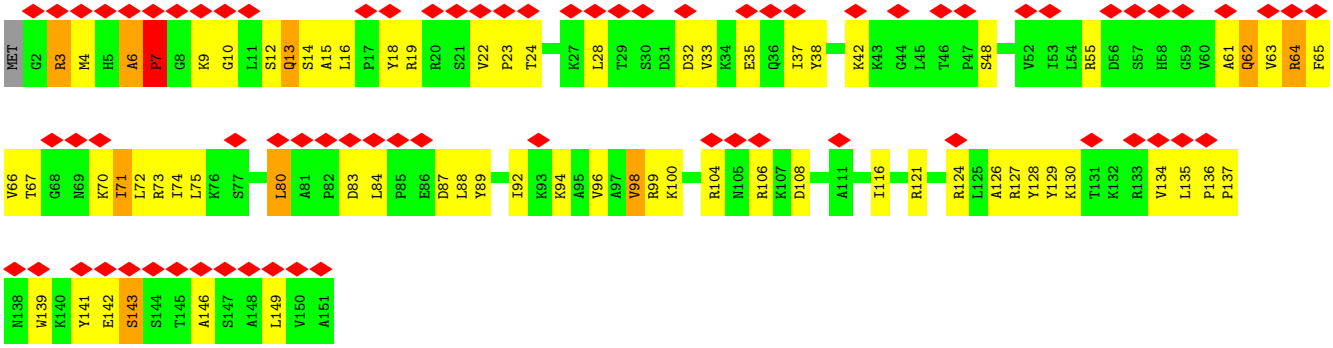
Chain CM:





• Molecule 64: 40S RIBOSOMAL PROTEIN ES15

Chain CN:

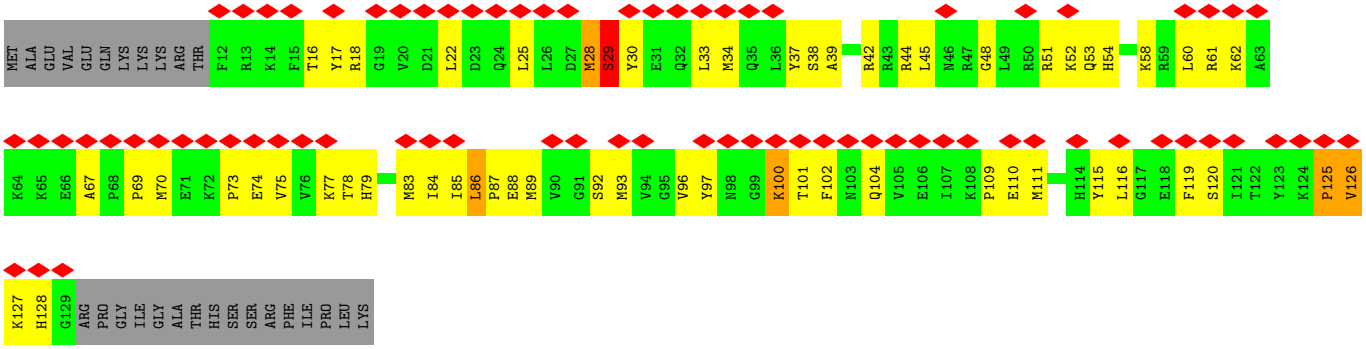


• Molecule 65: 40S RIBOSOMAL PROTEIN ES11

Chain CO:

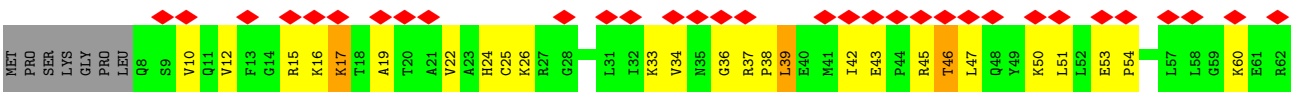
• Molecule 66: 40S RIBOSOMAL PROTEIN US19

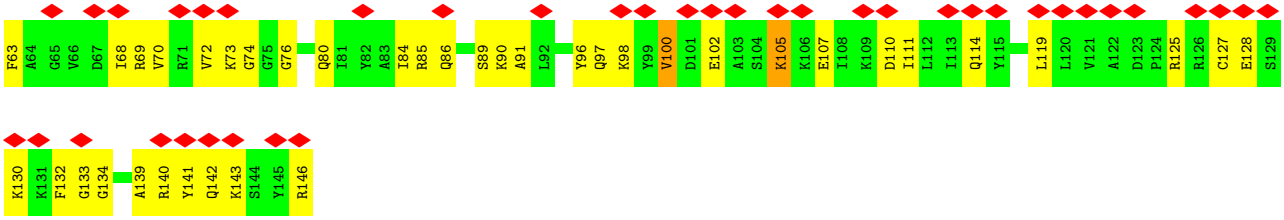
Chain CP:



• Molecule 67: 40S RIBOSOMAL PROTEIN US9

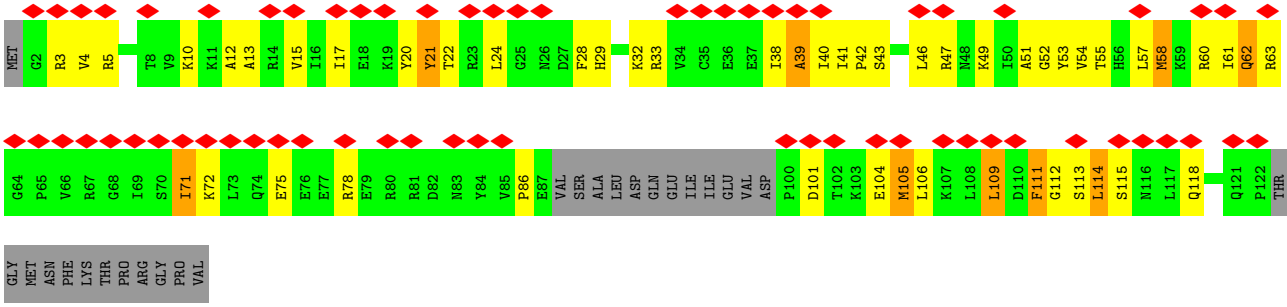
Chain CQ:





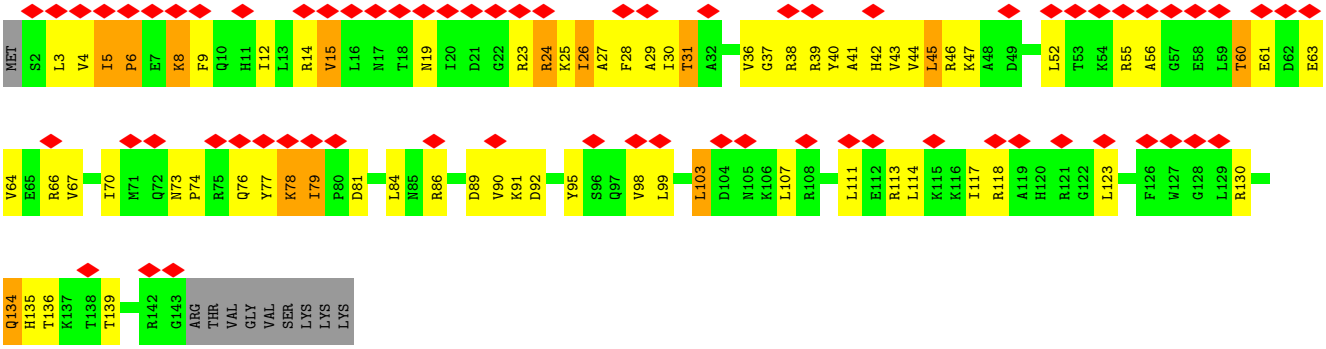
• Molecule 68: 40S RIBOSOMAL PROTEIN ES17

Chain CR:



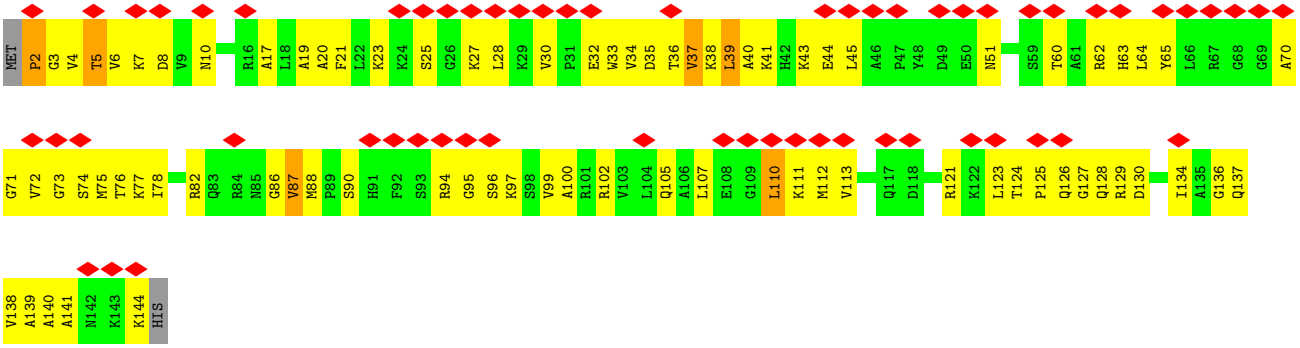
• Molecule 69: 40S RIBOSOMAL PROTEIN US13

Chain CS:



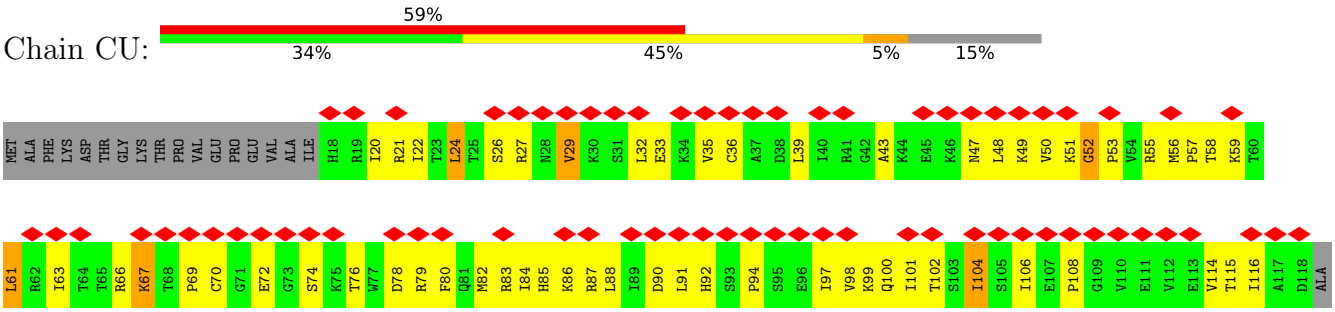
• Molecule 70: 40S RIBOSOMAL PROTEIN ES19

Chain CT:



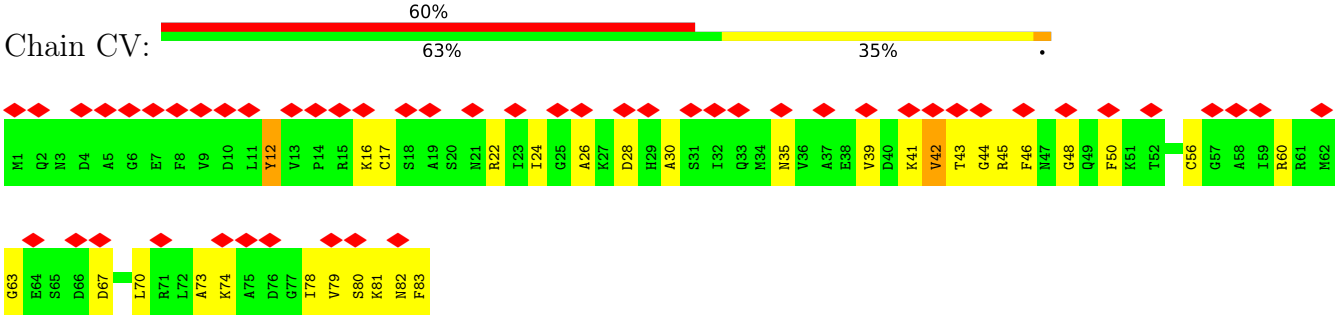
• Molecule 71: 40S RIBOSOMAL PROTEIN US10

Chain CU:



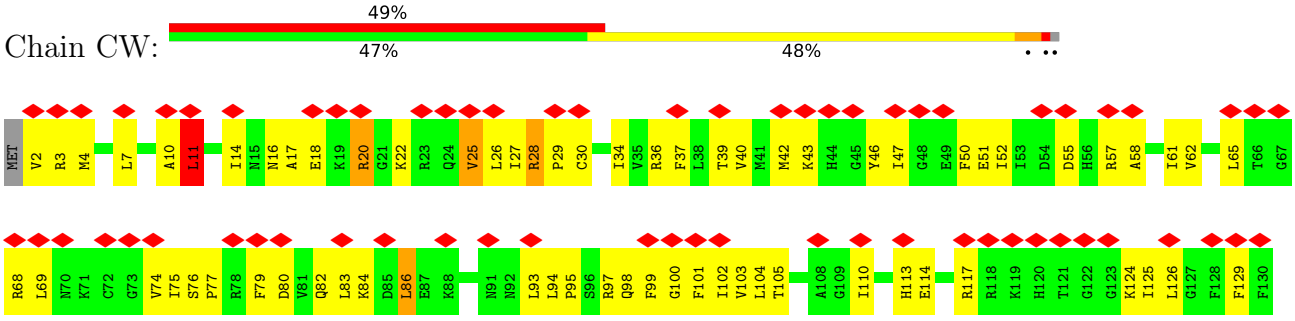
• Molecule 72: 40S RIBOSOMAL PROTEIN ES21

Chain CV:



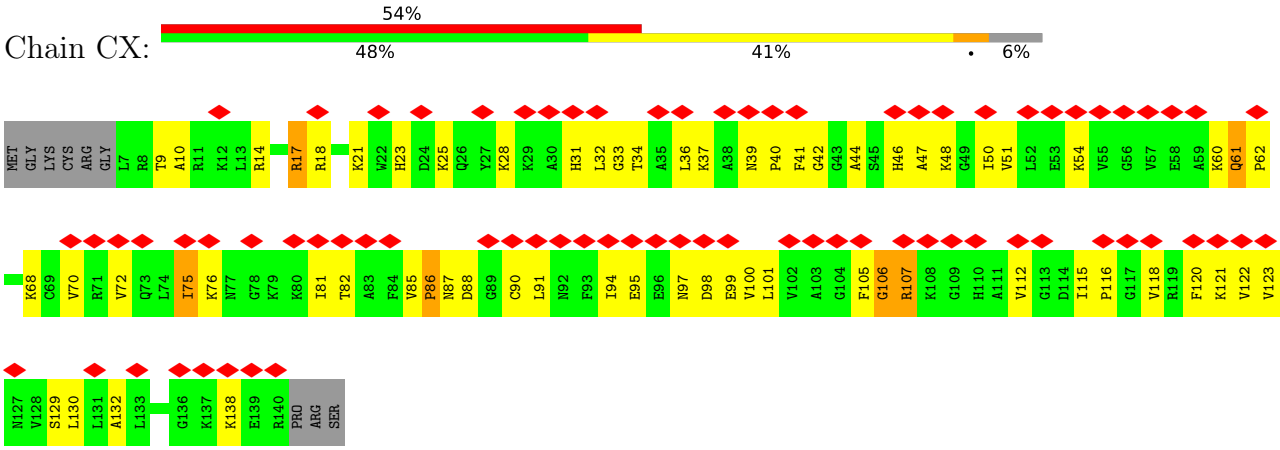
• Molecule 73: 40S RIBOSOMAL PROTEIN US8

Chain CW:



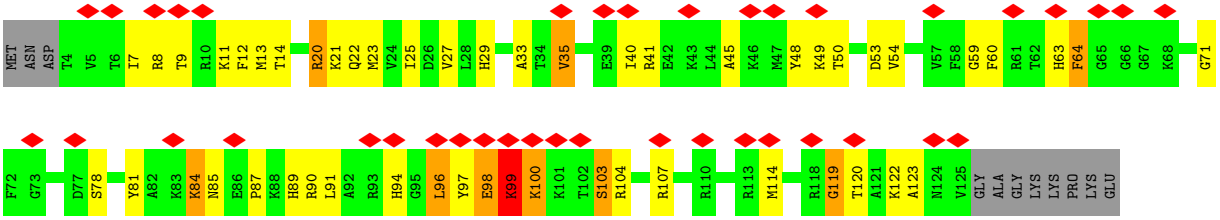
• Molecule 74: 40S RIBOSOMAL PROTEIN US12

Chain CX:



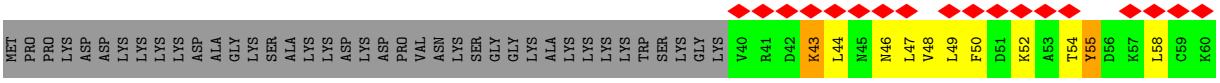
• Molecule 75: 40S RIBOSOMAL PROTEIN ES24

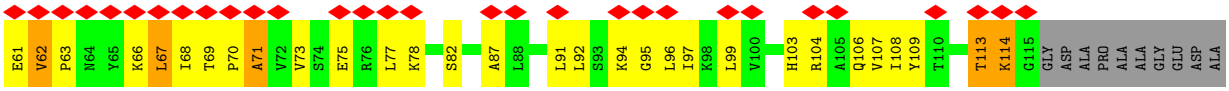
Chain CY:



• Molecule 76: 40S RIBOSOMAL PROTEIN ES25

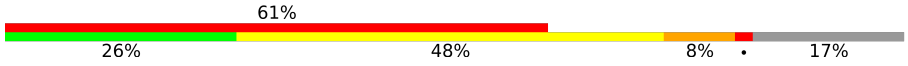
Chain CZ:

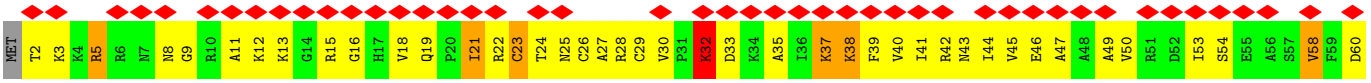


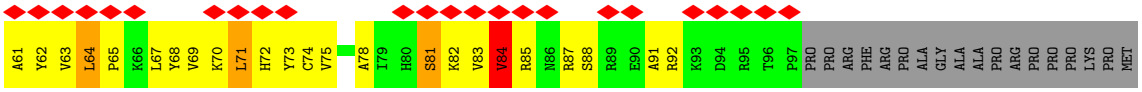


• Molecule 77: 40S RIBOSOMAL PROTEIN ES26

Chain Ca:

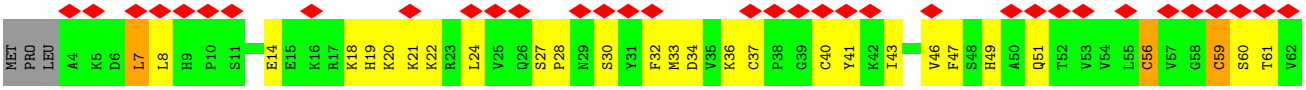


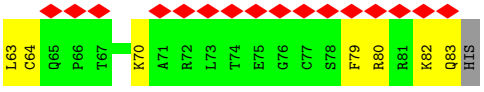




• Molecule 78: 40S RIBOSOMAL PROTEIN ES27

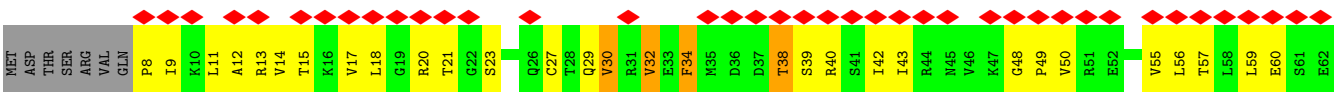
Chain Cb:

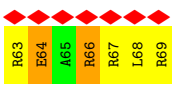




• Molecule 79: 40S RIBOSOMAL PROTEIN ES28

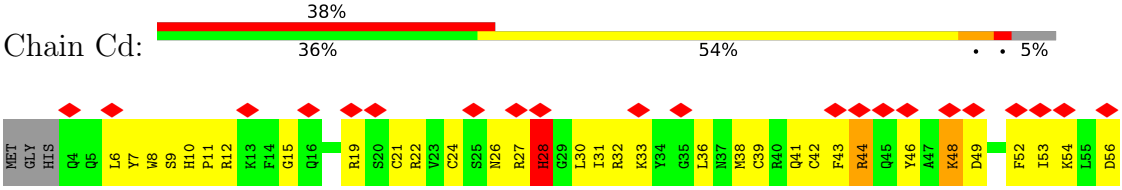
Chain Cc:





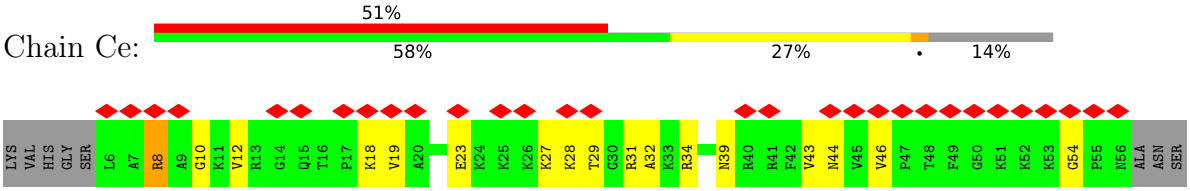
• Molecule 80: 40S RIBOSOMAL PROTEIN US14

Chain Cd:



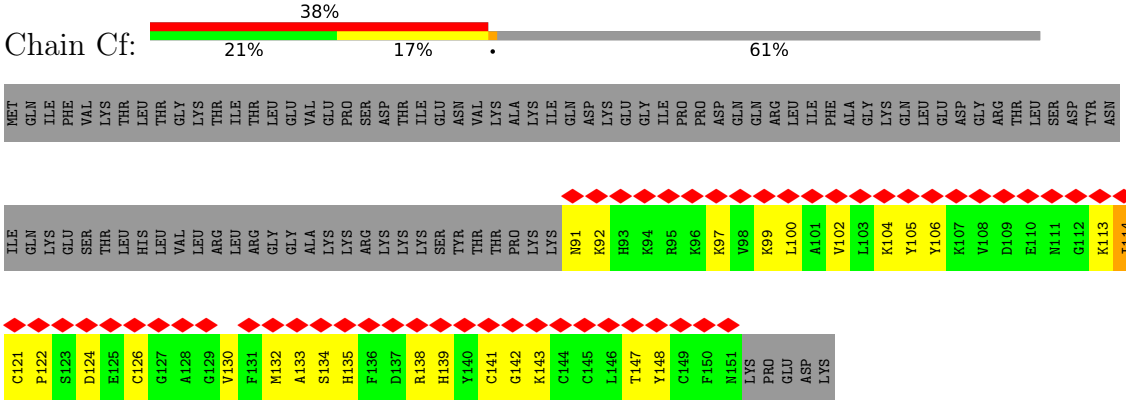
• Molecule 81: 40S RIBOSOMAL PROTEIN ES30

Chain Ce:



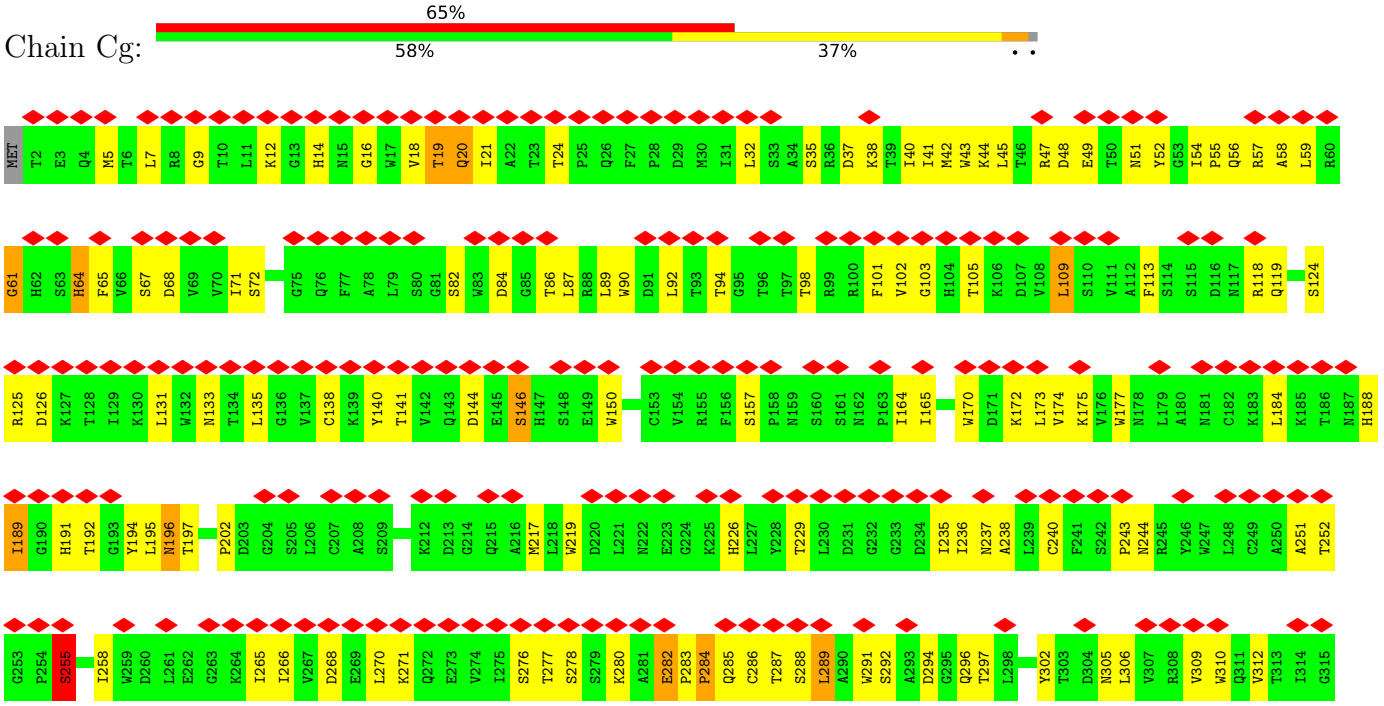
• Molecule 82: 40S RIBOSOMAL PROTEIN ES31

Chain Cf:



• Molecule 83: 40S RIBOSOMAL PROTEIN RACK1

Chain Cg:



THR
ARG

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	541570	Depositor
Resolution determination method	Not provided	
CTF correction method	CTFFIND3	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)	4500	Depositor
Magnification	194805	Depositor
Image detector	TVIPS TEMCAM-F416 (4k x 4k)	Depositor
Maximum map value	11974.922	Depositor
Minimum map value	-3949.843	Depositor
Average map value	-27.770	Depositor
Map value standard deviation	1021.781	Depositor
Recommended contour level	4000	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: GNP, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A2	0.35	16/86671 (0.0%)	0.68	69/135194 (0.1%)
2	A3	0.30	0/3723	0.63	2/5800 (0.0%)
3	A4	0.31	0/2836	0.67	1/4421 (0.0%)
4	AA	0.68	1/1926 (0.1%)	1.09	3/2583 (0.1%)
5	AB	0.72	2/3258 (0.1%)	1.12	10/4361 (0.2%)
6	AC	0.76	1/2943 (0.0%)	1.16	19/3953 (0.5%)
7	AD	0.78	6/2407 (0.2%)	1.11	12/3221 (0.4%)
8	AE	0.81	1/1312 (0.1%)	1.17	9/1763 (0.5%)
9	AF	0.68	0/1986	1.12	10/2644 (0.4%)
10	AG	0.75	1/1914 (0.1%)	1.20	14/2578 (0.5%)
11	AH	0.64	0/1555	1.10	4/2089 (0.2%)
12	AI	0.68	0/1643	1.15	13/2194 (0.6%)
13	AJ	0.79	0/1386	1.18	9/1852 (0.5%)
14	AL	0.82	5/1647 (0.3%)	1.18	14/2205 (0.6%)
15	AM	0.79	1/1162 (0.1%)	1.12	1/1556 (0.1%)
16	AN	0.68	0/1754	1.08	10/2348 (0.4%)
17	AO	0.72	2/1639 (0.1%)	1.15	11/2193 (0.5%)
18	AP	0.67	1/1260 (0.1%)	1.09	2/1691 (0.1%)
19	AQ	0.70	0/1518	1.15	8/2026 (0.4%)
20	AR	0.64	0/1541	1.07	6/2035 (0.3%)
21	AS	0.71	0/1479	1.19	16/1985 (0.8%)
22	AT	0.74	0/1326	1.21	14/1770 (0.8%)
23	AU	0.74	1/841 (0.1%)	1.16	8/1128 (0.7%)
24	AV	0.69	1/978 (0.1%)	1.03	0/1312
25	AW	0.64	1/542 (0.2%)	0.98	2/722 (0.3%)
26	AX	0.66	0/993	1.12	3/1334 (0.2%)
27	AY	0.74	1/1082 (0.1%)	1.17	5/1441 (0.3%)
28	AZ	0.74	0/1138	1.25	5/1517 (0.3%)
29	Aa	0.72	0/1191	1.11	4/1591 (0.3%)
30	Ab	0.71	1/570 (0.2%)	1.10	1/752 (0.1%)
31	Ac	0.72	1/813 (0.1%)	1.05	3/1091 (0.3%)
32	Ad	0.70	0/920	1.06	2/1238 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	Ae	0.71	1/1071 (0.1%)	1.12	5/1428 (0.4%)
34	Af	0.75	1/885 (0.1%)	1.22	10/1185 (0.8%)
35	Ag	0.74	1/917 (0.1%)	1.15	4/1222 (0.3%)
36	Ah	0.63	0/1023	1.03	1/1351 (0.1%)
37	Ai	0.70	1/793 (0.1%)	1.18	6/1048 (0.6%)
38	Aj	0.77	1/704 (0.1%)	1.16	4/931 (0.4%)
39	Ak	0.72	0/575	1.18	4/761 (0.5%)
40	Al	0.66	0/454	1.04	2/599 (0.3%)
41	Am	0.68	0/435	1.21	3/575 (0.5%)
42	An	0.62	0/241	0.85	0/305
43	Ao	0.70	0/885	1.14	4/1166 (0.3%)
44	Ap	0.63	0/718	0.97	1/953 (0.1%)
45	At	0.78	1/1058 (0.1%)	1.22	7/1416 (0.5%)
46	Au	0.69	0/1639	1.12	7/2222 (0.3%)
47	BA	0.50	1/1809 (0.1%)	1.11	22/2819 (0.8%)
48	BB	0.90	11/4926 (0.2%)	1.37	44/6641 (0.7%)
49	BC	0.96	4/6230 (0.1%)	1.51	109/9712 (1.1%)
50	C1	0.31	0/41550	0.66	11/64763 (0.0%)
51	CA	0.89	4/1756 (0.2%)	1.16	11/2386 (0.5%)
52	CB	0.83	0/1756	1.20	11/2350 (0.5%)
53	CC	0.69	0/1761	1.10	4/2379 (0.2%)
54	CD	0.63	0/1672	1.15	8/2250 (0.4%)
55	CE	0.72	0/2072	1.16	10/2793 (0.4%)
56	CF	0.68	0/1507	1.15	10/2026 (0.5%)
57	CG	0.77	1/1907 (0.1%)	1.23	11/2538 (0.4%)
58	CH	0.75	0/1558	1.26	12/2087 (0.6%)
59	CI	0.75	0/1724	1.12	6/2298 (0.3%)
60	CJ	0.74	0/1520	1.25	13/2030 (0.6%)
61	CK	0.77	0/815	1.10	5/1101 (0.5%)
62	CL	0.69	0/1220	1.16	8/1633 (0.5%)
63	CM	0.74	0/941	1.19	3/1264 (0.2%)
64	CN	0.69	0/1231	1.21	12/1656 (0.7%)
65	CO	0.73	0/1036	1.16	6/1391 (0.4%)
66	CP	0.66	0/1000	1.07	2/1335 (0.1%)
67	CQ	0.69	0/1125	1.10	3/1506 (0.2%)
68	CR	0.69	0/904	1.12	6/1208 (0.5%)
69	CS	0.69	0/1190	1.13	5/1594 (0.3%)
70	CT	0.68	0/1131	1.10	3/1515 (0.2%)
71	CU	0.76	0/813	1.17	3/1092 (0.3%)
72	CV	0.70	0/643	1.16	2/860 (0.2%)
73	CW	0.69	0/1050	1.12	6/1406 (0.4%)
74	CX	0.75	0/1063	1.11	1/1421 (0.1%)
75	CY	0.70	0/1019	1.12	5/1354 (0.4%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
76	CZ	0.68	0/611	1.14	3/820 (0.4%)
77	Ca	0.78	0/778	1.19	7/1041 (0.7%)
78	Cb	0.70	0/637	1.09	2/854 (0.2%)
79	Cc	0.71	0/492	1.15	5/657 (0.8%)
80	Cd	0.74	0/454	1.10	1/603 (0.2%)
81	Ce	0.70	0/417	1.09	0/548
82	Cf	0.76	0/507	1.34	4/673 (0.6%)
83	Cg	0.69	0/2497	1.06	7/3399 (0.2%)
All	All	0.55	70/240674 (0.0%)	0.91	729/353753 (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
1	A2	0	35
2	A3	0	2
48	BB	0	12
49	BC	0	105
50	C1	0	23
All	All	0	177

All (70) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A2	1701	C	O5'-C5'	16.80	1.67	1.42
1	A2	1701	C	C5'-C4'	14.79	1.73	1.51
1	A2	1673	C	C3'-O3'	13.66	1.63	1.43
1	A2	1673	C	O3'-P	11.27	1.78	1.61
1	A2	1673	C	O5'-C5'	10.36	1.58	1.42
7	AD	264	LYS	N-CA	9.26	1.58	1.46
49	BC	349	C	O3'-P	-9.07	1.47	1.61
1	A2	1673	C	C5'-C4'	9.04	1.65	1.51
1	A2	1701	C	P-O5'	8.97	1.73	1.59
1	A2	3914	A	O5'-C5'	-8.77	1.29	1.42
1	A2	1701	C	O3'-P	8.22	1.73	1.61
7	AD	264	LYS	CA-C	8.11	1.63	1.52
49	BC	348	A	O3'-P	-7.98	1.49	1.61
7	AD	265	ARG	N-CA	7.90	1.56	1.46
1	A2	1701	C	C4'-C3'	7.83	1.64	1.52
1	A2	3914	A	C3'-O3'	-7.58	1.30	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A2	1673	C	C4'-C3'	7.26	1.64	1.53
48	BB	1278	HIS	CG-ND1	-6.95	1.30	1.38
1	A2	1701	C	C3'-O3'	6.91	1.52	1.42
51	CA	203	PHE	CA-C	6.90	1.60	1.52
49	BC	334	C	O5'-C5'	6.88	1.52	1.42
7	AD	266	TRP	N-CA	6.68	1.53	1.46
1	A2	3921	A	O3'-P	-6.55	1.51	1.61
7	AD	264	LYS	C-N	6.52	1.42	1.33
48	BB	1278	HIS	CD2-NE2	-6.40	1.30	1.37
47	BA	9	A	O5'-C5'	6.34	1.52	1.42
31	Ac	109	PRO	C-N	-6.14	1.24	1.33
24	AV	84	GLN	CA-C	6.04	1.55	1.52
34	Af	63	LYS	C-O	-6.03	1.19	1.24
7	AD	265	ARG	CA-C	6.00	1.60	1.52
27	AY	127	GLN	C-N	-5.95	1.25	1.33
14	AL	130	LYS	C-N	5.92	1.40	1.34
6	AC	365	SER	C-N	-5.90	1.25	1.33
1	A2	1673	C	P-O5'	5.86	1.68	1.59
51	CA	203	PHE	C-N	5.85	1.40	1.33
14	AL	133	ALA	C-N	5.80	1.41	1.33
48	BB	1179	HIS	C-O	-5.79	1.17	1.24
33	Ae	131	SER	C-N	-5.77	1.25	1.33
4	AA	247	ARG	C-N	-5.77	1.25	1.33
38	Aj	85	LYS	C-N	-5.75	1.25	1.34
15	AM	140	PRO	C-N	-5.73	1.25	1.33
5	AB	396	ARG	C-N	-5.71	1.25	1.33
14	AL	131	PRO	N-CD	5.71	1.55	1.47
25	AW	63	GLN	C-N	-5.70	1.25	1.33
37	Ai	101	ALA	C-N	-5.69	1.25	1.33
14	AL	206	ASP	C-N	-5.65	1.25	1.33
18	AP	153	LYS	C-N	-5.65	1.25	1.33
45	At	130	ARG	C-N	-5.65	1.25	1.33
30	Ab	69	ALA	C-N	-5.64	1.25	1.33
35	Ag	115	LYS	C-N	-5.63	1.25	1.33
23	AU	116	GLN	C-N	-5.59	1.25	1.33
51	CA	204	TYR	N-CA	5.58	1.53	1.46
17	AO	199	HIS	C-N	-5.57	1.25	1.33
10	AG	262	ALA	C-N	-5.56	1.25	1.33
5	AB	300	LYS	CA-C	5.43	1.57	1.52
14	AL	134	PRO	N-CD	5.38	1.55	1.47
48	BB	846	PRO	N-CD	5.37	1.55	1.47
48	BB	1066	HIS	CG-ND1	-5.37	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
49	BC	240	C	O3'-P	-5.33	1.53	1.61
17	AO	109	PRO	CA-C	5.28	1.57	1.52
48	BB	1179	HIS	CD2-NE2	-5.27	1.32	1.37
57	CG	131	ARG	C-N	-5.26	1.27	1.33
48	BB	1389	HIS	CD2-NE2	-5.19	1.32	1.37
1	A2	3913	G	O3'-P	-5.17	1.53	1.61
48	BB	1228	HIS	CD2-NE2	-5.15	1.32	1.37
48	BB	1421	TRP	NE1-CE2	-5.12	1.31	1.37
48	BB	1278	HIS	CG-CD2	-5.10	1.30	1.35
8	AE	224	LYS	C-N	5.08	1.41	1.33
48	BB	853	HIS	CD2-NE2	-5.07	1.32	1.37
51	CA	202	TYR	CA-C	5.01	1.59	1.53

All (729) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A2	1701	C	C2'-C3'-O3'	-18.44	86.04	113.70
47	BA	6	G	C4'-C3'-O3'	16.88	134.72	109.40
1	A2	3920	G	C4'-C3'-O3'	-16.37	88.44	113.00
1	A2	1701	C	C4'-C3'-O3'	16.15	137.22	113.00
49	BC	63	U	C4'-C3'-O3'	15.96	133.34	109.40
1	A2	3914	A	C2'-C3'-O3'	-15.66	90.20	113.70
1	A2	3914	A	C4'-C3'-O3'	-15.33	90.00	113.00
1	A2	1701	C	O4'-C4'-C3'	-15.18	88.82	104.00
47	BA	8	U	C5'-C4'-C3'	14.42	137.62	116.00
1	A2	3914	A	O4'-C4'-C3'	-13.95	90.05	104.00
47	BA	69	G	C4'-C3'-O3'	-13.74	92.38	113.00
48	BB	1278	HIS	CG-CD2-NE2	13.42	120.62	107.20
49	BC	62	C	C4'-C3'-O3'	-12.54	94.20	113.00
1	A2	4035	U	P-O5'-C5'	-12.27	102.49	120.90
5	AB	325	GLU	N-CA-C	12.18	124.64	111.36
47	BA	74	C	C4'-C3'-O3'	11.79	130.69	113.00
1	A2	3921	A	C4'-C3'-O3'	-11.64	95.53	113.00
52	CB	37	ALA	N-CA-C	11.19	123.48	111.28
48	BB	1278	HIS	CE1-NE2-CD2	-10.86	98.14	109.00
49	BC	348	A	C4'-C3'-O3'	-10.62	97.08	113.00
1	A2	1673	C	C4'-C3'-O3'	10.56	125.25	109.40
47	BA	72	C	C4'-C3'-O3'	10.55	128.82	113.00
82	Cf	124	ASP	N-CA-C	-10.46	97.12	111.56
49	BC	350	G	O5'-C5'-C4'	-10.46	95.81	111.50
13	AJ	68	ILE	N-CA-C	10.37	121.19	110.62
54	CD	58	VAL	N-CA-C	10.35	120.36	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	AC	213	GLU	N-CA-C	10.34	122.63	111.36
49	BC	312	U	C4'-C3'-C2'	-9.86	92.74	102.60
1	A2	4034	U	C5'-C4'-C3'	-9.81	101.29	116.00
64	CN	24	THR	N-CA-C	9.78	121.70	111.14
49	BC	349	C	O3'-P-O5'	-9.70	89.45	104.00
53	CC	60	TRP	N-CA-C	9.70	121.45	111.07
49	BC	330	A	C4'-C3'-O3'	9.62	127.43	113.00
55	CE	136	ILE	N-CA-C	9.62	118.37	107.89
58	CH	9	VAL	N-CA-C	9.54	120.36	110.62
49	BC	333	C	C2'-C3'-O3'	-9.53	95.20	109.50
48	BB	1211	PHE	CA-CB-CG	9.33	123.13	113.80
49	BC	313	G	C5'-C4'-O4'	9.32	123.79	109.80
49	BC	276	A	C4'-C3'-C2'	-9.17	93.43	102.60
1	A2	3920	G	O3'-P-O5'	-9.09	90.37	104.00
48	BB	1222	ILE	O-C-N	-9.07	114.80	122.97
1	A2	1673	C	O3'-P-O5'	9.07	117.60	104.00
26	AX	78	LYS	N-CA-C	9.05	121.08	111.03
64	CN	6	ALA	N-CA-C	-9.04	96.48	110.58
60	CJ	53	ILE	N-CA-C	9.04	119.03	110.53
38	Aj	63	ARG	N-CA-C	8.95	121.04	111.28
11	AH	41	ILE	N-CA-C	8.89	119.70	110.72
49	BC	331	G	C2'-C3'-O3'	8.78	126.87	113.70
56	CF	68	ILE	N-CA-C	8.67	118.74	110.42
53	CC	260	VAL	N-CA-C	8.64	119.43	110.62
5	AB	258	HIS	C-N-CD	-8.56	89.89	125.00
1	A2	3919	U	C4'-C3'-O3'	8.56	122.24	109.40
4	AA	21	LYS	N-CA-C	8.53	120.58	111.28
49	BC	252	A	C4'-C3'-O3'	8.51	122.17	109.40
1	A2	3914	A	C5'-C4'-O4'	8.48	122.52	109.80
47	BA	73	A	C2'-C3'-O3'	-8.47	100.99	113.70
1	A2	1701	C	C5'-C4'-C3'	8.46	128.70	116.00
77	Ca	58	VAL	N-CA-C	8.45	119.70	111.67
1	A2	3913	G	P-O3'-C3'	-8.44	107.53	120.20
1	A2	3913	G	C4'-C3'-O3'	8.40	125.60	113.00
9	AF	16	GLU	N-CA-C	8.37	120.03	111.07
27	AY	51	LYS	N-CA-C	8.36	120.40	111.28
49	BC	323	G	C4'-C3'-O3'	8.35	121.92	109.40
1	A2	3915	G	P-O5'-C5'	-8.32	108.42	120.90
13	AJ	119	TYR	N-CA-C	8.31	119.96	111.07
47	BA	6	G	C2'-C3'-O3'	-8.29	97.06	109.50
20	AR	112	SER	N-CA-C	8.28	120.39	111.36
47	BA	69	G	C2'-C3'-O3'	8.27	126.10	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
63	CM	89	VAL	N-CA-C	8.10	118.90	110.72
62	CL	32	LYS	N-CA-C	8.08	120.17	111.36
49	BC	256	G	C1'-C2'-O2'	-8.07	96.30	108.40
9	AF	98	ILE	N-CA-C	8.07	118.85	110.62
45	At	12	ASN	N-CA-C	8.06	120.15	111.36
62	CL	28	THR	N-CA-C	8.06	120.06	111.28
49	BC	330	A	O3'-P-O5'	-8.01	91.99	104.00
38	Aj	84	PRO	N-CA-C	8.00	124.44	113.65
49	BC	282	U	O5'-C5'-C4'	7.98	123.48	111.50
6	AC	147	VAL	N-CA-C	7.97	116.76	108.95
37	Ai	97	MET	N-CA-C	7.91	119.98	111.36
70	CT	44	GLU	N-CA-C	7.90	119.89	111.28
16	AN	80	THR	N-CA-C	7.88	119.95	111.36
49	BC	334	C	P-O5'-C5'	7.88	132.72	120.90
4	AA	212	GLY	N-CA-C	7.88	120.99	111.93
1	A2	3914	A	O4'-C1'-N9	7.86	120.28	108.50
48	BB	899	ILE	CA-C-O	-7.85	112.17	120.57
14	AL	172	GLU	N-CA-C	-7.83	102.75	111.28
62	CL	31	GLU	N-CA-C	7.81	119.58	111.14
1	A2	3914	A	N9-C1'-C2'	-7.81	100.29	112.00
35	Ag	12	SER	N-CA-C	7.80	119.78	111.28
14	AL	174	LYS	N-CA-C	-7.79	97.93	109.62
1	A2	4017	U	C2'-C3'-O3'	7.76	121.14	109.50
1	A2	3919	U	N1-C2-O2	-7.74	99.59	122.80
47	BA	8	U	C4'-C3'-O3'	7.72	124.58	113.00
61	CK	94	LEU	N-CA-C	7.71	119.32	111.07
49	BC	281	U	O5'-C5'-C4'	7.68	123.21	111.70
1	A2	3919	U	N3-C2-O2	7.66	145.19	122.20
1	A2	3920	G	C2'-C3'-O3'	-7.63	102.25	113.70
49	BC	330	A	P-O3'-C3'	7.63	131.65	120.20
21	AS	166	ARG	N-CA-C	7.56	119.52	111.28
14	AL	76	PHE	N-CA-C	7.56	119.60	111.36
49	BC	331	G	C5'-C4'-O4'	-7.52	98.52	109.80
49	BC	287	U	C2'-C3'-O3'	-7.51	102.44	113.70
1	A2	3921	A	P-O5'-C5'	7.49	132.13	120.90
35	Ag	48	VAL	N-CA-C	7.49	117.61	110.42
1	A2	3920	G	O4'-C4'-C3'	-7.47	96.53	104.00
36	Ah	37	THR	N-CA-C	7.43	119.02	111.07
47	BA	68	C	C2'-C3'-O3'	-7.42	102.57	113.70
7	AD	265	ARG	N-CA-C	7.36	126.48	110.80
16	AN	126	THR	N-CA-C	7.36	119.38	111.36
41	Am	108	VAL	N-CA-C	7.32	118.11	110.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	BC	332	A	C2'-C3'-O3'	7.32	124.67	113.70
34	Af	58	VAL	N-CA-C	7.28	118.22	111.45
16	AN	89	VAL	N-CA-C	7.28	118.07	110.72
29	Aa	15	VAL	N-CA-C	7.26	117.39	110.42
59	CI	140	LYS	N-CA-C	7.26	120.24	111.82
68	CR	38	ILE	N-CA-C	7.26	118.05	110.72
53	CC	275	LYS	N-CA-C	7.25	118.83	111.07
67	CQ	98	LYS	N-CA-C	7.25	119.26	111.36
75	CY	103	SER	N-CA-C	7.24	121.37	112.54
54	CD	82	GLY	N-CA-C	-7.24	105.24	115.30
49	BC	265	U	C2'-C3'-O3'	7.23	120.34	109.50
17	AO	185	VAL	N-CA-C	7.22	117.98	110.62
1	A2	3920	G	O5'-C5'-C4'	7.21	122.32	111.50
49	BC	330	A	C2'-C3'-O3'	-7.21	102.89	113.70
49	BC	348	A	O3'-P-O5'	-7.20	93.20	104.00
49	BC	313	G	O3'-P-O5'	-7.18	93.24	104.00
10	AG	215	LEU	N-CA-C	7.16	118.73	111.07
49	BC	346	G	O3'-P-O5'	-7.16	93.27	104.00
83	Cg	67	SER	N-CA-C	7.16	119.16	111.36
1	A2	4130	A	C2'-C3'-O3'	7.15	120.22	109.50
49	BC	266	G	C2'-C3'-O3'	7.15	120.22	109.50
1	A2	4034	U	P-O5'-C5'	-7.14	110.19	120.90
27	AY	126	ARG	N-CA-C	-7.10	103.54	111.28
60	CJ	135	ILE	N-CA-C	7.10	118.11	108.17
15	AM	16	SER	N-CA-C	7.09	119.09	111.36
83	Cg	196	ASN	N-CA-C	7.07	119.07	111.36
7	AD	124	GLU	N-CA-C	7.05	118.97	111.28
1	A2	4034	U	C2'-C3'-O3'	7.04	124.26	113.70
47	BA	9	A	P-O5'-C5'	7.02	131.43	120.90
77	Ca	13	LYS	N-CA-C	7.02	119.01	111.36
1	A2	1673	C	C5'-C4'-C3'	7.01	125.72	115.20
47	BA	8	U	O5'-C5'-C4'	7.00	122.00	111.50
48	BB	1382	SER	CA-C-N	7.00	126.96	120.03
48	BB	1382	SER	C-N-CA	7.00	126.96	120.03
48	BB	887	VAL	CA-C-N	6.98	126.97	119.78
48	BB	887	VAL	C-N-CA	6.98	126.97	119.78
49	BC	120	C	O4'-C1'-C2'	-6.96	100.64	107.60
48	BB	1090	ILE	CA-C-O	-6.95	112.54	120.67
49	BC	126	C	C4'-C3'-C2'	-6.94	95.66	102.60
66	CP	54	HIS	N-CA-C	6.94	118.49	111.07
52	CB	35	ALA	CA-C-N	6.93	126.89	120.03
52	CB	35	ALA	C-N-CA	6.93	126.89	120.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A2	4033	G	C4'-C3'-O3'	-6.91	102.63	113.00
21	AS	169	THR	N-CA-C	6.91	118.89	111.36
65	CO	147	ARG	N-CA-C	6.90	118.80	111.28
12	AI	200	ILE	N-CA-C	6.89	114.72	107.76
1	A2	4637	U	C2'-C3'-O3'	6.88	119.83	109.50
17	AO	110	PRO	N-CA-C	6.88	119.10	110.70
56	CF	57	ALA	N-CA-C	6.88	118.78	111.28
47	BA	68	C	O3'-P-O5'	-6.88	93.68	104.00
5	AB	358	ARG	N-CA-C	-6.87	103.79	111.28
5	AB	205	VAL	N-CA-C	6.87	114.95	107.60
12	AI	159	PHE	N-CA-C	6.87	118.72	110.07
7	AD	37	VAL	N-CA-C	6.86	117.65	110.72
50	C1	1781	A	C2'-C3'-O3'	6.86	119.79	109.50
48	BB	1036	PRO	N-CA-CB	-6.84	97.08	103.17
33	Ae	17	THR	N-CA-C	-6.84	104.41	112.89
69	CS	26	ILE	N-CA-C	6.83	116.98	110.42
1	A2	3921	A	C2'-C3'-O3'	6.83	123.94	113.70
58	CH	15	LYS	CA-C-N	6.79	126.71	119.85
58	CH	15	LYS	C-N-CA	6.79	126.71	119.85
49	BC	349	C	C5'-C4'-C3'	-6.79	105.02	115.20
65	CO	17	LEU	N-CA-C	-6.78	103.89	111.28
40	Al	49	LEU	N-CA-C	6.77	118.32	111.07
8	AE	156	ARG	N-CA-C	-6.76	103.91	111.28
47	BA	8	U	P-O3'-C3'	6.75	130.33	120.20
64	CN	13	GLN	N-CA-C	6.75	119.93	109.07
1	A2	2481	C	C2'-C3'-O3'	6.74	119.61	109.50
9	AF	199	LYS	N-CA-C	6.73	118.61	111.28
52	CB	46	LYS	N-CA-C	6.72	119.29	109.07
22	AT	107	LYS	N-CA-C	-6.72	103.96	111.28
51	CA	77	ILE	N-CA-C	6.70	117.49	108.11
9	AF	233	ALA	N-CA-C	6.70	119.46	110.35
6	AC	304	ALA	N-CA-C	6.69	119.32	110.08
73	CW	93	LEU	N-CA-C	6.69	118.65	111.36
21	AS	51	LEU	N-CA-C	6.69	118.65	111.36
48	BB	1209	LEU	CB-CG-CD1	-6.69	90.63	110.70
18	AP	115	GLU	N-CA-C	6.67	118.64	111.36
21	AS	108	GLN	N-CA-C	6.66	118.62	111.36
49	BC	256	G	C3'-C2'-C1'	6.66	107.96	101.30
28	AZ	68	ILE	N-CA-C	6.65	117.43	108.11
48	BB	1036	PRO	CB-CA-C	-6.65	103.06	111.71
32	Ad	80	VAL	N-CA-C	6.65	115.47	108.95
74	CX	72	VAL	N-CA-C	6.63	117.40	108.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AI	200	ILE	CA-C-O	6.63	123.06	119.15
49	BC	257	A	C4'-C3'-O3'	6.63	119.34	109.40
70	CT	32	GLU	N-CA-C	6.63	118.16	111.07
48	BB	1222	ILE	CA-C-O	6.62	126.11	120.22
49	BC	291	G	C5'-C4'-C3'	-6.61	106.08	116.00
17	AO	128	ARG	N-CA-C	6.61	118.56	111.36
10	AG	160	ASP	N-CA-C	6.59	118.46	111.28
5	AB	308	ASP	N-CA-C	6.59	118.25	111.14
49	BC	125	C	O3'-P-O5'	-6.59	94.12	104.00
31	Ac	31	TYR	N-CA-C	6.55	118.08	111.07
61	CK	84	HIS	CA-CB-CG	6.55	120.35	113.80
5	AB	378	ARG	N-CA-CB	-6.55	101.88	110.59
49	BC	276	A	O4'-C1'-N9	6.54	118.01	108.20
25	AW	50	ASN	N-CA-C	6.54	118.41	111.28
47	BA	73	A	O3'-P-O5'	-6.53	94.20	104.00
12	AI	186	ALA	N-CA-C	-6.53	105.18	113.01
45	At	114	ALA	N-CA-C	6.53	118.47	111.36
47	BA	7	A	P-O5'-C5'	6.53	130.69	120.90
14	AL	133	ALA	CA-C-N	-6.52	113.24	119.76
14	AL	133	ALA	C-N-CA	-6.52	113.24	119.76
49	BC	276	A	C3'-C2'-O2'	6.52	124.38	114.60
1	A2	2718	U	C2'-C3'-O3'	6.51	119.27	109.50
22	AT	17	ARG	CA-C-N	6.51	127.98	119.84
22	AT	17	ARG	C-N-CA	6.51	127.98	119.84
1	A2	4034	U	P-O3'-C3'	-6.51	110.44	120.20
9	AF	48	LYS	CB-CA-C	-6.49	100.69	110.88
21	AS	169	THR	CB-CA-C	-6.48	99.83	110.85
49	BC	281	U	C5'-C4'-C3'	6.48	124.92	115.20
49	BC	305	U	P-O3'-C3'	6.47	129.91	120.20
48	BB	1384	LYS	CA-C-O	-6.47	113.85	120.71
64	CN	71	ILE	N-CA-C	6.46	116.62	110.42
41	Am	98	LYS	N-CA-C	6.45	118.39	111.36
55	CE	94	LYS	N-CA-C	6.44	118.30	111.28
1	A2	1673	C	C5'-C4'-O4'	-6.44	99.44	109.10
1	A2	3921	A	C5'-C4'-C3'	-6.43	106.35	116.00
1	A2	4031	U	C2'-C3'-O3'	-6.42	104.07	113.70
48	BB	1152	LEU	CA-C-O	-6.42	114.38	121.89
43	Ao	23	VAL	N-CA-C	6.42	117.10	108.11
48	BB	1340	CYS	CA-CB-SG	-6.42	99.64	114.40
49	BC	331	G	O3'-P-O5'	-6.41	94.39	104.00
55	CE	26	VAL	N-CA-C	6.41	117.19	110.72
12	AI	168	SER	N-CA-C	6.40	119.57	109.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	Ai	29	ARG	N-CA-C	-6.40	105.22	113.16
21	AS	124	ILE	N-CA-C	6.39	117.12	108.17
47	BA	70	G	O5'-C5'-C4'	-6.39	101.91	111.50
1	A2	14	C	O4'-C4'-C3'	-6.39	99.71	106.10
57	CG	61	PHE	CA-C-N	6.38	126.30	119.85
57	CG	61	PHE	C-N-CA	6.38	126.30	119.85
59	CI	130	THR	CA-C-N	6.38	127.82	119.84
59	CI	130	THR	C-N-CA	6.38	127.82	119.84
22	AT	134	PRO	N-CA-C	6.38	117.40	110.58
75	CY	104	ARG	N-CA-C	6.37	117.89	111.07
1	A2	1701	C	O4'-C1'-N1	6.37	118.05	108.50
46	Au	121	VAL	N-CA-C	6.37	117.15	110.72
48	BB	1150	LYS	N-CA-C	6.37	119.17	111.40
48	BB	1152	LEU	CD1-CG-CD2	-6.36	96.81	110.80
49	BC	271	G	C3'-C2'-C1'	6.35	107.65	101.30
49	BC	252	A	C2'-C3'-O3'	6.34	119.01	109.50
40	Al	36	ARG	N-CA-C	6.34	118.27	111.36
48	BB	835	SER	N-CA-C	-6.33	100.53	109.96
22	AT	133	ALA	CA-C-N	6.32	124.21	119.66
22	AT	133	ALA	C-N-CA	6.32	124.21	119.66
1	A2	3914	A	C4'-C3'-C2'	-6.30	96.30	102.60
58	CH	122	LEU	N-CA-C	6.30	117.81	111.07
49	BC	127	U	O3'-P-O5'	-6.29	94.56	104.00
27	AY	126	ARG	CB-CA-C	-6.29	100.35	110.79
5	AB	200	ARG	N-CA-C	6.29	120.96	113.16
62	CL	24	LEU	N-CA-C	6.29	118.13	111.28
49	BC	259	U	O4'-C1'-N1	6.28	117.92	108.50
58	CH	23	ILE	N-CA-C	6.28	116.45	110.42
60	CJ	128	VAL	CB-CA-C	-6.27	103.57	112.22
55	CE	24	THR	N-CA-C	6.26	118.10	111.28
71	CU	67	LYS	N-CA-C	6.25	118.17	111.36
58	CH	76	GLN	N-CA-C	6.25	118.09	111.28
39	Ak	51	GLU	N-CA-C	6.25	118.09	111.28
58	CH	106	ARG	N-CA-C	6.25	118.77	109.59
27	AY	55	VAL	N-CA-C	6.24	116.85	108.11
49	BC	235	G	C2'-C3'-O3'	-6.24	104.34	113.70
49	BC	255	C	C4'-C3'-O3'	6.24	122.36	113.00
49	BC	288	A	C2'-C3'-O3'	-6.23	104.35	113.70
49	BC	258	G	C4'-C3'-C2'	-6.23	96.37	102.60
51	CA	204	TYR	N-CA-C	6.22	118.00	108.42
69	CS	67	VAL	N-CA-C	6.22	117.00	110.72
45	At	72	LYS	CA-C-N	6.22	126.41	120.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	At	72	LYS	C-N-CA	6.22	126.41	120.31
1	A2	4035	U	O5'-C5'-C4'	6.22	120.83	111.50
1	A2	188	G	C2'-C3'-O3'	6.21	118.82	109.50
45	At	13	CYS	N-CA-C	6.20	120.11	111.56
49	BC	334	C	O5'-C5'-C4'	6.19	120.79	111.50
71	CU	29	VAL	N-CA-C	6.17	116.91	110.62
6	AC	200	ARG	N-CA-C	6.17	118.00	111.28
49	BC	287	U	O3'-P-O5'	6.16	113.24	104.00
48	BB	975	LEU	CD1-CG-CD2	-6.16	97.25	110.80
6	AC	322	LEU	N-CA-C	6.16	117.99	111.28
48	BB	896	THR	OG1-CB-CG2	-6.15	97.00	109.30
62	CL	51	ILE	N-CA-C	6.15	116.33	110.42
80	Cd	28	HIS	N-CA-C	6.15	117.98	111.28
73	CW	46	TYR	N-CA-C	6.14	117.98	111.28
57	CG	42	GLY	N-CA-C	6.14	120.62	112.77
20	AR	32	ILE	N-CA-C	6.12	116.87	110.62
45	At	100	ASN	N-CA-C	6.12	120.82	112.68
49	BC	63	U	O5'-C5'-C4'	-6.12	102.52	111.70
1	A2	1673	C	C4'-C3'-C2'	-6.12	96.48	102.60
16	AN	73	ARG	CA-C-N	6.11	125.80	119.56
16	AN	73	ARG	C-N-CA	6.11	125.80	119.56
49	BC	284	U	O4'-C1'-C2'	-6.11	101.49	107.60
14	AL	165	LYS	N-CA-C	6.11	117.93	111.28
60	CJ	8	VAL	N-CA-C	6.09	116.63	107.80
18	AP	25	HIS	CA-CB-CG	-6.09	107.71	113.80
58	CH	45	ILE	N-CA-C	6.09	116.64	107.75
76	CZ	71	ALA	N-CA-C	6.08	117.58	111.07
10	AG	103	ARG	CA-C-N	6.07	125.98	119.85
10	AG	103	ARG	C-N-CA	6.07	125.98	119.85
67	CQ	46	THR	N-CA-C	6.07	117.89	111.28
49	BC	94	G	O4'-C1'-C2'	-6.07	99.73	105.80
21	AS	138	ARG	N-CA-C	6.06	117.89	111.28
1	A2	3920	G	N9-C1'-C2'	-6.06	102.91	112.00
49	BC	324	U	C2'-C3'-O3'	6.06	118.59	109.50
17	AO	114	LYS	N-CA-C	6.06	117.96	111.36
17	AO	89	PRO	N-CA-C	-6.05	104.31	112.48
56	CF	65	GLN	N-CA-C	6.05	117.88	111.28
43	Ao	31	ASP	N-CA-C	6.05	117.54	111.07
48	BB	1278	HIS	ND1-CG-CD2	-6.05	100.05	106.10
76	CZ	55	TYR	N-CA-C	6.04	117.53	111.07
82	Cf	117	LEU	N-CA-C	6.04	117.94	111.36
11	AH	187	VAL	N-CA-C	6.03	116.81	110.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A2	959	C	C2'-C3'-O3'	6.03	118.55	109.50
49	BC	314	C	O5'-C5'-C4'	-6.03	102.46	111.50
23	AU	69	LYS	N-CA-C	6.02	118.33	109.24
63	CM	85	LEU	N-CA-C	6.01	117.84	111.28
41	Am	90	ASN	N-CA-C	6.01	117.91	111.36
47	BA	5	G	C4'-C3'-O3'	-6.01	103.99	113.00
49	BC	69	C	O4'-C4'-C3'	6.00	110.00	104.00
5	AB	366	LYS	N-CA-C	6.00	117.90	111.36
50	C1	1697	A	C2'-C3'-O3'	6.00	118.50	109.50
14	AL	130	LYS	CA-C-N	-6.00	113.63	119.87
14	AL	130	LYS	C-N-CA	-6.00	113.63	119.87
68	CR	21	TYR	N-CA-C	5.99	117.81	111.28
6	AC	70	GLY	N-CA-C	5.99	121.08	113.24
47	BA	73	A	P-O5'-C5'	-5.98	111.92	120.90
7	AD	185	SER	N-CA-C	5.98	117.80	111.28
33	Ae	123	THR	N-CA-C	5.98	117.88	111.36
79	Cc	30	VAL	N-CA-C	5.98	117.37	108.46
46	Au	78	VAL	N-CA-C	5.95	116.44	108.11
49	BC	160	U	C3'-C2'-O2'	5.95	119.62	110.70
73	CW	25	VAL	N-CA-C	5.94	116.42	108.11
48	BB	1320	ASP	CB-CA-C	5.93	121.86	110.17
32	Ad	82	TYR	N-CA-C	5.93	117.74	111.28
68	CR	111	PHE	N-CA-C	-5.92	105.37	112.59
61	CK	42	ASN	N-CA-C	5.91	117.73	111.28
7	AD	252	VAL	N-CA-C	5.91	118.44	111.05
69	CS	103	LEU	N-CA-C	5.91	117.39	111.07
34	Af	54	LYS	N-CA-CB	-5.90	101.72	110.10
20	AR	61	ALA	N-CA-C	5.90	117.38	111.07
49	BC	89	C	O4'-C4'-C3'	5.89	109.89	104.00
1	A2	3729	A	C2'-C3'-O3'	5.89	118.33	109.50
13	AJ	80	GLU	N-CA-C	5.88	117.77	111.36
48	BB	812	ASP	CA-CB-CG	-5.87	106.73	112.60
34	Af	89	ARG	N-CA-C	-5.87	104.89	111.28
65	CO	95	ILE	N-CA-C	5.87	116.32	107.75
57	CG	23	LYS	N-CA-C	5.86	117.67	111.28
75	CY	89	HIS	N-CA-C	5.86	117.67	111.28
67	CQ	73	LYS	N-CA-C	-5.86	105.44	112.59
58	CH	140	VAL	N-CA-C	5.86	116.04	110.42
49	BC	287	U	C4'-C3'-O3'	5.85	121.78	113.00
58	CH	161	ALA	N-CA-C	5.85	117.66	111.28
10	AG	69	ILE	N-CA-C	5.85	116.62	110.72
37	Ai	22	SER	N-CA-C	5.85	118.25	110.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	Af	41	PHE	N-CA-C	5.84	117.65	111.28
50	C1	799	U	C2'-C3'-O3'	5.84	118.27	109.50
48	BB	1340	CYS	N-CA-C	5.84	118.92	109.40
34	Af	17	GLY	N-CA-C	-5.84	105.78	112.79
51	CA	102	ARG	N-CA-CB	5.84	118.64	109.83
48	BB	1348	ASP	O-C-N	-5.84	114.83	122.59
6	AC	304	ALA	CA-C-N	5.83	127.13	119.84
6	AC	304	ALA	C-N-CA	5.83	127.13	119.84
7	AD	264	LYS	N-CA-C	5.83	123.21	110.80
73	CW	86	LEU	N-CA-C	5.82	117.62	111.28
7	AD	178	LYS	N-CA-C	5.82	118.57	111.82
55	CE	56	LEU	N-CA-C	5.82	117.70	111.36
83	Cg	244	ASN	N-CA-C	5.82	117.70	111.36
47	BA	7	A	C5'-C4'-C3'	5.81	123.92	115.20
46	Au	157	ARG	N-CA-CB	-5.81	101.31	110.49
69	CS	12	ILE	N-CA-C	5.81	116.24	108.11
60	CJ	125	HIS	CB-CA-C	-5.80	101.17	110.79
28	AZ	8	GLY	N-CA-C	5.79	119.68	112.73
8	AE	257	ILE	N-CA-C	5.79	115.98	110.42
51	CA	193	HIS	N-CA-C	5.79	116.99	109.64
79	Cc	34	PHE	N-CA-C	5.79	118.84	109.40
23	AU	97	ARG	N-CA-C	5.79	117.59	111.28
10	AG	114	LEU	N-CA-C	5.78	117.67	111.36
48	BB	1405	ILE	N-CA-C	5.78	115.97	110.42
62	CL	5	GLN	N-CA-C	5.78	117.26	111.07
28	AZ	61	LYS	N-CA-C	5.78	117.58	111.28
14	AL	55	ILE	N-CA-C	-5.78	97.33	109.34
49	BC	88	G	O4'-C4'-C3'	5.78	109.78	104.00
54	CD	79	PHE	CA-C-N	5.78	125.45	119.56
54	CD	79	PHE	C-N-CA	5.78	125.45	119.56
50	C1	1401	A	C2'-C3'-O3'	5.77	118.16	109.50
1	A2	4030	A	C4'-C3'-O3'	5.77	121.66	113.00
8	AE	153	LEU	N-CA-C	5.77	117.65	111.36
22	AT	105	PHE	N-CA-C	5.77	117.24	111.07
48	BB	1133	TYR	CB-CG-CD2	-5.76	112.15	120.80
64	CN	18	TYR	N-CA-C	5.76	117.56	111.28
57	CG	53	SER	N-CA-C	5.76	117.64	111.36
8	AE	223	ARG	N-CA-C	5.75	118.13	108.23
59	CI	205	ARG	N-CA-C	5.75	117.55	111.28
25	AW	9	SER	N-CA-C	5.75	117.55	111.28
49	BC	324	U	C4'-C3'-O3'	-5.75	100.78	109.40
19	AQ	161	SER	N-CA-C	5.74	117.53	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	AR	144	LYS	N-CA-C	5.74	117.62	111.36
49	BC	349	C	C5'-C4'-O4'	-5.74	100.49	109.10
51	CA	198	MET	CA-C-N	5.74	125.83	119.87
51	CA	198	MET	C-N-CA	5.74	125.83	119.87
56	CF	119	SER	N-CA-C	5.73	120.12	113.18
57	CG	131	ARG	N-CA-C	-5.73	101.80	110.28
1	A2	14	C	C2'-C3'-O3'	5.72	118.09	109.50
23	AU	53	ALA	N-CA-C	5.72	117.60	111.36
52	CB	35	ALA	N-CA-C	5.72	117.90	110.40
58	CH	109	ARG	N-CA-CB	5.72	120.17	110.49
38	Aj	29	LEU	N-CA-C	5.72	117.19	111.07
55	CE	136	ILE	N-CA-CB	-5.71	105.50	111.61
12	AI	79	SER	N-CA-C	5.71	117.58	111.36
63	CM	34	GLY	N-CA-C	5.70	118.67	112.29
48	BB	1395	ILE	CA-CB-CG2	-5.70	100.82	110.50
33	Ae	27	ARG	N-CA-C	5.69	117.56	111.36
29	Aa	22	ILE	N-CA-C	5.69	115.87	110.53
49	BC	333	C	N1-C1'-C2'	-5.68	105.47	114.00
1	A2	4031	U	P-O5'-C5'	-5.68	112.38	120.90
44	Ap	41	PHE	N-CA-C	5.68	117.15	111.07
61	CK	20	VAL	N-CA-C	5.68	116.85	108.45
20	AR	57	VAL	N-CA-C	5.67	116.27	107.99
54	CD	168	VAL	N-CA-C	5.66	116.04	108.11
1	A2	2548	C	O4'-C1'-C2'	-5.66	101.94	107.60
50	C1	1477	U	C2'-C3'-O3'	5.66	117.99	109.50
49	BC	141	U	O5'-C5'-C4'	5.66	119.99	111.50
35	Ag	56	VAL	N-CA-C	5.66	116.03	108.11
54	CD	10	LYS	N-CA-C	5.66	117.52	111.36
52	CB	121	ILE	N-CA-C	5.65	116.02	108.11
55	CE	70	ILE	N-CA-C	5.65	116.02	108.11
5	AB	122	TRP	N-CA-C	5.64	117.11	111.07
8	AE	162	VAL	N-CA-C	5.64	116.82	108.65
10	AG	80	ILE	N-CA-C	-5.63	101.69	109.46
14	AL	101	ARG	N-CA-C	5.63	117.50	111.36
1	A2	3919	U	O3'-P-O5'	-5.63	95.56	104.00
33	Ae	94	SER	N-CA-C	5.62	118.60	111.69
49	BC	324	U	C4'-C3'-C2'	-5.62	96.98	102.60
49	BC	51	G	O4'-C4'-C3'	5.61	109.61	104.00
52	CB	62	LEU	N-CA-C	5.61	119.39	112.54
38	Aj	5	THR	N-CA-C	5.61	117.40	111.28
1	A2	1672	U	O4'-C1'-C2'	-5.61	101.99	107.60
16	AN	153	LYS	CA-C-N	5.61	125.45	119.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	AN	153	LYS	C-N-CA	5.61	125.45	119.28
52	CB	91	VAL	N-CA-C	5.61	116.19	108.12
49	BC	227	U	C2'-C3'-O3'	-5.60	105.30	113.70
64	CN	55	ARG	CB-CA-C	-5.60	102.09	110.88
49	BC	248	U	C5'-C4'-O4'	5.59	118.18	109.80
49	BC	312	U	C4'-C3'-O3'	5.58	121.37	113.00
83	Cg	282	GLU	N-CA-C	5.58	117.69	109.50
48	BB	1071	ARG	CA-C-N	-5.57	110.90	121.54
48	BB	1071	ARG	C-N-CA	-5.57	110.90	121.54
19	AQ	152	PHE	N-CA-C	5.56	118.34	110.50
19	AQ	93	GLN	N-CA-C	5.56	117.42	111.36
23	AU	54	GLY	N-CA-C	5.55	122.19	113.86
1	A2	3915	G	O5'-C5'-C4'	5.55	119.83	111.50
64	CN	98	VAL	N-CA-C	5.55	116.28	110.62
72	CV	12	TYR	CA-C-N	-5.55	118.83	122.60
72	CV	12	TYR	C-N-CA	-5.55	118.83	122.60
50	C1	78	C	C2'-C3'-O3'	5.55	117.82	109.50
34	Af	59	THR	N-CA-C	5.54	122.06	109.81
49	BC	258	G	N9-C1'-C2'	5.54	122.31	114.00
49	BC	164	U	C4'-C3'-C2'	-5.54	97.06	102.60
57	CG	158	VAL	N-CA-C	5.54	116.71	108.46
58	CH	139	ILE	N-CA-C	5.54	115.92	108.17
17	AO	168	TYR	N-CA-C	-5.54	105.15	111.07
52	CB	59	SER	N-CA-C	5.54	117.31	111.28
20	AR	29	THR	N-CA-C	5.53	117.30	111.28
37	Ai	27	SER	N-CA-C	-5.52	100.98	109.76
68	CR	39	ALA	N-CA-C	5.52	117.37	109.14
9	AF	117	ILE	N-CA-C	5.52	117.26	108.87
1	A2	3914	A	O4'-C1'-C2'	-5.51	102.08	107.60
17	AO	93	LYS	N-CA-C	-5.51	105.27	111.28
11	AH	16	VAL	N-CA-C	5.51	116.41	108.48
78	Cb	64	CYS	N-CA-C	5.51	118.20	109.50
55	CE	147	ILE	N-CA-C	5.51	115.82	108.11
56	CF	64	ALA	N-CA-C	5.51	117.28	111.28
60	CJ	121	LYS	CB-CA-C	5.50	119.92	110.79
14	AL	146	LEU	N-CA-C	5.50	117.27	111.28
49	BC	50	A	O4'-C4'-C3'	5.50	109.50	104.00
69	CS	15	VAL	N-CA-C	5.50	116.04	108.12
22	AT	103	ASP	N-CA-C	5.49	117.27	111.28
49	BC	281	U	C4'-C3'-O3'	-5.49	101.16	109.40
52	CB	132	GLY	N-CA-C	5.49	126.20	113.18
60	CJ	38	ARG	N-CA-C	5.49	117.35	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	BB	1167	GLU	O-C-N	-5.49	116.39	122.86
65	CO	89	GLY	N-CA-C	-5.49	107.20	115.32
51	CA	35	GLU	N-CA-C	5.48	117.26	111.28
49	BC	313	G	C4'-C3'-O3'	-5.48	104.78	113.00
56	CF	188	TYR	N-CA-C	-5.47	105.32	111.28
59	CI	131	PRO	N-CA-C	5.47	123.74	112.47
27	AY	116	LYS	CB-CA-C	-5.47	102.30	110.88
17	AO	87	MET	N-CA-CB	-5.47	102.08	110.12
49	BC	266	G	P-O3'-C3'	5.46	128.39	120.20
62	CL	20	LYS	N-CA-CB	-5.46	101.81	110.22
21	AS	152	PHE	CA-CB-CG	5.46	119.26	113.80
49	BC	315	C	O3'-P-O5'	-5.46	95.82	104.00
13	AJ	18	ARG	N-CA-C	5.45	116.91	111.07
48	BB	845	ALA	CA-C-N	-5.45	113.03	119.84
48	BB	845	ALA	C-N-CA	-5.45	113.03	119.84
51	CA	23	THR	N-CA-C	5.45	117.22	111.28
75	CY	35	VAL	N-CA-C	5.44	114.28	108.95
22	AT	91	VAL	N-CA-C	5.44	115.95	108.12
64	CN	7	PRO	N-CA-C	5.44	123.68	112.47
1	A2	1703	G	O4'-C1'-C2'	-5.44	100.36	105.80
50	C1	1430	C	O4'-C1'-C2'	-5.43	102.17	107.60
1	A2	3914	A	P-O5'-C5'	5.43	129.05	120.90
48	BB	1179	HIS	O-C-N	-5.43	115.96	122.15
47	BA	71	G	C4'-C3'-O3'	-5.43	104.86	113.00
56	CF	24	SER	N-CA-C	5.42	118.10	109.96
1	A2	1701	C	O5'-C5'-C4'	5.42	119.63	111.50
55	CE	154	ILE	N-CA-C	5.42	115.75	108.17
34	Af	19	ARG	N-CA-C	5.42	120.02	113.41
48	BB	1155	THR	OG1-CB-CG2	5.42	120.13	109.30
49	BC	254	C	C3'-C2'-C1'	5.41	106.71	101.30
3	A4	108	G	O4'-C4'-C3'	-5.41	98.59	104.00
37	Ai	63	VAL	N-CA-C	5.41	116.28	111.90
77	Ca	5	ARG	N-CA-CB	-5.41	101.46	111.52
48	BB	1172	VAL	CG1-CB-CG2	-5.41	98.90	110.80
64	CN	7	PRO	N-CA-CB	-5.41	97.57	103.25
49	BC	160	U	P-O3'-C3'	5.41	128.31	120.20
2	A3	34	U	C3'-C2'-C1'	-5.40	95.90	101.30
14	AL	61	CYS	CA-C-N	5.40	125.34	119.78
14	AL	61	CYS	C-N-CA	5.40	125.34	119.78
16	AN	153	LYS	N-CA-C	5.40	116.50	109.64
19	AQ	95	VAL	CA-C-N	5.39	125.30	119.85
19	AQ	95	VAL	C-N-CA	5.39	125.30	119.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	BC	234	U	C3'-C2'-C1'	5.39	106.69	101.30
71	CU	43	ALA	N-CA-C	5.39	117.23	111.36
54	CD	39	VAL	N-CA-C	5.39	115.88	108.12
49	BC	258	G	C3'-C2'-C1'	-5.38	96.12	101.50
39	Ak	2	PRO	N-CA-CB	5.38	108.92	103.00
10	AG	120	LYS	N-CA-C	5.38	117.22	111.36
19	AQ	76	GLU	N-CA-C	5.38	117.14	111.28
52	CB	214	LYS	N-CA-C	5.38	118.20	109.06
1	A2	4711	U	C3'-C2'-O2'	-5.37	106.54	114.60
10	AG	163	PRO	CA-C-N	5.37	127.82	120.46
10	AG	163	PRO	C-N-CA	5.37	127.82	120.46
49	BC	135	G	O3'-P-O5'	5.37	112.06	104.00
66	CP	100	LYS	N-CA-C	-5.37	100.56	108.99
48	BB	810	ASP	CA-CB-CG	-5.37	107.23	112.60
49	BC	131	G	O4'-C4'-C3'	5.37	109.37	104.00
9	AF	156	LYS	N-CA-C	5.36	117.20	111.36
49	BC	255	C	O4'-C1'-N1	5.35	116.53	108.50
60	CJ	178	ALA	N-CA-C	5.35	117.19	111.36
5	AB	207	VAL	N-CA-C	5.35	117.78	111.09
49	BC	284	U	O4'-C1'-N1	5.35	116.52	108.50
4	AA	9	ARG	N-CA-C	5.35	117.11	111.28
7	AD	211	LEU	N-CA-C	5.35	117.11	111.28
46	Au	62	PHE	CA-CB-CG	-5.35	108.45	113.80
26	AX	149	VAL	N-CA-C	5.33	116.11	110.72
46	Au	155	GLU	N-CA-C	5.33	117.17	111.36
75	CY	99	LYS	N-CA-C	5.33	118.17	110.28
48	BB	1133	TYR	CA-CB-CG	5.33	123.49	113.90
49	BC	341	C	O4'-C1'-C2'	-5.32	102.28	107.60
83	Cg	49	GLU	N-CA-C	5.32	117.07	111.28
49	BC	159	G	O4'-C4'-C3'	5.31	109.31	104.00
19	AQ	172	ARG	N-CA-C	-5.31	103.38	110.55
46	Au	40	SER	N-CA-C	5.31	117.07	111.28
6	AC	151	PRO	CA-N-CD	-5.31	104.57	112.00
12	AI	14	ASN	N-CA-C	5.31	117.26	109.24
50	C1	1406	G	C2'-C3'-O3'	5.31	117.46	109.50
17	AO	170	LYS	N-CA-C	5.31	116.75	111.07
65	CO	62	VAL	N-CA-C	5.31	115.76	108.12
6	AC	323	ARG	N-CA-C	5.30	117.06	111.28
23	AU	65	ARG	CB-CA-C	-5.30	101.00	109.75
12	AI	189	ARG	N-CA-C	5.30	122.09	110.80
6	AC	215	ASN	N-CA-C	5.30	117.52	110.53
31	Ac	101	ASP	N-CA-C	-5.30	105.50	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
60	CJ	2	PRO	N-CA-CB	5.30	108.83	103.00
49	BC	77	G	O4'-C4'-C3'	5.30	109.30	104.00
13	AJ	47	THR	CA-C-N	5.29	125.20	119.85
13	AJ	47	THR	C-N-CA	5.29	125.20	119.85
60	CJ	144	ILE	CA-C-N	5.29	125.10	119.28
60	CJ	144	ILE	C-N-CA	5.29	125.10	119.28
13	AJ	57	VAL	N-CA-C	5.29	116.06	110.72
49	BC	256	G	O4'-C1'-C2'	-5.29	102.31	107.60
77	Ca	54	SER	N-CA-C	5.28	117.03	111.28
6	AC	136	LEU	N-CA-C	5.27	116.71	111.07
48	BB	977	ASP	CA-CB-CG	5.27	117.87	112.60
49	BC	123	C	O4'-C4'-C3'	5.27	109.27	104.00
56	CF	58	ALA	N-CA-C	5.27	117.02	111.28
64	CN	12	SER	N-CA-C	-5.26	103.44	110.55
79	Cc	8	PRO	N-CA-CB	5.25	108.78	103.00
16	AN	93	LYS	N-CA-C	5.25	119.82	113.41
61	CK	31	LYS	N-CA-C	5.25	117.01	111.28
68	CR	78	ARG	N-CA-C	5.25	117.00	111.28
47	BA	72	C	C2'-C3'-O3'	-5.25	105.83	113.70
48	BB	1275	ILE	CA-CB-CG1	-5.25	101.48	110.40
73	CW	84	LYS	N-CA-C	5.25	117.00	111.28
7	AD	67	ALA	N-CA-C	5.25	118.29	109.95
8	AE	254	ASP	N-CA-C	5.24	117.00	111.28
82	Cf	122	PRO	CA-C-N	-5.24	115.80	122.77
82	Cf	122	PRO	C-N-CA	-5.24	115.80	122.77
12	AI	159	PHE	CA-C-N	5.24	125.14	119.85
12	AI	159	PHE	C-N-CA	5.24	125.14	119.85
13	AJ	168	GLN	N-CA-C	5.24	116.99	111.28
26	AX	92	ASP	N-CA-C	5.24	117.07	111.36
49	BC	324	U	O4'-C1'-C2'	-5.24	100.56	105.80
23	AU	76	VAL	N-CA-C	5.24	114.72	108.96
22	AT	154	ILE	CA-C-N	5.24	125.17	119.78
22	AT	154	ILE	C-N-CA	5.24	125.17	119.78
9	AF	99	ASN	N-CA-C	5.23	118.34	109.76
78	Cb	8	LEU	N-CA-C	5.23	117.06	111.36
79	Cc	66	ARG	N-CA-C	5.23	117.59	108.76
64	CN	64	ARG	CB-CA-C	-5.22	102.12	110.79
35	Ag	106	VAL	N-CA-C	5.22	115.44	110.53
16	AN	14	LYS	N-CA-C	5.22	116.97	111.28
1	A2	4848	A	C2'-C3'-O3'	-5.21	105.88	113.70
49	BC	297	U	C2'-C3'-O3'	5.21	117.32	109.50
6	AC	224	ILE	N-CA-C	5.21	114.05	108.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	Ae	92	ASN	N-CA-C	5.21	116.96	111.28
6	AC	151	PRO	CB-CA-C	5.21	120.15	111.56
49	BC	271	G	O4'-C1'-N9	5.20	116.30	108.50
79	Cc	15	THR	N-CA-C	5.20	116.75	111.14
6	AC	213	GLU	CB-CA-C	-5.20	102.02	110.85
12	AI	17	TYR	CA-C-N	5.20	125.17	120.03
12	AI	17	TYR	C-N-CA	5.20	125.17	120.03
49	BC	304	C	O4'-C4'-C3'	5.20	109.20	104.00
10	AG	77	PRO	CA-C-N	5.19	125.24	119.32
10	AG	77	PRO	C-N-CA	5.19	125.24	119.32
57	CG	50	VAL	N-CA-C	5.19	115.60	108.12
68	CR	62	GLN	N-CA-C	-5.19	105.62	111.28
19	AQ	98	LEU	N-CA-C	5.19	121.85	110.80
21	AS	154	LEU	CA-C-N	5.19	125.17	120.03
21	AS	154	LEU	C-N-CA	5.19	125.17	120.03
48	BB	1317	ASN	CA-CB-CG	5.19	117.79	112.60
59	CI	181	GLN	N-CA-C	5.19	117.01	111.36
8	AE	175	VAL	N-CA-C	5.18	115.58	108.12
49	BC	349	C	P-O3'-C3'	5.18	127.97	120.20
60	CJ	168	GLY	N-CA-C	5.18	118.58	111.54
14	AL	187	ALA	N-CA-C	5.17	117.00	111.36
56	CF	182	LYS	N-CA-C	-5.17	101.77	109.11
77	Ca	47	ALA	N-CA-C	5.17	116.60	111.07
2	A3	34	U	O4'-C1'-C2'	-5.17	102.43	107.60
49	BC	305	U	C4'-C3'-O3'	5.17	117.15	109.40
49	BC	341	C	C4'-C3'-O3'	5.17	120.75	113.00
49	BC	132	G	O4'-C4'-C3'	5.16	109.16	104.00
60	CJ	152	ASP	N-CA-C	5.16	116.91	111.28
37	Ai	6	PRO	N-CA-CB	5.16	108.68	103.00
65	CO	81	VAL	N-CA-C	5.16	115.88	110.62
77	Ca	32	LYS	N-CA-C	5.16	116.91	111.28
21	AS	93	MET	N-CA-C	5.16	117.64	109.50
22	AT	104	SER	N-CA-C	-5.16	105.66	111.28
49	BC	136	A	P-O5'-C5'	-5.15	113.18	120.90
53	CC	79	GLU	N-CA-C	-5.15	105.67	111.28
45	At	75	THR	N-CA-C	5.15	115.33	108.38
49	BC	83	C	O4'-C4'-C3'	5.15	109.15	104.00
13	AJ	31	ASP	N-CA-C	5.14	116.89	111.28
6	AC	306	ARG	N-CA-C	-5.14	105.67	111.28
9	AF	15	PRO	N-CA-CB	5.14	108.66	103.00
34	Af	92	LEU	CA-C-N	5.14	124.80	119.56
34	Af	92	LEU	C-N-CA	5.14	124.80	119.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	Aa	2	PRO	N-CA-CB	5.14	108.65	103.00
50	C1	211	G	O4'-C1'-C2'	-5.13	102.47	107.60
49	BC	257	A	P-O3'-C3'	5.13	127.90	120.20
39	Ak	41	TYR	N-CA-C	5.13	117.18	109.23
51	CA	196	GLU	N-CA-C	5.13	116.87	111.28
83	Cg	109	LEU	N-CA-C	5.13	116.95	111.36
1	A2	2034	G	O4'-C4'-C3'	-5.12	100.97	106.10
21	AS	24	THR	CA-C-N	5.12	125.66	120.38
21	AS	24	THR	C-N-CA	5.12	125.66	120.38
39	Ak	66	VAL	N-CA-C	5.12	115.28	108.11
21	AS	15	ARG	N-CA-C	5.12	120.65	113.02
50	C1	1862	G	C1'-C2'-O2'	-5.12	104.12	111.80
7	AD	268	ARG	CA-C-N	5.12	125.02	119.85
7	AD	268	ARG	C-N-CA	5.12	125.02	119.85
7	AD	28	THR	N-CA-C	5.11	117.23	108.90
49	BC	348	A	C2'-C3'-O3'	5.11	121.37	113.70
22	AT	14	MET	N-CA-C	5.11	116.85	111.28
28	AZ	26	VAL	N-CA-C	5.11	116.57	111.00
56	CF	118	ASN	N-CA-C	5.11	116.93	111.36
1	A2	3918	A	C4'-C3'-O3'	-5.11	105.34	113.00
43	Ao	74	GLU	CA-C-N	5.11	124.90	119.28
43	Ao	74	GLU	C-N-CA	5.11	124.90	119.28
1	A2	3919	U	O4'-C1'-N1	5.10	115.86	108.20
8	AE	154	THR	N-CA-C	5.10	120.14	112.94
57	CG	100	CYS	N-CA-C	5.09	116.83	111.28
64	CN	83	ASP	N-CA-C	5.09	116.83	111.28
31	Ac	47	ILE	N-CA-C	5.08	115.29	108.17
49	BC	309	G	O4'-C4'-C3'	5.08	109.08	104.00
51	CA	189	ILE	N-CA-C	5.08	116.03	108.46
48	BB	1383	PRO	CA-N-CD	-5.08	104.89	112.00
49	BC	158	G	O5'-C5'-C4'	5.08	119.11	111.50
49	BC	271	G	O4'-C4'-C3'	5.08	109.08	104.00
29	Aa	128	PHE	N-CA-C	5.07	117.09	109.23
34	Af	75	THR	N-CA-C	5.07	119.46	113.12
50	C1	343	A	C2'-C3'-O3'	5.07	117.11	109.50
10	AG	82	GLN	N-CA-C	-5.07	105.75	111.28
49	BC	137	G	C2'-C3'-O3'	-5.07	106.10	113.70
70	CT	2	PRO	N-CA-CB	5.07	108.58	103.00
73	CW	11	LEU	N-CA-C	5.07	116.49	111.07
55	CE	213	ALA	N-CA-C	5.06	116.80	111.28
9	AF	227	PHE	N-CA-C	-5.06	105.89	111.71
62	CL	97	ARG	N-CA-C	5.06	116.79	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	AO	111	PRO	CA-C-N	5.06	127.05	120.28
17	AO	111	PRO	C-N-CA	5.06	127.05	120.28
54	CD	199	GLY	N-CA-C	5.05	122.65	112.34
49	BC	95	U	O4'-C4'-C3'	5.05	109.05	104.00
8	AE	248	ILE	N-CA-C	5.05	115.27	110.42
23	AU	109	SER	N-CA-C	5.04	117.05	109.23
1	A2	4688	A	C3'-C2'-C1'	-5.04	96.46	101.50
1	A2	1673	C	N1-C1'-C2'	5.04	121.56	114.00
6	AC	329	ASN	CA-C-N	5.04	124.70	119.56
6	AC	329	ASN	C-N-CA	5.04	124.70	119.56
11	AH	182	SER	N-CA-C	5.04	117.54	111.40
10	AG	153	GLN	N-CA-C	5.03	116.84	111.36
28	AZ	89	ILE	N-CA-C	5.03	119.75	108.88
57	CG	127	THR	N-CA-C	5.03	117.50	109.96
76	CZ	61	GLU	N-CA-C	5.03	117.16	109.62
21	AS	80	ILE	N-CA-C	5.03	115.15	108.11
12	AI	134	VAL	N-CA-C	5.02	115.57	107.73
49	BC	268	G	C5'-C4'-C3'	-5.02	107.67	115.20
83	Cg	19	THR	N-CA-C	5.02	117.86	111.69
23	AU	48	LYS	N-CA-C	5.01	117.14	109.07
49	BC	255	C	O3'-P-O5'	5.01	111.52	104.00
1	A2	135	G	O4'-C1'-C2'	-5.01	102.59	107.60
30	Ab	20	GLY	N-CA-C	5.01	125.06	113.18
57	CG	99	GLY	N-CA-C	5.01	117.69	111.93
6	AC	177	TRP	N-CA-C	5.01	116.74	111.28
21	AS	37	HIS	N-CA-C	5.01	118.65	112.54
77	Ca	25	ASN	N-CA-C	5.01	116.59	111.03
51	CA	103	PHE	N-CA-C	5.01	116.74	111.28
22	AT	93	ILE	N-CA-C	5.00	115.72	110.62
46	Au	187	ASP	N-CA-C	5.00	116.54	111.14
49	BC	86	U	C3'-C2'-C1'	-5.00	96.50	101.50

There are no chirality outliers.

All (177) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A2	1	C	Sidechain
1	A2	115	C	Sidechain
1	A2	121	A	Sidechain
1	A2	1218	A	Sidechain
1	A2	1248	G	Sidechain
1	A2	1349	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A2	140	C	Sidechain
1	A2	1481	G	Sidechain
1	A2	149	U	Sidechain
1	A2	1618	U	Sidechain
1	A2	1673	C	Sidechain
1	A2	2	G	Sidechain
1	A2	2064	G	Sidechain
1	A2	2246	G	Sidechain
1	A2	2274	U	Sidechain
1	A2	2294	G	Sidechain
1	A2	2338	G	Sidechain
1	A2	2354	C	Sidechain
1	A2	2570	C	Sidechain
1	A2	2581	C	Sidechain
1	A2	2624	A	Sidechain
1	A2	2795	C	Sidechain
1	A2	426	A	Sidechain
1	A2	4533	G	Sidechain
1	A2	4637	U	Sidechain
1	A2	4655	C	Sidechain
1	A2	4681	G	Sidechain
1	A2	4710	G	Sidechain
1	A2	4712	U	Sidechain
1	A2	4740	U	Sidechain
1	A2	510	C	Sidechain
1	A2	721	A	Sidechain
1	A2	902	G	Sidechain
1	A2	965	C	Sidechain
1	A2	966	U	Sidechain
2	A3	130	C	Sidechain
2	A3	156	U	Sidechain
48	BB	1105	PRO	Mainchain
48	BB	1133	TYR	Sidechain,Peptide
48	BB	1196	TYR	Sidechain
48	BB	1219	TYR	Sidechain
48	BB	1277	TYR	Sidechain
48	BB	1290	TYR	Sidechain
48	BB	1348	ASP	Mainchain,Peptide
48	BB	1385	MET	Peptide
48	BB	880	GLN	Mainchain
48	BB	899	ILE	Mainchain
49	BC	108	C	Sidechain

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Mol	Chain	Res	Type	Group
49	BC	109	A	Sidechain
49	BC	110	G	Sidechain
49	BC	111	C	Sidechain
49	BC	112	C	Sidechain
49	BC	113	U	Sidechain
49	BC	114	C	Sidechain
49	BC	115	C	Sidechain
49	BC	116	A	Sidechain
49	BC	117	G	Sidechain
49	BC	121	C	Sidechain
49	BC	122	C	Sidechain
49	BC	127	U	Sidechain
49	BC	128	C	Sidechain
49	BC	132	G	Sidechain
49	BC	134	A	Sidechain
49	BC	139	C	Sidechain
49	BC	143	G	Sidechain
49	BC	144	U	Sidechain
49	BC	148	C	Sidechain
49	BC	153	G	Sidechain
49	BC	156	C	Sidechain
49	BC	159	G	Sidechain
49	BC	160	U	Sidechain
49	BC	161	G	Sidechain
49	BC	162	A	Sidechain
49	BC	163	G	Sidechain
49	BC	232	C	Sidechain
49	BC	234	U	Sidechain
49	BC	236	C	Sidechain
49	BC	237	C	Sidechain
49	BC	240	C	Sidechain
49	BC	245	G	Sidechain
49	BC	246	A	Sidechain
49	BC	247	C	Sidechain
49	BC	248	U	Sidechain
49	BC	249	G	Sidechain
49	BC	252	A	Sidechain
49	BC	253	G	Sidechain
49	BC	254	C	Sidechain
49	BC	255	C	Sidechain
49	BC	256	G	Sidechain
49	BC	257	A	Sidechain

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Mol	Chain	Res	Type	Group
49	BC	258	G	Sidechain
49	BC	259	U	Sidechain
49	BC	260	A	Sidechain
49	BC	264	U	Sidechain
49	BC	265	U	Sidechain
49	BC	266	G	Sidechain
49	BC	269	U	Sidechain
49	BC	272	C	Sidechain
49	BC	274	A	Sidechain
49	BC	276	A	Sidechain
49	BC	279	C	Sidechain
49	BC	280	C	Sidechain
49	BC	281	U	Sidechain
49	BC	282	U	Sidechain
49	BC	283	G	Sidechain
49	BC	285	G	Sidechain
49	BC	286	G	Sidechain
49	BC	288	A	Sidechain
49	BC	292	C	Sidechain
49	BC	293	C	Sidechain
49	BC	303	G	Sidechain
49	BC	305	U	Sidechain
49	BC	307	G	Sidechain
49	BC	310	A	Sidechain
49	BC	313	G	Sidechain
49	BC	315	C	Sidechain
49	BC	323	G	Sidechain
49	BC	325	C	Sidechain
49	BC	335	G	Sidechain
49	BC	341	C	Sidechain
49	BC	46	U	Sidechain
49	BC	47	G	Sidechain
49	BC	48	U	Sidechain
49	BC	49	G	Sidechain
49	BC	50	A	Sidechain
49	BC	51	G	Sidechain
49	BC	52	G	Sidechain
49	BC	54	A	Sidechain
49	BC	55	C	Sidechain
49	BC	57	A	Sidechain
49	BC	58	C	Sidechain
49	BC	60	G	Sidechain

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Mol	Chain	Res	Type	Group
49	BC	69	C	Sidechain
49	BC	70	A	Sidechain
49	BC	71	G	Sidechain
49	BC	72	A	Sidechain
49	BC	73	A	Sidechain
49	BC	74	A	Sidechain
49	BC	78	U	Sidechain
49	BC	79	C	Sidechain
49	BC	82	G	Sidechain
49	BC	83	C	Sidechain
49	BC	84	C	Sidechain
49	BC	86	U	Sidechain
49	BC	87	G	Sidechain
49	BC	88	G	Sidechain
49	BC	89	C	Sidechain
49	BC	90	G	Sidechain
49	BC	91	U	Sidechain
49	BC	96	A	Sidechain
49	BC	97	U	Sidechain
49	BC	98	G	Sidechain
50	C1	111	A	Sidechain
50	C1	1120	U	Sidechain
50	C1	1288	U	Sidechain
50	C1	1308	U	Sidechain
50	C1	1414	A	Sidechain
50	C1	1548	G	Sidechain
50	C1	1578	U	Sidechain
50	C1	1624	U	Sidechain
50	C1	1686	G	Sidechain
50	C1	1823	A	Sidechain
50	C1	216	C	Sidechain
50	C1	235	A	Sidechain
50	C1	44	U	Sidechain
50	C1	570	C	Sidechain
50	C1	572	U	Sidechain
50	C1	643	A	Sidechain
50	C1	645	C	Sidechain
50	C1	747	U	Sidechain
50	C1	77	A	Sidechain
50	C1	799	U	Sidechain
50	C1	84	A	Sidechain
50	C1	867	G	Sidechain

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Mol	Chain	Res	Type	Group
50	C1	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	A2	77488	0	39156	7714	0
2	A3	3334	0	1693	299	0
3	A4	2538	0	1286	247	0
4	AA	1888	0	1983	134	0
5	AB	3190	0	3327	187	0
6	AC	2889	0	3064	271	0
7	AD	2362	0	2385	142	0
8	AE	1287	0	1398	161	0
9	AF	1950	0	2093	140	0
10	AG	1881	0	2018	123	0
11	AH	1536	0	1611	119	0
12	AI	1605	0	1652	71	0
13	AJ	1363	0	1398	107	0
14	AL	1617	0	1725	122	0
15	AM	1139	0	1204	119	0
16	AN	1709	0	1761	90	0
17	AO	1607	0	1745	126	0
18	AP	1234	0	1263	71	0
19	AQ	1494	0	1612	105	0
20	AR	1526	0	1682	88	0
21	AS	1439	0	1472	86	0
22	AT	1298	0	1366	117	0
23	AU	827	0	852	23	0
24	AV	964	0	1026	45	0
25	AW	529	0	541	32	0
26	AX	976	0	1053	47	0
27	AY	1065	0	1145	85	0
28	AZ	1115	0	1194	99	0
29	Aa	1162	0	1213	83	0
30	Ab	560	0	590	43	0
31	Ac	802	0	845	64	0
32	Ad	905	0	947	27	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
33	Ae	1053	0	1144	51	0
34	Af	866	0	904	102	0
35	Ag	907	0	1002	103	0
36	Ah	1015	0	1148	46	0
37	Ai	783	0	862	57	0
38	Aj	690	0	719	54	0
39	Ak	569	0	637	32	0
40	Al	444	0	483	14	0
41	Am	429	0	466	24	0
42	An	240	0	287	46	0
43	Ao	871	0	940	128	0
44	Ap	708	0	760	40	0
45	At	1043	0	1120	122	0
46	Au	1622	0	1563	151	0
47	BA	1619	0	816	416	0
48	BB	4846	0	4954	1445	0
49	BC	5574	0	2803	302	0
50	C1	37159	0	18772	3999	0
51	CA	1719	0	1717	133	0
52	CB	1729	0	1803	151	0
53	CC	1724	0	1808	93	0
54	CD	1646	0	1737	115	0
55	CE	2031	0	2138	114	0
56	CF	1486	0	1543	112	0
57	CG	1884	0	2044	155	0
58	CH	1535	0	1632	132	0
59	CI	1695	0	1774	138	0
60	CJ	1495	0	1615	96	0
61	CK	791	0	811	56	0
62	CL	1199	0	1269	71	0
63	CM	931	0	961	45	0
64	CN	1207	0	1294	81	0
65	CO	1023	0	1050	67	0
66	CP	981	0	1026	56	0
67	CQ	1108	0	1172	98	0
68	CR	893	0	946	66	0
69	CS	1172	0	1229	80	0
70	CT	1112	0	1146	116	0
71	CU	803	0	866	80	0
72	CV	636	0	637	45	0
73	CW	1033	0	1080	67	0
74	CX	1046	0	1110	87	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
75	CY	1002	0	1075	65	0
76	CZ	605	0	665	68	0
77	Ca	767	0	816	108	0
78	Cb	625	0	642	57	0
79	Cc	490	0	519	44	0
80	Cd	444	0	442	51	0
81	Ce	412	0	463	35	0
82	Cf	497	0	497	35	0
83	Cg	2440	0	2396	120	0
84	BB	32	0	13	11	0
85	BB	1	0	0	0	0
All	All	223911	0	165616	18166	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 47.

All (18166) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1116:ARG:HB3	50:C1:488:U:C6	1.22	1.65
47:BA:75:C:H5	48:BB:1316:PHE:CD2	1.14	1.64
47:BA:34:G:H4'	50:C1:1248:U:C1'	1.19	1.63
42:An:10:MET:HE1	50:C1:1172:U:C5'	1.18	1.62
48:BB:1116:ARG:HB3	50:C1:488:U:C5	1.20	1.60
47:BA:75:C:C5	48:BB:1316:PHE:CD2	1.87	1.60
11:AH:98:HIS:CE1	48:BB:944:MET:HB3	1.11	1.59
43:Ao:105:GLN:CA	47:BA:57:G:H5"	1.27	1.57
48:BB:1116:ARG:CB	50:C1:488:U:C5	1.86	1.57
48:BB:881:GLN:HG2	48:BB:1121:PRO:CG	1.09	1.56
48:BB:1066:HIS:CA	48:BB:1094:GLY:N	1.68	1.56
11:AH:98:HIS:CE1	48:BB:944:MET:CB	1.86	1.56
47:BA:32:U:H5"	67:CQ:146:ARG:C	1.29	1.56
43:Ao:105:GLN:HA	47:BA:57:G:C5'	1.29	1.54
49:BC:351:A:N1	53:CC:147:VAL:CG2	1.70	1.53
48:BB:927:ARG:HH12	48:BB:1158:GLY:CA	1.16	1.53
48:BB:1301:ILE:HG21	48:BB:1403:GLN:NE2	1.22	1.53
34:Af:106:TYR:CD2	34:Af:107:PRO:HD2	1.42	1.51
43:Ao:105:GLN:N	47:BA:55:U:C2	1.77	1.51
48:BB:841:GLU:H	48:BB:1065:ALA:CB	1.22	1.51
47:BA:75:C:N4	48:BB:1316:PHE:CD1	1.77	1.49
48:BB:1301:ILE:CG2	48:BB:1403:GLN:HE21	1.24	1.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1066:HIS:HA	48:BB:1094:GLY:N	1.17	1.48
42:An:5:TRP:CD1	50:C1:1852:C:C5	1.86	1.47
48:BB:881:GLN:CB	48:BB:1121:PRO:HG2	1.44	1.46
47:BA:75:C:N4	48:BB:1316:PHE:CE1	1.84	1.46
1:A2:1673:C:C3'	1:A2:1673:C:O3'	1.63	1.46
42:An:5:TRP:CZ2	50:C1:1853:C:N4	1.81	1.45
48:BB:928:ASN:CG	48:BB:1073:GLN:HE22	1.20	1.45
1:A2:4565:A:C4'	48:BB:949:PRO:HG2	1.46	1.44
49:BC:235:G:N1	78:Cb:80:ARG:NH1	1.65	1.44
48:BB:1301:ILE:CG2	48:BB:1403:GLN:NE2	1.78	1.43
48:BB:1355:ILE:CG1	48:BB:1373:VAL:HB	1.47	1.43
49:BC:349:C:C4'	54:CD:146:ARG:HH21	1.29	1.43
48:BB:817:GLU:CB	48:BB:1170:ILE:HG12	1.09	1.42
48:BB:841:GLU:N	48:BB:1065:ALA:HB2	1.21	1.42
31:Ac:8:LYS:CE	50:C1:1007:C:H5"	1.46	1.41
1:A2:4068:C:C4'	52:CB:224:GLU:OE1	1.70	1.40
1:A2:4980:C:H4'	59:CI:123:ARG:NH1	1.31	1.40
12:AI:102:MET:HE1	48:BB:1316:PHE:CD1	1.55	1.40
31:Ac:8:LYS:HE2	50:C1:1007:C:C5'	1.49	1.39
47:BA:37:A:N1	49:BC:342:A:N6	1.71	1.39
48:BB:1065:ALA:CA	48:BB:1141:ALA:HB3	1.49	1.39
48:BB:1066:HIS:HA	48:BB:1094:GLY:CA	1.52	1.39
1:A2:1701:C:C5'	1:A2:1701:C:O5'	1.67	1.38
1:A2:4565:A:H4'	48:BB:949:PRO:CG	1.54	1.38
48:BB:817:GLU:HB2	48:BB:1170:ILE:CG1	1.33	1.38
1:A2:3920:G:H22	1:A2:4029:G:N2	1.16	1.38
48:BB:818:ARG:NH1	48:BB:1172:VAL:HG23	1.34	1.37
42:An:5:TRP:HZ2	50:C1:1853:C:C4	1.42	1.35
48:BB:828:GLU:HB2	48:BB:1068:GLU:OE1	1.22	1.35
48:BB:933:LEU:HD22	48:BB:1075:MET:CE	1.54	1.35
49:BC:100:G:H4'	76:CZ:114:LYS:CE	1.53	1.35
47:BA:74:C:C4'	48:BB:1321:PRO:HB2	1.56	1.35
48:BB:842:LYS:CB	48:BB:1140:GLU:HB3	1.57	1.35
1:A2:4560:G:H5'	84:BB:2435:GNP:O3'	1.19	1.34
48:BB:881:GLN:CG	48:BB:1121:PRO:CG	1.76	1.34
49:BC:352:A:C5	53:CC:147:VAL:HG11	1.62	1.34
48:BB:927:ARG:NH1	48:BB:1158:GLY:HA2	1.36	1.33
49:BC:351:A:C5	53:CC:124:PHE:CZ	2.14	1.33
47:BA:33:U:OP2	67:CQ:146:ARG:C	1.67	1.33
48:BB:817:GLU:HG3	48:BB:1170:ILE:CD1	1.34	1.33
1:A2:3920:G:N2	1:A2:4029:G:N2	1.75	1.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3920:G:N2	1:A2:4029:G:H22	1.20	1.33
48:BB:1070:LEU:HD22	48:BB:1073:GLN:N	1.41	1.33
47:BA:76:A:C5’	48:BB:1373:VAL:N	1.81	1.33
48:BB:881:GLN:CG	48:BB:1121:PRO:HG2	0.86	1.33
49:BC:351:A:N1	53:CC:147:VAL:HG21	1.00	1.32
48:BB:817:GLU:CB	48:BB:1170:ILE:CG1	1.84	1.32
48:BB:831:ARG:NH2	48:BB:1094:GLY:HA2	1.44	1.32
48:BB:1067:CYS:SG	48:BB:1092:ILE:CD1	2.16	1.32
1:A2:3740:C:H5”	47:BA:13:C:C4’	1.58	1.31
49:BC:338:C:C4	50:C1:961:G:OP1	1.83	1.31
42:An:10:MET:CE	50:C1:1172:U:H5”	1.60	1.31
49:BC:268:G:N1	50:C1:1116:C:OP2	1.58	1.31
1:A2:3725:A:H5’	48:BB:1346:PHE:CZ	1.65	1.31
49:BC:338:C:N4	50:C1:961:G:OP1	1.60	1.31
43:Ao:105:GLN:HA	47:BA:57:G:C4’	1.58	1.30
47:BA:75:C:OP2	48:BB:1323:VAL:CB	1.80	1.30
48:BB:817:GLU:H	48:BB:1170:ILE:CD1	1.45	1.30
48:BB:880:GLN:CG	48:BB:1122:PRO:HD2	1.43	1.30
48:BB:1116:ARG:NH1	50:C1:488:U:O5’	1.65	1.30
49:BC:349:C:O4’	54:CD:146:ARG:NH2	1.64	1.29
43:Ao:103:VAL:HG23	47:BA:56:C:O3’	1.32	1.29
49:BC:351:A:C2	53:CC:147:VAL:HG21	1.65	1.29
48:BB:1355:ILE:HG21	48:BB:1371:VAL:CG2	1.61	1.29
48:BB:933:LEU:CD2	48:BB:1075:MET:HE2	1.62	1.29
48:BB:1355:ILE:HG12	48:BB:1373:VAL:CB	1.61	1.29
47:BA:74:C:C5	47:BA:75:C:C5	2.19	1.28
42:An:10:MET:CE	50:C1:1172:U:C5’	2.10	1.28
48:BB:929:ARG:CD	48:BB:1180:GLU:OE2	1.68	1.28
48:BB:1116:ARG:CB	50:C1:488:U:C6	2.09	1.28
48:BB:1116:ARG:CB	50:C1:488:U:H5	1.29	1.28
48:BB:1354:SER:O	48:BB:1373:VAL:HG23	1.32	1.28
47:BA:41:C:H1’	50:C1:1640:A:O2’	1.21	1.28
48:BB:881:GLN:HA	48:BB:1121:PRO:CG	1.64	1.28
48:BB:880:GLN:HG2	48:BB:1122:PRO:CD	1.43	1.27
48:BB:1082:GLY:HA3	50:C1:50:A:O4’	1.26	1.27
48:BB:881:GLN:HG2	48:BB:1121:PRO:CD	1.64	1.26
1:A2:4980:C:C4’	59:CI:123:ARG:HH12	1.27	1.26
47:BA:31:A:H4’	50:C1:1641:A:O2’	1.30	1.26
47:BA:32:U:C5’	67:CQ:146:ARG:C	2.09	1.26
4:AA:196:TRP:HB3	4:AA:197:PRO:CD	1.62	1.26
47:BA:34:G:C4’	50:C1:1248:U:C1’	2.14	1.26

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AJ:55:TYR:OH	47:BA:53:G:OP2	1.53	1.25
43:Ao:103:VAL:C	47:BA:57:G:P	2.14	1.25
1:A2:3740:C:C5'	47:BA:13:C:C5'	2.13	1.25
48:BB:1065:ALA:HA	48:BB:1141:ALA:CB	1.64	1.25
48:BB:1327:THR:HG22	48:BB:1370:GLU:CG	1.65	1.25
42:An:5:TRP:CD1	50:C1:1852:C:H5	1.33	1.25
43:Ao:106:PHE:CZ	47:BA:57:G:C2	2.24	1.24
48:BB:1354:SER:C	48:BB:1373:VAL:HG23	1.60	1.24
48:BB:1355:ILE:CG2	48:BB:1371:VAL:HG23	1.67	1.24
49:BC:100:G:C4'	76:CZ:114:LYS:HE2	1.68	1.24
43:Ao:103:VAL:HB	47:BA:57:G:OP1	1.35	1.23
48:BB:1116:ARG:HH12	50:C1:488:U:P	1.61	1.23
1:A2:3740:C:C5'	47:BA:13:C:O5'	1.86	1.23
48:BB:841:GLU:CB	48:BB:1065:ALA:HB1	1.65	1.23
49:BC:164:U:H3'	78:Cb:41:TYR:CZ	1.72	1.23
49:BC:351:A:C6	53:CC:124:PHE:CZ	1.92	1.23
47:BA:32:U:H5"	67:CQ:146:ARG:CA	1.69	1.23
47:BA:34:G:C4'	50:C1:1248:U:H1'	1.68	1.23
1:A2:3740:C:H5'	47:BA:13:C:O5'	1.07	1.23
43:Ao:106:PHE:CE2	47:BA:57:G:C2	2.27	1.23
47:BA:75:C:C5	48:BB:1316:PHE:CE2	2.27	1.22
48:BB:1067:CYS:SG	48:BB:1092:ILE:CB	2.07	1.22
1:A2:3740:C:C5'	47:BA:13:C:H4'	1.68	1.22
43:Ao:106:PHE:CZ	47:BA:57:G:N2	2.08	1.22
49:BC:338:C:N3	50:C1:961:G:OP1	1.72	1.21
49:BC:349:C:C4'	54:CD:146:ARG:NH2	2.02	1.21
48:BB:880:GLN:CG	48:BB:1122:PRO:CD	1.90	1.21
48:BB:927:ARG:NH1	48:BB:1158:GLY:CA	1.96	1.21
48:BB:1070:LEU:CD2	48:BB:1073:GLN:H	1.53	1.21
4:AA:186:TYR:HB2	4:AA:196:TRP:CZ2	1.76	1.20
47:BA:32:U:C5'	67:CQ:146:ARG:HA	1.69	1.20
1:A2:1179:G:H2'	1:A2:1180:G:C8	1.77	1.20
47:BA:70:G:OP2	48:BB:1383:PRO:HA	1.38	1.20
48:BB:881:GLN:CA	48:BB:1121:PRO:CG	2.20	1.20
48:BB:817:GLU:CG	48:BB:1170:ILE:HD13	1.66	1.19
49:BC:267:G:C8	50:C1:1115:U:OP2	1.94	1.19
48:BB:1327:THR:CB	48:BB:1370:GLU:HG2	1.72	1.19
50:C1:1431:G:H2'	50:C1:1432:U:C6	1.77	1.19
48:BB:828:GLU:CB	48:BB:1068:GLU:OE1	1.88	1.19
48:BB:1355:ILE:CG2	48:BB:1371:VAL:CG2	2.19	1.19
34:Af:106:TYR:HD2	34:Af:107:PRO:CD	1.55	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3728:A:N1	50:C1:1709:G:H5'	1.57	1.18
49:BC:63:U:H2'	49:BC:64:U:C5	1.77	1.18
49:BC:349:C:C5'	54:CD:146:ARG:HH21	1.54	1.18
1:A2:3765:U:H4'	50:C1:1720:U:O2'	1.42	1.18
48:BB:831:ARG:NE	48:BB:1066:HIS:HB3	1.56	1.18
48:BB:844:ARG:O	48:BB:910:PRO:CB	1.89	1.18
1:A2:719:G:H1'	1:A2:720:A:H5"	1.22	1.18
1:A2:3735:A:N6	50:C1:1708:C:C2'	2.07	1.18
48:BB:1366:LYS:O	48:BB:1369:GLN:HG3	1.04	1.18
1:A2:4562:A:OP2	48:BB:945:HIS:HE1	1.27	1.17
11:AH:98:HIS:HE1	48:BB:944:MET:CB	1.35	1.17
48:BB:831:ARG:NE	48:BB:841:GLU:OE1	1.73	1.17
1:A2:2040:C:H3'	1:A2:2041:G:H5"	1.22	1.17
1:A2:4709:G:H2'	1:A2:4710:G:H5"	1.21	1.17
1:A2:4980:C:C4'	59:CI:123:ARG:NH1	1.94	1.17
47:BA:31:A:C4'	50:C1:1641:A:O2'	1.92	1.17
48:BB:821:ASP:HA	48:BB:1165:TYR:OH	1.43	1.17
5:AB:258:HIS:CB	5:AB:259:PRO:HD2	1.68	1.16
48:BB:841:GLU:N	48:BB:1065:ALA:CB	1.91	1.16
49:BC:235:G:C6	78:Cb:80:ARG:NH1	2.08	1.16
48:BB:929:ARG:HD2	48:BB:1070:LEU:HA	1.20	1.16
48:BB:928:ASN:CG	48:BB:1073:GLN:NE2	2.03	1.16
47:BA:34:G:O4'	50:C1:1248:U:C2	1.86	1.16
50:C1:377:G:H4'	59:CI:97:VAL:HG13	1.24	1.16
48:BB:1353:THR:OG1	48:BB:1374:LYS:O	1.60	1.15
50:C1:571:U:H3'	50:C1:572:U:C5'	1.77	1.15
1:A2:3740:C:H4'	47:BA:13:C:H5'	1.15	1.15
43:Ao:104:ILE:C	47:BA:55:U:N3	1.93	1.15
49:BC:347:C:O2'	50:C1:626:G:O6	1.58	1.15
49:BC:351:A:N3	54:CD:116:ARG:NH2	1.94	1.15
1:A2:284:G:H4'	1:A2:285:G:C8	1.81	1.15
1:A2:1542:A:N6	64:CN:127:ARG:CZ	2.09	1.15
48:BB:1070:LEU:CG	48:BB:1160:PRO:HA	1.65	1.15
47:BA:71:G:N7	48:BB:1319:ARG:NH2	1.95	1.15
47:BA:34:G:C4'	50:C1:1248:U:N1	1.95	1.14
48:BB:1354:SER:O	48:BB:1373:VAL:CG2	1.94	1.14
1:A2:400:G:H22	1:A2:2305:U:H5"	1.08	1.14
1:A2:1058:A:H62	1:A2:1205:U:H1'	1.06	1.14
1:A2:1258:C:H3'	1:A2:1259:A:H5"	1.29	1.14
12:AI:102:MET:CE	48:BB:1316:PHE:HD1	1.61	1.14
48:BB:831:ARG:HD2	48:BB:1066:HIS:CB	1.77	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BC:350:G:OP2	54:CD:146:ARG:CD	1.95	1.14
50:C1:1416:C:H3'	50:C1:1417:C:H5"	1.29	1.14
1:A2:41:C:H2'	1:A2:42:A:H5"	1.16	1.14
48:BB:928:ASN:OD1	48:BB:1070:LEU:CD1	1.96	1.13
1:A2:1718:G:H5"	3:A4:102:U:H1'	1.22	1.13
47:BA:76:A:H5'	48:BB:1373:VAL:N	0.89	1.13
48:BB:1327:THR:CG2	48:BB:1370:GLU:HG2	1.79	1.13
48:BB:1303:VAL:O	48:BB:1304:PHE:O	1.64	1.13
50:C1:211:G:H2'	50:C1:212:C:H6	1.13	1.13
50:C1:797:C:H2'	50:C1:798:G:H5"	1.28	1.13
50:C1:1547:C:H3'	50:C1:1548:G:H5"	1.28	1.13
1:A2:2370:C:H3'	1:A2:2371:G:H5"	1.31	1.12
1:A2:4980:C:H5"	59:CI:168:GLN:NE2	1.57	1.12
43:Ao:103:VAL:O	47:BA:56:C:O3'	1.66	1.12
48:BB:1303:VAL:HG11	48:BB:1337:THR:HG22	1.21	1.12
50:C1:1330:G:H4'	50:C1:1331:C:H5'	1.29	1.12
48:BB:814:THR:O	48:BB:1172:VAL:HG12	1.45	1.12
1:A2:957:G:H8	1:A2:957:G:H5'	1.02	1.12
48:BB:841:GLU:CB	48:BB:1065:ALA:CB	2.27	1.12
50:C1:561:A:H3'	50:C1:562:U:H5"	1.22	1.12
50:C1:569:A:H2'	50:C1:570:C:H5"	1.24	1.12
4:AA:196:TRP:CB	4:AA:197:PRO:HD3	1.79	1.12
49:BC:235:G:H1	78:Cb:80:ARG:NH1	1.33	1.12
49:BC:349:C:H4'	54:CD:146:ARG:NE	1.65	1.12
1:A2:104:G:H1'	1:A2:1340:G:H22	1.00	1.12
13:AJ:53:ALA:HB2	13:AJ:68:ILE:HD12	1.32	1.12
48:BB:814:THR:HA	48:BB:1170:ILE:HG13	1.23	1.12
1:A2:716:U:H4'	9:AF:69:ILE:HB	1.32	1.11
1:A2:1224:G:H3'	1:A2:1225:C:H5"	1.31	1.11
47:BA:34:G:N1	50:C1:1701:C:C2	2.18	1.11
50:C1:179:C:H3'	50:C1:180:G:H5"	1.17	1.11
1:A2:1647:A:H2'	1:A2:1648:A:H5"	1.28	1.11
1:A2:1648:A:H2'	1:A2:1649:G:H5"	1.26	1.11
43:Ao:103:VAL:O	47:BA:56:C:C3'	1.98	1.11
47:BA:35:A:N1	49:BC:344:G:N2	1.99	1.11
48:BB:818:ARG:NH1	48:BB:1172:VAL:CG2	2.12	1.11
49:BC:338:C:H41	65:CO:149:ARG:NH1	1.48	1.11
1:A2:893:A:H2'	1:A2:894:G:H5"	1.33	1.11
1:A2:1219:C:C2	1:A2:1249:G:H4'	1.86	1.11
47:BA:37:A:C2	49:BC:342:A:C6	2.38	1.11
48:BB:1242:ASP:HB3	48:BB:1244:GLN:HG2	1.31	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1355:ILE:HG21	48:BB:1371:VAL:HG21	1.32	1.11
1:A2:462:A:H4'	1:A2:463:C:H5"	1.23	1.11
17:AO:21:ALA:HA	17:AO:87:MET:HE1	1.22	1.11
48:BB:831:ARG:CZ	48:BB:1094:GLY:HA2	1.80	1.11
48:BB:1315:ILE:HB	48:BB:1324:MET:HE2	1.33	1.11
48:BB:1366:LYS:O	48:BB:1369:GLN:CG	1.99	1.11
50:C1:180:G:H1'	50:C1:181:A:H5'	1.16	1.11
1:A2:457:A:H8	1:A2:676:G:H5"	1.07	1.10
1:A2:510:C:H6	1:A2:510:C:H5'	1.09	1.10
47:BA:74:C:C5'	48:BB:1321:PRO:HB2	1.82	1.10
48:BB:817:GLU:OE1	48:BB:1167:GLU:N	1.82	1.10
48:BB:818:ARG:N	48:BB:1172:VAL:CG1	2.13	1.10
48:BB:831:ARG:CZ	48:BB:1066:HIS:HB3	1.79	1.10
48:BB:844:ARG:HB2	48:BB:1143:GLN:OE1	1.49	1.10
48:BB:1116:ARG:HD3	50:C1:488:U:C6	1.85	1.10
48:BB:817:GLU:N	48:BB:1170:ILE:HD11	1.66	1.10
49:BC:351:A:C2	54:CD:116:ARG:NH2	2.16	1.10
1:A2:2637:A:H3'	1:A2:2638:U:H5"	1.32	1.10
1:A2:4981:U:O2	59:CI:166:PHE:O	1.67	1.10
47:BA:20:U:H3'	47:BA:21:A:H5'	1.33	1.10
48:BB:881:GLN:HA	48:BB:1121:PRO:HG3	1.32	1.10
50:C1:1684:C:H2'	50:C1:1685:U:H5'	1.19	1.10
48:BB:1110:PRO:HG3	48:BB:1174:LYS:HG3	1.34	1.10
50:C1:1631:U:H5'	50:C1:1631:U:H6	1.16	1.10
1:A2:3735:A:C6	50:C1:1708:C:O2'	1.90	1.10
1:A2:178:C:H3'	1:A2:179:G:H5"	1.21	1.09
1:A2:1191:G:H2'	1:A2:1192:G:H8	1.10	1.09
47:BA:32:U:C5'	67:CQ:146:ARG:CA	2.25	1.09
48:BB:1069:GLU:C	48:BB:1071:ARG:H	1.59	1.09
1:A2:4068:C:H4'	52:CB:224:GLU:CD	1.76	1.09
48:BB:952:ILE:HD12	48:BB:955:ILE:HD11	1.35	1.09
48:BB:1066:HIS:C	48:BB:1094:GLY:N	2.11	1.09
1:A2:4562:A:OP2	48:BB:945:HIS:CE1	2.06	1.09
1:A2:4639:G:H2'	1:A2:4640:G:H5"	1.31	1.09
48:BB:818:ARG:N	48:BB:1172:VAL:HG11	1.67	1.09
48:BB:831:ARG:NH1	48:BB:1066:HIS:HB2	1.67	1.09
48:BB:1157:ALA:CB	48:BB:1202:LEU:HD21	1.83	1.09
49:BC:66:A:N7	49:BC:67:C:C4	2.20	1.09
1:A2:433:G:H2'	1:A2:434:G:C8	1.88	1.09
1:A2:713:G:H4'	6:AC:346:ASN:CB	1.83	1.09
5:AB:258:HIS:CG	5:AB:259:PRO:HD2	1.88	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:An:10:MET:HE1	50:C1:1172:U:H5'	1.28	1.09
48:BB:1166:LYS:HE3	48:BB:1170:ILE:HG12	1.31	1.09
1:A2:4687:U:H3'	1:A2:4688:A:H5"	1.27	1.08
47:BA:74:C:C3'	48:BB:1321:PRO:HB2	1.80	1.08
50:C1:1101:U:H2'	50:C1:1102:G:C8	1.88	1.08
1:A2:709:G:H2'	1:A2:710:G:H5'	1.29	1.08
1:A2:4655:C:H2'	1:A2:4656:C:H5'	1.29	1.08
42:An:5:TRP:CZ2	50:C1:1853:C:C4	2.31	1.08
48:BB:881:GLN:CB	48:BB:1121:PRO:CG	2.16	1.08
1:A2:1791:C:H2'	1:A2:1792:U:H6	1.17	1.08
1:A2:4825:G:H4'	1:A2:4826:C:H4'	1.14	1.08
1:A2:2348:U:H6	1:A2:2348:U:H5"	1.16	1.08
1:A2:4595:A:H5'	1:A2:4624:A:H61	1.19	1.08
48:BB:841:GLU:HB3	48:BB:1065:ALA:HB1	1.10	1.08
50:C1:618:C:H1'	50:C1:632:C:H5'	1.35	1.08
34:Af:106:TYR:CD2	34:Af:107:PRO:CD	2.32	1.08
47:BA:34:G:H4'	50:C1:1248:U:N1	1.33	1.08
1:A2:3586:G:H2'	1:A2:3587:C:H5'	1.34	1.07
47:BA:30:G:H5'	50:C1:1525:C:H5"	1.28	1.07
49:BC:349:C:H4'	54:CD:146:ARG:HE	0.98	1.07
50:C1:181:A:H3'	50:C1:182:C:H5"	1.29	1.07
1:A2:441:G:H8	1:A2:441:G:H5'	1.16	1.07
1:A2:2310:G:H4'	2:A3:20:A:H4'	1.34	1.07
1:A2:2384:G:H2'	40:Al:13:LEU:HD11	1.36	1.07
49:BC:164:U:H3'	78:Cb:41:TYR:CE1	1.88	1.07
50:C1:527:C:H3'	50:C1:528:A:C8	1.88	1.07
50:C1:1258:A:H3'	50:C1:1258:A:N3	1.69	1.07
1:A2:4700:C:H2'	1:A2:4701:G:H4'	1.28	1.07
43:Ao:105:GLN:CA	47:BA:57:G:C5'	2.01	1.07
48:BB:832:LEU:HD23	48:BB:838:VAL:HG12	1.36	1.07
48:BB:1354:SER:O	48:BB:1373:VAL:HA	1.55	1.07
49:BC:265:U:H4'	50:C1:1115:U:H5"	1.37	1.07
49:BC:352:A:H1'	54:CD:116:ARG:NH1	1.68	1.07
50:C1:302:A:H2'	50:C1:303:C:H5"	1.31	1.07
1:A2:4906:G:H2'	1:A2:4907:G:C8	1.89	1.07
48:BB:1116:ARG:HB2	50:C1:488:U:H5	0.94	1.07
50:C1:751:G:H2'	50:C1:752:G:H8	1.17	1.07
1:A2:229:G:H1'	1:A2:374:A:H1'	1.35	1.07
1:A2:4700:C:H3'	1:A2:4701:G:H5"	1.34	1.07
49:BC:351:A:C2	49:BC:352:A:C8	2.41	1.07
59:CI:69:SER:HB3	62:CL:24:LEU:HD11	1.37	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:656:G:H2'	1:A2:657:C:H5'	1.31	1.06
12:AI:102:MET:CE	48:BB:1316:PHE:CD1	2.35	1.06
50:C1:112:U:H5"	50:C1:113:G:H5'	1.37	1.06
1:A2:424:A:H1'	1:A2:425:A:H5"	1.35	1.06
1:A2:457:A:C8	1:A2:676:G:H5"	1.89	1.06
48:BB:862:LEU:HD22	48:BB:914:ILE:HD12	1.28	1.06
1:A2:4031:U:H2'	1:A2:4032:C:H5"	1.33	1.06
1:A2:641:C:H2'	1:A2:642:C:H5	1.10	1.06
1:A2:1166:U:H2'	1:A2:1167:G:C8	1.91	1.05
1:A2:4695:C:H2'	1:A2:4696:G:C8	1.90	1.05
11:AH:98:HIS:HE1	48:BB:944:MET:HB2	1.20	1.05
48:BB:933:LEU:CD1	48:BB:1090:ILE:HG21	1.86	1.05
48:BB:1065:ALA:CB	48:BB:1140:GLU:OE2	2.04	1.05
49:BC:164:U:H4'	78:Cb:41:TYR:CD1	1.89	1.05
1:A2:284:G:H21	1:A2:288:U:H4'	1.13	1.05
1:A2:4031:U:H2'	1:A2:4032:C:C5'	1.86	1.05
50:C1:384:U:H2'	50:C1:385:G:H5"	1.35	1.05
50:C1:571:U:H3'	50:C1:572:U:C4'	1.84	1.05
1:A2:709:G:C2'	1:A2:710:G:H5'	1.86	1.05
48:BB:1352:VAL:CG1	48:BB:1373:VAL:HG21	1.87	1.05
49:BC:164:U:C3'	78:Cb:41:TYR:CZ	2.39	1.05
1:A2:380:A:H3'	1:A2:380:A:N3	1.71	1.05
48:BB:843:LEU:HD11	48:BB:908:ARG:HA	1.33	1.05
48:BB:1067:CYS:CB	48:BB:1092:ILE:HG13	1.86	1.05
48:BB:1319:ARG:HA	48:BB:1322:ILE:HG22	1.36	1.05
1:A2:2738:U:H1'	1:A2:2739:G:C8	1.92	1.05
48:BB:1275:ILE:HG12	48:BB:1278:HIS:HD2	1.22	1.05
49:BC:63:U:C2'	49:BC:64:U:C5	2.39	1.05
49:BC:164:U:C3'	78:Cb:41:TYR:CE1	2.39	1.05
50:C1:527:C:H4'	60:CJ:125:HIS:HB2	1.34	1.05
1:A2:1059:C:H3'	1:A2:1060:C:C5	1.92	1.04
1:A2:2063:G:H1'	6:AC:309:ILE:HD13	1.37	1.04
11:AH:98:HIS:NE2	48:BB:944:MET:C	2.14	1.04
47:BA:75:C:OP2	48:BB:1323:VAL:HB	0.88	1.04
48:BB:817:GLU:CG	48:BB:1170:ILE:CD1	2.09	1.04
48:BB:843:LEU:CD1	48:BB:908:ARG:HA	1.86	1.04
48:BB:1082:GLY:O	50:C1:50:A:C8	2.10	1.04
48:BB:1354:SER:O	48:BB:1373:VAL:CA	2.05	1.04
50:C1:475:C:H5'	50:C1:475:C:H6	1.20	1.04
1:A2:182:C:H3'	1:A2:183:G:C8	1.92	1.04
1:A2:3588:G:H5'	1:A2:3589:G:H5"	1.39	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4291:G:H3'	1:A2:4292:C:H5'	1.05	1.04
48:BB:831:ARG:CD	48:BB:1066:HIS:HB3	1.87	1.04
48:BB:881:GLN:HA	48:BB:1121:PRO:CB	1.81	1.04
48:BB:1301:ILE:HG22	48:BB:1403:GLN:NE2	1.70	1.04
50:C1:929:G:H21	50:C1:1104:G:H4'	1.23	1.04
50:C1:1441:U:H2'	50:C1:1442:U:H4'	1.06	1.04
1:A2:4687:U:H3'	1:A2:4688:A:C5'	1.87	1.04
47:BA:74:C:C4'	48:BB:1321:PRO:CB	2.36	1.04
49:BC:136:A:OP1	49:BC:297:U:C2	2.09	1.04
50:C1:211:G:H2'	50:C1:212:C:C6	1.91	1.04
50:C1:1659:U:H5"	80:Cd:30:LEU:HD11	1.38	1.04
47:BA:37:A:N1	49:BC:342:A:C6	2.25	1.04
50:C1:1833:C:H5'	50:C1:1833:C:H6	1.18	1.04
1:A2:4712:U:H1'	1:A2:4713:G:H8	1.21	1.04
48:BB:843:LEU:HD21	48:BB:908:ARG:HB2	1.39	1.04
50:C1:900:C:H2'	50:C1:901:G:C8	1.93	1.04
1:A2:957:G:H5'	1:A2:957:G:C8	1.91	1.03
1:A2:2449:A:H3'	1:A2:2450:A:H5'	1.35	1.03
11:AH:98:HIS:CE1	48:BB:944:MET:HB2	1.93	1.03
48:BB:841:GLU:H	48:BB:1065:ALA:HB3	1.19	1.03
48:BB:1233:MET:SD	74:CX:75:ILE:HD12	1.97	1.03
48:BB:1327:THR:HG22	48:BB:1370:GLU:CD	1.82	1.03
1:A2:178:C:H3'	1:A2:179:G:C5'	1.88	1.03
1:A2:712:C:H2'	1:A2:713:G:C8	1.93	1.03
1:A2:1178:G:H3'	1:A2:1179:G:H5"	1.39	1.03
1:A2:2311:C:H5'	1:A2:2311:C:H6	1.19	1.03
50:C1:43:U:H5'	50:C1:44:U:H5	1.20	1.03
50:C1:307:G:H4'	50:C1:308:G:H5"	1.41	1.03
1:A2:1191:G:H2'	1:A2:1192:G:C8	1.93	1.03
1:A2:1276:G:H3'	1:A2:1277:U:H4'	1.35	1.03
47:BA:34:G:C6	50:C1:1701:C:N1	2.27	1.03
48:BB:831:ARG:CZ	48:BB:1066:HIS:CB	2.37	1.03
48:BB:831:ARG:NH1	48:BB:1066:HIS:CB	2.22	1.03
48:BB:895:GLN:HE21	48:BB:1049:ILE:HG21	1.22	1.03
48:BB:1327:THR:CG2	48:BB:1370:GLU:OE2	2.07	1.03
1:A2:3775:G:O2'	50:C1:1719:A:H1'	1.58	1.03
1:A2:3938:G:H1'	46:Au:160:HIS:HB2	1.37	1.03
47:BA:8:U:O2	47:BA:48:C:O2	1.77	1.03
47:BA:35:A:N1	49:BC:344:G:C2	2.25	1.03
48:BB:842:LYS:HB2	48:BB:1140:GLU:HB3	1.39	1.03
49:BC:352:A:C5	53:CC:147:VAL:CG1	2.41	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:594:A:H1'	50:C1:643:A:N6	1.72	1.03
1:A2:1248:G:H3'	1:A2:1249:G:C8	1.93	1.03
47:BA:34:G:H1	49:BC:344:G:N2	1.57	1.03
48:BB:817:GLU:HG3	48:BB:1170:ILE:HD13	1.16	1.03
48:BB:842:LYS:HB3	48:BB:1140:GLU:HB3	1.39	1.03
48:BB:929:ARG:HD3	48:BB:1180:GLU:OE2	1.37	1.03
50:C1:557:U:H3'	50:C1:558:G:C8	1.93	1.03
47:BA:34:G:C6	50:C1:1701:C:C2	2.47	1.02
48:BB:817:GLU:N	48:BB:1170:ILE:CD1	2.19	1.02
48:BB:818:ARG:CA	48:BB:1172:VAL:HG11	1.59	1.02
50:C1:500:A:H2'	50:C1:501:C:H5"	1.39	1.02
1:A2:2354:C:H2'	1:A2:2355:G:H8	1.19	1.02
1:A2:2532:G:H2'	1:A2:2533:G:C8	1.93	1.02
48:BB:842:LYS:HB2	48:BB:1140:GLU:CB	1.88	1.02
48:BB:1307:LYS:HE3	48:BB:1395:ILE:HG21	1.35	1.02
49:BC:350:G:OP2	54:CD:146:ARG:NE	1.92	1.02
50:C1:211:G:H8	50:C1:211:G:H5'	1.19	1.02
50:C1:1637:A:H4'	50:C1:1638:G:C5'	1.88	1.02
1:A2:393:A:H8	1:A2:393:A:H5"	1.23	1.02
1:A2:978:G:H2'	1:A2:979:C:C6	1.95	1.02
47:BA:34:G:C5	50:C1:1701:C:C5	2.47	1.02
50:C1:1684:C:C2'	50:C1:1685:U:H5'	1.90	1.02
1:A2:462:A:H4'	1:A2:463:C:C5'	1.89	1.02
1:A2:1409:C:H2'	1:A2:1410:C:C6	1.94	1.02
1:A2:2750:G:H2'	1:A2:2751:C:C6	1.95	1.02
48:BB:929:ARG:CD	48:BB:1070:LEU:HA	1.88	1.02
1:A2:59:A:H2'	1:A2:60:A:H5'	1.42	1.02
47:BA:35:A:C2	49:BC:344:G:N2	2.28	1.02
47:BA:37:A:C6	49:BC:342:A:N6	2.28	1.02
20:AR:119:MET:HB3	20:AR:145:LEU:HD21	1.41	1.01
50:C1:76:U:H2'	50:C1:77:A:H3'	1.41	1.01
1:A2:713:G:H4'	6:AC:346:ASN:HB2	1.41	1.01
1:A2:2305:U:H2'	1:A2:2306:G:C8	1.94	1.01
47:BA:69:G:C8	48:BB:1384:LYS:HE3	1.96	1.01
49:BC:64:U:H2'	49:BC:65:C:H4'	1.05	1.01
50:C1:302:A:C2'	50:C1:303:C:H5"	1.90	1.01
1:A2:2276:A:C8	6:AC:185:ALA:HB3	1.95	1.01
1:A2:3740:C:H5'	47:BA:13:C:C5'	1.84	1.01
1:A2:4562:A:P	48:BB:945:HIS:CE1	2.53	1.01
1:A2:4665:A:H3'	1:A2:4666:G:H8	1.17	1.01
42:An:5:TRP:CG	50:C1:1852:C:C5	2.41	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1075:MET:N	48:BB:1088:ASP:O	1.93	1.01
1:A2:14:C:O4'	1:A2:15:A:H5'	1.60	1.01
1:A2:165:C:H2'	1:A2:166:G:H8	1.26	1.01
47:BA:32:U:H5"	67:CQ:146:ARG:O	1.60	1.01
1:A2:1057:C:H2'	1:A2:1058:A:H5"	1.41	1.01
1:A2:4562:A:O5'	48:BB:945:HIS:NE2	1.93	1.01
48:BB:1065:ALA:CA	48:BB:1141:ALA:CB	2.31	1.01
1:A2:4829:A:H1'	21:AS:169:THR:HG23	1.38	1.00
47:BA:20:U:C3'	47:BA:21:A:H5'	1.91	1.00
48:BB:842:LYS:CB	48:BB:1140:GLU:CB	2.39	1.00
48:BB:1344:LYS:HD2	48:BB:1431:PHE:HB3	1.42	1.00
48:BB:1355:ILE:HG23	48:BB:1371:VAL:HG23	1.41	1.00
48:BB:1405:ILE:HA	48:BB:1421:TRP:CH2	1.94	1.00
2:A3:127:U:H3'	2:A3:128:C:H5"	1.04	1.00
47:BA:34:G:H4'	50:C1:1248:U:H1'	1.02	1.00
47:BA:34:G:C4	50:C1:1701:C:C4	2.49	1.00
48:BB:1066:HIS:HA	48:BB:1094:GLY:HA2	1.40	1.00
50:C1:1768:A:H2'	50:C1:1769:C:H5'	1.37	1.00
1:A2:459:U:H4'	1:A2:460:C:OP1	1.60	1.00
1:A2:1466:G:H2'	1:A2:1467:G:H5"	1.43	1.00
1:A2:2311:C:H5'	1:A2:2311:C:C6	1.95	1.00
1:A2:2416:G:H2'	1:A2:2495:G:N2	1.75	1.00
2:A3:8:U:H2'	2:A3:9:A:H8	1.23	1.00
47:BA:6:G:N2	47:BA:67:C:H42	1.58	1.00
47:BA:6:G:H1	47:BA:67:C:N4	1.60	1.00
49:BC:66:A:C8	49:BC:67:C:C5	2.50	1.00
1:A2:943:G:H3'	1:A2:1262:G:C4'	1.92	1.00
1:A2:1659:G:H8	1:A2:1659:G:H5'	1.25	1.00
15:AM:123:ILE:HA	17:AO:187:LYS:CE	1.91	1.00
48:BB:929:ARG:HD3	48:BB:1180:GLU:CD	1.82	1.00
50:C1:1286:G:H1'	63:CM:34:GLY:HA2	1.43	1.00
1:A2:4236:G:C8	1:A2:4236:G:H5"	1.96	1.00
47:BA:34:G:N1	49:BC:344:G:N2	2.10	1.00
48:BB:1352:VAL:HG13	48:BB:1373:VAL:HG21	1.44	1.00
1:A2:1355:C:H2'	1:A2:1356:C:H5'	1.43	0.99
1:A2:1718:G:C5'	3:A4:102:U:H1'	1.90	0.99
1:A2:2370:C:H3'	1:A2:2371:G:C5'	1.91	0.99
1:A2:2416:G:H2'	1:A2:2495:G:H22	1.25	0.99
1:A2:4812:A:H2'	1:A2:4813:C:C6	1.97	0.99
48:BB:844:ARG:CB	48:BB:1143:GLN:OE1	2.09	0.99
50:C1:1698:C:H4'	50:C1:1699:A:C8	1.97	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3770:U:H4'	1:A2:4456:A:H2	1.25	0.99
1:A2:4830:G:H3'	1:A2:4831:U:H4'	1.42	0.99
45:At:73:PRO:HG3	45:At:78:VAL:HG21	1.39	0.99
49:BC:352:A:N1	53:CC:151:ILE:HD11	1.78	0.99
50:C1:572:U:H2'	50:C1:573:U:C4	1.97	0.99
50:C1:1682:C:H1'	79:Cc:23:SER:HA	1.43	0.99
1:A2:1301:G:H4'	1:A2:1869:A:H2	1.25	0.99
43:Ao:104:ILE:C	47:BA:55:U:C2	2.35	0.99
50:C1:1442:U:H5'	50:C1:1443:C:H6	1.22	0.99
1:A2:3769:A:C2	1:A2:4456:A:H1'	1.96	0.99
11:AH:98:HIS:NE2	48:BB:944:MET:HB3	1.78	0.99
1:A2:1351:A:H3'	1:A2:1352:A:H8	1.23	0.99
1:A2:1791:C:H2'	1:A2:1792:U:C6	1.96	0.99
1:A2:2526:G:H3'	1:A2:2527:G:C5'	1.92	0.99
1:A2:3580:A:H2	1:A2:4971:A:H8	1.08	0.99
6:AC:54:VAL:HG22	6:AC:55:SER:H	1.27	0.99
6:AC:263:LEU:HD22	6:AC:273:LEU:HD22	1.44	0.99
47:BA:74:C:H4'	48:BB:1321:PRO:CG	1.92	0.99
50:C1:689:U:H3'	50:C1:690:G:C8	1.96	0.99
1:A2:957:G:H2'	1:A2:958:C:H5"	1.44	0.99
4:AA:185:ALA:C	4:AA:196:TRP:HE1	1.71	0.99
50:C1:1286:G:H1'	63:CM:34:GLY:CA	1.92	0.99
50:C1:1520:G:H5'	50:C1:1521:C:C5	1.97	0.99
1:A2:1061:C:H2'	1:A2:1062:C:C6	1.96	0.99
1:A2:4900:G:H3'	1:A2:4901:U:H5'	1.45	0.99
28:AZ:83:THR:HG1	35:Ag:95:PHE:HZ	1.04	0.99
47:BA:74:C:H4'	48:BB:1321:PRO:CB	1.91	0.99
48:BB:814:THR:HA	48:BB:1170:ILE:CG1	1.90	0.99
48:BB:885:THR:HB	48:BB:914:ILE:HD11	1.42	0.99
48:BB:933:LEU:HD22	48:BB:1075:MET:HE2	1.00	0.99
1:A2:700:C:C3'	1:A2:701:C:H5"	1.93	0.99
43:Ao:106:PHE:CZ	47:BA:18:G:H1'	1.97	0.99
48:BB:842:LYS:HB3	48:BB:1140:GLU:OE1	1.61	0.99
48:BB:1116:ARG:HB3	50:C1:488:U:H6	1.20	0.99
48:BB:1275:ILE:HG12	48:BB:1278:HIS:CD2	1.98	0.99
49:BC:63:U:H2'	49:BC:64:U:H5	1.09	0.99
50:C1:301:A:H2'	50:C1:302:A:C8	1.97	0.99
1:A2:104:G:C1'	1:A2:1340:G:H22	1.75	0.98
47:BA:6:G:H22	47:BA:67:C:N4	1.60	0.98
50:C1:235:A:HO2'	50:C1:236:A:H8	1.00	0.98
1:A2:3740:C:C4'	47:BA:13:C:H5'	1.91	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:814:THR:CA	48:BB:1170:ILE:HG13	1.92	0.98
48:BB:933:LEU:HD13	48:BB:1090:ILE:HG21	1.46	0.98
48:BB:981:SER:HB2	48:BB:989:THR:HG22	1.45	0.98
1:A2:1:C:HO5'	1:A2:1:C:H6	0.99	0.98
1:A2:1873:G:H5'	1:A2:1873:G:H8	1.27	0.98
42:An:5:TRP:HZ2	50:C1:1853:C:N4	1.33	0.98
42:An:11:ARG:NH1	50:C1:1183:A:C5'	2.23	0.98
1:A2:3877:A:H2'	1:A2:3878:C:H5'	1.44	0.98
48:BB:831:ARG:CD	48:BB:1066:HIS:CB	2.40	0.98
50:C1:184:G:H8	50:C1:185:G:H4'	1.25	0.98
1:A2:2310:G:C3'	1:A2:2311:C:H5"	1.92	0.98
1:A2:4825:G:C4'	1:A2:4826:C:H4'	1.93	0.98
49:BC:63:U:O2'	49:BC:64:U:C5	2.17	0.98
47:BA:75:C:N4	48:BB:1316:PHE:CZ	2.32	0.98
50:C1:1832:A:H2'	50:C1:1833:C:H5"	1.46	0.98
51:CA:6:ASP:HB3	72:CV:42:VAL:HG13	1.43	0.98
48:BB:1069:GLU:O	48:BB:1071:ARG:N	1.95	0.98
48:BB:1347:VAL:HG11	48:BB:1389:HIS:HB3	1.42	0.98
50:C1:1461:G:H21	50:C1:1465:A:H62	1.01	0.98
50:C1:1589:A:H4'	70:CT:82:ARG:HD3	1.43	0.98
47:BA:34:G:O2'	50:C1:1248:U:OP2	1.81	0.97
48:BB:831:ARG:HH22	48:BB:1094:GLY:CA	1.76	0.97
50:C1:683:G:H1'	50:C1:1023:A:C2	1.99	0.97
48:BB:841:GLU:HB3	48:BB:1065:ALA:CB	1.93	0.97
48:BB:847:VAL:HG23	48:BB:934:CYS:HA	1.41	0.97
48:BB:1233:MET:HE1	74:CX:75:ILE:HG23	1.45	0.97
50:C1:193:C:H4'	50:C1:209:A:N6	1.78	0.97
50:C1:1258:A:H2'	50:C1:1259:A:H4'	1.44	0.97
1:A2:2750:G:H2'	1:A2:2751:C:H6	1.28	0.97
47:BA:75:C:C5	48:BB:1316:PHE:CG	2.53	0.97
50:C1:655:A:H4'	50:C1:656:G:H3'	1.44	0.97
1:A2:122:U:H2'	1:A2:123:C:C6	2.00	0.97
1:A2:267:C:H3'	37:Ai:34:THR:HG21	1.46	0.97
1:A2:3858:G:H3'	1:A2:4679:G:H22	1.24	0.97
14:AL:169:ILE:HG12	29:Aa:98:ALA:HB2	1.47	0.97
48:BB:1116:ARG:NH2	50:C1:487:U:O3'	1.97	0.97
50:C1:794:A:H2'	50:C1:795:A:H4'	1.46	0.97
1:A2:4560:G:C5'	84:BB:2435:GNP:O3'	2.11	0.97
47:BA:75:C:P	48:BB:1323:VAL:HB	2.03	0.97
48:BB:1070:LEU:HG	48:BB:1160:PRO:CA	1.92	0.97
1:A2:4291:G:H3'	1:A2:4292:C:C5'	1.94	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BC:349:C:C4’	54:CD:146:ARG:HE	1.78	0.97
50:C1:168:C:H4’	57:CG:131:ARG:HD2	1.46	0.97
50:C1:746:C:H1’	50:C1:747:U:N3	1.79	0.97
1:A2:1870:A:H5’	1:A2:1871:C:H5	1.24	0.97
43:Ao:103:VAL:C	47:BA:56:C:O3’	2.05	0.97
50:C1:1414:A:H2’	50:C1:1415:C:C1’	1.94	0.97
1:A2:41:C:C2’	1:A2:42:A:H5”	1.94	0.97
1:A2:1258:C:H3’	1:A2:1259:A:C5’	1.95	0.96
48:BB:831:ARG:NH2	48:BB:1094:GLY:CA	2.26	0.96
48:BB:928:ASN:OD1	48:BB:1073:GLN:NE2	1.95	0.96
48:BB:1157:ALA:HB2	48:BB:1202:LEU:HD21	1.46	0.96
48:BB:840:THR:N	48:BB:1064:LEU:HB2	1.80	0.96
49:BC:64:U:C2’	49:BC:65:C:H4’	1.94	0.96
48:BB:929:ARG:CG	48:BB:1180:GLU:OE2	2.13	0.96
48:BB:817:GLU:H	48:BB:1170:ILE:HD11	0.80	0.96
48:BB:881:GLN:CA	48:BB:1121:PRO:CB	2.35	0.96
50:C1:1692:U:H2’	50:C1:1693:G:C8	1.99	0.96
1:A2:2308:A:H4’	1:A2:2309:G:H5’	1.44	0.96
1:A2:2526:G:H3’	1:A2:2527:G:H5”	1.45	0.96
7:AD:280:VAL:HG13	12:AI:206:LEU:HD11	1.48	0.96
11:AH:98:HIS:NE2	48:BB:944:MET:O	1.98	0.96
13:AJ:55:TYR:HE1	47:BA:53:G:OP1	1.48	0.96
48:BB:831:ARG:HH11	48:BB:1066:HIS:HB2	1.25	0.96
50:C1:561:A:H3’	50:C1:562:U:C5’	1.95	0.96
48:BB:1172:VAL:HG23	48:BB:1175:ASP:CB	1.96	0.96
1:A2:2701:G:H4’	1:A2:2702:A:C2	2.00	0.96
1:A2:3584:G:H21	25:AW:49:ILE:HA	1.29	0.96
1:A2:700:C:H3’	1:A2:701:C:H5”	1.47	0.96
48:BB:928:ASN:ND2	48:BB:1073:GLN:OE1	1.99	0.96
48:BB:1347:VAL:HG22	48:BB:1349:ILE:HA	1.48	0.96
1:A2:4308:A:H3’	1:A2:4309:C:H5”	1.47	0.96
47:BA:41:C:C1’	50:C1:1640:A:O2’	2.12	0.96
49:BC:332:A:H5”	49:BC:332:A:H8	1.26	0.96
50:C1:1442:U:C5	50:C1:1443:C:H1’	2.01	0.96
43:Ao:105:GLN:N	47:BA:55:U:O2	1.99	0.96
48:BB:1172:VAL:HG23	48:BB:1175:ASP:HB3	1.48	0.96
48:BB:1327:THR:HG22	48:BB:1370:GLU:HG2	1.34	0.96
49:BC:338:C:H41	65:CO:149:ARG:HH11	0.98	0.96
1:A2:3943:G:H5’	1:A2:3943:G:H8	1.28	0.95
1:A2:4561:U:O2’	48:BB:974:ARG:NH2	1.99	0.95
1:A2:4665:A:H3’	1:A2:4666:G:C8	2.01	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BC:64:U:O2'	49:BC:65:C:O3'	1.81	0.95
50:C1:746:C:H1'	50:C1:747:U:C4	2.01	0.95
1:A2:476:C:H6	1:A2:476:C:H5"	1.30	0.95
1:A2:3740:C:H4'	47:BA:13:C:C5'	1.96	0.95
48:BB:1070:LEU:HG	48:BB:1160:PRO:HA	0.98	0.95
1:A2:1053:G:H2'	1:A2:1054:G:H8	1.31	0.95
1:A2:1465:C:C2'	1:A2:1466:G:H5'	1.96	0.95
1:A2:4339:A:N7	43:Ao:54:PRO:HA	1.80	0.95
48:BB:831:ARG:HH22	48:BB:1094:GLY:HA2	1.20	0.95
48:BB:1074:VAL:HG22	48:BB:1159:LEU:O	1.66	0.95
49:BC:336:U:H5'	65:CO:110:PRO:HB3	1.45	0.95
1:A2:1050:G:H2'	1:A2:1051:C:H5'	1.47	0.95
2:A3:149:G:H1'	10:AG:61:ILE:HD12	1.46	0.95
49:BC:351:A:N7	53:CC:124:PHE:CZ	2.34	0.95
50:C1:193:C:H2'	50:C1:194:C:C6	2.01	0.95
2:A3:37:A:H2	2:A3:105:C:H42	1.14	0.95
4:AA:186:TYR:HA	4:AA:196:TRP:CE2	1.99	0.95
13:AJ:55:TYR:CZ	47:BA:53:G:OP2	2.18	0.95
48:BB:1239:LEU:HA	48:BB:1246:ALA:HB2	1.47	0.95
50:C1:229:A:N1	50:C1:900:C:H1'	1.80	0.95
50:C1:475:C:H5'	50:C1:475:C:C6	2.02	0.95
50:C1:794:A:C2	50:C1:795:A:H1'	2.01	0.95
50:C1:929:G:N2	50:C1:1104:G:H4'	1.81	0.95
1:A2:240:A:H2'	1:A2:241:G:C8	2.02	0.95
1:A2:1179:G:H2'	1:A2:1180:G:H8	1.17	0.95
1:A2:4825:G:H4'	1:A2:4826:C:C4'	1.95	0.95
48:BB:842:LYS:HD3	48:BB:1140:GLU:CB	1.97	0.95
48:BB:1303:VAL:CG1	48:BB:1337:THR:HG22	1.96	0.95
50:C1:990:A:H62	50:C1:992:A:H1'	1.31	0.95
1:A2:386:A:H3'	1:A2:387:A:H8	1.29	0.95
1:A2:510:C:H5'	1:A2:510:C:C6	2.02	0.95
1:A2:929:U:H2'	1:A2:930:C:H5'	1.46	0.95
2:A3:127:U:C3'	2:A3:128:C:H5"	1.94	0.95
47:BA:8:U:O4	47:BA:14:A:N7	2.00	0.95
49:BC:63:U:C2'	49:BC:64:U:H5	1.74	0.95
50:C1:559:G:H3'	50:C1:560:A:H5"	1.47	0.95
1:A2:286:A:C2	1:A2:308:A:H8	1.84	0.94
1:A2:1061:C:H2'	1:A2:1062:C:H6	1.27	0.94
48:BB:967:VAL:HB	48:BB:1034:LEU:HD23	1.49	0.94
50:C1:571:U:H3'	50:C1:572:U:H5"	1.45	0.94
50:C1:1695:A:H2'	50:C1:1696:C:O4'	1.65	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1366:LYS:O	48:BB:1367:LYS:O	1.84	0.94
1:A2:2549:C:H4'	1:A2:2736:G:H2'	1.47	0.94
48:BB:842:LYS:HD3	48:BB:1140:GLU:HB2	1.49	0.94
69:CS:45:LEU:HD23	69:CS:52:LEU:HG	1.47	0.94
1:A2:1885:A:H4'	9:AF:222:LYS:HB2	1.49	0.94
1:A2:2551:G:H4'	1:A2:2552:U:OP2	1.66	0.94
33:Ae:12:ILE:HD11	33:Ae:69:MET:HB3	1.48	0.94
50:C1:179:C:H3'	50:C1:180:G:C5'	1.96	0.94
1:A2:2508:C:HO2'	1:A2:2509:C:H6	0.98	0.94
1:A2:3740:C:C4'	47:BA:13:C:C5'	2.45	0.94
1:A2:4661:A:H2'	1:A2:4662:G:H5'	1.48	0.94
19:AQ:155:ALA:HB1	19:AQ:156:PRO:HD2	1.48	0.94
47:BA:70:G:C5	48:BB:1319:ARG:NH2	2.36	0.94
50:C1:302:A:H1'	59:CI:73:THR:HB	1.49	0.94
50:C1:1621:U:H2'	50:C1:1622:U:H5'	1.49	0.94
67:CQ:12:VAL:HG21	67:CQ:91:ALA:HA	1.47	0.94
1:A2:3834:A:H2'	1:A2:3835:C:C6	2.02	0.94
47:BA:74:C:H4'	48:BB:1321:PRO:HG2	1.46	0.94
50:C1:570:C:C2'	50:C1:571:U:H5"	1.98	0.94
50:C1:754:G:H2'	50:C1:755:C:C6	2.02	0.94
1:A2:3781:C:H3'	1:A2:3782:A:H5"	1.45	0.94
47:BA:76:A:OP1	48:BB:1355:ILE:HA	1.66	0.94
47:BA:76:A:C8	48:BB:1372:CYS:SG	2.61	0.94
48:BB:928:ASN:OD1	48:BB:1070:LEU:HD13	1.65	0.94
1:A2:1146:G:H5"	1:A2:1147:C:H5	1.32	0.94
1:A2:1278:C:H2'	1:A2:1279:G:C8	2.02	0.94
1:A2:2047:A:H2'	1:A2:2048:U:H3'	1.48	0.94
1:A2:4253:U:H3'	1:A2:4254:C:H5"	1.50	0.94
47:BA:35:A:C6	49:BC:344:G:N2	2.36	0.94
47:BA:41:C:O3'	50:C1:1640:A:C5'	2.16	0.94
50:C1:694:G:H2'	50:C1:695:C:C6	2.01	0.94
50:C1:1253:A:H4'	50:C1:1254:C:H5"	1.47	0.94
50:C1:1402:A:H2'	50:C1:1403:C:C4	2.02	0.94
55:CE:129:ILE:HG22	55:CE:156:VAL:HG22	1.50	0.94
1:A2:929:U:C2'	1:A2:930:C:H5'	1.98	0.94
47:BA:70:G:N7	48:BB:1384:LYS:HD3	1.82	0.94
1:A2:441:G:H5'	1:A2:441:G:C8	2.03	0.94
1:A2:937:C:H2'	1:A2:938:C:C6	2.03	0.94
1:A2:1218:A:H5'	1:A2:1218:A:C8	2.02	0.94
48:BB:1327:THR:CG2	48:BB:1370:GLU:CG	2.43	0.94
1:A2:288:U:H2'	1:A2:289:G:C8	2.02	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1081:C:H4'	1:A2:1081:C:OP1	1.65	0.93
1:A2:2550:A:P	1:A2:2736:G:H8	1.91	0.93
1:A2:4561:U:H2'	1:A2:4562:A:C8	2.03	0.93
48:BB:1233:MET:CE	74:CX:75:ILE:HG23	1.98	0.93
1:A2:4308:A:H3'	1:A2:4309:C:C5'	1.98	0.93
50:C1:175:A:H3'	50:C1:176:U:H5"	1.47	0.93
50:C1:551:U:H5"	81:Ce:39:ASN:HB3	1.51	0.93
50:C1:1750:C:H2'	50:C1:1751:C:H5'	1.48	0.93
1:A2:924:C:H3'	1:A2:925:C:H5"	1.49	0.93
1:A2:1503:A:H3'	1:A2:1504:A:H5"	1.50	0.93
50:C1:525:A:H2	50:C1:561:A:H61	1.11	0.93
50:C1:609:U:H2'	50:C1:610:G:H8	1.34	0.93
50:C1:1257:G:H4'	50:C1:1258:A:OP2	1.63	0.93
57:CG:53:SER:HB2	57:CG:112:VAL:HG23	1.51	0.93
1:A2:218:C:H2'	1:A2:219:C:H6	1.33	0.93
1:A2:641:C:H2'	1:A2:642:C:C5	2.02	0.93
43:Ao:104:ILE:HD13	47:BA:54:U:C6	2.03	0.93
48:BB:1110:PRO:CG	48:BB:1174:LYS:HG3	1.97	0.93
49:BC:351:A:N7	53:CC:124:PHE:HZ	1.67	0.93
50:C1:693:A:H3'	50:C1:694:G:C4'	1.98	0.93
1:A2:254:G:H3'	1:A2:254:G:N3	1.83	0.93
1:A2:1245:G:H2'	1:A2:1246:G:H5"	1.51	0.93
1:A2:3580:A:O3'	59:CI:92:ARG:CZ	2.05	0.93
1:A2:3602:C:H2'	1:A2:3603:G:C8	2.04	0.93
47:BA:74:C:OP2	48:BB:1317:ASN:OD1	1.53	0.93
48:BB:1175:ASP:OD1	48:BB:1179:HIS:CE1	2.21	0.93
49:BC:351:A:H2	54:CD:116:ARG:HH12	1.01	0.93
50:C1:1330:G:C4'	50:C1:1331:C:H5'	1.98	0.93
1:A2:326:A:H3'	1:A2:327:A:H8	1.30	0.93
1:A2:1942:A:C4	1:A2:4654:G:C8	2.57	0.93
1:A2:3740:C:C5'	47:BA:13:C:C4'	2.28	0.93
47:BA:69:G:N7	48:BB:1384:LYS:CE	2.31	0.93
1:A2:2661:C:H2'	1:A2:2662:C:C6	2.03	0.93
20:AR:137:ILE:O	20:AR:140:GLU:N	2.02	0.93
48:BB:1197:VAL:HG11	48:BB:1208:LEU:HD22	1.51	0.93
50:C1:134:C:H3'	50:C1:135:U:H4'	1.49	0.93
50:C1:1276:A:H5'	50:C1:1277:C:H5	1.34	0.93
50:C1:1441:U:C2'	50:C1:1442:U:H4'	1.98	0.93
1:A2:104:G:H1'	1:A2:1340:G:N2	1.83	0.93
1:A2:977:G:H2'	1:A2:978:G:O4'	1.69	0.93
41:Am:103:LEU:HD21	41:Am:110:CYS:HA	1.49	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:942:G:H2'	50:C1:943:U:C6	2.04	0.93
50:C1:1546:G:H21	50:C1:1670:C:H1'	1.32	0.93
1:A2:1542:A:N6	64:CN:127:ARG:NH1	2.16	0.93
1:A2:2309:G:H1'	1:A2:2310:G:C8	2.04	0.93
1:A2:2310:G:C2'	1:A2:2311:C:H5"	1.99	0.93
1:A2:4826:C:H42	15:AM:97:ALA:C	1.77	0.93
50:C1:1309:C:H1'	82:Cf:133:ALA:CB	1.98	0.93
1:A2:1058:A:N6	1:A2:1205:U:H1'	1.84	0.92
1:A2:2345:A:H5"	1:A2:2804:G:H22	1.34	0.92
1:A2:3725:A:O3'	48:BB:1346:PHE:HE1	1.52	0.92
1:A2:4032:C:H2'	1:A2:4033:G:H5'	1.51	0.92
1:A2:4956:U:H4'	5:AB:317:LEU:HG	1.51	0.92
48:BB:844:ARG:O	48:BB:910:PRO:HB2	1.14	0.92
50:C1:926:A:H2'	50:C1:927:C:O4'	1.69	0.92
1:A2:1313:A:H3'	1:A2:1314:A:C8	2.04	0.92
47:BA:74:C:H5'	48:BB:1321:PRO:HB2	1.49	0.92
1:A2:1199:G:H2'	1:A2:1200:G:C8	2.05	0.92
32:Ad:39:LYS:HA	32:Ad:77:ILE:HD12	1.49	0.92
48:BB:1302:ALA:HB2	48:BB:1401:SER:H	1.34	0.92
1:A2:2513:A:H5"	39:Ak:42:LEU:HD22	1.51	0.92
1:A2:4593:G:H2'	1:A2:4623:G:H1	1.33	0.92
2:A3:127:U:H3'	2:A3:128:C:C5'	1.97	0.92
43:Ao:105:GLN:C	47:BA:57:G:H5"	1.93	0.92
47:BA:75:C:C4	48:BB:1316:PHE:CE2	2.58	0.92
50:C1:804:U:H2'	50:C1:805:U:C6	2.04	0.92
82:Cf:121:CYS:SG	82:Cf:141:CYS:HB2	2.09	0.92
1:A2:424:A:H1'	1:A2:425:A:C5'	1.99	0.92
1:A2:2304:G:C2'	1:A2:2305:U:H5'	2.00	0.92
48:BB:824:LYS:CB	48:BB:1165:TYR:CZ	2.52	0.92
1:A2:1079:C:H2'	1:A2:1080:U:C4'	1.99	0.92
1:A2:1894:G:H2'	1:A2:1895:A:H5'	1.50	0.92
1:A2:3605:C:H6	1:A2:3605:C:H5'	1.32	0.92
50:C1:794:A:H2'	50:C1:795:A:C4'	1.99	0.92
50:C1:1397:U:H4'	50:C1:1398:G:H21	1.34	0.92
4:AA:186:TYR:CB	4:AA:196:TRP:CZ2	2.52	0.92
43:Ao:105:GLN:N	47:BA:55:U:N3	2.11	0.92
48:BB:927:ARG:NH1	48:BB:1158:GLY:HA3	1.82	0.92
48:BB:1065:ALA:CA	48:BB:1140:GLU:OE2	2.17	0.92
50:C1:751:G:H2'	50:C1:752:G:C8	2.05	0.92
50:C1:1602:U:H2'	50:C1:1603:G:H2'	1.52	0.92
65:CO:125:LYS:HG2	77:Ca:58:VAL:HG11	1.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:CP:34:MET:HG3	66:CP:45:LEU:HD22	1.52	0.92
47:BA:34:G:C6	50:C1:1701:C:C6	2.57	0.92
48:BB:838:VAL:O	48:BB:1061:SER:C	2.12	0.92
50:C1:314:U:H4'	50:C1:314:U:OP1	1.70	0.92
50:C1:573:U:H2'	50:C1:576:A:C2	2.03	0.92
1:A2:4723:A:H1'	1:A2:4724:G:OP1	1.70	0.92
47:BA:75:C:C4	48:BB:1316:PHE:CD2	2.58	0.92
1:A2:943:G:H3'	1:A2:1262:G:H4'	1.47	0.91
1:A2:1801:U:H2'	1:A2:1802:G:O4'	1.69	0.91
47:BA:74:C:O3'	48:BB:1321:PRO:HB3	1.69	0.91
1:A2:927:A:H3'	9:AF:245:ARG:HG2	1.49	0.91
1:A2:2549:C:H2'	1:A2:2550:A:H5"	1.50	0.91
1:A2:4689:C:O5'	1:A2:4695:C:H4'	1.71	0.91
50:C1:1766:C:H3'	50:C1:1767:C:C5	2.04	0.91
1:A2:180:C:H4'	1:A2:182:C:C6	2.06	0.91
48:BB:881:GLN:CA	48:BB:1121:PRO:HB3	1.89	0.91
1:A2:4823:G:H4'	1:A2:4824:U:OP1	1.69	0.91
47:BA:74:C:C3'	48:BB:1321:PRO:CB	2.49	0.91
48:BB:1116:ARG:CD	50:C1:488:U:C6	2.53	0.91
49:BC:351:A:C5	53:CC:124:PHE:HZ	1.72	0.91
1:A2:4830:G:N7	1:A2:4831:U:H1'	1.85	0.91
4:AA:186:TYR:HA	4:AA:196:TRP:NE1	1.85	0.91
48:BB:947:LEU:HD22	48:BB:1011:GLU:HG2	1.51	0.91
48:BB:1105:PRO:HD2	48:BB:1159:LEU:HB3	1.49	0.91
47:BA:17:C:H3'	47:BA:18:G:H5"	1.50	0.91
1:A2:2421:U:H5"	1:A2:2422:C:H5	1.31	0.91
2:A3:26:C:H1'	6:AC:56:GLU:HG2	1.50	0.91
2:A3:26:C:H2'	2:A3:27:U:C6	2.05	0.91
50:C1:574:A:H5'	50:C1:575:A:N7	1.85	0.91
50:C1:798:G:H8	50:C1:867:G:N2	1.69	0.91
1:A2:719:G:H1'	1:A2:720:A:C5'	2.00	0.91
1:A2:1455:C:H2'	1:A2:1456:C:C6	2.05	0.91
1:A2:1515:U:H2'	1:A2:1516:A:H8	1.31	0.91
1:A2:4691:G:H5'	1:A2:4694:G:H4'	1.53	0.91
1:A2:4837:U:HO2'	1:A2:4838:C:H6	0.93	0.91
48:BB:844:ARG:HD3	48:BB:1143:GLN:OE1	1.69	0.91
50:C1:604:A:H2	50:C1:605:A:C2	1.88	0.91
1:A2:4980:C:C5'	59:CI:168:GLN:NE2	2.33	0.91
48:BB:1209:LEU:HD12	48:BB:1222:ILE:HG21	1.51	0.91
1:A2:2532:G:H2'	1:A2:2533:G:H8	1.24	0.91
1:A2:4551:U:H3	1:A2:4579:U:H3	1.18	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1310:ILE:HB	48:BB:1390:PHE:CZ	2.06	0.91
50:C1:60:A:H3'	50:C1:501:C:H41	1.34	0.91
50:C1:558:G:P	50:C1:558:G:H8	1.94	0.91
1:A2:471:C:H5"	1:A2:472:G:H5"	1.53	0.90
1:A2:1059:C:H3'	1:A2:1060:C:H5	1.36	0.90
1:A2:1218:A:H3'	9:AF:51:TYR:OH	1.69	0.90
1:A2:1791:C:H4'	30:Ab:57:MET:HB3	1.53	0.90
1:A2:4068:C:H4'	52:CB:224:GLU:OE1	0.73	0.90
48:BB:990:LEU:HG	48:BB:998:LYS:NZ	1.85	0.90
48:BB:1237:VAL:HG11	74:CX:50:ILE:HD13	1.53	0.90
50:C1:1441:U:H2'	50:C1:1442:U:C4'	2.00	0.90
1:A2:1352:A:C2	1:A2:1353:A:C5	2.59	0.90
1:A2:4031:U:C2'	1:A2:4032:C:H5"	2.01	0.90
1:A2:4803:C:C4	1:A2:4804:G:H1'	2.05	0.90
43:Ao:103:VAL:CG2	47:BA:56:C:O3'	2.17	0.90
49:BC:350:G:OP2	54:CD:146:ARG:HD2	1.70	0.90
50:C1:1280:G:H2'	50:C1:1281:G:H8	1.36	0.90
60:CJ:86:VAL:HG12	60:CJ:87:LEU:HD12	1.51	0.90
1:A2:930:C:H4'	6:AC:336:ARG:HE	1.36	0.90
47:BA:74:C:H5'	48:BB:1321:PRO:O	1.70	0.90
48:BB:1065:ALA:HA	48:BB:1140:GLU:OE2	1.71	0.90
50:C1:570:C:H2'	50:C1:571:U:H5"	1.51	0.90
1:A2:3725:A:H5'	48:BB:1346:PHE:HZ	1.06	0.90
1:A2:4032:C:C2'	1:A2:4033:G:H5'	2.01	0.90
1:A2:4484:G:C2	5:AB:252:ALA:HB1	2.07	0.90
48:BB:1066:HIS:N	48:BB:1094:GLY:N	2.18	0.90
48:BB:1327:THR:CA	48:BB:1370:GLU:HG2	2.02	0.90
49:BC:332:A:H5"	49:BC:332:A:C8	2.05	0.90
50:C1:184:G:C8	50:C1:185:G:H4'	2.06	0.90
50:C1:1491:G:H2'	50:C1:1492:U:C6	2.05	0.90
1:A2:1196:C:C5	1:A2:1239:G:H5'	2.06	0.90
1:A2:1403:U:H2'	1:A2:1404:G:H8	1.36	0.90
1:A2:1607:C:H2'	1:A2:1608:G:H5'	1.53	0.90
1:A2:1711:C:H2'	1:A2:1712:G:H5"	1.53	0.90
1:A2:2486:C:H5"	1:A2:2486:C:H6	1.35	0.90
1:A2:3686:A:H2'	1:A2:3687:A:C8	2.06	0.90
1:A2:4204:A:H2	1:A2:4227:G:H2'	1.37	0.90
1:A2:4709:G:H2'	1:A2:4710:G:C5'	2.01	0.90
47:BA:34:G:C2	50:C1:1701:C:N3	2.40	0.90
48:BB:1157:ALA:HB2	48:BB:1202:LEU:CD2	2.00	0.90
48:BB:1167:GLU:O	48:BB:1170:ILE:HG22	1.70	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1666:C:H3'	50:C1:1667:U:H6	1.35	0.90
1:A2:725:C:H3'	1:A2:726:C:C5	2.05	0.90
1:A2:2564:A:H5'	1:A2:2746:U:O2'	1.72	0.90
1:A2:2702:A:H4'	1:A2:2703:G:H5"	1.54	0.90
48:BB:1366:LYS:C	48:BB:1369:GLN:HG3	1.95	0.90
50:C1:75:G:H1'	50:C1:76:U:C5	2.06	0.90
1:A2:4909:G:H2'	1:A2:4910:A:H8	1.35	0.90
55:CE:19:MET:HE3	55:CE:108:ARG:HG2	1.50	0.90
1:A2:1020:G:H22	1:A2:1044:G:H22	1.14	0.90
45:At:119:ARG:O	45:At:123:PRO:HD3	1.71	0.90
47:BA:75:C:H5	48:BB:1316:PHE:CG	1.90	0.90
1:A2:1465:C:H2'	1:A2:1466:G:H5'	1.54	0.90
1:A2:1716:A:H5'	3:A4:78:C:H4'	1.54	0.90
1:A2:4637:U:H1'	1:A2:4638:G:OP1	1.71	0.90
50:C1:1157:G:H5"	50:C1:1157:G:N3	1.87	0.90
1:A2:1193:G:H4'	1:A2:1194:C:OP2	1.70	0.90
48:BB:824:LYS:HB3	48:BB:1165:TYR:OH	1.72	0.90
48:BB:881:GLN:HA	48:BB:1121:PRO:HB3	1.45	0.90
62:CL:40:ILE:HG21	62:CL:143:LEU:HD11	1.52	0.90
1:A2:3580:A:H2	1:A2:4971:A:C8	1.89	0.89
48:BB:1340:CYS:HA	48:BB:1348:ASP:O	1.71	0.89
49:BC:351:A:H2	54:CD:116:ARG:NH1	1.69	0.89
1:A2:481:C:H2'	1:A2:482:G:H5"	1.54	0.89
1:A2:2742:A:H2'	1:A2:2743:A:C8	2.07	0.89
1:A2:3696:A:HO2'	1:A2:3697:A:H8	1.20	0.89
43:Ao:105:GLN:N	47:BA:57:G:H5"	1.61	0.89
50:C1:210:U:H2'	50:C1:211:G:H5"	1.52	0.89
50:C1:557:U:C3'	50:C1:558:G:C8	2.55	0.89
50:C1:958:G:OP1	50:C1:958:G:H4'	1.69	0.89
6:AC:139:SER:O	45:At:14:SER:HA	1.72	0.89
49:BC:351:A:C2	49:BC:352:A:H8	1.84	0.89
1:A2:712:C:H2'	1:A2:713:G:H8	1.36	0.89
1:A2:2455:C:P	1:A2:2456:G:H5"	2.11	0.89
48:BB:824:LYS:HB2	48:BB:1165:TYR:CZ	2.06	0.89
48:BB:1237:VAL:HG11	74:CX:50:ILE:CD1	2.01	0.89
50:C1:58:C:H5"	50:C1:499:G:H21	1.36	0.89
50:C1:383:G:H3'	50:C1:384:U:C6	2.07	0.89
1:A2:1064:C:H2'	1:A2:1065:C:C6	2.07	0.89
1:A2:1547:C:H2'	1:A2:1548:U:C6	2.07	0.89
1:A2:1554:A:C8	1:A2:1554:A:H5"	2.07	0.89
1:A2:2547:U:H2'	1:A2:2548:C:H6	1.34	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A3:129:C:H2'	2:A3:130:C:C5	2.07	0.89
35:Ag:43:LYS:HB2	35:Ag:51:GLY:O	1.73	0.89
47:BA:70:G:OP2	48:BB:1383:PRO:CA	2.20	0.89
48:BB:1067:CYS:SG	48:BB:1069:GLU:HB2	2.13	0.89
49:BC:345:A:H2'	49:BC:346:G:H5'	1.50	0.89
50:C1:529:A:H2'	50:C1:530:U:C6	2.08	0.89
50:C1:744:G:H4'	58:CH:102:PRO:HG3	1.53	0.89
50:C1:1330:G:H4'	50:C1:1331:C:C5'	2.01	0.89
1:A2:720:A:H4'	1:A2:721:A:OP2	1.71	0.89
48:BB:1355:ILE:CG1	48:BB:1373:VAL:CB	2.32	0.89
70:CT:39:LEU:HD11	70:CT:43:LYS:HB2	1.55	0.89
1:A2:469:G:C2'	1:A2:470:G:H5'	2.03	0.89
1:A2:737:G:H22	1:A2:901:A:H2	1.16	0.89
1:A2:1443:C:H2'	1:A2:1445:G:OP2	1.73	0.89
1:A2:2656:G:H2'	1:A2:2657:G:H8	1.35	0.89
1:A2:4735:G:H3'	1:A2:4736:C:H5"	1.55	0.89
48:BB:1073:GLN:CD	48:BB:1090:ILE:HG23	1.97	0.89
50:C1:444:G:H22	50:C1:447:A:H5"	1.38	0.89
50:C1:1431:G:H2'	50:C1:1432:U:C5	2.07	0.89
1:A2:957:G:H2'	1:A2:958:C:C5'	2.03	0.89
1:A2:1301:G:H4'	1:A2:1869:A:C2	2.06	0.89
1:A2:2020:A:H2	1:A2:4424:A:C6	1.91	0.89
1:A2:2355:G:N2	1:A2:2357:G:H3'	1.88	0.89
50:C1:310:C:H4'	50:C1:311:C:OP2	1.73	0.89
50:C1:806:U:H2'	50:C1:807:G:H5'	1.53	0.89
50:C1:1631:U:H5'	50:C1:1631:U:C6	2.06	0.89
52:CB:28:LYS:HD3	52:CB:48:LEU:HD13	1.55	0.89
1:A2:1274:A:H8	1:A2:1274:A:H5'	1.38	0.89
1:A2:4806:G:H2'	1:A2:4807:C:H4'	1.53	0.89
2:A3:109:C:H4'	2:A3:110:U:C5	2.07	0.89
5:AB:258:HIS:HB3	5:AB:259:PRO:HD2	1.54	0.89
48:BB:839:ASN:O	48:BB:840:THR:OG1	1.91	0.89
83:Cg:175:LYS:HB3	83:Cg:184:LEU:HD21	1.54	0.89
1:A2:4645:U:H2'	1:A2:4646:G:H8	1.38	0.89
13:AJ:26:VAL:O	13:AJ:68:ILE:HG23	1.72	0.89
48:BB:1321:PRO:HB3	48:BB:1374:LYS:CD	2.03	0.89
50:C1:184:G:H3'	50:C1:185:G:H4'	1.55	0.89
50:C1:1308:U:H1'	50:C1:1309:C:C6	2.08	0.89
1:A2:700:C:H2'	1:A2:701:C:O4'	1.71	0.88
1:A2:1203:G:H2'	1:A2:1204:G:H8	1.36	0.88
1:A2:1525:C:H4'	1:A2:1562:A:H2	1.38	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2469:C:H2'	1:A2:2470:G:C8	2.08	0.88
1:A2:4687:U:C3'	1:A2:4688:A:H5"	2.02	0.88
1:A2:4712:U:H1'	1:A2:4713:G:C8	2.07	0.88
1:A2:4735:G:H2'	1:A2:4736:C:H4'	1.55	0.88
4:AA:196:TRP:HB3	4:AA:197:PRO:HD3	0.93	0.88
11:AH:132:VAL:HG12	11:AH:154:VAL:HG22	1.55	0.88
34:Af:59:THR:HA	34:Af:63:LYS:HA	1.55	0.88
48:BB:1065:ALA:HB1	48:BB:1140:GLU:OE2	1.73	0.88
1:A2:105:A:C2	1:A2:327:A:H2	1.91	0.88
1:A2:642:C:H2'	1:A2:643:G:H4'	1.55	0.88
1:A2:2398:G:P	1:A2:2805:U:H1'	2.13	0.88
48:BB:831:ARG:HD2	48:BB:1066:HIS:CG	2.08	0.88
48:BB:1317:ASN:HB3	48:BB:1323:VAL:HG12	1.53	0.88
68:CR:109:LEU:HD13	68:CR:111:PHE:H	1.38	0.88
1:A2:2625:G:H1'	1:A2:2663:G:O6	1.71	0.88
48:BB:1402:ARG:O	48:BB:1405:ILE:HG12	1.73	0.88
49:BC:345:A:C2'	49:BC:346:G:H5'	2.02	0.88
50:C1:569:A:C2'	50:C1:570:C:H5"	2.03	0.88
50:C1:590:A:H1'	81:Ce:27:LYS:HG2	1.53	0.88
50:C1:851:C:H4'	50:C1:852:G:C2	2.08	0.88
1:A2:381:C:C6	1:A2:381:C:H5"	2.08	0.88
1:A2:457:A:H2'	1:A2:458:U:C5'	2.02	0.88
1:A2:2348:U:H5"	1:A2:2348:U:C6	2.07	0.88
1:A2:2859:A:H2'	1:A2:2860:G:H5'	1.53	0.88
1:A2:3580:A:C2	1:A2:4971:A:H8	1.91	0.88
1:A2:4098:G:H1	1:A2:4113:C:H42	1.16	0.88
49:BC:337:G:O2'	56:CF:130:ARG:CB	2.08	0.88
1:A2:440:C:H2'	1:A2:441:G:H5"	1.54	0.88
1:A2:728:G:H2'	1:A2:729:C:H6	1.37	0.88
47:BA:73:A:H4'	47:BA:74:C:O4'	1.74	0.88
50:C1:1638:G:N3	50:C1:1638:G:H5'	1.89	0.88
48:BB:1405:ILE:HA	48:BB:1421:TRP:HH2	1.33	0.88
50:C1:1556:A:P	50:C1:1556:A:H3'	2.14	0.88
1:A2:2571:C:H1'	1:A2:4092:C:N4	1.89	0.88
1:A2:4971:A:H2	1:A2:4988:G:H21	1.17	0.88
48:BB:1005:ALA:O	48:BB:1008:ILE:HG22	1.74	0.88
48:BB:1327:THR:HG22	48:BB:1370:GLU:OE2	1.66	0.88
49:BC:173:A:O2'	49:BC:174:U:H5'	1.74	0.88
49:BC:349:C:H5'	54:CD:146:ARG:HH21	1.38	0.88
50:C1:1340:U:H5"	50:C1:1341:C:H2'	1.55	0.88
50:C1:1405:A:C2	50:C1:1442:U:H6	1.91	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:333:G:H2'	1:A2:334:C:H5"	1.56	0.88
1:A2:1717:A:H4'	3:A4:101:A:C2	2.08	0.88
1:A2:3750:C:C5'	1:A2:3790:A:H4'	2.04	0.88
1:A2:4655:C:C2'	1:A2:4656:C:H5'	2.04	0.88
48:BB:1341:VAL:HG23	48:BB:1348:ASP:HA	1.54	0.88
50:C1:229:A:C6	50:C1:900:C:H1'	2.09	0.88
50:C1:339:A:H2'	50:C1:340:C:C6	2.08	0.88
1:A2:924:C:H2'	1:A2:925:C:O4'	1.73	0.88
1:A2:1377:A:H2'	1:A2:1400:A:H61	1.39	0.88
3:A4:23:A:N3	3:A4:119:U:H1'	1.89	0.88
1:A2:2333:U:H5'	1:A2:2333:U:H6	1.39	0.88
1:A2:2553:G:H8	1:A2:2553:G:H5"	1.38	0.88
1:A2:4893:A:N6	8:AE:243:THR:HG23	1.89	0.88
5:AB:237:THR:HG21	5:AB:251:VAL:HG22	1.56	0.88
6:AC:13:GLU:HB2	6:AC:170:LEU:HD11	1.53	0.88
48:BB:1166:LYS:HG3	48:BB:1170:ILE:HG21	1.56	0.88
49:BC:334:C:O2	77:Ca:46:GLU:CG	2.21	0.88
50:C1:222:U:H2'	50:C1:223:C:C6	2.09	0.88
50:C1:222:U:H2'	50:C1:223:C:H6	1.36	0.88
1:A2:384:U:C3'	1:A2:385:G:H4'	2.04	0.87
1:A2:4211:A:H2'	1:A2:4212:C:C6	2.09	0.87
1:A2:4897:C:H2'	8:AE:190:HIS:HB2	1.54	0.87
50:C1:1093:A:H5'	73:CW:3:ARG:HE	1.39	0.87
1:A2:1065:C:H2'	1:A2:1066:C:H5'	1.56	0.87
1:A2:1797:G:H22	1:A2:1799:C:H2'	1.37	0.87
48:BB:1069:GLU:CB	48:BB:1092:ILE:HD11	2.04	0.87
48:BB:1107:VAL:HG22	48:BB:1156:LEU:HD21	1.56	0.87
48:BB:1314:TYR:O	48:BB:1324:MET:HG3	1.75	0.87
50:C1:1518:C:H5"	50:C1:1519:U:H5'	1.56	0.87
1:A2:218:C:H2'	1:A2:219:C:C6	2.08	0.87
1:A2:437:C:H3'	1:A2:438:C:C5	2.09	0.87
1:A2:1020:G:H1	1:A2:1044:G:H1	1.20	0.87
1:A2:2624:A:C6	1:A2:2665:G:C6	2.62	0.87
1:A2:4562:A:H2'	1:A2:4563:C:C6	2.09	0.87
1:A2:4584:A:H2	5:AB:336:CYS:HG	1.19	0.87
3:A4:66:G:H2'	3:A4:66:G:N3	1.86	0.87
6:AC:270:ALA:HB1	6:AC:276:ASN:HA	1.56	0.87
43:Ao:106:PHE:HZ	47:BA:57:G:N2	1.67	0.87
48:BB:1067:CYS:O	48:BB:1069:GLU:N	2.06	0.87
1:A2:1547:C:H2'	1:A2:1548:U:H6	1.38	0.87
1:A2:2853:G:C8	44:Ap:16:THR:HG22	2.08	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4637:U:O4	1:A2:4674:C:H1'	1.74	0.87
47:BA:32:U:H3'	67:CQ:146:ARG:O	1.75	0.87
48:BB:832:LEU:O	48:BB:838:VAL:HG12	1.74	0.87
48:BB:1008:ILE:HG13	48:BB:1012:PHE:CE2	2.08	0.87
50:C1:1697:A:H1'	50:C1:1698:C:OP2	1.75	0.87
54:CD:158:ILE:HG22	54:CD:164:VAL:HG22	1.54	0.87
1:A2:668:C:H1'	45:At:84:LYS:HD2	1.53	0.87
1:A2:1855:G:H5"	1:A2:1855:G:H8	1.39	0.87
1:A2:2689:G:H2'	1:A2:2690:C:H5'	1.55	0.87
1:A2:3943:G:H4'	46:Au:204:MET:SD	2.13	0.87
43:Ao:105:GLN:HA	47:BA:57:G:O4'	1.74	0.87
53:CC:174:ILE:HG22	53:CC:175:GLY:H	1.38	0.87
1:A2:381:C:H5"	1:A2:381:C:H6	1.39	0.87
1:A2:2705:U:H2'	1:A2:2706:C:O4'	1.75	0.87
49:BC:331:G:H3'	49:BC:331:G:H8	1.36	0.87
50:C1:131:C:N4	50:C1:215:G:H5'	1.89	0.87
1:A2:949:G:H3'	1:A2:950:A:H4'	1.56	0.87
1:A2:1177:C:H4'	1:A2:1178:G:OP1	1.75	0.87
1:A2:1178:G:H2'	1:A2:1179:G:H4'	1.56	0.87
1:A2:1380:G:H2'	1:A2:1381:C:H6	1.40	0.87
1:A2:2572:C:H2'	1:A2:2573:G:C8	2.10	0.87
1:A2:4806:G:H2'	1:A2:4807:C:C4'	2.04	0.87
50:C1:609:U:H2'	50:C1:610:G:C8	2.07	0.87
1:A2:2345:A:H3'	1:A2:2804:G:H1	1.37	0.87
48:BB:831:ARG:HD2	48:BB:1066:HIS:HB2	1.57	0.87
48:BB:1400:ILE:HD13	48:BB:1421:TRP:CZ3	2.09	0.87
50:C1:76:U:H3'	50:C1:77:A:H5"	1.57	0.87
1:A2:1397:C:H2'	1:A2:1398:C:C6	2.10	0.87
1:A2:2735:G:O2'	1:A2:2743:A:H1'	1.75	0.87
47:BA:69:G:N7	48:BB:1384:LYS:HE2	1.90	0.87
48:BB:990:LEU:HG	48:BB:998:LYS:HZ2	1.39	0.87
48:BB:1355:ILE:HA	48:BB:1372:CYS:O	1.75	0.87
1:A2:393:A:H5"	1:A2:393:A:C8	2.10	0.86
1:A2:1203:G:H5'	1:A2:1210:U:C5	2.10	0.86
1:A2:1651:U:H1'	1:A2:4264:A:H62	1.40	0.86
1:A2:4204:A:C2	1:A2:4227:G:H2'	2.10	0.86
48:BB:1116:ARG:HH22	50:C1:487:U:C3'	1.87	0.86
50:C1:172:U:H3'	50:C1:173:A:H5"	1.56	0.86
1:A2:180:C:H4'	1:A2:182:C:H6	1.38	0.86
1:A2:326:A:H3'	1:A2:327:A:C8	2.09	0.86
1:A2:711:A:H2'	1:A2:712:C:H1'	1.56	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1403:U:H2'	1:A2:1404:G:C8	2.09	0.86
1:A2:1892:C:H4'	17:AO:89:PRO:HD3	1.57	0.86
1:A2:2752:C:H2'	1:A2:2753:G:C8	2.10	0.86
1:A2:3867:G:H5'	5:AB:254:ILE:HG22	1.56	0.86
1:A2:4562:A:C5'	48:BB:945:HIS:HE2	1.87	0.86
43:Ao:105:GLN:CA	47:BA:55:U:O2	2.22	0.86
50:C1:1684:C:H2'	50:C1:1685:U:C5'	2.05	0.86
1:A2:1380:G:H2'	1:A2:1381:C:C6	2.09	0.86
1:A2:2372:A:O2'	1:A2:2783:A:H2'	1.75	0.86
48:BB:817:GLU:CB	48:BB:1170:ILE:CD1	2.44	0.86
48:BB:1230:LYS:NZ	74:CX:75:ILE:HG21	1.91	0.86
50:C1:1101:U:H2'	50:C1:1102:G:H8	1.39	0.86
50:C1:1765:C:H2'	50:C1:1766:C:O4'	1.74	0.86
1:A2:972:C:H1'	1:A2:1218:A:OP2	1.76	0.86
1:A2:1053:G:H2'	1:A2:1054:G:C8	2.09	0.86
28:AZ:104:PRO:O	28:AZ:108:ARG:HG2	1.76	0.86
48:BB:1116:ARG:CG	50:C1:488:U:C6	2.57	0.86
1:A2:961:C:OP1	1:A2:961:C:H4'	1.73	0.86
1:A2:1349:C:H4'	1:A2:1350:G:OP2	1.75	0.86
1:A2:4563:C:H2'	1:A2:4564:G:H5'	1.54	0.86
28:AZ:11:VAL:HG12	28:AZ:82:PRO:HA	1.58	0.86
34:Af:106:TYR:CG	34:Af:107:PRO:HD2	2.09	0.86
49:BC:266:G:H2'	50:C1:1115:U:P	2.15	0.86
50:C1:1424:G:H3'	50:C1:1425:G:O4'	1.76	0.86
50:C1:1491:G:H2'	50:C1:1492:U:H6	1.40	0.86
50:C1:1531:A:H4'	50:C1:1605:G:H4'	1.54	0.86
1:A2:937:C:H2'	1:A2:938:C:H6	1.39	0.86
1:A2:2310:G:H2'	1:A2:2311:C:H5"	1.56	0.86
48:BB:897:LYS:HG3	48:BB:898:MET:H	1.38	0.86
48:BB:1399:LYS:HD2	48:BB:1428:LYS:HE3	1.58	0.86
1:A2:24:G:N1	1:A2:333:G:C8	2.43	0.86
1:A2:194:A:H4'	27:AY:126:ARG:HD3	1.56	0.86
1:A2:400:G:N2	1:A2:2305:U:H5"	1.89	0.86
1:A2:719:G:C1'	1:A2:720:A:H5"	2.05	0.86
1:A2:1203:G:H2'	1:A2:1204:G:C8	2.11	0.86
1:A2:4236:G:H5"	1:A2:4236:G:H8	1.35	0.86
42:An:5:TRP:HZ2	50:C1:1853:C:C5	1.92	0.86
45:At:73:PRO:CG	45:At:78:VAL:HG21	2.05	0.86
47:BA:37:A:C2	49:BC:342:A:N1	2.42	0.86
50:C1:211:G:H5'	50:C1:211:G:C8	2.10	0.86
50:C1:1442:U:H3'	50:C1:1443:C:C5'	2.04	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:641:C:C2’	1:A2:642:C:H5	1.89	0.86
1:A2:1020:G:N2	1:A2:1044:G:H22	1.73	0.86
47:BA:75:C:N4	48:BB:1316:PHE:CG	2.21	0.86
47:BA:76:A:H62	48:BB:1316:PHE:HB2	1.41	0.86
50:C1:68:A:H4’	50:C1:69:C:O5’	1.74	0.86
50:C1:1690:U:H2’	50:C1:1691:U:H5’	1.56	0.86
64:CN:92:ILE:HG21	64:CN:149:LEU:HD13	1.55	0.86
1:A2:682:C:H2’	1:A2:683:C:H6	1.40	0.86
1:A2:713:G:H4’	6:AC:346:ASN:HB3	1.56	0.86
1:A2:976:C:H4’	1:A2:1222:G:H4’	1.58	0.86
1:A2:2394:A:C8	1:A2:2394:A:H5”	2.10	0.86
6:AC:330:PRO:HB2	9:AF:51:TYR:CE1	2.09	0.86
8:AE:175:VAL:HB	8:AE:187:ARG:O	1.75	0.86
48:BB:1353:THR:CB	48:BB:1374:LYS:HE3	2.05	0.86
49:BC:331:G:H3’	49:BC:331:G:C8	2.11	0.86
49:BC:352:A:H1’	54:CD:116:ARG:HH11	1.34	0.86
50:C1:106:C:H5”	50:C1:431:G:H1’	1.56	0.86
50:C1:1079:C:H4’	50:C1:1181:A:N6	1.91	0.86
1:A2:1083:C:H3’	1:A2:1084:C:H5”	1.57	0.86
1:A2:1890:G:H1’	1:A2:1897:G:C6	2.10	0.86
1:A2:4688:A:O2’	1:A2:4695:C:H1’	1.75	0.86
15:AM:31:ILE:HD13	21:AS:100:LEU:HD11	1.57	0.86
47:BA:34:G:C5	50:C1:1701:C:C6	2.64	0.86
48:BB:1340:CYS:SG	48:BB:1399:LYS:HD3	2.15	0.86
49:BC:100:G:OP1	76:CZ:114:LYS:NZ	2.09	0.86
50:C1:66:G:H2’	57:CG:132:ARG:O	1.74	0.86
50:C1:192:C:H42	50:C1:207:G:H1	1.23	0.86
50:C1:748:C:H42	50:C1:860:G:P	1.97	0.86
50:C1:1214:A:H2’	50:C1:1215:C:H5’	1.57	0.86
50:C1:1390:U:H2’	50:C1:1391:C:C6	2.11	0.86
1:A2:4906:G:H2’	1:A2:4907:G:H8	1.41	0.85
17:AO:109:PRO:HB2	17:AO:112:TYR:CD2	2.11	0.85
47:BA:34:G:O6	50:C1:1701:C:C1’	2.24	0.85
50:C1:690:G:H2’	50:C1:691:G:C8	2.11	0.85
50:C1:979:C:O2’	50:C1:980:A:H5’	1.76	0.85
50:C1:1217:A:H2’	50:C1:1218:C:C6	2.11	0.85
50:C1:1261:C:H4’	50:C1:1261:C:OP1	1.75	0.85
1:A2:3739:U:O3’	47:BA:12:U:O2’	1.92	0.85
1:A2:4043:U:H1’	1:A2:4044:G:H2’	1.58	0.85
1:A2:4837:U:H4’	1:A2:4838:C:C5’	2.06	0.85
24:AV:120:PRO:HD3	25:AW:24:THR:O	1.76	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BC:136:A:OP1	49:BC:297:U:N3	2.09	0.85
49:BC:164:U:C4’	78:Cb:41:TYR:CE1	2.58	0.85
50:C1:1082:A:H2’	50:C1:1084:A:H5”	1.57	0.85
1:A2:1221:C:H2’	1:A2:1222:G:H5’	1.57	0.85
1:A2:2310:G:H4’	2:A3:20:A:C4’	2.05	0.85
1:A2:4005:C:H2’	1:A2:4006:C:H6	1.41	0.85
1:A2:4980:C:C5’	59:CI:123:ARG:NH1	2.38	0.85
48:BB:1327:THR:HG21	48:BB:1370:GLU:OE2	1.74	0.85
50:C1:1276:A:H5’	50:C1:1277:C:C5	2.10	0.85
50:C1:1768:A:C2’	50:C1:1769:C:H5’	2.05	0.85
50:C1:1832:A:C2’	50:C1:1833:C:H5”	2.06	0.85
1:A2:924:C:H3’	1:A2:925:C:C5’	2.06	0.85
1:A2:1894:G:C2’	1:A2:1895:A:H5’	2.06	0.85
1:A2:2260:G:H8	1:A2:2260:G:H5”	1.41	0.85
1:A2:4737:C:H2’	1:A2:4738:U:C6	2.11	0.85
42:An:10:MET:HE1	50:C1:1172:U:C4’	2.05	0.85
43:Ao:103:VAL:CB	47:BA:57:G:OP1	2.21	0.85
47:BA:76:A:OP1	48:BB:1372:CYS:O	1.81	0.85
49:BC:349:C:C4’	54:CD:146:ARG:NE	2.39	0.85
50:C1:1016:U:H1’	50:C1:1017:U:H5”	1.58	0.85
1:A2:417:A:H2’	1:A2:418:A:H8	1.39	0.85
1:A2:724:C:H3’	1:A2:725:C:H5”	1.56	0.85
1:A2:4291:G:C3’	1:A2:4292:C:H5’	2.00	0.85
1:A2:4617:U:O2	1:A2:4617:U:H2’	1.76	0.85
28:AZ:68:ILE:HD12	28:AZ:119:GLU:HG2	1.59	0.85
35:Ag:48:VAL:HG21	35:Ag:86:CYS:HB3	1.58	0.85
46:Au:79:LEU:HD21	46:Au:84:LEU:HB2	1.56	0.85
48:BB:1354:SER:O	48:BB:1373:VAL:CB	2.24	0.85
50:C1:1021:U:H5”	64:CN:128:TYR:CE1	2.12	0.85
1:A2:1378:A:H2’	1:A2:1379:G:C8	2.12	0.85
1:A2:1781:A:H4’	22:AT:105:PHE:CE1	2.11	0.85
1:A2:2738:U:H1’	1:A2:2739:G:H8	1.37	0.85
1:A2:3694:G:H5”	1:A2:3694:G:H8	1.42	0.85
1:A2:4855:C:H2’	1:A2:4856:G:H4’	1.59	0.85
8:AE:166:LYS:HD2	8:AE:208:ILE:HG21	1.57	0.85
48:BB:929:ARG:HD2	48:BB:1070:LEU:CA	2.05	0.85
49:BC:352:A:C4	53:CC:147:VAL:HG11	2.10	0.85
50:C1:162:C:H2’	50:C1:163:U:O4’	1.77	0.85
50:C1:1079:C:H4’	50:C1:1181:A:H61	1.40	0.85
50:C1:1138:C:H5”	50:C1:1139:C:OP1	1.74	0.85
50:C1:1554:C:H3’	50:C1:1555:U:H5’	1.57	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1918:G:H5”	1:A2:1918:G:C8	2.11	0.85
1:A2:2304:G:H2’	1:A2:2305:U:H5’	1.58	0.85
1:A2:4955:G:H2’	1:A2:4956:U:H5’	1.58	0.85
3:A4:23:A:H2’	3:A4:24:C:C6	2.11	0.85
47:BA:68:C:H2’	47:BA:69:G:H5’	1.57	0.85
47:BA:69:G:C5	48:BB:1384:LYS:HE2	2.12	0.85
47:BA:76:A:N7	48:BB:1316:PHE:HB2	1.90	0.85
48:BB:841:GLU:CA	48:BB:1065:ALA:CB	2.53	0.85
49:BC:267:G:C6	50:C1:1114:U:OP1	2.29	0.85
50:C1:222:U:H5”	62:CL:17:PHE:O	1.77	0.85
50:C1:1255:G:H5”	50:C1:1256:G:H8	1.41	0.85
50:C1:1284:A:C5	50:C1:1286:G:H5’	2.10	0.85
1:A2:964:U:OP2	1:A2:967:C:H1’	1.76	0.85
1:A2:4060:G:H2’	1:A2:4061:G:H5’	1.59	0.85
1:A2:4478:A:N7	5:AB:257:TRP:CD1	2.45	0.85
50:C1:181:A:C3’	50:C1:182:C:H5”	2.05	0.85
50:C1:576:A:OP1	50:C1:577:U:H3’	1.77	0.85
50:C1:797:C:H4’	58:CH:109:ARG:CB	2.07	0.85
56:CF:144:LEU:HD23	79:Cc:49:PRO:HB2	1.57	0.85
1:A2:457:A:H2’	1:A2:458:U:H5’	1.58	0.85
1:A2:1224:G:H2’	1:A2:1225:C:H4’	1.56	0.85
1:A2:1256:C:C2’	1:A2:1257:G:H5’	2.07	0.85
1:A2:1277:U:H2’	1:A2:1278:C:O4’	1.76	0.85
1:A2:1659:G:H5’	1:A2:1659:G:C8	2.12	0.85
47:BA:74:C:O3’	48:BB:1321:PRO:CB	2.25	0.85
50:C1:20:G:H4’	50:C1:620:G:C2	2.12	0.85
50:C1:606:G:C8	81:Ce:54:GLY:HA3	2.11	0.85
50:C1:1298:G:H4’	66:CP:78:THR:HA	1.57	0.85
50:C1:1418:C:H5”	70:CT:129:ARG:CB	2.07	0.85
68:CR:109:LEU:HD11	68:CR:111:PHE:HB2	1.57	0.85
1:A2:4598:U:H2’	1:A2:4599:G:C8	2.11	0.85
1:A2:4980:C:C5’	59:CI:123:ARG:HH12	1.90	0.85
43:Ao:105:GLN:HG2	47:BA:56:C:H2’	1.58	0.85
47:BA:76:A:N6	48:BB:1316:PHE:CD1	2.44	0.85
48:BB:929:ARG:CD	48:BB:1071:ARG:NH1	2.37	0.85
48:BB:1166:LYS:CE	48:BB:1170:ILE:HG12	2.05	0.85
50:C1:84:A:HO2’	50:C1:85:A:H8	0.88	0.85
50:C1:640:A:H5”	60:CJ:25:LEU:HD11	1.59	0.85
83:Cg:236:ILE:HG12	83:Cg:252:THR:HG22	1.59	0.85
1:A2:286:A:C2	1:A2:308:A:C8	2.65	0.84
1:A2:922:C:H2’	1:A2:923:G:C8	2.11	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1219:C:N3	1:A2:1249:G:H4'	1.91	0.84
1:A2:2742:A:H2'	1:A2:2743:A:N7	1.92	0.84
1:A2:4414:G:H2'	1:A2:4415:G:O4'	1.77	0.84
10:AG:41:ILE:HG22	10:AG:42:GLY:H	1.42	0.84
15:AM:112:VAL:HA	17:AO:197:LYS:HZ1	1.42	0.84
18:AP:19:GLY:HA3	18:AP:22:LEU:HD11	1.58	0.84
48:BB:933:LEU:HD12	48:BB:1090:ILE:CD1	2.07	0.84
49:BC:268:G:O6	50:C1:1115:U:O5'	1.93	0.84
1:A2:1701:C:H4'	1:A2:1821:A:O2'	1.77	0.84
1:A2:2040:C:C3'	1:A2:2041:G:H5"	2.07	0.84
1:A2:4595:A:H5'	1:A2:4624:A:N6	1.92	0.84
1:A2:4645:U:H2'	1:A2:4646:G:C8	2.12	0.84
8:AE:224:LYS:HA	8:AE:227:HIS:O	1.76	0.84
48:BB:933:LEU:HD12	48:BB:1090:ILE:HD13	1.56	0.84
50:C1:797:C:C2'	50:C1:798:G:H5"	2.06	0.84
50:C1:1775:U:H2'	50:C1:1776:G:H8	1.42	0.84
1:A2:477:C:H5"	1:A2:479:G:OP1	1.77	0.84
1:A2:1066:C:C2'	1:A2:1067:A:H5'	2.07	0.84
1:A2:1083:C:H3'	1:A2:1084:C:C5'	2.07	0.84
1:A2:1748:G:H2'	1:A2:1749:A:H5"	1.58	0.84
1:A2:3919:U:C2	1:A2:3920:G:N7	2.45	0.84
49:BC:349:C:C4'	54:CD:146:ARG:CZ	2.54	0.84
49:BC:351:A:N1	53:CC:147:VAL:HG22	1.92	0.84
50:C1:1416:C:N4	50:C1:1431:G:C2	2.44	0.84
50:C1:1542:C:H6	50:C1:1542:C:H5"	1.43	0.84
1:A2:50:C:H2'	1:A2:51:A:H5'	1.59	0.84
1:A2:1157:U:H2'	1:A2:1158:G:H8	1.42	0.84
1:A2:4584:A:H2	5:AB:336:CYS:SG	1.99	0.84
1:A2:4616:A:H4'	1:A2:4617:U:C5'	2.07	0.84
48:BB:909:ILE:HD12	48:BB:910:PRO:HD2	1.59	0.84
50:C1:210:U:C2'	50:C1:211:G:H5"	2.08	0.84
50:C1:1402:A:H2'	50:C1:1403:C:C5	2.12	0.84
50:C1:1692:U:H2'	50:C1:1693:G:H8	1.38	0.84
50:C1:1781:A:H1'	50:C1:1782:G:OP2	1.77	0.84
50:C1:1825:A:H2'	50:C1:1826:G:H5"	1.59	0.84
1:A2:156:C:H4'	37:Ai:26:HIS:HB2	1.60	0.84
1:A2:1351:A:H3'	1:A2:1352:A:C8	2.11	0.84
1:A2:3653:G:H2'	1:A2:3654:C:C6	2.12	0.84
1:A2:4086:C:H3'	1:A2:4086:C:OP2	1.76	0.84
48:BB:881:GLN:CG	48:BB:1121:PRO:CB	2.55	0.84
48:BB:1001:PHE:CZ	48:BB:1036:PRO:HB3	2.13	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BC:267:G:H8	50:C1:1115:U:OP2	1.60	0.84
50:C1:1280:G:H2'	50:C1:1281:G:C8	2.12	0.84
50:C1:1579:A:H3'	50:C1:1579:A:N3	1.92	0.84
1:A2:1662:U:H2'	1:A2:1663:A:C8	2.12	0.84
1:A2:4183:C:H2'	1:A2:4184:A:H5'	1.58	0.84
48:BB:889:LEU:HD11	48:BB:906:ASN:O	1.78	0.84
48:BB:1073:GLN:NE2	48:BB:1073:GLN:HA	1.92	0.84
50:C1:1308:U:H5"	82:Cf:135:HIS:HA	1.59	0.84
50:C1:1476:A:H4'	50:C1:1477:U:H5'	1.60	0.84
1:A2:176:G:C2'	1:A2:177:C:H5'	2.07	0.84
1:A2:2354:C:H2'	1:A2:2355:G:C8	2.09	0.84
1:A2:2589:G:H1'	35:Ag:22:LEU:HD21	1.59	0.84
30:Ab:16:TRP:HB3	30:Ab:21:ILE:HD11	1.58	0.84
47:BA:30:G:H5'	50:C1:1525:C:C5'	2.08	0.84
50:C1:526:A:H2'	50:C1:526:A:N3	1.90	0.84
48:BB:1067:CYS:SG	48:BB:1092:ILE:CG1	0.94	0.84
50:C1:804:U:H2'	50:C1:805:U:H6	1.42	0.84
1:A2:119:G:H4'	1:A2:120:A:O4'	1.78	0.84
1:A2:456:G:N2	1:A2:679:U:H3	1.75	0.84
1:A2:1165:G:H2'	1:A2:1166:U:H6	1.42	0.84
1:A2:1479:A:C3'	1:A2:1480:C:H5"	2.07	0.84
1:A2:3586:G:C2'	1:A2:3587:C:H5'	2.08	0.84
1:A2:3775:G:O2'	50:C1:1719:A:C1'	2.25	0.84
1:A2:3781:C:H2'	1:A2:3782:A:C8	2.13	0.84
1:A2:4593:G:H2'	1:A2:4623:G:N1	1.92	0.84
20:AR:105:LEU:HD12	20:AR:138:LEU:CD1	2.08	0.84
49:BC:352:A:C1'	54:CD:116:ARG:NH1	2.41	0.84
50:C1:216:C:H2'	50:C1:217:A:C8	2.12	0.84
50:C1:377:G:H4'	59:CI:97:VAL:CG1	2.05	0.84
50:C1:1133:A:H2'	50:C1:1134:G:H8	1.43	0.84
50:C1:1766:C:H3'	50:C1:1767:C:C6	2.12	0.84
60:CJ:128:VAL:O	60:CJ:132:GLN:HG2	1.78	0.84
1:A2:1065:C:C2'	1:A2:1066:C:H5'	2.07	0.84
1:A2:1792:U:H1'	30:Ab:50:ASN:OD1	1.78	0.84
48:BB:1000:GLU:O	48:BB:1003:GLU:HG2	1.78	0.84
48:BB:1082:GLY:CA	50:C1:50:A:O4'	2.21	0.84
50:C1:1098:C:H2'	50:C1:1099:G:C8	2.13	0.84
1:A2:1649:G:H4'	1:A2:1650:U:C6	2.13	0.83
2:A3:111:U:H1'	2:A3:112:G:OP2	1.78	0.83
14:AL:135:LYS:H	14:AL:135:LYS:CE	1.90	0.83
48:BB:840:THR:HA	48:BB:1064:LEU:C	2.03	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1237:VAL:HG21	74:CX:97:ASN:HD21	1.42	0.83
50:C1:1418:C:H2'	50:C1:1419:C:C6	2.13	0.83
50:C1:1476:A:H4'	50:C1:1477:U:C5'	2.07	0.83
1:A2:1165:G:H2'	1:A2:1166:U:C6	2.14	0.83
13:AJ:55:TYR:OH	47:BA:53:G:P	2.36	0.83
49:BC:333:C:O2	79:Cc:68:LEU:HD22	1.76	0.83
49:BC:334:C:C2	77:Ca:46:GLU:CG	2.49	0.83
50:C1:66:G:H1'	57:CG:160:LYS:HG2	1.61	0.83
1:A2:284:G:N2	1:A2:288:U:H4'	1.92	0.83
1:A2:408:G:H1'	2:A3:16:G:N2	1.92	0.83
1:A2:482:G:H5'	1:A2:482:G:H8	1.41	0.83
1:A2:961:C:H1'	1:A2:1254:A:H61	1.41	0.83
1:A2:1088:C:C6	1:A2:1088:C:H3'	2.13	0.83
1:A2:1858:G:H3'	1:A2:1859:C:H5'	1.60	0.83
3:A4:63:C:H1'	3:A4:64:G:H5"	1.60	0.83
11:AH:29:GLY:HA3	11:AH:84:VAL:CG1	2.09	0.83
18:AP:95:LEU:HG	18:AP:148:MET:HE1	1.59	0.83
48:BB:933:LEU:HD22	48:BB:1075:MET:SD	2.18	0.83
50:C1:893:U:H2'	50:C1:894:G:C8	2.12	0.83
50:C1:1103:C:H2'	50:C1:1104:G:H5'	1.59	0.83
50:C1:1834:A:H2	50:C1:1837:G:H22	1.26	0.83
57:CG:98:ARG:HD3	57:CG:106:LEU:HD11	1.60	0.83
1:A2:285:G:N7	1:A2:287:A:H2'	1.94	0.83
1:A2:346:A:H2'	1:A2:347:G:H5'	1.59	0.83
1:A2:658:G:H5"	1:A2:658:G:C8	2.14	0.83
1:A2:700:C:C2'	1:A2:701:C:H5"	2.08	0.83
1:A2:1270:G:H4'	1:A2:4898:A:H2	1.40	0.83
34:Af:104:MET:HG2	34:Af:106:TYR:HD1	1.43	0.83
47:BA:34:G:O4'	50:C1:1248:U:N3	2.10	0.83
1:A2:716:U:H4'	9:AF:69:ILE:CB	2.07	0.83
1:A2:3877:A:C2'	1:A2:3878:C:H5'	2.07	0.83
42:An:10:MET:CE	50:C1:1172:U:C4'	2.55	0.83
50:C1:1257:G:H8	50:C1:1257:G:H5"	1.44	0.83
50:C1:1416:C:C3'	50:C1:1417:C:H5"	2.08	0.83
1:A2:696:G:H1'	1:A2:4900:G:O2'	1.76	0.83
1:A2:1332:C:H3'	1:A2:1333:G:C8	2.13	0.83
1:A2:1410:C:H2'	1:A2:1411:C:C6	2.14	0.83
1:A2:1541:G:H2'	1:A2:1542:A:H5"	1.58	0.83
1:A2:4022:C:H4'	46:Au:30:ASN:ND2	1.94	0.83
3:A4:23:A:C2	3:A4:119:U:H1'	2.14	0.83
8:AE:155:GLY:O	8:AE:158:ARG:HG3	1.79	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AR:106:LEU:HG	20:AR:120:TYR:CE2	2.13	0.83
48:BB:843:LEU:HD13	48:BB:908:ARG:C	2.03	0.83
50:C1:193:C:H4'	50:C1:209:A:C6	2.13	0.83
50:C1:193:C:H2'	50:C1:194:C:H6	1.37	0.83
50:C1:798:G:C8	50:C1:867:G:N2	2.47	0.83
55:CE:141:THR:HG22	55:CE:143:ASP:H	1.42	0.83
1:A2:719:G:H4'	1:A2:720:A:OP1	1.79	0.83
1:A2:1219:C:H42	1:A2:1250:A:P	2.02	0.83
1:A2:2004:A:OP1	1:A2:2004:A:H4'	1.76	0.83
7:AD:132:VAL:HG21	7:AD:170:GLY:HA2	1.60	0.83
47:BA:34:G:C5'	50:C1:1248:U:H1'	2.07	0.83
47:BA:75:C:H5	48:BB:1316:PHE:HD2	1.13	0.83
48:BB:818:ARG:CA	48:BB:1172:VAL:CG1	2.43	0.83
48:BB:818:ARG:H	48:BB:1172:VAL:CG1	1.90	0.83
48:BB:1174:LYS:HG2	48:BB:1178:ILE:CG2	2.08	0.83
49:BC:164:U:C4'	78:Cb:41:TYR:CD1	2.60	0.83
50:C1:1276:A:H4'	50:C1:1277:C:O5'	1.78	0.83
50:C1:1442:U:H5'	50:C1:1443:C:C6	2.12	0.83
50:C1:1483:A:H4'	54:CD:160:SER:CB	2.08	0.83
1:A2:893:A:C2'	1:A2:894:G:H5"	2.08	0.83
1:A2:2284:A:H1'	2:A3:19:C:O2'	1.79	0.83
1:A2:3942:G:H5'	46:Au:21:PHE:HB3	1.60	0.83
1:A2:4017:U:H1'	1:A2:4018:A:OP1	1.79	0.83
1:A2:5003:A:H5'	1:A2:5004:G:H5"	1.60	0.83
5:AB:72:VAL:HA	24:AV:91:LYS:O	1.79	0.83
50:C1:1484:A:H5"	54:CD:159:HIS:HB3	1.61	0.83
1:A2:1647:A:C2'	1:A2:1648:A:H5"	2.06	0.83
1:A2:2827:A:H4'	1:A2:4455:G:H4'	1.61	0.83
3:A4:26:C:H5"	7:AD:56:THR:HB	1.60	0.83
48:BB:850:VAL:HG11	48:BB:861:ILE:HD11	1.61	0.83
50:C1:302:A:H2'	50:C1:303:C:C5'	2.08	0.83
50:C1:1534:C:H4'	50:C1:1535:U:H5'	1.61	0.83
1:A2:1146:G:H5"	1:A2:1147:C:C5	2.14	0.83
1:A2:1157:U:H2'	1:A2:1158:G:C8	2.13	0.83
1:A2:1285:C:H5"	1:A2:2289:A:C5	2.13	0.83
1:A2:1648:A:C8	1:A2:1648:A:H5'	2.13	0.83
1:A2:2393:G:H22	1:A2:2397:A:H62	1.22	0.83
1:A2:2561:G:C5'	1:A2:2659:G:H4'	2.08	0.83
1:A2:4697:C:H2'	1:A2:4698:C:H6	1.44	0.83
1:A2:4897:C:H4'	8:AE:188:ARG:HH21	1.44	0.83
15:AM:136:LEU:O	15:AM:140:PRO:HD3	1.79	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1310:ILE:HB	48:BB:1390:PHE:HZ	1.43	0.83
50:C1:447:A:H5'	59:CI:26:LYS:HD2	1.59	0.83
50:C1:1554:C:H3'	50:C1:1555:U:C5'	2.09	0.83
74:CX:87:ASN:HB2	74:CX:90:CYS:SG	2.19	0.83
1:A2:4691:G:C5'	1:A2:4694:G:H4'	2.08	0.82
1:A2:726:C:H2'	1:A2:727:G:H5"	1.60	0.82
1:A2:1221:C:C2'	1:A2:1222:G:H5'	2.09	0.82
1:A2:2559:A:H2	1:A2:2657:G:N2	1.76	0.82
1:A2:2637:A:C3'	1:A2:2638:U:H5"	2.09	0.82
47:BA:41:C:C3'	47:BA:42:C:H5"	2.09	0.82
48:BB:831:ARG:HE	48:BB:841:GLU:CD	1.86	0.82
48:BB:1355:ILE:HG13	48:BB:1373:VAL:CG2	2.09	0.82
1:A2:64:A:H3'	1:A2:110:C:N4	1.94	0.82
1:A2:942:G:H1'	1:A2:2250:C:OP1	1.79	0.82
1:A2:962:G:H2'	1:A2:963:C:H6	1.44	0.82
1:A2:2559:A:C2	1:A2:2657:G:N2	2.47	0.82
34:Af:48:ALA:O	34:Af:102:ARG:HG2	1.79	0.82
43:Ao:105:GLN:O	47:BA:55:U:O2	1.96	0.82
47:BA:34:G:O6	49:BC:344:G:N1	2.12	0.82
50:C1:573:U:H2'	50:C1:576:A:H2	1.42	0.82
50:C1:855:G:H2'	50:C1:856:C:H5'	1.60	0.82
50:C1:992:A:N6	77:Ca:12:LYS:HA	1.94	0.82
1:A2:962:G:H2'	1:A2:963:C:C6	2.15	0.82
47:BA:76:A:N6	48:BB:1316:PHE:HD1	1.74	0.82
50:C1:1405:A:C2'	50:C1:1406:G:H5"	2.09	0.82
71:CU:94:PRO:HD2	71:CU:97:ILE:HD12	1.60	0.82
1:A2:9:C:O2	1:A2:9:C:H2'	1.78	0.82
1:A2:2056:C:H2'	1:A2:2057:G:C8	2.15	0.82
1:A2:2421:U:H5"	1:A2:2422:C:C5	2.13	0.82
48:BB:1175:ASP:O	48:BB:1178:ILE:HG12	1.79	0.82
49:BC:338:C:N4	65:CO:149:ARG:NH1	2.26	0.82
50:C1:199:C:H4'	50:C1:200:G:OP2	1.79	0.82
50:C1:1557:C:OP2	50:C1:1557:C:H3'	1.79	0.82
50:C1:1833:C:H5'	50:C1:1833:C:C6	2.10	0.82
57:CG:135:PRO:HG3	57:CG:144:LEU:HD13	1.61	0.82
82:Cf:121:CYS:SG	82:Cf:132:MET:HG2	2.18	0.82
1:A2:348:U:H4'	6:AC:58:ALA:CB	2.09	0.82
1:A2:1183:G:H2'	1:A2:1184:C:C6	2.14	0.82
1:A2:1224:G:C3'	1:A2:1225:C:H5"	2.09	0.82
1:A2:2536:G:H2'	1:A2:2537:C:C6	2.15	0.82
3:A4:53:U:H2'	3:A4:53:U:O2	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:842:LYS:HB2	48:BB:1140:GLU:CG	2.09	0.82
48:BB:1174:LYS:HE2	48:BB:1175:ASP:N	1.95	0.82
49:BC:337:G:O2'	56:CF:130:ARG:HB3	1.77	0.82
50:C1:890:U:H3'	50:C1:891:G:H5"	1.61	0.82
1:A2:154:U:O3'	1:A2:157:G:H4'	1.79	0.82
1:A2:4089:G:H21	28:AZ:136:PHE:HA	1.42	0.82
48:BB:829:LYS:NZ	48:BB:1062:LYS:NZ	2.27	0.82
48:BB:1174:LYS:HE2	48:BB:1174:LYS:N	1.94	0.82
50:C1:1015:U:H5'	78:Cb:20:LYS:HE3	1.60	0.82
50:C1:1313:A:N1	63:CM:104:VAL:HG21	1.94	0.82
50:C1:1417:C:H2'	50:C1:1418:C:C6	2.13	0.82
50:C1:1547:C:H3'	50:C1:1548:G:C5'	2.10	0.82
1:A2:1477:G:H2'	1:A2:1478:C:H5'	1.60	0.82
1:A2:2369:C:H6	1:A2:2369:C:H5"	1.43	0.82
48:BB:928:ASN:OD1	48:BB:1070:LEU:HD12	1.78	0.82
49:BC:352:A:N7	53:CC:147:VAL:HG11	1.94	0.82
50:C1:559:G:H3'	50:C1:560:A:C5'	2.10	0.82
1:A2:329:A:C2	1:A2:330:C:C5	2.68	0.82
1:A2:2581:C:O2'	1:A2:2582:G:H5"	1.79	0.82
1:A2:4240:A:H5"	1:A2:4241:A:H5'	1.62	0.82
1:A2:4639:G:C2'	1:A2:4640:G:H5"	2.09	0.82
50:C1:398:A:H4'	50:C1:399:C:H3'	1.60	0.82
1:A2:379:A:H2'	1:A2:393:A:H61	1.44	0.82
1:A2:1276:G:H3'	1:A2:1277:U:C4'	2.09	0.82
1:A2:3669:C:H3'	1:A2:3715:A:H61	1.42	0.82
1:A2:4093:C:H3'	1:A2:4094:A:C5'	2.10	0.82
50:C1:691:G:C2'	50:C1:692:G:H5'	2.10	0.82
50:C1:1049:A:H2	50:C1:1069:U:H3	1.24	0.82
1:A2:1166:U:H2'	1:A2:1167:G:H8	1.44	0.81
1:A2:1254:A:H3'	1:A2:1255:G:H5"	1.62	0.81
1:A2:2638:U:H3'	1:A2:2639:G:C5'	2.10	0.81
1:A2:4695:C:H2'	1:A2:4696:G:H8	1.42	0.81
27:AY:44:VAL:HG23	27:AY:123:ALA:HB3	1.62	0.81
34:Af:104:MET:CG	34:Af:106:TYR:HD1	1.93	0.81
48:BB:835:SER:OG	48:BB:838:VAL:HA	1.80	0.81
48:BB:1306:CYS:SG	48:BB:1333:VAL:HG13	2.19	0.81
48:BB:1397:VAL:HG21	48:BB:1424:ILE:HG12	1.60	0.81
49:BC:268:G:N1	50:C1:1116:C:P	2.50	0.81
50:C1:215:G:H2'	50:C1:216:C:C6	2.15	0.81
50:C1:569:A:H2'	50:C1:570:C:C5'	2.08	0.81
50:C1:822:U:H5'	50:C1:822:U:H6	1.46	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1133:A:H2'	50:C1:1134:G:C8	2.15	0.81
50:C1:1440:C:H2'	50:C1:1441:U:C5	2.14	0.81
1:A2:14:C:H4'	26:AX:56:ARG:HA	1.61	0.81
1:A2:216:G:H4'	1:A2:217:C:OP1	1.79	0.81
1:A2:457:A:H62	1:A2:675:C:H5	1.27	0.81
1:A2:735:A:H2'	1:A2:736:G:H8	1.45	0.81
1:A2:916:A:H1'	1:A2:917:G:H5'	1.61	0.81
1:A2:1139:U:H2'	1:A2:1140:C:C6	2.15	0.81
1:A2:1197:G:O2'	1:A2:1198:G:H5'	1.79	0.81
1:A2:1357:G:N3	1:A2:1357:G:H5'	1.95	0.81
1:A2:3914:A:N6	1:A2:4036:U:O4	2.12	0.81
48:BB:929:ARG:HD2	48:BB:1071:ARG:NH1	1.94	0.81
48:BB:1303:VAL:HG11	48:BB:1337:THR:CG2	2.08	0.81
50:C1:1337:C:H2'	50:C1:1338:G:C8	2.15	0.81
59:CI:158:ILE:O	59:CI:162:LEU:HB2	1.79	0.81
1:A2:924:C:H2'	1:A2:925:C:C4'	2.10	0.81
1:A2:953:C:H2'	1:A2:954:G:C8	2.16	0.81
1:A2:957:G:H5"	1:A2:1218:A:O4'	1.80	0.81
1:A2:1248:G:H5"	1:A2:1249:G:N7	1.96	0.81
1:A2:1436:G:H2'	1:A2:1437:C:C6	2.14	0.81
1:A2:1797:G:N2	1:A2:1799:C:H2'	1.96	0.81
1:A2:1813:G:H4'	1:A2:1814:G:OP1	1.80	0.81
1:A2:2260:G:H5"	1:A2:2260:G:C8	2.16	0.81
1:A2:2561:G:H5"	1:A2:2659:G:H4'	1.60	0.81
1:A2:3880:C:H2'	1:A2:3881:U:C6	2.16	0.81
1:A2:4828:G:H1'	21:AS:165:PRO:HD3	1.60	0.81
2:A3:105:C:H4'	2:A3:106:G:O5'	1.79	0.81
2:A3:154:G:H5'	10:AG:189:ARG:NH2	1.95	0.81
6:AC:101:MET:HE1	6:AC:105:THR:HG23	1.62	0.81
24:AV:35:LYS:NZ	50:C1:1805:G:OP2	2.12	0.81
38:Aj:17:THR:HG23	38:Aj:29:LEU:HD11	1.59	0.81
48:BB:1084:GLY:HA2	50:C1:478:G:O2'	1.79	0.81
48:BB:1089:VAL:HG21	48:BB:1161:LEU:HD23	1.63	0.81
49:BC:266:G:H2'	50:C1:1115:U:H3'	1.62	0.81
49:BC:266:G:O2'	50:C1:1115:U:OP2	1.97	0.81
50:C1:59:U:C2'	50:C1:60:A:H5"	2.09	0.81
50:C1:67:C:H41	57:CG:163:ASN:HA	1.46	0.81
50:C1:364:A:H4'	50:C1:364:A:OP1	1.79	0.81
50:C1:527:C:C3'	50:C1:528:A:C8	2.63	0.81
50:C1:952:G:H2'	50:C1:953:C:O4'	1.81	0.81
50:C1:1016:U:H1'	50:C1:1017:U:C5'	2.10	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1103:C:C2’	50:C1:1104:G:H5’	2.09	0.81
51:CA:30:LEU:HD21	51:CA:35:GLU:HA	1.62	0.81
1:A2:135:G:H3’	1:A2:135:G:H8	1.45	0.81
1:A2:1270:G:C4’	1:A2:4898:A:H2	1.94	0.81
1:A2:2856:A:H4’	1:A2:2857:U:OP1	1.80	0.81
1:A2:3587:C:H5”	1:A2:3589:G:C8	2.15	0.81
47:BA:41:C:H1’	50:C1:1640:A:HO2’	1.41	0.81
48:BB:1074:VAL:CG2	48:BB:1159:LEU:O	2.28	0.81
48:BB:1327:THR:HB	48:BB:1370:GLU:HG2	1.63	0.81
49:BC:102:G:H2’	49:BC:103:U:O4’	1.80	0.81
50:C1:1445:U:O2’	50:C1:1446:A:H5’	1.80	0.81
1:A2:290:C:H2’	1:A2:291:A:C8	2.15	0.81
1:A2:2573:G:H2’	1:A2:2574:G:H8	1.44	0.81
1:A2:4192:U:H4’	1:A2:4193:A:C5’	2.10	0.81
1:A2:4848:A:H5”	1:A2:4849:A:OP1	1.81	0.81
1:A2:4909:G:H2’	1:A2:4910:A:C8	2.14	0.81
2:A3:126:C:H5’	2:A3:128:C:H5	1.44	0.81
14:AL:42:LYS:O	14:AL:46:ILE:HG12	1.79	0.81
50:C1:95:G:H1	50:C1:435:A:H61	1.26	0.81
1:A2:217:C:OP2	1:A2:217:C:H4’	1.79	0.81
1:A2:269:G:H5’	16:AN:12:ARG:HH22	1.45	0.81
1:A2:1248:G:H3’	1:A2:1249:G:H8	1.43	0.81
1:A2:1815:A:H4’	22:AT:129:LYS:HB3	1.62	0.81
24:AV:104:VAL:HG21	24:AV:112:MET:HE1	1.62	0.81
47:BA:74:C:C5	47:BA:75:C:C6	2.68	0.81
47:BA:76:A:H5’	48:BB:1373:VAL:H	1.01	0.81
49:BC:349:C:H5’	54:CD:146:ARG:NH2	1.93	0.81
50:C1:693:A:H3’	50:C1:694:G:H4’	1.61	0.81
50:C1:886:A:P	50:C1:886:A:H3’	2.21	0.81
1:A2:944:A:O4’	1:A2:2249:G:H5’	1.80	0.81
1:A2:1316:G:H2’	1:A2:1317:A:C8	2.16	0.81
1:A2:2278:C:H2’	1:A2:2279:C:C6	2.16	0.81
1:A2:4345:A:H4’	1:A2:4346:C:O5’	1.80	0.81
3:A4:84:U:H4’	3:A4:85:G:O5’	1.78	0.81
15:AM:112:VAL:HA	17:AO:197:LYS:NZ	1.95	0.81
48:BB:885:THR:HB	48:BB:914:ILE:CD1	2.09	0.81
48:BB:929:ARG:H	48:BB:1070:LEU:HD12	1.46	0.81
49:BC:64:U:O2’	49:BC:66:A:H5’	1.80	0.81
50:C1:217:A:H4’	50:C1:341:C:H5’	1.61	0.81
1:A2:510:C:H4’	14:AL:111:GLN:HG3	1.63	0.81
1:A2:1200:G:H8	1:A2:1200:G:P	2.04	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2564:A:H2'	1:A2:2565:C:H5"	1.60	0.81
1:A2:2609:U:H2'	1:A2:2610:U:C5	2.16	0.81
3:A4:89:G:H2'	3:A4:90:A:H8	1.46	0.81
42:An:10:MET:HE1	50:C1:1172:U:H5"	0.82	0.81
43:Ao:105:GLN:CA	47:BA:57:G:C4'	2.37	0.81
50:C1:1016:U:H4'	50:C1:1017:U:OP1	1.81	0.81
50:C1:1030:A:H2'	50:C1:1031:A:H8	1.46	0.81
50:C1:1214:A:C6	50:C1:1686:G:C2	2.69	0.81
50:C1:1456:G:H8	50:C1:1456:G:H5"	1.45	0.81
1:A2:482:G:H4'	1:A2:483:U:OP1	1.80	0.81
1:A2:1919:A:C2	1:A2:4394:C:H5"	2.16	0.81
1:A2:2311:C:H6	1:A2:2311:C:C5'	1.94	0.81
1:A2:3845:A:H4'	1:A2:3846:A:OP2	1.80	0.81
1:A2:4527:G:H2'	1:A2:4528:A:H5'	1.63	0.81
42:An:10:MET:CE	50:C1:1172:U:H4'	2.11	0.81
48:BB:842:LYS:CB	48:BB:1140:GLU:OE1	2.28	0.81
50:C1:84:A:H5'	75:CY:123:ALA:HB2	1.62	0.81
52:CB:103:MET:HB3	52:CB:215:VAL:HG12	1.61	0.81
55:CE:45:ILE:HD12	55:CE:61:VAL:HG21	1.62	0.81
66:CP:126:VAL:HG13	66:CP:127:LYS:H	1.44	0.81
1:A2:502:C:H5"	14:AL:165:LYS:HG3	1.61	0.81
1:A2:2051:C:H6	1:A2:2051:C:H3'	1.43	0.81
1:A2:2701:G:H4'	1:A2:2702:A:N1	1.96	0.81
1:A2:2802:A:H5"	1:A2:2802:A:H8	1.44	0.81
1:A2:4063:G:H8	1:A2:4063:G:H5'	1.44	0.81
1:A2:4800:C:H2'	1:A2:4801:C:C6	2.16	0.81
11:AH:98:HIS:NE2	48:BB:944:MET:CB	2.40	0.81
46:Au:45:GLU:HB2	46:Au:151:LEU:HD23	1.61	0.81
49:BC:267:G:N1	50:C1:1114:U:OP1	2.14	0.81
50:C1:1403:C:H3'	50:C1:1404:U:C6	2.16	0.81
50:C1:1405:A:H2'	50:C1:1406:G:H5"	1.62	0.81
64:CN:42:LYS:HE3	64:CN:80:LEU:HD23	1.63	0.81
1:A2:210:G:N3	1:A2:211:G:H1'	1.95	0.80
1:A2:2348:U:H2'	1:A2:2349:U:C6	2.17	0.80
1:A2:3740:C:H5"	47:BA:13:C:C5'	1.98	0.80
49:BC:349:C:C5'	54:CD:146:ARG:NH2	2.35	0.80
50:C1:125:C:H4'	55:CE:136:ILE:HA	1.63	0.80
50:C1:306:C:H2'	59:CI:43:ILE:O	1.81	0.80
50:C1:796:G:H22	50:C1:797:C:H5	1.29	0.80
50:C1:1666:C:H3'	50:C1:1667:U:C6	2.15	0.80
1:A2:481:C:C2'	1:A2:482:G:H5"	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1205:U:OP2	1:A2:1212:G:H8	1.63	0.80
3:A4:64:G:H4'	12:AI:204:GLY:HA2	1.61	0.80
50:C1:203:G:H2'	50:C1:204:G:C8	2.16	0.80
50:C1:1442:U:O5'	50:C1:1443:C:H5"	1.81	0.80
50:C1:1593:C:H5	76:CZ:104:ARG:HH21	1.30	0.80
51:CA:6:ASP:HB2	72:CV:42:VAL:HG22	1.62	0.80
1:A2:939:G:H4'	1:A2:940:A:OP1	1.79	0.80
1:A2:1281:C:H6	1:A2:1281:C:H3'	1.45	0.80
1:A2:2308:A:C4'	1:A2:2309:G:H5'	2.11	0.80
1:A2:3722:G:H22	1:A2:3741:U:H2'	1.46	0.80
1:A2:4883:C:H2'	1:A2:4884:C:H6	1.47	0.80
1:A2:4898:A:H2'	1:A2:4899:C:O4'	1.82	0.80
45:At:62:VAL:O	45:At:89:THR:HG21	1.81	0.80
49:BC:351:A:C6	53:CC:147:VAL:CG2	2.64	0.80
50:C1:309:G:H4'	50:C1:310:C:OP1	1.81	0.80
59:CI:130:THR:HG22	59:CI:136:ILE:HA	1.62	0.80
69:CS:66:ARG:O	69:CS:70:ILE:HG12	1.82	0.80
1:A2:958:C:H42	1:A2:1255:G:H1	1.28	0.80
1:A2:3724:G:H1'	1:A2:3725:A:OP1	1.81	0.80
1:A2:4897:C:H2'	8:AE:190:HIS:CB	2.10	0.80
43:Ao:103:VAL:O	47:BA:56:C:C5'	2.29	0.80
49:BC:235:G:H1	78:Cb:80:ARG:CZ	1.93	0.80
50:C1:1253:A:H4'	50:C1:1254:C:C5'	2.11	0.80
50:C1:1413:G:O2'	50:C1:1414:A:H5'	1.81	0.80
50:C1:1769:C:H2'	50:C1:1770:G:H8	1.46	0.80
76:CZ:69:THR:HG22	76:CZ:70:PRO:HD2	1.63	0.80
1:A2:326:A:C3'	1:A2:327:A:H8	1.93	0.80
1:A2:336:C:H2'	1:A2:337:G:H8	1.44	0.80
1:A2:2295:C:H2'	1:A2:2296:G:C8	2.15	0.80
1:A2:4837:U:H5'	1:A2:4838:C:OP1	1.81	0.80
11:AH:92:MET:HE2	11:AH:179:ILE:HG22	1.63	0.80
50:C1:795:A:H2'	50:C1:796:G:H8	1.45	0.80
56:CF:143:PRO:HD3	79:Cc:56:LEU:HD13	1.63	0.80
61:CK:30:PRO:O	80:Cd:8:TRP:HB2	1.80	0.80
1:A2:1082:U:C6	1:A2:1083:C:H5	1.98	0.80
1:A2:1196:C:H5	1:A2:1239:G:H5'	1.45	0.80
1:A2:1220:G:C2	1:A2:1248:G:N1	2.49	0.80
1:A2:4837:U:H3	8:AE:182:ASN:HA	1.46	0.80
22:AT:17:ARG:HH22	22:AT:45:MET:HE3	1.46	0.80
48:BB:944:MET:SD	48:BB:975:LEU:HD23	2.22	0.80
50:C1:795:A:C2'	50:C1:796:G:H5'	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1769:C:H2'	50:C1:1770:G:C8	2.17	0.80
66:CP:60:LEU:HD21	66:CP:92:SER:HB3	1.62	0.80
1:A2:670:C:H5"	45:At:58:LYS:H	1.45	0.80
1:A2:700:C:H2'	1:A2:701:C:H5"	1.64	0.80
1:A2:1057:C:H2'	1:A2:1058:A:C5'	2.12	0.80
1:A2:1079:C:H2'	1:A2:1080:U:O4'	1.80	0.80
1:A2:2752:C:H2'	1:A2:2753:G:H8	1.45	0.80
1:A2:4077:C:H2'	1:A2:4078:U:C6	2.16	0.80
1:A2:4711:U:H4'	1:A2:4711:U:OP1	1.81	0.80
48:BB:1385:MET:SD	48:BB:1389:HIS:HB2	2.21	0.80
50:C1:175:A:C2	50:C1:176:U:H1'	2.16	0.80
57:CG:12:CYS:SG	57:CG:127:THR:HB	2.21	0.80
83:Cg:197:THR:HG21	83:Cg:238:ALA:HA	1.64	0.80
1:A2:1221:C:H42	1:A2:1248:G:N2	1.79	0.80
1:A2:2588:A:H2'	1:A2:2589:G:C8	2.15	0.80
1:A2:2629:G:C3'	1:A2:2630:C:H4'	2.12	0.80
46:Au:60:VAL:HG13	46:Au:101:THR:HG21	1.63	0.80
47:BA:8:U:H1'	47:BA:48:C:H1'	1.63	0.80
49:BC:172:A:H2'	49:BC:173:A:C8	2.16	0.80
49:BC:351:A:C5	53:CC:124:PHE:CE1	2.36	0.80
50:C1:1348:G:N2	50:C1:1381:G:H22	1.78	0.80
50:C1:1578:U:OP2	50:C1:1578:U:H4'	1.80	0.80
1:A2:3740:C:H5"	47:BA:13:C:H4'	0.81	0.80
9:AF:95:ILE:HD12	9:AF:221:LYS:HD2	1.64	0.80
48:BB:843:LEU:CD1	48:BB:908:ARG:CA	2.59	0.80
48:BB:967:VAL:HB	48:BB:1034:LEU:CD2	2.12	0.80
48:BB:1067:CYS:SG	48:BB:1092:ILE:HG13	0.26	0.80
48:BB:1197:VAL:HB	48:BB:1222:ILE:HD13	1.64	0.80
48:BB:1310:ILE:HG23	48:BB:1393:THR:H	1.47	0.80
49:BC:66:A:N7	49:BC:67:C:N4	2.30	0.80
50:C1:1309:C:H1'	82:Cf:133:ALA:HB2	1.62	0.80
58:CH:79:LEU:HD22	58:CH:94:PHE:HZ	1.46	0.80
1:A2:1423:A:H5"	1:A2:1423:A:H8	1.43	0.80
1:A2:3735:A:N6	50:C1:1708:C:O2'	0.67	0.80
2:A3:121:G:H3'	2:A3:122:G:H5"	1.64	0.80
46:Au:5:ILE:HD13	46:Au:177:ILE:HG21	1.62	0.80
48:BB:928:ASN:ND2	48:BB:1073:GLN:HE22	1.80	0.80
48:BB:1174:LYS:HG2	48:BB:1178:ILE:HG23	1.62	0.80
50:C1:106:C:H2'	50:C1:107:A:C8	2.17	0.80
50:C1:745:C:H4'	50:C1:746:C:C6	2.17	0.80
1:A2:1379:G:H2'	1:A2:1380:G:H8	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2656:G:H2'	1:A2:2657:G:C8	2.17	0.79
48:BB:1299:LYS:CD	48:BB:1304:PHE:H	1.95	0.79
49:BC:66:A:C8	49:BC:67:C:C4	2.68	0.79
75:CY:35:VAL:HG23	75:CY:40:ILE:HD11	1.61	0.79
82:Cf:132:MET:HE2	82:Cf:139:HIS:HB3	1.62	0.79
1:A2:1213:G:C2'	1:A2:1214:G:H5'	2.12	0.79
1:A2:3725:A:H2'	1:A2:3726:G:H8	1.47	0.79
1:A2:4193:A:H4'	1:A2:4194:A:OP1	1.82	0.79
22:AT:77:ASN:HB3	22:AT:84:ILE:HD13	1.64	0.79
50:C1:186:C:H2'	50:C1:187:G:H8	1.46	0.79
50:C1:1647:A:O2'	50:C1:1648:G:H5'	1.82	0.79
1:A2:711:A:H2'	1:A2:712:C:C1'	2.13	0.79
1:A2:1016:C:H2'	1:A2:1017:C:C6	2.17	0.79
1:A2:1155:A:H2'	1:A2:1156:C:C6	2.17	0.79
1:A2:1458:G:H4'	1:A2:1459:C:OP1	1.82	0.79
1:A2:2399:C:C2	1:A2:2806:U:H1'	2.18	0.79
1:A2:2524:G:N2	1:A2:2526:G:H1'	1.97	0.79
1:A2:4163:A:H3'	1:A2:4163:A:N3	1.98	0.79
1:A2:4263:C:O2	1:A2:4263:C:H3'	1.83	0.79
13:AJ:119:TYR:CB	69:CS:14:ARG:NH2	2.45	0.79
39:Ak:20:ALA:HB2	39:Ak:36:VAL:HG23	1.64	0.79
48:BB:1105:PRO:HB2	48:BB:1159:LEU:HD22	1.65	0.79
50:C1:376:A:H2'	50:C1:377:G:C8	2.18	0.79
50:C1:380:G:H2'	50:C1:382:C:H5	1.46	0.79
50:C1:747:U:H1'	50:C1:748:C:H2'	1.63	0.79
56:CF:49:LEU:HD21	67:CQ:46:THR:HG22	1.63	0.79
68:CR:21:TYR:CE1	68:CR:61:ILE:HG21	2.17	0.79
1:A2:441:G:N3	1:A2:1274:A:H4'	1.98	0.79
1:A2:1203:G:H5'	1:A2:1210:U:H5	1.47	0.79
1:A2:1204:G:OP1	1:A2:1210:U:H2'	1.82	0.79
1:A2:1420:U:H3'	1:A2:1420:U:H6	1.46	0.79
1:A2:1720:G:H1'	1:A2:1760:U:H5'	1.64	0.79
1:A2:3779:C:H6	1:A2:3779:C:H3'	1.45	0.79
1:A2:4251:G:H4'	1:A2:4252:A:H5"	1.64	0.79
16:AN:85:VAL:HG12	43:Ao:49:GLY:HA3	1.62	0.79
23:AU:63:ILE:HG12	23:AU:72:VAL:HG12	1.61	0.79
47:BA:32:U:OP1	67:CQ:146:ARG:CA	2.24	0.79
49:BC:100:G:H4'	76:CZ:114:LYS:NZ	1.97	0.79
50:C1:690:G:H2'	50:C1:691:G:H8	1.46	0.79
50:C1:920:A:H2'	50:C1:922:A:H8	1.46	0.79
1:A2:41:C:H2'	1:A2:42:A:C5'	2.07	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1256:C:H2'	1:A2:1257:G:H5'	1.64	0.79
2:A3:129:C:H2'	2:A3:130:C:C6	2.18	0.79
4:AA:186:TYR:HB2	4:AA:196:TRP:HZ2	1.46	0.79
6:AC:148:PRO:HA	45:At:76:SER:HB2	1.62	0.79
47:BA:31:A:C4'	50:C1:1641:A:HO2'	1.95	0.79
48:BB:1132:GLN:HE22	50:C1:51:U:H4'	1.47	0.79
48:BB:1327:THR:HA	48:BB:1370:GLU:HA	1.65	0.79
49:BC:265:U:H1'	50:C1:1116:C:OP1	1.83	0.79
49:BC:349:C:H4'	54:CD:146:ARG:CZ	2.13	0.79
55:CE:18:TRP:HE3	55:CE:20:LEU:HD11	1.47	0.79
1:A2:136:G:H8	1:A2:136:G:H5"	1.48	0.79
1:A2:1163:C:C2'	1:A2:1164:A:H5'	2.12	0.79
1:A2:1280:G:H8	1:A2:1280:G:O5'	1.66	0.79
1:A2:4660:A:N1	11:AH:72:THR:HG21	1.98	0.79
1:A2:4712:U:H4'	1:A2:4713:G:OP1	1.79	0.79
7:AD:263:LYS:O	7:AD:264:LYS:HB2	1.81	0.79
43:Ao:103:VAL:O	47:BA:57:G:P	2.38	0.79
47:BA:41:C:O3'	50:C1:1640:A:H5"	1.81	0.79
48:BB:824:LYS:CB	48:BB:1165:TYR:OH	2.31	0.79
48:BB:1355:ILE:HG21	48:BB:1371:VAL:HG23	1.32	0.79
50:C1:70:G:H2'	50:C1:71:G:H4'	1.61	0.79
50:C1:944:A:H1'	65:CO:136:PRO:HB3	1.65	0.79
50:C1:1307:U:H2'	50:C1:1308:U:H5'	1.64	0.79
1:A2:365:G:H2'	1:A2:366:G:H5"	1.64	0.79
1:A2:2509:C:H2'	1:A2:2510:C:H5'	1.63	0.79
18:AP:67:VAL:HG11	18:AP:82:ARG:HD2	1.65	0.79
48:BB:841:GLU:CA	48:BB:1065:ALA:HB2	2.11	0.79
48:BB:905:GLU:OE2	48:BB:909:ILE:HB	1.82	0.79
50:C1:550:C:H4'	81:Ce:43:VAL:CG2	2.13	0.79
50:C1:558:G:H2'	50:C1:559:G:H5"	1.64	0.79
71:CU:55:ARG:HD2	71:CU:87:ARG:CZ	2.13	0.79
1:A2:329:A:H2	1:A2:330:C:C4	2.00	0.79
1:A2:1399:G:H2'	1:A2:1400:A:H5"	1.65	0.79
1:A2:1415:G:H2'	1:A2:1416:C:H6	1.46	0.79
1:A2:1435:G:H2'	1:A2:1436:G:C8	2.17	0.79
1:A2:2423:C:H2'	1:A2:2424:U:C6	2.18	0.79
1:A2:3769:A:O2'	1:A2:3770:U:H5'	1.81	0.79
1:A2:4673:G:H3'	1:A2:4674:C:C6	2.18	0.79
2:A3:28:C:H5"	2:A3:28:C:C6	2.18	0.79
11:AH:4:ILE:HG23	11:AH:5:LEU:H	1.47	0.79
20:AR:119:MET:SD	20:AR:145:LEU:HG	2.23	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Au:159:PHE:CZ	46:Au:161:THR:HB	2.17	0.79
48:BB:858:LYS:O	48:BB:861:ILE:HG12	1.82	0.79
48:BB:881:GLN:HG2	48:BB:1121:PRO:HD2	1.62	0.79
50:C1:683:G:H1'	50:C1:1023:A:H2	1.48	0.79
50:C1:1307:U:C2'	50:C1:1308:U:H5'	2.12	0.79
1:A2:8:U:O2	1:A2:8:U:H3'	1.82	0.79
1:A2:193:C:H4'	1:A2:194:A:OP2	1.80	0.79
1:A2:1197:G:H4'	1:A2:1198:G:OP1	1.82	0.79
1:A2:1525:C:H2'	1:A2:1590:C:N4	1.98	0.79
1:A2:4060:G:C2	1:A2:4118:C:N3	2.51	0.79
3:A4:62:U:H3'	3:A4:63:C:H5"	1.63	0.79
6:AC:141:GLY:HA2	45:At:15:SER:HB3	1.65	0.79
48:BB:905:GLU:HA	48:BB:908:ARG:NH1	1.98	0.79
48:BB:1116:ARG:CB	50:C1:488:U:H6	1.78	0.79
48:BB:1322:ILE:HG12	48:BB:1375:ILE:O	1.83	0.79
48:BB:1328:VAL:HB	48:BB:1367:LYS:O	1.83	0.79
50:C1:317:C:H3'	50:C1:318:A:H5"	1.63	0.79
50:C1:406:U:H4'	50:C1:407:G:N2	1.97	0.79
50:C1:740:C:H2'	50:C1:741:C:C6	2.18	0.79
50:C1:889:U:H3'	50:C1:890:U:H5"	1.63	0.79
50:C1:971:G:H4'	50:C1:972:A:O5'	1.82	0.79
50:C1:1442:U:O2	50:C1:1442:U:H2'	1.83	0.79
50:C1:1456:G:H5"	50:C1:1456:G:C8	2.18	0.79
50:C1:1634:A:H3'	50:C1:1635:C:H6	1.47	0.79
1:A2:716:U:C3'	1:A2:717:G:H5"	2.13	0.79
1:A2:927:A:H3'	9:AF:245:ARG:CG	2.12	0.79
1:A2:1454:G:H2'	1:A2:1455:C:H4'	1.65	0.79
1:A2:1775:U:H2'	1:A2:1776:G:O4'	1.83	0.79
1:A2:2549:C:H3'	1:A2:2549:C:H6	1.46	0.79
1:A2:2624:A:C6	1:A2:2664:U:N3	2.51	0.79
1:A2:2624:A:C6	1:A2:2665:G:C5	2.71	0.79
1:A2:4640:G:H2'	1:A2:4641:A:O4'	1.83	0.79
46:Au:74:VAL:HG11	46:Au:142:ILE:CG2	2.13	0.79
47:BA:75:C:C6	48:BB:1323:VAL:HG21	2.18	0.79
48:BB:1247:VAL:HG11	48:BB:1283:PHE:CE1	2.18	0.79
49:BC:100:G:H4'	76:CZ:114:LYS:HE2	0.82	0.79
50:C1:1630:A:H2'	50:C1:1631:U:H5"	1.64	0.79
50:C1:1638:G:H5'	50:C1:1638:G:C4	2.18	0.79
74:CX:61:GLN:HB3	74:CX:62:PRO:CD	2.13	0.79
1:A2:977:G:H2'	1:A2:978:G:C4'	2.12	0.78
1:A2:2330:U:H2'	1:A2:2331:G:C8	2.17	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4869:C:H3'	1:A2:4869:C:C6	2.18	0.78
48:BB:1316:PHE:HB3	48:BB:1323:VAL:HG13	1.66	0.78
50:C1:525:A:H2	50:C1:561:A:N6	1.81	0.78
50:C1:639:C:H2'	50:C1:640:A:H8	1.48	0.78
50:C1:1326:U:H4'	50:C1:1327:G:O5'	1.82	0.78
50:C1:1405:A:H8	50:C1:1405:A:O5'	1.65	0.78
66:CP:22:LEU:HD21	66:CP:109:PRO:HB3	1.64	0.78
1:A2:122:U:H2'	1:A2:123:C:C5	2.19	0.78
1:A2:913:A:H1'	1:A2:916:A:N6	1.98	0.78
1:A2:953:C:H2'	1:A2:954:G:H8	1.47	0.78
1:A2:3893:C:H2'	1:A2:3894:U:H5'	1.65	0.78
1:A2:4303:U:H4'	43:Ao:31:ASP:OD2	1.83	0.78
1:A2:4837:U:H4'	1:A2:4838:C:H5'	1.63	0.78
33:Ae:12:ILE:HG23	33:Ae:66:THR:HB	1.66	0.78
42:An:2:ARG:HB2	50:C1:1852:C:OP2	1.82	0.78
43:Ao:106:PHE:CE2	47:BA:57:G:N1	2.50	0.78
48:BB:850:VAL:HG21	48:BB:862:LEU:HD21	1.65	0.78
48:BB:1070:LEU:O	48:BB:1070:LEU:HD23	1.82	0.78
49:BC:333:C:H42	79:Cc:68:LEU:HD12	1.46	0.78
50:C1:384:U:C2'	50:C1:385:G:H5"	2.14	0.78
50:C1:618:C:H1'	50:C1:632:C:C5'	2.12	0.78
50:C1:1049:A:H2	50:C1:1069:U:N3	1.80	0.78
50:C1:1787:G:H2'	50:C1:1788:A:C8	2.19	0.78
1:A2:87:A:C2	1:A2:88:A:H1'	2.18	0.78
1:A2:1942:A:C4	1:A2:4654:G:H8	2.00	0.78
1:A2:4484:G:H2'	1:A2:4485:C:C5	2.18	0.78
1:A2:4828:G:H1'	21:AS:165:PRO:CD	2.14	0.78
3:A4:114:U:H4'	7:AD:73:MET:SD	2.23	0.78
48:BB:1230:LYS:O	48:BB:1233:MET:HG2	1.83	0.78
48:BB:1347:VAL:HG11	48:BB:1389:HIS:CB	2.12	0.78
50:C1:746:C:H5"	58:CH:104:PRO:O	1.84	0.78
50:C1:815:U:H2'	50:C1:816:A:C8	2.18	0.78
50:C1:1176:G:H2'	50:C1:1177:U:C6	2.18	0.78
50:C1:1203:G:C8	50:C1:1699:A:C2	2.70	0.78
60:CJ:130:ILE:HG22	60:CJ:135:ILE:HD12	1.63	0.78
1:A2:71:C:H2'	1:A2:72:C:H5'	1.66	0.78
1:A2:1883:U:H6	1:A2:1883:U:H5"	1.48	0.78
1:A2:2804:G:H5"	1:A2:2806:U:OP2	1.83	0.78
1:A2:3745:G:H4'	1:A2:3746:G:OP1	1.81	0.78
3:A4:34:C:N4	3:A4:47:G:H1'	1.98	0.78
42:An:11:ARG:NH1	50:C1:1183:A:H5'	1.98	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BC:349:C:O4'	54:CD:146:ARG:CZ	2.30	0.78
50:C1:179:C:H2'	50:C1:180:G:C2	2.18	0.78
55:CE:21:ASP:HB2	55:CE:24:THR:OG1	1.83	0.78
1:A2:510:C:H6	1:A2:510:C:C5'	1.92	0.78
1:A2:670:C:H2'	1:A2:671:C:C6	2.18	0.78
1:A2:1046:G:H2'	1:A2:1047:G:C8	2.19	0.78
1:A2:1278:C:H2'	1:A2:1279:G:H8	1.47	0.78
1:A2:1421:C:O5'	1:A2:1421:C:H6	1.66	0.78
1:A2:2632:C:H2'	1:A2:2633:U:C6	2.18	0.78
1:A2:3661:A:H62	1:A2:3792:G:H21	1.28	0.78
1:A2:4483:A:H2'	1:A2:4519:A:H62	1.49	0.78
1:A2:4689:C:P	1:A2:4695:C:H4'	2.23	0.78
48:BB:838:VAL:O	48:BB:1061:SER:CA	2.32	0.78
50:C1:301:A:H2'	50:C1:302:A:H8	1.47	0.78
50:C1:1411:G:H4'	50:C1:1412:C:OP1	1.81	0.78
50:C1:1648:G:H4'	50:C1:1649:U:OP2	1.81	0.78
50:C1:1743:G:H1'	50:C1:1792:G:N2	1.97	0.78
1:A2:16:G:H4'	36:Ah:78:TYR:CE1	2.19	0.78
1:A2:1474:G:O2'	1:A2:1475:G:H5'	1.84	0.78
1:A2:1479:A:H3'	1:A2:1480:C:H5"	1.64	0.78
1:A2:2310:G:C4'	2:A3:20:A:H4'	2.12	0.78
1:A2:2683:G:H21	1:A2:2686:C:H5'	1.47	0.78
1:A2:3661:A:H62	1:A2:3792:G:N2	1.82	0.78
1:A2:3858:G:H3'	1:A2:4679:G:N2	1.98	0.78
48:BB:1116:ARG:HH11	48:BB:1116:ARG:HG2	1.47	0.78
48:BB:1327:THR:HA	48:BB:1370:GLU:HG2	1.64	0.78
50:C1:179:C:H6	50:C1:179:C:OP2	1.67	0.78
50:C1:184:G:H2'	50:C1:185:G:O3'	1.82	0.78
50:C1:300:U:H2'	50:C1:301:A:C8	2.18	0.78
50:C1:1604:G:C2'	50:C1:1605:G:H5'	2.12	0.78
61:CK:90:VAL:HG13	61:CK:94:LEU:HD23	1.64	0.78
1:A2:457:A:N7	1:A2:676:G:C8	2.52	0.78
1:A2:2838:C:OP1	1:A2:2838:C:H3'	1.83	0.78
1:A2:4191:C:H4'	43:Ao:98:LYS:HZ2	1.48	0.78
47:BA:34:G:C5	50:C1:1701:C:C4	2.70	0.78
48:BB:966:ILE:HD13	48:BB:1051:LEU:HB3	1.64	0.78
48:BB:1352:VAL:HG13	48:BB:1373:VAL:CG2	2.13	0.78
48:BB:1353:THR:CG2	48:BB:1376:GLU:HB2	2.13	0.78
50:C1:179:C:H5"	50:C1:180:G:N2	1.99	0.78
50:C1:576:A:OP2	50:C1:577:U:H5'	1.82	0.78
50:C1:1442:U:C4	67:CQ:22:VAL:HG22	2.18	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1629:C:H5'	69:CS:39:ARG:HH21	1.49	0.78
1:A2:269:G:H5'	16:AN:12:ARG:NH2	1.98	0.78
1:A2:1185:G:H2'	1:A2:1186:C:C6	2.19	0.78
1:A2:1218:A:H5'	1:A2:1218:A:H8	1.49	0.78
1:A2:1918:G:H5"	1:A2:1918:G:H8	1.46	0.78
1:A2:2788:G:H4'	20:AR:82:LYS:HD3	1.65	0.78
1:A2:4236:G:H3'	1:A2:4237:G:H8	1.47	0.78
1:A2:4806:G:C2'	1:A2:4807:C:H4'	2.14	0.78
24:AV:57:VAL:HG12	24:AV:125:CYS:HB2	1.64	0.78
48:BB:1227:VAL:HB	48:BB:1255:ILE:HD12	1.64	0.78
50:C1:1353:A:H2'	50:C1:1354:G:H5"	1.66	0.78
50:C1:1699:A:H8	50:C1:1699:A:O5'	1.66	0.78
1:A2:8:U:H2'	1:A2:9:C:H5'	1.64	0.78
1:A2:710:G:C2'	1:A2:711:A:H5'	2.13	0.78
1:A2:959:C:H1'	1:A2:960:G:OP2	1.83	0.78
1:A2:1885:A:C8	1:A2:1885:A:H5'	2.19	0.78
1:A2:2683:G:N2	1:A2:2686:C:H5'	1.99	0.78
1:A2:2747:C:H2'	1:A2:2748:G:H8	1.49	0.78
1:A2:4022:C:H5'	46:Au:199:TYR:CD1	2.19	0.78
1:A2:4440:A:H2'	1:A2:4441:U:O4'	1.83	0.78
1:A2:4617:U:H3'	1:A2:4618:G:C5'	2.13	0.78
5:AB:258:HIS:CD2	5:AB:259:PRO:CD	2.66	0.78
19:AQ:85:THR:HG22	19:AQ:104:ARG:HB3	1.65	0.78
48:BB:881:GLN:CA	48:BB:1121:PRO:HG3	2.03	0.78
48:BB:1229:LYS:HB3	50:C1:481:C:OP1	1.84	0.78
48:BB:1345:ASN:ND2	48:BB:1347:VAL:HG12	1.99	0.78
50:C1:1427:C:H2'	50:C1:1428:G:O4'	1.83	0.78
1:A2:887:C:H2'	1:A2:888:C:C6	2.19	0.78
1:A2:1855:G:H5"	1:A2:1855:G:C8	2.18	0.78
1:A2:1873:G:H5'	1:A2:1873:G:C8	2.17	0.78
1:A2:2020:A:C2	1:A2:4424:A:C6	2.71	0.78
1:A2:2430:A:H61	1:A2:2484:A:H2	1.29	0.78
1:A2:4305:C:H2'	1:A2:4306:U:C6	2.19	0.78
1:A2:4530:G:N3	1:A2:4530:G:H2'	1.97	0.78
2:A3:71:A:H2'	2:A3:82:A:C2	2.19	0.78
15:AM:123:ILE:HA	17:AO:187:LYS:HE2	1.66	0.78
50:C1:500:A:H2'	50:C1:501:C:C5'	2.12	0.78
50:C1:1257:G:H5'	50:C1:1258:A:C8	2.18	0.78
50:C1:1725:U:H2'	50:C1:1726:G:C8	2.19	0.78
1:A2:71:C:C3'	1:A2:72:C:H5'	2.14	0.77
1:A2:727:G:C8	1:A2:727:G:C5'	2.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:978:G:H2'	1:A2:979:C:H6	1.44	0.77
1:A2:2624:A:H3'	1:A2:2625:G:H8	1.50	0.77
1:A2:3727:U:H4'	1:A2:3728:A:OP1	1.84	0.77
1:A2:4253:U:C3'	1:A2:4254:C:H5"	2.13	0.77
1:A2:4313:U:H5'	1:A2:4314:U:H5"	1.65	0.77
47:BA:74:C:H5'	48:BB:1321:PRO:CB	2.14	0.77
50:C1:934:G:H5'	50:C1:993:G:N2	1.99	0.77
50:C1:1310:U:H4'	82:Cf:142:GLY:HA3	1.64	0.77
1:A2:1357:G:H2'	1:A2:1360:G:OP2	1.84	0.77
1:A2:4287:C:H2'	1:A2:4288:G:H8	1.49	0.77
1:A2:4729:U:H2'	1:A2:4730:C:C6	2.18	0.77
1:A2:4803:C:H3'	1:A2:4804:G:C5'	2.14	0.77
20:AR:10:LEU:HD11	20:AR:38:ARG:HG2	1.66	0.77
48:BB:1065:ALA:C	48:BB:1141:ALA:CB	2.56	0.77
50:C1:315:C:N3	50:C1:336:A:H2	1.81	0.77
50:C1:1476:A:C4'	50:C1:1477:U:H5'	2.14	0.77
50:C1:1536:G:H2'	50:C1:1537:A:C8	2.19	0.77
54:CD:8:LYS:HG2	71:CU:61:LEU:HD21	1.65	0.77
1:A2:172:C:C2'	1:A2:173:G:H5'	2.14	0.77
1:A2:482:G:H2'	1:A2:484:G:H8	1.48	0.77
1:A2:1316:G:H2'	1:A2:1317:A:N7	1.99	0.77
1:A2:1665:C:H1'	30:Ab:15:LYS:HE3	1.66	0.77
1:A2:2449:A:H3'	1:A2:2450:A:C5'	2.14	0.77
1:A2:2449:A:C3'	1:A2:2450:A:H5'	2.14	0.77
1:A2:3725:A:C5'	48:BB:1346:PHE:CZ	2.60	0.77
1:A2:3728:A:C6	50:C1:1709:G:H5'	2.19	0.77
1:A2:4098:G:H2'	1:A2:4099:C:C6	2.18	0.77
48:BB:832:LEU:CD2	48:BB:838:VAL:HG12	2.13	0.77
48:BB:1116:ARG:NH1	50:C1:488:U:P	2.47	0.77
50:C1:91:A:H5"	50:C1:92:A:H5"	1.66	0.77
50:C1:1473:G:H2'	50:C1:1475:G:N7	1.99	0.77
1:A2:2543:G:H2'	1:A2:2544:G:H8	1.48	0.77
1:A2:4044:G:H4'	1:A2:4045:A:OP1	1.82	0.77
1:A2:4895:C:H6	1:A2:4895:C:H3'	1.50	0.77
50:C1:4:C:H2'	50:C1:5:U:C6	2.19	0.77
50:C1:84:A:H4'	75:CY:119:GLY:O	1.85	0.77
50:C1:1095:C:H5"	73:CW:22:LYS:NZ	2.00	0.77
50:C1:1659:U:H5"	80:Cd:30:LEU:CD1	2.13	0.77
1:A2:121:A:H4'	1:A2:122:U:O4'	1.85	0.77
1:A2:149:U:H1'	1:A2:150:G:N2	1.98	0.77
1:A2:400:G:H22	1:A2:2305:U:C5'	1.93	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:727:G:C5'	1:A2:727:G:H8	1.97	0.77
1:A2:951:C:H2'	1:A2:952:C:C6	2.19	0.77
1:A2:4640:G:H8	1:A2:4640:G:H5'	1.49	0.77
48:BB:1069:GLU:C	48:BB:1071:ARG:N	2.31	0.77
48:BB:1316:PHE:HD2	48:BB:1323:VAL:HG11	1.49	0.77
49:BC:266:G:H8	50:C1:1115:U:H5'	1.48	0.77
50:C1:59:U:H2'	50:C1:60:A:H5"	1.66	0.77
50:C1:794:A:C2'	50:C1:795:A:H4'	2.14	0.77
50:C1:797:C:H5"	58:CH:106:ARG:O	1.85	0.77
50:C1:855:G:C2'	50:C1:856:C:H5'	2.14	0.77
50:C1:1276:A:H4'	50:C1:1277:C:C5'	2.14	0.77
52:CB:82:ARG:HG2	52:CB:103:MET:HE1	1.67	0.77
1:A2:89:C:H2'	1:A2:90:G:H5'	1.65	0.77
1:A2:437:C:H3'	1:A2:438:C:H5	1.46	0.77
1:A2:457:A:N7	1:A2:676:G:H8	1.83	0.77
1:A2:469:G:H2'	1:A2:470:G:H5'	1.66	0.77
1:A2:1267:G:C5	1:A2:1268:G:H1'	2.18	0.77
1:A2:1460:C:H3'	1:A2:1460:C:H6	1.48	0.77
1:A2:2549:C:H5'	1:A2:2737:G:H8	1.49	0.77
1:A2:3674:G:H1'	4:AA:222:PRO:HG2	1.65	0.77
1:A2:3770:U:H4'	1:A2:4456:A:C2	2.17	0.77
2:A3:131:G:H2'	2:A3:132:G:C8	2.19	0.77
17:AO:90:HIS:HB2	17:AO:99:LEU:HD11	1.67	0.77
50:C1:900:C:H2'	50:C1:901:G:N7	1.99	0.77
59:CI:131:PRO:HG2	59:CI:138:ASN:CG	2.09	0.77
1:A2:384:U:C2'	1:A2:385:G:H4'	2.14	0.77
1:A2:2444:U:H4'	1:A2:2445:U:C5	2.20	0.77
1:A2:2840:G:H1'	1:A2:3588:G:C8	2.19	0.77
1:A2:4089:G:H21	28:AZ:136:PHE:CA	1.98	0.77
1:A2:4690:G:H4'	1:A2:4691:G:OP2	1.82	0.77
2:A3:103:A:H5'	2:A3:104:A:H8	1.50	0.77
2:A3:131:G:H5'	26:AX:107:HIS:HD2	1.50	0.77
16:AN:39:ALA:HB3	16:AN:61:ILE:HG22	1.67	0.77
50:C1:798:G:H8	50:C1:867:G:H22	1.30	0.77
50:C1:1413:G:C2'	50:C1:1414:A:H5'	2.14	0.77
50:C1:1625:U:H2'	50:C1:1626:C:C6	2.19	0.77
1:A2:384:U:H2'	1:A2:385:G:H4'	1.66	0.77
1:A2:399:A:H4'	1:A2:400:G:H5'	1.65	0.77
1:A2:917:G:P	1:A2:917:G:H3'	2.25	0.77
1:A2:1259:A:H2'	1:A2:1260:C:H6	1.50	0.77
1:A2:2332:G:H2'	1:A2:2333:U:H5"	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2523:G:H2'	1:A2:2524:G:C8	2.19	0.77
1:A2:3944:C:H2'	1:A2:3945:C:C6	2.18	0.77
1:A2:4280:G:H3'	1:A2:4281:U:C6	2.20	0.77
1:A2:4897:C:C6	8:AE:190:HIS:HA	2.20	0.77
2:A3:4:C:H2'	2:A3:5:U:H5'	1.66	0.77
49:BC:100:G:C4'	76:CZ:114:LYS:CE	2.45	0.77
50:C1:44:U:H5'	50:C1:44:U:C6	2.20	0.77
50:C1:527:C:C4'	60:CJ:125:HIS:HB2	2.14	0.77
50:C1:959:G:H1	65:CO:65:ASP:HB3	1.50	0.77
50:C1:1698:C:H4'	50:C1:1699:A:H8	1.49	0.77
50:C1:1848:U:O2'	50:C1:1849:G:H5'	1.84	0.77
65:CO:72:TYR:CE2	65:CO:76:LEU:HD11	2.19	0.77
1:A2:14:C:H1'	1:A2:15:A:OP2	1.84	0.77
1:A2:346:A:C2'	1:A2:347:G:H5'	2.14	0.77
1:A2:445:U:H3'	1:A2:446:C:C5	2.20	0.77
1:A2:2378:A:H2	35:Ag:7:TYR:CE2	2.02	0.77
1:A2:4263:C:H5"	1:A2:4264:A:C5'	2.15	0.77
1:A2:4688:A:OP1	1:A2:4694:G:H1'	1.84	0.77
11:AH:118:LEU:HD11	11:AH:167:VAL:HG22	1.67	0.77
13:AJ:63:ARG:NH1	47:BA:57:G:OP1	2.17	0.77
36:Ah:99:GLU:HA	36:Ah:102:LEU:HD13	1.67	0.77
48:BB:832:LEU:HD23	48:BB:838:VAL:CG1	2.14	0.77
48:BB:842:LYS:CG	48:BB:1140:GLU:HB3	2.14	0.77
48:BB:1116:ARG:HB2	50:C1:488:U:C5	1.84	0.77
50:C1:147:A:H61	50:C1:170:A:H8	1.33	0.77
50:C1:1040:G:H2'	50:C1:1041:G:C8	2.20	0.77
55:CE:220:THR:HG23	55:CE:225:ILE:HD11	1.66	0.77
1:A2:135:G:H3'	1:A2:135:G:C8	2.19	0.77
1:A2:180:C:C2'	1:A2:181:U:H5'	2.15	0.77
1:A2:346:A:C2	1:A2:347:G:H1'	2.18	0.77
1:A2:4880:U:O2'	1:A2:4881:C:H4'	1.85	0.77
43:Ao:105:GLN:C	47:BA:55:U:O2	2.28	0.77
48:BB:843:LEU:CD1	48:BB:908:ARG:C	2.56	0.77
48:BB:1302:ALA:CB	48:BB:1401:SER:H	1.96	0.77
49:BC:335:G:O6	79:Cc:67:ARG:HA	1.84	0.77
50:C1:81:U:H6	50:C1:81:U:H5"	1.50	0.77
50:C1:331:C:H3'	50:C1:332:G:H5"	1.66	0.77
50:C1:1287:A:H3'	50:C1:1312:G:H22	1.50	0.77
50:C1:1483:A:H4'	54:CD:160:SER:HB3	1.67	0.77
77:Ca:5:ARG:CD	77:Ca:8:ASN:HA	2.15	0.77
1:A2:334:C:H6	1:A2:334:C:C5'	1.98	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:386:A:H3'	1:A2:387:A:C8	2.18	0.76
1:A2:939:G:H1'	1:A2:940:A:H5"	1.65	0.76
1:A2:1530:C:H6	1:A2:1530:C:H5"	1.49	0.76
1:A2:1870:A:H5'	1:A2:1871:C:C5	2.16	0.76
1:A2:2721:A:H2'	1:A2:2722:A:C8	2.19	0.76
1:A2:2859:A:C2'	1:A2:2860:G:H5'	2.15	0.76
1:A2:4838:C:H2'	1:A2:4839:G:H5"	1.67	0.76
47:BA:75:C:C4	48:BB:1316:PHE:CG	2.72	0.76
48:BB:1039:ALA:HB3	84:BB:2435:GNP:N7	1.99	0.76
1:A2:1020:G:H22	1:A2:1044:G:N2	1.83	0.76
1:A2:1057:C:C2'	1:A2:1058:A:H5"	2.15	0.76
1:A2:1332:C:H3'	1:A2:1333:G:H8	1.49	0.76
1:A2:4806:G:C2	1:A2:4807:C:H1'	2.20	0.76
2:A3:151:G:C2	2:A3:152:U:H1'	2.21	0.76
48:BB:904:ARG:O	48:BB:907:VAL:HG12	1.84	0.76
48:BB:1299:LYS:HD2	48:BB:1304:PHE:H	1.48	0.76
1:A2:188:G:H1'	1:A2:189:G:OP2	1.84	0.76
1:A2:500:A:H2'	1:A2:501:U:H6	1.51	0.76
1:A2:1264:G:C2'	1:A2:1265:U:H5'	2.14	0.76
1:A2:1877:G:C8	1:A2:2254:G:C5	2.74	0.76
1:A2:1885:A:H5'	1:A2:1885:A:H8	1.50	0.76
1:A2:2348:U:H6	1:A2:2348:U:C5'	1.96	0.76
1:A2:2588:A:H2'	1:A2:2589:G:H8	1.49	0.76
1:A2:2624:A:N1	1:A2:2665:G:C5	2.53	0.76
1:A2:2667:C:H2'	1:A2:2668:U:C6	2.19	0.76
1:A2:4671:C:H2'	1:A2:4672:C:O4'	1.85	0.76
1:A2:4689:C:H3'	1:A2:4690:G:N7	2.00	0.76
1:A2:4862:G:H4'	1:A2:4863:G:OP1	1.86	0.76
10:AG:162:ASP:HB3	10:AG:163:PRO:CD	2.16	0.76
11:AH:60:TRP:CH2	21:AS:152:PHE:HB2	2.20	0.76
48:BB:1275:ILE:HG23	48:BB:1278:HIS:HB2	1.66	0.76
50:C1:444:G:H21	50:C1:446:G:H3'	1.51	0.76
50:C1:1418:C:H2'	50:C1:1419:C:C5	2.20	0.76
50:C1:1654:G:H3'	50:C1:1655:C:H5	1.48	0.76
53:CC:167:ARG:HA	53:CC:181:PRO:HD3	1.65	0.76
1:A2:1067:A:H2'	1:A2:1068:C:C6	2.20	0.76
1:A2:1185:G:H2'	1:A2:1186:C:H6	1.49	0.76
1:A2:1220:G:H5'	9:AF:48:LYS:CD	2.16	0.76
1:A2:1716:A:N3	3:A4:100:A:H2	1.84	0.76
1:A2:2344:A:H61	1:A2:2765:U:H3	1.34	0.76
1:A2:2359:A:C2	1:A2:2807:G:H4'	2.21	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4145:G:H2'	1:A2:4146:A:H8	1.50	0.76
2:A3:8:U:H2'	2:A3:9:A:C8	2.13	0.76
47:BA:41:C:H3'	47:BA:42:C:H5"	1.68	0.76
48:BB:896:THR:HG23	48:BB:899:ILE:HD11	1.67	0.76
48:BB:1157:ALA:CB	48:BB:1202:LEU:CD2	2.58	0.76
48:BB:1353:THR:HB	48:BB:1374:LYS:HE3	1.66	0.76
49:BC:164:U:H3'	78:Cb:41:TYR:OH	1.83	0.76
50:C1:1217:A:H1'	50:C1:1685:U:O2	1.86	0.76
1:A2:462:A:C4'	1:A2:463:C:H5"	2.11	0.76
1:A2:1090:C:H2'	1:A2:1091:U:C6	2.21	0.76
1:A2:1740:G:H2'	1:A2:1741:C:C6	2.20	0.76
1:A2:2549:C:C5'	1:A2:2737:G:H8	1.98	0.76
1:A2:4303:U:H2'	1:A2:4304:U:H6	1.48	0.76
2:A3:17:A:H2'	2:A3:18:U:C6	2.20	0.76
2:A3:149:G:H5'	10:AG:57:TRP:CZ3	2.21	0.76
47:BA:69:G:C8	48:BB:1384:LYS:CE	2.65	0.76
49:BC:343:U:H5'	50:C1:1830:U:O4	1.85	0.76
50:C1:42:A:H2'	50:C1:43:U:H5"	1.66	0.76
50:C1:64:A:H2	50:C1:84:A:N6	1.81	0.76
50:C1:557:U:H3'	50:C1:558:G:N7	2.00	0.76
50:C1:1516:G:H2'	50:C1:1517:G:H5'	1.68	0.76
50:C1:1833:C:H6	50:C1:1833:C:C5'	1.97	0.76
1:A2:14:C:H1'	1:A2:15:A:C8	2.21	0.76
1:A2:419:G:H2'	1:A2:420:A:C8	2.21	0.76
1:A2:1196:C:H4'	1:A2:1197:G:OP2	1.85	0.76
1:A2:1567:U:H2'	1:A2:1568:C:C6	2.20	0.76
1:A2:1812:U:H2'	1:A2:1813:G:H5'	1.68	0.76
1:A2:2498:G:H4'	35:Ag:26:PRO:HD2	1.66	0.76
1:A2:4709:G:C2'	1:A2:4710:G:H5"	2.11	0.76
1:A2:4903:C:H2'	1:A2:4904:G:H5'	1.68	0.76
5:AB:92:TYR:CE2	5:AB:101:THR:HB	2.20	0.76
5:AB:156:TYR:O	5:AB:157:CYS:HB3	1.83	0.76
5:AB:261:ARG:HB3	17:AO:64:THR:HG21	1.68	0.76
18:AP:141:SER:O	18:AP:143:PRO:HD3	1.85	0.76
28:AZ:14:LEU:HD11	35:Ag:88:ARG:HG3	1.67	0.76
50:C1:193:C:H5'	50:C1:193:C:H6	1.50	0.76
50:C1:589:G:H1'	50:C1:590:A:OP1	1.85	0.76
50:C1:989:C:H1'	77:Ca:32:LYS:HD3	1.67	0.76
50:C1:1039:C:H2'	50:C1:1040:G:C8	2.20	0.76
55:CE:253:ASP:O	55:CE:257:ALA:HA	1.86	0.76
1:A2:216:G:H1'	1:A2:217:C:O5'	1.86	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1252:C:H2’	1:A2:1253:G:C8	2.20	0.76
1:A2:1259:A:H2’	1:A2:1260:C:C6	2.20	0.76
1:A2:1421:C:H4’	1:A2:1422:C:OP1	1.86	0.76
1:A2:1462:C:H3’	1:A2:1463:G:C8	2.21	0.76
1:A2:1716:A:N3	3:A4:100:A:C2	2.54	0.76
1:A2:2451:G:H2’	1:A2:2452:G:O4’	1.85	0.76
1:A2:3686:A:H2’	1:A2:3687:A:H8	1.50	0.76
1:A2:4896:G:H5”	8:AE:172:LEU:HD11	1.68	0.76
47:BA:51:U:H2’	47:BA:52:G:C8	2.19	0.76
48:BB:1321:PRO:HB3	48:BB:1374:LYS:HG3	1.68	0.76
50:C1:313:A:H2’	57:CG:191:ARG:NH2	2.00	0.76
50:C1:658:U:H5”	50:C1:659:G:C5	2.21	0.76
50:C1:1439:A:H2’	50:C1:1440:C:C6	2.21	0.76
80:Cd:38:MET:SD	80:Cd:43:PHE:HA	2.25	0.76
1:A2:737:G:N2	1:A2:901:A:C2	2.54	0.76
1:A2:901:A:H2’	1:A2:902:G:C8	2.21	0.76
1:A2:1415:G:H2’	1:A2:1416:C:C6	2.21	0.76
1:A2:2386:U:H5”	1:A2:2387:C:H5	1.49	0.76
1:A2:2486:C:H5”	1:A2:2486:C:C6	2.20	0.76
1:A2:2551:G:OP1	1:A2:2551:G:H3’	1.86	0.76
1:A2:2638:U:O2	1:A2:2638:U:H2’	1.86	0.76
6:AC:326:LEU:CD2	6:AC:332:ALA:HB3	2.16	0.76
47:BA:76:A:H8	48:BB:1372:CYS:SG	2.07	0.76
49:BC:352:A:C6	53:CC:147:VAL:CG1	2.68	0.76
50:C1:1075:C:H2’	50:C1:1076:G:C8	2.21	0.76
50:C1:1260:A:C2	50:C1:1620:A:H1’	2.21	0.76
50:C1:1261:C:C6	50:C1:1261:C:H5”	2.21	0.76
50:C1:1417:C:O2’	50:C1:1418:C:H5’	1.86	0.76
52:CB:62:LEU:O	52:CB:65:ARG:HG3	1.86	0.76
1:A2:1441:A:H2’	1:A2:1442:C:C6	2.20	0.76
1:A2:2359:A:H2	1:A2:2807:G:H4’	1.51	0.76
1:A2:2737:G:H2’	1:A2:2738:U:H5”	1.68	0.76
5:AB:67:VAL:HG23	24:AV:91:LYS:HD2	1.67	0.76
50:C1:64:A:C2	50:C1:84:A:N6	2.54	0.76
50:C1:590:A:H4’	50:C1:591:U:OP1	1.86	0.76
50:C1:1079:C:C2’	50:C1:1080:A:H5’	2.16	0.76
50:C1:1203:G:C8	50:C1:1699:A:H2	2.02	0.76
50:C1:1755:C:H2’	50:C1:1756:C:C6	2.21	0.76
1:A2:186:G:O6	1:A2:221:U:H2’	1.86	0.76
1:A2:727:G:C8	1:A2:727:G:H5’	2.20	0.76
1:A2:1219:C:N4	1:A2:1250:A:P	2.59	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1441:A:H2'	1:A2:1442:C:H6	1.50	0.76
1:A2:1804:A:H3'	1:A2:1805:G:C8	2.21	0.76
1:A2:4893:A:H61	8:AE:243:THR:HG23	1.49	0.76
7:AD:22:ARG:HG2	7:AD:28:THR:OG1	1.85	0.76
10:AG:76:VAL:HG12	16:AN:21:PHE:CZ	2.21	0.76
15:AM:42:CYS:HG	15:AM:77:TRP:CD1	2.04	0.76
29:Aa:74:ASN:HB3	29:Aa:114:LYS:HB2	1.67	0.76
50:C1:142:C:H4'	50:C1:143:U:H4'	1.66	0.76
50:C1:911:C:H3'	50:C1:912:C:C6	2.20	0.76
50:C1:1429:G:H5"	50:C1:1430:C:OP2	1.85	0.76
50:C1:1637:A:H4'	50:C1:1638:G:H5"	1.68	0.76
1:A2:699:A:C2	1:A2:700:C:C5	2.74	0.75
1:A2:724:C:H2'	1:A2:725:C:H4'	1.67	0.75
1:A2:1046:G:H2'	1:A2:1047:G:H8	1.48	0.75
1:A2:1391:C:H2'	1:A2:1392:G:C8	2.20	0.75
1:A2:2369:C:H6	1:A2:2369:C:C5'	1.98	0.75
1:A2:3623:G:C2'	1:A2:3624:C:H5'	2.16	0.75
1:A2:4559:A:H4'	1:A2:4560:G:OP1	1.86	0.75
1:A2:4861:C:H2'	1:A2:4862:G:H8	1.50	0.75
13:AJ:55:TYR:CE1	47:BA:53:G:P	2.79	0.75
17:AO:21:ALA:HA	17:AO:87:MET:CE	2.09	0.75
50:C1:1574:C:H2'	50:C1:1575:G:H5'	1.67	0.75
64:CN:22:VAL:HG12	64:CN:66:VAL:HA	1.68	0.75
1:A2:6:C:H3'	1:A2:6:C:O2	1.86	0.75
1:A2:916:A:H1'	1:A2:917:G:OP2	1.87	0.75
1:A2:2372:A:H1'	1:A2:2783:A:C2	2.20	0.75
1:A2:2373:A:H4'	1:A2:2374:G:OP2	1.85	0.75
1:A2:2543:G:H2'	1:A2:2544:G:C8	2.21	0.75
1:A2:4204:A:H1'	1:A2:4228:A:O5'	1.85	0.75
7:AD:34:LYS:HE3	22:AT:30:TYR:OH	1.86	0.75
12:AI:102:MET:HE1	48:BB:1316:PHE:HD1	0.70	0.75
48:BB:818:ARG:CZ	48:BB:1172:VAL:HG23	2.15	0.75
48:BB:841:GLU:HB2	48:BB:1065:ALA:CB	2.15	0.75
50:C1:84:A:O2'	50:C1:85:A:H8	1.67	0.75
50:C1:884:C:O2'	50:C1:885:U:H5'	1.86	0.75
50:C1:1241:A:H1'	50:C1:1267:C:H1'	1.67	0.75
50:C1:1567:G:H2'	50:C1:1568:C:H5'	1.68	0.75
58:CH:84:GLU:OE2	58:CH:91:HIS:HA	1.85	0.75
1:A2:1388:G:N2	1:A2:1389:C:H1'	2.01	0.75
1:A2:1554:A:H5"	1:A2:1554:A:H8	1.49	0.75
1:A2:3566:G:H3'	1:A2:3566:G:N3	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4485:C:H2'	1:A2:4486:U:C6	2.20	0.75
6:AC:8:ILE:HD11	6:AC:24:LEU:HD12	1.68	0.75
15:AM:114:LYS:HD3	15:AM:115:ALA:N	2.01	0.75
31:Ac:46:VAL:HB	31:Ac:71:VAL:HG22	1.68	0.75
50:C1:933:G:O6	50:C1:992:A:H2	1.69	0.75
50:C1:1225:U:H2'	50:C1:1226:G:H5'	1.67	0.75
1:A2:64:A:H3'	1:A2:110:C:H41	1.50	0.75
1:A2:336:C:H2'	1:A2:337:G:C8	2.20	0.75
1:A2:705:U:H2'	1:A2:706:C:C6	2.21	0.75
1:A2:1066:C:H2'	1:A2:1067:A:H5'	1.68	0.75
1:A2:1198:G:C2'	1:A2:1199:G:H5'	2.16	0.75
1:A2:2276:A:C8	6:AC:182:LYS:HA	2.21	0.75
1:A2:3676:U:H2'	1:A2:3677:C:H5	1.49	0.75
6:AC:148:PRO:HA	45:At:76:SER:CB	2.17	0.75
6:AC:150:LEU:HB2	6:AC:151:PRO:HD2	1.68	0.75
31:Ac:13:SER:O	31:Ac:17:ARG:HD2	1.87	0.75
35:Ag:59:VAL:HG21	35:Ag:64:LEU:HD21	1.68	0.75
47:BA:20:U:H3'	47:BA:21:A:C5'	2.14	0.75
48:BB:927:ARG:HH12	48:BB:1158:GLY:HA2	0.59	0.75
48:BB:1257:ARG:O	48:BB:1260:GLN:HG2	1.85	0.75
49:BC:336:U:H5'	65:CO:110:PRO:CB	2.16	0.75
50:C1:207:G:H1'	50:C1:208:G:N7	2.02	0.75
50:C1:655:A:C5	50:C1:657:U:H5	2.03	0.75
50:C1:689:U:H3'	50:C1:690:G:H8	1.50	0.75
50:C1:815:U:H2'	50:C1:816:A:H8	1.51	0.75
50:C1:990:A:N6	50:C1:992:A:H1'	2.01	0.75
50:C1:1416:C:H3'	50:C1:1417:C:C5'	2.13	0.75
50:C1:1518:C:H5"	50:C1:1519:U:C5'	2.15	0.75
1:A2:3750:C:H5"	1:A2:3790:A:H4'	1.66	0.75
1:A2:3942:G:H4'	46:Au:21:PHE:CG	2.21	0.75
1:A2:4251:G:H4'	1:A2:4252:A:H3'	1.67	0.75
5:AB:123:HIS:CE1	5:AB:124:LYS:HG2	2.22	0.75
50:C1:1331:C:O2	50:C1:1331:C:H5"	1.87	0.75
1:A2:481:C:C3'	1:A2:482:G:H5"	2.17	0.75
1:A2:1550:G:H1'	20:AR:130:ASN:OD1	1.87	0.75
1:A2:1659:G:H8	1:A2:1659:G:C5'	2.00	0.75
1:A2:1673:C:H1'	1:A2:1821:A:C2	2.22	0.75
1:A2:2034:G:H8	1:A2:2034:G:H5'	1.50	0.75
1:A2:3920:G:H1	1:A2:4029:G:H1	1.35	0.75
2:A3:17:A:H2'	2:A3:18:U:H6	1.51	0.75
3:A4:67:C:O2	3:A4:68:C:H1'	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Af:47:CYS:SG	34:Af:103:VAL:HG22	2.25	0.75
46:Au:84:LEU:HD11	46:Au:118:LEU:HD21	1.66	0.75
47:BA:76:A:N6	48:BB:1316:PHE:HB2	2.02	0.75
48:BB:835:SER:O	48:BB:838:VAL:HG13	1.85	0.75
48:BB:929:ARG:HB3	48:BB:1070:LEU:HB2	1.69	0.75
48:BB:1148:LEU:HD22	50:C1:488:U:C5	2.21	0.75
48:BB:1230:LYS:HZ2	74:CX:75:ILE:HG21	1.50	0.75
50:C1:606:G:C3'	50:C1:607:U:H4'	2.17	0.75
50:C1:745:C:C2	50:C1:750:C:H5"	2.21	0.75
1:A2:1284:C:O2	1:A2:1284:C:H2'	1.86	0.75
1:A2:4905:U:H6	1:A2:4905:U:H5"	1.50	0.75
19:AQ:70:MET:SD	19:AQ:96:PRO:HG3	2.27	0.75
47:BA:34:G:O6	50:C1:1701:C:N1	2.20	0.75
50:C1:32:U:H1'	50:C1:516:A:C2	2.21	0.75
50:C1:120:U:H2'	50:C1:121:U:O4'	1.86	0.75
50:C1:304:C:H4'	50:C1:305:U:OP2	1.84	0.75
50:C1:987:A:H3'	50:C1:988:C:C5	2.22	0.75
50:C1:1166:G:H1	50:C1:1193:U:H3	1.33	0.75
1:A2:221:U:O2	6:AC:164:THR:HG23	1.86	0.75
1:A2:385:G:H2'	1:A2:387:A:O5'	1.86	0.75
1:A2:426:A:C8	1:A2:427:C:C5	2.75	0.75
1:A2:1229:C:H2'	1:A2:1230:C:C6	2.22	0.75
1:A2:1388:G:H22	1:A2:1390:U:H1'	1.51	0.75
1:A2:2394:A:H3'	1:A2:2395:A:H5"	1.68	0.75
1:A2:2489:A:H4'	1:A2:2490:A:OP2	1.85	0.75
1:A2:3676:U:H2'	1:A2:3677:C:C5	2.22	0.75
1:A2:3942:G:H2'	1:A2:3943:G:H5'	1.67	0.75
1:A2:4917:C:H2'	1:A2:4918:G:H8	1.50	0.75
46:Au:30:ASN:O	46:Au:195:ILE:HA	1.86	0.75
47:BA:41:C:O2	50:C1:1640:A:H1'	1.87	0.75
50:C1:560:A:H3'	60:CJ:171:GLY:HA3	1.68	0.75
50:C1:1286:G:H1'	63:CM:34:GLY:HA3	1.68	0.75
50:C1:1575:G:H2'	50:C1:1576:G:C8	2.22	0.75
1:A2:182:C:H3'	1:A2:183:G:H8	1.48	0.75
1:A2:433:G:H2'	1:A2:434:G:H8	1.44	0.75
1:A2:1091:U:H2'	1:A2:1092:C:C6	2.22	0.75
1:A2:1299:U:H6	1:A2:1299:U:H5"	1.50	0.75
1:A2:1420:U:H3'	1:A2:1420:U:C6	2.22	0.75
1:A2:2547:U:H2'	1:A2:2548:C:C6	2.20	0.75
1:A2:2568:A:H2'	1:A2:2569:U:H5'	1.69	0.75
1:A2:2650:G:H4'	1:A2:2651:A:OP2	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3740:C:C4’	47:BA:13:C:O5’	2.35	0.75
1:A2:4729:U:H2’	1:A2:4730:C:H6	1.52	0.75
45:At:64:ILE:HD12	45:At:89:THR:HB	1.67	0.75
1:A2:391:A:H4’	18:AP:16:LYS:O	1.86	0.74
1:A2:1070:G:H2’	1:A2:1071:C:C6	2.22	0.74
1:A2:2825:G:H5’	24:AV:24:ALA:HA	1.68	0.74
1:A2:3613:U:H2’	1:A2:3614:U:H5’	1.69	0.74
34:Af:27:LEU:HB3	34:Af:83:MET:HE2	1.67	0.74
47:BA:75:C:C4	48:BB:1316:PHE:CZ	2.73	0.74
50:C1:571:U:H3’	50:C1:572:U:O4’	1.87	0.74
50:C1:1461:G:H21	50:C1:1465:A:N6	1.82	0.74
1:A2:1590:C:H1’	1:A2:1591:G:N7	2.03	0.74
1:A2:2395:A:H2’	1:A2:2396:C:H6	1.51	0.74
1:A2:4140:G:H2’	1:A2:4141:U:O4’	1.86	0.74
1:A2:4703:A:N1	1:A2:4911:A:N1	2.35	0.74
28:AZ:97:ASN:O	28:AZ:100:VAL:HG12	1.87	0.74
43:Ao:105:GLN:CA	47:BA:55:U:C2	2.69	0.74
48:BB:1174:LYS:O	48:BB:1178:ILE:HG23	1.86	0.74
48:BB:1247:VAL:HG11	48:BB:1283:PHE:HE1	1.49	0.74
48:BB:1324:MET:HE3	48:BB:1386:PHE:CE2	2.22	0.74
50:C1:112:U:C5’	50:C1:113:G:H5’	2.15	0.74
50:C1:342:C:N4	50:C1:343:A:H62	1.85	0.74
52:CB:131:ASP:HB3	52:CB:180:ASP:OD2	1.87	0.74
1:A2:716:U:H5’	9:AF:69:ILE:HD12	1.67	0.74
1:A2:1401:G:H2’	1:A2:1402:G:H5’	1.67	0.74
1:A2:4117:A:H1’	1:A2:4118:C:P	2.27	0.74
1:A2:4688:A:H2’	1:A2:4694:G:H21	1.52	0.74
1:A2:4897:C:C6	8:AE:172:LEU:HA	2.23	0.74
1:A2:4899:C:H2’	1:A2:4900:G:O4’	1.87	0.74
20:AR:132:PHE:HA	20:AR:137:ILE:HD13	1.68	0.74
48:BB:1317:ASN:CB	48:BB:1323:VAL:HG12	2.16	0.74
50:C1:10:G:C8	50:C1:1697:A:C2	2.76	0.74
50:C1:380:G:N1	50:C1:382:C:H3’	2.01	0.74
50:C1:1039:C:H2’	50:C1:1040:G:H8	1.50	0.74
66:CP:33:LEU:HD22	66:CP:87:PRO:HG2	1.70	0.74
1:A2:171:C:H5”	36:Ah:101:ASN:ND2	2.02	0.74
1:A2:656:G:H2’	1:A2:657:C:C5’	2.14	0.74
1:A2:944:A:H4’	1:A2:945:G:OP2	1.86	0.74
1:A2:2469:C:H2’	1:A2:2470:G:H8	1.52	0.74
1:A2:4374:A:H2’	1:A2:4382:A:C2	2.21	0.74
1:A2:4697:C:H2’	1:A2:4698:C:C6	2.22	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4717:U:H5”	17:AO:114:LYS:O	1.87	0.74
11:AH:98:HIS:CD2	48:BB:944:MET:O	2.40	0.74
48:BB:1095:ARG:HE	48:BB:1097:LYS:NZ	1.84	0.74
50:C1:169:U:H1’	57:CG:133:LEU:HD12	1.69	0.74
50:C1:186:C:H2’	50:C1:187:G:C8	2.22	0.74
50:C1:444:G:N2	50:C1:447:A:H5”	2.01	0.74
50:C1:587:A:H2’	50:C1:592:C:N4	2.02	0.74
50:C1:886:A:H3’	50:C1:886:A:OP2	1.87	0.74
50:C1:1680:G:H4’	79:Cc:20:ARG:NH1	2.01	0.74
57:CG:32:MET:HE2	57:CG:65:GLN:HB2	1.68	0.74
66:CP:30:TYR:HA	66:CP:33:LEU:HD21	1.69	0.74
1:A2:887:C:H2’	1:A2:888:C:H6	1.53	0.74
1:A2:1299:U:H5”	1:A2:1299:U:C6	2.21	0.74
1:A2:1727:U:H6	1:A2:1727:U:H5”	1.51	0.74
1:A2:1930:G:H8	1:A2:1930:G:C5’	2.00	0.74
1:A2:3919:U:O2’	1:A2:3920:G:O5’	2.04	0.74
1:A2:4562:A:P	48:BB:945:HIS:HE1	2.00	0.74
1:A2:4604:G:H1	1:A2:4613:C:H42	1.34	0.74
1:A2:4712:U:H5”	34:Af:4:ARG:HB3	1.69	0.74
27:AY:58:VAL:HG13	27:AY:59:ARG:HG2	1.68	0.74
50:C1:812:A:H2’	50:C1:813:A:H8	1.53	0.74
50:C1:1100:A:H2’	50:C1:1101:U:H5’	1.67	0.74
50:C1:1370:A:H2’	50:C1:1372:U:H5’	1.70	0.74
1:A2:510:C:H4’	14:AL:111:GLN:CB	2.17	0.74
1:A2:918:C:OP2	1:A2:918:C:H6	1.70	0.74
1:A2:1436:G:H4’	19:AQ:69:LYS:HB3	1.69	0.74
1:A2:1635:U:H5”	1:A2:1635:U:H6	1.52	0.74
1:A2:2450:A:H5”	1:A2:2451:G:O5’	1.87	0.74
1:A2:2658:G:H2’	1:A2:2659:G:H8	1.53	0.74
1:A2:2741:A:H4’	1:A2:2742:A:OP1	1.86	0.74
1:A2:4485:C:H2’	1:A2:4486:U:H6	1.53	0.74
7:AD:69:ILE:HA	22:AT:31:MET:SD	2.26	0.74
28:AZ:10:VAL:O	28:AZ:83:THR:HG22	1.87	0.74
34:Af:33:VAL:HG13	34:Af:38:GLU:HB2	1.70	0.74
48:BB:928:ASN:ND2	48:BB:1073:GLN:CD	2.45	0.74
48:BB:1320:ASP:O	48:BB:1377:PRO:HD3	1.86	0.74
49:BC:334:C:O2	77:Ca:46:GLU:HG2	1.87	0.74
50:C1:308:G:H4’	50:C1:309:G:O5’	1.85	0.74
50:C1:574:A:H3’	50:C1:575:A:H8	1.53	0.74
50:C1:899:U:H2’	50:C1:900:C:C6	2.22	0.74
50:C1:952:G:H1’	65:CO:52:THR:HB	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1116:C:O2	50:C1:1116:C:H2'	1.87	0.74
1:A2:923:G:O2'	1:A2:924:C:H5'	1.87	0.74
1:A2:1388:G:H21	1:A2:1389:C:H1'	1.52	0.74
1:A2:1457:C:H2'	1:A2:1458:G:C8	2.22	0.74
1:A2:4483:A:C4	1:A2:4519:A:N6	2.55	0.74
1:A2:4661:A:C2'	1:A2:4662:G:H5'	2.17	0.74
1:A2:4897:C:H4'	8:AE:188:ARG:NH2	2.00	0.74
3:A4:54:A:H4'	13:AJ:13:ARG:HH21	1.50	0.74
4:AA:186:TYR:CA	4:AA:196:TRP:CE2	2.70	0.74
6:AC:149:GLU:HA	45:At:75:THR:HA	1.70	0.74
48:BB:1110:PRO:HG3	48:BB:1174:LYS:CG	2.15	0.74
48:BB:1181:LEU:HD12	48:BB:1185:LEU:HD12	1.70	0.74
50:C1:838:G:N7	75:CY:8:ARG:HA	2.02	0.74
50:C1:1285:G:OP2	82:Cf:102:VAL:HG22	1.87	0.74
50:C1:1771:G:H2'	50:C1:1772:C:C6	2.23	0.74
83:Cg:251:ALA:HB2	83:Cg:289:LEU:HD22	1.70	0.74
1:A2:473:G:N2	45:At:78:VAL:HA	2.02	0.74
1:A2:1409:C:H5"	19:AQ:42:THR:CG2	2.18	0.74
1:A2:4827:G:O5'	1:A2:4830:G:H4'	1.87	0.74
3:A4:32:A:C2	3:A4:41:G:C5	2.75	0.74
3:A4:67:C:H2'	3:A4:68:C:O4'	1.87	0.74
15:AM:100:ARG:HB3	17:AO:198:THR:CG2	2.17	0.74
48:BB:929:ARG:HG3	48:BB:1180:GLU:OE2	1.86	0.74
50:C1:184:G:H8	50:C1:185:G:C4'	1.99	0.74
50:C1:1296:U:H2'	50:C1:1297:U:H5'	1.69	0.74
76:CZ:58:LEU:HD13	76:CZ:77:LEU:HD22	1.70	0.74
1:A2:374:A:H62	1:A2:397:C:H5	1.35	0.74
1:A2:2532:G:H5"	28:AZ:109:LYS:HB2	1.69	0.74
1:A2:3769:A:H2	1:A2:4456:A:H1'	1.50	0.74
1:A2:3836:A:H2'	1:A2:3837:G:H5'	1.69	0.74
1:A2:4711:U:N3	1:A2:4903:C:H5	1.85	0.74
43:Ao:105:GLN:C	47:BA:57:G:C5'	2.54	0.74
48:BB:832:LEU:CD2	48:BB:838:VAL:CG1	2.66	0.74
48:BB:1338:PRO:O	48:BB:1339:MET:HE2	1.88	0.74
50:C1:1079:C:H2'	50:C1:1080:A:H5'	1.69	0.74
50:C1:1403:C:H3'	50:C1:1404:U:H6	1.51	0.74
54:CD:41:VAL:HG22	54:CD:46:THR:HG23	1.69	0.74
67:CQ:22:VAL:O	67:CQ:70:VAL:HA	1.86	0.74
1:A2:1542:A:C6	64:CN:127:ARG:CZ	2.71	0.74
1:A2:1648:A:C2'	1:A2:1649:G:H5"	2.14	0.74
1:A2:2047:A:H5'	1:A2:2047:A:H8	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2595:G:C2’	1:A2:2596:G:H5’	2.18	0.74
1:A2:2870:U:H4’	59:CI:208:LYS:HB2	1.69	0.74
1:A2:4287:C:H2’	1:A2:4288:G:C8	2.23	0.74
1:A2:4534:U:H3	1:A2:4910:A:H4’	1.52	0.74
1:A2:4578:G:H2’	1:A2:4579:U:H5’	1.69	0.74
14:AL:76:PHE:O	14:AL:77:SER:HB3	1.85	0.74
48:BB:1069:GLU:CG	48:BB:1092:ILE:HD11	2.18	0.74
50:C1:312:G:H4’	50:C1:313:A:OP1	1.88	0.74
50:C1:849:A:H2’	50:C1:850:C:H6	1.53	0.74
50:C1:1396:A:H2	50:C1:1449:G:H1	1.35	0.74
50:C1:1481:G:H4’	80:Cd:56:ASP:HB2	1.70	0.74
51:CA:6:ASP:O	72:CV:83:PHE:HB3	1.88	0.74
61:CK:32:HIS:H	61:CK:33:PRO:HD3	1.53	0.74
1:A2:1461:G:H3’	1:A2:1461:G:N3	2.03	0.73
1:A2:1464:C:H2’	1:A2:1465:C:C1’	2.18	0.73
1:A2:2665:G:C6	1:A2:2666:C:C4	2.76	0.73
1:A2:4329:A:H8	1:A2:4329:A:O5’	1.69	0.73
1:A2:4807:C:O2’	1:A2:4808:C:H5’	1.87	0.73
48:BB:1065:ALA:C	48:BB:1141:ALA:HB3	2.13	0.73
48:BB:1193:LYS:HB2	48:BB:1218:PRO:HB2	1.67	0.73
48:BB:1237:VAL:HG21	74:CX:97:ASN:ND2	2.03	0.73
48:BB:1315:ILE:CB	48:BB:1324:MET:HE2	2.16	0.73
49:BC:173:A:C2’	49:BC:174:U:H5’	2.18	0.73
50:C1:111:A:H4’	50:C1:112:U:OP1	1.86	0.73
50:C1:862:A:N3	73:CW:105:THR:HG22	2.03	0.73
53:CC:193:VAL:HG11	53:CC:240:THR:HG23	1.70	0.73
68:CR:71:ILE:HD13	68:CR:75:GLU:HB2	1.69	0.73
71:CU:80:PHE:CG	80:Cd:52:PHE:HB3	2.22	0.73
1:A2:14:C:H4’	26:AX:56:ARG:CA	2.18	0.73
1:A2:1267:G:C4	1:A2:1268:G:H1’	2.22	0.73
1:A2:1804:A:H3’	1:A2:1805:G:H8	1.51	0.73
1:A2:2608:U:OP1	1:A2:2608:U:H3’	1.88	0.73
1:A2:3574:C:H1’	1:A2:3575:U:H5’	1.70	0.73
1:A2:3592:C:H3’	1:A2:3592:C:H6	1.52	0.73
1:A2:3877:A:N7	1:A2:3878:C:H6	1.84	0.73
1:A2:3944:C:H2’	1:A2:3945:C:H6	1.52	0.73
46:Au:74:VAL:HG21	46:Au:142:ILE:HB	1.70	0.73
48:BB:1156:LEU:H	48:BB:1159:LEU:HD11	1.53	0.73
50:C1:91:A:H5”	50:C1:92:A:C5’	2.17	0.73
50:C1:130:G:H3’	50:C1:131:C:H5”	1.69	0.73
50:C1:749:U:H2’	50:C1:750:C:C6	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:CA:9:GLN:HB2	72:CV:83:PHE:CD2	2.23	0.73
1:A2:74:G:H5”	14:AL:59:VAL:CG1	2.18	0.73
1:A2:306:G:H8	29:Aa:62:HIS:HB2	1.52	0.73
1:A2:351:A:C2	2:A3:24:G:C4	2.75	0.73
1:A2:441:G:H1’	1:A2:1274:A:C5’	2.19	0.73
1:A2:1422:C:H2’	1:A2:1423:A:C8	2.23	0.73
1:A2:2550:A:P	1:A2:2736:G:C8	2.80	0.73
1:A2:2604:C:H42	1:A2:4609:G:N2	1.86	0.73
1:A2:3924:G:N2	1:A2:4025:C:H42	1.87	0.73
3:A4:26:C:H2’	3:A4:27:G:O4’	1.88	0.73
10:AG:156:VAL:HG13	10:AG:184:ILE:HD12	1.69	0.73
43:Ao:105:GLN:CG	47:BA:56:C:H2’	2.18	0.73
48:BB:1321:PRO:HB3	48:BB:1374:LYS:CG	2.18	0.73
50:C1:487:U:H1’	50:C1:488:U:OP1	1.87	0.73
50:C1:1016:U:C5	50:C1:1017:U:C5	2.75	0.73
50:C1:1082:A:H2’	50:C1:1084:A:C5’	2.18	0.73
50:C1:1543:U:H1’	50:C1:1544:C:O5’	1.87	0.73
1:A2:219:C:OP2	6:AC:165:LYS:NZ	2.19	0.73
1:A2:960:G:H8	1:A2:960:G:H5’	1.53	0.73
1:A2:4526:U:H3’	1:A2:4526:U:H6	1.52	0.73
3:A4:103:A:H2’	3:A4:104:C:H5’	1.70	0.73
36:Ah:17:LEU:HD13	36:Ah:61:ILE:HG12	1.71	0.73
43:Ao:104:ILE:HG21	47:BA:54:U:C4	2.24	0.73
48:BB:895:GLN:HE21	48:BB:1049:ILE:CG2	2.01	0.73
48:BB:1307:LYS:CE	48:BB:1395:ILE:HG21	2.15	0.73
49:BC:333:C:O2	79:Cc:68:LEU:CD2	2.35	0.73
50:C1:1117:C:H3’	50:C1:1118:C:H5”	1.69	0.73
50:C1:1542:C:H5”	50:C1:1542:C:C6	2.23	0.73
57:CG:77:LEU:O	57:CG:92:ARG:HA	1.88	0.73
1:A2:170:C:H2’	1:A2:171:C:C6	2.23	0.73
1:A2:219:C:H2’	1:A2:220:G:C5’	2.19	0.73
1:A2:473:G:H4’	1:A2:474:G:OP1	1.87	0.73
1:A2:977:G:H2’	1:A2:978:G:C5’	2.18	0.73
1:A2:1355:C:C2’	1:A2:1356:C:H5’	2.19	0.73
1:A2:1742:C:H3’	1:A2:1743:G:H5”	1.70	0.73
1:A2:2305:U:C2’	1:A2:2306:G:C8	2.72	0.73
1:A2:2763:C:H4’	1:A2:2764:A:C8	2.23	0.73
1:A2:2853:G:H3’	1:A2:2853:G:N3	2.04	0.73
1:A2:4080:U:H2’	1:A2:4081:C:O4’	1.87	0.73
1:A2:4700:C:C3’	1:A2:4701:G:H5”	2.18	0.73
5:AB:258:HIS:CG	5:AB:259:PRO:CD	2.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BC:237:C:O2'	78:Cb:36:LYS:NZ	2.21	0.73
50:C1:58:C:N4	50:C1:88:G:C2	2.57	0.73
50:C1:338:G:H2'	50:C1:339:A:C8	2.23	0.73
50:C1:1070:A:H2'	50:C1:1071:G:O4'	1.88	0.73
54:CD:72:VAL:HG13	61:CK:68:TYR:CD1	2.24	0.73
1:A2:19:G:H4'	1:A2:20:U:OP1	1.86	0.73
1:A2:43:U:H4'	43:Ao:52:THR:HG22	1.69	0.73
1:A2:264:U:H2'	1:A2:265:C:C6	2.22	0.73
1:A2:642:C:H5'	1:A2:642:C:H6	1.52	0.73
1:A2:1717:A:O2'	1:A2:1718:G:H5'	1.89	0.73
1:A2:1942:A:C5	1:A2:4654:G:C8	2.76	0.73
1:A2:3592:C:H3'	1:A2:3592:C:C6	2.24	0.73
1:A2:3697:A:H2'	1:A2:3698:U:O4'	1.87	0.73
1:A2:3739:U:H4'	47:BA:12:U:H4'	1.69	0.73
1:A2:3836:A:C2'	1:A2:3837:G:H5'	2.19	0.73
1:A2:4040:C:H2'	1:A2:4041:A:H8	1.52	0.73
3:A4:89:G:H2'	3:A4:90:A:C8	2.24	0.73
4:AA:186:TYR:CA	4:AA:196:TRP:CZ2	2.71	0.73
17:AO:21:ALA:CA	17:AO:87:MET:HE1	2.12	0.73
49:BC:266:G:OP1	50:C1:1116:C:OP1	2.07	0.73
50:C1:442:C:H42	50:C1:449:A:H62	1.36	0.73
50:C1:454:U:H2'	50:C1:455:A:C8	2.22	0.73
50:C1:574:A:H5'	50:C1:575:A:C8	2.23	0.73
50:C1:604:A:C2	50:C1:605:A:C2	2.76	0.73
1:A2:489:C:H2'	1:A2:490:G:C8	2.23	0.73
1:A2:930:C:H4'	6:AC:336:ARG:NE	2.02	0.73
1:A2:2266:C:H1'	1:A2:2297:G:H2'	1.70	0.73
1:A2:2278:C:H2'	1:A2:2279:C:H6	1.51	0.73
1:A2:2624:A:H3'	1:A2:2625:G:C8	2.24	0.73
1:A2:2663:G:H3'	1:A2:2664:U:C4'	2.19	0.73
1:A2:3770:U:C4'	1:A2:4456:A:H2	2.01	0.73
1:A2:4899:C:OP1	1:A2:4899:C:H4'	1.87	0.73
2:A3:26:C:C1'	6:AC:56:GLU:HG2	2.18	0.73
47:BA:31:A:H4'	50:C1:1641:A:C2'	2.19	0.73
48:BB:889:LEU:HD12	48:BB:909:ILE:HG23	1.71	0.73
48:BB:1077:VAL:CG1	48:BB:1152:LEU:HD21	2.18	0.73
48:BB:1230:LYS:HA	48:BB:1233:MET:HE3	1.71	0.73
50:C1:70:G:H2'	50:C1:71:G:C4'	2.18	0.73
50:C1:433:A:H5"	59:CI:25:ARG:HH21	1.53	0.73
50:C1:528:A:H2'	50:C1:529:A:O4'	1.89	0.73
50:C1:1427:C:H6	50:C1:1427:C:H3'	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1825:A:O5'	50:C1:1825:A:H8	1.70	0.73
1:A2:15:A:OP2	1:A2:15:A:H8	1.71	0.73
1:A2:172:C:O2'	1:A2:173:G:H5'	1.88	0.73
1:A2:1222:G:H2'	1:A2:1223:C:C6	2.23	0.73
1:A2:2667:C:H2'	1:A2:2668:U:H6	1.53	0.73
1:A2:4510:G:H2'	1:A2:4511:U:H5'	1.70	0.73
3:A4:34:C:H42	3:A4:47:G:H1'	1.51	0.73
48:BB:825:ARG:NH2	48:BB:1176:GLU:HG2	2.04	0.73
48:BB:1235:ALA:O	48:BB:1238:MET:HG2	1.89	0.73
50:C1:96:C:H1'	50:C1:474:G:H5'	1.70	0.73
50:C1:368:U:H4'	50:C1:369:C:OP1	1.87	0.73
50:C1:1087:A:H3'	50:C1:1088:U:H5'	1.71	0.73
50:C1:1272:C:H1'	80:Cd:7:TYR:OH	1.88	0.73
1:A2:137:G:H8	1:A2:137:G:OP2	1.71	0.73
1:A2:700:C:H2'	1:A2:701:C:C4'	2.19	0.73
1:A2:1273:G:H2'	8:AE:227:HIS:ND1	2.03	0.73
1:A2:1460:C:H3'	1:A2:1460:C:C6	2.23	0.73
1:A2:1633:G:H22	1:A2:1656:U:H5"	1.54	0.73
1:A2:2294:G:H2'	1:A2:2296:G:OP2	1.89	0.73
1:A2:3733:U:H2'	1:A2:3734:G:N7	2.04	0.73
1:A2:3758:C:H5	1:A2:3759:U:C2	2.06	0.73
1:A2:3914:A:H2'	1:A2:3915:G:H8	1.52	0.73
1:A2:4025:C:H3'	1:A2:4025:C:C6	2.23	0.73
1:A2:4838:C:H3'	1:A2:4839:G:C5'	2.18	0.73
1:A2:4883:C:O2'	1:A2:4884:C:H5'	1.89	0.73
49:BC:351:A:C2	54:CD:116:ARG:CZ	2.71	0.73
50:C1:673:G:H1'	50:C1:1084:A:C4	2.23	0.73
50:C1:1164:G:H3'	50:C1:1165:G:N2	2.02	0.73
50:C1:1412:C:H2'	50:C1:1414:A:OP1	1.88	0.73
50:C1:1426:U:H3'	50:C1:1427:C:H5'	1.71	0.73
50:C1:1555:U:H4'	50:C1:1556:A:OP1	1.89	0.73
50:C1:1643:U:H1'	67:CQ:142:GLN:OE1	1.88	0.73
50:C1:1807:C:H2'	50:C1:1808:U:C6	2.24	0.73
50:C1:1815:A:H3'	50:C1:1816:G:H8	1.54	0.73
1:A2:48:G:C6	1:A2:281:U:H4'	2.23	0.73
1:A2:1811:G:H2'	1:A2:1812:U:O4'	1.88	0.73
1:A2:2689:G:C2'	1:A2:2690:C:H5'	2.18	0.73
1:A2:3725:A:O3'	48:BB:1346:PHE:CE1	2.41	0.73
1:A2:4303:U:H2'	1:A2:4304:U:C6	2.23	0.73
1:A2:4410:U:O2'	1:A2:4411:G:H5'	1.88	0.73
1:A2:4825:G:H3'	1:A2:4825:G:P	2.28	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:169:ILE:CG1	29:Aa:98:ALA:HB2	2.18	0.73
34:Af:11:PHE:HE1	34:Af:26:ALA:HB1	1.54	0.73
43:Ao:104:ILE:HD11	47:BA:54:U:O5'	1.89	0.73
45:At:113:ARG:O	45:At:117:ILE:HG12	1.88	0.73
48:BB:831:ARG:NH1	48:BB:1094:GLY:HA2	2.02	0.73
48:BB:1001:PHE:HZ	48:BB:1036:PRO:HB3	1.53	0.73
50:C1:77:A:H2'	50:C1:77:A:N3	2.04	0.73
50:C1:1567:G:C2'	50:C1:1568:C:H5'	2.19	0.73
50:C1:1659:U:C5'	80:Cd:30:LEU:HD11	2.18	0.73
52:CB:49:VAL:HG11	52:CB:58:ALA:HB2	1.69	0.73
71:CU:63:ILE:HD12	80:Cd:52:PHE:CE2	2.22	0.73
1:A2:33:A:OP1	1:A2:33:A:H4'	1.89	0.72
1:A2:186:G:H8	1:A2:186:G:P	2.12	0.72
1:A2:333:G:C2'	1:A2:334:C:H5"	2.18	0.72
1:A2:2505:G:H8	1:A2:2506:A:H5"	1.54	0.72
1:A2:4659:U:H4'	1:A2:4660:A:OP1	1.88	0.72
1:A2:4849:A:H3'	15:AM:132:LYS:NZ	2.04	0.72
5:AB:305:THR:HG21	5:AB:365:LEU:O	1.89	0.72
48:BB:1095:ARG:HE	48:BB:1097:LYS:HZ1	1.35	0.72
48:BB:1303:VAL:O	48:BB:1304:PHE:C	2.31	0.72
50:C1:43:U:H5'	50:C1:44:U:C5	2.13	0.72
50:C1:65:C:C2'	50:C1:66:G:H3'	2.19	0.72
50:C1:217:A:H4'	50:C1:341:C:C5'	2.18	0.72
50:C1:341:C:H6	50:C1:341:C:O5'	1.72	0.72
1:A2:958:C:OP2	1:A2:971:C:H1'	1.88	0.72
1:A2:1798:G:H2'	1:A2:1799:C:C6	2.24	0.72
1:A2:2591:C:O2'	1:A2:2785:G:H5"	1.88	0.72
1:A2:3724:G:H2'	1:A2:3724:G:OP2	1.89	0.72
1:A2:3943:G:H5'	1:A2:3943:G:C8	2.17	0.72
1:A2:4189:U:H6	1:A2:4189:U:H5"	1.53	0.72
1:A2:4210:G:H5'	13:AJ:98:ASN:CG	2.13	0.72
1:A2:4717:U:H4'	1:A2:4718:C:OP1	1.87	0.72
27:AY:123:ALA:CA	27:AY:126:ARG:HB2	2.18	0.72
48:BB:1400:ILE:HD13	48:BB:1421:TRP:HZ3	1.51	0.72
50:C1:743:U:H4'	50:C1:744:G:OP2	1.88	0.72
50:C1:798:G:H1'	50:C1:867:G:H21	1.53	0.72
50:C1:1520:G:H5'	50:C1:1521:C:H5	1.54	0.72
59:CI:36:THR:O	59:CI:95:THR:HA	1.89	0.72
60:CJ:29:LEU:HA	60:CJ:32:ILE:HD12	1.70	0.72
1:A2:382:U:H2'	1:A2:383:U:C6	2.24	0.72
1:A2:949:G:N7	1:A2:950:A:H1'	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1281:C:H3'	1:A2:1281:C:C6	2.23	0.72
1:A2:1580:A:H5"	1:A2:1580:A:H8	1.55	0.72
1:A2:2453:G:H2'	1:A2:2454:A:O4'	1.87	0.72
1:A2:2527:G:H3'	1:A2:2528:A:C5'	2.19	0.72
1:A2:4072:A:H2'	1:A2:4073:G:H8	1.54	0.72
1:A2:4616:A:H4'	1:A2:4617:U:H5'	1.71	0.72
1:A2:4617:U:H3'	1:A2:4618:G:H5"	1.70	0.72
12:AI:174:THR:HG23	12:AI:176:PHE:H	1.53	0.72
43:Ao:106:PHE:CE2	47:BA:57:G:N3	2.56	0.72
48:BB:821:ASP:CA	48:BB:1165:TYR:OH	2.30	0.72
48:BB:943:ILE:HB	48:BB:969:LEU:HG	1.71	0.72
48:BB:1183:GLN:N	48:BB:1183:GLN:OE1	2.23	0.72
48:BB:1341:VAL:HG22	48:BB:1349:ILE:HD11	1.70	0.72
49:BC:334:C:H41	79:Cc:66:ARG:HG2	1.52	0.72
50:C1:35:C:H2'	50:C1:36:U:C6	2.24	0.72
50:C1:180:G:C1'	50:C1:181:A:H5'	2.08	0.72
50:C1:1144:A:H1'	50:C1:1199:A:O2'	1.89	0.72
61:CK:32:HIS:N	61:CK:33:PRO:HD3	2.04	0.72
1:A2:308:A:H61	1:A2:4320:U:H3	1.34	0.72
1:A2:386:A:H8	1:A2:386:A:O5'	1.71	0.72
1:A2:1730:A:H61	1:A2:1758:U:H3	1.36	0.72
1:A2:2375:U:H1'	1:A2:2376:G:OP1	1.89	0.72
1:A2:2573:G:H2'	1:A2:2574:G:C8	2.24	0.72
1:A2:4561:U:H2'	1:A2:4562:A:H8	1.49	0.72
1:A2:4867:G:H4'	1:A2:4868:G:OP1	1.89	0.72
3:A4:86:G:H2'	3:A4:87:G:H5'	1.72	0.72
13:AJ:167:GLN:NE2	13:AJ:174:ILE:HG13	2.05	0.72
14:AL:167:ARG:O	29:Aa:97:ALA:HA	1.90	0.72
27:AY:123:ALA:N	27:AY:126:ARG:HB2	2.05	0.72
48:BB:825:ARG:NH2	48:BB:1176:GLU:OE2	2.22	0.72
48:BB:845:ALA:HA	48:BB:909:ILE:HD11	1.71	0.72
48:BB:909:ILE:HG13	48:BB:911:GLY:H	1.53	0.72
48:BB:1310:ILE:HG23	48:BB:1393:THR:N	2.03	0.72
50:C1:408:A:H2'	50:C1:409:C:H4'	1.72	0.72
50:C1:672:A:H2	50:C1:1162:C:HO2'	1.34	0.72
50:C1:750:C:H2'	50:C1:751:G:H8	1.54	0.72
50:C1:1176:G:H2'	50:C1:1177:U:H6	1.54	0.72
50:C1:1576:G:C2'	50:C1:1577:G:H5'	2.19	0.72
52:CB:63:LYS:O	52:CB:88:THR:HB	1.89	0.72
62:CL:71:ARG:HH12	62:CL:73:LEU:HD11	1.54	0.72
77:Ca:38:LYS:O	77:Ca:71:LEU:HB2	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:475:U:O3'	1:A2:658:G:H4'	1.89	0.72
1:A2:1163:C:H2'	1:A2:1164:A:H5'	1.70	0.72
1:A2:1513:A:C2	38:Aj:15:THR:HG23	2.24	0.72
1:A2:4358:C:H3'	1:A2:4358:C:H6	1.55	0.72
1:A2:4526:U:H2'	1:A2:4527:G:O4'	1.90	0.72
1:A2:4560:G:H5'	84:BB:2435:GNP:HO3'	1.50	0.72
1:A2:4980:C:H5'	59:CI:123:ARG:NH1	2.03	0.72
6:AC:36:ILE:HG22	6:AC:123:ALA:HB2	1.72	0.72
6:AC:146:GLU:HB3	6:AC:175:LYS:HB3	1.70	0.72
48:BB:928:ASN:ND2	48:BB:1073:GLN:NE2	2.34	0.72
48:BB:1275:ILE:CG1	48:BB:1278:HIS:HD2	2.00	0.72
49:BC:351:A:C2	54:CD:116:ARG:NH1	2.54	0.72
50:C1:65:C:H4'	57:CG:133:LEU:HD22	1.70	0.72
50:C1:606:G:H8	81:Ce:54:GLY:CA	2.02	0.72
50:C1:738:C:H2'	50:C1:739:C:C6	2.24	0.72
50:C1:834:C:H4'	50:C1:835:C:O5'	1.86	0.72
50:C1:1606:G:H8	50:C1:1606:G:OP2	1.72	0.72
50:C1:1644:C:H4'	50:C1:1645:C:OP1	1.88	0.72
50:C1:1731:A:H2'	50:C1:1732:G:C8	2.24	0.72
58:CH:79:LEU:HD22	58:CH:94:PHE:CZ	2.24	0.72
1:A2:71:C:C2'	1:A2:72:C:H5'	2.18	0.72
1:A2:1083:C:H2'	1:A2:1083:C:O2	1.88	0.72
1:A2:1715:A:H1'	3:A4:78:C:O2'	1.89	0.72
1:A2:1797:G:H21	1:A2:1801:U:H5"	1.54	0.72
1:A2:1821:A:O5'	1:A2:1821:A:H8	1.72	0.72
1:A2:3735:A:H2'	1:A2:3735:A:N3	2.04	0.72
1:A2:4561:U:O2'	48:BB:974:ARG:NH1	2.23	0.72
1:A2:4724:G:H5'	11:AH:23:ARG:HH11	1.53	0.72
13:AJ:175:LEU:HB3	13:AJ:176:PRO:HD2	1.71	0.72
14:AL:130:LYS:N	14:AL:130:LYS:HD2	2.05	0.72
48:BB:933:LEU:CD1	48:BB:1090:ILE:CG2	2.66	0.72
48:BB:1301:ILE:CG2	48:BB:1403:GLN:HE22	1.98	0.72
50:C1:491:C:H5"	50:C1:574:A:N1	2.04	0.72
50:C1:1217:A:O2'	50:C1:1685:U:H1'	1.89	0.72
75:CY:91:LEU:HD22	75:CY:96:LEU:HD11	1.71	0.72
1:A2:919:A:H2'	1:A2:920:C:H5"	1.70	0.72
1:A2:1219:C:H3'	9:AF:44:LYS:HG2	1.71	0.72
1:A2:1220:G:C8	1:A2:1221:C:C5	2.78	0.72
1:A2:1542:A:H4'	64:CN:142:GLU:OE2	1.89	0.72
1:A2:4183:C:C2'	1:A2:4184:A:H5'	2.19	0.72
1:A2:4971:A:H2	1:A2:4988:G:N2	1.85	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A3:24:G:H8	2:A3:24:G:H5"	1.55	0.72
20:AR:134:ASN:OD1	20:AR:136:ARG:HB3	1.89	0.72
23:AU:80:LYS:HB3	23:AU:110:TYR:CE2	2.25	0.72
47:BA:6:G:N1	47:BA:67:C:N4	2.28	0.72
48:BB:839:ASN:ND2	48:BB:905:GLU:HG2	2.04	0.72
48:BB:897:LYS:NZ	48:BB:898:MET:HG2	2.05	0.72
48:BB:1227:VAL:HB	48:BB:1255:ILE:CD1	2.18	0.72
48:BB:1233:MET:HE1	74:CX:75:ILE:CG2	2.17	0.72
48:BB:1326:VAL:O	48:BB:1370:GLU:HA	1.89	0.72
48:BB:1353:THR:OG1	48:BB:1374:LYS:CE	2.38	0.72
50:C1:1036:A:H8	50:C1:1036:A:O5'	1.73	0.72
50:C1:1414:A:H2'	50:C1:1415:C:O4'	1.89	0.72
50:C1:1787:G:H2'	50:C1:1788:A:H8	1.52	0.72
55:CE:95:THR:HB	55:CE:97:GLU:OE2	1.90	0.72
1:A2:977:G:H2'	1:A2:978:G:H5"	1.70	0.72
1:A2:3653:G:H2'	1:A2:3654:C:C5	2.24	0.72
1:A2:4278:C:H2'	1:A2:4279:C:O4'	1.88	0.72
1:A2:4565:A:H4'	48:BB:949:PRO:CD	2.19	0.72
1:A2:4840:U:H2'	1:A2:4841:C:C6	2.25	0.72
8:AE:190:HIS:CD2	8:AE:192:LYS:HB3	2.25	0.72
14:AL:47:ALA:HB1	14:AL:48:PRO:HD2	1.72	0.72
15:AM:62:LEU:HD21	15:AM:82:ILE:HG13	1.72	0.72
47:BA:34:G:C2	50:C1:1701:C:C2	2.78	0.72
48:BB:947:LEU:HD22	48:BB:1011:GLU:CG	2.20	0.72
48:BB:1305:PRO:HG3	48:BB:1421:TRP:HE3	1.53	0.72
50:C1:15:U:C2'	50:C1:16:G:H5'	2.19	0.72
50:C1:741:C:H3'	50:C1:742:U:O3'	1.89	0.72
71:CU:79:ARG:HB3	80:Cd:56:ASP:OD1	1.90	0.72
1:A2:7:C:H2'	1:A2:8:U:C6	2.24	0.72
1:A2:269:G:H2'	1:A2:320:A:N6	2.04	0.72
1:A2:1454:G:C4	1:A2:1455:C:H1'	2.24	0.72
1:A2:1862:C:H4'	1:A2:2048:U:C5	2.25	0.72
1:A2:1942:A:H2'	1:A2:1943:G:C8	2.24	0.72
1:A2:2549:C:O4'	1:A2:2737:G:C8	2.43	0.72
1:A2:4374:A:H2'	1:A2:4382:A:N1	2.04	0.72
1:A2:4565:A:H2'	1:A2:4566:G:C8	2.25	0.72
1:A2:4803:C:N3	1:A2:4804:G:H1'	2.03	0.72
3:A4:22:A:C6	7:AD:266:TRP:HB2	2.25	0.72
13:AJ:55:TYR:HE1	47:BA:53:G:P	2.13	0.72
34:Af:43:LEU:HD22	34:Af:76:ARG:HA	1.70	0.72
49:BC:337:G:H21	56:CF:128:ILE:CG2	2.02	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:193:C:H4'	50:C1:209:A:H61	1.51	0.72
50:C1:203:G:H2'	50:C1:204:G:H8	1.55	0.72
50:C1:1120:U:H6	50:C1:1120:U:H5"	1.54	0.72
55:CE:38:LEU:HA	55:CE:41:CYS:SG	2.30	0.72
1:A2:210:G:C2	1:A2:211:G:H1'	2.25	0.72
1:A2:1349:C:H5"	1:A2:1350:G:C8	2.23	0.72
1:A2:1407:A:H2'	1:A2:1408:U:C6	2.25	0.72
1:A2:2000:C:H3'	1:A2:2001:C:C5	2.24	0.72
1:A2:4169:G:H4'	22:AT:12:ARG:HH21	1.53	0.72
1:A2:4917:C:H2'	1:A2:4918:G:C8	2.24	0.72
17:AO:182:GLU:C	17:AO:187:LYS:HD3	2.14	0.72
48:BB:933:LEU:CD1	48:BB:1090:ILE:CD1	2.67	0.72
48:BB:1193:LYS:HE3	48:BB:1218:PRO:HG3	1.71	0.72
50:C1:321:C:H2'	50:C1:322:C:C6	2.25	0.72
50:C1:414:A:H8	50:C1:414:A:O5'	1.73	0.72
50:C1:933:G:O6	50:C1:992:A:C2	2.43	0.72
50:C1:1030:A:H2'	50:C1:1031:A:C8	2.25	0.72
50:C1:1503:C:H2'	50:C1:1504:U:C6	2.24	0.72
1:A2:121:A:H4'	1:A2:122:U:O5'	1.90	0.71
1:A2:705:U:H2'	1:A2:706:C:H6	1.54	0.71
1:A2:1278:C:O2'	1:A2:1279:G:H5'	1.90	0.71
1:A2:1858:G:H3'	1:A2:1859:C:C5'	2.20	0.71
1:A2:2320:G:N7	6:AC:54:VAL:HG21	2.05	0.71
1:A2:2442:C:H2'	1:A2:2443:G:C8	2.25	0.71
1:A2:2448:G:H1'	10:AG:58:PRO:HB3	1.71	0.71
1:A2:2553:G:H5"	1:A2:2553:G:C8	2.24	0.71
1:A2:3640:G:H2'	1:A2:3641:G:C8	2.25	0.71
1:A2:3725:A:C2'	1:A2:3726:G:H5'	2.20	0.71
1:A2:4367:G:H2'	1:A2:4368:G:H8	1.55	0.71
2:A3:43:A:H4'	38:Aj:22:CYS:O	1.90	0.71
10:AG:152:ALA:HA	10:AG:205:THR:HG22	1.72	0.71
30:Ab:54:LEU:O	30:Ab:59:ALA:HB2	1.89	0.71
35:Ag:41:ALA:HB3	35:Ag:52:ARG:HD2	1.72	0.71
48:BB:1148:LEU:HD22	50:C1:488:U:C4	2.25	0.71
50:C1:1208:A:OP2	50:C1:1208:A:H4'	1.90	0.71
1:A2:14:C:H4'	26:AX:56:ARG:CB	2.19	0.71
1:A2:3569:G:H2'	1:A2:3570:C:C6	2.25	0.71
3:A4:27:G:H5"	7:AD:57:ASN:ND2	2.05	0.71
7:AD:25:GLU:O	13:AJ:147:ARG:HA	1.90	0.71
11:AH:23:ARG:NE	11:AH:39:ASN:HA	2.05	0.71
31:Ac:8:LYS:HE2	50:C1:1007:C:C4'	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1327:THR:HA	48:BB:1370:GLU:CG	2.20	0.71
50:C1:60:A:H5'	50:C1:501:C:H5	1.53	0.71
50:C1:890:U:O2	50:C1:890:U:H2'	1.90	0.71
50:C1:1129:G:H3'	50:C1:1130:G:C8	2.25	0.71
50:C1:1405:A:H3'	50:C1:1406:G:C5'	2.20	0.71
50:C1:1565:C:H2'	50:C1:1566:G:H5'	1.72	0.71
50:C1:1851:A:H5"	50:C1:1851:A:H8	1.53	0.71
1:A2:267:C:H5'	37:Ai:34:THR:HG23	1.72	0.71
1:A2:440:C:C2'	1:A2:441:G:H5"	2.19	0.71
1:A2:1016:C:H2'	1:A2:1017:C:H6	1.55	0.71
1:A2:1244:C:H2'	1:A2:1245:G:H8	1.54	0.71
1:A2:1410:C:H2'	1:A2:1411:C:H6	1.55	0.71
1:A2:1481:G:H2'	19:AQ:65:ARG:NH2	2.05	0.71
1:A2:1569:C:H4'	1:A2:2833:C:O2'	1.90	0.71
1:A2:2248:C:H2'	1:A2:2249:G:C8	2.26	0.71
1:A2:2523:G:C4	1:A2:2524:G:C8	2.77	0.71
1:A2:4192:U:H4'	1:A2:4193:A:O5'	1.90	0.71
1:A2:4249:U:O2'	1:A2:4280:G:H4'	1.90	0.71
48:BB:818:ARG:CZ	48:BB:1172:VAL:CG2	2.63	0.71
50:C1:1338:G:H4'	71:CU:74:SER:H	1.54	0.71
50:C1:1579:A:H2'	50:C1:1580:A:O4'	1.90	0.71
1:A2:439:G:H2'	1:A2:440:C:C6	2.26	0.71
1:A2:1492:U:H2'	1:A2:1493:U:C6	2.25	0.71
1:A2:2494:A:H2'	1:A2:2495:G:C8	2.25	0.71
1:A2:3604:A:H3'	1:A2:3605:C:H5"	1.71	0.71
1:A2:4561:U:O2'	48:BB:974:ARG:CZ	2.38	0.71
1:A2:4668:A:H5'	1:A2:4669:U:H5	1.56	0.71
48:BB:895:GLN:NE2	48:BB:1049:ILE:HG21	2.04	0.71
48:BB:1082:GLY:C	50:C1:50:A:C8	2.68	0.71
49:BC:338:C:N4	65:CO:149:ARG:HH11	1.82	0.71
50:C1:1255:G:H3'	50:C1:1256:G:C5'	2.20	0.71
50:C1:1522:A:C2	66:CP:128:HIS:HB2	2.25	0.71
50:C1:1853:C:H2'	50:C1:1854:U:C6	2.25	0.71
51:CA:82:THR:HA	51:CA:204:TYR:O	1.91	0.71
1:A2:204:G:OP1	1:A2:204:G:H8	1.74	0.71
1:A2:668:C:H5"	45:At:92:SER:HB2	1.71	0.71
1:A2:1199:G:C2'	1:A2:1200:G:C8	2.74	0.71
1:A2:1347:C:H4'	27:AY:3:PHE:O	1.89	0.71
1:A2:1391:C:H2'	1:A2:1392:G:H8	1.56	0.71
1:A2:1515:U:H2'	1:A2:1516:A:C8	2.20	0.71
1:A2:1919:A:H2	1:A2:4394:C:H5"	1.56	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2064:G:H22	45:At:39:ARG:HH21	1.38	0.71
1:A2:2599:G:H2'	1:A2:2600:A:C8	2.26	0.71
1:A2:3907:G:H1'	1:A2:3908:G:OP2	1.90	0.71
1:A2:4173:A:H5"	1:A2:4174:A:H5'	1.71	0.71
1:A2:4624:A:H2'	1:A2:4625:A:O4'	1.90	0.71
1:A2:4900:G:H2'	1:A2:4900:G:N3	2.05	0.71
1:A2:4977:U:H4'	1:A2:4978:C:OP1	1.91	0.71
42:An:18:ARG:NH1	50:C1:1182:A:OP1	2.24	0.71
47:BA:74:C:H5"	48:BB:1317:ASN:CG	2.15	0.71
48:BB:929:ARG:HD3	48:BB:1071:ARG:NH1	2.00	0.71
48:BB:1166:LYS:HE2	48:BB:1172:VAL:HG13	1.70	0.71
50:C1:29:G:H4'	74:CX:129:SER:CB	2.20	0.71
50:C1:319:C:H4'	50:C1:320:G:OP2	1.90	0.71
50:C1:370:G:C8	50:C1:370:G:H5'	2.25	0.71
50:C1:1123:C:H5"	52:CB:149:GLN:HE22	1.54	0.71
50:C1:1308:U:H4'	82:Cf:134:SER:C	2.15	0.71
51:CA:63:ARG:HG2	72:CV:46:PHE:CZ	2.25	0.71
53:CC:81:ILE:HG21	53:CC:88:ILE:HD11	1.72	0.71
1:A2:24:G:C2	1:A2:25:A:C4	2.78	0.71
1:A2:327:A:H5"	1:A2:329:A:OP1	1.90	0.71
1:A2:948:A:H3'	1:A2:949:G:C8	2.25	0.71
1:A2:1771:U:O2	3:A4:101:A:H4'	1.91	0.71
1:A2:2369:C:C5'	1:A2:2369:C:C6	2.73	0.71
1:A2:4004:G:H2'	1:A2:4005:C:C6	2.24	0.71
1:A2:4830:G:C8	1:A2:4831:U:H1'	2.26	0.71
2:A3:80:A:H2'	2:A3:81:C:C5	2.25	0.71
4:AA:77:ILE:HD11	4:AA:115:CYS:HB2	1.72	0.71
9:AF:227:PHE:HA	9:AF:231:GLY:O	1.90	0.71
46:Au:59:ILE:HD11	46:Au:146:LYS:N	2.06	0.71
50:C1:399:C:H4'	50:C1:400:C:OP2	1.89	0.71
50:C1:890:U:H3'	50:C1:891:G:C5'	2.19	0.71
50:C1:1308:U:H4'	82:Cf:134:SER:O	1.89	0.71
50:C1:1378:A:C4	51:CA:105:PRO:HB3	2.24	0.71
60:CJ:133:ARG:O	60:CJ:162:ARG:HD2	1.89	0.71
76:CZ:62:VAL:HG12	76:CZ:68:ILE:HG13	1.72	0.71
1:A2:50:C:C2'	1:A2:51:A:H5'	2.20	0.71
1:A2:1056:C:N4	1:A2:1204:G:H1	1.89	0.71
1:A2:1420:U:H2'	1:A2:1421:C:C5	2.24	0.71
1:A2:1517:U:C2'	1:A2:1518:G:H5'	2.20	0.71
1:A2:2020:A:C8	1:A2:2021:A:C2	2.78	0.71
1:A2:2568:A:C2'	1:A2:2569:U:H5'	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4056:C:H2'	1:A2:4057:G:C8	2.26	0.71
1:A2:4373:C:H3'	1:A2:4373:C:O2	1.90	0.71
1:A2:4399:U:C2'	1:A2:4400:G:H5'	2.20	0.71
1:A2:4549:A:H1'	1:A2:4550:A:H1'	1.71	0.71
3:A4:36:C:H6	3:A4:36:C:O5'	1.73	0.71
5:AB:258:HIS:CD2	5:AB:259:PRO:HD2	2.25	0.71
8:AE:149:ILE:HG21	8:AE:270:TYR:HE2	1.54	0.71
20:AR:134:ASN:O	20:AR:137:ILE:HG13	1.90	0.71
21:AS:164:LYS:CB	21:AS:165:PRO:HD3	2.21	0.71
43:Ao:103:VAL:O	47:BA:56:C:C4'	2.38	0.71
47:BA:68:C:C2'	47:BA:69:G:H5'	2.21	0.71
48:BB:885:THR:CB	48:BB:914:ILE:HD11	2.19	0.71
48:BB:1385:MET:HB3	48:BB:1389:HIS:H	1.56	0.71
50:C1:184:G:N7	50:C1:185:G:H1'	2.05	0.71
50:C1:736:C:H2'	50:C1:737:G:C8	2.25	0.71
1:A2:59:A:H2'	1:A2:60:A:C5'	2.20	0.71
1:A2:204:G:H1'	1:A2:397:C:OP1	1.90	0.71
1:A2:329:A:C2	1:A2:330:C:C4	2.79	0.71
1:A2:967:C:H2'	1:A2:967:C:O2	1.90	0.71
1:A2:1823:U:H2'	1:A2:1824:G:C8	2.25	0.71
1:A2:2393:G:H1	1:A2:2397:A:H61	1.37	0.71
1:A2:3724:G:H2'	1:A2:3724:G:P	2.30	0.71
1:A2:4210:G:H5"	1:A2:4211:A:OP2	1.89	0.71
1:A2:4325:C:H2'	1:A2:4326:A:C8	2.25	0.71
1:A2:4660:A:H2	11:AH:69:THR:HA	1.55	0.71
1:A2:4980:C:H2'	1:A2:4983:G:H5'	1.71	0.71
2:A3:138:C:H2'	2:A3:139:G:C8	2.26	0.71
3:A4:43:U:H4'	13:AJ:143:ASP:O	1.91	0.71
8:AE:168:LEU:HD21	8:AE:214:ASP:HA	1.72	0.71
8:AE:217:PHE:HB3	8:AE:246:ARG:NH2	2.06	0.71
11:AH:98:HIS:NE2	48:BB:945:HIS:CD2	2.59	0.71
48:BB:842:LYS:N	48:BB:1140:GLU:OE1	2.24	0.71
50:C1:553:U:H3'	50:C1:554:A:H5"	1.71	0.71
50:C1:957:A:H4'	50:C1:973:C:H1'	1.72	0.71
1:A2:180:C:H2'	1:A2:181:U:H5'	1.73	0.71
1:A2:1352:A:H2	1:A2:1353:A:C5	2.07	0.71
1:A2:1474:G:C2'	1:A2:1475:G:H5'	2.21	0.71
1:A2:1710:C:C6	1:A2:1710:C:H5"	2.24	0.71
1:A2:1831:G:H3'	1:A2:1831:G:H8	1.55	0.71
1:A2:2029:C:H5"	1:A2:2030:G:C8	2.25	0.71
1:A2:2771:C:H5'	1:A2:2774:C:H42	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4327:G:H2'	1:A2:4328:G:O4'	1.91	0.71
1:A2:4527:G:C2'	1:A2:4528:A:H5'	2.19	0.71
7:AD:111:ASN:HA	7:AD:116:ASP:HB2	1.72	0.71
18:AP:37:LYS:HD3	18:AP:117:ILE:HG22	1.73	0.71
48:BB:844:ARG:CG	48:BB:845:ALA:H	2.04	0.71
48:BB:1326:VAL:O	48:BB:1370:GLU:CA	2.39	0.71
48:BB:1347:VAL:HG22	48:BB:1349:ILE:CA	2.21	0.71
49:BC:64:U:H2'	49:BC:65:C:C4'	2.01	0.71
50:C1:527:C:H5'	60:CJ:122:SER:CB	2.21	0.71
50:C1:912:C:OP2	50:C1:912:C:H2'	1.90	0.71
50:C1:1348:G:H8	50:C1:1348:G:O5'	1.74	0.71
50:C1:1784:G:H2'	50:C1:1785:C:C6	2.26	0.71
55:CE:124:CYS:SG	55:CE:160:VAL:HG23	2.31	0.71
62:CL:96:ILE:HD11	62:CL:103:GLU:OE1	1.91	0.71
1:A2:62:A:H2'	1:A2:63:G:C8	2.26	0.71
1:A2:1218:A:H62	6:AC:326:LEU:HB3	1.54	0.71
1:A2:1293:C:H5	1:A2:3851:C:O4'	1.73	0.71
1:A2:1460:C:H42	1:A2:1463:G:H22	1.37	0.71
1:A2:2032:U:O2'	1:A2:2033:G:H5'	1.91	0.71
1:A2:3722:G:H2'	1:A2:3723:G:C1'	2.20	0.71
1:A2:4026:U:H2'	1:A2:4027:C:C6	2.26	0.71
1:A2:4090:C:H3'	1:A2:4090:C:H6	1.56	0.71
1:A2:4660:A:H2'	1:A2:4661:A:H5"	1.72	0.71
8:AE:188:ARG:HD3	8:AE:188:ARG:H	1.55	0.71
10:AG:106:THR:H	10:AG:109:GLU:HB2	1.55	0.71
48:BB:929:ARG:CD	48:BB:1071:ARG:HH12	2.04	0.71
50:C1:350:C:N4	50:C1:351:G:C2	2.58	0.71
50:C1:582:U:H3'	50:C1:583:A:H8	1.54	0.71
51:CA:67:ALA:HA	72:CV:50:PHE:CE1	2.26	0.71
52:CB:125:VAL:HG11	52:CB:172:MET:HB3	1.73	0.71
1:A2:509:G:H2'	1:A2:510:C:H5'	1.71	0.70
1:A2:677:C:H2'	1:A2:677:C:O2	1.90	0.70
1:A2:682:C:H2'	1:A2:683:C:C6	2.26	0.70
1:A2:1458:G:H2'	1:A2:1459:C:C5	2.26	0.70
1:A2:2000:C:H4'	1:A2:2001:C:OP1	1.91	0.70
1:A2:2844:C:C6	1:A2:2844:C:H5"	2.26	0.70
1:A2:3584:G:H21	25:AW:49:ILE:CA	2.02	0.70
1:A2:3696:A:O2'	1:A2:3697:A:H8	1.72	0.70
1:A2:3908:G:OP2	1:A2:3908:G:H8	1.72	0.70
1:A2:4032:C:C3'	1:A2:4033:G:H5'	2.20	0.70
1:A2:4177:G:HO2'	1:A2:4263:C:H6	1.39	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4833:C:H2'	1:A2:4834:C:C6	2.26	0.70
1:A2:4948:G:N2	1:A2:5013:A:C2	2.58	0.70
4:AA:48:ILE:HD11	44:Ap:63:THR:HG22	1.73	0.70
19:AQ:61:LEU:HD23	19:AQ:82:VAL:HG13	1.73	0.70
50:C1:808:A:H8	50:C1:808:A:O5'	1.74	0.70
50:C1:928:G:HO2'	50:C1:929:G:H8	1.39	0.70
50:C1:958:G:H3'	50:C1:959:G:C8	2.26	0.70
50:C1:1431:G:H2'	50:C1:1432:U:H6	1.54	0.70
50:C1:1493:C:C3'	50:C1:1494:U:H5'	2.21	0.70
50:C1:1700:C:H4'	50:C1:1701:C:H5'	1.72	0.70
66:CP:83:MET:HB3	66:CP:116:LEU:HD12	1.71	0.70
1:A2:1082:U:H6	1:A2:1083:C:H5	1.37	0.70
1:A2:1259:A:OP1	1:A2:1259:A:H4'	1.91	0.70
1:A2:1877:G:H1'	1:A2:2254:G:C2	2.26	0.70
1:A2:1934:A:C2	1:A2:2006:C:C2	2.79	0.70
1:A2:2282:G:H1'	1:A2:2307:G:N2	2.06	0.70
1:A2:2313:G:H2'	1:A2:2314:C:C6	2.25	0.70
1:A2:2624:A:N6	1:A2:2664:U:N3	2.39	0.70
1:A2:2651:A:N1	31:Ac:53:PRO:HD2	2.07	0.70
1:A2:4616:A:H1'	1:A2:4617:U:OP2	1.90	0.70
47:BA:76:A:N7	48:BB:1316:PHE:CB	2.55	0.70
48:BB:1368:GLY:O	48:BB:1370:GLU:HG3	1.90	0.70
50:C1:77:A:H4'	50:C1:78:C:C5	2.26	0.70
50:C1:747:U:H5"	50:C1:795:A:N6	2.07	0.70
50:C1:1483:A:H4'	54:CD:160:SER:HB2	1.72	0.70
1:A2:389:A:H2'	1:A2:390:G:O4'	1.90	0.70
1:A2:1160:C:C6	1:A2:1160:C:H3'	2.26	0.70
1:A2:1214:G:O3'	1:A2:1215:G:H4'	1.90	0.70
1:A2:1227:U:H2'	1:A2:1228:C:C6	2.26	0.70
1:A2:1229:C:H2'	1:A2:1230:C:H6	1.55	0.70
1:A2:1454:G:C2'	1:A2:1455:C:H4'	2.20	0.70
1:A2:1475:G:H4'	1:A2:1476:A:OP1	1.90	0.70
1:A2:1868:G:H8	1:A2:1868:G:O5'	1.74	0.70
1:A2:2282:G:H1'	1:A2:2307:G:H22	1.56	0.70
1:A2:2455:C:OP2	1:A2:2456:G:H8	1.74	0.70
1:A2:2527:G:H4'	1:A2:2527:G:OP1	1.89	0.70
2:A3:103:A:H5'	2:A3:104:A:C8	2.25	0.70
8:AE:173:LEU:O	8:AE:188:ARG:HA	1.92	0.70
10:AG:116:ALA:O	10:AG:120:LYS:HB3	1.91	0.70
43:Ao:105:GLN:O	47:BA:55:U:C2	2.44	0.70
50:C1:1469:A:H2'	50:C1:1470:C:C6	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1552:G:H2'	54:CD:3:VAL:HG21	1.71	0.70
1:A2:69:A:N3	1:A2:70:A:H4'	2.07	0.70
1:A2:668:C:H1'	45:At:84:LYS:CD	2.22	0.70
1:A2:1086:A:C1'	7:AD:273:LEU:HD23	2.21	0.70
1:A2:3893:C:C2'	1:A2:3894:U:H5'	2.20	0.70
1:A2:4813:C:C2'	1:A2:4814:C:H5'	2.21	0.70
1:A2:4840:U:H2'	1:A2:4841:C:H6	1.55	0.70
3:A4:9:C:H3'	3:A4:9:C:O2	1.91	0.70
6:AC:50:GLN:CB	6:AC:51:PRO:HD3	2.22	0.70
13:AJ:33:LEU:HD22	13:AJ:70:VAL:HG22	1.71	0.70
32:Ad:59:THR:HG21	32:Ad:104:THR:OG1	1.92	0.70
48:BB:1116:ARG:CG	50:C1:488:U:H6	1.99	0.70
50:C1:144:U:C6	57:CG:180:VAL:HG22	2.27	0.70
50:C1:412:G:H5'	50:C1:413:G:C8	2.26	0.70
50:C1:528:A:H8	50:C1:528:A:P	2.14	0.70
50:C1:1331:C:H6	50:C1:1489:A:N6	1.90	0.70
54:CD:73:VAL:HG11	54:CD:84:VAL:HG21	1.73	0.70
1:A2:175:C:H2'	1:A2:176:G:C8	2.26	0.70
1:A2:443:A:H1'	1:A2:444:G:C5	2.26	0.70
1:A2:951:C:H2'	1:A2:952:C:H6	1.52	0.70
1:A2:1351:A:C3'	1:A2:1352:A:H8	2.03	0.70
1:A2:1411:C:H2'	1:A2:1412:G:H8	1.56	0.70
1:A2:1457:C:H2'	1:A2:1458:G:H8	1.56	0.70
1:A2:2310:G:H4'	2:A3:20:A:H5"	1.72	0.70
1:A2:2559:A:H2	1:A2:2657:G:H21	1.32	0.70
1:A2:3725:A:H2'	1:A2:3726:G:C8	2.26	0.70
1:A2:4400:G:H2'	1:A2:4401:A:C8	2.26	0.70
1:A2:4438:G:H2'	1:A2:4439:A:O4'	1.91	0.70
10:AG:31:LEU:HD11	28:AZ:122:TYR:O	1.91	0.70
47:BA:35:A:C6	49:BC:344:G:C2	2.76	0.70
48:BB:817:GLU:N	48:BB:1170:ILE:HD13	2.05	0.70
48:BB:929:ARG:HD3	48:BB:1071:ARG:HH12	1.56	0.70
48:BB:1237:VAL:O	48:BB:1240:GLU:HG2	1.92	0.70
48:BB:1302:ALA:C	48:BB:1303:VAL:HG22	2.16	0.70
49:BC:266:G:C2'	50:C1:1115:U:P	2.80	0.70
50:C1:86:C:H3'	50:C1:87:U:H5"	1.73	0.70
50:C1:465:A:H1'	50:C1:466:G:OP2	1.90	0.70
1:A2:707:C:O2'	1:A2:708:G:H5'	1.92	0.70
1:A2:923:G:C2'	1:A2:924:C:H5'	2.22	0.70
1:A2:1054:G:C2'	1:A2:1055:G:H5'	2.22	0.70
1:A2:1805:G:C8	1:A2:1805:G:H5"	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2611:C:H4'	20:AR:57:VAL:HB	1.72	0.70
1:A2:4711:U:H3'	34:Af:6:TRP:HB2	1.73	0.70
1:A2:4801:C:C2'	1:A2:4802:G:H5'	2.22	0.70
11:AH:41:ILE:HG13	11:AH:73:ILE:HD11	1.74	0.70
14:AL:53:GLY:C	14:AL:55:ILE:H	1.98	0.70
48:BB:829:LYS:HZ2	48:BB:1062:LYS:HZ2	1.39	0.70
48:BB:885:THR:HB	48:BB:914:ILE:CG1	2.22	0.70
50:C1:62:G:H2'	50:C1:63:U:O4'	1.92	0.70
50:C1:105:U:H2'	50:C1:106:C:O4'	1.92	0.70
50:C1:112:U:H5"	50:C1:113:G:C5'	2.17	0.70
50:C1:210:U:C3'	50:C1:211:G:H5"	2.22	0.70
50:C1:558:G:C2'	50:C1:559:G:H5"	2.21	0.70
50:C1:747:U:C2	50:C1:748:C:H2'	2.25	0.70
50:C1:1663:A:H2	50:C1:1664:A:C6	2.10	0.70
83:Cg:45:LEU:HD22	83:Cg:52:TYR:HE2	1.56	0.70
1:A2:1050:G:C2'	1:A2:1051:C:H5'	2.21	0.70
1:A2:1252:C:H2'	1:A2:1253:G:H8	1.56	0.70
1:A2:1479:A:H3'	1:A2:1480:C:C5'	2.21	0.70
1:A2:2032:U:H5"	17:AO:129:LEU:HD21	1.73	0.70
1:A2:2310:G:P	1:A2:2310:G:H8	2.15	0.70
1:A2:2431:U:H2'	1:A2:2432:G:H5"	1.72	0.70
1:A2:2841:A:H2'	1:A2:2842:U:C6	2.25	0.70
1:A2:3699:U:O2'	1:A2:3700:C:H5"	1.91	0.70
1:A2:4046:C:H2'	1:A2:4047:C:O4'	1.92	0.70
7:AD:10:LYS:O	7:AD:14:LYS:HG3	1.91	0.70
42:An:2:ARG:N	50:C1:1852:C:OP2	2.24	0.70
48:BB:848:ILE:CG2	48:BB:914:ILE:HG22	2.22	0.70
48:BB:1355:ILE:HG12	48:BB:1373:VAL:HB	0.72	0.70
48:BB:1405:ILE:HA	48:BB:1421:TRP:CZ2	2.27	0.70
50:C1:1203:G:H8	50:C1:1699:A:C2	2.08	0.70
50:C1:1408:U:H2'	50:C1:1409:A:O4'	1.91	0.70
52:CB:79:VAL:HG11	52:CB:82:ARG:HD3	1.74	0.70
1:A2:198:C:HO2'	1:A2:199:C:H5	1.38	0.70
1:A2:356:U:H2'	1:A2:356:U:O2	1.91	0.70
1:A2:924:C:C3'	1:A2:925:C:H5"	2.19	0.70
1:A2:1189:U:H5'	1:A2:1189:U:H6	1.57	0.70
1:A2:1274:A:H5'	1:A2:1274:A:C8	2.23	0.70
1:A2:2340:A:H2'	1:A2:2341:G:O4'	1.92	0.70
1:A2:2482:C:H2'	1:A2:2483:G:H5'	1.73	0.70
1:A2:4077:C:H2'	1:A2:4078:U:H6	1.56	0.70
1:A2:4089:G:C6	35:Ag:94:ALA:HA	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4837:U:H5”	8:AE:272:ARG:HG2	1.73	0.70
27:AY:120:GLU:C	27:AY:125:SER:HB3	2.17	0.70
43:Ao:103:VAL:O	47:BA:56:C:H5”	1.91	0.70
46:Au:190:LYS:C	46:Au:192:PRO:HD3	2.17	0.70
47:BA:30:G:O5’	50:C1:1525:C:OP1	2.08	0.70
50:C1:334:C:H2’	50:C1:335:G:C8	2.27	0.70
50:C1:1704:C:H1’	50:C1:1832:A:N1	2.06	0.70
50:C1:1764:G:H3’	50:C1:1764:G:N3	2.07	0.70
78:Cb:56:CYS:SG	78:Cb:59:CYS:N	2.65	0.70
1:A2:84:A:H61	1:A2:98:A:H3’	1.56	0.70
1:A2:489:C:H2’	1:A2:490:G:H8	1.55	0.70
1:A2:510:C:H4’	14:AL:111:GLN:CG	2.21	0.70
1:A2:635:G:H2’	1:A2:636:G:H8	1.56	0.70
1:A2:1051:C:H2’	1:A2:1052:C:O4’	1.92	0.70
1:A2:1088:C:C6	1:A2:1088:C:C3’	2.75	0.70
1:A2:2051:C:H2’	1:A2:2052:C:C6	2.25	0.70
1:A2:2564:A:H5”	35:Ag:70:THR:HG22	1.74	0.70
1:A2:2673:A:H5’	1:A2:2674:A:C8	2.27	0.70
1:A2:2778:U:H1’	38:Aj:12:ARG:NH2	2.07	0.70
1:A2:3689:G:H2’	1:A2:3690:U:C6	2.27	0.70
1:A2:4854:G:H1’	1:A2:4855:C:OP1	1.92	0.70
2:A3:57:C:H4’	2:A3:63:U:C4	2.27	0.70
3:A4:68:C:H5’	3:A4:69:U:OP2	1.92	0.70
6:AC:264:TYR:O	6:AC:271:ALA:HB2	1.92	0.70
34:Af:57:THR:O	34:Af:64:PRO:HA	1.92	0.70
48:BB:896:THR:HG21	48:BB:900:LYS:HG3	1.74	0.70
50:C1:376:A:H2’	50:C1:377:G:H8	1.55	0.70
50:C1:1021:U:H1’	50:C1:1022:U:OP2	1.90	0.70
50:C1:1736:G:H2’	50:C1:1737:G:C8	2.27	0.70
62:CL:99:TYR:CE1	74:CX:14:ARG:HA	2.26	0.70
77:Ca:38:LYS:H	77:Ca:71:LEU:HB3	1.57	0.70
1:A2:15:A:OP2	1:A2:15:A:H3’	1.92	0.70
1:A2:380:A:H62	27:AY:90:ALA:HB1	1.57	0.70
1:A2:1086:A:H8	1:A2:1086:A:O5’	1.73	0.70
1:A2:1178:G:C3’	1:A2:1179:G:H5”	2.20	0.70
1:A2:1191:G:C2’	1:A2:1192:G:H8	1.98	0.70
1:A2:1462:C:O2	1:A2:1462:C:H2’	1.92	0.70
1:A2:2040:C:H3’	1:A2:2041:G:C5’	2.12	0.70
1:A2:2294:G:H5”	1:A2:2294:G:H8	1.57	0.70
1:A2:2355:G:H22	1:A2:2357:G:H3’	1.55	0.70
1:A2:2401:G:H2’	1:A2:2403:U:C5	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2605:U:H6	1:A2:2605:U:H3'	1.57	0.70
1:A2:3678:U:H2'	1:A2:3679:G:H5'	1.74	0.70
1:A2:4565:A:H4'	48:BB:949:PRO:HG2	0.74	0.70
1:A2:4616:A:H4'	1:A2:4617:U:O5'	1.92	0.70
34:Af:104:MET:HG2	34:Af:106:TYR:CD1	2.27	0.70
42:An:5:TRP:CZ3	50:C1:1848:U:O4	2.44	0.70
48:BB:1077:VAL:HG13	48:BB:1152:LEU:HD21	1.74	0.70
48:BB:1295:GLN:HE22	48:BB:1411:TRP:CD1	2.09	0.70
50:C1:95:G:H1	50:C1:435:A:N6	1.89	0.70
50:C1:606:G:H3'	50:C1:607:U:H4'	1.74	0.70
50:C1:1440:C:H2'	50:C1:1441:U:C6	2.26	0.70
50:C1:1606:G:N2	50:C1:1632:G:H2'	2.07	0.70
57:CG:64:LYS:HE2	57:CG:97:VAL:HG11	1.72	0.70
58:CH:102:PRO:HB2	58:CH:105:THR:HB	1.74	0.70
1:A2:176:G:O2'	1:A2:177:C:H5'	1.91	0.69
1:A2:458:U:H4'	1:A2:459:U:O5'	1.92	0.69
1:A2:1088:C:H2'	1:A2:1089:C:H5'	1.74	0.69
1:A2:1276:G:H8	1:A2:1276:G:O5'	1.75	0.69
1:A2:2442:C:H6	1:A2:2442:C:OP2	1.74	0.69
1:A2:2670:G:OP2	1:A2:2671:G:H3'	1.92	0.69
1:A2:3743:A:H5"	1:A2:3743:A:C8	2.26	0.69
1:A2:4883:C:H2'	1:A2:4884:C:C6	2.26	0.69
5:AB:258:HIS:CD2	5:AB:259:PRO:HD3	2.26	0.69
14:AL:57:PRO:HG3	14:AL:75:GLY:O	1.92	0.69
47:BA:73:A:H1'	47:BA:74:C:C2	2.27	0.69
48:BB:842:LYS:CD	48:BB:1140:GLU:HB3	2.22	0.69
48:BB:1401:SER:O	48:BB:1405:ILE:HG23	1.92	0.69
50:C1:307:G:H4'	50:C1:308:G:C5'	2.21	0.69
50:C1:550:C:H1'	81:Ce:44:ASN:HB3	1.73	0.69
50:C1:1405:A:C3'	50:C1:1406:G:H5"	2.22	0.69
50:C1:1840:U:H2'	50:C1:1841:C:C6	2.26	0.69
54:CD:11:PHE:CE1	71:CU:27:ARG:HB2	2.27	0.69
58:CH:102:PRO:HB2	58:CH:105:THR:CB	2.21	0.69
71:CU:24:LEU:HD11	71:CU:36:CYS:SG	2.32	0.69
1:A2:212:C:H3'	1:A2:212:C:OP2	1.92	0.69
1:A2:1277:U:H2'	1:A2:1278:C:C6	2.27	0.69
1:A2:4062:G:O2'	1:A2:4063:G:H2'	1.92	0.69
1:A2:4149:U:H1'	1:A2:4340:A:C2	2.27	0.69
1:A2:4895:C:H3'	1:A2:4895:C:C6	2.25	0.69
6:AC:12:SER:HB2	6:AC:16:GLU:O	1.91	0.69
8:AE:141:ARG:O	8:AE:144:ILE:HG12	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AG:39:PHE:CE1	10:AG:47:PRO:HD3	2.27	0.69
47:BA:76:A:C5	48:BB:1316:PHE:HB2	2.27	0.69
50:C1:1060:A:H1'	50:C1:1061:U:OP2	1.92	0.69
56:CF:40:ALA:HB3	56:CF:68:ILE:HG13	1.73	0.69
1:A2:63:G:O2'	1:A2:76:A:H1'	1.91	0.69
1:A2:170:C:H2'	1:A2:171:C:H6	1.55	0.69
1:A2:474:G:H5"	1:A2:659:A:H4'	1.73	0.69
1:A2:1795:C:H1'	30:Ab:42:ASN:ND2	2.06	0.69
1:A2:2004:A:O2'	1:A2:2005:U:H5'	1.92	0.69
1:A2:2588:A:P	1:A2:2665:G:H4'	2.32	0.69
1:A2:3584:G:N2	25:AW:49:ILE:HA	2.07	0.69
1:A2:3689:G:H2'	1:A2:3690:U:H6	1.56	0.69
1:A2:4034:U:H2'	1:A2:4035:U:C6	2.27	0.69
1:A2:4437:A:H4'	11:AH:171:ASP:OD2	1.91	0.69
1:A2:4703:A:H61	1:A2:4911:A:H61	1.40	0.69
1:A2:4865:A:H4'	5:AB:95:THR:HG22	1.74	0.69
2:A3:12:G:H2'	2:A3:13:G:H5'	1.72	0.69
6:AC:136:LEU:HD22	45:At:9:VAL:CG1	2.21	0.69
48:BB:1228:HIS:CD2	48:BB:1229:LYS:H	2.09	0.69
48:BB:1301:ILE:HD12	48:BB:1403:GLN:HG3	1.73	0.69
50:C1:78:C:H1'	50:C1:79:A:OP2	1.93	0.69
50:C1:1468:C:H2'	50:C1:1469:A:H8	1.56	0.69
50:C1:1690:U:C2'	50:C1:1691:U:H5'	2.22	0.69
50:C1:1833:C:OP1	50:C1:1840:U:H4'	1.92	0.69
1:A2:734:A:H61	1:A2:904:C:H1'	1.56	0.69
1:A2:1717:A:O3'	3:A4:101:A:H2	1.74	0.69
1:A2:1812:U:C5	1:A2:1813:G:C8	2.80	0.69
1:A2:1910:A:H5"	1:A2:1910:A:H8	1.56	0.69
1:A2:1942:A:C5	1:A2:4654:G:N7	2.60	0.69
1:A2:2372:A:H1'	1:A2:2783:A:N3	2.07	0.69
1:A2:2589:G:H1	1:A2:2704:C:H42	1.38	0.69
1:A2:4309:C:H4'	1:A2:4309:C:OP1	1.92	0.69
1:A2:4549:A:H1'	1:A2:4550:A:C1'	2.21	0.69
1:A2:4955:G:C2'	1:A2:4956:U:H5'	2.22	0.69
19:AQ:65:ARG:O	19:AQ:69:LYS:HG2	1.92	0.69
43:Ao:103:VAL:HG23	47:BA:56:C:C3'	2.22	0.69
48:BB:817:GLU:CB	48:BB:1170:ILE:HG21	2.21	0.69
48:BB:867:HIS:O	48:BB:871:GLN:HG2	1.92	0.69
48:BB:973:ASP:OD2	84:BB:2435:GNP:N2	2.19	0.69
48:BB:1196:TYR:HB2	48:BB:1238:MET:HE1	1.74	0.69
50:C1:215:G:H3'	50:C1:215:G:OP2	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:227:U:H1'	50:C1:228:C:OP2	1.92	0.69
50:C1:444:G:N2	50:C1:446:G:H3'	2.07	0.69
50:C1:448:A:N7	59:CI:26:LYS:HA	2.06	0.69
50:C1:738:C:H2'	50:C1:739:C:H6	1.55	0.69
50:C1:1780:G:P	50:C1:1781:A:H5"	2.32	0.69
61:CK:84:HIS:CD2	61:CK:85:LEU:H	2.10	0.69
1:A2:14:C:H5"	26:AX:56:ARG:HA	1.73	0.69
1:A2:165:C:H2'	1:A2:166:G:C8	2.18	0.69
1:A2:416:U:H1'	18:AP:6:LEU:HD22	1.73	0.69
1:A2:929:U:O5'	1:A2:929:U:H6	1.74	0.69
1:A2:1861:G:H5"	1:A2:1861:G:H8	1.57	0.69
1:A2:2309:G:H4'	1:A2:2310:G:O5'	1.91	0.69
1:A2:2389:A:OP1	20:AR:6:LEU:HD13	1.91	0.69
1:A2:2748:G:H2'	1:A2:2749:C:C6	2.26	0.69
1:A2:3918:A:H2'	1:A2:3919:U:O4'	1.92	0.69
1:A2:4389:C:H42	12:AI:158:LYS:HE2	1.56	0.69
39:Ak:61:PRO:HG2	39:Ak:64:LEU:HD12	1.74	0.69
50:C1:176:U:H3'	50:C1:177:G:C8	2.27	0.69
50:C1:313:A:H2	50:C1:315:C:N4	1.91	0.69
50:C1:745:C:H4'	50:C1:746:C:C5	2.27	0.69
50:C1:1217:A:HO2'	50:C1:1685:U:H1'	1.56	0.69
69:CS:43:VAL:HG22	70:CT:37:VAL:HB	1.74	0.69
73:CW:16:ASN:O	73:CW:20:ARG:HD2	1.90	0.69
1:A2:65:A:H2	1:A2:76:A:O3'	1.75	0.69
1:A2:219:C:H2'	1:A2:220:G:H5'	1.74	0.69
1:A2:707:C:H2'	1:A2:708:G:H8	1.58	0.69
1:A2:1358:C:H5"	1:A2:1359:C:OP2	1.93	0.69
1:A2:1360:G:H1'	1:A2:1361:U:O5'	1.93	0.69
1:A2:1388:G:N2	1:A2:1390:U:H1'	2.07	0.69
1:A2:1424:G:C2'	1:A2:1425:U:H5'	2.22	0.69
1:A2:2417:U:H5'	1:A2:2418:C:C5	2.27	0.69
1:A2:2417:U:H5'	1:A2:2418:C:H5	1.56	0.69
1:A2:3627:C:H4'	4:AA:240:ALA:HB2	1.73	0.69
1:A2:3821:A:H5"	1:A2:3822:U:H5	1.58	0.69
1:A2:4562:A:P	48:BB:945:HIS:NE2	2.64	0.69
1:A2:4593:G:N2	1:A2:4623:G:H2'	2.06	0.69
1:A2:4684:C:H2'	1:A2:4685:G:H8	1.57	0.69
1:A2:4715:C:H2'	1:A2:4716:C:C6	2.28	0.69
13:AJ:174:ILE:O	13:AJ:175:LEU:HB2	1.90	0.69
34:Af:101:ILE:C	34:Af:102:ARG:HD3	2.17	0.69
48:BB:838:VAL:O	48:BB:1061:SER:HA	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:880:GLN:HG2	48:BB:1122:PRO:HD2	0.71	0.69
50:C1:12:U:H2'	50:C1:13:C:C6	2.28	0.69
50:C1:528:A:P	60:CJ:122:SER:HB2	2.32	0.69
50:C1:1276:A:N6	50:C1:1317:C:H42	1.90	0.69
50:C1:1285:G:H4'	50:C1:1286:G:O5'	1.93	0.69
50:C1:1558:C:H2'	50:C1:1559:C:C6	2.27	0.69
50:C1:1561:A:C4'	50:C1:1583:C:H4'	2.23	0.69
1:A2:182:C:C3'	1:A2:183:G:C8	2.75	0.69
1:A2:500:A:H2'	1:A2:501:U:C6	2.27	0.69
1:A2:1096:C:H2'	1:A2:1097:C:C6	2.27	0.69
1:A2:1217:C:H4'	1:A2:1218:A:OP1	1.91	0.69
1:A2:1515:U:H4'	1:A2:3611:A:N1	2.08	0.69
1:A2:1610:A:C2	4:AA:204:MET:SD	2.85	0.69
1:A2:2310:G:H3'	1:A2:2311:C:H5"	1.73	0.69
1:A2:4655:C:H2'	1:A2:4656:C:C5'	2.16	0.69
2:A3:24:G:C2'	2:A3:25:G:H5'	2.22	0.69
11:AH:98:HIS:NE2	48:BB:945:HIS:HD2	1.90	0.69
21:AS:110:TYR:HE2	21:AS:126:ILE:HD11	1.57	0.69
34:Af:46:ARG:HD2	34:Af:106:TYR:CE2	2.27	0.69
42:An:10:MET:HE3	50:C1:1172:U:H4'	1.73	0.69
47:BA:71:G:C5	48:BB:1319:ARG:NH2	2.60	0.69
48:BB:817:GLU:OE1	48:BB:1167:GLU:CA	2.41	0.69
48:BB:842:LYS:HD3	48:BB:1140:GLU:HB3	1.72	0.69
49:BC:266:G:C2'	50:C1:1115:U:H3'	2.19	0.69
50:C1:131:C:C4	50:C1:215:G:H5'	2.26	0.69
50:C1:164:A:H3'	50:C1:165:G:C8	2.28	0.69
50:C1:331:C:H2'	50:C1:332:G:O4'	1.91	0.69
50:C1:912:C:O2'	50:C1:913:A:H4'	1.93	0.69
50:C1:1493:C:C6	50:C1:1493:C:H5"	2.27	0.69
50:C1:1599:U:H4'	50:C1:1599:U:OP1	1.92	0.69
57:CG:161:PRO:HA	57:CG:170:ARG:O	1.91	0.69
1:A2:42:A:C6	1:A2:4339:A:H2	2.10	0.69
1:A2:70:A:H5'	1:A2:72:C:H42	1.57	0.69
1:A2:398:A:H4'	1:A2:399:A:OP1	1.91	0.69
1:A2:708:G:H2'	1:A2:709:G:H8	1.57	0.69
1:A2:948:A:H2'	1:A2:949:G:N9	2.07	0.69
1:A2:1284:C:H3'	1:A2:1285:C:C5	2.28	0.69
1:A2:1630:G:H3'	1:A2:1631:U:C6	2.27	0.69
1:A2:2452:G:H2'	1:A2:2453:G:C8	2.28	0.69
1:A2:2587:G:O2'	1:A2:2665:G:H5"	1.91	0.69
1:A2:4128:G:C2	1:A2:4129:G:H1'	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4308:A:H3'	1:A2:4309:C:C4'	2.22	0.69
1:A2:4399:U:H2'	1:A2:4400:G:H5'	1.75	0.69
1:A2:4411:G:H8	1:A2:4411:G:O5'	1.75	0.69
1:A2:4522:C:H2'	1:A2:4523:U:C6	2.28	0.69
1:A2:4537:U:H2'	1:A2:4538:G:H8	1.57	0.69
1:A2:4632:A:H2'	1:A2:4633:U:C6	2.28	0.69
1:A2:4645:U:H6	1:A2:4645:U:O5'	1.76	0.69
1:A2:4896:G:H21	8:AE:170:SER:HB3	1.57	0.69
3:A4:15:C:H1'	7:AD:13:PHE:CE1	2.28	0.69
3:A4:68:C:H3'	3:A4:69:U:C6	2.27	0.69
6:AC:346:ASN:HA	6:AC:349:LEU:HB3	1.73	0.69
13:AJ:26:VAL:HG13	13:AJ:32:ARG:HH11	1.58	0.69
17:AO:48:TYR:O	17:AO:51:LYS:HG2	1.92	0.69
24:AV:16:ILE:HD11	24:AV:57:VAL:H	1.57	0.69
29:Aa:46:ASP:O	29:Aa:47:LYS:HB3	1.93	0.69
30:Ab:43:MET:O	30:Ab:47:LYS:HG2	1.93	0.69
36:Ah:46:LYS:O	36:Ah:49:VAL:HG22	1.93	0.69
48:BB:832:LEU:HD23	48:BB:832:LEU:O	1.93	0.69
48:BB:847:VAL:CG2	48:BB:934:CYS:HA	2.20	0.69
48:BB:1066:HIS:HD1	48:BB:1093:ASN:HD21	1.38	0.69
48:BB:1229:LYS:NZ	74:CX:76:LYS:HA	2.07	0.69
49:BC:265:U:H4'	50:C1:1115:U:C5'	2.19	0.69
50:C1:170:A:H2'	50:C1:171:A:C8	2.28	0.69
50:C1:187:G:H2'	50:C1:188:C:C6	2.27	0.69
50:C1:351:G:H3'	50:C1:351:G:C8	2.27	0.69
50:C1:374:G:H2'	50:C1:375:U:C6	2.27	0.69
50:C1:606:G:C8	81:Ce:54:GLY:CA	2.75	0.69
50:C1:749:U:O2	50:C1:795:A:C2	2.46	0.69
50:C1:797:C:H4'	58:CH:109:ARG:HB2	1.75	0.69
50:C1:1228:A:H2'	50:C1:1229:G:C8	2.28	0.69
50:C1:1287:A:H4'	50:C1:1312:G:N1	2.07	0.69
59:CI:34:ALA:HB2	59:CI:56:ARG:HD3	1.75	0.69
74:CX:51:VAL:HG13	74:CX:70:VAL:HG13	1.73	0.69
77:Ca:15:ARG:HD2	77:Ca:18:VAL:HG22	1.74	0.69
1:A2:34:A:H1'	1:A2:1506:A:O2'	1.93	0.69
1:A2:99:A:C3'	1:A2:100:C:H6	2.05	0.69
1:A2:104:G:H2'	1:A2:105:A:H5'	1.75	0.69
1:A2:400:G:H21	1:A2:2306:G:P	2.15	0.69
1:A2:897:U:O2'	1:A2:898:U:H3'	1.93	0.69
1:A2:916:A:C1'	1:A2:917:G:H5'	2.21	0.69
1:A2:958:C:P	1:A2:971:C:H1'	2.33	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:965:C:H6	1:A2:965:C:C5’	2.06	0.69
1:A2:1159:U:O5’	1:A2:1159:U:H6	1.76	0.69
1:A2:2056:C:H2’	1:A2:2057:G:H8	1.57	0.69
1:A2:2249:G:H1’	6:AC:309:ILE:HG21	1.74	0.69
1:A2:2450:A:H4’	1:A2:2451:G:OP2	1.92	0.69
1:A2:3605:C:H5’	1:A2:3605:C:C6	2.22	0.69
1:A2:4005:C:H2’	1:A2:4006:C:C6	2.25	0.69
1:A2:4063:G:H5’	1:A2:4063:G:C8	2.26	0.69
1:A2:4567:A:H3’	1:A2:4568:G:H5”	1.75	0.69
1:A2:4578:G:H5’	24:AV:15:ARG:HB2	1.74	0.69
3:A4:105:C:H2’	3:A4:106:G:O4’	1.93	0.69
47:BA:68:C:H2’	47:BA:69:G:C5’	2.23	0.69
48:BB:973:ASP:OD1	84:BB:2435:GNP:N1	2.21	0.69
48:BB:1089:VAL:HG21	48:BB:1161:LEU:CD2	2.22	0.69
48:BB:1319:ARG:HA	48:BB:1322:ILE:CG2	2.20	0.69
50:C1:380:G:H1	50:C1:383:G:P	2.15	0.69
50:C1:571:U:C3’	50:C1:572:U:C4’	2.65	0.69
50:C1:1281:G:N2	50:C1:1317:C:H1’	2.08	0.69
1:A2:463:C:H5’	1:A2:463:C:C6	2.28	0.69
1:A2:700:C:H2’	1:A2:701:C:C5’	2.23	0.69
1:A2:1748:G:H8	1:A2:1748:G:O5’	1.76	0.69
1:A2:2016:U:H2’	1:A2:2017:G:O4’	1.91	0.69
1:A2:2284:A:H2’	1:A2:2285:G:C8	2.28	0.69
1:A2:2310:G:H4’	2:A3:20:A:C5’	2.23	0.69
1:A2:2311:C:H2’	1:A2:2312:C:C6	2.28	0.69
1:A2:3793:A:H8	1:A2:3793:A:O5’	1.76	0.69
1:A2:4044:G:H21	1:A2:4130:A:H61	1.40	0.69
1:A2:4093:C:H3’	1:A2:4094:A:H5”	1.75	0.69
47:BA:75:C:OP2	48:BB:1323:VAL:CA	2.40	0.69
48:BB:933:LEU:CD1	48:BB:1090:ILE:HD12	2.23	0.69
48:BB:1068:GLU:H	48:BB:1093:ASN:C	2.00	0.69
50:C1:65:C:O2’	50:C1:66:G:H3’	1.93	0.69
50:C1:310:C:H2’	50:C1:340:C:H5’	1.75	0.69
50:C1:673:G:OP1	50:C1:673:G:H8	1.76	0.69
50:C1:845:G:H4’	55:CE:255:ARG:HH12	1.57	0.69
50:C1:1456:G:H2’	50:C1:1457:U:C6	2.28	0.69
1:A2:1082:U:H1’	1:A2:1083:C:OP1	1.92	0.68
1:A2:2283:A:N3	1:A2:2283:A:H2’	2.07	0.68
1:A2:2629:G:H3’	1:A2:2630:C:C4’	2.23	0.68
1:A2:3641:G:C2	1:A2:3643:G:H1’	2.27	0.68
1:A2:4030:A:H2’	1:A2:4031:U:O4’	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AG:61:ILE:O	10:AG:64:GLN:HG2	1.92	0.68
28:AZ:13:VAL:O	28:AZ:19:SER:HA	1.93	0.68
48:BB:1302:ALA:HB1	48:BB:1400:ILE:HA	1.75	0.68
50:C1:298:G:H2'	50:C1:299:A:H8	1.57	0.68
50:C1:380:G:H2'	50:C1:382:C:C5	2.28	0.68
50:C1:992:A:OP1	50:C1:1133:A:H1'	1.91	0.68
50:C1:1284:A:N7	50:C1:1286:G:H5'	2.07	0.68
50:C1:1425:G:H2'	50:C1:1426:U:C6	2.28	0.68
50:C1:1477:U:H1'	50:C1:1478:U:OP2	1.92	0.68
50:C1:1634:A:H3'	50:C1:1635:C:C6	2.27	0.68
76:CZ:44:LEU:HD21	76:CZ:78:LYS:HG2	1.74	0.68
1:A2:426:A:H2'	1:A2:427:C:H6	1.58	0.68
1:A2:965:C:H6	1:A2:965:C:H5"	1.58	0.68
1:A2:1265:U:H4'	8:AE:132:PRO:HB3	1.75	0.68
1:A2:1399:G:C2'	1:A2:1400:A:H5"	2.22	0.68
1:A2:1807:C:H2'	1:A2:1808:G:H8	1.57	0.68
1:A2:2393:G:H22	1:A2:2397:A:N6	1.89	0.68
1:A2:3765:U:C4'	50:C1:1720:U:O2'	2.33	0.68
1:A2:3914:A:H2'	1:A2:3915:G:C8	2.28	0.68
1:A2:4060:G:C2'	1:A2:4061:G:H5'	2.23	0.68
3:A4:64:G:H4'	12:AI:204:GLY:CA	2.23	0.68
9:AF:45:ALA:O	9:AF:48:LYS:HB3	1.93	0.68
9:AF:66:ARG:HA	9:AF:69:ILE:HD11	1.73	0.68
43:Ao:106:PHE:CZ	47:BA:18:G:C1'	2.74	0.68
48:BB:896:THR:CG2	48:BB:900:LYS:HG3	2.23	0.68
50:C1:1396:A:C2	50:C1:1449:G:N1	2.59	0.68
57:CG:68:LEU:HD23	57:CG:100:CYS:HB3	1.75	0.68
1:A2:58:G:O3'	1:A2:59:A:H4'	1.93	0.68
1:A2:181:U:H5"	1:A2:182:C:O4'	1.93	0.68
1:A2:725:C:H3'	1:A2:726:C:C6	2.28	0.68
1:A2:728:G:H2'	1:A2:729:C:C6	2.26	0.68
1:A2:927:A:H4'	1:A2:928:A:OP2	1.90	0.68
1:A2:2342:C:H6	1:A2:2342:C:H5"	1.58	0.68
1:A2:2867:C:H42	1:A2:3580:A:H61	1.41	0.68
1:A2:4156:G:OP1	1:A2:4156:G:H8	1.76	0.68
1:A2:4837:U:H6	8:AE:274:VAL:HG12	1.57	0.68
1:A2:4900:G:C3'	1:A2:4901:U:H5'	2.21	0.68
3:A4:22:A:H2'	3:A4:23:A:C8	2.28	0.68
6:AC:149:GLU:CA	45:At:75:THR:HA	2.24	0.68
11:AH:98:HIS:CD2	48:BB:945:HIS:HD2	2.11	0.68
27:AY:80:ILE:HG12	27:AY:99:ILE:O	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Au:62:PHE:CZ	46:Au:110:LEU:HG	2.27	0.68
48:BB:829:LYS:NZ	48:BB:1062:LYS:HZ3	1.90	0.68
48:BB:1116:ARG:CD	50:C1:488:U:C5	2.76	0.68
50:C1:65:C:H2'	50:C1:66:G:H3'	1.75	0.68
50:C1:550:C:H4'	81:Ce:43:VAL:HG21	1.75	0.68
50:C1:1092:G:H2'	50:C1:1093:A:H8	1.58	0.68
50:C1:1389:C:H2'	50:C1:1389:C:OP2	1.92	0.68
50:C1:1591:C:H5'	56:CF:85:LYS:HE3	1.75	0.68
62:CL:99:TYR:CZ	74:CX:14:ARG:HA	2.27	0.68
1:A2:148:G:H1	10:AG:163:PRO:HD2	1.58	0.68
1:A2:179:G:H2'	1:A2:180:C:H6	1.57	0.68
1:A2:181:U:H6	1:A2:181:U:C5'	2.07	0.68
1:A2:194:A:C2	1:A2:222:G:N2	2.61	0.68
1:A2:348:U:H4'	6:AC:58:ALA:HB1	1.73	0.68
1:A2:477:C:H5"	1:A2:479:G:P	2.34	0.68
1:A2:725:C:H3'	1:A2:726:C:H5	1.59	0.68
1:A2:1397:C:H2'	1:A2:1398:C:H6	1.57	0.68
1:A2:1652:U:O5'	1:A2:1652:U:H6	1.76	0.68
1:A2:1870:A:H4'	1:A2:1871:C:OP2	1.93	0.68
1:A2:3584:G:H2'	25:AW:44:ARG:HD2	1.74	0.68
1:A2:4745:G:H2'	1:A2:4746:C:C6	2.29	0.68
1:A2:4888:C:H2'	1:A2:4889:A:H8	1.58	0.68
6:AC:252:TRP:CZ3	6:AC:260:LEU:HD11	2.28	0.68
38:Aj:11:ARG:HB3	38:Aj:11:ARG:NH1	2.08	0.68
48:BB:885:THR:O	48:BB:914:ILE:HG12	1.93	0.68
50:C1:216:C:H2'	50:C1:217:A:H8	1.54	0.68
50:C1:1240:A:H2'	50:C1:1267:C:O2'	1.94	0.68
50:C1:1630:A:C2'	50:C1:1631:U:H5"	2.23	0.68
50:C1:1750:C:H2'	50:C1:1751:C:C5'	2.23	0.68
52:CB:63:LYS:HE3	52:CB:91:VAL:CG2	2.23	0.68
62:CL:5:GLN:HE22	62:CL:12:LYS:H	1.41	0.68
62:CL:20:LYS:HE3	62:CL:21:LYS:NZ	2.08	0.68
1:A2:306:G:H8	29:Aa:62:HIS:CB	2.06	0.68
1:A2:1221:C:H2'	1:A2:1222:G:C5'	2.23	0.68
1:A2:1651:U:H2'	1:A2:1652:U:C6	2.29	0.68
1:A2:4358:C:H3'	1:A2:4358:C:C6	2.29	0.68
6:AC:326:LEU:HD21	6:AC:332:ALA:HB3	1.74	0.68
15:AM:29:ASP:OD2	21:AS:75:VAL:HG21	1.93	0.68
20:AR:137:ILE:HD12	20:AR:138:LEU:H	1.58	0.68
25:AW:46:PRO:HB2	25:AW:54:LEU:HD23	1.74	0.68
30:Ab:30:GLU:HG2	30:Ab:31:SER:H	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:Ag:7:TYR:HB2	35:Ag:34:TYR:OH	1.94	0.68
36:Ah:34:ALA:HA	36:Ah:37:THR:OG1	1.94	0.68
46:Au:74:VAL:HG11	46:Au:142:ILE:HG22	1.76	0.68
49:BC:62:C:H2'	49:BC:63:U:C6	2.29	0.68
50:C1:465:A:H4'	50:C1:466:G:O5'	1.94	0.68
50:C1:1286:G:H2'	50:C1:1286:G:N3	2.09	0.68
50:C1:1442:U:C4	50:C1:1443:C:H1'	2.29	0.68
1:A2:14:C:C5'	26:AX:56:ARG:HA	2.24	0.68
1:A2:389:A:H3'	1:A2:389:A:C8	2.29	0.68
1:A2:942:G:H2'	1:A2:942:G:N3	2.07	0.68
1:A2:2510:C:OP2	1:A2:2510:C:H2'	1.94	0.68
1:A2:2527:G:H3'	1:A2:2528:A:H5"	1.75	0.68
1:A2:2789:A:C8	20:AR:83:GLY:HA2	2.28	0.68
1:A2:3592:C:C4	1:A2:3593:A:N1	2.62	0.68
1:A2:3618:A:C1'	1:A2:4495:A:H4'	2.23	0.68
1:A2:4586:A:H62	1:A2:4628:U:H3'	1.59	0.68
1:A2:4905:U:C2'	1:A2:4906:G:H5'	2.23	0.68
2:A3:104:A:H4'	2:A3:105:C:C5	2.29	0.68
3:A4:62:U:H3'	3:A4:63:C:C5'	2.22	0.68
9:AF:156:LYS:HD3	9:AF:248:ASN:OD1	1.93	0.68
20:AR:105:LEU:HD12	20:AR:138:LEU:HD12	1.75	0.68
29:Aa:65:ARG:O	29:Aa:66:ASN:HB3	1.93	0.68
48:BB:832:LEU:O	48:BB:838:VAL:CG1	2.42	0.68
48:BB:1069:GLU:HB2	48:BB:1092:ILE:HD11	1.73	0.68
50:C1:59:U:H2'	50:C1:60:A:C5'	2.23	0.68
50:C1:67:C:H5	57:CG:163:ASN:N	1.91	0.68
50:C1:911:C:H2'	50:C1:912:C:C2	2.29	0.68
50:C1:1005:G:H2'	50:C1:1006:C:C6	2.29	0.68
50:C1:1100:A:C2'	50:C1:1101:U:H5'	2.23	0.68
50:C1:1405:A:H3'	50:C1:1405:A:C8	2.28	0.68
1:A2:1437:C:H2'	1:A2:1438:A:C8	2.29	0.68
1:A2:1582:C:H4'	1:A2:2775:A:C2	2.28	0.68
1:A2:1831:G:H3'	1:A2:1831:G:C8	2.29	0.68
1:A2:1874:A:O2'	1:A2:2047:A:H2	1.76	0.68
1:A2:2624:A:C5	1:A2:2665:G:C6	2.82	0.68
1:A2:2711:U:H6	1:A2:2711:U:H5"	1.59	0.68
1:A2:3918:A:H2'	1:A2:3919:U:H6	1.59	0.68
1:A2:3918:A:O2'	1:A2:3919:U:H5'	1.94	0.68
1:A2:4305:C:H2'	1:A2:4306:U:H6	1.57	0.68
1:A2:4861:C:H2'	1:A2:4862:G:C8	2.29	0.68
1:A2:4891:G:O2'	1:A2:4892:C:H5'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AR:137:ILE:O	20:AR:139:MET:N	2.27	0.68
38:Aj:17:THR:CG2	38:Aj:29:LEU:HD11	2.22	0.68
48:BB:1066:HIS:N	48:BB:1141:ALA:HB2	2.09	0.68
50:C1:1204:A:H2'	50:C1:1205:C:O4'	1.93	0.68
50:C1:1519:U:C6	50:C1:1519:U:H5"	2.29	0.68
69:CS:25:LYS:HE3	69:CS:52:LEU:O	1.94	0.68
72:CV:70:LEU:HD12	72:CV:79:VAL:HG23	1.76	0.68
1:A2:1088:C:H3'	1:A2:1088:C:H6	1.57	0.68
1:A2:1213:G:H4'	6:AC:337:ARG:HE	1.58	0.68
1:A2:1343:C:H2'	1:A2:1344:U:O4'	1.94	0.68
1:A2:1377:A:H4'	1:A2:1378:A:OP2	1.94	0.68
1:A2:1897:G:N2	1:A2:2035:A:C8	2.61	0.68
1:A2:2032:U:H5"	17:AO:129:LEU:CD2	2.24	0.68
1:A2:2395:A:H2'	1:A2:2396:C:H5"	1.76	0.68
1:A2:2525:C:H3'	1:A2:2526:G:C4'	2.23	0.68
1:A2:2664:U:H2'	1:A2:2665:G:C8	2.28	0.68
1:A2:4145:G:H2'	1:A2:4146:A:C8	2.28	0.68
1:A2:4384:A:H2'	1:A2:4384:A:N3	2.08	0.68
5:AB:4:ARG:O	5:AB:5:LYS:HB2	1.94	0.68
6:AC:137:VAL:CG1	6:AC:144:ILE:HD11	2.23	0.68
6:AC:319:LEU:HD21	9:AF:152:GLU:HG3	1.76	0.68
43:Ao:104:ILE:HD13	47:BA:54:U:C5	2.29	0.68
48:BB:933:LEU:HD13	48:BB:1090:ILE:CG2	2.22	0.68
48:BB:1298:PHE:O	48:BB:1301:ILE:HG12	1.94	0.68
49:BC:66:A:C2'	49:BC:67:C:H5'	2.24	0.68
49:BC:100:G:C5'	76:CZ:114:LYS:NZ	2.56	0.68
50:C1:124:U:H6	50:C1:124:U:H3'	1.57	0.68
50:C1:795:A:C4	50:C1:796:G:C8	2.81	0.68
50:C1:1383:A:H8	50:C1:1383:A:O5'	1.76	0.68
50:C1:1721:U:H4'	50:C1:1722:G:O5'	1.94	0.68
50:C1:1814:G:H8	50:C1:1814:G:O5'	1.75	0.68
56:CF:103:LEU:HD21	76:CZ:67:LEU:HD11	1.75	0.68
69:CS:6:PRO:HD3	76:CZ:52:LYS:HD3	1.75	0.68
1:A2:10:A:C2'	1:A2:11:G:H5'	2.24	0.68
1:A2:347:G:H5"	6:AC:55:SER:O	1.93	0.68
1:A2:455:G:H3'	1:A2:456:G:H8	1.58	0.68
1:A2:645:C:H2'	1:A2:646:C:C6	2.29	0.68
1:A2:669:G:H5"	1:A2:669:G:C8	2.29	0.68
1:A2:1147:C:C6	1:A2:1147:C:H5"	2.29	0.68
1:A2:1367:A:H4'	1:A2:1368:A:OP1	1.94	0.68
1:A2:1444:G:H4'	1:A2:1445:G:OP2	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3782:A:OP1	1:A2:3782:A:H8	1.77	0.68
1:A2:4004:G:H2'	1:A2:4005:C:H6	1.59	0.68
16:AN:58:GLY:HA3	16:AN:142:ILE:HD11	1.74	0.68
17:AO:48:TYR:CD2	17:AO:51:LYS:HE2	2.29	0.68
38:Aj:60:GLY:N	38:Aj:64:MET:HE3	2.09	0.68
48:BB:1196:TYR:CE2	48:BB:1198:GLN:HG2	2.29	0.68
48:BB:1357:VAL:CG1	48:BB:1360:LYS:HB2	2.23	0.68
49:BC:266:G:H2'	50:C1:1115:U:O5'	1.94	0.68
50:C1:66:G:H4'	50:C1:67:C:OP2	1.93	0.68
50:C1:746:C:O5'	58:CH:105:THR:HA	1.94	0.68
50:C1:907:G:H2'	50:C1:908:A:C8	2.29	0.68
50:C1:943:U:H3'	50:C1:944:A:H8	1.59	0.68
50:C1:1750:C:C2'	50:C1:1751:C:H5'	2.23	0.68
56:CF:158:ALA:HB1	56:CF:173:LEU:HA	1.76	0.68
58:CH:109:ARG:CG	58:CH:113:LYS:HA	2.24	0.68
61:CK:15:LEU:HD23	61:CK:21:MET:HG2	1.75	0.68
1:A2:64:A:H4'	1:A2:65:A:O5'	1.94	0.68
1:A2:210:G:C4	1:A2:211:G:H1'	2.29	0.68
1:A2:442:C:C2'	1:A2:443:A:H5'	2.24	0.68
1:A2:477:C:H5'	1:A2:477:C:O2	1.93	0.68
1:A2:716:U:H3'	1:A2:717:G:H5"	1.74	0.68
1:A2:1479:A:C2'	1:A2:1480:C:H5"	2.24	0.68
1:A2:2313:G:H2'	1:A2:2314:C:H6	1.59	0.68
1:A2:2549:C:C5'	1:A2:2737:G:C8	2.76	0.68
1:A2:2554:C:H6	1:A2:2554:C:H5"	1.57	0.68
1:A2:2672:A:H3'	1:A2:2672:A:N3	2.09	0.68
1:A2:2838:C:O2'	1:A2:2839:G:C8	2.47	0.68
1:A2:3868:G:H2'	1:A2:3869:G:H5'	1.76	0.68
1:A2:4032:C:H2'	1:A2:4033:G:C5'	2.22	0.68
1:A2:4071:G:H2'	1:A2:4072:A:O5'	1.94	0.68
1:A2:4191:C:H4'	43:Ao:98:LYS:NZ	2.08	0.68
1:A2:4483:A:H2'	1:A2:4519:A:N6	2.09	0.68
11:AH:60:TRP:CZ3	21:AS:152:PHE:HB2	2.28	0.68
48:BB:1067:CYS:C	48:BB:1069:GLU:H	2.02	0.68
48:BB:1327:THR:HA	48:BB:1370:GLU:CA	2.24	0.68
50:C1:124:U:H3'	50:C1:124:U:C6	2.29	0.68
50:C1:377:G:H2'	50:C1:378:U:C6	2.29	0.68
50:C1:448:A:H4'	50:C1:449:A:O5'	1.93	0.68
50:C1:808:A:H2'	50:C1:809:A:C8	2.29	0.68
50:C1:1191:C:H2'	50:C1:1192:U:C6	2.29	0.68
50:C1:1397:U:O3'	50:C1:1398:G:H2'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1630:A:H2'	50:C1:1631:U:C5'	2.23	0.68
74:CX:100:VAL:CG1	74:CX:122:VAL:HG13	2.24	0.68
83:Cg:45:LEU:HD22	83:Cg:52:TYR:CE2	2.27	0.68
1:A2:916:A:H1'	1:A2:917:G:P	2.34	0.67
1:A2:1161:C:C6	1:A2:1161:C:H3'	2.29	0.67
1:A2:1162:C:H2'	1:A2:1163:C:C6	2.28	0.67
1:A2:1390:U:H6	1:A2:1390:U:H5"	1.59	0.67
1:A2:1580:A:H5"	1:A2:1580:A:C8	2.29	0.67
1:A2:2034:G:H5'	1:A2:2034:G:C8	2.29	0.67
1:A2:2051:C:H3'	1:A2:2051:C:C6	2.26	0.67
1:A2:2526:G:H3'	1:A2:2527:G:C4'	2.23	0.67
1:A2:2527:G:H22	1:A2:2744:U:H3	1.42	0.67
1:A2:2642:U:H2'	1:A2:2643:U:C6	2.28	0.67
1:A2:2672:A:H4'	39:Ak:26:LYS:HG3	1.75	0.67
1:A2:3883:U:H3	1:A2:4338:A:H61	1.41	0.67
1:A2:4204:A:C1'	1:A2:4228:A:H4'	2.24	0.67
1:A2:4887:U:H5"	8:AE:262:LYS:HG3	1.77	0.67
1:A2:4980:C:H5"	59:CI:168:GLN:CD	2.18	0.67
5:AB:6:PHE:CE1	24:AV:49:LEU:HD22	2.30	0.67
5:AB:77:THR:CG2	5:AB:336:CYS:HA	2.24	0.67
14:AL:135:LYS:H	14:AL:135:LYS:HE3	1.57	0.67
22:AT:84:ILE:CG1	30:Ab:24:PRO:HA	2.23	0.67
31:Ac:79:ILE:HA	31:Ac:90:ARG:HB3	1.76	0.67
45:At:80:THR:O	45:At:83:ASN:HA	1.93	0.67
47:BA:76:A:OP1	48:BB:1354:SER:O	2.09	0.67
48:BB:1058:THR:O	48:BB:1059:MET:HE2	1.94	0.67
50:C1:195:C:H2'	50:C1:196:C:C6	2.28	0.67
50:C1:380:G:C2	50:C1:382:C:H3'	2.29	0.67
50:C1:529:A:H2'	50:C1:530:U:C5	2.29	0.67
50:C1:688:U:H1'	50:C1:689:U:H6	1.57	0.67
50:C1:817:G:H8	50:C1:817:G:O5'	1.77	0.67
50:C1:907:G:H2'	50:C1:908:A:H8	1.58	0.67
50:C1:1076:G:H5'	64:CN:106:ARG:NH1	2.09	0.67
50:C1:1453:C:H4'	68:CR:49:LYS:HA	1.75	0.67
50:C1:1622:U:OP2	50:C1:1623:A:H5'	1.94	0.67
50:C1:1663:A:C2	50:C1:1664:A:C6	2.82	0.67
68:CR:109:LEU:HD22	68:CR:109:LEU:O	1.94	0.67
1:A2:59:A:C2'	1:A2:60:A:H5'	2.21	0.67
1:A2:292:G:H1'	16:AN:93:LYS:HD2	1.77	0.67
1:A2:901:A:H2'	1:A2:902:G:H8	1.59	0.67
1:A2:951:C:H42	1:A2:1263:G:H1	1.40	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1059:C:C3’	1:A2:1060:C:C5	2.73	0.67
1:A2:1293:C:C5	1:A2:3851:C:O4’	2.46	0.67
1:A2:2629:G:H3’	1:A2:2630:C:H4’	1.76	0.67
1:A2:4803:C:H3’	1:A2:4804:G:C4’	2.24	0.67
1:A2:4849:A:H1’	1:A2:4850:C:OP2	1.93	0.67
4:AA:186:TYR:CA	4:AA:196:TRP:NE1	2.57	0.67
6:AC:221:PHE:O	6:AC:227:ILE:HG21	1.94	0.67
8:AE:270:TYR:CE1	15:AM:107:PHE:HA	2.28	0.67
28:AZ:10:VAL:CG2	28:AZ:87:VAL:HG23	2.24	0.67
46:Au:107:GLU:HB2	46:Au:132:LEU:HD12	1.74	0.67
48:BB:1301:ILE:HD11	48:BB:1404:SER:HA	1.74	0.67
49:BC:235:G:O6	78:Cb:80:ARG:NH1	2.15	0.67
50:C1:636:C:O5’	50:C1:636:C:H6	1.77	0.67
50:C1:1284:A:N6	50:C1:1313:A:C2	2.63	0.67
50:C1:1673:U:C5’	50:C1:1673:U:H6	2.06	0.67
62:CL:20:LYS:HE3	62:CL:21:LYS:HZ2	1.58	0.67
66:CP:97:TYR:HB2	66:CP:102:PHE:CE2	2.28	0.67
1:A2:211:G:N3	1:A2:211:G:H2’	2.09	0.67
1:A2:425:A:H2’	1:A2:426:A:O5’	1.94	0.67
1:A2:717:G:C3’	1:A2:718:G:H5’	2.25	0.67
1:A2:1059:C:C3’	1:A2:1060:C:H5	2.05	0.67
1:A2:1161:C:H3’	1:A2:1161:C:H6	1.58	0.67
1:A2:1171:C:H2’	1:A2:1172:C:C6	2.30	0.67
1:A2:1648:A:H5’	1:A2:1648:A:H8	1.59	0.67
1:A2:4245:U:H2’	1:A2:4246:C:H6	1.59	0.67
1:A2:4252:A:H4’	1:A2:4253:U:OP2	1.94	0.67
2:A3:26:C:H2’	2:A3:27:U:C5	2.29	0.67
3:A4:11:A:H2	3:A4:66:G:N3	1.92	0.67
39:Ak:20:ALA:CB	39:Ak:36:VAL:HG23	2.24	0.67
47:BA:32:U:OP1	67:CQ:146:ARG:HA	1.73	0.67
47:BA:74:C:C5’	48:BB:1321:PRO:CB	2.65	0.67
48:BB:1066:HIS:N	48:BB:1141:ALA:CB	2.58	0.67
50:C1:42:A:C2’	50:C1:43:U:H5”	2.24	0.67
50:C1:140:C:H3’	50:C1:140:C:OP1	1.94	0.67
50:C1:172:U:OP1	50:C1:314:U:H2’	1.94	0.67
50:C1:693:A:C5	50:C1:694:G:H1’	2.28	0.67
52:CB:120:MET:HE2	52:CB:122:GLU:OE2	1.95	0.67
1:A2:426:A:H2’	1:A2:427:C:H5’	1.77	0.67
1:A2:1265:U:H2’	1:A2:1266:C:O4’	1.93	0.67
1:A2:1873:G:O2’	1:A2:1885:A:H1’	1.93	0.67
1:A2:2633:U:H5”	1:A2:2634:G:OP2	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2871:A:H2'	1:A2:2872:A:C8	2.30	0.67
1:A2:4085:U:H4'	1:A2:4086:C:OP1	1.93	0.67
1:A2:4088:G:C5	4:AA:85:GLY:HA3	2.28	0.67
4:AA:186:TYR:N	4:AA:196:TRP:HE1	1.92	0.67
11:AH:173:ARG:HH11	41:Am:127:VAL:HG13	1.58	0.67
35:Ag:45:ALA:CB	35:Ag:82:MET:HA	2.24	0.67
43:Ao:103:VAL:HB	47:BA:57:G:P	2.33	0.67
47:BA:41:C:H1'	50:C1:1640:A:C2'	2.19	0.67
48:BB:1067:CYS:SG	48:BB:1092:ILE:HG12	1.38	0.67
48:BB:1233:MET:SD	74:CX:75:ILE:CD1	2.81	0.67
48:BB:1273:ALA:HB3	48:BB:1279:LEU:HD21	1.76	0.67
48:BB:1303:VAL:C	48:BB:1304:PHE:O	2.37	0.67
48:BB:1340:CYS:SG	48:BB:1399:LYS:HB2	2.35	0.67
48:BB:1352:VAL:HG12	48:BB:1373:VAL:HG21	1.74	0.67
50:C1:795:A:N3	50:C1:796:G:C8	2.62	0.67
50:C1:805:U:N3	50:C1:858:A:C2	2.63	0.67
50:C1:1247:C:H4'	50:C1:1248:U:OP1	1.93	0.67
50:C1:1328:G:H2'	50:C1:1329:U:C6	2.29	0.67
50:C1:1866:A:N1	77:Ca:84:VAL:HG13	2.10	0.67
58:CH:109:ARG:HA	58:CH:113:LYS:H	1.59	0.67
1:A2:288:U:H2'	1:A2:289:G:H8	1.55	0.67
1:A2:425:A:H3'	1:A2:425:A:H8	1.58	0.67
1:A2:1058:A:C2	1:A2:1206:U:H1'	2.30	0.67
1:A2:1070:G:H2'	1:A2:1071:C:H6	1.59	0.67
1:A2:1217:C:H5'	6:AC:333:LYS:HD2	1.76	0.67
1:A2:1283:A:OP2	1:A2:1283:A:H4'	1.95	0.67
1:A2:1608:G:H2'	1:A2:1610:A:N7	2.09	0.67
1:A2:1664:G:H2'	1:A2:1665:C:C6	2.29	0.67
1:A2:2516:C:H2'	1:A2:2517:C:C6	2.30	0.67
1:A2:2523:G:H2'	1:A2:2524:G:H8	1.58	0.67
1:A2:2549:C:H5'	1:A2:2737:G:C8	2.29	0.67
1:A2:3887:G:H2'	1:A2:3888:C:H6	1.60	0.67
1:A2:3937:U:H2'	1:A2:3938:G:C8	2.30	0.67
1:A2:4133:G:C2'	1:A2:4134:U:H5'	2.24	0.67
1:A2:4536:U:H2'	1:A2:4537:U:C6	2.30	0.67
1:A2:4711:U:H1'	34:Af:4:ARG:HG2	1.76	0.67
34:Af:106:TYR:HD2	34:Af:107:PRO:HD2	0.90	0.67
48:BB:1071:ARG:N	48:BB:1071:ARG:HD3	2.10	0.67
48:BB:1242:ASP:HB3	48:BB:1244:GLN:CG	2.18	0.67
48:BB:1346:PHE:HE2	48:BB:1381:GLU:HB3	1.58	0.67
50:C1:348:A:H2'	50:C1:349:A:O4'	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:358:C:H5'	50:C1:358:C:H6	1.59	0.67
50:C1:1016:U:C6	50:C1:1017:U:H5	2.12	0.67
50:C1:1023:A:H5"	64:CN:124:ARG:NH2	2.10	0.67
50:C1:1287:A:H2'	50:C1:1287:A:N3	2.09	0.67
50:C1:1587:G:H21	70:CT:75:MET:HA	1.59	0.67
53:CC:174:ILE:HG22	53:CC:175:GLY:N	2.09	0.67
83:Cg:14:HIS:O	83:Cg:305:ASN:HB3	1.95	0.67
83:Cg:44:LYS:HG3	83:Cg:56:GLN:CG	2.24	0.67
1:A2:174:G:N1	1:A2:253:C:N4	2.42	0.67
1:A2:488:G:N3	1:A2:488:G:H2'	2.08	0.67
1:A2:670:C:H2'	1:A2:671:C:H6	1.59	0.67
1:A2:708:G:O2'	1:A2:709:G:H5'	1.95	0.67
1:A2:920:C:H2'	1:A2:921:U:H6	1.59	0.67
1:A2:961:C:O3'	1:A2:962:G:H8	1.78	0.67
1:A2:1218:A:H62	6:AC:326:LEU:CB	2.07	0.67
1:A2:1411:C:H2'	1:A2:1412:G:C8	2.29	0.67
1:A2:1453:C:H4'	1:A2:1454:G:OP1	1.94	0.67
1:A2:2704:C:C2'	1:A2:2705:U:H5'	2.25	0.67
5:AB:14:LEU:O	5:AB:17:LEU:HB2	1.95	0.67
26:AX:150:ALA:O	26:AX:153:ILE:HG12	1.95	0.67
47:BA:27:G:H2'	47:BA:28:G:C8	2.30	0.67
48:BB:837:ASN:HB3	48:BB:908:ARG:HD3	1.76	0.67
48:BB:1235:ALA:HA	48:BB:1238:MET:SD	2.35	0.67
48:BB:1250:ALA:HB1	48:BB:1253:VAL:HG12	1.77	0.67
50:C1:124:U:H5'	55:CE:148:ARG:HB3	1.75	0.67
50:C1:332:G:H4'	50:C1:333:G:OP1	1.92	0.67
50:C1:877:C:H2'	50:C1:878:G:H8	1.59	0.67
50:C1:1536:G:H2'	50:C1:1537:A:H8	1.57	0.67
50:C1:1587:G:N2	70:CT:75:MET:HA	2.10	0.67
50:C1:1696:C:O2'	50:C1:1697:A:H5"	1.94	0.67
54:CD:75:LYS:HB3	61:CK:22:VAL:HG11	1.75	0.67
67:CQ:34:VAL:HA	67:CQ:70:VAL:O	1.94	0.67
1:A2:99:A:H2'	1:A2:100:C:C6	2.29	0.67
1:A2:1257:G:N2	1:A2:1258:C:H41	1.93	0.67
1:A2:2020:A:H8	1:A2:2021:A:C4	2.12	0.67
1:A2:4586:A:N6	1:A2:4628:U:H3'	2.09	0.67
1:A2:4726:C:O5'	1:A2:4726:C:H6	1.78	0.67
1:A2:4851:G:H2'	1:A2:4852:G:C8	2.30	0.67
2:A3:109:C:H3'	38:Aj:20:ARG:NH2	2.10	0.67
12:AI:36:LEU:HB2	12:AI:87:ILE:HG23	1.74	0.67
48:BB:880:GLN:NE2	48:BB:1133:TYR:HB3	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:399:C:H5”	50:C1:400:C:C5	2.30	0.67
50:C1:558:G:C8	50:C1:558:G:P	2.84	0.67
50:C1:1624:U:H2’	50:C1:1624:U:O2	1.94	0.67
1:A2:1148:G:H8	1:A2:1148:G:O5’	1.78	0.67
1:A2:1393:C:H6	1:A2:1393:C:O5’	1.77	0.67
1:A2:3575:U:H2’	1:A2:3576:U:C6	2.30	0.67
1:A2:3826:G:C5	1:A2:3827:C:H5	2.13	0.67
1:A2:4236:G:H3’	1:A2:4237:G:C8	2.29	0.67
1:A2:4700:C:H3’	1:A2:4701:G:C5’	2.20	0.67
2:A3:109:C:H4’	2:A3:110:U:C6	2.30	0.67
9:AF:95:ILE:HG23	9:AF:221:LYS:HG2	1.76	0.67
47:BA:16:U:O3’	47:BA:17:C:H6	1.77	0.67
48:BB:1302:ALA:O	48:BB:1303:VAL:HG13	1.95	0.67
48:BB:1405:ILE:HB	48:BB:1421:TRP:CZ2	2.28	0.67
50:C1:338:G:H5”	50:C1:338:G:H8	1.60	0.67
50:C1:845:G:H5”	55:CE:108:ARG:HH12	1.58	0.67
50:C1:901:G:H8	50:C1:901:G:O5’	1.77	0.67
50:C1:1160:U:O2’	50:C1:1161:U:H5’	1.95	0.67
50:C1:1361:G:H5’	50:C1:1379:A:OP2	1.95	0.67
74:CX:46:HIS:HB3	74:CX:101:LEU:HD11	1.77	0.67
1:A2:467:G:H2’	1:A2:468:C:C6	2.29	0.67
1:A2:1183:G:H2’	1:A2:1184:C:H6	1.60	0.67
1:A2:1213:G:O2’	1:A2:1214:G:H5’	1.95	0.67
1:A2:1420:U:C6	1:A2:1420:U:C3’	2.77	0.67
1:A2:1466:G:H2’	1:A2:1467:G:C5’	2.23	0.67
1:A2:1836:A:C8	1:A2:1836:A:H5”	2.30	0.67
1:A2:3618:A:H1’	1:A2:4495:A:H4’	1.77	0.67
1:A2:3895:C:H4’	43:Ao:48:TYR:CE1	2.30	0.67
1:A2:3920:G:H21	1:A2:4029:G:N2	1.89	0.67
1:A2:4089:G:N2	28:AZ:136:PHE:HA	2.10	0.67
1:A2:4260:U:H2’	1:A2:4261:U:C6	2.30	0.67
1:A2:4260:U:H2’	1:A2:4261:U:H6	1.59	0.67
2:A3:154:G:H5’	10:AG:189:ARG:HH21	1.58	0.67
11:AH:173:ARG:HD2	41:Am:127:VAL:HG13	1.75	0.67
28:AZ:17:ARG:CD	35:Ag:75:SER:HB3	2.25	0.67
47:BA:32:U:H5’	67:CQ:146:ARG:HA	1.75	0.67
48:BB:892:ILE:HG23	48:BB:1049:ILE:HG12	1.76	0.67
50:C1:217:A:H4’	50:C1:341:C:C4’	2.25	0.67
50:C1:540:U:N3	50:C1:542:U:H5”	2.10	0.67
50:C1:640:A:H2’	50:C1:641:A:C8	2.30	0.67
50:C1:691:G:H2’	50:C1:692:G:H5’	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1008:A:H2'	50:C1:1009:A:O4'	1.94	0.67
50:C1:1016:U:C5	50:C1:1017:U:H5	2.13	0.67
50:C1:1109:C:H3'	50:C1:1109:C:O2	1.94	0.67
50:C1:1296:U:C2'	50:C1:1297:U:H5'	2.24	0.67
50:C1:1401:A:H1'	50:C1:1402:A:OP1	1.95	0.67
50:C1:1512:C:H2'	50:C1:1513:C:C6	2.29	0.67
50:C1:1648:G:H2'	67:CQ:127:CYS:CA	2.24	0.67
56:CF:73:THR:HG22	56:CF:93:VAL:HG21	1.77	0.67
69:CS:5:ILE:CG1	69:CS:6:PRO:HD2	2.25	0.67
1:A2:382:U:H2'	1:A2:383:U:C5	2.29	0.67
1:A2:961:C:H2'	1:A2:962:G:C8	2.30	0.67
1:A2:969:C:H2'	1:A2:970:C:C6	2.30	0.67
1:A2:1076:C:H2'	1:A2:1077:C:C6	2.30	0.67
1:A2:1082:U:H6	1:A2:1083:C:C5	2.13	0.67
1:A2:1943:G:H5'	1:A2:4655:C:O2'	1.94	0.67
1:A2:2445:U:H3'	1:A2:2445:U:H6	1.59	0.67
1:A2:3943:G:C4'	46:Au:204:MET:SD	2.83	0.67
1:A2:4088:G:H5'	35:Ag:93:ARG:HD3	1.77	0.67
1:A2:4980:C:C6	59:CI:168:GLN:OE1	2.48	0.67
3:A4:14:C:H6	3:A4:14:C:O5'	1.78	0.67
3:A4:32:A:C2	3:A4:41:G:C6	2.83	0.67
14:AL:134:PRO:HA	14:AL:135:LYS:NZ	2.09	0.67
27:AY:123:ALA:HA	27:AY:126:ARG:HB2	1.75	0.67
28:AZ:83:THR:HA	31:Ac:62:TYR:OH	1.95	0.67
38:Aj:25:LYS:HE3	40:Al:51:LEU:HD12	1.76	0.67
47:BA:74:C:O5'	48:BB:1321:PRO:HD2	1.95	0.67
50:C1:381:C:O5'	50:C1:381:C:H6	1.77	0.67
50:C1:794:A:N3	50:C1:795:A:H1'	2.08	0.67
50:C1:795:A:H2'	50:C1:796:G:H5'	1.76	0.67
50:C1:1135:C:H2'	50:C1:1136:U:C6	2.30	0.67
50:C1:1405:A:C2	50:C1:1442:U:C6	2.80	0.67
50:C1:1515:G:H5"	50:C1:1515:G:C8	2.30	0.67
50:C1:1516:G:C2'	50:C1:1517:G:H5'	2.24	0.67
52:CB:66:VAL:HG22	52:CB:85:LYS:HE3	1.75	0.67
1:A2:85:G:N2	1:A2:97:G:H2'	2.09	0.66
1:A2:100:C:H2'	1:A2:100:C:O2	1.95	0.66
1:A2:443:A:H4'	1:A2:444:G:OP1	1.93	0.66
1:A2:460:C:O2	1:A2:460:C:H2'	1.95	0.66
1:A2:1454:G:H2'	1:A2:1455:C:C4'	2.24	0.66
1:A2:1610:A:P	1:A2:1610:A:H8	2.18	0.66
1:A2:1622:A:C2'	1:A2:1623:C:H5'	2.24	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1774:A:H4'	3:A4:98:G:N3	2.09	0.66
1:A2:1852:A:H5"	1:A2:4178:U:O2	1.95	0.66
1:A2:2009:C:H2'	1:A2:2010:U:H5'	1.77	0.66
1:A2:2432:G:H4'	1:A2:2433:G:OP2	1.93	0.66
1:A2:2510:C:OP2	1:A2:2510:C:H6	1.78	0.66
1:A2:3945:C:H2'	1:A2:3946:C:C6	2.30	0.66
1:A2:4333:G:C8	43:Ao:60:ALA:HB3	2.30	0.66
1:A2:4373:C:H2'	1:A2:4374:A:O4'	1.95	0.66
1:A2:4692:C:H4'	1:A2:4693:A:H4'	1.77	0.66
1:A2:4711:U:N3	1:A2:4903:C:C5	2.60	0.66
1:A2:4807:C:H2'	1:A2:4808:C:C6	2.29	0.66
2:A3:10:G:N2	18:AP:6:LEU:HB2	2.10	0.66
44:Ap:47:MET:SD	44:Ap:57:CYS:HB2	2.35	0.66
48:BB:840:THR:C	48:BB:1065:ALA:HB2	2.15	0.66
48:BB:845:ALA:CB	48:BB:911:GLY:O	2.44	0.66
48:BB:1067:CYS:HG	48:BB:1092:ILE:HG12	0.57	0.66
50:C1:181:A:H4'	50:C1:182:C:OP2	1.93	0.66
50:C1:576:A:P	50:C1:577:U:H3'	2.34	0.66
50:C1:797:C:H2'	50:C1:798:G:C5'	2.16	0.66
50:C1:1053:C:O2	50:C1:1053:C:H2'	1.94	0.66
50:C1:1230:C:C2'	50:C1:1231:C:H5'	2.24	0.66
50:C1:1468:C:H2'	50:C1:1469:A:C8	2.29	0.66
55:CE:154:ILE:HG23	55:CE:158:ASP:OD2	1.95	0.66
1:A2:128:C:H2'	1:A2:129:C:C6	2.30	0.66
1:A2:434:G:H8	1:A2:434:G:O5'	1.77	0.66
1:A2:947:G:H2'	1:A2:948:A:C5'	2.24	0.66
1:A2:1264:G:H2'	1:A2:1265:U:H5'	1.77	0.66
1:A2:1267:G:C3'	1:A2:1268:G:H4'	2.26	0.66
1:A2:1285:C:H5"	1:A2:2289:A:C6	2.29	0.66
1:A2:1391:C:H6	1:A2:1391:C:O5'	1.79	0.66
1:A2:1409:C:H2'	1:A2:1410:C:H6	1.55	0.66
1:A2:1807:C:H2'	1:A2:1808:G:C8	2.30	0.66
1:A2:1884:U:H4'	9:AF:219:GLY:O	1.95	0.66
1:A2:2344:A:N6	1:A2:2765:U:H3	1.93	0.66
1:A2:2673:A:H4'	1:A2:2674:A:H5"	1.76	0.66
1:A2:2692:G:H3'	1:A2:2693:C:C5	2.30	0.66
1:A2:3587:C:H4'	1:A2:3589:G:C4	2.30	0.66
1:A2:3887:G:H2'	1:A2:3888:C:O5'	1.95	0.66
1:A2:4339:A:C8	43:Ao:54:PRO:HA	2.29	0.66
50:C1:746:C:C5	50:C1:749:U:H4'	2.29	0.66
50:C1:1000:C:H41	77:Ca:16:GLY:H	1.44	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1602:U:H2'	50:C1:1603:G:H8	1.58	0.66
50:C1:1649:U:N3	50:C1:1675:A:H2	1.93	0.66
50:C1:1688:C:H2'	50:C1:1688:C:O2	1.94	0.66
50:C1:1721:U:H1'	50:C1:1722:G:OP2	1.96	0.66
52:CB:186:ASN:O	52:CB:190:PRO:HD2	1.95	0.66
67:CQ:37:ARG:HB3	70:CT:7:LYS:HG3	1.77	0.66
70:CT:34:VAL:HG22	70:CT:99:VAL:HG12	1.77	0.66
1:A2:196:G:H1'	1:A2:197:U:OP1	1.96	0.66
1:A2:301:G:H2'	1:A2:302:G:O4'	1.95	0.66
1:A2:932:C:H2'	1:A2:933:G:H8	1.59	0.66
1:A2:1189:U:H6	1:A2:1189:U:C5'	2.08	0.66
1:A2:1312:C:H2'	1:A2:1313:A:C8	2.29	0.66
1:A2:2057:G:H4'	33:Ae:58:ILE:HD11	1.76	0.66
1:A2:2276:A:N7	6:AC:182:LYS:HA	2.09	0.66
1:A2:2575:A:H2'	1:A2:2576:G:O4'	1.95	0.66
1:A2:2587:G:O3'	1:A2:2665:G:H4'	1.94	0.66
1:A2:3779:C:H3'	1:A2:3779:C:C6	2.28	0.66
1:A2:4412:U:H2'	1:A2:4412:U:O2	1.94	0.66
1:A2:4718:C:H2'	17:AO:167:HIS:HB3	1.75	0.66
1:A2:4895:C:H2'	1:A2:4896:G:OP1	1.95	0.66
2:A3:79:G:H8	2:A3:79:G:O5'	1.79	0.66
38:Aj:76:HIS:O	38:Aj:79:ARG:HG2	1.95	0.66
43:Ao:103:VAL:O	47:BA:56:C:H3'	1.93	0.66
49:BC:63:U:H2'	49:BC:64:U:C6	2.27	0.66
50:C1:797:C:C6	58:CH:106:ARG:HB3	2.30	0.66
50:C1:1214:A:N1	50:C1:1686:G:N3	2.44	0.66
50:C1:1408:U:H5'	67:CQ:69:ARG:NH2	2.10	0.66
50:C1:1427:C:H3'	50:C1:1427:C:C6	2.30	0.66
50:C1:1676:U:H6	50:C1:1676:U:O5'	1.78	0.66
50:C1:1746:U:H2'	50:C1:1747:C:C6	2.30	0.66
1:A2:98:A:H1'	1:A2:283:G:C6	2.31	0.66
1:A2:103:G:H5"	1:A2:104:G:OP2	1.95	0.66
1:A2:411:A:H61	2:A3:15:G:H1'	1.59	0.66
1:A2:477:C:O2	1:A2:477:C:H2'	1.95	0.66
1:A2:482:G:H5'	1:A2:482:G:C8	2.28	0.66
1:A2:924:C:C3'	1:A2:925:C:C5'	2.73	0.66
1:A2:1085:C:OP2	1:A2:1085:C:H4'	1.96	0.66
1:A2:1088:C:C2'	1:A2:1089:C:H5'	2.25	0.66
1:A2:2837:C:C6	1:A2:2837:C:H3'	2.30	0.66
1:A2:4518:U:H2'	1:A2:4519:A:H5'	1.78	0.66
1:A2:4857:C:H2'	1:A2:4858:G:H8	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A4:23:A:N3	3:A4:119:U:C1’	2.58	0.66
3:A4:63:C:H1’	3:A4:64:G:C5’	2.25	0.66
10:AG:29:ASN:N	10:AG:30:PRO:HD2	2.11	0.66
38:Aj:70:VAL:HG22	38:Aj:73:ARG:HH21	1.60	0.66
42:An:2:ARG:CB	50:C1:1852:C:OP2	2.44	0.66
48:BB:828:GLU:O	48:BB:831:ARG:HG3	1.95	0.66
48:BB:1166:LYS:HE3	48:BB:1170:ILE:HG21	1.76	0.66
50:C1:148:U:H6	50:C1:148:U:H5”	1.61	0.66
50:C1:371:A:H5”	59:CI:11:ARG:HB2	1.76	0.66
50:C1:1476:A:H4’	50:C1:1477:U:O5’	1.92	0.66
52:CB:97:LEU:HG	52:CB:232:HIS:CE1	2.31	0.66
52:CB:97:LEU:HG	52:CB:232:HIS:NE2	2.10	0.66
56:CF:187:SER:OG	56:CF:190:ILE:HG12	1.94	0.66
70:CT:41:LYS:HG2	70:CT:95:GLY:HA2	1.76	0.66
1:A2:79:C:C1’	1:A2:329:A:H5’	2.26	0.66
1:A2:1479:A:H2’	1:A2:1480:C:H5”	1.77	0.66
1:A2:1943:G:O4’	1:A2:4655:C:H4’	1.96	0.66
1:A2:2549:C:H2’	1:A2:2550:A:C8	2.30	0.66
1:A2:3930:G:H2’	1:A2:3931:A:H5”	1.78	0.66
1:A2:4233:A:H5”	1:A2:4233:A:C8	2.30	0.66
3:A4:21:G:H8	3:A4:21:G:O5’	1.78	0.66
4:AA:180:LEU:HD11	44:Ap:26:VAL:HG21	1.78	0.66
12:AI:55:ASP:HA	12:AI:131:ILE:HG23	1.78	0.66
13:AJ:55:TYR:OH	47:BA:52:G:H5’	1.96	0.66
20:AR:137:ILE:O	20:AR:138:LEU:C	2.37	0.66
26:AX:76:ILE:O	26:AX:100:VAL:HG13	1.96	0.66
31:Ac:52:CYS:HB3	31:Ac:92:CYS:SG	2.35	0.66
49:BC:100:G:C5’	76:CZ:114:LYS:HZ1	2.08	0.66
49:BC:348:A:H8	49:BC:348:A:O5’	1.79	0.66
50:C1:312:G:H22	57:CG:195:LYS:HB2	1.61	0.66
50:C1:656:G:H5’	50:C1:662:G:N2	2.10	0.66
50:C1:955:A:H4’	65:CO:60:MET:HE3	1.77	0.66
1:A2:1869:A:N7	1:A2:1870:A:C6	2.64	0.66
1:A2:2060:G:H5”	19:AQ:11:ARG:O	1.95	0.66
1:A2:2308:A:H4’	1:A2:2309:G:C5’	2.23	0.66
1:A2:2330:U:H2’	1:A2:2331:G:H8	1.60	0.66
1:A2:2371:G:H4’	1:A2:2372:A:OP1	1.96	0.66
1:A2:2392:U:H2’	1:A2:2393:G:H8	1.61	0.66
1:A2:2695:U:H5”	1:A2:2696:C:O4’	1.96	0.66
1:A2:3661:A:N6	1:A2:3792:G:H21	1.93	0.66
1:A2:4283:A:H2	7:AD:146:LEU:HB3	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AB:56:ILE:HG21	5:AB:365:LEU:HD22	1.78	0.66
42:An:1:MET:H3	50:C1:1706:G:H5'	1.61	0.66
43:Ao:104:ILE:CA	47:BA:55:U:C2	2.78	0.66
50:C1:384:U:H6	50:C1:384:U:O5'	1.77	0.66
50:C1:1060:A:H4'	50:C1:1061:U:O5'	1.96	0.66
50:C1:1257:G:H5"	50:C1:1257:G:C8	2.27	0.66
50:C1:1778:C:H2'	50:C1:1779:G:C8	2.31	0.66
58:CH:194:LEU:HD11	78:Cb:83:GLN:HB3	1.77	0.66
1:A2:1:C:H6	1:A2:1:C:O5'	1.74	0.66
1:A2:99:A:H3'	1:A2:100:C:C6	2.31	0.66
1:A2:1216:C:H1'	1:A2:1217:C:OP1	1.95	0.66
1:A2:1445:G:H2'	1:A2:1446:C:C6	2.31	0.66
1:A2:2024:G:H5'	17:AO:60:LYS:NZ	2.11	0.66
1:A2:2060:G:H2'	1:A2:2061:C:O2	1.94	0.66
1:A2:2349:U:H2'	1:A2:2350:C:C6	2.30	0.66
1:A2:2396:C:H5"	1:A2:2396:C:C6	2.30	0.66
1:A2:3728:A:N1	50:C1:1709:G:C5'	2.48	0.66
1:A2:3750:C:H5'	1:A2:3790:A:H4'	1.78	0.66
1:A2:4081:C:H4'	1:A2:4082:G:OP2	1.94	0.66
1:A2:4849:A:H3'	15:AM:132:LYS:HZ3	1.61	0.66
8:AE:160:LYS:NZ	8:AE:183:ARG:HD3	2.10	0.66
41:Am:93:LYS:HB2	41:Am:124:LYS:HE2	1.78	0.66
48:BB:843:LEU:CD2	48:BB:908:ARG:HB2	2.22	0.66
48:BB:857:GLY:O	48:BB:861:ILE:HG23	1.96	0.66
48:BB:897:LYS:HZ2	48:BB:898:MET:HG2	1.60	0.66
48:BB:1067:CYS:C	48:BB:1069:GLU:N	2.51	0.66
50:C1:130:G:H1'	50:C1:181:A:N1	2.09	0.66
50:C1:185:G:H2'	50:C1:186:C:H5	1.61	0.66
50:C1:370:G:H5'	50:C1:370:G:H8	1.60	0.66
50:C1:428:U:H4'	50:C1:429:C:OP1	1.95	0.66
50:C1:559:G:C3'	50:C1:560:A:H5"	2.25	0.66
50:C1:658:U:H5"	50:C1:659:G:N7	2.11	0.66
50:C1:879:C:H2'	50:C1:880:G:H8	1.61	0.66
50:C1:1648:G:C8	67:CQ:125:ARG:HA	2.30	0.66
52:CB:30:TRP:CZ3	65:CO:19:PRO:HB3	2.30	0.66
1:A2:384:U:H3'	1:A2:385:G:H4'	1.78	0.66
1:A2:1019:C:H2'	1:A2:1020:G:C8	2.31	0.66
1:A2:2644:C:H5"	20:AR:103:ARG:HH21	1.60	0.66
1:A2:2686:C:OP1	1:A2:2686:C:H4'	1.93	0.66
1:A2:3732:A:C2	1:A2:3733:U:H1'	2.31	0.66
50:C1:131:C:O3'	50:C1:132:U:H4'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:498:C:H5'	55:CE:7:LYS:HD3	1.77	0.66
50:C1:522:A:N1	50:C1:643:A:H5'	2.09	0.66
50:C1:559:G:H5'	50:C1:560:A:H5"	1.76	0.66
50:C1:821:G:H1	60:CJ:147:PHE:HE1	1.44	0.66
50:C1:1397:U:H4'	50:C1:1398:G:N2	2.08	0.66
50:C1:1413:G:H2'	50:C1:1414:A:O4'	1.96	0.66
50:C1:1639:G:H2'	50:C1:1639:G:N3	2.09	0.66
52:CB:71:LEU:HD13	52:CB:72:ALA:N	2.10	0.66
52:CB:153:THR:HB	52:CB:155:TYR:CE2	2.31	0.66
73:CW:30:CYS:SG	73:CW:61:ILE:HD12	2.36	0.66
1:A2:121:A:N1	1:A2:147:U:C5	2.64	0.66
1:A2:179:G:H2'	1:A2:180:C:C6	2.31	0.66
1:A2:195:A:H5'	27:AY:45:ARG:HB2	1.77	0.66
1:A2:640:A:O2'	1:A2:641:C:H5'	1.96	0.66
1:A2:710:G:O2'	1:A2:711:A:H5'	1.96	0.66
1:A2:1096:C:H2'	1:A2:1097:C:H6	1.59	0.66
1:A2:1273:G:H2'	8:AE:227:HIS:CE1	2.31	0.66
1:A2:1389:C:H3'	1:A2:1389:C:O2	1.96	0.66
1:A2:1481:G:C4	1:A2:1481:G:OP1	2.48	0.66
1:A2:1789:G:H1	1:A2:1807:C:H42	1.41	0.66
1:A2:2764:A:H2'	1:A2:2764:A:N3	2.09	0.66
1:A2:3703:U:H2'	1:A2:3704:G:H5'	1.77	0.66
1:A2:3743:A:H5"	1:A2:3743:A:H8	1.61	0.66
1:A2:4597:G:O2'	1:A2:5000:G:H1'	1.95	0.66
1:A2:4851:G:H21	1:A2:4882:G:H1'	1.60	0.66
5:AB:115:LYS:HA	5:AB:118:PHE:CD2	2.31	0.66
5:AB:285:TYR:CE1	5:AB:334:LYS:HB2	2.31	0.66
6:AC:209:ILE:HD12	6:AC:211:TYR:HE2	1.61	0.66
47:BA:75:C:H5"	47:BA:76:A:OP2	1.95	0.66
48:BB:841:GLU:HB2	48:BB:1065:ALA:HB1	1.67	0.66
48:BB:853:HIS:HA	48:BB:950:GLN:HB2	1.77	0.66
48:BB:1201:THR:HG22	48:BB:1203:GLY:H	1.60	0.66
48:BB:1347:VAL:HG11	48:BB:1389:HIS:CG	2.31	0.66
49:BC:332:A:H8	49:BC:332:A:C5'	2.04	0.66
50:C1:224:A:N1	50:C1:297:A:N1	2.43	0.66
50:C1:305:U:H2'	59:CI:60:LEU:CD2	2.26	0.66
50:C1:572:U:H3'	50:C1:573:U:N3	2.11	0.66
50:C1:1034:A:H2'	50:C1:1035:A:H5'	1.78	0.66
50:C1:1391:C:H2'	50:C1:1392:U:O4'	1.95	0.66
50:C1:1556:A:H3'	50:C1:1556:A:OP2	1.95	0.66
83:Cg:173:LEU:CD2	83:Cg:189:ILE:HG23	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:135:G:C8	1:A2:135:G:C3’	2.77	0.66
1:A2:194:A:H2	1:A2:222:G:N2	1.94	0.66
1:A2:476:C:OP2	1:A2:658:G:H5’	1.95	0.66
1:A2:663:G:H2’	1:A2:664:C:H6	1.61	0.66
1:A2:918:C:H4’	1:A2:919:A:H5’	1.77	0.66
1:A2:1203:G:C2’	1:A2:1204:G:H8	2.07	0.66
1:A2:2380:A:H3’	1:A2:2381:A:H8	1.62	0.66
1:A2:2756:C:H2’	1:A2:2757:C:C6	2.31	0.66
1:A2:3826:G:C5	1:A2:3827:C:C5	2.84	0.66
1:A2:4245:U:H2’	1:A2:4246:C:C6	2.31	0.66
1:A2:4817:G:H2’	1:A2:4818:G:C8	2.30	0.66
13:AJ:55:TYR:CE1	47:BA:53:G:OP1	2.40	0.66
14:AL:37:LYS:O	14:AL:40:GLN:HG2	1.95	0.66
48:BB:1064:LEU:HA	48:BB:1142:ALA:HB2	1.76	0.66
48:BB:1116:ARG:NH1	50:C1:487:U:O3’	2.28	0.66
48:BB:1181:LEU:HD12	48:BB:1185:LEU:CD1	2.25	0.66
50:C1:421:G:N2	50:C1:653:A:H5’	2.11	0.66
50:C1:549:C:H2’	50:C1:550:C:C6	2.31	0.66
50:C1:1201:U:O5’	50:C1:1201:U:H6	1.79	0.66
50:C1:1410:C:P	50:C1:1413:G:H5”	2.35	0.66
50:C1:1587:G:C6	70:CT:74:SER:HB3	2.31	0.66
51:CA:176:TRP:CD2	51:CA:199:PRO:HB3	2.31	0.66
53:CC:210:PRO:HG3	53:CC:236:PHE:CE2	2.31	0.66
56:CF:35:LEU:HD12	56:CF:39:ILE:HD11	1.78	0.66
56:CF:72:LEU:HD11	56:CF:116:ILE:HD11	1.77	0.66
1:A2:926:G:H5”	9:AF:148:LYS:HG3	1.77	0.65
1:A2:1352:A:C2	1:A2:1353:A:C6	2.84	0.65
1:A2:2060:G:H4’	19:AQ:10:ASP:CG	2.22	0.65
1:A2:2451:G:H2’	1:A2:2452:G:C1’	2.26	0.65
1:A2:4237:G:H5”	1:A2:4238:C:OP2	1.96	0.65
1:A2:4566:G:OP1	48:BB:854:VAL:HG22	1.96	0.65
1:A2:4628:U:H4’	1:A2:4629:A:OP1	1.95	0.65
18:AP:148:MET:HE2	18:AP:150:LEU:HD11	1.77	0.65
19:AQ:75:ARG:NE	19:AQ:78:LYS:HG3	2.11	0.65
43:Ao:106:PHE:HE2	47:BA:57:G:N1	1.91	0.65
48:BB:939:LEU:HD11	48:BB:955:ILE:HG22	1.77	0.65
48:BB:1234:LYS:O	48:BB:1237:VAL:HG22	1.96	0.65
49:BC:350:G:OP2	54:CD:146:ARG:CG	2.44	0.65
50:C1:526:A:N3	50:C1:526:A:C2’	2.59	0.65
50:C1:575:A:H5”	50:C1:576:A:N6	2.10	0.65
50:C1:915:G:H2’	50:C1:916:A:H5’	1.76	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1167:G:H2'	50:C1:1168:G:O4'	1.96	0.65
57:CG:58:LYS:HA	57:CG:107:SER:HB2	1.78	0.65
60:CJ:27:GLN:OE1	60:CJ:30:LYS:HE2	1.96	0.65
60:CJ:111:GLN:NE2	60:CJ:130:ILE:HD12	2.10	0.65
77:Ca:19:GLN:HB3	77:Ca:32:LYS:HZ3	1.61	0.65
1:A2:89:C:C2'	1:A2:90:G:H5'	2.26	0.65
1:A2:346:A:C2	1:A2:347:G:C1'	2.79	0.65
1:A2:510:C:H5"	14:AL:111:GLN:HB3	1.78	0.65
1:A2:642:C:H3'	1:A2:643:G:C5'	2.27	0.65
1:A2:943:G:H1'	1:A2:944:A:O5'	1.96	0.65
1:A2:1249:G:C8	1:A2:1249:G:C5'	2.79	0.65
1:A2:1301:G:H5"	1:A2:1302:A:OP2	1.95	0.65
1:A2:1325:A:H5"	19:AQ:166:TYR:CZ	2.31	0.65
1:A2:1633:G:H22	1:A2:1656:U:C5'	2.08	0.65
1:A2:1797:G:N2	1:A2:1801:U:H5"	2.11	0.65
1:A2:2357:G:N2	1:A2:2401:G:H5"	2.11	0.65
1:A2:2840:G:H5"	1:A2:2841:A:OP2	1.96	0.65
1:A2:4021:A:H2	46:Au:160:HIS:CD2	2.15	0.65
1:A2:4268:C:C2'	1:A2:4269:G:H5'	2.26	0.65
1:A2:4838:C:C2'	1:A2:4839:G:H5"	2.27	0.65
6:AC:147:VAL:O	45:At:76:SER:HA	1.96	0.65
11:AH:92:MET:HE1	11:AH:161:ILE:HB	1.77	0.65
14:AL:47:ALA:HB1	14:AL:48:PRO:CD	2.26	0.65
48:BB:1208:LEU:HD23	48:BB:1208:LEU:C	2.21	0.65
48:BB:1239:LEU:HG	48:BB:1246:ALA:CB	2.27	0.65
49:BC:336:U:C5'	65:CO:110:PRO:HB3	2.25	0.65
49:BC:350:G:N2	49:BC:351:A:H8	1.94	0.65
50:C1:1287:A:C3'	50:C1:1312:G:H22	2.10	0.65
50:C1:1673:U:C5'	50:C1:1673:U:C6	2.80	0.65
53:CC:128:VAL:HG11	53:CC:155:ILE:HG12	1.78	0.65
1:A2:38:A:H5'	1:A2:39:A:H4'	1.78	0.65
1:A2:640:A:C2'	1:A2:641:C:H5'	2.26	0.65
1:A2:941:G:H2'	1:A2:941:G:N3	2.10	0.65
1:A2:957:G:OP1	1:A2:1219:C:H5"	1.95	0.65
1:A2:1454:G:C3'	1:A2:1455:C:H4'	2.25	0.65
1:A2:1583:G:H2'	1:A2:1584:G:C8	2.31	0.65
1:A2:3630:G:H4'	1:A2:3631:A:H5"	1.77	0.65
1:A2:3722:G:H2'	1:A2:3723:G:H1'	1.77	0.65
1:A2:3825:A:H4'	18:AP:85:LYS:HG2	1.79	0.65
1:A2:4131:C:H3'	1:A2:4132:A:H8	1.61	0.65
1:A2:4278:C:H3'	1:A2:4278:C:H6	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4397:U:C5	1:A2:4475:G:H4'	2.31	0.65
1:A2:4685:G:H2'	1:A2:4686:A:H8	1.61	0.65
1:A2:4718:C:O2'	17:AO:164:ALA:HA	1.96	0.65
2:A3:107:C:H5'	2:A3:107:C:H6	1.61	0.65
19:AQ:23:ILE:HG23	45:At:8:MET:HG3	1.79	0.65
42:An:5:TRP:CE3	50:C1:1848:U:O4	2.49	0.65
45:At:44:ILE:HG13	45:At:45:HIS:H	1.59	0.65
46:Au:198:VAL:HG13	46:Au:210:VAL:HG22	1.78	0.65
49:BC:350:G:H21	49:BC:351:A:H8	1.44	0.65
50:C1:172:U:C3'	50:C1:173:A:H5"	2.26	0.65
50:C1:551:U:H5"	81:Ce:39:ASN:CB	2.25	0.65
50:C1:795:A:C2'	50:C1:796:G:H8	2.09	0.65
50:C1:796:G:N2	50:C1:797:C:C5	2.65	0.65
50:C1:806:U:C2'	50:C1:807:G:H5'	2.26	0.65
50:C1:988:C:O5'	50:C1:988:C:H6	1.79	0.65
50:C1:1337:C:H2'	50:C1:1338:G:H8	1.60	0.65
50:C1:1534:C:H2'	50:C1:1599:U:C4	2.30	0.65
1:A2:482:G:H8	1:A2:482:G:C5'	2.09	0.65
1:A2:2384:G:H2'	40:Al:13:LEU:CD1	2.22	0.65
1:A2:2873:G:H5"	20:AR:134:ASN:CB	2.25	0.65
1:A2:4507:C:H3'	1:A2:4508:A:H5"	1.78	0.65
2:A3:122:G:OP1	2:A3:122:G:H4'	1.95	0.65
6:AC:183:VAL:HG11	6:AC:206:GLY:HA2	1.79	0.65
9:AF:117:ILE:HD11	9:AF:222:LYS:NZ	2.10	0.65
11:AH:96:TYR:HA	11:AH:177:ASP:OD1	1.96	0.65
39:Ak:25:ILE:HD12	39:Ak:66:VAL:HG13	1.79	0.65
48:BB:845:ALA:HA	48:BB:911:GLY:O	1.97	0.65
50:C1:107:A:H2'	50:C1:108:G:C8	2.31	0.65
50:C1:197:U:N3	50:C1:198:U:C5	2.65	0.65
50:C1:639:C:H2'	50:C1:640:A:C8	2.31	0.65
50:C1:799:U:H1'	50:C1:800:U:C6	2.30	0.65
50:C1:1034:A:C2'	50:C1:1035:A:H5'	2.27	0.65
56:CF:111:VAL:HG12	56:CF:177:LEU:HD21	1.78	0.65
62:CL:96:ILE:HD13	74:CX:14:ARG:HD2	1.79	0.65
1:A2:1399:G:C3'	1:A2:1400:A:H5"	2.27	0.65
1:A2:1727:U:H6	1:A2:1727:U:C5'	2.09	0.65
1:A2:1742:C:H3'	1:A2:1743:G:C5'	2.26	0.65
1:A2:2028:G:O2'	1:A2:3854:G:H4'	1.97	0.65
1:A2:2061:C:H41	1:A2:2249:G:H1	1.43	0.65
1:A2:2672:A:C3'	1:A2:2673:A:H5"	2.26	0.65
1:A2:3604:A:C3'	1:A2:3605:C:H5"	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3866:G:C2	1:A2:4519:A:H2	2.15	0.65
1:A2:3873:G:P	1:A2:3873:G:H2'	2.36	0.65
1:A2:4383:U:H3'	1:A2:4383:U:H6	1.60	0.65
1:A2:4524:A:H2'	1:A2:4525:C:C6	2.32	0.65
1:A2:4718:C:C2'	17:AO:167:HIS:HB3	2.26	0.65
1:A2:4728:G:H5"	17:AO:172:LYS:HD2	1.78	0.65
1:A2:4869:C:C6	1:A2:4869:C:C3'	2.80	0.65
1:A2:4898:A:H3'	1:A2:4898:A:OP2	1.96	0.65
19:AQ:23:ILE:O	19:AQ:27:LEU:HG	1.97	0.65
48:BB:1175:ASP:HA	48:BB:1178:ILE:HG12	1.79	0.65
49:BC:351:A:N7	53:CC:124:PHE:CE1	2.62	0.65
50:C1:331:C:H3'	50:C1:332:G:C5'	2.27	0.65
50:C1:526:A:C8	60:CJ:128:VAL:HG13	2.32	0.65
1:A2:13:U:H4'	1:A2:14:C:OP2	1.97	0.65
1:A2:717:G:H3'	1:A2:718:G:H5'	1.79	0.65
1:A2:1165:G:O2'	1:A2:1166:U:H5'	1.95	0.65
1:A2:1221:C:H6	1:A2:1221:C:H3'	1.61	0.65
1:A2:1388:G:C2	1:A2:1389:C:H1'	2.32	0.65
1:A2:2027:G:H5'	1:A2:2027:G:H8	1.62	0.65
1:A2:2384:G:C2'	40:Al:13:LEU:HD11	2.20	0.65
1:A2:4028:U:H2'	1:A2:4029:G:H8	1.62	0.65
1:A2:4625:A:H2'	1:A2:4626:G:C8	2.32	0.65
1:A2:4656:C:H2'	1:A2:4657:U:C6	2.31	0.65
1:A2:4695:C:C2'	1:A2:4696:G:H8	2.09	0.65
1:A2:4736:C:H1'	1:A2:4815:G:C2	2.31	0.65
2:A3:126:C:C5'	2:A3:128:C:H5	2.09	0.65
5:AB:322:HIS:O	5:AB:342:LYS:HE3	1.97	0.65
47:BA:73:A:H1'	47:BA:74:C:N3	2.11	0.65
48:BB:817:GLU:CA	48:BB:1170:ILE:CD1	2.75	0.65
50:C1:527:C:H5'	60:CJ:122:SER:HB3	1.77	0.65
50:C1:571:U:C3'	50:C1:572:U:O4'	2.45	0.65
50:C1:790:C:H2'	50:C1:791:C:C6	2.31	0.65
50:C1:1217:A:H2'	50:C1:1218:C:C5	2.31	0.65
50:C1:1439:A:H2'	50:C1:1440:C:N1	2.11	0.65
50:C1:1557:C:H3'	50:C1:1557:C:P	2.36	0.65
70:CT:34:VAL:CG2	70:CT:99:VAL:HG12	2.27	0.65
72:CV:35:ASN:OD1	72:CV:50:PHE:HB3	1.96	0.65
1:A2:1049:G:H2'	1:A2:1050:G:OP1	1.97	0.65
1:A2:1900:G:H4'	1:A2:1901:A:OP1	1.96	0.65
1:A2:2348:U:P	1:A2:2348:U:O4'	2.54	0.65
1:A2:2550:A:O5'	1:A2:2736:G:H8	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2552:U:H3'	1:A2:2552:U:H6	1.60	0.65
1:A2:4211:A:H8	13:AJ:129:ASP:OD1	1.79	0.65
1:A2:4343:U:H2'	1:A2:4344:U:C6	2.32	0.65
1:A2:4561:U:H4'	1:A2:4562:A:OP1	1.95	0.65
1:A2:4721:A:H3'	1:A2:4721:A:N3	2.10	0.65
1:A2:4743:C:H2'	1:A2:4744:C:C5	2.31	0.65
1:A2:4803:C:H3'	1:A2:4804:G:H5"	1.78	0.65
1:A2:4893:A:P	1:A2:4893:A:H3'	2.37	0.65
2:A3:134:G:H5'	26:AX:66:PRO:HB3	1.77	0.65
4:AA:177:LYS:HD3	44:Ap:29:ILE:HD11	1.78	0.65
9:AF:66:ARG:HA	9:AF:69:ILE:CD1	2.26	0.65
27:AY:44:VAL:HG23	27:AY:123:ALA:CB	2.26	0.65
43:Ao:105:GLN:CA	47:BA:57:G:O4'	2.42	0.65
45:At:44:ILE:HA	45:At:48:THR:HG21	1.78	0.65
50:C1:39:A:H1'	50:C1:518:G:H22	1.61	0.65
50:C1:167:G:H5'	57:CG:8:PRO:O	1.97	0.65
50:C1:413:G:H5'	50:C1:814:U:O2	1.96	0.65
50:C1:448:A:C8	59:CI:26:LYS:N	2.65	0.65
50:C1:525:A:H3'	50:C1:525:A:C8	2.32	0.65
50:C1:911:C:O2'	50:C1:912:C:H5'	1.97	0.65
50:C1:1340:U:C5'	50:C1:1341:C:H2'	2.27	0.65
50:C1:1389:C:H5'	54:CD:205:PRO:HB3	1.78	0.65
50:C1:1493:C:H3'	50:C1:1494:U:C5'	2.27	0.65
67:CQ:15:ARG:HA	67:CQ:19:ALA:O	1.95	0.65
1:A2:77:U:H3	1:A2:327:A:H61	1.45	0.65
1:A2:82:U:H3	1:A2:101:A:H62	1.45	0.65
1:A2:163:C:H2'	1:A2:164:C:H6	1.61	0.65
1:A2:175:C:H2'	1:A2:176:G:H8	1.62	0.65
1:A2:183:G:C2'	1:A2:184:U:H5'	2.27	0.65
1:A2:1281:C:C6	1:A2:1281:C:C3'	2.80	0.65
1:A2:1357:G:N7	1:A2:1360:G:H2'	2.12	0.65
1:A2:1369:U:H5"	1:A2:1475:G:O2'	1.97	0.65
1:A2:1648:A:N3	1:A2:1830:U:H4'	2.11	0.65
1:A2:2028:G:H8	1:A2:2028:G:O5'	1.80	0.65
1:A2:2321:U:H5'	1:A2:2321:U:H6	1.61	0.65
1:A2:2396:C:H6	1:A2:2396:C:H5"	1.59	0.65
1:A2:2514:A:H2'	1:A2:2515:U:C6	2.32	0.65
1:A2:2556:G:OP2	1:A2:2556:G:H2'	1.97	0.65
1:A2:2632:C:H2'	1:A2:2633:U:H6	1.59	0.65
1:A2:3875:A:H8	6:AC:69:THR:HB	1.61	0.65
1:A2:4740:U:O2'	1:A2:4741:C:H4'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4896:G:H4'	1:A2:4897:C:O5'	1.97	0.65
2:A3:37:A:H5"	2:A3:39:G:O4'	1.97	0.65
3:A4:68:C:H2'	3:A4:68:C:O2	1.95	0.65
13:AJ:18:ARG:NE	13:AJ:135:GLY:HA3	2.11	0.65
48:BB:814:THR:CA	48:BB:1170:ILE:CD1	2.74	0.65
50:C1:234:C:H2'	50:C1:235:A:H8	1.61	0.65
50:C1:869:A:C2	50:C1:915:G:H1'	2.30	0.65
50:C1:1372:U:H5"	50:C1:1386:A:N3	2.12	0.65
50:C1:1643:U:H2'	50:C1:1644:C:C6	2.32	0.65
70:CT:4:VAL:HG21	70:CT:139:ALA:CB	2.27	0.65
1:A2:69:A:N3	1:A2:69:A:H3'	2.12	0.65
1:A2:154:U:H4'	1:A2:157:G:O3'	1.97	0.65
1:A2:155:A:OP1	1:A2:157:G:H5'	1.97	0.65
1:A2:277:U:O5'	1:A2:277:U:H6	1.79	0.65
1:A2:438:C:H2'	1:A2:439:G:C8	2.31	0.65
1:A2:707:C:H2'	1:A2:708:G:C8	2.31	0.65
1:A2:723:G:H2'	1:A2:723:G:N3	2.10	0.65
1:A2:1019:C:H2'	1:A2:1020:G:H8	1.62	0.65
1:A2:1078:G:H2'	1:A2:1079:C:H5'	1.79	0.65
1:A2:1717:A:H1'	3:A4:101:A:H1'	1.78	0.65
1:A2:1758:U:H2'	1:A2:1759:A:C8	2.31	0.65
1:A2:2021:A:C4	1:A2:4476:G:H1'	2.32	0.65
1:A2:2836:G:H2'	1:A2:2837:C:C6	2.32	0.65
1:A2:4939:C:H5"	5:AB:25:HIS:HD2	1.61	0.65
17:AO:182:GLU:CA	17:AO:187:LYS:HD3	2.27	0.65
27:AY:121:ARG:HA	27:AY:125:SER:CB	2.27	0.65
31:Ac:62:TYR:CE2	31:Ac:66:LEU:HD11	2.31	0.65
46:Au:104:PHE:CE1	46:Au:122:LEU:HD21	2.32	0.65
46:Au:199:TYR:CE2	46:Au:209:GLU:HB3	2.32	0.65
50:C1:350:C:H2'	50:C1:351:G:H5'	1.77	0.65
50:C1:582:U:H3'	50:C1:583:A:C8	2.31	0.65
50:C1:747:U:H5"	50:C1:795:A:H62	1.60	0.65
50:C1:1298:G:H1'	66:CP:79:HIS:HB2	1.77	0.65
50:C1:1303:C:H2'	50:C1:1304:U:C6	2.32	0.65
50:C1:1684:C:C2'	50:C1:1685:U:C5'	2.70	0.65
50:C1:1767:C:C2'	50:C1:1768:A:H5'	2.27	0.65
74:CX:112:VAL:HB	74:CX:115:ILE:HD13	1.78	0.65
1:A2:83:C:H2'	1:A2:100:C:H42	1.61	0.65
1:A2:192:C:O5'	1:A2:192:C:H6	1.79	0.65
1:A2:424:A:H4'	1:A2:425:A:OP1	1.96	0.65
1:A2:735:A:H2'	1:A2:736:G:C8	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1200:G:C8	1:A2:1200:G:P	2.89	0.65
1:A2:1270:G:H4'	1:A2:4898:A:C2	2.28	0.65
1:A2:1336:U:H2'	1:A2:1337:C:C6	2.32	0.65
1:A2:1374:G:H2'	1:A2:1375:U:C6	2.32	0.65
1:A2:1422:C:H3'	1:A2:1422:C:O2	1.97	0.65
1:A2:1738:G:H1	1:A2:1752:U:H3	1.45	0.65
1:A2:1815:A:H1'	22:AT:130:ARG:O	1.96	0.65
1:A2:2333:U:H5'	1:A2:2333:U:C6	2.29	0.65
1:A2:2531:U:H2'	1:A2:2532:G:H5'	1.79	0.65
1:A2:4983:G:H2'	1:A2:4984:C:C6	2.31	0.65
2:A3:40:A:H2'	2:A3:41:A:H8	1.61	0.65
3:A4:119:U:H3'	7:AD:260:GLU:HG2	1.78	0.65
15:AM:62:LEU:CD2	15:AM:82:ILE:HG13	2.27	0.65
27:AY:49:ILE:HD13	27:AY:80:ILE:HG21	1.79	0.65
34:Af:46:ARG:HD2	34:Af:106:TYR:HE2	1.61	0.65
46:Au:62:PHE:CE1	46:Au:110:LEU:HG	2.32	0.65
48:BB:1087:ILE:HD11	48:BB:1152:LEU:HD12	1.78	0.65
48:BB:1116:ARG:CG	50:C1:488:U:C5	2.77	0.65
49:BC:349:C:N4	50:C1:1698:C:H42	1.95	0.65
50:C1:229:A:N6	50:C1:900:C:H1'	2.12	0.65
50:C1:385:G:H4'	50:C1:386:C:H5"	1.79	0.65
50:C1:464:A:H4'	50:C1:465:A:OP2	1.96	0.65
50:C1:505:G:C2'	50:C1:506:G:H5'	2.26	0.65
50:C1:736:C:H2'	50:C1:737:G:H8	1.61	0.65
50:C1:746:C:C5'	58:CH:105:THR:HA	2.27	0.65
50:C1:1013:U:H1'	50:C1:1104:G:H1'	1.79	0.65
50:C1:1260:A:H2	50:C1:1620:A:H1'	1.62	0.65
50:C1:1446:A:N3	71:CU:55:ARG:HG3	2.12	0.65
51:CA:6:ASP:C	72:CV:83:PHE:HB3	2.20	0.65
51:CA:8:LEU:O	51:CA:55:TRP:HZ2	1.80	0.65
53:CC:242:ASP:OD1	53:CC:246:LYS:HE3	1.97	0.65
70:CT:72:VAL:HG12	70:CT:97:LYS:HE3	1.78	0.65
1:A2:139:G:H8	1:A2:139:G:OP2	1.80	0.64
1:A2:147:U:H4'	1:A2:149:U:C6	2.32	0.64
1:A2:224:A:C2	1:A2:225:C:H1'	2.31	0.64
1:A2:928:A:H2	1:A2:931:C:N4	1.95	0.64
1:A2:1086:A:OP1	1:A2:1086:A:C8	2.50	0.64
1:A2:1161:C:C6	1:A2:1161:C:H5"	2.32	0.64
1:A2:1408:U:C2'	1:A2:1409:C:H5'	2.28	0.64
1:A2:2301:C:C2'	1:A2:2302:G:H5'	2.27	0.64
1:A2:2354:C:H1'	20:AR:1:MET:HA	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2869:C:H4'	1:A2:4973:C:H5'	1.79	0.64
1:A2:3729:A:H1'	1:A2:3730:C:OP2	1.97	0.64
1:A2:3744:A:C3'	1:A2:3745:G:H5"	2.26	0.64
1:A2:3797:A:H5"	1:A2:3798:G:OP2	1.97	0.64
1:A2:3877:A:C3'	1:A2:3878:C:H5'	2.27	0.64
1:A2:3936:G:H3'	1:A2:3937:U:C5	2.32	0.64
1:A2:4537:U:H2'	1:A2:4538:G:C8	2.32	0.64
1:A2:4568:G:H2'	1:A2:4569:G:O4'	1.97	0.64
1:A2:4673:G:H3'	1:A2:4674:C:H6	1.61	0.64
11:AH:132:VAL:HG11	11:AH:154:VAL:HA	1.78	0.64
17:AO:109:PRO:O	17:AO:112:TYR:HB2	1.96	0.64
24:AV:42:VAL:O	24:AV:45:ILE:HG23	1.97	0.64
46:Au:114:ILE:HG13	46:Au:118:LEU:HD23	1.78	0.64
48:BB:817:GLU:HG2	48:BB:1170:ILE:HD13	1.75	0.64
48:BB:842:LYS:HB3	48:BB:1140:GLU:CB	2.20	0.64
48:BB:1122:PRO:CD	48:BB:1133:TYR:HB3	2.28	0.64
48:BB:1295:GLN:O	48:BB:1298:PHE:HB3	1.98	0.64
50:C1:76:U:H3'	50:C1:77:A:C5'	2.27	0.64
50:C1:305:U:O2	59:CI:43:ILE:HD11	1.97	0.64
50:C1:562:U:H4'	60:CJ:132:GLN:OE1	1.97	0.64
50:C1:572:U:H3'	50:C1:572:U:H6	1.62	0.64
50:C1:1389:C:H2'	50:C1:1389:C:P	2.36	0.64
50:C1:1557:C:H2'	50:C1:1557:C:O2	1.95	0.64
50:C1:1778:C:H2'	50:C1:1779:G:H8	1.62	0.64
69:CS:24:ARG:HA	76:CZ:48:VAL:HG11	1.77	0.64
74:CX:51:VAL:HG22	74:CX:70:VAL:HG11	1.79	0.64
77:Ca:23:CYS:SG	77:Ca:26:CYS:N	2.69	0.64
77:Ca:38:LYS:O	77:Ca:40:VAL:HG23	1.97	0.64
1:A2:386:A:O5'	1:A2:386:A:C8	2.49	0.64
1:A2:441:G:H8	1:A2:441:G:C5'	2.02	0.64
1:A2:1170:C:H2'	1:A2:1171:C:C6	2.32	0.64
1:A2:1276:G:C3'	1:A2:1277:U:H4'	2.18	0.64
1:A2:1460:C:C6	1:A2:1460:C:C3'	2.79	0.64
1:A2:2848:A:H3'	1:A2:2849:C:C6	2.32	0.64
1:A2:4545:U:H2'	1:A2:4546:G:H8	1.60	0.64
1:A2:4902:U:H3	8:AE:154:THR:HG22	1.60	0.64
6:AC:86:ARG:HG3	6:AC:89:GLN:OE1	1.97	0.64
14:AL:167:ARG:C	29:Aa:97:ALA:HA	2.23	0.64
15:AM:23:LYS:HE3	15:AM:43:THR:O	1.97	0.64
18:AP:45:THR:HG23	18:AP:92:LEU:HD11	1.79	0.64
20:AR:136:ARG:O	20:AR:139:MET:HB3	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Au:5:ILE:CD1	46:Au:177:ILE:HG21	2.27	0.64
47:BA:70:G:H5"	48:BB:1382:SER:O	1.97	0.64
47:BA:74:C:C5'	48:BB:1321:PRO:O	2.45	0.64
48:BB:1006:LYS:O	48:BB:1009:ILE:HG12	1.96	0.64
50:C1:207:G:H4'	50:C1:208:G:OP1	1.97	0.64
50:C1:383:G:H3'	50:C1:384:U:C5	2.32	0.64
50:C1:473:A:H5"	50:C1:473:A:H8	1.62	0.64
50:C1:744:G:H4'	58:CH:102:PRO:CG	2.26	0.64
50:C1:1377:U:O2'	50:C1:1378:A:H4'	1.96	0.64
50:C1:1603:G:H3'	50:C1:1603:G:OP2	1.97	0.64
50:C1:1743:G:H1'	50:C1:1792:G:H22	1.61	0.64
50:C1:1840:U:H2'	50:C1:1841:C:H6	1.61	0.64
50:C1:1861:G:H5'	50:C1:1861:G:N3	2.13	0.64
72:CV:73:ALA:HB1	72:CV:78:ILE:HG13	1.79	0.64
1:A2:292:G:H3'	1:A2:293:C:C6	2.32	0.64
1:A2:928:A:C2	1:A2:931:C:N4	2.65	0.64
1:A2:1086:A:O4'	7:AD:273:LEU:HD23	1.97	0.64
1:A2:1274:A:H2'	1:A2:1275:C:H6	1.63	0.64
1:A2:1331:G:H2'	1:A2:1332:C:O4'	1.97	0.64
1:A2:1480:C:OP1	1:A2:1480:C:H3'	1.97	0.64
1:A2:1517:U:H2'	1:A2:1518:G:H5'	1.78	0.64
1:A2:1856:G:H2'	1:A2:1857:C:C6	2.33	0.64
1:A2:1877:G:C5	1:A2:2254:G:C6	2.85	0.64
1:A2:2056:C:H5"	33:Ae:62:SER:O	1.97	0.64
1:A2:2416:G:H1'	1:A2:2754:G:C2	2.31	0.64
1:A2:4085:U:H2'	1:A2:4085:U:O2	1.95	0.64
1:A2:4539:U:H2'	1:A2:4540:U:C6	2.33	0.64
1:A2:4687:U:C5'	1:A2:4688:A:H5"	2.27	0.64
1:A2:4817:G:H2'	1:A2:4818:G:H8	1.61	0.64
2:A3:126:C:C5'	2:A3:128:C:C5	2.80	0.64
10:AG:117:ARG:O	10:AG:121:LYS:HG2	1.96	0.64
18:AP:48:LEU:HD23	18:AP:88:ALA:O	1.97	0.64
48:BB:814:THR:C	48:BB:1170:ILE:HG13	2.23	0.64
48:BB:847:VAL:HG22	48:BB:935:ASP:OD2	1.97	0.64
48:BB:932:SER:HB2	48:BB:961:LYS:HE3	1.79	0.64
49:BC:172:A:H2'	49:BC:173:A:H8	1.57	0.64
49:BC:334:C:C2	77:Ca:46:GLU:HG3	2.32	0.64
50:C1:215:G:O2'	50:C1:216:C:H5'	1.98	0.64
50:C1:305:U:H2'	59:CI:60:LEU:HD23	1.79	0.64
50:C1:1330:G:H4'	50:C1:1331:C:C4'	2.27	0.64
50:C1:1642:U:O2'	50:C1:1643:U:H5'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:CG:193:ALA:O	57:CG:197:GLN:HG2	1.98	0.64
67:CQ:102:GLU:HB2	83:Cg:57:ARG:HA	1.79	0.64
1:A2:171:C:H5"	36:Ah:101:ASN:HD21	1.61	0.64
1:A2:642:C:H3'	1:A2:643:G:H5"	1.78	0.64
1:A2:718:G:C8	1:A2:719:G:C2	2.85	0.64
1:A2:917:G:H4'	1:A2:918:C:O5'	1.98	0.64
1:A2:976:C:H4'	1:A2:1222:G:C4'	2.26	0.64
1:A2:1198:G:O2'	1:A2:1199:G:H5'	1.97	0.64
1:A2:1238:G:H2'	1:A2:1239:G:H8	1.61	0.64
1:A2:2305:U:C2'	1:A2:2306:G:H8	2.10	0.64
1:A2:2549:C:C1'	1:A2:2550:A:H8	2.10	0.64
1:A2:2743:A:H2'	1:A2:2744:U:C4	2.32	0.64
1:A2:3623:G:H2'	1:A2:3624:C:H5'	1.79	0.64
1:A2:3654:C:H5"	4:AA:193:ARG:NH2	2.11	0.64
1:A2:3695:A:HO2'	1:A2:3696:A:H8	1.42	0.64
1:A2:4161:G:H8	1:A2:4161:G:O5'	1.81	0.64
4:AA:186:TYR:HB2	4:AA:196:TRP:CH2	2.32	0.64
6:AC:164:THR:HG22	6:AC:220:ALA:O	1.97	0.64
8:AE:136:HIS:O	8:AE:137:VAL:HB	1.96	0.64
19:AQ:157:GLY:O	19:AQ:161:SER:HB2	1.98	0.64
36:Ah:45:SER:O	36:Ah:48:ARG:HG2	1.97	0.64
47:BA:6:G:N2	47:BA:67:C:N4	2.27	0.64
48:BB:845:ALA:CB	48:BB:911:GLY:C	2.71	0.64
48:BB:929:ARG:NE	48:BB:1070:LEU:HA	2.12	0.64
48:BB:1082:GLY:O	48:BB:1083:MET:HE2	1.98	0.64
48:BB:1229:LYS:HG3	48:BB:1262:MET:CE	2.27	0.64
49:BC:235:G:O6	78:Cb:80:ARG:NH2	2.30	0.64
50:C1:109:U:O2'	50:C1:855:G:H1'	1.97	0.64
50:C1:1103:C:H6	50:C1:1103:C:O5'	1.81	0.64
50:C1:1120:U:H2'	50:C1:1121:G:H5'	1.77	0.64
50:C1:1203:G:H2'	50:C1:1699:A:C2	2.33	0.64
51:CA:63:ARG:HG2	72:CV:46:PHE:CE2	2.32	0.64
66:CP:34:MET:CG	66:CP:45:LEU:HD22	2.26	0.64
1:A2:194:A:C2	1:A2:240:A:C2	2.85	0.64
1:A2:470:G:C2'	1:A2:471:C:H5'	2.27	0.64
1:A2:716:U:C4'	9:AF:69:ILE:HD12	2.28	0.64
1:A2:957:G:H4'	1:A2:1218:A:H4'	1.78	0.64
1:A2:1160:C:C6	1:A2:1160:C:C3'	2.81	0.64
1:A2:1366:C:H6	1:A2:1366:C:O5'	1.81	0.64
1:A2:1464:C:H2'	1:A2:1465:C:O4'	1.97	0.64
1:A2:1483:G:H2'	1:A2:1484:C:C6	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1539:A:C2’	1:A2:1540:G:H5’	2.27	0.64
1:A2:1710:C:H42	1:A2:1777:G:H1	1.45	0.64
1:A2:2531:U:H1’	28:AZ:105:ALA:HA	1.79	0.64
1:A2:3842:G:H2’	1:A2:3843:G:C8	2.31	0.64
1:A2:4109:C:P	28:AZ:58:GLY:HA3	2.38	0.64
1:A2:4483:A:C2’	1:A2:4519:A:H62	2.09	0.64
1:A2:4526:U:H3’	1:A2:4526:U:C6	2.32	0.64
1:A2:4723:A:C8	21:AS:173:ASN:O	2.51	0.64
1:A2:4892:C:H41	8:AE:179:LEU:HD12	1.61	0.64
3:A4:7:G:O2’	3:A4:8:G:H5’	1.97	0.64
13:AJ:57:VAL:HG11	13:AJ:60:PHE:CD2	2.33	0.64
23:AU:61:VAL:HG12	23:AU:74:SER:HB2	1.79	0.64
39:Ak:36:VAL:CG1	39:Ak:43:TYR:HB2	2.27	0.64
45:At:90:LEU:HA	45:At:93:ILE:HG22	1.80	0.64
47:BA:74:C:C4	47:BA:75:C:C5	2.78	0.64
48:BB:1173:LEU:HD23	48:BB:1173:LEU:C	2.22	0.64
48:BB:1229:LYS:HZ1	74:CX:76:LYS:HA	1.62	0.64
50:C1:298:G:H2’	50:C1:299:A:C8	2.31	0.64
50:C1:346:C:H6	50:C1:346:C:H3’	1.61	0.64
50:C1:496:C:H2’	50:C1:497:C:C6	2.33	0.64
50:C1:745:C:C5’	58:CH:105:THR:HG23	2.28	0.64
50:C1:789:G:H2’	50:C1:790:C:C6	2.33	0.64
50:C1:1292:C:O5’	50:C1:1292:C:H6	1.80	0.64
50:C1:1414:A:H2’	50:C1:1415:C:H1’	1.78	0.64
1:A2:98:A:H1’	1:A2:283:G:O6	1.97	0.64
1:A2:226:G:H5’	27:AY:11:ARG:HG3	1.80	0.64
1:A2:1193:G:H3’	1:A2:1193:G:P	2.38	0.64
1:A2:1197:G:O3’	1:A2:1198:G:H8	1.81	0.64
1:A2:1387:C:H3’	1:A2:1388:G:N7	2.11	0.64
1:A2:1743:G:H2’	1:A2:1744:A:H5’	1.79	0.64
1:A2:2059:C:O2’	1:A2:2060:G:H5’	1.98	0.64
1:A2:2295:C:H2’	1:A2:2296:G:H8	1.61	0.64
1:A2:2305:U:C3’	1:A2:2306:G:H8	2.10	0.64
1:A2:2627:G:H5”	1:A2:2627:G:H8	1.63	0.64
1:A2:3725:A:C2	1:A2:3726:G:C5	2.85	0.64
1:A2:4253:U:H3’	1:A2:4254:C:C5’	2.24	0.64
1:A2:4260:U:H5’	22:AT:88:ARG:O	1.98	0.64
1:A2:4426:C:H2’	1:A2:4427:A:H5’	1.79	0.64
1:A2:4736:C:H42	1:A2:4811:G:H1	1.45	0.64
1:A2:4829:A:H5”	21:AS:167:PHE:O	1.98	0.64
1:A2:5015:A:H5”	1:A2:5016:A:OP1	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A3:58:G:H8	2:A3:58:G:OP2	1.80	0.64
2:A3:84:A:H4'	2:A3:85:U:OP1	1.97	0.64
11:AH:117:PHE:HB3	11:AH:124:ARG:HH21	1.63	0.64
15:AM:129:LYS:O	15:AM:132:LYS:HB3	1.97	0.64
46:Au:87:LEU:HB3	46:Au:117:TYR:CZ	2.33	0.64
48:BB:844:ARG:HG3	48:BB:845:ALA:H	1.62	0.64
48:BB:1301:ILE:HG22	48:BB:1403:GLN:HE22	1.61	0.64
48:BB:1301:ILE:CD1	48:BB:1404:SER:HA	2.27	0.64
50:C1:103:A:H2'	50:C1:105:U:OP1	1.98	0.64
50:C1:577:U:H4'	50:C1:578:C:O5'	1.96	0.64
50:C1:1048:G:H8	50:C1:1048:G:O5'	1.79	0.64
50:C1:1484:A:H4'	54:CD:159:HIS:CB	2.28	0.64
50:C1:1484:A:H2'	50:C1:1485:U:O4'	1.98	0.64
52:CB:31:TYR:CE2	52:CB:94:LYS:HA	2.33	0.64
64:CN:129:TYR:O	64:CN:134:VAL:HG12	1.98	0.64
1:A2:133:C:H2'	1:A2:135:G:N1	2.12	0.64
1:A2:425:A:H3'	1:A2:425:A:C8	2.32	0.64
1:A2:1217:C:O2'	1:A2:1218:A:H5"	1.98	0.64
1:A2:1388:G:H2'	1:A2:1388:G:N3	2.12	0.64
1:A2:2253:C:H2'	1:A2:2254:G:H5'	1.79	0.64
1:A2:2274:U:OP2	1:A2:2274:U:H6	1.81	0.64
1:A2:2587:G:H1'	1:A2:2663:G:H2'	1.79	0.64
1:A2:3586:G:C4	1:A2:3586:G:OP2	2.51	0.64
1:A2:4895:C:C6	1:A2:4895:C:C3'	2.81	0.64
2:A3:144:U:H2'	2:A3:145:C:O4'	1.98	0.64
12:AI:12:CYS:SG	12:AI:59:GLN:HG3	2.38	0.64
19:AQ:172:ARG:O	19:AQ:173:LYS:HB3	1.98	0.64
28:AZ:17:ARG:HD3	35:Ag:75:SER:HB3	1.79	0.64
29:Aa:74:ASN:HA	29:Aa:112:LEU:O	1.98	0.64
50:C1:209:A:H4'	50:C1:210:U:OP1	1.97	0.64
50:C1:576:A:OP2	50:C1:576:A:H3'	1.98	0.64
50:C1:812:A:H2'	50:C1:813:A:C8	2.33	0.64
50:C1:1214:A:C2'	50:C1:1215:C:H5'	2.28	0.64
50:C1:1493:C:C4'	50:C1:1494:U:H5'	2.28	0.64
53:CC:167:ARG:CA	53:CC:181:PRO:HD3	2.27	0.64
77:Ca:21:ILE:HD11	77:Ca:32:LYS:HB3	1.80	0.64
1:A2:434:G:N1	1:A2:1284:C:N4	2.45	0.64
1:A2:1249:G:C6	1:A2:1250:A:C5	2.86	0.64
1:A2:1377:A:H2'	1:A2:1400:A:N6	2.09	0.64
1:A2:1387:C:H6	1:A2:1387:C:C5'	2.11	0.64
1:A2:1524:G:H5"	1:A2:1525:C:OP2	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1667:G:O2'	1:A2:1668:G:H5'	1.97	0.64
1:A2:1732:G:H3'	1:A2:1733:U:H4'	1.80	0.64
1:A2:1801:U:C6	1:A2:1801:U:H3'	2.33	0.64
1:A2:2374:G:O2'	1:A2:2375:U:H3'	1.98	0.64
1:A2:2516:C:H5"	35:Ag:66:ARG:HD2	1.80	0.64
1:A2:3648:U:C5	4:AA:20:VAL:HG13	2.32	0.64
1:A2:4066:A:H2'	1:A2:4067:G:C8	2.33	0.64
1:A2:4738:U:C2'	1:A2:4739:G:H5'	2.28	0.64
1:A2:4745:G:H2'	1:A2:4746:C:H6	1.63	0.64
4:AA:136:VAL:HG22	4:AA:148:VAL:HG12	1.80	0.64
6:AC:139:SER:C	45:At:14:SER:HA	2.23	0.64
6:AC:330:PRO:HB2	9:AF:51:TYR:CZ	2.31	0.64
29:Aa:70:CYS:HA	29:Aa:109:TYR:HB3	1.80	0.64
48:BB:1082:GLY:HA3	50:C1:50:A:C1'	2.24	0.64
48:BB:1209:LEU:CD1	48:BB:1222:ILE:HG21	2.25	0.64
49:BC:334:C:N4	79:Cc:66:ARG:HG2	2.13	0.64
50:C1:62:G:H5'	50:C1:172:U:C4	2.32	0.64
50:C1:343:A:H4'	55:CE:128:LYS:NZ	2.13	0.64
50:C1:351:G:H3'	50:C1:351:G:H8	1.62	0.64
61:CK:38:LYS:HG2	61:CK:40:VAL:HG23	1.78	0.64
63:CM:71:GLU:OE2	82:Cf:113:LYS:HA	1.98	0.64
1:A2:306:G:C8	29:Aa:62:HIS:CB	2.81	0.64
1:A2:306:G:C8	29:Aa:62:HIS:HB2	2.31	0.64
1:A2:739:G:H22	1:A2:898:U:H3	1.46	0.64
1:A2:1079:C:H3'	1:A2:1080:U:H5"	1.80	0.64
1:A2:1592:A:C2	4:AA:196:TRP:CH2	2.85	0.64
1:A2:3592:C:C6	1:A2:3592:C:C3'	2.81	0.64
1:A2:3888:C:H4'	4:AA:207:VAL:HG12	1.79	0.64
1:A2:4570:A:H4'	1:A2:4570:A:OP1	1.96	0.64
14:AL:56:ARG:HB3	14:AL:73:GLY:O	1.97	0.64
29:Aa:70:CYS:HA	29:Aa:109:TYR:CB	2.28	0.64
34:Af:104:MET:CG	34:Af:106:TYR:CD1	2.78	0.64
37:Ai:33:LEU:H	37:Ai:33:LEU:HD13	1.63	0.64
42:An:1:MET:N	50:C1:1706:G:H5'	2.13	0.64
46:Au:43:VAL:HG11	46:Au:151:LEU:HG	1.80	0.64
47:BA:30:G:H2'	47:BA:31:A:H5'	1.80	0.64
48:BB:1139:VAL:HB	48:BB:1143:GLN:HG3	1.78	0.64
50:C1:36:U:H2'	50:C1:36:U:O2	1.97	0.64
50:C1:77:A:N6	57:CG:155:GLN:HB3	2.12	0.64
50:C1:222:U:H4'	62:CL:21:LYS:HE2	1.80	0.64
50:C1:670:A:H1'	50:C1:1164:G:O4'	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:751:G:C2'	50:C1:752:G:H8	2.04	0.64
50:C1:1130:G:N2	50:C1:1131:G:C8	2.66	0.64
50:C1:1500:G:H2'	50:C1:1501:C:O4'	1.97	0.64
50:C1:1648:G:H2'	67:CQ:127:CYS:C	2.23	0.64
50:C1:1767:C:O2'	50:C1:1768:A:H5'	1.98	0.64
51:CA:9:GLN:HB2	72:CV:83:PHE:HA	1.79	0.64
60:CJ:136:ARG:HB3	60:CJ:158:ASP:O	1.97	0.64
67:CQ:89:SER:CB	67:CQ:119:LEU:HB3	2.28	0.64
83:Cg:283:PRO:N	83:Cg:284:PRO:HD2	2.13	0.64
1:A2:226:G:H1'	27:AY:14:ASN:OD1	1.98	0.64
1:A2:471:C:C5'	1:A2:472:G:H5"	2.25	0.64
1:A2:948:A:C3'	1:A2:949:G:C8	2.81	0.64
1:A2:1717:A:O3'	3:A4:101:A:C2	2.50	0.64
1:A2:1718:G:C5'	3:A4:102:U:C1'	2.74	0.64
1:A2:1845:A:H2'	1:A2:1846:A:H5'	1.80	0.64
1:A2:2823:G:H1'	24:AV:86:LYS:HD3	1.79	0.64
1:A2:3911:A:O2'	1:A2:3912:A:H5'	1.98	0.64
1:A2:4285:A:H5'	7:AD:145:TYR:CE1	2.33	0.64
1:A2:4869:C:H3'	1:A2:4869:C:H6	1.63	0.64
1:A2:4905:U:H2'	1:A2:4906:G:H5'	1.80	0.64
47:BA:76:A:H62	48:BB:1316:PHE:CB	2.09	0.64
48:BB:1075:MET:HB2	48:BB:1088:ASP:O	1.98	0.64
48:BB:1211:PHE:HB3	48:BB:1280:PHE:CE2	2.33	0.64
50:C1:380:G:C6	50:C1:382:C:H5"	2.33	0.64
50:C1:587:A:H2'	50:C1:592:C:H41	1.63	0.64
50:C1:1565:C:C2'	50:C1:1566:G:H5'	2.27	0.64
50:C1:1734:G:H8	50:C1:1734:G:O5'	1.81	0.64
59:CI:68:GLY:C	62:CL:21:LYS:HE3	2.23	0.64
70:CT:70:ALA:HB3	70:CT:121:ARG:HE	1.62	0.64
1:A2:176:G:H2'	1:A2:177:C:H5'	1.80	0.63
1:A2:471:C:H4'	45:At:79:ARG:HD2	1.80	0.63
1:A2:943:G:OP1	1:A2:943:G:H4'	1.98	0.63
1:A2:943:G:O6	6:AC:312:ARG:N	2.31	0.63
1:A2:1569:C:H3'	1:A2:1570:U:H4'	1.80	0.63
1:A2:2045:C:H2'	1:A2:2046:C:C5	2.33	0.63
1:A2:2549:C:H3'	1:A2:2549:C:C6	2.30	0.63
1:A2:2638:U:H3'	1:A2:2639:G:H4'	1.79	0.63
1:A2:2839:G:H4'	1:A2:2840:G:OP2	1.96	0.63
1:A2:4084:U:H1'	1:A2:4085:U:OP1	1.97	0.63
1:A2:4168:U:H5	22:AT:4:THR:HG21	1.62	0.63
1:A2:4657:U:H2'	1:A2:4658:C:H5'	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4849:A:C3'	15:AM:132:LYS:HG3	2.29	0.63
1:A2:4863:G:H2'	1:A2:4864:A:H5"	1.81	0.63
8:AE:182:ASN:HD21	8:AE:271:LEU:HB3	1.63	0.63
8:AE:188:ARG:H	8:AE:188:ARG:CD	2.08	0.63
23:AU:22:THR:CG2	23:AU:69:LYS:HE3	2.29	0.63
23:AU:61:VAL:HG12	23:AU:74:SER:CB	2.28	0.63
24:AV:129:TRP:HB2	24:AV:132:ILE:HD12	1.79	0.63
32:Ad:57:MET:HB2	32:Ad:59:THR:HG22	1.78	0.63
42:An:5:TRP:CZ2	50:C1:1853:C:C5	2.78	0.63
43:Ao:103:VAL:C	47:BA:57:G:OP1	2.41	0.63
45:At:103:ARG:HB3	45:At:107:ARG:HB2	1.79	0.63
50:C1:519:A:H2	50:C1:520:A:C2	2.16	0.63
50:C1:535:G:HO2'	50:C1:536:A:H8	1.46	0.63
50:C1:659:G:H2'	50:C1:659:G:N3	2.13	0.63
50:C1:1408:U:H5'	67:CQ:69:ARG:HH21	1.62	0.63
60:CJ:107:GLU:HA	60:CJ:112:THR:HG21	1.80	0.63
75:CY:91:LEU:HB3	75:CY:97:TYR:HB2	1.79	0.63
83:Cg:44:LYS:HG3	83:Cg:56:GLN:HG3	1.80	0.63
83:Cg:191:HIS:CB	83:Cg:195:LEU:HD21	2.28	0.63
1:A2:32:G:H21	1:A2:50:C:H41	1.44	0.63
1:A2:69:A:C2	1:A2:70:A:H4'	2.33	0.63
1:A2:727:G:H5"	1:A2:727:G:H8	1.62	0.63
1:A2:1437:C:H4'	19:AQ:140:SER:H	1.62	0.63
1:A2:2305:U:H2'	1:A2:2306:G:H8	1.58	0.63
1:A2:2310:G:H8	1:A2:2310:G:O5'	1.81	0.63
1:A2:2338:G:H2'	18:AP:82:ARG:HH12	1.63	0.63
1:A2:2416:G:C2'	1:A2:2495:G:H22	2.07	0.63
1:A2:2608:U:C2'	1:A2:2609:U:H4'	2.28	0.63
1:A2:2620:G:C2'	1:A2:2621:G:H5'	2.28	0.63
1:A2:2624:A:C2	1:A2:2665:G:C4	2.86	0.63
1:A2:2726:C:H1'	35:Ag:64:LEU:HD13	1.80	0.63
1:A2:3648:U:C4	4:AA:20:VAL:HG13	2.33	0.63
1:A2:4294:U:H4'	22:AT:7:LYS:HB2	1.80	0.63
1:A2:4507:C:C3'	1:A2:4508:A:H5"	2.28	0.63
1:A2:4584:A:C2	5:AB:336:CYS:SG	2.86	0.63
1:A2:4684:C:H2'	1:A2:4685:G:C8	2.33	0.63
1:A2:4970:G:H21	1:A2:4989:A:H2	1.45	0.63
2:A3:12:G:H4'	18:AP:3:ARG:O	1.98	0.63
4:AA:229:ALA:O	4:AA:234:LYS:HE3	1.97	0.63
8:AE:168:LEU:HD21	8:AE:214:ASP:CA	2.29	0.63
12:AI:32:ARG:HG3	12:AI:33:ILE:HD13	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AM:57:LEU:HD12	21:AS:176:PHE:HZ	1.63	0.63
30:Ab:54:LEU:HA	30:Ab:58:GLN:HB2	1.79	0.63
45:At:30:ASN:HB3	45:At:48:THR:HB	1.80	0.63
48:BB:1284:THR:O	48:BB:1287:ARG:HG2	1.98	0.63
48:BB:1322:ILE:CG1	48:BB:1375:ILE:HB	2.28	0.63
49:BC:352:A:C2	49:BC:353:U:C2	2.86	0.63
50:C1:184:G:C8	50:C1:185:G:C4’	2.78	0.63
50:C1:1406:G:HO2’	50:C1:1408:U:H5	1.45	0.63
50:C1:1597:C:H5”	50:C1:1598:G:OP2	1.98	0.63
50:C1:1654:G:H2’	50:C1:1655:C:C5	2.33	0.63
50:C1:1775:U:H2’	50:C1:1776:G:C8	2.30	0.63
55:CE:129:ILE:CG2	55:CE:156:VAL:HG22	2.26	0.63
1:A2:218:C:O5’	1:A2:218:C:H6	1.82	0.63
1:A2:700:C:C3’	1:A2:701:C:C5’	2.73	0.63
1:A2:965:C:N4	1:A2:1249:G:C6	2.65	0.63
1:A2:976:C:O2’	1:A2:977:G:H5’	1.98	0.63
1:A2:1161:C:C6	1:A2:1161:C:C3’	2.82	0.63
1:A2:1245:G:C2’	1:A2:1246:G:H5”	2.27	0.63
1:A2:1423:A:H5”	1:A2:1423:A:C8	2.30	0.63
1:A2:1710:C:H5”	1:A2:1710:C:H6	1.63	0.63
1:A2:1754:A:C5	1:A2:1755:A:C8	2.86	0.63
1:A2:1873:G:H2’	1:A2:1874:A:O4’	1.98	0.63
1:A2:2661:C:H2’	1:A2:2662:C:H6	1.58	0.63
1:A2:4120:C:H6	1:A2:4120:C:H5”	1.63	0.63
1:A2:4285:A:C5	1:A2:4286:G:H1’	2.33	0.63
1:A2:4384:A:H5’	1:A2:4385:G:OP2	1.99	0.63
1:A2:4624:A:H5’	1:A2:4958:U:H5”	1.81	0.63
1:A2:4668:A:H5’	1:A2:4669:U:C5	2.33	0.63
1:A2:4688:A:C3’	1:A2:4695:C:H1’	2.28	0.63
1:A2:4723:A:H1’	1:A2:4724:G:P	2.38	0.63
1:A2:4813:C:H2’	1:A2:4814:C:H5’	1.79	0.63
1:A2:4864:A:H5’	5:AB:156:TYR:CE1	2.33	0.63
1:A2:4927:U:H3	1:A2:4941:G:H1	1.44	0.63
3:A4:22:A:H3’	3:A4:22:A:OP2	1.98	0.63
5:AB:46:PHE:CD2	5:AB:84:MET:HE3	2.33	0.63
6:AC:29:LYS:HD3	6:AC:267:TRP:CH2	2.34	0.63
20:AR:182:GLU:OE1	20:AR:183:GLU:N	2.32	0.63
27:AY:62:TYR:HB3	27:AY:65:GLN:CG	2.28	0.63
33:Ae:19:LYS:O	33:Ae:20:PHE:CG	2.52	0.63
33:Ae:97:ALA:O	33:Ae:122:VAL:HA	1.99	0.63
35:Ag:45:ALA:HB2	35:Ag:82:MET:HA	1.78	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:845:ALA:HB1	48:BB:912:MET:CA	2.29	0.63
48:BB:858:LYS:HE3	48:BB:917:THR:HG21	1.80	0.63
48:BB:1327:THR:HG22	48:BB:1370:GLU:CB	2.26	0.63
48:BB:1355:ILE:CG2	48:BB:1371:VAL:HG21	2.09	0.63
50:C1:342:C:H42	50:C1:343:A:N6	1.96	0.63
50:C1:539:C:H2'	50:C1:540:U:C6	2.33	0.63
50:C1:693:A:C3'	50:C1:694:G:H4'	2.28	0.63
50:C1:796:G:N2	50:C1:797:C:H5	1.96	0.63
50:C1:1016:U:C6	50:C1:1017:U:C5	2.86	0.63
50:C1:1085:C:H1'	50:C1:1086:G:H3'	1.81	0.63
50:C1:1351:G:H5"	50:C1:1351:G:H8	1.63	0.63
50:C1:1405:A:H2	50:C1:1442:U:H6	1.41	0.63
50:C1:1648:G:H8	67:CQ:125:ARG:HA	1.62	0.63
62:CL:5:GLN:NE2	62:CL:12:LYS:H	1.95	0.63
1:A2:156:C:H4'	37:Ai:26:HIS:CB	2.28	0.63
1:A2:1503:A:H3'	1:A2:1504:A:C5'	2.26	0.63
1:A2:1670:G:N7	19:AQ:13:VAL:HG13	2.13	0.63
1:A2:1743:G:C2'	1:A2:1744:A:H5'	2.27	0.63
1:A2:1823:U:H2'	1:A2:1824:G:H8	1.62	0.63
1:A2:1930:G:C5'	1:A2:1930:G:C8	2.81	0.63
1:A2:2709:G:H2'	1:A2:2710:C:C6	2.32	0.63
1:A2:3733:U:H3'	1:A2:3734:G:C8	2.32	0.63
1:A2:4031:U:C2'	1:A2:4032:C:C5'	2.67	0.63
1:A2:4746:C:H2'	1:A2:4747:C:C6	2.32	0.63
1:A2:4892:C:H42	8:AE:183:ARG:HA	1.62	0.63
1:A2:5018:G:H8	1:A2:5018:G:OP2	1.82	0.63
5:AB:17:LEU:HB3	5:AB:18:PRO:HD3	1.80	0.63
18:AP:67:VAL:HG12	18:AP:68:GLY:H	1.62	0.63
35:Ag:63:VAL:HG22	35:Ag:66:ARG:HH21	1.63	0.63
44:Ap:29:ILE:HG13	44:Ap:30:GLU:N	2.12	0.63
47:BA:32:U:H5'	67:CQ:146:ARG:C	2.17	0.63
48:BB:1065:ALA:HA	48:BB:1141:ALA:HB3	0.70	0.63
48:BB:1319:ARG:HD3	48:BB:1384:LYS:CB	2.29	0.63
49:BC:164:U:H4'	78:Cb:41:TYR:CE1	2.26	0.63
50:C1:520:A:C8	50:C1:521:A:C8	2.86	0.63
50:C1:1162:C:H2'	50:C1:1163:C:C6	2.33	0.63
50:C1:1332:A:H5'	50:C1:1332:A:H8	1.63	0.63
50:C1:1414:A:C2'	50:C1:1415:C:O4'	2.47	0.63
50:C1:1798:C:H4'	59:CI:2:GLY:O	1.98	0.63
51:CA:48:ILE:HG21	68:CR:105:MET:SD	2.38	0.63
53:CC:210:PRO:HG3	53:CC:236:PHE:CZ	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:CI:174:CYS:HB2	59:CI:190:LEU:HD21	1.80	0.63
1:A2:179:G:H2'	1:A2:180:C:O4'	1.99	0.63
1:A2:214:C:H6	1:A2:214:C:H3'	1.63	0.63
1:A2:730:G:H8	1:A2:730:G:O5'	1.81	0.63
1:A2:913:A:H1'	1:A2:916:A:H62	1.62	0.63
1:A2:1078:G:C2'	1:A2:1079:C:H5'	2.29	0.63
1:A2:1191:G:H4'	9:AF:63:GLN:OE1	1.98	0.63
1:A2:1249:G:H8	1:A2:1249:G:O5'	1.81	0.63
1:A2:1890:G:H1'	1:A2:1897:G:N1	2.14	0.63
1:A2:2003:A:N3	1:A2:2004:A:H1'	2.12	0.63
1:A2:4682:A:H2'	1:A2:4683:A:C8	2.34	0.63
1:A2:4855:C:H2'	1:A2:4856:G:C4'	2.27	0.63
2:A3:19:C:O2'	2:A3:20:A:H5'	1.98	0.63
5:AB:262:VAL:HG11	5:AB:268:ARG:HH11	1.64	0.63
8:AE:162:VAL:HG11	8:AE:175:VAL:HG13	1.81	0.63
18:AP:22:LEU:HD13	18:AP:90:PHE:CZ	2.34	0.63
20:AR:132:PHE:HA	20:AR:137:ILE:CD1	2.26	0.63
46:Au:151:LEU:HA	46:Au:159:PHE:CE1	2.34	0.63
50:C1:67:C:C5	57:CG:162:LEU:C	2.77	0.63
50:C1:235:A:O2'	50:C1:236:A:H8	1.76	0.63
50:C1:300:U:H2'	50:C1:301:A:H8	1.63	0.63
50:C1:838:G:C8	75:CY:9:THR:N	2.63	0.63
50:C1:849:A:H2'	50:C1:850:C:C6	2.31	0.63
54:CD:74:GLN:O	54:CD:78:GLY:HA2	1.98	0.63
55:CE:36:HIS:CD2	55:CE:85:GLY:HA3	2.33	0.63
71:CU:32:LEU:CD2	71:CU:85:HIS:HB2	2.28	0.63
73:CW:86:LEU:HD22	73:CW:113:HIS:HE1	1.63	0.63
1:A2:1:C:C2	2:A3:157:U:C2	2.86	0.63
1:A2:220:G:H4'	1:A2:222:G:N7	2.14	0.63
1:A2:476:C:H6	1:A2:476:C:C5'	2.09	0.63
1:A2:482:G:H2'	1:A2:484:G:C8	2.33	0.63
1:A2:644:U:H2'	1:A2:645:C:C6	2.33	0.63
1:A2:714:G:H4'	6:AC:342:ARG:NH2	2.12	0.63
1:A2:1783:A:H5"	1:A2:1785:G:C8	2.34	0.63
1:A2:1918:G:H8	1:A2:1918:G:OP2	1.80	0.63
1:A2:2526:G:H5"	1:A2:2527:G:H5"	1.78	0.63
1:A2:2549:C:H2'	1:A2:2550:A:C5'	2.24	0.63
1:A2:2642:U:C5	20:AR:124:TYR:CE1	2.87	0.63
1:A2:2693:C:H2'	1:A2:2694:G:H8	1.64	0.63
1:A2:4025:C:C6	1:A2:4025:C:C3'	2.81	0.63
1:A2:4232:G:N2	1:A2:4296:A:C2	2.67	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AC:209:ILE:HD12	6:AC:211:TYR:CE2	2.34	0.63
13:AJ:36:ALA:HB3	13:AJ:70:VAL:HG21	1.79	0.63
47:BA:30:G:C5'	50:C1:1525:C:H5"	2.18	0.63
48:BB:951:THR:O	48:BB:955:ILE:HG23	1.99	0.63
49:BC:66:A:H8	49:BC:66:A:O5'	1.82	0.63
50:C1:77:A:H1'	50:C1:78:C:OP1	1.99	0.63
50:C1:132:U:H5'	50:C1:133:C:C5	2.34	0.63
50:C1:615:C:H2'	50:C1:616:A:H5'	1.79	0.63
50:C1:885:U:O2'	50:C1:886:A:H2'	1.99	0.63
50:C1:1284:A:C8	50:C1:1286:G:C5'	2.82	0.63
50:C1:1326:U:H4'	50:C1:1327:G:C5'	2.28	0.63
50:C1:1404:U:H2'	50:C1:1406:G:N7	2.14	0.63
51:CA:180:ARG:HG2	51:CA:184:ARG:NH1	2.13	0.63
1:A2:33:A:H8	1:A2:33:A:H5"	1.62	0.63
1:A2:96:U:C6	1:A2:96:U:H5"	2.33	0.63
1:A2:381:C:C6	1:A2:381:C:OP1	2.52	0.63
1:A2:441:G:H1'	1:A2:1274:A:H5"	1.81	0.63
1:A2:502:C:H2'	1:A2:503:U:C6	2.34	0.63
1:A2:926:G:H5"	9:AF:148:LYS:CG	2.29	0.63
1:A2:1218:A:C8	1:A2:1218:A:C5'	2.79	0.63
1:A2:2516:C:H4'	35:Ag:66:ARG:HH11	1.63	0.63
1:A2:2673:A:H4'	1:A2:2674:A:C5'	2.28	0.63
1:A2:3585:U:H1'	1:A2:3586:G:P	2.39	0.63
1:A2:3725:A:O2'	1:A2:3726:G:H5'	1.98	0.63
1:A2:4740:U:H4'	1:A2:4741:C:OP1	1.98	0.63
1:A2:4861:C:C2'	1:A2:4862:G:H5'	2.28	0.63
1:A2:4934:A:C8	5:AB:228:TYR:HE1	2.15	0.63
6:AC:357:ALA:O	6:AC:361:LEU:HG	1.99	0.63
15:AM:31:ILE:CD1	21:AS:100:LEU:HD11	2.27	0.63
45:At:30:ASN:O	45:At:48:THR:HB	1.99	0.63
46:Au:60:VAL:HG22	46:Au:101:THR:HB	1.80	0.63
48:BB:1076:GLU:HG2	48:BB:1202:LEU:HB3	1.81	0.63
50:C1:431:G:H2'	50:C1:432:G:H8	1.62	0.63
50:C1:438:G:H2'	50:C1:439:A:C8	2.33	0.63
50:C1:1340:U:H3'	50:C1:1341:C:C6	2.33	0.63
50:C1:1604:G:H2'	50:C1:1605:G:H5'	1.81	0.63
50:C1:1864:U:O2'	50:C1:1866:A:H2	1.80	0.63
1:A2:284:G:C4'	1:A2:285:G:C8	2.72	0.63
1:A2:445:U:H3'	1:A2:446:C:C6	2.34	0.63
1:A2:446:C:H2'	1:A2:447:C:C6	2.34	0.63
1:A2:698:G:H2'	1:A2:699:A:C8	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1139:U:H2'	1:A2:1140:C:H6	1.63	0.63
1:A2:1374:G:H22	1:A2:1449:G:H4'	1.63	0.63
1:A2:1663:A:H5'	1:A2:1664:G:OP2	1.98	0.63
1:A2:2747:C:H2'	1:A2:2748:G:C8	2.32	0.63
1:A2:3741:U:OP1	47:BA:14:A:OP1	2.16	0.63
1:A2:4588:U:H2'	1:A2:4589:U:C6	2.34	0.63
1:A2:4849:A:H3'	15:AM:132:LYS:HG3	1.81	0.63
3:A4:32:A:H2	3:A4:41:G:C6	2.16	0.63
3:A4:63:C:C1'	3:A4:64:G:H5"	2.29	0.63
7:AD:86:TYR:CE1	7:AD:247:ILE:HA	2.34	0.63
26:AX:64:SER:HB3	36:Ah:69:LEU:HD13	1.81	0.63
47:BA:34:G:N7	50:C1:1701:C:C5	2.66	0.63
48:BB:1381:GLU:HB2	48:BB:1383:PRO:CD	2.29	0.63
50:C1:565:G:H2'	50:C1:565:G:N3	2.14	0.63
50:C1:571:U:H2'	50:C1:572:U:O4'	1.99	0.63
50:C1:602:G:H3'	50:C1:603:C:H5"	1.80	0.63
50:C1:657:U:H6	50:C1:657:U:H3'	1.64	0.63
50:C1:753:C:H3'	50:C1:754:G:C4'	2.29	0.63
50:C1:1284:A:C5	50:C1:1286:G:C5'	2.81	0.63
50:C1:1443:C:H2'	50:C1:1444:U:H5'	1.79	0.63
50:C1:1454:A:N6	50:C1:1467:C:C5	2.67	0.63
50:C1:1832:A:C3'	50:C1:1833:C:H5"	2.29	0.63
50:C1:1861:G:H4'	77:Ca:2:THR:O	1.99	0.63
51:CA:205:ARG:H	51:CA:208:GLU:HB3	1.64	0.63
62:CL:61:PRO:HD3	62:CL:141:ASN:ND2	2.13	0.63
1:A2:244:G:H2'	1:A2:245:C:C6	2.34	0.63
1:A2:1197:G:H2'	1:A2:1198:G:C8	2.34	0.63
1:A2:2702:A:H4'	1:A2:2703:G:C5'	2.29	0.63
1:A2:3686:A:H1'	1:A2:4139:G:H5'	1.81	0.63
1:A2:3866:G:H5'	5:AB:254:ILE:HD13	1.81	0.63
1:A2:4651:A:H4'	11:AH:71:ARG:HD2	1.79	0.63
2:A3:105:C:H1'	2:A3:106:G:OP2	1.99	0.63
8:AE:188:ARG:HD3	8:AE:188:ARG:N	2.13	0.63
19:AQ:163:THR:O	19:AQ:164:LYS:HB3	1.99	0.63
25:AW:3:VAL:HG11	25:AW:12:LYS:HE2	1.80	0.63
31:Ac:17:ARG:O	31:Ac:21:VAL:HG23	1.99	0.63
46:Au:203:THR:HG22	46:Au:204:MET:HE2	1.81	0.63
50:C1:321:C:H2'	50:C1:322:C:H6	1.64	0.63
50:C1:869:A:N3	50:C1:915:G:H1'	2.14	0.63
50:C1:902:G:H2'	50:C1:903:A:H8	1.64	0.63
50:C1:1023:A:H5'	64:CN:3:ARG:HH21	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1462:U:O2'	50:C1:1463:U:H3'	1.99	0.63
57:CG:188:LYS:HA	57:CG:191:ARG:NH2	2.14	0.63
60:CJ:39:ASN:HA	81:Ce:34:ARG:CZ	2.29	0.63
83:Cg:292:SER:HB2	83:Cg:297:THR:O	1.99	0.63
1:A2:15:A:C2	2:A3:143:G:C2	2.87	0.62
1:A2:215:A:H4'	1:A2:216:G:OP1	1.98	0.62
1:A2:417:A:H2'	1:A2:418:A:C8	2.28	0.62
1:A2:477:C:H1'	1:A2:478:G:OP2	1.99	0.62
1:A2:663:G:H2'	1:A2:664:C:C6	2.34	0.62
1:A2:926:G:O2'	1:A2:929:U:C6	2.51	0.62
1:A2:1056:C:H42	1:A2:1204:G:N2	1.95	0.62
1:A2:1377:A:H8	1:A2:1377:A:O5'	1.82	0.62
1:A2:1456:C:O5'	1:A2:1456:C:H6	1.81	0.62
1:A2:2320:G:N7	6:AC:54:VAL:HG11	2.14	0.62
1:A2:2331:G:H2'	1:A2:2332:G:H8	1.64	0.62
1:A2:3694:G:C2	1:A2:3696:A:H2'	2.34	0.62
1:A2:3781:C:C3'	1:A2:3782:A:H5"	2.26	0.62
2:A3:105:C:H4'	2:A3:106:G:C5'	2.29	0.62
10:AG:38:ASN:O	10:AG:44:ASP:HB2	1.98	0.62
15:AM:112:VAL:HA	17:AO:197:LYS:CE	2.27	0.62
21:AS:101:THR:HG23	21:AS:104:GLY:H	1.63	0.62
26:AX:80:PRO:HG2	26:AX:155:ILE:HD11	1.81	0.62
48:BB:1116:ARG:HD3	50:C1:488:U:C5	2.33	0.62
48:BB:1353:THR:OG1	48:BB:1374:LYS:HE2	1.99	0.62
48:BB:1422:GLN:O	48:BB:1425:VAL:HG12	1.99	0.62
50:C1:591:U:H2'	50:C1:591:U:O2	1.99	0.62
50:C1:1016:U:H1'	50:C1:1017:U:O5'	1.99	0.62
50:C1:1057:C:H2'	50:C1:1059:G:N7	2.14	0.62
50:C1:1225:U:C2'	50:C1:1226:G:H5'	2.29	0.62
50:C1:1375:G:H2'	50:C1:1376:A:H5'	1.80	0.62
50:C1:1402:A:C2'	50:C1:1403:C:C5	2.82	0.62
51:CA:205:ARG:HG3	51:CA:207:PRO:HD2	1.81	0.62
70:CT:112:MET:HG2	70:CT:127:GLY:HA2	1.81	0.62
82:Cf:105:TYR:HA	82:Cf:117:LEU:HD12	1.80	0.62
83:Cg:109:LEU:CD2	83:Cg:125:ARG:HG3	2.28	0.62
1:A2:240:A:C2'	1:A2:241:G:C8	2.81	0.62
1:A2:948:A:H2'	1:A2:949:G:C4	2.33	0.62
1:A2:957:G:H4'	1:A2:1218:A:C4'	2.29	0.62
1:A2:1402:G:H2'	1:A2:1403:U:C6	2.34	0.62
1:A2:1740:G:H2'	1:A2:1741:C:H6	1.61	0.62
1:A2:3779:C:C6	1:A2:3779:C:C3'	2.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4189:U:H5”	1:A2:4189:U:C6	2.33	0.62
1:A2:4220:U:H1’	13:AJ:131:TYR:CE1	2.34	0.62
1:A2:4233:A:H5”	1:A2:4233:A:H8	1.64	0.62
1:A2:4383:U:H3’	1:A2:4383:U:C6	2.34	0.62
1:A2:4837:U:H6	8:AE:274:VAL:CG1	2.12	0.62
3:A4:74:A:H4’	3:A4:75:G:O5’	1.98	0.62
10:AG:106:THR:HB	10:AG:195:HIS:CG	2.33	0.62
47:BA:20:U:C2’	47:BA:21:A:H5’	2.29	0.62
48:BB:896:THR:HB	48:BB:900:LYS:HD2	1.81	0.62
48:BB:1193:LYS:CB	48:BB:1218:PRO:HB2	2.30	0.62
48:BB:1201:THR:HG22	48:BB:1203:GLY:N	2.15	0.62
48:BB:1400:ILE:HG21	48:BB:1421:TRP:CZ3	2.34	0.62
50:C1:920:A:C8	50:C1:922:A:C8	2.87	0.62
50:C1:1291:A:O5’	50:C1:1291:A:H8	1.82	0.62
50:C1:1298:G:H4’	66:CP:78:THR:CA	2.28	0.62
50:C1:1587:G:H1	70:CT:70:ALA:HB1	1.63	0.62
50:C1:1677:U:H2’	50:C1:1677:U:O2	1.98	0.62
62:CL:47:PRO:HD2	62:CL:62:PHE:CE1	2.34	0.62
83:Cg:144:ASP:HB3	83:Cg:177:TRP:CZ3	2.34	0.62
1:A2:14:C:C4’	26:AX:56:ARG:HA	2.29	0.62
1:A2:106:A:H8	1:A2:106:A:O5’	1.82	0.62
1:A2:418:A:N6	2:A3:7:U:H3	1.96	0.62
1:A2:1377:A:O4’	1:A2:1447:C:H4’	1.98	0.62
1:A2:1748:G:P	1:A2:1748:G:C8	2.92	0.62
1:A2:2310:G:C8	1:A2:2310:G:C5’	2.82	0.62
1:A2:2401:G:H3’	1:A2:2401:G:C8	2.35	0.62
1:A2:2498:G:H5’	1:A2:2617:G:H1’	1.81	0.62
1:A2:3825:A:H4’	18:AP:85:LYS:CG	2.29	0.62
1:A2:3938:G:H1’	46:Au:160:HIS:CB	2.23	0.62
1:A2:4204:A:H1’	1:A2:4228:A:H4’	1.81	0.62
1:A2:4837:U:C4’	1:A2:4838:C:H5’	2.29	0.62
1:A2:4903:C:C2’	1:A2:4904:G:H5’	2.29	0.62
2:A3:126:C:H5	2:A3:127:U:C2	2.17	0.62
3:A4:47:G:H5’	7:AD:94:ASN:CB	2.29	0.62
10:AG:64:GLN:O	10:AG:67:ARG:HG2	2.00	0.62
48:BB:829:LYS:NZ	48:BB:1062:LYS:HZ2	1.90	0.62
48:BB:844:ARG:CD	48:BB:1143:GLN:OE1	2.44	0.62
48:BB:1170:ILE:CD1	48:BB:1171:PRO:HD2	2.26	0.62
50:C1:5:U:O2’	50:C1:602:G:H4’	1.98	0.62
50:C1:58:C:H5”	50:C1:499:G:N2	2.13	0.62
50:C1:313:A:H5”	57:CG:191:ARG:NH1	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:925:G:H1	50:C1:1017:U:H3	1.48	0.62
50:C1:1021:U:H5”	64:CN:128:TYR:HE1	1.63	0.62
50:C1:1255:G:C5’	50:C1:1256:G:H8	2.11	0.62
50:C1:1587:G:C5	70:CT:74:SER:HB3	2.35	0.62
50:C1:1714:U:H3’	50:C1:1715:A:C8	2.34	0.62
51:CA:81:ASN:OD1	51:CA:205:ARG:HD2	1.99	0.62
63:CM:52:LEU:HD13	63:CM:62:VAL:HG13	1.79	0.62
1:A2:134:G:H5”	1:A2:135:G:N1	2.14	0.62
1:A2:379:A:C2’	1:A2:393:A:H61	2.11	0.62
1:A2:441:G:H1’	1:A2:1274:A:H4’	1.79	0.62
1:A2:959:C:H3’	1:A2:1215:G:N2	2.14	0.62
1:A2:1161:C:H6	1:A2:1161:C:H5”	1.62	0.62
1:A2:1162:C:H2’	1:A2:1163:C:C5	2.34	0.62
1:A2:1409:C:H5”	19:AQ:42:THR:HG22	1.80	0.62
1:A2:1533:A:H2’	1:A2:1533:A:N3	2.13	0.62
1:A2:1833:G:H2’	1:A2:1834:C:C6	2.35	0.62
1:A2:2509:C:H5”	26:AX:125:ASN:ND2	2.14	0.62
1:A2:2666:C:H2’	1:A2:2667:C:C6	2.34	0.62
1:A2:3908:G:OP2	1:A2:3908:G:C8	2.52	0.62
1:A2:4349:C:H2’	1:A2:4350:A:C8	2.35	0.62
1:A2:4711:U:P	34:Af:102:ARG:HD2	2.40	0.62
1:A2:4819:U:H2’	1:A2:4820:C:C6	2.34	0.62
1:A2:4825:G:H4’	1:A2:4826:C:C5’	2.29	0.62
14:AL:18:TRP:O	14:AL:22:VAL:HG23	1.98	0.62
37:Ai:40:VAL:O	37:Ai:44:ILE:HG12	1.99	0.62
48:BB:884:ALA:HB2	48:BB:915:ILE:HD13	1.81	0.62
48:BB:1001:PHE:HZ	48:BB:1036:PRO:CB	2.12	0.62
48:BB:1008:ILE:HG23	48:BB:1034:LEU:HD13	1.81	0.62
48:BB:1315:ILE:HB	48:BB:1324:MET:CE	2.21	0.62
50:C1:185:G:H2’	50:C1:186:C:C5	2.33	0.62
50:C1:526:A:C2’	60:CJ:128:VAL:HG22	2.29	0.62
50:C1:1384:C:C2’	50:C1:1385:G:H5’	2.29	0.62
50:C1:1389:C:O2’	50:C1:1390:U:H6	1.83	0.62
50:C1:1399:C:H5’	50:C1:1399:C:H6	1.63	0.62
50:C1:1672:U:H2’	50:C1:1673:U:H5”	1.80	0.62
59:CI:120:PRO:HG2	59:CI:126:GLY:O	2.00	0.62
1:A2:409:A:C2	2:A3:17:A:H1’	2.34	0.62
1:A2:700:C:O2’	8:AE:135:GLN:HA	1.99	0.62
1:A2:708:G:H2’	1:A2:709:G:C8	2.33	0.62
1:A2:717:G:C8	1:A2:717:G:H5’	2.34	0.62
1:A2:1048:G:H5”	1:A2:1215:G:C8	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1256:C:H2'	1:A2:1257:G:C5'	2.28	0.62
1:A2:1420:U:H6	1:A2:1420:U:C3'	2.13	0.62
1:A2:1424:G:O2'	1:A2:1425:U:H5'	1.99	0.62
1:A2:1664:G:H5'	22:AT:81:LYS:HE3	1.81	0.62
1:A2:2326:A:H5'	1:A2:2327:U:H5"	1.81	0.62
1:A2:2524:G:H21	1:A2:2526:G:H1'	1.63	0.62
1:A2:2531:U:C2'	1:A2:2532:G:H5'	2.29	0.62
1:A2:2595:G:H2'	1:A2:2596:G:H5'	1.81	0.62
1:A2:2610:U:H2'	1:A2:2611:C:O4'	2.00	0.62
1:A2:2847:A:O2'	1:A2:2848:A:H5'	2.00	0.62
1:A2:3604:A:H61	44:Ap:18:TYR:H	1.48	0.62
1:A2:3859:A:H2'	1:A2:3860:A:H5'	1.79	0.62
1:A2:3888:C:H6	1:A2:3888:C:O5'	1.82	0.62
1:A2:3911:A:C2'	1:A2:3912:A:H5'	2.29	0.62
1:A2:4230:C:H5'	1:A2:4231:A:H5'	1.81	0.62
1:A2:4507:C:H3'	1:A2:4508:A:C5'	2.30	0.62
1:A2:4510:G:C2'	1:A2:4511:U:H5'	2.28	0.62
1:A2:4545:U:H2'	1:A2:4546:G:C8	2.35	0.62
1:A2:4813:C:H4'	1:A2:4814:C:OP1	1.98	0.62
1:A2:4838:C:OP2	1:A2:4839:G:H5'	2.00	0.62
1:A2:4975:G:H2'	1:A2:4976:C:C6	2.33	0.62
5:AB:41:VAL:HA	5:AB:187:GLY:HA3	1.80	0.62
5:AB:73:VAL:HG22	24:AV:93:GLY:CA	2.29	0.62
11:AH:41:ILE:HG13	11:AH:73:ILE:CD1	2.30	0.62
13:AJ:119:TYR:HB3	69:CS:14:ARG:NH2	2.14	0.62
28:AZ:10:VAL:HG21	28:AZ:87:VAL:HG23	1.81	0.62
29:Aa:7:LYS:O	29:Aa:10:LYS:HB3	1.99	0.62
50:C1:134:C:H3'	50:C1:135:U:C4'	2.28	0.62
50:C1:370:G:H4'	50:C1:371:A:OP1	1.97	0.62
50:C1:649:U:H2'	50:C1:650:A:C8	2.34	0.62
50:C1:879:C:H2'	50:C1:880:G:C8	2.35	0.62
50:C1:886:A:H1'	50:C1:887:U:H5'	1.80	0.62
50:C1:1287:A:C8	82:Cf:99:LYS:HB3	2.34	0.62
50:C1:1566:G:O6	70:CT:97:LYS:HB2	2.00	0.62
50:C1:1673:U:H6	50:C1:1673:U:H5"	1.64	0.62
52:CB:205:TYR:CG	52:CB:206:PRO:HD2	2.34	0.62
53:CC:98:LEU:CD2	53:CC:101:SER:HB2	2.28	0.62
1:A2:64:A:H8	1:A2:64:A:O5'	1.83	0.62
1:A2:212:C:H1'	1:A2:213:C:P	2.40	0.62
1:A2:254:G:N2	1:A2:255:C:H5	1.98	0.62
1:A2:681:U:H2'	1:A2:682:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1367:A:C4'	1:A2:1368:A:H5'	2.29	0.62
1:A2:2061:C:H41	1:A2:2249:G:H22	1.47	0.62
1:A2:2319:G:O2'	1:A2:2320:G:H5'	1.98	0.62
1:A2:2441:C:O2'	1:A2:2442:C:H5'	2.00	0.62
1:A2:2588:A:H5'	1:A2:2665:G:H5"	1.82	0.62
1:A2:3775:G:HO2'	50:C1:1719:A:C1'	2.11	0.62
1:A2:4254:C:C5'	1:A2:4254:C:H6	2.13	0.62
1:A2:4438:G:H5'	11:AH:175:PHE:HE2	1.64	0.62
12:AI:182:GLU:HA	12:AI:185:VAL:HG12	1.81	0.62
31:Ac:51:ASN:O	44:Ap:42:CYS:HA	2.00	0.62
48:BB:1390:PHE:CE1	48:BB:1396:LEU:HD11	2.34	0.62
50:C1:190:G:H4'	59:CI:116:HIS:O	1.99	0.62
50:C1:412:G:N7	50:C1:413:G:H1'	2.14	0.62
50:C1:685:A:H2'	50:C1:686:U:H5'	1.81	0.62
50:C1:1648:G:H8	67:CQ:125:ARG:CA	2.12	0.62
1:A2:219:C:C4	1:A2:220:G:N7	2.67	0.62
1:A2:269:G:H8	1:A2:269:G:H5"	1.64	0.62
1:A2:354:A:H4'	1:A2:355:G:OP1	2.00	0.62
1:A2:1565:G:H3'	1:A2:1566:G:C8	2.35	0.62
1:A2:1912:A:H4'	1:A2:2037:C:OP1	1.99	0.62
1:A2:2352:A:H3'	1:A2:2353:A:H8	1.64	0.62
1:A2:2549:C:O3'	1:A2:2736:G:C8	2.53	0.62
1:A2:2561:G:H1'	1:A2:2562:C:O5'	2.00	0.62
1:A2:3647:G:OP1	1:A2:3647:G:H8	1.83	0.62
1:A2:3648:U:H4'	1:A2:3649:U:OP2	1.98	0.62
1:A2:3828:G:H4'	18:AP:139:TYR:CE1	2.34	0.62
1:A2:4734:C:H2'	1:A2:4735:G:H5'	1.80	0.62
5:AB:77:THR:HG21	5:AB:336:CYS:HA	1.81	0.62
6:AC:209:ILE:HG22	6:AC:251:ILE:HB	1.82	0.62
13:AJ:55:TYR:CE1	47:BA:53:G:OP2	2.52	0.62
15:AM:119:ARG:HA	17:AO:190:ASP:HB3	1.81	0.62
37:Ai:33:LEU:O	37:Ai:34:THR:HB	1.98	0.62
48:BB:1355:ILE:CG1	48:BB:1373:VAL:CG2	2.75	0.62
50:C1:71:G:H22	50:C1:80:G:H22	1.47	0.62
50:C1:367:U:C6	50:C1:367:U:H5'	2.35	0.62
50:C1:398:A:C4'	50:C1:399:C:H3'	2.29	0.62
50:C1:1402:A:OP2	71:CU:51:LYS:HB3	1.99	0.62
50:C1:1556:A:H2	50:C1:1557:C:H5	1.46	0.62
50:C1:1835:A:H2'	50:C1:1835:A:N3	2.14	0.62
55:CE:173:ILE:HD13	55:CE:230:ASN:HB2	1.82	0.62
58:CH:4:SER:N	58:CH:24:SER:HG	1.97	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:CW:14:ILE:HD13	73:CW:25:VAL:HG11	1.82	0.62
74:CX:61:GLN:HB3	74:CX:62:PRO:HD3	1.80	0.62
1:A2:166:G:H21	1:A2:167:C:C1’	2.13	0.62
1:A2:2523:G:H2’	1:A2:2524:G:O4’	2.00	0.62
1:A2:2573:G:C4’	35:Ag:46:CYS:HA	2.30	0.62
1:A2:2802:A:H5”	1:A2:2802:A:C8	2.31	0.62
1:A2:4358:C:C2’	1:A2:4359:U:H5’	2.30	0.62
1:A2:4589:U:H3	1:A2:4629:A:H61	1.47	0.62
1:A2:4833:C:H2’	1:A2:4834:C:H6	1.63	0.62
2:A3:62:A:H4’	2:A3:63:U:O5’	1.99	0.62
2:A3:109:C:H3’	38:Aj:20:ARG:HH21	1.63	0.62
19:AQ:88:ASP:OD2	19:AQ:108:ARG:HB3	1.99	0.62
21:AS:110:TYR:CE2	21:AS:126:ILE:HD11	2.34	0.62
45:At:54:ALA:O	45:At:63:VAL:HB	1.98	0.62
48:BB:1150:LYS:HD3	50:C1:477:G:O3’	1.99	0.62
48:BB:1174:LYS:HE2	48:BB:1174:LYS:C	2.24	0.62
50:C1:435:A:N3	50:C1:450:C:H5	1.98	0.62
50:C1:746:C:C6	50:C1:749:U:H4’	2.35	0.62
50:C1:1529:C:H2’	50:C1:1530:U:H5’	1.81	0.62
50:C1:1549:U:C2’	50:C1:1550:G:H5’	2.30	0.62
50:C1:1562:C:H5’	70:CT:71:GLY:HA3	1.81	0.62
57:CG:48:TYR:CD2	57:CG:116:LYS:HA	2.35	0.62
74:CX:132:ALA:O	74:CX:138:LYS:HB2	1.99	0.62
77:Ca:44:ILE:HG13	77:Ca:45:VAL:HG23	1.81	0.62
1:A2:462:A:H2’	1:A2:462:A:N3	2.15	0.62
1:A2:476:C:P	1:A2:658:G:H5’	2.40	0.62
1:A2:633:G:H2’	1:A2:634:C:C6	2.35	0.62
1:A2:1254:A:H3’	1:A2:1255:G:C5’	2.30	0.62
1:A2:2395:A:H2’	1:A2:2396:C:C6	2.35	0.62
1:A2:2579:G:H2’	1:A2:2580:C:C6	2.34	0.62
1:A2:2873:G:O5’	1:A2:2873:G:H8	1.83	0.62
1:A2:4051:U:O2’	1:A2:4052:G:H3’	2.00	0.62
1:A2:4156:G:H8	1:A2:4156:G:P	2.23	0.62
1:A2:4437:A:C2	1:A2:4438:G:C5	2.88	0.62
1:A2:4814:C:H2’	1:A2:4815:G:H5”	1.81	0.62
3:A4:28:C:H3’	3:A4:29:C:O4’	1.99	0.62
6:AC:141:GLY:CA	45:At:15:SER:HB3	2.30	0.62
8:AE:222:LEU:HB3	8:AE:229:GLU:O	1.99	0.62
13:AJ:110:GLN:O	13:AJ:111:GLU:HB2	1.99	0.62
17:AO:172:LYS:HG2	17:AO:176:ARG:NH1	2.14	0.62
48:BB:831:ARG:CD	48:BB:1066:HIS:CG	2.78	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1157:ALA:HB1	48:BB:1202:LEU:HD21	1.79	0.62
50:C1:367:U:H5'	50:C1:367:U:H6	1.64	0.62
50:C1:1101:U:H2'	50:C1:1102:G:N7	2.15	0.62
50:C1:1204:A:H8	50:C1:1204:A:O5'	1.81	0.62
50:C1:1404:U:H4'	50:C1:1405:A:OP2	2.00	0.62
50:C1:1454:A:N6	50:C1:1467:C:H5	1.96	0.62
50:C1:1540:G:H2'	50:C1:1541:G:O4'	2.00	0.62
52:CB:134:LEU:HD12	52:CB:219:LYS:HB2	1.82	0.62
52:CB:171:ILE:HD13	52:CB:197:ILE:HD13	1.82	0.62
53:CC:167:ARG:HA	53:CC:181:PRO:CD	2.30	0.62
75:CY:35:VAL:CG2	75:CY:40:ILE:HD11	2.28	0.62
82:Cf:100:LEU:HD23	82:Cf:100:LEU:H	1.63	0.62
1:A2:71:C:H5"	1:A2:72:C:C5	2.35	0.62
1:A2:457:A:N3	1:A2:458:U:H5'	2.14	0.62
1:A2:897:U:O2'	1:A2:898:U:H5'	2.00	0.62
1:A2:943:G:H1'	1:A2:944:A:C5'	2.30	0.62
1:A2:961:C:C3'	1:A2:962:G:C8	2.83	0.62
1:A2:1140:C:H2'	1:A2:1141:G:C8	2.35	0.62
1:A2:1159:U:O2'	7:AD:293:ARG:NH2	2.33	0.62
1:A2:1828:A:H3'	1:A2:1829:G:C8	2.35	0.62
1:A2:2479:G:P	1:A2:4052:G:H22	2.23	0.62
1:A2:2551:G:N2	28:AZ:111:ARG:HB2	2.14	0.62
1:A2:2629:G:H1	35:Ag:54:ARG:HG2	1.65	0.62
1:A2:2865:G:O4'	1:A2:3587:C:H1'	2.00	0.62
1:A2:3887:G:H2'	1:A2:3888:C:C6	2.35	0.62
1:A2:4166:C:H41	22:AT:2:THR:HG22	1.65	0.62
1:A2:4387:G:H4'	1:A2:4387:G:OP1	2.00	0.62
1:A2:4851:G:H2'	1:A2:4852:G:H8	1.65	0.62
2:A3:129:C:H2'	2:A3:130:C:H5	1.62	0.62
6:AC:13:GLU:HA	6:AC:174:LEU:HD11	1.82	0.62
10:AG:162:ASP:HB3	10:AG:163:PRO:HD2	1.81	0.62
16:AN:139:HIS:HB3	16:AN:142:ILE:HD13	1.81	0.62
17:AO:163:LYS:O	17:AO:166:ILE:HG12	1.99	0.62
27:AY:2:LYS:HD3	27:AY:9:SER:OG	2.00	0.62
48:BB:841:GLU:HB3	48:BB:1140:GLU:OE2	1.99	0.62
48:BB:1367:LYS:C	48:BB:1369:GLN:H	2.07	0.62
50:C1:38:A:H4'	60:CJ:5:ARG:HE	1.64	0.62
50:C1:353:C:H5'	62:CL:71:ARG:NH2	2.14	0.62
50:C1:1023:A:H5'	64:CN:3:ARG:NH2	2.15	0.62
50:C1:1287:A:H4'	50:C1:1312:G:C2	2.35	0.62
50:C1:1445:U:H4'	71:CU:57:PRO:HB3	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:CQ:134:GLY:HA3	67:CQ:140:ARG:HA	1.82	0.62
76:CZ:94:LYS:O	76:CZ:96:LEU:N	2.33	0.62
77:Ca:87:ARG:HG2	77:Ca:91:ALA:HB3	1.81	0.62
1:A2:956:C:H2'	1:A2:957:G:H5'	1.82	0.61
1:A2:1161:C:C6	1:A2:1161:C:OP2	2.53	0.61
1:A2:1440:C:H2'	1:A2:1441:A:H8	1.65	0.61
1:A2:1732:G:H4'	1:A2:1733:U:OP2	1.99	0.61
1:A2:1748:G:H2'	1:A2:1749:A:C5'	2.30	0.61
1:A2:1903:G:H2'	1:A2:1904:C:H5'	1.82	0.61
1:A2:1930:G:H8	1:A2:1930:G:H5'	1.64	0.61
1:A2:2580:C:C4	1:A2:2581:C:N4	2.68	0.61
1:A2:2638:U:H3'	1:A2:2639:G:H5'	1.80	0.61
1:A2:3821:A:H5"	1:A2:3822:U:C5	2.34	0.61
1:A2:4933:G:H5'	5:AB:21:ARG:HH12	1.65	0.61
6:AC:74:ALA:C	6:AC:76:ILE:H	2.08	0.61
6:AC:163:LYS:O	6:AC:166:GLU:HG2	2.00	0.61
14:AL:86:ILE:HD11	14:AL:90:VAL:HG11	1.81	0.61
15:AM:119:ARG:HA	17:AO:190:ASP:CB	2.30	0.61
38:Aj:54:LYS:O	38:Aj:58:THR:HG23	1.99	0.61
48:BB:811:ASP:O	48:BB:1171:PRO:HG3	2.00	0.61
48:BB:817:GLU:HB3	48:BB:1170:ILE:HG21	1.81	0.61
48:BB:825:ARG:HH21	48:BB:1176:GLU:HG2	1.65	0.61
48:BB:1072:ALA:O	48:BB:1089:VAL:HG21	1.99	0.61
48:BB:1322:ILE:HD11	48:BB:1375:ILE:HB	1.81	0.61
50:C1:455:A:H2'	50:C1:456:C:C6	2.34	0.61
50:C1:569:A:C5	50:C1:570:C:C5	2.88	0.61
50:C1:682:U:H3	50:C1:1023:A:H61	1.47	0.61
50:C1:751:G:C4	50:C1:752:G:C8	2.88	0.61
50:C1:983:A:C2'	50:C1:984:C:H5'	2.28	0.61
50:C1:1307:U:C2'	50:C1:1308:U:C5'	2.77	0.61
50:C1:1561:A:O4'	50:C1:1583:C:H4'	2.00	0.61
50:C1:1865:C:C6	77:Ca:92:ARG:HB3	2.34	0.61
1:A2:96:U:C6	1:A2:96:U:C5'	2.84	0.61
1:A2:1284:C:H3'	1:A2:1285:C:H5	1.63	0.61
1:A2:1484:C:H2'	1:A2:1485:G:C8	2.35	0.61
1:A2:1610:A:H8	1:A2:1610:A:O5'	1.83	0.61
1:A2:2340:A:H3'	1:A2:2341:G:C8	2.35	0.61
1:A2:2706:C:H2'	1:A2:2707:U:C6	2.35	0.61
1:A2:3735:A:H62	50:C1:1708:C:C2'	1.93	0.61
1:A2:3917:C:O2'	37:Ai:63:VAL:CG2	2.47	0.61
1:A2:4051:U:H2'	1:A2:4052:G:H5"	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4400:G:H2'	1:A2:4401:A:H8	1.64	0.61
1:A2:4426:C:C2'	1:A2:4427:A:H5'	2.29	0.61
1:A2:4551:U:C6	1:A2:4551:U:H5"	2.35	0.61
1:A2:4701:G:H8	1:A2:4701:G:H5'	1.65	0.61
1:A2:4828:G:H3'	1:A2:4830:G:OP1	1.99	0.61
5:AB:77:THR:HG23	5:AB:335:GLY:O	2.00	0.61
6:AC:188:ARG:HH12	6:AC:202:ILE:HD12	1.64	0.61
14:AL:169:ILE:HG12	29:Aa:98:ALA:CB	2.26	0.61
17:AO:182:GLU:HA	17:AO:187:LYS:HD3	1.80	0.61
33:Ae:22:ARG:HD2	33:Ae:31:ILE:HG23	1.82	0.61
46:Au:55:GLN:HB3	46:Au:162:ARG:HH22	1.65	0.61
48:BB:1209:LEU:HD23	48:BB:1213:LYS:HE2	1.81	0.61
50:C1:71:G:N2	50:C1:72:C:H1'	2.15	0.61
50:C1:928:G:O2'	50:C1:929:G:H8	1.81	0.61
50:C1:1389:C:O2'	50:C1:1390:U:C6	2.52	0.61
50:C1:1416:C:C4	50:C1:1431:G:N2	2.68	0.61
50:C1:1463:U:H2'	50:C1:1464:C:C6	2.35	0.61
50:C1:1587:G:N3	70:CT:78:ILE:HB	2.15	0.61
50:C1:1700:C:H4'	50:C1:1701:C:C5'	2.29	0.61
50:C1:1808:U:H2'	50:C1:1809:A:C8	2.35	0.61
55:CE:148:ARG:HD3	55:CE:148:ARG:H	1.66	0.61
56:CF:30:ILE:CD1	56:CF:39:ILE:HD12	2.30	0.61
66:CP:28:MET:O	66:CP:29:SER:HB3	2.00	0.61
69:CS:25:LYS:HE2	69:CS:27:ALA:HB3	1.82	0.61
73:CW:77:PRO:HG2	73:CW:79:PHE:CE1	2.35	0.61
1:A2:280:C:H2'	1:A2:281:U:H6	1.65	0.61
1:A2:314:C:H2'	1:A2:315:A:C8	2.36	0.61
1:A2:430:G:H1'	34:Af:23:GLU:OE1	2.00	0.61
1:A2:457:A:H2'	1:A2:457:A:N3	2.13	0.61
1:A2:479:G:H2'	1:A2:480:C:C6	2.35	0.61
1:A2:1143:G:H2'	1:A2:1144:G:H8	1.65	0.61
1:A2:1892:C:H1'	17:AO:87:MET:O	2.01	0.61
1:A2:2250:C:O5'	1:A2:2250:C:H6	1.83	0.61
1:A2:2345:A:H3'	1:A2:2804:G:N1	2.13	0.61
1:A2:2573:G:H4'	35:Ag:46:CYS:HA	1.82	0.61
1:A2:2663:G:C6	1:A2:2664:U:O2	2.53	0.61
1:A2:2687:C:H2'	1:A2:2688:G:O4'	2.01	0.61
1:A2:2803:U:O2	1:A2:2803:U:H2'	1.99	0.61
1:A2:4051:U:O2'	1:A2:4053:A:H4'	1.99	0.61
1:A2:4675:C:H3'	1:A2:4676:C:C6	2.35	0.61
3:A4:63:C:H4'	3:A4:64:G:O5'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AC:136:LEU:HA	45:At:10:VAL:HG12	1.82	0.61
31:Ac:38:ILE:HD13	31:Ac:43:ALA:HB2	1.81	0.61
36:Ah:35:LYS:HA	36:Ah:44:LEU:HD22	1.82	0.61
48:BB:844:ARG:O	48:BB:910:PRO:CA	2.48	0.61
48:BB:1132:GLN:NE2	50:C1:51:U:H4'	2.15	0.61
48:BB:1139:VAL:HG21	48:BB:1145:VAL:HG11	1.81	0.61
50:C1:35:C:C3'	50:C1:36:U:H6	2.12	0.61
50:C1:192:C:H2'	50:C1:193:C:H5'	1.82	0.61
50:C1:312:G:C4	57:CG:191:ARG:HD3	2.34	0.61
50:C1:320:G:OP1	50:C1:320:G:C8	2.53	0.61
50:C1:746:C:H2'	50:C1:746:C:P	2.41	0.61
50:C1:884:C:H2'	50:C1:885:U:H6	1.66	0.61
50:C1:1375:G:C2'	50:C1:1376:A:H5'	2.30	0.61
50:C1:1418:C:H5"	70:CT:129:ARG:HB3	1.83	0.61
50:C1:1679:A:H3'	79:Cc:20:ARG:HH12	1.64	0.61
50:C1:1741:U:O4	50:C1:1793:A:C2	2.54	0.61
58:CH:162:GLN:O	58:CH:166:VAL:HB	2.00	0.61
1:A2:1059:C:C6	1:A2:1202:A:N6	2.68	0.61
1:A2:1154:G:H1	1:A2:1167:G:H1	1.48	0.61
1:A2:2020:A:H8	1:A2:2021:A:N3	1.99	0.61
1:A2:2431:U:H2'	1:A2:2431:U:O2	1.99	0.61
1:A2:2549:C:C4'	1:A2:2736:G:H2'	2.25	0.61
1:A2:2703:G:H1'	1:A2:2704:C:OP1	1.99	0.61
1:A2:2742:A:C2'	1:A2:2743:A:C8	2.82	0.61
1:A2:3605:C:H6	1:A2:3605:C:C5'	2.08	0.61
1:A2:3754:A:H1'	1:A2:3755:U:OP1	2.01	0.61
1:A2:4118:C:P	1:A2:4118:C:H6	2.23	0.61
1:A2:4169:G:H4'	22:AT:12:ARG:NH2	2.15	0.61
1:A2:4737:C:H2'	1:A2:4738:U:H6	1.60	0.61
1:A2:4739:G:OP2	1:A2:4740:U:H5"	2.00	0.61
2:A3:13:G:H2'	2:A3:14:U:C6	2.36	0.61
6:AC:217:ILE:HD11	6:AC:221:PHE:CE2	2.34	0.61
10:AG:191:GLY:HA2	10:AG:199:CYS:SG	2.40	0.61
18:AP:30:ARG:HA	18:AP:119:VAL:HG11	1.82	0.61
34:Af:41:PHE:HE1	34:Af:110:ILE:HD11	1.66	0.61
46:Au:111:MET:HA	46:Au:114:ILE:HG22	1.81	0.61
47:BA:70:G:H5'	48:BB:1382:SER:OG	2.00	0.61
48:BB:952:ILE:HA	48:BB:955:ILE:HG12	1.83	0.61
48:BB:1140:GLU:OE2	48:BB:1141:ALA:HB3	1.99	0.61
48:BB:1327:THR:HA	48:BB:1370:GLU:CB	2.30	0.61
48:BB:1355:ILE:HG12	48:BB:1373:VAL:CG1	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:60:A:H4'	50:C1:61:A:O5'	1.99	0.61
50:C1:313:A:C2	50:C1:315:C:N4	2.67	0.61
50:C1:681:U:H4'	74:CX:9:THR:HB	1.81	0.61
50:C1:693:A:C4	50:C1:694:G:H1'	2.35	0.61
50:C1:1092:G:H2'	50:C1:1093:A:C8	2.36	0.61
50:C1:1445:U:C2'	50:C1:1446:A:H5'	2.29	0.61
50:C1:1529:C:C2'	50:C1:1530:U:H5'	2.31	0.61
50:C1:1540:G:H8	50:C1:1540:G:H5'	1.65	0.61
50:C1:1700:C:H4'	50:C1:1701:C:OP2	1.98	0.61
1:A2:21:G:C4	1:A2:22:G:C8	2.89	0.61
1:A2:158:G:H2'	1:A2:159:A:H8	1.65	0.61
1:A2:891:C:H2'	1:A2:892:G:H8	1.65	0.61
1:A2:1454:G:C2	1:A2:1455:C:H1'	2.34	0.61
1:A2:2549:C:C2'	1:A2:2550:A:H8	2.12	0.61
1:A2:2744:U:O5'	1:A2:2744:U:H6	1.84	0.61
1:A2:4656:C:H2'	1:A2:4657:U:H6	1.63	0.61
1:A2:4869:C:H2'	1:A2:4870:G:H8	1.65	0.61
10:AG:100:HIS:O	10:AG:103:ARG:HG3	2.00	0.61
13:AJ:52:LYS:HB3	13:AJ:65:ASN:HA	1.82	0.61
45:At:120:SER:O	45:At:123:PRO:HD2	2.00	0.61
47:BA:76:A:P	48:BB:1354:SER:O	2.58	0.61
48:BB:1340:CYS:HA	48:BB:1348:ASP:OD1	2.00	0.61
48:BB:1349:ILE:CG2	48:BB:1385:MET:HE1	2.30	0.61
50:C1:60:A:H2'	50:C1:60:A:N3	2.14	0.61
50:C1:407:G:C5	74:CX:36:LEU:HD13	2.36	0.61
50:C1:572:U:P	75:CY:59:GLY:N	2.74	0.61
50:C1:1202:U:C3'	50:C1:1203:G:H5"	2.30	0.61
50:C1:1251:A:H2'	50:C1:1252:C:H5'	1.83	0.61
50:C1:1253:A:H5"	50:C1:1253:A:N3	2.16	0.61
50:C1:1310:U:C4'	82:Cf:142:GLY:HA3	2.31	0.61
50:C1:1620:A:H2'	50:C1:1624:U:C4	2.35	0.61
50:C1:1820:G:H2'	50:C1:1821:U:C6	2.36	0.61
58:CH:148:LEU:HA	73:CW:42:MET:HG2	1.82	0.61
63:CM:61:TYR:HE1	63:CM:107:SER:CB	2.13	0.61
71:CU:80:PHE:HA	80:Cd:53:ILE:O	2.01	0.61
73:CW:10:ALA:O	73:CW:14:ILE:HG12	1.99	0.61
1:A2:156:C:H5'	37:Ai:26:HIS:HB3	1.81	0.61
1:A2:350:A:H5"	1:A2:351:A:OP2	1.99	0.61
1:A2:1179:G:H8	1:A2:1179:G:H5'	1.65	0.61
1:A2:1274:A:H2'	1:A2:1275:C:C6	2.34	0.61
1:A2:1396:G:H2'	1:A2:1397:C:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1440:C:H2'	1:A2:1441:A:C8	2.35	0.61
1:A2:1445:G:H2'	1:A2:1446:C:H6	1.65	0.61
1:A2:2064:G:N2	1:A2:2246:G:N1	2.48	0.61
1:A2:2483:G:H2'	1:A2:2483:G:OP2	2.00	0.61
1:A2:3580:A:C2	1:A2:4971:A:C8	2.76	0.61
1:A2:4280:G:H3'	1:A2:4281:U:H6	1.64	0.61
1:A2:4711:U:H2'	34:Af:6:TRP:CD1	2.35	0.61
1:A2:4826:C:N4	15:AM:97:ALA:C	2.54	0.61
1:A2:4888:C:H2'	1:A2:4889:A:C8	2.36	0.61
1:A2:4944:U:H4'	1:A2:4945:C:O5'	1.98	0.61
1:A2:4947:G:H2'	1:A2:4948:G:C8	2.36	0.61
1:A2:4978:C:H4'	1:A2:4979:C:OP1	1.99	0.61
2:A3:79:G:H2'	2:A3:80:A:O4'	2.00	0.61
7:AD:41:LYS:CE	22:AT:34:TYR:HB2	2.30	0.61
8:AE:162:VAL:CG1	8:AE:175:VAL:HG13	2.31	0.61
10:AG:164:ILE:HG22	10:AG:168:VAL:CG1	2.30	0.61
14:AL:47:ALA:CB	14:AL:48:PRO:HD2	2.30	0.61
35:Ag:43:LYS:O	35:Ag:44:SER:HB2	2.00	0.61
42:An:5:TRP:CH2	50:C1:1853:C:N4	2.59	0.61
48:BB:843:LEU:CD2	48:BB:908:ARG:CB	2.78	0.61
48:BB:1074:VAL:HA	48:BB:1089:VAL:HB	1.82	0.61
50:C1:69:C:H6	50:C1:69:C:H5"	1.64	0.61
50:C1:172:U:H3'	50:C1:173:A:C5'	2.29	0.61
50:C1:342:C:H42	50:C1:343:A:H62	1.49	0.61
50:C1:360:A:H2'	50:C1:360:A:OP1	2.00	0.61
50:C1:606:G:H8	81:Ce:54:GLY:HA2	1.65	0.61
50:C1:684:G:C5	50:C1:920:A:C8	2.88	0.61
50:C1:753:C:N4	50:C1:754:G:C2	2.69	0.61
50:C1:1307:U:H2'	50:C1:1308:U:C5'	2.30	0.61
50:C1:1387:G:H2'	50:C1:1388:A:O4'	2.00	0.61
50:C1:1443:C:C2'	50:C1:1444:U:H5'	2.31	0.61
50:C1:1567:G:OP1	50:C1:1567:G:H8	1.83	0.61
50:C1:1699:A:C8	50:C1:1699:A:O5'	2.52	0.61
50:C1:1714:U:H3'	50:C1:1715:A:H8	1.66	0.61
57:CG:2:LYS:HE3	57:CG:15:LEU:HD11	1.81	0.61
59:CI:104:ILE:HB	59:CI:171:LEU:HB3	1.83	0.61
69:CS:98:VAL:HG21	69:CS:103:LEU:HD13	1.81	0.61
77:Ca:22:ARG:NH1	77:Ca:29:CYS:HB3	2.16	0.61
1:A2:14:C:H5"	26:AX:56:ARG:CA	2.31	0.61
1:A2:509:G:H2'	1:A2:510:C:C6	2.35	0.61
1:A2:1086:A:H1'	7:AD:273:LEU:HD23	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1203:G:C5’	1:A2:1210:U:H5	2.11	0.61
1:A2:1462:C:H5”	1:A2:1463:G:N7	2.15	0.61
1:A2:1874:A:H5’	9:AF:97:GLY:HA3	1.81	0.61
1:A2:2690:C:H2’	1:A2:2691:G:H8	1.65	0.61
1:A2:2839:G:H2’	1:A2:3588:G:O6	2.00	0.61
1:A2:3919:U:N3	1:A2:3920:G:N7	2.49	0.61
1:A2:4377:C:H3’	1:A2:4378:G:H8	1.66	0.61
1:A2:4700:C:H2’	1:A2:4701:G:C4’	2.19	0.61
7:AD:8:LYS:HB3	7:AD:13:PHE:CZ	2.35	0.61
10:AG:39:PHE:CD1	10:AG:47:PRO:HD3	2.35	0.61
46:Au:27:LEU:HB2	46:Au:163:VAL:HG21	1.82	0.61
46:Au:151:LEU:HD21	46:Au:184:LEU:CD2	2.31	0.61
47:BA:34:G:O4’	50:C1:1248:U:N1	2.21	0.61
50:C1:10:G:N7	50:C1:1697:A:C2	2.69	0.61
50:C1:350:C:H42	50:C1:351:G:N2	1.98	0.61
50:C1:987:A:H3’	50:C1:988:C:C6	2.36	0.61
50:C1:1147:C:C6	50:C1:1147:C:H3’	2.36	0.61
52:CB:63:LYS:HE3	52:CB:91:VAL:HG23	1.81	0.61
71:CU:79:ARG:O	80:Cd:54:LYS:HA	2.01	0.61
75:CY:84:LYS:HE2	75:CY:85:ASN:OD1	2.01	0.61
1:A2:1:C:O2’	1:A2:2:G:H5’	2.01	0.61
1:A2:348:U:P	6:AC:58:ALA:HB3	2.40	0.61
1:A2:716:U:C5’	9:AF:69:ILE:HD12	2.30	0.61
1:A2:947:G:H2’	1:A2:948:A:H5’	1.80	0.61
1:A2:1244:C:H2’	1:A2:1245:G:C8	2.34	0.61
1:A2:1388:G:N3	1:A2:1389:C:H1’	2.16	0.61
1:A2:2624:A:C6	1:A2:2664:U:C2	2.88	0.61
1:A2:2625:G:C1’	1:A2:2663:G:O6	2.46	0.61
1:A2:2789:A:C8	20:AR:83:GLY:CA	2.84	0.61
1:A2:3877:A:N7	1:A2:3878:C:C6	2.69	0.61
1:A2:3914:A:C6	1:A2:4036:U:O4	2.53	0.61
1:A2:4015:A:H5”	1:A2:4016:A:OP2	1.99	0.61
1:A2:4287:C:O2’	1:A2:4288:G:H5’	2.01	0.61
1:A2:4435:G:OP2	1:A2:4436:C:H6	1.84	0.61
1:A2:4497:C:H2’	1:A2:4498:G:C8	2.36	0.61
7:AD:263:LYS:O	7:AD:264:LYS:CB	2.48	0.61
14:AL:8:MET:SD	19:AQ:168:ARG:HB2	2.41	0.61
48:BB:1152:LEU:O	48:BB:1153:GLU:HG3	2.00	0.61
48:BB:1304:PHE:H	48:BB:1304:PHE:HD1	1.48	0.61
49:BC:343:U:H5’	50:C1:1830:U:C4	2.36	0.61
50:C1:25:A:H2’	50:C1:26:U:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:215:G:H2'	50:C1:216:C:H6	1.62	0.61
50:C1:547:G:H4'	50:C1:548:C:OP2	2.00	0.61
50:C1:747:U:C1'	50:C1:748:C:H2'	2.30	0.61
50:C1:806:U:H6	50:C1:806:U:O5'	1.84	0.61
50:C1:1065:G:C2	50:C1:1066:U:H1'	2.36	0.61
50:C1:1678:A:H2'	50:C1:1679:A:H5'	1.82	0.61
50:C1:1687:C:H3'	50:C1:1688:C:H6	1.65	0.61
50:C1:1825:A:O5'	50:C1:1825:A:C8	2.52	0.61
58:CH:132:ASP:O	58:CH:135:PHE:HB2	2.00	0.61
69:CS:5:ILE:HG13	69:CS:6:PRO:HD2	1.81	0.61
71:CU:21:ARG:HE	71:CU:88:LEU:HB3	1.65	0.61
83:Cg:109:LEU:HD21	83:Cg:125:ARG:HG3	1.82	0.61
1:A2:246:C:H4'	38:Aj:79:ARG:NH2	2.15	0.61
1:A2:391:A:H5"	18:AP:17:SER:HA	1.81	0.61
1:A2:473:G:H21	45:At:78:VAL:HA	1.65	0.61
1:A2:1256:C:O2'	1:A2:1257:G:H5'	1.99	0.61
1:A2:1343:C:H41	14:AL:32:LYS:NZ	1.97	0.61
1:A2:2006:C:H5'	1:A2:2006:C:H6	1.66	0.61
1:A2:3627:C:H4'	4:AA:240:ALA:CB	2.30	0.61
1:A2:3918:A:C4	1:A2:3919:U:C5	2.89	0.61
1:A2:4192:U:H4'	1:A2:4193:A:H5'	1.83	0.61
1:A2:4487:G:H2'	1:A2:4487:G:N3	2.15	0.61
1:A2:4734:C:C2'	1:A2:4735:G:H5'	2.31	0.61
2:A3:52:A:H4'	40:Al:19:GLN:HA	1.83	0.61
2:A3:80:A:H2'	2:A3:81:C:H5	1.65	0.61
2:A3:137:A:N3	2:A3:137:A:H2'	2.16	0.61
2:A3:151:G:H2'	2:A3:152:U:O4'	2.01	0.61
4:AA:129:ALA:HB3	4:AA:132:ASN:HD22	1.66	0.61
11:AH:94:SER:HB3	11:AH:142:ASP:HB3	1.83	0.61
15:AM:9:VAL:HG21	15:AM:66:HIS:ND1	2.16	0.61
18:AP:60:PHE:HB3	18:AP:64:ASN:HB3	1.83	0.61
42:An:10:MET:HE3	50:C1:1172:U:C4'	2.30	0.61
47:BA:6:G:H1	47:BA:67:C:H42	1.19	0.61
48:BB:1080:LEU:HG	48:BB:1081:PRO:HD2	1.82	0.61
48:BB:1249:LEU:HD23	48:BB:1271:PHE:HB2	1.83	0.61
48:BB:1354:SER:CA	48:BB:1373:VAL:HG23	2.31	0.61
49:BC:100:G:P	76:CZ:114:LYS:HZ1	2.24	0.61
50:C1:574:A:H3'	50:C1:575:A:C8	2.34	0.61
50:C1:593:C:H1'	50:C1:594:A:O5'	2.01	0.61
50:C1:913:A:H61	58:CH:119:SER:C	2.09	0.61
50:C1:1113:A:C2	50:C1:1120:U:O4	2.53	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1230:C:H2'	50:C1:1231:C:H5'	1.83	0.61
50:C1:1397:U:H6	50:C1:1397:U:H3'	1.65	0.61
50:C1:1534:C:H1'	50:C1:1535:U:OP2	2.01	0.61
50:C1:1654:G:C3'	50:C1:1655:C:H5	2.14	0.61
67:CQ:24:HIS:O	67:CQ:68:ILE:HA	2.01	0.61
69:CS:6:PRO:HD3	76:CZ:52:LYS:CE	2.30	0.61
1:A2:12:A:O3'	1:A2:13:U:H3'	2.00	0.61
1:A2:33:A:H5'	1:A2:34:A:OP2	2.01	0.61
1:A2:84:A:H4'	1:A2:85:G:OP1	2.01	0.61
1:A2:89:C:H2'	1:A2:90:G:C5'	2.31	0.61
1:A2:292:G:H3'	1:A2:293:C:H6	1.65	0.61
1:A2:904:C:H2'	1:A2:905:C:C6	2.35	0.61
1:A2:1146:G:H2'	1:A2:1146:G:N3	2.16	0.61
1:A2:1219:C:C4	9:AF:44:LYS:HD3	2.36	0.61
1:A2:1622:A:H8	1:A2:1622:A:O5'	1.84	0.61
1:A2:1648:A:C8	1:A2:1648:A:H3'	2.36	0.61
1:A2:2396:C:C6	1:A2:2396:C:C5'	2.84	0.61
1:A2:2602:U:H2'	1:A2:2602:U:O2	2.01	0.61
1:A2:2650:G:OP1	1:A2:2650:G:H3'	2.01	0.61
1:A2:3585:U:H3'	25:AW:44:ARG:HH12	1.65	0.61
1:A2:3685:C:H2'	1:A2:3704:G:C6	2.35	0.61
5:AB:73:VAL:HG22	24:AV:93:GLY:HA2	1.83	0.61
6:AC:54:VAL:C	6:AC:56:GLU:H	2.09	0.61
17:AO:167:HIS:CD2	17:AO:171:LYS:HB2	2.34	0.61
32:Ad:42:ALA:HB3	32:Ad:43:PRO:HD3	1.83	0.61
34:Af:102:ARG:HD3	34:Af:102:ARG:N	2.16	0.61
48:BB:1116:ARG:CZ	50:C1:487:U:O3'	2.48	0.61
48:BB:1385:MET:HB3	48:BB:1388:ARG:HB3	1.81	0.61
50:C1:145:G:H2'	50:C1:145:G:N3	2.14	0.61
50:C1:175:A:C2	50:C1:176:U:C1'	2.83	0.61
50:C1:315:C:H5"	50:C1:315:C:H6	1.66	0.61
50:C1:332:G:C8	57:CG:186:GLN:HB2	2.36	0.61
50:C1:671:A:C8	50:C1:671:A:H5"	2.36	0.61
50:C1:863:U:H6	50:C1:863:U:O5'	1.84	0.61
50:C1:1331:C:O2	50:C1:1331:C:H2'	2.00	0.61
50:C1:1378:A:C2	51:CA:105:PRO:HB3	2.36	0.61
50:C1:1587:G:O2'	70:CT:77:LYS:HB3	2.01	0.61
50:C1:1782:G:N3	50:C1:1783:C:N4	2.49	0.61
51:CA:4:ALA:HB1	72:CV:82:ASN:HB3	1.82	0.61
51:CA:180:ARG:HG2	51:CA:184:ARG:HH12	1.65	0.61
60:CJ:169:ARG:N	60:CJ:170:PRO:HD3	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:CT:41:LYS:CG	70:CT:95:GLY:HA2	2.31	0.61
1:A2:182:C:H3'	1:A2:183:G:N7	2.16	0.60
1:A2:193:C:O3'	1:A2:194:A:H8	1.84	0.60
1:A2:224:A:H61	1:A2:238:G:H2'	1.66	0.60
1:A2:299:G:H4'	1:A2:301:G:H4'	1.82	0.60
1:A2:381:C:H6	1:A2:381:C:C5'	2.12	0.60
1:A2:976:C:H2'	1:A2:977:G:C8	2.36	0.60
1:A2:1143:G:H2'	1:A2:1144:G:C8	2.35	0.60
1:A2:2253:C:C2'	1:A2:2254:G:H5'	2.31	0.60
1:A2:2771:C:H5'	1:A2:2774:C:N4	2.15	0.60
1:A2:4522:C:H2'	1:A2:4523:U:H6	1.63	0.60
1:A2:4560:G:OP1	1:A2:4560:G:H4'	2.00	0.60
1:A2:4562:A:H2'	1:A2:4563:C:C5	2.35	0.60
1:A2:4636:G:H4'	1:A2:4637:U:OP1	2.01	0.60
1:A2:4813:C:H3'	1:A2:4814:C:C5	2.36	0.60
1:A2:4977:U:H2'	1:A2:4978:C:H3'	1.83	0.60
2:A3:22:U:H4'	2:A3:23:C:OP1	2.01	0.60
6:AC:158:VAL:O	6:AC:217:ILE:HD13	2.01	0.60
7:AD:289:ARG:HG2	7:AD:293:ARG:HG3	1.83	0.60
8:AE:168:LEU:HD23	8:AE:172:LEU:CD1	2.31	0.60
15:AM:6:PHE:O	15:AM:11:ARG:HD2	2.00	0.60
31:Ac:28:VAL:HG23	31:Ac:95:ALA:HB3	1.83	0.60
34:Af:63:LYS:HB2	34:Af:64:PRO:HD3	1.82	0.60
48:BB:824:LYS:CD	48:BB:1165:TYR:CZ	2.45	0.60
48:BB:839:ASN:C	48:BB:840:THR:HG1	1.99	0.60
50:C1:184:G:C3'	50:C1:185:G:H4'	2.29	0.60
50:C1:237:C:H1'	50:C1:238:C:H5'	1.83	0.60
50:C1:310:C:H2'	50:C1:340:C:C5'	2.30	0.60
50:C1:582:U:H2'	50:C1:583:A:O4'	2.00	0.60
50:C1:991:G:N3	50:C1:991:G:H2'	2.16	0.60
50:C1:1214:A:C2	50:C1:1217:A:C8	2.89	0.60
50:C1:1420:G:H8	50:C1:1420:G:OP2	1.84	0.60
50:C1:1515:G:H5"	50:C1:1515:G:H8	1.65	0.60
50:C1:1800:A:H3'	50:C1:1801:A:H8	1.66	0.60
50:C1:1849:G:C2'	50:C1:1850:A:H5'	2.31	0.60
50:C1:1859:A:H2'	50:C1:1860:A:O4'	2.01	0.60
56:CF:48:TYR:CE1	67:CQ:50:LYS:HG3	2.35	0.60
58:CH:87:PHE:CD1	58:CH:90:LYS:HE2	2.35	0.60
61:CK:32:HIS:H	61:CK:33:PRO:CD	2.13	0.60
73:CW:102:ILE:HB	73:CW:113:HIS:HB2	1.83	0.60
79:Cc:12:ALA:HB1	79:Cc:32:VAL:HG13	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:10:A:C2	2:A3:147:G:C6	2.90	0.60
1:A2:24:G:N2	1:A2:25:A:C4	2.69	0.60
1:A2:64:A:C3'	1:A2:110:C:H41	2.13	0.60
1:A2:261:U:H2'	1:A2:262:C:C6	2.36	0.60
1:A2:673:G:H2'	1:A2:674:G:O4'	2.01	0.60
1:A2:1250:A:O5'	1:A2:1250:A:C8	2.54	0.60
1:A2:1353:A:C2	6:AC:234:LYS:HD3	2.35	0.60
1:A2:1423:A:O2'	1:A2:1424:G:H8	1.84	0.60
1:A2:1861:G:H5"	1:A2:1861:G:C8	2.37	0.60
1:A2:2279:C:O2'	1:A2:2282:G:H4'	2.02	0.60
1:A2:2284:A:H2'	1:A2:2285:G:H8	1.66	0.60
1:A2:2333:U:H6	1:A2:2333:U:C5'	2.11	0.60
1:A2:2335:G:H8	1:A2:2335:G:O5'	1.84	0.60
1:A2:2531:U:O2'	1:A2:2532:G:H5'	2.01	0.60
1:A2:2625:G:N3	1:A2:2663:G:O6	2.33	0.60
1:A2:2644:C:H5"	20:AR:103:ARG:NH2	2.16	0.60
1:A2:2858:A:H2'	1:A2:2859:A:H5'	1.83	0.60
1:A2:4084:U:H1'	1:A2:4085:U:P	2.41	0.60
1:A2:4256:U:H4'	1:A2:4256:U:OP1	2.00	0.60
1:A2:4617:U:O2	1:A2:4617:U:C2'	2.48	0.60
1:A2:4896:G:H5"	8:AE:214:ASP:OD2	2.01	0.60
3:A4:31:G:H2'	3:A4:32:A:H8	1.65	0.60
6:AC:137:VAL:HG11	6:AC:144:ILE:HD11	1.83	0.60
9:AF:87:PRO:HG2	9:AF:144:TYR:CZ	2.34	0.60
13:AJ:83:LEU:O	13:AJ:87:LEU:HG	2.01	0.60
17:AO:125:LYS:HE2	17:AO:135:PHE:CG	2.35	0.60
31:Ac:51:ASN:HD22	44:Ap:43:GLY:HA3	1.66	0.60
46:Au:105:ILE:HD11	46:Au:145:MET:HG2	1.82	0.60
48:BB:814:THR:O	48:BB:1170:ILE:HG13	2.01	0.60
48:BB:816:GLU:O	48:BB:820:TYR:HD1	1.83	0.60
50:C1:39:A:OP2	60:CJ:3:VAL:HG13	2.00	0.60
50:C1:69:C:H5"	50:C1:69:C:C6	2.36	0.60
50:C1:532:C:H2'	50:C1:533:A:O4'	2.01	0.60
50:C1:1214:A:N1	50:C1:1217:A:C4	2.68	0.60
50:C1:1416:C:N4	50:C1:1417:C:C2	2.70	0.60
51:CA:40:LYS:NZ	68:CR:101:ASP:HA	2.16	0.60
51:CA:62:ALA:O	51:CA:66:VAL:HG23	2.01	0.60
54:CD:190:LEU:HB3	54:CD:200:PRO:HD3	1.83	0.60
57:CG:8:PRO:CG	57:CG:112:VAL:HG13	2.31	0.60
1:A2:35:U:H4'	1:A2:1504:A:C2	2.35	0.60
1:A2:54:G:H1'	16:AN:161:MET:SD	2.41	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:131:C:H2'	1:A2:138:C:H41	1.64	0.60
1:A2:1056:C:N4	1:A2:1204:G:N1	2.49	0.60
1:A2:1436:G:H2'	1:A2:1437:C:H6	1.65	0.60
1:A2:1477:G:C2'	1:A2:1478:C:H5'	2.30	0.60
1:A2:1748:G:H8	1:A2:1748:G:P	2.23	0.60
1:A2:1907:A:C8	1:A2:1910:A:H1'	2.35	0.60
1:A2:1912:A:C2	1:A2:2026:U:N3	2.68	0.60
1:A2:2382:G:H8	1:A2:2382:G:O5'	1.84	0.60
1:A2:2763:C:O5'	1:A2:2763:C:H6	1.84	0.60
1:A2:4743:C:H2'	1:A2:4744:C:C6	2.36	0.60
1:A2:5018:G:OP2	1:A2:5018:G:C8	2.54	0.60
13:AJ:19:LYS:HB3	13:AJ:133:VAL:CG1	2.30	0.60
13:AJ:169:LYS:HD3	13:AJ:170:TYR:CD2	2.35	0.60
20:AR:119:MET:CB	20:AR:145:LEU:HD21	2.24	0.60
23:AU:17:GLN:HG3	23:AU:19:LEU:CD1	2.31	0.60
37:Ai:64:SER:O	37:Ai:65:LYS:HB3	2.02	0.60
47:BA:70:G:C6	48:BB:1319:ARG:NH2	2.63	0.60
48:BB:824:LYS:HB2	48:BB:1165:TYR:CE2	2.35	0.60
48:BB:1095:ARG:NE	48:BB:1097:LYS:HZ1	1.97	0.60
48:BB:1167:GLU:OE2	48:BB:1170:ILE:HD13	1.99	0.60
49:BC:331:G:C8	49:BC:331:G:C3'	2.82	0.60
50:C1:483:C:H5"	74:CX:48:LYS:HG3	1.84	0.60
50:C1:567:C:H2'	50:C1:568:C:H5"	1.82	0.60
50:C1:797:C:H4'	58:CH:109:ARG:HB3	1.83	0.60
50:C1:867:G:P	50:C1:867:G:H8	2.24	0.60
50:C1:1037:G:H4'	50:C1:1845:A:H4'	1.82	0.60
50:C1:1208:A:H61	50:C1:1691:U:H3	1.49	0.60
50:C1:1277:C:H3'	50:C1:1278:A:H8	1.66	0.60
50:C1:1561:A:H4'	50:C1:1583:C:H4'	1.83	0.60
57:CG:164:LYS:HG2	57:CG:166:GLY:H	1.66	0.60
60:CJ:117:LEU:CB	60:CJ:119:LEU:HD13	2.31	0.60
70:CT:39:LEU:HD11	70:CT:43:LYS:CB	2.28	0.60
1:A2:236:C:H2'	1:A2:237:G:C8	2.36	0.60
1:A2:456:G:N2	1:A2:679:U:N3	2.47	0.60
1:A2:509:G:H4'	14:AL:115:GLN:OE1	2.01	0.60
1:A2:657:C:H6	1:A2:657:C:O5'	1.85	0.60
1:A2:659:A:H2'	1:A2:660:C:H6	1.67	0.60
1:A2:965:C:N4	1:A2:1249:G:N1	2.49	0.60
1:A2:1390:U:H2'	1:A2:1391:C:C6	2.36	0.60
1:A2:1542:A:H62	64:CN:127:ARG:NH1	1.99	0.60
1:A2:1595:U:C2'	1:A2:1596:G:H5'	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1610:A:H4’	1:A2:1611:A:H5’	1.83	0.60
1:A2:2061:C:P	19:AQ:11:ARG:HB2	2.41	0.60
1:A2:2509:C:H5”	26:AX:125:ASN:HD22	1.66	0.60
1:A2:2569:U:H2’	1:A2:2570:C:O4’	2.02	0.60
1:A2:2664:U:OP1	1:A2:2664:U:H4’	2.01	0.60
1:A2:2875:G:H5”	20:AR:104:ARG:NH2	2.17	0.60
1:A2:3865:C:H1’	5:AB:268:ARG:HH21	1.67	0.60
1:A2:4051:U:C2’	1:A2:4052:G:H5”	2.31	0.60
1:A2:4456:A:N3	1:A2:4456:A:H2’	2.15	0.60
10:AG:41:ILE:HG22	10:AG:42:GLY:N	2.13	0.60
15:AM:9:VAL:HG11	15:AM:66:HIS:HA	1.83	0.60
23:AU:56:LEU:HD12	23:AU:61:VAL:HG21	1.82	0.60
48:BB:818:ARG:CZ	48:BB:1172:VAL:HG21	2.30	0.60
48:BB:831:ARG:HD3	48:BB:832:LEU:N	2.16	0.60
48:BB:1116:ARG:NH2	48:BB:1150:LYS:HG3	2.16	0.60
48:BB:1366:LYS:O	48:BB:1367:LYS:C	2.44	0.60
50:C1:77:A:N7	57:CG:155:GLN:HA	2.16	0.60
50:C1:428:U:H2’	50:C1:429:C:C6	2.36	0.60
50:C1:838:G:H8	75:CY:9:THR:H	1.45	0.60
50:C1:862:A:H2’	50:C1:863:U:C6	2.36	0.60
50:C1:1036:A:C2	50:C1:1844:U:H4’	2.36	0.60
50:C1:1254:C:OP1	50:C1:1254:C:H4’	2.00	0.60
50:C1:1549:U:H2’	50:C1:1550:G:H8	1.67	0.60
50:C1:1683:C:O5’	50:C1:1683:C:H6	1.85	0.60
55:CE:87:MET:HE2	55:CE:123:LEU:HB2	1.83	0.60
59:CI:165:GLN:HE21	59:CI:172:LEU:HD23	1.65	0.60
60:CJ:117:LEU:HB3	60:CJ:119:LEU:HD13	1.82	0.60
63:CM:35:ILE:HD11	63:CM:61:TYR:CZ	2.36	0.60
76:CZ:62:VAL:N	76:CZ:63:PRO:CD	2.64	0.60
80:Cd:24:CYS:HB3	80:Cd:42:CYS:SG	2.41	0.60
1:A2:377:A:H2	1:A2:395:U:O2	1.84	0.60
1:A2:379:A:H1’	1:A2:394:G:N2	2.17	0.60
1:A2:1191:G:O2’	1:A2:1192:G:H5’	2.01	0.60
1:A2:1207:C:O5’	1:A2:1207:C:H6	1.85	0.60
1:A2:1378:A:C2’	1:A2:1379:G:C8	2.85	0.60
1:A2:1828:A:H3’	1:A2:1829:G:H8	1.66	0.60
1:A2:2516:C:H5”	35:Ag:66:ARG:CD	2.31	0.60
1:A2:4441:U:H2’	1:A2:4441:U:O2	2.01	0.60
2:A3:13:G:H2’	2:A3:14:U:H6	1.66	0.60
2:A3:131:G:H2’	2:A3:132:G:H8	1.64	0.60
3:A4:23:A:H8	3:A4:23:A:O5’	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AA:196:TRP:CE3	4:AA:197:PRO:HG3	2.36	0.60
6:AC:50:GLN:HB3	6:AC:51:PRO:HD3	1.84	0.60
6:AC:147:VAL:HG11	6:AC:249:PHE:HE2	1.65	0.60
11:AH:129:ARG:O	11:AH:132:VAL:HG22	2.02	0.60
13:AJ:175:LEU:CB	13:AJ:176:PRO:HD2	2.31	0.60
14:AL:135:LYS:H	14:AL:135:LYS:CD	2.11	0.60
21:AS:9:GLU:OE2	21:AS:31:ARG:HD2	2.01	0.60
47:BA:74:C:C6	47:BA:75:C:C6	2.90	0.60
48:BB:1073:GLN:CG	48:BB:1090:ILE:HG23	2.31	0.60
50:C1:380:G:C2	50:C1:382:C:C6	2.89	0.60
50:C1:577:U:H4’	50:C1:578:C:C4’	2.32	0.60
50:C1:990:A:H5’	77:Ca:33:ASP:HA	1.82	0.60
50:C1:1148:A:H5’	50:C1:1148:A:N3	2.15	0.60
50:C1:1335:G:C2’	50:C1:1336:C:H5’	2.31	0.60
50:C1:1398:G:H2’	50:C1:1398:G:N3	2.14	0.60
50:C1:1489:A:H5’	50:C1:1490:G:H5’	1.83	0.60
50:C1:1768:A:H2’	50:C1:1769:C:C5’	2.22	0.60
82:Cf:126:CYS:O	82:Cf:130:VAL:HB	2.01	0.60
83:Cg:219:TRP:CZ3	83:Cg:226:HIS:HB2	2.37	0.60
1:A2:289:G:O2’	1:A2:290:C:H5’	2.02	0.60
1:A2:474:G:N7	45:At:75:THR:HB	2.16	0.60
1:A2:925:C:H4’	1:A2:925:C:OP1	2.01	0.60
1:A2:1885:A:H8	1:A2:1885:A:C5’	2.15	0.60
1:A2:2279:C:O2	1:A2:2279:C:H2’	2.01	0.60
1:A2:2369:C:H2’	1:A2:2370:C:C6	2.37	0.60
1:A2:2763:C:C4’	1:A2:2764:A:C8	2.84	0.60
1:A2:4435:G:OP2	1:A2:4436:C:C6	2.55	0.60
13:AJ:94:LEU:O	13:AJ:175:LEU:HB2	2.01	0.60
31:Ac:8:LYS:CE	50:C1:1007:C:C5’	2.36	0.60
35:Ag:63:VAL:HG22	35:Ag:66:ARG:NH2	2.16	0.60
43:Ao:106:PHE:CG	47:BA:58:A:O4’	2.50	0.60
47:BA:33:U:P	67:CQ:146:ARG:C	2.82	0.60
48:BB:837:ASN:HB3	48:BB:908:ARG:CD	2.31	0.60
50:C1:131:C:H4’	50:C1:132:U:O5’	2.01	0.60
50:C1:179:C:H5”	50:C1:180:G:H21	1.66	0.60
50:C1:223:C:H2’	50:C1:224:A:H8	1.66	0.60
50:C1:1124:C:O5’	50:C1:1124:C:H6	1.84	0.60
50:C1:1351:G:H5”	50:C1:1351:G:C8	2.36	0.60
50:C1:1513:C:O5’	50:C1:1513:C:H6	1.84	0.60
50:C1:1655:C:H2’	50:C1:1656:G:C8	2.37	0.60
50:C1:1684:C:C3’	50:C1:1685:U:H5’	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1863:A:N3	50:C1:1863:A:H2'	2.15	0.60
54:CD:94:ARG:HG2	54:CD:101:GLN:NE2	2.17	0.60
55:CE:173:ILE:HG21	55:CE:230:ASN:HB2	1.83	0.60
59:CI:131:PRO:HG2	59:CI:138:ASN:OD1	2.00	0.60
73:CW:50:PHE:HB2	73:CW:62:VAL:O	2.01	0.60
1:A2:12:A:C2	1:A2:14:C:N4	2.70	0.60
1:A2:21:G:N2	1:A2:22:G:H1'	2.17	0.60
1:A2:1074:G:H2'	1:A2:1075:A:H8	1.66	0.60
1:A2:1400:A:H2	1:A2:1446:C:H1'	1.67	0.60
1:A2:1649:G:H3'	1:A2:1649:G:C8	2.36	0.60
1:A2:2005:U:C2	1:A2:2006:C:C5	2.90	0.60
1:A2:2272:G:C6	1:A2:2316:G:C2	2.89	0.60
1:A2:2416:G:H1'	1:A2:2754:G:N3	2.17	0.60
1:A2:2587:G:H1'	1:A2:2663:G:C2'	2.31	0.60
1:A2:2736:G:H5"	1:A2:2736:G:N3	2.17	0.60
1:A2:2744:U:C5	1:A2:2745:C:N4	2.69	0.60
1:A2:3639:C:H2'	1:A2:3640:G:C8	2.36	0.60
1:A2:3742:U:O2	1:A2:3742:U:H2'	2.00	0.60
1:A2:3904:C:H2'	1:A2:3905:A:H8	1.66	0.60
1:A2:4040:C:H2'	1:A2:4041:A:C8	2.34	0.60
1:A2:4182:G:OP2	1:A2:4182:G:H4'	2.02	0.60
2:A3:60:G:H21	2:A3:64:U:H1'	1.66	0.60
4:AA:189:TYR:HB2	4:AA:196:TRP:CD1	2.37	0.60
5:AB:107:ALA:HB2	5:AB:201:LEU:HB3	1.84	0.60
5:AB:217:ILE:HD11	5:AB:333:LEU:HD21	1.82	0.60
6:AC:150:LEU:HD23	6:AC:150:LEU:H	1.67	0.60
47:BA:17:C:H3'	47:BA:18:G:C5'	2.29	0.60
49:BC:62:C:O2	49:BC:107:G:C2	2.55	0.60
50:C1:54:A:H3'	50:C1:55:U:C5'	2.30	0.60
50:C1:66:G:C8	57:CG:160:LYS:HD2	2.37	0.60
50:C1:1135:C:H2'	50:C1:1136:U:H6	1.64	0.60
50:C1:1196:A:H2'	50:C1:1197:G:O4'	2.02	0.60
50:C1:1320:G:C2	50:C1:1321:G:H1'	2.36	0.60
50:C1:1542:C:C6	50:C1:1542:C:C5'	2.85	0.60
50:C1:1848:U:H4'	50:C1:1849:G:OP1	2.02	0.60
51:CA:58:LEU:HD21	51:CA:177:MET:HG2	1.83	0.60
52:CB:103:MET:CB	52:CB:215:VAL:HG12	2.31	0.60
56:CF:75:SER:O	56:CF:78:MET:HE3	2.01	0.60
60:CJ:138:ARG:HG2	60:CJ:139:LYS:H	1.67	0.60
69:CS:70:ILE:HD13	69:CS:77:TYR:CD1	2.37	0.60
1:A2:45:U:H2'	1:A2:46:U:H5'	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:400:G:H4'	1:A2:401:A:C5'	2.32	0.60
1:A2:949:G:H8	1:A2:949:G:P	2.23	0.60
1:A2:974:C:H4'	1:A2:974:C:OP1	2.01	0.60
1:A2:1082:U:H1'	1:A2:1083:C:P	2.41	0.60
1:A2:1352:A:C2	1:A2:1353:A:N7	2.69	0.60
1:A2:1460:C:H42	1:A2:1463:G:N2	1.97	0.60
1:A2:1708:A:C2'	1:A2:1709:U:H5'	2.32	0.60
1:A2:2279:C:H4'	33:Ae:104:SER:HB3	1.84	0.60
1:A2:2310:G:H5'	2:A3:20:A:O3'	2.01	0.60
1:A2:2464:G:C6	1:A2:2466:C:H1'	2.37	0.60
1:A2:3770:U:O2	1:A2:4457:U:H5"	2.02	0.60
1:A2:3895:C:H4'	43:Ao:48:TYR:HE1	1.66	0.60
1:A2:4052:G:OP1	1:A2:4052:G:H8	1.85	0.60
1:A2:4557:U:H2'	1:A2:4558:C:H5'	1.83	0.60
1:A2:4600:C:C2'	1:A2:4601:U:H5'	2.32	0.60
2:A3:121:G:H3'	2:A3:122:G:C5'	2.31	0.60
5:AB:27:GLY:HA3	5:AB:276:HIS:CD2	2.37	0.60
5:AB:289:GLN:HA	5:AB:329:ASP:OD1	2.00	0.60
6:AC:190:ARG:HG3	6:AC:202:ILE:HD11	1.83	0.60
15:AM:65:PRO:HG2	15:AM:72:TYR:CE2	2.36	0.60
28:AZ:54:THR:HG23	28:AZ:56:ALA:HB3	1.84	0.60
31:Ac:103:ASP:HB2	31:Ac:106:ARG:HB3	1.83	0.60
35:Ag:85:LYS:O	35:Ag:88:ARG:HB3	2.01	0.60
45:At:99:LYS:CB	45:At:103:ARG:HH22	2.14	0.60
45:At:99:LYS:HB3	45:At:103:ARG:HH22	1.65	0.60
50:C1:746:C:H3'	50:C1:746:C:OP2	2.01	0.60
50:C1:869:A:C2	50:C1:915:G:C1'	2.84	0.60
50:C1:1522:A:C2	66:CP:128:HIS:CB	2.85	0.60
50:C1:1577:G:H1'	50:C1:1582:C:O2	2.01	0.60
50:C1:1637:A:H4'	50:C1:1638:G:O5'	1.94	0.60
52:CB:114:VAL:HG22	52:CB:120:MET:SD	2.41	0.60
67:CQ:36:GLY:O	70:CT:7:LYS:HG2	2.01	0.60
73:CW:11:LEU:HD11	73:CW:37:PHE:CE2	2.36	0.60
1:A2:71:C:H3'	1:A2:72:C:H5'	1.84	0.60
1:A2:154:U:H2'	1:A2:154:U:O2	2.02	0.60
1:A2:266:C:H4'	1:A2:267:C:OP1	2.02	0.60
1:A2:333:G:N1	2:A3:33:G:N1	2.50	0.60
1:A2:348:U:H5"	1:A2:348:U:H6	1.66	0.60
1:A2:380:A:N3	1:A2:380:A:C3'	2.55	0.60
1:A2:475:U:P	6:AC:6:PRO:HB2	2.42	0.60
1:A2:642:C:C2'	1:A2:643:G:H4'	2.30	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:736:G:O4'	15:AM:66:HIS:HB3	2.02	0.60
1:A2:1221:C:C5	1:A2:1222:G:C8	2.90	0.60
1:A2:1410:C:H6	1:A2:1410:C:O5'	1.84	0.60
1:A2:1505:G:H2'	1:A2:1506:A:H8	1.65	0.60
1:A2:1884:U:H2'	1:A2:1885:A:H5'	1.84	0.60
1:A2:2654:G:C8	1:A2:2654:G:OP2	2.55	0.60
1:A2:4147:G:H2'	1:A2:4148:U:C6	2.37	0.60
1:A2:4306:U:H5"	43:Ao:69:ARG:NH1	2.17	0.60
1:A2:4313:U:C5'	1:A2:4314:U:H5"	2.30	0.60
1:A2:4394:C:H2'	1:A2:4395:U:O4'	2.02	0.60
1:A2:4622:C:H2'	1:A2:4623:G:H5'	1.83	0.60
1:A2:4887:U:H4'	8:AE:262:LYS:HE3	1.84	0.60
2:A3:19:C:C2'	2:A3:20:A:H5'	2.32	0.60
3:A4:1:G:N7	7:AD:264:LYS:HG2	2.17	0.60
3:A4:58:A:H2'	3:A4:59:G:C8	2.37	0.60
7:AD:41:LYS:HB3	22:AT:68:THR:O	2.01	0.60
10:AG:73:ARG:HG3	10:AG:73:ARG:HH11	1.67	0.60
10:AG:76:VAL:HG22	10:AG:238:GLY:C	2.27	0.60
29:Aa:134:GLU:HG2	29:Aa:144:CYS:SG	2.42	0.60
48:BB:862:LEU:CD2	48:BB:914:ILE:HD12	2.19	0.60
48:BB:1166:LYS:CG	48:BB:1170:ILE:HG21	2.29	0.60
48:BB:1230:LYS:HD3	48:BB:1233:MET:CE	2.31	0.60
48:BB:1308:MET:HE3	48:BB:1333:VAL:HB	1.82	0.60
49:BC:225:A:O2'	49:BC:226:U:H5'	2.02	0.60
49:BC:351:A:H2	49:BC:352:A:C8	2.15	0.60
50:C1:43:U:H3'	50:C1:44:U:C5'	2.30	0.60
50:C1:130:G:P	50:C1:130:G:H8	2.25	0.60
50:C1:213:G:H2'	50:C1:214:U:H6	1.66	0.60
50:C1:312:G:H22	57:CG:195:LYS:CB	2.15	0.60
50:C1:750:C:H2'	50:C1:751:G:C8	2.37	0.60
50:C1:981:A:H8	50:C1:981:A:O5'	1.85	0.60
50:C1:1348:G:H2'	50:C1:1349:G:C8	2.36	0.60
59:CI:55:TYR:N	59:CI:55:TYR:CD1	2.70	0.60
60:CJ:53:ILE:HG23	60:CJ:97:ILE:HD11	1.83	0.60
70:CT:27:LYS:HD3	70:CT:110:LEU:HD11	1.82	0.60
71:CU:49:LYS:HB3	71:CU:92:HIS:HB3	1.83	0.60
74:CX:105:PHE:CZ	74:CX:121:LYS:HD2	2.37	0.60
1:A2:1218:A:C8	6:AC:330:PRO:HB3	2.37	0.60
1:A2:1313:A:H3'	1:A2:1314:A:H8	1.66	0.60
1:A2:1394:C:H2'	1:A2:1395:G:C8	2.37	0.60
1:A2:1481:G:H4'	1:A2:1482:A:OP1	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1492:U:H6	1:A2:1492:U:O5'	1.84	0.60
1:A2:1801:U:H3'	1:A2:1801:U:H6	1.67	0.60
1:A2:2062:C:C5	1:A2:2249:G:N1	2.69	0.60
1:A2:2306:G:H2'	1:A2:2306:G:N3	2.17	0.60
1:A2:2510:C:OP2	1:A2:2510:C:C6	2.55	0.60
1:A2:2726:C:C1'	35:Ag:64:LEU:HD13	2.32	0.60
1:A2:3741:U:H2'	1:A2:3742:U:H5	1.66	0.60
1:A2:4257:G:H2'	1:A2:4258:A:H8	1.67	0.60
1:A2:4267:A:H4'	19:AQ:186:TYR:CG	2.37	0.60
1:A2:4278:C:H3'	1:A2:4278:C:C6	2.37	0.60
1:A2:4370:G:H2'	1:A2:4371:G:H5'	1.83	0.60
1:A2:4372:C:H42	1:A2:4390:G:H1	1.49	0.60
3:A4:115:A:H1'	7:AD:74:ILE:HD12	1.83	0.60
4:AA:41:ILE:HG23	4:AA:90:CYS:SG	2.41	0.60
5:AB:56:ILE:HD12	5:AB:368:ILE:HG12	1.83	0.60
6:AC:326:LEU:HD23	6:AC:332:ALA:HB3	1.84	0.60
14:AL:153:PRO:O	14:AL:156:PRO:HD2	2.02	0.60
48:BB:831:ARG:HH22	48:BB:1094:GLY:C	2.10	0.60
48:BB:843:LEU:HD13	48:BB:908:ARG:CA	2.28	0.60
48:BB:1237:VAL:HG11	74:CX:50:ILE:HD12	1.80	0.60
48:BB:1319:ARG:HD3	48:BB:1384:LYS:HB2	1.83	0.60
48:BB:1427:LEU:O	48:BB:1430:VAL:HG12	2.02	0.60
49:BC:345:A:N6	49:BC:346:G:C6	2.70	0.60
50:C1:307:G:H4'	50:C1:308:G:OP1	2.02	0.60
50:C1:316:G:H2'	50:C1:317:C:C6	2.37	0.60
50:C1:508:A:N3	50:C1:508:A:H2'	2.16	0.60
50:C1:562:U:H2'	50:C1:563:G:C8	2.36	0.60
50:C1:683:G:C2	50:C1:1023:A:C5	2.89	0.60
50:C1:1466:G:C6	50:C1:1467:C:C4	2.90	0.60
50:C1:1614:A:H2'	50:C1:1615:U:H6	1.66	0.60
54:CD:68:GLU:O	54:CD:72:VAL:HG23	2.02	0.60
59:CI:130:THR:OG1	59:CI:131:PRO:HD2	2.02	0.60
61:CK:27:VAL:O	61:CK:28:HIS:HB3	2.01	0.60
78:Cb:59:CYS:HB2	78:Cb:61:THR:HG23	1.84	0.60
1:A2:416:U:H1'	18:AP:6:LEU:CD2	2.31	0.59
1:A2:426:A:C2'	1:A2:427:C:H5'	2.32	0.59
1:A2:715:C:H2'	1:A2:716:U:H6	1.65	0.59
1:A2:937:C:O2'	1:A2:938:C:H5'	2.02	0.59
1:A2:1264:G:O2'	1:A2:1265:U:H5'	2.02	0.59
1:A2:1285:C:H6	1:A2:1285:C:C5'	2.14	0.59
1:A2:1338:G:H8	1:A2:1338:G:O5'	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1507:U:H2'	1:A2:1508:G:C8	2.36	0.59
1:A2:2479:G:H2'	1:A2:2481:C:OP1	2.02	0.59
1:A2:2497:C:H2'	1:A2:2498:G:C8	2.37	0.59
1:A2:2597:G:H1	1:A2:2613:U:H3	1.50	0.59
1:A2:2668:U:H2'	1:A2:2669:U:C6	2.37	0.59
1:A2:3908:G:N7	1:A2:4130:A:H2'	2.17	0.59
1:A2:3917:C:O2'	37:Ai:63:VAL:HG21	2.02	0.59
1:A2:4283:A:H2'	1:A2:4284:A:O4'	2.02	0.59
1:A2:4563:C:C2'	1:A2:4564:G:H5'	2.29	0.59
1:A2:4565:A:H2'	1:A2:4566:G:H8	1.63	0.59
1:A2:4614:C:O5'	1:A2:4614:C:H6	1.85	0.59
2:A3:26:C:H2'	2:A3:27:U:H6	1.64	0.59
15:AM:123:ILE:HA	17:AO:187:LYS:HE3	1.80	0.59
35:Ag:54:ARG:CZ	35:Ag:54:ARG:HA	2.32	0.59
42:An:11:ARG:HH11	50:C1:1183:A:H5'	1.65	0.59
43:Ao:105:GLN:O	47:BA:55:U:N3	2.35	0.59
46:Au:203:THR:CG2	46:Au:204:MET:HE2	2.31	0.59
47:BA:70:G:C8	48:BB:1384:LYS:HD3	2.37	0.59
48:BB:938:ILE:HD11	48:BB:1052:LEU:HD11	1.83	0.59
48:BB:1197:VAL:HB	48:BB:1222:ILE:CD1	2.32	0.59
50:C1:16:G:H2'	50:C1:17:C:C6	2.37	0.59
50:C1:169:U:H5"	50:C1:169:U:H6	1.67	0.59
50:C1:181:A:H3'	50:C1:182:C:C5'	2.19	0.59
50:C1:193:C:H1'	50:C1:208:G:C2	2.37	0.59
50:C1:468:A:H2'	50:C1:469:A:O4'	2.02	0.59
50:C1:587:A:H8	50:C1:587:A:OP2	1.85	0.59
50:C1:605:A:H3'	50:C1:607:U:OP2	2.02	0.59
50:C1:688:U:H5"	58:CH:103:LYS:HD2	1.84	0.59
50:C1:743:U:H5'	50:C1:744:G:N7	2.16	0.59
50:C1:1121:G:H2'	50:C1:1122:A:C8	2.37	0.59
50:C1:1141:G:O4'	50:C1:1151:G:H4'	2.02	0.59
50:C1:1393:G:H5"	50:C1:1394:G:OP2	2.02	0.59
50:C1:1601:A:O2'	50:C1:1602:U:H5"	2.02	0.59
50:C1:1663:A:H2	50:C1:1664:A:N6	1.99	0.59
50:C1:1751:C:C2'	50:C1:1752:C:H5'	2.32	0.59
51:CA:12:GLU:HA	51:CA:15:VAL:HG22	1.84	0.59
57:CG:2:LYS:CE	57:CG:15:LEU:HD11	2.32	0.59
67:CQ:134:GLY:HA3	67:CQ:139:ALA:O	2.02	0.59
1:A2:155:A:H2'	1:A2:155:A:N3	2.17	0.59
1:A2:269:G:H2'	1:A2:320:A:C6	2.36	0.59
1:A2:372:U:H5'	1:A2:405:C:C5	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:506:C:H2'	1:A2:507:C:C6	2.37	0.59
1:A2:916:A:H1'	1:A2:917:G:C5'	2.30	0.59
1:A2:1302:A:H1'	1:A2:1304:A:OP2	2.02	0.59
1:A2:1340:G:H3'	1:A2:1341:G:C8	2.36	0.59
1:A2:1737:G:H2'	1:A2:1738:G:C8	2.37	0.59
1:A2:1907:A:H61	1:A2:2032:U:H3	1.49	0.59
1:A2:2310:G:H3'	1:A2:2311:C:C5'	2.32	0.59
1:A2:3703:U:O5'	1:A2:3703:U:H6	1.85	0.59
1:A2:4179:A:C2	1:A2:4180:A:C6	2.90	0.59
1:A2:4283:A:H5"	7:AD:176:SER:OG	2.02	0.59
1:A2:4651:A:H4'	11:AH:71:ARG:HB3	1.84	0.59
1:A2:4812:A:C2'	1:A2:4813:C:C6	2.80	0.59
1:A2:4825:G:C2	15:AM:91:TRP:HB2	2.37	0.59
1:A2:4962:A:H5"	1:A2:4997:A:H2	1.67	0.59
2:A3:40:A:O2'	2:A3:41:A:H5'	2.01	0.59
3:A4:26:C:O5'	3:A4:26:C:H6	1.84	0.59
3:A4:34:C:H2'	3:A4:34:C:O2	2.01	0.59
3:A4:63:C:C4'	3:A4:64:G:O5'	2.50	0.59
6:AC:48:ASN:HB2	6:AC:49:ARG:NH2	2.17	0.59
6:AC:141:GLY:HA2	45:At:15:SER:CB	2.31	0.59
11:AH:12:ILE:HD11	11:AH:55:LEU:HB2	1.84	0.59
11:AH:41:ILE:HG13	11:AH:73:ILE:CG1	2.32	0.59
17:AO:26:GLN:HG3	17:AO:31:ARG:CZ	2.32	0.59
19:AQ:12:LYS:O	19:AQ:13:VAL:HB	2.02	0.59
23:AU:22:THR:HG23	23:AU:69:LYS:HE3	1.84	0.59
34:Af:22:ARG:HB3	34:Af:24:HIS:CD2	2.37	0.59
41:Am:93:LYS:HB2	41:Am:124:LYS:CE	2.32	0.59
48:BB:1064:LEU:CA	48:BB:1142:ALA:HB2	2.31	0.59
49:BC:351:A:C2	53:CC:147:VAL:CG2	2.53	0.59
50:C1:96:C:O4'	50:C1:474:G:H4'	2.02	0.59
50:C1:525:A:H3'	50:C1:525:A:H8	1.65	0.59
50:C1:571:U:C1'	75:CY:60:PHE:H	2.15	0.59
50:C1:655:A:C8	50:C1:657:U:H5	2.20	0.59
50:C1:999:G:OP1	50:C1:1034:A:H1'	2.02	0.59
50:C1:1127:C:O2'	50:C1:1128:C:H5'	2.02	0.59
50:C1:1576:G:O2'	50:C1:1577:G:H5'	2.01	0.59
50:C1:1636:G:H1'	56:CF:164:ARG:HH22	1.67	0.59
83:Cg:59:LEU:HD22	83:Cg:90:TRP:CE3	2.38	0.59
1:A2:170:C:H6	1:A2:170:C:O5'	1.85	0.59
1:A2:180:C:O2'	1:A2:181:U:H5'	2.02	0.59
1:A2:328:U:H4'	1:A2:329:A:OP1	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:426:A:C8	1:A2:427:C:H5	2.19	0.59
1:A2:445:U:C3'	1:A2:446:C:C6	2.86	0.59
1:A2:1203:G:C2'	1:A2:1204:G:C8	2.84	0.59
1:A2:1281:C:H6	1:A2:1281:C:C3'	2.15	0.59
1:A2:1293:C:H5	1:A2:3851:C:C1'	2.16	0.59
1:A2:1367:A:C5	1:A2:1377:A:N6	2.70	0.59
1:A2:1541:G:C2'	1:A2:1542:A:H5"	2.31	0.59
1:A2:1911:G:N2	1:A2:2034:G:N2	2.51	0.59
1:A2:2064:G:C2	1:A2:2246:G:N1	2.69	0.59
1:A2:3831:A:H2'	1:A2:3832:C:O4'	2.03	0.59
1:A2:4139:G:H2'	1:A2:4140:G:H8	1.66	0.59
1:A2:4272:U:H2'	1:A2:4273:A:C8	2.37	0.59
1:A2:4342:G:H2'	1:A2:4343:U:C6	2.37	0.59
1:A2:4800:C:H2'	1:A2:4801:C:H6	1.67	0.59
2:A3:40:A:H2'	2:A3:41:A:C8	2.36	0.59
3:A4:31:G:H2'	3:A4:32:A:C8	2.37	0.59
6:AC:296:PRO:O	6:AC:300:ARG:HG3	2.01	0.59
13:AJ:85:LYS:HG2	13:AJ:115:LEU:HB2	1.83	0.59
15:AM:14:TYR:CZ	15:AM:22:GLY:HA2	2.37	0.59
17:AO:167:HIS:NE2	17:AO:171:LYS:HB2	2.17	0.59
31:Ac:8:LYS:HE2	50:C1:1007:C:H5"	0.67	0.59
38:Aj:25:LYS:HG2	38:Aj:25:LYS:O	2.01	0.59
39:Ak:24:LYS:NZ	39:Ak:69:LEU:HD11	2.17	0.59
47:BA:41:C:O3'	50:C1:1640:A:H5'	2.01	0.59
47:BA:41:C:O2	50:C1:1640:A:C1'	2.50	0.59
48:BB:844:ARG:CG	48:BB:1142:ALA:HB3	2.31	0.59
48:BB:1303:VAL:CB	48:BB:1337:THR:HG22	2.31	0.59
48:BB:1305:PRO:HG3	48:BB:1421:TRP:CE3	2.36	0.59
48:BB:1338:PRO:HB2	48:BB:1399:LYS:HB3	1.82	0.59
50:C1:15:U:H2'	50:C1:16:G:H5'	1.83	0.59
50:C1:18:C:H5'	50:C1:1194:A:N6	2.17	0.59
50:C1:76:U:H2'	50:C1:77:A:C3'	2.25	0.59
50:C1:101:U:H6	50:C1:101:U:O5'	1.85	0.59
50:C1:382:C:H2'	50:C1:383:G:N2	2.18	0.59
50:C1:479:C:C2'	50:C1:480:G:H5'	2.32	0.59
50:C1:522:A:H8	50:C1:522:A:O5'	1.85	0.59
50:C1:1016:U:C1'	50:C1:1017:U:H5"	2.32	0.59
50:C1:1641:A:H8	50:C1:1641:A:H5"	1.68	0.59
50:C1:1685:U:C5	50:C1:1686:G:N7	2.71	0.59
51:CA:163:CYS:SG	51:CA:174:MET:HE1	2.42	0.59
69:CS:86:ARG:NH2	69:CS:107:LEU:HD21	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2:G:C6	1:A2:3:C:C4	2.91	0.59
1:A2:166:G:H2'	1:A2:167:C:O4'	2.03	0.59
1:A2:477:C:H4'	1:A2:478:G:H5'	1.85	0.59
1:A2:914:G:N2	1:A2:915:C:C6	2.70	0.59
1:A2:1204:G:H4'	1:A2:1205:U:OP1	2.02	0.59
1:A2:1318:G:H8	1:A2:1318:G:O5'	1.85	0.59
1:A2:1577:C:H1'	1:A2:2775:A:C8	2.37	0.59
1:A2:2252:A:H2'	1:A2:2253:C:C6	2.36	0.59
1:A2:4479:C:H6	1:A2:4479:C:H3'	1.66	0.59
1:A2:4533:G:H4'	1:A2:4534:U:O5'	2.00	0.59
1:A2:4735:G:C3'	1:A2:4736:C:H5"	2.31	0.59
4:AA:22:HIS:HB3	4:AA:52:PRO:HG2	1.84	0.59
7:AD:56:THR:OG1	7:AD:59:ASP:HB3	2.00	0.59
15:AM:97:ALA:O	15:AM:100:ARG:HB2	2.02	0.59
22:AT:84:ILE:HD11	30:Ab:24:PRO:HB3	1.85	0.59
26:AX:61:PRO:HG2	36:Ah:80:PRO:HG3	1.84	0.59
47:BA:34:G:H5"	50:C1:1248:U:H1'	1.82	0.59
48:BB:1205:LEU:HD21	48:BB:1222:ILE:HG23	1.84	0.59
49:BC:267:G:C2	50:C1:1114:U:OP2	2.54	0.59
49:BC:352:A:N3	49:BC:352:A:H2'	2.17	0.59
50:C1:84:A:O3'	75:CY:119:GLY:HA3	2.03	0.59
50:C1:600:G:H5"	50:C1:601:G:OP2	2.02	0.59
50:C1:965:U:O5'	50:C1:965:U:H6	1.85	0.59
50:C1:1021:U:H2'	50:C1:1021:U:OP2	2.03	0.59
50:C1:1206:G:C2	50:C1:1208:A:C8	2.90	0.59
50:C1:1335:G:H2'	50:C1:1336:C:H5'	1.85	0.59
50:C1:1784:G:H2'	50:C1:1785:C:H6	1.67	0.59
56:CF:111:VAL:HG12	56:CF:177:LEU:CD2	2.32	0.59
77:Ca:38:LYS:C	77:Ca:71:LEU:HB2	2.27	0.59
1:A2:24:G:N1	1:A2:25:A:C5	2.70	0.59
1:A2:38:A:C5'	1:A2:39:A:H4'	2.33	0.59
1:A2:99:A:C2'	1:A2:100:C:H6	2.15	0.59
1:A2:121:A:N6	1:A2:147:U:C2	2.70	0.59
1:A2:1205:U:O2	1:A2:1205:U:H2'	2.03	0.59
1:A2:1284:C:O2'	1:A2:2289:A:H1'	2.01	0.59
1:A2:1317:A:H4'	6:AC:102:PHE:CG	2.37	0.59
1:A2:2028:G:N2	17:AO:87:MET:HA	2.17	0.59
1:A2:2549:C:O4'	1:A2:2737:G:N7	2.34	0.59
1:A2:3612:A:N7	38:Aj:3:LYS:HG2	2.18	0.59
1:A2:4358:C:C6	1:A2:4358:C:C3'	2.85	0.59
1:A2:4838:C:C3'	1:A2:4839:G:C5'	2.80	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4897:C:O2	1:A2:4897:C:H3'	2.02	0.59
1:A2:4901:U:H1'	34:Af:69:VAL:HB	1.85	0.59
13:AJ:55:TYR:OH	47:BA:52:G:C5'	2.51	0.59
15:AM:104:MET:HE2	17:AO:198:THR:HB	1.83	0.59
25:AW:13:ILE:HG12	25:AW:32:LEU:CB	2.33	0.59
27:AY:111:LEU:HB3	27:AY:116:LYS:HE2	1.84	0.59
35:Ag:5:LEU:HB2	35:Ag:32:TYR:CE2	2.38	0.59
38:Aj:63:ARG:O	38:Aj:68:LYS:HE2	2.03	0.59
43:Ao:99:ARG:NE	47:BA:56:C:OP2	2.34	0.59
44:Ap:79:VAL:O	44:Ap:83:ILE:HG12	2.01	0.59
47:BA:25:C:O2'	47:BA:26:A:H5'	2.03	0.59
47:BA:76:A:H2'	48:BB:1325:GLY:HA2	1.84	0.59
48:BB:814:THR:C	48:BB:1170:ILE:HD11	2.28	0.59
50:C1:439:A:H4'	50:C1:1799:G:H4'	1.84	0.59
50:C1:486:A:H8	50:C1:486:A:O5'	1.85	0.59
50:C1:1389:C:H5"	68:CR:43:SER:HB2	1.84	0.59
50:C1:1442:U:H3'	50:C1:1443:C:H5"	1.82	0.59
65:CO:118:ALA:O	65:CO:121:ARG:HG2	2.02	0.59
68:CR:51:ALA:HA	68:CR:54:VAL:HG12	1.83	0.59
82:Cf:118:ARG:HD2	82:Cf:134:SER:OG	2.03	0.59
1:A2:221:U:H4'	1:A2:222:G:O5'	2.02	0.59
1:A2:326:A:H2'	1:A2:327:A:C8	2.36	0.59
1:A2:635:G:H5'	14:AL:160:VAL:HA	1.84	0.59
1:A2:929:U:C3'	1:A2:930:C:H5'	2.33	0.59
1:A2:974:C:H2'	1:A2:974:C:O2	2.02	0.59
1:A2:1090:C:H2'	1:A2:1091:U:H6	1.65	0.59
1:A2:1338:G:N2	1:A2:1339:G:C5	2.71	0.59
1:A2:1347:C:C5	27:AY:1:MET:HG2	2.38	0.59
1:A2:1387:C:H3'	1:A2:1388:G:C8	2.38	0.59
1:A2:1624:C:H6	1:A2:1624:C:O5'	1.86	0.59
1:A2:1791:C:H4'	30:Ab:57:MET:CB	2.29	0.59
1:A2:2310:G:H8	1:A2:2310:G:C5'	2.15	0.59
1:A2:2487:G:O5'	1:A2:2487:G:H8	1.85	0.59
1:A2:4089:G:H2'	1:A2:4089:G:N3	2.17	0.59
1:A2:4314:U:H4'	1:A2:4315:G:H5'	1.84	0.59
1:A2:4565:A:C4'	48:BB:949:PRO:CG	2.39	0.59
1:A2:4723:A:H2	15:AM:2:VAL:HG22	1.67	0.59
1:A2:4938:C:C2'	1:A2:4939:C:H5'	2.32	0.59
3:A4:23:A:C2'	3:A4:24:C:C6	2.85	0.59
5:AB:206:PRO:HG2	5:AB:209:GLN:OE1	2.02	0.59
36:Ah:70:ARG:CG	36:Ah:83:LEU:HD22	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Ai:43:MET:O	37:Ai:47:VAL:HG23	2.03	0.59
43:Ao:106:PHE:CE2	47:BA:57:G:C4	2.90	0.59
46:Au:87:LEU:HD13	46:Au:97:LEU:HD11	1.84	0.59
47:BA:75:C:H6	48:BB:1323:VAL:HG21	1.65	0.59
48:BB:850:VAL:CG1	48:BB:861:ILE:HD11	2.31	0.59
48:BB:943:ILE:CB	48:BB:969:LEU:HG	2.33	0.59
49:BC:173:A:H8	49:BC:173:A:O5'	1.85	0.59
50:C1:24:C:H42	50:C1:650:A:H61	1.49	0.59
50:C1:133:C:H3'	50:C1:134:C:H4'	1.85	0.59
50:C1:684:G:H2'	50:C1:685:A:C8	2.38	0.59
50:C1:1038:U:H1'	50:C1:1181:A:C2	2.37	0.59
50:C1:1534:C:H2'	50:C1:1599:U:O4	2.03	0.59
50:C1:1698:C:H3'	50:C1:1699:A:H5'	1.85	0.59
59:CI:194:GLU:OE1	62:CL:20:LYS:HD3	2.01	0.59
67:CQ:50:LYS:HG2	67:CQ:85:ARG:HD2	1.85	0.59
69:CS:24:ARG:O	69:CS:55:ARG:HD3	2.02	0.59
83:Cg:24:THR:HB	83:Cg:71:ILE:CG2	2.32	0.59
1:A2:133:C:H2'	1:A2:135:G:C2	2.36	0.59
1:A2:965:C:C5'	1:A2:965:C:C6	2.86	0.59
1:A2:972:C:OP1	1:A2:1219:C:H4'	2.03	0.59
1:A2:1299:U:H4'	1:A2:1832:G:O6	2.02	0.59
1:A2:1747:C:H2'	1:A2:1748:G:C5	2.37	0.59
1:A2:1930:G:C8	1:A2:1930:G:H5'	2.37	0.59
1:A2:2006:C:H2'	1:A2:2007:A:O4'	2.02	0.59
1:A2:2062:C:C6	1:A2:2063:G:C8	2.91	0.59
1:A2:2549:C:C6	1:A2:2549:C:C3'	2.86	0.59
1:A2:3589:G:C2	1:A2:4602:U:H5"	2.38	0.59
1:A2:3592:C:C5	1:A2:3592:C:OP2	2.55	0.59
1:A2:3648:U:H5	4:AA:20:VAL:O	1.85	0.59
1:A2:4420:U:H2'	1:A2:4421:C:H6	1.67	0.59
1:A2:4593:G:O2'	1:A2:4594:U:H3'	2.03	0.59
1:A2:4900:G:H5'	1:A2:4901:U:O3'	2.02	0.59
15:AM:62:LEU:HD22	15:AM:64:PHE:CZ	2.38	0.59
48:BB:1025:ASN:HD21	48:BB:1031:PHE:HB2	1.66	0.59
48:BB:1353:THR:CB	48:BB:1374:LYS:CE	2.81	0.59
49:BC:350:G:P	54:CD:146:ARG:HE	2.24	0.59
50:C1:60:A:C5'	50:C1:501:C:H5	2.16	0.59
50:C1:111:A:N6	50:C1:351:G:N3	2.50	0.59
50:C1:593:C:OP2	50:C1:593:C:C6	2.56	0.59
50:C1:672:A:H2	50:C1:1162:C:O2'	1.85	0.59
50:C1:897:U:O2'	50:C1:898:U:H5"	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:959:G:N1	65:CO:65:ASP:HB3	2.16	0.59
50:C1:1014:G:H2'	50:C1:1015:U:C6	2.37	0.59
50:C1:1415:C:H42	50:C1:1431:G:H1	1.49	0.59
50:C1:1431:G:C2	50:C1:1432:U:N3	2.71	0.59
50:C1:1439:A:P	50:C1:1439:A:H8	2.25	0.59
50:C1:1494:U:H1'	50:C1:1495:G:OP2	2.01	0.59
50:C1:1649:U:H6	50:C1:1649:U:H3'	1.68	0.59
50:C1:1701:C:OP2	50:C1:1701:C:H4'	2.02	0.59
50:C1:1828:C:H3'	50:C1:1829:G:H8	1.68	0.59
50:C1:1861:G:P	77:Ca:3:LYS:HA	2.43	0.59
50:C1:1864:U:O2'	50:C1:1866:A:C2	2.56	0.59
52:CB:47:THR:HB	52:CB:65:ARG:NH1	2.18	0.59
64:CN:42:LYS:HE3	64:CN:80:LEU:CD2	2.32	0.59
1:A2:74:G:OP1	14:AL:59:VAL:HG13	2.02	0.59
1:A2:1213:G:O5'	1:A2:1213:G:H8	1.86	0.59
1:A2:1217:C:C2'	1:A2:1217:C:O2	2.50	0.59
1:A2:1221:C:H3'	1:A2:1221:C:C6	2.37	0.59
1:A2:1452:U:H2'	1:A2:1453:C:O4'	2.01	0.59
1:A2:1874:A:H3'	1:A2:1875:A:H5"	1.84	0.59
1:A2:2573:G:H4'	35:Ag:46:CYS:C	2.27	0.59
1:A2:2624:A:N6	1:A2:2664:U:C4	2.71	0.59
1:A2:2651:A:C2	31:Ac:53:PRO:HG2	2.38	0.59
1:A2:2665:G:C2'	1:A2:2666:C:H5'	2.33	0.59
1:A2:4094:A:H2'	1:A2:4095:A:C8	2.37	0.59
1:A2:4196:G:H4'	1:A2:4288:G:O2'	2.03	0.59
1:A2:4204:A:O4'	1:A2:4228:A:H4'	2.03	0.59
1:A2:4480:G:O6	5:AB:4:ARG:HA	2.02	0.59
1:A2:4869:C:H2'	1:A2:4870:G:C8	2.37	0.59
14:AL:103:ARG:HH21	37:Ai:25:ARG:HG2	1.68	0.59
15:AM:28:VAL:HG11	15:AM:47:ARG:HH21	1.66	0.59
20:AR:39:GLN:O	20:AR:43:LYS:HG2	2.02	0.59
28:AZ:1:MET:HA	31:Ac:67:ALA:O	2.03	0.59
33:Ae:85:LEU:C	33:Ae:85:LEU:HD13	2.28	0.59
34:Af:46:ARG:HB2	34:Af:106:TYR:CZ	2.38	0.59
45:At:14:SER:HB3	45:At:17:LEU:HB2	1.85	0.59
48:BB:832:LEU:HD21	48:BB:1062:LYS:HA	1.85	0.59
48:BB:1219:TYR:O	48:BB:1219:TYR:CD1	2.55	0.59
50:C1:945:U:H3'	50:C1:946:U:C6	2.37	0.59
50:C1:1322:G:H8	50:C1:1322:G:O5'	1.85	0.59
50:C1:1493:C:H5"	50:C1:1493:C:H6	1.65	0.59
50:C1:1658:G:H2'	50:C1:1659:U:H5'	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:CB:112:SER:HB2	77:Ca:68:TYR:CD2	2.37	0.59
56:CF:32:ASP:HB2	56:CF:117:ILE:CG2	2.32	0.59
58:CH:102:PRO:HB2	58:CH:105:THR:OG1	2.03	0.59
69:CS:26:ILE:HA	69:CS:56:ALA:HB2	1.85	0.59
70:CT:25:SER:HB3	70:CT:27:LYS:HG3	1.84	0.59
77:Ca:88:SER:O	77:Ca:92:ARG:HG3	2.03	0.59
83:Cg:283:PRO:C	83:Cg:285:GLN:H	2.10	0.59
1:A2:437:C:H2'	1:A2:438:C:C6	2.37	0.59
1:A2:677:C:H3'	1:A2:677:C:OP2	2.03	0.59
1:A2:722:G:C3'	1:A2:723:G:H4'	2.33	0.59
1:A2:724:C:H2'	1:A2:725:C:C4'	2.32	0.59
1:A2:890:C:H2'	1:A2:891:C:C6	2.37	0.59
1:A2:1630:G:H2'	1:A2:1630:G:N3	2.18	0.59
1:A2:1854:U:O3'	9:AF:103:PRO:HD3	2.03	0.59
1:A2:2395:A:C2'	1:A2:2396:C:H5"	2.33	0.59
1:A2:2430:A:H2'	1:A2:2431:U:H5'	1.84	0.59
1:A2:2443:G:H8	1:A2:2443:G:OP2	1.85	0.59
1:A2:2820:U:H2'	1:A2:2821:A:O4'	2.03	0.59
1:A2:4384:A:H3'	1:A2:4385:G:H8	1.68	0.59
1:A2:4704:G:N2	1:A2:4910:A:C2	2.70	0.59
3:A4:11:A:C2	3:A4:66:G:N3	2.71	0.59
5:AB:232:THR:HG23	5:AB:237:THR:O	2.02	0.59
8:AE:152:ILE:O	8:AE:158:ARG:HA	2.03	0.59
13:AJ:152:GLY:O	13:AJ:156:ARG:HG3	2.03	0.59
45:At:30:ASN:HB3	45:At:48:THR:CB	2.33	0.59
47:BA:34:G:O6	50:C1:1701:C:O4'	2.21	0.59
48:BB:1116:ARG:NH1	50:C1:488:U:C5'	2.65	0.59
48:BB:1384:LYS:O	48:BB:1388:ARG:HB2	2.03	0.59
49:BC:339:A:N1	50:C1:961:G:H5'	2.16	0.59
50:C1:46:A:O5'	50:C1:47:G:H5"	2.03	0.59
50:C1:133:C:C5	50:C1:134:C:H1'	2.38	0.59
50:C1:168:C:H4'	57:CG:131:ARG:CD	2.26	0.59
50:C1:454:U:H5"	57:CG:76:LEU:HD22	1.85	0.59
50:C1:741:C:C4	50:C1:744:G:N1	2.70	0.59
50:C1:858:A:C2	50:C1:859:G:C5	2.90	0.59
50:C1:1160:U:C2'	50:C1:1161:U:H5'	2.33	0.59
50:C1:1348:G:H8	50:C1:1348:G:P	2.25	0.59
50:C1:1506:A:H5'	50:C1:1508:A:N7	2.18	0.59
50:C1:1771:G:H2'	50:C1:1772:C:H6	1.66	0.59
50:C1:1864:U:H2'	77:Ca:5:ARG:HH12	1.68	0.59
61:CK:47:LYS:O	61:CK:50:GLN:HG2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Cd:26:ASN:O	80:Cd:39:CYS:SG	2.60	0.59
83:Cg:82:SER:HB3	83:Cg:84:ASP:OD1	2.02	0.59
1:A2:166:G:C2'	1:A2:167:C:H4'	2.32	0.59
1:A2:439:G:H2'	1:A2:440:C:H6	1.68	0.59
1:A2:442:C:O2'	1:A2:443:A:H5'	2.03	0.59
1:A2:445:U:H3'	1:A2:446:C:H5	1.68	0.59
1:A2:644:U:H2'	1:A2:645:C:H6	1.68	0.59
1:A2:673:G:H8	1:A2:673:G:O5'	1.85	0.59
1:A2:932:C:H2'	1:A2:933:G:C8	2.38	0.59
1:A2:1061:C:O2'	1:A2:1062:C:H5'	2.03	0.59
1:A2:1064:C:H2'	1:A2:1065:C:H6	1.65	0.59
1:A2:1186:C:H2'	1:A2:1187:C:H6	1.68	0.59
1:A2:1316:G:C2'	1:A2:1317:A:C8	2.86	0.59
1:A2:1641:C:H1'	1:A2:2297:G:H1'	1.85	0.59
1:A2:2368:G:H2'	1:A2:2369:C:H5"	1.85	0.59
1:A2:3618:A:H2'	1:A2:3618:A:N3	2.17	0.59
1:A2:3919:U:C2	1:A2:3920:G:C8	2.90	0.59
1:A2:4203:C:O2	1:A2:4228:A:H1'	2.03	0.59
1:A2:4365:G:H5"	12:AI:5:PRO:HG2	1.84	0.59
1:A2:4490:U:O5'	1:A2:4490:U:H6	1.86	0.59
2:A3:148:A:H3'	2:A3:148:A:H8	1.68	0.59
4:AA:180:LEU:HD21	44:Ap:26:VAL:HG21	1.84	0.59
6:AC:145:GLU:O	45:At:77:TYR:HB2	2.03	0.59
17:AO:34:VAL:HG11	17:AO:112:TYR:HE1	1.67	0.59
50:C1:102:A:H4'	50:C1:103:A:O5'	2.02	0.59
50:C1:184:G:H3'	50:C1:185:G:C4'	2.30	0.59
50:C1:604:A:H5'	60:CJ:22:LYS:HB2	1.85	0.59
50:C1:871:U:O2	50:C1:871:U:H2'	2.03	0.59
50:C1:957:A:C4'	50:C1:973:C:H1'	2.32	0.59
50:C1:1411:G:N3	50:C1:1411:G:H2'	2.17	0.59
50:C1:1598:G:H4'	50:C1:1600:G:O6	2.02	0.59
50:C1:1604:G:H2'	50:C1:1605:G:O4'	2.03	0.59
50:C1:1616:U:H2'	50:C1:1616:U:O2	2.02	0.59
50:C1:1617:G:H2'	50:C1:1619:A:OP2	2.03	0.59
52:CB:31:TYR:OH	52:CB:91:VAL:HG13	2.03	0.59
65:CO:77:ALA:O	65:CO:81:VAL:HG23	2.03	0.59
71:CU:63:ILE:HD12	80:Cd:52:PHE:HE2	1.64	0.59
77:Ca:19:GLN:HB3	77:Ca:32:LYS:NZ	2.18	0.59
79:Cc:21:THR:O	79:Cc:27:CYS:HB2	2.03	0.59
1:A2:28:C:H4'	1:A2:61:A:H4'	1.83	0.58
1:A2:137:G:H5'	16:AN:144:ARG:HH21	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1352:A:H2	1:A2:1353:A:C6	2.21	0.58
1:A2:2512:G:H2'	1:A2:2513:A:O4'	2.02	0.58
1:A2:2564:A:N7	35:Ag:70:THR:HB	2.18	0.58
1:A2:2655:A:H2'	1:A2:2656:G:C8	2.38	0.58
1:A2:2789:A:H3'	1:A2:2790:A:H8	1.67	0.58
1:A2:3899:U:H2'	1:A2:3900:C:C6	2.38	0.58
1:A2:3908:G:O6	1:A2:4130:A:H5"	2.02	0.58
1:A2:4381:C:C2'	1:A2:4382:A:H5'	2.33	0.58
1:A2:4487:G:H8	1:A2:4488:G:O6	1.86	0.58
1:A2:4647:A:H61	1:A2:4663:U:H3	1.51	0.58
3:A4:7:G:H4'	7:AD:33:ARG:NE	2.17	0.58
27:AY:57:VAL:HG22	27:AY:104:VAL:HG12	1.84	0.58
38:Aj:11:ARG:HB3	38:Aj:11:ARG:HH11	1.67	0.58
50:C1:43:U:H3'	50:C1:44:U:H5'	1.84	0.58
50:C1:130:G:H5'	57:CG:195:LYS:NZ	2.17	0.58
50:C1:130:G:N7	50:C1:131:C:C2	2.71	0.58
50:C1:311:C:H2'	50:C1:311:C:OP1	2.02	0.58
50:C1:455:A:H2'	50:C1:456:C:H6	1.68	0.58
50:C1:1223:A:C2	50:C1:1224:G:H1'	2.37	0.58
50:C1:1325:G:C2'	50:C1:1326:U:H5"	2.32	0.58
50:C1:1401:A:H1'	50:C1:1402:A:P	2.43	0.58
50:C1:1513:C:H5"	80:Cd:10:HIS:CD2	2.37	0.58
53:CC:82:TYR:CE1	53:CC:164:PRO:HD3	2.38	0.58
58:CH:109:ARG:HG3	58:CH:113:LYS:HA	1.84	0.58
60:CJ:141:VAL:HG13	60:CJ:162:ARG:NH2	2.18	0.58
69:CS:23:ARG:HD3	69:CS:23:ARG:H	1.68	0.58
74:CX:41:PHE:HE1	74:CX:120:PHE:CE1	2.21	0.58
1:A2:32:G:N2	1:A2:50:C:H5	2.01	0.58
1:A2:37:U:H4'	29:Aa:32:ARG:HD2	1.85	0.58
1:A2:249:C:H2'	1:A2:250:G:C8	2.38	0.58
1:A2:297:A:H2	37:Ai:82:ARG:CZ	2.16	0.58
1:A2:344:A:H4'	1:A2:346:A:N7	2.18	0.58
1:A2:357:A:C2	1:A2:367:A:C5	2.91	0.58
1:A2:445:U:H2'	1:A2:446:C:C6	2.38	0.58
1:A2:713:G:H1	1:A2:925:C:H42	1.51	0.58
1:A2:2455:C:O5'	1:A2:2456:G:H5"	2.03	0.58
1:A2:3627:C:O4'	4:AA:237:LEU:HD22	2.03	0.58
1:A2:4379:U:O2	1:A2:4379:U:H2'	2.04	0.58
3:A4:47:G:H8	3:A4:47:G:O5'	1.85	0.58
3:A4:49:A:OP1	7:AD:225:GLN:HG3	2.03	0.58
4:AA:196:TRP:CG	4:AA:197:PRO:HD3	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AC:263:LEU:HD22	6:AC:273:LEU:CD2	2.29	0.58
15:AM:113:MET:O	15:AM:117:LYS:HG2	2.03	0.58
18:AP:60:PHE:CE1	18:AP:82:ARG:HB2	2.38	0.58
28:AZ:5:MET:HE2	28:AZ:77:TYR:CD2	2.38	0.58
33:Ae:12:ILE:HG23	33:Ae:66:THR:CB	2.32	0.58
45:At:75:THR:HG23	45:At:78:VAL:HG22	1.84	0.58
48:BB:814:THR:C	48:BB:1170:ILE:CD1	2.76	0.58
48:BB:1005:ALA:HB1	48:BB:1021:LEU:HD21	1.84	0.58
50:C1:66:G:C1'	57:CG:160:LYS:HG2	2.32	0.58
50:C1:144:U:C5	57:CG:180:VAL:HG22	2.37	0.58
50:C1:746:C:C5'	58:CH:104:PRO:C	2.76	0.58
50:C1:1049:A:H2'	50:C1:1050:A:C5'	2.33	0.58
50:C1:1380:C:H2'	50:C1:1381:G:C1'	2.33	0.58
50:C1:1461:G:N2	50:C1:1466:G:C4	2.70	0.58
50:C1:1473:G:H8	50:C1:1475:G:OP2	1.85	0.58
50:C1:1544:C:H4'	67:CQ:80:GLN:HE22	1.68	0.58
50:C1:1656:G:H2'	50:C1:1657:G:C8	2.38	0.58
56:CF:60:ARG:HH21	79:Cc:49:PRO:HA	1.68	0.58
71:CU:51:LYS:HB2	71:CU:90:ASP:HB2	1.85	0.58
76:CZ:62:VAL:N	76:CZ:63:PRO:HD2	2.19	0.58
78:Cb:37:CYS:SG	78:Cb:41:TYR:N	2.75	0.58
1:A2:2:G:N2	2:A3:156:U:N3	2.51	0.58
1:A2:95:G:N2	1:A2:96:U:H1'	2.18	0.58
1:A2:121:A:H2'	1:A2:121:A:OP1	2.03	0.58
1:A2:286:A:H2	1:A2:308:A:H8	1.42	0.58
1:A2:673:G:H3'	1:A2:674:G:H5"	1.85	0.58
1:A2:1161:C:H2'	1:A2:1162:C:C1'	2.33	0.58
1:A2:1174:G:H8	1:A2:1174:G:O5'	1.87	0.58
1:A2:1562:A:C8	1:A2:1563:G:C8	2.92	0.58
1:A2:1648:A:C8	1:A2:1648:A:C3'	2.87	0.58
1:A2:1669:C:H2'	1:A2:1670:G:O4'	2.03	0.58
1:A2:1726:U:C6	1:A2:1726:U:H5"	2.38	0.58
1:A2:1877:G:C8	1:A2:2254:G:C4	2.91	0.58
1:A2:1883:U:H5"	1:A2:1883:U:C6	2.34	0.58
1:A2:2051:C:C6	1:A2:2051:C:C3'	2.83	0.58
1:A2:2417:U:O4'	1:A2:2495:G:C2	2.56	0.58
1:A2:4032:C:N3	1:A2:4033:G:H1'	2.17	0.58
1:A2:4089:G:C5	35:Ag:94:ALA:HA	2.37	0.58
1:A2:4321:U:O5'	1:A2:4321:U:H6	1.85	0.58
1:A2:4562:A:H5"	11:AH:98:HIS:CG	2.38	0.58
2:A3:138:C:H2'	2:A3:139:G:H8	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:Am:104:HIS:HB3	41:Am:107:ALA:HB2	1.84	0.58
45:At:67:ARG:HA	45:At:83:ASN:CB	2.33	0.58
48:BB:817:GLU:CB	48:BB:1170:ILE:CG2	2.72	0.58
48:BB:1340:CYS:SG	48:BB:1348:ASP:CG	2.86	0.58
50:C1:84:A:O2'	50:C1:85:A:C8	2.48	0.58
50:C1:184:G:H3'	50:C1:185:G:C5'	2.33	0.58
50:C1:535:G:O2'	50:C1:536:A:H8	1.86	0.58
50:C1:606:G:H3'	50:C1:607:U:C4'	2.33	0.58
50:C1:1396:A:H2	50:C1:1449:G:N1	2.00	0.58
50:C1:1405:A:N3	50:C1:1442:U:C6	2.71	0.58
50:C1:1607:A:C2'	50:C1:1608:U:H5'	2.33	0.58
56:CF:36:GLN:O	56:CF:37:ASP:HB2	2.02	0.58
56:CF:102:LEU:HB3	76:CZ:67:LEU:HD22	1.84	0.58
1:A2:79:C:C2'	1:A2:80:C:H5'	2.34	0.58
1:A2:357:A:C2	1:A2:367:A:C4	2.91	0.58
1:A2:400:G:H4'	1:A2:401:A:H5'	1.84	0.58
1:A2:422:G:N3	1:A2:3857:G:H2'	2.19	0.58
1:A2:502:C:H2'	1:A2:503:U:H6	1.68	0.58
1:A2:942:G:H1'	1:A2:2250:C:P	2.43	0.58
1:A2:1666:U:O2	1:A2:1666:U:H2'	2.02	0.58
1:A2:1706:U:H6	1:A2:1706:U:O5'	1.86	0.58
1:A2:1783:A:H4'	1:A2:1784:A:O5'	2.03	0.58
1:A2:1942:A:H2	1:A2:4654:G:HO2'	1.50	0.58
1:A2:2593:C:H2'	1:A2:2593:C:O2	2.03	0.58
1:A2:2608:U:O3'	1:A2:2609:U:H4'	2.04	0.58
1:A2:2665:G:H8	1:A2:2665:G:H5'	1.67	0.58
1:A2:3876:G:H2'	1:A2:4407:C:O2'	2.03	0.58
1:A2:4254:C:H5'	1:A2:4254:C:C6	2.38	0.58
1:A2:4363:U:O2'	1:A2:4364:U:H5'	2.04	0.58
1:A2:4699:G:H4'	1:A2:4700:C:OP1	2.02	0.58
1:A2:4700:C:C2'	1:A2:4701:G:H4'	2.19	0.58
1:A2:4971:A:C2	1:A2:4988:G:N2	2.64	0.58
2:A3:54:C:O5'	2:A3:54:C:H6	1.86	0.58
2:A3:71:A:H2'	2:A3:82:A:N1	2.19	0.58
2:A3:139:G:C6	2:A3:140:C:C4	2.91	0.58
6:AC:180:ILE:O	6:AC:183:VAL:HG22	2.04	0.58
17:AO:182:GLU:HG2	17:AO:191:LYS:CE	2.34	0.58
45:At:103:ARG:HG2	45:At:107:ARG:H	1.69	0.58
46:Au:64:GLU:HB2	46:Au:107:GLU:HG2	1.85	0.58
48:BB:842:LYS:HB2	48:BB:1140:GLU:HG3	1.85	0.58
50:C1:20:G:H2'	50:C1:21:U:H5'	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:158:A:H2'	50:C1:159:A:O4'	2.02	0.58
50:C1:216:C:H5"	55:CE:134:LYS:CE	2.33	0.58
50:C1:795:A:H2'	50:C1:796:G:C8	2.33	0.58
50:C1:940:U:O2	50:C1:940:U:H2'	2.02	0.58
50:C1:1271:C:OP1	50:C1:1303:C:H1'	2.03	0.58
50:C1:1301:A:H3'	50:C1:1301:A:N3	2.17	0.58
50:C1:1334:G:H2'	50:C1:1335:G:O4'	2.04	0.58
50:C1:1405:A:C3'	50:C1:1405:A:C8	2.86	0.58
56:CF:19:LEU:HD11	56:CF:22:LYS:HD3	1.86	0.58
57:CG:160:LYS:HD3	57:CG:161:PRO:O	2.04	0.58
68:CR:105:MET:HG2	68:CR:106:LEU:N	2.18	0.58
70:CT:77:LYS:NZ	70:CT:94:ARG:HE	2.02	0.58
71:CU:56:MET:HG3	71:CU:57:PRO:HD2	1.84	0.58
77:Ca:30:VAL:HG11	77:Ca:35:ALA:HB2	1.84	0.58
1:A2:172:C:H5"	36:Ah:98:HIS:NE2	2.19	0.58
1:A2:377:A:H5"	27:AY:87:ARG:NH2	2.18	0.58
1:A2:460:C:O2	1:A2:460:C:C2'	2.51	0.58
1:A2:726:C:C2'	1:A2:727:G:H5"	2.31	0.58
1:A2:957:G:C8	1:A2:957:G:C5'	2.76	0.58
1:A2:1254:A:H2'	1:A2:1255:G:H4'	1.86	0.58
1:A2:1811:G:H3'	1:A2:1811:G:H8	1.68	0.58
1:A2:1874:A:C3'	1:A2:1875:A:H5"	2.33	0.58
1:A2:2485:U:H5"	1:A2:2486:C:OP2	2.03	0.58
1:A2:2635:G:C4	1:A2:2652:G:N2	2.71	0.58
1:A2:2650:G:H21	1:A2:2652:G:N2	2.01	0.58
1:A2:2687:C:H3'	1:A2:2688:G:C8	2.38	0.58
1:A2:2848:A:H2'	1:A2:2849:C:O4'	2.04	0.58
1:A2:3913:G:OP1	1:A2:3914:A:OP2	2.22	0.58
1:A2:4060:G:N2	1:A2:4118:C:N3	2.51	0.58
1:A2:4434:A:H2'	1:A2:4436:C:H5"	1.85	0.58
1:A2:4830:G:C3'	1:A2:4831:U:H4'	2.26	0.58
1:A2:5002:C:C6	1:A2:5002:C:H5"	2.38	0.58
3:A4:50:A:H2'	3:A4:50:A:N3	2.18	0.58
6:AC:69:THR:HG22	6:AC:75:ARG:HE	1.68	0.58
9:AF:110:GLN:HG2	19:AQ:6:ARG:NE	2.19	0.58
10:AG:168:VAL:O	10:AG:171:PRO:HD2	2.03	0.58
13:AJ:55:TYR:CZ	47:BA:53:G:P	2.96	0.58
13:AJ:63:ARG:NH1	43:Ao:103:VAL:HB	2.17	0.58
17:AO:184:ASN:O	17:AO:187:LYS:HG3	2.02	0.58
18:AP:51:VAL:HA	18:AP:56:GLN:O	2.04	0.58
40:Al:24:PRO:O	40:Al:27:ILE:HG22	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Au:56:GLU:OE1	46:Au:146:LYS:HD3	2.04	0.58
48:BB:835:SER:HG	48:BB:838:VAL:HG12	1.67	0.58
48:BB:1399:LYS:HD2	48:BB:1428:LYS:CE	2.31	0.58
50:C1:96:C:H1'	50:C1:474:G:C5'	2.33	0.58
50:C1:170:A:H3'	50:C1:171:A:C8	2.38	0.58
50:C1:195:C:H2'	50:C1:196:C:H6	1.67	0.58
50:C1:301:A:C2'	50:C1:302:A:H8	2.17	0.58
50:C1:606:G:N7	81:Ce:54:GLY:HA3	2.17	0.58
50:C1:655:A:C5	50:C1:657:U:C5	2.89	0.58
50:C1:1348:G:H2'	50:C1:1349:G:H8	1.67	0.58
50:C1:1488:C:O2'	50:C1:1489:A:H4'	2.03	0.58
50:C1:1618:C:H6	50:C1:1618:C:H5"	1.69	0.58
50:C1:1686:G:C6	50:C1:1687:C:C4	2.92	0.58
50:C1:1868:U:H4'	50:C1:1868:U:OP1	2.02	0.58
58:CH:109:ARG:CA	58:CH:113:LYS:H	2.16	0.58
70:CT:39:LEU:CD1	70:CT:43:LYS:HB2	2.30	0.58
1:A2:254:G:N3	1:A2:254:G:C3'	2.63	0.58
1:A2:454:A:H2'	1:A2:455:G:C8	2.38	0.58
1:A2:708:G:C2'	1:A2:709:G:H5'	2.33	0.58
1:A2:957:G:H4'	1:A2:1218:A:C5'	2.33	0.58
1:A2:1220:G:H5'	9:AF:48:LYS:CB	2.32	0.58
1:A2:1305:C:H5	1:A2:3847:C:O3'	1.86	0.58
1:A2:1662:U:H4'	29:Aa:43:ILE:HG21	1.85	0.58
1:A2:1872:C:H2'	1:A2:1873:G:H5"	1.84	0.58
1:A2:2248:C:H2'	1:A2:2249:G:H8	1.65	0.58
1:A2:2284:A:C8	1:A2:2285:G:N7	2.72	0.58
1:A2:2526:G:C3'	1:A2:2527:G:C5'	2.76	0.58
1:A2:2549:C:OP1	1:A2:2741:A:C8	2.57	0.58
1:A2:2657:G:H2'	1:A2:2658:G:C8	2.38	0.58
1:A2:2812:A:N3	5:AB:228:TYR:CD1	2.71	0.58
1:A2:3918:A:C6	1:A2:3919:U:C4	2.92	0.58
1:A2:4179:A:C2	1:A2:4180:A:C5	2.92	0.58
1:A2:4265:G:H2'	1:A2:4265:G:N3	2.18	0.58
1:A2:4545:U:O5'	1:A2:4545:U:H6	1.86	0.58
1:A2:4825:G:H4'	1:A2:4826:C:OP1	2.02	0.58
1:A2:4893:A:O2'	1:A2:4894:C:H4'	2.03	0.58
4:AA:30:ARG:HD2	4:AA:63:PHE:CD1	2.38	0.58
6:AC:159:GLU:O	6:AC:215:ASN:HB2	2.04	0.58
10:AG:110:LYS:HE2	10:AG:114:LEU:HD12	1.85	0.58
11:AH:41:ILE:CG2	11:AH:43:VAL:HG22	2.32	0.58
14:AL:53:GLY:O	14:AL:55:ILE:HG22	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AN:191:ALA:HA	16:AN:194:ARG:HE	1.68	0.58
48:BB:966:ILE:HD13	48:BB:1051:LEU:CB	2.34	0.58
50:C1:167:G:H5"	50:C1:168:C:OP2	2.03	0.58
50:C1:1438:A:H3'	50:C1:1439:A:C8	2.39	0.58
51:CA:110:ASN:HD22	51:CA:110:ASN:C	2.11	0.58
58:CH:109:ARG:HA	58:CH:113:LYS:N	2.18	0.58
66:CP:75:VAL:HG21	66:CP:104:GLN:HG2	1.86	0.58
68:CR:17:ILE:HG21	68:CR:61:ILE:HD11	1.85	0.58
78:Cb:82:LYS:O	78:Cb:83:GLN:HG3	2.04	0.58
1:A2:699:A:C2	1:A2:700:C:H5	2.21	0.58
1:A2:947:G:H2'	1:A2:948:A:O5'	2.04	0.58
1:A2:1760:U:C2'	1:A2:1761:U:H5'	2.32	0.58
1:A2:2532:G:H4'	28:AZ:109:LYS:HD3	1.85	0.58
1:A2:3695:A:O2'	1:A2:3696:A:H8	1.85	0.58
1:A2:4133:G:H2'	1:A2:4134:U:H5'	1.86	0.58
1:A2:4236:G:C8	1:A2:4236:G:C5'	2.82	0.58
1:A2:4533:G:H5"	1:A2:4533:G:N3	2.19	0.58
1:A2:4625:A:H2'	1:A2:4626:G:H8	1.69	0.58
1:A2:4682:A:H4'	5:AB:100:ARG:NH2	2.19	0.58
1:A2:4850:C:O2'	1:A2:4851:G:H5'	2.03	0.58
2:A3:137:A:C2	2:A3:138:C:C2	2.91	0.58
3:A4:3:C:H3'	3:A4:3:C:O2	2.03	0.58
8:AE:168:LEU:HD23	8:AE:172:LEU:HD12	1.86	0.58
9:AF:160:GLY:HA3	9:AF:207:PHE:CE2	2.38	0.58
12:AI:92:HIS:HB2	12:AI:94:PHE:CE2	2.37	0.58
13:AJ:109:ILE:HD13	13:AJ:109:ILE:H	1.69	0.58
46:Au:74:VAL:HG11	46:Au:142:ILE:HG21	1.86	0.58
48:BB:831:ARG:NH1	48:BB:1066:HIS:CA	2.66	0.58
48:BB:1152:LEU:HD23	48:BB:1153:GLU:N	2.17	0.58
48:BB:1261:GLU:HG3	48:BB:1262:MET:N	2.18	0.58
48:BB:1353:THR:OG1	48:BB:1374:LYS:HE3	2.01	0.58
48:BB:1355:ILE:HG13	48:BB:1373:VAL:HG21	1.84	0.58
48:BB:1357:VAL:HG13	48:BB:1360:LYS:HB2	1.84	0.58
49:BC:66:A:H2'	49:BC:67:C:H5'	1.86	0.58
49:BC:100:G:H5'	76:CZ:114:LYS:NZ	2.18	0.58
50:C1:67:C:H6	57:CG:162:LEU:HD23	1.69	0.58
50:C1:229:A:H2'	50:C1:888:U:O2	2.04	0.58
50:C1:667:U:H5"	50:C1:1087:A:C2	2.38	0.58
50:C1:745:C:H5'	58:CH:105:THR:HG23	1.86	0.58
50:C1:1263:U:H3'	50:C1:1264:C:H6	1.69	0.58
50:C1:1385:G:H5"	54:CD:160:SER:OG	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1520:G:H5”	50:C1:1520:G:C4	2.38	0.58
50:C1:1600:G:N3	50:C1:1600:G:H2’	2.19	0.58
50:C1:1800:A:H5”	50:C1:1801:A:OP2	2.04	0.58
53:CC:253:PRO:HD3	73:CW:68:ARG:NH2	2.18	0.58
64:CN:75:LEU:HA	64:CN:80:LEU:HD12	1.86	0.58
71:CU:49:LYS:HB3	71:CU:92:HIS:CB	2.34	0.58
1:A2:134:G:N3	1:A2:134:G:H2’	2.17	0.58
1:A2:244:G:H2’	1:A2:245:C:H6	1.67	0.58
1:A2:308:A:H2’	1:A2:308:A:N3	2.17	0.58
1:A2:701:C:H3’	1:A2:702:G:C8	2.39	0.58
1:A2:926:G:H5”	9:AF:148:LYS:CD	2.33	0.58
1:A2:1066:C:O2’	1:A2:1067:A:H5’	2.04	0.58
1:A2:1082:U:O4	1:A2:1147:C:H5’	2.04	0.58
1:A2:1219:C:H2’	1:A2:1219:C:O2	2.03	0.58
1:A2:1299:U:H3’	1:A2:1301:G:OP2	2.04	0.58
1:A2:1305:C:C5	1:A2:3848:G:O5’	2.57	0.58
1:A2:1720:G:C8	1:A2:1760:U:H5’	2.39	0.58
1:A2:2019:A:C2’	1:A2:4424:A:H2	2.17	0.58
1:A2:2615:G:H22	1:A2:2674:A:H2	1.50	0.58
1:A2:2646:C:H2’	1:A2:2647:C:O4’	2.03	0.58
1:A2:3910:G:O2’	1:A2:3911:A:H5’	2.03	0.58
1:A2:4437:A:N3	1:A2:4437:A:H2’	2.19	0.58
1:A2:4544:A:H2	1:A2:4680:C:OP2	1.86	0.58
6:AC:101:MET:HE2	6:AC:103:ALA:O	2.03	0.58
10:AG:66:GLN:HB3	16:AN:28:TRP:CH2	2.39	0.58
24:AV:58:GLY:HA2	24:AV:125:CYS:SG	2.43	0.58
27:AY:46:SER:O	27:AY:122:LYS:HE3	2.04	0.58
37:Ai:60:LEU:HD22	37:Ai:64:SER:HB3	1.85	0.58
48:BB:845:ALA:CA	48:BB:909:ILE:HD11	2.33	0.58
48:BB:1050:TYR:O	48:BB:1053:VAL:HG12	2.04	0.58
48:BB:1116:ARG:HH22	50:C1:487:U:H3’	1.68	0.58
50:C1:211:G:H8	50:C1:211:G:C5’	2.05	0.58
50:C1:420:G:H1’	50:C1:661:U:H3	1.69	0.58
50:C1:577:U:H4’	50:C1:578:C:O4’	2.04	0.58
50:C1:602:G:H8	50:C1:602:G:O5’	1.86	0.58
50:C1:893:U:H2’	50:C1:894:G:H8	1.68	0.58
50:C1:1089:G:H2’	50:C1:1090:C:C6	2.38	0.58
50:C1:1093:A:H5’	73:CW:3:ARG:NE	2.13	0.58
50:C1:1242:U:O2’	50:C1:1518:C:H4’	2.03	0.58
50:C1:1418:C:H5”	70:CT:129:ARG:HB2	1.85	0.58
60:CJ:94:LEU:O	60:CJ:97:ILE:HG22	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:CJ:122:SER:HB3	60:CJ:125:HIS:H	1.68	0.58
61:CK:38:LYS:HE3	61:CK:40:VAL:HG21	1.84	0.58
66:CP:30:TYR:HA	66:CP:33:LEU:CD2	2.33	0.58
70:CT:121:ARG:O	70:CT:121:ARG:HD2	2.04	0.58
1:A2:166:G:O2'	1:A2:167:C:H4'	2.04	0.58
1:A2:427:C:C6	1:A2:427:C:O5'	2.57	0.58
1:A2:1217:C:H5'	6:AC:333:LYS:CD	2.33	0.58
1:A2:2471:U:O5'	1:A2:2471:U:H6	1.86	0.58
1:A2:2624:A:N6	1:A2:2664:U:C2	2.72	0.58
1:A2:3592:C:H6	1:A2:3592:C:O5'	1.86	0.58
1:A2:3682:U:H3'	1:A2:3682:U:H6	1.67	0.58
1:A2:3836:A:C2	1:A2:3849:G:C6	2.91	0.58
1:A2:4599:G:H1'	1:A2:4960:G:H5'	1.86	0.58
1:A2:4806:G:H2'	1:A2:4807:C:O4'	2.04	0.58
1:A2:4895:C:O2'	8:AE:217:PHE:HB2	2.04	0.58
2:A3:4:C:C2'	2:A3:5:U:H5'	2.32	0.58
2:A3:154:G:H8	2:A3:154:G:O5'	1.86	0.58
2:A3:155:C:H5'	2:A3:156:U:OP2	2.03	0.58
3:A4:22:A:N1	7:AD:266:TRP:HB2	2.19	0.58
3:A4:47:G:O5'	3:A4:47:G:C8	2.57	0.58
6:AC:139:SER:OG	45:At:10:VAL:HB	2.04	0.58
7:AD:21:ARG:HG3	7:AD:24:ARG:NH2	2.18	0.58
11:AH:7:ASN:HB3	11:AH:58:ASP:OD2	2.04	0.58
43:Ao:75:PRO:HA	43:Ao:78:ARG:HE	1.69	0.58
46:Au:62:PHE:CE2	46:Au:110:LEU:HB2	2.39	0.58
47:BA:70:G:C5'	48:BB:1382:SER:O	2.51	0.58
48:BB:1103:ILE:HG13	48:BB:1177:LEU:HD11	1.86	0.58
48:BB:1229:LYS:HG3	48:BB:1262:MET:SD	2.44	0.58
50:C1:97:U:H5'	50:C1:98:C:OP2	2.04	0.58
50:C1:184:G:H3'	50:C1:185:G:H5"	1.84	0.58
50:C1:374:G:H2'	50:C1:375:U:H6	1.67	0.58
50:C1:450:C:H2'	50:C1:451:G:H4'	1.84	0.58
50:C1:656:G:H4'	50:C1:657:U:OP2	2.03	0.58
50:C1:688:U:H1'	50:C1:689:U:C6	2.39	0.58
50:C1:1002:U:C2'	50:C1:1003:U:H5'	2.34	0.58
50:C1:1244:U:H2'	50:C1:1245:G:C8	2.39	0.58
50:C1:1276:A:H4'	50:C1:1277:C:H5"	1.85	0.58
50:C1:1344:A:N3	50:C1:1345:G:H1'	2.18	0.58
50:C1:1576:G:H2'	50:C1:1577:G:O4'	2.04	0.58
50:C1:1653:U:H2'	50:C1:1654:G:C8	2.39	0.58
55:CE:125:LYS:HB2	55:CE:226:PHE:CE1	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:Cg:133:ASN:HB2	83:Cg:138:CYS:HB2	1.86	0.58
1:A2:42:A:N6	1:A2:4339:A:H2	2.01	0.58
1:A2:183:G:H2'	1:A2:184:U:H5'	1.86	0.58
1:A2:976:C:H2'	1:A2:977:G:H8	1.69	0.58
1:A2:1227:U:H2'	1:A2:1228:C:H6	1.66	0.58
1:A2:1509:G:H2'	1:A2:1510:U:C6	2.39	0.58
1:A2:1673:C:O2	1:A2:1820:G:C2	2.57	0.58
1:A2:2737:G:H2'	1:A2:2737:G:N3	2.19	0.58
1:A2:2839:G:C4	1:A2:3593:A:C8	2.92	0.58
1:A2:3767:U:H3	1:A2:3769:A:H3'	1.69	0.58
1:A2:4869:C:H6	1:A2:4869:C:O5'	1.86	0.58
5:AB:92:TYR:CE1	5:AB:161:ARG:HD2	2.39	0.58
8:AE:145:THR:HB	8:AE:148:THR:CG2	2.34	0.58
11:AH:23:ARG:HH11	11:AH:23:ARG:HG3	1.69	0.58
11:AH:31:ARG:HH21	11:AH:188:GLN:HB3	1.67	0.58
13:AJ:119:TYR:HB2	69:CS:14:ARG:NH2	2.19	0.58
14:AL:53:GLY:C	14:AL:55:ILE:N	2.61	0.58
33:Ae:22:ARG:HD2	33:Ae:31:ILE:CG2	2.34	0.58
48:BB:842:LYS:CB	48:BB:1140:GLU:CG	2.76	0.58
48:BB:1211:PHE:HB3	48:BB:1280:PHE:HE2	1.68	0.58
50:C1:164:A:H2'	50:C1:165:G:C8	2.39	0.58
50:C1:573:U:H3'	50:C1:573:U:O2	2.03	0.58
50:C1:827:A:C5'	60:CJ:8:VAL:HG13	2.34	0.58
50:C1:1104:G:H2'	50:C1:1105:G:O4'	2.04	0.58
50:C1:1157:G:H1'	73:CW:76:SER:HB2	1.85	0.58
50:C1:1432:U:C5	50:C1:1432:U:OP2	2.57	0.58
50:C1:1686:G:C2	50:C1:1687:C:C2	2.91	0.58
50:C1:1696:C:O5'	50:C1:1696:C:H6	1.87	0.58
51:CA:6:ASP:CB	72:CV:42:VAL:HG22	2.30	0.58
65:CO:57:THR:OG1	65:CO:60:MET:HG3	2.04	0.58
66:CP:17:TYR:O	69:CS:91:LYS:HB3	2.03	0.58
77:Ca:50:VAL:O	77:Ca:53:ILE:HB	2.04	0.58
1:A2:102:G:H5"	14:AL:61:CYS:SG	2.44	0.57
1:A2:1056:C:H42	1:A2:1204:G:H22	1.52	0.57
1:A2:1607:C:C2'	1:A2:1608:G:H5'	2.31	0.57
1:A2:2034:G:O2'	1:A2:2035:A:H3'	2.03	0.57
1:A2:2309:G:P	1:A2:2309:G:H3'	2.43	0.57
1:A2:2462:U:O5'	1:A2:2462:U:H6	1.86	0.57
1:A2:2583:G:H21	1:A2:2644:C:H42	1.50	0.57
1:A2:2629:G:C2'	1:A2:2630:C:H4'	2.34	0.57
1:A2:2751:C:H6	1:A2:2751:C:O5'	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2848:A:H3'	1:A2:2849:C:H6	1.69	0.57
1:A2:4283:A:H2	7:AD:146:LEU:CB	2.15	0.57
1:A2:4314:U:O2	1:A2:4314:U:H2'	2.04	0.57
1:A2:4660:A:C2	11:AH:69:THR:HA	2.39	0.57
1:A2:4724:G:H1'	15:AM:2:VAL:HB	1.85	0.57
1:A2:4739:G:H21	1:A2:4744:C:H1'	1.68	0.57
1:A2:4832:G:H8	1:A2:4832:G:H5'	1.69	0.57
1:A2:4867:G:H8	1:A2:4867:G:H5"	1.69	0.57
2:A3:60:G:N2	2:A3:64:U:C2	2.72	0.57
10:AG:162:ASP:O	10:AG:164:ILE:HG13	2.04	0.57
14:AL:134:PRO:HA	14:AL:135:LYS:HZ1	1.67	0.57
18:AP:95:LEU:HG	18:AP:148:MET:CE	2.34	0.57
27:AY:121:ARG:HA	27:AY:125:SER:HB3	1.84	0.57
43:Ao:103:VAL:CB	47:BA:57:G:P	2.92	0.57
43:Ao:106:PHE:HE2	47:BA:57:G:C6	2.21	0.57
46:Au:84:LEU:HD23	46:Au:110:LEU:CD1	2.34	0.57
47:BA:68:C:O3'	48:BB:1388:ARG:CZ	2.52	0.57
48:BB:851:LEU:HB3	48:BB:954:SER:OG	2.04	0.57
48:BB:1070:LEU:HD13	48:BB:1073:GLN:NE2	2.19	0.57
50:C1:340:C:O5'	50:C1:340:C:H6	1.87	0.57
50:C1:385:G:H4'	50:C1:386:C:C5'	2.34	0.57
50:C1:514:U:H3'	50:C1:515:G:C8	2.38	0.57
50:C1:636:C:H2'	50:C1:637:U:O4'	2.04	0.57
50:C1:987:A:H3'	50:C1:988:C:H5	1.69	0.57
50:C1:1258:A:N3	50:C1:1258:A:C3'	2.55	0.57
50:C1:1311:C:C4	50:C1:1312:G:O6	2.57	0.57
50:C1:1340:U:H3'	50:C1:1341:C:C5	2.39	0.57
52:CB:46:LYS:NZ	65:CO:27:VAL:HA	2.19	0.57
56:CF:163:PHE:CD2	56:CF:164:ARG:HG3	2.39	0.57
68:CR:12:ALA:O	68:CR:15:VAL:HG12	2.04	0.57
71:CU:50:VAL:HG22	71:CU:91:LEU:HD22	1.86	0.57
76:CZ:69:THR:CG2	76:CZ:70:PRO:HD2	2.34	0.57
77:Ca:21:ILE:HD11	77:Ca:32:LYS:CB	2.33	0.57
1:A2:173:G:H2'	1:A2:174:G:C8	2.39	0.57
1:A2:218:C:O2'	1:A2:219:C:H5'	2.04	0.57
1:A2:254:G:H2'	1:A2:255:C:OP1	2.04	0.57
1:A2:1079:C:C3'	1:A2:1080:U:H5"	2.34	0.57
1:A2:1359:C:H5'	1:A2:1360:G:OP2	2.04	0.57
1:A2:1718:G:H2'	1:A2:1719:C:C6	2.40	0.57
1:A2:1898:C:O2'	1:A2:1900:G:H5"	2.04	0.57
1:A2:2048:U:H4'	1:A2:2049:A:OP2	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4358:C:H2'	1:A2:4359:U:H5'	1.86	0.57
1:A2:4742:C:H3'	1:A2:4742:C:H6	1.69	0.57
1:A2:4829:A:H1'	21:AS:169:THR:CG2	2.24	0.57
3:A4:23:A:H2	3:A4:119:U:O2	1.87	0.57
15:AM:126:GLU:HB2	17:AO:187:LYS:CE	2.34	0.57
16:AN:117:ASN:O	16:AN:133:ILE:HG22	2.03	0.57
19:AQ:75:ARG:HE	19:AQ:78:LYS:HG3	1.69	0.57
47:BA:75:C:N4	48:BB:1316:PHE:CD2	2.64	0.57
48:BB:1193:LYS:HG3	48:BB:1218:PRO:CB	2.33	0.57
50:C1:67:C:C5	57:CG:163:ASN:C	2.82	0.57
50:C1:209:A:O2'	50:C1:210:U:H5"	2.04	0.57
50:C1:215:G:OP2	50:C1:216:C:H5	1.86	0.57
50:C1:319:C:H1'	50:C1:320:G:OP1	2.04	0.57
50:C1:543:C:H6	50:C1:543:C:H3'	1.69	0.57
50:C1:743:U:H5	58:CH:97:GLN:HE22	1.50	0.57
50:C1:747:U:C2	50:C1:748:C:C2'	2.86	0.57
50:C1:931:C:O5'	50:C1:931:C:H6	1.87	0.57
50:C1:988:C:O5'	50:C1:988:C:C6	2.57	0.57
50:C1:999:G:H2'	50:C1:1000:C:C6	2.39	0.57
50:C1:1216:C:H3'	50:C1:1217:A:C5'	2.34	0.57
50:C1:1307:U:C3'	50:C1:1308:U:H5'	2.33	0.57
50:C1:1398:G:C6	83:Cg:61:GLY:HA2	2.38	0.57
50:C1:1644:C:H2'	50:C1:1645:C:C6	2.39	0.57
50:C1:1860:A:C2	50:C1:1862:G:O4'	2.57	0.57
52:CB:107:ARG:HG3	65:CO:131:ASP:O	2.04	0.57
52:CB:127:VAL:HG22	52:CB:128:LYS:H	1.68	0.57
54:CD:191:PRO:O	54:CD:200:PRO:HD2	2.03	0.57
56:CF:32:ASP:CB	56:CF:117:ILE:HG23	2.34	0.57
58:CH:63:PHE:CE2	58:CH:95:ILE:HD11	2.39	0.57
74:CX:123:VAL:O	74:CX:130:LEU:HG	2.04	0.57
77:Ca:5:ARG:HG3	77:Ca:8:ASN:HA	1.84	0.57
83:Cg:172:LYS:HE2	83:Cg:192:THR:O	2.04	0.57
83:Cg:240:CYS:HB3	83:Cg:291:TRP:CD1	2.39	0.57
1:A2:85:G:H22	1:A2:97:G:H3'	1.69	0.57
1:A2:280:C:H2'	1:A2:281:U:C6	2.40	0.57
1:A2:457:A:C2'	1:A2:458:U:C5'	2.78	0.57
1:A2:1281:C:H2'	1:A2:1282:U:OP1	2.04	0.57
1:A2:1408:U:H2'	1:A2:1409:C:H5'	1.86	0.57
1:A2:1421:C:H2'	1:A2:1422:C:O4'	2.04	0.57
1:A2:1712:G:N3	1:A2:4174:A:H2'	2.20	0.57
1:A2:1783:A:H1'	1:A2:1784:A:OP2	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2683:G:H1’	1:A2:2685:U:OP2	2.03	0.57
1:A2:3584:G:N2	25:AW:49:ILE:HG23	2.19	0.57
1:A2:4072:A:O2’	1:A2:4073:G:H5’	2.04	0.57
1:A2:4314:U:O2	1:A2:4314:U:H5’	2.04	0.57
1:A2:4354:A:H4’	1:A2:4355:U:OP2	2.05	0.57
1:A2:4505:G:H2’	1:A2:4506:A:O5’	2.04	0.57
1:A2:4811:G:O2’	1:A2:4812:A:C8	2.57	0.57
1:A2:4837:U:O2’	1:A2:4838:C:H5’	2.05	0.57
12:AI:51:HIS:HB2	12:AI:134:VAL:HG13	1.86	0.57
17:AO:172:LYS:HE3	17:AO:176:ARG:HH12	1.69	0.57
48:BB:1070:LEU:CG	48:BB:1160:PRO:CA	2.59	0.57
48:BB:1140:GLU:O	48:BB:1143:GLN:HG2	2.04	0.57
49:BC:100:G:C4’	76:CZ:114:LYS:NZ	2.63	0.57
49:BC:334:C:O2	49:BC:334:C:H2’	2.04	0.57
50:C1:10:G:OP1	50:C1:1697:A:H5’	2.04	0.57
50:C1:306:C:O2’	50:C1:307:G:H5’	2.05	0.57
50:C1:365:C:O2	50:C1:365:C:H2’	2.04	0.57
50:C1:435:A:C2	50:C1:474:G:OP2	2.58	0.57
50:C1:528:A:O4’	60:CJ:121:LYS:HB3	2.04	0.57
50:C1:567:C:H3’	50:C1:568:C:H5’	1.87	0.57
50:C1:894:G:H2’	50:C1:895:G:H8	1.69	0.57
50:C1:1116:C:O2	50:C1:1116:C:C2’	2.52	0.57
50:C1:1161:U:H3’	50:C1:1161:U:H6	1.69	0.57
50:C1:1208:A:OP2	50:C1:1835:A:C2	2.57	0.57
50:C1:1284:A:N7	50:C1:1286:G:C5’	2.68	0.57
50:C1:1309:C:H1’	82:Cf:133:ALA:HB1	1.82	0.57
50:C1:1493:C:H3’	50:C1:1494:U:H5’	1.86	0.57
50:C1:1520:G:H4’	50:C1:1521:C:OP2	2.04	0.57
50:C1:1579:A:C8	71:CU:86:LYS:HD3	2.40	0.57
50:C1:1607:A:H2’	50:C1:1608:U:H5’	1.86	0.57
50:C1:1839:U:H3	50:C1:1860:A:H61	1.51	0.57
56:CF:102:LEU:O	76:CZ:66:LYS:HE2	2.04	0.57
63:CM:32:ALA:HB3	63:CM:110:VAL:HG22	1.86	0.57
83:Cg:19:THR:O	83:Cg:288:SER:HB2	2.03	0.57
83:Cg:24:THR:HB	83:Cg:71:ILE:HG21	1.85	0.57
1:A2:102:G:N2	1:A2:103:G:C4	2.72	0.57
1:A2:152:C:H2’	1:A2:153:G:C8	2.38	0.57
1:A2:176:G:H2’	1:A2:177:C:H6	1.69	0.57
1:A2:402:G:H5”	1:A2:405:C:O2’	2.04	0.57
1:A2:476:C:H5”	1:A2:476:C:C6	2.23	0.57
1:A2:645:C:H2’	1:A2:646:C:H6	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:647:C:H2'	1:A2:648:C:C6	2.39	0.57
1:A2:891:C:H2'	1:A2:892:G:C8	2.40	0.57
1:A2:1164:A:C2'	1:A2:1165:G:H5'	2.33	0.57
1:A2:1229:C:O5'	1:A2:1229:C:H6	1.87	0.57
1:A2:1278:C:H4'	34:Af:59:THR:OG1	2.04	0.57
1:A2:1279:G:C5'	34:Af:59:THR:HB	2.35	0.57
1:A2:1918:G:C8	1:A2:1918:G:OP2	2.58	0.57
1:A2:1926:G:H2'	1:A2:1927:U:O4'	2.05	0.57
1:A2:1934:A:N1	1:A2:2006:C:C4	2.73	0.57
1:A2:2031:C:H5"	1:A2:2032:U:OP2	2.04	0.57
1:A2:2295:C:H5'	33:Ae:61:GLY:HA2	1.87	0.57
1:A2:2397:A:H3'	1:A2:2398:G:C4'	2.33	0.57
1:A2:2576:G:H5'	1:A2:2577:A:O5'	2.04	0.57
1:A2:3772:A:C5	1:A2:3773:G:C8	2.92	0.57
1:A2:3828:G:H4'	18:AP:139:TYR:CZ	2.40	0.57
1:A2:3876:G:H4'	1:A2:3877:A:OP1	2.03	0.57
1:A2:4268:C:H2'	1:A2:4269:G:H5'	1.86	0.57
1:A2:4456:A:H3'	1:A2:4457:U:H5'	1.87	0.57
1:A2:4677:A:H4'	5:AB:20:LYS:HD3	1.86	0.57
1:A2:4838:C:H3'	1:A2:4839:G:H5'	1.87	0.57
1:A2:4937:A:H2'	1:A2:4938:C:H5'	1.85	0.57
4:AA:227:ARG:HG2	4:AA:239:ALA:HB2	1.85	0.57
10:AG:194:VAL:HG13	10:AG:196:ARG:HG3	1.86	0.57
19:AQ:67:ILE:O	19:AQ:70:MET:HG2	2.04	0.57
25:AW:33:ASN:OD1	25:AW:35:LYS:HB3	2.04	0.57
34:Af:52:LYS:HA	34:Af:52:LYS:HE3	1.86	0.57
47:BA:8:U:O4	47:BA:14:A:C8	2.58	0.57
48:BB:1239:LEU:HG	48:BB:1246:ALA:HB1	1.85	0.57
49:BC:332:A:C8	49:BC:332:A:C5'	2.83	0.57
49:BC:349:C:H42	50:C1:1698:C:N4	2.02	0.57
50:C1:39:A:H8	50:C1:39:A:O5'	1.86	0.57
50:C1:370:G:C4'	50:C1:371:A:OP1	2.53	0.57
50:C1:636:C:H2'	50:C1:637:U:C6	2.39	0.57
50:C1:928:G:H4'	78:Cb:51:GLN:O	2.05	0.57
50:C1:941:C:H2'	50:C1:942:G:O4'	2.03	0.57
50:C1:1102:G:H1	50:C1:1130:G:H22	1.50	0.57
50:C1:1286:G:N2	50:C1:1312:G:O6	2.37	0.57
50:C1:1336:C:H4'	80:Cd:44:ARG:HH22	1.69	0.57
50:C1:1410:C:OP1	50:C1:1413:G:H5"	2.05	0.57
50:C1:1586:U:H2'	50:C1:1587:G:O5'	2.05	0.57
50:C1:1648:G:H8	67:CQ:125:ARG:CB	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1802:C:H2'	50:C1:1803:U:O4'	2.05	0.57
65:CO:116:LEU:HD22	77:Ca:53:ILE:CD1	2.34	0.57
72:CV:41:LYS:C	72:CV:43:THR:H	2.13	0.57
73:CW:55:ASP:HB3	73:CW:58:ALA:O	2.03	0.57
1:A2:42:A:C6	1:A2:4339:A:C2	2.92	0.57
1:A2:44:A:OP1	16:AN:85:VAL:HG11	2.04	0.57
1:A2:173:G:H2'	1:A2:174:G:H8	1.69	0.57
1:A2:252:G:H8	1:A2:252:G:O5'	1.87	0.57
1:A2:426:A:H2'	1:A2:427:C:C5'	2.35	0.57
1:A2:437:C:H2'	1:A2:437:C:O2	2.05	0.57
1:A2:469:G:O2'	1:A2:470:G:H5'	2.04	0.57
1:A2:1386:G:H21	1:A2:1387:C:H41	1.52	0.57
1:A2:2057:G:H1'	33:Ae:58:ILE:HG12	1.86	0.57
1:A2:2505:G:C8	1:A2:2506:A:H5"	2.38	0.57
1:A2:2560:C:H2'	1:A2:2560:C:O2	2.02	0.57
1:A2:3578:G:C5'	1:A2:3578:G:H8	2.18	0.57
1:A2:3838:C:C6	1:A2:3838:C:OP1	2.58	0.57
1:A2:3858:G:C3'	1:A2:4679:G:H22	2.08	0.57
1:A2:4561:U:C1'	48:BB:974:ARG:HH12	2.17	0.57
5:AB:80:GLU:OE1	5:AB:326:VAL:HG13	2.04	0.57
13:AJ:83:LEU:HD22	13:AJ:87:LEU:HG	1.87	0.57
21:AS:72:PRO:O	21:AS:100:LEU:HD23	2.05	0.57
21:AS:93:MET:HE1	21:AS:117:HIS:CE1	2.39	0.57
22:AT:28:ALA:O	22:AT:32:ARG:HG3	2.04	0.57
31:Ac:79:ILE:HA	31:Ac:90:ARG:CB	2.34	0.57
47:BA:8:U:C4'	47:BA:8:U:C6	2.88	0.57
48:BB:1310:ILE:HG21	48:BB:1391:GLU:O	2.04	0.57
48:BB:1347:VAL:HG13	48:BB:1348:ASP:N	2.19	0.57
48:BB:1347:VAL:CG2	48:BB:1349:ILE:HA	2.31	0.57
50:C1:176:U:H2'	50:C1:177:G:O4'	2.05	0.57
50:C1:206:G:H2'	50:C1:207:G:H8	1.67	0.57
50:C1:386:C:O2	50:C1:386:C:H2'	2.05	0.57
50:C1:429:C:H2'	50:C1:429:C:O2	2.05	0.57
50:C1:604:A:H1'	50:C1:605:A:OP1	2.04	0.57
50:C1:694:G:C2'	50:C1:695:C:C6	2.83	0.57
50:C1:1215:C:H4'	50:C1:1216:C:OP1	1.96	0.57
50:C1:1378:A:C5	51:CA:105:PRO:HB3	2.40	0.57
50:C1:1404:U:H2'	50:C1:1406:G:C5	2.39	0.57
50:C1:1471:C:H3'	50:C1:1472:C:C6	2.39	0.57
50:C1:1551:U:H3'	50:C1:1551:U:O2	2.03	0.57
51:CA:130:ASP:O	51:CA:133:PRO:HD2	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:CH:158:LEU:HD11	58:CH:187:PHE:CD2	2.40	0.57
1:A2:186:G:O5’	1:A2:186:G:C8	2.58	0.57
1:A2:215:A:O4’	1:A2:216:G:H5’	2.05	0.57
1:A2:337:G:C4	2:A3:29:G:N2	2.73	0.57
1:A2:432:G:O6	1:A2:1286:C:N3	2.38	0.57
1:A2:1214:G:H1’	1:A2:1216:C:H3’	1.87	0.57
1:A2:1546:U:H2’	1:A2:1547:C:C6	2.40	0.57
1:A2:1814:G:H5”	22:AT:129:LYS:N	2.19	0.57
1:A2:2276:A:H3’	1:A2:2277:G:H5’	1.86	0.57
1:A2:2507:U:H5	35:Ag:8:ARG:HB3	1.69	0.57
1:A2:3923:A:O5’	1:A2:3923:A:H8	1.88	0.57
1:A2:4034:U:OP1	37:Ai:55:ARG:NH1	2.38	0.57
1:A2:4043:U:C1’	1:A2:4044:G:H2’	2.32	0.57
1:A2:4688:A:C2’	1:A2:4695:C:H1’	2.33	0.57
1:A2:4712:U:C4	8:AE:276:ALA:HB1	2.39	0.57
1:A2:4872:C:H2’	1:A2:4873:C:C6	2.40	0.57
1:A2:4962:A:H5”	1:A2:4997:A:C2	2.39	0.57
3:A4:98:G:H3’	3:A4:99:G:H8	1.69	0.57
7:AD:81:HIS:O	7:AD:84:PRO:HD2	2.04	0.57
9:AF:184:ILE:HA	9:AF:189:ASP:OD2	2.03	0.57
39:Ak:47:ILE:HG12	39:Ak:52:LYS:HB2	1.86	0.57
47:BA:34:G:C4	50:C1:1701:C:N4	2.72	0.57
48:BB:1029:ARG:HG3	48:BB:1030:THR:HG23	1.86	0.57
48:BB:1073:GLN:HA	48:BB:1073:GLN:HE21	1.69	0.57
48:BB:1084:GLY:CA	50:C1:478:G:O2’	2.49	0.57
48:BB:1105:PRO:CB	48:BB:1159:LEU:HD22	2.33	0.57
48:BB:1320:ASP:CG	48:BB:1321:PRO:HD3	2.30	0.57
48:BB:1324:MET:HE3	48:BB:1386:PHE:CD2	2.40	0.57
49:BC:266:G:O3’	50:C1:1117:C:OP2	2.22	0.57
50:C1:27:A:H2’	50:C1:28:U:C6	2.40	0.57
50:C1:130:G:H1’	50:C1:181:A:C2	2.39	0.57
50:C1:572:U:H5	50:C1:576:A:H62	1.53	0.57
50:C1:839:C:H42	75:CY:49:LYS:HB2	1.69	0.57
50:C1:1002:U:H2’	50:C1:1003:U:H5’	1.84	0.57
50:C1:1180:C:H3’	50:C1:1180:C:H6	1.68	0.57
50:C1:1401:A:C1’	50:C1:1402:A:OP1	2.53	0.57
50:C1:1755:C:H2’	50:C1:1756:C:H6	1.67	0.57
57:CG:38:ALA:HB1	57:CG:41:LEU:HD12	1.87	0.57
58:CH:100:ILE:HD13	58:CH:122:LEU:HA	1.87	0.57
69:CS:6:PRO:HD3	76:CZ:52:LYS:CD	2.34	0.57
75:CY:59:GLY:O	75:CY:71:GLY:HA2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:Cg:255:SER:OG	83:Cg:271:LYS:HA	2.04	0.57
1:A2:193:C:O3'	1:A2:194:A:C8	2.57	0.57
1:A2:335:A:H2'	1:A2:336:C:C6	2.39	0.57
1:A2:956:C:H5"	9:AF:44:LYS:HE3	1.87	0.57
1:A2:1197:G:C3'	1:A2:1198:G:C8	2.88	0.57
1:A2:1359:C:C5	14:AL:156:PRO:HB3	2.40	0.57
1:A2:1424:G:H2'	1:A2:1425:U:H5'	1.85	0.57
1:A2:1465:C:C4	1:A2:1466:G:N7	2.72	0.57
1:A2:1517:U:H6	1:A2:1517:U:O5'	1.87	0.57
1:A2:2029:C:H3'	1:A2:2030:G:O4'	2.05	0.57
1:A2:2309:G:H1'	1:A2:2310:G:N9	2.18	0.57
1:A2:2447:C:N3	1:A2:3642:C:C5	2.73	0.57
1:A2:2524:G:H2'	1:A2:2524:G:N3	2.20	0.57
1:A2:2573:G:H4'	35:Ag:46:CYS:CA	2.34	0.57
1:A2:3825:A:H8	1:A2:3825:A:O5'	1.88	0.57
1:A2:4013:G:N2	1:A2:4015:A:H3'	2.20	0.57
1:A2:4153:C:H2'	1:A2:4154:U:H5'	1.86	0.57
1:A2:4573:C:H4'	11:AH:122:TYR:CD1	2.39	0.57
1:A2:4689:C:H3'	1:A2:4690:G:C8	2.39	0.57
1:A2:4837:U:H3	8:AE:182:ASN:CA	2.17	0.57
2:A3:34:U:H2'	2:A3:34:U:O2	2.02	0.57
6:AC:211:TYR:HD1	6:AC:253:THR:HG1	1.52	0.57
7:AD:252:VAL:O	7:AD:253:TYR:HB3	2.04	0.57
14:AL:130:LYS:HD2	14:AL:130:LYS:H	1.69	0.57
19:AQ:95:VAL:HG23	19:AQ:96:PRO:HD2	1.85	0.57
27:AY:42:TYR:HB2	27:AY:44:VAL:HG12	1.85	0.57
45:At:67:ARG:HA	45:At:83:ASN:HB2	1.87	0.57
48:BB:814:THR:HA	48:BB:1170:ILE:CA	2.23	0.57
48:BB:831:ARG:CZ	48:BB:1066:HIS:CA	2.83	0.57
50:C1:15:U:O5'	50:C1:15:U:H6	1.88	0.57
50:C1:77:A:H4'	50:C1:78:C:C4	2.39	0.57
50:C1:143:U:O4	50:C1:328:U:H4'	2.04	0.57
50:C1:187:G:H2'	50:C1:188:C:H6	1.70	0.57
50:C1:426:A:N3	50:C1:426:A:H2'	2.20	0.57
50:C1:435:A:C2	50:C1:450:C:H5	2.22	0.57
50:C1:539:C:C6	50:C1:539:C:H3'	2.40	0.57
50:C1:933:G:H22	77:Ca:15:ARG:HD3	1.68	0.57
50:C1:1384:C:H2'	50:C1:1385:G:H5'	1.86	0.57
50:C1:1405:A:C8	50:C1:1406:G:H5'	2.40	0.57
51:CA:111:GLN:OE1	53:CC:89:LYS:HG2	2.03	0.57
52:CB:63:LYS:HE3	52:CB:91:VAL:HB	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:CH:44:ASN:O	58:CH:65:PRO:HD2	2.05	0.57
73:CW:39:THR:HG22	73:CW:43:LYS:HE3	1.86	0.57
1:A2:213:C:OP1	1:A2:217:C:H5"	2.05	0.57
1:A2:303:G:H2'	1:A2:304:U:O4'	2.04	0.57
1:A2:306:G:N7	29:Aa:62:HIS:CG	2.73	0.57
1:A2:349:C:O5'	1:A2:349:C:H6	1.87	0.57
1:A2:468:C:C2'	1:A2:469:G:H5'	2.34	0.57
1:A2:735:A:H2	15:AM:67:SER:HB3	1.68	0.57
1:A2:1185:G:O2'	1:A2:1186:C:H5'	2.04	0.57
1:A2:1199:G:O3'	1:A2:1200:G:H8	1.88	0.57
1:A2:1319:U:H1'	6:AC:103:ALA:CB	2.35	0.57
1:A2:1506:A:N3	1:A2:1506:A:H2'	2.19	0.57
1:A2:1643:U:H5"	33:Ae:58:ILE:HB	1.86	0.57
1:A2:2608:U:P	1:A2:2608:U:H6	2.28	0.57
1:A2:2839:G:N3	1:A2:3593:A:C8	2.72	0.57
1:A2:3661:A:C2	1:A2:3662:U:H1'	2.40	0.57
1:A2:3752:A:H5'	1:A2:3752:A:H8	1.69	0.57
1:A2:3776:A:O2'	50:C1:1815:A:C2	2.57	0.57
1:A2:4268:C:H2'	1:A2:4269:G:C8	2.39	0.57
1:A2:4534:U:N3	1:A2:4910:A:H4'	2.20	0.57
1:A2:4723:A:H8	21:AS:173:ASN:O	1.87	0.57
2:A3:111:U:C1'	2:A3:112:G:OP2	2.52	0.57
3:A4:7:G:H5"	3:A4:7:G:H8	1.70	0.57
4:AA:50:HIS:HB2	44:Ap:54:ILE:CD1	2.34	0.57
4:AA:205:ASN:O	4:AA:208:GLU:HG2	2.05	0.57
5:AB:303:ALA:HB2	5:AB:314:ILE:HA	1.86	0.57
15:AM:123:ILE:HA	17:AO:187:LYS:NZ	2.20	0.57
17:AO:182:GLU:HG2	17:AO:191:LYS:HE2	1.86	0.57
22:AT:68:THR:HG22	22:AT:71:ALA:H	1.70	0.57
28:AZ:58:GLY:O	28:AZ:61:LYS:HB2	2.05	0.57
45:At:6:GLN:O	45:At:10:VAL:HG22	2.05	0.57
47:BA:27:G:H2'	47:BA:28:G:H8	1.67	0.57
47:BA:75:C:N4	48:BB:1316:PHE:CE2	2.68	0.57
48:BB:814:THR:CA	48:BB:1170:ILE:CG1	2.65	0.57
48:BB:1157:ALA:HB2	48:BB:1202:LEU:HD22	1.83	0.57
48:BB:1332:GLN:HB3	48:BB:1366:LYS:HG2	1.86	0.57
50:C1:153:G:H1	50:C1:165:G:H22	1.52	0.57
50:C1:192:C:N4	50:C1:207:G:H1	1.99	0.57
50:C1:337:C:C2'	50:C1:337:C:O2	2.53	0.57
50:C1:510:G:H8	50:C1:510:G:OP2	1.87	0.57
50:C1:590:A:H2'	50:C1:590:A:N3	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:900:C:C2’	50:C1:901:G:C8	2.78	0.57
50:C1:902:G:O2’	50:C1:903:A:H5’	2.05	0.57
50:C1:911:C:H3’	50:C1:912:C:C5	2.39	0.57
50:C1:980:A:H2’	50:C1:981:A:C8	2.40	0.57
50:C1:1125:C:H4’	51:CA:43:SER:O	2.05	0.57
50:C1:1242:U:H4’	50:C1:1243:U:O5’	2.04	0.57
50:C1:1255:G:H3’	50:C1:1256:G:H5’	1.86	0.57
50:C1:1442:U:C6	50:C1:1443:C:H1’	2.38	0.57
51:CA:81:ASN:OD1	51:CA:205:ARG:HA	2.04	0.57
55:CE:45:ILE:HD12	55:CE:61:VAL:CG2	2.33	0.57
56:CF:103:LEU:CD2	76:CZ:67:LEU:HD11	2.34	0.57
83:Cg:173:LEU:HD21	83:Cg:189:ILE:HG23	1.87	0.57
1:A2:286:A:H5’	1:A2:287:A:H8	1.69	0.57
1:A2:482:G:O2’	1:A2:484:G:H5”	2.05	0.57
1:A2:944:A:N3	1:A2:944:A:H2’	2.20	0.57
1:A2:959:C:C3’	1:A2:1215:G:N2	2.68	0.57
1:A2:966:U:H3’	1:A2:967:C:C5’	2.35	0.57
1:A2:1083:C:O2	1:A2:1083:C:C2’	2.53	0.57
1:A2:1284:C:O2	1:A2:1284:C:C2’	2.52	0.57
1:A2:1462:C:O2	1:A2:1462:C:C2’	2.52	0.57
1:A2:1484:C:H6	1:A2:1484:C:O5’	1.88	0.57
1:A2:1511:G:H5”	38:Aj:31:LYS:NZ	2.19	0.57
1:A2:1640:C:H2’	1:A2:1641:C:H6	1.69	0.57
1:A2:1649:G:H3’	1:A2:1649:G:H8	1.67	0.57
1:A2:1870:A:C5’	1:A2:1871:C:H5	2.08	0.57
1:A2:1894:G:C3’	1:A2:1895:A:H5’	2.34	0.57
1:A2:2309:G:H3’	1:A2:2309:G:OP2	2.04	0.57
1:A2:2537:C:O5’	1:A2:2537:C:H6	1.86	0.57
1:A2:2682:G:N2	1:A2:2688:G:H1	2.02	0.57
1:A2:2727:G:H2’	1:A2:2728:G:C8	2.40	0.57
4:AA:47:ASP:HA	4:AA:84:THR:HG22	1.87	0.57
4:AA:117:GLU:HG2	4:AA:124:GLY:H	1.70	0.57
8:AE:224:LYS:N	8:AE:225:PRO:CD	2.67	0.57
9:AF:124:LYS:NZ	9:AF:197:VAL:HG11	2.19	0.57
13:AJ:33:LEU:CD2	13:AJ:70:VAL:HG22	2.35	0.57
13:AJ:58:ARG:HD3	47:BA:47:U:O2	2.05	0.57
27:AY:62:TYR:HB3	27:AY:65:GLN:HG2	1.86	0.57
29:Aa:119:LYS:O	29:Aa:140:VAL:HB	2.03	0.57
29:Aa:137:ILE:O	29:Aa:140:VAL:HG22	2.05	0.57
31:Ac:56:ARG:NH1	31:Ac:56:ARG:HB2	2.20	0.57
46:Au:151:LEU:HD21	46:Au:184:LEU:HD21	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BA:69:G:H2'	47:BA:70:G:C8	2.40	0.57
48:BB:1310:ILE:HD11	48:BB:1324:MET:CG	2.34	0.57
48:BB:1348:ASP:C	48:BB:1349:ILE:HG13	2.29	0.57
50:C1:35:C:H6	50:C1:35:C:O5'	1.88	0.57
50:C1:67:C:H41	57:CG:163:ASN:CA	2.16	0.57
50:C1:77:A:C6	57:CG:155:GLN:HB3	2.40	0.57
50:C1:525:A:H4'	81:Ce:31:ARG:HB3	1.86	0.57
50:C1:1026:C:O2'	50:C1:1161:U:H4'	2.04	0.57
50:C1:1311:C:H6	50:C1:1311:C:C5'	2.17	0.57
50:C1:1413:G:N2	50:C1:1414:A:H1'	2.20	0.57
52:CB:24:PRO:O	52:CB:28:LYS:HG3	2.04	0.57
54:CD:64:ARG:O	54:CD:68:GLU:HG3	2.05	0.57
54:CD:74:GLN:NE2	54:CD:80:PRO:HA	2.20	0.57
59:CI:103:LEU:HA	59:CI:171:LEU:O	2.04	0.57
60:CJ:36:GLY:HA2	60:CJ:124:HIS:CE1	2.39	0.57
1:A2:156:C:H5'	37:Ai:26:HIS:CB	2.34	0.57
1:A2:380:A:N6	27:AY:90:ALA:HB1	2.19	0.57
1:A2:403:G:N3	1:A2:403:G:H5'	2.20	0.57
1:A2:467:G:H2'	1:A2:468:C:H6	1.67	0.57
1:A2:690:U:O5'	1:A2:690:U:H6	1.87	0.57
1:A2:959:C:C3'	1:A2:1215:G:H21	2.18	0.57
1:A2:1054:G:O2'	1:A2:1055:G:H5'	2.02	0.57
1:A2:1074:G:H2'	1:A2:1075:A:C8	2.39	0.57
1:A2:1159:U:C4	1:A2:1160:C:N4	2.73	0.57
1:A2:1539:A:H2'	1:A2:1540:G:H5'	1.86	0.57
1:A2:1542:A:C6	64:CN:130:LYS:NZ	2.72	0.57
1:A2:1901:A:C6	1:A2:1902:C:N4	2.73	0.57
1:A2:2310:G:C3'	1:A2:2311:C:C5'	2.75	0.57
1:A2:2313:G:C4	1:A2:2314:C:C5	2.93	0.57
1:A2:2346:U:C5	1:A2:4616:A:C8	2.93	0.57
1:A2:2453:G:O2'	1:A2:2454:A:H5'	2.05	0.57
1:A2:2491:G:C2	1:A2:2492:G:C8	2.93	0.57
1:A2:3878:C:C2'	1:A2:3878:C:O2	2.53	0.57
1:A2:4090:C:H5'	28:AZ:136:PHE:C	2.30	0.57
1:A2:4140:G:C2	1:A2:4141:U:H1'	2.40	0.57
1:A2:4303:U:O2'	1:A2:4304:U:H5'	2.05	0.57
1:A2:4352:G:H8	1:A2:4352:G:O5'	1.88	0.57
1:A2:4691:G:H5"	1:A2:4694:G:H4'	1.86	0.57
1:A2:5017:G:C2'	1:A2:5018:G:H5'	2.35	0.57
3:A4:108:G:OP2	7:AD:273:LEU:HD22	2.04	0.57
11:AH:150:ASP:O	11:AH:154:VAL:HG23	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AP:32:THR:HG22	18:AP:58:VAL:HG21	1.86	0.57
22:AT:77:ASN:CB	22:AT:84:ILE:HD13	2.35	0.57
47:BA:74:C:C5'	48:BB:1321:PRO:HD2	2.35	0.57
48:BB:1261:GLU:HG3	48:BB:1262:MET:H	1.70	0.57
48:BB:1298:PHE:O	48:BB:1301:ILE:CG1	2.52	0.57
48:BB:1321:PRO:HB3	48:BB:1374:LYS:HD3	1.86	0.57
49:BC:350:G:N2	49:BC:351:A:C8	2.73	0.57
50:C1:44:U:H5'	50:C1:44:U:H6	1.69	0.57
50:C1:1113:A:C2	50:C1:1120:U:C4	2.93	0.57
50:C1:1231:C:H2'	50:C1:1232:U:C6	2.40	0.57
50:C1:1375:G:O5'	50:C1:1375:G:H8	1.87	0.57
50:C1:1405:A:N3	50:C1:1442:U:C5	2.73	0.57
50:C1:1414:A:C2	50:C1:1415:C:N3	2.72	0.57
50:C1:1426:U:C4	50:C1:1427:C:C5	2.93	0.57
50:C1:1495:G:O6	71:CU:69:PRO:HB3	2.05	0.57
50:C1:1513:C:C5'	80:Cd:9:SER:HB2	2.34	0.57
52:CB:134:LEU:HB2	52:CB:219:LYS:HB2	1.86	0.57
64:CN:87:ASP:HB2	64:CN:129:TYR:OH	2.04	0.57
66:CP:33:LEU:O	66:CP:37:TYR:HD1	1.88	0.57
1:A2:431:U:H2'	1:A2:432:G:C8	2.40	0.56
1:A2:1079:C:H2'	1:A2:1080:U:H4'	1.82	0.56
1:A2:1217:C:H5'	6:AC:333:LYS:CE	2.34	0.56
1:A2:1249:G:C8	1:A2:1249:G:H5"	2.40	0.56
1:A2:1390:U:H2'	1:A2:1391:C:C5	2.40	0.56
1:A2:1730:A:H2'	1:A2:1730:A:N3	2.20	0.56
1:A2:1774:A:H5"	3:A4:98:G:O2'	2.05	0.56
1:A2:2000:C:H2'	1:A2:2001:C:N1	2.20	0.56
1:A2:2343:A:C2'	1:A2:2344:A:H5"	2.34	0.56
1:A2:2574:G:H4'	35:Ag:44:SER:HB2	1.87	0.56
1:A2:2743:A:H2'	1:A2:2744:U:C2	2.40	0.56
1:A2:2762:C:H3'	1:A2:2763:C:C5	2.40	0.56
4:AA:56:ALA:HB2	4:AA:130:SER:HB3	1.87	0.56
7:AD:79:TYR:O	7:AD:82:GLU:HB2	2.04	0.56
10:AG:41:ILE:CG2	10:AG:42:GLY:H	2.16	0.56
10:AG:170:LEU:HD23	10:AG:173:LEU:HD12	1.86	0.56
25:AW:9:SER:HB3	25:AW:36:CYS:SG	2.45	0.56
29:Aa:47:LYS:O	29:Aa:47:LYS:HG2	2.04	0.56
46:Au:105:ILE:HG21	46:Au:132:LEU:HD23	1.86	0.56
48:BB:814:THR:O	48:BB:1170:ILE:CG1	2.53	0.56
48:BB:1321:PRO:CB	48:BB:1374:LYS:HG3	2.35	0.56
48:BB:1327:THR:CG2	48:BB:1370:GLU:CD	2.59	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BC:66:A:H61	49:BC:101:U:H3	1.51	0.56
50:C1:155:G:H2'	50:C1:156:G:C8	2.40	0.56
50:C1:158:A:O4'	50:C1:464:A:C8	2.56	0.56
50:C1:167:G:H3'	50:C1:168:C:H5"	1.86	0.56
50:C1:359:U:O5'	50:C1:359:U:H6	1.88	0.56
50:C1:379:C:H2'	50:C1:379:C:O2	2.03	0.56
50:C1:640:A:H5"	60:CJ:25:LEU:CD1	2.33	0.56
50:C1:745:C:O2	50:C1:750:C:H5"	2.04	0.56
50:C1:876:C:H2'	50:C1:877:C:C6	2.39	0.56
50:C1:1631:U:C4	50:C1:1632:G:C2	2.93	0.56
50:C1:1790:A:C2'	50:C1:1791:A:H5'	2.35	0.56
54:CD:210:ILE:HG12	68:CR:39:ALA:CB	2.34	0.56
58:CH:177:TYR:CZ	58:CH:181:THR:HG21	2.40	0.56
59:CI:194:GLU:HG2	59:CI:195:LEU:N	2.19	0.56
60:CJ:48:PHE:O	60:CJ:51:ALA:HB3	2.05	0.56
61:CK:84:HIS:CG	61:CK:85:LEU:H	2.22	0.56
74:CX:68:LYS:HB2	74:CX:85:VAL:HB	1.87	0.56
77:Ca:44:ILE:HG22	77:Ca:67:LEU:HG	1.86	0.56
83:Cg:72:SER:HA	83:Cg:113:PHE:CZ	2.41	0.56
1:A2:700:C:C2'	1:A2:701:C:C5'	2.80	0.56
1:A2:976:C:H6	1:A2:976:C:O5'	1.88	0.56
1:A2:1203:G:C5'	1:A2:1210:U:C5	2.88	0.56
1:A2:2320:G:C8	6:AC:101:MET:HE3	2.40	0.56
1:A2:2547:U:H4'	1:A2:2739:G:C2	2.40	0.56
1:A2:2789:A:H8	20:AR:83:GLY:CA	2.18	0.56
1:A2:4157:G:O2'	1:A2:4158:G:H5'	2.05	0.56
1:A2:4396:U:H4'	1:A2:4397:U:OP1	2.05	0.56
1:A2:4437:A:C2	1:A2:4438:G:C8	2.93	0.56
1:A2:4657:U:H2'	1:A2:4658:C:C5'	2.36	0.56
1:A2:4801:C:H2'	1:A2:4802:G:H5'	1.87	0.56
1:A2:4801:C:O2'	1:A2:4802:G:H5'	2.05	0.56
1:A2:4852:G:H2'	1:A2:4853:G:H8	1.70	0.56
2:A3:156:U:H6	2:A3:156:U:O5'	1.88	0.56
4:AA:179:ILE:O	4:AA:184:ARG:HD2	2.05	0.56
6:AC:46:LYS:O	6:AC:49:ARG:HG2	2.05	0.56
13:AJ:119:TYR:CB	69:CS:14:ARG:HH22	2.16	0.56
39:Ak:36:VAL:O	39:Ak:42:LEU:HD12	2.04	0.56
39:Ak:52:LYS:O	39:Ak:56:LEU:HD13	2.05	0.56
43:Ao:105:GLN:HB2	47:BA:55:U:O2	2.05	0.56
48:BB:1302:ALA:O	48:BB:1303:VAL:HG22	2.04	0.56
50:C1:99:A:H2'	50:C1:100:U:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:360:A:H4'	50:C1:361:U:O5'	2.04	0.56
50:C1:528:A:H8	50:C1:528:A:O5'	1.87	0.56
50:C1:1101:U:H5"	52:CB:151:ARG:HD2	1.87	0.56
50:C1:1311:C:H6	50:C1:1311:C:H5"	1.68	0.56
50:C1:1325:G:H2'	50:C1:1326:U:H5"	1.85	0.56
50:C1:1351:G:C8	50:C1:1351:G:C5'	2.88	0.56
50:C1:1354:G:H2'	50:C1:1356:G:N7	2.19	0.56
50:C1:1476:A:C3'	50:C1:1477:U:H5'	2.35	0.56
50:C1:1497:G:H4'	50:C1:1498:A:OP2	2.04	0.56
50:C1:1606:G:H21	50:C1:1632:G:H2'	1.70	0.56
55:CE:205:PHE:CE1	55:CE:221:ARG:HD3	2.40	0.56
1:A2:16:G:H4'	36:Ah:78:TYR:CZ	2.41	0.56
1:A2:99:A:C2'	1:A2:100:C:C6	2.88	0.56
1:A2:108:A:H4'	1:A2:109:G:OP1	2.06	0.56
1:A2:233:G:H2'	1:A2:233:G:N3	2.19	0.56
1:A2:284:G:H5'	1:A2:285:G:O4'	2.06	0.56
1:A2:468:C:H2'	1:A2:469:G:C8	2.40	0.56
1:A2:650:G:O2'	1:A2:651:G:H5'	2.04	0.56
1:A2:692:C:H2'	1:A2:693:G:O4'	2.05	0.56
1:A2:717:G:C8	1:A2:717:G:C5'	2.88	0.56
1:A2:900:C:O2	1:A2:901:A:C2	2.59	0.56
1:A2:917:G:H3'	1:A2:917:G:OP2	2.04	0.56
1:A2:973:U:H2'	9:AF:55:LYS:NZ	2.19	0.56
1:A2:1220:G:H2'	1:A2:1221:C:C6	2.40	0.56
1:A2:1221:C:N4	1:A2:1248:G:N2	2.50	0.56
1:A2:1270:G:C4'	1:A2:4898:A:C2	2.84	0.56
1:A2:1337:C:H5"	1:A2:1338:G:OP2	2.05	0.56
1:A2:1464:C:C2'	1:A2:1465:C:O4'	2.54	0.56
1:A2:1505:G:H2'	1:A2:1506:A:C8	2.39	0.56
1:A2:1523:G:H5'	1:A2:1524:G:OP2	2.05	0.56
1:A2:1539:A:H8	1:A2:1539:A:O5'	1.88	0.56
1:A2:2046:C:O5'	1:A2:2046:C:H6	1.87	0.56
1:A2:2327:U:H3'	1:A2:2328:C:C5'	2.36	0.56
1:A2:2328:C:O2'	6:AC:95:MET:HE2	2.05	0.56
1:A2:2344:A:C2	1:A2:2775:A:N3	2.73	0.56
1:A2:2378:A:C3'	1:A2:2379:G:H5"	2.35	0.56
1:A2:2516:C:H2'	1:A2:2517:C:H6	1.69	0.56
1:A2:2587:G:H8	1:A2:2587:G:O5'	1.89	0.56
1:A2:2761:C:H2'	1:A2:2762:C:O4'	2.05	0.56
1:A2:3918:A:C5	1:A2:3919:U:C5	2.93	0.56
1:A2:3920:G:C5	1:A2:3921:A:N7	2.73	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3938:G:H2'	1:A2:3939:G:H8	1.70	0.56
1:A2:4094:A:H2'	1:A2:4095:A:H8	1.71	0.56
1:A2:4117:A:C1'	1:A2:4118:C:P	2.94	0.56
1:A2:4261:U:H2'	1:A2:4261:U:O2	2.05	0.56
1:A2:4264:A:H1'	1:A2:4265:G:C8	2.41	0.56
1:A2:4526:U:C6	1:A2:4526:U:C3'	2.88	0.56
1:A2:4587:U:N3	5:AB:75:ALA:HB2	2.20	0.56
1:A2:4598:U:H2'	1:A2:4599:G:H8	1.68	0.56
1:A2:5019:G:C8	18:AP:43:LYS:HB3	2.41	0.56
2:A3:24:G:H5"	2:A3:24:G:C8	2.38	0.56
2:A3:60:G:N2	2:A3:64:U:H1'	2.20	0.56
2:A3:127:U:OP2	2:A3:128:C:H5'	2.05	0.56
3:A4:12:U:H4'	3:A4:108:G:N2	2.21	0.56
4:AA:196:TRP:CE3	4:AA:197:PRO:HD3	2.40	0.56
6:AC:161:TYR:CE2	6:AC:170:LEU:HD22	2.40	0.56
8:AE:170:SER:OG	8:AE:172:LEU:HG	2.06	0.56
10:AG:182:CYS:HB3	10:AG:222:ILE:CG2	2.35	0.56
21:AS:103:ALA:O	21:AS:106:VAL:HG12	2.05	0.56
23:AU:66:SER:OG	23:AU:69:LYS:HB2	2.06	0.56
29:Aa:103:VAL:HG22	29:Aa:126:ALA:HB2	1.87	0.56
41:Am:78:ILE:HG21	41:Am:83:ARG:HE	1.70	0.56
46:Au:145:MET:O	46:Au:148:THR:HG22	2.04	0.56
48:BB:848:ILE:HG23	48:BB:914:ILE:HG22	1.88	0.56
48:BB:1095:ARG:NE	48:BB:1097:LYS:NZ	2.52	0.56
48:BB:1196:TYR:CE2	48:BB:1231:ASP:HB3	2.40	0.56
48:BB:1229:LYS:HE2	48:BB:1262:MET:SD	2.45	0.56
48:BB:1342:PRO:O	48:BB:1427:LEU:HD22	2.05	0.56
48:BB:1366:LYS:C	48:BB:1367:LYS:O	2.47	0.56
50:C1:59:U:H3'	50:C1:59:U:H6	1.70	0.56
50:C1:67:C:H5'	57:CG:162:LEU:HD23	1.87	0.56
50:C1:125:C:H3'	55:CE:149:TYR:OH	2.05	0.56
50:C1:130:G:C1'	50:C1:181:A:N1	2.68	0.56
50:C1:189:U:O5'	50:C1:189:U:H6	1.87	0.56
50:C1:351:G:C8	50:C1:351:G:C3'	2.87	0.56
50:C1:492:C:H42	50:C1:508:A:H62	1.52	0.56
50:C1:547:G:O5'	50:C1:548:C:H5"	2.05	0.56
50:C1:576:A:OP2	50:C1:576:A:C8	2.58	0.56
50:C1:583:A:H2'	50:C1:584:A:C8	2.40	0.56
50:C1:830:A:H3'	50:C1:830:A:N3	2.19	0.56
50:C1:913:A:N3	50:C1:913:A:H2'	2.19	0.56
50:C1:1016:U:C5	64:CN:14:SER:HB2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1043:G:H8	50:C1:1043:G:O5'	1.88	0.56
50:C1:1079:C:C4'	50:C1:1181:A:H61	2.14	0.56
50:C1:1230:C:O2'	50:C1:1231:C:H5'	2.05	0.56
50:C1:1361:G:H1'	50:C1:1380:C:H41	1.70	0.56
50:C1:1405:A:C3'	50:C1:1406:G:C5'	2.81	0.56
50:C1:1418:C:O2'	50:C1:1419:C:H5'	2.05	0.56
50:C1:1472:C:C2'	50:C1:1472:C:O2	2.54	0.56
50:C1:1579:A:H2'	50:C1:1580:A:C4'	2.35	0.56
50:C1:1599:U:H3	56:CF:165:ASN:C	2.13	0.56
50:C1:1654:G:H3'	50:C1:1655:C:C5	2.35	0.56
51:CA:110:ASN:HD21	51:CA:113:GLN:HB2	1.70	0.56
57:CG:8:PRO:HG2	57:CG:112:VAL:HG13	1.86	0.56
58:CH:83:LEU:CB	58:CH:92:VAL:HG21	2.36	0.56
60:CJ:37:LEU:O	81:Ce:34:ARG:HD3	2.06	0.56
60:CJ:60:LEU:HB2	60:CJ:94:LEU:HD11	1.87	0.56
61:CK:50:GLN:HA	61:CK:53:LYS:HE2	1.86	0.56
65:CO:142:ARG:HG3	77:Ca:22:ARG:CZ	2.36	0.56
68:CR:60:ARG:O	68:CR:63:ARG:HB2	2.05	0.56
69:CS:77:TYR:O	69:CS:78:LYS:HB2	2.05	0.56
70:CT:63:HIS:CE1	70:CT:78:ILE:HD13	2.40	0.56
71:CU:29:VAL:O	71:CU:33:GLU:HG2	2.05	0.56
71:CU:67:LYS:HD3	71:CU:76:THR:HG21	1.87	0.56
73:CW:22:LYS:O	73:CW:65:LEU:HD12	2.05	0.56
73:CW:28:ARG:HB3	73:CW:29:PRO:CD	2.36	0.56
73:CW:36:ARG:HG2	73:CW:110:ILE:HD12	1.87	0.56
76:CZ:58:LEU:CD1	76:CZ:77:LEU:HD22	2.35	0.56
77:Ca:87:ARG:HG2	77:Ca:91:ALA:CB	2.35	0.56
1:A2:74:G:H5"	14:AL:59:VAL:HG11	1.86	0.56
1:A2:156:C:O2	1:A2:156:C:H2'	2.04	0.56
1:A2:474:G:C5	45:At:75:THR:HB	2.41	0.56
1:A2:488:G:O6	1:A2:658:G:N3	2.38	0.56
1:A2:658:G:C8	1:A2:658:G:C5'	2.86	0.56
1:A2:714:G:H2'	1:A2:715:C:C6	2.40	0.56
1:A2:914:G:H2'	1:A2:914:G:N3	2.20	0.56
1:A2:1280:G:O5'	1:A2:1280:G:C8	2.54	0.56
1:A2:1542:A:H61	64:CN:127:ARG:NH1	2.02	0.56
1:A2:1804:A:C3'	1:A2:1805:G:H8	2.17	0.56
1:A2:1833:G:H2'	1:A2:1834:C:H6	1.68	0.56
1:A2:1942:A:H2'	1:A2:1943:G:H8	1.67	0.56
1:A2:2020:A:N7	1:A2:2021:A:C2	2.74	0.56
1:A2:2524:G:O2'	1:A2:2525:C:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2526:G:N2	1:A2:2746:U:C5	2.74	0.56
1:A2:2542:A:H8	1:A2:2542:A:O5'	1.89	0.56
1:A2:4262:U:H6	1:A2:4262:U:H3'	1.71	0.56
1:A2:4334:U:H3'	1:A2:4335:C:H5'	1.87	0.56
1:A2:4352:G:O2'	1:A2:4354:A:H2'	2.05	0.56
1:A2:4420:U:O5'	1:A2:4420:U:H6	1.87	0.56
1:A2:4854:G:H4'	1:A2:4855:C:OP2	2.06	0.56
1:A2:4985:U:H2'	1:A2:4986:G:O4'	2.06	0.56
3:A4:11:A:H2	3:A4:66:G:H2'	1.71	0.56
3:A4:118:C:O2'	3:A4:119:U:H5"	2.04	0.56
14:AL:143:GLU:HG2	14:AL:144:LEU:N	2.20	0.56
45:At:18:ILE:HD13	45:At:18:ILE:H	1.70	0.56
46:Au:62:PHE:HE1	46:Au:81:GLU:CA	2.18	0.56
48:BB:844:ARG:O	48:BB:845:ALA:HB2	2.05	0.56
48:BB:1314:TYR:C	48:BB:1324:MET:HG3	2.30	0.56
50:C1:61:A:H1'	50:C1:62:G:P	2.46	0.56
50:C1:684:G:C5	50:C1:920:A:N7	2.74	0.56
50:C1:797:C:C4'	58:CH:109:ARG:HB2	2.35	0.56
50:C1:1821:U:H2'	50:C1:1822:A:C8	2.41	0.56
51:CA:77:ILE:HG12	51:CA:99:ILE:CG2	2.36	0.56
59:CI:192:GLY:HA3	62:CL:20:LYS:CB	2.36	0.56
62:CL:82:MET:HE3	62:CL:85:THR:CG2	2.34	0.56
63:CM:26:LEU:HG	63:CM:89:VAL:O	2.05	0.56
65:CO:27:VAL:HG12	65:CO:90:ILE:HG12	1.88	0.56
68:CR:109:LEU:HD13	68:CR:111:PHE:N	2.16	0.56
69:CS:42:HIS:HA	69:CS:45:LEU:HD22	1.87	0.56
77:Ca:38:LYS:N	77:Ca:71:LEU:HB3	2.19	0.56
1:A2:8:U:O2	1:A2:8:U:C3'	2.53	0.56
1:A2:156:C:O2	1:A2:156:C:C2'	2.54	0.56
1:A2:239:U:O5'	1:A2:239:U:H6	1.88	0.56
1:A2:1523:G:H3'	1:A2:1524:G:H8	1.70	0.56
1:A2:1777:G:H4'	1:A2:4175:C:N4	2.20	0.56
1:A2:1936:A:H1'	1:A2:2003:A:N1	2.19	0.56
1:A2:2398:G:H2'	1:A2:2805:U:O2	2.06	0.56
1:A2:2564:A:H5"	35:Ag:70:THR:CG2	2.35	0.56
1:A2:2579:G:C5	1:A2:2580:C:C4	2.94	0.56
1:A2:2603:U:O5'	1:A2:2603:U:H6	1.88	0.56
1:A2:2631:C:H2'	1:A2:2632:C:C6	2.41	0.56
1:A2:3825:A:H2'	1:A2:3826:G:O4'	2.06	0.56
1:A2:4149:U:H2'	1:A2:4150:U:O2	2.05	0.56
1:A2:4187:U:H5"	1:A2:4188:G:OP2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4383:U:C6	1:A2:4383:U:C3'	2.89	0.56
1:A2:4531:A:H8	1:A2:4531:A:O5'	1.88	0.56
1:A2:4809:G:H2'	1:A2:4810:G:C8	2.41	0.56
1:A2:4824:U:H4'	1:A2:4825:G:OP1	2.00	0.56
8:AE:278:THR:HB	8:AE:281:ILE:HG12	1.88	0.56
10:AG:71:TYR:CE1	16:AN:25:VAL:HG13	2.40	0.56
11:AH:86:LEU:HD21	11:AH:191:ASP:HB2	1.87	0.56
16:AN:144:ARG:O	16:AN:145:ASN:HB3	2.06	0.56
42:An:1:MET:HE1	42:An:9:ARG:HE	1.71	0.56
45:At:103:ARG:HD3	45:At:106:LEU:CB	2.35	0.56
46:Au:84:LEU:HD12	46:Au:87:LEU:HD12	1.87	0.56
47:BA:68:C:H4'	48:BB:1388:ARG:HH22	1.71	0.56
48:BB:881:GLN:HG3	48:BB:1121:PRO:CB	2.35	0.56
48:BB:1070:LEU:O	48:BB:1161:LEU:N	2.38	0.56
48:BB:1148:LEU:HD22	50:C1:488:U:O4	2.05	0.56
50:C1:67:C:H2'	57:CG:162:LEU:HD23	1.86	0.56
50:C1:125:C:P	50:C1:125:C:H6	2.28	0.56
50:C1:197:U:O5'	50:C1:197:U:H6	1.89	0.56
50:C1:504:G:C2'	50:C1:505:G:H5'	2.36	0.56
50:C1:672:A:O2'	50:C1:673:G:H5"	2.06	0.56
50:C1:1016:U:C4'	50:C1:1017:U:OP1	2.53	0.56
50:C1:1394:G:H2'	50:C1:1395:C:H5'	1.87	0.56
50:C1:1403:C:C5	50:C1:1404:U:C2	2.93	0.56
51:CA:205:ARG:HG3	51:CA:206:ASP:N	2.21	0.56
58:CH:160:LYS:HE3	58:CH:191:GLU:N	2.21	0.56
59:CI:158:ILE:O	59:CI:158:ILE:HG13	2.05	0.56
74:CX:32:LEU:C	74:CX:34:THR:H	2.14	0.56
1:A2:8:U:H5'	16:AN:40:PRO:HG3	1.88	0.56
1:A2:221:U:N3	6:AC:163:LYS:HA	2.21	0.56
1:A2:235:C:H5'	1:A2:235:C:H6	1.71	0.56
1:A2:314:C:H2'	1:A2:315:A:H8	1.69	0.56
1:A2:674:G:C5'	1:A2:674:G:H8	2.19	0.56
1:A2:1147:C:O2	1:A2:1147:C:H2'	2.06	0.56
1:A2:1163:C:O2'	1:A2:1164:A:H5'	2.05	0.56
1:A2:1210:U:H3'	1:A2:1210:U:O2	2.05	0.56
1:A2:1220:G:H5'	9:AF:48:LYS:HD2	1.86	0.56
1:A2:1328:U:H5"	19:AQ:15:ARG:NH2	2.20	0.56
1:A2:1340:G:H3'	1:A2:1341:G:H8	1.70	0.56
1:A2:1435:G:H2'	1:A2:1436:G:H8	1.67	0.56
1:A2:1525:C:H4'	1:A2:1562:A:C2	2.29	0.56
1:A2:1649:G:C8	1:A2:1649:G:C3'	2.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1672:U:O2	1:A2:1672:U:H2'	2.05	0.56
1:A2:2062:C:C5	1:A2:2249:G:C2	2.93	0.56
1:A2:2257:U:C2'	1:A2:2258:A:H5'	2.34	0.56
1:A2:2378:A:H3'	1:A2:2379:G:H5"	1.87	0.56
1:A2:2526:G:C3'	1:A2:2527:G:H5"	2.28	0.56
1:A2:2634:G:H8	1:A2:2634:G:O5'	1.87	0.56
1:A2:2663:G:H3'	1:A2:2664:U:H4'	1.87	0.56
1:A2:3739:U:C3'	47:BA:12:U:HO2'	2.16	0.56
1:A2:4263:C:O2	1:A2:4263:C:C3'	2.52	0.56
1:A2:4572:C:O2	11:AH:120:GLU:HB3	2.05	0.56
1:A2:4612:G:C2'	1:A2:4613:C:H5'	2.35	0.56
2:A3:148:A:H4'	26:AX:46:PHE:HZ	1.70	0.56
3:A4:25:G:H2'	3:A4:26:C:C6	2.41	0.56
3:A4:94:C:H2'	3:A4:95:C:C6	2.41	0.56
6:AC:183:VAL:HG11	6:AC:206:GLY:CA	2.35	0.56
9:AF:94:ARG:CZ	9:AF:109:LEU:HD13	2.35	0.56
27:AY:66:GLN:O	27:AY:67:ILE:HB	2.05	0.56
31:Ac:87:LYS:HD2	31:Ac:89:TYR:CE2	2.40	0.56
33:Ae:6:PRO:HG3	33:Ae:72:SER:O	2.06	0.56
35:Ag:83:CYS:HB3	35:Ag:86:CYS:SG	2.46	0.56
45:At:73:PRO:CB	45:At:78:VAL:HG21	2.35	0.56
48:BB:966:ILE:HG13	48:BB:1055:LEU:HD11	1.87	0.56
49:BC:333:C:N4	79:Cc:68:LEU:HD12	1.46	0.56
50:C1:29:G:H4'	74:CX:129:SER:HB3	1.86	0.56
50:C1:93:U:H2'	50:C1:94:G:O4'	2.06	0.56
50:C1:471:G:H4'	50:C1:472:C:OP1	2.05	0.56
50:C1:924:G:H2'	50:C1:925:G:H8	1.70	0.56
50:C1:986:G:H5"	77:Ca:19:GLN:HG2	1.87	0.56
50:C1:1599:U:N3	56:CF:165:ASN:N	2.54	0.56
50:C1:1865:C:C5	77:Ca:92:ARG:HB3	2.41	0.56
51:CA:39:TYR:CE2	51:CA:50:ASN:HB2	2.40	0.56
55:CE:173:ILE:HD13	55:CE:230:ASN:CB	2.35	0.56
64:CN:139:TRP:HH2	64:CN:149:LEU:HD21	1.70	0.56
1:A2:477:C:O2'	45:At:71:ARG:HB2	2.05	0.56
1:A2:893:A:C2	1:A2:894:G:C8	2.93	0.56
1:A2:973:U:N3	9:AF:55:LYS:HB3	2.21	0.56
1:A2:1193:G:P	1:A2:1193:G:C3'	2.94	0.56
1:A2:1267:G:H3'	1:A2:1268:G:H4'	1.87	0.56
1:A2:1400:A:C2	1:A2:1446:C:H1'	2.41	0.56
1:A2:1407:A:H2'	1:A2:1408:U:H6	1.66	0.56
1:A2:1587:G:H2'	1:A2:1588:U:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1724:G:H2'	1:A2:1725:A:O4'	2.05	0.56
1:A2:2837:C:C6	1:A2:2837:C:C3'	2.89	0.56
1:A2:4406:U:H2'	1:A2:4406:U:O2	2.05	0.56
1:A2:4420:U:H2'	1:A2:4421:C:C6	2.40	0.56
1:A2:4688:A:HO2'	1:A2:4695:C:H1'	1.70	0.56
1:A2:4824:U:O2	1:A2:4824:U:H3'	2.05	0.56
1:A2:4874:G:H2'	1:A2:4875:C:H6	1.69	0.56
1:A2:4896:G:H5"	8:AE:172:LEU:CD1	2.33	0.56
1:A2:4908:G:H2'	1:A2:4909:G:H8	1.71	0.56
6:AC:207:PRO:HB3	6:AC:249:PHE:CD1	2.41	0.56
8:AE:153:LEU:C	8:AE:158:ARG:HG2	2.31	0.56
10:AG:173:LEU:HD23	37:Ai:43:MET:SD	2.46	0.56
22:AT:83:LYS:HE2	22:AT:85:LEU:HD21	1.88	0.56
29:Aa:70:CYS:CA	29:Aa:109:TYR:HB3	2.36	0.56
39:Ak:24:LYS:HB3	39:Ak:35:LYS:HB2	1.88	0.56
39:Ak:53:ALA:O	39:Ak:57:LYS:HG2	2.05	0.56
47:BA:70:G:N7	48:BB:1384:LYS:CD	2.63	0.56
47:BA:76:A:C6	48:BB:1316:PHE:HB2	2.39	0.56
50:C1:23:G:H2'	50:C1:24:C:C6	2.41	0.56
50:C1:125:C:H3'	55:CE:149:TYR:CZ	2.41	0.56
50:C1:544:G:H4'	50:C1:545:A:OP1	2.05	0.56
50:C1:558:G:H8	50:C1:558:G:O5'	1.89	0.56
50:C1:1180:C:H2'	50:C1:1181:A:H5'	1.87	0.56
50:C1:1472:C:O2	50:C1:1472:C:H2'	2.06	0.56
50:C1:1557:C:H42	50:C1:1661:A:C4'	2.19	0.56
50:C1:1603:G:H4'	50:C1:1604:G:OP2	2.04	0.56
50:C1:1828:C:H3'	50:C1:1829:G:C8	2.40	0.56
52:CB:71:LEU:HD13	52:CB:71:LEU:C	2.31	0.56
70:CT:76:THR:HG22	70:CT:95:GLY:H	1.70	0.56
1:A2:13:U:H1'	1:A2:14:C:OP1	2.06	0.56
1:A2:201:U:H3	1:A2:208:G:H1	1.54	0.56
1:A2:267:C:H5'	37:Ai:34:THR:CG2	2.36	0.56
1:A2:309:A:C2'	1:A2:310:A:H5'	2.35	0.56
1:A2:340:A:N7	6:AC:49:ARG:CZ	2.69	0.56
1:A2:438:C:C2'	1:A2:439:G:H5'	2.36	0.56
1:A2:481:C:H2'	1:A2:482:G:C5'	2.31	0.56
1:A2:1211:C:H1'	1:A2:1212:G:O5'	2.05	0.56
1:A2:2370:C:C3'	1:A2:2371:G:H5"	2.22	0.56
1:A2:2620:G:H2'	1:A2:2621:G:H5'	1.87	0.56
1:A2:2665:G:O6	1:A2:2666:C:N4	2.39	0.56
1:A2:2672:A:H3'	1:A2:2673:A:H5"	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2716:C:H1'	1:A2:2717:U:OP1	2.06	0.56
1:A2:3669:C:H3'	1:A2:3715:A:N6	2.18	0.56
1:A2:4417:U:H2'	1:A2:4418:C:H5'	1.87	0.56
2:A3:49:G:OP1	2:A3:49:G:H8	1.88	0.56
2:A3:93:C:H5"	38:Aj:76:HIS:CD2	2.41	0.56
5:AB:94:GLU:HB3	5:AB:158:GLN:CD	2.31	0.56
6:AC:53:ALA:HB1	6:AC:105:THR:OG1	2.05	0.56
11:AH:173:ARG:CD	41:Am:127:VAL:HG22	2.35	0.56
12:AI:38:ARG:HE	12:AI:40:LYS:HB2	1.71	0.56
17:AO:34:VAL:HG11	17:AO:112:TYR:CE1	2.40	0.56
48:BB:845:ALA:HB1	48:BB:912:MET:HA	1.87	0.56
48:BB:933:LEU:HD11	48:BB:1090:ILE:HD12	1.87	0.56
48:BB:1022:PHE:CB	48:BB:1051:LEU:HD11	2.36	0.56
48:BB:1122:PRO:CB	48:BB:1133:TYR:HB3	2.34	0.56
48:BB:1341:VAL:HB	48:BB:1343:SER:O	2.05	0.56
48:BB:1399:LYS:CD	48:BB:1428:LYS:HE3	2.33	0.56
49:BC:352:A:C8	53:CC:147:VAL:HG11	2.40	0.56
50:C1:59:U:H5"	50:C1:502:C:H5'	1.88	0.56
50:C1:81:U:H5'	50:C1:82:G:OP2	2.05	0.56
50:C1:124:U:H5'	55:CE:148:ARG:CB	2.35	0.56
50:C1:694:G:H2'	50:C1:695:C:C5	2.40	0.56
50:C1:951:C:N3	50:C1:975:G:O6	2.38	0.56
50:C1:1054:G:H8	50:C1:1054:G:O5'	1.89	0.56
50:C1:1164:G:H3'	50:C1:1165:G:C2	2.41	0.56
50:C1:1289:U:H3'	50:C1:1289:U:O2	2.05	0.56
50:C1:1473:G:C8	50:C1:1475:G:OP2	2.59	0.56
50:C1:1681:U:O5'	50:C1:1681:U:H6	1.89	0.56
51:CA:33:GLN:HB2	51:CA:154:LEU:HD12	1.86	0.56
52:CB:68:GLU:OE2	52:CB:83:LYS:HE2	2.06	0.56
61:CK:32:HIS:N	61:CK:33:PRO:CD	2.68	0.56
1:A2:703:G:H4'	6:AC:316:LYS:HD3	1.88	0.56
1:A2:1220:G:C4	1:A2:1221:C:N4	2.74	0.56
1:A2:1282:U:H1'	1:A2:1283:A:O5'	2.06	0.56
1:A2:1606:G:H3'	1:A2:1607:C:H6	1.71	0.56
1:A2:1756:C:C6	1:A2:1756:C:H5"	2.40	0.56
1:A2:1931:U:O5'	1:A2:1931:U:H6	1.89	0.56
1:A2:2045:C:H2'	1:A2:2046:C:C6	2.41	0.56
1:A2:2254:G:H21	33:Ae:58:ILE:HG23	1.70	0.56
1:A2:2311:C:C6	1:A2:2311:C:C5'	2.76	0.56
1:A2:2469:C:C2'	1:A2:2470:G:H8	2.18	0.56
1:A2:2520:A:C2	1:A2:2750:G:N2	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2702:A:H4'	1:A2:2703:G:OP2	2.05	0.56
1:A2:2702:A:H1'	20:AR:97:ARG:HH21	1.71	0.56
1:A2:3878:C:O2	1:A2:3878:C:H2'	2.05	0.56
1:A2:4231:A:H5"	1:A2:4232:G:OP2	2.06	0.56
1:A2:4479:C:H5"	1:A2:4480:G:H5"	1.88	0.56
1:A2:4565:A:C5'	48:BB:949:PRO:HG2	2.30	0.56
1:A2:4680:C:H4'	1:A2:4681:G:OP2	2.04	0.56
2:A3:73:U:H2'	2:A3:74:U:H5'	1.87	0.56
2:A3:143:G:C2'	2:A3:144:U:H5'	2.36	0.56
8:AE:258:LEU:HB2	8:AE:259:PRO:HD3	1.88	0.56
29:Aa:78:LEU:HD22	29:Aa:81:LEU:HD12	1.88	0.56
31:Ac:108:MET:N	31:Ac:109:PRO:HD2	2.21	0.56
48:BB:839:ASN:ND2	48:BB:905:GLU:CG	2.69	0.56
48:BB:1046:GLY:O	48:BB:1049:ILE:HG22	2.05	0.56
48:BB:1197:VAL:CG1	48:BB:1208:LEU:HD22	2.29	0.56
49:BC:350:G:P	54:CD:146:ARG:HD2	2.46	0.56
50:C1:343:A:H8	50:C1:343:A:O5'	1.89	0.56
50:C1:358:C:H5'	50:C1:358:C:C6	2.40	0.56
50:C1:396:U:H2'	50:C1:397:G:O4'	2.05	0.56
50:C1:572:U:P	75:CY:59:GLY:H	2.29	0.56
50:C1:636:C:O5'	50:C1:636:C:C6	2.59	0.56
50:C1:748:C:N4	50:C1:860:G:P	2.76	0.56
50:C1:889:U:H3'	50:C1:890:U:C5'	2.36	0.56
50:C1:1000:C:H42	77:Ca:15:ARG:HB2	1.71	0.56
50:C1:1017:U:H5"	50:C1:1017:U:H6	1.70	0.56
50:C1:1202:U:H3'	50:C1:1203:G:H5"	1.88	0.56
50:C1:1602:U:H3'	50:C1:1602:U:H6	1.70	0.56
50:C1:1698:C:H5'	50:C1:1699:A:C8	2.41	0.56
50:C1:1791:A:H2'	50:C1:1792:G:O4'	2.06	0.56
50:C1:1866:A:P	77:Ca:9:GLY:HA2	2.45	0.56
54:CD:32:ASP:HB3	54:CD:57:ASN:HB2	1.88	0.56
57:CG:63:MET:HE1	57:CG:102:VAL:HG22	1.87	0.56
58:CH:87:PHE:CE1	58:CH:90:LYS:HE2	2.41	0.56
61:CK:29:MET:N	61:CK:30:PRO:HD3	2.21	0.56
65:CO:18:GLY:H	65:CO:19:PRO:HD2	1.70	0.56
71:CU:78:ASP:HB3	71:CU:80:PHE:CZ	2.41	0.56
1:A2:166:G:H2'	1:A2:167:C:C4'	2.35	0.56
1:A2:455:G:H3'	1:A2:456:G:C8	2.41	0.56
1:A2:1076:C:H2'	1:A2:1077:C:H6	1.71	0.56
1:A2:1174:G:H2'	1:A2:1175:G:H8	1.70	0.56
1:A2:1267:G:H2'	1:A2:1268:G:H4'	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1648:A:H8	1:A2:1648:A:H3'	1.70	0.56
1:A2:1742:C:C3'	1:A2:1743:G:H5"	2.35	0.56
1:A2:2057:G:C4'	33:Ae:58:ILE:HD11	2.35	0.56
1:A2:2637:A:H3'	1:A2:2638:U:C5'	2.21	0.56
1:A2:3609:U:H3	1:A2:3616:A:H62	1.54	0.56
1:A2:3722:G:H8	1:A2:3722:G:H5"	1.71	0.56
1:A2:3739:U:C4'	47:BA:12:U:O2'	2.54	0.56
1:A2:3772:A:H5'	1:A2:4457:U:O2'	2.06	0.56
1:A2:3876:G:C8	1:A2:4407:C:O2'	2.55	0.56
1:A2:3914:A:O2'	1:A2:3915:G:H5'	2.05	0.56
1:A2:3918:A:H2'	1:A2:3919:U:C6	2.40	0.56
1:A2:4032:C:H2'	1:A2:4033:G:C4'	2.36	0.56
1:A2:4098:G:H2'	1:A2:4099:C:H6	1.65	0.56
1:A2:4234:A:H2'	1:A2:4235:G:C8	2.41	0.56
1:A2:4390:G:H5'	12:AI:63:GLU:OE1	2.06	0.56
1:A2:4579:U:H5'	1:A2:4579:U:H6	1.71	0.56
1:A2:4826:C:H42	15:AM:97:ALA:CB	2.18	0.56
1:A2:4956:U:C4'	5:AB:317:LEU:HG	2.31	0.56
13:AJ:89:VAL:HG22	13:AJ:114:ASP:HB3	1.87	0.56
14:AL:147:ALA:O	14:AL:151:THR:HB	2.06	0.56
27:AY:42:TYR:CG	27:AY:124:LYS:HE3	2.41	0.56
36:Ah:80:PRO:HG2	36:Ah:83:LEU:HD12	1.86	0.56
37:Ai:73:ILE:O	37:Ai:77:VAL:HG22	2.05	0.56
48:BB:814:THR:HA	48:BB:1170:ILE:CD1	2.36	0.56
48:BB:844:ARG:HG2	48:BB:1142:ALA:HB3	1.89	0.56
48:BB:939:LEU:HD11	48:BB:955:ILE:CG2	2.36	0.56
48:BB:1007:ALA:O	48:BB:1010:VAL:HG12	2.05	0.56
48:BB:1247:VAL:HG21	48:BB:1271:PHE:CE2	2.41	0.56
50:C1:186:C:O5'	50:C1:186:C:H6	1.88	0.56
50:C1:399:C:H5"	50:C1:400:C:H5	1.71	0.56
50:C1:628:A:N6	54:CD:179:GLN:HE22	2.04	0.56
50:C1:808:A:H4'	55:CE:219:ALA:O	2.06	0.56
50:C1:900:C:H2'	50:C1:901:G:C5	2.41	0.56
50:C1:983:A:H2'	50:C1:984:C:H5'	1.87	0.56
50:C1:1011:A:H8	50:C1:1011:A:O5'	1.89	0.56
50:C1:1130:G:H4'	64:CN:10:GLY:HA2	1.88	0.56
50:C1:1143:A:H2'	50:C1:1144:A:C8	2.40	0.56
50:C1:1214:A:N1	50:C1:1686:G:C2	2.74	0.56
50:C1:1276:A:N6	50:C1:1317:C:N4	2.54	0.56
50:C1:1427:C:C6	50:C1:1427:C:C3'	2.89	0.56
50:C1:1443:C:C3'	50:C1:1444:U:H5'	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1535:U:H6	56:CF:82:ASN:OD1	1.88	0.56
51:CA:120:ARG:O	51:CA:143:PRO:HD2	2.06	0.56
51:CA:205:ARG:HG3	51:CA:206:ASP:H	1.71	0.56
52:CB:35:ALA:HB1	52:CB:36:PRO:HD2	1.88	0.56
55:CE:87:MET:HE1	55:CE:123:LEU:HD12	1.88	0.56
55:CE:95:THR:HB	55:CE:97:GLU:CD	2.30	0.56
56:CF:39:ILE:HG23	56:CF:68:ILE:HG21	1.88	0.56
61:CK:12:TYR:CE1	61:CK:52:LEU:HD11	2.41	0.56
69:CS:5:ILE:O	69:CS:6:PRO:C	2.49	0.56
73:CW:77:PRO:HG2	73:CW:79:PHE:CZ	2.41	0.56
1:A2:174:G:H1	1:A2:253:C:N4	2.03	0.55
1:A2:411:A:H8	1:A2:411:A:OP2	1.89	0.55
1:A2:635:G:O2'	1:A2:636:G:H5'	2.05	0.55
1:A2:1199:G:C3'	1:A2:1200:G:C8	2.89	0.55
1:A2:1474:G:H5"	19:AQ:187:LYS:HZ1	1.70	0.55
1:A2:1894:G:H3'	1:A2:1894:G:H8	1.70	0.55
1:A2:2284:A:C2	2:A3:19:C:O2	2.59	0.55
1:A2:2302:G:H5"	33:Ae:127:ALA:HB2	1.88	0.55
1:A2:2456:G:H2'	1:A2:2457:G:C8	2.41	0.55
1:A2:2509:C:C2'	1:A2:2510:C:H5'	2.36	0.55
1:A2:2520:A:H2	1:A2:2750:G:N2	2.05	0.55
1:A2:2685:U:H3'	1:A2:2685:U:H6	1.69	0.55
1:A2:2741:A:O3'	1:A2:2742:A:C8	2.59	0.55
1:A2:2749:C:H2'	1:A2:2750:G:O5'	2.06	0.55
1:A2:4053:A:C2	1:A2:4124:C:N4	2.73	0.55
1:A2:4303:U:C2'	1:A2:4304:U:H5'	2.35	0.55
1:A2:4437:A:C2	1:A2:4438:G:N7	2.74	0.55
13:AJ:97:ASN:O	13:AJ:98:ASN:HB2	2.07	0.55
17:AO:23:VAL:O	17:AO:27:VAL:HG23	2.07	0.55
20:AR:106:LEU:HG	20:AR:120:TYR:CD2	2.41	0.55
43:Ao:104:ILE:N	47:BA:57:G:OP1	2.28	0.55
43:Ao:106:PHE:CE1	47:BA:18:G:H1'	2.40	0.55
48:BB:843:LEU:HD21	48:BB:908:ARG:CB	2.07	0.55
48:BB:900:LYS:HA	48:BB:1050:TYR:HE1	1.70	0.55
48:BB:1209:LEU:O	48:BB:1213:LYS:HG3	2.05	0.55
48:BB:1243:PRO:HB2	48:BB:1290:TYR:CE1	2.40	0.55
50:C1:549:C:H2'	50:C1:550:C:H6	1.71	0.55
50:C1:584:A:P	50:C1:584:A:H8	2.29	0.55
50:C1:635:G:H2'	50:C1:636:C:H6	1.71	0.55
50:C1:753:C:H3'	50:C1:754:G:O4'	2.06	0.55
50:C1:1282:A:H2'	50:C1:1283:C:H5'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1362:U:H4'	50:C1:1363:C:OP2	2.06	0.55
50:C1:1426:U:C4	50:C1:1427:C:C4	2.93	0.55
50:C1:1431:G:N2	50:C1:1432:U:C2	2.74	0.55
50:C1:1440:C:O5'	50:C1:1440:C:H6	1.89	0.55
50:C1:1579:A:C8	71:CU:56:MET:HG2	2.40	0.55
50:C1:1624:U:O5'	50:C1:1624:U:C6	2.59	0.55
50:C1:1667:U:H5"	67:CQ:141:TYR:OH	2.05	0.55
60:CJ:41:ARG:HD3	60:CJ:42:GLU:N	2.21	0.55
69:CS:8:LYS:HD3	69:CS:8:LYS:O	2.06	0.55
77:Ca:40:VAL:O	77:Ca:69:VAL:HG12	2.06	0.55
1:A2:116:G:C8	10:AG:145:THR:HG21	2.40	0.55
1:A2:204:G:H2'	1:A2:205:A:C8	2.41	0.55
1:A2:224:A:N6	1:A2:238:G:H2'	2.20	0.55
1:A2:722:G:H3'	1:A2:723:G:C5'	2.36	0.55
1:A2:1048:G:H5"	1:A2:1215:G:N7	2.21	0.55
1:A2:1231:C:H2'	1:A2:1232:C:C6	2.41	0.55
1:A2:1317:A:C2	1:A2:2326:A:C2	2.95	0.55
1:A2:1592:A:N3	4:AA:196:TRP:HH2	2.04	0.55
1:A2:1846:A:H2'	1:A2:1848:C:C6	2.41	0.55
1:A2:2390:U:O2'	1:A2:2391:G:H5'	2.06	0.55
1:A2:2420:G:O4'	1:A2:2489:A:C2	2.59	0.55
1:A2:2421:U:H5'	1:A2:2422:C:OP2	2.06	0.55
1:A2:2469:C:C2	1:A2:2470:G:N7	2.74	0.55
1:A2:2524:G:N2	1:A2:2525:C:C5	2.75	0.55
1:A2:3670:C:H4'	1:A2:3671:A:N7	2.20	0.55
1:A2:3718:C:H2'	1:A2:3719:G:O4'	2.07	0.55
1:A2:4319:U:H6	1:A2:4319:U:H5"	1.71	0.55
1:A2:4650:G:O2'	11:AH:72:THR:HG22	2.05	0.55
1:A2:4711:U:O2'	34:Af:5:LEU:N	2.40	0.55
1:A2:4865:A:H4'	5:AB:95:THR:CG2	2.36	0.55
2:A3:16:G:OP2	2:A3:16:G:C8	2.59	0.55
3:A4:28:C:H2'	3:A4:28:C:O2	2.06	0.55
5:AB:90:VAL:HG11	5:AB:182:GLU:OE2	2.05	0.55
10:AG:138:ALA:HB3	10:AG:196:ARG:NH2	2.22	0.55
13:AJ:96:LYS:HD3	13:AJ:177:GLY:C	2.31	0.55
14:AL:89:LYS:HZ2	36:Ah:114:TYR:HD2	1.52	0.55
28:AZ:83:THR:HA	31:Ac:62:TYR:HH	1.71	0.55
48:BB:1037:THR:HB	48:BB:1045:MET:CE	2.36	0.55
48:BB:1354:SER:C	48:BB:1373:VAL:CG2	2.53	0.55
49:BC:66:A:C5	49:BC:67:C:C4	2.93	0.55
49:BC:336:U:OP1	65:CO:110:PRO:HD3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:77:A:N7	57:CG:155:GLN:CA	2.69	0.55
50:C1:129:C:H1'	50:C1:182:C:N4	2.20	0.55
50:C1:144:U:H6	57:CG:180:VAL:HG22	1.70	0.55
50:C1:170:A:C3'	50:C1:171:A:H8	2.19	0.55
50:C1:193:C:H1'	50:C1:208:G:N1	2.21	0.55
50:C1:327:G:H4'	50:C1:328:U:OP1	2.05	0.55
50:C1:693:A:H3'	50:C1:694:G:O4'	2.05	0.55
50:C1:876:C:C6	50:C1:877:C:C5	2.93	0.55
50:C1:893:U:H6	50:C1:893:U:O5'	1.88	0.55
50:C1:1130:G:H4'	64:CN:10:GLY:CA	2.36	0.55
50:C1:1261:C:H3'	50:C1:1262:C:H5"	1.88	0.55
50:C1:1499:U:O2'	50:C1:1500:G:H5'	2.06	0.55
50:C1:1578:U:H4'	50:C1:1579:A:OP2	2.06	0.55
50:C1:1686:G:H3'	50:C1:1687:C:H6	1.71	0.55
52:CB:65:ARG:HG2	65:CO:50:LYS:HD2	1.88	0.55
60:CJ:137:VAL:HB	60:CJ:142:VAL:HG23	1.88	0.55
1:A2:1178:G:H3'	1:A2:1179:G:C5'	2.25	0.55
1:A2:1214:G:O2'	1:A2:1216:C:H3'	2.06	0.55
1:A2:1742:C:O5'	1:A2:1743:G:H5"	2.06	0.55
1:A2:1900:G:H8	1:A2:1900:G:H5'	1.71	0.55
1:A2:2247:C:O5'	1:A2:2247:C:H6	1.89	0.55
1:A2:2415:A:H1'	1:A2:2416:G:OP1	2.06	0.55
1:A2:2523:G:H2'	1:A2:2524:G:C1'	2.36	0.55
1:A2:2526:G:N2	1:A2:2746:U:C4	2.74	0.55
1:A2:3757:C:H2'	1:A2:3758:C:O2	2.07	0.55
1:A2:3914:A:O2'	1:A2:3915:G:O4'	2.23	0.55
1:A2:3924:G:N2	1:A2:4025:C:N4	2.54	0.55
1:A2:4254:C:C5'	1:A2:4254:C:C6	2.89	0.55
2:A3:91:A:H2'	2:A3:92:U:O4'	2.06	0.55
11:AH:80:MET:O	11:AH:84:VAL:HG23	2.06	0.55
13:AJ:26:VAL:HG13	13:AJ:32:ARG:HD3	1.87	0.55
15:AM:20:HIS:CA	15:AM:23:LYS:HD3	2.36	0.55
31:Ac:32:LYS:HA	31:Ac:35:LEU:HD12	1.88	0.55
48:BB:1243:PRO:HB2	48:BB:1290:TYR:CZ	2.40	0.55
50:C1:346:C:H3'	50:C1:346:C:C6	2.40	0.55
50:C1:423:U:H5"	50:C1:424:C:OP2	2.05	0.55
50:C1:797:C:O2'	58:CH:109:ARG:HD2	2.05	0.55
50:C1:869:A:C4	50:C1:915:G:H1'	2.41	0.55
50:C1:1383:A:O5'	50:C1:1383:A:C8	2.59	0.55
50:C1:1513:C:H4'	80:Cd:9:SER:OG	2.06	0.55
50:C1:1575:G:H2'	50:C1:1576:G:H8	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1783:C:O2	50:C1:1783:C:H2'	2.05	0.55
52:CB:116:LYS:HE2	52:CB:117:TRP:CZ3	2.41	0.55
56:CF:56:TYR:O	56:CF:62:ARG:HG3	2.06	0.55
61:CK:90:VAL:HG11	61:CK:95:ARG:HG2	1.87	0.55
63:CM:65:VAL:HG21	63:CM:108:CYS:SG	2.46	0.55
66:CP:17:TYR:HB3	66:CP:25:LEU:HD11	1.89	0.55
69:CS:134:GLN:HG2	69:CS:135:HIS:N	2.20	0.55
1:A2:105:A:H5"	1:A2:1341:G:O2'	2.07	0.55
1:A2:286:A:H5'	1:A2:287:A:C8	2.42	0.55
1:A2:309:A:H3'	1:A2:309:A:C8	2.41	0.55
1:A2:389:A:C8	1:A2:389:A:C3'	2.89	0.55
1:A2:428:G:H8	1:A2:428:G:O5'	1.88	0.55
1:A2:721:A:O2'	21:AS:70:LYS:HA	2.06	0.55
1:A2:974:C:H4'	1:A2:975:C:OP1	2.06	0.55
1:A2:1191:G:C2'	1:A2:1192:G:H5'	2.36	0.55
1:A2:1480:C:H2'	1:A2:1481:G:C5	2.41	0.55
1:A2:1480:C:H2'	1:A2:1481:G:N7	2.22	0.55
1:A2:1620:G:N7	1:A2:4346:C:H1'	2.21	0.55
1:A2:1811:G:H3'	1:A2:1811:G:C8	2.42	0.55
1:A2:1872:C:C2'	1:A2:1873:G:H5"	2.37	0.55
1:A2:2325:G:P	1:A2:2328:C:H41	2.29	0.55
1:A2:2331:G:H2'	1:A2:2332:G:C8	2.40	0.55
1:A2:2729:G:H2'	1:A2:2730:G:O4'	2.06	0.55
1:A2:2761:C:C6	1:A2:2761:C:H3'	2.41	0.55
1:A2:3720:G:N3	1:A2:3720:G:H2'	2.22	0.55
1:A2:3888:C:H4'	4:AA:207:VAL:CG1	2.36	0.55
1:A2:3920:G:C4	1:A2:3921:A:C8	2.95	0.55
1:A2:4167:C:H1'	1:A2:4295:C:H1'	1.87	0.55
1:A2:4438:G:H5'	11:AH:175:PHE:CE2	2.41	0.55
2:A3:148:A:H3'	2:A3:148:A:C8	2.41	0.55
4:AA:180:LEU:HD11	44:Ap:26:VAL:HG11	1.88	0.55
4:AA:225:ILE:HD11	4:AA:235:VAL:O	2.06	0.55
5:AB:167:GLN:HE22	5:AB:204:GLN:HE21	1.53	0.55
27:AY:101:PRO:HA	27:AY:104:VAL:HG22	1.86	0.55
35:Ag:82:MET:HB2	35:Ag:87:VAL:CG2	2.37	0.55
47:BA:20:U:C3'	47:BA:21:A:C5'	2.73	0.55
48:BB:1122:PRO:N	48:BB:1133:TYR:HB3	2.21	0.55
48:BB:1230:LYS:HZ3	74:CX:75:ILE:HG21	1.65	0.55
49:BC:349:C:N4	50:C1:1698:C:N4	2.54	0.55
50:C1:381:C:H5"	59:CI:48:VAL:HG22	1.89	0.55
50:C1:743:U:H2'	58:CH:100:ILE:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1461:G:N2	50:C1:1466:G:C5	2.74	0.55
50:C1:1830:U:H1'	50:C1:1831:A:OP2	2.06	0.55
51:CA:185:MET:HG2	72:CV:46:PHE:CE1	2.41	0.55
52:CB:153:THR:HB	52:CB:155:TYR:CD2	2.41	0.55
55:CE:149:TYR:CZ	57:CG:206:ALA:HA	2.42	0.55
60:CJ:141:VAL:HG22	60:CJ:162:ARG:HH22	1.71	0.55
76:CZ:43:LYS:HG3	76:CZ:44:LEU:O	2.07	0.55
1:A2:18:C:H2'	1:A2:19:G:C8	2.42	0.55
1:A2:166:G:C2	1:A2:258:G:N1	2.75	0.55
1:A2:1285:C:O5'	1:A2:1285:C:C6	2.59	0.55
1:A2:1304:A:H4'	1:A2:1305:C:OP1	2.06	0.55
1:A2:1350:G:OP1	14:AL:30:ALA:HA	2.06	0.55
1:A2:1387:C:H2'	1:A2:1388:G:H8	1.72	0.55
1:A2:1481:G:N2	19:AQ:65:ARG:N	2.55	0.55
1:A2:1844:U:H2'	1:A2:1844:U:O2	2.05	0.55
1:A2:1933:G:C2	1:A2:2007:A:C4	2.95	0.55
1:A2:2572:C:H2'	1:A2:2573:G:H8	1.70	0.55
1:A2:2663:G:H3'	1:A2:2664:U:O4'	2.07	0.55
1:A2:2738:U:H1'	1:A2:2739:G:N7	2.20	0.55
1:A2:2746:U:C5	1:A2:2746:U:OP1	2.60	0.55
1:A2:3618:A:O4'	1:A2:4495:A:H4'	2.06	0.55
1:A2:4637:U:C4	1:A2:4674:C:H1'	2.40	0.55
1:A2:4908:G:H2'	1:A2:4909:G:C8	2.41	0.55
2:A3:67:U:H4'	38:Aj:83:THR:HG23	1.88	0.55
2:A3:67:U:H5'	38:Aj:83:THR:O	2.05	0.55
3:A4:54:A:H2	3:A4:55:A:C4	2.25	0.55
5:AB:222:VAL:O	5:AB:339:GLY:HA2	2.07	0.55
11:AH:41:ILE:HG13	11:AH:73:ILE:HG13	1.88	0.55
13:AJ:120:ASP:HB3	13:AJ:123:ILE:HD12	1.89	0.55
25:AW:36:CYS:HG	25:AW:51:TRP:HH2	1.54	0.55
47:BA:35:A:N6	49:BC:344:G:N1	2.55	0.55
48:BB:1070:LEU:HA	48:BB:1071:ARG:CZ	2.35	0.55
48:BB:1210:GLU:HA	48:BB:1213:LYS:HE2	1.88	0.55
50:C1:372:U:C6	50:C1:372:U:H3'	2.41	0.55
50:C1:743:U:H3'	50:C1:744:G:H8	1.71	0.55
50:C1:1266:C:H2'	50:C1:1267:C:C6	2.42	0.55
50:C1:1413:G:H2'	50:C1:1414:A:C8	2.42	0.55
50:C1:1534:C:OP2	50:C1:1599:U:H5	1.90	0.55
50:C1:1677:U:O2	50:C1:1678:A:H8	1.89	0.55
50:C1:1825:A:H2'	50:C1:1826:G:C5'	2.34	0.55
54:CD:39:VAL:O	71:CU:108:PRO:HB3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:CH:102:PRO:HG2	58:CH:105:THR:HB	1.89	0.55
67:CQ:33:LYS:HE3	67:CQ:36:GLY:HA2	1.88	0.55
68:CR:113:SER:O	68:CR:114:LEU:HG	2.05	0.55
71:CU:99:LYS:HA	71:CU:102:THR:OG1	2.07	0.55
74:CX:32:LEU:HD22	74:CX:34:THR:HB	1.89	0.55
1:A2:192:C:H2'	1:A2:193:C:OP1	2.06	0.55
1:A2:267:C:H3'	37:Ai:34:THR:CG2	2.28	0.55
1:A2:428:G:H5'	33:Ae:53:ILE:HG22	1.89	0.55
1:A2:439:G:C2'	1:A2:440:C:H5'	2.37	0.55
1:A2:1300:U:H2'	1:A2:1301:G:O4'	2.07	0.55
1:A2:2027:G:H2'	1:A2:2028:G:O5'	2.07	0.55
1:A2:2280:U:C5	1:A2:2308:A:C2	2.95	0.55
1:A2:2518:G:C3'	1:A2:2519:G:H5"	2.37	0.55
1:A2:2605:U:H3'	1:A2:2605:U:C6	2.40	0.55
1:A2:2665:G:C6	1:A2:2666:C:N4	2.75	0.55
1:A2:2810:A:C5	1:A2:2811:C:N3	2.75	0.55
1:A2:2860:G:H2'	1:A2:2861:G:O4'	2.07	0.55
1:A2:3604:A:H3'	1:A2:3605:C:C5'	2.36	0.55
1:A2:3787:U:H4'	1:A2:3787:U:OP2	2.05	0.55
1:A2:3824:C:O2'	1:A2:3825:A:H5'	2.07	0.55
1:A2:3937:U:O5'	1:A2:3937:U:H6	1.90	0.55
1:A2:4431:U:H3	1:A2:4444:G:H22	1.54	0.55
1:A2:4438:G:H8	1:A2:4438:G:O5'	1.90	0.55
1:A2:4839:G:H2'	1:A2:4840:U:C6	2.42	0.55
14:AL:53:GLY:O	14:AL:55:ILE:N	2.40	0.55
14:AL:153:PRO:C	14:AL:156:PRO:HD2	2.32	0.55
15:AM:20:HIS:HA	15:AM:23:LYS:HD3	1.89	0.55
16:AN:39:ALA:HB3	16:AN:61:ILE:CG2	2.36	0.55
27:AY:87:ARG:HG3	27:AY:97:VAL:HG22	1.89	0.55
32:Ad:46:LEU:HD11	32:Ad:73:TRP:HE1	1.70	0.55
35:Ag:82:MET:HB2	35:Ag:87:VAL:HG22	1.88	0.55
44:Ap:33:GLN:HG3	44:Ap:49:ARG:HD3	1.88	0.55
46:Au:43:VAL:CG1	46:Au:151:LEU:HG	2.36	0.55
47:BA:69:G:OP1	48:BB:1383:PRO:HB3	2.06	0.55
47:BA:71:G:N7	48:BB:1319:ARG:CZ	2.66	0.55
50:C1:83:A:O2'	75:CY:123:ALA:HB1	2.07	0.55
50:C1:86:C:C3'	50:C1:87:U:H5"	2.37	0.55
50:C1:125:C:O4'	55:CE:136:ILE:HG22	2.07	0.55
50:C1:475:C:C6	50:C1:475:C:C5'	2.86	0.55
50:C1:686:U:O2'	50:C1:687:C:H5'	2.06	0.55
50:C1:743:U:O2	58:CH:100:ILE:HB	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:746:C:H5”	58:CH:104:PRO:C	2.32	0.55
50:C1:833:C:H4’	50:C1:834:C:OP2	2.07	0.55
50:C1:1272:C:H2’	50:C1:1273:C:C6	2.42	0.55
50:C1:1396:A:H2	50:C1:1449:G:H22	1.53	0.55
50:C1:1410:C:H3’	50:C1:1411:G:H3’	1.88	0.55
50:C1:1416:C:N4	50:C1:1431:G:N2	2.55	0.55
50:C1:1520:G:C5’	50:C1:1521:C:C5	2.83	0.55
50:C1:1549:U:O2’	50:C1:1550:G:H5’	2.06	0.55
50:C1:1739:C:O5’	50:C1:1739:C:H6	1.89	0.55
68:CR:13:ALA:HB1	68:CR:54:VAL:HB	1.87	0.55
70:CT:124:THR:HB	70:CT:125:PRO:HD2	1.89	0.55
1:A2:104:G:C1’	1:A2:1340:G:N2	2.57	0.55
1:A2:193:C:H3’	1:A2:193:C:O2	2.06	0.55
1:A2:219:C:P	6:AC:165:LYS:HZ1	2.27	0.55
1:A2:359:C:O5’	1:A2:359:C:H6	1.90	0.55
1:A2:1480:C:H3’	1:A2:1481:G:H5”	1.89	0.55
1:A2:1808:G:C2’	1:A2:1809:G:H5’	2.37	0.55
1:A2:1877:G:H5’	1:A2:2254:G:O2’	2.07	0.55
1:A2:1892:C:H5”	1:A2:1893:C:H5”	1.89	0.55
1:A2:2304:G:O2’	1:A2:2305:U:H5’	2.07	0.55
1:A2:2310:G:C8	1:A2:2310:G:H5”	2.42	0.55
1:A2:2867:C:H42	1:A2:3580:A:N6	2.05	0.55
1:A2:3887:G:C2’	1:A2:3888:C:O5’	2.54	0.55
1:A2:4635:U:O5’	1:A2:4635:U:H6	1.90	0.55
1:A2:4803:C:H2’	1:A2:4804:G:H4’	1.89	0.55
10:AG:51:LEU:HD12	26:AX:42:THR:O	2.07	0.55
15:AM:4:ARG:CZ	21:AS:155:PRO:HB3	2.36	0.55
15:AM:122:ILE:HG21	17:AO:187:LYS:N	2.22	0.55
45:At:90:LEU:O	45:At:93:ILE:HG22	2.06	0.55
47:BA:65:G:O2’	47:BA:66:U:H5’	2.07	0.55
48:BB:818:ARG:N	48:BB:1172:VAL:HG13	2.17	0.55
48:BB:892:ILE:HG22	48:BB:900:LYS:HE2	1.88	0.55
48:BB:932:SER:HA	48:BB:961:LYS:HE2	1.87	0.55
48:BB:1132:GLN:HE22	50:C1:51:U:C4’	2.18	0.55
49:BC:267:G:C2	50:C1:1114:U:P	2.99	0.55
50:C1:26:U:O5’	50:C1:26:U:H6	1.90	0.55
50:C1:307:G:C4’	50:C1:308:G:H5”	2.27	0.55
50:C1:350:C:N4	50:C1:351:G:N2	2.55	0.55
50:C1:691:G:O2’	50:C1:692:G:H5’	2.05	0.55
50:C1:905:C:H2’	50:C1:906:U:C6	2.41	0.55
50:C1:986:G:H5”	77:Ca:19:GLN:CG	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1168:G:C2'	50:C1:1169:G:H5'	2.37	0.55
50:C1:1835:A:N3	50:C1:1835:A:C2'	2.69	0.55
55:CE:195:ILE:HA	55:CE:210:VAL:HG12	1.89	0.55
56:CF:42:LYS:HB2	56:CF:45:TYR:CD1	2.41	0.55
59:CI:69:SER:CB	62:CL:24:LEU:HD11	2.25	0.55
78:Cb:18:LYS:HB3	78:Cb:22:LYS:HB2	1.89	0.55
1:A2:38:A:C8	1:A2:40:G:OP2	2.59	0.55
1:A2:70:A:N1	37:Ai:13:LYS:HE3	2.22	0.55
1:A2:99:A:C3'	1:A2:100:C:C6	2.89	0.55
1:A2:438:C:H2'	1:A2:439:G:H8	1.70	0.55
1:A2:655:G:H2'	1:A2:655:G:N3	2.22	0.55
1:A2:1086:A:H2'	1:A2:1087:C:H4'	1.87	0.55
1:A2:1359:C:C5	14:AL:156:PRO:HA	2.42	0.55
1:A2:1389:C:H2'	1:A2:1390:U:C6	2.42	0.55
1:A2:1596:G:N2	1:A2:2490:A:C8	2.75	0.55
1:A2:2283:A:H2	1:A2:2284:A:O4'	1.89	0.55
1:A2:2549:C:H2'	1:A2:2550:A:H8	1.66	0.55
1:A2:4452:U:H2'	1:A2:4452:U:O2	2.06	0.55
1:A2:4537:U:O2'	1:A2:4923:A:H4'	2.07	0.55
1:A2:4608:A:C5	1:A2:4609:G:N7	2.74	0.55
1:A2:4624:A:H2'	1:A2:4625:A:C8	2.42	0.55
1:A2:4843:U:H2'	1:A2:4844:G:H5'	1.87	0.55
2:A3:118:C:H2'	2:A3:119:C:O4'	2.06	0.55
3:A4:13:A:OP1	3:A4:109:U:H1'	2.07	0.55
20:AR:109:TYR:CD1	20:AR:142:ILE:HD13	2.42	0.55
48:BB:984:SER:HB2	48:BB:989:THR:HG23	1.89	0.55
48:BB:1230:LYS:HA	48:BB:1233:MET:CE	2.37	0.55
50:C1:72:C:H2'	50:C1:73:C:O4'	2.06	0.55
50:C1:136:C:H1'	50:C1:137:U:OP1	2.07	0.55
50:C1:217:A:H4'	50:C1:341:C:H4'	1.88	0.55
50:C1:302:A:H4'	59:CI:73:THR:O	2.06	0.55
50:C1:528:A:OP1	60:CJ:122:SER:HB2	2.06	0.55
50:C1:804:U:H2'	50:C1:805:U:C5	2.40	0.55
50:C1:1539:U:H2'	50:C1:1540:G:H5'	1.89	0.55
52:CB:197:ILE:O	52:CB:201:CYS:HB2	2.07	0.55
53:CC:200:ARG:HA	53:CC:221:ASP:OD2	2.06	0.55
59:CI:101:ILE:HD11	59:CI:198:TYR:CD1	2.42	0.55
1:A2:112:C:C2'	1:A2:113:A:H5'	2.36	0.55
1:A2:347:G:C5'	6:AC:55:SER:HB2	2.36	0.55
1:A2:383:U:H1'	1:A2:390:G:N2	2.22	0.55
1:A2:426:A:H2'	1:A2:427:C:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2012:G:H2'	1:A2:2013:C:C6	2.41	0.55
1:A2:2343:A:H2'	1:A2:2344:A:H5"	1.88	0.55
1:A2:2444:U:H4'	1:A2:2445:U:H5	1.67	0.55
1:A2:2568:A:C6	1:A2:2732:A:C1'	2.90	0.55
1:A2:2654:G:H21	20:AR:117:ARG:HH12	1.54	0.55
1:A2:2707:U:O2'	1:A2:2708:C:H5'	2.07	0.55
1:A2:2862:A:H8	1:A2:2862:A:O5'	1.90	0.55
1:A2:4157:G:C2'	1:A2:4158:G:H5'	2.37	0.55
1:A2:4743:C:C6	1:A2:4743:C:O5'	2.60	0.55
1:A2:4917:C:O2'	1:A2:4918:G:H5'	2.07	0.55
3:A4:95:C:H6	3:A4:95:C:O5'	1.90	0.55
5:AB:113:GLU:OE2	5:AB:167:GLN:HA	2.07	0.55
6:AC:188:ARG:C	6:AC:188:ARG:HD3	2.32	0.55
7:AD:41:LYS:HE2	22:AT:34:TYR:HB2	1.87	0.55
11:AH:93:ARG:O	11:AH:179:ILE:HA	2.07	0.55
28:AZ:14:LEU:CD1	35:Ag:88:ARG:HG3	2.37	0.55
29:Aa:74:ASN:CB	29:Aa:114:LYS:HD3	2.37	0.55
34:Af:106:TYR:HD2	34:Af:107:PRO:HD3	1.63	0.55
45:At:64:ILE:H	45:At:89:THR:HG22	1.72	0.55
47:BA:8:U:C4'	47:BA:8:U:H6	2.20	0.55
48:BB:1116:ARG:NH1	48:BB:1116:ARG:HG2	2.14	0.55
48:BB:1193:LYS:HG3	48:BB:1218:PRO:HB3	1.88	0.55
50:C1:36:U:C2	50:C1:520:A:C2	2.95	0.55
50:C1:67:C:H5	57:CG:162:LEU:C	2.13	0.55
50:C1:408:A:C2'	50:C1:409:C:H4'	2.36	0.55
50:C1:476:A:H3'	50:C1:477:G:H8	1.72	0.55
50:C1:562:U:H6	50:C1:562:U:H3'	1.72	0.55
50:C1:823:U:OP1	50:C1:823:U:H3'	2.07	0.55
50:C1:888:U:C6	50:C1:888:U:H3'	2.42	0.55
50:C1:890:U:O2	50:C1:890:U:C2'	2.55	0.55
50:C1:927:C:H2'	50:C1:928:G:H5'	1.88	0.55
50:C1:1214:A:N6	50:C1:1217:A:C2	2.75	0.55
50:C1:1649:U:H3'	50:C1:1649:U:C6	2.41	0.55
50:C1:1686:G:H5'	50:C1:1687:C:OP2	2.07	0.55
50:C1:1689:C:H2'	50:C1:1690:U:C6	2.42	0.55
52:CB:63:LYS:HE3	52:CB:91:VAL:CB	2.37	0.55
55:CE:49:ARG:HA	55:CE:55:ALA:O	2.07	0.55
60:CJ:87:LEU:HD11	60:CJ:100:LEU:HD11	1.87	0.55
63:CM:71:GLU:HG3	82:Cf:114:ILE:HG12	1.88	0.55
67:CQ:33:LYS:HD3	67:CQ:69:ARG:HD3	1.89	0.55
77:Ca:5:ARG:HD2	77:Ca:8:ASN:HA	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1:C:O2	2:A3:157:U:C2	2.60	0.55
1:A2:256:C:H3'	1:A2:256:C:O2	2.07	0.55
1:A2:973:U:H4'	1:A2:974:C:OP2	2.07	0.55
1:A2:1462:C:H3'	1:A2:1463:G:N7	2.22	0.55
1:A2:1481:G:N2	19:AQ:64:SER:C	2.65	0.55
1:A2:1761:U:H2'	1:A2:1762:C:H6	1.72	0.55
1:A2:2386:U:H5"	1:A2:2387:C:C5	2.36	0.55
1:A2:2395:A:H3'	1:A2:2396:C:H5"	1.88	0.55
1:A2:2401:G:H3'	1:A2:2401:G:H8	1.72	0.55
1:A2:2604:C:N4	1:A2:4609:G:N2	2.55	0.55
1:A2:2866:G:H21	1:A2:4989:A:H8	1.55	0.55
1:A2:3613:U:H2'	1:A2:3614:U:C5'	2.36	0.55
1:A2:3758:C:H5	1:A2:3759:U:N1	2.05	0.55
1:A2:3919:U:O2	1:A2:3920:G:C8	2.59	0.55
1:A2:4027:C:H6	1:A2:4027:C:O5'	1.90	0.55
1:A2:4388:A:H3'	1:A2:4389:C:O4'	2.07	0.55
1:A2:4484:G:H2'	1:A2:4485:C:C6	2.42	0.55
1:A2:4529:U:H1'	18:AP:69:ARG:NH1	2.22	0.55
1:A2:4685:G:H2'	1:A2:4686:A:C8	2.42	0.55
1:A2:4717:U:H6	17:AO:114:LYS:HA	1.72	0.55
1:A2:4829:A:H2'	1:A2:4830:G:N7	2.22	0.55
2:A3:122:G:C3'	2:A3:123:U:H5'	2.37	0.55
13:AJ:13:ARG:O	13:AJ:137:PRO:HD2	2.07	0.55
13:AJ:63:ARG:HH12	43:Ao:103:VAL:HB	1.72	0.55
15:AM:137:LYS:O	15:AM:140:PRO:HD2	2.05	0.55
19:AQ:27:LEU:HD22	45:At:4:HIS:CD2	2.41	0.55
28:AZ:89:ILE:HG12	28:AZ:89:ILE:O	2.05	0.55
33:Ae:85:LEU:CD1	33:Ae:114:ARG:HG3	2.37	0.55
46:Au:2:ASP:C	46:Au:4:GLU:H	2.14	0.55
47:BA:53:G:H2'	47:BA:54:U:C6	2.42	0.55
48:BB:844:ARG:O	48:BB:911:GLY:N	2.40	0.55
48:BB:936:ILE:HD12	48:BB:1052:LEU:HD22	1.89	0.55
48:BB:973:ASP:CG	84:BB:2435:GNP:HN1	2.12	0.55
50:C1:39:A:P	60:CJ:3:VAL:HG13	2.47	0.55
50:C1:215:G:H8	50:C1:215:G:O5'	1.89	0.55
50:C1:428:U:H2'	50:C1:429:C:H6	1.71	0.55
50:C1:581:U:H5"	75:CY:64:PHE:CE1	2.42	0.55
50:C1:740:C:H2'	50:C1:741:C:H6	1.69	0.55
50:C1:970:G:H1'	50:C1:971:G:OP1	2.06	0.55
50:C1:1556:A:C2	50:C1:1557:C:C5	2.95	0.55
50:C1:1672:U:C2'	50:C1:1673:U:H5"	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:CU:82:MET:HE3	71:CU:84:ILE:HD11	1.88	0.55
1:A2:284:G:H21	1:A2:288:U:C4’	2.03	0.54
1:A2:735:A:C4	1:A2:736:G:C8	2.95	0.54
1:A2:904:C:H2’	1:A2:905:C:H6	1.71	0.54
1:A2:1198:G:HO2’	1:A2:1199:G:H5’	1.71	0.54
1:A2:1280:G:H8	1:A2:1280:G:P	2.30	0.54
1:A2:1585:U:H2’	1:A2:1586:C:O4’	2.07	0.54
1:A2:1626:U:H6	1:A2:1626:U:O5’	1.89	0.54
1:A2:1715:A:O2’	1:A2:1716:A:H5’	2.08	0.54
1:A2:1727:U:C5’	1:A2:1727:U:C6	2.90	0.54
1:A2:2310:G:O3’	2:A3:20:A:H5”	2.07	0.54
1:A2:2395:A:H3’	1:A2:2396:C:C5’	2.37	0.54
1:A2:2395:A:C3’	1:A2:2396:C:H5”	2.37	0.54
1:A2:2395:A:C4	1:A2:2396:C:C5	2.95	0.54
1:A2:2398:G:OP1	1:A2:2805:U:H1’	2.07	0.54
1:A2:2745:C:H1’	1:A2:2746:U:P	2.47	0.54
1:A2:3590:A:H3’	1:A2:3591:C:C5	2.42	0.54
1:A2:3914:A:C2’	1:A2:3915:G:H8	2.20	0.54
1:A2:4068:C:C5’	52:CB:224:GLU:OE1	2.53	0.54
1:A2:4980:C:H6	59:CI:168:GLN:OE1	1.88	0.54
2:A3:129:C:C2	2:A3:130:C:H5	2.25	0.54
3:A4:7:G:OP1	7:AD:28:THR:HG23	2.06	0.54
6:AC:139:SER:CA	45:At:14:SER:HA	2.36	0.54
8:AE:162:VAL:HG11	8:AE:175:VAL:CG1	2.37	0.54
10:AG:156:VAL:HG11	10:AG:190:LEU:HD21	1.90	0.54
30:Ab:28:ARG:C	30:Ab:30:GLU:H	2.15	0.54
47:BA:32:U:H5’	67:CQ:146:ARG:CA	2.29	0.54
48:BB:881:GLN:HG3	48:BB:1121:PRO:HB2	1.88	0.54
48:BB:1008:ILE:CG2	48:BB:1034:LEU:HD13	2.37	0.54
48:BB:1226:PRO:HA	48:BB:1253:VAL:HG22	1.89	0.54
48:BB:1307:LYS:HE3	48:BB:1395:ILE:CG2	2.23	0.54
48:BB:1310:ILE:CG1	48:BB:1324:MET:SD	2.94	0.54
48:BB:1371:VAL:HG23	48:BB:1371:VAL:O	2.07	0.54
49:BC:351:A:N1	49:BC:352:A:C8	2.74	0.54
50:C1:10:G:H1’	53:CC:115:GLN:OE1	2.08	0.54
50:C1:170:A:C3’	50:C1:171:A:C8	2.90	0.54
50:C1:235:A:N6	50:C1:894:G:C2	2.75	0.54
50:C1:457:C:O4’	50:C1:1801:A:H4’	2.06	0.54
50:C1:482:G:H22	50:C1:485:A:H2	1.53	0.54
50:C1:611:G:N2	50:C1:633:C:H1’	2.22	0.54
50:C1:746:C:H1’	50:C1:747:U:C2	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:808:A:H5”	55:CE:188:ASN:HD21	1.72	0.54
50:C1:1095:C:H5”	73:CW:22:LYS:HZ3	1.70	0.54
50:C1:1533:A:H2’	50:C1:1533:A:N3	2.22	0.54
56:CF:162:ALA:HB2	56:CF:172:CYS:HB2	1.89	0.54
59:CI:66:SER:HA	59:CI:73:THR:HA	1.89	0.54
59:CI:122:GLY:O	59:CI:124:LYS:N	2.40	0.54
60:CJ:113:GLN:O	60:CJ:117:LEU:HG	2.06	0.54
68:CR:63:ARG:HA	83:Cg:280:LYS:HE2	1.88	0.54
69:CS:38:ARG:O	69:CS:42:HIS:HD2	1.90	0.54
71:CU:32:LEU:HD23	71:CU:85:HIS:HB2	1.89	0.54
83:Cg:202:PRO:HG2	83:Cg:243:PRO:HA	1.88	0.54
1:A2:42:A:N6	1:A2:4339:A:C2	2.75	0.54
1:A2:99:A:C8	1:A2:100:C:C5	2.95	0.54
1:A2:148:G:H22	10:AG:163:PRO:HD2	1.72	0.54
1:A2:240:A:H8	1:A2:240:A:O5’	1.91	0.54
1:A2:400:G:N2	1:A2:2305:U:C5’	2.61	0.54
1:A2:423:U:H3’	1:A2:423:U:H6	1.72	0.54
1:A2:441:G:H4’	1:A2:442:C:OP1	2.06	0.54
1:A2:972:C:H4’	9:AF:51:TYR:CE2	2.42	0.54
1:A2:1089:C:H2’	1:A2:1090:C:C6	2.43	0.54
1:A2:1204:G:H5”	1:A2:1211:C:C4	2.42	0.54
1:A2:1220:G:OP2	1:A2:1220:G:O4’	2.25	0.54
1:A2:1431:G:H2’	1:A2:1432:A:H8	1.73	0.54
1:A2:1587:G:H5’	1:A2:3797:A:O4’	2.07	0.54
1:A2:2380:A:H3’	1:A2:2381:A:C8	2.42	0.54
1:A2:2567:G:OP2	1:A2:2567:G:H2’	2.07	0.54
1:A2:2627:G:H5”	1:A2:2627:G:C8	2.41	0.54
1:A2:2629:G:H2’	1:A2:2630:C:H4’	1.89	0.54
1:A2:2760:A:H3’	1:A2:2761:C:C5	2.42	0.54
1:A2:3592:C:C6	1:A2:3592:C:O5’	2.61	0.54
1:A2:3752:A:H2	1:A2:3758:C:H41	1.55	0.54
1:A2:4085:U:H3’	35:Ag:100:GLN:HE22	1.72	0.54
1:A2:4089:G:N7	35:Ag:97:ILE:HD12	2.22	0.54
1:A2:4209:G:H2’	1:A2:4210:G:H8	1.73	0.54
1:A2:4269:G:H8	1:A2:4269:G:C5’	2.20	0.54
1:A2:4349:C:H2’	1:A2:4350:A:H8	1.72	0.54
1:A2:4481:U:H2’	1:A2:4484:G:O6	2.07	0.54
1:A2:4506:A:O5’	1:A2:4506:A:H8	1.90	0.54
1:A2:4704:G:H22	1:A2:4910:A:H2	1.53	0.54
1:A2:4738:U:H2’	1:A2:4739:G:H5’	1.88	0.54
1:A2:4863:G:H2’	1:A2:4864:A:C4’	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4874:G:C4	1:A2:4875:C:C5	2.95	0.54
1:A2:5002:C:H5"	1:A2:5002:C:H6	1.71	0.54
5:AB:37:PRO:O	5:AB:188:GLY:HA3	2.06	0.54
7:AD:22:ARG:HD2	7:AD:27:LYS:HB2	1.88	0.54
9:AF:229:GLU:OE1	21:AS:122:HIS:HE1	1.90	0.54
12:AI:76:MET:HE1	12:AI:138:ILE:HG21	1.89	0.54
14:AL:182:LEU:HD21	29:Aa:146:LEU:HD13	1.89	0.54
19:AQ:158:THR:HB	19:AQ:159:PRO:HD3	1.89	0.54
28:AZ:48:ARG:NH1	28:AZ:69:LYS:HB2	2.22	0.54
43:Ao:75:PRO:HA	43:Ao:78:ARG:NE	2.22	0.54
46:Au:26:ASP:OD2	46:Au:201:LYS:HE3	2.06	0.54
48:BB:831:ARG:NH2	48:BB:1094:GLY:C	2.65	0.54
48:BB:899:ILE:O	48:BB:1050:TYR:CE1	2.60	0.54
48:BB:952:ILE:O	48:BB:955:ILE:HG12	2.07	0.54
48:BB:1167:GLU:HB2	48:BB:1169:GLU:OE2	2.07	0.54
49:BC:100:G:H5'	76:CZ:114:LYS:HZ3	1.71	0.54
49:BC:345:A:N6	49:BC:346:G:O6	2.39	0.54
50:C1:526:A:N9	60:CJ:128:VAL:HG13	2.23	0.54
50:C1:664:A:H61	50:C1:1163:C:H42	1.55	0.54
50:C1:689:U:H5'	50:C1:690:G:OP2	2.08	0.54
50:C1:822:U:H5'	50:C1:822:U:C6	2.33	0.54
50:C1:915:G:C2'	50:C1:916:A:H5'	2.36	0.54
50:C1:1033:G:H5"	50:C1:1034:A:OP1	2.08	0.54
50:C1:1050:A:OP1	50:C1:1846:G:N2	2.40	0.54
50:C1:1387:G:H8	50:C1:1387:G:O5'	1.89	0.54
50:C1:1403:C:C5	50:C1:1404:U:N1	2.75	0.54
50:C1:1422:G:N3	50:C1:1422:G:H2'	2.21	0.54
50:C1:1454:A:H5'	68:CR:5:ARG:NH2	2.23	0.54
50:C1:1746:U:H2'	50:C1:1747:C:H6	1.70	0.54
50:C1:1866:A:C6	77:Ca:84:VAL:HG22	2.42	0.54
73:CW:37:PHE:CD1	73:CW:103:VAL:HG21	2.43	0.54
1:A2:163:C:H2'	1:A2:164:C:C6	2.41	0.54
1:A2:198:C:O2'	1:A2:199:C:H5	1.91	0.54
1:A2:707:C:C2'	1:A2:708:G:H5'	2.38	0.54
1:A2:957:G:O2'	1:A2:1217:C:H4'	2.08	0.54
1:A2:1535:C:H2'	1:A2:1536:C:C6	2.43	0.54
1:A2:2639:G:H1	1:A2:2649:C:H42	1.55	0.54
1:A2:2690:C:H2'	1:A2:2691:G:C8	2.42	0.54
1:A2:2789:A:H3'	1:A2:2790:A:C8	2.42	0.54
1:A2:2842:U:H2'	1:A2:2843:C:C6	2.42	0.54
1:A2:3627:C:H5"	4:AA:242:ARG:O	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3704:G:H8	1:A2:3704:G:O5’	1.90	0.54
1:A2:4223:C:H2’	1:A2:4224:G:O4’	2.08	0.54
1:A2:4439:A:C2’	1:A2:4440:A:H5’	2.37	0.54
1:A2:4579:U:H2’	1:A2:4580:U:C6	2.42	0.54
1:A2:4851:G:O2’	1:A2:4852:G:H5’	2.06	0.54
3:A4:107:G:H5”	3:A4:108:G:OP2	2.07	0.54
6:AC:161:TYR:HE2	6:AC:170:LEU:HD22	1.72	0.54
7:AD:232:THR:HB	7:AD:233:PRO:CD	2.38	0.54
9:AF:119:ASN:HA	9:AF:211:PHE:O	2.08	0.54
11:AH:12:ILE:O	11:AH:53:LYS:HA	2.07	0.54
27:AY:123:ALA:HA	27:AY:126:ARG:CB	2.36	0.54
34:Af:16:ARG:HB3	34:Af:21:GLN:HG2	1.89	0.54
36:Ah:14:LYS:HA	36:Ah:17:LEU:HD12	1.89	0.54
47:BA:30:G:C2’	47:BA:31:A:H5’	2.37	0.54
47:BA:70:G:N7	48:BB:1319:ARG:NH2	2.55	0.54
48:BB:1301:ILE:HG21	48:BB:1403:GLN:HE21	0.43	0.54
50:C1:124:U:C6	50:C1:124:U:C3’	2.84	0.54
50:C1:448:A:N7	59:CI:26:LYS:CA	2.70	0.54
50:C1:525:A:C8	50:C1:525:A:C3’	2.90	0.54
50:C1:811:A:H1’	50:C1:812:A:C8	2.42	0.54
50:C1:1277:C:H3’	50:C1:1278:A:C8	2.42	0.54
50:C1:1280:G:C2	50:C1:1281:G:C5	2.95	0.54
50:C1:1288:U:P	50:C1:1311:C:N3	2.81	0.54
50:C1:1332:A:H1’	54:CD:141:LYS:NZ	2.23	0.54
50:C1:1415:C:C2’	50:C1:1416:C:H5’	2.37	0.54
50:C1:1534:C:H5’	50:C1:1536:G:C1’	2.37	0.54
50:C1:1644:C:H6	50:C1:1644:C:O5’	1.90	0.54
50:C1:1669:G:H5’	67:CQ:130:LYS:HB3	1.88	0.54
54:CD:12:VAL:HG13	80:Cd:36:LEU:HD11	1.89	0.54
56:CF:51:HIS:CD2	56:CF:86:LYS:HD3	2.42	0.54
57:CG:23:LYS:HD3	57:CG:41:LEU:HD23	1.90	0.54
58:CH:148:LEU:HA	73:CW:42:MET:SD	2.47	0.54
73:CW:36:ARG:CG	73:CW:110:ILE:HD12	2.37	0.54
73:CW:76:SER:HB3	73:CW:77:PRO:HD3	1.89	0.54
1:A2:381:C:H6	1:A2:381:C:OP1	1.89	0.54
1:A2:458:U:H5”	1:A2:459:U:OP1	2.08	0.54
1:A2:978:G:H1	1:A2:1051:C:H42	1.56	0.54
1:A2:1218:A:N6	6:AC:326:LEU:CB	2.70	0.54
1:A2:1282:U:C2’	1:A2:1284:C:H6	2.20	0.54
1:A2:1332:C:O2	1:A2:1336:U:H5’	2.06	0.54
1:A2:1386:G:N2	1:A2:1387:C:H41	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1394:C:H2'	1:A2:1395:G:H8	1.72	0.54
1:A2:1567:U:H2'	1:A2:1568:C:H6	1.69	0.54
1:A2:2379:G:H1'	35:Ag:7:TYR:OH	2.08	0.54
1:A2:2635:G:C8	1:A2:2636:A:H2	2.25	0.54
1:A2:2652:G:H8	1:A2:2652:G:OP2	1.90	0.54
1:A2:2672:A:N3	1:A2:2672:A:H5"	2.22	0.54
1:A2:2743:A:H2'	1:A2:2744:U:N3	2.23	0.54
1:A2:3918:A:N1	1:A2:3919:U:C4	2.75	0.54
1:A2:4044:G:N2	1:A2:4130:A:H61	2.05	0.54
1:A2:4168:U:H5'	1:A2:4294:U:O2	2.08	0.54
1:A2:4675:C:H3'	1:A2:4676:C:H6	1.72	0.54
1:A2:4709:G:H8	1:A2:4709:G:O5'	1.91	0.54
1:A2:4835:C:H41	15:AM:116:LYS:HD3	1.72	0.54
1:A2:5009:C:O2	1:A2:5009:C:C2'	2.55	0.54
2:A3:67:U:C4'	38:Aj:83:THR:HG23	2.37	0.54
4:AA:129:ALA:HB3	4:AA:132:ASN:ND2	2.22	0.54
27:AY:123:ALA:H	27:AY:126:ARG:HB2	1.72	0.54
28:AZ:6:LYS:HB3	28:AZ:7:PRO:HD2	1.88	0.54
36:Ah:70:ARG:HG3	36:Ah:83:LEU:HD22	1.90	0.54
45:At:62:VAL:O	45:At:64:ILE:HG13	2.07	0.54
48:BB:1175:ASP:O	48:BB:1178:ILE:CG1	2.55	0.54
48:BB:1181:LEU:CD1	48:BB:1185:LEU:CD1	2.86	0.54
48:BB:1239:LEU:HA	48:BB:1246:ALA:CB	2.31	0.54
49:BC:335:G:O6	79:Cc:67:ARG:CA	2.54	0.54
50:C1:460:A:H2	50:C1:469:A:H61	1.56	0.54
50:C1:569:A:C6	50:C1:570:C:C4	2.95	0.54
50:C1:799:U:C6	50:C1:800:U:C2	2.96	0.54
50:C1:1068:G:H2'	50:C1:1069:U:C5	2.43	0.54
50:C1:1137:U:OP2	50:C1:1137:U:H6	1.90	0.54
50:C1:1165:G:H4'	50:C1:1166:G:C5'	2.38	0.54
50:C1:1214:A:C6	50:C1:1217:A:C4	2.94	0.54
50:C1:1425:G:H2'	50:C1:1426:U:C1'	2.38	0.54
50:C1:1552:G:C8	50:C1:1578:U:O4	2.60	0.54
51:CA:89:LYS:HB2	51:CA:202:TYR:CE2	2.42	0.54
77:Ca:5:ARG:CG	77:Ca:8:ASN:HA	2.36	0.54
1:A2:24:G:N1	1:A2:333:G:N7	2.55	0.54
1:A2:125:C:O5'	1:A2:125:C:H6	1.90	0.54
1:A2:210:G:C5	1:A2:211:G:C8	2.96	0.54
1:A2:284:G:H4'	1:A2:285:G:N9	2.20	0.54
1:A2:344:A:C2	1:A2:351:A:C8	2.96	0.54
1:A2:676:G:HO2'	1:A2:677:C:H5	1.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:961:C:C2’	1:A2:962:G:C8	2.90	0.54
1:A2:1142:G:H8	1:A2:1142:G:O5’	1.90	0.54
1:A2:1160:C:H3’	1:A2:1160:C:H6	1.70	0.54
1:A2:1238:G:H2’	1:A2:1239:G:C8	2.42	0.54
1:A2:1276:G:H5”	1:A2:1277:U:OP2	2.08	0.54
1:A2:1553:G:H8	1:A2:1553:G:O5’	1.90	0.54
1:A2:2843:C:C6	1:A2:2843:C:H3’	2.43	0.54
1:A2:3684:U:C2’	1:A2:3685:C:H5’	2.37	0.54
1:A2:4098:G:H1	1:A2:4113:C:N4	1.96	0.54
1:A2:4232:G:N2	1:A2:4296:A:H2	2.05	0.54
1:A2:4529:U:O4	1:A2:4530:G:H8	1.91	0.54
1:A2:4546:G:H2’	1:A2:4547:G:C8	2.43	0.54
1:A2:4583:G:H2’	1:A2:4584:A:O4’	2.07	0.54
1:A2:4903:C:C3’	1:A2:4904:G:H5’	2.38	0.54
1:A2:4942:C:O5’	1:A2:4942:C:H6	1.91	0.54
2:A3:12:G:C2’	2:A3:13:G:H5’	2.37	0.54
24:AV:105:ILE:HG23	24:AV:113:LYS:HB3	1.88	0.54
33:Ae:19:LYS:O	33:Ae:20:PHE:CD2	2.61	0.54
46:Au:30:ASN:ND2	46:Au:30:ASN:N	2.56	0.54
46:Au:108:LYS:O	46:Au:108:LYS:HG3	2.07	0.54
48:BB:860:LYS:HB2	84:BB:2435:GNP:O2A	2.08	0.54
48:BB:899:ILE:C	48:BB:1050:TYR:CE1	2.85	0.54
48:BB:1244:GLN:HG3	48:BB:1245:TYR:CD1	2.42	0.54
49:BC:266:G:H2’	50:C1:1115:U:C3’	2.35	0.54
50:C1:4:C:H2’	50:C1:5:U:H6	1.71	0.54
50:C1:169:U:H1’	57:CG:133:LEU:CD1	2.36	0.54
50:C1:307:G:O6	50:C1:1788:A:H4’	2.07	0.54
50:C1:345:U:C6	50:C1:345:U:H3’	2.43	0.54
50:C1:684:G:C6	50:C1:920:A:C8	2.95	0.54
50:C1:743:U:O2	50:C1:743:U:H5”	2.08	0.54
50:C1:819:G:H2’	50:C1:820:U:C6	2.42	0.54
50:C1:877:C:H2’	50:C1:878:G:C8	2.42	0.54
50:C1:1016:U:C6	64:CN:14:SER:OG	2.60	0.54
50:C1:1035:A:OP2	50:C1:1035:A:C8	2.60	0.54
50:C1:1284:A:C8	50:C1:1284:A:P	3.01	0.54
50:C1:1598:G:H4’	50:C1:1600:G:N7	2.23	0.54
56:CF:60:ARG:HH11	56:CF:60:ARG:HG2	1.72	0.54
60:CJ:37:LEU:HD23	60:CJ:127:ARG:NH2	2.23	0.54
65:CO:129:ILE:HD13	77:Ca:65:PRO:HG3	1.88	0.54
71:CU:22:ILE:HD11	71:CU:91:LEU:HD11	1.88	0.54
75:CY:87:PRO:HD2	75:CY:90:ARG:HD2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:24:G:C2	1:A2:333:G:C8	2.95	0.54
1:A2:65:A:C2	1:A2:76:A:O3'	2.59	0.54
1:A2:270:A:O4'	1:A2:272:U:H1'	2.08	0.54
1:A2:372:U:H2'	1:A2:373:G:O4'	2.07	0.54
1:A2:441:G:C8	1:A2:441:G:C5'	2.84	0.54
1:A2:451:C:H42	1:A2:684:A:H61	1.53	0.54
1:A2:929:U:C4	1:A2:930:C:C4	2.95	0.54
1:A2:1544:A:C2	1:A2:1545:C:H1'	2.43	0.54
1:A2:2337:A:N1	1:A2:3829:A:H5"	2.22	0.54
1:A2:2469:C:C2'	1:A2:2470:G:C8	2.89	0.54
1:A2:2531:U:C4'	28:AZ:105:ALA:HB1	2.38	0.54
1:A2:2624:A:N1	1:A2:2664:U:O2	2.41	0.54
1:A2:2875:G:H2'	1:A2:2876:C:H6	1.72	0.54
1:A2:3648:U:C5	4:AA:23:ARG:HB2	2.43	0.54
1:A2:3759:U:C4	1:A2:3761:G:H1'	2.43	0.54
1:A2:4648:C:C6	1:A2:4648:C:O5'	2.61	0.54
1:A2:4689:C:H3'	1:A2:4690:G:C5	2.42	0.54
1:A2:4812:A:H2'	1:A2:4813:C:C1'	2.38	0.54
1:A2:5021:U:H2'	1:A2:5022:U:H6	1.72	0.54
3:A4:87:G:H5"	21:AS:87:ARG:NE	2.22	0.54
8:AE:174:LEU:HD12	8:AE:212:LEU:HD23	1.90	0.54
9:AF:223:LYS:HB2	9:AF:232:ASP:H	1.71	0.54
15:AM:69:HIS:CE1	15:AM:72:TYR:HB2	2.42	0.54
23:AU:26:THR:OG1	23:AU:68:SER:HB2	2.07	0.54
27:AY:112:ASP:O	27:AY:116:LYS:HB2	2.07	0.54
46:Au:188:LEU:O	46:Au:189:GLU:HG2	2.07	0.54
47:BA:53:G:H2'	47:BA:54:U:H6	1.73	0.54
47:BA:76:A:C5'	48:BB:1373:VAL:H	1.83	0.54
48:BB:1295:GLN:HG2	48:BB:1304:PHE:HZ	1.72	0.54
48:BB:1422:GLN:HA	48:BB:1425:VAL:HG12	1.89	0.54
49:BC:265:U:H1'	50:C1:1116:C:P	2.47	0.54
50:C1:35:C:H2'	50:C1:36:U:H6	1.72	0.54
50:C1:78:C:N3	57:CG:173:ALA:HB3	2.22	0.54
50:C1:148:U:H6	50:C1:148:U:C5'	2.21	0.54
50:C1:211:G:C4	50:C1:212:C:C5	2.96	0.54
50:C1:525:A:O2'	50:C1:526:A:C8	2.61	0.54
50:C1:657:U:H3'	50:C1:657:U:C6	2.43	0.54
50:C1:798:G:H1'	50:C1:867:G:N2	2.20	0.54
50:C1:919:A:N1	64:CN:64:ARG:HD3	2.23	0.54
50:C1:952:G:H1'	65:CO:52:THR:CB	2.36	0.54
50:C1:992:A:N6	77:Ca:12:LYS:CA	2.68	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1286:G:N2	50:C1:1312:G:C6	2.76	0.54
50:C1:1310:U:H4'	82:Cf:142:GLY:CA	2.34	0.54
50:C1:1405:A:H3'	50:C1:1406:G:H5"	1.87	0.54
50:C1:1494:U:H1'	50:C1:1495:G:P	2.47	0.54
50:C1:1579:A:N6	71:CU:88:LEU:HD22	2.22	0.54
51:CA:5:LEU:O	51:CA:6:ASP:HB2	2.07	0.54
51:CA:6:ASP:HB3	72:CV:42:VAL:CG1	2.27	0.54
52:CB:81:PHE:O	52:CB:82:ARG:HB2	2.07	0.54
58:CH:135:PHE:HB3	58:CH:136:PRO:HD3	1.89	0.54
1:A2:99:A:H3'	1:A2:100:C:H6	1.64	0.54
1:A2:228:U:H4'	27:AY:100:HIS:CD2	2.43	0.54
1:A2:264:U:H2'	1:A2:265:C:H6	1.71	0.54
1:A2:297:A:H2	37:Ai:82:ARG:NH1	2.05	0.54
1:A2:699:A:H4'	8:AE:138:ARG:HD2	1.90	0.54
1:A2:921:U:H2'	1:A2:922:C:C6	2.42	0.54
1:A2:946:C:O2	1:A2:946:C:H2'	2.07	0.54
1:A2:966:U:H3'	1:A2:967:C:H5'	1.90	0.54
1:A2:1221:C:C6	1:A2:1221:C:C3'	2.91	0.54
1:A2:1325:A:H8	1:A2:1325:A:O5'	1.90	0.54
1:A2:1328:U:H5"	19:AQ:15:ARG:HH22	1.72	0.54
1:A2:1760:U:H2'	1:A2:1761:U:H5'	1.88	0.54
1:A2:2478:C:O5'	1:A2:2478:C:C6	2.60	0.54
1:A2:2650:G:N7	31:Ac:89:TYR:CD1	2.75	0.54
1:A2:2700:U:H2'	1:A2:2701:G:C8	2.43	0.54
1:A2:3907:G:C1'	1:A2:3908:G:OP2	2.55	0.54
1:A2:4005:C:O2'	1:A2:4006:C:H5'	2.07	0.54
1:A2:4090:C:H3'	1:A2:4090:C:C6	2.38	0.54
1:A2:4332:U:H4'	43:Ao:56:PHE:CZ	2.43	0.54
4:AA:97:ASN:HB2	4:AA:100:ASN:ND2	2.22	0.54
15:AM:122:ILE:HG21	17:AO:186:GLU:C	2.33	0.54
22:AT:68:THR:HG23	22:AT:69:GLN:N	2.23	0.54
48:BB:861:ILE:HG13	48:BB:862:LEU:N	2.23	0.54
50:C1:369:C:C2'	50:C1:370:G:H5"	2.38	0.54
50:C1:572:U:C2'	50:C1:573:U:C4	2.85	0.54
50:C1:798:G:H5'	50:C1:798:G:N3	2.22	0.54
50:C1:798:G:N1	50:C1:799:U:C4	2.75	0.54
50:C1:847:A:N3	50:C1:847:A:H2'	2.22	0.54
50:C1:902:G:H2'	50:C1:903:A:C8	2.41	0.54
50:C1:1170:A:O3'	50:C1:1171:G:H4'	2.08	0.54
50:C1:1419:C:H2'	50:C1:1420:G:C8	2.43	0.54
50:C1:1654:G:H4'	70:CT:82:ARG:NH2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:CA:110:ASN:OD1	51:CA:113:GLN:HG2	2.07	0.54
51:CA:177:MET:HG3	51:CA:180:ARG:HH12	1.72	0.54
54:CD:98:ALA:CA	54:CD:188:ILE:HD12	2.38	0.54
54:CD:99:ILE:HG12	54:CD:171:ALA:HB2	1.89	0.54
69:CS:81:ASP:HB2	69:CS:95:TYR:CD1	2.43	0.54
73:CW:86:LEU:HD22	73:CW:113:HIS:CE1	2.43	0.54
83:Cg:89:LEU:HD23	83:Cg:98:THR:HB	1.89	0.54
83:Cg:173:LEU:HD23	83:Cg:189:ILE:HG23	1.89	0.54
1:A2:15:A:H2	2:A3:143:G:C2	2.25	0.54
1:A2:71:C:H5"	1:A2:72:C:H5	1.73	0.54
1:A2:160:A:H2'	1:A2:161:G:C8	2.42	0.54
1:A2:166:G:H21	1:A2:167:C:H1'	1.73	0.54
1:A2:171:C:H2'	1:A2:172:C:C6	2.43	0.54
1:A2:425:A:C8	1:A2:425:A:C3'	2.90	0.54
1:A2:475:U:H6	1:A2:475:U:H3'	1.72	0.54
1:A2:638:G:H2'	1:A2:639:G:H8	1.73	0.54
1:A2:690:U:H3'	1:A2:691:G:H5"	1.89	0.54
1:A2:716:U:H4'	9:AF:69:ILE:HD12	1.89	0.54
1:A2:1045:G:H2'	1:A2:1046:G:C8	2.43	0.54
1:A2:1141:G:H8	1:A2:1141:G:O5'	1.90	0.54
1:A2:1217:C:C4'	1:A2:1218:A:OP1	2.55	0.54
1:A2:1282:U:H3'	1:A2:1284:C:H6	1.73	0.54
1:A2:1622:A:H2'	1:A2:1623:C:H5'	1.88	0.54
1:A2:1872:C:H2'	1:A2:1873:G:C5'	2.37	0.54
1:A2:1943:G:C4'	1:A2:4655:C:H4'	2.37	0.54
1:A2:2310:G:C8	1:A2:2310:G:P	2.99	0.54
1:A2:2383:G:O2'	1:A2:2768:C:H5"	2.08	0.54
1:A2:2584:C:H5"	20:AR:96:MET:SD	2.47	0.54
1:A2:3884:U:H2'	1:A2:3885:G:O4'	2.08	0.54
1:A2:4007:G:H2'	1:A2:4008:C:C6	2.43	0.54
1:A2:4029:G:C2	1:A2:4030:A:C5	2.96	0.54
1:A2:4218:C:O5'	1:A2:4218:C:H6	1.90	0.54
1:A2:4272:U:O5'	1:A2:4272:U:H6	1.90	0.54
1:A2:4379:U:O2	1:A2:4379:U:C2'	2.55	0.54
1:A2:4484:G:H2'	1:A2:4485:C:H5	1.69	0.54
1:A2:4507:C:H6	1:A2:4507:C:H5"	1.72	0.54
1:A2:4544:A:C2	1:A2:4680:C:OP2	2.61	0.54
3:A4:11:A:OP2	7:AD:18:VAL:HG22	2.06	0.54
3:A4:54:A:H3'	3:A4:54:A:OP2	2.07	0.54
3:A4:68:C:O2	3:A4:68:C:C2'	2.56	0.54
7:AD:195:HIS:O	7:AD:199:ILE:HG12	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AE:205:ASN:HB2	8:AE:256:GLN:CB	2.38	0.54
14:AL:135:LYS:HE3	14:AL:135:LYS:N	2.23	0.54
20:AR:134:ASN:O	20:AR:137:ILE:CG1	2.55	0.54
30:Ab:20:GLY:O	30:Ab:21:ILE:HB	2.07	0.54
38:Aj:64:MET:HB3	38:Aj:67:LEU:HB3	1.90	0.54
47:BA:69:G:OP1	48:BB:1383:PRO:CB	2.56	0.54
48:BB:838:VAL:O	48:BB:1061:SER:O	2.26	0.54
50:C1:475:C:H6	50:C1:475:C:C5'	2.07	0.54
50:C1:550:C:O2'	81:Ce:43:VAL:HG13	2.08	0.54
50:C1:589:G:C1'	50:C1:590:A:OP1	2.54	0.54
50:C1:674:C:H2'	50:C1:675:U:C6	2.43	0.54
50:C1:886:A:O2'	50:C1:887:U:H5'	2.08	0.54
50:C1:1440:C:H2'	50:C1:1441:U:H5	1.69	0.54
50:C1:1490:G:N3	50:C1:1490:G:H2'	2.22	0.54
50:C1:1492:U:H4'	71:CU:70:CYS:SG	2.48	0.54
51:CA:81:ASN:HA	51:CA:84:GLN:HB2	1.88	0.54
1:A2:15:A:H3'	1:A2:15:A:P	2.48	0.54
1:A2:132:G:H3'	1:A2:133:C:O2	2.08	0.54
1:A2:372:U:H6	1:A2:372:U:H3'	1.73	0.54
1:A2:1209:C:C2'	1:A2:1209:C:O2	2.55	0.54
1:A2:1313:A:H5'	1:A2:1314:A:OP2	2.08	0.54
1:A2:1390:U:H6	1:A2:1390:U:C5'	2.19	0.54
1:A2:1555:G:N2	1:A2:1557:U:H1'	2.21	0.54
1:A2:1652:U:H4'	1:A2:4262:U:O2	2.08	0.54
1:A2:1800:G:O5'	1:A2:1800:G:C8	2.61	0.54
1:A2:2014:C:H2'	1:A2:2015:C:H5'	1.88	0.54
1:A2:2384:G:C8	40:Al:13:LEU:HD21	2.43	0.54
1:A2:2448:G:C1'	10:AG:58:PRO:HB3	2.37	0.54
1:A2:2455:C:OP2	1:A2:2456:G:H5"	2.08	0.54
1:A2:2607:U:H4'	1:A2:2608:U:OP2	2.06	0.54
1:A2:2692:G:H3'	1:A2:2693:C:H5	1.73	0.54
1:A2:2823:G:H2'	1:A2:2824:G:H5'	1.90	0.54
1:A2:3834:A:H2'	1:A2:3835:C:H6	1.65	0.54
1:A2:4032:C:C3'	1:A2:4033:G:C5'	2.85	0.54
1:A2:4179:A:H2'	1:A2:4179:A:N3	2.23	0.54
1:A2:4551:U:C6	1:A2:4551:U:C5'	2.91	0.54
2:A3:58:G:H5"	2:A3:97:A:C2	2.43	0.54
5:AB:53:MET:HE2	5:AB:77:THR:HG22	1.89	0.54
7:AD:232:THR:HB	7:AD:233:PRO:HD2	1.89	0.54
8:AE:162:VAL:HG13	8:AE:163:VAL:N	2.23	0.54
13:AJ:85:LYS:HE2	13:AJ:115:LEU:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AS:80:ILE:HG22	21:AS:82:LEU:CD2	2.37	0.54
21:AS:80:ILE:HG22	21:AS:82:LEU:HD21	1.90	0.54
29:Aa:80:THR:HA	29:Aa:87:ARG:NH2	2.22	0.54
30:Ab:39:PHE:HA	30:Ab:42:ASN:HD21	1.71	0.54
39:Ak:16:ARG:NH1	39:Ak:61:PRO:HG3	2.22	0.54
43:Ao:14:LYS:HG2	43:Ao:77:CYS:SG	2.47	0.54
43:Ao:105:GLN:CB	47:BA:55:U:O2	2.55	0.54
47:BA:31:A:O2'	50:C1:1641:A:O2'	2.22	0.54
48:BB:847:VAL:HG21	48:BB:933:LEU:O	2.08	0.54
48:BB:1166:LYS:CE	48:BB:1172:VAL:HG13	2.37	0.54
48:BB:1186:ASN:O	48:BB:1187:ALA:HB2	2.08	0.54
48:BB:1189:LYS:O	48:BB:1190:LEU:HB2	2.07	0.54
48:BB:1301:ILE:CD1	48:BB:1404:SER:CA	2.86	0.54
48:BB:1405:ILE:CA	48:BB:1421:TRP:CZ2	2.91	0.54
50:C1:28:U:H4'	74:CX:124:LYS:NZ	2.23	0.54
50:C1:37:C:H3'	50:C1:38:A:H5"	1.90	0.54
50:C1:46:A:H4'	50:C1:47:G:H5'	1.89	0.54
50:C1:133:C:C4	50:C1:134:C:H1'	2.43	0.54
50:C1:223:C:H2'	50:C1:224:A:C8	2.42	0.54
50:C1:386:C:P	62:CL:136:LYS:HD3	2.48	0.54
50:C1:571:U:H1'	75:CY:60:PHE:N	2.23	0.54
50:C1:618:C:O4'	50:C1:632:C:H4'	2.08	0.54
50:C1:684:G:C8	50:C1:920:A:C6	2.96	0.54
50:C1:1178:U:H1'	50:C1:1184:G:N2	2.22	0.54
50:C1:1406:G:O4'	50:C1:1407:U:H5'	2.08	0.54
50:C1:1602:U:C2'	50:C1:1603:G:H2'	2.34	0.54
50:C1:1662:U:H2'	50:C1:1663:A:H5'	1.90	0.54
51:CA:40:LYS:HD2	68:CR:104:GLU:HB2	1.90	0.54
62:CL:82:MET:HE3	62:CL:85:THR:HG21	1.89	0.54
64:CN:61:ALA:HB2	78:Cb:32:PHE:HZ	1.72	0.54
1:A2:27:C:O2'	1:A2:60:A:H1'	2.08	0.54
1:A2:79:C:H4'	1:A2:329:A:H4'	1.90	0.54
1:A2:101:A:C8	1:A2:102:G:N7	2.76	0.54
1:A2:147:U:C5	10:AG:196:ARG:NE	2.76	0.54
1:A2:976:C:C4'	1:A2:1222:G:H4'	2.33	0.54
1:A2:977:G:C2'	1:A2:978:G:O4'	2.50	0.54
1:A2:1197:G:C3'	1:A2:1198:G:H8	2.20	0.54
1:A2:1377:A:H3'	29:Aa:113:GLY:O	2.08	0.54
1:A2:1437:C:C3'	1:A2:1438:A:H8	2.21	0.54
1:A2:2006:C:H5'	1:A2:2006:C:C6	2.42	0.54
1:A2:2006:C:H4'	1:A2:2007:A:OP1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2062:C:O2'	1:A2:2063:G:H5'	2.08	0.54
1:A2:2378:A:H2'	1:A2:2379:G:H5"	1.90	0.54
1:A2:2426:A:H3'	1:A2:2427:G:O4'	2.08	0.54
1:A2:2828:G:C2	1:A2:2829:U:H1'	2.42	0.54
1:A2:2838:C:O5'	1:A2:2838:C:H6	1.91	0.54
1:A2:3600:U:O4'	1:A2:3774:U:H5"	2.08	0.54
1:A2:3779:C:H6	1:A2:3779:C:C3'	2.15	0.54
1:A2:4155:G:H1'	1:A2:4156:G:OP2	2.08	0.54
1:A2:4484:G:N3	5:AB:252:ALA:HB1	2.23	0.54
1:A2:4551:U:H2'	1:A2:4551:U:O2	2.08	0.54
1:A2:4682:A:H2'	1:A2:4683:A:H8	1.73	0.54
2:A3:3:A:C8	2:A3:3:A:H3'	2.43	0.54
2:A3:149:G:H5'	10:AG:57:TRP:HZ3	1.72	0.54
4:AA:4:VAL:HG13	4:AA:8:GLN:OE1	2.07	0.54
11:AH:23:ARG:HB2	11:AH:39:ASN:OD1	2.08	0.54
11:AH:102:ASN:N	48:BB:976:TYR:CZ	2.73	0.54
22:AT:126:VAL:HB	22:AT:128:LEU:CD1	2.38	0.54
46:Au:105:ILE:HA	46:Au:130:GLU:O	2.08	0.54
47:BA:8:U:C2	47:BA:15:G:O6	2.61	0.54
50:C1:35:C:C2'	50:C1:36:U:H6	2.21	0.54
50:C1:586:G:C2	50:C1:587:A:H1'	2.42	0.54
50:C1:646:G:H5"	50:C1:646:G:C8	2.42	0.54
50:C1:684:G:C8	50:C1:920:A:C5	2.96	0.54
50:C1:951:C:H1'	50:C1:976:G:C2	2.43	0.54
50:C1:989:C:H1'	77:Ca:32:LYS:CD	2.37	0.54
50:C1:1504:U:O5'	50:C1:1504:U:H6	1.91	0.54
50:C1:1673:U:C6	50:C1:1673:U:H5'	2.44	0.54
53:CC:98:LEU:HD23	53:CC:101:SER:HB2	1.90	0.54
56:CF:34:SER:C	56:CF:36:GLN:H	2.16	0.54
71:CU:78:ASP:HB3	71:CU:80:PHE:CE2	2.44	0.54
74:CX:86:PRO:HB3	74:CX:121:LYS:HZ2	1.73	0.54
77:Ca:75:VAL:HA	77:Ca:78:ALA:HB3	1.89	0.54
1:A2:42:A:H2	1:A2:3894:U:O4'	1.91	0.53
1:A2:99:A:H2'	1:A2:100:C:H6	1.70	0.53
1:A2:457:A:H8	1:A2:676:G:C5'	1.99	0.53
1:A2:487:G:N2	1:A2:489:C:C5	2.77	0.53
1:A2:916:A:C1'	1:A2:917:G:P	2.96	0.53
1:A2:920:C:H2'	1:A2:921:U:C6	2.40	0.53
1:A2:926:G:H5"	9:AF:148:LYS:HD2	1.91	0.53
1:A2:1423:A:C2'	1:A2:1424:G:H8	2.21	0.53
1:A2:2296:G:N2	1:A2:2297:G:C2	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2525:C:H3'	1:A2:2526:G:H4'	1.88	0.53
1:A2:2687:C:OP1	20:AR:43:LYS:HG3	2.07	0.53
1:A2:2702:A:O5'	1:A2:2703:G:H8	1.91	0.53
1:A2:2711:U:H2'	1:A2:2712:G:O4'	2.08	0.53
1:A2:2823:G:C1'	24:AV:86:LYS:HD3	2.38	0.53
1:A2:2840:G:H3'	1:A2:2841:A:H8	1.73	0.53
1:A2:3739:U:H4'	47:BA:12:U:O2'	2.08	0.53
1:A2:3740:C:H5'	47:BA:13:C:C4'	2.22	0.53
1:A2:3821:A:C8	1:A2:3822:U:C5	2.96	0.53
1:A2:3865:C:H2'	1:A2:3866:G:C4	2.42	0.53
1:A2:3936:G:H3'	1:A2:3937:U:C6	2.43	0.53
1:A2:4234:A:H2'	1:A2:4235:G:H8	1.73	0.53
1:A2:4391:U:H4'	12:AI:160:PRO:HD3	1.90	0.53
1:A2:4533:G:C6	1:A2:4681:G:C6	2.96	0.53
1:A2:4828:G:C2'	1:A2:4828:G:N3	2.70	0.53
5:AB:356:LYS:O	5:AB:357:ARG:HB3	2.08	0.53
6:AC:50:GLN:CB	6:AC:51:PRO:CD	2.86	0.53
35:Ag:11:LEU:O	35:Ag:11:LEU:HG	2.08	0.53
46:Au:105:ILE:HG22	46:Au:132:LEU:HG	1.90	0.53
48:BB:933:LEU:O	48:BB:1090:ILE:CD1	2.56	0.53
48:BB:943:ILE:HA	48:BB:969:LEU:HD11	1.90	0.53
48:BB:1086:THR:HG21	48:BB:1146:LYS:NZ	2.24	0.53
48:BB:1107:VAL:CG2	48:BB:1156:LEU:HD21	2.34	0.53
48:BB:1229:LYS:HD2	48:BB:1258:ASP:OD2	2.08	0.53
48:BB:1256:GLU:OE1	48:BB:1258:ASP:HB3	2.06	0.53
49:BC:267:G:C8	50:C1:1115:U:P	3.00	0.53
49:BC:332:A:C2	49:BC:333:C:C4	2.96	0.53
50:C1:164:A:C3'	50:C1:165:G:C8	2.91	0.53
50:C1:305:U:O2	50:C1:305:U:C2'	2.56	0.53
50:C1:490:C:O5'	50:C1:490:C:H6	1.91	0.53
50:C1:523:A:H8	50:C1:523:A:O5'	1.91	0.53
50:C1:635:G:H2'	50:C1:636:C:C6	2.43	0.53
50:C1:800:U:H6	50:C1:800:U:C5'	2.21	0.53
50:C1:808:A:O5'	50:C1:808:A:C8	2.59	0.53
50:C1:921:G:C2	78:Cb:21:LYS:O	2.61	0.53
50:C1:1101:U:H3'	50:C1:1101:U:C6	2.44	0.53
50:C1:1452:A:C5	50:C1:1475:G:C6	2.96	0.53
66:CP:53:GLN:OE1	66:CP:83:MET:HG3	2.08	0.53
1:A2:6:C:O2	1:A2:6:C:C3'	2.54	0.53
1:A2:121:A:N1	1:A2:147:U:C4	2.76	0.53
1:A2:148:G:N2	10:AG:163:PRO:HG2	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:405:C:H5'	1:A2:406:G:OP2	2.07	0.53
1:A2:443:A:O2'	1:A2:444:G:H2'	2.07	0.53
1:A2:1226:G:H2'	1:A2:1227:U:C6	2.44	0.53
1:A2:1279:G:H5"	34:Af:59:THR:HB	1.90	0.53
1:A2:1322:A:H2'	1:A2:1323:A:O4'	2.07	0.53
1:A2:1428:G:H2'	1:A2:1429:C:H6	1.73	0.53
1:A2:1654:C:P	1:A2:4336:A:H2'	2.48	0.53
1:A2:1665:C:C5	1:A2:1665:C:OP2	2.60	0.53
1:A2:2530:A:C2	28:AZ:104:PRO:HD2	2.43	0.53
1:A2:2658:G:H2'	1:A2:2659:G:C8	2.40	0.53
1:A2:2688:G:N2	1:A2:2689:G:H1'	2.22	0.53
1:A2:3827:C:H2'	1:A2:3827:C:O2	2.08	0.53
1:A2:4052:G:H8	1:A2:4052:G:P	2.31	0.53
1:A2:4266:U:H4'	1:A2:4267:A:OP2	2.07	0.53
1:A2:4537:U:H4'	1:A2:4923:A:O2'	2.08	0.53
5:AB:67:VAL:CG2	24:AV:91:LYS:HD2	2.38	0.53
5:AB:70:LYS:HD3	24:AV:91:LYS:HE3	1.90	0.53
5:AB:122:TRP:CZ2	5:AB:127:LYS:HE3	2.43	0.53
8:AE:240:TYR:O	8:AE:243:THR:HB	2.08	0.53
9:AF:194:ILE:HA	9:AF:201:PHE:CE2	2.42	0.53
15:AM:23:LYS:HE3	15:AM:43:THR:HB	1.90	0.53
26:AX:96:LEU:HB3	26:AX:98:PHE:CE2	2.42	0.53
26:AX:149:VAL:O	26:AX:152:LYS:HB3	2.08	0.53
39:Ak:25:ILE:HG21	39:Ak:57:LYS:NZ	2.22	0.53
42:An:1:MET:HB3	50:C1:1706:G:H4'	1.89	0.53
47:BA:34:G:N3	50:C1:1701:C:C4	2.75	0.53
47:BA:41:C:O2	47:BA:41:C:H2'	2.06	0.53
48:BB:842:LYS:O	48:BB:844:ARG:N	2.41	0.53
48:BB:845:ALA:HB2	48:BB:911:GLY:C	2.32	0.53
48:BB:861:ILE:HG22	48:BB:1039:ALA:HB2	1.90	0.53
48:BB:1175:ASP:CA	48:BB:1178:ILE:HG12	2.38	0.53
48:BB:1310:ILE:HB	48:BB:1390:PHE:CE2	2.43	0.53
50:C1:201:C:H3'	50:C1:201:C:O2	2.08	0.53
50:C1:448:A:N7	59:CI:26:LYS:N	2.56	0.53
50:C1:448:A:N7	59:CI:25:ARG:C	2.66	0.53
50:C1:557:U:C2'	50:C1:558:G:C8	2.91	0.53
50:C1:571:U:H1'	75:CY:60:PHE:H	1.72	0.53
50:C1:618:C:C1'	50:C1:632:C:H5'	2.25	0.53
50:C1:1414:A:H2'	50:C1:1415:C:N1	2.22	0.53
50:C1:1556:A:C2	50:C1:1557:C:H5	2.26	0.53
50:C1:1578:U:C5	54:CD:5:ILE:HA	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1619:A:H2'	50:C1:1619:A:N3	2.23	0.53
50:C1:1622:U:H6	50:C1:1622:U:H3'	1.73	0.53
50:C1:1691:U:O2'	50:C1:1692:U:C6	2.59	0.53
52:CB:33:VAL:HG11	52:CB:67:PHE:CZ	2.43	0.53
52:CB:81:PHE:CD2	52:CB:82:ARG:HG3	2.42	0.53
54:CD:208:VAL:HG13	68:CR:40:ILE:O	2.08	0.53
56:CF:100:ILE:HA	56:CF:103:LEU:HD12	1.89	0.53
63:CM:33:ARG:HH21	63:CM:91:LEU:HD23	1.73	0.53
64:CN:28:LEU:HD11	64:CN:32:ASP:CB	2.38	0.53
65:CO:93:LEU:HD12	65:CO:119:LEU:HD23	1.90	0.53
1:A2:101:A:H2'	1:A2:101:A:N3	2.23	0.53
1:A2:337:G:N2	1:A2:338:A:H1'	2.23	0.53
1:A2:347:G:H5'	6:AC:55:SER:HB2	1.90	0.53
1:A2:351:A:N3	2:A3:24:G:H1'	2.23	0.53
1:A2:914:G:H21	1:A2:915:C:C5'	2.22	0.53
1:A2:946:C:O2	1:A2:946:C:C2'	2.57	0.53
1:A2:973:U:H1'	1:A2:974:C:OP1	2.07	0.53
1:A2:1138:G:H2'	1:A2:1139:U:C6	2.43	0.53
1:A2:1575:U:H6	1:A2:1575:U:H3'	1.72	0.53
1:A2:1801:U:C6	1:A2:1801:U:C3'	2.92	0.53
1:A2:1812:U:C6	1:A2:1813:G:C8	2.96	0.53
1:A2:2059:C:C2'	1:A2:2060:G:H5'	2.39	0.53
1:A2:3936:G:H21	46:Au:156:ARG:HG2	1.73	0.53
1:A2:4167:C:C1'	1:A2:4295:C:H1'	2.38	0.53
1:A2:4364:U:H2'	1:A2:4364:U:O2	2.08	0.53
1:A2:4651:A:C2	1:A2:4660:A:C5	2.96	0.53
1:A2:4687:U:H5"	1:A2:4688:A:H5"	1.90	0.53
2:A3:115:G:H2'	2:A3:116:C:H6	1.73	0.53
2:A3:126:C:C5	2:A3:127:U:C2	2.96	0.53
2:A3:148:A:H4'	26:AX:46:PHE:CZ	2.43	0.53
7:AD:64:ILE:HG13	7:AD:109:LEU:HD22	1.90	0.53
7:AD:283:LYS:O	7:AD:287:PHE:HD2	1.90	0.53
8:AE:161:ARG:HD3	8:AE:270:TYR:CE2	2.44	0.53
16:AN:200:LEU:HD13	16:AN:204:ARG:CZ	2.39	0.53
24:AV:40:ILE:HG13	24:AV:41:SER:N	2.23	0.53
33:Ae:7:LEU:O	33:Ae:9:LYS:HG2	2.09	0.53
48:BB:1022:PHE:HB3	48:BB:1051:LEU:HD11	1.89	0.53
48:BB:1237:VAL:CG2	74:CX:97:ASN:ND2	2.72	0.53
48:BB:1340:CYS:SG	48:BB:1399:LYS:CD	2.94	0.53
49:BC:235:G:O6	78:Cb:80:ARG:CZ	2.57	0.53
50:C1:314:U:H2'	50:C1:314:U:O2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:563:G:C4	50:C1:564:A:C8	2.97	0.53
50:C1:587:A:OP2	50:C1:587:A:C8	2.62	0.53
50:C1:854:A:H8	50:C1:854:A:O5'	1.91	0.53
50:C1:919:A:H2'	50:C1:919:A:N3	2.24	0.53
50:C1:1129:G:C3'	50:C1:1130:G:C8	2.92	0.53
50:C1:1426:U:O4	50:C1:1427:C:C4	2.61	0.53
50:C1:1442:U:H3'	50:C1:1443:C:C4'	2.39	0.53
50:C1:1592:C:H2'	50:C1:1593:C:C6	2.43	0.53
50:C1:1653:U:H3	50:C1:1671:G:H1	1.54	0.53
52:CB:91:VAL:HG22	52:CB:96:CYS:HB2	1.90	0.53
52:CB:193:ILE:O	52:CB:197:ILE:HG12	2.08	0.53
56:CF:116:ILE:HD13	56:CF:154:LEU:HD12	1.90	0.53
57:CG:55:GLY:O	57:CG:62:PRO:HA	2.08	0.53
67:CQ:96:TYR:HA	67:CQ:100:VAL:HG23	1.90	0.53
69:CS:47:LYS:HE2	69:CS:79:ILE:CG1	2.38	0.53
74:CX:90:CYS:O	74:CX:94:ILE:HG13	2.07	0.53
83:Cg:268:ASP:OD1	83:Cg:270:LEU:HG	2.09	0.53
83:Cg:283:PRO:O	83:Cg:285:GLN:N	2.41	0.53
1:A2:21:G:C2	1:A2:22:G:H1'	2.44	0.53
1:A2:30:C:C2'	1:A2:31:U:H5'	2.39	0.53
1:A2:282:U:C2	1:A2:284:G:H2'	2.43	0.53
1:A2:1392:G:H2'	1:A2:1393:C:C6	2.43	0.53
1:A2:2336:U:O5'	1:A2:2336:U:H6	1.91	0.53
1:A2:2638:U:H3'	1:A2:2639:G:C4'	2.38	0.53
1:A2:2772:A:N6	18:AP:130:TYR:HB3	2.23	0.53
1:A2:2775:A:O2'	1:A2:2776:G:H5'	2.09	0.53
1:A2:3585:U:H1'	1:A2:3586:G:OP2	2.08	0.53
1:A2:3727:U:HO2'	1:A2:3728:A:H8	1.55	0.53
1:A2:4144:G:H5'	4:AA:233:ARG:HB2	1.90	0.53
1:A2:4567:A:H3'	1:A2:4568:G:C5'	2.36	0.53
1:A2:4645:U:O2'	1:A2:4646:G:H5'	2.08	0.53
1:A2:4837:U:O2	1:A2:4837:U:C2'	2.57	0.53
1:A2:4855:C:C2'	1:A2:4856:G:H4'	2.33	0.53
9:AF:243:LEU:O	9:AF:247:MET:HG3	2.08	0.53
13:AJ:19:LYS:HE3	13:AJ:73:THR:HB	1.90	0.53
15:AM:25:VAL:HG12	15:AM:45:VAL:HG11	1.91	0.53
18:AP:87:SER:O	18:AP:91:LEU:HD13	2.09	0.53
20:AR:112:SER:O	20:AR:113:LYS:HB2	2.08	0.53
28:AZ:14:LEU:HB3	28:AZ:79:HIS:O	2.08	0.53
35:Ag:43:LYS:HB2	35:Ag:51:GLY:C	2.32	0.53
42:An:5:TRP:CG	50:C1:1852:C:H5	1.95	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:An:10:MET:CE	50:C1:1172:U:H5'	2.11	0.53
45:At:44:ILE:HG13	45:At:45:HIS:N	2.23	0.53
47:BA:6:G:N2	47:BA:67:C:C4	2.67	0.53
48:BB:818:ARG:H	48:BB:1172:VAL:HG12	1.73	0.53
48:BB:1006:LYS:HA	48:BB:1009:ILE:HG12	1.90	0.53
48:BB:1116:ARG:HH21	48:BB:1150:LYS:HG3	1.71	0.53
48:BB:1120:LEU:HG	48:BB:1121:PRO:HD2	1.90	0.53
48:BB:1382:SER:N	48:BB:1383:PRO:CD	2.72	0.53
50:C1:39:A:C2	50:C1:517:C:H1'	2.44	0.53
50:C1:213:G:H2'	50:C1:214:U:O4'	2.07	0.53
50:C1:505:G:H2'	50:C1:506:G:H5'	1.90	0.53
50:C1:564:A:N6	50:C1:586:G:H1	2.07	0.53
50:C1:609:U:H6	50:C1:609:U:O5'	1.91	0.53
50:C1:1012:A:H4'	50:C1:1130:G:O2'	2.07	0.53
50:C1:1035:A:C8	50:C1:1035:A:H3'	2.43	0.53
50:C1:1508:A:H8	50:C1:1508:A:OP2	1.91	0.53
57:CG:53:SER:HB3	57:CG:110:ASN:C	2.34	0.53
57:CG:136:LYS:O	57:CG:176:ILE:HG22	2.08	0.53
67:CQ:97:GLN:HB2	67:CQ:105:LYS:HE3	1.90	0.53
70:CT:4:VAL:CG2	70:CT:136:GLY:HA2	2.39	0.53
77:Ca:44:ILE:HA	77:Ca:67:LEU:CD1	2.37	0.53
80:Cd:30:LEU:O	80:Cd:39:CYS:HA	2.08	0.53
1:A2:340:A:H3'	1:A2:341:C:C5'	2.38	0.53
1:A2:379:A:H2'	1:A2:393:A:N6	2.19	0.53
1:A2:677:C:O2	1:A2:677:C:C2'	2.57	0.53
1:A2:1293:C:C2'	1:A2:1293:C:O2	2.56	0.53
1:A2:1423:A:HO2'	1:A2:1424:G:H8	1.52	0.53
1:A2:1705:U:H1'	9:AF:132:MET:CE	2.39	0.53
1:A2:3835:C:H2'	1:A2:3836:A:O4'	2.09	0.53
1:A2:3873:G:OP2	1:A2:3873:G:C8	2.61	0.53
1:A2:4084:U:C1'	1:A2:4085:U:P	2.97	0.53
1:A2:4163:A:N3	1:A2:4163:A:C3'	2.69	0.53
1:A2:4621:G:H2'	1:A2:4622:C:O4'	2.07	0.53
1:A2:4688:A:O3'	1:A2:4695:C:H1'	2.09	0.53
1:A2:4837:U:O2	1:A2:4837:U:H2'	2.08	0.53
1:A2:4902:U:N3	8:AE:154:THR:HG22	2.23	0.53
3:A4:64:G:H2'	3:A4:64:G:N3	2.24	0.53
3:A4:75:G:H4'	3:A4:76:U:H5'	1.91	0.53
4:AA:117:GLU:HB3	4:AA:119:LYS:O	2.08	0.53
6:AC:20:LYS:HB2	6:AC:20:LYS:HZ2	1.74	0.53
6:AC:54:VAL:HG13	6:AC:55:SER:N	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AD:99:TYR:CD1	7:AD:199:ILE:HD12	2.43	0.53
12:AI:145:LYS:CE	12:AI:167:ILE:HD13	2.39	0.53
13:AJ:44:THR:O	13:AJ:78:LYS:HD3	2.08	0.53
15:AM:40:GLY:HA3	15:AM:45:VAL:CG1	2.38	0.53
15:AM:126:GLU:HB2	17:AO:187:LYS:NZ	2.23	0.53
25:AW:36:CYS:SG	25:AW:51:TRP:HH2	2.31	0.53
25:AW:57:ARG:HH11	25:AW:63:GLN:HE22	1.55	0.53
28:AZ:48:ARG:H	28:AZ:69:LYS:HB3	1.73	0.53
29:Aa:23:GLY:O	29:Aa:24:LYS:HB2	2.08	0.53
46:Au:151:LEU:HD11	46:Au:184:LEU:HD21	1.91	0.53
48:BB:848:ILE:HD12	48:BB:936:ILE:C	2.33	0.53
48:BB:1070:LEU:CD2	48:BB:1073:GLN:N	2.33	0.53
48:BB:1082:GLY:O	50:C1:50:A:N7	2.38	0.53
49:BC:339:A:N1	50:C1:961:G:C5’	2.68	0.53
50:C1:96:C:H2’	50:C1:97:U:O4’	2.08	0.53
50:C1:172:U:H2’	50:C1:172:U:O2	2.07	0.53
50:C1:655:A:C4	50:C1:657:U:H5	2.25	0.53
50:C1:805:U:N3	50:C1:858:A:H2	2.05	0.53
50:C1:851:C:H4’	50:C1:852:G:N2	2.22	0.53
50:C1:1023:A:H8	50:C1:1023:A:O5’	1.91	0.53
50:C1:1047:C:H1’	65:CO:141:ARG:HG2	1.91	0.53
50:C1:1086:G:H2’	50:C1:1086:G:N3	2.22	0.53
50:C1:1274:G:N2	50:C1:1510:G:H21	2.06	0.53
50:C1:1621:U:H2’	50:C1:1622:U:C5’	2.32	0.53
50:C1:1682:C:H2’	50:C1:1683:C:C6	2.44	0.53
50:C1:1714:U:O5’	50:C1:1714:U:H6	1.91	0.53
51:CA:9:GLN:CB	72:CV:83:PHE:HA	2.38	0.53
52:CB:59:SER:O	52:CB:63:LYS:HD3	2.08	0.53
56:CF:142:SER:OG	79:Cc:50:VAL:HB	2.08	0.53
60:CJ:28:GLU:O	60:CJ:32:ILE:HG13	2.07	0.53
70:CT:111:LYS:O	70:CT:126:GLN:HB2	2.08	0.53
73:CW:14:ILE:HD11	73:CW:27:ILE:HD11	1.91	0.53
73:CW:26:LEU:HD22	78:Cb:7:LEU:HD12	1.89	0.53
76:CZ:103:HIS:CG	76:CZ:104:ARG:H	2.26	0.53
77:Ca:63:VAL:C	77:Ca:64:LEU:HG	2.33	0.53
79:Cc:14:VAL:HG13	79:Cc:30:VAL:HB	1.91	0.53
1:A2:44:A:P	16:AN:85:VAL:HG11	2.49	0.53
1:A2:85:G:H21	1:A2:97:G:H2’	1.72	0.53
1:A2:384:U:H2’	1:A2:385:G:C4’	2.36	0.53
1:A2:474:G:P	1:A2:659:A:H5”	2.48	0.53
1:A2:476:C:P	1:A2:658:G:H4’	2.48	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:642:C:H5'	1:A2:642:C:C6	2.38	0.53
1:A2:673:G:C3'	1:A2:674:G:H5"	2.38	0.53
1:A2:719:G:H5"	9:AF:76:ARG:HD3	1.90	0.53
1:A2:958:C:N4	1:A2:1255:G:H1	2.00	0.53
1:A2:969:C:H5'	1:A2:979:C:N4	2.22	0.53
1:A2:1398:C:H6	1:A2:1398:C:O5'	1.90	0.53
1:A2:1405:G:H2'	1:A2:1406:G:H8	1.74	0.53
1:A2:1523:G:H4'	35:Ag:14:ASN:O	2.09	0.53
1:A2:1803:G:C6	1:A2:1804:A:C6	2.96	0.53
1:A2:1915:C:O5'	1:A2:1915:C:H6	1.92	0.53
1:A2:2019:A:C2'	1:A2:4424:A:C2	2.92	0.53
1:A2:2258:A:H2'	1:A2:2259:G:O4'	2.08	0.53
1:A2:2331:G:H8	1:A2:2331:G:O5'	1.90	0.53
1:A2:2530:A:H2	28:AZ:104:PRO:HD2	1.73	0.53
1:A2:2564:A:H5"	1:A2:2564:A:C8	2.43	0.53
1:A2:2588:A:H5'	1:A2:2665:G:C5'	2.37	0.53
1:A2:4133:G:O2'	1:A2:4134:U:H5'	2.09	0.53
1:A2:4180:A:N6	1:A2:4182:G:H1'	2.23	0.53
1:A2:4280:G:H5"	1:A2:4281:U:OP2	2.09	0.53
1:A2:4738:U:C5	1:A2:4740:U:O4	2.62	0.53
2:A3:24:G:H2'	2:A3:25:G:H5'	1.90	0.53
3:A4:83:A:H61	3:A4:93:G:H1	1.55	0.53
7:AD:19:LYS:HG3	7:AD:23:ARG:CZ	2.39	0.53
8:AE:155:GLY:N	8:AE:158:ARG:HG3	2.23	0.53
8:AE:160:LYS:HZ2	8:AE:183:ARG:HD3	1.73	0.53
13:AJ:135:GLY:HA2	13:AJ:157:ILE:HD11	1.91	0.53
16:AN:183:THR:HB	16:AN:188:ARG:HB3	1.91	0.53
17:AO:182:GLU:O	17:AO:187:LYS:HD3	2.08	0.53
42:An:1:MET:H3	50:C1:1706:G:H4'	1.73	0.53
42:An:5:TRP:CZ3	50:C1:1848:U:C4	2.96	0.53
45:At:30:ASN:HB2	45:At:44:ILE:HG22	1.89	0.53
48:BB:1069:GLU:HB2	48:BB:1092:ILE:CD1	2.38	0.53
48:BB:1132:GLN:HE22	50:C1:51:U:C5'	2.21	0.53
48:BB:1174:LYS:HE2	48:BB:1174:LYS:CA	2.38	0.53
48:BB:1228:HIS:CD2	48:BB:1229:LYS:N	2.77	0.53
48:BB:1355:ILE:HG23	48:BB:1371:VAL:CG2	2.15	0.53
50:C1:29:G:H4'	74:CX:129:SER:HB2	1.89	0.53
50:C1:37:C:O5'	50:C1:37:C:H6	1.91	0.53
50:C1:336:A:C2	50:C1:337:C:H5	2.27	0.53
50:C1:412:G:H5'	50:C1:413:G:H8	1.72	0.53
50:C1:527:C:H5"	50:C1:528:A:OP2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:675:U:O5’	50:C1:675:U:H6	1.92	0.53
50:C1:829:C:H4’	50:C1:830:A:OP1	2.08	0.53
50:C1:904:A:H2’	50:C1:905:C:H6	1.73	0.53
50:C1:1191:C:H2’	50:C1:1192:U:H6	1.74	0.53
50:C1:1380:C:H2’	50:C1:1381:G:C8	2.43	0.53
50:C1:1413:G:H2’	50:C1:1414:A:H8	1.74	0.53
69:CS:15:VAL:O	69:CS:19:ASN:HB2	2.09	0.53
71:CU:50:VAL:HG22	71:CU:91:LEU:CD2	2.39	0.53
83:Cg:9:GLY:O	83:Cg:309:VAL:HG22	2.09	0.53
1:A2:118:C:H4’	1:A2:119:G:H3’	1.89	0.53
1:A2:181:U:H5’	1:A2:181:U:H6	1.73	0.53
1:A2:282:U:O2	1:A2:284:G:H2’	2.07	0.53
1:A2:357:A:C8	1:A2:358:C:C6	2.97	0.53
1:A2:393:A:OP1	1:A2:393:A:H4’	2.08	0.53
1:A2:667:C:O2’	1:A2:668:C:H5’	2.08	0.53
1:A2:709:G:O6	1:A2:928:A:N1	2.42	0.53
1:A2:722:G:H3’	1:A2:723:G:C4’	2.39	0.53
1:A2:725:C:C3’	1:A2:726:C:C6	2.91	0.53
1:A2:1054:G:H2’	1:A2:1055:G:H5’	1.90	0.53
1:A2:1204:G:H2’	1:A2:1204:G:N3	2.24	0.53
1:A2:1466:G:C2’	1:A2:1467:G:H5”	2.28	0.53
1:A2:1592:A:N3	4:AA:196:TRP:CH2	2.77	0.53
1:A2:1774:A:H5”	3:A4:98:G:H2’	1.90	0.53
1:A2:1825:C:H4’	19:AQ:152:PHE:CE1	2.44	0.53
1:A2:1831:G:C8	1:A2:1831:G:C3’	2.88	0.53
1:A2:1868:G:H4’	1:A2:1869:A:OP1	2.08	0.53
1:A2:1894:G:H3’	1:A2:1894:G:C8	2.43	0.53
1:A2:2532:G:H4’	28:AZ:109:LYS:CD	2.38	0.53
1:A2:2593:C:H1’	1:A2:2699:G:N2	2.24	0.53
1:A2:3607:G:H2’	1:A2:3608:U:H5’	1.90	0.53
1:A2:3651:A:H5’	4:AA:132:ASN:ND2	2.23	0.53
1:A2:3783:U:H2’	1:A2:3784:G:O5’	2.09	0.53
1:A2:3836:A:C2	1:A2:3849:G:C5	2.97	0.53
1:A2:4032:C:OP1	1:A2:4032:C:H4’	2.09	0.53
1:A2:4037:U:H2’	1:A2:4038:U:H6	1.73	0.53
1:A2:4156:G:O5’	1:A2:4156:G:C8	2.61	0.53
3:A4:7:G:H4’	7:AD:33:ARG:CZ	2.39	0.53
7:AD:193:GLU:O	7:AD:197:LYS:HG2	2.08	0.53
8:AE:223:ARG:CA	8:AE:225:PRO:HD2	2.39	0.53
10:AG:55:VAL:HA	26:AX:44:PRO:O	2.09	0.53
17:AO:181:ALA:O	17:AO:187:LYS:HD2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AQ:155:ALA:HB1	19:AQ:156:PRO:CD	2.31	0.53
21:AS:164:LYS:HB3	21:AS:165:PRO:HD3	1.91	0.53
28:AZ:23:ALA:HB1	28:AZ:43:VAL:HB	1.91	0.53
31:Ac:62:TYR:O	31:Ac:66:LEU:HG	2.09	0.53
34:Af:106:TYR:O	34:Af:107:PRO:C	2.52	0.53
42:An:1:MET:N	50:C1:1706:G:C4'	2.72	0.53
43:Ao:104:ILE:HD11	47:BA:54:U:P	2.49	0.53
46:Au:60:VAL:HG21	46:Au:104:PHE:CE2	2.43	0.53
48:BB:1295:GLN:HE22	48:BB:1411:TRP:HD1	1.54	0.53
48:BB:1381:GLU:OE1	48:BB:1383:PRO:HG3	2.09	0.53
48:BB:1400:ILE:HD13	48:BB:1421:TRP:CE3	2.43	0.53
50:C1:48:C:H2'	50:C1:49:C:O4'	2.09	0.53
50:C1:344:U:H2'	50:C1:345:U:N1	2.23	0.53
50:C1:465:A:H4'	50:C1:466:G:O4'	2.09	0.53
50:C1:478:G:H8	50:C1:478:G:O5'	1.91	0.53
50:C1:562:U:H4'	50:C1:562:U:OP1	2.08	0.53
50:C1:656:G:C4'	50:C1:657:U:OP2	2.55	0.53
50:C1:970:G:H4'	50:C1:971:G:OP2	2.08	0.53
50:C1:1138:C:H5"	50:C1:1139:C:P	2.49	0.53
50:C1:1215:C:H5'	50:C1:1217:A:H62	1.74	0.53
50:C1:1402:A:C8	50:C1:1403:C:H5	2.26	0.53
50:C1:1403:C:C4	50:C1:1404:U:H1'	2.44	0.53
50:C1:1420:G:H1'	70:CT:3:GLY:N	2.24	0.53
50:C1:1649:U:C6	50:C1:1649:U:O5'	2.61	0.53
56:CF:33:ILE:O	56:CF:34:SER:HB3	2.08	0.53
57:CG:91:GLU:HG2	57:CG:91:GLU:O	2.08	0.53
58:CH:75:ILE:HG22	58:CH:75:ILE:O	2.08	0.53
61:CK:11:ILE:CG1	61:CK:38:LYS:HE2	2.39	0.53
64:CN:67:THR:HG21	64:CN:74:ILE:HD11	1.89	0.53
72:CV:24:ILE:HG23	72:CV:28:ASP:HB2	1.90	0.53
74:CX:95:GLU:HB2	74:CX:98:ASP:OD2	2.09	0.53
83:Cg:44:LYS:HE3	83:Cg:56:GLN:CD	2.34	0.53
1:A2:74:G:H5"	14:AL:59:VAL:HG12	1.90	0.53
1:A2:199:C:H2'	1:A2:200:U:O4'	2.09	0.53
1:A2:348:U:H4'	6:AC:58:ALA:HB3	1.91	0.53
1:A2:442:C:O4'	8:AE:227:HIS:NE2	2.42	0.53
1:A2:509:G:C2'	1:A2:510:C:H5'	2.38	0.53
1:A2:1186:C:H2'	1:A2:1187:C:C6	2.43	0.53
1:A2:1213:G:H2'	1:A2:1214:G:H5'	1.88	0.53
1:A2:1267:G:C2'	1:A2:1268:G:H4'	2.39	0.53
1:A2:1633:G:H2'	1:A2:3883:U:OP1	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1756:C:C6	1:A2:1756:C:C5'	2.91	0.53
1:A2:1846:A:H8	1:A2:1846:A:O5'	1.92	0.53
1:A2:2061:C:H5	1:A2:2249:G:H22	1.56	0.53
1:A2:2281:U:H3'	1:A2:2282:G:C5'	2.39	0.53
1:A2:2394:A:H5"	1:A2:2394:A:H8	1.69	0.53
1:A2:3775:G:H8	1:A2:3775:G:O5'	1.91	0.53
1:A2:3801:U:H2'	1:A2:3802:C:H5"	1.89	0.53
1:A2:4374:A:C8	1:A2:4382:A:C2	2.97	0.53
1:A2:4480:G:H2'	1:A2:4481:U:O4'	2.09	0.53
1:A2:4602:U:O2'	1:A2:4603:G:H5'	2.09	0.53
1:A2:4683:A:H2'	1:A2:4684:C:C6	2.43	0.53
1:A2:4861:C:O2'	1:A2:4862:G:H5'	2.09	0.53
1:A2:4881:C:H2'	1:A2:4882:G:N7	2.24	0.53
3:A4:69:U:H2'	3:A4:70:G:C8	2.44	0.53
10:AG:77:PRO:HA	10:AG:237:TRP:CE3	2.44	0.53
35:Ag:7:TYR:HD1	35:Ag:9:ARG:O	1.91	0.53
45:At:17:LEU:HD12	45:At:25:TYR:O	2.09	0.53
47:BA:31:A:C2'	50:C1:1641:A:O2'	2.57	0.53
47:BA:74:C:O3'	48:BB:1374:LYS:CD	2.49	0.53
48:BB:1238:MET:SD	48:BB:1245:TYR:O	2.67	0.53
48:BB:1239:LEU:O	48:BB:1239:LEU:HD23	2.09	0.53
50:C1:19:A:O2'	50:C1:621:C:H1'	2.09	0.53
50:C1:36:U:C2	50:C1:520:A:N1	2.77	0.53
50:C1:448:A:C5	59:CI:26:LYS:HA	2.43	0.53
50:C1:587:A:C2'	50:C1:592:C:N4	2.71	0.53
50:C1:747:U:O2	50:C1:748:C:H3'	2.09	0.53
50:C1:748:C:H5"	50:C1:749:U:C5	2.44	0.53
50:C1:1152:U:H6	50:C1:1152:U:O5'	1.92	0.53
50:C1:1221:G:O2'	50:C1:1222:G:H5'	2.09	0.53
50:C1:1324:G:H2'	50:C1:1325:G:C8	2.44	0.53
50:C1:1332:A:H1'	54:CD:141:LYS:HZ1	1.74	0.53
50:C1:1419:C:O2'	70:CT:3:GLY:HA2	2.09	0.53
50:C1:1743:G:H21	50:C1:1791:A:H62	1.56	0.53
50:C1:1752:C:C2'	50:C1:1753:C:H5'	2.39	0.53
50:C1:1822:A:C6	50:C1:1823:A:C6	2.97	0.53
54:CD:24:PHE:HE1	54:CD:72:VAL:HG11	1.73	0.53
58:CH:83:LEU:HB2	58:CH:92:VAL:HG21	1.90	0.53
58:CH:147:LYS:HE3	58:CH:153:LEU:HD11	1.91	0.53
61:CK:29:MET:N	61:CK:30:PRO:CD	2.71	0.53
67:CQ:33:LYS:CE	67:CQ:36:GLY:HA2	2.38	0.53
74:CX:36:LEU:O	74:CX:42:GLY:HA2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:CX:39:ASN:OD1	74:CX:41:PHE:HB2	2.07	0.53
1:A2:1:C:C4	2:A3:157:U:C4	2.97	0.53
1:A2:186:G:P	1:A2:186:G:C8	2.98	0.53
1:A2:893:A:C4	1:A2:894:G:C8	2.97	0.53
1:A2:1250:A:H4'	9:AF:37:PHE:CD1	2.44	0.53
1:A2:1357:G:C8	1:A2:1360:G:H2'	2.44	0.53
1:A2:1435:G:H1'	19:AQ:75:ARG:HD3	1.90	0.53
1:A2:1551:U:H4'	20:AR:95:TRP:CE2	2.44	0.53
1:A2:1652:U:H1'	1:A2:4266:U:O4	2.09	0.53
1:A2:1783:A:H4'	1:A2:1784:A:H3'	1.91	0.53
1:A2:1797:G:C2	1:A2:1801:U:C6	2.97	0.53
1:A2:1899:C:C3'	1:A2:1900:G:H5"	2.39	0.53
1:A2:2044:C:H5'	34:Af:36:ARG:NH2	2.24	0.53
1:A2:2378:A:H61	1:A2:2780:U:H3	1.57	0.53
1:A2:2686:C:H2'	1:A2:2687:C:O5'	2.09	0.53
1:A2:2740:U:H4'	1:A2:2741:A:O5'	2.08	0.53
1:A2:2823:G:C2'	1:A2:2824:G:H5'	2.38	0.53
1:A2:2866:G:H2'	1:A2:2867:C:O4'	2.09	0.53
1:A2:3763:C:O5'	1:A2:3763:C:H6	1.91	0.53
1:A2:3888:C:C6	1:A2:3888:C:C5'	2.92	0.53
1:A2:3895:C:H2'	1:A2:3896:U:C6	2.44	0.53
1:A2:3903:G:O2'	1:A2:3904:C:H5'	2.08	0.53
1:A2:3936:G:H4'	46:Au:155:GLU:OE1	2.08	0.53
1:A2:4701:G:H2'	1:A2:4702:G:H8	1.73	0.53
1:A2:4717:U:C4'	1:A2:4718:C:OP1	2.56	0.53
1:A2:4838:C:H2'	1:A2:4838:C:O2	2.09	0.53
1:A2:4863:G:H3'	1:A2:4863:G:H8	1.74	0.53
1:A2:4896:G:H5'	8:AE:214:ASP:OD1	2.09	0.53
1:A2:4956:U:H5"	5:AB:317:LEU:HD11	1.91	0.53
2:A3:80:A:H2'	2:A3:81:C:C6	2.44	0.53
4:AA:186:TYR:N	4:AA:196:TRP:NE1	2.56	0.53
8:AE:153:LEU:HB2	8:AE:193:PHE:O	2.08	0.53
9:AF:88:LYS:HB3	9:AF:124:LYS:NZ	2.24	0.53
10:AG:71:TYR:CE1	16:AN:25:VAL:CG1	2.92	0.53
12:AI:53:VAL:HG23	12:AI:164:LYS:O	2.09	0.53
14:AL:169:ILE:HG13	29:Aa:96:GLY:O	2.09	0.53
16:AN:6:TYR:CE1	37:Ai:40:VAL:HG22	2.44	0.53
26:AX:74:TYR:HD2	36:Ah:29:SER:OG	1.92	0.53
45:At:119:ARG:O	45:At:122:LYS:HG2	2.09	0.53
48:BB:904:ARG:HG2	48:BB:1057:GLN:HE22	1.74	0.53
48:BB:1069:GLU:HB2	48:BB:1092:ILE:CG1	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1113:THR:OG1	48:BB:1151:ASP:HB3	2.09	0.53
50:C1:4:C:H5	50:C1:655:A:OP1	1.91	0.53
50:C1:65:C:H4'	57:CG:133:LEU:CD2	2.36	0.53
50:C1:91:A:P	50:C1:446:G:H22	2.32	0.53
50:C1:465:A:C4'	50:C1:466:G:O5'	2.56	0.53
50:C1:1042:A:H2'	50:C1:1043:G:O5'	2.09	0.53
50:C1:1204:A:O5'	50:C1:1204:A:C8	2.60	0.53
50:C1:1621:U:O2	50:C1:1621:U:H3'	2.08	0.53
50:C1:1673:U:H3'	50:C1:1674:G:H8	1.74	0.53
50:C1:1676:U:O5'	50:C1:1676:U:C6	2.61	0.53
50:C1:1851:A:H5"	50:C1:1851:A:C8	2.41	0.53
53:CC:82:TYR:CZ	53:CC:164:PRO:HD3	2.44	0.53
54:CD:166:TYR:CD1	54:CD:200:PRO:HB3	2.44	0.53
59:CI:113:TYR:HE2	59:CI:119:LEU:HD23	1.74	0.53
1:A2:20:U:O2	1:A2:20:U:H2'	2.07	0.53
1:A2:45:U:C2'	1:A2:46:U:H5'	2.38	0.53
1:A2:172:C:H2'	1:A2:173:G:H5'	1.90	0.53
1:A2:327:A:H3'	1:A2:328:U:H4'	1.91	0.53
1:A2:361:U:H1'	1:A2:1513:A:N1	2.23	0.53
1:A2:679:U:O5'	1:A2:679:U:C6	2.62	0.53
1:A2:721:A:O2'	1:A2:722:G:H5"	2.10	0.53
1:A2:957:G:C2'	1:A2:958:C:H5"	2.29	0.53
1:A2:1491:G:O2'	1:A2:1827:U:H5"	2.09	0.53
1:A2:1513:A:C2	38:Aj:15:THR:CG2	2.92	0.53
1:A2:1560:G:O6	1:A2:1589:C:H3'	2.08	0.53
1:A2:2302:G:H2'	1:A2:2303:G:H8	1.74	0.53
1:A2:2409:U:H6	1:A2:2409:U:O5'	1.91	0.53
1:A2:2417:U:H3'	1:A2:2418:C:H5'	1.91	0.53
1:A2:2417:U:H4'	1:A2:2418:C:OP2	2.09	0.53
1:A2:2523:G:C2'	1:A2:2524:G:H8	2.22	0.53
1:A2:2529:G:C2	1:A2:2530:A:C8	2.97	0.53
1:A2:2751:C:C6	1:A2:2751:C:O5'	2.62	0.53
1:A2:3578:G:C5'	1:A2:3578:G:C8	2.91	0.53
1:A2:3837:G:H8	1:A2:3837:G:OP2	1.92	0.53
1:A2:3943:G:H4'	46:Au:204:MET:CG	2.38	0.53
1:A2:4089:G:C2	35:Ag:94:ALA:CB	2.92	0.53
1:A2:4298:G:H1	1:A2:4332:U:H3'	1.74	0.53
1:A2:4502:U:H2'	1:A2:4503:G:H5'	1.91	0.53
1:A2:4578:G:C2'	1:A2:4579:U:H5'	2.39	0.53
2:A3:92:U:O5'	2:A3:92:U:H6	1.91	0.53
3:A4:36:C:O5'	3:A4:36:C:C6	2.59	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AA:13:GLY:O	4:AA:17:ARG:HG3	2.08	0.53
4:AA:79:ALA:O	4:AA:82:ILE:HG12	2.09	0.53
4:AA:116:LEU:HG	4:AA:126:LEU:HB2	1.91	0.53
29:Aa:76:ASP:CB	29:Aa:114:LYS:HG2	2.39	0.53
45:At:21:ASN:HB2	45:At:23:GLN:HE22	1.74	0.53
47:BA:52:G:H1	47:BA:62:C:H42	1.57	0.53
50:C1:10:G:H2'	50:C1:11:A:C8	2.44	0.53
50:C1:172:U:O2	50:C1:172:U:C2'	2.57	0.53
50:C1:188:C:H2'	50:C1:189:U:C6	2.44	0.53
50:C1:193:C:H1'	50:C1:208:G:N2	2.24	0.53
50:C1:214:U:H2'	50:C1:214:U:O2	2.07	0.53
50:C1:591:U:O2	50:C1:591:U:C2'	2.57	0.53
50:C1:1102:G:H22	50:C1:1130:G:N2	2.06	0.53
50:C1:1120:U:C2'	50:C1:1121:G:H5'	2.38	0.53
50:C1:1131:G:H2'	50:C1:1132:C:C6	2.43	0.53
50:C1:1287:A:C8	82:Cf:99:LYS:CB	2.91	0.53
50:C1:1512:C:H2'	50:C1:1513:C:C5	2.44	0.53
50:C1:1556:A:H2	50:C1:1557:C:C5	2.26	0.53
50:C1:1700:C:C2	50:C1:1834:A:N6	2.77	0.53
50:C1:1853:C:H2'	50:C1:1854:U:H6	1.71	0.53
57:CG:46:LYS:HB2	57:CG:119:LYS:HG2	1.91	0.53
58:CH:102:PRO:HG3	58:CH:105:THR:HG21	1.90	0.53
60:CJ:32:ILE:HD13	81:Ce:34:ARG:NH1	2.24	0.53
67:CQ:86:GLN:HE21	67:CQ:90:LYS:NZ	2.07	0.53
71:CU:80:PHE:CD1	80:Cd:52:PHE:HB3	2.44	0.53
1:A2:318:U:H5	37:Ai:25:ARG:HH22	1.55	0.52
1:A2:372:U:H3'	1:A2:372:U:C6	2.44	0.52
1:A2:670:C:O2'	1:A2:671:C:H5'	2.09	0.52
1:A2:937:C:C2'	1:A2:938:C:H5'	2.39	0.52
1:A2:1156:C:H2'	1:A2:1157:U:C6	2.44	0.52
1:A2:1250:A:H4'	9:AF:37:PHE:CE1	2.43	0.52
1:A2:1379:G:C4	1:A2:1380:G:N7	2.77	0.52
1:A2:1454:G:N3	1:A2:1455:C:H1'	2.24	0.52
1:A2:1467:G:H4'	29:Aa:131:ARG:NH1	2.24	0.52
1:A2:2358:A:C2	1:A2:2402:U:C5	2.97	0.52
1:A2:2453:G:H2'	1:A2:2454:A:C8	2.44	0.52
1:A2:2496:U:H4'	1:A2:2496:U:OP1	2.09	0.52
1:A2:2762:C:H3'	1:A2:2763:C:C6	2.44	0.52
1:A2:4300:U:H4'	19:AQ:178:ARG:HD2	1.91	0.52
1:A2:4609:G:C6	1:A2:4610:G:C2	2.96	0.52
1:A2:4671:C:O5'	1:A2:4671:C:H6	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A3:126:C:H5”	2:A3:128:C:C5	2.43	0.52
3:A4:15:C:H1’	7:AD:13:PHE:HE1	1.71	0.52
9:AF:142:TRP:CZ2	9:AF:235:ASN:HB2	2.43	0.52
10:AG:57:TRP:NE1	10:AG:65:ARG:HH12	2.07	0.52
13:AJ:144:LYS:HG3	13:AJ:146:ARG:O	2.09	0.52
15:AM:57:LEU:HD12	21:AS:176:PHE:CZ	2.43	0.52
15:AM:58:THR:HG22	15:AM:91:TRP:HZ3	1.72	0.52
15:AM:126:GLU:HB2	17:AO:187:LYS:HE3	1.91	0.52
15:AM:128:LYS:O	15:AM:132:LYS:N	2.41	0.52
27:AY:120:GLU:O	27:AY:125:SER:N	2.35	0.52
37:Ai:27:SER:O	37:Ai:28:ARG:HB2	2.10	0.52
43:Ao:104:ILE:HG21	47:BA:54:U:C5	2.44	0.52
48:BB:1086:THR:CG2	48:BB:1146:LYS:HG3	2.38	0.52
48:BB:1175:ASP:C	48:BB:1178:ILE:HG12	2.34	0.52
48:BB:1192:GLU:CD	48:BB:1193:LYS:H	2.17	0.52
50:C1:65:C:H2’	50:C1:66:G:C3’	2.39	0.52
50:C1:91:A:H5”	50:C1:92:A:H5’	1.90	0.52
50:C1:530:U:H2’	50:C1:531:A:O4’	2.09	0.52
50:C1:577:U:C4’	50:C1:578:C:O4’	2.56	0.52
50:C1:745:C:C5	58:CH:107:LYS:HD3	2.44	0.52
50:C1:746:C:H5’	58:CH:104:PRO:C	2.34	0.52
50:C1:747:U:N1	50:C1:748:C:H2’	2.24	0.52
50:C1:918:U:C5	50:C1:919:A:C8	2.97	0.52
50:C1:958:G:H5’	50:C1:959:G:N7	2.24	0.52
50:C1:1000:C:N4	77:Ca:16:GLY:H	2.08	0.52
50:C1:1049:A:H2’	50:C1:1050:A:H5’	1.91	0.52
50:C1:1308:U:C5’	82:Cf:135:HIS:HA	2.36	0.52
50:C1:1413:G:C2	50:C1:1414:A:C4	2.97	0.52
50:C1:1557:C:O2	50:C1:1557:C:C2’	2.56	0.52
50:C1:1631:U:H6	50:C1:1631:U:C5’	2.05	0.52
50:C1:1655:C:H6	50:C1:1655:C:O5’	1.92	0.52
50:C1:1747:C:H2’	50:C1:1748:G:C8	2.44	0.52
52:CB:31:TYR:CZ	52:CB:91:VAL:HG13	2.44	0.52
54:CD:28:GLU:HG2	61:CK:61:GLN:HG3	1.90	0.52
58:CH:158:LEU:HD11	58:CH:187:PHE:HD2	1.73	0.52
59:CI:57:ALA:HB2	59:CI:183:GLY:HA2	1.91	0.52
1:A2:24:G:N2	1:A2:25:A:N3	2.57	0.52
1:A2:459:U:H3’	1:A2:459:U:O2	2.10	0.52
1:A2:507:C:H2’	1:A2:508:C:H6	1.74	0.52
1:A2:947:G:C2’	1:A2:948:A:H5’	2.39	0.52
1:A2:1260:C:H6	1:A2:1260:C:O5’	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1539:A:O5'	1:A2:1539:A:C8	2.62	0.52
1:A2:1622:A:O5'	1:A2:1622:A:C8	2.62	0.52
1:A2:1774:A:H5"	3:A4:98:G:C2'	2.39	0.52
1:A2:1912:A:N1	1:A2:2026:U:N3	2.57	0.52
1:A2:2546:G:O2'	1:A2:2547:U:H5'	2.09	0.52
1:A2:2869:C:H5"	1:A2:2869:C:H6	1.73	0.52
1:A2:3620:A:H2'	1:A2:3621:A:C8	2.44	0.52
1:A2:3943:G:H8	1:A2:3943:G:C5'	2.13	0.52
1:A2:4838:C:C3'	1:A2:4839:G:H5"	2.40	0.52
1:A2:4850:C:H2'	1:A2:4851:G:C8	2.44	0.52
2:A3:60:G:H21	2:A3:64:U:C1'	2.22	0.52
2:A3:79:G:H2'	2:A3:80:A:C1'	2.39	0.52
3:A4:25:G:H3'	3:A4:26:C:H5	1.75	0.52
5:AB:76:VAL:HG21	5:AB:332:MET:SD	2.50	0.52
6:AC:50:GLN:HB2	6:AC:51:PRO:HD3	1.90	0.52
13:AJ:175:LEU:HB3	13:AJ:176:PRO:CD	2.38	0.52
18:AP:22:LEU:HD13	18:AP:90:PHE:HZ	1.73	0.52
31:Ac:10:SER:O	31:Ac:14:ILE:HG13	2.09	0.52
39:Ak:24:LYS:HZ2	39:Ak:69:LEU:HD11	1.74	0.52
47:BA:75:C:H41	48:BB:1316:PHE:CE1	1.52	0.52
48:BB:1070:LEU:HD23	48:BB:1070:LEU:C	2.33	0.52
48:BB:1113:THR:HG21	48:BB:1151:ASP:H	1.74	0.52
48:BB:1170:ILE:HG23	48:BB:1172:VAL:O	2.09	0.52
49:BC:164:U:O5'	78:Cb:41:TYR:HB3	2.10	0.52
49:BC:350:G:OP2	54:CD:146:ARG:HG3	2.08	0.52
50:C1:39:A:H2'	50:C1:40:A:O4'	2.10	0.52
50:C1:599:A:H5"	50:C1:600:G:OP1	2.10	0.52
50:C1:655:A:N7	50:C1:657:U:H5	2.06	0.52
50:C1:1272:C:O2'	50:C1:1273:C:H5'	2.10	0.52
50:C1:1389:C:H6	50:C1:1389:C:O5'	1.92	0.52
50:C1:1415:C:H2'	50:C1:1416:C:H5'	1.91	0.52
50:C1:1461:G:H5"	50:C1:1462:U:OP2	2.09	0.52
57:CG:164:LYS:HG2	57:CG:165:GLU:N	2.24	0.52
58:CH:123:THR:HA	58:CH:126:HIS:CE1	2.44	0.52
70:CT:4:VAL:HG21	70:CT:139:ALA:HB3	1.92	0.52
79:Cc:59:LEU:HD23	79:Cc:60:GLU:HG3	1.90	0.52
1:A2:15:A:O2'	1:A2:16:G:H5'	2.09	0.52
1:A2:180:C:C4'	1:A2:182:C:C6	2.88	0.52
1:A2:306:G:C8	29:Aa:62:HIS:CG	2.98	0.52
1:A2:334:C:H6	1:A2:334:C:H5'	1.70	0.52
1:A2:407:U:C2'	1:A2:408:G:H5'	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:468:C:H2'	1:A2:469:G:H8	1.74	0.52
1:A2:1048:G:OP1	1:A2:1215:G:H2'	2.09	0.52
1:A2:1367:A:C2	29:Aa:112:LEU:HD13	2.44	0.52
1:A2:1715:A:O2'	3:A4:78:C:H4'	2.10	0.52
1:A2:1868:G:P	1:A2:1868:G:C8	3.03	0.52
1:A2:1906:C:N4	1:A2:2033:G:OP2	2.42	0.52
1:A2:2060:G:H4'	19:AQ:10:ASP:OD2	2.10	0.52
1:A2:2345:A:H5"	1:A2:2804:G:N2	2.14	0.52
1:A2:2703:G:O2'	1:A2:2704:C:C6	2.63	0.52
1:A2:3591:C:H6	1:A2:3591:C:O5'	1.91	0.52
1:A2:3694:G:H5"	1:A2:3694:G:C8	2.33	0.52
1:A2:4204:A:H1'	1:A2:4228:A:C4'	2.40	0.52
1:A2:4240:A:H3'	1:A2:4241:A:C5'	2.40	0.52
1:A2:5017:G:H2'	1:A2:5018:G:H5'	1.91	0.52
2:A3:26:C:O2'	2:A3:27:U:H5'	2.09	0.52
2:A3:27:U:H2'	2:A3:28:C:O4'	2.09	0.52
3:A4:1:G:C5	7:AD:264:LYS:HA	2.45	0.52
3:A4:34:C:O2'	3:A4:35:U:H5'	2.09	0.52
11:AH:45:LEU:HA	11:AH:56:ARG:O	2.09	0.52
15:AM:65:PRO:HG2	15:AM:72:TYR:CZ	2.44	0.52
16:AN:58:GLY:HA3	16:AN:142:ILE:CD1	2.38	0.52
20:AR:105:LEU:C	20:AR:105:LEU:HD13	2.35	0.52
26:AX:117:TYR:HB2	26:AX:119:ILE:HG12	1.91	0.52
34:Af:62:GLY:HA3	34:Af:65:ASN:HD22	1.74	0.52
47:BA:74:C:H5'	48:BB:1321:PRO:C	2.33	0.52
48:BB:1025:ASN:ND2	48:BB:1031:PHE:HB2	2.25	0.52
50:C1:138:C:H4'	50:C1:138:C:OP1	2.09	0.52
50:C1:571:U:C2'	50:C1:572:U:O4'	2.56	0.52
50:C1:791:C:H2'	50:C1:792:C:C6	2.45	0.52
50:C1:795:A:C2	50:C1:796:G:N9	2.77	0.52
50:C1:835:C:O2	50:C1:835:C:C2'	2.57	0.52
50:C1:1359:U:H6	50:C1:1359:U:OP2	1.93	0.52
50:C1:1430:C:O2'	70:CT:5:THR:HB	2.09	0.52
50:C1:1493:C:C3'	50:C1:1494:U:C5'	2.87	0.52
50:C1:1635:C:H6	50:C1:1635:C:O5'	1.92	0.52
50:C1:1648:G:H3'	50:C1:1648:G:N3	2.23	0.52
55:CE:158:ASP:OD1	55:CE:174:LYS:HG2	2.09	0.52
58:CH:28:LEU:O	58:CH:31:GLU:HG2	2.10	0.52
61:CK:3:MET:SD	61:CK:47:LYS:HD3	2.48	0.52
61:CK:26:ASP:OD2	61:CK:33:PRO:HG2	2.09	0.52
67:CQ:51:LEU:HD11	67:CQ:84:ILE:HG22	1.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:CU:53:PRO:HB2	71:CU:55:ARG:HH12	1.73	0.52
77:Ca:30:VAL:CG1	77:Ca:35:ALA:HB2	2.38	0.52
83:Cg:191:HIS:CG	83:Cg:195:LEU:HD21	2.44	0.52
1:A2:35:U:H4'	1:A2:1504:A:N1	2.25	0.52
1:A2:289:G:C2'	1:A2:290:C:H5'	2.39	0.52
1:A2:402:G:H1'	1:A2:403:G:OP2	2.10	0.52
1:A2:427:C:H42	1:A2:1291:G:H1	1.56	0.52
1:A2:468:C:O2'	1:A2:469:G:H5'	2.10	0.52
1:A2:714:G:H4'	6:AC:342:ARG:HH21	1.74	0.52
1:A2:896:G:H4'	1:A2:897:U:O5'	2.09	0.52
1:A2:901:A:H3'	1:A2:901:A:C8	2.45	0.52
1:A2:1797:G:N2	1:A2:1801:U:C5'	2.72	0.52
1:A2:2369:C:H2'	1:A2:2370:C:H6	1.74	0.52
1:A2:2447:C:C2'	1:A2:2447:C:O2	2.57	0.52
1:A2:2630:C:H6	1:A2:2630:C:H5"	1.73	0.52
1:A2:2864:U:H2'	1:A2:3587:C:C6	2.45	0.52
1:A2:3736:C:H3'	1:A2:3737:U:C5	2.44	0.52
1:A2:3740:C:P	47:BA:12:U:HO2'	2.29	0.52
1:A2:4109:C:C5'	28:AZ:58:GLY:HA3	2.39	0.52
1:A2:4367:G:H2'	1:A2:4368:G:C8	2.40	0.52
1:A2:4597:G:OP2	1:A2:4597:G:H4'	2.09	0.52
3:A4:82:G:H8	3:A4:82:G:O5'	1.92	0.52
6:AC:36:ILE:HG22	6:AC:123:ALA:CB	2.40	0.52
11:AH:173:ARG:HD2	41:Am:127:VAL:HA	1.91	0.52
28:AZ:134:LEU:HD21	35:Ag:94:ALA:HB1	1.91	0.52
37:Ai:33:LEU:HG	37:Ai:38:LYS:CE	2.39	0.52
46:Au:121:VAL:O	46:Au:124:PRO:HD2	2.10	0.52
47:BA:8:U:H6	47:BA:8:U:O5'	1.93	0.52
48:BB:845:ALA:CA	48:BB:911:GLY:O	2.58	0.52
48:BB:966:ILE:CD1	48:BB:1051:LEU:HB3	2.37	0.52
48:BB:1006:LYS:C	48:BB:1009:ILE:HG12	2.34	0.52
48:BB:1066:HIS:C	48:BB:1093:ASN:C	2.36	0.52
48:BB:1400:ILE:HG21	48:BB:1421:TRP:CH2	2.44	0.52
49:BC:343:U:C5'	50:C1:1830:U:O4	2.55	0.52
50:C1:20:G:H4'	50:C1:620:G:N1	2.25	0.52
50:C1:316:G:C2	50:C1:335:G:C2	2.97	0.52
50:C1:317:C:H3'	50:C1:318:A:C5'	2.37	0.52
50:C1:546:G:H1'	50:C1:548:C:H5	1.74	0.52
50:C1:803:C:H4'	73:CW:80:ASP:OD2	2.09	0.52
50:C1:847:A:H3'	50:C1:848:U:H6	1.74	0.52
50:C1:1000:C:N4	77:Ca:15:ARG:HB2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1221:G:H2'	50:C1:1222:G:C8	2.43	0.52
50:C1:1266:C:H2'	50:C1:1267:C:H6	1.75	0.52
50:C1:1344:A:O2'	50:C1:1345:G:C8	2.62	0.52
50:C1:1410:C:OP2	50:C1:1413:G:H5"	2.10	0.52
50:C1:1414:A:H2'	50:C1:1415:C:C6	2.44	0.52
50:C1:1457:U:H2'	50:C1:1458:G:C8	2.44	0.52
50:C1:1495:G:C5	80:Cd:41:GLN:HB3	2.44	0.52
50:C1:1549:U:H3	50:C1:1584:G:N2	2.08	0.52
50:C1:1567:G:OP1	50:C1:1567:G:C8	2.62	0.52
50:C1:1571:G:C2	50:C1:1572:C:H1'	2.44	0.52
50:C1:1663:A:C2	50:C1:1664:A:N1	2.77	0.52
50:C1:1815:A:H3'	50:C1:1816:G:C8	2.40	0.52
50:C1:1834:A:C2	50:C1:1837:G:N2	2.70	0.52
57:CG:45:TRP:HA	57:CG:48:TYR:CE1	2.44	0.52
58:CH:102:PRO:CG	58:CH:105:THR:HB	2.40	0.52
65:CO:30:VAL:HG21	65:CO:47:LEU:HA	1.92	0.52
65:CO:136:PRO:HB2	65:CO:138:ASP:O	2.09	0.52
83:Cg:174:VAL:HG13	83:Cg:188:HIS:HB2	1.91	0.52
83:Cg:197:THR:HG21	83:Cg:238:ALA:CA	2.38	0.52
83:Cg:294:ASP:OD2	83:Cg:296:GLN:HB3	2.10	0.52
1:A2:94:A:H5"	29:Aa:34:ASN:OD1	2.10	0.52
1:A2:204:G:C8	1:A2:397:C:H1'	2.44	0.52
1:A2:1155:A:H2'	1:A2:1156:C:H6	1.70	0.52
1:A2:1322:A:C2'	1:A2:1323:A:H5'	2.40	0.52
1:A2:1569:C:C3'	1:A2:1570:U:H4'	2.39	0.52
1:A2:1635:U:H6	1:A2:1635:U:C5'	2.20	0.52
1:A2:1659:G:C8	1:A2:1659:G:C5'	2.84	0.52
1:A2:1715:A:H2'	1:A2:1716:A:C5'	2.40	0.52
1:A2:1786:C:O5'	1:A2:1786:C:H6	1.92	0.52
1:A2:1873:G:C2	1:A2:1874:A:H1'	2.43	0.52
1:A2:2063:G:H2'	1:A2:2064:G:H8	1.75	0.52
1:A2:2321:U:H2'	29:Aa:9:ARG:NH2	2.25	0.52
1:A2:2429:G:H2'	1:A2:2429:G:N3	2.24	0.52
1:A2:4358:C:H6	1:A2:4358:C:O5'	1.92	0.52
1:A2:4724:G:N7	11:AH:44:GLU:HB2	2.24	0.52
1:A2:4749:G:H2'	1:A2:4750:C:H6	1.74	0.52
3:A4:58:A:H2'	3:A4:59:G:H8	1.72	0.52
4:AA:33:ASP:O	4:AA:37:ARG:HG2	2.10	0.52
6:AC:230:LEU:HD11	6:AC:239:LYS:CB	2.39	0.52
9:AF:21:LYS:O	9:AF:25:PHE:HD1	1.93	0.52
17:AO:22:ILE:HG23	21:AS:166:ARG:HE	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:110:PRO:HG2	17:AO:111:PRO:HD3	1.92	0.52
34:Af:59:THR:HA	34:Af:63:LYS:CA	2.36	0.52
36:Ah:7:ARG:HA	36:Ah:10:ARG:NH2	2.25	0.52
45:At:3:ALA:HA	45:At:45:HIS:ND1	2.25	0.52
45:At:75:THR:CG2	45:At:78:VAL:HG22	2.40	0.52
48:BB:1152:LEU:HG	48:BB:1153:GLU:H	1.73	0.52
48:BB:1211:PHE:CB	48:BB:1280:PHE:CE2	2.92	0.52
48:BB:1390:PHE:CD1	48:BB:1396:LEU:HD21	2.45	0.52
50:C1:39:A:H1'	50:C1:518:G:N2	2.23	0.52
50:C1:557:U:H2'	50:C1:558:G:C8	2.45	0.52
50:C1:789:G:H2'	50:C1:790:C:H6	1.72	0.52
50:C1:797:C:P	58:CH:109:ARG:H	2.33	0.52
50:C1:862:A:H2'	50:C1:863:U:H6	1.74	0.52
50:C1:963:A:H2'	50:C1:964:A:O4'	2.08	0.52
50:C1:1043:G:H4'	50:C1:1044:G:OP1	2.09	0.52
50:C1:1265:A:H2'	50:C1:1265:A:N3	2.24	0.52
50:C1:1368:U:H2'	50:C1:1370:A:OP2	2.09	0.52
50:C1:1428:G:H5"	50:C1:1428:G:H8	1.74	0.52
50:C1:1461:G:N2	50:C1:1465:A:H62	1.86	0.52
50:C1:1559:C:H6	50:C1:1559:C:O5'	1.92	0.52
50:C1:1630:A:H5"	69:CS:37:GLY:N	2.25	0.52
50:C1:1696:C:O2'	50:C1:1697:A:C8	2.58	0.52
51:CA:200:ASP:HB3	68:CR:86:PRO:HB2	1.92	0.52
52:CB:58:ALA:O	52:CB:63:LYS:HG3	2.10	0.52
52:CB:144:LYS:HB2	52:CB:208:HIS:HB2	1.91	0.52
59:CI:119:LEU:HG	59:CI:121:LEU:HD12	1.91	0.52
64:CN:84:LEU:HD23	64:CN:89:TYR:HD2	1.74	0.52
65:CO:43:HIS:CE1	65:CO:52:THR:HG23	2.43	0.52
73:CW:104:LEU:CD2	73:CW:125:ILE:HG12	2.39	0.52
78:Cb:7:LEU:O	78:Cb:24:LEU:HD11	2.09	0.52
1:A2:15:A:OP2	1:A2:15:A:C8	2.59	0.52
1:A2:326:A:C3'	1:A2:327:A:C8	2.80	0.52
1:A2:388:G:H8	1:A2:388:G:O5'	1.93	0.52
1:A2:388:G:H2'	1:A2:389:A:O4'	2.09	0.52
1:A2:504:U:H2'	1:A2:505:U:C6	2.44	0.52
1:A2:916:A:C1'	1:A2:917:G:C5'	2.87	0.52
1:A2:943:G:N3	1:A2:943:G:H2'	2.25	0.52
1:A2:1086:A:O5'	1:A2:1086:A:C8	2.60	0.52
1:A2:1176:G:H2'	1:A2:1177:C:O5'	2.10	0.52
1:A2:1350:G:C8	1:A2:1350:G:O5'	2.63	0.52
1:A2:1514:C:C2'	1:A2:1515:U:H5'	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2587:G:H1’	1:A2:2663:G:O2’	2.09	0.52
1:A2:2665:G:H2’	1:A2:2666:C:H5’	1.92	0.52
1:A2:2686:C:H6	1:A2:2686:C:H5”	1.74	0.52
1:A2:2727:G:H4’	35:Ag:72:LYS:O	2.10	0.52
1:A2:2857:U:H6	1:A2:2857:U:C5’	2.22	0.52
1:A2:3578:G:H8	1:A2:3578:G:H5”	1.75	0.52
1:A2:3767:U:H6	1:A2:3767:U:H5”	1.75	0.52
1:A2:4089:G:N1	35:Ag:94:ALA:HA	2.25	0.52
1:A2:4131:C:H3’	1:A2:4132:A:C8	2.42	0.52
1:A2:4298:G:H22	1:A2:4332:U:H2’	1.74	0.52
1:A2:4604:G:H1	1:A2:4613:C:N4	2.06	0.52
1:A2:4608:A:H2’	1:A2:4609:G:O4’	2.10	0.52
1:A2:4677:A:H2’	1:A2:4678:G:O4’	2.10	0.52
1:A2:4698:C:C2’	1:A2:4699:G:H5’	2.39	0.52
1:A2:4807:C:C2’	1:A2:4808:C:H5’	2.39	0.52
1:A2:4851:G:C2	1:A2:4882:G:C8	2.97	0.52
3:A4:57:C:C2’	3:A4:58:A:H5’	2.39	0.52
4:AA:185:ALA:O	4:AA:189:TYR:HD1	1.92	0.52
6:AC:8:ILE:HD11	6:AC:24:LEU:CD1	2.38	0.52
16:AN:21:PHE:O	16:AN:25:VAL:HG23	2.10	0.52
19:AQ:64:SER:HB3	19:AQ:92:VAL:CG2	2.40	0.52
22:AT:81:LYS:HG2	22:AT:82:GLY:H	1.75	0.52
48:BB:909:ILE:HD12	48:BB:910:PRO:CD	2.35	0.52
48:BB:1076:GLU:OE2	48:BB:1201:THR:HG23	2.10	0.52
50:C1:197:U:N3	50:C1:198:U:H5	2.07	0.52
50:C1:901:G:C5	50:C1:902:G:N7	2.77	0.52
50:C1:924:G:H2’	50:C1:925:G:C8	2.45	0.52
50:C1:1331:C:H6	50:C1:1489:A:H62	1.49	0.52
50:C1:1426:U:C3’	50:C1:1427:C:H5’	2.39	0.52
50:C1:1546:G:N2	50:C1:1670:C:H1’	2.14	0.52
55:CE:97:GLU:HB3	55:CE:99:PHE:CE2	2.44	0.52
70:CT:96:SER:O	70:CT:99:VAL:HG22	2.10	0.52
70:CT:129:ARG:HG3	70:CT:130:ASP:N	2.24	0.52
83:Cg:16:GLY:H	83:Cg:37:ASP:HB3	1.74	0.52
1:A2:10:A:O2’	1:A2:11:G:H5’	2.09	0.52
1:A2:24:G:C6	1:A2:333:G:C8	2.97	0.52
1:A2:25:A:H2’	1:A2:26:C:C6	2.45	0.52
1:A2:105:A:C2	1:A2:327:A:C2	2.84	0.52
1:A2:156:C:H5’	37:Ai:26:HIS:CG	2.44	0.52
1:A2:339:G:H8	1:A2:339:G:O5’	1.93	0.52
1:A2:437:C:C3’	1:A2:438:C:C5	2.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:441:G:H1'	1:A2:1274:A:C4'	2.39	0.52
1:A2:719:G:C2	1:A2:720:A:C4	2.98	0.52
1:A2:967:C:O2	1:A2:967:C:C2'	2.58	0.52
1:A2:1371:A:OP1	1:A2:1371:A:H8	1.92	0.52
1:A2:1458:G:H2'	1:A2:1459:C:C6	2.44	0.52
1:A2:1474:G:H2'	1:A2:1475:G:C5'	2.40	0.52
1:A2:1630:G:N2	1:A2:1631:U:H1'	2.25	0.52
1:A2:1726:U:C6	1:A2:1726:U:C5'	2.93	0.52
1:A2:2659:G:H21	35:Ag:54:ARG:HD2	1.75	0.52
1:A2:3592:C:C5	1:A2:3593:A:C2	2.97	0.52
1:A2:3684:U:C5'	1:A2:3684:U:C6	2.93	0.52
1:A2:4088:G:N7	4:AA:85:GLY:HA3	2.25	0.52
1:A2:4308:A:H5'	1:A2:4309:C:C6	2.44	0.52
1:A2:4417:U:C2'	1:A2:4418:C:H5'	2.40	0.52
1:A2:4806:G:N3	1:A2:4807:C:H1'	2.25	0.52
7:AD:178:LYS:HA	7:AD:183:TYR:CD1	2.45	0.52
10:AG:106:THR:N	10:AG:109:GLU:HB2	2.23	0.52
14:AL:124:LEU:HD11	36:Ah:121:VAL:HG22	1.91	0.52
16:AN:93:LYS:O	16:AN:94:PHE:HB3	2.09	0.52
20:AR:137:ILE:C	20:AR:139:MET:N	2.65	0.52
48:BB:818:ARG:H	48:BB:1172:VAL:HG11	1.55	0.52
48:BB:1174:LYS:HG2	48:BB:1178:ILE:HG21	1.88	0.52
48:BB:1405:ILE:CA	48:BB:1421:TRP:CH2	2.82	0.52
50:C1:45:A:OP1	50:C1:45:A:H8	1.93	0.52
50:C1:178:C:H3'	50:C1:179:C:C6	2.43	0.52
50:C1:302:A:C4'	59:CI:73:THR:O	2.58	0.52
50:C1:320:G:HO2'	50:C1:321:C:H6	1.56	0.52
50:C1:438:G:N2	50:C1:439:A:C6	2.78	0.52
50:C1:452:G:H2'	50:C1:453:C:H6	1.74	0.52
50:C1:495:U:H2'	50:C1:496:C:O4'	2.09	0.52
50:C1:803:C:H2'	50:C1:804:U:C6	2.44	0.52
50:C1:1165:G:H4'	50:C1:1166:G:H5"	1.90	0.52
50:C1:1549:U:O5'	50:C1:1549:U:H6	1.92	0.52
54:CD:7:LYS:HD3	54:CD:10:LYS:HE2	1.91	0.52
55:CE:238:LEU:HD23	55:CE:238:LEU:H	1.74	0.52
58:CH:170:VAL:HG13	58:CH:187:PHE:CD1	2.44	0.52
59:CI:191:GLU:C	62:CL:20:LYS:HB2	2.35	0.52
64:CN:61:ALA:HB2	78:Cb:32:PHE:CZ	2.45	0.52
67:CQ:102:GLU:HB3	83:Cg:56:GLN:C	2.35	0.52
69:CS:30:ILE:HG22	69:CS:36:VAL:HG11	1.92	0.52
73:CW:52:ILE:HG12	73:CW:61:ILE:HG12	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:CX:82:THR:OG1	74:CX:118:VAL:HG22	2.09	0.52
1:A2:24:G:C2	1:A2:25:A:C5	2.97	0.52
1:A2:634:C:H2'	1:A2:635:G:H8	1.75	0.52
1:A2:963:C:O2	1:A2:963:C:H2'	2.08	0.52
1:A2:1194:C:H2'	1:A2:1194:C:O2	2.10	0.52
1:A2:1209:C:O2	1:A2:1209:C:H3'	2.10	0.52
1:A2:1318:G:O5'	1:A2:1318:G:C8	2.62	0.52
1:A2:1423:A:C8	1:A2:1423:A:OP2	2.63	0.52
1:A2:1632:A:H5"	1:A2:1633:G:OP1	2.08	0.52
1:A2:1639:U:H1'	1:A2:1640:C:OP1	2.09	0.52
1:A2:1671:C:H4'	19:AQ:57:ASN:ND2	2.25	0.52
1:A2:1785:G:H2'	1:A2:1786:C:C1'	2.39	0.52
1:A2:2294:G:H8	1:A2:2294:G:C5'	2.22	0.52
1:A2:2347:A:C4'	1:A2:2348:U:OP2	2.57	0.52
1:A2:2431:U:O2	1:A2:2431:U:C2'	2.58	0.52
1:A2:3775:G:O4'	50:C1:1719:A:O2'	2.27	0.52
1:A2:4090:C:C6	1:A2:4090:C:C3'	2.93	0.52
1:A2:4477:A:H4'	5:AB:258:HIS:ND1	2.25	0.52
1:A2:4549:A:H1'	1:A2:4550:A:O4'	2.09	0.52
1:A2:4560:G:H3'	84:BB:2435:GNP:H4'	1.90	0.52
1:A2:4742:C:H3'	1:A2:4742:C:C6	2.45	0.52
1:A2:4857:C:H2'	1:A2:4858:G:C8	2.41	0.52
1:A2:4887:U:O5'	1:A2:4887:U:H6	1.93	0.52
2:A3:6:C:H2'	2:A3:7:U:H5'	1.92	0.52
6:AC:32:ILE:HG21	45:At:9:VAL:HG21	1.90	0.52
8:AE:145:THR:O	8:AE:148:THR:HG23	2.10	0.52
21:AS:15:ARG:O	21:AS:16:CYS:HB3	2.10	0.52
27:AY:26:ARG:HD3	27:AY:75:ARG:O	2.09	0.52
47:BA:31:A:C3'	50:C1:1641:A:O2'	2.58	0.52
48:BB:975:LEU:HD11	48:BB:1001:PHE:HD1	1.74	0.52
49:BC:352:A:N1	53:CC:151:ILE:CD1	2.64	0.52
50:C1:138:C:OP2	50:C1:139:C:H5"	2.10	0.52
50:C1:301:A:H1'	59:CI:71:CYS:O	2.09	0.52
50:C1:380:G:H1	50:C1:382:C:H3'	1.71	0.52
50:C1:499:G:N2	50:C1:502:C:C4	2.78	0.52
50:C1:547:G:OP2	50:C1:548:C:C6	2.63	0.52
50:C1:601:G:H5"	50:C1:602:G:OP2	2.10	0.52
50:C1:850:C:H2'	50:C1:851:C:H5"	1.90	0.52
50:C1:890:U:C3'	50:C1:891:G:H5"	2.38	0.52
50:C1:1004:U:O5'	50:C1:1004:U:H6	1.92	0.52
50:C1:1313:A:C5'	50:C1:1314:U:H5	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1350:U:O2'	51:CA:110:ASN:HB2	2.09	0.52
50:C1:1588:A:H2'	50:C1:1589:A:C8	2.44	0.52
50:C1:1664:A:H4'	50:C1:1664:A:OP1	2.09	0.52
58:CH:148:LEU:HA	73:CW:42:MET:CG	2.39	0.52
68:CR:55:THR:O	68:CR:58:MET:HB2	2.09	0.52
78:Cb:14:GLU:OE1	78:Cb:18:LYS:HE2	2.09	0.52
1:A2:1:C:N3	2:A3:157:U:C4	2.78	0.52
1:A2:121:A:H2'	1:A2:121:A:P	2.49	0.52
1:A2:438:C:C6	1:A2:438:C:O5'	2.62	0.52
1:A2:449:C:H2'	1:A2:450:C:C6	2.45	0.52
1:A2:460:C:OP1	1:A2:679:U:O4'	2.28	0.52
1:A2:473:G:C4'	1:A2:474:G:OP1	2.56	0.52
1:A2:697:C:H2'	1:A2:698:G:H8	1.75	0.52
1:A2:905:C:H2'	1:A2:906:C:C6	2.45	0.52
1:A2:941:G:C5	1:A2:2053:G:OP1	2.63	0.52
1:A2:949:G:C8	1:A2:949:G:P	3.02	0.52
1:A2:957:G:C2'	1:A2:958:C:O5'	2.57	0.52
1:A2:1048:G:OP1	1:A2:1215:G:C8	2.63	0.52
1:A2:1061:C:H2'	1:A2:1062:C:C5	2.42	0.52
1:A2:1160:C:C2	1:A2:1161:C:O2	2.62	0.52
1:A2:1425:U:O5'	1:A2:1425:U:C6	2.63	0.52
1:A2:1476:A:H5"	1:A2:1477:G:OP2	2.10	0.52
1:A2:1789:G:H21	30:Ab:65:MET:HG3	1.74	0.52
1:A2:2027:G:O2'	1:A2:2028:G:H5'	2.10	0.52
1:A2:2478:C:O5'	1:A2:2478:C:H6	1.93	0.52
1:A2:2672:A:H3'	1:A2:2673:A:C5'	2.40	0.52
1:A2:2877:U:H5"	1:A2:2877:U:H6	1.75	0.52
1:A2:3767:U:H5'	1:A2:3768:A:OP2	2.10	0.52
1:A2:4014:A:O2'	46:Au:124:PRO:HG3	2.10	0.52
1:A2:4348:A:H2'	1:A2:4349:C:C6	2.45	0.52
1:A2:4373:C:O2	1:A2:4373:C:C3'	2.58	0.52
1:A2:4441:U:O2	1:A2:4441:U:C2'	2.57	0.52
1:A2:4502:U:O5'	1:A2:4502:U:H6	1.92	0.52
1:A2:4638:G:HO2'	1:A2:4639:G:H8	1.57	0.52
1:A2:4642:U:H2'	1:A2:4643:U:H5"	1.91	0.52
1:A2:4955:G:H21	5:AB:318:GLY:HA2	1.74	0.52
1:A2:5002:C:O2'	1:A2:5003:A:H5"	2.10	0.52
2:A3:35:C:H2'	2:A3:36:G:C8	2.44	0.52
9:AF:61:TYR:O	9:AF:65:TYR:HD2	1.92	0.52
33:Ae:126:ASN:O	33:Ae:129:LEU:HB2	2.10	0.52
38:Aj:67:LEU:C	38:Aj:67:LEU:HD13	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BA:6:G:H22	47:BA:67:C:H42	1.15	0.52
48:BB:840:THR:HG22	48:BB:1142:ALA:HB2	1.91	0.52
48:BB:1156:LEU:H	48:BB:1159:LEU:CD1	2.22	0.52
49:BC:312:U:H2'	49:BC:313:G:H5'	1.92	0.52
49:BC:331:G:H2'	49:BC:332:A:O4'	2.10	0.52
50:C1:67:C:C6	57:CG:164:LYS:HB2	2.45	0.52
50:C1:313:A:H2'	57:CG:191:ARG:HH21	1.74	0.52
50:C1:693:A:C8	50:C1:694:G:H1'	2.44	0.52
50:C1:956:G:O5'	65:CO:60:MET:HA	2.10	0.52
50:C1:1417:C:H2'	50:C1:1418:C:O4'	2.09	0.52
50:C1:1497:G:H4'	50:C1:1498:A:H5'	1.91	0.52
50:C1:1534:C:OP1	50:C1:1534:C:H3'	2.10	0.52
50:C1:1618:C:H5'	50:C1:1619:A:OP2	2.10	0.52
51:CA:77:ILE:HD12	51:CA:122:LEU:HD11	1.90	0.52
52:CB:129:THR:HG22	52:CB:176:VAL:HG12	1.91	0.52
56:CF:128:ILE:HG22	56:CF:130:ARG:HG2	1.90	0.52
58:CH:72:PHE:CZ	58:CH:94:PHE:HB2	2.45	0.52
59:CI:192:GLY:HA3	62:CL:20:LYS:HA	1.91	0.52
78:Cb:14:GLU:O	78:Cb:18:LYS:HD3	2.10	0.52
79:Cc:34:PHE:CZ	79:Cc:42:ILE:HD12	2.44	0.52
1:A2:79:C:O4'	1:A2:329:A:H5'	2.09	0.52
1:A2:229:G:H1	27:AY:61:HIS:CE1	2.28	0.52
1:A2:303:G:H3'	1:A2:303:G:C8	2.45	0.52
1:A2:337:G:H5"	27:AY:8:THR:HB	1.91	0.52
1:A2:446:C:C5	1:A2:446:C:OP2	2.63	0.52
1:A2:501:U:H3	1:A2:643:G:H1	1.56	0.52
1:A2:692:C:O2'	1:A2:693:G:H5'	2.10	0.52
1:A2:712:C:C2'	1:A2:713:G:H5'	2.39	0.52
1:A2:929:U:H4'	6:AC:325:MET:HE1	1.92	0.52
1:A2:952:C:H2'	1:A2:953:C:C6	2.44	0.52
1:A2:968:C:O2	1:A2:968:C:H2'	2.08	0.52
1:A2:1050:G:H2'	1:A2:1051:C:C5'	2.31	0.52
1:A2:1080:U:H3'	1:A2:1081:C:C5'	2.40	0.52
1:A2:1353:A:H2'	1:A2:1354:G:C8	2.44	0.52
1:A2:1715:A:C2	3:A4:77:A:H2	2.27	0.52
1:A2:1894:G:C2	34:Af:17:GLY:HA2	2.44	0.52
1:A2:2333:U:C6	1:A2:2333:U:C5'	2.92	0.52
1:A2:2351:A:H2'	1:A2:2352:A:C8	2.45	0.52
1:A2:4088:G:H5'	35:Ag:93:ARG:CD	2.40	0.52
1:A2:4215:A:C2'	1:A2:4216:A:H5'	2.40	0.52
1:A2:4879:C:O5'	1:A2:4879:C:H6	1.93	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A3:41:A:O2'	38:Aj:59:THR:HG22	2.10	0.52
10:AG:136:LEU:HB3	10:AG:204:PHE:CE2	2.45	0.52
11:AH:13:PRO:HG2	11:AH:16:VAL:HG22	1.92	0.52
37:Ai:69:ALA:O	37:Ai:73:ILE:HG12	2.09	0.52
38:Aj:34:CYS:HB3	38:Aj:39:TYR:H	1.75	0.52
48:BB:966:ILE:HG23	48:BB:1033:SER:O	2.09	0.52
48:BB:1070:LEU:O	48:BB:1160:PRO:HB3	2.10	0.52
48:BB:1075:MET:CA	48:BB:1088:ASP:O	2.58	0.52
48:BB:1116:ARG:HD2	48:BB:1148:LEU:CD2	2.40	0.52
49:BC:312:U:H2'	49:BC:313:G:H4'	1.91	0.52
50:C1:315:C:O2'	50:C1:316:G:H5'	2.09	0.52
50:C1:368:U:OP1	50:C1:369:C:H4'	2.10	0.52
50:C1:643:A:H4'	50:C1:644:G:H5'	1.92	0.52
50:C1:794:A:N3	50:C1:795:A:C1'	2.72	0.52
50:C1:866:U:H6	50:C1:866:U:O5'	1.91	0.52
50:C1:1101:U:H5"	52:CB:151:ARG:CD	2.41	0.52
50:C1:1161:U:H3'	50:C1:1161:U:C6	2.44	0.52
50:C1:1446:A:O2'	50:C1:1447:G:H5"	2.10	0.52
50:C1:1484:A:C5'	54:CD:159:HIS:HB3	2.38	0.52
50:C1:1493:C:H4'	50:C1:1494:U:H5'	1.90	0.52
50:C1:1530:U:H4'	70:CT:86:GLY:O	2.10	0.52
50:C1:1567:G:H1'	70:CT:38:LYS:HG3	1.92	0.52
51:CA:189:ILE:HG22	51:CA:190:SER:O	2.10	0.52
53:CC:94:ILE:HD13	53:CC:159:LYS:O	2.10	0.52
53:CC:124:PHE:O	53:CC:143:CYS:HA	2.10	0.52
53:CC:252:THR:OG1	53:CC:253:PRO:HD2	2.10	0.52
54:CD:106:ARG:HH12	54:CD:173:ARG:CB	2.23	0.52
63:CM:24:THR:O	63:CM:27:ILE:HG12	2.10	0.52
83:Cg:119:GLN:HB3	83:Cg:131:LEU:HD21	1.91	0.52
83:Cg:217:MET:HG3	83:Cg:229:THR:HG22	1.92	0.52
1:A2:219:C:H2'	1:A2:220:G:H5"	1.91	0.51
1:A2:269:G:H5"	1:A2:269:G:C8	2.43	0.51
1:A2:443:A:C4'	1:A2:444:G:OP1	2.57	0.51
1:A2:638:G:H2'	1:A2:639:G:C8	2.45	0.51
1:A2:735:A:C8	1:A2:736:G:N7	2.78	0.51
1:A2:1351:A:H5"	1:A2:1352:A:OP2	2.10	0.51
1:A2:1401:G:H2'	1:A2:1402:G:C5'	2.38	0.51
1:A2:1547:C:H2'	1:A2:1548:U:C5	2.44	0.51
1:A2:1570:U:H6	1:A2:1570:U:H3'	1.74	0.51
1:A2:1754:A:C4	1:A2:1755:A:C8	2.99	0.51
1:A2:2065:C:H2'	6:AC:293:LEU:HD22	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2309:G:O3'	1:A2:2310:G:C8	2.63	0.51
1:A2:2445:U:H3'	1:A2:2445:U:C6	2.42	0.51
1:A2:2475:C:O5'	1:A2:2475:C:H6	1.91	0.51
1:A2:2664:U:O2'	1:A2:2665:G:H5'	2.10	0.51
1:A2:2693:C:H2'	1:A2:2694:G:C8	2.44	0.51
1:A2:4025:C:OP2	1:A2:4025:C:C5	2.62	0.51
1:A2:4089:G:C2	35:Ag:94:ALA:HA	2.45	0.51
1:A2:4179:A:H5"	1:A2:4180:A:OP2	2.10	0.51
1:A2:4278:C:C6	1:A2:4278:C:C3'	2.92	0.51
1:A2:4292:C:H2'	1:A2:4292:C:O2	2.09	0.51
1:A2:4402:U:O5'	1:A2:4402:U:H6	1.92	0.51
1:A2:4706:C:O2'	1:A2:4707:U:H5'	2.09	0.51
1:A2:4709:G:C2'	1:A2:4710:G:C5'	2.80	0.51
6:AC:25:PRO:HB3	6:AC:261:ASP:HB2	1.92	0.51
6:AC:149:GLU:HA	45:At:75:THR:CA	2.40	0.51
7:AD:191:ASN:ND2	7:AD:194:VAL:HG23	2.25	0.51
8:AE:284:HIS:HA	34:Af:41:PHE:CG	2.45	0.51
14:AL:50:PRO:O	14:AL:51:ALA:HB3	2.10	0.51
17:AO:38:CYS:O	17:AO:41:ILE:HG13	2.10	0.51
22:AT:81:LYS:HG2	22:AT:82:GLY:N	2.25	0.51
24:AV:66:LYS:HG3	24:AV:67:LYS:HD2	1.91	0.51
24:AV:85:ARG:HD3	24:AV:99:GLU:O	2.10	0.51
26:AX:72:ASP:OD2	26:AX:74:TYR:HB2	2.10	0.51
31:Ac:53:PRO:HD3	44:Ap:41:PHE:O	2.11	0.51
32:Ad:84:ILE:HD11	32:Ad:108:TYR:CE1	2.45	0.51
33:Ae:105:SER:HA	33:Ae:108:ARG:HH11	1.76	0.51
34:Af:50:VAL:HG22	34:Af:69:VAL:HG22	1.92	0.51
46:Au:150:GLN:OE1	46:Au:152:ARG:HD2	2.10	0.51
47:BA:41:C:H3'	47:BA:42:C:C5'	2.38	0.51
48:BB:1173:LEU:CD2	48:BB:1174:LYS:N	2.73	0.51
50:C1:28:U:H4'	74:CX:124:LYS:HZ1	1.74	0.51
50:C1:151:C:OP1	75:CY:120:THR:HA	2.09	0.51
50:C1:337:C:O2	50:C1:337:C:H2'	2.10	0.51
50:C1:345:U:H2'	50:C1:346:C:C5'	2.40	0.51
50:C1:369:C:H2'	50:C1:370:G:H8	1.75	0.51
50:C1:572:U:C3'	50:C1:573:U:N3	2.73	0.51
50:C1:602:G:H3'	50:C1:603:C:C5'	2.39	0.51
50:C1:604:A:H4'	50:C1:605:A:OP2	2.09	0.51
50:C1:973:C:H3'	50:C1:973:C:H6	1.75	0.51
50:C1:1148:A:N3	50:C1:1148:A:C5'	2.72	0.51
50:C1:1279:C:O2'	50:C1:1280:G:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1562:C:H5'	70:CT:71:GLY:CA	2.40	0.51
50:C1:1607:A:H1'	50:C1:1633:A:C2	2.45	0.51
50:C1:1622:U:H3'	50:C1:1623:A:C5'	2.40	0.51
50:C1:1694:U:O2'	50:C1:1834:A:H5"	2.11	0.51
51:CA:30:LEU:HD22	51:CA:35:GLU:OE1	2.10	0.51
53:CC:167:ARG:C	53:CC:181:PRO:HD3	2.35	0.51
54:CD:194:PRO:HA	54:CD:201:LYS:HA	1.92	0.51
57:CG:133:LEU:HD23	57:CG:133:LEU:N	2.25	0.51
61:CK:27:VAL:HG23	61:CK:30:PRO:HD3	1.92	0.51
66:CP:18:ARG:NH2	66:CP:38:SER:HB2	2.25	0.51
74:CX:18:ARG:O	74:CX:21:LYS:HB3	2.10	0.51
79:Cc:38:THR:HG23	79:Cc:39:SER:N	2.26	0.51
1:A2:14:C:C1'	1:A2:15:A:OP2	2.54	0.51
1:A2:27:C:O2	1:A2:27:C:H2'	2.11	0.51
1:A2:236:C:H2'	1:A2:237:G:H8	1.75	0.51
1:A2:334:C:C5'	1:A2:334:C:C6	2.87	0.51
1:A2:335:A:C6	2:A3:31:G:C6	2.97	0.51
1:A2:636:G:O2'	1:A2:637:G:H5'	2.10	0.51
1:A2:710:G:H2'	1:A2:711:A:O4'	2.10	0.51
1:A2:1060:C:H2'	1:A2:1061:C:C6	2.44	0.51
1:A2:1222:G:H2'	1:A2:1223:C:C5	2.45	0.51
1:A2:1427:C:H2'	1:A2:1427:C:O2	2.10	0.51
1:A2:2465:C:H4'	1:A2:2466:C:OP2	2.09	0.51
1:A2:2526:G:H3'	1:A2:2527:G:O4'	2.11	0.51
1:A2:2531:U:H2'	1:A2:2532:G:C5'	2.40	0.51
1:A2:2573:G:H1'	35:Ag:45:ALA:O	2.10	0.51
1:A2:2586:G:O2'	1:A2:2663:G:C2	2.58	0.51
1:A2:2718:U:H1'	1:A2:2719:G:OP2	2.10	0.51
1:A2:3610:U:O2	1:A2:3610:U:H2'	2.11	0.51
1:A2:3679:G:H2'	1:A2:3679:G:N3	2.26	0.51
1:A2:3938:G:H8	1:A2:3938:G:OP2	1.93	0.51
1:A2:4387:G:H5"	1:A2:4387:G:C8	2.45	0.51
1:A2:4538:G:H2'	1:A2:4539:U:C6	2.44	0.51
1:A2:4739:G:N2	1:A2:4744:C:H1'	2.25	0.51
3:A4:33:U:H1'	7:AD:207:TYR:CE1	2.46	0.51
4:AA:90:CYS:HB3	4:AA:101:VAL:HG13	1.92	0.51
5:AB:156:TYR:O	5:AB:157:CYS:CB	2.57	0.51
5:AB:285:TYR:OH	5:AB:334:LYS:HD2	2.09	0.51
6:AC:130:ALA:O	6:AC:136:LEU:HD12	2.10	0.51
7:AD:62:CYS:SG	7:AD:101:THR:HG22	2.50	0.51
19:AQ:155:ALA:CB	19:AQ:156:PRO:HD2	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AR:10:LEU:CD2	20:AR:41:ILE:HG12	2.40	0.51
35:Ag:43:LYS:HB3	35:Ag:52:ARG:HA	1.92	0.51
38:Aj:19:CYS:SG	38:Aj:22:CYS:N	2.80	0.51
48:BB:1175:ASP:OD1	48:BB:1179:HIS:NE2	2.41	0.51
48:BB:1322:ILE:CD1	48:BB:1375:ILE:HB	2.40	0.51
48:BB:1412:PHE:O	48:BB:1412:PHE:CD2	2.63	0.51
50:C1:36:U:O2	50:C1:520:A:H2	1.93	0.51
50:C1:83:A:H2'	75:CY:123:ALA:CB	2.40	0.51
50:C1:519:A:C2	50:C1:520:A:C2	2.98	0.51
50:C1:552:G:H8	50:C1:552:G:O5'	1.93	0.51
50:C1:553:U:H3'	50:C1:554:A:C5'	2.38	0.51
50:C1:572:U:H3'	50:C1:572:U:C6	2.42	0.51
50:C1:590:A:N7	81:Ce:28:LYS:HB2	2.25	0.51
50:C1:840:C:O2	75:CY:14:THR:HG23	2.10	0.51
50:C1:920:A:C8	50:C1:922:A:N7	2.78	0.51
50:C1:1174:U:O5'	50:C1:1174:U:H6	1.93	0.51
50:C1:1672:U:C3'	50:C1:1673:U:H5"	2.40	0.51
50:C1:1761:U:H3	50:C1:1771:G:H1	1.58	0.51
51:CA:110:ASN:HD21	51:CA:113:GLN:CG	2.23	0.51
59:CI:81:VAL:O	59:CI:91:VAL:HG13	2.10	0.51
67:CQ:37:ARG:CB	70:CT:7:LYS:HG3	2.41	0.51
76:CZ:70:PRO:HD3	76:CZ:107:VAL:HB	1.92	0.51
80:Cd:26:ASN:HD21	80:Cd:28:HIS:CD2	2.27	0.51
1:A2:8:U:C2'	1:A2:9:C:H5'	2.38	0.51
1:A2:82:U:H3	1:A2:101:A:N6	2.06	0.51
1:A2:116:G:N2	1:A2:118:C:H2'	2.25	0.51
1:A2:198:C:O2'	1:A2:199:C:C5	2.63	0.51
1:A2:249:C:H6	1:A2:249:C:O5'	1.93	0.51
1:A2:411:A:H3'	1:A2:412:C:C6	2.46	0.51
1:A2:422:G:H21	1:A2:3857:G:H3'	1.76	0.51
1:A2:462:A:C8	1:A2:680:U:O2'	2.64	0.51
1:A2:668:C:C5'	45:At:92:SER:HB2	2.39	0.51
1:A2:1095:C:H2'	1:A2:1096:C:C6	2.44	0.51
1:A2:1164:A:O2'	1:A2:1165:G:H5'	2.10	0.51
1:A2:1367:A:H2	1:A2:1376:G:N3	2.09	0.51
1:A2:1404:G:H2'	1:A2:1405:G:H8	1.74	0.51
1:A2:1513:A:C5	38:Aj:13:ASN:O	2.64	0.51
1:A2:1790:G:O2'	30:Ab:61:ASN:HB2	2.10	0.51
1:A2:1860:U:H4'	1:A2:1861:G:O5'	2.10	0.51
1:A2:2001:C:H6	1:A2:2001:C:H5"	1.74	0.51
1:A2:2505:G:C8	1:A2:2505:G:H3'	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2552:U:H3'	1:A2:2552:U:C6	2.43	0.51
1:A2:2587:G:C5'	1:A2:2663:G:H21	2.23	0.51
1:A2:3578:G:H2'	1:A2:3579:A:O4'	2.10	0.51
1:A2:3743:A:H2'	1:A2:3744:A:C8	2.46	0.51
1:A2:3911:A:H2'	1:A2:3912:A:C8	2.46	0.51
1:A2:4533:G:H3'	1:A2:4535:G:OP1	2.10	0.51
1:A2:4574:G:H2'	1:A2:4575:C:C6	2.44	0.51
1:A2:4600:C:H2'	1:A2:4601:U:H5'	1.91	0.51
1:A2:4826:C:C2	15:AM:98:ARG:HB3	2.45	0.51
1:A2:4828:G:N3	1:A2:4828:G:H2'	2.25	0.51
1:A2:4976:C:H6	1:A2:4976:C:O5'	1.92	0.51
13:AJ:118:LYS:HB2	13:AJ:118:LYS:NZ	2.26	0.51
15:AM:20:HIS:C	15:AM:23:LYS:HD3	2.35	0.51
29:Aa:37:GLY:HA2	29:Aa:45:PHE:CE2	2.44	0.51
36:Ah:13:LYS:O	36:Ah:17:LEU:HG	2.10	0.51
37:Ai:33:LEU:HG	37:Ai:38:LYS:HE3	1.91	0.51
45:At:46:ARG:HB2	45:At:71:ARG:NH2	2.26	0.51
48:BB:1233:MET:SD	74:CX:75:ILE:HG23	2.50	0.51
49:BC:68:G:C5'	49:BC:68:G:N3	2.73	0.51
49:BC:266:G:C2'	50:C1:1115:U:OP2	2.58	0.51
50:C1:35:C:C2'	50:C1:36:U:C6	2.92	0.51
50:C1:106:C:H2'	50:C1:107:A:H8	1.72	0.51
50:C1:153:G:H1	50:C1:165:G:N2	2.06	0.51
50:C1:198:U:H6	50:C1:198:U:H5"	1.76	0.51
50:C1:222:U:C4'	62:CL:21:LYS:HE2	2.40	0.51
50:C1:595:U:H2'	50:C1:596:U:C6	2.45	0.51
50:C1:613:G:O2'	50:C1:626:G:H4'	2.09	0.51
50:C1:1005:G:H2'	50:C1:1006:C:H6	1.73	0.51
50:C1:1135:C:O2'	50:C1:1136:U:H5'	2.10	0.51
50:C1:1180:C:C2'	50:C1:1181:A:H5'	2.40	0.51
50:C1:1413:G:HO2'	50:C1:1414:A:H5'	1.74	0.51
50:C1:1548:G:O6	50:C1:1584:G:C2	2.64	0.51
50:C1:1648:G:O2'	67:CQ:127:CYS:HA	2.10	0.51
50:C1:1865:C:C6	77:Ca:5:ARG:HB3	2.45	0.51
52:CB:30:TRP:HE1	65:CO:17:LEU:CD2	2.24	0.51
54:CD:3:VAL:HG13	54:CD:5:ILE:HG13	1.91	0.51
55:CE:72:ILE:HB	55:CE:77:ARG:HG3	1.91	0.51
56:CF:89:THR:O	56:CF:93:VAL:HG23	2.10	0.51
59:CI:57:ALA:HB1	59:CI:60:LEU:HD21	1.92	0.51
67:CQ:24:HIS:HB3	67:CQ:69:ARG:H	1.74	0.51
76:CZ:92:LEU:HD13	76:CZ:109:TYR:HE1	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:52:G:H8	1:A2:52:G:O5'	1.92	0.51
1:A2:179:G:OP1	1:A2:179:G:H4'	2.11	0.51
1:A2:384:U:H3'	1:A2:385:G:C4'	2.39	0.51
1:A2:477:C:C5'	1:A2:479:G:OP1	2.55	0.51
1:A2:918:C:OP2	1:A2:918:C:H2'	2.10	0.51
1:A2:947:G:C6	1:A2:948:A:C5	2.98	0.51
1:A2:1055:G:H2'	1:A2:1056:C:C6	2.46	0.51
1:A2:1063:U:O2'	1:A2:1064:C:H5'	2.10	0.51
1:A2:1167:G:H4'	7:AD:272:SER:HB3	1.90	0.51
1:A2:1217:C:O2	1:A2:1217:C:H2'	2.10	0.51
1:A2:1349:C:H2'	2:A3:30:U:H4'	1.91	0.51
1:A2:1367:A:O4'	1:A2:1368:A:H5'	2.10	0.51
1:A2:2047:A:O2'	1:A2:2048:U:H2'	2.11	0.51
1:A2:2347:A:H1'	1:A2:2348:U:P	2.51	0.51
1:A2:2373:A:C4'	1:A2:2374:G:OP2	2.56	0.51
1:A2:2420:G:H4'	1:A2:2489:A:C4	2.46	0.51
1:A2:2479:G:H3'	1:A2:2479:G:H8	1.75	0.51
1:A2:2759:U:H4'	1:A2:2760:A:OP2	2.10	0.51
1:A2:2831:G:H3'	1:A2:2832:G:H5'	1.91	0.51
1:A2:3584:G:C2'	25:AW:44:ARG:HD2	2.39	0.51
1:A2:3585:U:H3'	25:AW:44:ARG:NH1	2.25	0.51
1:A2:3620:A:H2'	1:A2:3621:A:O4'	2.10	0.51
1:A2:3736:C:H2'	1:A2:3737:U:C6	2.45	0.51
1:A2:3761:G:H3'	1:A2:3762:U:H5	1.75	0.51
1:A2:4055:G:H2'	4:AA:34:PHE:HB3	1.91	0.51
1:A2:4144:G:H8	1:A2:4144:G:OP1	1.93	0.51
1:A2:4156:G:OP1	1:A2:4156:G:C8	2.61	0.51
1:A2:4233:A:N7	1:A2:4234:A:C5	2.79	0.51
1:A2:4264:A:OP2	22:AT:80:VAL:HG12	2.10	0.51
1:A2:4413:C:C2'	1:A2:4414:G:H5'	2.40	0.51
1:A2:4649:U:H2'	1:A2:4650:G:H5'	1.93	0.51
1:A2:4810:G:H2'	1:A2:4811:G:H8	1.76	0.51
2:A3:58:G:OP1	2:A3:97:A:N1	2.44	0.51
3:A4:12:U:H5'	3:A4:67:C:O2	2.10	0.51
3:A4:21:G:O5'	3:A4:21:G:C8	2.63	0.51
4:AA:117:GLU:HB2	4:AA:162:ASN:HD22	1.74	0.51
14:AL:48:PRO:HD3	14:AL:137:GLY:HA2	1.91	0.51
17:AO:193:THR:O	17:AO:197:LYS:HG3	2.10	0.51
19:AQ:160:HIS:H	19:AQ:188:ASN:HB3	1.75	0.51
20:AR:21:LYS:O	20:AR:53:LYS:HB2	2.10	0.51
24:AV:28:CYS:HB3	24:AV:34:ALA:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Ai:86:LYS:O	37:Ai:90:LEU:HD23	2.10	0.51
43:Ao:103:VAL:CB	47:BA:56:C:O3'	2.58	0.51
48:BB:821:ASP:HA	48:BB:1165:TYR:CZ	2.41	0.51
48:BB:837:ASN:CB	48:BB:908:ARG:HD3	2.39	0.51
48:BB:1067:CYS:O	48:BB:1068:GLU:C	2.53	0.51
50:C1:181:A:H2'	50:C1:181:A:N3	2.25	0.51
50:C1:343:A:H4'	55:CE:128:LYS:HZ1	1.73	0.51
50:C1:551:U:O5'	50:C1:551:U:H6	1.93	0.51
50:C1:572:U:C3'	50:C1:572:U:C6	2.93	0.51
50:C1:994:C:H2'	50:C1:995:G:O4'	2.10	0.51
50:C1:1099:G:C2	50:C1:1134:G:N2	2.79	0.51
50:C1:1217:A:C1'	50:C1:1685:U:O2	2.58	0.51
50:C1:1239:U:H2'	50:C1:1241:A:OP2	2.10	0.51
50:C1:1311:C:OP2	50:C1:1311:C:C5	2.63	0.51
50:C1:1557:C:N3	50:C1:1661:A:H4'	2.26	0.51
50:C1:1562:C:C5'	70:CT:71:GLY:HA3	2.40	0.51
50:C1:1705:C:H2'	50:C1:1706:G:C8	2.45	0.51
50:C1:1869:A:H8	50:C1:1869:A:O5'	1.93	0.51
51:CA:8:LEU:HG	51:CA:191:ARG:NE	2.25	0.51
51:CA:33:GLN:NE2	72:CV:63:GLY:HA3	2.25	0.51
57:CG:53:SER:CB	57:CG:112:VAL:HG23	2.34	0.51
58:CH:109:ARG:CG	58:CH:110:THR:H	2.23	0.51
66:CP:85:ILE:HD13	66:CP:111:MET:HB3	1.93	0.51
68:CR:5:ARG:HH11	68:CR:53:TYR:HB2	1.75	0.51
69:CS:24:ARG:HG3	69:CS:25:LYS:H	1.75	0.51
73:CW:26:LEU:HD22	78:Cb:7:LEU:CD1	2.40	0.51
76:CZ:97:ILE:HD12	76:CZ:109:TYR:CG	2.45	0.51
83:Cg:146:SER:HB3	83:Cg:177:TRP:CH2	2.46	0.51
1:A2:104:G:C2'	1:A2:105:A:H5'	2.41	0.51
1:A2:266:C:H2'	1:A2:266:C:O2	2.10	0.51
1:A2:283:G:C2	1:A2:284:G:N7	2.79	0.51
1:A2:393:A:H8	1:A2:393:A:C5'	2.09	0.51
1:A2:438:C:O2'	1:A2:439:G:H5'	2.10	0.51
1:A2:450:C:H2'	1:A2:451:C:H6	1.75	0.51
1:A2:672:G:H2'	1:A2:673:G:C8	2.45	0.51
1:A2:726:C:C5	1:A2:726:C:OP2	2.64	0.51
1:A2:1161:C:H2'	1:A2:1162:C:O4'	2.10	0.51
1:A2:1191:G:H4'	9:AF:63:GLN:CD	2.36	0.51
1:A2:1209:C:H4'	1:A2:1210:U:C1'	2.41	0.51
1:A2:1474:G:H5"	19:AQ:187:LYS:NZ	2.25	0.51
1:A2:1942:A:C2	1:A2:1943:G:C4	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2551:G:H3'	1:A2:2551:G:P	2.50	0.51
1:A2:2552:U:C6	1:A2:2552:U:C3'	2.94	0.51
1:A2:2580:C:O5'	1:A2:2580:C:H6	1.94	0.51
1:A2:2626:G:C2	1:A2:2662:C:C2	2.99	0.51
1:A2:2665:G:H8	1:A2:2665:G:C5'	2.23	0.51
1:A2:3592:C:C4	1:A2:3593:A:C2	2.98	0.51
1:A2:3651:A:H1'	1:A2:3653:G:C4	2.46	0.51
1:A2:3929:A:H1'	1:A2:4013:G:H5'	1.92	0.51
1:A2:4122:C:C5	2:A3:150:C:C6	2.98	0.51
1:A2:4164:C:OP2	1:A2:4164:C:H4'	2.11	0.51
1:A2:4704:G:N2	1:A2:4910:A:H2	2.08	0.51
1:A2:4749:G:H2'	1:A2:4750:C:C6	2.45	0.51
6:AC:67:TRP:HE1	6:AC:80:ARG:HG2	1.76	0.51
8:AE:242:ILE:O	8:AE:246:ARG:HG2	2.10	0.51
14:AL:143:GLU:HG2	14:AL:144:LEU:H	1.74	0.51
15:AM:43:THR:O	15:AM:44:GLN:HB3	2.11	0.51
17:AO:82:ARG:HA	17:AO:85:ARG:NH2	2.25	0.51
35:Ag:59:VAL:HG21	35:Ag:64:LEU:CD2	2.39	0.51
46:Au:192:PRO:O	46:Au:195:ILE:HG22	2.10	0.51
47:BA:41:C:C2'	47:BA:42:C:H5"	2.40	0.51
48:BB:1277:TYR:CZ	48:BB:1278:HIS:CE1	2.99	0.51
49:BC:267:G:C2	50:C1:1114:U:OP1	2.63	0.51
49:BC:337:G:H21	56:CF:128:ILE:HG23	1.73	0.51
50:C1:191:A:C2	50:C1:192:C:N1	2.79	0.51
50:C1:380:G:H3'	50:C1:382:C:OP2	2.11	0.51
50:C1:499:G:H2'	50:C1:499:G:N3	2.25	0.51
50:C1:529:A:C2'	50:C1:530:U:C6	2.88	0.51
50:C1:594:A:C1'	50:C1:643:A:N6	2.62	0.51
50:C1:798:G:C2	50:C1:799:U:C4	2.99	0.51
50:C1:872:A:H2'	50:C1:874:G:N2	2.26	0.51
50:C1:985:G:H8	50:C1:985:G:OP2	1.93	0.51
50:C1:1038:U:H1'	50:C1:1181:A:H2	1.75	0.51
50:C1:1133:A:C2	50:C1:1134:G:C5	2.98	0.51
50:C1:1284:A:C8	50:C1:1284:A:OP2	2.64	0.51
50:C1:1579:A:H62	71:CU:88:LEU:HD22	1.75	0.51
50:C1:1782:G:O4'	50:C1:1782:G:P	2.68	0.51
52:CB:208:HIS:O	52:CB:209:ASP:HB2	2.10	0.51
58:CH:102:PRO:CB	58:CH:105:THR:HB	2.38	0.51
58:CH:103:LYS:HB2	58:CH:104:PRO:HD3	1.91	0.51
70:CT:138:VAL:O	70:CT:141:ALA:HB3	2.11	0.51
74:CX:61:GLN:HB3	74:CX:62:PRO:HD2	1.90	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:163:C:O2'	1:A2:164:C:H5'	2.11	0.51
1:A2:241:G:H8	1:A2:241:G:O5'	1.93	0.51
1:A2:351:A:C2	2:A3:24:G:N9	2.79	0.51
1:A2:947:G:C4	1:A2:948:A:C8	2.99	0.51
1:A2:1480:C:OP1	1:A2:1480:C:C6	2.63	0.51
1:A2:1645:C:C2'	1:A2:1646:G:H5'	2.41	0.51
1:A2:2262:G:H2'	1:A2:2263:G:C8	2.45	0.51
1:A2:2265:C:N4	1:A2:2294:G:O2'	2.44	0.51
1:A2:2277:G:O5'	1:A2:2277:G:C8	2.64	0.51
1:A2:2763:C:H5"	1:A2:2764:A:O4'	2.11	0.51
1:A2:3604:A:H5"	1:A2:3604:A:H8	1.76	0.51
1:A2:3821:A:H5"	1:A2:3821:A:H8	1.76	0.51
1:A2:3821:A:H8	1:A2:3821:A:OP2	1.94	0.51
1:A2:3936:G:N2	46:Au:156:ARG:HG2	2.26	0.51
1:A2:4119:C:H5'	1:A2:4120:C:OP2	2.11	0.51
1:A2:4119:C:C5	1:A2:4120:C:N4	2.79	0.51
1:A2:4304:U:H5"	43:Ao:31:ASP:HA	1.91	0.51
1:A2:4467:A:H5"	1:A2:4467:A:C8	2.46	0.51
1:A2:4512:U:H2'	1:A2:4513:A:C8	2.46	0.51
1:A2:4580:U:C5	1:A2:4581:C:C5	2.98	0.51
1:A2:4664:C:H2'	1:A2:4665:A:O4'	2.11	0.51
1:A2:4893:A:H2'	1:A2:4894:C:O4'	2.10	0.51
1:A2:4903:C:H1'	8:AE:158:ARG:HH21	1.75	0.51
1:A2:4904:G:H1	34:Af:4:ARG:CZ	2.23	0.51
1:A2:4962:A:H5'	1:A2:4962:A:H8	1.75	0.51
1:A2:5007:C:H6	1:A2:5007:C:O5'	1.94	0.51
2:A3:35:C:H2'	2:A3:36:G:H8	1.75	0.51
6:AC:174:LEU:O	6:AC:175:LYS:HB2	2.10	0.51
6:AC:318:PRO:HG2	9:AF:155:TYR:HB3	1.93	0.51
7:AD:48:LYS:HE3	7:AD:145:TYR:CE2	2.45	0.51
8:AE:182:ASN:O	8:AE:183:ARG:HB3	2.10	0.51
11:AH:117:PHE:HB3	11:AH:124:ARG:NH2	2.25	0.51
14:AL:120:TYR:O	14:AL:124:LEU:HD13	2.11	0.51
15:AM:49:ALA:HB2	21:AS:100:LEU:CD2	2.41	0.51
18:AP:111:SER:O	18:AP:153:LYS:HB2	2.10	0.51
19:AQ:61:LEU:HD23	19:AQ:82:VAL:CG1	2.40	0.51
36:Ah:103:LYS:HB3	36:Ah:107:GLN:OE1	2.11	0.51
44:Ap:13:LYS:HE3	44:Ap:14:TYR:CZ	2.45	0.51
48:BB:973:ASP:CG	84:BB:2435:GNP:HN21	2.16	0.51
50:C1:59:U:C3'	50:C1:60:A:H5"	2.40	0.51
50:C1:65:C:O3'	57:CG:133:LEU:HD22	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:88:G:C2	50:C1:89:C:C2	2.99	0.51
50:C1:584:A:O2'	50:C1:585:C:H5'	2.11	0.51
50:C1:797:C:C2'	50:C1:798:G:C5'	2.82	0.51
50:C1:1117:C:H5"	50:C1:1118:C:OP2	2.11	0.51
50:C1:1132:C:O5'	50:C1:1132:C:H6	1.93	0.51
50:C1:1132:C:OP2	50:C1:1132:C:C5	2.64	0.51
50:C1:1214:A:C2	50:C1:1686:G:N3	2.79	0.51
50:C1:1349:G:H2'	50:C1:1350:U:C6	2.46	0.51
50:C1:1427:C:C4	50:C1:1428:G:C8	2.99	0.51
50:C1:1442:U:O2	50:C1:1442:U:C2'	2.57	0.51
50:C1:1597:C:H3'	50:C1:1598:G:C8	2.46	0.51
52:CB:177:GLN:HG2	52:CB:177:GLN:O	2.09	0.51
53:CC:104:ASP:CB	53:CC:130:ILE:HG22	2.41	0.51
56:CF:51:HIS:HA	56:CF:86:LYS:NZ	2.25	0.51
61:CK:15:LEU:HD22	61:CK:15:LEU:O	2.09	0.51
61:CK:65:ARG:HE	80:Cd:22:ARG:HA	1.76	0.51
71:CU:58:THR:HG23	71:CU:84:ILE:O	2.10	0.51
77:Ca:44:ILE:HG13	77:Ca:45:VAL:N	2.26	0.51
1:A2:14:C:O4'	1:A2:15:A:C5'	2.48	0.51
1:A2:68:U:H6	1:A2:68:U:O5'	1.93	0.51
1:A2:378:G:C4	1:A2:403:G:N1	2.79	0.51
1:A2:425:A:C2'	1:A2:426:A:O5'	2.59	0.51
1:A2:459:U:O2	1:A2:459:U:C2'	2.59	0.51
1:A2:1378:A:H3'	1:A2:1378:A:N3	2.26	0.51
1:A2:1460:C:N4	1:A2:1463:G:H22	2.08	0.51
1:A2:1707:U:H2'	1:A2:1708:A:C8	2.46	0.51
1:A2:1849:A:H5'	1:A2:4403:C:OP1	2.10	0.51
1:A2:2020:A:C8	1:A2:2021:A:C4	2.95	0.51
1:A2:2258:A:H5"	29:Aa:21:ARG:HD3	1.91	0.51
1:A2:2525:C:H3'	1:A2:2526:G:O4'	2.11	0.51
1:A2:2547:U:H4'	1:A2:2739:G:N2	2.26	0.51
1:A2:2718:U:H5'	4:AA:52:PRO:HB3	1.93	0.51
1:A2:3580:A:O3'	59:CI:92:ARG:NH2	2.11	0.51
1:A2:3595:G:C6	1:A2:3805:A:C2	2.98	0.51
1:A2:4043:U:H1'	1:A2:4044:G:O5'	2.11	0.51
1:A2:4100:C:H2'	1:A2:4101:C:H6	1.76	0.51
1:A2:4329:A:O2'	1:A2:4330:G:H5'	2.11	0.51
1:A2:4688:A:O3'	1:A2:4695:C:C1'	2.59	0.51
1:A2:4922:A:H5"	1:A2:4922:A:H8	1.76	0.51
1:A2:4935:C:H6	1:A2:4935:C:O5'	1.93	0.51
3:A4:53:U:O2	3:A4:53:U:C2'	2.53	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A4:69:U:H2'	3:A4:70:G:H8	1.76	0.51
3:A4:71:G:H2'	3:A4:72:U:H6	1.75	0.51
6:AC:232:VAL:HG21	6:AC:256:ALA:HA	1.91	0.51
16:AN:65:ARG:HG2	16:AN:127:TYR:CD1	2.45	0.51
16:AN:184:ILE:HG23	16:AN:185:GLY:N	2.26	0.51
21:AS:109:CYS:O	21:AS:113:MET:HG2	2.11	0.51
46:Au:30:ASN:N	46:Au:30:ASN:HD22	2.09	0.51
47:BA:32:U:H3'	67:CQ:146:ARG:C	2.36	0.51
48:BB:1070:LEU:HD13	48:BB:1073:GLN:HA	1.91	0.51
48:BB:1074:VAL:HA	48:BB:1089:VAL:CB	2.40	0.51
48:BB:1101:THR:HG22	48:BB:1112:VAL:CG2	2.40	0.51
48:BB:1196:TYR:OH	48:BB:1198:GLN:CD	2.54	0.51
50:C1:109:U:HO2'	50:C1:855:G:H1'	1.75	0.51
50:C1:111:A:N6	50:C1:351:G:H21	2.09	0.51
50:C1:314:U:O2	50:C1:314:U:C2'	2.57	0.51
50:C1:526:A:O2'	60:CJ:124:HIS:O	2.25	0.51
50:C1:876:C:C6	50:C1:876:C:P	3.04	0.51
50:C1:1356:G:H2'	50:C1:1357:A:C8	2.46	0.51
50:C1:1362:U:H3'	50:C1:1363:C:C2	2.46	0.51
50:C1:1461:G:C2	50:C1:1466:G:C6	2.99	0.51
50:C1:1678:A:C2'	50:C1:1679:A:H5'	2.40	0.51
50:C1:1834:A:H2	50:C1:1837:G:N2	2.00	0.51
52:CB:112:SER:HB2	77:Ca:68:TYR:CE2	2.46	0.51
54:CD:3:VAL:HG13	54:CD:5:ILE:CG1	2.41	0.51
54:CD:70:THR:O	54:CD:74:GLN:HG3	2.11	0.51
60:CJ:111:GLN:HE22	60:CJ:130:ILE:HD12	1.74	0.51
69:CS:4:VAL:HG12	69:CS:5:ILE:O	2.11	0.51
70:CT:39:LEU:HD21	70:CT:43:LYS:H	1.74	0.51
70:CT:102:ARG:HA	70:CT:105:GLN:OE1	2.10	0.51
73:CW:26:LEU:HB2	78:Cb:7:LEU:HD12	1.92	0.51
74:CX:50:ILE:HG23	74:CX:97:ASN:HA	1.93	0.51
74:CX:88:ASP:OD1	81:Ce:10:GLY:HA2	2.10	0.51
75:CY:91:LEU:CB	75:CY:97:TYR:HB2	2.41	0.51
78:Cb:30:SER:HB2	78:Cb:47:PHE:CZ	2.45	0.51
78:Cb:34:ASP:OD2	78:Cb:82:LYS:HE3	2.11	0.51
83:Cg:44:LYS:HE3	83:Cg:56:GLN:NE2	2.26	0.51
83:Cg:197:THR:CG2	83:Cg:238:ALA:HA	2.40	0.51
1:A2:26:C:H4'	1:A2:331:C:O2	2.11	0.51
1:A2:173:G:O2'	1:A2:174:G:H5'	2.10	0.51
1:A2:174:G:H2'	1:A2:175:C:C6	2.46	0.51
1:A2:194:A:C4'	27:AY:126:ARG:HD3	2.35	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:239:U:O5’	1:A2:239:U:C6	2.64	0.51
1:A2:286:A:H62	1:A2:4322:A:H4’	1.76	0.51
1:A2:457:A:C5	1:A2:676:G:C8	2.99	0.51
1:A2:462:A:N7	1:A2:681:U:H5’	2.25	0.51
1:A2:500:A:H8	1:A2:500:A:O5’	1.94	0.51
1:A2:510:C:C4’	14:AL:111:GLN:CB	2.88	0.51
1:A2:700:C:H3’	1:A2:701:C:C5’	2.30	0.51
1:A2:724:C:C3’	1:A2:725:C:H5”	2.35	0.51
1:A2:739:G:H2’	1:A2:740:G:H8	1.74	0.51
1:A2:915:C:H5’	1:A2:915:C:H6	1.76	0.51
1:A2:1063:U:H2’	1:A2:1064:C:H6	1.75	0.51
1:A2:1349:C:H5”	1:A2:1350:G:H8	1.74	0.51
1:A2:1873:G:N3	1:A2:1874:A:H1’	2.26	0.51
1:A2:1933:G:C6	1:A2:2007:A:C6	2.99	0.51
1:A2:2278:C:H2’	1:A2:2279:C:C5	2.45	0.51
1:A2:2497:C:H2’	1:A2:2498:G:H8	1.75	0.51
1:A2:2608:U:O2’	1:A2:2609:U:H4’	2.11	0.51
1:A2:2728:G:H4’	35:Ag:78:TYR:HA	1.91	0.51
1:A2:3621:A:H2’	1:A2:3622:A:C5	2.46	0.51
1:A2:3753:A:C5	1:A2:3755:U:C5	2.98	0.51
1:A2:4072:A:H2’	1:A2:4073:G:C8	2.41	0.51
1:A2:4536:U:H6	1:A2:4536:U:O5’	1.93	0.51
1:A2:4580:U:H2’	1:A2:4581:C:H5’	1.93	0.51
1:A2:4608:A:C4	1:A2:4609:G:C8	2.99	0.51
1:A2:4659:U:H4’	1:A2:4660:A:C5’	2.41	0.51
1:A2:4895:C:C2’	1:A2:4896:G:OP1	2.58	0.51
5:AB:56:ILE:CD1	5:AB:368:ILE:HG12	2.41	0.51
6:AC:54:VAL:HG22	6:AC:55:SER:N	2.09	0.51
8:AE:253:VAL:O	8:AE:257:ILE:HG12	2.11	0.51
9:AF:88:LYS:NZ	22:AT:135:PRO:HG2	2.26	0.51
10:AG:66:GLN:CB	16:AN:28:TRP:HH2	2.24	0.51
10:AG:162:ASP:O	10:AG:164:ILE:N	2.43	0.51
11:AH:92:MET:HG2	11:AH:181:VAL:HA	1.93	0.51
13:AJ:92:TYR:HB3	13:AJ:172:GLY:HA2	1.92	0.51
16:AN:181:HIS:CG	16:AN:182:HIS:N	2.79	0.51
20:AR:12:SER:HA	20:AR:22:VAL:HG11	1.92	0.51
26:AX:77:ILE:HD11	26:AX:98:PHE:CG	2.46	0.51
28:AZ:1:MET:HG2	31:Ac:68:LYS:HD3	1.92	0.51
31:Ac:28:VAL:HG21	31:Ac:37:MET:HG3	1.93	0.51
48:BB:842:LYS:N	48:BB:1140:GLU:CD	2.69	0.51
48:BB:944:MET:SD	48:BB:975:LEU:CD2	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1074:VAL:HG13	48:BB:1161:LEU:HB2	1.91	0.51
49:BC:341:C:H42	50:C1:1058:A:N6	2.09	0.51
50:C1:67:C:C2	57:CG:164:LYS:HB2	2.46	0.51
50:C1:346:C:C6	50:C1:346:C:C3'	2.94	0.51
50:C1:369:C:H2'	50:C1:370:G:H5'	1.93	0.51
50:C1:743:U:C4	58:CH:98:ARG:O	2.63	0.51
50:C1:1018:U:H1'	64:CN:48:SER:OG	2.11	0.51
50:C1:1049:A:C2	50:C1:1069:U:N3	2.71	0.51
50:C1:1255:G:OP2	50:C1:1256:G:N7	2.44	0.51
50:C1:1415:C:C3'	50:C1:1416:C:H5'	2.40	0.51
50:C1:1479:G:H2'	50:C1:1479:G:N3	2.25	0.51
50:C1:1500:G:O4'	54:CD:180:GLY:HA2	2.11	0.51
50:C1:1569:A:H5"	50:C1:1570:G:OP2	2.10	0.51
50:C1:1649:U:C6	50:C1:1649:U:C3'	2.93	0.51
50:C1:1709:G:OP2	50:C1:1709:G:H8	1.94	0.51
61:CK:84:HIS:CG	61:CK:85:LEU:N	2.79	0.51
65:CO:56:VAL:HG21	65:CO:81:VAL:HG22	1.93	0.51
68:CR:109:LEU:CD1	68:CR:111:PHE:HB2	2.36	0.51
83:Cg:40:ILE:HB	83:Cg:59:LEU:HB2	1.92	0.51
1:A2:2:G:N2	2:A3:156:U:H3	2.09	0.51
1:A2:399:A:C4'	1:A2:400:G:H5'	2.40	0.51
1:A2:425:A:C8	1:A2:425:A:O5'	2.64	0.51
1:A2:1374:G:N2	1:A2:1449:G:H5"	2.26	0.51
1:A2:1542:A:C8	1:A2:1542:A:P	3.04	0.51
1:A2:1837:C:H2'	1:A2:1838:U:H6	1.76	0.51
1:A2:2397:A:C3'	1:A2:2398:G:H5'	2.41	0.51
1:A2:2398:G:O5'	1:A2:2805:U:H1'	2.10	0.51
1:A2:2486:C:P	2:A3:108:A:H4'	2.51	0.51
1:A2:2650:G:C4'	1:A2:2651:A:OP2	2.57	0.51
1:A2:2650:G:N2	1:A2:2652:G:N2	2.59	0.51
1:A2:2652:G:H8	1:A2:2652:G:P	2.33	0.51
1:A2:2727:G:H2'	1:A2:2728:G:H8	1.74	0.51
1:A2:3630:G:H4'	1:A2:3631:A:C5'	2.41	0.51
1:A2:3732:A:C6	1:A2:3733:U:C2	2.99	0.51
1:A2:3740:C:P	47:BA:12:U:O2'	2.68	0.51
1:A2:4044:G:OP2	10:AG:73:ARG:NH1	2.44	0.51
1:A2:4089:G:H21	28:AZ:136:PHE:CB	2.24	0.51
1:A2:4105:C:H4'	1:A2:4106:G:OP1	2.11	0.51
1:A2:4712:U:H2'	8:AE:277:LEU:O	2.10	0.51
1:A2:4851:G:N2	1:A2:4882:G:H1'	2.25	0.51
3:A4:25:G:H2'	3:A4:26:C:C5	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AA:201:GLY:HA2	4:AA:204:MET:HG3	1.93	0.51
8:AE:165:LEU:HD23	8:AE:203:ILE:HD13	1.93	0.51
9:AF:104:LYS:HG3	9:AF:135:ILE:HG21	1.93	0.51
10:AG:66:GLN:HB3	16:AN:28:TRP:HH2	1.75	0.51
22:AT:82:GLY:O	30:Ab:21:ILE:HA	2.09	0.51
37:Ai:43:MET:HG2	37:Ai:47:VAL:HG23	1.93	0.51
46:Au:27:LEU:HB2	46:Au:163:VAL:CG2	2.40	0.51
46:Au:55:GLN:HB3	46:Au:162:ARG:NH2	2.26	0.51
47:BA:20:U:H2'	47:BA:21:A:H5'	1.93	0.51
48:BB:1148:LEU:HD13	50:C1:488:U:O4	2.10	0.51
48:BB:1225:GLY:C	48:BB:1253:VAL:HG21	2.36	0.51
48:BB:1308:MET:HE2	48:BB:1333:VAL:HG21	1.93	0.51
49:BC:66:A:N6	49:BC:101:U:H3	2.09	0.51
49:BC:173:A:H2'	49:BC:174:U:H5'	1.91	0.51
49:BC:337:G:N2	56:CF:128:ILE:CG2	2.73	0.51
50:C1:428:U:C2'	50:C1:429:C:H6	2.24	0.51
50:C1:448:A:H4'	50:C1:449:A:C5'	2.41	0.51
50:C1:547:G:OP2	50:C1:548:C:C5	2.64	0.51
50:C1:752:G:N2	50:C1:753:C:C5	2.79	0.51
50:C1:1017:U:H2'	50:C1:1018:U:O4'	2.10	0.51
50:C1:1418:C:C2'	50:C1:1419:C:C6	2.92	0.51
50:C1:1623:A:HO2'	50:C1:1624:U:H6	1.59	0.51
50:C1:1700:C:H5"	50:C1:1701:C:H5'	1.93	0.51
51:CA:33:GLN:CB	51:CA:154:LEU:HD12	2.41	0.51
52:CB:140:VAL:O	52:CB:210:VAL:HA	2.11	0.51
53:CC:74:LYS:HG3	53:CC:272:HIS:CD2	2.45	0.51
54:CD:98:ALA:HA	54:CD:188:ILE:HD12	1.93	0.51
58:CH:105:THR:HG22	58:CH:105:THR:O	2.09	0.51
59:CI:191:GLU:HG3	62:CL:20:LYS:HD2	1.92	0.51
61:CK:65:ARG:NE	80:Cd:22:ARG:HA	2.26	0.51
74:CX:122:VAL:O	74:CX:130:LEU:HD11	2.11	0.51
83:Cg:35:SER:HB3	83:Cg:37:ASP:OD1	2.11	0.51
1:A2:28:C:H6	1:A2:28:C:O5'	1.94	0.51
1:A2:346:A:H2'	1:A2:347:G:C5'	2.35	0.51
1:A2:357:A:H5"	40:Al:40:LYS:NZ	2.26	0.51
1:A2:1640:C:H2'	1:A2:1641:C:C6	2.46	0.51
1:A2:1660:G:H21	29:Aa:40:HIS:CA	2.24	0.51
1:A2:1705:U:H2'	1:A2:1706:U:C6	2.45	0.51
1:A2:2266:C:H6	1:A2:2266:C:C5'	2.24	0.51
1:A2:2378:A:H2	35:Ag:7:TYR:CZ	2.29	0.51
1:A2:2455:C:OP2	1:A2:2456:G:C8	2.61	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2503:C:H6	1:A2:2503:C:O5'	1.94	0.51
1:A2:2795:C:C6	1:A2:2795:C:H3'	2.46	0.51
1:A2:2831:G:C3'	1:A2:2832:G:H5'	2.41	0.51
1:A2:2839:G:C2	1:A2:3593:A:C8	2.99	0.51
1:A2:3685:C:H3'	1:A2:3704:G:O6	2.11	0.51
1:A2:3744:A:C2'	1:A2:3745:G:H5"	2.41	0.51
1:A2:3873:G:H1'	1:A2:3874:A:P	2.51	0.51
1:A2:4137:C:H2'	1:A2:4138:A:H5'	1.93	0.51
1:A2:4233:A:C8	1:A2:4233:A:H3'	2.46	0.51
1:A2:4668:A:C5'	1:A2:4669:U:H5	2.23	0.51
1:A2:4669:U:H2'	1:A2:4670:C:C6	2.46	0.51
1:A2:4819:U:C4	1:A2:4820:C:N4	2.79	0.51
1:A2:4880:U:C2'	1:A2:4881:C:H4'	2.41	0.51
3:A4:66:G:N3	3:A4:66:G:C2'	2.66	0.51
3:A4:69:U:H6	3:A4:69:U:H3'	1.76	0.51
7:AD:52:ILE:O	7:AD:62:CYS:HA	2.10	0.51
8:AE:144:ILE:O	8:AE:144:ILE:HG13	2.10	0.51
10:AG:106:THR:HB	10:AG:195:HIS:CD2	2.45	0.51
20:AR:131:VAL:O	20:AR:131:VAL:HG12	2.11	0.51
22:AT:105:PHE:O	22:AT:108:ARG:HB3	2.11	0.51
28:AZ:14:LEU:HD11	35:Ag:88:ARG:CG	2.40	0.51
28:AZ:17:ARG:HD2	35:Ag:75:SER:HB3	1.91	0.51
34:Af:72:GLY:HA3	34:Af:88:PHE:CD2	2.46	0.51
48:BB:840:THR:HA	48:BB:1065:ALA:N	2.26	0.51
48:BB:896:THR:HG23	48:BB:899:ILE:CD1	2.40	0.51
49:BC:173:A:H2'	49:BC:174:U:C6	2.46	0.51
50:C1:53:C:H2'	50:C1:54:A:H5'	1.92	0.51
50:C1:142:C:H2'	50:C1:142:C:O2	2.11	0.51
50:C1:214:U:O5'	50:C1:214:U:C6	2.64	0.51
50:C1:850:C:H2'	50:C1:850:C:O2	2.10	0.51
50:C1:1331:C:C6	50:C1:1489:A:N6	2.74	0.51
54:CD:213:PRO:HD3	68:CR:20:TYR:CE1	2.46	0.51
58:CH:170:VAL:HA	58:CH:173:PHE:CD2	2.46	0.51
64:CN:33:VAL:HG12	64:CN:37:ILE:CD1	2.41	0.51
69:CS:36:VAL:HG13	69:CS:40:TYR:HD1	1.76	0.51
83:Cg:302:TYR:HH	83:Cg:310:TRP:HH2	1.59	0.51
1:A2:105:A:H2'	1:A2:106:A:C8	2.47	0.50
1:A2:195:A:C8	1:A2:195:A:H5"	2.44	0.50
1:A2:365:G:H2'	1:A2:366:G:C5'	2.38	0.50
1:A2:715:C:H2'	1:A2:716:U:C6	2.44	0.50
1:A2:1273:G:H2'	8:AE:227:HIS:CG	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1294:C:C2	1:A2:3834:A:C2	2.99	0.50
1:A2:1318:G:C8	1:A2:1318:G:OP2	2.63	0.50
1:A2:1460:C:H6	1:A2:1460:C:C3'	2.18	0.50
1:A2:1533:A:H5"	44:Ap:4:ARG:NH2	2.26	0.50
1:A2:1715:A:C2'	1:A2:1716:A:H5'	2.40	0.50
1:A2:1795:C:O2	1:A2:1795:C:H2'	2.11	0.50
1:A2:2033:G:OP1	1:A2:2033:G:C8	2.65	0.50
1:A2:2288:U:H6	1:A2:2288:U:O5'	1.94	0.50
1:A2:2833:C:H5	1:A2:2834:A:C5	2.29	0.50
1:A2:3866:G:N1	1:A2:4519:A:H2	2.09	0.50
1:A2:3913:G:H2'	1:A2:3914:A:H5'	1.93	0.50
1:A2:4536:U:H2'	1:A2:4537:U:H6	1.74	0.50
1:A2:4595:A:C5'	1:A2:4624:A:H61	2.08	0.50
1:A2:4640:G:H2'	1:A2:4641:A:O5'	2.11	0.50
1:A2:4826:C:N3	15:AM:98:ARG:N	2.59	0.50
1:A2:4843:U:C2'	1:A2:4844:G:H5'	2.41	0.50
1:A2:4863:G:H2'	1:A2:4864:A:C5'	2.40	0.50
1:A2:4869:C:C6	1:A2:4869:C:P	3.03	0.50
2:A3:112:G:OP2	2:A3:112:G:H8	1.93	0.50
3:A4:24:C:H2'	3:A4:25:G:C8	2.46	0.50
5:AB:217:ILE:HD12	5:AB:347:LEU:HD12	1.93	0.50
5:AB:262:VAL:HG11	5:AB:268:ARG:NH1	2.25	0.50
6:AC:144:ILE:HG22	6:AC:144:ILE:O	2.11	0.50
10:AG:152:ALA:CA	10:AG:205:THR:HG22	2.40	0.50
10:AG:174:CYS:HB3	10:AG:179:VAL:O	2.11	0.50
14:AL:182:LEU:HD11	29:Aa:146:LEU:CD2	2.41	0.50
47:BA:67:C:N4	47:BA:68:C:N4	2.60	0.50
48:BB:844:ARG:CD	48:BB:845:ALA:H	2.24	0.50
48:BB:844:ARG:HD2	48:BB:845:ALA:H	1.75	0.50
48:BB:1001:PHE:CZ	48:BB:1036:PRO:CB	2.87	0.50
48:BB:1301:ILE:HD12	48:BB:1404:SER:N	2.26	0.50
48:BB:1367:LYS:O	48:BB:1369:GLN:N	2.43	0.50
50:C1:132:U:OP1	50:C1:133:C:H5	1.95	0.50
50:C1:312:G:H22	57:CG:195:LYS:HG3	1.76	0.50
50:C1:334:C:H2'	50:C1:335:G:H8	1.76	0.50
50:C1:649:U:H2'	50:C1:650:A:H8	1.74	0.50
50:C1:671:A:H5"	50:C1:671:A:H8	1.76	0.50
50:C1:888:U:C6	50:C1:888:U:C3'	2.94	0.50
50:C1:1555:U:O2'	50:C1:1556:A:H5'	2.11	0.50
50:C1:1687:C:O2	50:C1:1687:C:H2'	2.12	0.50
50:C1:1790:A:O2'	50:C1:1791:A:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1818:A:H8	50:C1:1818:A:O5'	1.94	0.50
53:CC:209:VAL:HB	53:CC:210:PRO:HD3	1.93	0.50
54:CD:24:PHE:CE1	54:CD:72:VAL:HG11	2.46	0.50
55:CE:180:LEU:HD13	55:CE:232:ASN:H	1.75	0.50
59:CI:68:GLY:HA3	62:CL:21:LYS:HE3	1.93	0.50
62:CL:35:ARG:HG2	62:CL:36:TYR:N	2.26	0.50
65:CO:104:ARG:HA	65:CO:142:ARG:NH1	2.26	0.50
66:CP:44:ARG:HD3	66:CP:44:ARG:C	2.36	0.50
69:CS:118:ARG:HA	69:CS:123:LEU:HD11	1.92	0.50
83:Cg:197:THR:HB	83:Cg:237:ASN:O	2.11	0.50
83:Cg:258:ILE:HD12	83:Cg:268:ASP:HB3	1.93	0.50
1:A2:3:C:H42	2:A3:154:G:H1	1.59	0.50
1:A2:231:G:H3'	1:A2:232:A:H5"	1.92	0.50
1:A2:263:U:H2'	1:A2:264:U:C6	2.46	0.50
1:A2:425:A:H2	33:Ae:27:ARG:HH12	1.58	0.50
1:A2:465:C:H2'	1:A2:466:G:C8	2.46	0.50
1:A2:738:U:H2'	1:A2:739:G:H8	1.76	0.50
1:A2:1217:C:C5	1:A2:1258:C:C2	3.00	0.50
1:A2:1478:C:H4'	1:A2:1479:A:OP1	2.10	0.50
1:A2:1529:G:H1	1:A2:1557:U:H3	1.59	0.50
1:A2:1770:U:H3'	1:A2:1771:U:H6	1.75	0.50
1:A2:1868:G:O5'	1:A2:1868:G:C8	2.60	0.50
1:A2:1890:G:H2'	1:A2:1891:C:H5'	1.93	0.50
1:A2:2051:C:C6	1:A2:2051:C:O5'	2.64	0.50
1:A2:2260:G:C8	1:A2:2260:G:C5'	2.91	0.50
1:A2:2401:G:C8	1:A2:2401:G:C3'	2.94	0.50
1:A2:2531:U:H4'	28:AZ:105:ALA:HB1	1.94	0.50
1:A2:2533:G:N2	1:A2:2737:G:O6	2.45	0.50
1:A2:2672:A:N3	1:A2:2672:A:C5'	2.74	0.50
1:A2:2836:G:C2'	1:A2:2837:C:H5'	2.41	0.50
1:A2:4142:G:H3'	1:A2:4142:G:C8	2.46	0.50
1:A2:4439:A:H2'	1:A2:4440:A:H5'	1.91	0.50
1:A2:4602:U:H2'	1:A2:4603:G:H8	1.76	0.50
1:A2:4607:G:H8	1:A2:4607:G:P	2.35	0.50
1:A2:4715:C:H2'	1:A2:4716:C:H6	1.76	0.50
1:A2:4837:U:C3'	1:A2:4838:C:H5'	2.39	0.50
6:AC:256:ALA:O	6:AC:260:LEU:HG	2.12	0.50
7:AD:123:VAL:HG12	7:AD:248:ARG:NH2	2.27	0.50
10:AG:30:PRO:C	10:AG:31:LEU:HD12	2.36	0.50
10:AG:121:LYS:HB3	10:AG:129:PRO:HG2	1.92	0.50
11:AH:102:ASN:HB3	11:AH:115:ARG:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AH:111:LEU:HD23	11:AH:127:ARG:HA	1.93	0.50
16:AN:94:PHE:CE2	16:AN:96:ARG:HB2	2.47	0.50
17:AO:172:LYS:HG2	17:AO:176:ARG:HH12	1.75	0.50
18:AP:4:TYR:N	18:AP:4:TYR:CD1	2.79	0.50
20:AR:105:LEU:HD12	20:AR:138:LEU:HD11	1.90	0.50
29:Aa:71:PRO:HG2	29:Aa:107:GLY:O	2.12	0.50
43:Ao:48:TYR:CG	43:Ao:49:GLY:N	2.79	0.50
45:At:2:SER:O	45:At:6:GLN:HG2	2.11	0.50
45:At:81:THR:C	45:At:83:ASN:N	2.67	0.50
48:BB:1027:ASP:OD1	48:BB:1029:ARG:HG2	2.11	0.50
48:BB:1230:LYS:HD3	48:BB:1233:MET:SD	2.51	0.50
49:BC:345:A:C6	49:BC:346:G:C5	2.99	0.50
50:C1:11:A:O5’	50:C1:11:A:H8	1.94	0.50
50:C1:73:C:O2’	50:C1:74:G:H5’	2.11	0.50
50:C1:75:G:N2	50:C1:78:C:H4’	2.26	0.50
50:C1:387:C:H2’	50:C1:388:U:C6	2.47	0.50
50:C1:570:C:C3’	50:C1:571:U:H5”	2.41	0.50
50:C1:867:G:N2	50:C1:868:G:C2	2.79	0.50
50:C1:904:A:H2’	50:C1:905:C:C6	2.45	0.50
50:C1:913:A:C6	58:CH:120:ARG:HB3	2.45	0.50
50:C1:973:C:C5	50:C1:974:C:C4	2.99	0.50
50:C1:1130:G:C5’	64:CN:10:GLY:HA2	2.41	0.50
50:C1:1130:G:H5’	64:CN:10:GLY:HA2	1.92	0.50
50:C1:1161:U:H2’	50:C1:1162:C:O5’	2.10	0.50
50:C1:1202:U:H4’	53:CC:114:LYS:HE3	1.93	0.50
50:C1:1452:A:H4’	50:C1:1453:C:O5’	2.11	0.50
50:C1:1454:A:O2’	50:C1:1455:A:C8	2.64	0.50
50:C1:1531:A:H2’	50:C1:1532:C:C6	2.46	0.50
50:C1:1534:C:C1’	50:C1:1535:U:OP2	2.59	0.50
50:C1:1649:U:O2’	50:C1:1650:A:H5’	2.11	0.50
50:C1:1767:C:C6	50:C1:1767:C:H3’	2.46	0.50
50:C1:1823:A:H4’	50:C1:1824:A:O5’	2.11	0.50
52:CB:71:LEU:HD22	52:CB:75:GLN:HB2	1.93	0.50
55:CE:23:LEU:O	55:CE:23:LEU:HG	2.08	0.50
56:CF:20:PHE:HD2	56:CF:21:GLY:H	1.58	0.50
62:CL:22:ARG:HG3	62:CL:27:GLU:O	2.11	0.50
65:CO:15:ILE:O	65:CO:15:ILE:HG13	2.10	0.50
71:CU:32:LEU:O	71:CU:35:VAL:HG12	2.10	0.50
72:CV:22:ARG:HH21	72:CV:56:CYS:HB2	1.76	0.50
76:CZ:73:VAL:HG13	76:CZ:77:LEU:HD12	1.93	0.50
1:A2:193:C:O2	1:A2:193:C:C2’	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:219:C:P	6:AC:165:LYS:NZ	2.85	0.50
1:A2:702:G:H2'	1:A2:703:G:H8	1.76	0.50
1:A2:710:G:H2'	1:A2:711:A:H5'	1.90	0.50
1:A2:716:U:C4'	9:AF:69:ILE:HB	2.22	0.50
1:A2:722:G:H3'	1:A2:723:G:H5"	1.93	0.50
1:A2:738:U:O5'	1:A2:738:U:H6	1.95	0.50
1:A2:1374:G:N2	1:A2:1449:G:H4'	2.27	0.50
1:A2:1737:G:H2'	1:A2:1738:G:H8	1.76	0.50
1:A2:2051:C:H6	1:A2:2051:C:C3'	2.17	0.50
1:A2:2285:G:H8	1:A2:2285:G:O5'	1.93	0.50
1:A2:2294:G:H5"	1:A2:2294:G:C8	2.43	0.50
1:A2:2352:A:C3'	1:A2:2353:A:H8	2.24	0.50
1:A2:2605:U:C6	1:A2:2605:U:C3'	2.95	0.50
1:A2:2704:C:O2'	1:A2:2705:U:H5'	2.11	0.50
1:A2:2755:G:N2	2:A3:113:C:P	2.84	0.50
1:A2:2782:C:OP2	1:A2:2782:C:H6	1.94	0.50
1:A2:3623:G:H3'	1:A2:3623:G:C8	2.46	0.50
1:A2:3667:G:H8	1:A2:3667:G:O5'	1.93	0.50
1:A2:4089:G:N2	28:AZ:135:ARG:O	2.44	0.50
1:A2:4215:A:H2'	1:A2:4216:A:H5'	1.92	0.50
1:A2:4397:U:H2'	1:A2:4398:U:H5'	1.93	0.50
1:A2:4456:A:C3'	1:A2:4457:U:H5'	2.41	0.50
1:A2:4612:G:H2'	1:A2:4613:C:H5'	1.92	0.50
1:A2:4702:G:H2'	1:A2:4703:A:H8	1.76	0.50
1:A2:4745:G:C2'	1:A2:4746:C:H5'	2.41	0.50
1:A2:4889:A:H2'	1:A2:4890:C:H6	1.76	0.50
1:A2:4981:U:O4	59:CI:122:GLY:CA	2.59	0.50
14:AL:47:ALA:O	14:AL:144:LEU:HD13	2.12	0.50
15:AM:100:ARG:HB3	17:AO:198:THR:HG22	1.93	0.50
22:AT:45:MET:HG3	22:AT:94:GLU:HB3	1.93	0.50
27:AY:87:ARG:HG3	27:AY:97:VAL:CG2	2.41	0.50
28:AZ:62:ILE:HG13	28:AZ:63:ALA:N	2.27	0.50
46:Au:32:ARG:HG3	46:Au:33:ASP:OD1	2.11	0.50
47:BA:74:C:O3'	48:BB:1374:LYS:HD3	2.11	0.50
50:C1:369:C:H2'	50:C1:370:G:C5'	2.42	0.50
50:C1:571:U:C2'	50:C1:572:U:C4'	2.89	0.50
50:C1:684:G:C2	50:C1:920:A:O4'	2.64	0.50
50:C1:1013:U:H6	50:C1:1013:U:O5'	1.95	0.50
50:C1:1635:C:C6	50:C1:1635:C:O5'	2.64	0.50
51:CA:39:TYR:CE2	68:CR:109:LEU:HG	2.46	0.50
51:CA:67:ALA:HA	72:CV:50:PHE:CZ	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CC:104:ASP:HB3	53:CC:130:ILE:HG22	1.92	0.50
54:CD:94:ARG:HG2	54:CD:101:GLN:HE22	1.75	0.50
55:CE:133:VAL:O	55:CE:136:ILE:HG23	2.12	0.50
56:CF:79:HIS:O	56:CF:81:ARG:N	2.44	0.50
61:CK:31:LYS:O	61:CK:32:HIS:HB2	2.11	0.50
1:A2:131:C:C2	1:A2:139:G:C2	2.99	0.50
1:A2:274:G:O6	1:A2:296:A:H2	1.95	0.50
1:A2:381:C:C6	1:A2:381:C:C5'	2.88	0.50
1:A2:444:G:C4'	1:A2:445:U:OP2	2.60	0.50
1:A2:445:U:C3'	1:A2:446:C:H6	2.23	0.50
1:A2:488:G:N1	1:A2:658:G:H1'	2.27	0.50
1:A2:921:U:H2'	1:A2:922:C:H6	1.77	0.50
1:A2:1249:G:H3'	1:A2:1250:A:C8	2.46	0.50
1:A2:1282:U:O2'	1:A2:1283:A:H5'	2.11	0.50
1:A2:1357:G:N7	1:A2:1360:G:C2'	2.73	0.50
1:A2:1474:G:H2'	1:A2:1475:G:H5'	1.93	0.50
1:A2:1499:C:C2'	1:A2:1500:C:H5'	2.41	0.50
1:A2:1804:A:C3'	1:A2:1805:G:C8	2.94	0.50
1:A2:1836:A:H5'	1:A2:1837:C:OP2	2.11	0.50
1:A2:1905:U:OP1	1:A2:1928:U:H5'	2.12	0.50
1:A2:3732:A:H3'	1:A2:3733:U:C6	2.46	0.50
1:A2:3810:C:O2'	1:A2:3811:C:H5'	2.11	0.50
1:A2:3856:C:H3'	1:A2:3857:G:C8	2.47	0.50
1:A2:3865:C:H2'	1:A2:3866:G:C5	2.47	0.50
1:A2:3896:U:O5'	1:A2:3896:U:H6	1.94	0.50
1:A2:4025:C:C6	1:A2:4025:C:O5'	2.65	0.50
1:A2:4362:C:H5'	1:A2:4363:U:OP2	2.11	0.50
1:A2:4711:U:H5'	34:Af:102:ARG:HB3	1.93	0.50
1:A2:4896:G:N2	8:AE:170:SER:HB3	2.23	0.50
1:A2:4897:C:N1	8:AE:172:LEU:HA	2.26	0.50
3:A4:1:G:C8	7:AD:264:LYS:HB3	2.47	0.50
3:A4:67:C:C6	3:A4:67:C:OP2	2.65	0.50
11:AH:48:LEU:HD22	11:AH:54:ARG:HH11	1.75	0.50
28:AZ:36:ARG:HH12	28:AZ:98:LYS:HD3	1.77	0.50
30:Ab:24:PRO:O	30:Ab:25:ARG:HB3	2.11	0.50
31:Ac:34:THR:O	31:Ac:38:ILE:HG12	2.11	0.50
39:Ak:38:CYS:HB2	39:Ak:41:TYR:O	2.11	0.50
45:At:46:ARG:HH22	45:At:106:LEU:HD11	1.77	0.50
47:BA:15:G:O2'	47:BA:16:U:H5'	2.11	0.50
48:BB:847:VAL:HG23	48:BB:935:ASP:H	1.76	0.50
48:BB:986:VAL:HG21	48:BB:1036:PRO:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1390:PHE:CD1	48:BB:1396:LEU:HD11	2.47	0.50
50:C1:210:U:C3’	50:C1:211:G:C5’	2.89	0.50
50:C1:331:C:C3’	50:C1:332:G:H5”	2.40	0.50
50:C1:661:U:H5’	50:C1:662:G:H3’	1.94	0.50
50:C1:893:U:H2’	50:C1:894:G:O4’	2.12	0.50
50:C1:1089:G:H2’	50:C1:1090:C:H6	1.75	0.50
50:C1:1109:C:O2	50:C1:1109:C:C3’	2.59	0.50
50:C1:1203:G:C2’	50:C1:1699:A:C2	2.95	0.50
50:C1:1484:A:O2’	50:C1:1485:U:H5’	2.11	0.50
50:C1:1685:U:C4	50:C1:1686:G:N7	2.80	0.50
51:CA:9:GLN:CA	72:CV:83:PHE:HA	2.41	0.50
54:CD:16:ILE:HG13	80:Cd:36:LEU:HD23	1.92	0.50
55:CE:252:ARG:NH1	55:CE:252:ARG:HB3	2.26	0.50
60:CJ:12:THR:O	60:CJ:45:ARG:HA	2.11	0.50
60:CJ:147:PHE:CE2	60:CJ:149:VAL:HG22	2.46	0.50
63:CM:64:LEU:HD22	82:Cf:106:TYR:HB2	1.93	0.50
64:CN:92:ILE:O	64:CN:96:VAL:HG23	2.10	0.50
1:A2:193:C:C4’	1:A2:194:A:OP2	2.54	0.50
1:A2:308:A:C2’	1:A2:309:A:H5’	2.42	0.50
1:A2:326:A:C2’	1:A2:327:A:C8	2.95	0.50
1:A2:376:A:O2’	1:A2:378:G:H5”	2.12	0.50
1:A2:391:A:H2’	1:A2:392:G:O4’	2.11	0.50
1:A2:426:A:C4	1:A2:427:C:C6	3.00	0.50
1:A2:694:C:O5’	1:A2:694:C:H6	1.95	0.50
1:A2:1161:C:H6	1:A2:1161:C:C3’	2.21	0.50
1:A2:1406:G:N2	1:A2:1438:A:C2	2.80	0.50
1:A2:1498:C:H2’	1:A2:1499:C:C6	2.47	0.50
1:A2:1536:C:C2’	1:A2:1537:A:H5’	2.41	0.50
1:A2:1542:A:C4’	64:CN:142:GLU:OE2	2.60	0.50
1:A2:1761:U:H2’	1:A2:1762:C:C6	2.46	0.50
1:A2:1777:G:H4’	1:A2:4175:C:C4	2.47	0.50
1:A2:1908:U:C2	17:AO:48:TYR:CE1	2.99	0.50
1:A2:2034:G:C8	1:A2:2036:G:N7	2.79	0.50
1:A2:2453:G:C2’	1:A2:2454:A:O4’	2.57	0.50
1:A2:2549:C:C4’	1:A2:2737:G:H8	2.24	0.50
1:A2:3585:U:C1’	1:A2:3586:G:P	2.99	0.50
1:A2:3682:U:H3’	1:A2:3682:U:C6	2.46	0.50
1:A2:3705:A:H8	1:A2:3705:A:O5’	1.95	0.50
1:A2:3801:U:H2’	1:A2:3802:C:O4’	2.12	0.50
1:A2:4061:G:C6	1:A2:4081:C:N4	2.79	0.50
1:A2:4278:C:H2’	1:A2:4279:C:O5’	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4803:C:H3'	1:A2:4804:G:H4'	1.93	0.50
1:A2:4811:G:O2'	1:A2:4812:A:H8	1.93	0.50
2:A3:44:A:H2'	2:A3:45:C:C6	2.47	0.50
3:A4:39:C:H6	3:A4:39:C:OP1	1.93	0.50
3:A4:92:C:H2'	3:A4:93:G:H8	1.75	0.50
5:AB:53:MET:HG2	5:AB:77:THR:HG22	1.94	0.50
6:AC:162:LYS:HD3	6:AC:162:LYS:H	1.77	0.50
8:AE:172:LEU:HD13	8:AE:188:ARG:HG2	1.93	0.50
10:AG:76:VAL:CG2	10:AG:81:ASN:HB2	2.41	0.50
11:AH:132:VAL:CG1	11:AH:154:VAL:HG22	2.33	0.50
14:AL:56:ARG:HB3	14:AL:57:PRO:HD2	1.94	0.50
23:AU:76:VAL:HG13	23:AU:77:PRO:HD2	1.93	0.50
28:AZ:10:VAL:HG22	28:AZ:87:VAL:HG23	1.93	0.50
35:Ag:92:LYS:O	35:Ag:96:LEU:HG	2.11	0.50
43:Ao:15:CYS:SG	43:Ao:17:LYS:O	2.70	0.50
48:BB:845:ALA:HB1	48:BB:911:GLY:C	2.35	0.50
48:BB:848:ILE:HB	48:BB:936:ILE:HG13	1.93	0.50
48:BB:1284:THR:HA	48:BB:1287:ARG:HG2	1.92	0.50
48:BB:1384:LYS:O	48:BB:1388:ARG:CB	2.59	0.50
50:C1:79:A:H2'	50:C1:79:A:N3	2.27	0.50
50:C1:83:A:H2'	75:CY:123:ALA:HB1	1.93	0.50
50:C1:83:A:C2'	75:CY:123:ALA:HB1	2.42	0.50
50:C1:219:U:C5'	50:C1:219:U:C6	2.95	0.50
50:C1:411:G:N2	50:C1:412:G:H1'	2.27	0.50
50:C1:813:A:H2'	50:C1:814:U:H5'	1.93	0.50
50:C1:914:U:H5"	50:C1:914:U:H6	1.74	0.50
50:C1:1016:U:C4	50:C1:1017:U:C5	2.99	0.50
50:C1:1283:C:H6	50:C1:1283:C:O5'	1.94	0.50
50:C1:1446:A:H5"	71:CU:58:THR:OG1	2.11	0.50
50:C1:1625:U:H4'	50:C1:1663:A:H4'	1.94	0.50
50:C1:1654:G:H8	50:C1:1654:G:O5'	1.94	0.50
51:CA:63:ARG:HA	72:CV:46:PHE:CE2	2.47	0.50
53:CC:63:VAL:O	53:CC:64:THR:CB	2.59	0.50
58:CH:5:SER:HA	58:CH:8:ILE:HD12	1.93	0.50
70:CT:107:LEU:HB3	70:CT:113:VAL:CG2	2.42	0.50
73:CW:114:GLU:O	73:CW:117:ARG:HG2	2.12	0.50
1:A2:64:A:O5'	1:A2:64:A:C8	2.65	0.50
1:A2:210:G:C6	1:A2:211:G:C8	2.99	0.50
1:A2:510:C:H4'	14:AL:111:GLN:HB2	1.89	0.50
1:A2:646:C:H2'	1:A2:647:C:C6	2.47	0.50
1:A2:1190:C:H1'	9:AF:67:THR:HA	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1803:G:H3'	1:A2:1804:A:H8	1.77	0.50
1:A2:1835:C:H1'	1:A2:1870:A:N3	2.27	0.50
1:A2:2426:A:C8	1:A2:2427:G:C8	2.99	0.50
1:A2:2525:C:C3'	1:A2:2526:G:H4'	2.41	0.50
1:A2:2599:G:H2'	1:A2:2600:A:H8	1.73	0.50
1:A2:2638:U:O2	1:A2:2638:U:C2'	2.57	0.50
1:A2:2724:U:O2'	35:Ag:62:LYS:HE3	2.12	0.50
1:A2:2782:C:H2'	1:A2:2783:A:C8	2.47	0.50
1:A2:3911:A:H2'	1:A2:3912:A:H8	1.76	0.50
1:A2:4022:C:H1'	46:Au:160:HIS:CE1	2.46	0.50
1:A2:4052:G:O5'	1:A2:4052:G:C8	2.64	0.50
1:A2:4190:C:H5"	43:Ao:1:MET:N	2.26	0.50
1:A2:4649:U:C2'	1:A2:4650:G:H5'	2.41	0.50
1:A2:4825:G:H21	15:AM:90:ARG:HB2	1.77	0.50
3:A4:9:C:O2	3:A4:9:C:C3'	2.58	0.50
8:AE:178:PRO:HB2	8:AE:181:LEU:HB2	1.94	0.50
10:AG:31:LEU:HD22	28:AZ:122:TYR:CZ	2.47	0.50
18:AP:64:ASN:HD22	18:AP:64:ASN:H	1.59	0.50
26:AX:119:ILE:HD12	26:AX:140:LEU:HD21	1.92	0.50
27:AY:59:ARG:HB2	27:AY:103:LYS:HD2	1.93	0.50
31:Ac:30:GLY:O	31:Ac:34:THR:HG23	2.12	0.50
33:Ae:84:GLU:HG2	45:At:20:ARG:CZ	2.41	0.50
42:An:1:MET:N	50:C1:1706:G:H4'	2.27	0.50
44:Ap:20:ALA:HA	44:Ap:23:ARG:HE	1.77	0.50
48:BB:881:GLN:CB	48:BB:1121:PRO:HG3	2.23	0.50
48:BB:939:LEU:CD1	48:BB:955:ILE:HG22	2.39	0.50
48:BB:1170:ILE:HD12	48:BB:1171:PRO:HD2	1.69	0.50
48:BB:1322:ILE:HB	48:BB:1386:PHE:CE1	2.46	0.50
48:BB:1335:GLN:HB3	48:BB:1363:ASP:OD1	2.11	0.50
49:BC:346:G:H2'	49:BC:347:C:C6	2.47	0.50
50:C1:100:U:H2'	50:C1:101:U:O5'	2.11	0.50
50:C1:343:A:C2	50:C1:344:U:C2	3.00	0.50
50:C1:372:U:C6	50:C1:372:U:C3'	2.95	0.50
50:C1:455:A:C8	50:C1:455:A:H3'	2.46	0.50
50:C1:482:G:N2	50:C1:485:A:H2	2.09	0.50
50:C1:574:A:C5'	50:C1:575:A:N7	2.69	0.50
50:C1:1095:C:H5"	73:CW:22:LYS:HZ1	1.73	0.50
50:C1:1198:G:H2'	50:C1:1198:G:N3	2.26	0.50
50:C1:1397:U:C3'	50:C1:1397:U:C6	2.95	0.50
50:C1:1606:G:H5'	70:CT:86:GLY:CA	2.42	0.50
50:C1:1614:A:H2'	50:C1:1615:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1704:C:C1’	50:C1:1832:A:N1	2.75	0.50
53:CC:260:VAL:O	53:CC:261:PHE:HB2	2.10	0.50
54:CD:213:PRO:HD3	68:CR:20:TYR:CZ	2.46	0.50
57:CG:15:LEU:HD13	57:CG:15:LEU:C	2.37	0.50
58:CH:37:LYS:HE2	58:CH:41:ARG:NH2	2.27	0.50
58:CH:109:ARG:HG3	58:CH:113:LYS:HD2	1.92	0.50
59:CI:83:TYR:HD1	59:CI:205:ARG:HD2	1.76	0.50
64:CN:63:VAL:HB	64:CN:71:ILE:HD11	1.94	0.50
65:CO:99:ALA:CB	65:CO:108:PRO:HA	2.40	0.50
68:CR:5:ARG:O	68:CR:10:LYS:HE2	2.11	0.50
69:CS:41:ALA:O	69:CS:45:LEU:HD13	2.11	0.50
83:Cg:109:LEU:N	83:Cg:109:LEU:HD22	2.27	0.50
83:Cg:196:ASN:HD21	83:Cg:235:ILE:HD11	1.75	0.50
1:A2:221:U:H3	6:AC:163:LYS:HA	1.75	0.50
1:A2:298:A:H3’	1:A2:298:A:C8	2.46	0.50
1:A2:366:G:H5”	1:A2:366:G:H8	1.77	0.50
1:A2:407:U:H2’	1:A2:408:G:H5’	1.93	0.50
1:A2:470:G:O2’	1:A2:471:C:H5’	2.10	0.50
1:A2:646:C:H2’	1:A2:647:C:H6	1.76	0.50
1:A2:949:G:C8	1:A2:949:G:OP2	2.65	0.50
1:A2:962:G:C8	1:A2:962:G:P	3.05	0.50
1:A2:975:C:H2’	1:A2:976:C:O4’	2.12	0.50
1:A2:1063:U:H2’	1:A2:1064:C:C6	2.46	0.50
1:A2:1315:G:H8	1:A2:1315:G:O5’	1.94	0.50
1:A2:1481:G:O3’	19:AQ:142:PRO:HG3	2.12	0.50
1:A2:1491:G:H4’	1:A2:1827:U:O3’	2.12	0.50
1:A2:1890:G:C2’	1:A2:1891:C:H5’	2.42	0.50
1:A2:2323:C:H4’	33:Ae:36:ARG:HH12	1.76	0.50
1:A2:2650:G:P	1:A2:2650:G:H2’	2.52	0.50
1:A2:4136:C:H2’	1:A2:4137:C:C6	2.46	0.50
1:A2:4449:G:N3	1:A2:4668:A:H2’	2.27	0.50
1:A2:4455:G:H5”	1:A2:4455:G:C8	2.47	0.50
1:A2:4469:U:H1’	1:A2:4472:U:C4	2.47	0.50
1:A2:4630:C:O3’	1:A2:4631:C:H3’	2.11	0.50
1:A2:4714:G:H8	1:A2:4714:G:O5’	1.95	0.50
1:A2:4896:G:C4	8:AE:214:ASP:CG	2.89	0.50
1:A2:4983:G:H2’	1:A2:4984:C:H6	1.73	0.50
3:A4:31:G:N2	3:A4:48:G:O6	2.43	0.50
3:A4:89:G:C4	3:A4:90:A:C8	3.00	0.50
4:AA:159:SER:O	4:AA:162:ASN:HB3	2.12	0.50
6:AC:76:ILE:HG23	6:AC:77:PRO:HD2	1.91	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AH:23:ARG:HE	11:AH:39:ASN:HA	1.76	0.50
28:AZ:3:LYS:HE2	28:AZ:30:ASP:OD2	2.12	0.50
47:BA:50:U:H2'	47:BA:51:U:O4'	2.12	0.50
48:BB:817:GLU:CA	48:BB:1170:ILE:HG12	2.20	0.50
48:BB:831:ARG:CZ	48:BB:1066:HIS:HA	2.42	0.50
48:BB:893:ASN:HD21	48:BB:906:ASN:ND2	2.10	0.50
48:BB:933:LEU:HD11	48:BB:1090:ILE:HB	1.93	0.50
48:BB:1152:LEU:HD11	48:BB:1155:THR:OG1	2.11	0.50
50:C1:232:A:OP2	50:C1:890:U:H1'	2.12	0.50
50:C1:443:U:H5'	50:C1:443:U:C6	2.47	0.50
50:C1:525:A:H2'	50:C1:526:A:OP2	2.11	0.50
50:C1:660:C:C2	62:CL:98:LYS:O	2.64	0.50
50:C1:751:G:O2'	50:C1:752:G:H5'	2.12	0.50
50:C1:944:A:H2'	50:C1:944:A:N3	2.25	0.50
50:C1:978:G:C6	50:C1:979:C:N4	2.79	0.50
50:C1:1036:A:H2'	50:C1:1037:G:H5'	1.94	0.50
50:C1:1547:C:OP1	50:C1:1547:C:H4'	2.12	0.50
50:C1:1574:C:C2'	50:C1:1575:G:H5'	2.39	0.50
50:C1:1583:C:N4	50:C1:1584:G:C6	2.80	0.50
50:C1:1860:A:C4	50:C1:1862:G:C8	2.99	0.50
51:CA:63:ARG:HG2	72:CV:46:PHE:HZ	1.74	0.50
52:CB:179:ASN:O	52:CB:180:ASP:HB2	2.10	0.50
53:CC:267:GLN:HE22	72:CV:35:ASN:HB2	1.75	0.50
59:CI:146:GLN:O	59:CI:149:TYR:HB2	2.12	0.50
61:CK:50:GLN:HA	61:CK:53:LYS:HG2	1.94	0.50
1:A2:2:G:H2'	1:A2:3:C:O5'	2.12	0.50
1:A2:9:C:H1'	10:AG:60:TYR:CE1	2.47	0.50
1:A2:19:G:N2	1:A2:20:U:C5	2.80	0.50
1:A2:116:G:H8	10:AG:145:THR:HG21	1.77	0.50
1:A2:194:A:H5"	27:AY:122:LYS:NZ	2.27	0.50
1:A2:736:G:H2'	1:A2:736:G:N3	2.26	0.50
1:A2:929:U:OP1	1:A2:930:C:H5	1.95	0.50
1:A2:943:G:H3'	1:A2:1262:G:C5'	2.40	0.50
1:A2:978:G:C2'	1:A2:979:C:C6	2.83	0.50
1:A2:1171:C:H2'	1:A2:1172:C:H6	1.74	0.50
1:A2:1186:C:C2'	1:A2:1187:C:H5'	2.42	0.50
1:A2:2479:G:H5'	1:A2:4052:G:N2	2.27	0.50
1:A2:2498:G:H5"	35:Ag:25:THR:CG2	2.42	0.50
1:A2:2550:A:O5'	1:A2:2736:G:C8	2.62	0.50
1:A2:2574:G:H2'	1:A2:2574:G:N3	2.26	0.50
1:A2:2833:C:H6	1:A2:2833:C:H3'	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3609:U:H5'	1:A2:3610:U:OP2	2.12	0.50
1:A2:3729:A:O2'	1:A2:3730:C:P	2.69	0.50
1:A2:3935:A:H8	1:A2:3935:A:O5'	1.95	0.50
1:A2:4264:A:OP2	22:AT:80:VAL:HA	2.10	0.50
1:A2:4637:U:C1'	1:A2:4638:G:OP1	2.54	0.50
1:A2:4851:G:C2	1:A2:4882:G:H8	2.30	0.50
3:A4:7:G:C2'	3:A4:8:G:H5'	2.41	0.50
4:AA:140:ASN:HB2	4:AA:145:LYS:O	2.11	0.50
5:AB:171:LEU:HD11	5:AB:323:TYR:OH	2.12	0.50
6:AC:55:SER:O	6:AC:56:GLU:HB2	2.11	0.50
14:AL:91:ALA:HA	14:AL:94:ILE:HG22	1.92	0.50
18:AP:30:ARG:HD3	18:AP:30:ARG:C	2.37	0.50
19:AQ:64:SER:HB3	19:AQ:92:VAL:HG21	1.93	0.50
32:Ad:124:GLU:O	32:Ad:125:ASN:HB2	2.12	0.50
46:Au:59:ILE:HD11	46:Au:146:LYS:CA	2.42	0.50
48:BB:837:ASN:O	48:BB:839:ASN:OD1	2.30	0.50
48:BB:909:ILE:CD1	48:BB:910:PRO:HD2	2.37	0.50
48:BB:1035:VAL:HG11	48:BB:1048:LEU:HD13	1.94	0.50
48:BB:1069:GLU:HG2	48:BB:1092:ILE:HD11	1.92	0.50
48:BB:1257:ARG:HD2	48:BB:1260:GLN:OE1	2.12	0.50
48:BB:1432:GLU:O	48:BB:1432:GLU:HG3	2.12	0.50
50:C1:61:A:H4'	50:C1:62:G:OP2	2.12	0.50
50:C1:120:U:H5'	50:C1:120:U:H6	1.77	0.50
50:C1:508:A:H3'	50:C1:509:G:H8	1.77	0.50
50:C1:743:U:H2'	58:CH:100:ILE:H	1.77	0.50
50:C1:1195:A:C2	50:C1:1196:A:C5	3.00	0.50
50:C1:1234:C:H4'	50:C1:1246:A:N1	2.27	0.50
50:C1:1284:A:C8	50:C1:1286:G:H5"	2.47	0.50
50:C1:1370:A:H62	68:CR:4:VAL:HB	1.76	0.50
50:C1:1506:A:C5'	50:C1:1508:A:N7	2.74	0.50
50:C1:1586:U:C2'	50:C1:1587:G:O5'	2.59	0.50
50:C1:1635:C:H2'	50:C1:1635:C:O2	2.11	0.50
50:C1:1707:U:C2'	50:C1:1708:C:H5'	2.42	0.50
51:CA:168:ALA:HB3	51:CA:203:PHE:CE1	2.46	0.50
55:CE:125:LYS:HB3	55:CE:142:HIS:ND1	2.26	0.50
58:CH:109:ARG:CG	58:CH:110:THR:N	2.74	0.50
71:CU:104:ILE:HD13	71:CU:106:ILE:HG22	1.93	0.50
76:CZ:50:PHE:CE2	76:CZ:55:TYR:CD1	2.99	0.50
83:Cg:41:ILE:HD13	83:Cg:58:ALA:HA	1.93	0.50
1:A2:189:G:O5'	1:A2:189:G:C8	2.65	0.50
1:A2:384:U:OP2	1:A2:384:U:H6	1.95	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:635:G:C2'	1:A2:636:G:H5'	2.41	0.50
1:A2:943:G:C6	6:AC:311:ARG:HA	2.47	0.50
1:A2:1230:C:H2'	1:A2:1231:C:C6	2.47	0.50
1:A2:1387:C:H6	1:A2:1387:C:H5"	1.76	0.50
1:A2:2366:A:C2'	1:A2:2367:G:H5'	2.42	0.50
1:A2:2397:A:H3'	1:A2:2398:G:C5'	2.42	0.50
1:A2:2503:C:C5	1:A2:2504:A:C6	3.00	0.50
1:A2:2549:C:O3'	1:A2:2736:G:H8	1.93	0.50
1:A2:2651:A:H2	31:Ac:53:PRO:HG2	1.75	0.50
1:A2:3770:U:C4'	1:A2:4456:A:C2	2.87	0.50
1:A2:3867:G:C5	5:AB:262:VAL:HG23	2.47	0.50
1:A2:4177:G:O2'	1:A2:4263:C:C6	2.63	0.50
1:A2:4371:G:H2'	1:A2:4372:C:C6	2.47	0.50
1:A2:4417:U:O5'	1:A2:4417:U:H6	1.95	0.50
1:A2:4449:G:C6	1:A2:4668:A:C5	2.99	0.50
1:A2:4579:U:O3'	24:AV:46:LYS:HD2	2.12	0.50
1:A2:4809:G:H2'	1:A2:4810:G:H8	1.77	0.50
1:A2:4837:U:H5	8:AE:160:LYS:HA	1.77	0.50
1:A2:4850:C:H2'	1:A2:4851:G:H8	1.76	0.50
4:AA:176:ASP:O	44:Ap:25:MET:HE2	2.12	0.50
8:AE:178:PRO:HD2	8:AE:182:ASN:OD1	2.12	0.50
12:AI:171:TRP:HB3	12:AI:174:THR:HG22	1.94	0.50
15:AM:47:ARG:HH11	21:AS:73:LEU:HB2	1.76	0.50
16:AN:151:ILE:HG13	16:AN:159:ARG:NH2	2.27	0.50
17:AO:94:ARG:NE	34:Af:97:ILE:HD12	2.27	0.50
42:An:1:MET:H3	50:C1:1706:G:C5'	2.25	0.50
44:Ap:75:SER:O	44:Ap:79:VAL:HG23	2.12	0.50
46:Au:32:ARG:HD3	46:Au:196:ASP:OD1	2.12	0.50
48:BB:853:HIS:HD2	48:BB:950:GLN:H	1.58	0.50
48:BB:897:LYS:HZ2	48:BB:898:MET:HE3	1.76	0.50
48:BB:1116:ARG:NH2	50:C1:487:U:C3'	2.66	0.50
48:BB:1211:PHE:CB	48:BB:1280:PHE:HE2	2.23	0.50
48:BB:1235:ALA:C	48:BB:1238:MET:HG2	2.37	0.50
48:BB:1351:ILE:HD11	48:BB:1376:GLU:OE1	2.12	0.50
49:BC:350:G:H2'	49:BC:350:G:N3	2.26	0.50
50:C1:77:A:N3	50:C1:77:A:C2'	2.74	0.50
50:C1:170:A:C2'	50:C1:171:A:C8	2.93	0.50
50:C1:672:A:H3'	50:C1:672:A:OP2	2.11	0.50
50:C1:925:G:H1'	64:CN:87:ASP:OD1	2.12	0.50
50:C1:1231:C:H1'	50:C1:1528:G:N2	2.27	0.50
50:C1:1415:C:N3	50:C1:1416:C:C5	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1431:G:C2	50:C1:1432:U:C2	3.00	0.50
50:C1:1452:A:C6	50:C1:1475:G:C5	3.00	0.50
50:C1:1602:U:H2'	50:C1:1603:G:C8	2.43	0.50
56:CF:26:ASP:O	56:CF:27:ASP:HB2	2.11	0.50
56:CF:91:ARG:HA	56:CF:91:ARG:HE	1.76	0.50
57:CG:160:LYS:O	57:CG:160:LYS:HG3	2.06	0.50
60:CJ:169:ARG:H	60:CJ:170:PRO:HD3	1.76	0.50
63:CM:32:ALA:HB3	63:CM:110:VAL:CG2	2.42	0.50
77:Ca:41:ILE:O	77:Ca:41:ILE:HG13	2.10	0.50
77:Ca:44:ILE:HA	77:Ca:67:LEU:HD12	1.94	0.50
1:A2:2:G:C5	1:A2:3:C:C5	3.01	0.49
1:A2:30:C:O2	1:A2:2437:A:H2	1.95	0.49
1:A2:214:C:H3'	1:A2:214:C:C6	2.44	0.49
1:A2:379:A:P	1:A2:379:A:C8	3.05	0.49
1:A2:480:C:O5'	1:A2:480:C:H6	1.95	0.49
1:A2:739:G:H2'	1:A2:740:G:C8	2.47	0.49
1:A2:903:C:O5'	1:A2:903:C:H6	1.95	0.49
1:A2:977:G:H1	1:A2:1052:C:H42	1.60	0.49
1:A2:1057:C:C6	1:A2:1057:C:O5'	2.65	0.49
1:A2:1204:G:OP1	1:A2:1211:C:H5	1.95	0.49
1:A2:1450:U:H2'	1:A2:1451:C:H6	1.76	0.49
1:A2:1465:C:C3'	1:A2:1466:G:H5'	2.42	0.49
1:A2:1473:U:H4'	1:A2:4257:G:H4'	1.93	0.49
1:A2:1595:U:O2'	1:A2:1596:G:H5'	2.12	0.49
1:A2:1665:C:H5"	30:Ab:19:ASN:ND2	2.26	0.49
1:A2:1869:A:N7	1:A2:1870:A:C5	2.80	0.49
1:A2:2564:A:C8	1:A2:2564:A:C5'	2.95	0.49
1:A2:2750:G:H2'	1:A2:2751:C:C5	2.44	0.49
1:A2:2873:G:H5"	20:AR:134:ASN:HB2	1.92	0.49
1:A2:3732:A:H3'	1:A2:3733:U:H6	1.77	0.49
1:A2:3920:G:H22	1:A2:4029:G:H22	0.79	0.49
1:A2:4021:A:H3'	1:A2:4022:C:C6	2.47	0.49
1:A2:4163:A:H4'	22:AT:2:THR:OG1	2.11	0.49
1:A2:4374:A:C8	1:A2:4382:A:N1	2.79	0.49
1:A2:4607:G:P	1:A2:4607:G:C8	3.05	0.49
1:A2:4845:G:H8	1:A2:4845:G:O5'	1.95	0.49
3:A4:102:U:C2'	3:A4:103:A:H5'	2.42	0.49
3:A4:107:G:H8	3:A4:107:G:O5'	1.95	0.49
4:AA:189:TYR:HB2	4:AA:196:TRP:HD1	1.76	0.49
10:AG:80:ILE:O	10:AG:81:ASN:HB3	2.11	0.49
16:AN:96:ARG:NH2	16:AN:100:SER:HB3	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AP:25:HIS:CD2	18:AP:142:SER:HB2	2.47	0.49
19:AQ:90:VAL:HG21	29:Aa:80:THR:CG2	2.41	0.49
27:AY:74:TYR:HB3	27:AY:77:LYS:HB2	1.93	0.49
28:AZ:14:LEU:HD21	35:Ag:88:ARG:NE	2.27	0.49
32:Ad:89:SER:O	32:Ad:104:THR:HA	2.11	0.49
34:Af:43:LEU:HD22	34:Af:76:ARG:CA	2.42	0.49
48:BB:1353:THR:HG23	48:BB:1376:GLU:H	1.75	0.49
48:BB:1406:ASP:O	48:BB:1408:LEU:HD23	2.12	0.49
49:BC:266:G:C3'	50:C1:1114:U:C6	2.85	0.49
49:BC:350:G:P	54:CD:146:ARG:NE	2.84	0.49
50:C1:15:U:O4'	50:C1:668:A:C2	2.64	0.49
50:C1:130:G:H5'	57:CG:195:LYS:HZ1	1.76	0.49
50:C1:204:G:C2'	50:C1:205:G:H5'	2.42	0.49
50:C1:539:C:C6	50:C1:539:C:C3'	2.95	0.49
50:C1:571:U:H2'	50:C1:572:U:C4'	2.41	0.49
50:C1:678:U:O5'	50:C1:678:U:C6	2.64	0.49
50:C1:684:G:O4'	50:C1:920:A:C2	2.65	0.49
50:C1:884:C:H2'	50:C1:885:U:C6	2.47	0.49
50:C1:1157:G:H1'	73:CW:76:SER:CB	2.41	0.49
50:C1:1168:G:H2'	50:C1:1169:G:H5'	1.94	0.49
50:C1:1196:A:C2'	50:C1:1197:G:H5'	2.42	0.49
50:C1:1432:U:H6	50:C1:1432:U:O5'	1.95	0.49
50:C1:1452:A:C6	50:C1:1476:A:C6	3.00	0.49
55:CE:42:LEU:CD1	55:CE:47:PHE:HB2	2.42	0.49
56:CF:116:ILE:HD13	56:CF:154:LEU:CD1	2.42	0.49
57:CG:186:GLN:HA	57:CG:189:ARG:NH2	2.27	0.49
67:CQ:24:HIS:NE2	67:CQ:26:LYS:HD3	2.27	0.49
67:CQ:60:LYS:HB2	67:CQ:60:LYS:NZ	2.27	0.49
1:A2:62:A:C6	1:A2:63:G:C6	3.00	0.49
1:A2:70:A:H5'	1:A2:72:C:N4	2.24	0.49
1:A2:115:C:H41	1:A2:154:U:H1'	1.76	0.49
1:A2:251:C:O5'	1:A2:251:C:H6	1.95	0.49
1:A2:314:C:H1'	1:A2:4315:G:N2	2.27	0.49
1:A2:465:C:H2'	1:A2:466:G:H8	1.76	0.49
1:A2:1086:A:P	3:A4:107:G:H4'	2.52	0.49
1:A2:1361:U:P	1:A2:1361:U:C6	3.05	0.49
1:A2:1424:G:N2	1:A2:1425:U:H1'	2.27	0.49
1:A2:1481:G:N2	19:AQ:64:SER:OG	2.45	0.49
1:A2:1653:C:H4'	1:A2:4336:A:C5	2.47	0.49
1:A2:2294:G:C5'	1:A2:2294:G:C8	2.95	0.49
1:A2:2305:U:H3'	1:A2:2306:G:H8	1.74	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2519:G:C6	1:A2:2520:A:C6	3.00	0.49
1:A2:2553:G:H8	1:A2:2553:G:C5'	2.17	0.49
1:A2:2587:G:O5'	1:A2:2587:G:C8	2.66	0.49
1:A2:2716:C:H5'	44:Ap:49:ARG:HH22	1.77	0.49
1:A2:3570:C:O2'	1:A2:3571:C:H5'	2.12	0.49
1:A2:3873:G:H1'	1:A2:3874:A:O5'	2.12	0.49
1:A2:4033:G:H2'	1:A2:4034:U:C6	2.47	0.49
1:A2:4043:U:H1'	1:A2:4044:G:P	2.52	0.49
1:A2:4201:C:H2'	1:A2:4201:C:O2	2.11	0.49
1:A2:4277:A:OP1	1:A2:4277:A:H4'	2.12	0.49
1:A2:4640:G:H5'	1:A2:4640:G:C8	2.39	0.49
1:A2:4645:U:O5'	1:A2:4645:U:C6	2.61	0.49
1:A2:4673:G:C8	1:A2:4674:C:C5	3.00	0.49
1:A2:4889:A:H2'	1:A2:4890:C:C6	2.47	0.49
1:A2:4896:G:N3	8:AE:170:SER:HB3	2.27	0.49
2:A3:16:G:OP2	2:A3:16:G:H8	1.95	0.49
2:A3:29:G:H2'	2:A3:30:U:C6	2.46	0.49
5:AB:223:THR:O	5:AB:274:TYR:HA	2.12	0.49
5:AB:293:ILE:HG12	5:AB:295:ASP:H	1.77	0.49
8:AE:232:ILE:HG22	8:AE:233:PHE:N	2.26	0.49
8:AE:278:THR:H	8:AE:281:ILE:HG13	1.77	0.49
14:AL:152:GLY:O	14:AL:156:PRO:HD3	2.13	0.49
15:AM:49:ALA:HB2	21:AS:100:LEU:HD21	1.95	0.49
25:AW:13:ILE:HG12	25:AW:32:LEU:HB3	1.93	0.49
26:AX:77:ILE:O	26:AX:77:ILE:HG23	2.12	0.49
27:AY:120:GLU:HG3	27:AY:124:LYS:HD2	1.93	0.49
31:Ac:82:GLY:CA	31:Ac:91:VAL:HG12	2.42	0.49
37:Ai:33:LEU:HD23	37:Ai:34:THR:H	1.76	0.49
38:Aj:14:LYS:HB2	38:Aj:14:LYS:NZ	2.28	0.49
48:BB:880:GLN:C	48:BB:1122:PRO:HD2	2.37	0.49
48:BB:1399:LYS:NZ	48:BB:1428:LYS:HE3	2.27	0.49
50:C1:452:G:H2'	50:C1:453:C:C6	2.46	0.49
50:C1:860:G:C6	50:C1:861:A:N1	2.80	0.49
50:C1:867:G:H8	50:C1:867:G:O5'	1.94	0.49
50:C1:894:G:H2'	50:C1:895:G:C8	2.46	0.49
50:C1:990:A:H2'	50:C1:991:G:O5'	2.12	0.49
50:C1:1087:A:H3'	50:C1:1088:U:C5'	2.42	0.49
50:C1:1260:A:H8	50:C1:1260:A:O5'	1.95	0.49
50:C1:1350:U:O2'	51:CA:112:ILE:HB	2.12	0.49
53:CC:85:SER:HA	72:CV:26:ALA:O	2.11	0.49
59:CI:197:PHE:HE1	62:CL:10:TYR:O	1.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:Cb:36:LYS:HG2	78:Cb:43:ILE:HG12	1.94	0.49
83:Cg:105:THR:HB	83:Cg:126:ASP:CB	2.42	0.49
1:A2:224:A:H2'	1:A2:225:C:O4'	2.12	0.49
1:A2:229:G:C1'	1:A2:374:A:H1'	2.25	0.49
1:A2:481:C:H2'	1:A2:482:G:O4'	2.13	0.49
1:A2:484:G:H2'	1:A2:485:U:C6	2.47	0.49
1:A2:1217:C:O2	6:AC:326:LEU:HD13	2.12	0.49
1:A2:1313:A:H3'	1:A2:1314:A:N7	2.24	0.49
1:A2:1368:A:C5	1:A2:1376:G:N2	2.80	0.49
1:A2:1529:G:H8	1:A2:1529:G:O5'	1.95	0.49
1:A2:1542:A:N6	64:CN:127:ARG:NE	2.59	0.49
1:A2:1542:A:H61	64:CN:127:ARG:CZ	2.15	0.49
1:A2:1801:U:H2'	1:A2:1802:G:C1'	2.42	0.49
1:A2:1846:A:H2'	1:A2:1848:C:H6	1.76	0.49
1:A2:1900:G:H2'	1:A2:1901:A:O4'	2.11	0.49
1:A2:1911:G:H21	1:A2:2036:G:H5'	1.77	0.49
1:A2:2266:C:H2'	1:A2:2267:G:C8	2.47	0.49
1:A2:2325:G:H5'	1:A2:2328:C:N4	2.27	0.49
1:A2:2551:G:N2	28:AZ:111:ARG:CB	2.74	0.49
1:A2:2795:C:O5'	1:A2:2795:C:H6	1.95	0.49
1:A2:3727:U:C6	1:A2:3727:U:H3'	2.46	0.49
1:A2:4251:G:C4'	1:A2:4252:A:H5"	2.39	0.49
1:A2:4263:C:H5"	1:A2:4264:A:H5'	1.95	0.49
1:A2:4418:C:H2'	1:A2:4419:U:C6	2.47	0.49
1:A2:4473:A:H2'	1:A2:4474:G:O4'	2.12	0.49
1:A2:4565:A:O3'	48:BB:853:HIS:NE2	2.32	0.49
1:A2:4706:C:P	34:Af:54:LYS:HB2	2.51	0.49
1:A2:4851:G:N2	1:A2:4882:G:C8	2.81	0.49
2:A3:24:G:O2'	2:A3:25:G:H5'	2.12	0.49
12:AI:42:LYS:HB2	12:AI:45:GLU:HB2	1.95	0.49
12:AI:72:ALA:HB2	12:AI:155:ALA:HB2	1.94	0.49
14:AL:84:ALA:HB2	14:AL:117:LEU:HD13	1.95	0.49
17:AO:147:TRP:NE1	17:AO:149:TYR:HB2	2.27	0.49
21:AS:164:LYS:HB2	21:AS:165:PRO:HD3	1.94	0.49
24:AV:89:ARG:HB2	24:AV:95:PHE:CE2	2.48	0.49
27:AY:120:GLU:O	27:AY:125:SER:HB3	2.12	0.49
36:Ah:69:LEU:O	36:Ah:73:TYR:HD1	1.95	0.49
43:Ao:12:CYS:O	43:Ao:15:CYS:SG	2.70	0.49
46:Au:198:VAL:CG1	46:Au:210:VAL:HG22	2.42	0.49
49:BC:338:C:N4	50:C1:961:G:P	2.80	0.49
50:C1:67:C:H1'	57:CG:164:LYS:HD2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:219:U:H6	50:C1:219:U:H5”	1.77	0.49
50:C1:382:C:C6	50:C1:382:C:OP2	2.65	0.49
50:C1:421:G:H21	50:C1:653:A:H5’	1.76	0.49
50:C1:498:C:H5”	50:C1:499:G:OP2	2.12	0.49
50:C1:682:U:H3	50:C1:1023:A:N6	2.08	0.49
50:C1:695:C:C5	50:C1:695:C:OP2	2.65	0.49
50:C1:928:G:O2’	50:C1:929:G:H5”	2.12	0.49
50:C1:1208:A:N6	50:C1:1691:U:H3	2.10	0.49
50:C1:1406:G:C4’	50:C1:1407:U:C5’	2.90	0.49
50:C1:1439:A:P	50:C1:1439:A:C8	3.05	0.49
50:C1:1483:A:H2’	50:C1:1483:A:N3	2.27	0.49
50:C1:1523:C:O5’	50:C1:1523:C:H6	1.94	0.49
50:C1:1624:U:O2	50:C1:1624:U:C2’	2.58	0.49
50:C1:1861:G:H4’	77:Ca:2:THR:C	2.36	0.49
55:CE:136:ILE:HG12	55:CE:136:ILE:O	2.12	0.49
57:CG:90:GLY:C	57:CG:92:ARG:H	2.20	0.49
58:CH:20:GLU:HG2	58:CH:48:ALA:HB3	1.93	0.49
59:CI:138:ASN:OD1	59:CI:144:LYS:HE3	2.13	0.49
63:CM:93:LYS:HE2	63:CM:101:ARG:HH21	1.77	0.49
64:CN:33:VAL:HG12	64:CN:37:ILE:HD11	1.94	0.49
65:CO:27:VAL:CG1	65:CO:90:ILE:HG12	2.42	0.49
67:CQ:89:SER:HB2	67:CQ:119:LEU:HB3	1.93	0.49
68:CR:29:HIS:CG	83:Cg:65:PHE:HE2	2.30	0.49
70:CT:34:VAL:HG22	70:CT:99:VAL:CG1	2.42	0.49
77:Ca:23:CYS:O	77:Ca:27:ALA:HA	2.12	0.49
1:A2:93:G:C6	1:A2:94:A:C6	3.00	0.49
1:A2:148:G:H22	10:AG:163:PRO:HG2	1.76	0.49
1:A2:192:C:O5’	1:A2:192:C:C6	2.63	0.49
1:A2:212:C:O2	1:A2:217:C:C6	2.65	0.49
1:A2:341:C:H3’	6:AC:197:ARG:HH12	1.77	0.49
1:A2:674:G:C5’	1:A2:674:G:C8	2.95	0.49
1:A2:700:C:C2’	1:A2:701:C:C4’	2.89	0.49
1:A2:903:C:H2’	1:A2:904:C:C6	2.47	0.49
1:A2:929:U:H5’	6:AC:319:LEU:HD22	1.93	0.49
1:A2:1316:G:H8	1:A2:1316:G:O5’	1.95	0.49
1:A2:1481:G:H2’	19:AQ:65:ARG:HH21	1.76	0.49
1:A2:1603:G:OP1	1:A2:1605:G:H1’	2.12	0.49
1:A2:1652:U:H2’	1:A2:1653:C:C6	2.47	0.49
1:A2:2000:C:C3’	1:A2:2001:C:C6	2.95	0.49
1:A2:2301:C:O2’	1:A2:2302:G:H5’	2.12	0.49
1:A2:2469:C:H4’	2:A3:126:C:N3	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2686:C:H3’	1:A2:2687:C:C6	2.47	0.49
1:A2:3658:G:H5”	1:A2:3659:U:OP2	2.11	0.49
1:A2:3746:G:H1’	1:A2:3747:U:H5	1.78	0.49
1:A2:3829:A:N3	1:A2:3829:A:H2’	2.28	0.49
1:A2:4154:U:O2’	1:A2:4155:G:H5’	2.12	0.49
1:A2:4233:A:C8	1:A2:4233:A:C3’	2.95	0.49
1:A2:4386:C:H2’	1:A2:4386:C:O2	2.12	0.49
1:A2:4518:U:C2’	1:A2:4519:A:H5’	2.42	0.49
1:A2:4718:C:O2’	17:AO:167:HIS:HB3	2.12	0.49
2:A3:13:G:H4’	18:AP:120:ASN:ND2	2.27	0.49
3:A4:11:A:C2	3:A4:66:G:N2	2.80	0.49
6:AC:53:ALA:O	6:AC:54:VAL:HB	2.12	0.49
6:AC:180:ILE:HD11	6:AC:207:PRO:HG2	1.93	0.49
6:AC:189:MET:HB3	6:AC:195:LYS:HE3	1.95	0.49
7:AD:51:MET:HG3	7:AD:64:ILE:HD13	1.94	0.49
14:AL:166:ALA:HB1	29:Aa:97:ALA:HB1	1.94	0.49
17:AO:7:LEU:O	17:AO:33:VAL:HA	2.12	0.49
21:AS:24:THR:N	21:AS:25:PRO:HD3	2.28	0.49
27:AY:62:TYR:HB3	27:AY:65:GLN:HG3	1.92	0.49
33:Ae:5:ARG:N	33:Ae:6:PRO:HD3	2.27	0.49
47:BA:40:C:H2’	47:BA:41:C:H6	1.76	0.49
48:BB:821:ASP:HA	48:BB:1165:TYR:HH	1.65	0.49
48:BB:1068:GLU:N	48:BB:1093:ASN:C	2.69	0.49
48:BB:1070:LEU:O	48:BB:1160:PRO:CB	2.60	0.49
48:BB:1173:LEU:C	48:BB:1175:ASP:H	2.20	0.49
48:BB:1247:VAL:HG22	48:BB:1248:ILE:N	2.27	0.49
50:C1:22:A:C2	50:C1:653:A:C2	3.00	0.49
50:C1:84:A:H5’	75:CY:123:ALA:CB	2.37	0.49
50:C1:438:G:H2’	50:C1:439:A:H8	1.78	0.49
50:C1:586:G:N2	50:C1:587:A:H1’	2.27	0.49
50:C1:683:G:C4	50:C1:1023:A:N1	2.80	0.49
50:C1:1147:C:C6	50:C1:1147:C:C3’	2.94	0.49
50:C1:1225:U:O5’	50:C1:1225:U:H6	1.96	0.49
50:C1:1241:A:C1’	50:C1:1267:C:H1’	2.40	0.49
50:C1:1308:U:H1’	50:C1:1309:C:N1	2.27	0.49
50:C1:1482:C:C5	50:C1:1483:A:H8	2.30	0.49
50:C1:1658:G:C6	50:C1:1659:U:N3	2.80	0.49
50:C1:1836:G:OP1	50:C1:1839:U:H4’	2.12	0.49
52:CB:218:LEU:HD22	52:CB:219:LYS:H	1.77	0.49
74:CX:100:VAL:HA	74:CX:124:LYS:O	2.12	0.49
1:A2:14:C:C1’	1:A2:15:A:H5’	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:123:C:O5’	1:A2:123:C:H6	1.96	0.49
1:A2:297:A:H8	1:A2:297:A:H3’	1.78	0.49
1:A2:325:A:H3’	1:A2:326:A:H8	1.78	0.49
1:A2:928:A:OP2	1:A2:928:A:H4’	2.11	0.49
1:A2:1867:U:H5”	1:A2:1868:G:OP2	2.12	0.49
1:A2:2296:G:C8	1:A2:2296:G:OP2	2.66	0.49
1:A2:2312:C:H2’	1:A2:2313:G:H8	1.77	0.49
1:A2:2332:G:C2’	1:A2:2333:U:H5”	2.39	0.49
1:A2:2549:C:H5”	1:A2:2736:G:O2’	2.12	0.49
1:A2:2749:C:O5’	1:A2:2749:C:H6	1.96	0.49
1:A2:3769:A:N3	1:A2:4456:A:H1’	2.25	0.49
1:A2:3796:G:H4’	1:A2:3797:A:OP2	2.12	0.49
1:A2:3858:G:C3’	1:A2:4679:G:N2	2.71	0.49
1:A2:4130:A:H1’	1:A2:4131:C:OP2	2.13	0.49
1:A2:4156:G:H8	1:A2:4156:G:O5’	1.96	0.49
1:A2:4198:G:H2’	1:A2:4199:A:O4’	2.12	0.49
1:A2:4358:C:H6	1:A2:4358:C:C3’	2.23	0.49
1:A2:4413:C:H2’	1:A2:4414:G:H5’	1.93	0.49
1:A2:4428:U:H2’	1:A2:4429:U:H5’	1.93	0.49
1:A2:4643:U:H5’	1:A2:4643:U:H6	1.77	0.49
1:A2:4648:C:O2’	1:A2:4649:U:H5’	2.13	0.49
1:A2:4954:G:H8	1:A2:4954:G:O5’	1.96	0.49
2:A3:85:U:H5”	2:A3:85:U:H6	1.77	0.49
4:AA:200:ARG:O	4:AA:204:MET:HG2	2.12	0.49
6:AC:179:ASP:O	6:AC:182:LYS:HB3	2.12	0.49
10:AG:80:ILE:C	10:AG:82:GLN:H	2.19	0.49
12:AI:193:ASP:O	12:AI:194:GLY:C	2.55	0.49
13:AJ:76:GLY:O	13:AJ:78:LYS:N	2.46	0.49
14:AL:47:ALA:CB	14:AL:48:PRO:CD	2.89	0.49
17:AO:130:LYS:HG3	17:AO:131:PRO:HD2	1.95	0.49
29:Aa:76:ASP:HB3	29:Aa:114:LYS:HG2	1.94	0.49
30:Ab:39:PHE:HA	30:Ab:42:ASN:ND2	2.28	0.49
34:Af:47:CYS:HG	34:Af:103:VAL:HG22	1.78	0.49
36:Ah:118:LYS:N	36:Ah:118:LYS:HD3	2.27	0.49
48:BB:846:PRO:HD3	48:BB:909:ILE:CD1	2.43	0.49
48:BB:896:THR:CB	48:BB:900:LYS:HD2	2.42	0.49
48:BB:933:LEU:CD2	48:BB:1075:MET:CE	2.42	0.49
48:BB:1008:ILE:HD11	48:BB:1012:PHE:CZ	2.47	0.49
48:BB:1230:LYS:HA	48:BB:1233:MET:SD	2.53	0.49
49:BC:61:U:O5’	49:BC:61:U:H6	1.95	0.49
50:C1:37:C:C3’	50:C1:38:A:H5”	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:70:G:H3'	50:C1:71:G:H5"	1.94	0.49
50:C1:130:G:H4'	50:C1:181:A:H61	1.77	0.49
50:C1:158:A:O4'	50:C1:464:A:H8	1.95	0.49
50:C1:181:A:C8	57:CG:196:LYS:HB2	2.48	0.49
50:C1:834:C:H5'	50:C1:836:G:OP2	2.12	0.49
50:C1:992:A:H8	50:C1:992:A:O5'	1.94	0.49
50:C1:1113:A:H2	50:C1:1120:U:C4	2.30	0.49
50:C1:1243:U:H2'	50:C1:1244:U:O4'	2.12	0.49
50:C1:1373:C:H2'	50:C1:1374:C:H6	1.76	0.49
51:CA:58:LEU:HD11	51:CA:178:LEU:HB2	1.93	0.49
51:CA:83:GLY:O	51:CA:87:VAL:HG23	2.12	0.49
53:CC:256:TRP:NE1	73:CW:68:ARG:HD3	2.27	0.49
54:CD:172:VAL:HG22	54:CD:185:LYS:HG2	1.93	0.49
57:CG:23:LYS:HE2	57:CG:42:GLY:H	1.77	0.49
60:CJ:129:LEU:O	60:CJ:134:HIS:HB2	2.12	0.49
63:CM:38:ALA:O	63:CM:42:LEU:HG	2.12	0.49
69:CS:37:GLY:H	69:CS:40:TYR:HB3	1.76	0.49
69:CS:43:VAL:HG22	70:CT:37:VAL:CB	2.41	0.49
74:CX:123:VAL:HA	74:CX:130:LEU:CD1	2.42	0.49
78:Cb:37:CYS:SG	78:Cb:40:CYS:N	2.85	0.49
83:Cg:18:VAL:HG11	83:Cg:21:ILE:HD11	1.95	0.49
1:A2:76:A:C2	1:A2:77:U:C1'	2.96	0.49
1:A2:95:G:H4'	1:A2:95:G:OP1	2.12	0.49
1:A2:105:A:H2	1:A2:327:A:H2	1.55	0.49
1:A2:218:C:O2	1:A2:219:C:C5	2.65	0.49
1:A2:286:A:N1	1:A2:308:A:C8	2.79	0.49
1:A2:337:G:C8	1:A2:337:G:O5'	2.66	0.49
1:A2:409:A:N1	2:A3:17:A:H1'	2.27	0.49
1:A2:902:G:H2'	1:A2:902:G:N3	2.27	0.49
1:A2:1058:A:O2'	1:A2:1059:C:H5"	2.12	0.49
1:A2:1216:C:H1'	1:A2:1217:C:P	2.53	0.49
1:A2:1580:A:N7	1:A2:3612:A:C4	2.80	0.49
1:A2:1717:A:C4'	3:A4:101:A:C2	2.90	0.49
1:A2:1907:A:H2'	1:A2:1907:A:N3	2.27	0.49
1:A2:2283:A:N3	1:A2:2283:A:C2'	2.74	0.49
1:A2:2320:G:C5	6:AC:54:VAL:HG21	2.47	0.49
1:A2:2430:A:N6	1:A2:2484:A:H2	2.06	0.49
1:A2:2485:U:H3'	1:A2:2486:C:H5"	1.95	0.49
1:A2:2533:G:C8	1:A2:2533:G:O5'	2.64	0.49
1:A2:2536:G:H2'	1:A2:2537:C:C5	2.47	0.49
1:A2:2647:C:H2'	1:A2:2648:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2671:G:H4'	1:A2:2672:A:O4'	2.13	0.49
1:A2:2685:U:H3'	1:A2:2685:U:C6	2.47	0.49
1:A2:3735:A:H61	50:C1:1708:C:C2'	1.98	0.49
1:A2:3896:U:H2'	1:A2:3897:A:C8	2.47	0.49
1:A2:3942:G:C2'	1:A2:3943:G:H5'	2.37	0.49
1:A2:4177:G:O2'	1:A2:4263:C:H6	1.94	0.49
1:A2:4269:G:H2'	1:A2:4270:A:O4'	2.12	0.49
1:A2:4325:C:H2'	1:A2:4326:A:H8	1.75	0.49
1:A2:4573:C:O4'	11:AH:122:TYR:HB2	2.13	0.49
1:A2:4582:A:H2'	1:A2:4583:G:C8	2.48	0.49
1:A2:4747:C:H2'	1:A2:4748:G:H8	1.77	0.49
1:A2:4932:A:H2'	1:A2:4933:G:O4'	2.12	0.49
1:A2:4989:A:H2'	1:A2:4990:U:O4'	2.12	0.49
2:A3:84:A:H62	27:AY:114:ASP:H	1.61	0.49
3:A4:57:C:H2'	3:A4:58:A:H5'	1.94	0.49
6:AC:52:TYR:O	6:AC:53:ALA:HB2	2.11	0.49
8:AE:223:ARG:HD2	8:AE:229:GLU:OE2	2.13	0.49
10:AG:83:PHE:O	10:AG:84:THR:HB	2.12	0.49
10:AG:104:PRO:HG3	10:AG:194:VAL:HG23	1.95	0.49
14:AL:40:GLN:O	14:AL:44:ARG:HD3	2.12	0.49
38:Aj:21:ARG:HB2	38:Aj:39:TYR:CD1	2.47	0.49
43:Ao:33:LEU:O	43:Ao:34:TYR:HB2	2.13	0.49
48:BB:897:LYS:CG	48:BB:898:MET:H	2.12	0.49
48:BB:1110:PRO:HB2	48:BB:1174:LYS:HB2	1.95	0.49
48:BB:1304:PHE:HE2	48:BB:1413:ARG:HH11	1.60	0.49
48:BB:1355:ILE:CG2	48:BB:1371:VAL:CB	2.90	0.49
48:BB:1383:PRO:HG2	48:BB:1389:HIS:CE1	2.48	0.49
50:C1:76:U:C2'	50:C1:77:A:H3'	2.27	0.49
50:C1:111:A:C4'	50:C1:112:U:OP1	2.57	0.49
50:C1:148:U:H5"	50:C1:148:U:C6	2.43	0.49
50:C1:332:G:N7	57:CG:186:GLN:HB2	2.27	0.49
50:C1:573:U:C2'	50:C1:576:A:C2	2.86	0.49
50:C1:657:U:C6	50:C1:657:U:C3'	2.95	0.49
50:C1:751:G:N3	50:C1:752:G:C8	2.80	0.49
50:C1:754:G:H2'	50:C1:755:C:H6	1.73	0.49
50:C1:1285:G:C4'	50:C1:1286:G:O5'	2.61	0.49
50:C1:1397:U:H3'	50:C1:1397:U:C6	2.47	0.49
50:C1:1447:G:P	71:CU:87:ARG:HH22	2.35	0.49
50:C1:1453:C:H3'	50:C1:1453:C:O2	2.12	0.49
50:C1:1477:U:H1'	50:C1:1478:U:P	2.52	0.49
50:C1:1788:A:N3	50:C1:1788:A:H2'	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:CD:80:PRO:C	54:CD:82:GLY:H	2.21	0.49
56:CF:144:LEU:HD23	79:Cc:49:PRO:CB	2.36	0.49
57:CG:167:LYS:HG2	57:CG:167:LYS:O	2.13	0.49
74:CX:54:LYS:HD2	74:CX:91:LEU:HD11	1.94	0.49
1:A2:44:A:H2'	1:A2:45:U:H6	1.77	0.49
1:A2:115:C:C5	1:A2:153:G:N2	2.80	0.49
1:A2:160:A:H2'	1:A2:161:G:H8	1.77	0.49
1:A2:178:C:OP2	1:A2:179:G:H5'	2.13	0.49
1:A2:690:U:C3'	1:A2:691:G:H5"	2.42	0.49
1:A2:917:G:H1'	1:A2:918:C:C4	2.48	0.49
1:A2:1056:C:H41	1:A2:1204:G:H1	1.56	0.49
1:A2:1058:A:N1	1:A2:1206:U:H1'	2.28	0.49
1:A2:1200:G:H2'	1:A2:1201:G:C8	2.47	0.49
1:A2:1224:G:C3'	1:A2:1225:C:C5'	2.87	0.49
1:A2:1518:G:H4'	4:AA:194:ASN:HD22	1.78	0.49
1:A2:1643:U:H2'	1:A2:1644:C:C6	2.48	0.49
1:A2:1648:A:H1'	1:A2:1830:U:O2'	2.13	0.49
1:A2:1742:C:H3'	1:A2:1743:G:H4'	1.94	0.49
1:A2:1822:G:C8	1:A2:1822:G:H5"	2.47	0.49
1:A2:2062:C:C5	1:A2:2063:G:C8	3.01	0.49
1:A2:2491:G:H2'	1:A2:2491:G:N3	2.28	0.49
1:A2:3580:A:H2'	1:A2:3581:C:C6	2.48	0.49
1:A2:3867:G:N3	5:AB:261:ARG:HA	2.28	0.49
1:A2:4251:G:H4'	1:A2:4252:A:C3'	2.41	0.49
1:A2:4296:A:H3'	1:A2:4296:A:H8	1.77	0.49
1:A2:4490:U:H2'	1:A2:4491:U:H6	1.76	0.49
1:A2:4556:C:O5'	1:A2:4556:C:H6	1.96	0.49
1:A2:4696:G:H2'	1:A2:4697:C:C6	2.48	0.49
1:A2:4814:C:H5"	17:AO:165:LYS:HB3	1.93	0.49
1:A2:4829:A:C5'	21:AS:167:PHE:O	2.59	0.49
1:A2:4840:U:O2'	1:A2:4841:C:H5'	2.12	0.49
2:A3:90:C:H2'	2:A3:91:A:C8	2.47	0.49
3:A4:97:G:H8	3:A4:97:G:H5'	1.76	0.49
4:AA:41:ILE:HD13	10:AG:42:GLY:HA2	1.93	0.49
6:AC:13:GLU:HB2	6:AC:170:LEU:CD1	2.35	0.49
7:AD:64:ILE:HG21	7:AD:109:LEU:CD2	2.43	0.49
8:AE:134:SER:O	8:AE:135:GLN:HB2	2.13	0.49
12:AI:30:LYS:HG2	12:AI:63:GLU:HB3	1.94	0.49
13:AJ:109:ILE:HD13	13:AJ:109:ILE:N	2.28	0.49
18:AP:15:CYS:SG	18:AP:150:LEU:HB2	2.53	0.49
25:AW:33:ASN:N	25:AW:33:ASN:HD22	2.09	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Ae:65:LYS:HB2	33:Ae:65:LYS:HZ2	1.77	0.49
38:Aj:15:THR:O	38:Aj:28:HIS:HA	2.13	0.49
43:Ao:105:GLN:CG	47:BA:56:C:C2'	2.89	0.49
45:At:18:ILE:HD13	45:At:18:ILE:N	2.27	0.49
46:Au:60:VAL:HG22	46:Au:101:THR:CB	2.41	0.49
48:BB:1235:ALA:HA	48:BB:1238:MET:HE3	1.93	0.49
48:BB:1321:PRO:HB3	48:BB:1374:LYS:HD2	1.91	0.49
48:BB:1357:VAL:HG12	48:BB:1360:LYS:HB2	1.92	0.49
50:C1:24:C:H6	50:C1:24:C:O5'	1.96	0.49
50:C1:76:U:O2'	50:C1:77:A:H2'	2.13	0.49
50:C1:442:C:C3'	50:C1:443:U:H5"	2.43	0.49
50:C1:559:G:H2'	50:C1:561:A:H1'	1.95	0.49
50:C1:668:A:H1'	50:C1:1198:G:H1'	1.95	0.49
50:C1:691:G:H2'	50:C1:692:G:H8	1.78	0.49
50:C1:1132:C:C6	50:C1:1132:C:O5'	2.65	0.49
50:C1:1292:C:O5'	50:C1:1292:C:C6	2.65	0.49
50:C1:1402:A:H3'	50:C1:1403:C:C5	2.47	0.49
50:C1:1406:G:O2'	50:C1:1408:U:H5	1.95	0.49
50:C1:1416:C:C5	50:C1:1417:C:C6	3.00	0.49
50:C1:1589:A:H2'	50:C1:1653:U:O2'	2.13	0.49
50:C1:1654:G:H4'	70:CT:82:ARG:CZ	2.43	0.49
55:CE:49:ARG:HH21	55:CE:58:GLY:CA	2.26	0.49
58:CH:143:ARG:HD3	73:CW:51:GLU:OE2	2.13	0.49
73:CW:83:LEU:O	73:CW:86:LEU:HG	2.13	0.49
73:CW:101:PHE:HB3	73:CW:129:PHE:CZ	2.47	0.49
83:Cg:87:LEU:HB2	83:Cg:101:PHE:HB2	1.94	0.49
1:A2:103:G:O3'	1:A2:1360:G:N2	2.45	0.49
1:A2:221:U:C4	6:AC:163:LYS:HA	2.48	0.49
1:A2:404:G:OP2	1:A2:404:G:H4'	2.13	0.49
1:A2:716:U:C2'	1:A2:717:G:H5"	2.43	0.49
1:A2:1067:A:H2'	1:A2:1068:C:H6	1.70	0.49
1:A2:1367:A:H4'	1:A2:1368:A:H5'	1.94	0.49
1:A2:1471:G:H5"	30:Ab:44:ARG:NH1	2.27	0.49
1:A2:1792:U:O2	1:A2:1792:U:H2'	2.12	0.49
1:A2:2020:A:H2	1:A2:4424:A:N6	2.08	0.49
1:A2:2064:G:OP2	1:A2:2064:G:C8	2.65	0.49
1:A2:2541:G:H2'	1:A2:2542:A:C8	2.48	0.49
1:A2:2663:G:C5	1:A2:2664:U:O2	2.66	0.49
1:A2:2743:A:H2'	1:A2:2744:U:C5	2.48	0.49
1:A2:4055:G:H3'	4:AA:37:ARG:HH21	1.78	0.49
1:A2:4289:G:H3'	1:A2:4289:G:N3	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4367:G:C4	1:A2:4368:G:C8	3.01	0.49
1:A2:4456:A:H3'	1:A2:4457:U:C5'	2.42	0.49
1:A2:4573:C:H4'	11:AH:122:TYR:HD1	1.76	0.49
1:A2:4724:G:H5'	11:AH:23:ARG:NH1	2.24	0.49
1:A2:4724:G:C8	11:AH:44:GLU:HB2	2.48	0.49
1:A2:4747:C:H2'	1:A2:4748:G:C8	2.48	0.49
1:A2:4863:G:H3'	1:A2:4863:G:C8	2.47	0.49
2:A3:57:C:O2'	2:A3:58:G:H5'	2.13	0.49
2:A3:87:G:C6	2:A3:88:A:C2	3.01	0.49
5:AB:3:HIS:O	5:AB:4:ARG:C	2.55	0.49
5:AB:17:LEU:O	5:AB:19:ARG:N	2.46	0.49
10:AG:225:ASN:O	10:AG:229:ARG:HD2	2.13	0.49
13:AJ:56:THR:HG23	13:AJ:62:ILE:O	2.12	0.49
14:AL:124:LEU:HA	36:Ah:120:ALA:O	2.13	0.49
16:AN:84:PRO:O	43:Ao:48:TYR:CE2	2.66	0.49
20:AR:15:LEU:O	20:AR:16:ARG:HB2	2.12	0.49
26:AX:89:LYS:HE2	26:AX:137:TYR:CE1	2.48	0.49
46:Au:50:PRO:HG3	46:Au:179:VAL:HG21	1.93	0.49
48:BB:831:ARG:NH1	48:BB:1066:HIS:HA	2.27	0.49
48:BB:833:GLU:HA	48:BB:833:GLU:OE1	2.12	0.49
48:BB:842:LYS:CD	48:BB:1140:GLU:CB	2.76	0.49
48:BB:853:HIS:CE1	48:BB:854:VAL:HG22	2.48	0.49
48:BB:972:ILE:HG22	48:BB:1001:PHE:HE1	1.77	0.49
48:BB:1064:LEU:O	48:BB:1142:ALA:CB	2.61	0.49
48:BB:1087:ILE:HG13	48:BB:1152:LEU:HD13	1.94	0.49
48:BB:1209:LEU:HD23	48:BB:1213:LYS:CE	2.42	0.49
50:C1:89:C:H5"	50:C1:89:C:H6	1.77	0.49
50:C1:310:C:C2'	50:C1:340:C:H5'	2.41	0.49
50:C1:345:U:H2'	50:C1:346:C:H5'	1.94	0.49
50:C1:345:U:H2'	50:C1:346:C:O5'	2.13	0.49
50:C1:385:G:H5'	50:C1:386:C:C5	2.48	0.49
50:C1:527:C:O2'	60:CJ:121:LYS:HB2	2.13	0.49
50:C1:572:U:H3'	50:C1:573:U:C2	2.48	0.49
50:C1:683:G:C1'	50:C1:1023:A:C2	2.86	0.49
50:C1:973:C:H5	50:C1:974:C:C4	2.30	0.49
50:C1:1129:G:C3'	50:C1:1130:G:H8	2.26	0.49
50:C1:1196:A:H2'	50:C1:1197:G:C5'	2.43	0.49
50:C1:1597:C:H4'	50:C1:1603:G:O6	2.12	0.49
51:CA:77:ILE:HG12	51:CA:99:ILE:HG22	1.95	0.49
52:CB:31:TYR:CZ	52:CB:94:LYS:HA	2.47	0.49
52:CB:132:GLY:HA3	52:CB:221:PRO:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:CK:12:TYR:HB3	61:CK:79:LEU:HD22	1.94	0.49
78:Cb:59:CYS:O	78:Cb:60:SER:HB3	2.13	0.49
1:A2:509:G:H2'	1:A2:510:C:H6	1.78	0.49
1:A2:1198:G:H2'	1:A2:1199:G:H8	1.78	0.49
1:A2:1208:U:O2	1:A2:1208:U:H2'	2.12	0.49
1:A2:1216:C:C1'	1:A2:1217:C:P	3.01	0.49
1:A2:1338:G:OP1	6:AC:117:THR:HG23	2.13	0.49
1:A2:1352:A:H5'	6:AC:48:ASN:OD1	2.12	0.49
1:A2:1590:C:H1'	1:A2:1591:G:C8	2.47	0.49
1:A2:1769:U:O5'	1:A2:1769:U:H6	1.96	0.49
1:A2:1773:A:H2	3:A4:98:G:N2	2.11	0.49
1:A2:2052:C:O5'	1:A2:2052:C:H6	1.94	0.49
1:A2:2276:A:H3'	1:A2:2277:G:C5'	2.43	0.49
1:A2:2281:U:H3'	1:A2:2282:G:H5'	1.94	0.49
1:A2:2549:C:N1	1:A2:2550:A:C8	2.81	0.49
1:A2:2576:G:H5"	1:A2:2577:A:H2'	1.94	0.49
1:A2:2688:G:H8	1:A2:2688:G:O5'	1.96	0.49
1:A2:3739:U:H2'	1:A2:3740:C:C6	2.47	0.49
1:A2:3927:G:N3	1:A2:3927:G:H2'	2.28	0.49
1:A2:4025:C:H3'	1:A2:4025:C:H6	1.72	0.49
1:A2:4052:G:OP1	1:A2:4052:G:C8	2.66	0.49
1:A2:4417:U:H2'	1:A2:4418:C:C5'	2.43	0.49
1:A2:4432:G:C2	1:A2:4433:A:N7	2.81	0.49
1:A2:4658:C:HO2'	1:A2:4659:U:H6	1.56	0.49
1:A2:4723:A:C1'	1:A2:4724:G:P	3.01	0.49
1:A2:4874:G:H2'	1:A2:4875:C:C6	2.46	0.49
2:A3:127:U:H5"	2:A3:128:C:OP2	2.13	0.49
3:A4:66:G:O3'	7:AD:14:LYS:HA	2.13	0.49
3:A4:67:C:OP2	3:A4:67:C:H6	1.95	0.49
5:AB:106:PHE:HD1	5:AB:133:TYR:OH	1.96	0.49
6:AC:45:ARG:NE	6:AC:238:LEU:HD22	2.28	0.49
6:AC:50:GLN:HB2	6:AC:51:PRO:CD	2.43	0.49
6:AC:252:TRP:CE3	6:AC:260:LEU:HD11	2.47	0.49
6:AC:263:LEU:O	6:AC:271:ALA:HB1	2.13	0.49
8:AE:282:TYR:O	8:AE:286:LEU:HG	2.13	0.49
13:AJ:151:ILE:CD1	13:AJ:156:ARG:HA	2.43	0.49
16:AN:68:ARG:HG2	16:AN:128:LYS:HG3	1.95	0.49
39:Ak:60:LEU:HD22	39:Ak:61:PRO:HD2	1.95	0.49
45:At:103:ARG:HD3	45:At:106:LEU:HB3	1.95	0.49
48:BB:837:ASN:C	48:BB:838:VAL:CG2	2.86	0.49
48:BB:1110:PRO:CB	48:BB:1174:LYS:HB2	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1239:LEU:HG	48:BB:1246:ALA:HB2	1.95	0.49
49:BC:337:G:O2'	56:CF:135:ARG:HG2	2.12	0.49
50:C1:77:A:H5"	50:C1:78:C:H41	1.76	0.49
50:C1:175:A:H3'	50:C1:176:U:C5'	2.31	0.49
50:C1:380:G:N3	50:C1:382:C:C5	2.81	0.49
50:C1:540:U:C2	50:C1:542:U:H5"	2.48	0.49
50:C1:550:C:H2'	50:C1:551:U:C6	2.48	0.49
50:C1:752:G:O2'	50:C1:753:C:H5'	2.12	0.49
50:C1:809:A:C6	50:C1:810:A:N6	2.80	0.49
50:C1:934:G:H5'	50:C1:993:G:H22	1.75	0.49
50:C1:1052:A:H5"	50:C1:1053:C:OP2	2.13	0.49
50:C1:1191:C:O2'	50:C1:1192:U:H5'	2.12	0.49
50:C1:1286:G:N3	50:C1:1286:G:C2'	2.76	0.49
50:C1:1419:C:H2'	50:C1:1420:G:H8	1.78	0.49
50:C1:1419:C:H1'	70:CT:3:GLY:HA3	1.94	0.49
50:C1:1483:A:N3	50:C1:1483:A:C2'	2.76	0.49
50:C1:1648:G:C2'	67:CQ:127:CYS:HA	2.42	0.49
51:CA:110:ASN:O	51:CA:116:PHE:HD1	1.95	0.49
52:CB:128:LYS:HB2	52:CB:134:LEU:CD2	2.43	0.49
55:CE:52:LEU:O	55:CE:53:LYS:HB2	2.13	0.49
57:CG:195:LYS:HD3	57:CG:195:LYS:C	2.38	0.49
58:CH:109:ARG:HG3	58:CH:113:LYS:CD	2.43	0.49
60:CJ:163:SER:N	60:CJ:164:PRO:HD2	2.27	0.49
61:CK:12:TYR:CD1	61:CK:52:LEU:HD11	2.47	0.49
78:Cb:40:CYS:O	78:Cb:41:TYR:HB3	2.13	0.49
1:A2:67:C:H2'	1:A2:67:C:O2	2.12	0.49
1:A2:103:G:N2	1:A2:1340:G:C2	2.81	0.49
1:A2:136:G:H5"	1:A2:136:G:C8	2.38	0.49
1:A2:178:C:N4	1:A2:250:G:H21	2.10	0.49
1:A2:240:A:OP2	1:A2:240:A:C8	2.66	0.49
1:A2:372:U:C6	1:A2:372:U:C3'	2.95	0.49
1:A2:496:G:H8	1:A2:496:G:O5'	1.96	0.49
1:A2:1267:G:H3'	1:A2:1268:G:C4'	2.43	0.49
1:A2:1514:C:H2'	1:A2:1515:U:O4'	2.13	0.49
1:A2:1570:U:H3'	1:A2:1570:U:C6	2.47	0.49
1:A2:1592:A:H62	1:A2:3606:U:H3	1.61	0.49
1:A2:1628:U:O5'	1:A2:1628:U:H6	1.95	0.49
1:A2:1847:G:C4	1:A2:3846:A:C2	3.01	0.49
1:A2:1851:A:H2'	1:A2:1852:A:H5'	1.94	0.49
1:A2:1911:G:H8	1:A2:1911:G:O5'	1.94	0.49
1:A2:1929:G:C6	1:A2:2011:A:N1	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2348:U:O4'	1:A2:2348:U:OP2	2.31	0.49
1:A2:2457:G:H2'	1:A2:2458:G:C8	2.48	0.49
1:A2:2572:C:O5'	1:A2:2572:C:H6	1.96	0.49
1:A2:2652:G:OP2	1:A2:2652:G:C8	2.66	0.49
1:A2:2680:G:H5'	23:AU:113:ARG:NH1	2.28	0.49
1:A2:2859:A:C3'	1:A2:2860:G:H5'	2.42	0.49
1:A2:3646:U:OP2	1:A2:3647:G:H2'	2.13	0.49
1:A2:3676:U:OP1	4:AA:226:ARG:HA	2.13	0.49
1:A2:4057:G:N1	1:A2:4121:G:N1	2.61	0.49
1:A2:4166:C:N4	22:AT:2:THR:HG22	2.27	0.49
1:A2:4195:G:O2'	1:A2:4196:G:H5'	2.13	0.49
1:A2:4358:C:C6	1:A2:4358:C:O5'	2.66	0.49
1:A2:4378:G:H2'	1:A2:4435:G:H22	1.78	0.49
1:A2:4529:U:H2'	1:A2:4530:G:H5'	1.94	0.49
1:A2:4538:G:O2'	5:AB:118:PHE:HA	2.13	0.49
1:A2:4897:C:H2'	8:AE:190:HIS:CA	2.42	0.49
5:AB:262:VAL:HG21	5:AB:268:ARG:HH12	1.77	0.49
6:AC:316:LYS:HB2	6:AC:324:ILE:CD1	2.43	0.49
7:AD:155:THR:HG22	7:AD:179:ARG:NH1	2.28	0.49
11:AH:31:ARG:HH21	11:AH:188:GLN:CB	2.25	0.49
17:AO:90:HIS:CB	17:AO:99:LEU:HD11	2.42	0.49
18:AP:25:HIS:CE1	18:AP:27:LYS:H	2.31	0.49
20:AR:123:LEU:O	20:AR:127:VAL:HG23	2.13	0.49
22:AT:6:GLY:H	22:AT:9:ARG:HB2	1.77	0.49
22:AT:84:ILE:HG13	30:Ab:24:PRO:HA	1.93	0.49
29:Aa:52:TYR:HD1	29:Aa:53:PHE:CD1	2.31	0.49
34:Af:11:PHE:CD1	34:Af:92:LEU:HD12	2.48	0.49
36:Ah:48:ARG:O	36:Ah:52:LYS:HD3	2.13	0.49
48:BB:847:VAL:HG23	48:BB:934:CYS:CA	2.30	0.49
48:BB:943:ILE:CD1	48:BB:1001:PHE:CE1	2.96	0.49
48:BB:1310:ILE:HG13	48:BB:1324:MET:SD	2.52	0.49
48:BB:1392:ALA:O	48:BB:1393:THR:HB	2.12	0.49
49:BC:349:C:H42	50:C1:1698:C:H42	1.61	0.49
49:BC:349:C:C6	49:BC:349:C:O5'	2.66	0.49
50:C1:46:A:H4'	50:C1:47:G:C5'	2.43	0.49
50:C1:71:G:H1	50:C1:80:G:H1	1.60	0.49
50:C1:125:C:H6	50:C1:125:C:OP2	1.96	0.49
50:C1:186:C:O5'	50:C1:186:C:C6	2.66	0.49
50:C1:216:C:H5"	55:CE:134:LYS:HE3	1.95	0.49
50:C1:232:A:OP2	50:C1:890:U:C6	2.66	0.49
50:C1:305:U:O2	50:C1:305:U:H3'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:440:G:H2'	50:C1:441:C:O4'	2.13	0.49
50:C1:525:A:C4	50:C1:588:G:O6	2.66	0.49
50:C1:746:C:C1'	50:C1:747:U:C4	2.88	0.49
50:C1:858:A:C2	50:C1:859:G:C6	3.01	0.49
50:C1:1132:C:OP2	50:C1:1132:C:H5	1.95	0.49
50:C1:1448:A:H2'	50:C1:1449:G:H8	1.77	0.49
50:C1:1648:G:H21	67:CQ:128:GLU:HG3	1.78	0.49
50:C1:1781:A:C4	50:C1:1782:G:N2	2.80	0.49
55:CE:114:ILE:HG23	55:CE:118:GLU:HB2	1.94	0.49
55:CE:173:ILE:HG21	55:CE:230:ASN:HD22	1.78	0.49
66:CP:75:VAL:HG23	66:CP:93:MET:HG3	1.94	0.49
72:CV:41:LYS:O	72:CV:43:THR:N	2.46	0.49
72:CV:74:LYS:HA	72:CV:79:VAL:HG12	1.94	0.49
1:A2:12:A:H5"	1:A2:12:A:H8	1.78	0.48
1:A2:33:A:H3'	1:A2:34:A:C8	2.47	0.48
1:A2:100:C:H2'	1:A2:101:A:OP1	2.13	0.48
1:A2:146:A:H8	1:A2:146:A:O5'	1.96	0.48
1:A2:172:C:H2'	1:A2:173:G:H8	1.76	0.48
1:A2:220:G:N3	6:AC:164:THR:HG21	2.28	0.48
1:A2:432:G:C2'	1:A2:433:G:H5'	2.43	0.48
1:A2:929:U:H6	1:A2:929:U:P	2.36	0.48
1:A2:941:G:N3	1:A2:941:G:C2'	2.76	0.48
1:A2:1092:C:H2'	1:A2:1093:C:C6	2.48	0.48
1:A2:1166:U:C2'	1:A2:1167:G:H8	2.22	0.48
1:A2:1250:A:O5'	1:A2:1250:A:H8	1.96	0.48
1:A2:1465:C:H6	1:A2:1465:C:O5'	1.95	0.48
1:A2:1478:C:C6	1:A2:1478:C:OP2	2.66	0.48
1:A2:1611:A:H3'	1:A2:1611:A:C8	2.47	0.48
1:A2:1792:U:C6	1:A2:1792:U:OP2	2.66	0.48
1:A2:2257:U:O2'	1:A2:2258:A:H5'	2.13	0.48
1:A2:2284:A:H1'	2:A3:19:C:HO2'	1.74	0.48
1:A2:2877:U:H5"	1:A2:2877:U:C6	2.48	0.48
1:A2:3714:U:O5'	1:A2:3714:U:H6	1.95	0.48
1:A2:3739:U:H4'	47:BA:12:U:C4'	2.39	0.48
1:A2:3842:G:H2'	1:A2:3843:G:O4'	2.13	0.48
1:A2:3942:G:H4'	46:Au:21:PHE:CD1	2.48	0.48
1:A2:3945:C:C5	1:A2:3945:C:OP2	2.66	0.48
1:A2:4158:G:C6	1:A2:4159:C:N4	2.81	0.48
1:A2:4163:A:O4'	22:AT:2:THR:HA	2.12	0.48
1:A2:4218:C:O5'	1:A2:4218:C:C6	2.66	0.48
1:A2:4493:A:H8	1:A2:4493:A:O5'	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4508:A:H4'	1:A2:4509:G:O5'	2.13	0.48
1:A2:4706:C:P	34:Af:54:LYS:CB	3.01	0.48
1:A2:4736:C:H5'	1:A2:4736:C:H6	1.77	0.48
1:A2:4812:A:H4'	17:AO:169:ARG:CZ	2.43	0.48
3:A4:47:G:C5	3:A4:48:G:O6	2.66	0.48
3:A4:48:G:C8	7:AD:222:GLN:HB2	2.48	0.48
3:A4:66:G:H3'	3:A4:67:C:C5	2.48	0.48
4:AA:90:CYS:HB3	4:AA:101:VAL:CG1	2.42	0.48
5:AB:43:LEU:HD11	5:AB:196:TRP:HH2	1.78	0.48
6:AC:54:VAL:CG2	6:AC:55:SER:H	2.05	0.48
8:AE:161:ARG:HD3	8:AE:270:TYR:CZ	2.48	0.48
13:AJ:79:ALA:O	13:AJ:83:LEU:HB2	2.13	0.48
15:AM:20:HIS:CE1	15:AM:45:VAL:HG23	2.47	0.48
15:AM:130:LEU:HD12	17:AO:181:ALA:CB	2.43	0.48
18:AP:4:TYR:N	18:AP:4:TYR:HD1	2.10	0.48
20:AR:99:MET:HE1	20:AR:128:LYS:HA	1.94	0.48
34:Af:78:HIS:HB2	34:Af:85:ARG:HG3	1.95	0.48
45:At:103:ARG:HD3	45:At:106:LEU:HB2	1.94	0.48
46:Au:62:PHE:CE1	46:Au:81:GLU:HB3	2.48	0.48
48:BB:955:ILE:CD1	48:BB:1015:GLN:HE21	2.26	0.48
48:BB:1174:LYS:CE	48:BB:1175:ASP:N	2.73	0.48
48:BB:1280:PHE:O	48:BB:1284:THR:HG23	2.13	0.48
48:BB:1310:ILE:HD11	48:BB:1324:MET:HB3	1.94	0.48
49:BC:68:G:N3	49:BC:68:G:H5"	2.28	0.48
50:C1:92:A:N7	50:C1:446:G:H2'	2.28	0.48
50:C1:129:C:C3'	50:C1:130:G:C8	2.96	0.48
50:C1:655:A:C8	50:C1:657:U:C5	3.00	0.48
50:C1:741:C:N4	50:C1:744:G:H22	2.11	0.48
50:C1:1020:A:H8	50:C1:1020:A:O5'	1.96	0.48
50:C1:1261:C:H3'	50:C1:1262:C:C5'	2.42	0.48
50:C1:1356:G:O5'	50:C1:1356:G:H8	1.96	0.48
50:C1:1559:C:C6	50:C1:1559:C:O5'	2.66	0.48
50:C1:1607:A:N6	50:C1:1632:G:H1'	2.28	0.48
50:C1:1704:C:H1'	50:C1:1832:A:C6	2.48	0.48
51:CA:185:MET:HG2	72:CV:46:PHE:CD1	2.48	0.48
52:CB:83:LYS:HD2	52:CB:106:THR:HG22	1.95	0.48
56:CF:156:THR:HA	56:CF:159:ARG:NH1	2.28	0.48
61:CK:31:LYS:O	61:CK:32:HIS:CB	2.61	0.48
61:CK:65:ARG:HG3	80:Cd:22:ARG:O	2.13	0.48
65:CO:18:GLY:H	65:CO:19:PRO:CD	2.25	0.48
68:CR:58:MET:HE2	68:CR:58:MET:HA	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:CT:123:LEU:HD12	70:CT:128:GLN:OE1	2.13	0.48
71:CU:97:ILE:O	71:CU:100:GLN:HB3	2.13	0.48
74:CX:100:VAL:HG13	74:CX:122:VAL:HG13	1.95	0.48
76:CZ:69:THR:HG22	76:CZ:70:PRO:CD	2.39	0.48
82:Cf:92:LYS:HB2	82:Cf:92:LYS:NZ	2.27	0.48
1:A2:176:G:H2'	1:A2:177:C:C6	2.47	0.48
1:A2:218:C:O5'	1:A2:218:C:C6	2.66	0.48
1:A2:248:G:H2'	1:A2:249:C:C6	2.48	0.48
1:A2:274:G:C6	1:A2:296:A:H2	2.31	0.48
1:A2:383:U:H1'	1:A2:390:G:H22	1.78	0.48
1:A2:482:G:C8	1:A2:482:G:C5'	2.93	0.48
1:A2:726:C:H2'	1:A2:727:G:C5'	2.37	0.48
1:A2:733:G:N3	1:A2:733:G:H2'	2.28	0.48
1:A2:738:U:H2'	1:A2:739:G:C8	2.48	0.48
1:A2:910:G:H2'	1:A2:911:G:H5'	1.95	0.48
1:A2:978:G:C4	1:A2:979:C:C5	3.01	0.48
1:A2:1313:A:C3'	1:A2:1314:A:C8	2.88	0.48
1:A2:1378:A:H8	1:A2:1399:G:N1	2.11	0.48
1:A2:1461:G:N3	1:A2:1461:G:C3'	2.75	0.48
1:A2:1639:U:O2	1:A2:2322:G:H2'	2.13	0.48
1:A2:1716:A:O2'	3:A4:77:A:H1'	2.12	0.48
1:A2:2565:C:N4	1:A2:2728:G:OP1	2.46	0.48
1:A2:2579:G:C6	1:A2:2580:C:C4	3.01	0.48
1:A2:3592:C:C5	1:A2:3593:A:N1	2.80	0.48
1:A2:3616:A:H2'	1:A2:3617:A:H5"	1.95	0.48
1:A2:3684:U:H2'	1:A2:3685:C:H5'	1.95	0.48
1:A2:3727:U:O2'	1:A2:3728:A:H8	1.96	0.48
1:A2:3743:A:C2	1:A2:3744:A:C4	3.02	0.48
1:A2:3761:G:H3'	1:A2:3762:U:C5	2.48	0.48
1:A2:4047:C:H2'	1:A2:4047:C:O2	2.12	0.48
1:A2:4200:G:H5'	1:A2:4201:C:OP2	2.13	0.48
2:A3:26:C:O4'	6:AC:56:GLU:OE1	2.30	0.48
6:AC:283:LYS:HB2	19:AQ:24:TYR:HB3	1.95	0.48
10:AG:117:ARG:CG	10:AG:121:LYS:HD3	2.43	0.48
15:AM:44:GLN:O	15:AM:44:GLN:HG2	2.12	0.48
19:AQ:95:VAL:CG2	19:AQ:96:PRO:HD2	2.43	0.48
28:AZ:6:LYS:HB3	28:AZ:7:PRO:CD	2.43	0.48
35:Ag:54:ARG:HD3	35:Ag:55:GLY:H	1.78	0.48
37:Ai:51:ALA:O	37:Ai:54:GLU:HB2	2.13	0.48
39:Ak:25:ILE:HG21	39:Ak:57:LYS:HZ1	1.78	0.48
48:BB:825:ARG:HH21	48:BB:1176:GLU:CG	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:831:ARG:HD3	48:BB:831:ARG:C	2.37	0.48
48:BB:1073:GLN:HG3	48:BB:1090:ILE:CG2	2.42	0.48
48:BB:1116:ARG:NH2	50:C1:477:G:H5"	2.28	0.48
48:BB:1205:LEU:CD2	48:BB:1222:ILE:HG23	2.42	0.48
49:BC:268:G:O2'	50:C1:1117:C:OP1	2.25	0.48
50:C1:4:C:H4'	53:CC:207:ALA:HB2	1.94	0.48
50:C1:71:G:C2	50:C1:72:C:H1'	2.48	0.48
50:C1:102:A:C5	50:C1:408:A:C2	3.01	0.48
50:C1:154:U:C4'	57:CG:13:GLN:HB3	2.44	0.48
50:C1:211:G:C8	50:C1:211:G:C5'	2.88	0.48
50:C1:313:A:C8	57:CG:191:ARG:NE	2.81	0.48
50:C1:345:U:C6	50:C1:345:U:C3'	2.96	0.48
50:C1:359:U:H2'	50:C1:362:C:H5	1.78	0.48
50:C1:380:G:N2	50:C1:382:C:C6	2.81	0.48
50:C1:504:G:H2'	50:C1:505:G:H5'	1.94	0.48
50:C1:794:A:C2	50:C1:795:A:C1'	2.88	0.48
50:C1:838:G:P	50:C1:838:G:H21	2.36	0.48
50:C1:905:C:H2'	50:C1:906:U:H6	1.77	0.48
50:C1:1311:C:H5"	63:CM:40:LYS:HZ1	1.78	0.48
50:C1:1417:C:C2'	50:C1:1418:C:H5'	2.44	0.48
50:C1:1560:U:H2'	50:C1:1561:A:H8	1.78	0.48
50:C1:1613:G:H2'	50:C1:1614:A:O5'	2.13	0.48
52:CB:30:TRP:NE1	52:CB:48:LEU:HB3	2.28	0.48
55:CE:11:ARG:HD3	55:CE:28:ALA:HB2	1.95	0.48
57:CG:4:ASN:HB3	57:CG:110:ASN:OD1	2.13	0.48
62:CL:101:ARG:C	74:CX:10:ALA:HB2	2.38	0.48
66:CP:125:PRO:O	66:CP:126:VAL:HB	2.13	0.48
67:CQ:107:GLU:O	67:CQ:111:ILE:HG12	2.13	0.48
68:CR:24:LEU:HB3	68:CR:58:MET:SD	2.53	0.48
68:CR:106:LEU:HB3	68:CR:112:GLY:HA2	1.95	0.48
70:CT:73:GLY:O	70:CT:76:THR:HB	2.13	0.48
71:CU:20:ILE:CD1	71:CU:116:ILE:HG12	2.43	0.48
71:CU:39:LEU:HD13	71:CU:39:LEU:C	2.38	0.48
78:Cb:33:MET:HA	78:Cb:80:ARG:O	2.13	0.48
83:Cg:48:ASP:HB2	83:Cg:51:ASN:O	2.13	0.48
83:Cg:118:ARG:NH2	83:Cg:133:ASN:HD21	2.11	0.48
1:A2:51:A:H1'	1:A2:1507:U:O2'	2.13	0.48
1:A2:116:G:H21	1:A2:118:C:H2'	1.78	0.48
1:A2:205:A:H4'	27:AY:60:GLY:HA2	1.95	0.48
1:A2:284:G:O2'	1:A2:288:U:H5'	2.13	0.48
1:A2:636:G:C2'	1:A2:637:G:H5'	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1059:C:H3’	1:A2:1060:C:C6	2.45	0.48
1:A2:1093:C:H2’	1:A2:1094:U:H6	1.78	0.48
1:A2:1149:G:H2’	1:A2:1150:G:C8	2.47	0.48
1:A2:1221:C:H2’	1:A2:1222:G:O4’	2.13	0.48
1:A2:1277:U:C2’	1:A2:1278:C:C6	2.95	0.48
1:A2:1291:G:H5’	34:Af:19:ARG:O	2.13	0.48
1:A2:1483:G:H8	1:A2:1483:G:OP2	1.96	0.48
1:A2:1607:C:H2’	1:A2:1607:C:O2	2.13	0.48
1:A2:1703:G:H2’	9:AF:107:LYS:HE3	1.95	0.48
1:A2:1848:C:H2’	1:A2:1849:A:C8	2.48	0.48
1:A2:1877:G:N7	1:A2:2254:G:C5	2.81	0.48
1:A2:2011:A:H5”	1:A2:2011:A:H8	1.79	0.48
1:A2:2624:A:N1	1:A2:2664:U:C2	2.81	0.48
1:A2:2629:G:C4	1:A2:2630:C:H1’	2.48	0.48
1:A2:2840:G:H2’	1:A2:2840:G:N3	2.28	0.48
1:A2:2853:G:N3	1:A2:2853:G:C3’	2.75	0.48
1:A2:3752:A:H2	1:A2:3758:C:N4	2.11	0.48
1:A2:4199:A:H3’	1:A2:4200:G:H8	1.79	0.48
1:A2:4200:G:H2’	1:A2:4200:G:N3	2.28	0.48
1:A2:4535:G:N3	1:A2:4535:G:H2’	2.28	0.48
1:A2:4742:C:C6	1:A2:4742:C:C3’	2.96	0.48
1:A2:4900:G:N1	34:Af:60:PRO:C	2.71	0.48
1:A2:4938:C:O2’	1:A2:4939:C:H5’	2.13	0.48
1:A2:4977:U:C2’	1:A2:4978:C:H3’	2.42	0.48
2:A3:25:G:H21	6:AC:56:GLU:CD	2.21	0.48
5:AB:51:ALA:HA	5:AB:323:TYR:CD1	2.48	0.48
6:AC:149:GLU:HG3	45:At:74:ALA:C	2.38	0.48
6:AC:150:LEU:HB2	6:AC:151:PRO:CD	2.39	0.48
7:AD:164:LYS:HG3	7:AD:195:HIS:CE1	2.48	0.48
8:AE:223:ARG:HA	8:AE:225:PRO:HD2	1.95	0.48
9:AF:90:ALA:HB2	9:AF:125:LEU:HD11	1.96	0.48
18:AP:31:GLU:HG3	18:AP:60:PHE:CD2	2.48	0.48
35:Ag:45:ALA:HB2	35:Ag:81:SER:C	2.38	0.48
47:BA:32:U:OP1	67:CQ:146:ARG:N	2.45	0.48
48:BB:1346:PHE:CE2	48:BB:1381:GLU:HB3	2.45	0.48
48:BB:1381:GLU:C	48:BB:1383:PRO:HD2	2.38	0.48
49:BC:275:A:H3’	49:BC:276:A:C5’	2.43	0.48
50:C1:75:G:H22	50:C1:78:C:H4’	1.78	0.48
50:C1:131:C:N3	50:C1:215:G:O4’	2.45	0.48
50:C1:332:G:C4’	50:C1:333:G:OP1	2.60	0.48
50:C1:500:A:H2	50:C1:502:C:O5’	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:527:C:H3’	50:C1:528:A:N7	2.25	0.48
50:C1:564:A:H61	50:C1:586:G:H1	1.60	0.48
50:C1:836:G:OP1	50:C1:836:G:H8	1.96	0.48
50:C1:929:G:H5’	50:C1:930:C:OP2	2.14	0.48
50:C1:1060:A:C8	50:C1:1062:A:C5	3.02	0.48
50:C1:1120:U:H6	50:C1:1120:U:C5’	2.24	0.48
50:C1:1587:G:H4’	50:C1:1588:A:OP2	2.14	0.48
50:C1:1590:C:O4’	50:C1:1653:U:H4’	2.14	0.48
51:CA:103:PHE:CD2	51:CA:132:GLN:HB2	2.47	0.48
56:CF:167:LYS:HA	76:CZ:71:ALA:CB	2.44	0.48
57:CG:194:LEU:HA	57:CG:197:GLN:HB2	1.94	0.48
59:CI:6:ASP:HB3	59:CI:28:GLU:CD	2.38	0.48
59:CI:191:GLU:CG	62:CL:20:LYS:HD2	2.43	0.48
61:CK:84:HIS:HD2	63:CM:27:ILE:HD12	1.77	0.48
62:CL:71:ARG:NH2	62:CL:140:PHE:HZ	2.11	0.48
65:CO:85:CYS:HA	65:CO:88:LEU:HD12	1.96	0.48
67:CQ:37:ARG:HB3	70:CT:7:LYS:HE2	1.94	0.48
73:CW:18:GLU:OE2	73:CW:65:LEU:HD22	2.12	0.48
78:Cb:20:LYS:HE2	78:Cb:28:PRO:HA	1.94	0.48
82:Cf:139:HIS:O	82:Cf:147:THR:HA	2.14	0.48
1:A2:17:A:C2’	1:A2:18:C:H5’	2.43	0.48
1:A2:83:C:C2’	1:A2:100:C:H42	2.24	0.48
1:A2:98:A:C5’	16:AN:195:ARG:HD2	2.44	0.48
1:A2:191:C:O5’	1:A2:191:C:H6	1.97	0.48
1:A2:195:A:H5’	27:AY:45:ARG:HD2	1.95	0.48
1:A2:368:A:N6	1:A2:369:A:C2	2.82	0.48
1:A2:472:G:H8	45:At:79:ARG:HG3	1.78	0.48
1:A2:697:C:H6	1:A2:697:C:O5’	1.94	0.48
1:A2:724:C:H3’	1:A2:725:C:C5’	2.38	0.48
1:A2:730:G:O5’	1:A2:730:G:C8	2.65	0.48
1:A2:1066:C:H2’	1:A2:1067:A:C5’	2.40	0.48
1:A2:1093:C:O5’	1:A2:1093:C:H6	1.95	0.48
1:A2:1162:C:C2’	1:A2:1163:C:C6	2.96	0.48
1:A2:1249:G:H3’	1:A2:1250:A:H8	1.77	0.48
1:A2:1278:C:H5”	34:Af:58:VAL:CG1	2.43	0.48
1:A2:1369:U:OP1	1:A2:1476:A:H2’	2.13	0.48
1:A2:1422:C:O2	1:A2:1422:C:C3’	2.61	0.48
1:A2:1475:G:C4’	1:A2:1476:A:OP1	2.60	0.48
1:A2:1582:C:O2’	1:A2:1583:G:H5’	2.13	0.48
1:A2:1781:A:H4’	22:AT:105:PHE:CD1	2.47	0.48
1:A2:1820:G:H5’	19:AQ:11:ARG:HH22	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2042:G:C6	1:A2:2043:G:C6	3.01	0.48
1:A2:2347:A:H4'	1:A2:2348:U:OP2	2.14	0.48
1:A2:2518:G:H2'	1:A2:2519:G:H5"	1.94	0.48
1:A2:2624:A:C2	1:A2:2665:G:C5	3.01	0.48
1:A2:2702:A:OP2	1:A2:2703:G:C8	2.66	0.48
1:A2:2842:U:O2'	1:A2:2843:C:H5'	2.13	0.48
1:A2:3680:A:H8	1:A2:3710:C:O2	1.96	0.48
1:A2:3742:U:O2	1:A2:3742:U:C2'	2.60	0.48
1:A2:4121:G:O2'	1:A2:4122:C:H4'	2.13	0.48
1:A2:4137:C:C2'	1:A2:4138:A:H5'	2.43	0.48
1:A2:4203:C:H42	1:A2:4227:G:H1	1.62	0.48
1:A2:4401:A:H8	1:A2:4401:A:OP2	1.96	0.48
1:A2:4661:A:C3'	1:A2:4662:G:H5'	2.43	0.48
1:A2:4700:C:C3'	1:A2:4701:G:C5'	2.87	0.48
1:A2:4830:G:H8	1:A2:4830:G:O5'	1.96	0.48
1:A2:4867:G:C2	1:A2:4868:G:O6	2.66	0.48
1:A2:4903:C:O2	8:AE:158:ARG:HB2	2.11	0.48
1:A2:4980:C:H6	1:A2:4980:C:H3'	1.79	0.48
7:AD:219:TYR:HE1	7:AD:227:ILE:HD11	1.79	0.48
10:AG:121:LYS:CB	10:AG:129:PRO:HG2	2.43	0.48
15:AM:132:LYS:HE3	15:AM:136:LEU:CD1	2.44	0.48
19:AQ:172:ARG:O	19:AQ:173:LYS:CB	2.62	0.48
28:AZ:101:PHE:CD2	28:AZ:107:LYS:HE2	2.49	0.48
32:Ad:18:ASN:O	32:Ad:19:GLU:HB2	2.13	0.48
39:Ak:69:LEU:O	39:Ak:70:LYS:HB3	2.13	0.48
43:Ao:105:GLN:HA	47:BA:57:G:O5'	2.01	0.48
47:BA:28:G:O2'	47:BA:29:G:H5'	2.14	0.48
47:BA:68:C:H4'	48:BB:1388:ARG:NH2	2.27	0.48
48:BB:831:ARG:NH1	48:BB:1094:GLY:CA	2.76	0.48
48:BB:897:LYS:HG3	48:BB:898:MET:N	2.19	0.48
48:BB:1007:ALA:C	48:BB:1010:VAL:HG12	2.38	0.48
48:BB:1173:LEU:C	48:BB:1173:LEU:CD2	2.86	0.48
49:BC:68:G:OP2	49:BC:68:G:N2	2.38	0.48
50:C1:562:U:C4'	60:CJ:132:GLN:OE1	2.60	0.48
50:C1:593:C:OP2	50:C1:593:C:H6	1.96	0.48
50:C1:933:G:H2'	50:C1:993:G:N2	2.28	0.48
50:C1:1261:C:C5	50:C1:1619:A:N6	2.81	0.48
50:C1:1407:U:OP2	50:C1:1408:U:C6	2.66	0.48
50:C1:1649:U:H5	50:C1:1674:G:N2	2.10	0.48
50:C1:1677:U:O2	50:C1:1677:U:C2'	2.62	0.48
50:C1:1678:A:H2	50:C1:1680:G:P	2.36	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:CA:25:LEU:O	51:CA:164:ASN:HB2	2.13	0.48
53:CC:79:GLU:OE1	72:CV:12:TYR:HD1	1.97	0.48
60:CJ:161:LEU:HA	60:CJ:166:GLY:HA3	1.94	0.48
62:CL:59:LYS:HD3	62:CL:134:LEU:HD23	1.94	0.48
63:CM:86:GLY:HA2	63:CM:91:LEU:HB2	1.95	0.48
65:CO:125:LYS:HG2	77:Ca:58:VAL:CG1	2.36	0.48
77:Ca:21:ILE:HB	77:Ca:72:HIS:CE1	2.48	0.48
78:Cb:40:CYS:HB3	78:Cb:59:CYS:N	2.29	0.48
81:Ce:27:LYS:HG3	81:Ce:28:LYS:H	1.78	0.48
1:A2:9:C:O2	1:A2:9:C:C2'	2.50	0.48
1:A2:24:G:H2'	1:A2:25:A:O4'	2.13	0.48
1:A2:76:A:C2	1:A2:77:U:H1'	2.49	0.48
1:A2:507:C:H2'	1:A2:508:C:C6	2.48	0.48
1:A2:659:A:H2'	1:A2:660:C:C6	2.48	0.48
1:A2:930:C:H2'	1:A2:931:C:C6	2.48	0.48
1:A2:1093:C:H2'	1:A2:1094:U:C6	2.48	0.48
1:A2:1191:G:H5'	9:AF:63:GLN:OE1	2.14	0.48
1:A2:1217:C:C5'	6:AC:333:LYS:HD2	2.42	0.48
1:A2:1506:A:H5"	1:A2:1507:U:OP2	2.14	0.48
1:A2:2020:A:H2	1:A2:4424:A:N1	2.09	0.48
1:A2:2266:C:H2'	1:A2:2267:G:H8	1.79	0.48
1:A2:2445:U:C6	1:A2:2445:U:C3'	2.95	0.48
1:A2:2561:G:H1'	1:A2:2562:C:P	2.54	0.48
1:A2:2704:C:H2'	1:A2:2705:U:O4'	2.13	0.48
1:A2:2771:C:C2	18:AP:136:ILE:HD11	2.48	0.48
1:A2:2771:C:H2'	1:A2:2771:C:O2	2.13	0.48
1:A2:3623:G:O2'	1:A2:3624:C:H5'	2.12	0.48
1:A2:3682:U:C6	1:A2:3682:U:C3'	2.96	0.48
1:A2:3730:C:H5'	1:A2:3730:C:O2	2.12	0.48
1:A2:3821:A:H5"	1:A2:3821:A:C8	2.48	0.48
1:A2:3908:G:H8	1:A2:3908:G:P	2.37	0.48
1:A2:3930:G:H8	1:A2:3930:G:O5'	1.97	0.48
1:A2:4045:A:H2'	1:A2:4046:C:C6	2.49	0.48
1:A2:4224:G:H5"	7:AD:12:TYR:OH	2.14	0.48
1:A2:4357:A:H5'	1:A2:4358:C:OP2	2.14	0.48
1:A2:4417:U:O2	5:AB:252:ALA:HB3	2.13	0.48
1:A2:4418:C:H2'	1:A2:4419:U:H6	1.78	0.48
1:A2:4525:C:O2	1:A2:4525:C:H2'	2.13	0.48
1:A2:4544:A:H2'	1:A2:4545:U:O4'	2.13	0.48
1:A2:4872:C:H2'	1:A2:4873:C:H6	1.77	0.48
3:A4:86:G:C2'	3:A4:87:G:H5'	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AC:252:TRP:HB3	6:AC:257:PHE:HB2	1.95	0.48
9:AF:194:ILE:HA	9:AF:201:PHE:CD2	2.49	0.48
13:AJ:64:ARG:O	43:Ao:103:VAL:HG12	2.13	0.48
17:AO:46:ASN:HB2	17:AO:134:LYS:HD2	1.94	0.48
19:AQ:17:GLU:HG3	19:AQ:18:PRO:HD2	1.95	0.48
19:AQ:179:GLY:O	19:AQ:188:ASN:N	2.46	0.48
27:AY:86:GLN:HA	27:AY:97:VAL:HG23	1.95	0.48
43:Ao:10:THR:HA	43:Ao:18:HIS:CD2	2.47	0.48
45:At:18:ILE:HD12	45:At:27:THR:HG23	1.94	0.48
47:BA:8:U:C6	47:BA:8:U:O5'	2.66	0.48
48:BB:1041:THR:HG22	48:BB:1042:GLY:N	2.28	0.48
48:BB:1332:GLN:HG3	48:BB:1332:GLN:O	2.14	0.48
49:BC:351:A:C6	53:CC:147:VAL:HG22	2.43	0.48
50:C1:62:G:H5'	50:C1:172:U:N3	2.29	0.48
50:C1:96:C:C1'	50:C1:474:G:H4'	2.43	0.48
50:C1:125:C:H5'	55:CE:136:ILE:HB	1.95	0.48
50:C1:192:C:C2'	50:C1:193:C:H5'	2.44	0.48
50:C1:524:U:H5	81:Ce:31:ARG:HD3	1.79	0.48
50:C1:550:C:H4'	81:Ce:43:VAL:HG22	1.91	0.48
50:C1:794:A:H2'	50:C1:795:A:O4'	2.12	0.48
50:C1:798:G:N2	50:C1:799:U:C2	2.82	0.48
50:C1:944:A:H4'	65:CO:134:PRO:HB2	1.95	0.48
50:C1:990:A:H1'	50:C1:991:G:N2	2.29	0.48
50:C1:1076:G:H5'	64:CN:106:ARG:HH11	1.78	0.48
50:C1:1169:G:OP2	50:C1:1170:A:H2'	2.14	0.48
50:C1:1336:C:H2'	50:C1:1337:C:O4'	2.13	0.48
50:C1:1420:G:H1'	70:CT:3:GLY:H	1.78	0.48
50:C1:1425:G:C5	50:C1:1426:U:C4	3.01	0.48
50:C1:1643:U:C4	50:C1:1644:C:N4	2.81	0.48
50:C1:1647:A:C5	56:CF:57:ALA:HB1	2.48	0.48
51:CA:7:VAL:HG23	51:CA:191:ARG:HG2	1.94	0.48
57:CG:6:SER:O	57:CG:8:PRO:HD3	2.12	0.48
58:CH:109:ARG:NE	58:CH:113:LYS:HD3	2.28	0.48
62:CL:36:TYR:CE2	62:CL:38:LYS:HB2	2.49	0.48
65:CO:115:ALA:O	65:CO:119:LEU:HD13	2.14	0.48
69:CS:42:HIS:NE2	70:CT:45:LEU:HD11	2.28	0.48
1:A2:15:A:C2'	1:A2:16:G:H5'	2.43	0.48
1:A2:79:C:H1'	1:A2:329:A:H5'	1.96	0.48
1:A2:277:U:O2'	1:A2:278:U:H5'	2.13	0.48
1:A2:373:G:H2'	1:A2:375:A:N7	2.29	0.48
1:A2:957:G:P	1:A2:1219:C:OP1	2.72	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1253:G:C2’	1:A2:1254:A:H5”	2.44	0.48
1:A2:1282:U:C3’	1:A2:1284:C:H6	2.26	0.48
1:A2:1570:U:H5”	1:A2:4487:G:OP1	2.13	0.48
1:A2:1612:G:H5”	4:AA:205:ASN:OD1	2.12	0.48
1:A2:1868:G:N2	1:A2:1916:C:N4	2.62	0.48
1:A2:1889:C:O4’	1:A2:1895:A:C5	2.66	0.48
1:A2:2009:C:C5’	1:A2:2009:C:C6	2.96	0.48
1:A2:2056:C:H5”	33:Ae:62:SER:C	2.39	0.48
1:A2:2061:C:N4	1:A2:2249:G:H22	2.09	0.48
1:A2:2328:C:H2’	1:A2:2329:U:C5	2.49	0.48
1:A2:2482:C:C2’	1:A2:2483:G:H5’	2.41	0.48
1:A2:2587:G:H2’	1:A2:2588:A:C8	2.49	0.48
1:A2:2605:U:H2’	1:A2:2606:C:O2	2.13	0.48
1:A2:2701:G:C4’	1:A2:2702:A:C2	2.85	0.48
1:A2:2796:U:O2’	1:A2:4605:C:H4’	2.13	0.48
1:A2:3684:U:C6	1:A2:3684:U:H5”	2.48	0.48
1:A2:3759:U:H4’	1:A2:3760:C:OP1	2.13	0.48
1:A2:4120:C:H4’	1:A2:4120:C:OP1	2.14	0.48
1:A2:4332:U:H4’	43:Ao:56:PHE:CE2	2.49	0.48
1:A2:4371:G:H2’	1:A2:4372:C:H6	1.79	0.48
1:A2:4408:G:H5”	1:A2:4408:G:H8	1.78	0.48
1:A2:4478:A:C8	5:AB:257:TRP:CG	3.01	0.48
1:A2:4487:G:C8	1:A2:4488:G:O6	2.66	0.48
1:A2:4544:A:C2	1:A2:4680:C:P	3.07	0.48
1:A2:4609:G:C6	1:A2:4610:G:N2	2.81	0.48
2:A3:34:U:O2	2:A3:34:U:C2’	2.62	0.48
5:AB:279:GLU:CG	5:AB:338:VAL:HG23	2.44	0.48
8:AE:261:ILE:HG22	8:AE:268:GLN:HG3	1.96	0.48
14:AL:143:GLU:CG	14:AL:144:LEU:H	2.26	0.48
20:AR:154:LEU:HA	20:AR:157:ASP:HB2	1.95	0.48
29:Aa:65:ARG:O	29:Aa:66:ASN:CB	2.60	0.48
29:Aa:125:LYS:HG2	29:Aa:145:VAL:HB	1.94	0.48
43:Ao:106:PHE:CD1	47:BA:58:A:C4’	2.93	0.48
45:At:88:ALA:HB3	45:At:92:SER:HB3	1.96	0.48
46:Au:106:ALA:O	46:Au:131:PRO:HA	2.12	0.48
48:BB:896:THR:CG2	48:BB:899:ILE:HG13	2.44	0.48
48:BB:984:SER:HB2	48:BB:989:THR:CG2	2.43	0.48
48:BB:1076:GLU:CG	48:BB:1202:LEU:HB3	2.43	0.48
48:BB:1105:PRO:HB2	48:BB:1159:LEU:CD2	2.41	0.48
48:BB:1105:PRO:O	48:BB:1159:LEU:HD13	2.14	0.48
48:BB:1235:ALA:HA	48:BB:1238:MET:HG2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1312:PRO:HA	48:BB:1392:ALA:HB1	1.96	0.48
49:BC:352:A:C1'	54:CD:116:ARG:HH12	2.22	0.48
50:C1:20:G:H4'	50:C1:620:G:N2	2.28	0.48
50:C1:78:C:C1'	50:C1:79:A:OP2	2.61	0.48
50:C1:125:C:H4'	55:CE:136:ILE:CA	2.40	0.48
50:C1:157:U:H5'	57:CG:58:LYS:O	2.14	0.48
50:C1:193:C:H4'	50:C1:209:A:N1	2.27	0.48
50:C1:331:C:C3'	50:C1:332:G:C5'	2.92	0.48
50:C1:467:G:C2'	50:C1:468:A:H5'	2.43	0.48
50:C1:526:A:O3'	60:CJ:124:HIS:HB3	2.14	0.48
50:C1:664:A:H2'	50:C1:664:A:N3	2.29	0.48
50:C1:743:U:C2'	58:CH:100:ILE:O	2.62	0.48
50:C1:978:G:H2'	50:C1:979:C:C6	2.49	0.48
50:C1:986:G:H5"	77:Ca:19:GLN:CD	2.38	0.48
50:C1:1481:G:H8	50:C1:1481:G:O5'	1.97	0.48
50:C1:1663:A:O2'	50:C1:1664:A:H5"	2.14	0.48
50:C1:1698:C:C2'	50:C1:1698:C:O2	2.61	0.48
50:C1:1714:U:C3'	50:C1:1715:A:H8	2.27	0.48
50:C1:1822:A:N1	50:C1:1823:A:C6	2.82	0.48
51:CA:107:THR:HG23	51:CA:115:ALA:O	2.14	0.48
52:CB:77:ASP:O	52:CB:78:GLU:HB2	2.13	0.48
55:CE:122:LYS:O	55:CE:162:ILE:HG22	2.14	0.48
60:CJ:131:ARG:HB3	60:CJ:131:ARG:NH1	2.29	0.48
64:CN:100:LYS:HG2	64:CN:104:ARG:NH1	2.29	0.48
66:CP:119:PHE:CE1	69:CS:117:ILE:HG23	2.48	0.48
67:CQ:12:VAL:HG11	67:CQ:91:ALA:N	2.29	0.48
71:CU:26:SER:HB2	71:CU:32:LEU:HB2	1.94	0.48
71:CU:83:ARG:HB3	71:CU:85:HIS:CE1	2.49	0.48
75:CY:59:GLY:O	75:CY:71:GLY:CA	2.62	0.48
83:Cg:289:LEU:N	83:Cg:289:LEU:HD23	2.28	0.48
1:A2:40:G:C8	1:A2:41:C:C5	3.02	0.48
1:A2:316:U:O5'	1:A2:316:U:H6	1.97	0.48
1:A2:432:G:H2'	1:A2:433:G:H5'	1.95	0.48
1:A2:635:G:H2'	1:A2:636:G:C8	2.44	0.48
1:A2:641:C:C2'	1:A2:642:C:C5	2.78	0.48
1:A2:916:A:P	1:A2:916:A:O4'	2.71	0.48
1:A2:1188:G:H2'	1:A2:1189:U:C4'	2.44	0.48
1:A2:1282:U:C4'	1:A2:1283:A:OP1	2.62	0.48
1:A2:1368:A:H2'	1:A2:1369:U:O4'	2.14	0.48
1:A2:1396:G:H2'	1:A2:1397:C:H6	1.78	0.48
1:A2:1515:U:C4'	1:A2:3611:A:N1	2.75	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1805:G:H5'	1:A2:1806:C:OP2	2.13	0.48
1:A2:1817:U:H2'	1:A2:1818:G:C8	2.49	0.48
1:A2:2005:U:O2'	1:A2:2006:C:H5'	2.14	0.48
1:A2:2042:G:OP1	1:A2:2042:G:H4'	2.14	0.48
1:A2:2283:A:N1	1:A2:2284:A:C4	2.81	0.48
1:A2:2345:A:N6	1:A2:2765:U:C2	2.82	0.48
1:A2:2346:U:OP1	1:A2:2804:G:N1	2.46	0.48
1:A2:2479:G:H3'	1:A2:2479:G:C8	2.49	0.48
1:A2:2598:A:N7	23:AU:81:ARG:HD2	2.28	0.48
1:A2:2629:G:H5'	1:A2:2629:G:H8	1.78	0.48
1:A2:2682:G:N2	1:A2:2688:G:N1	2.62	0.48
1:A2:2745:C:C1'	1:A2:2746:U:P	3.02	0.48
1:A2:3679:G:H2'	1:A2:3680:A:H5'	1.96	0.48
1:A2:3753:A:C6	1:A2:3755:U:C5	3.02	0.48
1:A2:3914:A:HO2'	1:A2:3915:G:H8	1.62	0.48
1:A2:3920:G:H2'	1:A2:3921:A:H8	1.79	0.48
1:A2:4028:U:C2'	1:A2:4029:G:H5'	2.42	0.48
1:A2:4067:G:C8	1:A2:4067:G:O5'	2.66	0.48
1:A2:4071:G:C2'	1:A2:4072:A:O5'	2.61	0.48
1:A2:4101:C:O2	1:A2:4101:C:H2'	2.12	0.48
1:A2:4549:A:N3	1:A2:4549:A:H2'	2.29	0.48
1:A2:4591:G:H2'	1:A2:4592:U:C6	2.49	0.48
1:A2:4595:A:O3'	1:A2:4596:U:H4'	2.13	0.48
1:A2:4616:A:OP2	1:A2:4616:A:H2'	2.14	0.48
1:A2:4704:G:H8	1:A2:4704:G:O5'	1.95	0.48
1:A2:4838:C:H3'	1:A2:4839:G:H5"	1.95	0.48
2:A3:112:G:OP2	2:A3:112:G:C8	2.66	0.48
3:A4:25:G:H3'	3:A4:26:C:C5	2.49	0.48
3:A4:102:U:H2'	3:A4:103:A:H5'	1.96	0.48
5:AB:303:ALA:O	5:AB:368:ILE:HD12	2.14	0.48
7:AD:257:PRO:O	7:AD:258:LYS:HB3	2.14	0.48
9:AF:124:LYS:HZ3	9:AF:197:VAL:HG11	1.77	0.48
10:AG:182:CYS:HB3	10:AG:222:ILE:HG21	1.95	0.48
13:AJ:80:GLU:HA	13:AJ:83:LEU:HB3	1.96	0.48
18:AP:101:ASN:O	18:AP:104:LEU:HB2	2.13	0.48
28:AZ:89:ILE:CG1	28:AZ:93:LYS:HE2	2.43	0.48
31:Ac:82:GLY:HA2	31:Ac:91:VAL:HG12	1.94	0.48
32:Ad:85:ARG:NH2	32:Ad:120:VAL:HG22	2.27	0.48
34:Af:27:LEU:CD2	34:Af:85:ARG:HG2	2.43	0.48
38:Aj:25:LYS:HE3	40:Al:51:LEU:CD1	2.44	0.48
41:Am:104:HIS:CG	41:Am:105:PRO:HD2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:At:73:PRO:HB2	45:At:75:THR:HG22	1.96	0.48
46:Au:151:LEU:HD12	46:Au:159:PHE:CE1	2.48	0.48
47:BA:30:G:H1'	50:C1:1640:A:H2	1.78	0.48
48:BB:817:GLU:O	48:BB:820:TYR:HB2	2.14	0.48
48:BB:1070:LEU:HD23	48:BB:1072:ALA:N	2.28	0.48
48:BB:1156:LEU:HB2	48:BB:1159:LEU:CG	2.44	0.48
48:BB:1167:GLU:HB2	48:BB:1169:GLU:CD	2.38	0.48
48:BB:1311:LEU:HD21	48:BB:1327:THR:CG2	2.43	0.48
49:BC:349:C:O5'	49:BC:349:C:H6	1.95	0.48
50:C1:63:U:H6	50:C1:63:U:H5"	1.79	0.48
50:C1:224:A:H61	50:C1:297:A:H61	1.61	0.48
50:C1:234:C:H2'	50:C1:235:A:C8	2.45	0.48
50:C1:433:A:H5"	59:CI:25:ARG:NH2	2.27	0.48
50:C1:504:G:O2'	50:C1:505:G:H5'	2.14	0.48
50:C1:558:G:C2	50:C1:559:G:N7	2.82	0.48
50:C1:899:U:H2'	50:C1:900:C:N1	2.29	0.48
50:C1:1016:U:C5	64:CN:14:SER:CB	2.97	0.48
50:C1:1061:U:O4	50:C1:1849:G:H5"	2.14	0.48
50:C1:1135:C:C2'	50:C1:1136:U:H5'	2.43	0.48
50:C1:1142:G:H8	50:C1:1142:G:O5'	1.96	0.48
50:C1:1214:A:C4	50:C1:1686:G:N2	2.81	0.48
50:C1:1280:G:N2	50:C1:1318:G:C4	2.81	0.48
50:C1:1298:G:H1'	66:CP:79:HIS:CB	2.43	0.48
50:C1:1357:A:O2'	53:CC:112:VAL:HB	2.14	0.48
50:C1:1392:U:O2	50:C1:1392:U:H2'	2.13	0.48
50:C1:1401:A:C1'	50:C1:1402:A:P	3.01	0.48
50:C1:1404:U:C6	50:C1:1404:U:OP2	2.66	0.48
50:C1:1617:G:H2'	50:C1:1618:C:H5'	1.95	0.48
50:C1:1655:C:H2'	50:C1:1656:G:H8	1.78	0.48
50:C1:1762:C:H2'	50:C1:1763:G:C8	2.47	0.48
56:CF:20:PHE:CD2	56:CF:21:GLY:N	2.81	0.48
56:CF:66:CYS:SG	56:CF:67:PRO:HD2	2.54	0.48
57:CG:38:ALA:HB3	57:CG:48:TYR:HB2	1.94	0.48
58:CH:31:GLU:CD	58:CH:40:LEU:HD22	2.39	0.48
61:CK:10:ALA:C	61:CK:38:LYS:HZ3	2.21	0.48
67:CQ:39:LEU:O	67:CQ:42:ILE:HG13	2.14	0.48
68:CR:28:PHE:HE1	68:CR:52:GLY:N	2.12	0.48
74:CX:25:LYS:O	74:CX:28:LYS:HB3	2.14	0.48
76:CZ:92:LEU:HD13	76:CZ:109:TYR:CE1	2.48	0.48
77:Ca:84:VAL:HG12	77:Ca:84:VAL:O	2.14	0.48
83:Cg:282:GLU:HB3	83:Cg:284:PRO:HD2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:25:A:O2'	1:A2:331:C:H1'	2.14	0.48
1:A2:32:G:H21	1:A2:50:C:N4	2.08	0.48
1:A2:40:G:H3'	1:A2:41:C:H6	1.79	0.48
1:A2:59:A:N7	1:A2:329:A:C2	2.82	0.48
1:A2:943:G:H1	6:AC:312:ARG:H	1.60	0.48
1:A2:957:G:C2'	1:A2:958:C:C5'	2.84	0.48
1:A2:1075:A:H2'	1:A2:1076:C:C6	2.47	0.48
1:A2:1088:C:C3'	1:A2:1088:C:H6	2.23	0.48
1:A2:1193:G:O4'	1:A2:1195:C:C4	2.66	0.48
1:A2:1205:U:OP2	1:A2:1212:G:C8	2.54	0.48
1:A2:1220:G:H1'	1:A2:1221:C:C4	2.48	0.48
1:A2:1220:G:C5'	9:AF:48:LYS:HB2	2.44	0.48
1:A2:1276:G:C8	1:A2:1277:U:H1'	2.48	0.48
1:A2:1352:A:H2'	1:A2:1353:A:C8	2.49	0.48
1:A2:1387:C:H2'	1:A2:1388:G:C8	2.49	0.48
1:A2:1390:U:C6	1:A2:1390:U:OP2	2.66	0.48
1:A2:1398:C:C6	1:A2:1398:C:O5'	2.66	0.48
1:A2:1630:G:H3'	1:A2:1631:U:H6	1.75	0.48
1:A2:1665:C:C1'	30:Ab:15:LYS:HE3	2.42	0.48
1:A2:1894:G:C3'	1:A2:1894:G:C8	2.96	0.48
1:A2:2031:C:H5'	17:AO:17:GLY:HA3	1.95	0.48
1:A2:2047:A:H5'	1:A2:2047:A:C8	2.41	0.48
1:A2:2495:G:H1'	1:A2:2516:C:H1'	1.94	0.48
1:A2:2653:A:N6	1:A2:2654:G:H1	2.12	0.48
1:A2:3722:G:H5"	1:A2:3722:G:C8	2.49	0.48
1:A2:3866:G:C6	1:A2:4519:A:C2	3.02	0.48
1:A2:4018:A:H3'	1:A2:4019:C:C6	2.49	0.48
1:A2:4189:U:H2'	1:A2:4190:C:O4'	2.14	0.48
1:A2:4329:A:OP2	1:A2:4329:A:C8	2.67	0.48
1:A2:4399:U:O2'	1:A2:4400:G:H5'	2.13	0.48
1:A2:4576:A:H4'	5:AB:65:SER:OG	2.14	0.48
1:A2:4640:G:N3	1:A2:4641:A:H1'	2.29	0.48
1:A2:4718:C:C6	17:AO:167:HIS:CG	3.02	0.48
1:A2:4829:A:H5"	21:AS:167:PHE:C	2.38	0.48
1:A2:4892:C:H41	8:AE:179:LEU:CD1	2.25	0.48
1:A2:4957:U:H3	1:A2:5000:G:H1	1.60	0.48
1:A2:4990:U:O5'	1:A2:4990:U:H6	1.96	0.48
3:A4:54:A:H3'	3:A4:54:A:P	2.53	0.48
6:AC:139:SER:O	45:At:14:SER:CA	2.53	0.48
7:AD:95:TYR:HE1	7:AD:156:GLY:O	1.96	0.48
8:AE:226:ARG:HA	8:AE:226:ARG:HE	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AM:124:LYS:O	15:AM:128:LYS:N	2.39	0.48
20:AR:105:LEU:CD1	20:AR:138:LEU:CD1	2.88	0.48
22:AT:19:PHE:CD1	22:AT:20:ARG:HG3	2.48	0.48
22:AT:84:ILE:HD11	30:Ab:24:PRO:HA	1.95	0.48
25:AW:42:SER:HB2	25:AW:44:ARG:HG2	1.96	0.48
48:BB:837:ASN:O	48:BB:838:VAL:HG23	2.13	0.48
48:BB:1156:LEU:HB2	48:BB:1159:LEU:HD21	1.95	0.48
48:BB:1182:LYS:HA	48:BB:1182:LYS:NZ	2.27	0.48
48:BB:1344:LYS:NZ	48:BB:1431:PHE:CD2	2.80	0.48
49:BC:343:U:C5'	50:C1:1830:U:N3	2.77	0.48
50:C1:191:A:OP1	59:CI:147:LYS:N	2.47	0.48
50:C1:218:U:H2'	50:C1:219:U:O4'	2.14	0.48
50:C1:543:C:H3'	50:C1:543:C:C6	2.46	0.48
50:C1:616:A:H8	50:C1:616:A:O5'	1.96	0.48
50:C1:976:G:H2'	50:C1:977:C:C6	2.49	0.48
50:C1:1469:A:C2	50:C1:1470:C:C2	3.01	0.48
50:C1:1548:G:O6	50:C1:1584:G:N3	2.47	0.48
50:C1:1866:A:C4'	50:C1:1866:A:OP1	2.61	0.48
50:C1:1867:U:H1'	50:C1:1868:U:O5'	2.14	0.48
51:CA:5:LEU:HD22	51:CA:8:LEU:CD1	2.44	0.48
52:CB:49:VAL:HG21	52:CB:58:ALA:HB2	1.96	0.48
52:CB:65:ARG:HG2	65:CO:50:LYS:CE	2.44	0.48
52:CB:135:LEU:HD12	52:CB:215:VAL:HG21	1.96	0.48
53:CC:270:THR:HA	53:CC:273:LEU:HD12	1.95	0.48
54:CD:138:VAL:CG1	54:CD:182:LEU:HD11	2.44	0.48
57:CG:24:LEU:HA	57:CG:27:PHE:CD2	2.49	0.48
60:CJ:60:LEU:CB	60:CJ:94:LEU:HD11	2.43	0.48
61:CK:49:MET:HE2	61:CK:69:TRP:CE3	2.49	0.48
66:CP:111:MET:HG2	66:CP:119:PHE:CE1	2.47	0.48
68:CR:106:LEU:HA	68:CR:109:LEU:HD12	1.96	0.48
70:CT:60:THR:HG23	70:CT:121:ARG:HH12	1.79	0.48
78:Cb:40:CYS:SG	78:Cb:59:CYS:SG	3.12	0.48
1:A2:10:A:H2'	1:A2:11:G:H5'	1.95	0.48
1:A2:148:G:OP1	1:A2:148:G:H8	1.97	0.48
1:A2:267:C:C6	1:A2:267:C:H5"	2.49	0.48
1:A2:299:G:H4'	1:A2:301:G:C4'	2.43	0.48
1:A2:403:G:H3'	1:A2:404:G:C5'	2.43	0.48
1:A2:434:G:H1	1:A2:1284:C:N4	2.09	0.48
1:A2:476:C:OP2	1:A2:476:C:H4'	2.14	0.48
1:A2:917:G:O3'	1:A2:918:C:C6	2.67	0.48
1:A2:921:U:C2	1:A2:922:C:C5	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:965:C:N4	1:A2:1249:G:H1	2.11	0.48
1:A2:1086:A:OP1	3:A4:107:G:H5'	2.14	0.48
1:A2:1142:G:H2'	1:A2:1143:G:H8	1.79	0.48
1:A2:1217:C:O2	1:A2:1217:C:H3'	2.13	0.48
1:A2:1262:G:H8	1:A2:1262:G:P	2.37	0.48
1:A2:1302:A:C6	1:A2:1306:A:C8	3.02	0.48
1:A2:1377:A:C1'	1:A2:1447:C:H4'	2.44	0.48
1:A2:1389:C:O2	1:A2:1389:C:C3'	2.60	0.48
1:A2:1649:G:C1'	1:A2:1831:G:H4'	2.43	0.48
1:A2:1926:G:C8	1:A2:1926:G:OP1	2.67	0.48
1:A2:2034:G:C4	1:A2:2036:G:N7	2.81	0.48
1:A2:2057:G:H8	1:A2:2057:G:O5'	1.97	0.48
1:A2:2481:C:OP2	1:A2:2481:C:C6	2.67	0.48
1:A2:2527:G:H5'	1:A2:2528:A:O5'	2.14	0.48
1:A2:2601:G:O2'	1:A2:2602:U:H6	1.97	0.48
1:A2:2662:C:O2'	1:A2:2663:G:H5'	2.13	0.48
1:A2:2704:C:H2'	1:A2:2705:U:H5'	1.95	0.48
1:A2:2831:G:H22	1:A2:2833:C:H5'	1.79	0.48
1:A2:3606:U:H2'	1:A2:3607:G:O4'	2.13	0.48
1:A2:3876:G:H8	1:A2:4408:G:OP2	1.97	0.48
1:A2:4743:C:H6	1:A2:4743:C:H3'	1.78	0.48
1:A2:4803:C:O5'	1:A2:4804:G:H5"	2.14	0.48
1:A2:4877:C:H2'	1:A2:4878:C:H6	1.79	0.48
1:A2:4981:U:O4	59:CI:122:GLY:HA3	2.14	0.48
3:A4:39:C:H4'	13:AJ:47:THR:CG2	2.44	0.48
3:A4:94:C:H2'	3:A4:95:C:H6	1.79	0.48
13:AJ:89:VAL:HG11	13:AJ:109:ILE:HG13	1.96	0.48
15:AM:56:GLN:HG3	21:AS:157:ARG:NH1	2.29	0.48
27:AY:47:MET:HE3	27:AY:109:LEU:HD22	1.95	0.48
27:AY:115:ARG:HD3	27:AY:115:ARG:C	2.39	0.48
33:Ae:89:LEU:HD21	45:At:117:ILE:CD1	2.44	0.48
35:Ag:60:ARG:HG3	35:Ag:61:PRO:HD2	1.95	0.48
41:Am:102:ARG:C	41:Am:103:LEU:HD12	2.39	0.48
43:Ao:64:LYS:HA	43:Ao:87:ARG:HH11	1.79	0.48
46:Au:34:LEU:HB3	46:Au:157:ARG:HD3	1.95	0.48
48:BB:829:LYS:HZ1	48:BB:1062:LYS:HZ3	1.57	0.48
49:BC:347:C:C6	49:BC:347:C:C3'	2.97	0.48
49:BC:350:G:O2'	49:BC:351:A:OP1	2.29	0.48
50:C1:33:G:H2'	50:C1:34:U:H6	1.78	0.48
50:C1:369:C:C2'	50:C1:370:G:C5'	2.92	0.48
50:C1:455:A:H2'	50:C1:456:C:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:693:A:C8	50:C1:694:G:C1’	2.97	0.48
50:C1:795:A:H3’	50:C1:796:G:C8	2.48	0.48
50:C1:827:A:H2’	50:C1:828:G:H5’	1.96	0.48
50:C1:1166:G:C2	50:C1:1167:G:C8	3.01	0.48
50:C1:1373:C:H2’	50:C1:1374:C:C6	2.48	0.48
50:C1:1418:C:H5”	70:CT:129:ARG:CA	2.43	0.48
50:C1:1678:A:H2	50:C1:1679:A:O3’	1.96	0.48
51:CA:58:LEU:HD11	51:CA:178:LEU:CA	2.44	0.48
55:CE:91:SER:HA	55:CE:97:GLU:O	2.14	0.48
56:CF:48:TYR:HD1	56:CF:49:LEU:H	1.61	0.48
60:CJ:161:LEU:O	60:CJ:161:LEU:HG	2.14	0.48
68:CR:111:PHE:CD1	68:CR:114:LEU:HD11	2.48	0.48
75:CY:98:GLU:HG2	75:CY:99:LYS:N	2.29	0.48
1:A2:29:G:C6	1:A2:54:G:O6	2.67	0.48
1:A2:194:A:N3	1:A2:194:A:H2’	2.28	0.48
1:A2:215:A:H4’	1:A2:216:G:C5’	2.44	0.48
1:A2:327:A:H2’	1:A2:329:A:OP2	2.14	0.48
1:A2:400:G:H4’	1:A2:401:A:O5’	2.14	0.48
1:A2:415:U:O5’	1:A2:415:U:H6	1.97	0.48
1:A2:454:A:H2’	1:A2:455:G:H8	1.79	0.48
1:A2:457:A:C8	1:A2:676:G:C5’	2.81	0.48
1:A2:510:C:C6	1:A2:510:C:C4’	2.97	0.48
1:A2:718:G:N2	1:A2:721:A:N6	2.61	0.48
1:A2:1421:C:H3’	1:A2:1422:C:C6	2.49	0.48
1:A2:1649:G:O4’	1:A2:1831:G:H4’	2.14	0.48
1:A2:1849:A:H8	1:A2:1849:A:O5’	1.97	0.48
1:A2:2061:C:H41	1:A2:2249:G:N2	2.11	0.48
1:A2:2336:U:H5”	1:A2:2337:A:OP2	2.13	0.48
1:A2:2348:U:C6	1:A2:2348:U:C5’	2.83	0.48
1:A2:2382:G:H5’	38:Aj:12:ARG:O	2.14	0.48
1:A2:2673:A:H5’	1:A2:2674:A:H8	1.75	0.48
1:A2:2726:C:C4’	35:Ag:64:LEU:HB3	2.43	0.48
1:A2:2843:C:C6	1:A2:2843:C:C3’	2.97	0.48
1:A2:4020:C:H2’	1:A2:4021:A:H8	1.79	0.48
1:A2:4051:U:C3’	1:A2:4052:G:H5”	2.44	0.48
1:A2:4109:C:C6	1:A2:4109:C:O5’	2.67	0.48
1:A2:4582:A:H2’	1:A2:4583:G:H8	1.79	0.48
1:A2:4699:G:O2’	1:A2:4700:C:C6	2.66	0.48
1:A2:4849:A:H3’	15:AM:132:LYS:HZ2	1.78	0.48
1:A2:4892:C:N3	8:AE:183:ARG:O	2.46	0.48
1:A2:4988:G:H8	1:A2:4988:G:O5’	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A3:73:U:C2'	2:A3:74:U:H5'	2.44	0.48
2:A3:145:C:H2'	2:A3:146:U:C6	2.49	0.48
3:A4:25:G:C5	3:A4:26:C:N4	2.82	0.48
5:AB:128:LYS:O	5:AB:131:THR:HG22	2.14	0.48
5:AB:173:LEU:HD11	5:AB:342:LYS:CD	2.43	0.48
8:AE:226:ARG:HA	8:AE:226:ARG:NE	2.29	0.48
9:AF:165:LYS:O	9:AF:166:ARG:C	2.56	0.48
12:AI:75:TYR:O	12:AI:78:LYS:HG2	2.14	0.48
13:AJ:19:LYS:CE	13:AJ:73:THR:HB	2.44	0.48
13:AJ:169:LYS:O	13:AJ:170:TYR:HB2	2.14	0.48
19:AQ:147:GLU:HG2	19:AQ:150:ARG:HH21	1.79	0.48
26:AX:81:LEU:CD2	26:AX:135:LYS:HE2	2.44	0.48
28:AZ:11:VAL:HG21	28:AZ:80:LEU:HD13	1.96	0.48
36:Ah:21:LEU:HD13	36:Ah:21:LEU:C	2.38	0.48
37:Ai:58:MET:HE1	37:Ai:98:ARG:HH22	1.77	0.48
39:Ak:3:ARG:O	39:Ak:43:TYR:HA	2.13	0.48
42:An:25:LYS:O	42:An:25:LYS:HG3	2.14	0.48
46:Au:114:ILE:O	46:Au:118:LEU:HB2	2.14	0.48
48:BB:1320:ASP:OD2	48:BB:1321:PRO:HD3	2.14	0.48
48:BB:1352:VAL:CG1	48:BB:1373:VAL:CG2	2.73	0.48
48:BB:1356:GLU:HA	48:BB:1360:LYS:O	2.13	0.48
50:C1:350:C:C2'	50:C1:351:G:H5'	2.43	0.48
50:C1:571:U:O3'	75:CY:59:GLY:HA2	2.13	0.48
50:C1:633:C:H2'	50:C1:634:A:C8	2.49	0.48
50:C1:1074:C:H2'	50:C1:1075:C:C6	2.49	0.48
50:C1:1085:C:H1'	50:C1:1086:G:H5"	1.96	0.48
50:C1:1153:C:H2'	50:C1:1153:C:O2	2.14	0.48
50:C1:1187:G:H8	50:C1:1187:G:O5'	1.97	0.48
50:C1:1311:C:H5'	63:CM:40:LYS:HZ3	1.79	0.48
50:C1:1388:A:H2'	50:C1:1389:C:O5'	2.13	0.48
50:C1:1678:A:C2	50:C1:1679:A:O3'	2.67	0.48
52:CB:160:GLN:NE2	52:CB:204:ILE:HG23	2.29	0.48
54:CD:37:VAL:HG12	54:CD:50:ILE:HG12	1.95	0.48
56:CF:179:ASN:CB	56:CF:187:SER:HB3	2.43	0.48
63:CM:76:LEU:HB3	63:CM:129:LYS:O	2.14	0.48
66:CP:48:GLY:O	66:CP:52:LYS:HE2	2.14	0.48
68:CR:5:ARG:HB2	68:CR:10:LYS:HE2	1.96	0.48
69:CS:24:ARG:HA	76:CZ:48:VAL:CG1	2.44	0.48
69:CS:74:PRO:CG	69:CS:84:LEU:HD21	2.44	0.48
75:CY:11:LYS:O	75:CY:23:MET:HA	2.14	0.48
81:Ce:28:LYS:HG2	81:Ce:28:LYS:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:33:A:H3'	1:A2:34:A:H8	1.77	0.47
1:A2:63:G:H1'	1:A2:76:A:N3	2.29	0.47
1:A2:100:C:O2	1:A2:100:C:C2'	2.62	0.47
1:A2:131:C:H5"	1:A2:132:G:OP2	2.13	0.47
1:A2:148:G:N1	10:AG:163:PRO:HD2	2.27	0.47
1:A2:298:A:H3'	1:A2:298:A:H8	1.79	0.47
1:A2:409:A:C2'	1:A2:410:A:H5'	2.44	0.47
1:A2:418:A:H61	2:A3:7:U:H3	1.63	0.47
1:A2:438:C:O5'	1:A2:438:C:H6	1.96	0.47
1:A2:661:C:H2'	1:A2:662:G:H8	1.77	0.47
1:A2:929:U:C5	1:A2:930:C:C5	3.02	0.47
1:A2:1086:A:P	3:A4:107:G:H5'	2.54	0.47
1:A2:1092:C:O5'	1:A2:1092:C:H6	1.97	0.47
1:A2:1191:G:N3	1:A2:1192:G:C8	2.82	0.47
1:A2:1198:G:H2'	1:A2:1199:G:H5'	1.95	0.47
1:A2:1359:C:H42	14:AL:150:LEU:HB2	1.79	0.47
1:A2:1430:C:H2'	1:A2:1431:G:H8	1.79	0.47
1:A2:1791:C:H1'	30:Ab:58:GLN:CG	2.44	0.47
1:A2:2246:G:P	1:A2:2246:G:C8	3.07	0.47
1:A2:2262:G:H8	1:A2:2262:G:O5'	1.97	0.47
1:A2:2436:G:H8	1:A2:2436:G:O5'	1.96	0.47
1:A2:2457:G:H2'	1:A2:2458:G:H8	1.79	0.47
1:A2:2457:G:O2'	1:A2:2458:G:H5'	2.14	0.47
1:A2:2595:G:O2'	1:A2:2596:G:H5'	2.14	0.47
1:A2:2829:U:C2	1:A2:2831:G:H5"	2.49	0.47
1:A2:3604:A:C2'	1:A2:3605:C:H5"	2.43	0.47
1:A2:3606:U:C2'	1:A2:3607:G:H5'	2.44	0.47
1:A2:3684:U:C5'	1:A2:3684:U:H6	2.26	0.47
1:A2:3744:A:H3'	1:A2:3745:G:H5"	1.94	0.47
1:A2:4032:C:H5'	1:A2:4032:C:H6	1.79	0.47
1:A2:4069:C:OP2	52:CB:227:LYS:HB2	2.13	0.47
1:A2:4231:A:H2'	1:A2:4232:G:H1'	1.96	0.47
1:A2:4348:A:H2'	1:A2:4349:C:H6	1.79	0.47
1:A2:4412:U:O2	1:A2:4412:U:C2'	2.61	0.47
1:A2:4541:G:H2'	1:A2:4542:C:H5'	1.95	0.47
1:A2:4563:C:H2'	1:A2:4564:G:C5'	2.34	0.47
1:A2:4580:U:C2'	1:A2:4581:C:H5'	2.44	0.47
1:A2:4837:U:C6	8:AE:274:VAL:HG12	2.44	0.47
1:A2:4892:C:N4	8:AE:179:LEU:HD12	2.29	0.47
1:A2:4939:C:H5"	5:AB:25:HIS:CD2	2.47	0.47
2:A3:6:C:C6	2:A3:6:C:H3'	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A3:151:G:H5'	10:AG:64:GLN:HE21	1.79	0.47
3:A4:33:U:H1'	7:AD:207:TYR:CD1	2.49	0.47
5:AB:105:VAL:HG13	5:AB:153:MET:HE3	1.96	0.47
5:AB:173:LEU:HD11	5:AB:342:LYS:HD3	1.96	0.47
9:AF:143:GLY:HA3	9:AF:240:ILE:HG21	1.95	0.47
10:AG:109:GLU:O	10:AG:112:GLN:HB3	2.14	0.47
11:AH:173:ARG:HD2	41:Am:127:VAL:CG1	2.43	0.47
27:AY:22:PRO:HG2	27:AY:24:HIS:CE1	2.49	0.47
28:AZ:48:ARG:HB3	28:AZ:69:LYS:HB3	1.95	0.47
41:Am:99:CYS:HB2	41:Am:101:ALA:H	1.79	0.47
45:At:16:PHE:O	45:At:26:SER:HA	2.13	0.47
45:At:22:LYS:O	45:At:22:LYS:HG2	2.14	0.47
48:BB:817:GLU:CB	48:BB:1170:ILE:HD13	2.30	0.47
48:BB:904:ARG:CG	48:BB:1057:GLN:HE22	2.27	0.47
48:BB:933:LEU:HD12	48:BB:1090:ILE:HD12	1.86	0.47
48:BB:944:MET:C	48:BB:1004:ARG:NH2	2.72	0.47
48:BB:1310:ILE:HG23	48:BB:1310:ILE:O	2.14	0.47
48:BB:1405:ILE:HG22	48:BB:1421:TRP:CH2	2.49	0.47
49:BC:66:A:C5	49:BC:67:C:N3	2.82	0.47
49:BC:133:G:H2'	49:BC:134:A:C8	2.48	0.47
50:C1:35:C:N3	50:C1:520:A:N6	2.62	0.47
50:C1:59:U:H3'	50:C1:59:U:C6	2.48	0.47
50:C1:69:C:N4	50:C1:82:G:N3	2.62	0.47
50:C1:159:A:H8	50:C1:159:A:O5'	1.97	0.47
50:C1:189:U:H6	50:C1:189:U:P	2.37	0.47
50:C1:377:G:H2'	50:C1:378:U:H6	1.75	0.47
50:C1:426:A:C8	50:C1:426:A:OP1	2.67	0.47
50:C1:572:U:H3'	50:C1:573:U:H3	1.77	0.47
50:C1:583:A:C3'	50:C1:584:A:C8	2.97	0.47
50:C1:1060:A:H2'	50:C1:1060:A:N3	2.29	0.47
50:C1:1083:A:C2'	50:C1:1858:G:H21	2.26	0.47
50:C1:1085:C:H4'	50:C1:1086:G:H21	1.79	0.47
50:C1:1129:G:H3'	50:C1:1130:G:H8	1.78	0.47
50:C1:1348:G:N2	50:C1:1381:G:N2	2.55	0.47
50:C1:1417:C:C4	50:C1:1418:C:C4	3.01	0.47
50:C1:1769:C:C6	50:C1:1769:C:O5'	2.67	0.47
50:C1:1824:A:N3	50:C1:1824:A:H5"	2.29	0.47
50:C1:1859:A:H8	50:C1:1859:A:O5'	1.97	0.47
51:CA:5:LEU:CD2	72:CV:44:GLY:HA2	2.44	0.47
52:CB:35:ALA:HB3	52:CB:42:ARG:HA	1.95	0.47
53:CC:98:LEU:HG	53:CC:101:SER:HB2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:CU:20:ILE:HG21	71:CU:98:VAL:CG2	2.44	0.47
74:CX:86:PRO:HB3	74:CX:121:LYS:NZ	2.29	0.47
74:CX:100:VAL:HG11	74:CX:122:VAL:HG13	1.94	0.47
1:A2:259:G:H2'	1:A2:260:G:H8	1.79	0.47
1:A2:297:A:N6	1:A2:298:A:C2	2.82	0.47
1:A2:407:U:C3'	1:A2:408:G:H5'	2.42	0.47
1:A2:430:G:H2'	1:A2:431:U:O5'	2.14	0.47
1:A2:471:C:H6	1:A2:471:C:O5'	1.97	0.47
1:A2:473:G:H2'	1:A2:473:G:N3	2.29	0.47
1:A2:699:A:P	1:A2:699:A:H8	2.38	0.47
1:A2:702:G:C2'	1:A2:703:G:H5'	2.44	0.47
1:A2:904:C:O2'	1:A2:905:C:H5'	2.14	0.47
1:A2:1217:C:H5'	6:AC:333:LYS:NZ	2.28	0.47
1:A2:1220:G:C3'	9:AF:48:LYS:HD2	2.44	0.47
1:A2:1279:G:OP1	34:Af:58:VAL:HG23	2.13	0.47
1:A2:1285:C:H6	1:A2:1285:C:O5'	1.96	0.47
1:A2:1322:A:O2'	1:A2:1323:A:H5'	2.14	0.47
1:A2:1465:C:C2	1:A2:1466:G:C8	3.01	0.47
1:A2:1492:U:H2'	1:A2:1493:U:H6	1.76	0.47
1:A2:1923:G:H2'	1:A2:1924:G:C5'	2.44	0.47
1:A2:1942:A:N3	1:A2:4654:G:C8	2.83	0.47
1:A2:2034:G:C4	1:A2:2036:G:C8	3.01	0.47
1:A2:2384:G:C8	40:Al:13:LEU:CD2	2.96	0.47
1:A2:2393:G:H1	1:A2:2397:A:N6	2.08	0.47
1:A2:2464:G:H21	2:A3:125:C:N4	2.11	0.47
1:A2:2517:C:H2'	1:A2:2518:G:C8	2.49	0.47
1:A2:2640:G:H2'	1:A2:2641:G:H5'	1.96	0.47
1:A2:2711:U:H5"	1:A2:2711:U:C6	2.44	0.47
1:A2:3606:U:H2'	1:A2:3607:G:H5'	1.96	0.47
1:A2:3661:A:H2	44:Ap:19:GLY:HA2	1.80	0.47
1:A2:3822:U:C4	1:A2:3823:C:N4	2.82	0.47
1:A2:3830:A:O5'	1:A2:3830:A:H8	1.96	0.47
1:A2:3920:G:C8	1:A2:3920:G:H3'	2.48	0.47
1:A2:4502:U:C2'	1:A2:4503:G:H5'	2.44	0.47
1:A2:4850:C:C2'	1:A2:4851:G:H8	2.27	0.47
1:A2:4938:C:H2'	1:A2:4939:C:H5'	1.95	0.47
1:A2:4996:G:N2	5:AB:391:PRO:O	2.47	0.47
5:AB:259:PRO:O	5:AB:261:ARG:N	2.44	0.47
6:AC:139:SER:HA	45:At:14:SER:HA	1.97	0.47
19:AQ:101:CYS:HA	19:AQ:121:LEU:O	2.14	0.47
19:AQ:132:LYS:HE3	19:AQ:134:CYS:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AY:112:ASP:O	27:AY:116:LYS:CB	2.63	0.47
27:AY:121:ARG:O	27:AY:126:ARG:HA	2.14	0.47
48:BB:1234:LYS:O	48:BB:1238:MET:HE3	2.13	0.47
48:BB:1385:MET:CE	48:BB:1389:HIS:HB2	2.44	0.47
50:C1:67:C:N4	57:CG:168:LYS:O	2.46	0.47
50:C1:370:G:O4'	50:C1:371:A:C8	2.66	0.47
50:C1:396:U:O2'	50:C1:397:G:H5'	2.14	0.47
50:C1:560:A:O3'	50:C1:561:A:H8	1.97	0.47
50:C1:659:G:N3	50:C1:659:G:C2'	2.77	0.47
50:C1:1203:G:H2'	50:C1:1699:A:H2	1.74	0.47
50:C1:1206:G:C6	50:C1:1208:A:N7	2.82	0.47
50:C1:1330:G:C5'	50:C1:1331:C:H5'	2.45	0.47
50:C1:1351:G:C5'	51:CA:110:ASN:HB3	2.44	0.47
50:C1:1624:U:OP2	50:C1:1624:U:C5	2.67	0.47
50:C1:1649:U:C2'	50:C1:1650:A:H5'	2.44	0.47
50:C1:1656:G:H2'	50:C1:1657:G:H8	1.76	0.47
50:C1:1689:C:H2'	50:C1:1690:U:H6	1.79	0.47
51:CA:5:LEU:HD21	72:CV:39:VAL:HG11	1.95	0.47
64:CN:70:LYS:HE3	64:CN:73:ARG:NH1	2.29	0.47
66:CP:22:LEU:HA	66:CP:25:LEU:HD12	1.94	0.47
69:CS:61:GLU:O	69:CS:64:VAL:HB	2.13	0.47
70:CT:25:SER:HB3	70:CT:27:LYS:HE3	1.95	0.47
71:CU:47:ASN:C	71:CU:48:LEU:HD12	2.39	0.47
77:Ca:32:LYS:HB3	77:Ca:32:LYS:NZ	2.29	0.47
80:Cd:24:CYS:SG	80:Cd:26:ASN:HB3	2.54	0.47
1:A2:74:G:H2'	1:A2:75:G:O5'	2.14	0.47
1:A2:98:A:H5"	16:AN:195:ARG:HD2	1.96	0.47
1:A2:215:A:H1'	1:A2:216:G:O5'	2.15	0.47
1:A2:230:U:C2	1:A2:2280:U:C5	3.02	0.47
1:A2:270:A:H2'	1:A2:270:A:OP1	2.13	0.47
1:A2:312:U:H3	1:A2:4316:G:H1	1.61	0.47
1:A2:397:C:N4	1:A2:398:A:N6	2.62	0.47
1:A2:430:G:O2'	34:Af:91:ASN:HB2	2.14	0.47
1:A2:434:G:C8	1:A2:434:G:O5'	2.63	0.47
1:A2:705:U:O2'	1:A2:706:C:H5'	2.14	0.47
1:A2:941:G:H4'	1:A2:2054:G:OP1	2.15	0.47
1:A2:974:C:O2	1:A2:974:C:C2'	2.61	0.47
1:A2:1217:C:O2	1:A2:1217:C:C3'	2.63	0.47
1:A2:1302:A:H4'	1:A2:1303:A:OP1	2.13	0.47
1:A2:1360:G:H1'	1:A2:1361:U:P	2.54	0.47
1:A2:1513:A:C4	38:Aj:13:ASN:O	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1524:G:N3	1:A2:1524:G:H2'	2.29	0.47
1:A2:1610:A:O5'	1:A2:1610:A:C8	2.65	0.47
1:A2:1728:A:H4'	12:AI:35:ASP:OD2	2.14	0.47
1:A2:1885:A:C4'	9:AF:222:LYS:HB2	2.32	0.47
1:A2:2003:A:H4'	1:A2:2004:A:OP2	2.13	0.47
1:A2:2246:G:P	1:A2:2246:G:H8	2.37	0.47
1:A2:2327:U:H3'	1:A2:2328:C:H5"	1.96	0.47
1:A2:2362:U:O5'	1:A2:2362:U:H6	1.96	0.47
1:A2:2378:A:C2'	1:A2:2379:G:H5"	2.45	0.47
1:A2:2555:G:H8	1:A2:2555:G:OP2	1.97	0.47
1:A2:3587:C:H5"	1:A2:3589:G:N7	2.27	0.47
1:A2:3614:U:C4	1:A2:4493:A:C2	3.02	0.47
1:A2:3627:C:C1'	4:AA:237:LEU:HD22	2.44	0.47
1:A2:3758:C:C5	1:A2:3759:U:C2	2.97	0.47
1:A2:3898:G:H2'	1:A2:3899:U:O4'	2.15	0.47
1:A2:4169:G:H2'	1:A2:4170:U:O4'	2.14	0.47
1:A2:4429:U:H2'	1:A2:4430:G:H8	1.79	0.47
1:A2:4562:A:H1'	11:AH:99:PHE:CE2	2.48	0.47
1:A2:4675:C:C5'	1:A2:4675:C:C6	2.96	0.47
1:A2:4902:U:O2	8:AE:158:ARG:HD3	2.14	0.47
3:A4:107:G:H8	3:A4:107:G:P	2.37	0.47
3:A4:112:U:O2'	3:A4:113:G:H5'	2.13	0.47
6:AC:20:LYS:HB2	6:AC:20:LYS:NZ	2.29	0.47
7:AD:108:ARG:HG3	7:AD:251:PRO:O	2.13	0.47
8:AE:153:LEU:O	8:AE:158:ARG:HG2	2.14	0.47
15:AM:2:VAL:HG11	15:AM:4:ARG:CZ	2.43	0.47
16:AN:143:ARG:HB3	36:Ah:99:GLU:OE1	2.14	0.47
17:AO:182:GLU:O	17:AO:191:LYS:HE3	2.14	0.47
21:AS:43:ARG:O	21:AS:47:PHE:HD2	1.97	0.47
22:AT:27:LEU:HA	22:AT:30:TYR:CD2	2.50	0.47
28:AZ:10:VAL:HG23	28:AZ:86:SER:HA	1.95	0.47
28:AZ:72:VAL:HG22	28:AZ:111:ARG:HE	1.79	0.47
47:BA:31:A:C1'	50:C1:1641:A:HO2'	2.26	0.47
48:BB:842:LYS:CA	48:BB:1140:GLU:OE1	2.62	0.47
48:BB:866:ARG:O	48:BB:870:VAL:HG23	2.14	0.47
48:BB:1076:GLU:HG2	48:BB:1202:LEU:HD23	1.96	0.47
49:BC:65:C:O2'	49:BC:66:A:O4'	2.28	0.47
50:C1:78:C:H1'	50:C1:79:A:P	2.53	0.47
50:C1:483:C:OP1	74:CX:47:ALA:HA	2.13	0.47
50:C1:587:A:C2'	50:C1:592:C:H41	2.28	0.47
50:C1:911:C:H5"	50:C1:912:C:C4	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:919:A:H2	64:CN:64:ARG:NH1	2.12	0.47
50:C1:1180:C:H3'	50:C1:1180:C:C6	2.49	0.47
50:C1:1245:G:H2'	50:C1:1246:A:C8	2.49	0.47
50:C1:1258:A:N7	50:C1:1259:A:N3	2.62	0.47
50:C1:1396:A:H2'	50:C1:1397:U:H5'	1.96	0.47
50:C1:1426:U:C5	50:C1:1427:C:C5	3.02	0.47
50:C1:1557:C:P	50:C1:1557:C:C3'	3.02	0.47
50:C1:1576:G:H2'	50:C1:1577:G:H5'	1.94	0.47
50:C1:1648:G:H2'	67:CQ:127:CYS:HA	1.93	0.47
50:C1:1649:U:C5	50:C1:1674:G:N2	2.82	0.47
51:CA:171:VAL:O	51:CA:175:TRP:HD1	1.97	0.47
52:CB:105:LEU:HD11	52:CB:109:LYS:HG2	1.97	0.47
53:CC:125:LYS:HE2	53:CC:127:PHE:CZ	2.50	0.47
54:CD:106:ARG:HH12	54:CD:173:ARG:HB2	1.78	0.47
59:CI:48:VAL:HG21	59:CI:54:LYS:CD	2.44	0.47
60:CJ:67:ASP:OD1	60:CJ:69:ARG:HB3	2.14	0.47
71:CU:66:ARG:HD2	71:CU:66:ARG:H	1.80	0.47
73:CW:28:ARG:HB3	73:CW:29:PRO:HD3	1.96	0.47
77:Ca:81:SER:O	77:Ca:82:LYS:HB2	2.14	0.47
1:A2:397:C:OP1	1:A2:397:C:H6	1.98	0.47
1:A2:718:G:H4'	1:A2:719:G:OP1	2.13	0.47
1:A2:1545:C:O5'	1:A2:1545:C:H6	1.98	0.47
1:A2:2020:A:H4'	1:A2:2020:A:OP1	2.14	0.47
1:A2:2023:G:O2'	1:A2:2024:G:H2'	2.14	0.47
1:A2:2478:C:H6	1:A2:2478:C:H3'	1.80	0.47
1:A2:2504:A:H2'	1:A2:2505:G:H5'	1.97	0.47
1:A2:2567:G:O4'	1:A2:2732:A:N6	2.48	0.47
1:A2:2579:G:C8	1:A2:2719:G:N7	2.83	0.47
1:A2:2663:G:C4	1:A2:2664:U:H1'	2.50	0.47
1:A2:2673:A:H2'	39:Ak:70:LYS:HA	1.96	0.47
1:A2:2759:U:H3'	1:A2:2760:A:H5'	1.96	0.47
1:A2:2870:U:O2'	1:A2:2871:A:H5'	2.14	0.47
1:A2:3588:G:H5"	1:A2:3588:G:N3	2.29	0.47
1:A2:3670:C:H4'	1:A2:3671:A:C8	2.50	0.47
1:A2:3745:G:H5'	1:A2:3745:G:N3	2.29	0.47
1:A2:3776:A:O2'	50:C1:1815:A:H2	1.98	0.47
1:A2:3904:C:H2'	1:A2:3905:A:C8	2.48	0.47
1:A2:4028:U:H2'	1:A2:4029:G:C8	2.46	0.47
1:A2:4196:G:O2'	1:A2:4288:G:H1'	2.14	0.47
1:A2:4329:A:H8	1:A2:4329:A:P	2.38	0.47
1:A2:4393:G:H2'	1:A2:4394:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4393:G:O2'	1:A2:4394:C:H5'	2.15	0.47
1:A2:4549:A:C8	1:A2:4550:A:H1'	2.49	0.47
7:AD:289:ARG:O	7:AD:293:ARG:HG3	2.14	0.47
8:AE:288:PHE:CE2	34:Af:110:ILE:HD13	2.49	0.47
18:AP:129:THR:HG23	18:AP:139:TYR:CG	2.49	0.47
19:AQ:18:PRO:HD3	19:AQ:52:PHE:CD1	2.49	0.47
21:AS:100:LEU:H	21:AS:100:LEU:HD12	1.79	0.47
27:AY:112:ASP:O	27:AY:116:LYS:HE3	2.14	0.47
28:AZ:25:ILE:HA	28:AZ:43:VAL:HG12	1.95	0.47
31:Ac:8:LYS:CD	50:C1:1007:C:C5'	2.90	0.47
32:Ad:84:ILE:HD12	32:Ad:114:PHE:HE1	1.79	0.47
38:Aj:29:LEU:H	38:Aj:29:LEU:HD12	1.78	0.47
43:Ao:106:PHE:CE2	47:BA:57:G:C6	3.00	0.47
47:BA:7:A:N1	47:BA:49:C:C2	2.83	0.47
48:BB:943:ILE:HA	48:BB:969:LEU:CD1	2.44	0.47
48:BB:1064:LEU:O	48:BB:1142:ALA:HB2	2.15	0.47
48:BB:1341:VAL:HG21	48:BB:1345:ASN:CB	2.44	0.47
49:BC:66:A:O2'	49:BC:67:C:H5'	2.15	0.47
50:C1:563:G:O6	50:C1:592:C:N3	2.46	0.47
50:C1:911:C:H2'	50:C1:912:C:N3	2.29	0.47
50:C1:1000:C:H41	77:Ca:16:GLY:N	2.10	0.47
50:C1:1015:U:C5	64:CN:13:GLN:O	2.68	0.47
50:C1:1179:G:H8	50:C1:1179:G:O5'	1.98	0.47
50:C1:1281:G:N1	50:C1:1282:A:C6	2.82	0.47
52:CB:134:LEU:HD12	52:CB:219:LYS:CB	2.44	0.47
56:CF:113:VAL:O	56:CF:117:ILE:HD13	2.14	0.47
59:CI:84:ASN:OD1	59:CI:86:SER:HB2	2.13	0.47
62:CL:4:ILE:HG21	62:CL:55:TYR:HA	1.95	0.47
64:CN:70:LYS:HG3	64:CN:73:ARG:HB2	1.96	0.47
65:CO:106:LYS:HE3	65:CO:135:ILE:HG22	1.97	0.47
70:CT:70:ALA:HB3	70:CT:121:ARG:NE	2.28	0.47
71:CU:22:ILE:HG12	71:CU:114:VAL:HG12	1.96	0.47
71:CU:80:PHE:HB3	80:Cd:52:PHE:HB3	1.95	0.47
73:CW:18:GLU:HG3	73:CW:69:LEU:HB2	1.96	0.47
76:CZ:50:PHE:HE2	76:CZ:55:TYR:CD1	2.33	0.47
1:A2:85:G:H22	1:A2:97:G:C3'	2.27	0.47
1:A2:255:C:H2'	1:A2:255:C:O2	2.15	0.47
1:A2:268:G:OP2	37:Ai:37:THR:HG23	2.15	0.47
1:A2:308:A:H2'	1:A2:309:A:H5'	1.96	0.47
1:A2:323:C:H5'	16:AN:150:TRP:CZ3	2.50	0.47
1:A2:469:G:N3	1:A2:470:G:C8	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:649:C:H2'	1:A2:650:G:H8	1.79	0.47
1:A2:661:C:H2'	1:A2:662:G:C8	2.49	0.47
1:A2:922:C:H2'	1:A2:923:G:H8	1.72	0.47
1:A2:975:C:O2'	1:A2:976:C:H5'	2.14	0.47
1:A2:1137:G:H2'	1:A2:1138:G:H8	1.79	0.47
1:A2:1158:G:H1'	7:AD:282:GLN:CG	2.44	0.47
1:A2:1162:C:OP2	1:A2:1162:C:C6	2.68	0.47
1:A2:1359:C:C4	14:AL:156:PRO:HB3	2.49	0.47
1:A2:1717:A:O4'	3:A4:100:A:C2	2.68	0.47
1:A2:1802:G:H5"	1:A2:1802:G:H8	1.79	0.47
1:A2:2323:C:O2'	1:A2:2324:A:H3'	2.14	0.47
1:A2:2424:U:O2'	1:A2:2425:G:H5'	2.15	0.47
1:A2:2726:C:O3'	35:Ag:72:LYS:HD2	2.15	0.47
1:A2:4044:G:H21	1:A2:4130:A:N6	2.10	0.47
1:A2:4154:U:H4'	1:A2:4181:C:H5	1.80	0.47
1:A2:4897:C:C5	8:AE:171:GLY:O	2.67	0.47
2:A3:148:A:C8	2:A3:148:A:C3'	2.98	0.47
3:A4:67:C:H2'	3:A4:68:C:C4'	2.43	0.47
3:A4:116:G:H5'	3:A4:117:G:OP2	2.14	0.47
5:AB:341:LYS:O	5:AB:342:LYS:HB2	2.15	0.47
6:AC:13:GLU:CB	6:AC:170:LEU:HD11	2.35	0.47
6:AC:345:ARG:NH1	6:AC:349:LEU:HD12	2.29	0.47
8:AE:284:HIS:HD2	34:Af:38:GLU:OE1	1.97	0.47
15:AM:130:LEU:O	15:AM:134:ALA:N	2.43	0.47
17:AO:56:ALA:O	17:AO:59:ARG:HB3	2.14	0.47
19:AQ:152:PHE:O	19:AQ:154:LYS:HD2	2.13	0.47
33:Ae:67:LYS:HG2	33:Ae:68:HIS:CD2	2.49	0.47
37:Ai:60:LEU:C	37:Ai:60:LEU:HD13	2.39	0.47
45:At:7:TRP:CD2	45:At:38:PHE:HB2	2.49	0.47
48:BB:892:ILE:O	48:BB:895:GLN:HG2	2.14	0.47
48:BB:897:LYS:HZ1	48:BB:898:MET:HG2	1.79	0.47
48:BB:1237:VAL:CG1	74:CX:50:ILE:HD12	2.44	0.47
48:BB:1344:LYS:HG2	48:BB:1431:PHE:CD1	2.50	0.47
48:BB:1354:SER:O	48:BB:1373:VAL:C	2.56	0.47
48:BB:1397:VAL:CG2	48:BB:1424:ILE:HG12	2.37	0.47
49:BC:332:A:C2	49:BC:333:C:N4	2.83	0.47
50:C1:63:U:OP1	50:C1:315:C:H4'	2.14	0.47
50:C1:520:A:H8	50:C1:521:A:C8	2.33	0.47
50:C1:520:A:H2'	50:C1:521:A:O4'	2.14	0.47
50:C1:836:G:O6	75:CY:9:THR:O	2.32	0.47
50:C1:841:G:H8	75:CY:12:PHE:CE2	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:850:C:H2'	50:C1:851:C:C5'	2.45	0.47
50:C1:888:U:H5'	50:C1:889:U:OP2	2.14	0.47
50:C1:912:C:O2'	50:C1:913:A:C4'	2.61	0.47
50:C1:1013:U:C1'	50:C1:1104:G:H1'	2.44	0.47
50:C1:1051:G:OP1	50:C1:1847:G:H4'	2.14	0.47
50:C1:1053:C:O2	50:C1:1053:C:C2'	2.61	0.47
50:C1:1087:A:N7	50:C1:1861:G:C6	2.83	0.47
50:C1:1161:U:H2'	50:C1:1162:C:C5'	2.44	0.47
50:C1:1202:U:H3	50:C1:1697:A:H61	1.62	0.47
50:C1:1622:U:H3'	50:C1:1622:U:C6	2.50	0.47
52:CB:51:ARG:C	52:CB:53:GLN:H	2.23	0.47
52:CB:171:ILE:HG12	52:CB:174:ARG:HH22	1.80	0.47
55:CE:124:CYS:HB2	55:CE:141:THR:CG2	2.45	0.47
56:CF:40:ALA:O	56:CF:42:LYS:HG3	2.14	0.47
56:CF:52:SER:C	56:CF:54:GLY:H	2.21	0.47
58:CH:53:VAL:HG11	58:CH:171:GLU:HG3	1.97	0.47
58:CH:178:LYS:HE2	58:CH:184:ASP:OD1	2.14	0.47
65:CO:56:VAL:HG12	65:CO:77:ALA:HB1	1.97	0.47
83:Cg:5:MET:HG2	83:Cg:312:VAL:HA	1.96	0.47
1:A2:32:G:H21	1:A2:50:C:H5	1.51	0.47
1:A2:77:U:H2'	1:A2:78:U:H5'	1.95	0.47
1:A2:194:A:H5"	27:AY:122:LYS:HZ2	1.79	0.47
1:A2:218:C:C2	1:A2:219:C:C5	3.03	0.47
1:A2:276:G:H2'	1:A2:277:U:O4'	2.15	0.47
1:A2:340:A:N7	6:AC:49:ARG:NE	2.62	0.47
1:A2:385:G:H5'	1:A2:387:A:OP2	2.15	0.47
1:A2:1148:G:H2'	1:A2:1149:G:H5"	1.97	0.47
1:A2:1280:G:C8	1:A2:1280:G:OP2	2.67	0.47
1:A2:1357:G:N3	1:A2:1357:G:C5'	2.72	0.47
1:A2:1648:A:C8	1:A2:1648:A:C5'	2.93	0.47
1:A2:1737:G:H22	1:A2:1753:C:H41	1.61	0.47
1:A2:1934:A:C2	1:A2:2006:C:N3	2.83	0.47
1:A2:2302:G:C4	1:A2:2303:G:C8	3.03	0.47
1:A2:2458:G:H2'	1:A2:2459:C:C6	2.50	0.47
1:A2:2587:G:O3'	1:A2:2665:G:H5"	2.15	0.47
1:A2:3640:G:C3'	1:A2:3641:G:H8	2.28	0.47
1:A2:3830:A:H4'	18:AP:137:ASN:ND2	2.29	0.47
1:A2:3851:C:H2'	1:A2:3852:U:C6	2.50	0.47
1:A2:4021:A:C2	46:Au:160:HIS:CD2	3.00	0.47
1:A2:4133:G:H2'	1:A2:4134:U:C5'	2.43	0.47
1:A2:4173:A:H5"	1:A2:4174:A:C5'	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4259:U:H2'	1:A2:4260:U:C6	2.49	0.47
1:A2:4264:A:C2	22:AT:81:LYS:HD2	2.50	0.47
1:A2:4937:A:H2'	1:A2:4938:C:C5'	2.43	0.47
2:A3:72:A:C4'	2:A3:87:G:H21	2.27	0.47
3:A4:69:U:C6	3:A4:69:U:H3'	2.49	0.47
5:AB:73:VAL:HG22	24:AV:93:GLY:HA3	1.95	0.47
6:AC:329:ASN:HB2	9:AF:188:GLU:OE2	2.15	0.47
9:AF:209:TRP:CD1	9:AF:210:PRO:HD2	2.49	0.47
9:AF:243:LEU:HD23	9:AF:246:ARG:HH21	1.80	0.47
10:AG:73:ARG:HE	10:AG:242:LEU:HA	1.79	0.47
10:AG:104:PRO:HB3	10:AG:135:VAL:HG21	1.95	0.47
15:AM:122:ILE:HG22	17:AO:187:LYS:HB3	1.96	0.47
19:AQ:68:ARG:HG3	19:AQ:68:ARG:HH11	1.79	0.47
21:AS:170:LYS:O	21:AS:171:ARG:HB2	2.13	0.47
22:AT:42:ILE:HG12	22:AT:96:ILE:CD1	2.45	0.47
24:AV:36:ASN:HD21	24:AV:67:LYS:HB2	1.80	0.47
27:AY:55:VAL:CG1	27:AY:104:VAL:HB	2.44	0.47
36:Ah:109:ARG:O	36:Ah:113:LEU:HG	2.15	0.47
44:Ap:44:LYS:HE2	44:Ap:46:LYS:HE2	1.96	0.47
48:BB:814:THR:C	48:BB:1170:ILE:CG1	2.88	0.47
48:BB:1196:TYR:CZ	48:BB:1231:ASP:CG	2.92	0.47
48:BB:1306:CYS:SG	48:BB:1333:VAL:CG1	2.98	0.47
50:C1:1:U:H3'	50:C1:1:U:O2	2.14	0.47
50:C1:59:U:C2'	50:C1:60:A:C5'	2.87	0.47
50:C1:93:U:H3'	50:C1:94:G:H8	1.80	0.47
50:C1:125:C:C6	50:C1:125:C:OP1	2.67	0.47
50:C1:158:A:H62	57:CG:59:GLN:HE21	1.62	0.47
50:C1:167:G:H4'	57:CG:8:PRO:O	2.15	0.47
50:C1:1351:G:C4'	51:CA:110:ASN:HB3	2.43	0.47
50:C1:1432:U:N3	50:C1:1433:C:N4	2.62	0.47
50:C1:1439:A:H8	50:C1:1439:A:O5'	1.97	0.47
50:C1:1473:G:H5'	50:C1:1474:A:OP2	2.15	0.47
50:C1:1534:C:H5'	50:C1:1536:G:H1'	1.97	0.47
50:C1:1558:C:H2'	50:C1:1559:C:H6	1.75	0.47
50:C1:1610:G:H2'	50:C1:1611:G:O4'	2.15	0.47
50:C1:1829:G:C8	50:C1:1829:G:O5'	2.68	0.47
52:CB:57:ILE:HG22	52:CB:59:SER:H	1.78	0.47
69:CS:6:PRO:HD3	76:CZ:52:LYS:HE2	1.95	0.47
69:CS:27:ALA:HB1	69:CS:41:ALA:HB1	1.97	0.47
74:CX:48:LYS:HD3	74:CX:99:GLU:OE2	2.14	0.47
74:CX:106:GLY:O	74:CX:107:ARG:O	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:CZ:113:THR:HG22	76:CZ:113:THR:O	2.13	0.47
79:Cc:42:ILE:HG22	79:Cc:43:ILE:N	2.29	0.47
83:Cg:188:HIS:HB3	83:Cg:219:TRP:CZ2	2.49	0.47
1:A2:19:G:C6	2:A3:139:G:N1	2.83	0.47
1:A2:20:U:O2	1:A2:20:U:C2'	2.62	0.47
1:A2:40:G:H3'	1:A2:41:C:C6	2.50	0.47
1:A2:85:G:N2	1:A2:97:G:C2'	2.78	0.47
1:A2:170:C:O2'	1:A2:171:C:H5'	2.14	0.47
1:A2:183:G:O2'	1:A2:184:U:H5'	2.15	0.47
1:A2:214:C:C6	1:A2:214:C:C3'	2.97	0.47
1:A2:361:U:H4'	1:A2:1513:A:N6	2.29	0.47
1:A2:411:A:OP2	1:A2:411:A:C8	2.66	0.47
1:A2:436:U:H3'	1:A2:436:U:O2	2.15	0.47
1:A2:897:U:C5'	1:A2:898:U:OP1	2.63	0.47
1:A2:1381:C:C6	1:A2:1381:C:O5'	2.68	0.47
1:A2:1435:G:H5"	19:AQ:73:PRO:HD2	1.96	0.47
1:A2:1565:G:H3'	1:A2:1566:G:H8	1.80	0.47
1:A2:1595:U:H2'	1:A2:1596:G:H5'	1.97	0.47
1:A2:1715:A:H2	3:A4:77:A:H2	1.61	0.47
1:A2:1715:A:H2	3:A4:77:A:C2	2.33	0.47
1:A2:1730:A:H3'	1:A2:1731:G:H8	1.78	0.47
1:A2:1811:G:C8	1:A2:1811:G:C3'	2.98	0.47
1:A2:1835:C:H2'	1:A2:1836:A:C8	2.49	0.47
1:A2:1856:G:H2'	1:A2:1857:C:C5	2.49	0.47
1:A2:1885:A:C8	1:A2:1885:A:C5'	2.92	0.47
1:A2:2020:A:H8	1:A2:2021:A:C2	2.28	0.47
1:A2:2302:G:H2'	1:A2:2303:G:C8	2.49	0.47
1:A2:2329:U:H2'	1:A2:2330:U:C6	2.49	0.47
1:A2:2350:C:O2'	1:A2:2351:A:H5'	2.15	0.47
1:A2:2356:A:C2'	1:A2:2357:G:H5'	2.45	0.47
1:A2:2382:G:H2'	1:A2:2383:G:H5'	1.96	0.47
1:A2:2397:A:O2'	1:A2:2398:G:H5'	2.14	0.47
1:A2:2663:G:C8	1:A2:2664:U:H1'	2.50	0.47
1:A2:2668:U:C2	1:A2:2669:U:C5	3.03	0.47
1:A2:2692:G:N3	1:A2:2692:G:H2'	2.29	0.47
1:A2:2749:C:C2'	1:A2:2750:G:O5'	2.62	0.47
1:A2:2763:C:H4'	1:A2:2764:A:N9	2.29	0.47
1:A2:2844:C:H5'	1:A2:2845:G:OP2	2.14	0.47
1:A2:3659:U:H5"	1:A2:3788:G:OP2	2.13	0.47
1:A2:3754:A:H4'	1:A2:3755:U:OP2	2.14	0.47
1:A2:3758:C:C5	1:A2:3759:U:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3866:G:H4'	5:AB:254:ILE:HB	1.97	0.47
1:A2:3907:G:C2	1:A2:4131:C:OP1	2.67	0.47
1:A2:4045:A:H5"	16:AN:28:TRP:CD1	2.49	0.47
1:A2:4155:G:C1'	1:A2:4156:G:OP2	2.63	0.47
1:A2:4177:G:H4'	1:A2:4263:C:H1'	1.97	0.47
1:A2:4565:A:C8	1:A2:4566:G:N7	2.82	0.47
1:A2:4572:C:O5'	1:A2:4572:C:H6	1.98	0.47
1:A2:4659:U:O4'	1:A2:4660:A:H5'	2.15	0.47
1:A2:4698:C:O2'	1:A2:4699:G:H5'	2.15	0.47
1:A2:4735:G:H2'	1:A2:4736:C:C4'	2.34	0.47
1:A2:4803:C:C3'	1:A2:4804:G:H4'	2.44	0.47
1:A2:4897:C:O2	1:A2:4897:C:C3'	2.62	0.47
1:A2:4981:U:C2	59:CI:166:PHE:O	2.59	0.47
2:A3:154:G:O5'	2:A3:154:G:C8	2.66	0.47
3:A4:47:G:H5'	7:AD:94:ASN:HB3	1.96	0.47
5:AB:132:LYS:O	5:AB:135:LYS:HB3	2.14	0.47
6:AC:42:THR:HG22	6:AC:46:LYS:HE3	1.95	0.47
8:AE:282:TYR:HB2	8:AE:285:LYS:HG2	1.96	0.47
11:AH:48:LEU:HD22	11:AH:54:ARG:NH1	2.30	0.47
13:AJ:112:HIS:HD2	13:AJ:126:TYR:H	1.63	0.47
13:AJ:112:HIS:CD2	13:AJ:126:TYR:H	2.31	0.47
14:AL:8:MET:HA	29:Aa:49:HIS:CE1	2.49	0.47
16:AN:15:GLN:HG2	37:Ai:52:PRO:HD2	1.96	0.47
16:AN:140:LYS:HB3	16:AN:144:ARG:NH1	2.29	0.47
18:AP:2:VAL:O	18:AP:3:ARG:HB3	2.15	0.47
20:AR:112:SER:O	20:AR:113:LYS:CB	2.63	0.47
25:AW:58:LYS:HB3	25:AW:58:LYS:NZ	2.29	0.47
32:Ad:33:ILE:HG22	32:Ad:33:ILE:O	2.15	0.47
34:Af:30:ILE:HG23	34:Af:33:VAL:HB	1.95	0.47
35:Ag:89:ASP:O	35:Ag:93:ARG:HG3	2.15	0.47
38:Aj:64:MET:SD	38:Aj:67:LEU:HD12	2.54	0.47
40:Al:23:ILE:HG12	40:Al:38:ASN:HB2	1.97	0.47
45:At:44:ILE:HA	45:At:48:THR:CG2	2.45	0.47
46:Au:22:ARG:HA	46:Au:166:GLU:OE2	2.14	0.47
46:Au:105:ILE:HD11	46:Au:145:MET:CG	2.43	0.47
46:Au:105:ILE:CG2	46:Au:132:LEU:HD23	2.45	0.47
48:BB:811:ASP:O	48:BB:1171:PRO:CG	2.62	0.47
48:BB:824:LYS:CG	48:BB:1165:TYR:CZ	2.96	0.47
48:BB:836:LYS:C	48:BB:838:VAL:H	2.23	0.47
48:BB:885:THR:CG2	48:BB:914:ILE:HD11	2.43	0.47
48:BB:893:ASN:HD21	48:BB:906:ASN:HD21	1.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1007:ALA:HA	48:BB:1010:VAL:HG12	1.96	0.47
48:BB:1152:LEU:CG	48:BB:1153:GLU:N	2.77	0.47
48:BB:1174:LYS:HE2	48:BB:1175:ASP:H	1.76	0.47
48:BB:1367:LYS:C	48:BB:1369:GLN:N	2.73	0.47
48:BB:1376:GLU:CG	48:BB:1377:PRO:HD2	2.45	0.47
50:C1:14:C:H5'	53:CC:190:SER:OG	2.14	0.47
50:C1:18:C:O5'	50:C1:18:C:H6	1.97	0.47
50:C1:60:A:H5'	50:C1:501:C:C5	2.42	0.47
50:C1:125:C:P	50:C1:125:C:C6	3.08	0.47
50:C1:159:A:H8	50:C1:159:A:P	2.38	0.47
50:C1:319:C:H4'	50:C1:319:C:OP1	2.13	0.47
50:C1:462:C:H2'	50:C1:463:C:O5'	2.15	0.47
50:C1:474:G:H8	50:C1:474:G:OP1	1.97	0.47
50:C1:543:C:C6	50:C1:543:C:C3'	2.97	0.47
50:C1:545:A:C8	50:C1:545:A:H3'	2.50	0.47
50:C1:558:G:C8	50:C1:558:G:OP2	2.68	0.47
50:C1:563:G:H2'	50:C1:564:A:H8	1.78	0.47
50:C1:615:C:C2'	50:C1:616:A:H5'	2.45	0.47
50:C1:667:U:H2'	50:C1:668:A:H5"	1.97	0.47
50:C1:691:G:C4	50:C1:692:G:C8	3.02	0.47
50:C1:793:G:H2'	50:C1:794:A:O4'	2.14	0.47
50:C1:795:A:O2'	50:C1:796:G:H5'	2.14	0.47
50:C1:852:G:N3	50:C1:852:G:H2'	2.29	0.47
50:C1:856:C:C2'	50:C1:857:U:H5'	2.45	0.47
50:C1:953:C:H2'	50:C1:954:U:O4'	2.14	0.47
50:C1:1142:G:N2	50:C1:1145:A:OP2	2.48	0.47
50:C1:1161:U:C6	50:C1:1161:U:C3'	2.98	0.47
50:C1:1206:G:H1'	50:C1:1834:A:N3	2.28	0.47
50:C1:1282:A:C2'	50:C1:1283:C:H5'	2.45	0.47
50:C1:1288:U:OP2	50:C1:1311:C:C2	2.68	0.47
50:C1:1396:A:H2	50:C1:1449:G:N2	2.12	0.47
50:C1:1535:U:C6	56:CF:82:ASN:OD1	2.67	0.47
50:C1:1547:C:H6	50:C1:1547:C:H5"	1.80	0.47
50:C1:1555:U:C2'	50:C1:1556:A:H5'	2.45	0.47
50:C1:1580:A:H3'	50:C1:1581:C:C5'	2.45	0.47
50:C1:1593:C:H5	76:CZ:104:ARG:NH2	2.06	0.47
50:C1:1607:A:C2	50:C1:1608:U:H1'	2.50	0.47
50:C1:1638:G:OP2	50:C1:1638:G:C5	2.68	0.47
50:C1:1698:C:H4'	50:C1:1699:A:OP2	2.12	0.47
50:C1:1751:C:H2'	50:C1:1752:C:H5'	1.96	0.47
50:C1:1803:U:H2'	50:C1:1804:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:CA:48:ILE:CG2	68:CR:105:MET:SD	3.02	0.47
52:CB:22:VAL:O	52:CB:23:ASP:C	2.57	0.47
52:CB:160:GLN:HE21	52:CB:204:ILE:CG2	2.28	0.47
53:CC:62:PRO:HA	53:CC:90:GLU:OE2	2.13	0.47
56:CF:163:PHE:CE2	56:CF:164:ARG:HG3	2.49	0.47
57:CG:36:VAL:HB	57:CG:50:VAL:O	2.14	0.47
57:CG:135:PRO:HG3	57:CG:144:LEU:CD1	2.39	0.47
58:CH:181:THR:HG22	58:CH:183:LYS:HD3	1.97	0.47
59:CI:131:PRO:HG3	59:CI:147:LYS:HE3	1.96	0.47
59:CI:192:GLY:HA3	62:CL:20:LYS:CA	2.45	0.47
59:CI:193:LYS:HE2	62:CL:5:GLN:OE1	2.14	0.47
60:CJ:122:SER:O	60:CJ:125:HIS:HB3	2.14	0.47
64:CN:94:LYS:O	64:CN:98:VAL:HG23	2.14	0.47
66:CP:60:LEU:C	66:CP:60:LEU:HD13	2.40	0.47
66:CP:84:ILE:HD11	66:CP:115:TYR:CE2	2.50	0.47
67:CQ:16:LYS:HD3	67:CQ:17:LYS:HG2	1.97	0.47
69:CS:46:ARG:CZ	70:CT:37:VAL:HG22	2.44	0.47
73:CW:94:LEU:HD12	73:CW:97:ARG:HH22	1.80	0.47
74:CX:68:LYS:CB	74:CX:85:VAL:HB	2.45	0.47
75:CY:41:ARG:HH12	75:CY:94:HIS:CD2	2.32	0.47
76:CZ:103:HIS:CG	76:CZ:104:ARG:N	2.82	0.47
77:Ca:44:ILE:CG2	77:Ca:67:LEU:HG	2.45	0.47
1:A2:8:U:H5'	16:AN:40:PRO:CB	2.44	0.47
1:A2:14:C:O4'	1:A2:14:C:O2	2.31	0.47
1:A2:29:G:P	16:AN:187:SER:HB2	2.55	0.47
1:A2:33:A:H5"	1:A2:33:A:C8	2.46	0.47
1:A2:1148:G:O5'	1:A2:1148:G:C8	2.65	0.47
1:A2:1260:C:C6	1:A2:1260:C:O5'	2.67	0.47
1:A2:1270:G:O4'	1:A2:4898:A:C2	2.68	0.47
1:A2:1379:G:H2'	1:A2:1380:G:C8	2.38	0.47
1:A2:1490:U:C5	1:A2:1490:U:OP2	2.68	0.47
1:A2:1581:U:H2'	1:A2:1582:C:C6	2.50	0.47
1:A2:1820:G:H8	19:AQ:11:ARG:NH2	2.13	0.47
1:A2:1821:A:OP2	1:A2:1821:A:C8	2.68	0.47
1:A2:1929:G:H21	21:AS:93:MET:HE2	1.80	0.47
1:A2:2005:U:H2'	1:A2:2005:U:OP2	2.15	0.47
1:A2:2251:G:H2'	1:A2:2252:A:O4'	2.14	0.47
1:A2:2276:A:H2'	1:A2:2276:A:N3	2.30	0.47
1:A2:2386:U:H3'	1:A2:2386:U:O2	2.15	0.47
1:A2:2421:U:C5'	1:A2:2422:C:C5	2.94	0.47
1:A2:2551:G:O6	28:AZ:108:ARG:HD2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2693:C:H6	1:A2:2693:C:O5'	1.98	0.47
1:A2:2730:G:C6	1:A2:2731:G:N1	2.83	0.47
1:A2:3920:G:C8	1:A2:3920:G:C3'	2.98	0.47
1:A2:4315:G:H2'	1:A2:4315:G:N3	2.29	0.47
1:A2:4530:G:N3	1:A2:4530:G:C2'	2.74	0.47
1:A2:4611:A:H2'	1:A2:4612:G:O4'	2.15	0.47
1:A2:4921:A:H3'	5:AB:128:LYS:HD2	1.96	0.47
3:A4:36:C:H5'	7:AD:155:THR:OG1	2.15	0.47
9:AF:43:ARG:HD3	9:AF:46:ARG:HH21	1.80	0.47
10:AG:55:VAL:HA	26:AX:44:PRO:HA	1.96	0.47
11:AH:41:ILE:HD11	11:AH:69:THR:HG22	1.96	0.47
15:AM:51:PRO:HB2	15:AM:53:LYS:HG2	1.95	0.47
16:AN:61:ILE:HD13	16:AN:133:ILE:CD1	2.45	0.47
17:AO:110:PRO:CB	17:AO:111:PRO:HD3	2.45	0.47
18:AP:24:VAL:HG23	18:AP:144:CYS:SG	2.55	0.47
29:Aa:70:CYS:CB	29:Aa:109:TYR:HB3	2.45	0.47
41:Am:96:CYS:HA	41:Am:121:LEU:HD23	1.96	0.47
48:BB:844:ARG:CG	48:BB:845:ALA:N	2.73	0.47
48:BB:850:VAL:HG11	48:BB:861:ILE:CD1	2.39	0.47
48:BB:1103:ILE:CG1	48:BB:1162:LEU:HB2	2.45	0.47
48:BB:1116:ARG:NH2	50:C1:487:U:H3'	2.30	0.47
48:BB:1247:VAL:HG21	48:BB:1271:PHE:HE2	1.79	0.47
48:BB:1305:PRO:HA	48:BB:1400:ILE:HD11	1.97	0.47
50:C1:78:C:O3'	57:CG:175:LYS:HG2	2.15	0.47
50:C1:79:A:H3'	50:C1:80:G:C8	2.49	0.47
50:C1:431:G:H2'	50:C1:432:G:C8	2.47	0.47
50:C1:563:G:C5	50:C1:564:A:N7	2.83	0.47
50:C1:567:C:H2'	50:C1:568:C:C5'	2.44	0.47
50:C1:577:U:O2	50:C1:577:U:O4'	2.33	0.47
50:C1:891:G:H8	50:C1:891:G:O5'	1.98	0.47
50:C1:985:G:C3'	50:C1:986:G:H5'	2.45	0.47
50:C1:1017:U:C5	50:C1:1018:U:C5	3.03	0.47
50:C1:1512:C:H5'	61:CK:29:MET:SD	2.55	0.47
50:C1:1731:A:H2'	50:C1:1732:G:H8	1.75	0.47
50:C1:1740:C:H5"	59:CI:58:LEU:HD11	1.97	0.47
52:CB:30:TRP:CD1	52:CB:48:LEU:HB3	2.50	0.47
52:CB:197:ILE:HG13	52:CB:210:VAL:HG11	1.97	0.47
55:CE:133:VAL:O	55:CE:136:ILE:CG2	2.63	0.47
56:CF:78:MET:O	56:CF:79:HIS:HB3	2.15	0.47
57:CG:189:ARG:O	57:CG:192:ILE:HG22	2.14	0.47
59:CI:65:PHE:O	59:CI:73:THR:HA	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:CI:131:PRO:HG3	59:CI:147:LYS:HZ1	1.79	0.47
69:CS:27:ALA:HB2	69:CS:45:LEU:HD21	1.97	0.47
71:CU:67:LYS:O	80:Cd:44:ARG:HG3	2.13	0.47
79:Cc:43:ILE:O	79:Cc:64:GLU:HA	2.14	0.47
83:Cg:86:THR:HG22	83:Cg:102:VAL:HG22	1.97	0.47
1:A2:59:A:C8	1:A2:329:A:C2	3.03	0.47
1:A2:83:C:C2	1:A2:100:C:N4	2.83	0.47
1:A2:212:C:C1'	1:A2:213:C:P	3.03	0.47
1:A2:297:A:H3'	1:A2:297:A:C8	2.50	0.47
1:A2:378:G:C2	1:A2:403:G:C2	3.03	0.47
1:A2:403:G:H4'	1:A2:405:C:C2	2.50	0.47
1:A2:409:A:O2'	1:A2:410:A:H5'	2.15	0.47
1:A2:934:G:H2'	1:A2:935:G:H8	1.80	0.47
1:A2:1197:G:C2'	1:A2:1198:G:C8	2.97	0.47
1:A2:1330:C:O2'	1:A2:1331:G:H5'	2.15	0.47
1:A2:1336:U:H2'	1:A2:1337:C:C5	2.50	0.47
1:A2:1453:C:H2'	1:A2:1454:G:N7	2.29	0.47
1:A2:1592:A:C2	4:AA:196:TRP:HH2	2.32	0.47
1:A2:1730:A:H3'	1:A2:1731:G:C8	2.50	0.47
1:A2:1942:A:N3	1:A2:4654:G:H8	2.13	0.47
1:A2:2481:C:H1'	1:A2:2482:C:OP1	2.14	0.47
1:A2:2795:C:H1'	1:A2:4604:G:O2'	2.14	0.47
1:A2:2831:G:C3'	1:A2:2832:G:C5'	2.93	0.47
1:A2:3590:A:C8	1:A2:4602:U:H1'	2.50	0.47
1:A2:3592:C:H6	1:A2:3592:C:C3'	2.20	0.47
1:A2:3692:A:C2'	1:A2:3693:A:H5'	2.44	0.47
1:A2:3703:U:C2'	1:A2:3704:G:H5'	2.45	0.47
1:A2:3724:G:C1'	1:A2:3725:A:OP1	2.57	0.47
1:A2:3727:U:H2'	1:A2:3728:A:C8	2.50	0.47
1:A2:3820:U:H2'	1:A2:3821:A:O4'	2.15	0.47
1:A2:4028:U:O2'	1:A2:4029:G:H5'	2.15	0.47
1:A2:4037:U:H2'	1:A2:4038:U:C6	2.49	0.47
1:A2:4130:A:H8	1:A2:4130:A:O5'	1.98	0.47
1:A2:4374:A:H2'	1:A2:4382:A:C6	2.49	0.47
1:A2:4487:G:H4'	1:A2:4488:G:O5'	2.14	0.47
1:A2:4942:C:C4	5:AB:123:HIS:ND1	2.83	0.47
3:A4:48:G:H5"	7:AD:91:GLY:CA	2.44	0.47
6:AC:149:GLU:O	6:AC:152:LEU:HD23	2.15	0.47
10:AG:83:PHE:O	10:AG:84:THR:CB	2.62	0.47
11:AH:86:LEU:HD13	11:AH:186:THR:HG21	1.96	0.47
13:AJ:96:LYS:C	13:AJ:97:ASN:O	2.55	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AN:137:PRO:HB3	16:AN:152:THR:HA	1.96	0.47
20:AR:41:ILE:HD12	20:AR:44:LEU:HD12	1.97	0.47
47:BA:67:C:C4	47:BA:68:C:N4	2.83	0.47
47:BA:67:C:H2'	47:BA:68:C:C6	2.50	0.47
48:BB:842:LYS:HE2	48:BB:1139:VAL:HA	1.96	0.47
48:BB:1077:VAL:O	48:BB:1224:ILE:HD12	2.15	0.47
48:BB:1105:PRO:CG	48:BB:1159:LEU:HD22	2.44	0.47
48:BB:1194:GLY:O	48:BB:1195:VAL:HB	2.14	0.47
50:C1:23:G:C5	50:C1:24:C:C4	3.02	0.47
50:C1:77:A:H5"	50:C1:78:C:N4	2.30	0.47
50:C1:181:A:O5'	50:C1:182:C:C5'	2.63	0.47
50:C1:215:G:O5'	50:C1:215:G:C8	2.68	0.47
50:C1:298:G:O2'	50:C1:299:A:H5'	2.14	0.47
50:C1:382:C:H2'	50:C1:383:G:C2	2.49	0.47
50:C1:564:A:H2'	50:C1:565:G:OP1	2.15	0.47
50:C1:920:A:H2'	50:C1:922:A:C8	2.37	0.47
50:C1:949:G:H8	50:C1:949:G:O5'	1.98	0.47
50:C1:1214:A:C5	50:C1:1217:A:C6	3.03	0.47
50:C1:1284:A:C4	50:C1:1286:G:H5"	2.50	0.47
50:C1:1454:A:H5"	68:CR:3:ARG:HD2	1.96	0.47
50:C1:1698:C:C4'	50:C1:1699:A:C8	2.83	0.47
50:C1:1862:G:H4'	50:C1:1863:A:OP1	2.15	0.47
52:CB:46:LYS:HZ2	65:CO:27:VAL:HA	1.78	0.47
52:CB:124:HIS:HB3	52:CB:138:PHE:CE2	2.50	0.47
53:CC:63:VAL:O	53:CC:64:THR:HB	2.15	0.47
54:CD:37:VAL:CG1	54:CD:50:ILE:HG12	2.45	0.47
57:CG:131:ARG:HB2	57:CG:131:ARG:NH1	2.29	0.47
58:CH:147:LYS:HD2	58:CH:151:SER:HB2	1.97	0.47
66:CP:111:MET:HG2	66:CP:119:PHE:CZ	2.50	0.47
67:CQ:33:LYS:HD3	67:CQ:69:ARG:CD	2.45	0.47
67:CQ:96:TYR:HA	67:CQ:100:VAL:CG2	2.45	0.47
70:CT:62:ARG:O	70:CT:65:TYR:HB3	2.14	0.47
83:Cg:165:ILE:HG13	83:Cg:177:TRP:HB2	1.96	0.47
1:A2:179:G:O2'	1:A2:180:C:H5'	2.15	0.47
1:A2:229:G:H1'	1:A2:374:A:C1'	2.25	0.47
1:A2:304:U:OP2	1:A2:304:U:C5	2.68	0.47
1:A2:416:U:C2'	1:A2:417:A:H5'	2.45	0.47
1:A2:680:U:H2'	1:A2:681:U:C5	2.49	0.47
1:A2:718:G:H21	1:A2:721:A:N6	2.13	0.47
1:A2:961:C:H1'	1:A2:1254:A:N6	2.20	0.47
1:A2:1082:U:C1'	1:A2:1083:C:P	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1221:C:H2'	1:A2:1222:G:C4'	2.44	0.47
1:A2:1334:A:H4'	1:A2:1335:G:O5'	2.15	0.47
1:A2:1846:A:O2'	1:A2:1848:C:H5'	2.15	0.47
1:A2:1912:A:N1	1:A2:2026:U:C4	2.83	0.47
1:A2:2362:U:H2'	1:A2:2363:U:C6	2.50	0.47
1:A2:2370:C:O2	1:A2:2370:C:H2'	2.15	0.47
1:A2:2409:U:H2'	1:A2:2410:G:O4'	2.14	0.47
1:A2:2449:A:O2'	26:AX:48:ARG:HA	2.15	0.47
1:A2:2525:C:H2'	1:A2:2525:C:O2	2.15	0.47
1:A2:2737:G:C2'	1:A2:2738:U:H5"	2.39	0.47
1:A2:2746:U:H2'	1:A2:2747:C:O5'	2.15	0.47
1:A2:2761:C:C6	1:A2:2761:C:C3'	2.98	0.47
1:A2:3631:A:H2'	4:AA:118:GLU:OE2	2.15	0.47
1:A2:3662:U:H2'	1:A2:3663:U:H5'	1.97	0.47
1:A2:3695:A:H8	1:A2:3695:A:O5'	1.98	0.47
1:A2:3697:A:H2'	1:A2:3698:U:C4'	2.45	0.47
1:A2:3867:G:C2	5:AB:261:ARG:HA	2.50	0.47
1:A2:3907:G:N2	1:A2:4131:C:OP1	2.47	0.47
1:A2:4024:A:H1'	46:Au:156:ARG:CZ	2.45	0.47
1:A2:4064:C:H2'	1:A2:4065:G:H5'	1.96	0.47
1:A2:4089:G:H21	28:AZ:136:PHE:HB3	1.79	0.47
1:A2:4135:G:H2'	1:A2:4136:C:C6	2.50	0.47
1:A2:4167:C:H3'	22:AT:4:THR:CG2	2.44	0.47
1:A2:4428:U:C6	1:A2:4428:U:H3'	2.50	0.47
1:A2:4593:G:H1	1:A2:4623:G:H2'	1.80	0.47
1:A2:4812:A:C2	1:A2:4813:C:C2	3.02	0.47
1:A2:4876:C:H2'	1:A2:4877:C:C6	2.49	0.47
2:A3:14:U:H3'	2:A3:15:G:H8	1.80	0.47
2:A3:24:G:H2'	2:A3:25:G:O4'	2.15	0.47
2:A3:27:U:O2	6:AC:51:PRO:HB3	2.15	0.47
8:AE:149:ILE:HA	8:AE:162:VAL:O	2.15	0.47
9:AF:88:LYS:HB3	9:AF:124:LYS:HZ1	1.80	0.47
15:AM:49:ALA:HB2	21:AS:100:LEU:CD1	2.45	0.47
16:AN:183:THR:CB	16:AN:188:ARG:HB3	2.45	0.47
21:AS:46:TYR:O	21:AS:49:SER:HB2	2.14	0.47
22:AT:105:PHE:O	22:AT:109:VAL:HG23	2.15	0.47
28:AZ:9:LYS:HE2	28:AZ:82:PRO:HB2	1.97	0.47
31:Ac:31:TYR:O	31:Ac:35:LEU:HG	2.15	0.47
41:Am:95:ILE:HD11	41:Am:124:LYS:NZ	2.30	0.47
48:BB:1233:MET:O	48:BB:1237:VAL:HG13	2.15	0.47
48:BB:1308:MET:HE3	48:BB:1333:VAL:CB	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:173:A:H2'	50:C1:174:C:C6	2.50	0.47
50:C1:193:C:H6	50:C1:193:C:C5'	2.24	0.47
50:C1:212:C:H2'	50:C1:212:C:O2	2.15	0.47
50:C1:305:U:H2'	50:C1:305:U:O2	2.15	0.47
50:C1:567:C:C3'	50:C1:568:C:H5'	2.44	0.47
50:C1:572:U:H2'	50:C1:573:U:N3	2.26	0.47
50:C1:684:G:H2'	50:C1:685:A:H8	1.79	0.47
50:C1:743:U:H5	58:CH:97:GLN:NE2	2.11	0.47
50:C1:841:G:C8	75:CY:12:PHE:CZ	3.02	0.47
50:C1:985:G:H3'	77:Ca:19:GLN:NE2	2.30	0.47
50:C1:1258:A:H2'	50:C1:1259:A:C4'	2.32	0.47
50:C1:1361:G:N7	50:C1:1362:U:C5	2.83	0.47
50:C1:1395:C:H2'	50:C1:1396:A:O4'	2.15	0.47
50:C1:1598:G:H4'	50:C1:1600:G:C6	2.50	0.47
50:C1:1649:U:N3	50:C1:1675:A:C2	2.80	0.47
50:C1:1704:C:O5'	50:C1:1704:C:H6	1.98	0.47
50:C1:1712:A:H2'	50:C1:1713:C:C6	2.50	0.47
50:C1:1743:G:O2'	50:C1:1744:G:H5'	2.14	0.47
50:C1:1771:G:O2'	50:C1:1772:C:H5'	2.14	0.47
50:C1:1825:A:C8	50:C1:1825:A:H3'	2.50	0.47
51:CA:108:PHE:HD2	51:CA:136:GLU:OE1	1.97	0.47
56:CF:32:ASP:HB3	56:CF:117:ILE:HG23	1.95	0.47
56:CF:92:ILE:HG23	56:CF:170:ALA:HB2	1.97	0.47
56:CF:162:ALA:HB2	56:CF:172:CYS:SG	2.54	0.47
59:CI:48:VAL:HG21	59:CI:54:LYS:HD3	1.97	0.47
70:CT:41:LYS:HG2	70:CT:94:ARG:O	2.15	0.47
76:CZ:44:LEU:HD22	76:CZ:46:ASN:OD1	2.14	0.47
83:Cg:32:LEU:CB	83:Cg:71:ILE:HD11	2.45	0.47
83:Cg:72:SER:HA	83:Cg:113:PHE:CE1	2.50	0.47
1:A2:8:U:N3	1:A2:9:C:C5	2.83	0.46
1:A2:119:G:C4'	1:A2:120:A:C8	2.98	0.46
1:A2:122:U:C4	1:A2:123:C:N4	2.83	0.46
1:A2:252:G:O5'	1:A2:252:G:C8	2.66	0.46
1:A2:943:G:H3'	1:A2:1262:G:O4'	2.16	0.46
1:A2:956:C:O2'	1:A2:957:G:H5"	2.15	0.46
1:A2:1085:C:C2'	1:A2:1085:C:O2	2.63	0.46
1:A2:1141:G:H2'	1:A2:1142:G:C8	2.50	0.46
1:A2:1198:G:C4	1:A2:1199:G:C8	3.04	0.46
1:A2:1278:C:H6	1:A2:1278:C:O5'	1.98	0.46
1:A2:1450:U:H2'	1:A2:1451:C:C6	2.49	0.46
1:A2:1518:G:H4'	4:AA:194:ASN:ND2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1573:C:H2'	1:A2:1574:G:O5'	2.15	0.46
1:A2:1587:G:H8	1:A2:1587:G:O5'	1.99	0.46
1:A2:1650:U:H6	1:A2:1650:U:H5"	1.78	0.46
1:A2:1796:U:H3	1:A2:1802:G:N2	2.13	0.46
1:A2:1812:U:H6	1:A2:1812:U:H5"	1.80	0.46
1:A2:2064:G:H5"	6:AC:305:PRO:HB2	1.96	0.46
1:A2:2346:U:O2'	1:A2:2347:A:H8	1.98	0.46
1:A2:3658:G:H2'	1:A2:3658:G:N3	2.30	0.46
1:A2:3725:A:H2'	1:A2:3726:G:H5'	1.95	0.46
1:A2:4068:C:C4'	52:CB:224:GLU:CD	2.59	0.46
1:A2:4109:C:O5'	1:A2:4109:C:H6	1.97	0.46
1:A2:4143:G:H5'	1:A2:4143:G:N3	2.30	0.46
1:A2:4634:C:H4'	5:AB:335:GLY:HA3	1.97	0.46
1:A2:4824:U:OP1	1:A2:4825:G:C2	2.67	0.46
3:A4:48:G:H5"	7:AD:91:GLY:HA2	1.96	0.46
4:AA:47:ASP:HA	4:AA:84:THR:CG2	2.45	0.46
4:AA:104:VAL:HB	4:AA:146:THR:HG21	1.97	0.46
6:AC:150:LEU:HD23	6:AC:150:LEU:N	2.30	0.46
8:AE:172:LEU:HB2	8:AE:188:ARG:HB2	1.97	0.46
11:AH:98:HIS:CD2	48:BB:945:HIS:CD2	2.98	0.46
15:AM:31:ILE:HD13	21:AS:100:LEU:CD1	2.39	0.46
16:AN:142:ILE:HD12	16:AN:142:ILE:N	2.30	0.46
21:AS:30:MET:HG2	22:AT:151:LEU:O	2.15	0.46
21:AS:69:GLU:OE2	21:AS:76:LYS:HE3	2.15	0.46
32:Ad:59:THR:O	32:Ad:59:THR:HG23	2.15	0.46
38:Aj:2:THR:O	38:Aj:7:SER:HB3	2.14	0.46
46:Au:28:ALA:HB1	46:Au:160:HIS:CE1	2.50	0.46
46:Au:114:ILE:HA	46:Au:118:LEU:HD23	1.96	0.46
48:BB:844:ARG:CG	48:BB:1143:GLN:OE1	2.61	0.46
48:BB:1116:ARG:NH2	48:BB:1150:LYS:CG	2.78	0.46
48:BB:1326:VAL:O	48:BB:1370:GLU:C	2.58	0.46
48:BB:1390:PHE:CE1	48:BB:1396:LEU:HG	2.50	0.46
50:C1:305:U:C6	50:C1:305:U:OP1	2.68	0.46
50:C1:525:A:C2	50:C1:561:A:N6	2.71	0.46
50:C1:572:U:H6	50:C1:572:U:C3'	2.27	0.46
50:C1:684:G:H2'	50:C1:685:A:O4'	2.15	0.46
50:C1:740:C:O5'	50:C1:740:C:H6	1.97	0.46
50:C1:743:U:H5"	50:C1:743:U:C2	2.51	0.46
50:C1:805:U:C6	50:C1:805:U:O5'	2.69	0.46
50:C1:906:U:H2'	50:C1:907:G:C8	2.49	0.46
50:C1:934:G:H5'	50:C1:993:G:H21	1.75	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1043:G:H1’	50:C1:1044:G:O5’	2.15	0.46
50:C1:1091:C:O2’	50:C1:1092:G:H5’	2.15	0.46
50:C1:1217:A:H2’	50:C1:1218:C:H6	1.71	0.46
50:C1:1220:A:N6	50:C1:1221:G:C6	2.83	0.46
50:C1:1288:U:C2	50:C1:1315:U:H1’	2.50	0.46
50:C1:1307:U:H4’	50:C1:1308:U:OP1	2.15	0.46
50:C1:1341:C:H6	50:C1:1341:C:O5’	1.98	0.46
50:C1:1352:G:H5”	51:CA:139:TYR:CZ	2.50	0.46
50:C1:1465:A:C5	50:C1:1466:G:H1’	2.50	0.46
50:C1:1495:G:C6	80:Cd:41:GLN:HB3	2.50	0.46
51:CA:40:LYS:HB2	68:CR:105:MET:HA	1.96	0.46
51:CA:40:LYS:HB2	68:CR:105:MET:CA	2.46	0.46
55:CE:87:MET:CE	55:CE:123:LEU:HD12	2.45	0.46
58:CH:78:ARG:O	58:CH:81:ARG:HB3	2.15	0.46
59:CI:144:LYS:O	59:CI:147:LYS:HG2	2.16	0.46
65:CO:125:LYS:HB3	77:Ca:58:VAL:HG21	1.96	0.46
67:CQ:102:GLU:CB	83:Cg:57:ARG:HA	2.43	0.46
69:CS:74:PRO:HG2	69:CS:84:LEU:HD21	1.97	0.46
75:CY:94:HIS:HB3	75:CY:96:LEU:HD23	1.95	0.46
75:CY:97:TYR:O	75:CY:98:GLU:CB	2.63	0.46
75:CY:100:LYS:O	75:CY:100:LYS:HG2	2.14	0.46
1:A2:197:U:N3	1:A2:235:C:O4’	2.49	0.46
1:A2:470:G:H2’	1:A2:471:C:H5’	1.96	0.46
1:A2:722:G:C3’	1:A2:723:G:C4’	2.93	0.46
1:A2:929:U:C6	1:A2:929:U:P	3.09	0.46
1:A2:961:C:O3’	1:A2:962:G:C8	2.64	0.46
1:A2:1056:C:C6	1:A2:1056:C:H5”	2.51	0.46
1:A2:1412:G:N2	1:A2:1432:A:C2	2.83	0.46
1:A2:1861:G:H8	1:A2:1861:G:C5’	2.26	0.46
1:A2:1868:G:C8	1:A2:1868:G:H3’	2.49	0.46
1:A2:2020:A:C2	1:A2:4424:A:N1	2.82	0.46
1:A2:2352:A:H3’	1:A2:2353:A:C8	2.49	0.46
1:A2:2444:U:OP1	1:A2:2445:U:H5	1.97	0.46
1:A2:2449:A:H5”	1:A2:2450:A:OP2	2.15	0.46
1:A2:2503:C:O5’	1:A2:2503:C:C6	2.68	0.46
1:A2:2668:U:H2’	1:A2:2669:U:H6	1.81	0.46
1:A2:2688:G:C2	1:A2:2689:G:H1’	2.49	0.46
1:A2:2839:G:C2	1:A2:3593:A:H8	2.33	0.46
1:A2:3574:C:HO2’	1:A2:3575:U:H6	1.58	0.46
1:A2:3577:A:H5”	1:A2:3577:A:C8	2.51	0.46
1:A2:3664:U:H6	1:A2:3664:U:H5”	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3684:U:H6	1:A2:3684:U:O5'	1.96	0.46
1:A2:3704:G:O5'	1:A2:3704:G:C8	2.67	0.46
1:A2:3746:G:O3'	1:A2:3747:U:H6	1.98	0.46
1:A2:4235:G:H4'	22:AT:12:ARG:NH2	2.30	0.46
1:A2:4299:A:H2'	1:A2:4300:U:C6	2.50	0.46
1:A2:4338:A:O2'	1:A2:4339:A:H2'	2.16	0.46
1:A2:4398:U:H6	1:A2:4398:U:OP2	1.98	0.46
1:A2:4598:U:H4'	1:A2:4999:A:N3	2.30	0.46
1:A2:4733:C:H1'	1:A2:4734:C:H5	1.80	0.46
1:A2:4812:A:H2'	1:A2:4813:C:O4'	2.14	0.46
1:A2:4882:G:N2	1:A2:4883:C:C6	2.84	0.46
1:A2:4904:G:H2'	1:A2:4905:U:O4'	2.15	0.46
1:A2:4910:A:H2'	1:A2:4911:A:C8	2.50	0.46
2:A3:90:C:H2'	2:A3:91:A:H8	1.80	0.46
6:AC:112:HIS:HB2	16:AN:202:ARG:O	2.15	0.46
6:AC:229:LEU:HD13	6:AC:229:LEU:C	2.39	0.46
8:AE:192:LYS:CG	34:Af:107:PRO:HD3	2.45	0.46
9:AF:105:VAL:HB	9:AF:136:VAL:HG12	1.96	0.46
11:AH:10:VAL:HG22	11:AH:74:CYS:SG	2.54	0.46
12:AI:47:PRO:HB3	12:AI:171:TRP:CZ2	2.50	0.46
12:AI:96:VAL:HG22	12:AI:122:PRO:HB3	1.98	0.46
14:AL:24:THR:HB	14:AL:26:PHE:CE2	2.50	0.46
14:AL:29:PRO:O	14:AL:33:ILE:HD13	2.15	0.46
15:AM:119:ARG:CA	17:AO:190:ASP:HB3	2.45	0.46
17:AO:110:PRO:HB2	17:AO:111:PRO:HD3	1.97	0.46
22:AT:89:ILE:HG22	22:AT:91:VAL:HG23	1.96	0.46
26:AX:127:LEU:CD2	26:AX:135:LYS:HB3	2.46	0.46
31:Ac:38:ILE:HG21	31:Ac:63:TYR:HB3	1.97	0.46
42:An:1:MET:N	50:C1:1706:G:C5'	2.78	0.46
43:Ao:26:TYR:HB3	43:Ao:67:VAL:HB	1.98	0.46
43:Ao:106:PHE:CD1	47:BA:58:A:O4'	2.68	0.46
46:Au:43:VAL:O	46:Au:152:ARG:HA	2.15	0.46
48:BB:1070:LEU:C	48:BB:1071:ARG:NE	2.73	0.46
50:C1:36:U:N3	50:C1:520:A:N1	2.63	0.46
50:C1:59:U:OP2	50:C1:59:U:H4'	2.13	0.46
50:C1:100:U:H2'	50:C1:101:U:C5'	2.45	0.46
50:C1:215:G:H3'	50:C1:215:G:P	2.55	0.46
50:C1:417:C:H5'	50:C1:418:A:OP2	2.15	0.46
50:C1:499:G:N2	50:C1:502:C:C5	2.75	0.46
50:C1:515:G:H8	50:C1:515:G:O5'	1.98	0.46
50:C1:593:C:C6	50:C1:593:C:P	3.09	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:901:G:O2'	50:C1:902:G:H5'	2.15	0.46
50:C1:1411:G:N3	50:C1:1411:G:C2'	2.77	0.46
50:C1:1681:U:H5"	79:Cc:20:ARG:HG3	1.96	0.46
52:CB:63:LYS:C	52:CB:65:ARG:H	2.23	0.46
52:CB:71:LEU:HD22	52:CB:71:LEU:O	2.15	0.46
53:CC:109:ILE:HD11	53:CC:151:ILE:HD11	1.96	0.46
57:CG:63:MET:HE3	57:CG:99:GLY:O	2.14	0.46
57:CG:87:ARG:O	57:CG:88:ARG:HB3	2.15	0.46
69:CS:60:THR:O	69:CS:63:GLU:HB2	2.14	0.46
70:CT:40:ALA:O	70:CT:41:LYS:HB2	2.15	0.46
71:CU:80:PHE:CB	80:Cd:52:PHE:HB3	2.45	0.46
76:CZ:54:THR:HB	76:CZ:58:LEU:HD11	1.97	0.46
1:A2:21:G:H1'	2:A3:103:A:N3	2.30	0.46
1:A2:46:U:H5"	14:AL:15:HIS:ND1	2.30	0.46
1:A2:87:A:H2'	1:A2:88:A:O4'	2.16	0.46
1:A2:344:A:N1	1:A2:351:A:C8	2.83	0.46
1:A2:653:C:O5'	1:A2:653:C:H6	1.98	0.46
1:A2:656:G:C2'	1:A2:657:C:H5'	2.23	0.46
1:A2:1250:A:H2'	1:A2:1250:A:N3	2.30	0.46
1:A2:1318:G:H8	1:A2:1318:G:P	2.38	0.46
1:A2:1354:G:H2'	1:A2:1354:G:N3	2.30	0.46
1:A2:1359:C:H3'	1:A2:1359:C:O2	2.15	0.46
1:A2:1435:G:H4'	19:AQ:72:LEU:HB3	1.97	0.46
1:A2:1437:C:C3'	1:A2:1438:A:C8	2.98	0.46
1:A2:1624:C:H2'	1:A2:1625:A:O4'	2.14	0.46
1:A2:1661:A:C6	1:A2:1662:U:N3	2.83	0.46
1:A2:2009:C:H2'	1:A2:2010:U:C5'	2.44	0.46
1:A2:2530:A:N1	28:AZ:104:PRO:HG2	2.31	0.46
1:A2:2548:C:O2	1:A2:2548:C:H2'	2.16	0.46
1:A2:2575:A:C6	1:A2:2576:G:C4	3.04	0.46
1:A2:2743:A:P	1:A2:2743:A:H8	2.39	0.46
1:A2:2831:G:H3'	1:A2:2832:G:C5'	2.45	0.46
1:A2:3918:A:N3	1:A2:3919:U:C6	2.83	0.46
1:A2:4210:G:H5'	13:AJ:98:ASN:OD1	2.16	0.46
1:A2:4283:A:C2	7:AD:146:LEU:CB	2.96	0.46
1:A2:4296:A:H3'	1:A2:4296:A:C8	2.49	0.46
1:A2:4407:C:O2'	1:A2:4408:G:P	2.73	0.46
1:A2:4419:U:H2'	1:A2:4420:U:O5'	2.15	0.46
1:A2:4549:A:O3'	1:A2:4550:A:H4'	2.16	0.46
1:A2:4706:C:OP1	34:Af:54:LYS:CB	2.63	0.46
2:A3:105:C:H4'	2:A3:106:G:H5"	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A3:149:G:H1'	10:AG:61:ILE:CD1	2.33	0.46
3:A4:66:G:O3'	7:AD:14:LYS:HG2	2.16	0.46
5:AB:41:VAL:HG22	5:AB:187:GLY:HA3	1.97	0.46
7:AD:104:LEU:HD13	7:AD:247:ILE:HG23	1.97	0.46
10:AG:41:ILE:O	10:AG:43:GLN:N	2.44	0.46
10:AG:149:ASN:HB2	10:AG:151:LYS:HD3	1.98	0.46
13:AJ:135:GLY:HA2	13:AJ:157:ILE:CD1	2.44	0.46
14:AL:204:GLU:O	14:AL:206:ASP:N	2.49	0.46
16:AN:186:GLY:O	16:AN:187:SER:HB3	2.15	0.46
17:AO:15:LEU:HA	17:AO:42:ASN:O	2.15	0.46
21:AS:7:LEU:CD1	21:AS:35:PRO:HD3	2.45	0.46
28:AZ:21:ARG:HH11	28:AZ:21:ARG:HG2	1.79	0.46
32:Ad:85:ARG:HH22	32:Ad:120:VAL:HG22	1.81	0.46
41:Am:95:ILE:HD11	41:Am:124:LYS:HZ3	1.80	0.46
46:Au:26:ASP:HA	46:Au:163:VAL:HG23	1.98	0.46
46:Au:84:LEU:HD11	46:Au:118:LEU:CD2	2.41	0.46
47:BA:20:U:OP1	47:BA:20:U:H4'	2.15	0.46
48:BB:892:ILE:HG23	48:BB:1049:ILE:CG1	2.44	0.46
48:BB:1310:ILE:CG2	48:BB:1390:PHE:CZ	2.99	0.46
48:BB:1332:GLN:CB	48:BB:1366:LYS:HG2	2.46	0.46
49:BC:66:A:H2'	49:BC:67:C:C6	2.51	0.46
49:BC:174:U:H6	49:BC:174:U:O5'	1.98	0.46
50:C1:104:A:H62	50:C1:352:U:H5	1.64	0.46
50:C1:172:U:C5	50:C1:337:C:H1'	2.50	0.46
50:C1:197:U:C4	50:C1:198:U:H5	2.33	0.46
50:C1:993:G:C2'	50:C1:994:C:H5'	2.45	0.46
50:C1:1195:A:C2	50:C1:1196:A:N7	2.83	0.46
50:C1:1208:A:P	50:C1:1835:A:C2	3.08	0.46
50:C1:1344:A:H5"	50:C1:1370:A:H4'	1.96	0.46
50:C1:1398:G:N1	83:Cg:61:GLY:HA2	2.29	0.46
50:C1:1406:G:O4'	50:C1:1407:U:C5'	2.64	0.46
50:C1:1454:A:H61	50:C1:1467:C:H41	1.61	0.46
50:C1:1579:A:N3	50:C1:1579:A:C3'	2.71	0.46
50:C1:1695:A:H3'	50:C1:1696:C:C6	2.51	0.46
50:C1:1738:C:O5'	50:C1:1738:C:H6	1.99	0.46
51:CA:110:ASN:HD21	51:CA:113:GLN:CB	2.28	0.46
52:CB:172:MET:O	52:CB:176:VAL:HG23	2.16	0.46
57:CG:84:TYR:OH	57:CG:91:GLU:HB3	2.16	0.46
58:CH:131:GLU:OE2	58:CH:139:ILE:HD11	2.15	0.46
63:CM:35:ILE:HD11	63:CM:61:TYR:OH	2.15	0.46
66:CP:22:LEU:HD11	66:CP:109:PRO:CG	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:CS:73:ASN:HD22	69:CS:76:GLN:HB2	1.81	0.46
74:CX:98:ASP:O	74:CX:100:VAL:HG23	2.16	0.46
1:A2:174:G:C6	1:A2:175:C:N4	2.83	0.46
1:A2:241:G:H8	1:A2:241:G:P	2.38	0.46
1:A2:293:C:H4'	1:A2:4136:C:O4'	2.15	0.46
1:A2:434:G:C6	1:A2:1284:C:N4	2.84	0.46
1:A2:728:G:O2'	1:A2:729:C:H5'	2.15	0.46
1:A2:931:C:H2'	1:A2:932:C:H6	1.81	0.46
1:A2:947:G:C2'	1:A2:948:A:O5'	2.63	0.46
1:A2:1163:C:H2'	1:A2:1164:A:C5'	2.42	0.46
1:A2:1220:G:H2'	1:A2:1221:C:O5'	2.16	0.46
1:A2:1348:A:OP1	27:AY:5:PRO:HA	2.15	0.46
1:A2:1481:G:H3'	1:A2:1481:G:C8	2.50	0.46
1:A2:1531:G:C4	1:A2:1553:G:N2	2.84	0.46
1:A2:1660:G:H21	29:Aa:40:HIS:HB2	1.80	0.46
1:A2:1672:U:O2	1:A2:1672:U:C2'	2.62	0.46
1:A2:1706:U:H5'	9:AF:131:ASN:HD22	1.81	0.46
1:A2:2054:G:H8	1:A2:2054:G:O5'	1.99	0.46
1:A2:2280:U:O2	1:A2:2280:U:H2'	2.13	0.46
1:A2:2400:A:H8	1:A2:2400:A:OP2	1.99	0.46
1:A2:2471:U:H2'	1:A2:2472:U:C6	2.51	0.46
1:A2:2600:A:C2	1:A2:2601:G:N7	2.83	0.46
1:A2:3722:G:H22	1:A2:3741:U:C2'	2.23	0.46
1:A2:4051:U:H6	1:A2:4053:A:H1'	1.80	0.46
1:A2:4104:C:H6	1:A2:4104:C:O5'	1.97	0.46
1:A2:4177:G:H2'	1:A2:4178:U:C6	2.50	0.46
1:A2:4264:A:H4'	22:AT:80:VAL:CG1	2.45	0.46
1:A2:4428:U:O5'	1:A2:4428:U:H6	1.99	0.46
1:A2:4434:A:C2	1:A2:4442:U:C2	3.04	0.46
1:A2:4500:C:H2'	1:A2:4501:G:O4'	2.14	0.46
1:A2:4722:U:C4	21:AS:173:ASN:HB3	2.50	0.46
1:A2:4883:C:C2'	1:A2:4884:C:H5'	2.45	0.46
5:AB:234:ARG:NH2	5:AB:235:TRP:HE1	2.13	0.46
5:AB:325:GLU:O	5:AB:326:VAL:HB	2.14	0.46
6:AC:122:TYR:CD2	6:AC:280:PRO:HG3	2.50	0.46
6:AC:224:ILE:O	6:AC:227:ILE:HG22	2.16	0.46
7:AD:41:LYS:HG3	22:AT:67:VAL:HG13	1.96	0.46
8:AE:154:THR:HA	8:AE:158:ARG:HD3	1.96	0.46
9:AF:127:LYS:HE2	9:AF:131:ASN:HD21	1.80	0.46
9:AF:163:ASN:O	9:AF:164:LYS:HB2	2.15	0.46
9:AF:232:ASP:HA	9:AF:236:ARG:NH2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AH:96:TYR:HB3	11:AH:101:ILE:CD1	2.45	0.46
12:AI:35:ASP:C	12:AI:36:LEU:HD12	2.41	0.46
12:AI:99:ILE:O	12:AI:120:GLY:HA3	2.15	0.46
17:AO:34:VAL:CG1	17:AO:112:TYR:HE1	2.27	0.46
25:AW:57:ARG:NH1	25:AW:63:GLN:HE22	2.12	0.46
32:Ad:26:THR:HG23	32:Ad:85:ARG:HH11	1.80	0.46
37:Ai:9:VAL:HA	37:Ai:13:LYS:HD3	1.98	0.46
46:Au:64:GLU:H	46:Au:67:THR:HB	1.81	0.46
47:BA:42:C:H1'	50:C1:1639:G:N1	2.22	0.46
47:BA:74:C:H5'	48:BB:1321:PRO:CA	2.46	0.46
47:BA:74:C:C6	48:BB:1323:VAL:HG11	2.50	0.46
48:BB:821:ASP:HB3	48:BB:1176:GLU:OE2	2.15	0.46
48:BB:1012:PHE:HE2	48:BB:1034:LEU:HD21	1.81	0.46
48:BB:1066:HIS:HD1	48:BB:1093:ASN:ND2	2.09	0.46
48:BB:1306:CYS:SG	48:BB:1332:GLN:N	2.88	0.46
49:BC:341:C:H42	50:C1:1058:A:H62	1.62	0.46
50:C1:423:U:C4	50:C1:424:C:C5	3.04	0.46
50:C1:527:C:H6	50:C1:527:C:C5'	2.28	0.46
50:C1:600:G:C2	50:C1:601:G:C5	3.04	0.46
50:C1:673:G:H1'	50:C1:1084:A:N3	2.30	0.46
50:C1:684:G:C4	50:C1:920:A:C8	3.03	0.46
50:C1:694:G:H4'	50:C1:694:G:OP1	2.16	0.46
50:C1:1304:U:O5'	50:C1:1304:U:H6	1.99	0.46
50:C1:1387:G:H2'	50:C1:1388:A:C8	2.51	0.46
50:C1:1495:G:HO2'	50:C1:1496:U:H6	1.60	0.46
50:C1:1643:U:H1'	67:CQ:142:GLN:CD	2.41	0.46
52:CB:140:VAL:HB	52:CB:213:ARG:HH12	1.80	0.46
52:CB:186:ASN:O	52:CB:190:PRO:CD	2.63	0.46
53:CC:255:LEU:O	53:CC:255:LEU:HG	2.14	0.46
58:CH:125:VAL:O	58:CH:128:ALA:HB3	2.16	0.46
62:CL:22:ARG:HD2	62:CL:27:GLU:CD	2.40	0.46
76:CZ:94:LYS:C	76:CZ:96:LEU:H	2.23	0.46
1:A2:19:G:C4'	1:A2:20:U:OP1	2.60	0.46
1:A2:301:G:H3'	1:A2:301:G:C8	2.51	0.46
1:A2:307:U:O2	1:A2:307:U:H2'	2.15	0.46
1:A2:402:G:H4'	1:A2:403:G:O5'	2.15	0.46
1:A2:718:G:C8	1:A2:719:G:N2	2.84	0.46
1:A2:736:G:H22	1:A2:902:G:H22	1.60	0.46
1:A2:1086:A:OP1	3:A4:107:G:C5'	2.64	0.46
1:A2:1087:C:H5'	7:AD:277:LYS:NZ	2.31	0.46
1:A2:1248:G:C3'	1:A2:1249:G:C8	2.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1377:A:C2’	1:A2:1400:A:N6	2.78	0.46
1:A2:1650:U:OP1	30:Ab:8:THR:HG22	2.15	0.46
1:A2:1653:C:O5’	1:A2:1653:C:H6	1.97	0.46
1:A2:2062:C:C4	1:A2:2249:G:N1	2.84	0.46
1:A2:2254:G:N2	33:Ae:58:ILE:HG23	2.30	0.46
1:A2:2260:G:H3’	1:A2:2261:A:C8	2.51	0.46
1:A2:2518:G:C2’	1:A2:2519:G:H5”	2.46	0.46
1:A2:2640:G:C2’	1:A2:2641:G:H5’	2.46	0.46
1:A2:2640:G:H21	1:A2:2653:A:H1’	1.81	0.46
1:A2:2745:C:C6	1:A2:2745:C:OP2	2.69	0.46
1:A2:2789:A:H5”	1:A2:2790:A:OP2	2.16	0.46
1:A2:3840:A:H2’	1:A2:3841:A:C8	2.51	0.46
1:A2:3890:U:C5	1:A2:4143:G:N7	2.84	0.46
1:A2:4055:G:H5”	10:AG:54:PHE:CZ	2.50	0.46
1:A2:4072:A:O5’	1:A2:4072:A:C8	2.69	0.46
1:A2:4088:G:N3	1:A2:4088:G:C2’	2.79	0.46
1:A2:4283:A:C2	7:AD:146:LEU:HB2	2.50	0.46
1:A2:4314:U:O2	1:A2:4314:U:C2’	2.63	0.46
1:A2:4446:C:H1’	1:A2:4643:U:O2	2.14	0.46
1:A2:4523:U:H6	1:A2:4523:U:O5’	1.98	0.46
1:A2:4541:G:C2’	1:A2:4542:C:H5’	2.46	0.46
1:A2:4711:U:O2	34:Af:4:ARG:HA	2.16	0.46
2:A3:27:U:H2’	2:A3:28:C:H6	1.80	0.46
2:A3:131:G:H5’	26:AX:107:HIS:CD2	2.40	0.46
6:AC:150:LEU:O	6:AC:151:PRO:C	2.56	0.46
6:AC:211:TYR:HD1	6:AC:253:THR:OG1	1.98	0.46
7:AD:191:ASN:HD22	7:AD:194:VAL:HG23	1.79	0.46
13:AJ:13:ARG:C	13:AJ:137:PRO:HD2	2.40	0.46
16:AN:85:VAL:CG1	43:Ao:49:GLY:HA3	2.39	0.46
19:AQ:75:ARG:HH21	19:AQ:78:LYS:HZ3	1.63	0.46
21:AS:83:ARG:HH21	22:AT:155:PRO:C	2.23	0.46
27:AY:121:ARG:O	27:AY:126:ARG:N	2.48	0.46
27:AY:123:ALA:O	27:AY:126:ARG:HB3	2.16	0.46
35:Ag:63:VAL:HA	35:Ag:66:ARG:HE	1.79	0.46
45:At:14:SER:C	45:At:17:LEU:H	2.24	0.46
47:BA:75:C:H5”	48:BB:1374:LYS:HB3	1.52	0.46
48:BB:884:ALA:CB	48:BB:915:ILE:HD13	2.45	0.46
48:BB:930:GLY:O	48:BB:931:SER:HB2	2.15	0.46
48:BB:1050:TYR:HA	48:BB:1053:VAL:HG12	1.97	0.46
48:BB:1069:GLU:CB	48:BB:1092:ILE:CD1	2.86	0.46
48:BB:1183:GLN:N	48:BB:1183:GLN:CD	2.73	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1209:LEU:HD12	48:BB:1222:ILE:CG2	2.35	0.46
48:BB:1240:GLU:O	48:BB:1241:HIS:HB3	2.15	0.46
48:BB:1347:VAL:HG13	48:BB:1348:ASP:H	1.81	0.46
48:BB:1390:PHE:CE1	48:BB:1396:LEU:CG	2.99	0.46
48:BB:1431:PHE:CD2	48:BB:1432:GLU:HG2	2.50	0.46
50:C1:175:A:C6	50:C1:176:U:C6	3.04	0.46
50:C1:178:C:H2'	50:C1:179:C:C1'	2.44	0.46
50:C1:311:C:O2	50:C1:311:C:C2'	2.63	0.46
50:C1:346:C:H5"	55:CE:38:LEU:CD1	2.46	0.46
50:C1:446:G:OP1	59:CI:49:ARG:O	2.34	0.46
50:C1:522:A:C6	50:C1:643:A:H5'	2.50	0.46
50:C1:743:U:H2'	50:C1:743:U:O2	2.15	0.46
50:C1:745:C:O5'	58:CH:105:THR:HG23	2.15	0.46
50:C1:869:A:N7	58:CH:115:LYS:HB3	2.30	0.46
50:C1:989:C:O2	77:Ca:32:LYS:HE2	2.16	0.46
50:C1:1208:A:C6	50:C1:1692:U:O2	2.68	0.46
50:C1:1406:G:H4'	50:C1:1407:U:C5'	2.46	0.46
50:C1:1447:G:H1'	71:CU:55:ARG:HE	1.80	0.46
50:C1:1601:A:N1	50:C1:1635:C:C4	2.84	0.46
50:C1:1709:G:H2'	50:C1:1710:C:H5"	1.97	0.46
50:C1:1767:C:C6	50:C1:1767:C:C3'	2.99	0.46
51:CA:62:ALA:HB1	51:CA:185:MET:SD	2.56	0.46
52:CB:62:LEU:HD23	52:CB:65:ARG:HH21	1.81	0.46
54:CD:74:GLN:O	54:CD:78:GLY:CA	2.64	0.46
55:CE:18:TRP:HB3	55:CE:20:LEU:HG	1.98	0.46
60:CJ:136:ARG:HD2	60:CJ:160:SER:HB2	1.97	0.46
67:CQ:34:VAL:O	67:CQ:37:ARG:HG2	2.15	0.46
68:CR:51:ALA:CA	68:CR:54:VAL:HG12	2.46	0.46
76:CZ:43:LYS:HZ1	76:CZ:44:LEU:H	1.63	0.46
83:Cg:174:VAL:CG1	83:Cg:188:HIS:HB2	2.45	0.46
1:A2:288:U:O5'	1:A2:288:U:H6	1.98	0.46
1:A2:473:G:N3	1:A2:473:G:C2'	2.78	0.46
1:A2:957:G:H2'	1:A2:958:C:O5'	2.14	0.46
1:A2:1189:U:H5'	1:A2:1189:U:C6	2.45	0.46
1:A2:1209:C:H4'	1:A2:1210:U:O4'	2.16	0.46
1:A2:1305:C:H4'	1:A2:1306:A:O5'	2.16	0.46
1:A2:1336:U:H6	1:A2:1336:U:OP2	1.99	0.46
1:A2:1352:A:H5'	6:AC:48:ASN:HA	1.97	0.46
1:A2:1363:G:H2'	1:A2:1364:C:C6	2.51	0.46
1:A2:1424:G:H2'	1:A2:1425:U:C5'	2.45	0.46
1:A2:1548:U:C2'	1:A2:1549:G:H5'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1773:A:H2'	1:A2:1774:A:H5'	1.97	0.46
1:A2:1822:G:H5"	1:A2:1822:G:H8	1.80	0.46
1:A2:1900:G:H1	1:A2:2040:C:H42	1.63	0.46
1:A2:2010:U:H2'	1:A2:2011:A:O5'	2.15	0.46
1:A2:2015:C:O5'	1:A2:2015:C:H6	1.98	0.46
1:A2:2033:G:H8	1:A2:2033:G:H5"	1.79	0.46
1:A2:2254:G:H21	33:Ae:58:ILE:CG2	2.28	0.46
1:A2:2448:G:H1'	10:AG:58:PRO:CB	2.43	0.46
1:A2:2464:G:H8	1:A2:2464:G:OP2	1.98	0.46
1:A2:2608:U:OP1	1:A2:2608:U:C6	2.69	0.46
1:A2:2672:A:N3	1:A2:2672:A:C3'	2.77	0.46
1:A2:2715:C:O3'	1:A2:2716:C:H3'	2.16	0.46
1:A2:3769:A:H2	1:A2:4456:A:C1'	2.25	0.46
1:A2:4088:G:N3	1:A2:4088:G:H2'	2.29	0.46
1:A2:4249:U:H2'	1:A2:4250:U:H6	1.79	0.46
1:A2:4264:A:C2	22:AT:81:LYS:HG3	2.51	0.46
1:A2:4527:G:H5"	1:A2:4527:G:C8	2.51	0.46
1:A2:4550:A:H2'	1:A2:4551:U:H6	1.80	0.46
1:A2:4718:C:HO2'	17:AO:164:ALA:HA	1.79	0.46
1:A2:4835:C:H2'	1:A2:4835:C:O2	2.15	0.46
2:A3:55:U:H6	2:A3:55:U:O5'	1.98	0.46
3:A4:92:C:H2'	3:A4:93:G:C8	2.51	0.46
8:AE:284:HIS:HB3	34:Af:42:TYR:CE1	2.51	0.46
11:AH:52:LYS:O	11:AH:52:LYS:HG2	2.15	0.46
11:AH:59:LYS:HZ2	11:AH:66:GLU:HB3	1.80	0.46
12:AI:44:ASP:HA	12:AI:171:TRP:HE1	1.80	0.46
13:AJ:13:ARG:O	13:AJ:14:GLU:O	2.33	0.46
13:AJ:56:THR:OG1	13:AJ:63:ARG:HA	2.15	0.46
13:AJ:86:GLY:O	13:AJ:89:VAL:HB	2.16	0.46
14:AL:46:ILE:O	14:AL:47:ALA:HB3	2.16	0.46
15:AM:16:SER:HB3	21:AS:160:ARG:HH21	1.80	0.46
20:AR:138:LEU:O	20:AR:138:LEU:HD22	2.14	0.46
21:AS:7:LEU:HD12	21:AS:35:PRO:HD3	1.97	0.46
22:AT:2:THR:HG23	22:AT:3:ASN:N	2.30	0.46
27:AY:66:GLN:O	27:AY:67:ILE:CB	2.63	0.46
29:Aa:132:ARG:N	29:Aa:132:ARG:HD3	2.31	0.46
32:Ad:68:LEU:C	32:Ad:68:LEU:HD13	2.40	0.46
34:Af:93:PRO:O	34:Af:94:ALA:HB3	2.16	0.46
34:Af:106:TYR:C	34:Af:108:SER:N	2.73	0.46
42:An:1:MET:H3	50:C1:1706:G:C4'	2.28	0.46
47:BA:34:G:O4'	50:C1:1248:U:C4	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:929:ARG:HB3	48:BB:1070:LEU:CB	2.44	0.46
49:BC:137:G:H1	49:BC:287:U:H3	1.64	0.46
49:BC:333:C:O2	49:BC:333:C:H2'	2.15	0.46
50:C1:42:A:H4'	50:C1:98:C:OP2	2.16	0.46
50:C1:69:C:C6	50:C1:69:C:C3'	2.99	0.46
50:C1:380:G:N2	50:C1:382:C:H3'	2.30	0.46
50:C1:467:G:OP2	50:C1:467:G:C8	2.68	0.46
50:C1:521:A:N6	50:C1:522:A:C2	2.83	0.46
50:C1:668:A:C1'	50:C1:1198:G:H1'	2.45	0.46
50:C1:1375:G:H3'	50:C1:1375:G:C8	2.50	0.46
50:C1:1398:G:C2	83:Cg:61:GLY:O	2.69	0.46
50:C1:1519:U:H5"	50:C1:1519:U:H6	1.80	0.46
50:C1:1521:C:H2'	69:CS:136:THR:OG1	2.16	0.46
50:C1:1665:G:C2	70:CT:87:VAL:HB	2.51	0.46
50:C1:1752:C:O2'	50:C1:1753:C:H5'	2.15	0.46
53:CC:60:TRP:CD1	53:CC:60:TRP:C	2.93	0.46
69:CS:9:PHE:CD2	76:CZ:49:LEU:HD22	2.50	0.46
73:CW:25:VAL:O	73:CW:62:VAL:HA	2.15	0.46
1:A2:63:G:H8	1:A2:63:G:O5'	1.98	0.46
1:A2:121:A:C6	1:A2:147:U:N3	2.83	0.46
1:A2:382:U:O2	1:A2:391:A:H2	1.99	0.46
1:A2:431:U:O2'	1:A2:432:G:H5'	2.15	0.46
1:A2:1086:A:C8	1:A2:1086:A:P	3.09	0.46
1:A2:1207:C:H2'	1:A2:1208:U:OP2	2.15	0.46
1:A2:1305:C:O2	1:A2:1305:C:O4'	2.33	0.46
1:A2:1479:A:C3'	1:A2:1480:C:C5'	2.82	0.46
1:A2:1493:U:H2'	1:A2:1494:A:O4'	2.16	0.46
1:A2:1556:G:O2'	1:A2:1591:G:H5"	2.15	0.46
1:A2:1872:C:C3'	1:A2:1873:G:C5'	2.94	0.46
1:A2:1884:U:H2'	1:A2:1885:A:C5'	2.46	0.46
1:A2:2022:U:O2'	1:A2:2023:G:C8	2.67	0.46
1:A2:2283:A:C2	1:A2:2284:A:N9	2.84	0.46
1:A2:2304:G:H2'	1:A2:2305:U:C5'	2.39	0.46
1:A2:2329:U:H4'	6:AC:96:CYS:SG	2.56	0.46
1:A2:2397:A:C3'	1:A2:2398:G:C5'	2.94	0.46
1:A2:2508:C:H1'	1:A2:2509:C:OP1	2.15	0.46
1:A2:2614:U:O2'	1:A2:2695:U:H4'	2.14	0.46
1:A2:2630:C:H5"	1:A2:2630:C:C6	2.49	0.46
1:A2:2723:A:H2'	1:A2:2724:U:O4'	2.15	0.46
1:A2:2778:U:H1'	38:Aj:12:ARG:HH22	1.79	0.46
1:A2:3940:G:OP1	46:Au:162:ARG:HD2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4067:G:P	1:A2:4067:G:H8	2.39	0.46
1:A2:4125:C:H5'	1:A2:4126:G:OP2	2.15	0.46
1:A2:4212:C:H2'	1:A2:4213:A:C8	2.51	0.46
1:A2:4511:U:H2'	1:A2:4512:U:C6	2.50	0.46
1:A2:4546:G:OP1	17:AO:72:HIS:HB2	2.16	0.46
1:A2:4645:U:C2'	1:A2:4646:G:H5'	2.46	0.46
1:A2:4738:U:OP2	1:A2:4740:U:C5	2.69	0.46
1:A2:4895:C:HO2'	8:AE:217:PHE:HB2	1.79	0.46
1:A2:5004:G:H4'	1:A2:5005:C:OP2	2.16	0.46
2:A3:19:C:H2'	2:A3:20:A:H8	1.81	0.46
2:A3:90:C:H6	2:A3:90:C:O5'	1.99	0.46
2:A3:115:G:H2'	2:A3:116:C:C6	2.51	0.46
5:AB:41:VAL:HG13	5:AB:185:VAL:CG2	2.45	0.46
7:AD:146:LEU:HD11	7:AD:163:LEU:HD22	1.97	0.46
7:AD:155:THR:HG22	7:AD:179:ARG:HH11	1.81	0.46
10:AG:59:ARG:O	10:AG:63:LEU:HG	2.15	0.46
10:AG:105:GLU:OE2	10:AG:113:ARG:HB2	2.16	0.46
16:AN:146:PRO:HG3	36:Ah:104:THR:HA	1.98	0.46
17:AO:109:PRO:HB3	17:AO:110:PRO:HD2	1.97	0.46
17:AO:173:GLN:HE21	17:AO:177:LEU:HG	1.81	0.46
21:AS:153:PRO:C	21:AS:155:PRO:HD3	2.41	0.46
24:AV:29:ALA:HB2	24:AV:83:ARG:NH2	2.31	0.46
24:AV:36:ASN:ND2	24:AV:67:LYS:HB2	2.31	0.46
28:AZ:61:LYS:HA	28:AZ:64:LYS:HB3	1.98	0.46
29:Aa:74:ASN:CB	29:Aa:114:LYS:HB2	2.40	0.46
29:Aa:128:PHE:HZ	37:Ai:9:VAL:HG13	1.81	0.46
43:Ao:51:GLN:HE21	43:Ao:53:LYS:H	1.63	0.46
46:Au:62:PHE:HE1	46:Au:81:GLU:HB3	1.80	0.46
47:BA:34:G:C2	50:C1:1701:C:C4	3.04	0.46
48:BB:861:ILE:HG13	48:BB:862:LEU:HD23	1.97	0.46
48:BB:972:ILE:CG2	48:BB:1001:PHE:HE1	2.29	0.46
48:BB:993:GLN:HB3	48:BB:997:THR:OG1	2.15	0.46
48:BB:1166:LYS:HE3	48:BB:1170:ILE:CG2	2.42	0.46
48:BB:1310:ILE:CB	48:BB:1390:PHE:CZ	2.90	0.46
49:BC:266:G:C5'	50:C1:1115:U:O2	2.46	0.46
49:BC:267:G:N2	50:C1:1114:U:OP2	2.49	0.46
50:C1:2:A:H3'	50:C1:3:C:H5'	1.98	0.46
50:C1:35:C:C3'	50:C1:36:U:C6	2.97	0.46
50:C1:77:A:C4'	50:C1:78:C:C5	2.99	0.46
50:C1:105:U:C4	50:C1:106:C:C4	3.03	0.46
50:C1:438:G:H8	50:C1:438:G:O5'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:494:C:O2'	50:C1:495:U:H5'	2.16	0.46
50:C1:1087:A:H4'	50:C1:1088:U:OP2	2.16	0.46
50:C1:1101:U:C6	50:C1:1101:U:C3'	2.98	0.46
50:C1:1284:A:N7	50:C1:1286:G:OP2	2.49	0.46
50:C1:1394:G:C2'	50:C1:1395:C:H5'	2.46	0.46
50:C1:1428:G:H5"	50:C1:1428:G:C8	2.49	0.46
50:C1:1697:A:O2'	50:C1:1698:C:P	2.73	0.46
52:CB:71:LEU:HA	52:CB:74:LEU:HB3	1.97	0.46
52:CB:84:PHE:CD1	52:CB:100:PHE:CE2	3.04	0.46
55:CE:99:PHE:CD1	55:CE:111:VAL:HB	2.51	0.46
57:CG:62:PRO:HG2	57:CG:83:CYS:SG	2.55	0.46
63:CM:89:VAL:CG1	63:CM:91:LEU:HG	2.46	0.46
66:CP:85:ILE:CD1	66:CP:111:MET:HB3	2.45	0.46
69:CS:4:VAL:HG21	76:CZ:49:LEU:HD11	1.97	0.46
77:Ca:82:LYS:HE2	79:Cc:69:ARG:HD2	1.97	0.46
80:Cd:15:GLY:O	80:Cd:19:ARG:HG2	2.16	0.46
83:Cg:47:ARG:HG2	83:Cg:47:ARG:O	2.15	0.46
1:A2:16:G:OP1	26:AX:59:LYS:HB3	2.16	0.46
1:A2:133:C:O2'	1:A2:173:G:H5"	2.15	0.46
1:A2:479:G:H2'	1:A2:480:C:H6	1.80	0.46
1:A2:903:C:O5'	1:A2:903:C:C6	2.69	0.46
1:A2:948:A:C5	1:A2:949:G:N1	2.84	0.46
1:A2:1436:G:OP1	19:AQ:72:LEU:HG	2.16	0.46
1:A2:1442:C:H2'	1:A2:1443:C:C6	2.51	0.46
1:A2:1927:U:H5"	11:AH:64:ARG:HB3	1.97	0.46
1:A2:2061:C:C5	1:A2:2062:C:C2	3.04	0.46
1:A2:2289:A:OP2	1:A2:2289:A:H4'	2.16	0.46
1:A2:2568:A:H2'	1:A2:2569:U:C5'	2.44	0.46
1:A2:2568:A:C6	1:A2:2732:A:H1'	2.51	0.46
1:A2:2624:A:C6	1:A2:2665:G:O6	2.69	0.46
1:A2:2685:U:C6	1:A2:2685:U:C3'	2.99	0.46
1:A2:2717:U:H4'	1:A2:2718:U:OP2	2.16	0.46
1:A2:3752:A:H5'	1:A2:3752:A:C8	2.48	0.46
1:A2:3870:A:H61	1:A2:4406:U:H1'	1.79	0.46
1:A2:3877:A:C8	1:A2:3878:C:C6	3.04	0.46
1:A2:3885:G:N3	1:A2:3885:G:H2'	2.31	0.46
1:A2:3909:U:H6	1:A2:3909:U:O5'	1.98	0.46
1:A2:3920:G:N2	1:A2:4029:G:C2	2.55	0.46
1:A2:4082:G:N2	10:AG:38:ASN:HB2	2.31	0.46
1:A2:4165:A:C8	1:A2:4335:C:N4	2.84	0.46
1:A2:4187:U:O5'	1:A2:4187:U:H6	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4264:A:H2	22:AT:81:LYS:CD	2.29	0.46
1:A2:4306:U:H5"	43:Ao:69:ARG:HH12	1.81	0.46
2:A3:76:C:H2'	2:A3:77:A:C8	2.51	0.46
2:A3:106:G:H1'	2:A3:136:U:O2	2.16	0.46
3:A4:66:G:N2	3:A4:67:C:C1'	2.79	0.46
35:Ag:22:LEU:O	35:Ag:22:LEU:HG	2.15	0.46
36:Ah:44:LEU:O	36:Ah:47:ILE:HG22	2.16	0.46
41:Am:104:HIS:CD2	41:Am:105:PRO:HD2	2.51	0.46
45:At:99:LYS:CB	45:At:103:ARG:NH2	2.78	0.46
46:Au:62:PHE:HE1	46:Au:81:GLU:CB	2.28	0.46
46:Au:191:GLY:N	46:Au:192:PRO:HD3	2.31	0.46
47:BA:69:G:H2'	47:BA:70:G:H8	1.81	0.46
47:BA:75:C:OP2	48:BB:1323:VAL:N	2.48	0.46
48:BB:958:LEU:CD2	48:BB:963:CYS:SG	3.04	0.46
48:BB:1041:THR:HG22	48:BB:1042:GLY:H	1.80	0.46
48:BB:1085:THR:HG21	48:BB:1153:GLU:HG2	1.97	0.46
48:BB:1229:LYS:O	48:BB:1262:MET:HE1	2.16	0.46
48:BB:1414:ASP:HB3	48:BB:1417:GLN:HG3	1.98	0.46
50:C1:440:G:H5"	50:C1:1798:C:O2'	2.15	0.46
50:C1:569:A:C3'	50:C1:570:C:H5"	2.46	0.46
50:C1:641:A:H2'	50:C1:642:U:H5'	1.97	0.46
50:C1:644:G:H2'	50:C1:645:C:C6	2.51	0.46
50:C1:685:A:H8	50:C1:685:A:O5'	1.99	0.46
50:C1:753:C:C4	50:C1:754:G:C4	3.04	0.46
50:C1:798:G:N3	50:C1:798:G:H3'	2.31	0.46
50:C1:831:G:H2'	50:C1:832:G:H8	1.81	0.46
50:C1:991:G:H5'	77:Ca:11:ALA:CB	2.46	0.46
50:C1:1403:C:C6	50:C1:1404:U:C6	3.04	0.46
50:C1:1532:C:H3'	50:C1:1637:A:H62	1.81	0.46
50:C1:1676:U:H3'	50:C1:1677:U:H5"	1.98	0.46
50:C1:1693:G:H2'	50:C1:1694:U:O4'	2.15	0.46
50:C1:1721:U:C4'	50:C1:1722:G:O5'	2.64	0.46
51:CA:178:LEU:O	51:CA:182:VAL:HG23	2.15	0.46
54:CD:62:LYS:HB3	61:CK:94:LEU:O	2.16	0.46
56:CF:100:ILE:CD1	56:CF:177:LEU:HD22	2.46	0.46
56:CF:184:SER:O	56:CF:186:ASN:N	2.49	0.46
59:CI:158:ILE:O	59:CI:159:SER:O	2.33	0.46
1:A2:207:C:H41	1:A2:228:U:H2'	1.79	0.46
1:A2:240:A:H2'	1:A2:241:G:H8	1.72	0.46
1:A2:337:G:H8	1:A2:337:G:O5'	1.99	0.46
1:A2:351:A:N3	2:A3:24:G:C1'	2.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:469:G:C2	1:A2:470:G:C8	3.04	0.46
1:A2:472:G:OP1	1:A2:472:G:H4'	2.16	0.46
1:A2:923:G:H2'	1:A2:924:C:H5'	1.97	0.46
1:A2:978:G:H1	1:A2:1051:C:N4	2.13	0.46
1:A2:1203:G:C4	1:A2:1204:G:C8	3.04	0.46
1:A2:1205:U:O2	1:A2:1205:U:C2'	2.63	0.46
1:A2:1208:U:H4'	1:A2:1209:C:O5'	2.15	0.46
1:A2:1279:G:H5'	34:Af:59:THR:HB	1.97	0.46
1:A2:1285:C:H4'	1:A2:2289:A:C2	2.51	0.46
1:A2:1293:C:O2	1:A2:1293:C:H2'	2.16	0.46
1:A2:1349:C:C2'	2:A3:30:U:H4'	2.46	0.46
1:A2:1428:G:H5"	6:AC:303:ARG:NH2	2.30	0.46
1:A2:1639:U:OP1	29:Aa:15:VAL:HA	2.16	0.46
1:A2:1805:G:H1'	30:Ab:47:LYS:HE2	1.96	0.46
1:A2:1868:G:N2	1:A2:1917:A:H61	2.14	0.46
1:A2:1874:A:H8	1:A2:1874:A:O5'	1.98	0.46
1:A2:2603:U:H2'	23:AU:89:LYS:NZ	2.31	0.46
1:A2:2847:A:OP2	1:A2:2847:A:C8	2.69	0.46
1:A2:4072:A:C2'	1:A2:4073:G:H5'	2.46	0.46
1:A2:4073:G:H2'	1:A2:4073:G:N3	2.31	0.46
1:A2:4176:G:N3	1:A2:4176:G:H2'	2.30	0.46
1:A2:4267:A:OP2	19:AQ:159:PRO:HG2	2.16	0.46
1:A2:4345:A:N7	1:A2:4492:U:H4'	2.31	0.46
1:A2:4578:G:H2'	1:A2:4579:U:C5'	2.42	0.46
1:A2:4637:U:O2'	1:A2:4638:G:C8	2.68	0.46
1:A2:4820:C:O5'	1:A2:4820:C:H6	1.99	0.46
1:A2:4859:G:H2'	1:A2:4860:C:H6	1.81	0.46
1:A2:4925:C:O5'	1:A2:4925:C:C6	2.68	0.46
2:A3:58:G:C5'	2:A3:97:A:C2	2.98	0.46
2:A3:102:G:C2	2:A3:104:A:N6	2.84	0.46
2:A3:109:C:O2'	2:A3:110:U:H2'	2.16	0.46
2:A3:128:C:H2'	2:A3:129:C:C6	2.50	0.46
3:A4:67:C:O2'	3:A4:68:C:H4'	2.16	0.46
7:AD:231:VAL:HG13	7:AD:235:MET:HB2	1.98	0.46
7:AD:279:ARG:O	7:AD:283:LYS:HG3	2.16	0.46
8:AE:177:GLY:O	8:AE:178:PRO:C	2.59	0.46
8:AE:223:ARG:H	8:AE:229:GLU:HG2	1.81	0.46
9:AF:126:ASN:CG	22:AT:132:PRO:HB2	2.40	0.46
11:AH:29:GLY:HA3	11:AH:84:VAL:HG13	1.94	0.46
11:AH:34:LEU:HD12	11:AH:80:MET:O	2.15	0.46
12:AI:209:TRP:O	12:AI:212:LEU:O	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AJ:26:VAL:HG12	13:AJ:28:GLU:H	1.81	0.46
14:AL:55:ILE:HB	14:AL:148:THR:HB	1.98	0.46
16:AN:148:THR:O	16:AN:151:ILE:HG22	2.16	0.46
17:AO:50:ASN:O	17:AO:53:LYS:HB2	2.16	0.46
20:AR:5:ARG:HD3	20:AR:5:ARG:C	2.41	0.46
33:Ae:12:ILE:CG2	33:Ae:66:THR:HB	2.41	0.46
37:Ai:34:THR:HG22	37:Ai:36:HIS:N	2.30	0.46
38:Aj:5:THR:HA	38:Aj:8:PHE:CD2	2.51	0.46
39:Ak:26:LYS:HE3	39:Ak:28:ASN:ND2	2.31	0.46
43:Ao:105:GLN:HG3	47:BA:56:C:C2'	2.46	0.46
48:BB:1075:MET:HB2	48:BB:1088:ASP:C	2.40	0.46
48:BB:1340:CYS:CA	48:BB:1348:ASP:OD1	2.64	0.46
49:BC:346:G:O2'	49:BC:347:C:O4'	2.34	0.46
50:C1:74:G:H2'	50:C1:74:G:N3	2.31	0.46
50:C1:213:G:H2'	50:C1:214:U:C6	2.48	0.46
50:C1:217:A:C2'	50:C1:218:U:H5'	2.46	0.46
50:C1:316:G:C6	50:C1:317:C:N4	2.84	0.46
50:C1:332:G:H1'	50:C1:333:G:N7	2.31	0.46
50:C1:369:C:O2'	50:C1:370:G:H5"	2.15	0.46
50:C1:428:U:C3'	50:C1:429:C:H6	2.28	0.46
50:C1:598:G:O5'	50:C1:598:G:C8	2.68	0.46
50:C1:958:G:C6	50:C1:959:G:C2	3.03	0.46
50:C1:1253:A:N7	50:C1:1666:C:H4'	2.30	0.46
50:C1:1348:G:C2	50:C1:1382:A:C2	3.03	0.46
50:C1:1512:C:H1'	80:Cd:7:TYR:CE2	2.51	0.46
50:C1:1529:C:H5'	50:C1:1666:C:OP1	2.16	0.46
50:C1:1539:U:H2'	50:C1:1540:G:C5'	2.46	0.46
50:C1:1586:U:O2	50:C1:1587:G:C8	2.69	0.46
50:C1:1628:C:H2'	50:C1:1629:C:C6	2.51	0.46
50:C1:1641:A:H5"	50:C1:1641:A:C8	2.50	0.46
50:C1:1688:C:C2	50:C1:1689:C:C5	3.04	0.46
50:C1:1854:U:H5"	65:CO:150:ARG:HH22	1.81	0.46
51:CA:5:LEU:HD22	51:CA:8:LEU:HD12	1.97	0.46
51:CA:12:GLU:O	51:CA:15:VAL:HG22	2.16	0.46
55:CE:16:LYS:O	55:CE:19:MET:HE2	2.16	0.46
56:CF:91:ARG:HA	56:CF:91:ARG:NE	2.31	0.46
58:CH:146:VAL:O	73:CW:42:MET:HE1	2.15	0.46
73:CW:17:ALA:CB	73:CW:25:VAL:HG22	2.46	0.46
77:Ca:26:CYS:SG	77:Ca:28:ARG:HB3	2.55	0.46
1:A2:8:U:O4	1:A2:9:C:H5	1.98	0.46
1:A2:286:A:C5'	1:A2:287:A:C8	2.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:309:A:O2'	1:A2:310:A:H5'	2.16	0.46
1:A2:431:U:H2'	1:A2:432:G:H8	1.80	0.46
1:A2:463:C:H5'	1:A2:463:C:H6	1.79	0.46
1:A2:943:G:H1'	1:A2:944:A:P	2.56	0.46
1:A2:1049:G:C2'	1:A2:1050:G:OP1	2.62	0.46
1:A2:1296:G:OP1	33:Ae:40:GLY:HA3	2.15	0.46
1:A2:1323:A:C6	1:A2:1324:C:C5	3.04	0.46
1:A2:1401:G:N1	1:A2:1445:G:O4'	2.49	0.46
1:A2:1437:C:C2'	1:A2:1438:A:C8	2.98	0.46
1:A2:1499:C:O2'	1:A2:1500:C:H5'	2.16	0.46
1:A2:1930:G:H8	1:A2:1930:G:H5"	1.77	0.46
1:A2:2010:U:C6	1:A2:2010:U:H3'	2.51	0.46
1:A2:2016:U:C2'	1:A2:2017:G:H5'	2.46	0.46
1:A2:2260:G:H5'	1:A2:2261:A:OP2	2.16	0.46
1:A2:2310:G:C6	1:A2:2311:C:C5	3.04	0.46
1:A2:2551:G:H1	28:AZ:108:ARG:HA	1.81	0.46
1:A2:2683:G:O2'	1:A2:2684:U:H5"	2.16	0.46
1:A2:2746:U:OP1	1:A2:2746:U:C6	2.69	0.46
1:A2:2773:G:H8	1:A2:2773:G:O5'	1.99	0.46
1:A2:3640:G:C2'	1:A2:3641:G:C8	2.98	0.46
1:A2:3758:C:H5	1:A2:3759:U:C6	2.34	0.46
1:A2:4009:C:C5	1:A2:4010:G:N7	2.84	0.46
1:A2:4025:C:H2'	1:A2:4026:U:H5'	1.98	0.46
1:A2:4433:A:H4'	1:A2:4434:A:OP1	2.16	0.46
1:A2:4712:U:H5"	34:Af:4:ARG:CB	2.42	0.46
1:A2:4738:U:O2'	1:A2:4739:G:H5'	2.16	0.46
1:A2:4850:C:O2'	1:A2:4851:G:H8	1.99	0.46
2:A3:57:C:N4	38:Aj:63:ARG:NH2	2.64	0.46
2:A3:65:A:C2'	2:A3:66:A:H5'	2.46	0.46
3:A4:11:A:O5'	3:A4:11:A:C8	2.69	0.46
3:A4:54:A:C2	3:A4:55:A:C4	3.04	0.46
3:A4:67:C:H4'	22:AT:20:ARG:NH1	2.31	0.46
7:AD:98:ALA:O	7:AD:162:ALA:HA	2.16	0.46
14:AL:103:ARG:HH21	37:Ai:25:ARG:CG	2.28	0.46
24:AV:89:ARG:HD3	24:AV:95:PHE:CE1	2.51	0.46
29:Aa:74:ASN:ND2	29:Aa:112:LEU:HB2	2.31	0.46
37:Ai:43:MET:HG2	37:Ai:47:VAL:CG2	2.46	0.46
38:Aj:60:GLY:CA	38:Aj:64:MET:HE3	2.46	0.46
46:Au:110:LEU:HD22	46:Au:110:LEU:HA	1.79	0.46
47:BA:8:U:O2	47:BA:48:C:C2	2.66	0.46
47:BA:16:U:H4'	47:BA:17:C:H5	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BA:37:A:H3'	47:BA:38:A:H8	1.80	0.46
48:BB:808:ASP:CG	48:BB:809:SER:H	2.24	0.46
48:BB:1345:ASN:HD21	48:BB:1347:VAL:HG12	1.80	0.46
48:BB:1383:PRO:HG2	48:BB:1389:HIS:HE1	1.80	0.46
48:BB:1405:ILE:HB	48:BB:1421:TRP:HZ2	1.77	0.46
50:C1:61:A:P	50:C1:61:A:H3'	2.55	0.46
50:C1:450:C:H6	50:C1:450:C:H5"	1.80	0.46
50:C1:604:A:H3'	50:C1:604:A:OP2	2.16	0.46
50:C1:901:G:H8	50:C1:901:G:P	2.38	0.46
50:C1:1013:U:C4'	50:C1:1129:G:H21	2.29	0.46
50:C1:1420:G:O2'	70:CT:2:PRO:HA	2.16	0.46
50:C1:1431:G:C4	50:C1:1432:U:C4	3.04	0.46
50:C1:1529:C:H6	50:C1:1529:C:O5'	1.99	0.46
50:C1:1648:G:H21	67:CQ:128:GLU:CB	2.29	0.46
50:C1:1654:G:C3'	50:C1:1655:C:C5	2.98	0.46
51:CA:8:LEU:HG	51:CA:191:ARG:CZ	2.46	0.46
53:CC:82:TYR:CD1	72:CV:26:ALA:HB1	2.51	0.46
55:CE:44:LEU:HD12	55:CE:79:ASP:O	2.16	0.46
58:CH:31:GLU:HB3	58:CH:40:LEU:HD13	1.97	0.46
59:CI:83:TYR:N	59:CI:91:VAL:HG21	2.31	0.46
61:CK:59:LYS:HB2	61:CK:70:TYR:CD2	2.51	0.46
66:CP:34:MET:O	66:CP:42:ARG:HG2	2.16	0.46
70:CT:75:MET:HA	70:CT:78:ILE:HG22	1.98	0.46
73:CW:99:PHE:O	73:CW:101:PHE:N	2.48	0.46
75:CY:20:ARG:C	75:CY:20:ARG:HD2	2.41	0.46
83:Cg:251:ALA:HB1	83:Cg:286:CYS:HB2	1.98	0.46
1:A2:64:A:C2'	1:A2:110:C:H41	2.30	0.45
1:A2:722:G:H2'	1:A2:723:G:H4'	1.97	0.45
1:A2:901:A:H3'	1:A2:901:A:H8	1.79	0.45
1:A2:951:C:C6	1:A2:952:C:C5	3.04	0.45
1:A2:1075:A:H2'	1:A2:1076:C:H6	1.80	0.45
1:A2:1336:U:H2'	1:A2:1337:C:H6	1.81	0.45
1:A2:1459:C:H6	1:A2:1459:C:O5'	2.00	0.45
1:A2:1641:C:C1'	1:A2:2297:G:H1'	2.46	0.45
1:A2:1793:C:H5'	30:Ab:49:HIS:ND1	2.31	0.45
1:A2:1825:C:H3'	1:A2:1826:C:H6	1.79	0.45
1:A2:1838:U:H2'	1:A2:1838:U:O2	2.15	0.45
1:A2:1858:G:C3'	1:A2:1859:C:C5'	2.93	0.45
1:A2:1865:G:H3'	1:A2:1866:A:H5"	1.99	0.45
1:A2:1866:A:N7	1:A2:2027:G:H5"	2.31	0.45
1:A2:2021:A:N3	1:A2:4476:G:H1'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2291:G:H8	1:A2:2291:G:O5'	1.99	0.45
1:A2:2309:G:C1'	1:A2:2310:G:C8	2.89	0.45
1:A2:2320:G:C5	6:AC:101:MET:HE3	2.51	0.45
1:A2:2320:G:C2	6:AC:101:MET:HG2	2.51	0.45
1:A2:2407:C:H6	1:A2:2407:C:O5'	1.99	0.45
1:A2:2423:C:C2'	1:A2:2424:U:C6	2.95	0.45
1:A2:2524:G:C2'	1:A2:2525:C:H5'	2.46	0.45
1:A2:3742:U:H2'	1:A2:3743:A:H5'	1.96	0.45
1:A2:3744:A:H2'	1:A2:3745:G:H5"	1.97	0.45
1:A2:3938:G:H4'	46:Au:160:HIS:O	2.16	0.45
1:A2:4675:C:H6	1:A2:4675:C:O5'	1.99	0.45
1:A2:4704:G:O5'	1:A2:4704:G:C8	2.68	0.45
1:A2:4818:G:C6	1:A2:4819:U:C4	3.04	0.45
2:A3:58:G:H5"	2:A3:97:A:H2	1.79	0.45
6:AC:206:GLY:HA3	6:AC:226:GLY:O	2.16	0.45
9:AF:66:ARG:HA	9:AF:69:ILE:HG12	1.98	0.45
9:AF:221:LYS:O	9:AF:222:LYS:HD2	2.16	0.45
10:AG:194:VAL:HG22	10:AG:194:VAL:O	2.16	0.45
11:AH:173:ARG:HD2	41:Am:127:VAL:CB	2.46	0.45
13:AJ:96:LYS:HG2	13:AJ:174:ILE:CG2	2.46	0.45
14:AL:113:ASN:O	14:AL:116:ARG:HB3	2.15	0.45
14:AL:182:LEU:HD11	29:Aa:146:LEU:HD22	1.98	0.45
17:AO:181:ALA:O	17:AO:187:LYS:CD	2.63	0.45
19:AQ:81:VAL:O	19:AQ:138:LEU:HD12	2.16	0.45
27:AY:56:GLN:HA	27:AY:65:GLN:O	2.16	0.45
48:BB:824:LYS:HD3	48:BB:1165:TYR:CD2	2.44	0.45
48:BB:1307:LYS:HB3	48:BB:1329:GLU:HB2	1.97	0.45
48:BB:1408:LEU:HD23	48:BB:1408:LEU:H	1.81	0.45
50:C1:39:A:N6	50:C1:515:G:H21	2.14	0.45
50:C1:178:C:H2'	50:C1:179:C:O4'	2.15	0.45
50:C1:235:A:C4	50:C1:236:A:C8	3.04	0.45
50:C1:342:C:C6	50:C1:342:C:H5"	2.51	0.45
50:C1:380:G:C2	50:C1:382:C:H6	2.34	0.45
50:C1:571:U:C3'	50:C1:572:U:H5"	2.31	0.45
50:C1:746:C:H5'	58:CH:105:THR:N	2.30	0.45
50:C1:797:C:H41	58:CH:104:PRO:HA	1.81	0.45
50:C1:876:C:H6	50:C1:876:C:H3'	1.81	0.45
50:C1:884:C:C2'	50:C1:885:U:H5'	2.45	0.45
50:C1:935:G:C2	50:C1:1008:A:C2	3.03	0.45
50:C1:1006:C:H6	50:C1:1006:C:O5'	1.98	0.45
50:C1:1204:A:O2'	50:C1:1699:A:H2'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1322:G:H3'	50:C1:1322:G:C8	2.51	0.45
50:C1:1332:A:OP1	50:C1:1332:A:H3'	2.16	0.45
50:C1:1494:U:C1'	50:C1:1495:G:OP2	2.64	0.45
50:C1:1778:C:H6	50:C1:1778:C:O5'	1.99	0.45
50:C1:1808:U:O5'	50:C1:1808:U:H6	1.99	0.45
58:CH:105:THR:O	58:CH:105:THR:CG2	2.64	0.45
62:CL:128:VAL:HG12	62:CL:142:VAL:HA	1.97	0.45
63:CM:30:GLY:HA3	63:CM:113:ASP:OD1	2.15	0.45
64:CN:141:TYR:CE1	64:CN:146:ALA:HB2	2.51	0.45
66:CP:17:TYR:CB	66:CP:25:LEU:HD11	2.46	0.45
71:CU:24:LEU:HD23	71:CU:24:LEU:N	2.30	0.45
76:CZ:54:THR:O	76:CZ:58:LEU:HG	2.16	0.45
83:Cg:283:PRO:C	83:Cg:285:GLN:N	2.74	0.45
1:A2:85:G:OP1	1:A2:85:G:H4'	2.15	0.45
1:A2:113:A:H1'	16:AN:50:ARG:HG3	1.98	0.45
1:A2:180:C:H4'	1:A2:182:C:H1'	1.98	0.45
1:A2:188:G:O2'	1:A2:189:G:P	2.75	0.45
1:A2:356:U:C2'	1:A2:357:A:H5'	2.46	0.45
1:A2:409:A:C6	2:A3:17:A:H1'	2.51	0.45
1:A2:679:U:O5'	1:A2:679:U:H6	1.99	0.45
1:A2:943:G:N2	1:A2:1261:G:O2'	2.50	0.45
1:A2:1191:G:C5'	9:AF:63:GLN:OE1	2.64	0.45
1:A2:1258:C:O2	6:AC:323:ARG:HB3	2.17	0.45
1:A2:1299:U:H2'	1:A2:1301:G:C8	2.51	0.45
1:A2:1577:C:H1'	1:A2:2775:A:H8	1.79	0.45
1:A2:1706:U:C5'	9:AF:131:ASN:HD22	2.28	0.45
1:A2:1712:G:C5	1:A2:4174:A:C2	3.04	0.45
1:A2:1793:C:H5'	30:Ab:49:HIS:CG	2.52	0.45
1:A2:1846:A:O2'	1:A2:1847:G:H3'	2.15	0.45
1:A2:1933:G:N1	1:A2:2007:A:C5	2.85	0.45
1:A2:2047:A:C8	1:A2:2047:A:H3'	2.51	0.45
1:A2:2355:G:H21	1:A2:2357:G:H8	1.63	0.45
1:A2:2362:U:H5'	20:AR:3:MET:SD	2.56	0.45
1:A2:2415:A:C1'	1:A2:2416:G:OP1	2.63	0.45
1:A2:2417:U:C6	1:A2:2495:G:N2	2.85	0.45
1:A2:2531:U:C2'	1:A2:2532:G:C5'	2.93	0.45
1:A2:2589:G:C8	1:A2:2589:G:OP2	2.69	0.45
1:A2:2657:G:H2'	1:A2:2658:G:H8	1.78	0.45
1:A2:2736:G:H4'	1:A2:2742:A:H1'	1.99	0.45
1:A2:3584:G:H21	25:AW:50:ASN:H	1.65	0.45
1:A2:3604:A:H2	1:A2:3793:A:N1	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3746:G:O3'	1:A2:3747:U:C6	2.69	0.45
1:A2:3867:G:N2	5:AB:261:ARG:HA	2.31	0.45
1:A2:3876:G:C4'	1:A2:3877:A:OP1	2.64	0.45
1:A2:4282:G:H2'	1:A2:4283:A:H3'	1.98	0.45
1:A2:4334:U:C3'	1:A2:4335:C:H5'	2.46	0.45
1:A2:4539:U:H2'	1:A2:4540:U:H6	1.78	0.45
2:A3:32:C:H2'	2:A3:33:G:C8	2.50	0.45
2:A3:72:A:H4'	2:A3:87:G:H21	1.81	0.45
4:AA:22:HIS:CB	4:AA:52:PRO:HG2	2.45	0.45
6:AC:188:ARG:HD3	6:AC:188:ARG:O	2.16	0.45
7:AD:222:GLN:O	7:AD:223:PHE:HB2	2.16	0.45
9:AF:66:ARG:HA	9:AF:69:ILE:CG1	2.46	0.45
10:AG:55:VAL:HG13	10:AG:57:TRP:CZ2	2.51	0.45
13:AJ:151:ILE:HD12	13:AJ:155:HIS:O	2.16	0.45
14:AL:194:ILE:O	14:AL:197:LYS:HB3	2.16	0.45
15:AM:49:ALA:HB2	21:AS:100:LEU:HD11	1.98	0.45
48:BB:832:LEU:HD23	48:BB:832:LEU:C	2.41	0.45
48:BB:842:LYS:HE3	48:BB:1140:GLU:H	1.81	0.45
48:BB:851:LEU:O	48:BB:940:VAL:HG22	2.16	0.45
48:BB:889:LEU:HD12	48:BB:909:ILE:CG2	2.45	0.45
48:BB:1103:ILE:HG22	48:BB:1112:VAL:HB	1.99	0.45
48:BB:1175:ASP:HA	48:BB:1178:ILE:CD1	2.45	0.45
48:BB:1181:LEU:C	48:BB:1183:GLN:N	2.73	0.45
49:BC:255:C:H3'	49:BC:256:G:C8	2.51	0.45
50:C1:386:C:OP2	62:CL:136:LYS:HD3	2.16	0.45
50:C1:435:A:H2	50:C1:474:G:OP2	1.96	0.45
50:C1:621:C:H2'	50:C1:621:C:O2	2.15	0.45
50:C1:1099:G:H8	50:C1:1099:G:O5'	2.00	0.45
50:C1:1214:A:C5	50:C1:1686:G:C2	3.04	0.45
50:C1:1289:U:C5	50:C1:1311:C:O2	2.70	0.45
50:C1:1340:U:H3'	50:C1:1341:C:H6	1.77	0.45
50:C1:1353:A:H2'	50:C1:1354:G:C5'	2.43	0.45
50:C1:1532:C:OP1	50:C1:1533:A:H1'	2.16	0.45
50:C1:1600:G:P	76:CZ:43:LYS:HD2	2.56	0.45
50:C1:1621:U:C2'	50:C1:1622:U:H5'	2.36	0.45
50:C1:1780:G:OP2	50:C1:1781:A:C8	2.69	0.45
52:CB:77:ASP:O	52:CB:78:GLU:CB	2.63	0.45
55:CE:52:LEU:HB3	55:CE:54:TYR:CD2	2.51	0.45
55:CE:108:ARG:NH2	55:CE:240:ARG:HH12	2.14	0.45
55:CE:246:LEU:HD23	55:CE:250:GLU:HB3	1.97	0.45
57:CG:195:LYS:HD3	57:CG:195:LYS:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:CH:69:LEU:C	58:CH:69:LEU:HD13	2.42	0.45
59:CI:29:LEU:HD21	59:CI:49:ARG:HD3	1.98	0.45
59:CI:191:GLU:HG3	62:CL:20:LYS:HB2	1.98	0.45
63:CM:51:VAL:HG22	63:CM:109:VAL:O	2.16	0.45
75:CY:29:HIS:CG	75:CY:35:VAL:HG13	2.51	0.45
77:Ca:26:CYS:SG	77:Ca:28:ARG:CB	3.04	0.45
77:Ca:39:PHE:CD2	77:Ca:70:LYS:HA	2.51	0.45
80:Cd:28:HIS:ND1	80:Cd:28:HIS:N	2.64	0.45
80:Cd:33:LYS:HG2	80:Cd:33:LYS:O	2.17	0.45
1:A2:2:G:C2	2:A3:156:U:N3	2.85	0.45
1:A2:108:A:N6	1:A2:325:A:H1'	2.31	0.45
1:A2:230:U:O2	1:A2:2280:U:C5	2.69	0.45
1:A2:409:A:C6	2:A3:17:A:C1'	2.99	0.45
1:A2:434:G:H3'	1:A2:435:G:C8	2.52	0.45
1:A2:456:G:N2	1:A2:679:U:C4	2.84	0.45
1:A2:457:A:OP1	1:A2:463:C:N4	2.48	0.45
1:A2:693:G:H2'	1:A2:694:C:C6	2.52	0.45
1:A2:893:A:N3	1:A2:894:G:C8	2.85	0.45
1:A2:1359:C:C5	14:AL:156:PRO:CA	2.99	0.45
1:A2:1635:U:C2'	1:A2:1636:G:H5'	2.47	0.45
1:A2:1648:A:C2	1:A2:1830:U:H4'	2.52	0.45
1:A2:1649:G:C8	1:A2:1649:G:H5'	2.52	0.45
1:A2:1914:C:H6	1:A2:1914:C:O5'	2.00	0.45
1:A2:2019:A:C1'	1:A2:4424:A:C2	2.99	0.45
1:A2:2464:G:O6	1:A2:2466:C:H1'	2.16	0.45
1:A2:2469:C:H2'	1:A2:2470:G:N7	2.31	0.45
1:A2:2505:G:C8	1:A2:2505:G:C3'	2.99	0.45
1:A2:2549:C:C6	1:A2:2549:C:O5'	2.70	0.45
1:A2:2571:C:H1'	1:A2:4092:C:H42	1.73	0.45
1:A2:2579:G:C6	1:A2:2719:G:O6	2.69	0.45
1:A2:2687:C:P	20:AR:43:LYS:HE2	2.57	0.45
1:A2:3584:G:H21	25:AW:50:ASN:N	2.14	0.45
1:A2:3605:C:C6	1:A2:3605:C:C3'	3.00	0.45
1:A2:3750:C:H5"	1:A2:3790:A:O3'	2.16	0.45
1:A2:3822:U:H2'	1:A2:3823:C:C6	2.51	0.45
1:A2:4117:A:H1'	1:A2:4118:C:OP2	2.16	0.45
1:A2:4418:C:H6	1:A2:4418:C:O5'	1.99	0.45
1:A2:4814:C:H2'	1:A2:4815:G:C5'	2.44	0.45
1:A2:4845:G:H2'	1:A2:4846:G:O4'	2.15	0.45
1:A2:4869:C:H2'	1:A2:4870:G:O4'	2.16	0.45
2:A3:68:G:H2'	2:A3:69:U:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A4:39:C:O2'	13:AJ:46:GLN:HB3	2.15	0.45
3:A4:119:U:H3'	7:AD:260:GLU:CG	2.46	0.45
5:AB:56:ILE:CG2	5:AB:365:LEU:HD22	2.45	0.45
5:AB:301:ASN:OD1	5:AB:311:ASP:HA	2.16	0.45
6:AC:149:GLU:HG2	6:AC:150:LEU:O	2.16	0.45
7:AD:34:LYS:O	7:AD:38:ILE:HG13	2.16	0.45
9:AF:25:PHE:O	9:AF:29:LYS:HG3	2.16	0.45
11:AH:43:VAL:HG11	11:AH:70:VAL:HG22	1.98	0.45
11:AH:173:ARG:HG3	41:Am:127:VAL:HG22	1.99	0.45
12:AI:68:ALA:HA	12:AI:158:LYS:HG3	1.97	0.45
17:AO:33:VAL:O	17:AO:102:LEU:HD22	2.16	0.45
18:AP:54:GLN:HA	18:AP:83:TRP:CD1	2.51	0.45
19:AQ:32:TYR:CE2	19:AQ:47:VAL:HG11	2.51	0.45
27:AY:15:ARG:O	27:AY:19:PHE:HD2	1.99	0.45
27:AY:83:GLU:O	27:AY:84:ARG:CB	2.63	0.45
29:Aa:103:VAL:CG2	29:Aa:126:ALA:HB2	2.46	0.45
36:Ah:34:ALA:HA	36:Ah:37:THR:CB	2.45	0.45
39:Ak:25:ILE:O	39:Ak:68:GLU:HA	2.17	0.45
43:Ao:10:THR:O	43:Ao:18:HIS:HA	2.16	0.45
45:At:16:PHE:CD1	45:At:28:GLU:HA	2.51	0.45
45:At:103:ARG:CZ	45:At:103:ARG:HB2	2.46	0.45
47:BA:16:U:H4'	47:BA:17:C:C5	2.51	0.45
48:BB:1262:MET:O	48:BB:1262:MET:HG2	2.15	0.45
48:BB:1373:VAL:O	48:BB:1373:VAL:HG13	2.16	0.45
50:C1:23:G:H2'	50:C1:24:C:O4'	2.17	0.45
50:C1:36:U:H5'	50:C1:580:U:O2'	2.17	0.45
50:C1:133:C:C6	50:C1:134:C:H4'	2.51	0.45
50:C1:388:U:H3'	50:C1:389:A:H8	1.81	0.45
50:C1:927:C:C2'	50:C1:928:G:H5'	2.46	0.45
50:C1:1036:A:O5'	50:C1:1036:A:C8	2.62	0.45
50:C1:1082:A:H2'	50:C1:1084:A:O5'	2.16	0.45
50:C1:1083:A:C2	50:C1:1861:G:C4	3.04	0.45
50:C1:1175:G:H2'	50:C1:1176:G:C8	2.51	0.45
50:C1:1196:A:O2'	50:C1:1197:G:H5'	2.16	0.45
50:C1:1203:G:C2'	50:C1:1699:A:H2	2.29	0.45
50:C1:1352:G:OP1	51:CA:109:THR:HB	2.16	0.45
50:C1:1395:C:O2'	50:C1:1396:A:H5'	2.16	0.45
50:C1:1507:G:C2	82:Cf:91:ASN:HA	2.51	0.45
50:C1:1602:U:H3'	50:C1:1602:U:C6	2.50	0.45
50:C1:1632:G:OP1	50:C1:1632:G:H4'	2.17	0.45
50:C1:1654:G:C2'	50:C1:1655:C:C5	2.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CE:88:ASP:HA	55:CE:122:LYS:HE3	1.97	0.45
57:CG:8:PRO:HG3	57:CG:112:VAL:HG13	1.97	0.45
62:CL:95:TYR:HB2	62:CL:102:PHE:CE2	2.52	0.45
67:CQ:10:VAL:HB	67:CQ:25:CYS:HB3	1.98	0.45
70:CT:82:ARG:HG3	70:CT:90:SER:OG	2.16	0.45
75:CY:103:SER:HB2	75:CY:107:ARG:CG	2.46	0.45
83:Cg:283:PRO:N	83:Cg:284:PRO:CD	2.79	0.45
1:A2:57:G:H4'	16:AN:155:VAL:HG12	1.98	0.45
1:A2:90:G:H2'	1:A2:91:G:OP2	2.17	0.45
1:A2:716:U:H4'	9:AF:69:ILE:CD1	2.46	0.45
1:A2:965:C:N4	1:A2:1248:G:OP1	2.49	0.45
1:A2:1191:G:C4	1:A2:1192:G:C8	3.04	0.45
1:A2:1359:C:H5	14:AL:156:PRO:HA	1.78	0.45
1:A2:1772:A:H2'	1:A2:1772:A:N3	2.31	0.45
1:A2:1814:G:H5"	22:AT:129:LYS:HG3	1.98	0.45
1:A2:2000:C:H2'	1:A2:2001:C:C6	2.52	0.45
1:A2:2274:U:OP2	1:A2:2274:U:C6	2.66	0.45
1:A2:2718:U:O2'	1:A2:2719:G:P	2.75	0.45
1:A2:2764:A:H1'	1:A2:2767:U:OP2	2.17	0.45
1:A2:3613:U:H2'	1:A2:4514:G:O2'	2.15	0.45
1:A2:3651:A:H5"	4:AA:151:PRO:CB	2.47	0.45
1:A2:3667:G:H2'	1:A2:3668:C:C6	2.51	0.45
1:A2:3722:G:O4'	1:A2:3745:G:C8	2.69	0.45
1:A2:4273:A:H4'	22:AT:71:ALA:CB	2.47	0.45
1:A2:4527:G:OP2	5:AB:18:PRO:HA	2.15	0.45
1:A2:4561:U:C2'	1:A2:4562:A:C8	2.90	0.45
1:A2:4565:A:O4'	48:BB:949:PRO:HG2	2.10	0.45
1:A2:4717:U:OP1	17:AO:116:LYS:HD3	2.17	0.45
1:A2:4831:U:O2	1:A2:4831:U:H2'	2.15	0.45
1:A2:4885:C:H5"	15:AM:114:LYS:HE3	1.99	0.45
1:A2:4896:G:H21	8:AE:170:SER:CB	2.28	0.45
5:AB:158:GLN:HG3	5:AB:159:VAL:HG13	1.99	0.45
5:AB:279:GLU:HG3	5:AB:338:VAL:HG23	1.98	0.45
9:AF:88:LYS:HZ3	22:AT:135:PRO:HG2	1.82	0.45
10:AG:174:CYS:HA	10:AG:179:VAL:CG2	2.46	0.45
10:AG:194:VAL:CG1	10:AG:199:CYS:SG	3.05	0.45
11:AH:74:CYS:O	11:AH:78:GLN:HG2	2.15	0.45
12:AI:34:PHE:O	12:AI:88:ARG:HA	2.16	0.45
13:AJ:128:LEU:HD23	13:AJ:130:PHE:CZ	2.52	0.45
14:AL:198:ARG:O	14:AL:202:ALA:HB3	2.17	0.45
15:AM:137:LYS:C	15:AM:140:PRO:CD	2.90	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AN:168:GLY:O	16:AN:172:ARG:HG3	2.15	0.45
17:AO:92:THR:HG22	17:AO:94:ARG:H	1.81	0.45
20:AR:119:MET:HB3	20:AR:145:LEU:CD2	2.29	0.45
21:AS:29:ARG:HD3	22:AT:148:PRO:HB2	1.99	0.45
31:Ac:51:ASN:HB2	44:Ap:43:GLY:HA3	1.98	0.45
33:Ae:98:GLU:HG3	33:Ae:123:THR:OG1	2.15	0.45
43:Ao:105:GLN:HG3	47:BA:56:C:H3'	1.96	0.45
45:At:80:THR:O	45:At:83:ASN:CA	2.63	0.45
48:BB:824:LYS:O	48:BB:828:GLU:HG3	2.15	0.45
48:BB:1160:PRO:HB2	48:BB:1177:LEU:HD22	1.99	0.45
48:BB:1340:CYS:SG	48:BB:1348:ASP:OD1	2.74	0.45
50:C1:36:U:O2	50:C1:36:U:C2'	2.63	0.45
50:C1:84:A:H3'	75:CY:122:LYS:HD2	1.98	0.45
50:C1:133:C:H3'	50:C1:134:C:C5'	2.47	0.45
50:C1:395:G:O5'	50:C1:395:G:C8	2.69	0.45
50:C1:422:U:O2	50:C1:652:U:H5"	2.17	0.45
50:C1:441:C:C5	50:C1:448:A:N3	2.84	0.45
50:C1:681:U:O5'	50:C1:681:U:H6	1.98	0.45
50:C1:681:U:H2'	50:C1:682:U:H5'	1.98	0.45
50:C1:824:C:O2	60:CJ:144:ILE:HG21	2.17	0.45
50:C1:831:G:H2'	50:C1:832:G:C8	2.51	0.45
50:C1:1035:A:C8	50:C1:1035:A:C3'	2.99	0.45
50:C1:1177:U:H2'	50:C1:1178:U:H6	1.80	0.45
50:C1:1225:U:O5'	50:C1:1225:U:C6	2.69	0.45
50:C1:1338:G:H4'	71:CU:74:SER:N	2.27	0.45
50:C1:1414:A:C6	50:C1:1415:C:N4	2.84	0.45
50:C1:1418:C:H5"	70:CT:129:ARG:HA	1.99	0.45
50:C1:1518:C:H5"	50:C1:1519:U:H5"	1.97	0.45
50:C1:1576:G:H2'	50:C1:1577:G:C8	2.52	0.45
50:C1:1695:A:C6	50:C1:1696:C:O2	2.69	0.45
51:CA:39:TYR:CZ	51:CA:50:ASN:HB2	2.51	0.45
51:CA:42:LYS:HB3	51:CA:46:ILE:H	1.82	0.45
58:CH:63:PHE:CD2	58:CH:95:ILE:HD11	2.51	0.45
58:CH:83:LEU:HB3	58:CH:92:VAL:HG21	1.98	0.45
63:CM:19:GLN:HA	63:CM:88:TRP:CD1	2.51	0.45
68:CR:63:ARG:HA	83:Cg:280:LYS:CE	2.46	0.45
71:CU:20:ILE:HG21	71:CU:98:VAL:HG22	1.99	0.45
71:CU:94:PRO:CD	71:CU:97:ILE:HD12	2.38	0.45
72:CV:67:ASP:O	72:CV:70:LEU:HB3	2.16	0.45
83:Cg:86:THR:CG2	83:Cg:102:VAL:HG22	2.47	0.45
1:A2:21:G:C5	1:A2:22:G:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:24:G:N1	1:A2:25:A:C6	2.84	0.45
1:A2:153:G:H8	1:A2:153:G:O5'	1.98	0.45
1:A2:181:U:H4'	1:A2:182:C:O5'	2.16	0.45
1:A2:195:A:C5'	27:AY:45:ARG:HD2	2.47	0.45
1:A2:240:A:H8	1:A2:240:A:P	2.40	0.45
1:A2:245:C:C6	1:A2:245:C:O5'	2.70	0.45
1:A2:248:G:H8	1:A2:248:G:O5'	2.00	0.45
1:A2:671:C:H2'	1:A2:672:G:C8	2.52	0.45
1:A2:942:G:C1'	1:A2:2250:C:OP1	2.57	0.45
1:A2:943:G:C4'	1:A2:944:A:OP1	2.64	0.45
1:A2:961:C:C3'	1:A2:962:G:H8	2.28	0.45
1:A2:1196:C:H5	1:A2:1239:G:C5'	2.22	0.45
1:A2:1205:U:O2'	1:A2:1206:U:P	2.75	0.45
1:A2:1213:G:HO2'	1:A2:1214:G:H5'	1.81	0.45
1:A2:1462:C:H3'	1:A2:1463:G:H8	1.76	0.45
1:A2:1479:A:C2	29:Aa:114:LYS:HE3	2.52	0.45
1:A2:1653:C:O3'	1:A2:4336:A:C8	2.70	0.45
1:A2:1821:A:H2'	1:A2:1822:G:H8	1.82	0.45
1:A2:2009:C:C6	1:A2:2009:C:H5"	2.51	0.45
1:A2:2032:U:O2'	1:A2:2033:G:C5'	2.62	0.45
1:A2:2034:G:C5	1:A2:2036:G:N7	2.84	0.45
1:A2:2548:C:H2'	1:A2:2737:G:C4	2.52	0.45
1:A2:2873:G:H8	1:A2:2873:G:P	2.39	0.45
1:A2:3688:A:H2'	1:A2:3688:A:N3	2.30	0.45
1:A2:3739:U:C3'	47:BA:12:U:O2'	2.64	0.45
1:A2:3920:G:C6	1:A2:3921:A:N7	2.84	0.45
1:A2:4085:U:O2	1:A2:4085:U:C2'	2.61	0.45
1:A2:4523:U:C6	1:A2:4523:U:O5'	2.69	0.45
1:A2:4956:U:H5"	5:AB:317:LEU:CD1	2.46	0.45
3:A4:6:C:O2	3:A4:6:C:O4'	2.34	0.45
5:AB:49:TYR:C	5:AB:79:VAL:HG23	2.41	0.45
8:AE:224:LYS:HA	8:AE:227:HIS:C	2.41	0.45
9:AF:37:PHE:CD1	9:AF:37:PHE:C	2.94	0.45
9:AF:81:PHE:HB2	22:AT:141:VAL:CG2	2.47	0.45
10:AG:104:PRO:CG	10:AG:194:VAL:HG23	2.46	0.45
13:AJ:58:ARG:HH11	47:BA:47:U:H3	1.64	0.45
16:AN:42:PRO:HA	16:AN:131:GLU:OE2	2.17	0.45
17:AO:182:GLU:HA	17:AO:187:LYS:CD	2.47	0.45
17:AO:196:LEU:C	17:AO:198:THR:H	2.25	0.45
20:AR:109:TYR:HB2	20:AR:115:ILE:HD12	1.98	0.45
26:AX:119:ILE:HD12	26:AX:140:LEU:CD2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Ad:84:ILE:HD12	32:Ad:114:PHE:CE1	2.51	0.45
35:Ag:7:TYR:CZ	35:Ag:12:SER:HA	2.52	0.45
43:Ao:105:GLN:HG2	47:BA:57:G:O4'	2.16	0.45
45:At:99:LYS:HB2	45:At:103:ARG:NH2	2.32	0.45
46:Au:98:ALA:HB2	46:Au:121:VAL:HG12	1.99	0.45
46:Au:138:VAL:O	46:Au:141:VAL:HG22	2.17	0.45
48:BB:845:ALA:HB1	48:BB:911:GLY:O	2.17	0.45
48:BB:947:LEU:HG	48:BB:951:THR:HG21	1.99	0.45
48:BB:1157:ALA:HB1	48:BB:1202:LEU:CD2	2.43	0.45
48:BB:1387:GLY:HA2	48:BB:1391:GLU:OE2	2.16	0.45
48:BB:1390:PHE:CE1	48:BB:1396:LEU:CD1	3.00	0.45
49:BC:266:G:O4'	50:C1:1115:U:O2	2.34	0.45
50:C1:133:C:C2	50:C1:179:C:OP1	2.69	0.45
50:C1:143:U:C2	57:CG:180:VAL:HG11	2.51	0.45
50:C1:154:U:O4'	57:CG:13:GLN:HB3	2.16	0.45
50:C1:371:A:C5'	59:CI:11:ARG:HB2	2.44	0.45
50:C1:528:A:C8	50:C1:528:A:P	3.04	0.45
50:C1:845:G:H5"	55:CE:108:ARG:NH1	2.28	0.45
50:C1:1188:A:H4'	50:C1:1188:A:OP1	2.16	0.45
50:C1:1284:A:H3'	50:C1:1285:G:C4'	2.46	0.45
50:C1:1348:G:O5'	50:C1:1348:G:C8	2.62	0.45
50:C1:1565:C:H2'	50:C1:1566:G:C5'	2.45	0.45
50:C1:1602:U:C6	50:C1:1602:U:C3'	3.00	0.45
50:C1:1618:C:H5"	50:C1:1618:C:C6	2.49	0.45
50:C1:1680:G:H4'	79:Cc:20:ARG:HH12	1.80	0.45
57:CG:127:THR:CG2	57:CG:129:VAL:HG23	2.46	0.45
57:CG:194:LEU:O	57:CG:197:GLN:HB2	2.17	0.45
61:CK:13:GLU:OE1	61:CK:83:LEU:HD13	2.17	0.45
62:CL:101:ARG:CB	74:CX:10:ALA:HB2	2.47	0.45
63:CM:26:LEU:C	63:CM:26:LEU:HD13	2.42	0.45
67:CQ:60:LYS:HA	67:CQ:63:PHE:CE1	2.52	0.45
69:CS:39:ARG:HH11	70:CT:39:LEU:H	1.63	0.45
70:CT:107:LEU:HB3	70:CT:113:VAL:HG23	1.98	0.45
83:Cg:20:GLN:HG3	83:Cg:68:ASP:CG	2.42	0.45
83:Cg:294:ASP:C	83:Cg:296:GLN:H	2.24	0.45
1:A2:72:C:OP2	1:A2:72:C:H6	1.99	0.45
1:A2:168:U:O5'	1:A2:168:U:H6	2.00	0.45
1:A2:169:C:H6	1:A2:169:C:O5'	2.00	0.45
1:A2:230:U:O2	1:A2:2280:U:C6	2.70	0.45
1:A2:380:A:H3'	1:A2:380:A:C4	2.48	0.45
1:A2:408:G:N3	2:A3:16:G:C2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:424:A:C2	1:A2:426:A:OP2	2.70	0.45
1:A2:689:G:OP2	1:A2:690:U:C5	2.70	0.45
1:A2:1044:G:H2'	1:A2:1045:G:C8	2.52	0.45
1:A2:1294:C:C2	1:A2:1295:C:C4	3.04	0.45
1:A2:1430:C:H2'	1:A2:1431:G:C8	2.52	0.45
1:A2:1464:C:H2'	1:A2:1465:C:H1'	1.98	0.45
1:A2:1657:C:C5	1:A2:4153:C:H5'	2.51	0.45
1:A2:1814:G:H3'	1:A2:1814:G:N3	2.32	0.45
1:A2:1814:G:O3'	22:AT:129:LYS:HA	2.16	0.45
1:A2:1867:U:H3'	1:A2:1868:G:N7	2.31	0.45
1:A2:1911:G:C2	1:A2:2034:G:N2	2.85	0.45
1:A2:2053:G:H2'	1:A2:2054:G:O5'	2.16	0.45
1:A2:2283:A:C2	1:A2:2284:A:O4'	2.69	0.45
1:A2:2400:A:OP2	1:A2:2400:A:C8	2.69	0.45
1:A2:2672:A:H5'	1:A2:2673:A:OP2	2.17	0.45
1:A2:2840:G:H3'	1:A2:2841:A:C8	2.52	0.45
1:A2:2841:A:H2'	1:A2:2842:U:H6	1.74	0.45
1:A2:3595:G:H2'	1:A2:3596:G:O4'	2.17	0.45
1:A2:4128:G:C2	1:A2:4129:G:C1'	2.99	0.45
1:A2:4388:A:H3'	1:A2:4389:C:C5'	2.46	0.45
1:A2:4388:A:H3'	1:A2:4389:C:C4'	2.47	0.45
1:A2:4478:A:C8	5:AB:257:TRP:CD1	3.04	0.45
1:A2:4520:C:O2	1:A2:4520:C:O4'	2.34	0.45
1:A2:4675:C:H5'	1:A2:4676:C:OP2	2.15	0.45
1:A2:4829:A:H2'	1:A2:4830:G:C5	2.51	0.45
2:A3:27:U:H6	2:A3:27:U:O5'	2.00	0.45
2:A3:28:C:H1'	6:AC:51:PRO:HG3	1.99	0.45
3:A4:64:G:P	12:AI:204:GLY:H	2.39	0.45
6:AC:136:LEU:HD22	45:At:9:VAL:HG11	1.98	0.45
6:AC:329:ASN:ND2	9:AF:188:GLU:HG2	2.32	0.45
7:AD:52:ILE:HG22	7:AD:54:ARG:HG2	1.99	0.45
12:AI:96:VAL:CG2	12:AI:122:PRO:HB3	2.46	0.45
12:AI:176:PHE:CD2	12:AI:184:MET:HE1	2.52	0.45
14:AL:76:PHE:O	14:AL:77:SER:CB	2.60	0.45
15:AM:123:ILE:O	15:AM:127:VAL:HG23	2.17	0.45
34:Af:6:TRP:CE3	34:Af:102:ARG:HB2	2.52	0.45
34:Af:11:PHE:HZ	34:Af:14:TYR:CE1	2.35	0.45
36:Ah:44:LEU:O	36:Ah:44:LEU:HG	2.17	0.45
48:BB:905:GLU:HA	48:BB:908:ARG:CZ	2.46	0.45
48:BB:933:LEU:HD12	48:BB:933:LEU:O	2.16	0.45
48:BB:986:VAL:HG11	48:BB:1022:PHE:CE1	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1219:TYR:CD1	48:BB:1219:TYR:C	2.94	0.45
48:BB:1429:LYS:HG3	48:BB:1433:ILE:HA	1.99	0.45
50:C1:67:C:C5	57:CG:162:LEU:HG	2.51	0.45
50:C1:193:C:C4'	50:C1:209:A:C6	2.93	0.45
50:C1:302:A:O2'	59:CI:74:ARG:HA	2.16	0.45
50:C1:374:G:O6	50:C1:385:G:O6	2.35	0.45
50:C1:441:C:H41	50:C1:448:A:H1'	1.82	0.45
50:C1:500:A:C2'	50:C1:501:C:C5'	2.91	0.45
50:C1:528:A:C2'	50:C1:529:A:H5'	2.47	0.45
50:C1:532:C:C5	50:C1:533:A:C8	3.04	0.45
50:C1:590:A:H1'	81:Ce:27:LYS:CG	2.36	0.45
50:C1:743:U:C5	58:CH:98:ARG:O	2.70	0.45
50:C1:876:C:H2'	50:C1:877:C:H6	1.79	0.45
50:C1:946:U:H2'	50:C1:947:G:O4'	2.17	0.45
50:C1:984:C:H2'	50:C1:985:G:C8	2.51	0.45
50:C1:1075:C:H2'	50:C1:1076:G:H8	1.75	0.45
50:C1:1311:C:OP1	82:Cf:143:LYS:HE3	2.17	0.45
50:C1:1350:U:H4'	51:CA:112:ILE:HD13	1.98	0.45
50:C1:1406:G:C1'	50:C1:1407:U:O5'	2.65	0.45
50:C1:1417:C:C5	50:C1:1418:C:N4	2.85	0.45
50:C1:1639:G:H4'	50:C1:1639:G:OP1	2.17	0.45
50:C1:1661:A:C5	50:C1:1662:U:N3	2.85	0.45
50:C1:1782:G:C2	50:C1:1783:C:N4	2.84	0.45
50:C1:1866:A:C5	77:Ca:84:VAL:HG22	2.51	0.45
60:CJ:75:ASN:O	60:CJ:79:ARG:HB2	2.16	0.45
79:Cc:18:LEU:HD12	79:Cc:29:GLN:HG2	1.97	0.45
1:A2:121:A:C6	1:A2:147:U:C4	3.04	0.45
1:A2:133:C:OP1	1:A2:173:G:H4'	2.17	0.45
1:A2:181:U:H3	1:A2:247:G:H1	1.64	0.45
1:A2:309:A:H2'	1:A2:310:A:O4'	2.16	0.45
1:A2:476:C:P	1:A2:658:G:C5'	3.04	0.45
1:A2:642:C:H6	1:A2:642:C:C5'	2.23	0.45
1:A2:692:C:H42	1:A2:1273:G:H1	1.63	0.45
1:A2:914:G:N3	1:A2:914:G:C2'	2.79	0.45
1:A2:969:C:OP1	1:A2:979:C:C5	2.69	0.45
1:A2:1075:A:C4	1:A2:1076:C:C5	3.05	0.45
1:A2:1176:G:C2'	1:A2:1177:C:O5'	2.65	0.45
1:A2:1180:G:C2	1:A2:1181:U:C2	3.05	0.45
1:A2:1209:C:O2	1:A2:1209:C:H2'	2.15	0.45
1:A2:1634:C:H2'	1:A2:1635:U:H5"	1.99	0.45
1:A2:1773:A:C2	3:A4:98:G:N2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1878:C:H2'	1:A2:1879:C:O4'	2.17	0.45
1:A2:1886:A:H8	1:A2:1886:A:O5'	1.98	0.45
1:A2:2342:C:H5"	1:A2:2342:C:C6	2.46	0.45
1:A2:2683:G:H2'	1:A2:2683:G:OP2	2.17	0.45
1:A2:3652:C:O4'	4:AA:175:ILE:HD13	2.17	0.45
1:A2:3667:G:H1'	1:A2:3747:U:O2	2.16	0.45
1:A2:3695:A:O2'	1:A2:3696:A:C8	2.58	0.45
1:A2:3725:A:N1	1:A2:3726:G:C6	2.85	0.45
1:A2:4052:G:H8	1:A2:4052:G:O5'	1.98	0.45
1:A2:4120:C:H6	1:A2:4120:C:C5'	2.28	0.45
1:A2:4157:G:H2'	1:A2:4158:G:O4'	2.16	0.45
1:A2:4287:C:C2'	1:A2:4288:G:H5'	2.46	0.45
1:A2:4313:U:H5'	1:A2:4314:U:C5'	2.42	0.45
1:A2:4601:U:H2'	1:A2:4602:U:C6	2.52	0.45
1:A2:4689:C:C5'	1:A2:4690:G:C8	3.00	0.45
1:A2:4884:C:H2'	1:A2:4885:C:H6	1.82	0.45
2:A3:11:C:H2'	2:A3:12:G:O4'	2.17	0.45
3:A4:22:A:C6	3:A4:23:A:C6	3.04	0.45
3:A4:23:A:C2	3:A4:119:U:O2	2.70	0.45
3:A4:71:G:H2'	3:A4:72:U:C6	2.51	0.45
5:AB:229:LYS:HD2	5:AB:233:SER:CB	2.47	0.45
9:AF:43:ARG:HD3	9:AF:46:ARG:NH2	2.31	0.45
13:AJ:26:VAL:HG22	13:AJ:32:ARG:NH1	2.32	0.45
13:AJ:111:GLU:HG2	13:AJ:125:ILE:HG21	1.97	0.45
14:AL:103:ARG:NH2	37:Ai:25:ARG:HG2	2.31	0.45
15:AM:64:PHE:CE2	15:AM:73:VAL:HG13	2.52	0.45
20:AR:35:ALA:HB3	20:AR:44:LEU:HD11	1.98	0.45
21:AS:29:ARG:O	22:AT:150:LEU:HA	2.17	0.45
22:AT:68:THR:CG2	22:AT:69:GLN:N	2.80	0.45
36:Ah:33:VAL:HG12	36:Ah:37:THR:OG1	2.16	0.45
37:Ai:57:ALA:O	37:Ai:60:LEU:HB3	2.17	0.45
46:Au:32:ARG:HB3	46:Au:196:ASP:OD1	2.17	0.45
46:Au:62:PHE:HE1	46:Au:81:GLU:HA	1.81	0.45
47:BA:8:U:C6	47:BA:8:U:C3'	2.99	0.45
48:BB:842:LYS:CE	48:BB:1140:GLU:H	2.29	0.45
48:BB:848:ILE:HD11	48:BB:938:ILE:HG13	1.99	0.45
48:BB:931:SER:C	48:BB:961:LYS:NZ	2.75	0.45
48:BB:943:ILE:CG1	48:BB:969:LEU:HG	2.47	0.45
48:BB:1005:ALA:CB	48:BB:1021:LEU:HD21	2.47	0.45
48:BB:1151:ASP:OD1	48:BB:1151:ASP:O	2.34	0.45
48:BB:1324:MET:HB2	48:BB:1386:PHE:CZ	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BC:257:A:H5'	49:BC:259:U:H1'	1.99	0.45
49:BC:345:A:C5	49:BC:346:G:N7	2.85	0.45
50:C1:157:U:H6	50:C1:157:U:O5'	1.99	0.45
50:C1:181:A:P	50:C1:182:C:H5'	2.57	0.45
50:C1:746:C:OP2	50:C1:746:C:C3'	2.65	0.45
50:C1:751:G:C4	50:C1:752:G:N7	2.84	0.45
50:C1:790:C:H2'	50:C1:791:C:H6	1.80	0.45
50:C1:1079:C:C3'	50:C1:1080:A:H5'	2.46	0.45
50:C1:1195:A:H5"	50:C1:1195:A:H8	1.81	0.45
50:C1:1401:A:H4'	71:CU:52:GLY:HA3	1.99	0.45
50:C1:1561:A:C6	50:C1:1575:G:N3	2.85	0.45
50:C1:1635:C:H3'	50:C1:1636:G:C5'	2.47	0.45
50:C1:1766:C:O2	50:C1:1766:C:H2'	2.15	0.45
52:CB:180:ASP:HB3	52:CB:181:LEU:H	1.57	0.45
56:CF:145:ARG:HB2	79:Cc:48:GLY:HA3	1.98	0.45
59:CI:68:GLY:CA	62:CL:21:LYS:HE3	2.47	0.45
64:CN:15:ALA:N	78:Cb:20:LYS:HZ1	2.14	0.45
64:CN:62:GLN:CG	64:CN:65:PHE:HD1	2.29	0.45
70:CT:113:VAL:HG13	70:CT:121:ARG:HB2	1.99	0.45
73:CW:80:ASP:OD1	73:CW:124:LYS:HG2	2.16	0.45
75:CY:13:MET:HE3	75:CY:22:GLN:OE1	2.17	0.45
1:A2:19:G:C2	1:A2:20:U:C4	3.05	0.45
1:A2:303:G:C2'	1:A2:304:U:H5'	2.47	0.45
1:A2:457:A:N3	1:A2:457:A:C2'	2.79	0.45
1:A2:475:U:C2'	1:A2:476:C:OP1	2.64	0.45
1:A2:510:C:H1'	14:AL:108:GLU:OE1	2.17	0.45
1:A2:1218:A:H4'	1:A2:1219:C:OP2	2.10	0.45
1:A2:1466:G:C5	1:A2:1467:G:C8	3.05	0.45
1:A2:1582:C:C2'	1:A2:1583:G:H5'	2.47	0.45
1:A2:1588:U:H2'	1:A2:1589:C:O4'	2.16	0.45
1:A2:1611:A:C8	1:A2:1611:A:C3'	3.00	0.45
1:A2:1645:C:O2	1:A2:1667:G:H5"	2.17	0.45
1:A2:1705:U:H1'	9:AF:132:MET:HE2	1.99	0.45
1:A2:1820:G:C8	19:AQ:11:ARG:NH2	2.85	0.45
1:A2:1898:C:O2'	1:A2:1899:C:H3'	2.16	0.45
1:A2:2330:U:OP1	6:AC:89:GLN:HA	2.17	0.45
1:A2:2335:G:H2'	1:A2:2336:U:H5'	1.99	0.45
1:A2:2339:U:C5	1:A2:3828:G:C2	3.04	0.45
1:A2:2383:G:N7	40:Al:2:SER:CB	2.80	0.45
1:A2:2427:G:H2'	1:A2:2427:G:N3	2.31	0.45
1:A2:2450:A:H8	1:A2:2450:A:O5'	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2610:U:H5”	20:AR:61:ALA:HB2	1.99	0.45
1:A2:2831:G:H2’	1:A2:2832:G:H5’	1.97	0.45
1:A2:2878:G:C3’	1:A2:2879:G:H5”	2.47	0.45
1:A2:3758:C:H3’	1:A2:3758:C:C6	2.52	0.45
1:A2:3825:A:C6	1:A2:3826:G:C6	3.04	0.45
1:A2:3897:A:H8	1:A2:3897:A:OP2	2.00	0.45
1:A2:4022:C:H5’	46:Au:199:TYR:CE1	2.52	0.45
1:A2:4060:G:N1	1:A2:4118:C:N4	2.64	0.45
1:A2:4100:C:H2’	1:A2:4101:C:C6	2.52	0.45
1:A2:4151:G:H2’	1:A2:4152:A:O4’	2.16	0.45
1:A2:4624:A:H2’	1:A2:4625:A:H8	1.81	0.45
2:A3:149:G:H2’	2:A3:151:G:OP1	2.16	0.45
3:A4:23:A:C3’	3:A4:24:C:C6	3.00	0.45
3:A4:73:U:H5”	3:A4:74:A:H2’	1.99	0.45
5:AB:71:GLU:O	24:AV:92:ASP:HA	2.16	0.45
5:AB:227:GLY:H	5:AB:271:GLN:HE22	1.65	0.45
11:AH:173:ARG:HD2	41:Am:127:VAL:CA	2.47	0.45
12:AI:156:LYS:HG3	12:AI:163:GLN:OE1	2.17	0.45
14:AL:57:PRO:HG3	14:AL:75:GLY:C	2.41	0.45
21:AS:25:PRO:O	22:AT:146:LYS:HE3	2.17	0.45
41:Am:94:MET:HG2	41:Am:105:PRO:HA	1.99	0.45
46:Au:45:GLU:O	46:Au:151:LEU:HB3	2.17	0.45
47:BA:34:G:N1	50:C1:1701:C:O2	2.44	0.45
48:BB:1073:GLN:HG3	48:BB:1090:ILE:HG23	1.96	0.45
48:BB:1082:GLY:CA	50:C1:50:A:C8	3.00	0.45
48:BB:1414:ASP:HB3	48:BB:1417:GLN:HE21	1.82	0.45
50:C1:93:U:H3’	50:C1:94:G:C8	2.52	0.45
50:C1:189:U:C6	50:C1:189:U:P	3.10	0.45
50:C1:338:G:H2’	50:C1:339:A:N7	2.32	0.45
50:C1:338:G:H5”	50:C1:338:G:C8	2.46	0.45
50:C1:538:U:H5”	50:C1:539:C:OP2	2.16	0.45
50:C1:656:G:H4’	50:C1:657:U:H5’	1.98	0.45
50:C1:685:A:C8	50:C1:685:A:O5’	2.69	0.45
50:C1:746:C:H2’	50:C1:746:C:OP2	2.17	0.45
50:C1:1058:A:C2’	50:C1:1059:G:H5’	2.46	0.45
50:C1:1132:C:H6	50:C1:1132:C:C5’	2.30	0.45
50:C1:1394:G:C6	50:C1:1474:A:C2	3.05	0.45
50:C1:1402:A:C8	50:C1:1403:C:C5	3.04	0.45
50:C1:1415:C:C6	50:C1:1415:C:H5”	2.52	0.45
50:C1:1534:C:H3’	50:C1:1534:C:P	2.56	0.45
50:C1:1552:G:H2’	54:CD:3:VAL:CG2	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1608:U:H5”	69:CS:130:ARG:NH1	2.32	0.45
50:C1:1769:C:O5’	50:C1:1769:C:H6	2.00	0.45
50:C1:1814:G:O5’	50:C1:1814:G:C8	2.62	0.45
51:CA:12:GLU:HB3	68:CR:115:SER:HB2	1.98	0.45
52:CB:176:VAL:O	52:CB:178:THR:N	2.50	0.45
54:CD:190:LEU:CB	54:CD:200:PRO:HD3	2.46	0.45
55:CE:252:ARG:HH11	60:CJ:72:PHE:HD1	1.64	0.45
57:CG:159:ARG:HB3	57:CG:171:THR:CG2	2.47	0.45
59:CI:37:LYS:HB2	59:CI:59:ARG:HG2	1.98	0.45
59:CI:130:THR:O	59:CI:132:GLU:N	2.50	0.45
63:CM:25:ALA:HB1	63:CM:111:VAL:HG13	1.97	0.45
1:A2:12:A:H5”	1:A2:12:A:C8	2.51	0.45
1:A2:12:A:H2	1:A2:14:C:N4	2.14	0.45
1:A2:122:U:P	1:A2:122:U:C6	3.10	0.45
1:A2:148:G:H22	10:AG:163:PRO:CG	2.30	0.45
1:A2:180:C:C4’	1:A2:182:C:H6	2.20	0.45
1:A2:396:U:H2’	1:A2:397:C:O5’	2.17	0.45
1:A2:962:G:H8	1:A2:962:G:P	2.39	0.45
1:A2:1089:C:H2’	1:A2:1090:C:H6	1.81	0.45
1:A2:1212:G:H2’	1:A2:1212:G:N3	2.32	0.45
1:A2:1318:G:C4	1:A2:1498:C:O4’	2.70	0.45
1:A2:1332:C:C5’	1:A2:1332:C:C6	3.00	0.45
1:A2:1354:G:C2	6:AC:234:LYS:HE2	2.51	0.45
1:A2:1720:G:H1’	1:A2:1760:U:C5’	2.43	0.45
1:A2:1741:C:H41	1:A2:1743:G:N2	2.15	0.45
1:A2:2424:U:O2	1:A2:2424:U:H2’	2.17	0.45
1:A2:2716:C:H5’	44:Ap:52:VAL:HG13	1.98	0.45
1:A2:2835:A:H2’	1:A2:2836:G:O4’	2.17	0.45
1:A2:2869:C:H5”	1:A2:2869:C:C6	2.50	0.45
1:A2:3573:A:OP2	1:A2:3573:A:H2	1.99	0.45
1:A2:3625:A:O4’	1:A2:3716:A:C2	2.70	0.45
1:A2:3728:A:N7	1:A2:3734:G:C6	2.85	0.45
1:A2:3880:C:H2’	1:A2:3881:U:H6	1.73	0.45
1:A2:4031:U:H2’	1:A2:4032:C:H5’	1.89	0.45
1:A2:4177:G:O3’	1:A2:4263:C:H6	2.00	0.45
1:A2:4381:C:C3’	1:A2:4382:A:H5’	2.47	0.45
1:A2:4527:G:H5”	1:A2:4527:G:H8	1.81	0.45
1:A2:4613:C:H4’	32:Ad:75:LYS:O	2.17	0.45
1:A2:4894:C:C5	8:AE:239:LYS:HG3	2.52	0.45
1:A2:4901:U:H5”	34:Af:61:GLY:HA3	1.99	0.45
3:A4:23:A:O2’	3:A4:119:U:P	2.75	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A4:47:G:C8	3:A4:48:G:O6	2.70	0.45
4:AA:177:LYS:HD3	44:Ap:29:ILE:CD1	2.45	0.45
5:AB:376:HIS:CD2	25:AW:33:ASN:HB3	2.52	0.45
6:AC:147:VAL:HG11	6:AC:249:PHE:CE2	2.49	0.45
9:AF:126:ASN:O	9:AF:130:ILE:HG13	2.17	0.45
11:AH:12:ILE:HB	11:AH:52:LYS:O	2.16	0.45
11:AH:117:PHE:CZ	11:AH:165:THR:HB	2.52	0.45
13:AJ:19:LYS:HD2	13:AJ:75:ARG:HH21	1.82	0.45
13:AJ:66:GLU:O	13:AJ:66:GLU:HG2	2.17	0.45
17:AO:182:GLU:HA	17:AO:187:LYS:CE	2.46	0.45
19:AQ:88:ASP:HB2	19:AQ:109:ALA:N	2.32	0.45
20:AR:23:TRP:CZ3	20:AR:51:ILE:HD12	2.52	0.45
21:AS:13:VAL:HG12	21:AS:29:ARG:CB	2.47	0.45
22:AT:126:VAL:O	22:AT:127:GLN:HB2	2.17	0.45
27:AY:42:TYR:HB2	27:AY:44:VAL:CG1	2.46	0.45
27:AY:121:ARG:CA	27:AY:125:SER:HB3	2.45	0.45
32:Ad:33:ILE:HD11	32:Ad:45:ALA:HB2	1.98	0.45
34:Af:11:PHE:HB2	34:Af:101:ILE:HD13	1.99	0.45
34:Af:57:THR:HB	34:Af:65:ASN:H	1.82	0.45
47:BA:32:U:C3'	67:CQ:146:ARG:O	2.55	0.45
48:BB:844:ARG:O	48:BB:910:PRO:C	2.59	0.45
48:BB:983:ASP:OD1	48:BB:983:ASP:O	2.34	0.45
48:BB:1086:THR:HG21	48:BB:1146:LYS:HZ2	1.82	0.45
48:BB:1140:GLU:CD	48:BB:1140:GLU:C	2.85	0.45
49:BC:68:G:H21	49:BC:68:G:P	2.39	0.45
50:C1:179:C:OP2	50:C1:179:C:C6	2.58	0.45
50:C1:184:G:C8	50:C1:185:G:H1'	2.51	0.45
50:C1:448:A:C8	59:CI:25:ARG:C	2.95	0.45
50:C1:548:C:O2	50:C1:548:C:H2'	2.17	0.45
50:C1:1028:A:H3'	50:C1:1029:G:C8	2.52	0.45
50:C1:1280:G:O2'	50:C1:1281:G:H5'	2.16	0.45
50:C1:1331:C:O2	50:C1:1331:C:C2'	2.65	0.45
50:C1:1387:G:H2'	50:C1:1388:A:H8	1.80	0.45
50:C1:1432:U:C4	50:C1:1433:C:N4	2.83	0.45
50:C1:1561:A:N6	50:C1:1575:G:C4	2.85	0.45
50:C1:1605:G:H21	50:C1:1634:A:H62	1.65	0.45
50:C1:1606:G:OP2	50:C1:1606:G:C8	2.61	0.45
50:C1:1606:G:H5'	70:CT:86:GLY:HA3	1.99	0.45
50:C1:1794:C:H6	50:C1:1794:C:O5'	2.00	0.45
51:CA:9:GLN:HG3	51:CA:10:MET:N	2.32	0.45
51:CA:142:LEU:HD12	51:CA:142:LEU:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:CB:135:LEU:HD13	52:CB:217:MET:HE1	1.99	0.45
52:CB:158:HIS:O	52:CB:161:VAL:HB	2.17	0.45
54:CD:58:VAL:HA	54:CD:65:ARG:HD3	1.97	0.45
55:CE:125:LYS:H	55:CE:142:HIS:CE1	2.34	0.45
57:CG:162:LEU:HG	57:CG:163:ASN:N	2.32	0.45
58:CH:27:LEU:O	58:CH:40:LEU:HD11	2.17	0.45
59:CI:173:ALA:HB1	59:CI:188:TYR:O	2.17	0.45
70:CT:110:LEU:HB3	70:CT:112:MET:HG3	1.98	0.45
71:CU:32:LEU:HD21	71:CU:87:ARG:HG2	1.97	0.45
74:CX:41:PHE:HB3	74:CX:44:ALA:HB3	1.99	0.45
83:Cg:5:MET:CG	83:Cg:312:VAL:HG22	2.47	0.45
83:Cg:43:TRP:CZ3	83:Cg:55:PRO:HD3	2.52	0.45
1:A2:120:A:H61	10:AG:130:THR:HB	1.82	0.45
1:A2:254:G:N2	1:A2:255:C:C5	2.83	0.45
1:A2:286:A:H61	1:A2:4322:A:C1’	2.30	0.45
1:A2:418:A:N6	2:A3:7:U:N3	2.65	0.45
1:A2:444:G:H4’	1:A2:445:U:OP2	2.14	0.45
1:A2:472:G:C8	45:At:79:ARG:HG3	2.52	0.45
1:A2:665:C:H6	1:A2:665:C:O5’	2.00	0.45
1:A2:971:C:H6	1:A2:971:C:H3’	1.82	0.45
1:A2:1087:C:H5’	7:AD:277:LYS:HZ2	1.80	0.45
1:A2:1179:G:C2’	1:A2:1180:G:H8	2.07	0.45
1:A2:1250:A:C4’	9:AF:37:PHE:CE1	3.00	0.45
1:A2:1284:C:O2’	1:A2:2289:A:C1’	2.65	0.45
1:A2:1454:G:C3’	1:A2:1455:C:C4’	2.95	0.45
1:A2:1653:C:O3’	1:A2:4336:A:H2’	2.17	0.45
1:A2:1756:C:C5’	1:A2:1756:C:H6	2.29	0.45
1:A2:1839:U:H2’	1:A2:1840:U:O4’	2.16	0.45
1:A2:2338:G:C6	18:AP:25:HIS:CD2	3.05	0.45
1:A2:2567:G:H1’	1:A2:2731:G:N2	2.32	0.45
1:A2:3585:U:C1’	1:A2:3586:G:OP2	2.65	0.45
1:A2:3724:G:N3	1:A2:3725:A:C8	2.85	0.45
1:A2:3878:C:O2	1:A2:3879:C:C6	2.70	0.45
1:A2:3940:G:H8	1:A2:3940:G:O5’	1.99	0.45
1:A2:4093:C:C3’	1:A2:4094:A:H5”	2.45	0.45
1:A2:4309:C:H5”	1:A2:4309:C:H6	1.82	0.45
1:A2:4409:A:H1’	1:A2:4410:U:OP1	2.16	0.45
1:A2:4449:G:C2	1:A2:4668:A:H2’	2.51	0.45
1:A2:4580:U:C6	1:A2:4580:U:H3’	2.51	0.45
1:A2:4599:G:N1	1:A2:4621:G:C2	2.84	0.45
1:A2:4727:G:O2’	1:A2:4728:G:H5’	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4833:C:O5'	1:A2:4833:C:H6	1.99	0.45
1:A2:4862:G:O3'	1:A2:4863:G:C8	2.70	0.45
1:A2:4947:G:H8	1:A2:4947:G:OP2	2.00	0.45
2:A3:114:G:C2	2:A3:115:G:C8	3.05	0.45
3:A4:32:A:N1	3:A4:41:G:C5	2.85	0.45
8:AE:136:HIS:O	8:AE:137:VAL:CB	2.65	0.45
14:AL:21:ARG:O	16:AN:197:THR:HG23	2.17	0.45
22:AT:104:SER:O	22:AT:108:ARG:HB2	2.17	0.45
28:AZ:46:ILE:HG13	28:AZ:69:LYS:O	2.17	0.45
43:Ao:64:LYS:HA	43:Ao:87:ARG:NH1	2.32	0.45
46:Au:34:LEU:HD13	46:Au:34:LEU:C	2.43	0.45
47:BA:32:U:C3'	67:CQ:146:ARG:C	2.90	0.45
47:BA:34:G:C8	50:C1:1701:C:C5	3.05	0.45
47:BA:41:C:H2'	47:BA:42:C:H5"	1.99	0.45
48:BB:848:ILE:HG21	48:BB:914:ILE:HG22	1.97	0.45
48:BB:1168:ASP:OD1	48:BB:1169:GLU:OE1	2.35	0.45
48:BB:1174:LYS:N	48:BB:1174:LYS:CE	2.73	0.45
48:BB:1201:THR:CG2	48:BB:1203:GLY:H	2.28	0.45
48:BB:1227:VAL:HB	48:BB:1255:ILE:HD13	1.98	0.45
48:BB:1302:ALA:C	48:BB:1303:VAL:CG2	2.86	0.45
49:BC:225:A:H2'	49:BC:226:U:C6	2.52	0.45
49:BC:352:A:C6	53:CC:151:ILE:HD11	2.51	0.45
50:C1:170:A:H3'	50:C1:171:A:H8	1.79	0.45
50:C1:571:U:C2'	50:C1:572:U:H4'	2.47	0.45
50:C1:749:U:O2	50:C1:795:A:N1	2.50	0.45
50:C1:1210:G:H4'	77:Ca:85:ARG:CZ	2.47	0.45
50:C1:1370:A:C5	50:C1:1372:U:O4'	2.70	0.45
50:C1:1603:G:H5'	69:CS:38:ARG:NE	2.32	0.45
50:C1:1695:A:C5	50:C1:1696:C:C2	3.05	0.45
50:C1:1767:C:H3'	50:C1:1767:C:H6	1.80	0.45
51:CA:120:ARG:HA	51:CA:120:ARG:NE	2.32	0.45
55:CE:30:ARG:O	55:CE:30:ARG:HG3	2.17	0.45
55:CE:251:GLU:O	55:CE:255:ARG:HG3	2.17	0.45
56:CF:32:ASP:CB	56:CF:117:ILE:CG2	2.94	0.45
60:CJ:86:VAL:HG12	60:CJ:87:LEU:CD1	2.34	0.45
75:CY:41:ARG:NH2	75:CY:53:ASP:HA	2.31	0.45
83:Cg:124:SER:HB3	83:Cg:126:ASP:OD1	2.17	0.45
1:A2:113:A:H2	1:A2:269:G:C4	2.35	0.44
1:A2:202:C:O5'	1:A2:202:C:H6	2.00	0.44
1:A2:219:C:C2'	1:A2:220:G:C5'	2.93	0.44
1:A2:378:G:C4	1:A2:403:G:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:385:G:H3'	1:A2:387:A:OP2	2.16	0.44
1:A2:675:C:H2'	1:A2:676:G:O4'	2.17	0.44
1:A2:1086:A:H1'	7:AD:273:LEU:CD2	2.47	0.44
1:A2:1276:G:O5'	1:A2:1276:G:C8	2.62	0.44
1:A2:1283:A:OP2	1:A2:1283:A:C4'	2.65	0.44
1:A2:1340:G:H2'	1:A2:1341:G:H5'	1.99	0.44
1:A2:1459:C:C6	1:A2:1459:C:H3'	2.52	0.44
1:A2:1531:G:C2	1:A2:1553:G:N3	2.85	0.44
1:A2:1638:U:OP1	1:A2:2325:G:N7	2.50	0.44
1:A2:1797:G:N2	1:A2:1801:U:O4'	2.50	0.44
1:A2:1797:G:H21	1:A2:1801:U:C5'	2.24	0.44
1:A2:1874:A:C5'	1:A2:1874:A:C8	3.00	0.44
1:A2:2050:C:H5'	9:AF:117:ILE:HG23	1.99	0.44
1:A2:2411:G:C8	1:A2:2411:G:H5"	2.53	0.44
1:A2:2685:U:H2'	1:A2:2686:C:O4'	2.17	0.44
1:A2:2719:G:H5"	1:A2:2720:A:OP1	2.16	0.44
1:A2:2740:U:H4'	1:A2:2741:A:OP1	2.15	0.44
1:A2:3686:A:C5	1:A2:3705:A:C6	3.05	0.44
1:A2:3722:G:C8	1:A2:3723:G:C8	3.04	0.44
1:A2:3751:C:H2'	1:A2:3752:A:H5"	1.99	0.44
1:A2:3936:G:O2'	46:Au:155:GLU:HB2	2.16	0.44
1:A2:4083:C:H1'	1:A2:4084:U:OP1	2.16	0.44
1:A2:4399:U:H2'	1:A2:4400:G:C5'	2.45	0.44
1:A2:4479:C:C6	1:A2:4479:C:C3'	3.00	0.44
1:A2:4699:G:C4'	1:A2:4700:C:OP1	2.64	0.44
1:A2:4712:U:C2	34:Af:4:ARG:HB2	2.52	0.44
1:A2:4824:U:O2	1:A2:4824:U:C2'	2.65	0.44
1:A2:4850:C:HO2'	1:A2:4851:G:H8	1.62	0.44
1:A2:4980:C:C5	59:CI:168:GLN:OE1	2.70	0.44
2:A3:49:G:OP1	2:A3:49:G:C8	2.69	0.44
3:A4:69:U:H3	3:A4:106:G:H1	1.65	0.44
3:A4:114:U:C4'	7:AD:73:MET:SD	3.02	0.44
4:AA:179:ILE:O	4:AA:180:LEU:HB2	2.17	0.44
4:AA:204:MET:O	4:AA:212:GLY:CA	2.65	0.44
5:AB:96:PRO:O	17:AO:149:TYR:CD1	2.71	0.44
5:AB:102:PHE:CE1	5:AB:157:CYS:HB2	2.52	0.44
7:AD:105:LEU:HD22	7:AD:105:LEU:O	2.17	0.44
9:AF:76:ARG:NH2	9:AF:81:PHE:HE2	2.15	0.44
9:AF:80:ASN:HB3	22:AT:141:VAL:O	2.17	0.44
11:AH:88:PHE:CD2	11:AH:151:ILE:HB	2.51	0.44
14:AL:143:GLU:CG	14:AL:144:LEU:N	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AP:40:HIS:H	18:AP:43:LYS:HD3	1.82	0.44
20:AR:39:GLN:O	20:AR:42:ARG:HB3	2.18	0.44
23:AU:43:LEU:O	23:AU:47:ILE:HG13	2.17	0.44
26:AX:77:ILE:HA	26:AX:100:VAL:HG22	1.99	0.44
31:Ac:43:ALA:O	31:Ac:69:THR:HG21	2.16	0.44
43:Ao:102:GLN:HB3	47:BA:56:C:C5'	2.47	0.44
47:BA:73:A:C1'	47:BA:74:C:C2	2.99	0.44
48:BB:836:LYS:C	48:BB:838:VAL:N	2.75	0.44
48:BB:1132:GLN:HE22	50:C1:51:U:H5"	1.82	0.44
48:BB:1199:ALA:O	48:BB:1224:ILE:HA	2.17	0.44
48:BB:1237:VAL:CG2	74:CX:97:ASN:HD21	2.21	0.44
48:BB:1326:VAL:O	48:BB:1370:GLU:HB3	2.17	0.44
48:BB:1349:ILE:HG23	48:BB:1385:MET:HE1	1.97	0.44
48:BB:1405:ILE:CB	48:BB:1421:TRP:CZ2	2.98	0.44
50:C1:358:C:H6	50:C1:358:C:C5'	2.27	0.44
50:C1:519:A:N1	50:C1:520:A:C6	2.85	0.44
50:C1:886:A:P	50:C1:886:A:C3'	3.00	0.44
50:C1:899:U:H3'	50:C1:900:C:C6	2.52	0.44
50:C1:1016:U:O2'	50:C1:1017:U:H5"	2.18	0.44
50:C1:1214:A:H61	50:C1:1685:U:H3	1.64	0.44
50:C1:1338:G:H2'	50:C1:1339:U:C6	2.51	0.44
50:C1:1348:G:H22	50:C1:1381:G:H1	1.65	0.44
50:C1:1403:C:H2'	50:C1:1404:U:O5'	2.17	0.44
50:C1:1452:A:C6	50:C1:1475:G:C6	3.05	0.44
50:C1:1549:U:H2'	50:C1:1550:G:C8	2.51	0.44
50:C1:1579:A:C3'	50:C1:1580:A:H5"	2.47	0.44
50:C1:1579:A:N7	71:CU:56:MET:HG2	2.32	0.44
50:C1:1609:C:C5'	50:C1:1609:C:C6	3.00	0.44
50:C1:1750:C:O5'	50:C1:1750:C:C6	2.70	0.44
52:CB:84:PHE:CE1	52:CB:100:PHE:HE2	2.35	0.44
55:CE:49:ARG:HH21	55:CE:58:GLY:HA2	1.82	0.44
57:CG:38:ALA:O	57:CG:41:LEU:HB2	2.17	0.44
59:CI:68:GLY:HA3	62:CL:21:LYS:NZ	2.32	0.44
67:CQ:53:GLU:HB3	67:CQ:54:PRO:HD3	1.99	0.44
68:CR:5:ARG:HG3	68:CR:53:TYR:CD1	2.53	0.44
68:CR:105:MET:HG2	68:CR:106:LEU:H	1.82	0.44
1:A2:32:G:N2	1:A2:50:C:C5	2.79	0.44
1:A2:69:A:N3	1:A2:69:A:C3'	2.78	0.44
1:A2:99:A:H2'	1:A2:100:C:O4'	2.18	0.44
1:A2:148:G:H22	10:AG:163:PRO:CD	2.30	0.44
1:A2:210:G:H8	1:A2:210:G:O5'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:355:G:OP1	1:A2:355:G:H4'	2.16	0.44
1:A2:422:G:H5'	1:A2:3858:G:C8	2.52	0.44
1:A2:506:C:C6	1:A2:506:C:H3'	2.51	0.44
1:A2:721:A:C2'	1:A2:722:G:H5"	2.47	0.44
1:A2:928:A:H2	1:A2:931:C:H42	1.62	0.44
1:A2:1180:G:H8	1:A2:1180:G:O5'	2.00	0.44
1:A2:1209:C:H2'	1:A2:1210:U:OP2	2.18	0.44
1:A2:1551:U:H4'	20:AR:95:TRP:CD2	2.52	0.44
1:A2:1649:G:H2'	1:A2:1833:G:OP2	2.17	0.44
1:A2:1672:U:C6	1:A2:1672:U:O5'	2.70	0.44
1:A2:1773:A:C2'	1:A2:1774:A:H5'	2.46	0.44
1:A2:1830:U:C4	1:A2:1831:G:N2	2.85	0.44
1:A2:2062:C:O2	1:A2:2062:C:O4'	2.35	0.44
1:A2:2369:C:C6	1:A2:2369:C:H5'	2.51	0.44
1:A2:2531:U:H1'	28:AZ:105:ALA:CA	2.46	0.44
1:A2:2638:U:H3	20:AR:118:HIS:CE1	2.34	0.44
1:A2:2690:C:O2'	1:A2:2691:G:H5'	2.17	0.44
1:A2:2738:U:C1'	1:A2:2739:G:C8	2.83	0.44
1:A2:3678:U:C2'	1:A2:3679:G:H5'	2.45	0.44
1:A2:3790:A:H2'	1:A2:3791:U:O4'	2.17	0.44
1:A2:3894:U:C4	1:A2:3895:C:C5	3.05	0.44
1:A2:4024:A:H1'	46:Au:156:ARG:NH1	2.32	0.44
1:A2:4026:U:H2'	1:A2:4027:C:H6	1.78	0.44
1:A2:4157:G:H2'	1:A2:4158:G:C5'	2.47	0.44
1:A2:4562:A:H4'	11:AH:98:HIS:HB3	1.97	0.44
1:A2:4623:G:H4'	1:A2:4958:U:O3'	2.16	0.44
1:A2:4648:C:H2'	1:A2:4649:U:H6	1.83	0.44
1:A2:4725:C:H6	1:A2:4725:C:C5'	2.30	0.44
1:A2:4902:U:O2	8:AE:154:THR:HA	2.17	0.44
2:A3:70:G:OP1	27:AY:118:ILE:HD13	2.17	0.44
2:A3:112:G:O2'	2:A3:113:C:H5'	2.16	0.44
3:A4:104:C:C2	3:A4:105:C:C5	3.05	0.44
3:A4:106:G:H2'	3:A4:107:G:C8	2.52	0.44
3:A4:109:U:O5'	3:A4:109:U:H6	2.00	0.44
6:AC:42:THR:O	6:AC:46:LYS:HG3	2.18	0.44
6:AC:136:LEU:HD23	45:At:10:VAL:CG1	2.47	0.44
10:AG:194:VAL:HG11	10:AG:199:CYS:SG	2.57	0.44
15:AM:124:LYS:O	15:AM:128:LYS:HB2	2.17	0.44
15:AM:127:VAL:O	15:AM:131:GLN:N	2.41	0.44
21:AS:159:LEU:O	21:AS:159:LEU:HG	2.17	0.44
22:AT:92:ARG:HB3	22:AT:95:HIS:CD2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AV:87:SER:HB3	25:AW:19:ARG:NH2	2.32	0.44
28:AZ:1:MET:CB	31:Ac:68:LYS:HB3	2.47	0.44
28:AZ:36:ARG:C	28:AZ:38:TYR:H	2.25	0.44
36:Ah:121:VAL:O	36:Ah:122:LYS:HB2	2.17	0.44
39:Ak:8:ILE:O	39:Ak:11:PHE:HB3	2.17	0.44
43:Ao:68:LEU:HD11	43:Ao:85:ILE:HD11	1.99	0.44
46:Au:47:VAL:HG21	46:Au:179:VAL:HG12	1.98	0.44
46:Au:49:LEU:HD22	46:Au:176:ASN:OD1	2.17	0.44
48:BB:824:LYS:HB3	48:BB:1165:TYR:CZ	2.35	0.44
48:BB:905:GLU:HG2	48:BB:908:ARG:CZ	2.44	0.44
48:BB:943:ILE:HD13	48:BB:1001:PHE:CE1	2.52	0.44
48:BB:1001:PHE:CZ	48:BB:1036:PRO:CG	3.01	0.44
48:BB:1075:MET:CB	48:BB:1088:ASP:O	2.64	0.44
48:BB:1250:ALA:HB1	48:BB:1253:VAL:CG1	2.45	0.44
48:BB:1354:SER:N	48:BB:1373:VAL:HG23	2.32	0.44
49:BC:345:A:C6	49:BC:346:G:C6	3.05	0.44
49:BC:351:A:N1	53:CC:147:VAL:HG23	2.07	0.44
49:BC:353:U:O5’	49:BC:353:U:H6	2.00	0.44
50:C1:43:U:C5’	50:C1:44:U:H5	2.08	0.44
50:C1:67:C:C4	57:CG:164:LYS:N	2.85	0.44
50:C1:191:A:OP1	59:CI:147:LYS:HB3	2.17	0.44
50:C1:313:A:H5”	57:CG:191:ARG:HH12	1.81	0.44
50:C1:360:A:N3	50:C1:362:C:H3’	2.32	0.44
50:C1:381:C:H5”	59:CI:48:VAL:CG2	2.46	0.44
50:C1:411:G:C2	50:C1:412:G:H1’	2.52	0.44
50:C1:479:C:O2’	50:C1:480:G:H5’	2.18	0.44
50:C1:493:A:O2’	50:C1:494:C:H5’	2.18	0.44
50:C1:573:U:N3	50:C1:576:A:C5	2.86	0.44
50:C1:870:A:C6	50:C1:916:A:C5	3.05	0.44
50:C1:999:G:H2’	50:C1:1000:C:H6	1.81	0.44
50:C1:1277:C:H5”	50:C1:1277:C:C6	2.51	0.44
50:C1:1407:U:OP2	50:C1:1408:U:C5	2.71	0.44
50:C1:1413:G:C4	50:C1:1414:A:C8	3.04	0.44
56:CF:55:ARG:C	56:CF:57:ALA:H	2.25	0.44
64:CN:99:ARG:HH12	64:CN:143:SER:HA	1.82	0.44
66:CP:29:SER:O	66:CP:33:LEU:HD23	2.17	0.44
67:CQ:110:ASP:O	67:CQ:114:GLN:HG2	2.17	0.44
69:CS:41:ALA:O	69:CS:44:VAL:HB	2.17	0.44
80:Cd:27:ARG:HA	80:Cd:31:ILE:HD11	1.99	0.44
81:Ce:31:ARG:HG3	81:Ce:32:ALA:N	2.31	0.44
1:A2:186:G:H8	1:A2:186:G:O5’	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:254:G:C2'	1:A2:255:C:OP1	2.65	0.44
1:A2:444:G:H4'	1:A2:445:U:C5'	2.47	0.44
1:A2:455:G:C3'	1:A2:456:G:H8	2.28	0.44
1:A2:460:C:H4'	1:A2:461:A:OP1	2.17	0.44
1:A2:469:G:C4	1:A2:470:G:C8	3.05	0.44
1:A2:717:G:C2'	1:A2:718:G:H5'	2.47	0.44
1:A2:918:C:C6	1:A2:918:C:P	3.10	0.44
1:A2:943:G:H4'	1:A2:944:A:OP1	2.17	0.44
1:A2:944:A:OP2	1:A2:945:G:H5"	2.18	0.44
1:A2:1094:U:H2'	1:A2:1095:C:C6	2.52	0.44
1:A2:1280:G:H8	1:A2:1280:G:C5'	2.31	0.44
1:A2:1909:C:H5"	17:AO:52:LEU:HD21	1.99	0.44
1:A2:2312:C:H2'	1:A2:2313:G:C8	2.52	0.44
1:A2:2438:G:H2'	1:A2:2439:C:C6	2.52	0.44
1:A2:2488:A:C2	1:A2:2491:G:C4	3.05	0.44
1:A2:2530:A:HO2'	1:A2:2531:U:C1'	2.30	0.44
1:A2:2539:G:H21	1:A2:2541:G:H3'	1.82	0.44
1:A2:2653:A:N6	1:A2:2654:G:N1	2.64	0.44
1:A2:2821:A:O3'	1:A2:2822:A:C8	2.70	0.44
1:A2:3580:A:H2'	1:A2:3581:C:H6	1.82	0.44
1:A2:3648:U:C6	4:AA:23:ARG:HB2	2.52	0.44
1:A2:3699:U:HO2'	1:A2:3700:C:H6	1.65	0.44
1:A2:3825:A:H4'	18:AP:85:LYS:HG3	1.98	0.44
1:A2:4038:U:H2'	1:A2:4039:U:C6	2.53	0.44
1:A2:4222:C:H6	1:A2:4222:C:O5'	2.00	0.44
1:A2:4587:U:O2'	5:AB:54:THR:HA	2.17	0.44
1:A2:4640:G:C2'	1:A2:4641:A:O5'	2.66	0.44
1:A2:4836:U:C4	15:AM:113:MET:SD	3.11	0.44
1:A2:4949:G:C2	1:A2:5013:A:C2	3.06	0.44
1:A2:5009:C:O2	1:A2:5009:C:H2'	2.17	0.44
2:A3:111:U:H4'	2:A3:112:G:H5'	1.99	0.44
3:A4:6:C:H4'	7:AD:50:ARG:HH22	1.82	0.44
3:A4:75:G:H4'	3:A4:76:U:OP2	2.17	0.44
3:A4:75:G:H1'	3:A4:76:U:OP2	2.16	0.44
6:AC:45:ARG:CZ	6:AC:238:LEU:HD22	2.47	0.44
7:AD:289:ARG:O	7:AD:293:ARG:CG	2.66	0.44
8:AE:168:LEU:HD23	8:AE:172:LEU:HD11	1.99	0.44
9:AF:114:LEU:HA	9:AF:119:ASN:HD21	1.82	0.44
9:AF:127:LYS:CB	22:AT:133:ALA:HB3	2.47	0.44
9:AF:154:ILE:HG13	9:AF:191:ILE:HD11	1.99	0.44
9:AF:217:ARG:HH11	9:AF:217:ARG:HG3	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AJ:57:VAL:O	13:AJ:58:ARG:HB3	2.17	0.44
17:AO:176:ARG:HA	17:AO:179:LYS:HG2	1.99	0.44
18:AP:91:LEU:O	18:AP:95:LEU:HD13	2.16	0.44
19:AQ:36:ALA:HB1	19:AQ:45:GLN:NE2	2.33	0.44
21:AS:81:TRP:HA	21:AS:93:MET:O	2.17	0.44
25:AW:13:ILE:HG12	25:AW:32:LEU:HB2	1.99	0.44
35:Ag:11:LEU:HD23	35:Ag:11:LEU:H	1.82	0.44
43:Ao:103:VAL:CA	47:BA:57:G:OP1	2.65	0.44
46:Au:59:ILE:CD1	46:Au:145:MET:HB3	2.48	0.44
47:BA:34:G:C6	49:BC:344:G:N2	2.85	0.44
48:BB:842:LYS:CB	48:BB:1140:GLU:CD	2.89	0.44
48:BB:1083:MET:SD	48:BB:1148:LEU:CD1	3.06	0.44
48:BB:1116:ARG:HH21	48:BB:1150:LYS:CG	2.30	0.44
48:BB:1376:GLU:HG3	48:BB:1377:PRO:HD2	2.00	0.44
49:BC:351:A:N6	53:CC:147:VAL:HG22	2.32	0.44
50:C1:525:A:H5'	81:Ce:31:ARG:H	1.83	0.44
50:C1:525:A:C5'	81:Ce:31:ARG:HB3	2.47	0.44
50:C1:838:G:H8	75:CY:9:THR:N	2.11	0.44
50:C1:1071:G:H8	50:C1:1071:G:O5'	2.00	0.44
50:C1:1120:U:O4	50:C1:1121:G:C5	2.69	0.44
50:C1:1120:U:H3'	50:C1:1120:U:C6	2.53	0.44
50:C1:1122:A:H4'	52:CB:205:TYR:CD1	2.53	0.44
50:C1:1223:A:O2'	50:C1:1651:A:H4'	2.18	0.44
50:C1:1230:C:H2'	50:C1:1231:C:C5'	2.46	0.44
50:C1:1260:A:O5'	50:C1:1260:A:C8	2.70	0.44
50:C1:1326:U:O2	50:C1:1326:U:O4'	2.35	0.44
50:C1:1668:U:H3'	50:C1:1669:G:H5"	1.99	0.44
50:C1:1745:A:H3'	50:C1:1745:A:N3	2.32	0.44
50:C1:1765:C:H2'	50:C1:1766:C:C1'	2.46	0.44
50:C1:1850:A:H8	50:C1:1850:A:O5'	1.99	0.44
52:CB:179:ASN:HB2	52:CB:183:GLU:HB2	1.99	0.44
53:CC:60:TRP:CD1	53:CC:92:GLU:OE1	2.71	0.44
53:CC:163:VAL:HB	53:CC:164:PRO:HD2	1.99	0.44
54:CD:162:ASP:N	54:CD:163:PRO:HD2	2.32	0.44
56:CF:72:LEU:HD22	56:CF:151:ILE:HG12	2.00	0.44
56:CF:99:ILE:HD11	76:CZ:106:GLN:OE1	2.18	0.44
59:CI:68:GLY:HA3	62:CL:21:LYS:CE	2.46	0.44
68:CR:33:ARG:HG3	83:Cg:150:TRP:CH2	2.52	0.44
70:CT:6:VAL:HG22	70:CT:65:TYR:HE2	1.82	0.44
70:CT:41:LYS:HG2	70:CT:94:ARG:C	2.42	0.44
71:CU:53:PRO:HB2	71:CU:55:ARG:NH1	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:Ca:74:CYS:O	77:Ca:78:ALA:HB2	2.18	0.44
1:A2:21:G:H2'	1:A2:22:G:O4'	2.17	0.44
1:A2:32:G:N2	1:A2:50:C:H41	2.14	0.44
1:A2:79:C:H2'	1:A2:80:C:H5'	1.98	0.44
1:A2:134:G:H3'	1:A2:135:G:C4	2.52	0.44
1:A2:384:U:C2	1:A2:385:G:H1'	2.53	0.44
1:A2:390:G:C6	1:A2:391:A:C6	3.06	0.44
1:A2:960:G:H5'	1:A2:960:G:C8	2.43	0.44
1:A2:1277:U:H3'	1:A2:1278:C:C6	2.52	0.44
1:A2:1431:G:H2'	1:A2:1432:A:C8	2.50	0.44
1:A2:1435:G:O3'	19:AQ:72:LEU:CB	2.65	0.44
1:A2:1575:U:H3'	1:A2:1575:U:C6	2.52	0.44
1:A2:1719:C:H6	1:A2:1719:C:C5'	2.30	0.44
1:A2:1728:A:H2'	1:A2:1729:G:O4'	2.16	0.44
1:A2:1798:G:OP1	1:A2:1798:G:C8	2.71	0.44
1:A2:2019:A:C4	1:A2:4424:A:C2	3.06	0.44
1:A2:2313:G:C5	1:A2:2314:C:C4	3.05	0.44
1:A2:2397:A:H3'	1:A2:2398:G:O4'	2.18	0.44
1:A2:2479:G:C8	1:A2:2479:G:C3'	3.00	0.44
1:A2:2531:U:O2	28:AZ:108:ARG:HG3	2.18	0.44
1:A2:2588:A:H5'	1:A2:2665:G:H4'	1.99	0.44
1:A2:2726:C:H2'	1:A2:2727:G:O4'	2.17	0.44
1:A2:3606:U:H2'	1:A2:3607:G:C5'	2.46	0.44
1:A2:3720:G:H5"	1:A2:3721:C:OP2	2.17	0.44
1:A2:3923:A:O5'	1:A2:3923:A:C8	2.71	0.44
1:A2:4018:A:H3'	1:A2:4019:C:H6	1.82	0.44
1:A2:4061:G:O2'	1:A2:4062:G:H5'	2.17	0.44
1:A2:4128:G:C2'	1:A2:4129:G:H5'	2.48	0.44
1:A2:4353:G:N7	1:A2:4406:U:H3'	2.32	0.44
1:A2:4366:U:C2'	1:A2:4367:G:H5'	2.47	0.44
1:A2:4529:U:H3'	1:A2:4530:G:C5'	2.47	0.44
1:A2:4568:G:OP1	48:BB:1278:HIS:CD2	2.70	0.44
1:A2:4731:C:O5'	1:A2:4731:C:H6	2.01	0.44
1:A2:4831:U:O2'	1:A2:4832:G:C8	2.62	0.44
1:A2:4960:G:N7	25:AW:35:LYS:NZ	2.64	0.44
2:A3:125:C:O2	2:A3:125:C:H2'	2.17	0.44
3:A4:66:G:O2'	7:AD:13:PHE:C	2.60	0.44
5:AB:291:TYR:O	5:AB:292:LEU:HB2	2.18	0.44
5:AB:370:THR:O	5:AB:370:THR:HG23	2.18	0.44
6:AC:43:ASN:HD22	6:AC:115:VAL:HG22	1.83	0.44
6:AC:210:ILE:HG22	6:AC:232:VAL:HG22	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AJ:151:ILE:HD12	13:AJ:156:ARG:HA	1.98	0.44
15:AM:20:HIS:O	15:AM:23:LYS:HD3	2.17	0.44
15:AM:28:VAL:HG11	15:AM:47:ARG:NH2	2.31	0.44
16:AN:4:TYR:HD1	16:AN:7:ILE:HD12	1.82	0.44
16:AN:39:ALA:O	16:AN:61:ILE:HB	2.17	0.44
17:AO:42:ASN:HA	17:AO:136:ALA:O	2.18	0.44
17:AO:172:LYS:CE	17:AO:176:ARG:HH12	2.30	0.44
24:AV:84:GLN:HG3	24:AV:86:LYS:H	1.83	0.44
26:AX:147:LEU:C	26:AX:147:LEU:HD13	2.42	0.44
27:AY:37:GLU:O	27:AY:41:LYS:HG3	2.18	0.44
29:Aa:102:ASP:OD1	29:Aa:104:VAL:HB	2.17	0.44
30:Ab:44:ARG:O	30:Ab:47:LYS:HB2	2.17	0.44
31:Ac:36:LYS:HG3	31:Ac:39:ARG:NH2	2.32	0.44
32:Ad:18:ASN:ND2	32:Ad:102:LEU:HD11	2.32	0.44
34:Af:27:LEU:CB	34:Af:83:MET:HE2	2.44	0.44
47:BA:31:A:C1’	50:C1:1641:A:O2’	2.65	0.44
47:BA:67:C:C4	47:BA:68:C:C4	3.06	0.44
48:BB:975:LEU:CD1	48:BB:1001:PHE:HD1	2.30	0.44
48:BB:1008:ILE:HG23	48:BB:1034:LEU:CD1	2.47	0.44
48:BB:1070:LEU:CD2	48:BB:1072:ALA:H	2.30	0.44
48:BB:1198:GLN:HA	48:BB:1223:ASN:O	2.18	0.44
48:BB:1275:ILE:HG21	48:BB:1278:HIS:CD2	2.53	0.44
48:BB:1306:CYS:SG	48:BB:1330:ALA:O	2.66	0.44
48:BB:1312:PRO:HG3	48:BB:1393:THR:OG1	2.17	0.44
49:BC:64:U:H6	49:BC:64:U:H3’	1.82	0.44
50:C1:28:U:H2’	50:C1:29:G:H8	1.82	0.44
50:C1:59:U:C3’	50:C1:59:U:C6	3.00	0.44
50:C1:753:C:N4	50:C1:754:G:N3	2.65	0.44
50:C1:794:A:H8	50:C1:794:A:O5’	2.00	0.44
50:C1:1081:U:C2’	50:C1:1082:A:H5’	2.47	0.44
50:C1:1120:U:C6	50:C1:1120:U:C3’	3.00	0.44
50:C1:1196:A:C2	50:C1:1197:G:H1’	2.53	0.44
50:C1:1547:C:H42	50:C1:1656:G:C4’	2.30	0.44
50:C1:1679:A:C4’	50:C1:1679:A:OP2	2.65	0.44
50:C1:1688:C:O2	50:C1:1688:C:C2’	2.60	0.44
50:C1:1739:C:O5’	50:C1:1739:C:C6	2.70	0.44
50:C1:1762:C:H2’	50:C1:1763:G:H8	1.82	0.44
51:CA:77:ILE:HG12	51:CA:99:ILE:HG21	1.99	0.44
53:CC:191:VAL:HA	53:CC:227:ARG:O	2.17	0.44
56:CF:129:GLY:HA2	56:CF:134:VAL:HG12	1.99	0.44
59:CI:103:LEU:HD23	59:CI:170:LYS:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:CM:19:GLN:HB3	63:CM:88:TRP:CE2	2.52	0.44
77:Ca:60:ASP:O	77:Ca:62:TYR:N	2.45	0.44
1:A2:86:U:H3	1:A2:98:A:H62	1.66	0.44
1:A2:103:G:H4'	1:A2:1360:G:C2	2.52	0.44
1:A2:122:U:C6	1:A2:122:U:OP2	2.70	0.44
1:A2:193:C:O2	1:A2:193:C:C3'	2.66	0.44
1:A2:334:C:H5"	1:A2:334:C:H6	1.76	0.44
1:A2:386:A:H2'	1:A2:387:A:C1'	2.47	0.44
1:A2:441:G:N3	1:A2:1274:A:C4'	2.77	0.44
1:A2:649:C:H2'	1:A2:650:G:C8	2.52	0.44
1:A2:1178:G:C3'	1:A2:1179:G:C5'	2.92	0.44
1:A2:1191:G:C4	1:A2:1192:G:N7	2.86	0.44
1:A2:1193:G:OP1	1:A2:1194:C:H5'	2.17	0.44
1:A2:1219:C:N3	1:A2:1249:G:O3'	2.50	0.44
1:A2:1281:C:C2'	1:A2:1282:U:OP1	2.64	0.44
1:A2:1360:G:H2'	1:A2:1360:G:N3	2.32	0.44
1:A2:1361:U:C6	1:A2:1361:U:OP2	2.70	0.44
1:A2:1389:C:O2	1:A2:1389:C:C2'	2.65	0.44
1:A2:1673:C:C3'	1:A2:1701:C:P	3.02	0.44
1:A2:1715:A:H2'	1:A2:1716:A:H5'	1.98	0.44
1:A2:2507:U:C5	35:Ag:8:ARG:HB3	2.52	0.44
1:A2:2564:A:C8	35:Ag:70:THR:HG22	2.52	0.44
1:A2:2566:C:H2'	1:A2:2566:C:O2	2.16	0.44
1:A2:2609:U:C2'	1:A2:2610:U:C5	2.95	0.44
1:A2:2629:G:C5	1:A2:2630:C:H1'	2.53	0.44
1:A2:2663:G:C3'	1:A2:2664:U:H4'	2.47	0.44
1:A2:3686:A:C6	1:A2:3705:A:C6	3.06	0.44
1:A2:3892:A:O5'	1:A2:3892:A:H8	1.99	0.44
1:A2:4032:C:H2'	1:A2:4033:G:H4'	1.99	0.44
1:A2:4195:G:H2'	1:A2:4196:G:O5'	2.17	0.44
1:A2:4262:U:C3'	1:A2:4262:U:C6	3.01	0.44
1:A2:4294:U:C6	1:A2:4294:U:H3'	2.52	0.44
1:A2:4331:G:H4'	43:Ao:59:LYS:CD	2.48	0.44
1:A2:4352:G:O5'	1:A2:4352:G:C8	2.70	0.44
1:A2:4365:G:H5"	12:AI:5:PRO:CG	2.47	0.44
1:A2:4456:A:C3'	1:A2:4457:U:C5'	2.96	0.44
1:A2:4485:C:C6	1:A2:4485:C:C5'	3.00	0.44
1:A2:4574:G:H2'	1:A2:4575:C:H6	1.83	0.44
1:A2:4812:A:H2'	1:A2:4813:C:H6	1.68	0.44
1:A2:4829:A:N1	17:AO:118:MET:HE1	2.32	0.44
1:A2:4849:A:H1'	1:A2:4850:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A3:28:C:H5"	2:A3:28:C:H6	1.73	0.44
3:A4:39:C:H4'	13:AJ:47:THR:HG23	1.99	0.44
5:AB:137:TRP:O	5:AB:140:GLU:HG2	2.17	0.44
5:AB:229:LYS:HD2	5:AB:233:SER:HB2	1.99	0.44
5:AB:300:LYS:HG3	5:AB:313:SER:HB2	1.99	0.44
6:AC:110:ARG:HB2	16:AN:204:ARG:NH1	2.32	0.44
6:AC:133:LEU:HB2	6:AC:136:LEU:CD1	2.48	0.44
8:AE:255:SER:O	8:AE:259:PRO:HD2	2.18	0.44
12:AI:49:CYS:HB3	12:AI:168:SER:HB3	2.00	0.44
14:AL:84:ALA:HA	14:AL:118:LYS:HZ1	1.82	0.44
14:AL:145:LYS:HE2	36:Ah:122:LYS:HD3	1.99	0.44
15:AM:28:VAL:CG1	15:AM:67:SER:HA	2.48	0.44
21:AS:78:PHE:CE1	21:AS:102:THR:HG22	2.53	0.44
22:AT:17:ARG:HA	22:AT:18:PRO:HD2	1.81	0.44
48:BB:1012:PHE:CE2	48:BB:1034:LEU:HD21	2.53	0.44
48:BB:1070:LEU:CD2	48:BB:1072:ALA:N	2.81	0.44
48:BB:1110:PRO:HG2	48:BB:1174:LYS:HG3	1.91	0.44
48:BB:1192:GLU:CG	48:BB:1193:LYS:H	2.31	0.44
50:C1:22:A:H1'	60:CJ:17:ARG:HH11	1.83	0.44
50:C1:130:G:O6	50:C1:131:C:C5	2.71	0.44
50:C1:136:C:H4'	50:C1:137:U:OP2	2.17	0.44
50:C1:342:C:N4	50:C1:343:A:N6	2.55	0.44
50:C1:562:U:C3'	50:C1:562:U:C6	3.01	0.44
50:C1:578:C:C6	50:C1:578:C:OP2	2.71	0.44
50:C1:794:A:O2'	50:C1:795:A:H4'	2.16	0.44
50:C1:1043:G:O2'	50:C1:1044:G:H8	2.01	0.44
50:C1:1106:C:OP1	78:Cb:70:LYS:HG2	2.17	0.44
50:C1:1214:A:C6	50:C1:1217:A:C2	3.04	0.44
50:C1:1221:G:H2'	50:C1:1222:G:O4'	2.17	0.44
50:C1:1265:A:N3	50:C1:1265:A:C2'	2.81	0.44
50:C1:1280:G:C2	50:C1:1281:G:C6	3.06	0.44
50:C1:1317:C:O5'	50:C1:1506:A:N6	2.51	0.44
50:C1:1404:U:H6	50:C1:1404:U:OP2	1.99	0.44
50:C1:1471:C:O5'	50:C1:1471:C:H6	2.01	0.44
50:C1:1495:G:N7	71:CU:69:PRO:HB2	2.32	0.44
50:C1:1630:A:C6	50:C1:1631:U:C4	3.04	0.44
50:C1:1664:A:HO2'	50:C1:1666:C:H5	1.66	0.44
50:C1:1668:U:H5"	67:CQ:132:PHE:HA	1.98	0.44
50:C1:1787:G:C2'	50:C1:1788:A:H8	2.27	0.44
50:C1:1833:C:C6	50:C1:1833:C:C5'	2.85	0.44
50:C1:1846:G:H3'	50:C1:1847:G:H8	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:CA:40:LYS:HZ2	68:CR:101:ASP:HA	1.81	0.44
51:CA:90:PHE:CZ	51:CA:178:LEU:HD22	2.53	0.44
51:CA:204:TYR:HA	51:CA:208:GLU:HG2	2.00	0.44
52:CB:65:ARG:HA	65:CO:50:LYS:NZ	2.32	0.44
58:CH:76:GLN:HG3	58:CH:77:VAL:N	2.33	0.44
59:CI:137:LEU:HD22	59:CI:137:LEU:HA	1.88	0.44
62:CL:71:ARG:HH12	62:CL:73:LEU:CD1	2.28	0.44
64:CN:35:GLU:HA	64:CN:38:TYR:CE2	2.52	0.44
66:CP:62:LYS:HD3	66:CP:62:LYS:C	2.43	0.44
75:CY:45:ALA:HB1	75:CY:50:THR:O	2.18	0.44
83:Cg:282:GLU:C	83:Cg:284:PRO:HD2	2.43	0.44
1:A2:21:G:C2'	1:A2:22:G:H5'	2.47	0.44
1:A2:52:G:O5'	1:A2:52:G:C8	2.71	0.44
1:A2:112:C:H2'	1:A2:113:A:H5'	2.00	0.44
1:A2:119:G:O4'	1:A2:120:A:C8	2.71	0.44
1:A2:148:G:N2	10:AG:163:PRO:CG	2.81	0.44
1:A2:304:U:C6	1:A2:304:U:O5'	2.71	0.44
1:A2:362:A:H2'	1:A2:363:A:C8	2.53	0.44
1:A2:384:U:OP2	1:A2:384:U:C6	2.70	0.44
1:A2:403:G:N3	1:A2:403:G:C5'	2.80	0.44
1:A2:424:A:H1'	1:A2:425:A:O5'	2.16	0.44
1:A2:445:U:C2'	1:A2:446:C:C6	2.99	0.44
1:A2:717:G:C3'	1:A2:718:G:C5'	2.93	0.44
1:A2:903:C:OP2	1:A2:903:C:C5	2.71	0.44
1:A2:924:C:C2'	1:A2:925:C:C4'	2.90	0.44
1:A2:942:G:N2	1:A2:1262:G:OP1	2.50	0.44
1:A2:959:C:H5'	1:A2:1214:G:N2	2.32	0.44
1:A2:1079:C:O3'	1:A2:1083:C:H1'	2.18	0.44
1:A2:1200:G:C8	1:A2:1200:G:OP2	2.70	0.44
1:A2:1249:G:H8	1:A2:1249:G:C5'	2.26	0.44
1:A2:1249:G:C4	1:A2:1250:A:C8	3.06	0.44
1:A2:1253:G:H2'	1:A2:1254:A:H5"	1.98	0.44
1:A2:1421:C:C2'	1:A2:1422:C:O4'	2.65	0.44
1:A2:1454:G:C5	1:A2:1455:C:H1'	2.52	0.44
1:A2:1481:G:H2'	19:AQ:142:PRO:HD3	1.99	0.44
1:A2:1569:C:C2'	1:A2:1570:U:H4'	2.47	0.44
1:A2:1583:G:H2'	1:A2:1584:G:H8	1.80	0.44
1:A2:1714:U:N3	1:A2:4174:A:C8	2.86	0.44
1:A2:1773:A:OP1	1:A2:1773:A:H4'	2.18	0.44
1:A2:1845:A:C2'	1:A2:1846:A:H5'	2.44	0.44
1:A2:2421:U:C5'	1:A2:2422:C:H5	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2458:G:H2'	1:A2:2459:C:H6	1.81	0.44
1:A2:2464:G:OP2	1:A2:2464:G:C8	2.71	0.44
1:A2:2466:C:H5"	1:A2:2467:U:OP1	2.17	0.44
1:A2:2486:C:H6	1:A2:2486:C:C5'	2.19	0.44
1:A2:2548:C:C6	1:A2:2548:C:C5'	3.01	0.44
1:A2:2625:G:H3'	1:A2:2625:G:OP2	2.18	0.44
1:A2:2652:G:H8	1:A2:2652:G:O5'	2.01	0.44
1:A2:2742:A:H8	1:A2:2742:A:O5'	2.01	0.44
1:A2:3590:A:C8	1:A2:3590:A:OP2	2.70	0.44
1:A2:3617:A:C2	1:A2:3754:A:C5	3.06	0.44
1:A2:3787:U:H3'	1:A2:3788:G:H4'	1.99	0.44
1:A2:3873:G:C1'	1:A2:3874:A:P	3.05	0.44
1:A2:4080:U:H6	1:A2:4080:U:H3'	1.82	0.44
1:A2:4151:G:C5'	1:A2:4151:G:C8	3.01	0.44
1:A2:4191:C:H5'	1:A2:4194:A:N6	2.33	0.44
1:A2:4233:A:N7	1:A2:4234:A:C6	2.86	0.44
1:A2:4272:U:H4'	22:AT:51:GLY:HA2	2.00	0.44
1:A2:4397:U:OP2	1:A2:4397:U:H4'	2.17	0.44
1:A2:4428:U:C2'	1:A2:4429:U:H5'	2.47	0.44
1:A2:4575:C:H6	1:A2:4575:C:O5'	2.00	0.44
1:A2:4589:U:H1'	24:AV:95:PHE:CE1	2.53	0.44
1:A2:4636:G:C4'	1:A2:4637:U:OP1	2.65	0.44
1:A2:4978:C:H6	1:A2:4978:C:H2'	1.64	0.44
2:A3:81:C:O2	2:A3:81:C:H2'	2.17	0.44
3:A4:47:G:H5'	7:AD:94:ASN:HA	1.98	0.44
4:AA:204:MET:HG2	4:AA:204:MET:H	1.62	0.44
7:AD:20:PHE:HZ	22:AT:24:VAL:O	2.01	0.44
10:AG:69:ILE:CG2	10:AG:73:ARG:NH1	2.81	0.44
12:AI:102:MET:CE	47:BA:75:C:N4	2.80	0.44
14:AL:120:TYR:CE2	14:AL:124:LEU:HD22	2.53	0.44
14:AL:134:PRO:HA	14:AL:135:LYS:CE	2.46	0.44
15:AM:86:TRP:O	15:AM:89:THR:HG22	2.18	0.44
27:AY:47:MET:SD	27:AY:48:PRO:O	2.76	0.44
28:AZ:81:MET:HE1	35:Ag:92:LYS:HG2	2.00	0.44
44:Ap:46:LYS:HB2	44:Ap:57:CYS:SG	2.58	0.44
47:BA:75:C:C5	48:BB:1316:PHE:HD2	1.99	0.44
47:BA:76:A:N6	48:BB:1316:PHE:CB	2.75	0.44
48:BB:840:THR:CG2	48:BB:1142:ALA:HB2	2.47	0.44
48:BB:1102:ILE:O	48:BB:1112:VAL:HA	2.18	0.44
50:C1:21:U:H3	50:C1:654:A:H2	1.64	0.44
50:C1:125:C:O2'	50:C1:126:G:H5"	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:181:A:C3'	50:C1:182:C:C5'	2.87	0.44
50:C1:203:G:H8	50:C1:203:G:O5'	2.00	0.44
50:C1:573:U:O2	50:C1:573:U:C3'	2.65	0.44
50:C1:1127:C:C2'	50:C1:1128:C:H5'	2.48	0.44
50:C1:1206:G:N3	50:C1:1834:A:H1'	2.32	0.44
50:C1:1217:A:N3	50:C1:1685:U:O2	2.51	0.44
50:C1:1321:G:N2	50:C1:1322:G:C4	2.85	0.44
50:C1:1790:A:H4'	57:CG:81:HIS:CE1	2.52	0.44
51:CA:88:LEU:HD13	51:CA:88:LEU:C	2.43	0.44
56:CF:162:ALA:HB2	56:CF:172:CYS:CB	2.47	0.44
57:CG:50:VAL:HG11	57:CG:111:LEU:HB3	1.99	0.44
63:CM:18:LEU:O	63:CM:22:LEU:HD13	2.17	0.44
64:CN:38:TYR:HB2	64:CN:80:LEU:HD22	2.00	0.44
69:CS:70:ILE:HD13	69:CS:77:TYR:CE1	2.52	0.44
70:CT:76:THR:CG2	70:CT:95:GLY:H	2.29	0.44
83:Cg:109:LEU:HD23	83:Cg:125:ARG:HG3	1.97	0.44
83:Cg:170:TRP:HB3	83:Cg:194:TYR:HD2	1.83	0.44
1:A2:69:A:N3	1:A2:69:A:C2'	2.80	0.44
1:A2:99:A:H8	1:A2:99:A:O5'	2.00	0.44
1:A2:444:G:C3'	1:A2:445:U:H5"	2.48	0.44
1:A2:634:C:H2'	1:A2:635:G:C8	2.51	0.44
1:A2:901:A:C8	1:A2:901:A:C3'	3.00	0.44
1:A2:934:G:H2'	1:A2:935:G:C8	2.52	0.44
1:A2:949:G:N7	1:A2:950:A:C1'	2.78	0.44
1:A2:1164:A:C2	1:A2:1165:G:C5	3.06	0.44
1:A2:1219:C:H3'	9:AF:44:LYS:CG	2.45	0.44
1:A2:1270:G:P	1:A2:4895:C:H41	2.40	0.44
1:A2:1397:C:H2'	1:A2:1398:C:C5	2.51	0.44
1:A2:1532:A:OP2	1:A2:1532:A:C8	2.71	0.44
1:A2:1559:C:H2'	1:A2:1560:G:O4'	2.18	0.44
1:A2:2279:C:O2	1:A2:2279:C:C2'	2.63	0.44
1:A2:2289:A:C2	2:A3:8:U:O4'	2.70	0.44
1:A2:2441:C:C2'	1:A2:2442:C:H5'	2.47	0.44
1:A2:2457:G:C2'	1:A2:2458:G:H5'	2.48	0.44
1:A2:2549:C:N1	1:A2:2550:A:H8	2.15	0.44
1:A2:2665:G:C8	1:A2:2665:G:C5'	3.01	0.44
1:A2:2866:G:H8	1:A2:2866:G:O5'	2.00	0.44
1:A2:3604:A:H2'	1:A2:3605:C:H5"	2.00	0.44
1:A2:3686:A:N7	1:A2:3705:A:N6	2.65	0.44
1:A2:3694:G:H5'	1:A2:3695:A:OP2	2.17	0.44
1:A2:3841:A:H2'	1:A2:3842:G:H5'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3918:A:C2	1:A2:3919:U:C5	3.06	0.44
1:A2:4045:A:H5"	16:AN:28:TRP:NE1	2.33	0.44
1:A2:4153:C:C2'	1:A2:4154:U:H5'	2.48	0.44
1:A2:4292:C:C6	1:A2:4292:C:O5'	2.71	0.44
1:A2:4388:A:H5"	1:A2:4388:A:C8	2.51	0.44
1:A2:4508:A:OP1	1:A2:4508:A:H3'	2.18	0.44
1:A2:4533:G:C6	1:A2:4681:G:O6	2.71	0.44
1:A2:4587:U:H3'	1:A2:4588:U:H6	1.82	0.44
1:A2:4639:G:H2'	1:A2:4640:G:C5'	2.23	0.44
1:A2:4643:U:H5	1:A2:4666:G:H21	1.66	0.44
1:A2:4812:A:H2'	1:A2:4813:C:N1	2.28	0.44
1:A2:4828:G:C3'	1:A2:4830:G:OP1	2.65	0.44
3:A4:68:C:H3'	3:A4:69:U:C5	2.53	0.44
6:AC:93:GLY:HA2	6:AC:100:ARG:NH1	2.32	0.44
6:AC:122:TYR:CE2	6:AC:280:PRO:HG3	2.53	0.44
9:AF:142:TRP:O	9:AF:235:ASN:HA	2.18	0.44
10:AG:52:THR:HG21	26:AX:38:LYS:HD2	1.99	0.44
11:AH:98:HIS:NE2	48:BB:944:MET:CA	2.80	0.44
15:AM:91:TRP:NE1	15:AM:95:ILE:HD11	2.32	0.44
19:AQ:69:LYS:HA	19:AQ:69:LYS:HD3	1.77	0.44
35:Ag:83:CYS:O	35:Ag:84:ALA:HB3	2.17	0.44
37:Ai:60:LEU:HD12	37:Ai:69:ALA:HB2	2.00	0.44
48:BB:1094:GLY:N	48:BB:1141:ALA:HB2	2.33	0.44
48:BB:1382:SER:N	48:BB:1383:PRO:HD2	2.33	0.44
48:BB:1390:PHE:HE1	48:BB:1396:LEU:HG	1.82	0.44
50:C1:25:A:H3'	50:C1:25:A:C8	2.53	0.44
50:C1:77:A:C5	57:CG:155:GLN:HB3	2.53	0.44
50:C1:174:C:H6	50:C1:174:C:H5"	1.82	0.44
50:C1:502:C:H1'	50:C1:503:C:O5'	2.18	0.44
50:C1:611:G:H8	50:C1:611:G:O5'	2.01	0.44
50:C1:746:C:H4'	50:C1:747:U:OP1	2.17	0.44
50:C1:746:C:H5	50:C1:749:U:H4'	1.81	0.44
50:C1:906:U:H2'	50:C1:907:G:H8	1.82	0.44
50:C1:969:U:H1'	50:C1:971:G:O6	2.17	0.44
50:C1:1043:G:O5'	50:C1:1043:G:C8	2.71	0.44
50:C1:1137:U:OP2	50:C1:1137:U:C6	2.68	0.44
50:C1:1330:G:H4'	50:C1:1331:C:H4'	2.00	0.44
50:C1:1416:C:C4	50:C1:1417:C:O4'	2.71	0.44
51:CA:9:GLN:CB	72:CV:83:PHE:CD2	2.99	0.44
52:CB:129:THR:HB	52:CB:180:ASP:HA	1.99	0.44
56:CF:204:ARG:HH11	79:Cc:63:ARG:HG3	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:CO:61:LYS:HD3	65:CO:76:LEU:HD13	1.98	0.44
66:CP:58:LYS:HG2	66:CP:61:ARG:HH21	1.83	0.44
70:CT:75:MET:HB2	70:CT:121:ARG:NH2	2.33	0.44
72:CV:17:CYS:SG	72:CV:56:CYS:N	2.91	0.44
74:CX:51:VAL:HG13	74:CX:70:VAL:CG1	2.43	0.44
79:Cc:13:ARG:HA	79:Cc:55:VAL:HA	1.99	0.44
80:Cd:10:HIS:O	80:Cd:11:PRO:C	2.60	0.44
80:Cd:21:CYS:SG	80:Cd:38:MET:HA	2.58	0.44
83:Cg:251:ALA:HB2	83:Cg:289:LEU:CD2	2.44	0.44
1:A2:61:A:C2'	1:A2:62:A:H5'	2.47	0.44
1:A2:196:G:H3'	1:A2:235:C:OP2	2.16	0.44
1:A2:241:G:C8	1:A2:241:G:O5'	2.70	0.44
1:A2:268:G:OP2	37:Ai:34:THR:HG21	2.16	0.44
1:A2:477:C:H4'	1:A2:478:G:C5'	2.47	0.44
1:A2:488:G:H1	1:A2:658:G:H1'	1.81	0.44
1:A2:951:C:N4	1:A2:1263:G:H1	2.13	0.44
1:A2:973:U:P	9:AF:51:TYR:CD1	3.10	0.44
1:A2:1049:G:H2'	1:A2:1049:G:N3	2.32	0.44
1:A2:1193:G:O4'	1:A2:1195:C:C5	2.70	0.44
1:A2:1219:C:O2	1:A2:1219:C:C2'	2.64	0.44
1:A2:1220:G:H5'	9:AF:48:LYS:HB2	1.99	0.44
1:A2:1282:U:C2'	1:A2:1284:C:C6	3.01	0.44
1:A2:1305:C:O2	1:A2:3870:A:H5"	2.18	0.44
1:A2:1338:G:H1'	1:A2:1339:G:H5'	2.00	0.44
1:A2:1343:C:H41	14:AL:32:LYS:HZ3	1.62	0.44
1:A2:1378:A:H2'	1:A2:1379:G:N7	2.32	0.44
1:A2:1530:C:H5"	1:A2:1530:C:C6	2.39	0.44
1:A2:1630:G:H3'	1:A2:1631:U:C5	2.53	0.44
1:A2:1766:A:O2'	1:A2:1767:A:H5'	2.17	0.44
1:A2:1770:U:H3'	1:A2:1771:U:C6	2.52	0.44
1:A2:2031:C:O5'	1:A2:2031:C:H6	2.01	0.44
1:A2:2032:U:O2'	1:A2:2034:G:C8	2.64	0.44
1:A2:2476:C:H2'	1:A2:2477:U:H6	1.83	0.44
1:A2:2789:A:C3'	1:A2:2790:A:H8	2.29	0.44
1:A2:2815:G:P	5:AB:249:ARG:HG2	2.58	0.44
1:A2:3730:C:H3'	1:A2:3731:U:C6	2.53	0.44
1:A2:3770:U:C5'	1:A2:4456:A:C2	3.01	0.44
1:A2:3799:A:H5"	1:A2:3800:U:OP2	2.18	0.44
1:A2:3936:G:N2	46:Au:158:THR:HG21	2.32	0.44
1:A2:4264:A:H2	22:AT:81:LYS:HD2	1.82	0.44
1:A2:4308:A:C2	1:A2:4310:C:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4638:G:C2	1:A2:4673:G:H1'	2.53	0.44
1:A2:4737:C:H1'	1:A2:4813:C:H42	1.83	0.44
1:A2:4742:C:H2'	1:A2:4743:C:C6	2.52	0.44
1:A2:4891:G:H2'	1:A2:4892:C:C6	2.52	0.44
3:A4:64:G:H4'	12:AI:204:GLY:C	2.43	0.44
4:AA:204:MET:O	4:AA:212:GLY:HA3	2.18	0.44
4:AA:234:LYS:HB3	4:AA:238:ILE:HD11	2.00	0.44
9:AF:150:VAL:O	9:AF:154:ILE:HG12	2.18	0.44
12:AI:62:SER:CB	12:AI:93:PRO:HG3	2.48	0.44
16:AN:92:LEU:H	16:AN:92:LEU:HD12	1.82	0.44
18:AP:5:SER:O	18:AP:6:LEU:C	2.61	0.44
18:AP:25:HIS:CE1	18:AP:27:LYS:HB2	2.53	0.44
19:AQ:30:LYS:HZ3	45:At:4:HIS:CE1	2.36	0.44
20:AR:132:PHE:CA	20:AR:137:ILE:CD1	2.93	0.44
21:AS:27:LEU:HD12	22:AT:146:LYS:HE2	2.00	0.44
24:AV:66:LYS:C	24:AV:67:LYS:HD2	2.43	0.44
26:AX:109:ILE:O	26:AX:113:VAL:HG23	2.17	0.44
28:AZ:82:PRO:O	31:Ac:62:TYR:HE2	2.01	0.44
31:Ac:7:THR:O	31:Ac:11:LEU:HG	2.17	0.44
46:Au:48:VAL:HG21	46:Au:144:ARG:HG3	1.99	0.44
47:BA:34:G:C4	50:C1:1701:C:C5	2.87	0.44
48:BB:1067:CYS:HG	48:BB:1092:ILE:CG1	1.21	0.44
48:BB:1110:PRO:CG	48:BB:1174:LYS:CG	2.82	0.44
48:BB:1332:GLN:HB3	48:BB:1366:LYS:HE2	2.00	0.44
48:BB:1344:LYS:HD2	48:BB:1431:PHE:CB	2.28	0.44
48:BB:1420:ASP:O	48:BB:1424:ILE:HG13	2.18	0.44
49:BC:66:A:C8	49:BC:66:A:OP2	2.70	0.44
49:BC:254:C:H2'	49:BC:255:C:C6	2.53	0.44
50:C1:29:G:C5'	74:CX:129:SER:HB3	2.47	0.44
50:C1:211:G:H2'	50:C1:212:C:C5	2.48	0.44
50:C1:217:A:O2'	50:C1:218:U:H5'	2.18	0.44
50:C1:308:G:OP1	50:C1:308:G:N3	2.51	0.44
50:C1:428:U:H3'	50:C1:429:C:C5	2.53	0.44
50:C1:527:C:O2'	60:CJ:121:LYS:HE3	2.18	0.44
50:C1:593:C:C4'	50:C1:594:A:OP1	2.66	0.44
50:C1:745:C:H3'	58:CH:105:THR:HG23	1.98	0.44
50:C1:794:A:H2	50:C1:795:A:H1'	1.74	0.44
50:C1:1034:A:C6	50:C1:1082:A:C4	3.06	0.44
50:C1:1103:C:H2'	50:C1:1104:G:H8	1.82	0.44
50:C1:1115:U:O3'	50:C1:1116:C:H3'	2.18	0.44
50:C1:1129:G:H3'	50:C1:1130:G:N7	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1315:U:O5’	50:C1:1315:U:H6	2.00	0.44
50:C1:1416:C:C6	50:C1:1417:C:H5”	2.53	0.44
50:C1:1456:G:C8	50:C1:1456:G:C5’	2.96	0.44
50:C1:1588:A:C6	50:C1:1589:A:C6	3.06	0.44
50:C1:1598:G:C4’	50:C1:1600:G:O6	2.66	0.44
50:C1:1620:A:H5’	66:CP:115:TYR:OH	2.17	0.44
50:C1:1696:C:O2	50:C1:1697:A:C8	2.71	0.44
50:C1:1747:C:H2’	50:C1:1748:G:H8	1.82	0.44
52:CB:112:SER:O	52:CB:115:LYS:HE2	2.18	0.44
54:CD:192:TRP:CD1	54:CD:203:PRO:HA	2.53	0.44
57:CG:1:MET:HE1	57:CG:106:LEU:O	2.17	0.44
57:CG:106:LEU:H	57:CG:106:LEU:HD22	1.82	0.44
70:CT:6:VAL:HG22	70:CT:65:TYR:CE2	2.52	0.44
74:CX:123:VAL:HA	74:CX:130:LEU:HD12	2.00	0.44
77:Ca:24:THR:HB	77:Ca:73:TYR:CE1	2.52	0.44
77:Ca:71:LEU:HD21	77:Ca:73:TYR:HE2	1.82	0.44
83:Cg:12:LYS:HB3	83:Cg:306:LEU:HG	2.00	0.44
83:Cg:177:TRP:CE2	83:Cg:184:LEU:HD23	2.52	0.44
1:A2:103:G:H4’	1:A2:1360:G:N2	2.32	0.44
1:A2:165:C:C2	1:A2:166:G:C8	3.06	0.44
1:A2:430:G:C2’	1:A2:431:U:O5’	2.66	0.44
1:A2:508:C:C2’	1:A2:509:G:H5’	2.48	0.44
1:A2:510:C:C6	1:A2:510:C:C5’	2.80	0.44
1:A2:968:C:O3’	1:A2:969:C:H4’	2.17	0.44
1:A2:1052:C:H5’	1:A2:1053:G:OP2	2.18	0.44
1:A2:1057:C:O5’	1:A2:1057:C:H6	2.00	0.44
1:A2:1173:C:H2’	1:A2:1174:G:C8	2.52	0.44
1:A2:1259:A:C4	1:A2:1260:C:C5	3.05	0.44
1:A2:1279:G:H8	1:A2:1279:G:O5’	2.00	0.44
1:A2:1358:C:H3’	1:A2:1358:C:O2	2.18	0.44
1:A2:1423:A:H8	1:A2:1423:A:OP2	2.00	0.44
1:A2:1742:C:H3’	1:A2:1743:G:C4’	2.47	0.44
1:A2:1773:A:H5”	1:A2:4174:A:N6	2.33	0.44
1:A2:1791:C:O5’	1:A2:1791:C:H6	2.01	0.44
1:A2:2024:G:H4’	1:A2:2025:A:O5’	2.17	0.44
1:A2:2526:G:C5’	1:A2:2527:G:H5”	2.45	0.44
1:A2:2567:G:C1’	1:A2:2732:A:N6	2.81	0.44
1:A2:2625:G:C2	1:A2:2664:U:C4	3.05	0.44
1:A2:2726:C:O4’	35:Ag:64:LEU:HD13	2.18	0.44
1:A2:3769:A:H8	1:A2:3769:A:H5’	1.82	0.44
1:A2:3791:U:C2’	1:A2:3792:G:H5’	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4063:G:O2'	1:A2:4064:C:H5'	2.17	0.44
1:A2:4086:C:H3'	1:A2:4086:C:P	2.57	0.44
1:A2:4235:G:H4'	22:AT:12:ARG:NE	2.33	0.44
1:A2:4257:G:H2'	1:A2:4258:A:C8	2.51	0.44
1:A2:4285:A:N7	1:A2:4286:G:H1'	2.31	0.44
1:A2:4498:G:N3	1:A2:4498:G:H2'	2.33	0.44
1:A2:4572:C:O2	11:AH:122:TYR:HB3	2.18	0.44
1:A2:4602:U:H2'	1:A2:4603:G:C8	2.51	0.44
1:A2:4736:C:H1'	1:A2:4815:G:N2	2.33	0.44
1:A2:4746:C:H2'	1:A2:4747:C:H6	1.80	0.44
1:A2:4829:A:C2	17:AO:116:LYS:HG2	2.52	0.44
1:A2:4862:G:N1	1:A2:4868:G:N2	2.63	0.44
2:A3:18:U:H6	2:A3:18:U:O5'	2.01	0.44
3:A4:48:G:C2'	3:A4:48:G:N3	2.80	0.44
4:AA:196:TRP:CD2	4:AA:197:PRO:HD3	2.53	0.44
4:AA:227:ARG:HE	4:AA:239:ALA:CB	2.31	0.44
4:AA:242:ARG:NH1	4:AA:246:LEU:HD23	2.33	0.44
5:AB:136:LYS:HB3	5:AB:146:LEU:HD21	2.00	0.44
6:AC:346:ASN:O	6:AC:350:ARG:N	2.46	0.44
9:AF:154:ILE:HG13	9:AF:191:ILE:CD1	2.48	0.44
13:AJ:101:ASP:OD1	13:AJ:102:THR:HG23	2.17	0.44
17:AO:141:LEU:O	17:AO:145:VAL:HG23	2.18	0.44
19:AQ:68:ARG:O	19:AQ:71:LYS:HB2	2.18	0.44
22:AT:68:THR:HG23	22:AT:69:GLN:H	1.83	0.44
31:Ac:8:LYS:HE2	50:C1:1007:C:H4'	1.98	0.44
32:Ad:18:ASN:CG	32:Ad:102:LEU:HD11	2.43	0.44
32:Ad:94:GLU:O	32:Ad:95:ASP:HB2	2.18	0.44
43:Ao:102:GLN:HB3	47:BA:56:C:H5"	1.99	0.44
44:Ap:33:GLN:HG3	44:Ap:49:ARG:CD	2.48	0.44
46:Au:107:GLU:OE1	46:Au:132:LEU:HB2	2.17	0.44
48:BB:844:ARG:HG3	48:BB:845:ALA:N	2.31	0.44
48:BB:958:LEU:HD23	48:BB:963:CYS:SG	2.58	0.44
48:BB:1087:ILE:HD11	48:BB:1152:LEU:CD1	2.46	0.44
48:BB:1196:TYR:CE2	48:BB:1198:GLN:CG	2.99	0.44
48:BB:1229:LYS:HG3	48:BB:1262:MET:HE1	2.00	0.44
49:BC:351:A:C5	53:CC:124:PHE:HE1	2.15	0.44
50:C1:181:A:C8	57:CG:192:ILE:HG13	2.53	0.44
50:C1:311:C:H2'	50:C1:311:C:O2	2.18	0.44
50:C1:571:U:O2'	75:CY:59:GLY:HA2	2.18	0.44
50:C1:574:A:N7	50:C1:575:A:H1'	2.33	0.44
50:C1:875:A:O3'	50:C1:876:C:C6	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1109:C:O2	50:C1:1109:C:C2’	2.66	0.44
50:C1:1188:A:H3’	50:C1:1189:A:C8	2.53	0.44
50:C1:1218:C:C2’	50:C1:1219:C:H5’	2.48	0.44
50:C1:1237:C:H2’	50:C1:1238:U:O4’	2.18	0.44
50:C1:1314:U:H3	61:CK:2:LEU:HD11	1.82	0.44
50:C1:1377:U:O2	50:C1:1379:A:H5’	2.17	0.44
50:C1:1412:C:C4	50:C1:1414:A:H5”	2.53	0.44
50:C1:1547:C:H42	50:C1:1656:G:H4’	1.82	0.44
52:CB:66:VAL:CG2	52:CB:85:LYS:HG3	2.48	0.44
53:CC:94:ILE:HG13	53:CC:95:ASP:N	2.31	0.44
57:CG:114:VAL:HG12	57:CG:115:LYS:HG3	1.99	0.44
59:CI:26:LYS:O	59:CI:29:LEU:HD23	2.18	0.44
63:CM:56:CYS:SG	63:CM:61:TYR:CE1	3.10	0.44
64:CN:28:LEU:HD11	64:CN:32:ASP:HB3	1.99	0.44
68:CR:33:ARG:HG2	83:Cg:125:ARG:HH11	1.83	0.44
69:CS:25:LYS:HD2	69:CS:28:PHE:H	1.82	0.44
69:CS:77:TYR:O	69:CS:78:LYS:CB	2.66	0.44
75:CY:7:ILE:HG23	75:CY:25:ILE:HG23	1.99	0.44
77:Ca:82:LYS:HE2	79:Cc:69:ARG:NH1	2.33	0.44
80:Cd:36:LEU:HD12	80:Cd:36:LEU:N	2.32	0.44
83:Cg:238:ALA:HB3	83:Cg:289:LEU:HD21	1.99	0.44
83:Cg:255:SER:HB3	83:Cg:270:LEU:O	2.18	0.44
1:A2:141:G:H8	1:A2:141:G:H5”	1.83	0.43
1:A2:441:G:C4	1:A2:1274:A:H4’	2.53	0.43
1:A2:446:C:O2’	1:A2:447:C:H5’	2.17	0.43
1:A2:722:G:C2’	1:A2:723:G:H4’	2.47	0.43
1:A2:887:C:H2’	1:A2:888:C:C5	2.52	0.43
1:A2:923:G:H2’	1:A2:924:C:C5’	2.49	0.43
1:A2:1158:G:H2’	1:A2:1159:U:C5	2.53	0.43
1:A2:1177:C:O2’	1:A2:1178:G:H5’	2.17	0.43
1:A2:1642:C:H42	1:A2:2262:G:H1	1.66	0.43
1:A2:1717:A:H8	1:A2:1717:A:O5’	2.01	0.43
1:A2:1868:G:C8	1:A2:1868:G:C3’	3.00	0.43
1:A2:1911:G:N1	1:A2:1912:A:C6	2.86	0.43
1:A2:2308:A:H1’	1:A2:2309:G:H2’	1.99	0.43
1:A2:2325:G:P	1:A2:2328:C:N4	2.90	0.43
1:A2:2371:G:H2’	1:A2:2371:G:N3	2.33	0.43
1:A2:2687:C:H3’	1:A2:2688:G:H8	1.82	0.43
1:A2:2721:A:C2	1:A2:2722:A:C4	3.06	0.43
1:A2:2849:C:OP2	1:A2:2849:C:C5	2.70	0.43
1:A2:3635:C:H5”	1:A2:3636:C:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3645:G:H2'	1:A2:3646:U:H5'	2.00	0.43
1:A2:3677:C:H2'	1:A2:3677:C:O2	2.18	0.43
1:A2:4076:G:H2'	1:A2:4077:C:C6	2.53	0.43
1:A2:4130:A:C1'	1:A2:4131:C:OP2	2.66	0.43
1:A2:4143:G:H4'	1:A2:4144:G:N7	2.32	0.43
1:A2:4195:G:C4	1:A2:4196:G:C8	3.06	0.43
1:A2:4414:G:H1	1:A2:4486:U:H3	1.64	0.43
1:A2:4637:U:C4	1:A2:4673:G:C2	3.06	0.43
1:A2:4681:G:C2'	1:A2:4681:G:N3	2.80	0.43
1:A2:4699:G:O2'	1:A2:4700:C:H6	2.01	0.43
1:A2:4814:C:C5'	17:AO:165:LYS:HB3	2.46	0.43
1:A2:4882:G:N2	1:A2:4883:C:N1	2.66	0.43
2:A3:137:A:C2	2:A3:138:C:N1	2.86	0.43
3:A4:87:G:H1'	3:A4:90:A:H62	1.83	0.43
6:AC:29:LYS:HD3	6:AC:267:TRP:CZ2	2.53	0.43
6:AC:54:VAL:C	6:AC:56:GLU:N	2.75	0.43
8:AE:217:PHE:HB3	8:AE:246:ARG:HH22	1.81	0.43
8:AE:270:TYR:CD1	15:AM:107:PHE:HA	2.53	0.43
12:AI:139:ARG:HG3	12:AI:173:PHE:CZ	2.53	0.43
16:AN:198:LEU:HD23	16:AN:200:LEU:HG	2.00	0.43
17:AO:31:ARG:HE	17:AO:33:VAL:CG2	2.31	0.43
19:AQ:91:ARG:HG3	29:Aa:76:ASP:OD2	2.18	0.43
23:AU:17:GLN:O	23:AU:75:GLU:HA	2.18	0.43
28:AZ:82:PRO:HG2	31:Ac:66:LEU:CD1	2.47	0.43
38:Aj:24:SER:O	38:Aj:25:LYS:HB3	2.18	0.43
47:BA:68:C:O2'	47:BA:69:G:H5'	2.18	0.43
47:BA:75:C:OP2	48:BB:1322:ILE:C	2.60	0.43
48:BB:835:SER:OG	48:BB:838:VAL:HG12	2.17	0.43
48:BB:972:ILE:HG23	48:BB:1037:THR:O	2.18	0.43
49:BC:266:G:O5'	50:C1:1115:U:O2	2.34	0.43
49:BC:312:U:C4	49:BC:313:G:H1'	2.52	0.43
50:C1:118:C:H2'	50:C1:119:U:O4'	2.18	0.43
50:C1:164:A:C2'	50:C1:165:G:C8	3.01	0.43
50:C1:497:C:H2'	50:C1:498:C:C6	2.53	0.43
50:C1:505:G:O2'	50:C1:506:G:H5'	2.18	0.43
50:C1:659:G:H3'	74:CX:17:ARG:HH21	1.82	0.43
50:C1:663:C:C2	50:C1:664:A:C8	3.05	0.43
50:C1:678:U:H6	50:C1:678:U:H3'	1.83	0.43
50:C1:1086:G:C2	50:C1:1086:G:OP1	2.71	0.43
50:C1:1173:A:C6	50:C1:1188:A:C8	3.06	0.43
50:C1:1277:C:O2	50:C1:1277:C:H2'	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1378:A:N3	51:CA:105:PRO:HB3	2.32	0.43
50:C1:1417:C:C4	50:C1:1418:C:N4	2.85	0.43
50:C1:1510:G:OP2	50:C1:1510:G:C8	2.71	0.43
50:C1:1511:U:H2'	50:C1:1512:C:O4'	2.18	0.43
50:C1:1512:C:H1'	80:Cd:7:TYR:CD2	2.53	0.43
50:C1:1561:A:H1'	50:C1:1583:C:H5'	1.99	0.43
50:C1:1654:G:H5'	70:CT:82:ARG:NH2	2.33	0.43
50:C1:1689:C:H2'	50:C1:1690:U:O4'	2.18	0.43
50:C1:1703:C:C4	50:C1:1704:C:C4	3.06	0.43
50:C1:1849:G:O2'	50:C1:1850:A:H5'	2.18	0.43
53:CC:173:LYS:N	53:CC:173:LYS:HD2	2.33	0.43
55:CE:29:PRO:HB3	55:CE:45:ILE:HG21	1.99	0.43
55:CE:126:VAL:HG13	55:CE:139:LEU:HG	2.00	0.43
56:CF:48:TYR:CD1	56:CF:49:LEU:N	2.86	0.43
56:CF:69:VAL:O	56:CF:72:LEU:HB2	2.18	0.43
57:CG:64:LYS:HE2	57:CG:97:VAL:CG1	2.43	0.43
57:CG:64:LYS:O	57:CG:100:CYS:HB2	2.17	0.43
60:CJ:125:HIS:NE2	60:CJ:129:LEU:HD11	2.33	0.43
61:CK:27:VAL:HG21	61:CK:29:MET:HE3	1.99	0.43
62:CL:95:TYR:CE2	62:CL:97:ARG:HA	2.53	0.43
64:CN:4:MET:HE1	64:CN:121:ARG:HG3	1.99	0.43
1:A2:287:A:C2	1:A2:307:U:C4'	3.01	0.43
1:A2:451:C:C6	1:A2:451:C:O5'	2.71	0.43
1:A2:475:U:H3'	1:A2:475:U:C6	2.53	0.43
1:A2:501:U:O2'	1:A2:502:C:H5'	2.18	0.43
1:A2:650:G:C2'	1:A2:651:G:H5'	2.48	0.43
1:A2:961:C:H2'	1:A2:961:C:O2	2.18	0.43
1:A2:973:U:H1'	1:A2:974:C:P	2.58	0.43
1:A2:1086:A:OP2	3:A4:107:G:H4'	2.18	0.43
1:A2:1180:G:C8	1:A2:1180:G:O5'	2.71	0.43
1:A2:1249:G:O6	1:A2:1250:A:C6	2.70	0.43
1:A2:1285:C:C5'	1:A2:1285:C:C6	2.99	0.43
1:A2:1361:U:P	1:A2:1361:U:H6	2.40	0.43
1:A2:1367:A:N1	29:Aa:112:LEU:HD13	2.33	0.43
1:A2:1372:A:O2'	1:A2:1373:G:H5'	2.18	0.43
1:A2:1428:G:H2'	1:A2:1429:C:C6	2.53	0.43
1:A2:1466:G:C4	1:A2:1467:G:C8	3.05	0.43
1:A2:1471:G:H5"	30:Ab:44:ARG:CZ	2.47	0.43
1:A2:1711:C:C2'	1:A2:1712:G:H5"	2.35	0.43
1:A2:1732:G:H2'	1:A2:1734:C:OP2	2.18	0.43
1:A2:1910:A:H5"	1:A2:1910:A:C8	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2304:G:N2	1:A2:2305:U:H1'	2.33	0.43
1:A2:2348:U:C2'	1:A2:2349:U:C6	2.96	0.43
1:A2:2591:C:H4'	1:A2:2784:A:O3'	2.18	0.43
1:A2:2634:G:H8	1:A2:2634:G:P	2.41	0.43
1:A2:2873:G:O5'	1:A2:2873:G:C8	2.67	0.43
1:A2:3571:C:H2'	1:A2:3572:G:O4'	2.18	0.43
1:A2:3714:U:O5'	1:A2:3714:U:C6	2.70	0.43
1:A2:3814:A:H2'	1:A2:3815:C:C6	2.53	0.43
1:A2:3814:A:H4'	1:A2:4628:U:O2'	2.17	0.43
1:A2:3828:G:H5'	18:AP:139:TYR:CE2	2.53	0.43
1:A2:3837:G:OP2	1:A2:3837:G:C8	2.71	0.43
1:A2:3877:A:C3'	1:A2:3878:C:C5'	2.95	0.43
1:A2:4025:C:O5'	1:A2:4025:C:H6	2.01	0.43
1:A2:4151:G:H8	1:A2:4151:G:H5"	1.83	0.43
1:A2:4250:U:H4'	1:A2:4251:G:OP1	2.17	0.43
1:A2:4294:U:H3'	1:A2:4294:U:H6	1.83	0.43
1:A2:4401:A:C8	1:A2:4401:A:OP2	2.71	0.43
1:A2:4479:C:H3'	1:A2:4479:C:C6	2.48	0.43
1:A2:4483:A:C1'	1:A2:4519:A:H62	2.31	0.43
1:A2:4537:U:HO2'	1:A2:4923:A:H4'	1.83	0.43
1:A2:4737:C:O2'	1:A2:4738:U:H5'	2.18	0.43
1:A2:4828:G:H1'	21:AS:165:PRO:CG	2.48	0.43
1:A2:4901:U:C1'	34:Af:69:VAL:HB	2.48	0.43
2:A3:84:A:H62	27:AY:114:ASP:N	2.16	0.43
3:A4:3:C:O2	3:A4:3:C:C3'	2.66	0.43
4:AA:34:PHE:CD2	4:AA:35:ALA:N	2.86	0.43
4:AA:65:ASP:HB3	4:AA:68:ARG:O	2.17	0.43
5:AB:55:HIS:ND1	5:AB:369:ASP:HB3	2.33	0.43
5:AB:285:TYR:HD2	5:AB:365:LEU:HD21	1.82	0.43
6:AC:195:LYS:HB3	6:AC:200:ARG:CZ	2.49	0.43
8:AE:164:PHE:HE1	8:AE:173:LEU:HD22	1.83	0.43
10:AG:32:PHE:HE1	28:AZ:54:THR:C	2.27	0.43
10:AG:75:LYS:HD2	10:AG:240:ASN:HB2	2.00	0.43
13:AJ:63:ARG:NH1	47:BA:57:G:P	2.90	0.43
14:AL:94:ILE:HG13	14:AL:126:LEU:HD21	1.99	0.43
15:AM:11:ARG:HD3	15:AM:57:LEU:HB3	2.01	0.43
18:AP:6:LEU:HG	18:AP:8:PRO:HD3	1.99	0.43
20:AR:19:LYS:O	20:AR:22:VAL:HG22	2.18	0.43
31:Ac:44:LYS:HG2	31:Ac:105:ILE:HD11	1.98	0.43
45:At:98:ARG:HG3	45:At:107:ARG:NH2	2.32	0.43
46:Au:74:VAL:CG2	46:Au:139:VAL:HA	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BA:68:C:C2'	47:BA:69:G:C5'	2.88	0.43
48:BB:837:ASN:C	48:BB:838:VAL:HG22	2.43	0.43
48:BB:1073:GLN:NE2	48:BB:1090:ILE:HG23	2.30	0.43
50:C1:66:G:H1'	50:C1:67:C:OP1	2.18	0.43
50:C1:153:G:H21	57:CG:13:GLN:CD	2.27	0.43
50:C1:190:G:H8	50:C1:190:G:O5'	2.01	0.43
50:C1:389:A:N3	50:C1:389:A:H2'	2.33	0.43
50:C1:474:G:N2	50:C1:507:G:O2'	2.51	0.43
50:C1:1149:A:O2'	50:C1:1150:A:H3'	2.18	0.43
50:C1:1275:G:O6	50:C1:1506:A:H8	2.01	0.43
50:C1:1311:C:OP2	50:C1:1311:C:C6	2.71	0.43
50:C1:1438:A:OP1	50:C1:1438:A:H4'	2.18	0.43
50:C1:1554:C:C3'	50:C1:1555:U:C5'	2.90	0.43
50:C1:1631:U:H2'	50:C1:1632:G:O4'	2.17	0.43
50:C1:1665:G:N2	70:CT:87:VAL:HB	2.33	0.43
50:C1:1679:A:C8	79:Cc:20:ARG:NH1	2.87	0.43
50:C1:1684:C:C3'	50:C1:1685:U:C5'	2.95	0.43
52:CB:68:GLU:CD	52:CB:83:LYS:HE2	2.43	0.43
55:CE:160:VAL:HG12	55:CE:172:PHE:HB3	1.99	0.43
56:CF:39:ILE:HG23	56:CF:68:ILE:HG12	2.00	0.43
57:CG:177:GLN:O	57:CG:178:ARG:HB2	2.17	0.43
59:CI:97:VAL:O	59:CI:175:ILE:HD11	2.18	0.43
60:CJ:136:ARG:HB2	60:CJ:162:ARG:NH2	2.33	0.43
60:CJ:171:GLY:O	60:CJ:174:LYS:HB2	2.19	0.43
63:CM:56:CYS:SG	63:CM:61:TYR:CD1	3.09	0.43
67:CQ:12:VAL:CG1	67:CQ:90:LYS:HB2	2.48	0.43
68:CR:51:ALA:HA	68:CR:54:VAL:CG1	2.48	0.43
69:CS:91:LYS:HE3	69:CS:113:ARG:HH12	1.81	0.43
70:CT:30:VAL:HG11	70:CT:35:ASP:OD1	2.17	0.43
70:CT:36:THR:O	70:CT:37:VAL:HB	2.17	0.43
75:CY:12:PHE:HA	75:CY:22:GLN:O	2.18	0.43
1:A2:121:A:C2	1:A2:147:U:C4	3.06	0.43
1:A2:224:A:H61	1:A2:238:G:C2'	2.30	0.43
1:A2:744:G:H2'	1:A2:745:G:O4'	2.18	0.43
1:A2:1082:U:O2	1:A2:1082:U:H2'	2.18	0.43
1:A2:1197:G:O3'	1:A2:1198:G:C8	2.67	0.43
1:A2:1204:G:OP1	1:A2:1211:C:C5	2.71	0.43
1:A2:1220:G:OP1	9:AF:44:LYS:HB3	2.18	0.43
1:A2:1270:G:H3'	1:A2:1271:G:H8	1.83	0.43
1:A2:1383:G:H2'	1:A2:1384:G:H8	1.83	0.43
1:A2:1490:U:OP2	1:A2:1490:U:H5	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1514:C:H2'	1:A2:1515:U:H5'	2.01	0.43
1:A2:1587:G:C6	1:A2:1588:U:C4	3.07	0.43
1:A2:1803:G:H3'	1:A2:1804:A:C8	2.52	0.43
1:A2:1889:C:H5'	1:A2:1895:A:N6	2.33	0.43
1:A2:1926:G:OP1	1:A2:1926:G:H8	2.01	0.43
1:A2:2032:U:H1'	1:A2:2034:G:C5	2.53	0.43
1:A2:2306:G:N3	1:A2:2306:G:C2'	2.80	0.43
1:A2:2310:G:C5'	2:A3:20:A:O3'	2.65	0.43
1:A2:2521:G:O5'	1:A2:2521:G:H8	2.01	0.43
1:A2:2546:G:C2'	1:A2:2547:U:H5'	2.48	0.43
1:A2:2573:G:O4'	35:Ag:46:CYS:HA	2.18	0.43
1:A2:2778:U:H2'	1:A2:2779:C:C5	2.53	0.43
1:A2:3757:C:H1'	1:A2:3781:C:C2	2.53	0.43
1:A2:3873:G:O2'	1:A2:3874:A:H5"	2.17	0.43
1:A2:3918:A:C6	1:A2:3919:U:C5	3.06	0.43
1:A2:3945:C:C6	1:A2:3945:C:O5'	2.71	0.43
1:A2:4022:C:O3'	46:Au:30:ASN:CG	2.61	0.43
1:A2:4088:G:C4'	1:A2:4089:G:OP2	2.65	0.43
1:A2:4239:A:H4'	1:A2:4240:A:C5'	2.48	0.43
1:A2:4567:A:C8	1:A2:4568:G:O4'	2.71	0.43
1:A2:4851:G:N2	1:A2:4882:G:H8	2.15	0.43
1:A2:4970:G:N2	1:A2:4989:A:H2	2.13	0.43
3:A4:26:C:H4'	3:A4:27:G:OP1	2.17	0.43
3:A4:75:G:O4'	3:A4:75:G:P	2.76	0.43
4:AA:3:ARG:HG2	4:AA:4:VAL:N	2.33	0.43
6:AC:207:PRO:HB3	6:AC:249:PHE:HD1	1.82	0.43
10:AG:167:VAL:HG23	10:AG:170:LEU:HD12	2.00	0.43
10:AG:182:CYS:HB3	10:AG:222:ILE:HG23	1.99	0.43
11:AH:25:VAL:O	11:AH:35:ARG:HA	2.18	0.43
11:AH:86:LEU:HB3	11:AH:186:THR:HB	2.01	0.43
22:AT:19:PHE:CE1	22:AT:20:ARG:HG3	2.54	0.43
23:AU:81:ARG:NH1	23:AU:81:ARG:HB3	2.33	0.43
30:Ab:52:LYS:HG2	30:Ab:56:LYS:HZ3	1.83	0.43
36:Ah:71:LYS:HA	36:Ah:74:LYS:HG3	1.99	0.43
43:Ao:105:GLN:C	47:BA:55:U:C2	2.92	0.43
45:At:16:PHE:HB3	45:At:28:GLU:HG2	2.01	0.43
48:BB:1010:VAL:O	48:BB:1014:GLN:HG3	2.18	0.43
48:BB:1156:LEU:O	48:BB:1159:LEU:HG	2.17	0.43
48:BB:1230:LYS:HD3	48:BB:1233:MET:HE1	1.99	0.43
48:BB:1234:LYS:C	48:BB:1237:VAL:HG22	2.43	0.43
48:BB:1341:VAL:N	48:BB:1348:ASP:OD1	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1400:ILE:HG21	48:BB:1421:TRP:HZ3	1.79	0.43
48:BB:1408:LEU:C	48:BB:1410:ASP:H	2.26	0.43
49:BC:339:A:N7	50:C1:961:G:C1'	2.75	0.43
49:BC:345:A:C3'	49:BC:346:G:H5'	2.48	0.43
50:C1:9:U:O2	50:C1:12:U:H5	2.00	0.43
50:C1:69:C:C6	50:C1:69:C:H3'	2.53	0.43
50:C1:133:C:O5'	50:C1:133:C:H6	2.01	0.43
50:C1:336:A:N3	50:C1:337:C:H5	2.14	0.43
50:C1:1025:U:H2'	50:C1:1026:C:O5'	2.19	0.43
50:C1:1242:U:H4'	50:C1:1243:U:C5'	2.48	0.43
50:C1:1245:G:H2'	50:C1:1246:A:H8	1.83	0.43
50:C1:1363:C:O2	50:C1:1363:C:O4'	2.34	0.43
50:C1:1371:U:O2'	50:C1:1372:U:P	2.76	0.43
50:C1:1420:G:OP2	50:C1:1420:G:C8	2.68	0.43
50:C1:1766:C:H5'	50:C1:1767:C:OP2	2.18	0.43
50:C1:1815:A:H8	50:C1:1815:A:O5'	2.00	0.43
51:CA:203:PHE:HE2	51:CA:208:GLU:OE1	2.00	0.43
57:CG:36:VAL:O	57:CG:49:VAL:HA	2.18	0.43
57:CG:59:GLN:HG2	57:CG:59:GLN:O	2.18	0.43
60:CJ:38:ARG:O	81:Ce:34:ARG:HD2	2.19	0.43
60:CJ:84:ILE:CG2	60:CJ:108:ARG:HG3	2.48	0.43
60:CJ:117:LEU:HB2	60:CJ:119:LEU:HD13	1.99	0.43
64:CN:84:LEU:HD23	64:CN:89:TYR:CD2	2.53	0.43
65:CO:18:GLY:N	65:CO:19:PRO:CD	2.80	0.43
67:CQ:45:ARG:HH21	70:CT:10:ASN:HD21	1.65	0.43
68:CR:105:MET:CG	68:CR:106:LEU:N	2.79	0.43
73:CW:28:ARG:CB	73:CW:29:PRO:CD	2.96	0.43
83:Cg:68:ASP:HB2	83:Cg:109:LEU:O	2.18	0.43
83:Cg:105:THR:HB	83:Cg:126:ASP:HB3	2.01	0.43
83:Cg:236:ILE:HG23	83:Cg:251:ALA:O	2.17	0.43
1:A2:43:U:H2'	1:A2:44:A:O4'	2.17	0.43
1:A2:304:U:O5'	1:A2:304:U:H6	2.00	0.43
1:A2:408:G:N2	2:A3:16:G:C4	2.87	0.43
1:A2:411:A:H2'	1:A2:412:C:O4'	2.18	0.43
1:A2:670:C:O5'	45:At:58:LYS:HB3	2.18	0.43
1:A2:717:G:H2'	1:A2:718:G:H5'	2.01	0.43
1:A2:718:G:N2	1:A2:721:A:H61	2.16	0.43
1:A2:946:C:O2'	1:A2:947:G:H5'	2.18	0.43
1:A2:1087:C:OP1	7:AD:274:ALA:HB2	2.18	0.43
1:A2:1202:A:H2'	1:A2:1202:A:N3	2.33	0.43
1:A2:1277:U:H2'	1:A2:1278:C:H6	1.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1325:A:H5”	19:AQ:166:TYR:OH	2.17	0.43
1:A2:1378:A:H8	1:A2:1399:G:H1	1.66	0.43
1:A2:1387:C:C3’	1:A2:1388:G:C8	3.02	0.43
1:A2:1412:G:N2	1:A2:1432:A:H2	2.17	0.43
1:A2:1429:C:OP2	1:A2:1429:C:C5	2.71	0.43
1:A2:1467:G:H2’	1:A2:1468:G:O4’	2.18	0.43
1:A2:1873:G:HO2’	1:A2:1885:A:H1’	1.84	0.43
1:A2:2297:G:H5’	1:A2:2298:G:O5’	2.18	0.43
1:A2:2666:C:H2’	1:A2:2667:C:H6	1.81	0.43
1:A2:2681:C:C4	1:A2:2682:G:N7	2.86	0.43
1:A2:3702:A:H2’	1:A2:3703:U:C6	2.53	0.43
1:A2:3943:G:H2’	1:A2:3944:C:H6	1.83	0.43
1:A2:4005:C:C2’	1:A2:4006:C:H5’	2.48	0.43
1:A2:4130:A:O2’	1:A2:4131:C:P	2.77	0.43
1:A2:4142:G:C8	1:A2:4142:G:C3’	3.02	0.43
1:A2:4377:C:C5’	1:A2:4377:C:C6	3.01	0.43
1:A2:4432:G:C4	1:A2:4433:A:N7	2.86	0.43
1:A2:4483:A:N9	1:A2:4519:A:N6	2.63	0.43
1:A2:4544:A:H2	1:A2:4680:C:P	2.42	0.43
1:A2:4621:G:H2’	1:A2:4622:C:H5”	2.00	0.43
1:A2:4924:C:O5’	1:A2:4924:C:H6	1.99	0.43
1:A2:4958:U:H2’	1:A2:4959:C:O4’	2.18	0.43
1:A2:4980:C:C2’	1:A2:4983:G:H5’	2.45	0.43
2:A3:3:A:H3’	2:A3:3:A:H8	1.83	0.43
2:A3:152:U:H2’	2:A3:153:C:H6	1.82	0.43
3:A4:26:C:O5’	3:A4:26:C:C6	2.68	0.43
3:A4:65:G:H8	3:A4:65:G:OP2	2.02	0.43
4:AA:116:LEU:HD23	4:AA:116:LEU:H	1.83	0.43
5:AB:154:LYS:HG3	5:AB:194:LEU:HD22	1.99	0.43
6:AC:270:ALA:CB	6:AC:276:ASN:HA	2.39	0.43
6:AC:275:SER:O	6:AC:276:ASN:CB	2.66	0.43
7:AD:257:PRO:O	7:AD:258:LYS:CB	2.66	0.43
8:AE:217:PHE:CD1	8:AE:217:PHE:N	2.85	0.43
10:AG:138:ALA:HB3	10:AG:196:ARG:HH22	1.82	0.43
11:AH:162:GLN:HG3	11:AH:163:GLN:N	2.34	0.43
12:AI:62:SER:HB3	12:AI:93:PRO:HG3	2.01	0.43
17:AO:71:TYR:HB2	17:AO:73:PHE:CE2	2.52	0.43
20:AR:115:ILE:HG22	20:AR:116:ASP:O	2.18	0.43
20:AR:119:MET:SD	20:AR:145:LEU:CG	3.00	0.43
24:AV:109:LYS:HB2	24:AV:111:GLU:OE1	2.18	0.43
29:Aa:64:LYS:HE3	29:Aa:67:GLN:NE2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:Ah:33:VAL:C	36:Ah:37:THR:HG1	2.26	0.43
45:At:73:PRO:HG3	45:At:78:VAL:CG2	2.29	0.43
45:At:103:ARG:HB2	45:At:103:ARG:NH1	2.34	0.43
46:Au:88:GLY:HA2	46:Au:117:TYR:CD1	2.53	0.43
47:BA:8:U:H6	47:BA:8:U:C5'	2.31	0.43
48:BB:825:ARG:CZ	48:BB:1176:GLU:OE2	2.65	0.43
48:BB:1038:SER:HB3	48:BB:1041:THR:HB	2.00	0.43
48:BB:1086:THR:HG21	48:BB:1146:LYS:CD	2.48	0.43
48:BB:1207:ALA:O	48:BB:1211:PHE:CD1	2.72	0.43
48:BB:1298:PHE:CZ	48:BB:1407:ALA:C	2.95	0.43
49:BC:61:U:H2'	49:BC:62:C:C6	2.54	0.43
50:C1:116:U:H3	50:C1:347:G:H1	1.67	0.43
50:C1:312:G:H22	57:CG:195:LYS:CG	2.31	0.43
50:C1:381:C:H6	50:C1:381:C:C5'	2.30	0.43
50:C1:401:A:N7	50:C1:402:C:C5	2.85	0.43
50:C1:546:G:H4'	50:C1:547:G:OP2	2.18	0.43
50:C1:583:A:O3'	50:C1:584:A:H8	2.01	0.43
50:C1:746:C:OP1	58:CH:105:THR:C	2.61	0.43
50:C1:876:C:O2'	50:C1:877:C:H5'	2.19	0.43
50:C1:985:G:H4'	50:C1:986:G:H5'	2.00	0.43
50:C1:1083:A:H2'	50:C1:1858:G:H21	1.83	0.43
50:C1:1130:G:C8	50:C1:1130:G:O5'	2.71	0.43
50:C1:1177:U:H2'	50:C1:1178:U:C6	2.53	0.43
50:C1:1216:C:H1'	67:CQ:143:LYS:NZ	2.33	0.43
50:C1:1398:G:C2	50:C1:1398:G:OP1	2.71	0.43
50:C1:1442:U:C5'	50:C1:1443:C:H5"	2.47	0.43
50:C1:1533:A:C5	50:C1:1604:G:O4'	2.71	0.43
50:C1:1829:G:H1'	50:C1:1850:A:H2	1.84	0.43
52:CB:66:VAL:HA	52:CB:86:LEU:O	2.17	0.43
52:CB:86:LEU:HB3	52:CB:98:THR:OG1	2.18	0.43
52:CB:128:LYS:HB2	52:CB:134:LEU:HD23	2.00	0.43
52:CB:173:THR:O	52:CB:177:GLN:NE2	2.51	0.43
53:CC:98:LEU:HD21	53:CC:132:ASP:CG	2.44	0.43
54:CD:26:THR:HB	54:CD:34:TYR:OH	2.18	0.43
56:CF:165:ASN:ND2	56:CF:167:LYS:HB2	2.33	0.43
57:CG:160:LYS:HE2	57:CG:161:PRO:HD2	2.01	0.43
57:CG:197:GLN:O	57:CG:201:LYS:HG3	2.18	0.43
63:CM:65:VAL:CG2	63:CM:108:CYS:SG	3.07	0.43
65:CO:116:LEU:HD22	77:Ca:53:ILE:HD13	2.00	0.43
83:Cg:32:LEU:HD11	83:Cg:40:ILE:CG2	2.47	0.43
83:Cg:177:TRP:CD2	83:Cg:184:LEU:HD23	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1:C:N3	2:A3:157:U:N3	2.67	0.43
1:A2:126:C:H6	1:A2:126:C:O5'	2.01	0.43
1:A2:181:U:C5'	1:A2:181:U:C6	2.96	0.43
1:A2:202:C:H42	1:A2:206:U:H5	1.67	0.43
1:A2:272:U:O2	1:A2:273:C:C5	2.72	0.43
1:A2:366:G:C5'	1:A2:366:G:C8	3.02	0.43
1:A2:473:G:N2	45:At:79:ARG:H	2.17	0.43
1:A2:692:C:H6	1:A2:692:C:O5'	2.01	0.43
1:A2:710:G:H2'	1:A2:711:A:C5'	2.47	0.43
1:A2:743:C:H2'	1:A2:744:G:H8	1.82	0.43
1:A2:943:G:O6	6:AC:311:ARG:HA	2.18	0.43
1:A2:1147:C:N4	1:A2:1176:G:O2'	2.51	0.43
1:A2:1435:G:O3'	19:AQ:72:LEU:HB2	2.19	0.43
1:A2:1479:A:N1	29:Aa:114:LYS:HG3	2.33	0.43
1:A2:1557:U:H4'	44:Ap:17:ARG:HH12	1.82	0.43
1:A2:1568:C:C2'	1:A2:1569:C:H5'	2.48	0.43
1:A2:1667:G:H2'	1:A2:1668:G:O4'	2.17	0.43
1:A2:1708:A:H2'	1:A2:1709:U:H5'	2.00	0.43
1:A2:1740:G:H1	1:A2:1750:U:H3	1.67	0.43
1:A2:2057:G:H1'	33:Ae:58:ILE:CG1	2.49	0.43
1:A2:2296:G:H22	1:A2:2297:G:N2	2.16	0.43
1:A2:2449:A:O2'	26:AX:48:ARG:CA	2.67	0.43
1:A2:2516:C:H5"	35:Ag:66:ARG:HD3	2.00	0.43
1:A2:2532:G:C5'	28:AZ:109:LYS:HB2	2.43	0.43
1:A2:2561:G:H5'	1:A2:2659:G:H4'	1.97	0.43
1:A2:2875:G:H5"	20:AR:104:ARG:HH21	1.83	0.43
1:A2:3729:A:N3	1:A2:3729:A:C2'	2.82	0.43
1:A2:4195:G:H2'	1:A2:4196:G:C5'	2.48	0.43
1:A2:4378:G:H2'	1:A2:4435:G:N2	2.33	0.43
1:A2:4411:G:O5'	1:A2:4411:G:C8	2.64	0.43
1:A2:4432:G:H2'	1:A2:4433:A:H5'	2.01	0.43
1:A2:4587:U:H1'	5:AB:54:THR:C	2.44	0.43
1:A2:4622:C:H5"	1:A2:4622:C:H6	1.82	0.43
1:A2:4673:G:N7	1:A2:4674:C:C4	2.86	0.43
1:A2:4700:C:C6	1:A2:4701:G:O4'	2.71	0.43
2:A3:129:C:C2	2:A3:130:C:C5	3.06	0.43
3:A4:39:C:OP1	3:A4:39:C:C6	2.70	0.43
4:AA:227:ARG:HE	4:AA:239:ALA:HB3	1.84	0.43
6:AC:139:SER:CB	45:At:10:VAL:HB	2.49	0.43
6:AC:161:TYR:HB3	6:AC:166:GLU:OE2	2.18	0.43
8:AE:231:GLU:HG2	8:AE:235:THR:HG21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AH:110:SER:HB2	11:AH:128:MET:HB2	2.00	0.43
11:AH:173:ARG:HD2	41:Am:127:VAL:HG22	1.99	0.43
12:AI:19:LYS:HE2	12:AI:26:VAL:HG21	1.99	0.43
12:AI:102:MET:HE2	47:BA:75:C:N4	2.33	0.43
16:AN:184:ILE:HG23	16:AN:185:GLY:H	1.83	0.43
18:AP:22:LEU:HD13	18:AP:90:PHE:CE1	2.53	0.43
20:AR:8:LYS:HE3	20:AR:19:LYS:HB3	2.00	0.43
21:AS:107:THR:O	21:AS:111:ARG:HG2	2.18	0.43
22:AT:84:ILE:HD11	30:Ab:24:PRO:CA	2.48	0.43
24:AV:29:ALA:HB2	24:AV:83:ARG:HH22	1.83	0.43
27:AY:121:ARG:O	27:AY:126:ARG:CA	2.67	0.43
28:AZ:58:GLY:O	28:AZ:61:LYS:N	2.50	0.43
31:Ac:45:LEU:HG	31:Ac:104:ILE:HG21	2.00	0.43
34:Af:33:VAL:HG13	34:Af:38:GLU:CB	2.44	0.43
34:Af:106:TYR:CB	34:Af:107:PRO:HD2	2.48	0.43
35:Ag:45:ALA:CB	35:Ag:81:SER:C	2.92	0.43
43:Ao:106:PHE:CD2	47:BA:57:G:C4	3.07	0.43
44:Ap:18:TYR:O	44:Ap:22:LEU:HD12	2.18	0.43
45:At:122:LYS:HA	45:At:125:MET:CE	2.48	0.43
46:Au:2:ASP:C	46:Au:4:GLU:N	2.77	0.43
46:Au:27:LEU:HD21	46:Au:198:VAL:CG2	2.48	0.43
47:BA:68:C:O3'	48:BB:1388:ARG:NH2	2.51	0.43
48:BB:900:LYS:HA	48:BB:1050:TYR:CE1	2.52	0.43
48:BB:1181:LEU:HA	48:BB:1185:LEU:HD12	2.01	0.43
50:C1:123:G:H4'	50:C1:123:G:OP1	2.19	0.43
50:C1:313:A:C6	57:CG:187:HIS:NE2	2.87	0.43
50:C1:319:C:C4'	50:C1:320:G:OP2	2.64	0.43
50:C1:360:A:H4'	50:C1:361:U:C5'	2.49	0.43
50:C1:409:C:H5	50:C1:426:A:H5'	1.84	0.43
50:C1:527:C:C1'	60:CJ:125:HIS:ND1	2.82	0.43
50:C1:618:C:C1'	50:C1:632:C:C5'	2.91	0.43
50:C1:941:C:H2'	50:C1:942:G:C8	2.53	0.43
50:C1:952:G:C2	50:C1:975:G:N1	2.86	0.43
50:C1:1418:C:C5'	70:CT:129:ARG:HA	2.48	0.43
50:C1:1476:A:C4'	50:C1:1477:U:C5'	2.83	0.43
50:C1:1544:C:H4'	67:CQ:80:GLN:NE2	2.32	0.43
50:C1:1591:C:O2	50:C1:1591:C:H2'	2.18	0.43
50:C1:1657:G:H1	50:C1:1667:U:H3	1.66	0.43
50:C1:1781:A:O2'	50:C1:1782:G:P	2.76	0.43
50:C1:1830:U:C6	50:C1:1830:U:O5'	2.72	0.43
50:C1:1831:A:C2'	50:C1:1832:A:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1849:G:H2'	50:C1:1850:A:H5'	1.99	0.43
54:CD:205:PRO:O	68:CR:42:PRO:HG2	2.18	0.43
55:CE:177:THR:HG23	55:CE:196:THR:O	2.18	0.43
56:CF:59:LYS:HB3	56:CF:62:ARG:HG2	2.00	0.43
56:CF:100:ILE:HD11	56:CF:177:LEU:HD22	2.00	0.43
57:CG:50:VAL:HG13	57:CG:112:VAL:O	2.19	0.43
59:CI:63:GLY:O	59:CI:75:LYS:HD2	2.19	0.43
62:CL:82:MET:HG2	62:CL:85:THR:CG2	2.48	0.43
67:CQ:38:PRO:HG2	70:CT:8:ASP:HA	2.01	0.43
70:CT:123:LEU:HD23	70:CT:123:LEU:H	1.83	0.43
72:CV:79:VAL:HG13	72:CV:80:SER:N	2.33	0.43
80:Cd:6:LEU:O	80:Cd:6:LEU:HG	2.18	0.43
1:A2:42:A:OP1	1:A2:42:A:H4'	2.19	0.43
1:A2:98:A:O5'	1:A2:98:A:H8	2.02	0.43
1:A2:190:G:O5'	1:A2:190:G:C8	2.72	0.43
1:A2:209:A:H8	1:A2:209:A:O5'	2.02	0.43
1:A2:282:U:O2	1:A2:288:U:C2	2.72	0.43
1:A2:285:G:H8	1:A2:285:G:P	2.42	0.43
1:A2:343:G:H1	6:AC:196:MET:HE2	1.84	0.43
1:A2:384:U:H2'	1:A2:385:G:O3'	2.19	0.43
1:A2:443:A:H5"	1:A2:444:G:OP1	2.18	0.43
1:A2:928:A:H5'	9:AF:245:ARG:HH21	1.84	0.43
1:A2:1218:A:C4'	1:A2:1219:C:OP1	2.67	0.43
1:A2:1220:G:O5'	9:AF:45:ALA:HA	2.19	0.43
1:A2:1278:C:OP2	1:A2:1278:C:C5	2.72	0.43
1:A2:1282:U:H2'	1:A2:1284:C:C6	2.54	0.43
1:A2:1314:A:H8	1:A2:1314:A:P	2.41	0.43
1:A2:1322:A:H1'	14:AL:14:PHE:CZ	2.53	0.43
1:A2:1360:G:C1'	1:A2:1361:U:P	3.06	0.43
1:A2:1481:G:C4'	1:A2:1482:A:OP1	2.66	0.43
1:A2:1592:A:C2	4:AA:196:TRP:CZ3	3.07	0.43
1:A2:1607:C:H41	4:AA:3:ARG:NH1	2.17	0.43
1:A2:1867:U:H3	1:A2:1917:A:N6	2.16	0.43
1:A2:1899:C:H3'	1:A2:1900:G:H5"	1.99	0.43
1:A2:2019:A:H2'	1:A2:4424:A:C2	2.54	0.43
1:A2:2485:U:H2'	1:A2:2486:C:C5	2.53	0.43
1:A2:2544:G:H2'	1:A2:2545:C:C6	2.54	0.43
1:A2:2676:C:O2	1:A2:2676:C:H2'	2.19	0.43
1:A2:2702:A:P	1:A2:2703:G:H8	2.42	0.43
1:A2:2717:U:O2'	1:A2:2719:G:N2	2.52	0.43
1:A2:2754:G:H8	1:A2:2754:G:O5'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3724:G:N2	1:A2:3725:A:C4	2.87	0.43
1:A2:3733:U:C3'	1:A2:3734:G:C8	3.00	0.43
1:A2:3741:U:H2'	1:A2:3742:U:C5	2.49	0.43
1:A2:3753:A:H4'	1:A2:3754:A:OP1	2.19	0.43
1:A2:3792:G:H21	1:A2:3793:A:N6	2.17	0.43
1:A2:3939:G:H5'	46:Au:161:THR:HA	2.00	0.43
1:A2:4209:G:H2'	1:A2:4210:G:C8	2.52	0.43
1:A2:4377:C:H5"	1:A2:4377:C:H6	1.83	0.43
1:A2:4658:C:O2'	1:A2:4659:U:C6	2.69	0.43
1:A2:4832:G:H2'	1:A2:4833:C:C6	2.53	0.43
1:A2:5021:U:H2'	1:A2:5022:U:C6	2.54	0.43
2:A3:14:U:H5"	2:A3:15:G:OP2	2.18	0.43
3:A4:33:U:O2	3:A4:33:U:C2'	2.67	0.43
3:A4:66:G:N1	3:A4:67:C:C2	2.86	0.43
4:AA:76:PHE:HZ	4:AA:165:VAL:HG21	1.84	0.43
6:AC:303:ARG:O	19:AQ:38:ARG:HD2	2.19	0.43
7:AD:41:LYS:NZ	22:AT:34:TYR:HB2	2.33	0.43
9:AF:92:VAL:HG13	9:AF:140:ILE:HD12	2.00	0.43
17:AO:48:TYR:CG	17:AO:51:LYS:HE2	2.52	0.43
28:AZ:66:SER:O	28:AZ:68:ILE:HG13	2.19	0.43
30:Ab:30:GLU:CG	30:Ab:31:SER:H	2.26	0.43
35:Ag:84:ALA:O	35:Ag:87:VAL:HB	2.18	0.43
35:Ag:99:GLU:O	35:Ag:103:VAL:HG23	2.19	0.43
36:Ah:9:LEU:HD22	36:Ah:57:VAL:HG22	1.99	0.43
38:Aj:16:HIS:HA	38:Aj:27:TYR:O	2.19	0.43
43:Ao:105:GLN:O	47:BA:58:A:OP2	2.36	0.43
47:BA:22:G:H2'	47:BA:23:A:C8	2.54	0.43
48:BB:976:TYR:O	48:BB:977:ASP:HB3	2.18	0.43
49:BC:351:A:OP1	49:BC:351:A:H4'	2.19	0.43
50:C1:33:G:H2'	50:C1:34:U:C6	2.53	0.43
50:C1:67:C:C5	57:CG:164:LYS:HB2	2.53	0.43
50:C1:67:C:C4	57:CG:164:LYS:HB2	2.54	0.43
50:C1:92:A:C8	50:C1:446:G:H2'	2.54	0.43
50:C1:152:U:C6	50:C1:152:U:OP2	2.72	0.43
50:C1:338:G:H8	50:C1:338:G:C5'	2.30	0.43
50:C1:439:A:C2'	50:C1:440:G:H5'	2.48	0.43
50:C1:798:G:C5'	50:C1:798:G:N3	2.81	0.43
50:C1:813:A:H2'	50:C1:814:U:C5'	2.49	0.43
50:C1:853:C:O2	50:C1:853:C:O4'	2.36	0.43
50:C1:863:U:O5'	50:C1:863:U:C6	2.69	0.43
50:C1:900:C:C4	50:C1:901:G:O6	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:977:C:C6	50:C1:977:C:OP2	2.71	0.43
50:C1:1031:A:H1'	64:CN:116:ILE:CD1	2.48	0.43
50:C1:1164:G:C3'	50:C1:1165:G:N2	2.78	0.43
50:C1:1292:C:H1'	82:Cf:147:THR:OG1	2.18	0.43
50:C1:1587:G:H1'	70:CT:78:ILE:HB	2.01	0.43
50:C1:1620:A:C2	50:C1:1624:U:H1'	2.54	0.43
50:C1:1686:G:H3'	50:C1:1687:C:C6	2.53	0.43
51:CA:50:ASN:HD21	51:CA:53:ARG:CG	2.32	0.43
52:CB:47:THR:HB	52:CB:65:ARG:HH11	1.81	0.43
52:CB:49:VAL:HG22	52:CB:65:ARG:NH2	2.33	0.43
52:CB:66:VAL:HG22	52:CB:85:LYS:HG3	2.00	0.43
52:CB:109:LYS:O	52:CB:113:MET:HG2	2.18	0.43
56:CF:32:ASP:HB2	56:CF:117:ILE:HG23	1.97	0.43
58:CH:115:LYS:O	58:CH:117:PRO:HD3	2.18	0.43
62:CL:55:TYR:CD2	62:CL:115:PRO:HG2	2.53	0.43
66:CP:77:LYS:HD3	66:CP:102:PHE:CD1	2.54	0.43
68:CR:41:ILE:HG21	68:CR:47:ARG:HB2	2.00	0.43
69:CS:4:VAL:HG21	76:CZ:49:LEU:CD1	2.49	0.43
71:CU:51:LYS:HE3	71:CU:90:ASP:CB	2.48	0.43
73:CW:74:VAL:HG13	73:CW:126:LEU:O	2.18	0.43
77:Ca:71:LEU:HD22	77:Ca:71:LEU:HA	1.82	0.43
83:Cg:170:TRP:HB3	83:Cg:194:TYR:CD2	2.53	0.43
1:A2:21:G:O4'	2:A3:103:A:H1'	2.18	0.43
1:A2:178:C:OP2	1:A2:179:G:C5'	2.66	0.43
1:A2:194:A:O2'	27:AY:126:ARG:HD2	2.19	0.43
1:A2:241:G:C8	1:A2:241:G:P	3.12	0.43
1:A2:910:G:C2'	1:A2:911:G:H5'	2.48	0.43
1:A2:924:C:C2'	1:A2:925:C:H5"	2.48	0.43
1:A2:946:C:H2'	1:A2:947:G:H8	1.84	0.43
1:A2:947:G:O2'	1:A2:948:A:H5'	2.18	0.43
1:A2:1193:G:O4'	1:A2:1195:C:N4	2.52	0.43
1:A2:1489:G:H8	1:A2:1489:G:P	2.42	0.43
1:A2:1599:U:H5'	1:A2:1600:A:OP2	2.18	0.43
1:A2:1609:A:H5"	4:AA:199:VAL:CG2	2.48	0.43
1:A2:1646:G:H8	1:A2:1646:G:O5'	2.01	0.43
1:A2:1794:G:O6	30:Ab:41:ARG:HB3	2.18	0.43
1:A2:2247:C:H2'	1:A2:2248:C:C6	2.53	0.43
1:A2:2296:G:OP2	1:A2:2296:G:H8	2.02	0.43
1:A2:2312:C:H42	6:AC:188:ARG:NH2	2.17	0.43
1:A2:2349:U:H4'	32:Ad:46:LEU:HD12	2.00	0.43
1:A2:2432:G:H1'	1:A2:2448:G:OP1	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2491:G:C2’	1:A2:2492:G:H5’	2.49	0.43
1:A2:2630:C:H3’	1:A2:2631:C:C5	2.54	0.43
1:A2:3566:G:N3	1:A2:3566:G:C3’	2.76	0.43
1:A2:3667:G:O5’	1:A2:3667:G:C8	2.70	0.43
1:A2:3684:U:H5”	1:A2:3685:C:C5	2.54	0.43
1:A2:3783:U:H2’	1:A2:3784:G:C5’	2.49	0.43
1:A2:3921:A:H3’	1:A2:3922:G:C8	2.53	0.43
1:A2:4091:G:H4’	1:A2:4092:C:OP2	2.15	0.43
1:A2:4129:G:H4’	1:A2:4131:C:C2	2.53	0.43
1:A2:4598:U:H3	1:A2:4621:G:H1	1.65	0.43
1:A2:4697:C:C2	1:A2:4698:C:C5	3.06	0.43
1:A2:4709:G:C6	1:A2:4710:G:N7	2.87	0.43
1:A2:4718:C:C6	17:AO:167:HIS:CD2	3.07	0.43
1:A2:4823:G:H5’	1:A2:4825:G:N1	2.34	0.43
1:A2:4919:C:H6	1:A2:4919:C:O5’	2.01	0.43
1:A2:4930:G:H4’	1:A2:4931:U:OP1	2.18	0.43
2:A3:29:G:O2’	2:A3:30:U:H5’	2.18	0.43
2:A3:42:G:O6	2:A3:102:G:C2	2.71	0.43
3:A4:75:G:C4’	3:A4:76:U:OP2	2.66	0.43
3:A4:89:G:C4	3:A4:90:A:N7	2.87	0.43
5:AB:301:ASN:CG	5:AB:311:ASP:HA	2.43	0.43
7:AD:132:VAL:HG21	7:AD:170:GLY:CA	2.41	0.43
19:AQ:48:LEU:HD22	19:AQ:48:LEU:O	2.19	0.43
22:AT:129:LYS:HB2	22:AT:131:GLN:HE22	1.84	0.43
29:Aa:36:GLY:HA3	29:Aa:40:HIS:CE1	2.54	0.43
29:Aa:70:CYS:HA	29:Aa:109:TYR:HB2	1.98	0.43
34:Af:104:MET:HG3	34:Af:106:TYR:HD1	1.77	0.43
46:Au:24:THR:HG23	46:Au:25:VAL:N	2.34	0.43
47:BA:42:C:H5’	47:BA:42:C:H6	1.84	0.43
48:BB:977:ASP:HB3	48:BB:997:THR:HG22	2.00	0.43
48:BB:1037:THR:HB	48:BB:1045:MET:HE3	2.00	0.43
49:BC:265:U:O2	50:C1:1116:C:P	2.77	0.43
49:BC:332:A:C8	49:BC:332:A:C4’	3.02	0.43
50:C1:77:A:H62	57:CG:155:GLN:HB3	1.83	0.43
50:C1:95:G:O2’	50:C1:96:C:H5’	2.17	0.43
50:C1:100:U:H2’	50:C1:101:U:H5’	1.99	0.43
50:C1:165:G:O2’	50:C1:166:A:H5’	2.18	0.43
50:C1:465:A:OP2	50:C1:465:A:H8	2.02	0.43
50:C1:526:A:O2’	60:CJ:128:VAL:HG22	2.19	0.43
50:C1:571:U:O5’	50:C1:572:U:H5”	2.18	0.43
50:C1:901:G:C4	50:C1:902:G:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:936:G:H2'	50:C1:937:C:C6	2.53	0.43
50:C1:1102:G:N2	50:C1:1130:G:N2	2.66	0.43
50:C1:1227:G:N7	50:C1:1638:G:C8	2.87	0.43
50:C1:1257:G:C8	50:C1:1257:G:C5'	2.99	0.43
50:C1:1425:G:C6	50:C1:1426:U:O4	2.71	0.43
50:C1:1494:U:C1'	50:C1:1495:G:P	3.06	0.43
50:C1:1571:G:H2'	50:C1:1572:C:O4'	2.18	0.43
50:C1:1639:G:N3	50:C1:1639:G:C2'	2.79	0.43
50:C1:1670:C:O5'	50:C1:1670:C:H6	2.01	0.43
51:CA:147:LEU:HB3	51:CA:163:CYS:SG	2.59	0.43
52:CB:54:GLY:O	52:CB:55:THR:HB	2.19	0.43
56:CF:179:ASN:HB2	56:CF:187:SER:HB3	2.00	0.43
62:CL:61:PRO:HD3	62:CL:141:ASN:HD21	1.83	0.43
63:CM:61:TYR:CE1	63:CM:107:SER:CB	2.98	0.43
64:CN:16:LEU:H	73:CW:57:ARG:HH21	1.67	0.43
65:CO:53:ILE:HG22	65:CO:54:CYS:N	2.34	0.43
79:Cc:42:ILE:HG23	79:Cc:64:GLU:HB2	2.00	0.43
82:Cf:104:LYS:O	82:Cf:104:LYS:HD2	2.19	0.43
83:Cg:105:THR:HB	83:Cg:126:ASP:HB2	2.01	0.43
1:A2:8:U:H5'	16:AN:40:PRO:CG	2.49	0.43
1:A2:22:G:H3'	1:A2:23:C:C6	2.54	0.43
1:A2:62:A:H2'	1:A2:63:G:H8	1.78	0.43
1:A2:113:A:C2	1:A2:269:G:C4	3.07	0.43
1:A2:309:A:C8	1:A2:309:A:C3'	3.01	0.43
1:A2:378:G:N3	1:A2:403:G:C2	2.87	0.43
1:A2:416:U:O2'	1:A2:417:A:H5'	2.19	0.43
1:A2:676:G:O3'	1:A2:677:C:C5	2.71	0.43
1:A2:724:C:C2	1:A2:725:C:O4'	2.72	0.43
1:A2:959:C:C4'	1:A2:1215:G:H21	2.32	0.43
1:A2:1167:G:H4'	7:AD:272:SER:CB	2.49	0.43
1:A2:1312:C:H2'	1:A2:1313:A:H8	1.79	0.43
1:A2:1457:C:H2'	1:A2:1458:G:O4'	2.18	0.43
1:A2:1511:G:H5"	38:Aj:31:LYS:HZ1	1.81	0.43
1:A2:1570:U:C6	1:A2:1570:U:C3'	3.02	0.43
1:A2:1705:U:H2'	1:A2:1706:U:H6	1.82	0.43
1:A2:1754:A:C4	1:A2:1755:A:H8	2.37	0.43
1:A2:1860:U:C4'	1:A2:1861:G:O5'	2.66	0.43
1:A2:2027:G:H5'	1:A2:2027:G:C8	2.49	0.43
1:A2:2517:C:C6	1:A2:2517:C:O5'	2.71	0.43
1:A2:2625:G:N2	1:A2:2662:C:C2	2.79	0.43
1:A2:2706:C:C4	1:A2:2707:U:O4	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2749:C:C6	1:A2:2749:C:O5'	2.71	0.43
1:A2:2870:U:H2'	1:A2:2871:A:C8	2.53	0.43
1:A2:3618:A:C2	1:A2:3619:C:C6	3.07	0.43
1:A2:3689:G:C4	1:A2:3690:U:C5	3.07	0.43
1:A2:3758:C:C6	1:A2:3758:C:C3'	3.01	0.43
1:A2:3830:A:H2'	1:A2:3831:A:H8	1.84	0.43
1:A2:3913:G:H1	1:A2:4037:U:H3	1.67	0.43
1:A2:3942:G:C5'	1:A2:3942:G:H8	2.32	0.43
1:A2:3943:G:C8	1:A2:3943:G:C5'	2.94	0.43
1:A2:4073:G:C2	1:A2:4074:G:H4'	2.54	0.43
1:A2:4154:U:C5	1:A2:4157:G:OP1	2.71	0.43
1:A2:4167:C:C6	22:AT:4:THR:HG23	2.54	0.43
1:A2:4264:A:H4'	22:AT:80:VAL:HG12	2.00	0.43
1:A2:4373:C:H5'	12:AI:157:PHE:CE2	2.53	0.43
1:A2:4673:G:C8	1:A2:4674:C:C4	3.07	0.43
1:A2:4689:C:C5	1:A2:4690:G:O6	2.72	0.43
1:A2:4825:G:N3	1:A2:4825:G:H2'	2.34	0.43
1:A2:4895:C:O2	8:AE:219:LYS:HB2	2.19	0.43
4:AA:34:PHE:CG	4:AA:35:ALA:N	2.86	0.43
4:AA:102:LEU:HB3	4:AA:106:THR:OG1	2.19	0.43
4:AA:178:PRO:HG2	44:Ap:26:VAL:CG2	2.49	0.43
6:AC:303:ARG:NH1	19:AQ:40:ASN:HD22	2.16	0.43
6:AC:304:ALA:HA	6:AC:305:PRO:HD3	1.82	0.43
6:AC:323:ARG:HG3	6:AC:324:ILE:N	2.34	0.43
7:AD:264:LYS:O	7:AD:265:ARG:HB3	2.18	0.43
9:AF:86:GLU:HG3	22:AT:136:ARG:HG2	2.01	0.43
12:AI:12:CYS:HB2	12:AI:57:TYR:CE2	2.53	0.43
12:AI:145:LYS:HE3	12:AI:167:ILE:HG21	1.99	0.43
14:AL:162:LYS:HE2	29:Aa:102:ASP:CG	2.44	0.43
16:AN:144:ARG:O	16:AN:145:ASN:CB	2.67	0.43
22:AT:80:VAL:O	22:AT:81:LYS:HB3	2.18	0.43
24:AV:65:VAL:HG21	24:AV:72:LEU:HG	2.01	0.43
26:AX:100:VAL:O	26:AX:134:LYS:HB3	2.18	0.43
27:AY:69:LYS:NZ	27:AY:69:LYS:HB2	2.34	0.43
28:AZ:9:LYS:NZ	31:Ac:66:LEU:HD22	2.34	0.43
28:AZ:36:ARG:HH22	28:AZ:98:LYS:HD3	1.82	0.43
31:Ac:51:ASN:HB2	44:Ap:43:GLY:N	2.34	0.43
39:Ak:60:LEU:HA	39:Ak:61:PRO:HD3	1.90	0.43
42:An:11:ARG:NH1	50:C1:1183:A:C4'	2.78	0.43
47:BA:68:C:C3'	48:BB:1388:ARG:CZ	2.93	0.43
47:BA:76:A:C2'	48:BB:1325:GLY:HA2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:817:GLU:CA	48:BB:1170:ILE:HD13	2.44	0.43
48:BB:986:VAL:HB	48:BB:1044:GLY:HA2	2.01	0.43
48:BB:1087:ILE:CG1	48:BB:1152:LEU:CD1	2.96	0.43
48:BB:1153:GLU:OE2	50:C1:479:C:OP1	2.37	0.43
48:BB:1178:ILE:HG13	48:BB:1179:HIS:N	2.33	0.43
50:C1:99:A:H2'	50:C1:100:U:C6	2.53	0.43
50:C1:180:G:H2'	50:C1:180:G:N3	2.34	0.43
50:C1:485:A:H5"	50:C1:486:A:OP1	2.19	0.43
50:C1:616:A:N3	81:Ce:12:VAL:HG21	2.34	0.43
50:C1:795:A:C2	50:C1:796:G:H1'	2.53	0.43
50:C1:1050:A:H2'	50:C1:1051:G:C5'	2.49	0.43
50:C1:1215:C:C5'	50:C1:1217:A:H62	2.32	0.43
50:C1:1256:G:C5	50:C1:1257:G:H1'	2.53	0.43
50:C1:1270:G:O2'	50:C1:1301:A:N7	2.52	0.43
50:C1:1535:U:H1'	56:CF:88:MET:SD	2.59	0.43
50:C1:1647:A:C6	56:CF:57:ALA:CB	3.02	0.43
50:C1:1829:G:H8	50:C1:1829:G:O5'	2.01	0.43
52:CB:137:LEU:HB3	52:CB:215:VAL:HG23	2.01	0.43
52:CB:158:HIS:HA	52:CB:161:VAL:HB	2.01	0.43
54:CD:65:ARG:O	54:CD:69:LEU:HG	2.19	0.43
55:CE:97:GLU:HG3	55:CE:113:ARG:CZ	2.49	0.43
56:CF:31:ASN:OD1	56:CF:117:ILE:HG21	2.18	0.43
57:CG:132:ARG:C	57:CG:133:LEU:HD23	2.44	0.43
58:CH:177:TYR:HE2	58:CH:183:LYS:HB2	1.84	0.43
59:CI:114:GLU:OE2	59:CI:129:LEU:HD13	2.19	0.43
59:CI:190:LEU:HD22	59:CI:194:GLU:HG3	2.01	0.43
61:CK:11:ILE:HG12	61:CK:38:LYS:HE2	2.00	0.43
62:CL:86:ILE:HG13	62:CL:111:VAL:HG13	2.00	0.43
67:CQ:17:LYS:O	67:CQ:17:LYS:HG3	2.18	0.43
67:CQ:89:SER:OG	67:CQ:119:LEU:HD13	2.18	0.43
71:CU:51:LYS:HE3	71:CU:90:ASP:HB3	2.01	0.43
72:CV:78:ILE:HB	72:CV:81:LYS:NZ	2.34	0.43
74:CX:60:LYS:O	74:CX:61:GLN:HB2	2.19	0.43
75:CY:78:SER:HB3	75:CY:81:TYR:CD2	2.54	0.43
78:Cb:34:ASP:HB3	78:Cb:43:ILE:CG2	2.48	0.43
83:Cg:240:CYS:HB3	83:Cg:291:TRP:NE1	2.34	0.43
1:A2:310:A:H5"	37:Ai:80:HIS:CD2	2.54	0.43
1:A2:347:G:H4'	6:AC:56:GLU:OE2	2.18	0.43
1:A2:398:A:O2'	1:A2:400:G:H3'	2.19	0.43
1:A2:459:U:O2	1:A2:459:U:C3'	2.67	0.43
1:A2:471:C:H4'	45:At:79:ARG:CD	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:736:G:C4'	15:AM:66:HIS:HB3	2.47	0.43
1:A2:737:G:N2	1:A2:738:U:C2	2.87	0.43
1:A2:961:C:H3'	1:A2:962:G:N7	2.34	0.43
1:A2:1220:G:N9	1:A2:1221:C:C4	2.87	0.43
1:A2:1307:C:H2'	1:A2:1307:C:O2	2.17	0.43
1:A2:1360:G:C2'	1:A2:1360:G:N3	2.81	0.43
1:A2:1410:C:H4'	19:AQ:133:GLY:O	2.18	0.43
1:A2:1423:A:N3	1:A2:1424:G:N7	2.67	0.43
1:A2:1425:U:H2'	1:A2:1426:C:C5	2.53	0.43
1:A2:1438:A:C6	1:A2:1439:C:C4	3.07	0.43
1:A2:1548:U:H2'	1:A2:1549:G:H5'	2.00	0.43
1:A2:1648:A:H2'	1:A2:1649:G:C5'	2.20	0.43
1:A2:1753:C:O2	1:A2:1753:C:O4'	2.36	0.43
1:A2:1851:A:C2'	1:A2:1852:A:H5'	2.49	0.43
1:A2:1912:A:C5	1:A2:2026:U:C2	3.06	0.43
1:A2:2430:A:C2'	1:A2:2431:U:H5'	2.49	0.43
1:A2:2471:U:H2'	1:A2:2472:U:H6	1.84	0.43
1:A2:2593:C:O2	1:A2:2593:C:C2'	2.67	0.43
1:A2:2651:A:H61	31:Ac:52:CYS:HA	1.84	0.43
1:A2:2651:A:OP1	31:Ac:92:CYS:HB3	2.18	0.43
1:A2:4332:U:OP1	43:Ao:61:LYS:HG2	2.19	0.43
1:A2:4701:G:H5'	1:A2:4701:G:C8	2.48	0.43
1:A2:4711:U:HO2'	34:Af:4:ARG:HB3	1.84	0.43
1:A2:4717:U:O2	1:A2:4718:C:C5	2.71	0.43
1:A2:4724:G:H1'	15:AM:2:VAL:CB	2.48	0.43
1:A2:4740:U:H6	1:A2:4740:U:H3'	1.84	0.43
1:A2:5006:C:H2'	1:A2:5007:C:O4'	2.19	0.43
2:A3:109:C:H4'	2:A3:110:U:H5	1.73	0.43
3:A4:42:A:H1'	13:AJ:75:ARG:CZ	2.49	0.43
3:A4:78:C:H2'	3:A4:79:U:H6	1.83	0.43
5:AB:43:LEU:HD11	5:AB:196:TRP:CH2	2.54	0.43
5:AB:72:VAL:HG13	24:AV:91:LYS:O	2.19	0.43
5:AB:301:ASN:HA	5:AB:312:LYS:O	2.18	0.43
5:AB:356:LYS:O	5:AB:357:ARG:CB	2.67	0.43
8:AE:220:LYS:HE3	8:AE:235:THR:OG1	2.18	0.43
9:AF:142:TRP:CE2	9:AF:235:ASN:HB2	2.54	0.43
11:AH:176:LEU:HD22	41:Am:90:ASN:HD22	1.83	0.43
14:AL:91:ALA:O	14:AL:94:ILE:HG22	2.19	0.43
15:AM:95:ILE:HG12	15:AM:98:ARG:HH12	1.83	0.43
17:AO:51:LYS:HD2	17:AO:144:GLU:CD	2.44	0.43
18:AP:2:VAL:O	18:AP:3:ARG:CB	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AQ:154:LYS:HB3	19:AQ:155:ALA:H	1.67	0.43
20:AR:52:ARG:O	20:AR:53:LYS:HB2	2.18	0.43
22:AT:17:ARG:O	22:AT:18:PRO:O	2.36	0.43
25:AW:3:VAL:HG11	25:AW:12:LYS:CE	2.48	0.43
26:AX:67:ARG:HG3	26:AX:68:ARG:O	2.19	0.43
27:AY:50:ARG:HH11	27:AY:115:ARG:HH11	1.67	0.43
27:AY:86:GLN:HG2	27:AY:96:HIS:HA	2.01	0.43
27:AY:121:ARG:HA	27:AY:125:SER:OG	2.19	0.43
35:Ag:61:PRO:HA	35:Ag:64:LEU:HD12	1.99	0.43
38:Aj:47:TYR:HB3	38:Aj:49:TRP:CD1	2.53	0.43
43:Ao:104:ILE:CD1	47:BA:54:U:OP2	2.66	0.43
46:Au:151:LEU:HD12	46:Au:159:PHE:CD1	2.54	0.43
47:BA:7:A:C6	47:BA:49:C:C4	3.06	0.43
47:BA:11:C:H2'	47:BA:12:U:C6	2.54	0.43
47:BA:42:C:O2'	50:C1:1639:G:C2	2.63	0.43
48:BB:881:GLN:HE21	48:BB:1120:LEU:HD11	1.82	0.43
48:BB:955:ILE:HG13	48:BB:956:ASN:N	2.34	0.43
48:BB:1122:PRO:HB3	48:BB:1133:TYR:HB3	2.01	0.43
48:BB:1341:VAL:CG1	48:BB:1342:PRO:HD2	2.49	0.43
48:BB:1347:VAL:CG1	48:BB:1348:ASP:N	2.81	0.43
50:C1:214:U:O2	50:C1:214:U:C2'	2.67	0.43
50:C1:346:C:O4'	55:CE:33:THR:HG22	2.19	0.43
50:C1:559:G:H3'	50:C1:560:A:C4'	2.49	0.43
50:C1:746:C:OP2	50:C1:746:C:C2'	2.67	0.43
50:C1:797:C:C5	58:CH:106:ARG:HB3	2.53	0.43
50:C1:805:U:OP1	73:CW:82:GLN:HG3	2.18	0.43
50:C1:827:A:O5'	60:CJ:8:VAL:HG13	2.19	0.43
50:C1:951:C:O2	50:C1:975:G:N1	2.51	0.43
50:C1:1311:C:H5"	63:CM:40:LYS:NZ	2.34	0.43
50:C1:1341:C:C6	50:C1:1341:C:O5'	2.71	0.43
50:C1:1347:U:O2	50:C1:1347:U:H2'	2.17	0.43
50:C1:1375:G:H2'	50:C1:1376:A:C5'	2.46	0.43
50:C1:1406:G:C4'	50:C1:1407:U:H5'	2.48	0.43
50:C1:1453:C:H2'	50:C1:1454:A:O3'	2.18	0.43
50:C1:1548:G:C6	50:C1:1584:G:N2	2.87	0.43
50:C1:1589:A:H2'	50:C1:1590:C:C6	2.54	0.43
50:C1:1604:G:O2'	50:C1:1605:G:H5'	2.17	0.43
50:C1:1631:U:N3	50:C1:1632:G:N2	2.67	0.43
50:C1:1682:C:H6	50:C1:1682:C:H3'	1.84	0.43
50:C1:1861:G:H5"	77:Ca:2:THR:C	2.43	0.43
52:CB:75:GLN:O	52:CB:76:ASN:CB	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CC:98:LEU:CG	53:CC:101:SER:HB2	2.47	0.43
55:CE:124:CYS:SG	55:CE:162:ILE:HB	2.59	0.43
55:CE:203:GLY:O	55:CE:204:SER:HB2	2.17	0.43
55:CE:208:VAL:HG11	55:CE:225:ILE:CD1	2.49	0.43
56:CF:49:LEU:HD21	67:CQ:46:THR:CG2	2.43	0.43
58:CH:47:ALA:H	58:CH:63:PHE:HB2	1.84	0.43
58:CH:109:ARG:HG2	58:CH:113:LYS:HA	1.97	0.43
59:CI:102:VAL:HG12	59:CI:103:LEU:N	2.33	0.43
59:CI:104:ILE:HG22	59:CI:105:ASP:N	2.33	0.43
59:CI:165:GLN:NE2	59:CI:172:LEU:HD23	2.32	0.43
60:CJ:137:VAL:HB	60:CJ:142:VAL:CG2	2.48	0.43
70:CT:134:ILE:O	70:CT:137:GLN:HG2	2.19	0.43
78:Cb:19:HIS:HB3	78:Cb:22:LYS:HG2	2.00	0.43
1:A2:99:A:H3'	1:A2:100:C:C5	2.54	0.43
1:A2:134:G:P	1:A2:135:G:H1	2.41	0.43
1:A2:283:G:C6	1:A2:284:G:O6	2.72	0.43
1:A2:286:A:N6	1:A2:4322:A:C4'	2.82	0.43
1:A2:310:A:H2	1:A2:4319:U:C2	2.37	0.43
1:A2:675:C:H3'	1:A2:675:C:OP2	2.19	0.43
1:A2:702:G:H2'	1:A2:703:G:C8	2.54	0.43
1:A2:1179:G:H5'	1:A2:1179:G:C8	2.50	0.43
1:A2:1220:G:C2'	1:A2:1221:C:O5'	2.66	0.43
1:A2:1412:G:H22	1:A2:1432:A:H2	1.64	0.43
1:A2:1575:U:C6	1:A2:1575:U:C3'	3.01	0.43
1:A2:1926:G:H8	1:A2:1926:G:O5'	2.01	0.43
1:A2:2020:A:O2'	1:A2:2021:A:C8	2.72	0.43
1:A2:2263:G:H2'	1:A2:2264:G:O4'	2.19	0.43
1:A2:2302:G:C5	1:A2:2303:G:N7	2.87	0.43
1:A2:2578:A:N1	1:A2:2720:A:C8	2.87	0.43
1:A2:2604:C:N4	1:A2:4609:G:H22	2.17	0.43
1:A2:2746:U:C2'	1:A2:2747:C:O5'	2.67	0.43
1:A2:2758:G:H5'	40:Al:5:LYS:O	2.19	0.43
1:A2:3595:G:H2'	1:A2:3596:G:C8	2.54	0.43
1:A2:3595:G:H2'	1:A2:3596:G:H8	1.83	0.43
1:A2:3609:U:H2'	1:A2:3610:U:C6	2.54	0.43
1:A2:3830:A:O2'	1:A2:3831:A:H5'	2.19	0.43
1:A2:3900:C:O5'	1:A2:3900:C:H6	2.01	0.43
1:A2:3945:C:H2'	1:A2:3946:C:H6	1.77	0.43
1:A2:4225:U:O5'	1:A2:4225:U:H6	2.01	0.43
1:A2:4490:U:H2'	1:A2:4491:U:H2'	2.01	0.43
1:A2:4527:G:OP1	5:AB:19:ARG:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4836:U:H1'	8:AE:274:VAL:HG22	2.01	0.43
1:A2:4852:G:H2'	1:A2:4853:G:C8	2.51	0.43
1:A2:4898:A:C2'	1:A2:4899:C:O4'	2.61	0.43
2:A3:12:G:C5	2:A3:13:G:C8	3.07	0.43
2:A3:60:G:C2	36:Ah:59:THR:OG1	2.71	0.43
2:A3:67:U:H2'	2:A3:68:G:H8	1.83	0.43
3:A4:65:G:OP2	3:A4:65:G:C8	2.72	0.43
3:A4:71:G:N2	3:A4:105:C:C2	2.87	0.43
3:A4:98:G:H3'	3:A4:99:G:C8	2.53	0.43
7:AD:205:ALA:O	7:AD:233:PRO:HB3	2.18	0.43
10:AG:110:LYS:HE2	10:AG:114:LEU:CD1	2.48	0.43
14:AL:77:SER:HA	14:AL:99:ASP:O	2.19	0.43
16:AN:140:LYS:HB3	16:AN:144:ARG:HH12	1.84	0.43
18:AP:109:VAL:HA	18:AP:112:LEU:HD22	2.01	0.43
20:AR:12:SER:HB3	20:AR:19:LYS:HG2	2.01	0.43
24:AV:57:VAL:CG1	24:AV:125:CYS:HB2	2.43	0.43
26:AX:93:ASN:O	26:AX:94:ASN:HB3	2.19	0.43
35:Ag:69:LYS:HA	35:Ag:72:LYS:HE2	2.01	0.43
35:Ag:82:MET:HE3	35:Ag:90:ARG:CZ	2.49	0.43
45:At:44:ILE:CG1	45:At:45:HIS:H	2.25	0.43
46:Au:175:ASP:O	46:Au:178:ASP:HB3	2.18	0.43
47:BA:73:A:O2'	47:BA:74:C:C6	2.69	0.43
48:BB:892:ILE:HG22	48:BB:900:LYS:CE	2.49	0.43
48:BB:1070:LEU:HD22	48:BB:1073:GLN:H	0.57	0.43
48:BB:1310:ILE:HD11	48:BB:1324:MET:HG2	2.01	0.43
48:BB:1311:LEU:HD11	48:BB:1327:THR:HG23	2.01	0.43
48:BB:1347:VAL:HG22	48:BB:1349:ILE:C	2.43	0.43
48:BB:1381:GLU:HB2	48:BB:1383:PRO:HD2	1.97	0.43
48:BB:1381:GLU:HB2	48:BB:1383:PRO:HD3	2.00	0.43
49:BC:349:C:H4'	49:BC:350:G:OP2	2.19	0.43
49:BC:350:G:H2'	49:BC:351:A:O5'	2.18	0.43
50:C1:16:G:H5"	50:C1:669:A:N1	2.34	0.43
50:C1:148:U:C4	50:C1:169:U:C4	3.06	0.43
50:C1:534:G:H2'	50:C1:535:G:C4'	2.49	0.43
50:C1:670:A:N3	50:C1:1164:G:H1'	2.34	0.43
50:C1:839:C:C4	75:CY:48:TYR:O	2.72	0.43
50:C1:905:C:H6	50:C1:905:C:O5'	2.02	0.43
50:C1:1066:U:H2'	50:C1:1067:C:C6	2.54	0.43
50:C1:1092:G:H1'	73:CW:2:VAL:O	2.18	0.43
50:C1:1387:G:C4	50:C1:1388:A:C8	3.07	0.43
50:C1:1447:G:OP1	71:CU:85:HIS:ND1	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1455:A:H5”	50:C1:1456:G:OP2	2.18	0.43
50:C1:1627:C:H2’	50:C1:1628:C:C6	2.53	0.43
50:C1:1648:G:H8	67:CQ:125:ARG:HB2	1.82	0.43
50:C1:1829:G:C4	50:C1:1830:U:H5	2.37	0.43
52:CB:183:GLU:HG3	52:CB:187:LYS:HE3	2.01	0.43
53:CC:196:ILE:HB	53:CC:223:TYR:HB2	2.01	0.43
54:CD:24:PHE:HE1	54:CD:72:VAL:CG1	2.32	0.43
54:CD:123:LEU:HD11	54:CD:152:PHE:HB3	2.01	0.43
56:CF:59:LYS:HB3	56:CF:62:ARG:CG	2.49	0.43
56:CF:94:LYS:HD3	56:CF:94:LYS:C	2.43	0.43
57:CG:74:ARG:HB3	57:CG:94:ARG:HE	1.83	0.43
58:CH:31:GLU:HB3	58:CH:40:LEU:HD22	2.00	0.43
59:CI:133:GLU:O	59:CI:134:GLU:C	2.62	0.43
67:CQ:38:PRO:HD2	70:CT:7:LYS:O	2.19	0.43
69:CS:98:VAL:CG2	69:CS:103:LEU:HD13	2.48	0.43
72:CV:74:LYS:HD3	72:CV:74:LYS:C	2.43	0.43
73:CW:47:ILE:HG22	73:CW:69:LEU:HD11	2.01	0.43
76:CZ:68:ILE:HG23	76:CZ:73:VAL:HG23	2.01	0.43
83:Cg:7:LEU:HD12	83:Cg:309:VAL:O	2.19	0.43
83:Cg:140:TYR:O	83:Cg:141:THR:C	2.60	0.43
1:A2:5:A:N1	2:A3:153:C:C2	2.87	0.42
1:A2:10:A:N1	2:A3:147:G:C6	2.87	0.42
1:A2:15:A:H2’	1:A2:16:G:H5’	2.01	0.42
1:A2:135:G:H2’	1:A2:136:G:C8	2.54	0.42
1:A2:196:G:H2’	1:A2:235:C:P	2.59	0.42
1:A2:488:G:N3	1:A2:488:G:C2’	2.79	0.42
1:A2:639:G:H2’	1:A2:640:A:H8	1.84	0.42
1:A2:694:C:O5’	1:A2:694:C:C6	2.72	0.42
1:A2:917:G:N3	1:A2:918:C:N4	2.67	0.42
1:A2:1015:C:O2’	1:A2:1016:C:H5’	2.19	0.42
1:A2:1059:C:C2’	1:A2:1060:C:C5	3.02	0.42
1:A2:1198:G:C5	1:A2:1199:G:N7	2.87	0.42
1:A2:1220:G:C1’	1:A2:1221:C:C4	3.02	0.42
1:A2:1249:G:C6	1:A2:1250:A:C6	3.07	0.42
1:A2:1377:A:H1’	1:A2:1447:C:C4’	2.49	0.42
1:A2:1465:C:O2’	1:A2:1466:G:H5’	2.15	0.42
1:A2:1671:C:H2’	1:A2:1672:U:C6	2.54	0.42
1:A2:1749:A:H2’	1:A2:1750:U:O4’	2.19	0.42
1:A2:1916:C:H4’	1:A2:1917:A:O5’	2.18	0.42
1:A2:2064:G:N1	1:A2:2246:G:N1	2.67	0.42
1:A2:2376:G:H5”	1:A2:2800:G:O2’	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2452:G:O2'	1:A2:2453:G:H5'	2.19	0.42
1:A2:2643:U:C2	1:A2:2646:C:C5	3.08	0.42
1:A2:2795:C:C6	1:A2:2795:C:C3'	3.02	0.42
1:A2:3698:U:O2'	1:A2:3699:U:H5'	2.18	0.42
1:A2:3909:U:H2'	1:A2:3910:G:H8	1.83	0.42
1:A2:3919:U:N3	1:A2:3920:G:C5	2.87	0.42
1:A2:4022:C:O2'	46:Au:30:ASN:HB3	2.19	0.42
1:A2:4077:C:H2'	1:A2:4078:U:O4'	2.19	0.42
1:A2:4078:U:H5"	1:A2:4079:C:OP2	2.19	0.42
1:A2:4212:C:H5"	1:A2:4213:A:OP2	2.19	0.42
1:A2:4299:A:H3'	1:A2:4300:U:H5	1.84	0.42
1:A2:4562:A:H5"	11:AH:98:HIS:ND1	2.34	0.42
1:A2:4824:U:OP1	1:A2:4825:G:C4	2.72	0.42
1:A2:4828:G:O3'	21:AS:165:PRO:HD2	2.18	0.42
1:A2:4882:G:H3'	1:A2:4882:G:N3	2.34	0.42
2:A3:33:G:H4'	38:Aj:74:PHE:CZ	2.54	0.42
2:A3:64:U:H2'	2:A3:64:U:O2	2.17	0.42
4:AA:117:GLU:OE1	4:AA:120:PRO:HA	2.19	0.42
5:AB:17:LEU:HB3	5:AB:18:PRO:CD	2.48	0.42
5:AB:19:ARG:HB2	5:AB:234:ARG:NH1	2.33	0.42
5:AB:298:LEU:O	5:AB:299:ILE:HB	2.19	0.42
6:AC:74:ALA:C	6:AC:76:ILE:N	2.76	0.42
6:AC:211:TYR:HA	6:AC:253:THR:OG1	2.19	0.42
6:AC:347:HIS:O	6:AC:351:VAL:HG23	2.19	0.42
7:AD:193:GLU:O	7:AD:196:ARG:HB3	2.19	0.42
9:AF:90:ALA:HB1	9:AF:142:TRP:HE3	1.84	0.42
12:AI:77:VAL:HG23	12:AI:82:LYS:HA	2.00	0.42
14:AL:163:LYS:O	14:AL:163:LYS:HD2	2.19	0.42
18:AP:57:CYS:HB2	18:AP:82:ARG:O	2.18	0.42
20:AR:23:TRP:CH2	20:AR:25:ASP:HB3	2.53	0.42
21:AS:73:LEU:H	21:AS:73:LEU:HG	1.69	0.42
21:AS:81:TRP:CE3	21:AS:128:LYS:HB2	2.54	0.42
22:AT:81:LYS:CG	22:AT:82:GLY:H	2.32	0.42
23:AU:44:GLN:NE2	23:AU:56:LEU:HB3	2.33	0.42
29:Aa:78:LEU:CD2	29:Aa:81:LEU:HD12	2.49	0.42
33:Ae:14:LYS:O	33:Ae:15:LYS:HB2	2.19	0.42
37:Ai:64:SER:O	37:Ai:65:LYS:CB	2.66	0.42
47:BA:74:C:C5	48:BB:1323:VAL:HG11	2.54	0.42
48:BB:1071:ARG:N	48:BB:1071:ARG:CD	2.73	0.42
48:BB:1156:LEU:HB2	48:BB:1159:LEU:HG	2.01	0.42
48:BB:1385:MET:HE3	48:BB:1390:PHE:N	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BC:64:U:HO2'	49:BC:66:A:P	2.30	0.42
49:BC:350:G:HO2'	49:BC:351:A:P	2.40	0.42
50:C1:428:U:C3'	50:C1:429:C:C6	3.02	0.42
50:C1:500:A:N1	50:C1:502:C:OP2	2.52	0.42
50:C1:650:A:H3'	50:C1:651:U:H6	1.84	0.42
50:C1:672:A:OP2	50:C1:673:G:H5'	2.19	0.42
50:C1:992:A:N6	77:Ca:12:LYS:C	2.77	0.42
50:C1:1043:G:N3	50:C1:1044:G:C8	2.86	0.42
50:C1:1442:U:C6	50:C1:1443:C:C1'	3.02	0.42
50:C1:1703:C:H3'	50:C1:1704:C:C5	2.54	0.42
50:C1:1782:G:H1'	50:C1:1783:C:C5	2.54	0.42
51:CA:40:LYS:HZ3	68:CR:101:ASP:HA	1.83	0.42
52:CB:84:PHE:CZ	52:CB:103:MET:SD	3.12	0.42
52:CB:131:ASP:H	52:CB:180:ASP:CG	2.24	0.42
52:CB:135:LEU:HD23	52:CB:135:LEU:N	2.34	0.42
56:CF:49:LEU:HD22	67:CQ:47:LEU:HD23	2.00	0.42
58:CH:117:PRO:HD2	58:CH:120:ARG:HD3	1.99	0.42
60:CJ:133:ARG:HA	60:CJ:143:ASN:HD22	1.84	0.42
62:CL:96:ILE:HD12	74:CX:10:ALA:HB1	2.01	0.42
63:CM:51:VAL:HG12	63:CM:77:ILE:CG1	2.48	0.42
64:CN:136:PRO:HA	64:CN:137:PRO:HD3	1.86	0.42
69:CS:24:ARG:HE	69:CS:29:ALA:HA	1.84	0.42
69:CS:27:ALA:HB1	69:CS:41:ALA:CB	2.49	0.42
69:CS:118:ARG:HA	69:CS:123:LEU:CD1	2.49	0.42
71:CU:55:ARG:HD2	71:CU:87:ARG:NE	2.34	0.42
71:CU:63:ILE:HD11	80:Cd:32:ARG:NH2	2.34	0.42
76:CZ:87:ALA:O	76:CZ:91:LEU:HD13	2.18	0.42
77:Ca:42:ARG:O	77:Ca:67:LEU:HB2	2.19	0.42
77:Ca:83:VAL:O	77:Ca:84:VAL:HB	2.18	0.42
1:A2:196:G:C1'	1:A2:197:U:OP1	2.65	0.42
1:A2:304:U:OP2	1:A2:304:U:H5	2.02	0.42
1:A2:339:G:N2	2:A3:27:U:C2	2.87	0.42
1:A2:386:A:O4'	1:A2:2356:A:C8	2.73	0.42
1:A2:439:G:H8	1:A2:439:G:C5'	2.32	0.42
1:A2:965:C:C6	1:A2:965:C:C4'	3.02	0.42
1:A2:1079:C:H2'	1:A2:1080:U:C5'	2.48	0.42
1:A2:1282:U:H3'	1:A2:1284:C:C6	2.53	0.42
1:A2:1732:G:C3'	1:A2:1733:U:H4'	2.49	0.42
1:A2:2047:A:C8	1:A2:2047:A:C3'	3.03	0.42
1:A2:2420:G:P	1:A2:2493:G:H22	2.42	0.42
1:A2:2444:U:OP1	1:A2:2445:U:C5	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2873:G:H5”	20:AR:134:ASN:HB3	1.99	0.42
1:A2:3613:U:C2’	1:A2:3614:U:C5’	2.97	0.42
1:A2:3737:U:C2’	1:A2:3738:C:H5’	2.50	0.42
1:A2:3753:A:C5	1:A2:3755:U:H5	2.36	0.42
1:A2:3907:G:H1’	1:A2:3908:G:P	2.59	0.42
1:A2:3930:G:O5’	1:A2:3930:G:C8	2.72	0.42
1:A2:4050:G:O6	1:A2:4053:A:C2	2.73	0.42
1:A2:4224:G:C2’	1:A2:4227:G:O6	2.67	0.42
1:A2:4270:A:H2’	22:AT:7:LYS:HZ2	1.85	0.42
1:A2:4310:C:H2’	1:A2:4311:U:H6	1.84	0.42
1:A2:4345:A:H4’	1:A2:4346:C:C5’	2.48	0.42
1:A2:4429:U:H2’	1:A2:4430:G:C8	2.54	0.42
1:A2:4575:C:C6	1:A2:4575:C:O5’	2.72	0.42
1:A2:4578:G:C2’	1:A2:4579:U:C5’	2.97	0.42
1:A2:4691:G:O6	1:A2:5022:U:H3’	2.20	0.42
1:A2:4695:C:C2’	1:A2:4696:G:C8	2.77	0.42
2:A3:58:G:O5’	2:A3:97:A:C2	2.72	0.42
2:A3:156:U:H3’	2:A3:156:U:C6	2.54	0.42
6:AC:48:ASN:HB2	6:AC:49:ARG:CZ	2.48	0.42
6:AC:106:LYS:HD2	6:AC:108:TRP:CH2	2.55	0.42
6:AC:140:LYS:NZ	6:AC:242:PRO:HD2	2.34	0.42
6:AC:309:ILE:H	6:AC:309:ILE:HG12	1.47	0.42
7:AD:90:VAL:HG11	7:AD:225:GLN:HB3	2.01	0.42
9:AF:37:PHE:O	9:AF:40:LYS:HG2	2.20	0.42
11:AH:60:TRP:CD1	21:AS:155:PRO:CD	3.02	0.42
12:AI:47:PRO:HB3	12:AI:171:TRP:CE2	2.54	0.42
15:AM:6:PHE:H	15:AM:11:ARG:NH1	2.17	0.42
15:AM:28:VAL:HG12	15:AM:67:SER:HA	2.00	0.42
17:AO:181:ALA:C	17:AO:187:LYS:HZ2	2.27	0.42
18:AP:45:THR:HG23	18:AP:92:LEU:CD1	2.49	0.42
19:AQ:84:GLY:O	19:AQ:103:LEU:HB2	2.19	0.42
48:BB:896:THR:HG21	48:BB:900:LYS:CG	2.48	0.42
48:BB:913:LEU:C	48:BB:913:LEU:HD23	2.44	0.42
48:BB:933:LEU:HD11	48:BB:1090:ILE:CB	2.49	0.42
48:BB:1071:ARG:NH2	48:BB:1160:PRO:HB3	2.09	0.42
48:BB:1235:ALA:HA	48:BB:1238:MET:CE	2.48	0.42
48:BB:1256:GLU:O	48:BB:1259:ALA:HB3	2.19	0.42
48:BB:1301:ILE:O	48:BB:1401:SER:OG	2.23	0.42
48:BB:1319:ARG:NH1	48:BB:1384:LYS:HD2	2.34	0.42
48:BB:1422:GLN:C	48:BB:1425:VAL:HG12	2.43	0.42
49:BC:139:C:H2’	49:BC:140:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:36:U:O2	50:C1:520:A:C2	2.72	0.42
50:C1:558:G:C8	50:C1:558:G:O5'	2.70	0.42
50:C1:684:G:C4	50:C1:920:A:C4	3.07	0.42
50:C1:688:U:O2	50:C1:688:U:O4'	2.37	0.42
50:C1:823:U:H5'	75:CY:64:PHE:HD2	1.84	0.42
50:C1:827:A:C2'	50:C1:828:G:H5'	2.48	0.42
50:C1:838:G:H8	75:CY:9:THR:OG1	2.01	0.42
50:C1:883:U:O5'	50:C1:883:U:H6	2.02	0.42
50:C1:1094:C:C2'	50:C1:1095:C:H5'	2.49	0.42
50:C1:1122:A:C2'	50:C1:1123:C:H5'	2.49	0.42
50:C1:1122:A:H2'	50:C1:1123:C:H5'	2.01	0.42
50:C1:1139:C:H2'	50:C1:1140:G:C5'	2.49	0.42
50:C1:1263:U:C6	50:C1:1264:C:C6	3.08	0.42
50:C1:1416:C:N4	50:C1:1417:C:N1	2.67	0.42
50:C1:1519:U:C6	50:C1:1623:A:N6	2.87	0.42
50:C1:1575:G:C2	50:C1:1576:G:C6	3.06	0.42
50:C1:1597:C:OP2	76:CZ:82:SER:HB3	2.19	0.42
50:C1:1748:G:H1	50:C1:1786:U:H3	1.67	0.42
51:CA:180:ARG:HB3	51:CA:180:ARG:NH1	2.34	0.42
52:CB:116:LYS:NZ	77:Ca:37:LYS:HE2	2.34	0.42
52:CB:151:ARG:CZ	52:CB:153:THR:OG1	2.68	0.42
54:CD:23:GLU:CG	80:Cd:46:TYR:HE1	2.32	0.42
55:CE:133:VAL:O	55:CE:136:ILE:HD13	2.19	0.42
56:CF:40:ALA:C	56:CF:42:LYS:N	2.75	0.42
60:CJ:137:VAL:O	60:CJ:138:ARG:HB3	2.19	0.42
61:CK:31:LYS:HE3	80:Cd:12:ARG:HE	1.83	0.42
63:CM:81:ASP:OD1	63:CM:84:LYS:HB2	2.19	0.42
64:CN:6:ALA:HB1	64:CN:7:PRO:HD2	2.01	0.42
66:CP:100:LYS:O	66:CP:101:THR:HB	2.18	0.42
66:CP:110:GLU:OE1	69:CS:113:ARG:HG3	2.20	0.42
68:CR:13:ALA:HB1	68:CR:54:VAL:CB	2.48	0.42
1:A2:98:A:H4'	16:AN:195:ARG:CZ	2.49	0.42
1:A2:134:G:C5'	1:A2:135:G:N1	2.82	0.42
1:A2:148:G:N2	10:AG:163:PRO:HD2	2.34	0.42
1:A2:215:A:C4'	1:A2:216:G:C5'	2.97	0.42
1:A2:413:C:O5'	1:A2:413:C:H6	2.02	0.42
1:A2:438:C:H5	1:A2:438:C:OP2	2.02	0.42
1:A2:450:C:H2'	1:A2:451:C:C6	2.54	0.42
1:A2:666:G:H2'	1:A2:667:C:C6	2.53	0.42
1:A2:887:C:O5'	1:A2:887:C:H6	2.02	0.42
1:A2:1185:G:C2'	1:A2:1186:C:H5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1350:G:OP1	14:AL:33:ILE:HB	2.20	0.42
1:A2:1464:C:O5'	1:A2:1464:C:H6	2.02	0.42
1:A2:1542:A:C6	64:CN:127:ARG:NE	2.87	0.42
1:A2:1547:C:C2	1:A2:1548:U:C5	3.07	0.42
1:A2:1639:U:H3'	29:Aa:13:GLY:H	1.83	0.42
1:A2:1704:U:H2'	1:A2:1705:U:C6	2.55	0.42
1:A2:1708:A:O2'	1:A2:1709:U:H5'	2.18	0.42
1:A2:1857:C:O5'	1:A2:1857:C:H6	2.02	0.42
1:A2:1934:A:N1	1:A2:1935:U:C2	2.87	0.42
1:A2:2009:C:H2'	1:A2:2009:C:O2	2.19	0.42
1:A2:2282:G:H1'	1:A2:2307:G:C2	2.54	0.42
1:A2:2344:A:C2	1:A2:2775:A:C4	3.07	0.42
1:A2:2403:U:O2'	1:A2:2404:G:H5'	2.20	0.42
1:A2:2564:A:H2'	1:A2:2565:C:C5'	2.41	0.42
1:A2:2836:G:O2'	1:A2:2837:C:H5'	2.18	0.42
1:A2:2878:G:H3'	1:A2:2879:G:H5"	2.02	0.42
1:A2:3647:G:OP1	1:A2:3647:G:C8	2.68	0.42
1:A2:3670:C:N4	1:A2:3714:U:H3'	2.35	0.42
1:A2:3698:U:O5'	1:A2:3698:U:H6	2.01	0.42
1:A2:4022:C:C5'	46:Au:199:TYR:CE1	3.02	0.42
1:A2:4702:G:H2'	1:A2:4703:A:C8	2.53	0.42
1:A2:5011:A:H2'	1:A2:5012:C:C6	2.54	0.42
2:A3:17:A:C4	2:A3:18:U:C5	3.07	0.42
2:A3:30:U:P	14:AL:34:ARG:HH21	2.42	0.42
2:A3:151:G:H5'	10:AG:64:GLN:HG3	2.02	0.42
3:A4:3:C:H2'	3:A4:4:U:C6	2.55	0.42
3:A4:7:G:O5'	7:AD:33:ARG:HD2	2.18	0.42
7:AD:291:GLN:NE2	12:AI:210:ARG:NH2	2.66	0.42
10:AG:57:TRP:HB3	10:AG:61:ILE:HB	2.00	0.42
12:AI:67:ALA:HB1	12:AI:158:LYS:HZ3	1.85	0.42
12:AI:139:ARG:HG3	12:AI:173:PHE:CE2	2.55	0.42
12:AI:139:ARG:HG2	12:AI:172:GLY:CA	2.50	0.42
16:AN:198:LEU:CD2	16:AN:200:LEU:HG	2.49	0.42
19:AQ:78:LYS:HD2	19:AQ:135:GLY:HA2	2.01	0.42
19:AQ:91:ARG:HB2	19:AQ:91:ARG:NH1	2.35	0.42
20:AR:134:ASN:O	20:AR:137:ILE:CD1	2.67	0.42
22:AT:84:ILE:HD11	30:Ab:24:PRO:CB	2.47	0.42
28:AZ:9:LYS:HE3	28:AZ:83:THR:N	2.34	0.42
30:Ab:36:ASP:HA	30:Ab:37:PRO:HD3	1.92	0.42
35:Ag:9:ARG:HG3	35:Ag:34:TYR:CE1	2.55	0.42
39:Ak:12:LEU:O	39:Ak:16:ARG:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Ak:17:ARG:O	39:Ak:19:ASP:N	2.49	0.42
43:Ao:105:GLN:C	47:BA:58:A:OP2	2.62	0.42
48:BB:884:ALA:HB2	48:BB:915:ILE:CD1	2.47	0.42
48:BB:930:GLY:O	48:BB:931:SER:CB	2.67	0.42
49:BC:351:A:C6	53:CC:124:PHE:CE2	2.84	0.42
50:C1:315:C:H6	50:C1:315:C:C5'	2.31	0.42
50:C1:342:C:H5"	50:C1:342:C:H6	1.85	0.42
50:C1:343:A:H8	50:C1:343:A:P	2.43	0.42
50:C1:435:A:H2'	50:C1:450:C:C6	2.54	0.42
50:C1:494:C:C2'	50:C1:495:U:H5'	2.50	0.42
50:C1:571:U:O3'	75:CY:59:GLY:N	2.53	0.42
50:C1:682:U:C2	50:C1:1024:A:N1	2.87	0.42
50:C1:692:G:O2'	50:C1:693:A:H5'	2.19	0.42
50:C1:746:C:O5'	50:C1:746:C:C2'	2.68	0.42
50:C1:837:A:H5'	50:C1:837:A:N3	2.34	0.42
50:C1:992:A:C2	77:Ca:15:ARG:HB3	2.54	0.42
50:C1:1065:G:H2'	50:C1:1065:G:N3	2.34	0.42
50:C1:1130:G:C4'	64:CN:10:GLY:HA2	2.49	0.42
50:C1:1334:G:C2'	50:C1:1335:G:H5'	2.49	0.42
50:C1:1405:A:N3	50:C1:1442:U:H5	2.17	0.42
50:C1:1578:U:C6	54:CD:6:SER:N	2.88	0.42
50:C1:1622:U:C6	50:C1:1622:U:C3'	3.01	0.42
50:C1:1686:G:H5'	50:C1:1687:C:P	2.60	0.42
50:C1:1700:C:N3	50:C1:1834:A:N6	2.66	0.42
50:C1:1739:C:H2'	50:C1:1740:C:O4'	2.19	0.42
50:C1:1746:U:O5'	50:C1:1746:U:H6	2.02	0.42
50:C1:1750:C:C2'	50:C1:1751:C:C5'	2.92	0.42
50:C1:1864:U:HO2'	50:C1:1866:A:H2	1.54	0.42
51:CA:82:THR:HG22	51:CA:205:ARG:HB2	1.99	0.42
54:CD:106:ARG:HH22	54:CD:173:ARG:HG3	1.84	0.42
56:CF:36:GLN:O	56:CF:37:ASP:CB	2.68	0.42
56:CF:69:VAL:O	56:CF:73:THR:HG23	2.19	0.42
58:CH:47:ALA:O	58:CH:63:PHE:HD1	2.00	0.42
59:CI:135:GLU:HG2	59:CI:135:GLU:O	2.19	0.42
63:CM:33:ARG:HE	63:CM:91:LEU:HD21	1.84	0.42
75:CY:119:GLY:HA2	75:CY:122:LYS:HB3	2.01	0.42
78:Cb:27:SER:HB2	78:Cb:28:PRO:HD2	2.01	0.42
80:Cd:48:LYS:HD2	80:Cd:49:ASP:N	2.34	0.42
1:A2:206:U:H5"	27:AY:59:ARG:HD2	1.99	0.42
1:A2:298:A:C8	1:A2:298:A:C3'	3.02	0.42
1:A2:397:C:C4	1:A2:398:A:N6	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:426:A:H3'	1:A2:427:C:H5	1.85	0.42
1:A2:449:C:H2'	1:A2:450:C:H6	1.83	0.42
1:A2:457:A:C2'	1:A2:458:U:H5"	2.48	0.42
1:A2:458:U:OP2	1:A2:463:C:N3	2.52	0.42
1:A2:698:G:H5'	8:AE:192:LYS:NZ	2.35	0.42
1:A2:713:G:H1	1:A2:925:C:N4	2.17	0.42
1:A2:736:G:C8	1:A2:736:G:H5"	2.55	0.42
1:A2:971:C:H3'	1:A2:971:C:C6	2.54	0.42
1:A2:1059:C:C2'	1:A2:1060:C:H5	2.31	0.42
1:A2:1085:C:OP2	1:A2:1085:C:C4'	2.64	0.42
1:A2:1198:G:H2'	1:A2:1199:G:C8	2.54	0.42
1:A2:1249:G:N2	1:A2:1250:A:H1'	2.34	0.42
1:A2:1438:A:C8	1:A2:1438:A:OP2	2.73	0.42
1:A2:1658:A:H4'	1:A2:4354:A:N1	2.35	0.42
1:A2:1737:G:N2	1:A2:1753:C:H41	2.17	0.42
1:A2:1885:A:C8	1:A2:1885:A:OP2	2.72	0.42
1:A2:2268:C:H5"	1:A2:2269:U:OP2	2.19	0.42
1:A2:2324:A:OP1	1:A2:2324:A:C8	2.71	0.42
1:A2:2390:U:H2'	1:A2:2391:G:H8	1.84	0.42
1:A2:2426:A:H4'	4:AA:21:LYS:CE	2.49	0.42
1:A2:2432:G:N2	1:A2:2451:G:OP2	2.52	0.42
1:A2:2450:A:C4'	1:A2:2451:G:OP2	2.66	0.42
1:A2:2516:C:H4'	35:Ag:66:ARG:HD3	2.02	0.42
1:A2:2568:A:C2	1:A2:2732:A:H1'	2.55	0.42
1:A2:2638:U:O5'	1:A2:2639:G:H4'	2.19	0.42
1:A2:2792:A:H2'	1:A2:2793:G:C8	2.54	0.42
1:A2:2821:A:C5	1:A2:3808:G:N7	2.87	0.42
1:A2:2837:C:H2'	1:A2:2838:C:O5'	2.18	0.42
1:A2:3581:C:H2'	1:A2:3582:U:O4'	2.19	0.42
1:A2:3842:G:C6	1:A2:3843:G:C6	3.08	0.42
1:A2:4039:U:H2'	1:A2:4040:C:H6	1.85	0.42
1:A2:4162:U:H6	1:A2:4162:U:O5'	2.03	0.42
1:A2:4168:U:C5	22:AT:4:THR:HG21	2.50	0.42
1:A2:4210:G:H4'	13:AJ:106:GLY:O	2.19	0.42
1:A2:4435:G:OP2	1:A2:4436:C:H5'	2.19	0.42
1:A2:4455:G:H5"	1:A2:4455:G:H8	1.84	0.42
1:A2:4478:A:N7	5:AB:257:TRP:NE1	2.67	0.42
1:A2:4557:U:H2'	1:A2:4558:C:C5'	2.50	0.42
1:A2:4584:A:H2'	1:A2:4585:C:C6	2.55	0.42
1:A2:4711:U:O2'	34:Af:4:ARG:C	2.62	0.42
1:A2:4723:A:H2	15:AM:2:VAL:CG2	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4981:U:O4	59:CI:122:GLY:HA2	2.18	0.42
3:A4:90:A:C4	3:A4:91:C:H1'	2.54	0.42
4:AA:186:TYR:HD1	4:AA:196:TRP:CH2	2.38	0.42
5:AB:61:ASP:HA	5:AB:68:ASN:OD1	2.20	0.42
8:AE:282:TYR:CB	8:AE:285:LYS:HG2	2.50	0.42
10:AG:117:ARG:HG3	10:AG:121:LYS:HD3	2.01	0.42
11:AH:41:ILE:HG23	11:AH:43:VAL:HG22	2.02	0.42
16:AN:44:ARG:NH1	16:AN:47:LYS:HG2	2.34	0.42
16:AN:146:PRO:CG	36:Ah:104:THR:HA	2.50	0.42
17:AO:193:THR:HG22	17:AO:197:LYS:HD2	2.01	0.42
18:AP:28:ASN:O	18:AP:32:THR:HG23	2.19	0.42
19:AQ:75:ARG:HE	19:AQ:78:LYS:HZ2	1.65	0.42
22:AT:25:VAL:HG21	22:AT:94:GLU:OE2	2.20	0.42
22:AT:29:THR:O	22:AT:32:ARG:HB2	2.19	0.42
22:AT:84:ILE:CD1	30:Ab:24:PRO:HA	2.48	0.42
23:AU:25:CYS:O	23:AU:29:VAL:HG23	2.19	0.42
28:AZ:89:ILE:HG12	28:AZ:93:LYS:HE2	2.00	0.42
31:Ac:52:CYS:HA	31:Ac:53:PRO:HD2	1.90	0.42
34:Af:60:PRO:HD2	34:Af:62:GLY:O	2.19	0.42
37:Ai:50:PHE:HB3	37:Ai:54:GLU:CB	2.50	0.42
39:Ak:23:VAL:HG21	39:Ak:64:LEU:HD13	2.01	0.42
43:Ao:99:ARG:CD	47:BA:56:C:OP2	2.68	0.42
47:BA:12:U:H2'	47:BA:13:C:O4'	2.19	0.42
48:BB:1039:ALA:N	84:BB:2435:GNP:O6	2.52	0.42
48:BB:1093:ASN:C	48:BB:1141:ALA:HB2	2.44	0.42
48:BB:1152:LEU:CD2	48:BB:1153:GLU:N	2.80	0.42
49:BC:63:U:O2	49:BC:105:G:C2	2.73	0.42
50:C1:52:G:H8	50:C1:52:G:O5'	2.02	0.42
50:C1:54:A:H3'	50:C1:55:U:H5"	2.02	0.42
50:C1:145:G:N2	50:C1:146:G:N7	2.68	0.42
50:C1:493:A:H1'	50:C1:573:U:O3'	2.18	0.42
50:C1:502:C:O2'	50:C1:503:C:C6	2.71	0.42
50:C1:621:C:H5"	50:C1:622:C:OP2	2.19	0.42
50:C1:659:G:H3'	74:CX:17:ARG:NH2	2.34	0.42
50:C1:745:C:O2'	58:CH:107:LYS:HB3	2.19	0.42
50:C1:878:G:N2	50:C1:908:A:C2	2.87	0.42
50:C1:1130:G:H2'	50:C1:1131:G:H5"	2.01	0.42
50:C1:1236:G:H3'	50:C1:1237:C:H6	1.85	0.42
50:C1:1261:C:O2	50:C1:1261:C:H2'	2.18	0.42
50:C1:1288:U:OP2	50:C1:1311:C:N3	2.52	0.42
50:C1:1404:U:H3	50:C1:1440:C:N4	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1430:C:H2'	50:C1:1430:C:O2	2.19	0.42
50:C1:1643:U:H4'	67:CQ:143:LYS:O	2.19	0.42
50:C1:1663:A:O2'	50:C1:1664:A:N3	2.51	0.42
50:C1:1685:U:C6	50:C1:1686:G:C8	3.08	0.42
50:C1:1719:A:H8	50:C1:1719:A:O5'	2.02	0.42
55:CE:36:HIS:CG	55:CE:85:GLY:HA3	2.53	0.42
55:CE:56:LEU:HB2	75:CY:22:GLN:HE22	1.84	0.42
55:CE:139:LEU:HD22	55:CE:147:ILE:HD12	2.01	0.42
64:CN:22:VAL:HB	64:CN:23:PRO:HD2	2.02	0.42
69:CS:39:ARG:NH1	70:CT:39:LEU:H	2.17	0.42
69:CS:43:VAL:HA	70:CT:37:VAL:HG21	2.00	0.42
74:CX:61:GLN:CB	74:CX:62:PRO:CD	2.89	0.42
75:CY:63:HIS:O	75:CY:64:PHE:C	2.62	0.42
76:CZ:43:LYS:NZ	76:CZ:44:LEU:H	2.17	0.42
76:CZ:58:LEU:HD22	76:CZ:77:LEU:HD22	2.01	0.42
1:A2:25:A:C8	1:A2:26:C:C5	3.08	0.42
1:A2:140:C:OP2	1:A2:140:C:C5	2.73	0.42
1:A2:192:C:C2'	1:A2:193:C:OP1	2.66	0.42
1:A2:286:A:N6	1:A2:4322:A:H4'	2.34	0.42
1:A2:287:A:C2	1:A2:307:U:O4'	2.73	0.42
1:A2:309:A:H1'	1:A2:3696:A:C2	2.55	0.42
1:A2:319:A:N3	1:A2:319:A:H2'	2.35	0.42
1:A2:456:G:N3	1:A2:456:G:H2'	2.34	0.42
1:A2:481:C:H3'	1:A2:482:G:H5"	1.97	0.42
1:A2:917:G:H21	1:A2:918:C:H42	1.68	0.42
1:A2:959:C:OP1	1:A2:970:C:O2	2.38	0.42
1:A2:1161:C:C6	1:A2:1161:C:C5'	3.01	0.42
1:A2:1165:G:HO2'	1:A2:1166:U:H5'	1.82	0.42
1:A2:1180:G:C6	1:A2:1181:U:C4	3.07	0.42
1:A2:1209:C:C2'	1:A2:1210:U:OP2	2.67	0.42
1:A2:1211:C:C4'	1:A2:1212:G:OP1	2.67	0.42
1:A2:1454:G:C4	1:A2:1455:C:C1'	2.98	0.42
1:A2:1535:C:H1'	1:A2:2646:C:OP1	2.20	0.42
1:A2:1542:A:C6	64:CN:127:ARG:NH2	2.87	0.42
1:A2:1608:G:H21	1:A2:1611:A:H62	1.66	0.42
1:A2:1779:U:OP1	1:A2:1779:U:H4'	2.19	0.42
1:A2:2012:G:C5	1:A2:2013:C:N4	2.88	0.42
1:A2:2280:U:OP1	1:A2:2281:U:H2'	2.20	0.42
1:A2:2366:A:H5'	32:Ad:70:LYS:NZ	2.34	0.42
1:A2:2379:G:H5'	1:A2:2763:C:H42	1.84	0.42
1:A2:2382:G:O5'	1:A2:2382:G:C8	2.69	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2470:G:H5'	2:A3:126:C:O2'	2.19	0.42
1:A2:2549:C:C2	1:A2:2550:A:C8	3.07	0.42
1:A2:2587:G:O3'	1:A2:2665:G:C4'	2.63	0.42
1:A2:2803:U:O2	1:A2:2803:U:C2'	2.65	0.42
1:A2:3640:G:H3'	1:A2:3641:G:H8	1.83	0.42
1:A2:4022:C:H4'	46:Au:30:ASN:HD21	1.78	0.42
1:A2:4053:A:H3'	1:A2:4054:G:C5'	2.48	0.42
1:A2:4081:C:H2'	1:A2:4117:A:N6	2.34	0.42
1:A2:4240:A:C3'	1:A2:4241:A:H5'	2.50	0.42
1:A2:4253:U:O2	1:A2:4253:U:H2'	2.20	0.42
1:A2:4258:A:C2'	1:A2:4259:U:H5'	2.50	0.42
1:A2:4802:G:H21	1:A2:4803:C:H41	1.67	0.42
2:A3:10:G:H2'	2:A3:11:C:C6	2.55	0.42
2:A3:25:G:H8	2:A3:25:G:O5'	2.03	0.42
3:A4:87:G:H21	3:A4:89:G:H3'	1.85	0.42
6:AC:55:SER:C	6:AC:56:GLU:CG	2.88	0.42
6:AC:162:LYS:N	6:AC:166:GLU:OE2	2.52	0.42
9:AF:105:VAL:CB	9:AF:136:VAL:HG12	2.49	0.42
14:AL:161:TYR:O	14:AL:162:LYS:HB2	2.18	0.42
16:AN:88:GLY:O	16:AN:92:LEU:HD11	2.20	0.42
22:AT:48:VAL:HG12	22:AT:50:LYS:H	1.85	0.42
22:AT:126:VAL:HB	22:AT:128:LEU:HD12	2.02	0.42
24:AV:26:ILE:HD13	24:AV:39:ILE:HD11	2.00	0.42
26:AX:63:LYS:HD2	26:AX:66:PRO:HA	2.01	0.42
26:AX:156:ILE:O	26:AX:156:ILE:HG23	2.20	0.42
28:AZ:16:GLY:O	35:Ag:76:ARG:HG3	2.19	0.42
29:Aa:62:HIS:CG	29:Aa:62:HIS:O	2.70	0.42
30:Ab:47:LYS:HA	30:Ab:50:ASN:HD22	1.83	0.42
33:Ae:16:ARG:HD2	33:Ae:19:LYS:HD3	2.00	0.42
33:Ae:16:ARG:HD2	33:Ae:60:TYR:CE2	2.54	0.42
34:Af:49:TYR:O	34:Af:69:VAL:HA	2.20	0.42
34:Af:54:LYS:CG	34:Af:55:ASN:H	2.32	0.42
44:Ap:11:VAL:O	44:Ap:13:LYS:N	2.53	0.42
44:Ap:55:TRP:O	44:Ap:63:THR:HA	2.20	0.42
47:BA:28:G:H1	47:BA:42:C:H42	1.67	0.42
48:BB:817:GLU:HB2	48:BB:1170:ILE:CG2	2.39	0.42
50:C1:79:A:H3'	50:C1:80:G:H8	1.85	0.42
50:C1:85:A:OP1	75:CY:119:GLY:N	2.52	0.42
50:C1:168:C:H2'	50:C1:169:U:C6	2.54	0.42
50:C1:179:C:H2'	50:C1:180:G:N3	2.34	0.42
50:C1:238:C:O2'	50:C1:239:C:C6	2.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:313:A:OP1	50:C1:313:A:H4'	2.18	0.42
50:C1:476:A:H3'	50:C1:477:G:C8	2.53	0.42
50:C1:792:C:H2'	50:C1:793:G:C8	2.54	0.42
50:C1:810:A:H3'	50:C1:810:A:C8	2.54	0.42
50:C1:835:C:O2	50:C1:835:C:H2'	2.18	0.42
50:C1:942:G:H8	50:C1:942:G:OP2	2.03	0.42
50:C1:1101:U:C2'	50:C1:1102:G:H8	2.21	0.42
50:C1:1102:G:H1	50:C1:1130:G:N2	2.17	0.42
50:C1:1165:G:N2	74:CX:23:HIS:CG	2.87	0.42
50:C1:1378:A:C6	51:CA:105:PRO:HB3	2.54	0.42
50:C1:1609:C:C5'	50:C1:1609:C:H6	2.33	0.42
50:C1:1621:U:O2	50:C1:1621:U:C3'	2.68	0.42
50:C1:1636:G:OP1	50:C1:1638:G:N2	2.53	0.42
50:C1:1647:A:H1'	50:C1:1649:U:O4'	2.19	0.42
51:CA:200:ASP:O	68:CR:86:PRO:HG2	2.19	0.42
52:CB:90:ASP:OD1	52:CB:97:LEU:HB2	2.19	0.42
53:CC:250:TYR:HE2	73:CW:99:PHE:CZ	2.37	0.42
55:CE:203:GLY:O	55:CE:204:SER:CB	2.67	0.42
56:CF:130:ARG:O	56:CF:131:ALA:HB3	2.20	0.42
56:CF:131:ALA:O	56:CF:133:THR:N	2.51	0.42
57:CG:127:THR:HG23	57:CG:129:VAL:HG23	2.01	0.42
58:CH:49:LYS:O	58:CH:60:ILE:HD12	2.19	0.42
58:CH:59:ALA:CB	58:CH:91:HIS:HB2	2.49	0.42
61:CK:3:MET:CG	61:CK:47:LYS:HD3	2.50	0.42
62:CL:6:THR:O	62:CL:7:GLU:C	2.63	0.42
68:CR:62:GLN:C	83:Cg:280:LYS:HE2	2.43	0.42
69:CS:86:ARG:NH1	69:CS:98:VAL:HG11	2.35	0.42
71:CU:48:LEU:HD21	71:CU:97:ILE:HG21	2.02	0.42
73:CW:104:LEU:O	73:CW:110:ILE:HG23	2.20	0.42
76:CZ:113:THR:O	76:CZ:114:LYS:HB3	2.19	0.42
1:A2:43:U:OP1	16:AN:85:VAL:HG13	2.20	0.42
1:A2:94:A:H2'	1:A2:95:G:O4'	2.19	0.42
1:A2:119:G:H4'	1:A2:120:A:C8	2.54	0.42
1:A2:121:A:C6	1:A2:147:U:C2	3.07	0.42
1:A2:256:C:O2	1:A2:256:C:C3'	2.68	0.42
1:A2:413:C:O2'	1:A2:414:G:H5'	2.18	0.42
1:A2:973:U:H2'	9:AF:55:LYS:HZ3	1.82	0.42
1:A2:1079:C:P	1:A2:1080:U:OP2	2.78	0.42
1:A2:1174:G:C2	1:A2:1175:G:N7	2.88	0.42
1:A2:1285:C:H2'	1:A2:1286:C:O4'	2.19	0.42
1:A2:1611:A:C8	1:A2:1612:G:H4'	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1926:G:H8	1:A2:1926:G:P	2.42	0.42
1:A2:2000:C:H2'	1:A2:2001:C:O4'	2.19	0.42
1:A2:2027:G:H8	1:A2:2027:G:C5'	2.30	0.42
1:A2:2040:C:H5'	1:A2:2041:G:OP2	2.18	0.42
1:A2:2061:C:O2	1:A2:2061:C:O4'	2.37	0.42
1:A2:2061:C:N4	1:A2:2249:G:H1	2.13	0.42
1:A2:2353:A:C8	1:A2:2353:A:OP2	2.73	0.42
1:A2:2497:C:H1'	1:A2:2617:G:H21	1.84	0.42
1:A2:2547:U:H1'	1:A2:2739:G:C6	2.54	0.42
1:A2:2655:A:H2'	1:A2:2656:G:H8	1.83	0.42
1:A2:2716:C:C5	4:AA:177:LYS:HE2	2.54	0.42
1:A2:2741:A:H3'	1:A2:2741:A:N3	2.34	0.42
1:A2:2839:G:C4	1:A2:3593:A:N7	2.87	0.42
1:A2:2845:G:H2'	1:A2:2846:U:O4'	2.20	0.42
1:A2:4080:U:H2'	1:A2:4081:C:C4'	2.49	0.42
1:A2:4088:G:C6	4:AA:85:GLY:HA3	2.55	0.42
1:A2:4148:U:H2'	1:A2:4149:U:C6	2.54	0.42
1:A2:4332:U:OP2	1:A2:4332:U:H6	2.03	0.42
1:A2:4396:U:P	1:A2:4396:U:H6	2.43	0.42
1:A2:4415:G:C2'	1:A2:4416:C:H5'	2.49	0.42
1:A2:4642:U:O4	1:A2:4666:G:H2'	2.19	0.42
2:A3:126:C:C5	2:A3:127:U:N3	2.88	0.42
3:A4:47:G:H5'	7:AD:94:ASN:CA	2.50	0.42
4:AA:28:ARG:HH11	4:AA:123:ARG:CZ	2.32	0.42
4:AA:90:CYS:CB	4:AA:101:VAL:HG13	2.50	0.42
5:AB:54:THR:O	5:AB:76:VAL:HG22	2.20	0.42
6:AC:159:GLU:OE2	6:AC:253:THR:HG21	2.19	0.42
8:AE:205:ASN:HB2	8:AE:256:GLN:HB2	2.00	0.42
11:AH:31:ARG:NH2	11:AH:187:VAL:HG12	2.35	0.42
16:AN:1:MET:N	37:Ai:36:HIS:CE1	2.88	0.42
22:AT:158:PHE:C	22:AT:159:MET:HG2	2.45	0.42
31:Ac:32:LYS:O	31:Ac:36:LYS:HD2	2.20	0.42
33:Ae:85:LEU:HD13	33:Ae:85:LEU:O	2.19	0.42
34:Af:11:PHE:CE1	34:Af:26:ALA:HB1	2.44	0.42
43:Ao:58:LYS:NZ	43:Ao:58:LYS:HB3	2.35	0.42
46:Au:56:GLU:HB2	46:Au:146:LYS:CG	2.48	0.42
48:BB:1000:GLU:HA	48:BB:1003:GLU:OE1	2.19	0.42
48:BB:1070:LEU:CA	48:BB:1071:ARG:CZ	2.97	0.42
48:BB:1234:LYS:HA	48:BB:1237:VAL:HG22	2.02	0.42
48:BB:1257:ARG:HA	48:BB:1260:GLN:HG2	2.01	0.42
48:BB:1353:THR:HB	48:BB:1374:LYS:CE	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1374:LYS:HE2	48:BB:1374:LYS:HB3	1.57	0.42
50:C1:317:C:H4'	50:C1:317:C:OP1	2.19	0.42
50:C1:323:C:O5'	50:C1:323:C:H6	2.03	0.42
50:C1:331:C:H41	57:CG:189:ARG:HH12	1.66	0.42
50:C1:616:A:H4'	81:Ce:8:ARG:O	2.20	0.42
50:C1:885:U:O3'	50:C1:886:A:H2'	2.20	0.42
50:C1:911:C:H5"	50:C1:912:C:N4	2.34	0.42
50:C1:924:G:H5"	64:CN:3:ARG:HD2	2.01	0.42
50:C1:982:G:H5'	50:C1:1044:G:OP1	2.19	0.42
50:C1:1130:G:C2	50:C1:1131:G:C8	3.07	0.42
50:C1:1205:C:H2'	50:C1:1205:C:O2	2.19	0.42
50:C1:1406:G:H1'	50:C1:1407:U:O5'	2.20	0.42
50:C1:1442:U:N3	67:CQ:22:VAL:HG22	2.35	0.42
50:C1:1507:G:N1	82:Cf:91:ASN:HA	2.34	0.42
50:C1:1520:G:H5"	50:C1:1520:G:N3	2.33	0.42
50:C1:1543:U:C4'	50:C1:1544:C:OP1	2.66	0.42
50:C1:1628:C:H6	50:C1:1628:C:O5'	2.02	0.42
50:C1:1766:C:C5	50:C1:1767:C:N4	2.88	0.42
51:CA:30:LEU:HD23	51:CA:30:LEU:C	2.45	0.42
51:CA:62:ALA:CB	51:CA:185:MET:HE1	2.50	0.42
52:CB:89:GLU:HG3	52:CB:223:PHE:CE2	2.55	0.42
53:CC:152:ARG:O	53:CC:156:ILE:HG12	2.20	0.42
53:CC:261:PHE:HE1	72:CV:16:LYS:O	2.02	0.42
54:CD:71:ALA:HB3	61:CK:20:VAL:HG21	2.01	0.42
54:CD:166:TYR:CE1	54:CD:200:PRO:HB3	2.54	0.42
55:CE:123:LEU:HD23	55:CE:161:GLN:HA	2.00	0.42
55:CE:252:ARG:HB3	55:CE:252:ARG:HH11	1.84	0.42
58:CH:143:ARG:HB2	58:CH:155:LYS:O	2.20	0.42
59:CI:83:TYR:CD1	59:CI:205:ARG:HD2	2.53	0.42
60:CJ:131:ARG:C	60:CJ:133:ARG:H	2.28	0.42
61:CK:43:LEU:HD23	61:CK:44:HIS:H	1.85	0.42
64:CN:84:LEU:HD11	64:CN:88:LEU:HD23	2.00	0.42
66:CP:86:LEU:CD1	66:CP:88:GLU:HB3	2.50	0.42
66:CP:97:TYR:HB2	66:CP:102:PHE:CD2	2.55	0.42
71:CU:22:ILE:HD11	71:CU:91:LEU:CD1	2.50	0.42
83:Cg:42:MET:HG3	83:Cg:92:LEU:HG	2.01	0.42
1:A2:54:G:H4'	16:AN:108:ARG:NH1	2.34	0.42
1:A2:230:U:H4'	1:A2:230:U:OP2	2.20	0.42
1:A2:374:A:C6	1:A2:375:A:C6	3.07	0.42
1:A2:409:A:H2	1:A2:1313:A:O2'	2.02	0.42
1:A2:714:G:H2'	1:A2:715:C:H6	1.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:725:C:C5’	1:A2:725:C:H6	2.33	0.42
1:A2:959:C:O2’	1:A2:960:G:P	2.76	0.42
1:A2:1280:G:N2	1:A2:1281:C:H41	2.17	0.42
1:A2:1308:G:H5’	1:A2:1308:G:H8	1.84	0.42
1:A2:1542:A:C8	1:A2:1542:A:OP2	2.72	0.42
1:A2:1630:G:H5”	1:A2:1631:U:H5	1.84	0.42
1:A2:1734:C:OP2	1:A2:1734:C:C5	2.72	0.42
1:A2:1798:G:OP1	1:A2:1798:G:H8	2.01	0.42
1:A2:1825:C:H3’	1:A2:1826:C:C6	2.54	0.42
1:A2:1870:A:H3’	1:A2:1870:A:C8	2.55	0.42
1:A2:1927:U:H6	1:A2:1927:U:O5’	2.03	0.42
1:A2:1942:A:C2’	1:A2:1943:G:H8	2.33	0.42
1:A2:2060:G:C4	1:A2:2251:G:C2	3.08	0.42
1:A2:2282:G:N3	1:A2:2307:G:C2	2.88	0.42
1:A2:2316:G:H8	1:A2:2316:G:OP2	2.02	0.42
1:A2:2508:C:H2’	1:A2:2509:C:H5	1.85	0.42
1:A2:2549:C:C4’	1:A2:2737:G:C8	3.03	0.42
1:A2:2587:G:C5’	1:A2:2663:G:N2	2.83	0.42
1:A2:2746:U:P	1:A2:2746:U:C6	3.12	0.42
1:A2:3605:C:C6	1:A2:3605:C:C5’	2.95	0.42
1:A2:3694:G:N2	1:A2:3696:A:H2’	2.34	0.42
1:A2:3727:U:C2’	1:A2:3728:A:H8	2.33	0.42
1:A2:3895:C:O2’	1:A2:3896:U:H5’	2.20	0.42
1:A2:3938:G:O2’	1:A2:3939:G:H5’	2.19	0.42
1:A2:4118:C:H2’	1:A2:4119:C:O4’	2.19	0.42
1:A2:4251:G:H8	1:A2:4251:G:O5’	2.03	0.42
1:A2:4264:A:H2	22:AT:81:LYS:CG	2.33	0.42
1:A2:4328:G:H2’	1:A2:4328:G:N3	2.34	0.42
1:A2:4343:U:O5’	1:A2:4343:U:H6	2.03	0.42
1:A2:4621:G:C5	1:A2:4622:C:C5	3.07	0.42
1:A2:4706:C:P	34:Af:54:LYS:HB3	2.59	0.42
1:A2:4803:C:C4	1:A2:4804:G:C1’	2.90	0.42
1:A2:4874:G:C2’	1:A2:4875:C:H5’	2.50	0.42
1:A2:4922:A:H5”	1:A2:4922:A:C8	2.54	0.42
2:A3:58:G:O6	38:Aj:63:ARG:NH2	2.52	0.42
4:AA:103:PRO:HA	4:AA:162:ASN:O	2.19	0.42
5:AB:4:ARG:O	5:AB:5:LYS:CB	2.66	0.42
9:AF:32:ARG:HA	9:AF:35:LYS:HE3	2.01	0.42
9:AF:88:LYS:HG2	22:AT:135:PRO:CG	2.49	0.42
15:AM:23:LYS:CE	15:AM:43:THR:HB	2.50	0.42
16:AN:44:ARG:CZ	16:AN:47:LYS:HG2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:28:LEU:HD13	17:AO:28:LEU:C	2.45	0.42
17:AO:117:ARG:NH1	17:AO:160:ARG:HH12	2.18	0.42
20:AR:149:LYS:O	20:AR:153:LYS:HG3	2.19	0.42
21:AS:62:VAL:HG11	22:AT:141:VAL:HG21	2.00	0.42
31:Ac:78:ASN:HB2	31:Ac:91:VAL:C	2.45	0.42
32:Ad:32:ARG:HD3	32:Ad:48:GLU:CG	2.50	0.42
47:BA:39:U:O2'	47:BA:40:C:H5'	2.20	0.42
47:BA:44:G:O2'	47:BA:45:U:H5'	2.20	0.42
48:BB:1348:ASP:CA	48:BB:1349:ILE:HG13	2.49	0.42
48:BB:1381:GLU:CB	48:BB:1383:PRO:HD2	2.50	0.42
49:BC:343:U:C5'	50:C1:1830:U:C4	3.02	0.42
50:C1:37:C:H2'	50:C1:38:A:H5"	2.01	0.42
50:C1:59:U:H2'	50:C1:60:A:H5'	2.02	0.42
50:C1:59:U:C5	50:C1:501:C:H2'	2.55	0.42
50:C1:206:G:H8	50:C1:206:G:O5'	2.02	0.42
50:C1:474:G:C6	50:C1:475:C:N4	2.88	0.42
50:C1:522:A:N1	50:C1:643:A:C5'	2.82	0.42
50:C1:876:C:C6	50:C1:877:C:H5	2.35	0.42
50:C1:899:U:C2'	50:C1:900:C:C6	2.98	0.42
50:C1:986:G:H22	65:CO:135:ILE:HD12	1.85	0.42
50:C1:1181:A:H2'	50:C1:1182:A:O4'	2.19	0.42
50:C1:1214:A:C6	50:C1:1686:G:N1	2.87	0.42
50:C1:1214:A:N6	50:C1:1686:G:C6	2.88	0.42
50:C1:1411:G:C2'	50:C1:1412:C:H5"	2.50	0.42
50:C1:1458:G:N1	50:C1:1469:A:C6	2.88	0.42
50:C1:1567:G:C3'	50:C1:1568:C:H5'	2.50	0.42
50:C1:1649:U:H6	50:C1:1649:U:O5'	2.03	0.42
50:C1:1764:G:N3	50:C1:1764:G:C3'	2.80	0.42
50:C1:1835:A:H5"	50:C1:1863:A:H1'	2.02	0.42
50:C1:1860:A:C2	50:C1:1862:G:C8	3.08	0.42
52:CB:93:GLY:O	52:CB:94:LYS:HB2	2.20	0.42
53:CC:136:HIS:HB3	53:CC:162:ILE:HD11	2.01	0.42
54:CD:82:GLY:O	54:CD:85:GLU:HB2	2.18	0.42
55:CE:166:THR:OG1	55:CE:168:LYS:HG3	2.20	0.42
55:CE:173:ILE:HD12	55:CE:235:TRP:HZ2	1.84	0.42
56:CF:47:LYS:CE	56:CF:67:PRO:HG2	2.49	0.42
58:CH:10:LYS:N	58:CH:11:PRO:HD3	2.34	0.42
62:CL:9:ALA:CB	62:CL:12:LYS:HE2	2.49	0.42
73:CW:7:LEU:HA	73:CW:34:ILE:HG12	2.00	0.42
78:Cb:40:CYS:HB3	78:Cb:59:CYS:CB	2.49	0.42
79:Cc:34:PHE:CE2	79:Cc:42:ILE:HD12	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:Cc:42:ILE:CG2	79:Cc:43:ILE:N	2.83	0.42
79:Cc:59:LEU:O	79:Cc:60:GLU:HB2	2.20	0.42
80:Cd:24:CYS:CB	80:Cd:42:CYS:SG	3.07	0.42
82:Cf:100:LEU:O	82:Cf:100:LEU:HG	2.19	0.42
1:A2:10:A:C2	2:A3:147:G:N1	2.88	0.42
1:A2:170:C:OP2	1:A2:170:C:H5	2.03	0.42
1:A2:303:G:C8	1:A2:303:G:C3'	3.03	0.42
1:A2:402:G:C1'	1:A2:403:G:OP2	2.67	0.42
1:A2:437:C:C3'	1:A2:438:C:C6	3.03	0.42
1:A2:917:G:P	1:A2:917:G:C3'	3.03	0.42
1:A2:956:C:C2'	1:A2:957:G:C5'	2.98	0.42
1:A2:1068:C:H2'	1:A2:1069:G:C8	2.55	0.42
1:A2:1219:C:C2'	1:A2:1220:G:OP2	2.68	0.42
1:A2:1245:G:H2'	1:A2:1246:G:C5'	2.37	0.42
1:A2:1277:U:H3'	1:A2:1278:C:C5	2.55	0.42
1:A2:1328:U:H2'	1:A2:1329:G:H8	1.84	0.42
1:A2:1413:A:C2	1:A2:1431:G:N1	2.87	0.42
1:A2:1778:G:N3	1:A2:1778:G:H2'	2.35	0.42
1:A2:1832:G:OP2	1:A2:1832:G:H4'	2.19	0.42
1:A2:2525:C:N4	1:A2:2747:C:C2	2.87	0.42
1:A2:2551:G:O6	28:AZ:108:ARG:CD	2.68	0.42
1:A2:2575:A:N6	1:A2:2576:G:C6	2.87	0.42
1:A2:2620:G:O2'	1:A2:2621:G:H5'	2.20	0.42
1:A2:2853:G:N2	1:A2:2854:G:C8	2.87	0.42
1:A2:2870:U:H5"	59:CI:208:LYS:CB	2.49	0.42
1:A2:3856:C:H3'	1:A2:3857:G:H8	1.85	0.42
1:A2:4021:A:N3	46:Au:160:HIS:CE1	2.88	0.42
1:A2:4043:U:C1'	1:A2:4044:G:P	3.08	0.42
1:A2:4089:G:C4	35:Ag:94:ALA:HA	2.54	0.42
1:A2:4167:C:O4'	1:A2:4295:C:H1'	2.20	0.42
1:A2:4469:U:H1'	1:A2:4472:U:C5	2.54	0.42
1:A2:4484:G:N2	5:AB:252:ALA:HB1	2.33	0.42
1:A2:4622:C:C2'	1:A2:4623:G:H5'	2.49	0.42
1:A2:4659:U:H4'	1:A2:4660:A:H5"	2.02	0.42
1:A2:4710:G:O3'	1:A2:4711:U:C4'	2.67	0.42
1:A2:4714:G:O5'	1:A2:4714:G:C8	2.73	0.42
1:A2:4825:G:C4'	1:A2:4826:C:OP1	2.67	0.42
1:A2:4838:C:N4	1:A2:4891:G:N2	2.68	0.42
1:A2:4940:U:H4'	5:AB:175:GLN:HG3	2.02	0.42
5:AB:2:SER:O	5:AB:3:HIS:HB3	2.18	0.42
5:AB:102:PHE:HZ	5:AB:156:TYR:O	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AC:180:ILE:CD1	6:AC:207:PRO:HG2	2.50	0.42
7:AD:33:ARG:HE	22:AT:27:LEU:HD12	1.84	0.42
8:AE:172:LEU:CB	8:AE:188:ARG:HB2	2.50	0.42
8:AE:174:LEU:HD23	8:AE:188:ARG:HB3	2.02	0.42
15:AM:43:THR:OG1	15:AM:45:VAL:HG12	2.20	0.42
17:AO:7:LEU:HD23	17:AO:31:ARG:HG3	2.02	0.42
21:AS:109:CYS:O	21:AS:112:ASP:HB3	2.20	0.42
28:AZ:1:MET:HA	31:Ac:67:ALA:C	2.44	0.42
28:AZ:18:TYR:CE2	28:AZ:73:LYS:HE3	2.55	0.42
38:Aj:20:ARG:HB2	38:Aj:39:TYR:CZ	2.55	0.42
46:Au:121:VAL:C	46:Au:124:PRO:HD2	2.45	0.42
47:BA:34:G:O6	50:C1:1701:C:H1’	2.15	0.42
48:BB:904:ARG:HG2	48:BB:1057:GLN:NE2	2.34	0.42
48:BB:1122:PRO:CA	48:BB:1133:TYR:HB3	2.50	0.42
48:BB:1173:LEU:HD23	48:BB:1174:LYS:N	2.35	0.42
48:BB:1260:GLN:HG3	48:BB:1261:GLU:N	2.34	0.42
49:BC:173:A:C8	49:BC:173:A:O5’	2.70	0.42
49:BC:353:U:O5’	49:BC:353:U:C6	2.72	0.42
50:C1:33:G:O6	50:C1:522:A:H2	2.03	0.42
50:C1:166:A:H2’	50:C1:167:G:C8	2.55	0.42
50:C1:190:G:C4’	59:CI:116:HIS:O	2.64	0.42
50:C1:193:C:H5’	50:C1:193:C:C6	2.41	0.42
50:C1:211:G:C8	50:C1:211:G:H3’	2.55	0.42
50:C1:386:C:O2	50:C1:386:C:C2’	2.67	0.42
50:C1:491:C:H2’	50:C1:492:C:O4’	2.20	0.42
50:C1:514:U:H3’	50:C1:515:G:H8	1.82	0.42
50:C1:527:C:H5’	60:CJ:122:SER:HB2	2.00	0.42
50:C1:557:U:H2’	50:C1:558:G:N9	2.34	0.42
50:C1:572:U:C2’	50:C1:573:U:N3	2.83	0.42
50:C1:1057:C:O2	50:C1:1057:C:O4’	2.38	0.42
50:C1:1195:A:H2’	50:C1:1196:A:H8	1.84	0.42
50:C1:1222:G:H8	50:C1:1222:G:O5’	2.02	0.42
50:C1:1261:C:H5”	50:C1:1261:C:H6	1.79	0.42
50:C1:1377:U:C5	51:CA:102:ARG:HD3	2.54	0.42
50:C1:1451:G:H5’	83:Cg:64:HIS:CE1	2.54	0.42
50:C1:1483:A:N3	50:C1:1483:A:H3’	2.35	0.42
50:C1:1500:G:H4’	54:CD:178:ARG:O	2.20	0.42
50:C1:1578:U:C2	54:CD:4:GLN:O	2.73	0.42
50:C1:1822:A:C3’	50:C1:1823:A:H5”	2.50	0.42
52:CB:135:LEU:HD23	52:CB:135:LEU:H	1.85	0.42
54:CD:66:ILE:HD13	54:CD:66:ILE:C	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:CD:210:ILE:HG12	68:CR:39:ALA:HB2	2.01	0.42
55:CE:136:ILE:HD11	55:CE:138:HIS:CE1	2.55	0.42
56:CF:21:GLY:O	56:CF:22:LYS:HB2	2.20	0.42
56:CF:77:MET:HB3	56:CF:89:THR:OG1	2.20	0.42
58:CH:157:HIS:HD1	58:CH:190:PRO:HG3	1.85	0.42
61:CK:11:ILE:HA	61:CK:38:LYS:HE2	2.02	0.42
61:CK:15:LEU:CD2	61:CK:21:MET:HG2	2.48	0.42
62:CL:31:GLU:HG2	62:CL:32:LYS:N	2.35	0.42
62:CL:77:VAL:HG22	62:CL:86:ILE:HD12	2.02	0.42
66:CP:34:MET:O	66:CP:37:TYR:HB2	2.20	0.42
68:CR:29:HIS:O	68:CR:32:LYS:HG2	2.20	0.42
68:CR:51:ALA:O	68:CR:54:VAL:HG12	2.19	0.42
70:CT:17:ALA:HB1	70:CT:21:PHE:HE2	1.85	0.42
75:CY:7:ILE:HG12	75:CY:27:VAL:HG22	2.02	0.42
78:Cb:40:CYS:HB3	78:Cb:59:CYS:CA	2.49	0.42
83:Cg:44:LYS:HB2	83:Cg:44:LYS:NZ	2.34	0.42
1:A2:14:C:C1’	1:A2:15:A:P	3.08	0.42
1:A2:347:G:C5’	6:AC:55:SER:CB	2.97	0.42
1:A2:405:C:H4’	1:A2:405:C:OP1	2.20	0.42
1:A2:924:C:N3	1:A2:925:C:C6	2.87	0.42
1:A2:947:G:C2’	1:A2:948:A:C5’	2.95	0.42
1:A2:1187:C:OP2	1:A2:1187:C:C5	2.72	0.42
1:A2:1317:A:H5’	6:AC:102:PHE:HB2	2.02	0.42
1:A2:1670:G:H1	1:A2:1823:U:H3	1.66	0.42
1:A2:1894:G:N2	34:Af:17:GLY:HA2	2.35	0.42
1:A2:2000:C:H3’	1:A2:2001:C:C6	2.55	0.42
1:A2:2062:C:C6	1:A2:2249:G:C2	3.07	0.42
1:A2:2351:A:H2’	1:A2:2352:A:H8	1.84	0.42
1:A2:2442:C:OP2	1:A2:2442:C:C6	2.63	0.42
1:A2:2498:G:O4’	1:A2:2617:G:H1’	2.20	0.42
1:A2:2550:A:OP1	1:A2:2736:G:H1’	2.20	0.42
1:A2:2625:G:C2	1:A2:2664:U:N3	2.87	0.42
1:A2:2657:G:O2’	1:A2:2658:G:H5’	2.20	0.42
1:A2:2856:A:C8	1:A2:2858:A:O4’	2.73	0.42
1:A2:3800:U:H6	1:A2:3800:U:O5’	2.02	0.42
1:A2:3890:U:O5’	1:A2:3890:U:H6	2.02	0.42
1:A2:3894:U:H2’	1:A2:3895:C:O4’	2.19	0.42
1:A2:3942:G:H2’	1:A2:3943:G:H8	1.85	0.42
1:A2:3942:G:O3’	46:Au:21:PHE:CD1	2.73	0.42
1:A2:4004:G:C4	1:A2:4005:C:C5	3.08	0.42
1:A2:4043:U:C4’	1:A2:4044:G:OP1	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4251:G:H4'	1:A2:4252:A:C5'	2.44	0.42
1:A2:4319:U:H5"	1:A2:4319:U:C6	2.54	0.42
1:A2:4648:C:O5'	1:A2:4648:C:H6	2.00	0.42
1:A2:4743:C:C6	1:A2:4743:C:H3'	2.55	0.42
1:A2:4899:C:OP1	1:A2:4899:C:C4'	2.64	0.42
2:A3:6:C:C6	2:A3:6:C:C3'	3.02	0.42
2:A3:61:A:O3'	2:A3:63:U:H1'	2.20	0.42
3:A4:38:U:H2'	3:A4:40:U:OP2	2.19	0.42
3:A4:77:A:O2'	3:A4:78:C:H5'	2.20	0.42
5:AB:140:GLU:HG3	5:AB:140:GLU:O	2.20	0.42
8:AE:283:PRO:HB3	34:Af:105:LEU:HD21	2.00	0.42
12:AI:86:HIS:ND1	12:AI:173:PHE:HE2	2.17	0.42
14:AL:177:LYS:O	14:AL:178:ALA:HB3	2.19	0.42
28:AZ:25:ILE:HG23	28:AZ:41:ALA:HB1	2.02	0.42
28:AZ:122:TYR:HD1	28:AZ:131:PHE:CD2	2.38	0.42
28:AZ:134:LEU:CD2	35:Ag:94:ALA:HB1	2.50	0.42
31:Ac:52:CYS:CB	31:Ac:92:CYS:SG	3.06	0.42
33:Ae:70:LEU:HB3	33:Ae:71:PRO:HD2	2.00	0.42
46:Au:94:ALA:HB1	46:Au:121:VAL:HG21	2.02	0.42
47:BA:21:A:C3'	47:BA:22:G:H5"	2.50	0.42
48:BB:952:ILE:C	48:BB:955:ILE:HG12	2.45	0.42
48:BB:977:ASP:OD1	48:BB:977:ASP:O	2.37	0.42
48:BB:1181:LEU:O	48:BB:1183:GLN:N	2.53	0.42
48:BB:1301:ILE:HD12	48:BB:1404:SER:CA	2.49	0.42
48:BB:1408:LEU:HD23	48:BB:1409:LYS:H	1.84	0.42
49:BC:63:U:C2'	49:BC:64:U:C6	2.95	0.42
50:C1:49:C:H2'	50:C1:49:C:O2	2.19	0.42
50:C1:71:G:C2	50:C1:72:C:C1'	3.03	0.42
50:C1:190:G:C2	50:C1:191:A:C8	3.08	0.42
50:C1:193:C:OP1	59:CI:139:LYS:HE2	2.20	0.42
50:C1:239:C:C4	50:C1:240:G:N7	2.88	0.42
50:C1:296:U:C2	50:C1:297:A:C8	3.08	0.42
50:C1:300:U:C2'	50:C1:301:A:H8	2.31	0.42
50:C1:330:G:N3	50:C1:330:G:H2'	2.35	0.42
50:C1:382:C:C2'	50:C1:383:G:N2	2.83	0.42
50:C1:527:C:OP1	60:CJ:124:HIS:HB2	2.20	0.42
50:C1:876:C:OP2	50:C1:876:C:C5	2.73	0.42
50:C1:973:C:H3'	50:C1:973:C:C6	2.53	0.42
50:C1:1106:C:H2'	50:C1:1107:G:C8	2.54	0.42
50:C1:1276:A:N3	50:C1:1276:A:O5'	2.52	0.42
50:C1:1398:G:C2	83:Cg:61:GLY:HA2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1599:U:C5	56:CF:164:ARG:HA	2.55	0.42
50:C1:1604:G:C3'	50:C1:1605:G:H5'	2.49	0.42
51:CA:30:LEU:HD23	51:CA:31:ASP:O	2.20	0.42
52:CB:34:LYS:HD2	52:CB:95:ASN:OD1	2.20	0.42
53:CC:183:LYS:CE	73:CW:95:PRO:HA	2.50	0.42
57:CG:45:TRP:HA	57:CG:48:TYR:CD1	2.54	0.42
58:CH:101:LEU:HB2	58:CH:116:ARG:HG3	2.01	0.42
66:CP:69:PRO:O	66:CP:70:MET:HB2	2.20	0.42
69:CS:113:ARG:O	69:CS:117:ILE:HG13	2.20	0.42
70:CT:20:ALA:O	70:CT:23:LYS:HB2	2.20	0.42
70:CT:36:THR:O	70:CT:37:VAL:CB	2.67	0.42
70:CT:144:LYS:O	70:CT:144:LYS:HG2	2.20	0.42
74:CX:32:LEU:CD2	74:CX:34:THR:HB	2.49	0.42
77:Ca:23:CYS:HB2	77:Ca:74:CYS:HB3	2.01	0.42
82:Cf:121:CYS:HA	82:Cf:132:MET:SD	2.60	0.42
1:A2:44:A:C2'	1:A2:45:U:H5'	2.50	0.42
1:A2:46:U:OP2	1:A2:47:A:H2'	2.20	0.42
1:A2:131:C:H2'	1:A2:138:C:N4	2.31	0.42
1:A2:236:C:H5"	27:AY:46:SER:OG	2.19	0.42
1:A2:328:U:H2'	14:AL:31:ARG:HD2	2.02	0.42
1:A2:462:A:C4'	1:A2:463:C:C5'	2.79	0.42
1:A2:670:C:P	45:At:58:LYS:HB3	2.59	0.42
1:A2:670:C:P	45:At:87:ARG:HB2	2.60	0.42
1:A2:1046:G:C8	1:A2:1046:G:O5'	2.73	0.42
1:A2:1294:C:C4	1:A2:1295:C:N4	2.88	0.42
1:A2:1607:C:H4'	1:A2:1607:C:OP1	2.20	0.42
1:A2:1643:U:H2'	1:A2:1644:C:H6	1.83	0.42
1:A2:1791:C:H1'	30:Ab:58:GLN:HG2	2.01	0.42
1:A2:1794:G:C6	30:Ab:41:ARG:HB3	2.55	0.42
1:A2:1815:A:H8	1:A2:1815:A:H5"	1.84	0.42
1:A2:1904:C:O5'	1:A2:1904:C:H6	2.03	0.42
1:A2:2508:C:H2'	1:A2:2509:C:C5	2.55	0.42
1:A2:2839:G:C5	1:A2:3593:A:N7	2.88	0.42
1:A2:3584:G:N2	25:AW:50:ASN:H	2.17	0.42
1:A2:3870:A:N3	1:A2:3870:A:H2'	2.34	0.42
1:A2:3903:G:C2'	1:A2:3904:C:H5'	2.50	0.42
1:A2:4093:C:O5'	1:A2:4093:C:C6	2.73	0.42
1:A2:4285:A:H5'	7:AD:145:TYR:CD1	2.54	0.42
1:A2:4333:G:N7	43:Ao:60:ALA:HB3	2.34	0.42
1:A2:4600:C:H2'	1:A2:4600:C:O2	2.19	0.42
1:A2:4642:U:C2'	1:A2:4643:U:H5"	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4743:C:C6	1:A2:4743:C:C3'	3.02	0.42
1:A2:4831:U:C5	8:AE:280:GLY:HA2	2.55	0.42
1:A2:4901:U:H4'	34:Af:71:TRP:HE1	1.85	0.42
2:A3:3:A:C8	2:A3:3:A:C3'	3.03	0.42
3:A4:24:C:P	3:A4:24:C:H6	2.43	0.42
3:A4:85:G:N2	3:A4:93:G:C4	2.88	0.42
5:AB:90:VAL:HG11	5:AB:182:GLU:CD	2.45	0.42
6:AC:349:LEU:O	6:AC:353:LYS:N	2.39	0.42
7:AD:172:SER:C	7:AD:173:ILE:HG13	2.45	0.42
8:AE:264:ILE:HG21	8:AE:267:LEU:HB2	2.02	0.42
10:AG:146:LEU:HD13	10:AG:205:THR:HG21	2.01	0.42
14:AL:110:LEU:O	14:AL:114:VAL:HG23	2.20	0.42
14:AL:134:PRO:HA	14:AL:135:LYS:HE3	2.01	0.42
17:AO:161:LYS:O	17:AO:164:ALA:HB3	2.20	0.42
21:AS:82:LEU:C	21:AS:127:MET:HE2	2.44	0.42
21:AS:140:PRO:HA	21:AS:143:LYS:HB3	2.01	0.42
22:AT:117:LYS:O	22:AT:120:LYS:HG2	2.20	0.42
33:Ae:12:ILE:HG12	33:Ae:66:THR:HB	2.01	0.42
46:Au:59:ILE:HD13	46:Au:145:MET:HB3	2.01	0.42
47:BA:34:G:O4'	50:C1:1248:U:C6	2.73	0.42
47:BA:35:A:N6	49:BC:344:G:H1	2.16	0.42
48:BB:841:GLU:HB2	48:BB:1065:ALA:HB3	1.97	0.42
48:BB:1086:THR:HG21	48:BB:1146:LYS:HD3	2.02	0.42
48:BB:1152:LEU:CG	48:BB:1153:GLU:H	2.33	0.42
48:BB:1196:TYR:OH	48:BB:1231:ASP:CG	2.63	0.42
48:BB:1311:LEU:HD21	48:BB:1327:THR:HG21	2.02	0.42
50:C1:10:G:H2'	50:C1:11:A:H8	1.83	0.42
50:C1:129:C:H3'	50:C1:130:G:C8	2.55	0.42
50:C1:169:U:C1'	57:CG:133:LEU:HD12	2.44	0.42
50:C1:222:U:O5'	50:C1:222:U:H6	2.03	0.42
50:C1:317:C:C6	50:C1:317:C:H5"	2.55	0.42
50:C1:365:C:O2	50:C1:365:C:C2'	2.68	0.42
50:C1:813:A:C5	50:C1:814:U:C5	3.08	0.42
50:C1:912:C:C6	50:C1:912:C:OP2	2.73	0.42
50:C1:977:C:OP2	50:C1:977:C:H6	2.03	0.42
50:C1:1120:U:C6	50:C1:1120:U:C4'	3.03	0.42
50:C1:1124:C:C5'	52:CB:150:ILE:HG12	2.50	0.42
50:C1:1139:C:O2	50:C1:1139:C:O4'	2.37	0.42
50:C1:1212:G:N1	50:C1:1688:C:C2	2.88	0.42
50:C1:1244:U:H2'	50:C1:1245:G:H8	1.85	0.42
50:C1:1284:A:H4'	50:C1:1287:A:N6	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1313:A:O5'	50:C1:1314:U:H5	2.02	0.42
50:C1:1421:A:H3'	50:C1:1422:G:C8	2.54	0.42
50:C1:1439:A:C8	50:C1:1439:A:OP2	2.73	0.42
50:C1:1543:U:H4'	50:C1:1544:C:OP1	2.19	0.42
50:C1:1659:U:H6	50:C1:1660:C:O2	2.03	0.42
56:CF:33:ILE:O	56:CF:34:SER:CB	2.68	0.42
59:CI:12:ARG:HG3	59:CI:13:LYS:N	2.34	0.42
60:CJ:14:VAL:CG2	60:CJ:48:PHE:HD1	2.33	0.42
60:CJ:18:ARG:HA	60:CJ:19:PRO:HD2	1.93	0.42
60:CJ:133:ARG:O	60:CJ:162:ARG:CD	2.65	0.42
62:CL:16:ILE:CG1	62:CL:36:TYR:HD1	2.33	0.42
64:CN:33:VAL:O	64:CN:37:ILE:HG13	2.20	0.42
65:CO:56:VAL:HG21	65:CO:81:VAL:CG2	2.50	0.42
66:CP:96:VAL:HB	66:CP:120:SER:HB2	2.01	0.42
70:CT:123:LEU:HD23	70:CT:123:LEU:N	2.35	0.42
75:CY:27:VAL:HG11	75:CY:35:VAL:HG21	2.01	0.42
76:CZ:43:LYS:HE3	76:CZ:44:LEU:O	2.19	0.42
76:CZ:106:GLN:OE1	76:CZ:108:ILE:HD11	2.20	0.42
77:Ca:43:ASN:HD21	77:Ca:50:VAL:HG21	1.84	0.42
79:Cc:12:ALA:HB1	79:Cc:32:VAL:CG1	2.49	0.42
80:Cd:12:ARG:HG2	80:Cd:12:ARG:O	2.20	0.42
1:A2:14:C:O5'	1:A2:14:C:H2'	2.20	0.41
1:A2:43:U:H4'	43:Ao:52:THR:CG2	2.44	0.41
1:A2:202:C:N3	1:A2:206:U:C5	2.88	0.41
1:A2:221:U:OP2	1:A2:221:U:C6	2.73	0.41
1:A2:367:A:C2	1:A2:368:A:C4	3.08	0.41
1:A2:446:C:C6	1:A2:446:C:OP2	2.72	0.41
1:A2:457:A:C6	1:A2:676:G:N7	2.89	0.41
1:A2:642:C:C6	1:A2:643:G:O4'	2.73	0.41
1:A2:741:C:C2	1:A2:742:U:C5	3.08	0.41
1:A2:743:C:H2'	1:A2:744:G:C8	2.55	0.41
1:A2:929:U:C4	1:A2:930:C:C5	3.08	0.41
1:A2:1307:C:H1'	1:A2:4408:G:H21	1.85	0.41
1:A2:1512:A:OP1	38:Aj:15:THR:HG21	2.20	0.41
1:A2:1662:U:C4'	29:Aa:43:ILE:HG21	2.49	0.41
1:A2:1734:C:OP2	1:A2:1734:C:C6	2.72	0.41
1:A2:1814:G:N3	1:A2:1814:G:C2'	2.83	0.41
1:A2:1830:U:H6	1:A2:1830:U:O5'	2.03	0.41
1:A2:2014:C:C5'	1:A2:2014:C:C6	3.03	0.41
1:A2:2040:C:O2	1:A2:2040:C:H2'	2.20	0.41
1:A2:2247:C:H2'	1:A2:2248:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2305:U:H2'	1:A2:2306:G:N9	2.31	0.41
1:A2:2323:C:H4'	33:Ae:36:ARG:NH1	2.34	0.41
1:A2:2373:A:OP2	1:A2:2783:A:C5	2.72	0.41
1:A2:2463:G:H3'	1:A2:2464:G:C8	2.54	0.41
1:A2:2479:G:C5'	1:A2:4052:G:H22	2.33	0.41
1:A2:2549:C:P	1:A2:2741:A:C8	3.13	0.41
1:A2:4039:U:H2'	1:A2:4040:C:C6	2.55	0.41
1:A2:4142:G:O2'	4:AA:230:PRO:HG3	2.20	0.41
1:A2:4211:A:C4'	13:AJ:108:GLY:HA3	2.50	0.41
1:A2:4248:C:O2	1:A2:4281:U:H5'	2.20	0.41
1:A2:4298:G:O6	1:A2:4335:C:H1'	2.19	0.41
1:A2:4526:U:H2'	1:A2:4527:G:O5'	2.20	0.41
1:A2:4542:C:C5	1:A2:4543:C:N4	2.88	0.41
1:A2:4573:C:C2	1:A2:4574:G:C8	3.07	0.41
1:A2:4595:A:N3	1:A2:4595:A:H2'	2.35	0.41
1:A2:4717:U:C6	17:AO:114:LYS:HA	2.53	0.41
1:A2:4867:G:H5"	1:A2:4867:G:C8	2.53	0.41
1:A2:4900:G:C6	34:Af:60:PRO:O	2.72	0.41
10:AG:37:LYS:HE2	10:AG:44:ASP:HB3	2.02	0.41
11:AH:81:ILE:O	11:AH:84:VAL:HB	2.19	0.41
12:AI:76:MET:HE2	12:AI:85:PHE:CG	2.55	0.41
14:AL:76:PHE:HB2	14:AL:81:LEU:HD21	2.02	0.41
15:AM:39:ASP:HB2	15:AM:47:ARG:HG3	2.01	0.41
18:AP:4:TYR:CE2	18:AP:16:LYS:HD3	2.55	0.41
18:AP:10:ASN:ND2	18:AP:12:THR:HB	2.34	0.41
19:AQ:67:ILE:HG12	19:AQ:96:PRO:HD2	2.02	0.41
19:AQ:75:ARG:NH1	19:AQ:137:VAL:HG22	2.35	0.41
20:AR:106:LEU:C	20:AR:120:TYR:HE2	2.28	0.41
21:AS:16:CYS:HA	21:AS:59:GLY:HA2	2.02	0.41
28:AZ:89:ILE:HD11	28:AZ:93:LYS:HE2	2.02	0.41
34:Af:41:PHE:CE1	34:Af:110:ILE:HD11	2.50	0.41
34:Af:48:ALA:HB1	34:Af:69:VAL:CG1	2.50	0.41
36:Ah:87:LYS:HE2	36:Ah:91:MET:HB3	2.02	0.41
39:Ak:17:ARG:C	39:Ak:19:ASP:H	2.28	0.41
40:Al:23:ILE:CD1	40:Al:38:ASN:HB2	2.50	0.41
43:Ao:33:LEU:O	43:Ao:34:TYR:CB	2.67	0.41
46:Au:59:ILE:HG22	46:Au:61:VAL:HG23	2.02	0.41
46:Au:84:LEU:CD1	46:Au:118:LEU:HD21	2.42	0.41
48:BB:932:SER:CB	48:BB:961:LYS:HE3	2.48	0.41
48:BB:1306:CYS:SG	48:BB:1331:GLY:C	3.03	0.41
50:C1:35:C:H3'	50:C1:36:U:C6	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:45:A:N6	50:C1:481:C:H4’	2.35	0.41
50:C1:61:A:C1’	50:C1:62:G:P	3.08	0.41
50:C1:157:U:O5’	50:C1:157:U:C6	2.73	0.41
50:C1:398:A:H4’	50:C1:399:C:C3’	2.41	0.41
50:C1:527:C:H1’	60:CJ:125:HIS:ND1	2.35	0.41
50:C1:560:A:O3’	50:C1:561:A:C8	2.72	0.41
50:C1:586:G:H2’	50:C1:586:G:N3	2.35	0.41
50:C1:641:A:C2’	50:C1:642:U:H5’	2.50	0.41
50:C1:740:C:C4	50:C1:741:C:N4	2.88	0.41
50:C1:743:U:P	50:C1:743:U:O4’	2.78	0.41
50:C1:867:G:OP2	50:C1:867:G:C8	2.72	0.41
50:C1:973:C:C6	50:C1:973:C:C3’	3.03	0.41
50:C1:1043:G:C4	50:C1:1044:G:C8	3.08	0.41
50:C1:1081:U:O2’	50:C1:1082:A:H5’	2.20	0.41
50:C1:1257:G:H5’	50:C1:1258:A:H8	1.78	0.41
50:C1:1282:A:H2’	50:C1:1283:C:C5’	2.50	0.41
50:C1:1403:C:C5	50:C1:1404:U:C1’	3.03	0.41
50:C1:1513:C:H5’	80:Cd:9:SER:HB2	2.01	0.41
50:C1:1543:U:C2	67:CQ:43:GLU:HG2	2.55	0.41
50:C1:1829:G:N3	50:C1:1829:G:H2’	2.35	0.41
51:CA:103:PHE:CD1	51:CA:133:PRO:HG3	2.55	0.41
55:CE:80:VAL:HG13	55:CE:81:THR:HG23	2.02	0.41
57:CG:165:GLU:C	57:CG:167:LYS:H	2.27	0.41
58:CH:61:ILE:HG22	58:CH:93:VAL:CG2	2.50	0.41
58:CH:109:ARG:HD3	58:CH:110:THR:H	1.85	0.41
58:CH:152:ARG:HD3	58:CH:152:ARG:N	2.35	0.41
59:CI:191:GLU:HG3	62:CL:20:LYS:CG	2.50	0.41
63:CM:111:VAL:HG12	63:CM:113:ASP:O	2.20	0.41
71:CU:20:ILE:HG13	71:CU:98:VAL:CG2	2.50	0.41
74:CX:41:PHE:HE1	74:CX:120:PHE:CD1	2.38	0.41
79:Cc:11:LEU:HD23	79:Cc:57:THR:HA	2.01	0.41
79:Cc:40:ARG:HD3	79:Cc:42:ILE:HD11	2.01	0.41
1:A2:15:A:C2	2:A3:143:G:N2	2.89	0.41
1:A2:87:A:N3	1:A2:88:A:H1’	2.32	0.41
1:A2:463:C:O2	1:A2:463:C:H2’	2.20	0.41
1:A2:691:G:H2’	1:A2:692:C:OP2	2.20	0.41
1:A2:897:U:H3’	1:A2:897:U:H6	1.85	0.41
1:A2:970:C:O2	1:A2:970:C:H2’	2.20	0.41
1:A2:970:C:O5’	1:A2:970:C:H6	2.02	0.41
1:A2:1274:A:H62	8:AE:228:GLN:HG3	1.84	0.41
1:A2:1305:C:C5	1:A2:3847:C:O3’	2.70	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1384:G:C4	1:A2:1385:C:C5	3.07	0.41
1:A2:1497:A:H4'	1:A2:1498:C:OP1	2.19	0.41
1:A2:1525:C:C4'	1:A2:1562:A:H2	2.21	0.41
1:A2:1532:A:H4'	1:A2:1533:A:OP2	2.20	0.41
1:A2:1656:U:H2'	1:A2:1657:C:O4'	2.19	0.41
1:A2:1792:U:H3'	1:A2:1793:C:C5	2.55	0.41
1:A2:1866:A:N7	1:A2:2027:G:C5'	2.83	0.41
1:A2:1918:G:C8	1:A2:1918:G:C5'	2.95	0.41
1:A2:2301:C:H2'	1:A2:2302:G:H5'	2.01	0.41
1:A2:2348:U:C6	1:A2:2348:U:C4'	3.04	0.41
1:A2:2362:U:H2'	1:A2:2363:U:H6	1.85	0.41
1:A2:2454:A:H2'	1:A2:2455:C:OP2	2.20	0.41
1:A2:2703:G:C1'	1:A2:2704:C:OP1	2.67	0.41
1:A2:3648:U:O2	1:A2:3648:U:O4'	2.37	0.41
1:A2:3713:G:C2'	1:A2:3714:U:H5'	2.50	0.41
1:A2:4100:C:O5'	1:A2:4100:C:H6	2.02	0.41
1:A2:4310:C:H2'	1:A2:4311:U:C6	2.55	0.41
1:A2:4578:G:O5'	1:A2:4578:G:H8	2.03	0.41
1:A2:4651:A:C2	1:A2:4660:A:C4	3.07	0.41
1:A2:4709:G:N2	1:A2:4905:U:C4	2.88	0.41
1:A2:4720:G:H3'	1:A2:4720:G:C8	2.55	0.41
1:A2:4722:U:H3'	1:A2:4722:U:O2	2.20	0.41
1:A2:4803:C:C2'	1:A2:4804:G:H4'	2.48	0.41
1:A2:4863:G:C8	1:A2:4863:G:C3'	3.04	0.41
2:A3:25:G:O5'	2:A3:25:G:C8	2.73	0.41
2:A3:37:A:H2	2:A3:105:C:N4	1.96	0.41
2:A3:140:C:H6	2:A3:140:C:O5'	2.03	0.41
3:A4:107:G:C8	3:A4:107:G:OP2	2.73	0.41
5:AB:332:MET:HE1	5:AB:365:LEU:HD13	2.02	0.41
6:AC:93:GLY:O	6:AC:99:GLY:HA3	2.20	0.41
9:AF:80:ASN:HB2	22:AT:140:PHE:CZ	2.55	0.41
17:AO:185:VAL:O	17:AO:188:LYS:HB3	2.20	0.41
19:AQ:91:ARG:HA	29:Aa:76:ASP:OD1	2.20	0.41
20:AR:121:HIS:NE2	20:AR:125:LEU:HD11	2.35	0.41
27:AY:42:TYR:HB3	27:AY:124:LYS:HE3	2.03	0.41
32:Ad:124:GLU:O	32:Ad:125:ASN:CB	2.67	0.41
34:Af:46:ARG:HB2	34:Af:106:TYR:OH	2.20	0.41
34:Af:58:VAL:C	34:Af:63:LYS:O	2.63	0.41
39:Ak:20:ALA:HB2	39:Ak:36:VAL:CG2	2.43	0.41
46:Au:62:PHE:CD2	46:Au:62:PHE:C	2.97	0.41
47:BA:66:U:O2'	47:BA:67:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:810:ASP:O	48:BB:1171:PRO:HD3	2.20	0.41
48:BB:824:LYS:HD3	48:BB:1165:TYR:CE2	2.55	0.41
48:BB:838:VAL:HG23	48:BB:1061:SER:HB3	2.03	0.41
48:BB:840:THR:O	48:BB:842:LYS:N	2.53	0.41
48:BB:1073:GLN:NE2	48:BB:1073:GLN:CA	2.73	0.41
48:BB:1324:MET:CB	48:BB:1386:PHE:CZ	3.03	0.41
48:BB:1327:THR:HG22	48:BB:1370:GLU:HB3	2.01	0.41
50:C1:67:C:C5	57:CG:163:ASN:N	2.79	0.41
50:C1:95:G:C2'	50:C1:96:C:H5'	2.49	0.41
50:C1:142:C:H4'	50:C1:143:U:O5'	2.20	0.41
50:C1:190:G:C2	50:C1:191:A:N7	2.88	0.41
50:C1:340:C:C6	50:C1:340:C:O5'	2.72	0.41
50:C1:683:G:C4	50:C1:1023:A:C6	3.08	0.41
50:C1:840:C:H4'	50:C1:841:G:OP2	2.17	0.41
50:C1:928:G:H2'	50:C1:928:G:O5'	2.21	0.41
50:C1:1204:A:C2	50:C1:1205:C:C2	3.08	0.41
50:C1:1258:A:OP2	50:C1:1258:A:C4	2.73	0.41
50:C1:1265:A:C2	50:C1:1266:C:C6	3.08	0.41
50:C1:1289:U:O2	50:C1:1289:U:C3'	2.68	0.41
50:C1:1350:U:C6	50:C1:1350:U:O5'	2.73	0.41
50:C1:1402:A:H3'	50:C1:1403:C:C6	2.55	0.41
50:C1:1518:C:OP1	50:C1:1520:G:H8	2.03	0.41
50:C1:1547:C:H1'	50:C1:1670:C:H4'	2.02	0.41
50:C1:1643:U:C2	50:C1:1644:C:C5	3.08	0.41
50:C1:1675:A:H2'	50:C1:1676:U:O4'	2.20	0.41
50:C1:1686:G:C5	50:C1:1687:C:C5	3.08	0.41
52:CB:72:ALA:HB1	52:CB:79:VAL:O	2.19	0.41
52:CB:126:ASP:O	52:CB:127:VAL:HB	2.20	0.41
53:CC:59:GLU:HG2	53:CC:60:TRP:N	2.35	0.41
54:CD:64:ARG:HH21	61:CK:72:THR:HA	1.85	0.41
54:CD:210:ILE:HG12	68:CR:39:ALA:HB1	2.00	0.41
67:CQ:80:GLN:O	67:CQ:84:ILE:HG13	2.20	0.41
73:CW:36:ARG:O	73:CW:40:VAL:HG23	2.20	0.41
81:Ce:23:GLU:OE2	81:Ce:27:LYS:HE2	2.20	0.41
1:A2:220:G:H4'	1:A2:221:U:OP1	2.20	0.41
1:A2:265:C:H2'	1:A2:266:C:C6	2.54	0.41
1:A2:420:A:H8	1:A2:420:A:O5'	2.03	0.41
1:A2:510:C:C4'	14:AL:111:GLN:HB2	2.47	0.41
1:A2:663:G:C4	1:A2:664:C:C5	3.08	0.41
1:A2:736:G:N2	1:A2:737:G:H1'	2.35	0.41
1:A2:889:C:O5'	1:A2:889:C:C6	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:893:A:C6	1:A2:894:G:N7	2.88	0.41
1:A2:961:C:H2'	1:A2:962:G:N7	2.35	0.41
1:A2:1179:G:C2	1:A2:1180:G:C5	3.09	0.41
1:A2:1221:C:OP2	9:AF:48:LYS:HE3	2.20	0.41
1:A2:1533:A:H3'	1:A2:1534:G:H8	1.85	0.41
1:A2:1631:U:H6	1:A2:1631:U:O5'	2.04	0.41
1:A2:1649:G:N2	1:A2:1832:G:H2'	2.35	0.41
1:A2:1729:G:C5	1:A2:1730:A:C8	3.07	0.41
1:A2:2340:A:H3'	1:A2:2341:G:H8	1.84	0.41
1:A2:2347:A:C1'	1:A2:2348:U:P	3.07	0.41
1:A2:2426:A:H8	1:A2:2426:A:O5'	2.04	0.41
1:A2:2616:U:C2	1:A2:2671:G:C2	3.08	0.41
1:A2:2637:A:C3'	1:A2:2638:U:C5'	2.91	0.41
1:A2:2741:A:N3	1:A2:2741:A:C2'	2.83	0.41
1:A2:2862:A:H2'	1:A2:2863:U:C6	2.55	0.41
1:A2:3570:C:H6	1:A2:3570:C:O5'	2.03	0.41
1:A2:3573:A:H5'	1:A2:3574:C:OP1	2.21	0.41
1:A2:3611:A:C8	38:Aj:3:LYS:HD3	2.55	0.41
1:A2:3702:A:H2'	1:A2:3703:U:N1	2.35	0.41
1:A2:3733:U:H6	1:A2:3733:U:O5'	2.02	0.41
1:A2:3737:U:O2'	1:A2:3738:C:H5'	2.19	0.41
1:A2:3753:A:H2'	1:A2:3754:A:H3'	2.01	0.41
1:A2:3840:A:C2	1:A2:3854:G:C2	3.08	0.41
1:A2:3888:C:H6	1:A2:3888:C:C5'	2.33	0.41
1:A2:4013:G:O6	46:Au:95:LYS:HD3	2.20	0.41
1:A2:4184:A:H2'	1:A2:4185:G:O4'	2.21	0.41
1:A2:4225:U:H5'	1:A2:4227:G:O6	2.20	0.41
1:A2:4269:G:C8	1:A2:4269:G:O5'	2.73	0.41
1:A2:4285:A:H8	1:A2:4285:A:O5'	2.02	0.41
1:A2:4517:U:H2'	1:A2:4518:U:H5'	2.02	0.41
1:A2:4529:U:H3'	1:A2:4530:G:H5'	2.02	0.41
1:A2:4660:A:H2'	1:A2:4661:A:C5'	2.45	0.41
1:A2:4735:G:C3'	1:A2:4736:C:C5'	2.99	0.41
2:A3:114:G:H2'	2:A3:114:G:N3	2.36	0.41
5:AB:213:GLN:NE2	5:AB:287:ILE:HB	2.34	0.41
7:AD:33:ARG:HG2	22:AT:27:LEU:HD11	2.02	0.41
7:AD:197:LYS:HD2	7:AD:202:GLN:CG	2.51	0.41
9:AF:186:CYS:O	9:AF:189:ASP:HB3	2.19	0.41
10:AG:63:LEU:HB3	16:AN:29:GLN:HE22	1.85	0.41
11:AH:54:ARG:NH1	11:AH:56:ARG:HD3	2.36	0.41
16:AN:115:VAL:HA	16:AN:134:LEU:HD23	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AP:40:HIS:O	18:AP:43:LYS:HG2	2.20	0.41
30:Ab:54:LEU:O	30:Ab:59:ALA:CB	2.64	0.41
32:Ad:115:LYS:HG3	32:Ad:116:ASN:N	2.35	0.41
45:At:14:SER:O	45:At:17:LEU:HB3	2.20	0.41
48:BB:814:THR:O	48:BB:1170:ILE:HD11	2.19	0.41
48:BB:848:ILE:HD13	48:BB:936:ILE:HD12	2.02	0.41
48:BB:849:CYS:SG	48:BB:934:CYS:SG	3.12	0.41
49:BC:347:C:C6	49:BC:347:C:H3'	2.55	0.41
50:C1:125:C:H42	50:C1:129:C:P	2.43	0.41
50:C1:130:G:H3'	50:C1:131:C:C5'	2.46	0.41
50:C1:191:A:H4'	59:CI:147:LYS:NZ	2.35	0.41
50:C1:211:G:C8	50:C1:211:G:C3'	3.04	0.41
50:C1:361:U:H4'	50:C1:362:C:H5'	2.01	0.41
50:C1:601:G:H1	50:C1:621:C:H42	1.69	0.41
50:C1:830:A:C6	50:C1:845:G:C2	3.08	0.41
50:C1:870:A:C6	50:C1:916:A:C6	3.08	0.41
50:C1:1066:U:H2'	50:C1:1067:C:H6	1.85	0.41
50:C1:1308:U:C1'	50:C1:1309:C:C6	2.93	0.41
50:C1:1402:A:C3'	50:C1:1403:C:C5	3.03	0.41
50:C1:1540:G:H5'	50:C1:1540:G:C8	2.51	0.41
50:C1:1551:U:O2	50:C1:1551:U:C3'	2.69	0.41
50:C1:1839:U:H1'	50:C1:1863:A:N7	2.35	0.41
51:CA:30:LEU:HB2	51:CA:47:TYR:CE2	2.55	0.41
52:CB:145:LYS:HZ3	52:CB:149:GLN:HB3	1.85	0.41
55:CE:133:VAL:O	55:CE:134:LYS:HB2	2.20	0.41
57:CG:145:PHE:O	57:CG:146:ASN:CB	2.68	0.41
58:CH:62:ILE:HG22	58:CH:93:VAL:O	2.21	0.41
62:CL:40:ILE:HD13	62:CL:143:LEU:HD11	2.02	0.41
62:CL:59:LYS:HB2	62:CL:112:HIS:CE1	2.56	0.41
62:CL:111:VAL:HG23	62:CL:140:PHE:C	2.45	0.41
63:CM:92:CYS:SG	63:CM:94:ILE:HG23	2.60	0.41
65:CO:147:ARG:HH12	65:CO:150:ARG:HH11	1.69	0.41
66:CP:126:VAL:HG13	66:CP:127:LYS:N	2.23	0.41
68:CR:63:ARG:HA	83:Cg:280:LYS:NZ	2.35	0.41
70:CT:72:VAL:HG13	70:CT:100:ALA:HB1	2.02	0.41
70:CT:102:ARG:O	70:CT:102:ARG:HD3	2.20	0.41
83:Cg:277:THR:HB	83:Cg:278:SER:H	1.63	0.41
1:A2:24:G:N2	1:A2:332:G:O4'	2.44	0.41
1:A2:87:A:H8	1:A2:87:A:O5'	2.04	0.41
1:A2:137:G:H5'	16:AN:144:ARG:NH2	2.34	0.41
1:A2:194:A:H8	1:A2:194:A:P	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:457:A:O2'	1:A2:679:U:C5	2.71	0.41
1:A2:461:A:H5'	1:A2:462:A:OP2	2.21	0.41
1:A2:943:G:H5'	1:A2:1262:G:H5'	2.01	0.41
1:A2:1079:C:OP2	1:A2:1079:C:H6	2.04	0.41
1:A2:1160:C:C4	1:A2:1161:C:N3	2.89	0.41
1:A2:1220:G:H5'	9:AF:48:LYS:HD3	1.98	0.41
1:A2:1239:G:O2'	1:A2:1240:G:H5'	2.20	0.41
1:A2:1258:C:C3'	1:A2:1259:A:C5'	2.84	0.41
1:A2:1305:C:C5	1:A2:3848:G:P	3.14	0.41
1:A2:1317:A:C2	1:A2:1638:U:O4'	2.74	0.41
1:A2:1341:G:H8	1:A2:1341:G:O5'	2.02	0.41
1:A2:1374:G:H2'	1:A2:1375:U:H6	1.81	0.41
1:A2:1479:A:O3'	1:A2:1481:G:H5'	2.19	0.41
1:A2:1479:A:C4	29:Aa:114:LYS:HE3	2.55	0.41
1:A2:1483:G:OP2	1:A2:1483:G:C8	2.74	0.41
1:A2:1552:G:C6	1:A2:1553:G:C2	3.08	0.41
1:A2:1671:C:C2	1:A2:1672:U:C5	3.09	0.41
1:A2:1868:G:N2	1:A2:1916:C:C4	2.88	0.41
1:A2:1890:G:C6	1:A2:2035:A:C2	3.08	0.41
1:A2:2010:U:C6	1:A2:2010:U:C3'	3.03	0.41
1:A2:2020:A:N7	1:A2:2021:A:N1	2.68	0.41
1:A2:2061:C:H5	1:A2:2249:G:N2	2.17	0.41
1:A2:2320:G:C4	6:AC:101:MET:HE3	2.56	0.41
1:A2:2395:A:C5	1:A2:2396:C:C5	3.08	0.41
1:A2:2524:G:N3	1:A2:2524:G:C2'	2.83	0.41
1:A2:2550:A:H2'	1:A2:2550:A:N3	2.36	0.41
1:A2:2642:U:H3'	20:AR:124:TYR:OH	2.21	0.41
1:A2:2864:U:H2'	1:A2:3587:C:C5	2.55	0.41
1:A2:3616:A:C2'	1:A2:3617:A:H5"	2.51	0.41
1:A2:3705:A:H2'	1:A2:3706:A:C8	2.55	0.41
1:A2:3724:G:H3'	48:BB:1381:GLU:HA	2.01	0.41
1:A2:4175:C:H3'	1:A2:4175:C:OP1	2.21	0.41
1:A2:4219:C:H6	1:A2:4219:C:O5'	2.03	0.41
1:A2:4221:C:H2'	1:A2:4222:C:C6	2.55	0.41
1:A2:4269:G:C8	1:A2:4269:G:C5'	3.03	0.41
1:A2:4530:G:H2'	1:A2:4531:A:OP2	2.19	0.41
1:A2:4562:A:P	48:BB:945:HIS:HE2	2.27	0.41
1:A2:4580:U:C6	1:A2:4580:U:C3'	3.03	0.41
1:A2:4736:C:N4	1:A2:4811:G:H1	2.15	0.41
1:A2:4825:G:C4	15:AM:91:TRP:HB2	2.55	0.41
1:A2:4829:A:O4'	21:AS:169:THR:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4922:A:OP2	5:AB:128:LYS:HD2	2.21	0.41
2:A3:103:A:OP2	2:A3:104:A:H2'	2.20	0.41
2:A3:117:C:O2'	2:A3:118:C:H5'	2.20	0.41
6:AC:252:TRP:CH2	6:AC:260:LEU:HD11	2.55	0.41
9:AF:66:ARG:HG2	9:AF:69:ILE:HD11	2.03	0.41
11:AH:34:LEU:HD12	11:AH:84:VAL:HG23	2.01	0.41
12:AI:191:ILE:HG21	12:AI:213:HIS:CE1	2.54	0.41
13:AJ:110:GLN:O	13:AJ:111:GLU:CB	2.67	0.41
15:AM:24:LEU:H	15:AM:43:THR:HG21	1.85	0.41
16:AN:84:PRO:O	43:Ao:48:TYR:CD2	2.74	0.41
16:AN:157:LYS:HG3	16:AN:158:HIS:CD2	2.55	0.41
17:AO:47:PHE:HA	17:AO:136:ALA:HB2	2.03	0.41
22:AT:34:TYR:OH	22:AT:97:LYS:HA	2.20	0.41
23:AU:39:PHE:CE1	23:AU:43:LEU:HD11	2.56	0.41
23:AU:40:GLU:OE1	23:AU:65:ARG:HB2	2.21	0.41
28:AZ:9:LYS:CE	28:AZ:82:PRO:HB2	2.50	0.41
28:AZ:133:LYS:NZ	28:AZ:133:LYS:HB3	2.36	0.41
31:Ac:32:LYS:O	31:Ac:35:LEU:HB2	2.19	0.41
39:Ak:61:PRO:CG	39:Ak:64:LEU:HD12	2.44	0.41
43:Ao:105:GLN:CA	47:BA:57:G:C1'	2.95	0.41
47:BA:74:C:C5'	48:BB:1321:PRO:CD	2.98	0.41
48:BB:818:ARG:HA	48:BB:1172:VAL:CG1	2.44	0.41
48:BB:853:HIS:CD2	48:BB:950:GLN:HB2	2.55	0.41
48:BB:1067:CYS:O	48:BB:1069:GLU:OE1	2.39	0.41
48:BB:1080:LEU:HD23	48:BB:1081:PRO:O	2.20	0.41
48:BB:1241:HIS:O	48:BB:1242:ASP:HB2	2.20	0.41
50:C1:98:C:H4'	50:C1:99:A:OP1	2.21	0.41
50:C1:359:U:H2'	50:C1:362:C:C5	2.55	0.41
50:C1:381:C:O5'	50:C1:381:C:C6	2.66	0.41
50:C1:389:A:H2'	50:C1:390:C:C6	2.55	0.41
50:C1:401:A:H2'	50:C1:402:C:H5'	2.01	0.41
50:C1:454:U:H5"	57:CG:76:LEU:CD2	2.50	0.41
50:C1:559:G:C5'	50:C1:560:A:H5"	2.46	0.41
50:C1:561:A:C3'	50:C1:562:U:C5'	2.84	0.41
50:C1:746:C:O5'	50:C1:746:C:H2'	2.20	0.41
50:C1:950:C:H2'	50:C1:950:C:O2	2.19	0.41
50:C1:969:U:H4'	50:C1:969:U:OP1	2.21	0.41
50:C1:1180:C:C6	50:C1:1180:C:C3'	3.02	0.41
50:C1:1215:C:C4'	50:C1:1216:C:OP1	2.66	0.41
50:C1:1438:A:OP1	50:C1:1438:A:C4'	2.67	0.41
50:C1:1698:C:C5'	50:C1:1699:A:C8	3.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1711:U:H2'	50:C1:1712:A:C8	2.55	0.41
50:C1:1868:U:O2'	50:C1:1869:A:P	2.78	0.41
51:CA:64:ALA:O	51:CA:67:ALA:HB3	2.20	0.41
51:CA:205:ARG:O	51:CA:208:GLU:HB3	2.20	0.41
55:CE:124:CYS:HB2	55:CE:141:THR:HG23	2.02	0.41
55:CE:173:ILE:CD1	55:CE:235:TRP:HZ2	2.33	0.41
59:CI:19:LYS:HA	59:CI:20:PRO:HD3	1.85	0.41
59:CI:145:ILE:HA	59:CI:148:LYS:CE	2.50	0.41
62:CL:22:ARG:HD2	62:CL:27:GLU:HB3	2.03	0.41
62:CL:99:TYR:OH	74:CX:17:ARG:HB2	2.20	0.41
70:CT:137:GLN:O	70:CT:140:ALA:HB3	2.21	0.41
77:Ca:44:ILE:HG22	77:Ca:67:LEU:CG	2.49	0.41
77:Ca:45:VAL:HG12	77:Ca:49:ALA:HB3	2.03	0.41
81:Ce:27:LYS:HG3	81:Ce:28:LYS:N	2.34	0.41
1:A2:259:G:H2'	1:A2:260:G:C8	2.55	0.41
1:A2:409:A:N1	2:A3:17:A:C1'	2.84	0.41
1:A2:711:A:H2'	1:A2:712:C:O4'	2.20	0.41
1:A2:1087:C:H6	1:A2:1087:C:H5"	1.86	0.41
1:A2:1282:U:H1'	1:A2:1283:A:P	2.60	0.41
1:A2:1318:G:H22	29:Aa:25:HIS:CD2	2.38	0.41
1:A2:1441:A:C4	1:A2:1442:C:C5	3.07	0.41
1:A2:1446:C:H2'	1:A2:1447:C:C6	2.55	0.41
1:A2:1873:G:C8	1:A2:1873:G:C5'	2.98	0.41
1:A2:1922:A:O5'	1:A2:1922:A:C8	2.73	0.41
1:A2:2064:G:N1	1:A2:2246:G:C6	2.88	0.41
1:A2:2284:A:H2'	1:A2:2285:G:O4'	2.21	0.41
1:A2:2305:U:H2'	1:A2:2306:G:C1'	2.50	0.41
1:A2:2493:G:H5'	1:A2:2723:A:H2	1.86	0.41
1:A2:2509:C:C2	1:A2:2510:C:C5	3.09	0.41
1:A2:2560:C:O2	1:A2:2560:C:C2'	2.66	0.41
1:A2:2820:U:C2	1:A2:2821:A:C8	3.09	0.41
1:A2:3633:G:H2'	1:A2:3634:G:H8	1.85	0.41
1:A2:3686:A:N6	1:A2:3705:A:C5	2.89	0.41
1:A2:3722:G:H2'	1:A2:3723:G:O4'	2.20	0.41
1:A2:3877:A:H5'	1:A2:3877:A:H8	1.84	0.41
1:A2:3926:U:H4'	1:A2:3927:G:OP1	2.18	0.41
1:A2:4053:A:C6	1:A2:4124:C:C5	3.08	0.41
1:A2:4197:C:H4'	1:A2:4287:C:O2	2.21	0.41
1:A2:4240:A:C2	7:AD:23:ARG:CG	3.04	0.41
1:A2:4258:A:O2'	1:A2:4259:U:H5'	2.20	0.41
1:A2:4264:A:C2	22:AT:81:LYS:CG	3.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4381:C:H2'	1:A2:4382:A:H5'	2.03	0.41
1:A2:4384:A:H3'	1:A2:4385:G:C8	2.53	0.41
1:A2:4627:C:O5'	1:A2:4627:C:H6	2.03	0.41
1:A2:4723:A:C1'	1:A2:4724:G:OP1	2.56	0.41
1:A2:4738:U:OP2	1:A2:4740:U:H5	2.03	0.41
2:A3:129:C:H2'	2:A3:130:C:H6	1.81	0.41
3:A4:13:A:H5"	3:A4:14:C:H5	1.84	0.41
3:A4:27:G:N3	3:A4:27:G:H2'	2.36	0.41
3:A4:103:A:H2'	3:A4:104:C:C5'	2.47	0.41
4:AA:24:LYS:HE3	4:AA:49:ILE:HD13	2.02	0.41
6:AC:55:SER:O	6:AC:56:GLU:CB	2.69	0.41
7:AD:22:ARG:CD	7:AD:27:LYS:HB2	2.51	0.41
8:AE:160:LYS:CE	8:AE:183:ARG:HD3	2.50	0.41
11:AH:105:ILE:O	11:AH:105:ILE:HG13	2.21	0.41
11:AH:128:MET:SD	11:AH:134:CYS:SG	3.18	0.41
16:AN:39:ALA:HA	16:AN:40:PRO:HD2	1.94	0.41
16:AN:186:GLY:O	16:AN:187:SER:CB	2.69	0.41
21:AS:44:PHE:O	21:AS:48:VAL:HG23	2.20	0.41
21:AS:157:ARG:HD3	21:AS:176:PHE:CD1	2.55	0.41
33:Ae:85:LEU:HD11	33:Ae:114:ARG:HG3	2.02	0.41
44:Ap:5:THR:HB	44:Ap:8:VAL:HG22	2.03	0.41
46:Au:58:THR:HG21	46:Au:100:ASP:O	2.21	0.41
47:BA:40:C:H2'	47:BA:41:C:C6	2.56	0.41
48:BB:848:ILE:HA	48:BB:936:ILE:O	2.21	0.41
48:BB:896:THR:HG22	48:BB:899:ILE:HG13	2.03	0.41
48:BB:932:SER:CA	48:BB:961:LYS:CE	2.98	0.41
48:BB:950:GLN:HA	48:BB:950:GLN:HE21	1.85	0.41
48:BB:965:PHE:HZ	48:BB:1017:LEU:HD13	1.85	0.41
48:BB:1065:ALA:O	48:BB:1066:HIS:CG	2.73	0.41
48:BB:1225:GLY:O	48:BB:1253:VAL:HG21	2.21	0.41
49:BC:267:G:N7	50:C1:1115:U:P	2.94	0.41
50:C1:67:C:N4	57:CG:162:LEU:O	2.54	0.41
50:C1:168:C:C4	50:C1:169:U:O4	2.74	0.41
50:C1:316:G:H2'	50:C1:317:C:H6	1.83	0.41
50:C1:616:A:N1	50:C1:632:C:H1'	2.34	0.41
50:C1:671:A:H4'	50:C1:672:A:OP1	2.20	0.41
50:C1:694:G:H3'	50:C1:695:C:C5	2.55	0.41
50:C1:743:U:H3'	50:C1:744:G:C8	2.53	0.41
50:C1:750:C:O5'	50:C1:750:C:H6	2.03	0.41
50:C1:790:C:C6	50:C1:790:C:O5'	2.74	0.41
50:C1:795:A:C3'	50:C1:796:G:H8	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:846:G:H2'	55:CE:19:MET:SD	2.60	0.41
50:C1:1020:A:O2'	50:C1:1021:U:P	2.79	0.41
50:C1:1024:A:H2'	50:C1:1025:U:C6	2.56	0.41
50:C1:1036:A:C2'	50:C1:1037:G:H5'	2.51	0.41
50:C1:1161:U:C5	50:C1:1162:C:C5	3.08	0.41
50:C1:1214:A:C2	50:C1:1217:A:C5	3.08	0.41
50:C1:1568:C:N4	50:C1:1569:A:C6	2.89	0.41
50:C1:1864:U:O2'	50:C1:1865:C:H4'	2.21	0.41
52:CB:183:GLU:O	52:CB:186:ASN:HB3	2.21	0.41
52:CB:223:PHE:HE1	52:CB:225:LEU:HD13	1.85	0.41
56:CF:55:ARG:O	56:CF:57:ALA:N	2.53	0.41
57:CG:165:GLU:C	57:CG:167:LYS:N	2.79	0.41
67:CQ:133:GLY:C	67:CQ:140:ARG:HG2	2.45	0.41
74:CX:132:ALA:HA	74:CX:138:LYS:HG3	2.03	0.41
75:CY:114:MET:HG3	75:CY:122:LYS:HG3	2.02	0.41
1:A2:8:U:C5'	16:AN:40:PRO:HG3	2.51	0.41
1:A2:74:G:C2'	1:A2:75:G:O5'	2.68	0.41
1:A2:174:G:C2	1:A2:253:C:N4	2.82	0.41
1:A2:286:A:N3	1:A2:286:A:C2'	2.83	0.41
1:A2:331:C:O2	1:A2:331:C:O4'	2.38	0.41
1:A2:368:A:H5'	6:AC:86:ARG:HH21	1.85	0.41
1:A2:379:A:C8	1:A2:379:A:OP2	2.73	0.41
1:A2:402:G:H5"	1:A2:405:C:H1'	2.02	0.41
1:A2:423:U:C6	1:A2:423:U:C3'	3.03	0.41
1:A2:680:U:H2'	1:A2:681:U:C6	2.55	0.41
1:A2:693:G:H2'	1:A2:694:C:H6	1.85	0.41
1:A2:719:G:N2	1:A2:720:A:C4	2.88	0.41
1:A2:723:G:N3	1:A2:723:G:C2'	2.81	0.41
1:A2:736:G:N2	1:A2:902:G:H22	2.18	0.41
1:A2:956:C:O2'	1:A2:1218:A:O4'	2.38	0.41
1:A2:1149:G:H2'	1:A2:1150:G:H8	1.86	0.41
1:A2:1353:A:H2'	1:A2:1354:G:H8	1.84	0.41
1:A2:1393:C:H2'	1:A2:1394:C:C6	2.55	0.41
1:A2:1428:G:C8	1:A2:1428:G:C5'	3.04	0.41
1:A2:1463:G:H2'	1:A2:1464:C:C1'	2.51	0.41
1:A2:1596:G:N3	1:A2:2490:A:N7	2.69	0.41
1:A2:1649:G:H8	1:A2:1649:G:H5'	1.84	0.41
1:A2:1916:C:H4'	1:A2:1917:A:C5'	2.51	0.41
1:A2:2280:U:O2	1:A2:2280:U:H5"	2.19	0.41
1:A2:2707:U:C4	1:A2:2708:C:C5	3.08	0.41
1:A2:2716:C:C5'	44:Ap:49:ARG:HH22	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:2865:G:H4'	20:AR:80:LYS:HE2	2.02	0.41
1:A2:3611:A:H3'	1:A2:3612:A:H2'	2.02	0.41
1:A2:3682:U:H6	1:A2:3682:U:C3'	2.32	0.41
1:A2:3726:G:P	48:BB:1346:PHE:HE1	2.43	0.41
1:A2:3943:G:OP1	46:Au:19:ARG:HB3	2.20	0.41
1:A2:4035:U:H2'	1:A2:4036:U:C6	2.56	0.41
1:A2:4298:G:C6	1:A2:4335:C:H1'	2.54	0.41
1:A2:4320:U:H2'	1:A2:4321:U:C6	2.55	0.41
1:A2:4428:U:C6	1:A2:4428:U:C3'	3.04	0.41
1:A2:4467:A:H5"	1:A2:4467:A:H8	1.83	0.41
1:A2:4528:A:P	5:AB:20:LYS:HB2	2.61	0.41
1:A2:4593:G:N2	1:A2:4595:A:C2	2.89	0.41
1:A2:4648:C:H2'	1:A2:4649:U:C6	2.56	0.41
1:A2:4863:G:H2'	1:A2:4864:A:H4'	2.02	0.41
1:A2:4869:C:C3'	1:A2:4869:C:H6	2.30	0.41
1:A2:5007:C:H4'	5:AB:325:GLU:OE2	2.20	0.41
4:AA:136:VAL:HG22	4:AA:148:VAL:CG1	2.49	0.41
5:AB:9:PRO:CD	24:AV:48:ARG:HH12	2.32	0.41
5:AB:73:VAL:CG2	24:AV:93:GLY:HA3	2.49	0.41
5:AB:105:VAL:HG22	5:AB:153:MET:HE1	2.03	0.41
6:AC:236:ASN:HB3	6:AC:239:LYS:HD3	2.01	0.41
6:AC:316:LYS:HB2	6:AC:324:ILE:HD12	2.03	0.41
7:AD:33:ARG:HE	22:AT:27:LEU:CD1	2.34	0.41
7:AD:58:ARG:HA	7:AD:93:THR:CG2	2.51	0.41
7:AD:150:LEU:HD12	13:AJ:146:ARG:HG3	2.02	0.41
9:AF:232:ASP:HA	9:AF:236:ARG:HH21	1.85	0.41
10:AG:164:ILE:HG22	10:AG:168:VAL:HG13	2.00	0.41
20:AR:81:ARG:HG3	20:AR:88:ARG:HD2	2.02	0.41
21:AS:99:ASP:OD2	21:AS:105:ALA:HA	2.21	0.41
28:AZ:58:GLY:O	28:AZ:59:LYS:C	2.63	0.41
42:An:11:ARG:HH12	50:C1:1182:A:H2'	1.69	0.41
45:At:66:ARG:O	45:At:83:ASN:HB2	2.20	0.41
48:BB:831:ARG:CD	48:BB:832:LEU:N	2.82	0.41
48:BB:837:ASN:HB3	48:BB:908:ARG:NE	2.35	0.41
48:BB:842:LYS:HB3	48:BB:1140:GLU:CD	2.41	0.41
48:BB:843:LEU:HA	48:BB:908:ARG:O	2.20	0.41
48:BB:900:LYS:HZ2	48:BB:1053:VAL:HG11	1.86	0.41
48:BB:929:ARG:HB2	48:BB:1070:LEU:HG	2.02	0.41
48:BB:1076:GLU:OE2	48:BB:1202:LEU:HB3	2.20	0.41
48:BB:1210:GLU:HA	48:BB:1213:LYS:CE	2.50	0.41
48:BB:1390:PHE:CE1	48:BB:1396:LEU:HD21	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BB:1414:ASP:CB	48:BB:1417:GLN:HE21	2.34	0.41
49:BC:82:G:H4'	49:BC:84:C:H41	1.84	0.41
49:BC:164:U:O5'	78:Cb:41:TYR:CB	2.52	0.41
49:BC:352:A:N7	53:CC:147:VAL:CG1	2.74	0.41
50:C1:10:G:C8	50:C1:1697:A:H2	2.32	0.41
50:C1:15:U:O2'	50:C1:16:G:H5'	2.20	0.41
50:C1:25:A:C2	50:C1:649:U:O2	2.74	0.41
50:C1:213:G:O5'	50:C1:213:G:C8	2.73	0.41
50:C1:402:C:C6	50:C1:402:C:O5'	2.74	0.41
50:C1:426:A:N3	50:C1:426:A:C2'	2.82	0.41
50:C1:441:C:O2	50:C1:441:C:H2'	2.20	0.41
50:C1:466:G:H3'	50:C1:466:G:N3	2.36	0.41
50:C1:600:G:H2'	50:C1:601:G:C8	2.55	0.41
50:C1:796:G:H2'	50:C1:797:C:C5'	2.51	0.41
50:C1:913:A:N6	58:CH:120:ARG:HA	2.34	0.41
50:C1:1204:A:O4'	50:C1:1699:A:C2	2.73	0.41
50:C1:1206:G:C6	50:C1:1693:G:C2	3.08	0.41
50:C1:1227:G:N3	50:C1:1227:G:H2'	2.35	0.41
50:C1:1251:A:C2'	50:C1:1252:C:H5'	2.49	0.41
50:C1:1260:A:C5	50:C1:1619:A:N1	2.89	0.41
50:C1:1320:G:H2'	50:C1:1321:G:O4'	2.20	0.41
50:C1:1405:A:C8	50:C1:1406:G:C5'	3.03	0.41
50:C1:1528:G:OP2	67:CQ:142:GLN:HG2	2.21	0.41
50:C1:1587:G:N2	70:CT:75:MET:CA	2.83	0.41
50:C1:1639:G:OP1	50:C1:1639:G:C4'	2.68	0.41
50:C1:1655:C:O5'	50:C1:1655:C:C6	2.73	0.41
50:C1:1673:U:P	67:CQ:76:GLY:HA3	2.61	0.41
50:C1:1690:U:N3	50:C1:1691:U:C5	2.89	0.41
50:C1:1862:G:O2'	50:C1:1863:A:P	2.78	0.41
50:C1:1865:C:H2'	77:Ca:92:ARG:O	2.21	0.41
52:CB:65:ARG:HG2	65:CO:50:LYS:CD	2.49	0.41
55:CE:159:THR:HG23	55:CE:226:PHE:CE1	2.56	0.41
56:CF:47:LYS:HE3	56:CF:67:PRO:HG2	2.02	0.41
58:CH:37:LYS:HE2	58:CH:41:ARG:HH21	1.86	0.41
58:CH:66:VAL:N	58:CH:67:PRO:CD	2.83	0.41
58:CH:102:PRO:CB	58:CH:105:THR:CB	2.95	0.41
62:CL:33:LEU:HB2	62:CL:34:PRO:HD3	2.02	0.41
65:CO:61:LYS:HD3	65:CO:76:LEU:HB3	2.02	0.41
65:CO:64:ALA:HB3	65:CO:67:ASP:HB2	2.02	0.41
69:CS:46:ARG:NH1	70:CT:37:VAL:HG22	2.35	0.41
70:CT:65:TYR:CE1	70:CT:128:GLN:OE1	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:CT:126:GLN:HA	70:CT:129:ARG:HG2	2.02	0.41
71:CU:24:LEU:HG	71:CU:87:ARG:HB2	2.02	0.41
72:CV:30:ALA:HB1	72:CV:60:ARG:HD3	2.01	0.41
72:CV:41:LYS:C	72:CV:43:THR:N	2.79	0.41
74:CX:39:ASN:HB2	74:CX:40:PRO:HD2	2.02	0.41
1:A2:179:G:H5'	1:A2:179:G:H8	1.86	0.41
1:A2:315:A:H2'	1:A2:316:U:C6	2.54	0.41
1:A2:327:A:H4'	1:A2:328:U:OP2	2.21	0.41
1:A2:380:A:H2'	1:A2:381:C:OP2	2.21	0.41
1:A2:949:G:C3'	1:A2:950:A:H4'	2.40	0.41
1:A2:971:C:C6	1:A2:971:C:C3'	3.04	0.41
1:A2:1279:G:C8	1:A2:1279:G:O5'	2.74	0.41
1:A2:1401:G:C6	1:A2:1445:G:O4'	2.73	0.41
1:A2:1423:A:C2'	1:A2:1424:G:C8	3.03	0.41
1:A2:1501:G:OP1	6:AC:77:PRO:HD3	2.21	0.41
1:A2:1580:A:N7	1:A2:3612:A:N3	2.68	0.41
1:A2:1716:A:C5'	3:A4:78:C:H4'	2.35	0.41
1:A2:1768:C:O2	1:A2:1768:C:H2'	2.21	0.41
1:A2:1770:U:C6	1:A2:1771:U:C5	3.08	0.41
1:A2:1800:G:H2'	1:A2:1801:U:OP1	2.19	0.41
1:A2:1815:A:P	22:AT:129:LYS:HA	2.61	0.41
1:A2:2281:U:C6	1:A2:2281:U:OP1	2.73	0.41
1:A2:2320:G:N7	6:AC:54:VAL:CG2	2.79	0.41
1:A2:2568:A:O2'	1:A2:2569:U:H5'	2.20	0.41
1:A2:2588:A:C5'	1:A2:2665:G:H4'	2.50	0.41
1:A2:2615:G:O2'	1:A2:2616:U:H5'	2.20	0.41
1:A2:2746:U:H2'	1:A2:2746:U:O2	2.20	0.41
1:A2:2842:U:C2'	1:A2:2843:C:H5'	2.50	0.41
1:A2:3727:U:C6	1:A2:3727:U:C3'	3.03	0.41
1:A2:3843:G:H8	1:A2:3843:G:P	2.44	0.41
1:A2:3859:A:H2'	1:A2:3860:A:C5'	2.50	0.41
1:A2:3876:G:H1'	1:A2:3877:A:OP1	2.21	0.41
1:A2:4163:A:O5'	22:AT:2:THR:HB	2.21	0.41
1:A2:4251:G:OP2	1:A2:4253:U:H1'	2.20	0.41
1:A2:4535:G:N2	1:A2:4689:C:O2'	2.54	0.41
1:A2:4542:C:C5	1:A2:4543:C:C4	3.08	0.41
1:A2:4571:A:C2	11:AH:120:GLU:HG2	2.55	0.41
1:A2:4818:G:C5	1:A2:4819:U:C4	3.09	0.41
1:A2:4892:C:N3	8:AE:183:ARG:HB2	2.36	0.41
1:A2:4943:U:C6	1:A2:4943:U:H3'	2.56	0.41
2:A3:120:G:N2	2:A3:131:G:C8	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A3:151:G:H3'	2:A3:152:U:H6	1.85	0.41
3:A4:11:A:C2	3:A4:66:G:H2'	2.53	0.41
3:A4:40:U:H4'	13:AJ:46:GLN:NE2	2.36	0.41
3:A4:85:G:H2'	3:A4:85:G:N3	2.36	0.41
5:AB:173:LEU:HD11	5:AB:342:LYS:HG2	2.01	0.41
6:AC:177:TRP:O	6:AC:180:ILE:HB	2.21	0.41
8:AE:164:PHE:CE1	8:AE:173:LEU:HD22	2.56	0.41
10:AG:76:VAL:HG22	10:AG:238:GLY:CA	2.50	0.41
14:AL:57:PRO:HG3	14:AL:76:PHE:HA	2.02	0.41
14:AL:61:CYS:SG	14:AL:66:TYR:HB3	2.60	0.41
14:AL:84:ALA:HA	14:AL:118:LYS:NZ	2.36	0.41
15:AM:9:VAL:HA	15:AM:27:ILE:O	2.21	0.41
15:AM:56:GLN:HG3	21:AS:157:ARG:HH12	1.84	0.41
16:AN:3:ALA:O	16:AN:7:ILE:HG13	2.20	0.41
21:AS:164:LYS:CB	21:AS:165:PRO:CD	2.95	0.41
28:AZ:10:VAL:HB	28:AZ:83:THR:CG2	2.51	0.41
31:Ac:45:LEU:C	31:Ac:45:LEU:HD13	2.46	0.41
31:Ac:51:ASN:HB2	44:Ap:42:CYS:C	2.45	0.41
35:Ag:5:LEU:HD13	35:Ag:32:TYR:CZ	2.56	0.41
37:Ai:33:LEU:CD2	37:Ai:34:THR:H	2.33	0.41
44:Ap:8:VAL:O	44:Ap:11:VAL:HB	2.20	0.41
44:Ap:53:GLY:HA2	44:Ap:67:GLY:O	2.21	0.41
47:BA:35:A:C6	49:BC:344:G:N1	2.89	0.41
47:BA:48:C:H2'	47:BA:59:U:C1'	2.51	0.41
48:BB:928:ASN:CG	48:BB:929:ARG:H	2.28	0.41
48:BB:1175:ASP:HA	48:BB:1178:ILE:CG1	2.47	0.41
48:BB:1347:VAL:HG13	48:BB:1349:ILE:HG12	2.02	0.41
49:BC:64:U:HO2'	49:BC:66:A:H5'	1.79	0.41
49:BC:160:U:H2'	49:BC:161:G:C8	2.55	0.41
50:C1:393:U:H4'	50:C1:394:G:OP1	2.21	0.41
50:C1:422:U:C5'	50:C1:422:U:C6	3.04	0.41
50:C1:526:A:H1'	60:CJ:128:VAL:HG13	2.02	0.41
50:C1:573:U:C4	50:C1:576:A:C5	3.08	0.41
50:C1:693:A:H3'	50:C1:694:G:C5'	2.49	0.41
50:C1:742:U:H6	58:CH:49:LYS:HZ2	1.66	0.41
50:C1:751:G:C2'	50:C1:752:G:C8	2.90	0.41
50:C1:924:G:H2'	50:C1:925:G:O4'	2.21	0.41
50:C1:954:U:N3	50:C1:971:G:N2	2.69	0.41
50:C1:1469:A:C5	50:C1:1470:C:C4	3.09	0.41
50:C1:1637:A:H4'	50:C1:1638:G:H5'	1.91	0.41
50:C1:1649:U:C2	50:C1:1675:A:H2	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:CA:117:ARG:HG2	51:CA:119:PRO:HD3	2.01	0.41
55:CE:202:PRO:C	55:CE:204:SER:N	2.77	0.41
59:CI:119:LEU:HD12	59:CI:127:ALA:O	2.21	0.41
64:CN:64:ARG:HH11	64:CN:64:ARG:HB3	1.85	0.41
68:CR:54:VAL:O	68:CR:57:LEU:HB2	2.21	0.41
77:Ca:37:LYS:HA	77:Ca:71:LEU:O	2.21	0.41
83:Cg:37:ASP:O	83:Cg:38:LYS:HB2	2.20	0.41
1:A2:28:C:H3'	1:A2:28:C:C6	2.56	0.41
1:A2:95:G:H5"	1:A2:95:G:C8	2.56	0.41
1:A2:116:G:H21	1:A2:118:C:H3'	1.85	0.41
1:A2:158:G:H2'	1:A2:159:A:C8	2.51	0.41
1:A2:267:C:OP2	37:Ai:35:LYS:HB2	2.20	0.41
1:A2:425:A:OP2	1:A2:3836:A:H4'	2.21	0.41
1:A2:676:G:H5'	1:A2:677:C:OP1	2.20	0.41
1:A2:918:C:OP2	1:A2:918:C:C6	2.60	0.41
1:A2:1082:U:H4'	1:A2:1083:C:OP2	2.20	0.41
1:A2:1273:G:C2'	8:AE:227:HIS:CE1	3.01	0.41
1:A2:1305:C:C5	1:A2:3847:C:O2'	2.60	0.41
1:A2:1352:A:C5'	6:AC:48:ASN:HA	2.51	0.41
1:A2:1388:G:H21	1:A2:1389:C:C1'	2.25	0.41
1:A2:1456:C:C6	1:A2:1456:C:O5'	2.69	0.41
1:A2:1660:G:H21	29:Aa:40:HIS:HA	1.85	0.41
1:A2:1770:U:H5"	1:A2:1771:U:H5	1.85	0.41
1:A2:1898:C:H3'	1:A2:1900:G:OP2	2.21	0.41
1:A2:1908:U:H4'	17:AO:52:LEU:HD23	2.03	0.41
1:A2:2065:C:P	19:AQ:38:ARG:HH22	2.44	0.41
1:A2:2484:A:O2'	1:A2:2485:U:H5'	2.20	0.41
1:A2:2576:G:H3'	1:A2:2577:A:H8	1.85	0.41
1:A2:2633:U:H6	1:A2:2633:U:O5'	2.03	0.41
1:A2:3577:A:H5"	1:A2:3577:A:H8	1.86	0.41
1:A2:3580:A:H1'	1:A2:4971:A:O2'	2.20	0.41
1:A2:3590:A:H3'	1:A2:3591:C:C6	2.56	0.41
1:A2:3830:A:H2'	1:A2:3831:A:C8	2.56	0.41
1:A2:3942:G:H8	1:A2:3942:G:O5'	2.04	0.41
1:A2:4050:G:O6	1:A2:4053:A:H2	2.04	0.41
1:A2:4151:G:C5'	1:A2:4151:G:H8	2.34	0.41
1:A2:4198:G:C4	1:A2:4199:A:C8	3.09	0.41
1:A2:4237:G:N3	1:A2:4237:G:H2'	2.36	0.41
1:A2:4261:U:O2	1:A2:4261:U:C2'	2.68	0.41
1:A2:4380:U:H6	1:A2:4380:U:OP2	2.04	0.41
1:A2:4502:U:O5'	1:A2:4502:U:C6	2.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4621:G:C6	1:A2:4622:C:C4	3.08	0.41
1:A2:4737:C:C2	1:A2:4738:U:C5	3.09	0.41
1:A2:4824:U:O2	1:A2:4824:U:C3'	2.67	0.41
1:A2:4903:C:H1'	8:AE:158:ARG:HE	1.85	0.41
2:A3:67:U:H2'	2:A3:68:G:C8	2.56	0.41
2:A3:103:A:C8	2:A3:104:A:C8	3.08	0.41
2:A3:150:C:H6	2:A3:150:C:O5'	2.04	0.41
3:A4:103:A:H2'	3:A4:103:A:N3	2.36	0.41
6:AC:149:GLU:CB	45:At:75:THR:HA	2.51	0.41
6:AC:351:VAL:O	6:AC:355:ALA:N	2.47	0.41
8:AE:140:LEU:HD12	8:AE:167:GLN:OE1	2.20	0.41
10:AG:173:LEU:CD2	37:Ai:43:MET:SD	3.09	0.41
11:AH:31:ARG:NH2	11:AH:188:GLN:HB3	2.34	0.41
12:AI:145:LYS:HE2	12:AI:167:ILE:HD13	2.03	0.41
14:AL:60:ARG:HD3	14:AL:67:HIS:CE1	2.55	0.41
19:AQ:126:LEU:HD13	19:AQ:126:LEU:C	2.46	0.41
21:AS:71:SER:HB3	21:AS:74:ARG:HB2	2.02	0.41
29:Aa:75:LEU:HD11	29:Aa:133:ALA:HA	2.02	0.41
35:Ag:77:ALA:O	35:Ag:78:TYR:HB2	2.20	0.41
37:Ai:27:SER:O	37:Ai:28:ARG:CB	2.68	0.41
45:At:82:ILE:HG22	45:At:82:ILE:O	2.19	0.41
46:Au:193:LEU:H	46:Au:193:LEU:HD22	1.84	0.41
48:BB:840:THR:C	48:BB:842:LYS:N	2.75	0.41
48:BB:858:LYS:HE2	48:BB:858:LYS:HB2	1.93	0.41
48:BB:947:LEU:HD12	48:BB:947:LEU:N	2.36	0.41
48:BB:1056:THR:HG22	48:BB:1060:LEU:HD12	2.03	0.41
48:BB:1103:ILE:CG1	48:BB:1177:LEU:HD11	2.51	0.41
48:BB:1188:ILE:H	48:BB:1188:ILE:HG12	1.65	0.41
50:C1:20:G:C2'	50:C1:21:U:H5'	2.48	0.41
50:C1:29:G:H5"	74:CX:129:SER:HB3	2.02	0.41
50:C1:50:A:OP2	50:C1:472:C:N4	2.54	0.41
50:C1:59:U:H5	50:C1:501:C:H2'	1.86	0.41
50:C1:66:G:N2	57:CG:158:VAL:HG21	2.35	0.41
50:C1:156:G:H3'	50:C1:157:U:C5	2.56	0.41
50:C1:526:A:H2	50:C1:527:C:C6	2.39	0.41
50:C1:534:G:H2'	50:C1:535:G:H4'	2.02	0.41
50:C1:679:A:H3'	50:C1:680:G:H8	1.86	0.41
50:C1:750:C:H6	50:C1:750:C:C5'	2.34	0.41
50:C1:955:A:N6	50:C1:971:G:N2	2.69	0.41
50:C1:958:G:OP2	65:CO:39:ASP:HB3	2.21	0.41
50:C1:980:A:H8	50:C1:980:A:OP2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1057:C:C6	50:C1:1059:G:OP2	2.73	0.41
50:C1:1089:G:C2'	50:C1:1090:C:H5'	2.50	0.41
50:C1:1204:A:C6	50:C1:1205:C:C4	3.09	0.41
50:C1:1216:C:OP1	50:C1:1217:A:C8	2.74	0.41
50:C1:1364:U:H2'	50:C1:1365:G:H5'	2.03	0.41
50:C1:1484:A:H4'	54:CD:159:HIS:HB3	1.99	0.41
50:C1:1600:G:O5'	76:CZ:43:LYS:HB2	2.21	0.41
50:C1:1638:G:C5'	50:C1:1638:G:N3	2.73	0.41
50:C1:1848:U:C6	50:C1:1848:U:H3'	2.55	0.41
52:CB:179:ASN:HB2	52:CB:183:GLU:CB	2.51	0.41
53:CC:168:GLY:N	53:CC:179:THR:O	2.47	0.41
54:CD:158:ILE:O	54:CD:164:VAL:HG13	2.21	0.41
55:CE:206:ASP:HB2	55:CE:222:LEU:CD1	2.51	0.41
56:CF:40:ALA:CB	56:CF:67:PRO:HA	2.50	0.41
57:CG:69:THR:C	57:CG:71:GLY:H	2.28	0.41
58:CH:11:PRO:HA	58:CH:14:GLU:O	2.21	0.41
59:CI:84:ASN:HD21	59:CI:97:VAL:CG2	2.34	0.41
61:CK:59:LYS:O	61:CK:69:TRP:HA	2.21	0.41
64:CN:19:ARG:NH2	64:CN:23:PRO:HA	2.36	0.41
64:CN:126:ALA:O	64:CN:130:LYS:HG3	2.20	0.41
66:CP:67:ALA:HB2	66:CP:73:PRO:HB3	2.02	0.41
76:CZ:71:ALA:O	76:CZ:75:GLU:HG2	2.20	0.41
1:A2:69:A:H2	1:A2:70:A:HO2'	1.66	0.41
1:A2:134:G:N3	1:A2:134:G:C2'	2.83	0.41
1:A2:194:A:H8	1:A2:194:A:O5'	2.04	0.41
1:A2:220:G:H22	6:AC:224:ILE:CG1	2.34	0.41
1:A2:230:U:C2	1:A2:2280:U:C6	3.09	0.41
1:A2:241:G:N2	1:A2:242:C:C4	2.88	0.41
1:A2:266:C:O2	1:A2:266:C:C2'	2.68	0.41
1:A2:319:A:C2	1:A2:320:A:C4	3.09	0.41
1:A2:348:U:H6	1:A2:348:U:C5'	2.33	0.41
1:A2:438:C:C5	1:A2:438:C:OP2	2.73	0.41
1:A2:460:C:O5'	1:A2:679:U:H4'	2.21	0.41
1:A2:673:G:H5"	1:A2:674:G:OP2	2.21	0.41
1:A2:693:G:C4	1:A2:694:C:C5	3.08	0.41
1:A2:721:A:C4	21:AS:68:PHE:HB3	2.56	0.41
1:A2:741:C:H2'	1:A2:742:U:H6	1.84	0.41
1:A2:895:U:H3'	1:A2:895:U:H6	1.86	0.41
1:A2:954:G:H5"	9:AF:36:LYS:HD2	2.03	0.41
1:A2:1055:G:H2'	1:A2:1056:C:H6	1.84	0.41
1:A2:1067:A:O2'	1:A2:1068:C:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1146:G:N3	1:A2:1146:G:C2’	2.83	0.41
1:A2:1161:C:C6	1:A2:1161:C:C4’	3.04	0.41
1:A2:1170:C:H2’	1:A2:1171:C:H6	1.81	0.41
1:A2:1186:C:O2’	1:A2:1187:C:H5’	2.21	0.41
1:A2:1189:U:HO2’	1:A2:1190:C:H5	1.64	0.41
1:A2:1270:G:O4’	1:A2:4898:A:H2	2.04	0.41
1:A2:1274:A:N7	8:AE:228:GLN:O	2.53	0.41
1:A2:1276:G:OP2	1:A2:1277:U:C1’	2.69	0.41
1:A2:1302:A:C8	1:A2:1306:A:N6	2.89	0.41
1:A2:1307:C:H1’	1:A2:4408:G:N3	2.36	0.41
1:A2:1317:A:H5’	6:AC:102:PHE:CB	2.51	0.41
1:A2:1348:A:C4’	1:A2:1349:C:H5’	2.50	0.41
1:A2:1357:G:N7	1:A2:1360:G:H3’	2.35	0.41
1:A2:1377:A:C1’	1:A2:1447:C:C4’	2.99	0.41
1:A2:1387:C:C5’	1:A2:1387:C:C6	2.99	0.41
1:A2:1467:G:H4’	29:Aa:131:ARG:HH12	1.86	0.41
1:A2:1532:A:C2	1:A2:1554:A:H1’	2.56	0.41
1:A2:1635:U:O4’	1:A2:4351:G:H4’	2.20	0.41
1:A2:1815:A:C1’	22:AT:130:ARG:O	2.66	0.41
1:A2:1821:A:C4	1:A2:1822:G:C8	3.08	0.41
1:A2:1835:C:C2	1:A2:1836:A:C8	3.08	0.41
1:A2:1941:C:C2’	1:A2:1942:A:H5’	2.51	0.41
1:A2:1942:A:C2	1:A2:1943:G:N9	2.89	0.41
1:A2:1942:A:O2’	1:A2:4655:C:C1’	2.68	0.41
1:A2:2024:G:H5’	17:AO:60:LYS:HZ2	1.81	0.41
1:A2:2311:C:C6	1:A2:2311:C:C4’	3.04	0.41
1:A2:2338:G:O6	18:AP:25:HIS:CD2	2.74	0.41
1:A2:2350:C:C2’	1:A2:2351:A:H5’	2.51	0.41
1:A2:2522:U:H2’	1:A2:2523:G:H8	1.86	0.41
1:A2:2524:G:N2	1:A2:2526:G:C1’	2.77	0.41
1:A2:2542:A:O5’	1:A2:2542:A:C8	2.72	0.41
1:A2:2559:A:O2’	1:A2:2631:C:H1’	2.20	0.41
1:A2:2586:G:O3’	1:A2:2663:G:N2	2.54	0.41
1:A2:2615:G:C2’	1:A2:2616:U:H5’	2.51	0.41
1:A2:2716:C:N4	4:AA:177:LYS:O	2.54	0.41
1:A2:2723:A:C8	1:A2:2723:A:H3’	2.56	0.41
1:A2:2742:A:C2’	1:A2:2743:A:N7	2.75	0.41
1:A2:2793:G:H8	1:A2:2793:G:O5’	2.03	0.41
1:A2:2828:G:H2’	1:A2:2829:U:O4’	2.21	0.41
1:A2:2831:G:C2’	1:A2:2832:G:H5’	2.51	0.41
1:A2:3713:G:H2’	1:A2:3714:U:H5’	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:3724:G:O2'	1:A2:3725:A:C8	2.74	0.41
1:A2:3738:C:C4	1:A2:3739:U:C4	3.09	0.41
1:A2:3763:C:H2'	1:A2:3764:A:O4'	2.21	0.41
1:A2:3767:U:O2	1:A2:3769:A:H2'	2.21	0.41
1:A2:3788:G:C2	1:A2:3789:G:N7	2.88	0.41
1:A2:3848:G:H4'	1:A2:3849:G:OP1	2.21	0.41
1:A2:3886:A:H2'	1:A2:3887:G:H5'	2.03	0.41
1:A2:3903:G:H2'	1:A2:3904:C:C6	2.55	0.41
1:A2:4057:G:C2	1:A2:4121:G:N2	2.89	0.41
1:A2:4067:G:C8	1:A2:4067:G:OP2	2.74	0.41
1:A2:4067:G:O5'	1:A2:4067:G:H8	2.04	0.41
1:A2:4087:U:C5	31:Ac:54:ALA:HB2	2.56	0.41
1:A2:4092:C:H1'	4:AA:69:PHE:CG	2.56	0.41
1:A2:4118:C:P	1:A2:4118:C:C6	3.10	0.41
1:A2:4235:G:H4'	22:AT:12:ARG:HH21	1.86	0.41
1:A2:4249:U:C2'	1:A2:4250:U:O5'	2.68	0.41
1:A2:4344:U:H2'	1:A2:4345:A:OP2	2.21	0.41
1:A2:4351:G:P	6:AC:75:ARG:HH22	2.44	0.41
1:A2:4380:U:OP2	1:A2:4381:C:C5	2.74	0.41
1:A2:4417:U:O2'	1:A2:4418:C:H5'	2.21	0.41
1:A2:4526:U:H6	1:A2:4526:U:C3'	2.24	0.41
1:A2:4587:U:H3'	1:A2:4588:U:C6	2.56	0.41
1:A2:4595:A:O2'	1:A2:4597:G:H8	2.04	0.41
1:A2:4674:C:C2	1:A2:4675:C:C6	3.08	0.41
1:A2:4712:U:C2	8:AE:277:LEU:O	2.73	0.41
1:A2:4735:G:H3'	1:A2:4736:C:C5'	2.39	0.41
1:A2:4824:U:OP2	1:A2:4825:G:C5	2.74	0.41
1:A2:4846:G:O5'	1:A2:4846:G:H8	2.04	0.41
1:A2:4906:G:C2'	1:A2:4907:G:H8	2.23	0.41
1:A2:4934:A:N7	5:AB:228:TYR:HE1	2.19	0.41
1:A2:4948:G:N2	1:A2:5014:C:C2	2.89	0.41
2:A3:84:A:H61	27:AY:112:ASP:HB3	1.85	0.41
2:A3:97:A:C2'	2:A3:98:C:H5'	2.51	0.41
3:A4:69:U:C6	3:A4:69:U:C3'	3.03	0.41
4:AA:149:LYS:HB2	4:AA:149:LYS:NZ	2.35	0.41
4:AA:196:TRP:CE3	4:AA:197:PRO:CG	3.03	0.41
4:AA:196:TRP:HE3	4:AA:197:PRO:HD3	1.86	0.41
5:AB:53:MET:HE2	5:AB:77:THR:CG2	2.50	0.41
6:AC:84:THR:HG22	6:AC:86:ARG:H	1.86	0.41
6:AC:259:LYS:O	6:AC:263:LEU:HG	2.21	0.41
6:AC:330:PRO:CB	9:AF:51:TYR:OH	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AD:11:ALA:HA	7:AD:14:LYS:HD2	2.03	0.41
7:AD:191:ASN:HD22	7:AD:194:VAL:CG2	2.34	0.41
7:AD:197:LYS:HD2	7:AD:202:GLN:HG3	2.02	0.41
7:AD:236:MET:SD	7:AD:240:TYR:HE2	2.44	0.41
8:AE:150:LEU:HB2	8:AE:162:VAL:HG12	2.03	0.41
8:AE:224:LYS:N	8:AE:225:PRO:HD2	2.36	0.41
9:AF:27:GLU:O	9:AF:31:LYS:HB3	2.19	0.41
11:AH:41:ILE:HG21	11:AH:43:VAL:HG22	2.03	0.41
12:AI:165:ILE:HG13	12:AI:165:ILE:O	2.21	0.41
12:AI:185:VAL:C	12:AI:187:GLU:N	2.76	0.41
13:AJ:90:ARG:HD3	13:AJ:94:LEU:HD23	2.02	0.41
13:AJ:96:LYS:HD3	13:AJ:177:GLY:CA	2.51	0.41
13:AJ:175:LEU:HD23	13:AJ:175:LEU:HA	1.85	0.41
15:AM:125:ASN:HA	15:AM:128:LYS:HB3	2.02	0.41
17:AO:54:TYR:O	17:AO:57:PHE:HB3	2.20	0.41
20:AR:81:ARG:HH21	20:AR:85:ALA:HA	1.85	0.41
21:AS:24:THR:CG2	22:AT:146:LYS:HD2	2.51	0.41
22:AT:42:ILE:HG12	22:AT:96:ILE:HD12	2.02	0.41
25:AW:42:SER:HB3	25:AW:44:ARG:NH1	2.35	0.41
27:AY:121:ARG:N	27:AY:125:SER:HB3	2.36	0.41
29:Aa:7:LYS:O	29:Aa:11:LEU:HD23	2.20	0.41
29:Aa:74:ASN:HD22	29:Aa:112:LEU:HB2	1.86	0.41
31:Ac:8:LYS:CD	50:C1:1007:C:H5”	2.34	0.41
36:Ah:40:ALA:C	36:Ah:42:SER:N	2.79	0.41
43:Ao:105:GLN:O	43:Ao:106:PHE:HB2	2.20	0.41
44:Ap:44:LYS:HE2	44:Ap:46:LYS:CE	2.50	0.41
45:At:122:LYS:HA	45:At:125:MET:HE3	2.02	0.41
46:Au:23:GLU:CD	46:Au:202:THR:HB	2.46	0.41
46:Au:190:LYS:HD3	46:Au:190:LYS:H	1.85	0.41
47:BA:15:G:N2	47:BA:21:A:H1’	2.35	0.41
48:BB:832:LEU:CD2	48:BB:832:LEU:C	2.94	0.41
48:BB:1070:LEU:C	48:BB:1072:ALA:N	2.78	0.41
48:BB:1152:LEU:O	48:BB:1153:GLU:CG	2.66	0.41
48:BB:1193:LYS:HG3	48:BB:1218:PRO:HB2	2.02	0.41
48:BB:1226:PRO:HA	48:BB:1253:VAL:CG2	2.51	0.41
48:BB:1229:LYS:HB2	48:BB:1258:ASP:OD2	2.21	0.41
48:BB:1230:LYS:HZ2	74:CX:75:ILE:CG2	2.24	0.41
48:BB:1243:PRO:O	48:BB:1246:ALA:HB3	2.21	0.41
48:BB:1276:ILE:HG23	48:BB:1280:PHE:CE1	2.56	0.41
48:BB:1287:ARG:O	48:BB:1291:LYS:HG3	2.20	0.41
49:BC:266:G:H3’	50:C1:1117:C:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BC:334:C:N4	79:Cc:66:ARG:CG	2.82	0.41
50:C1:9:U:O2	50:C1:12:U:C5	2.73	0.41
50:C1:15:U:O5'	50:C1:15:U:C6	2.72	0.41
50:C1:176:U:C4	50:C1:177:G:C2	3.09	0.41
50:C1:394:G:H5'	62:CL:81:LYS:NZ	2.36	0.41
50:C1:498:C:H2'	50:C1:499:G:C8	2.56	0.41
50:C1:545:A:C8	50:C1:545:A:C3'	3.03	0.41
50:C1:547:G:C4'	50:C1:548:C:OP2	2.69	0.41
50:C1:562:U:H3'	50:C1:562:U:C6	2.55	0.41
50:C1:571:U:O3'	75:CY:59:GLY:CA	2.69	0.41
50:C1:583:A:C2'	50:C1:584:A:C8	3.04	0.41
50:C1:655:A:C4	50:C1:657:U:C5	3.08	0.41
50:C1:690:G:C2	50:C1:691:G:C5	3.09	0.41
50:C1:790:C:H6	50:C1:790:C:O5'	2.04	0.41
50:C1:840:C:H1'	75:CY:14:THR:OG1	2.21	0.41
50:C1:845:G:H4'	55:CE:255:ARG:NH1	2.31	0.41
50:C1:888:U:H3'	50:C1:888:U:H6	1.85	0.41
50:C1:979:C:OP2	50:C1:979:C:H6	2.04	0.41
50:C1:990:A:C1'	50:C1:991:G:N2	2.84	0.41
50:C1:1043:G:C4'	50:C1:1044:G:OP1	2.69	0.41
50:C1:1139:C:H2'	50:C1:1140:G:H5'	2.03	0.41
50:C1:1201:U:O5'	50:C1:1201:U:C6	2.67	0.41
50:C1:1232:U:H3	50:C1:1526:G:H1	1.69	0.41
50:C1:1325:G:H8	50:C1:1325:G:OP2	2.02	0.41
50:C1:1344:A:N6	50:C1:1386:A:H5'	2.36	0.41
50:C1:1350:U:O5'	50:C1:1350:U:H6	2.04	0.41
50:C1:1475:G:OP2	50:C1:1475:G:H8	2.03	0.41
50:C1:1484:A:H4'	54:CD:159:HIS:HB2	2.01	0.41
50:C1:1484:A:C2'	50:C1:1485:U:H5'	2.51	0.41
50:C1:1491:G:C4	50:C1:1492:U:C5	3.09	0.41
50:C1:1530:U:O2'	50:C1:1531:A:H8	2.03	0.41
50:C1:1616:U:O2	50:C1:1616:U:C2'	2.64	0.41
50:C1:1639:G:C5'	50:C1:1640:A:OP2	2.69	0.41
50:C1:1647:A:H1'	50:C1:1649:U:C1'	2.51	0.41
50:C1:1731:A:C6	50:C1:1732:G:C6	3.09	0.41
50:C1:1781:A:C5	50:C1:1782:G:N2	2.88	0.41
50:C1:1782:G:O2'	50:C1:1783:C:C6	2.68	0.41
50:C1:1783:C:O2	50:C1:1783:C:C2'	2.69	0.41
50:C1:1865:C:C5	77:Ca:92:ARG:HD3	2.56	0.41
51:CA:39:TYR:CD2	51:CA:50:ASN:HA	2.56	0.41
52:CB:115:LYS:H	52:CB:118:GLN:HE21	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:CB:116:LYS:HZ2	77:Ca:37:LYS:HE2	1.86	0.41
52:CB:169:MET:O	52:CB:172:MET:HB2	2.21	0.41
53:CC:183:LYS:HG2	53:CC:196:ILE:HA	2.03	0.41
53:CC:253:PRO:O	53:CC:256:TRP:HB2	2.21	0.41
55:CE:149:TYR:CE2	57:CG:206:ALA:HA	2.55	0.41
56:CF:60:ARG:HG2	56:CF:60:ARG:NH1	2.36	0.41
56:CF:199:VAL:HG13	56:CF:203:ASN:ND2	2.35	0.41
57:CG:2:LYS:HE2	57:CG:15:LEU:HD11	2.02	0.41
57:CG:3:LEU:O	57:CG:15:LEU:HD22	2.21	0.41
58:CH:39:GLN:HG3	58:CH:75:ILE:HB	2.03	0.41
59:CI:83:TYR:H	59:CI:91:VAL:HG21	1.85	0.41
59:CI:84:ASN:HB3	59:CI:87:ASN:O	2.20	0.41
60:CJ:130:ILE:HD11	60:CJ:145:PRO:HB3	2.03	0.41
63:CM:61:TYR:HE1	63:CM:107:SER:HB3	1.85	0.41
63:CM:106:CYS:O	63:CM:107:SER:CB	2.69	0.41
65:CO:99:ALA:O	65:CO:100:THR:C	2.63	0.41
69:CS:47:LYS:HE2	69:CS:79:ILE:HG13	2.01	0.41
69:CS:89:ASP:C	69:CS:91:LYS:H	2.29	0.41
69:CS:111:LEU:HD23	69:CS:114:LEU:HD12	2.03	0.41
70:CT:87:VAL:HG23	70:CT:88:MET:H	1.86	0.41
73:CW:75:ILE:HG22	73:CW:77:PRO:HD2	2.03	0.41
73:CW:99:PHE:O	73:CW:101:PHE:CD2	2.74	0.41
76:CZ:97:ILE:HD12	76:CZ:109:TYR:CD1	2.55	0.41
77:Ca:30:VAL:HG21	77:Ca:74:CYS:HB3	2.02	0.41
77:Ca:43:ASN:ND2	77:Ca:50:VAL:HG21	2.36	0.41
79:Cc:43:ILE:H	79:Cc:64:GLU:HG3	1.85	0.41
82:Cf:135:HIS:HB3	82:Cf:138:ARG:H	1.86	0.41
83:Cg:72:SER:HA	83:Cg:113:PHE:HZ	1.84	0.41
83:Cg:144:ASP:HB3	83:Cg:177:TRP:CE3	2.55	0.41
83:Cg:283:PRO:CD	83:Cg:284:PRO:HD2	2.50	0.41
1:A2:89:C:H5"	1:A2:285:G:H1'	2.03	0.41
1:A2:113:A:N1	1:A2:269:G:C6	2.88	0.41
1:A2:284:G:O2'	1:A2:288:U:C6	2.74	0.41
1:A2:365:G:C2'	1:A2:366:G:H5"	2.42	0.41
1:A2:635:G:H5'	14:AL:161:TYR:H	1.86	0.41
1:A2:642:C:OP2	1:A2:643:G:H5"	2.21	0.41
1:A2:716:U:H2'	1:A2:717:G:H5"	2.02	0.41
1:A2:915:C:OP1	1:A2:916:A:H5"	2.21	0.41
1:A2:1068:C:H2'	1:A2:1069:G:H8	1.86	0.41
1:A2:1154:G:H22	1:A2:1167:G:N2	2.19	0.41
1:A2:1231:C:H6	1:A2:1231:C:O5'	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1313:A:C3'	1:A2:1314:A:H8	2.30	0.41
1:A2:1459:C:C6	1:A2:1459:C:C3'	3.04	0.41
1:A2:1558:C:O2'	1:A2:1559:C:H5'	2.21	0.41
1:A2:1606:G:OP2	1:A2:1606:G:H8	2.04	0.41
1:A2:1713:G:H8	1:A2:1713:G:OP2	2.03	0.41
1:A2:1785:G:C5'	1:A2:1785:G:H8	2.34	0.41
1:A2:1885:A:OP1	9:AF:220:MET:HB3	2.20	0.41
1:A2:1942:A:O2'	1:A2:4655:C:H1'	2.21	0.41
1:A2:2052:C:C6	1:A2:2052:C:H3'	2.56	0.41
1:A2:2321:U:H2'	29:Aa:9:ARG:HH22	1.85	0.41
1:A2:2325:G:OP1	1:A2:2325:G:H4'	2.21	0.41
1:A2:2349:U:H2'	1:A2:2350:C:C5	2.56	0.41
1:A2:2355:G:H21	1:A2:2357:G:H3'	1.77	0.41
1:A2:2563:G:H1'	1:A2:2747:C:H4'	2.03	0.41
1:A2:2629:G:H2'	1:A2:2630:C:C4'	2.49	0.41
1:A2:3604:A:H3'	1:A2:3604:A:C8	2.56	0.41
1:A2:3832:C:O5'	1:A2:3832:C:H6	2.03	0.41
1:A2:4007:G:H5'	1:A2:4018:A:O4'	2.20	0.41
1:A2:4189:U:H6	1:A2:4189:U:C5'	2.28	0.41
1:A2:4296:A:C8	1:A2:4296:A:C3'	3.04	0.41
1:A2:4497:C:H3'	1:A2:4498:G:H8	1.86	0.41
1:A2:4529:U:C3'	1:A2:4530:G:H5'	2.51	0.41
1:A2:4568:G:OP1	48:BB:1278:HIS:CE1	2.74	0.41
1:A2:4593:G:N1	1:A2:4623:G:H2'	2.36	0.41
1:A2:4740:U:H3'	1:A2:4740:U:C6	2.56	0.41
1:A2:4984:C:C6	1:A2:4984:C:H3'	2.56	0.41
2:A3:18:U:H2'	2:A3:19:C:O5'	2.21	0.41
2:A3:105:C:C1'	2:A3:106:G:OP2	2.69	0.41
5:AB:234:ARG:HG3	5:AB:272:LYS:HD3	2.03	0.41
5:AB:305:THR:H	5:AB:308:ASP:HB3	1.86	0.41
5:AB:321:VAL:HG23	5:AB:341:LYS:NZ	2.36	0.41
6:AC:144:ILE:HG23	6:AC:147:VAL:HB	2.03	0.41
6:AC:190:ARG:HB2	6:AC:202:ILE:HG13	2.02	0.41
7:AD:47:PRO:CB	7:AD:66:TYR:HB2	2.51	0.41
8:AE:190:HIS:CD2	8:AE:192:LYS:CB	3.02	0.41
11:AH:132:VAL:HG12	11:AH:154:VAL:CG2	2.40	0.41
12:AI:46:PHE:CB	12:AI:139:ARG:HB3	2.51	0.41
12:AI:46:PHE:HB3	12:AI:140:THR:N	2.36	0.41
18:AP:36:ILE:CG2	18:AP:114:ILE:HD12	2.51	0.41
19:AQ:43:PHE:CE1	19:AQ:47:VAL:HG21	2.55	0.41
19:AQ:57:ASN:C	19:AQ:59:PRO:HD3	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AT:40:VAL:HB	22:AT:96:ILE:CG2	2.51	0.41
33:Ae:92:ASN:HB2	33:Ae:119:ALA:O	2.21	0.41
37:Ai:33:LEU:O	37:Ai:34:THR:CB	2.66	0.41
46:Au:203:THR:HG22	46:Au:204:MET:CE	2.50	0.41
47:BA:25:C:C2'	47:BA:26:A:H5'	2.51	0.41
48:BB:821:ASP:HB3	48:BB:1176:GLU:CD	2.46	0.41
48:BB:928:ASN:CG	48:BB:1073:GLN:CD	2.78	0.41
48:BB:933:LEU:HD12	48:BB:1090:ILE:HG21	1.87	0.41
48:BB:983:ASP:HA	48:BB:1042:GLY:HA3	2.02	0.41
48:BB:1005:ALA:O	48:BB:1009:ILE:HG23	2.20	0.41
48:BB:1148:LEU:CD2	50:C1:488:U:C5	3.00	0.41
48:BB:1170:ILE:CG2	48:BB:1172:VAL:O	2.69	0.41
48:BB:1217:VAL:HA	48:BB:1218:PRO:HD2	1.89	0.41
48:BB:1295:GLN:NE2	48:BB:1411:TRP:HB3	2.36	0.41
48:BB:1340:CYS:CA	48:BB:1348:ASP:O	2.56	0.41
48:BB:1353:THR:HG21	48:BB:1376:GLU:HB2	1.98	0.41
50:C1:300:U:C2'	50:C1:301:A:C8	2.98	0.41
50:C1:343:A:OP2	50:C1:343:A:C8	2.74	0.41
50:C1:563:G:H8	50:C1:563:G:O5'	2.04	0.41
50:C1:591:U:N3	81:Ce:28:LYS:HA	2.36	0.41
50:C1:659:G:C2	50:C1:663:C:C4	3.08	0.41
50:C1:679:A:C2'	50:C1:680:G:H5'	2.51	0.41
50:C1:679:A:H2'	50:C1:680:G:H5'	2.03	0.41
50:C1:753:C:OP2	50:C1:754:G:H8	2.04	0.41
50:C1:795:A:C2	50:C1:796:G:C1'	3.04	0.41
50:C1:925:G:H2'	50:C1:925:G:N3	2.36	0.41
50:C1:1016:U:P	78:Cb:28:PRO:HB3	2.61	0.41
50:C1:1103:C:O5'	50:C1:1103:C:C6	2.68	0.41
50:C1:1289:U:H5	50:C1:1311:C:O2	2.04	0.41
50:C1:1362:U:H3'	50:C1:1363:C:N3	2.36	0.41
50:C1:1454:A:H61	50:C1:1467:C:N4	2.19	0.41
50:C1:1466:G:C6	50:C1:1467:C:N4	2.89	0.41
50:C1:1614:A:O2'	50:C1:1615:U:H5'	2.21	0.41
58:CH:65:PRO:C	58:CH:67:PRO:HD2	2.45	0.41
59:CI:126:GLY:HA2	59:CI:135:GLU:CD	2.46	0.41
60:CJ:28:GLU:O	60:CJ:31:LEU:HB3	2.20	0.41
62:CL:39:ASN:C	62:CL:41:GLY:N	2.75	0.41
64:CN:62:GLN:HG2	64:CN:65:PHE:CD1	2.56	0.41
64:CN:129:TYR:HD1	64:CN:134:VAL:HG11	1.86	0.41
65:CO:30:VAL:CG2	65:CO:47:LEU:HA	2.51	0.41
66:CP:51:ARG:HG2	66:CP:51:ARG:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:CP:60:LEU:HD21	66:CP:92:SER:CB	2.43	0.41
78:Cb:34:ASP:O	78:Cb:79:PHE:HA	2.21	0.41
83:Cg:191:HIS:HB2	83:Cg:195:LEU:HD21	2.00	0.41
1:A2:153:G:H3'	1:A2:154:U:C5	2.56	0.40
1:A2:154:U:O5'	1:A2:154:U:C6	2.74	0.40
1:A2:202:C:N3	1:A2:206:U:H5	2.19	0.40
1:A2:205:A:O4'	1:A2:229:G:C2	2.74	0.40
1:A2:270:A:OP2	1:A2:270:A:C8	2.74	0.40
1:A2:286:A:C8	43:Ao:39:ARG:HD3	2.55	0.40
1:A2:329:A:H8	1:A2:329:A:O5'	2.05	0.40
1:A2:373:G:N1	1:A2:375:A:H3'	2.37	0.40
1:A2:407:U:C2	2:A3:17:A:N6	2.89	0.40
1:A2:722:G:O2'	21:AS:73:LEU:HD11	2.22	0.40
1:A2:949:G:H3'	1:A2:950:A:C4'	2.38	0.40
1:A2:959:C:C6	1:A2:959:C:OP2	2.74	0.40
1:A2:1082:U:C6	1:A2:1083:C:C5	2.87	0.40
1:A2:1209:C:O2	1:A2:1209:C:C3'	2.69	0.40
1:A2:1503:A:H5'	1:A2:1504:A:OP2	2.20	0.40
1:A2:1660:G:H21	29:Aa:40:HIS:CB	2.34	0.40
1:A2:1755:A:N3	1:A2:1755:A:H2'	2.35	0.40
1:A2:2285:G:H4'	2:A3:19:C:H5'	2.03	0.40
1:A2:2307:G:C8	1:A2:2307:G:OP2	2.73	0.40
1:A2:2386:U:C5'	1:A2:2387:C:H5	2.28	0.40
1:A2:2497:C:O2	1:A2:2617:G:N2	2.54	0.40
1:A2:2573:G:H4'	35:Ag:47:GLY:N	2.37	0.40
1:A2:2636:A:OP1	1:A2:2636:A:H4'	2.22	0.40
1:A2:3584:G:H2'	25:AW:44:ARG:CD	2.48	0.40
1:A2:3651:A:H1'	1:A2:3653:G:C5	2.56	0.40
1:A2:3826:G:C2'	1:A2:3827:C:H5'	2.51	0.40
1:A2:3891:G:N3	1:A2:3891:G:H2'	2.35	0.40
1:A2:4072:A:C8	1:A2:4072:A:H3'	2.56	0.40
1:A2:4128:G:N1	1:A2:4129:G:H1'	2.37	0.40
1:A2:4200:G:H3'	1:A2:4201:C:H6	1.85	0.40
1:A2:4289:G:N3	1:A2:4289:G:C2'	2.83	0.40
1:A2:4360:G:H2'	1:A2:4361:G:O4'	2.22	0.40
1:A2:4395:U:H3'	1:A2:4396:U:C5	2.55	0.40
1:A2:4505:G:C2'	1:A2:4506:A:O5'	2.67	0.40
1:A2:4527:G:H8	1:A2:4527:G:C5'	2.35	0.40
1:A2:4529:U:C2'	1:A2:4530:G:H5'	2.51	0.40
1:A2:4533:G:N1	1:A2:4681:G:O6	2.53	0.40
1:A2:4616:A:C4'	1:A2:4617:U:O5'	2.66	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4706:C:C2’	1:A2:4707:U:H5’	2.51	0.40
1:A2:4712:U:H6	1:A2:4713:G:C8	2.39	0.40
1:A2:4730:C:H2’	1:A2:4731:C:C6	2.56	0.40
1:A2:4826:C:N4	15:AM:98:ARG:N	2.69	0.40
1:A2:4873:C:H2’	1:A2:4874:G:H8	1.86	0.40
1:A2:4894:C:H6	1:A2:4894:C:H5”	1.85	0.40
1:A2:4897:C:H5”	8:AE:172:LEU:CD2	2.51	0.40
1:A2:4924:C:O2	1:A2:4924:C:H2’	2.21	0.40
2:A3:67:U:H5”	38:Aj:86:PRO:N	2.36	0.40
3:A4:90:A:H2’	3:A4:91:C:O4’	2.21	0.40
4:AA:185:ALA:O	4:AA:196:TRP:NE1	2.52	0.40
5:AB:57:VAL:CG1	5:AB:367:PHE:HB3	2.51	0.40
5:AB:94:GLU:HB3	5:AB:158:GLN:OE1	2.21	0.40
5:AB:118:PHE:CE2	5:AB:130:PHE:CE1	3.09	0.40
9:AF:117:ILE:HD11	9:AF:222:LYS:HZ1	1.83	0.40
10:AG:220:GLU:HA	10:AG:223:ARG:HE	1.86	0.40
13:AJ:82:ILE:O	13:AJ:85:LYS:HB3	2.21	0.40
16:AN:53:TYR:HD1	16:AN:133:ILE:HD11	1.85	0.40
18:AP:109:VAL:O	18:AP:112:LEU:HD22	2.21	0.40
19:AQ:63:LEU:HD11	19:AQ:109:ALA:HA	2.03	0.40
20:AR:76:MET:O	20:AR:76:MET:HG3	2.20	0.40
33:Ae:88:LEU:HD22	33:Ae:88:LEU:HA	1.83	0.40
35:Ag:44:SER:O	35:Ag:81:SER:O	2.39	0.40
46:Au:32:ARG:HB3	46:Au:196:ASP:CG	2.45	0.40
47:BA:34:G:O6	50:C1:1701:C:C6	2.65	0.40
48:BB:941:VAL:HG13	48:BB:969:LEU:HD12	2.03	0.40
48:BB:1066:HIS:N	48:BB:1141:ALA:HB3	2.34	0.40
48:BB:1073:GLN:HB3	48:BB:1089:VAL:HG22	1.23	0.40
48:BB:1101:THR:CG2	48:BB:1112:VAL:HG22	2.51	0.40
48:BB:1167:GLU:H	48:BB:1167:GLU:CD	2.29	0.40
48:BB:1194:GLY:HA3	48:BB:1245:TYR:HB3	2.03	0.40
49:BC:66:A:H3’	49:BC:67:C:C5	2.56	0.40
50:C1:4:C:H2’	50:C1:5:U:C5	2.53	0.40
50:C1:18:C:O5’	50:C1:18:C:C6	2.74	0.40
50:C1:64:A:H4’	50:C1:65:C:OP1	2.21	0.40
50:C1:67:C:H5	57:CG:162:LEU:HG	1.86	0.40
50:C1:78:C:O2	50:C1:78:C:C2’	2.69	0.40
50:C1:158:A:H8	50:C1:158:A:O5’	2.04	0.40
50:C1:189:U:OP2	50:C1:189:U:C5	2.74	0.40
50:C1:211:G:C8	50:C1:211:G:C4’	3.04	0.40
50:C1:496:C:OP1	55:CE:28:ALA:HA	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:586:G:C2	50:C1:587:A:C1’	3.03	0.40
50:C1:635:G:H5’	81:Ce:19:VAL:HB	2.03	0.40
50:C1:673:G:C8	50:C1:1084:A:C6	3.10	0.40
50:C1:745:C:C4’	50:C1:746:C:C5	3.02	0.40
50:C1:746:C:C6	50:C1:749:U:C4’	3.02	0.40
50:C1:1142:G:H8	50:C1:1142:G:P	2.44	0.40
50:C1:1283:C:O3’	50:C1:1284:A:C8	2.74	0.40
50:C1:1285:G:OP1	50:C1:1286:G:N7	2.54	0.40
50:C1:1286:G:C1’	63:CM:34:GLY:HA3	2.43	0.40
50:C1:1313:A:H5”	50:C1:1314:U:H5	1.86	0.40
50:C1:1425:G:C2’	50:C1:1426:U:C6	3.01	0.40
50:C1:1478:U:H2’	50:C1:1479:G:O4’	2.20	0.40
50:C1:1481:G:H4’	80:Cd:56:ASP:CB	2.46	0.40
50:C1:1576:G:H2’	50:C1:1577:G:H8	1.85	0.40
50:C1:1579:A:H3’	50:C1:1580:A:H5”	2.03	0.40
50:C1:1601:A:C2’	50:C1:1602:U:H5”	2.52	0.40
50:C1:1700:C:C4’	50:C1:1701:C:OP2	2.67	0.40
50:C1:1721:U:H4’	50:C1:1721:U:OP1	2.21	0.40
50:C1:1825:A:C8	50:C1:1825:A:C3’	3.04	0.40
50:C1:1839:U:H5”	50:C1:1839:U:H6	1.87	0.40
51:CA:13:GLU:O	51:CA:17:LYS:HG3	2.21	0.40
51:CA:16:LEU:HD13	51:CA:16:LEU:C	2.46	0.40
51:CA:120:ARG:HA	51:CA:120:ARG:HE	1.86	0.40
55:CE:65:CYS:O	55:CE:78:VAL:HG12	2.21	0.40
55:CE:100:ARG:NH2	55:CE:118:GLU:HB3	2.36	0.40
64:CN:72:LEU:HD13	64:CN:72:LEU:O	2.21	0.40
69:CS:52:LEU:N	69:CS:52:LEU:HD12	2.36	0.40
69:CS:86:ARG:HH22	69:CS:107:LEU:HD21	1.84	0.40
70:CT:17:ALA:O	70:CT:21:PHE:HD2	2.04	0.40
72:CV:43:THR:HG22	72:CV:45:ARG:CB	2.51	0.40
73:CW:39:THR:O	73:CW:43:LYS:HG3	2.21	0.40
1:A2:333:G:C2	2:A3:33:G:N2	2.89	0.40
1:A2:426:A:O2’	1:A2:427:C:H5’	2.21	0.40
1:A2:737:G:N2	1:A2:902:G:C6	2.89	0.40
1:A2:956:C:OP1	9:AF:44:LYS:HD2	2.21	0.40
1:A2:1374:G:H2’	1:A2:1375:U:O4’	2.21	0.40
1:A2:1384:G:H3’	1:A2:1385:C:H5	1.86	0.40
1:A2:1448:C:C2’	1:A2:1449:G:H5’	2.52	0.40
1:A2:1517:U:O2’	1:A2:1518:G:H5’	2.21	0.40
1:A2:1628:U:C4	1:A2:1630:G:H1’	2.56	0.40
1:A2:1652:U:H4’	1:A2:4262:U:C2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1771:U:O2	3:A4:101:A:C4’	2.66	0.40
1:A2:1789:G:H1	1:A2:1807:C:N4	2.12	0.40
1:A2:1825:C:H4’	19:AQ:152:PHE:CZ	2.57	0.40
1:A2:1890:G:C1’	1:A2:1897:G:N1	2.81	0.40
1:A2:1934:A:N1	1:A2:2006:C:N3	2.68	0.40
1:A2:2064:G:N2	45:At:39:ARG:HH21	2.11	0.40
1:A2:2313:G:C6	1:A2:2314:C:C4	3.09	0.40
1:A2:2331:G:O2’	1:A2:2332:G:H5’	2.21	0.40
1:A2:2436:G:H5”	1:A2:2437:A:OP2	2.21	0.40
1:A2:2479:G:H1’	1:A2:2481:C:H5	1.85	0.40
1:A2:2529:G:C6	1:A2:2530:A:N7	2.90	0.40
1:A2:2559:A:C6	1:A2:2658:G:H1’	2.56	0.40
1:A2:2824:G:H3’	1:A2:2825:G:H8	1.86	0.40
1:A2:2838:C:H3’	1:A2:2838:C:P	2.62	0.40
1:A2:3690:U:C6	1:A2:3690:U:O5’	2.73	0.40
1:A2:3740:C:OP1	47:BA:12:U:O2’	2.39	0.40
1:A2:3826:G:C6	1:A2:3827:C:C5	3.09	0.40
1:A2:3827:C:O2	1:A2:3827:C:C2’	2.70	0.40
1:A2:3881:U:H6	1:A2:3881:U:O5’	2.04	0.40
1:A2:4052:G:H3’	1:A2:4053:A:H4’	2.03	0.40
1:A2:4117:A:H1’	1:A2:4118:C:OP1	2.21	0.40
1:A2:4195:G:C5	1:A2:4196:G:N7	2.89	0.40
1:A2:4204:A:N3	1:A2:4228:A:OP1	2.54	0.40
1:A2:4240:A:C2	7:AD:23:ARG:HG2	2.56	0.40
1:A2:4270:A:H3’	1:A2:4271:A:H8	1.86	0.40
1:A2:4367:G:H5”	48:BB:1358:ASN:HB3	2.04	0.40
1:A2:4377:C:H3’	1:A2:4378:G:C8	2.51	0.40
1:A2:4421:C:O2	1:A2:4421:C:H2’	2.20	0.40
1:A2:4459:G:H2’	1:A2:4460:U:O4’	2.21	0.40
1:A2:4588:U:H5’	5:AB:55:HIS:NE2	2.36	0.40
1:A2:4637:U:O2’	1:A2:4638:G:P	2.80	0.40
1:A2:4712:U:O4’	34:Af:4:ARG:HD2	2.21	0.40
1:A2:4720:G:H3’	1:A2:4720:G:H8	1.86	0.40
1:A2:4725:C:C6	1:A2:4725:C:H5”	2.56	0.40
1:A2:4853:G:H2’	1:A2:4854:G:O4’	2.21	0.40
1:A2:4861:C:H2’	1:A2:4862:G:H5’	2.01	0.40
1:A2:5003:A:H5’	1:A2:5004:G:C5’	2.43	0.40
2:A3:28:C:H2’	2:A3:28:C:O2	2.20	0.40
2:A3:154:G:C2	2:A3:155:C:C2	3.08	0.40
5:AB:232:THR:OG1	5:AB:249:ARG:HB2	2.21	0.40
6:AC:136:LEU:HD23	45:At:10:VAL:HG13	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AC:315:LYS:HE2	9:AF:155:TYR:O	2.22	0.40
7:AD:22:ARG:CG	7:AD:28:THR:OG1	2.63	0.40
7:AD:41:LYS:CG	22:AT:67:VAL:HG13	2.51	0.40
8:AE:208:ILE:CG2	8:AE:212:LEU:HG	2.51	0.40
8:AE:264:ILE:CG2	8:AE:267:LEU:HB2	2.51	0.40
10:AG:136:LEU:HD13	10:AG:202:VAL:HG13	2.03	0.40
12:AI:140:THR:HG21	12:AI:144:ASN:HD22	1.86	0.40
12:AI:176:PHE:CE2	12:AI:184:MET:HE1	2.56	0.40
14:AL:80:GLU:HG2	14:AL:110:LEU:CD1	2.51	0.40
18:AP:64:ASN:HD22	18:AP:64:ASN:N	2.19	0.40
23:AU:48:LYS:HA	23:AU:52:LYS:O	2.21	0.40
27:AY:123:ALA:CA	27:AY:126:ARG:CB	2.93	0.40
33:Ae:63:ASN:HB3	33:Ae:66:THR:OG1	2.21	0.40
35:Ag:8:ARG:HH11	35:Ag:31:VAL:HG21	1.86	0.40
37:Ai:66:ASP:HA	37:Ai:69:ALA:HB3	2.02	0.40
46:Au:195:ILE:O	46:Au:195:ILE:HG23	2.21	0.40
47:BA:37:A:N6	49:BC:342:A:N6	2.65	0.40
48:BB:821:ASP:O	48:BB:825:ARG:HG3	2.21	0.40
48:BB:844:ARG:HD2	48:BB:845:ALA:O	2.22	0.40
48:BB:896:THR:HG22	48:BB:900:LYS:HG3	2.01	0.40
48:BB:1337:THR:HA	48:BB:1338:PRO:HD3	1.90	0.40
49:BC:338:C:C4	50:C1:961:G:P	3.05	0.40
50:C1:93:U:C5	50:C1:94:G:H1’	2.56	0.40
50:C1:212:C:C5	50:C1:212:C:OP2	2.74	0.40
50:C1:301:A:O2’	59:CI:72:CYS:HA	2.21	0.40
50:C1:358:C:H2’	50:C1:359:U:O5’	2.20	0.40
50:C1:437:G:C5	50:C1:438:G:C5	3.10	0.40
50:C1:572:U:C3’	50:C1:573:U:C2	3.05	0.40
50:C1:741:C:N4	50:C1:744:G:H1	2.19	0.40
50:C1:754:G:C5	50:C1:755:C:C4	3.10	0.40
50:C1:820:U:H3	50:C1:828:G:H1	1.67	0.40
50:C1:919:A:C2	64:CN:64:ARG:NH1	2.89	0.40
50:C1:1002:U:O2’	50:C1:1003:U:H5’	2.21	0.40
50:C1:1013:U:O5’	50:C1:1013:U:C6	2.74	0.40
50:C1:1130:G:H4’	64:CN:9:LYS:O	2.20	0.40
50:C1:1250:A:H4’	50:C1:1251:A:OP2	2.20	0.40
50:C1:1447:G:H1’	71:CU:55:ARG:HH21	1.85	0.40
50:C1:1527:C:H5”	67:CQ:142:GLN:HB2	2.03	0.40
50:C1:1562:C:P	70:CT:71:GLY:HA3	2.61	0.40
50:C1:1570:G:H8	50:C1:1570:G:O5’	2.03	0.40
50:C1:1580:A:H3’	50:C1:1581:C:H5’	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1643:U:H2'	50:C1:1644:C:H6	1.81	0.40
50:C1:1666:C:H5'	50:C1:1667:U:OP2	2.21	0.40
50:C1:1745:A:C2	50:C1:1746:U:C5	3.09	0.40
52:CB:140:VAL:HB	52:CB:213:ARG:NH1	2.36	0.40
59:CI:182:CYS:O	59:CI:184:ARG:HG3	2.22	0.40
61:CK:2:LEU:O	61:CK:44:HIS:HE1	2.03	0.40
61:CK:85:LEU:O	61:CK:86:PRO:C	2.62	0.40
70:CT:126:GLN:HB2	70:CT:126:GLN:HE21	1.77	0.40
1:A2:86:U:O2	1:A2:86:U:H2'	2.19	0.40
1:A2:88:A:C2	1:A2:89:C:C6	3.09	0.40
1:A2:155:A:N3	1:A2:155:A:C2'	2.85	0.40
1:A2:221:U:H2'	1:A2:221:U:H6	1.74	0.40
1:A2:241:G:C8	1:A2:241:G:OP2	2.74	0.40
1:A2:250:G:C6	1:A2:251:C:N4	2.89	0.40
1:A2:383:U:H6	1:A2:383:U:O5'	2.04	0.40
1:A2:417:A:C2	2:A3:8:U:N3	2.89	0.40
1:A2:423:U:H3'	1:A2:423:U:C6	2.54	0.40
1:A2:444:G:H4'	1:A2:445:U:H5'	2.03	0.40
1:A2:475:U:O2	6:AC:4:ALA:HB3	2.21	0.40
1:A2:709:G:C3'	1:A2:710:G:H5'	2.44	0.40
1:A2:741:C:H2'	1:A2:742:U:C6	2.57	0.40
1:A2:970:C:C6	1:A2:970:C:O5'	2.75	0.40
1:A2:1055:G:H2'	1:A2:1056:C:O4'	2.21	0.40
1:A2:1278:C:C2'	1:A2:1279:G:H5'	2.50	0.40
1:A2:1289:C:H6	1:A2:1289:C:O5'	2.04	0.40
1:A2:1401:G:C5	1:A2:1445:G:H1'	2.57	0.40
1:A2:1463:G:C8	1:A2:1463:G:O5'	2.75	0.40
1:A2:1756:C:H6	1:A2:1756:C:O5'	2.04	0.40
1:A2:1942:A:C2	1:A2:4654:G:O2'	2.70	0.40
1:A2:2295:C:C6	1:A2:2295:C:C3'	3.04	0.40
1:A2:2478:C:C6	1:A2:2478:C:C3'	3.04	0.40
1:A2:2488:A:C2	1:A2:2491:G:C5	3.10	0.40
1:A2:2526:G:H5"	1:A2:2527:G:C5'	2.48	0.40
1:A2:2778:U:H2'	1:A2:2778:U:O2	2.21	0.40
1:A2:3601:C:H2'	1:A2:3602:C:O5'	2.21	0.40
1:A2:3623:G:H2'	1:A2:3624:C:C5'	2.48	0.40
1:A2:3627:C:O3'	4:AA:240:ALA:HA	2.22	0.40
1:A2:3897:A:H5"	1:A2:3898:G:OP2	2.22	0.40
1:A2:3938:G:C8	1:A2:3938:G:OP2	2.73	0.40
1:A2:4233:A:H8	1:A2:4233:A:H3'	1.84	0.40
1:A2:4247:G:H8	1:A2:4247:G:O5'	2.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4377:C:C5'	1:A2:4377:C:H6	2.35	0.40
1:A2:4397:U:C6	1:A2:4397:U:H5'	2.56	0.40
1:A2:4448:A:H4'	1:A2:4449:G:H8	1.86	0.40
1:A2:4586:A:N6	1:A2:4628:U:H5"	2.37	0.40
1:A2:4711:U:C3'	34:Af:6:TRP:HB2	2.46	0.40
1:A2:4736:C:H5'	1:A2:4736:C:C6	2.56	0.40
1:A2:4926:A:O5'	1:A2:4926:A:H8	2.05	0.40
2:A3:49:G:H21	36:Ah:43:LYS:HE2	1.86	0.40
3:A4:82:G:H3'	3:A4:82:G:C8	2.57	0.40
5:AB:123:HIS:NE2	5:AB:124:LYS:HG2	2.36	0.40
6:AC:136:LEU:HD22	45:At:9:VAL:HB	2.04	0.40
6:AC:346:ASN:HA	6:AC:349:LEU:CB	2.46	0.40
7:AD:61:ILE:HG12	7:AD:79:TYR:CD2	2.57	0.40
8:AE:131:LYS:HB2	8:AE:132:PRO:HD3	2.04	0.40
9:AF:143:GLY:HA2	9:AF:235:ASN:OD1	2.22	0.40
15:AM:130:LEU:HD12	17:AO:181:ALA:HB2	2.02	0.40
15:AM:137:LYS:C	15:AM:140:PRO:HD2	2.47	0.40
17:AO:43:ILE:HG22	17:AO:44:SER:N	2.37	0.40
19:AQ:159:PRO:HB3	19:AQ:188:ASN:O	2.21	0.40
23:AU:78:PHE:CZ	23:AU:83:LEU:HG	2.56	0.40
35:Ag:43:LYS:O	35:Ag:43:LYS:HG3	2.22	0.40
38:Aj:49:TRP:CZ3	38:Aj:50:SER:HB3	2.56	0.40
45:At:51:VAL:HA	45:At:65:LYS:O	2.21	0.40
45:At:80:THR:C	45:At:83:ASN:H	2.29	0.40
45:At:90:LEU:HA	45:At:93:ILE:CG2	2.48	0.40
45:At:120:SER:C	45:At:123:PRO:HD2	2.46	0.40
46:Au:43:VAL:HG22	46:Au:188:LEU:HG	2.03	0.40
46:Au:94:ALA:HB2	46:Au:117:TYR:OH	2.20	0.40
48:BB:1095:ARG:CD	48:BB:1097:LYS:NZ	2.84	0.40
48:BB:1341:VAL:HG21	48:BB:1345:ASN:HB3	2.04	0.40
50:C1:13:C:H6	50:C1:13:C:O5'	2.05	0.40
50:C1:93:U:O2	50:C1:93:U:O4'	2.38	0.40
50:C1:186:C:O2'	50:C1:187:G:H5'	2.21	0.40
50:C1:190:G:C6	50:C1:191:A:N7	2.89	0.40
50:C1:343:A:O5'	50:C1:343:A:C8	2.71	0.40
50:C1:378:U:H6	50:C1:378:U:O5'	2.03	0.40
50:C1:439:A:O2'	50:C1:440:G:H5'	2.21	0.40
50:C1:576:A:P	50:C1:576:A:H3'	2.61	0.40
50:C1:847:A:H5'	50:C1:848:U:OP2	2.21	0.40
50:C1:851:C:C4'	50:C1:852:G:N2	2.85	0.40
50:C1:870:A:C5	50:C1:916:A:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:917:U:O2	50:C1:917:U:H2'	2.21	0.40
50:C1:943:U:H5"	50:C1:944:A:OP2	2.22	0.40
50:C1:944:A:H5'	65:CO:134:PRO:CB	2.51	0.40
50:C1:991:G:H5'	77:Ca:11:ALA:HB3	2.02	0.40
50:C1:1013:U:O2'	50:C1:1104:G:H1'	2.21	0.40
50:C1:1180:C:C5	50:C1:1181:A:C5	3.09	0.40
50:C1:1224:G:H2'	50:C1:1224:G:N3	2.37	0.40
50:C1:1350:U:O3'	51:CA:110:ASN:HB2	2.20	0.40
50:C1:1367:U:H3'	50:C1:1367:U:H6	1.87	0.40
50:C1:1427:C:C5	50:C1:1428:G:C8	3.09	0.40
50:C1:1438:A:C3'	50:C1:1439:A:C8	3.05	0.40
50:C1:1555:U:O3'	50:C1:1556:A:H3'	2.21	0.40
50:C1:1561:A:N1	50:C1:1575:G:H1'	2.35	0.40
50:C1:1599:U:C2'	50:C1:1600:G:OP2	2.69	0.40
50:C1:1762:C:H6	50:C1:1762:C:O5'	2.04	0.40
52:CB:116:LYS:HG2	52:CB:117:TRP:N	2.36	0.40
52:CB:131:ASP:N	52:CB:180:ASP:OD1	2.48	0.40
53:CC:168:GLY:CA	53:CC:177:PRO:HB3	2.52	0.40
59:CI:6:ASP:OD2	59:CI:8:TRP:HB2	2.22	0.40
66:CP:34:MET:HA	66:CP:37:TYR:CD1	2.56	0.40
70:CT:19:ALA:O	70:CT:23:LYS:HG3	2.21	0.40
71:CU:20:ILE:HB	71:CU:91:LEU:HB2	2.03	0.40
76:CZ:107:VAL:CG1	76:CZ:109:TYR:HE2	2.34	0.40
78:Cb:33:MET:HG2	78:Cb:46:VAL:O	2.21	0.40
1:A2:9:C:N4	2:A3:147:G:H1	2.19	0.40
1:A2:62:A:H1'	1:A2:77:U:O2'	2.22	0.40
1:A2:64:A:C3'	1:A2:110:C:N4	2.74	0.40
1:A2:121:A:C2	1:A2:147:U:C5	3.09	0.40
1:A2:261:U:H2'	1:A2:262:C:H6	1.84	0.40
1:A2:306:G:P	1:A2:306:G:H3'	2.62	0.40
1:A2:335:A:H2'	1:A2:336:C:H6	1.84	0.40
1:A2:505:U:H3	1:A2:638:G:H1	1.69	0.40
1:A2:948:A:C5	1:A2:949:G:C6	3.10	0.40
1:A2:949:G:H8	1:A2:949:G:OP2	2.04	0.40
1:A2:1076:C:H6	1:A2:1076:C:O5'	2.05	0.40
1:A2:1199:G:O3'	1:A2:1200:G:C8	2.72	0.40
1:A2:1218:A:H3'	9:AF:51:TYR:CZ	2.51	0.40
1:A2:1299:U:C6	1:A2:1299:U:C5'	2.99	0.40
1:A2:1336:U:OP2	1:A2:1336:U:C6	2.75	0.40
1:A2:1399:G:H2'	1:A2:1399:G:N3	2.36	0.40
1:A2:1463:G:H8	1:A2:1463:G:O5'	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:1465:C:N3	1:A2:1466:G:C8	2.90	0.40
1:A2:1481:G:H3'	1:A2:1481:G:H8	1.86	0.40
1:A2:1505:G:N3	1:A2:1506:A:C8	2.89	0.40
1:A2:1521:U:H2'	1:A2:1522:G:O4'	2.22	0.40
1:A2:1575:U:H2'	18:AP:131:ARG:HH21	1.86	0.40
1:A2:1616:A:H5"	1:A2:1618:U:C4	2.56	0.40
1:A2:1632:A:H2'	1:A2:1634:C:N4	2.37	0.40
1:A2:1706:U:H2'	1:A2:1707:U:C6	2.56	0.40
1:A2:1766:A:N3	1:A2:4170:U:O2'	2.55	0.40
1:A2:1824:G:H8	1:A2:1824:G:O5'	2.04	0.40
1:A2:1876:C:H2'	1:A2:2255:A:H4'	2.03	0.40
1:A2:1892:C:H5"	1:A2:1893:C:H3'	2.02	0.40
1:A2:1938:A:OP1	1:A2:1938:A:H8	2.04	0.40
1:A2:2010:U:H2'	1:A2:2011:A:O4'	2.22	0.40
1:A2:2019:A:H62	1:A2:4394:C:H1'	1.87	0.40
1:A2:2252:A:H2'	1:A2:2253:C:H6	1.84	0.40
1:A2:2284:A:C8	1:A2:2285:G:C8	3.10	0.40
1:A2:2301:C:H2'	1:A2:2302:G:O4'	2.22	0.40
1:A2:2575:A:O5'	1:A2:2575:A:H8	2.04	0.40
1:A2:2596:G:H2'	1:A2:2597:G:O5'	2.21	0.40
1:A2:2610:U:O2'	20:AR:59:SER:HB3	2.22	0.40
1:A2:2674:A:C8	1:A2:2674:A:H5"	2.57	0.40
1:A2:2703:G:O2'	1:A2:2704:C:H6	2.04	0.40
1:A2:3630:G:N7	4:AA:152:SER:CB	2.85	0.40
1:A2:3727:U:H2'	1:A2:3728:A:H8	1.87	0.40
1:A2:3768:A:H2'	1:A2:3769:A:C8	2.56	0.40
1:A2:3918:A:C4	1:A2:3919:U:C6	3.09	0.40
1:A2:3943:G:C4	1:A2:3944:C:C5	3.09	0.40
1:A2:4023:U:H5'	46:Au:30:ASN:HB3	2.03	0.40
1:A2:4032:C:C4	1:A2:4033:G:H1'	2.57	0.40
1:A2:4120:C:H2'	1:A2:4121:G:C8	2.56	0.40
1:A2:4166:C:C2	1:A2:4167:C:C5	3.09	0.40
1:A2:4240:A:C3'	1:A2:4241:A:C5'	2.99	0.40
1:A2:4264:A:H1'	1:A2:4265:G:N7	2.37	0.40
1:A2:4718:C:O3'	17:AO:164:ALA:HA	2.22	0.40
1:A2:4849:A:C4'	1:A2:4850:C:O5'	2.70	0.40
2:A3:102:G:C6	2:A3:104:A:N1	2.90	0.40
5:AB:9:PRO:HD2	24:AV:48:ARG:HH12	1.86	0.40
7:AD:33:ARG:NE	22:AT:27:LEU:CD1	2.84	0.40
9:AF:92:VAL:CG1	9:AF:140:ILE:HD12	2.51	0.40
11:AH:29:GLY:HA3	11:AH:84:VAL:HG12	1.98	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AJ:109:ILE:HD11	13:AJ:130:PHE:HE2	1.87	0.40
14:AL:136:LYS:HA	14:AL:136:LYS:HD2	1.81	0.40
15:AM:114:LYS:HD3	15:AM:114:LYS:C	2.45	0.40
16:AN:181:HIS:CE1	16:AN:182:HIS:HB2	2.57	0.40
17:AO:187:LYS:O	17:AO:190:ASP:HB2	2.22	0.40
20:AR:137:ILE:CD1	20:AR:138:LEU:H	2.28	0.40
26:AX:81:LEU:HD22	26:AX:135:LYS:HE2	2.02	0.40
28:AZ:101:PHE:O	28:AZ:102:ARG:HB2	2.21	0.40
36:Ah:7:ARG:HG3	36:Ah:8:ASP:N	2.36	0.40
41:Am:93:LYS:HB3	41:Am:103:LEU:O	2.22	0.40
46:Au:58:THR:OG1	46:Au:101:THR:HG23	2.22	0.40
47:BA:34:G:C3'	50:C1:1248:U:H1'	2.45	0.40
47:BA:45:U:H5"	47:BA:46:G:OP1	2.22	0.40
48:BB:866:ARG:HG2	48:BB:885:THR:HG23	2.03	0.40
48:BB:897:LYS:NZ	48:BB:898:MET:HE3	2.36	0.40
48:BB:932:SER:N	48:BB:961:LYS:NZ	2.69	0.40
48:BB:1006:LYS:CA	48:BB:1009:ILE:HG12	2.51	0.40
48:BB:1050:TYR:C	48:BB:1053:VAL:HG12	2.47	0.40
48:BB:1075:MET:H	48:BB:1089:VAL:HA	1.85	0.40
50:C1:183:G:O2'	50:C1:184:G:H5'	2.21	0.40
50:C1:216:C:C2'	50:C1:217:A:H8	2.30	0.40
50:C1:313:A:OP1	50:C1:313:A:C4'	2.68	0.40
50:C1:495:U:OP2	50:C1:495:U:H6	2.03	0.40
50:C1:524:U:H5	81:Ce:31:ARG:CD	2.35	0.40
50:C1:567:C:C3'	50:C1:568:C:C5'	2.99	0.40
50:C1:662:G:H4'	50:C1:663:C:O5'	2.20	0.40
50:C1:679:A:C3'	50:C1:680:G:H5'	2.51	0.40
50:C1:828:G:H2'	50:C1:829:C:O5'	2.22	0.40
50:C1:838:G:N7	75:CY:9:THR:N	2.68	0.40
50:C1:1094:C:O2'	50:C1:1095:C:H5'	2.21	0.40
50:C1:1287:A:N7	82:Cf:99:LYS:CB	2.84	0.40
50:C1:1402:A:H5'	50:C1:1403:C:OP2	2.22	0.40
50:C1:1430:C:C6	50:C1:1430:C:O5'	2.75	0.40
50:C1:1432:U:OP2	50:C1:1432:U:H5	2.03	0.40
50:C1:1672:U:H2'	50:C1:1673:U:H6	1.85	0.40
50:C1:1781:A:C2	50:C1:1782:G:N2	2.89	0.40
50:C1:1828:C:C3'	50:C1:1829:G:C8	3.05	0.40
50:C1:1861:G:H4'	77:Ca:2:THR:N	2.36	0.40
51:CA:108:PHE:HB2	51:CA:136:GLU:HB3	2.03	0.40
52:CB:129:THR:HA	52:CB:177:GLN:HA	2.04	0.40
66:CP:83:MET:SD	66:CP:89:MET:SD	3.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:CR:62:GLN:O	83:Cg:280:LYS:HE2	2.22	0.40
71:CU:101:ILE:HG22	71:CU:101:ILE:O	2.21	0.40
73:CW:104:LEU:HD23	73:CW:125:ILE:HA	2.02	0.40
1:A2:10:A:H1'	1:A2:2448:G:O6	2.21	0.40
1:A2:176:G:H2'	1:A2:177:C:C5'	2.51	0.40
1:A2:252:G:C8	1:A2:252:G:OP2	2.74	0.40
1:A2:312:U:C5	1:A2:313:C:C5	3.09	0.40
1:A2:417:A:N1	2:A3:8:U:C4	2.90	0.40
1:A2:451:C:C5	1:A2:451:C:OP2	2.75	0.40
1:A2:471:C:OP1	1:A2:472:G:H4'	2.22	0.40
1:A2:501:U:H2'	1:A2:502:C:C6	2.56	0.40
1:A2:508:C:O2'	1:A2:509:G:H5'	2.22	0.40
1:A2:510:C:C5'	14:AL:111:GLN:HB3	2.48	0.40
1:A2:725:C:C6	1:A2:725:C:H5'	2.56	0.40
1:A2:928:A:C1'	1:A2:929:U:P	3.09	0.40
1:A2:1180:G:C2'	1:A2:1181:U:H5'	2.51	0.40
1:A2:1364:C:O2	1:A2:1484:C:H4'	2.22	0.40
1:A2:1474:G:C2'	1:A2:1475:G:C5'	2.93	0.40
1:A2:1475:G:H5"	1:A2:1476:A:P	2.61	0.40
1:A2:1783:A:C1'	1:A2:1784:A:OP2	2.68	0.40
1:A2:1787:C:O2'	1:A2:1788:C:H5'	2.21	0.40
1:A2:1811:G:H2'	1:A2:1812:U:C5'	2.52	0.40
1:A2:1862:C:C4'	1:A2:2048:U:C5	3.00	0.40
1:A2:1876:C:OP1	1:A2:2049:A:H5"	2.22	0.40
1:A2:1877:G:C1'	1:A2:2254:G:C2	3.00	0.40
1:A2:2355:G:N3	1:A2:2355:G:H2'	2.36	0.40
1:A2:2356:A:H2'	1:A2:2357:G:H5'	2.04	0.40
1:A2:2452:G:H2'	1:A2:2453:G:H8	1.79	0.40
1:A2:2456:G:OP1	1:A2:2456:G:H4'	2.21	0.40
1:A2:2517:C:H6	1:A2:2517:C:O5'	2.04	0.40
1:A2:2526:G:N7	1:A2:2527:G:C8	2.90	0.40
1:A2:2531:U:O4'	28:AZ:105:ALA:HB1	2.21	0.40
1:A2:2554:C:H6	1:A2:2554:C:C5'	2.31	0.40
1:A2:2691:G:H2'	1:A2:2692:G:O4'	2.22	0.40
1:A2:2865:G:H2'	1:A2:2866:G:H5'	2.02	0.40
1:A2:3791:U:H2'	1:A2:3792:G:H5'	2.04	0.40
1:A2:3834:A:H2'	1:A2:3835:C:C5	2.50	0.40
1:A2:3863:A:H2'	1:A2:3864:G:O4'	2.20	0.40
1:A2:3930:G:H3'	1:A2:3931:A:C5'	2.51	0.40
1:A2:4144:G:H2'	1:A2:4145:G:O5'	2.21	0.40
1:A2:4268:C:H2'	1:A2:4269:G:H8	1.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A2:4294:U:C6	1:A2:4294:U:C3'	3.04	0.40
1:A2:4388:A:C8	1:A2:4388:A:C5'	3.05	0.40
1:A2:4469:U:H1'	1:A2:4472:U:O4	2.22	0.40
1:A2:4530:G:C2'	1:A2:4531:A:OP2	2.69	0.40
1:A2:4717:U:H6	17:AO:114:LYS:CA	2.35	0.40
1:A2:4854:G:O2'	1:A2:4856:G:H5"	2.21	0.40
2:A3:51:U:H6	2:A3:52:A:N7	2.20	0.40
3:A4:11:A:H2'	3:A4:66:G:N2	2.36	0.40
7:AD:208:MET:HE3	7:AD:233:PRO:HG3	2.03	0.40
7:AD:219:TYR:O	7:AD:222:GLN:O	2.39	0.40
8:AE:182:ASN:O	8:AE:183:ARG:CB	2.70	0.40
8:AE:283:PRO:CB	34:Af:105:LEU:HD21	2.52	0.40
10:AG:106:THR:HG22	10:AG:109:GLU:HG2	2.03	0.40
12:AI:102:MET:HE2	47:BA:75:C:H42	1.86	0.40
14:AL:155:MET:N	14:AL:156:PRO:CD	2.85	0.40
14:AL:164:GLU:H	14:AL:164:GLU:CD	2.29	0.40
16:AN:136:ASP:HA	16:AN:137:PRO:HD2	1.98	0.40
19:AQ:12:LYS:HG2	19:AQ:13:VAL:H	1.87	0.40
19:AQ:61:LEU:HD13	19:AQ:61:LEU:HA	1.76	0.40
19:AQ:158:THR:N	19:AQ:159:PRO:CD	2.85	0.40
21:AS:12:VAL:HG22	21:AS:64:CYS:SG	2.61	0.40
29:Aa:131:ARG:O	29:Aa:135:GLU:HG3	2.21	0.40
33:Ae:16:ARG:CD	33:Ae:19:LYS:HD3	2.51	0.40
33:Ae:88:LEU:HB3	33:Ae:120:ILE:HD13	2.04	0.40
35:Ag:69:LYS:HB3	35:Ag:73:HIS:HE1	1.87	0.40
35:Ag:69:LYS:HB3	35:Ag:73:HIS:CE1	2.56	0.40
42:An:21:ARG:O	42:An:25:LYS:N	2.55	0.40
43:Ao:14:LYS:HE3	43:Ao:77:CYS:SG	2.61	0.40
48:BB:824:LYS:HD3	48:BB:1165:TYR:CZ	2.35	0.40
50:C1:32:U:H1'	50:C1:516:A:H2	1.83	0.40
50:C1:200:G:H4'	50:C1:201:C:OP1	2.21	0.40
50:C1:237:C:H1'	50:C1:238:C:C5'	2.49	0.40
50:C1:473:A:H5"	50:C1:473:A:C8	2.50	0.40
50:C1:526:A:H2'	60:CJ:128:VAL:HG22	2.04	0.40
50:C1:748:C:C2'	50:C1:748:C:O2	2.70	0.40
50:C1:958:G:C5'	50:C1:959:G:N7	2.84	0.40
50:C1:992:A:H5"	50:C1:1132:C:O2	2.21	0.40
50:C1:1015:U:H1'	78:Cb:49:HIS:ND1	2.37	0.40
50:C1:1348:G:H22	50:C1:1381:G:N2	2.19	0.40
50:C1:1414:A:N3	50:C1:1415:C:C2	2.90	0.40
50:C1:1673:U:OP1	67:CQ:76:GLY:HA3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:1686:G:N3	50:C1:1686:G:H2'	2.36	0.40
50:C1:1706:G:H2'	50:C1:1850:A:O2'	2.22	0.40
50:C1:1798:C:H2'	50:C1:1799:G:O4'	2.21	0.40
51:CA:9:GLN:HB2	72:CV:83:PHE:CG	2.56	0.40
51:CA:69:GLU:HB2	53:CC:270:THR:HG21	2.02	0.40
52:CB:223:PHE:CE1	52:CB:225:LEU:HD13	2.56	0.40
55:CE:31:PRO:HG2	55:CE:38:LEU:HG	2.02	0.40
55:CE:173:ILE:HD12	55:CE:235:TRP:CZ2	2.57	0.40
58:CH:8:ILE:HG23	58:CH:45:ILE:O	2.21	0.40
59:CI:21:TYR:O	59:CI:21:TYR:CD1	2.75	0.40
61:CK:83:LEU:O	61:CK:84:HIS:HB3	2.21	0.40
62:CL:49:GLU:HA	62:CL:52:GLU:OE2	2.21	0.40
64:CN:64:ARG:NH1	64:CN:64:ARG:HB3	2.36	0.40
64:CN:80:LEU:H	64:CN:80:LEU:HG	1.70	0.40
64:CN:135:LEU:HG	64:CN:136:PRO:HD2	2.04	0.40
65:CO:62:VAL:HG12	65:CO:64:ALA:H	1.85	0.40
70:CT:112:MET:HA	70:CT:127:GLY:HA3	2.03	0.40
71:CU:49:LYS:HB3	71:CU:92:HIS:HB2	2.04	0.40
77:Ca:82:LYS:HE2	79:Cc:69:ARG:HH11	1.86	0.40
79:Cc:34:PHE:HZ	79:Cc:42:ILE:HD12	1.85	0.40
81:Ce:31:ARG:HG3	81:Ce:32:ALA:H	1.87	0.40
82:Cf:130:VAL:HG11	82:Cf:141:CYS:SG	2.61	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
4	AA	245/257 (95%)	236 (96%)	6 (2%)	3 (1%)	10 44
5	AB	394/403 (98%)	369 (94%)	11 (3%)	14 (4%)	2 20
6	AC	362/427 (85%)	338 (93%)	9 (2%)	15 (4%)	2 18

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
7	AD	288/297 (97%)	279 (97%)	4 (1%)	5 (2%)	7 36
8	AE	156/158 (99%)	141 (90%)	8 (5%)	7 (4%)	2 17
9	AF	232/248 (94%)	225 (97%)	3 (1%)	4 (2%)	7 36
10	AG	233/266 (88%)	216 (93%)	8 (3%)	9 (4%)	2 19
11	AH	190/192 (99%)	184 (97%)	3 (2%)	3 (2%)	7 38
12	AI	192/214 (90%)	187 (97%)	2 (1%)	3 (2%)	7 38
13	AJ	168/178 (94%)	153 (91%)	3 (2%)	12 (7%)	1 11
14	AL	198/211 (94%)	178 (90%)	9 (4%)	11 (6%)	1 14
15	AM	138/215 (64%)	132 (96%)	4 (3%)	2 (1%)	9 40
16	AN	202/204 (99%)	193 (96%)	6 (3%)	3 (2%)	8 40
17	AO	194/203 (96%)	187 (96%)	4 (2%)	3 (2%)	8 40
18	AP	151/184 (82%)	141 (93%)	7 (5%)	3 (2%)	6 31
19	AQ	182/188 (97%)	169 (93%)	7 (4%)	6 (3%)	3 21
20	AR	180/196 (92%)	172 (96%)	3 (2%)	5 (3%)	4 24
21	AS	171/176 (97%)	158 (92%)	7 (4%)	6 (4%)	3 20
22	AT	157/160 (98%)	150 (96%)	4 (2%)	3 (2%)	6 32
23	AU	100/128 (78%)	97 (97%)	3 (3%)	0	100 100
24	AV	126/140 (90%)	119 (94%)	5 (4%)	2 (2%)	7 38
25	AW	62/157 (40%)	61 (98%)	1 (2%)	0	100 100
26	AX	117/156 (75%)	113 (97%)	4 (3%)	0	100 100
27	AY	126/145 (87%)	119 (94%)	4 (3%)	3 (2%)	4 27
28	AZ	134/136 (98%)	125 (93%)	5 (4%)	4 (3%)	3 23
29	Aa	145/148 (98%)	134 (92%)	6 (4%)	5 (3%)	3 21
30	Ab	67/159 (42%)	60 (90%)	3 (4%)	4 (6%)	1 13
31	Ac	102/115 (89%)	99 (97%)	1 (1%)	2 (2%)	6 31
32	Ad	107/125 (86%)	103 (96%)	3 (3%)	1 (1%)	14 51
33	Ae	126/135 (93%)	117 (93%)	6 (5%)	3 (2%)	4 27
34	Af	105/110 (96%)	96 (91%)	4 (4%)	5 (5%)	2 16
35	Ag	113/117 (97%)	103 (91%)	6 (5%)	4 (4%)	3 20
36	Ah	120/123 (98%)	112 (93%)	5 (4%)	3 (2%)	4 26
37	Ai	95/105 (90%)	85 (90%)	4 (4%)	6 (6%)	1 13

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
38	Aj	83/97 (86%)	75 (90%)	6 (7%)	2 (2%)	4 27
39	Ak	67/70 (96%)	64 (96%)	2 (3%)	1 (2%)	8 40
40	Al	48/51 (94%)	46 (96%)	1 (2%)	1 (2%)	5 30
41	Am	50/128 (39%)	48 (96%)	1 (2%)	1 (2%)	6 31
42	An	23/25 (92%)	23 (100%)	0	0	100 100
43	Ao	104/106 (98%)	98 (94%)	4 (4%)	2 (2%)	6 32
44	Ap	89/92 (97%)	83 (93%)	3 (3%)	3 (3%)	3 21
45	At	128/137 (93%)	112 (88%)	9 (7%)	7 (6%)	1 15
46	Au	208/210 (99%)	199 (96%)	6 (3%)	3 (1%)	9 40
48	BB	605/627 (96%)	523 (86%)	51 (8%)	31 (5%)	1 15
51	CA	216/295 (73%)	209 (97%)	5 (2%)	2 (1%)	14 51
52	CB	211/264 (80%)	176 (83%)	18 (8%)	17 (8%)	1 9
53	CC	220/293 (75%)	213 (97%)	2 (1%)	5 (2%)	5 28
54	CD	210/243 (86%)	201 (96%)	4 (2%)	5 (2%)	4 27
55	CE	255/263 (97%)	237 (93%)	13 (5%)	5 (2%)	6 31
56	CF	186/204 (91%)	163 (88%)	13 (7%)	10 (5%)	1 15
57	CG	230/249 (92%)	216 (94%)	5 (2%)	9 (4%)	2 19
58	CH	189/194 (97%)	178 (94%)	7 (4%)	4 (2%)	5 30
59	CI	205/208 (99%)	184 (90%)	14 (7%)	7 (3%)	3 21
60	CJ	177/194 (91%)	169 (96%)	5 (3%)	3 (2%)	7 36
61	CK	92/165 (56%)	84 (91%)	1 (1%)	7 (8%)	1 10
62	CL	144/158 (91%)	133 (92%)	5 (4%)	6 (4%)	2 17
63	CM	118/132 (89%)	111 (94%)	1 (1%)	6 (5%)	1 15
64	CN	148/151 (98%)	138 (93%)	5 (3%)	5 (3%)	3 21
65	CO	135/151 (89%)	129 (96%)	3 (2%)	3 (2%)	5 29
66	CP	116/145 (80%)	106 (91%)	5 (4%)	5 (4%)	2 17
67	CQ	137/146 (94%)	129 (94%)	6 (4%)	2 (2%)	8 40
68	CR	105/135 (78%)	99 (94%)	4 (4%)	2 (2%)	6 32
69	CS	140/152 (92%)	125 (89%)	7 (5%)	8 (6%)	1 14
70	CT	141/145 (97%)	135 (96%)	4 (3%)	2 (1%)	9 40
71	CU	99/119 (83%)	95 (96%)	3 (3%)	1 (1%)	12 49

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
72	CV	81/83 (98%)	78 (96%)	1 (1%)	2 (2%)	4 26
73	CW	127/130 (98%)	118 (93%)	7 (6%)	2 (2%)	7 38
74	CX	132/143 (92%)	120 (91%)	5 (4%)	7 (5%)	1 15
75	CY	120/133 (90%)	114 (95%)	2 (2%)	4 (3%)	3 21
76	CZ	74/125 (59%)	71 (96%)	0	3 (4%)	2 18
77	Ca	94/115 (82%)	85 (90%)	5 (5%)	4 (4%)	2 17
78	Cb	78/84 (93%)	70 (90%)	8 (10%)	0	100 100
79	Cc	60/69 (87%)	57 (95%)	1 (2%)	2 (3%)	3 21
80	Cd	51/56 (91%)	44 (86%)	7 (14%)	0	100 100
81	Ce	49/59 (83%)	43 (88%)	5 (10%)	1 (2%)	6 31
82	Cf	59/156 (38%)	53 (90%)	6 (10%)	0	100 100
83	Cg	312/317 (98%)	291 (93%)	14 (4%)	7 (2%)	5 29
All	All	11794/13395 (88%)	10996 (93%)	442 (4%)	356 (3%)	5 23

All (356) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	AA	144	LYS
4	AA	196	TRP
5	AB	4	ARG
5	AB	5	LYS
5	AB	157	CYS
5	AB	259	PRO
5	AB	260	ALA
5	AB	360	LEU
6	AC	50	GLN
6	AC	53	ALA
6	AC	54	VAL
6	AC	151	PRO
6	AC	309	ILE
7	AD	258	LYS
8	AE	137	VAL
8	AE	183	ARG
8	AE	185	PRO
9	AF	222	LYS
10	AG	41	ILE
10	AG	42	GLY
10	AG	162	ASP

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Mol	Chain	Res	Type
11	AH	4	ILE
11	AH	61	TRP
12	AI	189	ARG
13	AJ	11	PRO
13	AJ	14	GLU
13	AJ	77	ALA
13	AJ	155	HIS
13	AJ	175	LEU
14	AL	47	ALA
14	AL	52	SER
14	AL	54	PRO
14	AL	77	SER
14	AL	205	GLN
15	AM	21	ALA
16	AN	184	ILE
18	AP	3	ARG
18	AP	6	LEU
19	AQ	98	LEU
19	AQ	155	ALA
20	AR	131	VAL
21	AS	171	ARG
22	AT	18	PRO
27	AY	67	ILE
28	AZ	32	GLY
28	AZ	103	ASP
28	AZ	125	GLY
29	Aa	48	TYR
30	Ab	30	GLU
30	Ab	56	LYS
31	Ac	107	SER
33	Ae	19	LYS
33	Ae	20	PHE
34	Af	60	PRO
34	Af	64	PRO
34	Af	106	TYR
34	Af	107	PRO
35	Ag	84	ALA
36	Ah	122	LYS
37	Ai	28	ARG
37	Ai	33	LEU
37	Ai	34	THR
38	Aj	11	ARG

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Mol	Chain	Res	Type
38	Aj	85	LYS
39	Ak	18	LYS
40	Al	4	HIS
45	At	44	ILE
45	At	61	VAL
45	At	76	SER
45	At	104	PRO
46	Au	190	LYS
48	BB	836	LYS
48	BB	843	LEU
48	BB	897	LYS
48	BB	931	SER
48	BB	1068	GLU
48	BB	1070	LEU
48	BB	1142	ALA
48	BB	1190	LEU
48	BB	1266	LEU
48	BB	1303	VAL
48	BB	1304	PHE
48	BB	1320	ASP
48	BB	1349	ILE
48	BB	1367	LYS
48	BB	1386	PHE
52	CB	76	ASN
52	CB	132	GLY
52	CB	148	ASN
52	CB	154	SER
52	CB	176	VAL
52	CB	177	GLN
52	CB	207	LEU
52	CB	221	PRO
53	CC	64	THR
53	CC	172	ASN
53	CC	176	LYS
54	CD	78	GLY
54	CD	199	GLY
55	CE	204	SER
55	CE	205	PHE
56	CF	20	PHE
56	CF	22	LYS
56	CF	40	ALA
56	CF	48	TYR

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Mol	Chain	Res	Type
56	CF	80	GLY
56	CF	132	GLY
56	CF	185	SER
57	CG	43	GLU
57	CG	146	ASN
57	CG	147	LEU
57	CG	169	PRO
58	CH	88	SER
58	CH	135	PHE
59	CI	123	ARG
59	CI	131	PRO
59	CI	134	GLU
59	CI	142	SER
59	CI	159	SER
61	CK	30	PRO
61	CK	32	HIS
61	CK	36	ALA
61	CK	84	HIS
61	CK	87	PRO
62	CL	8	ARG
62	CL	19	ASN
64	CN	7	PRO
64	CN	108	ASP
65	CO	100	THR
65	CO	146	ARG
66	CP	29	SER
66	CP	126	VAL
68	CR	72	LYS
69	CS	78	LYS
69	CS	79	ILE
69	CS	134	GLN
70	CT	37	VAL
71	CU	52	GLY
72	CV	42	VAL
73	CW	100	GLY
74	CX	61	GLN
74	CX	106	GLY
74	CX	107	ARG
74	CX	116	PRO
75	CY	33	ALA
75	CY	98	GLU
76	CZ	95	GLY

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Mol	Chain	Res	Type
83	Cg	255	SER
83	Cg	284	PRO
5	AB	299	ILE
5	AB	309	LEU
5	AB	357	ARG
6	AC	55	SER
6	AC	58	ALA
6	AC	148	PRO
6	AC	276	ASN
9	AF	166	ARG
9	AF	170	THR
10	AG	84	THR
11	AH	190	ALA
12	AI	41	ALA
12	AI	194	GLY
13	AJ	97	ASN
13	AJ	117	ILE
14	AL	51	ALA
14	AL	143	GLU
14	AL	162	LYS
19	AQ	157	GLY
20	AR	113	LYS
20	AR	137	ILE
20	AR	138	LEU
24	AV	85	ARG
27	AY	84	ARG
29	Aa	47	LYS
29	Aa	66	ASN
29	Aa	116	LYS
35	Ag	44	SER
35	Ag	45	ALA
43	Ao	34	TYR
44	Ap	12	GLY
48	BB	1153	GLU
48	BB	1185	LEU
48	BB	1195	VAL
48	BB	1432	GLU
51	CA	6	ASP
52	CB	52	THR
52	CB	78	GLU
52	CB	127	VAL
52	CB	209	ASP

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Mol	Chain	Res	Type
53	CC	174	ILE
54	CD	81	GLU
55	CE	231	GLY
55	CE	243	GLY
56	CF	34	SER
56	CF	56	TYR
57	CG	87	ARG
57	CG	157	VAL
58	CH	164	ASN
61	CK	64	TRP
62	CL	119	ASP
63	CM	30	GLY
63	CM	60	MET
63	CM	106	CYS
63	CM	107	SER
64	CN	143	SER
68	CR	114	LEU
69	CS	24	ARG
69	CS	31	THR
69	CS	90	VAL
69	CS	92	ASP
72	CV	48	GLY
77	Ca	61	ALA
83	Cg	276	SER
5	AB	292	LEU
5	AB	296	GLY
6	AC	57	LEU
6	AC	75	ARG
6	AC	150	LEU
7	AD	265	ARG
8	AE	135	GLN
8	AE	265	PRO
10	AG	161	VAL
10	AG	163	PRO
13	AJ	111	GLU
14	AL	141	ALA
14	AL	161	TYR
14	AL	177	LYS
17	AO	72	HIS
17	AO	198	THR
17	AO	199	HIS
18	AP	5	SER

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Mol	Chain	Res	Type
19	AQ	12	LYS
21	AS	135	SER
27	AY	123	ALA
28	AZ	37	PRO
30	Ab	29	TYR
36	Ah	41	ALA
37	Ai	101	ALA
41	Am	79	GLU
44	Ap	51	ALA
46	Au	3	GLN
48	BB	1302	ALA
48	BB	1414	ASP
52	CB	49	VAL
52	CB	213	ARG
54	CD	142	LEU
55	CE	203	GLY
56	CF	79	HIS
57	CG	91	GLU
57	CG	92	ARG
58	CH	109	ARG
62	CL	7	GLU
63	CM	102	LYS
64	CN	3	ARG
67	CQ	17	LYS
67	CQ	74	GLY
74	CX	33	GLY
74	CX	86	PRO
75	CY	64	PHE
76	CZ	113	THR
77	Ca	81	SER
79	Cc	38	THR
4	AA	70	LYS
7	AD	253	TYR
8	AE	227	HIS
10	AG	44	ASP
13	AJ	120	ASP
13	AJ	176	PRO
15	AM	44	GLN
16	AN	145	ASN
19	AQ	164	LYS
21	AS	16	CYS
21	AS	158	VAL

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Mol	Chain	Res	Type
21	AS	160	ARG
22	AT	125	TRP
31	Ac	53	PRO
36	Ah	3	LYS
45	At	79	ARG
45	At	89	THR
48	BB	841	GLU
48	BB	1182	LYS
48	BB	1187	ALA
48	BB	1348	ASP
48	BB	1358	ASN
64	CN	62	GLN
66	CP	39	ALA
73	CW	28	ARG
74	CX	75	ILE
75	CY	119	GLY
79	Cc	64	GLU
83	Cg	146	SER
5	AB	189	THR
6	AC	30	ALA
6	AC	56	GLU
10	AG	134	PRO
19	AQ	156	PRO
21	AS	164	LYS
45	At	45	HIS
46	Au	39	PRO
48	BB	845	ALA
48	BB	1192	GLU
48	BB	1242	ASP
53	CC	261	PHE
57	CG	88	ARG
60	CJ	138	ARG
60	CJ	169	ARG
62	CL	115	PRO
66	CP	28	MET
66	CP	125	PRO
70	CT	51	ASN
76	CZ	114	LYS
77	Ca	38	LYS
81	Ce	8	ARG
5	AB	326	VAL
7	AD	125	VAL

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Mol	Chain	Res	Type
7	AD	259	LYS
9	AF	184	ILE
13	AJ	58	ARG
20	AR	53	LYS
22	AT	123	GLY
29	Aa	24	LYS
30	Ab	21	ILE
34	Af	59	THR
37	Ai	21	VAL
37	Ai	65	LYS
51	CA	104	THR
52	CB	23	ASP
52	CB	210	VAL
59	CI	12	ARG
69	CS	6	PRO
77	Ca	84	VAL
10	AG	30	PRO
13	AJ	76	GLY
35	Ag	79	GLY
44	Ap	19	GLY
52	CB	64	GLY
60	CJ	170	PRO
61	CK	86	PRO
48	BB	1368	GLY
48	BB	1382	SER
59	CI	20	PRO
62	CL	29	GLY
63	CM	100	PRO
83	Cg	103	GLY
5	AB	18	PRO
6	AC	232	VAL
8	AE	144	ILE
32	Ad	20	VAL
65	CO	53	ILE
83	Cg	61	GLY
16	AN	52	GLY
43	Ao	101	GLY
83	Cg	265	ILE
24	AV	45	ILE
33	Ae	6	PRO
54	CD	63	GLY

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	AA	189/199 (95%)	182 (96%)	7 (4%)	30	51
5	AB	344/349 (99%)	322 (94%)	22 (6%)	16	37
6	AC	302/348 (87%)	283 (94%)	19 (6%)	16	37
7	AD	244/250 (98%)	237 (97%)	7 (3%)	37	58
8	AE	143/143 (100%)	133 (93%)	10 (7%)	14	35
9	AF	203/215 (94%)	195 (96%)	8 (4%)	28	49
10	AG	199/223 (89%)	190 (96%)	9 (4%)	24	46
11	AH	171/171 (100%)	165 (96%)	6 (4%)	32	53
12	AI	170/181 (94%)	161 (95%)	9 (5%)	20	41
13	AJ	143/149 (96%)	137 (96%)	6 (4%)	26	48
14	AL	167/177 (94%)	156 (93%)	11 (7%)	15	37
15	AM	118/161 (73%)	113 (96%)	5 (4%)	26	48
16	AN	172/172 (100%)	167 (97%)	5 (3%)	37	58
17	AO	168/174 (97%)	165 (98%)	3 (2%)	51	68
18	AP	133/163 (82%)	126 (95%)	7 (5%)	20	41
19	AQ	162/165 (98%)	157 (97%)	5 (3%)	35	56
20	AR	161/175 (92%)	150 (93%)	11 (7%)	14	36
21	AS	155/157 (99%)	149 (96%)	6 (4%)	28	49
22	AT	139/140 (99%)	135 (97%)	4 (3%)	37	58
23	AU	91/115 (79%)	91 (100%)	0	100	100
24	AV	100/107 (94%)	100 (100%)	0	100	100
25	AW	55/126 (44%)	52 (94%)	3 (6%)	19	41
26	AX	107/133 (80%)	105 (98%)	2 (2%)	50	67
27	AY	119/135 (88%)	114 (96%)	5 (4%)	26	48
28	AZ	118/118 (100%)	114 (97%)	4 (3%)	32	54
29	Aa	120/121 (99%)	115 (96%)	5 (4%)	26	48

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
30	Ab	58/126 (46%)	57 (98%)	1 (2%)	53 69
31	Ac	88/97 (91%)	87 (99%)	1 (1%)	65 76
32	Ad	100/110 (91%)	97 (97%)	3 (3%)	36 57
33	Ae	115/121 (95%)	111 (96%)	4 (4%)	32 53
34	Af	87/89 (98%)	77 (88%)	10 (12%)	5 18
35	Ag	98/100 (98%)	89 (91%)	9 (9%)	8 27
36	Ah	109/110 (99%)	105 (96%)	4 (4%)	30 51
37	Ai	82/89 (92%)	76 (93%)	6 (7%)	13 34
38	Aj	71/80 (89%)	69 (97%)	2 (3%)	38 60
39	Ak	64/65 (98%)	64 (100%)	0	100 100
40	Al	47/48 (98%)	46 (98%)	1 (2%)	47 65
41	Am	48/116 (41%)	45 (94%)	3 (6%)	16 37
42	An	24/24 (100%)	24 (100%)	0	100 100
43	Ao	94/94 (100%)	90 (96%)	4 (4%)	26 47
44	Ap	74/75 (99%)	72 (97%)	2 (3%)	39 61
45	At	113/121 (93%)	108 (96%)	5 (4%)	25 47
46	Au	177/177 (100%)	161 (91%)	16 (9%)	9 27
48	BB	540/552 (98%)	517 (96%)	23 (4%)	26 47
51	CA	181/243 (74%)	177 (98%)	4 (2%)	45 64
52	CB	194/231 (84%)	182 (94%)	12 (6%)	16 38
53	CC	188/225 (84%)	179 (95%)	9 (5%)	23 44
54	CD	175/202 (87%)	164 (94%)	11 (6%)	16 37
55	CE	220/225 (98%)	207 (94%)	13 (6%)	18 39
56	CF	158/170 (93%)	152 (96%)	6 (4%)	29 50
57	CG	202/218 (93%)	196 (97%)	6 (3%)	36 57
58	CH	171/174 (98%)	170 (99%)	1 (1%)	78 83
59	CI	179/180 (99%)	167 (93%)	12 (7%)	15 36
60	CJ	160/168 (95%)	152 (95%)	8 (5%)	22 43
61	CK	85/136 (62%)	81 (95%)	4 (5%)	23 45
62	CL	133/142 (94%)	130 (98%)	3 (2%)	44 64
63	CM	102/108 (94%)	96 (94%)	6 (6%)	18 39

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
64	CN	130/131 (99%)	128 (98%)	2 (2%)	57	72
65	CO	107/119 (90%)	99 (92%)	8 (8%)	12	33
66	CP	107/130 (82%)	103 (96%)	4 (4%)	30	51
67	CQ	115/121 (95%)	111 (96%)	4 (4%)	32	53
68	CR	99/122 (81%)	92 (93%)	7 (7%)	13	35
69	CS	123/132 (93%)	115 (94%)	8 (6%)	15	37
70	CT	113/115 (98%)	106 (94%)	7 (6%)	16	38
71	CU	93/107 (87%)	87 (94%)	6 (6%)	15	37
72	CV	67/67 (100%)	67 (100%)	0	100	100
73	CW	112/113 (99%)	108 (96%)	4 (4%)	31	52
74	CX	108/115 (94%)	104 (96%)	4 (4%)	30	51
75	CY	107/115 (93%)	100 (94%)	7 (6%)	15	37
76	CZ	67/103 (65%)	62 (92%)	5 (8%)	12	33
77	Ca	83/98 (85%)	76 (92%)	7 (8%)	10	30
78	Cb	72/76 (95%)	68 (94%)	4 (6%)	19	40
79	Cc	55/62 (89%)	52 (94%)	3 (6%)	19	41
80	Cd	47/49 (96%)	44 (94%)	3 (6%)	16	37
81	Ce	42/48 (88%)	39 (93%)	3 (7%)	13	35
82	Cf	54/140 (39%)	51 (94%)	3 (6%)	19	40
83	Cg	272/275 (99%)	260 (96%)	12 (4%)	25	47
All	All	10303/11421 (90%)	9834 (95%)	469 (5%)	25	45

All (469) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	AA	10	LYS
4	AA	45	VAL
4	AA	116	LEU
4	AA	149	LYS
4	AA	162	ASN
4	AA	177	LYS
4	AA	225	ILE
5	AB	3	HIS
5	AB	55	HIS
5	AB	73	VAL

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Mol	Chain	Res	Type
5	AB	89	ILE
5	AB	101	THR
5	AB	131	THR
5	AB	146	LEU
5	AB	157	CYS
5	AB	240	LEU
5	AB	243	LYS
5	AB	248	LEU
5	AB	254	ILE
5	AB	258	HIS
5	AB	291	TYR
5	AB	300	LYS
5	AB	305	THR
5	AB	314	ILE
5	AB	327	THR
5	AB	345	LEU
5	AB	351	LEU
5	AB	352	LEU
5	AB	370	THR
6	AC	13	GLU
6	AC	24	LEU
6	AC	49	ARG
6	AC	78	ARG
6	AC	100	ARG
6	AC	107	THR
6	AC	150	LEU
6	AC	151	PRO
6	AC	162	LYS
6	AC	163	LYS
6	AC	188	ARG
6	AC	193	LYS
6	AC	215	ASN
6	AC	232	VAL
6	AC	253	THR
6	AC	289	LEU
6	AC	309	ILE
6	AC	310	HIS
6	AC	323	ARG
7	AD	81	HIS
7	AD	105	LEU
7	AD	126	THR
7	AD	155	THR

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Mol	Chain	Res	Type
7	AD	177	THR
7	AD	262	LYS
7	AD	293	ARG
8	AE	137	VAL
8	AE	162	VAL
8	AE	172	LEU
8	AE	188	ARG
8	AE	189	THR
8	AE	197	THR
8	AE	208	ILE
8	AE	212	LEU
8	AE	217	PHE
8	AE	278	THR
9	AF	37	PHE
9	AF	44	LYS
9	AF	55	LYS
9	AF	83	VAL
9	AF	127	LYS
9	AF	199	LYS
9	AF	222	LYS
9	AF	226	HIS
10	AG	34	LYS
10	AG	46	GLN
10	AG	55	VAL
10	AG	81	ASN
10	AG	136	LEU
10	AG	162	ASP
10	AG	163	PRO
10	AG	199	CYS
10	AG	218	LEU
11	AH	2	LYS
11	AH	20	LEU
11	AH	41	ILE
11	AH	45	LEU
11	AH	129	ARG
11	AH	188	GLN
12	AI	33	ILE
12	AI	39	LYS
12	AI	53	VAL
12	AI	96	VAL
12	AI	129	VAL
12	AI	163	GLN

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Mol	Chain	Res	Type
12	AI	166	HIS
12	AI	174	THR
12	AI	200	ILE
13	AJ	12	MET
13	AJ	70	VAL
13	AJ	83	LEU
13	AJ	109	ILE
13	AJ	115	LEU
13	AJ	169	LYS
14	AL	52	SER
14	AL	54	PRO
14	AL	55	ILE
14	AL	123	LYS
14	AL	130	LYS
14	AL	135	LYS
14	AL	148	THR
14	AL	151	THR
14	AL	155	MET
14	AL	163	LYS
14	AL	183	ARG
15	AM	2	VAL
15	AM	7	VAL
15	AM	45	VAL
15	AM	78	GLN
15	AM	114	LYS
16	AN	5	LYS
16	AN	31	ARG
16	AN	36	LEU
16	AN	60	VAL
16	AN	174	LEU
17	AO	169	ARG
17	AO	187	LYS
17	AO	197	LYS
18	AP	2	VAL
18	AP	4	TYR
18	AP	64	ASN
18	AP	67	VAL
18	AP	78	TRP
18	AP	94	MET
18	AP	112	LEU
19	AQ	48	LEU
19	AQ	61	LEU

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Mol	Chain	Res	Type
19	AQ	72	LEU
19	AQ	75	ARG
19	AQ	120	ILE
20	AR	1	MET
20	AR	3	MET
20	AR	5	ARG
20	AR	20	LYS
20	AR	25	ASP
20	AR	41	ILE
20	AR	57	VAL
20	AR	74	ARG
20	AR	103	ARG
20	AR	137	ILE
20	AR	138	LEU
21	AS	4	SER
21	AS	7	LEU
21	AS	24	THR
21	AS	27	LEU
21	AS	73	LEU
21	AS	169	THR
22	AT	17	ARG
22	AT	68	THR
22	AT	84	ILE
22	AT	126	VAL
25	AW	32	LEU
25	AW	33	ASN
25	AW	58	LYS
26	AX	79	PHE
26	AX	123	LYS
27	AY	8	THR
27	AY	36	LYS
27	AY	69	LYS
27	AY	70	VAL
27	AY	79	VAL
28	AZ	1	MET
28	AZ	89	ILE
28	AZ	133	LYS
28	AZ	136	PHE
29	Aa	8	THR
29	Aa	47	LYS
29	Aa	56	VAL
29	Aa	78	LEU

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Mol	Chain	Res	Type
29	Aa	138	LYS
30	Ab	61	ASN
31	Ac	17	ARG
32	Ad	92	ARG
32	Ad	115	LYS
32	Ad	119	THR
33	Ae	13	VAL
33	Ae	54	LEU
33	Ae	70	LEU
33	Ae	88	LEU
34	Af	52	LYS
34	Af	54	LYS
34	Af	58	VAL
34	Af	59	THR
34	Af	63	LYS
34	Af	73	LYS
34	Af	89	ARG
34	Af	101	ILE
34	Af	102	ARG
34	Af	107	PRO
35	Ag	4	ARG
35	Ag	5	LEU
35	Ag	22	LEU
35	Ag	36	LYS
35	Ag	54	ARG
35	Ag	60	ARG
35	Ag	67	LEU
35	Ag	74	VAL
35	Ag	81	SER
36	Ah	43	LYS
36	Ah	49	VAL
36	Ah	113	LEU
36	Ah	118	LYS
37	Ai	33	LEU
37	Ai	34	THR
37	Ai	68	ARG
37	Ai	79	THR
37	Ai	87	ARG
37	Ai	90	LEU
38	Aj	19	CYS
38	Aj	83	THR
40	Al	5	LYS

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Mol	Chain	Res	Type
41	Am	112	LYS
41	Am	115	CYS
41	Am	118	THR
43	Ao	83	LEU
43	Ao	93	LEU
43	Ao	99	ARG
43	Ao	100	LYS
44	Ap	29	ILE
44	Ap	52	VAL
45	At	4	HIS
45	At	18	ILE
45	At	61	VAL
45	At	77	TYR
45	At	81	THR
46	Au	21	PHE
46	Au	24	THR
46	Au	30	ASN
46	Au	34	LEU
46	Au	53	THR
46	Au	57	THR
46	Au	60	VAL
46	Au	101	THR
46	Au	110	LEU
46	Au	156	ARG
46	Au	163	VAL
46	Au	188	LEU
46	Au	190	LYS
46	Au	193	LEU
46	Au	197	THR
46	Au	210	VAL
48	BB	831	ARG
48	BB	838	VAL
48	BB	844	ARG
48	BB	866	ARG
48	BB	939	LEU
48	BB	952	ILE
48	BB	1036	PRO
48	BB	1069	GLU
48	BB	1073	GLN
48	BB	1075	MET
48	BB	1163	VAL
48	BB	1174	LYS

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Mol	Chain	Res	Type
48	BB	1181	LEU
48	BB	1182	LYS
48	BB	1184	THR
48	BB	1188	ILE
48	BB	1189	LYS
48	BB	1190	LEU
48	BB	1192	GLU
48	BB	1201	THR
48	BB	1205	LEU
48	BB	1301	ILE
48	BB	1303	VAL
51	CA	8	LEU
51	CA	19	LEU
51	CA	68	ILE
51	CA	110	ASN
52	CB	23	ASP
52	CB	30	TRP
52	CB	46	LYS
52	CB	71	LEU
52	CB	79	VAL
52	CB	97	LEU
52	CB	131	ASP
52	CB	148	ASN
52	CB	176	VAL
52	CB	177	GLN
52	CB	216	LYS
52	CB	218	LEU
53	CC	137	VAL
53	CC	205	VAL
53	CC	209	VAL
53	CC	240	THR
53	CC	252	THR
53	CC	256	TRP
53	CC	274	VAL
53	CC	276	THR
53	CC	278	THR
54	CD	3	VAL
54	CD	5	ILE
54	CD	16	ILE
54	CD	42	THR
54	CD	66	ILE
54	CD	84	VAL

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Mol	Chain	Res	Type
54	CD	93	THR
54	CD	150	MET
54	CD	162	ASP
54	CD	193	ASP
54	CD	211	VAL
55	CE	23	LEU
55	CE	37	LYS
55	CE	51	ARG
55	CE	95	THR
55	CE	101	LEU
55	CE	114	ILE
55	CE	115	THR
55	CE	128	LYS
55	CE	136	ILE
55	CE	148	ARG
55	CE	166	THR
55	CE	173	ILE
55	CE	189	LEU
56	CF	47	LYS
56	CF	63	LYS
56	CF	68	ILE
56	CF	72	LEU
56	CF	103	LEU
56	CF	135	ARG
57	CG	24	LEU
57	CG	29	GLU
57	CG	34	THR
57	CG	133	LEU
57	CG	160	LYS
57	CG	176	ILE
58	CH	111	LYS
59	CI	19	LYS
59	CI	29	LEU
59	CI	48	VAL
59	CI	55	TYR
59	CI	62	VAL
59	CI	78	ILE
59	CI	93	THR
59	CI	97	VAL
59	CI	131	PRO
59	CI	136	ILE
59	CI	137	LEU

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Mol	Chain	Res	Type
59	CI	144	LYS
60	CJ	8	VAL
60	CJ	12	THR
60	CJ	41	ARG
60	CJ	47	LYS
60	CJ	78	LEU
60	CJ	128	VAL
60	CJ	130	ILE
60	CJ	163	SER
61	CK	3	MET
61	CK	15	LEU
61	CK	70	TYR
61	CK	84	HIS
62	CL	69	ARG
62	CL	113	LEU
62	CL	146	THR
63	CM	52	LEU
63	CM	76	LEU
63	CM	83	LYS
63	CM	88	TRP
63	CM	106	CYS
63	CM	117	GLU
64	CN	7	PRO
64	CN	80	LEU
65	CO	45	THR
65	CO	63	LYS
65	CO	100	THR
65	CO	105	THR
65	CO	129	ILE
65	CO	132	VAL
65	CO	135	ILE
65	CO	140	THR
66	CP	16	THR
66	CP	29	SER
66	CP	74	GLU
66	CP	86	LEU
67	CQ	39	LEU
67	CQ	72	VAL
67	CQ	100	VAL
67	CQ	105	LYS
68	CR	22	THR
68	CR	46	LEU

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Mol	Chain	Res	Type
68	CR	58	MET
68	CR	71	ILE
68	CR	105	MET
68	CR	109	LEU
68	CR	118	GLN
69	CS	3	LEU
69	CS	5	ILE
69	CS	8	LYS
69	CS	31	THR
69	CS	45	LEU
69	CS	60	THR
69	CS	99	LEU
69	CS	139	THR
70	CT	5	THR
70	CT	28	LEU
70	CT	33	TRP
70	CT	39	LEU
70	CT	64	LEU
70	CT	87	VAL
70	CT	110	LEU
71	CU	24	LEU
71	CU	59	LYS
71	CU	61	LEU
71	CU	72	GLU
71	CU	104	ILE
71	CU	115	THR
73	CW	4	MET
73	CW	11	LEU
73	CW	20	ARG
73	CW	98	GLN
74	CX	17	ARG
74	CX	31	HIS
74	CX	37	LYS
74	CX	81	ILE
75	CY	20	ARG
75	CY	21	LYS
75	CY	54	VAL
75	CY	84	LYS
75	CY	96	LEU
75	CY	99	LYS
75	CY	100	LYS
76	CZ	43	LYS

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Mol	Chain	Res	Type
76	CZ	47	LEU
76	CZ	62	VAL
76	CZ	67	LEU
76	CZ	99	LEU
77	Ca	21	ILE
77	Ca	23	CYS
77	Ca	32	LYS
77	Ca	37	LYS
77	Ca	64	LEU
77	Ca	71	LEU
77	Ca	84	VAL
78	Cb	7	LEU
78	Cb	56	CYS
78	Cb	59	CYS
78	Cb	63	LEU
79	Cc	9	ILE
79	Cc	17	VAL
79	Cc	32	VAL
80	Cd	28	HIS
80	Cd	44	ARG
80	Cd	48	LYS
81	Ce	18	LYS
81	Ce	29	THR
81	Ce	46	VAL
82	Cf	97	LYS
82	Cf	114	ILE
82	Cf	148	TYR
83	Cg	20	GLN
83	Cg	54	ILE
83	Cg	64	HIS
83	Cg	94	THR
83	Cg	135	LEU
83	Cg	157	SER
83	Cg	164	ILE
83	Cg	189	ILE
83	Cg	255	SER
83	Cg	266	ILE
83	Cg	287	THR
83	Cg	289	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (271) such sidechains are listed below:

Mol	Chain	Res	Type
4	AA	50	HIS
4	AA	97	ASN
4	AA	132	ASN
4	AA	140	ASN
4	AA	209	HIS
4	AA	215	ASN
5	AB	25	HIS
5	AB	167	GLN
5	AB	208	ASN
5	AB	213	GLN
5	AB	271	GLN
5	AB	328	ASN
5	AB	354	GLN
6	AC	43	ASN
6	AC	50	GLN
6	AC	112	HIS
6	AC	187	GLN
6	AC	278	ASN
6	AC	317	ASN
6	AC	329	ASN
6	AC	338	ASN
6	AC	347	HIS
6	AC	362	GLN
7	AD	131	ASN
7	AD	191	ASN
7	AD	244	HIS
7	AD	291	GLN
8	AE	135	GLN
8	AE	182	ASN
8	AE	205	ASN
8	AE	211	HIS
8	AE	256	GLN
8	AE	279	ASN
9	AF	80	ASN
9	AF	131	ASN
9	AF	151	ASN
9	AF	192	HIS
9	AF	239	GLN
10	AG	81	ASN
10	AG	108	GLN
11	AH	15	ASN
12	AI	14	ASN
12	AI	51	HIS

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Mol	Chain	Res	Type
12	AI	59	GLN
12	AI	130	HIS
12	AI	144	ASN
12	AI	213	HIS
13	AJ	97	ASN
13	AJ	112	HIS
13	AJ	167	GLN
13	AJ	168	GLN
14	AL	19	GLN
14	AL	111	GLN
14	AL	149	GLN
14	AL	159	ASN
14	AL	188	ASN
15	AM	20	HIS
15	AM	33	GLN
15	AM	34	ASN
15	AM	69	HIS
15	AM	78	GLN
15	AM	131	GLN
16	AN	29	GLN
16	AN	109	HIS
16	AN	158	HIS
16	AN	181	HIS
16	AN	201	HIS
17	AO	42	ASN
17	AO	180	GLN
17	AO	199	HIS
18	AP	25	HIS
18	AP	54	GLN
18	AP	64	ASN
18	AP	80	GLN
18	AP	93	HIS
18	AP	120	ASN
19	AQ	40	ASN
20	AR	39	GLN
20	AR	40	GLN
20	AR	118	HIS
20	AR	143	HIS
21	AS	50	GLN
21	AS	66	GLN
21	AS	91	HIS
21	AS	108	GLN

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Mol	Chain	Res	Type
21	AS	117	HIS
21	AS	122	HIS
21	AS	125	GLN
21	AS	146	HIS
21	AS	156	HIS
22	AT	69	GLN
22	AT	127	GLN
22	AT	131	GLN
22	AT	139	HIS
22	AT	144	ASN
23	AU	17	GLN
23	AU	44	GLN
23	AU	116	GLN
24	AV	36	ASN
24	AV	84	GLN
24	AV	135	ASN
25	AW	48	GLN
25	AW	63	GLN
26	AX	107	HIS
26	AX	111	GLN
26	AX	125	ASN
27	AY	66	GLN
27	AY	72	GLN
28	AZ	132	GLN
29	Aa	17	HIS
29	Aa	40	HIS
29	Aa	67	GLN
29	Aa	74	ASN
30	Ab	42	ASN
30	Ab	50	ASN
30	Ab	60	ASN
31	Ac	15	ASN
32	Ad	125	ASN
33	Ae	43	ASN
34	Af	21	GLN
34	Af	65	ASN
35	Ag	3	GLN
35	Ag	100	GLN
36	Ah	20	GLN
36	Ah	62	ASN
36	Ah	101	ASN
37	Ai	20	ASN

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Mol	Chain	Res	Type
37	Ai	36	HIS
37	Ai	80	HIS
38	Aj	30	GLN
39	Ak	28	ASN
41	Am	84	GLN
41	Am	87	GLN
41	Am	90	ASN
42	An	22	GLN
43	Ao	45	GLN
43	Ao	51	GLN
43	Ao	76	ASN
43	Ao	102	GLN
44	Ap	33	GLN
44	Ap	56	HIS
45	At	21	ASN
45	At	23	GLN
46	Au	3	GLN
46	Au	55	GLN
46	Au	194	ASN
48	BB	881	GLN
48	BB	895	GLN
48	BB	906	ASN
48	BB	928	ASN
48	BB	945	HIS
48	BB	950	GLN
48	BB	1015	GLN
48	BB	1073	GLN
48	BB	1093	ASN
48	BB	1132	GLN
48	BB	1179	HIS
48	BB	1278	HIS
48	BB	1295	GLN
48	BB	1359	HIS
48	BB	1389	HIS
48	BB	1403	GLN
48	BB	1417	GLN
48	BB	1422	GLN
51	CA	50	ASN
51	CA	70	ASN
51	CA	110	ASN
51	CA	193	HIS
51	CA	215	GLN

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Mol	Chain	Res	Type
52	CB	40	ASN
52	CB	53	GLN
52	CB	148	ASN
52	CB	149	GLN
52	CB	157	GLN
52	CB	160	GLN
52	CB	177	GLN
53	CC	136	HIS
53	CC	267	GLN
53	CC	277	HIS
54	CD	4	GLN
54	CD	56	GLN
54	CD	57	ASN
54	CD	101	GLN
54	CD	174	HIS
54	CD	179	GLN
55	CE	36	HIS
55	CE	138	HIS
55	CE	179	ASN
55	CE	188	ASN
55	CE	197	ASN
55	CE	230	ASN
56	CF	29	GLN
56	CF	82	ASN
56	CF	95	HIS
56	CF	107	ASN
56	CF	203	ASN
57	CG	65	GLN
57	CG	81	HIS
57	CG	105	ASN
57	CG	186	GLN
58	CH	25	GLN
58	CH	97	GLN
58	CH	112	ASN
58	CH	168	HIS
58	CH	193	GLN
59	CI	22	HIS
59	CI	87	ASN
59	CI	138	ASN
60	CJ	124	HIS
61	CK	32	HIS
61	CK	44	HIS

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Mol	Chain	Res	Type
61	CK	50	GLN
61	CK	84	HIS
62	CL	5	GLN
62	CL	19	ASN
62	CL	94	HIS
62	CL	112	HIS
63	CM	19	GLN
64	CN	62	GLN
64	CN	123	HIS
65	CO	32	HIS
65	CO	43	HIS
65	CO	103	ASN
66	CP	35	GLN
67	CQ	48	GLN
67	CQ	86	GLN
68	CR	26	ASN
68	CR	62	GLN
68	CR	74	GLN
69	CS	73	ASN
69	CS	85	ASN
69	CS	87	GLN
70	CT	11	GLN
70	CT	51	ASN
70	CT	63	HIS
70	CT	91	HIS
70	CT	126	GLN
70	CT	137	GLN
71	CU	100	GLN
72	CV	2	GLN
73	CW	24	GLN
73	CW	82	GLN
73	CW	90	GLN
73	CW	113	HIS
74	CX	20	GLN
74	CX	61	GLN
74	CX	73	GLN
74	CX	77	ASN
74	CX	97	ASN
75	CY	19	GLN
75	CY	22	GLN
75	CY	29	HIS
76	CZ	89	GLN

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Mol	Chain	Res	Type
76	CZ	103	HIS
77	Ca	19	GLN
77	Ca	43	ASN
77	Ca	86	ASN
79	Cc	24	GLN
79	Cc	45	ASN
80	Cd	5	GLN
80	Cd	16	GLN
80	Cd	26	ASN
80	Cd	41	GLN
81	Ce	22	GLN
81	Ce	44	ASN
83	Cg	20	GLN
83	Cg	26	GLN
83	Cg	64	HIS
83	Cg	117	ASN
83	Cg	196	ASN
83	Cg	226	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A2	3604/5025 (71%)	2050 (56%)	324 (8%)
2	A3	156/194 (80%)	82 (52%)	6 (3%)
3	A4	118/121 (97%)	69 (58%)	9 (7%)
47	BA	75/76 (98%)	14 (18%)	1 (1%)
49	BC	259/504 (51%)	142 (54%)	40 (15%)
50	C1	1738/1869 (92%)	1042 (59%)	152 (8%)
All	All	5950/7789 (76%)	3399 (57%)	532 (8%)

All (3399) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A2	2	G
1	A2	3	C
1	A2	5	A
1	A2	6	C
1	A2	8	U
1	A2	9	C
1	A2	11	G
1	A2	12	A

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Mol	Chain	Res	Type
1	A2	13	U
1	A2	14	C
1	A2	15	A
1	A2	18	C
1	A2	19	G
1	A2	20	U
1	A2	21	G
1	A2	22	G
1	A2	24	G
1	A2	25	A
1	A2	26	C
1	A2	27	C
1	A2	31	U
1	A2	33	A
1	A2	34	A
1	A2	36	U
1	A2	37	U
1	A2	39	A
1	A2	41	C
1	A2	42	A
1	A2	45	U
1	A2	46	U
1	A2	47	A
1	A2	48	G
1	A2	49	U
1	A2	53	C
1	A2	55	G
1	A2	56	A
1	A2	57	G
1	A2	58	G
1	A2	59	A
1	A2	61	A
1	A2	64	A
1	A2	65	A
1	A2	66	A
1	A2	67	C
1	A2	68	U
1	A2	69	A
1	A2	70	A
1	A2	71	C
1	A2	72	C
1	A2	73	A

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Mol	Chain	Res	Type
1	A2	74	G
1	A2	75	G
1	A2	76	A
1	A2	77	U
1	A2	80	C
1	A2	84	A
1	A2	85	G
1	A2	86	U
1	A2	88	A
1	A2	91	G
1	A2	92	C
1	A2	93	G
1	A2	94	A
1	A2	95	G
1	A2	96	U
1	A2	97	G
1	A2	98	A
1	A2	101	A
1	A2	102	G
1	A2	103	G
1	A2	104	G
1	A2	105	A
1	A2	107	G
1	A2	108	A
1	A2	109	G
1	A2	112	C
1	A2	113	A
1	A2	115	C
1	A2	119	G
1	A2	120	A
1	A2	121	A
1	A2	122	U
1	A2	123	C
1	A2	130	C
1	A2	132	G
1	A2	133	C
1	A2	134	G
1	A2	135	G
1	A2	137	G
1	A2	139	G
1	A2	140	C
1	A2	143	G

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Mol	Chain	Res	Type
1	A2	148	G
1	A2	149	U
1	A2	155	A
1	A2	156	C
1	A2	157	G
1	A2	158	G
1	A2	165	C
1	A2	168	U
1	A2	169	C
1	A2	170	C
1	A2	171	C
1	A2	173	G
1	A2	175	C
1	A2	177	C
1	A2	178	C
1	A2	179	G
1	A2	180	C
1	A2	181	U
1	A2	182	C
1	A2	183	G
1	A2	186	G
1	A2	187	G
1	A2	188	G
1	A2	189	G
1	A2	191	C
1	A2	193	C
1	A2	194	A
1	A2	195	A
1	A2	196	G
1	A2	197	U
1	A2	198	C
1	A2	199	C
1	A2	201	U
1	A2	203	U
1	A2	204	G
1	A2	207	C
1	A2	208	G
1	A2	212	C
1	A2	213	C
1	A2	215	A
1	A2	216	G
1	A2	217	C

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Mol	Chain	Res	Type
1	A2	219	C
1	A2	220	G
1	A2	221	U
1	A2	222	G
1	A2	223	G
1	A2	224	A
1	A2	226	G
1	A2	227	G
1	A2	229	G
1	A2	230	U
1	A2	231	G
1	A2	232	A
1	A2	233	G
1	A2	234	G
1	A2	235	C
1	A2	236	C
1	A2	238	G
1	A2	239	U
1	A2	240	A
1	A2	241	G
1	A2	242	C
1	A2	243	G
1	A2	246	C
1	A2	247	G
1	A2	251	C
1	A2	252	G
1	A2	253	C
1	A2	254	G
1	A2	255	C
1	A2	256	C
1	A2	258	G
1	A2	259	G
1	A2	266	C
1	A2	267	C
1	A2	268	G
1	A2	269	G
1	A2	270	A
1	A2	271	G
1	A2	279	G
1	A2	284	G
1	A2	285	G
1	A2	286	A

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Mol	Chain	Res	Type
1	A2	287	A
1	A2	288	U
1	A2	289	G
1	A2	291	A
1	A2	292	G
1	A2	293	C
1	A2	295	C
1	A2	296	A
1	A2	297	A
1	A2	299	G
1	A2	300	C
1	A2	301	G
1	A2	303	G
1	A2	305	G
1	A2	307	U
1	A2	308	A
1	A2	309	A
1	A2	312	U
1	A2	313	C
1	A2	314	C
1	A2	317	C
1	A2	319	A
1	A2	320	A
1	A2	321	G
1	A2	322	G
1	A2	325	A
1	A2	326	A
1	A2	327	A
1	A2	328	U
1	A2	329	A
1	A2	331	C
1	A2	332	G
1	A2	333	G
1	A2	334	C
1	A2	335	A
1	A2	337	G
1	A2	338	A
1	A2	340	A
1	A2	341	C
1	A2	342	C
1	A2	343	G
1	A2	344	A

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Mol	Chain	Res	Type
1	A2	345	U
1	A2	349	C
1	A2	350	A
1	A2	351	A
1	A2	353	A
1	A2	354	A
1	A2	355	G
1	A2	357	A
1	A2	363	A
1	A2	366	G
1	A2	369	A
1	A2	370	G
1	A2	371	U
1	A2	372	U
1	A2	373	G
1	A2	376	A
1	A2	377	A
1	A2	378	G
1	A2	379	A
1	A2	380	A
1	A2	381	C
1	A2	382	U
1	A2	383	U
1	A2	384	U
1	A2	385	G
1	A2	386	A
1	A2	387	A
1	A2	389	A
1	A2	391	A
1	A2	393	A
1	A2	394	G
1	A2	395	U
1	A2	396	U
1	A2	397	C
1	A2	398	A
1	A2	399	A
1	A2	400	G
1	A2	401	A
1	A2	402	G
1	A2	403	G
1	A2	404	G
1	A2	405	C

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Mol	Chain	Res	Type
1	A2	406	G
1	A2	408	G
1	A2	411	A
1	A2	421	G
1	A2	423	U
1	A2	424	A
1	A2	425	A
1	A2	426	A
1	A2	431	U
1	A2	432	G
1	A2	433	G
1	A2	434	G
1	A2	435	G
1	A2	436	U
1	A2	437	C
1	A2	439	G
1	A2	440	C
1	A2	441	G
1	A2	442	C
1	A2	443	A
1	A2	444	G
1	A2	445	U
1	A2	446	C
1	A2	455	G
1	A2	456	G
1	A2	457	A
1	A2	458	U
1	A2	459	U
1	A2	460	C
1	A2	461	A
1	A2	462	A
1	A2	463	C
1	A2	464	C
1	A2	465	C
1	A2	466	G
1	A2	469	G
1	A2	470	G
1	A2	471	C
1	A2	472	G
1	A2	473	G
1	A2	474	G
1	A2	475	U

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Mol	Chain	Res	Type
1	A2	476	C
1	A2	477	C
1	A2	478	G
1	A2	479	G
1	A2	482	G
1	A2	483	U
1	A2	484	G
1	A2	485	U
1	A2	488	G
1	A2	489	C
1	A2	490	G
1	A2	491	G
1	A2	508	C
1	A2	510	C
1	A2	634	C
1	A2	636	G
1	A2	640	A
1	A2	641	C
1	A2	642	C
1	A2	643	G
1	A2	644	U
1	A2	650	G
1	A2	654	C
1	A2	655	G
1	A2	656	G
1	A2	657	C
1	A2	658	G
1	A2	659	A
1	A2	666	G
1	A2	671	C
1	A2	674	G
1	A2	675	C
1	A2	676	G
1	A2	677	C
1	A2	678	A
1	A2	679	U
1	A2	680	U
1	A2	691	G
1	A2	692	C
1	A2	701	C
1	A2	703	G
1	A2	706	C

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Mol	Chain	Res	Type
1	A2	708	G
1	A2	709	G
1	A2	710	G
1	A2	712	C
1	A2	713	G
1	A2	714	G
1	A2	717	G
1	A2	718	G
1	A2	719	G
1	A2	720	A
1	A2	721	A
1	A2	722	G
1	A2	723	G
1	A2	724	C
1	A2	725	C
1	A2	726	C
1	A2	727	G
1	A2	728	G
1	A2	731	G
1	A2	733	G
1	A2	734	A
1	A2	736	G
1	A2	737	G
1	A2	744	G
1	A2	745	G
1	A2	890	C
1	A2	892	G
1	A2	893	A
1	A2	894	G
1	A2	895	U
1	A2	896	G
1	A2	897	U
1	A2	898	U
1	A2	899	A
1	A2	900	C
1	A2	901	A
1	A2	903	C
1	A2	911	G
1	A2	912	C
1	A2	913	A
1	A2	914	G
1	A2	915	C

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Mol	Chain	Res	Type
1	A2	916	A
1	A2	917	G
1	A2	918	C
1	A2	919	A
1	A2	920	C
1	A2	921	U
1	A2	925	C
1	A2	926	G
1	A2	927	A
1	A2	928	A
1	A2	929	U
1	A2	930	C
1	A2	934	G
1	A2	938	C
1	A2	939	G
1	A2	940	A
1	A2	941	G
1	A2	942	G
1	A2	943	G
1	A2	944	A
1	A2	945	G
1	A2	946	C
1	A2	947	G
1	A2	948	A
1	A2	950	A
1	A2	951	C
1	A2	957	G
1	A2	958	C
1	A2	959	C
1	A2	960	G
1	A2	961	C
1	A2	962	G
1	A2	963	C
1	A2	964	U
1	A2	965	C
1	A2	966	U
1	A2	967	C
1	A2	968	C
1	A2	969	C
1	A2	970	C
1	A2	971	C
1	A2	972	C

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Mol	Chain	Res	Type
1	A2	973	U
1	A2	974	C
1	A2	975	C
1	A2	976	C
1	A2	977	G
1	A2	978	G
1	A2	1047	G
1	A2	1048	G
1	A2	1049	G
1	A2	1050	G
1	A2	1051	C
1	A2	1052	C
1	A2	1053	G
1	A2	1055	G
1	A2	1056	C
1	A2	1058	A
1	A2	1059	C
1	A2	1060	C
1	A2	1062	C
1	A2	1064	C
1	A2	1066	C
1	A2	1077	C
1	A2	1079	C
1	A2	1080	U
1	A2	1081	C
1	A2	1082	U
1	A2	1083	C
1	A2	1084	C
1	A2	1085	C
1	A2	1086	A
1	A2	1087	C
1	A2	1089	C
1	A2	1090	C
1	A2	1096	C
1	A2	1142	G
1	A2	1143	G
1	A2	1144	G
1	A2	1145	G
1	A2	1146	G
1	A2	1147	C
1	A2	1148	G
1	A2	1149	G

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Mol	Chain	Res	Type
1	A2	1159	U
1	A2	1160	C
1	A2	1161	C
1	A2	1162	C
1	A2	1165	G
1	A2	1173	C
1	A2	1174	G
1	A2	1176	G
1	A2	1177	C
1	A2	1178	G
1	A2	1179	G
1	A2	1186	C
1	A2	1187	C
1	A2	1188	G
1	A2	1189	U
1	A2	1190	C
1	A2	1192	G
1	A2	1193	G
1	A2	1194	C
1	A2	1195	C
1	A2	1196	C
1	A2	1197	G
1	A2	1198	G
1	A2	1199	G
1	A2	1201	G
1	A2	1202	A
1	A2	1204	G
1	A2	1205	U
1	A2	1206	U
1	A2	1207	C
1	A2	1208	U
1	A2	1209	C
1	A2	1210	U
1	A2	1212	G
1	A2	1214	G
1	A2	1215	G
1	A2	1216	C
1	A2	1217	C
1	A2	1218	A
1	A2	1219	C
1	A2	1220	G
1	A2	1221	C

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Mol	Chain	Res	Type
1	A2	1223	C
1	A2	1224	G
1	A2	1225	C
1	A2	1242	G
1	A2	1245	G
1	A2	1246	G
1	A2	1247	C
1	A2	1248	G
1	A2	1249	G
1	A2	1250	A
1	A2	1251	G
1	A2	1254	A
1	A2	1255	G
1	A2	1256	C
1	A2	1258	C
1	A2	1259	A
1	A2	1262	G
1	A2	1263	G
1	A2	1264	G
1	A2	1267	G
1	A2	1268	G
1	A2	1273	G
1	A2	1274	A
1	A2	1276	G
1	A2	1277	U
1	A2	1279	G
1	A2	1280	G
1	A2	1281	C
1	A2	1282	U
1	A2	1283	A
1	A2	1284	C
1	A2	1285	C
1	A2	1287	A
1	A2	1289	C
1	A2	1290	C
1	A2	1292	A
1	A2	1293	C
1	A2	1294	C
1	A2	1297	U
1	A2	1299	U
1	A2	1300	U
1	A2	1301	G

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Mol	Chain	Res	Type
1	A2	1302	A
1	A2	1303	A
1	A2	1305	C
1	A2	1306	A
1	A2	1308	G
1	A2	1313	A
1	A2	1314	A
1	A2	1318	G
1	A2	1323	A
1	A2	1324	C
1	A2	1326	C
1	A2	1329	G
1	A2	1332	C
1	A2	1334	A
1	A2	1336	U
1	A2	1337	C
1	A2	1338	G
1	A2	1339	G
1	A2	1340	G
1	A2	1341	G
1	A2	1349	C
1	A2	1350	G
1	A2	1351	A
1	A2	1354	G
1	A2	1356	C
1	A2	1357	G
1	A2	1358	C
1	A2	1359	C
1	A2	1360	G
1	A2	1361	U
1	A2	1366	C
1	A2	1367	A
1	A2	1368	A
1	A2	1372	A
1	A2	1374	G
1	A2	1376	G
1	A2	1377	A
1	A2	1378	A
1	A2	1384	G
1	A2	1388	G
1	A2	1389	C
1	A2	1390	U

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Mol	Chain	Res	Type
1	A2	1392	G
1	A2	1393	C
1	A2	1398	C
1	A2	1399	G
1	A2	1400	A
1	A2	1401	G
1	A2	1402	G
1	A2	1406	G
1	A2	1409	C
1	A2	1410	C
1	A2	1412	G
1	A2	1416	C
1	A2	1417	C
1	A2	1418	U
1	A2	1419	C
1	A2	1420	U
1	A2	1421	C
1	A2	1422	C
1	A2	1423	A
1	A2	1424	G
1	A2	1426	C
1	A2	1428	G
1	A2	1433	G
1	A2	1434	G
1	A2	1436	G
1	A2	1438	A
1	A2	1444	G
1	A2	1445	G
1	A2	1446	C
1	A2	1449	G
1	A2	1452	U
1	A2	1454	G
1	A2	1455	C
1	A2	1459	C
1	A2	1460	C
1	A2	1461	G
1	A2	1463	G
1	A2	1464	C
1	A2	1465	C
1	A2	1466	G
1	A2	1467	G
1	A2	1468	G

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Mol	Chain	Res	Type
1	A2	1471	G
1	A2	1476	A
1	A2	1477	G
1	A2	1478	C
1	A2	1479	A
1	A2	1480	C
1	A2	1481	G
1	A2	1482	A
1	A2	1483	G
1	A2	1484	C
1	A2	1487	A
1	A2	1488	C
1	A2	1493	U
1	A2	1495	G
1	A2	1498	C
1	A2	1499	C
1	A2	1500	C
1	A2	1502	A
1	A2	1503	A
1	A2	1504	A
1	A2	1505	G
1	A2	1513	A
1	A2	1518	G
1	A2	1520	C
1	A2	1521	U
1	A2	1522	G
1	A2	1523	G
1	A2	1524	G
1	A2	1526	A
1	A2	1530	C
1	A2	1531	G
1	A2	1532	A
1	A2	1533	A
1	A2	1537	A
1	A2	1540	G
1	A2	1541	G
1	A2	1542	A
1	A2	1543	A
1	A2	1544	A
1	A2	1545	C
1	A2	1550	G
1	A2	1553	G

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Mol	Chain	Res	Type
1	A2	1554	A
1	A2	1555	G
1	A2	1556	G
1	A2	1557	U
1	A2	1558	C
1	A2	1561	U
1	A2	1567	U
1	A2	1570	U
1	A2	1571	G
1	A2	1572	A
1	A2	1573	C
1	A2	1574	G
1	A2	1575	U
1	A2	1576	G
1	A2	1580	A
1	A2	1582	C
1	A2	1583	G
1	A2	1585	U
1	A2	1590	C
1	A2	1591	G
1	A2	1593	C
1	A2	1595	U
1	A2	1596	G
1	A2	1597	G
1	A2	1599	U
1	A2	1600	A
1	A2	1603	G
1	A2	1604	G
1	A2	1607	C
1	A2	1609	A
1	A2	1610	A
1	A2	1611	A
1	A2	1612	G
1	A2	1613	A
1	A2	1614	C
1	A2	1615	U
1	A2	1616	A
1	A2	1617	A
1	A2	1619	C
1	A2	1620	G
1	A2	1623	C
1	A2	1629	A

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Mol	Chain	Res	Type
1	A2	1630	G
1	A2	1631	U
1	A2	1633	G
1	A2	1635	U
1	A2	1637	G
1	A2	1639	U
1	A2	1640	C
1	A2	1644	C
1	A2	1648	A
1	A2	1649	G
1	A2	1650	U
1	A2	1651	U
1	A2	1653	C
1	A2	1654	C
1	A2	1655	C
1	A2	1656	U
1	A2	1657	C
1	A2	1658	A
1	A2	1659	G
1	A2	1660	G
1	A2	1661	A
1	A2	1663	A
1	A2	1666	U
1	A2	1667	G
1	A2	1669	C
1	A2	1671	C
1	A2	1672	U
1	A2	1673	C
1	A2	1701	C
1	A2	1703	G
1	A2	1704	U
1	A2	1706	U
1	A2	1709	U
1	A2	1710	C
1	A2	1711	C
1	A2	1712	G
1	A2	1713	G
1	A2	1714	U
1	A2	1715	A
1	A2	1719	C
1	A2	1721	A
1	A2	1725	A

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Mol	Chain	Res	Type
1	A2	1726	U
1	A2	1727	U
1	A2	1729	G
1	A2	1730	A
1	A2	1732	G
1	A2	1733	U
1	A2	1734	C
1	A2	1736	U
1	A2	1737	G
1	A2	1743	G
1	A2	1744	A
1	A2	1745	A
1	A2	1746	A
1	A2	1747	C
1	A2	1749	A
1	A2	1752	U
1	A2	1754	A
1	A2	1755	A
1	A2	1757	C
1	A2	1758	U
1	A2	1759	A
1	A2	1760	U
1	A2	1761	U
1	A2	1766	A
1	A2	1768	C
1	A2	1772	A
1	A2	1773	A
1	A2	1775	U
1	A2	1779	U
1	A2	1780	A
1	A2	1781	A
1	A2	1783	A
1	A2	1784	A
1	A2	1785	G
1	A2	1786	C
1	A2	1787	C
1	A2	1789	G
1	A2	1790	G
1	A2	1792	U
1	A2	1793	C
1	A2	1794	G
1	A2	1795	C

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Mol	Chain	Res	Type
1	A2	1796	U
1	A2	1797	G
1	A2	1798	G
1	A2	1799	C
1	A2	1800	G
1	A2	1801	U
1	A2	1802	G
1	A2	1803	G
1	A2	1804	A
1	A2	1805	G
1	A2	1806	C
1	A2	1809	G
1	A2	1810	G
1	A2	1811	G
1	A2	1813	G
1	A2	1815	A
1	A2	1816	A
1	A2	1818	G
1	A2	1820	G
1	A2	1821	A
1	A2	1822	G
1	A2	1825	C
1	A2	1829	G
1	A2	1832	G
1	A2	1833	G
1	A2	1835	C
1	A2	1836	A
1	A2	1837	C
1	A2	1839	U
1	A2	1840	U
1	A2	1844	U
1	A2	1845	A
1	A2	1846	A
1	A2	1847	G
1	A2	1848	C
1	A2	1849	A
1	A2	1852	A
1	A2	1853	C
1	A2	1855	G
1	A2	1856	G
1	A2	1857	C
1	A2	1859	C

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Mol	Chain	Res	Type
1	A2	1860	U
1	A2	1861	G
1	A2	1865	G
1	A2	1867	U
1	A2	1868	G
1	A2	1869	A
1	A2	1870	A
1	A2	1871	C
1	A2	1873	G
1	A2	1874	A
1	A2	1875	A
1	A2	1876	C
1	A2	1877	G
1	A2	1879	C
1	A2	1880	G
1	A2	1881	G
1	A2	1883	U
1	A2	1884	U
1	A2	1885	A
1	A2	1886	A
1	A2	1891	C
1	A2	1893	C
1	A2	1894	G
1	A2	1895	A
1	A2	1896	U
1	A2	1897	G
1	A2	1898	C
1	A2	1899	C
1	A2	1900	G
1	A2	1901	A
1	A2	1903	G
1	A2	1911	G
1	A2	1912	A
1	A2	1917	A
1	A2	1918	G
1	A2	1919	A
1	A2	1920	A
1	A2	1924	G
1	A2	1925	U
1	A2	1926	G
1	A2	1929	G
1	A2	1930	G

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Mol	Chain	Res	Type
1	A2	1931	U
1	A2	1935	U
1	A2	1936	A
1	A2	1939	G
1	A2	1941	C
1	A2	1942	A
1	A2	2000	C
1	A2	2001	C
1	A2	2002	G
1	A2	2004	A
1	A2	2005	U
1	A2	2006	C
1	A2	2007	A
1	A2	2009	C
1	A2	2010	U
1	A2	2011	A
1	A2	2012	G
1	A2	2013	C
1	A2	2014	C
1	A2	2016	U
1	A2	2020	A
1	A2	2022	U
1	A2	2023	G
1	A2	2024	G
1	A2	2025	A
1	A2	2026	U
1	A2	2027	G
1	A2	2029	C
1	A2	2030	G
1	A2	2031	C
1	A2	2032	U
1	A2	2033	G
1	A2	2034	G
1	A2	2035	A
1	A2	2037	C
1	A2	2039	U
1	A2	2040	C
1	A2	2041	G
1	A2	2042	G
1	A2	2043	G
1	A2	2044	C
1	A2	2046	C

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Mol	Chain	Res	Type
1	A2	2047	A
1	A2	2048	U
1	A2	2049	A
1	A2	2050	C
1	A2	2052	C
1	A2	2056	C
1	A2	2057	G
1	A2	2061	C
1	A2	2062	C
1	A2	2064	G
1	A2	2251	G
1	A2	2254	G
1	A2	2255	A
1	A2	2257	U
1	A2	2258	A
1	A2	2259	G
1	A2	2260	G
1	A2	2263	G
1	A2	2264	G
1	A2	2265	C
1	A2	2266	C
1	A2	2267	G
1	A2	2268	C
1	A2	2269	U
1	A2	2270	G
1	A2	2271	C
1	A2	2273	G
1	A2	2274	U
1	A2	2275	G
1	A2	2276	A
1	A2	2277	G
1	A2	2279	C
1	A2	2280	U
1	A2	2282	G
1	A2	2283	A
1	A2	2284	A
1	A2	2288	U
1	A2	2289	A
1	A2	2290	G
1	A2	2293	C
1	A2	2294	G
1	A2	2295	C

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Mol	Chain	Res	Type
1	A2	2296	G
1	A2	2297	G
1	A2	2298	G
1	A2	2301	C
1	A2	2302	G
1	A2	2304	G
1	A2	2306	G
1	A2	2307	G
1	A2	2308	A
1	A2	2309	G
1	A2	2310	G
1	A2	2311	C
1	A2	2315	C
1	A2	2320	G
1	A2	2321	U
1	A2	2322	G
1	A2	2325	G
1	A2	2326	A
1	A2	2328	C
1	A2	2329	U
1	A2	2331	G
1	A2	2332	G
1	A2	2333	U
1	A2	2334	G
1	A2	2337	A
1	A2	2344	A
1	A2	2345	A
1	A2	2346	U
1	A2	2347	A
1	A2	2348	U
1	A2	2349	U
1	A2	2351	A
1	A2	2353	A
1	A2	2354	C
1	A2	2355	G
1	A2	2358	A
1	A2	2359	A
1	A2	2360	C
1	A2	2361	U
1	A2	2362	U
1	A2	2367	G
1	A2	2368	G

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Mol	Chain	Res	Type
1	A2	2369	C
1	A2	2370	C
1	A2	2371	G
1	A2	2372	A
1	A2	2373	A
1	A2	2374	G
1	A2	2376	G
1	A2	2379	G
1	A2	2380	A
1	A2	2381	A
1	A2	2384	G
1	A2	2385	U
1	A2	2386	U
1	A2	2387	C
1	A2	2388	C
1	A2	2392	U
1	A2	2393	G
1	A2	2394	A
1	A2	2395	A
1	A2	2396	C
1	A2	2397	A
1	A2	2398	G
1	A2	2399	C
1	A2	2400	A
1	A2	2402	U
1	A2	2403	U
1	A2	2405	A
1	A2	2406	A
1	A2	2407	C
1	A2	2411	G
1	A2	2412	G
1	A2	2414	C
1	A2	2415	A
1	A2	2416	G
1	A2	2418	C
1	A2	2421	U
1	A2	2424	U
1	A2	2426	A
1	A2	2427	G
1	A2	2429	G
1	A2	2430	A
1	A2	2431	U

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

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

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

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

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

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

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

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Mol	Chain	Res	Type
1	A2	3649	U
1	A2	3650	G
1	A2	3651	A
1	A2	3652	C
1	A2	3653	G
1	A2	3654	C
1	A2	3655	G
1	A2	3657	U
1	A2	3658	G
1	A2	3661	A
1	A2	3662	U
1	A2	3664	U
1	A2	3665	C
1	A2	3666	U
1	A2	3667	G
1	A2	3668	C
1	A2	3675	C
1	A2	3676	U
1	A2	3678	U
1	A2	3679	G
1	A2	3680	A
1	A2	3681	A
1	A2	3682	U
1	A2	3683	G
1	A2	3684	U
1	A2	3685	C
1	A2	3686	A
1	A2	3693	A
1	A2	3695	A
1	A2	3696	A
1	A2	3697	A
1	A2	3700	C
1	A2	3701	A
1	A2	3706	A
1	A2	3710	C
1	A2	3717	A
1	A2	3720	G
1	A2	3722	G
1	A2	3723	G
1	A2	3724	G
1	A2	3725	A
1	A2	3726	G

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Mol	Chain	Res	Type
1	A2	3727	U
1	A2	3728	A
1	A2	3729	A
1	A2	3730	C
1	A2	3732	A
1	A2	3733	U
1	A2	3734	G
1	A2	3736	C
1	A2	3737	U
1	A2	3741	U
1	A2	3743	A
1	A2	3744	A
1	A2	3746	G
1	A2	3749	G
1	A2	3750	C
1	A2	3751	C
1	A2	3753	A
1	A2	3754	A
1	A2	3755	U
1	A2	3756	G
1	A2	3759	U
1	A2	3761	G
1	A2	3764	A
1	A2	3765	U
1	A2	3767	U
1	A2	3768	A
1	A2	3769	A
1	A2	3770	U
1	A2	3771	U
1	A2	3772	A
1	A2	3776	A
1	A2	3778	G
1	A2	3779	C
1	A2	3780	G
1	A2	3781	C
1	A2	3782	A
1	A2	3786	A
1	A2	3787	U
1	A2	3788	G
1	A2	3792	G
1	A2	3793	A
1	A2	3797	A

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Mol	Chain	Res	Type
1	A2	3798	G
1	A2	3799	A
1	A2	3800	U
1	A2	3801	U
1	A2	3802	C
1	A2	3803	C
1	A2	3807	U
1	A2	3808	G
1	A2	3809	U
1	A2	3814	A
1	A2	3815	C
1	A2	3819	C
1	A2	3821	A
1	A2	3822	U
1	A2	3826	G
1	A2	3830	A
1	A2	3833	C
1	A2	3834	A
1	A2	3836	A
1	A2	3837	G
1	A2	3838	C
1	A2	3845	A
1	A2	3846	A
1	A2	3847	C
1	A2	3848	G
1	A2	3850	G
1	A2	3852	U
1	A2	3854	G
1	A2	3856	C
1	A2	3857	G
1	A2	3858	G
1	A2	3859	A
1	A2	3863	A
1	A2	3865	C
1	A2	3866	G
1	A2	3867	G
1	A2	3870	A
1	A2	3871	A
1	A2	3872	A
1	A2	3873	G
1	A2	3874	A
1	A2	3875	A

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Mol	Chain	Res	Type
1	A2	3876	G
1	A2	3877	A
1	A2	3879	C
1	A2	3883	U
1	A2	3884	U
1	A2	3885	G
1	A2	3887	G
1	A2	3888	C
1	A2	3890	U
1	A2	3891	G
1	A2	3894	U
1	A2	3895	C
1	A2	3897	A
1	A2	3898	G
1	A2	3905	A
1	A2	3907	G
1	A2	3908	G
1	A2	3910	G
1	A2	3912	A
1	A2	3922	G
1	A2	3923	A
1	A2	3924	G
1	A2	3925	G
1	A2	3926	U
1	A2	3927	G
1	A2	3931	A
1	A2	3933	U
1	A2	3934	A
1	A2	3936	G
1	A2	3938	G
1	A2	3941	A
1	A2	3942	G
1	A2	3943	G
1	A2	3945	C
1	A2	4007	G
1	A2	4008	C
1	A2	4009	C
1	A2	4011	G
1	A2	4012	U
1	A2	4015	A
1	A2	4018	A
1	A2	4024	A

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Mol	Chain	Res	Type
1	A2	4025	C
1	A2	4026	U
1	A2	4027	C
1	A2	4029	G
1	A2	4032	C
1	A2	4041	A
1	A2	4044	G
1	A2	4045	A
1	A2	4046	C
1	A2	4047	C
1	A2	4050	G
1	A2	4051	U
1	A2	4052	G
1	A2	4053	A
1	A2	4054	G
1	A2	4055	G
1	A2	4056	C
1	A2	4057	G
1	A2	4059	G
1	A2	4060	G
1	A2	4063	G
1	A2	4066	A
1	A2	4068	C
1	A2	4069	C
1	A2	4070	C
1	A2	4071	G
1	A2	4073	G
1	A2	4074	G
1	A2	4079	C
1	A2	4080	U
1	A2	4081	C
1	A2	4082	G
1	A2	4083	C
1	A2	4084	U
1	A2	4085	U
1	A2	4086	C
1	A2	4087	U
1	A2	4089	G
1	A2	4090	C
1	A2	4092	C
1	A2	4093	C
1	A2	4094	A

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Mol	Chain	Res	Type
1	A2	4101	C
1	A2	4103	C
1	A2	4105	C
1	A2	4106	G
1	A2	4108	C
1	A2	4109	C
1	A2	4111	G
1	A2	4117	A
1	A2	4118	C
1	A2	4119	C
1	A2	4120	C
1	A2	4121	G
1	A2	4122	C
1	A2	4123	U
1	A2	4124	C
1	A2	4126	G
1	A2	4129	G
1	A2	4130	A
1	A2	4131	C
1	A2	4135	G
1	A2	4137	C
1	A2	4138	A
1	A2	4142	G
1	A2	4143	G
1	A2	4144	G
1	A2	4145	G
1	A2	4151	G
1	A2	4155	G
1	A2	4156	G
1	A2	4159	C
1	A2	4163	A
1	A2	4164	C
1	A2	4165	A
1	A2	4166	C
1	A2	4168	U
1	A2	4174	A
1	A2	4175	C
1	A2	4176	G
1	A2	4177	G
1	A2	4179	A
1	A2	4180	A
1	A2	4181	C

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Mol	Chain	Res	Type
1	A2	4182	G
1	A2	4185	G
1	A2	4186	G
1	A2	4187	U
1	A2	4188	G
1	A2	4189	U
1	A2	4190	C
1	A2	4191	C
1	A2	4192	U
1	A2	4193	A
1	A2	4194	A
1	A2	4195	G
1	A2	4199	A
1	A2	4200	G
1	A2	4201	C
1	A2	4210	G
1	A2	4211	A
1	A2	4212	C
1	A2	4214	G
1	A2	4215	A
1	A2	4226	G
1	A2	4227	G
1	A2	4231	A
1	A2	4232	G
1	A2	4233	A
1	A2	4234	A
1	A2	4236	G
1	A2	4237	G
1	A2	4239	A
1	A2	4240	A
1	A2	4241	A
1	A2	4242	A
1	A2	4245	U
1	A2	4247	G
1	A2	4250	U
1	A2	4251	G
1	A2	4252	A
1	A2	4253	U
1	A2	4254	C
1	A2	4255	U
1	A2	4256	U
1	A2	4261	U

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Mol	Chain	Res	Type
1	A2	4262	U
1	A2	4263	C
1	A2	4264	A
1	A2	4265	G
1	A2	4266	U
1	A2	4267	A
1	A2	4269	G
1	A2	4270	A
1	A2	4271	A
1	A2	4273	A
1	A2	4276	G
1	A2	4277	A
1	A2	4279	C
1	A2	4280	G
1	A2	4283	A
1	A2	4286	G
1	A2	4287	C
1	A2	4288	G
1	A2	4289	G
1	A2	4290	G
1	A2	4291	G
1	A2	4292	C
1	A2	4293	C
1	A2	4297	C
1	A2	4298	G
1	A2	4301	C
1	A2	4303	U
1	A2	4304	U
1	A2	4305	C
1	A2	4306	U
1	A2	4308	A
1	A2	4309	C
1	A2	4313	U
1	A2	4314	U
1	A2	4315	G
1	A2	4316	G
1	A2	4317	G
1	A2	4319	U
1	A2	4321	U
1	A2	4324	G
1	A2	4326	A
1	A2	4327	G

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Mol	Chain	Res	Type
1	A2	4328	G
1	A2	4329	A
1	A2	4331	G
1	A2	4333	G
1	A2	4335	C
1	A2	4336	A
1	A2	4337	G
1	A2	4338	A
1	A2	4339	A
1	A2	4341	A
1	A2	4342	G
1	A2	4345	A
1	A2	4346	C
1	A2	4347	C
1	A2	4348	A
1	A2	4350	A
1	A2	4353	G
1	A2	4354	A
1	A2	4355	U
1	A2	4357	A
1	A2	4359	U
1	A2	4362	C
1	A2	4363	U
1	A2	4366	U
1	A2	4367	G
1	A2	4370	G
1	A2	4372	C
1	A2	4373	C
1	A2	4375	A
1	A2	4376	G
1	A2	4377	C
1	A2	4379	U
1	A2	4380	U
1	A2	4382	A
1	A2	4383	U
1	A2	4384	A
1	A2	4386	C
1	A2	4387	G
1	A2	4388	A
1	A2	4389	C
1	A2	4390	G
1	A2	4394	C

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Mol	Chain	Res	Type
1	A2	4396	U
1	A2	4397	U
1	A2	4401	A
1	A2	4404	C
1	A2	4406	U
1	A2	4407	C
1	A2	4408	G
1	A2	4409	A
1	A2	4410	U
1	A2	4411	G
1	A2	4412	U
1	A2	4413	C
1	A2	4415	G
1	A2	4416	C
1	A2	4420	U
1	A2	4421	C
1	A2	4422	C
1	A2	4423	U
1	A2	4424	A
1	A2	4425	U
1	A2	4426	C
1	A2	4431	U
1	A2	4433	A
1	A2	4434	A
1	A2	4435	G
1	A2	4437	A
1	A2	4438	G
1	A2	4448	A
1	A2	4449	G
1	A2	4451	G
1	A2	4452	U
1	A2	4453	U
1	A2	4454	G
1	A2	4455	G
1	A2	4456	A
1	A2	4457	U
1	A2	4458	U
1	A2	4459	G
1	A2	4460	U
1	A2	4461	U
1	A2	4465	C
1	A2	4466	C

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Mol	Chain	Res	Type
1	A2	4470	A
1	A2	4472	U
1	A2	4473	A
1	A2	4474	G
1	A2	4477	A
1	A2	4478	A
1	A2	4479	C
1	A2	4480	G
1	A2	4482	G
1	A2	4483	A
1	A2	4484	G
1	A2	4488	G
1	A2	4489	G
1	A2	4491	U
1	A2	4492	U
1	A2	4494	G
1	A2	4498	G
1	A2	4499	U
1	A2	4500	C
1	A2	4502	U
1	A2	4503	G
1	A2	4505	G
1	A2	4507	C
1	A2	4508	A
1	A2	4509	G
1	A2	4510	G
1	A2	4512	U
1	A2	4515	U
1	A2	4516	U
1	A2	4519	A
1	A2	4520	C
1	A2	4521	C
1	A2	4522	C
1	A2	4525	C
1	A2	4526	U
1	A2	4527	G
1	A2	4528	A
1	A2	4529	U
1	A2	4530	G
1	A2	4532	U
1	A2	4533	G
1	A2	4534	U

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Mol	Chain	Res	Type
1	A2	4535	G
1	A2	4536	U
1	A2	4538	G
1	A2	4539	U
1	A2	4541	G
1	A2	4543	C
1	A2	4544	A
1	A2	4545	U
1	A2	4549	A
1	A2	4550	A
1	A2	4551	U
1	A2	4552	C
1	A2	4557	U
1	A2	4558	C
1	A2	4560	G
1	A2	4561	U
1	A2	4562	A
1	A2	4563	C
1	A2	4566	G
1	A2	4567	A
1	A2	4568	G
1	A2	4569	G
1	A2	4570	A
1	A2	4577	G
1	A2	4578	G
1	A2	4579	U
1	A2	4580	U
1	A2	4583	G
1	A2	4584	A
1	A2	4586	A
1	A2	4587	U
1	A2	4592	U
1	A2	4594	U
1	A2	4595	A
1	A2	4596	U
1	A2	4597	G
1	A2	4598	U
1	A2	4599	G
1	A2	4600	C
1	A2	4601	U
1	A2	4602	U
1	A2	4604	G

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Mol	Chain	Res	Type
1	A2	4609	G
1	A2	4610	G
1	A2	4612	G
1	A2	4613	C
1	A2	4615	A
1	A2	4616	A
1	A2	4617	U
1	A2	4618	G
1	A2	4621	G
1	A2	4622	C
1	A2	4628	U
1	A2	4629	A
1	A2	4630	C
1	A2	4632	A
1	A2	4636	G
1	A2	4637	U
1	A2	4638	G
1	A2	4639	G
1	A2	4640	G
1	A2	4641	A
1	A2	4642	U
1	A2	4643	U
1	A2	4646	G
1	A2	4651	A
1	A2	4654	G
1	A2	4655	C
1	A2	4657	U
1	A2	4658	C
1	A2	4659	U
1	A2	4660	A
1	A2	4661	A
1	A2	4664	C
1	A2	4665	A
1	A2	4668	A
1	A2	4669	U
1	A2	4671	C
1	A2	4672	C
1	A2	4675	C
1	A2	4676	C
1	A2	4678	G
1	A2	4679	G
1	A2	4680	C

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Mol	Chain	Res	Type
1	A2	4681	G
1	A2	4682	A
1	A2	4684	C
1	A2	4688	A
1	A2	4689	C
1	A2	4690	G
1	A2	4691	G
1	A2	4692	C
1	A2	4693	A
1	A2	4694	G
1	A2	4696	G
1	A2	4698	C
1	A2	4699	G
1	A2	4700	C
1	A2	4701	G
1	A2	4706	C
1	A2	4710	G
1	A2	4711	U
1	A2	4712	U
1	A2	4713	G
1	A2	4714	G
1	A2	4716	C
1	A2	4718	C
1	A2	4719	G
1	A2	4720	G
1	A2	4721	A
1	A2	4723	A
1	A2	4724	G
1	A2	4725	C
1	A2	4726	C
1	A2	4733	C
1	A2	4734	C
1	A2	4735	G
1	A2	4736	C
1	A2	4739	G
1	A2	4740	U
1	A2	4741	C
1	A2	4742	C
1	A2	4746	C
1	A2	4803	C
1	A2	4804	G
1	A2	4807	C

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Mol	Chain	Res	Type
1	A2	4808	C
1	A2	4809	G
1	A2	4812	A
1	A2	4813	C
1	A2	4814	C
1	A2	4815	G
1	A2	4816	G
1	A2	4822	G
1	A2	4824	U
1	A2	4825	G
1	A2	4826	C
1	A2	4827	G
1	A2	4828	G
1	A2	4829	A
1	A2	4831	U
1	A2	4832	G
1	A2	4834	C
1	A2	4836	U
1	A2	4838	C
1	A2	4839	G
1	A2	4840	U
1	A2	4844	G
1	A2	4847	A
1	A2	4848	A
1	A2	4849	A
1	A2	4850	C
1	A2	4851	G
1	A2	4852	G
1	A2	4853	G
1	A2	4854	G
1	A2	4855	C
1	A2	4856	G
1	A2	4857	C
1	A2	4858	G
1	A2	4862	G
1	A2	4863	G
1	A2	4867	G
1	A2	4868	G
1	A2	4875	C
1	A2	4879	C
1	A2	4880	U
1	A2	4881	C

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Mol	Chain	Res	Type
1	A2	4882	G
1	A2	4883	C
1	A2	4892	C
1	A2	4893	A
1	A2	4894	C
1	A2	4895	C
1	A2	4896	G
1	A2	4897	C
1	A2	4898	A
1	A2	4899	C
1	A2	4900	G
1	A2	4901	U
1	A2	4902	U
1	A2	4903	C
1	A2	4904	G
1	A2	4905	U
1	A2	4906	G
1	A2	4919	C
1	A2	4921	A
1	A2	4923	A
1	A2	4924	C
1	A2	4930	G
1	A2	4931	U
1	A2	4932	A
1	A2	4940	U
1	A2	4943	U
1	A2	4944	U
1	A2	4945	C
1	A2	4946	U
1	A2	4947	G
1	A2	4949	G
1	A2	4955	G
1	A2	4956	U
1	A2	4958	U
1	A2	4959	C
1	A2	4960	G
1	A2	4962	A
1	A2	4963	C
1	A2	4968	C
1	A2	4969	A
1	A2	4972	G
1	A2	4974	A

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Mol	Chain	Res	Type
1	A2	4975	G
1	A2	4976	C
1	A2	4978	C
1	A2	4979	C
1	A2	4980	C
1	A2	4981	U
1	A2	4982	C
1	A2	4983	G
1	A2	4985	U
1	A2	4986	G
1	A2	4988	G
1	A2	4995	U
1	A2	4996	G
1	A2	4998	A
1	A2	5002	C
1	A2	5003	A
1	A2	5005	C
1	A2	5009	C
1	A2	5010	G
1	A2	5015	A
1	A2	5016	A
1	A2	5017	G
1	A2	5018	G
1	A2	5019	G
1	A2	5020	U
1	A2	5021	U
2	A3	4	C
2	A3	6	C
2	A3	7	U
2	A3	8	U
2	A3	9	A
2	A3	10	G
2	A3	12	G
2	A3	13	G
2	A3	14	U
2	A3	16	G
2	A3	20	A
2	A3	23	C
2	A3	24	G
2	A3	25	G
2	A3	26	C
2	A3	28	C

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Mol	Chain	Res	Type
2	A3	30	U
2	A3	32	C
2	A3	34	U
2	A3	38	U
2	A3	40	A
2	A3	43	A
2	A3	47	C
2	A3	49	G
2	A3	51	U
2	A3	52	A
2	A3	58	G
2	A3	59	A
2	A3	61	A
2	A3	62	A
2	A3	63	U
2	A3	69	U
2	A3	71	A
2	A3	72	A
2	A3	75	G
2	A3	76	C
2	A3	77	A
2	A3	78	G
2	A3	80	A
2	A3	81	C
2	A3	82	A
2	A3	83	C
2	A3	84	A
2	A3	85	U
2	A3	86	U
2	A3	89	U
2	A3	94	G
2	A3	95	A
2	A3	103	A
2	A3	104	A
2	A3	105	C
2	A3	106	G
2	A3	107	C
2	A3	109	C
2	A3	111	U
2	A3	112	G
2	A3	114	G
2	A3	117	C

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Mol	Chain	Res	Type
2	A3	120	G
2	A3	122	G
2	A3	123	U
2	A3	124	U
2	A3	125	C
2	A3	126	C
2	A3	128	C
2	A3	129	C
2	A3	130	C
2	A3	131	G
2	A3	137	A
2	A3	138	C
2	A3	140	C
2	A3	141	C
2	A3	143	G
2	A3	144	U
2	A3	146	U
2	A3	147	G
2	A3	148	A
2	A3	149	G
2	A3	150	C
2	A3	151	G
2	A3	156	U
2	A3	157	U
3	A4	3	C
3	A4	6	C
3	A4	7	G
3	A4	9	C
3	A4	10	C
3	A4	11	A
3	A4	12	U
3	A4	13	A
3	A4	15	C
3	A4	19	C
3	A4	22	A
3	A4	27	G
3	A4	28	C
3	A4	29	C
3	A4	30	C
3	A4	33	U
3	A4	34	C
3	A4	35	U

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Mol	Chain	Res	Type
3	A4	36	C
3	A4	40	U
3	A4	41	G
3	A4	46	C
3	A4	47	G
3	A4	48	G
3	A4	49	A
3	A4	53	U
3	A4	54	A
3	A4	55	A
3	A4	56	G
3	A4	57	C
3	A4	58	A
3	A4	61	G
3	A4	62	U
3	A4	63	C
3	A4	64	G
3	A4	65	G
3	A4	67	C
3	A4	68	C
3	A4	69	U
3	A4	73	U
3	A4	74	A
3	A4	75	G
3	A4	76	U
3	A4	77	A
3	A4	79	U
3	A4	81	G
3	A4	85	G
3	A4	86	G
3	A4	87	G
3	A4	89	G
3	A4	90	A
3	A4	91	C
3	A4	94	C
3	A4	95	C
3	A4	96	U
3	A4	97	G
3	A4	99	G
3	A4	100	A
3	A4	101	A
3	A4	103	A

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Mol	Chain	Res	Type
3	A4	105	C
3	A4	107	G
3	A4	108	G
3	A4	109	U
3	A4	110	G
3	A4	113	G
3	A4	116	G
3	A4	117	G
3	A4	118	C
47	BA	2	C
47	BA	17	C
47	BA	18	G
47	BA	19	G
47	BA	20	U
47	BA	21	A
47	BA	22	G
47	BA	42	C
47	BA	46	G
47	BA	47	U
47	BA	48	C
47	BA	52	G
47	BA	61	C
47	BA	76	A
49	BC	45	C
49	BC	46	U
49	BC	49	G
49	BC	54	A
49	BC	55	C
49	BC	57	A
49	BC	60	G
49	BC	61	U
49	BC	65	C
49	BC	67	C
49	BC	74	A
49	BC	77	G
49	BC	82	G
49	BC	83	C
49	BC	84	C
49	BC	85	A
49	BC	86	U
49	BC	88	G
49	BC	89	C

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Mol	Chain	Res	Type
49	BC	91	U
49	BC	93	A
49	BC	95	U
49	BC	96	A
49	BC	97	U
49	BC	98	G
49	BC	100	G
49	BC	101	U
49	BC	102	G
49	BC	103	U
49	BC	104	C
49	BC	106	U
49	BC	107	G
49	BC	110	G
49	BC	111	C
49	BC	115	C
49	BC	116	A
49	BC	117	G
49	BC	119	A
49	BC	120	C
49	BC	121	C
49	BC	123	C
49	BC	127	U
49	BC	129	C
49	BC	130	C
49	BC	131	G
49	BC	132	G
49	BC	133	G
49	BC	134	A
49	BC	140	A
49	BC	141	U
49	BC	142	A
49	BC	148	C
49	BC	149	U
49	BC	150	G
49	BC	154	A
49	BC	156	C
49	BC	157	C
49	BC	158	G
49	BC	159	G
49	BC	161	G
49	BC	164	U

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Mol	Chain	Res	Type
49	BC	165	A
49	BC	167	A
49	BC	168	C
49	BC	170	G
49	BC	172	A
49	BC	226	U
49	BC	227	U
49	BC	228	U
49	BC	229	G
49	BC	230	G
49	BC	231	G
49	BC	232	C
49	BC	233	G
49	BC	234	U
49	BC	235	G
49	BC	236	C
49	BC	243	A
49	BC	244	A
49	BC	245	G
49	BC	246	A
49	BC	247	C
49	BC	248	U
49	BC	252	A
49	BC	253	G
49	BC	255	C
49	BC	256	G
49	BC	257	A
49	BC	258	G
49	BC	259	U
49	BC	260	A
49	BC	261	G
49	BC	266	G
49	BC	267	G
49	BC	268	G
49	BC	270	C
49	BC	271	G
49	BC	272	C
49	BC	276	A
49	BC	277	G
49	BC	279	C
49	BC	280	C
49	BC	282	U

Continued on next page...

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Mol	Chain	Res	Type
49	BC	284	U
49	BC	285	G
49	BC	289	C
49	BC	291	G
49	BC	292	C
49	BC	295	G
49	BC	296	A
49	BC	297	U
49	BC	298	A
49	BC	299	G
49	BC	300	G
49	BC	301	G
49	BC	302	U
49	BC	305	U
49	BC	306	U
49	BC	307	G
49	BC	308	C
49	BC	309	G
49	BC	310	A
49	BC	311	G
49	BC	312	U
49	BC	313	G
49	BC	315	C
49	BC	319	G
49	BC	322	G
49	BC	324	U
49	BC	325	C
49	BC	329	U
49	BC	330	A
49	BC	337	G
49	BC	338	C
49	BC	339	A
49	BC	341	C
49	BC	342	A
49	BC	344	G
49	BC	345	A
49	BC	346	G
49	BC	350	G
49	BC	351	A
50	C1	2	A
50	C1	3	C
50	C1	4	C

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Mol	Chain	Res	Type
50	C1	5	U
50	C1	6	G
50	C1	7	G
50	C1	8	U
50	C1	9	U
50	C1	15	U
50	C1	16	G
50	C1	17	C
50	C1	21	U
50	C1	22	A
50	C1	24	C
50	C1	25	A
50	C1	26	U
50	C1	30	C
50	C1	33	G
50	C1	39	A
50	C1	40	A
50	C1	41	G
50	C1	44	U
50	C1	45	A
50	C1	46	A
50	C1	47	G
50	C1	48	C
50	C1	50	A
50	C1	55	U
50	C1	56	G
50	C1	59	U
50	C1	60	A
50	C1	61	A
50	C1	62	G
50	C1	63	U
50	C1	64	A
50	C1	65	C
50	C1	66	G
50	C1	67	C
50	C1	68	A
50	C1	69	C
50	C1	70	G
50	C1	71	G
50	C1	72	C
50	C1	74	G
50	C1	75	G

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Mol	Chain	Res	Type
50	C1	76	U
50	C1	77	A
50	C1	78	C
50	C1	79	A
50	C1	80	G
50	C1	81	U
50	C1	82	G
50	C1	83	A
50	C1	84	A
50	C1	87	U
50	C1	98	C
50	C1	99	A
50	C1	101	U
50	C1	103	A
50	C1	104	A
50	C1	105	U
50	C1	106	C
50	C1	109	U
50	C1	110	U
50	C1	111	A
50	C1	112	U
50	C1	113	G
50	C1	114	G
50	C1	115	U
50	C1	116	U
50	C1	117	C
50	C1	118	C
50	C1	120	U
50	C1	121	U
50	C1	122	G
50	C1	123	G
50	C1	124	U
50	C1	125	C
50	C1	126	G
50	C1	127	C
50	C1	128	U
50	C1	129	C
50	C1	130	G
50	C1	131	C
50	C1	132	U
50	C1	133	C
50	C1	134	C

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Mol	Chain	Res	Type
50	C1	135	U
50	C1	136	C
50	C1	137	U
50	C1	138	C
50	C1	139	C
50	C1	140	C
50	C1	141	A
50	C1	142	C
50	C1	143	U
50	C1	144	U
50	C1	145	G
50	C1	146	G
50	C1	147	A
50	C1	148	U
50	C1	150	A
50	C1	151	C
50	C1	152	U
50	C1	153	G
50	C1	158	A
50	C1	160	U
50	C1	161	U
50	C1	162	C
50	C1	163	U
50	C1	164	A
50	C1	166	A
50	C1	167	G
50	C1	168	C
50	C1	169	U
50	C1	171	A
50	C1	173	A
50	C1	174	C
50	C1	176	U
50	C1	179	C
50	C1	180	G
50	C1	181	A
50	C1	182	C
50	C1	183	G
50	C1	184	G
50	C1	185	G
50	C1	187	G
50	C1	193	C
50	C1	198	U

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Mol	Chain	Res	Type
50	C1	199	C
50	C1	200	G
50	C1	201	C
50	C1	202	G
50	C1	204	G
50	C1	205	G
50	C1	207	G
50	C1	208	G
50	C1	209	A
50	C1	210	U
50	C1	211	G
50	C1	213	G
50	C1	214	U
50	C1	215	G
50	C1	216	C
50	C1	217	A
50	C1	218	U
50	C1	219	U
50	C1	220	U
50	C1	225	G
50	C1	226	A
50	C1	227	U
50	C1	228	C
50	C1	229	A
50	C1	230	A
50	C1	233	C
50	C1	234	C
50	C1	235	A
50	C1	236	A
50	C1	237	C
50	C1	238	C
50	C1	239	C
50	C1	298	G
50	C1	301	A
50	C1	303	C
50	C1	304	C
50	C1	305	U
50	C1	306	C
50	C1	307	G
50	C1	308	G
50	C1	309	G
50	C1	310	C

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Mol	Chain	Res	Type
50	C1	311	C
50	C1	312	G
50	C1	313	A
50	C1	314	U
50	C1	315	C
50	C1	317	C
50	C1	318	A
50	C1	319	C
50	C1	320	G
50	C1	321	C
50	C1	327	G
50	C1	328	U
50	C1	329	G
50	C1	330	G
50	C1	332	G
50	C1	333	G
50	C1	337	C
50	C1	338	G
50	C1	339	A
50	C1	343	A
50	C1	344	U
50	C1	345	U
50	C1	346	C
50	C1	347	G
50	C1	350	C
50	C1	352	U
50	C1	353	C
50	C1	354	U
50	C1	356	C
50	C1	357	C
50	C1	358	C
50	C1	359	U
50	C1	362	C
50	C1	363	A
50	C1	364	A
50	C1	368	U
50	C1	369	C
50	C1	370	G
50	C1	371	A
50	C1	372	U
50	C1	375	U
50	C1	376	A

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Mol	Chain	Res	Type
50	C1	378	U
50	C1	379	C
50	C1	380	G
50	C1	381	C
50	C1	382	C
50	C1	383	G
50	C1	384	U
50	C1	386	C
50	C1	389	A
50	C1	395	G
50	C1	399	C
50	C1	400	C
50	C1	407	G
50	C1	408	A
50	C1	409	C
50	C1	410	G
50	C1	412	G
50	C1	416	U
50	C1	421	G
50	C1	422	U
50	C1	423	U
50	C1	424	C
50	C1	426	A
50	C1	427	U
50	C1	429	C
50	C1	431	G
50	C1	433	A
50	C1	435	A
50	C1	436	G
50	C1	438	G
50	C1	440	G
50	C1	441	C
50	C1	442	C
50	C1	443	U
50	C1	445	A
50	C1	447	A
50	C1	448	A
50	C1	449	A
50	C1	450	C
50	C1	451	G
50	C1	452	G
50	C1	454	U

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Mol	Chain	Res	Type
50	C1	459	C
50	C1	460	A
50	C1	463	C
50	C1	464	A
50	C1	465	A
50	C1	466	G
50	C1	467	G
50	C1	468	A
50	C1	472	C
50	C1	473	A
50	C1	474	G
50	C1	475	C
50	C1	476	A
50	C1	477	G
50	C1	480	G
50	C1	482	G
50	C1	485	A
50	C1	487	U
50	C1	488	U
50	C1	489	A
50	C1	491	C
50	C1	492	C
50	C1	493	A
50	C1	495	U
50	C1	496	C
50	C1	497	C
50	C1	499	G
50	C1	500	A
50	C1	501	C
50	C1	502	C
50	C1	503	C
50	C1	504	G
50	C1	506	G
50	C1	507	G
50	C1	509	G
50	C1	510	G
50	C1	512	A
50	C1	516	A
50	C1	517	C
50	C1	518	G
50	C1	523	A
50	C1	525	A

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Mol	Chain	Res	Type
50	C1	526	A
50	C1	527	C
50	C1	529	A
50	C1	530	U
50	C1	533	A
50	C1	535	G
50	C1	536	A
50	C1	537	C
50	C1	538	U
50	C1	539	C
50	C1	541	U
50	C1	542	U
50	C1	543	C
50	C1	544	G
50	C1	545	A
50	C1	546	G
50	C1	547	G
50	C1	548	C
50	C1	549	C
50	C1	550	C
50	C1	553	U
50	C1	554	A
50	C1	555	A
50	C1	559	G
50	C1	560	A
50	C1	562	U
50	C1	564	A
50	C1	565	G
50	C1	566	U
50	C1	568	C
50	C1	570	C
50	C1	571	U
50	C1	572	U
50	C1	573	U
50	C1	574	A
50	C1	575	A
50	C1	576	A
50	C1	577	U
50	C1	578	C
50	C1	579	C
50	C1	580	U
50	C1	582	U

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Mol	Chain	Res	Type
50	C1	586	G
50	C1	587	A
50	C1	588	G
50	C1	589	G
50	C1	590	A
50	C1	591	U
50	C1	592	C
50	C1	593	C
50	C1	594	A
50	C1	595	U
50	C1	596	U
50	C1	597	G
50	C1	599	A
50	C1	600	G
50	C1	603	C
50	C1	604	A
50	C1	605	A
50	C1	606	G
50	C1	607	U
50	C1	608	C
50	C1	609	U
50	C1	612	U
50	C1	613	G
50	C1	614	C
50	C1	617	G
50	C1	619	A
50	C1	620	G
50	C1	621	C
50	C1	623	G
50	C1	624	C
50	C1	627	U
50	C1	628	A
50	C1	629	A
50	C1	630	U
50	C1	631	U
50	C1	634	A
50	C1	638	C
50	C1	643	A
50	C1	644	G
50	C1	645	C
50	C1	647	U
50	C1	648	A

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Mol	Chain	Res	Type
50	C1	650	A
50	C1	651	U
50	C1	652	U
50	C1	654	A
50	C1	655	A
50	C1	656	G
50	C1	657	U
50	C1	658	U
50	C1	659	G
50	C1	660	C
50	C1	661	U
50	C1	663	C
50	C1	664	A
50	C1	665	G
50	C1	666	U
50	C1	668	A
50	C1	669	A
50	C1	671	A
50	C1	672	A
50	C1	673	G
50	C1	674	C
50	C1	675	U
50	C1	676	C
50	C1	677	G
50	C1	679	A
50	C1	680	G
50	C1	681	U
50	C1	683	G
50	C1	684	G
50	C1	686	U
50	C1	688	U
50	C1	689	U
50	C1	692	G
50	C1	694	G
50	C1	695	C
50	C1	742	U
50	C1	743	U
50	C1	744	G
50	C1	745	C
50	C1	746	C
50	C1	747	U
50	C1	748	C

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Mol	Chain	Res	Type
50	C1	749	U
50	C1	750	C
50	C1	754	G
50	C1	755	C
50	C1	793	G
50	C1	795	A
50	C1	796	G
50	C1	797	C
50	C1	798	G
50	C1	799	U
50	C1	800	U
50	C1	801	U
50	C1	802	A
50	C1	803	C
50	C1	804	U
50	C1	807	G
50	C1	810	A
50	C1	812	A
50	C1	815	U
50	C1	816	A
50	C1	818	A
50	C1	819	G
50	C1	820	U
50	C1	821	G
50	C1	822	U
50	C1	823	U
50	C1	825	A
50	C1	827	A
50	C1	829	C
50	C1	830	A
50	C1	831	G
50	C1	834	C
50	C1	835	C
50	C1	837	A
50	C1	838	G
50	C1	839	C
50	C1	840	C
50	C1	841	G
50	C1	842	C
50	C1	844	U
50	C1	845	G
50	C1	847	A

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Mol	Chain	Res	Type
50	C1	848	U
50	C1	851	C
50	C1	852	G
50	C1	856	C
50	C1	861	A
50	C1	862	A
50	C1	863	U
50	C1	865	A
50	C1	869	A
50	C1	870	A
50	C1	873	G
50	C1	874	G
50	C1	875	A
50	C1	876	C
50	C1	886	A
50	C1	887	U
50	C1	888	U
50	C1	889	U
50	C1	890	U
50	C1	891	G
50	C1	896	U
50	C1	897	U
50	C1	898	U
50	C1	899	U
50	C1	900	C
50	C1	911	C
50	C1	912	C
50	C1	913	A
50	C1	914	U
50	C1	915	G
50	C1	917	U
50	C1	918	U
50	C1	919	A
50	C1	920	A
50	C1	921	G
50	C1	924	G
50	C1	930	C
50	C1	933	G
50	C1	937	C
50	C1	938	A
50	C1	942	G
50	C1	943	U

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Mol	Chain	Res	Type
50	C1	946	U
50	C1	950	C
50	C1	951	C
50	C1	953	C
50	C1	955	A
50	C1	956	G
50	C1	957	A
50	C1	958	G
50	C1	959	G
50	C1	960	U
50	C1	961	G
50	C1	962	A
50	C1	963	A
50	C1	966	U
50	C1	967	C
50	C1	968	U
50	C1	969	U
50	C1	970	G
50	C1	971	G
50	C1	972	A
50	C1	975	G
50	C1	977	C
50	C1	979	C
50	C1	980	A
50	C1	984	C
50	C1	985	G
50	C1	988	C
50	C1	990	A
50	C1	991	G
50	C1	995	G
50	C1	999	G
50	C1	1000	C
50	C1	1004	U
50	C1	1006	C
50	C1	1007	C
50	C1	1009	A
50	C1	1011	A
50	C1	1015	U
50	C1	1016	U
50	C1	1017	U
50	C1	1018	U
50	C1	1019	C

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Mol	Chain	Res	Type
50	C1	1020	A
50	C1	1021	U
50	C1	1022	U
50	C1	1023	A
50	C1	1024	A
50	C1	1029	G
50	C1	1033	G
50	C1	1034	A
50	C1	1035	A
50	C1	1036	A
50	C1	1040	G
50	C1	1044	G
50	C1	1045	U
50	C1	1049	A
50	C1	1050	A
50	C1	1051	G
50	C1	1052	A
50	C1	1053	C
50	C1	1055	A
50	C1	1057	C
50	C1	1058	A
50	C1	1060	A
50	C1	1061	U
50	C1	1062	A
50	C1	1064	C
50	C1	1065	G
50	C1	1067	C
50	C1	1076	G
50	C1	1083	A
50	C1	1084	A
50	C1	1085	C
50	C1	1086	G
50	C1	1087	A
50	C1	1088	U
50	C1	1089	G
50	C1	1090	C
50	C1	1096	G
50	C1	1097	G
50	C1	1101	U
50	C1	1104	G
50	C1	1108	G
50	C1	1109	C

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Mol	Chain	Res	Type
50	C1	1110	G
50	C1	1112	U
50	C1	1114	U
50	C1	1115	U
50	C1	1116	C
50	C1	1117	C
50	C1	1118	C
50	C1	1120	U
50	C1	1121	G
50	C1	1124	C
50	C1	1131	G
50	C1	1132	C
50	C1	1133	A
50	C1	1136	U
50	C1	1137	U
50	C1	1139	C
50	C1	1140	G
50	C1	1141	G
50	C1	1143	A
50	C1	1144	A
50	C1	1147	C
50	C1	1148	A
50	C1	1149	A
50	C1	1150	A
50	C1	1151	G
50	C1	1153	C
50	C1	1154	U
50	C1	1155	U
50	C1	1157	G
50	C1	1158	G
50	C1	1161	U
50	C1	1163	C
50	C1	1164	G
50	C1	1165	G
50	C1	1166	G
50	C1	1169	G
50	C1	1170	A
50	C1	1171	G
50	C1	1176	G
50	C1	1182	A
50	C1	1183	A
50	C1	1186	U

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Mol	Chain	Res	Type
50	C1	1189	A
50	C1	1194	A
50	C1	1195	A
50	C1	1198	G
50	C1	1199	A
50	C1	1200	A
50	C1	1203	G
50	C1	1205	C
50	C1	1206	G
50	C1	1207	G
50	C1	1215	C
50	C1	1216	C
50	C1	1217	A
50	C1	1218	C
50	C1	1219	C
50	C1	1221	G
50	C1	1223	A
50	C1	1224	G
50	C1	1235	G
50	C1	1236	G
50	C1	1237	C
50	C1	1242	U
50	C1	1243	U
50	C1	1245	G
50	C1	1246	A
50	C1	1247	C
50	C1	1248	U
50	C1	1249	C
50	C1	1251	A
50	C1	1253	A
50	C1	1254	C
50	C1	1255	G
50	C1	1256	G
50	C1	1257	G
50	C1	1258	A
50	C1	1259	A
50	C1	1260	A
50	C1	1261	C
50	C1	1262	C
50	C1	1263	U
50	C1	1264	C
50	C1	1265	A

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Mol	Chain	Res	Type
50	C1	1266	C
50	C1	1267	C
50	C1	1268	C
50	C1	1269	G
50	C1	1270	G
50	C1	1273	C
50	C1	1274	G
50	C1	1275	G
50	C1	1276	A
50	C1	1277	C
50	C1	1278	A
50	C1	1279	C
50	C1	1282	A
50	C1	1284	A
50	C1	1285	G
50	C1	1286	G
50	C1	1287	A
50	C1	1288	U
50	C1	1289	U
50	C1	1297	U
50	C1	1300	U
50	C1	1301	A
50	C1	1302	G
50	C1	1303	C
50	C1	1307	U
50	C1	1308	U
50	C1	1309	C
50	C1	1310	U
50	C1	1311	C
50	C1	1312	G
50	C1	1313	A
50	C1	1314	U
50	C1	1315	U
50	C1	1317	C
50	C1	1318	G
50	C1	1323	U
50	C1	1324	G
50	C1	1325	G
50	C1	1326	U
50	C1	1327	G
50	C1	1330	G
50	C1	1331	C

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Mol	Chain	Res	Type
50	C1	1332	A
50	C1	1333	U
50	C1	1335	G
50	C1	1343	U
50	C1	1344	A
50	C1	1345	G
50	C1	1347	U
50	C1	1349	G
50	C1	1351	G
50	C1	1352	G
50	C1	1354	G
50	C1	1357	A
50	C1	1358	U
50	C1	1359	U
50	C1	1360	U
50	C1	1363	C
50	C1	1364	U
50	C1	1368	U
50	C1	1369	A
50	C1	1371	U
50	C1	1372	U
50	C1	1378	A
50	C1	1381	G
50	C1	1382	A
50	C1	1384	C
50	C1	1389	C
50	C1	1390	U
50	C1	1392	U
50	C1	1393	G
50	C1	1394	G
50	C1	1395	C
50	C1	1397	U
50	C1	1399	C
50	C1	1401	A
50	C1	1402	A
50	C1	1403	C
50	C1	1404	U
50	C1	1405	A
50	C1	1406	G
50	C1	1407	U
50	C1	1408	U
50	C1	1409	A

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Mol	Chain	Res	Type
50	C1	1410	C
50	C1	1411	G
50	C1	1412	C
50	C1	1413	G
50	C1	1415	C
50	C1	1416	C
50	C1	1417	C
50	C1	1419	C
50	C1	1420	G
50	C1	1421	A
50	C1	1422	G
50	C1	1423	C
50	C1	1424	G
50	C1	1425	G
50	C1	1426	U
50	C1	1427	C
50	C1	1428	G
50	C1	1429	G
50	C1	1430	C
50	C1	1431	G
50	C1	1432	U
50	C1	1433	C
50	C1	1434	C
50	C1	1435	C
50	C1	1436	C
50	C1	1437	C
50	C1	1438	A
50	C1	1440	C
50	C1	1441	U
50	C1	1442	U
50	C1	1443	C
50	C1	1444	U
50	C1	1445	U
50	C1	1446	A
50	C1	1447	G
50	C1	1448	A
50	C1	1451	G
50	C1	1453	C
50	C1	1454	A
50	C1	1455	A
50	C1	1456	G
50	C1	1457	U

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Mol	Chain	Res	Type
50	C1	1461	G
50	C1	1462	U
50	C1	1463	U
50	C1	1464	C
50	C1	1465	A
50	C1	1466	G
50	C1	1467	C
50	C1	1471	C
50	C1	1472	C
50	C1	1473	G
50	C1	1475	G
50	C1	1476	A
50	C1	1477	U
50	C1	1478	U
50	C1	1480	A
50	C1	1481	G
50	C1	1482	C
50	C1	1484	A
50	C1	1486	A
50	C1	1489	A
50	C1	1490	G
50	C1	1493	C
50	C1	1494	U
50	C1	1495	G
50	C1	1496	U
50	C1	1498	A
50	C1	1500	G
50	C1	1505	U
50	C1	1507	G
50	C1	1508	A
50	C1	1509	U
50	C1	1510	G
50	C1	1511	U
50	C1	1513	C
50	C1	1514	G
50	C1	1517	G
50	C1	1520	G
50	C1	1521	C
50	C1	1522	A
50	C1	1523	C
50	C1	1528	G
50	C1	1529	C

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Mol	Chain	Res	Type
50	C1	1530	U
50	C1	1531	A
50	C1	1535	U
50	C1	1536	G
50	C1	1539	U
50	C1	1540	G
50	C1	1541	G
50	C1	1542	C
50	C1	1543	U
50	C1	1544	C
50	C1	1545	A
50	C1	1546	G
50	C1	1547	C
50	C1	1548	G
50	C1	1549	U
50	C1	1550	G
50	C1	1551	U
50	C1	1553	C
50	C1	1554	C
50	C1	1555	U
50	C1	1556	A
50	C1	1557	C
50	C1	1558	C
50	C1	1560	U
50	C1	1561	A
50	C1	1563	G
50	C1	1568	C
50	C1	1569	A
50	C1	1570	G
50	C1	1573	G
50	C1	1574	C
50	C1	1577	G
50	C1	1578	U
50	C1	1579	A
50	C1	1580	A
50	C1	1581	C
50	C1	1582	C
50	C1	1585	U
50	C1	1586	U
50	C1	1587	G
50	C1	1588	A
50	C1	1589	A

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Mol	Chain	Res	Type
50	C1	1591	C
50	C1	1595	U
50	C1	1597	C
50	C1	1598	G
50	C1	1599	U
50	C1	1600	G
50	C1	1601	A
50	C1	1602	U
50	C1	1603	G
50	C1	1604	G
50	C1	1605	G
50	C1	1607	A
50	C1	1609	C
50	C1	1610	G
50	C1	1612	G
50	C1	1614	A
50	C1	1615	U
50	C1	1617	G
50	C1	1618	C
50	C1	1620	A
50	C1	1621	U
50	C1	1622	U
50	C1	1623	A
50	C1	1624	U
50	C1	1625	U
50	C1	1627	C
50	C1	1631	U
50	C1	1632	G
50	C1	1635	C
50	C1	1636	G
50	C1	1637	A
50	C1	1638	G
50	C1	1639	G
50	C1	1640	A
50	C1	1644	C
50	C1	1645	C
50	C1	1647	A
50	C1	1648	G
50	C1	1649	U
50	C1	1651	A
50	C1	1652	G
50	C1	1654	G

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Mol	Chain	Res	Type
50	C1	1655	C
50	C1	1656	G
50	C1	1660	C
50	C1	1661	A
50	C1	1662	U
50	C1	1664	A
50	C1	1665	G
50	C1	1666	C
50	C1	1669	G
50	C1	1671	G
50	C1	1672	U
50	C1	1673	U
50	C1	1674	G
50	C1	1677	U
50	C1	1678	A
50	C1	1679	A
50	C1	1680	G
50	C1	1682	C
50	C1	1684	C
50	C1	1685	U
50	C1	1686	G
50	C1	1687	C
50	C1	1688	C
50	C1	1689	C
50	C1	1691	U
50	C1	1692	U
50	C1	1694	U
50	C1	1696	C
50	C1	1697	A
50	C1	1698	C
50	C1	1699	A
50	C1	1700	C
50	C1	1701	C
50	C1	1702	G
50	C1	1703	C
50	C1	1707	U
50	C1	1708	C
50	C1	1709	G
50	C1	1710	C
50	C1	1714	U
50	C1	1719	A
50	C1	1720	U

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Mol	Chain	Res	Type
50	C1	1721	U
50	C1	1722	G
50	C1	1723	G
50	C1	1728	U
50	C1	1729	U
50	C1	1731	A
50	C1	1732	G
50	C1	1735	A
50	C1	1744	G
50	C1	1745	A
50	C1	1747	C
50	C1	1749	G
50	C1	1751	C
50	C1	1752	C
50	C1	1760	G
50	C1	1761	U
50	C1	1764	G
50	C1	1765	C
50	C1	1767	C
50	C1	1768	A
50	C1	1770	G
50	C1	1775	U
50	C1	1781	A
50	C1	1782	G
50	C1	1783	C
50	C1	1788	A
50	C1	1789	G
50	C1	1790	A
50	C1	1792	G
50	C1	1794	C
50	C1	1798	C
50	C1	1800	A
50	C1	1809	A
50	C1	1811	C
50	C1	1813	A
50	C1	1817	G
50	C1	1819	A
50	C1	1823	A
50	C1	1824	A
50	C1	1825	A
50	C1	1826	G
50	C1	1827	U

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Mol	Chain	Res	Type
50	C1	1829	G
50	C1	1831	A
50	C1	1832	A
50	C1	1833	C
50	C1	1834	A
50	C1	1835	A
50	C1	1836	G
50	C1	1837	G
50	C1	1838	U
50	C1	1839	U
50	C1	1841	C
50	C1	1843	G
50	C1	1844	U
50	C1	1846	G
50	C1	1847	G
50	C1	1849	G
50	C1	1850	A
50	C1	1851	A
50	C1	1852	C
50	C1	1856	C
50	C1	1857	G
50	C1	1860	A
50	C1	1861	G
50	C1	1862	G
50	C1	1863	A
50	C1	1864	U
50	C1	1865	C
50	C1	1866	A
50	C1	1867	U
50	C1	1868	U
50	C1	1869	A

All (532) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A2	13	U
1	A2	14	C
1	A2	19	G
1	A2	48	G
1	A2	64	A
1	A2	69	A
1	A2	70	A

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Mol	Chain	Res	Type
1	A2	96	U
1	A2	156	C
1	A2	181	U
1	A2	188	G
1	A2	192	C
1	A2	193	C
1	A2	196	G
1	A2	207	C
1	A2	212	C
1	A2	215	A
1	A2	216	G
1	A2	221	U
1	A2	229	G
1	A2	266	C
1	A2	287	A
1	A2	292	G
1	A2	300	C
1	A2	328	U
1	A2	331	C
1	A2	333	G
1	A2	334	C
1	A2	342	C
1	A2	366	G
1	A2	371	U
1	A2	379	A
1	A2	381	C
1	A2	386	A
1	A2	398	A
1	A2	402	G
1	A2	424	A
1	A2	433	G
1	A2	441	G
1	A2	443	A
1	A2	444	G
1	A2	458	U
1	A2	459	U
1	A2	460	C
1	A2	461	A
1	A2	462	A
1	A2	473	G
1	A2	474	G
1	A2	477	C

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Mol	Chain	Res	Type
1	A2	482	G
1	A2	633	G
1	A2	658	G
1	A2	717	G
1	A2	718	G
1	A2	719	G
1	A2	720	A
1	A2	721	A
1	A2	727	G
1	A2	736	G
1	A2	897	U
1	A2	914	G
1	A2	916	A
1	A2	927	A
1	A2	928	A
1	A2	939	G
1	A2	941	G
1	A2	943	G
1	A2	944	A
1	A2	947	G
1	A2	957	G
1	A2	959	C
1	A2	967	C
1	A2	973	U
1	A2	974	C
1	A2	1082	U
1	A2	1147	C
1	A2	1177	C
1	A2	1193	G
1	A2	1196	C
1	A2	1197	G
1	A2	1204	G
1	A2	1205	U
1	A2	1207	C
1	A2	1208	U
1	A2	1209	C
1	A2	1211	C
1	A2	1216	C
1	A2	1217	C
1	A2	1218	A
1	A2	1219	C
1	A2	1249	G

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Mol	Chain	Res	Type
1	A2	1280	G
1	A2	1282	U
1	A2	1293	C
1	A2	1299	U
1	A2	1304	A
1	A2	1340	G
1	A2	1349	C
1	A2	1357	G
1	A2	1358	C
1	A2	1360	G
1	A2	1367	A
1	A2	1377	A
1	A2	1388	G
1	A2	1400	A
1	A2	1421	C
1	A2	1423	A
1	A2	1444	G
1	A2	1453	C
1	A2	1458	G
1	A2	1475	G
1	A2	1476	A
1	A2	1478	C
1	A2	1481	G
1	A2	1497	A
1	A2	1502	A
1	A2	1523	G
1	A2	1530	C
1	A2	1532	A
1	A2	1553	G
1	A2	1554	A
1	A2	1604	G
1	A2	1612	G
1	A2	1619	C
1	A2	1628	U
1	A2	1639	U
1	A2	1659	G
1	A2	1673	C
1	A2	1703	G
1	A2	1732	G
1	A2	1744	A
1	A2	1745	A
1	A2	1756	C

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Mol	Chain	Res	Type
1	A2	1783	A
1	A2	1786	C
1	A2	1802	G
1	A2	1805	G
1	A2	1836	A
1	A2	1846	A
1	A2	1855	G
1	A2	1859	C
1	A2	1860	U
1	A2	1868	G
1	A2	1870	A
1	A2	1874	A
1	A2	1883	U
1	A2	1885	A
1	A2	1900	G
1	A2	1916	C
1	A2	1918	G
1	A2	1924	G
1	A2	1930	G
1	A2	2000	C
1	A2	2003	A
1	A2	2006	C
1	A2	2009	C
1	A2	2011	A
1	A2	2023	G
1	A2	2024	G
1	A2	2034	G
1	A2	2046	C
1	A2	2048	U
1	A2	2270	G
1	A2	2294	G
1	A2	2309	G
1	A2	2310	G
1	A2	2324	A
1	A2	2333	U
1	A2	2347	A
1	A2	2348	U
1	A2	2358	A
1	A2	2360	C
1	A2	2369	C
1	A2	2371	G
1	A2	2373	A

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Mol	Chain	Res	Type
1	A2	2375	U
1	A2	2394	A
1	A2	2395	A
1	A2	2396	C
1	A2	2405	A
1	A2	2411	G
1	A2	2415	A
1	A2	2450	A
1	A2	2454	A
1	A2	2465	C
1	A2	2481	C
1	A2	2489	A
1	A2	2502	U
1	A2	2508	C
1	A2	2548	C
1	A2	2551	G
1	A2	2561	G
1	A2	2564	A
1	A2	2606	C
1	A2	2607	U
1	A2	2650	G
1	A2	2673	A
1	A2	2684	U
1	A2	2702	A
1	A2	2703	G
1	A2	2716	C
1	A2	2718	U
1	A2	2735	G
1	A2	2740	U
1	A2	2741	A
1	A2	2745	C
1	A2	2749	C
1	A2	2802	A
1	A2	2803	U
1	A2	2838	C
1	A2	3578	G
1	A2	3583	G
1	A2	3584	G
1	A2	3585	U
1	A2	3648	U
1	A2	3666	U
1	A2	3684	U

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Mol	Chain	Res	Type
1	A2	3696	A
1	A2	3724	G
1	A2	3727	U
1	A2	3729	A
1	A2	3733	U
1	A2	3743	A
1	A2	3753	A
1	A2	3754	A
1	A2	3769	A
1	A2	3770	U
1	A2	3802	C
1	A2	3821	A
1	A2	3845	A
1	A2	3865	C
1	A2	3866	G
1	A2	3873	G
1	A2	3876	G
1	A2	3887	G
1	A2	3907	G
1	A2	3926	U
1	A2	3933	U
1	A2	4017	U
1	A2	4043	U
1	A2	4044	G
1	A2	4081	C
1	A2	4083	C
1	A2	4084	U
1	A2	4085	U
1	A2	4088	G
1	A2	4091	G
1	A2	4105	C
1	A2	4117	A
1	A2	4122	C
1	A2	4130	A
1	A2	4155	G
1	A2	4181	C
1	A2	4211	A
1	A2	4226	G
1	A2	4236	G
1	A2	4252	A
1	A2	4254	C
1	A2	4292	C

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Mol	Chain	Res	Type
1	A2	4336	A
1	A2	4338	A
1	A2	4354	A
1	A2	4374	A
1	A2	4387	G
1	A2	4388	A
1	A2	4396	U
1	A2	4408	G
1	A2	4409	A
1	A2	4433	A
1	A2	4437	A
1	A2	4454	G
1	A2	4455	G
1	A2	4485	C
1	A2	4515	U
1	A2	4533	G
1	A2	4551	U
1	A2	4561	U
1	A2	4562	A
1	A2	4566	G
1	A2	4596	U
1	A2	4597	G
1	A2	4609	G
1	A2	4616	A
1	A2	4628	U
1	A2	4636	G
1	A2	4637	U
1	A2	4659	U
1	A2	4660	A
1	A2	4675	C
1	A2	4680	C
1	A2	4688	A
1	A2	4690	G
1	A2	4692	C
1	A2	4693	A
1	A2	4699	G
1	A2	4711	U
1	A2	4712	U
1	A2	4717	U
1	A2	4723	A
1	A2	4733	C
1	A2	4740	U

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Mol	Chain	Res	Type
1	A2	4807	C
1	A2	4813	C
1	A2	4823	G
1	A2	4824	U
1	A2	4825	G
1	A2	4827	G
1	A2	4837	U
1	A2	4847	A
1	A2	4848	A
1	A2	4849	A
1	A2	4854	G
1	A2	4862	G
1	A2	4867	G
1	A2	4895	C
1	A2	4930	G
1	A2	4943	U
1	A2	4944	U
1	A2	4977	U
1	A2	4978	C
1	A2	4980	C
1	A2	5002	C
1	A2	5004	G
1	A2	5019	G
2	A3	22	U
2	A3	71	A
2	A3	84	A
2	A3	105	C
2	A3	111	U
2	A3	125	C
3	A4	12	U
3	A4	26	C
3	A4	54	A
3	A4	63	C
3	A4	74	A
3	A4	75	G
3	A4	90	A
3	A4	108	G
3	A4	109	U
47	BA	8	U
49	BC	83	C
49	BC	85	A
49	BC	95	U

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Mol	Chain	Res	Type
49	BC	110	G
49	BC	119	A
49	BC	120	C
49	BC	126	C
49	BC	132	G
49	BC	133	G
49	BC	140	A
49	BC	156	C
49	BC	158	G
49	BC	160	U
49	BC	161	G
49	BC	164	U
49	BC	167	A
49	BC	228	U
49	BC	230	G
49	BC	231	G
49	BC	232	C
49	BC	234	U
49	BC	252	A
49	BC	256	G
49	BC	257	A
49	BC	259	U
49	BC	265	U
49	BC	266	G
49	BC	271	G
49	BC	276	A
49	BC	284	U
49	BC	290	U
49	BC	291	G
49	BC	301	G
49	BC	305	U
49	BC	309	G
49	BC	323	G
49	BC	324	U
49	BC	344	G
49	BC	349	C
49	BC	350	G
50	C1	24	C
50	C1	44	U
50	C1	61	A
50	C1	64	A
50	C1	66	G

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Mol	Chain	Res	Type
50	C1	68	A
50	C1	77	A
50	C1	78	C
50	C1	102	A
50	C1	111	A
50	C1	113	G
50	C1	124	U
50	C1	131	C
50	C1	136	C
50	C1	139	C
50	C1	140	C
50	C1	147	A
50	C1	162	C
50	C1	181	A
50	C1	183	G
50	C1	199	C
50	C1	200	G
50	C1	207	G
50	C1	209	A
50	C1	227	U
50	C1	304	C
50	C1	307	G
50	C1	308	G
50	C1	310	C
50	C1	312	G
50	C1	317	C
50	C1	319	C
50	C1	332	G
50	C1	338	G
50	C1	356	C
50	C1	363	A
50	C1	368	U
50	C1	370	G
50	C1	383	G
50	C1	399	C
50	C1	428	U
50	C1	448	A
50	C1	465	A
50	C1	475	C
50	C1	486	A
50	C1	487	U
50	C1	501	C

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Mol	Chain	Res	Type
50	C1	517	C
50	C1	544	G
50	C1	546	G
50	C1	547	G
50	C1	558	G
50	C1	577	U
50	C1	578	C
50	C1	589	G
50	C1	590	A
50	C1	593	C
50	C1	604	A
50	C1	656	G
50	C1	662	G
50	C1	671	A
50	C1	687	C
50	C1	743	U
50	C1	799	U
50	C1	811	A
50	C1	821	G
50	C1	822	U
50	C1	833	C
50	C1	834	C
50	C1	840	C
50	C1	899	U
50	C1	913	A
50	C1	970	G
50	C1	971	G
50	C1	1015	U
50	C1	1016	U
50	C1	1020	A
50	C1	1021	U
50	C1	1043	G
50	C1	1060	A
50	C1	1088	U
50	C1	1108	G
50	C1	1114	U
50	C1	1115	U
50	C1	1138	C
50	C1	1150	A
50	C1	1164	G
50	C1	1198	G
50	C1	1215	C

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Mol	Chain	Res	Type
50	C1	1242	U
50	C1	1247	C
50	C1	1250	A
50	C1	1253	A
50	C1	1257	G
50	C1	1259	A
50	C1	1261	C
50	C1	1264	C
50	C1	1277	C
50	C1	1285	G
50	C1	1301	A
50	C1	1307	U
50	C1	1308	U
50	C1	1311	C
50	C1	1313	A
50	C1	1326	U
50	C1	1342	U
50	C1	1351	G
50	C1	1362	U
50	C1	1401	A
50	C1	1404	U
50	C1	1406	G
50	C1	1411	G
50	C1	1456	G
50	C1	1476	A
50	C1	1477	U
50	C1	1494	U
50	C1	1497	G
50	C1	1508	A
50	C1	1520	G
50	C1	1534	C
50	C1	1542	C
50	C1	1543	U
50	C1	1555	U
50	C1	1556	A
50	C1	1578	U
50	C1	1586	U
50	C1	1603	G
50	C1	1624	U
50	C1	1631	U
50	C1	1635	C
50	C1	1637	A

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Mol	Chain	Res	Type
50	C1	1638	G
50	C1	1644	C
50	C1	1648	G
50	C1	1654	G
50	C1	1655	C
50	C1	1673	U
50	C1	1697	A
50	C1	1698	C
50	C1	1700	C
50	C1	1721	U
50	C1	1781	A
50	C1	1823	A
50	C1	1824	A
50	C1	1830	U
50	C1	1833	C
50	C1	1834	A
50	C1	1836	G
50	C1	1848	U
50	C1	1860	A
50	C1	1862	G
50	C1	1867	U

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 2 ligands modelled in this entry, 1 is monoatomic - leaving 1 for Mogul analysis.

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	$\#\|Z\|>2$
84	GNP	BB	2435	85	34,34,34	1.78	6 (17%)	47,54,54	1.30	5 (10%)

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
84	GNP	BB	2435	85	-	2/18/38/38	0/3/3/3

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	BB	2435	GNP	PA-O3A	-6.53	1.52	1.59
84	BB	2435	GNP	C2'-C1'	-3.03	1.44	1.53
84	BB	2435	GNP	PB-O3A	-2.66	1.55	1.59
84	BB	2435	GNP	C4-N3	2.58	1.40	1.34
84	BB	2435	GNP	PB-N3B	-2.47	1.56	1.63
84	BB	2435	GNP	PG-N3B	-2.27	1.57	1.63

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	BB	2435	GNP	O1B-PB-N3B	3.38	116.75	111.77
84	BB	2435	GNP	O2A-PA-O3A	3.07	115.58	107.27
84	BB	2435	GNP	O2G-PG-O1G	2.43	119.53	113.45
84	BB	2435	GNP	C1'-N9-C8	2.23	133.07	126.73
84	BB	2435	GNP	O3A-PB-N3B	2.21	112.73	106.59

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
84	BB	2435	GNP	PG-N3B-PB-O1B
84	BB	2435	GNP	PG-N3B-PB-O3A

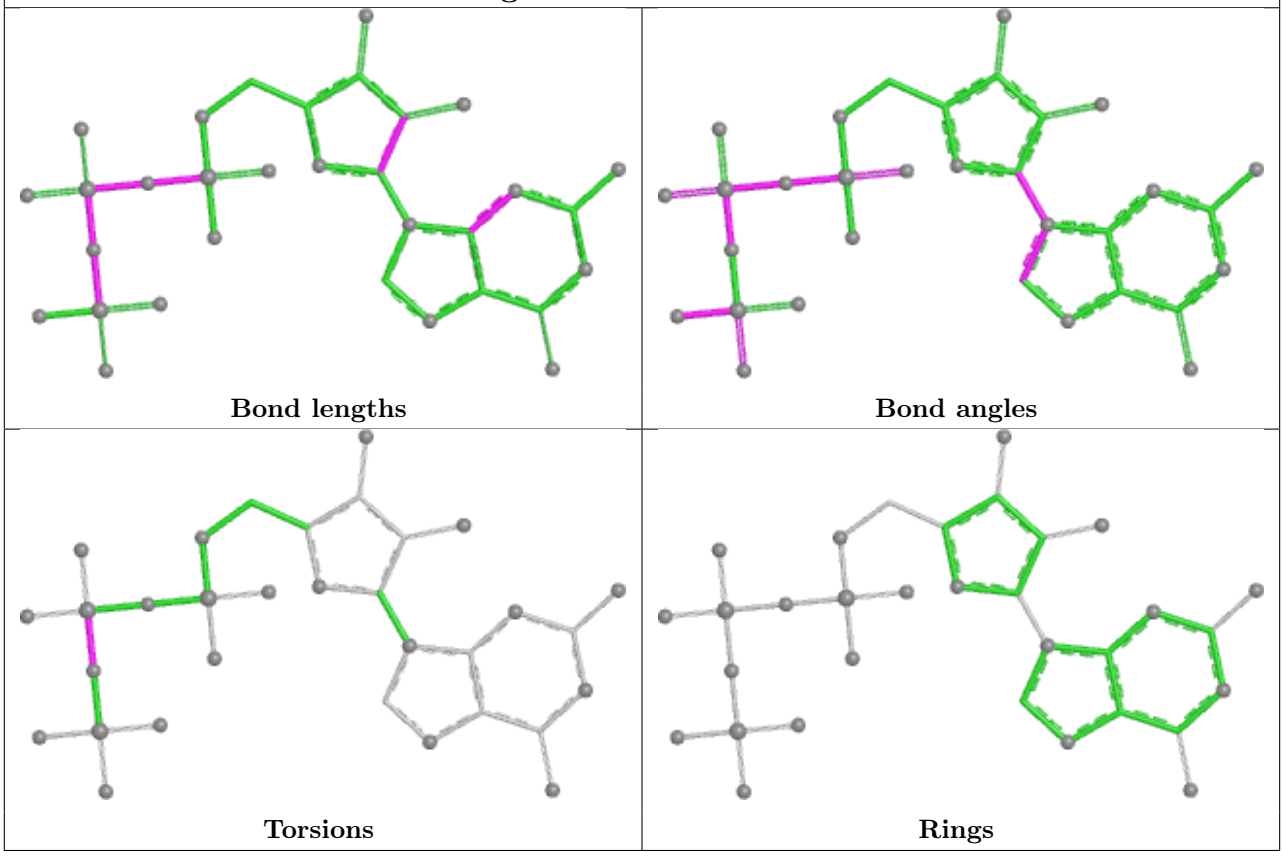
There are no ring outliers.

1 monomer is involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	BB	2435	GNP	11	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand GNP BB 2435



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
20	AR	1
1	A2	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AR	182:GLU	C	183:GLU	N	5.96
1	A2	4036:U	O3'	4037:U	P	4.57

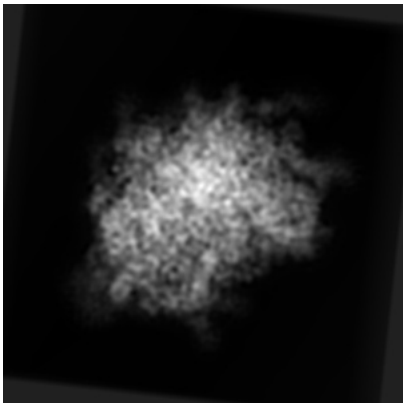
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-2682. These allow visual inspection of the internal detail of the map and identification of artifacts.

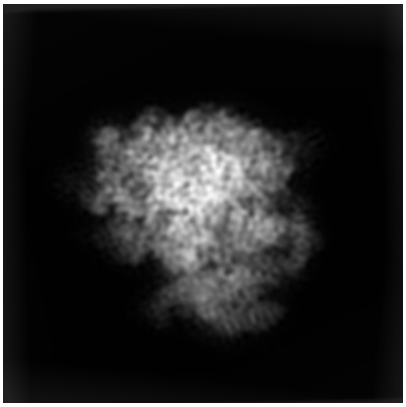
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

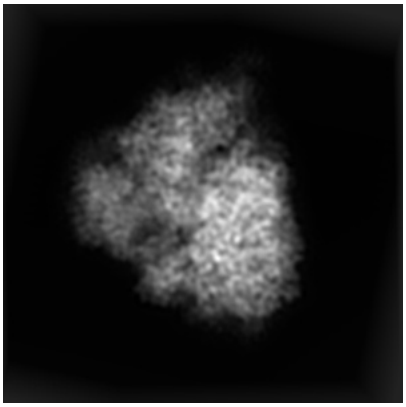
6.1.1 Primary map



X



Y

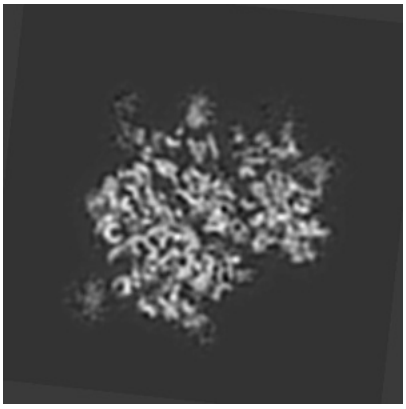


Z

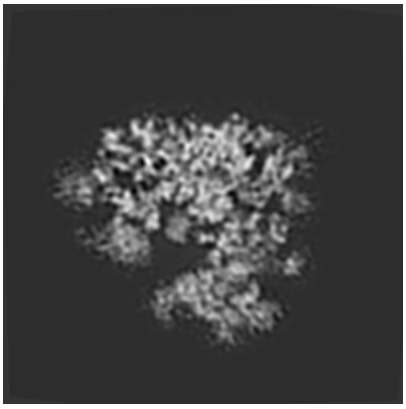
The images above show the map projected in three orthogonal directions.

6.2 Central slices

6.2.1 Primary map



X Index: 180



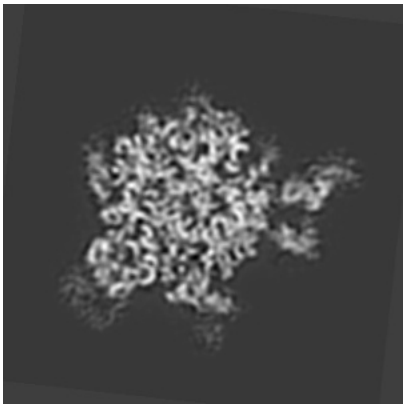
Y Index: 180

Z Index: 180

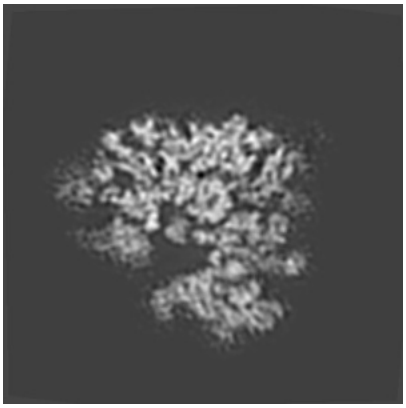
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

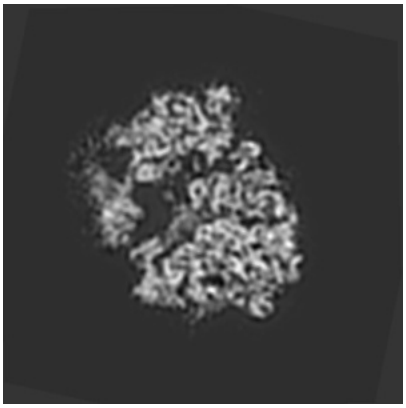
6.3.1 Primary map



X Index: 214



Y Index: 182

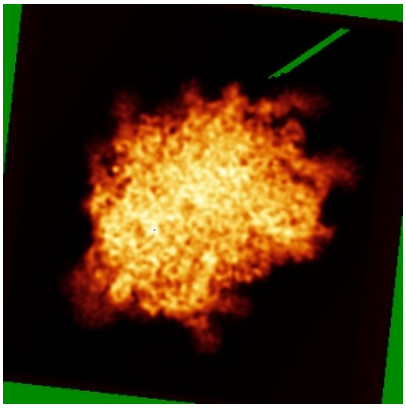


Z Index: 169

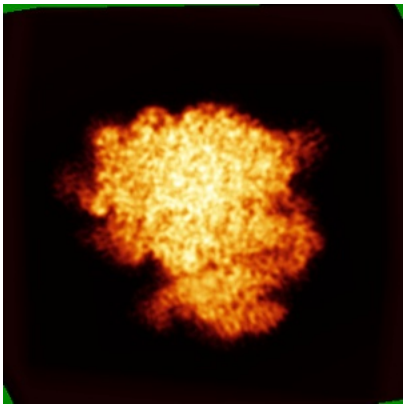
The images above show the largest variance slices of the map in three orthogonal directions.

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

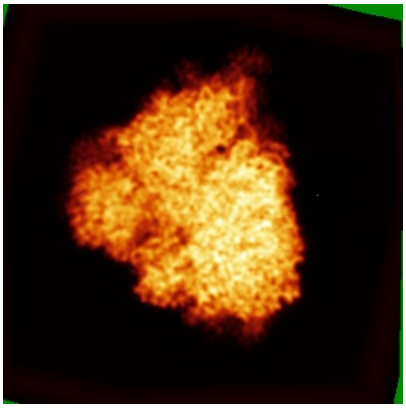
6.4.1 Primary map



X



Y

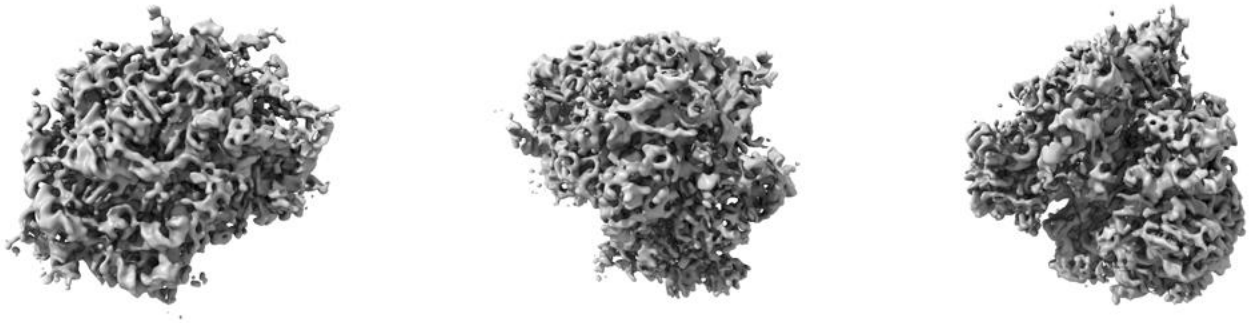


Z

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 4000.0. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

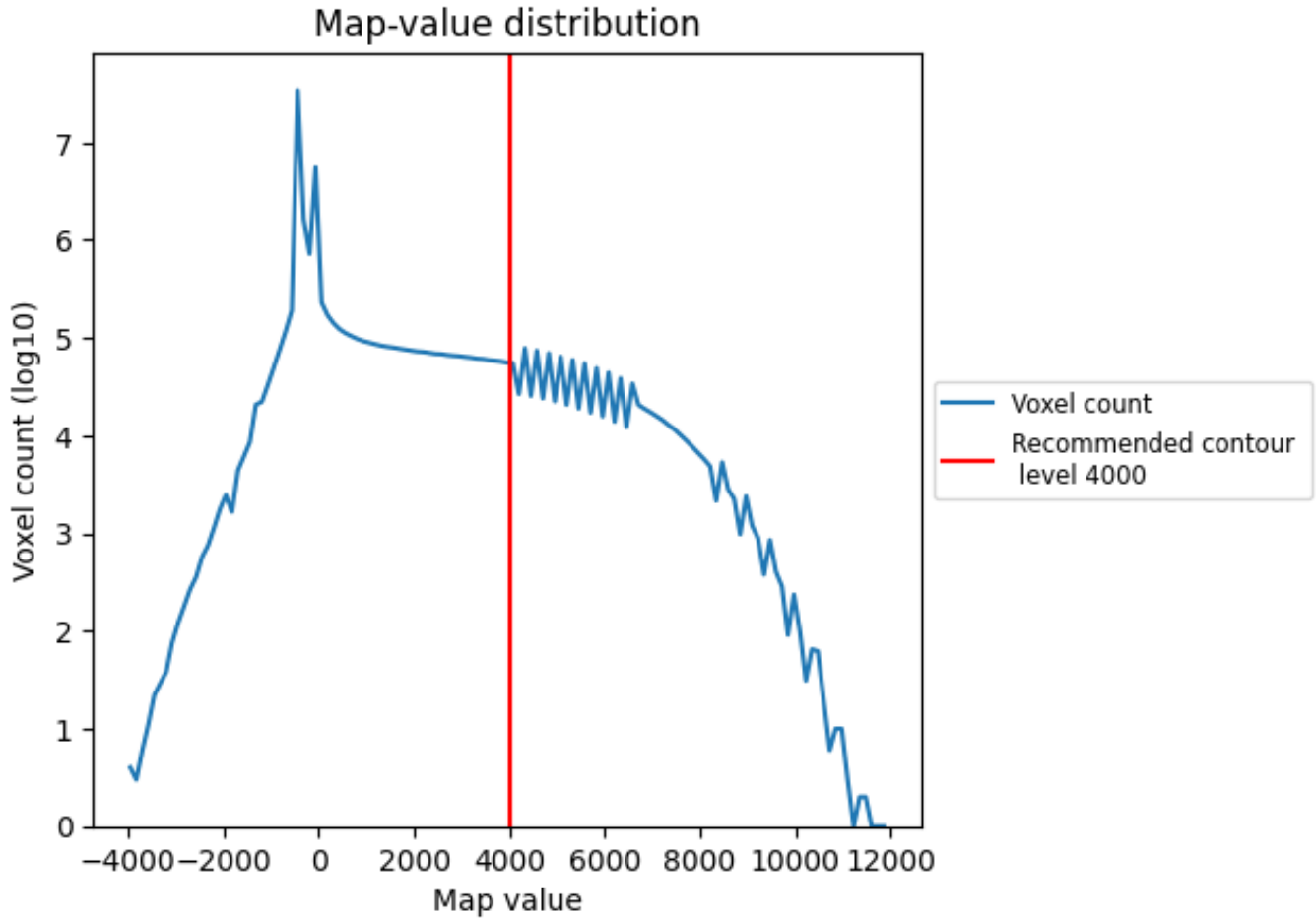
6.6 Mask visualisation (i)

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

7 Map analysis

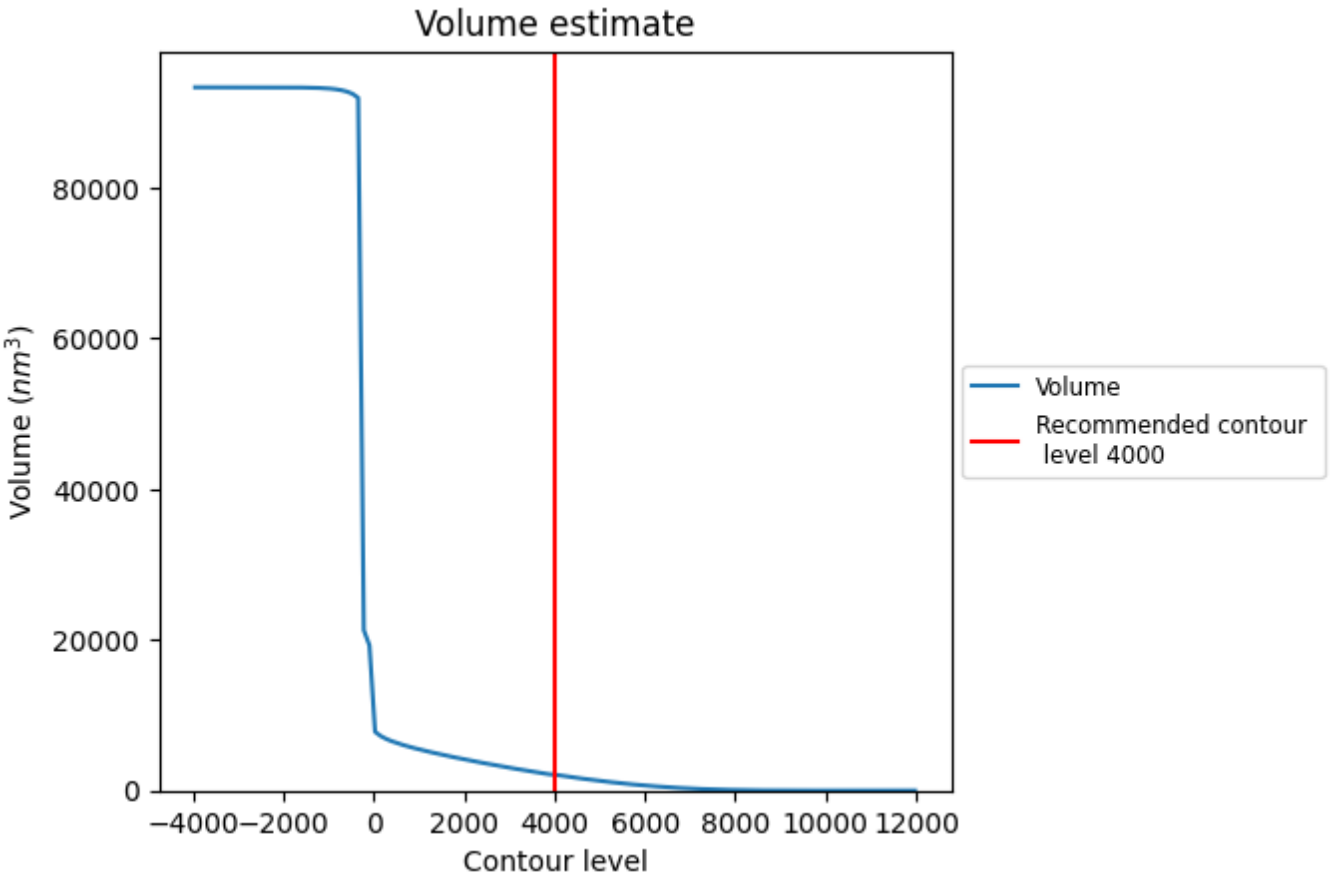
This section contains the results of statistical analysis of the map.

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.

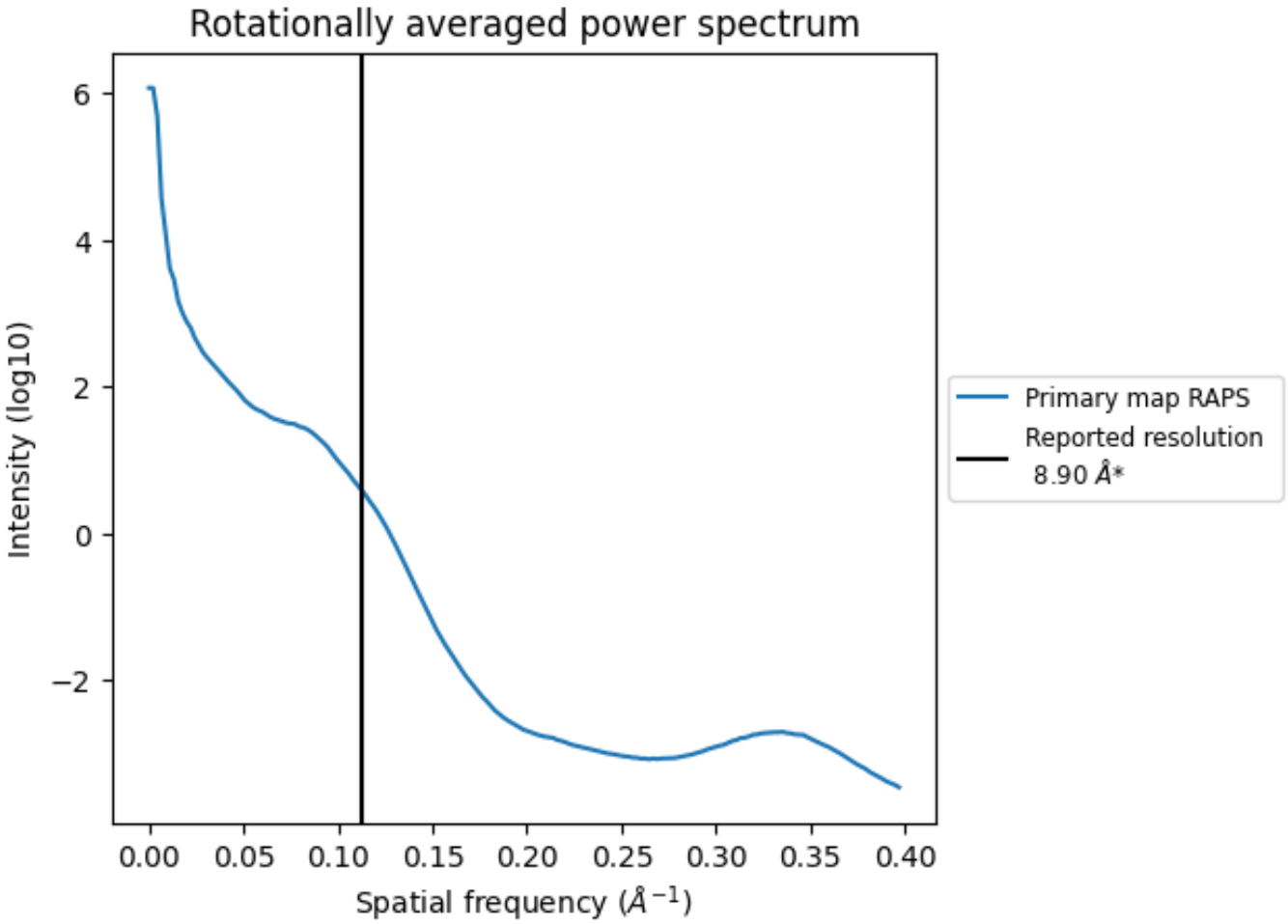
7.2 Volume estimate



The volume at the recommended contour level is 2109 nm^3; this corresponds to an approximate mass of 1905 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 0.112 Å^{-1}

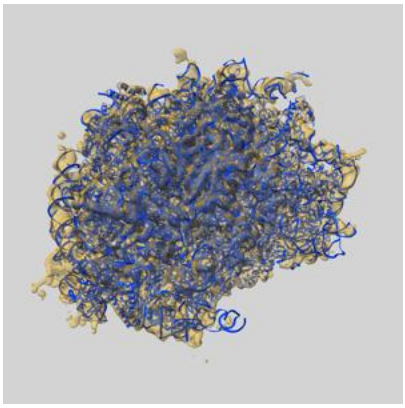
8 Fourier-Shell correlation

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

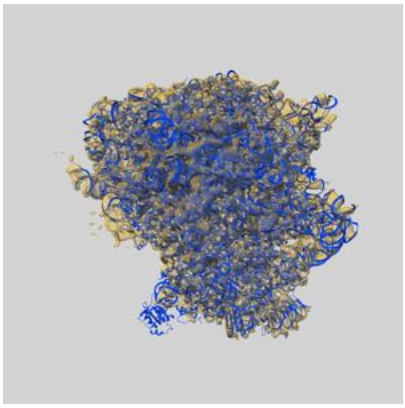
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-2682 and PDB model 4UJD. Per-residue inclusion information can be found in section 3 on page 20.

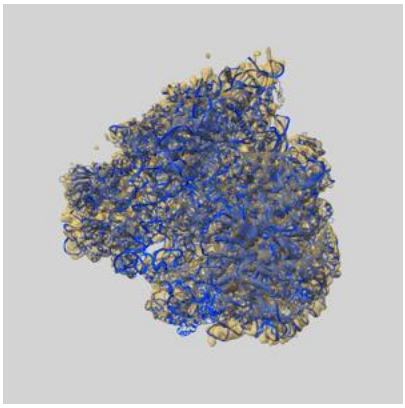
9.1 Map-model overlay



X



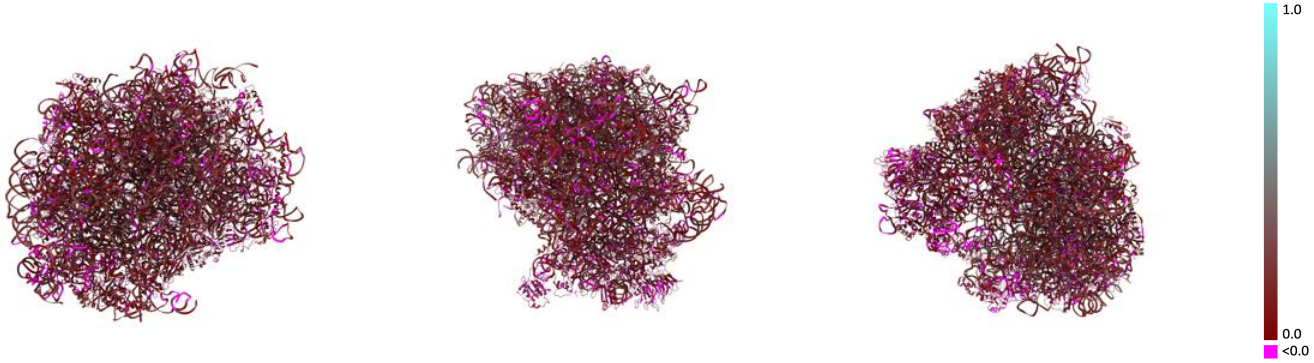
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 4000.0 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

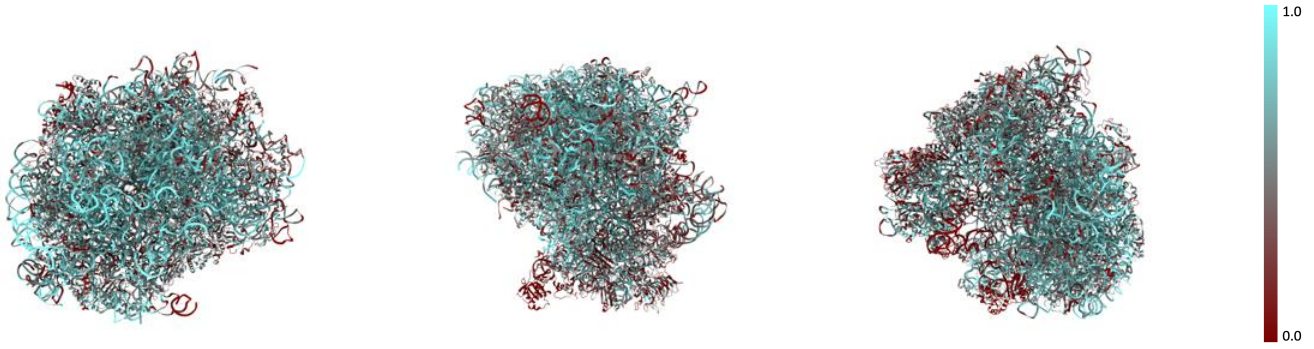
9.2 Q-score mapped to coordinate model (i)



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.

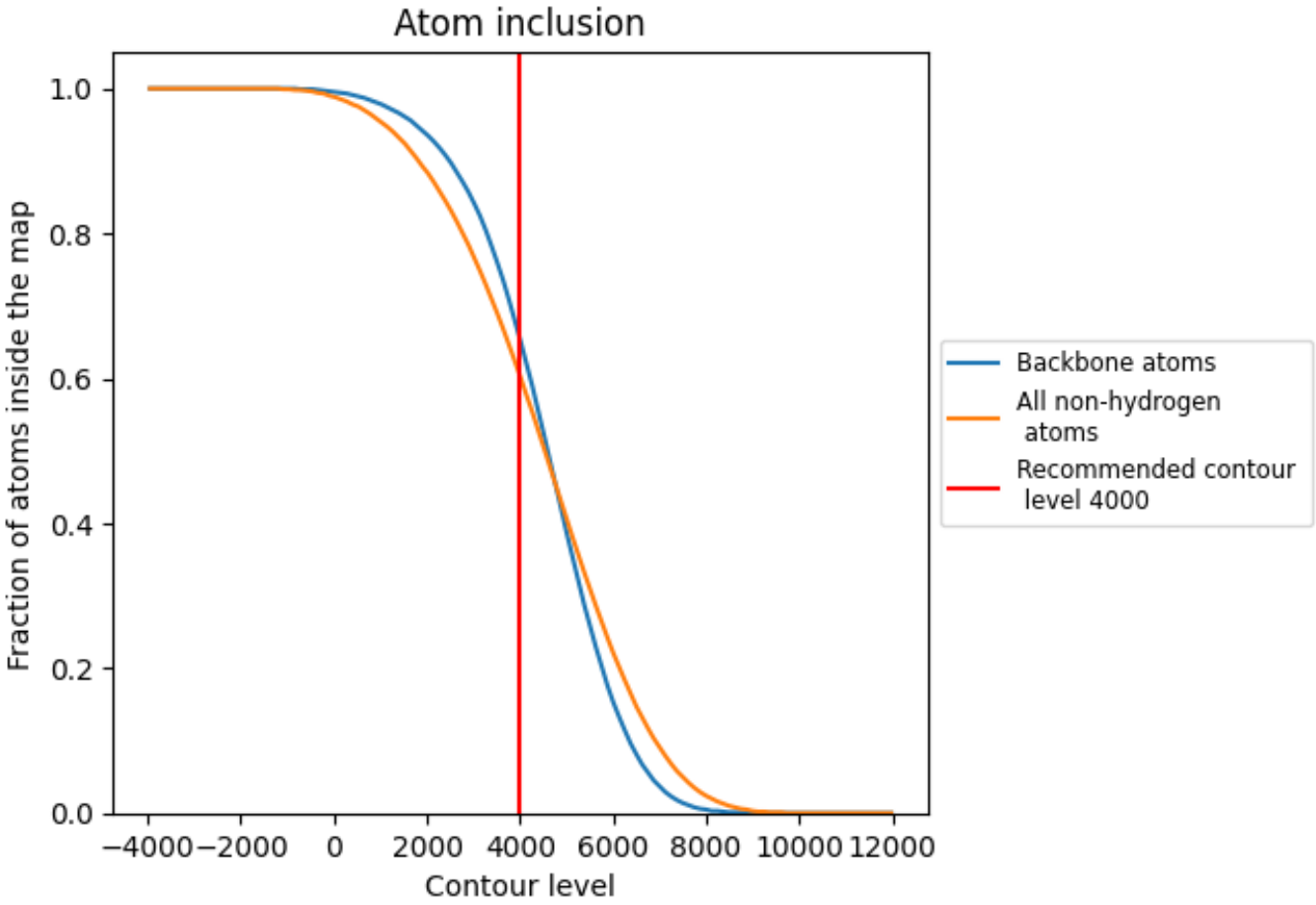
9.3 Atom inclusion mapped to coordinate model (i)



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 (4000).

9.4 Atom inclusion (i)



At the recommended contour level, 65% of all backbone atoms, 60% 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 (4000) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6030	0.1400
A2	0.7730	0.1740
A3	0.8110	0.1810
A4	0.8820	0.1860
AA	0.3690	0.0980
AB	0.4360	0.1060
AC	0.4690	0.0950
AD	0.5650	0.1180
AE	0.4260	0.1110
AF	0.4720	0.1090
AG	0.3940	0.1190
AH	0.4050	0.1260
AI	0.4690	0.1190
AJ	0.5450	0.1210
AL	0.4470	0.1070
AM	0.5300	0.1270
AN	0.4680	0.0890
AO	0.4750	0.1200
AP	0.5310	0.0990
AQ	0.4910	0.1120
AR	0.5060	0.1100
AS	0.4450	0.1100
AT	0.4350	0.1120
AU	0.4150	0.1150
AV	0.2600	0.1050
AW	0.5120	0.1190
AX	0.4560	0.1250
AY	0.5550	0.1120
AZ	0.4370	0.1140
Aa	0.5160	0.1030
Ab	0.4940	0.0950
Ac	0.5100	0.1340
Ad	0.5350	0.1220
Ae	0.4440	0.1190
Af	0.4340	0.0890

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Chain	Atom inclusion	Q-score
Ag	0.3810	0.0930
Ah	0.4980	0.1240
Ai	0.5050	0.1240
Aj	0.5890	0.0940
Ak	0.4040	0.1290
Al	0.4590	0.1280
Am	0.5110	0.1350
An	0.4570	0.0870
Ao	0.4630	0.1150
Ap	0.4360	0.1160
At	0.4660	0.0870
Au	0.0050	0.0190
BA	0.5500	0.1590
BB	0.4060	0.1210
BC	0.3360	0.0940
C1	0.7250	0.1580
CA	0.4020	0.1280
CB	0.3900	0.1300
CC	0.4200	0.1220
CD	0.2820	0.1000
CE	0.4550	0.0970
CF	0.3950	0.0940
CG	0.4270	0.0970
CH	0.2740	0.1210
CI	0.4110	0.0920
CJ	0.5180	0.1270
CK	0.2260	0.0740
CL	0.3600	0.1090
CM	0.0020	0.0180
CN	0.4080	0.1170
CO	0.4070	0.1010
CP	0.2880	0.0910
CQ	0.3980	0.0730
CR	0.3440	0.1000
CS	0.4260	0.0970
CT	0.4790	0.0800
CU	0.2860	0.0850
CV	0.3750	0.1200
CW	0.4130	0.1270
CX	0.3500	0.1280
CY	0.5460	0.0980
CZ	0.3170	0.1280

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Chain	Atom inclusion	Q-score
Ca	0.2580	0.0590
Cb	0.3300	0.1140
Cc	0.2470	0.0720
Cd	0.5590	0.0860
Ce	0.3500	0.1000
Cf	0.0290	0.0390
Cg	0.2940	0.0750