Full wwPDB EM Validation Report

Mar 5, 2026 – 10:11 AM UTC

PDB ID	:	8T3C / pdb_00008t3c
EMDB ID	:	EMD-40999
Title	:	Hypomethylated yeast 80S bound with Taura syndrome virus (TSV) internal ribosome entry site (IRES), eEF2, GDP, and sordarin, Structure II
Authors	:	Zhao, Y.; Li, H.
Deposited on	:	2023-06-07
Resolution	:	3.86 Å(reported)

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

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

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

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

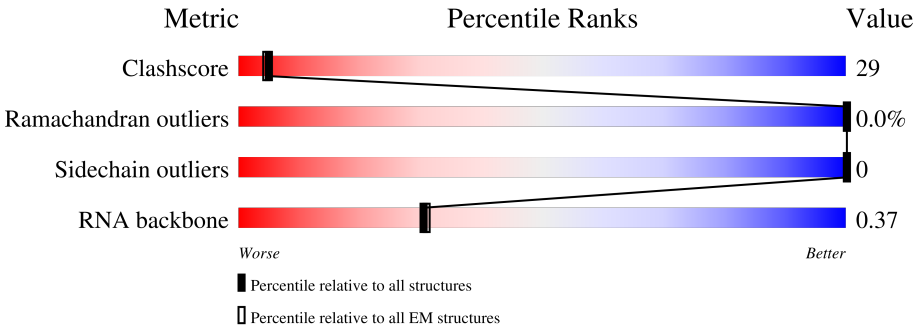
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data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

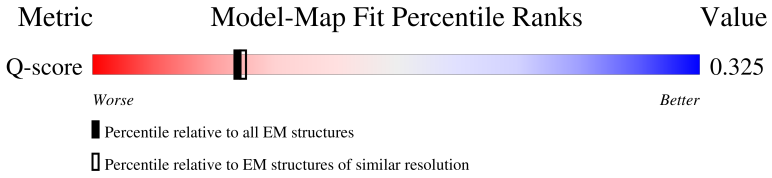
1 Overall quality at a glance

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

The reported resolution of this entry is 3.86 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	8889 (3.36 - 4.35)

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	BA	252	23% 42% 40% 18%
2	BB	255	48% 37% 47% 16%
3	BC	254	20% 38% 48% 15%

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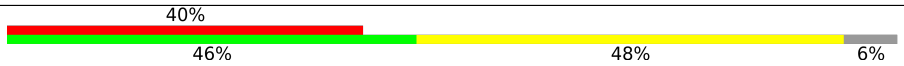
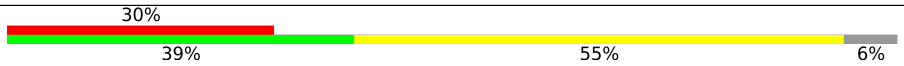
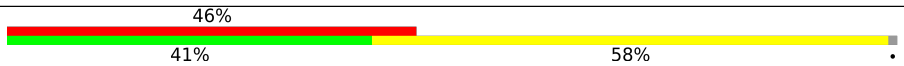
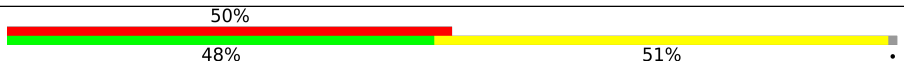
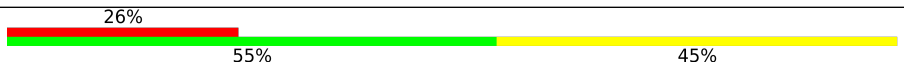
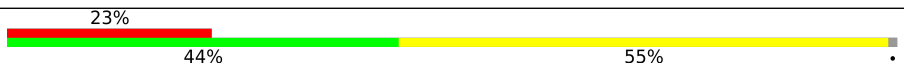
Mol	Chain	Length	Quality of chain
4	BE	261	
5	BG	236	
6	BH	190	
7	BI	200	
8	BJ	197	
9	BL	156	
10	BN	151	
11	BO	137	
12	BV	87	
13	BW	130	
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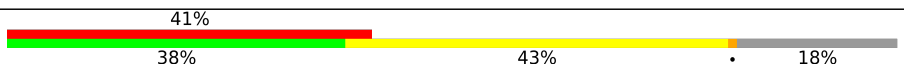
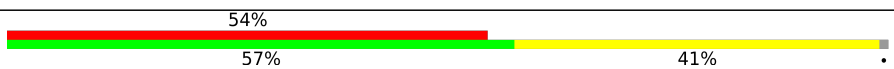
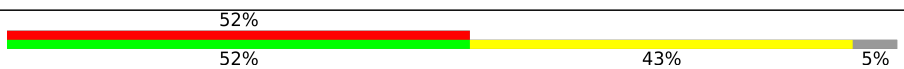
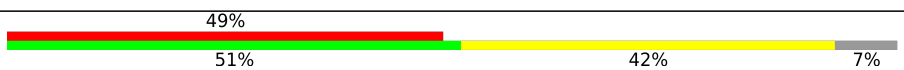
15	BY	135	
16	Ba	119	
17	Bb	82	
18	Be	63	
19	BD	240	
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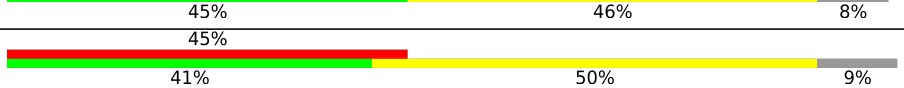
21	BK	105	
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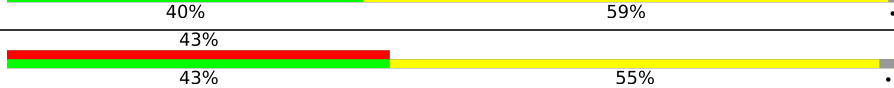
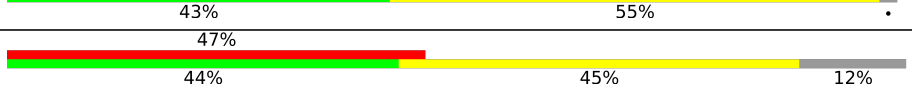
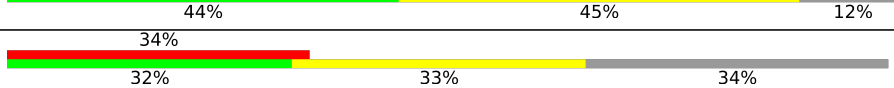
23	BQ	143	
24	BR	136	
25	BS	146	
26	BT	144	
27	BU	121	
28	BZ	108	

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Mol	Chain	Length	Quality of chain
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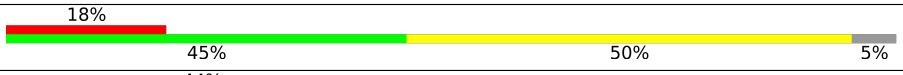
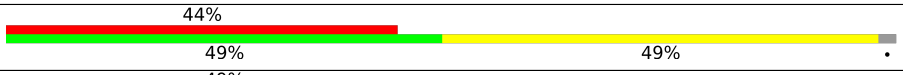
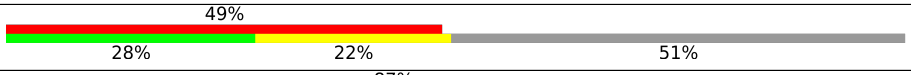
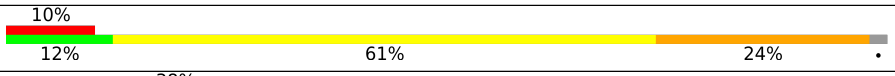
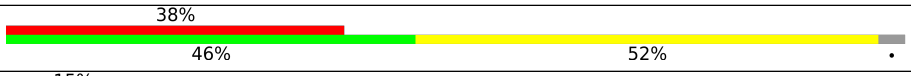
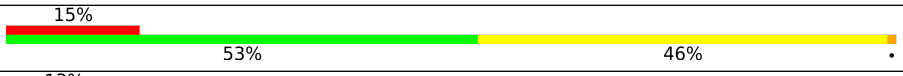
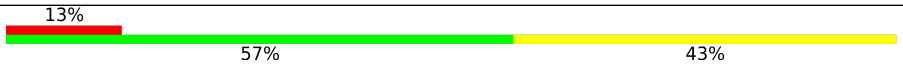
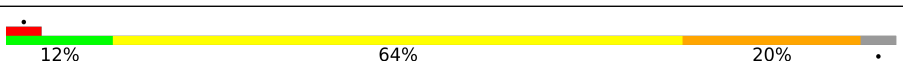
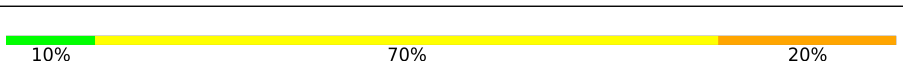
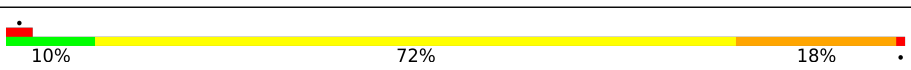
30	Bd	56	
31	Bg	319	
32	Bf	152	
33	BM	143	
34	B5	1798	
35	AA	254	
36	AB	387	
37	AC	362	
38	A1	3360	
39	A3	121	
40	A4	158	
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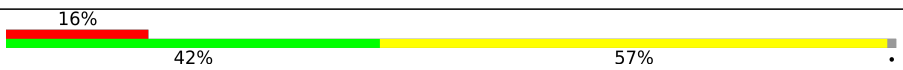
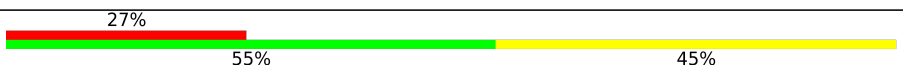
42	AE	176	
43	AF	244	
44	AG	256	
45	AH	191	
46	AI	222	
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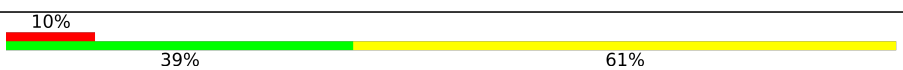
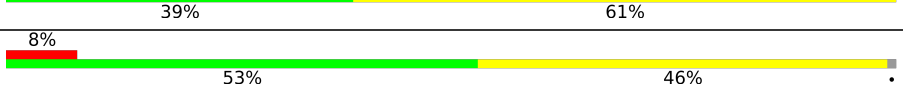
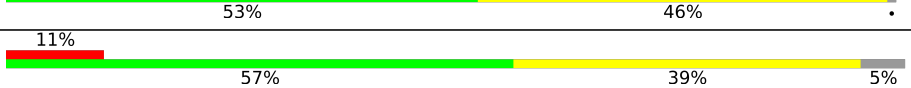
48	AL	199	
49	AM	138	
50	AN	204	
51	AO	199	
52	AP	184	
53	AQ	186	

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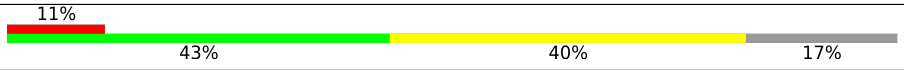
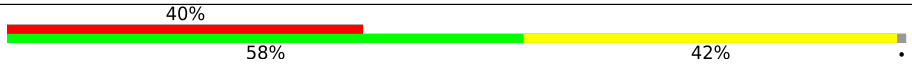
Mol	Chain	Length	Quality of chain
54	AR	189	
55	AS	178	
56	AT	160	
57	AU	121	
58	AV	137	
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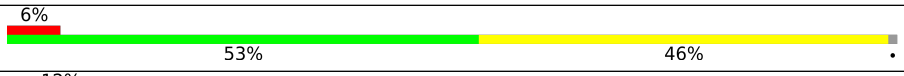
60	AX	142	
61	AY	127	
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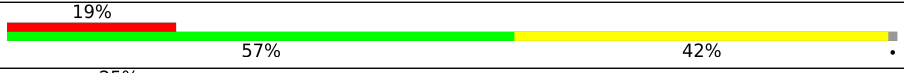
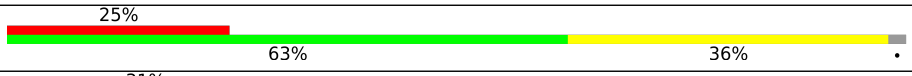
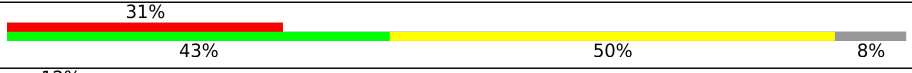
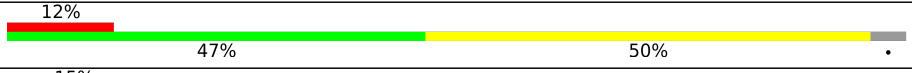
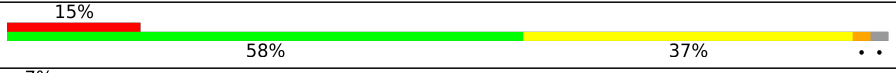
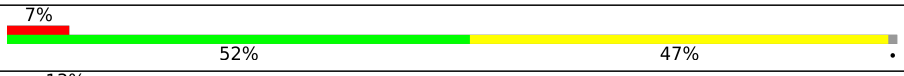
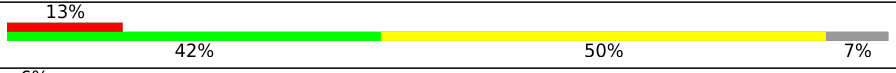
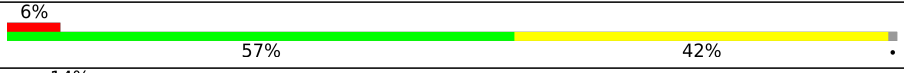
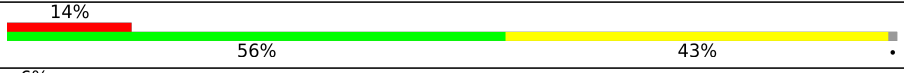
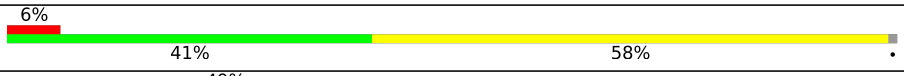
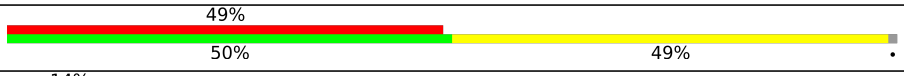
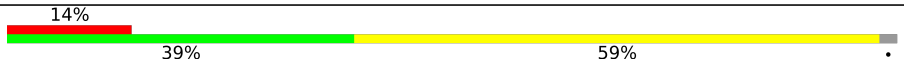
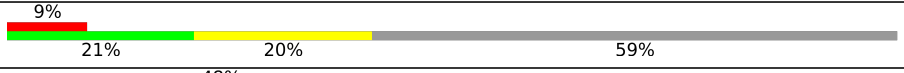
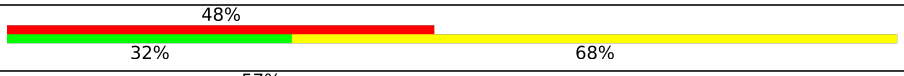
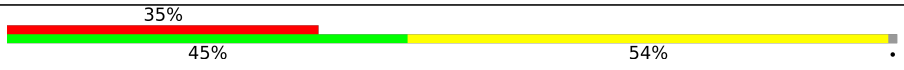
63	Aa	149	
64	Ab	59	
65	Ac	105	
66	Ad	113	
67	Ae	130	
68	Af	107	
69	Ag	121	
70	Ah	120	
71	Ai	100	
72	Aj	88	
73	Ak	78	
74	Al	51	
75	Am	128	
76	An	25	
77	Ao	106	
78	Ap	92	

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Mol	Chain	Length	Quality of chain
79	E	217	69% 51% 49%
80	DC	842	37% 42% 55%
81	EC	202	62% 11% 43% 45%

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
85	SO1	DC	903	X	-	-	-

2 Entry composition

There are 85 unique types of molecules in this entry. The entry contains 212449 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 protein called 40S ribosomal protein S0-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	BA	206	1612	1034	285	291	2	0	0

- Molecule 2 is a protein called RPS1A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	BB	214	1709	1084	310	311	4	0	0

- Molecule 3 is a protein called RPS2 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	BC	217	1635	1047	289	297	2	0	0

- Molecule 4 is a protein called 40S ribosomal protein S4-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	BE	260	2068	1316	389	360	3	0	0

- Molecule 5 is a protein called 40S ribosomal protein S6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	BG	226	1820	1142	350	325	3	0	0

- Molecule 6 is a protein called 40S ribosomal protein S7-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
6	BH	184	1481	951	265	265	0	0

- Molecule 7 is a protein called 40S ribosomal protein S8-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	BI	188	Total	C	N	O	S	0	0
			1489	925	298	264	2		

- Molecule 8 is a protein called 40S ribosomal protein S9-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	BJ	185	Total	C	N	O	S	0	0
			1494	943	289	261	1		

- Molecule 9 is a protein called 40S ribosomal protein S11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	BL	155	Total	C	N	O	S	0	0
			1244	798	235	208	3		

- Molecule 10 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	BN	150	Total	C	N	O	S	0	0
			1192	759	224	207	2		

- Molecule 11 is a protein called 40S ribosomal protein S14-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	BO	127	Total	C	N	O	S	0	0
			941	578	186	174	3		

- Molecule 12 is a protein called 40S ribosomal protein S21-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	BV	87	Total	C	N	O	S	0	0
			684	420	125	137	2		

- Molecule 13 is a protein called RPS22A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	BW	129	Total	C	N	O	S	0	0
			1021	650	188	180	3		

- Molecule 14 is a protein called 40S ribosomal protein S23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	BX	144	Total	C	N	O	S	0	0
			1121	708	220	191	2		

- Molecule 15 is a protein called 40S ribosomal protein S24-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
15	BY	134	Total	C	N	O	0	0
			1073	676	208	189		

- Molecule 16 is a protein called RPS26B isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	Ba	97	Total	C	N	O	S	0	0
			769	475	160	129	5		

- Molecule 17 is a protein called 40S ribosomal protein S27-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	Bb	81	Total	C	N	O	S	0	0
			610	382	110	113	5		

- Molecule 18 is a protein called 40S ribosomal protein S30-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	Be	60	Total	C	N	O	S	0	0
			475	299	98	77	1		

- Molecule 19 is a protein called RPS3 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	BD	223	Total	C	N	O	S	0	0
			1734	1101	313	314	6		

- Molecule 20 is a protein called Rps5p.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	BF	206	Total	C	N	O	S	0	0
			1609	1007	300	299	3		

- Molecule 21 is a protein called 40S ribosomal protein S10-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	BK	96	Total	C	N	O	S	0	0
			817	529	133	153	2		

- Molecule 22 is a protein called RPS15 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	BP	124	Total	C	N	O	S	0	0
			991	631	187	166	7		

- Molecule 23 is a protein called 40S ribosomal protein S16-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
23	BQ	141	Total	C	N	O	0	0
			1105	708	203	194		

- Molecule 24 is a protein called 40S ribosomal protein S17-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	BR	121	Total	C	N	O	S	0	0
			948	596	179	171	2		

- Molecule 25 is a protein called 40S ribosomal protein S18-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	BS	145	Total	C	N	O	S	0	0
			1192	743	237	210	2		

- Molecule 26 is a protein called 40S ribosomal protein S19-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	BT	141	Total	C	N	O	S	0	0
			1095	685	206	202	2		

- Molecule 27 is a protein called RPS20 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	BU	107	Total	C	N	O	S	0	0
			855	539	156	159	1		

- Molecule 28 is a protein called RPS25A isoform 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
28	BZ	71	Total	C	N	O	0	0
			574	366	108	100		

- Molecule 29 is a protein called RPS28A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Bc	63	Total	C	N	O	S	0	0
			497	306	99	91	1		

- Molecule 30 is a protein called RPS29A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Bd	53	Total	C	N	O	S	0	0
			442	274	92	72	4		

- Molecule 31 is a protein called Guanine nucleotide-binding protein subunit beta-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Bg	312	Total	C	N	O	S	0	0
			2401	1522	410	461	8		

- Molecule 32 is a protein called Ubiquitin-40S ribosomal protein S31.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Bf	75	Total	C	N	O	S	0	0
			605	386	116	99	4		

- Molecule 33 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	BM	124	Total	C	N	O	S	0	0
			935	587	165	181	2		

- Molecule 34 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	B5	1757	Total	C	N	O	P	1	0
			37463	16754	6635	12317	1757		

- Molecule 35 is a protein called 60S ribosomal protein L2-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	AA	247	Total	C	N	O	S	0	0
			1878	1170	381	326	1		

- Molecule 36 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	AB	386	Total	C	N	O	S	0	0
			3081	1956	584	533	8		

- Molecule 37 is a protein called RPL4A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	AC	361	Total	C	N	O	S	0	0
			2748	1729	522	494	3		

- Molecule 38 is a RNA chain called 25S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	A1	3216	Total	C	N	O	P	0	0
			68786	30729	12387	22454	3216		

- Molecule 39 is a RNA chain called 5s rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	A3	121	Total	C	N	O	P	0	0
			2579	1152	461	845	121		

- Molecule 40 is a RNA chain called 5.8 S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	A4	158	Total	C	N	O	P	0	0
			3353	1500	586	1109	158		

- Molecule 41 is a protein called RPL5 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	AD	292	Total	C	N	O	S	0	0
			2341	1478	408	453	2		

- Molecule 42 is a protein called 60S ribosomal protein L6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	AE	167	Total	C	N	O	S	0	0
			1303	840	234	228	1		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AE	120	LYS	ASN	conflict	UNP Q02326

- Molecule 43 is a protein called 60S ribosomal protein L7-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	AF	222	Total	C	N	O	S	0	0
			1784	1151	324	308	1		

- Molecule 44 is a protein called 60S ribosomal protein L8-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	AG	230	Total	C	N	O	S	0	0
			1798	1149	323	323	3		

- Molecule 45 is a protein called 60S ribosomal protein L9-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	AH	190	Total	C	N	O	S	0	0
			1510	957	273	276	4		

- Molecule 46 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	AI	222	Total	C	N	O	S	0	0
			1804	1147	339	310	8		

- Molecule 47 is a protein called RPL11A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	AJ	169	Total	C	N	O	S	0	0
			1353	847	253	249	4		

- Molecule 48 is a protein called 60S ribosomal protein L13-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
48	AL	193	Total 1543	C 962	N 315	O 266	0	0

- Molecule 49 is a protein called 60S ribosomal protein L14-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	AM	136	Total 1053	C 675	N 199	O 177	S 2	0	0

- Molecule 50 is a protein called 60S ribosomal protein L15-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	AN	203	Total 1720	C 1077	N 361	O 281	S 1	0	0

- Molecule 51 is a protein called 60S ribosomal protein L16-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	AO	197	Total 1555	C 1003	N 289	O 262	S 1	197	0

- Molecule 52 is a protein called 60S ribosomal protein L17-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
52	AP	175	Total 1388	C 862	N 277	O 249	0	0

- Molecule 53 is a protein called 60S ribosomal protein L18-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	AQ	185	Total 1441	C 908	N 290	O 241	S 2	0	0

- Molecule 54 is a protein called 60S ribosomal protein L19-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
54	AR	188	Total 1521	C 935	N 326	O 260	0	0

- Molecule 55 is a protein called 60S ribosomal protein L20.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	AS	172	Total	C	N	O	S	0	0
			1445	930	267	244	4		

- Molecule 56 is a protein called 60S ribosomal protein L21-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	AT	159	Total	C	N	O	S	0	0
			1276	805	246	221	4		

- Molecule 57 is a protein called 60S ribosomal protein L22-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
57	AU	100	Total	C	N	O	0	0
			796	516	131	149		

- Molecule 58 is a protein called 60S ribosomal protein L23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	AV	136	Total	C	N	O	S	0	0
			1003	628	189	179	7		

- Molecule 59 is a protein called RPL24A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	AW	63	Total	C	N	O	S	0	0
			521	336	102	82	1		

- Molecule 60 is a protein called 60S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	AX	121	Total	C	N	O	S	0	0
			968	623	170	173	2		

- Molecule 61 is a protein called 60S ribosomal protein L26-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
61	AY	126	Total	C	N	O	0	0
			993	625	192	176		

- Molecule 62 is a protein called 60S ribosomal protein L27-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
62	AZ	135	Total 1092	C 710	N 202	O 180	0	0

- Molecule 63 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	Aa	148	Total 1173	C 749	N 231	O 190	S 3	0	0

- Molecule 64 is a protein called RPL29 isoform 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
64	Ab	58	Total 462	C 289	N 100	O 73	0	0

- Molecule 65 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	Ac	97	Total 743	C 479	N 124	O 139	S 1	0	0

- Molecule 66 is a protein called 60S ribosomal protein L31-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	Ad	109	Total 890	C 565	N 168	O 156	S 1	0	0

- Molecule 67 is a protein called RPL32 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	Ae	127	Total 1020	C 647	N 205	O 167	S 1	0	0

- Molecule 68 is a protein called 60S ribosomal protein L33-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	Af	106	Total 850	C 540	N 165	O 144	S 1	0	0

- Molecule 69 is a protein called 60S ribosomal protein L34-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	Ag	112	Total	C	N	O	S	0	0
			880	545	179	152	4		

- Molecule 70 is a protein called 60S ribosomal protein L35-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	Ah	119	Total	C	N	O	S	0	0
			969	615	186	167	1		

- Molecule 71 is a protein called 60S ribosomal protein L36-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	Ai	99	Total	C	N	O	S	0	0
			771	481	156	132	2		

- Molecule 72 is a protein called 60S ribosomal protein L37-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	Aj	87	Total	C	N	O	S	0	0
			681	414	148	114	5		

- Molecule 73 is a protein called RPL38 isoform 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
73	Ak	77	Total	C	N	O	0	0
			612	391	115	106		

- Molecule 74 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	Al	50	Total	C	N	O	S	0	0
			436	272	97	65	2		

- Molecule 75 is a protein called Ubiquitin-60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	Am	52	Total	C	N	O	S	0	0
			417	259	86	67	5		

- Molecule 76 is a protein called 60S ribosomal protein L41-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	An	25	Total	C	N	O	S	0	0
			233	142	63	27	1		

- Molecule 77 is a protein called 60S ribosomal protein L42-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	Ao	105	Total	C	N	O	S	0	0
			847	534	170	138	5		

- Molecule 78 is a protein called 60S ribosomal protein L43-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Ap	91	Total	C	N	O	S	0	0
			694	429	138	121	6		

- Molecule 79 is a protein called RPL1A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	E	217	Total	C	N	O	S	0	0
			1718	1097	299	312	10		

- Molecule 80 is a protein called Elongation factor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	DC	824	Total	C	N	O	S	0	0
			6419	4085	1096	1208	30		

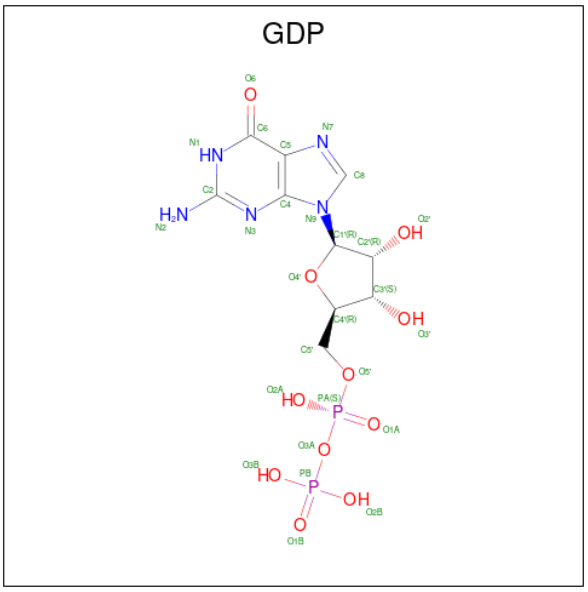
- Molecule 81 is a RNA chain called TSV IRES.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	EC	200	Total	C	N	O	P	0	0
			4235	1891	751	1393	200		

- Molecule 82 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
82	Ao	1	Total	Zn	0
			1	1	

- Molecule 83 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).

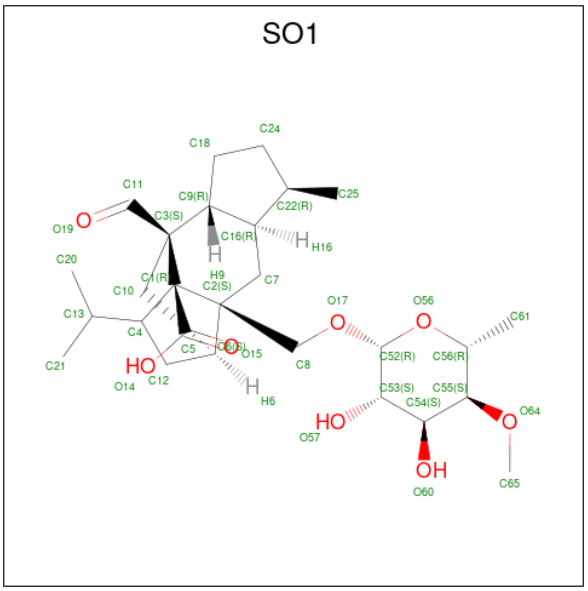


Mol	Chain	Residues	Atoms					AltConf
83	DC	1	Total	C	N	O	P	0
			28	10	5	11	2	

- Molecule 84 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
84	DC	1	Total	Mg	0
			1	1	

- Molecule 85 is [1R-(1.ALPHA.,3A.BETA.,4.BETA.,4A.BETA.,7.BETA.,7A.ALPHA.,8A.BETA.)]8A-[(6-DEOXY-4-O-METHYL-BETA-D-ALTROPYRANOSYLOXY)METHYL]-4-FORMYL-4,4A,5,6,7,7A,8,8A-OCTAHYDRO-7-METHYL-3-(1-METHYLETHYL)-1,4-METHANO-S-INDACENE-3A(1H)-CARBOXYLIC ACID (CCD ID: SO1) (formula: $C_{27}H_{42}O_8$).



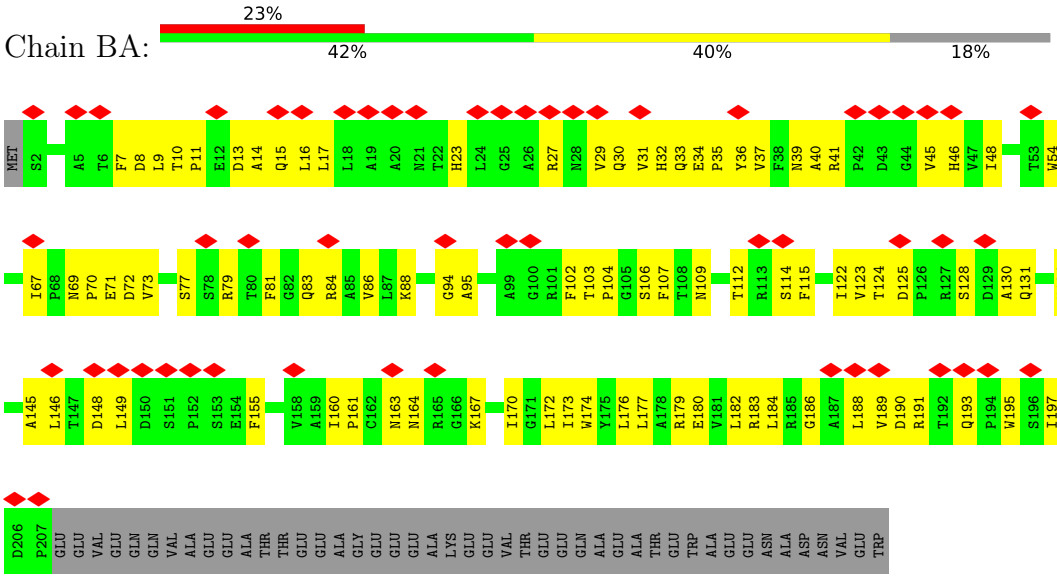
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
85	DC	1	35	27	8	0

3 Residue-property plots (i)

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

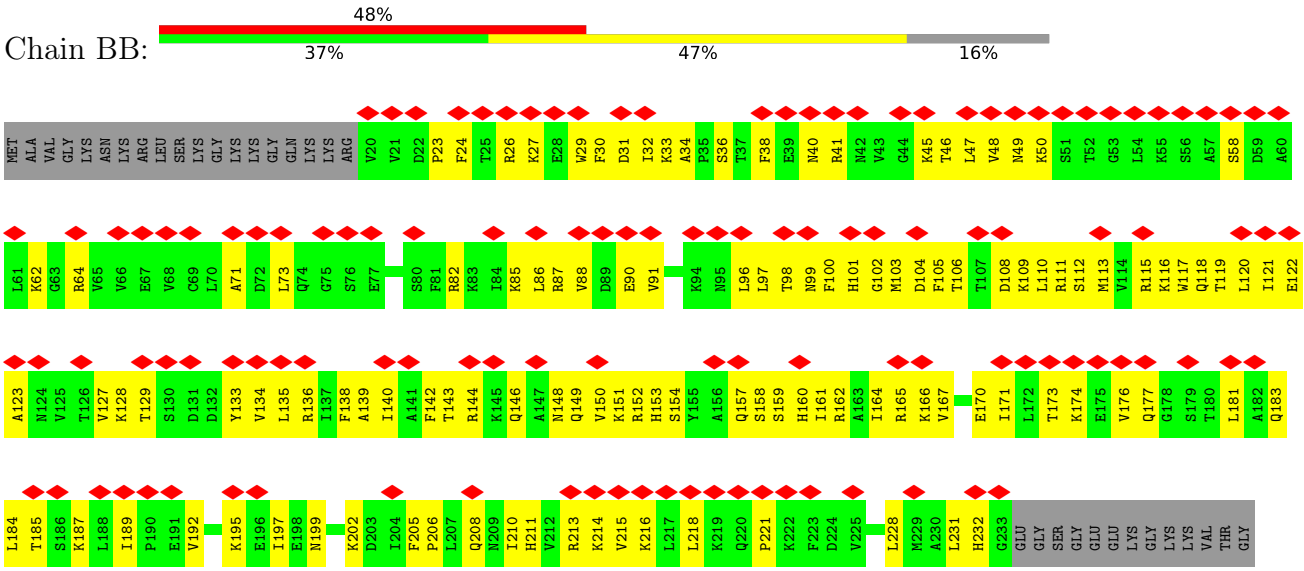
• Molecule 1: 40S ribosomal protein S0-A

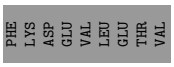
Chain BA:



• Molecule 2: RPS1A isoform 1

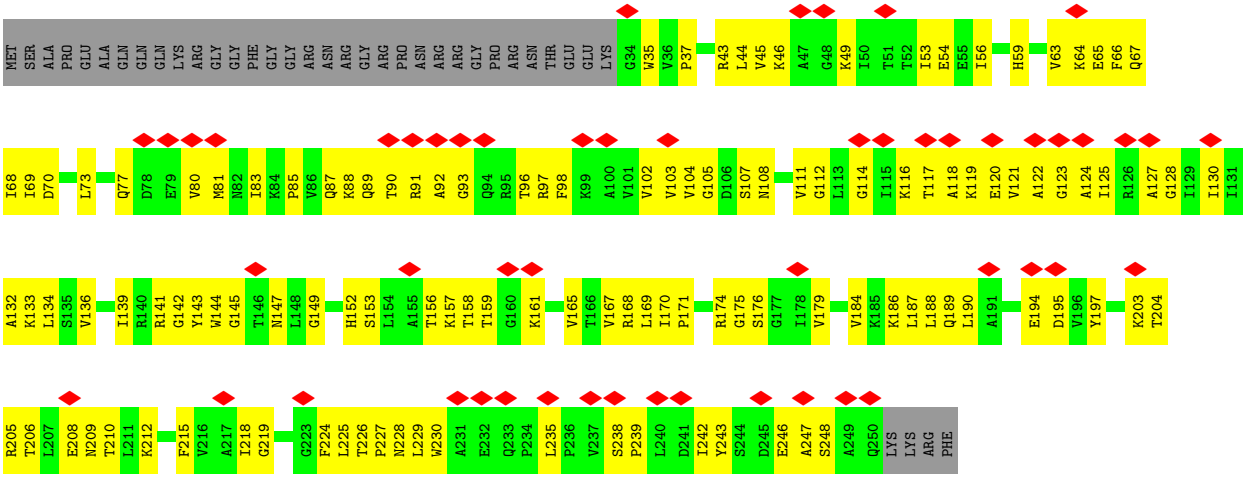
Chain BB:





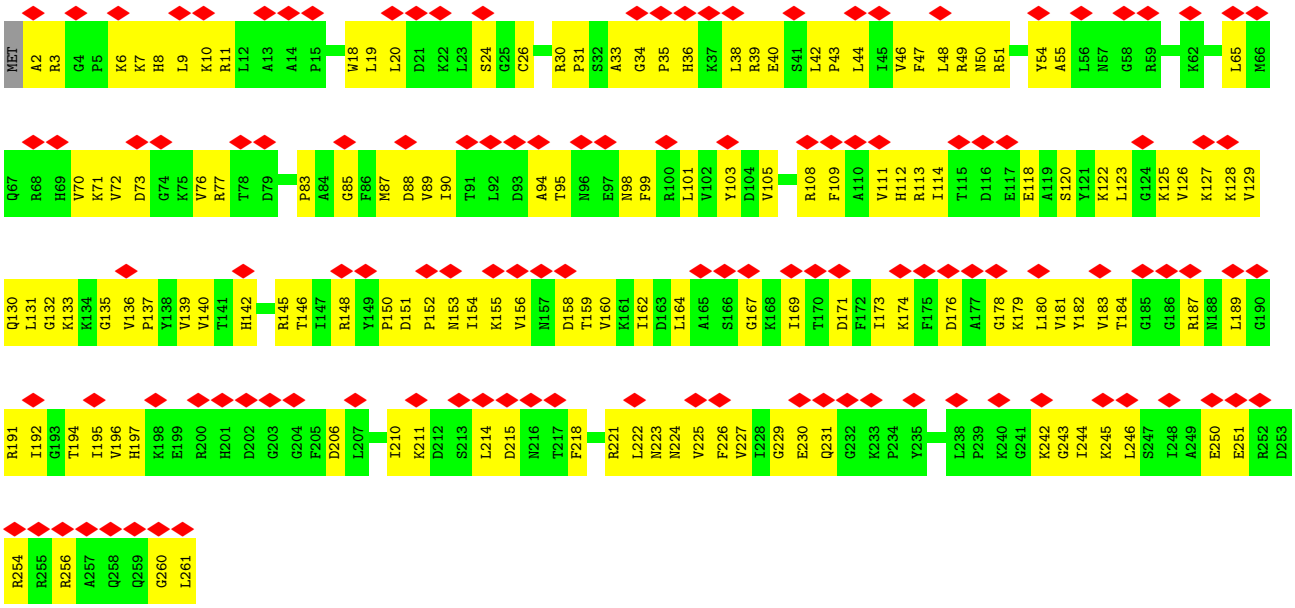
• Molecule 3: RPS2 isoform 1

Chain BC:



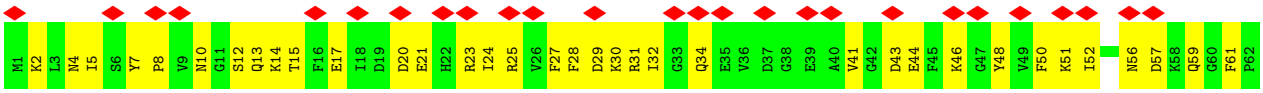
• Molecule 4: 40S ribosomal protein S4-A

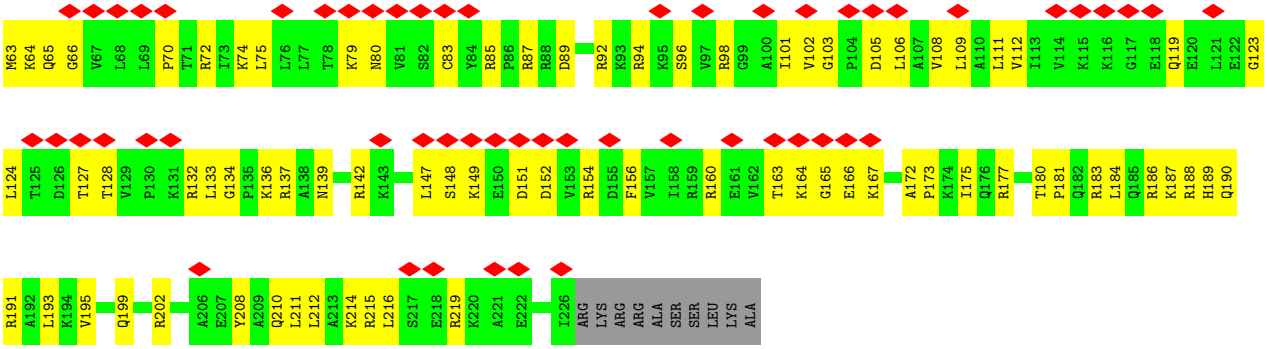
Chain BE:



• Molecule 5: 40S ribosomal protein S6-A

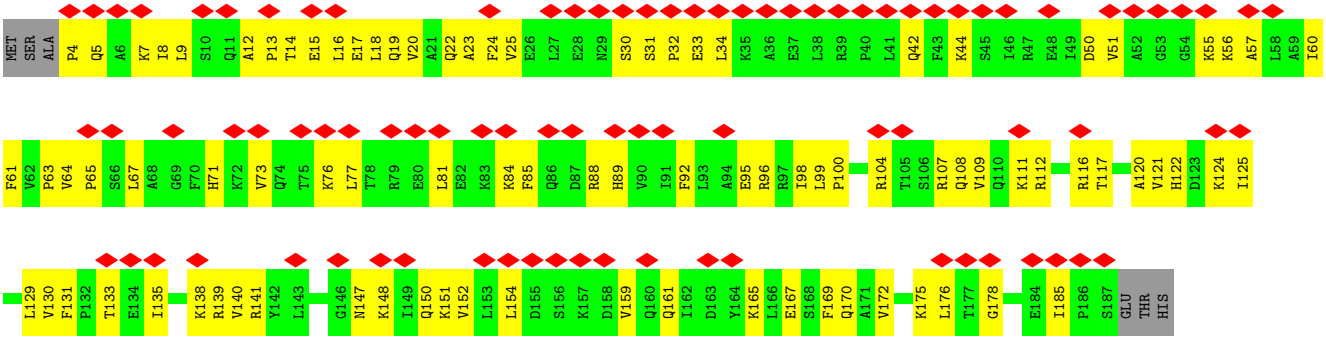
Chain BG:





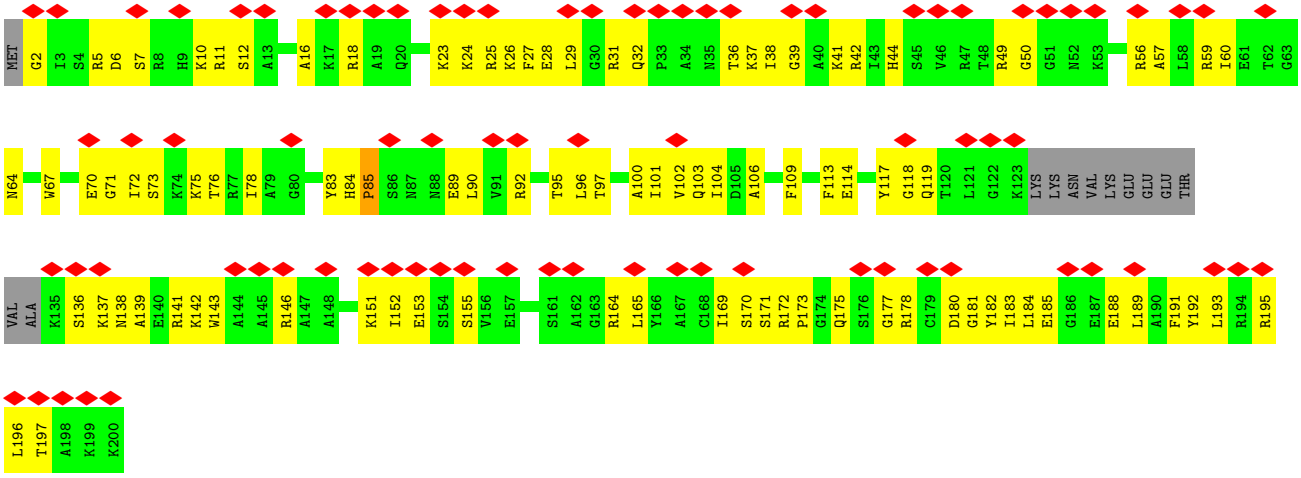
• Molecule 6: 40S ribosomal protein S7-A

Chain BH:



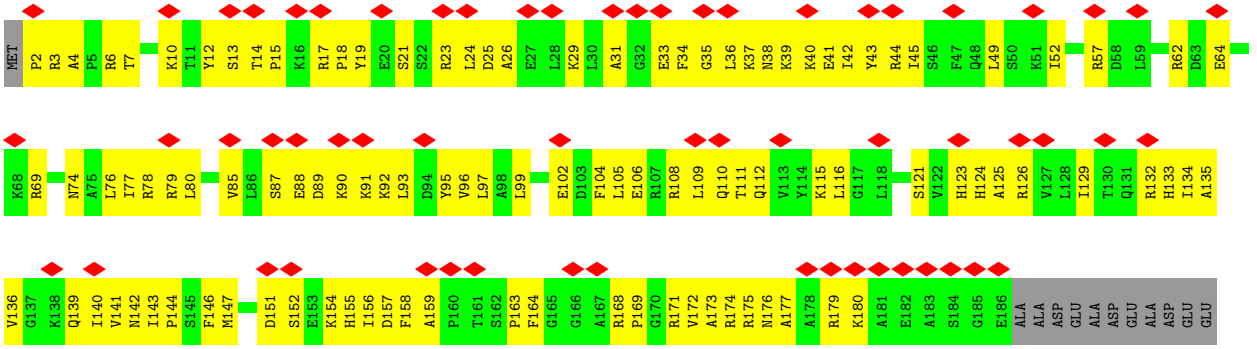
• Molecule 7: 40S ribosomal protein S8-A

Chain BI:



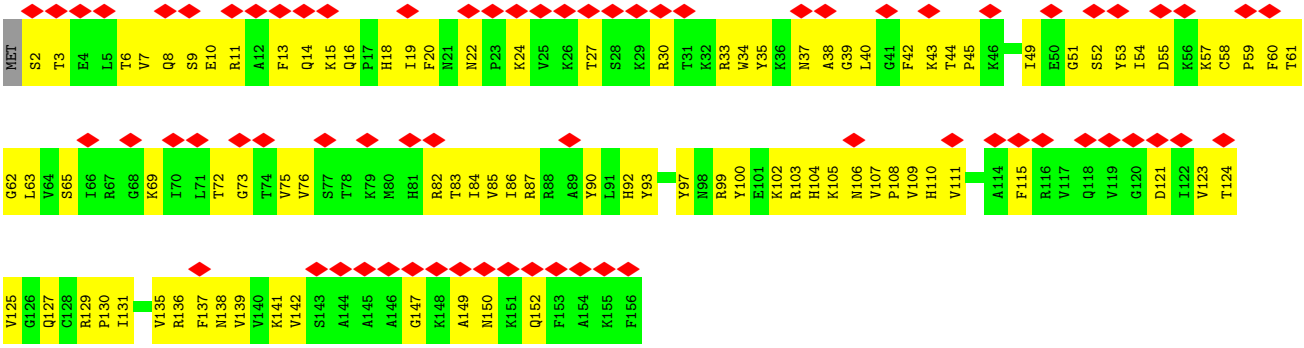
• Molecule 8: 40S ribosomal protein S9-A

Chain BJ:



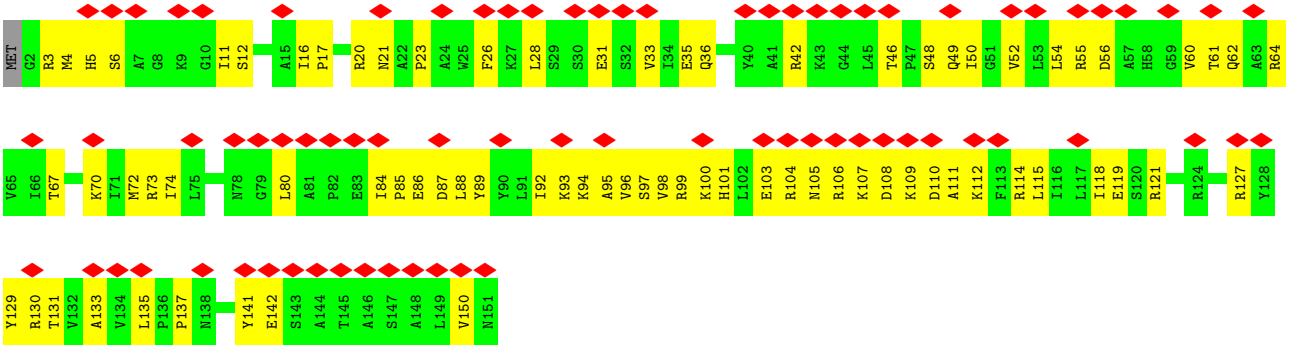
• Molecule 9: 40S ribosomal protein S11-A

Chain BL:



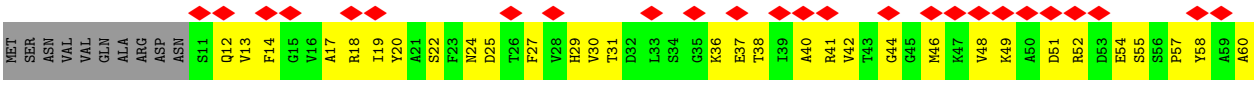
• Molecule 10: 40S ribosomal protein S13

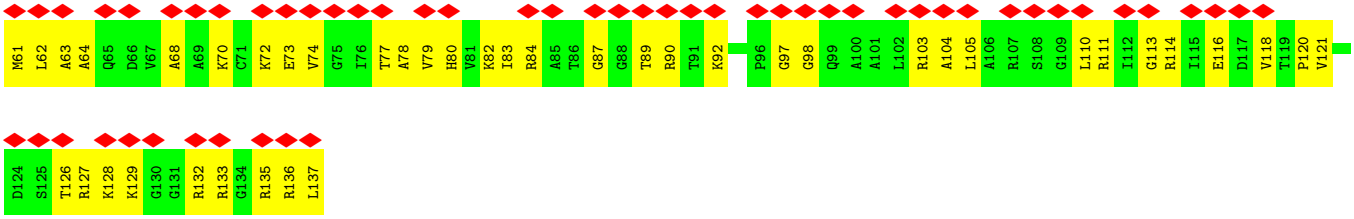
Chain BN:



• Molecule 11: 40S ribosomal protein S14-A

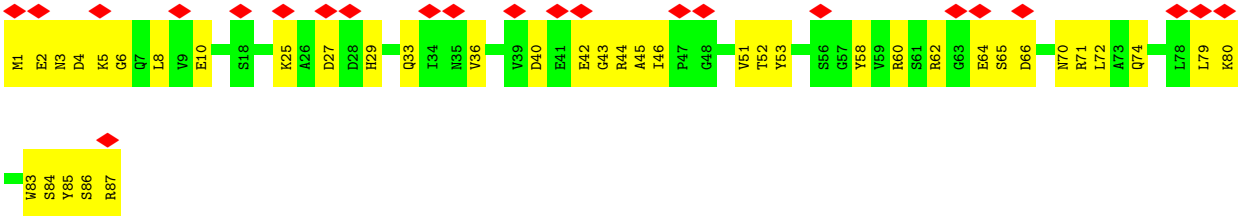
Chain BO:





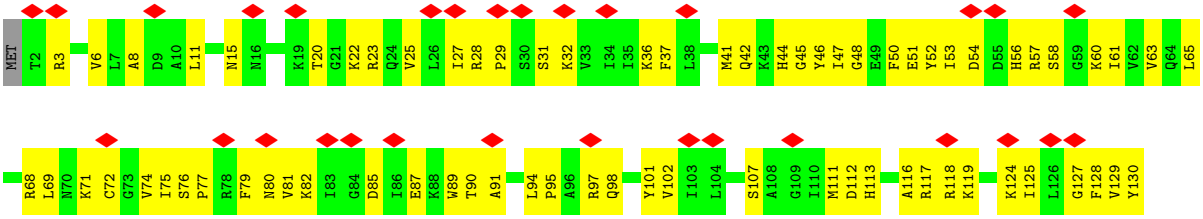
• Molecule 12: 40S ribosomal protein S21-A

Chain BV:



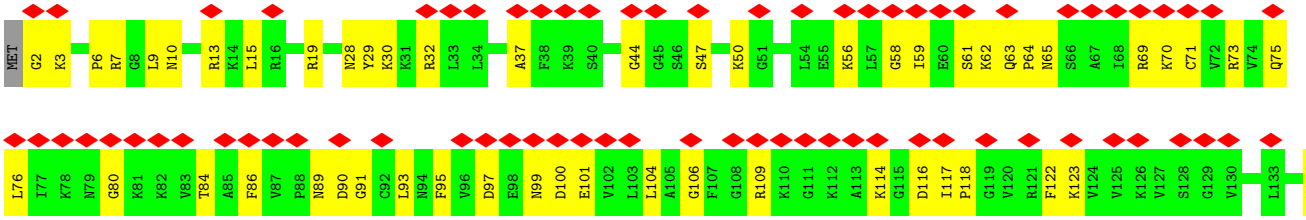
• Molecule 13: RPS22A isoform 1

Chain BW:



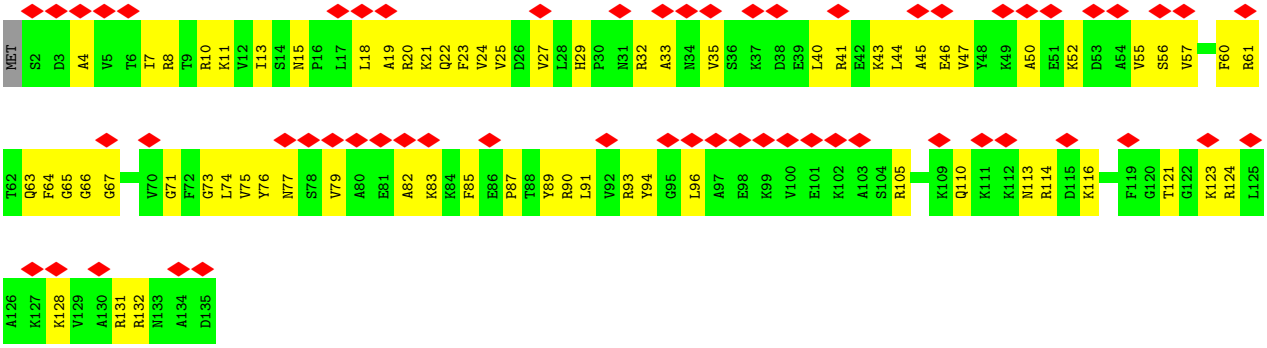
• Molecule 14: 40S ribosomal protein S23-A

Chain BX:



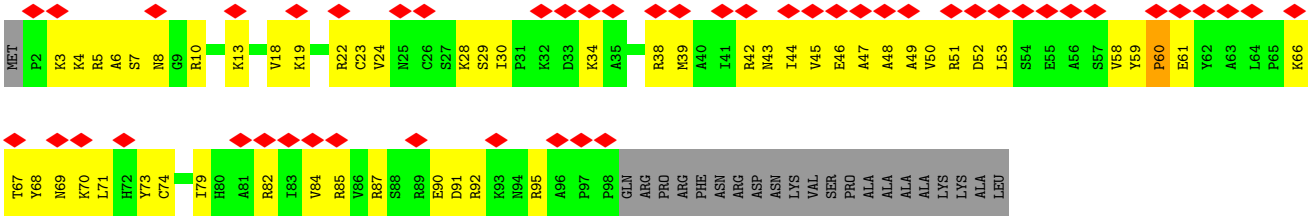
• Molecule 15: 40S ribosomal protein S24-A

Chain BY:



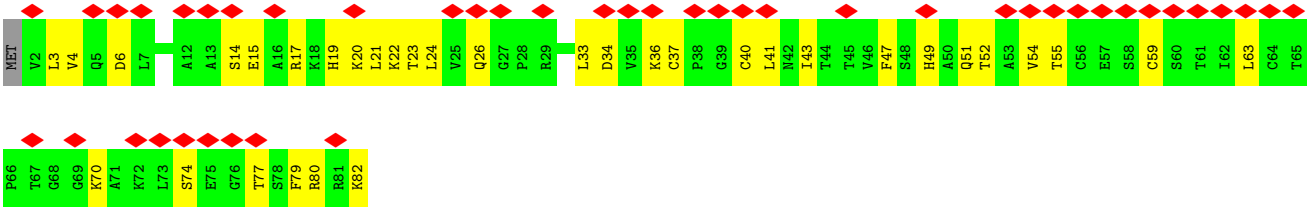
• Molecule 16: RPS26B isoform 1

Chain Ba:



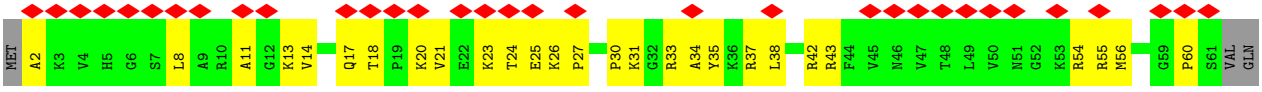
• Molecule 17: 40S ribosomal protein S27-A

Chain Bb:



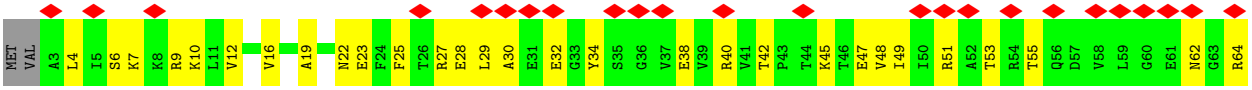
• Molecule 18: 40S ribosomal protein S30-A

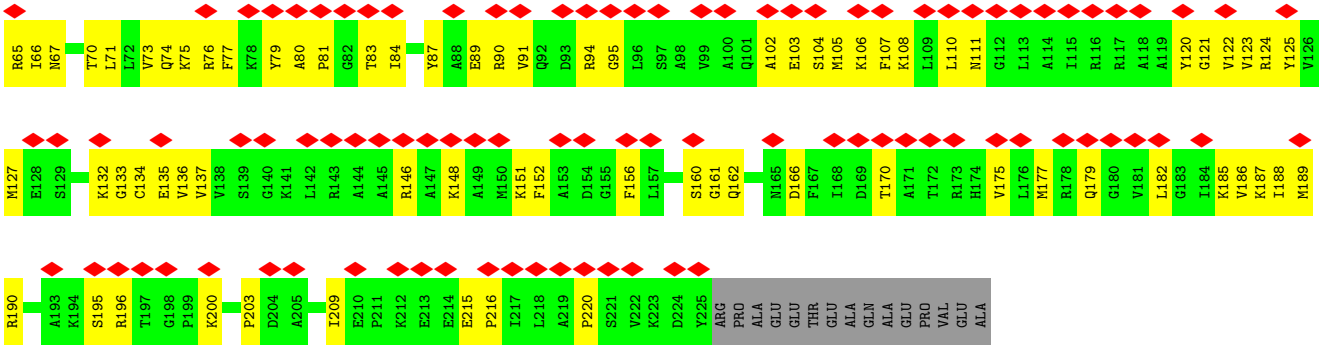
Chain Be:



• Molecule 19: RPS3 isoform 1

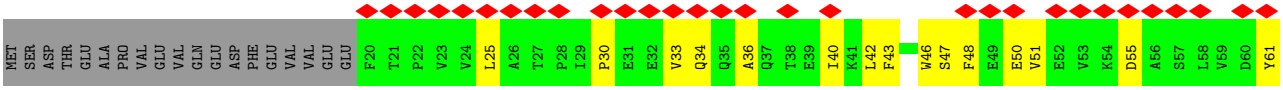
Chain BD:

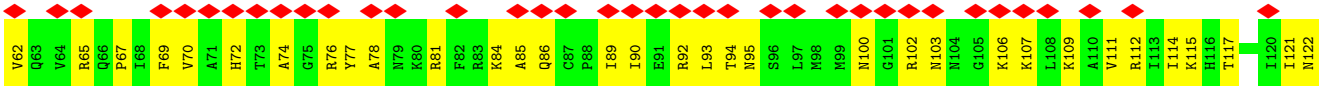


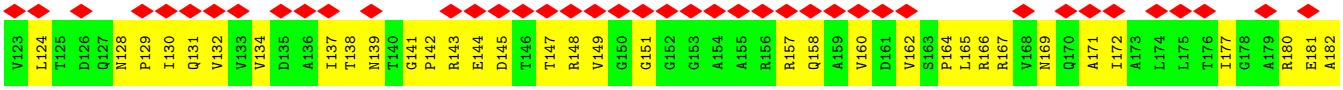


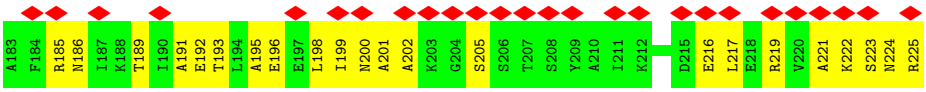
• Molecule 20: Rps5p

Chain BF:



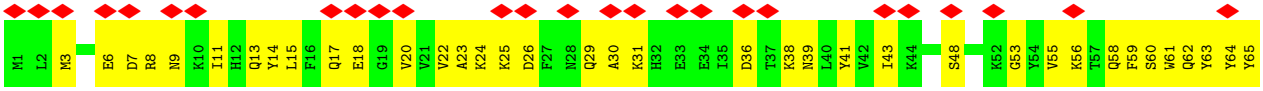


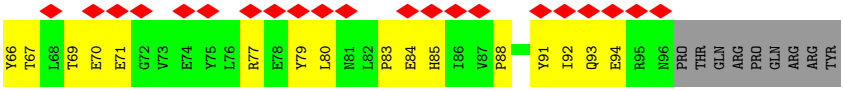




• Molecule 21: 40S ribosomal protein S10-A

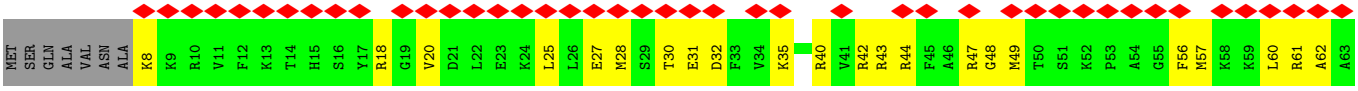
Chain BK:

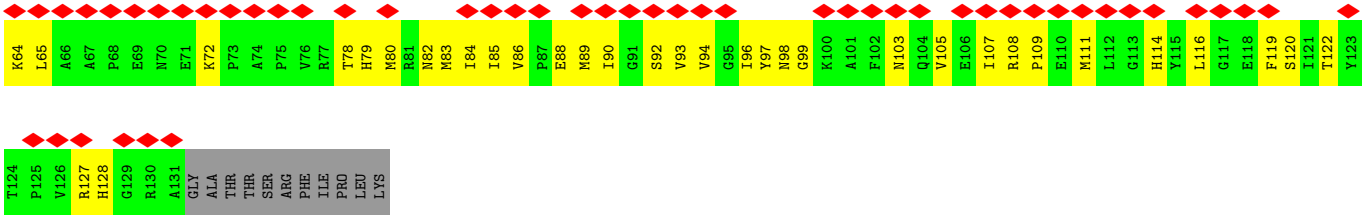




• Molecule 22: RPS15 isoform 1

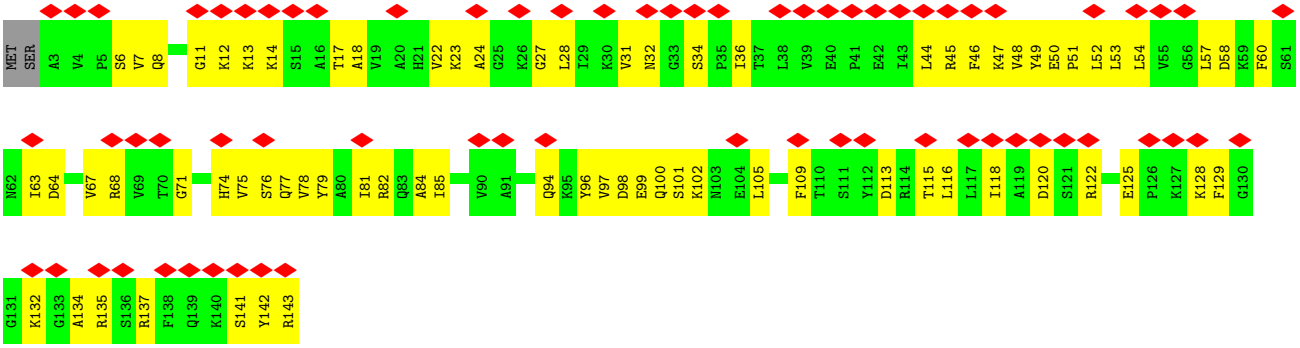
Chain BP:





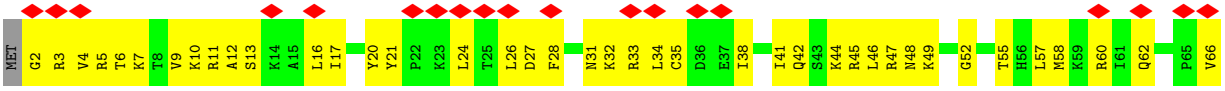
• Molecule 23: 40S ribosomal protein S16-A

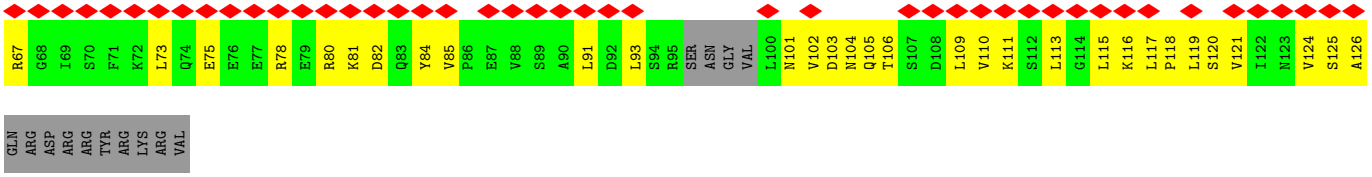
Chain BQ:



• Molecule 24: 40S ribosomal protein S17-A

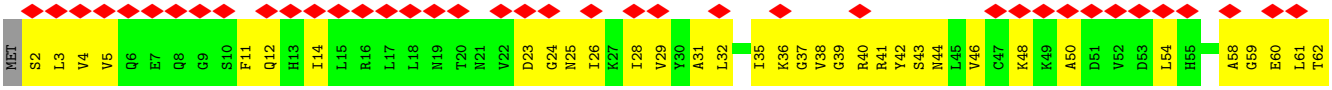
Chain BR:

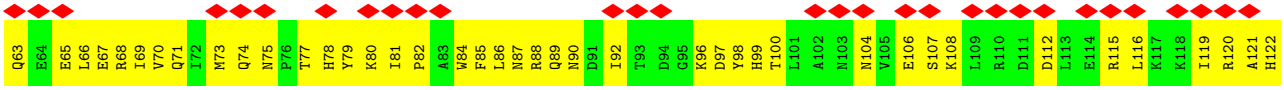


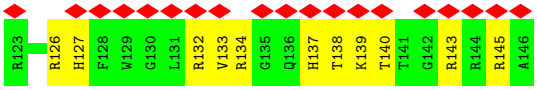


• Molecule 25: 40S ribosomal protein S18-A

Chain BS:

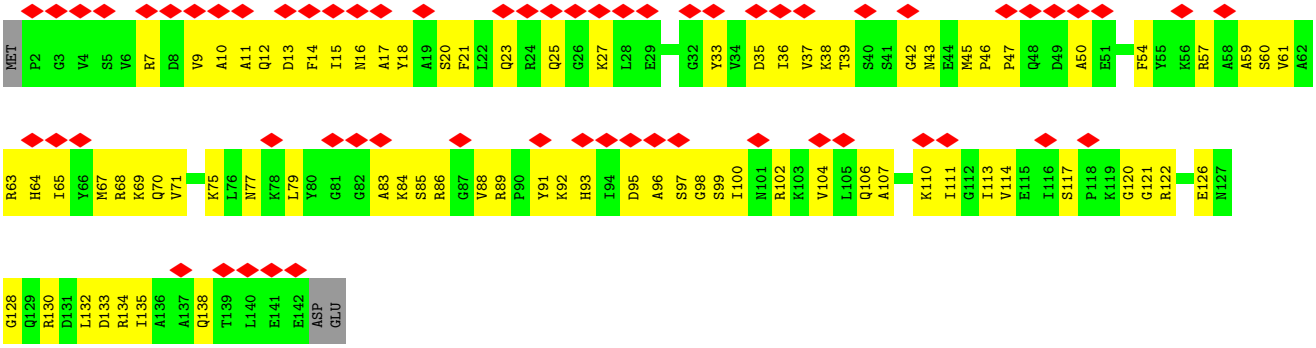






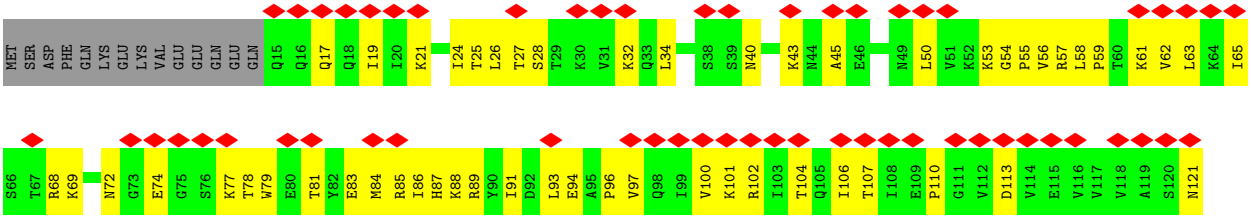
• Molecule 26: 40S ribosomal protein S19-A

Chain BT:



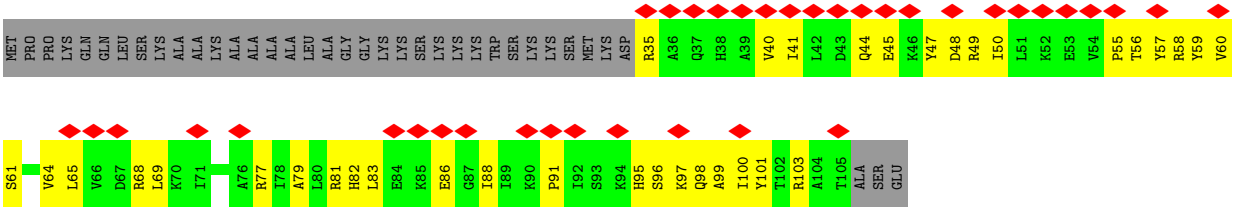
• Molecule 27: RPS20 isoform 1

Chain BU:



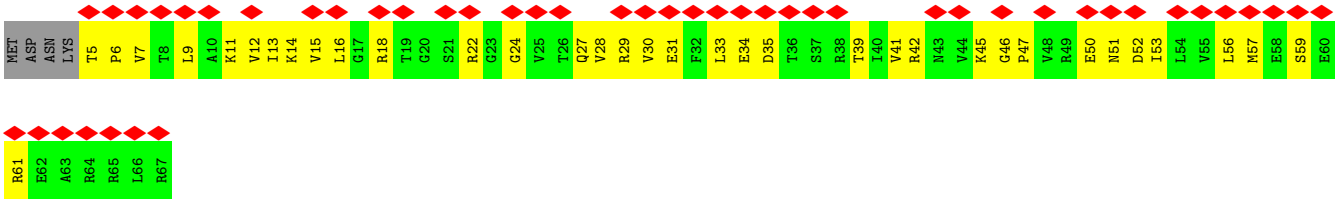
• Molecule 28: RPS25A isoform 1

Chain BZ:



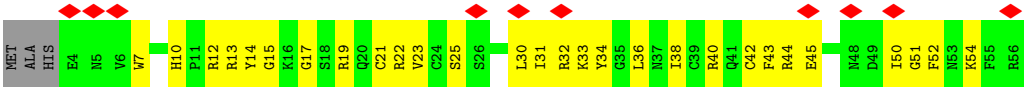
• Molecule 29: RPS28A isoform 1

Chain Bc:



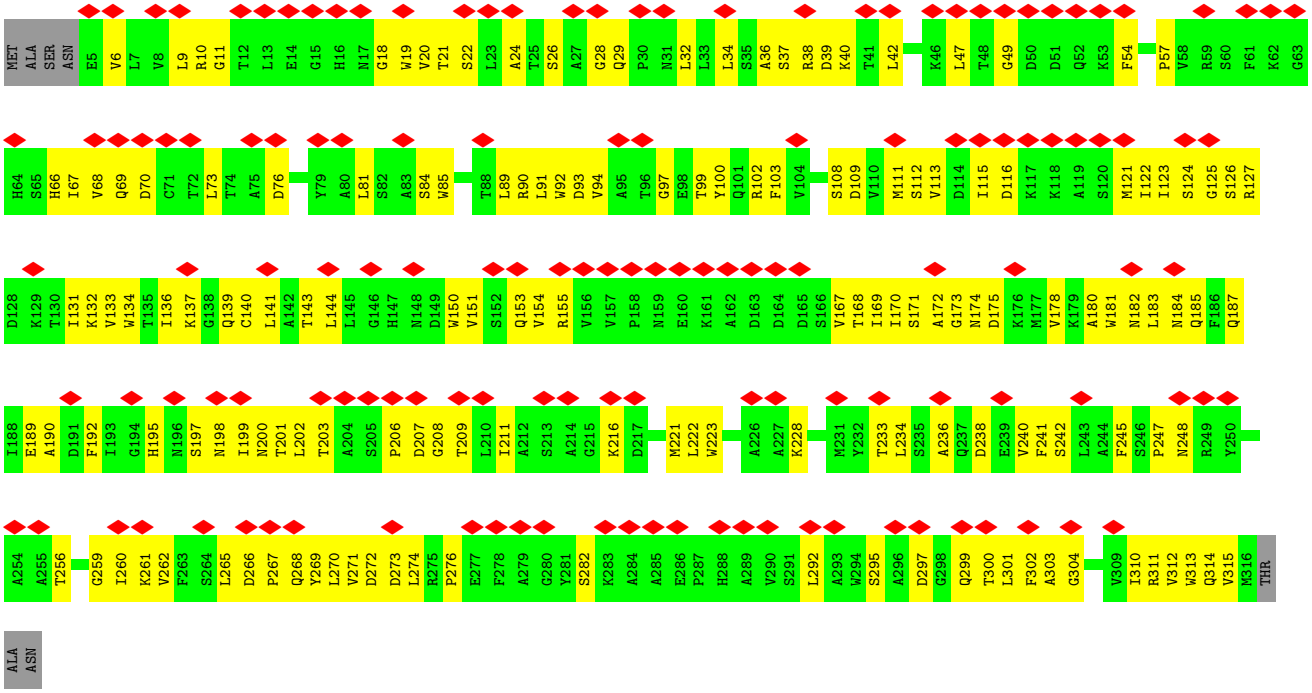
• Molecule 30: RPS29A isoform 1

Chain Bd:



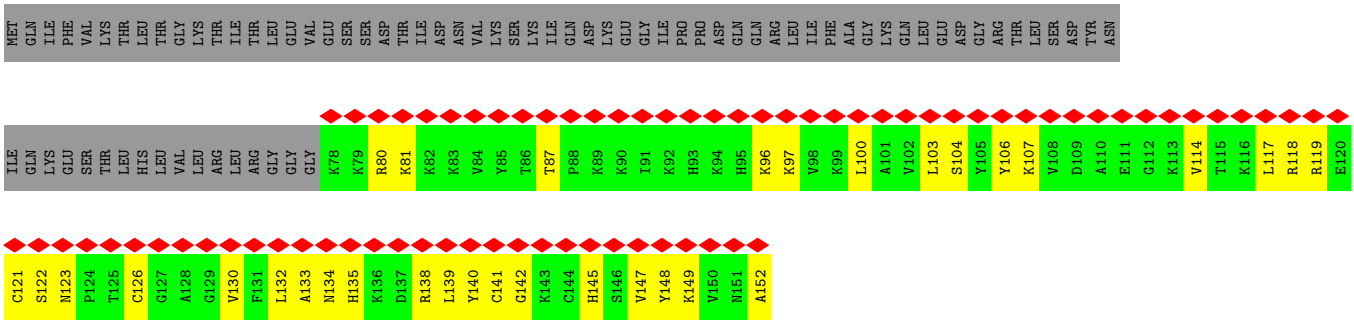
• Molecule 31: Guanine nucleotide-binding protein subunit beta-like protein

Chain Bg:



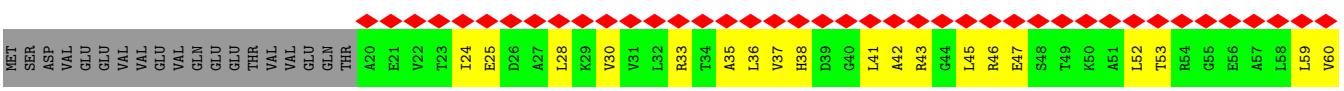
• Molecule 32: Ubiquitin-40S ribosomal protein S31

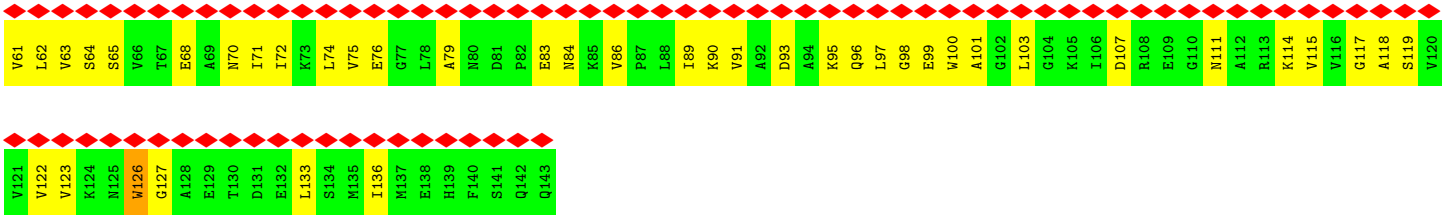
Chain Bf:



• Molecule 33: 40S ribosomal protein S12

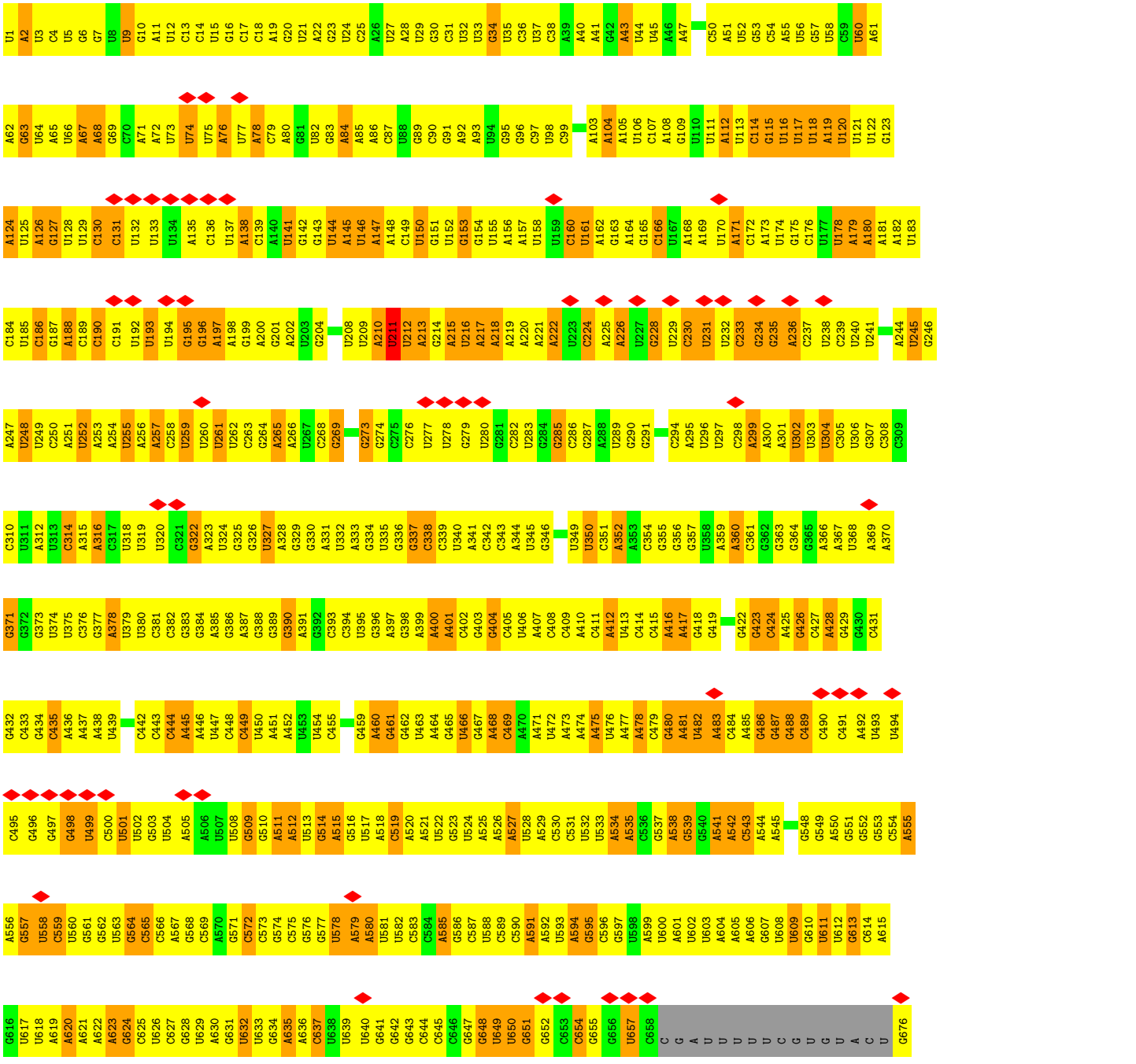
Chain BM:

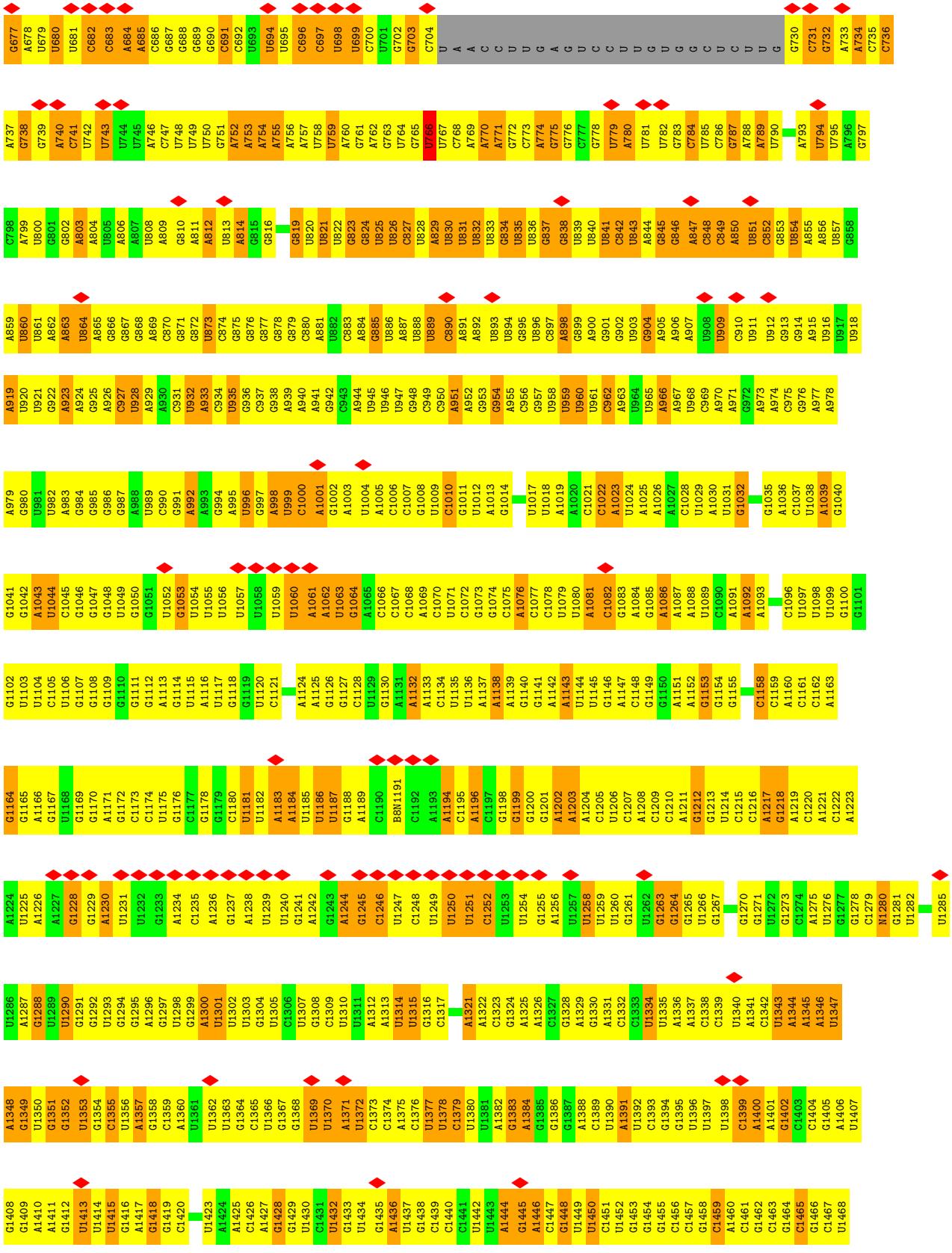


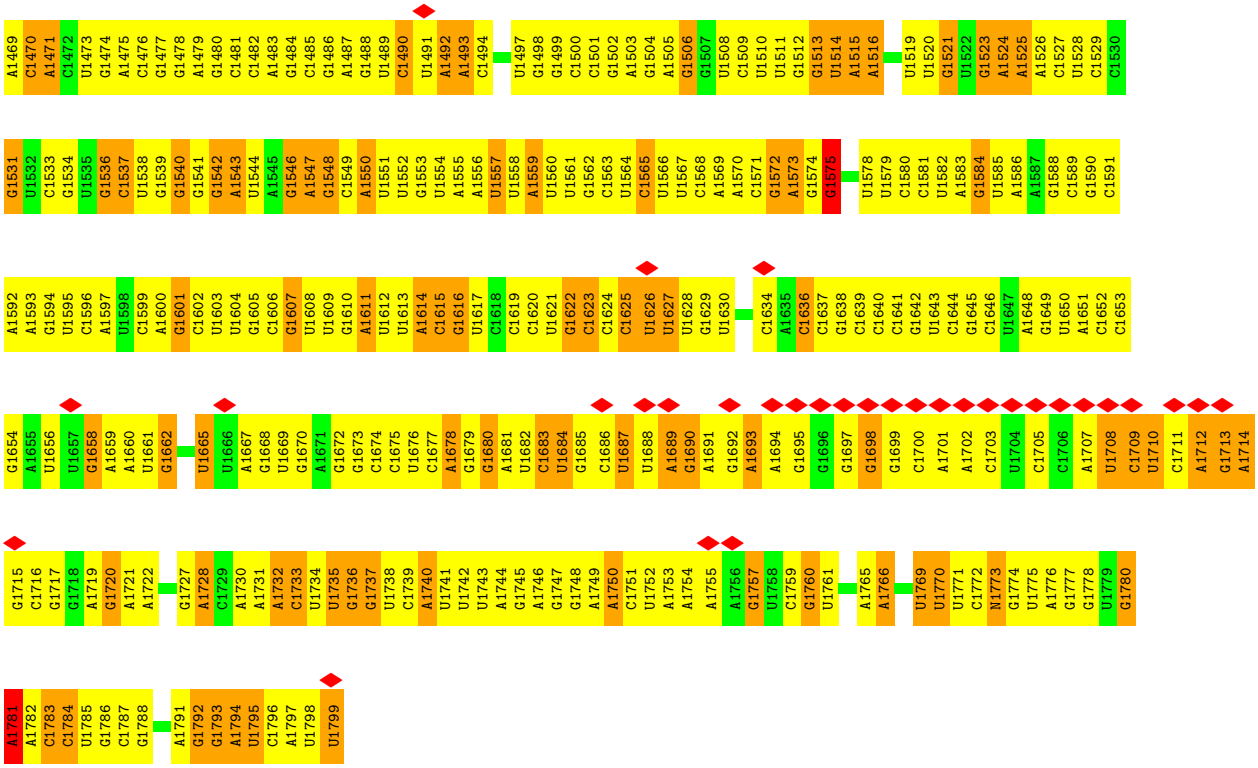


• Molecule 34: 18S rRNA

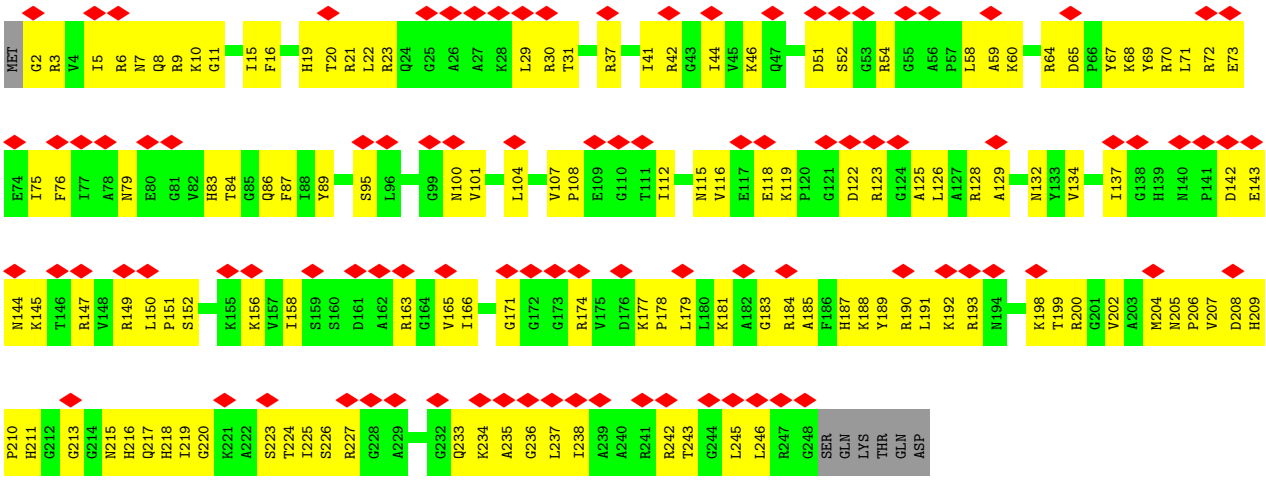
Chain B5:



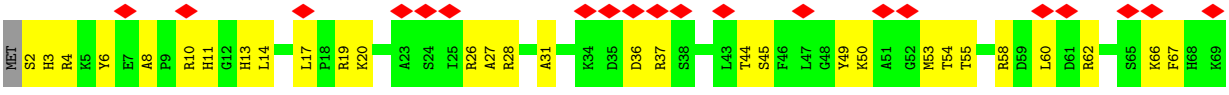


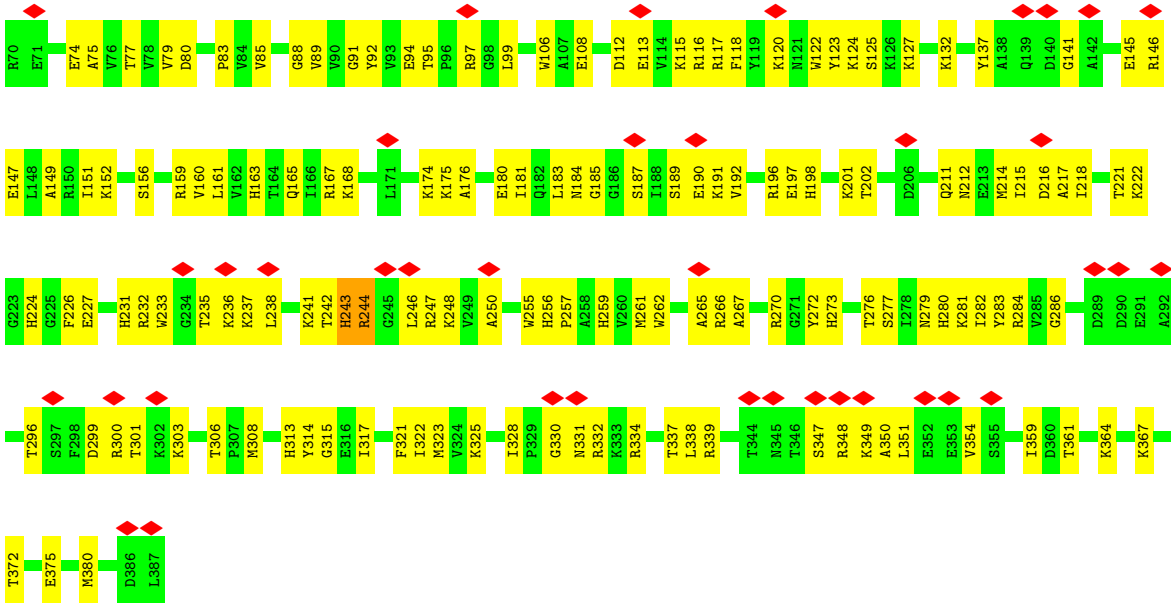


• Molecule 35: 60S ribosomal protein L2-A



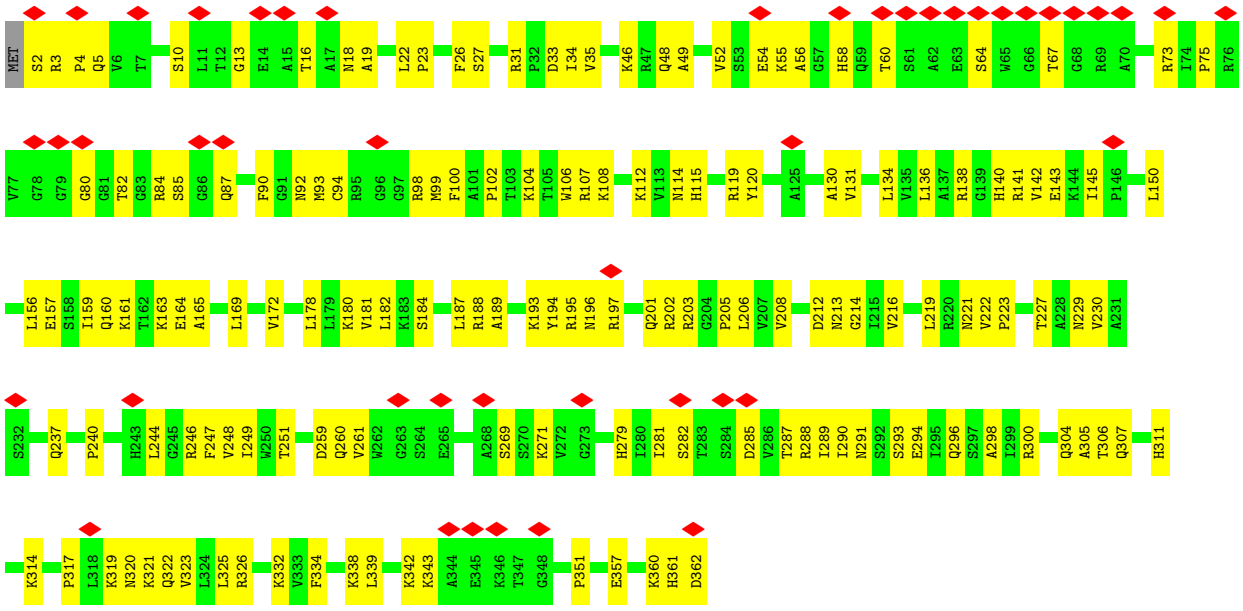
• Molecule 36: 60S ribosomal protein L3





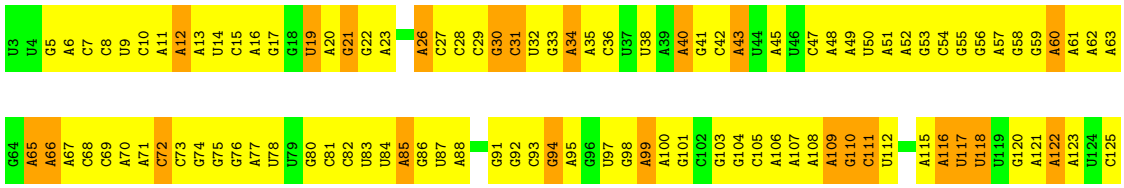
• Molecule 37: RPL4A isoform 1

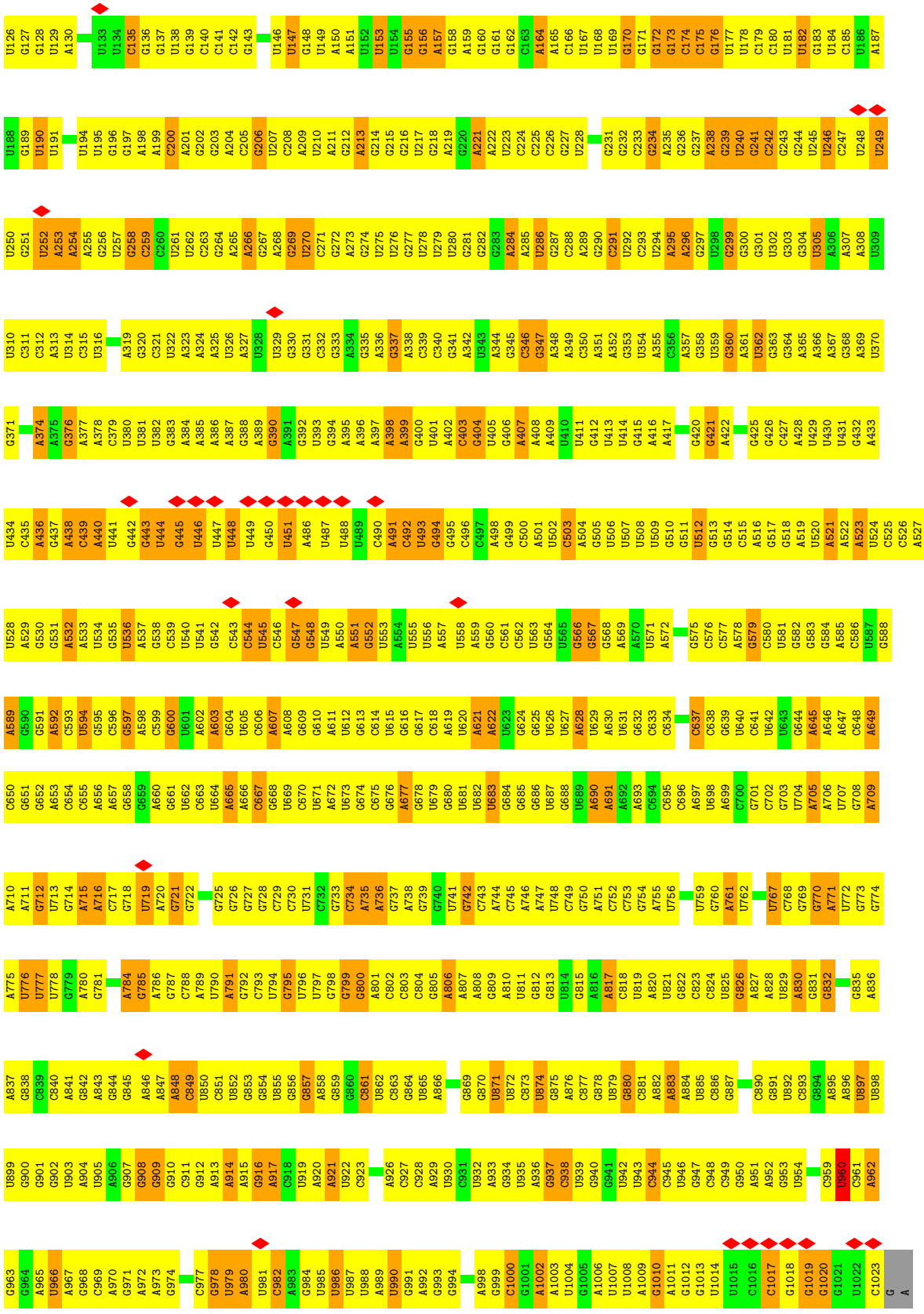
Chain AC:

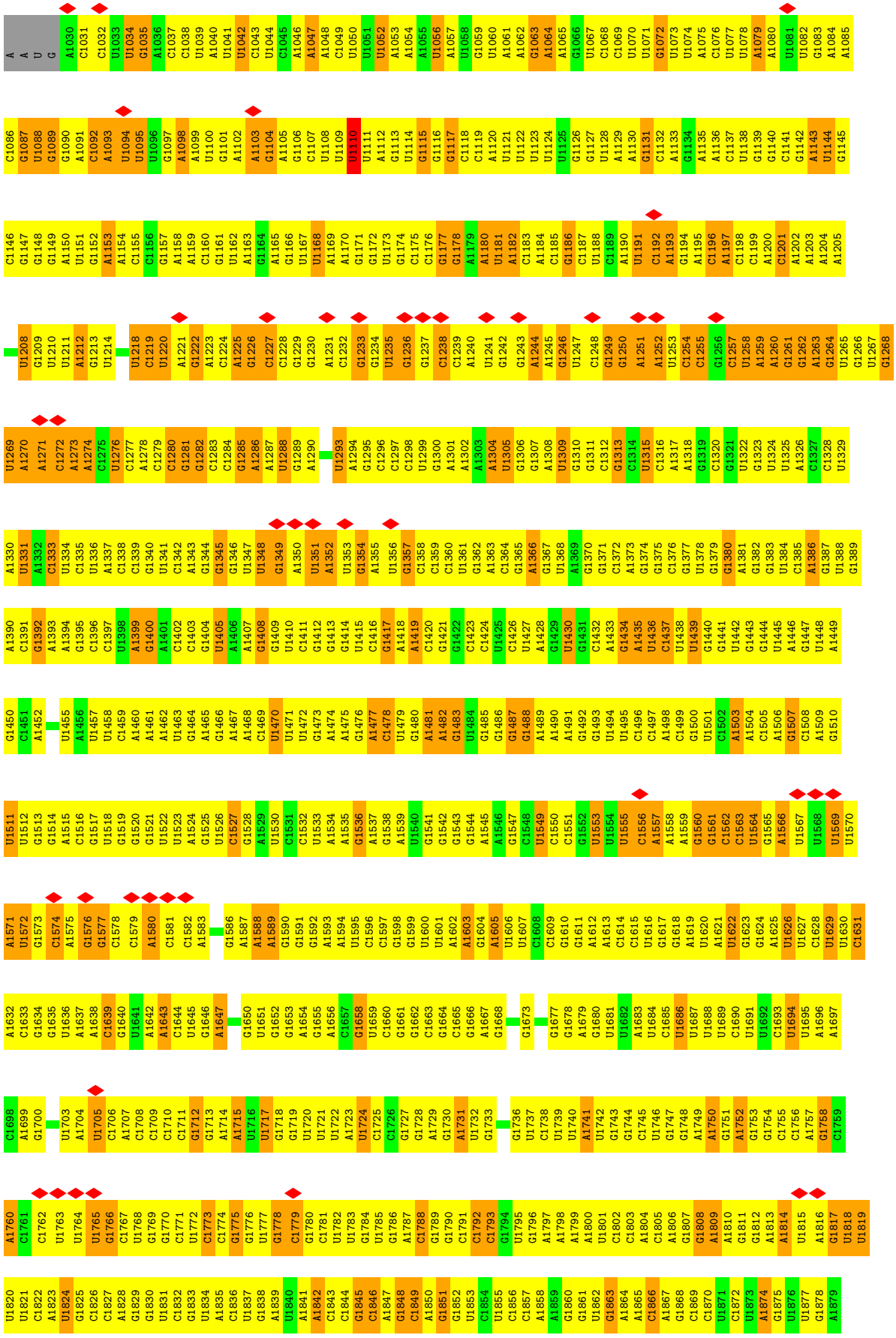


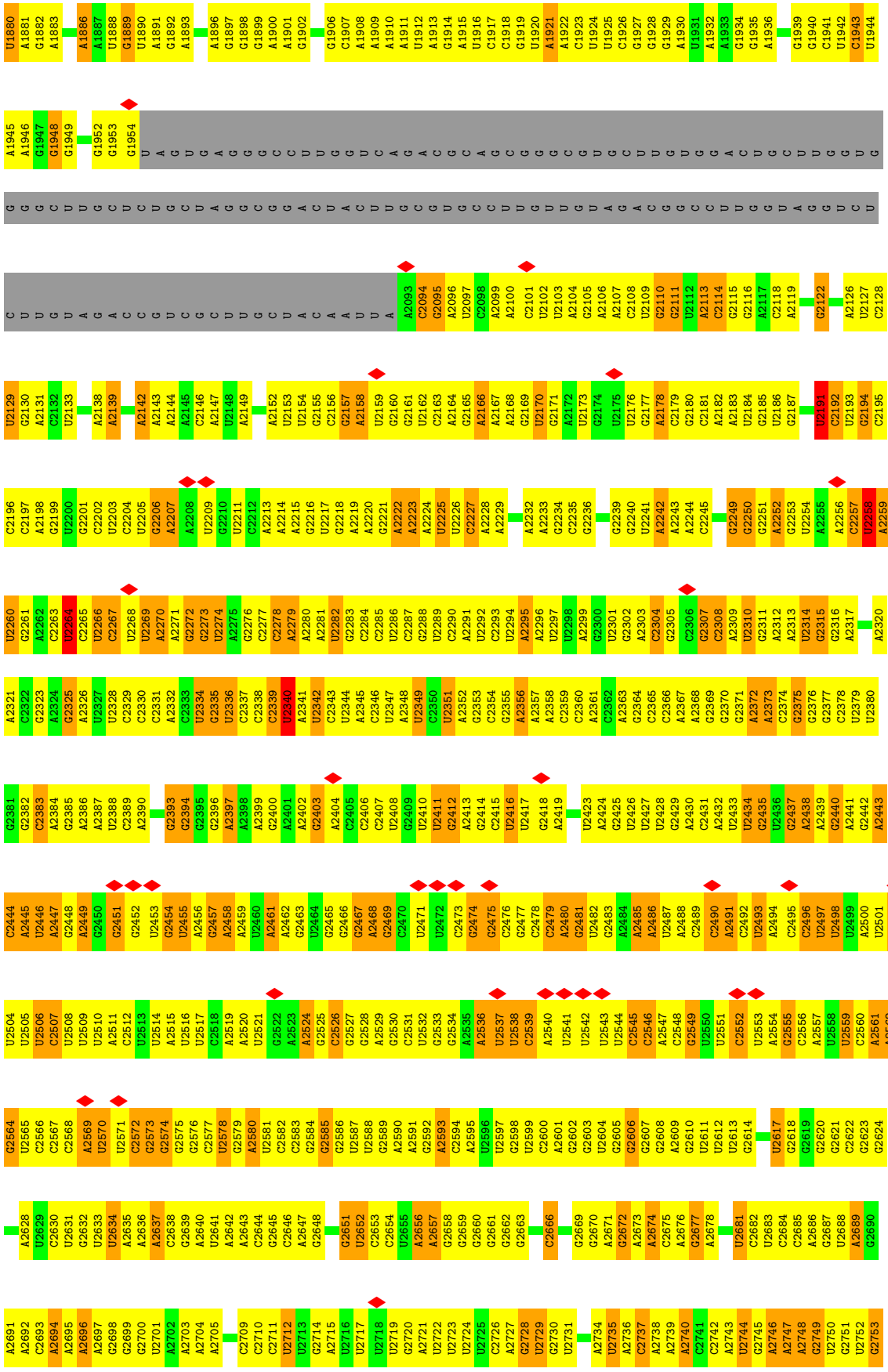
• Molecule 38: 25S rRNA

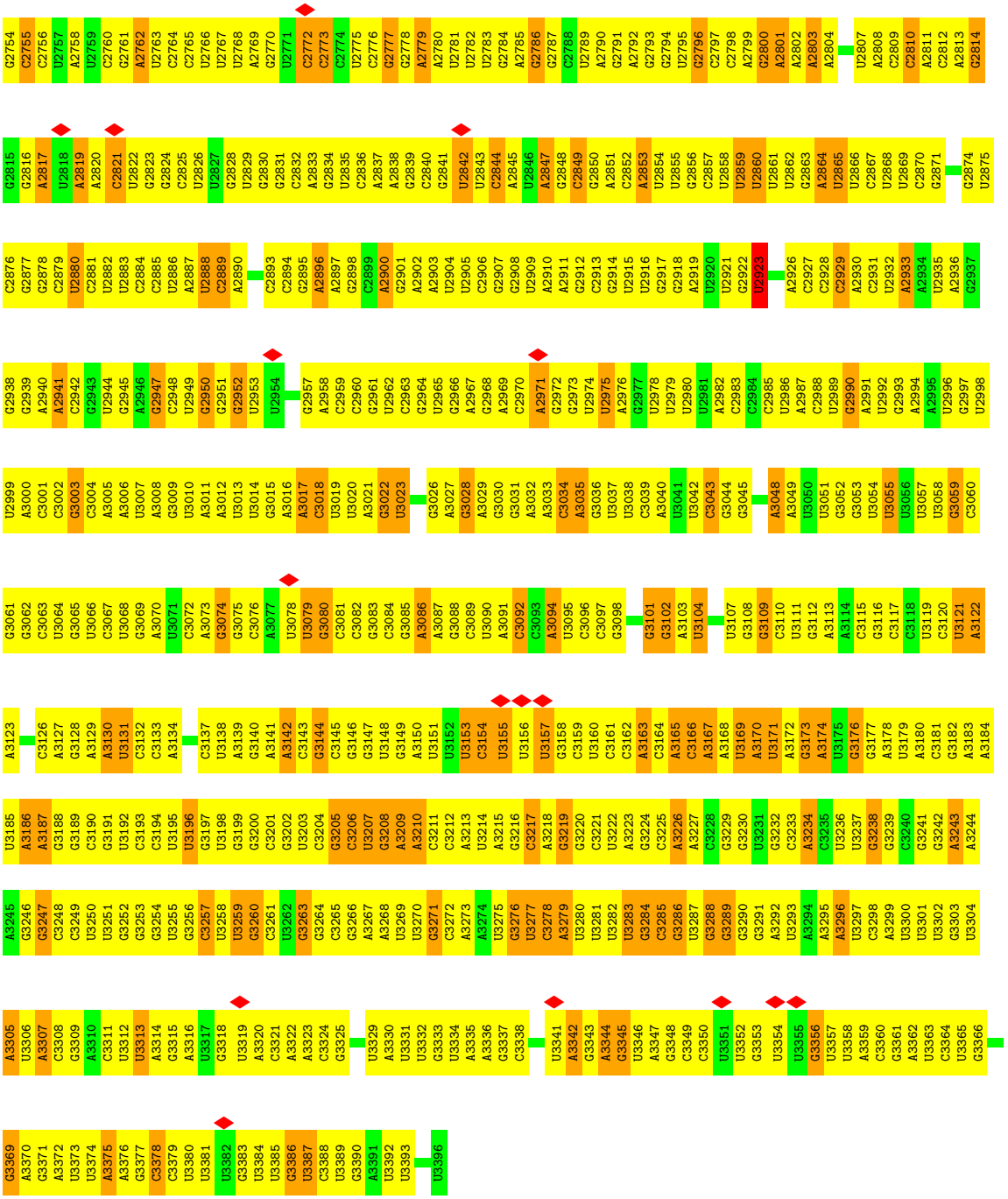
Chain A1:





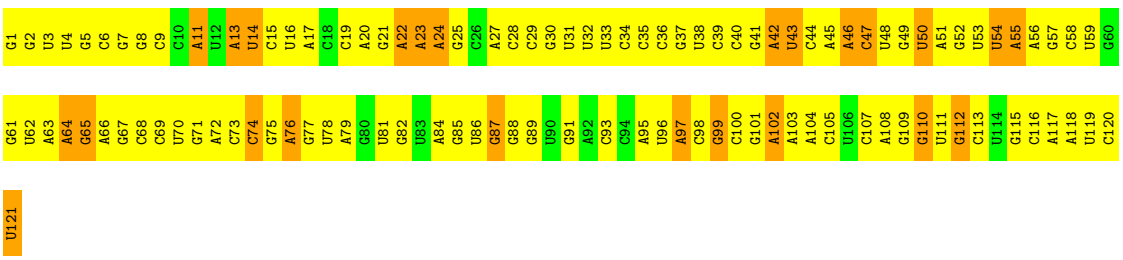






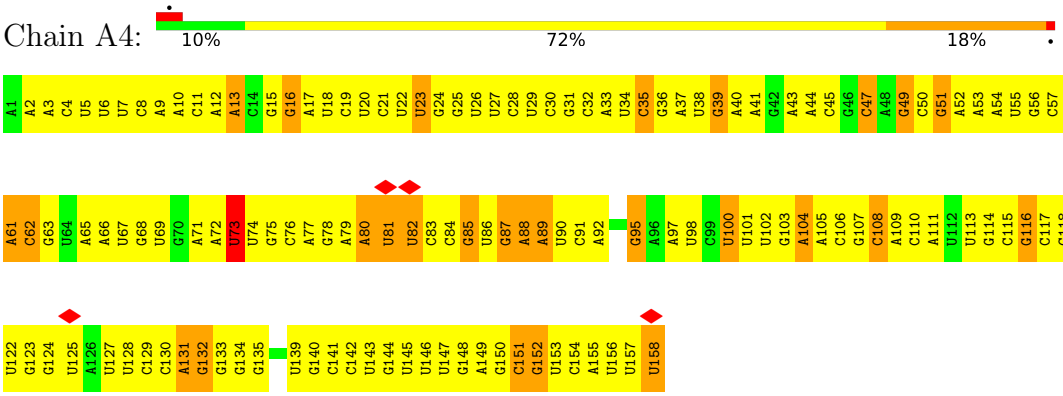
• Molecule 39: 5s rRNA

Chain A3:



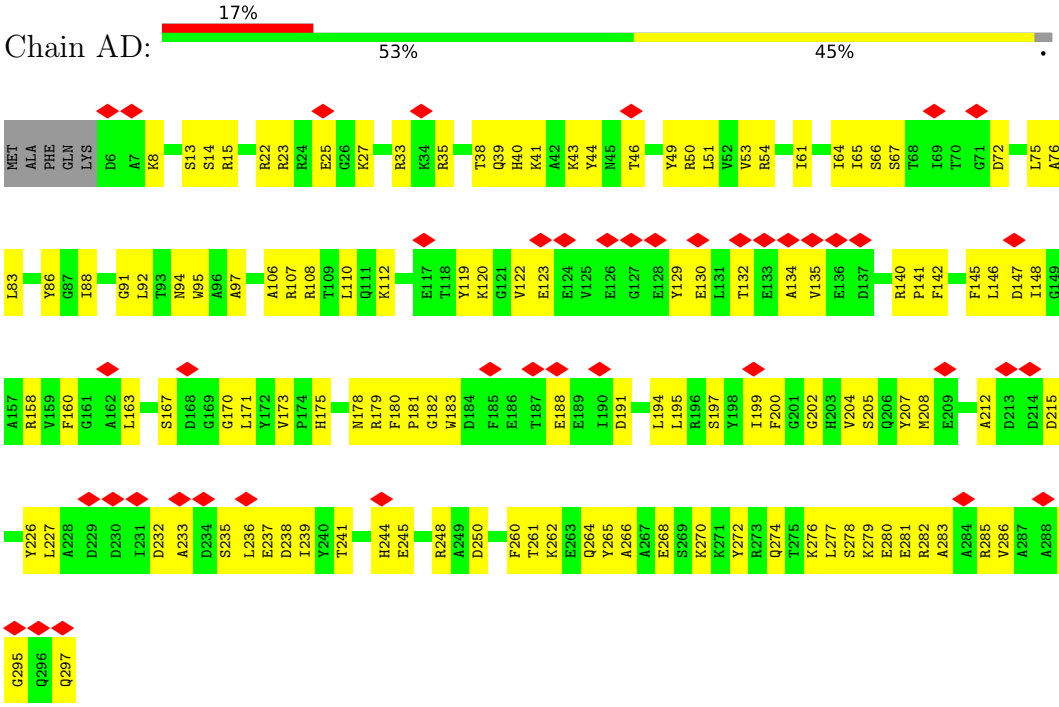
• Molecule 40: 5.8 S rRNA

Chain A4:



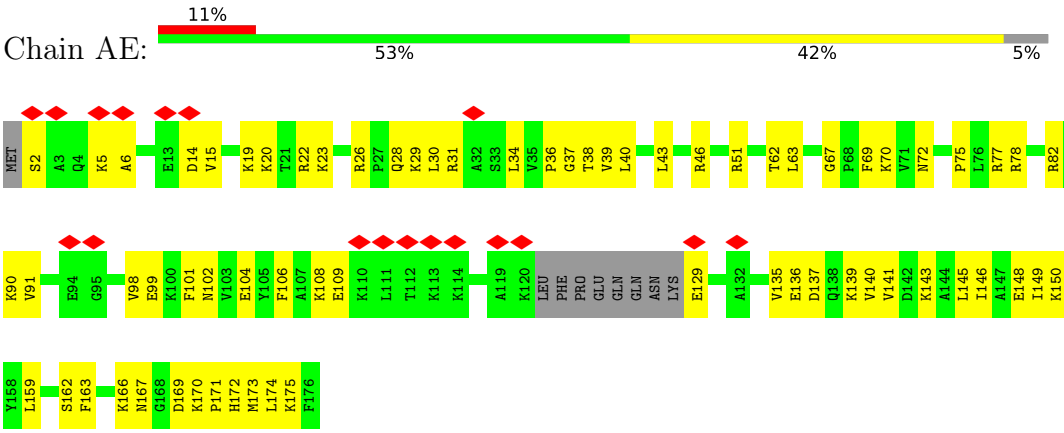
• Molecule 41: RPL5 isoform 1

Chain AD:



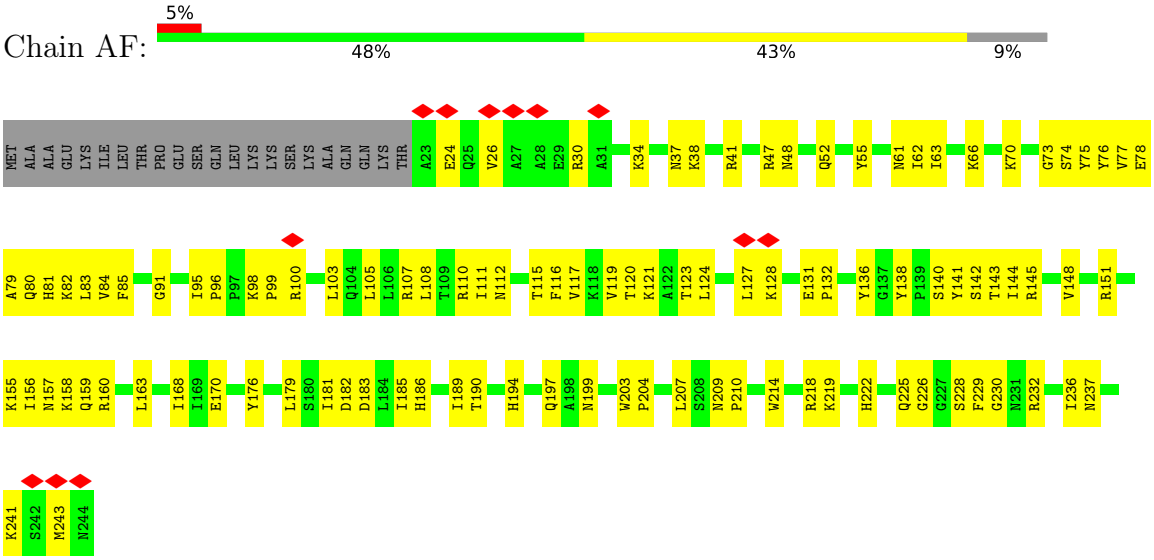
• Molecule 42: 60S ribosomal protein L6-A

Chain AE:



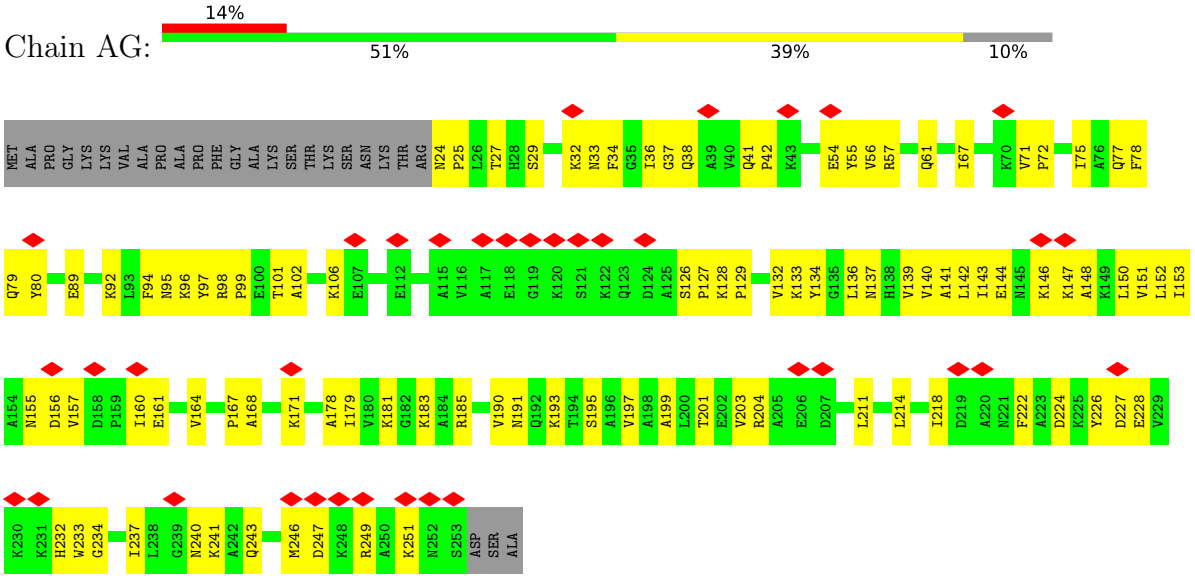
• Molecule 43: 60S ribosomal protein L7-A

Chain AF:



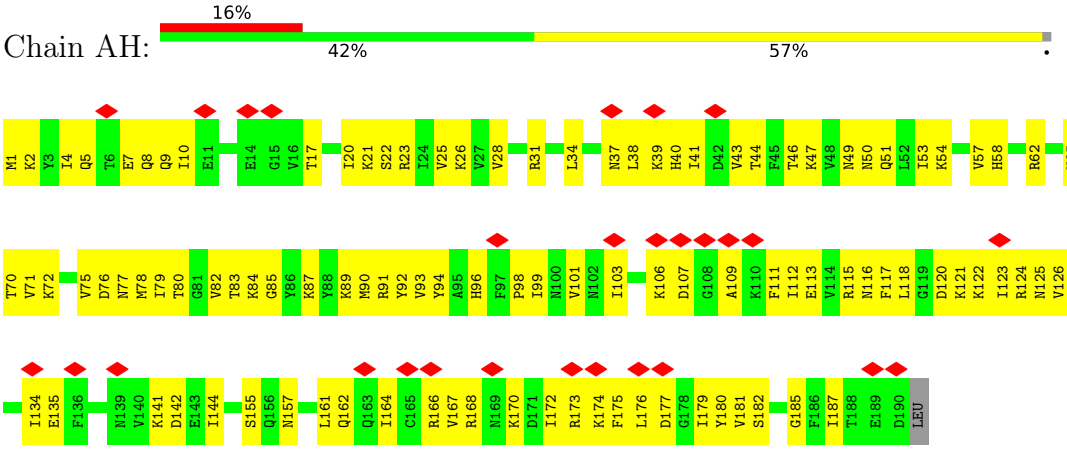
• Molecule 44: 60S ribosomal protein L8-A

Chain AG:

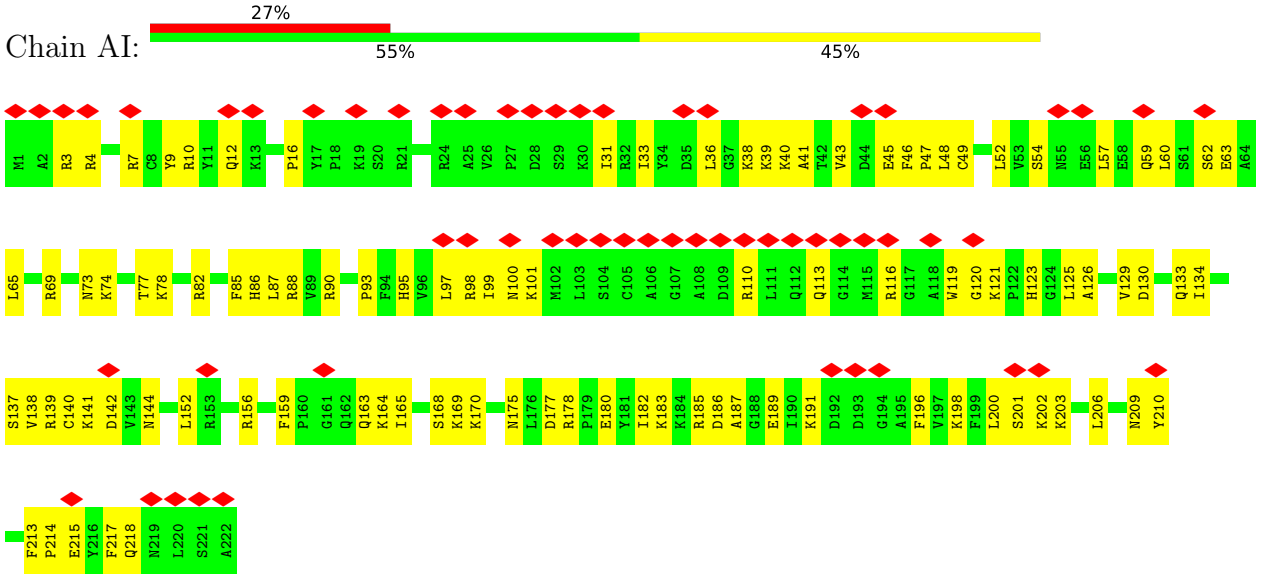


• Molecule 45: 60S ribosomal protein L9-A

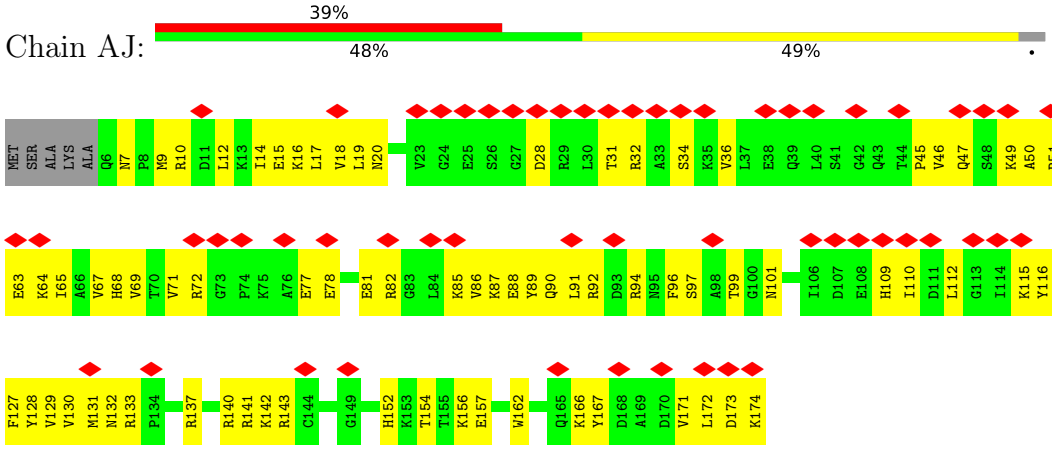
Chain AH:



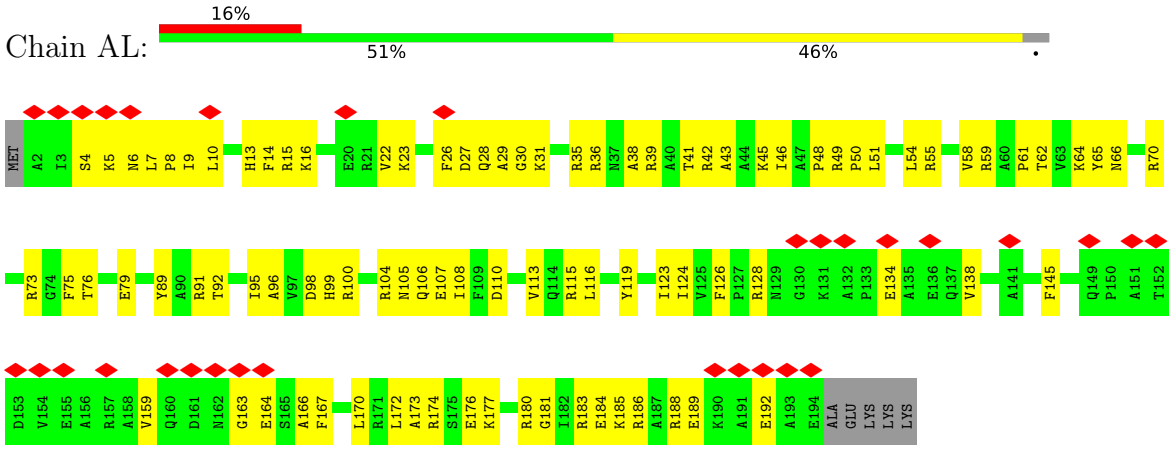
• Molecule 46: 60S ribosomal protein L10



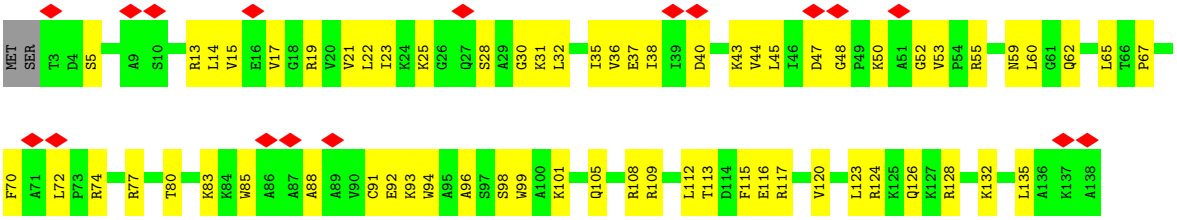
• Molecule 47: RPL11A isoform 1



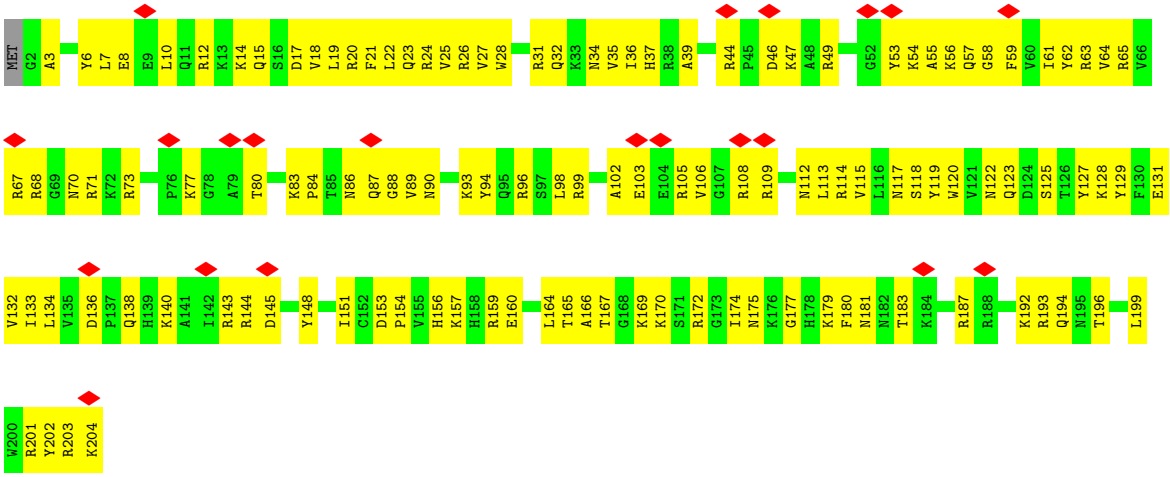
• Molecule 48: 60S ribosomal protein L13-A



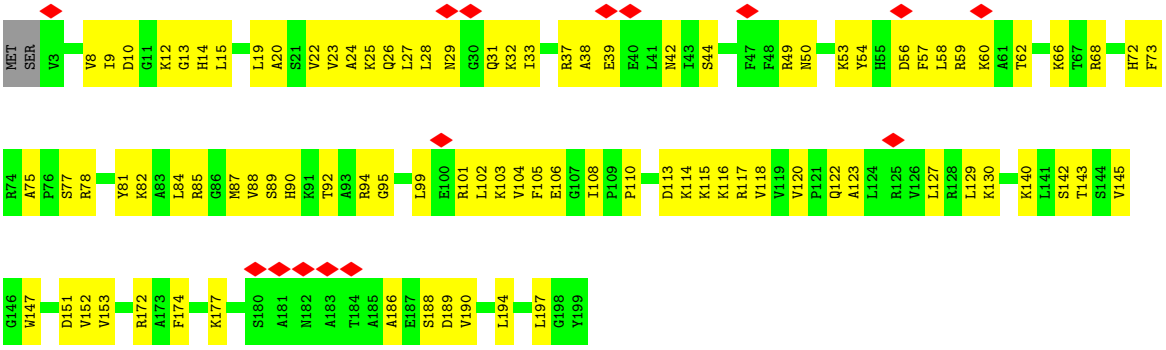
• Molecule 49: 60S ribosomal protein L14-A



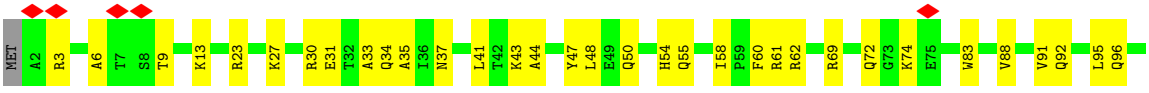
• Molecule 50: 60S ribosomal protein L15-A

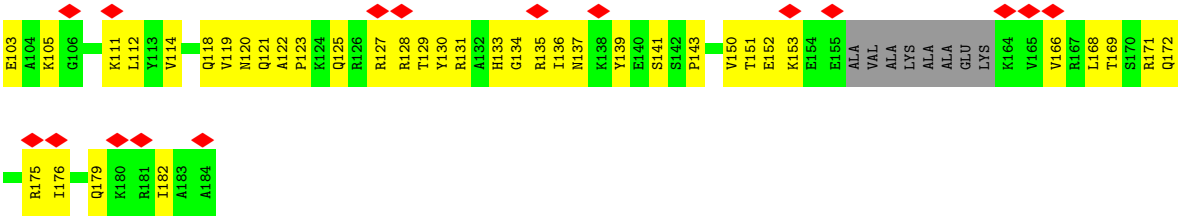


• Molecule 51: 60S ribosomal protein L16-A



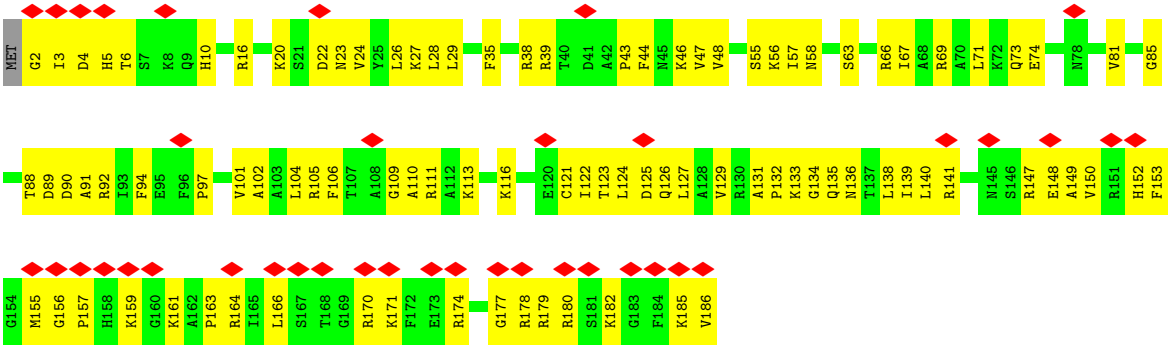
• Molecule 52: 60S ribosomal protein L17-A





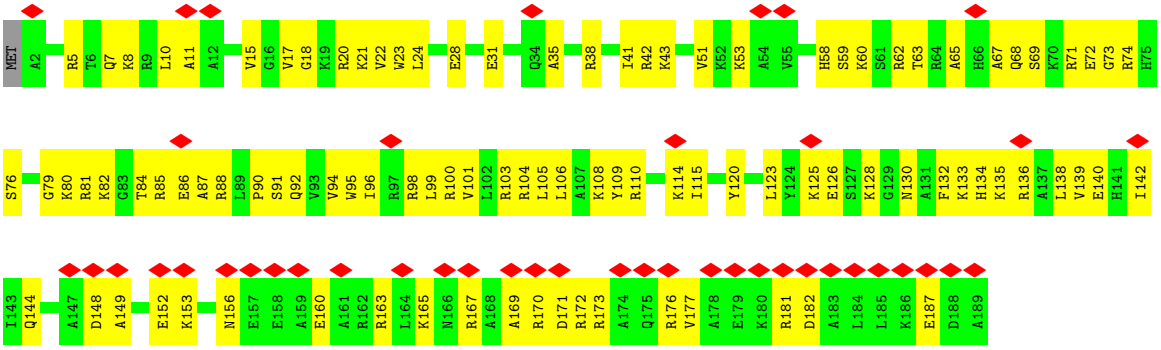
• Molecule 53: 60S ribosomal protein L18-A

Chain AQ:



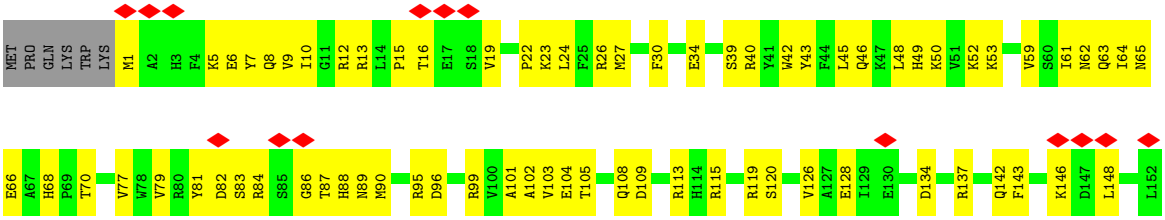
• Molecule 54: 60S ribosomal protein L19-A

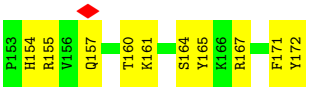
Chain AR:



• Molecule 55: 60S ribosomal protein L20

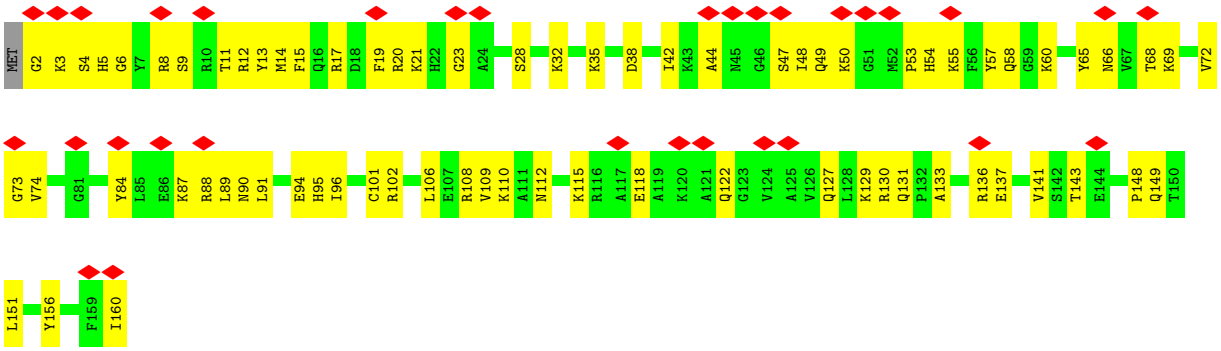
Chain AS:





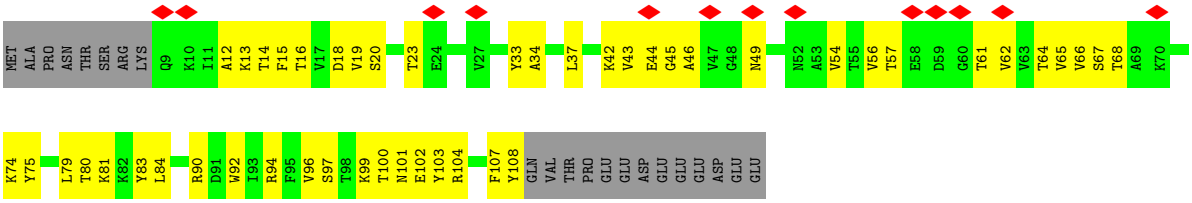
• Molecule 56: 60S ribosomal protein L21-A

Chain AT:



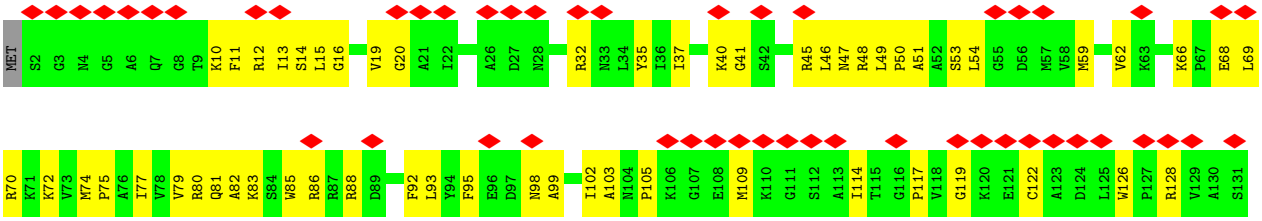
• Molecule 57: 60S ribosomal protein L22-A

Chain AU:



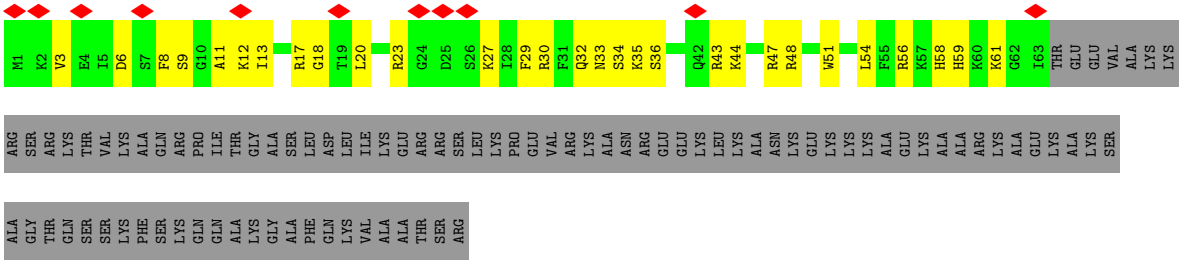
• Molecule 58: 60S ribosomal protein L23-A

Chain AV:



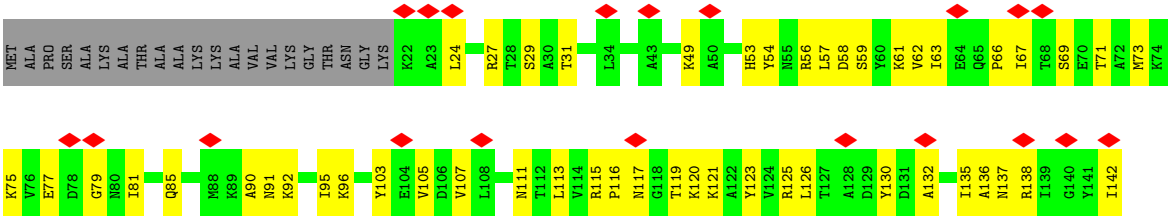
• Molecule 59: RPL24A isoform 1

Chain AW:



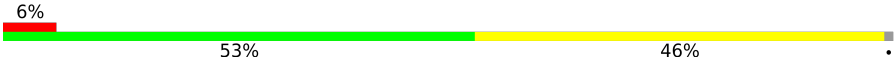
• Molecule 60: 60S ribosomal protein L25

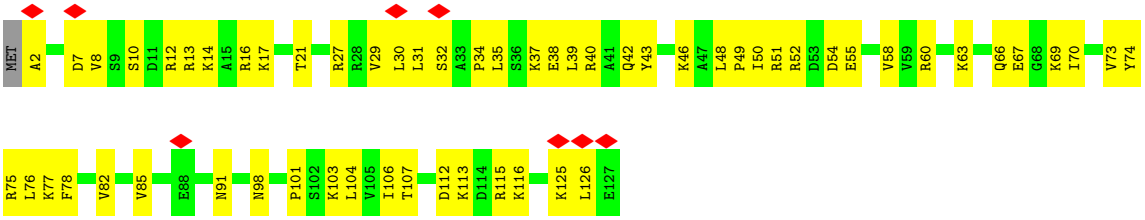
Chain AX:



• Molecule 61: 60S ribosomal protein L26-A

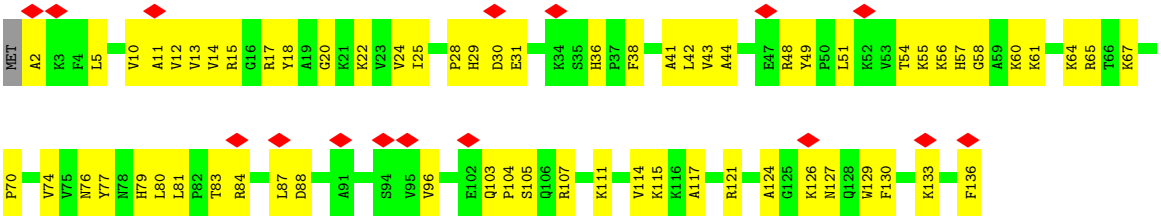
Chain AY:





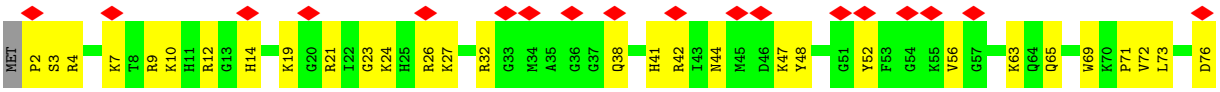
• Molecule 62: 60S ribosomal protein L27-A

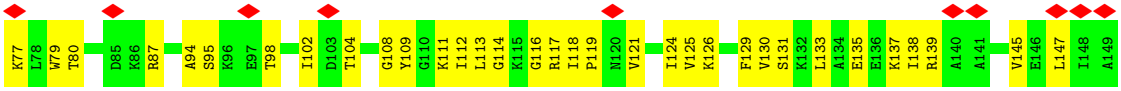
Chain AZ:



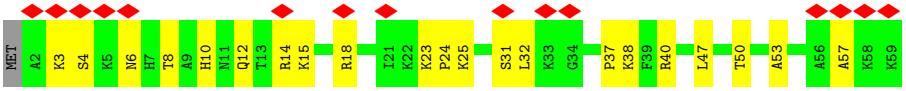
• Molecule 63: 60S ribosomal protein L28

Chain Aa:

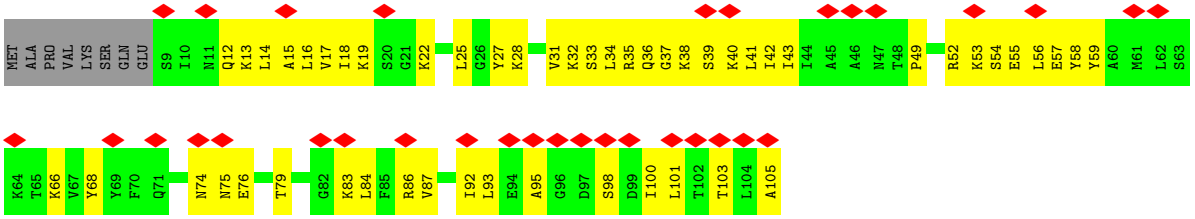




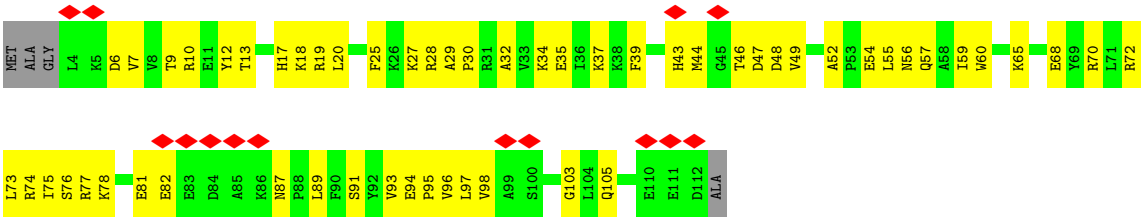
• Molecule 64: RPL29 isoform 1



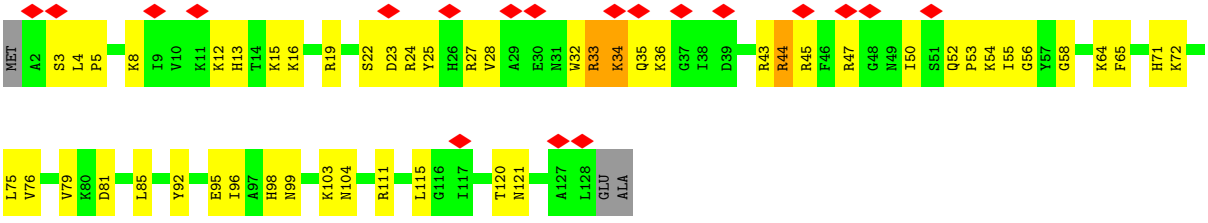
• Molecule 65: 60S ribosomal protein L30



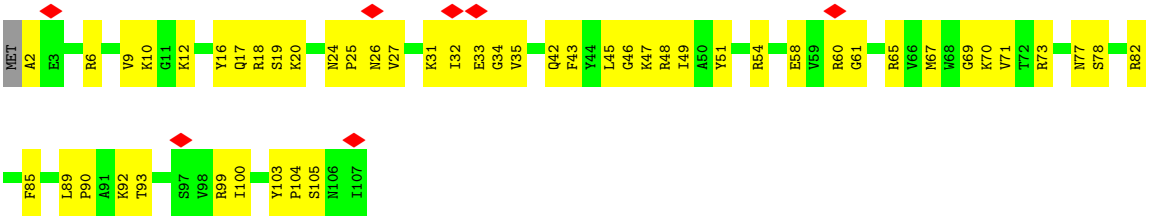
• Molecule 66: 60S ribosomal protein L31-A



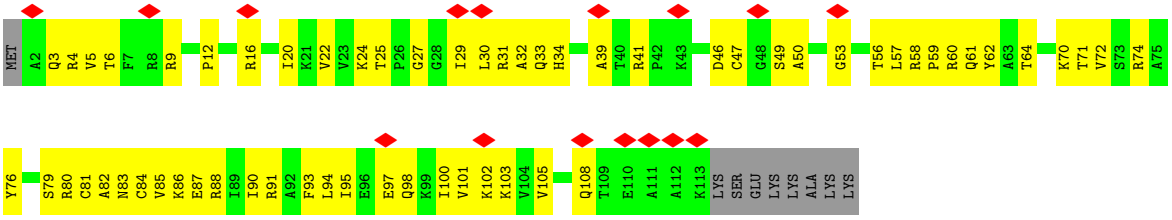
• Molecule 67: RPL32 isoform 1



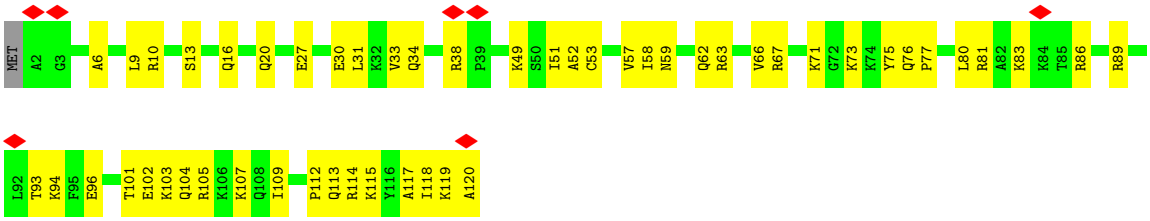
• Molecule 68: 60S ribosomal protein L33-A



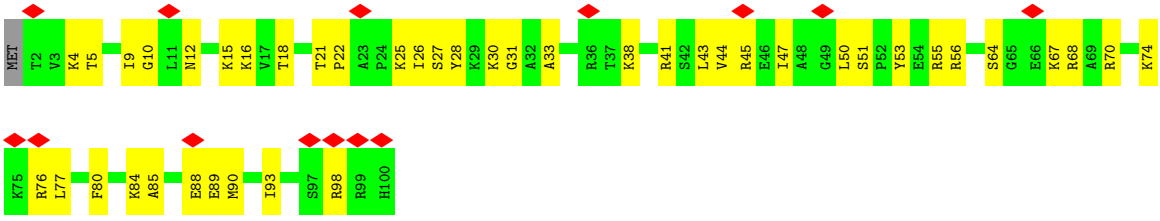
• Molecule 69: 60S ribosomal protein L34-A



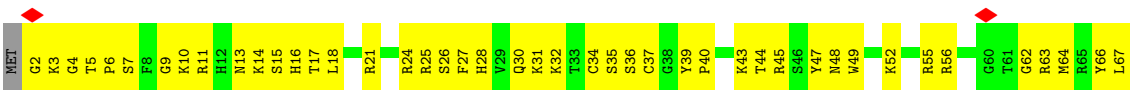
• Molecule 70: 60S ribosomal protein L35-A

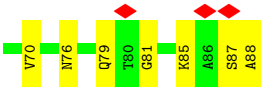


• Molecule 71: 60S ribosomal protein L36-A



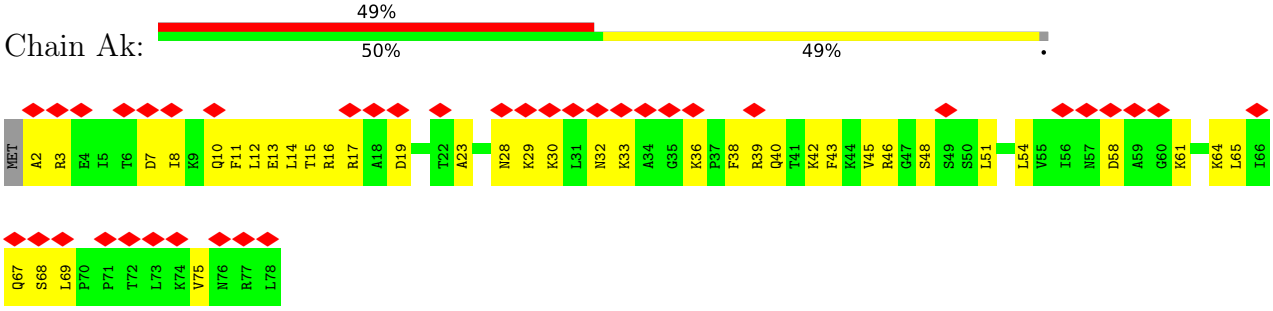
• Molecule 72: 60S ribosomal protein L37-A





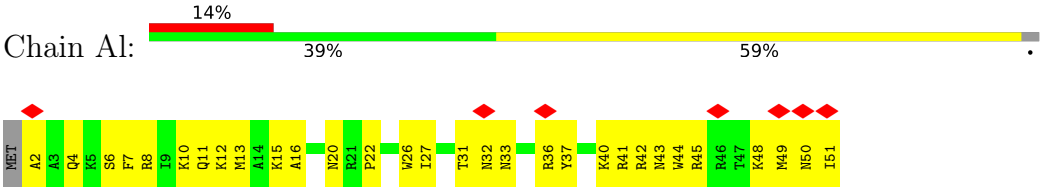
• Molecule 73: RPL38 isoform 1

Chain Ak:



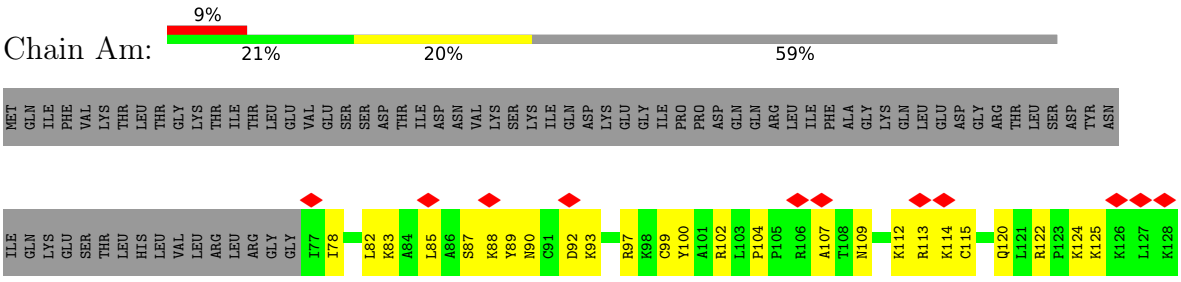
• Molecule 74: 60S ribosomal protein L39

Chain Al:



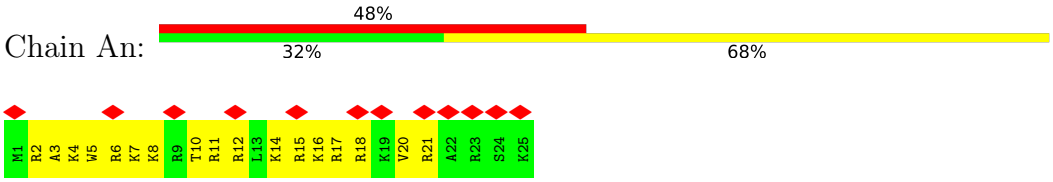
• Molecule 75: Ubiquitin-60S ribosomal protein L40

Chain Am:



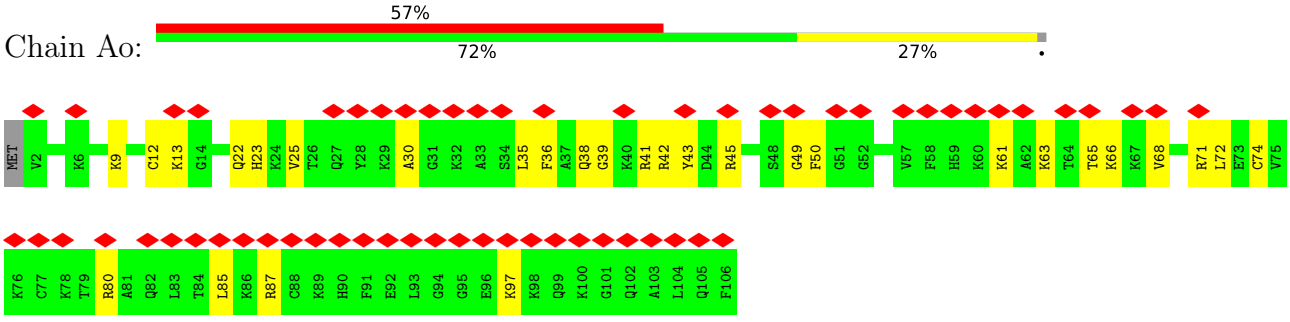
• Molecule 76: 60S ribosomal protein L41-A

Chain An:



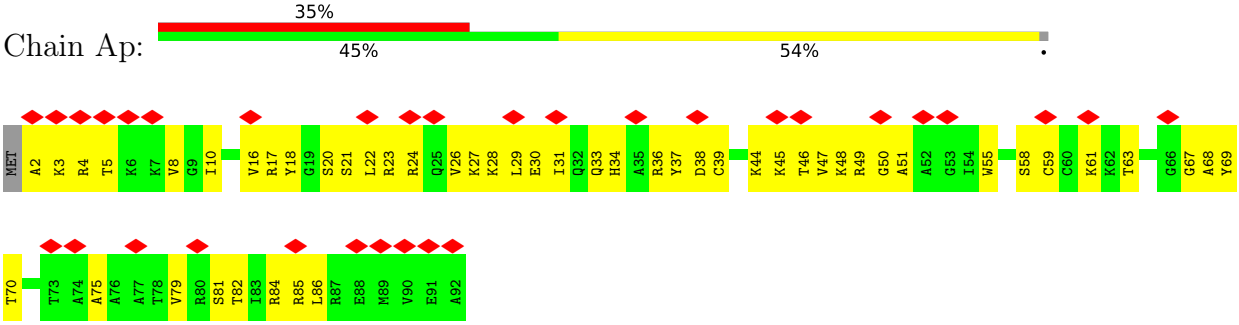
• Molecule 77: 60S ribosomal protein L42-A

Chain Ao:



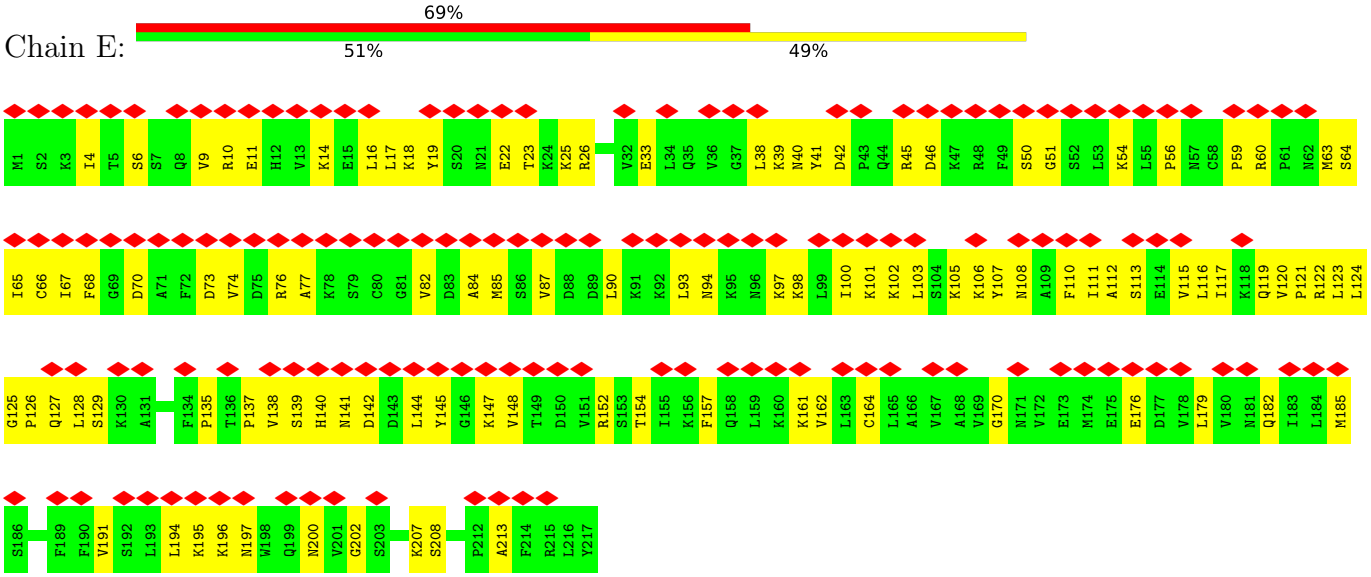
• Molecule 78: 60S ribosomal protein L43-A

Chain Ap:



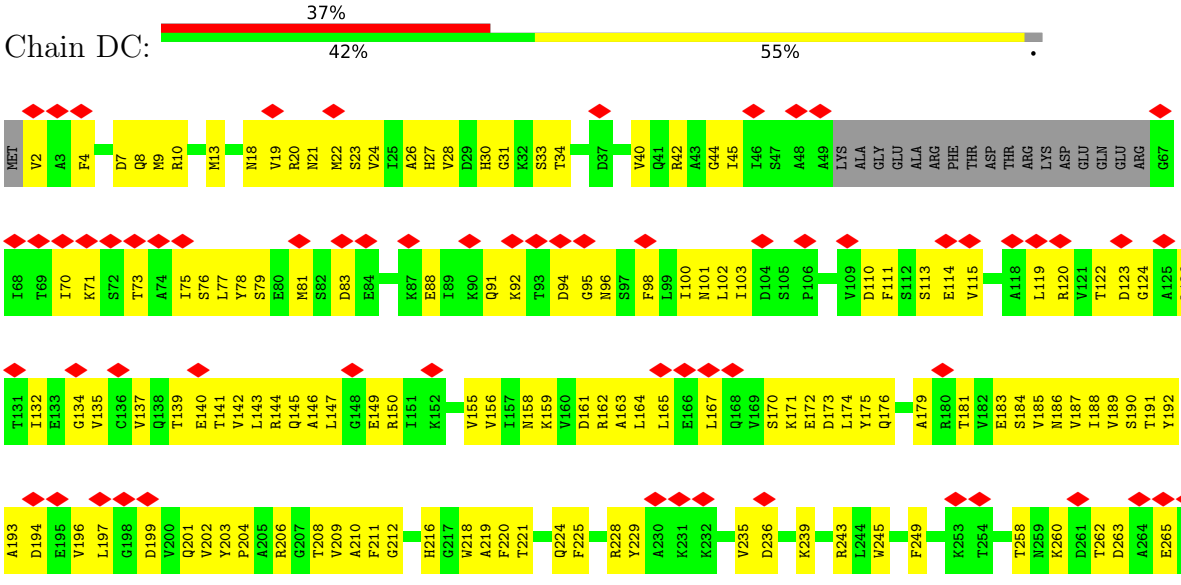
• Molecule 79: RPL1A isoform 1

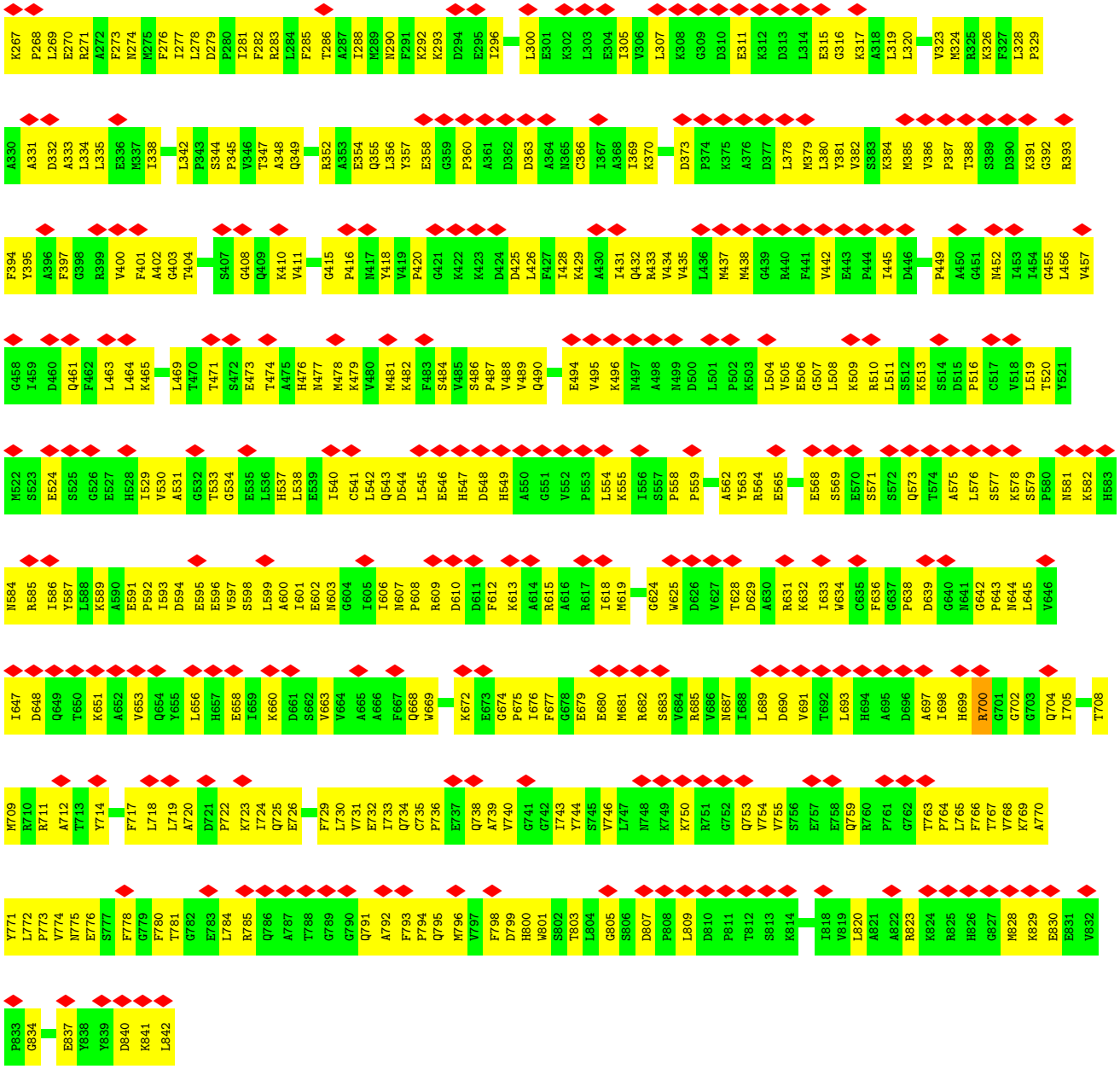
Chain E:



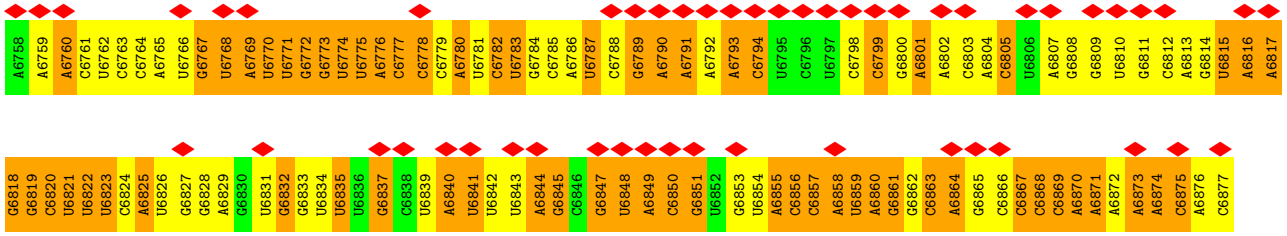
• Molecule 80: Elongation factor 2

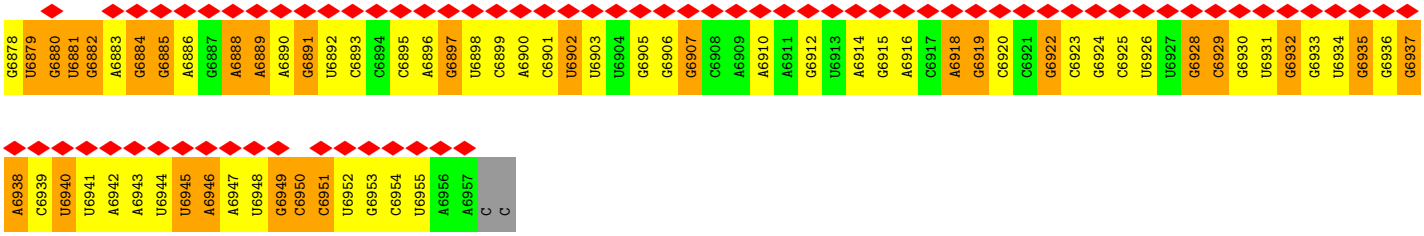
Chain DC:





• Molecule 81: TSV IRES




G6878
U6879
G6880
U6881
G6882
A6883
G6884
G6885
A6886
G6887
A6888
A6889
A6890
G6891
U6892
C6893
C6894
C6895
A6896
G6897
U6898
C6899
A6900
C6901
U6902
U6903
U6904
G6905
G6906
G6907
C6908
A6909
A6910
A6911
G6912
U6913
A6914
G6915
A6916
C6917
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A6938
C6939
U6940
U6941
A6942
A6943
U6944
U6945
A6946
A6947
U6948
G6949
C6950
C6951
U6952
G6953
C6954
U6955
A6956
A6957
C
C

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	22050	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	60	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	1.296	Depositor
Minimum map value	-0.490	Depositor
Average map value	0.007	Depositor
Map value standard deviation	0.084	Depositor
Recommended contour level	0.3	Depositor
Map size (Å)	423.99997, 423.99997, 423.99997	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.06, 1.06, 1.06	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, PSU, ZN, GDP, G7M, 4AC, HIC, UR3, B8N, MA6, OMG, 5MC, OMU, DDE, SO1, 1MA

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	BA	0.19	0/1653	0.38	0/2261
2	BB	0.19	0/1735	0.46	0/2335
3	BC	0.20	0/1665	0.37	0/2263
4	BE	0.17	0/2109	0.37	0/2839
5	BG	0.15	0/1844	0.32	0/2464
6	BH	0.16	0/1506	0.39	0/2028
7	BI	0.20	0/1514	0.46	1/2021 (0.0%)
8	BJ	0.17	0/1519	0.38	0/2035
9	BL	0.20	0/1272	0.41	0/1712
10	BN	0.21	0/1215	0.45	0/1638
11	BO	0.21	0/952	0.47	0/1279
12	BV	0.22	0/693	0.44	0/935
13	BW	0.20	0/1038	0.37	0/1395
14	BX	0.19	0/1139	0.37	0/1518
15	BY	0.16	0/1087	0.37	0/1449
16	Ba	0.26	0/782	0.56	2/1047 (0.2%)
17	Bb	0.15	0/620	0.34	0/838
18	Be	0.23	0/483	0.58	1/643 (0.2%)
19	BD	0.16	0/1759	0.37	0/2368
20	BF	0.16	0/1629	0.36	0/2202
21	BK	0.16	0/837	0.42	0/1131
22	BP	0.18	0/1012	0.38	0/1356
23	BQ	0.15	0/1125	0.33	0/1510
24	BR	0.25	0/958	0.50	0/1286
25	BS	0.15	0/1211	0.36	0/1628
26	BT	0.14	0/1113	0.34	0/1494
27	BU	0.15	0/865	0.33	0/1169
28	BZ	0.12	0/582	0.31	0/782
29	Bc	0.14	0/499	0.36	0/670
30	Bd	0.17	0/452	0.37	0/600
31	Bg	0.14	0/2454	0.35	0/3340
32	Bf	0.14	0/616	0.36	0/817

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	BM	0.12	0/943	0.47	2/1274 (0.2%)
34	B5	0.21	0/41450	0.32	0/64582
35	AA	0.27	0/1912	0.45	0/2569
36	AB	0.26	0/3139	0.41	0/4219
37	AC	0.24	0/2800	0.40	0/3790
38	A1	0.27	0/76161	0.34	0/118749
39	A3	0.23	0/2861	0.33	0/4457
40	A4	0.28	0/3724	0.34	0/5798
41	AD	0.17	0/2390	0.33	0/3225
42	AE	0.20	0/1324	0.34	0/1782
43	AF	0.25	0/1821	0.36	0/2451
44	AG	0.21	0/1830	0.38	0/2469
45	AH	0.23	0/1531	0.43	0/2062
46	AI	0.21	0/1843	0.33	0/2471
47	AJ	0.16	0/1374	0.38	0/1842
48	AL	0.22	0/1568	0.36	0/2106
49	AM	0.21	0/1068	0.33	0/1438
50	AN	0.29	0/1757	0.45	0/2354
51	AO	0.25	0/1585	0.41	0/2128
52	AP	0.24	0/1410	0.33	0/1893
53	AQ	0.24	0/1465	0.38	0/1965
54	AR	0.22	0/1538	0.42	0/2050
55	AS	0.26	0/1481	0.41	0/1990
56	AT	0.20	0/1300	0.37	0/1743
57	AU	0.19	0/812	0.38	0/1099
58	AV	0.27	0/1018	0.45	1/1369 (0.1%)
59	AW	0.23	0/533	0.39	0/707
60	AX	0.22	0/983	0.35	0/1325
61	AY	0.22	0/1004	0.38	0/1341
62	AZ	0.24	0/1118	0.39	0/1497
63	Aa	0.24	0/1204	0.34	0/1612
64	Ab	0.19	0/473	0.43	0/629
65	Ac	0.26	0/751	0.42	0/1008
66	Ad	0.24	0/904	0.39	0/1213
67	Ae	0.24	0/1041	0.52	1/1394 (0.1%)
68	Af	0.28	0/868	0.43	0/1168
69	Ag	0.23	0/890	0.44	0/1189
70	Ah	0.21	0/978	0.34	0/1301
71	Ai	0.21	0/778	0.35	0/1034
72	Aj	0.27	0/696	0.42	0/923
73	Ak	0.19	0/618	0.33	0/826
74	Al	0.27	0/443	0.55	0/588
75	Am	0.22	0/423	0.39	0/562

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
76	An	0.40	0/234	0.68	0/300
77	Ao	0.18	0/860	0.36	0/1136
78	Ap	0.25	0/701	0.44	0/934
79	E	0.16	0/1745	0.40	0/2342
80	DC	0.19	0/6521	0.44	2/8830 (0.0%)
81	EC	0.15	0/4733	0.34	0/7369
All	All	0.23	0/226542	0.36	10/332156 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	BA	0	1
67	Ae	0	2
All	All	0	3

There are no bond length outliers.

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	BM	126	TRP	CA-C-N	8.46	136.92	121.70
33	BM	126	TRP	C-N-CA	8.46	136.92	121.70
16	Ba	60	PRO	CA-N-CD	-8.07	100.70	112.00
18	Be	60	PRO	CA-N-CD	-7.33	101.73	112.00
80	DC	774	VAL	CA-C-N	-7.30	112.71	121.90
80	DC	774	VAL	C-N-CA	-7.30	112.71	121.90
67	Ae	34	LYS	CA-CB-CG	7.14	128.38	114.10
7	BI	85	PRO	CA-N-CD	-5.45	104.37	112.00
16	Ba	60	PRO	N-CD-CG	-5.19	95.41	103.20
58	AV	50	PRO	CA-N-CD	-5.09	104.87	112.00

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
67	Ae	33	ARG	Peptide
67	Ae	44	ARG	Peptide
1	BA	195	TRP	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	BA	1612	0	1623	89	0
2	BB	1709	0	1784	136	0
3	BC	1635	0	1723	111	0
4	BE	2068	0	2154	129	0
5	BG	1820	0	1918	110	0
6	BH	1481	0	1572	79	0
7	BI	1489	0	1525	117	0
8	BJ	1494	0	1573	109	0
9	BL	1244	0	1314	101	0
10	BN	1192	0	1255	79	0
11	BO	941	0	979	98	0
12	BV	684	0	672	35	0
13	BW	1021	0	1060	74	0
14	BX	1121	0	1196	62	0
15	BY	1073	0	1132	75	0
16	Ba	769	0	818	66	0
17	Bb	610	0	633	30	0
18	Be	475	0	525	37	0
19	BD	1734	0	1817	92	0
20	BF	1609	0	1675	101	0
21	BK	817	0	804	51	0
22	BP	991	0	1035	51	0
23	BQ	1105	0	1166	78	0
24	BR	948	0	991	65	0
25	BS	1192	0	1222	91	0
26	BT	1095	0	1114	78	0
27	BU	855	0	917	67	0
28	BZ	574	0	616	36	0
29	Bc	497	0	535	34	0
30	Bd	442	0	432	33	0
31	Bg	2401	0	2356	138	0
32	Bf	605	0	654	37	0
33	BM	935	0	975	57	0
34	B5	37463	0	18842	2149	0
35	AA	1878	0	1946	161	0
36	AB	3081	0	3160	192	0
37	AC	2748	0	2859	168	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	A1	68786	0	34575	3724	0
39	A3	2579	0	1304	154	0
40	A4	3353	0	1695	237	0
41	AD	2341	0	2290	115	0
42	AE	1303	0	1376	73	0
43	AF	1784	0	1862	87	0
44	AG	1798	0	1894	87	0
45	AH	1510	0	1576	105	0
46	AI	1804	0	1854	93	0
47	AJ	1353	0	1383	84	0
48	AL	1543	0	1608	107	0
49	AM	1053	0	1149	62	0
50	AN	1720	0	1779	163	0
51	AO	1555	0	1659	97	0
52	AP	1388	0	1423	80	0
53	AQ	1441	0	1543	86	0
54	AR	1521	0	1617	118	0
55	AS	1445	0	1487	80	0
56	AT	1276	0	1323	78	0
57	AU	796	0	812	39	0
58	AV	1003	0	1047	69	0
59	AW	521	0	551	30	0
60	AX	968	0	1036	43	0
61	AY	993	0	1081	56	0
62	AZ	1092	0	1155	72	0
63	Aa	1173	0	1215	72	0
64	Ab	462	0	490	22	0
65	Ac	743	0	797	61	0
66	Ad	890	0	938	53	0
67	Ae	1020	0	1090	67	0
68	Af	850	0	880	57	0
69	Ag	880	0	945	75	0
70	Ah	969	0	1078	58	0
71	Ai	771	0	849	44	0
72	Aj	681	0	687	71	0
73	Ak	612	0	682	40	0
74	Al	436	0	475	38	0
75	Am	417	0	459	27	0
76	An	233	0	281	29	0
77	Ao	847	0	914	38	0
78	Ap	694	0	738	58	0
79	E	1718	0	1811	102	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
80	DC	6419	0	6487	436	0
81	EC	4235	0	2135	191	0
82	Ao	1	0	0	0	0
83	DC	28	0	12	6	0
84	DC	1	0	0	0	0
85	DC	35	0	40	6	0
All	All	212449	0	158654	10677	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 29.

All (10677) 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)
34:B5:883:C:N4	34:B5:945:U:H3	1.53	1.05
34:B5:1175:U:H3	34:B5:1464:G:H1	1.07	1.02
15:BY:20:ARG:HH12	15:BY:22:GLN:HB2	1.24	1.01
38:A1:2276:G:H1	38:A1:2310:U:H3	1.05	1.01
38:A1:160:G:H1	38:A1:261:U:H3	1.07	1.00
38:A1:2465:G:N1	38:A1:2491:A:C6	2.28	1.00
34:B5:1679:G:H21	34:B5:1722:A:H62	1.03	1.00
34:B5:628:G:N2	34:B5:971:A:H62	1.59	0.99
38:A1:184:U:H3	38:A1:232:G:H1	1.00	0.99
34:B5:1679:G:N2	34:B5:1722:A:H62	1.60	0.98
38:A1:310:U:C2	38:A1:2779:A:N6	2.32	0.98
40:A4:121:U:H3	40:A4:132:G:H1	1.03	0.98
39:A3:2:G:H1	39:A3:119:U:H3	1.07	0.97
81:EC:6922:G:H1	81:EC:6931:U:H3	0.98	0.96
66:Ad:73:LEU:HD21	66:Ad:93:VAL:HG13	1.46	0.96
38:A1:1249:G:H2'	38:A1:1250:G:H4'	1.48	0.96
34:B5:1499:G:H1	34:B5:1508:U:H3	1.08	0.95
34:B5:875:G:N1	34:B5:952:A:C2	2.34	0.95
34:B5:875:G:H1	34:B5:952:A:H2	1.00	0.95
3:BC:89:GLN:HE22	34:B5:1146:G:H1'	1.29	0.94
45:AH:92:TYR:HB2	45:AH:142:ASP:HB2	1.48	0.94
38:A1:337:G:H1	40:A4:26:U:H3	1.13	0.94
24:BR:111:LYS:HA	24:BR:116:LYS:HA	1.50	0.94
34:B5:976:G:H1	34:B5:1023:A:HO2'	1.10	0.94
34:B5:513:U:H3	34:B5:541:A:N6	1.63	0.93
38:A1:3232:G:O6	38:A1:3255:U:C2	2.21	0.93
34:B5:69:G:H1	34:B5:82:U:H3	1.05	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:Ap:36:ARG:HE	78:Ap:47:VAL:H	1.13	0.93
11:BO:41:ARG:HH22	34:B5:916:U:H3	1.14	0.92
38:A1:3348:G:H1	38:A1:3357:U:H3	1.08	0.92
27:BU:85:ARG:HH22	34:B5:1335:U:H5'	1.34	0.92
38:A1:1805:C:H2'	38:A1:1806:A:H8	1.34	0.92
38:A1:129:U:H3	38:A1:139:G:H1	0.94	0.92
34:B5:649:U:H3	34:B5:684:A:N6	1.68	0.91
24:BR:78:ARG:HG3	24:BR:81:LYS:HE2	1.51	0.91
38:A1:2856:G:H8	46:AI:7:ARG:HH12	1.11	0.91
40:A4:104:A:H5"	72:Aj:21:ARG:HH22	1.31	0.91
34:B5:868:G:H1	34:B5:960:U:H3	1.14	0.91
38:A1:1624:G:H1	38:A1:1820:U:H3	1.09	0.91
34:B5:628:G:H21	34:B5:971:A:N6	1.68	0.91
34:B5:1679:G:H21	34:B5:1722:A:N6	1.69	0.91
34:B5:1144:U:HO2'	34:B5:1301:U:HO2'	1.17	0.90
34:B5:1335:U:H3	34:B5:1416:G:H1	1.13	0.90
4:BE:246:LEU:HD13	4:BE:250:GLU:HB3	1.54	0.90
3:BC:165:VAL:HG11	3:BC:210:THR:HA	1.53	0.90
38:A1:3189:G:H1	38:A1:3203:U:H3	1.15	0.90
38:A1:538:G:H1	38:A1:553:U:H3	0.90	0.90
27:BU:68:ARG:HH22	27:BU:77:LYS:HA	1.36	0.90
38:A1:2160:G:H2'	38:A1:2161:G:H8	1.36	0.90
2:BB:82:ARG:HB2	2:BB:103:MET:HE1	1.54	0.89
25:BS:39:GLY:H	34:B5:1566:U:H5"	1.37	0.89
34:B5:1546:G:N2	34:B5:1565:C:O2	2.03	0.89
34:B5:649:U:H3	34:B5:684:A:H62	0.93	0.89
34:B5:648:G:N1	34:B5:686:C:N3	2.20	0.88
34:B5:898:A:H62	34:B5:914:G:N2	1.71	0.88
34:B5:628:G:H21	34:B5:971:A:H62	0.91	0.88
34:B5:875:G:N1	34:B5:952:A:H2	1.68	0.88
34:B5:1546:G:N1	34:B5:1565:C:N3	2.22	0.88
80:DC:772:LEU:HB3	80:DC:775:ASN:ND2	1.89	0.88
38:A1:1238:C:N3	38:A1:1250:G:N1	2.23	0.87
34:B5:774:A:N1	34:B5:786:C:N3	2.21	0.87
38:A1:1061:A:H4'	56:AT:102:ARG:HH22	1.37	0.87
38:A1:2445:A:N1	38:A1:2503:G:C2	2.42	0.87
40:A4:8:C:H2'	40:A4:9:A:H8	1.38	0.87
34:B5:1149:G:H1	34:B5:1628:U:H3	1.20	0.87
34:B5:1267:G:N2	34:B5:1442:U:O2	2.07	0.87
38:A1:1071:U:H3	38:A1:1087:G:H1	1.22	0.87
34:B5:480:G:N1	34:B5:508:U:N3	2.24	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Ah:114:ARG:HE	70:Ah:115:LYS:H	1.19	0.86
40:A4:11:C:H1'	52:AP:6:ALA:HB2	1.58	0.86
38:A1:2315:G:H2'	38:A1:2316:G:C8	2.11	0.86
38:A1:31:C:H4'	50:AN:96:ARG:HH12	1.40	0.85
68:Af:58:GLU:OE2	68:Af:61:GLY:N	2.08	0.85
80:DC:505:VAL:HA	80:DC:508:LEU:HD13	1.56	0.85
3:BC:205:ARG:NH2	34:B5:7:G:N7	2.23	0.85
9:BL:42:PHE:HB3	9:BL:141:LYS:HZ3	1.41	0.85
33:BM:28:LEU:HB3	33:BM:136:ILE:HG21	1.58	0.85
38:A1:806:A:N7	38:A1:935:U:O2	2.09	0.85
80:DC:437:MET:HE3	80:DC:455:GLY:HA3	1.58	0.85
50:AN:183:THR:HG22	50:AN:187:ARG:HB3	1.59	0.85
78:Ap:36:ARG:HD2	78:Ap:45:LYS:HD2	1.57	0.85
34:B5:871:G:H2'	34:B5:872:G:C8	2.12	0.85
34:B5:898:A:N6	34:B5:914:G:N2	2.25	0.84
9:BL:2:SER:HA	9:BL:53:TYR:HD1	1.41	0.84
34:B5:563:U:O2	34:B5:580:A:N7	2.10	0.84
38:A1:158:G:H2'	38:A1:159:A:H8	1.38	0.84
38:A1:591:G:N2	38:A1:612:U:OP1	2.10	0.84
38:A1:2465:G:N1	38:A1:2491:A:N6	2.25	0.84
38:A1:571:U:H2'	38:A1:572:A:H8	1.40	0.84
10:BN:72:MET:N	10:BN:72:MET:SD	2.50	0.84
34:B5:1488:G:H3'	34:B5:1515:A:H61	1.43	0.84
36:AB:37:ARG:HH22	36:AB:156:SER:HB2	1.40	0.84
38:A1:1017:C:N4	38:A1:2671:A:OP2	2.10	0.84
40:A4:5:U:OP2	52:AP:62:ARG:NH1	2.10	0.84
35:AA:21:ARG:HG3	38:A1:824:C:H5"	1.60	0.84
3:BC:91:ARG:HH22	34:B5:1423:U:H3	1.23	0.83
38:A1:182:U:H3	38:A1:234:G:H1	0.85	0.83
48:AL:29:ALA:H	50:AN:201:ARG:HH22	1.25	0.83
4:BE:31:PRO:HG2	4:BE:38:LEU:HG	1.61	0.83
80:DC:432:GLN:HG3	80:DC:433:ARG:HG3	1.60	0.83
38:A1:794:U:H2'	38:A1:795:G:H8	1.43	0.83
3:BC:83:ILE:HG21	3:BC:121:VAL:HG12	1.58	0.83
81:EC:6789:G:N2	81:EC:6790:A:O2'	2.12	0.83
38:A1:524:U:O4	38:A1:568:G:N1	2.11	0.83
9:BL:8:GLN:HE22	9:BL:13:PHE:HA	1.43	0.83
38:A1:627:U:H2'	38:A1:628:A:C8	2.13	0.83
38:A1:3166:C:H2'	38:A1:3167:A:C8	2.14	0.83
34:B5:845:G:OP1	34:B5:845:G:N2	2.12	0.83
38:A1:655:C:H2'	38:A1:656:A:H8	1.42	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BB:162:ARG:HD2	2:BB:165:ARG:HH21	1.44	0.82
34:B5:144:U:H3	34:B5:171:A:H61	1.23	0.82
34:B5:1216:C:N3	34:B5:1446:A:N7	2.26	0.82
34:B5:898:A:N6	34:B5:914:G:H21	1.77	0.82
38:A1:3027:A:O2'	80:DC:27:HIS:NE2	2.12	0.82
34:B5:1229:G:N2	34:B5:1255:G:O2'	2.12	0.82
34:B5:1335:U:O2	34:B5:1416:G:N2	2.10	0.82
34:B5:1542:G:H1	34:B5:1568:C:HO2'	0.84	0.82
38:A1:1010:G:H1	38:A1:1040:A:H61	1.26	0.82
78:Ap:17:ARG:HG3	78:Ap:18:TYR:HD1	1.44	0.82
38:A1:312:C:H2'	38:A1:313:A:H8	1.45	0.82
34:B5:1595:U:O2	34:B5:1600:A:N7	2.12	0.82
38:A1:2344:U:H2'	38:A1:2345:A:H8	1.45	0.82
54:AR:167:ARG:NH1	54:AR:171:ASP:OD2	2.13	0.82
81:EC:6929:C:H2'	81:EC:6930:G:H8	1.45	0.82
2:BB:109:LYS:HG2	2:BB:113:MET:HE2	1.60	0.82
34:B5:603:U:H2'	34:B5:604:A:H8	1.44	0.82
38:A1:2435:G:OP1	50:AN:20:ARG:NH2	2.13	0.82
80:DC:565:GLU:HB2	80:DC:681:MET:HE1	1.61	0.82
36:AB:238:LEU:HB3	36:AB:242:THR:HG21	1.62	0.82
38:A1:3232:G:O6	38:A1:3255:U:O2	1.98	0.82
47:AJ:129:VAL:HG12	47:AJ:131:MET:HE3	1.61	0.82
34:B5:1339:C:O2'	34:B5:1341:A:N7	2.13	0.81
34:B5:1774:G:N7	76:An:4:LYS:NZ	2.29	0.81
4:BE:221:ARG:HD3	4:BE:223:ASN:HD21	1.44	0.81
13:BW:23:ARG:HA	13:BW:65:LEU:HB2	1.61	0.81
34:B5:1709:C:H4'	34:B5:1710:U:H5'	1.62	0.81
38:A1:841:A:H4'	54:AR:126:GLU:HG2	1.59	0.81
81:EC:6936:G:N7	81:EC:6938:A:N6	2.27	0.81
38:A1:2844:C:H42	38:A1:2898:G:H22	1.28	0.81
81:EC:6922:G:N2	81:EC:6931:U:O2	2.12	0.81
34:B5:1267:G:H1	34:B5:1442:U:H3	0.87	0.81
34:B5:1295:G:H1	34:B5:1302:U:H3	1.27	0.81
39:A3:79:A:H62	39:A3:101:G:H21	1.27	0.81
38:A1:299:G:H1	38:A1:316:U:H3	1.26	0.81
38:A1:634:C:H4'	67:Ae:47:ARG:HH12	1.44	0.81
38:A1:1630:U:H3	38:A1:1812:G:H2'	1.45	0.81
34:B5:1297:G:N2	34:B5:1300:A:OP2	2.14	0.81
81:EC:6929:C:H2'	81:EC:6930:G:C8	2.15	0.81
81:EC:6878:G:H3'	81:EC:6879:U:H5'	1.61	0.81
37:AC:291:ASN:HA	37:AC:296:GLN:HE21	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BG:202:ARG:NH2	34:B5:127:G:N7	2.29	0.80
38:A1:2468:A:N6	38:A1:2477:G:O2'	2.14	0.80
1:BA:84:ARG:NH1	1:BA:203:PHE:O	2.13	0.80
19:BD:179:GLN:HB3	34:B5:579:A:H62	1.44	0.80
38:A1:50:U:H2'	38:A1:51:A:H8	1.46	0.80
38:A1:2138:A:HO2'	72:Aj:2:GLY:N	1.80	0.80
65:Ac:32:LYS:HA	65:Ac:35:ARG:HG2	1.63	0.80
81:EC:6788:C:H3'	81:EC:6805:C:H42	1.45	0.80
2:BB:192:VAL:HA	2:BB:195:LYS:HE2	1.62	0.80
3:BC:147:ASN:ND2	12:BV:2:GLU:O	2.14	0.80
22:BP:86:VAL:HG22	22:BP:89:MET:HG2	1.64	0.80
38:A1:98:G:N7	48:AL:13:HIS:NE2	2.29	0.80
38:A1:655:C:H2'	38:A1:656:A:C8	2.16	0.80
38:A1:1881:A:H2'	38:A1:1882:G:H8	1.45	0.80
39:A3:49:G:N2	39:A3:52:G:O6	2.15	0.80
14:BX:99:ASN:HD21	80:DC:506:GLU:HA	1.47	0.80
39:A3:43:U:O2'	41:AD:152:ARG:NH2	2.15	0.80
19:BD:64:ARG:NH2	21:BK:91:TYR:O	2.14	0.80
34:B5:1216:C:O2	34:B5:1446:A:N6	2.14	0.80
38:A1:3375:A:H5'	66:Ad:18:LYS:HD2	1.63	0.80
10:BN:108:ASP:HB3	10:BN:111:ALA:HB3	1.63	0.80
25:BS:87:ASN:OD1	34:B5:1546:G:N2	2.13	0.80
34:B5:1354:G:N2	34:B5:1372:U:O2'	2.13	0.80
6:BH:178:GLY:HA3	34:B5:641:G:H21	1.45	0.80
10:BN:64:ARG:NH1	10:BN:64:ARG:O	2.15	0.80
22:BP:122:THR:HG21	34:B5:1454:G:H4'	1.64	0.80
81:EC:6860:A:N6	81:EC:6870:A:O2'	2.14	0.80
34:B5:984:G:H1	34:B5:1017:U:H3	1.26	0.79
38:A1:1310:G:H2'	38:A1:1311:G:C8	2.17	0.79
38:A1:2986:U:H2'	38:A1:2987:A:H8	1.46	0.79
34:B5:1467:C:O2	34:B5:1601:G:N2	2.15	0.79
34:B5:1120:U:H3	34:B5:1127:G:H1	1.27	0.79
34:B5:1187:PSU:H2'	34:B5:1188:G:H8	1.46	0.79
2:BB:136:ARG:HH22	34:B5:884:A:H4'	1.48	0.79
36:AB:152:LYS:HZ3	36:AB:192:VAL:HB	1.47	0.79
38:A1:793:C:O2'	63:Aa:7:LYS:NZ	2.15	0.79
47:AJ:88:GLU:HB2	47:AJ:90:GLN:HE21	1.48	0.79
58:AV:93:LEU:HB3	59:AW:20:LEU:HB3	1.65	0.79
34:B5:1354:G:H22	34:B5:1372:U:HO2'	1.30	0.79
37:AC:138:ARG:HH21	37:AC:240:PRO:HD2	1.48	0.79
38:A1:813:G:O2'	72:Aj:45:ARG:NH2	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3042:U:OP2	38:A1:3092:C:N4	2.14	0.79
81:EC:6789:G:N2	81:EC:6881:U:OP1	2.16	0.79
20:BF:111:VAL:HA	20:BF:114:ILE:HG12	1.64	0.79
38:A1:1579:C:N4	38:A1:1581:C:O2	2.16	0.79
44:AG:246:MET:HA	44:AG:249:ARG:HD3	1.65	0.79
80:DC:162:ARG:NH2	83:DC:901:GDP:N3	2.31	0.79
38:A1:754:G:N2	38:A1:778:U:O2	2.15	0.79
79:E:40:ASN:OD1	79:E:200:ASN:ND2	2.16	0.79
17:Bb:51:GLN:NE2	34:B5:870:C:O2	2.16	0.79
34:B5:486:G:N1	34:B5:501:U:N3	2.30	0.79
34:B5:648:G:N2	34:B5:686:C:O2	2.09	0.79
38:A1:1497:C:H2'	38:A1:1498:A:H8	1.47	0.79
38:A1:1635:G:N2	38:A1:1638:A:OP2	2.12	0.79
34:B5:513:U:H3	34:B5:541:A:H62	0.81	0.78
38:A1:1695:U:O2'	38:A1:1749:A:N1	2.15	0.78
38:A1:1783:U:H2'	38:A1:1784:G:H8	1.46	0.78
38:A1:1785:U:H2'	38:A1:1786:G:C8	2.18	0.78
38:A1:3174:A:H62	68:Af:54:ARG:HH22	1.30	0.78
31:Bg:131:ILE:HB	31:Bg:144:LEU:HB2	1.66	0.78
34:B5:255:U:H2'	34:B5:256:A:H8	1.48	0.78
34:B5:481:A:H5'	34:B5:498:G:H22	1.46	0.78
34:B5:1220:C:H2'	34:B5:1221:A:H8	1.46	0.78
34:B5:1588:G:N2	34:B5:1608:U:O2	2.14	0.78
38:A1:745:C:H2'	38:A1:746:A:H8	1.47	0.78
38:A1:947:G:H5"	67:Ae:55:ILE:HD11	1.64	0.78
19:BD:64:ARG:HH22	21:BK:92:ILE:HG13	1.47	0.78
34:B5:1081:A:O2'	34:B5:1083:G:N7	2.15	0.78
35:AA:70:ARG:HG3	38:A1:1650:G:H5"	1.64	0.78
39:A3:99:G:OP2	55:AS:53:LYS:NZ	2.13	0.78
72:Aj:34:CYS:SG	72:Aj:35:SER:N	2.56	0.78
34:B5:118:U:O2	34:B5:298:C:N4	2.17	0.78
38:A1:806:A:N7	38:A1:935:U:C2	2.51	0.78
38:A1:1119:C:H2'	38:A1:1120:A:H8	1.48	0.78
38:A1:1709:C:H4'	62:AZ:15:ARG:HH22	1.49	0.78
38:A1:3138:U:H2'	38:A1:3139:A:H8	1.46	0.78
2:BB:121:ILE:HD11	2:BB:165:ARG:HD3	1.65	0.78
21:BK:77:ARG:HH22	21:BK:88:PRO:HA	1.48	0.78
38:A1:2094:C:H2'	38:A1:2095:G:H8	1.48	0.78
3:BC:65:GLU:OE2	3:BC:67:GLN:NE2	2.16	0.78
34:B5:480:G:N2	34:B5:508:U:O2	2.16	0.78
38:A1:1468:A:N1	38:A1:1881:A:O2'	2.15	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2193:U:H5”	38:A1:2194:G:H5’	1.66	0.78
4:BE:47:PHE:HA	4:BE:51:ARG:HB2	1.65	0.78
11:BO:18:ARG:NH1	11:BO:29:HIS:O	2.15	0.78
79:E:122:ARG:HG3	79:E:123:LEU:HG	1.66	0.78
81:EC:6780:A:N6	81:EC:6816:A:OP1	2.10	0.78
5:BG:31:ARG:NH2	34:B5:1681:A:O2’	2.16	0.78
34:B5:996:U:O2	34:B5:1008:G:O6	2.02	0.78
38:A1:3009:G:H5”	51:AO:66[A]:LYS:HD2	1.65	0.78
20:BF:189:THR:HB	20:BF:192:GLU:HG3	1.65	0.77
38:A1:541:U:H2’	38:A1:542:G:H8	1.49	0.77
38:A1:753:C:H2’	38:A1:754:G:H8	1.47	0.77
34:B5:1290:PSU:H2’	34:B5:1291:G:H8	1.49	0.77
38:A1:2434:U:N3	38:A1:2594:C:OP2	2.15	0.77
9:BL:38:ALA:O	34:B5:246:G:N2	2.17	0.77
38:A1:172:G:O2’	38:A1:244:G:O6	2.02	0.77
34:B5:343:C:H2’	34:B5:344:A:H8	1.49	0.77
38:A1:3158:G:O6	38:A1:3292:A:N1	2.18	0.77
65:Ac:49:PRO:HG2	65:Ac:52:ARG:HB2	1.65	0.77
19:BD:74:GLN:HB2	19:BD:84:ILE:HG21	1.65	0.77
38:A1:899:U:H2’	38:A1:900:G:H8	1.50	0.77
57:AU:34:ALA:HA	57:AU:37:LEU:HD12	1.66	0.77
34:B5:16:G:H21	34:B5:1138:A:H62	1.31	0.77
36:AB:348:ARG:HD3	38:A1:3037:U:H5”	1.66	0.77
38:A1:99:A:P	50:AN:194:GLN:HE22	2.07	0.77
38:A1:733:G:N2	38:A1:736:A:OP2	2.15	0.77
38:A1:754:G:H1	38:A1:778:U:H3	1.32	0.77
38:A1:1472:U:H2’	38:A1:1473:G:H8	1.50	0.77
38:A1:1521:G:O5’	60:AX:115:ARG:NH2	2.18	0.77
38:A1:2444:C:N3	38:A1:2445:A:N6	2.33	0.77
37:AC:93:MET:O	38:A1:658:G:N2	2.17	0.77
38:A1:674:G:OP1	53:AQ:105:ARG:NH2	2.17	0.77
38:A1:1238:C:O2	38:A1:1250:G:N2	2.18	0.77
20:BF:147:THR:HG23	29:Bc:45:LYS:HE3	1.65	0.77
34:B5:226:A:H1’	34:B5:837:G:H1	1.49	0.77
25:BS:112:ASP:OD1	25:BS:115:ARG:NH2	2.18	0.77
34:B5:775:G:O6	34:B5:785:U:O2	2.03	0.77
37:AC:35:VAL:HG21	37:AC:244:LEU:HD11	1.66	0.77
38:A1:2285:C:OP2	38:A1:2286:U:O2’	2.03	0.77
37:AC:98:ARG:NH2	38:A1:804:C:OP1	2.18	0.76
38:A1:3034:C:H2’	45:AH:122:LYS:HD3	1.67	0.76
4:BE:180:LEU:HG	4:BE:231:GLN:HA	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:310:U:N3	38:A1:2779:A:N6	2.32	0.76
38:A1:1717:U:H2'	38:A1:1718:G:C8	2.19	0.76
40:A4:121:U:O2	40:A4:132:G:N2	2.16	0.76
6:BH:141:ARG:NE	13:BW:51:GLU:OE1	2.19	0.76
34:B5:213:A:H3'	34:B5:214:G:H8	1.50	0.76
34:B5:442:C:O2'	34:B5:525:A:N1	2.18	0.76
34:B5:1377:U:O2'	34:B5:1379:C:OP2	2.02	0.76
5:BG:25:ARG:HH21	5:BG:28:PHE:HE2	1.33	0.76
34:B5:366:A:OP1	34:B5:758:U:O2'	2.03	0.76
38:A1:68:C:N4	38:A1:314:U:O2'	2.19	0.76
47:AJ:87:LYS:HD2	47:AJ:92:ARG:HH12	1.50	0.76
8:BJ:175:ARG:HH12	34:B5:538:A:H8	1.32	0.76
34:B5:273:G:O6	34:B5:283:U:O2	2.02	0.76
34:B5:849:C:H5"	54:AR:170:ARG:HH21	1.49	0.76
34:B5:1628:U:H2'	34:B5:1629:G:H8	1.50	0.76
28:BZ:103:ARG:HH22	81:EC:6863:C:H1'	1.51	0.76
40:A4:9:A:H2'	40:A4:10:A:H8	1.51	0.76
40:A4:154:C:H2'	40:A4:155:A:H8	1.50	0.76
64:Ab:8:THR:HG22	64:Ab:10:HIS:H	1.51	0.76
80:DC:563:TYR:O	80:DC:564:ARG:NH1	2.18	0.76
34:B5:603:U:H2'	34:B5:604:A:C8	2.21	0.76
65:Ac:18:ILE:HG23	65:Ac:19:LYS:HD2	1.68	0.76
38:A1:866:A:N6	38:A1:893:C:O2	2.18	0.76
38:A1:970:A:OP1	64:Ab:18:ARG:NH1	2.18	0.76
38:A1:1322:U:H2'	38:A1:1323:G:C8	2.20	0.76
38:A1:2211:U:H3	38:A1:2234:G:H1	1.32	0.76
4:BE:30:ARG:NH2	34:B5:298:C:O2'	2.18	0.75
7:BI:73:SER:N	34:B5:256:A:O2'	2.16	0.75
20:BF:47:SER:H	20:BF:128:ASN:HD21	1.34	0.75
34:B5:1212:G:N2	34:B5:1241:G:O6	2.19	0.75
38:A1:31:C:O2'	50:AN:96:ARG:NH2	2.18	0.75
38:A1:837:A:OP2	78:Ap:4:ARG:NE	2.17	0.75
38:A1:1208:U:H5'	75:Am:109:ASN:HD21	1.51	0.75
79:E:126:PRO:HA	81:EC:6773:G:H4'	1.67	0.75
80:DC:571:SER:O	80:DC:589:LYS:NZ	2.18	0.75
4:BE:19:LEU:HD11	4:BE:108:ARG:HD2	1.67	0.75
20:BF:122:ASN:HB2	20:BF:129:PRO:HG3	1.68	0.75
21:BK:31:LYS:NZ	21:BK:36:ASP:OD1	2.19	0.75
38:A1:236:G:H2'	38:A1:237:G:C8	2.21	0.75
38:A1:3166:C:H2'	38:A1:3167:A:H8	1.49	0.75
11:BO:17:ALA:HA	11:BO:30:VAL:HA	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BO:126:THR:HG21	34:B5:989:U:H1'	1.68	0.75
34:B5:973:A:H2'	34:B5:974:A:H8	1.51	0.75
38:A1:110:G:O3'	48:AL:91:ARG:NH1	2.20	0.75
38:A1:1083:G:H2'	38:A1:1084:A:C8	2.20	0.75
38:A1:1779:C:N4	38:A1:2102:U:OP1	2.19	0.75
38:A1:2896:A:OP1	75:Am:102:ARG:NH1	2.20	0.75
42:AE:40:LEU:HD12	42:AE:84:VAL:HB	1.68	0.75
80:DC:385:MET:HE1	80:DC:513:LYS:HG3	1.68	0.75
14:BX:99:ASN:O	80:DC:509:LYS:NZ	2.19	0.75
80:DC:171:LYS:O	80:DC:274:ASN:ND2	2.16	0.75
1:BA:109:ASN:ND2	34:B5:1293:U:O2	2.20	0.75
2:BB:165:ARG:NH1	34:B5:946:U:OP1	2.17	0.75
7:BI:84:HIS:HD2	7:BI:100:ALA:HB2	1.51	0.75
38:A1:1785:U:H2'	38:A1:1786:G:H8	1.52	0.75
38:A1:2448:G:N2	38:A1:2498:U:O2	2.15	0.75
80:DC:415:GLY:O	80:DC:477:ASN:ND2	2.20	0.75
9:BL:57:LYS:HB3	9:BL:131:ILE:HD11	1.68	0.75
38:A1:34:A:OP1	50:AN:73:ARG:NH2	2.20	0.75
38:A1:1152:G:N2	38:A1:1152:G:OP2	2.20	0.75
38:A1:2103:U:H2'	38:A1:2104:A:H8	1.51	0.75
54:AR:98:ARG:NH1	54:AR:132:PHE:O	2.20	0.75
81:EC:6764:C:H2'	81:EC:6765:A:C8	2.22	0.75
34:B5:875:G:O6	34:B5:952:A:N1	2.20	0.75
34:B5:1442:U:H5"	80:DC:631:ARG:HH12	1.49	0.75
38:A1:1307:G:H4'	38:A1:1308:A:H5'	1.68	0.75
40:A4:8:C:H2'	40:A4:9:A:C8	2.20	0.75
59:AW:23:ARG:HH22	59:AW:27:LYS:HD2	1.52	0.75
71:Ai:5:THR:HG23	71:Ai:12:ASN:HB2	1.67	0.75
34:B5:431:C:H2'	34:B5:432:G:H8	1.52	0.75
38:A1:242:C:H2'	38:A1:243:G:C8	2.22	0.75
3:BC:139:ILE:HD11	3:BC:218:ILE:HD12	1.67	0.74
3:BC:209:ASN:ND2	34:B5:1298:U:O2	2.18	0.74
26:BT:70:GLN:HB2	26:BT:121:GLY:H	1.52	0.74
35:AA:184:ARG:HH22	38:A1:1792:C:H4'	1.51	0.74
38:A1:2812:C:H2'	38:A1:2813:A:H8	1.51	0.74
41:AD:49:TYR:HB3	41:AD:64:ILE:HD11	1.68	0.74
31:Bg:150:TRP:HB2	31:Bg:174:ASN:HD22	1.51	0.74
34:B5:1369:U:O2	34:B5:1373:C:N4	2.19	0.74
38:A1:584:G:H2'	38:A1:585:A:H8	1.52	0.74
38:A1:806:A:C8	38:A1:935:U:N3	2.55	0.74
38:A1:1634:G:N7	62:AZ:17:ARG:NH2	2.35	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:Ai:50:LEU:HB3	71:Ai:55:ARG:HE	1.51	0.74
34:B5:966:A:N6	34:B5:967:A:N6	2.34	0.74
34:B5:1585:U:H3	34:B5:1611:A:H2	1.33	0.74
38:A1:845:G:O2'	38:A1:848:A:N6	2.20	0.74
38:A1:903:U:HO2'	38:A1:1536:G:HO2'	1.35	0.74
38:A1:1083:G:H2'	38:A1:1084:A:H8	1.52	0.74
38:A1:1203:A:H2'	38:A1:1204:A:H8	1.52	0.74
81:EC:6849:A:N6	81:EC:6880:G:O4'	2.19	0.74
19:BD:121:GLY:HA2	19:BD:124:ARG:HE	1.51	0.74
24:BR:41:ILE:HB	24:BR:47:ARG:HG2	1.69	0.74
34:B5:787:G:H3'	34:B5:788:A:H8	1.52	0.74
3:BC:53:ILE:HA	3:BC:56:ILE:HD13	1.69	0.74
16:Ba:3:LYS:NZ	34:B5:1030:A:OP1	2.18	0.74
35:AA:193:ARG:HH22	38:A1:2173:U:H4'	1.51	0.74
16:Ba:13:LYS:NZ	34:B5:1076:A:O2'	2.19	0.74
25:BS:41:ARG:NH2	26:BT:36:ILE:O	2.20	0.74
38:A1:597:G:OP2	43:AF:37:ASN:ND2	2.20	0.74
38:A1:1717:U:O2	38:A1:1727:G:N2	2.18	0.74
39:A3:74:C:H2'	39:A3:75:G:C8	2.22	0.74
6:BH:73:VAL:HG22	6:BH:77:LEU:HB2	1.70	0.74
19:BD:9:ARG:NH1	34:B5:1514:U:O2	2.19	0.74
30:Bd:32:ARG:NH2	34:B5:1597:A:OP2	2.21	0.74
32:Bf:139:LEU:HD23	32:Bf:148:TYR:HB2	1.70	0.74
38:A1:2745:G:N2	38:A1:2748:A:OP2	2.19	0.74
38:A1:2988:C:OP1	51:AO:68[A]:ARG:NH1	2.20	0.74
38:A1:3092:C:O2'	38:A1:3094:A:OP2	2.05	0.74
79:E:6:SER:O	79:E:10:ARG:NH1	2.19	0.74
2:BB:46:THR:OG1	2:BB:64:ARG:NH1	2.21	0.74
11:BO:40:ALA:HB2	11:BO:70:LYS:HD3	1.70	0.74
11:BO:129:LYS:NZ	34:B5:1009:U:OP1	2.20	0.74
62:AZ:5:LEU:HD21	65:Ac:35:ARG:HH21	1.53	0.74
80:DC:8:GLN:HE21	80:DC:9:MET:HE3	1.52	0.74
80:DC:564:ARG:HB2	80:DC:725:GLN:HB2	1.70	0.74
2:BB:36:SER:N	2:BB:231:LEU:O	2.20	0.74
22:BP:108:ARG:HG2	22:BP:111:MET:HE1	1.69	0.74
34:B5:1773:4AC:H5"	76:An:3:ALA:HB3	1.70	0.74
38:A1:1390:A:N6	38:A1:1418:A:O2'	2.20	0.74
40:A4:80:A:O2'	40:A4:83:C:N4	2.19	0.74
41:AD:39:GLN:NE2	41:AD:46:THR:O	2.21	0.74
80:DC:189:VAL:HA	80:DC:192:TYR:HB2	1.69	0.74
5:BG:44:GLU:O	5:BG:119:GLN:NE2	2.21	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:19:ARG:NH1	36:AB:232:ARG:O	2.20	0.73
62:AZ:49:TYR:HD1	62:AZ:133:LYS:HA	1.53	0.73
80:DC:83:ASP:OD1	80:DC:96:ASN:ND2	2.20	0.73
36:AB:20:LYS:NZ	38:A1:3139:A:O2'	2.20	0.73
38:A1:1717:U:H2'	38:A1:1718:G:H8	1.49	0.73
8:BJ:151:ASP:O	8:BJ:154:LYS:NZ	2.18	0.73
18:Be:26:LYS:HD2	18:Be:27:PRO:HD2	1.70	0.73
20:BF:145:ASP:HB3	20:BF:217:LEU:HD21	1.71	0.73
45:AH:49:ASN:O	45:AH:51:GLN:NE2	2.21	0.73
70:Ah:76:GLN:O	70:Ah:81:ARG:NH2	2.20	0.73
2:BB:30:PHE:N	2:BB:46:THR:O	2.21	0.73
9:BL:152:GLN:HA	10:BN:133:ALA:HB2	1.70	0.73
40:A4:40:A:OP2	40:A4:103:G:N1	2.19	0.73
15:BY:11:LYS:NZ	34:B5:776:G:O6	2.18	0.73
29:Bc:18:ARG:NH1	29:Bc:24:GLY:O	2.21	0.73
38:A1:129:U:H2'	38:A1:130:A:C8	2.24	0.73
38:A1:2457:G:O2'	38:A1:2481:G:N7	2.21	0.73
75:Am:99:CYS:HB3	75:Am:115:CYS:HB3	1.70	0.73
77:Ao:38:GLN:HG3	77:Ao:41:ARG:HH21	1.53	0.73
2:BB:111:ARG:HD3	16:Ba:68:TYR:HB3	1.70	0.73
28:BZ:56:THR:O	28:BZ:103:ARG:NH2	2.21	0.73
38:A1:158:G:H2'	38:A1:159:A:C8	2.21	0.73
38:A1:1942:U:OP2	54:AR:74:ARG:NE	2.20	0.73
38:A1:2156:C:H2'	38:A1:2178:A:H61	1.52	0.73
34:B5:1202:A:H1'	34:B5:1207:C:H42	1.53	0.73
38:A1:629:U:H2'	38:A1:630:A:H8	1.53	0.73
38:A1:1434:G:OP1	38:A1:1437:C:N4	2.22	0.73
80:DC:40:VAL:HG12	80:DC:77:LEU:HD21	1.70	0.73
31:Bg:236:ALA:O	31:Bg:261:LYS:NZ	2.20	0.73
34:B5:1397:U:O2	34:B5:1401:A:N6	2.19	0.73
34:B5:1777:G:H2'	34:B5:1778:G:C8	2.24	0.73
37:AC:90:PHE:O	37:AC:98:ARG:NH1	2.21	0.73
80:DC:607:ASN:HB3	80:DC:610:ASP:HB2	1.70	0.73
36:AB:116:ARG:HB3	36:AB:175:LYS:HG2	1.71	0.73
38:A1:627:U:H2'	38:A1:628:A:H8	1.53	0.73
38:A1:1803:C:H2'	38:A1:1804:A:C8	2.23	0.73
38:A1:2116:G:OP1	38:A1:2118:C:N4	2.21	0.73
38:A1:3308:C:N3	52:AP:69:ARG:NH2	2.35	0.73
80:DC:490:GLN:HB3	80:DC:529:ILE:HD11	1.69	0.73
38:A1:593:C:OP2	42:AE:19:LYS:NZ	2.20	0.72
38:A1:2357:A:H2'	38:A1:2358:A:H8	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:BY:4:ALA:O	15:BY:32:ARG:NH1	2.22	0.72
2:BB:58:SER:OG	2:BB:62:LYS:NZ	2.22	0.72
36:AB:367:LYS:NZ	38:A1:3086:A:O5'	2.23	0.72
38:A1:2720:G:OP2	53:AQ:180:ARG:NH1	2.21	0.72
4:BE:254:ARG:NH1	34:B5:787:G:OP1	2.23	0.72
29:Bc:42:ARG:NH1	29:Bc:61:ARG:O	2.23	0.72
38:A1:1712:G:N2	38:A1:1732:U:O4	2.16	0.72
31:Bg:221:MET:HE2	31:Bg:223:TRP:HE1	1.54	0.72
35:AA:181:LYS:HB3	78:Ap:18:TYR:HE2	1.55	0.72
38:A1:1489:A:OP2	38:A1:1838:G:N1	2.19	0.72
38:A1:2599:U:H5"	50:AN:70:ASN:HD21	1.55	0.72
38:A1:2882:U:H2'	38:A1:2883:U:C6	2.24	0.72
38:A1:2945:G:O2'	38:A1:2948:C:OP2	2.07	0.72
44:AG:144:GLU:O	44:AG:146:LYS:NZ	2.22	0.72
47:AJ:88:GLU:OE1	47:AJ:90:GLN:NE2	2.21	0.72
6:BH:167:GLU:HA	6:BH:170:GLN:HE21	1.55	0.72
34:B5:1171:A:H2'	34:B5:1172:G:H8	1.54	0.72
35:AA:184:ARG:NH2	38:A1:1793:C:OP1	2.23	0.72
38:A1:295:A:OP1	50:AN:15:GLN:NE2	2.21	0.72
38:A1:1783:U:H2'	38:A1:1784:G:C8	2.24	0.72
38:A1:1875:G:N7	54:AR:20:ARG:NE	2.38	0.72
38:A1:2284:C:N4	38:A1:2308:C:O4'	2.23	0.72
38:A1:2413:A:H2'	38:A1:2414:G:H8	1.53	0.72
38:A1:2597:U:H2'	38:A1:2598:G:H8	1.54	0.72
81:EC:6854:U:O4	81:EC:6855:A:N6	2.23	0.72
36:AB:92:TYR:HB3	36:AB:99:LEU:HD12	1.70	0.72
38:A1:1323:G:O3'	55:AS:1:MET:N	2.22	0.72
38:A1:2406:C:H1'	38:A1:2819:A:C2	2.25	0.72
38:A1:2971:A:H5"	46:AI:110:ARG:HH22	1.55	0.72
55:AS:12:ARG:NH1	55:AS:13:ARG:O	2.22	0.72
14:BX:7:ARG:H	34:B5:1103:U:P	2.12	0.72
34:B5:774:A:N6	34:B5:786:C:O2	2.22	0.72
34:B5:966:A:C6	34:B5:967:A:N6	2.58	0.72
34:B5:1171:A:H2'	34:B5:1172:G:C8	2.25	0.72
36:AB:115:LYS:HE2	36:AB:122:TRP:HH2	1.55	0.72
38:A1:825:U:O2	38:A1:900:G:O6	2.08	0.72
38:A1:2660:G:H2'	38:A1:2661:G:C8	2.24	0.72
45:AH:98:PRO:O	45:AH:116:ASN:ND2	2.23	0.72
58:AV:86:ARG:HB3	58:AV:92:PHE:CE2	2.24	0.72
62:AZ:77:TYR:HB3	65:Ac:35:ARG:CZ	2.20	0.72
9:BL:57:LYS:O	9:BL:138:ASN:ND2	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:997:G:H2'	34:B5:998:A:H8	1.54	0.72
36:AB:4:ARG:HH11	38:A1:2882:U:H5	1.36	0.72
45:AH:10:ILE:HB	45:AH:53:ILE:HB	1.72	0.72
50:AN:117:ASN:OD1	50:AN:118:SER:N	2.23	0.72
80:DC:723:LYS:HD2	80:DC:805:GLY:HA2	1.70	0.72
14:BX:32:ARG:HH22	34:B5:375:U:H5"	1.54	0.72
19:BD:166:ASP:O	19:BD:190:ARG:NH2	2.22	0.72
25:BS:138:THR:HG22	34:B5:1458:G:H5"	1.72	0.72
27:BU:54:GLY:N	34:B5:1345:A:OP1	2.23	0.72
34:B5:60:U:N3	34:B5:63:G:OP1	2.21	0.72
34:B5:773:C:HO2'	34:B5:788:A:HO2'	1.28	0.72
34:B5:1672:G:H2'	34:B5:1673:G:C8	2.24	0.72
35:AA:242:ARG:NH1	35:AA:245:LEU:O	2.23	0.72
39:A3:77:G:O2'	55:AS:46:GLN:NE2	2.23	0.72
41:AD:75:LEU:HD22	41:AD:112:LYS:HZ3	1.54	0.72
41:AD:232:ASP:OD1	41:AD:233:ALA:N	2.22	0.72
55:AS:155:ARG:NH1	55:AS:171:PHE:O	2.23	0.72
80:DC:73:THR:HG21	80:DC:386:VAL:HG23	1.72	0.72
34:B5:147:A:H3'	34:B5:148:A:H8	1.55	0.71
34:B5:769:A:H2'	34:B5:770:A:C8	2.25	0.71
34:B5:982:U:H2'	34:B5:983:A:H8	1.54	0.71
38:A1:855:U:O4	78:Ap:4:ARG:NH1	2.23	0.71
38:A1:2344:U:H2'	38:A1:2345:A:C8	2.25	0.71
39:A3:53:U:O2'	39:A3:55:A:N7	2.22	0.71
40:A4:81:U:H4'	40:A4:82:U:H5'	1.70	0.71
43:AF:170:GLU:HG3	43:AF:179:LEU:HD22	1.71	0.71
50:AN:160:GLU:N	50:AN:160:GLU:OE2	2.23	0.71
5:BG:21:GLU:HA	5:BG:24:ILE:HG12	1.73	0.71
15:BY:45:ALA:HA	15:BY:50:ALA:HB3	1.72	0.71
27:BU:72:ASN:ND2	34:B5:1429:G:N3	2.35	0.71
31:Bg:260:ILE:HB	31:Bg:274:LEU:HB2	1.71	0.71
34:B5:486:G:H1	34:B5:501:U:H3	1.31	0.71
34:B5:1658:G:O6	34:B5:1743:U:O2	2.09	0.71
38:A1:2473:C:H2'	38:A1:2474:G:H21	1.55	0.71
58:AV:62:VAL:HG13	58:AV:70:ARG:HD2	1.72	0.71
62:AZ:10:VAL:HG22	62:AZ:24:VAL:HG12	1.72	0.71
81:EC:6772:G:N1	81:EC:6821:U:OP2	2.21	0.71
19:BD:42:THR:OG1	19:BD:45:LYS:O	2.08	0.71
34:B5:1264:G:H2'	34:B5:1265:G:C8	2.23	0.71
34:B5:1290:PSU:H2'	34:B5:1291:G:C8	2.24	0.71
38:A1:3070:A:OP1	54:AR:62:ARG:NH2	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:AG:203:VAL:HG21	44:AG:211:LEU:HD22	1.72	0.71
47:AJ:28:ASP:OD1	47:AJ:31:THR:OG1	2.07	0.71
34:B5:734:A:N7	34:B5:736:C:N4	2.38	0.71
34:B5:1690:G:N7	34:B5:1707:A:N6	2.38	0.71
38:A1:2465:G:H1	38:A1:2491:A:N6	1.81	0.71
39:A3:98:C:OP1	55:AS:39:SER:OG	2.07	0.71
50:AN:193:ARG:NH1	50:AN:193:ARG:O	2.24	0.71
34:B5:862:A:O2'	34:B5:963:A:N1	2.22	0.71
38:A1:612:U:H2'	38:A1:613:G:H8	1.53	0.71
38:A1:946:U:OP1	67:Ae:32:TRP:NE1	2.21	0.71
38:A1:1194:G:H2'	38:A1:1195:A:C8	2.25	0.71
38:A1:2340:PSU:H2'	38:A1:2341:A:H8	1.56	0.71
38:A1:2448:G:H1	38:A1:2498:U:H3	0.76	0.71
52:AP:175:ARG:NH1	52:AP:179:GLN:OE1	2.24	0.71
8:BJ:88:GLU:O	8:BJ:91:LYS:NZ	2.20	0.71
34:B5:1044:U:H2'	34:B5:1045:C:C6	2.26	0.71
38:A1:946:U:H2'	38:A1:947:G:H8	1.55	0.71
38:A1:1481:A:N6	38:A1:1872:C:O2	2.23	0.71
73:Ak:46:ARG:HH11	73:Ak:51:LEU:HB3	1.54	0.71
34:B5:435:C:H2'	34:B5:436:A:C8	2.26	0.71
34:B5:519:C:H3'	34:B5:520:A:H8	1.56	0.71
34:B5:1544:U:N3	34:B5:1567:U:O4	2.19	0.71
38:A1:359:U:N3	38:A1:920:A:C6	2.58	0.71
38:A1:890:C:H2'	38:A1:891:G:H8	1.56	0.71
38:A1:1188:U:OP1	38:A1:1210:U:O2'	2.09	0.71
38:A1:3016:A:H2'	38:A1:3017:A:H8	1.55	0.71
38:A1:3043:C:H5"	58:AV:45:ARG:HH21	1.56	0.71
42:AE:37:GLY:O	42:AE:91:VAL:N	2.21	0.71
3:BC:142:GLY:N	3:BC:153:SER:O	2.24	0.71
26:BT:133:ASP:OD2	34:B5:1359:C:O2'	2.08	0.71
34:B5:1158:C:H41	34:B5:1163:A:H61	1.39	0.71
38:A1:1203:A:OP2	38:A1:1301:A:N6	2.22	0.71
44:AG:95:ASN:OD1	44:AG:98:ARG:NH2	2.23	0.71
19:BD:195:SER:OG	19:BD:200:LYS:NZ	2.22	0.71
33:BM:60:VAL:HG23	33:BM:86:VAL:HG21	1.72	0.71
34:B5:948:G:H2'	34:B5:949:C:H6	1.56	0.71
34:B5:1125:A:OP1	76:An:18:ARG:NH1	2.24	0.71
41:AD:155:THR:HG22	41:AD:179:ARG:HA	1.72	0.71
43:AF:83:LEU:HD11	43:AF:116:PHE:HB3	1.73	0.71
56:AT:8:ARG:HG3	56:AT:11:THR:HG21	1.71	0.71
69:Ag:22:VAL:HG12	69:Ag:30:LEU:HD11	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BI:137:LYS:NZ	34:B5:196:G:O6	2.24	0.71
16:Ba:8:ASN:HD22	34:B5:1791:A:H5"	1.56	0.71
38:A1:1201:C:N4	38:A1:2857:C:OP1	2.24	0.71
39:A3:7:G:OP1	41:AD:33:ARG:NH1	2.24	0.71
68:Af:31:LYS:NZ	68:Af:78:SER:O	2.23	0.71
69:Ag:20:ILE:HD11	69:Ag:32:ALA:HB1	1.73	0.71
10:BN:54:LEU:HB3	10:BN:60:VAL:HB	1.73	0.70
34:B5:1471:A:N6	34:B5:1538:U:C2	2.60	0.70
34:B5:1559:A:H5'	34:B5:1560:U:H5"	1.73	0.70
38:A1:1334:U:H2'	38:A1:1335:C:H6	1.56	0.70
38:A1:2270:A:H2'	38:A1:2271:A:C8	2.26	0.70
38:A1:2586:G:O2'	44:AG:241:LYS:NZ	2.23	0.70
8:BJ:129:ILE:HG13	8:BJ:134:ILE:HD13	1.72	0.70
20:BF:62:VAL:HG13	20:BF:89:ILE:HG21	1.73	0.70
34:B5:523:G:N1	34:B5:528:U:OP2	2.23	0.70
34:B5:649:U:O4	34:B5:684:A:N7	2.24	0.70
38:A1:2222:A:H2'	38:A1:2223:A:C4	2.26	0.70
38:A1:3167:A:H2'	38:A1:3168:A:H8	1.56	0.70
41:AD:91:GLY:O	41:AD:94:ASN:ND2	2.24	0.70
50:AN:54:LYS:H	50:AN:59:PHE:HE2	1.39	0.70
56:AT:17:ARG:NH2	56:AT:21:LYS:O	2.23	0.70
5:BG:172:ALA:HB3	34:B5:79:C:H5'	1.72	0.70
6:BH:23:ALA:HB1	6:BH:84:LYS:HD2	1.72	0.70
10:BN:98:VAL:HG11	10:BN:115:LEU:HB2	1.71	0.70
16:Ba:18:VAL:HG13	16:Ba:19:LYS:H	1.56	0.70
31:Bg:19:TRP:H	31:Bg:38:ARG:HB2	1.56	0.70
34:B5:898:A:N3	34:B5:899:G:H1'	2.04	0.70
38:A1:438:A:H3'	38:A1:439:C:H2'	1.73	0.70
38:A1:705:A:O2'	38:A1:714:G:N2	2.24	0.70
38:A1:1333:C:OP1	53:AQ:2:GLY:N	2.25	0.70
38:A1:1760:A:O2'	38:A1:1766:G:N2	2.23	0.70
38:A1:2218:G:H2'	38:A1:2219:A:H8	1.55	0.70
81:EC:6859:U:C2	81:EC:6871:A:N6	2.58	0.70
19:BD:185:LYS:NZ	34:B5:1279:C:OP1	2.25	0.70
22:BP:97:TYR:OH	34:B5:1211:A:N3	2.22	0.70
34:B5:1279:C:H2'	34:B5:1280:4AC:H6	1.71	0.70
34:B5:1684:U:H3	34:B5:1717:G:H1	0.79	0.70
36:AB:8:ALA:HB2	58:AV:46:LEU:HD21	1.73	0.70
36:AB:372:THR:HG23	36:AB:375:GLU:H	1.56	0.70
38:A1:641:C:OP2	63:Aa:21:ARG:NH2	2.19	0.70
69:Ag:3:GLN:HE21	69:Ag:29:ILE:HD11	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:601:ILE:HD13	80:DC:643:PRO:HA	1.73	0.70
6:BH:109:VAL:O	34:B5:810:G:N2	2.24	0.70
7:BI:84:HIS:NE2	7:BI:97:THR:OG1	2.23	0.70
36:AB:58:ARG:NE	36:AB:74:GLU:OE2	2.24	0.70
36:AB:259:HIS:CE1	38:A1:2366:C:H4'	2.26	0.70
38:A1:1071:U:O4	38:A1:1087:G:O6	2.09	0.70
38:A1:1713:G:O2'	38:A1:1730:G:N2	2.23	0.70
38:A1:2221:G:O2'	38:A1:2223:A:N6	2.24	0.70
38:A1:2786:G:OP1	77:Ao:38:GLN:NE2	2.21	0.70
50:AN:44:ARG:NH2	50:AN:120:TRP:O	2.24	0.70
56:AT:53:PRO:HB3	56:AT:91:LEU:HD11	1.74	0.70
66:Ad:46:THR:OG1	66:Ad:91:SER:OG	2.07	0.70
1:BA:197:ILE:HD11	24:BR:85:VAL:HG21	1.74	0.70
31:Bg:89:LEU:HB2	31:Bg:103:PHE:HB2	1.73	0.70
34:B5:67:A:H61	34:B5:83:G:H2'	1.56	0.70
34:B5:977:A:N7	34:B5:1024:U:O4	2.25	0.70
34:B5:1772:C:H3'	76:An:2:ARG:HH21	1.55	0.70
38:A1:1803:C:H2'	38:A1:1804:A:H8	1.56	0.70
42:AE:108:LYS:HG2	42:AE:109:GLU:HG3	1.74	0.70
76:An:3:ALA:HA	76:An:6:ARG:HG2	1.72	0.70
31:Bg:200:ASN:ND2	31:Bg:240:VAL:O	2.21	0.70
34:B5:1045:C:H2'	34:B5:1046:G:H8	1.55	0.70
38:A1:528:U:O2	38:A1:564:G:N2	2.24	0.70
38:A1:2682:C:OP2	47:AJ:51:ARG:NH2	2.25	0.70
38:A1:3213:A:N7	49:AM:124:ARG:NH2	2.40	0.70
40:A4:67:U:H2'	40:A4:68:G:H8	1.56	0.70
68:Af:51:TYR:HB3	68:Af:67:MET:HB2	1.74	0.70
79:E:76:ARG:NH1	79:E:140:HIS:O	2.24	0.70
18:Be:43:ARG:O	18:Be:54:ARG:NH1	2.25	0.70
31:Bg:22:SER:HB2	31:Bg:36:ALA:HB3	1.74	0.70
34:B5:1369:U:H4'	34:B5:1372:U:H3	1.57	0.70
35:AA:193:ARG:NH1	38:A1:2173:U:O3'	2.25	0.70
38:A1:310:U:N3	38:A1:2779:A:C6	2.60	0.70
38:A1:629:U:H2'	38:A1:630:A:C8	2.26	0.70
38:A1:2478:C:OP2	38:A1:2480:A:N6	2.23	0.70
38:A1:3020:U:H2'	38:A1:3033:A:H61	1.56	0.70
52:AP:31:GLU:OE2	52:AP:61:ARG:N	2.18	0.70
14:BX:109:ARG:NH1	34:B5:19:A:OP1	2.24	0.70
25:BS:58:ALA:HA	25:BS:61:LEU:HD13	1.73	0.70
26:BT:134:ARG:HH22	34:B5:1360:A:H5"	1.57	0.70
34:B5:948:G:H2'	34:B5:949:C:C6	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:E:194:LEU:O	79:E:197:ASN:ND2	2.24	0.70
80:DC:380:LEU:HD22	80:DC:400:VAL:HG12	1.74	0.70
1:BA:13:ASP:OD1	1:BA:14:ALA:N	2.25	0.70
13:BW:45:GLY:O	13:BW:68:ARG:NH2	2.25	0.70
17:Bb:36:LYS:HB2	17:Bb:43:ILE:HG12	1.74	0.70
38:A1:2466:G:H3'	38:A1:2467:G:H5'	1.74	0.70
50:AN:14:LYS:HA	50:AN:19:LEU:HD23	1.73	0.70
62:AZ:22:LYS:NZ	62:AZ:129:TRP:O	2.25	0.70
80:DC:639:ASP:H	80:DC:668:GLN:HE22	1.37	0.70
2:BB:149:GLN:HA	34:B5:1067:C:H5'	1.72	0.69
6:BH:139:ARG:HB3	6:BH:151:LYS:HB3	1.74	0.69
7:BI:16:ALA:HB2	34:B5:354:C:H5"	1.72	0.69
7:BI:172:ARG:NH2	34:B5:331:A:OP2	2.25	0.69
8:BJ:49:LEU:HD13	8:BJ:52:ILE:HD11	1.73	0.69
28:BZ:77:ARG:NH2	34:B5:1534:G:N7	2.40	0.69
38:A1:30:G:H5'	50:AN:172:ARG:HG2	1.74	0.69
38:A1:2106:A:H2'	38:A1:2107:A:H8	1.57	0.69
80:DC:175:TYR:O	80:DC:179:ALA:N	2.24	0.69
81:EC:6833:G:O2'	81:EC:6872:A:N6	2.25	0.69
8:BJ:62:ARG:O	8:BJ:69:ARG:NH2	2.25	0.69
23:BQ:77:GLN:HE22	34:B5:1482:C:H4'	1.57	0.69
32:Bf:141:CYS:O	34:B5:1252:C:O2'	2.09	0.69
34:B5:69:G:O6	34:B5:82:U:O4	2.10	0.69
37:AC:5:GLN:NE2	37:AC:19:ALA:O	2.25	0.69
38:A1:394:G:N1	38:A1:397:A:OP2	2.24	0.69
38:A1:567:G:H2'	38:A1:568:G:C8	2.27	0.69
38:A1:595:G:O6	42:AE:22:ARG:NH2	2.25	0.69
38:A1:1508:C:N4	38:A1:1880:U:O2'	2.25	0.69
40:A4:83:C:N3	61:AY:52:ARG:NH2	2.40	0.69
11:BO:18:ARG:HE	34:B5:918:U:H4'	1.58	0.69
16:Ba:10:ARG:NH1	34:B5:1791:A:OP2	2.25	0.69
20:BF:81:ARG:NH1	34:B5:1615:C:OP2	2.25	0.69
24:BR:5:ARG:O	24:BR:10:LYS:NZ	2.26	0.69
26:BT:102:ARG:NE	34:B5:1501:C:OP2	2.24	0.69
27:BU:17:GLN:HE21	27:BU:96:PRO:HG3	1.58	0.69
38:A1:1336:U:H2'	38:A1:1337:A:H8	1.57	0.69
38:A1:1750:A:OP2	73:Ak:28:ASN:ND2	2.25	0.69
38:A1:1881:A:H2'	38:A1:1882:G:C8	2.27	0.69
38:A1:2366:C:H2'	38:A1:2367:A:H8	1.56	0.69
47:AJ:47:GLN:HB2	47:AJ:64:LYS:HE3	1.73	0.69
55:AS:34:GLU:N	55:AS:34:GLU:OE2	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BO:48:VAL:HG21	11:BO:54:GLU:HA	1.75	0.69
12:BV:53:TYR:HE2	12:BV:72:LEU:HB3	1.57	0.69
17:Bb:34:ASP:OD1	17:Bb:82:LYS:NZ	2.26	0.69
38:A1:718:G:OP1	63:Aa:117:ARG:NH2	2.25	0.69
38:A1:928:C:H2'	38:A1:929:A:C8	2.28	0.69
38:A1:939:U:OP2	63:Aa:26:ARG:NH2	2.25	0.69
38:A1:1008:U:H5	38:A1:1042:PSU:HN1	1.40	0.69
79:E:144:LEU:HA	79:E:147:LYS:HB2	1.74	0.69
3:BC:186:LYS:HD2	3:BC:189:GLN:HE21	1.57	0.69
9:BL:109:VAL:HG22	9:BL:137:PHE:HB2	1.75	0.69
27:BU:58:LEU:HB2	27:BU:88:LYS:HB3	1.73	0.69
34:B5:1773:4AC:H4	34:B5:1788:G:H1	1.41	0.69
37:AC:307:GLN:HE22	38:A1:1345:G:H21	1.39	0.69
38:A1:1268:G:P	38:A1:1274:A:H61	2.16	0.69
38:A1:1411:C:H2'	38:A1:1412:G:H8	1.57	0.69
39:A3:35:C:O2	39:A3:45:A:O2'	2.07	0.69
52:AP:48:LEU:HD12	52:AP:88:VAL:HG13	1.74	0.69
2:BB:23:PRO:O	2:BB:27:LYS:NZ	2.26	0.69
10:BN:101:HIS:CE1	34:B5:951:A:H1'	2.28	0.69
38:A1:2697:A:H2'	38:A1:2698:G:C8	2.27	0.69
41:AD:107:ARG:NH2	41:AD:120:LYS:O	2.25	0.69
50:AN:63:ARG:HG2	50:AN:131:GLU:HG2	1.75	0.69
68:Af:27:VAL:HG11	68:Af:82:ARG:HD2	1.73	0.69
80:DC:18:ASN:HD21	80:DC:94:ASP:H	1.40	0.69
80:DC:150:ARG:HB2	80:DC:355:GLN:HE22	1.57	0.69
81:EC:6920:C:N4	81:EC:6934:U:O2	2.25	0.69
81:EC:6936:G:H2'	81:EC:6937:G:H8	1.55	0.69
9:BL:83:THR:HA	9:BL:110:HIS:HA	1.72	0.69
20:BF:51:VAL:O	20:BF:65:ARG:NH2	2.25	0.69
31:Bg:109:ASP:OD2	31:Bg:127:ARG:NH1	2.26	0.69
34:B5:565:C:N4	34:B5:576:G:OP2	2.25	0.69
35:AA:5:ILE:HD13	35:AA:209:HIS:HA	1.74	0.69
35:AA:46:LYS:HZ1	35:AA:60:LYS:HG2	1.58	0.69
37:AC:33:ASP:OD1	37:AC:34:ILE:N	2.25	0.69
38:A1:707:U:OP1	38:A1:780:A:O2'	2.11	0.69
38:A1:944:C:H4'	67:Ae:33:ARG:HE	1.58	0.69
45:AH:8:GLN:HB3	45:AH:72:LYS:HD3	1.73	0.69
61:AY:70:ILE:HA	61:AY:82:VAL:HG12	1.74	0.69
66:Ad:54:GLU:OE2	66:Ad:54:GLU:N	2.24	0.69
81:EC:6835:U:OP1	81:EC:6848:U:N3	2.26	0.69
2:BB:121:ILE:HB	2:BB:161:ILE:HD11	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BX:28:ASN:OD1	14:BX:29:TYR:N	2.25	0.69
25:BS:32:LEU:HD12	25:BS:35:ILE:HD13	1.73	0.69
30:Bd:15:GLY:HA3	34:B5:1204:A:H61	1.56	0.69
34:B5:434:G:N1	34:B5:437:A:OP2	2.26	0.69
34:B5:444:C:O2	34:B5:460:A:N6	2.24	0.69
34:B5:688:G:H2'	34:B5:689:G:H8	1.56	0.69
34:B5:1198:G:OP1	34:B5:1199:G:O2'	2.10	0.69
35:AA:242:ARG:HH22	35:AA:246:LEU:HA	1.57	0.69
36:AB:232:ARG:HA	36:AB:270:ARG:HD3	1.75	0.69
38:A1:41:G:H21	38:A1:2803:A:H62	1.41	0.69
38:A1:242:C:H2'	38:A1:243:G:H8	1.57	0.69
38:A1:797:U:H2'	38:A1:798:G:C8	2.27	0.69
38:A1:982:C:H5"	64:Ab:23:LYS:HD3	1.73	0.69
38:A1:1213:G:H5"	55:AS:137:ARG:HH21	1.57	0.69
38:A1:1307:G:OP1	51:AO:59[A]:ARG:NH2	2.26	0.69
38:A1:1387:G:HO2'	42:AE:2:SER:N	1.89	0.69
38:A1:1739:U:O2	69:Ag:41:ARG:NH2	2.26	0.69
38:A1:2697:A:H2'	38:A1:2698:G:H8	1.57	0.69
38:A1:3199:G:H2'	38:A1:3200:G:H8	1.58	0.69
58:AV:14:SER:O	58:AV:81:GLN:NE2	2.26	0.69
80:DC:142:VAL:O	80:DC:146:ALA:N	2.25	0.69
13:BW:80:ASN:ND2	34:B5:747:C:O3'	2.23	0.69
34:B5:931:C:H3'	34:B5:932:U:H2'	1.74	0.69
34:B5:1787:C:H2'	34:B5:1788:G:C8	2.28	0.69
36:AB:266:ARG:HH12	38:A1:2989:U:H1'	1.58	0.69
38:A1:644:G:N2	38:A1:2372:A:O4'	2.26	0.69
62:AZ:70:PRO:O	62:AZ:111:LYS:NZ	2.26	0.69
9:BL:136:ARG:HD3	34:B5:304:U:H5"	1.74	0.69
20:BF:50:GLU:O	20:BF:131:GLN:NE2	2.25	0.69
20:BF:76:ARG:HD2	23:BQ:122:ARG:HD3	1.75	0.69
29:Bc:33:LEU:HD11	29:Bc:53:ILE:HD12	1.73	0.69
34:B5:561:G:H2'	34:B5:562:G:H8	1.57	0.69
38:A1:327:A:H5"	48:AL:23:LYS:HE3	1.75	0.69
38:A1:524:U:OP1	49:AM:77:ARG:NH2	2.26	0.69
38:A1:1224:C:N4	38:A1:1225:A:H62	1.91	0.69
38:A1:1316:C:OP1	51:AO:130[A]:LYS:N	2.24	0.69
38:A1:1493:G:N2	38:A1:1493:G:OP2	2.27	0.69
38:A1:1493:G:O2'	74:Al:13:MET:SD	2.50	0.69
40:A4:9:A:H2'	40:A4:10:A:C8	2.27	0.69
43:AF:116:PHE:O	43:AF:199:ASN:ND2	2.22	0.69
43:AF:142:SER:O	43:AF:241:LYS:NZ	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Be:55:ARG:NH2	34:B5:558:U:OP2	2.24	0.68
38:A1:354:U:O2	38:A1:365:A:N7	2.25	0.68
38:A1:508:U:H3	38:A1:583:G:H1	1.41	0.68
38:A1:1724:U:O4	54:AR:125:LYS:NZ	2.19	0.68
38:A1:1874:A:OP2	54:AR:21:LYS:NZ	2.26	0.68
38:A1:3225:C:H2'	38:A1:3226:A:C8	2.27	0.68
63:Aa:133:LEU:H	63:Aa:133:LEU:HD23	1.58	0.68
80:DC:186:ASN:O	80:DC:201:GLN:NE2	2.26	0.68
19:BD:132:LYS:HZ2	19:BD:189:MET:HE2	1.59	0.68
34:B5:983:A:H61	34:B5:1018:U:H5	1.40	0.68
35:AA:215:ASN:ND2	38:A1:2969:A:N7	2.40	0.68
38:A1:126:U:OP1	50:AN:144:ARG:NH1	2.26	0.68
38:A1:791:A:H2'	38:A1:792:G:H8	1.58	0.68
52:AP:103:GLU:OE1	52:AP:103:GLU:N	2.24	0.68
62:AZ:49:TYR:CD1	62:AZ:133:LYS:HA	2.28	0.68
80:DC:156:VAL:HG23	80:DC:210:ALA:HB3	1.76	0.68
2:BB:228:LEU:HA	2:BB:231:LEU:HB2	1.75	0.68
15:BY:57:VAL:HA	15:BY:73:GLY:HA2	1.74	0.68
22:BP:40:ARG:NH1	34:B5:1552:U:O4	2.21	0.68
24:BR:34:LEU:HA	31:Bg:150:TRP:HH2	1.59	0.68
26:BT:126:GLU:OE1	34:B5:1358:G:O2'	2.11	0.68
36:AB:146:ARG:NH1	36:AB:147:GLU:OE1	2.26	0.68
38:A1:518:G:N2	38:A1:518:G:OP2	2.27	0.68
38:A1:1049:C:H5'	56:AT:12:ARG:HH22	1.57	0.68
38:A1:1135:A:N6	38:A1:1136:A:N6	2.41	0.68
38:A1:1655:G:N2	38:A1:1801:U:O4	2.27	0.68
38:A1:2445:A:N6	38:A1:2503:G:N1	2.42	0.68
38:A1:2483:G:OP2	79:E:98:LYS:NZ	2.25	0.68
60:AX:113:LEU:HD21	60:AX:121:LYS:HE3	1.73	0.68
61:AY:112:ASP:H	61:AY:115:ARG:HB2	1.59	0.68
79:E:64:SER:OG	79:E:108:ASN:N	2.26	0.68
81:EC:6934:U:H5"	81:EC:6935:G:H4'	1.75	0.68
7:BI:152:ILE:HG13	7:BI:153:GLU:H	1.56	0.68
22:BP:25:LEU:HA	22:BP:28:MET:HB2	1.76	0.68
34:B5:340:U:H2'	34:B5:341:A:C8	2.29	0.68
34:B5:929:A:H3'	34:B5:931:C:H41	1.57	0.68
36:AB:31:ALA:HB3	36:AB:339:ARG:HH12	1.57	0.68
38:A1:2727:A:OP2	38:A1:2728:G:N2	2.24	0.68
40:A4:104:A:P	72:Aj:21:ARG:HH12	2.17	0.68
40:A4:128:U:OP1	40:A4:129:C:N4	2.20	0.68
44:AG:240:ASN:OD1	44:AG:241:LYS:N	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:AJ:86:VAL:HG11	47:AJ:112:LEU:HD11	1.73	0.68
48:AL:105:ASN:HB3	48:AL:108:ILE:HG22	1.75	0.68
78:Ap:36:ARG:NH1	78:Ap:38:ASP:OD1	2.26	0.68
2:BB:71:ALA:HB3	11:BO:114:ARG:HH22	1.59	0.68
4:BE:73:ASP:HB3	4:BE:164:LEU:HD11	1.76	0.68
13:BW:8:ALA:HA	13:BW:74:VAL:HG11	1.76	0.68
31:Bg:197:SER:HB2	31:Bg:216:LYS:HG2	1.76	0.68
34:B5:513:U:N3	34:B5:541:A:N6	2.31	0.68
37:AC:84:ARG:HB2	37:AC:87:GLN:HG3	1.74	0.68
38:A1:285:A:N3	77:Ao:45:ARG:NH2	2.42	0.68
38:A1:846:A:H3'	38:A1:847:A:H8	1.57	0.68
38:A1:1497:C:H2'	38:A1:1498:A:C8	2.29	0.68
38:A1:1705:U:O4	69:Ag:41:ARG:NH2	2.27	0.68
38:A1:2113:A:O2'	38:A1:2116:G:N7	2.26	0.68
67:Ae:55:ILE:H	67:Ae:55:ILE:HD12	1.59	0.68
71:Ai:4:LYS:HA	71:Ai:12:ASN:HB3	1.73	0.68
2:BB:88:VAL:HG11	2:BB:96:LEU:HD23	1.74	0.68
2:BB:149:GLN:HE22	2:BB:154:SER:HB3	1.58	0.68
34:B5:1432:U:H4'	34:B5:1433:G:H5"	1.76	0.68
34:B5:1678:A:H3'	34:B5:1679:G:H8	1.59	0.68
38:A1:1364:C:O2	53:AQ:10:HIS:NE2	2.26	0.68
38:A1:2534:G:N2	38:A1:2545:C:O2'	2.25	0.68
38:A1:2660:G:O3'	38:A1:2749:G:N2	2.26	0.68
38:A1:3113:A:H1'	45:AH:70:THR:HG22	1.76	0.68
39:A3:28:C:OP1	47:AJ:137:ARG:NH1	2.26	0.68
65:Ac:103:THR:HG23	65:Ac:105:ALA:H	1.58	0.68
69:Ag:100:ILE:HA	69:Ag:103:LYS:HE3	1.76	0.68
79:E:87:VAL:HG12	79:E:90:LEU:HD12	1.75	0.68
1:BA:104:PRO:HG3	1:BA:131:GLN:HG2	1.75	0.68
4:BE:103:TYR:HD2	4:BE:189:LEU:HD11	1.57	0.68
5:BG:142:ARG:NH2	5:BG:151:ASP:O	2.22	0.68
6:BH:67:LEU:O	6:BH:71:HIS:ND1	2.27	0.68
14:BX:91:GLY:HA2	18:Be:11:ALA:HB1	1.74	0.68
19:BD:209:ILE:O	24:BR:20:TYR:OH	2.10	0.68
34:B5:1684:U:O2	34:B5:1717:G:N2	2.22	0.68
38:A1:116:A:H5"	38:A1:265:A:H2	1.58	0.68
38:A1:970:A:H2'	38:A1:971:G:H8	1.59	0.68
38:A1:2999:U:H2'	38:A1:3000:A:H8	1.58	0.68
58:AV:15:LEU:HD23	58:AV:53:SER:HB2	1.75	0.68
79:E:191:VAL:O	79:E:197:ASN:ND2	2.26	0.68
2:BB:120:LEU:HD12	2:BB:140:ILE:HD11	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:BW:11:LEU:O	13:BW:15:ASN:ND2	2.27	0.68
31:Bg:133:VAL:O	31:Bg:141:LEU:N	2.27	0.68
34:B5:1513:G:O2'	34:B5:1515:A:N3	2.25	0.68
34:B5:1541:G:N1	34:B5:1569:A:OP2	2.24	0.68
36:AB:266:ARG:NH2	38:A1:2988:C:O2'	2.27	0.68
36:AB:315:GLY:HA2	38:A1:3379:C:H4'	1.75	0.68
38:A1:1098:A:H5'	56:AT:129:LYS:HB3	1.75	0.68
38:A1:1177:G:OP1	38:A1:1177:G:N2	2.26	0.68
38:A1:1637:A:O2'	62:AZ:15:ARG:NH2	2.27	0.68
38:A1:2165:G:N2	38:A1:2168:A:OP2	2.27	0.68
38:A1:2572:C:H1'	62:AZ:60:LYS:HE2	1.76	0.68
53:AQ:29:LEU:HD11	53:AQ:124:LEU:HB2	1.75	0.68
79:E:90:LEU:HD23	79:E:93:LEU:HD12	1.74	0.68
80:DC:26:ALA:HB2	80:DC:128:VAL:HB	1.76	0.68
80:DC:119:LEU:HD11	80:DC:146:ALA:HA	1.75	0.68
81:EC:6817:A:H4'	81:EC:6818:G:H5'	1.76	0.68
4:BE:146:THR:HG1	34:B5:123:G:H21	1.41	0.68
27:BU:61:LYS:NZ	34:B5:1516:A:OP2	2.26	0.68
35:AA:217:GLN:NE2	38:A1:2959:C:OP1	2.26	0.68
38:A1:160:G:N2	38:A1:261:U:O2	2.19	0.68
38:A1:284:A:OP2	77:Ao:41:ARG:NH2	2.26	0.68
38:A1:1597:C:OP1	69:Ag:31:ARG:NH1	2.27	0.68
38:A1:1805:C:H2'	38:A1:1806:A:C8	2.25	0.68
7:BI:92:ARG:HH12	38:A1:3346:U:H5'	1.57	0.68
8:BJ:163:PRO:HG3	8:BJ:168:ARG:HB2	1.76	0.68
14:BX:3:LYS:NZ	34:B5:614:C:OP1	2.24	0.68
34:B5:851:U:H4'	34:B5:852:C:H5'	1.74	0.68
35:AA:178:PRO:HG3	78:Ap:22:LEU:HD12	1.76	0.68
37:AC:188:ARG:NH1	38:A1:1382:G:OP2	2.27	0.68
37:AC:287:THR:O	37:AC:291:ASN:ND2	2.27	0.68
38:A1:179:C:H2'	38:A1:180:C:C6	2.29	0.68
38:A1:275:U:OP2	38:A1:285:A:N6	2.27	0.68
38:A1:2458:A:N6	38:A1:2478:C:OP2	2.26	0.68
38:A1:2643:A:OP1	64:Ab:6:ASN:ND2	2.27	0.68
38:A1:2748:A:O2'	41:AD:35:ARG:O	2.09	0.68
41:AD:197:SER:O	41:AD:202:GLY:N	2.22	0.68
56:AT:106:LEU:O	56:AT:110:LYS:NZ	2.27	0.68
80:DC:488:VAL:O	80:DC:490:GLN:NE2	2.26	0.68
26:BT:86:ARG:NH2	34:B5:1601:G:OP1	2.27	0.67
34:B5:44:U:OP2	34:B5:437:A:N6	2.27	0.67
34:B5:761:G:N2	34:B5:790:U:O4	2.26	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1072:C:H2'	34:B5:1073:G:C8	2.29	0.67
34:B5:1396:U:O2	34:B5:1402:G:N2	2.25	0.67
34:B5:1446:A:O2'	34:B5:1448:G:N7	2.25	0.67
34:B5:1752:U:H2'	34:B5:1753:A:H8	1.59	0.67
38:A1:1135:A:N6	38:A1:1136:A:H62	1.92	0.67
38:A1:2755:C:O2'	56:AT:49:GLN:OE1	2.11	0.67
40:A4:75:G:OP2	61:AY:74:TYR:OH	2.06	0.67
80:DC:723:LYS:NZ	80:DC:803:THR:OG1	2.27	0.67
7:BI:11:ARG:NH2	34:B5:319:U:OP1	2.27	0.67
13:BW:50:PHE:HB3	13:BW:63:VAL:HG13	1.75	0.67
34:B5:10:G:H1	34:B5:1144:U:H3	1.42	0.67
34:B5:477:A:N6	34:B5:541:A:O5'	2.28	0.67
34:B5:1654:G:H5'	76:An:21:ARG:NH2	2.09	0.67
37:AC:196:ASN:ND2	61:AY:10:SER:O	2.28	0.67
38:A1:86:G:O2'	38:A1:98:G:O6	2.12	0.67
38:A1:413:U:OP1	52:AP:30:ARG:NH2	2.27	0.67
51:AO:29[A]:ASN:O	68:Af:12:LYS:NZ	2.23	0.67
52:AP:41:LEU:HD22	52:AP:112:LEU:HB3	1.76	0.67
59:AW:13:ILE:HD13	59:AW:32:GLN:HA	1.77	0.67
27:BU:21:LYS:NZ	27:BU:94:GLU:OE1	2.24	0.67
34:B5:486:G:N2	34:B5:501:U:O2	2.27	0.67
34:B5:617:U:H2'	34:B5:618:U:C6	2.29	0.67
34:B5:1512:G:H2'	34:B5:1513:G:C8	2.28	0.67
38:A1:1882:G:H2'	38:A1:1883:A:H8	1.58	0.67
38:A1:2103:U:H2'	38:A1:2104:A:C8	2.29	0.67
38:A1:2601:A:H2'	38:A1:2602:G:H8	1.60	0.67
38:A1:3015:G:H2'	38:A1:3016:A:H8	1.59	0.67
38:A1:3186:A:N6	45:AH:58:HIS:O	2.28	0.67
39:A3:5:G:OP1	41:AD:27:LYS:NZ	2.27	0.67
44:AG:139:VAL:HG11	44:AG:197:VAL:HG21	1.76	0.67
61:AY:35:LEU:HG	61:AY:106:ILE:HD11	1.75	0.67
80:DC:212:GLY:HA3	80:DC:219:ALA:HA	1.76	0.67
80:DC:730:LEU:HB2	80:DC:799:ASP:HB2	1.75	0.67
3:BC:91:ARG:NH2	34:B5:1423:U:H3	1.92	0.67
14:BX:7:ARG:N	34:B5:1103:U:OP2	2.28	0.67
16:Ba:85:ARG:O	34:B5:1797:A:N6	2.28	0.67
20:BF:74:ALA:O	23:BQ:122:ARG:NH2	2.27	0.67
32:Bf:104:SER:O	32:Bf:118:ARG:NH1	2.28	0.67
34:B5:854:U:OP1	54:AR:181:ARG:NE	2.27	0.67
38:A1:1416:C:H2'	38:A1:1417:G:C4	2.29	0.67
49:AM:88:ALA:O	49:AM:93:LYS:NZ	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:110:ASP:OD2	80:DC:537:HIS:N	2.26	0.67
9:BL:85:VAL:HA	9:BL:108:PRO:HA	1.75	0.67
21:BK:14:TYR:HA	21:BK:17:GLN:HE21	1.60	0.67
26:BT:70:GLN:HG3	26:BT:120:GLY:HA3	1.77	0.67
34:B5:923:A:H2'	34:B5:924:A:C8	2.29	0.67
34:B5:991:G:N1	34:B5:1012:U:OP2	2.24	0.67
34:B5:1353:U:H5'	34:B5:1354:G:H5'	1.76	0.67
34:B5:1667:A:H2'	34:B5:1668:G:C8	2.29	0.67
34:B5:1684:U:O4	34:B5:1717:G:O6	2.11	0.67
35:AA:21:ARG:NH1	38:A1:825:U:OP2	2.28	0.67
36:AB:28:ARG:NH2	38:A1:3140:G:N7	2.41	0.67
36:AB:296:THR:H	36:AB:299:ASP:HB2	1.60	0.67
38:A1:182:U:O4	38:A1:234:G:O6	2.12	0.67
38:A1:1576:G:N2	38:A1:1810:A:OP1	2.28	0.67
38:A1:1846:C:O2'	52:AP:128:ARG:NH2	2.28	0.67
38:A1:2094:C:H2'	38:A1:2095:G:C8	2.29	0.67
38:A1:2438:A:H2'	38:A1:2439:A:H8	1.60	0.67
38:A1:2508:U:H2'	38:A1:2509:U:H6	1.59	0.67
39:A3:13:A:OP2	39:A3:67:G:N2	2.26	0.67
40:A4:20:U:H2'	40:A4:21:C:H6	1.59	0.67
52:AP:72:GLN:HG3	52:AP:83:TRP:HZ2	1.60	0.67
69:Ag:85:VAL:HA	69:Ag:88:ARG:HB2	1.75	0.67
80:DC:658:GLU:OE2	80:DC:700:ARG:NH2	2.27	0.67
8:BJ:106:GLU:HA	8:BJ:111:THR:HG21	1.76	0.67
23:BQ:74:HIS:HE1	34:B5:1526:A:H61	1.43	0.67
34:B5:1035:G:H2'	34:B5:1036:A:H8	1.60	0.67
38:A1:1011:A:H2'	38:A1:1012:G:H8	1.59	0.67
38:A1:3160:U:O4	38:A1:3290:G:O6	2.11	0.67
40:A4:38:U:O2'	70:Ah:83:LYS:NZ	2.27	0.67
47:AJ:96:PHE:O	47:AJ:156:LYS:NZ	2.28	0.67
80:DC:511:LEU:HD21	80:DC:541:CYS:HB2	1.77	0.67
81:EC:6815:U:H3'	81:EC:6816:A:H5"	1.75	0.67
5:BG:92:ARG:NH1	34:B5:394:C:O2'	2.28	0.67
35:AA:181:LYS:HB3	78:Ap:18:TYR:CE2	2.29	0.67
37:AC:360:LYS:NZ	38:A1:519:A:N7	2.35	0.67
38:A1:1146:C:H2'	38:A1:1147:G:H8	1.60	0.67
38:A1:1433:A:O4'	67:Ae:27:ARG:NH1	2.28	0.67
38:A1:3061:G:H2'	38:A1:3062:G:H8	1.60	0.67
38:A1:3297:U:H2'	38:A1:3298:C:H6	1.60	0.67
52:AP:31:GLU:OE1	52:AP:60:PHE:HA	1.94	0.67
70:Ah:102:GLU:HA	70:Ah:105:ARG:HG2	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:BC:219:GLY:O	12:BV:25:LYS:NZ	2.27	0.67
5:BG:83:CYS:N	34:B5:162:A:OP1	2.28	0.67
9:BL:99:ARG:HH21	14:BX:7:ARG:HA	1.59	0.67
23:BQ:113:ASP:HB3	23:BQ:116:LEU:HD23	1.77	0.67
34:B5:591:A:H2'	34:B5:592:A:C8	2.29	0.67
34:B5:1142:A:H2'	34:B5:1143:A:C8	2.30	0.67
38:A1:149:U:OP1	50:AN:55:ALA:N	2.28	0.67
38:A1:1661:G:H2'	38:A1:1662:G:C8	2.30	0.67
38:A1:2340:PSU:H2'	38:A1:2341:A:C8	2.30	0.67
38:A1:3216:G:H3'	38:A1:3219:G:H21	1.60	0.67
80:DC:225:PHE:HA	80:DC:228:ARG:HG3	1.77	0.67
81:EC:6804:A:H2'	81:EC:6808:G:H21	1.59	0.67
2:BB:140:ILE:HG23	2:BB:213:ARG:HH11	1.59	0.67
5:BG:142:ARG:HA	5:BG:147:LEU:HD12	1.76	0.67
10:BN:73:ARG:HD3	34:B5:859:A:C5	2.30	0.67
15:BY:65:GLY:N	34:B5:532:U:H5"	2.09	0.67
34:B5:213:A:H3'	34:B5:214:G:C8	2.30	0.67
38:A1:411:U:H2'	38:A1:412:G:H8	1.60	0.67
38:A1:1010:G:N3	46:AI:196:PHE:HZ	1.93	0.67
38:A1:1289:G:H2'	38:A1:1290:A:H8	1.58	0.67
38:A1:1910:A:H2'	38:A1:1911:A:C8	2.29	0.67
38:A1:2445:A:N6	38:A1:2503:G:C6	2.61	0.67
38:A1:2618:G:OP1	38:A1:2644:C:O2'	2.12	0.67
38:A1:2651:G:O2'	38:A1:2796:G:O6	2.12	0.67
73:Ak:43:PHE:HB2	73:Ak:54:LEU:HB2	1.77	0.67
79:E:94:ASN:HB2	79:E:123:LEU:HB3	1.76	0.67
8:BJ:13:SER:OG	34:B5:1:U:O4	2.12	0.67
15:BY:105:ARG:NH2	34:B5:459:G:OP2	2.27	0.67
16:Ba:90:GLU:N	16:Ba:90:GLU:OE2	2.27	0.67
31:Bg:170:ILE:HD12	31:Bg:211:ILE:HD12	1.75	0.67
34:B5:579:A:O2'	34:B5:581:U:OP2	2.13	0.67
37:AC:119:ARG:NH2	38:A1:696:C:OP2	2.27	0.67
38:A1:21:G:OP2	70:Ah:86:ARG:NH2	2.28	0.67
38:A1:2900:A:H2'	38:A1:2901:G:C8	2.30	0.67
38:A1:3271:G:C4	42:AE:108:LYS:HG3	2.29	0.67
50:AN:68:ARG:HD3	50:AN:128:LYS:HG3	1.75	0.67
80:DC:676:ILE:O	80:DC:823:ARG:NH2	2.24	0.67
81:EC:6924:G:N2	81:EC:6928:G:O6	2.27	0.67
3:BC:103:VAL:HG21	3:BC:187:LEU:HB2	1.76	0.66
4:BE:160:VAL:HG13	4:BE:162:ILE:HD11	1.77	0.66
20:BF:169:ASN:ND2	34:B5:1614:A:OP2	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:107:C:OP1	34:B5:383:G:O2'	2.11	0.66
34:B5:107:C:H2'	34:B5:108:A:H8	1.60	0.66
34:B5:199:G:H2'	34:B5:200:A:H8	1.59	0.66
34:B5:513:U:C2	34:B5:541:A:N6	2.62	0.66
34:B5:627:C:H2'	34:B5:628:G:O4'	1.94	0.66
34:B5:1588:G:O6	34:B5:1608:U:O4	2.14	0.66
36:AB:246:LEU:HD12	36:AB:247:ARG:HG3	1.77	0.66
38:A1:364:G:O6	72:Aj:56:ARG:NE	2.26	0.66
38:A1:1493:G:C4	74:Al:13:MET:HE1	2.30	0.66
38:A1:1666:G:H2'	38:A1:1667:A:H8	1.60	0.66
38:A1:2696:A:N7	38:A1:2758:A:N6	2.44	0.66
49:AM:36:VAL:HB	49:AM:45:LEU:HB3	1.75	0.66
58:AV:68:GLU:O	58:AV:72:LYS:NZ	2.29	0.66
61:AY:112:ASP:OD1	61:AY:113:LYS:N	2.28	0.66
62:AZ:88:ASP:OD1	62:AZ:121:ARG:NH1	2.26	0.66
81:EC:6862:G:H3'	81:EC:6863:C:H5"	1.76	0.66
34:B5:92:A:OP2	34:B5:398:G:N1	2.19	0.66
34:B5:1303:U:O2'	34:B5:1322:A:OP2	2.13	0.66
38:A1:43:A:OP1	50:AN:83:LYS:NZ	2.27	0.66
38:A1:900:G:N3	38:A1:1589:A:N6	2.43	0.66
38:A1:990:PSU:O4	38:A1:1059:G:N1	2.20	0.66
38:A1:1680:G:O6	38:A1:1689:U:O4	2.13	0.66
38:A1:2445:A:C6	38:A1:2503:G:N1	2.63	0.66
38:A1:2812:C:H2'	38:A1:2813:A:C8	2.28	0.66
38:A1:2898:G:OP2	45:AH:173:ARG:NH2	2.28	0.66
53:AQ:67:ILE:HD12	53:AQ:81:VAL:HG11	1.76	0.66
80:DC:573:GLN:HB2	80:DC:719:LEU:HD13	1.76	0.66
9:BL:65:SER:OG	34:B5:115:G:OP2	2.13	0.66
22:BP:47:ARG:NH2	34:B5:1554:U:OP2	2.27	0.66
34:B5:329:G:H2'	34:B5:330:G:H8	1.60	0.66
37:AC:221:ASN:ND2	38:A1:209:A:N3	2.43	0.66
39:A3:29:C:O2'	39:A3:51:A:N1	2.27	0.66
39:A3:62:U:O2'	41:AD:285:ARG:NH2	2.28	0.66
46:AI:47:PRO:HD2	46:AI:141:LYS:HA	1.76	0.66
56:AT:118:GLU:OE2	56:AT:122:GLN:NE2	2.28	0.66
80:DC:598:SER:HA	80:DC:601:ILE:HD12	1.76	0.66
80:DC:612:PHE:HB2	80:DC:631:ARG:HA	1.76	0.66
81:EC:6948:U:H4'	81:EC:6949:G:H2'	1.76	0.66
2:BB:117:TRP:HD1	2:BB:153:HIS:HB3	1.60	0.66
5:BG:92:ARG:O	34:B5:405:C:O2'	2.13	0.66
10:BN:118:ILE:HD13	10:BN:121:ARG:HH12	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:261:MET:SD	38:A1:2882:U:O2'	2.50	0.66
37:AC:82:THR:H	37:AC:85:SER:HG	1.42	0.66
38:A1:664:U:H2'	38:A1:665:A:C8	2.30	0.66
38:A1:2138:A:O2'	72:Aj:2:GLY:N	2.27	0.66
44:AG:133:LYS:N	44:AG:199:ALA:O	2.28	0.66
6:BH:64:VAL:HA	6:BH:67:LEU:HD23	1.77	0.66
9:BL:136:ARG:HH12	34:B5:303:U:H5"	1.59	0.66
20:BF:40:ILE:HB	20:BF:67:PRO:HB2	1.78	0.66
25:BS:40:ARG:HH12	26:BT:46:PRO:HD2	1.61	0.66
34:B5:1426:C:O2'	34:B5:1428:G:OP2	2.14	0.66
38:A1:110:G:OP2	48:AL:73:ARG:NH2	2.23	0.66
38:A1:845:G:N2	38:A1:848:A:OP2	2.29	0.66
38:A1:1264:G:H22	38:A1:1276:U:H3	1.42	0.66
38:A1:2218:G:H2'	38:A1:2219:A:C8	2.30	0.66
38:A1:2659:G:H2'	38:A1:2660:G:C8	2.30	0.66
40:A4:97:A:O2'	70:Ah:63:ARG:NH2	2.29	0.66
77:Ao:61:LYS:NZ	77:Ao:63:LYS:O	2.28	0.66
81:EC:6776:A:O2'	81:EC:6818:G:O4'	2.13	0.66
4:BE:246:LEU:HD11	4:BE:251:GLU:HG3	1.76	0.66
11:BO:49:LYS:NZ	34:B5:899:G:OP2	2.23	0.66
20:BF:160:VAL:O	29:Bc:45:LYS:NZ	2.28	0.66
20:BF:182:ALA:O	20:BF:186:ASN:ND2	2.22	0.66
34:B5:902:G:N2	34:B5:907:A:OP2	2.28	0.66
35:AA:3:ARG:HH21	38:A1:911:C:N4	1.93	0.66
35:AA:64:ARG:NH2	44:AG:37:GLY:O	2.29	0.66
36:AB:50:LYS:NZ	36:AB:330:GLY:O	2.21	0.66
36:AB:237:LYS:HD2	36:AB:237:LYS:N	2.11	0.66
38:A1:528:U:H2'	38:A1:529:A:C8	2.31	0.66
79:E:45:ARG:HH12	81:EC:6814:G:H21	1.42	0.66
3:BC:226:THR:OG1	3:BC:228:ASN:OD1	2.10	0.66
5:BG:50:PHE:HB3	5:BG:111:LEU:HB3	1.77	0.66
20:BF:51:VAL:HG22	20:BF:131:GLN:HB2	1.75	0.66
32:Bf:132:LEU:HD22	32:Bf:141:CYS:HA	1.78	0.66
34:B5:1116:A:H5"	76:An:17:ARG:HH12	1.61	0.66
34:B5:1144:U:H2'	34:B5:1145:U:C6	2.31	0.66
34:B5:1669:U:H3	34:B5:1732:A:H62	1.44	0.66
38:A1:1161:G:H21	67:Ae:56:GLY:HA2	1.61	0.66
38:A1:3383:G:N2	66:Ad:105:GLN:OE1	2.29	0.66
48:AL:98:ASP:OD1	48:AL:99:HIS:N	2.29	0.66
80:DC:122:THR:O	80:DC:352:ARG:NH1	2.29	0.66
80:DC:798:PHE:HB3	85:DC:903:SO1:O60	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:BE:6:LYS:O	4:BE:30:ARG:NH1	2.29	0.66
7:BI:5:ARG:N	7:BI:28:GLU:OE1	2.28	0.66
7:BI:44:HIS:O	7:BI:56:ARG:N	2.26	0.66
18:Be:2:ALA:N	34:B5:1754:A:N3	2.43	0.66
22:BP:90:ILE:HD12	22:BP:109:PRO:HA	1.76	0.66
32:Bf:145:HIS:HD1	34:B5:1234:A:HO2'	1.39	0.66
34:B5:1708:U:H5'	34:B5:1709:C:H5"	1.78	0.66
36:AB:10:ARG:HH22	36:AB:13:HIS:HA	1.60	0.66
38:A1:33:G:H5"	50:AN:73:ARG:HH12	1.60	0.66
38:A1:439:C:O4'	38:A1:494:G:N2	2.29	0.66
38:A1:1464:G:N2	38:A1:1467:A:OP2	2.26	0.66
38:A1:1604:G:H4'	38:A1:1835:A:H4'	1.78	0.66
42:AE:31:ARG:NH2	68:Af:105:SER:O	2.21	0.66
46:AI:214:PRO:O	46:AI:218:GLN:NE2	2.29	0.66
47:AJ:47:GLN:HG3	47:AJ:67:VAL:HG22	1.78	0.66
48:AL:174:ARG:HH21	71:Ai:9:ILE:HG21	1.61	0.66
55:AS:48:LEU:HD23	56:AT:151:LEU:HD13	1.77	0.66
62:AZ:25:ILE:HA	62:AZ:43:VAL:HG12	1.77	0.66
66:Ad:87:ASN:ND2	66:Ad:89:LEU:O	2.29	0.66
69:Ag:74:ARG:NH2	69:Ag:82:ALA:HB2	2.11	0.66
5:BG:56:ASN:OD1	34:B5:153:G:N2	2.25	0.66
11:BO:128:LYS:H	16:Ba:22:ARG:HH22	1.43	0.66
16:Ba:70:LYS:NZ	34:B5:931:C:OP1	2.29	0.66
25:BS:138:THR:HG21	34:B5:1459:C:H5"	1.78	0.66
34:B5:214:G:N2	34:B5:252:U:O4	2.28	0.66
34:B5:1614:A:O2'	34:B5:1615:C:O5'	2.14	0.66
35:AA:184:ARG:NH1	38:A1:1792:C:O2'	2.28	0.66
36:AB:58:ARG:HD3	36:AB:354:VAL:HG13	1.76	0.66
38:A1:1257:C:H5"	38:A1:1258:U:H5	1.60	0.66
50:AN:44:ARG:HH21	50:AN:119:TYR:HD2	1.40	0.66
61:AY:39:LEU:HD13	61:AY:42:GLN:HE21	1.61	0.66
80:DC:27:HIS:HB3	80:DC:30:HIS:CD2	2.29	0.66
80:DC:730:LEU:HG	80:DC:769:LYS:HG3	1.78	0.66
8:BJ:34:PHE:O	8:BJ:108:ARG:NH2	2.29	0.66
9:BL:59:PRO:HD3	9:BL:138:ASN:HD22	1.61	0.66
31:Bg:153:GLN:HG3	31:Bg:201:THR:HA	1.76	0.66
34:B5:895:G:H2'	34:B5:896:U:C6	2.31	0.66
35:AA:3:ARG:HH21	38:A1:911:C:H42	1.44	0.66
38:A1:269:G:H5"	50:AN:14:LYS:HE2	1.77	0.66
38:A1:358:G:N2	38:A1:361:A:OP2	2.26	0.66
38:A1:1638:A:H5'	62:AZ:15:ARG:HH21	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:Ag:9:ARG:H	69:Ag:34:HIS:HE1	1.43	0.66
4:BE:130:GLN:HE22	34:B5:244:A:H1'	1.61	0.65
11:BO:105:LEU:HD11	11:BO:110:LEU:HD22	1.78	0.65
34:B5:65:A:H2	34:B5:84:A:H62	1.43	0.65
34:B5:1055:U:O2	34:B5:1064:G:O6	2.14	0.65
34:B5:1089:U:O2'	34:B5:1093:A:N1	2.28	0.65
34:B5:1213:G:O2'	34:B5:1242:A:N6	2.29	0.65
34:B5:1273:G:N2	34:B5:1278:G:O6	2.30	0.65
38:A1:2746:A:H61	41:AD:148:ILE:HD13	1.61	0.65
39:A3:79:A:H62	39:A3:101:G:N2	1.94	0.65
58:AV:103:ALA:HA	58:AV:109:MET:HA	1.77	0.65
80:DC:120:ARG:NH1	80:DC:481:MET:SD	2.70	0.65
81:EC:6884:G:H2'	81:EC:6885:G:C8	2.30	0.65
10:BN:92:ILE:HG23	10:BN:141:TYR:HE2	1.61	0.65
34:B5:553:G:H3'	34:B5:554:C:H2'	1.79	0.65
38:A1:2448:G:O6	38:A1:2498:U:O4	2.14	0.65
38:A1:3348:G:O6	38:A1:3357:U:O4	2.14	0.65
63:Aa:102:ILE:HD11	63:Aa:125:VAL:HG22	1.78	0.65
2:BB:62:LYS:HE3	2:BB:90:GLU:HA	1.77	0.65
5:BG:191:ARG:HH22	34:B5:178:U:H5'	1.61	0.65
38:A1:138:U:H2'	38:A1:139:G:H8	1.59	0.65
38:A1:787:G:H2'	38:A1:788:C:H6	1.61	0.65
38:A1:1394:A:OP1	67:Ae:98:HIS:NE2	2.28	0.65
38:A1:1460:A:H2'	38:A1:1461:A:H8	1.61	0.65
38:A1:1602:A:H5"	54:AR:10:LEU:HD11	1.79	0.65
38:A1:2103:U:OP1	54:AR:81:ARG:NE	2.29	0.65
38:A1:2507:C:H2'	38:A1:2508:U:C6	2.32	0.65
40:A4:43:A:H2'	40:A4:44:A:H8	1.62	0.65
51:AO:75[A]:ALA:HB3	51:AO:78[A]:ARG:HG2	1.79	0.65
78:Ap:10:ILE:HG21	78:Ap:30:GLU:OE1	1.97	0.65
79:E:17:LEU:HD13	79:E:176:GLU:HG3	1.78	0.65
3:BC:170:ILE:HB	3:BC:197:TYR:HB2	1.78	0.65
10:BN:64:ARG:NH1	10:BN:67:THR:O	2.29	0.65
14:BX:114:LYS:NZ	34:B5:571:G:O3'	2.21	0.65
20:BF:143:ARG:HH11	20:BF:144:GLU:HB2	1.62	0.65
34:B5:522:U:H3	34:B5:530:C:H42	1.43	0.65
34:B5:923:A:H2'	34:B5:924:A:H8	1.62	0.65
37:AC:323:VAL:HG23	37:AC:326:ARG:HD2	1.79	0.65
38:A1:584:G:H2'	38:A1:585:A:C8	2.31	0.65
38:A1:649:A:OP2	38:A1:2868:U:O2'	2.14	0.65
38:A1:2516:U:O4	38:A1:2592:G:N2	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2666:C:OP2	38:A1:2687:G:N1	2.28	0.65
43:AF:163:LEU:HA	43:AF:168:ILE:HD11	1.77	0.65
57:AU:56:VAL:HA	57:AU:65:VAL:HG22	1.78	0.65
34:B5:444:C:N4	34:B5:459:G:OP2	2.28	0.65
34:B5:480:G:H3'	34:B5:481:A:C8	2.32	0.65
34:B5:982:U:H2'	34:B5:983:A:C8	2.32	0.65
34:B5:1553:G:N2	34:B5:1556:A:O5'	2.28	0.65
38:A1:398:A:O2'	38:A1:1416:C:OP1	2.14	0.65
38:A1:794:U:H2'	38:A1:795:G:C8	2.29	0.65
38:A1:987:U:H2'	38:A1:988:U:C6	2.31	0.65
38:A1:1597:C:H2'	38:A1:1598:G:H8	1.62	0.65
38:A1:1786:G:H2'	38:A1:1787:A:C8	2.32	0.65
38:A1:2468:A:O2'	38:A1:2469:G:OP2	2.13	0.65
3:BC:157:LYS:NZ	13:BW:91:ALA:O	2.28	0.65
20:BF:84:LYS:O	20:BF:92:ARG:NH1	2.30	0.65
27:BU:40:ASN:HA	27:BU:43:LYS:HE3	1.79	0.65
38:A1:1175:C:H2'	38:A1:1176:C:C6	2.30	0.65
38:A1:1542:G:OP1	50:AN:34:ASN:ND2	2.28	0.65
38:A1:3192:U:O4	38:A1:3200:G:O6	2.15	0.65
45:AH:37:ASN:OD1	45:AH:38:LEU:N	2.29	0.65
49:AM:48:GLY:HA3	49:AM:53:VAL:HB	1.78	0.65
70:Ah:13:SER:OG	70:Ah:16:GLN:OE1	2.15	0.65
80:DC:149:GLU:O	80:DC:355:GLN:NE2	2.29	0.65
2:BB:120:LEU:HD23	2:BB:120:LEU:H	1.61	0.65
5:BG:29:ASP:N	5:BG:102:VAL:O	2.29	0.65
27:BU:89:ARG:NH2	34:B5:1383:G:OP1	2.30	0.65
34:B5:1086:A:H2'	34:B5:1087:A:C8	2.32	0.65
38:A1:1203:A:H2'	38:A1:1204:A:C8	2.31	0.65
38:A1:3333:G:H2'	59:AW:51:TRP:HZ3	1.62	0.65
44:AG:98:ARG:HD3	44:AG:99:PRO:HD2	1.78	0.65
45:AH:22:SER:OG	45:AH:23:ARG:N	2.28	0.65
47:AJ:82:ARG:HA	47:AJ:85:LYS:HE2	1.79	0.65
50:AN:103:GLU:HA	50:AN:106:VAL:HG12	1.78	0.65
63:Aa:38:GLN:O	63:Aa:42:ARG:NH2	2.29	0.65
66:Ad:9:THR:HG23	66:Ad:76:SER:HB3	1.79	0.65
70:Ah:117:ALA:O	70:Ah:119:LYS:NZ	2.30	0.65
71:Ai:50:LEU:HB3	71:Ai:55:ARG:NE	2.10	0.65
80:DC:378:LEU:HA	80:DC:403:GLY:HA3	1.79	0.65
80:DC:433:ARG:HE	80:DC:457:VAL:HG21	1.62	0.65
2:BB:113:MET:SD	2:BB:213:ARG:NH2	2.70	0.65
31:Bg:182:ASN:HB2	31:Bg:189:GLU:HG2	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1347:U:OP2	34:B5:1371:A:N6	2.28	0.65
34:B5:1774:G:OP1	76:An:7:LYS:NZ	2.30	0.65
38:A1:1614:C:H2'	38:A1:1615:C:H6	1.62	0.65
38:A1:2926:A:H2'	38:A1:2927:C:H6	1.61	0.65
38:A1:3173:G:OP2	51:AO:101[A]:ARG:NH1	2.30	0.65
43:AF:48:ASN:ND2	43:AF:182:ASP:OD2	2.30	0.65
80:DC:632:LYS:NZ	80:DC:648:ASP:O	2.25	0.65
81:EC:6864:A:H4'	81:EC:6865:G:H5'	1.78	0.65
4:BE:72:VAL:HG23	4:BE:90:ILE:HG13	1.79	0.65
15:BY:121:THR:N	34:B5:149:C:OP1	2.23	0.65
31:Bg:121:MET:HE1	31:Bg:123:ILE:HG23	1.79	0.65
35:AA:156:LYS:HB3	35:AA:158:ILE:HD11	1.78	0.65
36:AB:364:LYS:NZ	38:A1:3049:A:O2'	2.30	0.65
38:A1:504:A:N6	38:A1:588:G:O6	2.29	0.65
38:A1:650:C:H2'	38:A1:651:G:C8	2.32	0.65
38:A1:1258:U:OP1	38:A1:1260:A:N6	2.30	0.65
38:A1:1639:C:OP2	69:Ag:74:ARG:NH1	2.30	0.65
38:A1:1750:A:H1'	38:A1:1752:A:N7	2.12	0.65
38:A1:2423:U:H2'	38:A1:2424:A:H8	1.61	0.65
42:AE:36:PRO:O	42:AE:90:LYS:NZ	2.29	0.65
43:AF:143:THR:HG22	43:AF:241:LYS:HE2	1.79	0.65
53:AQ:170:ARG:HH12	53:AQ:171:LYS:HB3	1.62	0.65
80:DC:540:ILE:HA	80:DC:543:GLN:HE22	1.61	0.65
81:EC:6918:A:H3'	81:EC:6919:G:H8	1.61	0.65
7:BI:26:LYS:HE3	34:B5:399:A:H3'	1.78	0.65
22:BP:43:ARG:NH1	34:B5:1551:U:O5'	2.30	0.65
34:B5:438:A:O2'	34:B5:465:G:N2	2.30	0.65
36:AB:256:HIS:ND1	38:A1:2941:A:OP2	2.28	0.65
38:A1:87:U:H2'	38:A1:88:A:C8	2.31	0.65
38:A1:221:A:O2'	38:A1:223:U:OP2	2.15	0.65
40:A4:103:G:O3'	72:Aj:21:ARG:NH1	2.29	0.65
53:AQ:159:LYS:O	53:AQ:161:LYS:NZ	2.27	0.65
70:Ah:58:ILE:O	70:Ah:62:GLN:NE2	2.30	0.65
80:DC:378:LEU:HD11	80:DC:380:LEU:HD23	1.77	0.65
80:DC:465:LYS:HG2	80:DC:513:LYS:HD2	1.79	0.65
1:BA:64:ILE:HD11	1:BA:122:ILE:HD11	1.79	0.64
4:BE:33:ALA:HB1	34:B5:297:U:H6	1.61	0.64
7:BI:188:GLU:HG3	9:BL:13:PHE:CZ	2.32	0.64
34:B5:654:C:OP2	34:B5:682:C:N4	2.31	0.64
34:B5:862:A:N1	34:B5:963:A:O2'	2.30	0.64
34:B5:875:G:C6	34:B5:952:A:N1	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:354:U:O2'	74:Al:40:LYS:NZ	2.31	0.64
38:A1:1060:U:H2'	38:A1:1061:A:C8	2.31	0.64
38:A1:1111:U:O5'	48:AL:5:LYS:NZ	2.27	0.64
38:A1:1229:G:H2'	38:A1:1230:G:C8	2.32	0.64
38:A1:1268:G:N3	38:A1:1273:A:N6	2.45	0.64
38:A1:1447:G:OP2	52:AP:27:LYS:NZ	2.29	0.64
38:A1:1863:G:N1	38:A1:1866:C:OP2	2.26	0.64
48:AL:75:PHE:O	48:AL:98:ASP:N	2.29	0.64
62:AZ:103:GLN:NE2	62:AZ:105:SER:OG	2.26	0.64
1:BA:112:THR:HG22	1:BA:114:SER:H	1.61	0.64
6:BH:96:ARG:O	34:B5:694:U:N3	2.29	0.64
6:BH:129:LEU:HD21	6:BH:169:PHE:HB3	1.78	0.64
8:BJ:78:ARG:NH2	34:B5:762:A:O3'	2.30	0.64
9:BL:127:GLN:NE2	34:B5:304:U:O2'	2.29	0.64
25:BS:2:SER:HB3	28:BZ:81:ARG:HB2	1.78	0.64
25:BS:37:GLY:H	34:B5:1567:U:H5"	1.62	0.64
25:BS:67:GLU:OE1	25:BS:71:GLN:NE2	2.30	0.64
26:BT:77:ASN:HB3	26:BT:95:ASP:HB2	1.78	0.64
30:Bd:54:LYS:NZ	34:B5:1419:G:O3'	2.30	0.64
32:Bf:103:LEU:HD23	33:BM:74:LEU:HD22	1.78	0.64
34:B5:1682:U:O2'	34:B5:1683:C:O5'	2.13	0.64
34:B5:1735:U:H2'	34:B5:1736:G:H8	1.60	0.64
38:A1:528:U:H3	38:A1:564:G:H1	1.46	0.64
38:A1:705:A:N6	38:A1:715:A:O5'	2.30	0.64
38:A1:708:G:N2	38:A1:711:A:OP2	2.26	0.64
38:A1:970:A:H2'	38:A1:971:G:C8	2.32	0.64
38:A1:1251:A:H5"	38:A1:1252:A:H4'	1.80	0.64
38:A1:2442:G:H22	38:A1:2505:U:H3	1.42	0.64
38:A1:2744:U:H2'	38:A1:2745:G:C8	2.32	0.64
49:AM:25:LYS:HE3	49:AM:62:GLN:HG3	1.79	0.64
70:Ah:34:GLN:HE22	70:Ah:38:ARG:HB2	1.60	0.64
75:Am:104:PRO:HG2	75:Am:107:ALA:HB2	1.79	0.64
80:DC:643:PRO:HG2	80:DC:682:ARG:HA	1.79	0.64
2:BB:184:LEU:HA	2:BB:187:LYS:HG2	1.79	0.64
20:BF:219:ARG:NH2	81:EC:6841:U:O2'	2.29	0.64
27:BU:26:LEU:O	27:BU:89:ARG:N	2.30	0.64
34:B5:821:U:O2'	34:B5:822:U:O4'	2.07	0.64
34:B5:1752:U:H2'	34:B5:1753:A:C8	2.33	0.64
37:AC:320:ASN:ND2	38:A1:608:A:OP1	2.24	0.64
37:AC:322:GLN:NE2	38:A1:607:A:O2'	2.31	0.64
38:A1:30:G:OP1	50:AN:172:ARG:NE	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:687:U:OP2	48:AL:36:ARG:NH2	2.24	0.64
38:A1:787:G:H2'	38:A1:788:C:C6	2.33	0.64
38:A1:1010:G:H5'	46:AI:40:LYS:HE2	1.80	0.64
38:A1:1747:G:H21	73:Ak:2:ALA:HB3	1.61	0.64
38:A1:1753:G:O6	38:A1:1772:U:O2	2.15	0.64
69:Ag:25:THR:HG23	69:Ag:27:GLY:H	1.62	0.64
80:DC:577:SER:OG	80:DC:711:ARG:NH2	2.30	0.64
4:BE:146:THR:OG1	34:B5:123:G:N2	2.28	0.64
11:BO:128:LYS:HG3	16:Ba:22:ARG:NH1	2.12	0.64
35:AA:83:HIS:ND1	35:AA:84:THR:O	2.31	0.64
36:AB:259:HIS:HE1	38:A1:2366:C:H4'	1.63	0.64
37:AC:294:GLU:OE1	37:AC:294:GLU:N	2.23	0.64
38:A1:581:U:H2'	38:A1:582:G:H8	1.63	0.64
38:A1:1476:G:H1	38:A1:1877:U:H3	1.46	0.64
38:A1:1485:G:HO2'	38:A1:1874:A:HO2'	1.45	0.64
38:A1:1636:U:H1'	62:AZ:76:ASN:HB2	1.78	0.64
38:A1:2988:C:H2'	38:A1:2989:U:H6	1.61	0.64
38:A1:3186:A:N3	45:AH:44:THR:HG23	2.13	0.64
65:Ac:55:GLU:HB3	69:Ag:94:LEU:HD21	1.79	0.64
80:DC:293:LYS:HD2	80:DC:296:ILE:HD12	1.78	0.64
20:BF:164:PRO:HA	20:BF:167:ARG:HD3	1.78	0.64
31:Bg:236:ALA:HB1	31:Bg:261:LYS:HD2	1.80	0.64
34:B5:174:U:H2'	34:B5:175:G:C8	2.32	0.64
34:B5:1041:G:H2'	34:B5:1042:G:C8	2.32	0.64
34:B5:1738:U:H2'	34:B5:1739:C:C6	2.32	0.64
38:A1:797:U:H2'	38:A1:798:G:H8	1.62	0.64
38:A1:1177:G:H5"	68:Af:18:ARG:HH12	1.61	0.64
38:A1:2369:G:H2'	38:A1:2370:G:C8	2.33	0.64
38:A1:2370:G:H2'	38:A1:2371:G:C8	2.32	0.64
38:A1:2999:U:H2'	38:A1:3000:A:C8	2.32	0.64
38:A1:3291:G:H2'	38:A1:3292:A:C8	2.32	0.64
40:A4:65:A:O3'	70:Ah:10:ARG:NH2	2.26	0.64
48:AL:163:GLY:HA2	63:Aa:139:ARG:HH12	1.60	0.64
63:Aa:63:LYS:NZ	63:Aa:65:GLN:OE1	2.30	0.64
80:DC:488:VAL:HG11	80:DC:796:MET:HE2	1.80	0.64
7:BI:42:ARG:NH1	34:B5:1678:A:OP2	2.30	0.64
8:BJ:143:ILE:HD13	34:B5:768:C:H1'	1.79	0.64
14:BX:69:ARG:HG3	14:BX:117:ILE:HG22	1.79	0.64
31:Bg:91:LEU:O	31:Bg:100:TYR:N	2.30	0.64
34:B5:340:U:H2'	34:B5:341:A:H8	1.60	0.64
34:B5:514:G:HO2'	34:B5:515:A:H8	1.46	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:402:A:H5'	74:Al:36:ARG:HH12	1.61	0.64
38:A1:681:U:O2	38:A1:696:C:N4	2.31	0.64
38:A1:1010:G:H1	38:A1:1040:A:N6	1.95	0.64
38:A1:1622:U:H2'	38:A1:1623:G:H8	1.63	0.64
38:A1:1804:A:H2'	38:A1:1805:C:C6	2.32	0.64
38:A1:2508:U:H2'	38:A1:2509:U:C6	2.33	0.64
40:A4:154:C:H2'	40:A4:155:A:C8	2.32	0.64
50:AN:67:ARG:HG2	50:AN:127:TYR:HE1	1.62	0.64
60:AX:111:ASN:O	60:AX:123:TYR:N	2.31	0.64
61:AY:37:LYS:HG3	61:AY:40:ARG:HH22	1.62	0.64
34:B5:69:G:N2	34:B5:82:U:O2	2.31	0.64
34:B5:325:G:H2'	34:B5:326:G:H8	1.62	0.64
34:B5:647:G:N2	34:B5:648:G:O6	2.31	0.64
38:A1:115:A:P	50:AN:49:ARG:HH22	2.21	0.64
38:A1:285:A:H1'	77:Ao:45:ARG:HH12	1.62	0.64
38:A1:876:A:H4'	38:A1:1890:U:H4'	1.78	0.64
38:A1:1342:C:H2'	38:A1:1343:A:C8	2.33	0.64
38:A1:1524:A:O2'	38:A1:1526:U:OP2	2.14	0.64
38:A1:3297:U:O3'	52:AP:74:LYS:NZ	2.27	0.64
81:EC:6828:G:H2'	81:EC:6829:A:C8	2.31	0.64
4:BE:159:THR:HG21	4:BE:173:ILE:HD12	1.80	0.64
14:BX:2:GLY:N	34:B5:1103:U:O4	2.31	0.64
14:BX:50:LYS:NZ	34:B5:436:A:OP1	2.31	0.64
19:BD:16:VAL:HG11	30:Bd:22:ARG:HH11	1.61	0.64
31:Bg:221:MET:HE2	31:Bg:223:TRP:NE1	2.13	0.64
33:BM:91:VAL:HG21	33:BM:97:LEU:HB3	1.80	0.64
34:B5:1628:U:H2'	34:B5:1629:G:C8	2.31	0.64
34:B5:1680:G:N2	34:B5:1721:A:OP2	2.31	0.64
35:AA:30:ARG:O	35:AA:163:ARG:NH2	2.31	0.64
36:AB:83:PRO:O	36:AB:165:GLN:NE2	2.31	0.64
38:A1:788:C:H2'	38:A1:789:A:H8	1.63	0.64
38:A1:1203:A:N6	38:A1:1300:G:H2'	2.13	0.64
38:A1:2926:A:H2'	38:A1:2927:C:C6	2.33	0.64
38:A1:2931:C:OP1	58:AV:40:LYS:NZ	2.31	0.64
40:A4:140:G:O3'	50:AN:109:ARG:NH1	2.31	0.64
80:DC:307:LEU:HD22	80:DC:311:GLU:HG3	1.79	0.64
1:BA:88:LYS:HE2	1:BA:201:LEU:HB2	1.78	0.64
2:BB:211:HIS:HB2	2:BB:213:ARG:HD2	1.79	0.64
3:BC:227:PRO:HA	3:BC:230:TRP:CD2	2.33	0.64
5:BG:139:ASN:ND2	34:B5:143:G:OP2	2.31	0.64
34:B5:591:A:H2'	34:B5:592:A:H8	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:160:G:H2'	38:A1:161:G:H8	1.61	0.64
38:A1:994:G:H3'	56:AT:13:TYR:HD2	1.62	0.64
38:A1:2445:A:N1	38:A1:2503:G:N1	2.46	0.64
38:A1:2856:G:N7	46:AI:7:ARG:NH2	2.40	0.64
38:A1:2915:U:H5"	38:A1:2916:U:H5'	1.78	0.64
50:AN:84:PRO:HA	50:AN:87:GLN:HG2	1.78	0.64
52:AP:34:GLN:N	52:AP:34:GLN:OE1	2.31	0.64
53:AQ:170:ARG:NH2	63:Aa:56:VAL:O	2.25	0.64
66:Ad:68:GLU:OE1	66:Ad:68:GLU:N	2.26	0.64
5:BG:183:ARG:NH2	34:B5:141:U:O2	2.31	0.64
25:BS:41:ARG:HG2	25:BS:85:PHE:CZ	2.33	0.64
34:B5:16:G:N2	34:B5:1138:A:H62	1.96	0.64
34:B5:343:C:H2'	34:B5:344:A:C8	2.32	0.64
34:B5:691:C:H2'	34:B5:692:C:C6	2.33	0.64
34:B5:1045:C:H2'	34:B5:1046:G:C8	2.33	0.64
34:B5:1336:A:H2'	34:B5:1337:A:C8	2.32	0.64
37:AC:271:LYS:NZ	38:A1:695:C:OP1	2.31	0.64
38:A1:148:G:N7	44:AG:137:ASN:ND2	2.46	0.64
38:A1:1508:C:OP1	52:AP:127:ARG:NH1	2.31	0.64
38:A1:2383:C:OP2	51:AO:85[A]:ARG:NH2	2.30	0.64
38:A1:2526:C:H2'	38:A1:2527:G:C8	2.33	0.64
50:AN:56:LYS:NZ	50:AN:145:ASP:OD2	2.31	0.64
52:AP:23:ARG:HE	52:AP:125:GLN:HE21	1.46	0.64
57:AU:15:PHE:N	57:AU:65:VAL:O	2.31	0.64
79:E:161:LYS:NZ	81:EC:6819:G:OP2	2.30	0.64
80:DC:320:LEU:HA	80:DC:323:VAL:HG12	1.80	0.64
1:BA:13:ASP:O	1:BA:17:LEU:N	2.27	0.63
5:BG:4:ASN:HA	5:BG:15:THR:HA	1.81	0.63
34:B5:480:G:O6	34:B5:508:U:O4	2.15	0.63
34:B5:1216:C:N4	34:B5:1446:A:C8	2.66	0.63
36:AB:108:GLU:OE1	36:AB:108:GLU:N	2.30	0.63
36:AB:132:LYS:NZ	38:A1:3151:U:OP2	2.27	0.63
38:A1:1280:C:H2'	38:A1:1281:G:C8	2.33	0.63
38:A1:2106:A:H2'	38:A1:2107:A:C8	2.33	0.63
38:A1:2520:A:H2'	38:A1:2521:U:C6	2.33	0.63
50:AN:35:VAL:HG23	50:AN:36:ILE:HG12	1.80	0.63
51:AO:12[A]:LYS:HB3	55:AS:167:ARG:HH22	1.62	0.63
80:DC:418:TYR:HB3	80:DC:477:ASN:HD21	1.63	0.63
7:BI:67:TRP:HB3	7:BI:72:ILE:HG22	1.80	0.63
17:Bb:19:HIS:CE1	17:Bb:21:LEU:HB3	2.33	0.63
27:BU:32:LYS:NZ	34:B5:1384:A:OP1	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:246:LEU:N	38:A1:1889:G:OP1	2.26	0.63
38:A1:155:G:H1'	71:Ai:26:ILE:HD11	1.80	0.63
38:A1:513:G:H2'	38:A1:514:G:C8	2.33	0.63
38:A1:709:A:OP2	53:AQ:174:ARG:NH2	2.29	0.63
38:A1:1043:C:O3'	46:AI:90:ARG:NH2	2.32	0.63
38:A1:2834:G:H2'	38:A1:2835:U:C6	2.33	0.63
38:A1:3265:C:N4	38:A1:3266:G:O6	2.32	0.63
68:Af:89:LEU:HD22	68:Af:93:THR:HG21	1.79	0.63
81:EC:6857:C:H2'	81:EC:6858:A:C4	2.33	0.63
3:BC:87:GLN:NE2	34:B5:11:A:H5'	2.12	0.63
5:BG:85:ARG:O	5:BG:87:ARG:NH1	2.30	0.63
5:BG:160:ARG:NH2	34:B5:68:A:OP1	2.32	0.63
5:BG:163:THR:HG22	5:BG:165:GLY:H	1.64	0.63
8:BJ:133:HIS:NE2	34:B5:512:A:O2'	2.26	0.63
19:BD:71:LEU:HB3	19:BD:75:LYS:HE2	1.79	0.63
34:B5:62:A:O2'	34:B5:268:C:O2	2.16	0.63
34:B5:211:PSU:H3'	34:B5:212:U:H5"	1.81	0.63
34:B5:228:G:N2	34:B5:835:U:O5'	2.32	0.63
34:B5:924:A:H2'	34:B5:925:G:C8	2.33	0.63
34:B5:1580:C:H2'	34:B5:1581:C:C6	2.34	0.63
35:AA:224:THR:HG21	38:A1:2201:G:H21	1.62	0.63
38:A1:661:G:OP2	38:A1:661:G:N2	2.25	0.63
38:A1:1011:A:H2'	38:A1:1012:G:C8	2.33	0.63
38:A1:1060:U:H2'	38:A1:1061:A:H8	1.64	0.63
38:A1:1162:U:P	67:Ae:54:LYS:HZ1	2.22	0.63
38:A1:2315:G:H2'	38:A1:2316:G:H8	1.60	0.63
38:A1:3015:G:H2'	38:A1:3016:A:C8	2.33	0.63
38:A1:3085:G:OP1	59:AW:34:SER:OG	2.13	0.63
47:AJ:16:LYS:HB3	47:AJ:72:ARG:HG2	1.81	0.63
62:AZ:5:LEU:HD21	65:Ac:35:ARG:NH2	2.13	0.63
79:E:107:TYR:HE2	79:E:110:PHE:HA	1.64	0.63
80:DC:75:ILE:O	80:DC:102:LEU:N	2.29	0.63
80:DC:335:LEU:HA	80:DC:338:ILE:HD12	1.80	0.63
6:BH:135:ILE:HG23	6:BH:152:VAL:HG13	1.80	0.63
7:BI:183:ILE:HG23	7:BI:185:GLU:HG3	1.80	0.63
10:BN:46:THR:OG1	10:BN:49:GLN:OE1	2.16	0.63
34:B5:86:A:H2'	34:B5:87:C:H6	1.64	0.63
34:B5:967:A:H2'	34:B5:968:U:C6	2.33	0.63
34:B5:1781:MA6:H8	34:B5:1781:MA6:OP2	1.97	0.63
38:A1:361:A:OP1	72:Aj:24:ARG:NH2	2.29	0.63
38:A1:437:G:H2'	38:A1:438:A:C4	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2357:A:H2'	38:A1:2358:A:C8	2.33	0.63
38:A1:3097:C:H2'	38:A1:3098:G:C8	2.34	0.63
38:A1:3204:C:H2'	38:A1:3205:G:C8	2.33	0.63
39:A3:84:A:H2'	39:A3:85:G:C8	2.34	0.63
40:A4:4:C:H2'	40:A4:5:U:C6	2.34	0.63
43:AF:47:ARG:NH1	43:AF:183:ASP:OD2	2.32	0.63
51:AO:92[A]:THR:HG23	51:AO:95[A]:GLY:H	1.64	0.63
59:AW:47:ARG:HA	59:AW:54:LEU:HD22	1.78	0.63
81:EC:6794:C:H42	81:EC:6940:U:H1'	1.63	0.63
81:EC:6859:U:N3	81:EC:6871:A:N6	2.46	0.63
1:BA:67:ILE:HD13	1:BA:73:VAL:HG23	1.80	0.63
5:BG:27:PHE:HZ	5:BG:41:VAL:HG22	1.64	0.63
9:BL:106:ASN:ND2	34:B5:349:U:OP2	2.31	0.63
17:Bb:74:SER:OG	17:Bb:77:THR:OG1	2.16	0.63
34:B5:648:G:O6	34:B5:686:C:N4	2.22	0.63
34:B5:1291:G:H22	34:B5:1324:G:N2	1.96	0.63
36:AB:106:TRP:O	36:AB:137:TYR:OH	2.16	0.63
38:A1:716:A:OP1	63:Aa:137:LYS:NZ	2.32	0.63
38:A1:1662:G:H2'	38:A1:1663:C:C6	2.34	0.63
38:A1:1740:U:H4'	38:A1:1741:A:H5'	1.79	0.63
38:A1:2747:A:O2'	38:A1:2748:A:O4'	2.14	0.63
38:A1:3055:U:HO2'	38:A1:3085:G:H1	0.69	0.63
38:A1:3060:C:H2'	38:A1:3061:G:H8	1.61	0.63
65:Ac:74:ASN:OD1	65:Ac:75:ASN:N	2.31	0.63
76:An:12:ARG:O	76:An:16:LYS:NZ	2.32	0.63
1:BA:124:THR:O	1:BA:164:ASN:ND2	2.31	0.63
3:BC:205:ARG:NH1	34:B5:7:G:O6	2.31	0.63
9:BL:108:PRO:HB2	9:BL:135:VAL:HG22	1.81	0.63
32:Bf:134:ASN:O	32:Bf:135:HIS:ND1	2.31	0.63
34:B5:92:A:OP1	34:B5:398:G:N2	2.31	0.63
34:B5:444:C:C2	34:B5:460:A:N6	2.67	0.63
34:B5:561:G:H2'	34:B5:562:G:C8	2.33	0.63
37:AC:141:ARG:NH2	38:A1:1386:A:OP2	2.31	0.63
38:A1:86:G:N7	48:AL:13:HIS:ND1	2.46	0.63
38:A1:299:G:H2'	38:A1:300:G:H8	1.63	0.63
38:A1:673:U:H2'	38:A1:674:G:C8	2.34	0.63
38:A1:1460:A:H2'	38:A1:1461:A:C8	2.34	0.63
38:A1:2204:C:H2'	38:A1:2205:U:C6	2.34	0.63
38:A1:2343:C:H2'	38:A1:2344:U:H6	1.63	0.63
38:A1:2786:G:H5'	77:Ao:38:GLN:NE2	2.14	0.63
38:A1:3160:U:H3	38:A1:3290:G:H1	0.71	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3214:U:OP2	49:AM:128:ARG:NH1	2.30	0.63
54:AR:173:ARG:O	54:AR:177:VAL:N	2.31	0.63
68:Af:48:ARG:HG2	68:Af:104:PRO:HD3	1.79	0.63
80:DC:633:ILE:HG12	80:DC:645:LEU:HD11	1.79	0.63
81:EC:6859:U:C2	81:EC:6871:A:C6	2.87	0.63
24:BR:57:LEU:HD22	24:BR:60:ARG:HH11	1.64	0.63
34:B5:1461:C:O2'	81:EC:6914:A:N6	2.32	0.63
36:AB:306:THR:O	36:AB:361:THR:OG1	2.16	0.63
38:A1:127:G:H2'	38:A1:128:G:H8	1.64	0.63
38:A1:533:A:O2'	38:A1:535:G:O5'	2.16	0.63
38:A1:634:C:H4'	67:Ae:47:ARG:NH1	2.13	0.63
38:A1:965:A:O3'	63:Aa:44:ASN:ND2	2.31	0.63
38:A1:1504:A:N1	38:A1:1515:A:O2'	2.28	0.63
38:A1:2521:U:O2'	38:A1:2524:A:OP1	2.17	0.63
48:AL:8:PRO:HB2	53:AQ:166:LEU:HD12	1.80	0.63
49:AM:19:ARG:HB3	49:AM:35:ILE:HD12	1.80	0.63
73:Ak:7:ASP:HB3	73:Ak:10:GLN:HB2	1.81	0.63
78:Ap:36:ARG:CZ	78:Ap:45:LYS:HA	2.29	0.63
10:BN:106:ARG:NH2	34:B5:1019:A:O5'	2.32	0.63
14:BX:90:ASP:OD1	14:BX:136:TRP:NE1	2.31	0.63
19:BD:146:ARG:O	19:BD:148:LYS:NZ	2.27	0.63
34:B5:754:A:H5"	34:B5:755:A:H5'	1.81	0.63
34:B5:1220:C:H2'	34:B5:1221:A:C8	2.31	0.63
38:A1:100:A:H4'	50:AN:181:ASN:HD22	1.64	0.63
38:A1:273:A:N6	38:A1:293:C:H42	1.97	0.63
38:A1:307:A:H2'	38:A1:308:A:C8	2.33	0.63
38:A1:407:A:H2'	38:A1:408:A:C8	2.34	0.63
38:A1:585:A:H2'	38:A1:586:C:C6	2.34	0.63
38:A1:664:U:H3	38:A1:798:G:H1	1.46	0.63
38:A1:790:U:H2'	38:A1:791:A:C8	2.34	0.63
38:A1:1340:G:H2'	38:A1:1341:U:C6	2.34	0.63
38:A1:1395:G:O2'	40:A4:18:U:O2	2.17	0.63
38:A1:1516:C:H2'	38:A1:1517:G:H8	1.64	0.63
38:A1:1729:A:O4'	65:Ac:52:ARG:NH1	2.21	0.63
38:A1:2342:U:H2'	38:A1:2343:C:H6	1.64	0.63
38:A1:2799:A:O2'	63:Aa:42:ARG:NH1	2.32	0.63
38:A1:3192:U:H3	38:A1:3200:G:H1	0.73	0.63
39:A3:71:G:H2'	39:A3:72:A:H8	1.62	0.63
48:AL:176:GLU:O	48:AL:180:ARG:N	2.32	0.63
52:AP:168:LEU:HD12	52:AP:172:GLN:HB3	1.81	0.63
57:AU:33:TYR:HH	57:AU:80:THR:HG1	1.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:Ai:67:LYS:HD2	71:Ai:70:ARG:HH22	1.64	0.63
72:Aj:28:HIS:HB3	72:Aj:31:LYS:HB3	1.79	0.63
80:DC:618:ILE:HG13	80:DC:619:MET:HG2	1.80	0.63
19:BD:75:LYS:NZ	21:BK:18:GLU:OE1	2.32	0.63
25:BS:23:ASP:OD1	25:BS:25:ASN:ND2	2.32	0.63
33:BM:42:ALA:HB3	33:BM:122:VAL:HB	1.80	0.63
33:BM:76:GLU:HA	33:BM:79:ALA:HB3	1.79	0.63
34:B5:196:G:O2'	34:B5:197:A:OP1	2.17	0.63
34:B5:912:U:O2	34:B5:914:G:N1	2.31	0.63
36:AB:95:THR:HG22	38:A1:3243:A:H4'	1.81	0.63
38:A1:714:G:N7	63:Aa:111:LYS:NZ	2.37	0.63
38:A1:1323:G:H2'	38:A1:1324:U:H6	1.64	0.63
38:A1:1342:C:H2'	38:A1:1343:A:H8	1.63	0.63
38:A1:1597:C:H2'	38:A1:1598:G:C8	2.34	0.63
57:AU:13:LYS:HD2	57:AU:101:ASN:HD21	1.64	0.63
67:Ae:23:ASP:OD1	67:Ae:24:ARG:N	2.32	0.63
2:BB:121:ILE:O	2:BB:140:ILE:HA	1.99	0.62
3:BC:87:GLN:HE22	34:B5:11:A:H5'	1.64	0.62
4:BE:39:ARG:NH2	34:B5:298:C:OP1	2.31	0.62
15:BY:15:ASN:O	15:BY:19:ALA:N	2.32	0.62
34:B5:1213:G:H1	34:B5:1450:U:H5	1.44	0.62
35:AA:72:ARG:NH2	38:A1:1580:A:OP1	2.32	0.62
38:A1:84:U:O2'	38:A1:101:G:O6	2.11	0.62
38:A1:675:C:O2'	38:A1:679:U:OP1	2.17	0.62
38:A1:1334:U:O2'	43:AF:151:ARG:NH1	2.32	0.62
38:A1:2789:U:OP1	53:AQ:179:ARG:NH1	2.32	0.62
39:A3:101:G:OP2	55:AS:52:LYS:NZ	2.32	0.62
5:BG:102:VAL:HG13	5:BG:106:LEU:HD13	1.81	0.62
8:BJ:31:ALA:HA	8:BJ:36:LEU:HD12	1.80	0.62
8:BJ:87:SER:OG	8:BJ:89:ASP:OD1	2.17	0.62
9:BL:123:VAL:HG12	9:BL:142:VAL:HA	1.80	0.62
19:BD:53:THR:O	19:BD:90:ARG:NE	2.31	0.62
20:BF:160:VAL:H	29:Bc:45:LYS:NZ	1.97	0.62
29:Bc:15:VAL:HA	29:Bc:28:VAL:HG12	1.79	0.62
34:B5:16:G:H2'	34:B5:17:C:C6	2.33	0.62
34:B5:841:U:H3'	34:B5:842:C:H4'	1.82	0.62
35:AA:2:GLY:N	38:A1:2415:C:OP1	2.32	0.62
38:A1:68:C:O3'	50:AN:177:GLY:HA2	1.97	0.62
38:A1:1261:G:H5"	38:A1:1262:G:C8	2.34	0.62
38:A1:3188:G:H2'	38:A1:3189:G:H8	1.63	0.62
39:A3:28:C:H2'	39:A3:29:C:O4'	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:An:2:ARG:HG3	76:An:5:TRP:CZ3	2.34	0.62
3:BC:108:ASN:O	3:BC:141:ARG:NH2	2.32	0.62
19:BD:170:THR:HG22	19:BD:187:LYS:HG3	1.80	0.62
35:AA:220:GLY:O	38:A1:2245:C:O2'	2.17	0.62
36:AB:45:SER:HA	36:AB:339:ARG:HA	1.80	0.62
36:AB:53:MET:HB3	36:AB:77:THR:HG23	1.81	0.62
37:AC:112:LYS:HB2	38:A1:790:U:H4'	1.80	0.62
38:A1:330:G:O6	40:A4:33:A:N1	2.31	0.62
38:A1:592:A:H5"	42:AE:19:LYS:HD3	1.80	0.62
38:A1:1624:G:N2	38:A1:1820:U:O2	2.25	0.62
38:A1:1718:G:H2'	38:A1:1719:G:H8	1.64	0.62
38:A1:2427:U:H2'	38:A1:2428:U:H6	1.64	0.62
38:A1:2705:A:N6	56:AT:47:SER:O	2.32	0.62
38:A1:2746:A:O2'	38:A1:2747:A:O5'	2.12	0.62
38:A1:2842:U:OP1	38:A1:2898:G:N2	2.33	0.62
50:AN:193:ARG:O	50:AN:196:THR:OG1	2.16	0.62
58:AV:16:GLY:HA3	58:AV:83:LYS:HG3	1.80	0.62
19:BD:38:GLU:HB3	19:BD:49:ILE:HB	1.82	0.62
22:BP:80:MET:HB2	22:BP:83:MET:HE3	1.80	0.62
31:Bg:174:ASN:O	31:Bg:198:ASN:ND2	2.32	0.62
34:B5:1294:G:O2'	34:B5:1321:A:N1	2.28	0.62
37:AC:161:LYS:HB2	37:AC:164:GLU:HG2	1.80	0.62
38:A1:1352:A:O2'	38:A1:1354:G:OP1	2.17	0.62
38:A1:1448:U:H2'	38:A1:1449:A:H8	1.64	0.62
38:A1:2526:C:H2'	38:A1:2527:G:H8	1.65	0.62
38:A1:2843:U:OP2	38:A1:2844:C:N4	2.32	0.62
45:AH:22:SER:C	45:AH:23:ARG:HD3	2.24	0.62
45:AH:91:ARG:HG2	45:AH:182:SER:HB3	1.79	0.62
62:AZ:54:THR:H	62:AZ:57:HIS:CD2	2.17	0.62
67:Ae:95:GLU:OE1	67:Ae:120:THR:OG1	2.15	0.62
80:DC:189:VAL:HB	80:DC:201:GLN:HE22	1.63	0.62
4:BE:11:ARG:NH2	34:B5:447:U:O2'	2.31	0.62
4:BE:129:VAL:HG22	4:BE:139:VAL:HG12	1.82	0.62
7:BI:70:GLU:OE1	7:BI:117:TYR:OH	2.15	0.62
34:B5:107:C:H2'	34:B5:108:A:C8	2.34	0.62
38:A1:32:U:O3'	50:AN:71:ARG:NH2	2.31	0.62
38:A1:677:A:OP2	53:AQ:88:THR:OG1	2.17	0.62
38:A1:2586:G:O2'	38:A1:2588:U:OP2	2.18	0.62
39:A3:108:A:H2'	39:A3:109:G:H8	1.62	0.62
47:AJ:110:ILE:HD11	47:AJ:123:PHE:HB2	1.80	0.62
49:AM:23:ILE:HD13	49:AM:28:SER:HB2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6827:G:H2'	81:EC:6828:G:C8	2.34	0.62
2:BB:71:ALA:HB3	11:BO:114:ARG:NH2	2.14	0.62
3:BC:119:LYS:HA	3:BC:119:LYS:HE3	1.82	0.62
7:BI:64:ASN:N	7:BI:180:ASP:OD1	2.31	0.62
8:BJ:25:ASP:OD1	8:BJ:26:ALA:N	2.32	0.62
10:BN:98:VAL:HB	10:BN:115:LEU:HD13	1.81	0.62
14:BX:73:ARG:NH1	14:BX:84:THR:OG1	2.29	0.62
14:BX:89:ASN:N	34:B5:569:C:OP1	2.32	0.62
29:Bc:11:LYS:HE2	29:Bc:51:ASN:HA	1.80	0.62
31:Bg:248:ASN:ND2	31:Bg:297:ASP:O	2.33	0.62
34:B5:607:G:H21	34:B5:614:C:H5"	1.64	0.62
34:B5:632:PSU:H2'	34:B5:633:U:C6	2.34	0.62
34:B5:906:A:H2'	34:B5:907:A:O4'	1.99	0.62
34:B5:973:A:H2'	34:B5:974:A:C8	2.34	0.62
34:B5:1739:C:H2'	34:B5:1740:A:C8	2.34	0.62
38:A1:381:U:H2'	38:A1:382:U:C6	2.35	0.62
38:A1:993:G:N3	38:A1:2637:A:H2'	2.14	0.62
38:A1:1313:G:OP1	51:AO:82[A]:LYS:NZ	2.27	0.62
38:A1:1517:G:H5"	74:Al:22:PRO:HG3	1.82	0.62
38:A1:1659:U:H3	38:A1:1790:G:H1	1.47	0.62
38:A1:2736:A:O2'	56:AT:90:ASN:ND2	2.31	0.62
38:A1:3022:G:N2	38:A1:3023:U:O4	2.32	0.62
54:AR:72:GLU:HG3	54:AR:74:ARG:HD3	1.80	0.62
58:AV:86:ARG:HB3	58:AV:92:PHE:HE2	1.62	0.62
59:AW:3:VAL:HG22	59:AW:12:LYS:HE3	1.80	0.62
80:DC:355:GLN:O	80:DC:479:LYS:NZ	2.23	0.62
26:BT:122:ARG:NH2	34:B5:1500:C:OP1	2.32	0.62
38:A1:157:A:C8	71:Ai:26:ILE:HD13	2.33	0.62
38:A1:299:G:H2'	38:A1:300:G:C8	2.35	0.62
38:A1:760:G:N2	38:A1:770:G:N3	2.47	0.62
38:A1:797:U:H1'	48:AL:10:LEU:HD11	1.82	0.62
38:A1:1226:G:H2'	38:A1:1227:C:C6	2.35	0.62
38:A1:1257:C:N4	38:A1:1262:G:OP2	2.33	0.62
38:A1:2107:A:O2'	38:A1:3344:A:O2'	2.17	0.62
38:A1:2139:A:O2'	72:Aj:3:LYS:NZ	2.33	0.62
38:A1:2742:C:H2'	38:A1:2743:A:H8	1.64	0.62
38:A1:3052:G:H2'	38:A1:3053:G:H8	1.64	0.62
38:A1:3387:U:H2'	38:A1:3388:C:C6	2.35	0.62
47:AJ:115:LYS:NZ	47:AJ:116:TYR:O	2.28	0.62
80:DC:91:GLN:NE2	80:DC:347:THR:OG1	2.33	0.62
80:DC:828:MET:SD	80:DC:829:LYS:N	2.72	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BB:128:LYS:HA	2:BB:134:VAL:HA	1.81	0.62
3:BC:143:TYR:O	13:BW:98:GLN:NE2	2.32	0.62
18:Be:33:ARG:NH2	34:B5:476:U:OP2	2.27	0.62
19:BD:137:VAL:HB	19:BD:185:LYS:HB2	1.82	0.62
20:BF:81:ARG:NH1	34:B5:1615:C:H5"	2.15	0.62
34:B5:122:U:H2'	34:B5:123:G:C8	2.35	0.62
34:B5:156:A:N6	34:B5:418:G:O6	2.33	0.62
34:B5:1470:C:H3'	34:B5:1573:A:H62	1.65	0.62
34:B5:1484:G:H21	34:B5:1606:C:H1'	1.64	0.62
38:A1:91:G:OP2	77:Ao:42:ARG:NH1	2.33	0.62
38:A1:2305:G:OP2	38:A1:2305:G:N2	2.26	0.62
38:A1:2427:U:H2'	38:A1:2428:U:C6	2.34	0.62
38:A1:2476:C:N4	38:A1:2477:G:O6	2.33	0.62
38:A1:2701:U:OP1	56:AT:23:GLY:N	2.29	0.62
38:A1:3092:C:O2	58:AV:12:ARG:NH1	2.32	0.62
44:AG:156:ASP:OD1	44:AG:183:LYS:NZ	2.33	0.62
50:AN:39:ALA:HB2	50:AN:63:ARG:HG3	1.80	0.62
6:BH:14:THR:HG22	6:BH:16:LEU:H	1.65	0.62
15:BY:128:LYS:NZ	34:B5:155:U:O4	2.33	0.62
34:B5:905:A:N1	34:B5:998:A:O2'	2.33	0.62
34:B5:1141:G:H2'	34:B5:1142:A:H8	1.63	0.62
35:AA:116:VAL:HB	35:AA:126:LEU:HB2	1.79	0.62
38:A1:1458:U:H1'	66:Ad:60:TRP:CH2	2.34	0.62
38:A1:1472:U:H2'	38:A1:1473:G:C8	2.33	0.62
38:A1:1717:U:O4	38:A1:1727:G:O6	2.18	0.62
38:A1:1768:U:H2'	38:A1:1769:G:H8	1.64	0.62
40:A4:26:U:H2'	40:A4:27:U:C6	2.35	0.62
46:AI:4:ARG:CZ	46:AI:99:ILE:HD11	2.29	0.62
47:AJ:14:ILE:HG23	47:AJ:131:MET:HE1	1.82	0.62
80:DC:137:VAL:O	80:DC:140:GLU:HG3	1.99	0.62
1:BA:182:LEU:HB3	1:BA:188:LEU:HD12	1.81	0.62
34:B5:1304:G:OP2	34:B5:1305:U:O2'	2.17	0.62
38:A1:215:G:OP1	61:AY:12:ARG:NH1	2.33	0.62
38:A1:631:U:H2'	38:A1:632:G:C8	2.35	0.62
38:A1:1334:U:H2'	38:A1:1335:C:C6	2.34	0.62
38:A1:2406:C:H2'	38:A1:2407:C:C6	2.34	0.62
38:A1:2947:G:OP1	38:A1:2982:A:N6	2.33	0.62
38:A1:3290:G:H2'	38:A1:3291:G:C8	2.35	0.62
38:A1:3322:A:H2'	38:A1:3323:A:H8	1.65	0.62
40:A4:13:A:N3	52:AP:120:ASN:ND2	2.47	0.62
51:AO:22[A]:VAL:HG21	51:AO:120[A]:VAL:HG11	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AU:61:THR:HG23	57:AU:62:VAL:HG23	1.80	0.62
81:EC:6810:U:N3	81:EC:6811:G:N7	2.48	0.62
34:B5:1066:C:H2'	34:B5:1067:C:H6	1.65	0.61
35:AA:108:PRO:HG2	78:Ap:86:LEU:HD21	1.82	0.61
38:A1:774:G:H2'	38:A1:775:A:C8	2.35	0.61
38:A1:2386:A:N7	38:A1:2994:A:N6	2.48	0.61
38:A1:2685:C:H2'	38:A1:2686:A:H8	1.64	0.61
38:A1:2999:U:H3	38:A1:3149:G:H1	1.47	0.61
38:A1:3101:G:H2'	38:A1:3102:G:H8	1.64	0.61
38:A1:3323:A:O4'	66:Ad:43:HIS:NE2	2.33	0.61
42:AE:135:VAL:HG12	42:AE:139:LYS:HE2	1.82	0.61
61:AY:50:ILE:HD11	61:AY:101:PRO:HB3	1.82	0.61
74:Al:27:ILE:O	74:Al:33:ASN:ND2	2.32	0.61
79:E:18:LYS:O	79:E:22:GLU:HG2	1.99	0.61
80:DC:270:GLU:OE2	80:DC:274:ASN:HB3	2.00	0.61
80:DC:385:MET:HE3	80:DC:394:PHE:CD2	2.35	0.61
9:BL:105:LYS:NZ	34:B5:306:U:OP2	2.31	0.61
27:BU:57:ARG:HD2	34:B5:1382:A:N3	2.15	0.61
31:Bg:122:ILE:HD11	31:Bg:136:ILE:HD13	1.82	0.61
34:B5:255:U:H2'	34:B5:256:A:C8	2.32	0.61
34:B5:534:A:H3'	34:B5:535:A:H8	1.65	0.61
34:B5:702:G:O2'	34:B5:703:G:O5'	2.17	0.61
34:B5:844:A:H3'	34:B5:845:G:C2	2.35	0.61
38:A1:1070:U:H2'	38:A1:1071:U:C6	2.36	0.61
38:A1:1299:U:H2'	38:A1:1300:G:O4'	2.00	0.61
38:A1:1921:A:H2'	38:A1:1922:A:H8	1.64	0.61
38:A1:2196:C:O2'	38:A1:2270:A:H1'	1.99	0.61
38:A1:2418:G:OP2	38:A1:2606:G:N2	2.33	0.61
38:A1:2768:U:H2'	38:A1:2769:A:H8	1.64	0.61
38:A1:2882:U:H2'	38:A1:2883:U:H6	1.65	0.61
39:A3:27:A:O3'	47:AJ:141:ARG:NH1	2.33	0.61
39:A3:27:A:H2'	39:A3:28:C:C6	2.36	0.61
41:AD:277:LEU:HD22	41:AD:281:GLU:HG2	1.81	0.61
45:AH:23:ARG:HG2	45:AH:39:LYS:HD3	1.80	0.61
50:AN:8:GLU:OE2	50:AN:12:ARG:NE	2.30	0.61
58:AV:15:LEU:HB3	58:AV:51:ALA:HB3	1.82	0.61
6:BH:96:ARG:HD3	6:BH:121:VAL:HG23	1.81	0.61
11:BO:90:ARG:NH1	34:B5:902:G:OP1	2.33	0.61
14:BX:109:ARG:NH2	34:B5:18:C:O3'	2.32	0.61
16:Ba:6:ALA:N	34:B5:1796:C:N3	2.48	0.61
34:B5:1141:G:H2'	34:B5:1142:A:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1392:U:H2'	34:B5:1393:C:C6	2.35	0.61
34:B5:1429:G:H2'	34:B5:1430:U:C6	2.34	0.61
36:AB:159:ARG:NH1	38:A1:3004:C:OP1	2.34	0.61
38:A1:297:G:OP2	38:A1:297:G:N2	2.31	0.61
38:A1:307:A:H2'	38:A1:308:A:H8	1.64	0.61
38:A1:1715:A:C5	65:Ac:84:LEU:HD21	2.35	0.61
38:A1:2423:U:H2'	38:A1:2424:A:C8	2.35	0.61
51:AO:81[A]:TYR:HE2	51:AO:99[A]:LEU:HD22	1.65	0.61
62:AZ:30:ASP:OD1	62:AZ:31:GLU:N	2.33	0.61
7:BI:114:GLU:HA	7:BI:118:GLY:H	1.65	0.61
10:BN:112:LYS:NZ	34:B5:974:A:O2'	2.34	0.61
19:BD:32:GLU:OE2	19:BD:65:ARG:NH1	2.33	0.61
25:BS:48:LYS:HD3	26:BT:35:ASP:HB3	1.82	0.61
26:BT:88:VAL:N	34:B5:1542:G:H5"	2.15	0.61
34:B5:86:A:H2'	34:B5:87:C:C6	2.35	0.61
35:AA:174:ARG:NH2	38:A1:1793:C:H1'	2.16	0.61
38:A1:184:U:H2'	38:A1:185:C:C6	2.35	0.61
38:A1:383:G:N2	38:A1:386:A:OP2	2.27	0.61
38:A1:2546:C:H2'	38:A1:2547:A:C8	2.35	0.61
38:A1:2608:G:H2'	38:A1:2609:A:H8	1.65	0.61
38:A1:2746:A:H62	41:AD:153:THR:HB	1.66	0.61
38:A1:3322:A:H2'	38:A1:3323:A:C8	2.36	0.61
62:AZ:84:ARG:NH1	65:Ac:58:TYR:OH	2.31	0.61
76:An:14:LYS:HG2	76:An:18:ARG:HH21	1.64	0.61
80:DC:354:GLU:OE2	80:DC:370:LYS:NZ	2.33	0.61
2:BB:115:ARG:H	2:BB:118:GLN:HE22	1.48	0.61
19:BD:22:ASN:OD1	19:BD:34:TYR:OH	2.17	0.61
22:BP:80:MET:HE1	34:B5:1452:U:H4'	1.82	0.61
31:Bg:90:ARG:NH2	31:Bg:102:ARG:HE	1.99	0.61
34:B5:566:C:H2'	34:B5:567:A:O4'	2.01	0.61
34:B5:628:G:N1	34:B5:970:A:OP2	2.26	0.61
34:B5:772:G:H21	34:B5:774:A:H1'	1.63	0.61
34:B5:891:A:H2'	34:B5:892:A:C8	2.35	0.61
36:AB:91:GLY:HA3	36:AB:151:ILE:HD12	1.82	0.61
37:AC:188:ARG:HH21	37:AC:197:ARG:HB3	1.65	0.61
38:A1:305:U:O2	38:A1:2784:G:N2	2.34	0.61
38:A1:571:U:H2'	38:A1:572:A:C8	2.29	0.61
38:A1:1545:A:N7	50:AN:105:ARG:NH1	2.48	0.61
38:A1:3064:U:H2'	38:A1:3065:G:H8	1.66	0.61
38:A1:3290:G:H2'	38:A1:3291:G:H8	1.65	0.61
43:AF:121:LYS:HB2	56:AT:133:ALA:HB3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:AJ:87:LYS:O	47:AJ:90:GLN:NE2	2.33	0.61
5:BG:134:GLY:N	34:B5:66:U:O4	2.34	0.61
27:BU:26:LEU:HB2	27:BU:89:ARG:HB2	1.82	0.61
27:BU:68:ARG:O	30:Bd:44:ARG:NH2	2.32	0.61
34:B5:90:C:H2'	34:B5:91:G:C8	2.36	0.61
34:B5:93:A:N6	34:B5:396:G:H1'	2.15	0.61
34:B5:410:A:H2'	34:B5:411:C:H6	1.66	0.61
34:B5:1452:U:H2'	34:B5:1453:G:H8	1.64	0.61
37:AC:212:ASP:OD1	37:AC:214:GLY:N	2.28	0.61
38:A1:515:C:H2'	38:A1:516:A:H8	1.65	0.61
38:A1:639:G:P	67:Ae:35:GLN:HE22	2.24	0.61
38:A1:668:G:H2'	38:A1:669:U:H6	1.63	0.61
38:A1:1238:C:C2	38:A1:1250:G:N2	2.69	0.61
38:A1:1901:A:H1'	58:AV:49:LEU:HD21	1.82	0.61
38:A1:2295:A:N6	58:AV:37:ILE:HD11	2.16	0.61
38:A1:3321:C:H2'	38:A1:3322:A:H8	1.64	0.61
58:AV:82:ALA:HA	58:AV:95:PHE:H	1.66	0.61
79:E:16:LEU:HD21	79:E:207:LYS:HA	1.81	0.61
80:DC:110:ASP:HB2	80:DC:537:HIS:HB2	1.81	0.61
3:BC:176:SER:HB3	8:BJ:57:ARG:HH22	1.64	0.61
22:BP:56:PHE:HZ	34:B5:1241:G:HO2'	1.46	0.61
23:BQ:13:LYS:HG2	23:BQ:76:SER:HA	1.83	0.61
34:B5:56:U:OP1	34:B5:403:G:N1	2.33	0.61
34:B5:1172:G:H2'	34:B5:1173:C:H6	1.66	0.61
34:B5:1313:A:O2'	34:B5:1315:U:OP1	2.18	0.61
36:AB:247:ARG:N	38:A1:1889:G:OP1	2.24	0.61
37:AC:84:ARG:NH1	38:A1:365:A:H4'	2.15	0.61
37:AC:84:ARG:HH22	38:A1:365:A:P	2.24	0.61
37:AC:114:ASN:HD21	38:A1:680:G:H5"	1.66	0.61
38:A1:2496:C:O2'	38:A1:2497:U:OP1	2.19	0.61
43:AF:186:HIS:O	43:AF:190:THR:OG1	2.15	0.61
45:AH:129:ARG:HB2	45:AH:157:ASN:HD21	1.66	0.61
79:E:82:VAL:HG21	79:E:148:VAL:HG11	1.81	0.61
3:BC:87:GLN:OE1	3:BC:87:GLN:N	2.34	0.61
5:BG:10:ASN:ND2	5:BG:127:THR:O	2.34	0.61
7:BI:73:SER:HB2	34:B5:257:A:H1'	1.83	0.61
14:BX:95:PHE:HE2	14:BX:136:TRP:HA	1.66	0.61
25:BS:140:THR:HA	25:BS:143:ARG:HH21	1.66	0.61
34:B5:445:A:H2'	34:B5:446:A:H8	1.66	0.61
34:B5:774:A:P	34:B5:787:G:H1	2.24	0.61
34:B5:1037:C:H2'	34:B5:1038:U:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1686:C:H2'	34:B5:1687:U:H5"	1.82	0.61
34:B5:1727:G:H2'	34:B5:1728:A:C8	2.35	0.61
35:AA:187:HIS:NE2	38:A1:896:A:OP2	2.26	0.61
38:A1:269:G:OP2	50:AN:44:ARG:NH1	2.33	0.61
38:A1:945:C:H2'	38:A1:946:U:C6	2.36	0.61
38:A1:951:A:OP2	38:A1:1367:G:N1	2.33	0.61
38:A1:1532:C:H2'	38:A1:1533:U:C6	2.34	0.61
38:A1:1626:U:H2'	38:A1:1627:U:C6	2.36	0.61
38:A1:1836:C:O2'	38:A1:1842:A:N6	2.33	0.61
38:A1:2191:PSU:O2'	38:A1:2192:C:O4'	2.14	0.61
38:A1:2366:C:H2'	38:A1:2367:A:C8	2.36	0.61
38:A1:3343:G:H21	38:A1:3362:A:H2	1.48	0.61
46:AI:47:PRO:HB2	46:AI:178:ARG:HH12	1.66	0.61
70:Ah:101:THR:HG23	70:Ah:104:GLN:H	1.66	0.61
80:DC:834:GLY:N	80:DC:837:GLU:OE2	2.32	0.61
8:BJ:37:LYS:HZ3	8:BJ:144:PRO:HB2	1.65	0.61
9:BL:16:GLN:NE2	9:BL:34:TRP:O	2.30	0.61
14:BX:70:LYS:NZ	14:BX:91:GLY:O	2.31	0.61
19:BD:55:THR:OG1	19:BD:90:ARG:NH2	2.34	0.61
34:B5:542:A:H4'	34:B5:543:C:H5"	1.82	0.61
38:A1:100:A:H3'	38:A1:101:G:H21	1.66	0.61
38:A1:429:U:H2'	38:A1:430:U:H6	1.65	0.61
38:A1:544:C:OP1	38:A1:548:G:N2	2.26	0.61
38:A1:2844:C:N4	38:A1:2898:G:H22	1.96	0.61
47:AJ:99:THR:O	47:AJ:154:THR:OG1	2.19	0.61
52:AP:172:GLN:NE2	68:Af:60:ARG:O	2.29	0.61
53:AQ:170:ARG:NH1	53:AQ:171:LYS:HB3	2.16	0.61
1:BA:172:LEU:O	1:BA:176:LEU:N	2.34	0.61
3:BC:225:LEU:HD13	3:BC:230:TRP:HE1	1.65	0.61
4:BE:71:LYS:HA	4:BE:76:VAL:HA	1.82	0.61
24:BR:2:GLY:N	34:B5:1312:A:N7	2.48	0.61
25:BS:28:ILE:HD11	25:BS:54:LEU:HD13	1.81	0.61
25:BS:82:PRO:HG2	25:BS:84:TRP:NE1	2.16	0.61
34:B5:966:A:N6	34:B5:967:A:H62	1.99	0.61
34:B5:1291:G:H1	34:B5:1324:G:H22	1.49	0.61
35:AA:177:LYS:NZ	78:Ap:69:TYR:OH	2.22	0.61
38:A1:72:C:H1'	48:AL:62:THR:H	1.65	0.61
38:A1:75:G:H5"	48:AL:58:VAL:HG13	1.83	0.61
38:A1:296:A:H2'	38:A1:297:G:C4	2.35	0.61
38:A1:1661:G:H2'	38:A1:1662:G:H8	1.65	0.61
38:A1:1662:G:H2'	38:A1:1663:C:H6	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1846:C:N4	52:AP:134:GLY:O	2.33	0.61
38:A1:2724:U:OP2	56:AT:87:LYS:NZ	2.33	0.61
39:A3:71:G:H2'	39:A3:72:A:C8	2.36	0.61
44:AG:89:GLU:HA	44:AG:92:LYS:HB2	1.82	0.61
56:AT:48:ILE:HG12	56:AT:94:GLU:HG3	1.82	0.61
56:AT:65:TYR:CZ	56:AT:88:ARG:HB2	2.36	0.61
58:AV:68:GLU:HG2	58:AV:69:LEU:HD12	1.82	0.61
60:AX:115:ARG:HG3	60:AX:116:PRO:HD2	1.82	0.61
80:DC:683:SER:OG	80:DC:725:GLN:NE2	2.33	0.61
1:BA:112:THR:HB	1:BA:115:PHE:HB2	1.83	0.60
4:BE:50:ASN:O	4:BE:51:ARG:NH1	2.34	0.60
12:BV:3:ASN:OD1	12:BV:4:ASP:N	2.30	0.60
15:BY:20:ARG:HD3	15:BY:76:TYR:CZ	2.37	0.60
24:BR:44:LYS:NZ	34:B5:1386:G:OP2	2.33	0.60
31:Bg:295:SER:OG	31:Bg:297:ASP:OD1	2.19	0.60
32:Bf:121:CYS:HB2	32:Bf:132:LEU:HD21	1.83	0.60
34:B5:32:U:H3	34:B5:468:A:H62	1.48	0.60
34:B5:410:A:H2'	34:B5:411:C:C6	2.36	0.60
34:B5:1537:C:O4'	34:B5:1572:G:N2	2.33	0.60
34:B5:1543:A:N6	34:B5:1568:C:O2	2.29	0.60
35:AA:67:TYR:OH	38:A1:2525:G:N7	2.34	0.60
35:AA:118:GLU:HG3	35:AA:126:LEU:HD21	1.82	0.60
36:AB:180:GLU:OE1	36:AB:180:GLU:N	2.32	0.60
38:A1:622:A:H5'	68:Af:60:ARG:HD3	1.81	0.60
38:A1:1105:A:H2'	38:A1:1106:G:H8	1.65	0.60
38:A1:1169:A:H4'	43:AF:219:LYS:HD3	1.82	0.60
38:A1:1492:G:O3'	74:Al:48:LYS:NZ	2.23	0.60
38:A1:2376:G:H2'	38:A1:2377:G:C8	2.36	0.60
39:A3:43:U:H2'	39:A3:44:C:C2	2.35	0.60
42:AE:170:LYS:NZ	68:Af:33:GLU:O	2.34	0.60
44:AG:99:PRO:HD3	44:AG:132:VAL:HG12	1.82	0.60
49:AM:105:GLN:HA	49:AM:108:ARG:HB3	1.83	0.60
1:BA:88:LYS:NZ	1:BA:201:LEU:O	2.32	0.60
4:BE:173:ILE:HD13	4:BE:229:GLY:HA2	1.83	0.60
6:BH:140:VAL:HG13	6:BH:148:LYS:HE3	1.84	0.60
7:BI:23:LYS:NZ	7:BI:24:LYS:O	2.34	0.60
7:BI:42:ARG:NH1	34:B5:1677:C:OP1	2.34	0.60
19:BD:48:VAL:O	19:BD:87:TYR:N	2.32	0.60
20:BF:106:LYS:HG3	20:BF:109:LYS:HB3	1.83	0.60
27:BU:21:LYS:HD2	27:BU:94:GLU:HB3	1.82	0.60
28:BZ:58:ARG:HA	28:BZ:103:ARG:HG3	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:107:ARG:HA	38:A1:664:U:H5'	1.83	0.60
38:A1:503:C:H2'	38:A1:504:A:H8	1.65	0.60
38:A1:760:G:O2'	38:A1:770:G:N2	2.34	0.60
38:A1:786:A:H4'	38:A1:787:G:H5'	1.82	0.60
38:A1:903:U:H2'	38:A1:904:A:H8	1.66	0.60
38:A1:2331:C:H2'	38:A1:2332:A:C8	2.36	0.60
38:A1:2908:G:O2'	75:Am:114:LYS:NZ	2.34	0.60
43:AF:132:PRO:HA	43:AF:229:PHE:CD1	2.36	0.60
44:AG:247:ASP:O	44:AG:251:LYS:N	2.33	0.60
47:AJ:36:VAL:HG21	47:AJ:110:ILE:HG13	1.81	0.60
49:AM:38:ILE:O	55:AS:95:ARG:NH2	2.33	0.60
49:AM:132:LYS:HA	49:AM:135:LEU:HD12	1.82	0.60
53:AQ:148:GLU:OE2	53:AQ:148:GLU:N	2.32	0.60
10:BN:119:GLU:OE1	10:BN:119:GLU:N	2.34	0.60
20:BF:166:ARG:HA	20:BF:169:ASN:HB2	1.83	0.60
26:BT:84:LYS:N	26:BT:92:LYS:O	2.33	0.60
27:BU:58:LEU:HD12	34:B5:1516:A:H5'	1.83	0.60
34:B5:58:U:O2'	34:B5:451:A:N3	2.33	0.60
34:B5:220:A:N7	34:B5:832:U:H1'	2.15	0.60
34:B5:1588:G:H1	34:B5:1608:U:H3	0.69	0.60
38:A1:50:U:H2'	38:A1:51:A:C8	2.34	0.60
38:A1:272:G:H2'	38:A1:273:A:H8	1.65	0.60
38:A1:310:U:C2	38:A1:2779:A:C6	2.90	0.60
38:A1:1413:G:H2'	38:A1:1414:G:H8	1.65	0.60
38:A1:2841:G:N2	38:A1:2898:G:O6	2.35	0.60
38:A1:3224:G:H2'	38:A1:3225:C:H6	1.65	0.60
49:AM:98:SER:HA	49:AM:101:LYS:HE2	1.83	0.60
62:AZ:76:ASN:HB3	62:AZ:79:HIS:CD2	2.37	0.60
65:Ac:76:GLU:OE1	65:Ac:76:GLU:N	2.31	0.60
74:Al:12:LYS:HE3	74:Al:12:LYS:HA	1.82	0.60
79:E:6:SER:HA	79:E:9:VAL:HG12	1.83	0.60
80:DC:506:GLU:OE1	80:DC:506:GLU:N	2.34	0.60
80:DC:543:GLN:O	80:DC:547:HIS:N	2.31	0.60
81:EC:6772:G:H1	81:EC:6820:C:H3'	1.65	0.60
3:BC:144:TRP:HD1	3:BC:171:PRO:HB2	1.67	0.60
8:BJ:42:ILE:HA	8:BJ:45:ILE:HG22	1.83	0.60
20:BF:223:SER:O	81:EC:6840:A:N6	2.34	0.60
29:Bc:12:VAL:HA	29:Bc:30:VAL:HG12	1.83	0.60
31:Bg:304:GLY:HA2	31:Bg:310:ILE:HA	1.84	0.60
34:B5:929:A:O5'	34:B5:931:C:N4	2.34	0.60
35:AA:9:ARG:NH1	38:A1:911:C:O5'	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:648:C:O2'	38:A1:2375:G:OP2	2.15	0.60
38:A1:1307:G:C2	51:AO:60[A]:LYS:HD3	2.37	0.60
38:A1:1471:U:OP1	54:AR:5:ARG:NH1	2.34	0.60
38:A1:1523:U:OP2	38:A1:1604:G:O2'	2.15	0.60
38:A1:2180:G:H2'	38:A1:2181:C:H6	1.65	0.60
38:A1:2413:A:H2'	38:A1:2414:G:C8	2.36	0.60
38:A1:3268:A:OP1	42:AE:46:ARG:NH2	2.35	0.60
80:DC:731:VAL:HG22	80:DC:772:LEU:HD11	1.82	0.60
5:BG:25:ARG:NH2	5:BG:28:PHE:HE2	1.98	0.60
6:BH:8:ILE:HG13	6:BH:42:GLN:HA	1.84	0.60
11:BO:41:ARG:NH2	34:B5:916:U:H3	1.94	0.60
15:BY:20:ARG:NH1	15:BY:22:GLN:HB2	2.07	0.60
15:BY:55:VAL:HG22	15:BY:75:VAL:HG22	1.83	0.60
34:B5:1085:G:N2	34:B5:1088:A:OP2	2.28	0.60
34:B5:1245:G:N1	34:B5:1249:U:O4	2.35	0.60
36:AB:348:ARG:NH1	38:A1:3037:U:O3'	2.35	0.60
38:A1:428:A:H2'	38:A1:429:U:C6	2.36	0.60
38:A1:1119:C:H2'	38:A1:1120:A:C8	2.32	0.60
38:A1:1373:A:H2'	38:A1:1374:G:C8	2.35	0.60
38:A1:2225:U:H2'	38:A1:2226:U:H6	1.67	0.60
38:A1:2517:U:OP2	50:AN:31:ARG:NH1	2.35	0.60
38:A1:2644:C:N3	46:AI:116:ARG:NH1	2.48	0.60
38:A1:3163:A:N6	38:A1:3288:G:O6	2.34	0.60
38:A1:3190:C:H2'	38:A1:3191:G:H8	1.67	0.60
38:A1:3234:A:H2	38:A1:3253:G:H22	1.50	0.60
45:AH:80:THR:O	45:AH:85:GLY:N	2.34	0.60
45:AH:120:ASP:OD1	45:AH:121:LYS:N	2.34	0.60
51:AO:14[A]:HIS:HB3	51:AO:19[A]:LEU:HD12	1.84	0.60
53:AQ:81:VAL:HB	53:AQ:101:VAL:HG22	1.83	0.60
67:Ae:111:ARG:HH11	67:Ae:115:LEU:HG	1.65	0.60
80:DC:273:PHE:HD1	80:DC:277:ILE:HD13	1.65	0.60
81:EC:6835:U:O2'	81:EC:6849:A:OP1	2.18	0.60
4:BE:184:THR:N	4:BE:224:ASN:O	2.25	0.60
9:BL:10:GLU:OE2	9:BL:14:GLN:HG2	2.02	0.60
10:BN:16:ILE:O	13:BW:57:ARG:NH2	2.34	0.60
16:Ba:82:ARG:NH2	34:B5:1152:A:OP1	2.27	0.60
34:B5:56:U:O2	34:B5:91:G:N2	2.35	0.60
34:B5:549:G:H2'	34:B5:550:A:H8	1.67	0.60
34:B5:631:G:H1	34:B5:968:U:H3	0.73	0.60
34:B5:698:U:O2'	34:B5:699:U:O4'	2.20	0.60
34:B5:1146:G:H2'	34:B5:1147:A:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1344:A:O2'	34:B5:1345:A:OP1	2.17	0.60
34:B5:1471:A:C5	34:B5:1540:G:H1'	2.35	0.60
34:B5:1661:U:OP1	58:AV:66:LYS:NZ	2.34	0.60
38:A1:12:A:H2'	38:A1:13:A:C8	2.37	0.60
38:A1:411:U:H2'	38:A1:412:G:C8	2.36	0.60
38:A1:548:G:O2'	38:A1:550:A:N6	2.34	0.60
38:A1:753:C:H2'	38:A1:754:G:C8	2.34	0.60
38:A1:1129:A:H2'	38:A1:1130:A:C8	2.37	0.60
38:A1:1363:A:OP1	43:AF:160:ARG:NH1	2.35	0.60
38:A1:3375:A:O2'	38:A1:3378:C:H5'	2.01	0.60
39:A3:19:C:H2'	39:A3:20:A:H8	1.67	0.60
39:A3:31:U:H4'	41:AD:218:ARG:HH12	1.66	0.60
44:AG:227:ASP:OD1	44:AG:228:GLU:N	2.35	0.60
51:AO:54[A]:TYR:O	51:AO:58[A]:LEU:N	2.29	0.60
69:Ag:57:LEU:HB2	69:Ag:62:TYR:CE1	2.37	0.60
9:BL:136:ARG:HH22	34:B5:303:U:H5"	1.66	0.60
10:BN:93:LYS:O	10:BN:97:SER:OG	2.15	0.60
10:BN:142:GLU:OE1	10:BN:142:GLU:N	2.34	0.60
34:B5:1178:G:OP1	34:B5:1189:A:N6	2.35	0.60
34:B5:1280:4AC:H2'	34:B5:1281:G:C8	2.36	0.60
34:B5:1360:A:N6	34:B5:1364:G:O6	2.35	0.60
34:B5:1521:G:O2'	34:B5:1523:G:OP2	2.19	0.60
34:B5:1525:A:H2'	34:B5:1526:A:O4'	2.01	0.60
34:B5:1649:G:H2'	34:B5:1650:U:C6	2.37	0.60
38:A1:54:C:H2'	38:A1:55:G:H8	1.65	0.60
38:A1:1678:G:H2'	38:A1:1679:A:C8	2.37	0.60
38:A1:1799:A:H2'	38:A1:1800:A:H8	1.67	0.60
38:A1:2219:A:H2'	38:A1:2220:A:C8	2.36	0.60
38:A1:2544:U:H3'	38:A1:2545:C:H6	1.65	0.60
38:A1:3223:A:C6	38:A1:3263:G:C6	2.90	0.60
40:A4:45:C:OP2	74:Al:15:LYS:NZ	2.31	0.60
42:AE:15:VAL:HG12	67:Ae:4:LEU:HD13	1.82	0.60
50:AN:57:GLN:OE1	50:AN:58:GLY:N	2.35	0.60
50:AN:119:TYR:OH	50:AN:131:GLU:OE1	2.12	0.60
55:AS:12:ARG:HH12	55:AS:15:PRO:HD3	1.64	0.60
67:Ae:65:PHE:HB2	67:Ae:72:LYS:HZ2	1.66	0.60
80:DC:123:ASP:OD1	80:DC:124:GLY:N	2.34	0.60
34:B5:1650:U:H2'	34:B5:1651:A:C8	2.36	0.60
38:A1:359:U:H4'	72:Aj:25:ARG:NH1	2.16	0.60
38:A1:796:U:H2'	38:A1:797:U:C6	2.36	0.60
38:A1:847:A:H2'	38:A1:848:A:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3060:C:H2'	38:A1:3061:G:C8	2.37	0.60
38:A1:3174:A:N7	68:Af:54:ARG:NH2	2.50	0.60
81:EC:6854:U:H3	81:EC:6874:A:H2	1.49	0.60
14:BX:99:ASN:OD1	80:DC:505:VAL:HG13	2.01	0.60
18:Be:31:LYS:NZ	34:B5:593:U:O2	2.35	0.60
19:BD:64:ARG:HH21	19:BD:67:ASN:HD21	1.50	0.60
25:BS:40:ARG:NH1	26:BT:46:PRO:HD2	2.16	0.60
25:BS:42:TYR:HA	25:BS:85:PHE:HE2	1.67	0.60
34:B5:5:U:H2'	34:B5:6:G:C8	2.37	0.60
34:B5:127:G:N2	34:B5:178:U:O2	2.31	0.60
34:B5:327:U:H2'	34:B5:328:A:C8	2.36	0.60
34:B5:1125:A:H4'	76:An:15:ARG:HH12	1.65	0.60
37:AC:163:LYS:NZ	38:A1:208:C:OP1	2.32	0.60
38:A1:801:A:OP1	63:Aa:27:LYS:NZ	2.30	0.60
38:A1:2685:C:H2'	38:A1:2686:A:C8	2.37	0.60
38:A1:3284:G:H2'	38:A1:3285:C:C6	2.37	0.60
41:AD:156:GLY:HA2	41:AD:181:PRO:HB3	1.83	0.60
67:Ae:96:ILE:O	67:Ae:121:ASN:ND2	2.34	0.60
72:Aj:25:ARG:HH21	74:Al:51:ILE:HD12	1.67	0.60
81:EC:6813:A:H2'	81:EC:6814:G:H8	1.67	0.60
5:BG:211:LEU:HA	5:BG:214:LYS:HE2	1.82	0.60
34:B5:36:C:H2'	34:B5:37:U:C6	2.37	0.60
34:B5:487:G:H2'	34:B5:488:G:H4'	1.84	0.60
35:AA:156:LYS:NZ	38:A1:2157:G:O3'	2.34	0.60
37:AC:4:PRO:HD2	37:AC:22:LEU:HD23	1.83	0.60
37:AC:193:LYS:NZ	38:A1:1420:C:OP2	2.34	0.60
38:A1:147:U:C4	44:AG:157:VAL:HG23	2.37	0.60
38:A1:612:U:H2'	38:A1:613:G:C8	2.35	0.60
38:A1:830:A:H2'	38:A1:831:G:O4'	2.02	0.60
38:A1:1120:A:H2'	38:A1:1121:U:H6	1.67	0.60
38:A1:1680:G:N1	38:A1:1689:U:N3	2.50	0.60
38:A1:1814:A:H5"	38:A1:1817:G:H5'	1.84	0.60
38:A1:2696:A:H2'	38:A1:2697:A:C8	2.37	0.60
40:A4:78:G:H2'	40:A4:79:A:C8	2.37	0.60
79:E:120:VAL:HG11	79:E:135:PRO:HG3	1.84	0.60
81:EC:6812:C:H2'	81:EC:6813:A:C8	2.37	0.60
2:BB:158:SER:HA	2:BB:161:ILE:HG22	1.84	0.59
2:BB:199:ASN:O	2:BB:202:LYS:NZ	2.30	0.59
8:BJ:38:ASN:HB2	34:B5:593:U:P	2.42	0.59
13:BW:42:GLN:HG3	13:BW:50:PHE:HE1	1.67	0.59
32:Bf:80:ARG:HH12	34:B5:1270:G:H4'	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BM:45:LEU:HB2	34:B5:1228:G:H5'	1.83	0.59
34:B5:116:U:H2'	34:B5:117:U:C6	2.37	0.59
34:B5:301:A:H2'	34:B5:302:PSU:C6	2.36	0.59
34:B5:1216:C:C4	34:B5:1446:A:N7	2.70	0.59
34:B5:1667:A:H2'	34:B5:1668:G:H8	1.67	0.59
34:B5:1741:U:H2'	34:B5:1742:U:H6	1.66	0.59
38:A1:947:G:C5'	67:Ae:55:ILE:HD11	2.32	0.59
38:A1:1210:U:O5'	45:AH:62:ARG:NH2	2.34	0.59
38:A1:1483:G:O6	69:Ag:4:ARG:NH1	2.35	0.59
38:A1:1687:U:N3	57:AU:42:LYS:O	2.35	0.59
38:A1:2599:U:OP1	50:AN:70:ASN:ND2	2.34	0.59
38:A1:3110:C:H2'	38:A1:3111:U:C6	2.37	0.59
49:AM:55:ARG:HG3	55:AS:70:THR:HG21	1.83	0.59
54:AR:165:LYS:HE2	54:AR:170:ARG:HG3	1.84	0.59
77:Ao:12:CYS:SG	77:Ao:74:CYS:HB2	2.41	0.59
79:E:66:CYS:N	79:E:107:TYR:OH	2.27	0.59
80:DC:144:ARG:NH1	80:DC:191:THR:O	2.29	0.59
80:DC:639:ASP:H	80:DC:668:GLN:NE2	1.99	0.59
80:DC:693:LEU:HB3	80:DC:700:ARG:HH11	1.66	0.59
2:BB:142:PHE:HD2	2:BB:208:GLN:HE21	1.49	0.59
3:BC:120:GLU:OE2	3:BC:123:GLY:N	2.34	0.59
4:BE:126:VAL:HB	4:BE:158:ASP:H	1.68	0.59
7:BI:152:ILE:HG13	7:BI:153:GLU:N	2.16	0.59
13:BW:3:ARG:NH2	34:B5:865:A:O5'	2.35	0.59
15:BY:124:ARG:NE	34:B5:151:G:N7	2.50	0.59
26:BT:106:GLN:NE2	34:B5:1501:C:OP2	2.29	0.59
29:Bc:14:LYS:HD3	29:Bc:29:ARG:HD2	1.84	0.59
32:Bf:96:LYS:NZ	34:B5:1251:U:H2'	2.16	0.59
34:B5:431:C:H2'	34:B5:432:G:C8	2.34	0.59
34:B5:824:G:N2	34:B5:847:A:H62	2.00	0.59
34:B5:1132:A:H2'	34:B5:1133:A:H8	1.66	0.59
36:AB:31:ALA:O	36:AB:339:ARG:NH1	2.34	0.59
38:A1:1723:A:OP1	54:AR:128:LYS:NZ	2.35	0.59
38:A1:1824:U:O2'	73:Ak:17:ARG:NH2	2.35	0.59
38:A1:1863:G:N1	38:A1:1865:A:H3'	2.17	0.59
40:A4:150:G:O2'	40:A4:152:G:OP1	2.16	0.59
67:Ae:19:ARG:HD3	67:Ae:33:ARG:HB2	1.83	0.59
80:DC:79:SER:OG	80:DC:81:MET:SD	2.60	0.59
1:BA:40:ALA:HA	1:BA:46:HIS:HA	1.84	0.59
4:BE:146:THR:HG1	34:B5:123:G:N2	1.99	0.59
6:BH:63:PRO:C	6:BH:65:PRO:HD3	2.26	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BO:14:PHE:HB3	11:BO:80:HIS:NE2	2.17	0.59
16:Ba:42:ARG:O	16:Ba:67:THR:N	2.36	0.59
20:BF:95:ASN:HB3	34:B5:1612:U:H5'	1.85	0.59
31:Bg:198:ASN:H	31:Bg:216:LYS:HZ2	1.48	0.59
34:B5:32:U:O2'	34:B5:594:A:N1	2.35	0.59
34:B5:838:G:N2	34:B5:838:G:OP2	2.35	0.59
34:B5:926:A:H2'	34:B5:927:C:C6	2.37	0.59
35:AA:37:ARG:NH2	38:A1:2525:G:O5'	2.34	0.59
38:A1:371:G:O2'	38:A1:396:A:N6	2.33	0.59
38:A1:702:C:N4	38:A1:703:G:O6	2.35	0.59
38:A1:1472:U:H5"	54:AR:8:LYS:HD2	1.84	0.59
38:A1:1666:G:H2'	38:A1:1667:A:C8	2.36	0.59
38:A1:2432:A:N1	38:A1:2598:G:C6	2.70	0.59
38:A1:2432:A:N6	38:A1:2598:G:O6	2.35	0.59
38:A1:2889:C:H2'	38:A1:2890:A:H8	1.68	0.59
38:A1:3022:G:H4'	38:A1:3023:U:O5'	2.01	0.59
44:AG:232:HIS:ND1	44:AG:233:TRP:O	2.35	0.59
53:AQ:132:PRO:HD2	53:AQ:135:GLN:HE22	1.67	0.59
54:AR:63:THR:O	54:AR:67:ALA:N	2.32	0.59
80:DC:183:GLU:HA	80:DC:186:ASN:HB2	1.85	0.59
34:B5:883:C:H42	34:B5:945:U:H3	0.74	0.59
38:A1:87:U:H2'	38:A1:88:A:H8	1.67	0.59
38:A1:640:U:OP1	63:Aa:21:ARG:NH1	2.35	0.59
38:A1:1114:U:OP1	63:Aa:23:GLY:N	2.36	0.59
38:A1:1326:A:O2'	68:Af:77:ASN:OD1	2.19	0.59
38:A1:1678:G:H2'	38:A1:1679:A:H8	1.67	0.59
38:A1:1941:C:H2'	38:A1:1942:U:C6	2.37	0.59
38:A1:2180:G:H2'	38:A1:2181:C:C6	2.38	0.59
38:A1:2683:U:H2'	38:A1:2684:C:C6	2.37	0.59
38:A1:3110:C:O2'	45:AH:155:SER:OG	2.19	0.59
44:AG:147:LYS:O	44:AG:201:THR:OG1	2.19	0.59
48:AL:110:ASP:HA	48:AL:113:VAL:HG22	1.83	0.59
60:AX:66:PRO:HD2	70:Ah:33:VAL:HG12	1.85	0.59
65:Ac:36:GLN:HB2	65:Ac:38:LYS:HD3	1.84	0.59
80:DC:494:GLU:HG2	80:DC:555:LYS:HB2	1.84	0.59
9:BL:35:TYR:CZ	9:BL:49:ILE:HG23	2.37	0.59
10:BN:4:MET:HB3	10:BN:5:HIS:CE1	2.37	0.59
27:BU:74:GLU:OE1	34:B5:1428:G:N2	2.35	0.59
33:BM:47:GLU:HG2	34:B5:1229:G:O6	2.02	0.59
34:B5:446:A:H62	34:B5:461:G:H21	1.50	0.59
34:B5:1746:A:HO2'	38:A1:2290:C:HO2'	1.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:20:LYS:HB2	38:A1:2991:A:P	2.43	0.59
38:A1:364:G:N7	72:Aj:56:ARG:NH2	2.50	0.59
38:A1:1323:G:H2'	38:A1:1324:U:C6	2.37	0.59
38:A1:1597:C:P	69:Ag:31:ARG:HH12	2.24	0.59
38:A1:1810:A:H2'	38:A1:1811:G:C8	2.37	0.59
38:A1:2439:A:H2'	38:A1:2440:G:C8	2.38	0.59
39:A3:95:A:H2'	39:A3:96:U:O4'	2.03	0.59
47:AJ:171:VAL:HG22	47:AJ:172:LEU:H	1.68	0.59
51:AO:27[A]:LEU:HD12	51:AO:101[A]:ARG:HG3	1.84	0.59
60:AX:53:HIS:ND1	60:AX:54:TYR:O	2.32	0.59
75:Am:97:ARG:NH1	75:Am:122:ARG:HB2	2.17	0.59
75:Am:97:ARG:HH11	75:Am:122:ARG:HB2	1.67	0.59
79:E:101:LYS:HE3	79:E:105:LYS:HZ2	1.68	0.59
1:BA:107:PHE:HB2	1:BA:135:GLU:HG2	1.84	0.59
2:BB:34:ALA:HB3	2:BB:41:ARG:HA	1.84	0.59
2:BB:104:ASP:OD1	2:BB:105:PHE:N	2.36	0.59
4:BE:35:PRO:HG2	4:BE:36:HIS:CE1	2.37	0.59
5:BG:186:ARG:O	5:BG:190:GLN:NE2	2.31	0.59
13:BW:101:TYR:HA	13:BW:113:HIS:HE1	1.68	0.59
27:BU:101:LYS:O	27:BU:104:THR:OG1	2.20	0.59
34:B5:330:G:H2'	34:B5:331:A:C8	2.37	0.59
34:B5:1589:C:H2'	34:B5:1590:G:C8	2.37	0.59
34:B5:1659:A:H2'	34:B5:1660:A:C8	2.37	0.59
36:AB:62:ARG:NH2	38:A1:3039:C:OP1	2.35	0.59
38:A1:622:A:OP1	68:Af:60:ARG:NH1	2.35	0.59
38:A1:1359:C:H2'	38:A1:1360:C:H6	1.68	0.59
38:A1:1379:G:H1	38:A1:1427:U:H3	1.50	0.59
41:AD:107:ARG:HH12	41:AD:120:LYS:HD2	1.67	0.59
43:AF:108:LEU:HD21	43:AF:115:THR:HG22	1.83	0.59
54:AR:31:GLU:OE2	54:AR:31:GLU:N	2.28	0.59
78:Ap:84:ARG:HH22	78:Ap:85:ARG:HB2	1.67	0.59
80:DC:533:THR:OG1	80:DC:537:HIS:ND1	2.30	0.59
6:BH:7:LYS:NZ	6:BH:42:GLN:OE1	2.35	0.59
6:BH:56:LYS:HB2	6:BH:88:ARG:HE	1.67	0.59
7:BI:67:TRP:HZ3	7:BI:183:ILE:HG12	1.68	0.59
7:BI:170:SER:HB3	7:BI:182:TYR:HD1	1.67	0.59
8:BJ:12:TYR:HB2	8:BJ:43:TYR:HB3	1.83	0.59
16:Ba:4:LYS:NZ	34:B5:1795:U:OP2	2.28	0.59
18:Be:25:GLU:OE2	34:B5:542:A:N6	2.36	0.59
23:BQ:143:ARG:O	34:B5:1194:A:N6	2.36	0.59
34:B5:549:G:H2'	34:B5:550:A:C8	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1032:G:O6	34:B5:1103:U:O2	2.19	0.59
34:B5:1072:C:H2'	34:B5:1073:G:H8	1.68	0.59
34:B5:1114:G:O2'	34:B5:1130:G:O6	2.20	0.59
34:B5:1357:A:H2'	34:B5:1358:G:C8	2.37	0.59
34:B5:1483:A:OP2	34:B5:1521:G:N2	2.29	0.59
36:AB:232:ARG:NH1	36:AB:266:ARG:O	2.36	0.59
38:A1:276:U:H2'	38:A1:277:G:C8	2.37	0.59
38:A1:838:G:O6	78:Ap:4:ARG:NH1	2.35	0.59
38:A1:1111:U:H2'	38:A1:1112:A:H8	1.68	0.59
38:A1:2160:G:H2'	38:A1:2161:G:C8	2.28	0.59
38:A1:2895:G:O2'	75:Am:100:TYR:O	2.21	0.59
38:A1:3275:U:O2'	68:Af:99:ARG:NH1	2.36	0.59
45:AH:113:GLU:OE2	45:AH:115:ARG:NH2	2.36	0.59
46:AI:170:LYS:HA	46:AI:177:ASP:HA	1.84	0.59
48:AL:55:ARG:NH1	48:AL:73:ARG:O	2.35	0.59
8:BJ:176:ASN:HA	8:BJ:179:ARG:HG2	1.84	0.59
10:BN:95:ALA:HB2	10:BN:118:ILE:HG21	1.83	0.59
31:Bg:38:ARG:HG2	31:Bg:67:ILE:HG23	1.84	0.59
34:B5:157:A:H2	34:B5:419:G:H21	1.51	0.59
34:B5:219:A:N6	34:B5:842:C:O2	2.35	0.59
34:B5:1396:U:O4	34:B5:1402:G:O6	2.21	0.59
34:B5:1434:U:O2'	34:B5:1436:A:OP1	2.19	0.59
34:B5:1579:U:H2'	34:B5:1580:C:C6	2.38	0.59
38:A1:76:G:OP1	48:AL:70:ARG:NH2	2.36	0.59
38:A1:592:A:H2'	38:A1:593:C:C6	2.38	0.59
38:A1:668:G:H2'	38:A1:669:U:C6	2.38	0.59
38:A1:2316:G:H2'	38:A1:2317:A:H8	1.67	0.59
38:A1:2660:G:OP1	38:A1:2750:U:O2'	2.20	0.59
38:A1:2703:A:OP2	41:AD:23:ARG:NH2	2.36	0.59
38:A1:2710:C:H2'	38:A1:2711:C:C6	2.37	0.59
38:A1:3026:G:N2	38:A1:3029:A:OP2	2.35	0.59
38:A1:3321:C:H2'	38:A1:3322:A:C8	2.37	0.59
40:A4:88:A:O2'	40:A4:89:A:OP1	2.19	0.59
40:A4:145:U:H2'	40:A4:146:U:C6	2.38	0.59
48:AL:49:ARG:NH2	70:Ah:113:GLN:OE1	2.33	0.59
58:AV:80:ARG:NH2	58:AV:117:PRO:O	2.35	0.59
80:DC:708:THR:HA	80:DC:711:ARG:HH12	1.68	0.59
3:BC:212:LYS:NZ	34:B5:1298:U:O3'	2.35	0.59
6:BH:5:GLN:HG2	6:BH:22:GLN:HG3	1.84	0.59
8:BJ:139:GLN:OE1	15:BY:63:GLN:HB2	2.03	0.59
11:BO:22:SER:OG	11:BO:25:ASP:OD1	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:BD:30:ALA:O	19:BD:103:GLU:HG2	2.02	0.59
20:BF:112:ARG:HD3	20:BF:115:LYS:HE3	1.84	0.59
34:B5:814:A:H5'	54:AR:167:ARG:NH2	2.17	0.59
34:B5:1452:U:H2'	34:B5:1453:G:C8	2.37	0.59
36:AB:45:SER:OG	36:AB:338:LEU:O	2.18	0.59
38:A1:584:G:OP1	42:AE:82:ARG:NH2	2.36	0.59
38:A1:707:U:O2	38:A1:712:G:O6	2.20	0.59
38:A1:838:G:H1	38:A1:855:U:H3	1.50	0.59
38:A1:1444:G:H2'	38:A1:1445:U:O4'	2.03	0.59
38:A1:1882:G:H2'	38:A1:1883:A:C8	2.35	0.59
38:A1:2225:U:H2'	38:A1:2226:U:C6	2.37	0.59
38:A1:2566:C:H2'	38:A1:2567:C:H6	1.68	0.59
38:A1:2669:G:H2'	38:A1:2670:G:H8	1.67	0.59
38:A1:2746:A:P	41:AD:178:ASN:HD21	2.25	0.59
45:AH:34:LEU:HD22	45:AH:78:MET:HE3	1.84	0.59
52:AP:9:THR:HG21	52:AP:151:THR:HG21	1.84	0.59
66:Ad:20:LEU:HD11	66:Ad:32:ALA:HB2	1.85	0.59
71:Ai:74:LYS:HE2	71:Ai:80:PHE:HA	1.84	0.59
79:E:77:ALA:HB1	79:E:82:VAL:HG23	1.85	0.59
7:BI:56:ARG:NH1	34:B5:331:A:OP1	2.35	0.59
24:BR:75:GLU:O	24:BR:78:ARG:NH1	2.35	0.59
33:BM:126:TRP:N	33:BM:127:GLY:HA2	2.18	0.59
34:B5:404:G:H2'	34:B5:405:C:H6	1.68	0.59
34:B5:649:U:O2'	34:B5:650:U:O5'	2.20	0.59
34:B5:752:A:N1	34:B5:797:G:O6	2.35	0.59
36:AB:125:SER:O	36:AB:127:LYS:NZ	2.28	0.59
36:AB:149:ALA:HA	36:AB:152:LYS:HG2	1.84	0.59
38:A1:541:U:H2'	38:A1:542:G:C8	2.35	0.59
38:A1:561:C:H2'	38:A1:562:C:H6	1.67	0.59
38:A1:1433:A:N3	67:Ae:27:ARG:NH1	2.50	0.59
38:A1:1534:A:OP2	38:A1:1586:G:N1	2.21	0.59
38:A1:1723:A:N1	38:A1:1788:C:O2'	2.29	0.59
38:A1:1822:C:H2'	38:A1:1823:A:C8	2.37	0.59
38:A1:1926:C:P	78:Ap:24:ARG:HH22	2.24	0.59
38:A1:3022:G:N2	38:A1:3031:G:H2'	2.17	0.59
40:A4:11:C:C2	40:A4:12:A:C8	2.91	0.59
40:A4:23:U:OP2	61:AY:16:ARG:NE	2.23	0.59
46:AI:113:GLN:OE1	46:AI:116:ARG:NH2	2.34	0.59
80:DC:279:ASP:HB3	80:DC:283:ARG:CZ	2.32	0.59
80:DC:544:ASP:O	80:DC:548:ASP:N	2.35	0.59
80:DC:601:ILE:HA	80:DC:606:ILE:HG22	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:BE:9:LEU:HD13	4:BE:30:ARG:HD2	1.83	0.58
15:BY:132:ARG:NH1	34:B5:155:U:OP2	2.28	0.58
31:Bg:180:ALA:HB3	31:Bg:190:ALA:HB3	1.85	0.58
34:B5:1396:U:N3	34:B5:1402:G:N1	2.28	0.58
36:AB:238:LEU:HB2	36:AB:246:LEU:HA	1.85	0.58
37:AC:326:ARG:NH2	38:A1:608:A:O3'	2.36	0.58
38:A1:111:C:P	48:AL:91:ARG:HH12	2.25	0.58
38:A1:640:U:H2'	38:A1:641:C:C6	2.37	0.58
38:A1:726:G:N2	38:A1:743:C:OP2	2.28	0.58
38:A1:1530:U:HO2'	40:A4:114:G:HO2'	1.46	0.58
38:A1:1720:U:OP2	54:AR:120:TYR:OH	2.12	0.58
38:A1:1927:G:C8	78:Ap:16:VAL:HA	2.38	0.58
38:A1:2564:G:OP2	62:AZ:55:LYS:NZ	2.32	0.58
38:A1:2844:C:H42	38:A1:2898:G:N2	2.01	0.58
38:A1:2856:G:H8	46:AI:7:ARG:NH1	1.92	0.58
38:A1:3138:U:H2'	38:A1:3139:A:C8	2.34	0.58
46:AI:86:HIS:HB3	46:AI:139:ARG:HG3	1.84	0.58
56:AT:53:PRO:HD3	56:AT:95:HIS:HD2	1.68	0.58
79:E:67:ILE:HG12	79:E:111:ILE:HD11	1.84	0.58
14:BX:109:ARG:HD3	14:BX:114:LYS:NZ	2.17	0.58
19:BD:7:LYS:NZ	27:BU:27:THR:OG1	2.35	0.58
21:BK:58:GLN:HB2	21:BK:65:TYR:HB2	1.85	0.58
34:B5:1117:U:H2'	34:B5:1118:G:H8	1.68	0.58
34:B5:1350:U:N3	34:B5:1376:C:O2	2.36	0.58
34:B5:1736:G:H2'	34:B5:1737:G:C8	2.37	0.58
34:B5:1737:G:H2'	34:B5:1738:U:C6	2.37	0.58
35:AA:54:ARG:NH1	38:A1:2176:U:OP1	2.36	0.58
37:AC:106:TRP:HZ3	48:AL:22:VAL:HG11	1.67	0.58
37:AC:150:LEU:HD23	37:AC:249:ILE:HG12	1.85	0.58
38:A1:3006:A:H2'	38:A1:3007:U:O4'	2.03	0.58
38:A1:3343:G:O2'	38:A1:3362:A:N6	2.36	0.58
45:AH:90:MET:HB3	45:AH:144:ILE:HG22	1.85	0.58
54:AR:73:GLY:O	54:AR:76:SER:OG	2.18	0.58
55:AS:99:ARG:NH2	55:AS:128:GLU:OE2	2.34	0.58
60:AX:90:ALA:O	60:AX:120:LYS:NZ	2.28	0.58
80:DC:76:SER:HA	80:DC:101:ASN:HA	1.86	0.58
16:Ba:5:ARG:HH21	34:B5:1795:U:H3'	1.68	0.58
34:B5:119:A:H1'	34:B5:397:A:C6	2.38	0.58
34:B5:1583:A:N6	34:B5:1612:U:OP2	2.28	0.58
36:AB:95:THR:OG1	36:AB:97:ARG:HG2	2.03	0.58
37:AC:141:ARG:NH1	38:A1:1385:C:OP1	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:105:C:H2'	38:A1:106:A:H8	1.68	0.58
38:A1:178:U:H2'	38:A1:179:C:C6	2.38	0.58
38:A1:929:A:H2'	38:A1:930:U:C6	2.38	0.58
38:A1:952:A:O3'	64:Ab:15:LYS:NZ	2.35	0.58
38:A1:1246:G:N2	38:A1:1272:C:O2'	2.36	0.58
38:A1:1458:U:H2'	38:A1:1459:C:C6	2.37	0.58
38:A1:1614:C:H2'	38:A1:1615:C:C6	2.38	0.58
38:A1:1815:U:O3'	38:A1:1817:G:N2	2.37	0.58
38:A1:2433:U:OP1	50:AN:20:ARG:NH2	2.36	0.58
48:AL:29:ALA:H	50:AN:201:ARG:NH2	1.98	0.58
56:AT:149:GLN:OE1	56:AT:149:GLN:N	2.37	0.58
81:EC:6861:G:H2'	81:EC:6862:G:C8	2.38	0.58
4:BE:46:VAL:HG13	4:BE:50:ASN:HB2	1.85	0.58
6:BH:18:LEU:HB3	6:BH:22:GLN:HE22	1.68	0.58
7:BI:38:ILE:HG12	7:BI:96:LEU:HD11	1.85	0.58
7:BI:97:THR:HA	7:BI:173:PRO:HG2	1.86	0.58
10:BN:48:SER:OG	10:BN:49:GLN:OE1	2.21	0.58
15:BY:11:LYS:O	15:BY:23:PHE:HA	2.03	0.58
20:BF:81:ARG:HH12	34:B5:1615:C:H5"	1.68	0.58
25:BS:41:ARG:HG2	25:BS:85:PHE:HZ	1.66	0.58
32:Bf:122:SER:N	32:Bf:148:TYR:OH	2.35	0.58
34:B5:220:A:C5	34:B5:832:U:H1'	2.38	0.58
34:B5:532:U:H2'	34:B5:533:U:O4'	2.03	0.58
34:B5:900:A:H4'	34:B5:916:U:H1'	1.86	0.58
34:B5:1053:G:H2'	34:B5:1054:U:C6	2.38	0.58
35:AA:233:GLN:HE22	38:A1:2606:G:P	2.26	0.58
36:AB:113:GLU:OE1	36:AB:113:GLU:N	2.34	0.58
36:AB:279:ASN:ND2	38:A1:3098:G:OP1	2.37	0.58
38:A1:760:G:H1'	38:A1:771:A:N6	2.18	0.58
38:A1:968:G:H21	64:Ab:15:LYS:HZ1	1.50	0.58
38:A1:1362:G:H2'	38:A1:1363:A:C8	2.38	0.58
38:A1:1482:A:OP2	38:A1:1858:A:O2'	2.21	0.58
38:A1:2260:PSU:H2'	38:A1:2261:G:C8	2.39	0.58
38:A1:2481:G:H5"	79:E:102:LYS:HZ2	1.68	0.58
38:A1:2573:G:H2'	38:A1:2574:G:O4'	2.04	0.58
38:A1:2855:U:H3'	46:AI:7:ARG:HD3	1.86	0.58
38:A1:3061:G:H2'	38:A1:3062:G:C8	2.38	0.58
40:A4:149:A:H2'	40:A4:150:G:C8	2.39	0.58
41:AD:277:LEU:HD13	41:AD:281:GLU:HB3	1.86	0.58
41:AD:283:ALA:HA	41:AD:286:VAL:HG12	1.84	0.58
43:AF:107:ARG:HB3	43:AF:204:PRO:HG3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:AG:142:LEU:HB3	44:AG:148:ALA:HB2	1.85	0.58
57:AU:81:LYS:HG2	57:AU:90:ARG:HH12	1.69	0.58
60:AX:58:ASP:OD1	60:AX:61:LYS:N	2.32	0.58
73:Ak:64:LYS:O	73:Ak:67:GLN:NE2	2.36	0.58
9:BL:104:HIS:NE2	34:B5:349:U:OP1	2.35	0.58
11:BO:20:TYR:HB3	11:BO:27:PHE:HB2	1.84	0.58
13:BW:44:HIS:NE2	13:BW:112:ASP:OD2	2.36	0.58
16:Ba:24:VAL:HG21	16:Ba:71:LEU:HD22	1.84	0.58
19:BD:4:LEU:HD23	34:B5:1490:C:H2'	1.85	0.58
34:B5:771:A:H3'	34:B5:772:G:H8	1.66	0.58
34:B5:794:U:O2'	34:B5:795:U:O4'	2.22	0.58
34:B5:939:A:H2'	34:B5:940:A:C8	2.39	0.58
34:B5:1087:A:H2'	34:B5:1088:A:C8	2.38	0.58
38:A1:1072:G:H2'	38:A1:1073:U:C6	2.38	0.58
38:A1:1192:C:N4	38:A1:1301:A:O2'	2.36	0.58
38:A1:2294:U:O2'	38:A1:2296:A:N7	2.25	0.58
38:A1:2836:C:H5	38:A1:2852:C:H42	1.52	0.58
38:A1:3153:U:H4'	38:A1:3154:C:C2	2.39	0.58
43:AF:226:GLY:HA3	55:AS:1:MET:HE2	1.86	0.58
66:Ad:72:ARG:HG2	66:Ad:98:VAL:HG21	1.85	0.58
80:DC:30:HIS:O	80:DC:158:ASN:ND2	2.35	0.58
80:DC:161:ASP:HA	80:DC:164:LEU:HD12	1.85	0.58
2:BB:166:LYS:HZ2	34:B5:947:U:H5"	1.68	0.58
6:BH:61:PHE:HB3	6:BH:95:GLU:HB2	1.84	0.58
15:BY:60:PHE:O	34:B5:522:U:O2'	2.22	0.58
33:BM:61:VAL:HG22	33:BM:89:ILE:HB	1.84	0.58
34:B5:559:C:H2'	34:B5:560:U:C6	2.38	0.58
34:B5:898:A:N1	34:B5:911:U:O2'	2.34	0.58
34:B5:996:U:O2	34:B5:1008:G:C6	2.56	0.58
34:B5:1106:U:H2'	34:B5:1107:G:C8	2.39	0.58
34:B5:1477:G:H2'	34:B5:1478:G:C8	2.38	0.58
34:B5:1695:G:H2'	34:B5:1695:G:N3	2.19	0.58
37:AC:102:PRO:HD2	38:A1:800:G:H1	1.69	0.58
37:AC:142:VAL:HG11	37:AC:247:PHE:CG	2.39	0.58
38:A1:443:G:H3'	38:A1:491:A:H62	1.69	0.58
38:A1:821:U:H2'	38:A1:822:G:H8	1.69	0.58
38:A1:919:U:H5"	38:A1:920:A:H5'	1.86	0.58
38:A1:1009:A:H5"	46:AI:39:LYS:HZ2	1.69	0.58
38:A1:1088:U:H2'	38:A1:1089:G:H8	1.69	0.58
38:A1:1098:A:OP2	56:AT:108:ARG:NH1	2.34	0.58
38:A1:1781:C:H2'	38:A1:1782:U:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2742:C:H2'	38:A1:2743:A:C8	2.39	0.58
38:A1:3193:C:H2'	38:A1:3194:C:C6	2.37	0.58
38:A1:3325:G:O3'	66:Ad:103:GLY:HA2	2.03	0.58
39:A3:61:G:H5"	41:AD:276:LYS:HB2	1.84	0.58
39:A3:64:A:N6	46:AI:201:SER:O	2.36	0.58
40:A4:95:G:O2'	72:Aj:81:GLY:O	2.19	0.58
60:AX:137:ASN:OD1	60:AX:138:ARG:N	2.37	0.58
70:Ah:27:GLU:HA	70:Ah:30:GLU:CD	2.28	0.58
70:Ah:30:GLU:HA	70:Ah:33:VAL:HG22	1.84	0.58
81:EC:6777:C:H3'	81:EC:6778:C:H2'	1.84	0.58
2:BB:134:VAL:HG22	2:BB:218:LEU:HD12	1.86	0.58
3:BC:54:GLU:OE1	3:BC:54:GLU:N	2.37	0.58
20:BF:144:GLU:OE1	20:BF:225:ARG:NH2	2.36	0.58
21:BK:24:LYS:O	21:BK:39:ASN:ND2	2.27	0.58
22:BP:99:GLY:O	34:B5:1211:A:H1'	2.02	0.58
27:BU:24:ILE:HD12	27:BU:93:LEU:HD12	1.86	0.58
34:B5:36:C:H2'	34:B5:37:U:H6	1.68	0.58
37:AC:92:ASN:HD22	37:AC:100:PHE:HB2	1.69	0.58
38:A1:759:U:H2'	38:A1:760:G:O4'	2.04	0.58
38:A1:843:A:H2'	38:A1:844:G:C8	2.39	0.58
38:A1:942:U:O4	63:Aa:24:LYS:NZ	2.27	0.58
38:A1:1361:U:H2'	38:A1:1362:G:C8	2.39	0.58
38:A1:1439:U:H2'	38:A1:1440:G:H8	1.68	0.58
38:A1:1650:G:H2'	38:A1:1651:U:C6	2.39	0.58
38:A1:2438:A:H2'	38:A1:2439:A:C8	2.39	0.58
38:A1:2560:C:N4	38:A1:2575:G:OP1	2.37	0.58
38:A1:3380:U:H2'	38:A1:3381:U:C6	2.39	0.58
39:A3:64:A:C6	46:AI:202:LYS:HA	2.39	0.58
55:AS:5:LYS:HB2	55:AS:7:TYR:CE1	2.38	0.58
61:AY:63:LYS:HE2	61:AY:66:GLN:HG3	1.86	0.58
81:EC:6813:A:H2'	81:EC:6814:G:C8	2.38	0.58
7:BI:44:HIS:ND1	34:B5:1676:U:OP1	2.36	0.58
8:BJ:174:ARG:NH2	34:B5:537:G:O6	2.37	0.58
18:Be:33:ARG:NH2	34:B5:475:A:H5"	2.19	0.58
20:BF:139:ASN:ND2	20:BF:201:ALA:O	2.34	0.58
30:Bd:45:GLU:OE1	34:B5:1433:G:N2	2.32	0.58
34:B5:1230:A:H2'	34:B5:1258:U:O2	2.04	0.58
37:AC:298:ALA:HB1	53:AQ:133:LYS:HE2	1.86	0.58
38:A1:576:C:H2'	38:A1:577:C:C6	2.38	0.58
38:A1:733:G:H21	38:A1:736:A:H2	1.51	0.58
38:A1:1234:G:H3'	38:A1:1263:A:H5"	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1480:G:O4'	38:A1:1483:G:N2	2.36	0.58
38:A1:2534:G:N1	38:A1:2545:C:O2	2.36	0.58
40:A4:146:U:H2'	40:A4:147:U:C6	2.39	0.58
49:AM:113:THR:HG22	49:AM:116:GLU:HG2	1.86	0.58
50:AN:17:ASP:OD1	50:AN:18:VAL:N	2.36	0.58
53:AQ:43:PRO:HA	53:AQ:46:LYS:HE2	1.85	0.58
53:AQ:92:ARG:HG3	63:Aa:76:ASP:HB2	1.86	0.58
67:Ae:55:ILE:O	67:Ae:58:GLY:N	2.31	0.58
79:E:112:ALA:HB1	79:E:116:LEU:HB2	1.86	0.58
80:DC:23:SER:O	80:DC:126:LEU:N	2.27	0.58
80:DC:734:GLN:HB3	80:DC:765:LEU:HD23	1.85	0.58
4:BE:152:PRO:O	4:BE:155:LYS:NZ	2.35	0.58
5:BG:70:PRO:O	5:BG:98:ARG:NH2	2.37	0.58
7:BI:56:ARG:HH22	34:B5:331:A:H5"	1.68	0.58
9:BL:63:LEU:O	9:BL:129:ARG:NH2	2.26	0.58
9:BL:82:ARG:O	9:BL:110:HIS:ND1	2.37	0.58
9:BL:100:TYR:N	14:BX:9:LEU:O	2.27	0.58
16:Ba:8:ASN:HB3	34:B5:1791:A:H3'	1.86	0.58
16:Ba:79:ILE:HD11	34:B5:1794:A:N3	2.18	0.58
19:BD:136:VAL:HG12	19:BD:186:VAL:HG12	1.85	0.58
24:BR:4:VAL:HG11	34:B5:1315:U:H1'	1.85	0.58
32:Bf:133:ALA:N	32:Bf:140:TYR:O	2.31	0.58
34:B5:17:C:H2'	34:B5:18:C:H6	1.68	0.58
34:B5:814:A:N3	54:AR:167:ARG:NH2	2.46	0.58
34:B5:894:U:H2'	34:B5:895:G:C5	2.38	0.58
34:B5:1254:U:H2'	34:B5:1255:G:C8	2.39	0.58
35:AA:119:LYS:NZ	38:A1:2159:U:OP1	2.35	0.58
36:AB:94:GLU:OE1	36:AB:94:GLU:N	2.37	0.58
38:A1:671:U:H2'	38:A1:672:A:H8	1.68	0.58
38:A1:1138:U:H2'	38:A1:1139:G:C8	2.39	0.58
38:A1:1289:G:H2'	38:A1:1290:A:C8	2.38	0.58
38:A1:3324:C:OP1	66:Ad:19:ARG:NH1	2.35	0.58
40:A4:28:C:H2'	40:A4:29:U:C6	2.39	0.58
40:A4:28:C:H2'	40:A4:29:U:H6	1.67	0.58
45:AH:161:LEU:HA	45:AH:164:ILE:HG22	1.84	0.58
52:AP:41:LEU:HD13	52:AP:112:LEU:HD22	1.85	0.58
56:AT:42:ILE:HD11	56:AT:74:VAL:HG11	1.86	0.58
60:AX:73:MET:HE1	60:AX:142:ILE:HG12	1.85	0.58
65:Ac:75:ASN:HD21	65:Ac:86:ARG:HH21	1.50	0.58
80:DC:22:MET:HB3	80:DC:100:ILE:HD11	1.86	0.58
80:DC:91:GLN:NE2	80:DC:344:SER:OG	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:581:ASN:N	80:DC:704:GLN:OE1	2.36	0.58
81:EC:6801:A:N3	81:EC:6882:G:H2'	2.18	0.58
2:BB:129:THR:HG23	2:BB:135:LEU:HD22	1.85	0.58
30:Bd:10:HIS:NE2	34:B5:1204:A:N3	2.49	0.58
34:B5:5:U:H2'	34:B5:6:G:H8	1.69	0.58
34:B5:74:U:O2'	34:B5:76:A:OP2	2.21	0.58
34:B5:605:A:OP2	34:B5:606:A:O2'	2.20	0.58
34:B5:1116:A:H5"	76:An:17:ARG:NH1	2.18	0.58
34:B5:1162:C:H2'	34:B5:1163:A:H8	1.69	0.58
34:B5:1738:U:H2'	34:B5:1739:C:H6	1.68	0.58
36:AB:248:LYS:NZ	38:A1:1888:U:O3'	2.37	0.58
37:AC:138:ARG:NH2	37:AC:240:PRO:O	2.37	0.58
38:A1:276:U:H2'	38:A1:277:G:H8	1.68	0.58
38:A1:371:G:N1	38:A1:374:A:OP2	2.35	0.58
38:A1:604:G:H2'	38:A1:605:U:C6	2.39	0.58
38:A1:665:A:H5'	50:AN:199:LEU:HD11	1.84	0.58
38:A1:852:U:H2'	38:A1:853:G:H8	1.69	0.58
38:A1:1258:U:H5'	38:A1:1261:G:N7	2.18	0.58
38:A1:1362:G:H1'	43:AF:159:GLN:OE1	2.03	0.58
38:A1:1680:G:N1	38:A1:1689:U:C4	2.72	0.58
38:A1:2856:G:H2'	38:A1:2857:C:C6	2.39	0.58
38:A1:3051:U:H2'	38:A1:3052:G:H8	1.69	0.58
38:A1:3366:G:OP1	59:AW:61:LYS:NZ	2.24	0.58
46:AI:186:ASP:OD1	46:AI:187:ALA:N	2.37	0.58
55:AS:16:THR:HG23	55:AS:19:VAL:H	1.68	0.58
55:AS:160:THR:HG23	55:AS:161:LYS:HD3	1.85	0.58
58:AV:54:LEU:N	58:AV:81:GLN:OE1	2.37	0.58
80:DC:21:ASN:O	80:DC:123:ASP:N	2.31	0.58
2:BB:148:ASN:OD1	34:B5:1066:C:O2'	2.17	0.57
10:BN:16:ILE:HB	10:BN:62:GLN:HE22	1.70	0.57
11:BO:103:ARG:NH1	16:Ba:48:ALA:O	2.37	0.57
16:Ba:22:ARG:HA	16:Ba:29:SER:HA	1.86	0.57
34:B5:631:G:O6	34:B5:968:U:O4	2.22	0.57
34:B5:1291:G:H22	34:B5:1324:G:H22	1.52	0.57
34:B5:1477:G:H2'	34:B5:1478:G:H8	1.67	0.57
34:B5:1487:A:H2'	34:B5:1488:G:C8	2.40	0.57
36:AB:19:ARG:HB2	36:AB:232:ARG:HH21	1.68	0.57
38:A1:31:C:H3'	38:A1:32:U:H6	1.68	0.57
38:A1:275:U:H2'	38:A1:276:U:C6	2.39	0.57
38:A1:746:A:H2'	38:A1:747:A:C8	2.38	0.57
38:A1:946:U:OP2	67:Ae:34:LYS:NZ	2.29	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1150:A:N6	38:A1:2369:G:O2'	2.36	0.57
38:A1:3348:G:N2	38:A1:3357:U:O2	2.30	0.57
39:A3:77:G:C8	55:AS:50:LYS:HD3	2.39	0.57
46:AI:9:TYR:CE2	46:AI:97:LEU:HB3	2.39	0.57
47:AJ:91:LEU:HD23	47:AJ:96:PHE:HE1	1.70	0.57
49:AM:112:LEU:O	49:AM:117:ARG:NH1	2.37	0.57
50:AN:103:GLU:OE1	50:AN:103:GLU:N	2.25	0.57
51:AO:113[A]:ASP:OD1	51:AO:114[A]:LYS:N	2.37	0.57
54:AR:21:LYS:HA	54:AR:53:LYS:HE2	1.86	0.57
3:BC:81:MET:HE1	3:BC:186:LYS:HB3	1.86	0.57
4:BE:73:ASP:N	4:BE:89:VAL:O	2.35	0.57
4:BE:131:LEU:HD12	34:B5:251:A:H2	1.69	0.57
7:BI:92:ARG:NH1	38:A1:3345:G:O3'	2.37	0.57
11:BO:128:LYS:HG3	16:Ba:22:ARG:HH12	1.68	0.57
19:BD:107:PHE:O	19:BD:111:ASN:ND2	2.36	0.57
23:BQ:100:GLN:HB2	31:Bg:57:PRO:HG2	1.86	0.57
34:B5:545:A:N1	34:B5:593:U:O2'	2.35	0.57
35:AA:243:THR:OG1	38:A1:2244:A:O5'	2.21	0.57
37:AC:259:ASP:OD1	37:AC:260:GLN:N	2.36	0.57
38:A1:289:A:H2'	38:A1:290:G:H8	1.69	0.57
38:A1:515:C:H2'	38:A1:516:A:C8	2.39	0.57
38:A1:567:G:H2'	38:A1:568:G:H8	1.68	0.57
38:A1:684:G:H5"	48:AL:35:ARG:HH22	1.68	0.57
38:A1:714:G:O2'	38:A1:753:C:O2'	2.20	0.57
38:A1:966:PSU:H2'	38:A1:967:A:C8	2.38	0.57
38:A1:1222:G:H1	38:A1:1285:G:HO2'	1.52	0.57
38:A1:1322:U:H2'	38:A1:1323:G:H8	1.64	0.57
38:A1:1493:G:C5	74:Al:13:MET:HE1	2.38	0.57
38:A1:1823:A:H2'	38:A1:1824:U:O4'	2.04	0.57
38:A1:3298:C:C2	38:A1:3299:A:C8	2.92	0.57
47:AJ:12:LEU:HD11	47:AJ:131:MET:HB3	1.85	0.57
48:AL:58:VAL:HA	48:AL:108:ILE:HD11	1.85	0.57
50:AN:73:ARG:HB2	50:AN:89:VAL:HB	1.85	0.57
60:AX:132:ALA:O	60:AX:136:ALA:N	2.34	0.57
65:Ac:16:LEU:HD22	65:Ac:98:SER:HB3	1.86	0.57
68:Af:48:ARG:HD2	68:Af:70:LYS:HD2	1.86	0.57
80:DC:141:THR:O	80:DC:145:GLN:NE2	2.36	0.57
80:DC:772:LEU:HB3	80:DC:775:ASN:HD21	1.69	0.57
18:Be:56:MET:HE3	34:B5:556:A:H4'	1.85	0.57
24:BR:60:ARG:HB3	24:BR:66:VAL:HG21	1.86	0.57
31:Bg:295:SER:HB3	31:Bg:302:PHE:HE2	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:304:U:H2'	34:B5:305:C:C6	2.39	0.57
35:AA:129:ALA:HB3	35:AA:132:ASN:HD22	1.68	0.57
38:A1:121:A:C2	44:AG:129:PRO:HB3	2.39	0.57
38:A1:173:G:O6	38:A1:244:G:N1	2.37	0.57
38:A1:843:A:H2'	38:A1:844:G:H8	1.69	0.57
38:A1:1057:A:OP1	43:AF:98:LYS:NZ	2.36	0.57
38:A1:1079:A:H2'	38:A1:1080:A:C8	2.40	0.57
38:A1:1084:A:H2'	38:A1:1085:A:C8	2.38	0.57
38:A1:1596:C:H2'	38:A1:1597:C:C6	2.39	0.57
38:A1:2129:PSU:H2'	38:A1:2130:G:C8	2.39	0.57
38:A1:2331:C:H2'	38:A1:2332:A:H8	1.69	0.57
38:A1:2656:A:C5	38:A1:2658:G:C8	2.93	0.57
38:A1:2717:U:O3'	77:Ao:13:LYS:NZ	2.32	0.57
38:A1:3052:G:H2'	38:A1:3053:G:C8	2.39	0.57
43:AF:100:ARG:NH1	53:AQ:4:ASP:OD1	2.37	0.57
46:AI:189:GLU:HG2	46:AI:200:LEU:HB3	1.86	0.57
52:AP:114:VAL:HA	52:AP:150:VAL:HA	1.84	0.57
56:AT:8:ARG:HD2	56:AT:15:PHE:CE2	2.39	0.57
62:AZ:136:PHE:O	69:Ag:76:TYR:OH	2.20	0.57
81:EC:6794:C:N4	81:EC:6940:U:O2'	2.36	0.57
81:EC:6856:C:O2'	81:EC:6872:A:O2'	2.15	0.57
1:BA:139:VAL:HG13	1:BA:141:ILE:HG12	1.85	0.57
4:BE:191:ARG:HD3	4:BE:245:LYS:HE3	1.85	0.57
10:BN:16:ILE:HG22	34:B5:959:U:H4'	1.85	0.57
14:BX:32:ARG:NH2	34:B5:375:U:H5"	2.20	0.57
36:AB:183:LEU:HB2	36:AB:191:LYS:HD3	1.85	0.57
38:A1:30:G:P	50:AN:172:ARG:HE	2.28	0.57
38:A1:54:C:H2'	38:A1:55:G:C8	2.39	0.57
38:A1:531:G:H2'	38:A1:532:A:C8	2.38	0.57
38:A1:1155:C:O2'	38:A1:1197:A:N1	2.36	0.57
38:A1:1219:C:O2'	38:A1:1286:A:N1	2.32	0.57
38:A1:1447:G:N2	38:A1:2356:A:OP2	2.32	0.57
38:A1:1547:G:OP1	50:AN:105:ARG:NH1	2.37	0.57
38:A1:1653:G:H2'	38:A1:1654:A:C8	2.40	0.57
38:A1:1742:U:H2'	38:A1:1743:G:H8	1.68	0.57
38:A1:2155:G:H2'	38:A1:2156:C:C6	2.39	0.57
38:A1:2630:C:H3'	56:AT:4:SER:OG	2.03	0.57
40:A4:41:A:H5'	72:Aj:67:LEU:HD23	1.86	0.57
42:AE:62:THR:HG21	42:AE:78:ARG:HH21	1.69	0.57
66:Ad:73:LEU:HD23	66:Ad:74:ARG:N	2.20	0.57
80:DC:345:PRO:HB3	80:DC:349:GLN:HE22	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BG:13:GLN:O	5:BG:13:GLN:HG2	2.05	0.57
6:BH:104:ARG:NE	34:B5:803:A:O2'	2.37	0.57
27:BU:85:ARG:NH2	34:B5:1334:U:O3'	2.37	0.57
34:B5:174:U:H2'	34:B5:175:G:H8	1.69	0.57
34:B5:561:G:C6	34:B5:585:A:C6	2.92	0.57
34:B5:1266:U:H2'	34:B5:1267:G:C8	2.40	0.57
38:A1:346:C:N4	38:A1:349:A:OP2	2.31	0.57
38:A1:745:C:H2'	38:A1:746:A:C8	2.35	0.57
38:A1:946:U:H2'	38:A1:947:G:C8	2.39	0.57
38:A1:1046:A:H2'	38:A1:1049:C:C5	2.38	0.57
38:A1:1803:C:O3'	69:Ag:70:LYS:NZ	2.37	0.57
38:A1:2166:A:H2'	38:A1:2167:A:C8	2.39	0.57
38:A1:2776:C:H5"	38:A1:2777:G:H5'	1.85	0.57
38:A1:3037:U:H2'	38:A1:3038:U:C6	2.40	0.57
38:A1:3044:G:H2'	38:A1:3045:G:C8	2.40	0.57
38:A1:3154:C:O2'	38:A1:3157:U:O2	2.19	0.57
38:A1:3211:C:H2'	38:A1:3212:C:C6	2.39	0.57
38:A1:3243:A:C8	51:AO:110[A]:PRO:HD3	2.39	0.57
39:A3:64:A:N7	46:AI:209:ASN:ND2	2.53	0.57
40:A4:67:U:H2'	40:A4:68:G:C8	2.37	0.57
46:AI:93:PRO:HB2	46:AI:125:LEU:HB3	1.85	0.57
69:Ag:87:GLU:HA	69:Ag:90:ILE:HG12	1.86	0.57
79:E:97:LYS:HE3	81:EC:6776:A:N6	2.20	0.57
1:BA:164:ASN:HA	1:BA:170:ILE:HD11	1.86	0.57
5:BG:177:ARG:NH2	34:B5:143:G:O6	2.38	0.57
6:BH:85:PHE:HB3	6:BH:88:ARG:HB2	1.87	0.57
7:BI:78:ILE:HA	7:BI:104:ILE:HG23	1.86	0.57
23:BQ:71:GLY:HA2	34:B5:1483:A:H4'	1.85	0.57
34:B5:23:G:N2	34:B5:602:U:O2	2.36	0.57
34:B5:199:G:H2'	34:B5:200:A:C8	2.39	0.57
34:B5:688:G:H2'	34:B5:689:G:C8	2.38	0.57
34:B5:1355:C:H2'	34:B5:1356:U:C6	2.40	0.57
34:B5:1364:G:H2'	34:B5:1365:C:C6	2.39	0.57
34:B5:1476:C:H2'	34:B5:1477:G:H8	1.70	0.57
34:B5:1772:C:H2'	34:B5:1773:4AC:H6	1.86	0.57
36:AB:215:ILE:HD12	36:AB:338:LEU:HD22	1.85	0.57
37:AC:343:LYS:NZ	38:A1:515:C:OP1	2.35	0.57
38:A1:33:G:H5"	50:AN:73:ARG:HH22	1.68	0.57
38:A1:115:A:H1'	38:A1:266:A:H5'	1.86	0.57
38:A1:172:G:N1	38:A1:246:U:O4	2.37	0.57
38:A1:1492:G:N7	74:Al:2:ALA:N	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1522:U:OP2	60:AX:115:ARG:NH2	2.38	0.57
38:A1:1723:A:OP2	54:AR:103:ARG:NH1	2.33	0.57
51:AO:50[A]:ASN:HA	51:AO:53[A]:LYS:HZ3	1.70	0.57
54:AR:153:LYS:HA	54:AR:153:LYS:HE3	1.86	0.57
60:AX:77:GLU:OE1	60:AX:77:GLU:N	2.24	0.57
79:E:100:ILE:HD12	79:E:127:GLN:HB2	1.87	0.57
80:DC:2:VAL:N	80:DC:44:GLY:O	2.37	0.57
80:DC:564:ARG:HG3	80:DC:682:ARG:HE	1.69	0.57
7:BI:25:ARG:NH1	34:B5:400:A:OP1	2.37	0.57
7:BI:137:LYS:HG2	34:B5:188:A:H5'	1.87	0.57
8:BJ:29:LYS:NZ	8:BJ:33:GLU:OE1	2.37	0.57
10:BN:110:ASP:OD1	10:BN:111:ALA:N	2.38	0.57
11:BO:120:PRO:HB2	34:B5:887:A:H5"	1.86	0.57
14:BX:19:ARG:NH2	34:B5:609:U:O2'	2.37	0.57
15:BY:56:SER:O	15:BY:74:LEU:N	2.34	0.57
31:Bg:102:ARG:NH2	34:B5:1341:A:O2'	2.38	0.57
34:B5:577:G:N1	81:EC:6955:U:O2	2.33	0.57
34:B5:1466:G:O2'	34:B5:1602:C:OP1	2.19	0.57
34:B5:1563:C:H2'	34:B5:1564:U:C6	2.40	0.57
36:AB:276:THR:HG21	38:A1:3137:C:H4'	1.86	0.57
38:A1:36:C:O2'	38:A1:934:G:N3	2.38	0.57
38:A1:289:A:H2'	38:A1:290:G:C8	2.39	0.57
38:A1:966:PSU:H2'	38:A1:967:A:H8	1.69	0.57
38:A1:1247:U:H3	38:A1:1267:U:H6	1.52	0.57
38:A1:1598:G:O2'	38:A1:1752:A:O2'	2.19	0.57
38:A1:1601:U:OP1	54:AR:42:ARG:NH2	2.37	0.57
38:A1:2382:G:OP2	51:AO:90[A]:HIS:NE2	2.32	0.57
38:A1:2406:C:H2'	38:A1:2407:C:H6	1.68	0.57
38:A1:2609:A:H2'	38:A1:2610:G:H8	1.70	0.57
38:A1:3016:A:H2'	38:A1:3017:A:C8	2.38	0.57
39:A3:19:C:H2'	39:A3:20:A:C8	2.40	0.57
61:AY:48:LEU:HD12	61:AY:49:PRO:HD2	1.87	0.57
80:DC:677:PHE:HA	80:DC:823:ARG:HH12	1.68	0.57
4:BE:160:VAL:HG23	4:BE:169:ILE:HG13	1.87	0.57
8:BJ:132:ARG:HD2	8:BJ:140:ILE:HD13	1.85	0.57
16:Ba:95:ARG:NH1	34:B5:1796:C:O2'	2.38	0.57
26:BT:18:TYR:HD1	26:BT:135:ILE:HG13	1.70	0.57
34:B5:41:A:H61	34:B5:466:PSU:HN3	1.51	0.57
34:B5:869:A:H61	34:B5:958:U:H3	1.53	0.57
34:B5:1146:G:H2'	34:B5:1147:A:H8	1.70	0.57
34:B5:1616:G:H2'	34:B5:1617:U:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:93:MET:HE1	38:A1:1435:A:C5	2.39	0.57
38:A1:159:A:H2'	38:A1:160:G:H8	1.69	0.57
38:A1:172:G:H1'	38:A1:173:G:N2	2.20	0.57
38:A1:890:C:H2'	38:A1:891:G:C8	2.37	0.57
38:A1:1307:G:OP1	51:AO:60[A]:LYS:NZ	2.28	0.57
38:A1:1696:A:H2'	38:A1:1697:A:C8	2.39	0.57
42:AE:175:LYS:O	49:AM:117:ARG:NH2	2.36	0.57
54:AR:23:TRP:HB2	54:AR:53:LYS:HD3	1.85	0.57
66:Ad:44:MET:HE3	66:Ad:77:ARG:HE	1.69	0.57
79:E:116:LEU:HA	79:E:119:GLN:HB3	1.87	0.57
17:Bb:15:GLU:OE1	17:Bb:23:THR:OG1	2.21	0.57
24:BR:21:TYR:HA	24:BR:24:LEU:HD12	1.86	0.57
25:BS:139:LYS:O	34:B5:1461:C:N4	2.38	0.57
34:B5:172:C:H2'	34:B5:173:A:C8	2.39	0.57
34:B5:702:G:N3	34:B5:703:G:H1'	2.19	0.57
36:AB:113:GLU:HG2	36:AB:176:ALA:HB2	1.86	0.57
36:AB:303:LYS:NZ	36:AB:359:ILE:O	2.34	0.57
38:A1:194:U:H2'	38:A1:195:U:C6	2.40	0.57
38:A1:500:C:H2'	38:A1:501:A:C8	2.40	0.57
38:A1:595:G:H2'	38:A1:596:C:H6	1.69	0.57
38:A1:710:A:H2'	38:A1:711:A:C8	2.39	0.57
38:A1:1010:G:N2	38:A1:1040:A:N1	2.44	0.57
38:A1:3027:A:H61	80:DC:781:THR:HG23	1.70	0.57
38:A1:3167:A:H2'	38:A1:3168:A:C8	2.38	0.57
38:A1:3337:G:H2'	38:A1:3338:C:C6	2.39	0.57
38:A1:3386:G:O5'	66:Ad:10:ARG:NH2	2.38	0.57
48:AL:43:ALA:HB2	48:AL:51:LEU:HD21	1.87	0.57
62:AZ:42:LEU:HD21	62:AZ:96:VAL:HG22	1.85	0.57
1:BA:130:ALA:O	1:BA:134:LYS:HG2	2.04	0.57
11:BO:84:ARG:NH2	34:B5:918:U:OP1	2.37	0.57
11:BO:128:LYS:H	16:Ba:22:ARG:NH2	2.02	0.57
12:BV:27:ASP:O	12:BV:29:HIS:ND1	2.38	0.57
19:BD:49:ILE:HG12	19:BD:87:TYR:HB2	1.86	0.57
25:BS:67:GLU:O	25:BS:71:GLN:NE2	2.37	0.57
26:BT:107:ALA:HA	26:BT:110:LYS:HE2	1.87	0.57
31:Bg:109:ASP:O	31:Bg:126:SER:OG	2.15	0.57
33:BM:64:SER:HB3	33:BM:90:LYS:HB3	1.87	0.57
34:B5:306:U:H2'	34:B5:307:G:C8	2.40	0.57
34:B5:329:G:H2'	34:B5:330:G:C8	2.40	0.57
34:B5:918:U:H2'	34:B5:919:A:C8	2.40	0.57
34:B5:1041:G:H2'	34:B5:1042:G:H8	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1142:A:H2'	34:B5:1143:A:H8	1.69	0.57
38:A1:1376:C:H2'	38:A1:1377:G:H8	1.70	0.57
38:A1:1757:A:H5"	57:AU:94:ARG:HH22	1.70	0.57
38:A1:1921:A:H2'	38:A1:1922:A:C8	2.39	0.57
38:A1:2407:C:H2'	38:A1:2408:U:H6	1.69	0.57
38:A1:2611:U:H2'	38:A1:2612:U:C6	2.40	0.57
38:A1:3253:G:H2'	38:A1:3254:G:C8	2.39	0.57
40:A4:32:C:H2'	40:A4:33:A:C8	2.40	0.57
42:AE:34:LEU:HD23	42:AE:63:LEU:HD21	1.87	0.57
58:AV:81:GLN:HG2	58:AV:83:LYS:HB2	1.85	0.57
67:Ae:52:GLN:OE1	67:Ae:52:GLN:N	2.28	0.57
81:EC:6855:A:O2'	81:EC:6873:A:OP1	2.22	0.57
14:BX:104:LEU:HD12	14:BX:122:PHE:HB3	1.87	0.56
16:Ba:18:VAL:HG13	16:Ba:19:LYS:N	2.20	0.56
31:Bg:124:SER:O	31:Bg:132:LYS:N	2.37	0.56
34:B5:802:G:H2'	34:B5:803:A:C4	2.39	0.56
34:B5:1074:G:H2'	34:B5:1075:C:C6	2.39	0.56
34:B5:1659:A:H2'	34:B5:1660:A:H8	1.70	0.56
37:AC:323:VAL:HA	37:AC:326:ARG:HB3	1.85	0.56
38:A1:15:C:H2'	38:A1:16:A:C8	2.40	0.56
38:A1:802:C:H2'	38:A1:803:C:C6	2.40	0.56
38:A1:1439:U:H2'	38:A1:1440:G:C8	2.39	0.56
38:A1:1848:G:OP1	74:Al:45:ARG:NH2	2.37	0.56
38:A1:2154:U:H2'	38:A1:2155:G:C8	2.40	0.56
38:A1:2709:C:H2'	38:A1:2710:C:C6	2.40	0.56
38:A1:3044:G:H2'	38:A1:3045:G:H8	1.68	0.56
39:A3:11:A:N6	41:AD:13:SER:O	2.38	0.56
42:AE:149:ILE:HG13	42:AE:155:LEU:HD23	1.87	0.56
48:AL:42:ARG:NH2	48:AL:51:LEU:O	2.38	0.56
52:AP:92:GLN:NE2	52:AP:96:GLN:OE1	2.37	0.56
62:AZ:36:HIS:O	62:AZ:38:PHE:N	2.38	0.56
80:DC:542:LEU:O	80:DC:546:GLU:N	2.36	0.56
4:BE:103:TYR:CD2	4:BE:189:LEU:HD11	2.39	0.56
13:BW:47:ILE:HG22	13:BW:48:GLY:H	1.69	0.56
20:BF:48:PHE:CE1	20:BF:67:PRO:HB3	2.40	0.56
23:BQ:22:VAL:HG13	23:BQ:63:ILE:HG21	1.87	0.56
26:BT:86:ARG:HD2	26:BT:92:LYS:HG2	1.86	0.56
31:Bg:67:ILE:HB	31:Bg:85:TRP:CG	2.41	0.56
34:B5:1741:U:H2'	34:B5:1742:U:C6	2.40	0.56
34:B5:1759:C:H2'	34:B5:1760:G:C8	2.40	0.56
35:AA:5:ILE:HD11	35:AA:209:HIS:CD2	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AA:128:ARG:NE	38:A1:2177:G:OP2	2.34	0.56
37:AC:229:ASN:OD1	37:AC:230:VAL:N	2.38	0.56
37:AC:326:ARG:NH2	38:A1:608:A:O2'	2.38	0.56
38:A1:35:A:H2'	38:A1:36:C:H6	1.70	0.56
38:A1:165:A:HO2'	38:A1:166:C:H6	1.54	0.56
38:A1:591:G:H22	38:A1:612:U:P	2.28	0.56
38:A1:825:U:H2'	38:A1:826:G:C8	2.40	0.56
38:A1:849:C:H2'	38:A1:850:U:H6	1.70	0.56
38:A1:1264:G:N1	38:A1:1266:G:N7	2.53	0.56
38:A1:1294:A:HO2'	38:A1:1295:G:H8	1.52	0.56
38:A1:1596:C:H2'	38:A1:1597:C:H6	1.71	0.56
38:A1:2451:G:O2'	38:A1:2452:G:O4'	2.22	0.56
38:A1:2651:G:O3'	38:A1:2760:C:N4	2.38	0.56
38:A1:3222:U:H2'	38:A1:3223:A:H8	1.71	0.56
38:A1:3230:G:H5'	49:AM:132:LYS:NZ	2.19	0.56
38:A1:3269:U:OP2	42:AE:46:ARG:NH1	2.38	0.56
40:A4:133:G:H2'	40:A4:134:G:H8	1.70	0.56
72:Aj:43:LYS:HA	72:Aj:43:LYS:HE3	1.85	0.56
80:DC:155:VAL:HB	80:DC:209:VAL:HG22	1.87	0.56
2:BB:29:TRP:CZ3	11:BO:13:VAL:HG11	2.41	0.56
2:BB:144:ARG:HD3	2:BB:208:GLN:HA	1.87	0.56
4:BE:128:LYS:HA	4:BE:156:VAL:HG12	1.87	0.56
5:BG:63:MET:HA	5:BG:98:ARG:HB3	1.86	0.56
5:BG:98:ARG:NE	5:BG:105:ASP:OD2	2.28	0.56
5:BG:188:ARG:HH22	34:B5:283:U:H3'	1.68	0.56
8:BJ:10:LYS:NZ	34:B5:471:A:OP1	2.32	0.56
10:BN:55:ARG:HG2	17:Bb:47:PHE:HB2	1.87	0.56
13:BW:22:LYS:HZ2	17:Bb:3:LEU:HD12	1.70	0.56
15:BY:57:VAL:HB	15:BY:60:PHE:HZ	1.70	0.56
27:BU:45:ALA:HB1	27:BU:50:LEU:HB3	1.88	0.56
34:B5:63:G:O2'	34:B5:170:U:OP1	2.23	0.56
34:B5:126:A:H62	34:B5:291:G:N2	2.03	0.56
34:B5:1002:G:N2	34:B5:1760:G:O3'	2.37	0.56
34:B5:1035:G:H2'	34:B5:1036:A:C8	2.41	0.56
34:B5:1036:A:H2'	34:B5:1037:C:C6	2.40	0.56
34:B5:1222:C:H2'	34:B5:1223:A:C8	2.40	0.56
36:AB:117:ARG:NH2	38:A1:3313:U:OP1	2.37	0.56
36:AB:243:HIC:HD2	36:AB:244:ARG:HB3	1.87	0.56
37:AC:332:LYS:NZ	38:A1:599:C:OP1	2.37	0.56
38:A1:33:G:OP1	50:AN:73:ARG:NH1	2.38	0.56
38:A1:368:G:O6	38:A1:369:A:N6	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:413:U:OP1	52:AP:34:GLN:NE2	2.32	0.56
38:A1:503:C:H2'	38:A1:504:A:C8	2.40	0.56
38:A1:503:C:O2	42:AE:23:LYS:NZ	2.34	0.56
38:A1:618:C:H2'	38:A1:619:A:C8	2.40	0.56
38:A1:673:U:H2'	38:A1:674:G:H8	1.70	0.56
38:A1:943:U:C6	63:Aa:12:ARG:HD2	2.40	0.56
38:A1:1364:C:OP1	43:AF:110:ARG:NH2	2.38	0.56
38:A1:1457:U:H5	38:A1:1877:U:H2'	1.71	0.56
38:A1:1486:G:H21	69:Ag:6:THR:HG22	1.70	0.56
38:A1:1606:U:O4	69:Ag:9:ARG:NH1	2.37	0.56
38:A1:1621:A:H2'	38:A1:1622:U:C6	2.40	0.56
38:A1:1656:A:N6	38:A1:1799:A:OP2	2.38	0.56
38:A1:1719:G:H2'	38:A1:1720:U:C6	2.40	0.56
38:A1:2465:G:C6	38:A1:2491:A:N6	2.74	0.56
38:A1:2549:G:OP1	38:A1:2549:G:N2	2.37	0.56
38:A1:2609:A:H2'	38:A1:2610:G:C8	2.41	0.56
38:A1:2683:U:H2'	38:A1:2684:C:H6	1.69	0.56
38:A1:2767:U:H2'	38:A1:2768:U:C6	2.40	0.56
38:A1:2786:G:P	77:Ao:38:GLN:HE22	2.29	0.56
38:A1:3160:U:H2'	38:A1:3161:C:C6	2.40	0.56
38:A1:3265:C:OP1	42:AE:70:LYS:NZ	2.32	0.56
39:A3:32:U:O2	39:A3:34:C:N4	2.38	0.56
45:AH:162:GLN:HE21	45:AH:180:TYR:HA	1.70	0.56
50:AN:88:GLY:HA3	77:Ao:50:PHE:CZ	2.40	0.56
53:AQ:106:PHE:HB2	53:AQ:111:ARG:HG3	1.87	0.56
56:AT:4:SER:O	56:AT:5:HIS:ND1	2.35	0.56
79:E:90:LEU:HD22	79:E:124:LEU:HD22	1.87	0.56
80:DC:410:LYS:NZ	80:DC:411:VAL:O	2.38	0.56
80:DC:576:LEU:HA	80:DC:586:ILE:O	2.05	0.56
80:DC:645:LEU:HB3	80:DC:685:ARG:HG3	1.88	0.56
81:EC:6859:U:N3	81:EC:6871:A:C6	2.73	0.56
2:BB:120:LEU:HD21	34:B5:931:C:O2	2.05	0.56
13:BW:75:ILE:HG12	13:BW:127:GLY:HA2	1.88	0.56
25:BS:4:VAL:HG22	28:BZ:82:HIS:CE1	2.41	0.56
34:B5:67:A:H61	34:B5:83:G:C2'	2.19	0.56
34:B5:751:G:H2'	34:B5:752:A:H8	1.70	0.56
34:B5:887:A:H2'	34:B5:888:U:H6	1.71	0.56
34:B5:1160:A:H2'	34:B5:1161:C:C6	2.40	0.56
34:B5:1181:PSU:H2'	34:B5:1182:U:O4'	2.05	0.56
36:AB:112:ASP:HA	36:AB:115:LYS:HZ1	1.70	0.56
38:A1:20:A:H2'	38:A1:21:G:C8	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:35:A:OP2	38:A1:48:A:N6	2.38	0.56
38:A1:160:G:H2'	38:A1:161:G:C8	2.40	0.56
38:A1:258:G:C2	38:A1:259:C:C2	2.93	0.56
38:A1:730:C:H2'	38:A1:731:U:C6	2.40	0.56
38:A1:821:U:H2'	38:A1:822:G:C8	2.40	0.56
38:A1:1228:C:N4	38:A1:1229:G:O6	2.39	0.56
38:A1:1491:A:OP1	72:Aj:14:LYS:NZ	2.22	0.56
38:A1:1818:U:HO2'	38:A1:1819:U:P	2.26	0.56
38:A1:2219:A:H2'	38:A1:2220:A:H8	1.70	0.56
42:AE:31:ARG:HB2	42:AE:34:LEU:HD13	1.87	0.56
47:AJ:130:VAL:O	47:AJ:131:MET:HE2	2.04	0.56
72:Aj:25:ARG:NH2	74:Al:51:ILE:HD12	2.21	0.56
81:EC:6876:A:H5"	81:EC:6878:G:H21	1.70	0.56
5:BG:66:GLY:HA2	34:B5:1681:A:H1'	1.88	0.56
5:BG:189:HIS:O	5:BG:193:LEU:N	2.30	0.56
9:BL:127:GLN:HE22	34:B5:304:U:H4'	1.69	0.56
30:Bd:19:ARG:NH1	34:B5:1597:A:OP1	2.38	0.56
34:B5:620:A:O2'	34:B5:621:A:O4'	2.19	0.56
34:B5:1084:A:H2'	34:B5:1085:G:C8	2.40	0.56
34:B5:1202:A:N6	34:B5:1457:C:OP1	2.38	0.56
38:A1:204:A:H2'	38:A1:205:C:C6	2.41	0.56
38:A1:838:G:N7	78:Ap:4:ARG:NH2	2.54	0.56
38:A1:1339:C:H2'	38:A1:1340:G:C8	2.41	0.56
38:A1:1638:A:H5'	62:AZ:15:ARG:NH2	2.19	0.56
38:A1:2465:G:N2	79:E:33:GLU:HG3	2.21	0.56
38:A1:2566:C:H2'	38:A1:2567:C:C6	2.40	0.56
38:A1:2656:A:OP2	77:Ao:97:LYS:NZ	2.28	0.56
38:A1:2703:A:C5	41:AD:150:LEU:HD11	2.40	0.56
38:A1:2895:G:H2'	38:A1:2896:A:H8	1.70	0.56
38:A1:3039:C:H2'	38:A1:3040:A:H8	1.70	0.56
38:A1:3217:C:O2	52:AP:182:ILE:HG13	2.05	0.56
44:AG:67:ILE:HB	44:AG:237:ILE:HD13	1.86	0.56
51:AO:151[A]:ASP:OD1	51:AO:152[A]:VAL:N	2.38	0.56
65:Ac:66:LYS:NZ	65:Ac:101:LEU:O	2.36	0.56
80:DC:829:LYS:NZ	80:DC:830:GLU:HG3	2.20	0.56
3:BC:229:LEU:HD12	12:BV:1:MET:HE1	1.87	0.56
11:BO:62:LEU:HD21	81:EC:6840:A:H1'	1.87	0.56
12:BV:33:GLN:NE2	12:BV:53:TYR:O	2.39	0.56
25:BS:132:ARG:CZ	34:B5:1544:U:H4'	2.35	0.56
25:BS:139:LYS:N	34:B5:1458:G:OP1	2.36	0.56
35:AA:179:LEU:HD22	38:A1:1793:C:C4	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:15:C:H2'	38:A1:16:A:H8	1.70	0.56
38:A1:360:G:N2	38:A1:815:G:O2'	2.39	0.56
38:A1:393:U:H2'	38:A1:394:G:O4'	2.06	0.56
38:A1:428:A:H2'	38:A1:429:U:H6	1.70	0.56
38:A1:727:G:OP2	38:A1:742:G:N2	2.38	0.56
38:A1:1564:U:N3	38:A1:1565:G:N7	2.53	0.56
38:A1:1619:A:N1	38:A1:1825:G:N2	2.50	0.56
38:A1:1822:C:H2'	38:A1:1823:A:H8	1.70	0.56
38:A1:2316:G:H2'	38:A1:2317:A:C8	2.40	0.56
38:A1:2767:U:O2'	77:Ao:30:ALA:O	2.21	0.56
39:A3:97:A:O4'	43:AF:225:GLN:NE2	2.39	0.56
40:A4:142:C:H2'	40:A4:143:U:C6	2.40	0.56
43:AF:95:ILE:HD11	43:AF:99:PRO:HB2	1.88	0.56
44:AG:78:PHE:O	44:AG:79:GLN:HG3	2.05	0.56
55:AS:79:VAL:HG13	55:AS:90:MET:HB3	1.87	0.56
69:Ag:79:SER:HB2	69:Ag:80:ARG:HH11	1.71	0.56
80:DC:212:GLY:HA2	80:DC:218:TRP:CZ3	2.41	0.56
2:BB:136:ARG:NH2	34:B5:884:A:H4'	2.16	0.56
2:BB:176:VAL:O	2:BB:177:GLN:HG3	2.06	0.56
6:BH:12:ALA:N	54:AR:187:GLU:OE2	2.39	0.56
7:BI:25:ARG:HG2	7:BI:27:PHE:CE2	2.41	0.56
9:BL:93:TYR:HB2	9:BL:100:TYR:CE1	2.41	0.56
34:B5:23:G:H1	34:B5:602:U:H3	1.54	0.56
34:B5:1735:U:OP1	58:AV:32:ARG:NH1	2.38	0.56
36:AB:216:ASP:OD2	36:AB:339:ARG:NH2	2.34	0.56
37:AC:304:GLN:NE2	37:AC:306:THR:O	2.38	0.56
38:A1:196:G:N1	38:A1:199:A:OP2	2.38	0.56
38:A1:538:G:O6	38:A1:553:U:O4	2.23	0.56
38:A1:668:G:O2'	53:AQ:164:ARG:NH1	2.38	0.56
38:A1:772:U:H2'	38:A1:773:G:O4'	2.05	0.56
38:A1:826:G:OP1	38:A1:1590:G:O2'	2.20	0.56
38:A1:1093:A:H1'	38:A1:1094:U:H4'	1.88	0.56
38:A1:1712:G:N2	38:A1:1733:G:C6	2.74	0.56
38:A1:2181:C:C2	38:A1:2182:A:C8	2.94	0.56
38:A1:2389:C:H2'	38:A1:2390:A:C8	2.41	0.56
38:A1:2443:A:H2'	38:A1:2444:C:O4'	2.06	0.56
38:A1:2696:A:N6	38:A1:2758:A:N7	2.54	0.56
38:A1:2901:G:O3'	45:AH:170:LYS:NZ	2.31	0.56
38:A1:3189:G:O6	38:A1:3203:U:O4	2.24	0.56
38:A1:3190:C:H2'	38:A1:3191:G:C8	2.40	0.56
38:A1:3269:U:P	42:AE:77:ARG:HH22	2.29	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3343:G:H2'	38:A1:3361:G:N2	2.20	0.56
49:AM:108:ARG:HH21	51:AO:197[A]:LEU:HA	1.70	0.56
65:Ac:55:GLU:OE1	65:Ac:55:GLU:N	2.39	0.56
73:Ak:12:LEU:HD23	73:Ak:16:ARG:HH21	1.70	0.56
80:DC:511:LEU:HB2	80:DC:545:LEU:HD21	1.88	0.56
81:EC:6899:C:C2	81:EC:6900:A:C8	2.94	0.56
8:BJ:17:ARG:NH1	34:B5:3:U:O2	2.31	0.56
10:BN:92:ILE:HG23	10:BN:141:TYR:CE2	2.40	0.56
11:BO:83:ILE:O	11:BO:118:VAL:N	2.31	0.56
34:B5:183:U:H2'	34:B5:184:C:C6	2.41	0.56
34:B5:887:A:H2'	34:B5:888:U:C6	2.41	0.56
34:B5:1164:G:H2'	34:B5:1165:G:C8	2.41	0.56
34:B5:1591:C:H2'	34:B5:1592:A:H8	1.71	0.56
36:AB:66:LYS:HB2	58:AV:88:ARG:HH22	1.70	0.56
38:A1:292:U:H2'	38:A1:293:C:C6	2.41	0.56
38:A1:785:G:N2	53:AQ:90:ASP:OD1	2.38	0.56
38:A1:1090:G:H2'	38:A1:1091:A:C8	2.40	0.56
38:A1:1090:G:H2'	38:A1:1091:A:H8	1.71	0.56
38:A1:1710:C:C2	38:A1:1711:C:C5	2.94	0.56
38:A1:1827:C:H2'	38:A1:1828:A:C8	2.41	0.56
38:A1:2416:PSU:H2'	38:A1:2417:U:C6	2.41	0.56
38:A1:2782:U:H2'	38:A1:2783:U:H6	1.70	0.56
38:A1:2830:G:H2'	38:A1:2831:G:C8	2.41	0.56
38:A1:2932:U:H5'	58:AV:41:GLY:HA2	1.88	0.56
43:AF:131:GLU:HG3	43:AF:230:GLY:HA2	1.87	0.56
45:AH:37:ASN:OD1	45:AH:39:LYS:N	2.38	0.56
47:AJ:81:GLU:OE1	47:AJ:89:TYR:OH	2.23	0.56
50:AN:64:VAL:HG21	50:AN:102:ALA:HB1	1.87	0.56
50:AN:115:VAL:HG12	50:AN:160:GLU:OE1	2.06	0.56
57:AU:43:VAL:HG12	57:AU:44:GLU:OE1	2.06	0.56
57:AU:92:TRP:HD1	57:AU:108:TYR:HE1	1.53	0.56
80:DC:45:ILE:HD11	80:DC:78:TYR:HB3	1.88	0.56
2:BB:48:VAL:HG13	2:BB:49:ASN:H	1.71	0.56
2:BB:87:ARG:NH1	2:BB:99:ASN:HB3	2.21	0.56
3:BC:175:GLY:N	3:BC:195:ASP:OD2	2.39	0.56
9:BL:54:ILE:HG23	9:BL:55:ASP:H	1.70	0.56
11:BO:13:VAL:H	11:BO:77:THR:HG1	1.53	0.56
15:BY:63:GLN:NE2	15:BY:66:GLY:O	2.38	0.56
15:BY:131:ARG:HH22	34:B5:153:G:H3'	1.69	0.56
18:Be:14:VAL:HA	18:Be:17:GLN:HE21	1.71	0.56
20:BF:81:ARG:HH12	34:B5:1615:C:P	2.28	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:221:MET:HB3	31:Bg:233:THR:HG23	1.87	0.56
34:B5:1409:G:N2	34:B5:1412:G:OP2	2.33	0.56
34:B5:1656:U:O2'	38:A1:2292:U:O2'	2.24	0.56
36:AB:45:SER:HB3	36:AB:181:ILE:HG12	1.88	0.56
36:AB:115:LYS:HA	36:AB:118:PHE:HD2	1.70	0.56
38:A1:107:A:H2'	38:A1:108:A:O4'	2.06	0.56
38:A1:184:U:H2'	38:A1:185:C:H6	1.70	0.56
38:A1:284:A:O5'	77:Ao:41:ARG:NH1	2.39	0.56
38:A1:321:C:OP1	50:AN:159:ARG:NH2	2.39	0.56
38:A1:595:G:H2'	38:A1:596:C:C6	2.41	0.56
38:A1:707:U:HO2'	38:A1:754:G:HO2'	1.52	0.56
38:A1:1108:U:H2'	38:A1:1109:U:C6	2.40	0.56
38:A1:1288:U:H2'	38:A1:1289:G:H8	1.71	0.56
38:A1:1334:U:OP1	43:AF:110:ARG:NH1	2.39	0.56
38:A1:1340:G:H2'	38:A1:1341:U:H6	1.70	0.56
38:A1:1659:U:H2'	38:A1:1660:C:C6	2.41	0.56
38:A1:2432:A:C6	38:A1:2598:G:C6	2.93	0.56
38:A1:2738:A:H5"	64:Ab:38:LYS:HE3	1.86	0.56
38:A1:2883:U:H2'	38:A1:2884:C:H6	1.71	0.56
44:AG:136:LEU:HA	44:AG:139:VAL:HG12	1.87	0.56
50:AN:65:ARG:HB3	50:AN:129:TYR:CE1	2.41	0.56
52:AP:13:LYS:HZ1	52:AP:152:GLU:HB2	1.71	0.56
59:AW:13:ILE:HD11	59:AW:18:GLY:HA3	1.88	0.56
62:AZ:51:LEU:HB2	62:AZ:65:ARG:HD2	1.88	0.56
79:E:14:LYS:HA	79:E:17:LEU:HG	1.88	0.56
80:DC:179:ALA:O	80:DC:183:GLU:HG2	2.06	0.56
80:DC:674:GLY:H	80:DC:679:GLU:N	2.04	0.56
4:BE:176:ASP:H	4:BE:179:LYS:NZ	2.03	0.56
11:BO:52:ARG:HD3	34:B5:905:A:H5"	1.87	0.56
16:Ba:43:ASN:OD1	16:Ba:66:LYS:HG2	2.05	0.56
17:Bb:20:LYS:NZ	34:B5:959:U:OP2	2.39	0.56
19:BD:62:ASN:OD1	19:BD:64:ARG:NH1	2.39	0.56
20:BF:36:ALA:HB3	23:BQ:53:LEU:HD13	1.87	0.56
20:BF:114:ILE:HG13	20:BF:115:LYS:N	2.20	0.56
20:BF:216:GLU:OE2	20:BF:219:ARG:NH1	2.35	0.56
26:BT:111:ILE:HG13	26:BT:113:ILE:HG12	1.88	0.56
34:B5:30:G:C6	34:B5:597:G:C6	2.94	0.56
34:B5:1010:C:H3'	34:B5:1011:G:H8	1.71	0.56
34:B5:1740:A:H2'	34:B5:1741:U:C6	2.41	0.56
36:AB:267:ALA:O	38:A1:2989:U:O2'	2.22	0.56
36:AB:277:SER:HB2	36:AB:280:HIS:NE2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:946:U:P	67:Ae:34:LYS:HZ3	2.28	0.56
38:A1:1120:A:H2'	38:A1:1121:U:C6	2.41	0.56
38:A1:1144:U:OP1	67:Ae:44:ARG:NH2	2.28	0.56
38:A1:1222:G:N2	38:A1:1286:A:C5	2.73	0.56
38:A1:1255:C:N4	38:A1:1257:C:H41	2.04	0.56
38:A1:1376:C:HO2'	38:A1:1408:G:HO2'	1.51	0.56
38:A1:1506:A:OP1	52:AP:127:ARG:NH2	2.39	0.56
38:A1:1613:A:P	73:Ak:46:ARG:HH12	2.29	0.56
38:A1:2185:G:O2'	38:A1:2314:PSU:OP2	2.24	0.56
38:A1:2730:G:H2'	38:A1:2731:U:C6	2.41	0.56
38:A1:2745:G:H2'	38:A1:2746:A:H3'	1.88	0.56
38:A1:3297:U:H2'	38:A1:3298:C:C6	2.41	0.56
39:A3:37:G:N1	39:A3:41:G:C2	2.74	0.56
39:A3:110:G:H2'	39:A3:111:U:C6	2.41	0.56
41:AD:205:SER:HB2	41:AD:233:ALA:HB1	1.87	0.56
42:AE:67:GLY:HA3	42:AE:72:ASN:HD21	1.71	0.56
51:AO:39[A]:GLU:OE1	51:AO:39[A]:GLU:N	2.35	0.56
73:Ak:65:LEU:HD12	73:Ak:68:SER:HB2	1.88	0.56
79:E:67:ILE:HD12	79:E:77:ALA:HB2	1.87	0.56
80:DC:262:THR:HA	80:DC:268:PRO:HA	1.88	0.56
80:DC:564:ARG:HG3	80:DC:682:ARG:NE	2.21	0.56
81:EC:6794:C:O2	81:EC:6891:G:N2	2.38	0.56
3:BC:156:THR:HG21	3:BC:224:PHE:CD2	2.42	0.55
6:BH:99:LEU:HD23	6:BH:112:ARG:HB2	1.88	0.55
8:BJ:6:ARG:NH1	34:B5:38:C:O3'	2.39	0.55
8:BJ:14:THR:HA	8:BJ:43:TYR:CE2	2.41	0.55
11:BO:121:VAL:O	34:B5:886:U:O2'	2.24	0.55
15:BY:8:ARG:HB3	34:B5:780:A:N3	2.20	0.55
20:BF:42:LEU:N	20:BF:46:TRP:O	2.37	0.55
23:BQ:31:VAL:N	23:BQ:34:SER:O	2.21	0.55
26:BT:7:ARG:NE	34:B5:1365:C:O2'	2.27	0.55
32:Bf:96:LYS:HZ3	34:B5:1251:U:H2'	1.69	0.55
34:B5:197:A:O3'	34:B5:198:A:H8	1.89	0.55
34:B5:375:U:H2'	34:B5:376:C:H6	1.70	0.55
34:B5:736:C:H2'	34:B5:737:A:C8	2.42	0.55
34:B5:1245:G:N3	34:B5:1248:C:N4	2.54	0.55
38:A1:796:U:H2'	38:A1:797:U:H6	1.70	0.55
38:A1:877:C:O2'	38:A1:880:G:O2'	2.18	0.55
38:A1:966:PSU:P	63:Aa:44:ASN:HD21	2.29	0.55
38:A1:1234:G:O3'	38:A1:1236:G:N2	2.40	0.55
38:A1:1637:A:O2'	38:A1:1638:A:O4'	2.15	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1652:G:H2'	38:A1:1653:G:C8	2.42	0.55
38:A1:1709:C:H2'	38:A1:1710:C:C6	2.41	0.55
38:A1:1807:G:O2'	38:A1:2559:U:O4	2.23	0.55
38:A1:2109:U:H2'	38:A1:2110:G:C8	2.41	0.55
38:A1:2458:A:H62	38:A1:2477:G:H3'	1.69	0.55
38:A1:2761:G:H22	38:A1:2798:C:H4'	1.71	0.55
38:A1:2767:U:H2'	38:A1:2768:U:H6	1.71	0.55
38:A1:2801:A:O2'	38:A1:2802:A:H2'	2.06	0.55
38:A1:3299:A:OP1	52:AP:72:GLN:NE2	2.39	0.55
63:Aa:125:VAL:HB	63:Aa:145:VAL:HG12	1.87	0.55
65:Ac:22:LYS:HG2	65:Ac:93:LEU:HB2	1.88	0.55
70:Ah:73:LYS:O	70:Ah:76:GLN:NE2	2.39	0.55
3:BC:87:GLN:HB3	3:BC:96:THR:HG23	1.89	0.55
7:BI:26:LYS:HA	7:BI:29:LEU:HG	1.87	0.55
7:BI:75:LYS:NZ	34:B5:259:U:OP1	2.39	0.55
13:BW:81:VAL:HG21	13:BW:125:ILE:HG13	1.88	0.55
14:BX:69:ARG:NH1	14:BX:116:ASP:OD2	2.40	0.55
21:BK:9:ASN:ND2	21:BK:79:TYR:OH	2.39	0.55
25:BS:38:VAL:HG23	25:BS:42:TYR:HD2	1.71	0.55
30:Bd:14:TYR:OH	34:B5:1555:A:N6	2.39	0.55
34:B5:15:U:O2'	34:B5:620:A:N6	2.39	0.55
34:B5:76:A:O2'	34:B5:78:A:OP1	2.21	0.55
34:B5:87:C:O2'	34:B5:169:A:N1	2.30	0.55
34:B5:696:C:H3'	34:B5:697:C:H3'	1.87	0.55
34:B5:764:U:O2	34:B5:772:G:O6	2.24	0.55
34:B5:878:G:H2'	34:B5:879:G:C8	2.41	0.55
34:B5:1669:U:H2'	34:B5:1670:G:O4'	2.06	0.55
35:AA:205:ASN:ND2	38:A1:916:G:O5'	2.38	0.55
38:A1:155:G:N2	38:A1:265:A:OP2	2.39	0.55
38:A1:434:U:H2'	38:A1:435:C:C6	2.42	0.55
38:A1:632:G:H2'	38:A1:633:C:C6	2.41	0.55
38:A1:875:G:O2'	38:A1:1891:A:OP1	2.21	0.55
38:A1:1210:U:H2'	38:A1:1211:U:C6	2.42	0.55
38:A1:2549:G:O2'	44:AG:33:ASN:ND2	2.37	0.55
38:A1:2594:C:H2'	38:A1:2595:A:O4'	2.07	0.55
38:A1:2597:U:H2'	38:A1:2598:G:C8	2.38	0.55
38:A1:2964:G:N2	38:A1:2967:A:OP2	2.38	0.55
38:A1:3141:A:H3'	38:A1:3142:A:H4'	1.88	0.55
40:A4:26:U:H2'	40:A4:27:U:H6	1.71	0.55
40:A4:45:C:OP1	74:Al:12:LYS:NZ	2.34	0.55
46:AI:9:TYR:HE2	46:AI:97:LEU:HB3	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:AO:84[A]:LEU:HA	51:AO:87[A]:MET:HB3	1.88	0.55
61:AY:77:LYS:HD2	61:AY:98:ASN:HD21	1.70	0.55
66:Ad:81:GLU:OE1	66:Ad:81:GLU:N	2.39	0.55
1:BA:189:VAL:HG22	1:BA:190:ASP:H	1.70	0.55
1:BA:198:MET:HE1	24:BR:91:LEU:H	1.71	0.55
8:BJ:139:GLN:HE21	8:BJ:140:ILE:H	1.52	0.55
18:Be:33:ARG:NH1	34:B5:475:A:OP2	2.39	0.55
24:BR:103:ASP:O	24:BR:106:THR:N	2.40	0.55
34:B5:318:U:O2	34:B5:346:G:O6	2.24	0.55
34:B5:1170:G:C2	34:B5:1171:A:C8	2.93	0.55
34:B5:1557:U:O2'	34:B5:1558:U:H2'	2.07	0.55
34:B5:1787:C:H2'	34:B5:1788:G:H8	1.71	0.55
37:AC:108:LYS:NZ	38:A1:664:U:O5'	2.32	0.55
37:AC:282:SER:H	53:AQ:123:THR:HG21	1.71	0.55
38:A1:1832:C:H2'	38:A1:1833:G:C8	2.41	0.55
38:A1:2111:G:O3'	59:AW:44:LYS:NZ	2.38	0.55
38:A1:2720:G:H2'	38:A1:2721:A:H8	1.72	0.55
39:A3:70:U:H2'	39:A3:71:G:C8	2.42	0.55
40:A4:119:C:H2'	40:A4:120:C:C6	2.41	0.55
40:A4:127:U:H2'	40:A4:128:U:C6	2.41	0.55
79:E:73:ASP:HA	79:E:76:ARG:HG2	1.88	0.55
4:BE:211:LYS:HD2	4:BE:215:ASP:HA	1.89	0.55
13:BW:6:VAL:HG23	13:BW:29:PRO:HD2	1.89	0.55
15:BY:131:ARG:NH1	34:B5:154:G:OP2	2.28	0.55
31:Bg:19:TRP:N	31:Bg:38:ARG:HB2	2.22	0.55
34:B5:182:A:H2'	34:B5:183:U:H6	1.72	0.55
34:B5:264:G:H5"	34:B5:265:A:H5'	1.87	0.55
34:B5:1280:4AC:H2'	34:B5:1281:G:H8	1.72	0.55
35:AA:198:LYS:NZ	38:A1:2183:A:OP2	2.30	0.55
37:AC:351:PRO:HB3	43:AF:70:LYS:HD3	1.89	0.55
38:A1:153:U:OP2	70:Ah:103:LYS:NZ	2.39	0.55
38:A1:677:A:N6	38:A1:786:A:O4'	2.40	0.55
38:A1:727:G:H3'	38:A1:728:G:H8	1.71	0.55
38:A1:1280:C:H2'	38:A1:1281:G:H8	1.71	0.55
38:A1:1361:U:O2	43:AF:159:GLN:NE2	2.39	0.55
38:A1:1801:U:H2'	38:A1:1802:C:C6	2.41	0.55
38:A1:2676:A:H5'	38:A1:2677:G:C8	2.41	0.55
49:AM:13:ARG:HE	49:AM:67:PRO:HD3	1.72	0.55
51:AO:77[A]:SER:HB3	51:AO:106[A]:GLU:HB2	1.88	0.55
66:Ad:55:LEU:HD22	66:Ad:93:VAL:HG12	1.89	0.55
72:Aj:15:SER:O	72:Aj:16:HIS:ND1	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:155:VAL:HG23	80:DC:202:VAL:HG11	1.87	0.55
80:DC:229:TYR:HE2	80:DC:276:PHE:HB3	1.72	0.55
80:DC:317:LYS:HZ2	80:DC:320:LEU:HD22	1.71	0.55
80:DC:629:ASP:HA	80:DC:632:LYS:HB2	1.88	0.55
3:BC:97:ARG:HB3	3:BC:117:THR:HG22	1.88	0.55
3:BC:120:GLU:OE1	3:BC:122:ALA:N	2.36	0.55
7:BI:23:LYS:HZ1	34:B5:400:A:H5"	1.71	0.55
11:BO:29:HIS:CD2	11:BO:41:ARG:HB3	2.42	0.55
18:Be:17:GLN:OE1	80:DC:609:ARG:NH2	2.39	0.55
20:BF:51:VAL:HG11	20:BF:130:ILE:HG22	1.87	0.55
21:BK:77:ARG:HD3	21:BK:84:GLU:HA	1.89	0.55
32:Bf:81:LYS:HB2	80:DC:651:LYS:HD2	1.88	0.55
34:B5:1037:C:H2'	34:B5:1038:U:H6	1.70	0.55
34:B5:1461:C:H2'	34:B5:1462:G:C8	2.41	0.55
34:B5:1499:G:O6	34:B5:1508:U:O4	2.24	0.55
38:A1:129:U:H2'	38:A1:130:A:H8	1.68	0.55
38:A1:507:U:H2'	38:A1:508:U:C6	2.42	0.55
38:A1:649:A:H2'	38:A1:650:C:C6	2.41	0.55
38:A1:937:G:OP2	38:A1:938:C:N4	2.32	0.55
38:A1:1088:U:C2	38:A1:1089:G:C8	2.94	0.55
38:A1:1516:C:H2'	38:A1:1517:G:C8	2.42	0.55
38:A1:1677:G:H1	38:A1:1691:U:H3	1.51	0.55
38:A1:2273:G:O2'	38:A1:2311:G:O6	2.23	0.55
38:A1:2497:U:HO2'	38:A1:2498:U:H6	1.54	0.55
38:A1:3202:G:H2'	38:A1:3203:U:C6	2.42	0.55
39:A3:4:U:H2'	39:A3:5:G:C8	2.42	0.55
41:AD:25:GLU:HG3	41:AD:27:LYS:HG2	1.87	0.55
44:AG:150:LEU:HD12	44:AG:151:VAL:H	1.72	0.55
51:AO:189[A]:ASP:OD2	51:AO:190[A]:VAL:N	2.39	0.55
68:Af:45:LEU:O	68:Af:47:LYS:NZ	2.39	0.55
80:DC:408:GLY:H	80:DC:431:ILE:HG23	1.70	0.55
80:DC:798:PHE:CZ	85:DC:903:SO1:H72	2.40	0.55
81:EC:6858:A:H4'	81:EC:6871:A:H61	1.71	0.55
81:EC:6884:G:H2'	81:EC:6885:G:H8	1.72	0.55
1:BA:186:GLY:HA2	12:BV:44:ARG:CZ	2.37	0.55
4:BE:8:HIS:HB2	34:B5:95:G:H5'	1.87	0.55
5:BG:137:ARG:HG3	5:BG:177:ARG:HD2	1.88	0.55
10:BN:23:PRO:HG2	10:BN:61:THR:HG21	1.89	0.55
19:BD:90:ARG:HD3	19:BD:94:ARG:HH12	1.70	0.55
31:Bg:300:THR:HG22	31:Bg:314:GLN:HG2	1.88	0.55
32:Bf:123:ASN:HB2	32:Bf:126:CYS:SG	2.47	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:499:U:O2'	34:B5:501:U:O4	2.22	0.55
34:B5:1368:G:N2	34:B5:1372:U:O2	2.38	0.55
35:AA:9:ARG:HH12	38:A1:911:C:H3'	1.71	0.55
35:AA:125:ALA:HB1	38:A1:2177:G:C5	2.42	0.55
38:A1:1062:A:O2'	38:A1:1098:A:OP1	2.25	0.55
38:A1:1458:U:H1'	66:Ad:60:TRP:HH2	1.71	0.55
38:A1:1565:G:N2	38:A1:1573:G:N7	2.54	0.55
38:A1:1872:C:H4'	54:AR:58:HIS:HB2	1.89	0.55
38:A1:2489:C:H2'	38:A1:2490:C:H4'	1.87	0.55
38:A1:2633:U:H2'	38:A1:2634:UR3:O4'	2.07	0.55
38:A1:2791:G:H2'	38:A1:2792:A:H8	1.72	0.55
38:A1:3101:G:H2'	38:A1:3102:G:C8	2.41	0.55
39:A3:54:U:H4'	39:A3:55:A:H5'	1.87	0.55
40:A4:88:A:HO2'	40:A4:89:A:P	2.30	0.55
42:AE:137:ASP:HA	42:AE:140:VAL:HG22	1.87	0.55
43:AF:155:LYS:HB2	43:AF:203:TRP:HE3	1.72	0.55
53:AQ:124:LEU:HD13	53:AQ:127:LEU:HD13	1.89	0.55
1:BA:84:ARG:NH1	1:BA:200:ASP:O	2.40	0.55
2:BB:116:LYS:NZ	34:B5:931:C:O3'	2.40	0.55
8:BJ:96:VAL:HA	8:BJ:99:LEU:HD23	1.89	0.55
13:BW:102:VAL:HA	13:BW:128:PHE:HA	1.89	0.55
34:B5:635:A:H2'	34:B5:636:A:C8	2.41	0.55
34:B5:956:C:H2'	34:B5:957:G:H8	1.71	0.55
34:B5:1785:U:H2'	34:B5:1786:G:H8	1.72	0.55
36:AB:14:LEU:HD13	36:AB:262:TRP:CH2	2.42	0.55
37:AC:216:VAL:HG23	37:AC:227:THR:HG21	1.89	0.55
38:A1:31:C:H3'	38:A1:32:U:C6	2.41	0.55
38:A1:432:G:H2'	38:A1:433:A:H8	1.71	0.55
38:A1:713:U:H2'	38:A1:714:G:O4'	2.06	0.55
38:A1:809:G:H2'	38:A1:810:A:H8	1.71	0.55
38:A1:1612:A:H5"	73:Ak:51:LEU:HD23	1.88	0.55
38:A1:1616:U:H2'	38:A1:1617:G:C8	2.42	0.55
38:A1:2095:G:H2'	38:A1:2096:A:H8	1.72	0.55
39:A3:23:A:H2'	39:A3:24:A:H8	1.72	0.55
40:A4:4:C:H2'	40:A4:5:U:H6	1.71	0.55
55:AS:164:SER:OG	55:AS:165:TYR:N	2.39	0.55
70:Ah:118:ILE:HG22	70:Ah:120:ALA:H	1.71	0.55
79:E:76:ARG:HB2	79:E:145:TYR:HE1	1.71	0.55
79:E:117:ILE:HD13	79:E:137:PRO:HG3	1.88	0.55
14:BX:75:GLN:NE2	14:BX:76:LEU:O	2.40	0.55
20:BF:182:ALA:HB3	20:BF:193:THR:HG21	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:BK:3:MET:HG3	21:BK:8:ARG:HH21	1.72	0.55
26:BT:11:ALA:HB1	34:B5:1480:G:H4'	1.89	0.55
34:B5:513:U:O4	34:B5:541:A:N7	2.40	0.55
34:B5:1483:A:N3	34:B5:1607:G:O2'	2.35	0.55
34:B5:1654:G:N2	34:B5:1745:G:H2'	2.22	0.55
38:A1:819:U:H2'	38:A1:820:A:H8	1.71	0.55
38:A1:1268:G:H2'	38:A1:1270:A:OP1	2.06	0.55
38:A1:1360:C:H2'	38:A1:1361:U:H6	1.71	0.55
38:A1:1549:U:H2'	38:A1:1550:C:C6	2.41	0.55
38:A1:1619:A:N6	38:A1:1825:G:H1	2.03	0.55
38:A1:2315:G:C2	38:A1:2316:G:C5	2.95	0.55
38:A1:2315:G:N1	38:A1:2316:G:C6	2.74	0.55
38:A1:2669:G:H2'	38:A1:2670:G:C8	2.42	0.55
38:A1:2974:U:H2'	38:A1:2975:PSU:H6	1.71	0.55
38:A1:3160:U:O2	38:A1:3290:G:N2	2.24	0.55
50:AN:37:HIS:CE1	50:AN:63:ARG:HB2	2.42	0.55
58:AV:82:ALA:HB3	58:AV:98:ASN:ND2	2.21	0.55
58:AV:85:TRP:CZ2	58:AV:93:LEU:HD11	2.42	0.55
63:Aa:111:LYS:HB2	63:Aa:129:PHE:HB2	1.88	0.55
70:Ah:59:ASN:HB3	70:Ah:63:ARG:HH22	1.71	0.55
80:DC:13:MET:HE1	80:DC:449:PRO:HG2	1.89	0.55
80:DC:785:ARG:NH1	80:DC:792:ALA:O	2.40	0.55
1:BA:103:THR:O	1:BA:106:SER:OG	2.20	0.55
1:BA:109:ASN:OD1	1:BA:112:THR:OG1	2.22	0.55
4:BE:49:ARG:NH1	34:B5:447:U:OP1	2.40	0.55
5:BG:57:ASP:HA	5:BG:106:LEU:HA	1.89	0.55
6:BH:67:LEU:HB3	6:BH:71:HIS:HE1	1.72	0.55
7:BI:37:LYS:C	7:BI:59:ARG:HA	2.32	0.55
9:BL:34:TRP:CG	34:B5:249:U:H5	2.25	0.55
15:BY:64:PHE:CE1	34:B5:531:C:H4'	2.42	0.55
25:BS:104:ASN:OD1	25:BS:107:SER:OG	2.25	0.55
26:BT:7:ARG:NH1	26:BT:67:MET:SD	2.80	0.55
36:AB:232:ARG:HG3	36:AB:270:ARG:HB2	1.89	0.55
36:AB:244:ARG:NH1	38:A1:2948:C:OP1	2.40	0.55
38:A1:184:U:O2	38:A1:232:G:N2	2.26	0.55
38:A1:190:U:H2'	61:AY:60:ARG:HH12	1.72	0.55
38:A1:351:A:H2	74:Al:40:LYS:HG2	1.71	0.55
38:A1:377:A:N6	38:A1:400:G:O2'	2.40	0.55
38:A1:537:A:H3'	38:A1:538:G:H8	1.72	0.55
38:A1:849:C:H2'	38:A1:850:U:C6	2.41	0.55
38:A1:1203:A:N3	38:A1:2855:U:O2'	2.34	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1436:U:H5”	38:A1:1437:C:H5”	1.88	0.55
38:A1:1470:U:H2’	38:A1:1471:U:H6	1.72	0.55
38:A1:2258:PSU:C4	38:A1:2259:A:C8	2.95	0.55
38:A1:2968:G:H2’	38:A1:2969:A:H8	1.70	0.55
40:A4:25:G:H2’	40:A4:26:U:H6	1.71	0.55
40:A4:43:A:H2’	40:A4:44:A:C8	2.41	0.55
47:AJ:157:GLU:OE1	47:AJ:157:GLU:N	2.37	0.55
48:AL:64:LYS:HD2	63:Aa:69:TRP:HB2	1.89	0.55
51:AO:38[A]:ALA:HB3	51:AO:106[A]:GLU:HA	1.88	0.55
53:AQ:55:SER:OG	53:AQ:56:LYS:N	2.40	0.55
56:AT:8:ARG:HD2	56:AT:15:PHE:HE2	1.71	0.55
62:AZ:29:HIS:N	62:AZ:77:TYR:OH	2.38	0.55
81:EC:6891:G:H2’	81:EC:6892:U:O4’	2.06	0.55
2:BB:149:GLN:HE21	2:BB:151:LYS:HB3	1.70	0.55
3:BC:89:GLN:HG2	34:B5:10:G:H1’	1.89	0.55
4:BE:108:ARG:NH1	34:B5:789:A:OP1	2.40	0.55
11:BO:52:ARG:NE	11:BO:52:ARG:O	2.39	0.55
15:BY:113:ASN:HA	15:BY:116:LYS:HD3	1.89	0.55
33:BM:33:ARG:HH22	33:BM:101:ALA:HA	1.71	0.55
33:BM:36:LEU:HD11	33:BM:43:ARG:HD3	1.89	0.55
33:BM:72:ILE:HA	33:BM:75:VAL:HG12	1.88	0.55
34:B5:54:C:H2’	34:B5:55:A:H8	1.71	0.55
34:B5:92:A:P	34:B5:398:G:H22	2.28	0.55
34:B5:407:A:H2’	34:B5:408:C:C6	2.42	0.55
34:B5:478:A:H61	34:B5:539:G:H1	1.54	0.55
34:B5:520:A:H2’	34:B5:521:A:C8	2.42	0.55
34:B5:922:G:H2’	34:B5:923:A:H8	1.71	0.55
34:B5:1237:G:H2’	34:B5:1238:A:H8	1.71	0.55
34:B5:1492:A:O2’	34:B5:1493:A:OP2	2.22	0.55
34:B5:1584:G:N2	34:B5:1611:A:OP2	2.36	0.55
34:B5:1614:A:H2’	34:B5:1615:C:C6	2.42	0.55
35:AA:112:ILE:HD13	78:Ap:79:VAL:HG22	1.88	0.55
37:AC:27:SER:O	37:AC:279:HIS:NE2	2.35	0.55
37:AC:64:SER:HA	37:AC:75:PRO:HA	1.88	0.55
38:A1:109:A:O2’	38:A1:323:A:N6	2.35	0.55
38:A1:1047:A:H61	46:AI:119:TRP:HH2	1.52	0.55
38:A1:1071:U:C4	38:A1:1087:G:O6	2.60	0.55
38:A1:1127:G:N2	38:A1:1130:A:OP2	2.30	0.55
38:A1:1479:U:O4	38:A1:1480:G:N1	2.40	0.55
38:A1:1700:G:H5’	73:Ak:3:ARG:HH22	1.72	0.55
38:A1:1926:C:OP2	78:Ap:24:ARG:NH2	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3066:U:H2'	38:A1:3067:C:C6	2.41	0.55
38:A1:3090:U:H2'	38:A1:3091:A:C8	2.42	0.55
39:A3:119:U:H2'	39:A3:120:C:C6	2.42	0.55
46:AI:169:LYS:NZ	56:AT:160:ILE:O	2.40	0.55
50:AN:3:ALA:HA	50:AN:6:TYR:HD1	1.71	0.55
1:BA:124:THR:HA	1:BA:146:LEU:HD12	1.87	0.54
3:BC:49:LYS:HA	3:BC:49:LYS:HE3	1.89	0.54
15:BY:29:HIS:ND1	15:BY:33:ALA:O	2.41	0.54
24:BR:27:ASP:OD1	31:Bg:38:ARG:NH1	2.40	0.54
25:BS:86:LEU:O	25:BS:89:GLN:NE2	2.40	0.54
31:Bg:270:LEU:HD21	31:Bg:273:ASP:HB2	1.90	0.54
34:B5:64:U:O2'	34:B5:168:A:N3	2.38	0.54
34:B5:182:A:H2'	34:B5:183:U:C6	2.42	0.54
34:B5:1733:C:H2'	34:B5:1734:U:C6	2.42	0.54
36:AB:167:ARG:NH1	36:AB:168:LYS:HG2	2.22	0.54
36:AB:233:TRP:CG	36:AB:265:ALA:HB1	2.42	0.54
38:A1:431:U:H2'	38:A1:432:G:H8	1.72	0.54
38:A1:1750:A:O2'	38:A1:1752:A:N6	2.29	0.54
38:A1:2900:A:H2'	38:A1:2901:G:H8	1.72	0.54
38:A1:3277:U:H5"	38:A1:3278:C:H5	1.72	0.54
39:A3:87:G:H2'	39:A3:88:G:H8	1.71	0.54
47:AJ:28:ASP:HB3	47:AJ:32:ARG:HH21	1.72	0.54
51:AO:12[A]:LYS:HB3	55:AS:167:ARG:NH2	2.22	0.54
54:AR:106:LEU:HG	54:AR:120:TYR:CD1	2.41	0.54
55:AS:8:GLN:NE2	55:AS:62:ASN:OD1	2.40	0.54
8:BJ:17:ARG:O	8:BJ:23:ARG:NH2	2.41	0.54
8:BJ:169:PRO:O	8:BJ:173:ALA:HB3	2.06	0.54
10:BN:114:ARG:O	10:BN:118:ILE:HG12	2.07	0.54
15:BY:123:LYS:HZ2	34:B5:150:U:P	2.30	0.54
27:BU:28:SER:O	27:BU:87:HIS:N	2.36	0.54
32:Bf:107:LYS:O	32:Bf:114:VAL:HA	2.08	0.54
34:B5:56:U:N3	34:B5:92:A:O2'	2.40	0.54
34:B5:123:G:C6	34:B5:124:A:C6	2.95	0.54
34:B5:213:A:H5'	34:B5:214:G:OP2	2.08	0.54
37:AC:98:ARG:NH2	38:A1:933:A:N3	2.54	0.54
37:AC:357:GLU:O	37:AC:361:HIS:ND1	2.37	0.54
38:A1:195:U:H2'	38:A1:196:G:O4'	2.08	0.54
38:A1:275:U:H3	38:A1:290:G:H1	1.53	0.54
38:A1:505:G:H2'	38:A1:506:U:C6	2.42	0.54
38:A1:589:A:N7	38:A1:610:G:O2'	2.30	0.54
38:A1:593:C:H2'	38:A1:594:U:C2	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:791:A:H2'	38:A1:792:G:C8	2.41	0.54
38:A1:802:C:H2'	38:A1:803:C:H6	1.72	0.54
38:A1:928:C:H2'	38:A1:929:A:H8	1.70	0.54
38:A1:1105:A:H2'	38:A1:1106:G:C8	2.42	0.54
38:A1:1562:C:H3'	38:A1:1563:C:H5"	1.90	0.54
38:A1:2457:G:N2	38:A1:2483:G:O2'	2.40	0.54
38:A1:2781:U:H2'	38:A1:2782:U:C6	2.42	0.54
38:A1:2847:A:OP2	75:Am:122:ARG:NE	2.40	0.54
38:A1:3021:A:H61	38:A1:3032:A:H5"	1.72	0.54
40:A4:135:G:OP2	60:AX:56:ARG:NH2	2.40	0.54
61:AY:55:GLU:HG3	61:AY:67:GLU:OE2	2.07	0.54
81:EC:6769:A:H62	81:EC:6771:U:H5	1.56	0.54
3:BC:105:GLY:HA3	3:BC:111:VAL:HA	1.87	0.54
17:Bb:55:THR:OG1	17:Bb:59:CYS:O	2.25	0.54
20:BF:166:ARG:HG3	29:Bc:47:PRO:HD2	1.89	0.54
22:BP:42:ARG:NH2	34:B5:1550:A:OP2	2.40	0.54
24:BR:78:ARG:CG	24:BR:81:LYS:HE2	2.30	0.54
31:Bg:18:GLY:HA3	31:Bg:39:ASP:N	2.22	0.54
34:B5:17:C:H2'	34:B5:18:C:C6	2.43	0.54
34:B5:1022:C:O2'	34:B5:1125:A:N6	2.40	0.54
34:B5:1541:G:H1'	34:B5:1570:A:N6	2.22	0.54
36:AB:221:THR:HG23	36:AB:273:HIS:O	2.08	0.54
38:A1:53:G:OP1	72:Aj:48:ASN:N	2.41	0.54
38:A1:68:C:H41	38:A1:314:U:HO2'	1.55	0.54
38:A1:359:U:O4	38:A1:920:A:C4	2.60	0.54
38:A1:709:A:H2'	38:A1:710:A:C8	2.43	0.54
38:A1:1104:G:H2'	38:A1:1105:A:H8	1.72	0.54
38:A1:1271:A:OP1	38:A1:1273:A:N6	2.40	0.54
38:A1:1299:U:H5'	75:Am:113:ARG:NH1	2.23	0.54
38:A1:1448:U:H2'	38:A1:1449:A:C8	2.42	0.54
38:A1:1473:G:H2'	38:A1:1474:A:H8	1.72	0.54
38:A1:1694:U:H2'	38:A1:1695:U:C6	2.42	0.54
38:A1:1770:G:H2'	38:A1:1771:C:C6	2.42	0.54
38:A1:2268:U:H2'	38:A1:2269:U:C6	2.42	0.54
38:A1:2765:C:H2'	38:A1:2766:U:C6	2.42	0.54
44:AG:36:ILE:O	44:AG:38:GLN:NE2	2.41	0.54
45:AH:7:GLU:OE2	45:AH:54:LYS:HB3	2.07	0.54
47:AJ:53:THR:HG23	47:AJ:60:ARG:HA	1.90	0.54
54:AR:68:GLN:HA	54:AR:71:ARG:NE	2.22	0.54
54:AR:86:GLU:HB2	54:AR:91:SER:H	1.73	0.54
55:AS:83:SER:N	55:AS:86:GLY:O	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:81:MET:HE1	80:DC:98:PHE:HB2	1.88	0.54
1:BA:190:ASP:OD1	1:BA:191:ARG:N	2.40	0.54
3:BC:35:TRP:CZ3	3:BC:46:LYS:HB2	2.41	0.54
8:BJ:34:PHE:HB3	8:BJ:108:ARG:HH12	1.73	0.54
18:Be:13:LYS:NZ	34:B5:564:G:OP1	2.40	0.54
31:Bg:123:ILE:HG21	31:Bg:169:ILE:HG21	1.89	0.54
34:B5:756:A:H3'	34:B5:757:A:H8	1.72	0.54
34:B5:1053:G:H2'	34:B5:1054:U:H6	1.71	0.54
34:B5:1186:U:N3	34:B5:1208:A:N7	2.54	0.54
36:AB:137:TYR:O	36:AB:141:GLY:N	2.39	0.54
38:A1:314:U:H2'	38:A1:315:C:C6	2.42	0.54
38:A1:650:C:H2'	38:A1:651:G:H8	1.72	0.54
38:A1:817:A:OP1	72:Aj:30:GLN:NE2	2.32	0.54
38:A1:1593:A:P	69:Ag:60:ARG:HE	2.30	0.54
38:A1:1729:A:C6	65:Ac:49:PRO:HD3	2.42	0.54
38:A1:2722:U:H4'	56:AT:88:ARG:HG3	1.89	0.54
38:A1:2933:A:C2	38:A1:3014:U:H4'	2.42	0.54
38:A1:3244:A:C6	51:AO:105[A]:PHE:HE1	2.25	0.54
38:A1:3252:G:H2'	38:A1:3253:G:H8	1.71	0.54
39:A3:47:C:H2'	39:A3:48:U:C6	2.42	0.54
42:AE:162:SER:OG	42:AE:163:PHE:N	2.41	0.54
56:AT:28:SER:O	56:AT:32:LYS:NZ	2.38	0.54
61:AY:31:LEU:HD11	61:AY:78:PHE:HA	1.89	0.54
80:DC:111:PHE:CZ	80:DC:540:ILE:HD13	2.43	0.54
4:BE:153:ASN:O	4:BE:174:LYS:NZ	2.33	0.54
7:BI:6:ASP:OD1	7:BI:7:SER:N	2.40	0.54
7:BI:50:GLY:HA2	34:B5:397:A:H4'	1.89	0.54
34:B5:396:G:N2	34:B5:398:G:H3'	2.22	0.54
34:B5:774:A:N6	34:B5:787:G:H1'	2.22	0.54
34:B5:1528:U:H2'	34:B5:1529:C:C6	2.41	0.54
36:AB:108:GLU:HB3	36:AB:137:TYR:CE2	2.42	0.54
36:AB:236:LYS:NZ	38:A1:2338:C:OP1	2.38	0.54
37:AC:307:GLN:HE21	38:A1:1360:C:H1'	1.72	0.54
38:A1:65:A:O2'	48:AL:100:ARG:NH2	2.40	0.54
38:A1:413:U:H2'	38:A1:414:U:C6	2.42	0.54
38:A1:534:U:O3'	55:AS:146:LYS:NZ	2.33	0.54
38:A1:691:A:N1	40:A4:28:C:O2'	2.39	0.54
38:A1:1439:U:C2	38:A1:1440:G:C8	2.96	0.54
38:A1:1802:C:H2'	38:A1:1803:C:C6	2.42	0.54
38:A1:2196:C:H2'	38:A1:2242:A:H61	1.71	0.54
38:A1:2437:G:O2'	38:A1:2438:A:OP1	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2582:C:H2'	38:A1:2583:C:C6	2.41	0.54
38:A1:2672:G:O3'	47:AJ:94:ARG:NH2	2.40	0.54
38:A1:2768:U:H4'	77:Ao:71:ARG:HH21	1.71	0.54
38:A1:2970:C:H2'	38:A1:2972:G:C8	2.42	0.54
39:A3:30:G:H1'	39:A3:50:PSU:HN3	1.72	0.54
48:AL:172:LEU:O	48:AL:176:GLU:HG3	2.07	0.54
61:AY:55:GLU:O	61:AY:107:THR:N	2.30	0.54
67:Ae:3:SER:OG	67:Ae:4:LEU:N	2.39	0.54
72:Aj:21:ARG:HD2	72:Aj:39:TYR:HD1	1.72	0.54
73:Ak:30:LYS:NZ	73:Ak:40:GLN:OE1	2.40	0.54
78:Ap:37:TYR:HE2	78:Ap:70:THR:HA	1.73	0.54
80:DC:672:LYS:HA	80:DC:680:GLU:HG3	1.90	0.54
80:DC:746:VAL:O	80:DC:750:LYS:NZ	2.35	0.54
80:DC:800:HIS:ND1	80:DC:801:TRP:O	2.38	0.54
13:BW:32:LYS:HG2	34:B5:637:C:OP1	2.08	0.54
16:Ba:47:ALA:HA	16:Ba:50:VAL:HB	1.88	0.54
21:BK:56:LYS:HZ3	21:BK:69:THR:HA	1.73	0.54
21:BK:58:GLN:O	21:BK:65:TYR:N	2.34	0.54
28:BZ:95:HIS:HB3	28:BZ:98:GLN:HE21	1.73	0.54
34:B5:385:A:H2'	34:B5:386:G:C8	2.41	0.54
34:B5:1434:U:H2'	34:B5:1436:A:H5'	1.90	0.54
34:B5:1471:A:N7	34:B5:1540:G:H1'	2.22	0.54
34:B5:1626:U:H3'	34:B5:1627:U:H5"	1.89	0.54
37:AC:197:ARG:NH2	38:A1:338:A:OP2	2.40	0.54
37:AC:288:ARG:NH1	37:AC:288:ARG:O	2.40	0.54
38:A1:180:C:H2'	38:A1:181:U:H6	1.73	0.54
38:A1:561:C:H2'	38:A1:562:C:C6	2.43	0.54
38:A1:794:U:H5'	63:Aa:7:LYS:NZ	2.23	0.54
38:A1:1111:U:H3'	48:AL:5:LYS:NZ	2.22	0.54
38:A1:1135:A:H4'	38:A1:2642:A:H1'	1.88	0.54
38:A1:1146:C:H2'	38:A1:1147:G:C8	2.39	0.54
38:A1:3188:G:H2'	38:A1:3189:G:C8	2.43	0.54
38:A1:3285:C:H3'	38:A1:3286:G:H5"	1.89	0.54
38:A1:3358:U:O4	38:A1:3359:A:N6	2.41	0.54
39:A3:89:G:H4'	55:AS:84:ARG:CZ	2.38	0.54
41:AD:61:ILE:HG12	41:AD:79:TYR:HD1	1.72	0.54
49:AM:91:CYS:SG	49:AM:92:GLU:N	2.79	0.54
50:AN:3:ALA:HA	50:AN:6:TYR:CD1	2.43	0.54
58:AV:54:LEU:HD21	58:AV:119:GLY:HA3	1.89	0.54
69:Ag:29:ILE:HG13	69:Ag:30:LEU:H	1.72	0.54
71:Ai:5:THR:N	71:Ai:12:ASN:O	2.32	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6763:C:H2'	81:EC:6764:C:C6	2.42	0.54
1:BA:10:THR:N	1:BA:13:ASP:OD2	2.40	0.54
7:BI:184:LEU:HB2	7:BI:189:LEU:HD13	1.90	0.54
15:BY:124:ARG:NH1	34:B5:152:U:O4	2.40	0.54
22:BP:18:ARG:NH1	25:BS:90:ASN:O	2.41	0.54
23:BQ:28:LEU:HB3	23:BQ:64:ASP:HB2	1.88	0.54
27:BU:62:VAL:HA	27:BU:84:MET:O	2.06	0.54
34:B5:651:G:O2'	34:B5:652:G:H3'	2.07	0.54
34:B5:1013:A:H3'	34:B5:1014:G:H8	1.72	0.54
34:B5:1117:U:H2'	34:B5:1118:G:C8	2.43	0.54
34:B5:1351:G:O2'	34:B5:1352:G:OP1	2.25	0.54
34:B5:1467:C:H2'	34:B5:1468:U:C6	2.43	0.54
34:B5:1674:C:H2'	34:B5:1675:C:C6	2.43	0.54
34:B5:1784:C:H2'	34:B5:1785:U:H6	1.73	0.54
36:AB:113:GLU:HA	36:AB:116:ARG:HB2	1.89	0.54
38:A1:1336:U:H2'	38:A1:1337:A:C8	2.40	0.54
38:A1:2556:C:H2'	38:A1:2557:A:C8	2.43	0.54
38:A1:3213:A:H2'	38:A1:3214:U:C2	2.43	0.54
46:AI:65:LEU:HD23	46:AI:159:PHE:CZ	2.43	0.54
48:AL:138:VAL:HG11	70:Ah:118:ILE:HB	1.89	0.54
49:AM:96:ALA:O	49:AM:101:LYS:NZ	2.40	0.54
51:AO:140[A]:LYS:O	51:AO:140[A]:LYS:NZ	2.38	0.54
58:AV:92:PHE:O	59:AW:20:LEU:N	2.41	0.54
80:DC:735:CYS:HB2	80:DC:739:ALA:HB3	1.90	0.54
81:EC:6880:G:H3'	81:EC:6881:U:O4'	2.08	0.54
2:BB:105:PHE:CD2	2:BB:213:ARG:HG3	2.43	0.54
3:BC:235:LEU:O	12:BV:52:THR:HG21	2.08	0.54
4:BE:10:LYS:HD3	34:B5:381:C:OP1	2.07	0.54
21:BK:23:ALA:O	21:BK:64:TYR:HB2	2.08	0.54
21:BK:91:TYR:HD1	21:BK:92:ILE:HD12	1.72	0.54
23:BQ:77:GLN:O	23:BQ:81:ILE:HG12	2.07	0.54
34:B5:105:A:N6	34:B5:308:C:O2	2.41	0.54
34:B5:330:G:H2'	34:B5:331:A:H8	1.72	0.54
34:B5:1370:U:H5'	34:B5:1371:A:C8	2.43	0.54
37:AC:156:LEU:HD12	37:AC:159:ILE:HD12	1.88	0.54
37:AC:334:PHE:HE1	43:AF:52:GLN:HE21	1.54	0.54
38:A1:126:U:C2	38:A1:127:G:C8	2.96	0.54
38:A1:214:G:H2'	38:A1:215:G:H8	1.73	0.54
38:A1:237:G:C2	38:A1:238:A:C2	2.95	0.54
38:A1:719:U:O2'	38:A1:721:G:OP1	2.26	0.54
38:A1:827:A:H2'	38:A1:828:A:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:877:C:HO2'	38:A1:880:G:HO2'	1.55	0.54
38:A1:1088:U:H2'	38:A1:1089:G:C8	2.42	0.54
38:A1:1112:A:C6	38:A1:1113:G:C6	2.96	0.54
38:A1:1744:G:H2'	38:A1:1745:C:H6	1.72	0.54
38:A1:2213:A:H2'	38:A1:2214:A:C8	2.43	0.54
38:A1:2294:U:N3	38:A1:2297:U:OP2	2.25	0.54
38:A1:2307:G:O2'	38:A1:2310:U:OP2	2.22	0.54
38:A1:2457:G:O2'	38:A1:2486:A:N1	2.41	0.54
38:A1:2834:G:H2'	38:A1:2835:U:H6	1.73	0.54
38:A1:3256:G:H2'	38:A1:3257:C:C6	2.43	0.54
38:A1:3303:G:C6	38:A1:3305:A:C2	2.96	0.54
43:AF:80:GLN:HE22	56:AT:136:ARG:HG2	1.72	0.54
50:AN:99:ARG:HH22	50:AN:166:ALA:HB3	1.72	0.54
79:E:45:ARG:HH12	81:EC:6814:G:N2	2.04	0.54
80:DC:385:MET:HE3	80:DC:394:PHE:HD2	1.72	0.54
81:EC:6775:U:H2'	81:EC:6817:A:N3	2.23	0.54
19:BD:91:VAL:HG12	19:BD:94:ARG:HG2	1.90	0.54
20:BF:100:ASN:HB3	20:BF:103:ASN:H	1.73	0.54
23:BQ:135:ARG:HB3	34:B5:1581:C:H4'	1.89	0.54
27:BU:27:THR:OG1	27:BU:88:LYS:HG3	2.08	0.54
31:Bg:32:LEU:HD21	31:Bg:94:VAL:HG11	1.88	0.54
34:B5:486:G:O6	34:B5:501:U:O4	2.26	0.54
34:B5:621:A:HO2'	34:B5:1106:U:HO2'	1.55	0.54
34:B5:736:C:H2'	34:B5:737:A:H8	1.72	0.54
34:B5:884:A:H2'	34:B5:885:G:C8	2.43	0.54
36:AB:221:THR:OG1	36:AB:272:TYR:N	2.41	0.54
37:AC:114:ASN:ND2	38:A1:680:G:H5"	2.22	0.54
38:A1:8:C:H2'	38:A1:9:U:C6	2.43	0.54
38:A1:138:U:H2'	38:A1:139:G:C8	2.41	0.54
38:A1:157:A:N7	71:Ai:26:ILE:HD13	2.22	0.54
38:A1:312:C:H2'	38:A1:313:A:C8	2.34	0.54
38:A1:426:G:H2'	38:A1:427:C:C6	2.43	0.54
38:A1:436:A:OP2	38:A1:621:A:N6	2.40	0.54
38:A1:582:G:H2'	38:A1:583:G:H8	1.73	0.54
38:A1:1293:U:O2'	55:AS:88:HIS:NE2	2.41	0.54
38:A1:1389:G:OP1	67:Ae:104:ASN:ND2	2.33	0.54
38:A1:1579:C:C4	38:A1:1581:C:H1'	2.42	0.54
38:A1:1620:U:H2'	38:A1:1621:A:C8	2.42	0.54
38:A1:2684:C:H2'	38:A1:2685:C:H6	1.73	0.54
38:A1:2948:C:H2'	38:A1:2949:U:C6	2.43	0.54
40:A4:55:U:O4	40:A4:62:C:N3	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AH:93:VAL:HG12	75:Am:82:LEU:HD13	1.90	0.54
47:AJ:17:LEU:HB3	47:AJ:71:VAL:HG23	1.90	0.54
50:AN:106:VAL:HG11	50:AN:132:VAL:HG11	1.90	0.54
68:Af:51:TYR:HD2	68:Af:67:MET:HG3	1.73	0.54
80:DC:823:ARG:CZ	80:DC:828:MET:HE3	2.37	0.54
81:EC:6839:U:H2'	81:EC:6841:U:OP1	2.07	0.54
2:BB:32:ILE:HD11	2:BB:46:THR:HB	1.89	0.54
3:BC:85:PRO:HG3	3:BC:98:PHE:CE2	2.43	0.54
5:BG:94:ARG:HH22	34:B5:1673:G:H5'	1.73	0.54
5:BG:139:ASN:OD1	5:BG:149:LYS:NZ	2.41	0.54
21:BK:91:TYR:CD1	21:BK:92:ILE:HD12	2.42	0.54
34:B5:15:U:H2'	34:B5:16:G:O4'	2.08	0.54
34:B5:397:A:H2'	34:B5:398:G:O4'	2.08	0.54
34:B5:634:G:N2	34:B5:965:U:OP2	2.35	0.54
34:B5:955:A:H2'	34:B5:956:C:C6	2.42	0.54
34:B5:1172:G:H2'	34:B5:1173:C:C6	2.43	0.54
34:B5:1684:U:H2'	34:B5:1685:G:C8	2.42	0.54
35:AA:132:ASN:ND2	38:A1:2178:A:H5"	2.23	0.54
35:AA:184:ARG:NH2	38:A1:1792:C:H4'	2.23	0.54
36:AB:80:ASP:OD1	36:AB:314:TYR:OH	2.25	0.54
36:AB:217:ALA:O	36:AB:277:SER:OG	2.26	0.54
38:A1:347:G:N7	72:Aj:55:ARG:NH1	2.56	0.54
38:A1:845:G:N2	38:A1:847:A:H3'	2.23	0.54
38:A1:872:U:H2'	38:A1:873:C:C6	2.43	0.54
38:A1:1268:G:O5'	38:A1:1274:A:N6	2.41	0.54
38:A1:1430:U:H2'	63:Aa:9:ARG:HH12	1.73	0.54
38:A1:1942:U:H2'	38:A1:1943:C:O4'	2.08	0.54
38:A1:2563:G:O6	38:A1:2579:G:N2	2.41	0.54
38:A1:2883:U:H2'	38:A1:2884:C:C6	2.41	0.54
38:A1:3103:A:H2'	38:A1:3104:U:O4'	2.08	0.54
38:A1:3386:G:P	66:Ad:10:ARG:HH22	2.31	0.54
44:AG:54:GLU:OE1	44:AG:54:GLU:N	2.41	0.54
45:AH:128:VAL:HG11	45:AH:134:ILE:HD11	1.90	0.54
46:AI:9:TYR:HD2	46:AI:97:LEU:HD13	1.73	0.54
53:AQ:16:ARG:NH1	53:AQ:20:LYS:HG2	2.23	0.54
80:DC:543:GLN:HA	80:DC:546:GLU:HB3	1.88	0.54
80:DC:563:TYR:HB3	80:DC:724:ILE:HD11	1.89	0.54
1:BA:39:ASN:ND2	24:BR:126:ALA:HB2	2.24	0.53
2:BB:197:ILE:HG21	2:BB:210:ILE:HG21	1.90	0.53
22:BP:43:ARG:NH2	34:B5:1552:U:OP2	2.38	0.53
34:B5:12:U:H2'	34:B5:13:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:384:G:H2'	34:B5:385:A:C8	2.43	0.53
34:B5:787:G:H3'	34:B5:788:A:C8	2.39	0.53
35:AA:5:ILE:HD11	35:AA:209:HIS:HD2	1.73	0.53
36:AB:26:ARG:NH1	38:A1:3003:G:OP1	2.41	0.53
38:A1:1099:A:H2'	38:A1:1100:U:C6	2.43	0.53
38:A1:1162:U:OP1	67:Ae:54:LYS:NZ	2.41	0.53
38:A1:1177:G:H5"	68:Af:18:ARG:HH22	1.73	0.53
38:A1:1413:G:H2'	38:A1:1414:G:C8	2.44	0.53
38:A1:1598:G:HO2'	38:A1:1752:A:HO2'	1.53	0.53
38:A1:1777:U:H2'	38:A1:1778:G:C8	2.43	0.53
38:A1:2389:C:H2'	38:A1:2390:A:H8	1.72	0.53
39:A3:66:A:P	46:AI:203:LYS:HZ2	2.31	0.53
48:AL:115:ARG:NH2	48:AL:145:PHE:O	2.41	0.53
60:AX:85:GLN:HE22	60:AX:119:THR:HB	1.72	0.53
78:Ap:20:SER:HB3	78:Ap:24:ARG:HH21	1.72	0.53
80:DC:211:PHE:O	80:DC:220:PHE:N	2.38	0.53
81:EC:6760:A:H2'	81:EC:6761:C:C6	2.43	0.53
81:EC:6804:A:H2'	81:EC:6808:G:N2	2.22	0.53
81:EC:6863:C:H2'	81:EC:6864:A:C8	2.43	0.53
2:BB:119:THR:N	2:BB:143:THR:OG1	2.36	0.53
3:BC:203:LYS:HD3	34:B5:14:C:H5"	1.90	0.53
5:BG:152:ASP:OD1	5:BG:154:ARG:NE	2.39	0.53
12:BV:86:SER:HA	17:Bb:6:ASP:HB2	1.90	0.53
13:BW:28:ARG:NH1	34:B5:864:U:O5'	2.42	0.53
23:BQ:141:SER:OG	34:B5:1195:C:N4	2.41	0.53
27:BU:89:ARG:HH22	34:B5:1383:G:P	2.30	0.53
34:B5:103:A:H4'	34:B5:105:A:C8	2.44	0.53
34:B5:406:U:H2'	34:B5:407:A:C8	2.44	0.53
34:B5:878:G:H2'	34:B5:879:G:H8	1.73	0.53
34:B5:1120:U:O2	34:B5:1127:G:N2	2.39	0.53
34:B5:1524:A:H2'	34:B5:1525:A:C8	2.43	0.53
38:A1:62:A:C4	38:A1:63:A:C8	2.96	0.53
38:A1:920:A:OP1	38:A1:923:C:N4	2.37	0.53
38:A1:1795:U:N3	78:Ap:50:GLY:O	2.41	0.53
38:A1:2154:U:H2'	38:A1:2155:G:H8	1.73	0.53
38:A1:2407:C:H2'	38:A1:2408:U:C6	2.43	0.53
38:A1:3068:U:OP1	54:AR:59:SER:N	2.39	0.53
38:A1:3097:C:H2'	38:A1:3098:G:H8	1.70	0.53
38:A1:3177:G:N1	38:A1:3212:C:N3	2.55	0.53
41:AD:123:GLU:HG3	41:AD:248:ARG:HH12	1.73	0.53
48:AL:27:ASP:OD1	48:AL:27:ASP:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:AR:152:GLU:O	54:AR:156:ASN:N	2.40	0.53
57:AU:84:LEU:HG	57:AU:90:ARG:HA	1.89	0.53
60:AX:103:TYR:HA	60:AX:138:ARG:HH22	1.74	0.53
64:Ab:47:LEU:HA	64:Ab:50:THR:HG22	1.91	0.53
78:Ap:3:LYS:NZ	78:Ap:5:THR:O	2.34	0.53
80:DC:718:LEU:HD23	80:DC:722:PRO:HG3	1.90	0.53
1:BA:15:GLN:HG2	24:BR:93:LEU:HG	1.90	0.53
2:BB:133:TYR:HD2	2:BB:181:LEU:HD13	1.72	0.53
4:BE:180:LEU:HD23	4:BE:194:THR:HG22	1.91	0.53
11:BO:127:ARG:HH22	34:B5:1788:G:P	2.32	0.53
34:B5:252:U:H2'	34:B5:253:A:C8	2.44	0.53
34:B5:341:A:H2'	34:B5:342:C:C6	2.43	0.53
34:B5:1183:A:N3	34:B5:1210:C:O2'	2.39	0.53
38:A1:139:G:H2'	38:A1:140:C:C6	2.43	0.53
38:A1:1562:C:H2'	38:A1:1563:C:H4'	1.89	0.53
38:A1:1635:G:H21	38:A1:1637:A:H8	1.55	0.53
38:A1:2444:C:C4	38:A1:2445:A:N6	2.76	0.53
38:A1:2674:A:H2'	38:A1:2675:C:C6	2.44	0.53
38:A1:2698:G:H2'	38:A1:2699:G:C8	2.43	0.53
38:A1:3000:A:H2'	38:A1:3001:C:C6	2.43	0.53
41:AD:286:VAL:HA	41:AD:289:LYS:HE3	1.90	0.53
46:AI:130:ASP:OD1	46:AI:133:GLN:HB2	2.08	0.53
47:AJ:109:HIS:CE1	47:AJ:112:LEU:HD22	2.44	0.53
48:AL:167:PHE:N	63:Aa:135:GLU:OE2	2.26	0.53
52:AP:111:LYS:HE3	52:AP:153:LYS:HB3	1.91	0.53
61:AY:31:LEU:HD21	61:AY:78:PHE:HB3	1.91	0.53
74:Al:20:ASN:OD1	74:Al:41:ARG:NE	2.41	0.53
80:DC:7:ASP:HA	80:DC:10:ARG:HG2	1.91	0.53
80:DC:130:ASP:CG	80:DC:159:LYS:HD2	2.34	0.53
80:DC:488:VAL:HG11	80:DC:796:MET:HB2	1.90	0.53
80:DC:601:ILE:HA	80:DC:606:ILE:CG2	2.39	0.53
1:BA:124:THR:HG22	1:BA:174:TRP:HZ2	1.72	0.53
1:BA:184:LEU:HD22	12:BV:45:ALA:HB2	1.89	0.53
8:BJ:109:LEU:HB2	8:BJ:146:PHE:HB3	1.90	0.53
9:BL:45:PRO:HG3	9:BL:115:PHE:CE1	2.43	0.53
9:BL:102:LYS:NZ	34:B5:631:G:O3'	2.37	0.53
11:BO:128:LYS:N	16:Ba:22:ARG:HH22	2.04	0.53
20:BF:143:ARG:NH1	20:BF:144:GLU:OE2	2.41	0.53
21:BK:20:VAL:HG12	21:BK:67:THR:HA	1.91	0.53
34:B5:640:U:H2'	34:B5:641:G:O4'	2.08	0.53
34:B5:897:C:O2'	34:B5:898:A:N7	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1383:G:H2'	34:B5:1384:A:C8	2.44	0.53
34:B5:1596:C:O4'	34:B5:1599:C:N4	2.40	0.53
35:AA:236:GLY:HA2	38:A1:2184:U:H4'	1.91	0.53
36:AB:187:SER:OG	36:AB:190:GLU:OE1	2.27	0.53
37:AC:112:LYS:HE3	50:AN:202:TYR:HB3	1.89	0.53
38:A1:436:A:C5	38:A1:437:G:C6	2.96	0.53
38:A1:1666:G:HO2'	38:A1:1742:U:HO2'	1.56	0.53
38:A1:1860:G:H1'	54:AR:58:HIS:HE1	1.73	0.53
38:A1:2483:G:N2	38:A1:2486:A:N3	2.57	0.53
38:A1:2765:C:H2'	38:A1:2766:U:H6	1.73	0.53
38:A1:2768:U:H2'	38:A1:2769:A:C8	2.42	0.53
38:A1:2916:U:O3'	58:AV:46:LEU:HA	2.08	0.53
38:A1:2929:C:H2'	38:A1:2930:A:C8	2.44	0.53
38:A1:3028:G:H4'	80:DC:28:VAL:HG21	1.91	0.53
40:A4:119:C:H2'	40:A4:120:C:H6	1.73	0.53
46:AI:88:ARG:O	46:AI:137:SER:OG	2.22	0.53
49:AM:23:ILE:HG23	49:AM:30:GLY:H	1.73	0.53
51:AO:9[A]:ILE:HD11	51:AO:120[A]:VAL:HG23	1.91	0.53
54:AR:148:ASP:OD1	54:AR:149:ALA:N	2.42	0.53
69:Ag:20:ILE:HG13	69:Ag:33:GLN:O	2.08	0.53
73:Ak:11:PHE:O	73:Ak:14:LEU:HG	2.08	0.53
73:Ak:65:LEU:HA	73:Ak:68:SER:HB2	1.89	0.53
80:DC:772:LEU:C	80:DC:775:ASN:HD21	2.17	0.53
81:EC:6873:A:H2'	81:EC:6874:A:H2'	1.89	0.53
3:BC:103:VAL:HG13	3:BC:190:LEU:HD13	1.89	0.53
7:BI:67:TRP:O	7:BI:71:GLY:N	2.41	0.53
12:BV:62:ARG:HD3	34:B5:1082:C:H1'	1.90	0.53
20:BF:124:LEU:O	28:BZ:58:ARG:NH1	2.42	0.53
24:BR:32:LYS:HE3	24:BR:33:ARG:NH1	2.24	0.53
32:Bf:140:TYR:CZ	32:Bf:142:GLY:HA2	2.44	0.53
34:B5:126:A:H62	34:B5:291:G:H21	1.56	0.53
34:B5:305:C:H2'	34:B5:306:U:C6	2.43	0.53
34:B5:407:A:H2'	34:B5:408:C:H6	1.74	0.53
34:B5:564:G:HO2'	34:B5:578:U:P	2.31	0.53
34:B5:999:PSU:H2'	34:B5:1000:C:C2	2.43	0.53
34:B5:1066:C:H2'	34:B5:1067:C:C6	2.42	0.53
34:B5:1067:C:H2'	34:B5:1068:C:H6	1.72	0.53
34:B5:1203:A:H61	34:B5:1553:G:H1'	1.72	0.53
34:B5:1242:A:O2'	34:B5:1244:A:OP1	2.21	0.53
34:B5:1506:G:O2'	34:B5:1550:A:O2'	2.15	0.53
36:AB:112:ASP:HA	36:AB:115:LYS:NZ	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:206:LEU:O	37:AC:249:ILE:N	2.41	0.53
38:A1:268:A:H61	38:A1:295:A:H3'	1.74	0.53
38:A1:513:G:H2'	38:A1:514:G:H8	1.72	0.53
38:A1:1346:G:H2'	38:A1:1347:U:C6	2.42	0.53
38:A1:1653:G:H2'	38:A1:1654:A:H8	1.73	0.53
38:A1:1899:G:O2'	38:A1:2334:U:O4	2.20	0.53
38:A1:2267:C:H2'	38:A1:2268:U:C6	2.44	0.53
38:A1:2895:G:OP2	45:AH:168:ARG:NH1	2.37	0.53
38:A1:3053:G:H2'	38:A1:3054:U:C6	2.43	0.53
38:A1:3261:C:OP1	49:AM:126:GLN:NE2	2.41	0.53
39:A3:109:G:H2'	39:A3:110:G:C8	2.43	0.53
47:AJ:49:LYS:HB3	47:AJ:62:ASN:HA	1.90	0.53
51:AO:127[A]:LEU:HD11	55:AS:157:GLN:H	1.73	0.53
71:Ai:53:TYR:CZ	71:Ai:77:LEU:HD21	2.43	0.53
80:DC:163:ALA:HB1	80:DC:167:LEU:HB3	1.90	0.53
80:DC:163:ALA:HB1	80:DC:167:LEU:CB	2.39	0.53
80:DC:591:GLU:OE2	80:DC:687:ASN:ND2	2.42	0.53
81:EC:6862:G:H2'	81:EC:6864:A:N7	2.22	0.53
13:BW:80:ASN:HA	13:BW:124:LYS:HD2	1.91	0.53
19:BD:66:ILE:O	19:BD:70:THR:OG1	2.25	0.53
30:Bd:17:GLY:N	34:B5:1205:C:O2	2.39	0.53
31:Bg:24:ALA:HB3	31:Bg:34:LEU:HB3	1.91	0.53
33:BM:33:ARG:NH1	33:BM:100:TRP:O	2.41	0.53
34:B5:1079:U:H2'	34:B5:1080:U:C6	2.44	0.53
34:B5:1367:G:H2'	34:B5:1368:G:H8	1.73	0.53
35:AA:184:ARG:HH12	38:A1:1792:C:H4'	1.73	0.53
36:AB:262:TRP:HE1	51:AO:66[A]:LYS:HE3	1.73	0.53
38:A1:72:C:O3'	48:AL:66:ASN:ND2	2.42	0.53
38:A1:288:C:H2'	38:A1:289:A:C8	2.44	0.53
38:A1:999:G:H2'	38:A1:1000:C:C6	2.44	0.53
38:A1:1168:U:H1'	43:AF:209:ASN:HD22	1.73	0.53
38:A1:1366:A:H2'	38:A1:1367:G:O4'	2.09	0.53
38:A1:1527:C:H4'	69:Ag:9:ARG:NH1	2.23	0.53
38:A1:1560:G:H1'	38:A1:1561:G:C8	2.44	0.53
38:A1:1943:C:H2'	38:A1:1944:U:C6	2.43	0.53
38:A1:2585:G:C6	60:AX:24:LEU:HD21	2.44	0.53
38:A1:3333:G:H22	38:A1:3369:G:H1'	1.73	0.53
47:AJ:50:ALA:H	47:AJ:62:ASN:HA	1.73	0.53
54:AR:95:TRP:CD1	54:AR:98:ARG:HH21	2.26	0.53
68:Af:46:GLY:H	68:Af:71:VAL:HG13	1.73	0.53
80:DC:185:VAL:HA	80:DC:188:ILE:HG12	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:300:LEU:HB3	80:DC:305:ILE:HB	1.90	0.53
80:DC:311:GLU:OE2	80:DC:326:LYS:NZ	2.40	0.53
80:DC:520:THR:HG22	80:DC:530:VAL:HG12	1.89	0.53
80:DC:562:ALA:HB1	80:DC:564:ARG:HH12	1.73	0.53
81:EC:6790:A:N6	81:EC:6798:C:OP2	2.31	0.53
81:EC:6793:A:N1	81:EC:6880:G:O2'	2.37	0.53
1:BA:88:LYS:HE3	24:BR:82:ASP:HA	1.90	0.53
4:BE:192:ILE:H	4:BE:243:GLY:HA3	1.74	0.53
4:BE:214:LEU:HD23	4:BE:214:LEU:H	1.74	0.53
6:BH:100:PRO:HG3	34:B5:696:C:OP1	2.09	0.53
6:BH:154:LEU:HB2	6:BH:185:ILE:HD13	1.91	0.53
7:BI:103:GLN:HB3	7:BI:164:ARG:HB3	1.90	0.53
22:BP:79:HIS:HA	22:BP:97:TYR:HB3	1.90	0.53
23:BQ:17:THR:HG21	34:B5:1379:C:O2'	2.09	0.53
29:Bc:16:LEU:HB3	29:Bc:27:GLN:HG2	1.90	0.53
31:Bg:84:SER:OG	31:Bg:85:TRP:N	2.42	0.53
34:B5:992:A:OP2	34:B5:1011:G:N1	2.36	0.53
34:B5:1185:U:O2'	34:B5:1458:G:N7	2.40	0.53
34:B5:1354:G:N2	34:B5:1372:U:HO2'	2.00	0.53
34:B5:1736:G:H2'	34:B5:1737:G:H8	1.74	0.53
36:AB:380:MET:HE1	38:A1:3369:G:H2'	1.91	0.53
38:A1:293:C:H2'	38:A1:294:U:O4'	2.09	0.53
38:A1:788:C:H2'	38:A1:789:A:C8	2.42	0.53
38:A1:953:G:H3'	38:A1:1117:G:H8	1.74	0.53
38:A1:969:C:O3'	64:Ab:18:ARG:NH2	2.41	0.53
38:A1:1499:C:H2'	38:A1:1500:G:C8	2.44	0.53
38:A1:3211:C:H2'	38:A1:3212:C:H6	1.73	0.53
39:A3:100:C:H2'	39:A3:101:G:O4'	2.09	0.53
63:Aa:38:GLN:HA	63:Aa:42:ARG:HE	1.73	0.53
65:Ac:38:LYS:HB3	65:Ac:93:LEU:HD12	1.90	0.53
78:Ap:36:ARG:NH1	78:Ap:45:LYS:HA	2.22	0.53
3:BC:157:LYS:HG2	13:BW:95:PRO:HA	1.89	0.53
5:BG:137:ARG:HH12	34:B5:144:U:H5	1.56	0.53
12:BV:60:ARG:HG2	12:BV:65:SER:HB3	1.91	0.53
20:BF:121:ILE:HG23	20:BF:199:ILE:HD11	1.91	0.53
25:BS:41:ARG:HD3	34:B5:1565:C:C5'	2.39	0.53
26:BT:117:SER:HB3	26:BT:121:GLY:O	2.08	0.53
31:Bg:67:ILE:O	31:Bg:85:TRP:N	2.40	0.53
34:B5:98:U:H2'	34:B5:99:C:C6	2.43	0.53
34:B5:472:U:H2'	34:B5:473:A:C8	2.44	0.53
34:B5:1455:G:H2'	34:B5:1456:C:C2	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1512:G:C6	34:B5:1513:G:C6	2.97	0.53
35:AA:95:SER:N	38:A1:2551:U:O4	2.33	0.53
38:A1:511:G:H2'	38:A1:512:U:C6	2.44	0.53
38:A1:999:G:H1'	38:A1:1002:A:H62	1.74	0.53
38:A1:1074:U:H2'	38:A1:1076:C:C5	2.44	0.53
38:A1:1801:U:O2'	69:Ag:60:ARG:NH1	2.42	0.53
38:A1:2682:C:O4'	47:AJ:20:ASN:ND2	2.42	0.53
38:A1:2755:C:H2'	38:A1:2756:C:C6	2.44	0.53
38:A1:3167:A:C4	38:A1:3284:G:N2	2.77	0.53
39:A3:4:U:H2'	39:A3:5:G:H8	1.74	0.53
39:A3:39:C:H2'	39:A3:40:C:C6	2.44	0.53
40:A4:25:G:H2'	40:A4:26:U:C6	2.43	0.53
41:AD:130:GLU:OE2	41:AD:167:SER:OG	2.26	0.53
46:AI:140:CYS:SG	46:AI:144:ASN:HB2	2.48	0.53
48:AL:107:GLU:OE1	48:AL:107:GLU:N	2.26	0.53
49:AM:13:ARG:N	55:AS:172:TYR:O	2.37	0.53
67:Ae:85:LEU:HD11	67:Ae:92:TYR:HB2	1.89	0.53
75:Am:93:LYS:O	75:Am:124:LYS:HB2	2.07	0.53
80:DC:235:VAL:HG22	80:DC:236:ASP:H	1.74	0.53
5:BG:65:GLN:OE1	34:B5:1681:A:O2'	2.21	0.53
5:BG:175:ILE:HG22	34:B5:78:A:C4	2.43	0.53
8:BJ:132:ARG:HG3	8:BJ:140:ILE:HG21	1.90	0.53
9:BL:90:TYR:CZ	34:B5:306:U:H5"	2.44	0.53
10:BN:114:ARG:CZ	34:B5:953:G:H5'	2.38	0.53
26:BT:9:VAL:HG11	26:BT:14:PHE:CD1	2.44	0.53
26:BT:60:SER:OG	34:B5:1480:G:OP1	2.19	0.53
34:B5:97:C:H2'	34:B5:98:U:C6	2.43	0.53
34:B5:851:U:N3	54:AR:176:ARG:HB2	2.24	0.53
34:B5:1005:A:H2'	34:B5:1006:C:C6	2.44	0.53
34:B5:1149:G:H2'	34:B5:1151:A:H8	1.74	0.53
34:B5:1563:C:H2'	34:B5:1564:U:H6	1.74	0.53
34:B5:1658:G:C6	34:B5:1743:U:O2	2.61	0.53
34:B5:1681:A:H3'	34:B5:1682:U:H6	1.74	0.53
37:AC:202:ARG:HA	38:A1:1384:U:OP2	2.08	0.53
38:A1:31:C:H4'	50:AN:96:ARG:NH1	2.16	0.53
38:A1:656:A:H2'	38:A1:657:A:C8	2.44	0.53
38:A1:1414:G:H2'	38:A1:1415:U:C6	2.44	0.53
38:A1:1498:A:H2'	38:A1:1499:C:H6	1.74	0.53
38:A1:1624:G:H2'	38:A1:1625:A:H8	1.73	0.53
38:A1:2184:U:H2'	38:A1:2185:G:H8	1.73	0.53
38:A1:2912:G:C2	38:A1:2913:C:C2	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:A4:47:C:H1'	40:A4:61:A:H2'	1.91	0.53
40:A4:68:G:H2'	40:A4:69:U:C6	2.44	0.53
44:AG:54:GLU:HA	44:AG:57:ARG:HE	1.74	0.53
60:AX:92:LYS:HA	60:AX:95:ILE:HG22	1.90	0.53
61:AY:31:LEU:HB3	61:AY:101:PRO:HG3	1.89	0.53
66:Ad:12:TYR:CD1	66:Ad:75:ILE:HD12	2.44	0.53
68:Af:69:GLY:HA3	68:Af:85:PHE:CD1	2.44	0.53
81:EC:6765:A:H2'	81:EC:6766:U:C6	2.44	0.53
3:BC:143:TYR:OH	3:BC:149:GLY:O	2.15	0.53
10:BN:35:GLU:OE1	10:BN:35:GLU:N	2.42	0.53
15:BY:83:LYS:HD3	15:BY:96:LEU:HD23	1.91	0.53
16:Ba:23:CYS:N	16:Ba:28:LYS:O	2.36	0.53
21:BK:3:MET:SD	21:BK:8:ARG:NE	2.76	0.53
21:BK:77:ARG:NH1	21:BK:83:PRO:O	2.42	0.53
24:BR:20:TYR:O	24:BR:24:LEU:HG	2.08	0.53
34:B5:43:A:C6	34:B5:378:A:C6	2.96	0.53
34:B5:851:U:O4	54:AR:176:ARG:NE	2.42	0.53
34:B5:896:U:H2'	34:B5:897:C:C6	2.44	0.53
34:B5:1068:C:H2'	34:B5:1069:A:H8	1.73	0.53
34:B5:1291:G:N2	34:B5:1324:G:H22	2.07	0.53
34:B5:1406:A:H2'	34:B5:1407:U:H6	1.74	0.53
34:B5:1546:G:O6	34:B5:1565:C:N4	2.38	0.53
34:B5:1624:C:H2'	34:B5:1625:C:C6	2.43	0.53
38:A1:122:A:N7	38:A1:146:U:N3	2.56	0.53
38:A1:173:G:N1	38:A1:244:G:O6	2.42	0.53
38:A1:183:G:C6	38:A1:234:G:C6	2.97	0.53
38:A1:437:G:H2'	38:A1:438:A:N3	2.24	0.53
38:A1:1116:G:N2	38:A1:2817:A:O4'	2.41	0.53
38:A1:1174:G:N2	51:AO:87[A]:MET:SD	2.82	0.53
38:A1:1288:U:H2'	38:A1:1289:G:C8	2.44	0.53
38:A1:1447:G:O2'	38:A1:2355:G:O6	2.20	0.53
38:A1:1652:G:H2'	38:A1:1653:G:H8	1.72	0.53
38:A1:2167:A:H2'	38:A1:2168:A:C4	2.44	0.53
38:A1:2895:G:H5"	75:Am:102:ARG:NH2	2.24	0.53
38:A1:3202:G:H2'	38:A1:3203:U:H6	1.74	0.53
41:AD:94:ASN:OD1	41:AD:97:ALA:N	2.35	0.53
50:AN:112:ASN:O	50:AN:113:LEU:HD23	2.09	0.53
51:AO:37[A]:ARG:NH1	51:AO:39[A]:GLU:OE2	2.42	0.53
56:AT:151:LEU:HD12	56:AT:151:LEU:O	2.08	0.53
66:Ad:25:PHE:HA	66:Ad:28:ARG:HG2	1.91	0.53
81:EC:6831:U:H3	81:EC:6858:A:N6	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BB:62:LYS:HZ1	2:BB:91:VAL:HG12	1.74	0.52
18:Be:20:LYS:NZ	18:Be:21:VAL:O	2.37	0.52
22:BP:82:ASN:ND2	34:B5:1555:A:O3'	2.42	0.52
23:BQ:142:TYR:HE1	34:B5:1579:U:H5"	1.73	0.52
34:B5:201:G:H2'	34:B5:202:A:C8	2.44	0.52
34:B5:302:PSU:H2'	34:B5:303:U:O4'	2.09	0.52
34:B5:819:G:O2'	34:B5:820:U:H5'	2.09	0.52
34:B5:889:U:O2'	34:B5:890:C:OP1	2.25	0.52
34:B5:1595:U:C2	34:B5:1600:A:N7	2.77	0.52
34:B5:1670:G:O2'	34:B5:1731:A:N6	2.42	0.52
38:A1:295:A:P	50:AN:15:GLN:HE22	2.32	0.52
38:A1:363:G:OP2	72:Aj:56:ARG:NH1	2.40	0.52
38:A1:737:G:H2'	38:A1:738:A:C8	2.44	0.52
38:A1:827:A:H2'	38:A1:828:A:C8	2.44	0.52
38:A1:970:A:H8	38:A1:970:A:O5'	1.92	0.52
38:A1:1437:C:H2'	38:A1:1438:U:H6	1.74	0.52
38:A1:1770:G:H2'	38:A1:1771:C:H6	1.74	0.52
38:A1:1814:A:O4'	38:A1:1817:G:N2	2.39	0.52
38:A1:1911:A:H2'	38:A1:1912:U:H6	1.74	0.52
38:A1:2197:C:O2	38:A1:2244:A:N6	2.42	0.52
38:A1:2393:G:O2'	38:A1:2982:A:N6	2.37	0.52
38:A1:2928:C:H2'	38:A1:2929:C:C6	2.44	0.52
38:A1:3010:U:O2'	38:A1:3011:A:H2'	2.09	0.52
38:A1:3272:C:O4'	42:AE:78:ARG:NH1	2.42	0.52
39:A3:72:A:H2'	39:A3:74:C:H5	1.74	0.52
39:A3:81:U:H2'	39:A3:82:G:C8	2.43	0.52
42:AE:62:THR:HG21	42:AE:78:ARG:NH2	2.24	0.52
48:AL:29:ALA:N	50:AN:201:ARG:HH22	2.00	0.52
51:AO:28[A]:LEU:HD12	51:AO:94[A]:ARG:NH1	2.24	0.52
80:DC:418:TYR:CE1	80:DC:426:LEU:HB2	2.44	0.52
81:EC:6893:C:H41	81:EC:6938:A:H1'	1.74	0.52
1:BA:160:ILE:HD12	1:BA:161:PRO:HD2	1.90	0.52
4:BE:103:TYR:N	4:BE:182:TYR:OH	2.41	0.52
5:BG:59:GLN:OE1	34:B5:157:A:N6	2.42	0.52
5:BG:142:ARG:NE	5:BG:148:SER:O	2.38	0.52
5:BG:180:THR:HG23	5:BG:183:ARG:H	1.74	0.52
8:BJ:143:ILE:CD1	34:B5:768:C:H1'	2.39	0.52
23:BQ:12:LYS:NZ	23:BQ:13:LYS:O	2.24	0.52
25:BS:11:PHE:CE1	25:BS:59:GLY:HA3	2.44	0.52
34:B5:740:A:H5'	34:B5:741:C:H2'	1.90	0.52
34:B5:766:PSU:H5"	34:B5:767:U:H5"	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1036:A:H2'	34:B5:1037:C:H6	1.74	0.52
34:B5:1344:A:H2'	34:B5:1345:A:C8	2.44	0.52
34:B5:1620:C:H2'	34:B5:1621:U:C6	2.45	0.52
36:AB:2:SER:OG	36:AB:3:HIS:N	2.43	0.52
37:AC:34:ILE:HD11	38:A1:673:U:H4'	1.91	0.52
38:A1:41:G:C4	38:A1:2801:A:C6	2.98	0.52
38:A1:253:A:H2'	38:A1:254:A:C8	2.44	0.52
38:A1:638:C:H2'	38:A1:639:G:C8	2.44	0.52
38:A1:748:U:H5"	64:Ab:31:SER:HB3	1.91	0.52
38:A1:754:G:H2'	38:A1:755:A:H8	1.74	0.52
38:A1:1111:U:H3'	48:AL:5:LYS:HZ2	1.74	0.52
38:A1:1643:A:H2'	38:A1:1644:C:C2	2.44	0.52
38:A1:1818:U:O2'	38:A1:1819:U:OP1	2.23	0.52
38:A1:1852:G:N2	72:Aj:9:GLY:O	2.34	0.52
38:A1:2343:C:H2'	38:A1:2344:U:C6	2.43	0.52
38:A1:2889:C:H2'	38:A1:2890:A:C8	2.44	0.52
38:A1:3277:U:H3'	38:A1:3278:C:H6	1.74	0.52
38:A1:3383:G:H2'	38:A1:3384:U:C6	2.44	0.52
40:A4:107:G:C6	40:A4:116:G:C5	2.97	0.52
42:AE:166:LYS:N	42:AE:169:ASP:OD2	2.38	0.52
44:AG:77:GLN:NE2	44:AG:167:PRO:HG2	2.24	0.52
45:AH:20:ILE:HG12	45:AH:25:VAL:HG12	1.91	0.52
46:AI:36:LEU:HB2	46:AI:87:LEU:HB3	1.92	0.52
50:AN:62:TYR:HD2	50:AN:134:LEU:HD12	1.75	0.52
79:E:65:ILE:HD12	79:E:152:ARG:HG2	1.91	0.52
80:DC:42:ARG:NH2	80:DC:329:PRO:HB2	2.24	0.52
80:DC:431:ILE:HD11	80:DC:456:LEU:HB2	1.89	0.52
80:DC:624:GLY:O	80:DC:625:TRP:HD1	1.92	0.52
3:BC:227:PRO:HA	3:BC:230:TRP:CE2	2.44	0.52
8:BJ:124:HIS:ND1	34:B5:478:A:H1'	2.24	0.52
10:BN:87:ASP:CG	34:B5:867:G:H21	2.17	0.52
20:BF:143:ARG:HH21	29:Bc:56:LEU:HG	1.75	0.52
22:BP:94:VAL:O	22:BP:105:VAL:HG22	2.08	0.52
34:B5:304:U:H2'	34:B5:305:C:H6	1.75	0.52
34:B5:655:G:N2	34:B5:677:G:OP2	2.40	0.52
34:B5:1165:G:H2'	34:B5:1166:A:C8	2.44	0.52
36:AB:261:MET:HE1	38:A1:2882:U:H1'	1.90	0.52
38:A1:199:A:O2'	38:A1:201:A:N6	2.31	0.52
38:A1:1132:C:H2'	38:A1:1133:A:H8	1.73	0.52
38:A1:1485:G:N2	69:Ag:4:ARG:HD2	2.24	0.52
38:A1:1650:G:H2'	38:A1:1651:U:H6	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2228:A:H2'	38:A1:2229:A:C8	2.44	0.52
38:A1:2563:G:O2'	44:AG:29:SER:OG	2.21	0.52
38:A1:2722:U:H2'	38:A1:2723:U:C6	2.44	0.52
38:A1:2793:G:O3'	77:Ao:66:LYS:NZ	2.40	0.52
38:A1:3022:G:H22	38:A1:3031:G:H2'	1.73	0.52
38:A1:3034:C:H41	45:AH:121:LYS:HE2	1.74	0.52
38:A1:3154:C:H41	38:A1:3293:U:H3	1.58	0.52
38:A1:3279:A:H2'	38:A1:3280:U:C6	2.44	0.52
38:A1:3348:G:H2'	38:A1:3349:C:C6	2.44	0.52
39:A3:23:A:H2'	39:A3:24:A:C8	2.45	0.52
40:A4:24:G:P	61:AY:17:LYS:HD3	2.50	0.52
40:A4:107:G:C6	40:A4:108:C:N4	2.77	0.52
40:A4:132:G:H2'	40:A4:133:G:H8	1.75	0.52
40:A4:133:G:H2'	40:A4:134:G:C8	2.44	0.52
43:AF:96:PRO:HB2	43:AF:99:PRO:HD2	1.91	0.52
46:AI:142:ASP:OD1	46:AI:142:ASP:N	2.41	0.52
54:AR:7:GLN:NE2	54:AR:35:ALA:O	2.36	0.52
55:AS:6:GLU:HG3	55:AS:64:ILE:HB	1.91	0.52
55:AS:89:ASN:HD21	56:AT:156:TYR:H	1.55	0.52
60:AX:130:TYR:HB3	60:AX:135:ILE:HD11	1.92	0.52
77:Ao:65:THR:O	77:Ao:87:ARG:NH1	2.42	0.52
9:BL:73:GLY:HA3	9:BL:86:ILE:HD12	1.90	0.52
19:BD:162:GLN:HB3	34:B5:1332:C:O2'	2.10	0.52
20:BF:102:ARG:NH2	34:B5:1475:A:OP1	2.32	0.52
25:BS:41:ARG:HD3	34:B5:1565:C:O5'	2.08	0.52
26:BT:64:HIS:CD2	26:BT:68:ARG:HD3	2.44	0.52
27:BU:58:LEU:HG	27:BU:88:LYS:HD2	1.91	0.52
31:Bg:69:GLN:HB2	31:Bg:85:TRP:HE1	1.74	0.52
34:B5:752:A:O2'	34:B5:753:A:OP1	2.22	0.52
34:B5:883:C:N3	34:B5:945:U:O2	2.42	0.52
34:B5:1127:G:OP1	76:An:11:ARG:NH2	2.25	0.52
34:B5:1735:U:H2'	34:B5:1736:G:C8	2.43	0.52
35:AA:206:PRO:HG3	35:AA:213:GLY:HA3	1.91	0.52
36:AB:36:ASP:O	36:AB:185:GLY:HA2	2.09	0.52
38:A1:307:A:O2'	38:A1:2223:A:O2'	2.26	0.52
38:A1:430:U:H5"	68:Af:67:MET:HE1	1.91	0.52
38:A1:671:U:H2'	38:A1:672:A:C8	2.44	0.52
38:A1:1082:U:H2'	38:A1:1083:G:O4'	2.09	0.52
38:A1:2095:G:H2'	38:A1:2096:A:C8	2.44	0.52
38:A1:2591:A:H2'	38:A1:2592:G:C8	2.45	0.52
38:A1:2819:A:H2'	38:A1:2820:A:O4'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3163:A:N6	38:A1:3288:G:C6	2.77	0.52
40:A4:7:U:H2'	40:A4:8:C:C6	2.45	0.52
40:A4:41:A:OP1	72:Aj:66:TYR:N	2.43	0.52
40:A4:145:U:H2'	40:A4:146:U:H6	1.75	0.52
47:AJ:19:LEU:HD11	47:AJ:127:PHE:CD1	2.44	0.52
50:AN:39:ALA:N	50:AN:61:ILE:O	2.41	0.52
54:AR:60:LYS:O	54:AR:63:THR:OG1	2.22	0.52
54:AR:109:TYR:HB3	54:AR:115:ILE:HD13	1.91	0.52
69:Ag:57:LEU:HD23	69:Ag:61:GLN:HG3	1.90	0.52
79:E:51:GLY:H	79:E:157:PHE:HB2	1.74	0.52
80:DC:733:ILE:HG23	80:DC:794:PRO:HA	1.90	0.52
2:BB:105:PHE:CD1	2:BB:213:ARG:HA	2.45	0.52
4:BE:176:ASP:H	4:BE:179:LYS:HZ3	1.56	0.52
5:BG:136:LYS:NZ	34:B5:65:A:O5'	2.41	0.52
8:BJ:74:ASN:HA	8:BJ:77:ILE:HG12	1.91	0.52
10:BN:96:VAL:HA	10:BN:99:ARG:HE	1.74	0.52
11:BO:58:TYR:HA	11:BO:61:MET:HE2	1.90	0.52
13:BW:117:ARG:HG2	13:BW:118:ARG:HH22	1.74	0.52
16:Ba:44:ILE:HG13	16:Ba:67:THR:OG1	2.09	0.52
17:Bb:19:HIS:ND1	17:Bb:22:LYS:HG2	2.24	0.52
18:Be:43:ARG:NE	34:B5:590:C:OP1	2.43	0.52
19:BD:120:TYR:O	19:BD:124:ARG:N	2.27	0.52
25:BS:38:VAL:HG23	25:BS:42:TYR:HB3	1.91	0.52
34:B5:111:U:H2'	34:B5:112:A:C8	2.45	0.52
34:B5:169:A:C4	34:B5:171:A:C8	2.97	0.52
36:AB:300:ARG:NE	36:AB:300:ARG:HA	2.24	0.52
38:A1:535:G:N2	38:A1:536:U:O4	2.33	0.52
38:A1:1615:C:H2'	38:A1:1616:U:C6	2.45	0.52
38:A1:1622:U:H2'	38:A1:1623:G:C8	2.43	0.52
38:A1:1900:A:H61	38:A1:1908:A:H61	1.55	0.52
38:A1:2368:A:H2'	38:A1:2369:G:H8	1.75	0.52
38:A1:2458:A:N6	38:A1:2477:G:H3'	2.25	0.52
38:A1:2646:C:H2'	38:A1:2647:A:C8	2.44	0.52
38:A1:2652:U:P	38:A1:2760:C:H41	2.32	0.52
38:A1:2877:G:C4	38:A1:2878:G:C8	2.98	0.52
44:AG:152:LEU:HD22	44:AG:178:ALA:HB3	1.91	0.52
45:AH:91:ARG:NE	45:AH:142:ASP:OD1	2.34	0.52
57:AU:79:LEU:O	57:AU:83:TYR:N	2.37	0.52
63:Aa:14:HIS:ND1	67:Ae:36:LYS:HE3	2.24	0.52
76:An:11:ARG:O	76:An:15:ARG:N	2.39	0.52
80:DC:393:ARG:HG3	80:DC:461:GLN:NE2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:638:PRO:HD2	80:DC:642:GLY:HA3	1.90	0.52
1:BA:27:ARG:HH11	1:BA:27:ARG:HG3	1.74	0.52
2:BB:116:LYS:HB3	2:BB:117:TRP:HE3	1.74	0.52
2:BB:158:SER:HB3	34:B5:875:G:OP1	2.10	0.52
4:BE:10:LYS:HZ2	8:BJ:2:PRO:N	2.08	0.52
4:BE:178:GLY:H	4:BE:195:ILE:HB	1.74	0.52
15:BY:20:ARG:NH1	15:BY:74:LEU:HD22	2.25	0.52
20:BF:33:VAL:HG12	23:BQ:53:LEU:HD21	1.92	0.52
20:BF:149:VAL:HG11	20:BF:158:GLN:HB2	1.92	0.52
23:BQ:47:LYS:O	23:BQ:82:ARG:NE	2.32	0.52
23:BQ:98:ASP:OD1	23:BQ:99:GLU:N	2.41	0.52
34:B5:481:A:H5'	34:B5:498:G:N2	2.21	0.52
34:B5:512:A:N6	34:B5:539:G:O6	2.41	0.52
34:B5:1126:G:H2'	34:B5:1127:G:H8	1.75	0.52
34:B5:1291:G:H1	34:B5:1324:G:H1	1.57	0.52
34:B5:1526:A:H3'	34:B5:1527:C:H6	1.75	0.52
34:B5:1533:C:N4	34:B5:1534:G:O6	2.42	0.52
34:B5:1612:U:H2'	34:B5:1613:U:O4'	2.10	0.52
36:AB:14:LEU:HA	36:AB:17:LEU:HD13	1.89	0.52
37:AC:300:ARG:NH1	38:A1:1347:U:OP1	2.41	0.52
38:A1:254:A:H2'	38:A1:255:A:C8	2.43	0.52
38:A1:628:A:H5"	38:A1:1399:A:C2	2.45	0.52
38:A1:631:U:H2'	38:A1:632:G:H8	1.74	0.52
38:A1:707:U:O2'	38:A1:754:G:O2'	2.25	0.52
38:A1:960:PSU:O2'	38:A1:961:C:O4'	2.28	0.52
38:A1:1047:A:N3	38:A1:2633:U:O2'	2.42	0.52
38:A1:1360:C:H2'	38:A1:1361:U:C6	2.45	0.52
38:A1:1636:U:C4	38:A1:1637:A:C2	2.97	0.52
38:A1:1798:A:H2'	38:A1:1799:A:C8	2.44	0.52
38:A1:1944:U:H2'	38:A1:1945:A:H8	1.75	0.52
38:A1:2577:C:H2'	38:A1:2578:U:C6	2.44	0.52
38:A1:2659:G:H2'	38:A1:2660:G:H8	1.72	0.52
38:A1:2700:G:H2'	38:A1:2701:U:C6	2.45	0.52
38:A1:2918:G:H2'	38:A1:2919:A:H8	1.75	0.52
38:A1:2989:U:H2'	38:A1:2990:G:O4'	2.10	0.52
38:A1:3051:U:C2	38:A1:3052:G:C8	2.98	0.52
39:A3:1:G:H2'	39:A3:2:G:H8	1.75	0.52
54:AR:95:TRP:CH2	54:AR:99:LEU:HD22	2.45	0.52
68:Af:49:ILE:HD11	68:Af:85:PHE:HE1	1.74	0.52
78:Ap:37:TYR:O	78:Ap:47:VAL:HB	2.10	0.52
80:DC:283:ARG:O	80:DC:286:THR:OG1	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:647:ILE:HG13	80:DC:685:ARG:HH21	1.75	0.52
80:DC:743:ILE:HA	80:DC:746:VAL:HG12	1.92	0.52
81:EC:6878:G:H3'	81:EC:6879:U:C5'	2.34	0.52
4:BE:145:ARG:NH2	34:B5:123:G:O2'	2.42	0.52
7:BI:31:ARG:NH1	34:B5:333:A:OP2	2.37	0.52
7:BI:141:ARG:NH1	34:B5:196:G:N7	2.57	0.52
8:BJ:171:ARG:NH1	34:B5:514:G:N7	2.57	0.52
17:Bb:36:LYS:HE2	17:Bb:41:LEU:HA	1.91	0.52
19:BD:136:VAL:HG23	19:BD:152:PHE:HB2	1.91	0.52
23:BQ:74:HIS:CE1	34:B5:1526:A:H61	2.25	0.52
23:BQ:134:ALA:N	34:B5:1586:A:OP1	2.43	0.52
26:BT:98:GLY:N	34:B5:1504:G:OP1	2.42	0.52
30:Bd:12:ARG:NH1	34:B5:1451:C:OP1	2.42	0.52
34:B5:404:G:H2'	34:B5:405:C:C6	2.45	0.52
34:B5:552:G:O6	34:B5:573:C:N4	2.42	0.52
34:B5:1116:A:H2'	34:B5:1117:U:O4'	2.09	0.52
34:B5:1546:G:H3'	34:B5:1547:A:H8	1.74	0.52
37:AC:2:SER:O	37:AC:3:ARG:NH1	2.39	0.52
38:A1:284:A:O4'	77:Ao:41:ARG:NH1	2.42	0.52
38:A1:597:G:H5'	43:AF:41:ARG:HD2	1.92	0.52
38:A1:949:C:O2'	38:A1:971:G:OP1	2.23	0.52
38:A1:1234:G:C6	38:A1:1254:C:N3	2.78	0.52
38:A1:1311:G:H2'	38:A1:1312:C:C6	2.44	0.52
38:A1:1501:U:H3	38:A1:1515:A:H61	1.56	0.52
38:A1:2338:C:H4'	58:AV:48:ARG:HA	1.91	0.52
38:A1:2451:G:H2'	38:A1:2452:G:C8	2.45	0.52
38:A1:2544:U:H3'	38:A1:2545:C:C6	2.43	0.52
38:A1:2974:U:H2'	38:A1:2975:PSU:C6	2.45	0.52
38:A1:3371:G:H2'	38:A1:3372:A:H8	1.75	0.52
50:AN:199:LEU:HD12	50:AN:203:ARG:HH11	1.75	0.52
2:BB:99:ASN:OD1	2:BB:100:PHE:N	2.42	0.52
7:BI:10:LYS:NZ	34:B5:339:C:OP2	2.32	0.52
9:BL:87:ARG:NH1	9:BL:104:HIS:HB2	2.24	0.52
10:BN:49:GLN:HA	10:BN:52:VAL:HB	1.92	0.52
19:BD:91:VAL:O	19:BD:94:ARG:NH1	2.43	0.52
20:BF:114:ILE:HA	20:BF:117:THR:HG22	1.92	0.52
21:BK:25:LYS:HB3	21:BK:62:GLN:HB2	1.91	0.52
34:B5:215:A:H3'	34:B5:216:U:C6	2.44	0.52
34:B5:393:C:H2'	34:B5:394:C:C6	2.45	0.52
34:B5:998:A:N6	34:B5:1007:C:H42	2.08	0.52
34:B5:1068:C:H2'	34:B5:1069:A:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1350:U:O2'	34:B5:1378:U:O4	2.25	0.52
34:B5:1573:A:H4'	34:B5:1574:G:O4'	2.09	0.52
38:A1:167:U:H2'	38:A1:168:U:C6	2.45	0.52
38:A1:538:G:H2'	38:A1:539:C:C6	2.45	0.52
38:A1:722:G:H1	38:A1:748:U:H3	1.58	0.52
38:A1:1718:G:H2'	38:A1:1719:G:C8	2.43	0.52
38:A1:1738:C:H2'	38:A1:1739:U:C6	2.44	0.52
38:A1:2181:C:H2'	38:A1:2182:A:H8	1.75	0.52
38:A1:3043:C:OP1	58:AV:45:ARG:NH2	2.43	0.52
38:A1:3252:G:H2'	38:A1:3253:G:C8	2.44	0.52
52:AP:30:ARG:NH1	52:AP:31:GLU:HG3	2.24	0.52
53:AQ:170:ARG:O	53:AQ:171:LYS:HG2	2.10	0.52
58:AV:86:ARG:HB3	58:AV:92:PHE:CD2	2.44	0.52
62:AZ:77:TYR:HB3	65:Ac:35:ARG:NH2	2.24	0.52
62:AZ:77:TYR:HB3	65:Ac:35:ARG:NH1	2.25	0.52
65:Ac:40:LYS:HB3	65:Ac:101:LEU:HD11	1.92	0.52
70:Ah:76:GLN:N	70:Ah:76:GLN:OE1	2.43	0.52
80:DC:435:VAL:HG21	80:DC:442:VAL:HB	1.90	0.52
2:BB:99:ASN:HB2	2:BB:228:LEU:HD13	1.91	0.52
2:BB:205:PHE:CD1	2:BB:206:PRO:HD2	2.45	0.52
7:BI:170:SER:OG	7:BI:180:ASP:O	2.22	0.52
11:BO:42:VAL:HG23	11:BO:46:MET:HG3	1.91	0.52
13:BW:11:LEU:HD11	13:BW:37:PHE:CE2	2.45	0.52
17:Bb:49:HIS:HA	17:Bb:70:LYS:HA	1.92	0.52
31:Bg:207:ASP:OD2	31:Bg:209:THR:OG1	2.24	0.52
34:B5:931:C:O5'	34:B5:931:C:H6	1.93	0.52
34:B5:1060:U:H3'	34:B5:1061:A:H5'	1.92	0.52
36:AB:60:LEU:HD12	36:AB:62:ARG:HG2	1.91	0.52
36:AB:160:VAL:HG22	36:AB:183:LEU:HD21	1.92	0.52
38:A1:201:A:H2'	38:A1:202:G:H8	1.74	0.52
38:A1:409:A:O2'	38:A1:654:C:O2'	2.25	0.52
38:A1:987:U:H2'	38:A1:988:U:H6	1.74	0.52
38:A1:1869:C:H2'	38:A1:1870:C:C6	2.44	0.52
38:A1:2972:G:H2'	38:A1:2973:G:H8	1.74	0.52
40:A4:66:A:OP1	70:Ah:10:ARG:NH1	2.32	0.52
40:A4:130:C:H2'	40:A4:131:A:C8	2.45	0.52
40:A4:143:U:H2'	40:A4:144:G:C8	2.45	0.52
49:AM:65:LEU:N	55:AS:172:TYR:OH	2.38	0.52
68:Af:43:PHE:O	68:Af:47:LYS:NZ	2.42	0.52
80:DC:487:PRO:HA	80:DC:533:THR:HA	1.92	0.52
80:DC:569:SER:HB2	80:DC:720:ALA:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:606:ILE:HG23	80:DC:606:ILE:O	2.10	0.52
1:BA:7:PHE:C	1:BA:54:TRP:HE1	2.18	0.52
3:BC:59:HIS:ND1	3:BC:239:PRO:HD3	2.25	0.52
5:BG:210:GLN:NE2	5:BG:214:LYS:HD3	2.25	0.52
9:BL:69:LYS:H	9:BL:127:GLN:HG3	1.75	0.52
17:Bb:36:LYS:NZ	17:Bb:40:CYS:O	2.36	0.52
23:BQ:24:ALA:HA	23:BQ:63:ILE:HD13	1.92	0.52
23:BQ:79:TYR:O	23:BQ:82:ARG:HG2	2.10	0.52
24:BR:45:ARG:O	24:BR:49:LYS:N	2.41	0.52
24:BR:78:ARG:HD3	24:BR:78:ARG:H	1.75	0.52
31:Bg:90:ARG:HH21	31:Bg:102:ARG:HH21	1.57	0.52
34:B5:60:U:N3	34:B5:62:A:O5'	2.43	0.52
34:B5:200:A:H2'	34:B5:201:G:H8	1.75	0.52
34:B5:600:U:H2'	34:B5:601:A:C8	2.45	0.52
34:B5:1107:G:H2'	34:B5:1108:G:N3	2.24	0.52
34:B5:1437:U:H2'	34:B5:1438:G:H8	1.75	0.52
36:AB:120:LYS:N	38:A1:3296:A:OP1	2.41	0.52
38:A1:172:G:H1'	38:A1:173:G:H22	1.74	0.52
38:A1:730:C:H2'	38:A1:731:U:H6	1.74	0.52
38:A1:886:C:H2'	38:A1:887:G:H8	1.75	0.52
38:A1:1227:C:O2'	38:A1:1282:G:N1	2.42	0.52
38:A1:1426:C:OP2	63:Aa:4:ARG:NH2	2.37	0.52
38:A1:1433:A:N3	67:Ae:27:ARG:NH2	2.53	0.52
38:A1:1526:U:H4'	38:A1:1594:A:N7	2.25	0.52
38:A1:1596:C:O2'	38:A1:1696:A:N3	2.41	0.52
38:A1:1694:U:O4	38:A1:1753:G:N1	2.43	0.52
38:A1:2412:G:H2'	38:A1:2413:A:H8	1.75	0.52
38:A1:2491:A:H5'	79:E:213:ALA:HB2	1.92	0.52
38:A1:3073:A:H2'	38:A1:3074:G:O4'	2.10	0.52
38:A1:3158:G:H1	38:A1:3292:A:H2	1.56	0.52
38:A1:3163:A:H2'	38:A1:3164:C:C6	2.45	0.52
41:AD:76:ALA:HB1	41:AD:108:ARG:HG2	1.91	0.52
52:AP:35:ALA:HB2	52:AP:58:ILE:HG23	1.92	0.52
54:AR:134:HIS:HE1	54:AR:136:ARG:CZ	2.22	0.52
60:AX:57:LEU:HD12	60:AX:62:VAL:HG12	1.91	0.52
65:Ac:33:SER:OG	65:Ac:39:SER:OG	2.16	0.52
68:Af:9:VAL:HG13	68:Af:100:ILE:HB	1.91	0.52
71:Ai:27:SER:HB2	71:Ai:30:LYS:NZ	2.24	0.52
74:Al:36:ARG:HG2	74:Al:37:TYR:HD1	1.74	0.52
80:DC:628:THR:O	80:DC:631:ARG:HG3	2.10	0.52
80:DC:634:TRP:CE3	80:DC:660:LYS:HG3	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:755:VAL:HB	80:DC:769:LYS:HD3	1.91	0.52
2:BB:87:ARG:H	2:BB:87:ARG:HD3	1.73	0.51
3:BC:145:GLY:O	13:BW:98:GLN:NE2	2.38	0.51
3:BC:179:VAL:HG22	34:B5:3:U:H5'	1.91	0.51
5:BG:195:VAL:O	5:BG:199:GLN:HG2	2.10	0.51
7:BI:41:LYS:HG3	7:BI:60:ILE:HG23	1.91	0.51
11:BO:82:LYS:HZ3	11:BO:116:GLU:HB3	1.74	0.51
25:BS:41:ARG:HH11	26:BT:46:PRO:HD3	1.75	0.51
30:Bd:34:TYR:OH	34:B5:1487:A:OP1	2.23	0.51
33:BM:43:ARG:NH1	33:BM:103:LEU:H	2.08	0.51
34:B5:158:U:O2'	34:B5:160:C:O5'	2.27	0.51
34:B5:259:U:O2'	34:B5:261:U:O4'	2.29	0.51
34:B5:375:U:H2'	34:B5:376:C:C6	2.44	0.51
34:B5:388:G:C6	34:B5:410:A:C6	2.98	0.51
34:B5:414:C:H2'	34:B5:415:C:O4'	2.09	0.51
34:B5:644:C:H2'	34:B5:645:C:C6	2.46	0.51
34:B5:1149:G:H2'	34:B5:1151:A:C8	2.45	0.51
34:B5:1163:A:N3	34:B5:1613:U:O2'	2.42	0.51
34:B5:1511:U:H2'	34:B5:1512:G:C8	2.44	0.51
35:AA:3:ARG:HG2	35:AA:207:VAL:HG12	1.92	0.51
35:AA:225:ILE:HD13	35:AA:233:GLN:O	2.10	0.51
38:A1:166:C:H2'	38:A1:167:U:C6	2.45	0.51
38:A1:337:G:O6	40:A4:26:U:O4	2.27	0.51
38:A1:359:U:H4'	72:Aj:25:ARG:HH12	1.75	0.51
38:A1:616:G:H2'	38:A1:617:G:C8	2.45	0.51
38:A1:840:C:H2'	38:A1:841:A:H8	1.75	0.51
38:A1:1269:U:OP1	38:A1:1270:A:N6	2.43	0.51
38:A1:1372:C:OP1	63:Aa:7:LYS:HE3	2.09	0.51
38:A1:1392:G:H1'	38:A1:1418:A:H61	1.75	0.51
38:A1:1727:G:H2'	38:A1:1728:G:H21	1.74	0.51
38:A1:1769:G:H2'	38:A1:1770:G:C8	2.46	0.51
38:A1:2328:U:H2'	38:A1:2329:C:H6	1.75	0.51
38:A1:2406:C:C2	38:A1:2407:C:C5	2.98	0.51
38:A1:2750:U:OP2	56:AT:69:LYS:NZ	2.43	0.51
41:AD:15:ARG:HG2	56:AT:19:PHE:HZ	1.74	0.51
46:AI:54:SER:HA	46:AI:163:GLN:HG3	1.91	0.51
47:AJ:101:ASN:HD22	47:AJ:131:MET:H	1.58	0.51
54:AR:86:GLU:HB2	54:AR:90:PRO:HA	1.91	0.51
54:AR:160:GLU:HA	54:AR:163:ARG:HB3	1.92	0.51
73:Ak:69:LEU:HD22	73:Ak:75:VAL:HG11	1.92	0.51
80:DC:147:LEU:HG	80:DC:192:TYR:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:586:ILE:HG23	80:DC:691:VAL:HG12	1.91	0.51
80:DC:634:TRP:CD2	80:DC:660:LYS:HG3	2.45	0.51
2:BB:176:VAL:HG22	2:BB:177:GLN:H	1.75	0.51
3:BC:44:LEU:HD21	3:BC:247:ALA:HB2	1.92	0.51
4:BE:187:ARG:HH12	34:B5:753:A:H8	1.54	0.51
5:BG:147:LEU:HD13	5:BG:156:PHE:HD2	1.75	0.51
6:BH:138:LYS:HG2	6:BH:150:GLN:NE2	2.24	0.51
6:BH:172:VAL:O	6:BH:176:LEU:N	2.43	0.51
7:BI:67:TRP:HB2	7:BI:109:PHE:CE1	2.44	0.51
8:BJ:139:GLN:NE2	15:BY:64:PHE:O	2.40	0.51
14:BX:75:GLN:HE21	14:BX:80:GLY:HA2	1.75	0.51
24:BR:75:GLU:OE1	24:BR:78:ARG:NH2	2.43	0.51
25:BS:92:ILE:HG21	25:BS:115:ARG:CZ	2.39	0.51
28:BZ:103:ARG:NH2	81:EC:6863:C:H1'	2.24	0.51
31:Bg:109:ASP:N	31:Bg:109:ASP:OD1	2.42	0.51
34:B5:1078:C:H2'	34:B5:1079:U:C6	2.45	0.51
34:B5:1407:U:H2'	34:B5:1408:G:C8	2.45	0.51
34:B5:1563:C:C2	34:B5:1564:U:C5	2.99	0.51
35:AA:200:ARG:NE	38:A1:2147:A:OP1	2.42	0.51
35:AA:216:HIS:O	35:AA:218:HIS:ND1	2.43	0.51
37:AC:108:LYS:HA	50:AN:203:ARG:HH21	1.74	0.51
38:A1:182:U:O2	38:A1:234:G:N2	2.30	0.51
38:A1:1141:C:O2'	38:A1:1153:A:N3	2.43	0.51
38:A1:2111:G:OP2	59:AW:48:ARG:NH2	2.43	0.51
38:A1:2578:U:H2'	38:A1:2579:G:O4'	2.10	0.51
38:A1:3048:A:N6	38:A1:3091:A:OP2	2.37	0.51
40:A4:91:C:H2'	40:A4:92:A:C8	2.45	0.51
42:AE:38:THR:HA	42:AE:90:LYS:HA	1.92	0.51
47:AJ:55:ARG:NH2	81:EC:6922:G:O2'	2.43	0.51
52:AP:54:HIS:HA	52:AP:83:TRP:CD1	2.45	0.51
54:AR:167:ARG:O	54:AR:172:ARG:NH1	2.38	0.51
55:AS:101:ALA:HA	55:AS:104:GLU:HG3	1.91	0.51
57:AU:79:LEU:HD12	57:AU:80:THR:N	2.25	0.51
62:AZ:54:THR:OG1	62:AZ:57:HIS:NE2	2.39	0.51
62:AZ:83:THR:HG22	69:Ag:93:PHE:HZ	1.75	0.51
80:DC:433:ARG:HH21	80:DC:457:VAL:HG11	1.75	0.51
80:DC:510:ARG:HG3	80:DC:549:HIS:HD2	1.74	0.51
2:BB:98:THR:H	2:BB:232:HIS:CE1	2.28	0.51
7:BI:23:LYS:NZ	34:B5:400:A:H2'	2.24	0.51
7:BI:113:PHE:CE2	7:BI:119:GLN:HB3	2.45	0.51
10:BN:112:LYS:NZ	34:B5:975:C:H5'	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BN:114:ARG:NE	34:B5:953:G:H5'	2.25	0.51
12:BV:40:ASP:HB3	12:BV:46:ILE:HD11	1.93	0.51
12:BV:74:GLN:HG3	12:BV:83:TRP:HE3	1.75	0.51
17:Bb:54:VAL:HG12	17:Bb:63:LEU:HD12	1.92	0.51
20:BF:164:PRO:HA	20:BF:167:ARG:HB2	1.92	0.51
21:BK:61:TRP:CD2	30:Bd:23:VAL:HA	2.45	0.51
26:BT:18:TYR:CD1	26:BT:135:ILE:HG13	2.45	0.51
31:Bg:150:TRP:HB2	31:Bg:174:ASN:ND2	2.23	0.51
34:B5:93:A:C8	34:B5:396:G:N2	2.78	0.51
34:B5:384:G:H2'	34:B5:385:A:H8	1.75	0.51
34:B5:657:U:O4	34:B5:676:G:O2'	2.26	0.51
34:B5:889:U:H2'	34:B5:890:C:C6	2.45	0.51
34:B5:1471:A:H2	34:B5:1474:G:N3	2.08	0.51
35:AA:20:THR:HA	35:AA:23:ARG:HG2	1.92	0.51
37:AC:49:ALA:HB2	48:AL:26:PHE:CE2	2.45	0.51
37:AC:261:VAL:O	37:AC:269:SER:OG	2.26	0.51
38:A1:7:C:H2'	38:A1:8:C:C6	2.45	0.51
38:A1:73:C:C5	71:Ai:15:LYS:HD3	2.45	0.51
38:A1:421:G:H1	38:A1:2383:C:H2'	1.75	0.51
38:A1:1145:G:N2	38:A1:1331:U:O2'	2.42	0.51
38:A1:1337:A:H2'	38:A1:1338:C:C6	2.44	0.51
38:A1:1361:U:H2'	38:A1:1362:G:H8	1.75	0.51
38:A1:1392:G:H1'	38:A1:1418:A:N6	2.26	0.51
38:A1:1844:C:O2'	72:Aj:11:ARG:NH2	2.43	0.51
38:A1:2369:G:C6	38:A1:2370:G:C6	2.98	0.51
38:A1:2424:A:H3'	38:A1:2425:G:H8	1.75	0.51
40:A4:5:U:H2'	40:A4:6:U:H6	1.75	0.51
40:A4:108:C:C4	40:A4:109:A:C6	2.99	0.51
60:AX:115:ARG:HG2	60:AX:117:ASN:OD1	2.10	0.51
72:Aj:28:HIS:O	72:Aj:32:LYS:N	2.43	0.51
80:DC:675:PRO:HG3	80:DC:714:TYR:CD1	2.46	0.51
80:DC:764:PRO:O	80:DC:791:GLN:NE2	2.35	0.51
81:EC:6875:C:H2'	81:EC:6876:A:O4'	2.10	0.51
5:BG:123:GLY:O	5:BG:127:THR:OG1	2.28	0.51
6:BH:161:GLN:OE1	6:BH:161:GLN:N	2.39	0.51
7:BI:195:ARG:HH22	9:BL:11:ARG:HG3	1.75	0.51
8:BJ:176:ASN:OD1	8:BJ:177:ALA:N	2.44	0.51
11:BO:89:THR:HB	11:BO:128:LYS:HG2	1.91	0.51
23:BQ:48:VAL:HG12	23:BQ:82:ARG:HB3	1.92	0.51
24:BR:3:ARG:HH21	34:B5:1413:U:H5'	1.76	0.51
34:B5:143:G:O2'	34:B5:144:U:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:226:A:N6	34:B5:834:G:H3'	2.25	0.51
34:B5:641:G:H2'	34:B5:642:G:H8	1.75	0.51
34:B5:732:G:H8	34:B5:734:A:H1'	1.75	0.51
34:B5:925:G:H2'	34:B5:926:A:C8	2.46	0.51
34:B5:1367:G:H2'	34:B5:1368:G:C8	2.45	0.51
34:B5:1461:C:H2'	34:B5:1462:G:H8	1.75	0.51
37:AC:289:ILE:HG12	53:AQ:125:ASP:OD1	2.09	0.51
37:AC:317:PRO:C	37:AC:319:LYS:H	2.19	0.51
38:A1:426:G:H2'	38:A1:427:C:H6	1.76	0.51
38:A1:637:C:C4	38:A1:2361:A:C5	2.99	0.51
38:A1:885:U:H2'	38:A1:886:C:H6	1.75	0.51
38:A1:2104:A:H2'	38:A1:2105:G:C8	2.45	0.51
38:A1:2222:A:H2'	38:A1:2223:A:C5	2.45	0.51
38:A1:2323:G:O2'	38:A1:2325:G:OP2	2.21	0.51
38:A1:2561:A:O2'	38:A1:2562:A:H8	1.92	0.51
38:A1:2747:A:H8	38:A1:2747:A:OP2	1.93	0.51
38:A1:3006:A:C2	38:A1:3141:A:C4	2.99	0.51
38:A1:3043:C:H2'	38:A1:3044:G:C8	2.45	0.51
38:A1:3064:U:H2'	38:A1:3065:G:C8	2.46	0.51
38:A1:3295:A:H2'	38:A1:3296:A:C8	2.46	0.51
38:A1:3314:A:H2'	38:A1:3315:G:C8	2.46	0.51
45:AH:47:LYS:NZ	49:AM:5:SER:O	2.43	0.51
45:AH:98:PRO:CD	80:DC:167:LEU:HA	2.40	0.51
51:AO:106[A]:GLU:OE2	51:AO:153[A]:VAL:HG21	2.11	0.51
52:AP:30:ARG:HA	52:AP:119:VAL:HG21	1.93	0.51
66:Ad:29:ALA:HB1	66:Ad:60:TRP:HE1	1.75	0.51
77:Ao:38:GLN:NE2	77:Ao:38:GLN:H	2.08	0.51
80:DC:162:ARG:HH22	83:DC:901:GDP:H1'	1.74	0.51
80:DC:203:TYR:N	80:DC:208:THR:OG1	2.36	0.51
80:DC:725:GLN:HG2	80:DC:803:THR:HB	1.93	0.51
81:EC:6923:C:H2'	81:EC:6924:G:C8	2.46	0.51
81:EC:6950:C:H2'	81:EC:6951:C:C6	2.45	0.51
2:BB:115:ARG:N	2:BB:118:GLN:HE22	2.08	0.51
3:BC:121:VAL:O	3:BC:125:ILE:HG12	2.10	0.51
7:BI:90:LEU:HG	7:BI:95:THR:HB	1.91	0.51
9:BL:54:ILE:HG23	9:BL:55:ASP:N	2.25	0.51
20:BF:196:GLU:O	20:BF:200:ASN:ND2	2.44	0.51
23:BQ:47:LYS:HD3	23:BQ:79:TYR:CZ	2.45	0.51
24:BR:48:ASN:HD21	34:B5:1388:A:H5"	1.74	0.51
31:Bg:274:LEU:HD23	31:Bg:313:TRP:CE2	2.45	0.51
34:B5:235:G:H3'	34:B5:236:A:H5"	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:967:A:H2'	34:B5:968:U:H6	1.76	0.51
34:B5:997:G:H2'	34:B5:998:A:C8	2.40	0.51
34:B5:1042:G:H22	34:B5:1076:A:H2	1.57	0.51
34:B5:1120:U:H2'	34:B5:1121:C:C6	2.46	0.51
34:B5:1202:A:H1'	34:B5:1207:C:N4	2.24	0.51
34:B5:1218:G:O4'	34:B5:1444:A:N6	2.44	0.51
34:B5:1404:C:H2'	34:B5:1405:G:C8	2.46	0.51
34:B5:1753:A:H2'	34:B5:1754:A:C8	2.44	0.51
38:A1:281:G:H2'	38:A1:282:G:C8	2.45	0.51
38:A1:848:A:OP2	38:A1:848:A:H8	1.93	0.51
38:A1:966:PSU:H5"	63:Aa:44:ASN:OD1	2.11	0.51
38:A1:1315:U:O4	51:AO:49[A]:ARG:NH1	2.39	0.51
38:A1:1317:A:O2'	38:A1:1318:A:H3'	2.10	0.51
38:A1:1722:U:C2	38:A1:1723:A:C8	2.99	0.51
38:A1:2224:A:C8	38:A1:2225:U:H1'	2.45	0.51
38:A1:2478:C:P	38:A1:2480:A:H62	2.33	0.51
38:A1:3095:U:H2'	38:A1:3096:C:H6	1.75	0.51
38:A1:3236:U:H2'	38:A1:3237:U:C6	2.46	0.51
39:A3:99:G:OP1	43:AF:128:LYS:NZ	2.35	0.51
40:A4:22:U:OP1	61:AY:12:ARG:NH2	2.41	0.51
40:A4:39:G:H1'	40:A4:104:A:H61	1.74	0.51
43:AF:110:ARG:HB3	53:AQ:3:ILE:HD13	1.93	0.51
48:AL:128:ARG:HG2	70:Ah:114:ARG:NH1	2.26	0.51
49:AM:19:ARG:HG2	49:AM:65:LEU:HD22	1.92	0.51
54:AR:84:THR:HG23	54:AR:87:ALA:H	1.75	0.51
54:AR:172:ARG:HB2	54:AR:176:ARG:HH21	1.76	0.51
63:Aa:73:LEU:HB2	63:Aa:109:TYR:HD2	1.76	0.51
74:Al:2:ALA:C	74:Al:4:GLN:H	2.18	0.51
80:DC:113:SER:HB2	80:DC:516:PRO:HG2	1.91	0.51
80:DC:633:ILE:HG21	80:DC:636:PHE:CZ	2.46	0.51
81:EC:6764:C:H2'	81:EC:6765:A:H8	1.75	0.51
5:BG:79:LYS:NZ	5:BG:80:ASN:OD1	2.28	0.51
7:BI:83:TYR:HD2	7:BI:196:LEU:HB3	1.76	0.51
13:BW:119:LYS:NZ	34:B5:687:G:H5"	2.25	0.51
15:BY:55:VAL:HA	15:BY:74:LEU:O	2.10	0.51
24:BR:116:LYS:HG3	24:BR:116:LYS:O	2.10	0.51
34:B5:172:C:H2'	34:B5:173:A:H8	1.74	0.51
34:B5:328:A:H2'	34:B5:329:G:C8	2.46	0.51
34:B5:328:A:H2'	34:B5:329:G:H8	1.75	0.51
34:B5:351:C:N4	34:B5:631:G:OP1	2.44	0.51
34:B5:624:G:H2'	34:B5:625:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1039:A:H3'	34:B5:1039:A:P	2.51	0.51
34:B5:1565:C:H2'	34:B5:1566:U:C6	2.45	0.51
34:B5:1591:C:H2'	34:B5:1592:A:C8	2.45	0.51
35:AA:150:LEU:HD23	35:AA:152:SER:H	1.76	0.51
36:AB:20:LYS:HZ3	38:A1:3139:A:H4'	1.75	0.51
38:A1:69:C:O2'	38:A1:101:G:O2'	2.22	0.51
38:A1:1146:C:H5"	67:Ae:47:ARG:HG2	1.92	0.51
38:A1:1440:G:H2'	38:A1:1441:G:H8	1.75	0.51
38:A1:1464:G:N2	38:A1:1466:G:H3'	2.25	0.51
38:A1:2737:C:C2	38:A1:2738:A:C8	2.99	0.51
38:A1:3146:G:H2'	38:A1:3147:G:H8	1.74	0.51
40:A4:107:G:C2	40:A4:108:C:C4	2.99	0.51
41:AD:51:LEU:HB3	41:AD:146:LEU:HA	1.93	0.51
45:AH:46:THR:HG23	45:AH:54:LYS:HB2	1.92	0.51
45:AH:91:ARG:NH2	75:Am:82:LEU:HD11	2.25	0.51
52:AP:129:THR:HB	52:AP:139:TYR:CD2	2.45	0.51
53:AQ:23:ASN:HD22	53:AQ:26:LEU:HB2	1.76	0.51
61:AY:58:VAL:HA	61:AY:104:LEU:HD13	1.93	0.51
1:BA:183:ARG:O	1:BA:191:ARG:NH1	2.40	0.51
5:BG:10:ASN:HB2	5:BG:128:THR:HG23	1.92	0.51
8:BJ:102:GLU:HA	8:BJ:105:LEU:HB2	1.91	0.51
15:BY:89:TYR:CE2	34:B5:525:A:H5"	2.46	0.51
15:BY:131:ARG:CZ	34:B5:153:G:H5'	2.40	0.51
16:Ba:82:ARG:NH1	16:Ba:85:ARG:HH12	2.08	0.51
17:Bb:19:HIS:CD2	34:B5:1072:C:H5'	2.46	0.51
28:BZ:97:LYS:NZ	34:B5:1531:G:O6	2.44	0.51
32:Bf:107:LYS:HE3	32:Bf:117:LEU:HG	1.93	0.51
34:B5:631:G:N2	34:B5:968:U:O2	2.40	0.51
34:B5:1071:U:H2'	34:B5:1072:C:C6	2.45	0.51
34:B5:1291:G:H1	34:B5:1324:G:N2	2.09	0.51
36:AB:37:ARG:NH2	36:AB:156:SER:HB2	2.19	0.51
38:A1:412:G:H2'	38:A1:413:U:C6	2.46	0.51
38:A1:436:A:H2'	38:A1:437:G:C8	2.46	0.51
38:A1:640:U:H2'	38:A1:641:C:H6	1.74	0.51
38:A1:809:G:H2'	38:A1:810:A:C8	2.45	0.51
38:A1:950:G:N1	38:A1:1368:U:OP2	2.33	0.51
38:A1:1423:C:H2'	38:A1:1424:C:H6	1.76	0.51
38:A1:1498:A:H2'	38:A1:1499:C:C6	2.45	0.51
38:A1:1660:C:H2'	38:A1:1661:G:C8	2.45	0.51
38:A1:1662:G:N2	38:A1:1722:U:O4	2.30	0.51
38:A1:1724:U:HO2'	38:A1:1725:C:H6	1.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1750:A:OP2	73:Ak:42:LYS:NZ	2.41	0.51
38:A1:1949:G:O6	38:A1:2097:U:O2	2.29	0.51
38:A1:2370:G:H2'	38:A1:2371:G:H8	1.76	0.51
38:A1:2507:C:H2'	38:A1:2508:U:H6	1.75	0.51
38:A1:2534:G:N1	38:A1:2546:C:N3	2.59	0.51
38:A1:2961:G:H2'	38:A1:2962:U:H6	1.76	0.51
39:A3:7:G:H5"	41:AD:22:ARG:HD3	1.92	0.51
42:AE:28:GLN:NE2	42:AE:29:LYS:O	2.44	0.51
43:AF:73:GLY:O	56:AT:143:THR:OG1	2.19	0.51
43:AF:140:SER:OG	43:AF:237:ASN:ND2	2.44	0.51
46:AI:73:ASN:O	46:AI:77:THR:OG1	2.16	0.51
49:AM:15:VAL:HG22	49:AM:65:LEU:HD11	1.91	0.51
59:AW:56:ARG:HH21	59:AW:61:LYS:HB3	1.75	0.51
65:Ac:27:TYR:CE2	65:Ac:52:ARG:HD3	2.46	0.51
67:Ae:75:LEU:HA	67:Ae:95:GLU:HB3	1.93	0.51
73:Ak:17:ARG:NH1	73:Ak:19:ASP:HB3	2.26	0.51
81:EC:6761:C:H2'	81:EC:6762:U:C6	2.45	0.51
81:EC:6922:G:C6	81:EC:6932:G:C6	2.99	0.51
1:BA:30:GLN:HE22	1:BA:32:HIS:HB2	1.74	0.51
3:BC:133:LYS:HA	3:BC:136:VAL:HG13	1.91	0.51
10:BN:96:VAL:O	10:BN:100:LYS:NZ	2.41	0.51
13:BW:71:LYS:NZ	34:B5:1096:C:OP2	2.43	0.51
14:BX:61:SER:HB2	14:BX:116:ASP:HB2	1.93	0.51
15:BY:10:ARG:NH2	34:B5:778:G:N7	2.58	0.51
19:BD:9:ARG:HA	19:BD:12:VAL:HG12	1.92	0.51
23:BQ:31:VAL:HA	23:BQ:67:VAL:HB	1.93	0.51
23:BQ:76:SER:OG	34:B5:1609:U:OP1	2.24	0.51
26:BT:14:PHE:CZ	26:BT:132:LEU:HD12	2.45	0.51
27:BU:28:SER:HB3	27:BU:34:LEU:HB2	1.93	0.51
34:B5:130:C:O2'	34:B5:131:C:OP1	2.27	0.51
34:B5:337:G:OP2	34:B5:338:C:N4	2.24	0.51
34:B5:374:U:H2'	34:B5:375:U:C6	2.46	0.51
34:B5:1564:U:H2'	34:B5:1565:C:C6	2.46	0.51
34:B5:1747:G:H2'	34:B5:1748:G:H8	1.75	0.51
34:B5:1784:C:H2'	34:B5:1785:U:C6	2.45	0.51
35:AA:134:VAL:HG12	35:AA:151:PRO:HD3	1.93	0.51
37:AC:131:VAL:HG12	37:AC:134:LEU:H	1.76	0.51
38:A1:122:A:H5"	38:A1:123:A:C8	2.46	0.51
38:A1:263:C:H3'	38:A1:264:G:H8	1.75	0.51
38:A1:1077:U:H2'	38:A1:1078:U:C6	2.45	0.51
38:A1:1817:G:H2'	38:A1:1818:U:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1943:C:H2'	38:A1:1944:U:H6	1.76	0.51
38:A1:2111:G:H5'	59:AW:48:ARG:NE	2.26	0.51
38:A1:2267:C:H2'	38:A1:2268:U:N1	2.25	0.51
38:A1:2290:C:H2'	38:A1:2291:A:H8	1.75	0.51
38:A1:2446:U:O5'	71:Ai:98:ARG:NH1	2.44	0.51
38:A1:2555:G:N7	69:Ag:95:ILE:HD11	2.26	0.51
38:A1:2753:G:H2'	38:A1:2754:G:C8	2.46	0.51
38:A1:2828:G:C2	38:A1:2863:G:H1'	2.46	0.51
38:A1:3232:G:H3'	38:A1:3233:C:H6	1.76	0.51
41:AD:238:ASP:O	41:AD:241:THR:OG1	2.25	0.51
54:AR:139:VAL:HA	54:AR:142:ILE:HG22	1.92	0.51
79:E:67:ILE:HD13	79:E:144:LEU:HD21	1.91	0.51
80:DC:155:VAL:HG21	80:DC:202:VAL:HG21	1.92	0.51
81:EC:6825:A:H2'	81:EC:6826:U:C6	2.45	0.51
2:BB:199:ASN:HA	2:BB:202:LYS:HD3	1.93	0.51
4:BE:120:SER:O	4:BE:164:LEU:HB3	2.11	0.51
9:BL:7:VAL:HG12	9:BL:14:GLN:HG3	1.93	0.51
13:BW:53:ILE:HG21	17:Bb:24:LEU:HD11	1.92	0.51
15:BY:20:ARG:HH12	15:BY:22:GLN:CB	2.10	0.51
15:BY:128:LYS:O	15:BY:131:ARG:HG2	2.11	0.51
22:BP:18:ARG:NH1	34:B5:1548:G:OP1	2.44	0.51
26:BT:83:ALA:HB2	34:B5:1525:A:H4'	1.93	0.51
34:B5:416:A:H3'	34:B5:417:A:H8	1.75	0.51
34:B5:808:U:H2'	34:B5:809:A:C8	2.45	0.51
34:B5:844:A:H5'	34:B5:845:G:H2'	1.92	0.51
34:B5:886:U:H2'	34:B5:887:A:O4'	2.11	0.51
34:B5:968:U:H2'	34:B5:969:C:O4'	2.11	0.51
34:B5:1001:A:H2'	34:B5:1002:G:C8	2.46	0.51
34:B5:1132:A:H2'	34:B5:1133:A:C8	2.45	0.51
34:B5:1187:PSU:H2'	34:B5:1188:G:C8	2.36	0.51
34:B5:1409:G:HO2'	34:B5:1411:A:H62	1.57	0.51
34:B5:1770:U:H2'	34:B5:1771:U:H6	1.76	0.51
35:AA:137:ILE:HG21	35:AA:149:ARG:HB2	1.93	0.51
37:AC:106:TRP:CE3	48:AL:22:VAL:HG21	2.46	0.51
38:A1:118:U:O2	38:A1:121:A:H5"	2.10	0.51
38:A1:121:A:N6	44:AG:127:PRO:O	2.43	0.51
38:A1:361:A:P	72:Aj:24:ARG:HH22	2.33	0.51
38:A1:853:G:O6	78:Ap:2:ALA:N	2.44	0.51
38:A1:1598:G:H2'	38:A1:1599:G:H8	1.76	0.51
38:A1:1658:G:OP1	69:Ag:16:ARG:NH2	2.43	0.51
38:A1:1917:C:P	54:AR:85:ARG:HH21	2.33	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2653:C:O2'	38:A1:2657:A:N1	2.40	0.51
38:A1:2840:C:H2'	38:A1:2841:G:O4'	2.09	0.51
38:A1:2970:C:H2'	38:A1:2972:G:H8	1.74	0.51
38:A1:3334:U:H4'	38:A1:3335:A:H5'	1.92	0.51
40:A4:58:G:O6	72:Aj:63:ARG:NH1	2.44	0.51
40:A4:151:C:O2'	40:A4:153:U:OP2	2.23	0.51
45:AH:57:VAL:HG23	45:AH:68:LEU:HD13	1.93	0.51
46:AI:138:VAL:HG21	46:AI:152:LEU:HD21	1.92	0.51
49:AM:17:VAL:HG11	49:AM:74:ARG:HA	1.93	0.51
63:Aa:111:LYS:HE3	63:Aa:113:LEU:HD21	1.93	0.51
1:BA:34:GLU:N	1:BA:35:PRO:HD2	2.26	0.51
1:BA:183:ARG:HB3	1:BA:191:ARG:CZ	2.41	0.51
1:BA:190:ASP:HB2	12:BV:42:GLU:OE1	2.11	0.51
2:BB:162:ARG:HE	2:BB:166:LYS:HZ3	1.59	0.51
3:BC:130:ILE:O	3:BC:134:LEU:HD23	2.11	0.51
3:BC:157:LYS:HB3	3:BC:171:PRO:HD3	1.93	0.51
8:BJ:38:ASN:O	8:BJ:41:GLU:HG3	2.11	0.51
8:BJ:171:ARG:NH2	34:B5:538:A:OP2	2.41	0.51
15:BY:35:VAL:HG21	15:BY:40:LEU:HD21	1.93	0.51
20:BF:42:LEU:HG	20:BF:43:PHE:CD2	2.46	0.51
23:BQ:132:LYS:NZ	34:B5:1588:G:OP2	2.36	0.51
26:BT:16:ASN:OD1	26:BT:17:ALA:N	2.44	0.51
27:BU:83:GLU:O	27:BU:84:MET:HE2	2.11	0.51
31:Bg:267:PRO:HG2	31:Bg:269:TYR:CE1	2.46	0.51
34:B5:897:C:O2'	34:B5:914:G:N2	2.44	0.51
34:B5:1210:C:H2'	34:B5:1211:A:H8	1.76	0.51
34:B5:1661:U:H2'	34:B5:1662:G:C8	2.46	0.51
35:AA:19:HIS:HD1	38:A1:823:C:H5"	1.76	0.51
35:AA:219:ILE:HG21	38:A1:2245:C:H5"	1.91	0.51
37:AC:203:ARG:HG3	38:A1:1383:G:H5"	1.92	0.51
37:AC:205:PRO:HB3	37:AC:247:PHE:HD2	1.76	0.51
38:A1:240:U:H1'	38:A1:241:G:C8	2.46	0.51
38:A1:1101:G:H5"	43:AF:107:ARG:HD3	1.91	0.51
38:A1:1624:G:O2'	38:A1:1643:A:N6	2.44	0.51
38:A1:1709:C:H2'	38:A1:1710:C:H6	1.76	0.51
38:A1:1914:G:C8	38:A1:2115:G:C2	2.99	0.51
38:A1:1920:U:O2'	38:A1:1932:A:N7	2.40	0.51
38:A1:2349:PSU:O2'	38:A1:3307:A:N3	2.44	0.51
38:A1:2559:U:OP1	44:AG:32:LYS:NZ	2.43	0.51
38:A1:2631:U:H2'	38:A1:2632:G:C8	2.46	0.51
38:A1:2639:G:H5"	56:AT:55:LYS:NZ	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3253:G:H2'	38:A1:3254:G:H8	1.75	0.51
40:A4:10:A:H2'	40:A4:11:C:C6	2.46	0.51
45:AH:103:ILE:HD13	45:AH:112:ILE:HD13	1.93	0.51
45:AH:135:GLU:N	45:AH:135:GLU:OE2	2.44	0.51
46:AI:46:PHE:HB2	46:AI:139:ARG:NH2	2.25	0.51
58:AV:13:ILE:HG23	58:AV:85:TRP:CG	2.46	0.51
62:AZ:57:HIS:HB3	62:AZ:61:LYS:HB2	1.93	0.51
72:Aj:25:ARG:HE	74:Al:51:ILE:HB	1.76	0.51
73:Ak:12:LEU:O	73:Ak:15:THR:OG1	2.27	0.51
73:Ak:58:ASP:HB3	73:Ak:61:LYS:HG2	1.93	0.51
80:DC:345:PRO:HA	80:DC:348:ALA:HB3	1.92	0.51
3:BC:45:VAL:HG11	3:BC:68:ILE:HA	1.93	0.50
3:BC:59:HIS:CD2	3:BC:238:SER:HA	2.46	0.50
4:BE:33:ALA:O	34:B5:121:U:H1'	2.12	0.50
7:BI:2:GLY:N	34:B5:393:C:OP1	2.44	0.50
7:BI:32:GLN:HE22	34:B5:1727:G:H21	1.59	0.50
8:BJ:176:ASN:ND2	34:B5:511:A:OP2	2.43	0.50
9:BL:152:GLN:NE2	10:BN:131:THR:O	2.44	0.50
10:BN:4:MET:HE1	34:B5:967:A:P	2.51	0.50
19:BD:220:PRO:HB3	31:Bg:221:MET:HE1	1.93	0.50
20:BF:134:VAL:O	20:BF:137:ILE:HG22	2.11	0.50
26:BT:88:VAL:HG23	34:B5:1468:U:H1'	1.92	0.50
31:Bg:168:THR:HG22	31:Bg:182:ASN:HA	1.92	0.50
34:B5:217:A:N6	34:B5:843:U:O4	2.44	0.50
34:B5:447:U:H2'	34:B5:448:C:C6	2.46	0.50
34:B5:480:G:O6	34:B5:508:U:C4	2.65	0.50
34:B5:480:G:C6	34:B5:508:U:N3	2.76	0.50
34:B5:1102:G:H2'	34:B5:1103:U:C6	2.46	0.50
34:B5:1406:A:H2'	34:B5:1407:U:C6	2.46	0.50
34:B5:1488:G:O2'	34:B5:1494:C:O2	2.26	0.50
34:B5:1748:G:H2'	34:B5:1749:A:C8	2.46	0.50
37:AC:181:VAL:O	37:AC:182:LEU:HG	2.11	0.50
38:A1:11:A:H2'	38:A1:12:A:C8	2.46	0.50
38:A1:141:C:H2'	38:A1:142:C:C6	2.45	0.50
38:A1:209:A:H4'	38:A1:211:A:C8	2.46	0.50
38:A1:353:G:H1'	38:A1:354:U:H5	1.74	0.50
38:A1:499:G:H2'	38:A1:500:C:C6	2.46	0.50
38:A1:936:A:H2'	38:A1:938:C:N4	2.25	0.50
38:A1:1054:A:H5"	38:A1:2637:A:H61	1.76	0.50
38:A1:1139:G:P	64:Ab:14:ARG:HH21	2.35	0.50
38:A1:1284:C:H5	38:A1:1285:G:C2	2.29	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1339:C:H2'	38:A1:1340:G:H8	1.75	0.50
38:A1:1427:U:H2'	38:A1:1428:A:C8	2.46	0.50
38:A1:1825:G:OP1	73:Ak:48:SER:OG	2.23	0.50
38:A1:1845:G:H5"	38:A1:1846:C:H5"	1.93	0.50
38:A1:2286:U:H4'	38:A1:2287:C:H3'	1.92	0.50
38:A1:3188:G:C2	38:A1:3205:G:N1	2.79	0.50
38:A1:3192:U:O2	38:A1:3200:G:N2	2.26	0.50
39:A3:55:A:C2	47:AJ:9:MET:HE1	2.46	0.50
46:AI:4:ARG:NE	46:AI:99:ILE:HD11	2.26	0.50
50:AN:35:VAL:HG12	50:AN:65:ARG:NE	2.26	0.50
65:Ac:34:LEU:HA	65:Ac:39:SER:HB2	1.93	0.50
80:DC:558:PRO:HB3	80:DC:776:GLU:OE2	2.11	0.50
81:EC:6785:C:H3'	81:EC:6786:A:H8	1.76	0.50
81:EC:6837:G:C6	81:EC:6847:G:N1	2.78	0.50
81:EC:6906:G:H2'	81:EC:6907:G:H8	1.75	0.50
1:BA:58:VAL:O	1:BA:62:ARG:HG3	2.10	0.50
1:BA:70:PRO:HB2	1:BA:94:GLY:H	1.75	0.50
1:BA:188:LEU:HD22	1:BA:193:GLN:HE22	1.76	0.50
6:BH:139:ARG:NE	13:BW:53:ILE:HG13	2.27	0.50
7:BI:32:GLN:HE22	34:B5:1727:G:N2	2.09	0.50
14:BX:65:ASN:ND2	34:B5:575:C:H41	2.09	0.50
23:BQ:58:ASP:N	23:BQ:58:ASP:OD1	2.43	0.50
25:BS:79:TYR:O	25:BS:80:LYS:HG2	2.10	0.50
27:BU:50:LEU:HD23	27:BU:93:LEU:HD22	1.93	0.50
34:B5:156:A:H2'	34:B5:157:A:C8	2.46	0.50
34:B5:184:C:H2'	34:B5:185:U:C6	2.46	0.50
34:B5:200:A:H2'	34:B5:201:G:C8	2.46	0.50
34:B5:396:G:H22	34:B5:398:G:H3'	1.76	0.50
34:B5:442:C:H2'	34:B5:443:C:C6	2.45	0.50
34:B5:691:C:H2'	34:B5:692:C:H6	1.77	0.50
34:B5:1044:U:H2'	34:B5:1045:C:H6	1.75	0.50
34:B5:1783:C:H2'	34:B5:1784:C:C6	2.47	0.50
35:AA:234:LYS:NZ	38:A1:2163:C:OP2	2.39	0.50
37:AC:181:VAL:HG23	37:AC:201:GLN:HB3	1.94	0.50
38:A1:60:A:C4	38:A1:61:A:C8	2.99	0.50
38:A1:150:A:OP1	50:AN:56:LYS:NZ	2.44	0.50
38:A1:165:A:O2'	38:A1:166:C:H5"	2.09	0.50
38:A1:769:G:H2'	38:A1:770:G:C8	2.47	0.50
38:A1:946:U:P	67:Ae:34:LYS:NZ	2.84	0.50
38:A1:1178:G:O6	68:Af:20:LYS:NZ	2.39	0.50
38:A1:1295:G:H2'	38:A1:1296:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1423:C:H2'	38:A1:1424:C:C6	2.47	0.50
38:A1:1801:U:H2'	38:A1:1802:C:H6	1.76	0.50
38:A1:2743:A:H5'	77:Ao:9:LYS:NZ	2.26	0.50
38:A1:2964:G:O2'	38:A1:2966:G:O6	2.28	0.50
38:A1:2988:C:H2'	38:A1:2989:U:C6	2.43	0.50
38:A1:3049:A:O2'	59:AW:17:ARG:NH2	2.31	0.50
38:A1:3363:U:H2'	38:A1:3364:C:H6	1.77	0.50
40:A4:17:A:H2'	40:A4:18:U:H6	1.76	0.50
50:AN:122:ASN:OD1	50:AN:123:GLN:N	2.43	0.50
52:AP:176:ILE:HG13	52:AP:179:GLN:HE21	1.75	0.50
57:AU:46:ALA:HB3	57:AU:49:ASN:ND2	2.26	0.50
80:DC:482:LYS:NZ	80:DC:484:SER:OG	2.44	0.50
81:EC:6784:G:H2'	81:EC:6785:C:O4'	2.11	0.50
2:BB:133:TYR:CD2	2:BB:181:LEU:HD13	2.46	0.50
9:BL:84:ILE:O	9:BL:109:VAL:N	2.34	0.50
15:BY:131:ARG:NH1	34:B5:153:G:H5'	2.25	0.50
21:BK:84:GLU:HG2	21:BK:85:HIS:CD2	2.47	0.50
25:BS:41:ARG:HD3	34:B5:1565:C:H5"	1.93	0.50
26:BT:13:ASP:HA	26:BT:16:ASN:ND2	2.26	0.50
28:BZ:99:ALA:HB1	28:BZ:101:TYR:HE1	1.76	0.50
33:BM:38:HIS:ND1	33:BM:126:TRP:O	2.44	0.50
34:B5:427:C:H2'	34:B5:428:A:O4'	2.11	0.50
34:B5:1693:A:OP2	34:B5:1693:A:H8	1.93	0.50
36:AB:117:ARG:HA	36:AB:175:LYS:HD2	1.93	0.50
38:A1:273:A:H61	38:A1:293:C:H42	1.57	0.50
38:A1:522:A:H1'	55:AS:65:ASN:ND2	2.27	0.50
38:A1:1107:C:H2'	38:A1:1108:U:C6	2.47	0.50
38:A1:1177:G:H4'	68:Af:18:ARG:HH12	1.75	0.50
38:A1:1470:U:H2'	38:A1:1471:U:C6	2.46	0.50
38:A1:1636:U:H5'	62:AZ:74:VAL:HG13	1.92	0.50
38:A1:1939:G:OP1	54:AR:80:LYS:NZ	2.33	0.50
38:A1:2743:A:H2'	38:A1:2744:U:C6	2.46	0.50
38:A1:2992:U:H2'	38:A1:2993:G:O4'	2.11	0.50
38:A1:3113:A:O2'	45:AH:69:ARG:HB3	2.11	0.50
38:A1:3173:G:N1	68:Af:92:LYS:O	2.39	0.50
39:A3:16:U:H2'	39:A3:17:A:C8	2.46	0.50
50:AN:27:VAL:HG13	50:AN:122:ASN:HD21	1.76	0.50
50:AN:46:ASP:OD1	50:AN:47:LYS:N	2.42	0.50
50:AN:115:VAL:HG23	50:AN:133:ILE:O	2.11	0.50
54:AR:28:GLU:HB3	54:AR:31:GLU:OE1	2.11	0.50
61:AY:38:GLU:OE1	61:AY:38:GLU:N	2.33	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:Ai:74:LYS:HZ1	71:Ai:80:PHE:HD1	1.58	0.50
72:Aj:21:ARG:HB3	72:Aj:37:CYS:SG	2.52	0.50
80:DC:150:ARG:HB2	80:DC:355:GLN:NE2	2.26	0.50
80:DC:203:TYR:HB2	80:DC:206:ARG:HG2	1.93	0.50
80:DC:653:VAL:HG13	80:DC:656:LEU:HG	1.93	0.50
81:EC:6804:A:H5'	81:EC:6807:A:O5'	2.12	0.50
2:BB:138:PHE:HB2	2:BB:214:LYS:HB3	1.92	0.50
3:BC:170:ILE:N	3:BC:197:TYR:O	2.43	0.50
5:BG:48:TYR:OH	5:BG:119:GLN:O	2.19	0.50
7:BI:23:LYS:HD2	7:BI:23:LYS:C	2.36	0.50
11:BO:17:ALA:HB2	11:BO:79:VAL:HG11	1.93	0.50
14:BX:63:GLN:NE2	14:BX:64:PRO:HA	2.26	0.50
19:BD:23:GLU:OE2	21:BK:60:SER:OG	2.25	0.50
25:BS:116:LEU:HA	25:BS:119:ILE:HD12	1.92	0.50
34:B5:180:A:H2'	34:B5:181:A:H8	1.77	0.50
34:B5:809:A:H2'	34:B5:810:G:C8	2.46	0.50
34:B5:851:U:H4'	34:B5:852:C:C5'	2.42	0.50
34:B5:883:C:H2'	34:B5:884:A:C8	2.47	0.50
34:B5:1087:A:H5'	34:B5:1298:U:O4	2.12	0.50
37:AC:142:VAL:HG11	37:AC:247:PHE:CD1	2.46	0.50
38:A1:598:A:H2'	38:A1:599:C:C6	2.47	0.50
38:A1:1187:C:H2'	38:A1:1188:U:C6	2.47	0.50
38:A1:1249:G:C2'	38:A1:1250:G:H4'	2.33	0.50
38:A1:2585:G:H5"	40:A4:151:C:H42	1.76	0.50
38:A1:2810:C:H2'	38:A1:2811:A:H8	1.76	0.50
38:A1:2853:A:H4'	46:AI:63:GLU:OE1	2.11	0.50
38:A1:2998:U:H2'	38:A1:2999:U:C6	2.45	0.50
38:A1:3172:A:O3'	51:AO:101[A]:ARG:NH2	2.44	0.50
38:A1:3346:U:H2'	38:A1:3347:A:C8	2.46	0.50
38:A1:3370:A:C4	38:A1:3371:G:C8	3.00	0.50
42:AE:28:GLN:HG3	42:AE:30:LEU:HD22	1.93	0.50
44:AG:55:TYR:CE1	44:AG:56:VAL:HG23	2.46	0.50
45:AH:5:GLN:OE1	45:AH:58:HIS:ND1	2.33	0.50
50:AN:167:THR:HA	50:AN:170:LYS:HB3	1.92	0.50
51:AO:14[A]:HIS:CB	51:AO:19[A]:LEU:HD12	2.41	0.50
51:AO:37[A]:ARG:HB2	51:AO:108[A]:ILE:HD11	1.93	0.50
58:AV:80:ARG:HB3	58:AV:99:ALA:HB3	1.93	0.50
58:AV:81:GLN:HB3	58:AV:85:TRP:CZ3	2.46	0.50
61:AY:40:ARG:HD3	61:AY:46:LYS:HD3	1.93	0.50
62:AZ:17:ARG:HD2	62:AZ:18:TYR:CE1	2.46	0.50
65:Ac:98:SER:HB2	65:Ac:100:ILE:HG13	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BH:33:GLU:HG3	6:BH:76:LYS:HD2	1.93	0.50
7:BI:170:SER:H	7:BI:181:GLY:HA2	1.77	0.50
8:BJ:41:GLU:OE2	8:BJ:42:ILE:HG23	2.11	0.50
11:BO:89:THR:CB	11:BO:128:LYS:HG2	2.41	0.50
23:BQ:52:LEU:HG	23:BQ:60:PHE:HE2	1.77	0.50
28:BZ:58:ARG:HB3	81:EC:6863:C:C5	2.47	0.50
31:Bg:70:ASP:HB2	31:Bg:111:MET:O	2.11	0.50
34:B5:233:C:O2'	34:B5:237:C:N4	2.37	0.50
34:B5:234:G:O2'	34:B5:834:G:OP1	2.17	0.50
34:B5:775:G:C6	34:B5:785:U:O2	2.65	0.50
34:B5:1471:A:N7	34:B5:1538:U:O4	2.45	0.50
34:B5:1640:C:N4	81:EC:6952:U:OP1	2.44	0.50
34:B5:1791:A:HO2'	34:B5:1793:G:H8	1.57	0.50
37:AC:140:HIS:CD2	37:AC:247:PHE:H	2.29	0.50
38:A1:507:U:H2'	38:A1:508:U:H6	1.76	0.50
38:A1:744:A:H2'	38:A1:745:C:O4'	2.11	0.50
38:A1:798:G:O2'	48:AL:14:PHE:HB2	2.10	0.50
38:A1:2471:U:O2	38:A1:2475:G:O6	2.30	0.50
38:A1:2565:U:H2'	38:A1:2566:C:C6	2.47	0.50
38:A1:2761:G:N1	38:A1:2796:G:OP1	2.40	0.50
38:A1:3288:G:O2'	38:A1:3289:G:O5'	2.28	0.50
41:AD:39:GLN:OE1	41:AD:40:HIS:N	2.45	0.50
41:AD:95:TRP:CD1	41:AD:158:ARG:HA	2.47	0.50
50:AN:7:LEU:HD12	50:AN:10:LEU:HD11	1.93	0.50
80:DC:170:SER:HB3	80:DC:173:ASP:HB3	1.94	0.50
80:DC:508:LEU:HB3	80:DC:520:THR:HG21	1.92	0.50
80:DC:730:LEU:N	80:DC:799:ASP:HB2	2.26	0.50
3:BC:90:THR:N	3:BC:93:GLY:O	2.42	0.50
4:BE:7:LYS:NZ	34:B5:449:C:O2'	2.20	0.50
4:BE:222:LEU:O	4:BE:225:VAL:HG22	2.12	0.50
27:BU:87:HIS:HB3	27:BU:89:ARG:NH1	2.26	0.50
28:BZ:65:LEU:HD13	28:BZ:79:ALA:HB3	1.94	0.50
31:Bg:9:LEU:HB3	31:Bg:313:TRP:CE2	2.46	0.50
31:Bg:21:THR:OG1	31:Bg:69:GLN:NE2	2.45	0.50
34:B5:576:G:H5"	34:B5:580:A:H5'	1.94	0.50
34:B5:848:C:P	54:AR:165:LYS:HD2	2.51	0.50
34:B5:1186:U:H2'	34:B5:1187:PSU:O4'	2.12	0.50
34:B5:1352:G:N2	34:B5:1354:G:H1'	2.26	0.50
36:AB:17:LEU:HD11	36:AB:233:TRP:HH2	1.76	0.50
36:AB:197:GLU:O	36:AB:201:LYS:NZ	2.35	0.50
38:A1:236:G:N2	38:A1:237:G:C2	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:351:A:N6	74:Al:37:TYR:O	2.41	0.50
38:A1:361:A:OP1	72:Aj:36:SER:OG	2.25	0.50
38:A1:439:C:N4	38:A1:619:A:N1	2.59	0.50
38:A1:548:G:H1'	38:A1:549:U:C5	2.47	0.50
38:A1:604:G:H2'	38:A1:605:U:H6	1.75	0.50
38:A1:678:G:H2'	38:A1:679:U:O4'	2.11	0.50
38:A1:869:G:C6	38:A1:891:G:O6	2.65	0.50
38:A1:1132:C:H2'	38:A1:1133:A:C8	2.46	0.50
38:A1:1310:G:H2'	38:A1:1311:G:H8	1.73	0.50
38:A1:1402:C:H2'	38:A1:1403:C:C6	2.46	0.50
38:A1:2485:A:H2'	38:A1:2485:A:N3	2.27	0.50
39:A3:24:A:H2'	39:A3:25:G:C8	2.47	0.50
42:AE:108:LYS:HE3	42:AE:109:GLU:HG3	1.94	0.50
48:AL:42:ARG:O	48:AL:46:ILE:HG12	2.12	0.50
53:AQ:102:ALA:HB2	53:AQ:122:ILE:HG13	1.94	0.50
60:AX:105:VAL:HG21	60:AX:135:ILE:HG12	1.93	0.50
67:Ae:43:ARG:HH12	67:Ae:44:ARG:HB3	1.76	0.50
72:Aj:34:CYS:HG	72:Aj:35:SER:H	1.58	0.50
78:Ap:33:GLN:OE1	78:Ap:49:ARG:NH1	2.44	0.50
80:DC:187:VAL:O	80:DC:190:SER:OG	2.17	0.50
80:DC:798:PHE:CE2	85:DC:903:SO1:H72	2.46	0.50
81:EC:6767:G:H21	81:EC:6824:C:H5	1.59	0.50
4:BE:38:LEU:HD13	34:B5:298:C:H5'	1.93	0.50
16:Ba:82:ARG:HH12	34:B5:1152:A:H5"	1.76	0.50
29:Bc:9:LEU:O	29:Bc:33:LEU:N	2.32	0.50
33:BM:35:ALA:HB1	33:BM:41:LEU:HB2	1.93	0.50
34:B5:297:U:H2'	34:B5:298:C:C6	2.46	0.50
34:B5:367:A:H2'	34:B5:368:U:O4'	2.11	0.50
34:B5:961:U:H2'	34:B5:962:C:C6	2.47	0.50
37:AC:159:ILE:HG21	37:AC:165:ALA:HB2	1.93	0.50
38:A1:270:U:H2'	38:A1:271:C:H6	1.76	0.50
38:A1:292:U:OP2	50:AN:68:ARG:NH2	2.42	0.50
38:A1:370:U:H2'	38:A1:371:G:O4'	2.12	0.50
38:A1:400:G:H5"	38:A1:403:C:H1'	1.94	0.50
38:A1:971:G:H2'	38:A1:972:A:C8	2.46	0.50
38:A1:1008:U:O4	38:A1:1043:C:N4	2.45	0.50
38:A1:1246:G:OP2	38:A1:1268:G:N2	2.45	0.50
38:A1:1527:C:H2'	38:A1:1528:G:H8	1.76	0.50
38:A1:1542:G:H2'	38:A1:1543:G:C8	2.46	0.50
38:A1:1598:G:H2'	38:A1:1599:G:C8	2.46	0.50
38:A1:2118:C:H3'	38:A1:2119:A:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2631:U:P	56:AT:6:GLY:HA3	2.51	0.50
39:A3:72:A:H2'	39:A3:74:C:C5	2.46	0.50
39:A3:86:U:O2'	43:AF:218:ARG:NH1	2.45	0.50
40:A4:109:A:C2	40:A4:114:G:N1	2.79	0.50
44:AG:161:GLU:CD	50:AN:26:ARG:HH22	2.20	0.50
44:AG:224:ASP:OD1	44:AG:224:ASP:N	2.43	0.50
46:AI:48:LEU:HA	46:AI:178:ARG:HH22	1.75	0.50
54:AR:172:ARG:HB2	54:AR:176:ARG:NH2	2.25	0.50
55:AS:27:MET:HE1	56:AT:151:LEU:O	2.11	0.50
62:AZ:14:VAL:HG13	69:Ag:86:LYS:NZ	2.26	0.50
65:Ac:13:LYS:HE3	65:Ac:100:ILE:HA	1.92	0.50
71:Ai:74:LYS:HE2	71:Ai:80:PHE:CA	2.42	0.50
72:Aj:26:SER:O	72:Aj:26:SER:OG	2.28	0.50
80:DC:130:ASP:O	80:DC:134:GLY:N	2.45	0.50
80:DC:263:ASP:OD2	80:DC:265:GLU:HG3	2.12	0.50
81:EC:6768:U:N3	81:EC:6824:C:N3	2.59	0.50
9:BL:69:LYS:NZ	34:B5:111:U:O2	2.45	0.50
11:BO:132:ARG:HA	16:Ba:29:SER:HG	1.75	0.50
14:BX:70:LYS:NZ	14:BX:89:ASN:O	2.42	0.50
19:BD:28:GLU:HG3	19:BD:29:LEU:HG	1.94	0.50
20:BF:177:ILE:HD12	20:BF:180:ARG:HH11	1.77	0.50
26:BT:134:ARG:HH12	34:B5:1360:A:H5"	1.77	0.50
31:Bg:282:SER:N	34:B5:1394:G:OP1	2.44	0.50
34:B5:153:G:H2'	34:B5:154:G:C8	2.47	0.50
34:B5:514:G:O2'	34:B5:515:A:O4'	2.29	0.50
34:B5:559:C:H2'	34:B5:560:U:H6	1.76	0.50
34:B5:827:C:H2'	34:B5:844:A:N1	2.27	0.50
34:B5:1209:C:C4	34:B5:1455:G:N2	2.79	0.50
34:B5:1264:G:H2'	34:B5:1265:G:H8	1.70	0.50
34:B5:1288:G:N7	34:B5:1314:U:O2'	2.42	0.50
34:B5:1593:A:H2'	34:B5:1594:G:H8	1.77	0.50
38:A1:99:A:H3'	38:A1:100:A:H8	1.77	0.50
38:A1:120:G:H21	38:A1:121:A:H62	1.60	0.50
38:A1:149:U:H4'	50:AN:56:LYS:HB3	1.93	0.50
38:A1:348:A:N3	38:A1:352:A:O2'	2.45	0.50
38:A1:502:U:H4'	42:AE:26:ARG:HB2	1.94	0.50
38:A1:655:C:OP1	67:Ae:27:ARG:HG2	2.10	0.50
38:A1:717:C:H2'	38:A1:718:G:O4'	2.12	0.50
38:A1:951:A:H5"	38:A1:1143:A:N1	2.27	0.50
38:A1:1646:G:N2	38:A1:1808:G:N3	2.59	0.50
38:A1:1659:U:H2'	38:A1:1660:C:H6	1.74	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1746:U:H2'	38:A1:1747:G:H8	1.76	0.50
38:A1:1925:U:O2'	38:A1:1927:G:N7	2.45	0.50
38:A1:2158:A:N7	38:A1:2160:G:C2	2.80	0.50
38:A1:2552:C:O2	65:Ac:53:LYS:NZ	2.29	0.50
38:A1:2684:C:H2'	38:A1:2685:C:C6	2.47	0.50
38:A1:3000:A:H2'	38:A1:3001:C:H6	1.76	0.50
38:A1:3220:G:C6	38:A1:3266:G:N1	2.79	0.50
40:A4:139:U:H2'	40:A4:140:G:C8	2.47	0.50
41:AD:119:TYR:CE1	41:AD:135:VAL:HG13	2.47	0.50
46:AI:33:ILE:HG23	46:AI:69:ARG:HD2	1.94	0.50
52:AP:50:GLN:HB3	52:AP:55:GLN:HB3	1.93	0.50
55:AS:87:THR:HB	56:AT:156:TYR:CE2	2.46	0.50
59:AW:6:ASP:OD1	59:AW:9:SER:N	2.45	0.50
71:Ai:28:TYR:H	71:Ai:30:LYS:HZ3	1.58	0.50
72:Aj:79:GLN:OE1	72:Aj:79:GLN:N	2.42	0.50
80:DC:840:ASP:OD1	80:DC:841:LYS:N	2.45	0.50
81:EC:6834:U:O2'	81:EC:6873:A:O4'	2.24	0.50
81:EC:6862:G:H3'	81:EC:6863:C:C5'	2.41	0.50
2:BB:173:THR:HA	2:BB:176:VAL:HG12	1.94	0.50
6:BH:44:LYS:HG3	6:BH:63:PRO:HD3	1.94	0.50
8:BJ:136:VAL:HG13	8:BJ:152:SER:HB3	1.93	0.50
9:BL:147:GLY:HA3	9:BL:150:ASN:ND2	2.27	0.50
10:BN:11:ILE:HD11	34:B5:1072:C:H4'	1.93	0.50
13:BW:47:ILE:HG22	13:BW:48:GLY:N	2.27	0.50
21:BK:30:ALA:HA	21:BK:38:LYS:HB2	1.93	0.50
25:BS:36:LYS:NZ	34:B5:1567:U:H4'	2.26	0.50
34:B5:368:U:H2'	34:B5:369:A:O4'	2.11	0.50
34:B5:413:U:H2'	34:B5:414:C:C6	2.47	0.50
34:B5:542:A:H4'	34:B5:543:C:H3'	1.94	0.50
34:B5:631:G:H2'	34:B5:632:PSU:C6	2.47	0.50
34:B5:854:U:P	54:AR:181:ARG:HE	2.35	0.50
34:B5:890:C:H2'	34:B5:891:A:H8	1.77	0.50
34:B5:1140:G:H2'	34:B5:1141:G:H8	1.76	0.50
34:B5:1266:U:H2'	34:B5:1267:G:H8	1.75	0.50
36:AB:218:ILE:HB	36:AB:337:THR:OG1	2.12	0.50
37:AC:3:ARG:HB2	37:AC:5:GLN:OE1	2.12	0.50
38:A1:87:U:OP2	38:A1:98:G:N1	2.36	0.50
38:A1:413:U:H2'	38:A1:414:U:H6	1.77	0.50
38:A1:737:G:H2'	38:A1:738:A:H8	1.76	0.50
38:A1:743:C:O2	53:AQ:141:ARG:NE	2.45	0.50
38:A1:810:A:H2'	38:A1:811:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1100:U:H1'	43:AF:105:LEU:HD21	1.94	0.50
38:A1:1268:G:H4'	38:A1:1274:A:H62	1.76	0.50
38:A1:1478:C:H2'	38:A1:1479:U:C6	2.47	0.50
38:A1:1634:G:C6	38:A1:1640:G:C6	3.00	0.50
38:A1:2163:C:H2'	38:A1:2164:A:H8	1.77	0.50
38:A1:2895:G:H2'	38:A1:2896:A:C8	2.47	0.50
39:A3:20:A:H2'	39:A3:21:G:H8	1.77	0.50
39:A3:85:G:O2'	39:A3:87:G:OP1	2.26	0.50
40:A4:27:U:H2'	40:A4:28:C:H6	1.76	0.50
40:A4:56:G:N2	40:A4:62:C:O4'	2.45	0.50
45:AH:96:HIS:O	80:DC:167:LEU:HD12	2.11	0.50
49:AM:31:LYS:HD2	49:AM:53:VAL:HG23	1.94	0.50
49:AM:80:THR:HA	49:AM:83:LYS:HE2	1.94	0.50
51:AO:26[A]:GLN:HE21	51:AO:31[A]:GLN:HG3	1.75	0.50
51:AO:73[A]:PHE:HD2	51:AO:78[A]:ARG:HB3	1.76	0.50
52:AP:72:GLN:HG3	52:AP:83:TRP:CZ2	2.43	0.50
78:Ap:36:ARG:CZ	78:Ap:38:ASP:HA	2.42	0.50
3:BC:204:THR:OG1	34:B5:5:U:OP2	2.26	0.49
8:BJ:79:ARG:NE	34:B5:763:G:OP2	2.45	0.49
11:BO:38:THR:HG21	11:BO:41:ARG:HG2	1.94	0.49
13:BW:25:VAL:HG12	13:BW:65:LEU:HD21	1.93	0.49
15:BY:20:ARG:C	15:BY:21:LYS:HD2	2.37	0.49
19:BD:19:ALA:HB2	30:Bd:50:ILE:HD13	1.94	0.49
19:BD:135:GLU:OE1	19:BD:187:LYS:HB3	2.12	0.49
22:BP:28:MET:HE3	22:BP:32:ASP:CG	2.37	0.49
22:BP:61:ARG:HA	22:BP:64:LYS:HE2	1.94	0.49
25:BS:127:HIS:CD2	25:BS:133:VAL:HG11	2.47	0.49
29:Bc:18:ARG:HG3	34:B5:1616:G:H4'	1.93	0.49
34:B5:97:C:H2'	34:B5:98:U:H6	1.76	0.49
34:B5:198:A:H3'	34:B5:199:G:H8	1.76	0.49
34:B5:940:A:H2'	34:B5:941:A:C8	2.47	0.49
34:B5:1346:A:H62	34:B5:1375:A:H61	1.60	0.49
34:B5:1357:A:H2'	34:B5:1358:G:H8	1.77	0.49
34:B5:1391:A:H2'	34:B5:1392:U:C6	2.47	0.49
34:B5:1649:G:H2'	34:B5:1650:U:H6	1.76	0.49
34:B5:1719:A:H3'	34:B5:1720:G:H8	1.76	0.49
35:AA:7:ASN:OD1	35:AA:8:GLN:N	2.45	0.49
36:AB:152:LYS:NZ	36:AB:192:VAL:HB	2.24	0.49
37:AC:145:ILE:HD11	37:AC:150:LEU:HB2	1.94	0.49
38:A1:130:A:C6	38:A1:139:G:C6	2.99	0.49
38:A1:376:G:O2'	38:A1:401:U:O4	2.21	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:542:G:H1	38:A1:548:G:N2	2.10	0.49
38:A1:674:G:H2'	38:A1:675:C:O4'	2.12	0.49
38:A1:718:G:C2	38:A1:721:G:H1'	2.47	0.49
38:A1:1064:A:H61	38:A1:1092:C:H2'	1.77	0.49
38:A1:1335:C:H2'	38:A1:1336:U:H6	1.77	0.49
38:A1:1347:U:OP2	53:AQ:38:ARG:NH1	2.38	0.49
38:A1:1348:U:OP1	53:AQ:39:ARG:NH1	2.45	0.49
38:A1:1396:C:H2'	38:A1:1397:C:C6	2.47	0.49
38:A1:1468:A:H2'	38:A1:1469:C:C6	2.46	0.49
38:A1:1476:G:H2'	38:A1:1477:A:O4'	2.12	0.49
38:A1:2227:C:H2'	38:A1:2228:A:C8	2.47	0.49
38:A1:2315:G:C2	38:A1:2316:G:C6	2.99	0.49
38:A1:2441:A:H2'	38:A1:2442:G:O4'	2.12	0.49
38:A1:2510:U:H2'	38:A1:2511:A:H8	1.77	0.49
38:A1:3083:G:H2'	38:A1:3084:C:C6	2.46	0.49
38:A1:3289:G:H2'	38:A1:3290:G:H8	1.77	0.49
40:A4:107:G:C6	40:A4:116:G:C6	3.00	0.49
40:A4:141:C:H1'	50:AN:112:ASN:ND2	2.27	0.49
43:AF:91:GLY:HA2	43:AF:111:ILE:HD11	1.93	0.49
45:AH:75:VAL:O	45:AH:78:MET:HB2	2.12	0.49
50:AN:8:GLU:HG2	50:AN:47:LYS:HZ2	1.77	0.49
50:AN:140:LYS:HE2	50:AN:144:ARG:NH1	2.26	0.49
50:AN:192:LYS:O	50:AN:196:THR:HG23	2.11	0.49
58:AV:109:MET:HE1	58:AV:128:ARG:HG3	1.94	0.49
66:Ad:47:ASP:OD1	66:Ad:48:ASP:N	2.44	0.49
79:E:120:VAL:HG21	79:E:135:PRO:HB3	1.94	0.49
80:DC:495:VAL:HG22	80:DC:504:LEU:HD21	1.94	0.49
81:EC:6783:U:H2'	81:EC:6784:G:C8	2.47	0.49
7:BI:137:LYS:HD3	34:B5:188:A:H3'	1.95	0.49
8:BJ:135:ALA:HB2	8:BJ:159:ALA:HA	1.94	0.49
20:BF:189:THR:HG22	20:BF:191:ALA:H	1.77	0.49
34:B5:628:G:O2'	38:A1:846:A:N6	2.45	0.49
34:B5:879:G:H2'	34:B5:880:C:C6	2.48	0.49
34:B5:1047:G:H1	34:B5:1071:U:H3	1.60	0.49
34:B5:1144:U:H2'	34:B5:1145:U:H6	1.74	0.49
35:AA:29:LEU:O	35:AA:123:ARG:NE	2.41	0.49
38:A1:129:U:O4	38:A1:139:G:O6	2.30	0.49
38:A1:290:G:H5"	50:AN:98:LEU:CD2	2.42	0.49
38:A1:822:G:H2'	38:A1:823:C:H6	1.76	0.49
38:A1:1270:A:N6	80:DC:738:GLN:OE1	2.46	0.49
38:A1:1478:C:H2'	38:A1:1479:U:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1543:G:OP1	50:AN:35:VAL:HG13	2.13	0.49
38:A1:1757:A:C6	38:A1:1769:G:C6	3.01	0.49
38:A1:1847:A:C4	52:AP:130:TYR:CE2	3.00	0.49
38:A1:2315:G:C6	38:A1:2316:G:O6	2.64	0.49
38:A1:2782:U:H2'	38:A1:2783:U:C6	2.47	0.49
38:A1:3201:C:H2'	38:A1:3202:G:C8	2.47	0.49
40:A4:155:A:H4'	44:AG:185:ARG:HH11	1.76	0.49
42:AE:69:PHE:HB2	42:AE:75:PRO:HA	1.94	0.49
44:AG:160:ILE:O	44:AG:164:VAL:HG13	2.12	0.49
45:AH:167:VAL:HG13	45:AH:172:ILE:HG22	1.94	0.49
46:AI:16:PRO:HA	46:AI:95:HIS:ND1	2.28	0.49
48:AL:38:ALA:HA	48:AL:41:THR:HG22	1.94	0.49
54:AR:95:TRP:NE1	54:AR:98:ARG:HH21	2.10	0.49
57:AU:99:LYS:HD3	57:AU:100:THR:N	2.27	0.49
69:Ag:94:LEU:O	69:Ag:97:GLU:HG3	2.11	0.49
78:Ap:37:TYR:CE2	78:Ap:70:THR:HG23	2.46	0.49
80:DC:111:PHE:HZ	80:DC:540:ILE:HD13	1.76	0.49
80:DC:647:ILE:HG13	80:DC:685:ARG:NH2	2.27	0.49
9:BL:7:VAL:HG11	9:BL:53:TYR:HA	1.94	0.49
16:Ba:60:PRO:HD2	16:Ba:61:GLU:OE1	2.12	0.49
20:BF:162:VAL:HG22	29:Bc:45:LYS:HD3	1.94	0.49
21:BK:56:LYS:NZ	21:BK:69:THR:HA	2.27	0.49
22:BP:78:THR:HA	34:B5:1241:G:H4'	1.94	0.49
23:BQ:99:GLU:HA	23:BQ:102:LYS:HB3	1.94	0.49
32:Bf:140:TYR:OH	34:B5:1234:A:N3	2.39	0.49
34:B5:103:A:OP2	34:B5:360:A:N6	2.46	0.49
34:B5:812:A:N6	34:B5:859:A:O5'	2.44	0.49
34:B5:1439:C:H2'	34:B5:1440:C:H6	1.78	0.49
34:B5:1698:G:N3	34:B5:1698:G:H2'	2.27	0.49
35:AA:207:VAL:HG21	38:A1:916:G:C6	2.47	0.49
38:A1:167:U:H2'	38:A1:168:U:H6	1.78	0.49
38:A1:347:G:N2	38:A1:352:A:O2'	2.45	0.49
38:A1:600:G:N2	38:A1:603:A:OP2	2.45	0.49
38:A1:1138:U:H2'	38:A1:1139:G:H8	1.76	0.49
38:A1:1465:A:H2'	38:A1:1466:G:O4'	2.12	0.49
38:A1:1490:A:H2'	38:A1:1491:A:O4'	2.13	0.49
38:A1:1551:C:O2'	38:A1:2170:U:O2'	2.30	0.49
38:A1:2221:G:HO2'	38:A1:2223:A:N6	2.08	0.49
38:A1:2301:U:H2'	38:A1:2302:G:H8	1.77	0.49
38:A1:2426:U:H2'	38:A1:2427:U:C6	2.46	0.49
38:A1:2449:A:H2	38:A1:2498:U:N3	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2469:G:H4'	79:E:26:ARG:HG3	1.92	0.49
38:A1:2583:C:H2'	38:A1:2584:G:C8	2.47	0.49
38:A1:2746:A:H2	41:AD:146:LEU:HD23	1.77	0.49
38:A1:2863:G:H3'	38:A1:2864:A:H8	1.78	0.49
38:A1:3192:U:H2'	38:A1:3193:C:C6	2.47	0.49
38:A1:3337:G:H2'	38:A1:3338:C:H6	1.75	0.49
39:A3:55:A:O4'	47:AJ:7:ASN:ND2	2.45	0.49
39:A3:118:A:H2'	39:A3:119:U:C6	2.48	0.49
40:A4:76:C:C2	40:A4:77:A:C8	3.00	0.49
45:AH:10:ILE:HG13	45:AH:72:LYS:HG3	1.93	0.49
45:AH:99:ILE:HD11	45:AH:117:PHE:HD1	1.76	0.49
51:AO:56[A]:ASP:OD1	51:AO:60[A]:LYS:NZ	2.46	0.49
51:AO:120[A]:VAL:HG12	51:AO:123[A]:ALA:H	1.76	0.49
52:AP:120:ASN:OD1	52:AP:121:GLN:N	2.46	0.49
70:Ah:59:ASN:HB3	70:Ah:63:ARG:NH2	2.26	0.49
71:Ai:64:SER:HB3	71:Ai:68:ARG:HD2	1.94	0.49
79:E:94:ASN:HD22	79:E:123:LEU:HD22	1.76	0.49
80:DC:317:LYS:NZ	80:DC:320:LEU:HD22	2.27	0.49
4:BE:42:LEU:HD12	4:BE:43:PRO:HD2	1.94	0.49
4:BE:159:THR:HB	4:BE:173:ILE:HB	1.94	0.49
6:BH:56:LYS:HB2	6:BH:88:ARG:NE	2.27	0.49
16:Ba:7:SER:OG	16:Ba:10:ARG:O	2.30	0.49
28:BZ:91:PRO:HB3	28:BZ:101:TYR:CZ	2.47	0.49
31:Bg:137:LYS:NZ	31:Bg:139:GLN:HB2	2.28	0.49
31:Bg:202:LEU:HB2	31:Bg:211:ILE:HD11	1.95	0.49
34:B5:282:C:H2'	34:B5:283:U:O4'	2.12	0.49
34:B5:472:U:H2'	34:B5:473:A:H8	1.77	0.49
34:B5:625:C:H2'	34:B5:626:U:C6	2.47	0.49
34:B5:1417:A:H2'	34:B5:1418:G:O4'	2.12	0.49
34:B5:1508:U:H2'	34:B5:1509:C:C6	2.47	0.49
36:AB:255:TRP:HB3	38:A1:2941:A:OP2	2.11	0.49
37:AC:100:PHE:HE1	38:A1:661:G:H5'	1.77	0.49
37:AC:160:GLN:OE1	37:AC:214:GLY:HA3	2.12	0.49
38:A1:16:A:H2'	38:A1:17:G:O4'	2.11	0.49
38:A1:118:U:OP1	38:A1:151:A:N6	2.45	0.49
38:A1:624:G:C2	38:A1:625:G:C8	3.00	0.49
38:A1:657:A:H2'	38:A1:658:G:H8	1.76	0.49
38:A1:1047:A:H2'	38:A1:1048:A:C8	2.47	0.49
38:A1:1150:A:N7	38:A1:1310:G:H5'	2.28	0.49
38:A1:1343:A:H2'	38:A1:1344:G:C8	2.48	0.49
38:A1:1362:G:H2'	38:A1:1363:A:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1523:U:OP1	38:A1:1834:U:O2'	2.20	0.49
38:A1:1631:C:H6	62:AZ:48:ARG:HH12	1.59	0.49
38:A1:2428:U:H2'	38:A1:2429:G:H8	1.77	0.49
38:A1:2734:A:H2'	38:A1:2735:PSU:H6	1.77	0.49
38:A1:2792:A:H2'	38:A1:2793:G:C8	2.47	0.49
38:A1:3121:U:H4'	38:A1:3122:A:OP1	2.11	0.49
44:AG:155:ASN:OD1	44:AG:181:LYS:HA	2.13	0.49
45:AH:41:ILE:HG22	45:AH:43:VAL:HG13	1.93	0.49
46:AI:152:LEU:O	46:AI:156:ARG:HG3	2.12	0.49
49:AM:36:VAL:N	49:AM:45:LEU:O	2.38	0.49
65:Ac:55:GLU:HA	65:Ac:58:TYR:HB3	1.94	0.49
78:Ap:59:CYS:C	78:Ap:61:LYS:H	2.20	0.49
79:E:207:LYS:NZ	79:E:208:SER:O	2.37	0.49
80:DC:388:THR:OG1	80:DC:394:PHE:HA	2.12	0.49
80:DC:571:SER:HB3	80:DC:720:ALA:HB2	1.94	0.49
8:BJ:90:LYS:HA	8:BJ:95:TYR:HD2	1.76	0.49
11:BO:57:PRO:O	11:BO:61:MET:HG2	2.12	0.49
19:BD:203:PRO:HA	24:BR:42:GLN:HB2	1.93	0.49
34:B5:107:C:H5"	34:B5:383:G:O2'	2.12	0.49
34:B5:273:G:O6	34:B5:283:U:C2	2.65	0.49
34:B5:524:U:O2'	34:B5:527:A:N7	2.39	0.49
34:B5:755:A:H2'	34:B5:756:A:O4'	2.11	0.49
34:B5:1169:G:N1	34:B5:1575:G7M:OP2	2.40	0.49
34:B5:1593:A:H2'	34:B5:1594:G:C8	2.47	0.49
34:B5:1775:U:H2'	34:B5:1776:A:C8	2.48	0.49
35:AA:15:ILE:HD11	38:A1:822:G:H1'	1.93	0.49
37:AC:195:ARG:HH12	38:A1:339:C:H3'	1.77	0.49
38:A1:127:G:H2'	38:A1:128:G:C8	2.46	0.49
38:A1:431:U:H2'	38:A1:432:G:C8	2.47	0.49
38:A1:641:C:P	63:Aa:21:ARG:HH21	2.33	0.49
38:A1:774:G:H2'	38:A1:775:A:H8	1.75	0.49
38:A1:981:U:O3'	64:Ab:23:LYS:NZ	2.43	0.49
38:A1:999:G:N3	38:A1:1002:A:N6	2.60	0.49
38:A1:1110:PSU:H2'	38:A1:1111:U:C6	2.47	0.49
38:A1:1351:U:H3	38:A1:1352:A:N6	2.11	0.49
38:A1:1443:G:C2	38:A1:1444:G:C5	3.01	0.49
38:A1:1452:A:H1'	38:A1:2347:U:O5'	2.12	0.49
38:A1:1609:C:H5"	60:AX:125:ARG:NH1	2.27	0.49
38:A1:1738:C:O3'	69:Ag:53:GLY:HA2	2.12	0.49
38:A1:1744:G:C4	38:A1:1745:C:C5	3.00	0.49
38:A1:1924:U:N3	38:A1:1926:C:N3	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1939:G:H5”	54:AR:80:LYS:HZ2	1.78	0.49
38:A1:2866:U:O2	38:A1:2867:C:N4	2.45	0.49
38:A1:2916:U:H2’	38:A1:2917:G:H8	1.76	0.49
38:A1:3159:C:H2’	38:A1:3160:U:H6	1.77	0.49
38:A1:3161:C:H2’	38:A1:3162:C:C6	2.46	0.49
38:A1:3212:C:OP2	49:AM:124:ARG:NH1	2.42	0.49
38:A1:3305:A:H2’	38:A1:3306:U:C2	2.48	0.49
38:A1:3313:U:O4	38:A1:3314:A:N6	2.45	0.49
39:A3:62:U:H2’	39:A3:63:A:C8	2.47	0.49
40:A4:4:C:H5’	52:AP:61:ARG:HB3	1.95	0.49
40:A4:121:U:H2’	40:A4:122:U:C6	2.48	0.49
47:AJ:110:ILE:H	47:AJ:110:ILE:HD12	1.77	0.49
48:AL:124:ILE:HG12	70:Ah:119:LYS:NZ	2.26	0.49
48:AL:181:GLY:O	48:AL:185:LYS:HG2	2.12	0.49
51:AO:39[A]:GLU:HB3	51:AO:106[A]:GLU:OE2	2.12	0.49
53:AQ:123:THR:HG23	53:AQ:126:GLN:H	1.78	0.49
53:AQ:178:ARG:O	53:AQ:185:LYS:HG3	2.13	0.49
55:AS:155:ARG:HD3	55:AS:172:TYR:CD1	2.47	0.49
61:AY:27:ARG:HA	61:AY:30:LEU:HD12	1.93	0.49
67:Ae:12:LYS:HD3	67:Ae:56:GLY:O	2.12	0.49
80:DC:70:ILE:HG13	80:DC:71:LYS:HE2	1.94	0.49
80:DC:524:GLU:H	80:DC:524:GLU:CD	2.21	0.49
5:BG:13:GLN:HE21	34:B5:151:G:H1’	1.76	0.49
11:BO:127:ARG:NH2	34:B5:1787:C:H5”	2.28	0.49
14:BX:6:PRO:HG2	14:BX:15:LEU:CD2	2.43	0.49
14:BX:10:ASN:OD1	34:B5:632:PSU:O3’	2.30	0.49
19:BD:76:ARG:HB2	21:BK:22:VAL:HG21	1.95	0.49
24:BR:67:ARG:HH22	34:B5:1399:C:H42	1.60	0.49
25:BS:24:GLY:HA2	25:BS:58:ALA:HB3	1.93	0.49
25:BS:32:LEU:HD23	25:BS:43:SER:HA	1.95	0.49
26:BT:33:TYR:CE2	34:B5:1503:A:H5’	2.47	0.49
31:Bg:155:ARG:HB2	31:Bg:170:ILE:HG13	1.93	0.49
34:B5:751:G:H2’	34:B5:752:A:C8	2.47	0.49
34:B5:1503:A:H2’	34:B5:1504:G:O4’	2.12	0.49
34:B5:1558:U:H3’	34:B5:1559:A:H4’	1.93	0.49
34:B5:1600:A:O2’	34:B5:1602:C:N4	2.44	0.49
34:B5:1712:A:H2	34:B5:1714:A:H4’	1.78	0.49
37:AC:305:ALA:HA	38:A1:1347:U:H4’	1.95	0.49
38:A1:1337:A:H2’	38:A1:1338:C:H6	1.76	0.49
38:A1:1784:G:H2’	38:A1:1785:U:C6	2.47	0.49
38:A1:1831:U:O2’	40:A4:114:G:OP1	2.17	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2118:C:H2'	38:A1:2119:A:O4'	2.13	0.49
38:A1:2471:U:H3	38:A1:2474:G:N2	2.10	0.49
38:A1:2651:G:H21	77:Ao:63:LYS:NZ	2.09	0.49
38:A1:2769:A:O2'	77:Ao:80:ARG:O	2.26	0.49
38:A1:3086:A:C4	38:A1:3087:A:C8	3.00	0.49
40:A4:68:G:H2'	40:A4:69:U:H6	1.77	0.49
40:A4:157:U:H2'	40:A4:158:U:C6	2.47	0.49
43:AF:24:GLU:HG2	43:AF:26:VAL:H	1.77	0.49
43:AF:176:TYR:CZ	43:AF:197:GLN:HG2	2.48	0.49
50:AN:115:VAL:HG21	50:AN:132:VAL:HG22	1.93	0.49
55:AS:82:ASP:HB3	55:AS:120:SER:HB2	1.95	0.49
62:AZ:51:LEU:HD12	62:AZ:65:ARG:HD2	1.94	0.49
80:DC:81:MET:SD	80:DC:81:MET:N	2.86	0.49
80:DC:793:PHE:O	80:DC:795:GLN:NE2	2.41	0.49
81:EC:6924:G:H2'	81:EC:6926:U:OP2	2.13	0.49
1:BA:173:ILE:O	1:BA:177:LEU:N	2.32	0.49
8:BJ:110:GLN:HE22	8:BJ:126:ARG:HD3	1.77	0.49
11:BO:136:ARG:HD2	34:B5:1769:U:O3'	2.12	0.49
16:Ba:92:ARG:HH11	34:B5:1796:C:P	2.36	0.49
22:BP:128:HIS:ND1	34:B5:1180:C:O2'	2.38	0.49
31:Bg:102:ARG:CZ	34:B5:1342:C:H5'	2.42	0.49
34:B5:67:A:C6	34:B5:84:A:N7	2.80	0.49
34:B5:220:A:H8	34:B5:831:U:O4	1.95	0.49
34:B5:461:G:H2'	34:B5:462:G:C8	2.47	0.49
34:B5:936:G:H2'	34:B5:937:C:C6	2.48	0.49
34:B5:1213:G:C2	34:B5:1214:U:C2	3.01	0.49
34:B5:1294:G:C2	34:B5:1322:A:C5	3.00	0.49
34:B5:1315:U:OP1	34:B5:1328:G:N2	2.41	0.49
34:B5:1449:U:H2'	34:B5:1450:U:O4'	2.12	0.49
34:B5:1623:C:H2'	34:B5:1624:C:C6	2.48	0.49
38:A1:156:G:OP2	71:Ai:25:LYS:HB3	2.13	0.49
38:A1:159:A:H2'	38:A1:160:G:C8	2.46	0.49
38:A1:244:G:H2'	38:A1:244:G:N3	2.27	0.49
38:A1:500:C:H2'	38:A1:501:A:H8	1.78	0.49
38:A1:576:C:H5"	43:AF:142:SER:OG	2.13	0.49
38:A1:679:U:O2	38:A1:701:G:O6	2.31	0.49
38:A1:1040:A:N3	46:AI:198:LYS:NZ	2.41	0.49
38:A1:1067:U:H4'	56:AT:109:VAL:HG11	1.92	0.49
38:A1:1095:U:N3	56:AT:127:GLN:OE1	2.46	0.49
38:A1:1128:U:N3	38:A1:2828:G:O4'	2.46	0.49
38:A1:1307:G:H1'	38:A1:1308:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1411:C:H4’	67:Ae:95:GLU:OE2	2.13	0.49
38:A1:1488:G:O2’	69:Ag:12:PRO:HG3	2.13	0.49
38:A1:1616:U:H2’	38:A1:1617:G:H8	1.76	0.49
38:A1:1680:G:C6	38:A1:1689:U:C4	3.01	0.49
38:A1:2428:U:H2’	38:A1:2429:G:C8	2.48	0.49
38:A1:2455:U:O4	38:A1:2461:A:H2’	2.12	0.49
38:A1:2552:C:OP1	69:Ag:102:LYS:NZ	2.43	0.49
38:A1:2662:G:H2’	38:A1:2663:G:H8	1.78	0.49
38:A1:2724:U:H4’	56:AT:54:HIS:CD2	2.46	0.49
38:A1:3302:U:H2’	38:A1:3303:G:C8	2.48	0.49
40:A4:88:A:H2’	40:A4:89:A:C8	2.47	0.49
40:A4:155:A:C6	40:A4:156:U:C4	3.01	0.49
41:AD:83:LEU:HD12	41:AD:88:ILE:HD12	1.95	0.49
43:AF:34:LYS:HB3	43:AF:38:LYS:NZ	2.27	0.49
43:AF:80:GLN:OE1	43:AF:80:GLN:N	2.38	0.49
52:AP:129:THR:HG22	52:AP:137:ASN:O	2.13	0.49
58:AV:74:MET:SD	58:AV:102:ILE:HG23	2.53	0.49
69:Ag:25:THR:HG23	69:Ag:27:GLY:N	2.25	0.49
73:Ak:23:ALA:HB2	73:Ak:45:VAL:HG23	1.93	0.49
79:E:60:ARG:HG3	79:E:63:MET:HE2	1.95	0.49
81:EC:6779:C:H2’	81:EC:6780:A:O4’	2.12	0.49
10:BN:46:THR:HG1	10:BN:49:GLN:CD	2.21	0.49
13:BW:52:TYR:OH	13:BW:54:ASP:OD1	2.29	0.49
13:BW:102:VAL:HG12	13:BW:113:HIS:ND1	2.28	0.49
14:BX:139:LYS:NZ	34:B5:31:C:O3’	2.45	0.49
15:BY:87:PRO:HG2	15:BY:90:ARG:CZ	2.43	0.49
21:BK:13:GLN:HG3	21:BK:80:LEU:HD22	1.95	0.49
24:BR:26:LEU:HD11	24:BR:62:GLN:HE21	1.77	0.49
29:Bc:35:ASP:OD1	29:Bc:35:ASP:N	2.46	0.49
31:Bg:178:VAL:HB	31:Bg:192:PHE:HB2	1.94	0.49
33:BM:35:ALA:HB3	33:BM:41:LEU:HD22	1.95	0.49
34:B5:91:G:H2’	34:B5:92:A:O4’	2.12	0.49
34:B5:489:C:N3	34:B5:499:U:H5”	2.28	0.49
34:B5:580:A:C6	34:B5:583:C:C2	3.01	0.49
34:B5:752:A:H2	34:B5:797:G:H1	1.57	0.49
34:B5:936:G:H2’	34:B5:937:C:H6	1.78	0.49
35:AA:54:ARG:HH12	38:A1:2176:U:H5”	1.78	0.49
35:AA:115:ASN:HB3	35:AA:165:VAL:HG12	1.93	0.49
36:AB:371:GLN:OE1	36:AB:371:GLN:N	2.43	0.49
37:AC:294:GLU:H	37:AC:294:GLU:CD	2.12	0.49
38:A1:425:G:H2’	38:A1:426:G:H8	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:589:A:N6	38:A1:610:G:H1'	2.27	0.49
38:A1:678:G:C6	38:A1:703:G:N1	2.80	0.49
38:A1:776:PSU:N1	38:A1:2737:C:N3	2.60	0.49
38:A1:1623:G:C6	38:A1:1624:G:C6	3.00	0.49
38:A1:1746:U:H2'	38:A1:1747:G:C8	2.48	0.49
38:A1:1948:G:C2	38:A1:2099:A:C2	3.01	0.49
38:A1:2312:A:O2'	38:A1:2315:G:N3	2.36	0.49
38:A1:2444:C:N4	38:A1:2445:A:H62	2.11	0.49
38:A1:2555:G:C5	69:Ag:95:ILE:HD11	2.48	0.49
38:A1:2562:A:H2'	38:A1:2563:G:O4'	2.12	0.49
38:A1:3182:G:P	51:AO:117[A]:ARG:HH21	2.35	0.49
40:A4:5:U:H2'	40:A4:6:U:C6	2.47	0.49
43:AF:81:HIS:HD1	43:AF:138:TYR:HD2	1.60	0.49
44:AG:34:PHE:CD1	44:AG:42:PRO:HD3	2.48	0.49
45:AH:90:MET:O	45:AH:91:ARG:HD2	2.12	0.49
47:AJ:12:LEU:HD23	47:AJ:162:TRP:CG	2.48	0.49
52:AP:166:VAL:HG12	52:AP:168:LEU:HD22	1.93	0.49
56:AT:127:GLN:OE1	56:AT:131:GLN:NE2	2.46	0.49
65:Ac:52:ARG:O	65:Ac:56:LEU:HD23	2.13	0.49
66:Ad:52:ALA:HB2	66:Ad:94:GLU:HG3	1.94	0.49
69:Ag:87:GLU:HB3	69:Ag:91:ARG:NH1	2.27	0.49
75:Am:89:TYR:O	75:Am:90:ASN:ND2	2.46	0.49
79:E:101:LYS:HG2	79:E:105:LYS:HZ3	1.78	0.49
80:DC:88:GLU:OE1	80:DC:88:GLU:N	2.34	0.49
2:BB:27:LYS:HB3	2:BB:47:LEU:HD12	1.95	0.49
3:BC:104:VAL:O	3:BC:112:GLY:N	2.33	0.49
10:BN:88:LEU:O	10:BN:92:ILE:HG12	2.13	0.49
14:BX:109:ARG:HD3	14:BX:114:LYS:HZ1	1.77	0.49
15:BY:61:ARG:NH1	34:B5:530:C:O2	2.39	0.49
20:BF:77:TYR:HE1	20:BF:86:GLN:HE21	1.61	0.49
29:Bc:27:GLN:N	29:Bc:27:GLN:OE1	2.43	0.49
30:Bd:40:ARG:HD3	34:B5:1199:G:C5	2.48	0.49
34:B5:196:G:HO2'	34:B5:197:A:P	2.36	0.49
34:B5:602:U:H2'	34:B5:603:U:C6	2.48	0.49
34:B5:1067:C:H2'	34:B5:1068:C:C6	2.48	0.49
34:B5:1590:G:H2'	34:B5:1591:C:C6	2.48	0.49
35:AA:125:ALA:HB1	38:A1:2177:G:C6	2.47	0.49
35:AA:242:ARG:HD2	35:AA:243:THR:O	2.12	0.49
36:AB:77:THR:HG21	36:AB:328:ILE:HG12	1.95	0.49
37:AC:141:ARG:HG2	37:AC:180:LYS:HG3	1.94	0.49
37:AC:187:LEU:HD21	38:A1:1419:A:N7	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:161:G:C5	38:A1:162:G:C2	3.00	0.49
38:A1:354:U:H2'	38:A1:355:A:C8	2.48	0.49
38:A1:608:A:H2'	42:AE:22:ARG:NH1	2.27	0.49
38:A1:743:C:C2	38:A1:744:A:C8	3.01	0.49
38:A1:851:C:H2'	38:A1:852:U:C6	2.48	0.49
38:A1:1043:C:H2'	38:A1:1044:U:C6	2.48	0.49
38:A1:1175:C:H1'	51:AO:87[A]:MET:CE	2.43	0.49
38:A1:1238:C:O2	38:A1:1250:G:C2	2.65	0.49
38:A1:1270:A:H61	80:DC:738:GLN:CD	2.20	0.49
38:A1:1447:G:C8	52:AP:27:LYS:HB2	2.48	0.49
38:A1:1680:G:C6	38:A1:1689:U:N3	2.81	0.49
38:A1:1916:U:O3'	54:AR:85:ARG:NH2	2.32	0.49
38:A1:2152:A:H2'	38:A1:2153:U:H6	1.77	0.49
38:A1:2290:C:H2'	38:A1:2291:A:C8	2.48	0.49
38:A1:2663:G:H5"	41:AD:152:ARG:HH11	1.77	0.49
38:A1:2833:A:C6	38:A1:2856:G:C6	3.01	0.49
38:A1:2844:C:N3	38:A1:2898:G:N1	2.61	0.49
39:A3:58:C:H2'	39:A3:59:U:C6	2.47	0.49
39:A3:108:A:H2'	39:A3:109:G:C8	2.46	0.49
40:A4:101:U:H2'	40:A4:102:U:O4'	2.13	0.49
41:AD:195:LEU:O	41:AD:199:ILE:HG13	2.11	0.49
51:AO:27[A]:LEU:HD11	51:AO:102[A]:LEU:HB2	1.94	0.49
54:AR:92:GLN:O	54:AR:96:ILE:HG12	2.13	0.49
54:AR:123:LEU:HD12	54:AR:138:LEU:HD11	1.94	0.49
54:AR:132:PHE:CD2	54:AR:138:LEU:HD12	2.48	0.49
55:AS:134:ASP:OD1	55:AS:134:ASP:N	2.43	0.49
62:AZ:55:LYS:HE3	62:AZ:56:LYS:HE2	1.95	0.49
69:Ag:9:ARG:N	69:Ag:34:HIS:HE1	2.09	0.49
80:DC:369:ILE:HG22	80:DC:402:ALA:HB2	1.94	0.49
81:EC:6789:G:H4'	81:EC:6851:G:N7	2.28	0.49
81:EC:6901:C:O2'	81:EC:6902:U:H5'	2.12	0.49
1:BA:48:ILE:HG23	1:BA:161:PRO:HB2	1.95	0.49
2:BB:134:VAL:HG13	2:BB:218:LEU:HB2	1.93	0.49
2:BB:152:ARG:NH2	34:B5:1799:U:O3'	2.46	0.49
4:BE:136:VAL:HG11	4:BE:148:ARG:HD2	1.95	0.49
5:BG:160:ARG:NH1	34:B5:66:U:O2'	2.45	0.49
6:BH:4:PRO:HG2	6:BH:25:VAL:HG11	1.95	0.49
11:BO:72:LYS:O	11:BO:73:GLU:HG3	2.13	0.49
20:BF:181:GLU:HG2	20:BF:182:ALA:N	2.28	0.49
25:BS:25:ASN:HB3	28:BZ:40:VAL:HG11	1.94	0.49
26:BT:10:ALA:HB3	26:BT:13:ASP:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:89:G:H2'	34:B5:90:C:C6	2.48	0.49
34:B5:250:C:H2'	34:B5:251:A:H8	1.77	0.49
34:B5:327:U:H2'	34:B5:328:A:H8	1.78	0.49
34:B5:370:A:C4	34:B5:371:G:C8	3.01	0.49
34:B5:1116:A:O3'	76:An:17:ARG:NH2	2.41	0.49
34:B5:1186:U:OP2	34:B5:1456:C:O2'	2.20	0.49
35:AA:236:GLY:H	38:A1:2183:A:HO2'	1.60	0.49
38:A1:51:A:C4	38:A1:52:A:C8	3.00	0.49
38:A1:269:G:H5"	50:AN:14:LYS:CE	2.42	0.49
38:A1:272:G:H2'	38:A1:273:A:C8	2.46	0.49
38:A1:538:G:N2	38:A1:553:U:O2	2.33	0.49
38:A1:988:U:O4	38:A1:989:A:N6	2.45	0.49
38:A1:1039:U:H2'	38:A1:1040:A:C8	2.47	0.49
38:A1:1153:A:H2'	38:A1:1154:A:C8	2.48	0.49
38:A1:1226:G:H4'	38:A1:1227:C:OP1	2.12	0.49
38:A1:1257:C:H5"	38:A1:1258:U:C5	2.46	0.49
38:A1:1544:G:O2'	38:A1:2167:A:H1'	2.13	0.49
38:A1:2857:C:H2'	38:A1:2858:U:C6	2.48	0.49
38:A1:3305:A:O2'	38:A1:3306:U:O4'	2.23	0.49
39:A3:23:A:N3	39:A3:120:C:O2'	2.45	0.49
41:AD:232:ASP:O	41:AD:235:SER:OG	2.18	0.49
42:AE:14:ASP:N	42:AE:14:ASP:OD1	2.46	0.49
42:AE:43:LEU:HD11	42:AE:85:ILE:HG12	1.94	0.49
46:AI:210:TYR:HA	46:AI:217:PHE:CE2	2.48	0.49
48:AL:54:LEU:HD11	48:AL:115:ARG:HE	1.78	0.49
52:AP:13:LYS:NZ	52:AP:152:GLU:HB2	2.28	0.49
65:Ac:34:LEU:HD22	65:Ac:59:TYR:HB3	1.95	0.49
65:Ac:76:GLU:O	65:Ac:79:THR:OG1	2.24	0.49
78:Ap:27:LYS:O	78:Ap:31:ILE:HG12	2.13	0.49
78:Ap:82:THR:OG1	78:Ap:85:ARG:NH2	2.46	0.49
79:E:139:SER:HB3	79:E:142:ASP:CG	2.37	0.49
80:DC:461:GLN:OE1	80:DC:461:GLN:N	2.44	0.49
81:EC:6860:A:H8	81:EC:6861:G:C2	2.31	0.49
3:BC:97:ARG:NH2	3:BC:118:ALA:HA	2.27	0.48
4:BE:151:ASP:O	4:BE:154:ILE:HG22	2.12	0.48
7:BI:64:ASN:HD21	7:BI:73:SER:HB3	1.78	0.48
7:BI:106:ALA:HB2	7:BI:165:LEU:HG	1.95	0.48
8:BJ:78:ARG:NE	34:B5:763:G:OP1	2.46	0.48
19:BD:179:GLN:OE1	34:B5:579:A:N6	2.46	0.48
23:BQ:75:VAL:HG12	34:B5:1609:U:H5"	1.93	0.48
23:BQ:134:ALA:O	23:BQ:137:ARG:NH2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BS:116:LEU:HD12	25:BS:121:ALA:HB3	1.95	0.48
25:BS:139:LYS:HB2	34:B5:1458:G:OP2	2.12	0.48
31:Bg:111:MET:CE	31:Bg:127:ARG:HG3	2.43	0.48
33:BM:59:LEU:HB2	33:BM:123:VAL:HG22	1.95	0.48
33:BM:62:LEU:HD22	33:BM:75:VAL:HG11	1.95	0.48
34:B5:32:U:H2'	34:B5:33:U:C6	2.48	0.48
34:B5:156:A:N1	34:B5:415:C:O2'	2.46	0.48
34:B5:219:A:H8	34:B5:219:A:OP2	1.96	0.48
34:B5:325:G:H2'	34:B5:326:G:C8	2.47	0.48
34:B5:472:U:O4	34:B5:473:A:N6	2.46	0.48
34:B5:595:G:H2'	34:B5:596:C:C6	2.48	0.48
34:B5:770:A:N7	34:B5:771:A:H1'	2.28	0.48
34:B5:922:G:H2'	34:B5:923:A:C8	2.47	0.48
34:B5:1235:C:C2	34:B5:1236:A:C8	3.01	0.48
34:B5:1365:C:H2'	34:B5:1366:U:O4'	2.13	0.48
34:B5:1374:C:H2'	34:B5:1375:A:C8	2.47	0.48
34:B5:1609:U:H2'	34:B5:1610:G:O4'	2.12	0.48
34:B5:1747:G:O2'	38:A1:2303:A:O2'	2.24	0.48
35:AA:58:LEU:HD13	35:AA:75:ILE:HG21	1.95	0.48
35:AA:118:GLU:OE2	38:A1:2177:G:N1	2.45	0.48
36:AB:308:MET:HE1	38:A1:3329:U:H5"	1.95	0.48
38:A1:359:U:C4	38:A1:920:A:C6	3.01	0.48
38:A1:645:1MA:C5	38:A1:2372:A:C6	3.01	0.48
38:A1:675:C:H2'	38:A1:676:G:O4'	2.13	0.48
38:A1:854:G:H2'	38:A1:855:U:H6	1.76	0.48
38:A1:1041:U:H2'	38:A1:1042:PSU:O4	2.13	0.48
38:A1:1234:G:C5	38:A1:1263:A:H2	2.31	0.48
38:A1:1533:U:H2'	38:A1:1534:A:H8	1.78	0.48
38:A1:1708:C:H2'	38:A1:1709:C:H6	1.78	0.48
38:A1:1757:A:H2'	38:A1:1758:G:C8	2.48	0.48
38:A1:2164:A:C6	38:A1:2165:G:C6	3.01	0.48
38:A1:2368:A:H2'	38:A1:2369:G:C8	2.48	0.48
38:A1:2700:G:H5"	56:AT:17:ARG:HG2	1.95	0.48
38:A1:3236:U:H2'	38:A1:3237:U:H6	1.78	0.48
38:A1:3308:C:O2'	52:AP:69:ARG:O	2.31	0.48
39:A3:20:A:H2'	39:A3:21:G:C8	2.47	0.48
39:A3:62:U:OP2	41:AD:276:LYS:NZ	2.33	0.48
39:A3:96:U:H1'	55:AS:119:ARG:HD2	1.94	0.48
40:A4:29:U:H5"	48:AL:27:ASP:HB3	1.95	0.48
40:A4:66:A:P	70:Ah:10:ARG:HH22	2.37	0.48
44:AG:178:ALA:HB2	44:AG:218:ILE:HG21	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AH:69:ARG:HH11	45:AH:69:ARG:HG3	1.77	0.48
45:AH:141:LYS:HE2	45:AH:142:ASP:HB3	1.95	0.48
45:AH:162:GLN:NE2	45:AH:180:TYR:HA	2.28	0.48
46:AI:215:GLU:H	46:AI:215:GLU:CD	2.21	0.48
48:AL:123:ILE:HD12	70:Ah:118:ILE:HG13	1.95	0.48
51:AO:12[A]:LYS:O	55:AS:167:ARG:NH1	2.46	0.48
54:AR:126:GLU:OE1	54:AR:132:PHE:HE1	1.96	0.48
57:AU:44:GLU:OE2	57:AU:49:ASN:ND2	2.45	0.48
60:AX:91:ASN:OD1	60:AX:92:LYS:N	2.46	0.48
68:Af:32:ILE:O	68:Af:35:VAL:HG12	2.13	0.48
81:EC:6853:G:C6	81:EC:6876:A:C2	3.01	0.48
81:EC:6888:A:H2'	81:EC:6889:A:H8	1.78	0.48
2:BB:142:PHE:HB2	2:BB:208:GLN:HG2	1.94	0.48
2:BB:228:LEU:HA	2:BB:231:LEU:HD12	1.94	0.48
4:BE:125:LYS:NZ	4:BE:159:THR:OG1	2.33	0.48
5:BG:191:ARG:NH2	34:B5:178:U:O4'	2.46	0.48
6:BH:24:PHE:HE1	6:BH:81:LEU:HD21	1.78	0.48
7:BI:138:ASN:HD21	34:B5:187:G:H3'	1.78	0.48
7:BI:175:GLN:NE2	34:B5:331:A:OP2	2.42	0.48
9:BL:35:TYR:CE2	9:BL:49:ILE:HG23	2.48	0.48
12:BV:64:GLU:HG2	17:Bb:3:LEU:HD13	1.95	0.48
13:BW:80:ASN:HD22	13:BW:124:LYS:HE3	1.77	0.48
30:Bd:30:LEU:O	34:B5:1199:G:N2	2.31	0.48
31:Bg:69:GLN:HB2	31:Bg:85:TRP:NE1	2.28	0.48
31:Bg:169:ILE:HG12	31:Bg:181:TRP:HB2	1.96	0.48
31:Bg:206:PRO:HG3	31:Bg:247:PRO:HA	1.96	0.48
32:Bf:119:ARG:HB2	32:Bf:139:LEU:HD21	1.95	0.48
34:B5:45:U:O2	34:B5:433:C:O2'	2.24	0.48
34:B5:52:U:H2'	34:B5:53:G:C8	2.48	0.48
34:B5:990:C:H2'	34:B5:991:G:O4'	2.13	0.48
34:B5:1470:C:H5"	34:B5:1471:A:H8	1.77	0.48
34:B5:1625:C:H2'	34:B5:1626:U:C5	2.47	0.48
38:A1:19:U:H4'	50:AN:138:GLN:CD	2.38	0.48
38:A1:164:A:C6	38:A1:258:G:C6	3.01	0.48
38:A1:226:C:H2'	38:A1:227:G:O4'	2.13	0.48
38:A1:274:G:H2'	38:A1:275:U:C6	2.49	0.48
38:A1:384:A:C6	38:A1:1465:A:N1	2.81	0.48
38:A1:633:C:H2'	38:A1:634:C:H6	1.78	0.48
38:A1:784:A:H5'	53:AQ:69:ARG:HH12	1.77	0.48
38:A1:966:PSU:O3'	63:Aa:47:LYS:NZ	2.43	0.48
38:A1:1037:C:H2'	38:A1:1038:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1181:U:O2'	51:AO:122[A]:GLN:NE2	2.46	0.48
38:A1:1580:A:H4'	38:A1:1581:C:H5'	1.95	0.48
38:A1:1690:C:H2'	38:A1:1691:U:C6	2.48	0.48
38:A1:1712:G:H2'	38:A1:1713:G:C8	2.48	0.48
38:A1:1852:G:H2'	38:A1:1853:U:C6	2.47	0.48
38:A1:2249:G:C5	38:A1:2272:G:C2	3.01	0.48
38:A1:2267:C:H2'	38:A1:2268:U:C2	2.48	0.48
38:A1:2339:C:H4'	38:A1:2340:PSU:O5'	2.13	0.48
38:A1:2662:G:H2'	38:A1:2663:G:C8	2.48	0.48
38:A1:2907:G:H2'	38:A1:2908:G:H8	1.78	0.48
38:A1:3027:A:H8	38:A1:3027:A:OP1	1.96	0.48
38:A1:3051:U:H2'	38:A1:3052:G:C8	2.48	0.48
38:A1:3178:A:N3	51:AO:115[A]:LYS:HD2	2.28	0.48
39:A3:40:C:N3	39:A3:42:A:N6	2.61	0.48
39:A3:58:C:H2'	39:A3:59:U:H6	1.78	0.48
42:AE:172:HIS:HA	68:Af:43:PHE:CG	2.47	0.48
45:AH:9:GLN:O	45:AH:72:LYS:HD2	2.13	0.48
53:AQ:102:ALA:HB3	53:AQ:127:LEU:HD12	1.93	0.48
55:AS:49:HIS:CE1	56:AT:151:LEU:HD22	2.48	0.48
58:AV:45:ARG:HG3	58:AV:46:LEU:O	2.14	0.48
76:An:5:TRP:HA	76:An:8:LYS:HB3	1.95	0.48
80:DC:542:LEU:HD12	80:DC:543:GLN:N	2.28	0.48
80:DC:579:SER:HB3	80:DC:584:ASN:HB2	1.95	0.48
80:DC:595:GLU:O	80:DC:599:LEU:HG	2.12	0.48
80:DC:743:ILE:O	80:DC:746:VAL:HG12	2.12	0.48
2:BB:165:ARG:NH1	34:B5:946:U:H5"	2.28	0.48
5:BG:66:GLY:O	34:B5:1722:A:H1'	2.14	0.48
8:BJ:18:PRO:CG	34:B5:22:A:H5'	2.43	0.48
11:BO:136:ARG:NH1	34:B5:1770:U:H5"	2.28	0.48
14:BX:50:LYS:HG3	34:B5:435:C:H5'	1.95	0.48
15:BY:25:VAL:HG11	15:BY:60:PHE:CE1	2.48	0.48
19:BD:80:ALA:O	19:BD:83:THR:HG22	2.13	0.48
28:BZ:95:HIS:HB3	28:BZ:98:GLN:HG2	1.96	0.48
31:Bg:70:ASP:HB3	31:Bg:113:VAL:HG12	1.95	0.48
31:Bg:90:ARG:NH2	34:B5:1341:A:O3'	2.45	0.48
34:B5:819:G:C6	34:B5:853:G:C6	3.01	0.48
34:B5:1346:A:H62	34:B5:1375:A:N6	2.11	0.48
34:B5:1433:G:H2'	34:B5:1434:U:C6	2.48	0.48
37:AC:282:SER:OG	53:AQ:125:ASP:OD2	2.31	0.48
38:A1:290:G:H5"	50:AN:98:LEU:HD23	1.95	0.48
38:A1:301:G:H2'	38:A1:302:U:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:398:A:H5”	52:AP:3:ARG:HG2	1.95	0.48
38:A1:529:A:H2’	38:A1:530:G:C8	2.47	0.48
38:A1:615:U:H2’	38:A1:616:G:C8	2.49	0.48
38:A1:685:G:P	48:AL:35:ARG:HH21	2.36	0.48
38:A1:991:G:H3’	38:A1:992:A:H8	1.78	0.48
38:A1:1306:G:C5	51:AO:62[A]:THR:HA	2.48	0.48
38:A1:1376:C:C2	38:A1:1377:G:C8	3.01	0.48
38:A1:1944:U:H2’	38:A1:1945:A:C8	2.48	0.48
38:A1:2139:A:C5	72:Aj:3:LYS:HG2	2.48	0.48
38:A1:3215:A:H5”	68:Af:2:ALA:HB2	1.96	0.48
38:A1:3248:C:O4’	51:AO:114[A]:LYS:NZ	2.45	0.48
38:A1:3387:U:H2’	38:A1:3388:C:H6	1.76	0.48
40:A4:51:G:H5”	74:Al:26:TRP:HZ2	1.78	0.48
41:AD:107:ARG:HH12	41:AD:120:LYS:HA	1.78	0.48
43:AF:74:SER:OG	43:AF:75:TYR:N	2.45	0.48
55:AS:66:GLU:OE1	55:AS:68:HIS:N	2.32	0.48
67:Ae:3:SER:HB2	67:Ae:71:HIS:CE1	2.48	0.48
70:Ah:109:ILE:O	70:Ah:112:PRO:HD3	2.13	0.48
72:Aj:87:SER:OG	72:Aj:88:ALA:N	2.45	0.48
79:E:97:LYS:HA	79:E:100:ILE:HG12	1.94	0.48
80:DC:486:SER:OG	80:DC:796:MET:O	2.18	0.48
81:EC:6847:G:H1’	81:EC:6848:U:C6	2.49	0.48
9:BL:2:SER:OG	9:BL:3:THR:N	2.31	0.48
16:Ba:92:ARG:HH12	34:B5:1795:U:H5”	1.77	0.48
23:BQ:18:ALA:HB1	23:BQ:81:ILE:HD13	1.95	0.48
26:BT:130:ARG:O	26:BT:134:ARG:HG2	2.14	0.48
34:B5:123:G:H2’	34:B5:124:A:C8	2.48	0.48
34:B5:218:A:H2’	34:B5:219:A:O4’	2.13	0.48
34:B5:983:A:N6	34:B5:1018:U:H5	2.10	0.48
34:B5:1103:U:H2’	34:B5:1104:U:C6	2.48	0.48
34:B5:1346:A:OP2	34:B5:1348:A:N6	2.45	0.48
34:B5:1525:A:H1’	34:B5:1590:G:H4’	1.95	0.48
34:B5:1613:U:O2	34:B5:1614:A:N6	2.45	0.48
34:B5:1713:G:O2’	34:B5:1716:C:OP2	2.25	0.48
37:AC:94:CYS:HA	38:A1:1438:U:H1’	1.94	0.48
38:A1:206:G:H1	38:A1:223:U:H3	1.59	0.48
38:A1:540:U:N3	38:A1:541:U:O4	2.46	0.48
38:A1:841:A:C6	38:A1:853:G:C6	3.01	0.48
38:A1:1307:G:P	51:AO:59[A]:ARG:HH12	2.35	0.48
38:A1:1680:G:H2’	38:A1:1681:U:H6	1.78	0.48
38:A1:1743:G:C2	38:A1:1744:G:C8	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2284:C:C4	38:A1:2285:C:N4	2.82	0.48
38:A1:2352:A:H2'	38:A1:2353:G:H8	1.78	0.48
38:A1:2455:U:H3'	38:A1:2456:A:H8	1.78	0.48
38:A1:2481:G:N7	38:A1:2486:A:N6	2.50	0.48
38:A1:2950:G:H22	38:A1:2979:U:H2'	1.77	0.48
38:A1:3323:A:H2'	38:A1:3324:C:C6	2.49	0.48
48:AL:59:ARG:NH1	48:AL:66:ASN:O	2.46	0.48
50:AN:143:ARG:HB3	70:Ah:96:GLU:OE1	2.14	0.48
53:AQ:89:ASP:OD2	53:AQ:109:GLY:HA3	2.14	0.48
55:AS:99:ARG:HH21	55:AS:128:GLU:CD	2.21	0.48
66:Ad:54:GLU:HA	66:Ad:57:GLN:HB2	1.93	0.48
67:Ae:45:ARG:HD2	67:Ae:52:GLN:HE22	1.77	0.48
75:Am:90:ASN:C	75:Am:93:LYS:HZ1	2.21	0.48
81:EC:6763:C:H2'	81:EC:6764:C:H6	1.79	0.48
81:EC:6782:C:N4	81:EC:6815:U:O2	2.47	0.48
81:EC:6936:G:H2'	81:EC:6937:G:C8	2.42	0.48
3:BC:187:LEU:HD12	3:BC:188:LEU:HD22	1.93	0.48
4:BE:103:TYR:HE1	4:BE:109:PHE:CD1	2.31	0.48
4:BE:214:LEU:HD21	4:BE:244:ILE:O	2.13	0.48
6:BH:122:HIS:HA	6:BH:125:ILE:HD12	1.96	0.48
10:BN:42:ARG:HH11	10:BN:80:LEU:HD11	1.78	0.48
13:BW:11:LEU:HB2	13:BW:74:VAL:HG13	1.95	0.48
19:BD:32:GLU:O	19:BD:53:THR:OG1	2.21	0.48
26:BT:18:TYR:HB2	26:BT:135:ILE:HG21	1.95	0.48
31:Bg:256:THR:HG1	31:Bg:259:GLY:C	2.22	0.48
32:Bf:100:LEU:HD23	33:BM:71:ILE:HD11	1.96	0.48
34:B5:20:G:H2'	34:B5:21:U:H5'	1.95	0.48
34:B5:144:U:H1'	34:B5:145:A:H5'	1.94	0.48
34:B5:351:C:H3'	34:B5:352:A:H5'	1.96	0.48
34:B5:949:C:H2'	34:B5:950:C:C6	2.49	0.48
34:B5:979:A:C4	34:B5:980:G:C8	3.00	0.48
34:B5:1003:A:H1'	34:B5:1005:A:N7	2.29	0.48
34:B5:1022:C:O2'	34:B5:1023:A:OP1	2.31	0.48
34:B5:1126:G:OP1	76:An:15:ARG:NH2	2.46	0.48
34:B5:1258:U:C2	34:B5:1259:U:C6	3.02	0.48
38:A1:157:A:C5	71:Ai:26:ILE:HD13	2.48	0.48
38:A1:180:C:H2'	38:A1:181:U:C6	2.48	0.48
38:A1:198:A:N3	38:A1:218:G:O2'	2.46	0.48
38:A1:290:G:N3	50:AN:93:LYS:NZ	2.61	0.48
38:A1:811:U:H2'	38:A1:812:G:C8	2.48	0.48
38:A1:1611:G:H2'	38:A1:1612:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1635:G:P	62:AZ:107:ARG:HH22	2.36	0.48
38:A1:1680:G:H2'	38:A1:1681:U:C6	2.48	0.48
38:A1:1781:C:H2'	38:A1:1782:U:H6	1.76	0.48
38:A1:2216:G:H22	38:A1:2229:A:H2	1.59	0.48
38:A1:2235:C:C2	38:A1:2236:G:C8	3.01	0.48
38:A1:2347:U:H2'	38:A1:2348:A:O4'	2.13	0.48
38:A1:2692:A:H2'	38:A1:2693:C:O4'	2.14	0.48
38:A1:2828:G:N2	38:A1:2863:G:H1'	2.28	0.48
38:A1:2916:U:H2'	38:A1:2917:G:C8	2.48	0.48
38:A1:2963:C:N4	38:A1:2964:G:O6	2.45	0.48
41:AD:92:LEU:HD23	41:AD:92:LEU:H	1.78	0.48
44:AG:153:ILE:HD13	44:AG:197:VAL:HG23	1.95	0.48
45:AH:41:ILE:HG21	45:AH:71:VAL:HG11	1.94	0.48
48:AL:159:VAL:HG22	63:Aa:124:ILE:HD11	1.95	0.48
53:AQ:63:SER:HB2	53:AQ:90:ASP:OD2	2.13	0.48
55:AS:12:ARG:HB3	55:AS:24:LEU:HA	1.94	0.48
55:AS:128:GLU:CD	55:AS:128:GLU:H	2.20	0.48
58:AV:86:ARG:HD2	58:AV:92:PHE:HE2	1.78	0.48
66:Ad:72:ARG:HD3	66:Ad:73:LEU:H	1.79	0.48
79:E:129:SER:CB	81:EC:6773:G:H1'	2.43	0.48
1:BA:183:ARG:HB3	1:BA:191:ARG:NH1	2.29	0.48
5:BG:32:ILE:HA	5:BG:52:ILE:HB	1.94	0.48
8:BJ:142:ASN:HB2	34:B5:767:U:O4	2.14	0.48
9:BL:3:THR:HA	9:BL:52:SER:OG	2.13	0.48
9:BL:102:LYS:HE2	34:B5:351:C:C4	2.48	0.48
20:BF:72:HIS:CD2	20:BF:107:LYS:HE3	2.48	0.48
25:BS:41:ARG:NH1	26:BT:46:PRO:HD3	2.29	0.48
26:BT:63:ARG:NH1	34:B5:1481:C:OP1	2.45	0.48
33:BM:63:VAL:HG22	33:BM:65:SER:H	1.79	0.48
34:B5:35:U:O4	34:B5:36:C:N4	2.47	0.48
34:B5:90:C:H2'	34:B5:91:G:H8	1.78	0.48
34:B5:413:U:H2'	34:B5:414:C:H6	1.78	0.48
34:B5:416:A:H3'	34:B5:417:A:C8	2.49	0.48
34:B5:534:A:H3'	34:B5:535:A:C8	2.46	0.48
34:B5:762:A:H2'	34:B5:763:G:O4'	2.14	0.48
34:B5:919:A:H2'	34:B5:920:U:H6	1.78	0.48
34:B5:1241:G:N2	34:B5:1452:U:O4'	2.47	0.48
34:B5:1377:U:O2'	34:B5:1378:U:O5'	2.32	0.48
34:B5:1400:A:H2'	34:B5:1401:A:C8	2.49	0.48
36:AB:227:GLU:OE2	36:AB:231:HIS:HB3	2.14	0.48
38:A1:284:A:N1	38:A1:2784:G:O2'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:291:C:H2'	38:A1:292:U:C6	2.48	0.48
38:A1:730:C:H5'	53:AQ:136:ASN:HA	1.94	0.48
38:A1:951:A:OP2	38:A1:1367:G:N2	2.46	0.48
38:A1:1101:G:H2'	38:A1:1102:A:C8	2.49	0.48
38:A1:1220:U:H5'	38:A1:1222:G:H1'	1.94	0.48
38:A1:1519:G:H2'	38:A1:1520:G:H8	1.78	0.48
38:A1:1593:A:O2'	38:A1:1594:A:O4'	2.17	0.48
38:A1:1619:A:H61	38:A1:1825:G:H1	1.60	0.48
38:A1:2164:A:C5	38:A1:2171:G:C2	3.02	0.48
38:A1:2454:G:H5'	38:A1:2455:U:C6	2.49	0.48
38:A1:2900:A:H4'	45:AH:174:LYS:HE2	1.96	0.48
38:A1:3180:A:H4'	51:AO:116[A]:LYS:HD3	1.96	0.48
38:A1:3224:G:H2'	38:A1:3225:C:C6	2.48	0.48
39:A3:43:U:H2'	39:A3:44:C:N1	2.27	0.48
40:A4:24:G:N7	61:AY:13:ARG:NE	2.62	0.48
44:AG:161:GLU:OE2	50:AN:26:ARG:NH2	2.45	0.48
51:AO:142[A]:SER:HA	51:AO:145[A]:VAL:HG12	1.95	0.48
70:Ah:114:ARG:NE	70:Ah:115:LYS:H	2.00	0.48
74:Al:43:ASN:OD1	74:Al:45:ARG:N	2.40	0.48
80:DC:31:GLY:HA2	83:DC:901:GDP:C8	2.49	0.48
80:DC:753:GLN:O	80:DC:771:TYR:N	2.44	0.48
81:EC:6892:U:O2	81:EC:6938:A:O2'	2.31	0.48
10:BN:104:ARG:HH22	34:B5:950:C:H4'	1.78	0.48
11:BO:118:VAL:HG12	11:BO:118:VAL:O	2.14	0.48
13:BW:111:MET:HE1	13:BW:116:ALA:N	2.28	0.48
18:Be:33:ARG:HH12	34:B5:476:U:H5	1.62	0.48
19:BD:151:LYS:N	19:BD:151:LYS:HD3	2.28	0.48
31:Bg:276:PRO:HG3	31:Bg:313:TRP:CH2	2.49	0.48
34:B5:331:A:H2'	34:B5:332:U:C6	2.48	0.48
34:B5:446:A:N6	34:B5:461:G:H21	2.12	0.48
34:B5:984:G:H2'	34:B5:985:G:C8	2.49	0.48
34:B5:986:G:H2'	34:B5:987:G:O4'	2.14	0.48
34:B5:1209:C:H2'	34:B5:1210:C:H6	1.78	0.48
34:B5:1461:C:H4'	81:EC:6914:A:N1	2.28	0.48
34:B5:1484:G:H1	34:B5:1591:C:HO2'	1.60	0.48
35:AA:150:LEU:HD21	38:A1:2157:G:C6	2.49	0.48
38:A1:582:G:H2'	38:A1:583:G:C8	2.47	0.48
38:A1:649:A:H4'	38:A1:2869:U:H4'	1.95	0.48
38:A1:1222:G:H2'	38:A1:1285:G:N2	2.29	0.48
38:A1:1370:G:H2'	38:A1:1371:G:H8	1.77	0.48
38:A1:1703:U:H1'	38:A1:1743:G:C2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1856:C:H2'	38:A1:1857:C:C6	2.49	0.48
38:A1:1863:G:H1	38:A1:1865:A:H3'	1.77	0.48
38:A1:2328:U:H2'	38:A1:2329:C:C6	2.49	0.48
38:A1:2562:A:H5'	62:AZ:54:THR:HG21	1.95	0.48
38:A1:2960:C:H2'	38:A1:2961:G:H8	1.78	0.48
38:A1:3095:U:H2'	38:A1:3096:C:C6	2.49	0.48
38:A1:3186:A:H2'	55:AS:154:HIS:HE1	1.79	0.48
39:A3:81:U:H2'	39:A3:82:G:N7	2.29	0.48
41:AD:122:VAL:O	41:AD:248:ARG:NH2	2.47	0.48
49:AM:32:LEU:HD11	49:AM:94:TRP:CD1	2.49	0.48
51:AO:142[A]:SER:HB3	51:AO:147[A]:TRP:HB3	1.95	0.48
65:Ac:83:LYS:HE2	65:Ac:83:LYS:HA	1.94	0.48
69:Ag:41:ARG:HD3	69:Ag:50:ALA:HB1	1.95	0.48
72:Aj:64:MET:SD	72:Aj:67:LEU:HB2	2.54	0.48
80:DC:221:THR:HG22	80:DC:333:ALA:HB1	1.95	0.48
2:BB:162:ARG:HE	2:BB:166:LYS:NZ	2.12	0.48
4:BE:7:LYS:HE2	34:B5:449:C:O3'	2.14	0.48
4:BE:24:SER:HB3	34:B5:447:U:H4'	1.96	0.48
4:BE:42:LEU:HD11	4:BE:46:VAL:HG11	1.94	0.48
5:BG:2:LYS:HB2	5:BG:108:VAL:HG22	1.96	0.48
7:BI:141:ARG:HD3	34:B5:190:C:H42	1.78	0.48
10:BN:73:ARG:NH1	34:B5:859:A:N3	2.61	0.48
11:BO:133:ARG:HH21	34:B5:1785:U:H3'	1.79	0.48
17:Bb:21:LEU:HG	34:B5:864:U:H1'	1.96	0.48
19:BD:7:LYS:HZ2	27:BU:88:LYS:HE2	1.78	0.48
21:BK:56:LYS:HB2	21:BK:67:THR:OG1	2.13	0.48
25:BS:41:ARG:HH22	26:BT:37:VAL:HA	1.78	0.48
27:BU:40:ASN:HD22	27:BU:107:THR:HB	1.78	0.48
32:Bf:138:ARG:HD2	34:B5:1235:C:O2	2.13	0.48
33:BM:60:VAL:O	33:BM:60:VAL:HG12	2.14	0.48
34:B5:14:C:H2'	34:B5:15:U:C6	2.49	0.48
34:B5:156:A:H2'	34:B5:157:A:O4'	2.13	0.48
34:B5:250:C:C2	34:B5:251:A:C8	3.01	0.48
34:B5:631:G:H2'	34:B5:632:PSU:H6	1.78	0.48
35:AA:156:LYS:NZ	38:A1:2157:G:O2'	2.45	0.48
36:AB:317:ILE:HG21	36:AB:321:PHE:HB3	1.94	0.48
38:A1:125:C:H2'	38:A1:126:U:H6	1.79	0.48
38:A1:285:A:H1'	77:Ao:45:ARG:HH22	1.78	0.48
38:A1:831:G:O2'	38:A1:1864:A:N3	2.32	0.48
38:A1:1167:U:P	68:Af:73:ARG:HH12	2.36	0.48
38:A1:1525:G:H2'	38:A1:1525:G:N3	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1836:C:H2'	38:A1:1837:U:H6	1.79	0.48
38:A1:2205:U:H2'	38:A1:2206:G:C8	2.49	0.48
38:A1:2622:C:C2	38:A1:2623:G:C8	3.01	0.48
38:A1:2749:G:O2'	41:AD:35:ARG:NH1	2.47	0.48
38:A1:2764:C:OP2	53:AQ:182:LYS:NZ	2.29	0.48
38:A1:3035:A:C5	38:A1:3036:G:C8	3.01	0.48
39:A3:78:U:H2'	39:A3:79:A:C8	2.49	0.48
40:A4:39:G:H1'	40:A4:104:A:N6	2.29	0.48
44:AG:179:ILE:HG22	44:AG:222:PHE:CZ	2.48	0.48
48:AL:166:ALA:O	48:AL:170:LEU:HD12	2.13	0.48
49:AM:120:VAL:HA	49:AM:123:LEU:HB2	1.96	0.48
59:AW:33:ASN:O	59:AW:36:SER:OG	2.29	0.48
64:Ab:32:LEU:HD23	64:Ab:32:LEU:H	1.77	0.48
66:Ad:55:LEU:HB2	66:Ad:95:PRO:HD3	1.94	0.48
67:Ae:24:ARG:NH2	67:Ae:25:TYR:OH	2.45	0.48
79:E:63:MET:SD	79:E:152:ARG:HB3	2.53	0.48
80:DC:736:PRO:HD3	80:DC:792:ALA:HA	1.96	0.48
81:EC:6856:C:H5'	81:EC:6857:C:OP1	2.14	0.48
81:EC:6857:C:H2'	81:EC:6858:A:C5	2.49	0.48
2:BB:136:ARG:HG2	2:BB:218:LEU:HD21	1.95	0.48
3:BC:168:ARG:CZ	3:BC:170:ILE:HD11	2.44	0.48
13:BW:28:ARG:HH22	34:B5:864:U:H3'	1.79	0.48
13:BW:71:LYS:N	13:BW:130:TYR:O	2.40	0.48
18:Be:17:GLN:NE2	34:B5:563:U:H4'	2.29	0.48
21:BK:60:SER:HB3	21:BK:65:TYR:CE1	2.49	0.48
23:BQ:128:LYS:CE	34:B5:1418:G:H4'	2.44	0.48
24:BR:13:SER:O	24:BR:17:ILE:HG13	2.13	0.48
31:Bg:49:GLY:HA2	31:Bg:54:PHE:CE1	2.49	0.48
31:Bg:260:ILE:O	31:Bg:274:LEU:N	2.47	0.48
33:BM:46:ARG:HB3	34:B5:1229:G:O6	2.14	0.48
34:B5:180:A:H2'	34:B5:181:A:C8	2.49	0.48
34:B5:226:A:H1'	34:B5:837:G:N1	2.23	0.48
34:B5:415:C:H3'	34:B5:417:A:H62	1.79	0.48
34:B5:756:A:C2	34:B5:757:A:H1'	2.49	0.48
34:B5:883:C:H2'	34:B5:884:A:H8	1.78	0.48
34:B5:1302:U:H2'	34:B5:1303:U:H6	1.79	0.48
35:AA:46:LYS:HZ1	35:AA:60:LYS:CG	2.27	0.48
36:AB:11:HIS:CD2	36:AB:235:THR:HA	2.49	0.48
36:AB:175:LYS:HG3	38:A1:3314:A:OP1	2.14	0.48
38:A1:161:G:H2'	38:A1:162:G:O4'	2.14	0.48
38:A1:1056:PSU:H2'	38:A1:1057:A:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1246:G:H5'	38:A1:1273:A:H61	1.78	0.48
38:A1:1505:C:OP2	52:AP:23:ARG:NH1	2.47	0.48
38:A1:1577:G:O2'	38:A1:1578:C:OP2	2.24	0.48
38:A1:1593:A:H5'	69:Ag:60:ARG:HD2	1.96	0.48
38:A1:1703:U:C2	38:A1:1743:G:C6	3.02	0.48
39:A3:13:A:H3'	39:A3:14:U:O2	2.14	0.48
39:A3:65:G:H2'	39:A3:66:A:C8	2.49	0.48
40:A4:35:C:H5"	72:Aj:70:VAL:HG21	1.95	0.48
44:AG:34:PHE:CG	44:AG:42:PRO:HD3	2.47	0.48
50:AN:113:LEU:HD22	50:AN:136:ASP:HA	1.95	0.48
65:Ac:15:ALA:O	65:Ac:18:ILE:HG22	2.14	0.48
65:Ac:28:LYS:HA	65:Ac:31:VAL:HG12	1.94	0.48
66:Ad:27:LYS:C	66:Ad:30:PRO:HD2	2.39	0.48
78:Ap:36:ARG:NH1	78:Ap:38:ASP:HA	2.27	0.48
80:DC:282:PHE:HA	80:DC:285:PHE:HB2	1.96	0.48
1:BA:57:LEU:HD21	1:BA:177:LEU:HA	1.95	0.48
3:BC:158:THR:O	3:BC:169:LEU:N	2.43	0.48
4:BE:77:ARG:NH1	34:B5:122:U:H5"	2.29	0.48
7:BI:113:PHE:HE2	7:BI:119:GLN:HB3	1.79	0.48
25:BS:86:LEU:HD22	25:BS:99:HIS:HB2	1.95	0.48
26:BT:121:GLY:C	26:BT:122:ARG:HD2	2.39	0.48
34:B5:103:A:O3'	34:B5:308:C:N4	2.46	0.48
34:B5:127:G:H5'	34:B5:128:U:H5	1.78	0.48
34:B5:386:G:H2'	34:B5:387:A:C8	2.49	0.48
34:B5:756:A:H2'	34:B5:757:A:O4'	2.12	0.48
35:AA:44:ILE:HD13	35:AA:87:PHE:CD1	2.48	0.48
35:AA:238:ILE:O	38:A1:2154:U:O2'	2.31	0.48
37:AC:311:HIS:NE2	37:AC:314:LYS:HA	2.29	0.48
38:A1:28:C:OP1	50:AN:192:LYS:NZ	2.36	0.48
38:A1:42:C:O2'	38:A1:43:A:H5'	2.13	0.48
38:A1:97:U:H2'	38:A1:98:G:O4'	2.14	0.48
38:A1:254:A:H2'	38:A1:255:A:H8	1.79	0.48
38:A1:277:G:H2'	38:A1:278:U:H6	1.78	0.48
38:A1:432:G:P	68:Af:65:ARG:HH12	2.37	0.48
38:A1:936:A:H2'	38:A1:938:C:C4	2.49	0.48
38:A1:989:A:H2'	38:A1:990:PSU:O4'	2.14	0.48
38:A1:1012:G:H2'	38:A1:1013:G:C8	2.49	0.48
38:A1:1117:G:OP1	64:Ab:4:SER:OG	2.28	0.48
38:A1:1183:C:C2	38:A1:1184:A:C8	3.01	0.48
38:A1:1255:C:N4	38:A1:1262:G:OP2	2.46	0.48
38:A1:1402:C:H2'	38:A1:1403:C:H6	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1624:G:H2'	38:A1:1625:A:C8	2.47	0.48
38:A1:1799:A:H2'	38:A1:1800:A:C8	2.46	0.48
38:A1:1807:G:H5"	62:AZ:133:LYS:NZ	2.29	0.48
38:A1:2227:C:H2'	38:A1:2228:A:H8	1.79	0.48
38:A1:2352:A:H2'	38:A1:2353:G:C8	2.49	0.48
38:A1:2433:U:H2'	38:A1:2434:U:C5	2.49	0.48
38:A1:2661:G:H2'	38:A1:2662:G:H8	1.78	0.48
38:A1:2863:G:H2'	38:A1:2863:G:N3	2.28	0.48
38:A1:3007:U:H2'	38:A1:3008:A:H8	1.79	0.48
38:A1:3043:C:C5'	58:AV:45:ARG:HH21	2.24	0.48
38:A1:3130:A:C2	38:A1:3131:U:H5'	2.49	0.48
38:A1:3371:G:H2'	38:A1:3372:A:C8	2.48	0.48
40:A4:123:G:H2'	40:A4:124:G:C8	2.49	0.48
44:AG:140:VAL:O	44:AG:143:ILE:N	2.43	0.48
45:AH:4:ILE:HG23	55:AS:142:GLN:NE2	2.28	0.48
49:AM:47:ASP:CG	49:AM:55:ARG:HB2	2.38	0.48
70:Ah:27:GLU:O	70:Ah:31:LEU:HB2	2.14	0.48
79:E:50:SER:HA	79:E:157:PHE:HB2	1.96	0.48
80:DC:137:VAL:O	80:DC:141:THR:HG23	2.14	0.48
80:DC:464:LEU:HD12	80:DC:465:LYS:HZ3	1.78	0.48
81:EC:6761:C:H2'	81:EC:6762:U:H6	1.78	0.48
1:BA:79:ARG:NH1	1:BA:81:PHE:HB2	2.29	0.47
4:BE:40:GLU:O	4:BE:103:TYR:OH	2.31	0.47
8:BJ:64:GLU:HA	8:BJ:69:ARG:HD2	1.96	0.47
8:BJ:85:VAL:HG11	8:BJ:104:PHE:CE2	2.49	0.47
14:BX:69:ARG:HH22	34:B5:569:C:H41	1.60	0.47
14:BX:117:ILE:HG13	14:BX:117:ILE:O	2.14	0.47
18:Be:33:ARG:NH2	34:B5:475:A:H3'	2.29	0.47
20:BF:222:LYS:HA	20:BF:225:ARG:NH2	2.29	0.47
21:BK:48:SER:HA	34:B5:1219:A:O2'	2.14	0.47
22:BP:27:GLU:OE2	22:BP:27:GLU:N	2.37	0.47
22:BP:30:THR:OG1	22:BP:88:GLU:OE2	2.32	0.47
26:BT:25:GLN:OE1	26:BT:27:LYS:NZ	2.40	0.47
34:B5:55:A:H3'	34:B5:403:G:H22	1.79	0.47
34:B5:156:A:H1'	34:B5:416:A:C5	2.49	0.47
34:B5:196:G:H3'	34:B5:197:A:H8	1.79	0.47
34:B5:994:G:OP1	34:B5:1778:G:O2'	2.32	0.47
34:B5:1160:A:H2'	34:B5:1161:C:H6	1.79	0.47
34:B5:1561:U:H2'	34:B5:1562:G:H8	1.77	0.47
34:B5:1776:A:H2'	34:B5:1777:G:H8	1.79	0.47
37:AC:115:HIS:N	38:A1:681:U:OP1	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:288:C:OP1	50:AN:170:LYS:NZ	2.44	0.47
38:A1:408:A:H2'	38:A1:409:A:C8	2.49	0.47
38:A1:432:G:H2'	38:A1:433:A:C8	2.48	0.47
38:A1:521:A:C8	38:A1:571:U:N3	2.76	0.47
38:A1:683:U:OP1	50:AN:204:LYS:NZ	2.31	0.47
38:A1:1019:G:O2'	38:A1:1020:G:H8	1.97	0.47
38:A1:1198:C:H2'	38:A1:1199:C:C5	2.48	0.47
38:A1:1372:C:H2'	38:A1:1373:A:C8	2.49	0.47
38:A1:1391:C:C2	67:Ae:103:LYS:HD3	2.50	0.47
38:A1:2104:A:H2'	38:A1:2105:G:H8	1.78	0.47
38:A1:2468:A:O2'	38:A1:2477:G:N2	2.47	0.47
38:A1:2900:A:H1'	38:A1:3026:G:H5'	1.96	0.47
38:A1:3087:A:C4	38:A1:3088:G:C8	3.01	0.47
38:A1:3232:G:C6	38:A1:3255:U:O2	2.66	0.47
38:A1:3249:C:H2'	38:A1:3250:U:C6	2.49	0.47
38:A1:3385:U:O2'	66:Ad:10:ARG:NH2	2.42	0.47
48:AL:9:ILE:HG12	63:Aa:52:TYR:OH	2.14	0.47
48:AL:128:ARG:NH2	70:Ah:112:PRO:HD2	2.28	0.47
49:AM:14:LEU:HB2	49:AM:19:ARG:HH21	1.79	0.47
50:AN:115:VAL:HG21	50:AN:132:VAL:CG2	2.43	0.47
51:AO:186[A]:ALA:C	51:AO:188[A]:SER:H	2.20	0.47
57:AU:33:TYR:OH	57:AU:80:THR:OG1	2.18	0.47
59:AW:58:HIS:HD1	59:AW:59:HIS:CE1	2.32	0.47
63:Aa:80:THR:HA	63:Aa:87:ARG:NH2	2.29	0.47
69:Ag:56:THR:C	69:Ag:57:LEU:HD12	2.39	0.47
70:Ah:6:ALA:HA	70:Ah:9:LEU:HD12	1.96	0.47
78:Ap:36:ARG:NH2	78:Ap:44:LYS:O	2.47	0.47
80:DC:172:GLU:OE2	80:DC:176:GLN:NE2	2.47	0.47
80:DC:315:GLU:HG3	80:DC:316:GLY:H	1.79	0.47
1:BA:69:ASN:HB3	1:BA:71:GLU:OE1	2.14	0.47
4:BE:48:LEU:O	4:BE:54:TYR:N	2.47	0.47
5:BG:74:LYS:HA	5:BG:96:SER:HA	1.96	0.47
8:BJ:173:ALA:HB2	34:B5:511:A:H5'	1.96	0.47
9:BL:45:PRO:O	9:BL:49:ILE:HG12	2.13	0.47
14:BX:58:GLY:HA2	18:Be:8:LEU:HD21	1.95	0.47
24:BR:5:ARG:HB3	24:BR:9:VAL:HG21	1.97	0.47
25:BS:24:GLY:O	25:BS:59:GLY:N	2.47	0.47
26:BT:12:GLN:NE2	34:B5:1479:A:N3	2.62	0.47
31:Bg:125:GLY:HA2	31:Bg:131:ILE:HA	1.96	0.47
31:Bg:189:GLU:OE1	31:Bg:228:LYS:NZ	2.46	0.47
34:B5:180:A:H8	34:B5:180:A:OP2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:224:C:H5	34:B5:225:A:C8	2.32	0.47
34:B5:381:C:H2'	34:B5:382:C:H6	1.79	0.47
34:B5:641:G:H2'	34:B5:642:G:C8	2.50	0.47
34:B5:684:A:C6	34:B5:685:A:H1'	2.48	0.47
34:B5:759:PSU:C4	34:B5:760:A:C8	3.02	0.47
34:B5:1302:U:H2'	34:B5:1303:U:C6	2.48	0.47
34:B5:1358:G:H2'	34:B5:1359:C:C6	2.49	0.47
34:B5:1654:G:H5'	76:An:21:ARG:HH22	1.78	0.47
38:A1:142:C:H2'	38:A1:143:G:O4'	2.14	0.47
38:A1:281:G:H2'	38:A1:282:G:H8	1.78	0.47
38:A1:315:C:H2'	38:A1:316:U:C6	2.49	0.47
38:A1:341:G:O2'	40:A4:22:U:O4	2.32	0.47
38:A1:346:C:N4	38:A1:349:A:H5'	2.29	0.47
38:A1:741:U:O3'	53:AQ:73:GLN:NE2	2.46	0.47
38:A1:748:U:H2'	38:A1:749:C:C6	2.49	0.47
38:A1:824:C:C4	38:A1:825:U:C4	3.02	0.47
38:A1:1102:A:H5"	38:A1:1103:A:H5'	1.96	0.47
38:A1:1391:C:N3	67:Ae:103:LYS:HD3	2.29	0.47
38:A1:1458:U:H2'	38:A1:1459:C:H6	1.77	0.47
38:A1:2233:A:C4	38:A1:2234:G:C8	3.03	0.47
38:A1:2355:G:H5'	52:AP:139:TYR:CE1	2.49	0.47
38:A1:2961:G:H2'	38:A1:2962:U:C6	2.49	0.47
38:A1:3249:C:H2'	38:A1:3250:U:H6	1.78	0.47
40:A4:104:A:H5"	72:Aj:21:ARG:NH2	2.13	0.47
41:AD:33:ARG:HH12	41:AD:50:ARG:NH2	2.12	0.47
45:AH:76:ASP:OD1	45:AH:77:ASN:N	2.47	0.47
46:AI:31:ILE:HD11	46:AI:65:LEU:HB2	1.95	0.47
50:AN:99:ARG:CZ	50:AN:167:THR:HG23	2.44	0.47
56:AT:112:ASN:HA	56:AT:115:LYS:HE3	1.94	0.47
68:Af:6:ARG:NH1	68:Af:10:LYS:HE3	2.29	0.47
69:Ag:58:ARG:HB3	69:Ag:59:PRO:HD2	1.96	0.47
73:Ak:33:LYS:H	73:Ak:33:LYS:HD2	1.79	0.47
78:Ap:23:ARG:HA	78:Ap:26:VAL:HG12	1.96	0.47
80:DC:42:ARG:CZ	80:DC:331:ALA:HB3	2.44	0.47
80:DC:507:GLY:O	80:DC:511:LEU:N	2.34	0.47
80:DC:544:ASP:OD1	80:DC:544:ASP:N	2.44	0.47
80:DC:568:GLU:HA	80:DC:592:PRO:HG3	1.95	0.47
81:EC:6858:A:O2'	81:EC:6859:U:OP1	2.30	0.47
2:BB:111:ARG:CZ	16:Ba:39:MET:HE1	2.45	0.47
3:BC:120:GLU:CD	3:BC:123:GLY:H	2.22	0.47
4:BE:114:ILE:HB	4:BE:118:GLU:OE2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BH:50:ASP:HA	6:BH:56:LYS:HD3	1.96	0.47
10:BN:130:ARG:HH11	10:BN:137:PRO:HA	1.79	0.47
13:BW:41:MET:CE	13:BW:47:ILE:HB	2.44	0.47
13:BW:76:SER:OG	34:B5:1102:G:OP1	2.20	0.47
21:BK:26:ASP:H	21:BK:39:ASN:ND2	2.12	0.47
27:BU:69:LYS:HA	30:Bd:44:ARG:NH2	2.29	0.47
31:Bg:238:ASP:HB3	31:Bg:256:THR:HB	1.95	0.47
34:B5:124:A:H2'	34:B5:125:U:O4'	2.15	0.47
34:B5:549:G:C2	34:B5:590:C:C2	3.02	0.47
34:B5:879:G:H2'	34:B5:880:C:H6	1.79	0.47
34:B5:901:G:C5	34:B5:902:G:C5	3.02	0.47
34:B5:1210:C:H2'	34:B5:1211:A:C8	2.49	0.47
34:B5:1636:C:O2	34:B5:1765:A:N6	2.47	0.47
38:A1:26:A:N6	38:A1:58:G:O6	2.47	0.47
38:A1:141:C:H2'	38:A1:142:C:H6	1.79	0.47
38:A1:421:G:N2	38:A1:2384:A:H1'	2.29	0.47
38:A1:633:C:H2'	38:A1:634:C:C6	2.49	0.47
38:A1:655:C:P	67:Ae:27:ARG:HG2	2.53	0.47
38:A1:837:A:H2'	38:A1:838:G:O4'	2.14	0.47
38:A1:1086:C:H2'	38:A1:1087:G:O4'	2.14	0.47
38:A1:1104:G:C2	38:A1:1105:A:C5	3.02	0.47
38:A1:1118:C:H2'	38:A1:1119:C:C6	2.49	0.47
38:A1:1601:U:P	54:AR:42:ARG:HH22	2.37	0.47
38:A1:1602:A:H2'	38:A1:1603:A:C4	2.49	0.47
38:A1:1687:U:O4	57:AU:45:GLY:N	2.31	0.47
38:A1:1845:G:O2'	72:Aj:5:THR:HG22	2.14	0.47
38:A1:2107:A:H2'	38:A1:2108:C:C6	2.49	0.47
38:A1:2113:A:H2'	38:A1:2114:C:O4'	2.15	0.47
38:A1:2465:G:H2'	38:A1:2466:G:O4'	2.15	0.47
38:A1:2960:C:H2'	38:A1:2961:G:C8	2.49	0.47
38:A1:3039:C:H2'	38:A1:3040:A:C8	2.48	0.47
39:A3:5:G:H2'	39:A3:6:C:C6	2.49	0.47
45:AH:181:VAL:O	75:Am:85:LEU:HD11	2.14	0.47
46:AI:3:ARG:HD2	46:AI:123:HIS:CE1	2.49	0.47
50:AN:53:TYR:CD2	50:AN:61:ILE:HD11	2.50	0.47
51:AO:14[A]:HIS:HD2	51:AO:123[A]:ALA:HB3	1.79	0.47
52:AP:169:THR:N	52:AP:172:GLN:OE1	2.29	0.47
58:AV:85:TRP:O	58:AV:92:PHE:HA	2.14	0.47
66:Ad:6:ASP:O	66:Ad:77:ARG:NH1	2.47	0.47
80:DC:22:MET:O	80:DC:102:LEU:HA	2.14	0.47
80:DC:395:TYR:HE2	80:DC:442:VAL:HG11	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:463:LEU:HG	80:DC:465:LYS:H	1.79	0.47
80:DC:601:ILE:HG21	80:DC:643:PRO:HA	1.96	0.47
4:BE:145:ARG:HH22	4:BE:167:GLY:HA3	1.79	0.47
4:BE:171:ASP:N	4:BE:171:ASP:OD1	2.45	0.47
5:BG:181:PRO:HA	5:BG:184:LEU:HB2	1.94	0.47
10:BN:20:ARG:O	10:BN:21:ASN:ND2	2.48	0.47
10:BN:106:ARG:HD2	10:BN:107:LYS:N	2.29	0.47
11:BO:136:ARG:HH22	34:B5:1770:U:H5	1.62	0.47
12:BV:70:ASN:HA	12:BV:79:LEU:HD23	1.95	0.47
19:BD:7:LYS:HA	19:BD:10:LYS:HG2	1.96	0.47
23:BQ:94:GLN:HB2	23:BQ:102:LYS:HG3	1.96	0.47
28:BZ:47:TYR:HA	28:BZ:50:ILE:HD12	1.95	0.47
32:Bf:106:TYR:O	32:Bf:107:LYS:HD3	2.14	0.47
34:B5:54:C:H2'	34:B5:55:A:C8	2.50	0.47
34:B5:61:A:H2'	34:B5:62:A:C8	2.49	0.47
34:B5:872:G:N2	34:B5:1047:G:H4'	2.29	0.47
34:B5:960:U:H2'	34:B5:961:U:C6	2.49	0.47
34:B5:1164:G:O2'	34:B5:1612:U:O2	2.32	0.47
34:B5:1308:G:H2'	34:B5:1309:C:C6	2.50	0.47
34:B5:1508:U:H2'	34:B5:1509:C:H6	1.78	0.47
37:AC:193:LYS:HZ3	38:A1:1419:A:H5"	1.78	0.47
38:A1:174:C:H2'	38:A1:175:C:C6	2.49	0.47
38:A1:296:A:H2'	38:A1:297:G:N3	2.28	0.47
38:A1:1225:A:C6	38:A1:1226:G:C6	3.02	0.47
38:A1:1639:C:OP1	69:Ag:74:ARG:NH2	2.47	0.47
38:A1:1678:G:O6	57:AU:74:LYS:NZ	2.41	0.47
38:A1:2291:A:H2'	38:A1:2292:U:C6	2.50	0.47
38:A1:2291:A:C6	38:A1:2302:G:C6	3.02	0.47
38:A1:2444:C:N3	38:A1:2445:A:C6	2.82	0.47
38:A1:2778:G:N2	38:A1:2779:A:H1'	2.30	0.47
38:A1:2791:G:H2'	38:A1:2792:A:C8	2.48	0.47
38:A1:3036:G:H2'	38:A1:3037:U:C6	2.50	0.47
38:A1:3072:C:H2'	38:A1:3073:A:O4'	2.15	0.47
38:A1:3094:A:H2'	38:A1:3095:U:C6	2.49	0.47
38:A1:3198:U:O2	45:AH:21:LYS:N	2.47	0.47
38:A1:3257:C:H2'	38:A1:3258:U:C6	2.50	0.47
40:A4:11:C:H2'	40:A4:12:A:H8	1.78	0.47
40:A4:132:G:H2'	40:A4:133:G:C8	2.49	0.47
44:AG:71:VAL:N	44:AG:234:GLY:O	2.42	0.47
46:AI:97:LEU:HD11	46:AI:126:ALA:HB2	1.96	0.47
47:AJ:10:ARG:O	47:AJ:133:ARG:NH1	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:AR:15:VAL:HG23	54:AR:17:VAL:HG22	1.97	0.47
55:AS:102:ALA:O	55:AS:105:THR:OG1	2.28	0.47
56:AT:6:GLY:N	56:AT:9:SER:OG	2.47	0.47
60:AX:79:GLY:O	60:AX:81:ILE:HG23	2.15	0.47
64:Ab:23:LYS:HE3	64:Ab:25:LYS:HA	1.96	0.47
70:Ah:63:ARG:O	70:Ah:67:ARG:HG3	2.15	0.47
72:Aj:27:PHE:HA	72:Aj:34:CYS:HA	1.96	0.47
74:Al:8:ARG:HA	74:Al:11:GLN:HG2	1.97	0.47
77:Ao:12:CYS:HB2	77:Ao:23:HIS:CE1	2.49	0.47
80:DC:410:LYS:NZ	80:DC:429:LYS:O	2.37	0.47
80:DC:765:LEU:HA	80:DC:791:GLN:NE2	2.29	0.47
81:EC:6885:G:H2'	81:EC:6886:A:C8	2.49	0.47
1:BA:8:ASP:HB2	24:BR:115:LEU:HD22	1.97	0.47
4:BE:256:ARG:O	4:BE:261:LEU:N	2.47	0.47
12:BV:8:LEU:HG	12:BV:10:GLU:OE1	2.14	0.47
13:BW:80:ASN:HD21	34:B5:748:U:P	2.37	0.47
15:BY:11:LYS:O	15:BY:13:ILE:HD12	2.15	0.47
15:BY:76:TYR:HB2	15:BY:82:ALA:HB2	1.96	0.47
23:BQ:8:GLN:HB2	34:B5:1378:U:C2	2.49	0.47
24:BR:109:LEU:O	24:BR:113:LEU:N	2.32	0.47
27:BU:84:MET:CE	30:Bd:52:PHE:HA	2.45	0.47
29:Bc:29:ARG:HB2	29:Bc:41:VAL:HG22	1.97	0.47
33:BM:62:LEU:HD12	33:BM:119:SER:O	2.14	0.47
34:B5:12:U:H2'	34:B5:13:C:H6	1.79	0.47
34:B5:324:U:H2'	34:B5:325:G:C8	2.50	0.47
34:B5:351:C:OP1	34:B5:630:A:O2'	2.17	0.47
34:B5:395:U:H2'	34:B5:396:G:O4'	2.14	0.47
34:B5:1312:A:H2'	34:B5:1313:A:C8	2.49	0.47
35:AA:101:VAL:HA	35:AA:165:VAL:HA	1.96	0.47
36:AB:75:ALA:HB2	38:A1:3049:A:C6	2.48	0.47
38:A1:75:G:H5"	48:AL:58:VAL:CG1	2.43	0.47
38:A1:333:G:C6	40:A4:31:G:C6	3.02	0.47
38:A1:412:G:N2	52:AP:118:GLN:OE1	2.47	0.47
38:A1:922:U:OP1	72:Aj:3:LYS:HE3	2.14	0.47
38:A1:954:U:H1'	64:Ab:12:GLN:NE2	2.29	0.47
38:A1:998:A:H2'	38:A1:999:G:C8	2.49	0.47
38:A1:1049:C:H5'	56:AT:12:ARG:NH2	2.28	0.47
38:A1:1375:G:N7	63:Aa:10:LYS:NZ	2.61	0.47
38:A1:1699:A:N6	38:A1:1747:G:O6	2.47	0.47
38:A1:2286:U:O4'	38:A1:2288:G:H5'	2.15	0.47
38:A1:2479:C:O3'	79:E:106:LYS:NZ	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2638:C:C2	38:A1:2639:G:C8	3.02	0.47
38:A1:2722:U:H2'	38:A1:2723:U:H6	1.77	0.47
38:A1:3112:G:O6	38:A1:3120:C:H5"	2.14	0.47
38:A1:3154:C:C4	38:A1:3158:G:C6	3.03	0.47
42:AE:89:THR:HG21	49:AM:115:PHE:HB2	1.96	0.47
44:AG:98:ARG:HG3	44:AG:99:PRO:O	2.14	0.47
46:AI:43:VAL:HA	46:AI:139:ARG:NH2	2.29	0.47
47:AJ:51:ARG:HG3	47:AJ:52:TYR:HD1	1.79	0.47
49:AM:109:ARG:HA	49:AM:112:LEU:HD23	1.96	0.47
51:AO:50[A]:ASN:HA	51:AO:53[A]:LYS:NZ	2.28	0.47
70:Ah:53:CYS:O	70:Ah:57:VAL:HG23	2.14	0.47
72:Aj:21:ARG:HD2	72:Aj:39:TYR:CD1	2.49	0.47
79:E:138:VAL:HG21	79:E:144:LEU:HD13	1.96	0.47
80:DC:464:LEU:HD12	80:DC:465:LYS:NZ	2.29	0.47
2:BB:106:THR:O	2:BB:110:LEU:HG	2.14	0.47
3:BC:56:ILE:H	3:BC:56:ILE:HD12	1.79	0.47
4:BE:9:LEU:CD1	4:BE:30:ARG:HD2	2.45	0.47
4:BE:125:LYS:HB2	4:BE:226:PHE:CD1	2.50	0.47
7:BI:49:ARG:HB3	34:B5:333:A:C8	2.49	0.47
8:BJ:172:VAL:HG11	34:B5:512:A:N7	2.30	0.47
13:BW:82:LYS:NZ	34:B5:748:U:O5'	2.39	0.47
13:BW:107:SER:HA	34:B5:804:A:C5	2.48	0.47
15:BY:29:HIS:CE1	15:BY:67:GLY:H	2.33	0.47
16:Ba:71:LEU:HB3	16:Ba:73:TYR:HE2	1.78	0.47
20:BF:166:ARG:NE	29:Bc:46:GLY:HA2	2.30	0.47
20:BF:198:LEU:O	20:BF:202:ALA:N	2.48	0.47
23:BQ:23:LYS:HG3	23:BQ:64:ASP:OD1	2.14	0.47
34:B5:183:U:H2'	34:B5:184:C:H6	1.79	0.47
34:B5:221:A:N6	34:B5:222:A:N3	2.62	0.47
34:B5:998:A:H2'	34:B5:999:PSU:C6	2.49	0.47
36:AB:19:ARG:HB2	36:AB:232:ARG:NH2	2.30	0.47
37:AC:282:SER:N	53:AQ:123:THR:HG21	2.30	0.47
38:A1:600:G:C2	38:A1:604:G:C6	3.03	0.47
38:A1:708:G:O2'	38:A1:710:A:N7	2.41	0.47
38:A1:1509:A:N7	38:A1:1510:G:N1	2.63	0.47
38:A1:1658:G:O4'	38:A1:1796:G:H2'	2.14	0.47
38:A1:1940:G:H21	38:A1:3362:A:H8	1.63	0.47
38:A1:2122:G:C6	38:A1:2332:A:N1	2.83	0.47
38:A1:2412:G:H2'	38:A1:2413:A:C8	2.49	0.47
38:A1:2912:G:H2'	38:A1:2913:C:C6	2.50	0.47
38:A1:3126:C:H2'	38:A1:3127:A:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3178:A:C4	51:AO:115[A]:LYS:HD2	2.49	0.47
40:A4:19:C:H2'	40:A4:20:U:C6	2.50	0.47
45:AH:111:PHE:HB3	45:AH:125:ASN:HB2	1.95	0.47
46:AI:36:LEU:HD21	46:AI:69:ARG:HH11	1.80	0.47
65:Ac:95:ALA:HB2	65:Ac:101:LEU:HD23	1.97	0.47
67:Ae:4:LEU:HD12	67:Ae:5:PRO:HD2	1.97	0.47
78:Ap:36:ARG:HG2	78:Ap:47:VAL:O	2.14	0.47
80:DC:135:VAL:HG13	80:DC:139:THR:HG23	1.95	0.47
80:DC:379:MET:HG3	80:DC:402:ALA:HB3	1.96	0.47
80:DC:504:LEU:HD23	80:DC:504:LEU:H	1.80	0.47
81:EC:6759:A:H2'	81:EC:6760:A:C8	2.50	0.47
1:BA:190:ASP:O	1:BA:193:GLN:HG3	2.14	0.47
3:BC:63:VAL:HG21	3:BC:69:ILE:HD11	1.97	0.47
3:BC:157:LYS:HE2	3:BC:170:ILE:HD12	1.96	0.47
5:BG:8:PRO:HD3	5:BG:112:VAL:HG13	1.95	0.47
5:BG:61:PHE:CD2	5:BG:72:ARG:HD3	2.50	0.47
5:BG:191:ARG:HA	34:B5:178:U:O4	2.14	0.47
6:BH:31:SER:OG	6:BH:32:PRO:HD3	2.15	0.47
6:BH:60:ILE:HB	6:BH:92:PHE:HA	1.95	0.47
6:BH:138:LYS:HG2	6:BH:150:GLN:HE21	1.80	0.47
9:BL:15:LYS:N	9:BL:54:ILE:HD12	2.30	0.47
9:BL:43:LYS:HZ1	34:B5:740:A:H4'	1.79	0.47
9:BL:102:LYS:NZ	14:BX:13:ARG:HH22	2.13	0.47
10:BN:55:ARG:NH1	34:B5:958:U:O2'	2.47	0.47
11:BO:114:ARG:NE	16:Ba:59:TYR:OH	2.48	0.47
13:BW:53:ILE:HD13	17:Bb:24:LEU:HG	1.96	0.47
14:BX:6:PRO:HG2	14:BX:15:LEU:HD21	1.97	0.47
17:Bb:14:SER:HA	17:Bb:17:ARG:HB2	1.97	0.47
19:BD:40:ARG:HD2	19:BD:47:GLU:CD	2.38	0.47
19:BD:70:THR:HG22	19:BD:84:ILE:HG23	1.97	0.47
20:BF:76:ARG:HH21	20:BF:78:ALA:H	1.63	0.47
22:BP:57:MET:HE2	22:BP:88:GLU:HB3	1.95	0.47
25:BS:145:ARG:NH2	34:B5:1172:G:O3'	2.36	0.47
26:BT:70:GLN:HB2	26:BT:121:GLY:N	2.24	0.47
28:BZ:35:ARG:HD3	34:B5:1536:G:OP1	2.15	0.47
28:BZ:45:GLU:OE1	28:BZ:45:GLU:N	2.47	0.47
28:BZ:64:VAL:HG13	28:BZ:68:ARG:HD3	1.97	0.47
33:BM:36:LEU:HG	33:BM:41:LEU:HD23	1.97	0.47
33:BM:96:GLN:HG3	33:BM:100:TRP:CZ2	2.50	0.47
34:B5:108:A:H2'	34:B5:109:G:C8	2.50	0.47
34:B5:113:U:HO2'	34:B5:115:G:HO2'	1.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:829:A:H2'	34:B5:830:U:C6	2.50	0.47
34:B5:868:G:C2	34:B5:869:A:C8	3.03	0.47
34:B5:947:U:H2'	34:B5:948:G:C8	2.50	0.47
34:B5:997:G:C6	34:B5:1008:G:C6	3.03	0.47
34:B5:1008:G:C6	34:B5:1009:U:C4	3.03	0.47
34:B5:1046:G:C6	34:B5:1073:G:N1	2.83	0.47
34:B5:1114:G:H22	34:B5:1130:G:H3'	1.79	0.47
34:B5:1294:G:C2	34:B5:1295:G:C8	3.03	0.47
34:B5:1352:G:C2	34:B5:1354:G:H1'	2.49	0.47
36:AB:54:THR:OG1	36:AB:55:THR:N	2.47	0.47
36:AB:262:TRP:CD1	51:AO:66[A]:LYS:H	2.32	0.47
37:AC:112:LYS:HE3	50:AN:202:TYR:CB	2.44	0.47
38:A1:99:A:H4'	38:A1:99:A:OP1	2.15	0.47
38:A1:189:G:C6	38:A1:206:G:C5	3.03	0.47
38:A1:357:A:H2'	38:A1:358:G:C8	2.50	0.47
38:A1:387:A:H2'	38:A1:388:G:H8	1.79	0.47
38:A1:412:G:H2'	38:A1:413:U:H6	1.79	0.47
38:A1:625:G:H2'	38:A1:626:U:C6	2.50	0.47
38:A1:697:A:H2'	38:A1:698:U:C6	2.50	0.47
38:A1:754:G:N3	38:A1:755:A:C8	2.83	0.47
38:A1:792:G:H2'	38:A1:793:C:C6	2.49	0.47
38:A1:846:A:H3'	38:A1:847:A:C8	2.45	0.47
38:A1:937:G:C6	38:A1:2410:U:H5"	2.49	0.47
38:A1:965:A:H5'	63:Aa:41:HIS:HE1	1.80	0.47
38:A1:1072:G:H2'	38:A1:1073:U:H6	1.79	0.47
38:A1:1393:A:N6	38:A1:1417:G:H1'	2.29	0.47
38:A1:1537:A:H2'	38:A1:1538:G:O4'	2.14	0.47
38:A1:1635:G:O2'	38:A1:1637:A:N6	2.41	0.47
38:A1:1699:A:C6	38:A1:1747:G:C6	3.02	0.47
38:A1:1748:G:OP2	73:Ak:42:LYS:NZ	2.47	0.47
38:A1:1847:A:O4'	52:AP:130:TYR:OH	2.29	0.47
38:A1:2301:U:H2'	38:A1:2302:G:C8	2.50	0.47
38:A1:2448:G:N1	38:A1:2498:U:N3	2.25	0.47
38:A1:2579:G:H3'	38:A1:2580:A:H8	1.80	0.47
38:A1:2622:C:H42	46:AI:116:ARG:HH22	1.61	0.47
38:A1:2686:A:H2'	38:A1:2687:G:O4'	2.14	0.47
38:A1:2762:A:H1'	38:A1:2800:G:C6	2.50	0.47
38:A1:2794:G:H5"	77:Ao:61:LYS:HE2	1.97	0.47
38:A1:2842:U:OP1	38:A1:2844:C:N4	2.44	0.47
38:A1:2909:U:H2'	38:A1:2910:A:O4'	2.14	0.47
38:A1:3084:C:H2'	38:A1:3085:G:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3116:G:H3'	38:A1:3117:C:C6	2.50	0.47
38:A1:3131:U:H2'	38:A1:3132:C:C6	2.50	0.47
38:A1:3282:U:H2'	38:A1:3283:U:C6	2.49	0.47
38:A1:3299:A:C6	38:A1:3300:U:C4	3.02	0.47
38:A1:3348:G:C2	38:A1:3358:U:C2	3.02	0.47
38:A1:3364:C:C2	38:A1:3365:U:C5	3.02	0.47
39:A3:46:A:H2'	39:A3:47:C:C6	2.49	0.47
39:A3:47:C:OP1	41:AD:95:TRP:N	2.41	0.47
39:A3:78:U:H2'	39:A3:79:A:H8	1.80	0.47
40:A4:2:A:C4	40:A4:3:A:C8	3.02	0.47
40:A4:58:G:N7	72:Aj:63:ARG:NH1	2.56	0.47
40:A4:91:C:H2'	40:A4:92:A:H8	1.79	0.47
42:AE:51:ARG:NE	42:AE:163:PHE:HB2	2.29	0.47
43:AF:214:TRP:CE2	43:AF:219:LYS:HD2	2.50	0.47
44:AG:150:LEU:HD12	44:AG:151:VAL:N	2.30	0.47
45:AH:17:THR:OG1	45:AH:28:VAL:HB	2.14	0.47
47:AJ:49:LYS:HD2	47:AJ:62:ASN:HB3	1.96	0.47
48:AL:48:PRO:HB2	70:Ah:117:ALA:HB2	1.97	0.47
52:AP:141:SER:O	52:AP:143:PRO:HD3	2.14	0.47
53:AQ:44:PHE:O	53:AQ:47:VAL:HG12	2.14	0.47
58:AV:81:GLN:HB3	58:AV:85:TRP:HZ3	1.80	0.47
58:AV:114:ILE:HD13	58:AV:133:SER:HA	1.96	0.47
62:AZ:58:GLY:H	62:AZ:61:LYS:HD2	1.80	0.47
63:Aa:130:VAL:HG22	63:Aa:131:SER:H	1.79	0.47
66:Ad:12:TYR:N	66:Ad:73:LEU:O	2.39	0.47
66:Ad:44:MET:HE3	66:Ad:77:ARG:NE	2.29	0.47
70:Ah:93:THR:HG23	70:Ah:96:GLU:H	1.79	0.47
72:Aj:5:THR:OG1	72:Aj:6:PRO:HD3	2.14	0.47
72:Aj:25:ARG:HD2	74:Al:50:ASN:O	2.14	0.47
73:Ak:64:LYS:HD3	73:Ak:64:LYS:HA	1.72	0.47
76:An:17:ARG:HA	76:An:20:VAL:HG22	1.96	0.47
78:Ap:17:ARG:HG3	78:Ap:18:TYR:CD1	2.35	0.47
78:Ap:36:ARG:HB2	78:Ap:48:LYS:NZ	2.30	0.47
79:E:97:LYS:HE3	81:EC:6776:A:H61	1.79	0.47
79:E:120:VAL:HB	79:E:121:PRO:HD3	1.96	0.47
79:E:125:GLY:H	79:E:126:PRO:HD2	1.80	0.47
80:DC:22:MET:O	80:DC:102:LEU:HD23	2.13	0.47
80:DC:216:HIS:HB3	80:DC:218:TRP:CD1	2.49	0.47
80:DC:378:LEU:HB3	80:DC:471:THR:HG23	1.97	0.47
80:DC:438:MET:O	80:DC:438:MET:HG3	2.15	0.47
80:DC:645:LEU:HD23	80:DC:685:ARG:HE	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:763:THR:HB	80:DC:765:LEU:HD13	1.96	0.47
81:EC:6773:G:C8	81:EC:6819:G:H2'	2.49	0.47
81:EC:6868:C:O2'	81:EC:6869:C:OP1	2.24	0.47
2:BB:119:THR:H	2:BB:143:THR:HG1	1.56	0.47
4:BE:10:LYS:NZ	34:B5:96:G:OP1	2.42	0.47
5:BG:30:LYS:HD2	5:BG:34:GLN:NE2	2.30	0.47
5:BG:208:TYR:CZ	5:BG:212:LEU:HD21	2.50	0.47
7:BI:103:GLN:HA	7:BI:165:LEU:O	2.14	0.47
7:BI:137:LYS:HE2	34:B5:190:C:C6	2.49	0.47
7:BI:191:PHE:O	7:BI:195:ARG:N	2.42	0.47
8:BJ:175:ARG:NH1	34:B5:538:A:OP2	2.48	0.47
9:BL:75:VAL:HG23	9:BL:121:ASP:O	2.15	0.47
11:BO:133:ARG:NH2	34:B5:1785:U:O5'	2.46	0.47
21:BK:53:GLY:C	21:BK:55:VAL:H	2.21	0.47
24:BR:105:GLN:O	24:BR:109:LEU:N	2.39	0.47
26:BT:75:LYS:NZ	34:B5:1520:U:H5"	2.30	0.47
34:B5:285:G:H2'	34:B5:286:C:H6	1.79	0.47
34:B5:388:G:O6	34:B5:410:A:N6	2.48	0.47
34:B5:606:A:H4'	34:B5:607:G:H3'	1.96	0.47
34:B5:680:U:O2	34:B5:682:C:N4	2.47	0.47
34:B5:814:A:H5'	54:AR:167:ARG:HH21	1.77	0.47
34:B5:819:G:C2	34:B5:821:U:O2	2.68	0.47
34:B5:835:U:H3'	34:B5:835:U:OP2	2.15	0.47
34:B5:952:A:H2'	34:B5:953:G:C8	2.50	0.47
34:B5:984:G:H2'	34:B5:985:G:H8	1.79	0.47
34:B5:1476:C:H2'	34:B5:1477:G:C8	2.47	0.47
34:B5:1638:G:H2'	34:B5:1639:C:O4'	2.14	0.47
34:B5:1760:G:H1'	34:B5:1781:MA6:H2	1.97	0.47
35:AA:68:LYS:HZ2	35:AA:72:ARG:HH12	1.61	0.47
35:AA:104:LEU:HD13	35:AA:107:VAL:HG11	1.97	0.47
36:AB:279:ASN:HD21	38:A1:3098:G:P	2.38	0.47
37:AC:84:ARG:NH2	38:A1:364:G:O3'	2.44	0.47
37:AC:203:ARG:N	38:A1:1384:U:OP1	2.48	0.47
38:A1:644:G:H22	38:A1:2868:U:H5'	1.80	0.47
38:A1:1177:G:H5"	68:Af:18:ARG:NH1	2.30	0.47
38:A1:1223:A:H2'	38:A1:1224:C:C6	2.50	0.47
38:A1:1259:A:H3'	38:A1:1260:A:C8	2.50	0.47
38:A1:1304:A:N6	38:A1:2860:U:H5"	2.29	0.47
38:A1:1569:U:H4'	40:A4:127:U:C2	2.49	0.47
38:A1:1595:U:O2'	38:A1:1606:U:O2	2.26	0.47
38:A1:1664:G:H2'	38:A1:1665:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1708:C:H2'	38:A1:1709:C:C6	2.50	0.47
38:A1:1814:A:H4'	38:A1:1815:U:H4'	1.96	0.47
38:A1:1882:G:C2	38:A1:1883:A:C5	3.03	0.47
38:A1:2139:A:N7	72:Aj:3:LYS:HG2	2.28	0.47
38:A1:2329:C:H2'	38:A1:2330:C:H6	1.79	0.47
38:A1:2363:A:H2'	38:A1:2364:G:O4'	2.15	0.47
38:A1:2371:G:N2	38:A1:2375:G:OP1	2.42	0.47
38:A1:2559:U:H5"	38:A1:2561:A:H4'	1.96	0.47
38:A1:2617:U:H5"	64:Ab:3:LYS:HG2	1.96	0.47
38:A1:2837:A:O2'	38:A1:2850:G:N2	2.39	0.47
38:A1:2863:G:N3	38:A1:2864:A:C8	2.83	0.47
38:A1:3209:A:C2	42:AE:173:MET:HE1	2.49	0.47
38:A1:3318:G:O2'	38:A1:3319:U:H5"	2.15	0.47
39:A3:70:U:H2'	39:A3:71:G:H8	1.79	0.47
39:A3:79:A:N6	39:A3:101:G:H21	2.04	0.47
39:A3:107:C:H2'	39:A3:108:A:C8	2.50	0.47
47:AJ:32:ARG:HB2	47:AJ:120:ILE:HG13	1.97	0.47
48:AL:76:THR:HG22	48:AL:79:GLU:CD	2.40	0.47
51:AO:8[A]:VAL:O	51:AO:118[A]:VAL:N	2.47	0.47
51:AO:73[A]:PHE:CD2	51:AO:78[A]:ARG:HB3	2.50	0.47
54:AR:173:ARG:HE	54:AR:177:VAL:HG21	1.80	0.47
60:AX:27:ARG:HG2	60:AX:27:ARG:HH11	1.79	0.47
62:AZ:79:HIS:C	62:AZ:80:LEU:HD12	2.40	0.47
64:Ab:37:PRO:HA	64:Ab:40:ARG:HG2	1.97	0.47
77:Ao:35:LEU:O	77:Ao:36:PHE:HB2	2.15	0.47
4:BE:18:TRP:HB3	4:BE:20:LEU:HD23	1.97	0.47
6:BH:71:HIS:CD2	6:BH:131:PHE:CG	3.02	0.47
9:BL:27:THR:O	9:BL:30:ARG:NH1	2.47	0.47
9:BL:39:GLY:HA3	34:B5:246:G:H21	1.79	0.47
9:BL:136:ARG:NH1	34:B5:303:U:H5"	2.30	0.47
22:BP:64:LYS:HE3	22:BP:64:LYS:HB2	1.69	0.47
24:BR:35:CYS:HA	24:BR:38:ILE:HG12	1.96	0.47
26:BT:77:ASN:HD21	26:BT:98:GLY:HA2	1.80	0.47
27:BU:53:LYS:HD3	34:B5:1345:A:H4'	1.96	0.47
31:Bg:47:LEU:HD12	31:Bg:54:PHE:CD2	2.50	0.47
31:Bg:116:ASP:OD1	31:Bg:121:MET:N	2.37	0.47
31:Bg:266:ASP:HB3	31:Bg:267:PRO:HD3	1.97	0.47
32:Bf:139:LEU:O	32:Bf:147:VAL:HA	2.15	0.47
33:BM:33:ARG:O	33:BM:37:VAL:HG23	2.15	0.47
34:B5:91:G:OP1	34:B5:397:A:N6	2.47	0.47
34:B5:264:G:C5'	34:B5:265:A:H5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:408:C:H2'	34:B5:409:C:C6	2.50	0.47
34:B5:562:G:H2'	34:B5:563:U:O4'	2.15	0.47
34:B5:564:G:O2'	34:B5:577:G:O3'	2.32	0.47
34:B5:750:U:H2'	34:B5:751:G:C8	2.50	0.47
34:B5:1592:A:H2'	34:B5:1593:A:C8	2.50	0.47
34:B5:1769:U:O2'	34:B5:1770:U:H5'	2.14	0.47
35:AA:19:HIS:HD1	38:A1:823:C:C5'	2.27	0.47
35:AA:223:SER:HB3	35:AA:237:LEU:HD23	1.96	0.47
36:AB:250:ALA:HB3	38:A1:2880:PSU:O4	2.14	0.47
37:AC:16:THR:OG1	37:AC:18:ASN:ND2	2.47	0.47
37:AC:195:ARG:NH1	38:A1:340:C:OP2	2.43	0.47
38:A1:71:A:C2	38:A1:313:A:H1'	2.50	0.47
38:A1:177:U:O2	38:A1:241:G:N2	2.47	0.47
38:A1:268:A:N7	50:AN:12:ARG:NH1	2.63	0.47
38:A1:429:U:H2'	38:A1:430:U:C6	2.49	0.47
38:A1:880:G:H3'	38:A1:882:A:OP2	2.15	0.47
38:A1:1008:U:H2'	38:A1:1009:A:C8	2.50	0.47
38:A1:1196:C:OP1	38:A1:1309:U:O2'	2.31	0.47
38:A1:1301:A:H4'	38:A1:1302:A:H5"	1.97	0.47
38:A1:1333:C:H2'	38:A1:1334:U:C6	2.50	0.47
38:A1:1372:C:P	63:Aa:7:LYS:HE3	2.55	0.47
38:A1:1374:G:O6	63:Aa:10:LYS:NZ	2.30	0.47
38:A1:1802:C:H2'	38:A1:1803:C:H6	1.80	0.47
38:A1:1928:G:H2'	38:A1:1929:G:O4'	2.14	0.47
38:A1:2129:PSU:H2'	38:A1:2130:G:H8	1.78	0.47
38:A1:2519:A:H2'	38:A1:2520:A:C8	2.49	0.47
38:A1:2527:G:H2'	38:A1:2528:G:C8	2.50	0.47
38:A1:2599:U:H5"	50:AN:70:ASN:ND2	2.25	0.47
38:A1:2768:U:H4'	77:Ao:71:ARG:NH2	2.29	0.47
38:A1:2856:G:C8	46:AI:7:ARG:NH1	2.76	0.47
38:A1:2858:U:H2'	38:A1:2859:U:C2	2.50	0.47
38:A1:3201:C:H2'	38:A1:3202:G:H8	1.79	0.47
39:A3:11:A:H61	41:AD:14:SER:HA	1.80	0.47
39:A3:89:G:O2'	39:A3:91:G:O6	2.31	0.47
47:AJ:18:VAL:HA	47:AJ:69:VAL:O	2.15	0.47
50:AN:8:GLU:HA	50:AN:47:LYS:NZ	2.30	0.47
71:Ai:33:ALA:HB3	71:Ai:38:LYS:NZ	2.30	0.47
76:An:12:ARG:HA	76:An:15:ARG:HB2	1.96	0.47
80:DC:260:LYS:NZ	80:DC:262:THR:OG1	2.48	0.47
80:DC:736:PRO:HD2	80:DC:739:ALA:HB2	1.96	0.47
81:EC:6837:G:O6	81:EC:6847:G:N1	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:9:LEU:HD13	1:BA:54:TRP:HB2	1.95	0.47
2:BB:164:ILE:HA	2:BB:167:VAL:HG22	1.96	0.47
4:BE:151:ASP:CG	5:BG:215:ARG:HH12	2.22	0.47
4:BE:256:ARG:HA	4:BE:260:GLY:HA3	1.97	0.47
12:BV:74:GLN:NE2	12:BV:80:LYS:O	2.33	0.47
14:BX:86:PHE:O	14:BX:123:LYS:HA	2.16	0.47
16:Ba:58:VAL:HG23	16:Ba:59:TYR:CE1	2.50	0.47
27:BU:19:ILE:HG13	27:BU:94:GLU:HB2	1.97	0.47
28:BZ:99:ALA:HB1	28:BZ:101:TYR:CE1	2.50	0.47
31:Bg:121:MET:SD	31:Bg:122:ILE:N	2.88	0.47
31:Bg:198:ASN:H	31:Bg:216:LYS:NZ	2.12	0.47
34:B5:32:U:C4	34:B5:33:U:C4	3.03	0.47
34:B5:949:C:H2’	34:B5:950:C:H6	1.79	0.47
34:B5:1138:A:H2’	34:B5:1139:A:H8	1.80	0.47
34:B5:1370:U:H5’	34:B5:1371:A:H2’	1.97	0.47
34:B5:1793:G:O2’	34:B5:1795:U:OP2	2.32	0.47
37:AC:193:LYS:HG3	37:AC:194:TYR:N	2.29	0.47
38:A1:288:C:H2’	38:A1:289:A:H8	1.78	0.47
38:A1:414:U:C2	38:A1:415:G:C8	3.03	0.47
38:A1:444:U:OP1	38:A1:491:A:N6	2.48	0.47
38:A1:696:C:H2’	38:A1:697:A:C8	2.50	0.47
38:A1:1573:G:H2’	38:A1:1574:C:C6	2.50	0.47
38:A1:1729:A:N6	65:Ac:49:PRO:HD3	2.30	0.47
38:A1:1780:G:C2	38:A1:1781:C:C4	3.03	0.47
38:A1:1948:G:H5’	54:AR:101:VAL:HG11	1.97	0.47
38:A1:2215:A:C5	38:A1:2216:G:C8	3.03	0.47
38:A1:2379:U:H2’	38:A1:2380:U:C6	2.49	0.47
38:A1:2612:U:H2’	38:A1:2613:U:O4’	2.15	0.47
38:A1:2645:G:C6	38:A1:2646:C:C4	3.03	0.47
38:A1:2908:G:H2’	38:A1:2909:U:C6	2.50	0.47
38:A1:2917:G:C6	38:A1:2918:G:C5	3.02	0.47
40:A4:155:A:H5’	44:AG:185:ARG:HD2	1.97	0.47
41:AD:82:GLU:OE1	41:AD:82:GLU:N	2.48	0.47
43:AF:61:ASN:OD1	43:AF:62:ILE:N	2.48	0.47
47:AJ:32:ARG:HG3	47:AJ:123:PHE:CE2	2.50	0.47
49:AM:48:GLY:O	49:AM:52:GLY:N	2.48	0.47
50:AN:113:LEU:HB2	50:AN:134:LEU:HD22	1.96	0.47
55:AS:12:ARG:HD2	55:AS:22:PRO:HD2	1.97	0.47
67:Ae:76:VAL:HG23	67:Ae:81:ASP:HB2	1.97	0.47
72:Aj:39:TYR:CD1	72:Aj:40:PRO:HA	2.50	0.47
74:Al:42:ARG:NH1	74:Al:49:MET:SD	2.88	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:746:VAL:HG22	80:DC:750:LYS:NZ	2.29	0.47
1:BA:190:ASP:N	12:BV:42:GLU:OE2	2.47	0.46
2:BB:48:VAL:HG13	2:BB:49:ASN:N	2.30	0.46
4:BE:133:LYS:HD3	34:B5:252:U:H5'	1.97	0.46
9:BL:92:HIS:CD2	9:BL:93:TYR:H	2.32	0.46
11:BO:18:ARG:HH22	11:BO:29:HIS:CD2	2.33	0.46
11:BO:87:GLY:HA3	11:BO:120:PRO:HG2	1.95	0.46
13:BW:15:ASN:OD1	13:BW:72:CYS:N	2.41	0.46
15:BY:57:VAL:O	15:BY:94:TYR:OH	2.32	0.46
16:Ba:18:VAL:CG1	16:Ba:19:LYS:H	2.26	0.46
18:Be:26:LYS:CD	18:Be:27:PRO:HD2	2.41	0.46
22:BP:62:ALA:HA	22:BP:65:LEU:HD12	1.96	0.46
27:BU:65:ILE:O	27:BU:81:THR:HA	2.15	0.46
31:Bg:267:PRO:HG2	31:Bg:269:TYR:HE1	1.80	0.46
32:Bf:87:THR:HG23	34:B5:1445:G:H22	1.80	0.46
34:B5:104:A:H61	34:B5:307:G:H2'	1.80	0.46
34:B5:749:U:H2'	34:B5:750:U:C6	2.50	0.46
34:B5:1114:G:OP1	76:An:6:ARG:NH2	2.36	0.46
34:B5:1653:C:C2	34:B5:1654:G:C8	3.03	0.46
34:B5:1653:C:H2'	34:B5:1654:G:C8	2.50	0.46
34:B5:1673:G:H2'	34:B5:1674:C:C6	2.50	0.46
34:B5:1739:C:H2'	34:B5:1740:A:H8	1.75	0.46
36:AB:259:HIS:O	38:A1:2394:G:H1'	2.15	0.46
38:A1:267:G:C6	38:A1:319:A:N7	2.83	0.46
38:A1:725:G:C6	38:A1:746:A:N6	2.83	0.46
38:A1:1136:A:H2'	38:A1:1137:C:C6	2.49	0.46
38:A1:1223:A:N6	38:A1:1286:A:C5	2.83	0.46
38:A1:1600:U:OP1	54:AR:42:ARG:NH1	2.48	0.46
38:A1:1757:A:H5"	57:AU:94:ARG:NH2	2.30	0.46
38:A1:1790:G:H2'	38:A1:1791:C:C6	2.49	0.46
38:A1:2646:C:H2'	38:A1:2647:A:H8	1.80	0.46
38:A1:2917:G:C6	38:A1:2930:A:N1	2.83	0.46
38:A1:3362:A:H3'	38:A1:3363:U:H6	1.79	0.46
40:A4:27:U:H2'	40:A4:28:C:C6	2.50	0.46
41:AD:223:PHE:O	41:AD:227:LEU:HG	2.15	0.46
44:AG:243:GLN:HA	44:AG:246:MET:HG3	1.97	0.46
56:AT:53:PRO:HD3	56:AT:95:HIS:CD2	2.50	0.46
58:AV:19:VAL:HG23	58:AV:37:ILE:HA	1.96	0.46
58:AV:79:VAL:HG12	58:AV:122:CYS:SG	2.55	0.46
59:AW:3:VAL:CG2	59:AW:12:LYS:HE3	2.46	0.46
65:Ac:41:LEU:HD23	65:Ac:100:ILE:HG22	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:27:HIS:CG	80:DC:28:VAL:H	2.32	0.46
80:DC:593:ILE:HG12	80:DC:685:ARG:HB2	1.97	0.46
2:BB:29:TRP:CD1	2:BB:47:LEU:HD13	2.49	0.46
2:BB:150:VAL:H	34:B5:1067:C:H5"	1.80	0.46
4:BE:49:ARG:HB2	4:BE:55:ALA:HB3	1.97	0.46
7:BI:12:SER:HA	7:BI:18:ARG:NH2	2.31	0.46
11:BO:58:TYR:OH	20:BF:224:ASN:ND2	2.49	0.46
21:BK:61:TRP:NE1	30:Bd:23:VAL:HG13	2.30	0.46
21:BK:93:GLN:HG2	21:BK:94:GLU:N	2.30	0.46
23:BQ:135:ARG:O	23:BQ:137:ARG:NE	2.43	0.46
30:Bd:40:ARG:O	30:Bd:43:PHE:HB3	2.15	0.46
34:B5:517:U:H3	34:B5:535:A:H61	1.63	0.46
34:B5:624:G:H2'	34:B5:625:C:H6	1.81	0.46
34:B5:779:U:H1'	34:B5:781:U:H5	1.81	0.46
34:B5:877:G:H22	34:B5:951:A:H2	1.61	0.46
34:B5:898:A:N6	34:B5:914:G:C2	2.82	0.46
34:B5:1151:A:O2'	34:B5:1766:A:N7	2.46	0.46
34:B5:1161:C:H1'	34:B5:1619:C:H42	1.79	0.46
34:B5:1479:A:H2'	34:B5:1480:G:C8	2.51	0.46
34:B5:1582:U:C2	34:B5:1614:A:N1	2.83	0.46
34:B5:1749:A:H2'	34:B5:1750:A:O4'	2.15	0.46
35:AA:10:LYS:HE3	35:AA:10:LYS:HB2	1.69	0.46
35:AA:226:SER:HB3	38:A1:2202:C:H5"	1.97	0.46
36:AB:53:MET:HA	36:AB:77:THR:HA	1.96	0.46
36:AB:161:LEU:HD22	36:AB:180:GLU:HB3	1.96	0.46
36:AB:286:GLY:HA3	36:AB:321:PHE:CE2	2.51	0.46
38:A1:197:G:H21	38:A1:218:G:N2	2.14	0.46
38:A1:342:A:C2	38:A1:349:A:C8	3.04	0.46
38:A1:646:A:H2'	38:A1:647:A:O4'	2.14	0.46
38:A1:666:A:H2'	38:A1:667:C:O4'	2.15	0.46
38:A1:688:G:H2'	38:A1:690:A:C8	2.51	0.46
38:A1:871:U:H2'	38:A1:872:U:C6	2.51	0.46
38:A1:1061:A:H2'	38:A1:1062:A:C8	2.50	0.46
38:A1:1381:A:H2'	38:A1:1382:G:H8	1.80	0.46
38:A1:1415:U:H2'	38:A1:1416:C:O4'	2.15	0.46
38:A1:1492:G:O2'	38:A1:1843:C:H5"	2.15	0.46
38:A1:1503:A:C4	38:A1:1504:A:C8	3.04	0.46
38:A1:2292:U:H2'	38:A1:2293:C:C6	2.49	0.46
38:A1:2336:U:H2'	38:A1:2337:C:O4'	2.15	0.46
38:A1:2746:A:OP2	41:AD:178:ASN:ND2	2.45	0.46
38:A1:2964:G:N1	38:A1:2968:G:O6	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3096:C:H2'	38:A1:3097:C:C6	2.50	0.46
38:A1:3154:C:H4'	38:A1:3155:U:C5'	2.45	0.46
38:A1:3230:G:H5'	49:AM:132:LYS:HZ2	1.80	0.46
39:A3:23:A:O2'	39:A3:24:A:OP1	2.31	0.46
39:A3:121:U:OP2	41:AD:265:TYR:OH	2.19	0.46
48:AL:128:ARG:HA	70:Ah:114:ARG:HH12	1.79	0.46
50:AN:115:VAL:HG23	50:AN:133:ILE:C	2.40	0.46
52:AP:122:ALA:HB1	52:AP:123:PRO:HD2	1.96	0.46
54:AR:65:ALA:O	54:AR:68:GLN:NE2	2.48	0.46
58:AV:11:PHE:O	58:AV:13:ILE:HD12	2.16	0.46
61:AY:7:ASP:OD1	61:AY:8:VAL:N	2.48	0.46
68:Af:16:TYR:HB2	68:Af:18:ARG:HD2	1.96	0.46
69:Ag:81:CYS:C	69:Ag:83:ASN:H	2.23	0.46
80:DC:174:LEU:HD23	80:DC:278:LEU:HD22	1.97	0.46
80:DC:638:PRO:HD3	80:DC:644:ASN:HD22	1.80	0.46
1:BA:34:GLU:C	1:BA:36:TYR:H	2.24	0.46
1:BA:72:ASP:N	1:BA:72:ASP:OD1	2.38	0.46
2:BB:103:MET:HB3	2:BB:215:VAL:HB	1.96	0.46
3:BC:112:GLY:HA2	3:BC:215:PHE:HE1	1.80	0.46
4:BE:3:ARG:HD2	34:B5:399:A:H4'	1.96	0.46
6:BH:150:GLN:OE1	6:BH:152:VAL:HG23	2.16	0.46
7:BI:31:ARG:NH1	34:B5:332:U:H5"	2.30	0.46
11:BO:64:ALA:HB3	11:BO:104:ALA:HB3	1.98	0.46
13:BW:79:PHE:HD2	13:BW:89:TRP:CH2	2.34	0.46
15:BY:7:ILE:HG21	15:BY:43:LYS:HZ1	1.79	0.46
15:BY:57:VAL:HB	15:BY:60:PHE:CZ	2.48	0.46
19:BD:27:ARG:NH2	21:BK:58:GLN:HB3	2.29	0.46
24:BR:106:THR:O	24:BR:110:VAL:HG12	2.15	0.46
28:BZ:59:TYR:HE1	28:BZ:100:ILE:HG23	1.80	0.46
34:B5:220:A:H5"	34:B5:831:U:N3	2.30	0.46
34:B5:331:A:H2'	34:B5:332:U:H6	1.81	0.46
34:B5:477:A:C2	34:B5:541:A:C5	3.03	0.46
34:B5:875:G:C2	34:B5:952:A:H2	2.33	0.46
34:B5:978:A:C4	34:B5:979:A:C8	3.03	0.46
34:B5:987:G:H8	34:B5:987:G:O5'	1.97	0.46
34:B5:1113:A:N6	34:B5:1132:A:OP2	2.34	0.46
34:B5:1645:G:H2'	34:B5:1646:C:H6	1.80	0.46
34:B5:1681:A:H2'	34:B5:1682:U:O4'	2.15	0.46
35:AA:152:SER:OG	38:A1:2157:G:N7	2.39	0.46
36:AB:350:ALA:HB3	36:AB:351:LEU:HD12	1.97	0.46
38:A1:197:G:H2'	38:A1:198:A:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:205:C:H2'	38:A1:206:G:O4'	2.15	0.46
38:A1:377:A:H1'	38:A1:392:G:N2	2.30	0.46
38:A1:651:G:H2'	38:A1:652:G:C8	2.50	0.46
38:A1:880:G:OP2	52:AP:131:ARG:NH2	2.46	0.46
38:A1:1003:A:N1	38:A1:1049:C:O2'	2.46	0.46
38:A1:1193:A:H3'	38:A1:1194:G:C8	2.50	0.46
38:A1:1338:C:H2'	38:A1:1339:C:H6	1.80	0.46
38:A1:1378:U:H2'	38:A1:1379:G:H8	1.79	0.46
38:A1:1438:U:H2'	38:A1:1439:U:C6	2.50	0.46
38:A1:2435:G:O2'	50:AN:24:ARG:NH1	2.47	0.46
38:A1:2736:A:H1'	56:AT:90:ASN:ND2	2.30	0.46
38:A1:2876:C:C2	38:A1:2952:G:C2	3.04	0.46
39:A3:109:G:H2'	39:A3:110:G:H8	1.79	0.46
40:A4:155:A:H2'	40:A4:156:U:C6	2.50	0.46
42:AE:170:LYS:HB3	42:AE:172:HIS:CE1	2.51	0.46
43:AF:156:ILE:HG22	43:AF:157:ASN:ND2	2.30	0.46
44:AG:24:ASN:OD1	44:AG:27:THR:N	2.42	0.46
51:AO:13[A]:GLY:HA2	51:AO:42[A]:ASN:OD1	2.14	0.46
55:AS:30:PHE:CD1	55:AS:103:VAL:HG21	2.50	0.46
56:AT:84:TYR:HB2	64:Ab:24:PRO:HD3	1.95	0.46
60:AX:58:ASP:H	60:AX:61:LYS:HB3	1.81	0.46
65:Ac:28:LYS:O	65:Ac:32:LYS:HG2	2.15	0.46
66:Ad:7:VAL:HG23	66:Ad:78:LYS:HA	1.98	0.46
80:DC:249:PHE:O	80:DC:258:THR:N	2.45	0.46
80:DC:473:GLU:O	80:DC:474:THR:OG1	2.26	0.46
80:DC:537:HIS:CD2	80:DC:540:ILE:HD11	2.51	0.46
80:DC:732:GLU:HA	80:DC:768:VAL:O	2.16	0.46
2:BB:123:ALA:N	2:BB:139:ALA:O	2.44	0.46
3:BC:63:VAL:C	3:BC:64:LYS:HD3	2.40	0.46
3:BC:159:THR:HA	3:BC:167:VAL:O	2.15	0.46
4:BE:33:ALA:HB3	34:B5:120:PSU:HN3	1.81	0.46
4:BE:154:ILE:O	4:BE:155:LYS:HD3	2.16	0.46
6:BH:24:PHE:CE1	6:BH:81:LEU:HD21	2.51	0.46
6:BH:130:VAL:HG23	6:BH:130:VAL:O	2.16	0.46
9:BL:109:VAL:HG21	9:BL:125:VAL:HG11	1.98	0.46
10:BN:3:ARG:HB3	10:BN:6:SER:HB2	1.97	0.46
10:BN:16:ILE:HD11	34:B5:862:A:O5'	2.16	0.46
15:BY:43:LYS:O	15:BY:47:VAL:HG23	2.16	0.46
19:BD:27:ARG:HH12	21:BK:60:SER:H	1.62	0.46
20:BF:90:ILE:H	20:BF:90:ILE:HD12	1.80	0.46
26:BT:39:THR:HG21	26:BT:57:ARG:HH22	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BU:72:ASN:HB3	34:B5:1430:U:H1'	1.95	0.46
29:Bc:5:THR:HG22	29:Bc:7:VAL:HG23	1.97	0.46
29:Bc:6:PRO:O	29:Bc:57:MET:HA	2.15	0.46
31:Bg:112:SER:HB2	31:Bg:154:VAL:HG22	1.98	0.46
34:B5:898:A:N1	34:B5:915:A:C5	2.84	0.46
34:B5:1209:C:H2'	34:B5:1210:C:C6	2.51	0.46
34:B5:1330:G:H2'	34:B5:1331:A:O4'	2.15	0.46
34:B5:1408:G:H2'	34:B5:1409:G:O4'	2.16	0.46
34:B5:1578:U:H2'	34:B5:1579:U:H6	1.81	0.46
34:B5:1673:G:H2'	34:B5:1674:C:H6	1.80	0.46
36:AB:152:LYS:NZ	36:AB:189:SER:HA	2.30	0.46
38:A1:168:U:H2'	38:A1:169:U:C6	2.50	0.46
38:A1:170:G:N7	38:A1:171:G:C6	2.84	0.46
38:A1:200:C:H5'	38:A1:221:A:C2	2.49	0.46
38:A1:350:C:N3	38:A1:367:A:H2'	2.30	0.46
38:A1:593:C:H2'	38:A1:594:U:N3	2.30	0.46
38:A1:616:G:H2'	38:A1:617:G:H8	1.79	0.46
38:A1:628:A:H2'	38:A1:629:U:C6	2.50	0.46
38:A1:682:U:H2'	50:AN:202:TYR:CE2	2.51	0.46
38:A1:708:G:P	53:AQ:174:ARG:HH22	2.39	0.46
38:A1:790:U:H2'	38:A1:791:A:H8	1.78	0.46
38:A1:874:U:H5	38:A1:2950:G:H21	1.63	0.46
38:A1:1074:U:H2'	38:A1:1076:C:H5	1.80	0.46
38:A1:1128:U:H2'	38:A1:1129:A:C8	2.50	0.46
38:A1:1212:A:OP1	45:AH:1:MET:HB2	2.15	0.46
38:A1:2334:U:H2'	38:A1:2335:G:H5'	1.97	0.46
38:A1:2433:U:H1'	50:AN:125:SER:HB3	1.98	0.46
38:A1:2917:G:OP1	58:AV:47:ASN:N	2.36	0.46
38:A1:3107:U:O4	38:A1:3128:G:N2	2.49	0.46
38:A1:3123:A:O2'	45:AH:40:HIS:ND1	2.35	0.46
38:A1:3335:A:H2'	38:A1:3336:A:C8	2.51	0.46
42:AE:78:ARG:HG2	42:AE:106:PHE:CD1	2.50	0.46
44:AG:97:TYR:OH	44:AG:204:ARG:N	2.42	0.46
47:AJ:173:ASP:OD1	47:AJ:174:LYS:N	2.49	0.46
57:AU:14:THR:HA	57:AU:66:VAL:HA	1.97	0.46
62:AZ:13:VAL:O	62:AZ:20:GLY:N	2.44	0.46
79:E:125:GLY:N	79:E:126:PRO:HD2	2.30	0.46
80:DC:722:PRO:HG2	80:DC:809:LEU:HD21	1.97	0.46
85:DC:903:SO1:H81	85:DC:903:SO1:H122	1.66	0.46
2:BB:119:THR:N	2:BB:143:THR:HG1	2.12	0.46
3:BC:124:ALA:O	3:BC:128:GLY:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:BC:156:THR:HG23	13:BW:95:PRO:HB3	1.96	0.46
3:BC:184:VAL:O	3:BC:187:LEU:HG	2.15	0.46
6:BH:30:SER:O	6:BH:34:LEU:N	2.42	0.46
9:BL:40:LEU:N	34:B5:246:G:N3	2.64	0.46
17:Bb:17:ARG:O	34:B5:1071:U:H5'	2.14	0.46
19:BD:73:VAL:O	19:BD:77:PHE:HD2	1.98	0.46
19:BD:104:SER:O	19:BD:108:LYS:HG2	2.15	0.46
19:BD:179:GLN:HB3	34:B5:579:A:N6	2.23	0.46
20:BF:85:ALA:HA	20:BF:92:ARG:HH12	1.81	0.46
20:BF:192:GLU:O	20:BF:195:ALA:N	2.49	0.46
20:BF:200:ASN:HB3	20:BF:205:SER:HB2	1.98	0.46
21:BK:63:TYR:HB2	21:BK:65:TYR:CE1	2.50	0.46
24:BR:27:ASP:CG	31:Bg:38:ARG:HH12	2.24	0.46
25:BS:77:THR:HA	25:BS:81:ILE:HB	1.97	0.46
25:BS:90:ASN:N	25:BS:97:ASP:OD1	2.46	0.46
25:BS:106:GLU:CD	25:BS:106:GLU:H	2.24	0.46
30:Bd:7:TRP:CZ3	34:B5:1215:C:H1'	2.51	0.46
32:Bf:135:HIS:ND1	34:B5:1250:U:O2	2.48	0.46
32:Bf:145:HIS:HB3	34:B5:1235:C:H5'	1.98	0.46
34:B5:52:U:H2'	34:B5:53:G:H8	1.81	0.46
34:B5:58:U:H3	34:B5:89:G:H1	1.64	0.46
34:B5:184:C:H2'	34:B5:185:U:H6	1.80	0.46
34:B5:218:A:N6	34:B5:842:C:H2'	2.31	0.46
34:B5:462:G:H2'	34:B5:463:U:H6	1.81	0.46
34:B5:825:U:H3'	34:B5:826:U:C5	2.50	0.46
34:B5:934:C:N3	34:B5:1077:C:H4'	2.30	0.46
34:B5:1049:U:H2'	34:B5:1050:G:C8	2.50	0.46
34:B5:1296:A:H2'	34:B5:1297:G:O4'	2.14	0.46
34:B5:1470:C:OP1	34:B5:1471:A:H1'	2.14	0.46
34:B5:1488:G:N2	34:B5:1519:U:O2	2.49	0.46
34:B5:1673:G:H22	34:B5:1728:A:H2	1.63	0.46
34:B5:1751:C:H2'	34:B5:1752:U:C6	2.50	0.46
38:A1:166:C:H2'	38:A1:167:U:H6	1.80	0.46
38:A1:325:A:H5"	38:A1:326:U:OP2	2.16	0.46
38:A1:954:U:H1'	64:Ab:12:GLN:HE21	1.80	0.46
38:A1:1268:G:H4'	38:A1:1274:A:N6	2.31	0.46
38:A1:1356:U:H5"	38:A1:1357:G:C8	2.50	0.46
38:A1:1384:U:H2'	38:A1:1385:C:C6	2.51	0.46
38:A1:1472:U:H4'	54:AR:24:LEU:HD21	1.97	0.46
38:A1:1499:C:H2'	38:A1:1500:G:H8	1.81	0.46
38:A1:1565:G:H2'	38:A1:1566:A:H4'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1857:C:H1'	69:Ag:5:VAL:O	2.15	0.46
38:A1:1875:G:O6	54:AR:20:ARG:NH2	2.49	0.46
38:A1:2213:A:H2'	38:A1:2214:A:H8	1.80	0.46
38:A1:2527:G:H2'	38:A1:2528:G:H8	1.79	0.46
38:A1:2905:U:H2'	38:A1:2906:C:C6	2.51	0.46
38:A1:2964:G:N1	38:A1:2968:G:C6	2.84	0.46
38:A1:3000:A:C6	38:A1:3149:G:C6	3.03	0.46
38:A1:3059:G:H5"	66:Ad:17:HIS:CE1	2.51	0.46
38:A1:3168:A:H2'	38:A1:3169:U:C6	2.51	0.46
38:A1:3301:U:H2'	38:A1:3302:U:H6	1.81	0.46
40:A4:6:U:H2'	40:A4:7:U:C6	2.50	0.46
42:AE:170:LYS:O	42:AE:174:LEU:N	2.48	0.46
46:AI:206:LEU:HA	46:AI:209:ASN:ND2	2.31	0.46
48:AL:61:PRO:O	48:AL:62:THR:OG1	2.28	0.46
50:AN:94:TYR:CE2	50:AN:96:ARG:HB2	2.50	0.46
50:AN:114:ARG:C	50:AN:134:LEU:HD23	2.41	0.46
50:AN:165:THR:O	50:AN:169:LYS:HG2	2.16	0.46
57:AU:54:VAL:HG22	57:AU:67:SER:HB2	1.97	0.46
80:DC:33:SER:H	83:DC:901:GDP:PA	2.37	0.46
80:DC:249:PHE:CE2	80:DC:271:ARG:HG2	2.51	0.46
80:DC:382:VAL:HG11	80:DC:463:LEU:HD11	1.97	0.46
80:DC:392:GLY:O	80:DC:510:ARG:NH2	2.48	0.46
80:DC:418:TYR:CE2	80:DC:420:PRO:HA	2.50	0.46
80:DC:544:ASP:HB2	80:DC:549:HIS:ND1	2.31	0.46
81:EC:6935:G:H2'	81:EC:6935:G:N3	2.30	0.46
2:BB:143:THR:HG22	2:BB:205:PHE:HE2	1.79	0.46
7:BI:78:ILE:HB	7:BI:102:VAL:HG11	1.98	0.46
7:BI:84:HIS:CD2	7:BI:100:ALA:HB2	2.42	0.46
10:BN:46:THR:O	10:BN:50:ILE:HG12	2.16	0.46
14:BX:62:LYS:HD3	14:BX:118:PRO:HB3	1.98	0.46
19:BD:90:ARG:HD2	19:BD:94:ARG:HH22	1.80	0.46
20:BF:221:ALA:O	20:BF:225:ARG:NH2	2.48	0.46
25:BS:134:ARG:HB3	34:B5:1559:A:C5	2.51	0.46
27:BU:56:VAL:HG22	34:B5:1345:A:H1'	1.98	0.46
31:Bg:201:THR:OG1	31:Bg:241:PHE:O	2.28	0.46
33:BM:52:LEU:HD11	33:BM:60:VAL:HG22	1.98	0.46
34:B5:232:U:H2'	34:B5:235:G:H1'	1.96	0.46
34:B5:904:G:H2'	34:B5:905:A:C8	2.51	0.46
34:B5:1354:G:H2'	34:B5:1354:G:N3	2.31	0.46
34:B5:1611:A:H2'	34:B5:1612:U:O4'	2.16	0.46
37:AC:80:GLY:HA2	37:AC:85:SER:HB3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:362:U:C2	38:A1:363:G:C8	3.03	0.46
38:A1:516:A:C6	38:A1:575:G:N1	2.83	0.46
38:A1:688:G:H2'	38:A1:690:A:N7	2.31	0.46
38:A1:842:G:H2'	38:A1:843:A:H8	1.81	0.46
38:A1:915:A:N7	38:A1:917:A:H1'	2.31	0.46
38:A1:987:U:H4'	43:AF:121:LYS:HG3	1.96	0.46
38:A1:1684:U:H2'	38:A1:1685:C:C6	2.51	0.46
38:A1:1714:A:N7	38:A1:1728:G:C5	2.84	0.46
38:A1:1753:G:H2'	38:A1:1754:G:H8	1.80	0.46
38:A1:1919:G:C2	38:A1:1920:U:C2	3.03	0.46
38:A1:1924:U:O2'	38:A1:1925:U:H2'	2.15	0.46
38:A1:2347:U:H3'	38:A1:2348:A:H8	1.81	0.46
38:A1:2877:G:H2'	38:A1:2878:G:H8	1.79	0.46
38:A1:3055:U:O2	38:A1:3085:G:N2	2.49	0.46
38:A1:3059:G:H2'	38:A1:3060:C:C6	2.50	0.46
38:A1:3376:A:H5'	38:A1:3377:G:H5"	1.97	0.46
39:A3:77:G:H22	39:A3:101:G:H2'	1.81	0.46
40:A4:143:U:H2'	40:A4:144:G:H8	1.79	0.46
51:AO:78[A]:ARG:HE	51:AO:81[A]:TYR:HD1	1.64	0.46
53:AQ:182:LYS:HE3	53:AQ:182:LYS:HB3	1.61	0.46
54:AR:38:ARG:HA	54:AR:41:ILE:HG12	1.97	0.46
57:AU:16:THR:HB	57:AU:102:GLU:HA	1.97	0.46
68:Af:17:GLN:NE2	68:Af:82:ARG:HD3	2.31	0.46
74:Al:31:THR:HG23	74:Al:32:ASN:OD1	2.16	0.46
79:E:60:ARG:HG3	79:E:63:MET:CE	2.46	0.46
79:E:70:ASP:OD1	79:E:70:ASP:N	2.44	0.46
79:E:113:SER:HB3	79:E:140:HIS:CE1	2.50	0.46
80:DC:285:PHE:HE1	80:DC:320:LEU:HD23	1.81	0.46
1:BA:16:LEU:CD1	24:BR:91:LEU:HB3	2.46	0.46
3:BC:91:ARG:HG2	3:BC:92:ALA:N	2.30	0.46
5:BG:24:ILE:HB	5:BG:27:PHE:HD2	1.81	0.46
6:BH:98:ILE:HD11	6:BH:121:VAL:HG21	1.98	0.46
6:BH:116:ARG:HD2	34:B5:856:A:C6	2.51	0.46
21:BK:59:PHE:CZ	21:BK:62:GLN:HA	2.51	0.46
28:BZ:58:ARG:HB3	81:EC:6863:C:C6	2.51	0.46
31:Bg:81:LEU:HD11	31:Bg:122:ILE:HG12	1.98	0.46
31:Bg:151:VAL:HA	31:Bg:173:GLY:HA2	1.96	0.46
32:Bf:139:LEU:H	32:Bf:147:VAL:HG13	1.81	0.46
34:B5:78:A:H2'	34:B5:79:C:C6	2.51	0.46
34:B5:516:G:C5	34:B5:517:U:C5	3.03	0.46
34:B5:1114:G:H1'	34:B5:1115:U:H5	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1231:U:OP1	34:B5:1259:U:O2'	2.30	0.46
34:B5:1295:G:N2	34:B5:1302:U:O2	2.47	0.46
34:B5:1600:A:H1'	34:B5:1602:C:C5	2.51	0.46
34:B5:1653:C:O2'	76:An:21:ARG:NH2	2.48	0.46
38:A1:16:A:C6	40:A4:144:G:N1	2.84	0.46
38:A1:197:G:H21	38:A1:218:G:H21	1.63	0.46
38:A1:525:C:H2'	38:A1:526:C:C6	2.50	0.46
38:A1:1062:A:N3	56:AT:130:ARG:NH2	2.53	0.46
38:A1:1062:A:H5"	38:A1:1063:G:H5'	1.97	0.46
38:A1:1200:A:H5'	38:A1:1201:C:OP1	2.15	0.46
38:A1:1264:G:N1	38:A1:1266:G:O6	2.42	0.46
38:A1:1298:C:H2'	38:A1:1299:U:C6	2.51	0.46
38:A1:1660:C:H2'	38:A1:1661:G:H8	1.80	0.46
38:A1:1767:C:H2'	38:A1:1768:U:C6	2.51	0.46
38:A1:2204:C:N3	38:A1:2239:G:N1	2.64	0.46
38:A1:2516:U:OP2	50:AN:31:ARG:NH2	2.49	0.46
38:A1:2682:C:H4'	47:AJ:68:HIS:CG	2.51	0.46
40:A4:58:G:OP1	40:A4:98:U:N3	2.48	0.46
41:AD:223:PHE:HB3	41:AD:226:TYR:HB2	1.98	0.46
54:AR:106:LEU:HG	54:AR:120:TYR:HD1	1.81	0.46
62:AZ:41:ALA:HB2	62:AZ:77:TYR:HE1	1.80	0.46
65:Ac:25:LEU:CD1	65:Ac:87:VAL:HG21	2.46	0.46
65:Ac:25:LEU:HD11	65:Ac:87:VAL:HG21	1.97	0.46
66:Ad:6:ASP:HA	66:Ad:77:ARG:HH12	1.80	0.46
68:Af:69:GLY:C	68:Af:70:LYS:HD3	2.41	0.46
69:Ag:105:VAL:HA	69:Ag:108:GLN:HG2	1.97	0.46
78:Ap:29:LEU:HD12	78:Ap:69:TYR:HD2	1.80	0.46
79:E:100:ILE:O	79:E:127:GLN:HG2	2.16	0.46
79:E:115:VAL:HG13	79:E:116:LEU:HD12	1.97	0.46
80:DC:204:PRO:HB2	80:DC:245:TRP:NE1	2.31	0.46
2:BB:162:ARG:NH2	34:B5:948:G:OP2	2.43	0.46
5:BG:43:ASP:O	5:BG:46:LYS:HG2	2.16	0.46
15:BY:25:VAL:HG11	15:BY:60:PHE:HE1	1.79	0.46
19:BD:6:SER:HA	34:B5:1514:U:O3'	2.16	0.46
19:BD:120:TYR:HE2	19:BD:152:PHE:HD1	1.64	0.46
22:BP:31:GLU:O	22:BP:35:LYS:NZ	2.49	0.46
25:BS:46:VAL:O	25:BS:50:ALA:N	2.48	0.46
26:BT:83:ALA:HA	26:BT:93:HIS:HA	1.98	0.46
27:BU:85:ARG:NH2	34:B5:1334:U:O2'	2.49	0.46
34:B5:27:U:H2'	34:B5:28:A:C8	2.51	0.46
34:B5:163:G:H3'	34:B5:163:G:N3	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1483:A:H2'	34:B5:1484:G:C8	2.51	0.46
34:B5:1505:A:O2'	34:B5:1562:G:N3	2.49	0.46
34:B5:1660:A:H2'	34:B5:1661:U:C6	2.51	0.46
38:A1:592:A:H5"	42:AE:19:LYS:HA	1.97	0.46
38:A1:725:G:H2'	38:A1:726:G:O4'	2.16	0.46
38:A1:771:A:H2'	38:A1:772:U:O4'	2.15	0.46
38:A1:861:C:H2'	38:A1:862:U:H6	1.80	0.46
38:A1:1227:C:O2'	38:A1:1282:G:N2	2.48	0.46
38:A1:1473:G:H2'	38:A1:1474:A:C8	2.51	0.46
38:A1:1681:U:H1'	38:A1:3069:G:N7	2.31	0.46
38:A1:1722:U:OP1	54:AR:100:ARG:NE	2.35	0.46
38:A1:2110:G:O2'	38:A1:2111:G:H5"	2.16	0.46
38:A1:2222:A:H4'	38:A1:2223:A:OP1	2.16	0.46
38:A1:2243:A:O2'	38:A1:2244:A:OP1	2.31	0.46
38:A1:2406:C:H1'	38:A1:2819:A:N1	2.30	0.46
38:A1:2427:U:C2	38:A1:2428:U:C5	3.04	0.46
38:A1:2585:G:H2'	38:A1:2585:G:N3	2.31	0.46
38:A1:3161:C:H2'	38:A1:3162:C:H6	1.81	0.46
38:A1:3176:G:O6	38:A1:3213:A:H2	1.99	0.46
40:A4:3:A:C6	40:A4:4:C:C2	3.04	0.46
40:A4:4:C:C2	40:A4:5:U:C5	3.04	0.46
40:A4:79:A:H2'	40:A4:80:A:C8	2.51	0.46
41:AD:215:ASP:OD1	41:AD:215:ASP:N	2.49	0.46
48:AL:126:PHE:HD2	70:Ah:115:LYS:HE2	1.81	0.46
52:AP:44:ALA:O	52:AP:47:TYR:N	2.47	0.46
53:AQ:48:VAL:HG22	53:AQ:139:ILE:HD11	1.98	0.46
53:AQ:94:PHE:CE2	63:Aa:119:PRO:HD3	2.51	0.46
53:AQ:101:VAL:O	53:AQ:121:CYS:HA	2.15	0.46
54:AR:10:LEU:HB3	54:AR:41:ILE:HD13	1.98	0.46
54:AR:181:ARG:NH1	54:AR:182:ASP:HB2	2.30	0.46
57:AU:57:THR:OG1	57:AU:64:THR:O	2.24	0.46
72:Aj:16:HIS:HD1	72:Aj:28:HIS:HA	1.81	0.46
79:E:56:PRO:HD2	79:E:182:GLN:NE2	2.31	0.46
79:E:74:VAL:HA	79:E:84:ALA:HB3	1.98	0.46
80:DC:27:HIS:HB3	80:DC:30:HIS:NE2	2.30	0.46
80:DC:263:ASP:HB3	80:DC:269:LEU:HG	1.98	0.46
80:DC:776:GLU:C	80:DC:778:PHE:H	2.24	0.46
80:DC:799:ASP:CG	80:DC:800:HIS:H	2.24	0.46
81:EC:6774:U:OP1	81:EC:6818:G:H1'	2.16	0.46
81:EC:6780:A:N6	81:EC:6816:A:H4'	2.31	0.46
81:EC:6850:C:H42	81:EC:6876:A:N6	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:55:GLU:HG3	12:BV:79:LEU:HD12	1.98	0.46
4:BE:206:ASP:HB3	4:BE:222:LEU:HD13	1.97	0.46
5:BG:87:ARG:NH2	34:B5:161:U:OP2	2.42	0.46
7:BI:10:LYS:HZ2	34:B5:338:C:H5"	1.81	0.46
16:Ba:30:ILE:HD13	16:Ba:74:CYS:HA	1.98	0.46
18:Be:17:GLN:HB3	80:DC:609:ARG:HH12	1.80	0.46
20:BF:81:ARG:CZ	34:B5:1615:C:H5"	2.46	0.46
26:BT:68:ARG:NE	34:B5:1523:G:N7	2.62	0.46
27:BU:68:ARG:HH11	27:BU:79:TRP:NE1	2.14	0.46
27:BU:84:MET:HB3	27:BU:86:ILE:HD11	1.98	0.46
34:B5:1:U:O2'	34:B5:2:A:OP2	2.30	0.46
34:B5:153:G:H2'	34:B5:154:G:H8	1.81	0.46
34:B5:486:G:C6	34:B5:501:U:N3	2.79	0.46
34:B5:842:C:H5	34:B5:844:A:C2	2.33	0.46
34:B5:1124:A:H2'	34:B5:1125:A:C8	2.51	0.46
34:B5:1267:G:O6	34:B5:1442:U:O4	2.33	0.46
34:B5:1438:G:H2'	34:B5:1439:C:H6	1.80	0.46
34:B5:1580:C:H2'	34:B5:1581:C:H6	1.80	0.46
35:AA:7:ASN:HD21	35:AA:235:ALA:HB2	1.80	0.46
35:AA:142:ASP:OD1	35:AA:143:GLU:N	2.49	0.46
35:AA:174:ARG:HH21	35:AA:188:LYS:NZ	2.13	0.46
36:AB:49:TYR:O	36:AB:80:ASP:N	2.48	0.46
38:A1:66:A:N6	38:A1:76:G:H1'	2.31	0.46
38:A1:72:C:O2'	48:AL:66:ASN:OD1	2.33	0.46
38:A1:256:G:H2'	38:A1:257:U:C6	2.51	0.46
38:A1:415:G:H2'	38:A1:416:A:H8	1.81	0.46
38:A1:799:G:OP1	48:AL:15:ARG:NH2	2.49	0.46
38:A1:862:U:C2	38:A1:863:C:C5	3.03	0.46
38:A1:872:U:H2'	38:A1:873:C:H6	1.78	0.46
38:A1:972:A:H2'	38:A1:973:A:H8	1.80	0.46
38:A1:1310:G:N1	38:A1:1311:G:C6	2.84	0.46
38:A1:1359:C:H2'	38:A1:1360:C:C6	2.48	0.46
38:A1:1487:G:N2	69:Ag:12:PRO:HB3	2.30	0.46
38:A1:1493:G:N7	74:Al:2:ALA:N	2.63	0.46
38:A1:1542:G:H2'	38:A1:1543:G:H8	1.80	0.46
38:A1:1618:G:H2'	38:A1:1619:A:C8	2.51	0.46
38:A1:1855:U:O2'	69:Ag:12:PRO:O	2.22	0.46
38:A1:1856:C:H2'	38:A1:1857:C:H6	1.81	0.46
38:A1:1874:A:H5"	54:AR:18:GLY:HA3	1.98	0.46
38:A1:2105:G:H2'	38:A1:2106:A:H8	1.80	0.46
38:A1:2113:A:N7	38:A1:2114:C:C4	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2115:G:H8	38:A1:2115:G:O5'	1.99	0.46
38:A1:2601:A:H2'	38:A1:2602:G:C8	2.47	0.46
38:A1:2994:A:OP2	38:A1:3142:A:N6	2.44	0.46
38:A1:3026:G:H1'	38:A1:3029:A:N6	2.31	0.46
38:A1:3058:U:O2'	38:A1:3059:G:N7	2.49	0.46
38:A1:3263:G:C6	38:A1:3264:G:C5	3.04	0.46
38:A1:3325:G:P	66:Ad:70:ARG:HH21	2.38	0.46
39:A3:7:G:C6	39:A3:115:G:C6	3.04	0.46
40:A4:129:C:H2'	40:A4:130:C:C6	2.51	0.46
40:A4:141:C:H2'	40:A4:142:C:C6	2.51	0.46
43:AF:176:TYR:HB3	43:AF:194:HIS:CD2	2.51	0.46
44:AG:78:PHE:C	44:AG:80:TYR:H	2.23	0.46
53:AQ:131:ALA:HB1	53:AQ:134:GLY:HA2	1.98	0.46
55:AS:5:LYS:HD3	55:AS:63:GLN:HE22	1.80	0.46
58:AV:74:MET:HE1	58:AV:102:ILE:HD12	1.97	0.46
58:AV:75:PRO:HG2	58:AV:105:PRO:HD3	1.97	0.46
69:Ag:47:CYS:SG	69:Ag:49:SER:OG	2.63	0.46
70:Ah:77:PRO:HB2	70:Ah:80:LEU:HD23	1.97	0.46
78:Ap:55:TRP:NE1	78:Ap:67:GLY:O	2.39	0.46
80:DC:22:MET:HG3	80:DC:342:LEU:HD13	1.98	0.46
80:DC:290:ASN:HB3	80:DC:292:LYS:HG2	1.98	0.46
80:DC:577:SER:O	80:DC:585:ARG:HA	2.15	0.46
81:EC:6834:U:H2'	81:EC:6855:A:H2	1.81	0.46
81:EC:6868:C:H2'	81:EC:6869:C:C5	2.51	0.46
81:EC:6932:G:N1	81:EC:6933:G:O6	2.49	0.46
81:EC:6937:G:H2'	81:EC:6937:G:N3	2.31	0.46
2:BB:87:ARG:CZ	2:BB:99:ASN:HB3	2.45	0.46
5:BG:27:PHE:CZ	5:BG:41:VAL:HG22	2.46	0.46
7:BI:23:LYS:HZ1	34:B5:400:A:C5'	2.29	0.46
7:BI:151:LYS:O	9:BL:24:LYS:NZ	2.28	0.46
9:BL:92:HIS:CG	9:BL:93:TYR:N	2.83	0.46
9:BL:97:TYR:C	9:BL:99:ARG:H	2.24	0.46
9:BL:147:GLY:C	9:BL:149:ALA:H	2.23	0.46
11:BO:36:LYS:HG3	11:BO:37:GLU:CD	2.41	0.46
11:BO:127:ARG:NH1	34:B5:1788:G:OP1	2.49	0.46
13:BW:57:ARG:HH11	17:Bb:26:GLN:NE2	2.12	0.46
14:BX:50:LYS:HB2	34:B5:435:C:OP2	2.16	0.46
16:Ba:18:VAL:O	16:Ba:19:LYS:HG2	2.16	0.46
23:BQ:97:VAL:HG12	23:BQ:98:ASP:N	2.31	0.46
34:B5:263:C:H2'	34:B5:264:G:H8	1.81	0.46
34:B5:389:G:C6	34:B5:390:G:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:649:U:H5	34:B5:683:C:C5	2.34	0.46
34:B5:768:C:C4	34:B5:769:A:C6	3.04	0.46
34:B5:956:C:H2'	34:B5:957:G:C8	2.51	0.46
34:B5:1061:A:O2'	34:B5:1062:A:OP1	2.29	0.46
34:B5:1275:A:C6	34:B5:1438:G:C5	3.04	0.46
34:B5:1379:C:H3'	34:B5:1380:U:O2	2.16	0.46
34:B5:1393:C:H2'	34:B5:1394:G:C8	2.50	0.46
35:AA:65:ASP:HB2	35:AA:72:ARG:HG2	1.97	0.46
38:A1:825:U:O2	38:A1:900:G:C6	2.69	0.46
38:A1:842:G:H2'	38:A1:843:A:C8	2.51	0.46
38:A1:878:G:H1'	38:A1:880:G:H21	1.80	0.46
38:A1:1284:C:H5'	38:A1:1285:G:O5'	2.16	0.46
38:A1:1536:G:C6	38:A1:1586:G:C2	3.04	0.46
38:A1:1743:G:N3	38:A1:1744:G:C8	2.84	0.46
38:A1:1809:A:H2'	38:A1:1810:A:O4'	2.16	0.46
38:A1:1923:C:N4	38:A1:1929:G:N2	2.64	0.46
38:A1:2095:G:C2	38:A1:2096:A:C5	3.04	0.46
38:A1:2285:C:H2'	38:A1:2286:U:C5	2.50	0.46
38:A1:2370:G:C6	38:A1:2371:G:C6	3.03	0.46
38:A1:2445:A:O3'	71:Ai:98:ARG:NH2	2.49	0.46
38:A1:2623:G:C6	38:A1:2624:G:C5	3.03	0.46
38:A1:2952:G:C2	38:A1:2953:U:C2	3.04	0.46
38:A1:3072:C:C4	38:A1:3073:A:C5	3.04	0.46
38:A1:3083:G:H2'	38:A1:3084:C:H6	1.80	0.46
38:A1:3102:G:H2'	38:A1:3103:A:C8	2.51	0.46
38:A1:3146:G:H2'	38:A1:3147:G:C8	2.50	0.46
38:A1:3213:A:OP2	49:AM:128:ARG:HD2	2.15	0.46
44:AG:214:LEU:O	44:AG:218:ILE:HG12	2.15	0.46
46:AI:85:PHE:HE2	46:AI:87:LEU:HB2	1.81	0.46
48:AL:4:SER:O	48:AL:7:LEU:HD13	2.16	0.46
55:AS:49:HIS:HE1	56:AT:151:LEU:HD22	1.81	0.46
56:AT:66:ASN:O	56:AT:73:GLY:N	2.39	0.46
62:AZ:2:ALA:C	65:Ac:37:GLY:HA3	2.41	0.46
66:Ad:10:ARG:HB2	66:Ad:12:TYR:HE1	1.81	0.46
67:Ae:32:TRP:CG	67:Ae:33:ARG:N	2.83	0.46
68:Af:24:ASN:HD21	68:Af:26:ASN:HD22	1.63	0.46
75:Am:97:ARG:HD3	75:Am:120:GLN:HB3	1.98	0.46
80:DC:45:ILE:HG12	80:DC:77:LEU:HA	1.98	0.46
80:DC:161:ASP:N	80:DC:161:ASP:OD1	2.47	0.46
80:DC:554:LEU:C	80:DC:555:LYS:HD3	2.41	0.46
80:DC:594:ASP:HB2	80:DC:597:VAL:HG23	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:23:HIS:O	1:BA:48:ILE:N	2.37	0.45
4:BE:2:ALA:N	34:B5:301:A:OP1	2.49	0.45
4:BE:122:LYS:HE2	4:BE:164:LEU:HD13	1.97	0.45
5:BG:15:THR:OG1	34:B5:152:U:O2'	2.30	0.45
5:BG:175:ILE:HG22	34:B5:78:A:C2	2.51	0.45
9:BL:13:PHE:CD2	9:BL:15:LYS:HD3	2.51	0.45
9:BL:33:ARG:NH1	9:BL:51:GLY:O	2.49	0.45
13:BW:23:ARG:CA	13:BW:65:LEU:HB2	2.41	0.45
19:BD:156:PHE:HE2	34:B5:1326:A:H4'	1.81	0.45
20:BF:100:ASN:HD22	20:BF:103:ASN:CG	2.23	0.45
28:BZ:59:TYR:CZ	28:BZ:61:SER:HB3	2.51	0.45
28:BZ:60:VAL:HB	28:BZ:101:TYR:HB2	1.97	0.45
31:Bg:132:LYS:HB3	31:Bg:140:CYS:SG	2.57	0.45
33:BM:25:GLU:O	33:BM:28:LEU:HG	2.17	0.45
33:BM:83:GLU:OE1	33:BM:83:GLU:N	2.49	0.45
34:B5:22:A:N1	34:B5:604:A:C6	2.84	0.45
34:B5:269:G:C6	34:B5:287:G:C2	3.04	0.45
34:B5:380:U:OP2	34:B5:381:C:N4	2.42	0.45
34:B5:572:C:H2'	34:B5:573:C:C6	2.52	0.45
34:B5:648:G:C5	34:B5:687:G:C2	3.04	0.45
34:B5:775:G:H2'	34:B5:776:G:C8	2.50	0.45
34:B5:825:U:H5"	34:B5:826:U:H5	1.81	0.45
34:B5:895:G:H22	34:B5:918:U:H6	1.64	0.45
34:B5:1204:A:C5	34:B5:1205:C:C5	3.04	0.45
34:B5:1246:C:H2'	34:B5:1247:U:C6	2.51	0.45
34:B5:1590:G:H2'	34:B5:1591:C:H6	1.81	0.45
36:AB:222:LYS:HG3	36:AB:224:HIS:HE2	1.80	0.45
36:AB:347:SER:C	36:AB:349:LYS:H	2.24	0.45
38:A1:263:C:H2'	38:A1:264:G:O4'	2.16	0.45
38:A1:275:U:H2'	38:A1:276:U:H6	1.79	0.45
38:A1:331:G:H2'	38:A1:332:C:C6	2.52	0.45
38:A1:385:A:H2'	38:A1:386:A:C8	2.51	0.45
38:A1:438:A:H5'	38:A1:439:C:H3'	1.97	0.45
38:A1:798:G:O3'	48:AL:15:ARG:NH2	2.49	0.45
38:A1:840:C:H2'	38:A1:841:A:C8	2.51	0.45
38:A1:1104:G:H2'	38:A1:1105:A:C8	2.50	0.45
38:A1:1165:A:H2'	38:A1:1166:G:H8	1.81	0.45
38:A1:1753:G:H2'	38:A1:1754:G:C8	2.51	0.45
38:A1:1832:C:H2'	38:A1:1833:G:H8	1.79	0.45
38:A1:1833:G:C5	38:A1:1834:U:N3	2.84	0.45
38:A1:1918:C:H2'	38:A1:1919:G:C8	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1949:G:C6	38:A1:2097:U:O2	2.69	0.45
38:A1:2445:A:C2	38:A1:2503:G:C2	3.03	0.45
38:A1:2543:U:H5"	38:A1:2544:U:O5'	2.16	0.45
38:A1:3018:C:C4	38:A1:3019:U:C4	3.05	0.45
38:A1:3182:G:H2'	38:A1:3183:A:C8	2.51	0.45
39:A3:13:A:C4	39:A3:112:G:C6	3.04	0.45
41:AD:53:VAL:O	41:AD:54:ARG:NH1	2.37	0.45
41:AD:191:ASP:CG	41:AD:194:LEU:H	2.24	0.45
43:AF:222:HIS:CD2	43:AF:230:GLY:HA3	2.51	0.45
44:AG:134:TYR:CG	44:AG:190:VAL:HG21	2.51	0.45
46:AI:41:ALA:HB1	46:AI:45:GLU:OE2	2.16	0.45
47:AJ:110:ILE:HD13	47:AJ:122:ILE:HD12	1.97	0.45
50:AN:80:THR:HG21	50:AN:86:ASN:O	2.15	0.45
52:AP:127:ARG:HB2	52:AP:139:TYR:O	2.16	0.45
77:Ao:38:GLN:HG3	77:Ao:41:ARG:NH2	2.27	0.45
80:DC:379:MET:SD	80:DC:401:PHE:HB2	2.56	0.45
80:DC:776:GLU:HB3	80:DC:778:PHE:CE2	2.50	0.45
81:EC:6914:A:H8	81:EC:6914:A:OP1	1.98	0.45
2:BB:127:VAL:HG21	2:BB:176:VAL:HG11	1.98	0.45
3:BC:179:VAL:HG23	34:B5:3:U:C6	2.50	0.45
4:BE:127:LYS:N	4:BE:140:VAL:O	2.22	0.45
7:BI:153:GLU:CD	7:BI:155:SER:H	2.24	0.45
8:BJ:108:ARG:NH1	8:BJ:111:THR:OG1	2.49	0.45
11:BO:132:ARG:NE	16:Ba:29:SER:OG	2.43	0.45
11:BO:135:ARG:NH1	11:BO:135:ARG:HB3	2.31	0.45
19:BD:196:ARG:N	19:BD:200:LYS:HZ2	2.15	0.45
20:BF:142:PRO:HD3	20:BF:171:ALA:HB2	1.97	0.45
31:Bg:26:SER:OG	31:Bg:73:LEU:HD13	2.16	0.45
33:BM:62:LEU:HB3	33:BM:90:LYS:NZ	2.31	0.45
33:BM:103:LEU:HD11	33:BM:118:ALA:HB2	1.96	0.45
34:B5:310:C:N3	34:B5:357:G:N1	2.64	0.45
34:B5:528:U:C2	34:B5:529:A:C8	3.04	0.45
34:B5:734:A:H62	34:B5:736:C:N4	2.14	0.45
34:B5:891:A:H2'	34:B5:892:A:H8	1.78	0.45
34:B5:962:C:H2'	34:B5:963:A:C8	2.50	0.45
34:B5:1139:A:C5	34:B5:1140:G:C8	3.04	0.45
34:B5:1208:A:H2	34:B5:1209:C:C5	2.33	0.45
34:B5:1230:A:N3	34:B5:1258:U:C2	2.85	0.45
34:B5:1292:G:H2'	34:B5:1293:U:C6	2.51	0.45
34:B5:1489:U:C5	34:B5:1490:C:H5	2.34	0.45
34:B5:1586:A:H1'	34:B5:1611:A:N6	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AA:83:HIS:CE1	35:AA:86:GLN:HB2	2.51	0.45
37:AC:205:PRO:O	37:AC:246:ARG:NH2	2.44	0.45
37:AC:326:ARG:HH22	38:A1:609:G:P	2.39	0.45
38:A1:301:G:H1	38:A1:314:U:H3	1.62	0.45
38:A1:646:A:C2	38:A1:2375:G:C2	3.04	0.45
38:A1:753:C:C2	38:A1:754:G:C8	3.05	0.45
38:A1:768:C:OP1	48:AL:186:ARG:NH2	2.49	0.45
38:A1:1142:G:H5"	38:A1:1143:A:OP2	2.16	0.45
38:A1:1563:C:H4'	38:A1:1563:C:OP1	2.16	0.45
38:A1:1748:G:C6	38:A1:1749:A:C6	3.04	0.45
38:A1:1806:A:H4'	69:Ag:76:TYR:HE2	1.81	0.45
38:A1:2096:A:C5	38:A1:2097:U:C4	3.05	0.45
38:A1:2830:G:H2'	38:A1:2831:G:H8	1.81	0.45
38:A1:3188:G:C2	38:A1:3189:G:C5	3.04	0.45
38:A1:3250:U:H2'	38:A1:3251:U:H6	1.81	0.45
38:A1:3379:C:H2'	38:A1:3380:U:C6	2.51	0.45
38:A1:3392:U:OP1	52:AP:43:LYS:NZ	2.49	0.45
39:A3:67:G:H2'	39:A3:68:C:C6	2.51	0.45
40:A4:124:G:N1	40:A4:130:C:N3	2.64	0.45
40:A4:143:U:H4'	50:AN:57:GLN:OE1	2.16	0.45
41:AD:212:ALA:HB2	41:AD:219:PHE:CZ	2.52	0.45
42:AE:102:ASN:ND2	42:AE:104:GLU:OE2	2.50	0.45
42:AE:171:PRO:HA	42:AE:174:LEU:HB2	1.97	0.45
43:AF:66:LYS:HZ3	43:AF:78:GLU:HB3	1.82	0.45
44:AG:54:GLU:HA	44:AG:57:ARG:NE	2.30	0.45
47:AJ:77:GLU:OE2	47:AJ:167:TYR:OH	2.22	0.45
48:AL:28:GLN:HA	48:AL:31:LYS:HB2	1.98	0.45
51:AO:60[A]:LYS:O	51:AO:72[A]:HIS:NE2	2.48	0.45
63:Aa:76:ASP:OD1	63:Aa:77:LYS:N	2.49	0.45
74:Al:16:ALA:O	74:Al:42:ARG:NH2	2.49	0.45
78:Ap:21:SER:HA	78:Ap:24:ARG:HG2	1.97	0.45
80:DC:733:ILE:O	80:DC:767:THR:HA	2.16	0.45
81:EC:6906:G:H2'	81:EC:6907:G:C8	2.51	0.45
1:BA:73:VAL:O	1:BA:95:ALA:HA	2.15	0.45
2:BB:24:PHE:HA	2:BB:27:LYS:NZ	2.31	0.45
4:BE:227:VAL:HG12	4:BE:229:GLY:H	1.82	0.45
5:BG:173:PRO:HB3	34:B5:66:U:C6	2.52	0.45
6:BH:98:ILE:HG12	34:B5:694:U:C2	2.51	0.45
7:BI:5:ARG:CZ	34:B5:336:G:C5	3.00	0.45
8:BJ:37:LYS:NZ	8:BJ:110:GLN:OE1	2.34	0.45
8:BJ:136:VAL:HB	8:BJ:141:VAL:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:BL:19:ILE:HG13	9:BL:34:TRP:HB2	1.98	0.45
11:BO:128:LYS:HG3	16:Ba:22:ARG:CZ	2.45	0.45
14:BX:59:ILE:HD13	14:BX:71:CYS:HB2	1.98	0.45
19:BD:40:ARG:HA	27:BU:110:PRO:HB3	1.97	0.45
23:BQ:13:LYS:HG3	23:BQ:14:LYS:H	1.81	0.45
34:B5:36:C:N4	34:B5:473:A:H61	2.13	0.45
34:B5:412:A:C2	34:B5:422:G:C6	3.05	0.45
34:B5:578:U:H4'	34:B5:579:A:O5'	2.17	0.45
34:B5:906:A:H61	34:B5:1008:G:H1'	1.80	0.45
34:B5:1234:A:OP2	34:B5:1245:G:O2'	2.33	0.45
34:B5:1470:C:H5"	34:B5:1471:A:C8	2.51	0.45
34:B5:1471:A:N7	34:B5:1538:U:C4	2.85	0.45
34:B5:1733:C:H2'	34:B5:1734:U:C5	2.51	0.45
35:AA:54:ARG:NH1	38:A1:2176:U:H5"	2.31	0.45
36:AB:45:SER:H	36:AB:181:ILE:HG21	1.81	0.45
36:AB:67:PHE:H	58:AV:88:ARG:HH12	1.65	0.45
36:AB:214:MET:CE	36:AB:281:LYS:HD3	2.45	0.45
36:AB:241:LYS:NZ	38:A1:2949:U:O3'	2.44	0.45
37:AC:31:ARG:NH1	37:AC:120:TYR:OH	2.49	0.45
37:AC:307:GLN:NE2	38:A1:1345:G:H21	2.08	0.45
38:A1:33:G:N1	38:A1:50:U:OP2	2.47	0.45
38:A1:962:A:O2'	38:A1:963:G:H5'	2.16	0.45
38:A1:1049:C:H2'	38:A1:1050:U:C6	2.51	0.45
38:A1:1111:U:H6	48:AL:5:LYS:NZ	2.15	0.45
38:A1:1447:G:N7	52:AP:27:LYS:HB2	2.32	0.45
38:A1:1466:G:H22	38:A1:1510:G:H5"	1.81	0.45
38:A1:1467:A:C5	38:A1:1470:U:C4	3.04	0.45
38:A1:1730:G:N7	65:Ac:28:LYS:HG2	2.31	0.45
38:A1:1773:C:H2'	38:A1:1774:C:C6	2.51	0.45
38:A1:1881:A:C4	38:A1:1882:G:N7	2.84	0.45
38:A1:2158:A:C8	38:A1:2160:G:C4	3.04	0.45
38:A1:2220:A:C6	38:A1:2221:G:C6	3.05	0.45
38:A1:2257:C:H3'	38:A1:2258:PSU:H6	1.80	0.45
38:A1:2276:G:O6	38:A1:2310:U:O4	2.34	0.45
38:A1:2496:C:H3'	38:A1:2497:U:H5"	1.97	0.45
38:A1:2653:C:H2'	38:A1:2654:C:C6	2.52	0.45
38:A1:2698:G:H2'	38:A1:2699:G:H8	1.80	0.45
38:A1:2761:G:O2'	38:A1:2795:U:O4	2.32	0.45
38:A1:2875:U:OP2	38:A1:2945:G:N2	2.42	0.45
38:A1:2908:G:H2'	38:A1:2909:U:H6	1.80	0.45
38:A1:3112:G:C5	38:A1:3119:U:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:A3:11:A:OP2	56:AT:20:ARG:NH2	2.31	0.45
39:A3:20:A:H1'	41:AD:274:GLN:NE2	2.31	0.45
39:A3:56:A:C4	39:A3:57:G:C8	3.04	0.45
39:A3:104:A:C2	39:A3:105:C:H1'	2.52	0.45
40:A4:114:G:C6	40:A4:115:C:C4	3.05	0.45
41:AD:277:LEU:HB3	41:AD:281:GLU:HB2	1.97	0.45
46:AI:62:SER:HB3	46:AI:93:PRO:HB3	1.98	0.45
61:AY:27:ARG:NH1	61:AY:75:ARG:O	2.42	0.45
69:Ag:29:ILE:HG13	69:Ag:30:LEU:N	2.30	0.45
79:E:68:PHE:HD2	79:E:85:MET:SD	2.39	0.45
1:BA:179:ARG:O	1:BA:183:ARG:N	2.45	0.45
2:BB:116:LYS:HB3	2:BB:117:TRP:CE3	2.51	0.45
2:BB:123:ALA:O	2:BB:139:ALA:N	2.45	0.45
3:BC:98:PHE:C	3:BC:117:THR:HG23	2.41	0.45
7:BI:67:TRP:N	7:BI:72:ILE:O	2.38	0.45
7:BI:170:SER:HB3	7:BI:182:TYR:CD1	2.49	0.45
11:BO:78:ALA:HA	11:BO:111:ARG:O	2.17	0.45
12:BV:66:ASP:N	12:BV:66:ASP:OD1	2.49	0.45
23:BQ:7:VAL:HG13	23:BQ:96:TYR:HE2	1.81	0.45
25:BS:134:ARG:NE	34:B5:1546:G:OP2	2.50	0.45
26:BT:77:ASN:HA	26:BT:96:ALA:HB3	1.97	0.45
31:Bg:172:ALA:HB2	31:Bg:202:LEU:HD23	1.97	0.45
31:Bg:203:THR:HG22	31:Bg:245:PHE:HD2	1.82	0.45
34:B5:277:U:O2'	34:B5:279:G:N2	2.49	0.45
34:B5:564:G:H4'	34:B5:566:C:C2	2.51	0.45
34:B5:872:G:H2'	34:B5:873:U:O4'	2.16	0.45
34:B5:1039:A:O2'	34:B5:1040:G:H8	1.99	0.45
34:B5:1079:U:H2'	34:B5:1080:U:H6	1.81	0.45
34:B5:1497:U:H3'	34:B5:1498:G:H8	1.81	0.45
38:A1:38:U:H4'	63:Aa:32:ARG:HD2	1.96	0.45
38:A1:80:G:H2'	38:A1:81:C:H6	1.82	0.45
38:A1:80:G:H2'	38:A1:81:C:C6	2.51	0.45
38:A1:201:A:H2'	38:A1:202:G:C8	2.51	0.45
38:A1:246:U:H2'	38:A1:247:C:C2	2.52	0.45
38:A1:414:U:H2'	38:A1:415:G:C8	2.52	0.45
38:A1:580:C:H2'	38:A1:581:U:C6	2.52	0.45
38:A1:727:G:N3	53:AQ:141:ARG:NH2	2.64	0.45
38:A1:865:U:O2'	38:A1:1867:A:H4'	2.16	0.45
38:A1:998:A:H2'	38:A1:999:G:H8	1.81	0.45
38:A1:1046:A:O2'	38:A1:1048:A:OP2	2.30	0.45
38:A1:1091:A:C6	38:A1:1092:C:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1127:G:OP2	46:AI:98:ARG:NE	2.48	0.45
38:A1:1693:C:H5"	38:A1:1694:U:H5'	1.97	0.45
38:A1:1694:U:H5	38:A1:1752:A:N1	2.15	0.45
38:A1:2965:U:H2'	38:A1:2966:G:C4	2.50	0.45
38:A1:3036:G:H2'	38:A1:3037:U:H6	1.82	0.45
38:A1:3065:G:H2'	38:A1:3066:U:C6	2.52	0.45
38:A1:3108:G:C6	38:A1:3109:G:N7	2.85	0.45
38:A1:3207:U:O2'	38:A1:3208:G:O5'	2.33	0.45
38:A1:3332:U:OP2	59:AW:35:LYS:NZ	2.35	0.45
40:A4:53:A:C4	40:A4:54:A:C8	3.05	0.45
40:A4:65:A:C4	40:A4:66:A:C8	3.04	0.45
43:AF:132:PRO:HA	43:AF:229:PHE:CG	2.50	0.45
45:AH:166:ARG:HB3	45:AH:166:ARG:CZ	2.46	0.45
46:AI:191:LYS:O	46:AI:198:LYS:N	2.40	0.45
47:AJ:60:ARG:HB2	47:AJ:63:GLU:CD	2.40	0.45
49:AM:70:PHE:CE2	49:AM:72:LEU:HD22	2.52	0.45
50:AN:53:TYR:CE2	50:AN:59:PHE:HB3	2.52	0.45
56:AT:57:TYR:CD1	56:AT:89:LEU:HD21	2.51	0.45
61:AY:46:LYS:HE2	61:AY:46:LYS:HB2	1.76	0.45
63:Aa:95:SER:OG	63:Aa:98:THR:O	2.23	0.45
69:Ag:58:ARG:HA	69:Ag:58:ARG:HD2	1.81	0.45
80:DC:216:HIS:HB3	80:DC:218:TRP:HD1	1.81	0.45
80:DC:387:PRO:HA	80:DC:394:PHE:CD2	2.52	0.45
3:BC:156:THR:HG21	3:BC:224:PHE:HD2	1.80	0.45
4:BE:108:ARG:HH12	34:B5:788:A:H3'	1.81	0.45
8:BJ:17:ARG:HH21	34:B5:4:C:H1'	1.82	0.45
8:BJ:171:ARG:NH2	34:B5:537:G:H2'	2.32	0.45
11:BO:113:GLY:HA3	16:Ba:58:VAL:HG22	1.99	0.45
16:Ba:51:ARG:NH2	16:Ba:52:ASP:OD2	2.49	0.45
21:BK:93:GLN:HG2	21:BK:94:GLU:H	1.80	0.45
24:BR:28:PHE:HZ	24:BR:48:ASN:OD1	2.00	0.45
24:BR:80:ARG:O	24:BR:84:TYR:N	2.50	0.45
26:BT:42:GLY:HA2	26:BT:84:LYS:HG3	1.98	0.45
31:Bg:21:THR:N	31:Bg:36:ALA:O	2.35	0.45
33:BM:83:GLU:HG2	33:BM:84:ASN:H	1.81	0.45
34:B5:363:G:H2'	34:B5:364:G:C8	2.51	0.45
34:B5:865:A:C2	34:B5:866:G:H1'	2.51	0.45
34:B5:979:A:H4'	34:B5:1786:G:N2	2.32	0.45
34:B5:1360:A:C6	34:B5:1364:G:C6	3.04	0.45
34:B5:1524:A:N3	34:B5:1590:G:O2'	2.41	0.45
35:AA:190:ARG:HD2	35:AA:190:ARG:C	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:88:GLY:O	36:AB:161:LEU:N	2.49	0.45
37:AC:84:ARG:NH2	38:A1:365:A:OP1	2.50	0.45
37:AC:100:PHE:CE1	38:A1:661:G:H5'	2.50	0.45
38:A1:8:C:H2'	38:A1:9:U:H6	1.80	0.45
38:A1:199:A:HO2'	38:A1:201:A:H62	1.59	0.45
38:A1:217:U:O2	61:AY:103:LYS:NZ	2.32	0.45
38:A1:221:A:C5	38:A1:224:C:C4	3.04	0.45
38:A1:323:A:H2'	38:A1:324:A:C8	2.52	0.45
38:A1:508:U:H2'	38:A1:509:U:C6	2.51	0.45
38:A1:751:A:H2'	38:A1:752:C:C6	2.52	0.45
38:A1:788:C:C2	38:A1:789:A:C8	3.05	0.45
38:A1:874:U:H5'	38:A1:875:G:H5'	1.98	0.45
38:A1:1054:A:H5"	38:A1:2637:A:N6	2.31	0.45
38:A1:1211:U:P	45:AH:62:ARG:HE	2.39	0.45
38:A1:1666:G:O2'	38:A1:1742:U:O2'	2.29	0.45
38:A1:1666:G:H1	38:A1:1783:U:H3	1.63	0.45
38:A1:2430:A:H2'	38:A1:2431:C:C6	2.51	0.45
38:A1:2504:U:HO2'	38:A1:2505:U:H6	1.63	0.45
38:A1:2566:C:N3	38:A1:2576:G:C6	2.85	0.45
38:A1:2600:C:H2'	38:A1:2601:A:C8	2.52	0.45
38:A1:2821:C:H2'	38:A1:2822:U:C6	2.52	0.45
38:A1:2836:C:H2'	38:A1:2837:A:O4'	2.17	0.45
38:A1:2864:A:C6	38:A1:2865:PSU:C2	3.05	0.45
38:A1:3007:U:H2'	38:A1:3008:A:C8	2.51	0.45
38:A1:3027:A:C5	80:DC:785:ARG:HD2	2.51	0.45
38:A1:3154:C:C2	38:A1:3158:G:C4	3.04	0.45
38:A1:3162:C:N4	38:A1:3163:A:H62	2.14	0.45
38:A1:3213:A:H8	38:A1:3213:A:O5'	1.99	0.45
39:A3:104:A:H3'	39:A3:105:C:O2	2.16	0.45
41:AD:40:HIS:CE1	56:AT:69:LYS:HA	2.50	0.45
45:AH:1:MET:C	45:AH:2:LYS:HG2	2.42	0.45
47:AJ:31:THR:O	47:AJ:34:SER:OG	2.26	0.45
49:AM:59:ASN:OD1	49:AM:60:LEU:N	2.49	0.45
56:AT:44:ALA:H	56:AT:58:GLN:HE22	1.64	0.45
60:AX:29:SER:OG	60:AX:31:THR:O	2.24	0.45
72:Aj:26:SER:OG	72:Aj:35:SER:OG	2.32	0.45
74:Al:41:ARG:HD2	74:Al:42:ARG:H	1.82	0.45
79:E:103:LEU:HG	79:E:110:PHE:HE2	1.80	0.45
80:DC:675:PRO:HG3	80:DC:714:TYR:CG	2.51	0.45
4:BE:49:ARG:NH2	34:B5:448:C:OP1	2.49	0.45
5:BG:5:ILE:O	5:BG:124:LEU:HD21	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BI:100:ALA:HB3	7:BI:169:ILE:HD13	1.98	0.45
11:BO:137:LEU:C	34:B5:1769:U:H4'	2.42	0.45
15:BY:110:GLN:O	15:BY:114:ARG:HG2	2.16	0.45
19:BD:6:SER:H	19:BD:9:ARG:NH1	2.14	0.45
23:BQ:27:GLY:HA2	23:BQ:60:PHE:O	2.16	0.45
23:BQ:51:PRO:HA	23:BQ:54:LEU:HD12	1.99	0.45
23:BQ:129:PHE:CD1	27:BU:78:THR:HA	2.52	0.45
24:BR:5:ARG:HB3	24:BR:9:VAL:CG2	2.46	0.45
27:BU:28:SER:HB3	27:BU:34:LEU:HD22	1.99	0.45
29:Bc:34:GLU:HG2	29:Bc:35:ASP:OD1	2.16	0.45
31:Bg:276:PRO:HG3	31:Bg:313:TRP:CZ2	2.51	0.45
34:B5:40:A:N6	34:B5:467:G:H1'	2.32	0.45
34:B5:65:A:N1	34:B5:85:A:N6	2.63	0.45
34:B5:614:C:H2'	34:B5:615:A:C8	2.52	0.45
34:B5:1182:U:H1'	34:B5:1185:U:C2	2.51	0.45
34:B5:1470:C:H3'	34:B5:1573:A:N6	2.31	0.45
34:B5:1620:C:H2'	34:B5:1621:U:H6	1.81	0.45
34:B5:1651:A:H2'	34:B5:1652:C:H6	1.81	0.45
38:A1:279:U:H2'	38:A1:280:U:C6	2.52	0.45
38:A1:578:A:H5"	38:A1:579:G:O5'	2.17	0.45
38:A1:668:G:H1	38:A1:794:U:H3	1.63	0.45
38:A1:761:A:H2'	38:A1:762:U:H6	1.81	0.45
38:A1:835:G:O2'	38:A1:836:A:OP2	2.34	0.45
38:A1:1175:C:H2'	38:A1:1176:C:H6	1.80	0.45
38:A1:1235:U:C4	38:A1:1245:A:H1'	2.51	0.45
38:A1:1259:A:H1'	38:A1:1280:C:O2'	2.15	0.45
38:A1:1826:C:H2'	38:A1:1827:C:H6	1.81	0.45
38:A1:1898:G:H2'	38:A1:1899:G:O4'	2.16	0.45
38:A1:2181:C:H2'	38:A1:2182:A:C8	2.52	0.45
38:A1:2511:A:H2'	38:A1:2512:C:C6	2.52	0.45
38:A1:2555:G:H2'	38:A1:2556:C:C6	2.51	0.45
38:A1:2587:U:H2'	38:A1:2588:U:C6	2.52	0.45
38:A1:2639:G:H5"	56:AT:55:LYS:HZ2	1.81	0.45
38:A1:3255:U:H2'	38:A1:3256:G:C8	2.52	0.45
39:A3:3:U:H2'	39:A3:4:U:C6	2.51	0.45
40:A4:72:A:H5'	61:AY:73:VAL:HB	1.99	0.45
40:A4:109:A:O5'	40:A4:109:A:H8	2.00	0.45
40:A4:117:C:H2'	40:A4:118:C:C6	2.52	0.45
40:A4:123:G:C6	40:A4:131:A:C6	3.04	0.45
41:AD:207:TYR:HD2	41:AD:223:PHE:HZ	1.65	0.45
42:AE:170:LYS:NZ	68:Af:34:GLY:HA3	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:AE:170:LYS:HD2	42:AE:172:HIS:HE1	1.81	0.45
45:AH:124:ARG:HD2	45:AH:164:ILE:HG13	1.99	0.45
46:AI:185:ARG:NH1	46:AI:185:ARG:O	2.50	0.45
48:AL:177:LYS:HZ3	71:Ai:10:GLY:HA2	1.82	0.45
50:AN:15:GLN:NE2	71:Ai:51:SER:OG	2.50	0.45
67:Ae:50:ILE:HD12	67:Ae:50:ILE:H	1.82	0.45
79:E:103:LEU:O	79:E:107:TYR:CB	2.64	0.45
80:DC:42:ARG:HH12	80:DC:332:ASP:N	2.15	0.45
80:DC:733:ILE:HD13	80:DC:795:GLN:H	1.81	0.45
81:EC:6778:C:N4	81:EC:6822:U:O2	2.49	0.45
2:BB:23:PRO:HB2	34:B5:896:U:H5"	1.98	0.45
2:BB:134:VAL:O	2:BB:218:LEU:HB2	2.17	0.45
4:BE:18:TRP:CH2	4:BE:43:PRO:HD3	2.51	0.45
6:BH:57:ALA:HA	6:BH:89:HIS:HB2	1.98	0.45
8:BJ:2:PRO:HB2	8:BJ:3:ARG:H	1.56	0.45
8:BJ:92:LYS:HB2	8:BJ:95:TYR:CG	2.52	0.45
9:BL:72:THR:HA	9:BL:124:THR:HA	1.97	0.45
11:BO:49:LYS:HD3	11:BO:49:LYS:HA	1.80	0.45
13:BW:11:LEU:HD11	13:BW:37:PHE:HE2	1.81	0.45
13:BW:81:VAL:HG13	13:BW:85:ASP:HB3	1.98	0.45
14:BX:50:LYS:H	34:B5:435:C:P	2.39	0.45
15:BY:128:LYS:HG2	15:BY:131:ARG:NE	2.32	0.45
31:Bg:234:LEU:HD11	31:Bg:268:GLN:OE1	2.17	0.45
33:BM:62:LEU:HG	33:BM:63:VAL:N	2.31	0.45
34:B5:16:G:H5'	34:B5:620:A:H61	1.81	0.45
34:B5:299:A:H2'	34:B5:300:A:C8	2.52	0.45
34:B5:428:A:H3'	34:B5:429:G:H8	1.81	0.45
34:B5:592:A:H2'	34:B5:593:U:O4'	2.16	0.45
34:B5:1170:G:H21	34:B5:1571:C:H4'	1.81	0.45
34:B5:1176:G:C6	34:B5:1464:G:C6	3.05	0.45
34:B5:1219:A:C6	34:B5:1220:C:C2	3.05	0.45
34:B5:1614:A:O2'	34:B5:1615:C:O4'	2.34	0.45
35:AA:42:ARG:HG3	35:AA:89:TYR:CE2	2.52	0.45
36:AB:62:ARG:HH22	38:A1:3039:C:P	2.39	0.45
36:AB:152:LYS:NZ	36:AB:189:SER:O	2.48	0.45
38:A1:12:A:H2'	38:A1:13:A:H8	1.79	0.45
38:A1:60:A:C8	38:A1:327:A:N6	2.84	0.45
38:A1:310:U:N3	38:A1:311:C:C5	2.85	0.45
38:A1:750:G:C4	38:A1:751:A:C8	3.05	0.45
38:A1:818:C:OP1	72:Aj:10:LYS:NZ	2.47	0.45
38:A1:825:U:C2	38:A1:900:G:O6	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:836:A:P	78:Ap:4:ARG:HD2	2.57	0.45
38:A1:892:U:H2'	38:A1:893:C:C6	2.52	0.45
38:A1:920:A:H5"	38:A1:922:U:H3	1.81	0.45
38:A1:985:U:H2'	38:A1:986:PSU:H6	1.82	0.45
38:A1:1506:A:O2'	38:A1:1507:G:OP1	2.34	0.45
38:A1:1523:U:O2'	38:A1:1524:A:H5'	2.17	0.45
38:A1:2217:U:C2	38:A1:2218:G:C8	3.05	0.45
38:A1:2224:A:H8	38:A1:2225:U:H1'	1.81	0.45
38:A1:2744:U:C2	38:A1:2745:G:N7	2.84	0.45
38:A1:2989:U:C2	38:A1:2990:G:C8	3.04	0.45
38:A1:3008:A:H2'	38:A1:3009:G:H8	1.82	0.45
38:A1:3021:A:N6	38:A1:3032:A:H5"	2.31	0.45
38:A1:3170:A:C4	38:A1:3171:U:C5	3.05	0.45
38:A1:3266:G:H2'	38:A1:3267:A:C8	2.50	0.45
38:A1:3353:G:C6	38:A1:3356:G:C5	3.05	0.45
40:A4:39:G:O2'	40:A4:105:A:N1	2.50	0.45
40:A4:116:G:C6	40:A4:117:C:C4	3.03	0.45
40:A4:141:C:H2'	40:A4:142:C:H6	1.81	0.45
44:AG:102:ALA:O	44:AG:106:LYS:HG2	2.16	0.45
47:AJ:51:ARG:HG3	47:AJ:52:TYR:CD1	2.52	0.45
55:AS:26:ARG:HB2	56:AT:148:PRO:HB3	1.97	0.45
57:AU:94:ARG:O	57:AU:96:VAL:HG23	2.17	0.45
58:AV:13:ILE:HD12	58:AV:13:ILE:H	1.82	0.45
63:Aa:126:LYS:HE3	63:Aa:126:LYS:HB2	1.82	0.45
69:Ag:9:ARG:HG2	69:Ag:34:HIS:CE1	2.52	0.45
69:Ag:25:THR:HG22	69:Ag:29:ILE:O	2.17	0.45
70:Ah:49:LYS:HA	70:Ah:49:LYS:HD3	1.84	0.45
80:DC:563:TYR:CD1	80:DC:726:GLU:HG3	2.51	0.45
81:EC:6849:A:H2'	81:EC:6879:U:O4	2.16	0.45
7:BI:32:GLN:NE2	34:B5:1727:G:H21	2.14	0.45
8:BJ:125:ALA:O	8:BJ:129:ILE:HD12	2.17	0.45
9:BL:43:LYS:NZ	34:B5:740:A:H4'	2.32	0.45
9:BL:103:ARG:NH1	34:B5:352:A:OP1	2.50	0.45
11:BO:18:ARG:HH12	11:BO:31:THR:HG23	1.82	0.45
11:BO:68:ALA:HB1	11:BO:110:LEU:HD13	1.98	0.45
13:BW:27:ILE:HD11	13:BW:61:ILE:HB	1.98	0.45
15:BY:76:TYR:CE2	15:BY:85:PHE:HB2	2.52	0.45
20:BF:216:GLU:HA	20:BF:219:ARG:HD3	1.98	0.45
22:BP:96:ILE:HD13	22:BP:116:LEU:HB3	1.99	0.45
23:BQ:6:SER:O	23:BQ:96:TYR:OH	2.26	0.45
23:BQ:134:ALA:HB3	34:B5:1585:U:O3'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BT:47:PRO:HB3	34:B5:1478:G:H5'	1.99	0.45
27:BU:72:ASN:HD22	34:B5:1430:U:C1'	2.30	0.45
33:BM:95:LYS:HD3	33:BM:117:GLY:HA3	1.98	0.45
34:B5:374:U:H2'	34:B5:375:U:H6	1.82	0.45
34:B5:450:U:O4	34:B5:451:A:N6	2.49	0.45
34:B5:625:C:H42	34:B5:974:A:H61	1.63	0.45
34:B5:631:G:C6	34:B5:632:PSU:C2	3.05	0.45
34:B5:636:A:N1	34:B5:860:U:H5	2.14	0.45
34:B5:968:U:O3'	34:B5:1032:G:N2	2.50	0.45
34:B5:1158:C:O2	34:B5:1158:C:H2'	2.17	0.45
34:B5:1260:U:H2'	34:B5:1261:G:C8	2.51	0.45
34:B5:1330:G:C2	34:B5:1331:A:H1'	2.52	0.45
34:B5:1395:G:C2	34:B5:1404:C:C2	3.05	0.45
34:B5:1562:G:H2'	34:B5:1563:C:H6	1.82	0.45
35:AA:31:THR:C	35:AA:163:ARG:HH22	2.24	0.45
38:A1:17:G:H4'	70:Ah:75:TYR:CE2	2.52	0.45
38:A1:26:A:C4	38:A1:330:G:C8	3.04	0.45
38:A1:299:G:C8	71:Ai:31:GLY:HA3	2.52	0.45
38:A1:407:A:C2	40:A4:17:A:H1'	2.52	0.45
38:A1:752:C:C2	38:A1:753:C:C5	3.04	0.45
38:A1:789:A:H2'	38:A1:790:U:H6	1.81	0.45
38:A1:885:U:H2'	38:A1:886:C:C6	2.51	0.45
38:A1:1002:A:H2'	38:A1:1003:A:H8	1.81	0.45
38:A1:1208:U:O2'	38:A1:3115:C:N4	2.50	0.45
38:A1:1233:G:O2'	38:A1:1245:A:N1	2.47	0.45
38:A1:1723:A:H2	38:A1:1789:G:O4'	1.99	0.45
38:A1:2302:G:C6	38:A1:2303:A:N7	2.85	0.45
38:A1:2435:G:C4	38:A1:2593:A:C6	3.05	0.45
38:A1:2538:U:C5	38:A1:2543:U:H2'	2.51	0.45
38:A1:2586:G:C6	44:AG:241:LYS:HB2	2.52	0.45
38:A1:2724:U:OP2	38:A1:2726:C:N4	2.49	0.45
38:A1:2779:A:N6	38:A1:2780:A:C6	2.85	0.45
38:A1:3133:C:C2	38:A1:3134:A:C8	3.05	0.45
41:AD:119:TYR:CZ	41:AD:135:VAL:HG13	2.51	0.45
41:AD:160:PHE:HB3	41:AD:180:PHE:CD1	2.51	0.45
43:AF:111:ILE:HD12	43:AF:111:ILE:H	1.81	0.45
45:AH:31:ARG:HB2	45:AH:82:VAL:HA	1.99	0.45
45:AH:72:LYS:HA	45:AH:75:VAL:HG22	1.99	0.45
46:AI:38:LYS:HG3	46:AI:82:ARG:HH12	1.81	0.45
51:AO:89[A]:SER:O	51:AO:95[A]:GLY:HA3	2.17	0.45
56:AT:53:PRO:CB	56:AT:91:LEU:HD11	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:AY:74:TYR:HE2	61:AY:77:LYS:NZ	2.15	0.45
66:Ad:35:GLU:O	66:Ad:39:PHE:N	2.46	0.45
67:Ae:13:HIS:CE1	67:Ae:15:LYS:HB3	2.52	0.45
80:DC:575:ALA:O	80:DC:587:TYR:HA	2.17	0.45
1:BA:41:ARG:NH1	24:BR:125:SER:O	2.49	0.45
6:BH:17:GLU:O	6:BH:20:VAL:HG22	2.16	0.45
7:BI:49:ARG:HD3	34:B5:333:A:N6	2.32	0.45
10:BN:12:SER:HB2	34:B5:956:C:O5'	2.16	0.45
10:BN:56:ASP:OD2	17:Bb:52:THR:OG1	2.35	0.45
11:BO:19:ILE:HG21	11:BO:98:GLY:HA2	1.99	0.45
11:BO:128:LYS:C	34:B5:990:C:H4'	2.41	0.45
13:BW:47:ILE:HD11	13:BW:69:LEU:HB2	1.98	0.45
15:BY:41:ARG:HB3	15:BY:52:LYS:HG2	1.99	0.45
18:Be:38:LEU:O	18:Be:42:ARG:N	2.40	0.45
28:BZ:65:LEU:O	28:BZ:69:LEU:HB3	2.17	0.45
31:Bg:134:TRP:HA	31:Bg:140:CYS:HA	1.99	0.45
34:B5:614:C:H2'	34:B5:615:A:H8	1.82	0.45
34:B5:615:A:N1	34:B5:1107:G:C6	2.85	0.45
34:B5:822:U:H5"	34:B5:823:G:OP2	2.17	0.45
34:B5:1140:G:C2	34:B5:1141:G:C8	3.04	0.45
34:B5:1174:C:O2'	34:B5:1196:A:N6	2.49	0.45
34:B5:1409:G:H2'	34:B5:1411:A:OP2	2.17	0.45
34:B5:1754:A:O5'	34:B5:1754:A:H8	2.00	0.45
34:B5:1791:A:O2'	34:B5:1793:G:H8	1.99	0.45
37:AC:290:ILE:HG23	53:AQ:35:PHE:CE2	2.52	0.45
38:A1:81:C:H2'	38:A1:82:C:C6	2.51	0.45
38:A1:129:U:O2	38:A1:139:G:N2	2.38	0.45
38:A1:185:C:C2	38:A1:232:G:C2	3.05	0.45
38:A1:287:G:H2'	38:A1:288:C:C6	2.52	0.45
38:A1:637:C:N4	38:A1:2361:A:N7	2.65	0.45
38:A1:972:A:H2'	38:A1:973:A:C8	2.52	0.45
38:A1:990:PSU:H1'	56:AT:101:CYS:SG	2.56	0.45
38:A1:1126:G:C6	38:A1:1133:A:C6	3.05	0.45
38:A1:1440:G:H2'	38:A1:1441:G:C8	2.52	0.45
38:A1:1646:G:N2	38:A1:1808:G:C4	2.85	0.45
38:A1:1646:G:O2'	38:A1:1647:A:OP2	2.33	0.45
38:A1:1673:G:C6	38:A1:1775:G:C6	3.05	0.45
38:A1:1787:A:H2'	38:A1:1788:C:O4'	2.17	0.45
38:A1:1807:G:H2'	38:A1:1808:G:C4	2.52	0.45
38:A1:1922:A:H2'	38:A1:1923:C:O4'	2.16	0.45
38:A1:2168:A:H2'	38:A1:2170:U:H5'	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2434:U:H4'	38:A1:2435:G:O4'	2.17	0.45
38:A1:2456:A:H2'	38:A1:2456:A:N3	2.31	0.45
38:A1:2772:C:H1'	38:A1:2773:C:OP2	2.17	0.45
38:A1:2880:PSU:H2'	38:A1:2881:C:C6	2.52	0.45
38:A1:3043:C:H2'	38:A1:3044:G:H8	1.81	0.45
38:A1:3180:A:O2'	51:AO:117[A]:ARG:NH1	2.50	0.45
38:A1:3276:G:N2	52:AP:172:GLN:HE21	2.14	0.45
39:A3:41:G:N2	39:A3:45:A:C4	2.85	0.45
42:AE:136:GLU:O	42:AE:140:VAL:HG13	2.17	0.45
44:AG:72:PRO:HA	44:AG:233:TRP:CZ3	2.52	0.45
47:AJ:50:ALA:HB3	47:AJ:62:ASN:H	1.81	0.45
47:AJ:97:SER:N	47:AJ:101:ASN:O	2.43	0.45
47:AJ:137:ARG:HA	47:AJ:140:ARG:HB2	1.98	0.45
53:AQ:66:ARG:HG2	53:AQ:140:LEU:HD21	1.99	0.45
73:Ak:38:PHE:CE2	73:Ak:40:GLN:HB2	2.52	0.45
78:Ap:81:SER:O	78:Ap:84:ARG:NH2	2.49	0.45
79:E:101:LYS:HE3	79:E:105:LYS:NZ	2.31	0.45
80:DC:23:SER:OG	80:DC:103:ILE:HB	2.17	0.45
80:DC:562:ALA:N	85:DC:903:SO1:O19	2.46	0.45
80:DC:591:GLU:N	80:DC:591:GLU:OE1	2.50	0.45
80:DC:610:ASP:O	80:DC:615:ARG:NH2	2.40	0.45
81:EC:6888:A:H2'	81:EC:6889:A:C8	2.51	0.45
3:BC:152:HIS:O	3:BC:194:GLU:HB2	2.16	0.45
3:BC:157:LYS:HA	3:BC:169:LEU:O	2.17	0.45
4:BE:111:VAL:HG12	4:BE:113:ARG:HH12	1.82	0.45
6:BH:120:ALA:O	6:BH:124:LYS:HG2	2.17	0.45
8:BJ:35:GLY:O	8:BJ:126:ARG:NH1	2.50	0.45
9:BL:10:GLU:OE1	9:BL:10:GLU:N	2.33	0.45
10:BN:103:GLU:OE2	10:BN:104:ARG:HG3	2.17	0.45
20:BF:61:TYR:HD2	20:BF:165:LEU:HD13	1.82	0.45
20:BF:141:GLY:HA2	20:BF:167:ARG:O	2.17	0.45
22:BP:72:LYS:HB3	22:BP:93:VAL:HG21	1.99	0.45
24:BR:102:VAL:N	24:BR:120:SER:O	2.50	0.45
33:BM:59:LEU:HD13	33:BM:123:VAL:HG21	1.98	0.45
34:B5:162:A:H2'	34:B5:163:G:C4	2.52	0.45
34:B5:229:U:O4	34:B5:230:C:N4	2.48	0.45
34:B5:364:G:N2	34:B5:381:C:C2	2.85	0.45
34:B5:465:G:C6	34:B5:466:PSU:C2	3.05	0.45
34:B5:485:A:N1	34:B5:504:U:O2'	2.35	0.45
34:B5:649:U:C2	34:B5:684:A:N6	2.81	0.45
34:B5:1107:G:N1	34:B5:1108:G:O6	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1126:G:C2	34:B5:1127:G:C8	3.05	0.45
34:B5:1259:U:C2	34:B5:1260:U:C5	3.05	0.45
36:AB:160:VAL:O	36:AB:180:GLU:HA	2.17	0.45
36:AB:236:LYS:HD2	36:AB:237:LYS:H	1.82	0.45
36:AB:279:ASN:HD21	38:A1:3098:G:H5'	1.81	0.45
37:AC:56:ALA:C	37:AC:58:HIS:H	2.25	0.45
38:A1:336:A:OP1	61:AY:10:SER:N	2.30	0.45
38:A1:538:G:OP1	38:A1:547:G:H1'	2.17	0.45
38:A1:670:C:P	53:AQ:147:ARG:HH12	2.39	0.45
38:A1:729:C:H2'	38:A1:730:C:H6	1.81	0.45
38:A1:968:G:H2'	38:A1:969:C:C6	2.52	0.45
38:A1:1517:G:C6	38:A1:1518:U:C4	3.05	0.45
38:A1:1699:A:O2'	73:Ak:3:ARG:NH2	2.50	0.45
38:A1:1721:U:O4	54:AR:128:LYS:NZ	2.46	0.45
38:A1:1771:C:H2'	38:A1:1772:U:O4'	2.17	0.45
38:A1:1838:G:H5"	38:A1:1839:A:O5'	2.17	0.45
38:A1:2308:C:C4	38:A1:2309:A:C5	3.05	0.45
38:A1:2537:U:O2'	38:A1:2539:C:OP2	2.35	0.45
38:A1:2598:G:H2'	38:A1:2599:U:C6	2.52	0.45
38:A1:2631:U:H2'	38:A1:2632:G:H8	1.81	0.45
38:A1:3029:A:C8	38:A1:3030:G:C8	3.05	0.45
38:A1:3174:A:N6	68:Af:54:ARG:HH22	2.07	0.45
38:A1:3248:C:H2'	38:A1:3249:C:C6	2.51	0.45
40:A4:103:G:OP2	40:A4:105:A:O2'	2.35	0.45
45:AH:69:ARG:HG3	45:AH:69:ARG:NH1	2.32	0.45
48:AL:189:GLU:HA	48:AL:192:GLU:HG2	1.99	0.45
49:AM:47:ASP:HA	49:AM:55:ARG:HA	1.98	0.45
51:AO:10[A]:ASP:HB2	51:AO:117[A]:ARG:HB3	1.98	0.45
66:Ad:29:ALA:CB	66:Ad:60:TRP:HE1	2.29	0.45
80:DC:91:GLN:OE1	80:DC:92:LYS:N	2.50	0.45
80:DC:729:PHE:HB2	80:DC:772:LEU:HB2	1.99	0.45
81:EC:6866:C:H5"	81:EC:6867:C:C6	2.52	0.45
81:EC:6884:G:N1	81:EC:6885:G:O6	2.50	0.45
1:BA:102:PHE:O	1:BA:103:THR:OG1	2.35	0.44
2:BB:214:LYS:NZ	2:BB:216:LYS:HB3	2.32	0.44
4:BE:87:MET:HE1	4:BE:123:LEU:H	1.82	0.44
5:BG:164:LYS:NZ	34:B5:71:A:OP2	2.50	0.44
11:BO:29:HIS:NE2	11:BO:38:THR:HB	2.32	0.44
12:BV:3:ASN:CG	12:BV:4:ASP:H	2.21	0.44
13:BW:90:THR:O	13:BW:94:LEU:HB2	2.17	0.44
21:BK:24:LYS:O	21:BK:43:ILE:HD11	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Bc:13:ILE:HD11	29:Bc:29:ARG:HG2	1.99	0.44
29:Bc:29:ARG:HA	29:Bc:41:VAL:HA	1.99	0.44
34:B5:354:C:C2	34:B5:355:G:C8	3.05	0.44
34:B5:409:C:N4	34:B5:410:A:H62	2.16	0.44
34:B5:510:G:C2	34:B5:511:A:C8	3.05	0.44
34:B5:625:C:H2'	34:B5:626:U:H6	1.82	0.44
34:B5:886:U:C2	34:B5:887:A:C8	3.04	0.44
34:B5:1010:C:H3'	34:B5:1011:G:C8	2.52	0.44
34:B5:1053:G:N1	34:B5:1067:C:C4	2.85	0.44
34:B5:1292:G:C2	34:B5:1324:G:N2	2.85	0.44
34:B5:1364:G:O5'	34:B5:1364:G:H8	2.00	0.44
34:B5:1393:C:H2'	34:B5:1394:G:H8	1.82	0.44
34:B5:1404:C:H2'	34:B5:1405:G:H8	1.81	0.44
34:B5:1409:G:O2'	34:B5:1411:A:N6	2.44	0.44
34:B5:1541:G:H1'	34:B5:1570:A:H61	1.81	0.44
34:B5:1678:A:C5	34:B5:1679:G:C5	3.05	0.44
35:AA:202:VAL:HG23	38:A1:2185:G:OP1	2.17	0.44
36:AB:2:SER:N	38:A1:2940:A:OP2	2.50	0.44
36:AB:27:ALA:HB1	36:AB:218:ILE:HG22	1.99	0.44
36:AB:115:LYS:HE2	36:AB:122:TRP:CH2	2.44	0.44
37:AC:206:LEU:HD22	37:AC:248:VAL:HG23	1.99	0.44
38:A1:21:G:OP2	40:A4:36:G:N2	2.49	0.44
38:A1:277:G:H2'	38:A1:278:U:C6	2.52	0.44
38:A1:651:G:C6	38:A1:652:G:C6	3.05	0.44
38:A1:944:C:OP1	67:Ae:33:ARG:NH2	2.50	0.44
38:A1:1392:G:N2	38:A1:1417:G:O2'	2.50	0.44
38:A1:1462:A:H2'	38:A1:1463:U:H6	1.82	0.44
38:A1:1594:A:N3	38:A1:1615:C:H1'	2.32	0.44
38:A1:1667:A:H2'	38:A1:1668:G:C8	2.52	0.44
38:A1:1927:G:H3'	38:A1:1927:G:N3	2.32	0.44
38:A1:1939:G:C6	38:A1:2110:G:C6	3.05	0.44
38:A1:3102:G:H2'	38:A1:3103:A:H8	1.83	0.44
38:A1:3164:C:H2'	38:A1:3165:A:H1'	2.00	0.44
38:A1:3359:A:H2'	38:A1:3360:C:C6	2.52	0.44
39:A3:35:C:H2'	39:A3:36:C:C6	2.52	0.44
40:A4:71:A:N1	40:A4:82:U:O2'	2.40	0.44
40:A4:108:C:H2'	40:A4:109:A:C8	2.51	0.44
43:AF:66:LYS:HG2	43:AF:76:TYR:HB3	1.99	0.44
43:AF:121:LYS:O	43:AF:124:LEU:HG	2.17	0.44
44:AG:193:LYS:HB2	44:AG:193:LYS:NZ	2.32	0.44
46:AI:47:PRO:HB2	46:AI:178:ARG:NH1	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:AL:64:LYS:C	48:AL:65:TYR:HD1	2.25	0.44
48:AL:106:GLN:HB2	71:Ai:18:THR:HB	1.99	0.44
55:AS:43:TYR:O	55:AS:46:GLN:HB3	2.17	0.44
61:AY:85:VAL:O	61:AY:85:VAL:HG13	2.17	0.44
62:AZ:87:LEU:HD11	62:AZ:121:ARG:HD3	1.98	0.44
1:BA:81:PHE:HB3	1:BA:167:LYS:HD3	1.98	0.44
2:BB:31:ASP:O	2:BB:96:LEU:N	2.48	0.44
2:BB:108:ASP:O	2:BB:112:SER:HB3	2.17	0.44
2:BB:228:LEU:HD12	2:BB:231:LEU:HB2	1.99	0.44
3:BC:35:TRP:CG	3:BC:67:GLN:HE21	2.35	0.44
4:BE:11:ARG:N	4:BE:26:CYS:O	2.28	0.44
4:BE:196:VAL:HG12	4:BE:197:HIS:HD2	1.81	0.44
5:BG:75:LEU:HD23	5:BG:75:LEU:HA	1.88	0.44
8:BJ:49:LEU:HD21	8:BJ:104:PHE:CE1	2.52	0.44
8:BJ:93:LEU:O	8:BJ:96:VAL:HB	2.17	0.44
9:BL:127:GLN:HE22	34:B5:304:U:C4’	2.31	0.44
10:BN:100:LYS:O	10:BN:103:GLU:HG3	2.17	0.44
13:BW:102:VAL:H	13:BW:113:HIS:CE1	2.35	0.44
22:BP:8:LYS:HE2	47:AJ:174:LYS:C	2.43	0.44
23:BQ:129:PHE:HB3	27:BU:79:TRP:HB2	1.99	0.44
25:BS:26:ILE:HB	25:BS:31:ALA:HB2	1.98	0.44
25:BS:86:LEU:N	25:BS:89:GLN:HE21	2.13	0.44
26:BT:71:VAL:HG13	26:BT:75:LYS:HB2	1.99	0.44
31:Bg:28:GLY:HA3	31:Bg:76:ASP:HA	2.00	0.44
33:BM:33:ARG:NH2	33:BM:101:ALA:HA	2.32	0.44
34:B5:1002:G:H21	34:B5:1760:G:H4’	1.81	0.44
34:B5:1153:G:C2	34:B5:1626:U:C2	3.05	0.44
34:B5:1373:C:H2’	34:B5:1374:C:C6	2.52	0.44
34:B5:1383:G:C6	34:B5:1384:A:C6	3.05	0.44
34:B5:1410:A:H2’	34:B5:1411:A:O4’	2.17	0.44
34:B5:1438:G:H2’	34:B5:1439:C:C6	2.53	0.44
34:B5:1537:C:O2’	34:B5:1571:C:N4	2.50	0.44
34:B5:1586:A:H1’	34:B5:1611:A:H61	1.83	0.44
34:B5:1643:U:O2	34:B5:1780:G:N2	2.43	0.44
34:B5:1751:C:C2	34:B5:1752:U:C5	3.05	0.44
35:AA:46:LYS:NZ	35:AA:60:LYS:HG2	2.30	0.44
36:AB:123:TYR:CZ	36:AB:124:LYS:HG3	2.52	0.44
37:AC:334:PHE:CD2	38:A1:578:A:H2’	2.52	0.44
38:A1:35:A:H2’	38:A1:36:C:C6	2.52	0.44
38:A1:137:G:H2’	38:A1:138:U:C6	2.52	0.44
38:A1:184:U:C2	38:A1:185:C:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:381:U:H3	38:A1:388:G:H1	1.64	0.44
38:A1:414:U:H2'	38:A1:415:G:H8	1.81	0.44
38:A1:517:G:H5"	43:AF:63:ILE:HG21	1.98	0.44
38:A1:641:C:H2'	38:A1:642:U:O4'	2.16	0.44
38:A1:847:A:C6	38:A1:848:A:C6	3.04	0.44
38:A1:953:G:H3'	38:A1:1117:G:C8	2.52	0.44
38:A1:1184:A:H5"	49:AM:59:ASN:ND2	2.32	0.44
38:A1:1247:U:C4	38:A1:1267:U:H5"	2.52	0.44
38:A1:1344:G:H2'	38:A1:1345:G:O4'	2.16	0.44
38:A1:1346:G:H2'	38:A1:1347:U:H6	1.81	0.44
38:A1:1522:U:O4	60:AX:116:PRO:HG3	2.18	0.44
38:A1:1534:A:H2'	38:A1:1535:A:C8	2.52	0.44
38:A1:1722:U:H5"	54:AR:99:LEU:HD23	1.98	0.44
38:A1:1935:G:H2'	38:A1:1936:A:C8	2.51	0.44
38:A1:2214:A:C4	38:A1:2215:A:C8	3.06	0.44
38:A1:2310:U:H2'	38:A1:2311:G:C8	2.52	0.44
38:A1:2579:G:H3'	38:A1:2580:A:C8	2.52	0.44
38:A1:2673:A:P	47:AJ:94:ARG:HH22	2.40	0.44
38:A1:2696:A:N6	38:A1:2758:A:C5	2.86	0.44
38:A1:2972:G:H2'	38:A1:2973:G:C8	2.52	0.44
38:A1:3222:U:H2'	38:A1:3223:A:C8	2.52	0.44
39:A3:118:A:H2'	39:A3:119:U:H6	1.82	0.44
40:A4:29:U:H2'	40:A4:30:C:C6	2.52	0.44
40:A4:44:A:H2'	40:A4:45:C:C6	2.53	0.44
40:A4:73:PSU:O2'	40:A4:74:U:O4'	2.35	0.44
40:A4:115:C:H3'	40:A4:116:G:H5"	1.99	0.44
41:AD:282:ARG:HA	41:AD:285:ARG:HG2	2.00	0.44
44:AG:61:GLN:HB2	50:AN:28:TRP:CZ2	2.53	0.44
46:AI:88:ARG:HH11	46:AI:90:ARG:NH1	2.15	0.44
47:AJ:17:LEU:N	47:AJ:71:VAL:O	2.43	0.44
50:AN:54:LYS:O	50:AN:56:LYS:N	2.46	0.44
53:AQ:71:LEU:HD12	53:AQ:97:PRO:HG2	1.99	0.44
53:AQ:85:GLY:HA2	53:AQ:104:LEU:HD12	1.98	0.44
54:AR:173:ARG:HE	54:AR:177:VAL:CG2	2.30	0.44
62:AZ:28:PRO:O	62:AZ:29:HIS:ND1	2.50	0.44
80:DC:199:ASP:OD2	80:DC:206:ARG:NH1	2.41	0.44
80:DC:434:VAL:HB	80:DC:445:ILE:O	2.17	0.44
80:DC:507:GLY:HA2	80:DC:510:ARG:HB3	1.98	0.44
80:DC:578:LYS:HE3	80:DC:585:ARG:HD2	1.98	0.44
80:DC:582:LYS:O	80:DC:582:LYS:HG3	2.17	0.44
2:BB:133:TYR:CE1	2:BB:221:PRO:HD2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BG:13:GLN:O	5:BG:14:LYS:HE2	2.17	0.44
6:BH:107:ARG:NH2	34:B5:698:U:H2'	2.32	0.44
7:BI:36:THR:OG1	7:BI:96:LEU:HB2	2.17	0.44
8:BJ:78:ARG:CZ	34:B5:763:G:H5'	2.47	0.44
8:BJ:109:LEU:HB2	8:BJ:146:PHE:CB	2.47	0.44
8:BJ:133:HIS:CE1	34:B5:513:U:H5'	2.53	0.44
10:BN:109:LYS:O	10:BN:112:LYS:HG3	2.17	0.44
11:BO:60:ALA:HB2	11:BO:97:GLY:HA2	1.99	0.44
11:BO:82:LYS:HB3	11:BO:118:VAL:HG21	1.98	0.44
18:Be:24:THR:OG1	34:B5:587:C:OP1	2.28	0.44
27:BU:61:LYS:N	27:BU:86:ILE:O	2.51	0.44
27:BU:121:ASN:ND2	34:B5:1347:U:OP2	2.51	0.44
31:Bg:9:LEU:HA	31:Bg:313:TRP:HA	1.98	0.44
34:B5:940:A:H2'	34:B5:941:A:H8	1.82	0.44
34:B5:961:U:H2'	34:B5:962:C:H6	1.80	0.44
34:B5:974:A:H2'	34:B5:975:C:C6	2.51	0.44
34:B5:1138:A:H2'	34:B5:1139:A:C8	2.52	0.44
37:AC:67:THR:OG1	38:A1:2813:A:OP1	2.29	0.44
37:AC:141:ARG:HH22	38:A1:1386:A:P	2.40	0.44
38:A1:93:C:OP2	38:A1:2764:C:O2'	2.27	0.44
38:A1:261:U:H2'	38:A1:262:U:C6	2.53	0.44
38:A1:653:A:C2	38:A1:1443:G:C5	3.05	0.44
38:A1:703:G:H2'	38:A1:704:U:C6	2.52	0.44
38:A1:776:PSU:H5"	38:A1:777:U:OP2	2.17	0.44
38:A1:807:A:N7	38:A1:2411:U:O2'	2.41	0.44
38:A1:1250:G:N7	38:A1:1251:A:O2'	2.43	0.44
38:A1:1297:C:H2'	38:A1:1298:C:H6	1.83	0.44
38:A1:1491:A:N7	74:Al:2:ALA:HA	2.32	0.44
38:A1:1782:U:H2'	38:A1:1783:U:C6	2.52	0.44
38:A1:1795:U:C2	78:Ap:51:ALA:HB2	2.53	0.44
38:A1:1852:G:H1'	72:Aj:9:GLY:HA3	1.99	0.44
38:A1:2146:C:H2'	38:A1:2147:A:C8	2.53	0.44
38:A1:2153:U:H2'	38:A1:2154:U:C6	2.52	0.44
38:A1:2184:U:H2'	38:A1:2185:G:C8	2.51	0.44
38:A1:2269:U:O3'	38:A1:2270:A:H8	2.00	0.44
38:A1:2590:A:H2'	38:A1:2591:A:C8	2.52	0.44
38:A1:2694:A:H2'	38:A1:2695:A:H8	1.82	0.44
38:A1:2746:A:N6	41:AD:153:THR:HB	2.30	0.44
38:A1:2912:G:C6	38:A1:2913:C:C4	3.05	0.44
38:A1:3286:G:H2'	38:A1:3287:U:C6	2.52	0.44
40:A4:3:A:O2'	52:AP:61:ARG:NH1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:A4:23:U:P	61:AY:16:ARG:HH21	2.40	0.44
45:AH:66:ALA:O	45:AH:70:THR:HG23	2.17	0.44
45:AH:124:ARG:HG2	45:AH:164:ILE:HD11	1.99	0.44
47:AJ:125:MET:N	47:AJ:125:MET:SD	2.90	0.44
48:AL:31:LYS:O	48:AL:35:ARG:N	2.40	0.44
51:AO:174[A]:PHE:O	51:AO:177[A]:LYS:HG2	2.17	0.44
54:AR:105:LEU:HD22	54:AR:135:LYS:HG3	2.00	0.44
60:AX:57:LEU:HD13	60:AX:61:LYS:HG3	2.00	0.44
71:Ai:56:ARG:CZ	71:Ai:56:ARG:HB3	2.48	0.44
72:Aj:28:HIS:CE1	72:Aj:30:GLN:HB2	2.52	0.44
73:Ak:32:ASN:HD21	73:Ak:36:LYS:H	1.65	0.44
80:DC:404:THR:HG22	80:DC:449:PRO:HA	1.99	0.44
81:EC:6787:U:P	81:EC:6804:A:H62	2.40	0.44
81:EC:6851:G:N2	81:EC:6879:U:OP1	2.50	0.44
1:BA:88:LYS:HG3	1:BA:201:LEU:HG	1.99	0.44
4:BE:99:PHE:HA	4:BE:112:HIS:O	2.17	0.44
5:BG:7:TYR:HB3	5:BG:12:SER:OG	2.18	0.44
7:BI:182:TYR:HE2	7:BI:188:GLU:OE2	2.00	0.44
11:BO:52:ARG:CD	34:B5:905:A:H5”	2.47	0.44
15:BY:7:ILE:HG13	15:BY:27:VAL:HG23	2.00	0.44
18:Be:17:GLN:HE22	34:B5:563:U:H4’	1.83	0.44
20:BF:93:LEU:HD13	20:BF:172:ILE:HG23	1.98	0.44
22:BP:84:ILE:HA	22:BP:114:HIS:O	2.18	0.44
27:BU:57:ARG:HA	27:BU:89:ARG:HG3	1.99	0.44
33:BM:68:GLU:HB2	33:BM:70:ASN:OD1	2.18	0.44
34:B5:552:G:C6	34:B5:553:G:C6	3.06	0.44
34:B5:919:A:H2’	34:B5:920:U:C6	2.53	0.44
34:B5:1116:A:C5’	76:An:17:ARG:HH12	2.28	0.44
34:B5:1279:C:H2’	34:B5:1280:4AC:C6	2.44	0.44
34:B5:1592:A:C2	34:B5:1593:A:C5	3.06	0.44
34:B5:1751:C:H2’	34:B5:1752:U:H6	1.82	0.44
36:AB:250:ALA:HB1	38:A1:2947:G:C2	2.53	0.44
36:AB:266:ARG:CZ	36:AB:266:ARG:HB3	2.47	0.44
38:A1:252:U:O2’	38:A1:253:A:OP1	2.34	0.44
38:A1:274:G:H2’	38:A1:275:U:H6	1.81	0.44
38:A1:415:G:C6	40:A4:9:A:N6	2.85	0.44
38:A1:439:C:O2’	38:A1:440:A:O4’	2.33	0.44
38:A1:794:U:H5’	63:Aa:7:LYS:HZ3	1.82	0.44
38:A1:852:U:H2’	38:A1:853:G:C8	2.50	0.44
38:A1:1116:G:C4	38:A1:2817:A:C2	3.05	0.44
38:A1:1440:G:C4	38:A1:1441:G:C8	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1504:A:H5”	52:AP:23:ARG:NH2	2.33	0.44
38:A1:1541:G:H1’	38:A1:1557:A:C5	2.53	0.44
38:A1:1804:A:H4’	69:Ag:71:THR:CG2	2.47	0.44
38:A1:1846:C:C4	52:AP:136:ILE:HG23	2.53	0.44
38:A1:1888:U:C4	38:A1:1889:G:C8	3.06	0.44
38:A1:1915:A:H2’	38:A1:1916:U:H6	1.82	0.44
38:A1:2341:A:H2’	38:A1:2342:U:C6	2.53	0.44
38:A1:2440:G:H2’	38:A1:2441:A:C8	2.52	0.44
38:A1:2853:A:H2’	38:A1:2854:U:O4’	2.16	0.44
38:A1:3038:U:H2’	38:A1:3039:C:C6	2.52	0.44
38:A1:3084:C:O2’	38:A1:3332:U:OP1	2.26	0.44
38:A1:3164:C:H2’	38:A1:3165:A:C1’	2.48	0.44
38:A1:3252:G:C2	38:A1:3253:G:C5	3.06	0.44
39:A3:34:C:N3	39:A3:46:A:H1’	2.32	0.44
39:A3:39:C:C6	47:AJ:46:VAL:HG13	2.53	0.44
40:A4:89:A:H2’	40:A4:91:C:C6	2.52	0.44
41:AD:208:MET:HA	41:AD:223:PHE:CE2	2.51	0.44
42:AE:19:LYS:HD3	42:AE:19:LYS:HA	1.77	0.44
42:AE:155:LEU:HG	42:AE:159:LEU:HD23	1.97	0.44
43:AF:26:VAL:O	43:AF:30:ARG:HG2	2.17	0.44
43:AF:79:ALA:HB2	56:AT:137:GLU:HA	1.99	0.44
44:AG:139:VAL:O	44:AG:143:ILE:HG13	2.18	0.44
48:AL:10:LEU:O	48:AL:10:LEU:HD12	2.18	0.44
58:AV:83:LYS:HA	58:AV:83:LYS:HD2	1.74	0.44
66:Ad:55:LEU:HA	66:Ad:95:PRO:HG3	1.98	0.44
66:Ad:97:LEU:O	66:Ad:97:LEU:HD12	2.17	0.44
79:E:139:SER:HB3	79:E:142:ASP:OD2	2.16	0.44
80:DC:18:ASN:ND2	80:DC:94:ASP:H	2.13	0.44
80:DC:20:ARG:O	80:DC:100:ILE:HD12	2.17	0.44
80:DC:740:VAL:HA	80:DC:743:ILE:HD12	1.99	0.44
81:EC:6832:G:HO2’	81:EC:6833:G:H8	1.64	0.44
1:BA:79:ARG:O	1:BA:83:GLN:HG3	2.17	0.44
1:BA:183:ARG:HD3	1:BA:191:ARG:HG3	1.98	0.44
4:BE:40:GLU:OE1	4:BE:40:GLU:N	2.50	0.44
7:BI:12:SER:HB3	7:BI:16:ALA:H	1.83	0.44
8:BJ:175:ARG:NH1	34:B5:538:A:H2’	2.33	0.44
9:BL:86:ILE:N	9:BL:107:VAL:O	2.36	0.44
15:BY:11:LYS:HB2	15:BY:24:VAL:HG12	1.99	0.44
20:BF:51:VAL:HG13	20:BF:131:GLN:HA	1.99	0.44
31:Bg:238:ASP:HB2	31:Bg:261:LYS:HZ1	1.83	0.44
34:B5:339:C:H2’	34:B5:340:U:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:525:A:C6	34:B5:526:A:C6	3.05	0.44
35:AA:118:GLU:HG3	35:AA:126:LEU:CD2	2.47	0.44
36:AB:85:VAL:HB	36:AB:163:HIS:CD2	2.52	0.44
37:AC:10:SER:N	37:AC:13:GLY:O	2.49	0.44
37:AC:73:ARG:NH2	38:A1:805:G:N3	2.66	0.44
37:AC:87:GLN:NE2	38:A1:1439:U:OP1	2.51	0.44
37:AC:106:TRP:CZ3	48:AL:22:VAL:HG11	2.50	0.44
37:AC:108:LYS:HZ3	38:A1:664:U:P	2.39	0.44
37:AC:159:ILE:HG23	37:AC:164:GLU:HG3	2.00	0.44
38:A1:103:G:H4'	48:AL:65:TYR:CD2	2.52	0.44
38:A1:179:C:H2'	38:A1:180:C:O4'	2.16	0.44
38:A1:182:U:H2'	38:A1:183:G:C8	2.53	0.44
38:A1:299:G:C4	38:A1:300:G:C8	3.05	0.44
38:A1:359:U:O5'	38:A1:359:U:H6	2.01	0.44
38:A1:521:A:N7	38:A1:571:U:C2	2.86	0.44
38:A1:551:A:O2'	38:A1:552:G:H8	2.00	0.44
38:A1:1049:C:H2'	38:A1:1050:U:H6	1.83	0.44
38:A1:1063:G:O2'	38:A1:1064:A:H5'	2.17	0.44
38:A1:1210:U:H2'	38:A1:1211:U:H6	1.83	0.44
38:A1:1234:G:C4	38:A1:1263:A:H2	2.35	0.44
38:A1:1788:C:H2'	38:A1:1789:G:C8	2.53	0.44
38:A1:1844:C:OP1	74:Al:48:LYS:HE2	2.17	0.44
38:A1:2166:A:H2'	38:A1:2167:A:C5	2.53	0.44
38:A1:2424:A:H5"	50:AN:90:ASN:OD1	2.17	0.44
38:A1:2444:C:N4	38:A1:2445:A:N6	2.65	0.44
38:A1:2496:C:HO2'	38:A1:2497:U:P	2.39	0.44
38:A1:2562:A:C4	38:A1:2563:G:C8	3.05	0.44
38:A1:2671:A:H2'	38:A1:2672:G:O4'	2.18	0.44
38:A1:3087:A:C6	38:A1:3088:G:C5	3.05	0.44
38:A1:3121:U:H1'	38:A1:3122:A:H5"	1.99	0.44
38:A1:3197:G:C6	38:A1:3199:G:C5	3.06	0.44
38:A1:3299:A:H61	38:A1:3315:G:H1	1.64	0.44
39:A3:54:U:O2	39:A3:55:A:N6	2.51	0.44
41:AD:132:THR:HG21	41:AD:170:GLY:HA2	1.97	0.44
42:AE:51:ARG:HB3	42:AE:159:LEU:HD13	1.98	0.44
42:AE:146:ILE:HA	42:AE:149:ILE:HG22	1.99	0.44
44:AG:171:LYS:HG2	44:AG:226:TYR:CD2	2.53	0.44
50:AN:37:HIS:NE2	50:AN:63:ARG:HB2	2.32	0.44
63:Aa:112:ILE:HG13	63:Aa:125:VAL:HG11	1.99	0.44
80:DC:18:ASN:OD1	80:DC:95:GLY:N	2.38	0.44
80:DC:189:VAL:O	80:DC:193:ALA:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:224:GLN:HE22	80:DC:228:ARG:CZ	2.31	0.44
80:DC:596:GLU:O	80:DC:600:ALA:N	2.37	0.44
2:BB:105:PHE:CG	2:BB:213:ARG:HG3	2.52	0.44
3:BC:242:ILE:HG13	3:BC:243:TYR:N	2.32	0.44
4:BE:133:LYS:HD2	34:B5:253:A:OP1	2.16	0.44
5:BG:72:ARG:HA	5:BG:98:ARG:HA	2.00	0.44
5:BG:199:GLN:HA	5:BG:202:ARG:HG3	1.99	0.44
8:BJ:108:ARG:HH21	8:BJ:110:GLN:CD	2.25	0.44
8:BJ:126:ARG:NH2	18:Be:33:ARG:O	2.50	0.44
9:BL:34:TRP:HZ2	34:B5:248:U:O3'	1.99	0.44
20:BF:81:ARG:NH2	34:B5:1615:C:H5"	2.33	0.44
23:BQ:36:ILE:HD12	23:BQ:49:TYR:HE1	1.83	0.44
23:BQ:74:HIS:HE1	34:B5:1526:A:N6	2.10	0.44
24:BR:52:GLY:HA3	34:B5:1389:C:O2'	2.17	0.44
33:BM:93:ASP:HB3	33:BM:96:GLN:HB2	2.00	0.44
34:B5:97:C:H1'	34:B5:426:G:H5'	1.98	0.44
34:B5:334:G:C4	34:B5:335:U:H5	2.36	0.44
34:B5:411:C:H2'	34:B5:412:A:O4'	2.17	0.44
34:B5:644:C:H2'	34:B5:645:C:H6	1.82	0.44
34:B5:730:G:N2	34:B5:731:C:H5"	2.32	0.44
34:B5:869:A:H2'	34:B5:870:C:O4'	2.17	0.44
34:B5:1062:A:H5'	34:B5:1063:U:C5	2.52	0.44
34:B5:1106:U:H2'	34:B5:1107:G:H8	1.79	0.44
34:B5:1214:U:C4	34:B5:1215:C:C4	3.06	0.44
34:B5:1550:A:H2'	34:B5:1551:U:C6	2.52	0.44
36:AB:243:HIC:CD2	36:AB:244:ARG:HB3	2.47	0.44
37:AC:169:LEU:HB3	37:AC:178:LEU:HD11	2.00	0.44
38:A1:421:G:C8	38:A1:2365:C:C6	3.06	0.44
38:A1:716:A:N7	63:Aa:117:ARG:HG2	2.33	0.44
38:A1:819:U:OP2	72:Aj:10:LYS:NZ	2.45	0.44
38:A1:869:G:N1	38:A1:891:G:C6	2.85	0.44
38:A1:1167:U:O2'	43:AF:210:PRO:O	2.29	0.44
38:A1:1595:U:C2	38:A1:1596:C:C5	3.05	0.44
38:A1:1746:U:C2	38:A1:1747:G:C8	3.06	0.44
38:A1:1929:G:H4'	38:A1:2321:A:H5"	1.98	0.44
38:A1:2118:C:H3'	38:A1:2119:A:C8	2.53	0.44
38:A1:2279:A:C6	38:A1:2283:G:N1	2.85	0.44
38:A1:2295:A:C6	38:A1:2296:A:C6	3.05	0.44
38:A1:2312:A:OP1	38:A1:2314:PSU:N1	2.51	0.44
38:A1:2320:A:C4	38:A1:2321:A:C8	3.05	0.44
38:A1:2746:A:H8	38:A1:2746:A:OP1	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3005:A:C4	38:A1:3140:G:C2	3.06	0.44
38:A1:3180:A:C4	51:AO:114[A]:LYS:HA	2.53	0.44
40:A4:65:A:C6	40:A4:66:A:C5	3.06	0.44
40:A4:67:U:C2	40:A4:68:G:C8	3.06	0.44
40:A4:85:G:C4	40:A4:87:G:C2	3.05	0.44
40:A4:155:A:C4	40:A4:156:U:C5	3.06	0.44
41:AD:64:ILE:HG23	41:AD:75:LEU:HB2	2.00	0.44
43:AF:148:VAL:HG12	43:AF:181:ILE:HD11	1.99	0.44
47:AJ:162:TRP:CZ2	47:AJ:166:LYS:HD3	2.52	0.44
48:AL:164:GLU:OE2	48:AL:166:ALA:HB2	2.17	0.44
60:AX:67:ILE:HG22	60:AX:69:SER:H	1.83	0.44
61:AY:55:GLU:OE1	61:AY:69:LYS:HB3	2.17	0.44
63:Aa:104:THR:O	63:Aa:108:GLY:N	2.51	0.44
80:DC:4:PHE:H	80:DC:8:GLN:NE2	2.16	0.44
80:DC:823:ARG:NH1	80:DC:828:MET:HE3	2.33	0.44
81:EC:6801:A:C4	81:EC:6882:G:C8	3.05	0.44
1:BA:7:PHE:O	1:BA:54:TRP:NE1	2.47	0.44
3:BC:114:GLY:HA3	3:BC:132:ALA:HB2	2.00	0.44
4:BE:2:ALA:HB2	34:B5:384:G:OP1	2.18	0.44
7:BI:171:SER:OG	7:BI:178:ARG:O	2.31	0.44
16:Ba:45:VAL:HG21	16:Ba:53:LEU:HD23	1.99	0.44
19:BD:67:ASN:ND2	21:BK:91:TYR:O	2.51	0.44
20:BF:102:ARG:HH22	34:B5:1475:A:P	2.39	0.44
22:BP:32:ASP:HA	22:BP:35:LYS:HG2	1.98	0.44
22:BP:105:VAL:HG12	22:BP:119:PHE:CD2	2.53	0.44
25:BS:12:GLN:NE2	25:BS:63:GLN:OE1	2.51	0.44
26:BT:15:ILE:HG23	26:BT:59:ALA:HB3	1.99	0.44
34:B5:112:A:H2'	34:B5:113:U:C6	2.53	0.44
34:B5:479:C:C2	34:B5:510:G:N1	2.86	0.44
34:B5:587:C:H2'	34:B5:588:U:H6	1.81	0.44
34:B5:1010:C:H2'	34:B5:1011:G:O4'	2.18	0.44
34:B5:1175:U:O2	34:B5:1464:G:N2	2.35	0.44
34:B5:1237:G:H2'	34:B5:1238:A:C8	2.52	0.44
34:B5:1439:C:H2'	34:B5:1440:C:C6	2.52	0.44
34:B5:1503:A:C6	34:B5:1504:G:C6	3.05	0.44
34:B5:1512:G:N1	34:B5:1513:G:C6	2.86	0.44
34:B5:1761:U:O2'	81:EC:6951:C:OP1	2.35	0.44
38:A1:120:G:N2	44:AG:126:SER:O	2.34	0.44
38:A1:294:U:H5"	71:Ai:53:TYR:CE1	2.53	0.44
38:A1:353:G:N2	38:A1:354:U:O4	2.35	0.44
38:A1:661:G:N2	38:A1:942:U:O2'	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:935:U:O4	38:A1:936:A:N6	2.51	0.44
38:A1:1104:G:O5'	43:AF:158:LYS:NZ	2.36	0.44
38:A1:1155:C:H1'	38:A1:1198:C:O2	2.17	0.44
38:A1:1204:A:H2'	38:A1:1205:A:O4'	2.17	0.44
38:A1:1397:C:N4	38:A1:1414:G:O6	2.51	0.44
38:A1:1432:C:O2'	38:A1:1433:A:H3'	2.18	0.44
38:A1:1463:U:H2'	38:A1:1464:G:O4'	2.18	0.44
38:A1:1472:U:H4'	54:AR:24:LEU:HD11	2.00	0.44
38:A1:1571:A:H3'	38:A1:1572:U:C5'	2.48	0.44
38:A1:1685:C:H2'	38:A1:1686:U:C6	2.51	0.44
38:A1:1869:C:H2'	38:A1:1870:C:H6	1.82	0.44
38:A1:2257:C:H3'	38:A1:2258:PSU:C6	2.52	0.44
38:A1:2447:A:OP2	38:A1:2447:A:H8	2.01	0.44
38:A1:2957:G:C6	38:A1:2958:A:C5	3.06	0.44
38:A1:3203:U:H2'	38:A1:3204:C:C6	2.53	0.44
38:A1:3232:G:H2'	38:A1:3232:G:N3	2.33	0.44
38:A1:3266:G:C6	38:A1:3267:A:C6	3.05	0.44
39:A3:2:G:N2	39:A3:119:U:O2	2.34	0.44
41:AD:134:ALA:HA	41:AD:141:PRO:HD3	1.99	0.44
42:AE:99:GLU:OE1	42:AE:99:GLU:N	2.43	0.44
46:AI:99:ILE:HB	46:AI:123:HIS:HB2	1.99	0.44
47:AJ:17:LEU:HD12	47:AJ:128:TYR:O	2.18	0.44
47:AJ:59:ILE:HG21	47:AJ:65:ILE:HD13	1.99	0.44
50:AN:49:ARG:HA	50:AN:53:TYR:O	2.17	0.44
54:AR:95:TRP:HE1	54:AR:98:ARG:HH21	1.65	0.44
55:AS:143:PHE:O	55:AS:148:LEU:HD11	2.18	0.44
59:AW:20:LEU:HD12	59:AW:29:PHE:O	2.17	0.44
66:Ad:13:THR:HB	66:Ad:72:ARG:NH2	2.33	0.44
71:Ai:80:PHE:CE2	71:Ai:84:LYS:HD2	2.53	0.44
77:Ao:25:VAL:HG12	77:Ao:72:LEU:HD23	2.00	0.44
79:E:19:TYR:O	79:E:23:THR:OG1	2.35	0.44
81:EC:6861:G:H1	81:EC:6870:A:H2	1.61	0.44
1:BA:155:PHE:O	12:BV:60:ARG:NH2	2.51	0.44
2:BB:90:GLU:OE2	2:BB:97:LEU:HB2	2.18	0.44
4:BE:88:ASP:HB2	4:BE:101:LEU:HD12	1.99	0.44
5:BG:7:TYR:H	5:BG:124:LEU:HD23	1.83	0.44
5:BG:51:LYS:HZ2	5:BG:112:VAL:HG12	1.83	0.44
5:BG:64:LYS:N	5:BG:98:ARG:O	2.33	0.44
5:BG:98:ARG:NH2	5:BG:103:GLY:H	2.15	0.44
5:BG:208:TYR:O	5:BG:212:LEU:HG	2.18	0.44
6:BH:71:HIS:HD2	6:BH:131:PHE:CG	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BI:11:ARG:HD2	34:B5:323:A:H4'	2.00	0.44
7:BI:138:ASN:HB3	34:B5:197:A:N1	2.32	0.44
9:BL:20:PHE:CZ	9:BL:22:ASN:HA	2.53	0.44
9:BL:44:THR:HG23	9:BL:60:PHE:HB3	1.99	0.44
10:BN:33:VAL:HG12	10:BN:36:GLN:HE22	1.82	0.44
12:BV:83:TRP:HZ2	12:BV:85:TYR:HD1	1.66	0.44
13:BW:32:LYS:HG3	13:BW:36:LYS:NZ	2.33	0.44
13:BW:90:THR:HB	13:BW:97:ARG:CZ	2.47	0.44
20:BF:42:LEU:HD12	20:BF:69:PHE:O	2.18	0.44
20:BF:70:VAL:HB	23:BQ:46:PHE:HD2	1.83	0.44
20:BF:132:VAL:HG13	20:BF:202:ALA:HB2	2.00	0.44
21:BK:61:TRP:CZ2	30:Bd:23:VAL:HG22	2.53	0.44
23:BQ:82:ARG:HA	23:BQ:85:ILE:HG22	1.99	0.44
24:BR:118:PRO:O	24:BR:119:LEU:HD23	2.18	0.44
31:Bg:167:VAL:N	31:Bg:184:ASN:OD1	2.25	0.44
31:Bg:185:GLN:HG2	31:Bg:187:GLN:HB2	2.00	0.44
34:B5:142:G:H21	34:B5:142:G:P	2.38	0.44
34:B5:152:U:H2'	34:B5:153:G:O4'	2.18	0.44
34:B5:299:A:H2'	34:B5:300:A:H8	1.82	0.44
34:B5:335:U:H2'	34:B5:336:G:C8	2.53	0.44
34:B5:350:U:H4'	34:B5:351:C:H5"	2.00	0.44
34:B5:523:G:N3	34:B5:530:C:N4	2.66	0.44
34:B5:605:A:C6	34:B5:606:A:C6	3.06	0.44
34:B5:730:G:H21	34:B5:731:C:H5"	1.82	0.44
34:B5:1107:G:O2'	34:B5:1108:G:H5'	2.18	0.44
34:B5:1173:C:H2'	34:B5:1174:C:C6	2.53	0.44
34:B5:1297:G:N2	34:B5:1299:G:H3'	2.33	0.44
34:B5:1364:G:H2'	34:B5:1365:C:H6	1.81	0.44
34:B5:1483:A:H61	34:B5:1591:C:H1'	1.83	0.44
34:B5:1644:C:H2'	34:B5:1645:G:H8	1.83	0.44
35:AA:204:MET:HG3	35:AA:209:HIS:HB2	1.99	0.44
37:AC:343:LYS:HD3	38:A1:515:C:H5"	2.00	0.44
38:A1:112:U:OP1	70:Ah:107:LYS:NZ	2.36	0.44
38:A1:354:U:C2	38:A1:365:A:N7	2.85	0.44
38:A1:513:G:C6	38:A1:579:G:C6	3.06	0.44
38:A1:1101:G:H2'	38:A1:1102:A:H8	1.82	0.44
38:A1:1388:U:O2'	67:Ae:99:ASN:O	2.22	0.44
38:A1:1609:C:H5"	60:AX:125:ARG:HH12	1.82	0.44
38:A1:1673:G:C6	38:A1:1775:G:C5	3.05	0.44
38:A1:1704:A:O2'	38:A1:1705:U:H5"	2.18	0.44
38:A1:1754:G:C6	38:A1:1755:C:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2295:A:H2	38:A1:2929:C:H1'	1.82	0.44
38:A1:2431:C:H2'	38:A1:2432:A:C8	2.53	0.44
38:A1:2466:G:H5'	79:E:60:ARG:HH12	1.81	0.44
38:A1:2589:G:H2'	38:A1:2590:A:H8	1.82	0.44
38:A1:2620:G:C4	38:A1:2621:G:C8	3.06	0.44
38:A1:2807:U:O2'	38:A1:2809:C:OP1	2.32	0.44
38:A1:2843:U:P	38:A1:2844:C:H41	2.39	0.44
38:A1:2895:G:O2'	38:A1:2896:A:H5'	2.17	0.44
38:A1:2948:C:H2'	38:A1:2949:U:H6	1.82	0.44
38:A1:3150:A:H2'	38:A1:3151:U:O4'	2.18	0.44
39:A3:55:A:C4	47:AJ:9:MET:HE1	2.53	0.44
39:A3:82:G:O6	39:A3:99:G:C6	2.70	0.44
40:A4:69:U:OP2	72:Aj:88:ALA:HB2	2.17	0.44
40:A4:109:A:H2'	40:A4:110:C:O4'	2.17	0.44
41:AD:183:TRP:CH2	41:AD:188:GLU:HA	2.52	0.44
50:AN:67:ARG:HG2	50:AN:127:TYR:CE1	2.49	0.44
55:AS:109:ASP:O	55:AS:113:ARG:N	2.43	0.44
61:AY:63:LYS:HD3	61:AY:85:VAL:HG23	1.99	0.44
62:AZ:84:ARG:NH1	65:Ac:58:TYR:CZ	2.82	0.44
65:Ac:16:LEU:HD13	65:Ac:98:SER:HA	2.00	0.44
69:Ag:39:ALA:O	69:Ag:56:THR:OG1	2.33	0.44
80:DC:558:PRO:HA	80:DC:559:PRO:HD3	1.91	0.44
1:BA:124:THR:HG22	1:BA:174:TRP:CZ2	2.51	0.44
3:BC:239:PRO:HA	3:BC:242:ILE:HG12	1.99	0.44
4:BE:181:VAL:HG21	4:BE:210:ILE:HD12	1.99	0.44
6:BH:147:ASN:OD1	6:BH:148:LYS:N	2.51	0.44
7:BI:32:GLN:CD	34:B5:1675:C:H1'	2.43	0.44
7:BI:39:GLY:O	7:BI:59:ARG:HB2	2.17	0.44
8:BJ:154:LYS:HE3	8:BJ:154:LYS:HB3	1.87	0.44
11:BO:31:THR:HG22	11:BO:38:THR:HA	1.98	0.44
14:BX:144:ARG:HG3	80:DC:464:LEU:HD13	1.99	0.44
15:BY:10:ARG:HA	34:B5:778:G:O6	2.18	0.44
19:BD:64:ARG:HH21	19:BD:67:ASN:ND2	2.14	0.44
20:BF:106:LYS:HG3	20:BF:106:LYS:O	2.17	0.44
25:BS:70:VAL:O	25:BS:73:MET:HB2	2.18	0.44
31:Bg:182:ASN:HB2	31:Bg:189:GLU:HB3	2.00	0.44
31:Bg:195:HIS:CG	31:Bg:199:ILE:HG12	2.52	0.44
34:B5:93:A:C8	34:B5:399:A:C4	3.06	0.44
34:B5:124:A:H8	34:B5:124:A:OP2	2.00	0.44
34:B5:178:U:O2'	34:B5:179:A:H5"	2.18	0.44
34:B5:524:U:H1'	34:B5:527:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:599:A:H2'	34:B5:600:U:C6	2.53	0.44
34:B5:831:U:H2'	34:B5:832:U:H4'	1.99	0.44
34:B5:1066:C:C2	34:B5:1067:C:C5	3.06	0.44
34:B5:1562:G:C6	34:B5:1563:C:C4	3.05	0.44
34:B5:1654:G:H22	34:B5:1745:G:H2'	1.81	0.44
36:AB:44:THR:HG22	36:AB:184:ASN:HB3	2.00	0.44
37:AC:26:PHE:HD2	37:AC:130:ALA:HB2	1.81	0.44
37:AC:54:GLU:HG2	37:AC:55:LYS:HG3	1.99	0.44
38:A1:34:A:P	50:AN:86:ASN:HD22	2.41	0.44
38:A1:71:A:H4'	38:A1:72:C:N1	2.33	0.44
38:A1:232:G:H2'	38:A1:233:C:C6	2.52	0.44
38:A1:276:U:O2	50:AN:93:LYS:NZ	2.48	0.44
38:A1:531:G:N2	38:A1:562:C:C2	2.85	0.44
38:A1:687:U:H3	38:A1:693:A:H61	1.64	0.44
38:A1:1370:G:H2'	38:A1:1371:G:C8	2.53	0.44
38:A1:1437:C:H2'	38:A1:1438:U:C6	2.51	0.44
38:A1:1500:G:C6	38:A1:1501:U:C4	3.05	0.44
38:A1:1557:A:C5	38:A1:1559:A:C6	3.05	0.44
38:A1:1915:A:H2'	38:A1:1916:U:C6	2.53	0.44
38:A1:2153:U:H2'	38:A1:2154:U:H6	1.82	0.44
38:A1:2254:U:H2'	38:A1:2261:G:N2	2.33	0.44
38:A1:2303:A:C4	38:A1:2304:C:C5	3.06	0.44
38:A1:2365:C:H2'	38:A1:2366:C:H6	1.83	0.44
38:A1:2435:G:C5	38:A1:2593:A:C5	3.06	0.44
38:A1:2838:A:C6	38:A1:2851:A:C8	3.06	0.44
38:A1:2968:G:H2'	38:A1:2969:A:C8	2.52	0.44
38:A1:3159:C:H2'	38:A1:3160:U:C6	2.52	0.44
38:A1:3190:C:OP1	51:AO:172[A]:ARG:NH1	2.50	0.44
38:A1:3198:U:H1'	45:AH:21:LYS:HD3	2.00	0.44
38:A1:3348:G:N1	38:A1:3357:U:N3	2.35	0.44
39:A3:36:C:H2'	39:A3:37:G:C8	2.53	0.44
40:A4:56:G:H2'	40:A4:57:C:C6	2.53	0.44
40:A4:129:C:H2'	40:A4:130:C:H6	1.82	0.44
44:AG:195:SER:C	44:AG:197:VAL:H	2.26	0.44
45:AH:62:ARG:HA	45:AH:65:VAL:HG22	2.00	0.44
48:AL:29:ALA:HB2	50:AN:201:ARG:HH12	1.83	0.44
57:AU:81:LYS:HE3	57:AU:90:ARG:HH22	1.82	0.44
58:AV:40:LYS:HE3	58:AV:59:MET:HE3	2.00	0.44
58:AV:128:ARG:HH11	58:AV:128:ARG:HA	1.82	0.44
61:AY:51:ARG:HA	61:AY:51:ARG:HD2	1.86	0.44
77:Ao:68:VAL:HG23	77:Ao:85:LEU:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:E:39:LYS:HE2	79:E:202:GLY:HA3	2.00	0.44
79:E:162:VAL:HG12	79:E:164:CYS:H	1.83	0.44
80:DC:358:GLU:OE2	80:DC:476:HIS:HB3	2.17	0.44
80:DC:675:PRO:HG2	80:DC:717:PHE:CD2	2.53	0.44
80:DC:736:PRO:HA	80:DC:791:GLN:CD	2.43	0.44
3:BC:206:THR:OG1	34:B5:14:C:OP2	2.31	0.43
5:BG:89:ASP:OD1	5:BG:89:ASP:N	2.49	0.43
5:BG:132:ARG:HG3	34:B5:165:G:H21	1.83	0.43
7:BI:193:LEU:HA	7:BI:197:THR:OG1	2.18	0.43
8:BJ:3:ARG:O	34:B5:380:U:H1'	2.18	0.43
8:BJ:175:ARG:HD3	34:B5:538:A:OP1	2.18	0.43
15:BY:60:PHE:H	15:BY:71:GLY:CA	2.30	0.43
18:Be:23:LYS:NZ	34:B5:586:G:OP1	2.51	0.43
20:BF:148:ARG:HH11	20:BF:148:ARG:C	2.26	0.43
25:BS:122:HIS:HE1	25:BS:126:ARG:NH2	2.16	0.43
26:BT:97:SER:HA	34:B5:1504:G:H5"	2.00	0.43
28:BZ:55:PRO:HB3	28:BZ:88:ILE:HG12	2.00	0.43
31:Bg:26:SER:HB2	31:Bg:29:GLN:O	2.17	0.43
32:Bf:106:TYR:C	32:Bf:107:LYS:HD3	2.43	0.43
34:B5:15:U:C4	34:B5:16:G:C5	3.06	0.43
34:B5:41:A:H3'	34:B5:438:A:H62	1.83	0.43
34:B5:212:U:C2	34:B5:254:A:C2	3.06	0.43
34:B5:297:U:H2'	34:B5:298:C:H6	1.83	0.43
34:B5:1165:G:H2'	34:B5:1166:A:H8	1.81	0.43
34:B5:1329:A:H2'	34:B5:1330:G:O4'	2.18	0.43
34:B5:1356:U:N3	34:B5:1357:A:C8	2.86	0.43
34:B5:1504:G:H2'	34:B5:1505:A:C8	2.53	0.43
34:B5:1679:G:N2	34:B5:1722:A:N6	2.39	0.43
36:AB:284:ARG:O	36:AB:322:ILE:HD12	2.18	0.43
37:AC:31:ARG:HB2	37:AC:34:ILE:HB	1.99	0.43
37:AC:84:ARG:HH12	38:A1:365:A:H4'	1.81	0.43
37:AC:203:ARG:HE	37:AC:246:ARG:NH1	2.16	0.43
38:A1:31:C:C4'	50:AN:96:ARG:HH12	2.20	0.43
38:A1:196:G:C2	38:A1:199:A:C8	3.06	0.43
38:A1:358:G:O2'	38:A1:360:G:O6	2.31	0.43
38:A1:387:A:H2'	38:A1:388:G:C8	2.53	0.43
38:A1:405:U:H2'	38:A1:406:G:O4'	2.18	0.43
38:A1:626:U:H2'	38:A1:627:U:O4'	2.18	0.43
38:A1:630:A:H2'	38:A1:631:U:C6	2.52	0.43
38:A1:705:A:HO2'	38:A1:714:G:H22	1.61	0.43
38:A1:793:C:H2'	38:A1:794:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:886:C:H2'	38:A1:887:G:C8	2.52	0.43
38:A1:949:C:H2'	38:A1:950:G:O4'	2.17	0.43
38:A1:970:A:C4	38:A1:1112:A:N6	2.85	0.43
38:A1:1068:C:H2'	38:A1:1069:C:H6	1.83	0.43
38:A1:1710:C:H2'	38:A1:1711:C:C6	2.53	0.43
38:A1:1817:G:C8	38:A1:1818:U:C5	3.06	0.43
38:A1:2295:A:H62	58:AV:37:ILE:HD11	1.82	0.43
38:A1:2345:A:H2'	38:A1:2346:C:C6	2.53	0.43
38:A1:2630:C:OP2	56:AT:5:HIS:N	2.46	0.43
38:A1:2897:A:OP1	75:Am:124:LYS:HG3	2.18	0.43
38:A1:3036:G:C6	38:A1:3037:U:C4	3.06	0.43
38:A1:3169:U:C2	38:A1:3170:A:C8	3.05	0.43
39:A3:44:C:OP1	47:AJ:137:ARG:NH2	2.47	0.43
39:A3:46:A:H2'	39:A3:47:C:H6	1.83	0.43
40:A4:11:C:H2'	40:A4:12:A:C8	2.53	0.43
40:A4:15:G:C5	40:A4:16:G:N1	2.85	0.43
40:A4:117:C:H2'	40:A4:118:C:H6	1.82	0.43
40:A4:149:A:N3	44:AG:55:TYR:OH	2.47	0.43
41:AD:182:GLY:HA2	41:AD:194:LEU:HD23	2.00	0.43
41:AD:295:GLY:O	41:AD:297:GLN:NE2	2.51	0.43
45:AH:22:SER:O	45:AH:23:ARG:HD3	2.18	0.43
47:AJ:130:VAL:C	47:AJ:131:MET:HE2	2.43	0.43
51:AO:20[A]:ALA:O	51:AO:24[A]:ALA:N	2.42	0.43
52:AP:105:LYS:HE2	52:AP:105:LYS:HB3	1.72	0.43
57:AU:18:ASP:HB3	57:AU:104:ARG:HA	2.01	0.43
66:Ad:81:GLU:HG2	66:Ad:82:GLU:HG3	1.99	0.43
70:Ah:114:ARG:HE	70:Ah:115:LYS:N	2.00	0.43
71:Ai:85:ALA:O	71:Ai:88:GLU:HG3	2.18	0.43
79:E:73:ASP:OD2	79:E:140:HIS:ND1	2.48	0.43
80:DC:171:LYS:NZ	80:DC:279:ASP:HA	2.32	0.43
80:DC:780:PHE:CD2	80:DC:784:LEU:HD22	2.53	0.43
1:BA:29:VAL:HG23	1:BA:33:GLN:HB2	1.99	0.43
2:BB:170:GLU:HA	2:BB:173:THR:HG22	2.00	0.43
3:BC:176:SER:CB	8:BJ:57:ARG:HH22	2.30	0.43
4:BE:130:GLN:HB3	34:B5:251:A:O2'	2.18	0.43
6:BH:44:LYS:HD2	6:BH:63:PRO:HG3	1.99	0.43
6:BH:67:LEU:HB3	6:BH:71:HIS:CE1	2.53	0.43
7:BI:136:SER:HB3	7:BI:139:ALA:HB3	1.99	0.43
9:BL:33:ARG:HH21	9:BL:61:THR:HB	1.82	0.43
10:BN:48:SER:O	34:B5:960:U:O2'	2.27	0.43
12:BV:4:ASP:OD1	12:BV:5:LYS:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:BW:46:TYR:O	13:BW:47:ILE:HD13	2.19	0.43
15:BY:7:ILE:HG21	15:BY:43:LYS:NZ	2.34	0.43
18:Be:30:PRO:HB3	18:Be:34:ALA:HB3	2.00	0.43
25:BS:65:GLU:HA	25:BS:68:ARG:HB3	2.00	0.43
31:Bg:124:SER:HB3	31:Bg:134:TRP:NE1	2.33	0.43
31:Bg:292:LEU:HD13	31:Bg:301:LEU:HD21	2.00	0.43
33:BM:33:ARG:CZ	33:BM:33:ARG:HA	2.48	0.43
34:B5:34:G:H2'	34:B5:35:U:O4'	2.18	0.43
34:B5:95:G:C4	34:B5:96:G:C8	3.06	0.43
34:B5:127:G:O2'	34:B5:128:U:H5'	2.18	0.43
34:B5:145:A:O2'	34:B5:146:U:H5"	2.18	0.43
34:B5:168:A:H2'	34:B5:169:A:C8	2.53	0.43
34:B5:188:A:N6	34:B5:198:A:H1'	2.33	0.43
34:B5:220:A:C2	34:B5:840:U:C2	3.06	0.43
34:B5:315:A:H4'	34:B5:316:A:H4'	2.00	0.43
34:B5:322:G:C6	34:B5:337:G:C6	3.05	0.43
34:B5:325:G:N1	34:B5:344:A:C6	2.85	0.43
34:B5:561:G:O6	34:B5:585:A:N6	2.51	0.43
34:B5:1032:G:O6	34:B5:1103:U:C2	2.72	0.43
34:B5:1045:C:C2	34:B5:1074:G:N1	2.86	0.43
34:B5:1054:U:H2'	34:B5:1055:U:O4'	2.19	0.43
34:B5:1174:C:H42	34:B5:1465:C:H42	1.66	0.43
34:B5:1184:A:O2'	34:B5:1209:C:O2'	2.30	0.43
34:B5:1322:A:H2'	34:B5:1323:C:C6	2.53	0.43
34:B5:1465:C:C2	34:B5:1466:G:C8	3.05	0.43
35:AA:95:SER:HB3	38:A1:2551:U:N3	2.33	0.43
35:AA:205:ASN:ND2	38:A1:916:G:O4'	2.50	0.43
35:AA:216:HIS:O	35:AA:218:HIS:N	2.52	0.43
36:AB:283:TYR:CE2	36:AB:325:LYS:HB2	2.53	0.43
37:AC:46:LYS:HA	37:AC:46:LYS:HD2	1.80	0.43
37:AC:285:ASP:HB2	37:AC:288:ARG:HB2	2.00	0.43
38:A1:85:A:C8	38:A1:87:U:C2	3.06	0.43
38:A1:213:A:O5'	61:AY:2:ALA:N	2.51	0.43
38:A1:322:U:OP1	50:AN:156:HIS:NE2	2.48	0.43
38:A1:727:G:H22	53:AQ:139:ILE:HB	1.83	0.43
38:A1:794:U:O2'	38:A1:795:G:H5'	2.18	0.43
38:A1:850:U:H2'	38:A1:851:C:C6	2.53	0.43
38:A1:1108:U:H2'	38:A1:1109:U:H6	1.83	0.43
38:A1:1165:A:H2'	38:A1:1166:G:C8	2.53	0.43
38:A1:1169:A:H3'	38:A1:1170:A:H8	1.83	0.43
38:A1:1310:G:C2	38:A1:1311:G:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1623:G:C6	38:A1:1624:G:C5	3.07	0.43
38:A1:1639:C:O2'	38:A1:1738:C:H5'	2.18	0.43
38:A1:1684:U:H2'	38:A1:1685:C:H6	1.84	0.43
38:A1:1712:G:O2'	38:A1:1713:G:O4'	2.22	0.43
38:A1:1721:U:O2'	38:A1:1723:A:N7	2.35	0.43
38:A1:1742:U:C2	38:A1:1743:G:C8	3.06	0.43
38:A1:2217:U:H2'	38:A1:2218:G:H8	1.83	0.43
38:A1:2239:G:H2'	38:A1:2240:G:C8	2.53	0.43
38:A1:2399:A:H2'	38:A1:2400:G:H8	1.82	0.43
38:A1:2642:A:H2'	38:A1:2643:A:C8	2.53	0.43
38:A1:2877:G:O2'	38:A1:2923:PSU:O2'	2.18	0.43
38:A1:2964:G:C2	38:A1:2968:G:C6	3.07	0.43
38:A1:3276:G:H22	52:AP:172:GLN:HE21	1.66	0.43
39:A3:76:A:H61	39:A3:102:A:H3'	1.82	0.43
40:A4:118:C:H2'	40:A4:119:C:H6	1.83	0.43
41:AD:86:TYR:OH	41:AD:250:ASP:O	2.22	0.43
46:AI:12:GLN:OE1	46:AI:59:GLN:N	2.51	0.43
47:AJ:45:PRO:HB3	47:AJ:69:VAL:HB	2.00	0.43
49:AM:21:VAL:HG23	49:AM:65:LEU:HD23	2.00	0.43
57:AU:12:ALA:HB2	57:AU:68:THR:HG22	2.00	0.43
59:AW:20:LEU:HD13	59:AW:30:ARG:HE	1.82	0.43
61:AY:125:LYS:H	61:AY:125:LYS:HG2	1.62	0.43
62:AZ:24:VAL:HG22	62:AZ:44:ALA:O	2.17	0.43
63:Aa:71:PRO:HB2	63:Aa:109:TYR:HA	2.00	0.43
67:Ae:8:LYS:H	67:Ae:8:LYS:HE2	1.82	0.43
71:Ai:43:LEU:HD12	71:Ai:44:VAL:N	2.33	0.43
76:An:2:ARG:HG3	76:An:5:TRP:CE3	2.52	0.43
80:DC:163:ALA:O	80:DC:167:LEU:N	2.43	0.43
80:DC:282:PHE:CD1	80:DC:285:PHE:HD2	2.36	0.43
80:DC:416:PRO:HD2	80:DC:464:LEU:HD23	1.99	0.43
80:DC:708:THR:HA	80:DC:711:ARG:NH1	2.32	0.43
80:DC:724:ILE:O	80:DC:803:THR:OG1	2.27	0.43
1:BA:15:GLN:HE22	24:BR:101:ASN:N	2.15	0.43
2:BB:146:GLN:O	2:BB:149:GLN:HB3	2.18	0.43
4:BE:65:LEU:HD13	4:BE:70:VAL:HB	2.00	0.43
7:BI:5:ARG:HG3	7:BI:5:ARG:O	2.17	0.43
8:BJ:36:LEU:HB3	8:BJ:41:GLU:OE2	2.17	0.43
8:BJ:151:ASP:OD1	8:BJ:152:SER:N	2.50	0.43
9:BL:35:TYR:HB3	9:BL:61:THR:HG22	2.00	0.43
11:BO:92:LYS:HG3	16:Ba:69:ASN:HD21	1.84	0.43
15:BY:29:HIS:HA	15:BY:32:ARG:NH1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:Ba:82:ARG:HH11	16:Ba:85:ARG:HH12	1.65	0.43
19:BD:102:ALA:HB2	19:BD:186:VAL:HG21	2.01	0.43
25:BS:60:GLU:N	25:BS:60:GLU:OE1	2.51	0.43
28:BZ:44:GLN:NE2	28:BZ:48:ASP:HB3	2.33	0.43
30:Bd:42:CYS:HB3	34:B5:1433:G:H21	1.83	0.43
31:Bg:93:ASP:O	31:Bg:97:GLY:N	2.50	0.43
34:B5:163:G:C2	34:B5:164:A:N7	2.86	0.43
34:B5:485:A:N6	34:B5:504:U:H1'	2.33	0.43
34:B5:751:G:C2	34:B5:799:A:C2	3.06	0.43
34:B5:1105:C:H2'	34:B5:1106:U:C6	2.52	0.43
35:AA:150:LEU:HD21	38:A1:2157:G:C5	2.52	0.43
35:AA:200:ARG:HD2	38:A1:2186:U:OP2	2.18	0.43
37:AC:112:LYS:O	38:A1:790:U:H4'	2.18	0.43
37:AC:338:LYS:N	37:AC:338:LYS:HD2	2.34	0.43
38:A1:216:G:N1	38:A1:225:C:N3	2.66	0.43
38:A1:236:G:N1	38:A1:237:G:C6	2.87	0.43
38:A1:927:C:C2	38:A1:928:C:C5	3.06	0.43
38:A1:1073:U:H2'	38:A1:1074:U:C6	2.53	0.43
38:A1:1433:A:OP1	67:Ae:19:ARG:NH2	2.49	0.43
38:A1:1612:A:H3'	73:Ak:46:ARG:HH22	1.84	0.43
38:A1:1744:G:H2'	38:A1:1745:C:C6	2.52	0.43
38:A1:2612:U:C4	38:A1:2613:U:C4	3.06	0.43
38:A1:3165:A:H3'	38:A1:3166:C:H6	1.83	0.43
38:A1:3375:A:H8	66:Ad:18:LYS:HZ2	1.67	0.43
39:A3:15:C:H2'	39:A3:16:U:C6	2.53	0.43
39:A3:112:G:C6	39:A3:113:C:C4	3.06	0.43
40:A4:72:A:H2'	40:A4:72:A:N3	2.33	0.43
40:A4:107:G:C5	40:A4:116:G:C6	3.06	0.43
45:AH:47:LYS:HD3	45:AH:50:ASN:CG	2.43	0.43
46:AI:180:GLU:HA	46:AI:183:LYS:HZ3	1.83	0.43
46:AI:210:TYR:HA	46:AI:217:PHE:HE2	1.83	0.43
53:AQ:57:ILE:HG13	53:AQ:58:ASN:N	2.33	0.43
53:AQ:170:ARG:HH12	53:AQ:171:LYS:HD3	1.84	0.43
54:AR:10:LEU:HD12	54:AR:38:ARG:HG3	1.99	0.43
59:AW:27:LYS:HB2	59:AW:27:LYS:HE3	1.81	0.43
67:Ae:45:ARG:CD	67:Ae:52:GLN:HE22	2.31	0.43
75:Am:83:LYS:O	75:Am:87:SER:N	2.46	0.43
80:DC:144:ARG:CZ	80:DC:192:TYR:HA	2.47	0.43
80:DC:262:THR:HA	80:DC:269:LEU:H	1.84	0.43
3:BC:69:ILE:HG13	3:BC:133:LYS:O	2.19	0.43
3:BC:159:THR:HG23	3:BC:167:VAL:C	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BI:23:LYS:HZ3	34:B5:400:A:H2'	1.81	0.43
9:BL:130:PRO:O	34:B5:335:U:O2'	2.34	0.43
10:BN:73:ARG:HB3	34:B5:859:A:C6	2.53	0.43
13:BW:90:THR:HB	13:BW:97:ARG:NH2	2.34	0.43
14:BX:106:GLY:O	34:B5:599:A:H4'	2.18	0.43
18:Be:55:ARG:HD2	18:Be:56:MET:H	1.83	0.43
23:BQ:75:VAL:HA	23:BQ:78:VAL:HG12	1.99	0.43
27:BU:61:LYS:HB2	27:BU:86:ILE:HB	2.00	0.43
28:BZ:96:SER:C	28:BZ:97:LYS:HD2	2.43	0.43
29:Bc:31:GLU:HA	29:Bc:39:THR:HA	1.99	0.43
31:Bg:40:LYS:HD2	31:Bg:66:HIS:HA	2.01	0.43
31:Bg:69:GLN:HB2	31:Bg:85:TRP:CD1	2.54	0.43
33:BM:99:GLU:OE1	33:BM:99:GLU:N	2.48	0.43
34:B5:40:A:H61	34:B5:467:G:H1'	1.84	0.43
34:B5:138:A:H8	34:B5:141:U:H5"	1.83	0.43
34:B5:235:G:H3'	34:B5:236:A:C5'	2.48	0.43
34:B5:250:C:H2'	34:B5:251:A:C8	2.52	0.43
34:B5:454:U:O2'	34:B5:455:C:O4'	2.36	0.43
34:B5:480:G:N1	34:B5:508:U:C2	2.76	0.43
34:B5:890:C:H2'	34:B5:891:A:C8	2.53	0.43
34:B5:1477:G:C2	34:B5:1478:G:C5	3.07	0.43
34:B5:1483:A:H2	34:B5:1607:G:H1'	1.83	0.43
35:AA:177:LYS:HD3	78:Ap:69:TYR:CE2	2.53	0.43
37:AC:339:LEU:HA	37:AC:342:LYS:HG2	1.99	0.43
38:A1:290:G:H2'	38:A1:291:C:C6	2.54	0.43
38:A1:716:A:N6	63:Aa:117:ARG:HG3	2.34	0.43
38:A1:826:G:H2'	38:A1:827:A:H8	1.84	0.43
38:A1:891:G:C6	38:A1:892:U:C4	3.06	0.43
38:A1:912:G:C2	38:A1:914:A:C2	3.06	0.43
38:A1:1184:A:H2'	38:A1:1185:C:C6	2.54	0.43
38:A1:1295:G:H2'	38:A1:1296:C:H6	1.83	0.43
38:A1:1335:C:H2'	38:A1:1336:U:C6	2.54	0.43
38:A1:1383:G:H2'	38:A1:1384:U:C6	2.53	0.43
38:A1:2354:C:C4	38:A1:2355:G:C5	3.07	0.43
38:A1:2838:A:H4'	46:AI:74:LYS:HE3	2.01	0.43
38:A1:3163:A:H2'	38:A1:3164:C:H6	1.82	0.43
38:A1:3225:C:H2'	38:A1:3226:A:H8	1.81	0.43
38:A1:3226:A:N1	38:A1:3260:G:C6	2.87	0.43
38:A1:3279:A:OP2	38:A1:3279:A:H8	2.01	0.43
38:A1:3375:A:C5	38:A1:3376:A:C6	3.07	0.43
39:A3:61:G:H2'	39:A3:62:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:AD:50:ARG:NH1	41:AD:147:ASP:OD2	2.49	0.43
42:AE:143:LYS:HD3	42:AE:143:LYS:HA	1.84	0.43
43:AF:228:SER:HA	43:AF:232:ARG:HH21	1.84	0.43
45:AH:126:VAL:HG21	45:AH:164:ILE:HG21	1.99	0.43
47:AJ:109:HIS:HA	47:AJ:112:LEU:HB2	2.00	0.43
50:AN:144:ARG:HD2	70:Ah:96:GLU:OE2	2.18	0.43
55:AS:13:ARG:O	55:AS:22:PRO:HG2	2.18	0.43
65:Ac:14:LEU:O	65:Ac:17:VAL:HG12	2.18	0.43
68:Af:103:TYR:HA	68:Af:104:PRO:C	2.43	0.43
80:DC:159:LYS:HG2	83:DC:901:GDP:C4	2.54	0.43
80:DC:555:LYS:HB2	80:DC:555:LYS:HE2	1.84	0.43
2:BB:87:ARG:HB3	2:BB:101:HIS:CG	2.53	0.43
2:BB:187:LYS:HB2	2:BB:192:VAL:CG2	2.48	0.43
3:BC:43:ARG:HG2	3:BC:248:SER:HA	2.01	0.43
3:BC:66:PHE:HB3	3:BC:134:LEU:HD21	1.99	0.43
7:BI:142:LYS:HB3	7:BI:146:ARG:CZ	2.48	0.43
9:BL:39:GLY:HA3	34:B5:246:G:N3	2.33	0.43
10:BN:85:PRO:HG2	10:BN:129:TYR:CE2	2.54	0.43
12:BV:71:ARG:NE	17:Bb:4:VAL:HG21	2.34	0.43
25:BS:89:GLN:N	34:B5:1547:A:O2'	2.44	0.43
26:BT:65:ILE:HG21	26:BT:114:VAL:HG12	2.01	0.43
27:BU:50:LEU:HD11	27:BU:94:GLU:O	2.18	0.43
30:Bd:21:CYS:HB3	30:Bd:25:SER:N	2.33	0.43
33:BM:46:ARG:NH2	34:B5:1254:U:OP2	2.51	0.43
34:B5:85:A:H2'	34:B5:86:A:O4'	2.19	0.43
34:B5:285:G:H2'	34:B5:286:C:C6	2.53	0.43
34:B5:344:A:C6	34:B5:345:U:C4	3.06	0.43
34:B5:784:C:H2'	34:B5:785:U:O4'	2.18	0.43
34:B5:898:A:H1'	34:B5:899:G:H1'	2.00	0.43
36:AB:283:TYR:CE1	36:AB:354:VAL:HG11	2.53	0.43
37:AC:48:GLN:N	38:A1:338:A:OP1	2.35	0.43
37:AC:319:LYS:HD2	37:AC:319:LYS:HA	1.86	0.43
38:A1:82:C:C4	38:A1:83:U:C4	3.07	0.43
38:A1:241:G:H5"	48:AL:45:LYS:O	2.18	0.43
38:A1:243:G:C2	38:A1:244:G:H1'	2.54	0.43
38:A1:592:A:O2'	42:AE:20:LYS:HE2	2.19	0.43
38:A1:734:C:H3'	38:A1:735:A:C8	2.52	0.43
38:A1:760:G:N2	38:A1:770:G:C4	2.87	0.43
38:A1:877:C:H2'	38:A1:878:G:O4'	2.19	0.43
38:A1:902:G:P	72:Aj:13:ASN:HD21	2.42	0.43
38:A1:908:G:N2	38:A1:2415:C:OP1	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:913:A:H5"	38:A1:914:A:N7	2.33	0.43
38:A1:1135:A:C6	38:A1:1136:A:N6	2.86	0.43
38:A1:1149:G:H21	38:A1:1199:C:H41	1.66	0.43
38:A1:1238:C:C2	38:A1:1250:G:C2	3.07	0.43
38:A1:1297:C:H2'	38:A1:1298:C:C6	2.54	0.43
38:A1:1449:A:H3'	38:A1:1450:G:H8	1.83	0.43
38:A1:2263:C:H2'	38:A1:2264:PSU:H1'	1.99	0.43
38:A1:2711:C:H2'	38:A1:2712:U:C6	2.52	0.43
38:A1:2753:G:H2'	38:A1:2754:G:H8	1.82	0.43
38:A1:2775:U:H2'	38:A1:2776:C:C6	2.53	0.43
38:A1:2813:A:H2'	38:A1:2814:G:O4'	2.18	0.43
38:A1:3010:U:HO2'	38:A1:3011:A:H2'	1.83	0.43
38:A1:3028:G:H8	38:A1:3028:G:OP2	2.02	0.43
40:A4:4:C:H2'	40:A4:5:U:C5	2.53	0.43
40:A4:4:C:H5"	52:AP:62:ARG:HD3	2.01	0.43
40:A4:97:A:C6	40:A4:98:U:C4	3.07	0.43
41:AD:75:LEU:HD22	41:AD:112:LYS:NZ	2.30	0.43
44:AG:106:LYS:HE3	44:AG:106:LYS:HB3	1.70	0.43
46:AI:90:ARG:HG3	46:AI:134:ILE:HG22	2.01	0.43
46:AI:200:LEU:HB2	46:AI:213:PHE:CG	2.53	0.43
48:AL:64:LYS:HD2	63:Aa:69:TRP:CG	2.54	0.43
50:AN:17:ASP:OD1	50:AN:18:VAL:HG13	2.19	0.43
60:AX:75:LYS:HG2	60:AX:81:ILE:HD11	1.99	0.43
61:AY:21:THR:O	61:AY:21:THR:HG22	2.19	0.43
67:Ae:111:ARG:O	67:Ae:111:ARG:HD3	2.17	0.43
76:An:10:THR:O	76:An:14:LYS:N	2.40	0.43
77:Ao:63:LYS:HD3	77:Ao:63:LYS:HA	1.80	0.43
79:E:38:LEU:HD13	79:E:41:TYR:HB3	1.99	0.43
81:EC:6875:C:C4	81:EC:6876:A:C8	3.07	0.43
3:BC:168:ARG:NH1	34:B5:1099:U:O4	2.52	0.43
4:BE:145:ARG:HD2	4:BE:145:ARG:HA	1.90	0.43
6:BH:150:GLN:NE2	6:BH:151:LYS:O	2.52	0.43
7:BI:85:PRO:HA	9:BL:11:ARG:NE	2.34	0.43
10:BN:26:PHE:CZ	10:BN:28:LEU:HB2	2.54	0.43
10:BN:105:ASN:ND2	34:B5:879:G:O2'	2.50	0.43
12:BV:2:GLU:OE2	12:BV:8:LEU:N	2.51	0.43
15:BY:10:ARG:NH1	34:B5:780:A:N1	2.64	0.43
15:BY:19:ALA:HB1	15:BY:77:ASN:ND2	2.33	0.43
21:BK:29:GLN:OE1	21:BK:39:ASN:HB2	2.17	0.43
31:Bg:81:LEU:HD12	31:Bg:115:ILE:HB	2.01	0.43
32:Bf:147:VAL:HG23	34:B5:1235:C:H1'	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BM:97:LEU:HD11	33:BM:119:SER:O	2.19	0.43
34:B5:164:A:H2'	34:B5:165:G:C8	2.54	0.43
34:B5:339:C:H2'	34:B5:340:U:H6	1.84	0.43
34:B5:406:U:H2'	34:B5:407:A:H8	1.84	0.43
34:B5:461:G:H2'	34:B5:462:G:H8	1.83	0.43
34:B5:737:A:HO2'	34:B5:738:G:H8	1.64	0.43
34:B5:868:G:C2	34:B5:961:U:C2	3.07	0.43
34:B5:941:A:O2'	34:B5:977:A:O4'	2.29	0.43
34:B5:1047:G:H2'	34:B5:1048:G:H8	1.84	0.43
34:B5:1105:C:H2'	34:B5:1106:U:H6	1.83	0.43
34:B5:1180:C:C4	34:B5:1181:PSU:C2	3.07	0.43
34:B5:1216:C:O3'	34:B5:1217:A:H3'	2.18	0.43
35:AA:6:ARG:NH2	38:A1:2184:U:OP1	2.52	0.43
35:AA:83:HIS:H	35:AA:86:GLN:HE21	1.67	0.43
35:AA:199:THR:HA	38:A1:2147:A:H5"	2.01	0.43
36:AB:89:VAL:HA	36:AB:160:VAL:HA	2.00	0.43
36:AB:257:PRO:HG3	38:A1:1305:U:C2	2.54	0.43
37:AC:294:GLU:HG3	53:AQ:129:VAL:O	2.19	0.43
38:A1:5:G:C6	40:A4:155:A:C6	3.06	0.43
38:A1:389:A:H2'	38:A1:390:G:O4'	2.19	0.43
38:A1:822:G:H2'	38:A1:823:C:C6	2.53	0.43
38:A1:909:G:O5'	50:AN:77:LYS:NZ	2.51	0.43
38:A1:1121:U:C4	38:A1:1122:U:C4	3.06	0.43
38:A1:1127:G:C4	38:A1:1129:A:OP2	2.72	0.43
38:A1:1334:U:C2	38:A1:1335:C:C5	3.07	0.43
38:A1:1522:U:C4	60:AX:116:PRO:HG3	2.53	0.43
38:A1:1593:A:OP1	69:Ag:60:ARG:NH2	2.51	0.43
38:A1:1805:C:C2	38:A1:1806:A:C8	3.07	0.43
38:A1:1907:C:C2	38:A1:1908:A:C8	3.07	0.43
38:A1:1949:G:O6	38:A1:2097:U:C2	2.71	0.43
38:A1:2127:U:H2'	38:A1:2128:C:H6	1.84	0.43
38:A1:2373:A:O2'	38:A1:2823:G:N2	2.47	0.43
38:A1:2386:A:C2	38:A1:2387:A:H1'	2.54	0.43
38:A1:2561:A:C4	44:AG:32:LYS:HD2	2.54	0.43
38:A1:2714:G:H4'	38:A1:2715:A:H5"	2.01	0.43
38:A1:2824:G:H2'	38:A1:2825:C:C6	2.53	0.43
38:A1:3020:U:H2'	38:A1:3033:A:N6	2.30	0.43
38:A1:3329:U:H2'	38:A1:3330:A:C8	2.53	0.43
38:A1:3372:A:H2'	38:A1:3373:U:C6	2.54	0.43
38:A1:3373:U:H2'	38:A1:3374:U:O4'	2.18	0.43
38:A1:3376:A:O2'	66:Ad:18:LYS:O	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3378:C:H2'	38:A1:3379:C:H6	1.83	0.43
40:A4:66:A:H2'	40:A4:67:U:C6	2.53	0.43
41:AD:49:TYR:CE1	41:AD:66:SER:HB2	2.53	0.43
42:AE:170:LYS:HD2	42:AE:172:HIS:CE1	2.52	0.43
43:AF:141:TYR:CZ	43:AF:145:ARG:HD2	2.54	0.43
43:AF:207:LEU:HB3	43:AF:243:MET:HG2	1.99	0.43
44:AG:33:ASN:CG	44:AG:38:GLN:HG2	2.43	0.43
45:AH:92:TYR:OH	45:AH:101:VAL:HG21	2.19	0.43
46:AI:49:CYS:O	46:AI:168:SER:OG	2.30	0.43
46:AI:52:LEU:HD13	46:AI:165:ILE:HG12	2.00	0.43
49:AM:32:LEU:HD11	49:AM:94:TRP:CE2	2.54	0.43
50:AN:23:GLN:O	50:AN:27:VAL:HG13	2.19	0.43
51:AO:23[A]:VAL:O	51:AO:27[A]:LEU:HD23	2.18	0.43
53:AQ:22:ASP:O	53:AQ:27:LYS:NZ	2.52	0.43
54:AR:99:LEU:HD21	54:AR:103:ARG:CZ	2.48	0.43
55:AS:77:VAL:HG12	55:AS:126:VAL:HG12	2.00	0.43
60:AX:81:ILE:HG22	60:AX:125:ARG:HA	2.01	0.43
62:AZ:22:LYS:HD3	62:AZ:129:TRP:CZ3	2.53	0.43
63:Aa:47:LYS:HD2	63:Aa:48:TYR:CD1	2.53	0.43
67:Ae:64:LYS:O	67:Ae:72:LYS:NZ	2.51	0.43
75:Am:88:LYS:NZ	75:Am:89:TYR:OH	2.46	0.43
80:DC:381:TYR:CG	80:DC:478:MET:HG3	2.54	0.43
80:DC:587:TYR:HB2	80:DC:690:ASP:H	1.84	0.43
2:BB:29:TRP:NE1	2:BB:47:LEU:HD13	2.34	0.43
6:BH:111:LYS:HG3	34:B5:810:G:C6	2.54	0.43
22:BP:92:SER:H	22:BP:107:ILE:HB	1.82	0.43
23:BQ:52:LEU:HA	23:BQ:60:PHE:CE2	2.53	0.43
25:BS:29:VAL:HG22	25:BS:44:ASN:HA	2.00	0.43
26:BT:18:TYR:O	26:BT:21:PHE:HB3	2.18	0.43
27:BU:55:PRO:HB3	27:BU:91:ILE:HG12	1.99	0.43
28:BZ:83:LEU:HA	28:BZ:86:GLU:HG2	1.99	0.43
34:B5:19:A:H2'	34:B5:20:G:O4'	2.18	0.43
34:B5:67:A:H4'	34:B5:68:A:C8	2.54	0.43
34:B5:84:A:H2'	34:B5:84:A:N3	2.34	0.43
34:B5:185:U:H2'	34:B5:186:C:O4'	2.19	0.43
34:B5:445:A:N1	34:B5:462:G:O2'	2.42	0.43
34:B5:473:A:C6	34:B5:474:A:C5	3.07	0.43
34:B5:635:A:H1'	34:B5:863:A:C4	2.54	0.43
34:B5:819:G:N2	34:B5:821:U:O2	2.51	0.43
34:B5:953:G:H2'	34:B5:954:G:C8	2.54	0.43
34:B5:1142:A:C6	34:B5:1143:A:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1162:C:H2'	34:B5:1163:A:C8	2.52	0.43
34:B5:1310:U:C2	34:B5:1316:G:N1	2.86	0.43
34:B5:1359:C:H2'	34:B5:1360:A:H8	1.84	0.43
34:B5:1513:G:OP2	34:B5:1513:G:H8	2.02	0.43
35:AA:2:GLY:HA2	35:AA:207:VAL:HG13	2.00	0.43
35:AA:11:GLY:HA3	38:A1:2163:C:H1'	2.00	0.43
35:AA:171:GLY:HA2	78:Ap:68:ALA:HB2	2.00	0.43
38:A1:62:A:C6	38:A1:63:A:C5	3.06	0.43
38:A1:1107:C:H2'	38:A1:1108:U:H6	1.82	0.43
38:A1:1147:G:C6	38:A1:1157:G:N1	2.86	0.43
38:A1:1178:G:C6	68:Af:20:LYS:HG2	2.53	0.43
38:A1:1228:C:C4	38:A1:1282:G:C6	3.07	0.43
38:A1:1357:G:H2'	38:A1:1358:C:C6	2.54	0.43
38:A1:1372:C:H2'	38:A1:1373:A:H8	1.83	0.43
38:A1:1630:U:O2	38:A1:1812:G:N2	2.51	0.43
38:A1:1714:A:C6	38:A1:1728:G:C2	3.07	0.43
38:A1:1791:C:OP1	78:Ap:34:HIS:NE2	2.50	0.43
38:A1:1862:U:C4	38:A1:1863:G:C4	3.06	0.43
38:A1:2226:U:H2'	38:A1:2227:C:C6	2.54	0.43
38:A1:2344:U:C2	38:A1:2345:A:N7	2.86	0.43
38:A1:2536:A:N6	38:A1:2539:C:O3'	2.51	0.43
38:A1:2933:A:H2	38:A1:3014:U:H4'	1.83	0.43
40:A4:12:A:C4	40:A4:13:A:C8	3.06	0.43
40:A4:17:A:C4	40:A4:18:U:C5	3.07	0.43
40:A4:24:G:C4	40:A4:25:G:C8	3.06	0.43
40:A4:60:U:P	60:AX:61:LYS:HZ1	2.42	0.43
40:A4:140:G:H2'	40:A4:141:C:O4'	2.19	0.43
40:A4:146:U:H2'	40:A4:147:U:H6	1.81	0.43
40:A4:151:C:O2'	40:A4:152:G:H5"	2.19	0.43
41:AD:35:ARG:O	41:AD:38:THR:HG22	2.18	0.43
42:AE:154:LEU:HA	42:AE:157:GLN:OE1	2.18	0.43
45:AH:39:LYS:HD3	45:AH:39:LYS:HA	1.70	0.43
45:AH:106:LYS:HE2	45:AH:125:ASN:HD22	1.83	0.43
47:AJ:55:ARG:NH2	81:EC:6923:C:O4'	2.51	0.43
53:AQ:177:GLY:O	53:AQ:186:VAL:N	2.38	0.43
58:AV:49:LEU:H	58:AV:49:LEU:HD12	1.84	0.43
66:Ad:37:LYS:NZ	66:Ad:49:VAL:O	2.51	0.43
69:Ag:57:LEU:HB2	69:Ag:62:TYR:HE1	1.81	0.43
70:Ah:51:ILE:HG13	70:Ah:52:ALA:N	2.33	0.43
72:Aj:52:LYS:HD2	72:Aj:55:ARG:HH21	1.84	0.43
80:DC:461:GLN:N	80:DC:461:GLN:CD	2.77	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:BE:36:HIS:CG	4:BE:85:GLY:HA3	2.53	0.43
4:BE:132:GLY:O	34:B5:252:U:H4'	2.18	0.43
5:BG:31:ARG:HG2	5:BG:101:ILE:HG12	2.01	0.43
8:BJ:158:PHE:CG	8:BJ:164:PHE:HB3	2.54	0.43
9:BL:60:PHE:CD2	9:BL:115:PHE:HZ	2.37	0.43
14:BX:63:GLN:NE2	81:EC:6954:C:O2'	2.52	0.43
16:Ba:3:LYS:HZ2	34:B5:1030:A:P	2.39	0.43
19:BD:161:GLY:HA3	34:B5:1331:A:N1	2.34	0.43
23:BQ:11:GLY:H	23:BQ:84:ALA:HB2	1.84	0.43
24:BR:58:MET:HE3	24:BR:58:MET:O	2.19	0.43
28:BZ:50:ILE:O	28:BZ:55:PRO:HD3	2.19	0.43
31:Bg:93:ASP:HB2	31:Bg:100:TYR:CE2	2.54	0.43
34:B5:301:A:H2'	34:B5:302:PSU:H6	1.84	0.43
34:B5:486:G:O2'	34:B5:487:G:O5'	2.37	0.43
34:B5:694:U:H3'	34:B5:695:U:C6	2.54	0.43
34:B5:753:A:H2'	34:B5:754:A:O4'	2.19	0.43
34:B5:932:U:H5'	34:B5:933:A:C5	2.54	0.43
34:B5:1040:G:C6	34:B5:1041:G:C5	3.07	0.43
34:B5:1112:G:N2	34:B5:1134:C:N4	2.67	0.43
35:AA:10:LYS:HA	35:AA:16:PHE:CD2	2.53	0.43
36:AB:120:LYS:NZ	38:A1:3297:U:OP1	2.43	0.43
36:AB:214:MET:HE2	36:AB:281:LYS:HD3	1.99	0.43
36:AB:322:ILE:HD12	36:AB:322:ILE:HA	1.92	0.43
37:AC:361:HIS:NE2	37:AC:362:ASP:OD2	2.52	0.43
38:A1:71:A:N6	38:A1:303:G:H1'	2.34	0.43
38:A1:72:C:N3	38:A1:74:G:C4	2.87	0.43
38:A1:313:A:H2'	38:A1:314:U:C6	2.54	0.43
38:A1:331:G:H2'	38:A1:332:C:H6	1.82	0.43
38:A1:562:C:H2'	38:A1:563:U:H6	1.82	0.43
38:A1:562:C:H2'	38:A1:563:U:C6	2.53	0.43
38:A1:729:C:H2'	38:A1:730:C:C6	2.53	0.43
38:A1:895:A:C6	38:A1:897:U:C4	3.07	0.43
38:A1:1160:C:C5	38:A1:1366:A:H1'	2.53	0.43
38:A1:1625:A:H2'	38:A1:1626:U:C6	2.54	0.43
38:A1:1685:C:H2'	38:A1:1686:U:H6	1.84	0.43
38:A1:1826:C:H2'	38:A1:1827:C:C6	2.54	0.43
38:A1:2203:U:H2'	38:A1:2204:C:C5	2.54	0.43
38:A1:2437:G:O6	38:A1:2510:U:O2	2.37	0.43
38:A1:2901:G:C6	38:A1:2902:A:C6	3.07	0.43
38:A1:3116:G:H21	38:A1:3116:G:P	2.42	0.43
38:A1:3188:G:N3	38:A1:3189:G:C8	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3308:C:H2'	38:A1:3309:G:O4'	2.19	0.43
38:A1:3320:A:H2'	38:A1:3321:C:C6	2.53	0.43
38:A1:3364:C:H2'	38:A1:3365:U:C6	2.53	0.43
39:A3:40:C:C4	39:A3:42:A:N6	2.87	0.43
40:A4:45:C:P	74:Al:12:LYS:HZ1	2.41	0.43
40:A4:123:G:H2'	40:A4:124:G:H8	1.81	0.43
40:A4:141:C:H5'	50:AN:109:ARG:NH1	2.32	0.43
41:AD:106:ALA:O	41:AD:110:LEU:HD23	2.19	0.43
43:AF:77:VAL:HG23	55:AS:59:VAL:HG23	1.99	0.43
43:AF:85:PHE:O	43:AF:136:TYR:HA	2.19	0.43
49:AM:108:ARG:NE	51:AO:197[A]:LEU:O	2.52	0.43
51:AO:15[A]:LEU:HD11	51:AO:44[A]:SER:HB2	2.00	0.43
52:AP:172:GLN:NE2	68:Af:61:GLY:HA3	2.33	0.43
55:AS:9:VAL:HG22	55:AS:61:ILE:CD1	2.48	0.43
62:AZ:127:ASN:HB3	62:AZ:130:PHE:HB3	2.01	0.43
80:DC:218:TRP:CH2	80:DC:281:ILE:HD11	2.53	0.43
80:DC:613:LYS:NZ	80:DC:631:ARG:HD2	2.34	0.43
80:DC:729:PHE:HB2	80:DC:772:LEU:HD13	2.00	0.43
81:EC:6773:G:H3'	81:EC:6818:G:H1'	2.01	0.43
81:EC:6844:A:O2'	81:EC:6845:G:N7	2.51	0.43
1:BA:41:ARG:N	1:BA:45:VAL:O	2.51	0.43
5:BG:133:LEU:HD12	34:B5:166:C:O2	2.19	0.43
5:BG:187:LYS:NZ	34:B5:139:C:O3'	2.52	0.43
6:BH:15:GLU:HA	6:BH:18:LEU:HD12	2.01	0.43
6:BH:117:THR:HB	34:B5:639:U:P	2.59	0.43
7:BI:56:ARG:HH22	34:B5:331:A:C5'	2.30	0.43
7:BI:67:TRP:CZ3	7:BI:183:ILE:HG12	2.52	0.43
8:BJ:155:HIS:ND1	8:BJ:155:HIS:O	2.52	0.43
9:BL:69:LYS:HE2	9:BL:127:GLN:HG3	2.01	0.43
11:BO:12:GLN:HB3	11:BO:77:THR:OG1	2.19	0.43
11:BO:111:ARG:NE	16:Ba:58:VAL:HA	2.34	0.43
15:BY:15:ASN:CG	15:BY:18:LEU:HB2	2.44	0.43
18:Be:30:PRO:C	18:Be:35:TYR:HB2	2.44	0.43
18:Be:33:ARG:CZ	34:B5:475:A:H5"	2.49	0.43
25:BS:96:LYS:HD3	25:BS:98:TYR:OH	2.18	0.43
26:BT:45:MET:SD	34:B5:1477:G:H5'	2.58	0.43
29:Bc:11:LYS:HD2	29:Bc:31:GLU:OE2	2.19	0.43
32:Bf:107:LYS:CE	32:Bf:117:LEU:HG	2.49	0.43
33:BM:107:ASP:HB2	33:BM:111:ASN:O	2.18	0.43
34:B5:56:U:H3	34:B5:92:A:HO2'	1.67	0.43
34:B5:217:A:O2'	34:B5:829:A:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:274:G:N2	34:B5:283:U:H1'	2.34	0.43
34:B5:341:A:H2'	34:B5:342:C:H6	1.84	0.43
34:B5:355:G:H2'	34:B5:356:G:H8	1.84	0.43
34:B5:405:C:H2'	34:B5:406:U:H6	1.84	0.43
34:B5:479:C:H2'	34:B5:480:G:O4'	2.19	0.43
34:B5:518:A:H1'	34:B5:534:A:N6	2.34	0.43
34:B5:799:A:H2'	34:B5:800:U:O4'	2.19	0.43
34:B5:1039:A:O2'	34:B5:1040:G:H5"	2.19	0.43
37:AC:157:GLU:O	37:AC:213:ASN:HB2	2.19	0.43
38:A1:20:A:C6	40:A4:140:G:N1	2.86	0.43
38:A1:29:C:C2	38:A1:56:G:N2	2.87	0.43
38:A1:207:U:H2'	38:A1:208:C:H6	1.84	0.43
38:A1:443:G:O3'	38:A1:445:G:N2	2.46	0.43
38:A1:492:C:H5"	38:A1:493:U:C6	2.54	0.43
38:A1:527:A:C6	38:A1:566:G:C6	3.07	0.43
38:A1:656:A:H2'	38:A1:657:A:H8	1.83	0.43
38:A1:856:G:H22	78:Ap:4:ARG:CZ	2.32	0.43
38:A1:967:A:H2'	38:A1:968:G:O4'	2.19	0.43
38:A1:977:C:H2'	38:A1:978:G:H8	1.83	0.43
38:A1:1048:A:H8	38:A1:1048:A:O5'	2.02	0.43
38:A1:1405:U:OP1	67:Ae:58:GLY:HA2	2.18	0.43
38:A1:1427:U:H2'	38:A1:1428:A:H8	1.84	0.43
38:A1:1632:A:H2'	38:A1:1633:C:C6	2.53	0.43
38:A1:1718:G:C6	38:A1:1727:G:C6	3.06	0.43
38:A1:1817:G:H8	38:A1:1818:U:C5	2.37	0.43
38:A1:1911:A:H2'	38:A1:1912:U:C6	2.52	0.43
38:A1:1935:G:C2	38:A1:1936:A:C5	3.07	0.43
38:A1:2144:A:H1'	38:A1:2281:A:H61	1.84	0.43
38:A1:2211:U:O2	38:A1:2234:G:N2	2.45	0.43
38:A1:2260:PSU:H2'	38:A1:2261:G:O4'	2.19	0.43
38:A1:2427:U:H3	38:A1:2602:G:H1	1.67	0.43
38:A1:2632:G:H2'	38:A1:2633:U:C6	2.53	0.43
38:A1:2722:U:C2	38:A1:2723:U:C5	3.07	0.43
40:A4:67:U:H5"	72:Aj:85:LYS:O	2.18	0.43
40:A4:141:C:H1'	50:AN:112:ASN:HD21	1.84	0.43
41:AD:41:LYS:HB2	56:AT:68:THR:O	2.18	0.43
41:AD:250:ASP:OD1	41:AD:250:ASP:N	2.51	0.43
44:AG:75:ILE:C	44:AG:77:GLN:H	2.27	0.43
50:AN:21:PHE:HD2	50:AN:22:LEU:HD22	1.83	0.43
54:AR:115:ILE:HG12	54:AR:142:ILE:HD11	2.01	0.43
57:AU:92:TRP:HB3	57:AU:107:PHE:CE1	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:AY:29:VAL:O	61:AY:32:SER:OG	2.34	0.43
65:Ac:54:SER:O	65:Ac:57:GLU:HG3	2.19	0.43
70:Ah:119:LYS:HA	70:Ah:119:LYS:HD3	1.65	0.43
73:Ak:32:ASN:HB3	73:Ak:38:PHE:CD1	2.54	0.43
80:DC:132:ILE:H	80:DC:132:ILE:HD12	1.83	0.43
81:EC:6855:A:C6	81:EC:6874:A:N1	2.87	0.43
1:BA:104:PRO:HB3	1:BA:131:GLN:HE21	1.84	0.43
5:BG:51:LYS:HG2	5:BG:112:VAL:O	2.19	0.43
8:BJ:39:LYS:HD3	8:BJ:42:ILE:HD11	2.01	0.43
10:BN:92:ILE:HD12	10:BN:141:TYR:CD2	2.54	0.43
16:Ba:46:GLU:O	16:Ba:50:VAL:HG23	2.18	0.43
20:BF:30:PRO:O	20:BF:34:GLN:HG2	2.18	0.43
20:BF:40:ILE:HG12	20:BF:69:PHE:CE1	2.54	0.43
20:BF:109:LYS:NZ	34:B5:1473:U:H4’	2.34	0.43
26:BT:100:ILE:O	26:BT:104:VAL:HG23	2.18	0.43
29:Bc:56:LEU:HD22	29:Bc:59:SER:OG	2.19	0.43
34:B5:209:U:H2’	34:B5:210:A:N3	2.34	0.43
34:B5:273:G:C6	34:B5:283:U:O2	2.71	0.43
34:B5:368:U:O2	34:B5:373:G:O6	2.37	0.43
34:B5:418:G:N2	34:B5:419:G:N7	2.66	0.43
34:B5:793:A:H2’	34:B5:793:A:N3	2.33	0.43
34:B5:927:C:H2’	34:B5:928:U:C6	2.54	0.43
34:B5:1049:U:H2’	34:B5:1050:G:H8	1.82	0.43
34:B5:1291:G:H2’	34:B5:1292:G:H8	1.83	0.43
34:B5:1310:U:N3	34:B5:1316:G:C6	2.87	0.43
34:B5:1317:C:H1’	34:B5:1401:A:H1’	2.01	0.43
34:B5:1546:G:H3’	34:B5:1547:A:C8	2.52	0.43
34:B5:1688:U:H5’	34:B5:1689:A:OP2	2.18	0.43
36:AB:371:GLN:N	36:AB:371:GLN:CD	2.77	0.43
37:AC:104:LYS:HD2	37:AC:104:LYS:HA	1.78	0.43
37:AC:108:LYS:NZ	38:A1:664:U:P	2.92	0.43
37:AC:195:ARG:NH1	38:A1:339:C:H3’	2.34	0.43
38:A1:228:U:H5”	61:AY:8:VAL:HG21	2.01	0.43
38:A1:330:G:H1	40:A4:33:A:H2	1.61	0.43
38:A1:383:G:N2	38:A1:385:A:H3’	2.33	0.43
38:A1:415:G:O6	40:A4:9:A:N6	2.52	0.43
38:A1:856:G:OP1	54:AR:92:GLN:NE2	2.49	0.43
38:A1:901:G:H2’	38:A1:902:G:H8	1.83	0.43
38:A1:1176:C:OP2	38:A1:1177:G:O2’	2.28	0.43
38:A1:1190:A:H2’	38:A1:1190:A:N3	2.34	0.43
38:A1:1523:U:OP1	38:A1:1607:U:N3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1527:C:H2'	38:A1:1528:G:C8	2.54	0.43
38:A1:1591:G:H2'	38:A1:1592:G:O4'	2.19	0.43
38:A1:1630:U:O2'	38:A1:1812:G:N2	2.52	0.43
38:A1:1630:U:N3	38:A1:1812:G:H2'	2.25	0.43
38:A1:1633:C:C4	62:AZ:17:ARG:NH2	2.87	0.43
38:A1:1908:A:C6	38:A1:1909:A:C6	3.07	0.43
38:A1:2186:U:C2	38:A1:2187:G:C8	3.06	0.43
38:A1:2240:G:H2'	38:A1:2241:U:O4'	2.19	0.43
38:A1:2389:C:C2	38:A1:2390:A:N7	2.86	0.43
38:A1:2416:PSU:H2'	38:A1:2417:U:H6	1.82	0.43
38:A1:2502:A:H61	44:AG:232:HIS:CD2	2.37	0.43
38:A1:2533:G:O6	38:A1:2547:A:N6	2.52	0.43
38:A1:2568:C:O2'	38:A1:2569:A:O5'	2.33	0.43
38:A1:2762:A:N3	38:A1:2763:U:C6	2.86	0.43
38:A1:2831:G:C6	38:A1:2832:C:C4	3.07	0.43
38:A1:2847:A:H2'	38:A1:2848:G:O4'	2.19	0.43
38:A1:3133:C:H2'	38:A1:3134:A:O4'	2.19	0.43
38:A1:3167:A:C4	38:A1:3168:A:C8	3.07	0.43
38:A1:3229:G:H2'	38:A1:3230:G:C8	2.54	0.43
38:A1:3247:G:H2'	38:A1:3248:C:C6	2.53	0.43
39:A3:16:U:H2'	39:A3:17:A:H8	1.84	0.43
41:AD:244:HIS:O	41:AD:248:ARG:HG2	2.19	0.43
43:AF:181:ILE:O	43:AF:185:ILE:HG12	2.19	0.43
46:AI:38:LYS:HG3	46:AI:82:ARG:NH1	2.33	0.43
48:AL:75:PHE:CD2	48:AL:116:LEU:HD11	2.53	0.43
48:AL:95:ILE:HD11	48:AL:119:TYR:CE2	2.53	0.43
49:AM:50:LYS:HB2	49:AM:85:TRP:CE3	2.53	0.43
50:AN:192:LYS:HE2	50:AN:192:LYS:HB3	1.81	0.43
50:AN:193:ARG:HH11	50:AN:193:ARG:C	2.21	0.43
62:AZ:104:PRO:O	62:AZ:107:ARG:HB2	2.18	0.43
62:AZ:114:VAL:HA	62:AZ:117:ALA:HB3	2.01	0.43
67:Ae:79:VAL:HG13	67:Ae:111:ARG:HG2	2.01	0.43
71:Ai:45:ARG:HH21	71:Ai:93:ILE:HG21	1.84	0.43
79:E:59:PRO:CB	79:E:170:GLY:HA2	2.48	0.43
80:DC:42:ARG:NH1	80:DC:332:ASP:OD1	2.52	0.43
80:DC:380:LEU:HG	80:DC:469:LEU:HB2	2.00	0.43
81:EC:6801:A:C2	81:EC:6882:G:H5'	2.54	0.43
2:BB:33:LYS:C	2:BB:232:HIS:HE1	2.27	0.42
3:BC:161:LYS:HE2	3:BC:161:LYS:HB2	1.83	0.42
4:BE:94:ALA:O	4:BE:95:THR:OG1	2.30	0.42
6:BH:89:HIS:HA	6:BH:165:LYS:HZ2	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:BJ:15:PRO:HD3	8:BJ:43:TYR:HE2	1.82	0.42
8:BJ:157:ASP:OD1	8:BJ:158:PHE:N	2.44	0.42
10:BN:84:ILE:HA	10:BN:135:LEU:HD21	2.01	0.42
11:BO:42:VAL:HG11	11:BO:63:ALA:O	2.19	0.42
11:BO:90:ARG:HH12	34:B5:902:G:P	2.42	0.42
21:BK:6:GLU:HG2	21:BK:7:ASP:N	2.34	0.42
21:BK:38:LYS:HE3	21:BK:41:TYR:CE2	2.54	0.42
22:BP:92:SER:HB2	22:BP:107:ILE:HG13	2.01	0.42
22:BP:98:ASN:HB3	22:BP:120:SER:OG	2.19	0.42
24:BR:75:GLU:HA	24:BR:78:ARG:CZ	2.48	0.42
24:BR:104:ASN:CG	24:BR:124:VAL:H	2.26	0.42
25:BS:138:THR:N	34:B5:1458:G:OP1	2.52	0.42
31:Bg:272:ASP:HB2	31:Bg:274:LEU:HD12	2.00	0.42
32:Bf:133:ALA:HB2	34:B5:1252:C:O4'	2.19	0.42
34:B5:214:G:H21	34:B5:251:A:H62	1.67	0.42
34:B5:325:G:O6	34:B5:344:A:N6	2.52	0.42
34:B5:409:C:H5'	34:B5:1732:A:O2'	2.19	0.42
34:B5:422:G:H2'	34:B5:423:G:C8	2.54	0.42
34:B5:771:A:C4	34:B5:772:G:C8	3.07	0.42
34:B5:960:U:H2'	34:B5:961:U:H6	1.83	0.42
34:B5:1042:G:H2'	34:B5:1043:A:C8	2.53	0.42
34:B5:1271:G:N1	34:B5:1440:C:N3	2.67	0.42
34:B5:1322:A:C6	34:B5:1323:C:C4	3.07	0.42
34:B5:1329:A:H3'	34:B5:1330:G:H8	1.84	0.42
34:B5:1355:C:C4	34:B5:1356:U:C4	3.07	0.42
34:B5:1395:G:N1	34:B5:1404:C:N3	2.66	0.42
34:B5:1562:G:C4	34:B5:1563:C:C5	3.07	0.42
34:B5:1668:G:H2'	34:B5:1669:U:O4'	2.19	0.42
34:B5:1681:A:H3'	34:B5:1682:U:C6	2.52	0.42
34:B5:1795:U:O2'	34:B5:1797:A:N7	2.47	0.42
35:AA:64:ARG:HA	35:AA:71:LEU:HD13	2.00	0.42
35:AA:112:ILE:HG21	78:Ap:79:VAL:HG13	2.00	0.42
35:AA:204:MET:HB3	35:AA:208:ASP:HB2	2.01	0.42
38:A1:61:A:C4	38:A1:62:A:C8	3.07	0.42
38:A1:236:G:C6	38:A1:237:G:C6	3.07	0.42
38:A1:365:A:H3'	38:A1:366:A:H8	1.84	0.42
38:A1:523:A:C2	38:A1:524:U:H1'	2.54	0.42
38:A1:542:G:H2'	38:A1:542:G:N3	2.33	0.42
38:A1:646:A:H2'	38:A1:647:A:C8	2.54	0.42
38:A1:904:A:H2'	38:A1:905:U:C6	2.54	0.42
38:A1:991:G:C5	38:A1:1059:G:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1087:G:C2	38:A1:1088:U:C6	3.08	0.42
38:A1:1111:U:C2'	38:A1:1112:A:H8	2.30	0.42
38:A1:1149:G:H21	38:A1:1199:C:N4	2.17	0.42
38:A1:1343:A:H2'	38:A1:1344:G:H8	1.82	0.42
38:A1:1409:G:C6	38:A1:1410:U:C4	3.06	0.42
38:A1:1519:G:H2'	38:A1:1520:G:C8	2.54	0.42
38:A1:1719:G:H4'	38:A1:1732:U:H4'	2.00	0.42
38:A1:1768:U:H2'	38:A1:1769:G:C8	2.49	0.42
38:A1:2180:G:C6	38:A1:2181:C:C4	3.07	0.42
38:A1:2249:G:N1	38:A1:2267:C:O2	2.45	0.42
38:A1:2457:G:H4'	38:A1:2482:U:H1'	2.01	0.42
38:A1:2631:U:OP2	56:AT:4:SER:OG	2.28	0.42
38:A1:3005:A:H2	38:A1:3144:G:C6	2.37	0.42
38:A1:3007:U:N3	38:A1:3008:A:N7	2.67	0.42
38:A1:3013:U:H2'	38:A1:3014:U:C6	2.54	0.42
38:A1:3169:U:O2'	38:A1:3170:A:H2'	2.18	0.42
38:A1:3212:C:H2'	38:A1:3213:A:C8	2.54	0.42
38:A1:3277:U:H5"	38:A1:3278:C:C5	2.51	0.42
38:A1:3292:A:H2'	38:A1:3293:U:C6	2.54	0.42
38:A1:3333:G:H2'	59:AW:51:TRP:CZ3	2.49	0.42
39:A3:43:U:O2'	47:AJ:142:LYS:NZ	2.52	0.42
40:A4:17:A:C6	40:A4:18:U:C4	3.07	0.42
41:AD:261:THR:HG22	41:AD:264:GLN:HE22	1.83	0.42
42:AE:5:LYS:HD2	42:AE:6:ALA:N	2.34	0.42
43:AF:74:SER:HG	56:AT:141:VAL:C	2.25	0.42
43:AF:84:VAL:HG13	43:AF:119:VAL:HG22	2.01	0.42
46:AI:57:LEU:HB3	46:AI:130:ASP:HA	2.00	0.42
48:AL:134:GLU:N	48:AL:134:GLU:OE1	2.51	0.42
50:AN:153:ASP:OD1	50:AN:154:PRO:HD2	2.19	0.42
55:AS:128:GLU:OE1	55:AS:128:GLU:N	2.35	0.42
60:AX:96:LYS:HG3	60:AX:107:VAL:HG11	2.01	0.42
62:AZ:15:ARG:HG3	62:AZ:79:HIS:ND1	2.34	0.42
63:Aa:79:TRP:HZ2	63:Aa:121:VAL:HG21	1.84	0.42
67:Ae:22:SER:HA	67:Ae:28:VAL:HB	2.02	0.42
67:Ae:76:VAL:N	67:Ae:95:GLU:O	2.52	0.42
69:Ag:46:ASP:HB3	69:Ag:84:CYS:SG	2.59	0.42
74:Al:6:SER:OG	74:Al:7:PHE:N	2.51	0.42
78:Ap:30:GLU:OE2	78:Ap:34:HIS:ND1	2.52	0.42
79:E:111:ILE:HG23	79:E:152:ARG:HH12	1.84	0.42
80:DC:22:MET:SD	80:DC:126:LEU:HB2	2.59	0.42
80:DC:543:GLN:N	80:DC:543:GLN:OE1	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:591:GLU:HG2	80:DC:685:ARG:HB3	2.00	0.42
80:DC:823:ARG:HA	80:DC:823:ARG:HD3	1.79	0.42
81:EC:6902:U:N3	81:EC:6912:G:C2	2.87	0.42
81:EC:6922:G:O6	81:EC:6931:U:O4	2.36	0.42
1:BA:180:GLU:HA	1:BA:183:ARG:HB2	2.00	0.42
2:BB:97:LEU:HD22	2:BB:232:HIS:HB3	2.01	0.42
11:BO:46:MET:CE	34:B5:899:G:H4'	2.48	0.42
12:BV:84:SER:H	12:BV:87:ARG:HH21	1.66	0.42
13:BW:87:GLU:OE1	13:BW:87:GLU:N	2.39	0.42
15:BY:43:LYS:O	15:BY:46:GLU:HG2	2.19	0.42
16:Ba:43:ASN:HA	16:Ba:66:LYS:HA	2.00	0.42
17:Bb:36:LYS:NZ	17:Bb:37:CYS:O	2.48	0.42
19:BD:106:LYS:O	19:BD:110:LEU:HG	2.19	0.42
23:BQ:118:ILE:O	23:BQ:118:ILE:HG13	2.18	0.42
25:BS:14:ILE:HD13	25:BS:23:ASP:HA	2.01	0.42
25:BS:42:TYR:HA	25:BS:85:PHE:CE2	2.50	0.42
34:B5:67:A:H62	34:B5:83:G:N2	2.17	0.42
34:B5:551:G:N7	34:B5:582:U:C2	2.87	0.42
34:B5:632:PSU:H2'	34:B5:633:U:H6	1.79	0.42
34:B5:907:A:H1'	34:B5:997:G:O2'	2.19	0.42
34:B5:976:G:H3'	34:B5:1023:A:H2	1.84	0.42
34:B5:1140:G:N3	34:B5:1141:G:C8	2.87	0.42
34:B5:1239:U:H2'	34:B5:1240:U:C6	2.54	0.42
34:B5:1296:A:C6	34:B5:1297:G:C5	3.08	0.42
34:B5:1316:G:N3	34:B5:1401:A:O2'	2.52	0.42
34:B5:1396:U:C4	34:B5:1402:G:O6	2.71	0.42
34:B5:1471:A:H2'	34:B5:1471:A:N3	2.34	0.42
34:B5:1474:G:H2'	34:B5:1475:A:H8	1.85	0.42
34:B5:1629:G:H2'	34:B5:1630:U:C6	2.54	0.42
34:B5:1650:U:H2'	34:B5:1651:A:H8	1.82	0.42
34:B5:1653:C:H2'	34:B5:1654:G:H8	1.82	0.42
36:AB:49:TYR:C	36:AB:79:VAL:HG13	2.44	0.42
37:AC:180:LYS:HA	38:A1:1386:A:N3	2.34	0.42
38:A1:94:G:H2'	38:A1:95:A:C8	2.54	0.42
38:A1:126:U:H2'	38:A1:127:G:H8	1.83	0.42
38:A1:213:A:C4	38:A1:214:G:C8	3.07	0.42
38:A1:241:G:O2'	38:A1:242:C:O5'	2.33	0.42
38:A1:344:A:C4	38:A1:345:G:C8	3.07	0.42
38:A1:597:G:H2'	38:A1:598:A:C8	2.54	0.42
38:A1:897:U:H2'	38:A1:898:U:C6	2.54	0.42
38:A1:945:C:H1'	38:A1:1407:A:H1'	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:972:A:C2	38:A1:1110:PSU:O4	2.72	0.42
38:A1:1131:G:O2'	38:A1:2373:A:N1	2.42	0.42
38:A1:1304:A:H62	38:A1:2860:U:H5"	1.84	0.42
38:A1:1590:G:C2	38:A1:1591:G:C5	3.06	0.42
38:A1:1709:C:H4'	62:AZ:15:ARG:NH2	2.26	0.42
38:A1:1718:G:C6	38:A1:1727:G:N1	2.87	0.42
38:A1:1775:G:C6	38:A1:1776:G:C5	3.08	0.42
38:A1:1864:A:OP2	54:AR:88:ARG:NH1	2.35	0.42
38:A1:2681:U:H2'	38:A1:2682:C:H6	1.83	0.42
38:A1:2736:A:OP1	56:AT:50:LYS:HB3	2.18	0.42
38:A1:2781:U:H2'	38:A1:2782:U:H6	1.83	0.42
38:A1:2986:U:C2	38:A1:2987:A:C8	3.07	0.42
38:A1:3247:G:O2'	51:AO:114[A]:LYS:NZ	2.29	0.42
38:A1:3261:C:P	49:AM:126:GLN:HE22	2.42	0.42
39:A3:47:C:H5"	41:AD:204:VAL:HG22	1.99	0.42
39:A3:69:C:N3	39:A3:110:G:N1	2.66	0.42
39:A3:115:G:H2'	39:A3:116:C:C6	2.53	0.42
40:A4:123:G:O6	40:A4:131:A:N6	2.52	0.42
41:AD:44:TYR:CE2	56:AT:35:LYS:HA	2.54	0.42
41:AD:129:TYR:OH	41:AD:175:HIS:O	2.17	0.42
45:AH:94:TYR:CG	45:AH:98:PRO:HA	2.55	0.42
50:AN:21:PHE:O	50:AN:25:VAL:HG23	2.19	0.42
56:AT:11:THR:OG1	56:AT:14:MET:HB3	2.19	0.42
62:AZ:12:VAL:HG12	62:AZ:81:LEU:HB2	2.01	0.42
65:Ac:58:TYR:HE2	69:Ag:97:GLU:HG2	1.84	0.42
77:Ao:9:LYS:HA	77:Ao:22:GLN:HA	2.01	0.42
79:E:63:MET:SD	79:E:152:ARG:HD3	2.59	0.42
79:E:129:SER:HB2	81:EC:6773:G:H1'	2.01	0.42
80:DC:326:LYS:HE2	80:DC:326:LYS:HB3	1.88	0.42
80:DC:373:ASP:N	80:DC:373:ASP:OD1	2.51	0.42
80:DC:820:LEU:O	80:DC:823:ARG:HB3	2.19	0.42
2:BB:160:HIS:O	2:BB:164:ILE:HG12	2.18	0.42
3:BC:144:TRP:C	13:BW:98:GLN:HE22	2.27	0.42
3:BC:170:ILE:HB	3:BC:197:TYR:CB	2.45	0.42
4:BE:135:GLY:HA2	34:B5:252:U:O2'	2.19	0.42
5:BG:94:ARG:HD2	34:B5:407:A:OP1	2.18	0.42
6:BH:13:PRO:HA	6:BH:14:THR:HA	1.66	0.42
6:BH:98:ILE:HD12	6:BH:121:VAL:HG11	2.02	0.42
7:BI:195:ARG:HH12	9:BL:11:ARG:HA	1.83	0.42
8:BJ:19:TYR:HA	8:BJ:24:LEU:HD11	2.00	0.42
11:BO:40:ALA:O	11:BO:42:VAL:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BO:72:LYS:C	11:BO:74:VAL:H	2.27	0.42
15:BY:105:ARG:HH21	34:B5:459:G:P	2.41	0.42
18:Be:33:ARG:HH22	34:B5:475:A:H3'	1.83	0.42
19:BD:177:MET:HG2	19:BD:179:GLN:H	1.84	0.42
22:BP:42:ARG:NH1	34:B5:1549:C:OP1	2.41	0.42
24:BR:31:ASN:HA	24:BR:34:LEU:HG	2.01	0.42
27:BU:65:ILE:HG22	30:Bd:33:LYS:HD3	2.01	0.42
29:Bc:52:ASP:OD1	29:Bc:53:ILE:N	2.53	0.42
31:Bg:274:LEU:HD23	31:Bg:313:TRP:CD2	2.54	0.42
34:B5:29:U:H2'	34:B5:30:G:C8	2.55	0.42
34:B5:149:C:H2'	34:B5:150:U:C6	2.54	0.42
34:B5:730:G:H2'	34:B5:730:G:N3	2.33	0.42
34:B5:977:A:N6	34:B5:1024:U:C2	2.88	0.42
36:AB:284:ARG:HB2	36:AB:323:MET:HE3	2.01	0.42
37:AC:136:LEU:HD13	37:AC:143:GLU:HG3	2.00	0.42
38:A1:23:A:OP1	72:Aj:44:THR:HG22	2.20	0.42
38:A1:40:A:N7	38:A1:937:G:C5	2.87	0.42
38:A1:264:G:O3'	38:A1:265:A:H8	2.02	0.42
38:A1:304:G:H3'	38:A1:304:G:OP2	2.19	0.42
38:A1:404:G:C5	38:A1:405:U:C5	3.06	0.42
38:A1:446:U:H4'	38:A1:488:U:O2	2.20	0.42
38:A1:501:A:H2'	38:A1:502:U:C6	2.54	0.42
38:A1:818:C:H2'	38:A1:819:U:O4'	2.20	0.42
38:A1:856:G:C2	38:A1:857:G:N2	2.87	0.42
38:A1:1034:U:O3'	38:A1:1035:G:H8	2.02	0.42
38:A1:1504:A:H5"	52:AP:23:ARG:CZ	2.50	0.42
38:A1:1861:G:O2'	38:A1:3066:U:OP1	2.35	0.42
38:A1:1912:U:H3'	38:A1:1913:A:C8	2.54	0.42
38:A1:2393:G:C4	38:A1:2982:A:N1	2.87	0.42
38:A1:2396:G:OP1	38:A1:2397:A:O2'	2.22	0.42
38:A1:2503:G:O2'	38:A1:2504:U:H5'	2.19	0.42
38:A1:2677:G:N3	38:A1:2677:G:H2'	2.34	0.42
38:A1:2874:G:C6	38:A1:2945:G:C8	3.07	0.42
38:A1:2895:G:C6	38:A1:2907:G:C6	3.06	0.42
38:A1:2895:G:P	45:AH:168:ARG:HH12	2.41	0.42
38:A1:2917:G:H2'	38:A1:2918:G:O4'	2.19	0.42
38:A1:3144:G:C6	38:A1:3145:C:C4	3.07	0.42
38:A1:3147:G:H2'	38:A1:3148:U:C6	2.53	0.42
38:A1:3299:A:P	52:AP:72:GLN:HE22	2.43	0.42
39:A3:87:G:H2'	39:A3:88:G:C8	2.53	0.42
40:A4:6:U:H2'	40:A4:7:U:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:A4:18:U:C4	40:A4:19:C:N4	2.87	0.42
40:A4:58:G:C2	40:A4:100:U:C4	3.07	0.42
43:AF:83:LEU:HD12	43:AF:117:VAL:O	2.19	0.42
43:AF:103:LEU:HD23	43:AF:103:LEU:HA	1.86	0.42
46:AI:209:ASN:HB3	46:AI:217:PHE:HZ	1.84	0.42
48:AL:98:ASP:OD1	48:AL:100:ARG:HG2	2.19	0.42
53:AQ:91:ALA:HB3	63:Aa:77:LYS:NZ	2.34	0.42
55:AS:96:ASP:OD2	55:AS:102:ALA:HA	2.18	0.42
60:AX:67:ILE:HD11	60:AX:85:GLN:HB2	2.00	0.42
60:AX:126:LEU:HD13	60:AX:135:ILE:HD13	2.01	0.42
66:Ad:12:TYR:CG	66:Ad:75:ILE:HD12	2.55	0.42
71:Ai:85:ALA:O	71:Ai:89:GLU:HG2	2.19	0.42
77:Ao:39:GLY:O	77:Ao:43:TYR:HB2	2.18	0.42
78:Ap:46:THR:OG1	78:Ap:58:SER:HB3	2.20	0.42
79:E:195:LYS:NZ	79:E:196:LYS:HD3	2.34	0.42
80:DC:155:VAL:O	80:DC:209:VAL:HA	2.18	0.42
80:DC:400:VAL:HG23	80:DC:452:ASN:H	1.84	0.42
80:DC:709:MET:HA	80:DC:712:ALA:HB3	2.01	0.42
81:EC:6771:U:H5”	81:EC:6823:U:N3	2.34	0.42
81:EC:6791:A:C8	81:EC:6793:A:H5”	2.54	0.42
81:EC:6798:C:H2’	81:EC:6799:C:O4’	2.18	0.42
4:BE:108:ARG:NH2	34:B5:788:A:OP2	2.52	0.42
4:BE:183:VAL:HG21	4:BE:218:PHE:HE2	1.85	0.42
6:BH:64:VAL:HG23	6:BH:67:LEU:HD23	2.00	0.42
6:BH:121:VAL:HG13	6:BH:122:HIS:CD2	2.54	0.42
6:BH:175:LYS:HD3	6:BH:175:LYS:HA	1.83	0.42
7:BI:49:ARG:HH22	34:B5:399:A:P	2.42	0.42
7:BI:49:ARG:CZ	34:B5:398:G:H5”	2.49	0.42
13:BW:60:LYS:NZ	17:Bb:23:THR:O	2.52	0.42
22:BP:44:ARG:NE	22:BP:49:MET:HE1	2.35	0.42
24:BR:7:LYS:HG3	24:BR:11:ARG:HG3	2.01	0.42
26:BT:85:SER:HA	26:BT:91:TYR:CD1	2.54	0.42
26:BT:86:ARG:CZ	26:BT:89:ARG:HB3	2.49	0.42
31:Bg:175:ASP:OD1	31:Bg:175:ASP:N	2.43	0.42
31:Bg:262:VAL:HB	31:Bg:271:VAL:HB	2.01	0.42
31:Bg:299:GLN:O	31:Bg:315:VAL:HG13	2.20	0.42
34:B5:37:U:C4	34:B5:38:C:C4	3.08	0.42
34:B5:445:A:C4	34:B5:446:A:C8	3.07	0.42
34:B5:772:G:N2	34:B5:774:A:H1’	2.33	0.42
34:B5:961:U:C2	34:B5:962:C:C5	3.07	0.42
34:B5:1060:U:H3’	34:B5:1061:A:C5’	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1474:G:C2	34:B5:1475:A:C5	3.07	0.42
35:AA:8:GLN:HE22	38:A1:2164:A:C5'	2.32	0.42
35:AA:216:HIS:CE1	38:A1:2961:G:N7	2.87	0.42
37:AC:60:THR:HB	37:AC:90:PHE:CE1	2.53	0.42
38:A1:121:A:H4'	38:A1:122:A:OP2	2.19	0.42
38:A1:178:U:O2	38:A1:239:G:C2	2.73	0.42
38:A1:313:A:C6	38:A1:314:U:C4	3.07	0.42
38:A1:662:U:H2'	38:A1:663:C:C6	2.54	0.42
38:A1:802:C:C2	38:A1:803:C:C5	3.07	0.42
38:A1:939:U:C2	38:A1:940:G:C8	3.08	0.42
38:A1:1126:G:C6	38:A1:1127:G:C6	3.07	0.42
38:A1:1171:G:H2'	38:A1:1172:G:O4'	2.20	0.42
38:A1:1243:G:H3'	38:A1:1243:G:N3	2.35	0.42
38:A1:1320:C:O2'	55:AS:115:ARG:NH1	2.52	0.42
38:A1:1576:G:H5"	38:A1:1577:G:H5'	2.01	0.42
38:A1:1634:G:C5	62:AZ:17:ARG:NH2	2.87	0.42
38:A1:1663:C:H2'	38:A1:1664:G:H8	1.84	0.42
38:A1:1687:U:O2'	57:AU:75:TYR:HB2	2.19	0.42
38:A1:1777:U:N3	38:A1:1778:G:O6	2.53	0.42
38:A1:1863:G:H4'	54:AR:82:LYS:NZ	2.34	0.42
38:A1:1945:A:H2'	38:A1:1946:A:C8	2.54	0.42
38:A1:2194:G:H2'	38:A1:2195:C:C6	2.54	0.42
38:A1:2288:G:C6	38:A1:2289:U:C4	3.07	0.42
38:A1:2426:U:H3	38:A1:2603:G:H1	1.67	0.42
38:A1:2555:G:C6	69:Ag:95:ILE:HD11	2.55	0.42
38:A1:2632:G:OP1	56:AT:11:THR:HG22	2.20	0.42
38:A1:2744:U:H2'	38:A1:2745:G:H8	1.79	0.42
38:A1:2760:C:C5	77:Ao:87:ARG:HD2	2.54	0.42
38:A1:2888:U:C5	38:A1:2910:A:C6	3.07	0.42
38:A1:2893:C:H2'	38:A1:2894:C:O4'	2.19	0.42
38:A1:3004:C:H2'	38:A1:3005:A:O4'	2.20	0.42
38:A1:3169:U:O2'	38:A1:3170:A:O5'	2.26	0.42
38:A1:3288:G:C2	38:A1:3289:G:C4	3.07	0.42
38:A1:3303:G:O2'	38:A1:3305:A:N7	2.44	0.42
39:A3:89:G:H4'	55:AS:84:ARG:NH2	2.35	0.42
41:AD:236:LEU:HA	41:AD:239:ILE:HG12	2.01	0.42
42:AE:141:VAL:O	42:AE:145:LEU:HD23	2.19	0.42
45:AH:101:VAL:HB	45:AH:112:ILE:HD11	2.01	0.42
46:AI:3:ARG:HD2	46:AI:123:HIS:NE2	2.35	0.42
47:AJ:87:LYS:HA	47:AJ:87:LYS:HD3	1.73	0.42
47:AJ:129:VAL:CG1	47:AJ:131:MET:HE3	2.41	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:AL:6:ASN:C	48:AL:7:LEU:HD12	2.44	0.42
48:AL:89:TYR:O	48:AL:92:THR:OG1	2.33	0.42
49:AM:17:VAL:HG22	49:AM:37:GLU:HA	2.00	0.42
49:AM:38:ILE:HG13	49:AM:44:VAL:HG12	2.01	0.42
49:AM:123:LEU:HB3	51:AO:194[A]:LEU:HD11	2.01	0.42
51:AO:27[A]:LEU:CD1	51:AO:101[A]:ARG:HG3	2.49	0.42
53:AQ:81:VAL:HG22	53:AQ:138:LEU:HD11	2.00	0.42
54:AR:11:ALA:O	54:AR:15:VAL:HG22	2.19	0.42
57:AU:42:LYS:HA	57:AU:46:ALA:O	2.19	0.42
61:AY:103:LYS:C	61:AY:104:LEU:HD22	2.43	0.42
70:Ah:71:LYS:HA	70:Ah:71:LYS:HD3	1.78	0.42
80:DC:263:ASP:OD1	80:DC:267:LYS:N	2.52	0.42
80:DC:385:MET:CE	80:DC:513:LYS:HG3	2.46	0.42
80:DC:634:TRP:HZ3	80:DC:663:VAL:HG21	1.84	0.42
81:EC:6799:C:H2'	81:EC:6800:G:O4'	2.19	0.42
2:BB:140:ILE:CG2	2:BB:213:ARG:HH11	2.29	0.42
4:BE:34:GLY:HA3	4:BE:83:PRO:HG3	2.01	0.42
9:BL:136:ARG:HH12	34:B5:303:U:C5'	2.31	0.42
10:BN:94:LYS:NZ	34:B5:952:A:OP1	2.29	0.42
11:BO:25:ASP:N	11:BO:55:SER:HB3	2.35	0.42
18:Be:14:VAL:HG21	34:B5:562:G:H21	1.85	0.42
19:BD:76:ARG:CG	21:BK:22:VAL:HG11	2.49	0.42
19:BD:95:GLY:O	19:BD:188:ILE:HD13	2.19	0.42
19:BD:105:MET:HE3	19:BD:122:VAL:HB	2.02	0.42
23:BQ:141:SER:O	34:B5:1195:C:N4	2.52	0.42
25:BS:62:THR:O	25:BS:66:LEU:HB2	2.19	0.42
31:Bg:271:VAL:HG12	31:Bg:272:ASP:CG	2.45	0.42
32:Bf:97:LYS:HD3	34:B5:1230:A:OP2	2.19	0.42
33:BM:114:LYS:O	34:B5:1226:A:N6	2.48	0.42
34:B5:43:A:H2'	34:B5:44:U:C6	2.54	0.42
34:B5:120:PSU:H2'	34:B5:121:U:H5'	2.00	0.42
34:B5:289:U:C2	34:B5:290:G:C8	3.06	0.42
34:B5:436:A:H8	34:B5:436:A:O5'	2.03	0.42
34:B5:853:G:H8	54:AR:173:ARG:HH22	1.68	0.42
34:B5:1182:U:H1'	34:B5:1185:U:O2	2.20	0.42
34:B5:1270:G:H2'	34:B5:1271:G:C8	2.55	0.42
34:B5:1281:G:H2'	34:B5:1282:U:C6	2.54	0.42
34:B5:1674:C:C2	34:B5:1675:C:C5	3.07	0.42
35:AA:59:ALA:N	35:AA:76:PHE:O	2.51	0.42
35:AA:70:ARG:HB3	35:AA:72:ARG:NH1	2.34	0.42
35:AA:183:GLY:CA	38:A1:896:A:H5"	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AA:211:HIS:CE1	35:AA:219:ILE:HD11	2.54	0.42
36:AB:331:ASN:OD1	36:AB:334:ARG:HB2	2.18	0.42
37:AC:237:GLN:OE1	37:AC:237:GLN:N	2.52	0.42
37:AC:321:LYS:O	37:AC:325:LEU:HG	2.19	0.42
38:A1:109:A:C4	38:A1:323:A:C6	3.07	0.42
38:A1:181:U:H2'	38:A1:182:U:O4'	2.19	0.42
38:A1:579:G:C6	38:A1:580:C:C4	3.07	0.42
38:A1:904:A:H2'	38:A1:905:U:H6	1.84	0.42
38:A1:1141:C:H2'	38:A1:1142:G:C8	2.55	0.42
38:A1:1472:U:C2	38:A1:1473:G:C8	3.07	0.42
38:A1:1500:G:C6	38:A1:1517:G:C6	3.06	0.42
38:A1:1952:G:N1	38:A1:2095:G:C6	2.88	0.42
38:A1:2215:A:C4	38:A1:2216:G:C8	3.07	0.42
38:A1:2406:C:H1'	38:A1:2819:A:H2	1.78	0.42
38:A1:2537:U:O2'	38:A1:2538:U:OP2	2.37	0.42
38:A1:2640:A:H2'	38:A1:2641:U:O4'	2.19	0.42
38:A1:2828:G:C4	38:A1:2829:U:C6	3.08	0.42
38:A1:2975:PSU:H2'	38:A1:2976:A:C8	2.55	0.42
38:A1:3037:U:O2'	38:A1:3038:U:H5'	2.20	0.42
38:A1:3160:U:H2'	38:A1:3161:C:H6	1.80	0.42
39:A3:67:G:H2'	39:A3:68:C:H6	1.84	0.42
39:A3:71:G:C2	39:A3:72:A:C4	3.08	0.42
40:A4:17:A:H2'	40:A4:18:U:C6	2.54	0.42
40:A4:17:A:C5	40:A4:18:U:C5	3.08	0.42
40:A4:37:A:OP2	70:Ah:86:ARG:HD2	2.19	0.42
42:AE:39:VAL:HB	42:AE:89:THR:OG1	2.20	0.42
45:AH:92:TYR:HD2	45:AH:142:ASP:C	2.27	0.42
45:AH:120:ASP:OD1	45:AH:122:LYS:HG2	2.18	0.42
46:AI:133:GLN:NE2	46:AI:134:ILE:O	2.52	0.42
47:AJ:16:LYS:CB	47:AJ:72:ARG:HG2	2.48	0.42
52:AP:33:ALA:O	52:AP:37:ASN:N	2.51	0.42
63:Aa:114:GLY:O	63:Aa:137:LYS:NZ	2.52	0.42
69:Ag:98:GLN:HA	69:Ag:101:VAL:HG12	2.01	0.42
70:Ah:34:GLN:NE2	70:Ah:38:ARG:HB2	2.31	0.42
80:DC:24:VAL:HG23	80:DC:102:LEU:HD22	2.01	0.42
80:DC:111:PHE:HB3	80:DC:114:GLU:OE2	2.18	0.42
80:DC:288:ILE:HG23	80:DC:319:LEU:HD23	2.00	0.42
81:EC:6765:A:H2'	81:EC:6766:U:H6	1.84	0.42
81:EC:6835:U:O4'	81:EC:6874:A:N6	2.33	0.42
1:BA:8:ASP:HB3	24:BR:115:LEU:HB2	2.01	0.42
2:BB:106:THR:OG1	11:BO:116:GLU:OE2	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BI:189:LEU:O	7:BI:193:LEU:HD23	2.20	0.42
8:BJ:76:LEU:HD21	8:BJ:96:VAL:HG11	2.01	0.42
9:BL:97:TYR:C	9:BL:99:ARG:N	2.77	0.42
13:BW:28:ARG:NH2	34:B5:865:A:OP1	2.43	0.42
19:BD:49:ILE:HA	19:BD:87:TYR:HB2	2.02	0.42
21:BK:11:ILE:O	21:BK:15:LEU:HD23	2.19	0.42
23:BQ:44:LEU:HD21	23:BQ:78:VAL:HG11	2.01	0.42
26:BT:69:LYS:NZ	34:B5:1368:G:OP2	2.52	0.42
26:BT:135:ILE:HG23	26:BT:138:GLN:HE21	1.84	0.42
29:Bc:22:ARG:NE	34:B5:1616:G:N2	2.68	0.42
31:Bg:207:ASP:OD1	31:Bg:208:GLY:N	2.53	0.42
33:BM:41:LEU:HD13	33:BM:123:VAL:HG12	2.01	0.42
33:BM:59:LEU:O	33:BM:122:VAL:HA	2.20	0.42
34:B5:90:C:O2	34:B5:451:A:H4'	2.19	0.42
34:B5:408:C:H2'	34:B5:409:C:H6	1.84	0.42
34:B5:894:U:C4	34:B5:895:G:O6	2.73	0.42
34:B5:909:U:H2'	34:B5:910:C:C6	2.55	0.42
34:B5:1335:U:N3	34:B5:1416:G:N1	2.40	0.42
34:B5:1477:G:C6	34:B5:1531:G:C6	3.07	0.42
34:B5:1770:U:H2'	34:B5:1771:U:C6	2.54	0.42
35:AA:192:LYS:HG3	35:AA:193:ARG:HG2	2.01	0.42
36:AB:301:THR:O	36:AB:303:LYS:N	2.50	0.42
38:A1:448:U:C5	38:A1:486:A:H1'	2.54	0.42
38:A1:529:A:H2'	38:A1:530:G:H8	1.84	0.42
38:A1:663:C:H2'	38:A1:664:U:C6	2.55	0.42
38:A1:773:G:H2'	38:A1:774:G:H8	1.84	0.42
38:A1:792:G:C2	38:A1:793:C:C4	3.06	0.42
38:A1:875:G:C2	38:A1:876:A:C8	3.08	0.42
38:A1:989:A:H2'	38:A1:990:PSU:C6	2.54	0.42
38:A1:1149:G:H2'	38:A1:1152:G:O6	2.19	0.42
38:A1:1182:A:H2'	38:A1:1183:C:H6	1.85	0.42
38:A1:1251:A:H3'	38:A1:1252:A:H4'	2.01	0.42
38:A1:1298:C:O2'	75:Am:113:ARG:NH1	2.53	0.42
38:A1:1400:G:C6	38:A1:1412:G:C6	3.08	0.42
38:A1:1500:G:C6	38:A1:1517:G:N1	2.88	0.42
38:A1:2220:A:H2'	38:A1:2221:G:C8	2.54	0.42
38:A1:2437:G:HO2'	38:A1:2438:A:P	2.40	0.42
38:A1:2603:G:H2'	38:A1:2604:U:C6	2.55	0.42
38:A1:2854:U:H2'	38:A1:2855:U:C6	2.54	0.42
38:A1:3017:A:C6	38:A1:3018:C:N4	2.87	0.42
38:A1:3080:G:C6	38:A1:3081:C:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3165:A:C5	38:A1:3286:G:C2	3.08	0.42
38:A1:3194:C:C2	38:A1:3199:G:N2	2.87	0.42
38:A1:3210:A:C4	38:A1:3211:C:C5	3.07	0.42
39:A3:96:U:H2'	39:A3:97:A:C8	2.54	0.42
41:AD:268:GLU:HG3	41:AD:272:TYR:CE2	2.53	0.42
50:AN:28:TRP:CD1	50:AN:32:GLN:HE22	2.37	0.42
50:AN:159:ARG:HB2	50:AN:164:LEU:HB2	2.00	0.42
54:AR:105:LEU:HA	54:AR:108:LYS:NZ	2.34	0.42
54:AR:140:GLU:O	54:AR:144:GLN:HG2	2.20	0.42
55:AS:40:ARG:HD2	55:AS:40:ARG:HA	1.76	0.42
58:AV:19:VAL:HG13	58:AV:49:LEU:HD23	2.01	0.42
65:Ac:75:ASN:HD21	65:Ac:86:ARG:HE	1.68	0.42
66:Ad:56:ASN:HA	66:Ad:59:ILE:HG22	2.02	0.42
68:Af:16:TYR:CE1	68:Af:25:PRO:HA	2.54	0.42
68:Af:46:GLY:N	68:Af:71:VAL:HG13	2.35	0.42
71:Ai:90:MET:HE2	71:Ai:90:MET:N	2.34	0.42
80:DC:356:LEU:HD12	80:DC:357:TYR:N	2.35	0.42
80:DC:733:ILE:HD13	80:DC:795:GLN:O	2.19	0.42
81:EC:6839:U:C2	81:EC:6845:G:C2	3.07	0.42
1:BA:123:VAL:HB	1:BA:145:ALA:HA	2.02	0.42
2:BB:185:THR:O	2:BB:189:ILE:HG12	2.20	0.42
4:BE:179:LYS:HB2	4:BE:230:GLU:HA	2.01	0.42
7:BI:37:LYS:HB2	7:BI:59:ARG:HB3	2.02	0.42
7:BI:76:THR:HG23	7:BI:104:ILE:HG21	2.02	0.42
8:BJ:3:ARG:HD2	8:BJ:4:ALA:N	2.35	0.42
8:BJ:40:LYS:O	8:BJ:44:ARG:HG3	2.19	0.42
8:BJ:76:LEU:O	8:BJ:80:LEU:HD23	2.20	0.42
9:BL:45:PRO:HG3	9:BL:115:PHE:HE1	1.83	0.42
9:BL:76:VAL:HG11	9:BL:87:ARG:HB2	2.01	0.42
9:BL:129:ARG:HB3	34:B5:115:G:C8	2.55	0.42
11:BO:44:GLY:O	11:BO:48:VAL:HG22	2.20	0.42
11:BO:61:MET:HE1	81:EC:6840:A:C8	2.55	0.42
11:BO:68:ALA:HB2	11:BO:105:LEU:HD12	2.02	0.42
13:BW:28:ARG:NH2	34:B5:864:U:H3'	2.34	0.42
19:BD:79:TYR:HB3	19:BD:83:THR:CG2	2.50	0.42
20:BF:137:ILE:HD12	20:BF:137:ILE:HA	1.95	0.42
25:BS:4:VAL:HG13	28:BZ:82:HIS:HE1	1.84	0.42
31:Bg:9:LEU:HB3	31:Bg:313:TRP:NE1	2.35	0.42
31:Bg:10:ARG:NH1	31:Bg:314:GLN:OE1	2.43	0.42
31:Bg:132:LYS:HA	31:Bg:143:THR:HA	2.02	0.42
33:BM:42:ALA:N	33:BM:122:VAL:O	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:199:G:C2	34:B5:200:A:C5	3.07	0.42
34:B5:219:A:H61	34:B5:842:C:H1'	1.85	0.42
34:B5:390:G:H2'	34:B5:391:A:C8	2.55	0.42
34:B5:521:A:H61	34:B5:531:C:H42	1.67	0.42
34:B5:587:C:H2'	34:B5:588:U:C6	2.54	0.42
34:B5:775:G:O6	34:B5:785:U:C2	2.72	0.42
34:B5:1147:A:H2'	34:B5:1148:C:C6	2.55	0.42
34:B5:1213:G:N1	34:B5:1451:C:C4	2.88	0.42
34:B5:1407:U:H2'	34:B5:1408:G:H8	1.84	0.42
34:B5:1437:U:H2'	34:B5:1438:G:C8	2.53	0.42
34:B5:1478:G:H2'	34:B5:1479:A:O4'	2.20	0.42
34:B5:1483:A:H61	34:B5:1591:C:C1'	2.31	0.42
34:B5:1621:U:C4	34:B5:1622:G:N7	2.87	0.42
34:B5:1641:C:N4	34:B5:1642:G:O6	2.52	0.42
34:B5:1733:C:O2'	34:B5:1734:U:H5'	2.20	0.42
35:AA:9:ARG:HD2	38:A1:911:C:OP2	2.20	0.42
35:AA:144:ASN:O	35:AA:145:LYS:HE2	2.20	0.42
35:AA:183:GLY:HA2	38:A1:896:A:H5"	2.00	0.42
37:AC:169:LEU:HA	37:AC:172:VAL:HG22	2.00	0.42
38:A1:36:C:O2	38:A1:934:G:O2'	2.38	0.42
38:A1:197:G:OP1	38:A1:197:G:H8	2.03	0.42
38:A1:263:C:H3'	38:A1:264:G:C8	2.54	0.42
38:A1:287:G:C2	38:A1:288:C:C2	3.08	0.42
38:A1:396:A:C6	38:A1:399:A:C5	3.08	0.42
38:A1:615:U:H2'	38:A1:616:G:H8	1.85	0.42
38:A1:1076:C:C4	38:A1:1077:U:C4	3.08	0.42
38:A1:1078:U:H5'	41:AD:43:LYS:HD3	2.01	0.42
38:A1:1177:G:H21	38:A1:1177:G:P	2.38	0.42
38:A1:1328:C:H2'	38:A1:1329:U:C2	2.54	0.42
38:A1:1706:C:H2'	38:A1:1707:A:O4'	2.19	0.42
38:A1:1718:G:C2	38:A1:1719:G:C5	3.07	0.42
38:A1:1806:A:C6	38:A1:1807:G:C6	3.07	0.42
38:A1:1815:U:H1'	38:A1:1817:G:H22	1.84	0.42
38:A1:1942:U:H3'	54:AR:74:ARG:NH2	2.35	0.42
38:A1:2143:A:O2'	38:A1:2144:A:H5'	2.19	0.42
38:A1:2291:A:C6	38:A1:2292:U:C4	3.08	0.42
38:A1:2338:C:H3'	38:A1:2339:C:H2'	2.00	0.42
38:A1:2785:A:H2'	38:A1:2786:G:O4'	2.19	0.42
38:A1:3015:G:C2	38:A1:3016:A:C5	3.08	0.42
38:A1:3146:G:C2	38:A1:3147:G:C5	3.08	0.42
38:A1:3308:C:OP2	38:A1:3309:G:N2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3343:G:O3'	38:A1:3344:A:H8	2.02	0.42
39:A3:11:A:O2'	39:A3:13:A:H2'	2.19	0.42
40:A4:59:A:OP1	40:A4:98:U:O2'	2.37	0.42
40:A4:74:U:O5'	61:AY:76:LEU:HD21	2.20	0.42
40:A4:109:A:H2	40:A4:114:G:C6	2.38	0.42
41:AD:80:SER:HA	41:AD:83:LEU:HD23	2.01	0.42
42:AE:98:VAL:HA	42:AE:101:PHE:CE2	2.55	0.42
43:AF:55:TYR:OH	43:AF:186:HIS:HA	2.20	0.42
45:AH:107:ASP:C	45:AH:109:ALA:H	2.27	0.42
48:AL:166:ALA:N	63:Aa:135:GLU:OE2	2.52	0.42
53:AQ:156:GLY:O	53:AQ:159:LYS:HB2	2.19	0.42
59:AW:6:ASP:HB3	59:AW:11:ALA:N	2.35	0.42
60:AX:59:SER:O	60:AX:63:ILE:HG22	2.19	0.42
62:AZ:14:VAL:HG13	69:Ag:86:LYS:HZ2	1.84	0.42
65:Ac:17:VAL:HG11	65:Ac:92:ILE:HD12	2.02	0.42
68:Af:17:GLN:HE21	68:Af:82:ARG:HD3	1.84	0.42
68:Af:89:LEU:HA	68:Af:89:LEU:HD23	1.83	0.42
73:Ak:7:ASP:HB3	73:Ak:10:GLN:OE1	2.19	0.42
79:E:116:LEU:HB3	79:E:120:VAL:HG23	2.02	0.42
79:E:194:LEU:HA	79:E:194:LEU:HD12	1.84	0.42
80:DC:579:SER:N	80:DC:584:ASN:O	2.50	0.42
80:DC:602:GLU:HG2	80:DC:603:ASN:N	2.34	0.42
80:DC:682:ARG:HB3	80:DC:725:GLN:OE1	2.19	0.42
2:BB:171:ILE:HG21	2:BB:197:ILE:HG12	2.02	0.42
5:BG:87:ARG:HH12	34:B5:161:U:P	2.42	0.42
7:BI:89:GLU:HA	7:BI:92:ARG:HB3	2.01	0.42
8:BJ:123:HIS:ND1	18:Be:37:ARG:HB2	2.34	0.42
9:BL:69:LYS:NZ	34:B5:111:U:H1'	2.34	0.42
9:BL:86:ILE:HG13	9:BL:107:VAL:HB	2.01	0.42
10:BN:73:ARG:HD3	34:B5:859:A:C4	2.54	0.42
11:BO:18:ARG:HA	11:BO:82:LYS:O	2.19	0.42
13:BW:57:ARG:O	13:BW:58:SER:OG	2.26	0.42
14:BX:30:LYS:NZ	34:B5:1132:A:OP1	2.50	0.42
17:Bb:33:LEU:HD12	17:Bb:79:PHE:HB2	2.01	0.42
18:Be:55:ARG:HH21	34:B5:557:G:P	2.42	0.42
19:BD:74:GLN:HE22	19:BD:81:PRO:HG3	1.84	0.42
20:BF:55:ASP:OD2	20:BF:138:THR:HB	2.19	0.42
20:BF:134:VAL:O	20:BF:138:THR:HG23	2.19	0.42
22:BP:111:MET:HG3	25:BS:119:ILE:HG23	2.01	0.42
23:BQ:12:LYS:NZ	23:BQ:14:LYS:O	2.53	0.42
23:BQ:36:ILE:O	23:BQ:45:ARG:NH2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:42:LEU:HD11	31:Bg:68:VAL:HG11	2.02	0.42
33:BM:36:LEU:HD21	33:BM:43:ARG:HE	1.84	0.42
33:BM:103:LEU:O	33:BM:115:VAL:HG11	2.19	0.42
34:B5:549:G:C2	34:B5:550:A:C5	3.08	0.42
34:B5:652:G:H4'	34:B5:655:G:N7	2.35	0.42
34:B5:758:U:C2	34:B5:759:PSU:C6	3.08	0.42
34:B5:1091:A:H4'	34:B5:1092:A:O4'	2.19	0.42
34:B5:1163:A:H2'	34:B5:1164:G:O4'	2.19	0.42
34:B5:1281:G:H2'	34:B5:1282:U:H6	1.85	0.42
34:B5:1526:A:H5"	34:B5:1527:C:H5	1.84	0.42
34:B5:1540:G:C5	34:B5:1541:G:C5	3.08	0.42
34:B5:1602:C:H2'	34:B5:1603:U:C6	2.55	0.42
34:B5:1645:G:C6	34:B5:1757:G:C6	3.07	0.42
35:AA:84:THR:HG22	78:Ap:63:THR:H	1.85	0.42
35:AA:179:LEU:O	35:AA:184:ARG:HG2	2.19	0.42
36:AB:364:LYS:HD3	38:A1:3049:A:H4'	2.02	0.42
38:A1:21:G:H3'	38:A1:22:G:H8	1.85	0.42
38:A1:65:A:C4	38:A1:110:G:N7	2.88	0.42
38:A1:215:G:H2'	38:A1:216:G:H8	1.83	0.42
38:A1:521:A:H2'	38:A1:522:A:O4'	2.19	0.42
38:A1:544:C:H5"	38:A1:545:U:C6	2.54	0.42
38:A1:600:G:N2	38:A1:602:A:H3'	2.35	0.42
38:A1:767:U:H1'	38:A1:768:C:C6	2.54	0.42
38:A1:876:A:H5"	38:A1:1890:U:H5"	2.02	0.42
38:A1:979:U:H4'	38:A1:980:A:O4'	2.19	0.42
38:A1:1261:G:H5"	38:A1:1262:G:N7	2.34	0.42
38:A1:1338:C:H2'	38:A1:1339:C:C6	2.55	0.42
38:A1:1441:G:H2'	38:A1:1442:U:C6	2.55	0.42
38:A1:1550:C:H2'	38:A1:1551:C:C6	2.54	0.42
38:A1:1604:G:C6	38:A1:1605:A:C6	3.07	0.42
38:A1:2250:G:C6	38:A1:2251:G:C5	3.08	0.42
38:A1:2251:G:H2'	38:A1:2252:A:C8	2.55	0.42
38:A1:2569:A:H4'	38:A1:2570:U:H5'	2.01	0.42
38:A1:2849:C:H3'	38:A1:2850:G:H8	1.85	0.42
38:A1:2912:G:C5	38:A1:2913:C:C4	3.07	0.42
38:A1:2959:C:H2'	38:A1:2960:C:C6	2.54	0.42
38:A1:3061:G:C2	38:A1:3062:G:C5	3.08	0.42
38:A1:3162:C:C2	38:A1:3289:G:N2	2.88	0.42
38:A1:3176:G:N7	42:AE:167:ASN:HB2	2.35	0.42
39:A3:116:C:H2'	39:A3:117:A:C8	2.55	0.42
40:A4:156:U:H2'	40:A4:157:U:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:AE:146:ILE:O	42:AE:150:LYS:HD3	2.19	0.42
43:AF:82:LYS:O	43:AF:119:VAL:N	2.43	0.42
44:AG:101:THR:HB	44:AG:191:ASN:HD22	1.85	0.42
45:AH:79:ILE:O	45:AH:83:THR:HG22	2.20	0.42
45:AH:87:LYS:O	45:AH:185:GLY:N	2.51	0.42
50:AN:99:ARG:HB2	50:AN:167:THR:HG21	2.02	0.42
53:AQ:104:LEU:HD23	53:AQ:104:LEU:HA	1.75	0.42
54:AR:22:VAL:HG23	54:AR:22:VAL:O	2.19	0.42
57:AU:49:ASN:OD1	57:AU:49:ASN:N	2.52	0.42
60:AX:71:THR:O	60:AX:75:LYS:N	2.51	0.42
63:Aa:2:PRO:HB2	63:Aa:3:SER:H	1.73	0.42
67:Ae:16:LYS:HD3	67:Ae:16:LYS:HA	1.80	0.42
67:Ae:72:LYS:HD2	67:Ae:92:TYR:CE1	2.54	0.42
71:Ai:21:THR:OG1	71:Ai:21:THR:O	2.33	0.42
73:Ak:8:ILE:HD11	73:Ak:65:LEU:HD22	2.01	0.42
73:Ak:13:GLU:HA	73:Ak:16:ARG:NH2	2.35	0.42
74:Al:44:TRP:CE2	74:Al:45:ARG:HG3	2.54	0.42
80:DC:702:GLY:HA2	80:DC:705:ILE:HB	2.01	0.42
80:DC:771:TYR:C	80:DC:772:LEU:HD12	2.45	0.42
81:EC:6879:U:O2'	81:EC:6880:G:OP1	2.35	0.42
81:EC:6892:U:H5'	81:EC:6893:C:OP1	2.19	0.42
81:EC:6897:G:H2'	81:EC:6898:U:C6	2.55	0.42
2:BB:85:LYS:O	2:BB:102:GLY:N	2.41	0.42
3:BC:112:GLY:HA3	3:BC:136:VAL:HG12	2.01	0.42
6:BH:17:GLU:HA	6:BH:19:GLN:NE2	2.35	0.42
8:BJ:116:LEU:HD21	8:BJ:156:ILE:HG21	2.02	0.42
15:BY:79:VAL:O	15:BY:83:LYS:HG2	2.20	0.42
15:BY:83:LYS:NZ	15:BY:91:LEU:HD13	2.34	0.42
19:BD:127:MET:HE1	19:BD:133:GLY:HA2	2.00	0.42
23:BQ:125:GLU:CD	23:BQ:134:ALA:HB2	2.45	0.42
26:BT:37:VAL:HG21	26:BT:100:ILE:HD11	2.01	0.42
26:BT:38:LYS:HA	26:BT:46:PRO:HA	2.02	0.42
27:BU:63:LEU:HB2	27:BU:84:MET:HB2	2.00	0.42
27:BU:84:MET:HE1	30:Bd:51:GLY:O	2.20	0.42
29:Bc:15:VAL:HG23	29:Bc:50:GLU:OE2	2.19	0.42
30:Bd:32:ARG:HH12	34:B5:1596:C:H3'	1.83	0.42
30:Bd:40:ARG:NH2	34:B5:1198:G:O3'	2.52	0.42
34:B5:61:A:H8	34:B5:61:A:OP1	2.03	0.42
34:B5:296:U:H2'	34:B5:297:U:O2	2.19	0.42
34:B5:390:G:H2'	34:B5:391:A:H8	1.85	0.42
34:B5:480:G:C6	34:B5:509:G:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:542:A:H5"	34:B5:544:A:O4'	2.20	0.42
34:B5:876:G:C6	34:B5:936:G:C5	3.08	0.42
34:B5:1067:C:C2	34:B5:1068:C:C5	3.08	0.42
34:B5:1135:U:H2'	34:B5:1136:U:C6	2.55	0.42
34:B5:1158:C:H41	34:B5:1163:A:N6	2.14	0.42
34:B5:1300:A:OP2	34:B5:1301:U:N3	2.53	0.42
34:B5:1349:G:H2'	34:B5:1350:U:C6	2.55	0.42
35:AA:21:ARG:HE	35:AA:22:LEU:CD2	2.33	0.42
36:AB:198:HIS:HA	36:AB:201:LYS:HD2	2.00	0.42
36:AB:313:HIS:NE2	38:A1:3377:G:O3'	2.50	0.42
38:A1:43:A:C6	38:A1:2802:A:C2	3.07	0.42
38:A1:125:C:H2'	38:A1:126:U:C6	2.55	0.42
38:A1:300:G:H2'	38:A1:301:G:H8	1.84	0.42
38:A1:344:A:C6	38:A1:345:G:C5	3.08	0.42
38:A1:379:C:C2	38:A1:380:U:C5	3.08	0.42
38:A1:392:G:C2	38:A1:393:U:C4	3.08	0.42
38:A1:421:G:H1'	38:A1:2365:C:OP2	2.19	0.42
38:A1:499:G:H2'	38:A1:500:C:H6	1.83	0.42
38:A1:760:G:H1'	38:A1:771:A:H61	1.82	0.42
38:A1:891:G:C5	38:A1:892:U:C4	3.08	0.42
38:A1:1218:U:C4	38:A1:1219:C:C4	3.08	0.42
38:A1:1357:G:H2'	38:A1:1358:C:H6	1.85	0.42
38:A1:1588:A:C6	74:Al:4:GLN:NE2	2.87	0.42
38:A1:1602:A:OP2	54:AR:38:ARG:N	2.34	0.42
38:A1:1720:U:P	54:AR:110:ARG:HH22	2.43	0.42
38:A1:1844:C:H2'	38:A1:1845:G:O4'	2.20	0.42
38:A1:1845:G:N1	38:A1:1851:G:C6	2.88	0.42
38:A1:2482:U:OP2	79:E:102:LYS:NZ	2.39	0.42
38:A1:2528:G:H2'	38:A1:2529:A:C8	2.54	0.42
38:A1:2639:G:H2'	38:A1:2640:A:H8	1.84	0.42
38:A1:2789:U:C2	38:A1:2790:A:C8	3.07	0.42
38:A1:2794:G:O2'	38:A1:2795:U:OP2	2.30	0.42
38:A1:2971:A:H2'	46:AI:110:ARG:CZ	2.50	0.42
38:A1:3282:U:H2'	38:A1:3283:U:O4'	2.19	0.42
40:A4:43:A:OP2	72:Aj:62:GLY:HA3	2.20	0.42
41:AD:278:SER:OG	41:AD:281:GLU:OE1	2.21	0.42
45:AH:84:LYS:O	45:AH:187:ILE:HB	2.20	0.42
51:AO:77[A]:SER:HB2	51:AO:104[A]:VAL:HG12	2.02	0.42
53:AQ:149:ALA:HA	53:AQ:152:HIS:HB2	2.01	0.42
54:AR:133:LYS:HD2	54:AR:134:HIS:HD2	1.84	0.42
62:AZ:55:LYS:HG3	62:AZ:56:LYS:HE2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:Aa:77:LYS:HD3	63:Aa:80:THR:HG21	2.02	0.42
78:Ap:5:THR:OG1	78:Ap:8:VAL:HG22	2.20	0.42
80:DC:188:ILE:HB	80:DC:192:TYR:CE2	2.55	0.42
80:DC:596:GLU:H	80:DC:596:GLU:CD	2.21	0.42
80:DC:700:ARG:HD2	80:DC:700:ARG:O	2.20	0.42
80:DC:823:ARG:HD2	80:DC:828:MET:C	2.44	0.42
81:EC:6884:G:C4	81:EC:6885:G:N7	2.88	0.42
81:EC:6945:U:H5'	81:EC:6946:A:OP1	2.20	0.42
1:BA:77:SER:HB2	1:BA:86:VAL:HG21	2.02	0.42
2:BB:86:LEU:HD13	2:BB:98:THR:HB	2.02	0.42
2:BB:136:ARG:HG2	2:BB:218:LEU:HD11	2.02	0.42
3:BC:77:GLN:HE22	3:BC:107:SER:N	2.17	0.42
3:BC:80:VAL:HA	3:BC:102:VAL:HG13	2.02	0.42
3:BC:174:ARG:O	8:BJ:97:LEU:HB3	2.19	0.42
4:BE:46:VAL:O	4:BE:51:ARG:N	2.53	0.42
4:BE:187:ARG:NH2	34:B5:752:A:H3'	2.35	0.42
6:BH:121:VAL:HG13	6:BH:122:HIS:HD2	1.85	0.42
8:BJ:176:ASN:OD1	8:BJ:180:LYS:NZ	2.53	0.42
9:BL:6:THR:OG1	9:BL:9:SER:HB3	2.19	0.42
10:BN:99:ARG:HB3	10:BN:99:ARG:NH1	2.35	0.42
13:BW:81:VAL:HG12	13:BW:82:LYS:O	2.20	0.42
14:BX:56:LYS:NZ	14:BX:93:LEU:O	2.51	0.42
14:BX:109:ARG:HD3	14:BX:114:LYS:HZ3	1.85	0.42
16:Ba:38:ARG:HA	16:Ba:38:ARG:HE	1.85	0.42
20:BF:166:ARG:CZ	29:Bc:46:GLY:HA2	2.49	0.42
22:BP:98:ASN:ND2	22:BP:103:ASN:OD1	2.52	0.42
23:BQ:78:VAL:O	23:BQ:81:ILE:HB	2.20	0.42
24:BR:115:LEU:O	24:BR:115:LEU:HG	2.20	0.42
31:Bg:6:VAL:HA	31:Bg:272:ASP:OD1	2.20	0.42
31:Bg:68:VAL:HA	31:Bg:84:SER:HA	2.02	0.42
34:B5:16:G:H2'	34:B5:17:C:H6	1.80	0.42
34:B5:17:C:H4'	34:B5:1109:G:C8	2.55	0.42
34:B5:51:A:OP2	34:B5:424:C:N4	2.51	0.42
34:B5:258:C:H2'	34:B5:259:U:C6	2.55	0.42
34:B5:622:A:H4'	34:B5:623:A:H5"	2.02	0.42
34:B5:627:C:C4	34:B5:628:G:C5	3.08	0.42
34:B5:851:U:C4	54:AR:176:ARG:HB2	2.54	0.42
34:B5:885:G:H2'	34:B5:886:U:C6	2.55	0.42
34:B5:889:U:H2'	34:B5:890:C:H6	1.85	0.42
34:B5:1184:A:HO2'	34:B5:1209:C:HO2'	1.62	0.42
34:B5:1338:C:H1'	34:B5:1410:A:C5	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AA:122:ASP:OD1	35:AA:122:ASP:O	2.37	0.42
35:AA:147:ARG:HH21	35:AA:156:LYS:C	2.28	0.42
35:AA:227:ARG:HH21	38:A1:2161:G:H5"	1.85	0.42
36:AB:141:GLY:O	36:AB:145:GLU:HG2	2.19	0.42
36:AB:236:LYS:HB3	38:A1:2880:PSU:O3'	2.20	0.42
38:A1:10:C:C2	38:A1:11:A:C8	3.08	0.42
38:A1:135:C:C2	70:Ah:94:LYS:HG2	2.55	0.42
38:A1:253:A:H2'	38:A1:254:A:H8	1.83	0.42
38:A1:378:A:H1'	61:AY:91:ASN:HA	2.02	0.42
38:A1:522:A:H1'	55:AS:65:ASN:HD21	1.85	0.42
38:A1:828:A:H2'	38:A1:829:U:C6	2.54	0.42
38:A1:1172:G:H2'	38:A1:1173:U:C6	2.54	0.42
38:A1:1244:A:N3	38:A1:1244:A:H2'	2.35	0.42
38:A1:1512:U:C2	38:A1:1513:G:C8	3.08	0.42
38:A1:1715:A:N7	65:Ac:84:LEU:HD11	2.35	0.42
38:A1:1891:A:H2'	38:A1:1892:G:O4'	2.20	0.42
38:A1:1909:A:C6	38:A1:1910:A:C6	3.08	0.42
38:A1:2403:G:H1	38:A1:2820:A:H61	1.67	0.42
38:A1:2476:C:O2'	38:A1:2488:A:H4'	2.20	0.42
38:A1:3158:G:C6	38:A1:3292:A:N1	2.88	0.42
38:A1:3174:A:C5	38:A1:3279:A:H1'	2.54	0.42
38:A1:3269:U:OP1	42:AE:77:ARG:NH1	2.53	0.42
39:A3:22:A:H3'	39:A3:23:A:C8	2.55	0.42
43:AF:214:TRP:NE1	43:AF:219:LYS:HD2	2.34	0.42
44:AG:157:VAL:HG13	44:AG:160:ILE:HA	2.01	0.42
46:AI:180:GLU:HA	46:AI:183:LYS:NZ	2.35	0.42
46:AI:183:LYS:HA	46:AI:186:ASP:OD2	2.20	0.42
48:AL:50:PRO:O	48:AL:51:LEU:HB2	2.19	0.42
48:AL:75:PHE:N	48:AL:96:ALA:O	2.44	0.42
53:AQ:113:LYS:HA	53:AQ:116:LYS:HE3	2.00	0.42
59:AW:43:ARG:O	59:AW:43:ARG:HD3	2.20	0.42
63:Aa:94:ALA:HB2	63:Aa:121:VAL:HG12	2.01	0.42
65:Ac:43:ILE:HA	65:Ac:68:TYR:O	2.20	0.42
67:Ae:32:TRP:CZ2	67:Ae:53:PRO:HD2	2.55	0.42
71:Ai:30:LYS:HE2	71:Ai:30:LYS:HB2	1.93	0.42
80:DC:31:GLY:HA2	80:DC:34:THR:HG22	2.02	0.42
80:DC:387:PRO:HA	80:DC:394:PHE:CE2	2.55	0.42
80:DC:568:GLU:OE1	80:DC:723:LYS:HE3	2.20	0.42
80:DC:587:TYR:O	80:DC:689:LEU:N	2.48	0.42
1:BA:11:PRO:HA	24:BR:117:LEU:HD22	2.01	0.41
1:BA:125:ASP:HA	1:BA:164:ASN:ND2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BB:171:ILE:HD13	2:BB:174:LYS:HZ1	1.85	0.41
9:BL:58:CYS:SG	9:BL:61:THR:N	2.80	0.41
10:BN:127:ARG:O	10:BN:131:THR:HG23	2.20	0.41
11:BO:51:ASP:HB3	34:B5:906:A:OP1	2.20	0.41
18:Be:14:VAL:O	18:Be:18:THR:OG1	2.28	0.41
19:BD:25:PHE:HA	19:BD:28:GLU:HG2	2.02	0.41
22:BP:96:ILE:HD12	22:BP:105:VAL:HG11	2.02	0.41
24:BR:73:LEU:HD23	24:BR:73:LEU:O	2.20	0.41
26:BT:61:VAL:O	26:BT:65:ILE:HG12	2.20	0.41
27:BU:59:PRO:HA	34:B5:1382:A:H5'	2.01	0.41
34:B5:198:A:C2	34:B5:199:G:H1'	2.55	0.41
34:B5:219:A:N1	34:B5:842:C:O2'	2.39	0.41
34:B5:446:A:C6	34:B5:447:U:C4	3.07	0.41
34:B5:511:A:C6	34:B5:512:A:C5	3.07	0.41
34:B5:521:A:C2	34:B5:532:U:C2	3.08	0.41
34:B5:639:U:N3	34:B5:695:U:O2	2.35	0.41
34:B5:694:U:H3'	34:B5:695:U:H6	1.85	0.41
34:B5:764:U:O2	34:B5:772:G:C6	2.73	0.41
34:B5:768:C:H2'	34:B5:769:A:C8	2.55	0.41
34:B5:774:A:C4	34:B5:787:G:C2	3.08	0.41
34:B5:933:A:C5	34:B5:935:U:C2	3.08	0.41
34:B5:1107:G:C6	34:B5:1108:G:O6	2.73	0.41
34:B5:1405:G:H2'	34:B5:1406:A:H8	1.85	0.41
34:B5:1712:A:C2	34:B5:1714:A:H4'	2.55	0.41
35:AA:29:LEU:HD12	35:AA:30:ARG:H	1.85	0.41
35:AA:132:ASN:HD21	38:A1:2179:C:H2'	1.84	0.41
35:AA:243:THR:HG21	38:A1:2244:A:O4'	2.20	0.41
36:AB:313:HIS:CE1	38:A1:3378:C:H5"	2.55	0.41
37:AC:5:GLN:O	37:AC:19:ALA:HB1	2.20	0.41
37:AC:141:ARG:HD2	37:AC:141:ARG:HA	1.86	0.41
37:AC:208:VAL:O	37:AC:251:THR:HG23	2.20	0.41
37:AC:342:LYS:HA	37:AC:342:LYS:HD2	1.84	0.41
38:A1:176:G:C6	38:A1:177:U:N3	2.88	0.41
38:A1:247:C:O2'	38:A1:249:U:H5'	2.19	0.41
38:A1:297:G:N3	71:Ai:41:ARG:NH2	2.68	0.41
38:A1:357:A:C6	38:A1:358:G:C6	3.08	0.41
38:A1:754:G:C2	38:A1:755:A:C8	3.07	0.41
38:A1:790:U:O2'	38:A1:791:A:H5'	2.19	0.41
38:A1:838:G:O6	38:A1:856:G:C2	2.73	0.41
38:A1:998:A:H4'	39:A3:103:A:C2	2.55	0.41
38:A1:1177:G:C5'	68:Af:18:ARG:HH12	2.29	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1186:G:H2'	38:A1:1187:C:C6	2.55	0.41
38:A1:1233:G:O2'	38:A1:1245:A:N6	2.53	0.41
38:A1:1497:C:C2	38:A1:1520:G:C2	3.08	0.41
38:A1:1745:C:H2'	38:A1:1746:U:H6	1.85	0.41
38:A1:1828:A:H2'	38:A1:1829:G:O4'	2.20	0.41
38:A1:1847:A:H5'	52:AP:128:ARG:HH12	1.85	0.41
38:A1:1918:C:C4	38:A1:1919:G:C6	3.08	0.41
38:A1:2584:G:H5"	38:A1:2585:G:OP2	2.20	0.41
38:A1:3063:C:H2'	38:A1:3064:U:H6	1.85	0.41
39:A3:22:A:H3'	39:A3:23:A:H8	1.84	0.41
39:A3:62:U:H2'	39:A3:63:A:H8	1.84	0.41
40:A4:80:A:HO2'	40:A4:83:C:H41	1.61	0.41
41:AD:8:LYS:HD2	41:AD:8:LYS:HA	1.91	0.41
41:AD:66:SER:OG	41:AD:67:SER:N	2.52	0.41
41:AD:119:TYR:OH	41:AD:135:VAL:N	2.38	0.41
44:AG:168:ALA:CB	71:Ai:47:ILE:HD11	2.50	0.41
48:AL:176:GLU:OE1	48:AL:177:LYS:HD3	2.20	0.41
51:AO:57[A]:PHE:CE2	51:AO:72[A]:HIS:HD2	2.38	0.41
51:AO:189[A]:ASP:OD2	51:AO:189[A]:ASP:C	2.62	0.41
52:AP:129:THR:OG1	52:AP:130:TYR:N	2.53	0.41
53:AQ:150:VAL:HA	53:AQ:153:PHE:CD2	2.55	0.41
54:AR:43:LYS:HA	54:AR:43:LYS:HD3	1.85	0.41
54:AR:98:ARG:HD2	54:AR:133:LYS:O	2.20	0.41
56:AT:65:TYR:OH	56:AT:89:LEU:O	2.30	0.41
57:AU:97:SER:HA	57:AU:103:TYR:HD1	1.85	0.41
58:AV:20:GLY:HA2	58:AV:35:TYR:CE1	2.55	0.41
63:Aa:116:GLY:HA2	63:Aa:137:LYS:HD3	2.02	0.41
71:Ai:4:LYS:O	71:Ai:16:LYS:HE2	2.20	0.41
73:Ak:7:ASP:CB	73:Ak:10:GLN:HB2	2.50	0.41
75:Am:88:LYS:HA	75:Am:92:ASP:OD1	2.19	0.41
75:Am:112:LYS:HD3	75:Am:112:LYS:HA	1.76	0.41
76:An:18:ARG:O	76:An:21:ARG:HB3	2.19	0.41
79:E:185:MET:HE2	79:E:185:MET:N	2.35	0.41
80:DC:585:ARG:HH22	80:DC:842:LEU:HA	1.85	0.41
1:BA:191:ARG:NH1	12:BV:43:GLY:O	2.53	0.41
3:BC:70:ASP:OD2	3:BC:133:LYS:NZ	2.52	0.41
11:BO:25:ASP:H	11:BO:55:SER:HB3	1.85	0.41
11:BO:114:ARG:HA	11:BO:114:ARG:HD3	1.76	0.41
14:BX:50:LYS:HG2	14:BX:101:GLU:OE2	2.21	0.41
16:Ba:53:LEU:HA	16:Ba:53:LEU:HD12	1.85	0.41
22:BP:43:ARG:HH12	34:B5:1551:U:H3'	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BR:102:VAL:O	24:BR:121:VAL:HA	2.19	0.41
27:BU:25:THR:C	27:BU:26:LEU:HD12	2.45	0.41
28:BZ:41:ILE:HD13	28:BZ:41:ILE:HA	1.94	0.41
32:Bf:126:CYS:HB3	32:Bf:130:VAL:HG21	2.02	0.41
34:B5:4:C:C2	34:B5:5:U:C5	3.08	0.41
34:B5:9:U:H2'	34:B5:11:A:OP2	2.20	0.41
34:B5:237:C:O2'	34:B5:835:U:OP1	2.22	0.41
34:B5:563:U:C2	34:B5:580:A:N7	2.84	0.41
34:B5:1040:G:C4	34:B5:1041:G:C8	3.08	0.41
34:B5:1178:G:P	34:B5:1189:A:H61	2.43	0.41
34:B5:1367:G:C2	34:B5:1368:G:C4	3.08	0.41
34:B5:1448:G:C6	34:B5:1449:U:C4	3.08	0.41
34:B5:1512:G:C6	34:B5:1513:G:O6	2.73	0.41
34:B5:1639:C:H2'	34:B5:1640:C:O4'	2.20	0.41
34:B5:1744:A:H2'	34:B5:1745:G:C8	2.56	0.41
36:AB:159:ARG:HH12	38:A1:3004:C:P	2.42	0.41
36:AB:283:TYR:CE2	36:AB:325:LYS:HD3	2.56	0.41
37:AC:87:GLN:NE2	38:A1:1439:U:O5'	2.53	0.41
38:A1:57:A:H5'	50:AN:157:LYS:HD2	2.02	0.41
38:A1:215:G:H2'	38:A1:216:G:C8	2.54	0.41
38:A1:238:A:C8	38:A1:239:G:C6	3.08	0.41
38:A1:359:U:O4	38:A1:920:A:C5	2.73	0.41
38:A1:527:A:H2'	38:A1:528:U:O4'	2.20	0.41
38:A1:768:C:O2'	48:AL:183:ARG:NH2	2.52	0.41
38:A1:947:G:H2'	38:A1:948:C:C6	2.55	0.41
38:A1:1122:U:C2	38:A1:1123:U:C5	3.08	0.41
38:A1:1139:G:C4	38:A1:1140:G:C8	3.07	0.41
38:A1:1191:U:OP2	51:AO:49[A]:ARG:HD2	2.20	0.41
38:A1:1341:U:H2'	38:A1:1342:C:C6	2.55	0.41
38:A1:1521:G:H3'	60:AX:115:ARG:HH21	1.86	0.41
38:A1:1624:G:C2	38:A1:1625:A:C5	3.08	0.41
38:A1:1811:G:H2'	38:A1:1812:G:C8	2.54	0.41
38:A1:2433:U:H5"	38:A1:2434:U:OP2	2.21	0.41
38:A1:2639:G:H2'	38:A1:2640:A:C8	2.55	0.41
38:A1:2765:C:C2	38:A1:2766:U:C5	3.08	0.41
38:A1:2884:C:H2'	38:A1:2885:C:H6	1.85	0.41
38:A1:2900:A:C2	38:A1:2901:G:C5	3.08	0.41
38:A1:2930:A:C6	38:A1:2931:C:C4	3.07	0.41
38:A1:3060:C:C2	38:A1:3061:G:C8	3.08	0.41
38:A1:3076:C:P	66:Ad:65:LYS:HE3	2.60	0.41
38:A1:3079:U:O2'	38:A1:3081:C:OP2	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3226:A:H61	38:A1:3227:A:N6	2.18	0.41
38:A1:3324:C:C2	38:A1:3325:G:C8	3.08	0.41
38:A1:3333:G:C8	59:AW:51:TRP:CZ3	3.08	0.41
39:A3:62:U:H4'	41:AD:285:ARG:NH1	2.36	0.41
40:A4:66:A:C6	40:A4:67:U:C4	3.08	0.41
50:AN:175:ASN:HB2	50:AN:180:PHE:CE2	2.55	0.41
54:AR:23:TRP:HE3	54:AR:51:VAL:HG22	1.85	0.41
59:AW:56:ARG:NH2	59:AW:61:LYS:HB3	2.35	0.41
61:AY:70:ILE:HD12	61:AY:70:ILE:H	1.85	0.41
61:AY:116:LYS:HB3	61:AY:126:LEU:HD21	2.02	0.41
65:Ac:12:GLN:HG2	65:Ac:13:LYS:N	2.35	0.41
68:Af:90:PRO:HD2	68:Af:93:THR:HG23	2.02	0.41
69:Ag:58:ARG:HB2	69:Ag:61:GLN:OE1	2.21	0.41
69:Ag:61:GLN:O	69:Ag:64:THR:OG1	2.25	0.41
72:Aj:4:GLY:O	72:Aj:7:SER:OG	2.29	0.41
73:Ak:11:PHE:CD1	73:Ak:54:LEU:HD11	2.55	0.41
74:Al:26:TRP:CD1	74:Al:26:TRP:H	2.38	0.41
79:E:122:ARG:HA	81:EC:6770:U:H4'	2.01	0.41
79:E:179:LEU:HD12	79:E:179:LEU:HA	1.86	0.41
80:DC:71:LYS:HD3	80:DC:71:LYS:HA	1.80	0.41
80:DC:194:ASP:OD2	80:DC:196:VAL:HG12	2.20	0.41
80:DC:324:MET:O	80:DC:328:LEU:N	2.39	0.41
2:BB:184:LEU:HD22	2:BB:187:LYS:NZ	2.36	0.41
5:BG:32:ILE:HB	5:BG:65:GLN:NE2	2.34	0.41
8:BJ:121:SER:O	8:BJ:125:ALA:N	2.52	0.41
10:BN:70:LYS:O	10:BN:74:ILE:HG12	2.20	0.41
11:BO:51:ASP:OD1	34:B5:902:G:N1	2.52	0.41
12:BV:36:VAL:O	12:BV:51:VAL:HG12	2.20	0.41
15:BY:56:SER:HB2	15:BY:94:TYR:HE2	1.86	0.41
15:BY:93:ARG:NH2	34:B5:526:A:OP1	2.53	0.41
19:BD:215:GLU:HG2	19:BD:216:PRO:HD2	2.01	0.41
20:BF:145:ASP:HA	20:BF:221:ALA:HB2	2.01	0.41
20:BF:185:ARG:HH11	34:B5:1471:A:P	2.44	0.41
22:BP:47:ARG:HD3	34:B5:1555:A:OP1	2.21	0.41
23:BQ:32:ASN:HA	23:BQ:68:ARG:HD3	2.02	0.41
23:BQ:101:SER:O	23:BQ:105:LEU:HG	2.20	0.41
24:BR:6:THR:O	24:BR:10:LYS:HG2	2.20	0.41
26:BT:113:ILE:HD12	26:BT:128:GLY:HA2	2.02	0.41
28:BZ:35:ARG:NH2	34:B5:1536:G:H4'	2.34	0.41
34:B5:329:G:N3	34:B5:330:G:C8	2.88	0.41
34:B5:778:G:H2'	34:B5:780:A:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:814:A:H2'	54:AR:167:ARG:CZ	2.50	0.41
34:B5:1126:G:N3	34:B5:1127:G:C8	2.88	0.41
34:B5:1162:C:C2	34:B5:1163:A:C8	3.08	0.41
34:B5:1202:A:H62	34:B5:1456:C:H2'	1.85	0.41
34:B5:1368:G:H21	34:B5:1372:U:H1'	1.86	0.41
34:B5:1594:G:H2'	34:B5:1595:U:O4'	2.20	0.41
34:B5:1609:U:C4	34:B5:1610:G:C5	3.08	0.41
34:B5:1693:A:H2'	34:B5:1695:G:C8	2.55	0.41
35:AA:179:LEU:HG	35:AA:185:ALA:HB2	2.02	0.41
36:AB:261:MET:CE	38:A1:2882:U:H1'	2.51	0.41
36:AB:266:ARG:HG2	36:AB:267:ALA:H	1.84	0.41
36:AB:313:HIS:CE1	36:AB:332:ARG:HH22	2.38	0.41
37:AC:159:ILE:HD13	37:AC:165:ALA:HA	2.03	0.41
38:A1:314:U:H2'	38:A1:315:C:H6	1.83	0.41
38:A1:359:U:C4	38:A1:360:G:N1	2.88	0.41
38:A1:665:A:H2'	38:A1:666:A:O4'	2.21	0.41
38:A1:677:A:H8	38:A1:785:G:C6	2.38	0.41
38:A1:1090:G:C2	38:A1:1091:A:C5	3.09	0.41
38:A1:1137:C:H2'	38:A1:1138:U:C6	2.56	0.41
38:A1:1174:G:C5	38:A1:1318:A:C4	3.08	0.41
38:A1:1387:G:C2	38:A1:1421:G:C5	3.09	0.41
38:A1:1471:U:H2'	38:A1:1472:U:C6	2.56	0.41
38:A1:1498:A:C6	38:A1:1519:G:N1	2.87	0.41
38:A1:1538:G:C5	38:A1:1553:U:C4	3.08	0.41
38:A1:1569:U:H4'	40:A4:127:U:N3	2.35	0.41
38:A1:1883:A:OP1	66:Ad:34:LYS:NZ	2.42	0.41
38:A1:1897:G:H1'	58:AV:83:LYS:NZ	2.35	0.41
38:A1:2160:G:C4	38:A1:2161:G:N7	2.88	0.41
38:A1:2160:G:N3	38:A1:2161:G:C8	2.89	0.41
38:A1:2161:G:C4	38:A1:2162:U:C5	3.07	0.41
38:A1:2419:A:C5	38:A1:2804:A:C5	3.08	0.41
38:A1:2682:C:H2'	38:A1:2683:U:H6	1.84	0.41
38:A1:3206:C:C4	49:AM:99:TRP:CD2	3.08	0.41
38:A1:3209:A:H8	38:A1:3209:A:OP1	2.03	0.41
38:A1:3392:U:H2'	38:A1:3393:U:C6	2.55	0.41
40:A4:66:A:C4	40:A4:67:U:C5	3.08	0.41
40:A4:149:A:H2'	40:A4:150:G:H8	1.82	0.41
41:AD:65:ILE:HG23	41:AD:72:ASP:HB3	2.02	0.41
42:AE:78:ARG:HG2	42:AE:106:PHE:HD1	1.86	0.41
43:AF:127:LEU:HD13	43:AF:136:TYR:CZ	2.55	0.41
44:AG:72:PRO:HB2	50:AN:18:VAL:HG12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:AG:134:TYR:CD2	44:AG:190:VAL:HG21	2.55	0.41
51:AO:25[A]:LYS:HD3	51:AO:25[A]:LYS:HA	1.80	0.41
51:AO:88[A]:VAL:O	51:AO:90[A]:HIS:N	2.52	0.41
78:Ap:75:ALA:O	78:Ap:79:VAL:HG23	2.20	0.41
79:E:42:ASP:OD1	79:E:42:ASP:N	2.53	0.41
79:E:74:VAL:HA	79:E:84:ALA:CB	2.50	0.41
79:E:120:VAL:CG1	79:E:128:LEU:HD23	2.50	0.41
79:E:196:LYS:H	79:E:196:LYS:HG2	1.67	0.41
80:DC:236:ASP:OD1	80:DC:236:ASP:N	2.51	0.41
80:DC:282:PHE:HD1	80:DC:285:PHE:HD2	1.66	0.41
80:DC:544:ASP:O	80:DC:549:HIS:N	2.53	0.41
80:DC:781:THR:HA	80:DC:784:LEU:CD2	2.50	0.41
2:BB:98:THR:O	2:BB:228:LEU:HD11	2.21	0.41
2:BB:100:PHE:HD2	2:BB:181:LEU:HD21	1.85	0.41
2:BB:115:ARG:H	2:BB:118:GLN:NE2	2.16	0.41
2:BB:115:ARG:HG3	2:BB:116:LYS:H	1.86	0.41
2:BB:183:GLN:HG2	2:BB:187:LYS:NZ	2.35	0.41
3:BC:88:LYS:HD2	34:B5:1301:U:H5'	2.02	0.41
4:BE:127:LYS:HE2	4:BE:142:HIS:HA	2.02	0.41
5:BG:7:TYR:HD2	5:BG:10:ASN:OD1	2.03	0.41
10:BN:17:PRO:HD3	34:B5:959:U:O4'	2.20	0.41
10:BN:86:GLU:HA	10:BN:89:TYR:CB	2.51	0.41
10:BN:99:ARG:HB3	10:BN:99:ARG:CZ	2.51	0.41
13:BW:77:PRO:HD3	14:BX:7:ARG:HB3	2.01	0.41
17:Bb:79:PHE:C	17:Bb:80:ARG:HD3	2.46	0.41
19:BD:91:VAL:HB	19:BD:94:ARG:HH11	1.85	0.41
23:BQ:7:VAL:HG23	23:BQ:22:VAL:HB	2.02	0.41
23:BQ:47:LYS:HA	23:BQ:50:GLU:HG2	2.00	0.41
25:BS:3:LEU:HG	25:BS:5:VAL:HG23	2.02	0.41
27:BU:26:LEU:N	27:BU:89:ARG:O	2.32	0.41
34:B5:32:U:H2'	34:B5:33:U:H6	1.85	0.41
34:B5:93:A:H8	34:B5:399:A:H5'	1.85	0.41
34:B5:121:U:H2'	34:B5:122:U:C6	2.55	0.41
34:B5:156:A:H8	34:B5:156:A:OP1	2.03	0.41
34:B5:305:C:H2'	34:B5:306:U:H6	1.86	0.41
34:B5:325:G:C6	34:B5:344:A:C6	3.08	0.41
34:B5:481:A:C5	34:B5:482:U:H5	2.37	0.41
34:B5:567:A:H61	34:B5:576:G:H1'	1.85	0.41
34:B5:620:A:H3'	34:B5:620:A:OP2	2.20	0.41
34:B5:737:A:O2'	34:B5:738:G:O5'	2.39	0.41
34:B5:775:G:H2'	34:B5:776:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:989:U:H2'	34:B5:990:C:C6	2.56	0.41
34:B5:1039:A:C5	34:B5:1091:A:C5	3.08	0.41
34:B5:1126:G:H5"	76:An:11:ARG:NH1	2.35	0.41
34:B5:1267:G:N1	34:B5:1442:U:N3	2.30	0.41
34:B5:1359:C:N4	34:B5:1360:A:H62	2.18	0.41
34:B5:1401:A:C5	34:B5:1402:G:H1'	2.55	0.41
34:B5:1407:U:H2'	34:B5:1408:G:O4'	2.21	0.41
34:B5:1478:G:C4	34:B5:1479:A:C8	3.08	0.41
34:B5:1483:A:C6	34:B5:1484:G:C6	3.08	0.41
34:B5:1484:G:H2'	34:B5:1485:C:H6	1.86	0.41
34:B5:1561:U:C2	34:B5:1562:G:C8	3.08	0.41
34:B5:1616:G:H2'	34:B5:1617:U:H6	1.84	0.41
35:AA:60:LYS:HG3	35:AA:73:GLU:OE2	2.20	0.41
35:AA:65:ASP:HB3	35:AA:68:LYS:O	2.20	0.41
35:AA:79:ASN:ND2	35:AA:166:ILE:O	2.53	0.41
36:AB:174:LYS:HB2	38:A1:3314:A:H5"	2.01	0.41
36:AB:364:LYS:HE2	36:AB:364:LYS:HA	2.03	0.41
38:A1:63:A:N3	38:A1:78:U:O2'	2.45	0.41
38:A1:203:G:H2'	38:A1:204:A:H8	1.85	0.41
38:A1:408:A:H61	40:A4:15:G:H1'	1.85	0.41
38:A1:596:C:H2'	38:A1:597:G:O4'	2.20	0.41
38:A1:682:U:C2	50:AN:202:TYR:HE2	2.38	0.41
38:A1:832:G:H1	38:A1:862:U:H3	1.68	0.41
38:A1:935:U:H2'	38:A1:936:A:C8	2.55	0.41
38:A1:1098:A:H2'	38:A1:1099:A:H8	1.84	0.41
38:A1:1112:A:N3	38:A1:1370:G:O2'	2.52	0.41
38:A1:1149:G:N1	38:A1:1155:C:C4	2.88	0.41
38:A1:1555:U:H5'	38:A1:1556:C:P	2.60	0.41
38:A1:1609:C:H2'	38:A1:1610:G:H8	1.85	0.41
38:A1:1845:G:C2	38:A1:1851:G:C6	3.08	0.41
38:A1:2343:C:C2	38:A1:2344:U:C5	3.08	0.41
38:A1:2423:U:C4	38:A1:2605:G:C2	3.09	0.41
38:A1:2466:G:O6	38:A1:2467:G:N2	2.54	0.41
38:A1:2723:U:H2'	38:A1:2724:U:C6	2.56	0.41
38:A1:2753:G:C2	38:A1:2754:G:C5	3.09	0.41
38:A1:2861:U:H2'	38:A1:2862:U:O4'	2.20	0.41
38:A1:3069:G:C2	38:A1:3070:A:C8	3.08	0.41
38:A1:3251:U:H2'	38:A1:3252:G:C8	2.55	0.41
38:A1:3330:A:H2'	38:A1:3331:U:H6	1.86	0.41
39:A3:72:A:O2'	39:A3:74:C:OP1	2.18	0.41
40:A4:76:C:H2'	40:A4:77:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:AG:94:PHE:HE2	44:AG:152:LEU:CD1	2.33	0.41
45:AH:23:ARG:HB3	45:AH:38:LEU:HB2	2.02	0.41
45:AH:176:LEU:HD12	75:Am:78:ILE:HG12	2.02	0.41
48:AL:166:ALA:HB1	63:Aa:147:LEU:HD11	2.02	0.41
49:AM:40:ASP:OD1	49:AM:43:LYS:N	2.53	0.41
49:AM:80:THR:HA	49:AM:83:LYS:HZ3	1.86	0.41
54:AR:90:PRO:O	54:AR:94:VAL:HG23	2.20	0.41
55:AS:24:LEU:O	55:AS:24:LEU:HD23	2.19	0.41
58:AV:37:ILE:HA	58:AV:37:ILE:HD12	1.87	0.41
62:AZ:76:ASN:OD1	62:AZ:77:TYR:N	2.54	0.41
63:Aa:38:GLN:HB3	63:Aa:42:ARG:HH21	1.84	0.41
69:Ag:30:LEU:HD12	69:Ag:31:ARG:N	2.35	0.41
69:Ag:97:GLU:HA	69:Ag:100:ILE:HG22	2.02	0.41
74:Al:10:LYS:O	74:Al:13:MET:HB2	2.20	0.41
80:DC:410:LYS:HE3	80:DC:428:ILE:HG22	2.01	0.41
80:DC:744:TYR:CE1	80:DC:754:VAL:HG21	2.55	0.41
80:DC:755:VAL:H	80:DC:770:ALA:HA	1.85	0.41
81:EC:6898:U:H2'	81:EC:6899:C:H6	1.84	0.41
2:BB:38:PHE:CE2	2:BB:73:LEU:HD13	2.55	0.41
3:BC:53:ILE:HB	3:BC:73:LEU:HD21	2.03	0.41
3:BC:116:LYS:HG2	3:BC:127:ALA:C	2.46	0.41
4:BE:90:ILE:O	4:BE:98:ASN:HA	2.20	0.41
4:BE:105:VAL:HG23	4:BE:191:ARG:HD2	2.02	0.41
8:BJ:168:ARG:NH2	34:B5:534:A:OP2	2.53	0.41
9:BL:18:HIS:HA	34:B5:211:PSU:OP2	2.21	0.41
10:BN:62:GLN:HE21	34:B5:959:U:H1'	1.85	0.41
11:BO:128:LYS:HD2	11:BO:129:LYS:N	2.36	0.41
11:BO:132:ARG:HA	16:Ba:29:SER:OG	2.20	0.41
16:Ba:45:VAL:HG13	16:Ba:49:ALA:HB3	2.01	0.41
16:Ba:87:ARG:HB3	16:Ba:91:ASP:HB3	2.03	0.41
21:BK:64:TYR:HB3	21:BK:66:TYR:CE2	2.55	0.41
23:BQ:78:VAL:HG13	23:BQ:79:TYR:CD1	2.56	0.41
25:BS:28:ILE:HD11	25:BS:54:LEU:HA	2.01	0.41
25:BS:38:VAL:HG23	25:BS:42:TYR:CD2	2.53	0.41
25:BS:116:LEU:O	25:BS:120:ARG:N	2.53	0.41
29:Bc:14:LYS:HD3	29:Bc:29:ARG:HB3	2.01	0.41
30:Bd:13:ARG:NH2	34:B5:1554:U:OP1	2.52	0.41
30:Bd:31:ILE:HG12	30:Bd:38:ILE:HB	2.03	0.41
31:Bg:201:THR:HG21	31:Bg:242:SER:HA	2.03	0.41
31:Bg:303:ALA:O	31:Bg:311:ARG:N	2.40	0.41
34:B5:231:U:C2	34:B5:233:C:H5	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:483:A:H2	34:B5:485:A:C8	2.39	0.41
34:B5:586:G:H2'	34:B5:587:C:C6	2.55	0.41
34:B5:1316:G:H2'	34:B5:1317:C:C6	2.56	0.41
34:B5:1396:U:N3	34:B5:1402:G:C6	2.86	0.41
34:B5:1462:G:H2'	34:B5:1463:C:H6	1.85	0.41
34:B5:1485:C:N3	34:B5:1592:A:O2'	2.52	0.41
35:AA:5:ILE:HG23	35:AA:8:GLN:H	1.84	0.41
35:AA:52:SER:HB2	35:AA:191:LEU:HD11	2.02	0.41
35:AA:193:ARG:HA	35:AA:193:ARG:HD2	1.81	0.41
36:AB:8:ALA:HB2	58:AV:46:LEU:CD2	2.48	0.41
37:AC:23:PRO:HB3	37:AC:259:ASP:HB3	2.02	0.41
38:A1:117:U:C5	44:AG:141:ALA:HB1	2.56	0.41
38:A1:226:C:C2	38:A1:227:G:H1'	2.56	0.41
38:A1:286:U:O2'	50:AN:179:LYS:O	2.39	0.41
38:A1:347:G:C4	38:A1:353:G:C6	3.08	0.41
38:A1:655:C:C2	38:A1:656:A:N7	2.88	0.41
38:A1:706:A:H2'	38:A1:707:U:O4'	2.20	0.41
38:A1:846:A:C5	38:A1:847:A:C5	3.09	0.41
38:A1:971:G:H2'	38:A1:972:A:H8	1.82	0.41
38:A1:1118:C:H2'	38:A1:1119:C:H6	1.84	0.41
38:A1:1142:G:OP2	38:A1:1144:U:H5"	2.21	0.41
38:A1:1404:G:C6	38:A1:1408:G:C6	3.09	0.41
38:A1:1412:G:H2'	38:A1:1413:G:H8	1.85	0.41
38:A1:1438:U:C2	38:A1:1439:U:C5	3.08	0.41
38:A1:1715:A:C4	65:Ac:84:LEU:HD21	2.55	0.41
38:A1:1868:G:C6	38:A1:1869:C:C4	3.09	0.41
38:A1:1914:G:H2'	38:A1:1915:A:C8	2.56	0.41
38:A1:1921:A:P	38:A1:1930:A:H61	2.43	0.41
38:A1:2281:A:O2'	38:A1:2282:U:H5'	2.21	0.41
38:A1:2310:U:C2	38:A1:2311:G:C8	3.09	0.41
38:A1:2351:PSU:H2'	38:A1:2352:A:H8	1.84	0.41
38:A1:2493:U:O2'	38:A1:2494:A:O4'	2.33	0.41
38:A1:2961:G:C6	38:A1:2972:G:C6	3.09	0.41
38:A1:3080:G:H2'	38:A1:3081:C:C6	2.55	0.41
38:A1:3311:C:H2'	38:A1:3312:U:C6	2.56	0.41
38:A1:3342:A:C2	38:A1:3364:C:C2	3.08	0.41
39:A3:91:G:H8	39:A3:91:G:O5'	2.04	0.41
41:AD:142:PHE:HD2	41:AD:171:LEU:HD11	1.85	0.41
41:AD:200:PHE:HB3	41:AD:237:GLU:HA	2.01	0.41
44:AG:34:PHE:O	44:AG:41:GLN:NE2	2.47	0.41
44:AG:128:LYS:HD2	44:AG:129:PRO:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AI:36:LEU:HD22	46:AI:87:LEU:HD23	2.03	0.41
48:AL:8:PRO:HD3	53:AQ:164:ARG:HD3	2.02	0.41
48:AL:27:ASP:O	48:AL:30:GLY:N	2.53	0.41
48:AL:104:ARG:HD2	71:Ai:22:PRO:HG3	2.02	0.41
48:AL:184:GLU:O	48:AL:188:ARG:HG3	2.20	0.41
50:AN:8:GLU:HA	50:AN:47:LYS:HZ2	1.85	0.41
51:AO:32[A]:LYS:O	51:AO:33[A]:ILE:HD13	2.21	0.41
52:AP:135:ARG:CZ	52:AP:135:ARG:HB2	2.51	0.41
53:AQ:35:PHE:CE1	53:AQ:39:ARG:HG3	2.55	0.41
56:AT:72:VAL:HG21	56:AT:96:ILE:HD13	2.03	0.41
59:AW:6:ASP:OD1	59:AW:8:PHE:N	2.54	0.41
64:Ab:53:ALA:O	64:Ab:57:ALA:N	2.53	0.41
65:Ac:75:ASN:ND2	65:Ac:86:ARG:HE	2.18	0.41
68:Af:42:GLN:H	68:Af:42:GLN:CD	2.20	0.41
70:Ah:16:GLN:O	70:Ah:20:GLN:HG3	2.21	0.41
80:DC:171:LYS:HZ1	80:DC:279:ASP:HA	1.85	0.41
80:DC:239:LYS:HG3	80:DC:243:ARG:HB2	2.03	0.41
80:DC:674:GLY:HA2	80:DC:681:MET:HE3	2.01	0.41
2:BB:26:ARG:O	2:BB:50:LYS:HG2	2.21	0.41
5:BG:215:ARG:O	5:BG:219:ARG:HG2	2.20	0.41
7:BI:83:TYR:OH	7:BI:195:ARG:NH2	2.53	0.41
8:BJ:112:GLN:O	8:BJ:115:LYS:HB3	2.20	0.41
11:BO:24:ASN:OD1	34:B5:902:G:H3'	2.21	0.41
16:Ba:8:ASN:ND2	34:B5:1791:A:H5"	2.28	0.41
18:Be:42:ARG:NH2	34:B5:589:C:O3'	2.53	0.41
22:BP:48:GLY:O	22:BP:49:MET:HE2	2.21	0.41
26:BT:99:SER:HA	26:BT:102:ARG:HH12	1.86	0.41
31:Bg:192:PHE:CE2	31:Bg:223:TRP:HB3	2.55	0.41
33:BM:30:VAL:HG12	33:BM:133:LEU:HD21	2.02	0.41
34:B5:193:U:O2'	34:B5:195:G:H5"	2.20	0.41
34:B5:295:A:C6	34:B5:296:U:C4	3.09	0.41
34:B5:370:A:H3'	34:B5:371:G:H8	1.86	0.41
34:B5:1030:A:C6	34:B5:1792:G:C6	3.09	0.41
34:B5:1158:C:N4	34:B5:1163:A:H61	2.11	0.41
34:B5:1475:A:C6	34:B5:1476:C:C4	3.09	0.41
34:B5:1523:G:N3	34:B5:1523:G:H5'	2.36	0.41
34:B5:1786:G:H2'	34:B5:1787:C:C6	2.55	0.41
35:AA:174:ARG:HH21	35:AA:188:LYS:HZ3	1.68	0.41
35:AA:209:HIS:CG	35:AA:210:PRO:HD2	2.56	0.41
36:AB:216:ASP:HB3	36:AB:339:ARG:HE	1.85	0.41
37:AC:26:PHE:CD2	37:AC:130:ALA:HB2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:147:U:H5'	44:AG:136:LEU:HD23	2.02	0.41
38:A1:685:G:H2'	38:A1:686:G:H8	1.86	0.41
38:A1:686:G:P	48:AL:39:ARG:HH21	2.44	0.41
38:A1:978:G:C6	38:A1:1104:G:C6	3.07	0.41
38:A1:1068:C:H2'	38:A1:1069:C:C6	2.56	0.41
38:A1:1084:A:H2'	38:A1:1085:A:H8	1.80	0.41
38:A1:1166:G:H2'	38:A1:1167:U:C6	2.55	0.41
38:A1:1211:U:OP2	45:AH:62:ARG:NE	2.41	0.41
38:A1:1364:C:H4'	53:AQ:5:HIS:HE1	1.85	0.41
38:A1:1379:G:C6	38:A1:1380:G:C5	3.09	0.41
38:A1:1499:C:C2	38:A1:1500:G:N7	2.88	0.41
38:A1:1714:A:C2	38:A1:1731:A:C4	3.08	0.41
38:A1:1765:U:H5'	54:AR:43:LYS:HE2	2.03	0.41
38:A1:2276:G:C6	38:A1:2277:C:C4	3.08	0.41
38:A1:2437:G:O6	38:A1:2510:U:C2	2.73	0.41
38:A1:2469:G:H5"	79:E:26:ARG:HE	1.85	0.41
38:A1:2608:G:N3	38:A1:2609:A:C8	2.88	0.41
38:A1:2643:A:H5'	64:Ab:6:ASN:HD22	1.85	0.41
38:A1:2729:U:H4'	53:AQ:157:PRO:HG3	2.03	0.41
38:A1:2739:A:H2'	38:A1:2740:A:O4'	2.21	0.41
38:A1:2883:U:H3	38:A1:2939:G:H1	1.69	0.41
38:A1:2952:G:H2'	38:A1:2953:U:C6	2.55	0.41
38:A1:3088:G:H2'	38:A1:3089:C:C6	2.56	0.41
38:A1:3199:G:N3	38:A1:3200:G:C8	2.88	0.41
38:A1:3226:A:N6	38:A1:3227:A:N6	2.69	0.41
38:A1:3232:G:H3'	38:A1:3233:C:C6	2.54	0.41
38:A1:3251:U:C2	38:A1:3252:G:C8	3.09	0.41
38:A1:3296:A:H2'	38:A1:3297:U:H6	1.85	0.41
38:A1:3365:U:H2'	38:A1:3366:G:C8	2.55	0.41
39:A3:87:G:C2	39:A3:95:A:C2	3.09	0.41
39:A3:112:G:H2'	39:A3:113:C:H6	1.84	0.41
41:AD:123:GLU:N	41:AD:123:GLU:OE1	2.54	0.41
41:AD:173:VAL:O	41:AD:175:HIS:ND1	2.45	0.41
45:AH:90:MET:SD	45:AH:179:ILE:HG13	2.61	0.41
47:AJ:59:ILE:HG23	47:AJ:65:ILE:HG21	2.02	0.41
48:AL:172:LEU:HD12	48:AL:173:ALA:N	2.35	0.41
50:AN:174:ILE:O	50:AN:175:ASN:ND2	2.53	0.41
53:AQ:122:ILE:HB	53:AQ:126:GLN:HB2	2.03	0.41
55:AS:42:TRP:CE3	55:AS:42:TRP:HA	2.55	0.41
58:AV:77:ILE:HD13	58:AV:126:TRP:CD1	2.55	0.41
58:AV:93:LEU:HD12	58:AV:93:LEU:C	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:Aa:118:ILE:HD11	63:Aa:138:ILE:HA	2.03	0.41
72:Aj:17:THR:OG1	72:Aj:18:LEU:N	2.53	0.41
73:Ak:11:PHE:O	73:Ak:15:THR:HG23	2.20	0.41
79:E:42:ASP:OD1	79:E:46:ASP:HB2	2.20	0.41
80:DC:486:SER:HA	80:DC:487:PRO:HD3	1.95	0.41
80:DC:669:TRP:HD1	80:DC:672:LYS:HZ3	1.68	0.41
81:EC:6787:U:H1'	81:EC:6788:C:H5	1.85	0.41
81:EC:6817:A:H4'	81:EC:6818:G:C5'	2.48	0.41
81:EC:6827:G:H2'	81:EC:6828:G:H8	1.83	0.41
81:EC:6849:A:H61	81:EC:6880:G:C4'	2.29	0.41
81:EC:6915:G:H2'	81:EC:6916:A:C8	2.56	0.41
4:BE:187:ARG:NH1	34:B5:753:A:H5"	2.36	0.41
5:BG:2:LYS:HG2	5:BG:17:GLU:OE2	2.21	0.41
5:BG:202:ARG:NH1	34:B5:179:A:N7	2.42	0.41
7:BI:136:SER:OG	34:B5:188:A:OP2	2.23	0.41
9:BL:55:ASP:C	9:BL:57:LYS:N	2.77	0.41
9:BL:147:GLY:HA3	9:BL:150:ASN:HD22	1.85	0.41
13:BW:31:SER:HB2	34:B5:636:A:H5"	2.03	0.41
15:BY:128:LYS:HG2	15:BY:131:ARG:HE	1.86	0.41
19:BD:175:VAL:HB	19:BD:182:LEU:HB3	2.03	0.41
23:BQ:13:LYS:HD2	23:BQ:13:LYS:HA	1.77	0.41
24:BR:103:ASP:O	24:BR:106:THR:OG1	2.24	0.41
25:BS:36:LYS:HB2	25:BS:36:LYS:HE2	1.86	0.41
25:BS:96:LYS:HD3	25:BS:98:TYR:CZ	2.55	0.41
25:BS:145:ARG:NH1	34:B5:1172:G:H5"	2.35	0.41
26:BT:64:HIS:CE1	26:BT:79:LEU:HD22	2.56	0.41
31:Bg:154:VAL:HG12	31:Bg:171:SER:HB2	2.02	0.41
34:B5:338:C:H2'	34:B5:339:C:C6	2.56	0.41
34:B5:378:A:H2'	34:B5:379:U:O4'	2.20	0.41
34:B5:417:A:H4'	34:B5:418:G:O4'	2.20	0.41
34:B5:431:C:H5"	80:DC:391:LYS:HG3	2.03	0.41
34:B5:464:A:C4	34:B5:465:G:C8	3.08	0.41
34:B5:628:G:H4'	38:A1:846:A:H61	1.84	0.41
34:B5:837:G:H5'	34:B5:838:G:OP1	2.21	0.41
34:B5:888:U:H2'	34:B5:889:U:C6	2.55	0.41
34:B5:898:A:H1'	34:B5:899:G:C1'	2.51	0.41
34:B5:938:G:N1	34:B5:942:G:C6	2.88	0.41
34:B5:1215:C:H2'	34:B5:1216:C:C6	2.55	0.41
34:B5:1287:A:OP1	34:B5:1313:A:H5'	2.21	0.41
34:B5:1499:G:N2	34:B5:1508:U:O2	2.42	0.41
34:B5:1502:G:N1	34:B5:1506:G:C6	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1527:C:C2	34:B5:1528:U:C5	3.09	0.41
34:B5:1584:G:H22	34:B5:1611:A:P	2.43	0.41
34:B5:1590:G:C2	34:B5:1607:G:C2	3.09	0.41
34:B5:1605:G:C6	34:B5:1606:C:C4	3.08	0.41
34:B5:1606:C:H2'	34:B5:1607:G:C8	2.56	0.41
35:AA:68:LYS:HZ2	35:AA:70:ARG:HD3	1.85	0.41
35:AA:174:ARG:NE	38:A1:1793:C:O2	2.54	0.41
36:AB:6:TYR:HB3	58:AV:46:LEU:HD22	2.02	0.41
36:AB:211:GLN:HG3	36:AB:212:ASN:OD1	2.20	0.41
36:AB:283:TYR:CZ	36:AB:325:LYS:HB2	2.55	0.41
37:AC:222:VAL:HA	37:AC:223:PRO:HD3	1.94	0.41
38:A1:47:C:H5"	48:AL:16:LYS:HD3	2.02	0.41
38:A1:116:A:C5	38:A1:265:A:C6	3.09	0.41
38:A1:122:A:C5	38:A1:146:U:C4	3.09	0.41
38:A1:182:U:H2'	38:A1:183:G:H8	1.86	0.41
38:A1:297:G:O2'	71:Ai:33:ALA:HB2	2.20	0.41
38:A1:413:U:P	52:AP:30:ARG:HH21	2.44	0.41
38:A1:712:G:C5	38:A1:713:U:C4	3.09	0.41
38:A1:944:C:H4'	67:Ae:33:ARG:NE	2.29	0.41
38:A1:1085:A:H2'	38:A1:1086:C:C6	2.55	0.41
38:A1:1650:G:C6	38:A1:1806:A:C6	3.09	0.41
38:A1:1710:C:N4	38:A1:1711:C:H41	2.19	0.41
38:A1:1719:G:C5	38:A1:1720:U:C4	3.08	0.41
38:A1:2170:U:H2'	38:A1:2171:G:O4'	2.21	0.41
38:A1:2225:U:H4'	77:Ao:36:PHE:CZ	2.56	0.41
38:A1:2320:A:C6	38:A1:2321:A:C5	3.09	0.41
38:A1:2358:A:H3'	38:A1:2359:C:H6	1.86	0.41
38:A1:2359:C:H2'	38:A1:2360:C:H6	1.85	0.41
38:A1:2403:G:H3'	38:A1:2403:G:OP2	2.20	0.41
38:A1:2445:A:N6	38:A1:2503:G:H1	2.14	0.41
38:A1:2455:U:O5'	38:A1:2455:U:H6	2.04	0.41
38:A1:2594:C:C4	38:A1:2595:A:C5	3.08	0.41
38:A1:2653:C:H2'	38:A1:2654:C:H6	1.85	0.41
38:A1:2778:G:N1	38:A1:2779:A:N3	2.69	0.41
38:A1:3035:A:C4	38:A1:3036:G:C8	3.08	0.41
38:A1:3107:U:H2'	38:A1:3108:G:C8	2.56	0.41
38:A1:3170:A:O2'	38:A1:3171:U:OP2	2.32	0.41
38:A1:3370:A:C5	38:A1:3371:G:C5	3.09	0.41
39:A3:109:G:H5"	41:AD:279:LYS:HD3	2.02	0.41
40:A4:76:C:H2'	40:A4:77:A:H8	1.85	0.41
40:A4:141:C:P	50:AN:109:ARG:HH12	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:AF:120:THR:OG1	43:AF:123:THR:HG23	2.20	0.41
43:AF:232:ARG:HG3	43:AF:236:ILE:HG12	2.03	0.41
45:AH:113:GLU:OE2	45:AH:123:ILE:HA	2.21	0.41
47:AJ:94:ARG:CZ	47:AJ:94:ARG:HB3	2.51	0.41
47:AJ:133:ARG:HG3	47:AJ:152:HIS:NE2	2.36	0.41
50:AN:148:TYR:O	50:AN:151:ILE:HG22	2.21	0.41
51:AO:15[A]:LEU:HD21	51:AO:129[A]:LEU:CD2	2.50	0.41
53:AQ:24:VAL:HG22	53:AQ:28:LEU:HD23	2.02	0.41
53:AQ:155:MET:HE1	53:AQ:163:PRO:HA	2.03	0.41
56:AT:38:ASP:N	56:AT:38:ASP:OD1	2.53	0.41
57:AU:19:VAL:O	57:AU:23:THR:OG1	2.15	0.41
61:AY:74:TYR:HE2	61:AY:77:LYS:HZ3	1.68	0.41
62:AZ:124:ALA:O	62:AZ:126:LYS:N	2.49	0.41
67:Ae:19:ARG:CD	67:Ae:33:ARG:HB2	2.49	0.41
67:Ae:34:LYS:HB3	67:Ae:36:LYS:HG3	2.02	0.41
73:Ak:14:LEU:HA	73:Ak:17:ARG:HB3	2.03	0.41
78:Ap:28:LYS:HG3	78:Ap:29:LEU:HD22	2.03	0.41
79:E:4:ILE:HD12	79:E:4:ILE:HA	1.93	0.41
80:DC:132:ILE:HD13	80:DC:162:ARG:HB3	2.01	0.41
80:DC:608:PRO:HA	80:DC:636:PHE:CE2	2.56	0.41
1:BA:37:VAL:HG22	1:BA:149:LEU:HD21	2.03	0.41
1:BA:125:ASP:HB3	1:BA:128:SER:OG	2.21	0.41
1:BA:148:ASP:OD1	1:BA:163:ASN:HA	2.20	0.41
2:BB:98:THR:O	2:BB:232:HIS:NE2	2.54	0.41
5:BG:211:LEU:HA	5:BG:214:LYS:HG2	2.03	0.41
8:BJ:147:MET:H	8:BJ:147:MET:HE2	1.84	0.41
10:BN:48:SER:OG	10:BN:49:GLN:N	2.54	0.41
10:BN:92:ILE:HB	10:BN:150:VAL:HG11	2.03	0.41
11:BO:128:LYS:HG3	16:Ba:22:ARG:NH2	2.36	0.41
15:BY:43:LYS:HZ2	15:BY:44:LEU:HG	1.85	0.41
20:BF:55:ASP:OD1	20:BF:55:ASP:N	2.48	0.41
24:BR:12:ALA:O	24:BR:16:LEU:HD23	2.21	0.41
24:BR:31:ASN:HD22	24:BR:55:THR:HB	1.85	0.41
25:BS:137:HIS:NE2	34:B5:1457:C:O2	2.53	0.41
28:BZ:45:GLU:O	28:BZ:49:ARG:HG2	2.20	0.41
31:Bg:92:TRP:HA	31:Bg:99:THR:HA	2.02	0.41
34:B5:364:G:OP2	34:B5:377:G:N2	2.42	0.41
34:B5:950:C:H2'	34:B5:951:A:C1'	2.49	0.41
34:B5:1173:C:H2'	34:B5:1174:C:H6	1.86	0.41
34:B5:1204:A:N3	34:B5:1204:A:H2'	2.35	0.41
34:B5:1355:C:C2	34:B5:1368:G:N2	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1561:U:H2'	34:B5:1562:G:C8	2.56	0.41
34:B5:1654:G:P	76:An:21:ARG:HH22	2.43	0.41
34:B5:1678:A:H2'	34:B5:1679:G:O4'	2.20	0.41
34:B5:1776:A:H2'	34:B5:1777:G:C8	2.56	0.41
35:AA:41:ILE:O	35:AA:89:TYR:HA	2.20	0.41
35:AA:243:THR:HG23	38:A1:2242:A:H5'	2.03	0.41
37:AC:189:ALA:HB2	38:A1:1420:C:C5	2.56	0.41
38:A1:277:G:OP1	77:Ao:49:GLY:N	2.54	0.41
38:A1:370:U:O2'	38:A1:399:A:O2'	2.24	0.41
38:A1:552:G:H2'	38:A1:553:U:C6	2.56	0.41
38:A1:727:G:C2	38:A1:728:G:H1'	2.55	0.41
38:A1:884:A:N7	38:A1:2139:A:C4	2.89	0.41
38:A1:1131:G:N2	38:A1:2372:A:OP2	2.50	0.41
38:A1:1213:G:OP1	55:AS:137:ARG:NE	2.43	0.41
38:A1:1225:A:H2	38:A1:3116:G:H2'	1.85	0.41
38:A1:1247:U:H2'	38:A1:1266:G:H5"	2.03	0.41
38:A1:1247:U:O4	38:A1:1267:U:H5"	2.21	0.41
38:A1:1392:G:O2'	38:A1:1393:A:OP2	2.34	0.41
38:A1:1504:A:C5	38:A1:1505:C:C5	3.09	0.41
38:A1:1629:U:O2	62:AZ:111:LYS:HE3	2.21	0.41
38:A1:1766:G:H2'	38:A1:1767:C:H6	1.86	0.41
38:A1:2325:G:H2'	38:A1:2326:A:H8	1.85	0.41
38:A1:2412:G:C6	38:A1:2811:A:C6	3.08	0.41
38:A1:2720:G:H2'	38:A1:2721:A:C8	2.53	0.41
38:A1:3016:A:C4	38:A1:3017:A:C8	3.09	0.41
38:A1:3191:G:H2'	38:A1:3192:U:C6	2.55	0.41
38:A1:3238:G:C2	38:A1:3250:U:C2	3.08	0.41
38:A1:3383:G:H2'	38:A1:3384:U:H6	1.84	0.41
39:A3:8:G:H2'	39:A3:9:C:C6	2.56	0.41
39:A3:100:C:P	55:AS:52:LYS:HZ3	2.44	0.41
40:A4:2:A:C6	40:A4:3:A:C5	3.08	0.41
40:A4:38:U:O4	70:Ah:89:ARG:HD2	2.21	0.41
40:A4:150:G:C2	40:A4:152:G:C5	3.08	0.41
40:A4:154:C:C2	40:A4:155:A:C8	3.09	0.41
42:AE:129:GLU:OE1	42:AE:129:GLU:N	2.54	0.41
44:AG:96:LYS:HA	44:AG:96:LYS:HD2	1.82	0.41
45:AH:173:ARG:NH1	75:Am:125:LYS:O	2.54	0.41
49:AM:40:ASP:HA	55:AS:143:PHE:CZ	2.56	0.41
50:AN:53:TYR:HB2	50:AN:133:ILE:HG21	2.02	0.41
51:AO:102[A]:LEU:HD12	51:AO:103[A]:LYS:N	2.36	0.41
51:AO:140[A]:LYS:NZ	51:AO:143[A]:THR:HB	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:AP:91:VAL:O	52:AP:95:LEU:HD23	2.21	0.41
54:AR:69:SER:HA	54:AR:72:GLU:HG2	2.01	0.41
57:AU:81:LYS:HE3	57:AU:90:ARG:NH2	2.36	0.41
62:AZ:51:LEU:HB2	62:AZ:65:ARG:HH11	1.86	0.41
65:Ac:41:LEU:HD12	65:Ac:42:ILE:H	1.84	0.41
73:Ak:16:ARG:NH1	73:Ak:16:ARG:HB2	2.35	0.41
78:Ap:33:GLN:HG2	78:Ap:34:HIS:ND1	2.36	0.41
78:Ap:39:CYS:HB2	78:Ap:47:VAL:HG21	2.02	0.41
79:E:139:SER:OG	79:E:141:ASN:OD1	2.28	0.41
80:DC:139:THR:O	80:DC:143:LEU:HD23	2.20	0.41
80:DC:165:LEU:HD21	80:DC:317:LYS:HD3	2.02	0.41
80:DC:360:PRO:HB2	80:DC:363:ASP:OD1	2.20	0.41
80:DC:697:ALA:HA	80:DC:700:ARG:HE	1.85	0.41
80:DC:755:VAL:HG11	80:DC:769:LYS:NZ	2.35	0.41
1:BA:188:LEU:HD23	1:BA:188:LEU:HA	1.96	0.41
2:BB:40:ASN:OD1	2:BB:40:ASN:N	2.54	0.41
2:BB:157:GLN:C	2:BB:159:SER:H	2.28	0.41
3:BC:243:TYR:HB3	3:BC:246:GLU:OE2	2.21	0.41
4:BE:192:ILE:HD12	4:BE:242:LYS:C	2.46	0.41
5:BG:188:ARG:NH2	34:B5:283:U:O5'	2.54	0.41
6:BH:9:LEU:HD22	6:BH:18:LEU:HD21	2.03	0.41
6:BH:89:HIS:HA	6:BH:165:LYS:NZ	2.36	0.41
6:BH:111:LYS:HA	34:B5:810:G:C2	2.56	0.41
7:BI:26:LYS:HE3	34:B5:399:A:C3'	2.48	0.41
7:BI:57:ALA:HB2	7:BI:177:GLY:HA2	2.03	0.41
7:BI:101:ILE:HG13	7:BI:192:TYR:CD2	2.55	0.41
7:BI:139:ALA:HB2	34:B5:187:G:OP1	2.21	0.41
7:BI:141:ARG:HD3	34:B5:190:C:N3	2.36	0.41
8:BJ:21:SER:HB2	34:B5:555:A:H5'	2.03	0.41
9:BL:62:GLY:C	9:BL:63:LEU:HD22	2.46	0.41
10:BN:31:GLU:HA	10:BN:31:GLU:OE2	2.21	0.41
12:BV:58:TYR:OH	13:BW:20:THR:O	2.28	0.41
13:BW:56:HIS:C	13:BW:57:ARG:HD2	2.46	0.41
13:BW:72:CYS:HB3	13:BW:129:VAL:HG23	2.01	0.41
14:BX:99:ASN:ND2	80:DC:506:GLU:HA	2.27	0.41
21:BK:25:LYS:HG3	21:BK:64:TYR:HE2	1.85	0.41
22:BP:85:ILE:HD13	22:BP:85:ILE:HA	1.94	0.41
23:BQ:67:VAL:HG11	23:BQ:81:ILE:HD12	2.03	0.41
24:BR:78:ARG:O	24:BR:81:LYS:HG2	2.20	0.41
25:BS:88:ARG:HD3	25:BS:100:THR:OG1	2.20	0.41
25:BS:108:LYS:HA	25:BS:108:LYS:HD2	1.80	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BS:143:ARG:HH11	34:B5:1461:C:H3'	1.86	0.41
26:BT:35:ASP:CG	26:BT:50:ALA:HB1	2.45	0.41
26:BT:54:PHE:CZ	26:BT:104:VAL:HG22	2.55	0.41
27:BU:84:MET:HE3	30:Bd:52:PHE:HA	2.02	0.41
27:BU:97:VAL:HA	27:BU:100:VAL:HG22	2.03	0.41
30:Bd:54:LYS:HZ1	34:B5:1420:C:P	2.44	0.41
31:Bg:20:VAL:HG12	31:Bg:37:SER:OG	2.21	0.41
33:BM:98:GLY:HA3	33:BM:118:ALA:HB3	2.03	0.41
34:B5:61:A:C6	34:B5:62:A:C6	3.09	0.41
34:B5:90:C:O2'	34:B5:451:A:H5"	2.21	0.41
34:B5:142:G:C4	34:B5:266:A:C6	3.09	0.41
34:B5:312:A:C2	34:B5:314:C:H2'	2.56	0.41
34:B5:393:C:H2'	34:B5:394:C:H6	1.84	0.41
34:B5:405:C:H2'	34:B5:406:U:C6	2.55	0.41
34:B5:518:A:C2'	34:B5:519:C:H5"	2.51	0.41
34:B5:611:U:H2'	34:B5:612:U:C6	2.56	0.41
34:B5:613:G:H5'	34:B5:1099:U:O2	2.21	0.41
34:B5:628:G:O3'	38:A1:846:A:N6	2.54	0.41
34:B5:1055:U:C2	34:B5:1064:G:O6	2.74	0.41
34:B5:1154:G:H2'	34:B5:1155:G:H8	1.85	0.41
34:B5:1170:G:N3	34:B5:1170:G:H2'	2.35	0.41
34:B5:1175:U:H1'	34:B5:1196:A:N7	2.36	0.41
34:B5:1260:U:C2	34:B5:1261:G:C8	3.09	0.41
34:B5:1292:G:C6	34:B5:1293:U:C4	3.09	0.41
34:B5:1383:G:O2'	34:B5:1384:A:H5'	2.20	0.41
34:B5:1433:G:H2'	34:B5:1434:U:H6	1.86	0.41
34:B5:1451:C:C2	34:B5:1452:U:C5	3.09	0.41
34:B5:1453:G:H2'	34:B5:1454:G:C8	2.56	0.41
34:B5:1604:U:C4	34:B5:1605:G:N7	2.89	0.41
34:B5:1648:A:C6	34:B5:1753:A:N6	2.88	0.41
35:AA:89:TYR:H	35:AA:100:ASN:ND2	2.18	0.41
36:AB:10:ARG:CZ	36:AB:14:LEU:HG	2.51	0.41
36:AB:26:ARG:HH21	38:A1:3002:C:P	2.44	0.41
37:AC:52:VAL:HG21	37:AC:99:MET:HE3	2.02	0.41
37:AC:219:LEU:HD13	37:AC:222:VAL:HG21	2.03	0.41
37:AC:294:GLU:OE2	53:AQ:129:VAL:HG13	2.21	0.41
38:A1:104:G:OP1	48:AL:70:ARG:HG3	2.21	0.41
38:A1:109:A:C5	38:A1:323:A:C5	3.09	0.41
38:A1:139:G:C6	38:A1:140:C:C4	3.08	0.41
38:A1:183:G:C6	38:A1:184:U:C4	3.09	0.41
38:A1:232:G:H2'	38:A1:233:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:240:U:O3'	38:A1:241:G:H2'	2.21	0.41
38:A1:320:G:H2'	38:A1:321:C:H6	1.85	0.41
38:A1:355:A:C2	38:A1:365:A:C4	3.08	0.41
38:A1:395:A:H8	38:A1:395:A:OP1	2.04	0.41
38:A1:408:A:N6	40:A4:15:G:H1'	2.35	0.41
38:A1:436:A:N1	38:A1:624:G:C2	2.87	0.41
38:A1:510:G:C6	38:A1:582:G:C6	3.09	0.41
38:A1:563:U:C2	38:A1:564:G:C8	3.09	0.41
38:A1:609:G:H3'	38:A1:609:G:N3	2.36	0.41
38:A1:613:G:C6	38:A1:614:C:C4	3.08	0.41
38:A1:805:G:C5	38:A1:936:A:N6	2.88	0.41
38:A1:813:G:C3'	72:Aj:45:ARG:HH22	2.30	0.41
38:A1:853:G:O2'	54:AR:130:ASN:ND2	2.54	0.41
38:A1:858:A:H2'	38:A1:859:G:C8	2.55	0.41
38:A1:1009:A:H2'	38:A1:1010:G:O4'	2.21	0.41
38:A1:1019:G:O2'	38:A1:1020:G:H2'	2.20	0.41
38:A1:1115:G:H5"	38:A1:1116:G:H5'	2.01	0.41
38:A1:1146:C:C2	38:A1:1147:G:N7	2.89	0.41
38:A1:1205:A:N6	38:A1:1300:G:N2	2.69	0.41
38:A1:1268:G:O2'	38:A1:1273:A:N7	2.42	0.41
38:A1:1381:A:C2	38:A1:1426:C:C2	3.09	0.41
38:A1:1471:U:H2'	38:A1:1472:U:H6	1.86	0.41
38:A1:1473:G:H5"	54:AR:23:TRP:CD1	2.55	0.41
38:A1:1534:A:C5	38:A1:1587:A:C6	3.09	0.41
38:A1:1593:A:H5'	69:Ag:60:ARG:CD	2.50	0.41
38:A1:1634:G:C6	38:A1:1635:G:C5	3.09	0.41
38:A1:1709:C:C2	38:A1:1710:C:C5	3.09	0.41
38:A1:1712:G:H8	38:A1:1712:G:OP2	2.03	0.41
38:A1:1730:G:C8	65:Ac:28:LYS:HE3	2.55	0.41
38:A1:1828:A:H2'	38:A1:1829:G:C8	2.56	0.41
38:A1:1847:A:C5	38:A1:1849:C:C5	3.09	0.41
38:A1:1934:G:N1	38:A1:1935:G:C5	2.89	0.41
38:A1:2359:C:H2'	38:A1:2360:C:C6	2.55	0.41
38:A1:2466:G:H3'	38:A1:2467:G:C5'	2.47	0.41
38:A1:2482:U:N3	38:A1:2486:A:C6	2.89	0.41
38:A1:2483:G:N1	38:A1:2486:A:O4'	2.46	0.41
38:A1:2505:U:H2'	38:A1:2506:U:O4'	2.20	0.41
38:A1:2573:G:P	62:AZ:61:LYS:HZ3	2.43	0.41
38:A1:2689:A:N3	38:A1:2689:A:H2'	2.35	0.41
38:A1:2838:A:H2'	38:A1:2839:G:O4'	2.21	0.41
38:A1:2856:G:P	46:AI:10:ARG:HH22	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2877:G:H2'	38:A1:2878:G:C8	2.56	0.41
38:A1:2986:U:H2'	38:A1:2987:A:C8	2.39	0.41
38:A1:3147:G:C6	38:A1:3148:U:C4	3.09	0.41
38:A1:3256:G:H2'	38:A1:3257:C:H6	1.85	0.41
38:A1:3314:A:H2'	38:A1:3315:G:H8	1.85	0.41
40:A4:40:A:C5	40:A4:104:A:C2	3.09	0.41
40:A4:72:A:C2	40:A4:89:A:H5'	2.56	0.41
40:A4:73:PSU:C6	40:A4:73:PSU:O5'	2.74	0.41
41:AD:260:PHE:CZ	41:AD:264:GLN:HB3	2.55	0.41
41:AD:261:THR:OG1	41:AD:262:LYS:N	2.49	0.41
43:AF:107:ARG:HE	43:AF:204:PRO:HD3	1.85	0.41
43:AF:144:ILE:HD12	43:AF:189:ILE:HD12	2.02	0.41
44:AG:24:ASN:HA	44:AG:25:PRO:HD3	1.92	0.41
44:AG:142:LEU:HD13	44:AG:147:LYS:HB2	2.03	0.41
46:AI:60:LEU:HD12	46:AI:129:VAL:HG11	2.03	0.41
46:AI:100:ASN:OD1	46:AI:101:LYS:N	2.54	0.41
46:AI:119:TRP:CD1	46:AI:119:TRP:C	2.98	0.41
46:AI:120:GLY:C	46:AI:121:LYS:HD2	2.45	0.41
47:AJ:14:ILE:HA	47:AJ:131:MET:HE1	2.02	0.41
47:AJ:19:LEU:HD12	47:AJ:125:MET:HG3	2.03	0.41
47:AJ:78:GLU:O	47:AJ:81:GLU:HB2	2.21	0.41
47:AJ:141:ARG:HG3	47:AJ:143:ARG:O	2.21	0.41
54:AR:84:THR:O	54:AR:88:ARG:HG3	2.21	0.41
55:AS:23:LYS:HD2	55:AS:23:LYS:HA	1.83	0.41
55:AS:81:TYR:CE1	55:AS:88:HIS:HB2	2.56	0.41
58:AV:74:MET:SD	58:AV:74:MET:C	3.04	0.41
60:AX:49:LYS:HE2	60:AX:49:LYS:HB3	1.84	0.41
61:AY:54:ASP:HB2	61:AY:70:ILE:HD13	2.03	0.41
62:AZ:64:LYS:HD2	62:AZ:67:LYS:HZ2	1.86	0.41
65:Ac:27:TYR:C	65:Ac:27:TYR:CD1	2.97	0.41
69:Ag:72:VAL:HG21	69:Ag:74:ARG:CZ	2.51	0.41
72:Aj:47:TYR:HB3	72:Aj:49:TRP:NE1	2.36	0.41
79:E:25:LYS:HD2	79:E:25:LYS:HA	1.87	0.41
79:E:122:ARG:HB2	81:EC:6770:U:H5"	2.03	0.41
80:DC:161:ASP:CG	83:DC:901:GDP:HN1	2.29	0.41
80:DC:384:LYS:HE3	80:DC:397:PHE:CD2	2.55	0.41
80:DC:568:GLU:CD	80:DC:723:LYS:HE3	2.46	0.41
80:DC:682:ARG:O	80:DC:683:SER:OG	2.39	0.41
80:DC:735:CYS:SG	80:DC:766:PHE:HB2	2.61	0.41
80:DC:775:ASN:O	80:DC:776:GLU:C	2.63	0.41
80:DC:829:LYS:HZ3	80:DC:830:GLU:HG3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6812:C:H2'	81:EC:6813:A:H8	1.85	0.41
2:BB:120:LEU:CD2	34:B5:931:C:H1'	2.51	0.41
4:BE:125:LYS:HD3	4:BE:158:ASP:O	2.21	0.41
5:BG:94:ARG:NH2	34:B5:1673:G:H5'	2.36	0.41
5:BG:102:VAL:HG11	5:BG:109:LEU:HD21	2.02	0.41
6:BH:108:GLN:CG	34:B5:743:U:H5"	2.51	0.41
6:BH:139:ARG:HE	13:BW:53:ILE:HG13	1.85	0.41
8:BJ:177:ALA:HA	8:BJ:180:LYS:HD2	2.03	0.41
9:BL:111:VAL:HA	9:BL:139:VAL:HG12	2.02	0.41
11:BO:17:ALA:O	11:BO:18:ARG:HG2	2.21	0.41
12:BV:74:GLN:HA	12:BV:79:LEU:O	2.21	0.41
16:Ba:38:ARG:HA	16:Ba:38:ARG:NE	2.36	0.41
19:BD:38:GLU:HB2	19:BD:51:ARG:NH1	2.36	0.41
20:BF:111:VAL:HG23	20:BF:114:ILE:HD11	2.03	0.41
22:BP:127:ARG:HA	22:BP:127:ARG:HD3	1.85	0.41
23:BQ:54:LEU:HD13	23:BQ:109:PHE:CD1	2.55	0.41
25:BS:32:LEU:HB3	25:BS:43:SER:OG	2.21	0.41
26:BT:99:SER:HA	26:BT:102:ARG:NH1	2.35	0.41
31:Bg:90:ARG:NH2	34:B5:1341:A:H4'	2.36	0.41
31:Bg:108:SER:OG	31:Bg:127:ARG:HB2	2.21	0.41
31:Bg:201:THR:HG1	31:Bg:241:PHE:C	2.25	0.41
34:B5:23:G:H2'	34:B5:24:U:C6	2.55	0.41
34:B5:201:G:H2'	34:B5:202:A:H8	1.85	0.41
34:B5:211:PSU:H5"	34:B5:212:U:OP2	2.21	0.41
34:B5:334:G:H2'	34:B5:335:U:C6	2.55	0.41
34:B5:844:A:H3'	34:B5:845:G:N3	2.35	0.41
34:B5:1310:U:C2	34:B5:1316:G:C2	3.09	0.41
34:B5:1474:G:H2'	34:B5:1475:A:C8	2.56	0.41
34:B5:1543:A:H2'	34:B5:1544:U:O4'	2.21	0.41
34:B5:1665:U:H3	34:B5:1736:G:H1	1.69	0.41
34:B5:1747:G:H2'	34:B5:1748:G:C8	2.55	0.41
36:AB:145:GLU:OE2	36:AB:196:ARG:NH1	2.54	0.41
37:AC:281:ILE:HG13	53:AQ:125:ASP:HB2	2.02	0.41
38:A1:107:A:H1'	38:A1:325:A:N3	2.36	0.41
38:A1:146:U:H5"	38:A1:148:G:O4'	2.21	0.41
38:A1:214:G:H2'	38:A1:215:G:C8	2.55	0.41
38:A1:293:C:O2'	71:Ai:76:ARG:O	2.30	0.41
38:A1:1072:G:C5	38:A1:1087:G:C2	3.09	0.41
38:A1:1103:A:C2	53:AQ:6:THR:HG21	2.55	0.41
38:A1:1180:A:C6	38:A1:1326:A:N1	2.89	0.41
38:A1:1577:G:H1'	38:A1:1578:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1634:G:H2'	38:A1:1635:G:O4'	2.21	0.41
38:A1:1754:G:H2'	38:A1:1755:C:O4'	2.21	0.41
38:A1:1811:G:H2'	38:A1:1812:G:H8	1.86	0.41
38:A1:1845:G:C4	38:A1:1849:C:N4	2.89	0.41
38:A1:1911:A:C8	38:A1:1912:U:H5	2.39	0.41
38:A1:2111:G:O4'	59:AW:48:ARG:NH1	2.54	0.41
38:A1:2203:U:H2'	38:A1:2204:C:C6	2.56	0.41
38:A1:2223:A:O2'	38:A1:2224:A:O4'	2.12	0.41
38:A1:2232:A:C6	38:A1:2233:A:C5	3.09	0.41
38:A1:2249:G:C6	38:A1:2250:G:N7	2.89	0.41
38:A1:2342:U:H2'	38:A1:2343:C:C6	2.50	0.41
38:A1:2416:PSU:H1'	38:A1:2967:A:H1'	2.03	0.41
38:A1:2473:C:O5'	38:A1:2474:G:N2	2.53	0.41
38:A1:2547:A:H2'	38:A1:2548:C:C6	2.56	0.41
38:A1:2597:U:C2	38:A1:2598:G:C8	3.09	0.41
38:A1:2768:U:C2	38:A1:2769:A:C8	3.09	0.41
38:A1:3184:A:H2'	38:A1:3185:U:O4'	2.20	0.41
38:A1:3210:A:C6	38:A1:3211:C:N4	2.88	0.41
38:A1:3248:C:C4'	51:AO:114[A]:LYS:HZ2	2.34	0.41
38:A1:3296:A:H2'	38:A1:3297:U:C6	2.56	0.41
40:A4:5:U:C2	40:A4:6:U:C5	3.09	0.41
40:A4:36:G:C8	70:Ah:86:ARG:HD3	2.56	0.41
40:A4:97:A:H4'	70:Ah:63:ARG:CZ	2.51	0.41
40:A4:130:C:H2'	40:A4:131:A:H8	1.85	0.41
40:A4:143:U:H2'	40:A4:144:G:O4'	2.21	0.41
43:AF:112:ASN:ND2	43:AF:209:ASN:OD1	2.45	0.41
45:AH:26:LYS:HA	45:AH:34:LEU:O	2.21	0.41
45:AH:89:LYS:HG3	45:AH:182:SER:OG	2.20	0.41
45:AH:120:ASP:CG	45:AH:122:LYS:HG2	2.46	0.41
46:AI:74:LYS:HD3	46:AI:78:LYS:HZ1	1.86	0.41
47:AJ:15:GLU:HG2	47:AJ:132:ASN:HD21	1.86	0.41
49:AM:22:LEU:HD12	49:AM:31:LYS:O	2.21	0.41
55:AS:10:ILE:HG13	55:AS:26:ARG:CG	2.51	0.41
55:AS:45:LEU:HD13	55:AS:45:LEU:HA	1.95	0.41
68:Af:51:TYR:CZ	68:Af:93:THR:HG22	2.55	0.41
69:Ag:74:ARG:HH21	69:Ag:82:ALA:HB2	1.83	0.41
80:DC:19:VAL:O	80:DC:20:ARG:HD3	2.20	0.41
80:DC:115:VAL:HG11	80:DC:142:VAL:HG11	2.03	0.41
80:DC:366:CYS:HA	80:DC:369:ILE:HG12	2.03	0.41
80:DC:418:TYR:HB2	80:DC:425:ASP:OD1	2.21	0.41
80:DC:489:VAL:HG11	80:DC:534:GLY:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:519:LEU:HB2	80:DC:531:ALA:HB3	2.02	0.41
81:EC:6859:U:H3	81:EC:6860:A:N6	2.18	0.41
4:BE:155:LYS:HG2	4:BE:174:LYS:NZ	2.36	0.40
6:BH:5:GLN:HB3	6:BH:18:LEU:HD22	2.02	0.40
8:BJ:7:THR:OG1	34:B5:759:PSU:OP1	2.40	0.40
10:BN:64:ARG:HB2	10:BN:70:LYS:HD2	2.02	0.40
14:BX:47:SER:OG	34:B5:599:A:N3	2.33	0.40
14:BX:63:GLN:CD	14:BX:64:PRO:HA	2.46	0.40
16:Ba:34:LYS:NZ	34:B5:1791:A:N7	2.70	0.40
19:BD:51:ARG:HA	19:BD:89:GLU:HB3	2.02	0.40
23:BQ:115:THR:HA	23:BQ:118:ILE:HG13	2.03	0.40
25:BS:42:TYR:HD1	25:BS:85:PHE:CE2	2.39	0.40
25:BS:69:ILE:O	25:BS:73:MET:HG2	2.21	0.40
27:BU:102:ARG:O	27:BU:106:ILE:HG12	2.21	0.40
31:Bg:37:SER:HB2	31:Bg:39:ASP:OD1	2.21	0.40
31:Bg:185:GLN:CG	31:Bg:187:GLN:HB2	2.52	0.40
32:Bf:149:LYS:HB2	32:Bf:152:ALA:HA	2.03	0.40
33:BM:24:ILE:HD12	33:BM:24:ILE:H	1.86	0.40
34:B5:160:C:H6	34:B5:160:C:P	2.44	0.40
34:B5:181:A:H2'	34:B5:182:A:O4'	2.20	0.40
34:B5:514:G:C4	34:B5:515:A:C8	3.09	0.40
34:B5:626:U:H5'	34:B5:939:A:H1'	2.03	0.40
34:B5:845:G:N3	34:B5:846:G:N1	2.68	0.40
34:B5:903:U:N3	34:B5:906:A:OP2	2.40	0.40
34:B5:1018:U:H2'	34:B5:1019:A:C8	2.55	0.40
34:B5:1022:C:HO2'	34:B5:1125:A:H61	1.67	0.40
34:B5:1203:A:N6	34:B5:1553:G:H1'	2.36	0.40
34:B5:1335:U:O2	34:B5:1416:G:C2	2.74	0.40
34:B5:1405:G:H2'	34:B5:1406:A:C8	2.56	0.40
34:B5:1658:G:C6	34:B5:1744:A:N7	2.90	0.40
34:B5:1697:G:N2	34:B5:1698:G:H4'	2.35	0.40
35:AA:8:GLN:HE22	38:A1:2164:A:H5'	1.85	0.40
36:AB:55:THR:HG23	38:A1:3049:A:H1'	2.03	0.40
36:AB:226:PHE:O	38:A1:1886:A:O2'	2.21	0.40
38:A1:33:G:H5"	50:AN:73:ARG:NH2	2.36	0.40
38:A1:62:A:H2'	38:A1:63:A:O4'	2.21	0.40
38:A1:72:C:O2'	48:AL:62:THR:N	2.55	0.40
38:A1:149:U:H5"	50:AN:54:LYS:HG3	2.02	0.40
38:A1:330:G:C6	40:A4:33:A:N1	2.89	0.40
38:A1:339:C:H2'	38:A1:340:C:C6	2.56	0.40
38:A1:392:G:H2'	38:A1:393:U:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:397:A:C5	38:A1:400:G:C6	3.09	0.40
38:A1:415:G:H2'	38:A1:416:A:C8	2.56	0.40
38:A1:420:G:C6	38:A1:2384:A:C6	3.09	0.40
38:A1:432:G:C6	38:A1:628:A:C6	3.09	0.40
38:A1:863:C:C4	38:A1:864:G:C5	3.09	0.40
38:A1:883:A:C6	38:A1:921:A:C5	3.09	0.40
38:A1:1052:PSU:C2	38:A1:1053:A:C5	3.09	0.40
38:A1:1126:G:O6	38:A1:1133:A:N6	2.54	0.40
38:A1:1145:G:C4	38:A1:1146:C:C6	3.10	0.40
38:A1:1260:A:N6	38:A1:1261:G:O6	2.54	0.40
38:A1:1335:C:C2	38:A1:1336:U:C5	3.09	0.40
38:A1:1413:G:C4	38:A1:1414:G:N7	2.89	0.40
38:A1:1668:G:OP1	69:Ag:24:LYS:NZ	2.39	0.40
38:A1:1765:U:H3'	54:AR:43:LYS:HD2	2.03	0.40
38:A1:1896:A:H2	58:AV:83:LYS:HZ1	1.68	0.40
38:A1:2206:G:H3'	38:A1:2207:A:H5"	2.02	0.40
38:A1:2516:U:O2'	38:A1:2595:A:N1	2.54	0.40
38:A1:2519:A:C6	38:A1:2589:G:C6	3.09	0.40
38:A1:2528:G:H2'	38:A1:2529:A:H8	1.86	0.40
38:A1:2555:G:C6	38:A1:2556:C:C4	3.09	0.40
38:A1:2581:U:H2'	38:A1:2582:C:C6	2.55	0.40
38:A1:2632:G:C6	38:A1:2647:A:C6	3.10	0.40
38:A1:3009:G:H2'	38:A1:3010:U:C6	2.56	0.40
38:A1:3058:U:H5'	38:A1:3059:G:OP1	2.21	0.40
38:A1:3066:U:H3	38:A1:3075:G:H1	1.69	0.40
38:A1:3247:G:H2'	38:A1:3248:C:H6	1.85	0.40
38:A1:3279:A:H2'	38:A1:3280:U:H6	1.85	0.40
38:A1:3323:A:H2'	38:A1:3324:C:H6	1.84	0.40
39:A3:34:C:O2	39:A3:46:A:O2'	2.35	0.40
39:A3:47:C:OP2	41:AD:158:ARG:HD3	2.21	0.40
40:A4:3:A:O3'	52:AP:61:ARG:HD3	2.21	0.40
41:AD:51:LEU:N	41:AD:145:PHE:O	2.33	0.40
41:AD:266:ALA:O	41:AD:270:LYS:HG3	2.21	0.40
42:AE:91:VAL:HB	42:AE:148:GLU:OE1	2.20	0.40
43:AF:155:LYS:HB2	43:AF:203:TRP:CE3	2.54	0.40
47:AJ:12:LEU:HD12	47:AJ:132:ASN:O	2.22	0.40
53:AQ:73:GLN:NE2	53:AQ:74:GLU:OE1	2.54	0.40
54:AR:80:LYS:HB2	54:AR:80:LYS:HE2	1.88	0.40
54:AR:101:VAL:HA	54:AR:104:ARG:NH2	2.36	0.40
57:AU:20:SER:HB3	57:AU:61:THR:OG1	2.21	0.40
61:AY:34:PRO:HD2	61:AY:104:LEU:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:AZ:11:ALA:HB3	62:AZ:80:LEU:HD23	2.03	0.40
68:Af:89:LEU:HA	68:Af:90:PRO:HD3	1.92	0.40
72:Aj:26:SER:OG	72:Aj:36:SER:N	2.53	0.40
73:Ak:29:LYS:NZ	73:Ak:39:ARG:HB2	2.35	0.40
79:E:11:GLU:HA	79:E:14:LYS:HB2	2.02	0.40
79:E:39:LYS:O	79:E:200:ASN:HA	2.21	0.40
80:DC:181:THR:O	80:DC:184:SER:HB2	2.21	0.40
80:DC:196:VAL:HG13	80:DC:197:LEU:HD12	2.03	0.40
80:DC:235:VAL:HG22	80:DC:236:ASP:N	2.35	0.40
80:DC:759:GLN:HB2	80:DC:766:PHE:HD2	1.86	0.40
80:DC:807:ASP:OD1	80:DC:809:LEU:HB2	2.21	0.40
81:EC:6805:C:OP1	81:EC:6807:A:H4'	2.21	0.40
81:EC:6863:C:H2'	81:EC:6864:A:N7	2.36	0.40
81:EC:6897:G:C2	81:EC:6918:A:C8	3.09	0.40
1:BA:125:ASP:CG	1:BA:164:ASN:HD22	2.30	0.40
2:BB:121:ILE:O	2:BB:121:ILE:HG23	2.21	0.40
2:BB:122:GLU:OE1	2:BB:140:ILE:HB	2.21	0.40
4:BE:221:ARG:HB2	4:BE:224:ASN:ND2	2.36	0.40
5:BG:216:LEU:HA	5:BG:219:ARG:NE	2.36	0.40
6:BH:133:THR:HG21	6:BH:159:VAL:HG23	2.03	0.40
7:BI:56:ARG:HD2	7:BI:56:ARG:HA	1.95	0.40
16:Ba:79:ILE:HG22	16:Ba:84:VAL:HG23	2.03	0.40
19:BD:12:VAL:HG21	30:Bd:36:LEU:HD21	2.03	0.40
20:BF:89:ILE:HA	20:BF:92:ARG:HG3	2.03	0.40
25:BS:75:ASN:HB3	25:BS:78:HIS:ND1	2.36	0.40
26:BT:20:SER:HA	26:BT:23:GLN:HG2	2.03	0.40
26:BT:43:ASN:ND2	34:B5:1478:G:OP1	2.53	0.40
27:BU:113:ASP:OD1	27:BU:113:ASP:N	2.45	0.40
29:Bc:11:LYS:HZ3	29:Bc:13:ILE:HA	1.87	0.40
31:Bg:169:ILE:HG23	31:Bg:183:LEU:HD13	2.02	0.40
31:Bg:222:LEU:HD11	31:Bg:265:LEU:HD21	2.02	0.40
34:B5:61:A:H2	34:B5:269:G:H21	1.69	0.40
34:B5:114:C:N4	34:B5:245:U:O2'	2.54	0.40
34:B5:208:U:H2'	34:B5:209:U:C6	2.56	0.40
34:B5:406:U:C2	34:B5:407:A:N7	2.89	0.40
34:B5:515:A:H2'	34:B5:516:G:O4'	2.21	0.40
34:B5:774:A:H2	34:B5:786:C:H42	1.67	0.40
34:B5:811:A:H2	34:B5:814:A:H62	1.68	0.40
34:B5:827:C:H2'	34:B5:844:A:C2	2.56	0.40
34:B5:925:G:H2'	34:B5:926:A:H8	1.83	0.40
34:B5:994:G:H2'	34:B5:995:A:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1097:U:H1’	34:B5:1099:U:C4	2.56	0.40
34:B5:1176:G:C2	34:B5:1464:G:C4	3.09	0.40
34:B5:1225:U:O2’	34:B5:1230:A:H4’	2.21	0.40
34:B5:1249:U:H5”	34:B5:1250:U:OP2	2.21	0.40
34:B5:1393:C:C2	34:B5:1394:G:C8	3.09	0.40
34:B5:1489:U:H1’	34:B5:1494:C:C4	2.56	0.40
34:B5:1505:A:H1’	34:B5:1562:G:H21	1.86	0.40
34:B5:1612:U:H3’	34:B5:1613:U:C6	2.56	0.40
34:B5:1678:A:H3’	34:B5:1679:G:C8	2.47	0.40
35:AA:51:ASP:HB2	35:AA:58:LEU:HG	2.02	0.40
36:AB:53:MET:HE1	38:A1:3049:A:C8	2.56	0.40
36:AB:99:LEU:HB2	38:A1:3004:C:H4’	2.03	0.40
37:AC:293:SER:HA	38:A1:1349:G:C2	2.56	0.40
38:A1:33:G:C5’	50:AN:73:ARG:HH12	2.30	0.40
38:A1:123:A:C6	38:A1:150:A:C5	3.09	0.40
38:A1:359:U:H3	38:A1:920:A:N6	2.18	0.40
38:A1:579:G:H2’	38:A1:580:C:C6	2.56	0.40
38:A1:606:C:O3’	42:AE:26:ARG:NH2	2.53	0.40
38:A1:625:G:H2’	38:A1:626:U:H6	1.86	0.40
38:A1:869:G:C6	38:A1:870:G:C2	3.09	0.40
38:A1:967:A:C6	38:A1:968:G:C5	3.09	0.40
38:A1:1064:A:H4’	38:A1:1065:A:H5”	2.03	0.40
38:A1:1180:A:C4	38:A1:1182:A:C8	3.10	0.40
38:A1:1298:C:O3’	75:Am:113:ARG:NH1	2.48	0.40
38:A1:1560:G:H4’	38:A1:1561:G:OP1	2.21	0.40
38:A1:1809:A:H2’	38:A1:1810:A:C8	2.57	0.40
38:A1:1908:A:H3’	38:A1:1909:A:H8	1.86	0.40
38:A1:2139:A:H8	72:Aj:2:GLY:N	2.20	0.40
38:A1:2161:G:C6	38:A1:2162:U:C4	3.09	0.40
38:A1:2198:A:C4	38:A1:2199:G:C8	3.09	0.40
38:A1:2222:A:C8	38:A1:2223:A:C6	3.09	0.40
38:A1:2273:G:H4’	38:A1:2274:U:H5’	2.04	0.40
38:A1:2563:G:H2’	38:A1:2564:G:C8	2.56	0.40
38:A1:2714:G:C4	38:A1:2751:G:C2	3.09	0.40
38:A1:3039:C:O2’	58:AV:10:LYS:O	2.39	0.40
38:A1:3126:C:H2’	38:A1:3127:A:H8	1.86	0.40
38:A1:3192:U:H2’	38:A1:3193:C:H6	1.87	0.40
38:A1:3207:U:HO2’	38:A1:3208:G:C5’	2.34	0.40
38:A1:3216:G:H1	38:A1:3259:U:H2’	1.86	0.40
39:A3:99:G:C6	39:A3:100:C:C4	3.08	0.40
40:A4:155:A:H2’	40:A4:156:U:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:AD:163:LEU:HD21	41:AD:175:HIS:CG	2.57	0.40
42:AE:139:LYS:O	42:AE:143:LYS:HG2	2.20	0.40
46:AI:46:PHE:HD2	46:AI:139:ARG:CZ	2.34	0.40
48:AL:177:LYS:HD3	48:AL:177:LYS:HA	1.93	0.40
51:AO:24[A]:ALA:O	51:AO:28[A]:LEU:HD23	2.21	0.40
53:AQ:74:GLU:OE1	53:AQ:74:GLU:N	2.53	0.40
54:AR:114:LYS:HB3	54:AR:115:ILE:HD12	2.03	0.40
62:AZ:76:ASN:HB3	62:AZ:79:HIS:HD2	1.84	0.40
66:Ad:72:ARG:HG3	66:Ad:96:VAL:HB	2.02	0.40
71:Ai:53:TYR:OH	71:Ai:77:LEU:HD21	2.21	0.40
73:Ak:32:ASN:ND2	73:Ak:36:LYS:H	2.19	0.40
79:E:54:LYS:HD3	79:E:154:THR:HB	2.02	0.40
80:DC:176:GLN:OE1	80:DC:176:GLN:N	2.54	0.40
80:DC:568:GLU:HA	80:DC:592:PRO:HB3	2.03	0.40
85:DC:903:SO1:H203	85:DC:903:SO1:O15	2.22	0.40
3:BC:208:GLU:HG2	3:BC:209:ASN:N	2.36	0.40
4:BE:137:PRO:HG2	4:BE:150:PRO:HD2	2.02	0.40
5:BG:166:GLU:HG2	5:BG:167:LYS:HG2	2.04	0.40
5:BG:173:PRO:HB3	34:B5:66:U:C5	2.57	0.40
6:BH:51:VAL:HG22	6:BH:55:LYS:O	2.22	0.40
7:BI:118:GLY:HA3	7:BI:143:TRP:CZ2	2.57	0.40
8:BJ:102:GLU:HA	8:BJ:105:LEU:HD12	2.02	0.40
9:BL:37:ASN:OD1	34:B5:247:A:H4'	2.21	0.40
20:BF:25:LEU:HD11	23:BQ:57:LEU:HD13	2.03	0.40
20:BF:222:LYS:HA	20:BF:225:ARG:HH22	1.86	0.40
21:BK:70:GLU:HG2	21:BK:71:GLU:N	2.35	0.40
22:BP:20:VAL:HG12	22:BP:25:LEU:HG	2.03	0.40
23:BQ:120:ASP:OD1	23:BQ:122:ARG:HG3	2.21	0.40
25:BS:40:ARG:HD3	25:BS:40:ARG:C	2.46	0.40
26:BT:130:ARG:HE	34:B5:1359:C:H5"	1.86	0.40
27:BU:57:ARG:HB3	27:BU:89:ARG:NH1	2.36	0.40
34:B5:40:A:C5	34:B5:469:C:C5	3.10	0.40
34:B5:220:A:C5	34:B5:830:U:C4	3.09	0.40
34:B5:237:C:O2'	34:B5:834:G:OP2	2.39	0.40
34:B5:246:G:C6	34:B5:247:A:C6	3.10	0.40
34:B5:746:A:H2'	34:B5:747:C:O4'	2.21	0.40
34:B5:774:A:O5'	34:B5:787:G:N1	2.54	0.40
34:B5:899:G:C2	34:B5:900:A:C8	3.10	0.40
34:B5:1127:G:C5	34:B5:1128:C:C5	3.09	0.40
34:B5:1316:G:H2'	34:B5:1317:C:H6	1.86	0.40
34:B5:1354:G:C5	34:B5:1355:C:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1514:U:H5”	34:B5:1515:A:O4’	2.22	0.40
34:B5:1569:A:H2’	34:B5:1570:A:C8	2.56	0.40
34:B5:1579:U:H2’	34:B5:1580:C:H6	1.86	0.40
34:B5:1637:C:C4	81:EC:6905:G:C5	3.09	0.40
34:B5:1660:A:H2’	34:B5:1661:U:H6	1.86	0.40
35:AA:72:ARG:HD3	35:AA:72:ARG:HA	1.91	0.40
36:AB:380:MET:O	38:A1:3369:G:N1	2.54	0.40
38:A1:26:A:C4	38:A1:27:C:C5	3.09	0.40
38:A1:115:A:H2’	38:A1:265:A:H2’	2.04	0.40
38:A1:135:C:C4	70:Ah:94:LYS:HD3	2.56	0.40
38:A1:252:U:H4’	38:A1:253:A:OP2	2.21	0.40
38:A1:290:G:H2’	38:A1:291:C:O4’	2.21	0.40
38:A1:407:A:O2’	38:A1:408:A:H5’	2.21	0.40
38:A1:450:G:H5”	38:A1:451:U:H5’	2.03	0.40
38:A1:561:C:P	49:AM:80:THR:HG21	2.61	0.40
38:A1:661:G:N7	63:Aa:19:LYS:HE3	2.36	0.40
38:A1:883:A:O4’	52:AP:133:HIS:HA	2.20	0.40
38:A1:912:G:H2’	38:A1:914:A:C5	2.57	0.40
38:A1:926:A:C4	38:A1:927:C:C5	3.09	0.40
38:A1:1079:A:O3’	41:AD:140:ARG:HB2	2.20	0.40
38:A1:1147:G:N1	38:A1:1148:G:C5	2.90	0.40
38:A1:1150:A:C8	38:A1:1310:G:O4’	2.73	0.40
38:A1:1185:C:H1’	55:AS:108:GLN:CD	2.47	0.40
38:A1:1208:U:H4’	38:A1:1209:G:OP1	2.21	0.40
38:A1:1223:A:C5	38:A1:1224:C:C4	3.09	0.40
38:A1:1387:G:N2	38:A1:1421:G:C4	2.89	0.40
38:A1:1470:U:C2	38:A1:1471:U:C5	3.09	0.40
38:A1:1510:G:O3’	38:A1:1511:U:H2’	2.21	0.40
38:A1:2202:C:H2’	38:A1:2203:U:O4’	2.22	0.40
38:A1:2316:G:C2	38:A1:2317:A:C5	3.09	0.40
38:A1:2342:U:O2’	38:A1:2343:C:H5’	2.21	0.40
38:A1:2411:U:H2’	38:A1:2412:G:O4’	2.21	0.40
38:A1:2474:G:H1’	38:A1:2476:C:N4	2.36	0.40
38:A1:2597:U:C2	38:A1:2598:G:N7	2.89	0.40
38:A1:2770:G:C2	38:A1:2789:U:C2	3.10	0.40
38:A1:2779:A:C8	38:A1:2780:A:C8	3.09	0.40
38:A1:2861:U:H2’	38:A1:2862:U:C6	2.56	0.40
38:A1:2879:C:C4	38:A1:2880:PSU:C2	3.09	0.40
38:A1:2985:C:H2’	38:A1:2986:U:C6	2.56	0.40
38:A1:3082:C:H2’	38:A1:3083:G:H8	1.86	0.40
38:A1:3129:A:H2’	38:A1:3130:A:H5”	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3363:U:H2'	38:A1:3364:C:C6	2.56	0.40
38:A1:3379:C:C4	38:A1:3380:U:C4	3.10	0.40
39:A3:23:A:C4	39:A3:24:A:C8	3.09	0.40
39:A3:99:G:OP1	43:AF:128:LYS:HG3	2.21	0.40
40:A4:77:A:H2'	40:A4:78:G:C8	2.56	0.40
41:AD:279:LYS:NZ	41:AD:280:GLU:OE2	2.53	0.40
44:AG:140:VAL:HA	44:AG:143:ILE:HD12	2.03	0.40
45:AH:10:ILE:HG12	45:AH:75:VAL:HG21	2.04	0.40
46:AI:170:LYS:NZ	46:AI:175:ASN:O	2.48	0.40
46:AI:182:ILE:HD13	46:AI:182:ILE:HA	1.91	0.40
48:AL:50:PRO:HB3	48:AL:138:VAL:HG13	2.02	0.40
51:AO:12[A]:LYS:HB3	55:AS:167:ARG:HH12	1.86	0.40
53:AQ:89:ASP:HB3	53:AQ:110:ALA:HA	2.04	0.40
57:AU:81:LYS:HE2	57:AU:81:LYS:HB3	1.88	0.40
58:AV:82:ALA:HB3	58:AV:98:ASN:HD22	1.86	0.40
61:AY:42:GLN:HG3	61:AY:43:TYR:CD1	2.56	0.40
65:Ac:84:LEU:H	65:Ac:84:LEU:HD23	1.86	0.40
68:Af:19:SER:OG	68:Af:20:LYS:N	2.54	0.40
80:DC:334:LEU:O	80:DC:338:ILE:HG13	2.22	0.40
80:DC:495:VAL:HG12	80:DC:496:LYS:N	2.37	0.40
80:DC:538:LEU:HA	80:DC:541:CYS:SG	2.60	0.40
80:DC:565:GLU:HB3	80:DC:717:PHE:CZ	2.56	0.40
80:DC:725:GLN:HA	80:DC:803:THR:HA	2.04	0.40
80:DC:759:GLN:HG3	80:DC:765:LEU:O	2.22	0.40
1:BA:31:VAL:HG23	1:BA:32:HIS:CD2	2.57	0.40
1:BA:81:PHE:HB3	1:BA:167:LYS:CD	2.52	0.40
2:BB:119:THR:HB	2:BB:143:THR:HG21	2.04	0.40
3:BC:37:PRO:HB2	3:BC:43:ARG:HD2	2.02	0.40
5:BG:32:ILE:HG23	5:BG:52:ILE:O	2.21	0.40
8:BJ:64:GLU:HA	8:BJ:69:ARG:HH11	1.86	0.40
8:BJ:85:VAL:HG21	8:BJ:104:PHE:CG	2.56	0.40
11:BO:80:HIS:HA	11:BO:113:GLY:O	2.21	0.40
12:BV:2:GLU:OE1	12:BV:6:GLY:HA2	2.21	0.40
14:BX:37:ALA:O	14:BX:44:GLY:HA2	2.21	0.40
15:BY:43:LYS:HE3	15:BY:43:LYS:HB3	1.89	0.40
15:BY:60:PHE:H	15:BY:71:GLY:HA2	1.86	0.40
16:Ba:44:ILE:H	16:Ba:44:ILE:HD12	1.86	0.40
19:BD:120:TYR:O	19:BD:124:ARG:HG3	2.21	0.40
19:BD:160:SER:OG	34:B5:1329:A:OP2	2.22	0.40
20:BF:148:ARG:NH2	20:BF:151:GLY:HA2	2.37	0.40
20:BF:157:ARG:HB2	20:BF:224:ASN:HB3	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BQ:68:ARG:NH1	34:B5:1366:U:OP1	2.54	0.40
23:BQ:129:PHE:CE1	27:BU:78:THR:HA	2.56	0.40
24:BR:46:LEU:HD12	24:BR:46:LEU:HA	1.87	0.40
25:BS:28:ILE:HG13	25:BS:29:VAL:N	2.35	0.40
25:BS:71:GLN:HA	25:BS:74:GLN:NE2	2.36	0.40
28:BZ:57:TYR:HA	81:EC:6863:C:O2	2.22	0.40
32:Bf:121:CYS:HB3	32:Bf:126:CYS:HB2	1.91	0.40
33:BM:70:ASN:OD1	33:BM:71:ILE:N	2.54	0.40
34:B5:36:C:N4	34:B5:473:A:N6	2.69	0.40
34:B5:82:U:H2'	34:B5:83:G:O4'	2.21	0.40
34:B5:399:A:H1'	34:B5:401:A:C8	2.57	0.40
34:B5:774:A:N1	34:B5:786:C:C4	2.86	0.40
34:B5:774:A:C6	34:B5:786:C:N3	2.86	0.40
34:B5:874:C:H2'	34:B5:875:G:C8	2.56	0.40
34:B5:913:G:N2	38:A1:2206:G:H1'	2.36	0.40
34:B5:1343:U:C4	34:B5:1383:G:N1	2.90	0.40
34:B5:1352:G:C6	34:B5:1354:G:C8	3.10	0.40
34:B5:1392:U:H2'	34:B5:1393:C:H6	1.83	0.40
34:B5:1642:G:H2'	34:B5:1643:U:H6	1.86	0.40
34:B5:1690:G:H1'	34:B5:1691:A:C2	2.55	0.40
35:AA:89:TYR:H	35:AA:100:ASN:HD22	1.70	0.40
35:AA:189:TYR:HD1	35:AA:193:ARG:HB2	1.85	0.40
35:AA:200:ARG:HE	38:A1:2147:A:P	2.44	0.40
36:AB:83:PRO:HB2	36:AB:202:THR:OG1	2.21	0.40
36:AB:282:ILE:HD12	36:AB:322:ILE:HD11	2.03	0.40
38:A1:73:C:N3	48:AL:59:ARG:NE	2.69	0.40
38:A1:105:C:O2'	38:A1:684:G:O2'	2.29	0.40
38:A1:206:G:H2'	38:A1:206:G:N3	2.36	0.40
38:A1:720:A:N3	38:A1:720:A:H2'	2.36	0.40
38:A1:730:C:C2	38:A1:731:U:C5	3.10	0.40
38:A1:746:A:H2'	38:A1:747:A:H8	1.85	0.40
38:A1:909:G:C4	38:A1:910:G:C8	3.10	0.40
38:A1:1059:G:H4'	56:AT:60:LYS:HD2	2.04	0.40
38:A1:1144:U:C4	38:A1:1366:A:C2	3.10	0.40
38:A1:1154:A:OP1	38:A1:1155:C:N4	2.39	0.40
38:A1:1160:C:O2	67:Ae:45:ARG:NH2	2.55	0.40
38:A1:1226:G:H2'	38:A1:1227:C:C5	2.56	0.40
38:A1:1383:G:H2'	38:A1:1384:U:H6	1.86	0.40
38:A1:1412:G:H2'	38:A1:1413:G:C8	2.57	0.40
38:A1:1745:C:C2	38:A1:1746:U:C5	3.09	0.40
38:A1:1919:G:C2	38:A1:1934:G:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1939:G:P	54:AR:79:GLY:H	2.43	0.40
38:A1:2152:A:H2'	38:A1:2153:U:C6	2.55	0.40
38:A1:2215:A:C2	38:A1:2216:G:H1'	2.56	0.40
38:A1:2415:C:H2'	38:A1:2416:PSU:H6	1.87	0.40
38:A1:2567:C:H2'	38:A1:2568:C:C6	2.57	0.40
38:A1:2630:C:P	56:AT:5:HIS:H	2.43	0.40
38:A1:2632:G:C6	38:A1:2633:U:C4	3.09	0.40
38:A1:2652:U:OP1	77:Ao:65:THR:OG1	2.23	0.40
38:A1:2747:A:H2'	38:A1:2748:A:C5	2.57	0.40
38:A1:3000:A:N1	38:A1:3149:G:C6	2.90	0.40
38:A1:3001:C:H2'	38:A1:3002:C:C6	2.57	0.40
38:A1:3064:U:O4	38:A1:3080:G:N1	2.54	0.40
38:A1:3221:C:H2'	38:A1:3222:U:H6	1.86	0.40
38:A1:3373:U:C4	38:A1:3374:U:C4	3.10	0.40
39:A3:85:G:O3'	39:A3:86:U:H3'	2.21	0.40
40:A4:26:U:C2	40:A4:27:U:C5	3.09	0.40
40:A4:139:U:H2'	40:A4:140:G:H8	1.85	0.40
45:AH:10:ILE:HD13	45:AH:53:ILE:HG22	2.03	0.40
45:AH:112:ILE:O	45:AH:126:VAL:N	2.53	0.40
46:AI:52:LEU:HD12	46:AI:164:LYS:O	2.22	0.40
51:AO:20[A]:ALA:HB1	51:AO:87[A]:MET:HG2	2.04	0.40
56:AT:2:GLY:C	56:AT:3:LYS:HD2	2.46	0.40
57:AU:43:VAL:O	57:AU:49:ASN:ND2	2.38	0.40
62:AZ:70:PRO:HG3	62:AZ:115:LYS:HA	2.04	0.40
63:Aa:72:VAL:HG13	63:Aa:113:LEU:HD23	2.03	0.40
69:Ag:58:ARG:H	69:Ag:61:GLN:NE2	2.19	0.40
70:Ah:62:GLN:O	70:Ah:66:VAL:N	2.42	0.40
80:DC:338:ILE:HG23	80:DC:342:LEU:HD12	2.03	0.40
80:DC:606:ILE:HD13	80:DC:619:MET:HG3	2.03	0.40
80:DC:633:ILE:HD13	80:DC:636:PHE:CE1	2.56	0.40
81:EC:6868:C:HO2'	81:EC:6869:C:P	2.40	0.40
2:BB:45:LYS:HE3	2:BB:45:LYS:HB2	1.91	0.40
3:BC:157:LYS:HB2	3:BC:170:ILE:HD13	2.04	0.40
3:BC:168:ARG:HD2	34:B5:1097:U:O2	2.21	0.40
4:BE:44:LEU:O	4:BE:48:LEU:HD23	2.21	0.40
4:BE:254:ARG:HH12	34:B5:787:G:P	2.40	0.40
5:BG:20:ASP:O	5:BG:23:ARG:HG2	2.22	0.40
10:BN:99:ARG:NH2	10:BN:115:LEU:HD11	2.36	0.40
14:BX:19:ARG:HD2	14:BX:19:ARG:HA	1.86	0.40
14:BX:97:ASP:HB2	14:BX:100:ASP:OD2	2.21	0.40
19:BD:27:ARG:HH22	21:BK:60:SER:N	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:BD:95:GLY:N	19:BD:125:TYR:OH	2.55	0.40
19:BD:123:VAL:HG13	19:BD:134:CYS:SG	2.62	0.40
20:BF:90:ILE:O	20:BF:94:THR:HG23	2.22	0.40
22:BP:60:LEU:HD13	22:BP:89:MET:SD	2.62	0.40
31:Bg:11:GLY:O	31:Bg:312:VAL:N	2.50	0.40
32:Bf:106:TYR:OH	33:BM:53:THR:OG1	2.31	0.40
34:B5:515:A:C8	34:B5:516:G:C8	3.10	0.40
34:B5:645:C:C2	34:B5:690:G:C2	3.10	0.40
34:B5:776:G:C6	34:B5:785:U:O2	2.74	0.40
34:B5:816:G:H22	34:B5:855:A:H2	1.69	0.40
34:B5:850:A:H1'	54:AR:169:ALA:HB1	2.04	0.40
34:B5:1082:C:N4	34:B5:1091:A:N1	2.70	0.40
34:B5:1145:U:H2'	34:B5:1146:G:C8	2.57	0.40
34:B5:1263:G:H3'	34:B5:1264:G:C8	2.56	0.40
34:B5:1565:C:H2'	34:B5:1566:U:H6	1.85	0.40
35:AA:69:TYR:OH	38:A1:2557:A:OP1	2.27	0.40
36:AB:20:LYS:HB2	38:A1:2991:A:OP1	2.21	0.40
36:AB:247:ARG:NE	38:A1:1888:U:OP1	2.43	0.40
37:AC:184:SER:HB2	38:A1:1386:A:O2'	2.22	0.40
37:AC:193:LYS:HE2	38:A1:1419:A:H5"	2.02	0.40
38:A1:65:A:C5	38:A1:110:G:C5	3.10	0.40
38:A1:103:G:C2	38:A1:104:G:C5	3.10	0.40
38:A1:335:G:OP2	61:AY:14:LYS:NZ	2.44	0.40
38:A1:357:A:N6	38:A1:363:G:C6	2.89	0.40
38:A1:420:G:C5	38:A1:2385:G:C6	3.10	0.40
38:A1:430:U:O2	68:Af:92:LYS:NZ	2.53	0.40
38:A1:638:C:H2'	38:A1:639:G:H8	1.83	0.40
38:A1:639:G:H8	38:A1:639:G:O5'	2.04	0.40
38:A1:680:G:H2'	38:A1:681:U:H5"	2.03	0.40
38:A1:703:G:C5	38:A1:704:U:C4	3.10	0.40
38:A1:754:G:H2'	38:A1:755:A:C8	2.55	0.40
38:A1:755:A:C6	38:A1:756:U:C4	3.10	0.40
38:A1:993:G:N1	38:A1:1056:PSU:O2	2.49	0.40
38:A1:1079:A:C6	38:A1:1080:A:C6	3.10	0.40
38:A1:1098:A:P	56:AT:108:ARG:HH22	2.43	0.40
38:A1:1135:A:H2'	38:A1:1136:A:H8	1.86	0.40
38:A1:1465:A:OP1	38:A1:1465:A:H8	2.04	0.40
38:A1:1547:G:H5'	50:AN:108:ARG:CZ	2.51	0.40
38:A1:1557:A:C5	38:A1:1559:A:C5	3.10	0.40
38:A1:1814:A:N3	38:A1:1817:G:C2	2.89	0.40
38:A1:1890:U:H2'	38:A1:1891:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2099:A:H2'	38:A1:2100:A:C8	2.57	0.40
38:A1:2101:C:HO2'	38:A1:2102:U:H6	1.67	0.40
38:A1:2102:U:H2'	38:A1:2103:U:C6	2.55	0.40
38:A1:2864:A:H2'	38:A1:2865:PSU:C6	2.55	0.40
38:A1:2885:C:O2'	38:A1:2886:U:H5'	2.21	0.40
38:A1:3026:G:N2	38:A1:3028:G:H5"	2.37	0.40
38:A1:3030:G:C4	38:A1:3031:G:C8	3.10	0.40
38:A1:3187:A:N1	55:AS:171:PHE:HB3	2.37	0.40
38:A1:3196:U:C2	38:A1:3197:G:C6	3.10	0.40
38:A1:3270:U:H1'	52:AP:171:ARG:HA	2.04	0.40
38:A1:3276:G:H22	52:AP:172:GLN:NE2	2.19	0.40
38:A1:3378:C:H2'	38:A1:3379:C:C6	2.56	0.40
39:A3:24:A:H2'	39:A3:25:G:H8	1.86	0.40
39:A3:75:G:C2	39:A3:105:C:N4	2.90	0.40
40:A4:49:G:H2'	40:A4:50:C:H6	1.87	0.40
40:A4:95:G:OP1	72:Aj:76:ASN:ND2	2.55	0.40
41:AD:245:GLU:HA	41:AD:248:ARG:HB2	2.04	0.40
45:AH:99:ILE:HD13	45:AH:99:ILE:HA	1.91	0.40
45:AH:118:LEU:HD21	45:AH:177:ASP:OD2	2.21	0.40
45:AH:172:ILE:HA	45:AH:175:PHE:HB2	2.04	0.40
49:AM:132:LYS:HA	49:AM:132:LYS:HD2	1.90	0.40
50:AN:140:LYS:HE2	50:AN:144:ARG:CZ	2.52	0.40
50:AN:199:LEU:HB3	50:AN:203:ARG:NH1	2.37	0.40
61:AY:37:LYS:HA	61:AY:40:ARG:CZ	2.52	0.40
62:AZ:17:ARG:HD2	62:AZ:18:TYR:HE1	1.85	0.40
63:Aa:113:LEU:HD13	63:Aa:113:LEU:HA	1.96	0.40
63:Aa:117:ARG:HA	63:Aa:117:ARG:HD3	1.83	0.40
80:DC:380:LEU:HB2	80:DC:400:VAL:HA	2.04	0.40
80:DC:382:VAL:HG23	80:DC:397:PHE:O	2.20	0.40
80:DC:463:LEU:HG	80:DC:465:LYS:N	2.37	0.40
81:EC:6858:A:H4'	81:EC:6871:A:N6	2.33	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	
1	BA	204/252 (81%)	182 (89%)	22 (11%)	0	100	100
2	BB	212/255 (83%)	176 (83%)	36 (17%)	0	100	100
3	BC	215/254 (85%)	202 (94%)	13 (6%)	0	100	100
4	BE	258/261 (99%)	230 (89%)	28 (11%)	0	100	100
5	BG	224/236 (95%)	208 (93%)	16 (7%)	0	100	100
6	BH	182/190 (96%)	167 (92%)	15 (8%)	0	100	100
7	BI	184/200 (92%)	156 (85%)	28 (15%)	0	100	100
8	BJ	183/197 (93%)	173 (94%)	10 (6%)	0	100	100
9	BL	153/156 (98%)	137 (90%)	16 (10%)	0	100	100
10	BN	148/151 (98%)	135 (91%)	13 (9%)	0	100	100
11	BO	125/137 (91%)	104 (83%)	21 (17%)	0	100	100
12	BV	85/87 (98%)	71 (84%)	14 (16%)	0	100	100
13	BW	127/130 (98%)	120 (94%)	7 (6%)	0	100	100
14	BX	142/145 (98%)	129 (91%)	13 (9%)	0	100	100
15	BY	132/135 (98%)	123 (93%)	9 (7%)	0	100	100
16	Ba	95/119 (80%)	83 (87%)	12 (13%)	0	100	100
17	Bb	79/82 (96%)	73 (92%)	6 (8%)	0	100	100
18	Be	58/63 (92%)	51 (88%)	7 (12%)	0	100	100
19	BD	221/240 (92%)	208 (94%)	13 (6%)	0	100	100
20	BF	204/225 (91%)	186 (91%)	18 (9%)	0	100	100
21	BK	94/105 (90%)	83 (88%)	11 (12%)	0	100	100
22	BP	122/142 (86%)	112 (92%)	10 (8%)	0	100	100
23	BQ	139/143 (97%)	131 (94%)	8 (6%)	0	100	100
24	BR	119/136 (88%)	107 (90%)	12 (10%)	0	100	100
25	BS	143/146 (98%)	129 (90%)	14 (10%)	0	100	100
26	BT	139/144 (96%)	127 (91%)	12 (9%)	0	100	100
27	BU	105/121 (87%)	98 (93%)	7 (7%)	0	100	100
28	BZ	69/108 (64%)	63 (91%)	6 (9%)	0	100	100
29	Bc	61/67 (91%)	57 (93%)	4 (7%)	0	100	100
30	Bd	51/56 (91%)	48 (94%)	3 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
31	Bg	310/319 (97%)	273 (88%)	37 (12%)	0	100	100
32	Bf	73/152 (48%)	60 (82%)	13 (18%)	0	100	100
33	BM	122/143 (85%)	117 (96%)	5 (4%)	0	100	100
35	AA	245/254 (96%)	226 (92%)	19 (8%)	0	100	100
36	AB	383/387 (99%)	338 (88%)	44 (12%)	1 (0%)	36	69
37	AC	359/362 (99%)	323 (90%)	36 (10%)	0	100	100
41	AD	290/297 (98%)	268 (92%)	22 (8%)	0	100	100
42	AE	163/176 (93%)	143 (88%)	20 (12%)	0	100	100
43	AF	220/244 (90%)	208 (94%)	12 (6%)	0	100	100
44	AG	228/256 (89%)	208 (91%)	20 (9%)	0	100	100
45	AH	188/191 (98%)	166 (88%)	22 (12%)	0	100	100
46	AI	220/222 (99%)	204 (93%)	16 (7%)	0	100	100
47	AJ	167/174 (96%)	155 (93%)	12 (7%)	0	100	100
48	AL	191/199 (96%)	181 (95%)	10 (5%)	0	100	100
49	AM	134/138 (97%)	129 (96%)	5 (4%)	0	100	100
50	AN	201/204 (98%)	178 (89%)	23 (11%)	0	100	100
51	AO	195/199 (98%)	185 (95%)	10 (5%)	0	100	100
52	AP	171/184 (93%)	157 (92%)	14 (8%)	0	100	100
53	AQ	183/186 (98%)	170 (93%)	13 (7%)	0	100	100
54	AR	186/189 (98%)	167 (90%)	19 (10%)	0	100	100
55	AS	170/178 (96%)	154 (91%)	16 (9%)	0	100	100
56	AT	157/160 (98%)	141 (90%)	16 (10%)	0	100	100
57	AU	98/121 (81%)	86 (88%)	12 (12%)	0	100	100
58	AV	134/137 (98%)	127 (95%)	7 (5%)	0	100	100
59	AW	61/155 (39%)	57 (93%)	4 (7%)	0	100	100
60	AX	119/142 (84%)	108 (91%)	11 (9%)	0	100	100
61	AY	124/127 (98%)	113 (91%)	11 (9%)	0	100	100
62	AZ	133/136 (98%)	121 (91%)	12 (9%)	0	100	100
63	Aa	146/149 (98%)	132 (90%)	14 (10%)	0	100	100
64	Ab	56/59 (95%)	51 (91%)	5 (9%)	0	100	100
65	Ac	95/105 (90%)	93 (98%)	2 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
66	Ad	107/113 (95%)	97 (91%)	10 (9%)	0	100	100
67	Ae	125/130 (96%)	116 (93%)	9 (7%)	0	100	100
68	Af	104/107 (97%)	97 (93%)	7 (7%)	0	100	100
69	Ag	110/121 (91%)	101 (92%)	9 (8%)	0	100	100
70	Ah	117/120 (98%)	114 (97%)	3 (3%)	0	100	100
71	Ai	97/100 (97%)	90 (93%)	7 (7%)	0	100	100
72	Aj	85/88 (97%)	77 (91%)	8 (9%)	0	100	100
73	Ak	75/78 (96%)	67 (89%)	8 (11%)	0	100	100
74	Al	48/51 (94%)	43 (90%)	5 (10%)	0	100	100
75	Am	50/128 (39%)	44 (88%)	6 (12%)	0	100	100
76	An	23/25 (92%)	22 (96%)	1 (4%)	0	100	100
77	Ao	103/106 (97%)	95 (92%)	8 (8%)	0	100	100
78	Ap	89/92 (97%)	80 (90%)	9 (10%)	0	100	100
79	E	215/217 (99%)	195 (91%)	20 (9%)	0	100	100
80	DC	819/842 (97%)	735 (90%)	81 (10%)	3 (0%)	30	64
All	All	11962/12946 (92%)	10881 (91%)	1077 (9%)	4 (0%)	100	100

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
80	DC	700	ARG
80	DC	698	ILE
80	DC	773	PRO
36	AB	244	ARG

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	
1	BA	173/210 (82%)	173 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	BB	191/224 (85%)	191 (100%)	0	100	100
3	BC	176/205 (86%)	176 (100%)	0	100	100
4	BE	221/222 (100%)	221 (100%)	0	100	100
5	BG	193/201 (96%)	193 (100%)	0	100	100
6	BH	165/170 (97%)	165 (100%)	0	100	100
7	BI	150/161 (93%)	150 (100%)	0	100	100
8	BJ	158/166 (95%)	158 (100%)	0	100	100
9	BL	136/137 (99%)	136 (100%)	0	100	100
10	BN	127/128 (99%)	127 (100%)	0	100	100
11	BO	96/105 (91%)	96 (100%)	0	100	100
12	BV	74/74 (100%)	74 (100%)	0	100	100
13	BW	110/111 (99%)	110 (100%)	0	100	100
14	BX	119/120 (99%)	119 (100%)	0	100	100
15	BY	112/113 (99%)	112 (100%)	0	100	100
16	Ba	83/100 (83%)	83 (100%)	0	100	100
17	Bb	70/71 (99%)	70 (100%)	0	100	100
18	Be	51/54 (94%)	51 (100%)	0	100	100
19	BD	182/195 (93%)	182 (100%)	0	100	100
20	BF	173/191 (91%)	173 (100%)	0	100	100
21	BK	89/98 (91%)	89 (100%)	0	100	100
22	BP	104/118 (88%)	104 (100%)	0	100	100
23	BQ	117/119 (98%)	117 (100%)	0	100	100
24	BR	101/124 (82%)	101 (100%)	0	100	100
25	BS	128/129 (99%)	128 (100%)	0	100	100
26	BT	113/116 (97%)	113 (100%)	0	100	100
27	BU	100/114 (88%)	100 (100%)	0	100	100
28	BZ	62/89 (70%)	62 (100%)	0	100	100
29	Bc	56/60 (93%)	56 (100%)	0	100	100
30	Bd	47/49 (96%)	47 (100%)	0	100	100
31	Bg	256/262 (98%)	256 (100%)	0	100	100
32	Bf	66/135 (49%)	66 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
33	BM	100/119 (84%)	100 (100%)	0	100	100
35	AA	189/196 (96%)	189 (100%)	0	100	100
36	AB	321/322 (100%)	321 (100%)	0	100	100
37	AC	288/289 (100%)	288 (100%)	0	100	100
41	AD	241/245 (98%)	241 (100%)	0	100	100
42	AE	137/153 (90%)	137 (100%)	0	100	100
43	AF	186/205 (91%)	186 (100%)	0	100	100
44	AG	189/208 (91%)	189 (100%)	0	100	100
45	AH	170/171 (99%)	170 (100%)	0	100	100
46	AI	190/190 (100%)	190 (100%)	0	100	100
47	AJ	147/150 (98%)	147 (100%)	0	100	100
48	AL	154/159 (97%)	154 (100%)	0	100	100
49	AM	107/109 (98%)	107 (100%)	0	100	100
50	AN	175/176 (99%)	175 (100%)	0	100	100
51	AO	160/162 (99%)	160 (100%)	0	100	100
52	AP	141/146 (97%)	141 (100%)	0	100	100
53	AQ	150/151 (99%)	150 (100%)	0	100	100
54	AR	153/154 (99%)	153 (100%)	0	100	100
55	AS	156/162 (96%)	156 (100%)	0	100	100
56	AT	136/137 (99%)	136 (100%)	0	100	100
57	AU	87/107 (81%)	87 (100%)	0	100	100
58	AV	104/105 (99%)	104 (100%)	0	100	100
59	AW	55/129 (43%)	55 (100%)	0	100	100
60	AX	105/118 (89%)	105 (100%)	0	100	100
61	AY	109/110 (99%)	109 (100%)	0	100	100
62	AZ	115/116 (99%)	115 (100%)	0	100	100
63	Aa	118/119 (99%)	118 (100%)	0	100	100
64	Ab	46/47 (98%)	46 (100%)	0	100	100
65	Ac	81/88 (92%)	81 (100%)	0	100	100
66	Ad	96/97 (99%)	96 (100%)	0	100	100
67	Ae	109/111 (98%)	109 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
68	Af	90/91 (99%)	90 (100%)	0	100	100
69	Ag	95/103 (92%)	95 (100%)	0	100	100
70	Ah	104/105 (99%)	104 (100%)	0	100	100
71	Ai	81/82 (99%)	81 (100%)	0	100	100
72	Aj	70/71 (99%)	70 (100%)	0	100	100
73	Ak	68/69 (99%)	68 (100%)	0	100	100
74	Al	45/46 (98%)	45 (100%)	0	100	100
75	Am	47/116 (40%)	47 (100%)	0	100	100
76	An	23/23 (100%)	23 (100%)	0	100	100
77	Ao	90/91 (99%)	90 (100%)	0	100	100
78	Ap	71/72 (99%)	71 (100%)	0	100	100
79	E	198/198 (100%)	198 (100%)	0	100	100
80	DC	699/714 (98%)	699 (100%)	0	100	100
All	All	10195/10903 (94%)	10195 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

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

Mol	Chain	Res	Type
1	BA	15	GLN
1	BA	30	GLN
1	BA	131	GLN
1	BA	193	GLN
2	BB	149	GLN
2	BB	194	ASN
2	BB	208	GLN
2	BB	220	GLN
3	BC	67	GLN
3	BC	89	GLN
3	BC	110	HIS
3	BC	152	HIS
3	BC	189	GLN
4	BE	36	HIS
4	BE	112	HIS
4	BE	130	GLN
4	BE	197	HIS

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Mol	Chain	Res	Type
4	BE	224	ASN
4	BE	258	GLN
5	BG	34	GLN
5	BG	182	GLN
5	BG	189	HIS
6	BH	108	GLN
6	BH	122	HIS
6	BH	170	GLN
7	BI	32	GLN
8	BJ	74	ASN
8	BJ	142	ASN
9	BL	98	ASN
9	BL	127	GLN
9	BL	150	ASN
9	BL	152	GLN
10	BN	21	ASN
10	BN	36	GLN
10	BN	62	GLN
10	BN	78	ASN
10	BN	105	ASN
10	BN	123	HIS
11	BO	29	HIS
12	BV	33	GLN
12	BV	70	ASN
13	BW	80	ASN
14	BX	63	GLN
14	BX	75	GLN
14	BX	94	ASN
14	BX	99	ASN
15	BY	15	ASN
15	BY	133	ASN
16	Ba	8	ASN
16	Ba	94	ASN
17	Bb	26	GLN
19	BD	101	GLN
19	BD	111	ASN
20	BF	86	GLN
20	BF	95	ASN
20	BF	100	ASN
20	BF	128	ASN
20	BF	224	ASN
21	BK	9	ASN

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Mol	Chain	Res	Type
21	BK	17	GLN
21	BK	85	HIS
22	BP	98	ASN
23	BQ	21	HIS
23	BQ	74	HIS
23	BQ	77	GLN
24	BR	42	GLN
24	BR	48	ASN
24	BR	56	HIS
24	BR	62	GLN
24	BR	101	ASN
25	BS	6	GLN
25	BS	89	GLN
25	BS	122	HIS
26	BT	64	HIS
26	BT	138	GLN
27	BU	15	GLN
27	BU	17	GLN
27	BU	40	ASN
28	BZ	44	GLN
28	BZ	82	HIS
28	BZ	98	GLN
31	Bg	174	ASN
32	Bf	93	HIS
35	AA	47	GLN
35	AA	79	ASN
35	AA	86	GLN
35	AA	100	ASN
35	AA	132	ASN
35	AA	194	ASN
35	AA	217	GLN
35	AA	233	GLN
36	AB	259	HIS
36	AB	293	ASN
37	AC	18	ASN
37	AC	58	HIS
37	AC	87	GLN
37	AC	175	HIS
37	AC	201	GLN
37	AC	296	GLN
37	AC	307	GLN
37	AC	322	GLN

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Mol	Chain	Res	Type
41	AD	90	HIS
41	AD	203	HIS
43	AF	52	GLN
43	AF	172	ASN
44	AG	38	GLN
44	AG	123	GLN
44	AG	145	ASN
44	AG	191	ASN
45	AH	64	HIS
45	AH	157	ASN
45	AH	162	GLN
46	AI	51	HIS
46	AI	144	ASN
46	AI	209	ASN
47	AJ	20	ASN
47	AJ	68	HIS
47	AJ	90	GLN
48	AL	17	HIS
48	AL	19	GLN
48	AL	105	ASN
49	AM	27	GLN
50	AN	11	GLN
50	AN	15	GLN
50	AN	37	HIS
50	AN	70	ASN
50	AN	87	GLN
50	AN	112	ASN
50	AN	175	ASN
50	AN	194	GLN
51	AO	26[A]	GLN
51	AO	42[A]	ASN
51	AO	122[A]	GLN
52	AP	45	GLN
52	AP	54	HIS
52	AP	55	GLN
53	AQ	5	HIS
53	AQ	23	ASN
53	AQ	73	GLN
53	AQ	135	GLN
53	AQ	145	ASN
54	AR	58	HIS
54	AR	66	HIS

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Mol	Chain	Res	Type
54	AR	118	HIS
54	AR	130	ASN
54	AR	134	HIS
54	AR	156	ASN
55	AS	3	HIS
55	AS	46	GLN
55	AS	49	HIS
55	AS	68	HIS
55	AS	89	ASN
55	AS	122	HIS
55	AS	154	HIS
55	AS	157	GLN
56	AT	22	HIS
56	AT	26	HIS
56	AT	90	ASN
56	AT	95	HIS
57	AU	101	ASN
58	AV	98	ASN
61	AY	42	GLN
61	AY	66	GLN
61	AY	98	ASN
62	AZ	106	GLN
62	AZ	128	GLN
63	Aa	11	HIS
63	Aa	49	HIS
63	Aa	62	HIS
64	Ab	6	ASN
64	Ab	43	HIS
66	Ad	17	HIS
66	Ad	21	HIS
67	Ae	13	HIS
67	Ae	21	HIS
67	Ae	99	ASN
68	Af	13	HIS
68	Af	17	GLN
68	Af	26	ASN
68	Af	39	GLN
69	Ag	34	HIS
69	Ag	98	GLN
69	Ag	108	GLN
70	Ah	20	GLN
70	Ah	34	GLN

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Mol	Chain	Res	Type
70	Ah	61	GLN
70	Ah	62	GLN
70	Ah	104	GLN
72	Aj	69	HIS
75	Am	109	ASN
77	Ao	27	GLN
77	Ao	38	GLN
77	Ao	105	GLN
79	E	44	GLN
79	E	94	ASN
79	E	119	GLN
79	E	127	GLN
79	E	188	ASN
80	DC	8	GLN
80	DC	91	GLN
80	DC	138	GLN
80	DC	145	GLN
80	DC	186	ASN
80	DC	201	GLN
80	DC	224	GLN
80	DC	349	GLN
80	DC	477	ASN
80	DC	547	HIS
80	DC	584	ASN
80	DC	775	ASN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
34	B5	1754/1798 (97%)	565 (32%)	15 (0%)
38	A1	3212/3360 (95%)	875 (27%)	29 (0%)
39	A3	120/121 (99%)	27 (22%)	1 (0%)
40	A4	157/158 (99%)	39 (24%)	2 (1%)
81	EC	196/202 (97%)	113 (57%)	6 (3%)
All	All	5439/5639 (96%)	1619 (29%)	53 (0%)

All (1619) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
34	B5	2	A
34	B5	9	U

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Mol	Chain	Res	Type
34	B5	25	C
34	B5	34	G
34	B5	43	A
34	B5	47	A
34	B5	50	C
34	B5	57	G
34	B5	60	U
34	B5	63	G
34	B5	67	A
34	B5	68	A
34	B5	72	A
34	B5	73	U
34	B5	74	U
34	B5	75	U
34	B5	76	A
34	B5	77	U
34	B5	78	A
34	B5	80	A
34	B5	84	A
34	B5	104	A
34	B5	112	A
34	B5	114	C
34	B5	115	G
34	B5	116	U
34	B5	117	U
34	B5	119	A
34	B5	124	A
34	B5	126	A
34	B5	127	G
34	B5	129	U
34	B5	130	C
34	B5	131	C
34	B5	132	U
34	B5	133	U
34	B5	135	A
34	B5	136	C
34	B5	137	U
34	B5	138	A
34	B5	141	U
34	B5	144	U
34	B5	145	A
34	B5	146	U

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Mol	Chain	Res	Type
34	B5	147	A
34	B5	150	U
34	B5	153	G
34	B5	160	C
34	B5	161	U
34	B5	166	C
34	B5	171	A
34	B5	176	C
34	B5	178	U
34	B5	179	A
34	B5	180	A
34	B5	186	C
34	B5	188	A
34	B5	189	C
34	B5	190	C
34	B5	191	C
34	B5	192	U
34	B5	193	U
34	B5	194	U
34	B5	195	G
34	B5	196	G
34	B5	197	A
34	B5	204	G
34	B5	210	A
34	B5	211	PSU
34	B5	212	U
34	B5	213	A
34	B5	215	A
34	B5	216	U
34	B5	217	A
34	B5	218	A
34	B5	222	A
34	B5	224	C
34	B5	226	A
34	B5	228	G
34	B5	230	C
34	B5	231	U
34	B5	233	C
34	B5	234	G
34	B5	235	G
34	B5	236	A
34	B5	238	U

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Mol	Chain	Res	Type
34	B5	239	C
34	B5	240	U
34	B5	241	U
34	B5	245	U
34	B5	248	U
34	B5	252	U
34	B5	255	U
34	B5	257	A
34	B5	259	U
34	B5	260	U
34	B5	261	U
34	B5	262	U
34	B5	265	A
34	B5	269	G
34	B5	273	G
34	B5	276	C
34	B5	278	U
34	B5	280	U
34	B5	285	G
34	B5	294	C
34	B5	299	A
34	B5	304	U
34	B5	314	C
34	B5	316	A
34	B5	320	U
34	B5	322	G
34	B5	327	U
34	B5	337	G
34	B5	338	C
34	B5	350	U
34	B5	352	A
34	B5	359	A
34	B5	360	A
34	B5	361	C
34	B5	371	G
34	B5	378	A
34	B5	390	G
34	B5	400	A
34	B5	401	A
34	B5	402	C
34	B5	404	G
34	B5	412	A

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Mol	Chain	Res	Type
34	B5	416	A
34	B5	417	A
34	B5	423	G
34	B5	424	C
34	B5	425	A
34	B5	426	G
34	B5	428	A
34	B5	435	C
34	B5	439	U
34	B5	444	C
34	B5	445	A
34	B5	449	C
34	B5	452	A
34	B5	460	A
34	B5	461	G
34	B5	468	A
34	B5	469	C
34	B5	475	A
34	B5	478	A
34	B5	480	G
34	B5	481	A
34	B5	482	U
34	B5	483	A
34	B5	484	C
34	B5	486	G
34	B5	487	G
34	B5	488	G
34	B5	489	C
34	B5	490	C
34	B5	491	C
34	B5	492	A
34	B5	493	U
34	B5	494	U
34	B5	495	C
34	B5	496	G
34	B5	497	G
34	B5	498	G
34	B5	499	U
34	B5	500	C
34	B5	501	U
34	B5	502	U
34	B5	503	G

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Mol	Chain	Res	Type
34	B5	505	A
34	B5	509	G
34	B5	511	A
34	B5	512	A
34	B5	514	G
34	B5	515	A
34	B5	519	C
34	B5	527	A
34	B5	534	A
34	B5	535	A
34	B5	538	A
34	B5	539	G
34	B5	541	A
34	B5	542	A
34	B5	543	C
34	B5	548	G
34	B5	555	A
34	B5	557	G
34	B5	558	U
34	B5	559	C
34	B5	564	G
34	B5	565	C
34	B5	568	G
34	B5	572	C
34	B5	574	G
34	B5	578	U
34	B5	579	A
34	B5	580	A
34	B5	585	A
34	B5	591	A
34	B5	594	A
34	B5	595	G
34	B5	608	U
34	B5	609	U
34	B5	610	G
34	B5	611	U
34	B5	613	G
34	B5	619	A
34	B5	620	A
34	B5	623	A
34	B5	624	G
34	B5	629	U

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Mol	Chain	Res	Type
34	B5	635	A
34	B5	637	C
34	B5	643	G
34	B5	648	G
34	B5	649	U
34	B5	650	U
34	B5	651	G
34	B5	654	C
34	B5	657	U
34	B5	677	G
34	B5	678	A
34	B5	679	U
34	B5	680	U
34	B5	681	U
34	B5	682	C
34	B5	683	C
34	B5	684	A
34	B5	685	A
34	B5	691	C
34	B5	694	U
34	B5	696	C
34	B5	697	C
34	B5	698	U
34	B5	699	U
34	B5	700	C
34	B5	703	G
34	B5	704	C
34	B5	731	C
34	B5	732	G
34	B5	733	A
34	B5	734	A
34	B5	735	C
34	B5	736	C
34	B5	738	G
34	B5	739	G
34	B5	740	A
34	B5	741	C
34	B5	742	U
34	B5	743	U
34	B5	753	A
34	B5	754	A
34	B5	755	A

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Mol	Chain	Res	Type
34	B5	765	G
34	B5	766	PSU
34	B5	770	A
34	B5	771	A
34	B5	774	A
34	B5	775	G
34	B5	779	U
34	B5	780	A
34	B5	782	U
34	B5	783	G
34	B5	784	C
34	B5	787	G
34	B5	789	A
34	B5	794	U
34	B5	803	A
34	B5	806	A
34	B5	812	A
34	B5	813	U
34	B5	814	A
34	B5	819	G
34	B5	821	U
34	B5	823	G
34	B5	824	G
34	B5	825	U
34	B5	826	U
34	B5	827	C
34	B5	828	U
34	B5	829	A
34	B5	830	U
34	B5	831	U
34	B5	832	U
34	B5	833	U
34	B5	834	G
34	B5	835	U
34	B5	836	U
34	B5	837	G
34	B5	838	G
34	B5	839	U
34	B5	841	U
34	B5	842	C
34	B5	843	U
34	B5	845	G

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Mol	Chain	Res	Type
34	B5	846	G
34	B5	847	A
34	B5	848	C
34	B5	849	C
34	B5	850	A
34	B5	851	U
34	B5	852	C
34	B5	854	U
34	B5	857	U
34	B5	860	U
34	B5	861	U
34	B5	863	A
34	B5	864	U
34	B5	873	U
34	B5	881	A
34	B5	885	G
34	B5	890	C
34	B5	893	U
34	B5	898	A
34	B5	904	G
34	B5	909	U
34	B5	919	A
34	B5	921	U
34	B5	923	A
34	B5	927	C
34	B5	928	U
34	B5	932	U
34	B5	933	A
34	B5	935	U
34	B5	944	A
34	B5	951	A
34	B5	954	G
34	B5	959	U
34	B5	960	U
34	B5	962	C
34	B5	966	A
34	B5	992	A
34	B5	996	U
34	B5	998	A
34	B5	1000	C
34	B5	1001	A
34	B5	1004	U

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Mol	Chain	Res	Type
34	B5	1010	C
34	B5	1021	C
34	B5	1023	A
34	B5	1025	A
34	B5	1026	A
34	B5	1028	C
34	B5	1029	U
34	B5	1031	U
34	B5	1032	G
34	B5	1039	A
34	B5	1043	A
34	B5	1044	U
34	B5	1052	U
34	B5	1053	G
34	B5	1056	U
34	B5	1057	U
34	B5	1059	U
34	B5	1060	U
34	B5	1061	A
34	B5	1062	A
34	B5	1063	U
34	B5	1064	G
34	B5	1070	C
34	B5	1076	A
34	B5	1081	A
34	B5	1082	C
34	B5	1086	A
34	B5	1092	A
34	B5	1098	U
34	B5	1100	G
34	B5	1111	G
34	B5	1132	A
34	B5	1137	A
34	B5	1138	A
34	B5	1143	A
34	B5	1153	G
34	B5	1158	C
34	B5	1159	C
34	B5	1164	G
34	B5	1167	G
34	B5	1183	A
34	B5	1184	A

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Mol	Chain	Res	Type
34	B5	1186	U
34	B5	1194	A
34	B5	1196	A
34	B5	1199	G
34	B5	1200	G
34	B5	1201	G
34	B5	1202	A
34	B5	1203	A
34	B5	1206	U
34	B5	1212	G
34	B5	1217	A
34	B5	1218	G
34	B5	1228	G
34	B5	1230	A
34	B5	1244	A
34	B5	1245	G
34	B5	1246	C
34	B5	1250	U
34	B5	1251	U
34	B5	1252	C
34	B5	1256	A
34	B5	1258	U
34	B5	1263	G
34	B5	1264	G
34	B5	1276	U
34	B5	1285	U
34	B5	1288	G
34	B5	1300	A
34	B5	1301	U
34	B5	1307	U
34	B5	1314	U
34	B5	1315	U
34	B5	1321	A
34	B5	1325	A
34	B5	1334	U
34	B5	1340	U
34	B5	1343	U
34	B5	1344	A
34	B5	1345	A
34	B5	1346	A
34	B5	1347	U
34	B5	1348	A

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Mol	Chain	Res	Type
34	B5	1349	G
34	B5	1352	G
34	B5	1353	U
34	B5	1355	C
34	B5	1357	A
34	B5	1362	U
34	B5	1363	U
34	B5	1369	U
34	B5	1370	U
34	B5	1371	A
34	B5	1372	U
34	B5	1377	U
34	B5	1378	U
34	B5	1379	C
34	B5	1383	G
34	B5	1384	A
34	B5	1390	U
34	B5	1391	A
34	B5	1398	U
34	B5	1399	C
34	B5	1400	A
34	B5	1402	G
34	B5	1413	U
34	B5	1414	U
34	B5	1415	PSU
34	B5	1418	G
34	B5	1425	A
34	B5	1427	A
34	B5	1428	G
34	B5	1432	U
34	B5	1435	G
34	B5	1436	A
34	B5	1444	A
34	B5	1445	G
34	B5	1446	A
34	B5	1447	C
34	B5	1448	G
34	B5	1450	U
34	B5	1459	C
34	B5	1460	A
34	B5	1465	C
34	B5	1469	A

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Mol	Chain	Res	Type
34	B5	1470	C
34	B5	1471	A
34	B5	1486	G
34	B5	1490	C
34	B5	1491	U
34	B5	1492	A
34	B5	1493	A
34	B5	1506	G
34	B5	1510	U
34	B5	1513	G
34	B5	1514	U
34	B5	1515	A
34	B5	1516	A
34	B5	1521	G
34	B5	1523	G
34	B5	1524	A
34	B5	1525	A
34	B5	1531	G
34	B5	1536	G
34	B5	1537	C
34	B5	1539	G
34	B5	1540	G
34	B5	1542	G
34	B5	1543	A
34	B5	1546	G
34	B5	1547	A
34	B5	1548	G
34	B5	1550	A
34	B5	1557	U
34	B5	1559	A
34	B5	1565	C
34	B5	1572	G
34	B5	1573	A
34	B5	1575	G7M
34	B5	1584	G
34	B5	1601	G
34	B5	1607	G
34	B5	1611	A
34	B5	1615	C
34	B5	1616	G
34	B5	1622	G
34	B5	1623	C

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Mol	Chain	Res	Type
34	B5	1625	C
34	B5	1626	U
34	B5	1627	U
34	B5	1634	C
34	B5	1636	C
34	B5	1658	G
34	B5	1662	G
34	B5	1665	U
34	B5	1678	A
34	B5	1680	G
34	B5	1683	C
34	B5	1684	U
34	B5	1687	U
34	B5	1689	A
34	B5	1690	G
34	B5	1692	G
34	B5	1693	A
34	B5	1694	A
34	B5	1698	G
34	B5	1699	G
34	B5	1700	C
34	B5	1701	A
34	B5	1702	A
34	B5	1703	C
34	B5	1705	C
34	B5	1708	U
34	B5	1709	C
34	B5	1710	U
34	B5	1711	C
34	B5	1712	A
34	B5	1713	G
34	B5	1714	A
34	B5	1715	G
34	B5	1720	G
34	B5	1728	A
34	B5	1730	A
34	B5	1732	A
34	B5	1733	C
34	B5	1735	U
34	B5	1736	G
34	B5	1737	G
34	B5	1740	A

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Mol	Chain	Res	Type
34	B5	1750	A
34	B5	1755	A
34	B5	1757	G
34	B5	1760	G
34	B5	1766	A
34	B5	1769	U
34	B5	1770	U
34	B5	1780	G
34	B5	1781	MA6
34	B5	1783	C
34	B5	1784	C
34	B5	1792	G
34	B5	1793	G
34	B5	1794	A
34	B5	1795	U
34	B5	1798	U
34	B5	1799	U
38	A1	6	A
38	A1	12	A
38	A1	14	U
38	A1	19	U
38	A1	21	G
38	A1	26	A
38	A1	30	G
38	A1	31	C
38	A1	34	A
38	A1	40	A
38	A1	43	A
38	A1	45	A
38	A1	49	A
38	A1	59	G
38	A1	60	A
38	A1	65	A
38	A1	66	A
38	A1	67	A
38	A1	70	A
38	A1	72	C
38	A1	77	A
38	A1	85	A
38	A1	92	G
38	A1	94	G
38	A1	99	A

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Mol	Chain	Res	Type
38	A1	109	A
38	A1	110	G
38	A1	111	C
38	A1	116	A
38	A1	117	U
38	A1	118	U
38	A1	122	A
38	A1	135	C
38	A1	136	G
38	A1	147	U
38	A1	153	U
38	A1	155	G
38	A1	156	G
38	A1	157	A
38	A1	164	A
38	A1	170	G
38	A1	172	G
38	A1	173	G
38	A1	174	C
38	A1	175	C
38	A1	176	G
38	A1	182	U
38	A1	187	A
38	A1	190	U
38	A1	191	U
38	A1	200	C
38	A1	206	G
38	A1	210	U
38	A1	212	G
38	A1	213	A
38	A1	219	A
38	A1	221	A
38	A1	222	A
38	A1	231	G
38	A1	234	G
38	A1	235	A
38	A1	238	A
38	A1	239	G
38	A1	240	U
38	A1	241	G
38	A1	242	C
38	A1	245	U

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Mol	Chain	Res	Type
38	A1	246	U
38	A1	248	U
38	A1	249	U
38	A1	250	U
38	A1	251	G
38	A1	252	U
38	A1	253	A
38	A1	254	A
38	A1	258	G
38	A1	259	C
38	A1	266	A
38	A1	269	G
38	A1	270	U
38	A1	284	A
38	A1	286	U
38	A1	291	C
38	A1	295	A
38	A1	296	A
38	A1	299	G
38	A1	305	U
38	A1	329	U
38	A1	337	G
38	A1	346	C
38	A1	347	G
38	A1	360	G
38	A1	362	U
38	A1	374	A
38	A1	376	G
38	A1	390	G
38	A1	398	A
38	A1	399	A
38	A1	403	C
38	A1	404	G
38	A1	407	A
38	A1	417	A
38	A1	421	G
38	A1	422	A
38	A1	436	A
38	A1	438	A
38	A1	439	C
38	A1	440	A
38	A1	441	U

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Mol	Chain	Res	Type
38	A1	442	G
38	A1	443	G
38	A1	444	U
38	A1	445	G
38	A1	446	U
38	A1	447	U
38	A1	448	U
38	A1	449	U
38	A1	451	U
38	A1	487	U
38	A1	490	C
38	A1	491	A
38	A1	492	C
38	A1	493	U
38	A1	494	G
38	A1	495	G
38	A1	496	C
38	A1	498	A
38	A1	503	C
38	A1	512	U
38	A1	520	U
38	A1	521	A
38	A1	523	A
38	A1	532	A
38	A1	536	U
38	A1	543	C
38	A1	544	C
38	A1	545	U
38	A1	546	C
38	A1	547	G
38	A1	548	G
38	A1	551	A
38	A1	552	G
38	A1	555	U
38	A1	556	U
38	A1	557	A
38	A1	558	U
38	A1	559	A
38	A1	560	G
38	A1	566	G
38	A1	567	G
38	A1	569	A

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Mol	Chain	Res	Type
38	A1	579	G
38	A1	589	A
38	A1	592	A
38	A1	594	U
38	A1	597	G
38	A1	600	G
38	A1	603	A
38	A1	607	A
38	A1	611	A
38	A1	620	U
38	A1	621	A
38	A1	622	A
38	A1	628	A
38	A1	637	C
38	A1	649	A
38	A1	660	A
38	A1	665	A
38	A1	667	C
38	A1	677	A
38	A1	683	U
38	A1	690	A
38	A1	691	A
38	A1	699	A
38	A1	705	A
38	A1	709	A
38	A1	712	G
38	A1	715	A
38	A1	716	A
38	A1	719	U
38	A1	721	G
38	A1	734	C
38	A1	735	A
38	A1	736	A
38	A1	739	G
38	A1	742	G
38	A1	761	A
38	A1	767	U
38	A1	770	G
38	A1	771	A
38	A1	777	U
38	A1	781	G
38	A1	784	A

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Mol	Chain	Res	Type
38	A1	785	G
38	A1	791	A
38	A1	795	G
38	A1	799	G
38	A1	800	G
38	A1	806	A
38	A1	808	A
38	A1	817	A
38	A1	826	G
38	A1	830	A
38	A1	832	G
38	A1	848	A
38	A1	849	C
38	A1	857	G
38	A1	861	C
38	A1	871	U
38	A1	874	U
38	A1	879	U
38	A1	880	G
38	A1	881	C
38	A1	883	A
38	A1	897	U
38	A1	907	G
38	A1	908	G
38	A1	909	G
38	A1	914	A
38	A1	916	G
38	A1	917	A
38	A1	921	A
38	A1	932	U
38	A1	937	G
38	A1	938	C
38	A1	944	C
38	A1	959	C
38	A1	960	PSU
38	A1	962	A
38	A1	974	G
38	A1	978	G
38	A1	979	U
38	A1	980	A
38	A1	982	C
38	A1	984	G

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Mol	Chain	Res	Type
38	A1	1000	C
38	A1	1002	A
38	A1	1006	A
38	A1	1007	U
38	A1	1010	G
38	A1	1014	U
38	A1	1017	C
38	A1	1018	G
38	A1	1019	G
38	A1	1020	G
38	A1	1023	C
38	A1	1031	C
38	A1	1032	C
38	A1	1034	U
38	A1	1035	G
38	A1	1047	A
38	A1	1063	G
38	A1	1064	A
38	A1	1072	G
38	A1	1075	A
38	A1	1079	A
38	A1	1087	G
38	A1	1088	U
38	A1	1089	G
38	A1	1092	C
38	A1	1093	A
38	A1	1094	U
38	A1	1095	U
38	A1	1097	G
38	A1	1098	A
38	A1	1103	A
38	A1	1104	G
38	A1	1110	PSU
38	A1	1115	G
38	A1	1117	G
38	A1	1131	G
38	A1	1143	A
38	A1	1144	U
38	A1	1151	U
38	A1	1153	A
38	A1	1158	A
38	A1	1159	A

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Mol	Chain	Res	Type
38	A1	1163	A
38	A1	1168	U
38	A1	1177	G
38	A1	1178	G
38	A1	1180	A
38	A1	1181	U
38	A1	1182	A
38	A1	1186	G
38	A1	1191	U
38	A1	1192	C
38	A1	1193	A
38	A1	1196	C
38	A1	1197	A
38	A1	1201	C
38	A1	1202	A
38	A1	1208	U
38	A1	1212	A
38	A1	1214	U
38	A1	1218	U
38	A1	1220	U
38	A1	1221	A
38	A1	1222	G
38	A1	1225	A
38	A1	1226	G
38	A1	1227	C
38	A1	1231	A
38	A1	1232	C
38	A1	1233	G
38	A1	1235	U
38	A1	1236	G
38	A1	1237	G
38	A1	1238	C
38	A1	1239	C
38	A1	1240	A
38	A1	1241	U
38	A1	1242	G
38	A1	1244	A
38	A1	1246	G
38	A1	1248	C
38	A1	1249	G
38	A1	1250	G
38	A1	1251	A

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Mol	Chain	Res	Type
38	A1	1252	A
38	A1	1253	U
38	A1	1254	C
38	A1	1255	C
38	A1	1257	C
38	A1	1258	U
38	A1	1259	A
38	A1	1260	A
38	A1	1261	G
38	A1	1262	G
38	A1	1263	A
38	A1	1264	G
38	A1	1265	U
38	A1	1268	G
38	A1	1269	U
38	A1	1270	A
38	A1	1271	A
38	A1	1272	C
38	A1	1274	A
38	A1	1276	U
38	A1	1277	C
38	A1	1278	A
38	A1	1279	C
38	A1	1280	C
38	A1	1281	G
38	A1	1282	G
38	A1	1283	C
38	A1	1285	G
38	A1	1286	A
38	A1	1287	A
38	A1	1288	U
38	A1	1293	U
38	A1	1304	A
38	A1	1305	U
38	A1	1309	U
38	A1	1313	G
38	A1	1315	U
38	A1	1325	U
38	A1	1330	A
38	A1	1331	U
38	A1	1333	C
38	A1	1345	G

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Mol	Chain	Res	Type
38	A1	1348	U
38	A1	1349	G
38	A1	1350	A
38	A1	1351	U
38	A1	1352	A
38	A1	1353	U
38	A1	1354	G
38	A1	1355	A
38	A1	1357	G
38	A1	1365	G
38	A1	1366	A
38	A1	1380	G
38	A1	1386	A
38	A1	1392	G
38	A1	1399	A
38	A1	1400	G
38	A1	1405	U
38	A1	1408	G
38	A1	1417	G
38	A1	1419	A
38	A1	1430	U
38	A1	1434	G
38	A1	1435	A
38	A1	1436	U
38	A1	1437	C
38	A1	1439	U
38	A1	1446	A
38	A1	1455	U
38	A1	1470	U
38	A1	1475	A
38	A1	1477	A
38	A1	1478	C
38	A1	1481	A
38	A1	1482	A
38	A1	1483	G
38	A1	1487	G
38	A1	1488	G
38	A1	1495	U
38	A1	1496	C
38	A1	1503	A
38	A1	1507	G
38	A1	1511	U

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Mol	Chain	Res	Type
38	A1	1514	G
38	A1	1527	C
38	A1	1536	G
38	A1	1539	A
38	A1	1549	U
38	A1	1553	U
38	A1	1555	U
38	A1	1556	C
38	A1	1557	A
38	A1	1558	A
38	A1	1560	G
38	A1	1561	G
38	A1	1562	C
38	A1	1563	C
38	A1	1564	U
38	A1	1566	A
38	A1	1567	U
38	A1	1569	U
38	A1	1570	U
38	A1	1571	A
38	A1	1572	U
38	A1	1574	C
38	A1	1575	A
38	A1	1576	G
38	A1	1577	G
38	A1	1580	A
38	A1	1582	C
38	A1	1583	A
38	A1	1589	A
38	A1	1603	A
38	A1	1605	A
38	A1	1622	U
38	A1	1626	U
38	A1	1628	C
38	A1	1629	U
38	A1	1631	C
38	A1	1639	C
38	A1	1642	A
38	A1	1643	A
38	A1	1645	U
38	A1	1647	A
38	A1	1658	G

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Mol	Chain	Res	Type
38	A1	1683	A
38	A1	1686	U
38	A1	1688	U
38	A1	1694	U
38	A1	1705	U
38	A1	1712	G
38	A1	1715	A
38	A1	1717	U
38	A1	1724	U
38	A1	1731	A
38	A1	1736	G
38	A1	1737	U
38	A1	1741	A
38	A1	1750	A
38	A1	1751	G
38	A1	1752	A
38	A1	1756	C
38	A1	1758	G
38	A1	1760	A
38	A1	1762	C
38	A1	1763	U
38	A1	1764	U
38	A1	1765	U
38	A1	1766	G
38	A1	1773	C
38	A1	1775	G
38	A1	1778	G
38	A1	1779	C
38	A1	1788	C
38	A1	1792	C
38	A1	1793	C
38	A1	1797	A
38	A1	1808	G
38	A1	1809	A
38	A1	1813	A
38	A1	1814	A
38	A1	1816	A
38	A1	1817	G
38	A1	1818	U
38	A1	1819	U
38	A1	1821	U
38	A1	1824	U

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Mol	Chain	Res	Type
38	A1	1830	G
38	A1	1841	A
38	A1	1842	A
38	A1	1845	G
38	A1	1846	C
38	A1	1848	G
38	A1	1849	C
38	A1	1850	A
38	A1	1851	G
38	A1	1863	G
38	A1	1866	C
38	A1	1874	A
38	A1	1878	G
38	A1	1880	U
38	A1	1886	A
38	A1	1889	G
38	A1	1893	A
38	A1	1902	G
38	A1	1906	G
38	A1	1921	A
38	A1	1943	C
38	A1	1948	G
38	A1	1953	G
38	A1	1954	G
38	A1	2094	C
38	A1	2095	G
38	A1	2110	G
38	A1	2111	G
38	A1	2113	A
38	A1	2114	C
38	A1	2122	G
38	A1	2126	A
38	A1	2131	A
38	A1	2139	A
38	A1	2142	1MA
38	A1	2149	A
38	A1	2157	G
38	A1	2158	A
38	A1	2166	A
38	A1	2169	G
38	A1	2170	U
38	A1	2178	A

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Mol	Chain	Res	Type
38	A1	2191	PSU
38	A1	2192	C
38	A1	2194	G
38	A1	2206	G
38	A1	2207	A
38	A1	2209	U
38	A1	2222	A
38	A1	2223	A
38	A1	2225	U
38	A1	2227	C
38	A1	2242	A
38	A1	2249	G
38	A1	2250	G
38	A1	2252	A
38	A1	2253	G
38	A1	2256	A
38	A1	2257	C
38	A1	2258	PSU
38	A1	2259	A
38	A1	2264	PSU
38	A1	2265	C
38	A1	2266	PSU
38	A1	2267	C
38	A1	2269	U
38	A1	2270	A
38	A1	2272	G
38	A1	2273	G
38	A1	2274	U
38	A1	2278	5MC
38	A1	2279	A
38	A1	2280	A
38	A1	2282	U
38	A1	2295	A
38	A1	2299	A
38	A1	2304	C
38	A1	2307	G
38	A1	2308	C
38	A1	2310	U
38	A1	2313	A
38	A1	2315	G
38	A1	2325	G
38	A1	2334	U

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Mol	Chain	Res	Type
38	A1	2335	G
38	A1	2336	U
38	A1	2339	C
38	A1	2340	PSU
38	A1	2342	U
38	A1	2356	A
38	A1	2372	A
38	A1	2373	A
38	A1	2374	C
38	A1	2375	G
38	A1	2378	C
38	A1	2383	C
38	A1	2388	U
38	A1	2393	G
38	A1	2394	G
38	A1	2397	A
38	A1	2402	A
38	A1	2403	G
38	A1	2404	A
38	A1	2411	U
38	A1	2412	G
38	A1	2434	U
38	A1	2435	G
38	A1	2437	G
38	A1	2438	A
38	A1	2440	G
38	A1	2443	A
38	A1	2444	C
38	A1	2445	A
38	A1	2446	U
38	A1	2447	A
38	A1	2449	A
38	A1	2451	G
38	A1	2453	U
38	A1	2454	G
38	A1	2455	U
38	A1	2457	G
38	A1	2458	A
38	A1	2459	A
38	A1	2461	A
38	A1	2462	A
38	A1	2463	G

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Mol	Chain	Res	Type
38	A1	2467	G
38	A1	2468	A
38	A1	2469	G
38	A1	2474	G
38	A1	2475	G
38	A1	2479	C
38	A1	2480	A
38	A1	2481	G
38	A1	2485	A
38	A1	2486	A
38	A1	2487	U
38	A1	2490	C
38	A1	2491	A
38	A1	2492	C
38	A1	2493	U
38	A1	2495	C
38	A1	2496	C
38	A1	2497	U
38	A1	2498	U
38	A1	2500	A
38	A1	2501	U
38	A1	2502	A
38	A1	2503	G
38	A1	2506	U
38	A1	2507	C
38	A1	2514	U
38	A1	2515	A
38	A1	2524	A
38	A1	2526	C
38	A1	2530	G
38	A1	2531	C
38	A1	2532	U
38	A1	2536	A
38	A1	2537	U
38	A1	2538	U
38	A1	2539	C
38	A1	2540	A
38	A1	2541	U
38	A1	2542	U
38	A1	2545	C
38	A1	2546	C
38	A1	2549	G

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Mol	Chain	Res	Type
38	A1	2552	C
38	A1	2553	U
38	A1	2554	A
38	A1	2555	G
38	A1	2559	U
38	A1	2561	A
38	A1	2562	A
38	A1	2564	G
38	A1	2569	A
38	A1	2570	U
38	A1	2571	U
38	A1	2572	C
38	A1	2573	G
38	A1	2574	G
38	A1	2578	U
38	A1	2580	A
38	A1	2585	G
38	A1	2593	A
38	A1	2606	G
38	A1	2607	G
38	A1	2614	G
38	A1	2617	U
38	A1	2628	A
38	A1	2635	A
38	A1	2636	A
38	A1	2637	A
38	A1	2648	G
38	A1	2651	G
38	A1	2652	U
38	A1	2656	A
38	A1	2657	A
38	A1	2666	C
38	A1	2672	G
38	A1	2674	A
38	A1	2677	G
38	A1	2678	A
38	A1	2681	U
38	A1	2688	U
38	A1	2689	A
38	A1	2691	A
38	A1	2694	A
38	A1	2696	A

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Mol	Chain	Res	Type
38	A1	2704	A
38	A1	2712	U
38	A1	2719	U
38	A1	2728	G
38	A1	2729	U
38	A1	2737	C
38	A1	2740	A
38	A1	2744	U
38	A1	2746	A
38	A1	2747	A
38	A1	2748	A
38	A1	2749	G
38	A1	2752	U
38	A1	2753	G
38	A1	2755	C
38	A1	2762	A
38	A1	2772	C
38	A1	2773	C
38	A1	2777	G
38	A1	2779	A
38	A1	2786	G
38	A1	2787	G
38	A1	2796	G
38	A1	2797	C
38	A1	2800	G
38	A1	2801	A
38	A1	2803	A
38	A1	2808	A
38	A1	2810	C
38	A1	2814	G
38	A1	2816	G
38	A1	2817	A
38	A1	2819	A
38	A1	2821	C
38	A1	2842	U
38	A1	2844	C
38	A1	2845	A
38	A1	2847	A
38	A1	2849	C
38	A1	2853	A
38	A1	2859	U
38	A1	2860	U

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Mol	Chain	Res	Type
38	A1	2864	A
38	A1	2871	G
38	A1	2887	A
38	A1	2888	U
38	A1	2889	C
38	A1	2896	A
38	A1	2900	A
38	A1	2903	A
38	A1	2904	U
38	A1	2911	A
38	A1	2914	G
38	A1	2923	PSU
38	A1	2929	C
38	A1	2933	A
38	A1	2935	U
38	A1	2936	A
38	A1	2938	G
38	A1	2941	A
38	A1	2942	C
38	A1	2947	G
38	A1	2950	G
38	A1	2951	G
38	A1	2952	G
38	A1	2971	A
38	A1	2978	U
38	A1	2980	U
38	A1	2983	C
38	A1	2990	G
38	A1	2996	U
38	A1	2997	G
38	A1	3003	G
38	A1	3012	A
38	A1	3017	A
38	A1	3018	C
38	A1	3022	G
38	A1	3023	U
38	A1	3028	G
38	A1	3034	C
38	A1	3035	A
38	A1	3043	C
38	A1	3048	A
38	A1	3055	U

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Mol	Chain	Res	Type
38	A1	3057	U
38	A1	3059	G
38	A1	3074	G
38	A1	3078	U
38	A1	3079	U
38	A1	3080	G
38	A1	3086	A
38	A1	3092	C
38	A1	3094	A
38	A1	3101	G
38	A1	3102	G
38	A1	3104	U
38	A1	3109	G
38	A1	3122	A
38	A1	3130	A
38	A1	3131	U
38	A1	3142	A
38	A1	3143	C
38	A1	3144	G
38	A1	3153	U
38	A1	3154	C
38	A1	3155	U
38	A1	3156	U
38	A1	3157	U
38	A1	3163	A
38	A1	3165	A
38	A1	3166	C
38	A1	3167	A
38	A1	3170	A
38	A1	3171	U
38	A1	3173	G
38	A1	3174	A
38	A1	3176	G
38	A1	3179	U
38	A1	3181	C
38	A1	3186	A
38	A1	3187	A
38	A1	3196	U
38	A1	3205	G
38	A1	3206	C
38	A1	3207	U
38	A1	3208	G

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Mol	Chain	Res	Type
38	A1	3209	A
38	A1	3210	A
38	A1	3217	C
38	A1	3218	A
38	A1	3219	G
38	A1	3226	A
38	A1	3234	A
38	A1	3238	G
38	A1	3239	G
38	A1	3241	G
38	A1	3242	G
38	A1	3243	A
38	A1	3246	G
38	A1	3247	G
38	A1	3257	C
38	A1	3259	U
38	A1	3260	G
38	A1	3263	G
38	A1	3271	G
38	A1	3273	A
38	A1	3276	G
38	A1	3277	U
38	A1	3278	C
38	A1	3279	A
38	A1	3281	U
38	A1	3283	U
38	A1	3284	G
38	A1	3285	C
38	A1	3286	G
38	A1	3288	G
38	A1	3289	G
38	A1	3296	A
38	A1	3304	U
38	A1	3305	A
38	A1	3307	A
38	A1	3313	U
38	A1	3316	A
38	A1	3341	U
38	A1	3342	A
38	A1	3344	A
38	A1	3345	G
38	A1	3350	C

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Mol	Chain	Res	Type
38	A1	3352	U
38	A1	3354	U
38	A1	3356	G
38	A1	3369	G
38	A1	3375	A
38	A1	3378	C
38	A1	3386	G
38	A1	3387	U
38	A1	3389	U
38	A1	3390	G
39	A3	11	A
39	A3	13	A
39	A3	14	U
39	A3	22	A
39	A3	23	A
39	A3	24	A
39	A3	33	U
39	A3	38	U
39	A3	42	A
39	A3	43	U
39	A3	46	A
39	A3	47	C
39	A3	54	U
39	A3	55	A
39	A3	64	A
39	A3	65	G
39	A3	73	C
39	A3	74	C
39	A3	76	A
39	A3	87	G
39	A3	93	C
39	A3	97	A
39	A3	99	G
39	A3	102	A
39	A3	110	G
39	A3	112	G
39	A3	121	U
40	A4	13	A
40	A4	16	G
40	A4	23	U
40	A4	34	U
40	A4	35	C

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Mol	Chain	Res	Type
40	A4	39	G
40	A4	47	C
40	A4	49	G
40	A4	51	G
40	A4	52	A
40	A4	59	A
40	A4	61	A
40	A4	62	C
40	A4	63	G
40	A4	73	PSU
40	A4	80	A
40	A4	81	U
40	A4	82	U
40	A4	84	C
40	A4	85	G
40	A4	86	U
40	A4	87	G
40	A4	89	A
40	A4	90	U
40	A4	95	G
40	A4	100	U
40	A4	104	A
40	A4	106	C
40	A4	108	C
40	A4	111	A
40	A4	113	U
40	A4	116	G
40	A4	125	U
40	A4	131	A
40	A4	132	G
40	A4	148	G
40	A4	151	C
40	A4	152	G
40	A4	158	U
81	EC	6760	A
81	EC	6767	G
81	EC	6768	U
81	EC	6769	A
81	EC	6770	U
81	EC	6771	U
81	EC	6772	G
81	EC	6773	G

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Mol	Chain	Res	Type
81	EC	6774	U
81	EC	6775	U
81	EC	6776	A
81	EC	6777	C
81	EC	6778	C
81	EC	6780	A
81	EC	6781	U
81	EC	6782	C
81	EC	6783	U
81	EC	6787	U
81	EC	6789	G
81	EC	6790	A
81	EC	6791	A
81	EC	6792	A
81	EC	6793	A
81	EC	6794	C
81	EC	6799	C
81	EC	6801	A
81	EC	6802	A
81	EC	6803	C
81	EC	6805	C
81	EC	6809	G
81	EC	6815	U
81	EC	6816	A
81	EC	6817	A
81	EC	6818	G
81	EC	6819	G
81	EC	6820	C
81	EC	6821	U
81	EC	6822	U
81	EC	6823	U
81	EC	6825	A
81	EC	6832	G
81	EC	6835	U
81	EC	6837	G
81	EC	6840	A
81	EC	6841	U
81	EC	6842	U
81	EC	6843	U
81	EC	6844	A
81	EC	6845	G
81	EC	6847	G

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Mol	Chain	Res	Type
81	EC	6848	U
81	EC	6849	A
81	EC	6850	C
81	EC	6851	G
81	EC	6855	A
81	EC	6856	C
81	EC	6857	C
81	EC	6858	A
81	EC	6859	U
81	EC	6860	A
81	EC	6861	G
81	EC	6863	C
81	EC	6864	A
81	EC	6867	C
81	EC	6868	C
81	EC	6869	C
81	EC	6870	A
81	EC	6871	A
81	EC	6873	A
81	EC	6874	A
81	EC	6875	C
81	EC	6877	C
81	EC	6879	U
81	EC	6880	G
81	EC	6881	U
81	EC	6882	G
81	EC	6883	A
81	EC	6884	G
81	EC	6885	G
81	EC	6888	A
81	EC	6889	A
81	EC	6890	A
81	EC	6891	G
81	EC	6895	C
81	EC	6896	A
81	EC	6897	G
81	EC	6902	U
81	EC	6903	U
81	EC	6907	G
81	EC	6910	A
81	EC	6918	A
81	EC	6919	G

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Mol	Chain	Res	Type
81	EC	6922	G
81	EC	6925	C
81	EC	6928	G
81	EC	6929	C
81	EC	6932	G
81	EC	6935	G
81	EC	6937	G
81	EC	6938	A
81	EC	6939	C
81	EC	6940	U
81	EC	6941	U
81	EC	6942	A
81	EC	6943	A
81	EC	6944	U
81	EC	6945	U
81	EC	6946	A
81	EC	6947	A
81	EC	6949	G
81	EC	6950	C
81	EC	6951	C
81	EC	6953	G

All (53) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
34	B5	118	U
34	B5	130	C
34	B5	196	G
34	B5	259	U
34	B5	752	A
34	B5	889	U
34	B5	1022	C
34	B5	1031	U
34	B5	1061	A
34	B5	1250	U
34	B5	1344	A
34	B5	1351	G
34	B5	1377	U
34	B5	1614	A
34	B5	1683	C
38	A1	190	U
38	A1	240	U

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Mol	Chain	Res	Type
38	A1	252	U
38	A1	734	C
38	A1	916	G
38	A1	1219	C
38	A1	1226	G
38	A1	1273	A
38	A1	1285	G
38	A1	1287	A
38	A1	1353	U
38	A1	1494	U
38	A1	1557	A
38	A1	1560	G
38	A1	1588	A
38	A1	1818	U
38	A1	1953	G
38	A1	2094	C
38	A1	2191	PSU
38	A1	2222	A
38	A1	2437	G
38	A1	2497	U
38	A1	2506	U
38	A1	2772	C
38	A1	3022	G
38	A1	3121	U
38	A1	3154	C
38	A1	3169	U
38	A1	3195	U
39	A3	23	A
40	A4	73	PSU
40	A4	88	A
81	EC	6789	G
81	EC	6857	C
81	EC	6868	C
81	EC	6879	U
81	EC	6883	A
81	EC	6889	A

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

60 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and

the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
80	DDE	DC	699	-	18,20,21	1.08	1 (5%)	17,28,30	1.09	2 (11%)
38	PSU	A1	2191	38	18,21,22	1.50	5 (27%)	21,30,33	2.06	4 (19%)
36	HIC	AB	243	36	10,11,12	1.47	1 (10%)	9,14,16	1.34	2 (22%)
38	PSU	A1	990	38	18,21,22	1.38	2 (11%)	21,30,33	2.17	4 (19%)
38	PSU	A1	776	38	18,21,22	1.39	5 (27%)	21,30,33	2.08	3 (14%)
38	5MC	A1	2870	38	19,22,23	1.48	3 (15%)	26,32,35	1.15	3 (11%)
38	1MA	A1	645	38	21,25,26	1.36	5 (23%)	30,37,40	1.67	4 (13%)
38	PSU	A1	2260	38	18,21,22	1.36	3 (16%)	21,30,33	2.14	4 (19%)
38	PSU	A1	2923	38	18,21,22	1.34	2 (11%)	21,30,33	2.09	4 (19%)
34	G7M	B5	1575	34	23,26,27	2.52	7 (30%)	34,39,42	1.72	7 (20%)
38	UR3	A1	2634	38	19,22,23	0.90	0	26,32,35	1.72	3 (11%)
34	PSU	B5	759	34	18,21,22	1.36	2 (11%)	21,30,33	2.07	3 (14%)
38	PSU	A1	2340	38	18,21,22	1.36	3 (16%)	21,30,33	2.01	4 (19%)
34	PSU	B5	1290	34	18,21,22	1.40	3 (16%)	21,30,33	2.17	4 (19%)
34	PSU	B5	302	34	18,21,22	1.38	4 (22%)	21,30,33	2.03	4 (19%)
38	PSU	A1	960	38	18,21,22	1.39	2 (11%)	21,30,33	2.12	4 (19%)
38	OMG	A1	2922	38	23,26,27	1.19	4 (17%)	32,38,41	1.92	6 (18%)
38	PSU	A1	2349	38	18,21,22	1.40	2 (11%)	21,30,33	2.08	4 (19%)
38	PSU	A1	2258	38	18,21,22	1.35	2 (11%)	21,30,33	2.04	3 (14%)
38	PSU	A1	2975	38	18,21,22	1.38	3 (16%)	21,30,33	2.10	4 (19%)
38	PSU	A1	2129	38	18,21,22	1.41	4 (22%)	21,30,33	2.11	3 (14%)
34	B8N	B5	1191	34	25,29,30	1.40	3 (12%)	28,42,45	1.62	4 (14%)
38	PSU	A1	2314	38	18,21,22	1.42	3 (16%)	21,30,33	2.13	4 (19%)
38	PSU	A1	1004	38	18,21,22	1.40	2 (11%)	21,30,33	2.08	3 (14%)
38	5MC	A1	2278	38	19,22,23	1.42	2 (10%)	26,32,35	1.50	5 (19%)
38	PSU	A1	2880	38	18,21,22	1.45	4 (22%)	21,30,33	2.11	4 (19%)
34	MA6	B5	1782	34	23,26,27	1.42	5 (21%)	33,38,41	2.08	10 (30%)
38	PSU	A1	2735	38	18,21,22	1.38	3 (16%)	21,30,33	2.06	3 (14%)
34	PSU	B5	999	34	18,21,22	1.35	2 (11%)	21,30,33	2.03	4 (19%)
34	4AC	B5	1280	34	21,24,25	1.14	1 (4%)	28,34,37	1.15	2 (7%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
38	PSU	A1	2865	38	18,21,22	1.44	3 (16%)	21,30,33	2.06	4 (19%)
34	PSU	B5	466	34	18,21,22	1.35	2 (11%)	21,30,33	2.05	5 (23%)
34	PSU	B5	1187	34	18,21,22	1.38	2 (11%)	21,30,33	2.05	4 (19%)
38	PSU	A1	1124	38	18,21,22	1.38	3 (16%)	21,30,33	2.00	4 (19%)
38	PSU	A1	2133	38	18,21,22	1.41	3 (16%)	21,30,33	2.22	4 (19%)
38	PSU	A1	2944	38	18,21,22	1.41	4 (22%)	21,30,33	2.06	4 (19%)
38	PSU	A1	1056	38	18,21,22	1.38	3 (16%)	21,30,33	2.14	4 (19%)
34	PSU	B5	1415	34	18,21,22	1.38	2 (11%)	21,30,33	1.99	3 (14%)
38	1MA	A1	2142	38	21,25,26	1.33	4 (19%)	30,37,40	1.74	6 (20%)
34	PSU	B5	1181	34	18,21,22	1.37	2 (11%)	21,30,33	2.11	3 (14%)
38	OMU	A1	2921	38	19,22,23	1.23	3 (15%)	25,31,34	1.85	5 (20%)
34	PSU	B5	120	34	18,21,22	1.42	3 (16%)	21,30,33	2.00	4 (19%)
38	PSU	A1	1042	38	18,21,22	1.41	4 (22%)	21,30,33	2.09	5 (23%)
38	PSU	A1	2351	38	18,21,22	1.42	4 (22%)	21,30,33	2.19	4 (19%)
38	PSU	A1	2826	38	18,21,22	1.39	4 (22%)	21,30,33	1.97	3 (14%)
34	PSU	B5	211	34	18,21,22	1.42	3 (16%)	21,30,33	2.04	3 (14%)
38	PSU	A1	966	38	18,21,22	1.39	4 (22%)	21,30,33	2.05	4 (19%)
34	PSU	B5	766	34	18,21,22	1.38	3 (16%)	21,30,33	2.01	4 (19%)
39	PSU	A3	50	39	18,21,22	1.40	2 (11%)	21,30,33	2.02	3 (14%)
40	PSU	A4	73	40	18,21,22	1.42	3 (16%)	21,30,33	2.20	5 (23%)
34	MA6	B5	1781	34	23,26,27	1.44	5 (21%)	33,38,41	2.06	11 (33%)
38	PSU	A1	2266	38	18,21,22	1.55	5 (27%)	21,30,33	1.94	3 (14%)
34	4AC	B5	1773	34	21,24,25	1.06	1 (4%)	28,34,37	1.06	3 (10%)
38	PSU	A1	1110	38	18,21,22	1.42	4 (22%)	21,30,33	2.43	6 (28%)
38	PSU	A1	2264	38	18,21,22	1.46	4 (22%)	21,30,33	2.16	3 (14%)
34	PSU	B5	632	34	18,21,22	1.38	3 (16%)	21,30,33	2.07	3 (14%)
38	PSU	A1	1052	38	18,21,22	1.37	3 (16%)	21,30,33	2.05	4 (19%)
34	PSU	B5	106	34	18,21,22	1.38	2 (11%)	21,30,33	2.01	3 (14%)
38	PSU	A1	986	38	18,21,22	1.41	3 (16%)	21,30,33	2.06	3 (14%)
38	PSU	A1	2416	38	18,21,22	1.47	5 (27%)	21,30,33	2.19	4 (19%)

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
80	DDE	DC	699	-	-	10/20/21/23	0/1/1/1
38	PSU	A1	2191	38	-	3/7/25/26	0/2/2/2
36	HIC	AB	243	36	-	0/5/6/8	0/1/1/1
38	PSU	A1	990	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	776	38	-	3/7/25/26	0/2/2/2
38	5MC	A1	2870	38	-	4/7/25/26	0/2/2/2
38	1MA	A1	645	38	-	2/7/25/26	0/3/3/3
38	PSU	A1	2260	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2923	38	-	3/7/25/26	0/2/2/2
34	G7M	B5	1575	34	-	0/7/25/26	0/3/3/3
38	UR3	A1	2634	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	759	34	-	0/7/25/26	0/2/2/2
38	PSU	A1	2340	38	-	3/7/25/26	0/2/2/2
34	PSU	B5	1290	34	-	0/7/25/26	0/2/2/2
34	PSU	B5	302	34	-	0/7/25/26	0/2/2/2
38	PSU	A1	960	38	-	2/7/25/26	0/2/2/2
38	OMG	A1	2922	38	-	0/9/27/28	0/3/3/3
38	PSU	A1	2349	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2258	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2975	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2129	38	-	0/7/25/26	0/2/2/2
34	B8N	B5	1191	34	-	2/16/34/35	0/2/2/2
38	PSU	A1	2314	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	1004	38	-	0/7/25/26	0/2/2/2
38	5MC	A1	2278	38	-	5/7/25/26	0/2/2/2
38	PSU	A1	2880	38	-	0/7/25/26	0/2/2/2
34	MA6	B5	1782	34	-	3/11/29/30	0/3/3/3
38	PSU	A1	2735	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	999	34	-	1/7/25/26	0/2/2/2
34	4AC	B5	1280	34	-	2/11/29/30	0/2/2/2
38	PSU	A1	2865	38	-	2/7/25/26	0/2/2/2
34	PSU	B5	466	34	-	0/7/25/26	0/2/2/2
34	PSU	B5	1187	34	-	0/7/25/26	0/2/2/2
38	PSU	A1	1124	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2133	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2944	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	1056	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	1415	34	-	2/7/25/26	0/2/2/2
38	1MA	A1	2142	38	-	0/7/25/26	0/3/3/3
34	PSU	B5	1181	34	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
38	OMU	A1	2921	38	-	0/9/27/28	0/2/2/2
34	PSU	B5	120	34	-	0/7/25/26	0/2/2/2
38	PSU	A1	1042	38	-	2/7/25/26	0/2/2/2
38	PSU	A1	2351	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2826	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	211	34	-	2/7/25/26	0/2/2/2
38	PSU	A1	966	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	766	34	-	0/7/25/26	0/2/2/2
39	PSU	A3	50	39	-	4/7/25/26	0/2/2/2
40	PSU	A4	73	40	-	3/7/25/26	0/2/2/2
34	MA6	B5	1781	34	-	6/11/29/30	0/3/3/3
38	PSU	A1	2266	38	-	4/7/25/26	0/2/2/2
34	4AC	B5	1773	34	-	0/11/29/30	0/2/2/2
38	PSU	A1	1110	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2264	38	-	5/7/25/26	0/2/2/2
34	PSU	B5	632	34	-	0/7/25/26	0/2/2/2
38	PSU	A1	1052	38	-	1/7/25/26	0/2/2/2
34	PSU	B5	106	34	-	1/7/25/26	0/2/2/2
38	PSU	A1	986	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2416	38	-	0/7/25/26	0/2/2/2

All (184) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	B5	1575	G7M	O6-C6	7.52	1.37	1.23
34	B5	1575	G7M	C2-N2	5.61	1.47	1.34
38	A1	2870	5MC	C5-C4	5.22	1.48	1.44
34	B5	1575	G7M	C5-N7	-4.98	1.33	1.39
34	B5	1782	MA6	C5-C4	4.43	1.47	1.39
38	A1	2278	5MC	C5-C4	4.40	1.47	1.44
34	B5	1781	MA6	C5-C4	4.39	1.46	1.39
34	B5	1191	B8N	C4-C5	-3.83	1.38	1.47
38	A1	2278	5MC	C6-N1	-3.59	1.31	1.38
34	B5	1280	4AC	C4-N4	-3.47	1.34	1.39
34	B5	120	PSU	C6-C5	3.38	1.39	1.35
34	B5	1191	B8N	C6-C5	3.31	1.39	1.35
38	A1	1004	PSU	C6-C5	3.28	1.38	1.35
34	B5	1415	PSU	C6-C5	3.27	1.38	1.35
34	B5	1575	G7M	CN7-N7	3.24	1.52	1.46
34	B5	211	PSU	C6-C5	3.23	1.38	1.35
34	B5	1181	PSU	C6-C5	3.21	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2349	PSU	C6-C5	3.21	1.38	1.35
38	A1	960	PSU	C6-C5	3.18	1.38	1.35
39	A3	50	PSU	C6-C5	3.16	1.38	1.35
38	A1	2266	PSU	C6-C5	3.16	1.38	1.35
34	B5	1773	4AC	C4-N4	-3.14	1.35	1.39
34	B5	766	PSU	C6-C5	3.12	1.38	1.35
34	B5	759	PSU	C6-C5	3.11	1.38	1.35
38	A1	2191	PSU	C6-C5	3.11	1.38	1.35
38	A1	1124	PSU	C6-C5	3.11	1.38	1.35
34	B5	1187	PSU	C6-C5	3.11	1.38	1.35
38	A1	2880	PSU	C6-C5	3.09	1.38	1.35
38	A1	2258	PSU	C6-C5	3.08	1.38	1.35
38	A1	2133	PSU	C4-N3	-3.08	1.33	1.38
34	B5	999	PSU	C6-C5	3.07	1.38	1.35
38	A1	1056	PSU	C4-N3	-3.06	1.33	1.38
38	A1	2735	PSU	C6-C5	3.05	1.38	1.35
38	A1	2416	PSU	C4-N3	-3.02	1.33	1.38
34	B5	106	PSU	C6-C5	3.01	1.38	1.35
38	A1	645	1MA	C6-N6	3.00	1.35	1.28
38	A1	2264	PSU	C6-C5	2.98	1.38	1.35
38	A1	1110	PSU	C4-N3	-2.97	1.33	1.38
34	B5	1290	PSU	C4-N3	-2.97	1.33	1.38
38	A1	990	PSU	C4-N3	-2.96	1.33	1.38
38	A1	2880	PSU	C4-N3	-2.96	1.33	1.38
38	A1	2351	PSU	C4-N3	-2.95	1.33	1.38
38	A1	2142	1MA	C6-N6	2.95	1.35	1.28
38	A1	986	PSU	C4-N3	-2.95	1.33	1.38
34	B5	302	PSU	C6-C5	2.93	1.38	1.35
38	A1	2922	OMG	C5-C4	2.93	1.46	1.38
40	A4	73	PSU	C4-N3	-2.91	1.33	1.38
38	A1	1042	PSU	C4-N3	-2.91	1.33	1.38
38	A1	2975	PSU	C4-N3	-2.90	1.33	1.38
38	A1	1124	PSU	C4-N3	-2.90	1.33	1.38
38	A1	2865	PSU	C6-C5	2.90	1.38	1.35
38	A1	2142	1MA	C5-C4	2.90	1.46	1.38
38	A1	2129	PSU	C4-N3	-2.89	1.33	1.38
38	A1	2260	PSU	C6-C5	2.89	1.38	1.35
34	B5	1290	PSU	C6-C5	2.88	1.38	1.35
38	A1	2191	PSU	C4-N3	-2.88	1.33	1.38
38	A1	2944	PSU	C4-N3	-2.87	1.33	1.38
40	A4	73	PSU	C6-C5	2.87	1.38	1.35
38	A1	960	PSU	C4-N3	-2.87	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	B5	632	PSU	C4-N3	-2.87	1.33	1.38
34	B5	1187	PSU	C4-N3	-2.86	1.33	1.38
38	A1	2264	PSU	C4-N3	-2.85	1.33	1.38
34	B5	466	PSU	C6-C5	2.85	1.38	1.35
38	A1	2923	PSU	C4-N3	-2.84	1.33	1.38
38	A1	2260	PSU	C4-N3	-2.84	1.33	1.38
38	A1	1052	PSU	C6-C5	2.83	1.38	1.35
38	A1	990	PSU	C6-C5	2.83	1.38	1.35
38	A1	2944	PSU	C6-C5	2.83	1.38	1.35
34	B5	1575	G7M	C6-N1	-2.83	1.33	1.38
38	A1	2314	PSU	C6-C5	2.82	1.38	1.35
38	A1	2314	PSU	C4-N3	-2.82	1.33	1.38
38	A1	966	PSU	C4-N3	-2.81	1.33	1.38
38	A1	1052	PSU	C4-N3	-2.81	1.33	1.38
38	A1	1004	PSU	C4-N3	-2.81	1.33	1.38
38	A1	2340	PSU	C4-N3	-2.80	1.33	1.38
38	A1	2129	PSU	C6-C5	2.80	1.38	1.35
34	B5	766	PSU	C4-N3	-2.80	1.33	1.38
38	A1	2735	PSU	C4-N3	-2.79	1.33	1.38
38	A1	966	PSU	C6-C5	2.79	1.38	1.35
38	A1	2826	PSU	C4-N3	-2.77	1.33	1.38
38	A1	2826	PSU	C6-C5	2.77	1.38	1.35
38	A1	986	PSU	C6-C5	2.77	1.38	1.35
38	A1	645	1MA	C5-C4	2.77	1.46	1.38
38	A1	2349	PSU	C4-N3	-2.77	1.33	1.38
38	A1	2921	OMU	C4-N3	-2.76	1.33	1.38
38	A1	776	PSU	C6-C5	2.76	1.38	1.35
38	A1	2266	PSU	C4-N3	-2.75	1.33	1.38
38	A1	2351	PSU	C6-C5	2.75	1.38	1.35
36	AB	243	HIC	CD2-CG	2.75	1.41	1.36
38	A1	2865	PSU	C4-N3	-2.75	1.33	1.38
34	B5	211	PSU	C4-N3	-2.75	1.33	1.38
38	A1	2133	PSU	C6-C5	2.74	1.38	1.35
38	A1	2923	PSU	C6-C5	2.73	1.38	1.35
38	A1	2416	PSU	C6-C5	2.72	1.38	1.35
38	A1	2975	PSU	C6-C5	2.72	1.38	1.35
34	B5	106	PSU	C4-N3	-2.72	1.33	1.38
34	B5	302	PSU	C4-N3	-2.71	1.33	1.38
34	B5	759	PSU	C4-N3	-2.69	1.33	1.38
34	B5	466	PSU	C4-N3	-2.68	1.33	1.38
38	A1	2314	PSU	O4'-C1'	-2.68	1.40	1.43
38	A1	1042	PSU	C6-C5	2.67	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2258	PSU	C4-N3	-2.67	1.33	1.38
34	B5	1415	PSU	C4-N3	-2.67	1.33	1.38
39	A3	50	PSU	C4-N3	-2.66	1.33	1.38
38	A1	1110	PSU	O4'-C1'	-2.66	1.40	1.43
34	B5	1181	PSU	C4-N3	-2.63	1.33	1.38
34	B5	120	PSU	C4-N3	-2.62	1.33	1.38
38	A1	1110	PSU	C6-C5	2.62	1.38	1.35
34	B5	632	PSU	C6-C5	2.62	1.38	1.35
38	A1	2266	PSU	O4'-C1'	-2.60	1.40	1.43
38	A1	2340	PSU	C6-C5	2.60	1.38	1.35
38	A1	645	1MA	C5-N7	-2.58	1.33	1.39
38	A1	1056	PSU	C6-C5	2.57	1.38	1.35
38	A1	776	PSU	C4-N3	-2.56	1.34	1.38
34	B5	999	PSU	C4-N3	-2.56	1.34	1.38
34	B5	1781	MA6	C5-C6	2.56	1.48	1.41
34	B5	1782	MA6	C5-C6	2.51	1.47	1.41
38	A1	2922	OMG	C6-N1	-2.50	1.34	1.38
34	B5	1782	MA6	C5-N7	-2.48	1.34	1.39
80	DC	699	DDE	CD2-CG	2.47	1.41	1.36
38	A1	2870	5MC	C6-C5	2.43	1.38	1.34
38	A1	2191	PSU	O4'-C1'	-2.42	1.40	1.43
38	A1	2870	5MC	C6-N1	-2.41	1.33	1.38
34	B5	1781	MA6	C5-N7	-2.39	1.34	1.39
38	A1	2340	PSU	C2-N3	-2.39	1.33	1.37
38	A1	1042	PSU	C2-N3	-2.35	1.33	1.37
34	B5	632	PSU	C2-N3	-2.34	1.33	1.37
38	A1	2880	PSU	C2-N3	-2.32	1.33	1.37
34	B5	1781	MA6	C4-N9	-2.31	1.32	1.37
38	A1	2133	PSU	C2-N3	-2.29	1.33	1.37
34	B5	1575	G7M	C4-N9	-2.28	1.32	1.38
38	A1	2416	PSU	C2-N1	-2.24	1.33	1.36
38	A1	2416	PSU	O4'-C1'	-2.24	1.40	1.43
34	B5	1782	MA6	C8-N7	2.24	1.36	1.31
38	A1	2944	PSU	O4'-C1'	-2.24	1.40	1.43
34	B5	1191	B8N	CN1-N1	2.23	1.51	1.46
40	A4	73	PSU	C2-N3	-2.23	1.33	1.37
38	A1	2416	PSU	C2-N3	-2.23	1.33	1.37
34	B5	1575	G7M	C2-N1	-2.22	1.32	1.37
38	A1	2142	1MA	C5-N7	-2.22	1.34	1.39
38	A1	2865	PSU	O4'-C1'	-2.20	1.40	1.43
38	A1	2351	PSU	C2-N3	-2.20	1.33	1.37
38	A1	2826	PSU	C2-N3	-2.19	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2129	PSU	C2-N3	-2.19	1.33	1.37
38	A1	1110	PSU	C2-N3	-2.18	1.33	1.37
38	A1	1052	PSU	C2-N3	-2.18	1.33	1.37
34	B5	1781	MA6	C8-N7	2.17	1.35	1.31
34	B5	302	PSU	C2-N1	-2.16	1.33	1.36
38	A1	2264	PSU	O4'-C1'	-2.16	1.40	1.43
38	A1	2944	PSU	C2-N3	-2.16	1.33	1.37
38	A1	1124	PSU	C2-N3	-2.16	1.33	1.37
38	A1	2191	PSU	C2-N3	-2.15	1.33	1.37
38	A1	2266	PSU	C2-N1	-2.15	1.33	1.36
38	A1	1056	PSU	C2-N3	-2.15	1.33	1.37
38	A1	2129	PSU	C2-N1	-2.13	1.33	1.36
34	B5	1290	PSU	C2-N3	-2.13	1.34	1.37
38	A1	2142	1MA	C2-N3	2.13	1.34	1.30
38	A1	2921	OMU	C5-C4	-2.13	1.39	1.43
38	A1	986	PSU	C2-N3	-2.11	1.34	1.37
38	A1	2351	PSU	C2-N1	-2.11	1.33	1.36
38	A1	2264	PSU	C2-N3	-2.11	1.34	1.37
34	B5	766	PSU	C2-N3	-2.11	1.34	1.37
38	A1	776	PSU	O4'-C1'	-2.11	1.40	1.43
38	A1	2922	OMG	C5-N7	-2.11	1.34	1.39
38	A1	2921	OMU	C2-N3	-2.09	1.34	1.38
38	A1	2922	OMG	C4-N9	-2.09	1.32	1.38
38	A1	966	PSU	C2-N3	-2.08	1.34	1.37
38	A1	2735	PSU	C2-N3	-2.08	1.34	1.37
34	B5	302	PSU	C2-N3	-2.08	1.34	1.37
38	A1	645	1MA	C2-N3	2.07	1.34	1.30
38	A1	2880	PSU	O4'-C1'	-2.07	1.41	1.43
38	A1	776	PSU	C2-N3	-2.06	1.34	1.37
38	A1	2826	PSU	C2-N1	-2.06	1.34	1.36
38	A1	2260	PSU	C2-N3	-2.05	1.34	1.37
38	A1	2266	PSU	C2-N3	-2.05	1.34	1.37
38	A1	2975	PSU	C2-N3	-2.04	1.34	1.37
34	B5	211	PSU	O4'-C1'	-2.04	1.41	1.43
38	A1	2191	PSU	C2-N1	-2.04	1.34	1.36
38	A1	645	1MA	C4-N9	-2.03	1.32	1.38
34	B5	1782	MA6	C4-N9	-2.03	1.33	1.37
38	A1	966	PSU	C2-N1	-2.02	1.34	1.36
38	A1	1042	PSU	C2-N1	-2.02	1.34	1.36
38	A1	776	PSU	C2-N1	-2.00	1.34	1.36
34	B5	120	PSU	C2-N3	-2.00	1.34	1.37

All (242) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	A1	2634	UR3	C4-N3-C2	-7.01	118.94	124.58
38	A1	2416	PSU	N1-C2-N3	6.89	122.44	115.17
38	A1	2264	PSU	N1-C2-N3	6.86	122.41	115.17
38	A1	2133	PSU	N1-C2-N3	6.83	122.37	115.17
38	A1	2351	PSU	N1-C2-N3	6.82	122.36	115.17
34	B5	1290	PSU	N1-C2-N3	6.79	122.33	115.17
38	A1	1110	PSU	N1-C2-N3	6.67	122.21	115.17
38	A1	2260	PSU	N1-C2-N3	6.65	122.18	115.17
38	A1	990	PSU	N1-C2-N3	6.65	122.18	115.17
38	A1	986	PSU	N1-C2-N3	6.64	122.17	115.17
38	A1	1056	PSU	N1-C2-N3	6.62	122.15	115.17
38	A1	2975	PSU	N1-C2-N3	6.62	122.15	115.17
38	A1	2191	PSU	N1-C2-N3	6.58	122.11	115.17
34	B5	1181	PSU	N1-C2-N3	6.57	122.10	115.17
38	A1	2865	PSU	N1-C2-N3	6.57	122.10	115.17
38	A1	2314	PSU	N1-C2-N3	6.55	122.08	115.17
38	A1	960	PSU	N1-C2-N3	6.54	122.07	115.17
34	B5	759	PSU	N1-C2-N3	6.54	122.07	115.17
38	A1	2129	PSU	N1-C2-N3	6.53	122.06	115.17
38	A1	1004	PSU	N1-C2-N3	6.53	122.05	115.17
34	B5	211	PSU	N1-C2-N3	6.47	122.00	115.17
38	A1	2258	PSU	N1-C2-N3	6.47	122.00	115.17
40	A4	73	PSU	N1-C2-N3	6.47	121.99	115.17
38	A1	1052	PSU	N1-C2-N3	6.46	121.98	115.17
38	A1	2349	PSU	N1-C2-N3	6.46	121.98	115.17
34	B5	1187	PSU	N1-C2-N3	6.45	121.97	115.17
34	B5	106	PSU	N1-C2-N3	6.43	121.95	115.17
38	A1	2735	PSU	N1-C2-N3	6.43	121.95	115.17
38	A1	2880	PSU	N1-C2-N3	6.41	121.92	115.17
34	B5	466	PSU	N1-C2-N3	6.37	121.89	115.17
38	A1	2923	PSU	N1-C2-N3	6.36	121.88	115.17
39	A3	50	PSU	N1-C2-N3	6.35	121.86	115.17
38	A1	966	PSU	N1-C2-N3	6.35	121.86	115.17
38	A1	776	PSU	N1-C2-N3	6.33	121.85	115.17
34	B5	1415	PSU	N1-C2-N3	6.31	121.83	115.17
34	B5	632	PSU	N1-C2-N3	6.30	121.82	115.17
38	A1	2266	PSU	N1-C2-N3	6.29	121.81	115.17
38	A1	2944	PSU	N1-C2-N3	6.24	121.75	115.17
34	B5	302	PSU	N1-C2-N3	6.24	121.75	115.17
34	B5	766	PSU	N1-C2-N3	6.23	121.74	115.17
38	A1	1042	PSU	N1-C2-N3	6.23	121.73	115.17
34	B5	999	PSU	N1-C2-N3	6.18	121.69	115.17
34	B5	120	PSU	N1-C2-N3	6.11	121.61	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	A1	1124	PSU	N1-C2-N3	6.00	121.50	115.17
38	A1	2340	PSU	N1-C2-N3	5.99	121.48	115.17
38	A1	2826	PSU	N1-C2-N3	5.96	121.46	115.17
34	B5	1782	MA6	C5-C4-N3	-5.84	118.68	126.72
38	A1	2922	OMG	C5-C4-N3	-5.62	119.44	128.39
38	A1	645	1MA	C5-C4-N3	-5.43	119.28	127.27
38	A1	2142	1MA	C5-C4-N3	-5.40	119.33	127.27
38	A1	1110	PSU	C4-N3-C2	-5.38	118.95	126.37
34	B5	1781	MA6	C5-C4-N3	-5.38	119.31	126.72
38	A1	2921	OMU	C4-N3-C2	-4.88	120.56	126.61
38	A1	2922	OMG	C2-N3-C4	4.81	120.59	112.30
34	B5	1191	B8N	C4-N3-C2	-4.80	119.71	125.62
34	B5	1575	G7M	C2-N3-C4	4.73	120.45	112.30
38	A1	2133	PSU	C4-N3-C2	-4.73	119.86	126.37
38	A1	2142	1MA	C2-N3-C4	4.68	121.70	112.53
38	A1	2921	OMU	N3-C2-N1	4.61	120.89	114.89
38	A1	645	1MA	C2-N3-C4	4.51	121.38	112.53
38	A1	2351	PSU	C4-N3-C2	-4.51	120.16	126.37
34	B5	1290	PSU	C4-N3-C2	-4.50	120.17	126.37
38	A1	990	PSU	C4-N3-C2	-4.46	120.22	126.37
38	A1	1042	PSU	C4-N3-C2	-4.44	120.26	126.37
38	A1	2260	PSU	C4-N3-C2	-4.42	120.28	126.37
38	A1	2880	PSU	C4-N3-C2	-4.40	120.31	126.37
34	B5	1782	MA6	N3-C4-N9	4.40	134.65	127.17
38	A1	2923	PSU	C4-N3-C2	-4.38	120.33	126.37
40	A4	73	PSU	C4-N3-C2	-4.37	120.36	126.37
38	A1	1056	PSU	C4-N3-C2	-4.36	120.36	126.37
38	A1	960	PSU	C4-N3-C2	-4.35	120.38	126.37
38	A1	2129	PSU	C4-N3-C2	-4.34	120.40	126.37
38	A1	2278	5MC	C1'-N1-C6	-4.32	114.04	121.15
38	A1	2314	PSU	C4-N3-C2	-4.32	120.43	126.37
38	A1	2865	PSU	C4-N3-C2	-4.30	120.44	126.37
34	B5	1181	PSU	C4-N3-C2	-4.29	120.46	126.37
38	A1	2416	PSU	C4-N3-C2	-4.28	120.48	126.37
34	B5	632	PSU	C4-N3-C2	-4.27	120.49	126.37
38	A1	1124	PSU	C4-N3-C2	-4.26	120.50	126.37
38	A1	2191	PSU	C4-N3-C2	-4.21	120.57	126.37
38	A1	2340	PSU	C4-N3-C2	-4.21	120.57	126.37
38	A1	2975	PSU	C4-N3-C2	-4.21	120.57	126.37
38	A1	1052	PSU	C4-N3-C2	-4.20	120.58	126.37
38	A1	2944	PSU	C4-N3-C2	-4.20	120.59	126.37
38	A1	2735	PSU	C4-N3-C2	-4.20	120.59	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	B5	766	PSU	C4-N3-C2	-4.19	120.59	126.37
34	B5	1781	MA6	N3-C4-N9	4.19	134.30	127.17
38	A1	776	PSU	C4-N3-C2	-4.17	120.63	126.37
38	A1	2922	OMG	N9-C4-N3	4.17	134.28	125.95
38	A1	966	PSU	C4-N3-C2	-4.16	120.65	126.37
34	B5	1781	MA6	C2-N1-C6	4.15	121.97	111.83
34	B5	211	PSU	C4-N3-C2	-4.15	120.66	126.37
38	A1	2349	PSU	C4-N3-C2	-4.13	120.68	126.37
34	B5	466	PSU	C4-N3-C2	-4.13	120.68	126.37
34	B5	759	PSU	C4-N3-C2	-4.13	120.69	126.37
38	A1	2264	PSU	C4-N3-C2	-4.13	120.69	126.37
34	B5	1575	G7M	C5-C4-N3	-4.11	120.39	128.15
34	B5	1187	PSU	C4-N3-C2	-4.07	120.77	126.37
38	A1	1004	PSU	C4-N3-C2	-4.06	120.78	126.37
38	A1	990	PSU	O2-C2-N1	-4.03	118.63	122.79
38	A1	776	PSU	O2-C2-N1	-4.00	118.66	122.79
38	A1	2264	PSU	O2-C2-N1	-4.00	118.67	122.79
38	A1	2258	PSU	C4-N3-C2	-3.99	120.87	126.37
34	B5	1782	MA6	C2-N1-C6	3.96	121.51	111.83
38	A1	986	PSU	C4-N3-C2	-3.95	120.93	126.37
34	B5	1415	PSU	C4-N3-C2	-3.95	120.93	126.37
38	A1	2416	PSU	O2-C2-N1	-3.94	118.73	122.79
34	B5	106	PSU	C4-N3-C2	-3.93	120.95	126.37
34	B5	999	PSU	C4-N3-C2	-3.92	120.97	126.37
38	A1	2826	PSU	C4-N3-C2	-3.92	120.97	126.37
38	A1	2351	PSU	O2-C2-N1	-3.91	118.75	122.79
34	B5	1181	PSU	O2-C2-N1	-3.89	118.78	122.79
39	A3	50	PSU	O2-C2-N1	-3.88	118.78	122.79
34	B5	302	PSU	C4-N3-C2	-3.87	121.04	126.37
39	A3	50	PSU	C4-N3-C2	-3.87	121.05	126.37
38	A1	2349	PSU	O2-C2-N1	-3.86	118.81	122.79
34	B5	1280	4AC	N4-C4-N3	3.85	120.11	113.87
38	A1	966	PSU	O2-C2-N1	-3.84	118.82	122.79
38	A1	2129	PSU	O2-C2-N1	-3.84	118.83	122.79
38	A1	1056	PSU	O2-C2-N1	-3.83	118.83	122.79
38	A1	2260	PSU	O2-C2-N1	-3.82	118.85	122.79
34	B5	1290	PSU	O2-C2-N1	-3.81	118.86	122.79
38	A1	1004	PSU	O2-C2-N1	-3.78	118.89	122.79
38	A1	2865	PSU	O2-C2-N1	-3.77	118.90	122.79
34	B5	466	PSU	O2-C2-N1	-3.77	118.90	122.79
38	A1	2923	PSU	O2-C2-N1	-3.76	118.91	122.79
38	A1	2266	PSU	O2-C2-N1	-3.75	118.92	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	B5	1575	G7M	C5-C6-N1	3.75	119.59	111.84
38	A1	2826	PSU	O2-C2-N1	-3.74	118.93	122.79
34	B5	759	PSU	O2-C2-N1	-3.73	118.95	122.79
34	B5	1187	PSU	O2-C2-N1	-3.72	118.95	122.79
38	A1	2975	PSU	O2-C2-N1	-3.72	118.96	122.79
38	A1	2258	PSU	O2-C2-N1	-3.71	118.97	122.79
34	B5	1191	B8N	C32-C31-N3	-3.70	105.69	112.16
34	B5	120	PSU	C4-N3-C2	-3.69	121.28	126.37
34	B5	999	PSU	O2-C2-N1	-3.69	118.98	122.79
34	B5	302	PSU	O2-C2-N1	-3.68	118.99	122.79
38	A1	986	PSU	O2-C2-N1	-3.64	119.03	122.79
38	A1	2921	OMU	C5-C4-N3	3.64	119.90	114.80
34	B5	106	PSU	O2-C2-N1	-3.63	119.04	122.79
34	B5	1781	MA6	C4-C5-N7	-3.63	106.43	110.58
38	A1	2314	PSU	O2-C2-N1	-3.63	119.05	122.79
38	A1	2735	PSU	O2-C2-N1	-3.63	119.05	122.79
38	A1	960	PSU	O2-C2-N1	-3.62	119.05	122.79
34	B5	1782	MA6	C2-N3-C4	3.62	120.67	111.83
40	A4	73	PSU	O2-C2-N1	-3.59	119.08	122.79
38	A1	2944	PSU	O2-C2-N1	-3.59	119.08	122.79
34	B5	1782	MA6	C4-C5-N7	-3.57	106.50	110.58
34	B5	632	PSU	O2-C2-N1	-3.57	119.11	122.79
34	B5	120	PSU	O2-C2-N1	-3.56	119.11	122.79
38	A1	2142	1MA	N9-C4-N3	3.55	134.98	126.90
38	A1	1042	PSU	O2-C2-N1	-3.54	119.14	122.79
38	A1	1110	PSU	O2-C2-N1	-3.53	119.15	122.79
34	B5	1781	MA6	C2-N3-C4	3.53	120.45	111.83
38	A1	2266	PSU	C4-N3-C2	-3.52	121.52	126.37
38	A1	2634	UR3	C5-C4-N3	3.52	119.68	115.04
38	A1	2133	PSU	O2-C2-N1	-3.51	119.17	122.79
34	B5	211	PSU	O2-C2-N1	-3.50	119.17	122.79
38	A1	2880	PSU	O2-C2-N1	-3.48	119.20	122.79
34	B5	1415	PSU	O2-C2-N1	-3.47	119.21	122.79
38	A1	2922	OMG	C6-C5-N7	3.43	136.53	130.29
38	A1	2870	5MC	C5-C6-N1	-3.42	119.60	123.31
38	A1	645	1MA	N9-C4-N3	3.40	134.65	126.90
38	A1	2191	PSU	O2-C2-N1	-3.39	119.29	122.79
34	B5	1575	G7M	N9-C4-N3	3.37	132.70	125.95
38	A1	1052	PSU	O2-C2-N1	-3.32	119.36	122.79
34	B5	1575	G7M	O6-C6-C5	-3.29	120.68	128.01
34	B5	766	PSU	O2-C2-N1	-3.27	119.41	122.79
34	B5	1781	MA6	N1-C2-N3	-3.24	123.67	128.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	B5	1575	G7M	C6-C5-N7	3.21	136.20	132.17
38	A1	1110	PSU	C5-C6-N1	-3.16	117.75	122.14
36	AB	243	HIC	NE2-CE1-ND1	-3.15	111.46	112.66
34	B5	1782	MA6	N1-C2-N3	-3.07	123.94	128.58
38	A1	1124	PSU	O2-C2-N1	-3.07	119.63	122.79
38	A1	2340	PSU	O2-C2-N1	-3.01	119.68	122.79
38	A1	2921	OMU	O4-C4-C5	-3.01	119.98	125.16
34	B5	1191	B8N	C31-N3-C4	2.97	121.38	117.18
34	B5	1781	MA6	C4-N9-C8	2.95	108.83	105.74
38	A1	1110	PSU	O4-C4-C5	-2.88	116.86	124.01
34	B5	1782	MA6	N1-C6-N6	2.85	120.33	116.86
38	A1	2278	5MC	O2-C2-N3	-2.82	117.88	122.33
34	B5	1191	B8N	N3-C2-N1	2.77	120.10	116.72
38	A1	2278	5MC	C5-C6-N1	-2.72	120.36	123.31
38	A1	2870	5MC	C5-C4-N3	-2.66	119.03	121.75
34	B5	1781	MA6	C5-N7-C8	2.58	107.50	103.45
80	DC	699	DDE	CAU-CBW-CBI	-2.54	106.25	111.22
38	A1	2922	OMG	C4-C5-N7	-2.50	106.70	110.67
34	B5	120	PSU	C6-C5-C4	-2.50	116.49	118.17
34	B5	1782	MA6	C5-N7-C8	2.49	107.37	103.45
34	B5	1773	4AC	C6-C5-C4	2.49	120.00	117.00
38	A1	2133	PSU	C5-C6-N1	-2.46	118.72	122.14
38	A1	1056	PSU	C5-C6-N1	-2.45	118.74	122.14
38	A1	2921	OMU	O2-C2-N1	-2.44	119.62	122.80
80	DC	699	DDE	CAC-NCB-CBW	2.42	116.32	110.52
38	A1	2314	PSU	C5-C6-N1	-2.41	118.79	122.14
38	A1	2351	PSU	C5-C6-N1	-2.39	118.83	122.14
38	A1	2260	PSU	C5-C6-N1	-2.38	118.84	122.14
34	B5	1575	G7M	C2-N1-C6	-2.37	120.81	125.11
34	B5	1781	MA6	N1-C6-N6	2.36	119.73	116.86
34	B5	1290	PSU	C5-C6-N1	-2.35	118.88	122.14
38	A1	990	PSU	C5-C6-N1	-2.33	118.91	122.14
34	B5	1782	MA6	C4-N9-C8	2.31	108.16	105.74
38	A1	2142	1MA	C4-C5-N7	-2.29	107.04	110.67
34	B5	302	PSU	C6-C5-C4	-2.29	116.63	118.17
38	A1	645	1MA	C4-C5-N7	-2.28	107.05	110.67
34	B5	1773	4AC	O2-C2-N3	-2.28	118.74	122.33
34	B5	1782	MA6	C5-C6-N6	-2.27	121.74	125.33
38	A1	2278	5MC	O2-C2-N1	2.26	123.34	118.90
38	A1	960	PSU	C5-C6-N1	-2.24	119.03	122.14
38	A1	1124	PSU	C5-C6-N1	-2.22	119.06	122.14
38	A1	2923	PSU	C5-C6-N1	-2.22	119.06	122.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	A1	2870	5MC	O2-C2-N3	-2.22	118.83	122.33
38	A1	2922	OMG	O6-C6-C5	-2.21	120.71	126.53
38	A1	1052	PSU	C5-C6-N1	-2.20	119.08	122.14
34	B5	766	PSU	C5-C6-N1	-2.20	119.09	122.14
38	A1	1110	PSU	O4'-C1'-C2'	2.20	108.19	105.15
34	B5	466	PSU	C5-C6-N1	-2.19	119.10	122.14
34	B5	1781	MA6	N9-C8-N7	-2.19	110.84	113.94
38	A1	2634	UR3	C3U-N3-C2	2.18	121.14	117.33
38	A1	2340	PSU	C5-C6-N1	-2.18	119.11	122.14
34	B5	1280	4AC	C5-C4-N4	-2.18	119.26	122.94
38	A1	2865	PSU	C5-C6-N1	-2.18	119.12	122.14
34	B5	1187	PSU	C5-C6-N1	-2.16	119.14	122.14
38	A1	2880	PSU	C5-C6-N1	-2.15	119.15	122.14
38	A1	2416	PSU	O4'-C1'-C2'	2.14	108.12	105.15
38	A1	2944	PSU	O4'-C1'-C2'	2.14	108.12	105.15
38	A1	2142	1MA	C6-C5-N7	2.14	135.94	132.16
36	AB	243	HIC	CB-CG-CD2	-2.14	124.80	129.96
34	B5	1773	4AC	O7-C7-N4	2.13	125.25	121.90
38	A1	2142	1MA	N1-C2-N3	-2.13	123.47	126.00
38	A1	2975	PSU	C5-C6-N1	-2.10	119.22	122.14
38	A1	1042	PSU	C5-C6-N1	-2.09	119.23	122.14
40	A4	73	PSU	O4'-C1'-C2'	2.08	108.03	105.15
38	A1	966	PSU	C5-C6-N1	-2.08	119.26	122.14
38	A1	2278	5MC	C1'-N1-C2	2.05	122.98	118.44
38	A1	2349	PSU	C5-C6-N1	-2.03	119.32	122.14
38	A1	1042	PSU	O4'-C1'-C2'	2.03	107.95	105.15
38	A1	2191	PSU	C6-C5-C4	-2.02	116.81	118.17
40	A4	73	PSU	C6-C5-C4	-2.02	116.81	118.17
34	B5	999	PSU	O4'-C1'-C2'	2.01	107.94	105.15
34	B5	1781	MA6	C6-C5-N7	2.01	136.64	133.43
34	B5	466	PSU	O4'-C1'-C2'	2.00	107.92	105.15

There are no chirality outliers.

All (75) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
39	A3	50	PSU	C2'-C1'-C5-C4
39	A3	50	PSU	C2'-C1'-C5-C6
80	DC	699	DDE	N-CA-CB-CG
80	DC	699	DDE	C-CA-CB-CG
80	DC	699	DDE	CBI-CBW-NCB-CAB
80	DC	699	DDE	CBI-CBW-NCB-CAC

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Mol	Chain	Res	Type	Atoms
80	DC	699	DDE	CBI-CBW-NCB-CAA
80	DC	699	DDE	CAU-CBW-NCB-CAB
80	DC	699	DDE	CAU-CBW-NCB-CAC
80	DC	699	DDE	CAU-CBW-NCB-CAA
34	B5	1280	4AC	N3-C4-N4-C7
34	B5	1280	4AC	C5-C4-N4-C7
34	B5	1781	MA6	C5-C6-N6-C9
34	B5	1782	MA6	C5-C6-N6-C9
38	A1	776	PSU	O4'-C1'-C5-C6
38	A1	1042	PSU	O4'-C1'-C5-C4
38	A1	1042	PSU	O4'-C1'-C5-C6
38	A1	2191	PSU	O4'-C4'-C5'-O5'
38	A1	2264	PSU	C2'-C1'-C5-C4
38	A1	2264	PSU	C2'-C1'-C5-C6
38	A1	2266	PSU	C2'-C1'-C5-C4
38	A1	2266	PSU	C2'-C1'-C5-C6
38	A1	2870	5MC	C2'-C1'-N1-C6
38	A1	2870	5MC	O4'-C1'-N1-C2
38	A1	2870	5MC	C2'-C1'-N1-C2
38	A1	2264	PSU	C3'-C4'-C5'-O5'
38	A1	2266	PSU	C3'-C4'-C5'-O5'
38	A1	2340	PSU	C3'-C4'-C5'-O5'
38	A1	2340	PSU	O4'-C4'-C5'-O5'
39	A3	50	PSU	C3'-C4'-C5'-O5'
34	B5	211	PSU	C3'-C4'-C5'-O5'
34	B5	1781	MA6	O4'-C4'-C5'-O5'
34	B5	1781	MA6	C3'-C4'-C5'-O5'
38	A1	2264	PSU	O4'-C4'-C5'-O5'
38	A1	2266	PSU	O4'-C4'-C5'-O5'
38	A1	2923	PSU	C3'-C4'-C5'-O5'
34	B5	1781	MA6	N1-C6-N6-C9
34	B5	1782	MA6	N1-C6-N6-C9
38	A1	776	PSU	C3'-C4'-C5'-O5'
38	A1	2191	PSU	C3'-C4'-C5'-O5'
38	A1	2870	5MC	O4'-C1'-N1-C6
34	B5	211	PSU	O4'-C4'-C5'-O5'
38	A1	2923	PSU	O4'-C4'-C5'-O5'
38	A1	2264	PSU	C4'-C5'-O5'-P
80	DC	699	DDE	OAG-CBI-CBW-CAU
38	A1	2278	5MC	C4'-C5'-O5'-P
38	A1	2340	PSU	C4'-C5'-O5'-P
38	A1	2923	PSU	C4'-C5'-O5'-P

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Mol	Chain	Res	Type	Atoms
39	A3	50	PSU	O4'-C4'-C5'-O5'
38	A1	776	PSU	O4'-C4'-C5'-O5'
34	B5	1415	PSU	O4'-C4'-C5'-O5'
34	B5	1415	PSU	C3'-C4'-C5'-O5'
34	B5	106	PSU	O4'-C4'-C5'-O5'
38	A1	2278	5MC	C3'-C4'-C5'-O5'
34	B5	1781	MA6	C4'-C5'-O5'-P
34	B5	1191	B8N	O4'-C1'-C5-C4
38	A1	2865	PSU	O4'-C1'-C5-C4
40	A4	73	PSU	O4'-C4'-C5'-O5'
34	B5	1781	MA6	C5-C6-N6-C10
34	B5	1782	MA6	C5-C6-N6-C10
38	A1	2278	5MC	O4'-C4'-C5'-O5'
38	A1	2191	PSU	C4'-C5'-O5'-P
38	A1	645	1MA	C2'-C1'-N9-C8
40	A4	73	PSU	C3'-C4'-C5'-O5'
34	B5	1191	B8N	O4'-C1'-C5-C6
38	A1	960	PSU	O4'-C1'-C5-C6
38	A1	2865	PSU	O4'-C1'-C5-C6
38	A1	2278	5MC	C2'-C1'-N1-C6
80	DC	699	DDE	NAD-CBI-CBW-CAU
38	A1	645	1MA	C2'-C1'-N9-C4
40	A4	73	PSU	C2'-C1'-C5-C6
38	A1	960	PSU	C2'-C1'-C5-C6
38	A1	1052	PSU	O4'-C4'-C5'-O5'
34	B5	999	PSU	C4'-C5'-O5'-P
38	A1	2278	5MC	C2'-C1'-N1-C2

There are no ring outliers.

44 monomers are involved in 97 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
38	A1	2191	PSU	1	0
36	AB	243	HIC	2	0
38	A1	990	PSU	4	0
38	A1	776	PSU	2	0
38	A1	645	1MA	1	0
38	A1	2260	PSU	2	0
38	A1	2923	PSU	1	0
34	B5	1575	G7M	1	0
38	A1	2634	UR3	1	0
34	B5	759	PSU	3	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
38	A1	2340	PSU	3	0
34	B5	1290	PSU	2	0
34	B5	302	PSU	3	0
38	A1	960	PSU	1	0
38	A1	2349	PSU	1	0
38	A1	2258	PSU	3	0
38	A1	2975	PSU	3	0
38	A1	2129	PSU	2	0
38	A1	2314	PSU	2	0
38	A1	2880	PSU	4	0
38	A1	2735	PSU	1	0
34	B5	999	PSU	2	0
34	B5	1280	4AC	4	0
38	A1	2865	PSU	2	0
34	B5	466	PSU	2	0
34	B5	1187	PSU	3	0
38	A1	1056	PSU	2	0
34	B5	1181	PSU	2	0
34	B5	120	PSU	2	0
38	A1	1042	PSU	2	0
38	A1	2351	PSU	1	0
34	B5	211	PSU	3	0
38	A1	966	PSU	5	0
34	B5	766	PSU	1	0
39	A3	50	PSU	1	0
40	A4	73	PSU	2	0
34	B5	1781	MA6	2	0
34	B5	1773	4AC	3	0
38	A1	1110	PSU	2	0
38	A1	2264	PSU	1	0
34	B5	632	PSU	6	0
38	A1	1052	PSU	1	0
38	A1	986	PSU	1	0
38	A1	2416	PSU	4	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 4 ligands modelled in this entry, 2 are monoatomic - leaving 2 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	$\#\|Z\| > 2$
83	GDP	DC	901	84	29,30,30	1.14	3 (10%)	45,47,47	1.86	8 (17%)
85	SO1	DC	903	-	34,39,39	0.69	1 (2%)	38,64,64	1.33	6 (15%)

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
83	GDP	DC	901	84	-	5/16/32/32	0/3/3/3
85	SO1	DC	903	-	1/1/15/16	5/21/104/104	0/7/5/5

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	DC	901	GDP	C5-C4	3.02	1.47	1.38
85	DC	903	SO1	O14-C5	-2.95	1.19	1.30
83	DC	901	GDP	C6-N1	-2.21	1.34	1.38
83	DC	901	GDP	C5-N7	-2.14	1.34	1.39

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
83	DC	901	GDP	C5-C4-N3	-6.32	118.34	128.39
83	DC	901	GDP	C2-N3-C4	5.19	121.24	112.30
85	DC	903	SO1	C12-C6-C2	-5.10	97.19	105.09
83	DC	901	GDP	N9-C4-N3	4.41	134.77	125.95
83	DC	901	GDP	C6-C5-N7	3.27	136.25	130.29
83	DC	901	GDP	C4-C5-N7	-2.95	105.99	110.67
85	DC	903	SO1	C7-C2-C6	2.81	117.42	112.05

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
83	DC	901	GDP	O6-C6-C5	-2.35	120.33	126.53
83	DC	901	GDP	C3'-C2'-C1'	2.31	105.83	101.46
85	DC	903	SO1	C18-C9-C16	-2.29	100.59	103.72
85	DC	903	SO1	O57-C53-C54	-2.24	105.11	110.38
85	DC	903	SO1	C21-C13-C4	2.22	118.33	112.41
85	DC	903	SO1	C24-C18-C9	-2.08	101.08	105.14
83	DC	901	GDP	C2'-C1'-N9	-2.06	107.51	113.25

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
85	DC	903	SO1	C4

All (10) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
85	DC	903	SO1	C2-C1-C5-O14
85	DC	903	SO1	C2-C1-C5-O15
85	DC	903	SO1	O56-C52-O17-C8
83	DC	901	GDP	O4'-C4'-C5'-O5'
83	DC	901	GDP	C3'-C4'-C5'-O5'
85	DC	903	SO1	C54-C55-O64-C65
83	DC	901	GDP	PA-O3A-PB-O1B
83	DC	901	GDP	PA-O3A-PB-O2B
83	DC	901	GDP	PA-O3A-PB-O3B
85	DC	903	SO1	C56-C55-O64-C65

There are no ring outliers.

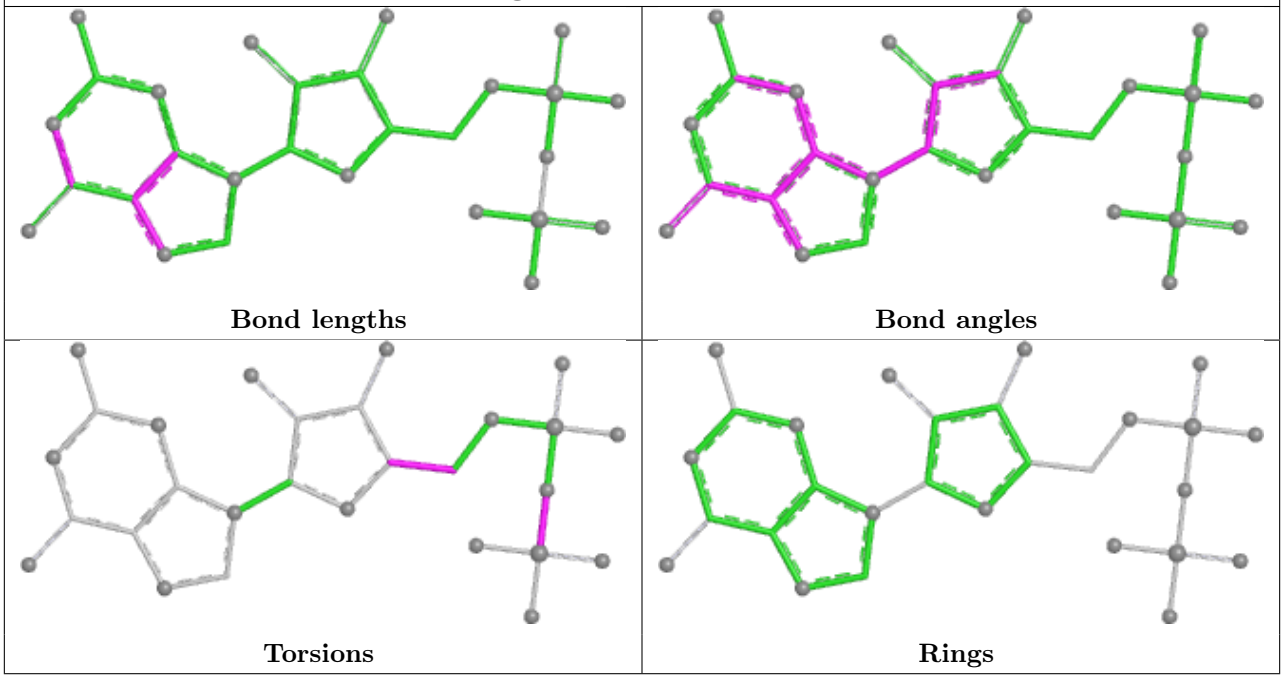
2 monomers are involved in 12 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
83	DC	901	GDP	6	0
85	DC	903	SO1	6	0

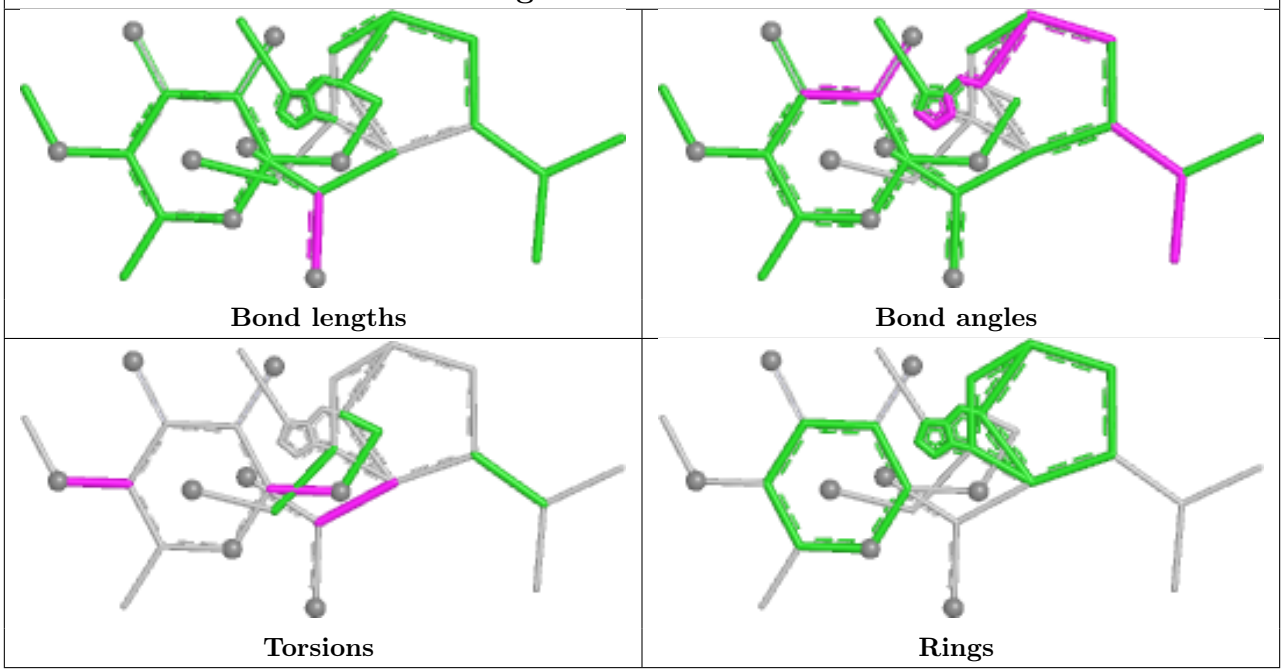
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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 GDP DC 901



Ligand SO1 DC 903



5.7 Other polymers

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
38	A1	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A1	451:U	O3'	486:A	P	15.26

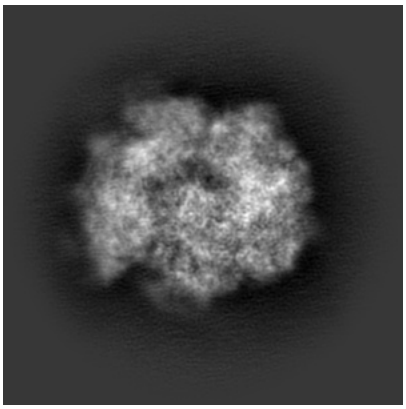
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-40999. These allow visual inspection of the internal detail of the map and identification of artifacts.

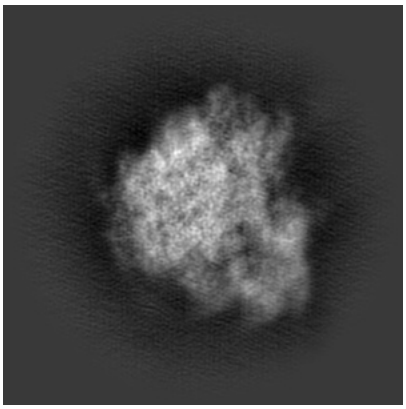
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

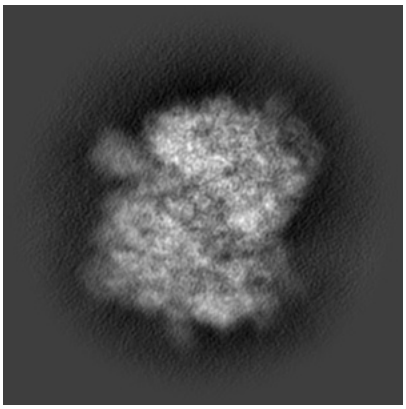
6.1.1 Primary map



X

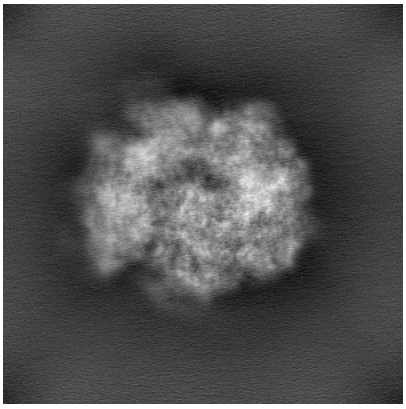


Y

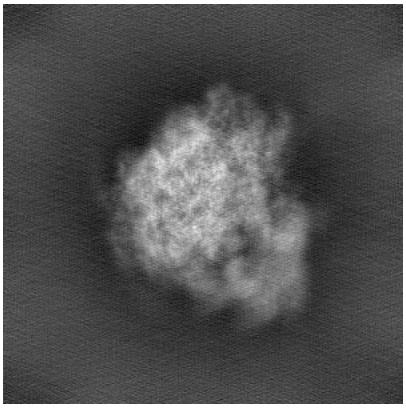


Z

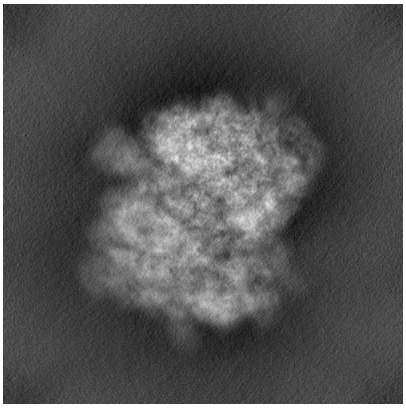
6.1.2 Raw map



X



Y

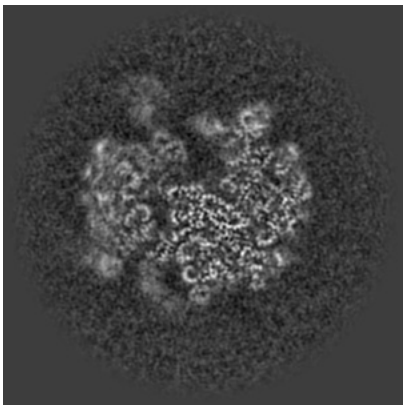


Z

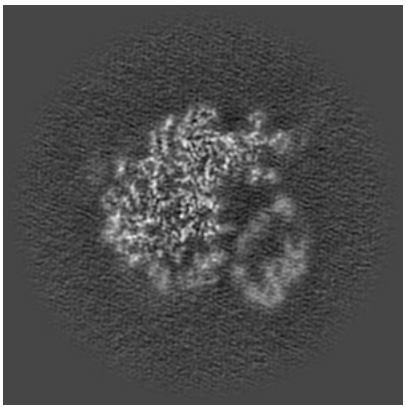
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

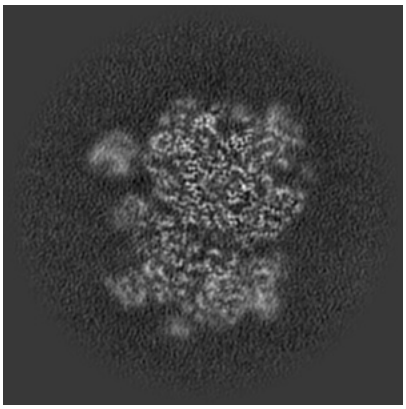
6.2.1 Primary map



X Index: 200

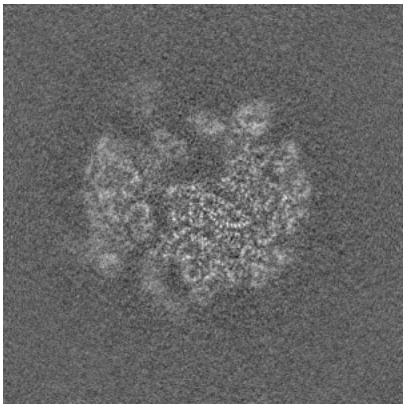


Y Index: 200

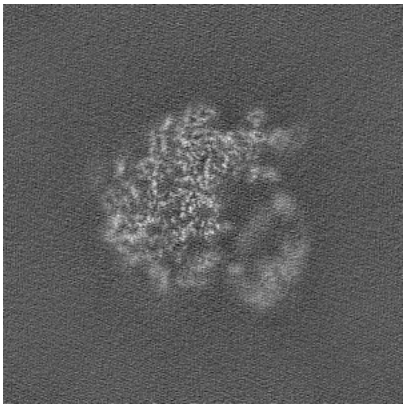


Z Index: 200

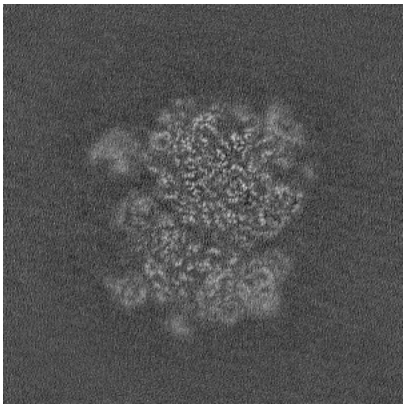
6.2.2 Raw map



X Index: 200



Y Index: 200

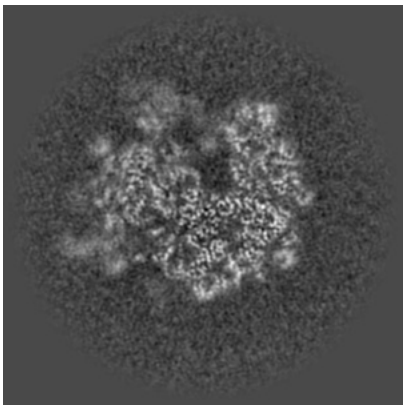


Z Index: 200

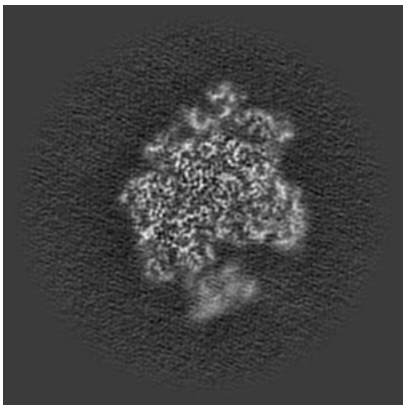
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

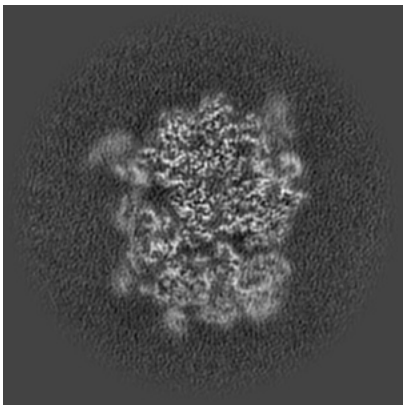
6.3.1 Primary map



X Index: 186

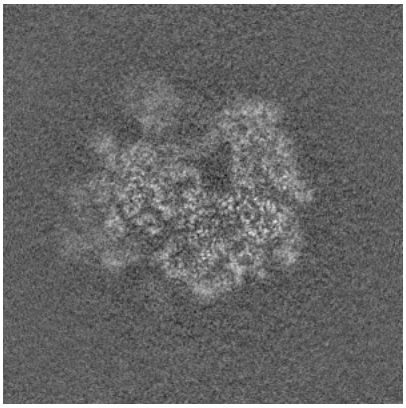


Y Index: 245

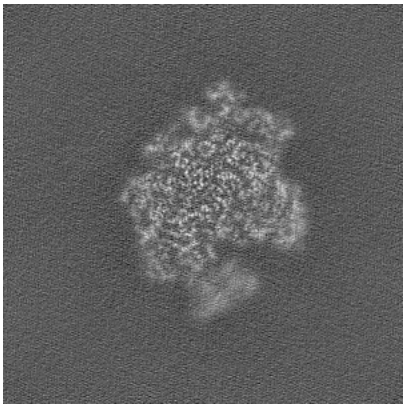


Z Index: 190

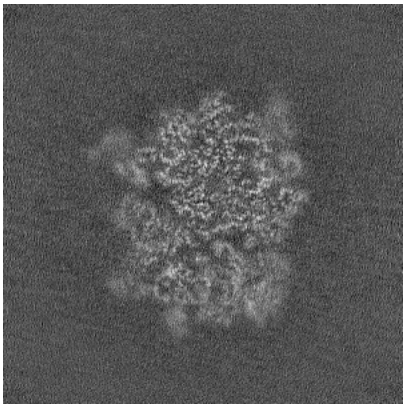
6.3.2 Raw map



X Index: 184



Y Index: 245

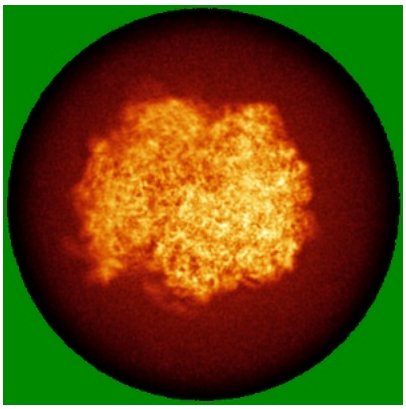


Z Index: 191

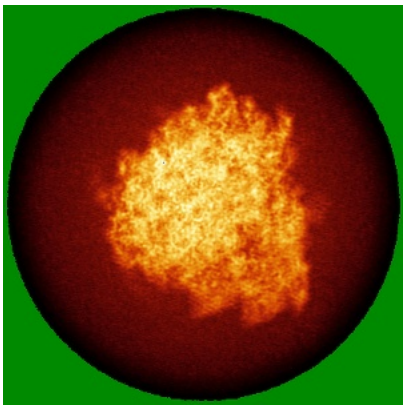
The images above show the largest variance slices of the map in three orthogonal directions.

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

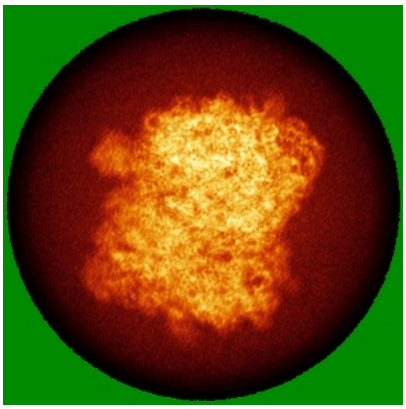
6.4.1 Primary map



X

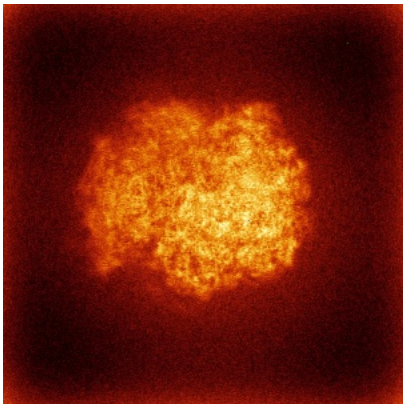


Y

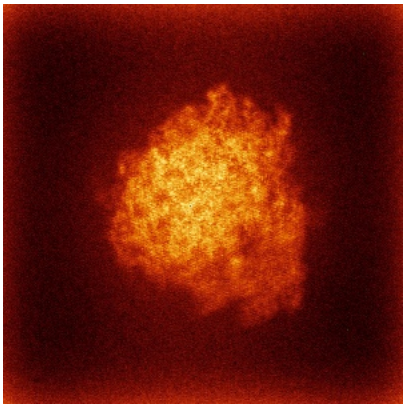


Z

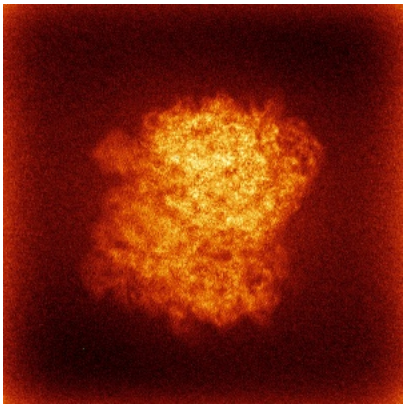
6.4.2 Raw map



X



Y

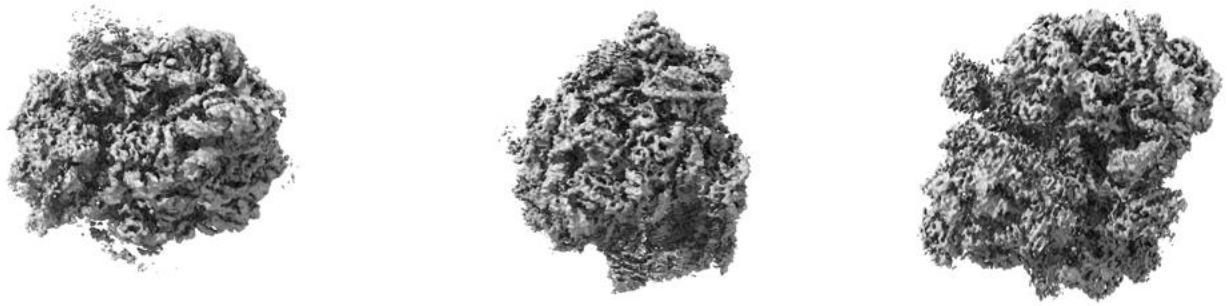


Z

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

6.5 Orthogonal surface views (i)

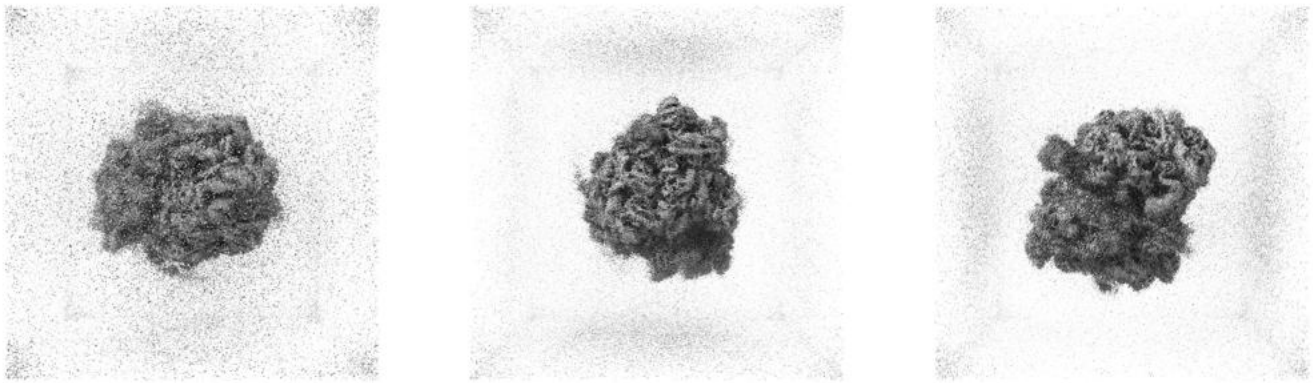
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.3. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

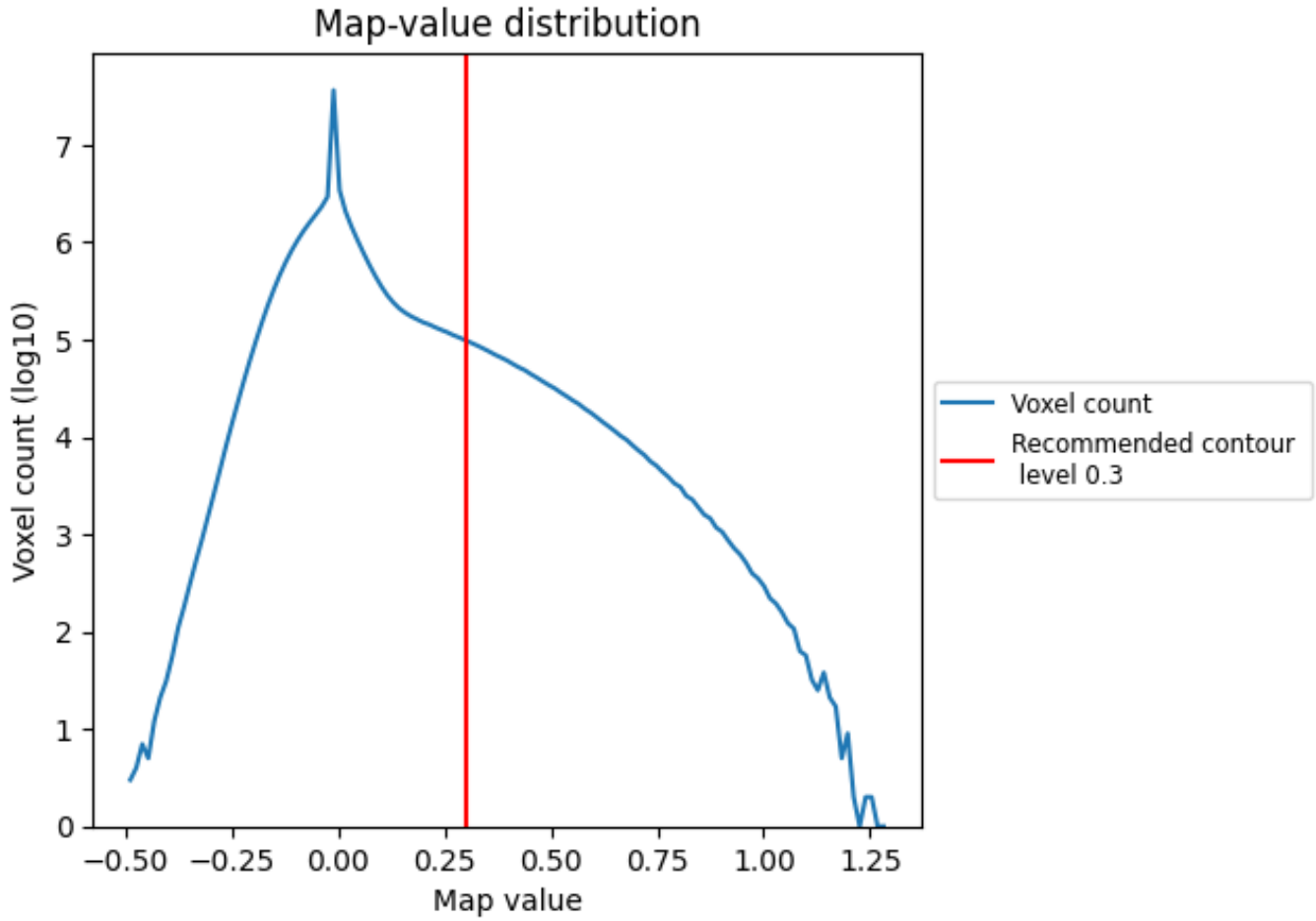
6.6 Mask visualisation (i)

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

7 Map analysis

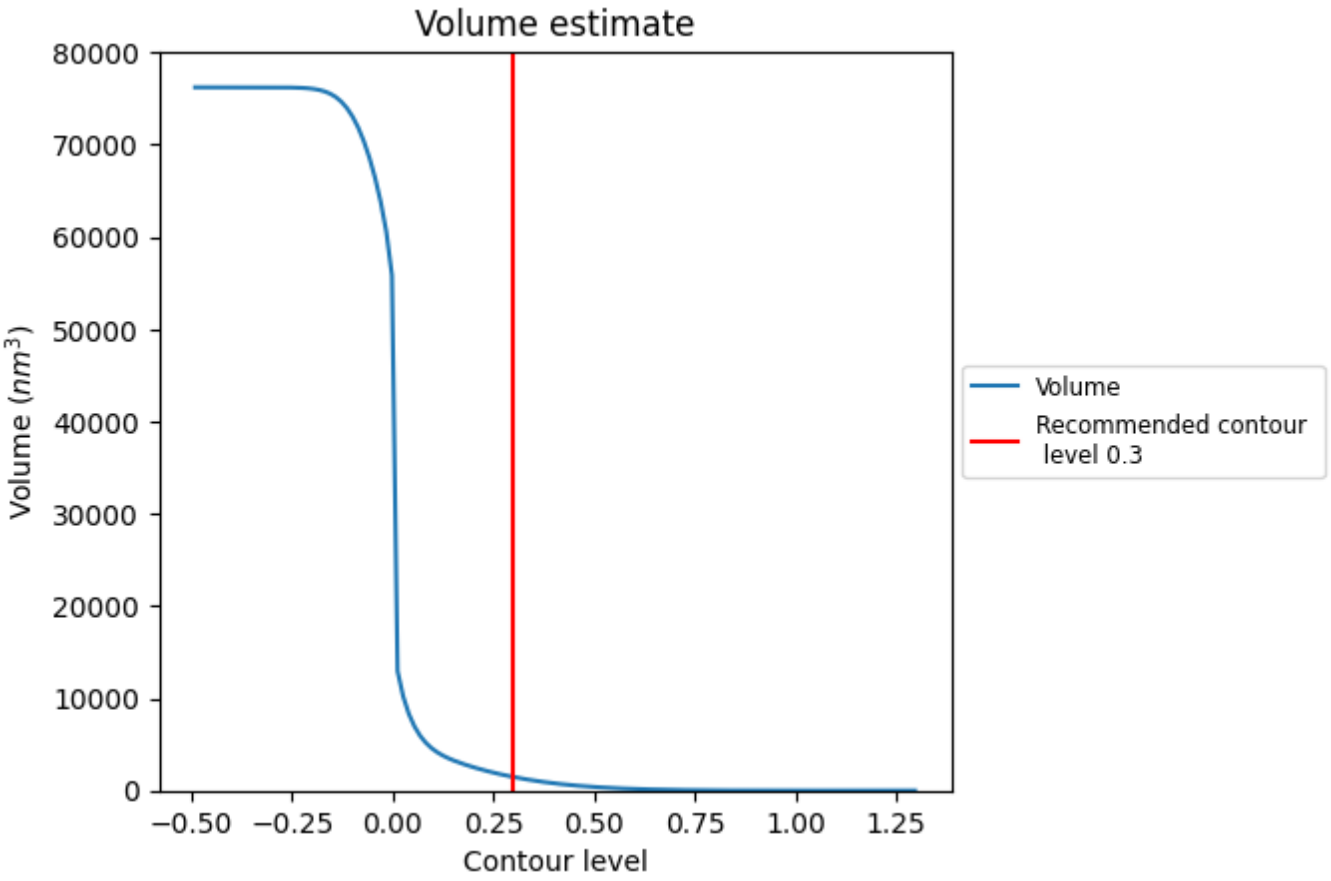
This section contains the results of statistical analysis of the map.

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.

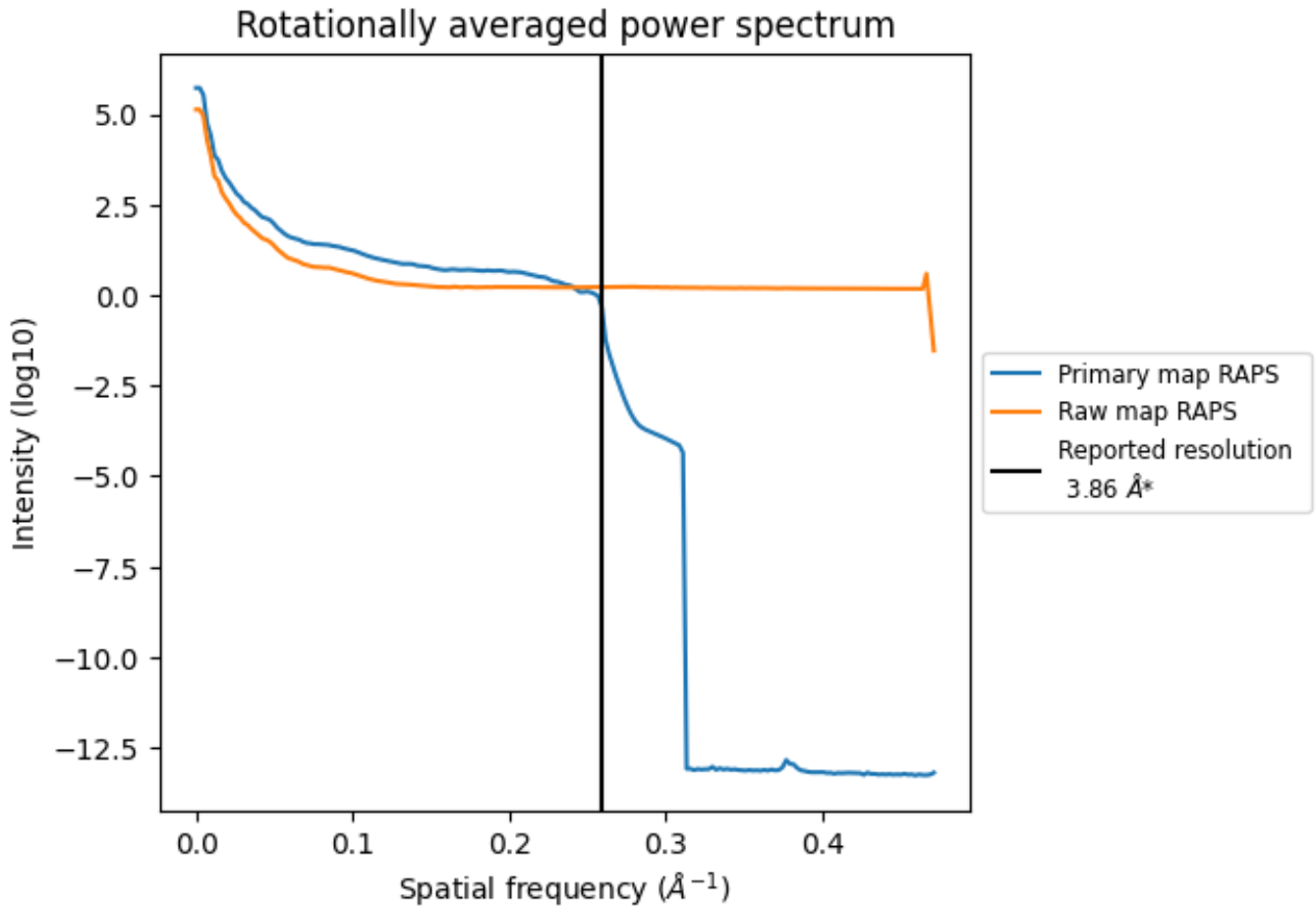
7.2 Volume estimate (i)



The volume at the recommended contour level is 1472 nm^3; this corresponds to an approximate mass of 1329 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)

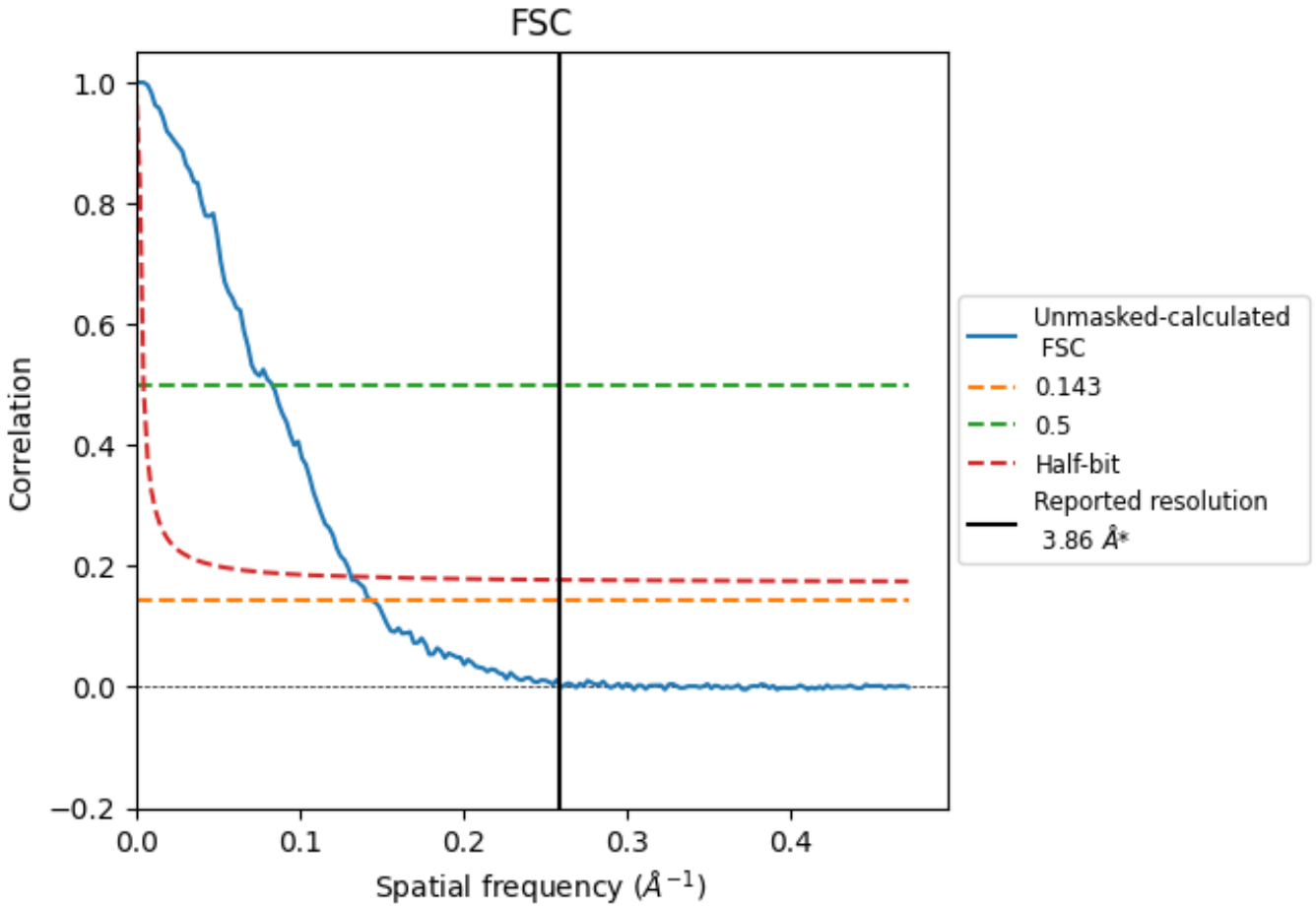


*Reported resolution corresponds to spatial frequency of 0.259 $Å^{-1}$

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.259 Å^{-1}

8.2 Resolution estimates (i)

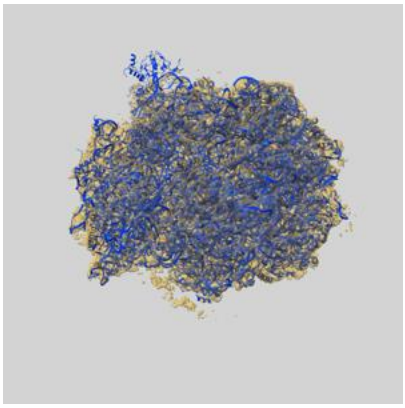
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.86	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	6.94	12.05	7.61

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 6.94 differs from the reported value 3.86 by more than 10 %

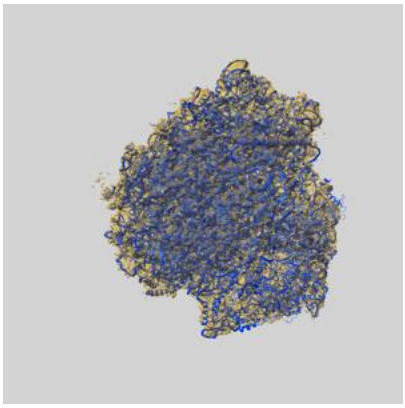
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-40999 and PDB model 8T3C. Per-residue inclusion information can be found in section 3 on page 21.

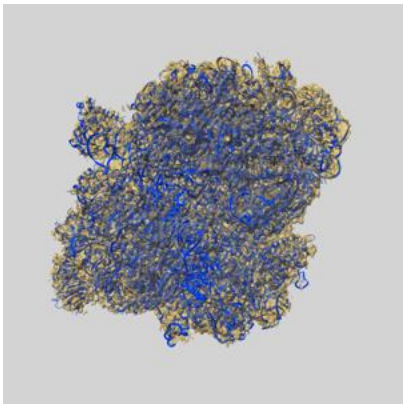
9.1 Map-model overlay



X



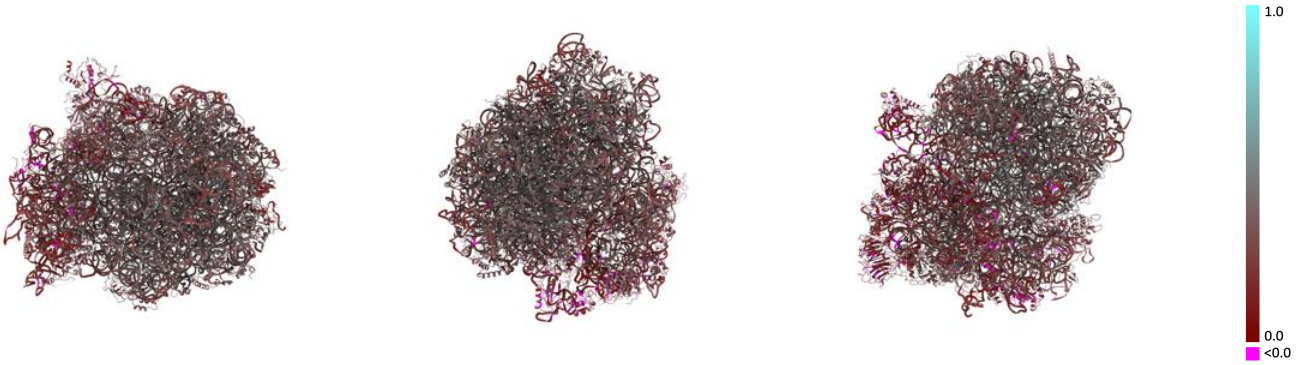
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.3 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.

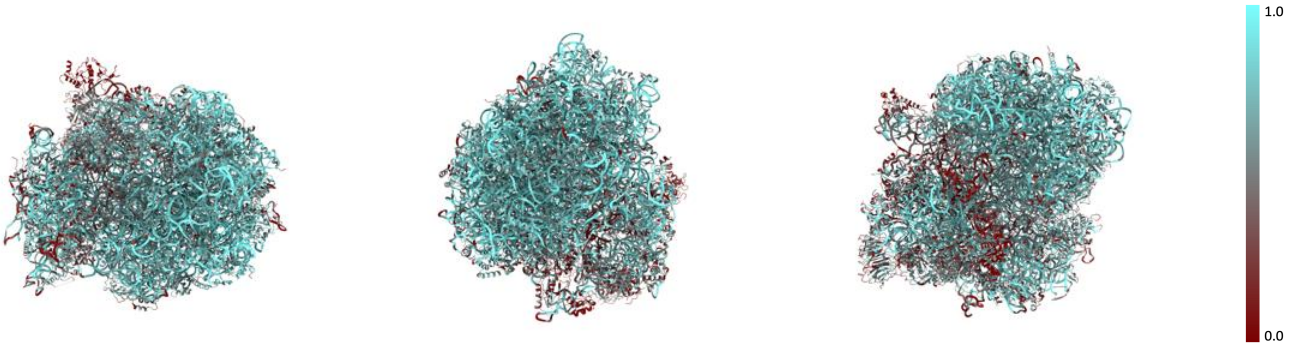
9.2 Q-score mapped to coordinate model (i)



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.

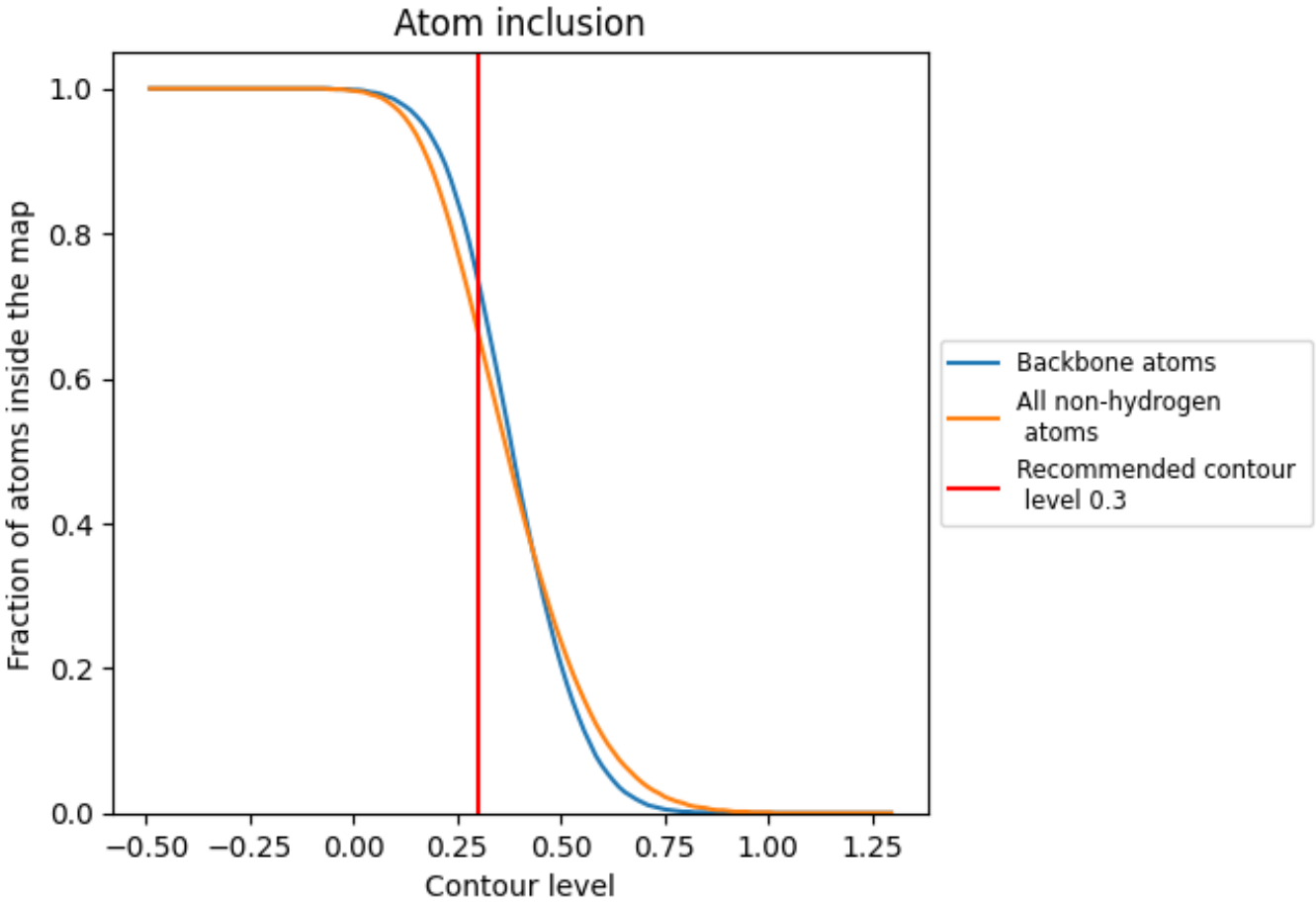
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.3).

9.4 Atom inclusion (i)



At the recommended contour level, 74% of all backbone atoms, 66% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.3) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6650	0.3250
A1	0.8290	0.3610
A3	0.9120	0.3390
A4	0.8720	0.3810
AA	0.4920	0.4130
AB	0.6320	0.3830
AC	0.6570	0.3940
AD	0.6360	0.3140
AE	0.6810	0.3440
AF	0.7170	0.3920
AG	0.6230	0.3600
AH	0.6010	0.3560
AI	0.5460	0.3490
AJ	0.4580	0.2970
AL	0.6780	0.3810
AM	0.6620	0.3510
AN	0.6320	0.4000
AO	0.6370	0.3870
AP	0.6650	0.3920
AQ	0.5790	0.3920
AR	0.5600	0.3470
AS	0.7060	0.3910
AT	0.5940	0.3790
AU	0.6390	0.3370
AV	0.4540	0.3960
AW	0.6020	0.3770
AX	0.6130	0.3870
AY	0.7070	0.3760
AZ	0.6480	0.3580
Aa	0.6330	0.4020
Ab	0.5330	0.3680
Ac	0.4910	0.3710
Ad	0.6520	0.3830
Ae	0.6340	0.4080
Af	0.6860	0.4140

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Chain	Atom inclusion	Q-score
Ag	0.5790	0.3910
Ah	0.6940	0.3590
Ai	0.6280	0.3430
Aj	0.6960	0.4130
Ak	0.3970	0.3410
Al	0.6050	0.4030
Am	0.5960	0.4180
An	0.4810	0.3490
Ao	0.3780	0.3700
Ap	0.4890	0.3900
B5	0.7380	0.2840
BA	0.5300	0.3020
BB	0.3510	0.2720
BC	0.5680	0.3360
BD	0.4040	0.2640
BE	0.4400	0.2490
BF	0.3010	0.2590
BG	0.5200	0.2470
BH	0.4260	0.2950
BI	0.4670	0.2980
BJ	0.5240	0.2150
BK	0.4170	0.2280
BL	0.4270	0.3190
BM	0.0100	0.1990
BN	0.4240	0.3220
BO	0.3290	0.2990
BP	0.2300	0.2150
BQ	0.3980	0.2400
BR	0.4000	0.2780
BS	0.3710	0.2180
BT	0.4480	0.1910
BU	0.3740	0.2450
BV	0.5440	0.3130
BW	0.5610	0.3420
BX	0.3910	0.3460
BY	0.4560	0.1910
BZ	0.4150	0.2390
Ba	0.3790	0.3510
Bb	0.3540	0.3200
Bc	0.2580	0.2420
Bd	0.6290	0.2860
Be	0.3770	0.2710

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Chain	Atom inclusion	Q-score
Bf	0.0170	0.1870
Bg	0.4520	0.1890
DC	0.4780	0.2840
E	0.2830	0.1420
EC	0.3220	0.1580