Full wwPDB EM Validation Report

Mar 8, 2026 – 01:08 PM UTC

PDB ID	:	8T3D / pdb_00008t3d
EMDB ID	:	EMD-41000
Title	:	Hypomethylated yeast 80S bound with Taura syndrome virus (TSV) internal ribosome entry site (IRES), eEF2, GDP, and sordarin, Structure III
Authors	:	Zhao, Y.; Li, H.
Deposited on	:	2023-06-07
Resolution	:	2.95 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:

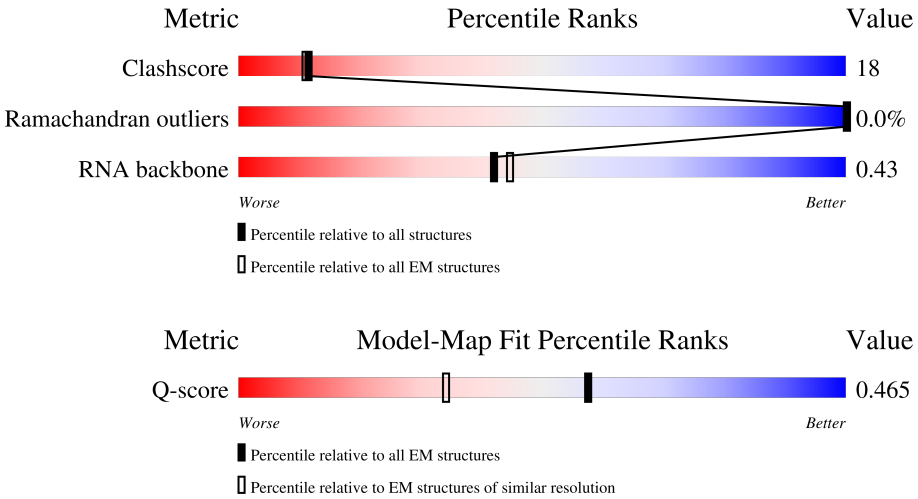
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data 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 2.95 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	-
RNA backbone	8273	3508	-
Q-score	-	25397	13114 (2.45 - 3.45)

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	9% 41% 40% 18%
2	BB	255	24% 35% 49% 16%
3	BC	254	51% 34% 15%
4	BE	261	9% 54% 46%

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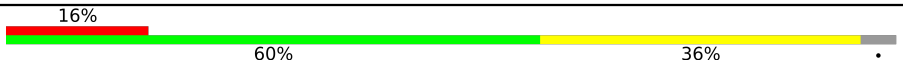
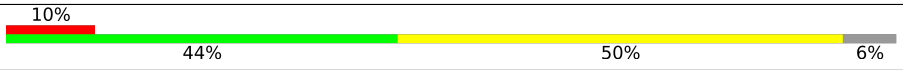
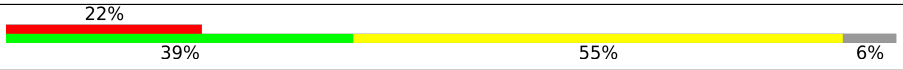
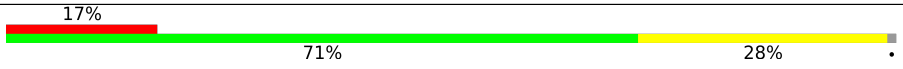
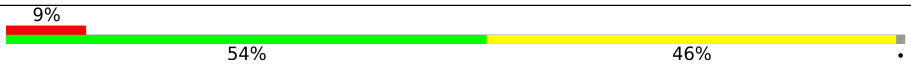
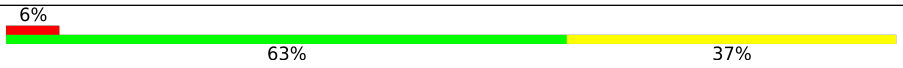
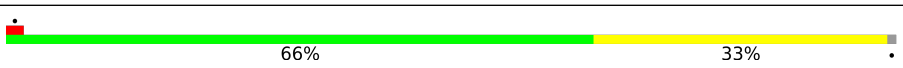
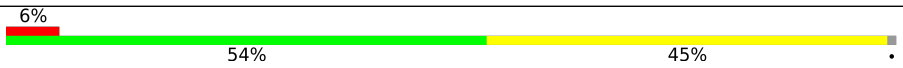
Mol	Chain	Length	Quality of chain
5	BG	236	
6	BH	190	
7	BI	200	
8	BJ	197	
9	BL	156	
10	BN	151	
11	BO	137	
12	BV	87	
13	BW	130	
14	BX	145	
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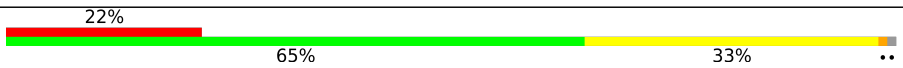
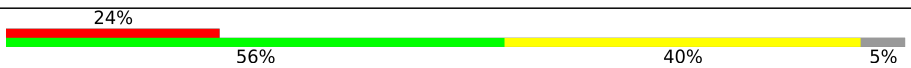
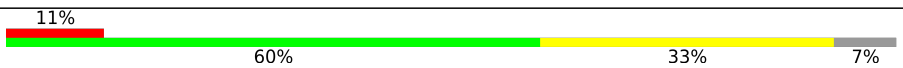
16	Ba	119	
17	Bb	82	
18	Be	63	
19	BD	240	
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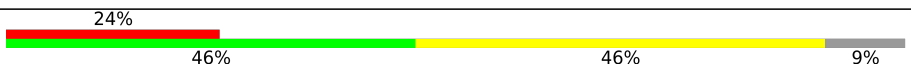
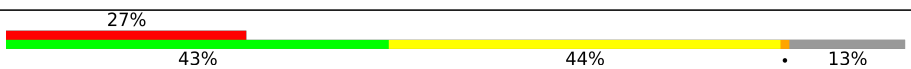
21	BK	105	
22	BP	142	
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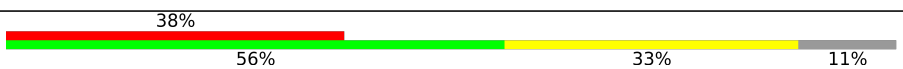
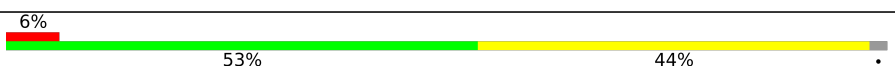
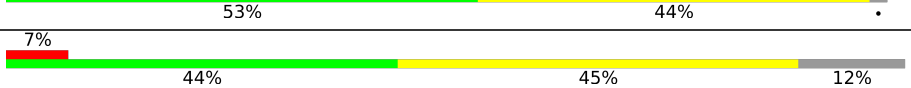
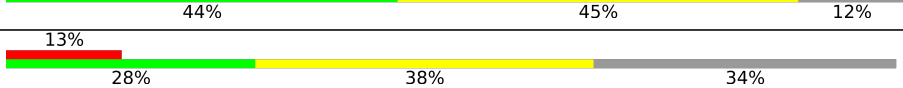
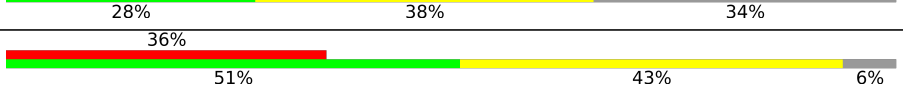
24	BR	136	
25	BS	146	
26	BT	144	
27	BU	121	
28	BZ	108	
29	Bc	67	

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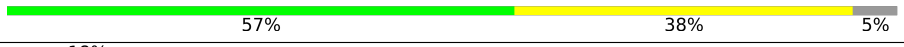
Mol	Chain	Length	Quality of chain
30	Bd	56	
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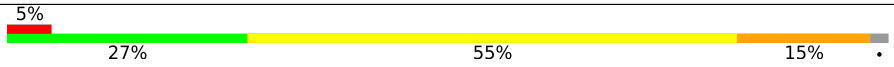
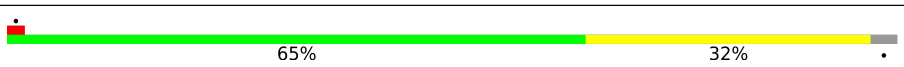
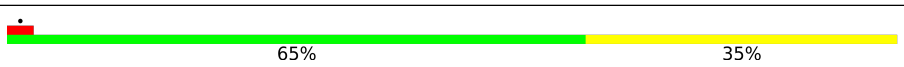
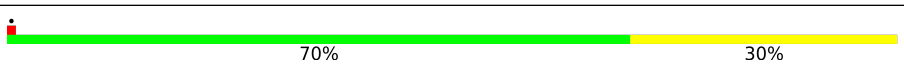
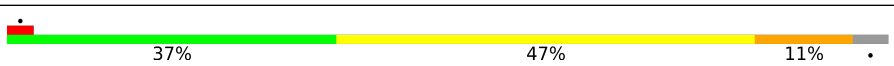
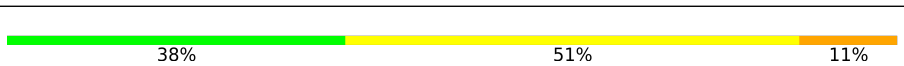
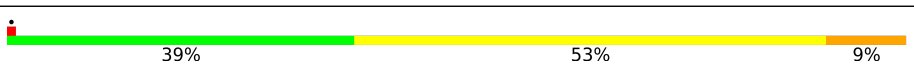
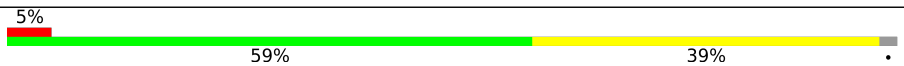
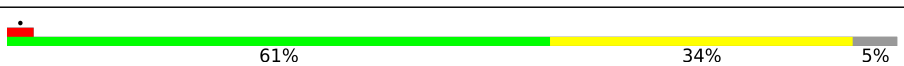
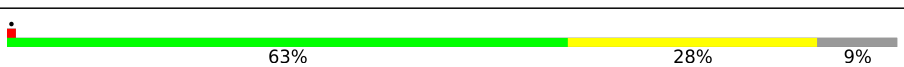
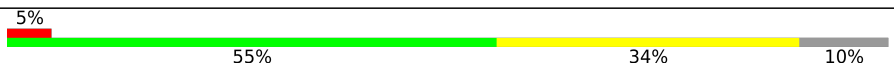
32	Bf	152	
33	BM	143	
34	B5	1798	
35	AA	254	
36	AB	387	
37	AC	362	
38	A1	3360	
39	A3	121	
40	A4	158	
41	AD	297	
42	AE	176	
43	AF	244	
44	AG	256	
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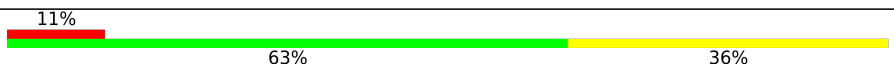
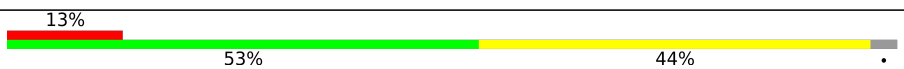
46	AI	222	
47	AJ	174	
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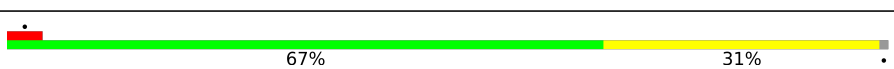
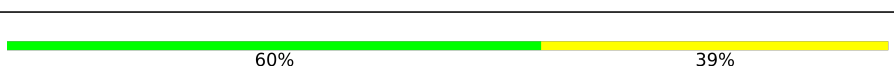
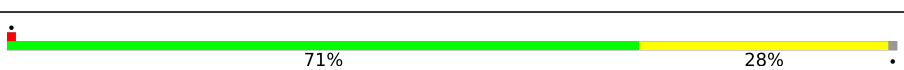
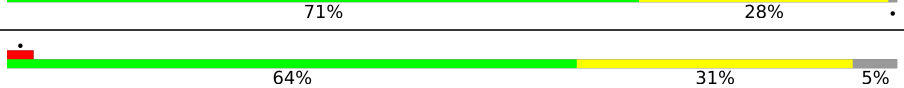
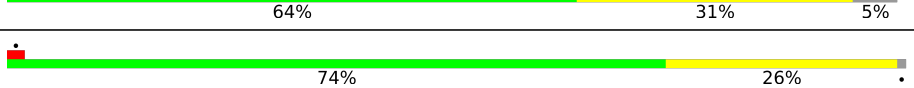
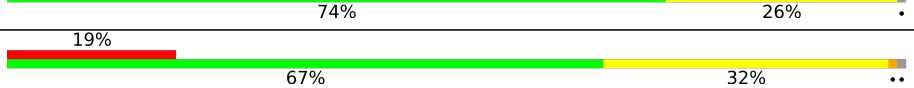
49	AM	138	
50	AN	204	
51	AO	199	
52	AP	184	
53	AQ	186	
54	AR	189	

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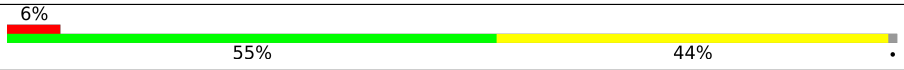
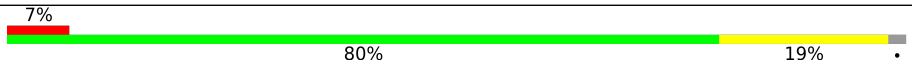
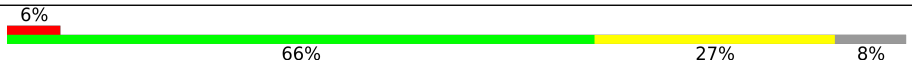
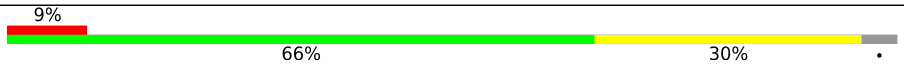
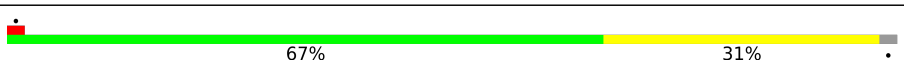
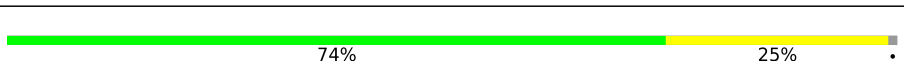
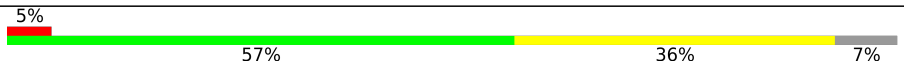
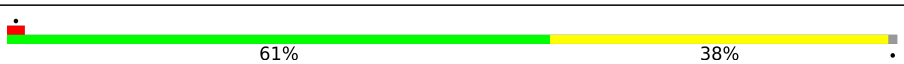
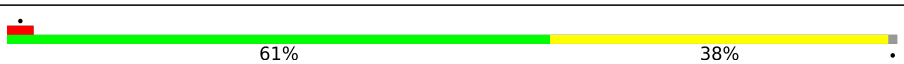
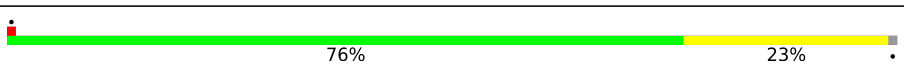
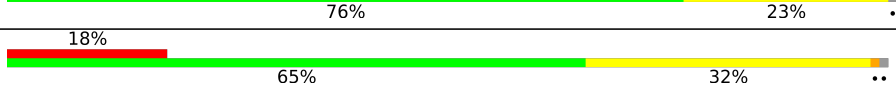
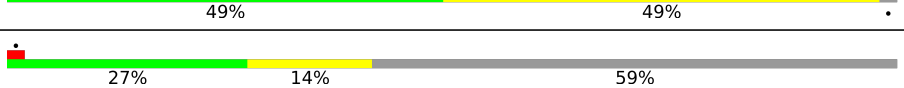
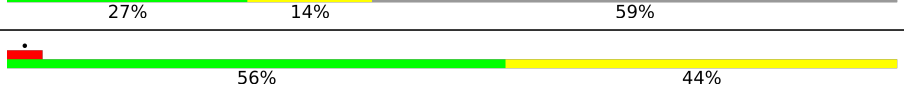
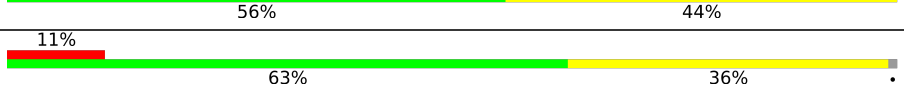
Mol	Chain	Length	Quality of chain
55	AS	178	
56	AT	160	
57	AU	121	
58	AV	137	
59	AW	155	
60	AX	142	
61	AY	127	
62	AZ	136	
63	Aa	149	
64	Ab	59	
65	Ac	105	
66	Ad	113	
67	Ae	130	
68	Af	107	
69	Ag	121	
70	Ah	120	
71	Ai	100	
72	Aj	88	
73	Ak	78	
74	Al	51	
75	Am	128	
76	An	25	
77	Ao	106	
78	Ap	92	
79	E	217	

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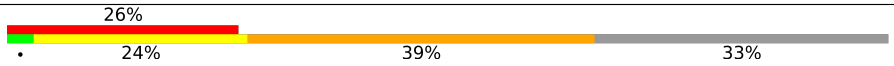
Mol	Chain	Length	Quality of chain
80	DC	842	
81	EC	202	

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
38	PSU	A1	2264	-	-	X	-
83	GDP	DC	901	-	-	X	-
85	SO1	DC	903	X	-	-	-

2 Entry composition

There are 85 unique types of molecules in this entry. The entry contains 211084 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	136	Total	C	N	O	P	0	0
			2870	1282	508	944	136		

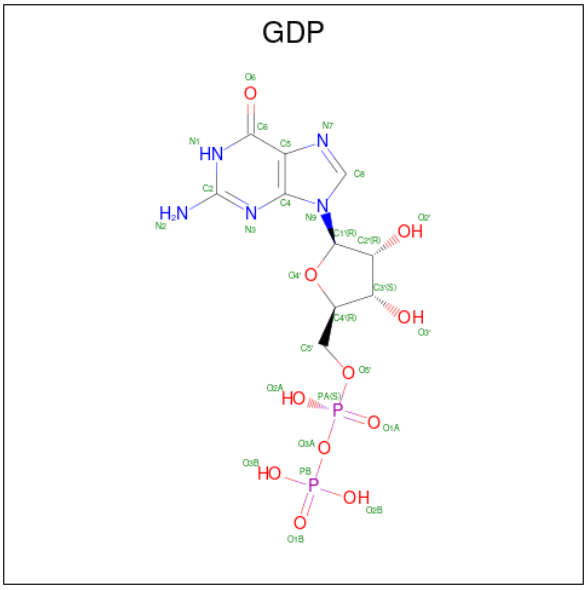
There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
EC	6940	U	G	conflict	GB 14780876
EC	6942	A	C	conflict	GB 14780876

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

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

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

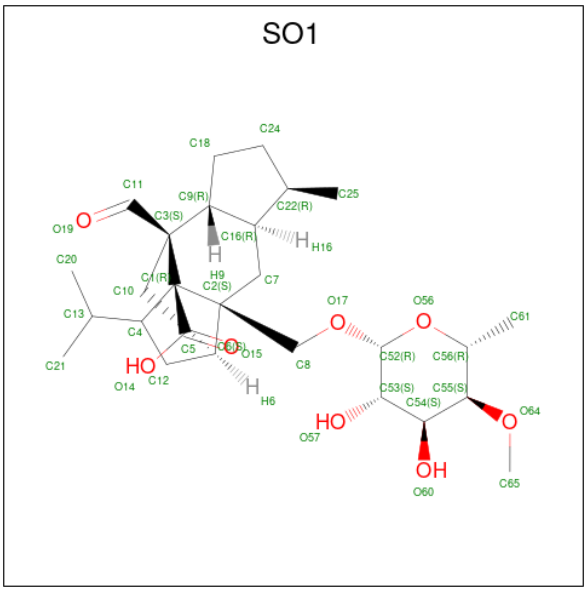


Mol	Chain	Residues	Atoms	AltConf
83	DC	1	Total C N O P 28 10 5 11 2	0

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

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

- 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: $C_{27}H_{42}O_8$).



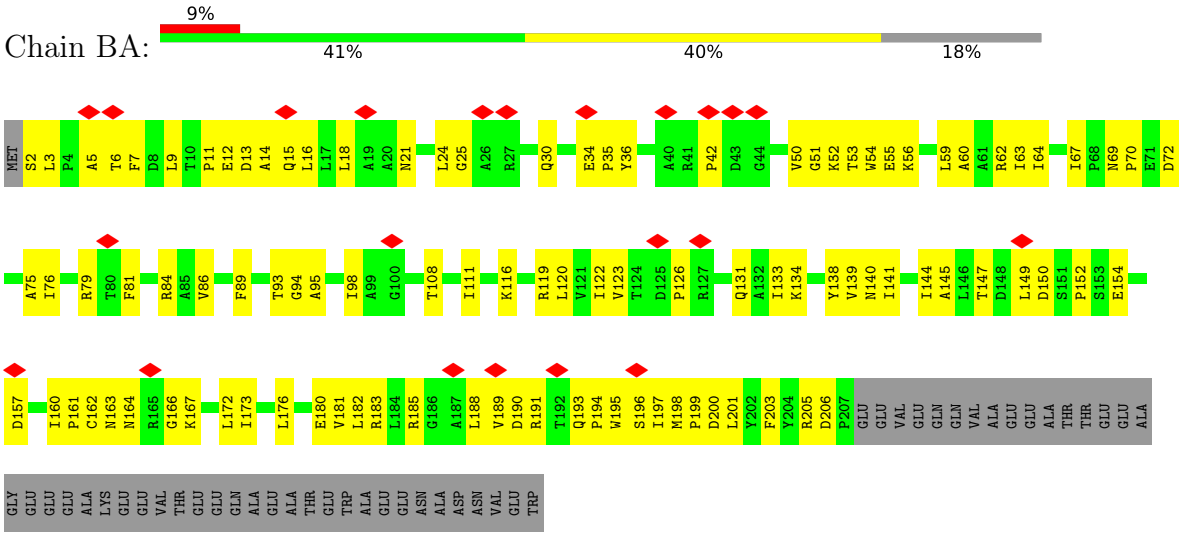
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
85	DC	1	35	27	8	0

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.

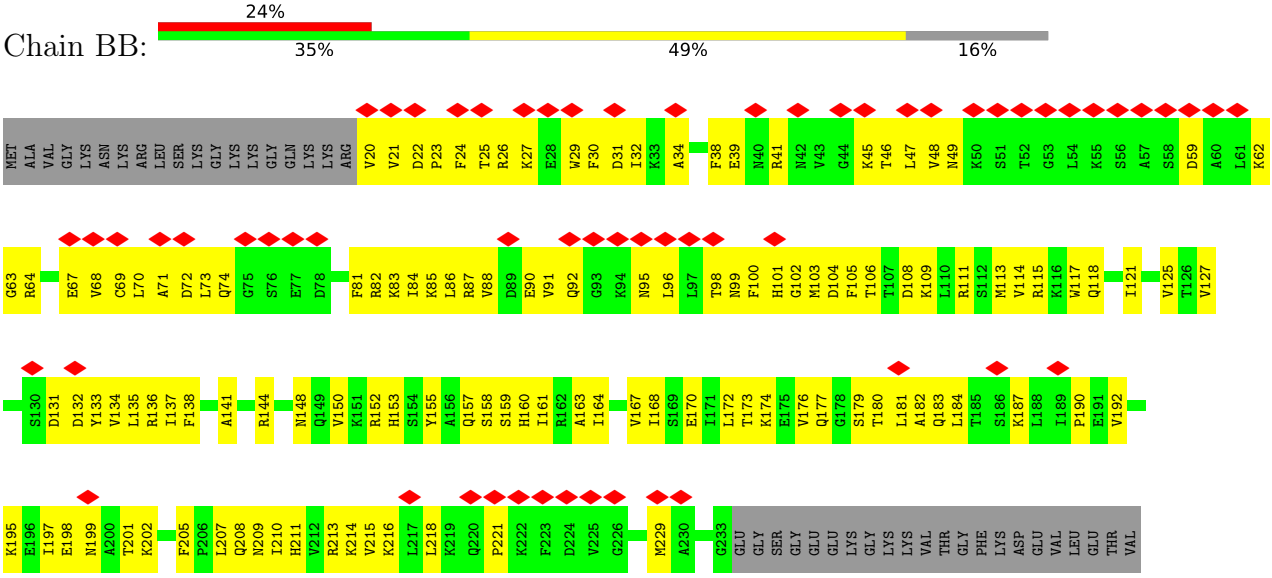
• Molecule 1: 40S ribosomal protein S0-A

Chain BA:



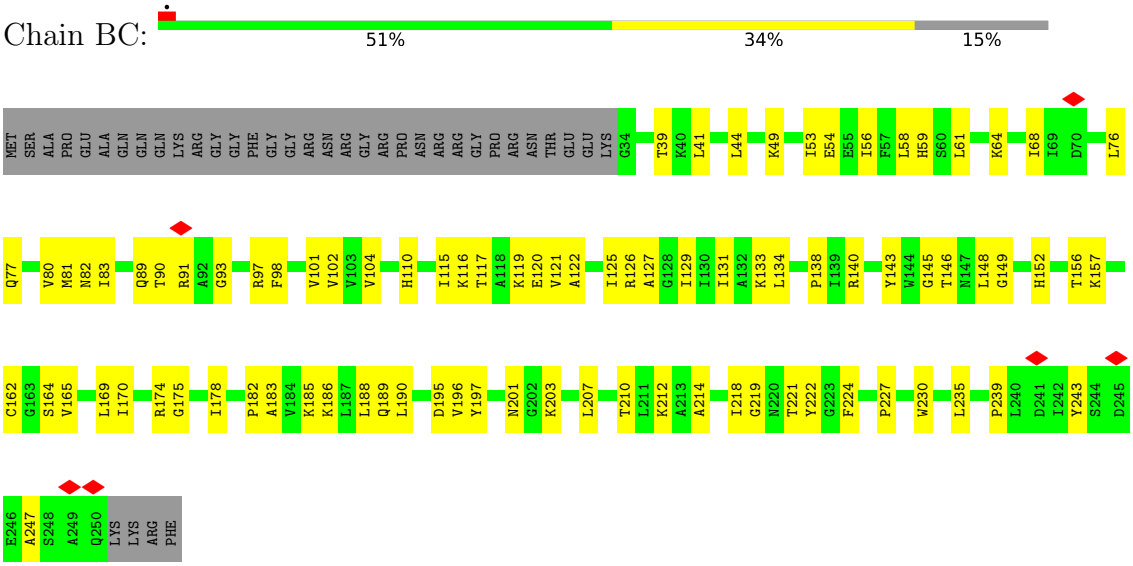
• Molecule 2: RPS1A isoform 1

Chain BB:



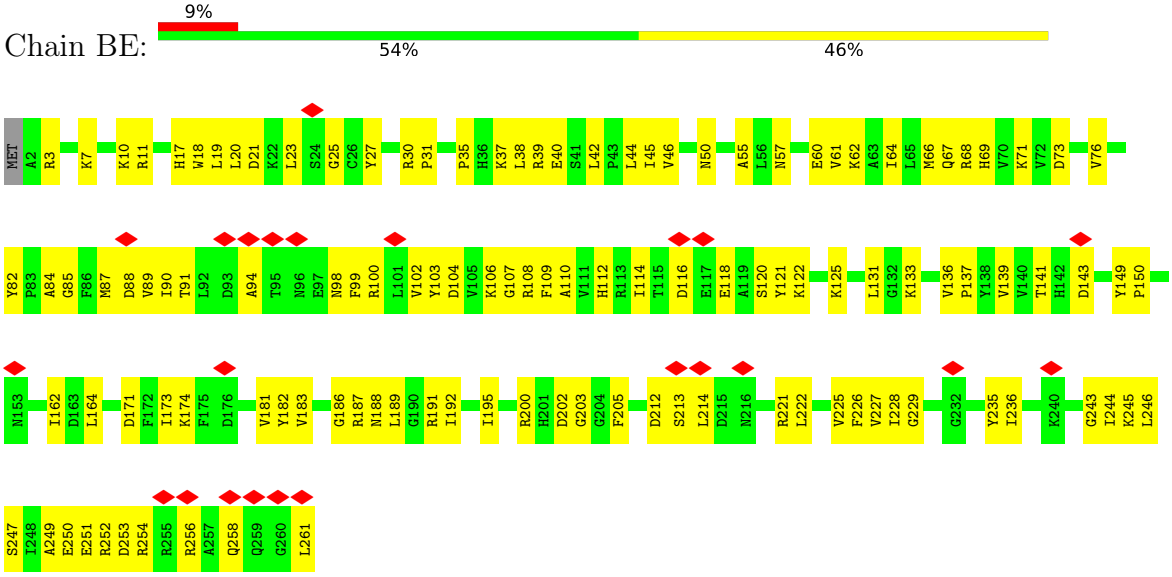
• Molecule 3: RPS2 isoform 1

Chain BC:



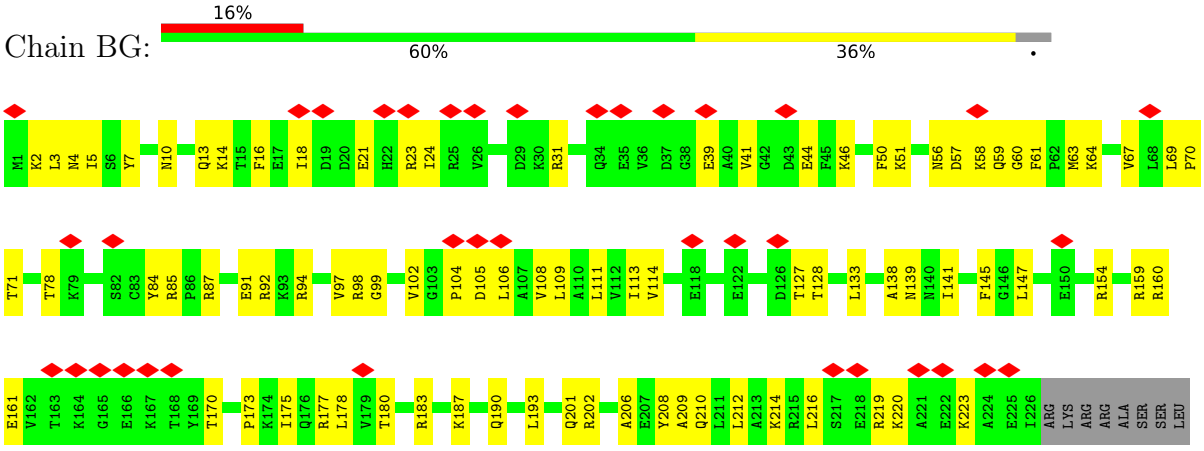
• Molecule 4: 40S ribosomal protein S4-A

Chain BE:



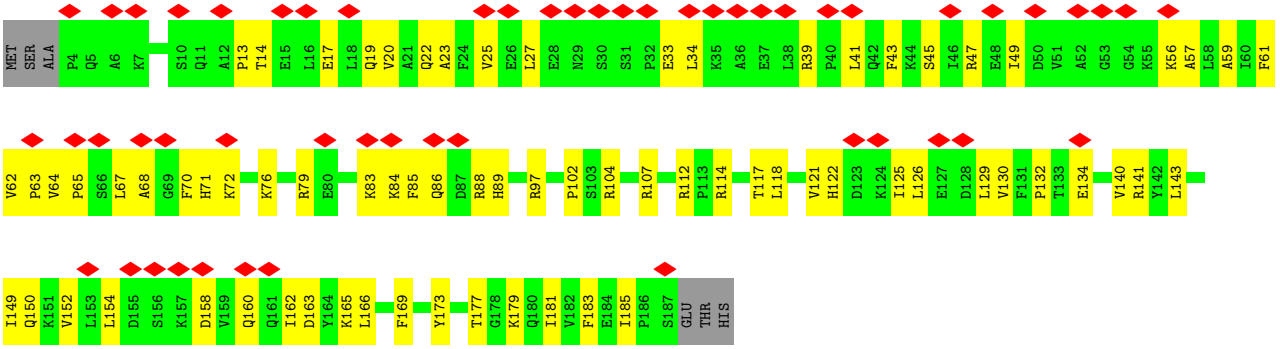
• Molecule 5: 40S ribosomal protein S6-A

Chain BG:



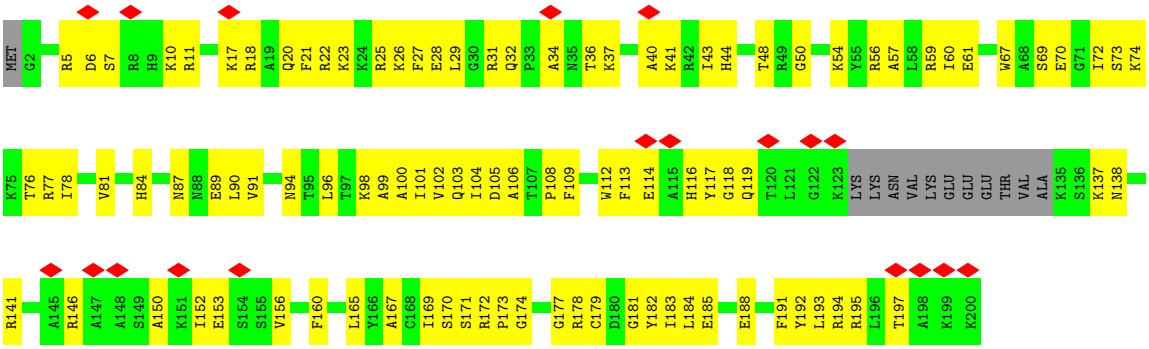
• Molecule 6: 40S ribosomal protein S7-A

Chain BH:



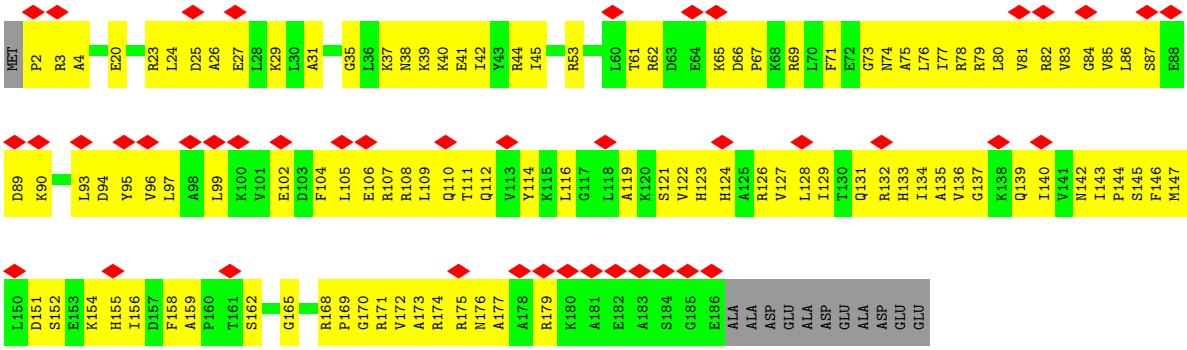
• Molecule 7: 40S ribosomal protein S8-A

Chain BI:



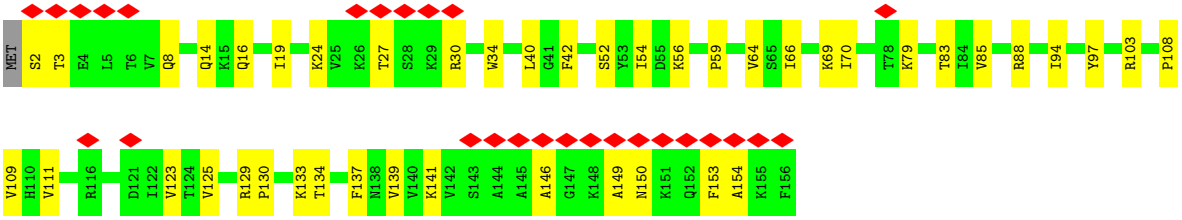
• Molecule 8: 40S ribosomal protein S9-A

Chain BJ:

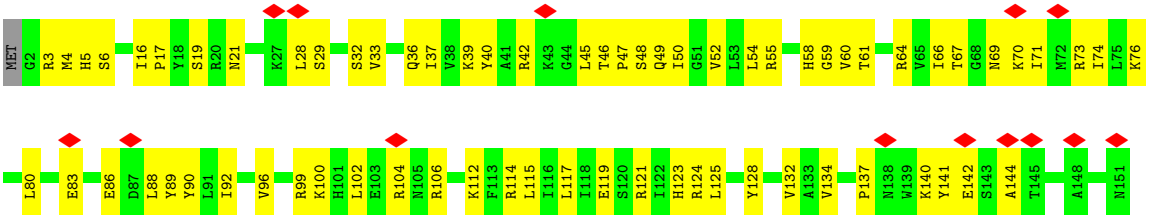


• Molecule 9: 40S ribosomal protein S11-A

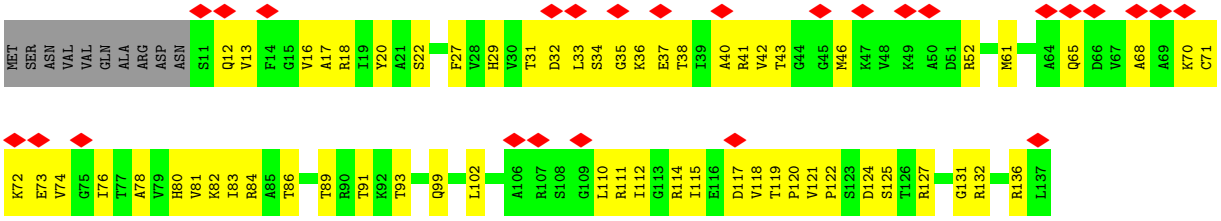
Chain BL:



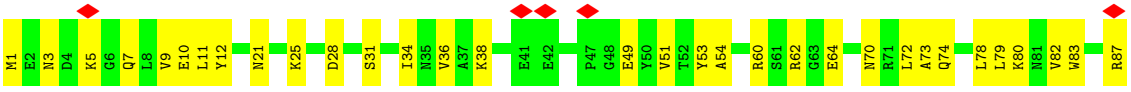
• Molecule 10: 40S ribosomal protein S13



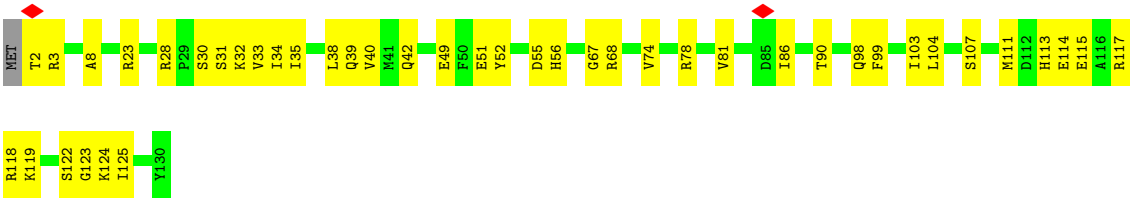
• Molecule 11: 40S ribosomal protein S14-A



• Molecule 12: 40S ribosomal protein S21-A

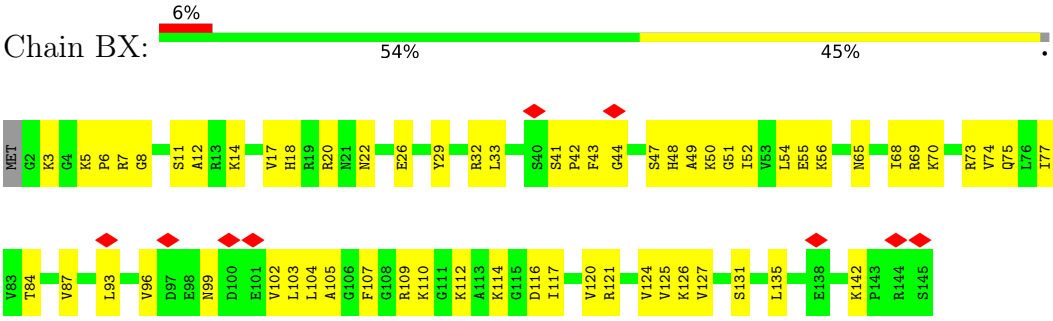


• Molecule 13: RPS22A isoform 1



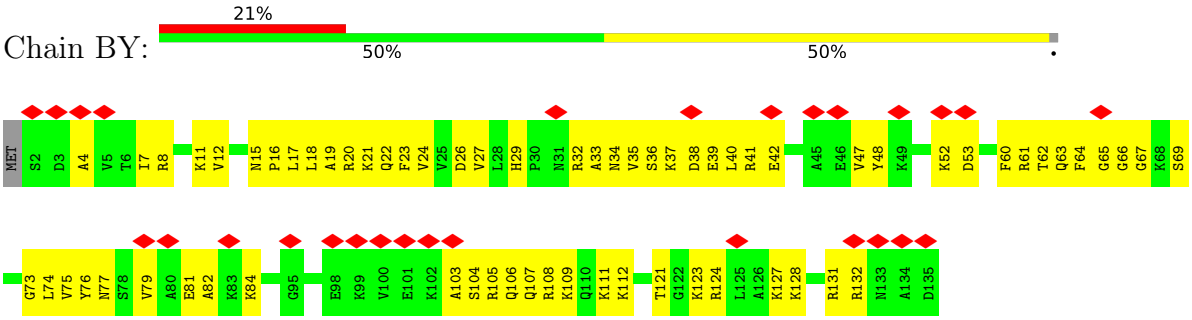
• Molecule 14: 40S ribosomal protein S23-A

Chain BX:



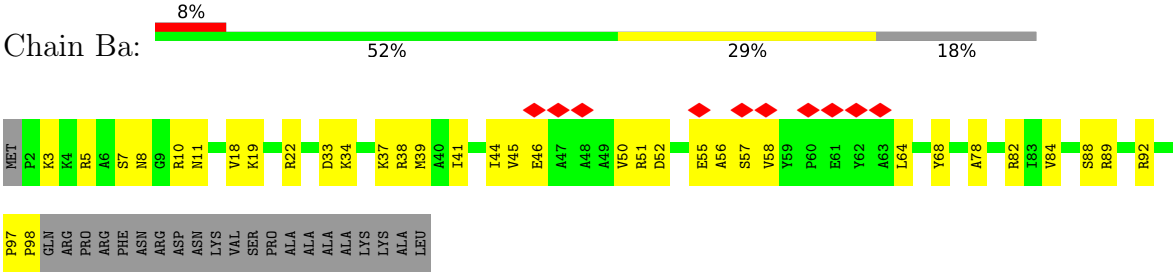
• Molecule 15: 40S ribosomal protein S24-A

Chain BY:



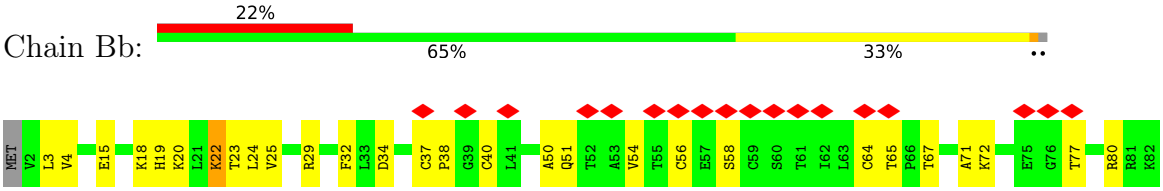
• Molecule 16: RPS26B isoform 1

Chain Ba:



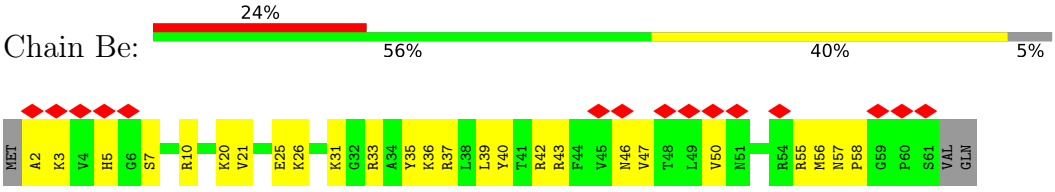
• Molecule 17: 40S ribosomal protein S27-A

Chain Bb:



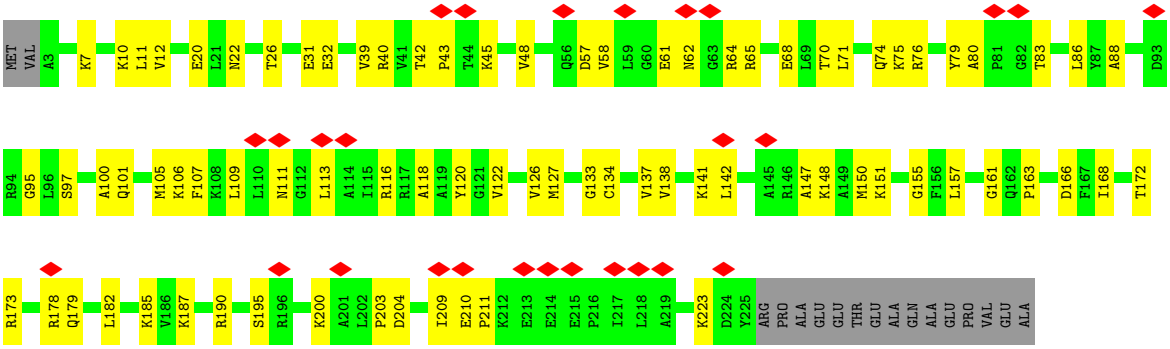
• Molecule 18: 40S ribosomal protein S30-A

Chain Be:



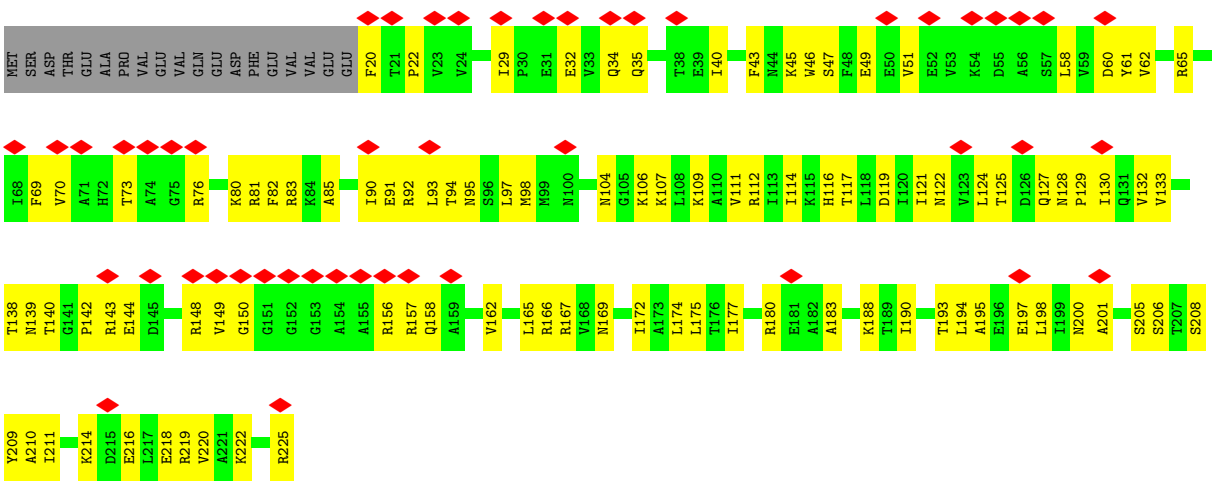
• Molecule 19: RPS3 isoform 1

Chain BD:



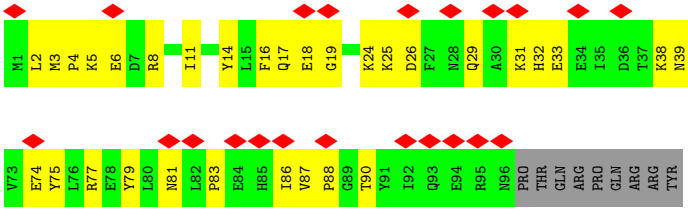
• Molecule 20: Rps5p

Chain BF:



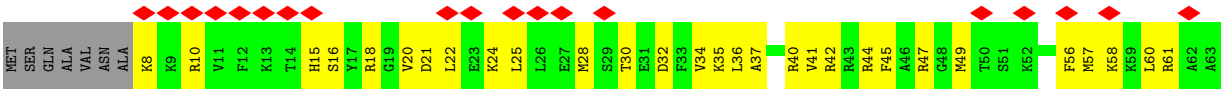
• Molecule 21: 40S ribosomal protein S10-A

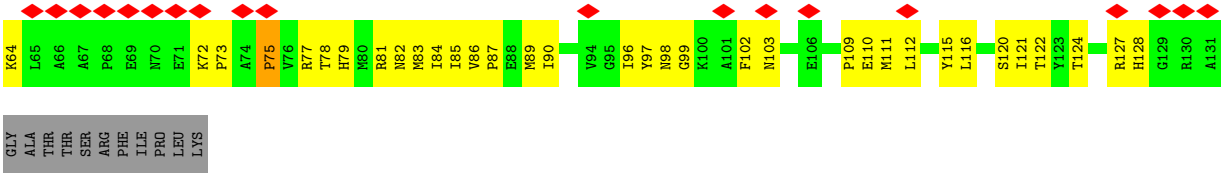
Chain BK:



• Molecule 22: RPS15 isoform 1

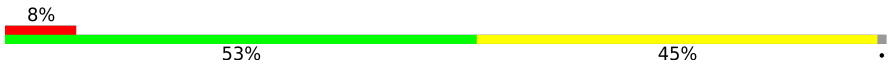
Chain BP:

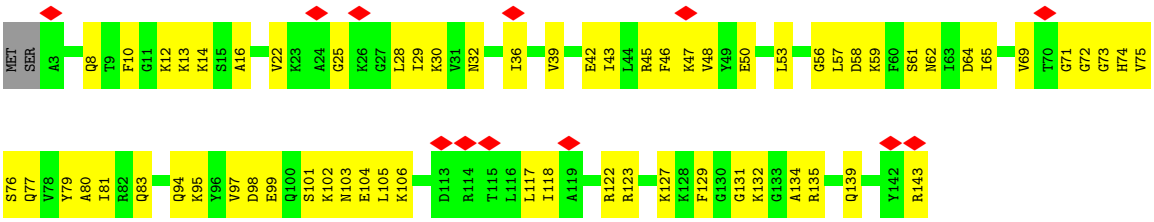




• Molecule 23: 40S ribosomal protein S16-A

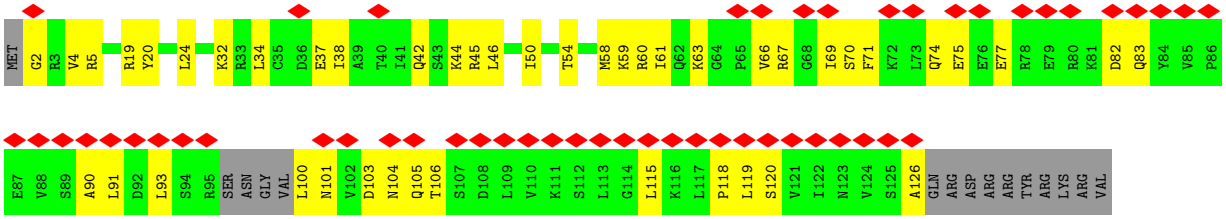
Chain BQ:





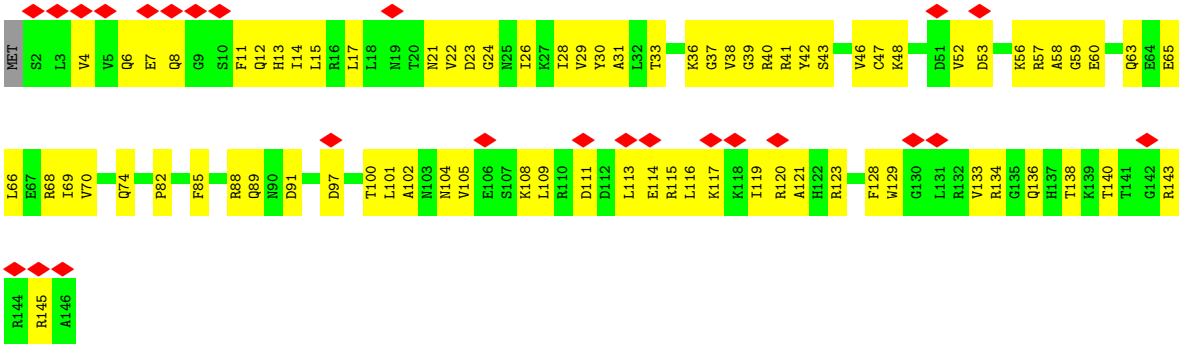
• Molecule 24: 40S ribosomal protein S17-A

Chain BR:



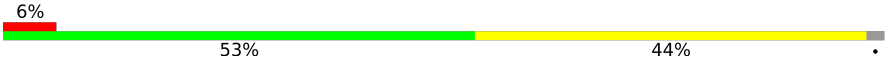
• Molecule 25: 40S ribosomal protein S18-A

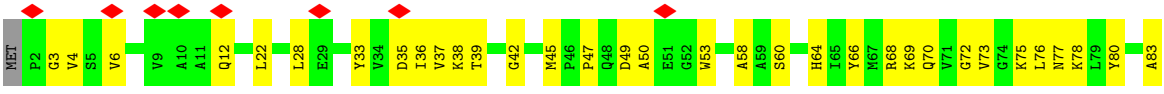
Chain BS:

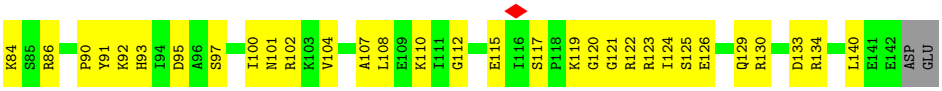


• Molecule 26: 40S ribosomal protein S19-A

Chain BT:

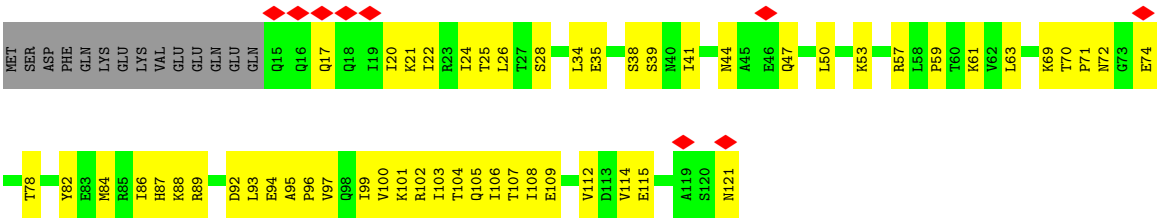






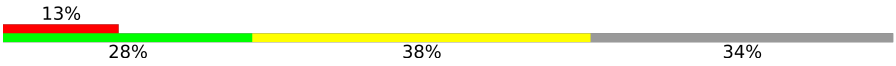
• Molecule 27: RPS20 isoform 1

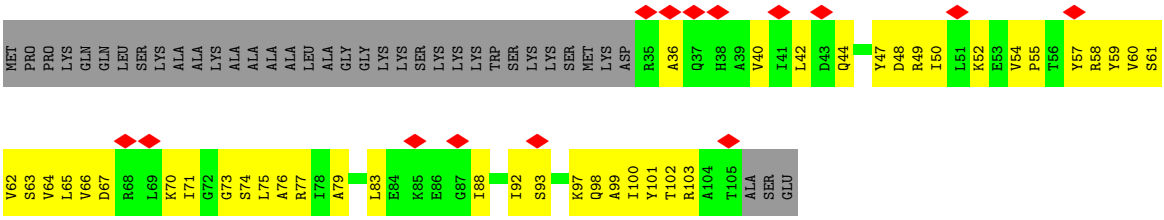
Chain BU:



• Molecule 28: RPS25A isoform 1

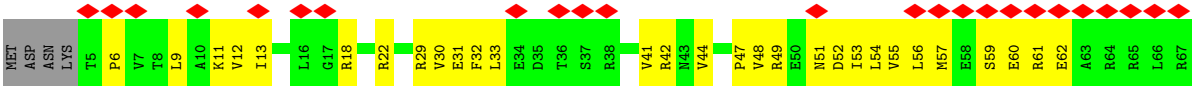
Chain BZ:





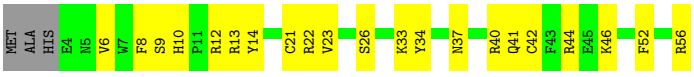
• Molecule 29: RPS28A isoform 1

Chain Bc:



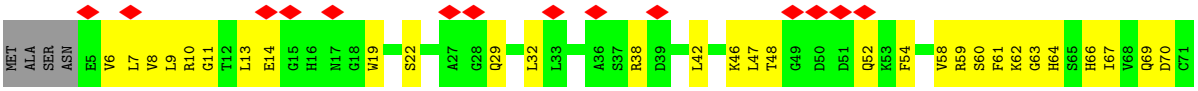
• Molecule 30: RPS29A isoform 1

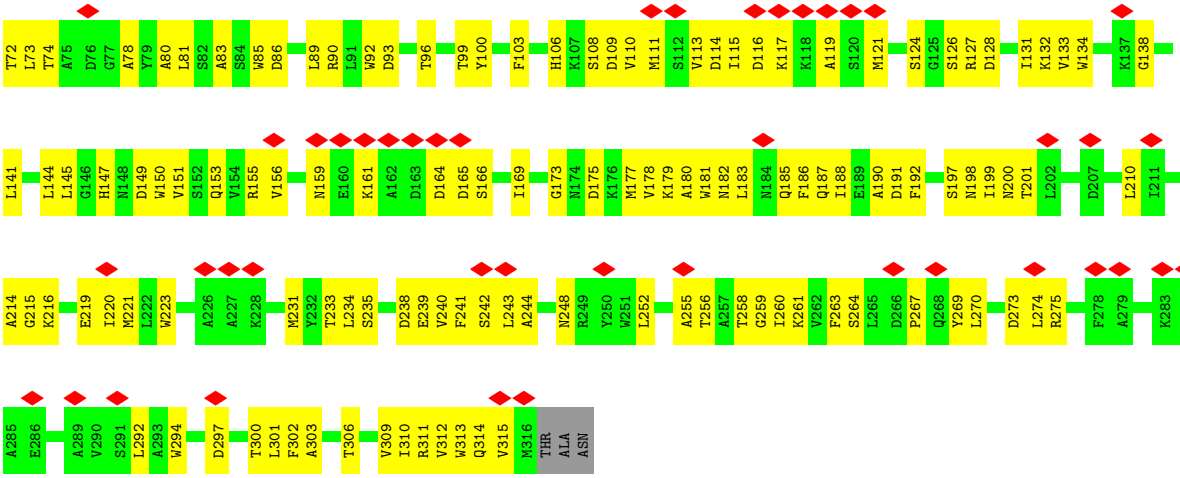
Chain Bd:



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

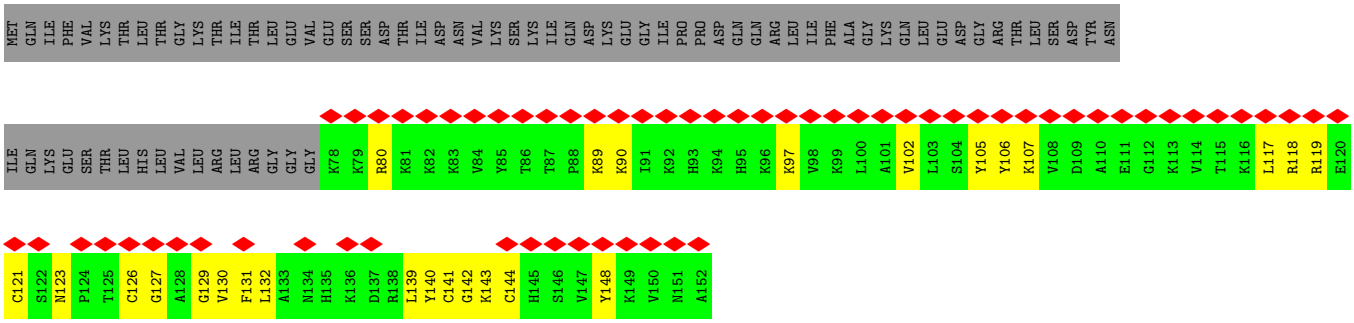
Chain Bg:





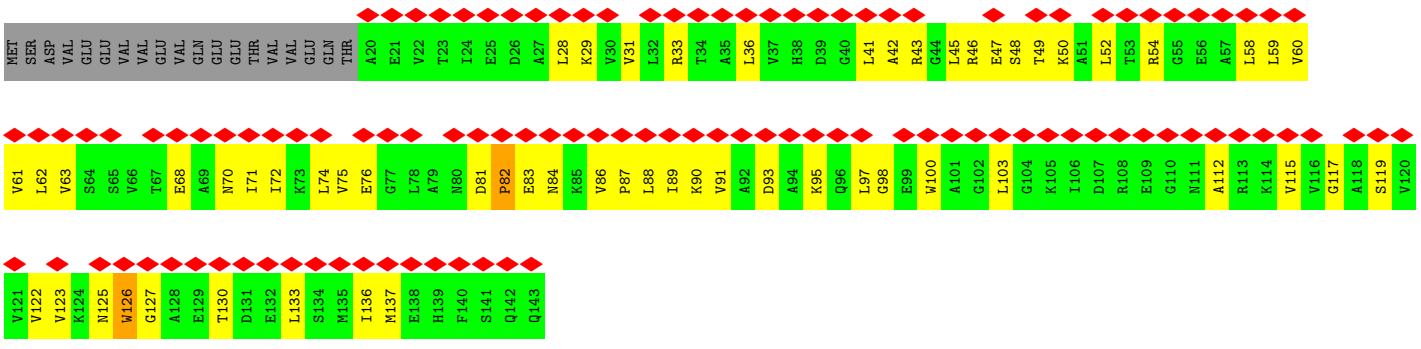
• Molecule 32: Ubiquitin-40S ribosomal protein S31

Chain Bf:



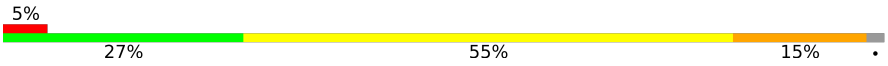
• Molecule 33: 40S ribosomal protein S12

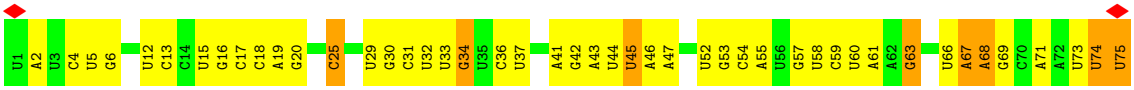
Chain BM:

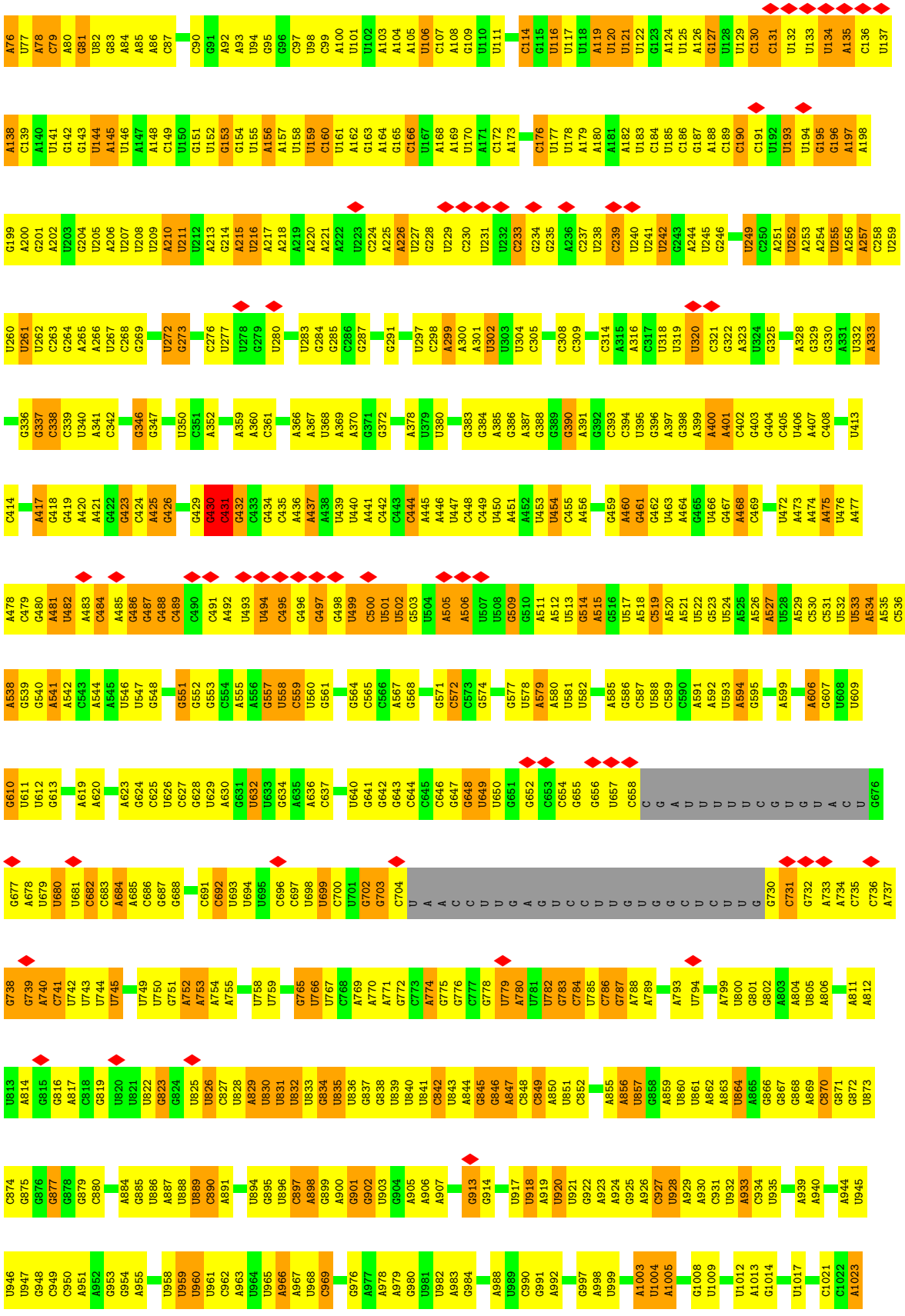


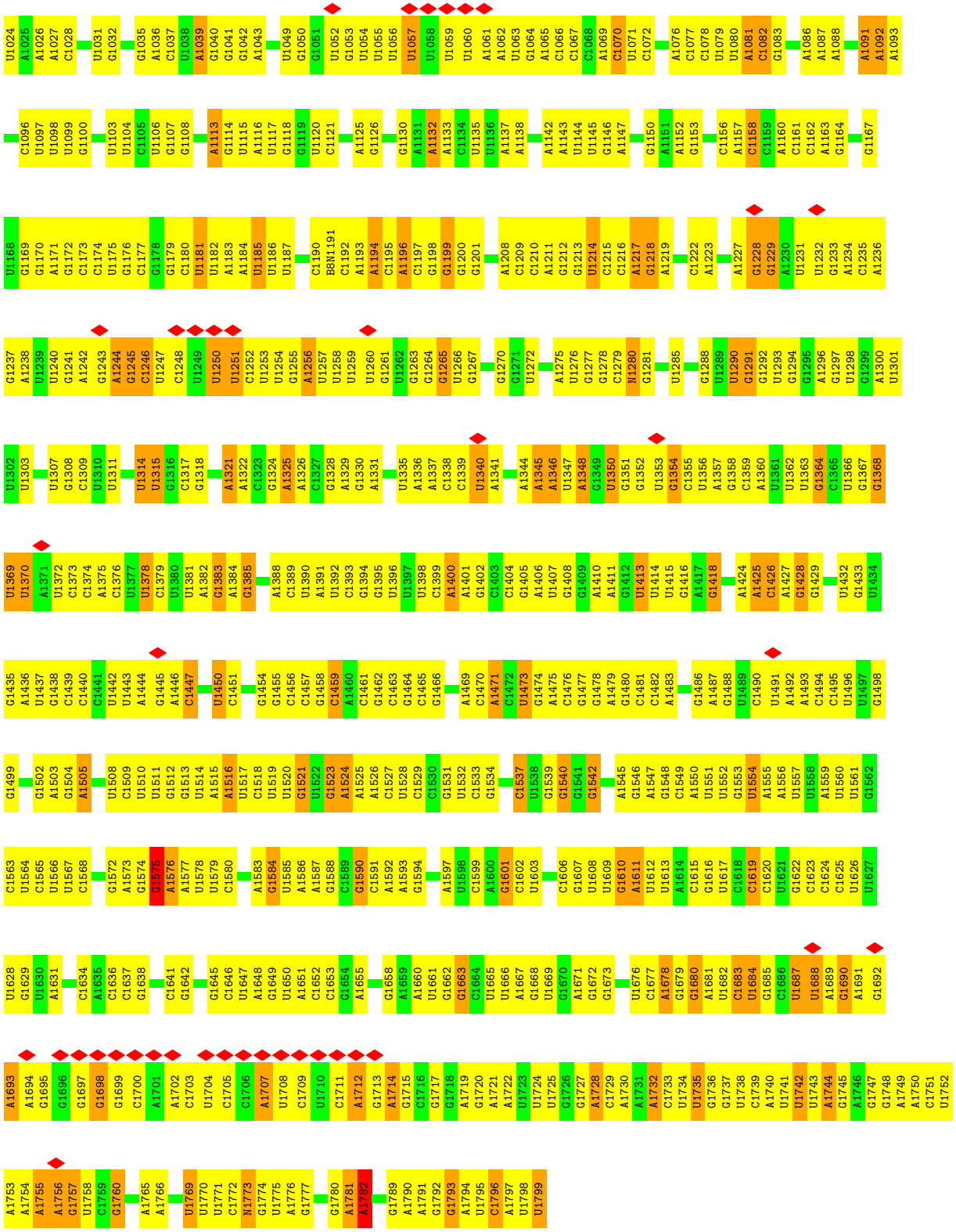
• Molecule 34: 18S rRNA

Chain B5:



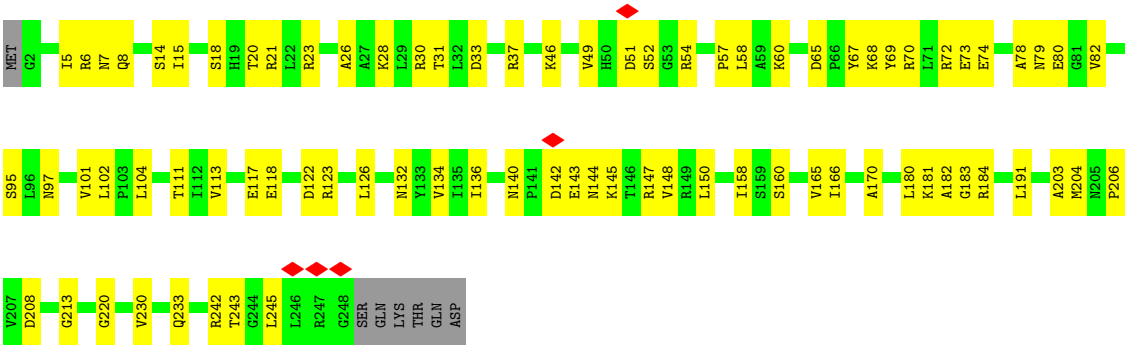






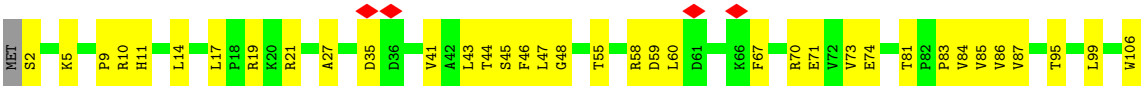
• Molecule 35: 60S ribosomal protein L2-A

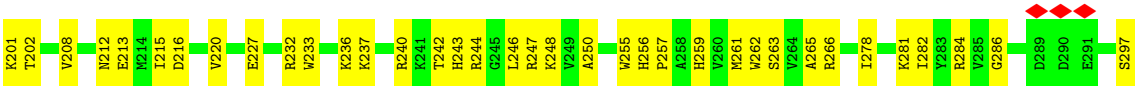
Chain AA:

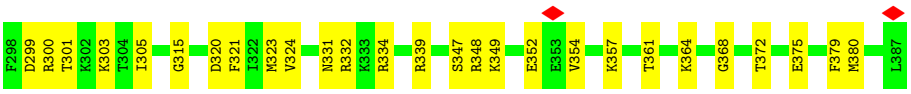


• Molecule 36: 60S ribosomal protein L3

Chain AB:

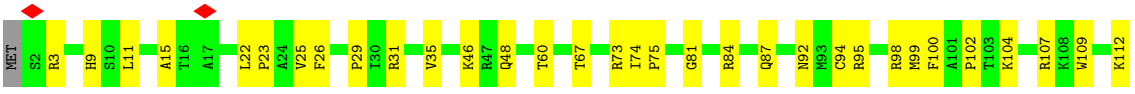


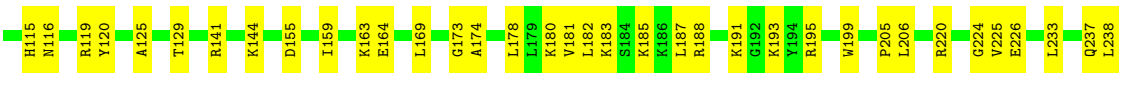




• Molecule 37: RPL4A isoform 1

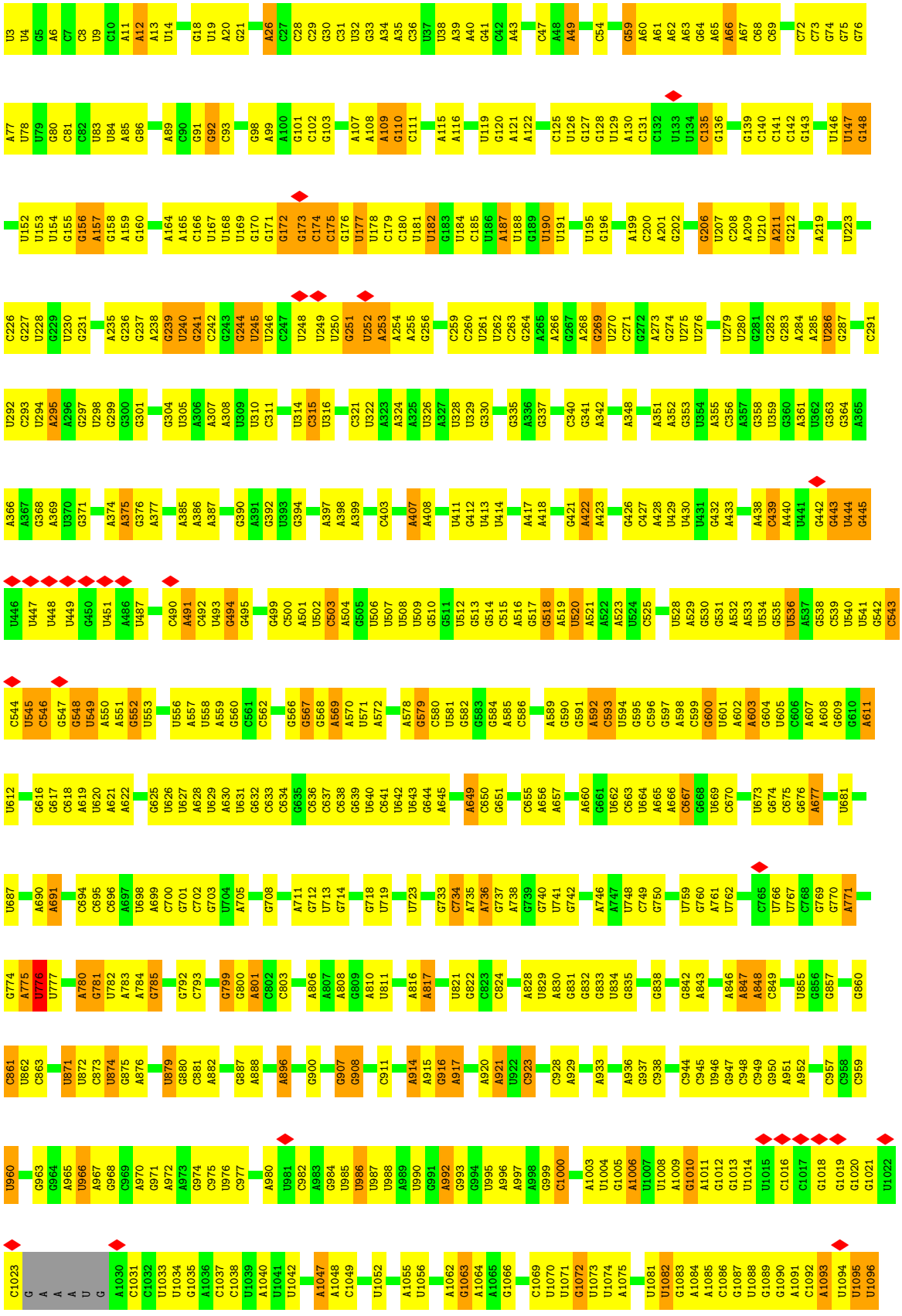
Chain AC:

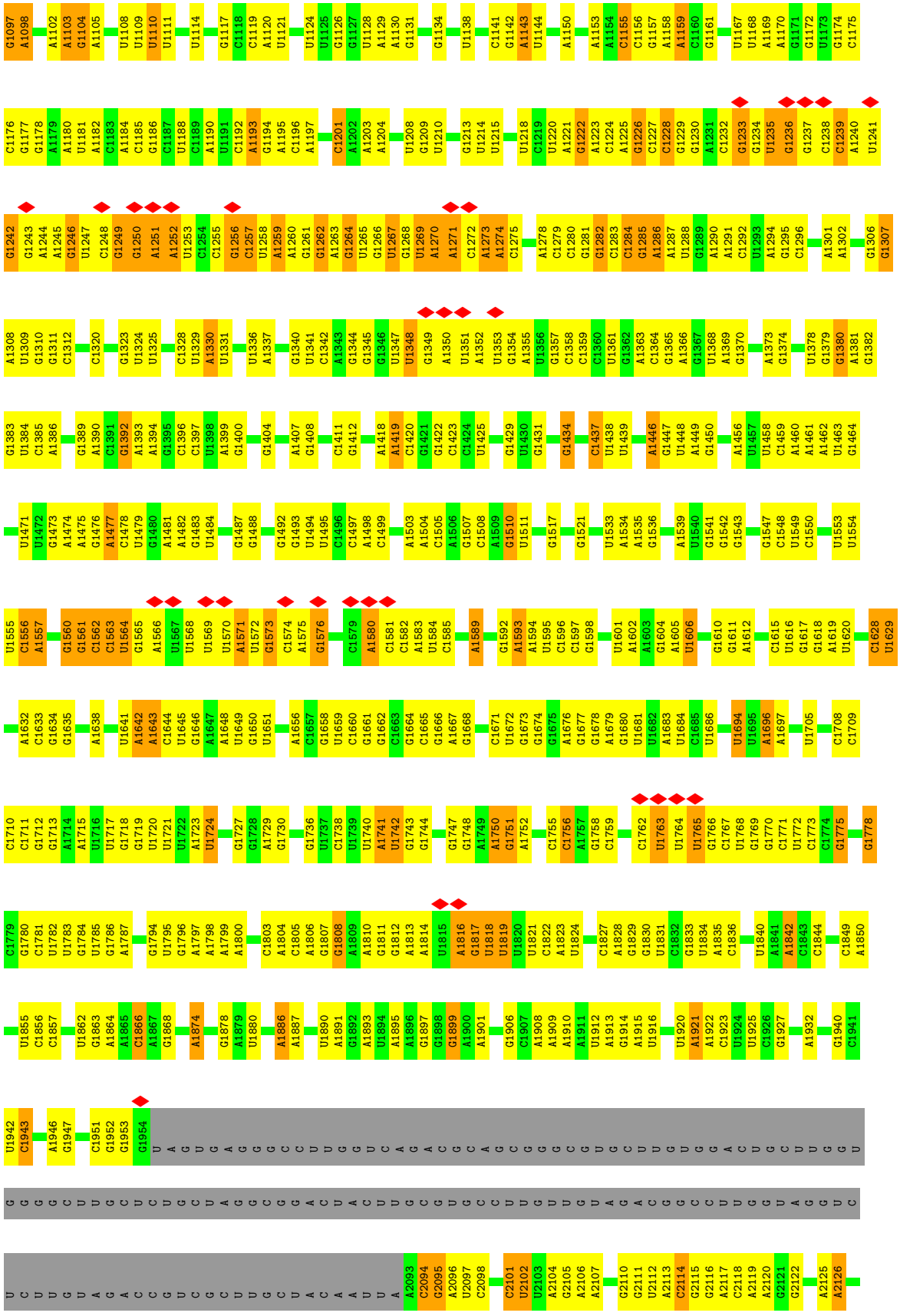


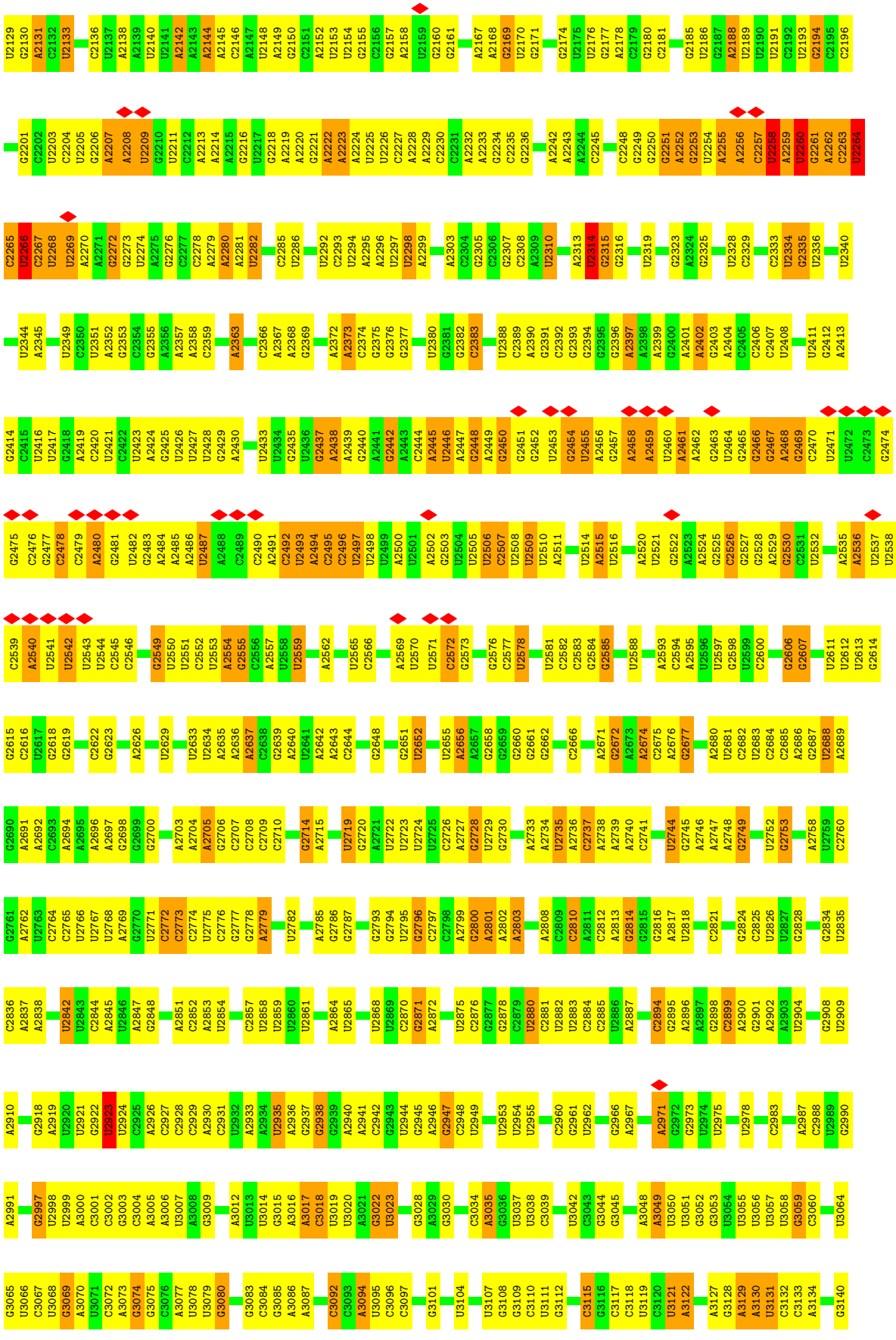


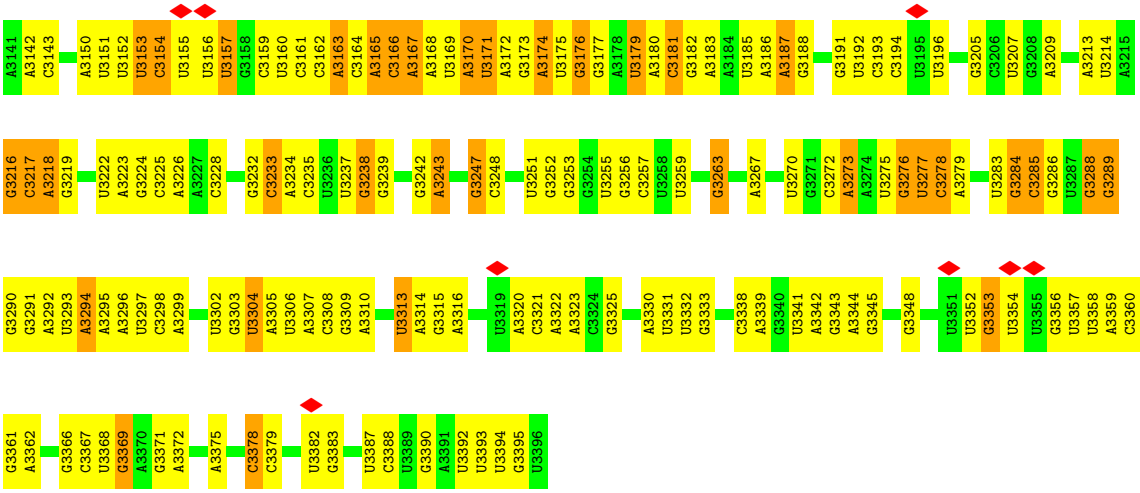
• Molecule 38: 25S rRNA

Chain A1:



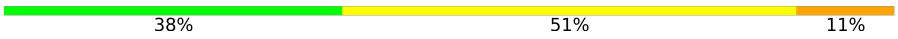


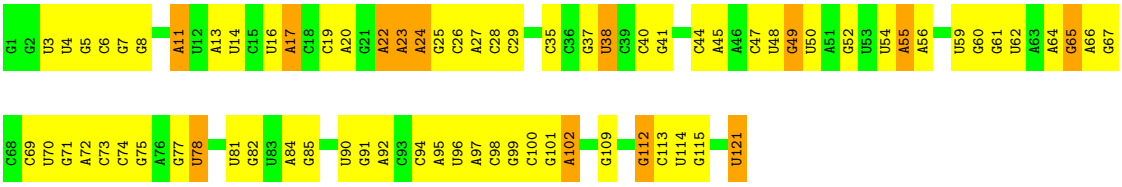




• Molecule 39: 5s rRNA

Chain A3:



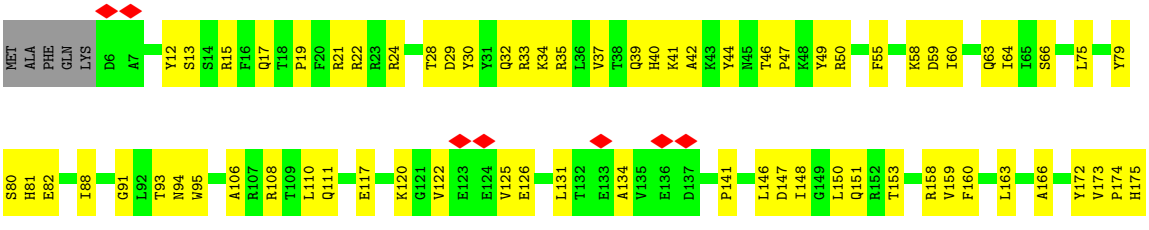


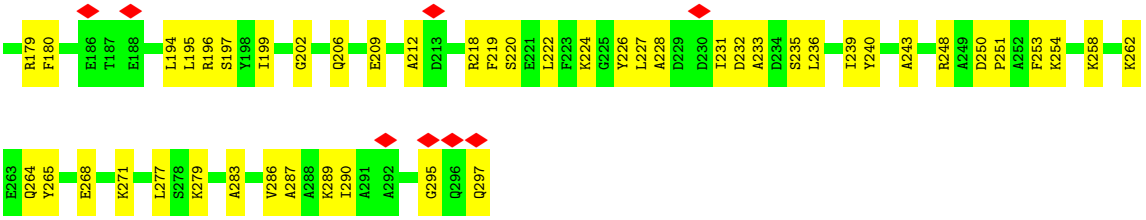
• Molecule 40: 5.8 S rRNA

Chain A4:

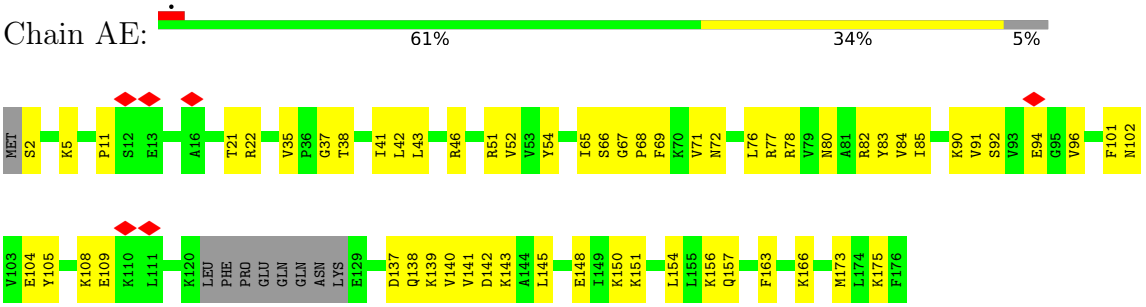
• Molecule 41: RPL5 isoform 1

Chain AD:

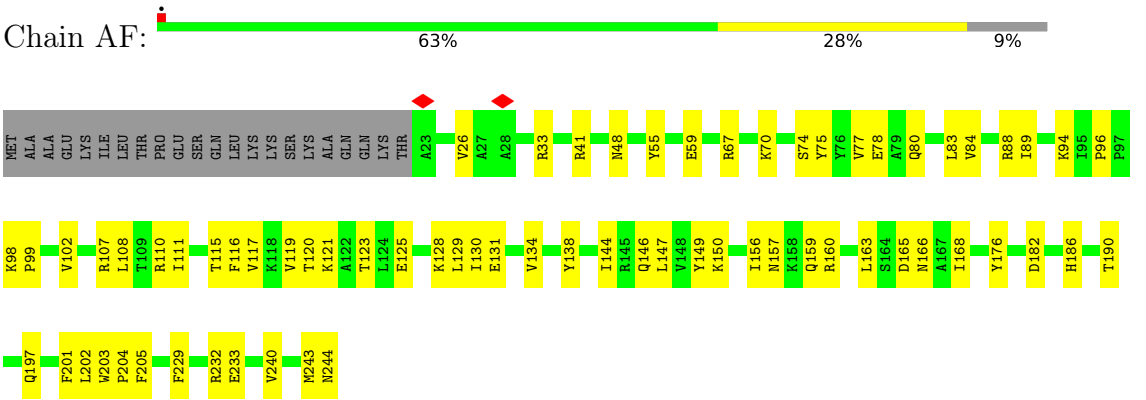




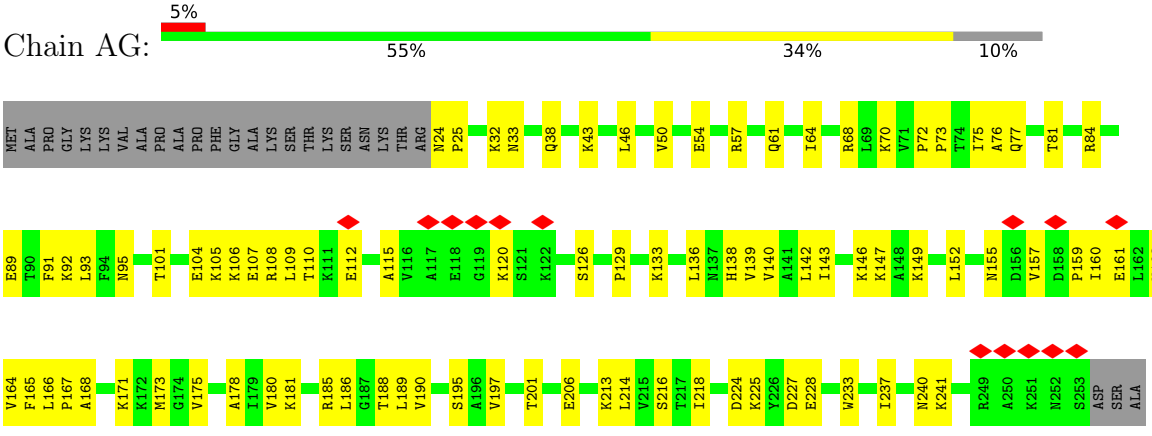
• Molecule 42: 60S ribosomal protein L6-A



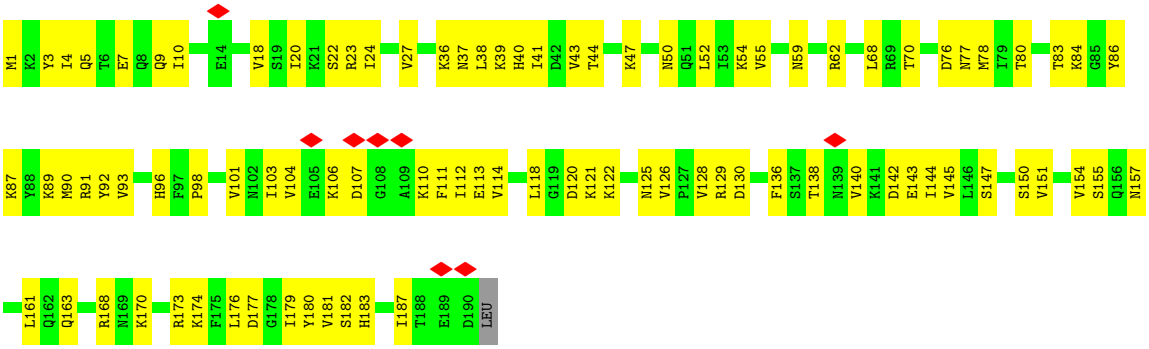
• Molecule 43: 60S ribosomal protein L7-A



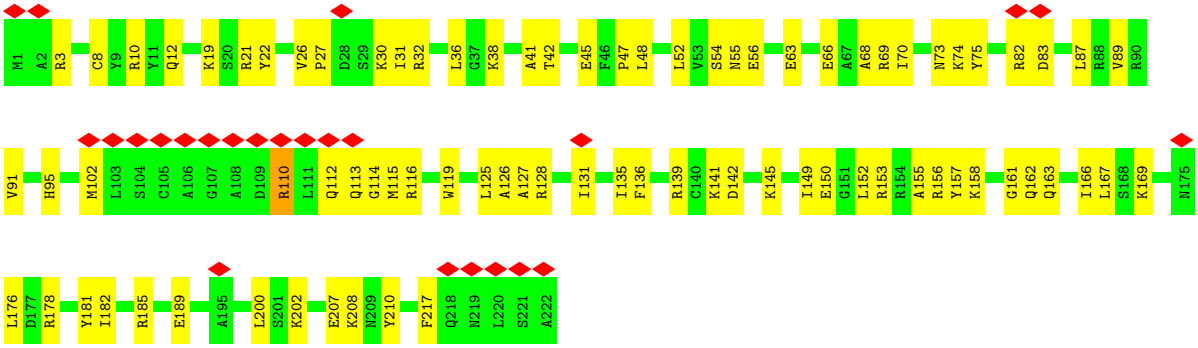
• Molecule 44: 60S ribosomal protein L8-A



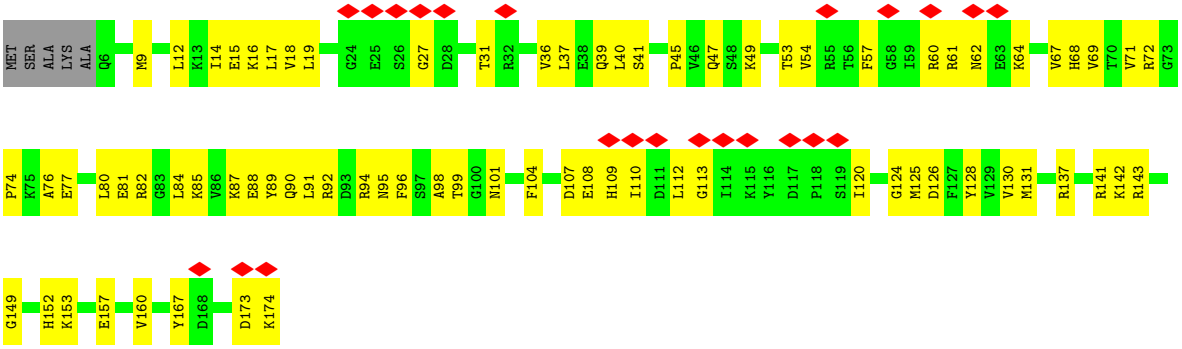
• Molecule 45: 60S ribosomal protein L9-A



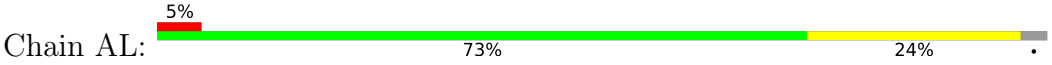
• Molecule 46: 60S ribosomal protein L10

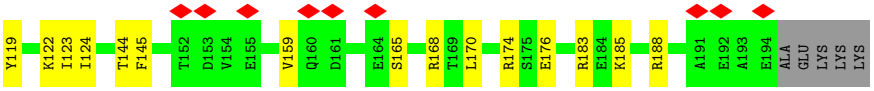


• Molecule 47: RPL11A isoform 1



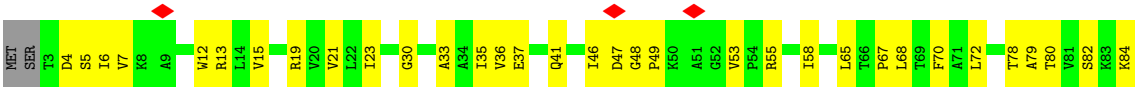
• Molecule 48: 60S ribosomal protein L13-A





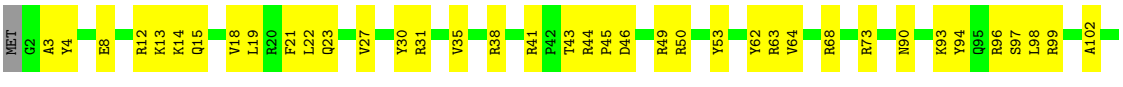
• Molecule 49: 60S ribosomal protein L14-A

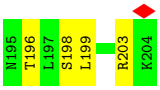
Chain AM:



• Molecule 50: 60S ribosomal protein L15-A

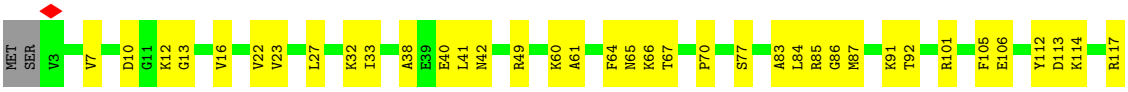
Chain AN:

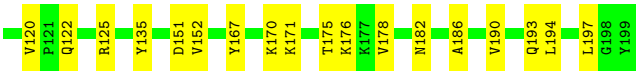




• Molecule 51: 60S ribosomal protein L16-A

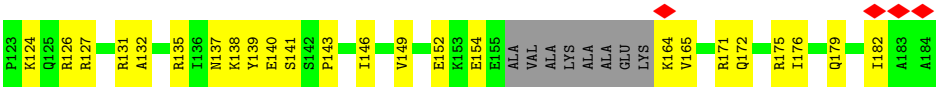
Chain AO:





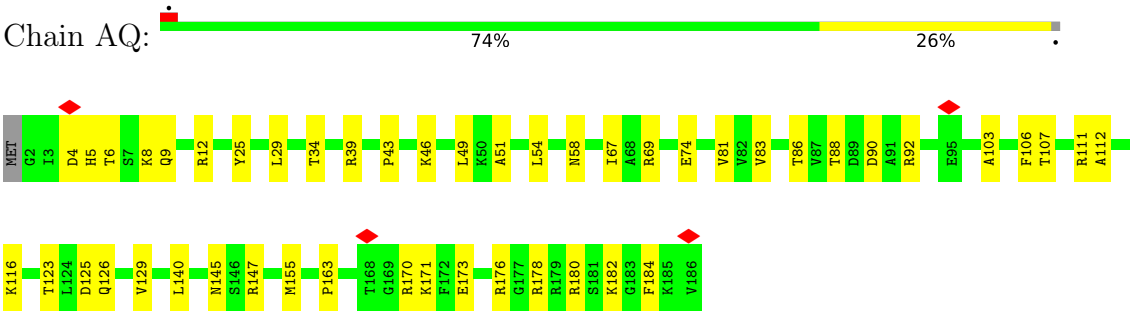
• Molecule 52: 60S ribosomal protein L17-A

Chain AP:



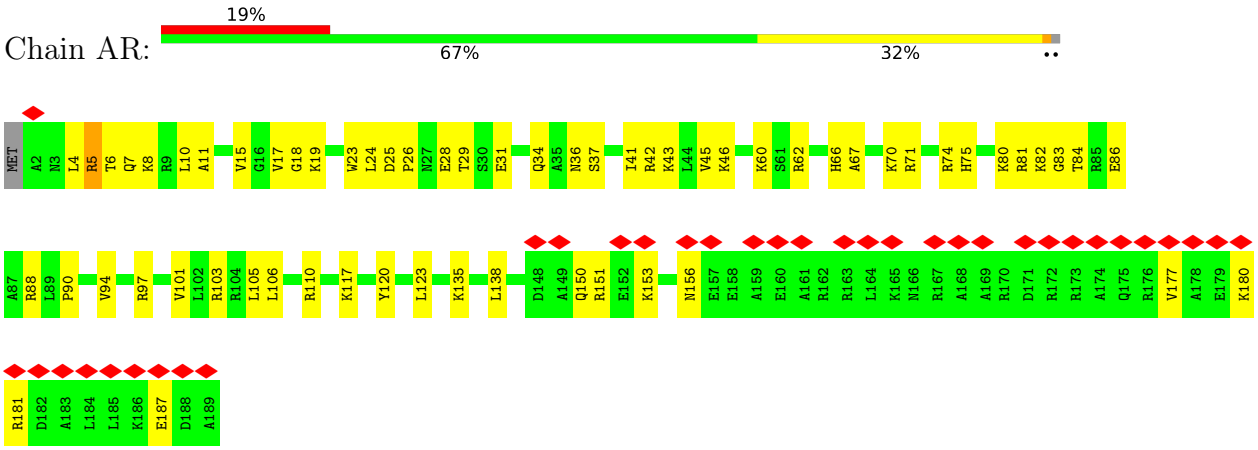
• Molecule 53: 60S ribosomal protein L18-A

Chain AQ:



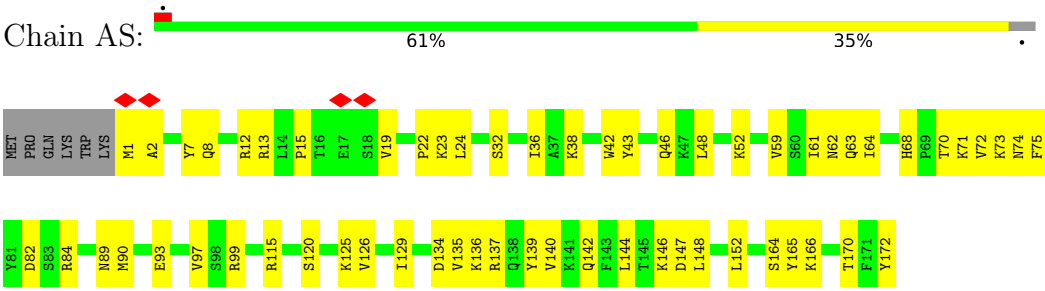
• Molecule 54: 60S ribosomal protein L19-A

Chain AR:



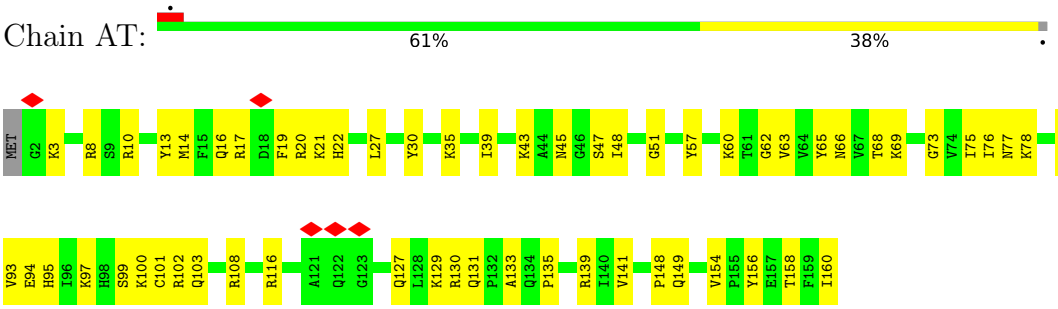
• Molecule 55: 60S ribosomal protein L20

Chain AS:



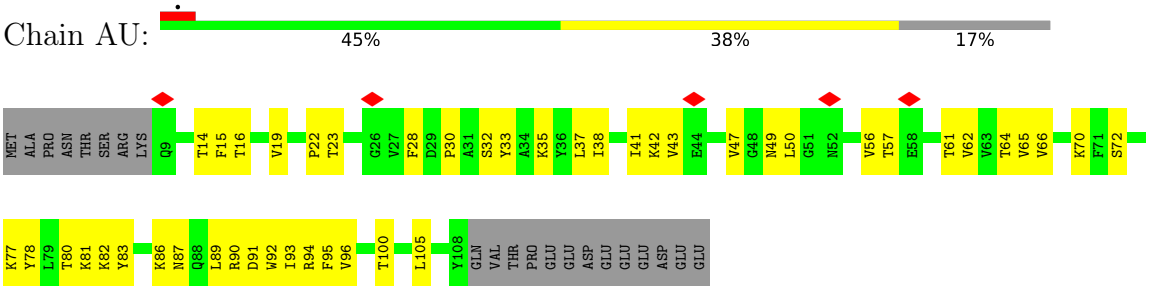
• Molecule 56: 60S ribosomal protein L21-A

Chain AT:



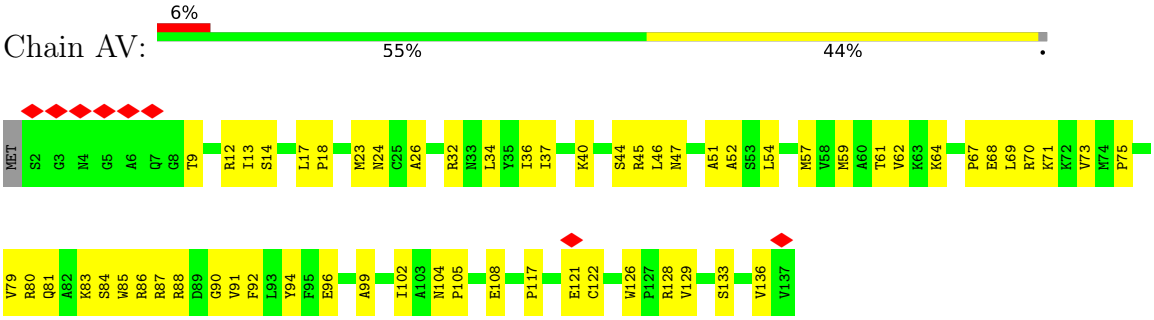
• Molecule 57: 60S ribosomal protein L22-A

Chain AU:



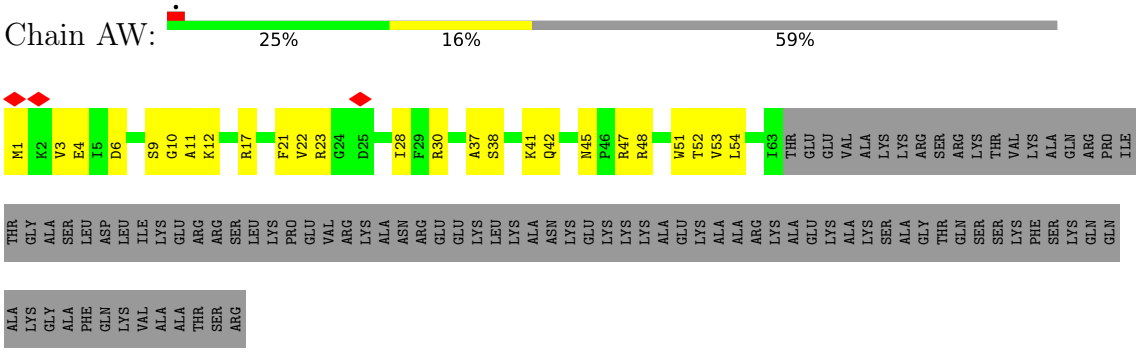
• Molecule 58: 60S ribosomal protein L23-A

Chain AV:



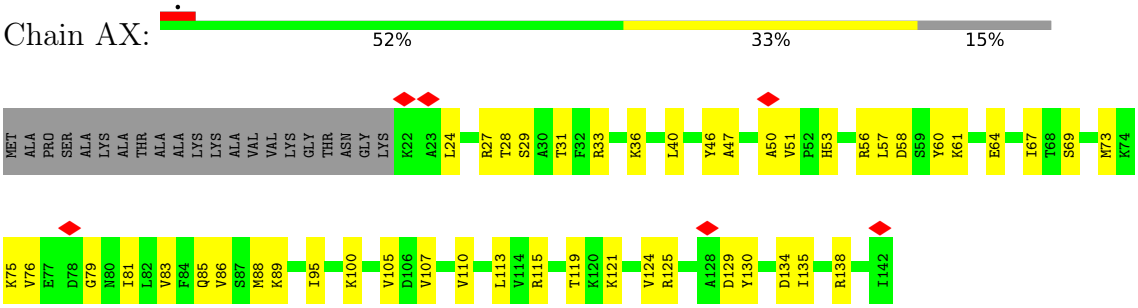
• Molecule 59: RPL24A isoform 1

Chain AW:



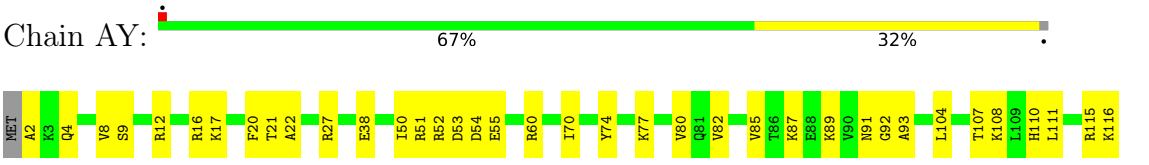
• Molecule 60: 60S ribosomal protein L25

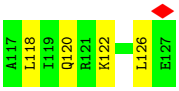
Chain AX:



• Molecule 61: 60S ribosomal protein L26-A

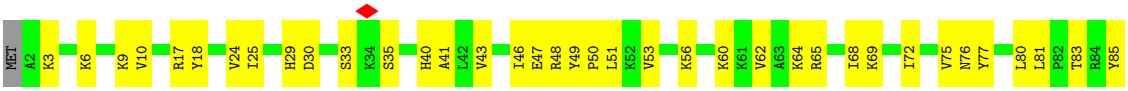
Chain AY:





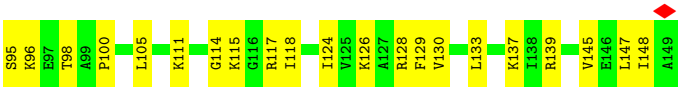
• Molecule 62: 60S ribosomal protein L27-A

Chain AZ:



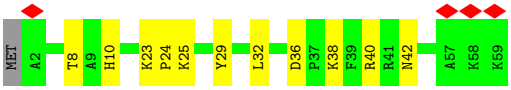
• Molecule 63: 60S ribosomal protein L28

Chain Aa:



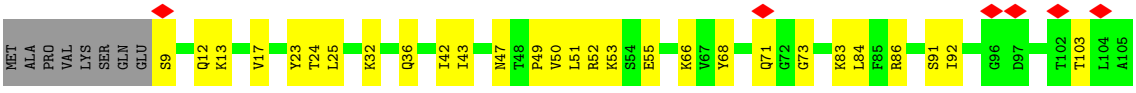
• Molecule 64: RPL29 isoform 1

Chain Ab:



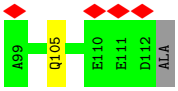
• Molecule 65: 60S ribosomal protein L30

Chain Ac:



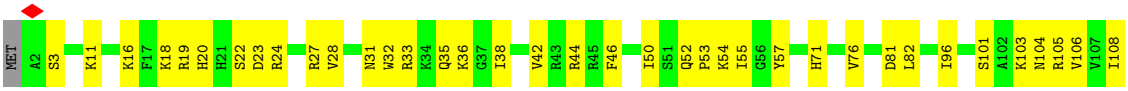
• Molecule 66: 60S ribosomal protein L31-A

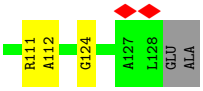
Chain Ad:



• Molecule 67: RPL32 isoform 1

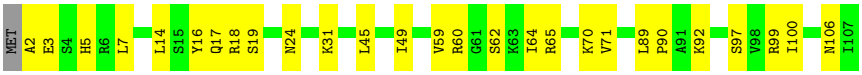
Chain Ae:





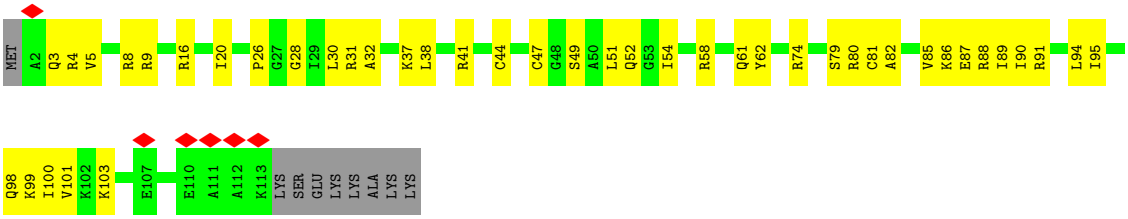
• Molecule 68: 60S ribosomal protein L33-A

Chain Af:



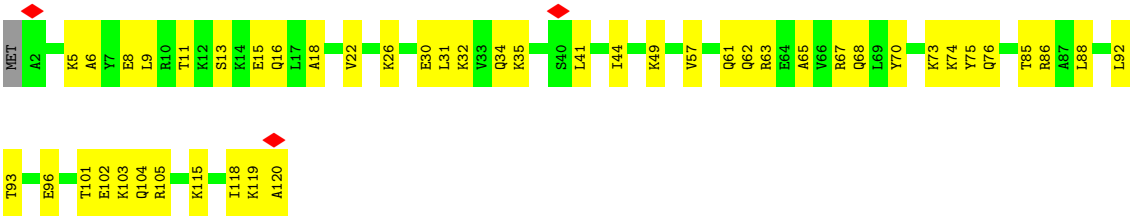
• Molecule 69: 60S ribosomal protein L34-A

Chain Ag:



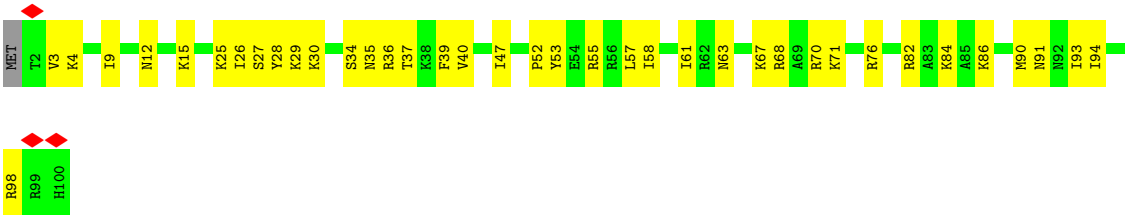
• Molecule 70: 60S ribosomal protein L35-A

Chain Ah:

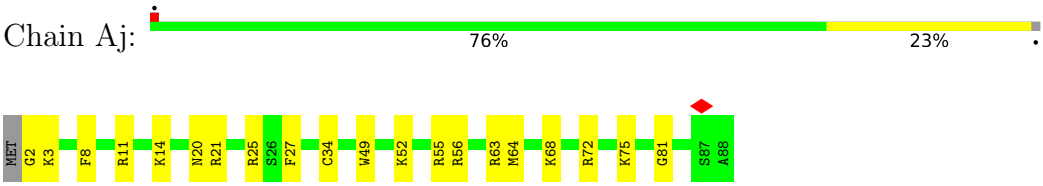


• Molecule 71: 60S ribosomal protein L36-A

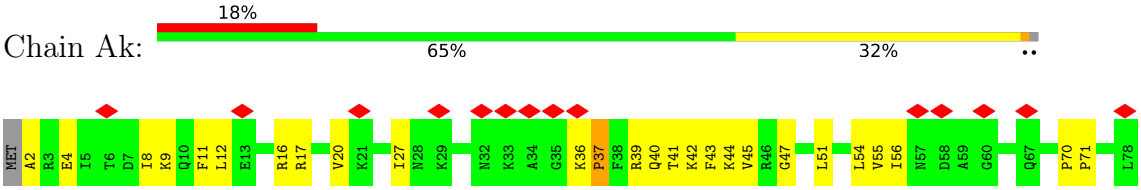
Chain Ai:



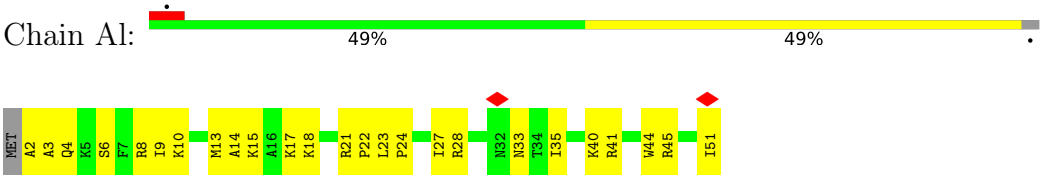
• Molecule 72: 60S ribosomal protein L37-A



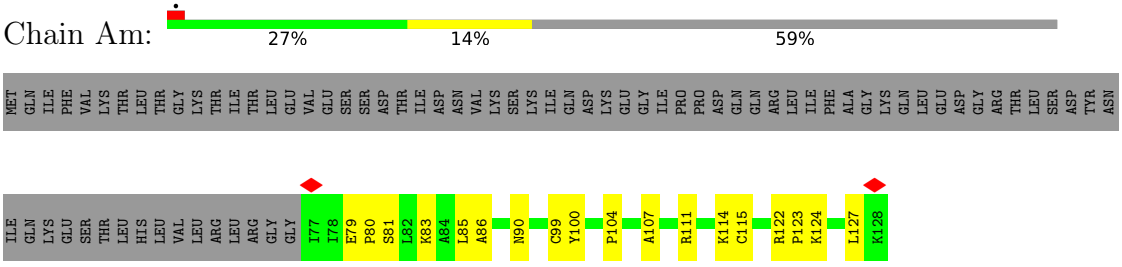
• Molecule 73: RPL38 isoform 1



• Molecule 74: 60S ribosomal protein L39



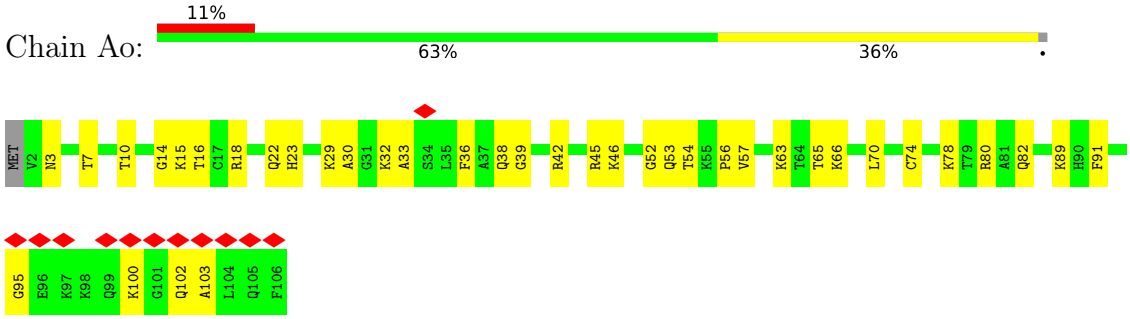
• Molecule 75: Ubiquitin-60S ribosomal protein L40



• Molecule 76: 60S ribosomal protein L41-A

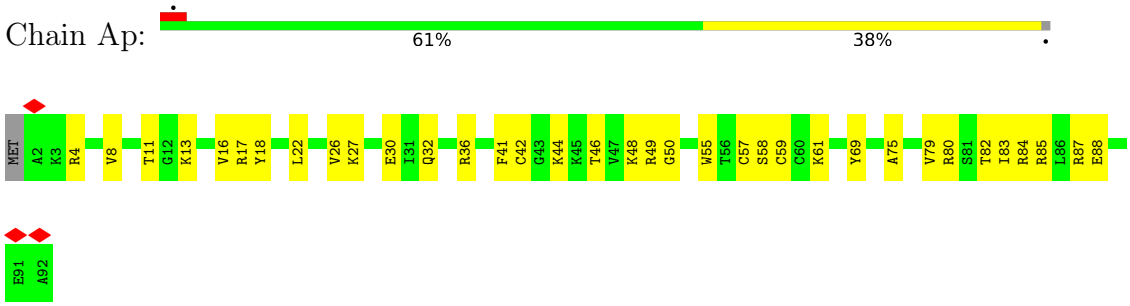
• Molecule 77: 60S ribosomal protein L42-A

Chain Ao:



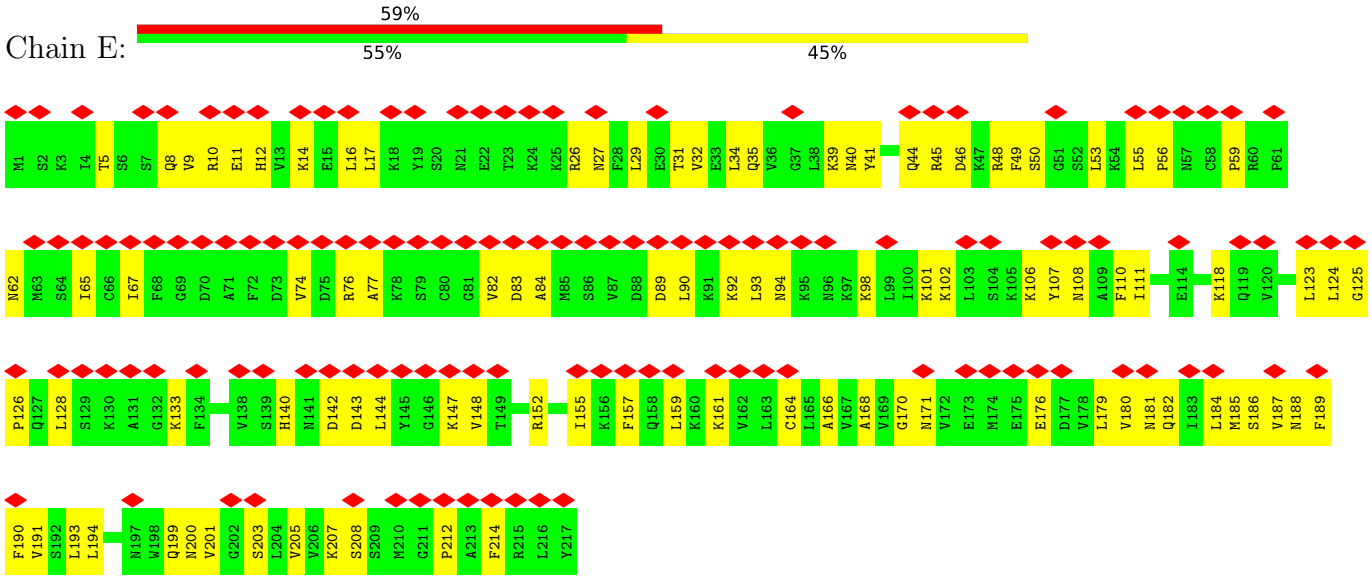
• Molecule 78: 60S ribosomal protein L43-A

Chain Ap:



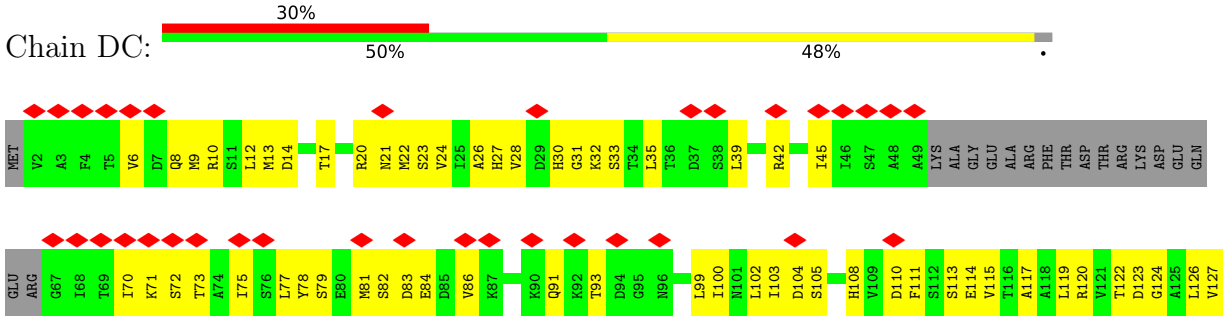
• Molecule 79: RPL1A isoform 1

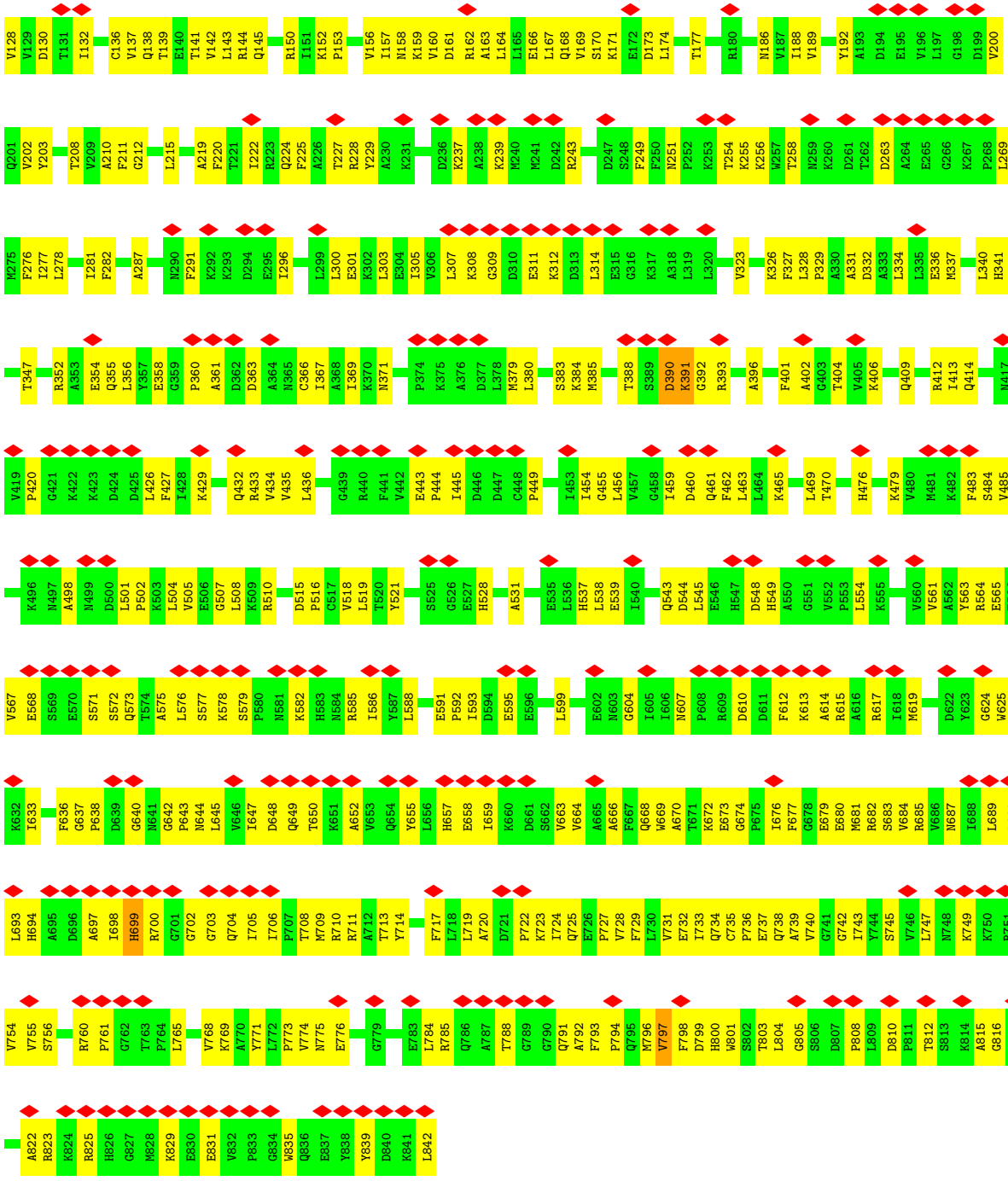
Chain E:



• Molecule 80: Elongation factor 2

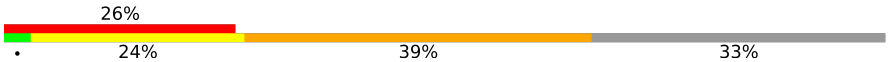
Chain DC:

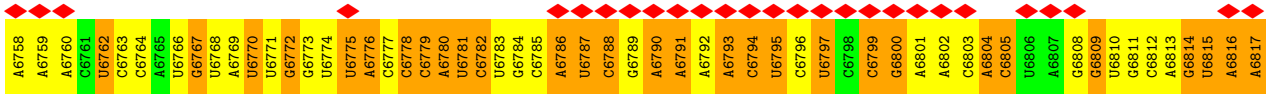


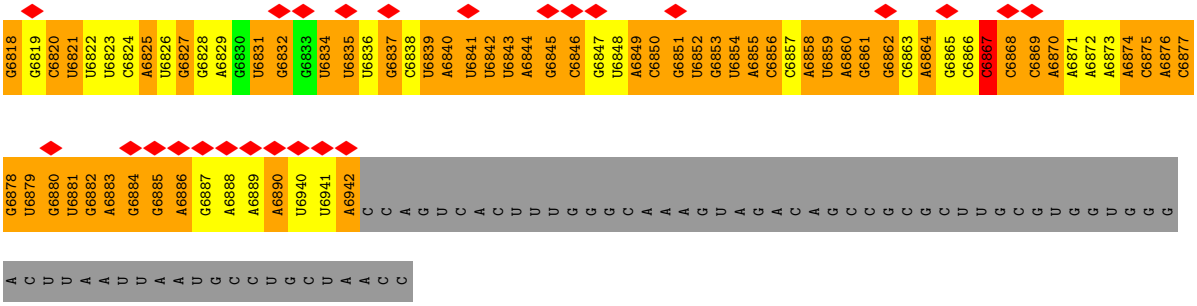


• Molecule 81: TSV IRES

Chain EC:






G6818 G6819 C6820 U6821 U6822 U6823 C6824 A6825 U6826 G6827 G6828 A6829 G6830 U6831 G6832 G6833 U6834 U6835 U6836 G6837 C6838 U6839 A6840 U6841 U6842 U6843 A6844 G6845 C6846 G6847 U6848 A6849 C6850 G6851 U6852 G6853 U6854 A6855 C6856 C6857 A6858 U6859 A6860 G6861 G6862 C6863 A6864 G6865 C6866 C6867 C6868 C6869 A6870 A6871 A6872 A6873 A6874 C6875 A6876 C6877

G6878 U6879 G6880 U6881 G6882 A6883 G6884 G6885 A6886 G6887 A6888 A6889 A6890 U6940 U6941 A6942 C C A G U C A C U U U G G C A A A G U A G A C A G C C C G C G C U U G C G U G U G G G

A C U U A A U U A A U G C C U G C U A A C C

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	124254	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)	1000	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	2.749	Depositor
Minimum map value	-1.378	Depositor
Average map value	0.006	Depositor
Map value standard deviation	0.114	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 (i)

5.1 Standard geometry (i)

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

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	0.28	1/1653 (0.1%)	0.51	3/2261 (0.1%)
2	BB	0.22	0/1735	0.49	0/2335
3	BC	0.25	0/1665	0.40	0/2263
4	BE	0.23	0/2109	0.41	0/2839
5	BG	0.16	0/1844	0.38	0/2464
6	BH	0.19	0/1506	0.44	0/2028
7	BI	0.22	0/1514	0.41	0/2021
8	BJ	0.25	0/1519	0.51	0/2035
9	BL	0.24	0/1272	0.39	0/1712
10	BN	0.26	0/1215	0.45	0/1638
11	BO	0.23	0/952	0.47	0/1279
12	BV	0.21	0/693	0.33	0/935
13	BW	0.26	0/1038	0.39	0/1395
14	BX	0.25	0/1139	0.40	0/1518
15	BY	0.17	0/1087	0.38	0/1449
16	Ba	0.25	0/782	0.43	0/1047
17	Bb	0.19	0/620	0.44	1/838 (0.1%)
18	Be	0.19	0/483	0.37	0/643
19	BD	0.66	4/1759 (0.2%)	0.78	4/2368 (0.2%)
20	BF	0.21	0/1629	0.45	0/2202
21	BK	0.24	0/837	0.49	0/1131
22	BP	0.25	0/1012	0.65	4/1356 (0.3%)
23	BQ	0.18	0/1125	0.35	0/1510
24	BR	0.18	0/957	0.35	0/1283
25	BS	0.16	0/1211	0.35	0/1628
26	BT	0.16	0/1113	0.37	0/1494
27	BU	0.17	0/865	0.33	0/1169
28	BZ	0.22	0/582	0.42	0/782
29	Bc	0.16	0/499	0.35	0/670
30	Bd	0.19	0/452	0.37	0/600
31	Bg	0.15	0/2454	0.36	0/3340
32	Bf	0.13	0/616	0.38	0/817

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	BM	0.41	1/943 (0.1%)	0.79	6/1274 (0.5%)
34	B5	0.24	1/41450 (0.0%)	0.32	4/64582 (0.0%)
35	AA	0.33	0/1912	0.39	0/2569
36	AB	0.31	0/3139	0.39	0/4219
37	AC	0.29	0/2800	0.36	0/3790
38	A1	0.34	0/76161	0.33	0/118749
39	A3	0.29	0/2861	0.30	0/4457
40	A4	0.34	0/3724	0.32	0/5798
41	AD	0.22	0/2390	0.35	0/3225
42	AE	0.52	2/1324 (0.2%)	0.84	4/1782 (0.2%)
43	AF	0.32	0/1821	0.39	1/2451 (0.0%)
44	AG	0.24	0/1830	0.37	0/2469
45	AH	0.28	0/1531	0.41	0/2062
46	AI	0.30	0/1843	0.47	0/2471
47	AJ	0.27	0/1374	0.50	0/1842
48	AL	0.27	0/1568	0.33	0/2106
49	AM	0.25	0/1068	0.38	0/1438
50	AN	0.34	0/1757	0.37	0/2354
51	AO	0.32	0/1585	0.36	0/2128
52	AP	0.30	0/1410	0.36	0/1893
53	AQ	0.29	0/1465	0.38	0/1965
54	AR	0.26	0/1538	0.37	0/2050
55	AS	0.34	0/1481	0.46	0/1990
56	AT	0.28	0/1300	0.35	0/1743
57	AU	0.24	0/812	0.37	0/1099
58	AV	0.30	0/1018	0.43	0/1369
59	AW	0.27	0/533	0.33	0/707
60	AX	0.27	0/983	0.39	0/1325
61	AY	0.27	0/1004	0.37	0/1341
62	AZ	0.25	0/1118	0.42	0/1497
63	Aa	0.31	0/1204	0.37	0/1612
64	Ab	0.24	0/473	0.33	0/629
65	Ac	0.27	0/751	0.30	0/1008
66	Ad	0.28	0/904	0.36	0/1213
67	Ae	0.29	0/1041	0.34	0/1394
68	Af	0.35	0/868	0.39	0/1168
69	Ag	0.30	0/890	0.40	0/1189
70	Ah	0.23	0/978	0.33	0/1301
71	Ai	0.22	0/778	0.35	0/1034
72	Aj	0.33	0/696	0.36	0/923
73	Ak	0.27	0/618	0.49	1/826 (0.1%)
74	Al	0.34	0/443	0.47	0/588
75	Am	0.29	0/423	0.42	0/562

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
76	An	0.29	0/234	0.36	0/300
77	Ao	0.24	0/860	0.36	0/1136
78	Ap	0.30	0/701	0.44	0/934
79	E	0.14	0/1745	0.37	0/2342
80	DC	0.21	0/6521	0.46	6/8830 (0.1%)
81	EC	0.18	0/3206	0.48	2/4986 (0.0%)
All	All	0.29	9/225014 (0.0%)	0.37	36/329770 (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
19	BD	0	1
43	AF	0	1
46	AI	0	1
54	AR	0	1
63	Aa	0	1
80	DC	0	1
All	All	0	6

All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	BD	43	PRO	CB-CG	17.39	2.36	1.49
19	BD	43	PRO	CG-CD	-17.04	0.92	1.50
42	AE	11	PRO	CB-CG	-14.69	0.76	1.49
33	BM	82	PRO	CG-CD	-10.36	1.15	1.50
19	BD	43	PRO	CA-CB	-8.51	1.41	1.53
1	BA	194	PRO	CG-CD	-6.45	1.28	1.50
42	AE	11	PRO	CG-CD	-6.04	1.30	1.50
19	BD	43	PRO	N-CD	5.81	1.55	1.47
34	B5	1575	G7M	O3'-P	5.50	1.61	1.56

All (36) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	AE	11	PRO	CB-CG-CD	21.33	174.37	106.10
19	BD	43	PRO	N-CD-CG	-18.07	76.09	103.20
19	BD	43	PRO	CA-CB-CG	-16.65	72.86	104.50
19	BD	43	PRO	CB-CG-CD	-15.85	55.37	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	AE	11	PRO	CA-CB-CG	-15.76	74.56	104.50
33	BM	82	PRO	N-CD-CG	-15.59	79.82	103.20
19	BD	43	PRO	N-CA-CB	-15.06	87.44	103.25
42	AE	11	PRO	N-CD-CG	-14.68	81.18	103.20
33	BM	82	PRO	CA-CB-CG	-14.31	77.31	104.50
22	BP	75	PRO	N-CD-CG	-11.12	86.52	103.20
1	BA	194	PRO	N-CD-CG	-10.14	87.99	103.20
80	DC	390	ASP	CA-C-N	9.65	139.98	121.54
80	DC	390	ASP	C-N-CA	9.65	139.98	121.54
22	BP	75	PRO	CA-CB-CG	-9.48	86.48	104.50
81	EC	6867	C	OP2-P-O3'	-8.70	81.89	108.00
42	AE	11	PRO	CA-N-CD	-8.53	100.06	112.00
81	EC	6867	C	OP1-P-O3'	-7.96	84.13	108.00
80	DC	391	LYS	N-CA-C	7.51	126.80	110.80
33	BM	82	PRO	CA-N-CD	-7.36	101.70	112.00
73	Ak	37	PRO	CA-N-CD	-7.07	102.11	112.00
1	BA	194	PRO	CA-CB-CG	-7.01	91.18	104.50
33	BM	126	TRP	CA-C-N	6.64	133.66	121.70
33	BM	126	TRP	C-N-CA	6.64	133.66	121.70
22	BP	75	PRO	CA-N-CD	-6.49	102.92	112.00
34	B5	431	C	C5'-C4'-C3'	6.19	125.28	116.00
80	DC	391	LYS	CB-CA-C	-6.06	98.37	110.42
34	B5	431	C	O5'-C5'-C4'	6.02	120.53	111.50
34	B5	430	G	O3'-P-O5'	6.02	113.03	104.00
1	BA	194	PRO	N-CA-CB	-5.93	97.02	103.25
34	B5	430	G	P-O3'-C3'	5.55	128.53	120.20
33	BM	82	PRO	N-CA-CB	-5.47	98.25	103.51
22	BP	75	PRO	N-CA-CB	-5.26	98.73	103.36
17	Bb	22	LYS	CB-CG-CD	5.16	123.17	111.30
80	DC	390	ASP	CA-C-O	-5.12	113.19	120.51
80	DC	391	LYS	CA-CB-CG	5.11	124.31	114.10
43	AF	26	VAL	N-CA-C	-5.08	107.61	111.62

There are no chirality outliers.

All (6) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
43	AF	232	ARG	Peptide
46	AI	110	ARG	Sidechain
54	AR	5	ARG	Sidechain
63	Aa	115	LYS	Peptide
19	BD	178	ARG	Sidechain

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Mol	Chain	Res	Type	Group
80	DC	797	VAL	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	132	0
3	BC	1635	0	1723	74	0
4	BE	2068	0	2154	111	0
5	BG	1820	0	1918	78	0
6	BH	1481	0	1572	73	0
7	BI	1489	0	1525	102	0
8	BJ	1494	0	1573	124	0
9	BL	1244	0	1314	38	0
10	BN	1192	0	1255	63	0
11	BO	941	0	979	69	0
12	BV	684	0	672	37	0
13	BW	1021	0	1060	43	0
14	BX	1121	0	1196	52	0
15	BY	1073	0	1132	73	0
16	Ba	769	0	818	41	0
17	Bb	610	0	633	21	0
18	Be	475	0	525	27	0
19	BD	1734	0	1817	61	0
20	BF	1609	0	1675	101	0
21	BK	817	0	804	48	0
22	BP	991	0	1035	58	0
23	BQ	1105	0	1166	74	0
24	BR	948	0	990	41	0
25	BS	1192	0	1222	75	0
26	BT	1095	0	1114	66	0
27	BU	855	0	917	50	0
28	BZ	574	0	616	56	0
29	Bc	497	0	535	25	0
30	Bd	442	0	432	21	0
31	Bg	2401	0	2356	131	0
32	Bf	605	0	654	28	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
33	BM	935	0	975	52	0
34	B5	37463	0	18841	1238	0
35	AA	1878	0	1946	72	0
36	AB	3081	0	3162	139	0
37	AC	2748	0	2859	96	0
38	A1	68786	0	34575	1567	0
39	A3	2579	0	1304	87	0
40	A4	3353	0	1695	88	0
41	AD	2341	0	2290	102	0
42	AE	1303	0	1376	52	0
43	AF	1784	0	1862	55	0
44	AG	1798	0	1894	72	0
45	AH	1510	0	1576	94	0
46	AI	1804	0	1856	75	0
47	AJ	1353	0	1383	82	0
48	AL	1543	0	1608	54	0
49	AM	1053	0	1149	43	0
50	AN	1720	0	1779	74	0
51	AO	1555	0	1659	48	0
52	AP	1388	0	1423	45	0
53	AQ	1441	0	1543	51	0
54	AR	1521	0	1617	55	0
55	AS	1445	0	1487	66	0
56	AT	1276	0	1323	60	0
57	AU	796	0	812	36	0
58	AV	1003	0	1047	58	0
59	AW	521	0	551	20	0
60	AX	968	0	1036	42	0
61	AY	993	0	1081	35	0
62	AZ	1092	0	1155	48	0
63	Aa	1173	0	1215	58	0
64	Ab	462	0	491	9	0
65	Ac	743	0	797	27	0
66	Ad	890	0	938	27	0
67	Ae	1020	0	1090	34	0
68	Af	850	0	880	22	0
69	Ag	880	0	945	43	0
70	Ah	969	0	1078	40	0
71	Ai	771	0	849	32	0
72	Aj	681	0	687	23	0
73	Ak	612	0	682	25	0
74	Al	436	0	475	29	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
75	Am	417	0	459	18	0
76	An	233	0	284	15	0
77	Ao	847	0	914	36	0
78	Ap	694	0	738	30	0
79	E	1718	0	1811	81	0
80	DC	6419	0	6492	386	0
81	EC	2870	0	1448	145	0
82	Ao	1	0	0	0	0
83	DC	28	0	12	9	0
84	DC	1	0	0	0	0
85	DC	35	0	39	3	0
All	All	211084	0	157977	6446	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 18.

All (6446) 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:B5:1355:C:N4	34:B5:1369:U:H3	1.52	1.07
47:AJ:87:LYS:HZ2	47:AJ:104:PHE:HB2	1.21	1.05
34:B5:126:A:H62	34:B5:291:G:N2	1.56	1.04
34:B5:1679:G:N2	34:B5:1722:A:H62	1.56	1.03
34:B5:649:U:H3	34:B5:684:A:N6	1.58	1.01
38:A1:160:G:H1	38:A1:261:U:H3	1.06	0.99
34:B5:1679:G:H21	34:B5:1722:A:N6	1.59	0.99
18:Be:2:ALA:N	34:B5:1754:A:HO2'	1.59	0.97
47:AJ:92:ARG:HH12	47:AJ:174:LYS:H	1.07	0.95
34:B5:918:U:H2'	34:B5:919:A:H8	1.31	0.94
80:DC:132:ILE:HD11	80:DC:163:ALA:H	1.29	0.94
50:AN:183:THR:HG22	50:AN:187:ARG:HB3	1.50	0.94
38:A1:1474:A:O2'	66:Ad:57:GLN:NE2	1.99	0.94
34:B5:1213:G:H1	34:B5:1450:U:H5	1.16	0.93
34:B5:976:G:H1	34:B5:1023:A:HO2'	1.11	0.93
39:A3:52:G:H21	47:AJ:9:MET:HE1	1.31	0.93
13:BW:31:SER:HB3	34:B5:636:A:H5"	1.51	0.92
34:B5:1679:G:H21	34:B5:1722:A:H62	0.93	0.92
34:B5:1355:C:H42	34:B5:1369:U:H3	1.14	0.92
34:B5:478:A:N7	34:B5:511:A:N6	2.19	0.91
8:BJ:83:VAL:HA	8:BJ:149:ARG:HA	1.53	0.91
8:BJ:35:GLY:HA3	18:Be:37:ARG:HH21	1.36	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6841:U:H4'	81:EC:6842:U:H5'	1.52	0.90
5:BG:21:GLU:HA	5:BG:24:ILE:HG12	1.51	0.90
22:BP:78:THR:HA	34:B5:1241:G:H4'	1.53	0.90
34:B5:126:A:H62	34:B5:291:G:H21	0.92	0.90
24:BR:67:ARG:HH21	34:B5:1318:G:H5"	1.36	0.90
34:B5:868:G:H1	34:B5:960:U:H3	1.20	0.89
79:E:161:LYS:NZ	81:EC:6817:A:N7	2.21	0.89
8:BJ:109:LEU:HD23	8:BJ:146:PHE:HB3	1.55	0.88
34:B5:849:C:H5'	34:B5:850:A:H5'	1.54	0.88
7:BI:48:THR:HG21	7:BI:54:LYS:HG3	1.56	0.88
38:A1:1246:G:H5'	38:A1:1273:A:H61	1.39	0.87
80:DC:171:LYS:HA	80:DC:282:PHE:HE2	1.39	0.87
38:A1:2465:G:N1	38:A1:2491:A:C6	2.43	0.87
34:B5:1665:U:O2	34:B5:1736:G:N2	2.07	0.87
55:AS:12:ARG:HH12	55:AS:15:PRO:HD3	1.39	0.87
38:A1:3348:G:H1	38:A1:3357:U:H3	1.21	0.86
17:Bb:19:HIS:HB3	17:Bb:22:LYS:HG2	1.58	0.86
34:B5:1291:G:H1	34:B5:1324:G:H22	1.21	0.86
34:B5:126:A:N6	34:B5:291:G:H21	1.73	0.85
34:B5:1499:G:H1	34:B5:1508:U:H3	1.23	0.85
38:A1:358:G:N2	38:A1:361:A:OP2	2.10	0.85
81:EC:6784:G:N2	81:EC:6812:C:O2	2.10	0.85
7:BI:11:ARG:HD3	7:BI:17:LYS:HZ2	1.41	0.85
34:B5:1684:U:H3	34:B5:1717:G:H1	0.85	0.85
4:BE:46:VAL:HG23	4:BE:50:ASN:HD22	1.42	0.85
34:B5:1665:U:H3	34:B5:1736:G:H1	1.21	0.85
34:B5:648:G:N2	34:B5:686:C:O2	2.10	0.84
4:BE:64:ILE:HD11	15:BY:18:LEU:HD22	1.58	0.84
6:BH:64:VAL:HA	6:BH:67:LEU:HD23	1.58	0.84
38:A1:1719:G:OP1	54:AR:110:ARG:NH1	2.10	0.83
48:AL:124:ILE:HG12	70:Ah:119:LYS:HZ2	1.42	0.83
20:BF:107:LYS:HZ2	34:B5:1610:G:H5'	1.44	0.83
69:Ag:58:ARG:HB2	69:Ag:61:GLN:HE22	1.44	0.83
5:BG:31:ARG:NH2	34:B5:1681:A:O2'	2.11	0.83
80:DC:760:ARG:HD2	80:DC:761:PRO:HD2	1.58	0.83
20:BF:60:ASP:H	20:BF:65:ARG:HH22	1.25	0.82
28:BZ:65:LEU:HD22	28:BZ:76:ALA:HA	1.61	0.82
46:AI:38:LYS:HG2	46:AI:41:ALA:HB2	1.62	0.82
34:B5:1339:C:O2'	34:B5:1341:A:N7	2.13	0.82
63:Aa:6:THR:HG22	63:Aa:8:THR:H	1.44	0.82
34:B5:1356:U:H3	34:B5:1367:G:H1	1.26	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:7:PHE:O	1:BA:54:TRP:NE1	2.12	0.82
47:AJ:15:GLU:OE2	47:AJ:72:ARG:NH1	2.13	0.82
79:E:50:SER:HA	79:E:157:PHE:HB2	1.61	0.82
6:BH:141:ARG:HE	6:BH:149:ILE:HD11	1.44	0.82
43:AF:88:ARG:NH1	53:AQ:4:ASP:OD2	2.11	0.82
34:B5:41:A:HO2'	34:B5:437:A:HO2'	1.25	0.82
38:A1:542:G:N1	38:A1:549:U:O4	2.13	0.82
6:BH:150:GLN:HB3	6:BH:181:ILE:HG22	1.62	0.81
38:A1:2483:G:N7	79:E:101:LYS:NZ	2.26	0.81
14:BX:3:LYS:HE2	14:BX:7:ARG:HH21	1.45	0.81
34:B5:487:G:H2'	34:B5:488:G:H4'	1.62	0.81
38:A1:2854:U:OP2	46:AI:3:ARG:NH2	2.14	0.81
32:Bf:90:LYS:HZ1	34:B5:1246:C:H6	1.28	0.81
20:BF:93:LEU:HD22	20:BF:114:ILE:HD13	1.63	0.81
44:AG:43:LYS:HE2	60:AX:28:THR:HG21	1.63	0.81
46:AI:189:GLU:HG3	46:AI:200:LEU:HB3	1.62	0.81
9:BL:8:GLN:HE22	9:BL:14:GLN:H	1.24	0.81
81:EC:6880:G:H3'	81:EC:6881:U:O4'	1.81	0.81
34:B5:774:A:N1	34:B5:786:C:N3	2.29	0.81
38:A1:541:U:H2'	38:A1:542:G:H8	1.45	0.81
2:BB:111:ARG:NH2	34:B5:930:A:N3	2.27	0.80
34:B5:648:G:N1	34:B5:686:C:N3	2.25	0.80
81:EC:6794:C:H3'	81:EC:6940:U:H3	1.44	0.80
81:EC:6859:U:H1'	81:EC:6860:A:H2'	1.63	0.80
65:Ac:55:GLU:HB3	69:Ag:94:LEU:HD11	1.63	0.80
38:A1:2465:G:C6	38:A1:2491:A:N6	2.49	0.80
5:BG:10:ASN:ND2	5:BG:127:THR:O	2.15	0.80
81:EC:6817:A:H4'	81:EC:6818:G:H5'	1.64	0.80
34:B5:845:G:OP1	34:B5:845:G:N2	2.15	0.80
38:A1:1390:A:N6	38:A1:1418:A:O2'	2.15	0.80
10:BN:124:ARG:NH1	34:B5:966:A:OP2	2.14	0.80
34:B5:609:U:H4'	34:B5:610:G:H5'	1.64	0.80
34:B5:1235:C:N4	34:B5:1250:U:O4	2.15	0.80
80:DC:42:ARG:HH22	80:DC:329:PRO:HB2	1.45	0.80
2:BB:68:VAL:H	2:BB:84:ILE:HB	1.47	0.79
40:A4:22:U:OP1	61:AY:12:ARG:NH2	2.16	0.79
79:E:110:PHE:H	79:E:133:LYS:HG2	1.47	0.79
38:A1:2253:G:O6	38:A1:2263:C:N4	2.16	0.79
19:BD:204:ASP:OD1	34:B5:1330:G:N2	2.15	0.79
34:B5:1585:U:H3	34:B5:1611:A:H2	1.28	0.79
4:BE:85:GLY:N	4:BE:88:ASP:OD2	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:BK:5:LYS:HA	21:BK:8:ARG:HE	1.48	0.79
34:B5:1267:G:H1	34:B5:1442:U:H3	1.29	0.79
7:BI:141:ARG:NH1	34:B5:196:G:N7	2.29	0.79
34:B5:898:A:H62	34:B5:914:G:N2	1.80	0.79
34:B5:1584:G:N2	34:B5:1611:A:OP2	2.15	0.79
68:Af:49:ILE:HG12	68:Af:100:ILE:HG13	1.65	0.79
32:Bf:107:LYS:HG3	32:Bf:117:LEU:HD11	1.64	0.79
34:B5:774:A:N6	34:B5:786:C:O2	2.15	0.79
16:Ba:3:LYS:NZ	16:Ba:8:ASN:OD1	2.16	0.78
38:A1:733:G:N2	38:A1:736:A:OP2	2.15	0.78
80:DC:163:ALA:HB1	80:DC:167:LEU:H	1.48	0.78
2:BB:138:PHE:HD2	2:BB:214:LYS:HB3	1.48	0.78
34:B5:918:U:H2'	34:B5:919:A:C8	2.17	0.78
40:A4:29:U:H5"	48:AL:27:ASP:HB3	1.65	0.78
47:AJ:92:ARG:HH12	47:AJ:174:LYS:N	1.81	0.78
81:EC:6784:G:N1	81:EC:6812:C:N3	2.30	0.78
20:BF:92:ARG:NH2	20:BF:169:ASN:OD1	2.16	0.78
31:Bg:89:LEU:HD11	31:Bg:113:VAL:HG11	1.64	0.78
38:A1:3353:G:H1'	38:A1:3356:G:H5'	1.65	0.78
34:B5:430:G:H3'	80:DC:391:LYS:HB2	1.63	0.78
58:AV:23:MET:HE3	58:AV:36:ILE:HD11	1.65	0.78
80:DC:108:HIS:O	80:DC:138:GLN:NE2	2.17	0.78
7:BI:104:ILE:HG13	7:BI:105:ASP:H	1.46	0.78
6:BH:67:LEU:HB3	6:BH:71:HIS:CE1	2.19	0.78
38:A1:1235:U:H5"	38:A1:1239:C:H41	1.47	0.78
38:A1:3187:A:OP1	45:AH:23:ARG:NH1	2.16	0.78
38:A1:3214:U:OP2	49:AM:128:ARG:NH1	2.17	0.78
34:B5:647:G:H21	34:B5:687:G:H1	1.31	0.78
20:BF:174:LEU:HD13	20:BF:177:ILE:HD11	1.66	0.78
56:AT:68:THR:HG22	56:AT:69:LYS:H	1.49	0.78
80:DC:433:ARG:HD3	80:DC:444:PRO:HB3	1.64	0.78
38:A1:1422:G:H21	42:AE:5:LYS:NZ	1.82	0.77
5:BG:13:GLN:NE2	34:B5:151:G:N3	2.31	0.77
22:BP:15:HIS:HB3	22:BP:22:LEU:HB2	1.66	0.77
80:DC:10:ARG:NH1	80:DC:14:ASP:OD1	2.18	0.77
80:DC:614:ALA:HA	80:DC:617:ARG:HE	1.48	0.77
25:BS:39:GLY:H	34:B5:1566:U:H5"	1.49	0.77
31:Bg:300:THR:HG22	31:Bg:314:GLN:HG2	1.66	0.77
34:B5:210:A:H62	34:B5:255:U:H3	1.31	0.77
45:AH:182:SER:HA	75:Am:85:LEU:HD11	1.66	0.77
22:BP:8:LYS:HE2	47:AJ:87:LYS:HD3	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:431:C:H3'	80:DC:392:GLY:H	1.49	0.77
38:A1:538:G:H1	38:A1:553:U:H3	1.31	0.77
20:BF:143:ARG:NE	29:Bc:55:VAL:O	2.16	0.77
34:B5:25:C:HO2'	34:B5:366:A:HO2'	1.31	0.77
34:B5:1542:G:H1	34:B5:1568:C:HO2'	1.31	0.77
8:BJ:109:LEU:HD22	8:BJ:148:VAL:HG13	1.66	0.77
38:A1:3343:G:H21	38:A1:3362:A:H2	1.33	0.77
3:BC:131:ILE:HA	3:BC:134:LEU:HD12	1.67	0.77
80:DC:110:ASP:HB3	80:DC:537:HIS:HB2	1.66	0.77
31:Bg:89:LEU:HB2	31:Bg:103:PHE:HB2	1.66	0.77
79:E:67:ILE:HG12	79:E:111:ILE:HD11	1.65	0.77
37:AC:99:MET:SD	37:AC:102:PRO:HA	2.25	0.76
38:A1:2466:G:OP1	79:E:108:ASN:ND2	2.18	0.76
75:Am:80:PRO:HA	75:Am:83:LYS:HB3	1.67	0.76
34:B5:894:U:N3	34:B5:895:G:O6	2.18	0.76
38:A1:2510:U:H2'	38:A1:2511:A:H8	1.48	0.76
80:DC:485:VAL:HG12	80:DC:793:PHE:HE1	1.51	0.76
34:B5:1170:G:O6	34:B5:1469:A:N1	2.19	0.76
34:B5:692:C:OP1	34:B5:696:C:N4	2.18	0.76
56:AT:17:ARG:NH1	56:AT:47:SER:OG	2.16	0.76
38:A1:110:G:OP2	48:AL:73:ARG:NH1	2.19	0.76
20:BF:133:VAL:HG22	20:BF:198:LEU:HD11	1.66	0.76
21:BK:26:ASP:HB3	21:BK:29:GLN:HB2	1.66	0.76
30:Bd:22:ARG:HH12	30:Bd:37:ASN:HB2	1.51	0.76
38:A1:780:A:H61	53:AQ:173:GLU:HB2	1.51	0.76
63:Aa:130:VAL:HG11	63:Aa:145:VAL:HG11	1.67	0.76
38:A1:1348:U:OP1	53:AQ:39:ARG:NH1	2.19	0.76
33:BM:59:LEU:HB2	33:BM:123:VAL:HG22	1.68	0.76
51:AO:27[A]:LEU:O	51:AO:101[A]:ARG:NH1	2.17	0.76
10:BN:46:THR:HB	10:BN:49:GLN:HG2	1.68	0.76
34:B5:1174:C:O2'	34:B5:1196:A:N6	2.18	0.76
81:EC:6868:C:H5"	81:EC:6869:C:H5	1.51	0.75
31:Bg:153:GLN:HG3	31:Bg:201:THR:HA	1.66	0.75
33:BM:36:LEU:HG	33:BM:41:LEU:HD13	1.68	0.75
34:B5:430:G:C4	80:DC:391:LYS:HG2	2.21	0.75
38:A1:2138:A:HO2'	72:Aj:2:GLY:N	1.84	0.75
81:EC:6881:U:H3'	81:EC:6882:G:H4'	1.69	0.75
20:BF:32:GLU:OE1	20:BF:35:GLN:NE2	2.20	0.75
5:BG:23:ARG:NH1	5:BG:41:VAL:O	2.19	0.75
46:AI:82:ARG:NH2	46:AI:83:ASP:OD2	2.19	0.75
79:E:45:ARG:NH2	81:EC:6816:A:OP2	2.19	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:520:A:H2'	34:B5:521:A:C8	2.22	0.75
38:A1:2672:G:H5'	47:AJ:94:ARG:HH21	1.50	0.75
46:AI:30:LYS:HD2	46:AI:63:GLU:HG3	1.68	0.75
81:EC:6783:U:O2	81:EC:6813:A:N6	2.19	0.75
15:BY:20:ARG:HD2	15:BY:74:LEU:HD22	1.67	0.75
37:AC:163:LYS:NZ	38:A1:209:A:O5'	2.20	0.75
38:A1:2768:U:O2	77:Ao:82:GLN:NE2	2.19	0.75
38:A1:2193:U:H5"	38:A1:2194:G:H5'	1.69	0.75
38:A1:3247:G:O2'	51:AO:114[A]:LYS:NZ	2.17	0.75
2:BB:152:ARG:NH2	34:B5:1799:U:O3'	2.20	0.74
34:B5:1588:G:H1	34:B5:1608:U:H3	0.83	0.74
8:BJ:109:LEU:CD2	8:BJ:146:PHE:HB3	2.16	0.74
38:A1:2727:A:OP2	38:A1:2728:G:N2	2.18	0.74
34:B5:766:PSU:H5"	34:B5:767:U:H5"	1.68	0.74
10:BN:46:THR:HG22	10:BN:48:SER:H	1.53	0.74
21:BK:8:ARG:HH22	34:B5:1257:U:H1'	1.52	0.74
28:BZ:50:ILE:HG23	28:BZ:54:VAL:HG11	1.70	0.74
38:A1:1193:A:OP2	51:AO:49[A]:ARG:NH2	2.19	0.74
38:A1:2588:U:OP1	44:AG:241:LYS:NZ	2.20	0.74
4:BE:87:MET:SD	4:BE:100:ARG:NH1	2.58	0.74
4:BE:205:PHE:HD2	4:BE:221:ARG:HD3	1.53	0.74
34:B5:1684:U:O2	34:B5:1717:G:N2	2.19	0.74
38:A1:2842:U:OP1	38:A1:2844:C:N4	2.20	0.74
61:AY:38:GLU:OE2	61:AY:38:GLU:N	2.19	0.74
37:AC:92:ASN:HD22	37:AC:100:PHE:HB2	1.53	0.74
20:BF:80:LYS:HB2	20:BF:83:ARG:HB2	1.69	0.74
38:A1:1863:G:N1	38:A1:1866:C:OP2	2.17	0.74
44:AG:61:GLN:HA	44:AG:64:ILE:HG12	1.68	0.74
55:AS:8:GLN:HE21	55:AS:62:ASN:HD22	1.33	0.74
58:AV:104:ASN:HD21	58:AV:108:GLU:HB2	1.53	0.74
1:BA:119:ARG:NH2	1:BA:140:ASN:O	2.20	0.74
4:BE:141:THR:OG1	4:BE:143:ASP:OD1	2.06	0.74
7:BI:167:ALA:HB2	7:BI:183:ILE:HD12	1.70	0.74
34:B5:114:C:N4	34:B5:245:U:O2	2.19	0.74
80:DC:727:PRO:HG2	80:DC:774:VAL:HG21	1.69	0.74
34:B5:226:A:N3	34:B5:837:G:N1	2.36	0.74
47:AJ:101:ASN:HD22	47:AJ:130:VAL:HA	1.52	0.73
7:BI:137:LYS:NZ	34:B5:196:G:O6	2.21	0.73
44:AG:89:GLU:HA	44:AG:92:LYS:HB2	1.68	0.73
4:BE:57:ASN:HD22	34:B5:446:A:H5"	1.52	0.73
11:BO:120:PRO:HB2	34:B5:887:A:H5"	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1363:A:OP1	43:AF:160:ARG:NH1	2.21	0.73
51:AO:16[A]:VAL:HG22	51:AO:41[A]:LEU:HD23	1.70	0.73
53:AQ:51:ALA:HA	53:AQ:54:LEU:HD23	1.67	0.73
11:BO:18:ARG:HD3	34:B5:918:U:H4'	1.70	0.73
38:A1:1323:G:O3'	55:AS:1:MET:N	2.21	0.73
41:AD:196:ARG:HA	41:AD:199:ILE:HD12	1.69	0.73
22:BP:37:ALA:O	22:BP:42:ARG:NH2	2.20	0.73
38:A1:543:C:HO2'	38:A1:548:G:H1	1.34	0.73
38:A1:1661:G:H2'	38:A1:1662:G:C8	2.24	0.73
44:AG:136:LEU:HD13	44:AG:197:VAL:HG21	1.67	0.73
36:AB:70:ARG:HG2	36:AB:71:GLU:H	1.54	0.73
45:AH:113:GLU:HA	45:AH:125:ASN:HA	1.71	0.73
27:BU:61:LYS:NZ	34:B5:1487:A:OP2	2.21	0.73
45:AH:92:TYR:CD2	45:AH:142:ASP:HB2	2.23	0.73
38:A1:3068:U:OP2	54:AR:62:ARG:NH2	2.19	0.73
38:A1:3276:G:O6	52:AP:171:ARG:NH1	2.22	0.73
40:A4:75:G:OP2	61:AY:74:TYR:OH	2.06	0.73
80:DC:13:MET:HE2	80:DC:99:LEU:HD23	1.71	0.73
8:BJ:132:ARG:NH2	34:B5:533:U:OP2	2.22	0.73
11:BO:20:TYR:HB3	11:BO:27:PHE:HB2	1.70	0.73
15:BY:61:ARG:NH2	34:B5:531:C:O2	2.22	0.72
29:Bc:9:LEU:HB3	29:Bc:33:LEU:HD13	1.70	0.72
31:Bg:131:ILE:HD11	31:Bg:151:VAL:HG11	1.71	0.72
14:BX:107:PHE:CE2	14:BX:114:LYS:HG3	2.23	0.72
11:BO:89:THR:HG22	11:BO:125:SER:HB2	1.72	0.72
34:B5:1236:A:OP1	34:B5:1243:G:N2	2.22	0.72
39:A3:98:C:O2'	43:AF:131:GLU:OE1	2.07	0.72
62:AZ:81:LEU:HD22	69:Ag:90:ILE:HD13	1.69	0.72
5:BG:102:VAL:HG13	5:BG:106:LEU:HD12	1.72	0.72
9:BL:56:LYS:NZ	34:B5:328:A:OP2	2.22	0.72
19:BD:137:VAL:HB	19:BD:185:LYS:HB3	1.71	0.72
23:BQ:80:ALA:HA	23:BQ:83:GLN:HE21	1.54	0.72
34:B5:273:G:O6	34:B5:283:U:O2	2.07	0.72
15:BY:63:GLN:NE2	15:BY:66:GLY:O	2.18	0.72
22:BP:10:ARG:HG2	47:AJ:88:GLU:HG3	1.71	0.72
34:B5:513:U:H2'	34:B5:514:G:C8	2.24	0.72
49:AM:48:GLY:HA3	49:AM:53:VAL:HB	1.71	0.72
2:BB:70:LEU:O	2:BB:74:GLN:N	2.22	0.72
25:BS:134:ARG:HB2	25:BS:136:GLN:HE22	1.55	0.72
34:B5:1229:G:N2	34:B5:1255:G:O2'	2.22	0.72
37:AC:308:LYS:NZ	38:A1:609:G:N7	2.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2508:U:H2'	38:A1:2509:U:C6	2.24	0.72
38:A1:2899:C:N3	45:AH:173:ARG:NH1	2.36	0.72
19:BD:209:ILE:O	24:BR:20:TYR:OH	2.05	0.72
31:Bg:59:ARG:HH21	31:Bg:96:THR:HG23	1.53	0.72
38:A1:1174:G:N2	51:AO:87[A]:MET:SD	2.63	0.72
38:A1:3228:C:OP1	49:AM:137:LYS:NZ	2.23	0.72
50:AN:8:GLU:HB2	50:AN:50:ARG:HH22	1.55	0.72
66:Ad:79:ARG:HH12	66:Ad:88:PRO:HB2	1.53	0.72
71:Ai:53:TYR:OH	71:Ai:86:LYS:NZ	2.22	0.72
80:DC:737:GLU:HG2	80:DC:738:GLN:HG2	1.72	0.72
1:BA:42:PRO:HD3	24:BR:126:ALA:HA	1.71	0.72
26:BT:73:VAL:O	26:BT:77:ASN:ND2	2.23	0.72
42:AE:105:TYR:OH	42:AE:137:ASP:OD2	2.06	0.72
4:BE:104:ASP:HB3	4:BE:110:ALA:HB2	1.71	0.71
23:BQ:73:GLY:H	23:BQ:76:SER:HB2	1.52	0.71
80:DC:818:ILE:O	80:DC:822:ALA:N	2.21	0.71
13:BW:56:HIS:O	34:B5:861:U:O2'	2.08	0.71
4:BE:253:ASP:OD1	4:BE:256:ARG:NH2	2.23	0.71
6:BH:41:LEU:HB2	6:BH:70:PHE:HE1	1.55	0.71
7:BI:11:ARG:NH1	34:B5:318:U:O3'	2.22	0.71
27:BU:17:GLN:HG2	27:BU:96:PRO:HG3	1.72	0.71
30:Bd:33:LYS:NZ	34:B5:1487:A:OP1	2.23	0.71
56:AT:75:ILE:HD11	56:AT:88:ARG:HH21	1.54	0.71
66:Ad:87:ASN:ND2	66:Ad:89:LEU:O	2.24	0.71
5:BG:160:ARG:HH12	34:B5:68:A:H5'	1.55	0.71
20:BF:112:ARG:NH2	23:BQ:42:GLU:OE2	2.24	0.71
33:BM:82:PRO:HG2	33:BM:83:GLU:N	2.00	0.71
17:Bb:51:GLN:NE2	34:B5:870:C:O2	2.23	0.71
31:Bg:113:VAL:HG12	31:Bg:124:SER:HA	1.72	0.71
38:A1:1598:G:OP2	69:Ag:31:ARG:NH2	2.23	0.71
38:A1:2510:U:H2'	38:A1:2511:A:C8	2.26	0.71
42:AE:52:VAL:HG21	42:AE:65:ILE:HD12	1.71	0.71
11:BO:18:ARG:HA	11:BO:82:LYS:HB3	1.73	0.71
26:BT:12:GLN:NE2	34:B5:1479:A:N3	2.39	0.71
36:AB:70:ARG:HH11	58:AV:88:ARG:HH22	1.39	0.71
1:BA:111:ILE:HD11	34:B5:1292:G:H21	1.55	0.71
4:BE:200:ARG:NH2	34:B5:739:G:O6	2.23	0.71
8:BJ:106:GLU:HA	8:BJ:111:THR:HG21	1.72	0.71
10:BN:3:ARG:NH2	34:B5:867:G:OP2	2.23	0.71
26:BT:70:GLN:HG3	26:BT:120:GLY:HA3	1.72	0.71
34:B5:649:U:H3	34:B5:684:A:H62	0.77	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:371:G:N1	38:A1:374:A:OP2	2.21	0.71
57:AU:43:VAL:HB	57:AU:49:ASN:HB3	1.71	0.71
75:Am:104:PRO:HG2	75:Am:107:ALA:HB2	1.70	0.71
15:BY:11:LYS:HB3	15:BY:24:VAL:HG12	1.71	0.71
16:Ba:37:LYS:O	16:Ba:38:ARG:NH1	2.23	0.71
37:AC:73:ARG:NH1	38:A1:2814:G:OP1	2.23	0.71
38:A1:1234:G:H4'	38:A1:1236:G:H22	1.54	0.71
50:AN:121:VAL:HG11	50:AN:131:GLU:HG3	1.73	0.71
38:A1:649:A:OP2	38:A1:2868:U:O2'	2.09	0.71
38:A1:769:G:O2'	48:AL:168:ARG:NH2	2.24	0.71
50:AN:140:LYS:NZ	70:Ah:96:GLU:OE2	2.24	0.71
79:E:5:THR:HB	79:E:8:GLN:HB3	1.73	0.71
80:DC:162:ARG:NH2	83:DC:901:GDP:O2'	2.24	0.71
80:DC:380:LEU:HD11	80:DC:469:LEU:HD12	1.72	0.71
12:BV:3:ASN:HD21	12:BV:7:GLN:HB2	1.55	0.71
36:AB:315:GLY:HA2	38:A1:3379:C:H4'	1.71	0.71
38:A1:1213:G:H4'	55:AS:90:MET:HB2	1.72	0.71
39:A3:77:G:N2	39:A3:78:U:O4	2.24	0.71
80:DC:504:LEU:O	80:DC:508:LEU:N	2.24	0.71
8:BJ:133:HIS:NE2	34:B5:512:A:O2'	2.24	0.70
11:BO:81:VAL:HG11	11:BO:102:LEU:HD11	1.72	0.70
38:A1:1671:C:OP1	54:AR:60:LYS:NZ	2.24	0.70
47:AJ:87:LYS:NZ	47:AJ:104:PHE:HB2	2.04	0.70
4:BE:258:GLN:HE22	34:B5:786:C:H5'	1.56	0.70
38:A1:269:G:H5"	50:AN:14:LYS:HE2	1.73	0.70
80:DC:123:ASP:O	80:DC:352:ARG:NH2	2.24	0.70
2:BB:23:PRO:O	2:BB:27:LYS:NZ	2.22	0.70
38:A1:2836:C:H5	38:A1:2852:C:H42	1.36	0.70
23:BQ:117:LEU:HG	23:BQ:118:ILE:HG23	1.74	0.70
27:BU:61:LYS:HB3	27:BU:86:ILE:HB	1.73	0.70
34:B5:1393:C:H2'	34:B5:1394:G:H8	1.57	0.70
34:B5:1693:A:H61	34:B5:1707:A:H8	1.40	0.70
41:AD:236:LEU:HD23	41:AD:239:ILE:HD11	1.72	0.70
43:AF:121:LYS:HB2	56:AT:133:ALA:HB3	1.73	0.70
55:AS:42:TRP:HB3	55:AS:46:GLN:HE22	1.54	0.70
1:BA:140:ASN:ND2	12:BV:31:SER:O	2.25	0.70
14:BX:56:LYS:HD2	14:BX:93:LEU:HD11	1.73	0.70
22:BP:97:TYR:OH	34:B5:1211:A:N3	2.25	0.70
2:BB:180:THR:HG22	2:BB:182:ALA:H	1.56	0.70
7:BI:76:THR:HG22	7:BI:108:PRO:HG2	1.73	0.70
14:BX:70:LYS:NZ	34:B5:567:A:OP1	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BU:84:MET:HE3	27:BU:86:ILE:HD11	1.72	0.70
34:B5:431:C:H6	80:DC:391:LYS:N	1.90	0.70
35:AA:101:VAL:HG22	35:AA:165:VAL:HG22	1.73	0.70
38:A1:591:G:N2	38:A1:612:U:OP1	2.23	0.70
38:A1:1606:U:O4	69:Ag:9:ARG:NE	2.21	0.70
6:BH:67:LEU:O	6:BH:71:HIS:ND1	2.24	0.70
10:BN:83:GLU:OE2	10:BN:83:GLU:N	2.22	0.70
38:A1:512:U:H3	38:A1:579:G:H1	1.40	0.70
51:AO:22[A]:VAL:HG21	51:AO:120[A]:VAL:HG11	1.74	0.70
73:Ak:27:ILE:HG23	73:Ak:39:ARG:HD3	1.73	0.70
73:Ak:40:GLN:NE2	73:Ak:41:THR:O	2.25	0.70
80:DC:45:ILE:HD11	80:DC:78:TYR:HB2	1.72	0.70
8:BJ:122:VAL:HG23	18:Be:37:ARG:HH12	1.56	0.70
34:B5:431:C:O5'	80:DC:392:GLY:N	2.25	0.70
38:A1:1422:G:H21	42:AE:5:LYS:HZ2	1.37	0.70
70:Ah:15:GLU:OE2	70:Ah:15:GLU:N	2.22	0.70
38:A1:158:G:H2'	38:A1:159:A:H8	1.57	0.70
38:A1:1404:G:N2	38:A1:1407:A:OP2	2.25	0.70
80:DC:171:LYS:HG2	80:DC:274:ASN:HD21	1.55	0.70
38:A1:1156:C:OP2	43:AF:94:LYS:NZ	2.23	0.70
38:A1:1942:U:OP2	54:AR:74:ARG:NE	2.22	0.70
38:A1:1834:U:OP2	74:Al:10:LYS:NZ	2.23	0.69
60:AX:57:LEU:HD11	60:AX:89:LYS:HB2	1.74	0.69
4:BE:192:ILE:HG22	4:BE:243:GLY:HA3	1.73	0.69
23:BQ:14:LYS:NZ	34:B5:1610:G:N7	2.39	0.69
38:A1:1807:G:O2'	38:A1:2559:U:O4	2.07	0.69
43:AF:98:LYS:HG2	43:AF:129:LEU:HD21	1.74	0.69
6:BH:129:LEU:HD21	6:BH:169:PHE:HB3	1.75	0.69
9:BL:109:VAL:HG12	9:BL:137:PHE:HB2	1.73	0.69
31:Bg:240:VAL:HG22	31:Bg:256:THR:HG22	1.74	0.69
34:B5:895:G:H2'	34:B5:896:U:C6	2.26	0.69
38:A1:1786:G:H2'	38:A1:1787:A:C8	2.27	0.69
46:AI:182:ILE:HA	46:AI:185:ARG:HG2	1.73	0.69
34:B5:1039:A:HO2'	34:B5:1040:G:H8	1.39	0.69
38:A1:1634:G:N7	62:AZ:17:ARG:NH2	2.40	0.69
38:A1:3172:A:N7	68:Af:92:LYS:NZ	2.41	0.69
6:BH:141:ARG:HG2	13:BW:49:GLU:OE1	1.93	0.69
11:BO:17:ALA:HB3	11:BO:81:VAL:HA	1.74	0.69
13:BW:119:LYS:NZ	34:B5:688:G:OP2	2.26	0.69
26:BT:37:VAL:HG22	26:BT:39:THR:H	1.57	0.69
34:B5:1125:A:OP1	76:An:18:ARG:NH2	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:31:C:OP2	50:AN:188:ARG:NH2	2.21	0.69
38:A1:760:G:O2'	38:A1:770:G:N2	2.26	0.69
80:DC:360:PRO:HB2	80:DC:363:ASP:HB2	1.73	0.69
13:BW:78:ARG:HB3	13:BW:124:LYS:HB3	1.75	0.69
24:BR:45:ARG:NH2	34:B5:1331:A:OP1	2.25	0.69
38:A1:68:C:OP2	38:A1:301:G:N2	2.25	0.69
38:A1:2697:A:H2'	38:A1:2698:G:C8	2.28	0.69
40:A4:143:U:OP1	50:AN:38:ARG:NH2	2.24	0.69
61:AY:111:LEU:HD21	61:AY:126:LEU:HD11	1.74	0.69
15:BY:104:SER:OG	15:BY:107:GLN:NE2	2.26	0.69
34:B5:430:G:N3	80:DC:390:ASP:HB2	2.07	0.69
38:A1:310:U:H3	38:A1:2779:A:H61	1.41	0.69
80:DC:79:SER:HB2	80:DC:81:MET:HE3	1.75	0.69
7:BI:32:GLN:HE22	34:B5:1728:A:H1'	1.58	0.69
10:BN:114:ARG:NH2	34:B5:939:A:OP1	2.24	0.69
30:Bd:13:ARG:NH2	34:B5:1554:U:OP1	2.26	0.69
43:AF:48:ASN:ND2	43:AF:182:ASP:OD2	2.26	0.69
47:AJ:17:LEU:HD13	47:AJ:76:ALA:HB1	1.74	0.69
80:DC:745:SER:O	80:DC:749:LYS:NZ	2.25	0.69
4:BE:251:GLU:N	4:BE:251:GLU:OE2	2.26	0.69
31:Bg:270:LEU:HD21	31:Bg:273:ASP:HB2	1.75	0.69
34:B5:775:G:O6	34:B5:785:U:O2	2.11	0.69
38:A1:286:U:O2'	50:AN:179:LYS:O	2.11	0.69
38:A1:992:A:H5"	56:AT:43:LYS:HD2	1.75	0.69
38:A1:2454:G:O5'	38:A1:2484:A:N6	2.26	0.69
47:AJ:87:LYS:HZ2	47:AJ:104:PHE:CB	2.04	0.69
48:AL:4:SER:OG	48:AL:5:LYS:NZ	2.26	0.69
6:BH:56:LYS:HB2	6:BH:88:ARG:HE	1.58	0.69
7:BI:138:ASN:HA	7:BI:141:ARG:HE	1.58	0.69
38:A1:1201:C:H42	38:A1:2857:C:H5"	1.58	0.69
2:BB:87:ARG:O	2:BB:99:ASN:N	2.25	0.68
38:A1:1676:A:OP2	57:AU:72:SER:OG	2.11	0.68
61:AY:70:ILE:HD13	61:AY:82:VAL:HG12	1.75	0.68
80:DC:163:ALA:HB3	80:DC:167:LEU:HD13	1.75	0.68
38:A1:212:G:OP2	61:AY:2:ALA:N	2.26	0.68
38:A1:2971:A:H2'	46:AI:110:ARG:HH12	1.58	0.68
14:BX:110:LYS:NZ	34:B5:19:A:OP1	2.26	0.68
80:DC:638:PRO:HG2	80:DC:680:GLU:HG3	1.75	0.68
80:DC:725:GLN:HG2	80:DC:803:THR:HA	1.75	0.68
3:BC:49:LYS:HB3	3:BC:243:TYR:HD2	1.58	0.68
38:A1:3016:A:H2'	38:A1:3017:A:H8	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BN:104:ARG:NH2	34:B5:950:C:O2'	2.25	0.68
19:BD:163:PRO:HA	19:BD:166:ASP:HB2	1.74	0.68
35:AA:70:ARG:NH2	38:A1:1580:A:OP1	2.22	0.68
38:A1:98:G:N7	48:AL:13:HIS:NE2	2.41	0.68
38:A1:2468:A:O2'	38:A1:2477:G:N2	2.27	0.68
38:A1:3383:G:H21	66:Ad:105:GLN:HE22	1.38	0.68
39:A3:27:A:H2'	39:A3:28:C:C6	2.27	0.68
3:BC:119:LYS:HD2	3:BC:119:LYS:H	1.55	0.68
5:BG:70:PRO:O	5:BG:98:ARG:NH2	2.27	0.68
11:BO:13:VAL:HG12	11:BO:76:ILE:HD12	1.76	0.68
34:B5:699:U:H3	34:B5:741:C:H41	1.39	0.68
38:A1:3348:G:O6	38:A1:3357:U:O4	2.11	0.68
45:AH:176:LEU:HD23	75:Am:90:ASN:HD22	1.59	0.68
65:Ac:51:LEU:HD21	69:Ag:90:ILE:HG21	1.76	0.68
80:DC:650:THR:HG21	80:DC:691:VAL:HG12	1.75	0.68
23:BQ:132:LYS:NZ	34:B5:1603:U:OP2	2.26	0.68
31:Bg:29:GLN:HE21	31:Bg:32:LEU:HD23	1.57	0.68
34:B5:634:G:N1	34:B5:965:U:OP2	2.23	0.68
38:A1:1280:C:H2'	38:A1:1281:G:C8	2.28	0.68
80:DC:42:ARG:NH2	80:DC:329:PRO:HB2	2.08	0.68
80:DC:694:HIS:O	80:DC:700:ARG:NH1	2.27	0.68
1:BA:98:ILE:HD11	1:BA:116:LYS:HD2	1.73	0.68
7:BI:165:LEU:HB3	7:BI:183:ILE:HD11	1.74	0.68
25:BS:145:ARG:HH12	34:B5:1172:G:H5"	1.58	0.68
36:AB:220:VAL:O	36:AB:334:ARG:NH1	2.27	0.68
38:A1:799:G:O2'	48:AL:18:TRP:NE1	2.19	0.68
38:A1:3042:U:OP2	38:A1:3092:C:N4	2.25	0.68
43:AF:78:GLU:OE2	43:AF:78:GLU:N	2.22	0.68
1:BA:138:TYR:OH	34:B5:1296:A:OP1	2.11	0.68
2:BB:88:VAL:HG12	2:BB:98:THR:HG22	1.76	0.68
19:BD:137:VAL:HG22	19:BD:151:LYS:HG2	1.76	0.68
34:B5:431:C:C6	80:DC:391:LYS:N	2.61	0.68
34:B5:800:U:H2'	34:B5:801:G:H8	1.59	0.68
34:B5:1477:G:H2'	34:B5:1478:G:H8	1.57	0.68
47:AJ:82:ARG:HH22	47:AJ:109:HIS:HE1	1.42	0.68
51:AO:77[A]:SER:N	51:AO:106[A]:GLU:OE2	2.24	0.68
10:BN:39:LYS:HA	10:BN:42:ARG:HG2	1.76	0.68
38:A1:2433:U:H1'	50:AN:125:SER:HB3	1.75	0.68
38:A1:3232:G:O6	38:A1:3255:U:O2	2.12	0.68
11:BO:40:ALA:HB2	11:BO:70:LYS:HD3	1.74	0.67
37:AC:119:ARG:NH2	38:A1:696:C:OP2	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:BC:83:ILE:HD11	3:BC:125:ILE:HD11	1.75	0.67
38:A1:2094:C:H2'	38:A1:2095:G:H8	1.58	0.67
58:AV:14:SER:O	58:AV:81:GLN:NE2	2.27	0.67
22:BP:44:ARG:NH1	22:BP:82:ASN:O	2.25	0.67
26:BT:126:GLU:OE2	26:BT:130:ARG:NH1	2.26	0.67
37:AC:116:ASN:ND2	38:A1:674:G:O2'	2.27	0.67
38:A1:938:C:OP2	63:Aa:26:ARG:NH1	2.27	0.67
43:AF:163:LEU:HA	43:AF:168:ILE:HD11	1.76	0.67
47:AJ:91:LEU:HG	47:AJ:92:ARG:H	1.59	0.67
80:DC:263:ASP:HB3	80:DC:269:LEU:HD21	1.76	0.67
80:DC:784:LEU:O	80:DC:788:THR:OG1	2.11	0.67
3:BC:219:GLY:O	12:BV:25:LYS:NZ	2.27	0.67
5:BG:67:VAL:HB	5:BG:99:GLY:HA2	1.76	0.67
47:AJ:53:THR:HG22	47:AJ:60:ARG:HA	1.76	0.67
52:AP:40:GLU:HA	52:AP:113:TYR:HA	1.76	0.67
8:BJ:143:ILE:HG13	8:BJ:146:PHE:HB2	1.76	0.67
27:BU:69:LYS:HG2	34:B5:1280:4AC:H5"	1.77	0.67
34:B5:1280:4AC:H2'	34:B5:1281:G:C8	2.29	0.67
34:B5:1690:G:N7	34:B5:1707:A:N6	2.42	0.67
7:BI:59:ARG:HH22	34:B5:1678:A:P	2.18	0.67
8:BJ:131:GLN:NE2	34:B5:513:U:O2	2.27	0.67
11:BO:12:GLN:HE22	16:Ba:58:VAL:HG11	1.60	0.67
34:B5:1177:C:O2'	34:B5:1190:C:N4	2.28	0.67
47:AJ:16:LYS:HB3	47:AJ:72:ARG:HG2	1.77	0.67
2:BB:27:LYS:HG3	2:BB:47:LEU:HD13	1.77	0.67
15:BY:7:ILE:HG13	15:BY:27:VAL:HG23	1.75	0.67
31:Bg:242:SER:H	31:Bg:255:ALA:HB3	1.58	0.67
68:Af:16:TYR:OH	68:Af:89:LEU:O	2.12	0.67
4:BE:149:TYR:OH	5:BG:201:GLN:NE2	2.27	0.67
5:BG:56:ASN:HB2	5:BG:108:VAL:HG22	1.75	0.67
14:BX:17:VAL:HG22	14:BX:20:ARG:HH22	1.60	0.67
15:BY:124:ARG:NH2	34:B5:151:G:N7	2.43	0.67
20:BF:205:SER:H	20:BF:211:ILE:HD12	1.60	0.67
34:B5:340:U:H2'	34:B5:341:A:H8	1.60	0.67
34:B5:891:A:O2'	35:AA:147:ARG:NH2	2.28	0.67
35:AA:54:ARG:NH2	38:A1:2176:U:OP1	2.27	0.67
38:A1:2258:PSU:H3'	38:A1:2259:A:C8	2.29	0.67
40:A4:142:C:OP1	50:AN:38:ARG:NH1	2.28	0.67
81:EC:6805:C:H1'	81:EC:6882:G:H8	1.58	0.67
4:BE:100:ARG:HH21	4:BE:112:HIS:CD2	2.12	0.67
22:BP:32:ASP:HA	22:BP:35:LYS:HD3	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:AE:38:THR:HG22	42:AE:90:LYS:HG2	1.77	0.67
53:AQ:170:ARG:NH1	63:Aa:56:VAL:O	2.28	0.67
80:DC:727:PRO:HA	80:DC:801:TRP:HA	1.76	0.67
5:BG:178:LEU:O	5:BG:183:ARG:NH1	2.28	0.67
34:B5:198:A:H3'	34:B5:199:G:H8	1.60	0.67
34:B5:1593:A:H2'	34:B5:1594:G:H8	1.60	0.67
38:A1:900:G:H1'	38:A1:1589:A:N6	2.10	0.67
80:DC:323:VAL:HA	80:DC:326:LYS:HE3	1.77	0.67
18:Be:20:LYS:NZ	18:Be:21:VAL:O	2.29	0.66
18:Be:31:LYS:HA	18:Be:35:TYR:HB2	1.76	0.66
31:Bg:103:PHE:HE1	31:Bg:138:GLY:HA2	1.61	0.66
37:AC:193:LYS:NZ	40:A4:21:C:OP1	2.27	0.66
38:A1:655:C:H2'	38:A1:656:A:C8	2.29	0.66
42:AE:51:ARG:O	42:AE:72:ASN:ND2	2.27	0.66
8:BJ:137:GLY:HA2	8:BJ:155:HIS:HB3	1.74	0.66
9:BL:103:ARG:NH1	34:B5:308:C:OP2	2.27	0.66
77:Ao:29:LYS:HE3	77:Ao:30:ALA:H	1.58	0.66
4:BE:103:TYR:O	4:BE:182:TYR:OH	2.13	0.66
38:A1:520:U:OP2	43:AF:70:LYS:NZ	2.19	0.66
38:A1:1226:G:H2'	38:A1:1227:C:C6	2.31	0.66
40:A4:103:G:OP2	40:A4:105:A:O2'	2.14	0.66
40:A4:155:A:H5'	44:AG:185:ARG:HD2	1.76	0.66
60:AX:46:TYR:HD1	70:Ah:75:TYR:HB3	1.59	0.66
38:A1:2218:G:H2'	38:A1:2219:A:H8	1.60	0.66
39:A3:8:G:O6	41:AD:21:ARG:NH2	2.27	0.66
40:A4:95:G:O2'	72:Aj:81:GLY:O	2.11	0.66
34:B5:1368:G:N2	34:B5:1372:U:O2	2.28	0.66
38:A1:3092:C:O2'	38:A1:3094:A:OP2	2.11	0.66
48:AL:165:SER:O	48:AL:168:ARG:N	2.28	0.66
81:EC:6778:C:OP2	81:EC:6779:C:N4	2.29	0.66
1:BA:12:GLU:HB3	24:BR:93:LEU:HD23	1.78	0.66
1:BA:52:LYS:HD2	12:BV:82:VAL:HG23	1.77	0.66
34:B5:163:G:OP2	34:B5:163:G:N2	2.23	0.66
38:A1:2971:A:H2'	46:AI:110:ARG:NH1	2.11	0.66
38:A1:3343:G:O2'	38:A1:3362:A:N6	2.26	0.66
40:A4:62:C:OP1	70:Ah:49:LYS:NZ	2.28	0.66
10:BN:37:ILE:HG23	10:BN:50:ILE:HG21	1.76	0.66
25:BS:14:ILE:HD12	25:BS:21:ASN:HD21	1.60	0.66
31:Bg:220:ILE:HD11	31:Bg:240:VAL:HG21	1.77	0.66
34:B5:800:U:H2'	34:B5:801:G:C8	2.30	0.66
38:A1:600:G:N2	38:A1:603:A:OP2	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2160:G:H2'	38:A1:2161:G:H8	1.61	0.66
38:A1:2252:A:N6	38:A1:2264:PSU:HN3	1.93	0.66
49:AM:47:ASP:OD2	49:AM:55:ARG:NH1	2.28	0.66
53:AQ:92:ARG:HG3	63:Aa:76:ASP:HB2	1.77	0.66
61:AY:50:ILE:HD13	61:AY:80:VAL:HG11	1.78	0.66
3:BC:140:ARG:HB3	3:BC:221:THR:HB	1.77	0.66
6:BH:83:LYS:O	6:BH:86:GLN:NE2	2.29	0.66
26:BT:117:SER:OG	26:BT:121:GLY:O	2.13	0.66
38:A1:1188:U:OP1	38:A1:1210:U:O2'	2.12	0.66
38:A1:3275:U:O2'	68:Af:99:ARG:NH1	2.29	0.66
69:Ag:41:ARG:NH2	69:Ag:51:LEU:O	2.29	0.66
79:E:9:VAL:HA	79:E:12:HIS:CE1	2.31	0.66
80:DC:22:MET:HA	80:DC:122:THR:HB	1.78	0.66
80:DC:610:ASP:O	80:DC:615:ARG:NH2	2.28	0.66
23:BQ:58:ASP:O	23:BQ:61:SER:OG	2.14	0.66
26:BT:133:ASP:OD2	34:B5:1359:C:O2'	2.13	0.66
38:A1:86:G:O2'	38:A1:98:G:O6	2.12	0.66
4:BE:246:LEU:HB3	4:BE:250:GLU:OE2	1.96	0.66
20:BF:143:ARG:NH1	20:BF:162:VAL:O	2.29	0.66
34:B5:1463:C:H2'	34:B5:1464:G:H8	1.61	0.66
38:A1:1114:U:OP1	63:Aa:23:GLY:N	2.26	0.66
41:AD:91:GLY:O	41:AD:94:ASN:ND2	2.29	0.66
69:Ag:58:ARG:HB2	69:Ag:61:GLN:NE2	2.11	0.66
2:BB:199:ASN:O	2:BB:202:LYS:NZ	2.27	0.65
3:BC:102:VAL:HG11	3:BC:129:ILE:HD13	1.76	0.65
6:BH:67:LEU:HB3	6:BH:71:HIS:HE1	1.60	0.65
31:Bg:180:ALA:HB3	31:Bg:190:ALA:HB3	1.77	0.65
38:A1:1805:C:H2'	38:A1:1806:A:H8	1.61	0.65
45:AH:129:ARG:H	45:AH:157:ASN:HD21	1.44	0.65
2:BB:69:CYS:SG	2:BB:71:ALA:N	2.70	0.65
2:BB:155:TYR:OH	34:B5:932:U:OP2	2.11	0.65
3:BC:157:LYS:HE2	3:BC:170:ILE:HG23	1.77	0.65
5:BG:57:ASP:OD1	5:BG:61:PHE:N	2.26	0.65
27:BU:101:LYS:O	27:BU:104:THR:OG1	2.11	0.65
34:B5:816:G:H22	34:B5:855:A:H2	1.43	0.65
34:B5:1367:G:N1	34:B5:1368:G:O6	2.29	0.65
38:A1:2852:C:N3	46:AI:158:LYS:NZ	2.37	0.65
70:Ah:102:GLU:HG3	70:Ah:105:ARG:HH21	1.62	0.65
31:Bg:42:LEU:HB2	31:Bg:61:PHE:HB2	1.78	0.65
34:B5:1350:U:H2'	34:B5:1351:G:H8	1.62	0.65
36:AB:17:LEU:HD11	36:AB:233:TRP:HH2	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:116:ARG:NH2	38:A1:3315:G:OP1	2.27	0.65
38:A1:353:G:O6	72:Aj:55:ARG:NH2	2.29	0.65
38:A1:1814:A:H1'	38:A1:1817:G:H21	1.59	0.65
38:A1:3177:G:O2'	38:A1:3179:U:OP1	2.14	0.65
4:BE:11:ARG:NH1	4:BE:21:ASP:O	2.28	0.65
5:BG:92:ARG:O	34:B5:405:C:O2'	2.14	0.65
16:Ba:44:ILE:HG23	16:Ba:45:VAL:HG23	1.78	0.65
38:A1:1493:G:N2	38:A1:1493:G:OP2	2.29	0.65
6:BH:23:ALA:HB1	6:BH:84:LYS:HD2	1.78	0.65
6:BH:122:HIS:HD2	6:BH:125:ILE:HD12	1.62	0.65
45:AH:101:VAL:HG12	45:AH:114:VAL:HG22	1.77	0.65
5:BG:138:ALA:HA	5:BG:175:ILE:HD11	1.78	0.65
5:BG:159:ARG:HH21	5:BG:170:THR:HG23	1.62	0.65
21:BK:49:LEU:HD21	21:BK:54:TYR:HB2	1.78	0.65
34:B5:1736:G:H2'	34:B5:1737:G:C8	2.32	0.65
38:A1:691:A:N1	40:A4:28:C:O2'	2.29	0.65
38:A1:2853:A:H1'	46:AI:158:LYS:HE3	1.78	0.65
5:BG:141:ILE:HD12	5:BG:175:ILE:HD12	1.77	0.65
34:B5:534:A:H3'	34:B5:535:A:H8	1.60	0.65
34:B5:898:A:N6	34:B5:914:G:H21	1.95	0.65
34:B5:1218:G:N1	34:B5:1444:A:OP2	2.23	0.65
38:A1:3308:C:N3	52:AP:69:ARG:NH2	2.40	0.65
80:DC:765:LEU:HA	80:DC:791:GLN:HE21	1.62	0.65
81:EC:6775:U:OP1	81:EC:6818:G:O2'	2.14	0.65
2:BB:47:LEU:HD11	11:BO:37:GLU:HG2	1.78	0.65
5:BG:3:LEU:HD12	5:BG:111:LEU:HD21	1.78	0.65
16:Ba:39:MET:HE3	16:Ba:41:ILE:HD11	1.79	0.65
34:B5:1171:A:H2'	34:B5:1172:G:C8	2.32	0.65
37:AC:60:THR:OG1	38:A1:364:G:OP1	2.12	0.65
38:A1:1049:C:OP1	46:AI:22:TYR:OH	2.09	0.65
38:A1:2469:G:N1	38:A1:2477:G:O6	2.28	0.65
41:AD:295:GLY:O	41:AD:297:GLN:NE2	2.23	0.65
2:BB:90:GLU:OE2	2:BB:92:GLN:NE2	2.23	0.65
4:BE:30:ARG:NH2	34:B5:298:C:O3'	2.29	0.65
5:BG:190:GLN:HA	5:BG:193:LEU:HD12	1.78	0.65
24:BR:2:GLY:N	34:B5:1311:U:O3'	2.30	0.65
34:B5:1132:A:H2'	34:B5:1133:A:H8	1.62	0.65
38:A1:271:C:O2	71:Ai:82:ARG:NH2	2.18	0.65
41:AD:163:LEU:HD21	41:AD:175:HIS:CG	2.32	0.65
44:AG:224:ASP:OD1	44:AG:225:LYS:N	2.30	0.65
45:AH:90:MET:HE2	45:AH:179:ILE:HG22	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BI:137:LYS:O	34:B5:190:C:N4	2.30	0.65
12:BV:64:GLU:N	12:BV:64:GLU:OE2	2.30	0.65
15:BY:8:ARG:NH2	15:BY:26:ASP:OD2	2.25	0.65
23:BQ:95:LYS:O	31:Bg:59:ARG:NH2	2.27	0.65
26:BT:102:ARG:NH2	34:B5:1502:G:N7	2.43	0.65
31:Bg:248:ASN:ND2	31:Bg:297:ASP:O	2.30	0.65
36:AB:236:LYS:HG2	38:A1:2880:PSU:H5'	1.79	0.65
38:A1:589:A:H1'	38:A1:1337:A:H5"	1.79	0.65
80:DC:655:TYR:HB2	80:DC:693:LEU:HD22	1.78	0.65
1:BA:157:ASP:OD1	12:BV:60:ARG:NH1	2.30	0.64
7:BI:7:SER:O	7:BI:18:ARG:NH2	2.30	0.64
7:BI:50:GLY:HA2	34:B5:397:A:H4'	1.78	0.64
8:BJ:44:ARG:NH1	34:B5:474:A:OP2	2.26	0.64
20:BF:121:ILE:HG21	20:BF:132:VAL:HG11	1.78	0.64
34:B5:919:A:H2'	34:B5:920:U:C6	2.32	0.64
35:AA:180:LEU:HD22	78:Ap:26:VAL:HG11	1.78	0.64
36:AB:266:ARG:NH2	38:A1:2392:C:O2'	2.26	0.64
37:AC:220:ARG:NH1	61:AY:4:GLN:OE1	2.30	0.64
52:AP:172:GLN:NE2	68:Af:60:ARG:O	2.26	0.64
7:BI:178:ARG:NH1	34:B5:207:U:O2	2.30	0.64
19:BD:75:LYS:NZ	21:BK:18:GLU:OE2	2.31	0.64
20:BF:124:LEU:HD21	81:EC:6862:G:H5"	1.79	0.64
32:Bf:119:ARG:HD2	32:Bf:139:LEU:HD22	1.78	0.64
34:B5:431:C:C3'	80:DC:392:GLY:H	2.09	0.64
34:B5:472:U:O2'	34:B5:769:A:N3	2.29	0.64
3:BC:97:ARG:NH1	3:BC:117:THR:OG1	2.30	0.64
4:BE:90:ILE:HB	4:BE:99:PHE:HB2	1.78	0.64
34:B5:1476:C:H2'	34:B5:1477:G:H8	1.63	0.64
38:A1:196:G:N1	38:A1:199:A:OP2	2.30	0.64
79:E:77:ALA:HB1	79:E:82:VAL:HG23	1.79	0.64
81:EC:6794:C:O2'	81:EC:6890:A:N1	2.27	0.64
4:BE:182:TYR:HD1	4:BE:192:ILE:HD13	1.62	0.64
5:BG:139:ASN:ND2	34:B5:143:G:OP2	2.31	0.64
8:BJ:144:PRO:HD2	34:B5:474:A:H5"	1.79	0.64
9:BL:40:LEU:HD13	9:BL:70:ILE:HD11	1.79	0.64
26:BT:38:LYS:O	26:BT:39:THR:OG1	2.15	0.64
34:B5:1027:A:OP1	34:B5:1789:G:O2'	2.14	0.64
38:A1:49:A:OP1	48:AL:16:LYS:NZ	2.28	0.64
38:A1:1517:G:H5"	74:Al:22:PRO:HG3	1.79	0.64
38:A1:1729:A:N6	78:Ap:41:PHE:O	2.27	0.64
41:AD:55:PHE:CD2	41:AD:60:ILE:HD12	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:84:ARG:HH22	1:BA:205:ARG:HG2	1.62	0.64
11:BO:38:THR:HG21	34:B5:895:G:H21	1.61	0.64
11:BO:127:ARG:HH22	16:Ba:22:ARG:HH12	1.42	0.64
20:BF:92:ARG:NH2	34:B5:1613:U:OP1	2.24	0.64
21:BK:6:GLU:OE1	21:BK:6:GLU:N	2.24	0.64
34:B5:564:G:N2	34:B5:577:G:OP1	2.27	0.64
34:B5:1280:4AC:H2'	34:B5:1281:G:H8	1.62	0.64
38:A1:1074:U:O2'	64:Ab:42:ASN:ND2	2.30	0.64
38:A1:1618:G:O2'	40:A4:126:A:N1	2.31	0.64
38:A1:2218:G:H2'	38:A1:2219:A:C8	2.32	0.64
47:AJ:92:ARG:NH2	47:AJ:174:LYS:HB3	2.13	0.64
67:Ae:82:LEU:HD11	67:Ae:112:ALA:HB2	1.79	0.64
81:EC:6785:C:H2'	81:EC:6786:A:H8	1.62	0.64
1:BA:59:LEU:HB2	12:BV:79:LEU:HD21	1.79	0.64
7:BI:138:ASN:HB3	7:BI:141:ARG:HH21	1.62	0.64
34:B5:1684:U:O4	34:B5:1717:G:O6	2.15	0.64
58:AV:108:GLU:N	58:AV:108:GLU:OE1	2.31	0.64
81:EC:6860:A:N6	81:EC:6867:C:OP1	2.30	0.64
29:Bc:44:VAL:HG11	29:Bc:48:VAL:HG11	1.80	0.64
31:Bg:185:GLN:HG2	31:Bg:187:GLN:HB2	1.80	0.64
34:B5:1488:G:H3'	34:B5:1515:A:H61	1.62	0.64
38:A1:2724:U:OP2	38:A1:2726:C:N4	2.31	0.64
38:A1:2853:A:H5'	46:AI:3:ARG:HH12	1.60	0.64
40:A4:8:C:H2'	40:A4:9:A:C8	2.33	0.64
17:Bb:18:LYS:HE3	17:Bb:23:THR:HA	1.80	0.64
26:BT:122:ARG:NH2	34:B5:1499:G:H5"	2.13	0.64
34:B5:871:G:H2'	34:B5:872:G:C8	2.33	0.64
34:B5:939:A:H2'	34:B5:940:A:C8	2.32	0.64
34:B5:1081:A:H2	34:B5:1082:C:H41	1.44	0.64
34:B5:1404:C:H2'	34:B5:1405:G:H8	1.62	0.64
34:B5:1477:G:H2'	34:B5:1478:G:C8	2.33	0.64
38:A1:584:G:OP1	42:AE:82:ARG:NH2	2.24	0.64
46:AI:68:ALA:HB1	46:AI:155:ALA:HB1	1.79	0.64
48:AL:79:GLU:HG3	48:AL:103:ASN:HD21	1.63	0.64
1:BA:25:GLY:HA3	1:BA:149:LEU:HD12	1.79	0.64
14:BX:96:VAL:HG12	14:BX:127:VAL:HG21	1.80	0.64
20:BF:112:ARG:HH12	23:BQ:43:ILE:HD11	1.63	0.64
33:BM:45:LEU:HB3	34:B5:1228:G:H5"	1.79	0.64
34:B5:445:A:H61	34:B5:462:G:H1'	1.63	0.64
64:Ab:8:THR:HG22	64:Ab:10:HIS:H	1.61	0.64
7:BI:26:LYS:HG2	7:BI:29:LEU:HD23	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:BL:14:GLN:HB3	9:BL:54:ILE:HG13	1.80	0.64
10:BN:49:GLN:HE22	34:B5:870:C:H5'	1.63	0.64
11:BO:121:VAL:O	34:B5:886:U:O2'	2.17	0.64
15:BY:12:VAL:HG12	34:B5:783:G:H8	1.62	0.64
16:Ba:51:ARG:NH2	29:Bc:60:GLU:O	2.30	0.64
20:BF:140:THR:HA	20:BF:214:LYS:HD2	1.80	0.64
21:BK:29:GLN:NE2	21:BK:31:LYS:O	2.30	0.64
26:BT:33:TYR:HE2	26:BT:100:ILE:HG22	1.63	0.64
34:B5:1488:G:O2'	34:B5:1494:C:O2	2.15	0.64
38:A1:228:U:H5"	61:AY:8:VAL:HG11	1.80	0.64
38:A1:664:U:H2'	38:A1:665:A:C8	2.33	0.64
38:A1:855:U:O4	78:Ap:4:ARG:NH1	2.31	0.64
47:AJ:157:GLU:N	47:AJ:157:GLU:OE2	2.29	0.64
78:Ap:13:LYS:NZ	78:Ap:30:GLU:OE2	2.23	0.64
31:Bg:177:MET:HE1	31:Bg:179:LYS:HD3	1.80	0.63
37:AC:328:ASN:ND2	43:AF:149:TYR:OH	2.31	0.63
38:A1:77:A:N7	48:AL:73:ARG:NH2	2.45	0.63
38:A1:187:A:N3	38:A1:208:C:O2'	2.25	0.63
38:A1:597:G:H5"	43:AF:41:ARG:HD2	1.80	0.63
38:A1:2658:G:HO2'	38:A1:2753:G:HO2'	1.44	0.63
8:BJ:121:SER:OG	8:BJ:123:HIS:ND1	2.31	0.63
10:BN:124:ARG:NH2	34:B5:628:G:OP1	2.25	0.63
20:BF:70:VAL:HG11	23:BQ:47:LYS:HZ2	1.62	0.63
20:BF:107:LYS:NZ	34:B5:1610:G:H5'	2.12	0.63
27:BU:87:HIS:ND1	34:B5:1383:G:OP1	2.31	0.63
29:Bc:11:LYS:O	29:Bc:31:GLU:N	2.31	0.63
34:B5:481:A:H5'	34:B5:498:G:H22	1.62	0.63
34:B5:649:U:C2	34:B5:684:A:N6	2.66	0.63
34:B5:1041:G:H2'	34:B5:1042:G:C8	2.33	0.63
34:B5:1161:C:H2'	34:B5:1162:C:H6	1.62	0.63
36:AB:9:PRO:HD2	58:AV:45:ARG:HH11	1.62	0.63
38:A1:846:A:N6	38:A1:847:A:N1	2.46	0.63
38:A1:1799:A:H2'	38:A1:1800:A:C8	2.32	0.63
39:A3:77:G:N2	39:A3:102:A:OP2	2.28	0.63
80:DC:138:GLN:HA	80:DC:141:THR:HG22	1.79	0.63
8:BJ:85:VAL:HG12	8:BJ:107:ARG:HG3	1.79	0.63
34:B5:237:C:O2'	34:B5:835:U:OP1	2.16	0.63
36:AB:348:ARG:NH1	38:A1:3038:U:OP1	2.31	0.63
38:A1:3108:G:N3	45:AH:163:GLN:NE2	2.46	0.63
41:AD:146:LEU:HD22	41:AD:163:LEU:HD12	1.80	0.63
65:Ac:50:VAL:HA	65:Ac:53:LYS:HG2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:162:ARG:HG3	80:DC:162:ARG:O	1.97	0.63
14:BX:32:ARG:HG2	14:BX:33:LEU:HD22	1.80	0.63
19:BD:65:ARG:N	19:BD:68:GLU:OE1	2.32	0.63
22:BP:15:HIS:HE1	22:BP:110:GLU:HB2	1.63	0.63
34:B5:1198:G:OP1	34:B5:1199:G:O2'	2.15	0.63
34:B5:1672:G:H2'	34:B5:1673:G:C8	2.33	0.63
40:A4:135:G:OP2	60:AX:56:ARG:NH2	2.31	0.63
47:AJ:92:ARG:NH1	47:AJ:174:LYS:H	1.87	0.63
80:DC:225:PHE:O	80:DC:229:TYR:N	2.30	0.63
81:EC:6853:G:H4'	81:EC:6854:U:OP1	1.97	0.63
6:BH:132:PRO:HD2	6:BH:162:ILE:HD13	1.80	0.63
11:BO:99:GLN:NE2	16:Ba:44:ILE:O	2.28	0.63
25:BS:38:VAL:HG13	25:BS:42:TYR:HB3	1.80	0.63
34:B5:1213:G:O2'	34:B5:1244:A:N7	2.31	0.63
34:B5:1650:U:H2'	34:B5:1651:A:C8	2.34	0.63
37:AC:311:HIS:NE2	37:AC:314:LYS:HA	2.12	0.63
38:A1:3222:U:O2	38:A1:3263:G:O6	2.16	0.63
38:A1:3273:A:OP2	42:AE:77:ARG:NH2	2.31	0.63
72:Aj:20:ASN:HD22	74:Al:8:ARG:HH12	1.46	0.63
81:EC:6852:U:H1'	81:EC:6874:A:H61	1.62	0.63
4:BE:139:VAL:HG13	4:BE:150:PRO:HG3	1.81	0.63
7:BI:69:SER:HB3	9:BL:24:LYS:HE2	1.80	0.63
24:BR:74:GLN:NE2	24:BR:77:GLU:OE1	2.31	0.63
25:BS:13:HIS:ND1	25:BS:14:ILE:HG12	2.14	0.63
28:BZ:54:VAL:HA	28:BZ:57:TYR:CE2	2.33	0.63
34:B5:832:U:N3	34:B5:840:U:O4	2.15	0.63
34:B5:1216:C:O2	34:B5:1446:A:N6	2.31	0.63
34:B5:1575:G7M:H2'	34:B5:1576:A:C8	2.33	0.63
38:A1:1601:U:OP1	54:AR:42:ARG:NH2	2.31	0.63
38:A1:2344:U:H2'	38:A1:2345:A:C8	2.34	0.63
38:A1:2703:A:N3	47:AJ:142:LYS:NZ	2.46	0.63
39:A3:81:U:H2'	39:A3:82:G:H8	1.64	0.63
40:A4:9:A:H2'	40:A4:10:A:C8	2.34	0.63
44:AG:206:GLU:OE1	44:AG:206:GLU:N	2.27	0.63
51:AO:61[A]:ALA:HA	51:AO:70[A]:PRO:HD2	1.79	0.63
63:Aa:77:LYS:O	63:Aa:80:THR:OG1	2.17	0.63
69:Ag:79:SER:OG	69:Ag:80:ARG:NH1	2.29	0.63
1:BA:122:ILE:HG13	1:BA:144:ILE:HB	1.81	0.63
15:BY:131:ARG:NH1	34:B5:153:G:OP2	2.29	0.63
20:BF:149:VAL:HG11	20:BF:158:GLN:HG3	1.79	0.63
38:A1:2895:G:O2'	75:Am:100:TYR:O	2.16	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:643:PRO:HG2	80:DC:682:ARG:HG3	1.78	0.63
1:BA:89:PHE:O	1:BA:93:THR:OG1	2.16	0.63
9:BL:64:VAL:HG12	9:BL:129:ARG:HH21	1.64	0.63
9:BL:83:THR:HG21	34:B5:325:G:H4'	1.81	0.63
31:Bg:260:ILE:HB	31:Bg:274:LEU:HB2	1.81	0.63
34:B5:874:C:H2'	34:B5:875:G:C8	2.33	0.63
34:B5:885:G:H2'	34:B5:886:U:C6	2.34	0.63
34:B5:1237:G:H2'	34:B5:1238:A:H8	1.64	0.63
79:E:76:ARG:HD3	79:E:144:LEU:HD12	1.81	0.63
5:BG:50:PHE:CE1	5:BG:113:ILE:HG13	2.34	0.63
5:BG:202:ARG:NH1	34:B5:127:G:N7	2.47	0.63
8:BJ:31:ALA:HB1	18:Be:36:LYS:HD3	1.81	0.63
14:BX:135:LEU:HD21	14:BX:142:LYS:HB2	1.79	0.63
34:B5:29:U:H2'	34:B5:30:G:H8	1.63	0.63
34:B5:1171:A:H2'	34:B5:1172:G:H8	1.62	0.63
34:B5:1641:C:H2'	34:B5:1642:G:C8	2.34	0.63
35:AA:30:ARG:HB3	35:AA:74:GLU:HG3	1.81	0.63
38:A1:1071:U:H3	38:A1:1087:G:H1	1.45	0.63
38:A1:2213:A:H2'	38:A1:2214:A:C8	2.34	0.63
38:A1:2898:G:OP2	45:AH:173:ARG:NH2	2.31	0.63
40:A4:67:U:H2'	40:A4:68:G:H8	1.64	0.63
3:BC:54:GLU:HB2	12:BV:12:TYR:HB3	1.81	0.62
9:BL:8:GLN:HE22	9:BL:14:GLN:N	1.95	0.62
16:Ba:97:PRO:HG2	16:Ba:98:PRO:HD3	1.80	0.62
31:Bg:11:GLY:HA2	31:Bg:52:GLN:HA	1.80	0.62
38:A1:443:G:N1	38:A1:492:C:OP2	2.25	0.62
38:A1:2116:G:OP1	38:A1:2118:C:N4	2.31	0.62
39:A3:112:G:H2'	39:A3:113:C:C6	2.34	0.62
56:AT:100:LYS:HB3	56:AT:103:GLN:HE21	1.64	0.62
81:EC:6809:G:H2'	81:EC:6810:U:C6	2.34	0.62
1:BA:126:PRO:HG2	1:BA:147:THR:HG22	1.81	0.62
3:BC:91:ARG:NE	34:B5:1147:A:OP1	2.32	0.62
20:BF:143:ARG:NH2	29:Bc:54:LEU:HB3	2.14	0.62
27:BU:53:LYS:HE3	34:B5:1345:A:H4'	1.81	0.62
28:BZ:61:SER:HA	28:BZ:99:ALA:HB3	1.81	0.62
45:AH:22:SER:OG	45:AH:23:ARG:N	2.24	0.62
55:AS:77:VAL:HG22	55:AS:126:VAL:HG13	1.80	0.62
62:AZ:109:GLU:HA	62:AZ:112:LYS:HG2	1.80	0.62
1:BA:154:GLU:OE2	1:BA:154:GLU:N	2.26	0.62
8:BJ:172:VAL:HA	8:BJ:175:ARG:HG2	1.81	0.62
24:BR:71:PHE:CE1	24:BR:74:GLN:HG2	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1355:C:N4	34:B5:1369:U:N3	2.30	0.62
35:AA:118:GLU:OE2	38:A1:2177:G:N2	2.32	0.62
38:A1:1628:C:O4'	38:A1:1814:A:N6	2.32	0.62
38:A1:2565:U:H3	38:A1:2576:G:H1	1.45	0.62
5:BG:98:ARG:NH2	5:BG:105:ASP:OD1	2.32	0.62
6:BH:114:ARG:O	6:BH:117:THR:OG1	2.15	0.62
11:BO:111:ARG:HE	16:Ba:58:VAL:HG22	1.63	0.62
33:BM:43:ARG:HH12	34:B5:1229:G:H22	1.48	0.62
34:B5:1474:G:H2'	34:B5:1475:A:C8	2.34	0.62
38:A1:91:G:OP2	38:A1:93:C:N4	2.29	0.62
38:A1:761:A:H2'	38:A1:762:U:C6	2.34	0.62
38:A1:2465:G:N1	38:A1:2491:A:N6	2.45	0.62
52:AP:122:ALA:HB3	52:AP:143:PRO:HB2	1.81	0.62
55:AS:23:LYS:HG3	56:AT:149:GLN:HE22	1.63	0.62
80:DC:117:ALA:HB1	80:DC:383:SER:HB3	1.82	0.62
80:DC:414:GLN:NE2	80:DC:470:THR:OG1	2.32	0.62
2:BB:108:ASP:OD2	2:BB:109:LYS:N	2.32	0.62
2:BB:173:THR:O	2:BB:177:GLN:NE2	2.31	0.62
19:BD:105:MET:HE3	19:BD:122:VAL:HG13	1.81	0.62
35:AA:21:ARG:HD3	38:A1:824:C:H5"	1.80	0.62
38:A1:2760:C:N3	77:Ao:63:LYS:NZ	2.47	0.62
38:A1:3322:A:H2'	38:A1:3323:A:C8	2.34	0.62
41:AD:202:GLY:O	41:AD:206:GLN:NE2	2.33	0.62
47:AJ:12:LEU:HG	47:AJ:131:MET:HE3	1.82	0.62
3:BC:101:VAL:HG12	3:BC:115:ILE:HD12	1.80	0.62
25:BS:41:ARG:HG2	34:B5:1565:C:H5"	1.80	0.62
28:BZ:59:TYR:HB3	28:BZ:64:VAL:HG21	1.82	0.62
34:B5:1158:C:H41	34:B5:1163:A:H61	1.48	0.62
38:A1:261:U:H2'	38:A1:262:U:C6	2.35	0.62
69:Ag:51:LEU:HB2	69:Ag:54:ILE:HD12	1.82	0.62
69:Ag:100:ILE:HA	69:Ag:103:LYS:HE3	1.81	0.62
4:BE:247:SER:OG	4:BE:250:GLU:OE1	2.16	0.62
6:BH:22:GLN:HA	6:BH:25:VAL:HG22	1.80	0.62
7:BI:119:GLN:HG3	7:BI:150:ALA:HB1	1.81	0.62
8:BJ:143:ILE:HD11	8:BJ:146:PHE:HD1	1.65	0.62
20:BF:180:ARG:NE	34:B5:1473:U:O4	2.32	0.62
31:Bg:109:ASP:O	31:Bg:126:SER:OG	2.11	0.62
38:A1:718:G:OP1	63:Aa:117:ARG:NH2	2.31	0.62
38:A1:1497:C:H2'	38:A1:1498:A:H8	1.64	0.62
38:A1:3165:A:H61	38:A1:3285:C:H42	1.47	0.62
6:BH:104:ARG:NH2	34:B5:805:U:O4	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:BJ:126:ARG:HH12	34:B5:476:U:P	2.22	0.62
31:Bg:7:LEU:HB2	31:Bg:274:LEU:HD21	1.82	0.62
34:B5:478:A:H61	34:B5:539:G:H1	1.45	0.62
38:A1:655:C:H2'	38:A1:656:A:H8	1.63	0.62
38:A1:1717:U:H2'	38:A1:1718:G:C8	2.33	0.62
50:AN:99:ARG:HH11	50:AN:167:THR:HB	1.64	0.62
7:BI:25:ARG:NH2	34:B5:386:G:OP2	2.32	0.62
7:BI:152:ILE:HG13	7:BI:153:GLU:H	1.65	0.62
15:BY:65:GLY:N	34:B5:532:U:OP1	2.31	0.62
15:BY:121:THR:OG1	34:B5:149:C:OP1	2.17	0.62
22:BP:24:LYS:HG2	22:BP:28:MET:SD	2.39	0.62
34:B5:183:U:H2'	34:B5:184:C:C6	2.35	0.62
34:B5:923:A:H2'	34:B5:924:A:C8	2.34	0.62
34:B5:1146:G:H2'	34:B5:1147:A:C8	2.35	0.62
38:A1:172:G:H22	38:A1:245:U:H5"	1.63	0.62
38:A1:1517:G:OP1	74:Al:41:ARG:NH1	2.33	0.62
38:A1:2768:U:H2'	38:A1:2769:A:H8	1.64	0.62
51:AO:175[A]:THR:HA	51:AO:178[A]:VAL:HG12	1.82	0.62
80:DC:485:VAL:HG12	80:DC:793:PHE:CE1	2.34	0.62
81:EC:6799:C:H42	81:EC:6884:G:H2'	1.65	0.62
8:BJ:128:LEU:HD23	8:BJ:134:ILE:HD11	1.80	0.62
34:B5:430:G:C5	80:DC:391:LYS:HG2	2.34	0.62
38:A1:2252:A:H61	38:A1:2264:PSU:HN3	1.47	0.62
39:A3:27:A:H4'	47:AJ:141:ARG:HH12	1.65	0.62
61:AY:80:VAL:HG21	61:AY:104:LEU:HD11	1.82	0.62
7:BI:170:SER:OG	34:B5:210:A:OP1	2.17	0.61
34:B5:823:G:O6	34:B5:849:C:O2'	2.17	0.61
34:B5:1234:A:OP2	34:B5:1245:G:O2'	2.18	0.61
34:B5:1736:G:H2'	34:B5:1737:G:H8	1.64	0.61
38:A1:1307:G:H5'	51:AO:60[A]:LYS:HE3	1.82	0.61
38:A1:1831:U:O2'	40:A4:114:G:OP1	2.15	0.61
79:E:34:LEU:HA	79:E:205:VAL:O	2.00	0.61
80:DC:212:GLY:HA3	80:DC:219:ALA:HA	1.82	0.61
2:BB:69:CYS:SG	11:BO:114:ARG:NH2	2.73	0.61
3:BC:140:ARG:NH1	12:BV:10:GLU:OE1	2.33	0.61
6:BH:41:LEU:HB2	6:BH:70:PHE:CE1	2.34	0.61
7:BI:5:ARG:NH1	34:B5:336:G:O6	2.32	0.61
27:BU:121:ASN:ND2	34:B5:1347:U:OP2	2.33	0.61
31:Bg:108:SER:HB3	31:Bg:128:ASP:HB3	1.82	0.61
34:B5:31:C:O2'	34:B5:547:U:OP1	2.18	0.61
34:B5:702:G:N3	34:B5:703:G:H1'	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3016:A:H2'	38:A1:3017:A:C8	2.34	0.61
39:A3:49:G:OP2	41:AD:91:GLY:N	2.27	0.61
46:AI:54:SER:HB3	46:AI:135:ILE:HD11	1.81	0.61
71:Ai:3:VAL:O	71:Ai:12:ASN:ND2	2.31	0.61
81:EC:6842:U:O2'	81:EC:6843:U:OP1	2.18	0.61
2:BB:113:MET:SD	2:BB:209:ASN:ND2	2.73	0.61
9:BL:79:LYS:NZ	34:B5:347:G:OP2	2.32	0.61
23:BQ:32:ASN:HD21	23:BQ:69:VAL:H	1.46	0.61
33:BM:103:LEU:HB3	33:BM:115:VAL:HG11	1.83	0.61
34:B5:482:U:O2'	34:B5:505:A:N6	2.33	0.61
36:AB:67:PHE:HA	36:AB:70:ARG:HH12	1.65	0.61
38:A1:1119:C:H2'	38:A1:1120:A:H8	1.65	0.61
38:A1:1150:A:N6	38:A1:2369:G:O2'	2.32	0.61
38:A1:1748:G:OP2	73:Ak:42:LYS:NZ	2.26	0.61
38:A1:2205:U:H2'	38:A1:2206:G:H8	1.65	0.61
38:A1:2494:A:H5'	38:A1:2495:C:H6	1.65	0.61
38:A1:3170:A:H1'	38:A1:3171:U:H5'	1.82	0.61
80:DC:145:GLN:NE2	80:DC:484:SER:OG	2.33	0.61
81:EC:6812:C:H2'	81:EC:6813:A:H8	1.64	0.61
14:BX:73:ARG:HD2	14:BX:84:THR:HG22	1.82	0.61
21:BK:61:TRP:HZ2	30:Bd:46:LYS:HE2	1.64	0.61
22:BP:98:ASN:ND2	22:BP:121:ILE:O	2.30	0.61
22:BP:115:TYR:OH	34:B5:1556:A:OP1	2.18	0.61
23:BQ:71:GLY:HA2	34:B5:1483:A:H4'	1.82	0.61
34:B5:95:G:O2'	34:B5:460:A:O2'	2.16	0.61
35:AA:95:SER:N	38:A1:2551:U:O4	2.27	0.61
38:A1:297:G:O6	50:AN:12:ARG:NH1	2.29	0.61
38:A1:1729:A:C6	65:Ac:49:PRO:HD3	2.35	0.61
48:AL:9:ILE:HD12	63:Aa:34:MET:HE2	1.82	0.61
57:AU:87:ASN:HB3	57:AU:89:LEU:HD13	1.82	0.61
81:EC:6782:C:N3	81:EC:6815:U:H1'	2.15	0.61
2:BB:68:VAL:HG12	2:BB:69:CYS:H	1.66	0.61
2:BB:105:PHE:CD2	2:BB:213:ARG:HA	2.35	0.61
3:BC:49:LYS:HB3	3:BC:243:TYR:CD2	2.36	0.61
4:BE:38:LEU:HD12	4:BE:39:ARG:HD2	1.82	0.61
12:BV:34:ILE:HB	12:BV:53:TYR:HB2	1.83	0.61
34:B5:920:U:H2'	34:B5:921:U:C6	2.35	0.61
34:B5:1169:G:H22	34:B5:1575:G7M:H3'	1.64	0.61
34:B5:1649:G:H2'	34:B5:1650:U:C6	2.35	0.61
35:AA:79:ASN:HD21	35:AA:165:VAL:HG11	1.65	0.61
38:A1:838:G:N7	78:Ap:4:ARG:NH2	2.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1750:A:OP1	73:Ak:44:LYS:NZ	2.28	0.61
38:A1:3084:C:O2'	38:A1:3332:U:OP1	2.18	0.61
39:A3:23:A:H1'	39:A3:121:U:H3'	1.81	0.61
58:AV:13:ILE:HD11	58:AV:121:GLU:HG2	1.82	0.61
62:AZ:83:THR:HG22	62:AZ:85:TYR:H	1.65	0.61
36:AB:284:ARG:HB3	36:AB:323:MET:HB3	1.82	0.61
38:A1:617:G:H4'	52:AP:171:ARG:HH21	1.66	0.61
38:A1:987:U:H2'	38:A1:988:U:C6	2.35	0.61
38:A1:1571:A:N6	38:A1:1573:G:O4'	2.33	0.61
38:A1:2666:C:OP2	38:A1:2687:G:N1	2.21	0.61
38:A1:3115:C:OP1	45:AH:62:ARG:NH2	2.32	0.61
42:AE:66:SER:HB2	42:AE:76:LEU:HD23	1.81	0.61
45:AH:77:ASN:HD22	45:AH:151:VAL:HG11	1.66	0.61
2:BB:39:GLU:O	2:BB:41:ARG:NH1	2.34	0.61
15:BY:106:GLN:NE2	34:B5:442:C:OP2	2.34	0.61
20:BF:116:HIS:CD2	28:BZ:98:GLN:HG3	2.35	0.61
26:BT:122:ARG:HH22	34:B5:1499:G:H5"	1.65	0.61
27:BU:28:SER:HB2	27:BU:112:VAL:HG13	1.82	0.61
34:B5:1164:G:O2'	34:B5:1612:U:O2	2.17	0.61
38:A1:723:U:HO2'	64:Ab:29:TYR:HH	1.41	0.61
38:A1:966:PSU:H2'	38:A1:967:A:C8	2.35	0.61
38:A1:2466:G:O6	38:A1:2467:G:N2	2.34	0.61
80:DC:684:VAL:HG21	80:DC:717:PHE:HE1	1.66	0.61
80:DC:724:ILE:HD11	80:DC:815:ALA:HB1	1.83	0.61
3:BC:178:ILE:HG12	3:BC:196:VAL:HG12	1.81	0.61
5:BG:57:ASP:HA	5:BG:106:LEU:HA	1.81	0.61
6:BH:114:ARG:NH1	34:B5:637:C:O2	2.28	0.61
19:BD:20:GLU:OE2	19:BD:76:ARG:NH2	2.30	0.61
22:BP:18:ARG:HB2	22:BP:36:LEU:HD21	1.82	0.61
23:BQ:74:HIS:HD2	34:B5:1526:A:H61	1.48	0.61
34:B5:1297:G:N2	34:B5:1300:A:OP2	2.25	0.61
34:B5:1584:G:O2'	34:B5:1610:G:O6	2.16	0.61
38:A1:1047:A:N3	38:A1:2633:U:O2'	2.32	0.61
55:AS:8:GLN:HB3	55:AS:64:ILE:HD11	1.82	0.61
80:DC:723:LYS:HD3	80:DC:805:GLY:HA2	1.82	0.61
16:Ba:82:ARG:HH22	34:B5:1153:G:P	2.23	0.61
34:B5:886:U:H2'	34:B5:887:A:H8	1.65	0.61
36:AB:48:GLY:HA3	36:AB:81:THR:HG22	1.82	0.61
36:AB:332:ARG:HH22	38:A1:3304:U:P	2.24	0.61
39:A3:60:G:H2'	39:A3:61:G:H8	1.66	0.61
43:AF:83:LEU:HD11	43:AF:116:PHE:HB3	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:303:LEU:HB3	80:DC:327:PHE:HE1	1.65	0.61
81:EC:6782:C:N4	81:EC:6815:U:O2	2.33	0.61
1:BA:13:ASP:HB3	24:BR:91:LEU:HG	1.81	0.61
2:BB:46:THR:HG21	2:BB:64:ARG:HH22	1.65	0.61
2:BB:138:PHE:CD2	2:BB:214:LYS:HB3	2.32	0.61
11:BO:84:ARG:HG3	11:BO:119:THR:HA	1.83	0.61
25:BS:26:ILE:HB	25:BS:31:ALA:HB2	1.82	0.61
30:Bd:42:CYS:SG	34:B5:1433:G:N2	2.73	0.61
33:BM:87:PRO:HB3	33:BM:137:MET:HE1	1.83	0.61
34:B5:67:A:N6	34:B5:83:G:O2'	2.33	0.61
34:B5:680:U:O2	34:B5:682:C:N4	2.29	0.61
38:A1:1836:C:H41	74:Al:3:ALA:HB2	1.65	0.61
38:A1:2357:A:H2'	38:A1:2358:A:H8	1.66	0.61
38:A1:3185:U:O2'	55:AS:170:THR:HG21	2.01	0.61
39:A3:23:A:H2'	39:A3:24:A:C8	2.35	0.61
41:AD:60:ILE:HD11	41:AD:93:THR:HA	1.83	0.61
70:Ah:34:GLN:HE21	70:Ah:41:LEU:HD21	1.66	0.61
81:EC:6759:A:H2'	81:EC:6760:A:C8	2.35	0.61
1:BA:6:THR:HB	1:BA:191:ARG:HB2	1.83	0.60
9:BL:88:ARG:NH2	34:B5:305:C:O3'	2.34	0.60
13:BW:111:MET:HG3	13:BW:115:GLU:HG3	1.82	0.60
20:BF:60:ASP:H	20:BF:65:ARG:NH2	1.97	0.60
20:BF:172:ILE:HA	20:BF:175:LEU:HD12	1.83	0.60
27:BU:57:ARG:HD2	34:B5:1382:A:N3	2.16	0.60
31:Bg:108:SER:OG	31:Bg:109:ASP:N	2.34	0.60
31:Bg:192:PHE:HB3	31:Bg:223:TRP:CE2	2.35	0.60
38:A1:2406:C:H2'	38:A1:2407:C:H6	1.67	0.60
47:AJ:15:GLU:HG3	47:AJ:16:LYS:HG2	1.83	0.60
69:Ag:86:LYS:O	69:Ag:90:ILE:HG12	2.01	0.60
23:BQ:139:GLN:HE22	34:B5:1167:G:H21	1.47	0.60
28:BZ:58:ARG:NE	81:EC:6864:A:H5"	2.16	0.60
34:B5:641:G:H1	34:B5:693:U:H3	1.49	0.60
34:B5:1393:C:H2'	34:B5:1394:G:C8	2.35	0.60
35:AA:136:ILE:HD13	35:AA:148:VAL:HG12	1.83	0.60
38:A1:920:A:OP1	38:A1:923:C:N4	2.28	0.60
38:A1:1256:G:H2'	38:A1:1257:C:H4'	1.82	0.60
38:A1:3166:C:H2'	38:A1:3167:A:H8	1.66	0.60
38:A1:3180:A:O2'	51:AO:117[A]:ARG:NH1	2.34	0.60
50:AN:15:GLN:HB3	71:Ai:52:PRO:HD2	1.82	0.60
50:AN:190:THR:O	50:AN:194:GLN:HG2	2.00	0.60
53:AQ:125:ASP:OD1	53:AQ:126:GLN:N	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:AT:13:TYR:HA	56:AT:16:GLN:HG2	1.83	0.60
80:DC:72:SER:HB3	80:DC:104:ASP:HB2	1.83	0.60
2:BB:141:ALA:HB1	2:BB:207:LEU:HD13	1.83	0.60
8:BJ:74:ASN:OD1	8:BJ:75:ALA:N	2.34	0.60
23:BQ:69:VAL:HG21	23:BQ:81:ILE:HG13	1.82	0.60
34:B5:1132:A:H2'	34:B5:1133:A:C8	2.36	0.60
38:A1:1320:C:O2	55:AS:115:ARG:NH2	2.34	0.60
47:AJ:107:ASP:HA	47:AJ:124:GLY:HA2	1.84	0.60
51:AO:105[A]:PHE:HE2	51:AO:112[A]:TYR:HE2	1.48	0.60
23:BQ:77:GLN:O	23:BQ:81:ILE:HD12	2.02	0.60
25:BS:24:GLY:HA2	25:BS:58:ALA:HB3	1.82	0.60
34:B5:61:A:N3	34:B5:269:G:O2'	2.30	0.60
34:B5:591:A:H2'	34:B5:592:A:C8	2.37	0.60
34:B5:1237:G:H2'	34:B5:1238:A:C8	2.36	0.60
38:A1:1310:G:HO2'	38:A1:2380:U:HO2'	1.47	0.60
38:A1:1311:G:N2	51:AO:86[A]:GLY:O	2.32	0.60
38:A1:1385:C:O2	42:AE:2:SER:N	2.34	0.60
38:A1:2185:G:O2'	38:A1:2314:PSU:OP2	2.19	0.60
38:A1:2848:G:OP1	75:Am:100:TYR:OH	2.19	0.60
39:A3:52:G:N2	47:AJ:9:MET:HE1	2.11	0.60
52:AP:127:ARG:HB2	52:AP:139:TYR:O	2.01	0.60
53:AQ:43:PRO:HA	53:AQ:46:LYS:HE2	1.83	0.60
81:EC:6784:G:N2	81:EC:6813:A:N7	2.49	0.60
20:BF:144:GLU:OE2	20:BF:225:ARG:NH1	2.34	0.60
34:B5:200:A:H2'	34:B5:201:G:H8	1.67	0.60
34:B5:200:A:H2'	34:B5:201:G:C8	2.36	0.60
34:B5:1114:G:O2'	34:B5:1130:G:O6	2.16	0.60
34:B5:1209:C:N3	34:B5:1455:G:N2	2.50	0.60
38:A1:363:G:OP2	72:Aj:56:ARG:NH1	2.25	0.60
38:A1:1940:G:H21	38:A1:3362:A:H8	1.48	0.60
38:A1:2786:G:H21	63:Aa:58:MET:HE2	1.67	0.60
38:A1:3083:G:H4'	59:AW:42:GLN:HE22	1.66	0.60
38:A1:3255:U:H2'	38:A1:3256:G:H8	1.65	0.60
45:AH:83:THR:HG23	45:AH:84:LYS:HG3	1.83	0.60
53:AQ:54:LEU:HD12	53:AQ:58:ASN:HB3	1.84	0.60
79:E:89:ASP:HB2	79:E:92:LYS:HE3	1.83	0.60
19:BD:71:LEU:HA	19:BD:74:GLN:HB3	1.83	0.60
21:BK:74:GLU:HA	21:BK:77:ARG:HD2	1.83	0.60
34:B5:12:U:H2'	34:B5:13:C:C6	2.37	0.60
34:B5:1414:U:O2'	34:B5:1416:G:OP2	2.17	0.60
38:A1:2094:C:H2'	38:A1:2095:G:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:A4:60:U:OP2	60:AX:61:LYS:NZ	2.25	0.60
1:BA:167:LYS:HZ2	1:BA:203:PHE:HB3	1.65	0.60
7:BI:34:ALA:HB2	7:BI:56:ARG:HD2	1.84	0.60
34:B5:1055:U:H3	34:B5:1064:G:H1	1.48	0.60
34:B5:1303:U:O2'	34:B5:1322:A:OP2	2.19	0.60
35:AA:57:PRO:HG2	35:AA:78:ALA:HB3	1.82	0.60
38:A1:1874:A:H5"	54:AR:18:GLY:HA3	1.83	0.60
38:A1:2697:A:H2'	38:A1:2698:G:H8	1.65	0.60
45:AH:27:VAL:HG21	45:AH:78:MET:HB3	1.83	0.60
80:DC:800:HIS:ND1	80:DC:801:TRP:O	2.32	0.60
81:EC:6837:G:N2	81:EC:6846:C:O2	2.35	0.60
2:BB:150:VAL:HG12	34:B5:1067:C:H5"	1.83	0.60
6:BH:158:ASP:OD1	6:BH:160:GLN:NE2	2.33	0.60
18:Be:3:LYS:HE3	18:Be:5:HIS:HB2	1.82	0.60
19:BD:141:LYS:NZ	34:B5:1275:A:N3	2.36	0.60
20:BF:82:PHE:CE1	29:Bc:47:PRO:HB2	2.36	0.60
23:BQ:103:ASN:OD1	23:BQ:104:GLU:N	2.35	0.60
31:Bg:159:ASN:ND2	31:Bg:166:SER:O	2.31	0.60
34:B5:752:A:O2'	34:B5:753:A:H8	1.84	0.60
62:AZ:103:GLN:NE2	62:AZ:106:GLN:HB2	2.17	0.60
78:Ap:46:THR:OG1	78:Ap:57:CYS:SG	2.59	0.60
80:DC:690:ASP:OD1	80:DC:691:VAL:N	2.35	0.60
2:BB:158:SER:OG	34:B5:875:G:OP1	2.20	0.60
3:BC:80:VAL:HG21	3:BC:125:ILE:HD12	1.84	0.60
4:BE:131:LEU:HD21	34:B5:251:A:C2	2.37	0.60
5:BG:209:ALA:HA	5:BG:212:LEU:HD12	1.83	0.60
6:BH:67:LEU:C	6:BH:71:HIS:HD1	2.10	0.60
28:BZ:77:ARG:NH1	34:B5:1533:C:OP2	2.34	0.60
34:B5:980:G:H4'	34:B5:1776:A:H4'	1.84	0.60
38:A1:1521:G:O6	74:Al:17:LYS:NZ	2.35	0.60
38:A1:2705:A:N6	56:AT:47:SER:O	2.34	0.60
38:A1:2908:G:O2'	75:Am:114:LYS:NZ	2.35	0.60
79:E:110:PHE:O	79:E:133:LYS:NZ	2.31	0.60
80:DC:731:VAL:HG13	80:DC:796:MET:HA	1.82	0.60
5:BG:5:ILE:HG22	5:BG:111:LEU:HD11	1.83	0.60
27:BU:72:ASN:ND2	34:B5:1429:G:O2'	2.34	0.60
30:Bd:10:HIS:H	34:B5:1451:C:H5"	1.65	0.60
34:B5:1389:C:N4	34:B5:1391:A:O4'	2.35	0.60
34:B5:1755:A:H3'	34:B5:1756[A]:A:H5"	1.82	0.60
38:A1:139:G:H2'	38:A1:140:C:C6	2.36	0.60
38:A1:1389:G:H5"	67:Ae:101:SER:HB3	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2882:U:H2'	38:A1:2883:U:C6	2.37	0.60
38:A1:2927:C:H2'	38:A1:2928:C:C6	2.37	0.60
80:DC:735:CYS:O	80:DC:791:GLN:NE2	2.34	0.60
81:EC:6799:C:N4	81:EC:6884:G:H2'	2.17	0.60
2:BB:180:THR:O	2:BB:183:GLN:HG3	2.01	0.59
7:BI:44:HIS:ND1	34:B5:1676:U:OP1	2.35	0.59
8:BJ:82:ARG:HG2	8:BJ:149:ARG:HB2	1.83	0.59
10:BN:36:GLN:HA	10:BN:39:LYS:HZ3	1.67	0.59
22:BP:85:ILE:HD13	22:BP:111:MET:HB3	1.84	0.59
28:BZ:57:TYR:O	81:EC:6863:C:O2'	2.18	0.59
32:Bf:132:LEU:HD22	32:Bf:141:CYS:HA	1.84	0.59
38:A1:411:U:H2'	38:A1:412:G:H8	1.67	0.59
38:A1:785:G:O6	63:Aa:77:LYS:NZ	2.34	0.59
38:A1:1389:G:OP1	67:Ae:104:ASN:ND2	2.29	0.59
38:A1:1447:G:N2	38:A1:1448:U:O4	2.26	0.59
38:A1:2451:G:O2'	38:A1:2452:G:O4'	2.09	0.59
38:A1:3006:A:H2'	38:A1:3007:U:O4'	2.00	0.59
43:AF:138:TYR:CD2	43:AF:233:GLU:HB2	2.37	0.59
49:AM:15:VAL:HG22	49:AM:65:LEU:HD11	1.84	0.59
80:DC:132:ILE:HD11	80:DC:163:ALA:N	2.11	0.59
80:DC:829:LYS:NZ	80:DC:831:GLU:O	2.35	0.59
3:BC:175:GLY:O	8:BJ:53:ARG:NH2	2.35	0.59
5:BG:87:ARG:HH21	34:B5:160:C:H5"	1.67	0.59
32:Bf:102:VAL:HG11	33:BM:46:ARG:HG3	1.84	0.59
33:BM:60:VAL:HG23	33:BM:86:VAL:HG21	1.83	0.59
38:A1:595:G:OP1	43:AF:33:ARG:NH2	2.31	0.59
38:A1:1083:G:H2'	38:A1:1084:A:C8	2.36	0.59
38:A1:2222:A:H2'	38:A1:2223:A:C8	2.36	0.59
38:A1:3255:U:H2'	38:A1:3256:G:C8	2.37	0.59
48:AL:63:VAL:HG22	63:Aa:128:ARG:NH1	2.17	0.59
58:AV:68:GLU:OE2	58:AV:68:GLU:N	2.30	0.59
80:DC:765:LEU:HA	80:DC:791:GLN:NE2	2.18	0.59
25:BS:36:LYS:HB3	25:BS:102:ALA:HA	1.84	0.59
34:B5:521:A:H2'	34:B5:522:U:O4'	2.02	0.59
34:B5:1584:G:H22	34:B5:1610:G:H3'	1.66	0.59
38:A1:1696:A:H2'	38:A1:1697:A:C8	2.37	0.59
80:DC:251:ASN:O	80:DC:255:LYS:N	2.35	0.59
80:DC:636:PHE:O	80:DC:642:GLY:N	2.34	0.59
1:BA:183:ARG:O	1:BA:183:ARG:NH1	2.34	0.59
11:BO:132:ARG:NH2	34:B5:1789:G:OP2	2.35	0.59
20:BF:82:PHE:HE1	29:Bc:47:PRO:HB2	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Bc:57:MET:N	29:Bc:57:MET:SD	2.75	0.59
32:Bf:141:CYS:O	34:B5:1252:C:O2'	2.20	0.59
34:B5:1175:U:H2'	34:B5:1176:G:C8	2.37	0.59
34:B5:1588:G:O6	34:B5:1608:U:O4	2.20	0.59
38:A1:3034:C:H5	45:AH:121:LYS:HB2	1.66	0.59
45:AH:9:GLN:HB3	45:AH:52:LEU:HD11	1.84	0.59
46:AI:38:LYS:HE3	46:AI:83:ASP:HB3	1.82	0.59
62:AZ:3:LYS:HE2	65:Ac:36:GLN:HA	1.83	0.59
80:DC:115:VAL:HG11	80:DC:142:VAL:HG23	1.84	0.59
6:BH:166:LEU:HA	6:BH:169:PHE:CD2	2.37	0.59
34:B5:440:U:OP2	80:DC:432:GLN:NE2	2.22	0.59
35:AA:245:LEU:HD21	38:A1:2243:A:C8	2.38	0.59
38:A1:140:C:OP1	44:AG:106:LYS:NZ	2.36	0.59
38:A1:548:G:O2'	38:A1:550:A:N7	2.35	0.59
38:A1:567:G:H2'	38:A1:568:G:C8	2.38	0.59
38:A1:1498:A:H2'	38:A1:1499:C:C6	2.37	0.59
63:Aa:24:LYS:O	63:Aa:26:ARG:HG2	2.02	0.59
2:BB:30:PHE:HD2	2:BB:47:LEU:HA	1.67	0.59
5:BG:220:LYS:HG3	5:BG:223:LYS:HE3	1.85	0.59
25:BS:134:ARG:NH2	34:B5:1546:G:N7	2.51	0.59
27:BU:89:ARG:NH2	34:B5:1383:G:O5'	2.36	0.59
38:A1:1576:G:N2	38:A1:1810:A:OP1	2.36	0.59
63:Aa:89:GLN:OE1	63:Aa:89:GLN:N	2.34	0.59
4:BE:45:ILE:HA	4:BE:61:VAL:HG11	1.83	0.59
16:Ba:5:ARG:NH2	34:B5:1793:G:O2'	2.35	0.59
21:BK:77:ARG:NH2	21:BK:87:VAL:O	2.36	0.59
34:B5:649:U:N3	34:B5:684:A:N6	2.29	0.59
34:B5:896:U:H2'	34:B5:897:C:C2	2.38	0.59
38:A1:63:A:H5"	50:AN:174:ILE:HG21	1.84	0.59
38:A1:1460:A:H2'	38:A1:1461:A:H8	1.67	0.59
38:A1:1717:U:H2'	38:A1:1718:G:H8	1.68	0.59
38:A1:2483:G:N2	38:A1:2486:A:N3	2.50	0.59
38:A1:2526:C:H2'	38:A1:2527:G:H8	1.68	0.59
38:A1:2747:A:H4'	41:AD:174:PRO:HB2	1.84	0.59
38:A1:3122:A:N1	45:AH:70:THR:HG21	2.17	0.59
47:AJ:47:GLN:HB3	47:AJ:64:LYS:HB3	1.84	0.59
56:AT:17:ARG:NH2	56:AT:21:LYS:O	2.36	0.59
56:AT:68:THR:HG22	56:AT:69:LYS:N	2.17	0.59
80:DC:575:ALA:N	80:DC:588:LEU:O	2.35	0.59
27:BU:82:TYR:OH	30:Bd:44:ARG:NE	2.33	0.59
35:AA:51:ASP:HB2	35:AA:58:LEU:HG	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AA:69:TYR:OH	38:A1:2557:A:OP1	2.16	0.59
36:AB:244:ARG:NH1	38:A1:2948:C:OP1	2.36	0.59
38:A1:1184:A:H2'	38:A1:1185:C:C6	2.38	0.59
38:A1:2864:A:H5"	46:AI:114:GLY:HA2	1.85	0.59
38:A1:3225:C:H2'	38:A1:3226:A:H8	1.66	0.59
58:AV:59:MET:HE3	58:AV:73:VAL:HG12	1.83	0.59
1:BA:67:ILE:HG21	1:BA:72:ASP:HB3	1.85	0.59
5:BG:50:PHE:HE1	5:BG:113:ILE:HG13	1.67	0.59
6:BH:47:ARG:HB3	6:BH:59:ALA:HB3	1.84	0.59
27:BU:82:TYR:HB3	30:Bd:52:PHE:HB3	1.84	0.59
34:B5:1508:U:H2'	34:B5:1509:C:C6	2.37	0.59
38:A1:2111:G:H5"	59:AW:48:ARG:HH21	1.67	0.59
41:AD:197:SER:HB2	41:AD:202:GLY:HA3	1.85	0.59
47:AJ:101:ASN:ND2	47:AJ:130:VAL:HA	2.16	0.59
61:AY:16:ARG:HH21	61:AY:20:PHE:HE2	1.48	0.59
68:Af:3:GLU:N	68:Af:3:GLU:OE2	2.36	0.59
70:Ah:31:LEU:HB3	70:Ah:44:ILE:HG22	1.85	0.59
80:DC:483:PHE:O	80:DC:485:VAL:N	2.35	0.59
81:EC:6785:C:H2'	81:EC:6786:A:C8	2.38	0.59
1:BA:79:ARG:HH12	1:BA:164:ASN:HB3	1.68	0.59
3:BC:165:VAL:HG21	3:BC:210:THR:HG22	1.85	0.59
7:BI:104:ILE:HG13	7:BI:105:ASP:N	2.17	0.59
8:BJ:27:GLU:HB2	8:BJ:42:ILE:HD13	1.84	0.59
11:BO:84:ARG:HD3	11:BO:118:VAL:HG23	1.83	0.59
20:BF:29:ILE:HD11	23:BQ:29:ILE:HD11	1.84	0.59
27:BU:74:GLU:OE1	34:B5:1428:G:N2	2.35	0.59
34:B5:1524:A:N3	34:B5:1590:G:O2'	2.34	0.59
36:AB:261:MET:HG2	51:AO:64[A]:PHE:HA	1.83	0.59
38:A1:551:A:O2'	38:A1:552:G:O5'	2.19	0.59
38:A1:1175:C:O2'	51:AO:87[A]:MET:O	2.18	0.59
38:A1:1269:U:OP1	38:A1:1270:A:N6	2.36	0.59
38:A1:1280:C:H2'	38:A1:1281:G:H8	1.67	0.59
38:A1:2445:A:O2'	71:Ai:98:ARG:NH2	2.36	0.59
45:AH:18:VAL:HG13	45:AH:27:VAL:HG12	1.84	0.59
70:Ah:73:LYS:O	70:Ah:76:GLN:NE2	2.36	0.59
2:BB:159:SER:OG	34:B5:874:C:OP1	2.18	0.58
27:BU:21:LYS:HA	27:BU:94:GLU:HG3	1.85	0.58
34:B5:1775:U:OP1	76:An:11:ARG:NH2	2.33	0.58
38:A1:2282:U:OP1	38:A1:2973:G:O2'	2.20	0.58
38:A1:2555:G:O6	69:Ag:99:LYS:NZ	2.25	0.58
44:AG:155:ASN:HD21	44:AG:181:LYS:HA	1.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AI:131:ILE:H	46:AI:131:ILE:HD12	1.68	0.58
54:AR:15:VAL:HG23	54:AR:17:VAL:HG12	1.85	0.58
57:AU:61:THR:HG23	57:AU:62:VAL:HG23	1.84	0.58
80:DC:137:VAL:HG11	80:DC:785:ARG:NH1	2.18	0.58
4:BE:100:ARG:NH1	4:BE:236:ILE:HG12	2.18	0.58
5:BG:173:PRO:HA	34:B5:66:U:H5'	1.85	0.58
8:BJ:174:ARG:NH1	34:B5:536:C:OP2	2.37	0.58
9:BL:27:THR:HG23	9:BL:30:ARG:H	1.68	0.58
10:BN:102:LEU:HD12	10:BN:115:LEU:HD12	1.85	0.58
11:BO:46:MET:HE1	34:B5:898:A:H4'	1.84	0.58
19:BD:107:PHE:O	19:BD:111:ASN:ND2	2.34	0.58
19:BD:203:PRO:HA	24:BR:42:GLN:HG3	1.85	0.58
34:B5:816:G:H2'	34:B5:817:A:H8	1.69	0.58
34:B5:1356:U:H2'	34:B5:1357:A:H8	1.67	0.58
36:AB:182:GLN:HE21	36:AB:184:ASN:HD21	1.51	0.58
44:AG:70:LYS:HG3	44:AG:233:TRP:CE3	2.38	0.58
63:Aa:90:TYR:CD1	63:Aa:100:PRO:HG3	2.38	0.58
66:Ad:77:ARG:HD2	66:Ad:89:LEU:HD13	1.85	0.58
81:EC:6853:G:O6	81:EC:6875:C:N4	2.34	0.58
2:BB:45:LYS:HB3	11:BO:13:VAL:HG13	1.86	0.58
4:BE:191:ARG:HD2	4:BE:245:LYS:HD2	1.85	0.58
8:BJ:67:PRO:O	8:BJ:71:PHE:HB2	2.03	0.58
59:AW:45:ASN:HD21	59:AW:47:ARG:HB2	1.66	0.58
70:Ah:85:THR:HB	70:Ah:88:LEU:HD13	1.85	0.58
80:DC:30:HIS:O	80:DC:158:ASN:ND2	2.25	0.58
81:EC:6828:G:H2'	81:EC:6829:A:C8	2.38	0.58
1:BA:108:THR:HA	3:BC:64:LYS:HZ1	1.68	0.58
2:BB:69:CYS:SG	2:BB:70:LEU:N	2.77	0.58
4:BE:42:LEU:N	4:BE:84:ALA:O	2.32	0.58
20:BF:107:LYS:HZ1	34:B5:1610:G:P	2.27	0.58
23:BQ:135:ARG:NH1	34:B5:1583:A:OP1	2.33	0.58
34:B5:255:U:H2'	34:B5:256:A:H8	1.69	0.58
35:AA:126:LEU:HD22	35:AA:150:LEU:HD11	1.85	0.58
38:A1:643:U:O2'	38:A1:1153:A:N1	2.34	0.58
38:A1:1446:A:H5"	52:AP:65:SER:HB3	1.84	0.58
38:A1:1914:G:O2'	54:AR:82:LYS:O	2.15	0.58
38:A1:2536:A:H61	38:A1:2540:A:P	2.27	0.58
38:A1:2900:A:H4'	45:AH:174:LYS:HE2	1.84	0.58
38:A1:2991:A:O2'	38:A1:3309:G:N7	2.36	0.58
39:A3:78:U:O2	39:A3:102:A:N7	2.37	0.58
41:AD:50:ARG:NH1	41:AD:147:ASP:OD2	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:AG:81:THR:HG21	44:AG:181:LYS:HB2	1.84	0.58
45:AH:89:LYS:HB3	45:AH:145:VAL:HG22	1.85	0.58
66:Ad:46:THR:HG21	66:Ad:90:PHE:HA	1.85	0.58
80:DC:627:VAL:O	80:DC:631:ARG:HG3	2.03	0.58
5:BG:177:ARG:HD3	34:B5:142:G:H22	1.68	0.58
8:BJ:76:LEU:O	8:BJ:80:LEU:HG	2.04	0.58
17:Bb:15:GLU:O	17:Bb:29:ARG:NH2	2.36	0.58
19:BD:32:GLU:OE2	19:BD:58:VAL:N	2.37	0.58
22:BP:75:PRO:O	22:BP:75:PRO:HG2	2.03	0.58
27:BU:70:THR:HG22	34:B5:1280:4AC:O2'	2.03	0.58
34:B5:924:A:H2'	34:B5:925:G:C8	2.38	0.58
34:B5:1236:A:H2'	34:B5:1237:G:C8	2.38	0.58
38:A1:1062:A:O2'	38:A1:1098:A:OP1	2.21	0.58
80:DC:732:GLU:OE1	80:DC:734:GLN:NE2	2.37	0.58
81:EC:6885:G:H2'	81:EC:6886:A:C8	2.37	0.58
2:BB:114:VAL:O	2:BB:115:ARG:NE	2.36	0.58
5:BG:219:ARG:NH2	34:B5:242:U:OP1	2.25	0.58
6:BH:67:LEU:HD13	6:BH:70:PHE:HD2	1.68	0.58
7:BI:99:ALA:HB3	34:B5:329:G:H5'	1.86	0.58
8:BJ:37:LYS:N	8:BJ:41:GLU:OE2	2.34	0.58
15:BY:128:LYS:HE2	34:B5:153:G:N7	2.17	0.58
17:Bb:34:ASP:HB2	17:Bb:80:ARG:HB3	1.84	0.58
25:BS:36:LYS:HD2	34:B5:1567:U:H4'	1.84	0.58
34:B5:139:C:O2'	34:B5:177:U:O2	2.21	0.58
34:B5:1114:G:P	76:An:6:ARG:HH12	2.27	0.58
34:B5:1183:A:N3	34:B5:1210:C:O2'	2.32	0.58
38:A1:907:G:H4'	38:A1:908:G:H5'	1.84	0.58
39:A3:19:C:H2'	39:A3:20:A:H8	1.68	0.58
45:AH:5:GLN:HE22	45:AH:7:GLU:HB2	1.67	0.58
59:AW:9:SER:HA	59:AW:52:THR:HG23	1.85	0.58
80:DC:739:ALA:O	80:DC:743:ILE:N	2.34	0.58
9:BL:94:ILE:HD12	14:BX:12:ALA:HB1	1.84	0.58
25:BS:4:VAL:HG13	28:BZ:42:LEU:HD23	1.85	0.58
30:Bd:22:ARG:NH1	30:Bd:37:ASN:HB2	2.18	0.58
30:Bd:56:ARG:O	34:B5:1418:G:O2'	2.22	0.58
33:BM:91:VAL:HG21	33:BM:97:LEU:HD22	1.84	0.58
34:B5:522:U:H2'	34:B5:523:G:C8	2.37	0.58
34:B5:1483:A:H2	34:B5:1607:G:H1'	1.68	0.58
38:A1:283:G:OP2	77:Ao:45:ARG:NH1	2.36	0.58
38:A1:1178:G:N3	38:A1:1328:C:O2'	2.37	0.58
38:A1:1251:A:H5"	38:A1:1252:A:H4'	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1646:G:O2'	38:A1:1808:G:N2	2.34	0.58
38:A1:2526:C:H2'	38:A1:2527:G:C8	2.39	0.58
38:A1:2736:A:H2'	38:A1:2737:C:O4'	2.03	0.58
38:A1:3272:C:OP2	42:AE:78:ARG:NE	2.37	0.58
47:AJ:14:ILE:HD13	47:AJ:131:MET:SD	2.44	0.58
16:Ba:52:ASP:HA	16:Ba:55:GLU:HB3	1.86	0.58
20:BF:51:VAL:HG11	20:BF:130:ILE:HG22	1.85	0.58
21:BK:5:LYS:HA	21:BK:8:ARG:NE	2.17	0.58
28:BZ:93:SER:HB3	28:BZ:100:ILE:HG13	1.86	0.58
34:B5:1359:C:H2'	34:B5:1360:A:C8	2.39	0.58
36:AB:110:LEU:HD22	36:AB:114:VAL:HG11	1.86	0.58
37:AC:185:LYS:HZ3	37:AC:199:TRP:CG	2.22	0.58
38:A1:1126:G:H5"	46:AI:119:TRP:HZ3	1.68	0.58
40:A4:46:G:O2'	40:A4:61:A:N1	2.36	0.58
51:AO:113[A]:ASP:OD2	51:AO:114[A]:LYS:HG3	2.03	0.58
53:AQ:123:THR:OG1	53:AQ:125:ASP:OD1	2.18	0.58
79:E:94:ASN:HB2	79:E:123:LEU:HB2	1.85	0.58
81:EC:6826:U:H2'	81:EC:6827:G:C8	2.39	0.58
5:BG:2:LYS:HB3	5:BG:108:VAL:HG12	1.85	0.58
34:B5:1236:A:H2'	34:B5:1237:G:H8	1.68	0.58
36:AB:10:ARG:NH2	36:AB:263:SER:O	2.37	0.58
44:AG:54:GLU:HA	44:AG:57:ARG:NH1	2.18	0.58
46:AI:113:GLN:OE1	46:AI:113:GLN:N	2.30	0.58
58:AV:26:ALA:HB2	58:AV:99:ALA:HB1	1.86	0.58
63:Aa:126:LYS:HE3	63:Aa:148:ILE:HG21	1.85	0.58
7:BI:69:SER:HB3	9:BL:24:LYS:CE	2.34	0.58
23:BQ:75:VAL:HG12	34:B5:1609:U:H5"	1.86	0.58
24:BR:100:LEU:HG	24:BR:120:SER:H	1.68	0.58
28:BZ:79:ALA:O	28:BZ:83:LEU:HG	2.04	0.58
34:B5:898:A:N3	34:B5:899:G:H1'	2.19	0.58
34:B5:1777:G:O6	76:An:8:LYS:NZ	2.37	0.58
36:AB:303:LYS:HD2	36:AB:361:THR:HG21	1.86	0.58
38:A1:177:U:O2	38:A1:241:G:N2	2.29	0.58
38:A1:279:U:O4	77:Ao:45:ARG:NH2	2.37	0.58
38:A1:413:U:OP1	52:AP:30:ARG:NH2	2.37	0.58
38:A1:1194:G:H2'	38:A1:1195:A:C8	2.39	0.58
38:A1:1564:U:N3	38:A1:1565:G:N7	2.52	0.58
38:A1:2883:U:H2'	38:A1:2884:C:H6	1.69	0.58
58:AV:37:ILE:HD11	58:AV:61:THR:HG23	1.84	0.58
5:BG:187:LYS:NZ	34:B5:177:U:O2	2.33	0.57
19:BD:74:GLN:NE2	19:BD:79:TYR:O	2.36	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BU:53:LYS:NZ	34:B5:1347:U:OP1	2.36	0.57
31:Bg:13:LEU:HD23	31:Bg:310:ILE:HD12	1.86	0.57
33:BM:58:LEU:HD12	33:BM:126:TRP:HZ3	1.69	0.57
34:B5:1356:U:H2'	34:B5:1357:A:C8	2.39	0.57
34:B5:1592:A:H2'	34:B5:1593:A:H8	1.69	0.57
34:B5:1795:U:O2'	34:B5:1797:A:N7	2.37	0.57
37:AC:29:PRO:HD2	37:AC:277:PRO:HB2	1.86	0.57
38:A1:1267:U:O4	38:A1:1274:A:O2'	2.11	0.57
38:A1:1817:G:H8	38:A1:1818:U:H5	1.50	0.57
38:A1:2439:A:H2'	38:A1:2440:G:H8	1.68	0.57
42:AE:54:TYR:HA	42:AE:65:ILE:HG22	1.86	0.57
50:AN:68:ARG:NH1	50:AN:124:ASP:O	2.37	0.57
80:DC:26:ALA:HB2	80:DC:128:VAL:HB	1.85	0.57
4:BE:253:ASP:HA	4:BE:256:ARG:HH21	1.69	0.57
15:BY:62:THR:HA	15:BY:69:SER:HA	1.85	0.57
34:B5:134:U:OP1	34:B5:135:A:O2'	2.18	0.57
38:A1:129:U:H2'	38:A1:130:A:C8	2.39	0.57
38:A1:1226:G:H2'	38:A1:1227:C:H6	1.69	0.57
38:A1:2260:PSU:H2'	38:A1:2261:G:C8	2.38	0.57
38:A1:3073:A:H2'	38:A1:3074:G:O4'	2.04	0.57
42:AE:154:LEU:HD23	42:AE:157:GLN:HE21	1.69	0.57
81:EC:6790:A:H61	81:EC:6797:U:H6	1.52	0.57
20:BF:81:ARG:HD3	34:B5:1615:C:H5"	1.86	0.57
29:Bc:18:ARG:NH2	34:B5:1615:C:OP1	2.36	0.57
34:B5:138:A:N6	34:B5:266:A:H61	2.02	0.57
34:B5:431:C:O5'	80:DC:390:ASP:O	2.21	0.57
38:A1:181:U:O2'	72:Aj:75:LYS:NZ	2.38	0.57
38:A1:1229:G:H2'	38:A1:1230:G:O4'	2.04	0.57
38:A1:2383:C:OP2	51:AO:85[A]:ARG:NH2	2.38	0.57
41:AD:232:ASP:O	41:AD:235:SER:OG	2.22	0.57
45:AH:90:MET:HB2	45:AH:144:ILE:CG2	2.34	0.57
60:AX:46:TYR:CD1	70:Ah:75:TYR:HB3	2.39	0.57
60:AX:67:ILE:HB	60:AX:83:VAL:HG12	1.86	0.57
80:DC:203:TYR:O	80:DC:208:THR:OG1	2.22	0.57
1:BA:79:ARG:NH2	1:BA:164:ASN:O	2.36	0.57
1:BA:176:LEU:O	1:BA:180:GLU:HG2	2.05	0.57
7:BI:195:ARG:NH1	7:BI:195:ARG:O	2.35	0.57
32:Bf:127:GLY:HA2	33:BM:54:ARG:HH21	1.67	0.57
38:A1:1203:A:H2'	38:A1:1204:A:C8	2.39	0.57
38:A1:2357:A:H2'	38:A1:2358:A:C8	2.39	0.57
41:AD:59:ASP:OD2	41:AD:81:HIS:ND1	2.31	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:AR:177:VAL:HA	54:AR:180:LYS:HB3	1.86	0.57
80:DC:152:LYS:HD3	80:DC:153:PRO:HD2	1.86	0.57
80:DC:564:ARG:O	80:DC:725:GLN:N	2.31	0.57
8:BJ:41:GLU:O	8:BJ:45:ILE:HG13	2.05	0.57
9:BL:109:VAL:HG11	9:BL:125:VAL:HG11	1.86	0.57
13:BW:28:ARG:HH12	34:B5:864:U:H3'	1.68	0.57
23:BQ:13:LYS:HG3	23:BQ:14:LYS:H	1.70	0.57
32:Bf:80:ARG:NH1	34:B5:1447:C:O4'	2.37	0.57
38:A1:571:U:H2'	38:A1:572:A:H8	1.69	0.57
38:A1:952:A:H4'	38:A1:968:G:N2	2.19	0.57
38:A1:1108:U:H2'	38:A1:1109:U:C6	2.39	0.57
38:A1:3070:A:OP1	54:AR:62:ARG:NH1	2.38	0.57
73:Ak:11:PHE:CD1	73:Ak:54:LEU:HD11	2.39	0.57
2:BB:68:VAL:HG12	2:BB:69:CYS:N	2.19	0.57
2:BB:85:LYS:HG2	2:BB:101:HIS:HB3	1.87	0.57
7:BI:69:SER:OG	7:BI:185:GLU:OE1	2.18	0.57
8:BJ:23:ARG:HG2	8:BJ:27:GLU:OE1	2.04	0.57
31:Bg:38:ARG:HA	31:Bg:67:ILE:HG23	1.85	0.57
31:Bg:59:ARG:NH2	31:Bg:96:THR:HG23	2.20	0.57
33:BM:95:LYS:HA	33:BM:117:GLY:HA3	1.86	0.57
34:B5:108:A:H2'	34:B5:109:G:C8	2.40	0.57
34:B5:430:G:C3'	80:DC:391:LYS:HB2	2.35	0.57
34:B5:902:G:H2'	34:B5:903:U:C6	2.40	0.57
34:B5:950:C:H2'	34:B5:951:A:C8	2.39	0.57
34:B5:1471:A:H2	34:B5:1474:G:N3	2.02	0.57
34:B5:1739:C:H2'	34:B5:1740:A:H8	1.69	0.57
38:A1:1460:A:H2'	38:A1:1461:A:C8	2.39	0.57
38:A1:2268:U:O2'	38:A1:2269:U:H2'	2.04	0.57
38:A1:2834:G:H2'	38:A1:2835:U:H6	1.70	0.57
40:A4:67:U:H2'	40:A4:68:G:C8	2.40	0.57
60:AX:85:GLN:HE21	60:AX:119:THR:HB	1.70	0.57
79:E:9:VAL:HG13	79:E:10:ARG:HD2	1.86	0.57
80:DC:24:VAL:O	80:DC:105:SER:OG	2.22	0.57
80:DC:460:ASP:HA	80:DC:463:LEU:HB3	1.86	0.57
22:BP:124:THR:HB	34:B5:1182:U:H4'	1.86	0.57
26:BT:75:LYS:HE3	34:B5:1520:U:H5"	1.86	0.57
28:BZ:103:ARG:NH1	81:EC:6863:C:O3'	2.37	0.57
31:Bg:200:ASN:ND2	31:Bg:239:GLU:OE2	2.36	0.57
38:A1:594:U:P	38:A1:609:G:H1	2.26	0.57
38:A1:1772:U:H5"	38:A1:1773:C:H5'	1.87	0.57
38:A1:2426:U:H2'	38:A1:2427:U:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3322:A:H2'	38:A1:3323:A:H8	1.70	0.57
39:A3:81:U:H2'	39:A3:82:G:C8	2.39	0.57
40:A4:80:A:O2'	40:A4:83:C:N4	2.38	0.57
74:Al:44:TRP:CH2	74:Al:45:ARG:HD3	2.40	0.57
80:DC:488:VAL:HG12	80:DC:796:MET:HB3	1.87	0.57
16:Ba:33:ASP:OD1	16:Ba:34:LYS:N	2.38	0.57
18:Be:25:GLU:O	34:B5:506:A:N6	2.37	0.57
23:BQ:8:GLN:HG3	34:B5:1378:U:C2	2.39	0.57
23:BQ:98:ASP:O	23:BQ:101:SER:OG	2.20	0.57
34:B5:430:G:H2'	80:DC:390:ASP:C	2.30	0.57
36:AB:123:TYR:CE2	36:AB:124:LYS:HG3	2.40	0.57
37:AC:84:ARG:HH11	37:AC:87:GLN:HE21	1.53	0.57
38:A1:1247:U:N3	38:A1:1267:U:H5"	2.19	0.57
38:A1:1411:C:H2'	38:A1:1412:G:H8	1.69	0.57
38:A1:1560:G:H4'	38:A1:1561:G:OP1	2.04	0.57
50:AN:99:ARG:NH2	50:AN:118:SER:O	2.37	0.57
58:AV:32:ARG:HD3	58:AV:64:LYS:HE2	1.87	0.57
62:AZ:30:ASP:HA	62:AZ:77:TYR:HE2	1.70	0.57
2:BB:86:LEU:HD13	2:BB:100:PHE:HA	1.86	0.57
8:BJ:126:ARG:HA	8:BJ:129:ILE:HB	1.86	0.57
26:BT:50:ALA:HA	26:BT:53:TRP:HD1	1.70	0.57
33:BM:70:ASN:OD1	33:BM:71:ILE:N	2.38	0.57
34:B5:97:C:H2'	34:B5:98:U:C6	2.40	0.57
34:B5:103:A:H4'	34:B5:105:A:C8	2.40	0.57
34:B5:1184:A:O2'	34:B5:1209:C:O2'	2.22	0.57
38:A1:20:A:H2'	38:A1:21:G:C8	2.40	0.57
38:A1:83:U:O2'	38:A1:700:C:O2'	2.22	0.57
38:A1:2696:A:H2'	38:A1:2697:A:C8	2.40	0.57
38:A1:2736:A:OP1	56:AT:92:ARG:NH2	2.38	0.57
38:A1:3288:G:O2'	38:A1:3289:G:O5'	2.19	0.57
38:A1:3298:C:C2	38:A1:3299:A:C8	2.93	0.57
39:A3:40:C:O2	47:AJ:72:ARG:NE	2.26	0.57
40:A4:8:C:H2'	40:A4:9:A:H8	1.70	0.57
48:AL:42:ARG:HH11	48:AL:51:LEU:HD12	1.70	0.57
60:AX:134:ASP:OD1	60:AX:135:ILE:N	2.38	0.57
80:DC:144:ARG:HD2	80:DC:192:TYR:CG	2.39	0.57
2:BB:209:ASN:HB2	2:BB:211:HIS:HE1	1.70	0.57
20:BF:139:ASN:O	20:BF:214:LYS:NZ	2.32	0.57
28:BZ:71:ILE:HD13	28:BZ:75:LEU:HD23	1.87	0.57
36:AB:244:ARG:O	36:AB:248:LYS:NZ	2.30	0.57
38:A1:531:G:H2'	38:A1:532:A:C8	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:714:G:O6	63:Aa:70:LYS:NZ	2.38	0.57
38:A1:1062:A:N3	56:AT:130:ARG:NH2	2.46	0.57
39:A3:23:A:H2'	39:A3:24:A:H8	1.69	0.57
3:BC:77:GLN:HE22	3:BC:190:LEU:HD22	1.68	0.56
3:BC:81:MET:HB2	3:BC:101:VAL:HG23	1.87	0.56
7:BI:73:SER:HB2	34:B5:257:A:H1'	1.86	0.56
13:BW:55:ASP:OD1	13:BW:56:HIS:N	2.38	0.56
34:B5:1426:C:O2'	34:B5:1428:G:OP2	2.13	0.56
36:AB:173:GLN:NE2	38:A1:3313:U:O5'	2.39	0.56
38:A1:1447:G:O2'	38:A1:2355:G:O6	2.19	0.56
39:A3:38:U:N3	39:A3:41:G:OP2	2.38	0.56
45:AH:176:LEU:HD22	75:Am:86:ALA:HB1	1.86	0.56
50:AN:112:ASN:OD1	50:AN:113:LEU:N	2.38	0.56
80:DC:132:ILE:H	80:DC:132:ILE:HD12	1.70	0.56
6:BH:122:HIS:CE1	6:BH:177:THR:HG23	2.40	0.56
8:BJ:83:VAL:HG13	8:BJ:85:VAL:H	1.70	0.56
9:BL:85:VAL:HG22	9:BL:108:PRO:HB3	1.87	0.56
28:BZ:73:GLY:O	28:BZ:77:ARG:NH2	2.38	0.56
34:B5:477:A:N6	34:B5:541:A:O4'	2.37	0.56
38:A1:2256:A:H62	80:DC:703:GLY:HA2	1.70	0.56
38:A1:2439:A:H2'	38:A1:2440:G:C8	2.41	0.56
38:A1:2683:U:H2'	38:A1:2684:C:C6	2.40	0.56
41:AD:150:LEU:HD12	47:AJ:142:LYS:HE3	1.87	0.56
43:AF:130:ILE:HD12	43:AF:134:VAL:HG11	1.87	0.56
54:AR:31:GLU:OE2	54:AR:31:GLU:N	2.31	0.56
66:Ad:75:ILE:HD13	66:Ad:93:VAL:HG13	1.86	0.56
80:DC:171:LYS:HA	80:DC:282:PHE:CE2	2.31	0.56
2:BB:59:ASP:HA	2:BB:62:LYS:HZ3	1.71	0.56
4:BE:66:MET:HE1	34:B5:454:U:OP2	2.05	0.56
4:BE:87:MET:O	4:BE:122:LYS:HE2	2.06	0.56
5:BG:31:ARG:HH22	34:B5:1681:A:HO2'	1.51	0.56
8:BJ:171:ARG:HD2	34:B5:513:U:C5	2.40	0.56
34:B5:142:G:P	34:B5:142:G:H21	2.29	0.56
34:B5:340:U:H2'	34:B5:341:A:C8	2.40	0.56
34:B5:649:U:O4	34:B5:684:A:N7	2.38	0.56
34:B5:1175:U:H2'	34:B5:1176:G:H8	1.71	0.56
34:B5:1259:U:H2'	34:B5:1260:U:C6	2.40	0.56
34:B5:1537:C:OP2	34:B5:1572:G:N2	2.38	0.56
36:AB:67:PHE:HB3	58:AV:88:ARG:CZ	2.35	0.56
37:AC:325:LEU:O	43:AF:41:ARG:NH2	2.38	0.56
38:A1:585:A:H5"	68:Af:70:LYS:HD2	1.85	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1678:G:OP2	57:AU:77:LYS:NZ	2.29	0.56
38:A1:1805:C:H2'	38:A1:1806:A:C8	2.40	0.56
38:A1:2262:A:H3'	38:A1:2263:C:C6	2.40	0.56
38:A1:2451:G:H2'	38:A1:2452:G:C8	2.40	0.56
38:A1:3356:G:H2'	38:A1:3357:U:H6	1.69	0.56
39:A3:23:A:O2'	39:A3:24:A:OP1	2.23	0.56
40:A4:107:G:H4'	40:A4:138:A:H5'	1.88	0.56
43:AF:108:LEU:HD21	43:AF:115:THR:HG22	1.87	0.56
45:AH:90:MET:HG2	45:AH:181:VAL:HA	1.86	0.56
48:AL:55:ARG:NH1	48:AL:73:ARG:O	2.33	0.56
57:AU:93:ILE:HG21	57:AU:105:LEU:HD23	1.86	0.56
70:Ah:57:VAL:O	70:Ah:61:GLN:HG2	2.05	0.56
80:DC:27:HIS:HB3	80:DC:30:HIS:CD2	2.40	0.56
80:DC:249:PHE:O	80:DC:258:THR:N	2.37	0.56
80:DC:658:GLU:OE2	80:DC:700:ARG:NH2	2.37	0.56
81:EC:6783:U:O2'	81:EC:6813:A:N1	2.38	0.56
10:BN:19:SER:OG	10:BN:21:ASN:OD1	2.22	0.56
12:BV:62:ARG:HH12	34:B5:1039:A:H4'	1.70	0.56
14:BX:69:ARG:HG3	14:BX:117:ILE:HG12	1.87	0.56
24:BR:103:ASP:O	24:BR:106:THR:OG1	2.15	0.56
34:B5:86:A:H2'	34:B5:87:C:H6	1.70	0.56
34:B5:830:U:H1'	34:B5:831:U:H5	1.69	0.56
34:B5:1404:C:H2'	34:B5:1405:G:C8	2.41	0.56
34:B5:1624:C:H2'	34:B5:1625:C:C6	2.40	0.56
34:B5:1772:C:H2'	34:B5:1773:4AC:H6	1.86	0.56
38:A1:2463:G:N2	38:A1:2464:U:O4	2.39	0.56
39:A3:99:G:H4'	43:AF:128:LYS:HD3	1.86	0.56
42:AE:82:ARG:NH1	68:Af:106:ASN:OD1	2.39	0.56
52:AP:152:GLU:N	52:AP:152:GLU:OE2	2.38	0.56
79:E:59:PRO:HB3	79:E:170:GLY:HA2	1.87	0.56
3:BC:53:ILE:HD12	3:BC:56:ILE:HD12	1.86	0.56
10:BN:67:THR:OG1	10:BN:69:ASN:O	2.22	0.56
22:BP:40:ARG:NH2	34:B5:1551:U:O4	2.39	0.56
34:B5:1680:G:H1'	34:B5:1721:A:N6	2.20	0.56
34:B5:1738:U:H2'	34:B5:1739:C:C6	2.41	0.56
38:A1:2728:G:O6	56:AT:78:LYS:NZ	2.27	0.56
40:A4:97:A:OP1	70:Ah:67:ARG:NH2	2.36	0.56
58:AV:32:ARG:HB3	58:AV:64:LYS:HG3	1.87	0.56
79:E:83:ASP:OD2	79:E:107:TYR:OH	2.21	0.56
79:E:184:LEU:O	79:E:188:ASN:HB2	2.05	0.56
80:DC:404:THR:HG22	80:DC:449:PRO:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:BC:76:LEU:HD22	3:BC:133:LYS:HE2	1.88	0.56
11:BO:72:LYS:O	11:BO:73:GLU:HG3	2.05	0.56
28:BZ:66:VAL:HG13	28:BZ:71:ILE:H	1.70	0.56
31:Bg:90:ARG:HD3	31:Bg:92:TRP:CZ2	2.41	0.56
38:A1:443:G:O3'	38:A1:445:G:N2	2.29	0.56
38:A1:982:C:H5"	64:Ab:23:LYS:HE2	1.87	0.56
38:A1:1743:G:H2'	38:A1:1744:G:H8	1.71	0.56
38:A1:2406:C:H2'	38:A1:2407:C:C6	2.41	0.56
38:A1:2549:G:OP1	38:A1:2549:G:N2	2.36	0.56
81:EC:6861:G:H4'	81:EC:6862:G:OP2	2.03	0.56
14:BX:50:LYS:HE2	34:B5:435:C:H5"	1.88	0.56
20:BF:40:ILE:HG23	20:BF:69:PHE:CD1	2.40	0.56
31:Bg:243:LEU:HB3	31:Bg:252:LEU:HD11	1.88	0.56
34:B5:431:C:C5	80:DC:391:LYS:HE2	2.39	0.56
34:B5:553:G:N2	34:B5:571:G:N7	2.48	0.56
37:AC:226:GLU:OE1	37:AC:237:GLN:HG2	2.05	0.56
38:A1:597:G:H2'	38:A1:598:A:H8	1.70	0.56
38:A1:1925:U:O2'	38:A1:1927:G:N7	2.38	0.56
38:A1:2255:A:H4'	38:A1:2256:A:OP2	2.02	0.56
38:A1:3163:A:H2'	38:A1:3164:C:H6	1.71	0.56
43:AF:147:LEU:HD12	43:AF:244:ASN:HD21	1.69	0.56
54:AR:150:GLN:OE1	54:AR:151:ARG:NH1	2.39	0.56
58:AV:84:SER:HA	58:AV:94:TYR:HB3	1.88	0.56
74:Al:27:ILE:O	74:Al:33:ASN:ND2	2.38	0.56
80:DC:42:ARG:HH21	80:DC:331:ALA:HB3	1.71	0.56
80:DC:137:VAL:HG11	80:DC:785:ARG:HH12	1.71	0.56
81:EC:6772:G:O2'	81:EC:6820:C:N4	2.38	0.56
2:BB:198:GLU:HA	2:BB:201:THR:HG22	1.86	0.56
3:BC:146:THR:HG23	3:BC:148:LEU:HD23	1.87	0.56
13:BW:32:LYS:N	34:B5:637:C:OP1	2.33	0.56
20:BF:61:TYR:CD1	20:BF:165:LEU:HD13	2.41	0.56
30:Bd:10:HIS:CE1	34:B5:1554:U:H3	2.24	0.56
34:B5:1688:U:H5"	34:B5:1714:A:N1	2.21	0.56
38:A1:860:G:OP1	78:Ap:18:TYR:OH	2.18	0.56
38:A1:1264:G:N1	38:A1:1266:G:O6	2.39	0.56
38:A1:1747:G:H21	73:Ak:2:ALA:HB3	1.70	0.56
38:A1:2417:U:OP2	38:A1:2606:G:O2'	2.20	0.56
38:A1:2446:U:H3	38:A1:2500:A:H61	1.54	0.56
38:A1:2618:G:OP1	38:A1:2644:C:O2'	2.20	0.56
38:A1:2782:U:OP1	48:AL:185:LYS:NZ	2.39	0.56
57:AU:37:LEU:HD12	57:AU:41:ILE:HD11	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:Ac:66:LYS:NZ	65:Ac:103:THR:O	2.33	0.56
1:BA:183:ARG:HG2	1:BA:191:ARG:HH11	1.71	0.56
9:BL:149:ALA:HA	9:BL:153:PHE:HD2	1.71	0.56
9:BL:154:ALA:HB2	10:BN:137:PRO:HD2	1.86	0.56
11:BO:52:ARG:HD2	34:B5:905:A:H5"	1.86	0.56
26:BT:38:LYS:NZ	34:B5:1564:U:OP1	2.28	0.56
26:BT:72:GLY:HA3	34:B5:1498:G:H5"	1.88	0.56
31:Bg:256:THR:OG1	31:Bg:259:GLY:O	2.22	0.56
34:B5:499:U:O2'	34:B5:501:U:O4	2.23	0.56
37:AC:120:TYR:CE1	37:AC:277:PRO:HB3	2.41	0.56
38:A1:518:G:OP1	43:AF:67:ARG:NE	2.33	0.56
38:A1:1095:U:H3	56:AT:127:GLN:CD	2.13	0.56
40:A4:88:A:HO2'	40:A4:89:A:P	2.29	0.56
46:AI:150:GLU:OE1	46:AI:153:ARG:NH2	2.39	0.56
48:AL:165:SER:H	63:Aa:139:ARG:HH22	1.54	0.56
52:AP:24:VAL:HG21	52:AP:87:SER:HA	1.88	0.56
81:EC:6805:C:H1'	81:EC:6882:G:C8	2.39	0.56
6:BH:64:VAL:HA	6:BH:67:LEU:CD2	2.33	0.56
31:Bg:294:TRP:CD2	31:Bg:301:LEU:HD13	2.41	0.56
34:B5:208:U:H2'	34:B5:209:U:H6	1.71	0.56
34:B5:1147:A:O2'	34:B5:1636:C:OP2	2.22	0.56
35:AA:70:ARG:HB3	38:A1:1650:G:H5"	1.88	0.56
35:AA:206:PRO:HG3	35:AA:213:GLY:HA3	1.88	0.56
36:AB:124:LYS:NZ	38:A1:3297:U:O4	2.36	0.56
37:AC:342:LYS:NZ	37:AC:343:LYS:O	2.34	0.56
38:A1:3154:C:O2'	38:A1:3157:U:O2	2.16	0.56
43:AF:156:ILE:HD11	43:AF:201:PHE:HE1	1.70	0.56
53:AQ:178:ARG:HH21	63:Aa:50:PRO:HG2	1.70	0.56
58:AV:80:ARG:HB2	58:AV:99:ALA:HB3	1.87	0.56
60:AX:69:SER:O	60:AX:73:MET:HG2	2.05	0.56
61:AY:12:ARG:NH2	61:AY:16:ARG:HH11	2.04	0.56
73:Ak:43:PHE:HE1	73:Ak:56:ILE:HD12	1.71	0.56
80:DC:222:ILE:HA	80:DC:225:PHE:CE2	2.40	0.56
80:DC:576:LEU:HD13	80:DC:585:ARG:NH2	2.20	0.56
23:BQ:99:GLU:OE1	23:BQ:99:GLU:N	2.39	0.55
31:Bg:19:TRP:H	31:Bg:38:ARG:HB3	1.71	0.55
31:Bg:201:THR:HG21	31:Bg:243:LEU:H	1.71	0.55
33:BM:46:ARG:NH1	34:B5:1254:U:OP2	2.39	0.55
34:B5:16:G:H2'	34:B5:17:C:C6	2.41	0.55
34:B5:1593:A:H2'	34:B5:1594:G:C8	2.40	0.55
38:A1:616:G:H2'	38:A1:617:G:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1497:C:H2'	38:A1:1498:A:C8	2.41	0.55
38:A1:1659:U:H2'	38:A1:1660:C:C6	2.41	0.55
38:A1:1782:U:H2'	38:A1:1783:U:O4'	2.06	0.55
38:A1:2280:A:O2'	38:A1:2281:A:H3'	2.06	0.55
67:Ae:96:ILE:HD12	67:Ae:108:ILE:HG21	1.88	0.55
68:Af:14:LEU:HD11	68:Af:31:LYS:HB2	1.88	0.55
71:Ai:4:LYS:HA	71:Ai:12:ASN:HB3	1.87	0.55
7:BI:57:ALA:HB2	7:BI:177:GLY:HA2	1.88	0.55
10:BN:73:ARG:HD3	34:B5:859:A:C5	2.41	0.55
19:BD:172:THR:O	19:BD:173:ARG:NH1	2.30	0.55
26:BT:86:ARG:NH2	34:B5:1601:G:OP1	2.39	0.55
34:B5:158:U:H3'	34:B5:159:U:H5"	1.88	0.55
34:B5:1035:G:H2'	34:B5:1036:A:H8	1.70	0.55
34:B5:1480:G:H2'	34:B5:1481:C:O4'	2.06	0.55
38:A1:733:G:H21	38:A1:736:A:H2	1.52	0.55
38:A1:1635:G:N2	38:A1:1638:A:OP2	2.35	0.55
38:A1:2259:A:H1'	38:A1:2260:PSU:H5"	1.87	0.55
40:A4:88:A:O2'	40:A4:89:A:OP1	2.23	0.55
51:AO:151[A]:ASP:OD1	51:AO:152[A]:VAL:N	2.39	0.55
80:DC:162:ARG:HH21	80:DC:215:LEU:HD12	1.72	0.55
80:DC:300:LEU:HD12	80:DC:305:ILE:HB	1.87	0.55
10:BN:96:VAL:O	10:BN:100:LYS:HG2	2.06	0.55
34:B5:898:A:H62	34:B5:914:G:H21	1.49	0.55
34:B5:953:G:H2'	34:B5:954:G:C8	2.41	0.55
37:AC:326:ARG:NH2	38:A1:608:A:O3'	2.39	0.55
38:A1:68:C:N4	38:A1:314:U:O2'	2.40	0.55
38:A1:235:A:H2'	38:A1:236:G:C8	2.41	0.55
38:A1:670:C:P	53:AQ:147:ARG:HH12	2.29	0.55
38:A1:3020:U:H1'	38:A1:3034:C:H42	1.71	0.55
39:A3:7:G:OP1	41:AD:33:ARG:HD2	2.06	0.55
40:A4:12:A:H5"	52:AP:3:ARG:HB3	1.88	0.55
43:AF:77:VAL:HB	56:AT:139:ARG:HG2	1.87	0.55
43:AF:240:VAL:HA	43:AF:243:MET:HB2	1.87	0.55
49:AM:19:ARG:HB3	49:AM:35:ILE:HD13	1.88	0.55
79:E:124:LEU:HD12	79:E:128:LEU:HD22	1.89	0.55
7:BI:27:PHE:CD2	34:B5:301:A:H4'	2.41	0.55
20:BF:177:ILE:O	20:BF:180:ARG:N	2.40	0.55
34:B5:1735:U:H2'	34:B5:1736:G:C8	2.41	0.55
34:B5:1739:C:H2'	34:B5:1740:A:C8	2.41	0.55
35:AA:52:SER:HB3	35:AA:191:LEU:HD12	1.88	0.55
38:A1:166:C:H2'	38:A1:167:U:H6	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1615:C:H2'	38:A1:1616:U:C6	2.42	0.55
38:A1:2469:G:O2'	79:E:26:ARG:NH2	2.39	0.55
40:A4:16:G:O2'	40:A4:17:A:OP2	2.21	0.55
41:AD:41:LYS:HD2	56:AT:93:VAL:HG11	1.87	0.55
48:AL:159:VAL:HG22	63:Aa:124:ILE:HD11	1.88	0.55
80:DC:659:ILE:HG22	80:DC:663:VAL:HG23	1.88	0.55
1:BA:70:PRO:O	1:BA:95:ALA:N	2.27	0.55
8:BJ:162:SER:OG	8:BJ:165:GLY:N	2.33	0.55
22:BP:98:ASN:ND2	22:BP:103:ASN:OD1	2.39	0.55
23:BQ:12:LYS:C	23:BQ:83:GLN:HE22	2.14	0.55
34:B5:1456:C:OP1	34:B5:1457:C:O2'	2.17	0.55
34:B5:1774:G:OP1	76:An:7:LYS:NZ	2.32	0.55
34:B5:1782:MA6:OP1	76:An:9:ARG:HD2	2.06	0.55
37:AC:102:PRO:HD2	38:A1:933:A:H61	1.70	0.55
38:A1:500:C:H4'	42:AE:80:ASN:HD21	1.71	0.55
38:A1:1340:G:H2'	38:A1:1341:U:C6	2.41	0.55
38:A1:2232:A:H2'	38:A1:2233:A:C8	2.42	0.55
38:A1:2871:G:H5"	38:A1:2872:A:H5"	1.89	0.55
38:A1:2902:A:OP1	45:AH:170:LYS:NZ	2.39	0.55
41:AD:250:ASP:HB2	41:AD:254:LYS:HZ1	1.72	0.55
53:AQ:106:PHE:HB3	53:AQ:111:ARG:HG3	1.87	0.55
72:Aj:27:PHE:HA	72:Aj:34:CYS:HA	1.89	0.55
80:DC:9:MET:HA	80:DC:12:LEU:HB3	1.88	0.55
80:DC:309:GLY:O	80:DC:312:LYS:NZ	2.36	0.55
1:BA:13:ASP:OD1	1:BA:14:ALA:N	2.39	0.55
2:BB:48:VAL:HG13	2:BB:49:ASN:H	1.71	0.55
3:BC:110:HIS:CE1	12:BV:11:LEU:HD21	2.42	0.55
8:BJ:126:ARG:HH22	34:B5:476:U:P	2.29	0.55
19:BD:133:GLY:HA2	19:BD:155:GLY:HA3	1.89	0.55
26:BT:33:TYR:O	26:BT:36:ILE:HG22	2.05	0.55
28:BZ:77:ARG:HD2	34:B5:1532:U:OP2	2.06	0.55
33:BM:43:ARG:N	33:BM:47:GLU:OE2	2.37	0.55
35:AA:26:ALA:HB1	35:AA:28:LYS:HE3	1.88	0.55
38:A1:592:A:N7	38:A1:593:C:N4	2.54	0.55
38:A1:759:U:H2'	38:A1:760:G:O4'	2.07	0.55
38:A1:2213:A:H2'	38:A1:2214:A:H8	1.70	0.55
38:A1:2419:A:H2'	38:A1:2420:C:C6	2.42	0.55
38:A1:2801:A:O2'	38:A1:2802:A:H2'	2.07	0.55
38:A1:3152:U:OP2	38:A1:3395:G:N2	2.32	0.55
45:AH:91:ARG:HG2	45:AH:182:SER:HB3	1.88	0.55
80:DC:113:SER:HB2	80:DC:516:PRO:HG2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:633:ILE:HD13	80:DC:647:ILE:HD11	1.87	0.55
7:BI:152:ILE:HG13	7:BI:153:GLU:N	2.21	0.55
9:BL:59:PRO:HB3	9:BL:66:ILE:HD11	1.89	0.55
15:BY:103:ALA:O	15:BY:108:ARG:NH2	2.38	0.55
26:BT:117:SER:HB3	26:BT:123:ARG:HG2	1.89	0.55
31:Bg:244:ALA:HB2	31:Bg:292:LEU:HB3	1.89	0.55
32:Bf:140:TYR:OH	34:B5:1234:A:N3	2.32	0.55
34:B5:1003:A:H1'	34:B5:1005:A:N7	2.22	0.55
38:A1:2535:A:H2'	38:A1:2536:A:O4'	2.07	0.55
41:AD:122:VAL:O	41:AD:248:ARG:NH2	2.30	0.55
44:AG:54:GLU:HA	44:AG:57:ARG:HH11	1.71	0.55
45:AH:5:GLN:NE2	45:AH:7:GLU:HB2	2.22	0.55
48:AL:122:LYS:HD2	48:AL:145:PHE:CE1	2.41	0.55
54:AR:67:ALA:O	54:AR:71:ARG:HG2	2.06	0.55
62:AZ:48:ARG:HE	62:AZ:69:LYS:HD2	1.71	0.55
2:BB:83:LYS:HG3	2:BB:106:THR:HG22	1.88	0.55
8:BJ:151:ASP:O	8:BJ:154:LYS:NZ	2.39	0.55
11:BO:68:ALA:HA	11:BO:71:CYS:SG	2.47	0.55
15:BY:15:ASN:HD21	15:BY:18:LEU:HD23	1.71	0.55
19:BD:138:VAL:HG13	19:BD:182:LEU:HD21	1.88	0.55
34:B5:253:A:H2'	34:B5:254:A:C8	2.42	0.55
38:A1:876:A:H4'	38:A1:1890:U:H4'	1.89	0.55
38:A1:1009:A:H2'	38:A1:1010:G:C8	2.42	0.55
38:A1:2160:G:H2'	38:A1:2161:G:C8	2.42	0.55
38:A1:2259:A:O2'	38:A1:2260:PSU:H6	1.89	0.55
38:A1:2453:U:O2	38:A1:2454:G:O2'	2.23	0.55
42:AE:42:LEU:HD23	42:AE:84:VAL:HG12	1.88	0.55
42:AE:67:GLY:HA3	42:AE:72:ASN:HD21	1.72	0.55
44:AG:227:ASP:OD2	44:AG:228:GLU:N	2.40	0.55
53:AQ:74:GLU:OE2	53:AQ:74:GLU:N	2.27	0.55
62:AZ:50:PRO:HD3	62:AZ:68:ILE:HG12	1.88	0.55
71:Ai:67:LYS:HG3	71:Ai:71:LYS:HE3	1.89	0.55
80:DC:31:GLY:HA2	83:DC:901:GDP:C8	2.42	0.55
19:BD:22:ASN:O	19:BD:26:THR:OG1	2.20	0.55
34:B5:998:A:N6	34:B5:1004:U:OP2	2.39	0.55
34:B5:1550:A:H2'	34:B5:1551:U:C6	2.42	0.55
38:A1:153:U:H4'	38:A1:158:G:H4'	1.89	0.55
38:A1:595:G:O6	42:AE:22:ARG:NH2	2.33	0.55
38:A1:1097:G:H4'	56:AT:129:LYS:HD3	1.88	0.55
38:A1:1119:C:H2'	38:A1:1120:A:C8	2.41	0.55
38:A1:1921:A:H2'	38:A1:1922:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2344:U:H2'	38:A1:2345:A:H8	1.72	0.55
45:AH:4:ILE:HD13	55:AS:148:LEU:HD11	1.89	0.55
45:AH:24:ILE:HA	45:AH:37:ASN:HA	1.89	0.55
57:AU:56:VAL:HG13	57:AU:65:VAL:HG22	1.89	0.55
3:BC:120:GLU:HG2	3:BC:122:ALA:H	1.72	0.55
8:BJ:102:GLU:HA	8:BJ:105:LEU:HB2	1.88	0.55
10:BN:3:ARG:HB3	10:BN:6:SER:HB3	1.88	0.55
36:AB:35:ASP:OD1	36:AB:182:GLN:NE2	2.40	0.55
38:A1:627:U:H2'	38:A1:628:A:C8	2.41	0.55
38:A1:2148:U:H2'	38:A1:2149:A:C8	2.42	0.55
38:A1:3066:U:H2'	38:A1:3067:C:C6	2.41	0.55
38:A1:3163:A:N6	38:A1:3288:G:O6	2.40	0.55
42:AE:43:LEU:HD21	42:AE:85:ILE:HD11	1.89	0.55
48:AL:174:ARG:HB2	71:Ai:9:ILE:HD12	1.88	0.55
52:AP:126:ARG:HA	52:AP:140:GLU:HB3	1.87	0.55
60:AX:135:ILE:HD12	60:AX:138:ARG:HH21	1.71	0.55
62:AZ:75:VAL:HG21	62:AZ:80:LEU:HD21	1.88	0.55
67:Ae:44:ARG:HE	67:Ae:46:PHE:HE2	1.55	0.55
80:DC:579:SER:HA	80:DC:708:THR:HB	1.88	0.55
80:DC:808:PRO:HB2	80:DC:819:VAL:HG21	1.88	0.55
1:BA:189:VAL:HB	1:BA:193:GLN:NE2	2.21	0.54
3:BC:175:GLY:N	3:BC:195:ASP:OD2	2.40	0.54
22:BP:90:ILE:HD11	22:BP:112:LEU:HD21	1.88	0.54
34:B5:107:C:H2'	34:B5:108:A:H8	1.73	0.54
34:B5:366:A:OP1	34:B5:758:U:O2'	2.16	0.54
34:B5:524:U:O2'	34:B5:526:A:N7	2.38	0.54
34:B5:1213:G:N1	34:B5:1450:U:H5	1.96	0.54
36:AB:83:PRO:HB2	36:AB:202:THR:HB	1.90	0.54
36:AB:212:ASN:ND2	36:AB:352:GLU:O	2.40	0.54
37:AC:304:GLN:NE2	38:A1:594:U:O4	2.40	0.54
38:A1:581:U:H2'	38:A1:582:G:H8	1.72	0.54
38:A1:662:U:H2'	38:A1:663:C:C6	2.42	0.54
38:A1:1659:U:H2'	38:A1:1660:C:H6	1.71	0.54
38:A1:2508:U:H2'	38:A1:2509:U:H6	1.70	0.54
39:A3:56:A:H4'	47:AJ:152:HIS:HB2	1.88	0.54
49:AM:55:ARG:NE	55:AS:70:THR:OG1	2.40	0.54
62:AZ:25:ILE:HA	62:AZ:43:VAL:HG12	1.90	0.54
8:BJ:126:ARG:NH1	34:B5:475:A:H5'	2.22	0.54
20:BF:156:ARG:HD3	20:BF:157:ARG:H	1.72	0.54
21:BK:77:ARG:HH21	21:BK:88:PRO:HA	1.71	0.54
23:BQ:36:ILE:HB	23:BQ:48:VAL:HG21	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BS:123:ARG:NH2	34:B5:1546:G:OP1	2.39	0.54
28:BZ:65:LEU:HD23	28:BZ:71:ILE:HD11	1.87	0.54
33:BM:97:LEU:HA	33:BM:100:TRP:HB2	1.89	0.54
35:AA:65:ASP:HB3	35:AA:68:LYS:O	2.06	0.54
36:AB:182:GLN:HE21	36:AB:184:ASN:ND2	2.05	0.54
38:A1:784:A:OP2	53:AQ:69:ARG:NH1	2.40	0.54
38:A1:860:G:H5'	38:A1:861:C:H5"	1.88	0.54
38:A1:1799:A:H2'	38:A1:1800:A:H8	1.73	0.54
38:A1:2263:C:C2	38:A1:2264:PSU:C6	2.95	0.54
38:A1:2700:G:O2'	38:A1:2705:A:N1	2.36	0.54
38:A1:2772:C:OP1	77:Ao:15:LYS:NZ	2.40	0.54
38:A1:2953:U:H2'	38:A1:2954:U:H2'	1.87	0.54
38:A1:3308:C:O2'	52:AP:69:ARG:O	2.23	0.54
41:AD:22:ARG:NE	41:AD:28:THR:OG1	2.34	0.54
46:AI:42:THR:HG22	46:AI:45:GLU:HG3	1.88	0.54
47:AJ:110:ILE:HG21	47:AJ:120:ILE:HG21	1.89	0.54
81:EC:6804:A:H2'	81:EC:6808:G:H21	1.72	0.54
4:BE:73:ASP:HB3	4:BE:164:LEU:HD11	1.88	0.54
5:BG:78:THR:HG22	5:BG:92:ARG:HG2	1.88	0.54
7:BI:36:THR:O	7:BI:96:LEU:N	2.35	0.54
19:BD:161:GLY:HA3	34:B5:1331:A:H61	1.71	0.54
20:BF:97:LEU:HD11	20:BF:194:LEU:HD22	1.89	0.54
34:B5:67:A:O2'	34:B5:69:G:OP1	2.22	0.54
34:B5:1064:G:H2'	34:B5:1065:A:C8	2.42	0.54
34:B5:1081:A:O2'	34:B5:1083:G:N7	2.35	0.54
34:B5:1350:U:H2'	34:B5:1351:G:C8	2.41	0.54
38:A1:528:U:H2'	38:A1:529:A:C8	2.42	0.54
38:A1:1364:C:OP1	43:AF:110:ARG:NH2	2.34	0.54
38:A1:1920:U:O2'	38:A1:1932:A:N7	2.33	0.54
38:A1:2507:C:H2'	38:A1:2508:U:C6	2.42	0.54
38:A1:3383:G:H21	66:Ad:105:GLN:NE2	2.05	0.54
44:AG:159:PRO:HB2	44:AG:161:GLU:OE1	2.07	0.54
46:AI:202:LYS:HE2	46:AI:202:LYS:HA	1.89	0.54
49:AM:123:LEU:HD21	51:AO:193[A]:GLN:NE2	2.22	0.54
81:EC:6849:A:H2'	81:EC:6878:G:H3'	1.89	0.54
1:BA:139:VAL:HG13	1:BA:141:ILE:HG12	1.89	0.54
7:BI:113:PHE:O	7:BI:117:TYR:N	2.41	0.54
10:BN:4:MET:N	10:BN:4:MET:SD	2.81	0.54
25:BS:30:TYR:O	25:BS:33:THR:OG1	2.25	0.54
31:Bg:261:LYS:HB3	31:Bg:263:PHE:HE1	1.72	0.54
32:Bf:89:LYS:HD3	32:Bf:90:LYS:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:103:A:O3'	34:B5:308:C:N4	2.41	0.54
34:B5:532:U:H2'	34:B5:533:U:O4'	2.06	0.54
34:B5:740:A:H5'	34:B5:741:C:H2'	1.89	0.54
34:B5:1118:G:OP1	76:An:21:ARG:NH2	2.34	0.54
34:B5:1592:A:H2'	34:B5:1593:A:C8	2.42	0.54
37:AC:317:PRO:C	37:AC:319:LYS:H	2.16	0.54
38:A1:947:G:H5"	67:Ae:55:ILE:HB	1.90	0.54
38:A1:1083:G:H2'	38:A1:1084:A:H8	1.71	0.54
38:A1:2883:U:H2'	38:A1:2884:C:C6	2.42	0.54
42:AE:108:LYS:HG2	42:AE:109:GLU:HG3	1.89	0.54
46:AI:52:LEU:HD11	46:AI:156:ARG:HG3	1.89	0.54
54:AR:97:ARG:O	54:AR:101:VAL:HG23	2.07	0.54
80:DC:215:LEU:HG	83:DC:901:GDP:H2'	1.90	0.54
80:DC:579:SER:HB2	80:DC:704:GLN:HG3	1.89	0.54
2:BB:34:ALA:HB3	2:BB:41:ARG:HH22	1.71	0.54
8:BJ:140:ILE:HD12	15:BY:65:GLY:HA3	1.90	0.54
16:Ba:92:ARG:HG2	34:B5:1796:C:C6	2.43	0.54
34:B5:205:U:N3	34:B5:206:A:N7	2.56	0.54
34:B5:702:G:O2'	34:B5:703:G:O4'	2.19	0.54
35:AA:113:VAL:HG12	35:AA:166:ILE:HD13	1.89	0.54
36:AB:144:ILE:H	36:AB:144:ILE:HD12	1.71	0.54
38:A1:1810:A:H2'	38:A1:1811:G:C8	2.43	0.54
38:A1:2359:C:H4'	38:A1:2399:A:H4'	1.88	0.54
40:A4:57:C:H4'	40:A4:63:G:N7	2.23	0.54
45:AH:80:THR:HA	45:AH:84:LYS:HZ3	1.72	0.54
48:AL:170:LEU:HD11	63:Aa:129:PHE:HA	1.89	0.54
49:AM:21:VAL:HG12	49:AM:65:LEU:HD23	1.90	0.54
53:AQ:90:ASP:OD1	53:AQ:92:ARG:HB2	2.07	0.54
2:BB:84:ILE:HG23	2:BB:86:LEU:HD23	1.88	0.54
7:BI:77:ARG:HD2	7:BI:78:ILE:N	2.22	0.54
11:BO:111:ARG:NH1	11:BO:112:ILE:O	2.41	0.54
16:Ba:51:ARG:HH12	29:Bc:62:GLU:HG2	1.71	0.54
34:B5:239:C:N4	34:B5:242:U:OP2	2.41	0.54
34:B5:869:A:H61	34:B5:958:U:H3	1.54	0.54
34:B5:1413:U:O2'	34:B5:1416:G:OP1	2.15	0.54
37:AC:115:HIS:N	38:A1:681:U:OP1	2.36	0.54
38:A1:293:C:O2'	71:Ai:76:ARG:HD3	2.06	0.54
38:A1:2450:G:H2'	38:A1:2451:G:C4	2.42	0.54
38:A1:2466:G:H3'	38:A1:2467:G:H5'	1.89	0.54
38:A1:3267:A:H2'	42:AE:69:PHE:CZ	2.43	0.54
39:A3:35:C:O2	39:A3:45:A:O2'	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:AJ:19:LEU:HD22	47:AJ:125:MET:HE1	1.89	0.54
50:AN:97:SER:OG	50:AN:167:THR:OG1	2.24	0.54
57:AU:91:ASP:OD1	57:AU:92:TRP:N	2.41	0.54
60:AX:113:LEU:HD21	60:AX:121:LYS:HE3	1.90	0.54
62:AZ:107:ARG:O	62:AZ:111:LYS:HG2	2.07	0.54
80:DC:159:LYS:HE3	80:DC:162:ARG:HD2	1.89	0.54
80:DC:336:GLU:O	80:DC:340:LEU:HG	2.08	0.54
80:DC:697:ALA:HA	80:DC:700:ARG:HB3	1.89	0.54
4:BE:106:LYS:NZ	34:B5:788:A:OP2	2.41	0.54
22:BP:57:MET:HE1	22:BP:86:VAL:HG21	1.89	0.54
26:BT:84:LYS:NZ	34:B5:1563:C:OP1	2.30	0.54
33:BM:43:ARG:NH2	34:B5:1227:A:N7	2.55	0.54
34:B5:97:C:H2'	34:B5:98:U:H6	1.73	0.54
34:B5:655:G:H4'	34:B5:656:G:H2'	1.88	0.54
34:B5:1049:U:H2'	34:B5:1050:G:H8	1.71	0.54
34:B5:1503:A:H2'	34:B5:1504:G:O4'	2.07	0.54
38:A1:266:A:H2'	71:Ai:30:LYS:HE2	1.90	0.54
38:A1:831:G:O2'	38:A1:1864:A:N3	2.32	0.54
38:A1:1037:C:H2'	38:A1:1038:C:C6	2.42	0.54
38:A1:2894:C:H5'	45:AH:168:ARG:NH2	2.23	0.54
38:A1:3028:G:H5'	80:DC:28:VAL:HG21	1.90	0.54
40:A4:128:U:OP1	40:A4:129:C:N4	2.26	0.54
72:Aj:20:ASN:ND2	74:Al:8:ARG:HH12	2.05	0.54
80:DC:666:ALA:HB2	80:DC:706:ILE:HA	1.89	0.54
1:BA:59:LEU:HD22	12:BV:79:LEU:HD11	1.90	0.54
5:BG:206:ALA:O	5:BG:210:GLN:NE2	2.39	0.54
8:BJ:110:GLN:CD	8:BJ:126:ARG:HB3	2.33	0.54
11:BO:61:MET:O	11:BO:65:GLN:HG2	2.08	0.54
14:BX:121:ARG:NH2	34:B5:1135:U:OP2	2.41	0.54
16:Ba:10:ARG:NH1	34:B5:1790:A:OP1	2.40	0.54
17:Bb:24:LEU:HD23	17:Bb:25:VAL:H	1.72	0.54
26:BT:73:VAL:HG22	26:BT:77:ASN:HD21	1.72	0.54
27:BU:63:LEU:HD22	27:BU:84:MET:HE2	1.89	0.54
34:B5:520:A:H2'	34:B5:521:A:H8	1.70	0.54
38:A1:518:G:OP2	38:A1:518:G:N2	2.34	0.54
38:A1:1084:A:H2'	38:A1:1085:A:C8	2.43	0.54
38:A1:1721:U:O2'	38:A1:1723:A:N7	2.33	0.54
41:AD:44:TYR:HE2	56:AT:35:LYS:HA	1.72	0.54
73:Ak:12:LEU:C	73:Ak:16:ARG:HH21	2.16	0.54
79:E:35:GLN:HB3	79:E:205:VAL:HB	1.89	0.54
2:BB:87:ARG:N	2:BB:99:ASN:O	2.24	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BG:63:MET:HA	5:BG:98:ARG:HB3	1.90	0.54
7:BI:116:HIS:NE2	7:BI:146:ARG:HG3	2.23	0.54
13:BW:114:GLU:HA	13:BW:117:ARG:HH12	1.73	0.54
14:BX:26:GLU:HB2	14:BX:29:TYR:HB3	1.88	0.54
30:Bd:8:PHE:CE1	34:B5:1450:U:H4'	2.42	0.54
31:Bg:54:PHE:HD2	31:Bg:312:VAL:HG21	1.71	0.54
34:B5:52:U:H2'	34:B5:53:G:C8	2.43	0.54
34:B5:1476:C:H2'	34:B5:1477:G:C8	2.41	0.54
38:A1:1370:G:OP1	63:Aa:16:SER:OG	2.24	0.54
38:A1:1498:A:H2'	38:A1:1499:C:H6	1.72	0.54
38:A1:2492:C:H4'	79:E:164:CYS:SG	2.48	0.54
38:A1:3232:G:O6	38:A1:3255:U:C2	2.61	0.54
43:AF:102:VAL:HG21	43:AF:129:LEU:HD23	1.90	0.54
58:AV:62:VAL:HG21	58:AV:69:LEU:HB3	1.90	0.54
63:Aa:75:LEU:HB3	63:Aa:118:ILE:HG23	1.89	0.54
65:Ac:84:LEU:HD23	65:Ac:84:LEU:H	1.73	0.54
81:EC:6849:A:O5'	81:EC:6880:G:N2	2.40	0.54
3:BC:156:THR:HG21	3:BC:224:PHE:CE2	2.43	0.54
10:BN:46:THR:HG22	10:BN:48:SER:N	2.20	0.54
12:BV:70:ASN:HB3	12:BV:83:TRP:HB2	1.90	0.54
25:BS:11:PHE:CE1	25:BS:59:GLY:HA3	2.43	0.54
25:BS:52:VAL:HG21	25:BS:69:ILE:HD11	1.88	0.54
25:BS:82:PRO:HD3	26:BT:36:ILE:HD11	1.90	0.54
28:BZ:100:ILE:HD13	81:EC:6863:C:H41	1.72	0.54
34:B5:431:C:O4'	80:DC:390:ASP:N	2.41	0.54
37:AC:311:HIS:H	38:A1:609:G:H1'	1.73	0.54
39:A3:5:G:O2'	41:AD:63:GLN:NE2	2.41	0.54
39:A3:45:A:OP1	41:AD:151:GLN:NE2	2.41	0.54
55:AS:146:LYS:HG3	55:AS:147:ASP:CG	2.33	0.54
57:AU:28:PHE:HE1	57:AU:83:TYR:HE2	1.55	0.54
62:AZ:9:LYS:HD2	62:AZ:83:THR:O	2.08	0.54
69:Ag:47:CYS:SG	69:Ag:49:SER:OG	2.54	0.54
2:BB:68:VAL:HB	2:BB:84:ILE:HG21	1.90	0.53
13:BW:118:ARG:NH1	34:B5:686:C:O3'	2.32	0.53
14:BX:44:GLY:H	14:BX:78:LYS:NZ	2.06	0.53
22:BP:77:ARG:NH2	34:B5:1241:G:OP2	2.41	0.53
34:B5:17:C:H2'	34:B5:18:C:C6	2.43	0.53
34:B5:337:G:H1'	34:B5:339:C:OP2	2.08	0.53
34:B5:896:U:H2'	34:B5:897:C:N1	2.23	0.53
34:B5:1163:A:N3	34:B5:1613:U:O2'	2.37	0.53
34:B5:1760:G:H1'	34:B5:1781:MA6:H2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:46:LYS:NZ	38:A1:691:A:OP1	2.26	0.53
37:AC:282:SER:N	53:AQ:125:ASP:OD2	2.37	0.53
38:A1:148:G:OP2	50:AN:4:TYR:OH	2.14	0.53
38:A1:1003:A:N1	38:A1:1049:C:O2'	2.37	0.53
38:A1:1616:U:H2'	38:A1:1617:G:C8	2.43	0.53
38:A1:2396:G:OP1	38:A1:2397:A:O2'	2.21	0.53
39:A3:6:C:O2'	41:AD:50:ARG:NH2	2.40	0.53
39:A3:44:C:OP2	47:AJ:137:ARG:NH2	2.38	0.53
44:AG:163:VAL:HA	44:AG:166:LEU:HD23	1.90	0.53
45:AH:96:HIS:CD2	80:DC:167:LEU:HD11	2.42	0.53
47:AJ:81:GLU:HB2	47:AJ:85:LYS:NZ	2.23	0.53
80:DC:356:LEU:HD22	80:DC:401:PHE:HE2	1.72	0.53
80:DC:576:LEU:HB2	80:DC:585:ARG:HH22	1.73	0.53
81:EC:6791:A:H2'	81:EC:6793:A:H5"	1.89	0.53
81:EC:6846:C:OP1	81:EC:6942:A:N6	2.41	0.53
81:EC:6853:G:H1'	81:EC:6854:U:H2'	1.90	0.53
1:BA:21:ASN:HD21	1:BA:24:LEU:HD12	1.73	0.53
5:BG:177:ARG:HD3	34:B5:142:G:N2	2.23	0.53
7:BI:87:ASN:HB3	7:BI:90:LEU:HD12	1.90	0.53
10:BN:5:HIS:HB3	10:BN:117:LEU:HD13	1.90	0.53
21:BK:59:PHE:CE1	21:BK:64:TYR:HE2	2.26	0.53
31:Bg:9:LEU:HB3	31:Bg:313:TRP:NE1	2.23	0.53
34:B5:1483:A:N3	34:B5:1607:G:O2'	2.39	0.53
36:AB:84:VAL:HG22	36:AB:162:VAL:HB	1.90	0.53
38:A1:597:G:H2'	38:A1:598:A:C8	2.43	0.53
38:A1:1770:G:H2'	38:A1:1771:C:C6	2.43	0.53
38:A1:2720:G:OP1	53:AQ:180:ARG:NE	2.41	0.53
48:AL:27:ASP:OD2	48:AL:31:LYS:HD2	2.09	0.53
50:AN:181:ASN:HA	50:AN:184:LYS:HE3	1.89	0.53
66:Ad:34:LYS:O	66:Ad:38:LYS:HG3	2.07	0.53
80:DC:435:VAL:HG23	80:DC:443:GLU:H	1.72	0.53
2:BB:24:PHE:HA	2:BB:27:LYS:HD3	1.90	0.53
7:BI:114:GLU:HA	7:BI:118:GLY:HA2	1.90	0.53
31:Bg:149:ASP:OD1	31:Bg:150:TRP:N	2.39	0.53
38:A1:63:A:N3	38:A1:78:U:O2'	2.32	0.53
38:A1:1167:U:H2'	38:A1:1168:U:O4'	2.09	0.53
38:A1:1833:G:OP1	74:Al:10:LYS:HD3	2.08	0.53
38:A1:2095:G:H2'	38:A1:2096:A:H8	1.73	0.53
38:A1:2115:G:H22	38:A1:2120:A:H1'	1.74	0.53
38:A1:2203:U:H2'	38:A1:2204:C:C6	2.43	0.53
42:AE:137:ASP:HA	42:AE:140:VAL:HG12	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:AG:115:ALA:O	44:AG:120:LYS:N	2.42	0.53
51:AO:32[A]:LYS:HG2	51:AO:101[A]:ARG:HB3	1.90	0.53
68:Af:18:ARG:NH1	68:Af:19:SER:O	2.42	0.53
79:E:90:LEU:HD23	79:E:93:LEU:HD12	1.91	0.53
81:EC:6858:A:N7	81:EC:6860:A:C8	2.75	0.53
23:BQ:123:ARG:NH1	34:B5:1336:A:O3'	2.42	0.53
34:B5:1179:G:H2'	34:B5:1180:C:C6	2.43	0.53
37:AC:181:VAL:HG11	37:AC:224:GLY:HA3	1.90	0.53
38:A1:1155:C:OP2	43:AF:94:LYS:NZ	2.25	0.53
38:A1:1213:G:H2'	38:A1:1214:U:C6	2.43	0.53
38:A1:1270:A:N6	80:DC:738:GLN:OE1	2.40	0.53
38:A1:3338:C:H2'	38:A1:3339:A:H8	1.73	0.53
40:A4:83:C:N3	61:AY:52:ARG:NH2	2.56	0.53
47:AJ:92:ARG:HB3	47:AJ:95:ASN:ND2	2.23	0.53
62:AZ:47:GLU:OE1	62:AZ:69:LYS:NZ	2.39	0.53
65:Ac:49:PRO:HG2	65:Ac:52:ARG:HB3	1.90	0.53
80:DC:379:MET:HA	80:DC:469:LEU:O	2.09	0.53
80:DC:568:GLU:HA	80:DC:592:PRO:HG3	1.89	0.53
6:BH:49:ILE:O	6:BH:57:ALA:N	2.38	0.53
6:BH:140:VAL:CG1	13:BW:52:TYR:HB3	2.39	0.53
13:BW:107:SER:HB3	34:B5:802:G:H1'	1.89	0.53
14:BX:52:ILE:HD13	14:BX:75:GLN:HE21	1.74	0.53
19:BD:58:VAL:HG11	19:BD:88:ALA:HB2	1.91	0.53
20:BF:47:SER:O	20:BF:128:ASN:ND2	2.41	0.53
24:BR:66:VAL:HB	24:BR:69:ILE:HD13	1.89	0.53
34:B5:82:U:H2'	34:B5:83:G:O4'	2.08	0.53
34:B5:518:A:O2'	34:B5:519:C:O4'	2.23	0.53
38:A1:103:G:OP1	48:AL:70:ARG:NE	2.39	0.53
38:A1:443:G:H1	38:A1:492:C:P	2.32	0.53
38:A1:999:G:H2'	38:A1:1000:C:C6	2.43	0.53
38:A1:1134:G:O2'	38:A1:2642:A:N3	2.38	0.53
38:A1:3064:U:H2'	38:A1:3065:G:C8	2.43	0.53
40:A4:39:G:H1'	40:A4:104:A:N6	2.24	0.53
51:AO:105[A]:PHE:HE2	51:AO:112[A]:TYR:CE2	2.26	0.53
72:Aj:25:ARG:HD2	72:Aj:25:ARG:O	2.09	0.53
77:Ao:3:ASN:ND2	77:Ao:95:GLY:O	2.41	0.53
80:DC:211:PHE:O	80:DC:220:PHE:N	2.36	0.53
80:DC:308:LYS:O	80:DC:311:GLU:HG2	2.09	0.53
80:DC:545:LEU:HD23	80:DC:549:HIS:HB2	1.89	0.53
25:BS:28:ILE:HG13	25:BS:29:VAL:N	2.24	0.53
32:Bf:105:TYR:OH	34:B5:1252:C:OP2	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BM:45:LEU:HD13	34:B5:1228:G:H4'	1.89	0.53
33:BM:60:VAL:O	33:BM:62:LEU:HG	2.08	0.53
34:B5:431:C:O5'	80:DC:391:LYS:C	2.51	0.53
34:B5:431:C:H5	80:DC:391:LYS:H	1.50	0.53
34:B5:968:U:H2'	34:B5:969:C:O4'	2.08	0.53
38:A1:835:G:O2'	38:A1:857:G:N2	2.26	0.53
38:A1:1073:U:H2'	38:A1:1074:U:C6	2.44	0.53
38:A1:1203:A:H2'	38:A1:1204:A:H8	1.74	0.53
38:A1:1616:U:H2'	38:A1:1617:G:H8	1.73	0.53
38:A1:2794:G:O2'	38:A1:2795:U:OP2	2.23	0.53
38:A1:2901:G:N2	38:A1:3030:G:O2'	2.42	0.53
38:A1:3216:G:OP2	68:Af:2:ALA:N	2.42	0.53
41:AD:39:GLN:NE2	41:AD:46:THR:OG1	2.41	0.53
46:AI:145:LYS:O	46:AI:149:ILE:HG12	2.09	0.53
49:AM:123:LEU:HD21	51:AO:193[A]:GLN:HE21	1.73	0.53
50:AN:19:LEU:O	50:AN:23:GLN:HG2	2.08	0.53
51:AO:22[A]:VAL:HG11	51:AO:122[A]:GLN:NE2	2.24	0.53
62:AZ:72:ILE:HG12	62:AZ:111:LYS:HD3	1.90	0.53
81:EC:6883:A:H2'	81:EC:6884:G:H4'	1.89	0.53
16:Ba:8:ASN:ND2	34:B5:1791:A:OP1	2.41	0.53
34:B5:447:U:H2'	34:B5:448:C:O4'	2.09	0.53
38:A1:107:A:O2'	38:A1:324:A:N3	2.41	0.53
38:A1:128:G:OP2	70:Ah:74:LYS:NZ	2.41	0.53
38:A1:255:A:H2'	38:A1:256:G:C8	2.44	0.53
38:A1:847:A:O2'	38:A1:848:A:O5'	2.20	0.53
38:A1:1478:C:H2'	38:A1:1479:U:C6	2.44	0.53
38:A1:2101:C:HO2'	38:A1:2102:U:H6	1.55	0.53
38:A1:2294:U:O2'	38:A1:2296:A:N7	2.38	0.53
38:A1:2315:G:H2'	38:A1:2316:G:H8	1.74	0.53
43:AF:186:HIS:O	43:AF:190:THR:OG1	2.17	0.53
47:AJ:81:GLU:HB2	47:AJ:85:LYS:HZ2	1.73	0.53
47:AJ:82:ARG:HH22	47:AJ:109:HIS:CE1	2.25	0.53
55:AS:82:ASP:HB3	55:AS:120:SER:HB2	1.90	0.53
62:AZ:72:ILE:HG22	62:AZ:101:PHE:CZ	2.44	0.53
67:Ae:104:ASN:O	67:Ae:108:ILE:HG12	2.09	0.53
76:An:2:ARG:HD3	76:An:5:TRP:CZ3	2.44	0.53
80:DC:160:VAL:O	80:DC:164:LEU:N	2.42	0.53
80:DC:327:PHE:CD2	80:DC:328:LEU:HG	2.44	0.53
80:DC:413:ILE:HD13	80:DC:429:LYS:HD3	1.90	0.53
81:EC:6797:U:H2'	81:EC:6886:A:C2	2.43	0.53
19:BD:148:LYS:HG3	19:BD:150:MET:HE3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BF:98:MET:HE1	20:BF:107:LYS:HG2	1.90	0.53
31:Bg:131:ILE:HB	31:Bg:144:LEU:HB2	1.88	0.53
34:B5:749:U:H2'	34:B5:750:U:C6	2.44	0.53
34:B5:976:G:N2	34:B5:1024:U:OP2	2.41	0.53
38:A1:268:A:C4	50:AN:12:ARG:HG2	2.44	0.53
38:A1:444:U:N3	38:A1:492:C:O2'	2.39	0.53
38:A1:2478:C:OP2	38:A1:2480:A:N6	2.41	0.53
38:A1:3291:G:H2'	38:A1:3292:A:C8	2.44	0.53
45:AH:151:VAL:O	45:AH:155:SER:OG	2.18	0.53
49:AM:112:LEU:HD22	51:AO:197[A]:LEU:HD23	1.90	0.53
55:AS:134:ASP:OD1	55:AS:134:ASP:N	2.42	0.53
6:BH:56:LYS:HB2	6:BH:88:ARG:NE	2.23	0.53
6:BH:154:LEU:HB2	6:BH:185:ILE:HG22	1.91	0.53
8:BJ:116:LEU:HD21	8:BJ:156:ILE:HG21	1.91	0.53
11:BO:127:ARG:NH2	16:Ba:22:ARG:HH12	2.07	0.53
13:BW:40:VAL:HG11	13:BW:103:ILE:HD12	1.91	0.53
17:Bb:37:CYS:HB3	17:Bb:40:CYS:SG	2.49	0.53
25:BS:100:THR:HG23	25:BS:104:ASN:HD22	1.74	0.53
34:B5:17:C:H2'	34:B5:18:C:H6	1.74	0.53
34:B5:172:C:H2'	34:B5:173:A:C8	2.43	0.53
34:B5:592:A:H2'	34:B5:593:U:O4'	2.08	0.53
34:B5:1359:C:H2'	34:B5:1360:A:H8	1.72	0.53
37:AC:303:GLY:H	38:A1:1347:U:H5"	1.74	0.53
38:A1:1712:G:H2'	38:A1:1713:G:C8	2.44	0.53
38:A1:2437:G:O2'	38:A1:2438:A:OP1	2.26	0.53
38:A1:3015:G:H2'	38:A1:3016:A:H8	1.74	0.53
38:A1:3393:U:H2'	38:A1:3394:U:C6	2.44	0.53
39:A3:19:C:H2'	39:A3:20:A:C8	2.44	0.53
62:AZ:10:VAL:HG22	62:AZ:24:VAL:HG12	1.91	0.53
62:AZ:103:GLN:OE1	62:AZ:105:SER:OG	2.13	0.53
81:EC:6851:G:H2'	81:EC:6876:A:H2	1.74	0.53
1:BA:84:ARG:HH12	1:BA:205:ARG:HG2	1.73	0.53
4:BE:100:ARG:HH12	4:BE:236:ILE:HG12	1.74	0.53
7:BI:25:ARG:HA	34:B5:400:A:H5"	1.90	0.53
7:BI:81:VAL:HG21	7:BI:91:VAL:HA	1.90	0.53
8:BJ:168:ARG:HH22	8:BJ:174:ARG:NH2	2.07	0.53
33:BM:33:ARG:HH21	33:BM:100:TRP:HA	1.74	0.53
34:B5:886:U:H2'	34:B5:887:A:C8	2.43	0.53
34:B5:1266:U:H2'	34:B5:1267:G:C8	2.44	0.53
34:B5:1684:U:H2'	34:B5:1685:G:C8	2.44	0.53
36:AB:14:LEU:O	38:A1:3009:G:O2'	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:89:A:OP2	53:AQ:171:LYS:NZ	2.26	0.53
38:A1:201:A:H2'	38:A1:202:G:H8	1.74	0.53
38:A1:308:A:H1'	38:A1:2222:A:C2	2.44	0.53
38:A1:3166:C:H2'	38:A1:3167:A:C8	2.44	0.53
44:AG:140:VAL:HG21	50:AN:3:ALA:HB2	1.91	0.53
57:AU:14:THR:HG22	57:AU:66:VAL:HG12	1.91	0.53
79:E:48:ARG:HA	79:E:159:LEU:HD23	1.91	0.53
80:DC:278:LEU:HA	80:DC:281:ILE:HG22	1.91	0.53
80:DC:406:LYS:HB2	80:DC:409:GLN:HB2	1.90	0.53
80:DC:420:PRO:HG3	80:DC:476:HIS:CE1	2.44	0.53
81:EC:6812:C:H2'	81:EC:6813:A:C8	2.43	0.53
1:BA:84:ARG:HD3	1:BA:201:LEU:O	2.09	0.52
4:BE:71:LYS:HG3	4:BE:91:THR:HB	1.91	0.52
5:BG:4:ASN:ND2	34:B5:152:U:O2	2.40	0.52
5:BG:69:LEU:HD23	5:BG:71:THR:H	1.74	0.52
9:BL:94:ILE:HG21	9:BL:97:TYR:HD2	1.73	0.52
10:BN:64:ARG:NH1	34:B5:862:A:N7	2.57	0.52
20:BF:70:VAL:HG11	23:BQ:47:LYS:NZ	2.23	0.52
20:BF:106:LYS:NZ	34:B5:1526:A:O3'	2.42	0.52
26:BT:73:VAL:HG12	34:B5:1499:G:OP2	2.09	0.52
31:Bg:66:HIS:CE1	31:Bg:67:ILE:HG12	2.43	0.52
32:Bf:118:ARG:HB2	32:Bf:131:PHE:HA	1.91	0.52
34:B5:119:A:H3'	34:B5:120:PSU:H6	1.73	0.52
34:B5:1216:C:HO2'	34:B5:1444:A:H61	1.57	0.52
34:B5:1678:A:H2'	34:B5:1679:G:O4'	2.10	0.52
38:A1:2256:A:H1'	38:A1:2257:C:OP2	2.09	0.52
38:A1:2459:A:N6	38:A1:2461:A:N1	2.58	0.52
38:A1:3320:A:H2'	38:A1:3321:C:C6	2.44	0.52
39:A3:49:G:C4	41:AD:58:LYS:HE2	2.44	0.52
69:Ag:44:CYS:HB2	69:Ag:81:CYS:HB3	1.89	0.52
74:Al:23:LEU:HD12	74:Al:24:PRO:HD2	1.91	0.52
79:E:39:LYS:HB2	79:E:200:ASN:HA	1.92	0.52
1:BA:160:ILE:HG22	1:BA:173:ILE:HD11	1.91	0.52
4:BE:254:ARG:NH2	34:B5:787:G:OP1	2.34	0.52
14:BX:73:ARG:HG2	14:BX:82:LYS:HE2	1.89	0.52
20:BF:104:ASN:OD1	34:B5:1587:A:O2'	2.22	0.52
31:Bg:48:THR:N	31:Bg:54:PHE:O	2.35	0.52
34:B5:214:G:N2	34:B5:252:U:O4	2.42	0.52
34:B5:329:G:H2'	34:B5:330:G:H8	1.74	0.52
34:B5:449:C:H2'	34:B5:450:U:C6	2.44	0.52
34:B5:779:U:H4'	34:B5:780:A:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:901:G:H2'	34:B5:902:G:C8	2.44	0.52
34:B5:1335:U:N3	34:B5:1336:A:N7	2.57	0.52
34:B5:1378:U:H2'	34:B5:1379:C:C6	2.44	0.52
36:AB:380:MET:O	38:A1:3369:G:N1	2.43	0.52
38:A1:428:A:H2'	38:A1:429:U:C6	2.43	0.52
38:A1:1047:A:H2'	38:A1:1048:A:C8	2.45	0.52
38:A1:1478:C:H2'	38:A1:1479:U:H6	1.74	0.52
38:A1:2429:G:H2'	38:A1:2430:A:H8	1.74	0.52
50:AN:155:VAL:O	50:AN:162:ARG:NH2	2.33	0.52
57:AU:32:SER:OG	57:AU:83:TYR:OH	2.19	0.52
69:Ag:3:GLN:NE2	69:Ag:30:LEU:HB3	2.24	0.52
6:BH:20:VAL:HA	6:BH:85:PHE:CZ	2.44	0.52
6:BH:141:ARG:NH1	13:BW:49:GLU:OE1	2.43	0.52
10:BN:70:LYS:HZ1	34:B5:962:C:P	2.31	0.52
11:BO:16:VAL:HG23	11:BO:33:LEU:HA	1.90	0.52
21:BK:3:MET:SD	21:BK:8:ARG:HB3	2.49	0.52
22:BP:128:HIS:HE1	34:B5:1180:C:O2	1.91	0.52
24:BR:61:ILE:HG12	24:BR:71:PHE:HE2	1.74	0.52
25:BS:29:VAL:O	25:BS:33:THR:HG23	2.08	0.52
25:BS:41:ARG:HH22	26:BT:37:VAL:HA	1.74	0.52
33:BM:76:GLU:HG3	33:BM:88:LEU:HD11	1.90	0.52
34:B5:86:A:H2'	34:B5:87:C:C6	2.44	0.52
34:B5:929:A:OP1	34:B5:944:A:O2'	2.26	0.52
38:A1:673:U:H2'	38:A1:674:G:C8	2.44	0.52
38:A1:1072:G:H2'	38:A1:1073:U:C6	2.44	0.52
38:A1:1381:A:H2'	38:A1:1382:G:H8	1.74	0.52
38:A1:1556:C:N4	38:A1:2169:G:O4'	2.43	0.52
39:A3:60:G:H2'	39:A3:61:G:C8	2.44	0.52
49:AM:70:PHE:CE2	49:AM:72:LEU:HD23	2.44	0.52
50:AN:98:LEU:HD12	50:AN:128:LYS:HD2	1.92	0.52
54:AR:7:GLN:HG3	54:AR:41:ILE:HD11	1.90	0.52
79:E:123:LEU:HD12	79:E:124:LEU:N	2.24	0.52
3:BC:125:ILE:O	3:BC:129:ILE:HG12	2.08	0.52
8:BJ:171:ARG:NH2	34:B5:513:U:H3'	2.24	0.52
10:BN:37:ILE:HG12	10:BN:54:LEU:HD11	1.91	0.52
26:BT:4:VAL:HG13	26:BT:140:LEU:HD12	1.92	0.52
29:Bc:12:VAL:HA	29:Bc:30:VAL:HA	1.91	0.52
31:Bg:199:ILE:HA	31:Bg:215:GLY:HA2	1.89	0.52
34:B5:431:C:C6	80:DC:390:ASP:HA	2.44	0.52
34:B5:1511:U:H2'	34:B5:1512:G:C8	2.44	0.52
34:B5:1584:G:N2	34:B5:1610:G:H3'	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:341:G:O2'	40:A4:22:U:O4	2.25	0.52
38:A1:1456:A:N1	38:A1:1476:G:O2'	2.37	0.52
42:AE:150:LYS:HE2	42:AE:156:LYS:HD3	1.92	0.52
46:AI:47:PRO:HD2	46:AI:141:LYS:HA	1.90	0.52
51:AO:23[A]:VAL:O	51:AO:27[A]:LEU:HD23	2.09	0.52
80:DC:12:LEU:HD21	80:DC:99:LEU:HB2	1.92	0.52
1:BA:34:GLU:OE1	12:BV:87:ARG:NH1	2.42	0.52
8:BJ:109:LEU:HD21	8:BJ:146:PHE:HD2	1.73	0.52
10:BN:36:GLN:NE2	10:BN:40:TYR:OH	2.29	0.52
24:BR:70:SER:OG	24:BR:75:GLU:OE2	2.22	0.52
28:BZ:59:TYR:HB2	81:EC:6862:G:C8	2.45	0.52
33:BM:43:ARG:HH12	34:B5:1229:G:N2	2.08	0.52
34:B5:85:A:H2'	34:B5:86:A:C8	2.45	0.52
34:B5:207:U:H2'	34:B5:208:U:C6	2.43	0.52
34:B5:855:A:C2	34:B5:857:U:H1'	2.44	0.52
36:AB:372:THR:HG23	36:AB:375:GLU:H	1.75	0.52
38:A1:166:C:H2'	38:A1:167:U:C6	2.44	0.52
38:A1:230:U:H2'	38:A1:231:G:O4'	2.09	0.52
38:A1:761:A:H2'	38:A1:762:U:H6	1.75	0.52
38:A1:875:G:O2'	38:A1:1891:A:OP1	2.28	0.52
38:A1:1686:U:OP1	57:AU:42:LYS:NZ	2.30	0.52
38:A1:1709:C:H2'	38:A1:1710:C:H6	1.74	0.52
38:A1:1738:C:H1'	69:Ag:52:GLN:HG2	1.92	0.52
38:A1:3022:G:H4'	38:A1:3023:U:O5'	2.09	0.52
44:AG:189:LEU:HD12	44:AG:190:VAL:HG13	1.91	0.52
71:Ai:35:ASN:OD1	71:Ai:36:ARG:N	2.43	0.52
80:DC:75:ILE:HD11	80:DC:102:LEU:HD23	1.92	0.52
80:DC:111:PHE:O	80:DC:114:GLU:HG3	2.09	0.52
80:DC:515:ASP:OD2	80:DC:518:VAL:N	2.41	0.52
1:BA:60:ALA:O	1:BA:63:ILE:HG22	2.10	0.52
3:BC:41:LEU:HD22	3:BC:68:ILE:HD13	1.90	0.52
5:BG:133:LEU:HD12	34:B5:148:A:H61	1.73	0.52
7:BI:73:SER:O	34:B5:257:A:O2'	2.27	0.52
12:BV:21:ASN:HB3	13:BW:67:GLY:HA3	1.91	0.52
25:BS:30:TYR:CZ	25:BS:40:ARG:HD2	2.44	0.52
32:Bf:139:LEU:HD11	32:Bf:148:TYR:HB2	1.91	0.52
34:B5:498:G:O2'	34:B5:500:C:OP2	2.20	0.52
36:AB:216:ASP:OD1	36:AB:278:ILE:HG13	2.10	0.52
38:A1:69:C:HO2'	38:A1:101:G:HO2'	1.52	0.52
38:A1:335:G:OP1	61:AY:9:SER:OG	2.26	0.52
38:A1:500:C:C4'	42:AE:80:ASN:HD21	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1412:G:H5”	67:Ae:124:GLY:HA3	1.92	0.52
38:A1:1666:G:H2’	38:A1:1667:A:H8	1.75	0.52
38:A1:2154:U:H2’	38:A1:2155:G:C8	2.45	0.52
38:A1:2494:A:H5’	38:A1:2495:C:C6	2.43	0.52
38:A1:2708:C:H2’	38:A1:2709:C:H6	1.74	0.52
38:A1:3035:A:OP1	45:AH:122:LYS:NZ	2.42	0.52
44:AG:33:ASN:ND2	44:AG:38:GLN:HG3	2.24	0.52
45:AH:93:VAL:HG23	45:AH:177:ASP:HA	1.92	0.52
49:AM:65:LEU:HD12	55:AS:172:TYR:CE2	2.43	0.52
73:Ak:8:ILE:HG13	73:Ak:9:LYS:N	2.25	0.52
77:Ao:32:LYS:HD3	77:Ao:33:ALA:H	1.75	0.52
80:DC:571:SER:HB3	80:DC:720:ALA:HB2	1.90	0.52
4:BE:100:ARG:HH21	4:BE:112:HIS:HD2	1.54	0.52
6:BH:45:SER:HB3	6:BH:61:PHE:HB2	1.91	0.52
11:BO:36:LYS:NZ	34:B5:919:A:H1’	2.25	0.52
14:BX:102:VAL:HG12	14:BX:127:VAL:HG23	1.92	0.52
15:BY:108:ARG:HA	15:BY:111:LYS:HE3	1.92	0.52
18:Be:42:ARG:NH2	34:B5:589:C:H5”	2.25	0.52
22:BP:72:LYS:HE3	22:BP:73:PRO:HD2	1.90	0.52
27:BU:96:PRO:HD2	27:BU:99:ILE:HD11	1.91	0.52
34:B5:99:C:OP2	34:B5:378:A:O2’	2.21	0.52
34:B5:886:U:C2	34:B5:887:A:C8	2.98	0.52
34:B5:922:G:H2’	34:B5:923:A:C8	2.44	0.52
34:B5:1368:G:H2’	34:B5:1369:U:O4’	2.09	0.52
34:B5:1482:C:O5’	34:B5:1521:G:N2	2.43	0.52
36:AB:246:LEU:HD23	36:AB:246:LEU:H	1.74	0.52
38:A1:158:G:H2’	38:A1:159:A:C8	2.43	0.52
38:A1:828:A:H2’	38:A1:829:U:C6	2.45	0.52
38:A1:1816:A:H5”	38:A1:1817:G:N7	2.25	0.52
38:A1:1895:A:O2’	38:A1:3053:G:H4’	2.10	0.52
38:A1:2228:A:H2’	38:A1:2229:A:C8	2.44	0.52
38:A1:2828:G:H5’	46:AI:8:CYS:SG	2.49	0.52
58:AV:79:VAL:HG12	58:AV:122:CYS:SG	2.49	0.52
63:Aa:36:GLY:HA3	63:Aa:40:HIS:CE1	2.44	0.52
78:Ap:59:CYS:C	78:Ap:61:LYS:H	2.17	0.52
81:EC:6759:A:H2’	81:EC:6760:A:H8	1.74	0.52
81:EC:6788:C:H42	81:EC:6809:G:N2	2.08	0.52
8:BJ:152:SER:O	8:BJ:156:ILE:N	2.37	0.52
12:BV:53:TYR:CE1	12:BV:72:LEU:HB3	2.44	0.52
20:BF:197:GLU:OE2	20:BF:210:ALA:N	2.37	0.52
22:BP:30:THR:O	22:BP:34:VAL:HG23	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BQ:103:ASN:O	23:BQ:106:LYS:HG2	2.10	0.52
33:BM:42:ALA:HB1	33:BM:47:GLU:HG3	1.92	0.52
34:B5:1776:A:H2'	34:B5:1777:G:C8	2.45	0.52
35:AA:33:ASP:N	35:AA:33:ASP:OD1	2.43	0.52
35:AA:37:ARG:HH22	38:A1:2525:G:P	2.33	0.52
35:AA:143:GLU:HG3	35:AA:145:LYS:HG3	1.90	0.52
36:AB:45:SER:HA	36:AB:339:ARG:HA	1.92	0.52
38:A1:834:U:H2'	38:A1:835:G:O4'	2.10	0.52
38:A1:1471:U:H5"	54:AR:5:ARG:HH11	1.73	0.52
38:A1:1680:G:H2'	38:A1:1681:U:C6	2.45	0.52
38:A1:2496:C:O2'	38:A1:2497:U:OP1	2.25	0.52
38:A1:2640:A:OP2	56:AT:10:ARG:NH1	2.42	0.52
42:AE:35:VAL:O	42:AE:38:THR:HG23	2.10	0.52
49:AM:13:ARG:HH11	49:AM:67:PRO:HD3	1.75	0.52
57:AU:19:VAL:O	57:AU:23:THR:OG1	2.13	0.52
67:Ae:54:LYS:H	67:Ae:57:TYR:HD2	1.58	0.52
80:DC:227:THR:HA	80:DC:237:LYS:HD2	1.91	0.52
2:BB:34:ALA:HA	2:BB:98:THR:OG1	2.09	0.52
3:BC:39:THR:HG21	3:BC:64:LYS:HB3	1.92	0.52
8:BJ:175:ARG:HH12	34:B5:537:G:P	2.32	0.52
9:BL:85:VAL:HA	9:BL:108:PRO:HA	1.91	0.52
15:BY:65:GLY:N	34:B5:532:U:H5"	2.25	0.52
20:BF:81:ARG:HD3	34:B5:1615:C:H2'	1.90	0.52
34:B5:811:A:H2	34:B5:816:G:N2	2.08	0.52
34:B5:948:G:H2'	34:B5:949:C:H6	1.75	0.52
34:B5:984:G:H1	34:B5:1017:U:H3	1.56	0.52
34:B5:1548:G:H2'	34:B5:1549:C:C6	2.45	0.52
35:AA:102:LEU:HD12	35:AA:166:ILE:HD11	1.91	0.52
37:AC:300:ARG:NH1	38:A1:1347:U:OP1	2.42	0.52
38:A1:244:G:H2'	38:A1:244:G:N3	2.24	0.52
38:A1:1306:G:O6	38:A1:2366:C:O2'	2.24	0.52
38:A1:1729:A:N6	78:Ap:42:CYS:HA	2.25	0.52
38:A1:2769:A:H5"	77:Ao:80:ARG:HD3	1.91	0.52
38:A1:2853:A:H5'	46:AI:3:ARG:HH22	1.75	0.52
40:A4:69:U:H2'	40:A4:70:G:O4'	2.09	0.52
73:Ak:11:PHE:CG	73:Ak:54:LEU:HD11	2.45	0.52
80:DC:23:SER:HB3	80:DC:122:THR:HG21	1.92	0.52
1:BA:193:GLN:OE1	1:BA:193:GLN:N	2.43	0.52
10:BN:106:ARG:NH1	10:BN:106:ARG:O	2.43	0.52
18:Be:39:LEU:HA	18:Be:42:ARG:HG2	1.90	0.52
20:BF:218:GLU:O	20:BF:222:LYS:HG2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:62:LYS:NZ	31:Bg:64:HIS:O	2.42	0.52
31:Bg:89:LEU:HD21	31:Bg:110:VAL:HG11	1.91	0.52
34:B5:145:A:O2'	34:B5:146:U:H5"	2.10	0.52
34:B5:244:A:H2'	34:B5:245:U:C6	2.45	0.52
34:B5:934:C:C4	34:B5:1077:C:H4'	2.45	0.52
35:AA:70:ARG:HG3	35:AA:72:ARG:NH1	2.25	0.52
37:AC:35:VAL:HG21	37:AC:244:LEU:HD21	1.92	0.52
37:AC:285:ASP:HB3	37:AC:288:ARG:HG2	1.92	0.52
38:A1:69:C:OP1	50:AN:178:HIS:ND1	2.30	0.52
38:A1:130:A:H2'	38:A1:131:C:C6	2.45	0.52
38:A1:439:C:N4	38:A1:619:A:N1	2.57	0.52
38:A1:513:G:H2'	38:A1:514:G:C8	2.45	0.52
38:A1:2113:A:O2'	38:A1:2116:G:N7	2.36	0.52
39:A3:96:U:OP1	55:AS:43:TYR:OH	2.13	0.52
45:AH:1:MET:SD	55:AS:139:TYR:HB3	2.50	0.52
45:AH:103:ILE:HD11	45:AH:136:PHE:HZ	1.75	0.52
80:DC:311:GLU:OE1	80:DC:326:LYS:NZ	2.42	0.52
80:DC:676:ILE:O	80:DC:823:ARG:NH2	2.42	0.52
15:BY:131:ARG:HH12	34:B5:153:G:H5'	1.75	0.51
31:Bg:238:ASP:OD2	31:Bg:258:THR:N	2.43	0.51
34:B5:898:A:N6	34:B5:914:G:N2	2.51	0.51
34:B5:1356:U:O2	34:B5:1367:G:N2	2.29	0.51
36:AB:197:GLU:O	36:AB:201:LYS:NZ	2.35	0.51
36:AB:250:ALA:HB1	38:A1:2947:G:N3	2.25	0.51
37:AC:294:GLU:H	37:AC:294:GLU:CD	2.17	0.51
38:A1:160:G:N2	38:A1:261:U:O2	2.28	0.51
38:A1:595:G:H2'	38:A1:596:C:C6	2.45	0.51
45:AH:18:VAL:HG12	45:AH:20:ILE:HD11	1.91	0.51
50:AN:53:TYR:HB2	50:AN:133:ILE:HD12	1.92	0.51
76:An:5:TRP:HA	76:An:8:LYS:HB3	1.92	0.51
15:BY:18:LEU:HG	15:BY:20:ARG:CZ	2.40	0.51
19:BD:105:MET:O	19:BD:109:LEU:HG	2.10	0.51
23:BQ:39:VAL:N	23:BQ:45:ARG:HE	2.08	0.51
34:B5:193:U:O2'	34:B5:195:G:H8	1.93	0.51
34:B5:468:A:N1	34:B5:594:A:O2'	2.41	0.51
34:B5:844:A:H3'	34:B5:845:G:C2	2.46	0.51
34:B5:948:G:H2'	34:B5:949:C:C6	2.45	0.51
35:AA:184:ARG:HH11	35:AA:184:ARG:HG3	1.75	0.51
38:A1:41:G:N2	38:A1:2803:A:N7	2.58	0.51
38:A1:698:U:H2'	38:A1:699:A:O4'	2.11	0.51
38:A1:874:U:N3	38:A1:2978:U:OP1	2.22	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1037:C:H2'	38:A1:1038:C:H6	1.74	0.51
38:A1:1126:G:H5"	46:AI:119:TRP:CZ3	2.45	0.51
38:A1:1560:G:O6	60:AX:33:ARG:NH1	2.44	0.51
38:A1:3291:G:H2'	38:A1:3292:A:H8	1.75	0.51
44:AG:214:LEU:O	44:AG:218:ILE:HG12	2.10	0.51
46:AI:42:THR:CG2	46:AI:45:GLU:HG3	2.40	0.51
48:AL:59:ARG:HD2	48:AL:66:ASN:O	2.09	0.51
51:AO:7[A]:VAL:CG2	51:AO:33[A]:ILE:HG12	2.41	0.51
81:EC:6849:A:H8	81:EC:6878:G:C4	2.28	0.51
2:BB:176:VAL:O	2:BB:177:GLN:HG2	2.11	0.51
4:BE:67:GLN:HG3	4:BE:69:HIS:HB2	1.92	0.51
7:BI:100:ALA:O	7:BI:169:ILE:HG22	2.10	0.51
11:BO:111:ARG:NH1	16:Ba:56:ALA:O	2.43	0.51
20:BF:109:LYS:CE	34:B5:1473:U:H4'	2.40	0.51
20:BF:129:PRO:HA	20:BF:132:VAL:HG12	1.92	0.51
21:BK:16:PHE:O	21:BK:90:THR:OG1	2.19	0.51
24:BR:44:LYS:HD2	24:BR:45:ARG:N	2.25	0.51
25:BS:104:ASN:HD21	25:BS:108:LYS:HE2	1.76	0.51
34:B5:1439:C:H2'	34:B5:1440:C:H6	1.74	0.51
38:A1:1129:A:H2'	38:A1:1130:A:C8	2.45	0.51
38:A1:1798:A:H2'	38:A1:1799:A:C8	2.45	0.51
38:A1:1921:A:H2'	38:A1:1922:A:H8	1.73	0.51
38:A1:2264:PSU:H2'	38:A1:2265:C:O4'	2.10	0.51
38:A1:2606:G:H2'	38:A1:2606:G:N3	2.26	0.51
38:A1:2772:C:H4'	38:A1:2773:C:H5'	1.92	0.51
40:A4:63:G:H22	40:A4:97:A:H2	1.59	0.51
79:E:207:LYS:HB3	79:E:214:PHE:HB2	1.92	0.51
80:DC:728:VAL:HB	80:DC:771:TYR:O	2.10	0.51
81:EC:6784:G:H2'	81:EC:6785:C:C6	2.46	0.51
81:EC:6794:C:H4'	81:EC:6890:A:H2	1.74	0.51
3:BC:121:VAL:O	3:BC:125:ILE:HG12	2.10	0.51
5:BG:7:TYR:HD2	5:BG:10:ASN:OD1	1.94	0.51
7:BI:106:ALA:HA	7:BI:165:LEU:HD12	1.93	0.51
23:BQ:80:ALA:HA	23:BQ:83:GLN:NE2	2.25	0.51
24:BR:5:ARG:NE	34:B5:1402:G:OP1	2.37	0.51
31:Bg:109:ASP:O	31:Bg:127:ARG:N	2.39	0.51
34:B5:29:U:H2'	34:B5:30:G:C8	2.43	0.51
34:B5:208:U:H2'	34:B5:209:U:C6	2.45	0.51
34:B5:1260:U:H2'	34:B5:1261:G:H8	1.75	0.51
34:B5:1461:C:H2'	34:B5:1462:G:H8	1.74	0.51
36:AB:250:ALA:HB3	38:A1:2880:PSU:O4	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:358:THR:HA	37:AC:361:HIS:HD2	1.75	0.51
38:A1:1323:G:O2'	55:AS:2:ALA:HB3	2.11	0.51
38:A1:1694:U:H5	38:A1:1752:A:N1	2.08	0.51
38:A1:2407:C:H2'	38:A1:2408:U:C6	2.46	0.51
38:A1:3252:G:H2'	38:A1:3253:G:C8	2.46	0.51
45:AH:89:LYS:NZ	45:AH:183:HIS:HB3	2.26	0.51
52:AP:33:ALA:HB1	52:AP:117:ILE:HG12	1.90	0.51
55:AS:73:LYS:NZ	55:AS:97:VAL:O	2.43	0.51
72:Aj:14:LYS:HZ1	74:Al:51:ILE:HD11	1.75	0.51
79:E:125:GLY:H	79:E:126:PRO:HD2	1.76	0.51
80:DC:461:GLN:HG2	80:DC:462:PHE:CD1	2.45	0.51
80:DC:724:ILE:HG23	80:DC:808:PRO:HG3	1.91	0.51
81:EC:6854:U:H4'	81:EC:6855:A:H5'	1.92	0.51
2:BB:111:ARG:HB3	16:Ba:68:TYR:HB2	1.92	0.51
14:BX:114:LYS:HD3	34:B5:571:G:H5"	1.92	0.51
15:BY:41:ARG:HB3	15:BY:52:LYS:HG3	1.91	0.51
26:BT:86:ARG:HD2	26:BT:92:LYS:HG2	1.93	0.51
26:BT:122:ARG:NH1	34:B5:1499:G:OP1	2.42	0.51
33:BM:28:LEU:HB3	33:BM:136:ILE:HG21	1.92	0.51
34:B5:444:C:N4	34:B5:459:G:OP2	2.31	0.51
34:B5:546:U:H2'	34:B5:547:U:C6	2.46	0.51
34:B5:905:A:N1	34:B5:998:A:O2'	2.44	0.51
34:B5:1338:C:H1'	34:B5:1410:A:C4	2.46	0.51
34:B5:1682:U:O2'	34:B5:1683:C:O5'	2.27	0.51
34:B5:1693:A:N6	34:B5:1707:A:H8	2.06	0.51
38:A1:348:A:N3	38:A1:352:A:O2'	2.43	0.51
38:A1:364:G:N7	72:Aj:56:ARG:NH2	2.53	0.51
38:A1:407:A:C2	40:A4:17:A:H1'	2.46	0.51
38:A1:1708:C:H1'	69:Ag:52:GLN:HE22	1.76	0.51
38:A1:2506:U:O2'	38:A1:2507:C:OP1	2.28	0.51
44:AG:147:LYS:O	44:AG:149:LYS:NZ	2.42	0.51
46:AI:75:TYR:CE1	46:AI:150:GLU:HB3	2.45	0.51
50:AN:27:VAL:HG23	50:AN:129:TYR:CE1	2.46	0.51
54:AR:11:ALA:O	54:AR:15:VAL:HG22	2.11	0.51
54:AR:28:GLU:HB3	54:AR:31:GLU:OE1	2.10	0.51
55:AS:89:ASN:ND2	56:AT:156:TYR:O	2.33	0.51
58:AV:81:GLN:HG2	58:AV:83:LYS:H	1.75	0.51
61:AY:82:VAL:HG23	61:AY:85:VAL:HB	1.93	0.51
79:E:76:ARG:NH1	79:E:140:HIS:O	2.44	0.51
80:DC:42:ARG:NH2	80:DC:331:ALA:HB3	2.26	0.51
80:DC:75:ILE:HG13	80:DC:102:LEU:HB3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:124:GLY:HA3	80:DC:342:LEU:HD22	1.93	0.51
80:DC:211:PHE:HB2	80:DC:220:PHE:CZ	2.45	0.51
4:BE:107:GLY:HA2	4:BE:189:LEU:HD22	1.92	0.51
8:BJ:39:LYS:NZ	34:B5:592:A:OP1	2.32	0.51
12:BV:1:MET:HG3	12:BV:9:VAL:HG23	1.90	0.51
16:Ba:37:LYS:NZ	34:B5:933:A:OP2	2.33	0.51
20:BF:149:VAL:HG22	20:BF:150:GLY:H	1.76	0.51
23:BQ:16:ALA:HB2	23:BQ:72:GLY:HA3	1.92	0.51
30:Bd:21:CYS:HB3	30:Bd:26:SER:H	1.76	0.51
35:AA:233:GLN:HB3	38:A1:2607:G:H5'	1.93	0.51
36:AB:305:ILE:HG13	36:AB:321:PHE:CE1	2.45	0.51
38:A1:1213:G:H2'	38:A1:1214:U:H6	1.76	0.51
38:A1:1750:A:H4'	38:A1:1751:G:H5'	1.93	0.51
38:A1:1758:G:H2'	38:A1:1759:C:C6	2.45	0.51
38:A1:2684:C:H2'	38:A1:2685:C:C6	2.46	0.51
44:AG:157:VAL:HG23	44:AG:160:ILE:HA	1.93	0.51
47:AJ:16:LYS:HG3	47:AJ:130:VAL:HB	1.92	0.51
47:AJ:54:VAL:HG21	47:AJ:57:PHE:CD2	2.45	0.51
47:AJ:94:ARG:C	47:AJ:96:PHE:H	2.19	0.51
50:AN:27:VAL:HG21	50:AN:124:ASP:HB3	1.93	0.51
58:AV:108:GLU:HA	58:AV:128:ARG:HG3	1.92	0.51
80:DC:669:TRP:HA	80:DC:672:LYS:HG2	1.92	0.51
80:DC:739:ALA:O	80:DC:743:ILE:HG13	2.11	0.51
1:BA:205:ARG:NH1	1:BA:206:ASP:O	2.44	0.51
3:BC:59:HIS:CD2	3:BC:239:PRO:HD3	2.45	0.51
22:BP:24:LYS:O	22:BP:28:MET:HE3	2.11	0.51
31:Bg:302:PHE:CE1	31:Bg:312:VAL:HG22	2.46	0.51
34:B5:606:A:H4'	34:B5:607:G:H3'	1.93	0.51
38:A1:28:C:O2'	38:A1:61:A:N3	2.42	0.51
38:A1:180:C:H2'	38:A1:181:U:C6	2.46	0.51
38:A1:411:U:H2'	38:A1:412:G:C8	2.45	0.51
38:A1:847:A:O2'	38:A1:848:A:O4'	2.27	0.51
38:A1:1492:G:O6	74:Al:2:ALA:N	2.43	0.51
38:A1:2467:G:H1'	38:A1:2468:A:N7	2.26	0.51
47:AJ:90:GLN:CD	47:AJ:173:ASP:HB3	2.35	0.51
49:AM:89:ALA:O	49:AM:93:LYS:NZ	2.37	0.51
54:AR:31:GLU:HA	54:AR:34:GLN:HG2	1.91	0.51
57:AU:78:TYR:CE1	57:AU:82:LYS:HD2	2.46	0.51
60:AX:105:VAL:HA	60:AX:130:TYR:CE2	2.46	0.51
62:AZ:25:ILE:HG23	62:AZ:41:ALA:HB1	1.93	0.51
2:BB:63:GLY:HA2	2:BB:87:ARG:HH22	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:BC:58:LEU:HD23	12:BV:12:TYR:HD2	1.76	0.51
3:BC:119:LYS:HD2	3:BC:119:LYS:N	2.26	0.51
10:BN:5:HIS:HD2	10:BN:117:LEU:HD22	1.76	0.51
11:BO:29:HIS:HE1	34:B5:918:U:H1'	1.74	0.51
11:BO:131:GLY:O	16:Ba:22:ARG:NH2	2.44	0.51
13:BW:28:ARG:HH22	34:B5:864:U:H2'	1.76	0.51
14:BX:3:LYS:HE2	14:BX:7:ARG:NH2	2.21	0.51
15:BY:8:ARG:HD3	34:B5:778:G:O6	2.11	0.51
15:BY:11:LYS:HG3	15:BY:11:LYS:O	2.10	0.51
20:BF:107:LYS:NZ	34:B5:1609:U:O3'	2.44	0.51
31:Bg:92:TRP:HA	31:Bg:99:THR:HA	1.92	0.51
34:B5:176:C:H2'	34:B5:177:U:C6	2.46	0.51
36:AB:212:ASN:ND2	36:AB:354:VAL:HG12	2.26	0.51
36:AB:216:ASP:HB2	36:AB:339:ARG:HG2	1.91	0.51
37:AC:74:ILE:HG12	37:AC:94:CYS:SG	2.51	0.51
37:AC:195:ARG:NH1	38:A1:340:C:OP2	2.30	0.51
37:AC:261:VAL:O	37:AC:269:SER:OG	2.27	0.51
38:A1:394:G:N1	38:A1:397:A:OP2	2.39	0.51
38:A1:616:G:H2'	38:A1:617:G:H8	1.76	0.51
38:A1:1909:A:H2'	38:A1:1910:A:C8	2.46	0.51
38:A1:2768:U:H2'	38:A1:2769:A:C8	2.44	0.51
38:A1:3115:C:P	45:AH:62:ARG:HH21	2.33	0.51
39:A3:101:G:N7	55:AS:52:LYS:NZ	2.40	0.51
75:Am:104:PRO:HD3	75:Am:111:ARG:HH22	1.75	0.51
4:BE:212:ASP:OD1	4:BE:213:SER:N	2.40	0.51
8:BJ:69:ARG:NH2	8:BJ:93:LEU:HB2	2.26	0.51
13:BW:8:ALA:HA	13:BW:74:VAL:HG11	1.93	0.51
34:B5:121:U:H2'	34:B5:122:U:C6	2.46	0.51
34:B5:446:A:N6	34:B5:461:G:H21	2.09	0.51
34:B5:564:G:H1	34:B5:580:A:P	2.34	0.51
34:B5:1624:C:H2'	34:B5:1625:C:H6	1.75	0.51
35:AA:67:TYR:OH	38:A1:2525:G:N7	2.30	0.51
38:A1:1601:U:P	54:AR:42:ARG:HH22	2.34	0.51
38:A1:1604:G:H4'	38:A1:1835:A:H4'	1.92	0.51
38:A1:2426:U:H2'	38:A1:2427:U:H6	1.75	0.51
38:A1:3154:C:H41	38:A1:3293:U:H3	1.57	0.51
38:A1:3193:C:H2'	38:A1:3194:C:C6	2.46	0.51
39:A3:8:G:OP2	41:AD:30:TYR:OH	2.23	0.51
47:AJ:17:LEU:HD21	47:AJ:80:LEU:HB2	1.93	0.51
49:AM:123:LEU:HG	51:AO:190[A]:VAL:HG23	1.92	0.51
51:AO:38[A]:ALA:HA	51:AO:41[A]:LEU:HD13	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:AW:38:SER:O	59:AW:42:GLN:HG3	2.10	0.51
1:BA:35:PRO:HB3	12:BV:87:ARG:HH22	1.75	0.51
3:BC:230:TRP:CD2	13:BW:68:ARG:HD3	2.46	0.51
4:BE:250:GLU:OE1	4:BE:250:GLU:N	2.29	0.51
7:BI:81:VAL:HG12	7:BI:102:VAL:HG12	1.93	0.51
8:BJ:69:ARG:CZ	8:BJ:93:LEU:HD12	2.40	0.51
14:BX:8:GLY:O	14:BX:11:SER:OG	2.24	0.51
24:BR:4:VAL:HG12	34:B5:1402:G:H4'	1.92	0.51
34:B5:182:A:H2'	34:B5:183:U:C6	2.45	0.51
34:B5:1232:U:H2'	34:B5:1233:G:C8	2.46	0.51
34:B5:1487:A:H2'	34:B5:1488:G:C8	2.46	0.51
34:B5:1655:A:N6	34:B5:1745:G:O2'	2.42	0.51
36:AB:305:ILE:HG13	36:AB:321:PHE:CZ	2.46	0.51
38:A1:292:U:OP2	50:AN:68:ARG:NH2	2.44	0.51
38:A1:1110:PSU:H2'	38:A1:1111:U:C6	2.46	0.51
38:A1:1120:A:H2'	38:A1:1121:U:H6	1.75	0.51
38:A1:2708:C:H2'	38:A1:2709:C:C6	2.46	0.51
38:A1:2961:G:H2'	38:A1:2962:U:C6	2.46	0.51
38:A1:2966:G:H2'	38:A1:2967:A:C8	2.46	0.51
39:A3:64:A:OP2	41:AD:289:LYS:NZ	2.30	0.51
55:AS:12:ARG:NH1	55:AS:15:PRO:HD3	2.18	0.51
56:AT:62:GLY:HA3	56:AT:76:ILE:HD13	1.93	0.51
79:E:179:LEU:HA	79:E:182:GLN:HB2	1.93	0.51
79:E:181:ASN:O	79:E:185:MET:HG2	2.10	0.51
80:DC:640:GLY:H	80:DC:668:GLN:HE22	1.59	0.51
80:DC:743:ILE:O	80:DC:747:LEU:HD22	2.11	0.51
8:BJ:159:ALA:HB3	8:BJ:162:SER:HB3	1.93	0.50
18:Be:42:ARG:HA	18:Be:46:ASN:OD1	2.12	0.50
25:BS:100:THR:HG23	25:BS:104:ASN:ND2	2.27	0.50
28:BZ:64:VAL:HA	81:EC:6868:C:H5	1.76	0.50
28:BZ:100:ILE:HA	81:EC:6863:C:N4	2.25	0.50
38:A1:1423:C:H1'	42:AE:5:LYS:HE3	1.93	0.50
38:A1:1597:C:H2'	38:A1:1598:G:C8	2.46	0.50
38:A1:2205:U:C2	38:A1:2206:G:C8	2.99	0.50
38:A1:2407:C:H2'	38:A1:2408:U:H6	1.75	0.50
38:A1:2522:G:O2'	38:A1:2524:A:OP2	2.19	0.50
38:A1:3159:C:H2'	38:A1:3160:U:C6	2.45	0.50
46:AI:70:ILE:O	46:AI:74:LYS:HG2	2.11	0.50
47:AJ:12:LEU:HG	47:AJ:131:MET:CE	2.41	0.50
53:AQ:81:VAL:HG13	53:AQ:140:LEU:HD12	1.92	0.50
53:AQ:170:ARG:O	53:AQ:171:LYS:HG2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BB:168:ILE:HG12	2:BB:197:ILE:HD11	1.92	0.50
3:BC:44:LEU:HD21	3:BC:247:ALA:HB2	1.94	0.50
3:BC:76:LEU:HD21	3:BC:104:VAL:HB	1.93	0.50
3:BC:77:GLN:NE2	3:BC:190:LEU:HD22	2.26	0.50
3:BC:116:LYS:HG2	3:BC:127:ALA:HB3	1.93	0.50
3:BC:235:LEU:HD11	12:BV:54:ALA:HB2	1.93	0.50
4:BE:247:SER:N	4:BE:250:GLU:OE2	2.44	0.50
6:BH:97:ARG:HB3	34:B5:856:A:C8	2.46	0.50
7:BI:138:ASN:HD21	34:B5:187:G:H3'	1.76	0.50
26:BT:112:GLY:O	26:BT:125:SER:OG	2.29	0.50
28:BZ:50:ILE:O	28:BZ:54:VAL:HG22	2.10	0.50
31:Bg:201:THR:OG1	31:Bg:241:PHE:O	2.27	0.50
34:B5:44:U:OP2	34:B5:437:A:N6	2.44	0.50
34:B5:272:U:H2'	34:B5:273:G:H8	1.77	0.50
34:B5:753:A:H2'	34:B5:754:A:O4'	2.11	0.50
34:B5:1474:G:H2'	34:B5:1475:A:H8	1.75	0.50
34:B5:1662:G:H2'	34:B5:1663:G:O4'	2.11	0.50
34:B5:1727:G:H2'	34:B5:1728:A:C8	2.46	0.50
38:A1:1055:A:H5"	39:A3:100:C:O2'	2.11	0.50
38:A1:1895:A:N6	38:A1:2335:G:O2'	2.45	0.50
38:A1:2389:C:H5'	52:AP:80:LYS:HE3	1.92	0.50
38:A1:2923:PSU:H2'	38:A1:2924:U:H6	1.75	0.50
40:A4:142:C:H2'	40:A4:143:U:C6	2.47	0.50
54:AR:181:ARG:H	54:AR:181:ARG:HD3	1.76	0.50
57:AU:33:TYR:OH	57:AU:80:THR:OG1	2.16	0.50
61:AY:53:ASP:HB3	61:AY:110:HIS:CG	2.45	0.50
61:AY:91:ASN:OD1	61:AY:92:GLY:N	2.44	0.50
79:E:10:ARG:HG3	79:E:180:VAL:HB	1.93	0.50
79:E:56:PRO:HD2	79:E:182:GLN:HG2	1.92	0.50
81:EC:6879:U:H3'	81:EC:6879:U:H6	1.76	0.50
2:BB:31:ASP:OD1	2:BB:32:ILE:N	2.44	0.50
2:BB:115:ARG:HB2	2:BB:118:GLN:HE22	1.75	0.50
3:BC:89:GLN:O	34:B5:1145:U:O2'	2.26	0.50
4:BE:37:LYS:NZ	34:B5:298:C:OP2	2.45	0.50
4:BE:183:VAL:HG11	4:BE:188:ASN:HB2	1.93	0.50
8:BJ:77:ILE:HD13	8:BJ:80:LEU:HD12	1.93	0.50
11:BO:84:ARG:NH2	34:B5:918:U:OP1	2.44	0.50
14:BX:18:HIS:CE1	14:BX:22:ASN:HD21	2.29	0.50
21:BK:40:LEU:O	21:BK:44:LYS:HG2	2.12	0.50
28:BZ:60:VAL:HG11	28:BZ:101:TYR:HB2	1.94	0.50
31:Bg:210:LEU:HG	31:Bg:231:MET:HE1	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:5:U:H2'	34:B5:6:G:H8	1.76	0.50
34:B5:629:U:H2'	34:B5:630:A:H8	1.76	0.50
34:B5:991:G:N1	34:B5:1012:U:OP2	2.30	0.50
34:B5:1734:U:O3'	58:AV:32:ARG:NH1	2.32	0.50
35:AA:70:ARG:HE	35:AA:72:ARG:NH1	2.09	0.50
36:AB:19:ARG:HB2	36:AB:232:ARG:NH2	2.26	0.50
38:A1:879:U:O2'	52:AP:135:ARG:NH2	2.42	0.50
38:A1:1680:G:H2'	38:A1:1681:U:H6	1.75	0.50
38:A1:2536:A:N6	38:A1:2540:A:OP1	2.39	0.50
38:A1:3094:A:H2'	38:A1:3095:U:C6	2.46	0.50
38:A1:3338:C:H2'	38:A1:3339:A:C8	2.46	0.50
39:A3:121:U:OP2	41:AD:265:TYR:OH	2.20	0.50
40:A4:52:A:P	74:Al:21:ARG:HH22	2.34	0.50
44:AG:105:LYS:HE3	44:AG:108:ARG:HH21	1.75	0.50
44:AG:139:VAL:O	44:AG:143:ILE:HG12	2.11	0.50
49:AM:49:PRO:HG3	49:AM:78:THR:HG23	1.92	0.50
55:AS:77:VAL:HG13	55:AS:126:VAL:HG22	1.92	0.50
60:AX:67:ILE:HD11	60:AX:85:GLN:HB2	1.91	0.50
75:Am:122:ARG:NH1	75:Am:123:PRO:O	2.45	0.50
80:DC:519:LEU:HG	80:DC:521:TYR:HD2	1.76	0.50
80:DC:567:VAL:HG12	80:DC:722:PRO:HA	1.93	0.50
2:BB:64:ARG:HD2	11:BO:36:LYS:HG2	1.93	0.50
2:BB:136:ARG:NH1	34:B5:885:G:OP1	2.44	0.50
25:BS:133:VAL:HG22	34:B5:1545:A:H5"	1.94	0.50
26:BT:42:GLY:HA2	26:BT:84:LYS:HB2	1.94	0.50
27:BU:25:THR:OG1	27:BU:115:GLU:HB2	2.11	0.50
29:Bc:29:ARG:HG3	29:Bc:41:VAL:HG22	1.93	0.50
31:Bg:151:VAL:HA	31:Bg:173:GLY:HA3	1.93	0.50
34:B5:430:G:H3'	80:DC:391:LYS:CB	2.39	0.50
34:B5:744:U:H2'	34:B5:745:U:O4'	2.12	0.50
34:B5:1564:U:H2'	34:B5:1565:C:C6	2.45	0.50
38:A1:275:U:H2'	38:A1:276:U:C6	2.45	0.50
38:A1:280:U:O2'	38:A1:282:G:N7	2.35	0.50
38:A1:2611:U:H2'	38:A1:2612:U:C6	2.46	0.50
42:AE:139:LYS:O	42:AE:143:LYS:HG2	2.11	0.50
46:AI:21:ARG:CZ	46:AI:22:TYR:CE1	2.94	0.50
47:AJ:62:ASN:ND2	77:Ao:102:GLN:O	2.45	0.50
53:AQ:112:ALA:O	53:AQ:116:LYS:HG2	2.11	0.50
54:AR:105:LEU:HD22	54:AR:135:LYS:HG3	1.92	0.50
61:AY:55:GLU:O	61:AY:107:THR:OG1	2.25	0.50
79:E:11:GLU:O	79:E:14:LYS:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6816:A:H62	81:EC:6821:U:P	2.34	0.50
2:BB:117:TRP:HB3	2:BB:153:HIS:HA	1.94	0.50
5:BG:58:LYS:NZ	5:BG:104:PRO:O	2.41	0.50
5:BG:160:ARG:NE	34:B5:66:U:O2	2.37	0.50
9:BL:2:SER:O	9:BL:52:SER:OG	2.21	0.50
11:BO:31:THR:OG1	11:BO:35:GLY:HA2	2.12	0.50
23:BQ:56:GLY:O	23:BQ:59:LYS:NZ	2.45	0.50
34:B5:138:A:H62	34:B5:266:A:H61	1.59	0.50
34:B5:877:G:H22	34:B5:951:A:H2	1.57	0.50
34:B5:1317:C:H2'	34:B5:1318:G:O4'	2.11	0.50
34:B5:1515:A:O2'	34:B5:1518:C:N4	2.44	0.50
35:AA:28:LYS:HB2	35:AA:123:ARG:HB3	1.93	0.50
38:A1:157:A:N7	71:Ai:26:ILE:HG12	2.25	0.50
38:A1:821:U:H2'	38:A1:822:G:H8	1.76	0.50
38:A1:842:G:H2'	38:A1:843:A:H8	1.76	0.50
38:A1:1225:A:H2'	38:A1:1226:G:C8	2.47	0.50
38:A1:2427:U:H2'	38:A1:2428:U:C6	2.47	0.50
38:A1:2429:G:H2'	38:A1:2430:A:C8	2.46	0.50
38:A1:2470:C:OP1	79:E:27:ASN:ND2	2.42	0.50
42:AE:137:ASP:OD1	42:AE:138:GLN:N	2.43	0.50
45:AH:23:ARG:HE	45:AH:39:LYS:HA	1.75	0.50
47:AJ:81:GLU:O	47:AJ:85:LYS:HG2	2.11	0.50
59:AW:45:ASN:ND2	59:AW:47:ARG:HB2	2.26	0.50
60:AX:53:HIS:CE1	60:AX:56:ARG:HG2	2.46	0.50
63:Aa:85:ASP:OD1	63:Aa:86:LYS:N	2.45	0.50
80:DC:429:LYS:HZ1	80:DC:459:ILE:HA	1.75	0.50
81:EC:6840:A:OP1	81:EC:6845:G:N1	2.45	0.50
2:BB:104:ASP:OD1	2:BB:105:PHE:N	2.44	0.50
4:BE:125:LYS:HB2	4:BE:226:PHE:CE1	2.46	0.50
5:BG:178:LEU:HD21	34:B5:78:A:C6	2.47	0.50
9:BL:79:LYS:NZ	34:B5:346:G:H5'	2.27	0.50
10:BN:28:LEU:HB3	10:BN:32:SER:OG	2.12	0.50
17:Bb:56:CYS:SG	17:Bb:58:SER:OG	2.67	0.50
24:BR:82:ASP:O	24:BR:83:GLN:NE2	2.44	0.50
34:B5:513:U:H2'	34:B5:514:G:H8	1.71	0.50
38:A1:172:G:O2'	38:A1:244:G:O6	2.25	0.50
38:A1:951:A:H5"	38:A1:1143:A:N1	2.27	0.50
38:A1:2298:U:O2'	38:A1:2299:A:H5'	2.12	0.50
38:A1:3163:A:H2'	38:A1:3164:C:C6	2.45	0.50
47:AJ:40:LEU:HD12	47:AJ:109:HIS:CG	2.46	0.50
74:Al:15:LYS:HA	74:Al:15:LYS:HE2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:E:67:ILE:HD13	79:E:144:LEU:HD13	1.92	0.50
80:DC:508:LEU:HD13	80:DC:528:HIS:HD2	1.75	0.50
81:EC:6788:C:OP2	81:EC:6805:C:N4	2.44	0.50
3:BC:82:ASN:OD1	3:BC:83:ILE:N	2.45	0.50
5:BG:56:ASN:HD22	34:B5:154:G:H1'	1.76	0.50
10:BN:121:ARG:O	10:BN:125:LEU:HD23	2.12	0.50
19:BD:42:THR:OG1	19:BD:45:LYS:O	2.20	0.50
19:BD:195:SER:O	19:BD:200:LYS:NZ	2.45	0.50
20:BF:49:GLU:C	20:BF:51:VAL:H	2.19	0.50
31:Bg:116:ASP:OD1	31:Bg:121:MET:N	2.45	0.50
31:Bg:303:ALA:HB3	31:Bg:313:TRP:HZ3	1.76	0.50
34:B5:261:U:H1'	34:B5:262:U:H5	1.76	0.50
34:B5:1096:C:H4'	34:B5:1099:U:H4'	1.93	0.50
34:B5:1291:G:H22	34:B5:1324:G:N2	2.10	0.50
34:B5:1607:G:H2'	34:B5:1608:U:H6	1.77	0.50
36:AB:122:TRP:CZ2	36:AB:127:LYS:HE3	2.47	0.50
37:AC:358:THR:HA	37:AC:361:HIS:CD2	2.47	0.50
38:A1:3110:C:H2'	38:A1:3111:U:C6	2.46	0.50
38:A1:3182:G:OP1	51:AO:117[A]:ARG:NH2	2.41	0.50
40:A4:143:U:P	50:AN:38:ARG:HH22	2.34	0.50
67:Ae:52:GLN:HE21	67:Ae:54:LYS:HE3	1.76	0.50
2:BB:64:ARG:NE	11:BO:34:SER:OG	2.40	0.50
2:BB:69:CYS:SG	11:BO:114:ARG:CZ	3.00	0.50
5:BG:175:ILE:HG22	34:B5:78:A:C4	2.47	0.50
7:BI:191:PHE:HD1	7:BI:194:ARG:HH22	1.60	0.50
8:BJ:73:GLY:O	8:BJ:76:LEU:HG	2.11	0.50
15:BY:8:ARG:HG3	34:B5:780:A:N3	2.26	0.50
20:BF:211:ILE:HA	20:BF:214:LYS:HG2	1.93	0.50
26:BT:66:TYR:HA	26:BT:124:ILE:HG12	1.93	0.50
28:BZ:58:ARG:HG3	81:EC:6862:G:C8	2.47	0.50
30:Bd:8:PHE:HE1	34:B5:1450:U:H4'	1.76	0.50
31:Bg:66:HIS:CG	31:Bg:67:ILE:H	2.29	0.50
34:B5:5:U:O2'	34:B5:553:G:H4'	2.11	0.50
34:B5:341:A:H2'	34:B5:342:C:C6	2.46	0.50
34:B5:393:C:H2'	34:B5:394:C:C6	2.46	0.50
34:B5:960:U:H2'	34:B5:961:U:O4'	2.12	0.50
34:B5:1345:A:H2'	34:B5:1348:A:H62	1.77	0.50
38:A1:426:G:H5'	67:Ae:50:ILE:HG22	1.93	0.50
38:A1:1741:A:H4'	69:Ag:38:LEU:HD11	1.94	0.50
38:A1:1785:U:H2'	38:A1:1786:G:C8	2.47	0.50
38:A1:1915:A:H2'	38:A1:1916:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2250:G:N3	38:A1:2250:G:H2'	2.27	0.50
38:A1:2853:A:C5'	46:AI:3:ARG:HH12	2.25	0.50
41:AD:194:LEU:O	41:AD:197:SER:OG	2.22	0.50
45:AH:41:ILE:HG22	45:AH:43:VAL:HG13	1.92	0.50
46:AI:66:GLU:OE2	46:AI:69:ARG:NH2	2.45	0.50
48:AL:170:LEU:HG	63:Aa:147:LEU:HD11	1.94	0.50
64:Ab:25:LYS:HG3	64:Ab:25:LYS:O	2.11	0.50
65:Ac:51:LEU:HD12	69:Ag:91:ARG:HG2	1.94	0.50
79:E:65:ILE:HD12	79:E:152:ARG:HG3	1.92	0.50
80:DC:732:GLU:HA	80:DC:768:VAL:O	2.11	0.50
7:BI:193:LEU:HD13	7:BI:197:THR:OG1	2.12	0.50
15:BY:109:LYS:O	15:BY:112:LYS:HG2	2.12	0.50
15:BY:131:ARG:HH22	34:B5:153:G:H5'	1.76	0.50
18:Be:57:ASN:ND2	34:B5:557:G:N3	2.58	0.50
25:BS:17:LEU:HD12	25:BS:22:VAL:HG21	1.93	0.50
31:Bg:22:SER:OG	31:Bg:69:GLN:O	2.25	0.50
34:B5:1770:U:H2'	34:B5:1771:U:C6	2.46	0.50
36:AB:215:ILE:HD11	36:AB:324:VAL:HG11	1.93	0.50
38:A1:47:C:OP1	48:AL:16:LYS:HE2	2.12	0.50
38:A1:965:A:H5"	48:AL:4:SER:HB3	1.93	0.50
38:A1:1827:C:H2'	38:A1:1828:A:C8	2.47	0.50
38:A1:1942:U:H2'	38:A1:1943:C:O4'	2.12	0.50
38:A1:2180:G:H2'	38:A1:2181:C:C6	2.47	0.50
38:A1:2196:C:H2'	38:A1:2242:A:H61	1.76	0.50
38:A1:2450:G:N2	38:A1:2497:U:H3	2.10	0.50
38:A1:2674:A:H8	47:AJ:126:ASP:OD1	1.95	0.50
38:A1:2767:U:O2'	77:Ao:30:ALA:O	2.24	0.50
40:A4:141:C:O2	50:AN:112:ASN:ND2	2.45	0.50
41:AD:29:ASP:HB3	41:AD:32:GLN:HG2	1.94	0.50
41:AD:33:ARG:O	41:AD:37:VAL:HG22	2.11	0.50
44:AG:165:PHE:HZ	50:AN:3:ALA:HB1	1.76	0.50
50:AN:21:PHE:HD2	50:AN:22:LEU:HD12	1.77	0.50
50:AN:99:ARG:NH1	50:AN:167:THR:HB	2.27	0.50
53:AQ:155:MET:SD	53:AQ:163:PRO:HA	2.52	0.50
55:AS:7:TYR:HE1	55:AS:63:GLN:HG2	1.77	0.50
55:AS:74:ASN:ND2	55:AS:144:LEU:HD21	2.27	0.50
56:AT:65:TYR:N	56:AT:73:GLY:O	2.41	0.50
73:Ak:36:LYS:HB2	73:Ak:37:PRO:HD3	1.94	0.50
79:E:11:GLU:OE1	79:E:11:GLU:N	2.45	0.50
79:E:48:ARG:HG2	79:E:49:PHE:N	2.27	0.50
80:DC:126:LEU:HD11	80:DC:156:VAL:HB	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:507:GLY:HA2	80:DC:510:ARG:HB2	1.94	0.50
81:EC:6834:U:H3'	81:EC:6835:U:H5'	1.93	0.50
2:BB:105:PHE:HD2	2:BB:213:ARG:HA	1.77	0.49
4:BE:181:VAL:HG12	4:BE:227:VAL:HG22	1.94	0.49
11:BO:91:THR:HG23	11:BO:93:THR:H	1.77	0.49
20:BF:91:GLU:O	20:BF:94:THR:OG1	2.27	0.49
21:BK:74:GLU:O	21:BK:77:ARG:N	2.45	0.49
33:BM:82:PRO:HG2	33:BM:83:GLU:H	1.75	0.49
34:B5:431:C:P	80:DC:390:ASP:O	2.70	0.49
34:B5:1231:U:H5	34:B5:1254:U:H3	1.59	0.49
34:B5:1774:G:N7	76:An:4:LYS:NZ	2.55	0.49
38:A1:171:G:O2'	38:A1:172:G:O5'	2.27	0.49
38:A1:236:G:H2'	38:A1:237:G:C8	2.47	0.49
38:A1:1541:G:H2'	38:A1:1542:G:O4'	2.12	0.49
38:A1:2918:G:H2'	38:A1:2919:A:H8	1.77	0.49
39:A3:5:G:OP1	47:AJ:143:ARG:NH2	2.38	0.49
47:AJ:62:ASN:HB2	77:Ao:103:ALA:HA	1.94	0.49
52:AP:29:THR:HG21	52:AP:146:ILE:HD11	1.93	0.49
52:AP:49:GLU:OE1	66:Ad:86:LYS:NZ	2.37	0.49
61:AY:17:LYS:O	61:AY:21:THR:OG1	2.17	0.49
80:DC:785:ARG:HH21	80:DC:794:PRO:HD3	1.77	0.49
81:EC:6758:A:H2'	81:EC:6759:A:O4'	2.12	0.49
81:EC:6796:C:O2'	81:EC:6888:A:N6	2.45	0.49
2:BB:164:ILE:HD11	2:BB:205:PHE:HB2	1.94	0.49
3:BC:143:TYR:OH	3:BC:149:GLY:O	2.26	0.49
10:BN:45:LEU:HG	10:BN:49:GLN:HB2	1.94	0.49
10:BN:60:VAL:HG13	10:BN:66:ILE:HG13	1.94	0.49
14:BX:54:LEU:HD11	14:BX:75:GLN:HB3	1.94	0.49
15:BY:34:ASN:ND2	34:B5:521:A:N3	2.60	0.49
15:BY:37:LYS:HD3	34:B5:522:U:H5"	1.93	0.49
16:Ba:82:ARG:NH1	34:B5:1152:A:O3'	2.44	0.49
17:Bb:22:LYS:NZ	34:B5:864:U:H6	2.10	0.49
19:BD:168:ILE:HD12	19:BD:187:LYS:HG2	1.94	0.49
20:BF:109:LYS:NZ	34:B5:1473:U:H4'	2.27	0.49
22:BP:22:LEU:HA	22:BP:25:LEU:HD12	1.94	0.49
22:BP:85:ILE:HA	22:BP:89:MET:HE3	1.94	0.49
23:BQ:25:GLY:HA3	23:BQ:64:ASP:CG	2.37	0.49
25:BS:101:LEU:O	25:BS:105:VAL:HG23	2.12	0.49
28:BZ:63:SER:OG	28:BZ:64:VAL:N	2.45	0.49
31:Bg:255:ALA:HB2	31:Bg:292:LEU:HD23	1.94	0.49
38:A1:11:A:H2'	38:A1:12:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:121:A:N6	44:AG:126:SER:OG	2.45	0.49
38:A1:510:G:O6	38:A1:581:U:O2	2.30	0.49
38:A1:585:A:H2'	38:A1:586:C:C6	2.47	0.49
38:A1:1010:G:H22	38:A1:1040:A:H2	1.59	0.49
38:A1:1048:A:H2'	46:AI:22:TYR:OH	2.12	0.49
38:A1:3015:G:H2'	38:A1:3016:A:C8	2.47	0.49
38:A1:3162:C:N4	38:A1:3163:A:H62	2.10	0.49
38:A1:3223:A:H2'	38:A1:3224:G:O4'	2.12	0.49
38:A1:3366:G:H2'	38:A1:3367:C:C6	2.48	0.49
39:A3:24:A:H2'	39:A3:25:G:C8	2.47	0.49
43:AF:74:SER:OG	43:AF:75:TYR:N	2.44	0.49
51:AO:27[A]:LEU:HD22	51:AO:33[A]:ILE:HD12	1.95	0.49
59:AW:22:VAL:HB	59:AW:28:ILE:HD13	1.94	0.49
62:AZ:117:ALA:O	62:AZ:121:ARG:HG3	2.12	0.49
80:DC:239:LYS:HA	80:DC:239:LYS:HE2	1.92	0.49
80:DC:578:LYS:HD3	80:DC:585:ARG:HD3	1.94	0.49
80:DC:644:ASN:ND2	80:DC:681:MET:O	2.45	0.49
2:BB:22:ASP:HB3	2:BB:25:THR:HG23	1.94	0.49
4:BE:55:ALA:HB1	4:BE:60:GLU:HB2	1.93	0.49
6:BH:173:TYR:HE2	6:BH:179:LYS:HB2	1.77	0.49
8:BJ:128:LEU:HD21	8:BJ:158:PHE:CE1	2.47	0.49
23:BQ:13:LYS:N	23:BQ:83:GLN:HE22	2.11	0.49
24:BR:104:ASN:OD1	24:BR:105:GLN:N	2.44	0.49
31:Bg:109:ASP:HB2	31:Bg:127:ARG:HD2	1.93	0.49
34:B5:406:U:H2'	34:B5:407:A:H8	1.77	0.49
34:B5:632:PSU:O2'	34:B5:1103:U:OP1	2.26	0.49
34:B5:642:G:H2'	34:B5:643:G:C8	2.47	0.49
34:B5:829:A:H2'	34:B5:830:U:C5	2.48	0.49
34:B5:1069:A:H2'	34:B5:1070:C:O4'	2.12	0.49
34:B5:1561:U:H4'	34:B5:1599:C:H4'	1.94	0.49
34:B5:1769:U:O2'	34:B5:1770:U:H5'	2.12	0.49
36:AB:19:ARG:HH22	38:A1:3045:G:H5"	1.77	0.49
37:AC:67:THR:HG21	38:A1:2402:A:H2'	1.94	0.49
38:A1:269:G:N2	38:A1:270:U:O4	2.26	0.49
38:A1:509:U:H2'	38:A1:510:G:O4'	2.12	0.49
38:A1:2438:A:H2'	38:A1:2439:A:C8	2.47	0.49
38:A1:3038:U:H2'	38:A1:3039:C:O4'	2.13	0.49
38:A1:3127:A:H2'	38:A1:3128:G:O4'	2.12	0.49
38:A1:3218:A:O2'	38:A1:3278:C:N3	2.32	0.49
39:A3:84:A:H2'	39:A3:85:G:C8	2.47	0.49
53:AQ:90:ASP:OD1	53:AQ:92:ARG:NE	2.39	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:AZ:53:VAL:HG11	62:AZ:62:VAL:HG13	1.93	0.49
77:Ao:65:THR:HG1	77:Ao:89:LYS:HZ2	1.55	0.49
2:BB:48:VAL:HG13	2:BB:49:ASN:N	2.27	0.49
3:BC:174:ARG:HB2	8:BJ:97:LEU:HD13	1.95	0.49
9:BL:42:PHE:HA	9:BL:141:LYS:HE2	1.94	0.49
14:BX:84:THR:OG1	14:BX:120:VAL:HG22	2.12	0.49
17:Bb:34:ASP:O	17:Bb:80:ARG:N	2.44	0.49
20:BF:125:THR:OG1	20:BF:127:GLN:OE1	2.27	0.49
29:Bc:42:ARG:NH2	29:Bc:56:LEU:HD22	2.28	0.49
34:B5:255:U:H2'	34:B5:256:A:C8	2.47	0.49
34:B5:558:U:H1'	34:B5:581:U:O4'	2.13	0.49
34:B5:1652:C:H2'	34:B5:1653:C:H6	1.77	0.49
38:A1:2425:G:OP2	50:AN:90:ASN:ND2	2.45	0.49
41:AD:44:TYR:HD1	41:AD:44:TYR:H	1.60	0.49
43:AF:80:GLN:HB2	56:AT:135:PRO:HB2	1.93	0.49
45:AH:107:ASP:OD1	45:AH:107:ASP:N	2.45	0.49
58:AV:87:ARG:HE	58:AV:91:VAL:HG23	1.78	0.49
62:AZ:29:HIS:HD2	62:AZ:40:HIS:CE1	2.31	0.49
73:Ak:39:ARG:NH1	73:Ak:41:THR:HB	2.27	0.49
77:Ao:70:LEU:HD21	77:Ao:91:PHE:HZ	1.77	0.49
79:E:55:LEU:HD11	79:E:155:ILE:HD11	1.94	0.49
80:DC:162:ARG:HE	83:DC:901:GDP:N2	2.08	0.49
81:EC:6783:U:H2'	81:EC:6784:G:N7	2.27	0.49
1:BA:36:TYR:OH	1:BA:56:LYS:NZ	2.45	0.49
2:BB:160:HIS:O	2:BB:164:ILE:N	2.34	0.49
4:BE:25:GLY:O	8:BJ:3:ARG:NH2	2.46	0.49
6:BH:33:GLU:HG3	6:BH:76:LYS:HE3	1.93	0.49
10:BN:86:GLU:HB3	10:BN:90:TYR:HE2	1.77	0.49
15:BY:29:HIS:CE1	15:BY:67:GLY:H	2.30	0.49
21:BK:48:SER:HA	34:B5:1219:A:O2'	2.13	0.49
31:Bg:66:HIS:HB3	31:Bg:86:ASP:HB3	1.94	0.49
34:B5:58:U:OP1	34:B5:456:A:O2'	2.27	0.49
34:B5:125:U:H3	34:B5:291:G:H22	1.61	0.49
34:B5:518:A:H1'	34:B5:534:A:H62	1.78	0.49
34:B5:1064:G:H2'	34:B5:1065:A:H8	1.78	0.49
34:B5:1266:U:H2'	34:B5:1267:G:H8	1.76	0.49
34:B5:1294:G:O2'	34:B5:1321:A:N1	2.37	0.49
34:B5:1405:G:H2'	34:B5:1406:A:H8	1.77	0.49
38:A1:12:A:H2'	38:A1:13:A:C8	2.47	0.49
38:A1:708:G:N2	38:A1:711:A:OP2	2.38	0.49
38:A1:1158:A:H5"	43:AF:111:ILE:HD11	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2157:G:N2	38:A1:2177:G:O2'	2.45	0.49
38:A1:2205:U:H2'	38:A1:2206:G:O4'	2.12	0.49
38:A1:2842:U:H1'	80:DC:745:SER:HA	1.94	0.49
38:A1:2930:A:H2'	38:A1:2931:C:C6	2.47	0.49
38:A1:3234:A:H2	38:A1:3253:G:H22	1.59	0.49
40:A4:58:G:N7	72:Aj:63:ARG:NH2	2.53	0.49
41:AD:106:ALA:O	41:AD:110:LEU:HD23	2.12	0.49
44:AG:149:LYS:HG2	44:AG:201:THR:O	2.12	0.49
44:AG:173:MET:HE3	71:Ai:39:PHE:CZ	2.48	0.49
55:AS:152:LEU:HB3	55:AS:172:TYR:CE2	2.48	0.49
62:AZ:81:LEU:HD22	69:Ag:90:ILE:CD1	2.40	0.49
69:Ag:91:ARG:O	69:Ag:95:ILE:HG12	2.13	0.49
71:Ai:27:SER:C	71:Ai:29:LYS:H	2.19	0.49
79:E:90:LEU:HB3	79:E:123:LEU:HD11	1.94	0.49
4:BE:3:ARG:HB3	34:B5:93:A:H1'	1.95	0.49
13:BW:30:SER:HA	13:BW:34:ILE:HD12	1.93	0.49
15:BY:15:ASN:HD22	15:BY:20:ARG:HE	1.59	0.49
15:BY:60:PHE:CE2	15:BY:62:THR:HB	2.47	0.49
23:BQ:74:HIS:CD2	34:B5:1526:A:H61	2.28	0.49
24:BR:100:LEU:HD21	24:BR:119:LEU:HD23	1.93	0.49
31:Bg:159:ASN:ND2	31:Bg:166:SER:H	2.10	0.49
36:AB:250:ALA:HB1	38:A1:2947:G:C2	2.48	0.49
38:A1:26:A:N3	38:A1:328:U:O2'	2.42	0.49
38:A1:501:A:H2'	38:A1:502:U:C6	2.48	0.49
38:A1:1863:G:H4'	54:AR:82:LYS:HD3	1.93	0.49
38:A1:2222:A:O2'	38:A1:2223:A:OP1	2.29	0.49
38:A1:2933:A:C6	38:A1:3014:U:H4'	2.47	0.49
38:A1:3297:U:H2'	38:A1:3298:C:H6	1.76	0.49
41:AD:108:ARG:NE	41:AD:253:PHE:HB2	2.27	0.49
42:AE:154:LEU:HA	42:AE:157:GLN:NE2	2.28	0.49
55:AS:89:ASN:OD1	56:AT:156:TYR:N	2.30	0.49
63:Aa:139:ARG:HH11	63:Aa:139:ARG:HG3	1.78	0.49
79:E:39:LYS:O	79:E:200:ASN:HB3	2.12	0.49
2:BB:29:TRP:HZ2	11:BO:74:VAL:HG12	1.77	0.49
2:BB:63:GLY:HA2	2:BB:87:ARG:NH2	2.28	0.49
8:BJ:124:HIS:NE2	8:BJ:128:LEU:HD13	2.28	0.49
12:BV:36:VAL:O	12:BV:51:VAL:N	2.44	0.49
15:BY:36:SER:HB3	15:BY:39:GLU:HG3	1.95	0.49
20:BF:61:TYR:HD1	20:BF:165:LEU:HD13	1.77	0.49
21:BK:47:GLN:O	21:BK:51:SER:OG	2.29	0.49
34:B5:276:C:O2'	34:B5:277:U:O5'	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:283:U:H2'	34:B5:284:G:C8	2.48	0.49
34:B5:1575:G7M:O2'	34:B5:1576:A:OP1	2.28	0.49
37:AC:99:MET:HE1	38:A1:1429:G:C5	2.47	0.49
38:A1:253:A:H2'	38:A1:254:A:H8	1.77	0.49
38:A1:314:U:H2'	38:A1:315:C:C6	2.47	0.49
38:A1:1233:G:O2'	38:A1:1245:A:N1	2.44	0.49
38:A1:2455:U:N3	38:A1:2483:G:O2'	2.44	0.49
39:A3:13:A:OP2	39:A3:67:G:N2	2.42	0.49
39:A3:92:A:H8	39:A3:92:A:O5'	1.96	0.49
41:AD:134:ALA:HA	41:AD:141:PRO:HD3	1.95	0.49
45:AH:7:GLU:OE2	45:AH:54:LYS:HD2	2.12	0.49
45:AH:126:VAL:HG21	45:AH:161:LEU:HD23	1.94	0.49
55:AS:12:ARG:HH21	56:AT:141:VAL:HG22	1.77	0.49
59:AW:52:THR:HG22	59:AW:54:LEU:H	1.77	0.49
62:AZ:25:ILE:HG13	62:AZ:43:VAL:HG12	1.95	0.49
62:AZ:100:THR:HB	62:AZ:106:GLN:CD	2.37	0.49
77:Ao:15:LYS:O	77:Ao:18:ARG:NH1	2.46	0.49
80:DC:162:ARG:HE	83:DC:901:GDP:HN22	1.60	0.49
2:BB:137:ILE:HG12	2:BB:172:LEU:HD12	1.94	0.49
2:BB:170:GLU:O	2:BB:174:LYS:HG2	2.13	0.49
4:BE:120:SER:O	4:BE:164:LEU:HB3	2.12	0.49
7:BI:169:ILE:HA	7:BI:181:GLY:HA3	1.93	0.49
31:Bg:178:VAL:HB	31:Bg:192:PHE:HB2	1.94	0.49
34:B5:919:A:O2'	34:B5:920:U:H5'	2.13	0.49
34:B5:1152:A:H2'	34:B5:1153:G:O4'	2.12	0.49
34:B5:1382:A:O2'	34:B5:1383:G:H8	1.96	0.49
34:B5:1576:A:H2'	34:B5:1577:A:O4'	2.12	0.49
34:B5:1741:U:H2'	34:B5:1742:U:C6	2.48	0.49
34:B5:1776:A:H2'	34:B5:1777:G:H8	1.77	0.49
37:AC:272:VAL:HG12	38:A1:696:C:OP1	2.13	0.49
38:A1:528:U:H2'	38:A1:529:A:H8	1.77	0.49
38:A1:640:U:H2'	38:A1:641:C:C6	2.47	0.49
38:A1:655:C:OP1	67:Ae:27:ARG:N	2.41	0.49
38:A1:792:G:H2'	38:A1:793:C:C6	2.47	0.49
38:A1:838:G:O6	78:Ap:4:ARG:NH1	2.45	0.49
38:A1:1721:U:O4	38:A1:1724:U:N3	2.46	0.49
38:A1:1844:C:O3'	72:Aj:11:ARG:NH2	2.45	0.49
38:A1:2208:A:H2'	38:A1:2209:U:C6	2.47	0.49
38:A1:3187:A:P	45:AH:23:ARG:HH12	2.36	0.49
38:A1:3277:U:OP2	52:AP:175:ARG:NH2	2.46	0.49
41:AD:219:PHE:CE2	41:AD:227:LEU:HD11	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:AF:121:LYS:O	43:AF:125:GLU:HG2	2.12	0.49
79:E:16:LEU:HD13	79:E:214:PHE:HE2	1.77	0.49
80:DC:593:ILE:HD11	80:DC:685:ARG:HB2	1.95	0.49
80:DC:604:GLY:C	80:DC:607:ASN:HD21	2.21	0.49
80:DC:731:VAL:O	80:DC:769:LYS:HA	2.11	0.49
81:EC:6850:C:H2'	81:EC:6879:U:OP1	2.13	0.49
7:BI:160:PHE:HE1	7:BI:165:LEU:HD11	1.77	0.49
10:BN:70:LYS:NZ	34:B5:962:C:P	2.86	0.49
15:BY:26:ASP:OD1	15:BY:26:ASP:N	2.45	0.49
22:BP:90:ILE:HD12	22:BP:109:PRO:HA	1.95	0.49
34:B5:431:C:OP2	80:DC:393:ARG:N	2.45	0.49
34:B5:551:G:H2'	34:B5:552:G:H8	1.77	0.49
34:B5:640:U:H2'	34:B5:641:G:O4'	2.13	0.49
34:B5:1407:U:H2'	34:B5:1408:G:H8	1.78	0.49
34:B5:1743:U:H2'	34:B5:1744:A:H8	1.77	0.49
36:AB:9:PRO:HD2	58:AV:45:ARG:NH1	2.27	0.49
38:A1:181:U:H2'	38:A1:182:U:O4'	2.13	0.49
38:A1:426:G:H2'	38:A1:427:C:C6	2.48	0.49
38:A1:656:A:H2'	38:A1:657:A:C8	2.47	0.49
38:A1:957:C:H1'	63:Aa:43:ILE:HD11	1.93	0.49
38:A1:1656:A:H5'	69:Ag:16:ARG:HH12	1.78	0.49
38:A1:2509:U:H2'	38:A1:2510:U:O4'	2.11	0.49
46:AI:150:GLU:CD	46:AI:153:ARG:HH21	2.20	0.49
78:Ap:58:SER:O	78:Ap:61:LYS:NZ	2.33	0.49
80:DC:738:GLN:HB2	80:DC:788:THR:HG22	1.93	0.49
1:BA:60:ALA:O	1:BA:64:ILE:HG12	2.12	0.49
1:BA:67:ILE:HG22	1:BA:69:ASN:H	1.78	0.49
10:BN:52:VAL:HG23	10:BN:55:ARG:NH2	2.27	0.49
21:BK:26:ASP:CB	21:BK:29:GLN:HB2	2.41	0.49
25:BS:70:VAL:O	25:BS:74:GLN:HG2	2.13	0.49
34:B5:395:U:H2'	34:B5:396:G:O4'	2.13	0.49
34:B5:1118:G:P	76:An:21:ARG:HH22	2.34	0.49
34:B5:1439:C:H2'	34:B5:1440:C:C6	2.47	0.49
34:B5:1585:U:OP2	34:B5:1610:G:N1	2.34	0.49
35:AA:80:GLU:HG2	35:AA:170:ALA:HA	1.94	0.49
38:A1:253:A:H2'	38:A1:254:A:C8	2.47	0.49
38:A1:287:G:OP1	50:AN:179:LYS:HE3	2.13	0.49
38:A1:2106:A:H2'	38:A1:2107:A:C8	2.48	0.49
38:A1:2328:U:H2'	38:A1:2329:C:C6	2.48	0.49
38:A1:2682:C:H5"	47:AJ:68:HIS:CE1	2.48	0.49
45:AH:44:THR:HG21	49:AM:12:TRP:HH2	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AI:12:GLN:HB3	46:AI:128:ARG:HH21	1.78	0.49
49:AM:19:ARG:HG3	49:AM:68:LEU:O	2.13	0.49
49:AM:82:SER:HA	49:AM:85:TRP:HD1	1.78	0.49
52:AP:138:LYS:HD2	52:AP:140:GLU:OE2	2.13	0.49
57:AU:38:ILE:HG23	57:AU:50:LEU:HD12	1.95	0.49
66:Ad:55:LEU:HB2	66:Ad:95:PRO:HD3	1.94	0.49
80:DC:26:ALA:CB	80:DC:128:VAL:HB	2.43	0.49
80:DC:564:ARG:HG2	80:DC:801:TRP:CH2	2.48	0.49
80:DC:822:ALA:HA	80:DC:825:ARG:CZ	2.43	0.49
1:BA:14:ALA:O	1:BA:18:LEU:HD23	2.13	0.48
2:BB:148:ASN:O	34:B5:1066:C:O2'	2.31	0.48
3:BC:122:ALA:O	3:BC:126:ARG:HG3	2.12	0.48
7:BI:67:TRP:HE3	7:BI:70:GLU:HG2	1.78	0.48
10:BN:88:LEU:O	10:BN:92:ILE:HG12	2.13	0.48
15:BY:61:ARG:NH2	34:B5:531:C:H1'	2.28	0.48
20:BF:43:PHE:HB2	20:BF:45:LYS:HG2	1.95	0.48
21:BK:17:GLN:HA	21:BK:90:THR:HG21	1.95	0.48
34:B5:58:U:O2'	34:B5:451:A:N3	2.44	0.48
34:B5:1180:C:H2'	34:B5:1181:PSU:O4'	2.13	0.48
35:AA:18:SER:OG	38:A1:2174:G:OP2	2.31	0.48
38:A1:375:A:O2'	61:AY:87:LYS:NZ	2.40	0.48
38:A1:535:G:N2	38:A1:536:U:O4	2.24	0.48
38:A1:737:G:H2'	38:A1:738:A:H8	1.78	0.48
38:A1:749:C:H2'	38:A1:750:G:O4'	2.13	0.48
38:A1:2465:G:H22	79:E:166:ALA:HB3	1.78	0.48
38:A1:2516:U:OP1	50:AN:31:ARG:NH1	2.42	0.48
38:A1:2559:U:OP1	44:AG:32:LYS:NZ	2.44	0.48
43:AF:150:LYS:HD3	43:AF:244:ASN:HB3	1.94	0.48
52:AP:50:GLN:HB3	52:AP:55:GLN:HB2	1.94	0.48
52:AP:154:GLU:N	52:AP:154:GLU:OE2	2.46	0.48
57:AU:16:THR:HG23	57:AU:62:VAL:HG13	1.95	0.48
73:Ak:43:PHE:CE1	73:Ak:56:ILE:HD12	2.48	0.48
2:BB:133:TYR:CE2	2:BB:181:LEU:HD22	2.49	0.48
4:BE:200:ARG:HH21	4:BE:202:ASP:HB2	1.77	0.48
5:BG:64:LYS:HB2	5:BG:97:VAL:HB	1.93	0.48
8:BJ:123:HIS:HB3	34:B5:478:A:H4'	1.94	0.48
14:BX:52:ILE:HD11	80:DC:502:PRO:HB3	1.94	0.48
15:BY:19:ALA:HB1	15:BY:77:ASN:ND2	2.27	0.48
19:BD:105:MET:HE2	19:BD:105:MET:HA	1.95	0.48
22:BP:81:ARG:NH2	22:BP:120:SER:O	2.46	0.48
22:BP:98:ASN:HB2	22:BP:122:THR:HA	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:221:A:N6	34:B5:832:U:O4	2.46	0.48
34:B5:431:C:OP1	80:DC:388:THR:OG1	2.17	0.48
34:B5:477:A:C6	34:B5:541:A:C4	3.01	0.48
34:B5:751:G:O2'	34:B5:752:A:H5'	2.13	0.48
34:B5:1071:U:H2'	34:B5:1072:C:C6	2.48	0.48
34:B5:1695:G:H2'	34:B5:1695:G:N3	2.27	0.48
38:A1:669:U:H1'	38:A1:1110:PSU:H4'	1.94	0.48
38:A1:1549:U:H2'	38:A1:1550:C:H6	1.78	0.48
38:A1:2268:U:O2	38:A1:2269:U:H5'	2.13	0.48
38:A1:2594:C:H2'	38:A1:2595:A:O4'	2.14	0.48
39:A3:4:U:H2'	39:A3:5:G:C8	2.48	0.48
40:A4:70:G:O2'	40:A4:87:G:N2	2.46	0.48
46:AI:19:LYS:HD3	46:AI:26:VAL:CG1	2.43	0.48
56:AT:27:LEU:HD23	56:AT:30:TYR:HD2	1.78	0.48
63:Aa:59:ARG:HH12	77:Ao:38:GLN:NE2	2.10	0.48
79:E:53:LEU:HD21	79:E:189:PHE:CD2	2.48	0.48
80:DC:303:LEU:HB3	80:DC:327:PHE:CE1	2.48	0.48
1:BA:198:MET:HG3	1:BA:199:PRO:HD2	1.95	0.48
2:BB:176:VAL:HG22	2:BB:184:LEU:HD11	1.95	0.48
4:BE:222:LEU:O	4:BE:225:VAL:HG22	2.13	0.48
8:BJ:109:LEU:HD21	8:BJ:146:PHE:CD2	2.48	0.48
15:BY:105:ARG:NH2	34:B5:459:G:OP2	2.46	0.48
23:BQ:99:GLU:HG2	31:Bg:60:SER:HB3	1.96	0.48
26:BT:64:HIS:O	26:BT:68:ARG:HG2	2.14	0.48
26:BT:76:LEU:HD12	26:BT:80:TYR:HE2	1.78	0.48
31:Bg:144:LEU:HD13	31:Bg:181:TRP:CD2	2.47	0.48
33:BM:49:THR:HA	33:BM:52:LEU:HD12	1.96	0.48
34:B5:130:C:O2'	34:B5:131:C:OP1	2.29	0.48
34:B5:172:C:H2'	34:B5:173:A:H8	1.78	0.48
34:B5:201:G:H2'	34:B5:202:A:C8	2.48	0.48
34:B5:233:C:O2'	34:B5:237:C:N4	2.46	0.48
34:B5:386:G:H2'	34:B5:387:A:C8	2.48	0.48
34:B5:394:C:H2'	34:B5:395:U:C6	2.47	0.48
35:AA:181:LYS:HB2	38:A1:860:G:C5	2.49	0.48
36:AB:347:SER:O	36:AB:348:ARG:HG2	2.14	0.48
38:A1:84:U:O2'	38:A1:101:G:O6	2.23	0.48
38:A1:876:A:H5"	38:A1:1890:U:H5"	1.94	0.48
38:A1:1249:G:H2'	38:A1:1250:G:H4'	1.95	0.48
38:A1:1817:G:H2'	38:A1:1818:U:C5	2.48	0.48
38:A1:2651:G:H5"	38:A1:2652:U:O4'	2.14	0.48
38:A1:3186:A:N3	45:AH:44:THR:HG23	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:A4:118:C:H2'	40:A4:119:C:C6	2.49	0.48
40:A4:155:A:O5'	44:AG:84:ARG:NH2	2.47	0.48
41:AD:47:PRO:HB3	41:AD:66:SER:HB2	1.95	0.48
48:AL:176:GLU:OE1	48:AL:183:ARG:NH1	2.46	0.48
58:AV:54:LEU:HB2	58:AV:81:GLN:HB2	1.96	0.48
80:DC:225:PHE:CZ	80:DC:277:ILE:HG13	2.49	0.48
80:DC:367:ILE:O	80:DC:371:ASN:ND2	2.46	0.48
80:DC:508:LEU:HD13	80:DC:528:HIS:CD2	2.47	0.48
2:BB:157:GLN:O	2:BB:159:SER:N	2.46	0.48
4:BE:102:VAL:O	4:BE:110:ALA:N	2.46	0.48
7:BI:146:ARG:HH12	7:BI:150:ALA:HB2	1.78	0.48
9:BL:3:THR:HG22	9:BL:3:THR:O	2.13	0.48
21:BK:16:PHE:HZ	21:BK:77:ARG:HA	1.78	0.48
31:Bg:8:VAL:HG13	31:Bg:10:ARG:HH12	1.79	0.48
34:B5:97:C:O2	34:B5:425:A:O2'	2.29	0.48
34:B5:119:A:H1'	34:B5:397:A:C4	2.48	0.48
34:B5:126:A:N6	34:B5:291:G:C2	2.78	0.48
34:B5:647:G:N2	34:B5:687:G:H1	2.04	0.48
34:B5:804:A:H2'	34:B5:805:U:O4'	2.14	0.48
34:B5:1039:A:O2'	34:B5:1040:G:H8	1.96	0.48
34:B5:1049:U:H2'	34:B5:1050:G:C8	2.48	0.48
34:B5:1437:U:H2'	34:B5:1438:G:H8	1.79	0.48
36:AB:166:ILE:HD11	36:AB:171:LEU:HD12	1.95	0.48
37:AC:92:ASN:HD21	38:A1:803:C:H4'	1.78	0.48
38:A1:632:G:H2'	38:A1:633:C:C6	2.48	0.48
38:A1:2167:A:H2'	38:A1:2168:A:C8	2.48	0.48
38:A1:2285:C:H3'	38:A1:2286:U:H2'	1.94	0.48
38:A1:2421:U:O2'	77:Ao:52:GLY:HA3	2.13	0.48
38:A1:2524:A:C5	44:AG:46:LEU:HD11	2.49	0.48
38:A1:3119:U:H4'	75:Am:104:PRO:HG3	1.93	0.48
48:AL:122:LYS:HD2	48:AL:145:PHE:HE1	1.78	0.48
50:AN:121:VAL:CG1	50:AN:131:GLU:HG3	2.43	0.48
80:DC:361:ALA:HA	80:DC:366:CYS:SG	2.53	0.48
80:DC:498:ALA:O	80:DC:501:LEU:HD23	2.14	0.48
81:EC:6858:A:N7	81:EC:6860:A:H8	2.10	0.48
2:BB:85:LYS:HB3	2:BB:102:GLY:O	2.13	0.48
19:BD:62:ASN:OD1	19:BD:64:ARG:NH1	2.40	0.48
19:BD:95:GLY:HA2	19:BD:101:GLN:NE2	2.28	0.48
21:BK:2:LEU:HD22	34:B5:1258:U:H4'	1.94	0.48
23:BQ:122:ARG:HB3	34:B5:1584:G:C8	2.49	0.48
34:B5:215:A:H2'	34:B5:216:U:H5'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:256:A:H2'	34:B5:257:A:O4'	2.13	0.48
34:B5:829:A:H2	34:B5:842:C:H42	1.61	0.48
34:B5:1172:G:H2'	34:B5:1173:C:H6	1.78	0.48
34:B5:1308:G:H2'	34:B5:1309:C:H6	1.79	0.48
34:B5:1360:A:N6	34:B5:1364:G:O6	2.46	0.48
34:B5:1524:A:H2'	34:B5:1525:A:C8	2.48	0.48
34:B5:1591:C:H2'	34:B5:1592:A:H8	1.79	0.48
34:B5:1743:U:H2'	34:B5:1744:A:C8	2.49	0.48
35:AA:7:ASN:OD1	35:AA:8:GLN:N	2.47	0.48
36:AB:73:VAL:HG11	58:AV:90:GLY:HA3	1.94	0.48
36:AB:95:THR:HG22	38:A1:3243:A:H4'	1.96	0.48
36:AB:262:TRP:HE1	51:AO:66[A]:LYS:NZ	2.12	0.48
37:AC:9:HIS:HA	37:AC:15:ALA:HA	1.95	0.48
38:A1:3:U:H2'	38:A1:4:U:C6	2.48	0.48
38:A1:207:U:H2'	38:A1:208:C:H6	1.78	0.48
38:A1:1103:A:C6	53:AQ:6:THR:HG21	2.48	0.48
38:A1:1342:C:H5"	53:AQ:12:ARG:HG3	1.94	0.48
38:A1:1449:A:H2'	38:A1:1450:G:O4'	2.13	0.48
38:A1:1643:A:H2'	38:A1:1644:C:C2	2.48	0.48
38:A1:1781:C:H2'	38:A1:1782:U:C6	2.48	0.48
38:A1:2106:A:H2'	38:A1:2107:A:H8	1.78	0.48
38:A1:2660:G:O3'	38:A1:2749:G:N2	2.46	0.48
38:A1:2684:C:O2'	47:AJ:99:THR:HG21	2.12	0.48
38:A1:2999:U:H2'	38:A1:3000:A:H8	1.79	0.48
38:A1:3050:U:OP1	59:AW:17:ARG:NH2	2.46	0.48
38:A1:3094:A:OP1	58:AV:12:ARG:NH2	2.44	0.48
41:AD:287:ALA:O	41:AD:290:ILE:HG22	2.14	0.48
45:AH:47:LYS:NZ	49:AM:6:ILE:HA	2.29	0.48
45:AH:103:ILE:HD12	45:AH:112:ILE:HG22	1.95	0.48
45:AH:180:TYR:HB2	75:Am:85:LEU:HD21	1.96	0.48
46:AI:31:ILE:O	46:AI:32:ARG:HD2	2.14	0.48
55:AS:80:ARG:HH11	56:AT:156:TYR:HB2	1.79	0.48
60:AX:107:VAL:HG23	60:AX:124:VAL:HG13	1.94	0.48
80:DC:27:HIS:CD2	80:DC:138:GLN:HB2	2.49	0.48
80:DC:186:ASN:ND2	80:DC:202:VAL:O	2.39	0.48
80:DC:544:ASP:O	80:DC:548:ASP:N	2.38	0.48
5:BG:31:ARG:NH2	34:B5:1681:A:HO2'	2.09	0.48
5:BG:159:ARG:NH2	5:BG:170:THR:HG23	2.27	0.48
12:BV:74:GLN:NE2	12:BV:80:LYS:O	2.46	0.48
14:BX:99:ASN:CG	80:DC:528:HIS:HE1	2.22	0.48
23:BQ:129:PHE:CE2	27:BU:78:THR:HA	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BS:30:TYR:OH	26:BT:45:MET:SD	2.71	0.48
31:Bg:221:MET:HE1	31:Bg:223:TRP:CE2	2.48	0.48
31:Bg:221:MET:HB3	31:Bg:233:THR:HG23	1.94	0.48
34:B5:448:C:H2'	34:B5:449:C:C6	2.48	0.48
34:B5:454:U:H3'	34:B5:455:C:C6	2.48	0.48
36:AB:21:ARG:NH1	38:A1:3309:G:O6	2.43	0.48
36:AB:70:ARG:HG2	36:AB:71:GLU:N	2.22	0.48
38:A1:1095:U:N3	56:AT:127:GLN:OE1	2.46	0.48
38:A1:1596:C:H2'	38:A1:1597:C:C6	2.48	0.48
38:A1:2444:C:H4'	71:Ai:63:ASN:HD21	1.78	0.48
38:A1:2836:C:H2'	38:A1:2837:A:O4'	2.14	0.48
44:AG:107:GLU:HA	44:AG:110:THR:OG1	2.14	0.48
45:AH:147:SER:HB3	45:AH:187:ILE:HD11	1.96	0.48
60:AX:79:GLY:O	60:AX:125:ARG:NH1	2.46	0.48
78:Ap:32:GLN:HG2	78:Ap:69:TYR:O	2.12	0.48
80:DC:719:LEU:HD21	80:DC:835:TRP:CD1	2.49	0.48
2:BB:135:LEU:HD11	2:BB:176:VAL:HG11	1.96	0.48
2:BB:187:LYS:C	2:BB:190:PRO:HD2	2.39	0.48
7:BI:103:GLN:HA	7:BI:165:LEU:O	2.13	0.48
10:BN:49:GLN:HA	10:BN:52:VAL:HG12	1.94	0.48
11:BO:29:HIS:CE1	34:B5:918:U:H1'	2.49	0.48
13:BW:2:THR:HG22	34:B5:1035:G:H5'	1.95	0.48
17:Bb:67:THR:HG22	17:Bb:71:ALA:HA	1.95	0.48
34:B5:430:G:C8	80:DC:391:LYS:HG3	2.49	0.48
35:AA:97:ASN:HD21	78:Ap:87:ARG:NH2	2.11	0.48
35:AA:183:GLY:N	38:A1:860:G:N7	2.56	0.48
38:A1:1899:G:O2'	38:A1:2334:U:O4	2.22	0.48
38:A1:2542:U:H5'	38:A1:2543:U:OP1	2.13	0.48
38:A1:2988:C:OP1	51:AO:65[A]:ASN:ND2	2.46	0.48
38:A1:3290:G:H2'	38:A1:3291:G:H8	1.79	0.48
41:AD:49:TYR:CE1	41:AD:75:LEU:HD11	2.48	0.48
43:AF:55:TYR:O	43:AF:59:GLU:HG2	2.13	0.48
43:AF:202:LEU:HD13	43:AF:205:PHE:HZ	1.78	0.48
46:AI:102:MET:SD	46:AI:112:GLN:NE2	2.87	0.48
64:Ab:32:LEU:HB3	64:Ab:40:ARG:HD2	1.95	0.48
65:Ac:17:VAL:HG11	65:Ac:92:ILE:HD12	1.96	0.48
67:Ae:23:ASP:OD1	67:Ae:24:ARG:N	2.47	0.48
80:DC:595:GLU:O	80:DC:599:LEU:N	2.32	0.48
80:DC:649:GLN:HB2	80:DC:689:LEU:HA	1.96	0.48
81:EC:6794:C:H4'	81:EC:6890:A:C2	2.49	0.48
2:BB:41:ARG:NE	2:BB:41:ARG:HA	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BB:59:ASP:HA	2:BB:62:LYS:NZ	2.28	0.48
7:BI:23:LYS:HE3	34:B5:390:G:H5'	1.96	0.48
7:BI:27:PHE:O	34:B5:333:A:N6	2.40	0.48
8:BJ:133:HIS:HA	8:BJ:162:SER:HB3	1.95	0.48
8:BJ:176:ASN:HA	8:BJ:179:ARG:HG2	1.94	0.48
13:BW:34:ILE:O	13:BW:38:LEU:HG	2.14	0.48
18:Be:3:LYS:NZ	38:A1:2256:A:N1	2.61	0.48
32:Bf:118:ARG:HB2	32:Bf:131:PHE:HD1	1.78	0.48
34:B5:129:U:O4	34:B5:264:G:H2'	2.14	0.48
34:B5:448:C:H2'	34:B5:449:C:H6	1.79	0.48
34:B5:1087:A:H2'	34:B5:1088:A:C8	2.48	0.48
34:B5:1691:A:H5'	34:B5:1693:A:N7	2.29	0.48
36:AB:87:VAL:HB	36:AB:110:LEU:HD21	1.95	0.48
38:A1:946:U:H2'	38:A1:947:G:H8	1.79	0.48
38:A1:1312:C:O2'	51:AO:83[A]:ALA:O	2.32	0.48
38:A1:1718:G:H4'	54:AR:117:LYS:HD3	1.96	0.48
38:A1:3375:A:O2'	38:A1:3378:C:OP2	2.28	0.48
46:AI:36:LEU:HD12	46:AI:87:LEU:HD23	1.94	0.48
50:AN:13:LYS:O	50:AN:19:LEU:HD12	2.14	0.48
58:AV:80:ARG:NH1	58:AV:117:PRO:O	2.47	0.48
67:Ae:19:ARG:HB2	67:Ae:31:ASN:O	2.14	0.48
78:Ap:85:ARG:HA	78:Ap:88:GLU:OE1	2.14	0.48
79:E:34:LEU:HD23	79:E:34:LEU:H	1.78	0.48
80:DC:658:GLU:HG3	80:DC:659:ILE:HG13	1.96	0.48
81:EC:6783:U:H2'	81:EC:6784:G:C8	2.49	0.48
2:BB:20:VAL:HG13	2:BB:21:VAL:HG23	1.95	0.48
4:BE:181:VAL:HG11	4:BE:195:ILE:HD11	1.96	0.48
8:BJ:79:ARG:O	8:BJ:83:VAL:HG12	2.13	0.48
20:BF:219:ARG:HA	20:BF:222:LYS:NZ	2.29	0.48
34:B5:1609:U:H2'	34:B5:1610:G:O4'	2.13	0.48
35:AA:5:ILE:HG22	35:AA:208:ASP:O	2.14	0.48
37:AC:144:LYS:NZ	37:AC:173:GLY:HA2	2.28	0.48
38:A1:130:A:N6	38:A1:139:G:O6	2.46	0.48
38:A1:638:C:N4	38:A1:639:G:O6	2.47	0.48
38:A1:1224:C:C2	38:A1:1225:A:C8	3.01	0.48
38:A1:1784:G:H2'	38:A1:1785:U:O4'	2.14	0.48
38:A1:2138:A:C4	72:Aj:3:LYS:HB3	2.49	0.48
38:A1:2529:A:H2'	38:A1:2530:G:O4'	2.13	0.48
38:A1:2926:A:H2'	38:A1:2927:C:C6	2.49	0.48
39:A3:78:U:C2	39:A3:102:A:N7	2.81	0.48
41:AD:40:HIS:CE1	41:AD:42:ALA:HB3	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:AL:185:LYS:O	48:AL:188:ARG:NH1	2.46	0.48
50:AN:8:GLU:HB2	50:AN:50:ARG:NH2	2.26	0.48
1:BA:81:PHE:HB3	1:BA:167:LYS:HA	1.95	0.48
2:BB:121:ILE:N	2:BB:141:ALA:O	2.41	0.48
2:BB:190:PRO:HB2	2:BB:192:VAL:HG13	1.96	0.48
5:BG:94:ARG:NH2	34:B5:406:U:O2'	2.37	0.48
7:BI:101:ILE:HD13	7:BI:192:TYR:CD1	2.49	0.48
8:BJ:126:ARG:NH2	18:Be:33:ARG:HD3	2.29	0.48
10:BN:142:GLU:HG2	10:BN:144:ALA:H	1.79	0.48
31:Bg:117:LYS:NZ	31:Bg:161:LYS:O	2.45	0.48
34:B5:329:G:H2'	34:B5:330:G:C8	2.49	0.48
34:B5:784:C:H2'	34:B5:785:U:H6	1.79	0.48
34:B5:884:A:H2'	34:B5:885:G:C8	2.48	0.48
34:B5:1057:U:O2	34:B5:1057:U:H2'	2.13	0.48
34:B5:1263:G:OP1	80:DC:613:LYS:NZ	2.28	0.48
36:AB:58:ARG:NE	36:AB:74:GLU:OE2	2.40	0.48
38:A1:36:C:H4'	38:A1:808:A:C2	2.49	0.48
38:A1:283:G:OP2	38:A1:285:A:O2'	2.24	0.48
38:A1:422:A:C2	38:A1:2363:A:H4'	2.49	0.48
38:A1:949:C:O2'	38:A1:971:G:OP1	2.27	0.48
38:A1:1549:U:H2'	38:A1:1550:C:C6	2.49	0.48
38:A1:1593:A:H2'	38:A1:1594:A:C8	2.49	0.48
38:A1:2442:G:H22	38:A1:2505:U:H3	1.62	0.48
38:A1:3153:U:H4'	38:A1:3154:C:C2	2.49	0.48
38:A1:3160:U:H2'	38:A1:3161:C:C6	2.49	0.48
41:AD:17:GLN:HE22	56:AT:22:HIS:N	2.12	0.48
43:AF:89:ILE:HD11	43:AF:229:PHE:HB3	1.96	0.48
51:AO:182[A]:ASN:O	51:AO:186[A]:ALA:N	2.47	0.48
56:AT:158:THR:HG22	56:AT:160:ILE:HG12	1.94	0.48
68:Af:2:ALA:O	68:Af:5:HIS:NE2	2.47	0.48
69:Ag:90:ILE:O	69:Ag:94:LEU:HG	2.14	0.48
80:DC:301:GLU:OE1	80:DC:301:GLU:N	2.46	0.48
80:DC:307:LEU:HA	80:DC:311:GLU:OE2	2.14	0.48
80:DC:756:SER:HB3	80:DC:769:LYS:O	2.14	0.48
1:BA:70:PRO:HB2	1:BA:94:GLY:H	1.78	0.47
1:BA:163:ASN:OD1	1:BA:166:GLY:N	2.47	0.47
1:BA:172:LEU:O	1:BA:176:LEU:N	2.41	0.47
3:BC:186:LYS:HA	3:BC:189:GLN:OE1	2.14	0.47
4:BE:23:LEU:HD11	34:B5:772:G:H4'	1.96	0.47
5:BG:39:GLU:HG3	5:BG:46:LYS:HA	1.96	0.47
6:BH:143:LEU:O	13:BW:42:GLN:NE2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BI:61:GLU:OE1	7:BI:61:GLU:N	2.47	0.47
14:BX:42:PRO:HA	14:BX:81:LYS:HD2	1.95	0.47
17:Bb:19:HIS:HB3	17:Bb:22:LYS:CG	2.38	0.47
20:BF:183:ALA:HB3	20:BF:190:ILE:HD12	1.96	0.47
25:BS:53:ASP:HB3	25:BS:56:LYS:HD2	1.96	0.47
31:Bg:261:LYS:HB3	31:Bg:263:PHE:CE1	2.49	0.47
34:B5:107:C:H2'	34:B5:108:A:C8	2.48	0.47
34:B5:183:U:H2'	34:B5:184:C:H6	1.79	0.47
34:B5:887:A:H2'	34:B5:888:U:C6	2.49	0.47
34:B5:902:G:H1'	34:B5:907:A:H62	1.79	0.47
37:AC:159:ILE:HG23	37:AC:164:GLU:HG3	1.96	0.47
38:A1:159:A:H2'	38:A1:160:G:H8	1.79	0.47
38:A1:525:C:H5"	49:AM:79:ALA:HB2	1.96	0.47
38:A1:842:G:H2'	38:A1:843:A:C8	2.49	0.47
38:A1:1562:C:H3'	38:A1:1563:C:H5"	1.96	0.47
38:A1:1829:G:H5"	38:A1:1830:G:H5'	1.96	0.47
38:A1:2219:A:H2'	38:A1:2220:A:C8	2.49	0.47
38:A1:2223:A:H2'	38:A1:2224:A:C8	2.49	0.47
38:A1:2268:U:OP2	38:A1:2268:U:H6	1.96	0.47
38:A1:2323:G:O2'	38:A1:2325:G:OP2	2.19	0.47
38:A1:2643:A:OP2	56:AT:3:LYS:NZ	2.32	0.47
38:A1:3165:A:N6	38:A1:3285:C:H42	2.12	0.47
38:A1:3284:G:H2'	38:A1:3285:C:C6	2.49	0.47
39:A3:65:G:H2'	39:A3:66:A:C8	2.49	0.47
40:A4:37:A:OP2	70:Ah:86:ARG:HD2	2.14	0.47
40:A4:51:G:O3'	74:Al:21:ARG:NH2	2.47	0.47
49:AM:88:ALA:O	49:AM:93:LYS:NZ	2.40	0.47
53:AQ:176:ARG:HB3	63:Aa:53:PHE:O	2.14	0.47
56:AT:45:ASN:H	56:AT:95:HIS:HD2	1.62	0.47
57:AU:81:LYS:HE3	57:AU:90:ARG:NH2	2.29	0.47
63:Aa:76:ASP:OD1	63:Aa:76:ASP:N	2.46	0.47
67:Ae:16:LYS:O	67:Ae:18:LYS:NZ	2.47	0.47
80:DC:369:ILE:HD11	80:DC:401:PHE:HD2	1.79	0.47
80:DC:625:TRP:HH2	80:DC:645:LEU:HD12	1.79	0.47
81:EC:6781:U:O2'	81:EC:6782:C:H6	1.97	0.47
81:EC:6869:C:O2'	81:EC:6870:A:O4'	2.32	0.47
2:BB:179:SER:OG	2:BB:180:THR:N	2.47	0.47
4:BE:57:ASN:ND2	34:B5:446:A:H5"	2.24	0.47
7:BI:59:ARG:NH2	34:B5:1678:A:OP2	2.47	0.47
9:BL:108:PRO:HG3	9:BL:134:THR:HG22	1.96	0.47
12:BV:28:ASP:O	12:BV:31:SER:OG	2.19	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BX:3:LYS:HG2	14:BX:5:LYS:HE3	1.96	0.47
19:BD:210:GLU:OE1	24:BR:19:ARG:NH1	2.43	0.47
21:BK:25:LYS:HG2	21:BK:62:GLN:HB2	1.95	0.47
28:BZ:73:GLY:H	34:B5:1534:G:H2'	1.78	0.47
31:Bg:242:SER:N	31:Bg:255:ALA:HB3	2.28	0.47
33:BM:60:VAL:O	33:BM:60:VAL:HG12	2.14	0.47
34:B5:1212:G:H2'	34:B5:1213:G:H8	1.79	0.47
34:B5:1666:U:H2'	34:B5:1667:A:O4'	2.15	0.47
35:AA:20:THR:HA	35:AA:23:ARG:HG3	1.96	0.47
36:AB:70:ARG:HH11	58:AV:88:ARG:NH2	2.09	0.47
37:AC:299:ILE:HB	53:AQ:39:ARG:HB3	1.96	0.47
38:A1:568:G:H2'	38:A1:569:A:O4'	2.14	0.47
38:A1:873:C:H4'	38:A1:1908:A:H5'	1.95	0.47
38:A1:1763:U:H2'	38:A1:1765:U:H1'	1.96	0.47
38:A1:3296:A:H2'	38:A1:3297:U:H6	1.79	0.47
39:A3:14:U:H5	39:A3:66:A:N1	2.12	0.47
39:A3:109:G:H5"	41:AD:279:LYS:NZ	2.29	0.47
62:AZ:18:TYR:CE1	62:AZ:47:GLU:HG2	2.49	0.47
62:AZ:24:VAL:HG11	62:AZ:87:LEU:HD23	1.95	0.47
80:DC:575:ALA:HA	80:DC:839:TYR:HE1	1.79	0.47
81:EC:6786:A:H5'	81:EC:6787:U:OP2	2.14	0.47
81:EC:6797:U:C4	81:EC:6887:G:C4	3.02	0.47
81:EC:6836:U:OP2	81:EC:6837:G:N2	2.47	0.47
1:BA:195:TRP:CD1	1:BA:196:SER:H	2.31	0.47
2:BB:131:ASP:OD1	2:BB:131:ASP:N	2.45	0.47
5:BG:14:LYS:HD2	5:BG:16:PHE:HE2	1.79	0.47
6:BH:43:PHE:HA	6:BH:62:VAL:HG12	1.95	0.47
6:BH:107:ARG:HE	34:B5:697:C:H4'	1.78	0.47
9:BL:129:ARG:HG2	9:BL:130:PRO:HD2	1.95	0.47
24:BR:46:LEU:O	24:BR:50:ILE:HD12	2.15	0.47
31:Bg:106:HIS:CE1	31:Bg:126:SER:HB3	2.48	0.47
32:Bf:89:LYS:HE2	32:Bf:89:LYS:HA	1.96	0.47
34:B5:320:U:OP1	34:B5:321:C:O2'	2.18	0.47
34:B5:822:U:O2	34:B5:823:G:N1	2.47	0.47
36:AB:11:HIS:CE1	58:AV:45:ARG:HH22	2.32	0.47
37:AC:92:ASN:ND2	38:A1:803:C:H4'	2.30	0.47
37:AC:318:LEU:HD13	43:AF:146:GLN:HG2	1.96	0.47
38:A1:255:A:H2'	38:A1:256:G:H8	1.79	0.47
38:A1:2152:A:H2'	38:A1:2153:U:H6	1.79	0.47
38:A1:2683:U:H2'	38:A1:2684:C:H6	1.79	0.47
38:A1:2793:G:H5"	77:Ao:66:LYS:HD2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:AD:79:TYR:HB2	41:AD:82:GLU:OE1	2.14	0.47
44:AG:133:LYS:HG3	44:AG:201:THR:HG23	1.97	0.47
44:AG:168:ALA:HB3	71:Ai:47:ILE:HD11	1.96	0.47
45:AH:44:THR:HG21	49:AM:12:TRP:CH2	2.49	0.47
51:AO:167[A]:TYR:HA	51:AO:170[A]:LYS:HE3	1.97	0.47
52:AP:87:SER:O	52:AP:91:VAL:HG23	2.14	0.47
52:AP:102:ALA:HB1	52:AP:107:LEU:HB2	1.96	0.47
57:AU:19:VAL:O	57:AU:22:PRO:HD2	2.14	0.47
80:DC:160:VAL:HG22	80:DC:212:GLY:O	2.15	0.47
80:DC:710:ARG:HG2	80:DC:714:TYR:HE1	1.79	0.47
81:EC:6837:G:OP1	81:EC:6874:A:O2'	2.29	0.47
81:EC:6854:U:H1'	81:EC:6855:A:C4	2.48	0.47
26:BT:107:ALA:HA	26:BT:110:LYS:HD3	1.96	0.47
32:Bf:129:GLY:O	33:BM:50:LYS:NZ	2.46	0.47
34:B5:97:C:H1'	34:B5:426:G:H5'	1.96	0.47
34:B5:905:A:H2'	34:B5:906:A:O4'	2.15	0.47
34:B5:1351:G:H2'	34:B5:1352:G:C8	2.49	0.47
34:B5:1358:G:H2'	34:B5:1359:C:C6	2.49	0.47
34:B5:1682:U:O4	34:B5:1720:G:N2	2.47	0.47
38:A1:38:U:H5"	63:Aa:32:ARG:HH11	1.78	0.47
38:A1:985:U:H2'	38:A1:986:PSU:H6	1.80	0.47
38:A1:1795:U:N3	78:Ap:50:GLY:O	2.46	0.47
38:A1:2352:A:H5"	52:AP:83:TRP:O	2.15	0.47
38:A1:2585:G:H2'	38:A1:2585:G:N3	2.29	0.47
38:A1:2597:U:O2'	50:AN:126:THR:HG22	2.14	0.47
45:AH:118:LEU:O	45:AH:118:LEU:HD23	2.14	0.47
60:AX:81:ILE:HG13	60:AX:125:ARG:HB2	1.97	0.47
62:AZ:9:LYS:HA	62:AZ:86:THR:HG22	1.96	0.47
80:DC:132:ILE:HG12	80:DC:167:LEU:HD22	1.96	0.47
80:DC:296:ILE:O	80:DC:300:LEU:N	2.45	0.47
1:BA:152:PRO:HB2	1:BA:154:GLU:OE2	2.14	0.47
4:BE:19:LEU:HD13	34:B5:788:A:C4	2.49	0.47
4:BE:44:LEU:HD23	4:BE:82:TYR:HB3	1.97	0.47
4:BE:60:GLU:O	4:BE:64:ILE:HG12	2.14	0.47
14:BX:112:LYS:H	14:BX:121:ARG:HH12	1.60	0.47
19:BD:61:GLU:OE1	19:BD:61:GLU:N	2.47	0.47
25:BS:143:ARG:NH1	34:B5:1462:G:N7	2.61	0.47
28:BZ:67:ASP:HB2	81:EC:6869:C:H41	1.80	0.47
34:B5:67:A:OP1	34:B5:83:G:N2	2.46	0.47
34:B5:1144:U:O2'	34:B5:1301:U:O2'	2.24	0.47
34:B5:1215:C:H2'	34:B5:1216:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:31:ARG:HG3	37:AC:120:TYR:HE2	1.80	0.47
38:A1:238:A:H2'	38:A1:239:G:C8	2.49	0.47
38:A1:307:A:H2'	38:A1:308:A:C8	2.49	0.47
38:A1:499:G:H2'	38:A1:500:C:C6	2.50	0.47
38:A1:519:A:H2	55:AS:63:GLN:O	1.97	0.47
38:A1:1261:G:H5"	38:A1:1262:G:C8	2.49	0.47
38:A1:2367:A:H2'	38:A1:2368:A:C8	2.49	0.47
38:A1:2407:C:H5'	38:A1:2619:G:H21	1.80	0.47
38:A1:2622:C:H42	46:AI:116:ARG:HH22	1.61	0.47
38:A1:2726:C:O2'	38:A1:2727:A:H2'	2.14	0.47
40:A4:26:U:H2'	40:A4:27:U:C6	2.49	0.47
40:A4:147:U:H2'	40:A4:148:G:O4'	2.15	0.47
45:AH:96:HIS:NE2	80:DC:167:LEU:HD11	2.30	0.47
47:AJ:108:GLU:OE2	47:AJ:112:LEU:HD12	2.15	0.47
58:AV:34:LEU:HD22	58:AV:102:ILE:HD11	1.96	0.47
79:E:14:LYS:HA	79:E:17:LEU:HG	1.96	0.47
79:E:65:ILE:HG13	79:E:152:ARG:NH2	2.29	0.47
80:DC:647:ILE:O	80:DC:687:ASN:HA	2.14	0.47
80:DC:674:GLY:H	80:DC:679:GLU:N	2.12	0.47
3:BC:227:PRO:HA	3:BC:230:TRP:CE2	2.49	0.47
4:BE:30:ARG:HH22	34:B5:299:A:P	2.38	0.47
7:BI:37:LYS:O	7:BI:59:ARG:HA	2.15	0.47
8:BJ:94:ASP:OD1	8:BJ:95:TYR:N	2.47	0.47
8:BJ:127:VAL:O	8:BJ:131:GLN:N	2.37	0.47
19:BD:7:LYS:HA	19:BD:10:LYS:HG2	1.97	0.47
19:BD:211:PRO:HD2	24:BR:19:ARG:NH2	2.29	0.47
19:BD:211:PRO:HG3	24:BR:20:TYR:CE1	2.50	0.47
25:BS:6:GLN:HE22	28:BZ:44:GLN:HA	1.80	0.47
25:BS:12:GLN:HG3	25:BS:13:HIS:O	2.13	0.47
26:BT:130:ARG:HG2	26:BT:134:ARG:HH21	1.78	0.47
31:Bg:197:SER:HB2	31:Bg:216:LYS:HB3	1.96	0.47
34:B5:144:U:H1'	34:B5:145:A:H5'	1.96	0.47
34:B5:887:A:H2'	34:B5:888:U:H6	1.79	0.47
34:B5:1578:U:H2'	34:B5:1579:U:H6	1.78	0.47
34:B5:1578:U:H2'	34:B5:1579:U:C6	2.50	0.47
38:A1:190:U:H2'	61:AY:60:ARG:HH12	1.80	0.47
38:A1:206:G:H1	38:A1:223:U:H3	1.63	0.47
38:A1:209:A:H4'	38:A1:211:A:C8	2.50	0.47
38:A1:1226:G:H2'	38:A1:1227:C:O4'	2.15	0.47
38:A1:1384:U:H3	38:A1:1422:G:H1	1.63	0.47
38:A1:1824:U:O2'	73:Ak:17:ARG:NH1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2459:A:H61	38:A1:2487:U:H1'	1.79	0.47
38:A1:3035:A:P	45:AH:122:LYS:HZ1	2.38	0.47
38:A1:3064:U:H2'	38:A1:3065:G:H8	1.79	0.47
38:A1:3072:C:H2'	38:A1:3073:A:O4'	2.15	0.47
39:A3:3:U:H2'	39:A3:4:U:C6	2.50	0.47
41:AD:236:LEU:HD22	41:AD:240:TYR:HE2	1.78	0.47
44:AG:50:VAL:HG21	60:AX:27:ARG:HD2	1.97	0.47
45:AH:22:SER:OG	45:AH:24:ILE:HD12	2.14	0.47
45:AH:50:ASN:HD21	49:AM:4:ASP:HA	1.79	0.47
45:AH:89:LYS:HB2	45:AH:143:GLU:OE2	2.15	0.47
46:AI:52:LEU:HB2	46:AI:152:LEU:HD22	1.95	0.47
54:AR:105:LEU:HD23	54:AR:138:LEU:HD23	1.95	0.47
55:AS:12:ARG:HB3	55:AS:24:LEU:HA	1.97	0.47
55:AS:68:HIS:C	55:AS:70:THR:H	2.23	0.47
61:AY:74:TYR:CD2	61:AY:77:LYS:HB2	2.49	0.47
80:DC:434:VAL:HB	80:DC:445:ILE:O	2.14	0.47
80:DC:515:ASP:OD2	80:DC:518:VAL:HG13	2.14	0.47
80:DC:585:ARG:HH21	80:DC:842:LEU:HD11	1.79	0.47
80:DC:694:HIS:CE1	80:DC:699:DDE:HD2	2.49	0.47
80:DC:808:PRO:HA	80:DC:816:GLY:HA2	1.96	0.47
81:EC:6849:A:N9	81:EC:6878:G:H5"	2.30	0.47
81:EC:6859:U:H4'	81:EC:6860:A:OP1	2.13	0.47
2:BB:68:VAL:HG22	11:BO:33:LEU:HD21	1.97	0.47
5:BG:59:GLN:HA	34:B5:155:U:H4'	1.96	0.47
6:BH:27:LEU:CD1	6:BH:34:LEU:HD13	2.45	0.47
8:BJ:96:VAL:HA	8:BJ:99:LEU:HG	1.97	0.47
10:BN:132:VAL:HG12	10:BN:134:VAL:HG13	1.96	0.47
14:BX:65:ASN:ND2	14:BX:116:ASP:OD2	2.39	0.47
14:BX:109:ARG:O	14:BX:110:LYS:HG2	2.14	0.47
17:Bb:22:LYS:HZ2	34:B5:864:U:H6	1.62	0.47
17:Bb:54:VAL:HG12	17:Bb:64:CYS:SG	2.54	0.47
20:BF:82:PHE:HD2	29:Bc:49:ARG:CZ	2.27	0.47
21:BK:88:PRO:C	21:BK:90:THR:H	2.22	0.47
27:BU:59:PRO:HG3	34:B5:1381:U:H4'	1.95	0.47
34:B5:300:A:H2'	34:B5:301:A:H8	1.80	0.47
34:B5:1209:C:C2	34:B5:1455:G:N2	2.82	0.47
34:B5:1212:G:H2'	34:B5:1213:G:C8	2.50	0.47
34:B5:1216:C:O2'	34:B5:1444:A:N6	2.42	0.47
34:B5:1272:U:O2'	34:B5:1275:A:OP2	2.25	0.47
34:B5:1329:A:H2'	34:B5:1330:G:O4'	2.14	0.47
34:B5:1651:A:H2'	34:B5:1652:C:H6	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AA:14:SER:OG	38:A1:911:C:OP1	2.29	0.47
35:AA:142:ASP:OD1	35:AA:142:ASP:N	2.43	0.47
37:AC:48:GLN:HE21	40:A4:28:C:H1'	1.79	0.47
37:AC:92:ASN:HA	37:AC:98:ARG:O	2.14	0.47
38:A1:38:U:H2'	38:A1:39:A:O4'	2.15	0.47
38:A1:238:A:H2'	38:A1:239:G:N9	2.29	0.47
38:A1:359:U:H4'	38:A1:817:A:N6	2.29	0.47
38:A1:413:U:H2'	38:A1:414:U:C6	2.49	0.47
38:A1:971:G:H2'	38:A1:972:A:C8	2.50	0.47
38:A1:1477:A:OP1	38:A1:3075:G:O2'	2.29	0.47
38:A1:1510:G:O2'	38:A1:1511:U:H2'	2.14	0.47
38:A1:1664:G:H2'	38:A1:1665:C:C6	2.50	0.47
38:A1:1723:A:OP2	54:AR:103:ARG:NH1	2.47	0.47
38:A1:1836:C:O2'	38:A1:1842:A:N1	2.37	0.47
38:A1:1922:A:H2'	38:A1:1923:C:O4'	2.15	0.47
38:A1:2785:A:H2'	38:A1:2786:G:O4'	2.15	0.47
38:A1:2834:G:H2'	38:A1:2835:U:C6	2.48	0.47
38:A1:2900:A:O2'	45:AH:174:LYS:NZ	2.43	0.47
38:A1:3051:U:C2	38:A1:3052:G:C8	3.03	0.47
38:A1:3267:A:H2'	42:AE:69:PHE:HZ	1.79	0.47
38:A1:3314:A:H2'	38:A1:3315:G:C8	2.49	0.47
39:A3:74:C:H2'	39:A3:75:G:C8	2.49	0.47
44:AG:72:PRO:HG3	50:AN:18:VAL:HA	1.96	0.47
46:AI:27:PRO:O	46:AI:125:LEU:HD11	2.14	0.47
46:AI:207:GLU:HG2	46:AI:208:LYS:N	2.30	0.47
48:AL:76:THR:OG1	48:AL:103:ASN:ND2	2.48	0.47
50:AN:192:LYS:O	50:AN:196:THR:HG23	2.15	0.47
53:AQ:54:LEU:HD12	53:AQ:58:ASN:CB	2.44	0.47
56:AT:27:LEU:HD23	56:AT:30:TYR:CD2	2.49	0.47
58:AV:67:PRO:HG3	58:AV:70:ARG:HH21	1.79	0.47
79:E:187:VAL:O	79:E:191:VAL:HG22	2.14	0.47
80:DC:119:LEU:HD12	80:DC:120:ARG:HG2	1.96	0.47
80:DC:161:ASP:O	80:DC:163:ALA:HA	2.15	0.47
80:DC:162:ARG:HA	80:DC:163:ALA:HA	1.57	0.47
80:DC:413:ILE:HB	80:DC:427:PHE:HB2	1.96	0.47
81:EC:6781:U:HO2'	81:EC:6782:C:H6	1.57	0.47
81:EC:6837:G:H2'	81:EC:6838:C:C6	2.49	0.47
81:EC:6841:U:H4'	81:EC:6842:U:C5'	2.35	0.47
4:BE:35:PRO:HB3	4:BE:143:ASP:O	2.13	0.47
7:BI:11:ARG:HH12	34:B5:319:U:P	2.38	0.47
9:BL:16:GLN:O	9:BL:19:ILE:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BN:71:ILE:O	10:BN:74:ILE:HG12	2.14	0.47
15:BY:27:VAL:HG21	15:BY:35:VAL:HG21	1.96	0.47
19:BD:147:ALA:HB2	34:B5:1276:U:H4'	1.97	0.47
22:BP:20:VAL:HG12	22:BP:25:LEU:HG	1.96	0.47
24:BR:60:ARG:CZ	34:B5:1400:A:H5"	2.45	0.47
31:Bg:47:LEU:HD11	31:Bg:302:PHE:HZ	1.80	0.47
31:Bg:169:ILE:HG12	31:Bg:181:TRP:HB2	1.97	0.47
33:BM:48:SER:HA	33:BM:122:VAL:HG12	1.95	0.47
34:B5:153:G:H2'	34:B5:154:G:C8	2.50	0.47
34:B5:1645:G:H2'	34:B5:1646:C:H6	1.80	0.47
34:B5:1665:U:H2'	34:B5:1666:U:O2	2.15	0.47
35:AA:140:ASN:ND2	35:AA:143:GLU:OE2	2.30	0.47
36:AB:45:SER:OG	36:AB:46:PHE:N	2.48	0.47
36:AB:137:TYR:HA	36:AB:144:ILE:HD13	1.97	0.47
36:AB:158:VAL:HB	36:AB:191:LYS:HD2	1.96	0.47
37:AC:11:LEU:HD21	37:AC:155:ASP:HB3	1.96	0.47
37:AC:163:LYS:NZ	38:A1:209:A:H8	2.12	0.47
38:A1:226:C:H2'	38:A1:227:G:O4'	2.15	0.47
38:A1:592:A:C5	38:A1:593:C:N3	2.83	0.47
38:A1:631:U:H2'	38:A1:632:G:C8	2.50	0.47
38:A1:1242:G:P	38:A1:1243:G:H5"	2.55	0.47
38:A1:1474:A:HO2'	66:Ad:57:GLN:NE2	2.06	0.47
38:A1:1741:A:H2'	38:A1:1742:U:H5'	1.96	0.47
38:A1:2221:G:N2	38:A1:2224:A:OP2	2.44	0.47
38:A1:2881:C:H2'	38:A1:2882:U:C6	2.50	0.47
38:A1:3225:C:H2'	38:A1:3226:A:C8	2.48	0.47
41:AD:224:LYS:O	41:AD:228:ALA:N	2.47	0.47
48:AL:48:PRO:HD3	70:Ah:115:LYS:HE2	1.96	0.47
51:AO:125[A]:ARG:HD3	51:AO:135[A]:TYR:CD2	2.50	0.47
63:Aa:72:VAL:HG12	63:Aa:111:LYS:HB3	1.97	0.47
80:DC:156:VAL:O	80:DC:157:ILE:C	2.57	0.47
80:DC:356:LEU:HD22	80:DC:401:PHE:CE2	2.50	0.47
80:DC:785:ARG:HG2	80:DC:792:ALA:CB	2.44	0.47
81:EC:6780:A:O2'	81:EC:6781:U:H6	1.98	0.47
2:BB:68:VAL:CG1	2:BB:69:CYS:H	2.27	0.47
8:BJ:84:GLY:HA3	8:BJ:107:ARG:NH1	2.30	0.47
11:BO:111:ARG:NH2	16:Ba:58:VAL:H	2.13	0.47
20:BF:76:ARG:HA	23:BQ:122:ARG:NH2	2.30	0.47
34:B5:12:U:H2'	34:B5:13:C:H6	1.77	0.47
34:B5:187:G:O2'	34:B5:198:A:N6	2.48	0.47
34:B5:319:U:H4'	34:B5:323:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:888:U:H2'	34:B5:889:U:C6	2.50	0.47
34:B5:1035:G:H2'	34:B5:1036:A:C8	2.50	0.47
34:B5:1636:C:O2	34:B5:1765:A:N6	2.48	0.47
35:AA:203:ALA:HB1	38:A1:2146:C:H5"	1.97	0.47
38:A1:439:C:N3	38:A1:494:G:N1	2.62	0.47
38:A1:650:C:H2'	38:A1:651:G:C8	2.50	0.47
38:A1:673:U:H2'	38:A1:674:G:H8	1.80	0.47
38:A1:1458:U:H2'	38:A1:1459:C:C6	2.50	0.47
38:A1:1497:C:O2'	38:A1:1602:A:N3	2.44	0.47
38:A1:1662:G:H22	38:A1:1787:A:H2	1.62	0.47
38:A1:2225:U:H2'	38:A1:2226:U:C6	2.50	0.47
38:A1:2744:U:H2'	38:A1:2745:G:C8	2.50	0.47
41:AD:122:VAL:HG23	41:AD:125:VAL:HG22	1.97	0.47
47:AJ:47:GLN:HG3	47:AJ:67:VAL:HG12	1.97	0.47
75:Am:99:CYS:HB3	75:Am:115:CYS:HB3	1.97	0.47
79:E:90:LEU:HB3	79:E:123:LEU:CD1	2.44	0.47
81:EC:6849:A:C8	81:EC:6878:G:C4	3.03	0.47
81:EC:6860:A:P	81:EC:6860:A:H3'	2.55	0.47
5:BG:56:ASN:HB3	5:BG:60:GLY:HA2	1.96	0.47
8:BJ:172:VAL:O	8:BJ:175:ARG:HG2	2.15	0.47
14:BX:69:ARG:HH21	14:BX:116:ASP:CG	2.23	0.47
26:BT:101:ASN:HA	26:BT:104:VAL:HG12	1.97	0.47
29:Bc:6:PRO:O	29:Bc:57:MET:HA	2.15	0.47
34:B5:186:C:H2'	34:B5:187:G:O4'	2.16	0.47
34:B5:654:C:N4	34:B5:678:A:OP1	2.47	0.47
34:B5:1176:G:N3	34:B5:1195:C:O2'	2.39	0.47
34:B5:1616:G:H2'	34:B5:1617:U:C6	2.50	0.47
35:AA:184:ARG:HG3	35:AA:184:ARG:NH1	2.29	0.47
36:AB:87:VAL:HG11	36:AB:163:HIS:CD2	2.50	0.47
36:AB:286:GLY:HA3	36:AB:321:PHE:CE1	2.50	0.47
37:AC:48:GLN:NE2	38:A1:691:A:N6	2.63	0.47
38:A1:92:G:OP1	77:Ao:46:LYS:HE3	2.15	0.47
38:A1:147:U:O2'	50:AN:41:ARG:NH1	2.48	0.47
38:A1:871:U:H2'	38:A1:872:U:C6	2.50	0.47
38:A1:1323:G:H2'	38:A1:1324:U:C6	2.50	0.47
38:A1:1563:C:H4'	38:A1:1563:C:OP1	2.14	0.47
38:A1:2097:U:H2'	38:A1:2098:C:C6	2.50	0.47
38:A1:2483:G:H2'	38:A1:2485:A:N7	2.29	0.47
38:A1:3191:G:H5"	51:AO:176[A]:LYS:HE3	1.97	0.47
39:A3:27:A:H2'	39:A3:28:C:H6	1.75	0.47
40:A4:9:A:H2'	40:A4:10:A:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:AE:148:GLU:O	42:AE:151:LYS:HG2	2.15	0.47
46:AI:176:LEU:HD21	46:AI:181:TYR:HD1	1.80	0.47
47:AJ:36:VAL:HG23	47:AJ:39:GLN:HE21	1.80	0.47
64:Ab:36:ASP:OD2	64:Ab:38:LYS:HB3	2.15	0.47
71:Ai:36:ARG:HG3	71:Ai:37:THR:N	2.29	0.47
80:DC:220:PHE:HB3	80:DC:328:LEU:HD13	1.97	0.47
2:BB:195:LYS:NZ	2:BB:199:ASN:HD21	2.13	0.46
7:BI:117:TYR:O	7:BI:146:ARG:NH2	2.48	0.46
13:BW:86:ILE:HD12	13:BW:104:LEU:HD21	1.97	0.46
15:BY:41:ARG:NH1	15:BY:52:LYS:O	2.48	0.46
15:BY:128:LYS:O	15:BY:131:ARG:HG2	2.16	0.46
21:BK:38:LYS:NZ	21:BK:40:LEU:HD22	2.30	0.46
23:BQ:94:GLN:HB2	23:BQ:102:LYS:HD3	1.97	0.46
25:BS:116:LEU:HA	25:BS:119:ILE:HB	1.97	0.46
28:BZ:71:ILE:HD12	28:BZ:75:LEU:HB3	1.97	0.46
34:B5:55:A:H3'	34:B5:403:G:H22	1.79	0.46
34:B5:116:U:H2'	34:B5:117:U:C6	2.51	0.46
34:B5:196:G:O2'	34:B5:197:A:OP1	2.31	0.46
34:B5:221:A:H5"	34:B5:833:U:OP1	2.15	0.46
34:B5:413:U:H2'	34:B5:414:C:C6	2.50	0.46
34:B5:430:G:H21	80:DC:390:ASP:CB	2.28	0.46
34:B5:1267:G:N2	34:B5:1442:U:O2	2.42	0.46
34:B5:1308:G:H2'	34:B5:1309:C:C6	2.50	0.46
34:B5:1483:A:C2	34:B5:1607:G:H1'	2.50	0.46
34:B5:1526:A:H3'	34:B5:1527:C:H6	1.80	0.46
34:B5:1606:C:H2'	34:B5:1607:G:C8	2.50	0.46
36:AB:106:TRP:CH2	36:AB:161:LEU:HD13	2.49	0.46
37:AC:181:VAL:O	37:AC:182:LEU:HG	2.14	0.46
38:A1:8:C:H2'	38:A1:9:U:C6	2.50	0.46
38:A1:68:C:O3'	50:AN:177:GLY:HA2	2.16	0.46
38:A1:385:A:H2'	38:A1:386:A:C8	2.50	0.46
38:A1:417:A:H2'	38:A1:418:A:C8	2.50	0.46
38:A1:1534:A:H2'	38:A1:1535:A:C8	2.50	0.46
38:A1:1817:G:H8	38:A1:1818:U:C5	2.33	0.46
38:A1:2266:PSU:H2'	38:A1:2267:C:C6	2.50	0.46
38:A1:2674:A:H2'	38:A1:2675:C:O4'	2.15	0.46
38:A1:3181:C:OP2	51:AO:171[A]:LYS:NZ	2.30	0.46
44:AG:213:LYS:O	44:AG:216:SER:OG	2.31	0.46
45:AH:86:TYR:CE2	45:AH:151:VAL:HB	2.50	0.46
50:AN:115:VAL:HA	50:AN:134:LEU:HD23	1.97	0.46
55:AS:7:TYR:CE1	55:AS:63:GLN:HG2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:Ad:51:LEU:HG	66:Ad:55:LEU:HD22	1.97	0.46
67:Ae:20:HIS:CG	67:Ae:42:VAL:HG21	2.49	0.46
80:DC:251:ASN:HB3	80:DC:254:THR:HB	1.97	0.46
80:DC:640:GLY:H	80:DC:668:GLN:NE2	2.13	0.46
80:DC:693:LEU:HD23	80:DC:700:ARG:HD2	1.96	0.46
81:EC:6804:A:O2'	81:EC:6809:G:O6	2.33	0.46
1:BA:75:ALA:HB3	1:BA:86:VAL:HG13	1.98	0.46
3:BC:182:PRO:HA	3:BC:185:LYS:HG2	1.97	0.46
5:BG:58:LYS:HD2	5:BG:105:ASP:HA	1.97	0.46
10:BN:86:GLU:O	10:BN:89:TYR:N	2.49	0.46
12:BV:3:ASN:ND2	12:BV:7:GLN:HB2	2.27	0.46
15:BY:7:ILE:HG22	15:BY:8:ARG:N	2.29	0.46
16:Ba:18:VAL:O	16:Ba:19:LYS:HG2	2.16	0.46
20:BF:121:ILE:O	20:BF:124:LEU:HB2	2.15	0.46
22:BP:36:LEU:HD12	22:BP:36:LEU:O	2.16	0.46
23:BQ:102:LYS:HA	23:BQ:105:LEU:HD12	1.97	0.46
25:BS:43:SER:HA	25:BS:46:VAL:HG22	1.98	0.46
25:BS:113:LEU:O	25:BS:117:LYS:HG3	2.14	0.46
34:B5:895:G:H1	34:B5:918:U:H5	1.63	0.46
34:B5:1660:A:H2'	34:B5:1661:U:C6	2.49	0.46
35:AA:31:THR:HB	35:AA:123:ARG:HH11	1.79	0.46
36:AB:44:THR:HG23	36:AB:182:GLN:O	2.16	0.46
38:A1:746:A:OP1	53:AQ:145:ASN:ND2	2.48	0.46
38:A1:1055:A:N3	39:A3:81:U:O2'	2.49	0.46
38:A1:1290:A:H2'	38:A1:1291:A:C8	2.50	0.46
38:A1:1295:G:O2'	55:AS:115:ARG:HD3	2.14	0.46
38:A1:1301:A:H4'	38:A1:1302:A:H5"	1.97	0.46
38:A1:1310:G:O2'	38:A1:2380:U:O2'	2.20	0.46
38:A1:2150:G:O2'	38:A1:2189:U:OP1	2.30	0.46
38:A1:2248:C:O2'	38:A1:2272:G:H1'	2.15	0.46
38:A1:2427:U:H2'	38:A1:2428:U:H6	1.79	0.46
38:A1:2971:A:C8	46:AI:110:ARG:NH2	2.78	0.46
38:A1:3167:A:H2'	38:A1:3168:A:C8	2.50	0.46
47:AJ:149:GLY:O	47:AJ:153:LYS:HG3	2.15	0.46
56:AT:48:ILE:HB	56:AT:94:GLU:OE2	2.15	0.46
70:Ah:101:THR:HG23	70:Ah:104:GLN:H	1.80	0.46
70:Ah:102:GLU:CG	70:Ah:105:ARG:HH21	2.29	0.46
70:Ah:118:ILE:HG22	70:Ah:120:ALA:H	1.79	0.46
72:Aj:52:LYS:NZ	72:Aj:55:ARG:HH22	2.13	0.46
78:Ap:8:VAL:O	78:Ap:11:THR:HG22	2.16	0.46
78:Ap:79:VAL:HA	78:Ap:82:THR:HG22	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:157:ILE:O	80:DC:211:PHE:HA	2.15	0.46
81:EC:6882:G:H2'	81:EC:6883:A:C8	2.50	0.46
5:BG:69:LEU:O	5:BG:99:GLY:HA3	2.16	0.46
7:BI:113:PHE:O	7:BI:118:GLY:N	2.45	0.46
22:BP:127:ARG:HH22	25:BS:129:TRP:HE1	1.64	0.46
24:BR:34:LEU:O	24:BR:38:ILE:HG12	2.15	0.46
27:BU:101:LYS:HD2	27:BU:105:GLN:HE22	1.80	0.46
28:BZ:73:GLY:H	34:B5:1534:G:C2'	2.29	0.46
31:Bg:147:HIS:ND1	31:Bg:175:ASP:OD2	2.49	0.46
34:B5:1091:A:H4'	34:B5:1092:A:O4'	2.15	0.46
34:B5:1400:A:H2'	34:B5:1401:A:C8	2.50	0.46
34:B5:1773:4AC:OP2	76:An:2:ARG:NH2	2.43	0.46
36:AB:213:GLU:HB3	36:AB:282:ILE:HD13	1.96	0.46
38:A1:374:A:H4'	38:A1:375:A:H5'	1.97	0.46
38:A1:1755:C:H2'	38:A1:1756:C:O4'	2.15	0.46
38:A1:2119:A:H2'	38:A1:2120:A:O4'	2.16	0.46
38:A1:2250:G:N2	38:A1:2251:G:C8	2.83	0.46
38:A1:2455:U:H3'	38:A1:2456:A:C8	2.50	0.46
38:A1:2719:U:H5'	53:AQ:180:ARG:NH1	2.30	0.46
40:A4:118:C:H2'	40:A4:119:C:H6	1.80	0.46
41:AD:209:GLU:HG2	41:AD:233:ALA:HB3	1.96	0.46
47:AJ:84:LEU:O	47:AJ:88:GLU:N	2.48	0.46
49:AM:23:ILE:O	49:AM:30:GLY:N	2.48	0.46
58:AV:122:CYS:SG	58:AV:129:VAL:HG11	2.54	0.46
59:AW:3:VAL:HG11	59:AW:12:LYS:HD2	1.97	0.46
63:Aa:19:LYS:HB3	63:Aa:25:HIS:HB2	1.97	0.46
70:Ah:70:TYR:HD1	70:Ah:73:LYS:HD3	1.80	0.46
71:Ai:90:MET:HA	71:Ai:93:ILE:HG22	1.96	0.46
78:Ap:79:VAL:O	78:Ap:83:ILE:HG12	2.16	0.46
80:DC:162:ARG:NE	83:DC:901:GDP:N3	2.64	0.46
81:EC:6883:A:H2'	81:EC:6884:G:C4'	2.45	0.46
1:BA:126:PRO:HG3	1:BA:145:ALA:HB1	1.97	0.46
2:BB:24:PHE:HD1	2:BB:27:LYS:HE2	1.80	0.46
2:BB:41:ARG:HA	2:BB:41:ARG:CZ	2.46	0.46
8:BJ:29:LYS:HA	18:Be:40:TYR:HE1	1.79	0.46
13:BW:86:ILE:O	13:BW:90:THR:HG23	2.16	0.46
15:BY:53:ASP:HB2	15:BY:79:VAL:HG22	1.96	0.46
24:BR:100:LEU:HD21	24:BR:119:LEU:HA	1.97	0.46
25:BS:89:GLN:HA	25:BS:97:ASP:HA	1.97	0.46
25:BS:117:LYS:HZ1	25:BS:128:PHE:HA	1.81	0.46
31:Bg:74:THR:HG1	31:Bg:78:ALA:H	1.60	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:201:THR:HB	31:Bg:243:LEU:HG	1.96	0.46
34:B5:213:A:H2'	34:B5:214:G:O4'	2.15	0.46
34:B5:1405:G:H2'	34:B5:1406:A:C8	2.50	0.46
34:B5:1719:A:H2'	34:B5:1720:G:O4'	2.15	0.46
36:AB:110:LEU:HD23	36:AB:110:LEU:HA	1.71	0.46
36:AB:233:TRP:CD1	36:AB:265:ALA:HB1	2.50	0.46
36:AB:259:HIS:CE1	38:A1:2366:C:H4'	2.50	0.46
37:AC:281:ILE:HG22	53:AQ:25:TYR:HB3	1.98	0.46
38:A1:264:G:OP1	71:Ai:34:SER:HB2	2.15	0.46
38:A1:1048:A:H2'	46:AI:22:TYR:CZ	2.51	0.46
38:A1:1245:A:H2'	38:A1:1271:A:O2'	2.15	0.46
38:A1:1556:C:HO2'	38:A1:2169:G:H1	1.64	0.46
38:A1:1808:G:OP1	62:AZ:135:ARG:NH2	2.49	0.46
38:A1:2419:A:OP1	38:A1:2606:G:N2	2.44	0.46
38:A1:2795:U:OP2	77:Ao:63:LYS:HG2	2.15	0.46
40:A4:154:C:H2'	40:A4:155:A:C8	2.50	0.46
51:AO:13[A]:GLY:HA2	51:AO:42[A]:ASN:HD21	1.81	0.46
53:AQ:5:HIS:HD2	53:AQ:9:GLN:HE21	1.63	0.46
56:AT:77:ASN:HD21	64:Ab:24:PRO:HG3	1.81	0.46
59:AW:4:GLU:HG3	59:AW:30:ARG:NH1	2.30	0.46
61:AY:22:ALA:O	61:AY:27:ARG:NE	2.45	0.46
68:Af:90:PRO:C	68:Af:92:LYS:H	2.22	0.46
80:DC:736:PRO:HG3	80:DC:791:GLN:C	2.40	0.46
81:EC:6800:G:OP2	81:EC:6800:G:N2	2.28	0.46
6:BH:19:GLN:HA	6:BH:22:GLN:HE22	1.80	0.46
20:BF:200:ASN:HB2	20:BF:208:SER:HB3	1.96	0.46
22:BP:49:MET:N	22:BP:49:MET:SD	2.89	0.46
25:BS:57:ARG:NE	28:BZ:40:VAL:HG11	2.31	0.46
34:B5:928:U:H3'	34:B5:944:A:O2'	2.15	0.46
35:AA:111:THR:HG22	35:AA:136:ILE:HB	1.97	0.46
35:AA:204:MET:HG2	38:A1:914:A:C2	2.51	0.46
37:AC:116:ASN:HD21	38:A1:675:C:H5'	1.81	0.46
37:AC:163:LYS:HZ2	38:A1:209:A:H8	1.63	0.46
37:AC:206:LEU:HD12	37:AC:226:GLU:O	2.16	0.46
38:A1:950:G:N1	38:A1:1368:U:OP2	2.36	0.46
38:A1:1411:C:H2'	38:A1:1412:G:C8	2.49	0.46
38:A1:2946:A:H5"	38:A1:2947:G:H5'	1.97	0.46
38:A1:3069:G:C2	38:A1:3070:A:C8	3.04	0.46
38:A1:3192:U:H2'	38:A1:3193:C:C6	2.50	0.46
39:A3:121:U:O3'	41:AD:268:GLU:HG2	2.16	0.46
44:AG:73:PRO:HD3	44:AG:233:TRP:CE2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AH:47:LYS:HZ3	49:AM:6:ILE:HA	1.79	0.46
56:AT:39:ILE:HG13	56:AT:63:VAL:HG12	1.96	0.46
58:AV:17:LEU:HB2	58:AV:52:ALA:O	2.15	0.46
69:Ag:8:ARG:HH11	69:Ag:8:ARG:HG3	1.81	0.46
70:Ah:5:LYS:HB2	70:Ah:8:GLU:OE1	2.16	0.46
79:E:29:LEU:HD23	79:E:171:ASN:HD22	1.80	0.46
79:E:65:ILE:HD12	79:E:152:ARG:CG	2.46	0.46
79:E:74:VAL:HA	79:E:84:ALA:HB1	1.96	0.46
80:DC:189:VAL:HG12	80:DC:200:VAL:HG13	1.98	0.46
80:DC:736:PRO:HG2	80:DC:788:THR:OG1	2.15	0.46
81:EC:6852:U:O2'	81:EC:6853:G:H2'	2.15	0.46
2:BB:34:ALA:H	2:BB:41:ARG:HH21	1.64	0.46
4:BE:89:VAL:HG13	4:BE:114:ILE:HD11	1.97	0.46
8:BJ:126:ARG:NH2	34:B5:476:U:OP2	2.43	0.46
14:BX:51:GLY:HA2	14:BX:77:ILE:HG23	1.97	0.46
20:BF:92:ARG:HH21	34:B5:1613:U:P	2.35	0.46
25:BS:41:ARG:HG3	25:BS:85:PHE:CZ	2.50	0.46
25:BS:65:GLU:O	25:BS:68:ARG:HG2	2.15	0.46
28:BZ:67:ASP:HB2	81:EC:6869:C:N4	2.31	0.46
31:Bg:159:ASN:HD21	31:Bg:166:SER:H	1.64	0.46
31:Bg:311:ARG:HB2	31:Bg:313:TRP:CZ3	2.50	0.46
34:B5:1509:C:H2'	34:B5:1510:U:O4'	2.15	0.46
34:B5:1591:C:H2'	34:B5:1592:A:C8	2.51	0.46
36:AB:300:ARG:NE	36:AB:300:ARG:HA	2.30	0.46
38:A1:119:U:H4'	38:A1:120:G:H3'	1.98	0.46
38:A1:195:U:H2'	38:A1:196:G:O4'	2.16	0.46
38:A1:408:A:N6	40:A4:15:G:H1'	2.31	0.46
38:A1:1951:C:H2'	38:A1:1952:G:C8	2.50	0.46
38:A1:3096:C:H2'	38:A1:3097:C:C6	2.50	0.46
38:A1:3159:C:H2'	38:A1:3160:U:H6	1.80	0.46
39:A3:4:U:H2'	39:A3:5:G:H8	1.79	0.46
39:A3:7:G:H5"	41:AD:22:ARG:HD3	1.96	0.46
39:A3:47:C:OP1	41:AD:95:TRP:N	2.41	0.46
41:AD:55:PHE:CE2	41:AD:158:ARG:HB3	2.51	0.46
44:AG:136:LEU:HD11	44:AG:166:LEU:HD21	1.97	0.46
45:AH:110:LYS:HD2	45:AH:128:VAL:HG11	1.96	0.46
45:AH:176:LEU:HD22	75:Am:86:ALA:CB	2.45	0.46
47:AJ:82:ARG:NH1	47:AJ:113:GLY:HA3	2.31	0.46
52:AP:56:ARG:NH2	52:AP:75:GLU:OE2	2.40	0.46
54:AR:26:PRO:O	54:AR:29:THR:HG23	2.15	0.46
56:AT:99:SER:OG	56:AT:101:CYS:SG	2.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:AY:51:ARG:HB2	61:AY:115:ARG:HH21	1.81	0.46
77:Ao:14:GLY:C	77:Ao:16:THR:H	2.23	0.46
80:DC:6:VAL:HA	80:DC:9:MET:HE2	1.97	0.46
80:DC:504:LEU:HD23	80:DC:504:LEU:H	1.81	0.46
81:EC:6762:U:H2'	81:EC:6763:C:C6	2.51	0.46
2:BB:38:PHE:CD2	2:BB:73:LEU:HD23	2.50	0.46
2:BB:69:CYS:HB3	2:BB:72:ASP:HB2	1.97	0.46
3:BC:138:PRO:HG2	3:BC:222:TYR:CE2	2.50	0.46
6:BH:102:PRO:HD3	6:BH:112:ARG:HD3	1.98	0.46
8:BJ:169:PRO:O	8:BJ:173:ALA:HB3	2.15	0.46
17:Bb:38:PRO:HD3	17:Bb:77:THR:HA	1.97	0.46
23:BQ:97:VAL:HG12	23:BQ:98:ASP:N	2.30	0.46
31:Bg:182:ASN:HB3	31:Bg:185:GLN:HE22	1.81	0.46
33:BM:29:LYS:HD3	33:BM:100:TRP:CD2	2.51	0.46
34:B5:5:U:H2'	34:B5:6:G:C8	2.51	0.46
34:B5:338:C:H2'	34:B5:339:C:C6	2.51	0.46
34:B5:1039:A:O2'	34:B5:1040:G:H5"	2.15	0.46
34:B5:1227:A:N6	34:B5:1256:A:O2'	2.47	0.46
34:B5:1394:G:H2'	34:B5:1395:G:H8	1.80	0.46
34:B5:1625:C:H2'	34:B5:1626:U:C6	2.50	0.46
36:AB:19:ARG:HB2	36:AB:232:ARG:HH21	1.81	0.46
36:AB:143:GLY:O	36:AB:146:ARG:N	2.45	0.46
38:A1:75:G:H5"	48:AL:58:VAL:HB	1.98	0.46
38:A1:140:C:H2'	38:A1:141:C:C6	2.51	0.46
38:A1:321:C:OP1	50:AN:159:ARG:NH2	2.48	0.46
38:A1:644:G:H2'	38:A1:2372:A:N7	2.31	0.46
38:A1:1369:A:H4'	63:Aa:21:ARG:HG2	1.98	0.46
38:A1:1373:A:H2'	38:A1:1374:G:C8	2.50	0.46
38:A1:1666:G:H2'	38:A1:1667:A:C8	2.50	0.46
38:A1:3095:U:H2'	38:A1:3096:C:C6	2.51	0.46
38:A1:3387:U:H2'	38:A1:3388:C:C6	2.50	0.46
39:A3:11:A:N1	39:A3:67:G:O2'	2.40	0.46
40:A4:57:C:H2'	40:A4:58:G:C8	2.50	0.46
41:AD:49:TYR:CD1	41:AD:66:SER:HB3	2.51	0.46
41:AD:268:GLU:HA	41:AD:271:LYS:NZ	2.31	0.46
45:AH:23:ARG:HD2	45:AH:38:LEU:O	2.15	0.46
46:AI:169:LYS:O	46:AI:178:ARG:HG3	2.16	0.46
48:AL:25:HIS:NE2	50:AN:198:SER:OG	2.46	0.46
50:AN:119:TYR:CZ	50:AN:131:GLU:HB2	2.51	0.46
66:Ad:20:LEU:HD21	66:Ad:32:ALA:HB2	1.97	0.46
78:Ap:49:ARG:HB2	78:Ap:55:TRP:CZ3	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:702:GLY:O	80:DC:706:ILE:HG12	2.15	0.46
1:BA:64:ILE:HD13	1:BA:120:LEU:HD21	1.98	0.46
7:BI:25:ARG:HG2	7:BI:27:PHE:CE1	2.50	0.46
8:BJ:114:TYR:CD2	8:BJ:122:VAL:HG13	2.51	0.46
13:BW:86:ILE:HD11	13:BW:113:HIS:HB2	1.98	0.46
16:Ba:50:VAL:HG21	16:Ba:64:LEU:HD22	1.97	0.46
19:BD:7:LYS:HG3	34:B5:1515:A:OP2	2.15	0.46
20:BF:69:PHE:HZ	23:BQ:53:LEU:HD22	1.80	0.46
21:BK:32:HIS:ND1	21:BK:33:GLU:O	2.48	0.46
21:BK:54:TYR:HA	21:BK:72:GLY:HA3	1.96	0.46
25:BS:28:ILE:HG23	25:BS:56:LYS:O	2.16	0.46
26:BT:49:ASP:OD1	26:BT:53:TRP:HB3	2.15	0.46
27:BU:97:VAL:HA	27:BU:100:VAL:HG22	1.96	0.46
31:Bg:14:GLU:OE1	31:Bg:309:VAL:HG12	2.15	0.46
31:Bg:70:ASP:HB3	31:Bg:83:ALA:HB3	1.97	0.46
33:BM:46:ARG:HB3	34:B5:1229:G:O6	2.16	0.46
34:B5:204:G:H2'	34:B5:205:U:O4'	2.16	0.46
34:B5:1697:G:N2	34:B5:1698:G:H4'	2.31	0.46
34:B5:1732:A:H2'	34:B5:1733:C:O4'	2.16	0.46
35:AA:28:LYS:HD2	35:AA:123:ARG:HH21	1.81	0.46
36:AB:259:HIS:HB3	38:A1:2987:A:O2'	2.16	0.46
37:AC:193:LYS:NZ	38:A1:1420:C:OP2	2.39	0.46
38:A1:80:G:H2'	38:A1:81:C:H6	1.79	0.46
38:A1:551:A:O2'	38:A1:552:G:H8	1.98	0.46
38:A1:571:U:H2'	38:A1:572:A:C8	2.50	0.46
38:A1:975:C:H2'	38:A1:976:U:C6	2.51	0.46
38:A1:1098:A:OP1	56:AT:108:ARG:NH1	2.48	0.46
38:A1:1378:U:H2'	38:A1:1379:G:H8	1.80	0.46
38:A1:2709:C:H2'	38:A1:2710:C:C6	2.51	0.46
38:A1:2875:U:OP2	38:A1:2945:G:N1	2.38	0.46
40:A4:115:C:H2'	40:A4:116:G:O4'	2.15	0.46
42:AE:80:ASN:HB3	42:AE:83:TYR:HD1	1.80	0.46
44:AG:185:ARG:O	44:AG:188:THR:HG22	2.15	0.46
45:AH:36:LYS:HG2	45:AH:78:MET:HE3	1.98	0.46
46:AI:41:ALA:HB3	46:AI:139:ARG:HH21	1.80	0.46
46:AI:95:HIS:CG	46:AI:128:ARG:HD3	2.51	0.46
50:AN:162:ARG:HB2	50:AN:164:LEU:HD13	1.98	0.46
60:AX:40:LEU:HD23	60:AX:40:LEU:H	1.81	0.46
74:Al:14:ALA:O	74:Al:18:LYS:NZ	2.49	0.46
1:BA:70:PRO:HB2	1:BA:94:GLY:HA3	1.97	0.46
2:BB:125:VAL:HG12	2:BB:127:VAL:HG13	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:BJ:149:ARG:CZ	34:B5:765:G:C4	2.99	0.46
20:BF:112:ARG:NH1	23:BQ:43:ILE:HD11	2.28	0.46
26:BT:91:TYR:HB2	34:B5:1590:G:OP1	2.16	0.46
27:BU:20:ILE:HD12	27:BU:95:ALA:O	2.16	0.46
27:BU:44:ASN:OD1	27:BU:47:GLN:NE2	2.48	0.46
34:B5:15:U:H2'	34:B5:16:G:O4'	2.15	0.46
34:B5:368:U:H2'	34:B5:369:A:O4'	2.15	0.46
34:B5:417:A:H5'	34:B5:418:G:C8	2.51	0.46
34:B5:784:C:H2'	34:B5:785:U:C6	2.51	0.46
34:B5:1482:C:P	34:B5:1521:G:H22	2.38	0.46
34:B5:1553:G:N2	34:B5:1555:A:H3'	2.31	0.46
34:B5:1748:G:H2'	34:B5:1749:A:C8	2.50	0.46
36:AB:215:ILE:HG23	36:AB:282:ILE:HD11	1.97	0.46
37:AC:315:LYS:HD3	37:AC:320:ASN:HD21	1.81	0.46
38:A1:80:G:H2'	38:A1:81:C:C6	2.51	0.46
38:A1:135:C:H1'	70:Ah:93:THR:HB	1.97	0.46
38:A1:507:U:H2'	38:A1:508:U:C6	2.51	0.46
38:A1:1176:C:H2'	38:A1:1177:G:N2	2.31	0.46
38:A1:1235:U:H4'	38:A1:1239:C:C5	2.51	0.46
38:A1:1712:G:OP2	65:Ac:32:LYS:NZ	2.48	0.46
38:A1:1715:A:C5	65:Ac:84:LEU:HD21	2.50	0.46
38:A1:2444:C:H4'	71:Ai:63:ASN:ND2	2.31	0.46
38:A1:2723:U:H2'	38:A1:2724:U:C6	2.51	0.46
38:A1:2767:U:H2'	38:A1:2768:U:C6	2.50	0.46
39:A3:67:G:O2'	41:AD:13:SER:O	2.34	0.46
39:A3:71:G:H2'	39:A3:72:A:C8	2.50	0.46
41:AD:41:LYS:HB2	56:AT:68:THR:O	2.15	0.46
41:AD:218:ARG:HD3	41:AD:218:ARG:HA	1.83	0.46
54:AR:8:LYS:HG2	54:AR:19:LYS:HG3	1.98	0.46
60:AX:73:MET:HA	60:AX:76:VAL:HG12	1.97	0.46
62:AZ:87:LEU:HD11	62:AZ:121:ARG:HE	1.81	0.46
80:DC:14:ASP:HA	80:DC:449:PRO:HG2	1.96	0.46
80:DC:163:ALA:CB	80:DC:167:LEU:HD13	2.44	0.46
80:DC:406:LYS:HG3	80:DC:409:GLN:HG3	1.97	0.46
81:EC:6831:U:H4'	81:EC:6832:G:H2'	1.98	0.46
1:BA:9:LEU:HD21	1:BA:51:GLY:HA2	1.97	0.46
4:BE:256:ARG:O	4:BE:261:LEU:N	2.49	0.46
6:BH:118:LEU:HA	6:BH:121:VAL:HG22	1.97	0.46
11:BO:122:PRO:HG2	11:BO:125:SER:HB3	1.98	0.46
15:BY:76:TYR:HD2	15:BY:82:ALA:HA	1.80	0.46
22:BP:110:GLU:HG3	25:BS:115:ARG:HH22	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BS:88:ARG:NH1	25:BS:108:LYS:HD3	2.31	0.46
25:BS:134:ARG:HB2	25:BS:136:GLN:NE2	2.27	0.46
34:B5:252:U:C2	34:B5:253:A:C8	3.04	0.46
34:B5:341:A:H2'	34:B5:342:C:H6	1.79	0.46
34:B5:432:G:C6	80:DC:391:LYS:NZ	2.84	0.46
34:B5:1182:U:H3	34:B5:1185:U:H5"	1.81	0.46
34:B5:1622:G:H2'	34:B5:1623:C:C6	2.50	0.46
38:A1:115:A:H8	38:A1:266:A:H5'	1.81	0.46
38:A1:130:A:H2'	38:A1:131:C:H6	1.81	0.46
38:A1:506:U:H2'	38:A1:507:U:O4'	2.16	0.46
38:A1:861:C:OP1	38:A1:2133:PSU:O2'	2.18	0.46
38:A1:2515:A:N1	38:A1:2594:C:N4	2.61	0.46
38:A1:2745:G:N2	38:A1:2747:A:H3'	2.31	0.46
38:A1:2935:U:O4	58:AV:44:SER:OG	2.23	0.46
38:A1:3039:C:H1'	58:AV:9:THR:HG21	1.97	0.46
40:A4:146:U:H2'	40:A4:147:U:O4'	2.16	0.46
44:AG:75:ILE:HG22	44:AG:76:ALA:H	1.81	0.46
44:AG:77:GLN:NE2	44:AG:167:PRO:HG2	2.31	0.46
47:AJ:27:GLY:O	47:AJ:31:THR:HG23	2.16	0.46
48:AL:2:ALA:HB3	63:Aa:41:HIS:CE1	2.51	0.46
52:AP:48:LEU:HD22	52:AP:88:VAL:HG23	1.97	0.46
58:AV:13:ILE:HD12	58:AV:85:TRP:CD1	2.51	0.46
61:AY:55:GLU:HB2	61:AY:108:LYS:HB3	1.97	0.46
62:AZ:76:ASN:OD1	62:AZ:77:TYR:N	2.49	0.46
80:DC:164:LEU:HD11	80:DC:282:PHE:HE1	1.81	0.46
81:EC:6766:U:O2	81:EC:6825:A:N6	2.49	0.46
2:BB:157:GLN:C	2:BB:159:SER:H	2.24	0.45
4:BE:121:TYR:OH	4:BE:235:TYR:O	2.34	0.45
6:BH:129:LEU:HD21	6:BH:169:PHE:CB	2.45	0.45
6:BH:181:ILE:HD12	6:BH:183:PHE:HE1	1.81	0.45
15:BY:63:GLN:HE21	15:BY:66:GLY:C	2.16	0.45
18:Be:10:ARG:HH21	34:B5:567:A:P	2.39	0.45
20:BF:58:LEU:HG	20:BF:138:THR:HG22	1.97	0.45
26:BT:75:LYS:HA	26:BT:78:LYS:HB2	1.97	0.45
34:B5:1008:G:H2'	34:B5:1009:U:C6	2.52	0.45
34:B5:1173:C:HO2'	34:B5:1601:G:H1	1.64	0.45
34:B5:1537:C:O4'	34:B5:1572:G:N2	2.48	0.45
34:B5:1576:A:C8	34:B5:1577:A:C8	3.04	0.45
34:B5:1649:G:H2'	34:B5:1650:U:H6	1.79	0.45
34:B5:1679:G:N2	34:B5:1722:A:N6	2.35	0.45
36:AB:27:ALA:HB2	36:AB:220:VAL:HG23	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:122:TRP:CE2	36:AB:127:LYS:HE3	2.50	0.45
36:AB:331:ASN:O	36:AB:334:ARG:HB3	2.16	0.45
38:A1:59:G:H2'	40:A4:33:A:H2'	1.98	0.45
38:A1:562:C:H5"	55:AS:71:LYS:HG3	1.97	0.45
38:A1:627:U:H2'	38:A1:628:A:H8	1.81	0.45
38:A1:1543:G:OP1	50:AN:35:VAL:HG23	2.16	0.45
38:A1:1710:C:C2	38:A1:1711:C:C5	3.04	0.45
38:A1:1940:G:OP1	54:AR:75:HIS:HD2	1.99	0.45
41:AD:148:ILE:HD12	41:AD:151:GLN:O	2.16	0.45
41:AD:226:TYR:HD1	41:AD:231:ILE:HD11	1.80	0.45
47:AJ:74:PRO:HA	47:AJ:77:GLU:HB3	1.96	0.45
53:AQ:125:ASP:O	53:AQ:129:VAL:HG23	2.15	0.45
55:AS:78:TRP:CZ3	55:AS:125:LYS:HE3	2.51	0.45
58:AV:17:LEU:HB2	58:AV:52:ALA:HB3	1.98	0.45
80:DC:174:LEU:O	80:DC:177:THR:OG1	2.33	0.45
8:BJ:27:GLU:OE2	8:BJ:27:GLU:N	2.41	0.45
10:BN:29:SER:N	10:BN:32:SER:OG	2.49	0.45
10:BN:49:GLN:NE2	34:B5:869:A:O2'	2.50	0.45
15:BY:16:PRO:HA	15:BY:19:ALA:HA	1.98	0.45
27:BU:35:GLU:HA	27:BU:38:SER:OG	2.16	0.45
27:BU:41:ILE:HG13	27:BU:107:THR:HG21	1.98	0.45
28:BZ:54:VAL:HA	28:BZ:57:TYR:HE2	1.82	0.45
31:Bg:219:GLU:HA	31:Bg:235:SER:HA	1.98	0.45
32:Bf:123:ASN:HB2	32:Bf:126:CYS:SG	2.56	0.45
34:B5:205:U:C2	34:B5:206:A:C8	3.04	0.45
34:B5:420:A:H2'	34:B5:421:A:C8	2.52	0.45
34:B5:607:G:H5'	34:B5:613:G:N2	2.32	0.45
34:B5:646:C:H2'	34:B5:647:G:O4'	2.16	0.45
34:B5:826:U:N3	34:B5:846:G:O6	2.50	0.45
34:B5:1080:U:H2'	34:B5:1081:A:O4'	2.16	0.45
36:AB:71:GLU:OE1	36:AB:357:LYS:HD2	2.16	0.45
38:A1:1615:C:H2'	38:A1:1616:U:H6	1.80	0.45
38:A1:1715:A:N7	65:Ac:84:LEU:HD21	2.31	0.45
38:A1:1767:C:H2'	38:A1:1768:U:C6	2.51	0.45
38:A1:1912:U:H2'	38:A1:1913:A:O4'	2.17	0.45
38:A1:3333:G:N2	38:A1:3369:G:O2'	2.49	0.45
38:A1:3371:G:H2'	38:A1:3372:A:C8	2.50	0.45
49:AM:128:ARG:HA	49:AM:131:VAL:HG12	1.98	0.45
50:AN:30:TYR:OH	50:AN:43:THR:HG21	2.16	0.45
51:AO:22[A]:VAL:HG11	51:AO:122[A]:GLN:HE22	1.81	0.45
54:AR:84:THR:O	54:AR:88:ARG:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:Aa:43:ILE:H	63:Aa:43:ILE:HD12	1.82	0.45
63:Aa:95:SER:OG	63:Aa:98:THR:O	2.31	0.45
80:DC:576:LEU:HG	80:DC:839:TYR:CE1	2.51	0.45
1:BA:5:ALA:HA	24:BR:115:LEU:HD13	1.98	0.45
1:BA:167:LYS:HE3	1:BA:167:LYS:HB3	1.79	0.45
7:BI:78:ILE:HD13	7:BI:96:LEU:HD11	1.97	0.45
7:BI:109:PHE:HA	7:BI:112:TRP:HD1	1.82	0.45
8:BJ:73:GLY:O	8:BJ:77:ILE:HG12	2.16	0.45
8:BJ:104:PHE:O	8:BJ:147:MET:HE1	2.17	0.45
9:BL:133:LYS:HB2	34:B5:337:G:H3'	1.97	0.45
14:BX:103:LEU:HD11	34:B5:435:C:H4'	1.97	0.45
15:BY:123:LYS:O	15:BY:127:LYS:HG2	2.17	0.45
21:BK:49:LEU:HA	21:BK:52:LYS:HG2	1.98	0.45
21:BK:77:ARG:O	21:BK:81:ASN:N	2.49	0.45
25:BS:105:VAL:O	25:BS:109:LEU:HD23	2.17	0.45
33:BM:33:ARG:NE	33:BM:100:TRP:O	2.35	0.45
34:B5:304:U:H2'	34:B5:305:C:C6	2.52	0.45
34:B5:519:C:C4	34:B5:534:A:C8	3.05	0.45
34:B5:982:U:H2'	34:B5:983:A:C8	2.51	0.45
34:B5:1106:U:H2'	34:B5:1107:G:H8	1.80	0.45
35:AA:242:ARG:NH2	35:AA:243:THR:O	2.49	0.45
36:AB:180:GLU:OE2	38:A1:3003:G:H4'	2.16	0.45
38:A1:91:G:OP2	77:Ao:42:ARG:NH1	2.49	0.45
38:A1:377:A:H1'	38:A1:392:G:N2	2.31	0.45
38:A1:412:G:OP1	52:AP:62:ARG:NH1	2.50	0.45
38:A1:694:C:H2'	38:A1:695:C:H6	1.80	0.45
38:A1:784:A:H2	53:AQ:92:ARG:HB3	1.81	0.45
38:A1:1283:C:O2'	38:A1:1284:C:O4'	2.31	0.45
38:A1:2328:U:H2'	38:A1:2329:C:H6	1.81	0.45
38:A1:2480:A:O2'	38:A1:2481:G:O4'	2.20	0.45
38:A1:2584:G:O2'	44:AG:240:ASN:ND2	2.49	0.45
38:A1:2661:G:H2'	38:A1:2662:G:H8	1.81	0.45
38:A1:2696:A:N7	38:A1:2758:A:N6	2.65	0.45
38:A1:2765:C:O3'	77:Ao:39:GLY:HA3	2.16	0.45
38:A1:2810:C:OP2	38:A1:2955:U:O2'	2.35	0.45
38:A1:2908:G:H2'	38:A1:2909:U:C6	2.51	0.45
39:A3:28:C:H2'	39:A3:29:C:O4'	2.15	0.45
48:AL:25:HIS:HD2	50:AN:199:LEU:O	2.00	0.45
48:AL:46:ILE:HD11	48:AL:51:LEU:HA	1.97	0.45
58:AV:86:ARG:HD2	58:AV:92:PHE:CE1	2.51	0.45
63:Aa:75:LEU:HB3	63:Aa:118:ILE:CG2	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:Ac:42:ILE:HG13	65:Ac:42:ILE:O	2.16	0.45
80:DC:70:ILE:HG23	80:DC:71:LYS:HG2	1.98	0.45
80:DC:171:LYS:HG2	80:DC:274:ASN:ND2	2.28	0.45
81:EC:6868:C:O2	81:EC:6868:C:H2'	2.16	0.45
1:BA:13:ASP:O	1:BA:16:LEU:N	2.49	0.45
2:BB:63:GLY:O	2:BB:87:ARG:NH1	2.41	0.45
4:BE:131:LEU:HD21	34:B5:251:A:N3	2.32	0.45
4:BE:174:LYS:HB3	4:BE:174:LYS:HE2	1.82	0.45
5:BG:154:ARG:HG2	34:B5:78:A:N7	2.31	0.45
5:BG:161:GLU:OE1	5:BG:170:THR:HB	2.17	0.45
8:BJ:119:ALA:C	8:BJ:121:SER:H	2.23	0.45
12:BV:38:LYS:HZ2	12:BV:49:GLU:HB3	1.82	0.45
14:BX:74:VAL:HG11	14:BX:104:LEU:HD11	1.97	0.45
22:BP:58:LYS:HA	22:BP:61:ARG:HG2	1.98	0.45
31:Bg:96:THR:HG22	31:Bg:96:THR:O	2.16	0.45
34:B5:1054:U:H2'	34:B5:1055:U:C6	2.51	0.45
34:B5:1142:A:H2'	34:B5:1143:A:C8	2.51	0.45
34:B5:1553:G:N1	34:B5:1556:A:OP2	2.49	0.45
35:AA:79:ASN:O	35:AA:82:VAL:HG12	2.17	0.45
35:AA:230:VAL:H	35:AA:233:GLN:HE21	1.64	0.45
36:AB:2:SER:N	38:A1:2940:A:OP2	2.49	0.45
36:AB:86:VAL:HG22	36:AB:162:VAL:HG12	1.97	0.45
36:AB:299:ASP:OD1	36:AB:301:THR:OG1	2.27	0.45
38:A1:172:G:N2	38:A1:173:G:H22	2.14	0.45
38:A1:184:U:H2'	38:A1:185:C:C6	2.51	0.45
38:A1:516:A:H2'	38:A1:517:G:C8	2.52	0.45
38:A1:604:G:H2'	38:A1:605:U:C6	2.51	0.45
38:A1:737:G:H2'	38:A1:738:A:C8	2.51	0.45
38:A1:995:U:H1'	38:A1:2637:A:H5'	1.98	0.45
38:A1:2205:U:H2'	38:A1:2206:G:C8	2.48	0.45
38:A1:3295:A:H2'	38:A1:3296:A:C8	2.51	0.45
40:A4:53:A:HO2'	74:Al:40:LYS:HZ1	1.53	0.45
40:A4:141:C:O3'	50:AN:62:TYR:OH	2.32	0.45
41:AD:15:ARG:HG2	56:AT:19:PHE:HZ	1.81	0.45
42:AE:143:LYS:HD3	42:AE:143:LYS:HA	1.75	0.45
45:AH:10:ILE:HG23	45:AH:76:ASP:OD1	2.17	0.45
47:AJ:92:ARG:HD3	47:AJ:92:ARG:HA	1.50	0.45
62:AZ:30:ASP:OD1	62:AZ:77:TYR:OH	2.31	0.45
65:Ac:51:LEU:HD12	69:Ag:91:ARG:NH1	2.31	0.45
66:Ad:96:VAL:HG12	66:Ad:98:VAL:HG13	1.99	0.45
74:Al:6:SER:HB3	74:Al:9:ILE:HG12	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:E:193:LEU:HD12	79:E:194:LEU:HD23	1.98	0.45
80:DC:225:PHE:HB3	80:DC:228:ARG:HH21	1.81	0.45
80:DC:427:PHE:CE2	80:DC:462:PHE:HB3	2.51	0.45
81:EC:6868:C:H3'	81:EC:6869:C:C6	2.52	0.45
1:BA:12:GLU:HG2	1:BA:13:ASP:N	2.31	0.45
2:BB:195:LYS:O	2:BB:199:ASN:ND2	2.50	0.45
4:BE:17:HIS:CD2	4:BE:18:TRP:HD1	2.35	0.45
4:BE:100:ARG:HH12	4:BE:236:ILE:HG21	1.82	0.45
7:BI:20:GLN:NE2	7:BI:22:ARG:O	2.49	0.45
7:BI:41:LYS:HA	7:BI:59:ARG:O	2.16	0.45
8:BJ:66:ASP:HB3	8:BJ:69:ARG:HB2	1.97	0.45
10:BN:29:SER:O	10:BN:32:SER:OG	2.27	0.45
13:BW:23:ARG:HG3	17:Bb:4:VAL:HG22	1.98	0.45
14:BX:41:SER:O	14:BX:81:LYS:NZ	2.49	0.45
20:BF:107:LYS:HE2	20:BF:107:LYS:HB2	1.62	0.45
20:BF:129:PRO:O	20:BF:133:VAL:HG23	2.16	0.45
22:BP:16:SER:HA	22:BP:21:ASP:HA	1.97	0.45
24:BR:54:THR:O	24:BR:58:MET:HG2	2.17	0.45
26:BT:35:ASP:HB3	26:BT:50:ALA:HB1	1.98	0.45
26:BT:100:ILE:HG13	26:BT:101:ASN:N	2.31	0.45
27:BU:24:ILE:HD12	27:BU:115:GLU:O	2.17	0.45
32:Bf:141:CYS:SG	32:Bf:144:CYS:N	2.89	0.45
34:B5:196:G:H3'	34:B5:197:A:H8	1.80	0.45
34:B5:514:G:O2'	34:B5:515:A:H8	2.00	0.45
34:B5:1611:A:H2'	34:B5:1612:U:O4'	2.16	0.45
35:AA:113:VAL:HG23	35:AA:134:VAL:HG13	1.97	0.45
38:A1:168:U:H2'	38:A1:169:U:C6	2.52	0.45
38:A1:326:U:OP1	48:AL:31:LYS:NZ	2.39	0.45
38:A1:774:G:O2'	38:A1:775:A:H5'	2.17	0.45
38:A1:2219:A:H2'	38:A1:2220:A:H8	1.81	0.45
38:A1:3133:C:H2'	38:A1:3134:A:O4'	2.16	0.45
38:A1:3183:A:H2	38:A1:3188:G:H4'	1.82	0.45
39:A3:90:U:H2'	39:A3:91:G:O4'	2.16	0.45
41:AD:220:SER:O	41:AD:224:LYS:HB3	2.17	0.45
49:AM:65:LEU:HD12	55:AS:172:TYR:HE2	1.81	0.45
62:AZ:3:LYS:O	62:AZ:6:LYS:HE3	2.16	0.45
62:AZ:51:LEU:HB2	62:AZ:65:ARG:HG3	1.97	0.45
80:DC:138:GLN:O	80:DC:142:VAL:HG12	2.17	0.45
80:DC:150:ARG:HH12	80:DC:355:GLN:HG2	1.81	0.45
81:EC:6795:U:H2'	81:EC:6796:C:C6	2.52	0.45
81:EC:6808:G:H2'	81:EC:6809:G:C5	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BH:89:HIS:CE1	6:BH:165:LYS:HG2	2.52	0.45
8:BJ:102:GLU:O	8:BJ:106:GLU:N	2.35	0.45
11:BO:32:ASP:OD1	11:BO:36:LYS:N	2.49	0.45
16:Ba:78:ALA:HB1	16:Ba:84:VAL:HG22	1.98	0.45
19:BD:75:LYS:HE3	21:BK:14:TYR:HE1	1.81	0.45
28:BZ:42:LEU:HD13	28:BZ:75:LEU:HD21	1.98	0.45
33:BM:81:ASP:HB3	33:BM:84:ASN:HB2	1.98	0.45
34:B5:300:A:H2'	34:B5:301:A:C8	2.52	0.45
36:AB:347:SER:C	36:AB:349:LYS:H	2.24	0.45
38:A1:340:C:H2'	38:A1:341:G:O4'	2.16	0.45
38:A1:847:A:H2'	38:A1:848:A:C8	2.52	0.45
38:A1:900:G:H1'	38:A1:1589:A:H61	1.78	0.45
38:A1:947:G:C5'	67:Ae:55:ILE:HB	2.47	0.45
38:A1:976:U:H2'	38:A1:977:C:O4'	2.16	0.45
38:A1:1602:A:H4'	54:AR:10:LEU:HD11	1.99	0.45
38:A1:2492:C:C4	38:A1:2493:U:H1'	2.52	0.45
38:A1:2748:A:C2	41:AD:35:ARG:HG3	2.51	0.45
38:A1:2948:C:H2'	38:A1:2949:U:H6	1.82	0.45
40:A4:119:C:H2'	40:A4:120:C:C6	2.52	0.45
41:AD:258:LYS:HE2	41:AD:258:LYS:HB3	1.78	0.45
41:AD:268:GLU:O	41:AD:271:LYS:HG2	2.17	0.45
44:AG:186:LEU:O	44:AG:190:VAL:HG22	2.17	0.45
46:AI:113:GLN:CG	46:AI:116:ARG:HB3	2.46	0.45
51:AO:27[A]:LEU:CD2	51:AO:33[A]:ILE:HD12	2.47	0.45
52:AP:72:GLN:OE1	52:AP:83:TRP:NE1	2.45	0.45
53:AQ:176:ARG:HA	53:AQ:182:LYS:O	2.16	0.45
56:AT:97:LYS:HB2	56:AT:97:LYS:HE3	1.75	0.45
60:AX:110:VAL:HG22	60:AX:124:VAL:HG22	1.98	0.45
66:Ad:55:LEU:HD11	66:Ad:73:LEU:HD22	1.99	0.45
67:Ae:32:TRP:CZ2	67:Ae:53:PRO:HD2	2.52	0.45
67:Ae:111:ARG:HH11	67:Ae:111:ARG:HG3	1.81	0.45
79:E:190:PHE:O	79:E:193:LEU:HG	2.17	0.45
80:DC:20:ARG:HB2	80:DC:100:ILE:HG22	1.99	0.45
2:BB:179:SER:HB3	2:BB:183:GLN:NE2	2.32	0.45
6:BH:47:ARG:HG3	6:BH:49:ILE:HG12	1.98	0.45
7:BI:6:ASP:HB3	7:BI:28:GLU:OE2	2.17	0.45
8:BJ:38:ASN:HB2	34:B5:593:U:P	2.57	0.45
8:BJ:87:SER:H	8:BJ:90:LYS:NZ	2.15	0.45
10:BN:42:ARG:HD2	10:BN:80:LEU:HD21	1.98	0.45
19:BD:127:MET:HE2	19:BD:127:MET:HA	1.98	0.45
21:BK:69:THR:HG22	21:BK:71:GLU:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:64:HIS:CE1	31:Bg:90:ARG:HG3	2.52	0.45
34:B5:92:A:P	34:B5:398:G:H22	2.40	0.45
34:B5:497:G:O2'	34:B5:498:G:H4'	2.17	0.45
34:B5:737:A:HO2'	34:B5:738:G:H8	1.61	0.45
34:B5:889:U:O2'	34:B5:890:C:OP1	2.35	0.45
34:B5:1469:A:H2'	34:B5:1470:C:C6	2.52	0.45
34:B5:1645:G:H1	34:B5:1755:A:H2	1.63	0.45
34:B5:1751:C:H2'	34:B5:1752:U:C6	2.52	0.45
35:AA:183:GLY:HA2	38:A1:896:A:H5"	1.98	0.45
36:AB:47:LEU:HD23	36:AB:47:LEU:HA	1.86	0.45
37:AC:141:ARG:NH1	37:AC:180:LYS:HG3	2.32	0.45
38:A1:533:A:O2'	38:A1:535:G:O5'	2.35	0.45
38:A1:1158:A:H2'	38:A1:1159:A:H4'	1.98	0.45
38:A1:1856:C:H2'	38:A1:1857:C:C6	2.52	0.45
38:A1:2295:A:N3	38:A1:2929:C:O2'	2.45	0.45
38:A1:2493:U:H2'	38:A1:2494:A:H5"	1.98	0.45
38:A1:2597:U:H2'	38:A1:2598:G:H8	1.81	0.45
38:A1:3059:G:H2'	38:A1:3060:C:C6	2.52	0.45
38:A1:3150:A:H2'	38:A1:3151:U:O4'	2.16	0.45
42:AE:41:ILE:HG21	42:AE:163:PHE:CD2	2.52	0.45
44:AG:157:VAL:HG21	44:AG:163:VAL:HG22	1.99	0.45
56:AT:66:ASN:HB3	56:AT:73:GLY:HA3	1.98	0.45
58:AV:87:ARG:HH21	58:AV:91:VAL:HG21	1.81	0.45
63:Aa:88:ASP:OD1	63:Aa:92:LYS:HD3	2.16	0.45
69:Ag:3:GLN:HE22	69:Ag:30:LEU:H	1.64	0.45
73:Ak:20:VAL:HG22	73:Ak:47:GLY:HA2	1.98	0.45
3:BC:49:LYS:HD2	3:BC:243:TYR:CD2	2.51	0.45
6:BH:67:LEU:O	6:BH:71:HIS:N	2.44	0.45
8:BJ:78:ARG:HA	8:BJ:81:VAL:HG22	1.98	0.45
11:BO:124:ASP:HB3	34:B5:927:C:O2	2.16	0.45
12:BV:62:ARG:HH22	34:B5:1039:A:H4'	1.81	0.45
20:BF:34:GLN:HE22	23:BQ:57:LEU:HD12	1.82	0.45
20:BF:148:ARG:HH12	29:Bc:22:ARG:NH2	2.15	0.45
23:BQ:139:GLN:HE22	34:B5:1167:G:N2	2.15	0.45
34:B5:384:G:H2'	34:B5:385:A:C8	2.52	0.45
34:B5:1115:U:H2'	34:B5:1116:A:H8	1.82	0.45
34:B5:1181:PSU:H2'	34:B5:1182:U:O4'	2.17	0.45
34:B5:1219:A:N6	34:B5:1265:G:H1'	2.31	0.45
34:B5:1586:A:H1'	34:B5:1611:A:N6	2.32	0.45
38:A1:239:G:H2'	38:A1:240:U:C6	2.51	0.45
38:A1:723:U:O2'	64:Ab:29:TYR:OH	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:775:A:O2'	38:A1:776:PSU:H5"	2.17	0.45
38:A1:784:A:C2	53:AQ:92:ARG:HB3	2.52	0.45
38:A1:984:G:N2	38:A1:1138:U:OP1	2.50	0.45
38:A1:996:A:H2'	38:A1:997:A:O4'	2.17	0.45
38:A1:1358:C:H2'	38:A1:1359:C:O4'	2.17	0.45
38:A1:1713:G:O2'	38:A1:1730:G:N2	2.47	0.45
38:A1:1720:U:OP2	54:AR:120:TYR:OH	2.25	0.45
38:A1:2104:A:H2'	38:A1:2105:G:C8	2.52	0.45
38:A1:2507:C:H2'	38:A1:2508:U:H6	1.82	0.45
39:A3:94:C:H2'	39:A3:95:A:C8	2.52	0.45
40:A4:56:G:H21	40:A4:62:C:H5"	1.82	0.45
43:AF:203:TRP:CD1	43:AF:204:PRO:HD2	2.52	0.45
44:AG:93:LEU:HD21	44:AG:214:LEU:HD22	1.99	0.45
45:AH:40:HIS:CD2	45:AH:41:ILE:HG13	2.51	0.45
51:AO:10[A]:ASP:HB2	51:AO:117[A]:ARG:HB3	1.99	0.45
60:AX:47:ALA:HB3	60:AX:50:ALA:HB2	1.99	0.45
60:AX:115:ARG:HD3	60:AX:119:THR:OG1	2.17	0.45
68:Af:7:LEU:HD23	68:Af:7:LEU:HA	1.77	0.45
79:E:44:GLN:HG2	79:E:161:LYS:HZ3	1.82	0.45
79:E:89:ASP:O	79:E:92:LYS:HG3	2.17	0.45
80:DC:572:SER:OG	80:DC:573:GLN:OE1	2.34	0.45
80:DC:733:ILE:HG22	80:DC:735:CYS:HB3	1.99	0.45
81:EC:6777:C:H2'	81:EC:6778:C:C5	2.52	0.45
2:BB:64:ARG:O	2:BB:88:VAL:HG22	2.17	0.45
2:BB:148:ASN:O	34:B5:1067:C:H5'	2.16	0.45
3:BC:80:VAL:HG21	3:BC:125:ILE:CD1	2.47	0.45
8:BJ:65:LYS:O	8:BJ:65:LYS:HG2	2.17	0.45
8:BJ:109:LEU:O	8:BJ:112:GLN:N	2.49	0.45
11:BO:84:ARG:HD2	11:BO:120:PRO:HD3	1.99	0.45
21:BK:61:TRP:CE2	30:Bd:23:VAL:HG13	2.52	0.45
25:BS:15:LEU:HD13	25:BS:66:LEU:HD11	1.99	0.45
27:BU:50:LEU:HD11	27:BU:94:GLU:O	2.17	0.45
27:BU:69:LYS:HZ3	34:B5:1280:4AC:P	2.39	0.45
31:Bg:198:ASN:N	31:Bg:198:ASN:OD1	2.48	0.45
32:Bf:106:TYR:CE1	32:Bf:131:PHE:HZ	2.35	0.45
33:BM:130:THR:HG21	33:BM:133:LEU:HD13	1.99	0.45
34:B5:78:A:H2'	34:B5:79:C:C6	2.52	0.45
34:B5:268:C:H2'	34:B5:269:G:H8	1.82	0.45
34:B5:534:A:H3'	34:B5:535:A:C8	2.47	0.45
34:B5:925:G:H2'	34:B5:926:A:C8	2.50	0.45
34:B5:1251:U:O2'	34:B5:1252:C:H5"	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:71:GLU:HG3	59:AW:1:MET:N	2.32	0.45
38:A1:928:C:H2'	38:A1:929:A:C8	2.52	0.45
38:A1:1141:C:H2'	38:A1:1142:G:O4'	2.17	0.45
38:A1:2095:G:H2'	38:A1:2096:A:C8	2.50	0.45
38:A1:2656:A:N7	38:A1:2658:G:C8	2.85	0.45
38:A1:3121:U:H1'	38:A1:3122:A:H5"	1.98	0.45
38:A1:3358:U:H2'	38:A1:3359:A:H8	1.81	0.45
40:A4:62:C:H4'	40:A4:63:G:O5'	2.16	0.45
46:AI:91:VAL:HG22	46:AI:127:ALA:HB1	1.98	0.45
48:AL:54:LEU:HD22	48:AL:119:TYR:CG	2.52	0.45
50:AN:94:TYR:CE2	50:AN:96:ARG:HB2	2.52	0.45
52:AP:40:GLU:CD	52:AP:40:GLU:H	2.23	0.45
53:AQ:83:VAL:O	53:AQ:103:ALA:HA	2.17	0.45
54:AR:41:ILE:O	54:AR:45:VAL:HG23	2.17	0.45
60:AX:135:ILE:HD12	60:AX:138:ARG:NH2	2.32	0.45
61:AY:12:ARG:O	61:AY:16:ARG:HG3	2.17	0.45
65:Ac:43:ILE:HD13	65:Ac:68:TYR:HB3	1.99	0.45
65:Ac:86:ARG:NH1	78:Ap:44:LYS:HE2	2.32	0.45
70:Ah:8:GLU:O	70:Ah:11:THR:OG1	2.34	0.45
74:Al:44:TRP:CZ2	74:Al:45:ARG:HD3	2.52	0.45
80:DC:22:MET:HE1	80:DC:126:LEU:HB2	1.99	0.45
1:BA:76:ILE:HD13	1:BA:98:ILE:HB	1.99	0.45
1:BA:111:ILE:HD11	34:B5:1292:G:N2	2.29	0.45
2:BB:144:ARG:HD3	2:BB:208:GLN:HA	1.98	0.45
2:BB:176:VAL:HG22	2:BB:184:LEU:CD1	2.47	0.45
3:BC:227:PRO:HG2	13:BW:99:PHE:HB2	1.98	0.45
4:BE:68:ARG:HG2	4:BE:76:VAL:HG11	1.98	0.45
7:BI:40:ALA:N	7:BI:61:GLU:OE2	2.49	0.45
7:BI:67:TRP:CZ2	7:BI:109:PHE:HB3	2.52	0.45
10:BN:4:MET:HE1	34:B5:867:G:H5'	1.98	0.45
10:BN:123:HIS:NE2	38:A1:847:A:H5'	2.32	0.45
13:BW:122:SER:OG	13:BW:123:GLY:N	2.50	0.45
19:BD:31:GLU:HA	19:BD:107:PHE:CE2	2.52	0.45
19:BD:151:LYS:HE3	34:B5:1424:A:OP2	2.17	0.45
20:BF:82:PHE:HB2	29:Bc:49:ARG:HH21	1.82	0.45
21:BK:4:PRO:HB2	21:BK:6:GLU:OE1	2.17	0.45
25:BS:57:ARG:CZ	28:BZ:40:VAL:HG11	2.47	0.45
31:Bg:70:ASP:HB2	31:Bg:111:MET:O	2.17	0.45
31:Bg:267:PRO:HB2	31:Bg:269:TYR:CE2	2.52	0.45
34:B5:328:A:H2'	34:B5:329:G:C8	2.51	0.45
34:B5:1144:U:H2'	34:B5:1145:U:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1146:G:H2'	34:B5:1147:A:H8	1.80	0.45
34:B5:1733:C:H2'	34:B5:1734:U:H6	1.81	0.45
34:B5:1747:G:O2'	38:A1:2303:A:O2'	2.23	0.45
36:AB:59:ASP:OD1	36:AB:60:LEU:N	2.50	0.45
38:A1:330:G:H22	40:A4:33:A:H2	1.63	0.45
38:A1:444:U:H3	38:A1:492:C:HO2'	1.59	0.45
38:A1:633:C:H4'	68:Af:18:ARG:HH21	1.80	0.45
38:A1:800:G:H2'	38:A1:801:A:N7	2.32	0.45
38:A1:1463:U:H2'	38:A1:1464:G:O4'	2.17	0.45
38:A1:2413:A:H2'	38:A1:2414:G:H8	1.81	0.45
38:A1:2635:A:H4'	38:A1:2636:A:O5'	2.17	0.45
38:A1:2896:A:OP1	75:Am:124:LYS:HE3	2.17	0.45
38:A1:2999:U:H2'	38:A1:3000:A:C8	2.51	0.45
38:A1:3108:G:H21	45:AH:163:GLN:CD	2.24	0.45
38:A1:3213:A:H2'	38:A1:3214:U:O4'	2.17	0.45
38:A1:3305:A:H2'	38:A1:3306:U:O4'	2.16	0.45
40:A4:12:A:C6	40:A4:13:A:N7	2.85	0.45
40:A4:27:U:H2'	40:A4:28:C:H6	1.82	0.45
42:AE:142:ASP:HA	42:AE:145:LEU:HB2	1.99	0.45
43:AF:96:PRO:HB2	43:AF:99:PRO:HD2	1.99	0.45
43:AF:116:PHE:CE1	43:AF:144:ILE:HG12	2.52	0.45
46:AI:36:LEU:HD13	46:AI:73:ASN:ND2	2.32	0.45
50:AN:152:CYS:SG	70:Ah:92:LEU:HD21	2.57	0.45
73:Ak:20:VAL:HG11	73:Ak:45:VAL:HG23	1.98	0.45
74:Al:21:ARG:HG3	74:Al:22:PRO:HD2	1.98	0.45
77:Ao:74:CYS:O	77:Ao:78:LYS:HE2	2.17	0.45
80:DC:35:LEU:O	80:DC:39:LEU:HD23	2.17	0.45
80:DC:379:MET:SD	80:DC:402:ALA:HB3	2.56	0.45
81:EC:6780:A:HO2'	81:EC:6781:U:H6	1.65	0.45
4:BE:44:LEU:HD21	4:BE:82:TYR:HD2	1.83	0.44
6:BH:67:LEU:HA	6:BH:70:PHE:HB2	1.98	0.44
12:BV:64:GLU:HG2	17:Bb:3:LEU:HD13	1.98	0.44
18:Be:47:VAL:HG12	18:Be:50:VAL:HG22	1.97	0.44
22:BP:18:ARG:HB2	22:BP:36:LEU:HD11	1.99	0.44
23:BQ:46:PHE:O	23:BQ:50:GLU:HG2	2.17	0.44
25:BS:7:GLU:HG2	25:BS:8:GLN:O	2.17	0.44
29:Bc:30:VAL:HG11	29:Bc:54:LEU:HD12	1.99	0.44
31:Bg:177:MET:CE	31:Bg:179:LYS:HD3	2.44	0.44
33:BM:61:VAL:HG12	33:BM:89:ILE:HB	1.98	0.44
34:B5:63:G:O2'	34:B5:170:U:OP1	2.35	0.44
34:B5:258:C:H2'	34:B5:259:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1254:U:H2'	34:B5:1255:G:O4'	2.17	0.44
36:AB:143:GLY:O	36:AB:146:ARG:HG2	2.17	0.44
36:AB:266:ARG:HG2	36:AB:266:ARG:HH11	1.82	0.44
37:AC:188:ARG:O	37:AC:193:LYS:HE3	2.17	0.44
37:AC:233:LEU:HD22	37:AC:238:LEU:HD11	1.98	0.44
38:A1:1222:G:N2	38:A1:1285:G:O2'	2.38	0.44
38:A1:1228:C:C2	38:A1:1282:G:C2	3.06	0.44
38:A1:1650:G:H2'	38:A1:1651:U:C6	2.52	0.44
38:A1:2203:U:H2'	38:A1:2204:C:H6	1.82	0.44
38:A1:2947:G:OP2	38:A1:2947:G:H4'	2.15	0.44
38:A1:3294:A:H2'	38:A1:3295:A:O4'	2.16	0.44
42:AE:76:LEU:HD13	42:AE:101:PHE:CZ	2.52	0.44
45:AH:106:LYS:HB2	45:AH:111:PHE:HD2	1.81	0.44
45:AH:174:LYS:HB3	75:Am:127:LEU:HD13	1.99	0.44
52:AP:131:ARG:HG3	52:AP:137:ASN:OD1	2.17	0.44
58:AV:18:PRO:HA	58:AV:51:ALA:HA	1.99	0.44
59:AW:10:GLY:HA3	59:AW:53:VAL:CG1	2.47	0.44
63:Aa:75:LEU:HG	63:Aa:114:GLY:HA2	1.99	0.44
66:Ad:84:ASP:N	66:Ad:84:ASP:OD1	2.48	0.44
80:DC:544:ASP:HB2	80:DC:549:HIS:HD2	1.81	0.44
1:BA:50:VAL:O	1:BA:53:THR:OG1	2.30	0.44
1:BA:62:ARG:HH21	12:BV:38:LYS:HA	1.82	0.44
4:BE:205:PHE:CD2	4:BE:221:ARG:HD3	2.44	0.44
5:BG:18:ILE:HG23	5:BG:23:ARG:HH22	1.81	0.44
8:BJ:53:ARG:HE	8:BJ:97:LEU:HA	1.83	0.44
8:BJ:135:ALA:O	8:BJ:156:ILE:HD12	2.17	0.44
10:BN:102:LEU:HD11	10:BN:112:LYS:HA	1.99	0.44
20:BF:107:LYS:NZ	34:B5:1610:G:P	2.89	0.44
20:BF:109:LYS:HG3	34:B5:1528:U:OP1	2.17	0.44
31:Bg:19:TRP:CE2	31:Bg:306:THR:HB	2.52	0.44
31:Bg:111:MET:HG2	31:Bg:127:ARG:HG3	1.98	0.44
32:Bf:121:CYS:H	32:Bf:130:VAL:HG11	1.82	0.44
33:BM:125:ASN:C	33:BM:127:GLY:HA2	2.41	0.44
34:B5:467:G:O2'	34:B5:469:C:OP2	2.20	0.44
34:B5:868:G:N2	34:B5:961:U:H1'	2.33	0.44
34:B5:1169:G:N2	34:B5:1575:G7M:H3'	2.32	0.44
34:B5:1222:C:H2'	34:B5:1223:A:C8	2.52	0.44
34:B5:1391:A:H2'	34:B5:1392:U:C6	2.52	0.44
34:B5:1466:G:O2'	34:B5:1602:C:OP1	2.32	0.44
35:AA:6:ARG:HH21	35:AA:204:MET:HE1	1.81	0.44
38:A1:18:G:OP2	60:AX:46:TYR:OH	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:503:C:H2'	38:A1:504:A:H8	1.82	0.44
38:A1:821:U:H2'	38:A1:822:G:C8	2.52	0.44
38:A1:1396:C:H2'	38:A1:1397:C:C6	2.52	0.44
38:A1:1676:A:H4'	57:AU:100:THR:HG23	1.99	0.44
38:A1:2733:A:H2'	38:A1:2734:A:O4'	2.16	0.44
38:A1:3000:A:H2'	38:A1:3001:C:C6	2.53	0.44
38:A1:3170:A:O2'	38:A1:3171:U:OP2	2.31	0.44
38:A1:3305:A:O2'	38:A1:3310:A:N1	2.42	0.44
40:A4:145:U:H2'	40:A4:146:U:C6	2.52	0.44
41:AD:264:GLN:OE1	41:AD:264:GLN:N	2.50	0.44
44:AG:75:ILE:C	44:AG:77:GLN:H	2.25	0.44
46:AI:167:LEU:HD23	46:AI:167:LEU:H	1.83	0.44
50:AN:203:ARG:HA	50:AN:203:ARG:HD3	1.75	0.44
56:AT:68:THR:CG2	56:AT:69:LYS:H	2.26	0.44
57:AU:28:PHE:HE1	57:AU:83:TYR:CE2	2.35	0.44
58:AV:94:TYR:CE1	59:AW:21:PHE:HD1	2.36	0.44
63:Aa:59:ARG:NH1	77:Ao:38:GLN:HE21	2.15	0.44
63:Aa:105:LEU:HD21	63:Aa:128:ARG:HE	1.82	0.44
73:Ak:36:LYS:HB2	73:Ak:37:PRO:CD	2.47	0.44
4:BE:37:LYS:HB2	4:BE:40:GLU:OE1	2.18	0.44
14:BX:107:PHE:HZ	14:BX:117:ILE:HD12	1.82	0.44
15:BY:132:ARG:HH12	34:B5:154:G:H3'	1.82	0.44
21:BK:3:MET:O	21:BK:8:ARG:NH2	2.51	0.44
23:BQ:97:VAL:HG12	23:BQ:98:ASP:H	1.82	0.44
25:BS:13:HIS:ND1	25:BS:14:ILE:N	2.62	0.44
26:BT:93:HIS:ND1	34:B5:1524:A:O3'	2.50	0.44
28:BZ:47:TYR:O	28:BZ:50:ILE:HB	2.17	0.44
34:B5:163:G:H2'	34:B5:164:A:C8	2.53	0.44
34:B5:201:G:H2'	34:B5:202:A:H8	1.82	0.44
34:B5:901:G:C6	34:B5:902:G:C6	3.06	0.44
34:B5:1410:A:H2'	34:B5:1411:A:C8	2.52	0.44
34:B5:1494:C:H2'	34:B5:1495:C:C6	2.52	0.44
36:AB:67:PHE:CA	36:AB:70:ARG:HH12	2.27	0.44
37:AC:107:ARG:NH2	38:A1:1429:G:OP2	2.28	0.44
38:A1:165:A:O2'	38:A1:166:C:H5"	2.16	0.44
38:A1:172:G:N3	38:A1:173:G:N2	2.64	0.44
38:A1:600:G:N2	38:A1:602:A:H3'	2.32	0.44
38:A1:640:U:OP2	67:Ae:38:ILE:HG12	2.18	0.44
38:A1:945:C:H2'	38:A1:946:U:C6	2.52	0.44
38:A1:970:A:H2'	38:A1:971:G:C8	2.52	0.44
38:A1:1096:U:P	56:AT:116:ARG:HH22	2.40	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1344:G:O2'	43:AF:157:ASN:ND2	2.49	0.44
38:A1:1573:G:H2'	38:A1:1574:C:C6	2.53	0.44
38:A1:1658:G:H2'	38:A1:1659:U:C6	2.52	0.44
38:A1:1750:A:H1'	38:A1:1752:A:N7	2.32	0.44
43:AF:77:VAL:CG2	55:AS:59:VAL:HG23	2.48	0.44
43:AF:84:VAL:HG13	43:AF:119:VAL:CG2	2.47	0.44
47:AJ:49:LYS:HE3	47:AJ:64:LYS:HE2	2.00	0.44
50:AN:18:VAL:HG23	50:AN:19:LEU:N	2.32	0.44
70:Ah:65:ALA:HA	70:Ah:68:GLN:HG2	2.00	0.44
74:Al:2:ALA:C	74:Al:4:GLN:H	2.25	0.44
80:DC:33:SER:H	83:DC:901:GDP:PB	2.41	0.44
80:DC:224:GLN:HE22	80:DC:228:ARG:NH1	2.16	0.44
80:DC:300:LEU:HB3	80:DC:301:GLU:OE1	2.17	0.44
80:DC:586:ILE:HG13	80:DC:691:VAL:HG23	1.99	0.44
80:DC:677:PHE:CE2	80:DC:679:GLU:HB2	2.52	0.44
80:DC:804:LEU:HD23	80:DC:804:LEU:HA	1.81	0.44
4:BE:106:LYS:HB3	4:BE:106:LYS:HE2	1.55	0.44
4:BE:214:LEU:HB2	4:BE:244:ILE:HD11	1.99	0.44
6:BH:86:GLN:H	6:BH:86:GLN:CD	2.21	0.44
7:BI:21:PHE:CZ	34:B5:106:PSU:H4'	2.52	0.44
7:BI:78:ILE:HD11	7:BI:102:VAL:HG11	2.00	0.44
19:BD:223:LYS:HE2	31:Bg:191:ASP:HB2	2.00	0.44
24:BR:32:LYS:HE2	24:BR:32:LYS:HB3	1.65	0.44
27:BU:34:LEU:HD21	27:BU:89:ARG:HD3	2.00	0.44
31:Bg:132:LYS:HB3	31:Bg:134:TRP:HE1	1.82	0.44
33:BM:98:GLY:O	33:BM:103:LEU:HB2	2.18	0.44
34:B5:165:G:H2'	34:B5:166:C:O4'	2.18	0.44
34:B5:417:A:H5'	34:B5:418:G:C4	2.52	0.44
34:B5:1172:G:H2'	34:B5:1173:C:C6	2.52	0.44
34:B5:1647:U:H2'	34:B5:1648:A:C8	2.53	0.44
36:AB:67:PHE:HB3	58:AV:88:ARG:NH2	2.33	0.44
38:A1:19:U:H2'	38:A1:20:A:C8	2.53	0.44
38:A1:63:A:H2'	38:A1:64:G:O4'	2.17	0.44
38:A1:545:U:H4'	38:A1:546:C:C5	2.52	0.44
38:A1:810:A:H2'	38:A1:811:U:C6	2.53	0.44
38:A1:1011:A:H2'	38:A1:1012:G:H8	1.81	0.44
38:A1:1095:U:H3	56:AT:127:GLN:NE2	2.14	0.44
38:A1:2600:C:OP1	50:AN:93:LYS:NZ	2.47	0.44
38:A1:2745:G:N2	38:A1:2748:A:OP2	2.36	0.44
38:A1:3129:A:H2'	38:A1:3130:A:H5"	1.98	0.44
38:A1:3234:A:H2	38:A1:3253:G:H1	1.56	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3234:A:C2	38:A1:3253:G:N1	2.72	0.44
38:A1:3302:U:O2'	38:A1:3303:G:H5'	2.18	0.44
40:A4:139:U:H2'	40:A4:140:G:H8	1.83	0.44
41:AD:32:GLN:HG3	41:AD:33:ARG:N	2.31	0.44
47:AJ:18:VAL:CG2	47:AJ:128:TYR:HB3	2.48	0.44
52:AP:164:LYS:HB2	52:AP:165:VAL:H	1.64	0.44
53:AQ:88:THR:HG22	53:AQ:107:THR:HG21	2.00	0.44
53:AQ:90:ASP:OD2	53:AQ:92:ARG:NH2	2.34	0.44
66:Ad:78:LYS:HE2	66:Ad:92:TYR:HB3	2.00	0.44
73:Ak:40:GLN:CD	73:Ak:55:VAL:HG13	2.42	0.44
79:E:144:LEU:O	79:E:148:VAL:HG22	2.17	0.44
80:DC:156:VAL:HG23	80:DC:334:LEU:HD21	1.99	0.44
80:DC:544:ASP:HB2	80:DC:548:ASP:HB3	1.99	0.44
80:DC:565:GLU:HB2	80:DC:681:MET:HG3	2.00	0.44
80:DC:736:PRO:HB3	80:DC:791:GLN:HB3	1.99	0.44
81:EC:6816:A:N6	81:EC:6821:U:OP2	2.51	0.44
1:BA:2:SER:OG	1:BA:3:LEU:N	2.47	0.44
2:BB:183:GLN:NE2	2:BB:184:LEU:HD22	2.31	0.44
3:BC:169:LEU:HD13	3:BC:188:LEU:HD21	1.99	0.44
3:BC:188:LEU:CD2	3:BC:196:VAL:HG11	2.48	0.44
11:BO:36:LYS:HD3	11:BO:36:LYS:HA	1.60	0.44
15:BY:12:VAL:HG12	34:B5:783:G:C8	2.47	0.44
19:BD:122:VAL:O	19:BD:126:VAL:HG23	2.17	0.44
23:BQ:134:ALA:HB3	34:B5:1585:U:H5"	1.98	0.44
25:BS:120:ARG:HD3	25:BS:120:ARG:HA	1.68	0.44
31:Bg:69:GLN:HB2	31:Bg:85:TRP:HE1	1.81	0.44
32:Bf:140:TYR:CZ	32:Bf:142:GLY:HA2	2.53	0.44
33:BM:46:ARG:HH21	34:B5:1253:U:P	2.41	0.44
34:B5:71:A:N1	34:B5:81:G:C6	2.86	0.44
34:B5:273:G:O6	34:B5:283:U:C2	2.70	0.44
34:B5:787:G:H3'	34:B5:788:A:H8	1.82	0.44
34:B5:1461:C:H2'	34:B5:1462:G:C8	2.53	0.44
34:B5:1647:U:H2'	34:B5:1648:A:H8	1.82	0.44
36:AB:113:GLU:OE2	36:AB:167:ARG:N	2.41	0.44
36:AB:255:TRP:HB3	38:A1:2941:A:OP1	2.17	0.44
36:AB:297:SER:HA	36:AB:300:ARG:NH1	2.32	0.44
38:A1:93:C:OP2	38:A1:2764:C:O2'	2.28	0.44
38:A1:636:C:O2	38:A1:2377:G:O2'	2.25	0.44
38:A1:782:U:H2'	38:A1:783:A:O4'	2.18	0.44
38:A1:1128:U:H2'	38:A1:1129:A:O4'	2.17	0.44
38:A1:1597:C:H2'	38:A1:1598:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2465:G:N2	79:E:166:ALA:HB3	2.32	0.44
38:A1:2467:G:OP1	79:E:62:ASN:ND2	2.50	0.44
38:A1:2775:U:H2'	38:A1:2776:C:C6	2.53	0.44
38:A1:3084:C:H2'	38:A1:3085:G:O4'	2.16	0.44
40:A4:97:A:OP1	70:Ah:63:ARG:NH2	2.44	0.44
42:AE:66:SER:HB2	42:AE:76:LEU:HA	2.00	0.44
43:AF:107:ARG:HG3	43:AF:107:ARG:HH11	1.82	0.44
43:AF:176:TYR:CE1	43:AF:197:GLN:HG2	2.52	0.44
46:AI:10:ARG:HH21	46:AI:161:GLY:HA2	1.82	0.44
48:AL:123:ILE:HG22	70:Ah:118:ILE:HG13	1.98	0.44
80:DC:20:ARG:HD3	80:DC:20:ARG:HA	1.69	0.44
80:DC:75:ILE:HD12	80:DC:77:LEU:HD11	1.99	0.44
80:DC:490:GLN:OE1	80:DC:521:TYR:OH	2.30	0.44
80:DC:637:GLY:HA2	80:DC:668:GLN:HE22	1.83	0.44
1:BA:183:ARG:NH2	1:BA:190:ASP:HA	2.33	0.44
2:BB:23:PRO:O	2:BB:26:ARG:NH1	2.51	0.44
6:BH:141:ARG:HG3	13:BW:51:GLU:HG3	1.98	0.44
7:BI:98:LYS:HD3	7:BI:172:ARG:HG2	1.98	0.44
8:BJ:108:ARG:HG2	8:BJ:145:SER:HA	1.99	0.44
9:BL:34:TRP:CE3	34:B5:249:U:H5	2.35	0.44
15:BY:21:LYS:HB2	15:BY:75:VAL:HG22	1.99	0.44
19:BD:113:LEU:HD23	19:BD:118:ALA:HB2	1.99	0.44
20:BF:40:ILE:HG23	20:BF:69:PHE:HD1	1.82	0.44
20:BF:122:ASN:HD22	20:BF:129:PRO:HD3	1.83	0.44
23:BQ:143:ARG:O	34:B5:1195:C:N4	2.37	0.44
25:BS:30:TYR:HE2	34:B5:1539:G:C8	2.35	0.44
26:BT:3:GLY:HA2	34:B5:1360:A:N3	2.33	0.44
26:BT:69:LYS:HG2	34:B5:1367:G:H5"	1.99	0.44
26:BT:119:LYS:NZ	34:B5:1368:G:OP1	2.50	0.44
31:Bg:59:ARG:HE	31:Bg:96:THR:HA	1.81	0.44
34:B5:829:A:H2	34:B5:842:C:N4	2.16	0.44
34:B5:1196:A:H4'	34:B5:1197:C:H5"	1.99	0.44
34:B5:1214:U:H5'	34:B5:1215:C:OP2	2.18	0.44
34:B5:1340:U:C5	34:B5:1378:U:H4'	2.53	0.44
34:B5:1346:A:C5	34:B5:1370:U:H5"	2.53	0.44
34:B5:1619:C:H2'	34:B5:1620:C:H6	1.82	0.44
35:AA:15:ILE:HD13	38:A1:911:C:H5"	2.00	0.44
35:AA:150:LEU:HG	38:A1:2157:G:C5	2.53	0.44
37:AC:169:LEU:HD22	37:AC:249:ILE:HD13	1.99	0.44
37:AC:187:LEU:HD23	38:A1:1419:A:C8	2.53	0.44
38:A1:532:A:H2'	38:A1:533:A:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:612:U:H4'	42:AE:21:THR:HG21	1.99	0.44
38:A1:666:A:H2'	38:A1:667:C:O4'	2.18	0.44
38:A1:929:A:O2'	72:Aj:49:TRP:O	2.36	0.44
38:A1:1592:G:OP2	69:Ag:37:LYS:NZ	2.43	0.44
38:A1:1765:U:H3'	54:AR:43:LYS:HE3	2.00	0.44
38:A1:2207:A:N3	38:A1:2209:U:H5	2.15	0.44
38:A1:2294:U:C2	38:A1:2297:U:C5	3.06	0.44
38:A1:2463:G:C2	38:A1:2494:A:H8	2.36	0.44
38:A1:2565:U:H2'	38:A1:2566:C:C6	2.52	0.44
38:A1:2703:A:H1'	47:AJ:142:LYS:NZ	2.33	0.44
38:A1:2812:C:H2'	38:A1:2813:A:C8	2.53	0.44
38:A1:3175:U:H4'	38:A1:3176:G:H5'	2.00	0.44
38:A1:3187:A:H2	38:A1:3205:G:H22	1.64	0.44
38:A1:3275:U:C2	68:Af:64:ILE:HG21	2.53	0.44
39:A3:62:U:H5"	41:AD:277:LEU:HD12	1.99	0.44
41:AD:34:LYS:HA	56:AT:27:LEU:HD21	1.99	0.44
46:AI:163:GLN:OE1	46:AI:163:GLN:N	2.50	0.44
49:AM:36:VAL:HG11	49:AM:55:ARG:NH2	2.33	0.44
62:AZ:56:LYS:HD2	62:AZ:56:LYS:HA	1.83	0.44
65:Ac:47:ASN:HB2	65:Ac:73:GLY:HA2	1.99	0.44
68:Af:59:VAL:HB	68:Af:65:ARG:HH21	1.83	0.44
69:Ag:8:ARG:HG3	69:Ag:8:ARG:NH1	2.33	0.44
69:Ag:91:ARG:HG2	69:Ag:91:ARG:HH11	1.82	0.44
73:Ak:42:LYS:HA	73:Ak:54:LEU:O	2.18	0.44
79:E:98:LYS:NZ	79:E:102:LYS:HD3	2.32	0.44
79:E:186:SER:O	79:E:190:PHE:HD1	2.01	0.44
80:DC:163:ALA:HB1	80:DC:166:GLU:HB2	1.99	0.44
81:EC:6767:G:H1'	81:EC:6824:C:H42	1.82	0.44
81:EC:6854:U:H3'	81:EC:6854:U:OP2	2.18	0.44
2:BB:141:ALA:HB2	2:BB:210:ILE:HG23	1.99	0.44
2:BB:157:GLN:HB2	2:BB:160:HIS:ND1	2.33	0.44
4:BE:69:HIS:CE1	15:BY:17:LEU:HD23	2.53	0.44
8:BJ:89:ASP:CG	8:BJ:90:LYS:H	2.24	0.44
15:BY:42:GLU:HG2	15:BY:52:LYS:HE2	1.99	0.44
22:BP:78:THR:OG1	34:B5:1241:G:O2'	2.30	0.44
31:Bg:156:VAL:HA	31:Bg:169:ILE:HA	2.00	0.44
34:B5:19:A:H2'	34:B5:20:G:O4'	2.17	0.44
34:B5:45:U:H2'	34:B5:46:A:H2'	1.99	0.44
34:B5:580:A:O2'	34:B5:582:U:OP2	2.35	0.44
34:B5:847:A:H2'	34:B5:848:C:O4'	2.18	0.44
34:B5:900:A:H2'	34:B5:901:G:H8	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:946:U:H2'	34:B5:947:U:C6	2.53	0.44
34:B5:1407:U:H2'	34:B5:1408:G:C8	2.53	0.44
35:AA:97:ASN:HD21	78:Ap:87:ARG:HH21	1.66	0.44
35:AA:144:ASN:OD1	35:AA:160:SER:HB2	2.16	0.44
36:AB:58:ARG:HE	36:AB:74:GLU:CD	2.25	0.44
37:AC:25:VAL:HG23	37:AC:276:LEU:HD21	1.98	0.44
38:A1:269:G:OP2	50:AN:44:ARG:NH1	2.47	0.44
38:A1:1709:C:H2'	38:A1:1710:C:C6	2.52	0.44
38:A1:1913:A:N3	38:A1:2120:A:H2'	2.33	0.44
38:A1:1925:U:O4	38:A1:2319:U:O2'	2.24	0.44
38:A1:2279:A:H2	38:A1:2305:G:C8	2.36	0.44
38:A1:2454:G:H21	38:A1:2455:U:H1'	1.82	0.44
38:A1:2655:U:H4'	38:A1:2656:A:O4'	2.17	0.44
38:A1:2941:A:H8	38:A1:2941:A:OP2	1.99	0.44
38:A1:3035:A:H4'	45:AH:122:LYS:NZ	2.33	0.44
38:A1:3277:U:N3	68:Af:62:SER:OG	2.47	0.44
39:A3:69:C:H2'	39:A3:70:U:C6	2.53	0.44
39:A3:97:A:H2'	39:A3:98:C:C6	2.53	0.44
43:AF:98:LYS:HB3	43:AF:99:PRO:HD3	2.00	0.44
47:AJ:45:PRO:HB3	47:AJ:69:VAL:HB	2.00	0.44
60:AX:64:GLU:HB2	60:AX:85:GLN:O	2.18	0.44
66:Ad:78:LYS:HG3	66:Ad:90:PHE:CE1	2.52	0.44
70:Ah:18:ALA:O	70:Ah:22:VAL:HG23	2.18	0.44
80:DC:21:ASN:N	80:DC:123:ASP:OD2	2.51	0.44
80:DC:354:GLU:HG3	80:DC:355:GLN:NE2	2.33	0.44
80:DC:685:ARG:NE	80:DC:687:ASN:OD1	2.51	0.44
80:DC:723:LYS:HA	80:DC:808:PRO:CD	2.47	0.44
80:DC:823:ARG:HD3	80:DC:829:LYS:O	2.17	0.44
2:BB:48:VAL:HG22	2:BB:49:ASN:ND2	2.33	0.44
2:BB:115:ARG:H	2:BB:118:GLN:NE2	2.16	0.44
4:BE:64:ILE:HD11	15:BY:18:LEU:CD2	2.39	0.44
8:BJ:129:ILE:HA	8:BJ:134:ILE:HB	1.99	0.44
8:BJ:136:VAL:HG13	8:BJ:137:GLY:N	2.33	0.44
13:BW:118:ARG:NH1	34:B5:686:C:O2'	2.51	0.44
15:BY:15:ASN:ND2	15:BY:18:LEU:HD23	2.33	0.44
23:BQ:123:ARG:HH11	34:B5:1337:A:H5'	1.83	0.44
28:BZ:54:VAL:HA	28:BZ:57:TYR:CD2	2.53	0.44
29:Bc:32:PHE:CZ	29:Bc:59:SER:HB3	2.52	0.44
33:BM:63:VAL:HG13	33:BM:119:SER:O	2.18	0.44
33:BM:68:GLU:HB3	33:BM:71:ILE:HG12	1.99	0.44
34:B5:1516:A:O2'	34:B5:1517:U:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1523:G:OP2	34:B5:1523:G:N2	2.45	0.44
35:AA:65:ASP:OD1	35:AA:72:ARG:CZ	2.65	0.44
35:AA:70:ARG:HG3	35:AA:72:ARG:HH12	1.83	0.44
36:AB:166:ILE:HD13	36:AB:173:GLN:HG2	2.00	0.44
38:A1:73:C:C4	71:Ai:15:LYS:HD3	2.53	0.44
38:A1:432:G:H2'	38:A1:433:A:C8	2.52	0.44
38:A1:629:U:H2'	38:A1:630:A:C8	2.53	0.44
38:A1:1392:G:H1'	38:A1:1418:A:N6	2.32	0.44
38:A1:1412:G:OP1	67:Ae:105:ARG:NH2	2.51	0.44
38:A1:2117:A:C8	38:A1:3064:U:H1'	2.53	0.44
38:A1:2235:C:C2	38:A1:2236:G:C8	3.06	0.44
38:A1:2254:U:O2'	38:A1:2261:G:O6	2.36	0.44
38:A1:2553:U:H3'	38:A1:2554:A:H5"	2.00	0.44
38:A1:2612:U:H2'	38:A1:2613:U:O4'	2.18	0.44
38:A1:2622:C:H2'	38:A1:2623:G:O4'	2.17	0.44
38:A1:2692:A:H8	38:A1:2692:A:O5'	2.01	0.44
38:A1:2842:U:O2	38:A1:2842:U:H2'	2.17	0.44
38:A1:2858:U:H2'	38:A1:2859:U:C6	2.53	0.44
38:A1:3174:A:OP2	68:Af:97:SER:OG	2.26	0.44
42:AE:68:PRO:HB2	42:AE:71:VAL:HG23	1.99	0.44
47:AJ:53:THR:HG23	47:AJ:61:ARG:HE	1.82	0.44
62:AZ:24:VAL:HG11	62:AZ:87:LEU:HB3	1.99	0.44
71:Ai:26:ILE:HD12	71:Ai:29:LYS:HE3	1.99	0.44
71:Ai:86:LYS:HD2	71:Ai:90:MET:HE3	1.99	0.44
79:E:201:VAL:O	79:E:203:SER:N	2.49	0.44
80:DC:561:VAL:HG21	80:DC:774:VAL:HG21	2.00	0.44
6:BH:68:ALA:O	6:BH:72:LYS:HG2	2.18	0.44
8:BJ:86:LEU:HD12	8:BJ:99:LEU:HD11	1.99	0.44
14:BX:17:VAL:HG22	14:BX:20:ARG:NH2	2.32	0.44
14:BX:125:VAL:HG12	14:BX:126:LYS:HG3	2.00	0.44
16:Ba:11:ASN:HD21	34:B5:934:C:H4'	1.83	0.44
20:BF:81:ARG:CD	34:B5:1615:C:H5"	2.47	0.44
25:BS:48:LYS:HE2	25:BS:48:LYS:HB3	1.88	0.44
26:BT:58:ALA:HB1	26:BT:108:LEU:HD21	2.00	0.44
31:Bg:19:TRP:HB2	31:Bg:38:ARG:HB2	1.99	0.44
31:Bg:181:TRP:CE2	31:Bg:188:ILE:HD13	2.53	0.44
34:B5:107:C:H5"	34:B5:383:G:O2'	2.18	0.44
34:B5:477:A:C4	34:B5:478:A:C2	3.06	0.44
34:B5:586:G:H2'	34:B5:587:C:C6	2.53	0.44
34:B5:610:G:H2'	34:B5:610:G:N3	2.33	0.44
34:B5:872:G:H2'	34:B5:873:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1241:G:H3'	34:B5:1242:A:H8	1.83	0.44
34:B5:1384:A:H2'	34:B5:1385:G:O4'	2.17	0.44
34:B5:1513:G:H1'	34:B5:1518:C:O2	2.18	0.44
36:AB:87:VAL:O	36:AB:107:ALA:N	2.50	0.44
37:AC:163:LYS:NZ	38:A1:209:A:P	2.91	0.44
38:A1:259:C:H6	38:A1:259:C:H2'	1.61	0.44
38:A1:1090:G:H2'	38:A1:1091:A:C8	2.52	0.44
38:A1:2125:A:H2'	38:A1:2126:A:O4'	2.18	0.44
38:A1:2263:C:O2'	38:A1:2264:PSU:OP2	2.33	0.44
38:A1:2778:G:C6	38:A1:2779:A:C2	3.06	0.44
38:A1:2937:G:H2'	38:A1:2938:G:O4'	2.18	0.44
49:AM:46:ILE:HD13	49:AM:58:ILE:HG21	2.00	0.44
49:AM:80:THR:O	49:AM:84:LYS:HG2	2.18	0.44
56:AT:57:TYR:HA	56:AT:60:LYS:HG3	2.00	0.44
68:Af:17:GLN:O	68:Af:24:ASN:N	2.36	0.44
69:Ag:20:ILE:HD12	69:Ag:32:ALA:HB1	2.00	0.44
69:Ag:98:GLN:HA	69:Ag:101:VAL:HG22	2.00	0.44
70:Ah:13:SER:H	70:Ah:16:GLN:NE2	2.16	0.44
70:Ah:92:LEU:HD22	70:Ah:96:GLU:HB3	1.99	0.44
70:Ah:119:LYS:HB2	70:Ah:119:LYS:HE2	1.79	0.44
79:E:212:PRO:HG2	79:E:214:PHE:CE1	2.53	0.44
80:DC:666:ALA:HB3	80:DC:709:MET:SD	2.58	0.44
81:EC:6763:C:H2'	81:EC:6764:C:H6	1.82	0.44
1:BA:11:PRO:HG3	24:BR:118:PRO:HG2	1.98	0.43
4:BE:7:LYS:HD3	34:B5:450:U:H5"	2.00	0.43
7:BI:56:ARG:NE	7:BI:174:GLY:O	2.50	0.43
8:BJ:23:ARG:O	8:BJ:26:ALA:N	2.50	0.43
8:BJ:80:LEU:HA	8:BJ:83:VAL:HG12	1.99	0.43
10:BN:4:MET:HE1	34:B5:866:G:O3'	2.17	0.43
11:BO:84:ARG:HG2	11:BO:84:ARG:HH11	1.83	0.43
16:Ba:18:VAL:HG21	16:Ba:33:ASP:OD2	2.18	0.43
23:BQ:127:LYS:HD3	23:BQ:131:GLY:O	2.18	0.43
23:BQ:139:GLN:NE2	34:B5:1579:U:H1'	2.33	0.43
29:Bc:42:ARG:NH2	29:Bc:61:ARG:HH22	2.16	0.43
31:Bg:93:ASP:HB2	31:Bg:100:TYR:CE1	2.53	0.43
34:B5:52:U:H2'	34:B5:53:G:H8	1.81	0.43
34:B5:990:C:H2'	34:B5:991:G:O4'	2.18	0.43
34:B5:1120:U:H2'	34:B5:1121:C:C6	2.53	0.43
34:B5:1160:A:H2'	34:B5:1161:C:C6	2.52	0.43
34:B5:1340:U:H4'	34:B5:1341:A:H5"	2.00	0.43
34:B5:1396:U:H3	34:B5:1402:G:H1	1.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1556:A:H1'	34:B5:1560:U:OP2	2.18	0.43
34:B5:1607:G:H2'	34:B5:1608:U:C6	2.53	0.43
38:A1:29:C:H4'	38:A1:62:A:H4'	2.00	0.43
38:A1:33:G:OP1	50:AN:73:ARG:NH1	2.51	0.43
38:A1:1471:U:C5'	54:AR:5:ARG:HH11	2.30	0.43
38:A1:1503:A:C4	38:A1:1504:A:C8	3.06	0.43
38:A1:1676:A:C6	38:A1:1677:G:N7	2.86	0.43
38:A1:1679:A:OP1	57:AU:94:ARG:HD2	2.17	0.43
38:A1:3217:C:C6	52:AP:182:ILE:HD11	2.52	0.43
38:A1:3325:G:OP1	66:Ad:70:ARG:NH1	2.50	0.43
40:A4:95:G:OP2	72:Aj:72:ARG:NE	2.39	0.43
43:AF:163:LEU:O	43:AF:165:ASP:N	2.50	0.43
44:AG:64:ILE:O	44:AG:68:ARG:HG2	2.18	0.43
44:AG:91:PHE:O	44:AG:95:ASN:ND2	2.51	0.43
44:AG:138:HIS:O	44:AG:142:LEU:HG	2.18	0.43
45:AH:3:TYR:HA	55:AS:142:GLN:HE22	1.83	0.43
45:AH:120:ASP:OD1	45:AH:121:LYS:N	2.51	0.43
46:AI:113:GLN:HG2	46:AI:116:ARG:HB3	2.00	0.43
56:AT:131:GLN:OE1	56:AT:131:GLN:HA	2.17	0.43
58:AV:13:ILE:HG23	58:AV:85:TRP:CG	2.53	0.43
61:AY:118:LEU:HD11	61:AY:122:LYS:HD2	2.00	0.43
62:AZ:33:SER:OG	62:AZ:35:SER:O	2.33	0.43
62:AZ:68:ILE:O	62:AZ:115:LYS:HE2	2.18	0.43
79:E:32:VAL:HA	79:E:208:SER:HA	1.99	0.43
80:DC:32:LYS:NZ	83:DC:901:GDP:O3B	2.39	0.43
80:DC:436:LEU:HB3	80:DC:443:GLU:OE2	2.18	0.43
80:DC:644:ASN:OD1	80:DC:683:SER:N	2.51	0.43
80:DC:648:ASP:OD1	80:DC:648:ASP:N	2.44	0.43
80:DC:773:PRO:O	80:DC:776:GLU:HG2	2.18	0.43
2:BB:105:PHE:CE2	2:BB:213:ARG:HA	2.53	0.43
6:BH:112:ARG:NH2	6:BH:117:THR:HA	2.33	0.43
7:BI:60:ILE:HB	7:BI:179:CYS:SG	2.59	0.43
11:BO:136:ARG:HB3	34:B5:1769:U:H1'	2.00	0.43
13:BW:114:GLU:HA	13:BW:117:ARG:NH1	2.32	0.43
18:Be:50:VAL:O	18:Be:50:VAL:HG12	2.18	0.43
19:BD:105:MET:HG2	19:BD:122:VAL:HG11	2.00	0.43
20:BF:92:ARG:HA	20:BF:95:ASN:HD22	1.84	0.43
22:BP:87:PRO:O	22:BP:90:ILE:HG12	2.18	0.43
24:BR:2:GLY:O	34:B5:1414:U:H5'	2.18	0.43
27:BU:101:LYS:HD3	27:BU:101:LYS:HA	1.76	0.43
28:BZ:92:ILE:HD11	28:BZ:102:THR:HG22	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:338:C:H2'	34:B5:339:C:H6	1.82	0.43
34:B5:1209:C:C4	34:B5:1455:G:N2	2.85	0.43
34:B5:1474:G:C2	34:B5:1475:A:C5	3.06	0.43
36:AB:55:THR:HG23	38:A1:3049:A:O2'	2.18	0.43
38:A1:180:C:H2'	38:A1:181:U:H6	1.83	0.43
38:A1:273:A:H2'	38:A1:274:G:H8	1.84	0.43
38:A1:538:G:H2'	38:A1:539:C:C6	2.52	0.43
38:A1:1393:A:N3	38:A1:1419:A:O2'	2.47	0.43
38:A1:2438:A:H2'	38:A1:2439:A:H8	1.83	0.43
38:A1:3356:G:H2'	38:A1:3357:U:C6	2.51	0.43
40:A4:16:G:HO2'	40:A4:17:A:P	2.40	0.43
43:AF:138:TYR:CE2	43:AF:233:GLU:HB2	2.54	0.43
53:AQ:67:ILE:HG23	53:AQ:81:VAL:HG21	1.99	0.43
67:Ae:11:LYS:HD3	67:Ae:11:LYS:HA	1.73	0.43
80:DC:161:ASP:C	80:DC:164:LEU:H	2.26	0.43
80:DC:465:LYS:HE3	80:DC:465:LYS:HB3	1.83	0.43
80:DC:538:LEU:HD12	80:DC:539:GLU:N	2.33	0.43
80:DC:708:THR:HA	80:DC:711:ARG:HG2	2.00	0.43
81:EC:6797:U:H3	81:EC:6886:A:H2'	1.83	0.43
2:BB:103:MET:H	2:BB:215:VAL:HG13	1.83	0.43
2:BB:216:LYS:HB2	2:BB:216:LYS:HE3	1.71	0.43
3:BC:170:ILE:HB	3:BC:197:TYR:HB2	2.00	0.43
4:BE:131:LEU:HA	4:BE:137:PRO:HA	2.00	0.43
4:BE:187:ARG:HH21	34:B5:752:A:C2'	2.30	0.43
11:BO:40:ALA:O	11:BO:42:VAL:N	2.51	0.43
18:Be:10:ARG:NH2	34:B5:567:A:OP1	2.50	0.43
24:BR:20:TYR:O	24:BR:24:LEU:HG	2.17	0.43
27:BU:102:ARG:HA	27:BU:102:ARG:HD3	1.71	0.43
31:Bg:63:GLY:HA2	34:B5:1341:A:P	2.58	0.43
36:AB:123:TYR:CE1	38:A1:3315:G:C5	3.06	0.43
38:A1:156:G:OP2	71:Ai:25:LYS:HB3	2.18	0.43
38:A1:617:G:H2'	38:A1:618:C:C6	2.54	0.43
38:A1:649:A:H2'	38:A1:650:C:C6	2.53	0.43
38:A1:800:G:H2'	38:A1:801:A:C8	2.53	0.43
38:A1:862:U:H2'	38:A1:863:C:H6	1.83	0.43
38:A1:1104:G:H2'	38:A1:1105:A:C8	2.54	0.43
38:A1:1408:G:OP1	67:Ae:33:ARG:NH2	2.44	0.43
38:A1:1684:U:OP1	57:AU:86:LYS:NZ	2.43	0.43
38:A1:2130:G:O4'	38:A1:2144:A:H4'	2.19	0.43
38:A1:2458:A:O2'	38:A1:2459:A:H5"	2.18	0.43
38:A1:2480:A:OP2	79:E:106:LYS:HD2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2671:A:O2'	47:AJ:98:ALA:N	2.51	0.43
38:A1:2688:U:OP1	41:AD:12:TYR:OH	2.20	0.43
38:A1:2735:PSU:H4'	56:AT:51:GLY:HA2	2.00	0.43
38:A1:2765:C:H2'	38:A1:2766:U:H6	1.83	0.43
38:A1:2824:G:H2'	38:A1:2825:C:C6	2.53	0.43
38:A1:3117:C:H2'	38:A1:3118:C:O4'	2.18	0.43
38:A1:3181:C:H2'	38:A1:3182:G:C8	2.52	0.43
38:A1:3256:G:H2'	38:A1:3257:C:C6	2.52	0.43
40:A4:57:C:O2'	40:A4:58:G:H5'	2.18	0.43
47:AJ:19:LEU:CD2	47:AJ:125:MET:HE1	2.48	0.43
48:AL:159:VAL:HB	63:Aa:96:LYS:NZ	2.33	0.43
53:AQ:5:HIS:CD2	53:AQ:9:GLN:HE21	2.36	0.43
71:Ai:57:LEU:O	71:Ai:61:ILE:HG12	2.18	0.43
74:Al:10:LYS:HA	74:Al:13:MET:HE3	2.00	0.43
80:DC:42:ARG:HH21	80:DC:332:ASP:H	1.66	0.43
80:DC:655:TYR:HA	80:DC:657:HIS:CE1	2.53	0.43
4:BE:133:LYS:O	4:BE:136:VAL:HG22	2.17	0.43
6:BH:129:LEU:HD23	6:BH:130:VAL:HG13	2.00	0.43
7:BI:25:ARG:NH1	34:B5:386:G:OP1	2.50	0.43
14:BX:93:LEU:HD12	14:BX:93:LEU:HA	1.74	0.43
19:BD:32:GLU:OE2	19:BD:57:ASP:HB2	2.17	0.43
19:BD:116:ARG:HD2	19:BD:120:TYR:OH	2.17	0.43
19:BD:190:ARG:NH1	19:BD:195:SER:OG	2.51	0.43
22:BP:79:HIS:HA	22:BP:97:TYR:HB3	2.00	0.43
25:BS:140:THR:HG22	25:BS:143:ARG:NH2	2.33	0.43
31:Bg:159:ASN:OD1	31:Bg:164:ASP:N	2.48	0.43
34:B5:432:G:OP2	80:DC:392:GLY:HA2	2.18	0.43
34:B5:486:G:N2	34:B5:501:U:O2	2.52	0.43
34:B5:816:G:N3	34:B5:817:A:C8	2.87	0.43
34:B5:1192:C:OP1	34:B5:1194:A:H5"	2.18	0.43
34:B5:1465:C:H2'	34:B5:1466:G:O4'	2.19	0.43
36:AB:55:THR:HG22	38:A1:3049:A:N3	2.33	0.43
38:A1:107:A:H2'	38:A1:108:A:O4'	2.18	0.43
38:A1:280:U:N3	38:A1:283:G:OP1	2.47	0.43
38:A1:351:A:N6	74:Al:35:ILE:HG23	2.33	0.43
38:A1:1155:C:O2'	38:A1:1197:A:N1	2.43	0.43
38:A1:1595:U:O2'	38:A1:1606:U:O2	2.36	0.43
38:A1:1629:U:H1'	62:AZ:115:LYS:NZ	2.33	0.43
38:A1:2113:A:H2'	38:A1:2114:C:O4'	2.17	0.43
38:A1:2144:A:H1'	38:A1:2281:A:N6	2.34	0.43
38:A1:3321:C:H2'	38:A1:3322:A:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:A3:7:G:C8	41:AD:22:ARG:HD2	2.53	0.43
41:AD:88:ILE:HG12	41:AD:243:ALA:HB2	2.01	0.43
41:AD:106:ALA:HB2	41:AD:166:ALA:HA	1.99	0.43
46:AI:48:LEU:HD22	46:AI:142:ASP:HA	2.01	0.43
50:AN:44:ARG:NH1	50:AN:120:TRP:O	2.51	0.43
60:AX:79:GLY:C	60:AX:81:ILE:HD12	2.43	0.43
60:AX:129:ASP:OD1	60:AX:130:TYR:HD1	2.02	0.43
63:Aa:139:ARG:HG3	63:Aa:139:ARG:NH1	2.33	0.43
65:Ac:25:LEU:HD21	65:Ac:83:LYS:HG3	2.00	0.43
78:Ap:17:ARG:H	78:Ap:17:ARG:HG2	1.65	0.43
79:E:102:LYS:O	79:E:106:LYS:HG2	2.18	0.43
80:DC:156:VAL:CG2	80:DC:334:LEU:HD21	2.49	0.43
4:BE:3:ARG:HG2	34:B5:399:A:H4'	2.01	0.43
5:BG:208:TYR:CE2	5:BG:212:LEU:HD11	2.53	0.43
7:BI:23:LYS:HG2	34:B5:386:G:OP1	2.18	0.43
7:BI:160:PHE:CE1	7:BI:165:LEU:HD11	2.53	0.43
10:BN:114:ARG:HA	10:BN:114:ARG:HD3	1.85	0.43
13:BW:35:ILE:O	13:BW:39:GLN:HG2	2.17	0.43
13:BW:81:VAL:HB	13:BW:125:ILE:HD11	1.99	0.43
17:Bb:65:THR:HB	17:Bb:72:LYS:HB3	2.00	0.43
19:BD:142:LEU:HB2	19:BD:148:LYS:NZ	2.33	0.43
20:BF:124:LEU:HA	81:EC:6863:C:H5"	2.00	0.43
22:BP:99:GLY:HA3	34:B5:1183:A:C6	2.53	0.43
26:BT:6:VAL:O	26:BT:6:VAL:HG13	2.19	0.43
26:BT:115:GLU:N	26:BT:115:GLU:OE1	2.51	0.43
31:Bg:86:ASP:OD1	31:Bg:86:ASP:N	2.51	0.43
31:Bg:264:SER:HB2	31:Bg:267:PRO:HD2	1.99	0.43
32:Bf:132:LEU:CD2	32:Bf:141:CYS:HA	2.49	0.43
34:B5:430:G:H2'	80:DC:390:ASP:O	2.17	0.43
34:B5:434:G:O2'	34:B5:436:A:N7	2.48	0.43
34:B5:1013:A:H2'	34:B5:1014:G:O4'	2.18	0.43
34:B5:1210:C:H2'	34:B5:1211:A:C8	2.54	0.43
37:AC:23:PRO:HD2	37:AC:26:PHE:CD2	2.54	0.43
37:AC:95:ARG:NH2	38:A1:366:A:OP1	2.35	0.43
38:A1:368:G:O2'	38:A1:369:A:H5'	2.19	0.43
38:A1:412:G:H2'	38:A1:413:U:C6	2.53	0.43
38:A1:580:C:H2'	38:A1:581:U:O4'	2.18	0.43
38:A1:881:C:H2'	38:A1:882:A:H8	1.84	0.43
38:A1:1294:A:O2'	38:A1:1295:G:H5"	2.18	0.43
38:A1:1462:A:H2'	38:A1:1463:U:C6	2.54	0.43
38:A1:1783:U:H2'	38:A1:1784:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2186:U:H5'	38:A1:2314:PSU:H5"	2.00	0.43
38:A1:2483:G:N3	38:A1:2485:A:C6	2.86	0.43
38:A1:2615:G:H2'	38:A1:2616:C:H6	1.83	0.43
38:A1:2738:A:H2'	38:A1:2739:A:C8	2.54	0.43
39:A3:13:A:H3'	39:A3:14:U:O2	2.19	0.43
39:A3:64:A:H5'	39:A3:65:G:H5"	1.99	0.43
40:A4:27:U:H2'	40:A4:28:C:C6	2.54	0.43
41:AD:268:GLU:HA	41:AD:271:LYS:HZ3	1.83	0.43
45:AH:150:SER:O	45:AH:154:VAL:HG12	2.18	0.43
46:AI:19:LYS:HD3	46:AI:26:VAL:HG11	2.01	0.43
54:AR:25:ASP:N	54:AR:25:ASP:OD1	2.51	0.43
60:AX:60:TYR:HE1	70:Ah:26:LYS:HD3	1.83	0.43
73:Ak:40:GLN:NE2	73:Ak:55:VAL:HG13	2.34	0.43
80:DC:312:LYS:HE2	80:DC:312:LYS:HB2	1.87	0.43
81:EC:6797:U:C4	81:EC:6886:A:C5	3.07	0.43
4:BE:98:ASN:HD21	4:BE:116:ASP:CG	2.27	0.43
4:BE:246:LEU:HD13	4:BE:250:GLU:HG3	1.99	0.43
4:BE:250:GLU:H	4:BE:250:GLU:CD	2.18	0.43
5:BG:51:LYS:NZ	5:BG:114:VAL:HB	2.33	0.43
6:BH:39:ARG:HD3	54:AR:187:GLU:C	2.43	0.43
6:BH:140:VAL:HG13	13:BW:52:TYR:HB3	2.00	0.43
6:BH:149:ILE:O	6:BH:149:ILE:HG13	2.19	0.43
7:BI:31:ARG:HD2	34:B5:332:U:OP1	2.19	0.43
7:BI:137:LYS:O	7:BI:141:ARG:NE	2.52	0.43
15:BY:37:LYS:HA	15:BY:40:LEU:HD12	1.99	0.43
19:BD:12:VAL:HG21	30:Bd:34:TYR:HB3	2.00	0.43
19:BD:134:CYS:N	19:BD:157:LEU:HD11	2.34	0.43
20:BF:20:PHE:CE1	20:BF:22:PRO:HG3	2.53	0.43
21:BK:8:ARG:HD2	21:BK:79:TYR:OH	2.18	0.43
21:BK:59:PHE:CE1	21:BK:64:TYR:CE2	3.06	0.43
34:B5:367:A:H2'	34:B5:368:U:O4'	2.19	0.43
34:B5:536:C:H2'	34:B5:537:G:C8	2.52	0.43
34:B5:774:A:P	34:B5:787:G:H1	2.42	0.43
34:B5:776:G:N1	34:B5:785:U:C2	2.86	0.43
34:B5:845:G:H4'	34:B5:846:G:H5'	2.01	0.43
34:B5:845:G:C4	34:B5:846:G:C6	3.07	0.43
34:B5:1156:C:H2'	34:B5:1157:A:C8	2.54	0.43
34:B5:1246:C:H2'	34:B5:1247:U:C6	2.52	0.43
34:B5:1394:G:H2'	34:B5:1395:G:C8	2.53	0.43
34:B5:1512:G:H2'	34:B5:1513:G:O4'	2.19	0.43
34:B5:1528:U:H2'	34:B5:1529:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:357:LYS:HE2	36:AB:357:LYS:HB2	1.91	0.43
37:AC:315:LYS:HB3	37:AC:320:ASN:HD22	1.83	0.43
38:A1:992:A:O2'	38:A1:993:G:H5'	2.17	0.43
38:A1:1434:G:H5'	38:A1:1437:C:C5	2.52	0.43
38:A1:1804:A:H2'	38:A1:1805:C:O4'	2.18	0.43
38:A1:2366:C:C2	38:A1:2382:G:N2	2.86	0.43
38:A1:2373:A:N3	38:A1:2824:G:O2'	2.45	0.43
38:A1:2520:A:H2'	38:A1:2521:U:C6	2.54	0.43
38:A1:2708:C:OP1	77:Ao:100:LYS:HD3	2.19	0.43
42:AE:92:SER:HB3	42:AE:94:GLU:OE1	2.19	0.43
42:AE:102:ASN:HB2	42:AE:104:GLU:OE2	2.19	0.43
46:AI:56:GLU:OE1	46:AI:56:GLU:HA	2.18	0.43
54:AR:106:LEU:HB3	54:AR:120:TYR:CE1	2.53	0.43
55:AS:13:ARG:O	55:AS:22:PRO:HG2	2.19	0.43
58:AV:24:ASN:O	58:AV:99:ALA:HA	2.18	0.43
60:AX:58:ASP:OD1	60:AX:58:ASP:N	2.43	0.43
60:AX:86:VAL:HG21	60:AX:95:ILE:HD11	2.00	0.43
66:Ad:44:MET:SD	66:Ad:77:ARG:HB2	2.58	0.43
71:Ai:55:ARG:O	71:Ai:58:ILE:HG22	2.19	0.43
71:Ai:68:ARG:HA	71:Ai:71:LYS:HD2	2.01	0.43
79:E:142:ASP:OD1	79:E:143:ASP:N	2.52	0.43
80:DC:576:LEU:HD13	80:DC:585:ARG:HH22	1.83	0.43
81:EC:6777:C:H2'	81:EC:6778:C:C6	2.53	0.43
4:BE:192:ILE:HD11	4:BE:228:ILE:HG21	2.00	0.43
7:BI:153:GLU:HB3	7:BI:156:VAL:HG12	2.00	0.43
8:BJ:3:ARG:HE	8:BJ:4:ALA:N	2.16	0.43
8:BJ:40:LYS:HB3	8:BJ:40:LYS:HE2	1.88	0.43
8:BJ:169:PRO:HG2	8:BJ:174:ARG:HG3	1.99	0.43
10:BN:33:VAL:O	10:BN:37:ILE:HG13	2.19	0.43
10:BN:61:THR:HG22	17:Bb:32:PHE:CZ	2.54	0.43
14:BX:47:SER:OG	34:B5:599:A:N3	2.30	0.43
16:Ba:34:LYS:NZ	34:B5:1791:A:N7	2.67	0.43
16:Ba:51:ARG:O	16:Ba:55:GLU:N	2.45	0.43
18:Be:7:SER:HB3	18:Be:10:ARG:HH12	1.83	0.43
20:BF:92:ARG:HA	20:BF:95:ASN:ND2	2.33	0.43
22:BP:111:MET:HE1	25:BS:119:ILE:HG23	2.01	0.43
26:BT:78:LYS:HA	26:BT:95:ASP:OD1	2.18	0.43
26:BT:121:GLY:O	26:BT:122:ARG:HD3	2.18	0.43
30:Bd:6:VAL:HA	30:Bd:9:SER:HB3	2.00	0.43
31:Bg:73:LEU:HD23	31:Bg:80:ALA:HA	2.01	0.43
34:B5:98:U:O2'	34:B5:99:C:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:559:C:H2’	34:B5:560:U:C6	2.53	0.43
34:B5:844:A:H5”	34:B5:845:G:C4	2.54	0.43
34:B5:1288:G:N7	34:B5:1314:U:O2’	2.36	0.43
34:B5:1370:U:H5	34:B5:1374:C:H41	1.65	0.43
34:B5:1671:A:H3’	34:B5:1672:G:H8	1.83	0.43
36:AB:153:LYS:HD2	36:AB:154:TYR:CE2	2.54	0.43
36:AB:193:ASP:O	36:AB:197:GLU:HG2	2.19	0.43
38:A1:146:U:H5”	38:A1:148:G:O4’	2.17	0.43
38:A1:201:A:H2’	38:A1:202:G:C8	2.52	0.43
38:A1:316:U:O4	71:Ai:28:TYR:HA	2.18	0.43
38:A1:534:U:O3’	55:AS:146:LYS:NZ	2.45	0.43
38:A1:1384:U:H2’	38:A1:1385:C:C6	2.54	0.43
38:A1:1672:U:H2’	38:A1:1673:G:H8	1.83	0.43
38:A1:2581:U:H2’	38:A1:2582:C:C6	2.54	0.43
38:A1:2802:A:C8	77:Ao:56:PRO:HA	2.54	0.43
38:A1:3296:A:H2’	38:A1:3297:U:C6	2.54	0.43
38:A1:3344:A:N6	38:A1:3361:G:H1’	2.34	0.43
39:A3:48:U:H1’	41:AD:222:LEU:HD22	2.00	0.43
39:A3:77:G:H1’	39:A3:78:U:H5	1.83	0.43
41:AD:160:PHE:CD2	41:AD:179:ARG:HB3	2.54	0.43
42:AE:175:LYS:HE3	42:AE:175:LYS:HB2	1.88	0.43
43:AF:120:THR:H	43:AF:123:THR:HG1	1.66	0.43
45:AH:47:LYS:HE2	49:AM:7:VAL:HG22	2.01	0.43
50:AN:45:PRO:O	50:AN:49:ARG:HG2	2.19	0.43
55:AS:136:LYS:NZ	55:AS:137:ARG:HH12	2.16	0.43
66:Ad:19:ARG:HB3	66:Ad:35:GLU:HG2	2.01	0.43
80:DC:385:MET:N	80:DC:385:MET:SD	2.91	0.43
80:DC:578:LYS:HG2	80:DC:582:LYS:HD2	2.00	0.43
80:DC:638:PRO:HD3	80:DC:644:ASN:HD22	1.84	0.43
81:EC:6882:G:H2’	81:EC:6883:A:C5	2.53	0.43
6:BH:34:LEU:HD11	6:BH:39:ARG:HH12	1.84	0.43
7:BI:195:ARG:HH11	7:BI:195:ARG:C	2.26	0.43
8:BJ:171:ARG:CZ	34:B5:537:G:C6	3.02	0.43
11:BO:13:VAL:O	11:BO:78:ALA:N	2.52	0.43
21:BK:24:LYS:HG2	21:BK:62:GLN:O	2.19	0.43
22:BP:47:ARG:NH1	34:B5:1553:G:N7	2.60	0.43
25:BS:47:CYS:SG	25:BS:48:LYS:N	2.91	0.43
26:BT:126:GLU:HG3	26:BT:130:ARG:HH22	1.83	0.43
28:BZ:62:VAL:HA	28:BZ:76:ALA:HB1	2.01	0.43
34:B5:168:A:H2’	34:B5:169:A:C8	2.54	0.43
34:B5:587:C:H2’	34:B5:588:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:895:G:N1	34:B5:918:U:H5	2.16	0.43
34:B5:1290:PSU:H2'	34:B5:1291:G:C8	2.54	0.43
34:B5:1552:U:O2	34:B5:1597:A:H2	2.02	0.43
34:B5:1668:G:H2'	34:B5:1669:U:H6	1.82	0.43
35:AA:220:GLY:O	38:A1:2245:C:O2'	2.36	0.43
36:AB:227:GLU:HA	38:A1:1887:A:H4'	2.00	0.43
37:AC:318:LEU:HD11	43:AF:146:GLN:HA	2.01	0.43
38:A1:19:U:H4'	50:AN:138:GLN:HG2	2.00	0.43
38:A1:429:U:H2'	38:A1:430:U:H6	1.84	0.43
38:A1:1279:C:H2'	38:A1:1280:C:O4'	2.19	0.43
38:A1:1818:U:C4	38:A1:1819:U:C4	3.07	0.43
38:A1:2225:U:H4'	77:Ao:36:PHE:CE2	2.54	0.43
38:A1:2376:G:H2'	38:A1:2377:G:C8	2.54	0.43
38:A1:2437:G:HO2'	38:A1:2438:A:P	2.40	0.43
38:A1:2493:U:C2'	38:A1:2494:A:H5"	2.49	0.43
38:A1:2722:U:O2'	56:AT:88:ARG:O	2.36	0.43
38:A1:3165:A:H3'	38:A1:3166:C:H5"	2.01	0.43
38:A1:3251:U:H2'	38:A1:3252:G:O4'	2.18	0.43
39:A3:44:C:H2'	39:A3:45:A:H8	1.83	0.43
44:AG:33:ASN:CG	44:AG:38:GLN:HG3	2.43	0.43
46:AI:182:ILE:HA	46:AI:185:ARG:CG	2.46	0.43
60:AX:129:ASP:OD1	60:AX:130:TYR:N	2.48	0.43
61:AY:89:LYS:HD3	61:AY:93:ALA:HB3	2.00	0.43
62:AZ:109:GLU:OE1	62:AZ:109:GLU:N	2.41	0.43
63:Aa:27:LYS:HB3	63:Aa:27:LYS:HE2	1.73	0.43
71:Ai:70:ARG:HD2	71:Ai:84:LYS:HG2	2.00	0.43
72:Aj:64:MET:HB3	72:Aj:68:LYS:HB3	2.00	0.43
77:Ao:7:THR:HB	77:Ao:22:GLN:HE21	1.84	0.43
80:DC:31:GLY:HA2	83:DC:901:GDP:N7	2.34	0.43
80:DC:130:ASP:OD1	80:DC:159:LYS:HD3	2.19	0.43
80:DC:225:PHE:HA	80:DC:228:ARG:HE	1.84	0.43
80:DC:515:ASP:HB3	80:DC:518:VAL:HG22	2.00	0.43
80:DC:664:VAL:O	80:DC:668:GLN:HG2	2.18	0.43
85:DC:903:SO1:H102	85:DC:903:SO1:H16	1.74	0.43
81:EC:6784:G:N2	81:EC:6812:C:C2	2.71	0.43
81:EC:6853:G:C6	81:EC:6875:C:N4	2.87	0.43
1:BA:15:GLN:HE22	24:BR:101:ASN:HB2	1.84	0.43
2:BB:168:ILE:O	2:BB:172:LEU:HD23	2.19	0.43
3:BC:145:GLY:O	13:BW:98:GLN:NE2	2.43	0.43
5:BG:7:TYR:HB2	5:BG:113:ILE:HD13	2.01	0.43
5:BG:145:PHE:HB2	5:BG:147:LEU:HG	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BH:13:PRO:HA	6:BH:14:THR:HA	1.83	0.43
7:BI:37:LYS:C	7:BI:59:ARG:HA	2.43	0.43
7:BI:74:LYS:HB2	7:BI:109:PHE:CE1	2.53	0.43
10:BN:128:TYR:OH	34:B5:963:A:H4'	2.19	0.43
23:BQ:123:ARG:NH1	34:B5:1337:A:H5'	2.34	0.43
31:Bg:46:LYS:HG2	31:Bg:58:VAL:HG11	2.01	0.43
31:Bg:46:LYS:HG2	31:Bg:58:VAL:HG21	2.00	0.43
34:B5:1196:A:H1'	34:B5:1602:C:O2'	2.19	0.43
34:B5:1575:G7M:O2'	34:B5:1576:A:P	2.77	0.43
36:AB:242:THR:HA	38:A1:2948:C:O2'	2.18	0.43
37:AC:191:LYS:N	38:A1:1380:G:OP1	2.35	0.43
37:AC:206:LEU:HB3	37:AC:248:VAL:HG22	2.00	0.43
38:A1:631:U:H2'	38:A1:632:G:H8	1.83	0.43
38:A1:760:G:H1'	38:A1:771:A:N6	2.33	0.43
38:A1:1143:A:H5'	38:A1:1368:U:H1'	2.00	0.43
38:A1:2229:A:H2'	38:A1:2230:C:O4'	2.19	0.43
38:A1:2446:U:H3	38:A1:2500:A:N6	2.17	0.43
38:A1:2677:G:N3	38:A1:2677:G:H2'	2.34	0.43
38:A1:3107:U:H2'	38:A1:3108:G:C8	2.52	0.43
38:A1:3182:G:H2'	38:A1:3183:A:C8	2.54	0.43
38:A1:3247:G:H2'	38:A1:3248:C:C6	2.54	0.43
38:A1:3392:U:H2'	38:A1:3393:U:C6	2.53	0.43
39:A3:28:C:OP1	47:AJ:137:ARG:HD3	2.19	0.43
44:AG:180:VAL:HG11	44:AG:186:LEU:HD21	2.00	0.43
45:AH:59:ASN:HD21	49:AM:41:GLN:NE2	2.16	0.43
46:AI:89:VAL:HG13	46:AI:136:PHE:HE1	1.83	0.43
48:AL:144:THR:HG21	70:Ah:118:ILE:HG21	2.00	0.43
63:Aa:14:HIS:CE1	67:Ae:36:LYS:HE3	2.54	0.43
65:Ac:24:THR:HG22	65:Ac:91:SER:HB2	2.01	0.43
66:Ad:53:PRO:O	66:Ad:57:GLN:OE1	2.37	0.43
69:Ag:74:ARG:NH2	69:Ag:82:ALA:HB2	2.34	0.43
80:DC:169:VAL:HG11	80:DC:174:LEU:HD13	2.00	0.43
80:DC:171:LYS:HZ2	80:DC:171:LYS:HG3	1.55	0.43
80:DC:229:TYR:OH	80:DC:276:PHE:HB3	2.19	0.43
80:DC:239:LYS:O	80:DC:243:ARG:N	2.48	0.43
80:DC:420:PRO:HG3	80:DC:476:HIS:CD2	2.53	0.43
2:BB:64:ARG:HD2	11:BO:36:LYS:CG	2.48	0.43
4:BE:10:LYS:HA	4:BE:27:TYR:HA	2.00	0.43
5:BG:210:GLN:O	5:BG:214:LYS:HG2	2.19	0.43
7:BI:146:ARG:NH1	7:BI:150:ALA:HB2	2.34	0.43
8:BJ:80:LEU:O	8:BJ:84:GLY:N	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:BJ:142:ASN:OD1	8:BJ:142:ASN:N	2.51	0.43
10:BN:58:HIS:CG	10:BN:59:GLY:H	2.36	0.43
21:BK:5:LYS:HB3	21:BK:5:LYS:HE3	1.76	0.43
22:BP:96:ILE:HB	22:BP:120:SER:HB2	2.01	0.43
28:BZ:49:ARG:NH1	28:BZ:52:LYS:HD3	2.33	0.43
29:Bc:52:ASP:OD1	29:Bc:53:ILE:N	2.47	0.43
34:B5:53:G:H2'	34:B5:54:C:C6	2.54	0.43
34:B5:481:A:C5'	34:B5:498:G:H22	2.31	0.43
34:B5:766:PSU:HN3	34:B5:770:A:H62	1.67	0.43
34:B5:1552:U:O2'	34:B5:1597:A:N3	2.44	0.43
36:AB:213:GLU:O	36:AB:281:LYS:HD3	2.18	0.43
38:A1:862:U:H2'	38:A1:863:C:C6	2.54	0.43
38:A1:936:A:H2'	38:A1:938:C:C4	2.54	0.43
38:A1:1103:A:C5	53:AQ:6:THR:HG21	2.54	0.43
38:A1:1126:G:H21	46:AI:115:MET:HE2	1.83	0.43
38:A1:1270:A:C2	80:DC:737:GLU:HB2	2.54	0.43
38:A1:1812:G:O6	62:AZ:64:LYS:HE3	2.18	0.43
38:A1:2292:U:H2'	38:A1:2293:C:C6	2.54	0.43
38:A1:2297:U:H2'	38:A1:2299:A:N7	2.34	0.43
38:A1:2527:G:H2'	38:A1:2528:G:C8	2.53	0.43
39:A3:25:G:H2'	39:A3:26:C:C6	2.54	0.43
40:A4:56:G:H2'	40:A4:57:C:O4'	2.18	0.43
44:AG:68:ARG:HD3	44:AG:237:ILE:O	2.19	0.43
46:AI:36:LEU:HD13	46:AI:73:ASN:HD22	1.84	0.43
46:AI:210:TYR:HA	46:AI:217:PHE:CE2	2.54	0.43
48:AL:113:VAL:O	48:AL:117:LYS:HG3	2.19	0.43
52:AP:94:LEU:HD23	52:AP:94:LEU:HA	1.74	0.43
52:AP:124:LYS:HG2	52:AP:141:SER:O	2.19	0.43
55:AS:75:PHE:O	55:AS:93:GLU:HA	2.18	0.43
58:AV:71:LYS:HB3	58:AV:71:LYS:HE3	1.77	0.43
59:AW:6:ASP:HB3	59:AW:11:ALA:H	1.84	0.43
78:Ap:27:LYS:HE2	78:Ap:27:LYS:HB3	1.89	0.43
80:DC:8:GLN:HG3	80:DC:9:MET:SD	2.59	0.43
80:DC:127:VAL:HG21	80:DC:143:LEU:HD13	2.01	0.43
80:DC:170:SER:HB2	80:DC:173:ASP:CB	2.49	0.43
80:DC:561:VAL:HG13	80:DC:563:TYR:CE1	2.53	0.43
81:EC:6813:A:H3'	81:EC:6814:G:H8	1.83	0.43
81:EC:6879:U:H5	81:EC:6880:G:O4'	2.02	0.43
1:BA:131:GLN:HA	1:BA:134:LYS:HE3	2.01	0.42
2:BB:121:ILE:CD1	2:BB:161:ILE:HD12	2.49	0.42
4:BE:108:ARG:NH2	34:B5:788:A:N7	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BH:114:ARG:HA	6:BH:117:THR:HG23	2.01	0.42
6:BH:154:LEU:HD11	6:BH:183:PHE:HD2	1.84	0.42
9:BL:40:LEU:HG	34:B5:246:G:C2	2.54	0.42
11:BO:111:ARG:NH1	16:Ba:57:SER:HA	2.34	0.42
16:Ba:7:SER:O	16:Ba:7:SER:OG	2.37	0.42
21:BK:4:PRO:HB2	21:BK:6:GLU:CD	2.44	0.42
23:BQ:36:ILE:HD12	23:BQ:48:VAL:HG23	2.01	0.42
34:B5:919:A:H2'	34:B5:920:U:H6	1.81	0.42
34:B5:1086:A:H2'	34:B5:1087:A:C8	2.54	0.42
34:B5:1504:G:H2'	34:B5:1505:A:C8	2.54	0.42
34:B5:1668:G:H2'	34:B5:1669:U:C6	2.54	0.42
34:B5:1682:U:HO2'	34:B5:1683:C:H6	1.66	0.42
34:B5:1733:C:H2'	34:B5:1734:U:C6	2.54	0.42
34:B5:1752:U:H2'	34:B5:1753:A:C8	2.54	0.42
36:AB:379:PHE:HD1	36:AB:380:MET:HE2	1.84	0.42
37:AC:81:GLY:O	38:A1:356:C:O2'	2.28	0.42
38:A1:36:C:O2'	38:A1:808:A:N1	2.50	0.42
38:A1:283:G:O6	38:A1:304:G:H1'	2.18	0.42
38:A1:602:A:H2'	38:A1:603:A:C8	2.54	0.42
38:A1:1086:C:H2'	38:A1:1087:G:O4'	2.19	0.42
38:A1:1329:U:O2'	38:A1:1330:A:O5'	2.35	0.42
38:A1:1584:U:H2'	38:A1:1585:C:H6	1.84	0.42
38:A1:1648:A:H2'	38:A1:1649:U:O4'	2.19	0.42
38:A1:1696:A:H2'	38:A1:1697:A:H8	1.83	0.42
38:A1:1743:G:H2'	38:A1:1744:G:C8	2.51	0.42
38:A1:3303:G:C6	38:A1:3305:A:C2	3.07	0.42
39:A3:3:U:OP1	39:A3:59:U:O2'	2.26	0.42
41:AD:126:GLU:OE1	41:AD:126:GLU:N	2.52	0.42
41:AD:173:VAL:O	41:AD:175:HIS:ND1	2.48	0.42
50:AN:180:PHE:O	50:AN:184:LYS:HG3	2.19	0.42
55:AS:12:ARG:HH21	56:AT:141:VAL:CG2	2.31	0.42
66:Ad:11:GLU:OE2	66:Ad:96:VAL:HG21	2.19	0.42
67:Ae:3:SER:HB3	67:Ae:71:HIS:CE1	2.54	0.42
77:Ao:10:THR:HB	77:Ao:23:HIS:ND1	2.34	0.42
80:DC:91:GLN:NE2	80:DC:347:THR:OG1	2.42	0.42
80:DC:784:LEU:HG	80:DC:792:ALA:HB1	2.01	0.42
1:BA:79:ARG:NH1	1:BA:164:ASN:HB3	2.31	0.42
5:BG:10:ASN:ND2	5:BG:128:THR:HA	2.34	0.42
15:BY:23:PHE:CE1	15:BY:73:GLY:HA3	2.54	0.42
20:BF:46:TRP:NE1	20:BF:119:ASP:OD1	2.49	0.42
25:BS:14:ILE:HG22	25:BS:23:ASP:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BS:41:ARG:NH2	26:BT:36:ILE:O	2.52	0.42
28:BZ:70:LYS:HD2	28:BZ:70:LYS:HA	1.83	0.42
31:Bg:214:ALA:HB2	31:Bg:243:LEU:HD21	2.00	0.42
32:Bf:80:ARG:O	80:DC:652:ALA:HB1	2.19	0.42
34:B5:1652:C:H2'	34:B5:1653:C:C6	2.53	0.42
34:B5:1671:A:H2'	34:B5:1672:G:O4'	2.20	0.42
34:B5:1770:U:H2'	34:B5:1771:U:H6	1.83	0.42
35:AA:118:GLU:O	35:AA:158:ILE:HG23	2.19	0.42
36:AB:120:LYS:N	38:A1:3296:A:OP1	2.49	0.42
36:AB:368:GLY:O	59:AW:17:ARG:NH1	2.46	0.42
38:A1:76:G:N3	48:AL:100:ARG:HD3	2.34	0.42
38:A1:921:A:C5	72:Aj:8:PHE:HE2	2.38	0.42
38:A1:3332:U:H2'	38:A1:3333:G:O4'	2.19	0.42
40:A4:101:U:H2'	40:A4:102:U:O4'	2.20	0.42
59:AW:51:TRP:CD1	59:AW:51:TRP:H	2.37	0.42
61:AY:74:TYR:CE2	61:AY:77:LYS:HB2	2.54	0.42
67:Ae:32:TRP:O	67:Ae:33:ARG:NH1	2.51	0.42
80:DC:384:LYS:HE3	80:DC:384:LYS:HB2	1.71	0.42
80:DC:729:PHE:O	80:DC:771:TYR:HA	2.19	0.42
81:EC:6881:U:O2'	81:EC:6883:A:P	2.77	0.42
2:BB:176:VAL:HG12	2:BB:177:GLN:N	2.34	0.42
4:BE:103:TYR:HE1	4:BE:109:PHE:CE2	2.37	0.42
5:BG:216:LEU:HD13	34:B5:242:U:OP1	2.19	0.42
6:BH:160:GLN:HA	6:BH:163:ASP:CG	2.44	0.42
8:BJ:127:VAL:HG11	34:B5:477:A:O2'	2.19	0.42
9:BL:123:VAL:HG21	9:BL:139:VAL:HG22	2.01	0.42
10:BN:140:LYS:HD2	10:BN:140:LYS:HA	1.78	0.42
12:BV:73:ALA:HB1	12:BV:79:LEU:HG	2.00	0.42
13:BW:31:SER:O	13:BW:35:ILE:HD12	2.18	0.42
13:BW:114:GLU:OE2	13:BW:115:GLU:N	2.53	0.42
15:BY:4:ALA:O	15:BY:32:ARG:NH1	2.52	0.42
15:BY:8:ARG:HG2	34:B5:780:A:H1'	2.00	0.42
20:BF:90:ILE:O	20:BF:94:THR:HG23	2.19	0.42
20:BF:142:PRO:O	20:BF:167:ARG:HG2	2.20	0.42
21:BK:83:PRO:HB2	21:BK:86:ILE:HB	2.01	0.42
23:BQ:143:ARG:HA	23:BQ:143:ARG:HD3	1.76	0.42
25:BS:14:ILE:HB	25:BS:21:ASN:OD1	2.19	0.42
25:BS:134:ARG:NH1	34:B5:1545:A:N7	2.67	0.42
26:BT:97:SER:HB3	26:BT:100:ILE:HG12	2.00	0.42
27:BU:28:SER:HB3	27:BU:34:LEU:HD13	2.01	0.42
31:Bg:66:HIS:ND1	31:Bg:85:TRP:HB2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BM:28:LEU:HD23	33:BM:136:ILE:HG12	2.01	0.42
34:B5:262:U:H2'	34:B5:263:C:C6	2.54	0.42
34:B5:445:A:N1	34:B5:462:G:O2'	2.45	0.42
34:B5:449:C:H2'	34:B5:450:U:H6	1.83	0.42
34:B5:502:U:H2'	34:B5:503:G:C8	2.54	0.42
34:B5:625:C:H2'	34:B5:626:U:C6	2.53	0.42
34:B5:625:C:O2'	34:B5:939:A:O2'	2.36	0.42
34:B5:870:C:H2'	34:B5:871:G:H8	1.84	0.42
34:B5:1077:C:H2'	34:B5:1078:C:H6	1.84	0.42
34:B5:1292:G:H2'	34:B5:1293:U:C6	2.54	0.42
34:B5:1375:A:H2'	34:B5:1376:C:C6	2.54	0.42
34:B5:1552:U:H2'	34:B5:1553:G:O4'	2.19	0.42
38:A1:599:C:H2'	38:A1:600:G:O4'	2.19	0.42
38:A1:677:A:N1	38:A1:703:G:O2'	2.33	0.42
38:A1:1005:G:H2'	38:A1:1006:A:O4'	2.19	0.42
38:A1:1069:C:H2'	38:A1:1070:U:H6	1.84	0.42
38:A1:1394:A:H4'	38:A1:1420:C:H4'	2.01	0.42
38:A1:1438:U:H2'	38:A1:1439:U:C6	2.55	0.42
38:A1:1458:U:O2'	66:Ad:56:ASN:ND2	2.52	0.42
38:A1:1595:U:C2	38:A1:1596:C:C5	3.07	0.42
38:A1:1686:U:P	57:AU:42:LYS:HZ1	2.39	0.42
38:A1:1710:C:H2'	38:A1:1711:C:C6	2.54	0.42
38:A1:1715:A:N7	65:Ac:84:LEU:HD11	2.34	0.42
38:A1:1778:G:O2'	38:A1:1780:G:OP2	2.31	0.42
38:A1:1908:A:H8	38:A1:1908:A:O5'	2.03	0.42
39:A3:114:U:H2'	39:A3:115:G:H8	1.85	0.42
40:A4:151:C:C5	60:AX:24:LEU:HD11	2.55	0.42
41:AD:283:ALA:HA	41:AD:286:VAL:HG12	2.01	0.42
54:AR:105:LEU:HD13	54:AR:135:LYS:HE3	2.01	0.42
58:AV:96:GLU:OE2	59:AW:23:ARG:HA	2.19	0.42
62:AZ:119:GLU:OE2	62:AZ:123:GLN:NE2	2.38	0.42
69:Ag:80:ARG:HE	69:Ag:88:ARG:HH21	1.67	0.42
73:Ak:40:GLN:HG2	73:Ak:56:ILE:O	2.19	0.42
80:DC:674:GLY:HA2	80:DC:681:MET:HE1	2.00	0.42
81:EC:6886:A:H5"	81:EC:6887:G:OP2	2.19	0.42
1:BA:198:MET:HB3	1:BA:200:ASP:OD1	2.20	0.42
3:BC:59:HIS:HB2	3:BC:61:LEU:CD2	2.49	0.42
3:BC:203:LYS:NZ	34:B5:16:G:O6	2.28	0.42
4:BE:114:ILE:HB	4:BE:118:GLU:OE2	2.20	0.42
6:BH:126:LEU:HD23	6:BH:126:LEU:HA	1.82	0.42
7:BI:172:ARG:NH1	34:B5:332:U:O4	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:BJ:86:LEU:HG	8:BJ:90:LYS:HZ2	1.84	0.42
8:BJ:134:ILE:O	8:BJ:140:ILE:HG23	2.20	0.42
8:BJ:176:ASN:OD1	8:BJ:177:ALA:N	2.52	0.42
9:BL:69:LYS:HB3	9:BL:69:LYS:HE3	1.73	0.42
10:BN:73:ARG:O	10:BN:76:LYS:HG3	2.18	0.42
15:BY:33:ALA:HA	34:B5:532:U:O2'	2.19	0.42
16:Ba:88:SER:OG	16:Ba:89:ARG:N	2.52	0.42
22:BP:45:PHE:HZ	22:BP:84:ILE:HB	1.84	0.42
24:BR:59:LYS:O	24:BR:63:LYS:NZ	2.50	0.42
26:BT:70:GLN:HG3	26:BT:121:GLY:H	1.84	0.42
27:BU:53:LYS:HB3	27:BU:92:ASP:HB2	2.00	0.42
28:BZ:58:ARG:HE	81:EC:6864:A:H5"	1.84	0.42
32:Bf:106:TYR:HB3	33:BM:74:LEU:HD11	2.01	0.42
33:BM:68:GLU:HB2	34:B5:1228:G:N2	2.34	0.42
33:BM:126:TRP:N	33:BM:127:GLY:HA2	2.34	0.42
34:B5:153:G:H2'	34:B5:154:G:H8	1.84	0.42
34:B5:301:A:H2'	34:B5:302:PSU:C6	2.54	0.42
34:B5:372:G:H1'	34:B5:612:U:O2	2.18	0.42
34:B5:536:C:H2'	34:B5:537:G:H8	1.85	0.42
34:B5:894:U:H2'	34:B5:895:G:C8	2.54	0.42
34:B5:1170:G:C2	34:B5:1171:A:C8	3.07	0.42
34:B5:1184:A:HO2'	34:B5:1209:C:HO2'	1.60	0.42
34:B5:1210:C:H2'	34:B5:1211:A:H8	1.84	0.42
34:B5:1222:C:H2'	34:B5:1223:A:H8	1.84	0.42
34:B5:1642:G:H5'	76:An:1:MET:HG3	2.01	0.42
34:B5:1687:U:H1'	34:B5:1715:G:C6	2.55	0.42
35:AA:182:ALA:HB2	38:A1:2148:U:O2'	2.19	0.42
36:AB:14:LEU:HD13	36:AB:262:TRP:CH2	2.54	0.42
37:AC:104:LYS:NZ	38:A1:800:G:O6	2.43	0.42
38:A1:54:C:H5"	38:A1:1548:C:H1'	2.00	0.42
38:A1:101:G:H2'	38:A1:102:C:O4'	2.17	0.42
38:A1:641:C:H2'	38:A1:642:U:O4'	2.19	0.42
38:A1:1090:G:H2'	38:A1:1091:A:H8	1.84	0.42
38:A1:1250:G:H5'	38:A1:1251:A:O5'	2.19	0.42
38:A1:1381:A:H2'	38:A1:1382:G:C8	2.53	0.42
38:A1:1658:G:O4'	38:A1:1796:G:H2'	2.20	0.42
38:A1:1709:C:C2	38:A1:1710:C:C5	3.08	0.42
38:A1:2421:U:H4'	77:Ao:53:GLN:HB3	2.01	0.42
38:A1:2746:A:N7	41:AD:153:THR:HG21	2.35	0.42
39:A3:71:G:H2'	39:A3:72:A:H8	1.84	0.42
40:A4:40:A:H2'	40:A4:41:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AI:95:HIS:O	46:AI:126:ALA:N	2.46	0.42
50:AN:18:VAL:HG23	50:AN:19:LEU:H	1.84	0.42
53:AQ:92:ARG:HG3	63:Aa:76:ASP:CB	2.48	0.42
56:AT:39:ILE:HD13	56:AT:102:ARG:HG2	2.01	0.42
56:AT:57:TYR:CG	56:AT:89:LEU:HD11	2.54	0.42
57:AU:77:LYS:HE3	57:AU:95:PHE:HD1	1.83	0.42
72:Aj:64:MET:CB	72:Aj:68:LYS:HB3	2.50	0.42
1:BA:56:LYS:HD3	12:BV:82:VAL:HG21	2.01	0.42
3:BC:162:CYS:SG	3:BC:212:LYS:HD2	2.59	0.42
3:BC:186:LYS:HE3	3:BC:186:LYS:HB3	1.79	0.42
7:BI:84:HIS:CE1	7:BI:90:LEU:HD13	2.55	0.42
8:BJ:128:LEU:HD21	8:BJ:158:PHE:HE1	1.84	0.42
8:BJ:139:GLN:HB2	15:BY:64:PHE:CE2	2.55	0.42
9:BL:42:PHE:HD1	9:BL:141:LYS:HE2	1.85	0.42
13:BW:31:SER:OG	13:BW:33:VAL:HG12	2.19	0.42
19:BD:179:GLN:NE2	34:B5:579:A:C5	2.87	0.42
20:BF:62:VAL:HG23	20:BF:62:VAL:O	2.19	0.42
22:BP:56:PHE:CD1	22:BP:83:MET:HE1	2.54	0.42
27:BU:22:ILE:HG22	27:BU:93:LEU:O	2.19	0.42
28:BZ:48:ASP:OD1	28:BZ:49:ARG:N	2.53	0.42
28:BZ:64:VAL:HG22	81:EC:6862:G:C6	2.54	0.42
34:B5:13:C:H4’	34:B5:1298:U:O2	2.19	0.42
34:B5:153:G:C6	34:B5:162:A:C6	3.07	0.42
34:B5:484:C:H1’	34:B5:485:A:C8	2.54	0.42
34:B5:1087:A:H5’	34:B5:1298:U:C5	2.54	0.42
34:B5:1758:U:O2’	38:A1:2262:A:N6	2.45	0.42
36:AB:240:ARG:HH22	38:A1:874:U:P	2.42	0.42
37:AC:107:ARG:HA	38:A1:664:U:H5’	2.02	0.42
37:AC:163:LYS:HZ1	38:A1:208:C:H3’	1.85	0.42
37:AC:240:PRO:HB2	38:A1:1383:G:H4’	2.01	0.42
38:A1:32:U:H2’	38:A1:33:G:O4’	2.19	0.42
38:A1:1719:G:H2’	38:A1:1720:U:O4’	2.19	0.42
38:A1:2424:A:H2’	38:A1:2425:G:O4’	2.20	0.42
38:A1:2737:C:H4’	56:AT:68:THR:CG2	2.50	0.42
38:A1:2779:A:OP1	38:A1:2779:A:H4’	2.20	0.42
41:AD:55:PHE:CE1	41:AD:159:VAL:HA	2.54	0.42
45:AH:77:ASN:ND2	45:AH:151:VAL:HG11	2.34	0.42
54:AR:4:LEU:HD13	54:AR:24:LEU:HD23	2.02	0.42
58:AV:57:MET:HE3	58:AV:126:TRP:CH2	2.54	0.42
60:AX:100:LYS:HE3	60:AX:107:VAL:HG12	2.01	0.42
65:Ac:13:LYS:O	65:Ac:17:VAL:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:Ag:91:ARG:HG2	69:Ag:91:ARG:NH1	2.34	0.42
72:Aj:52:LYS:HE2	72:Aj:52:LYS:HB2	1.85	0.42
74:Al:23:LEU:HD23	74:Al:28:ARG:NE	2.33	0.42
75:Am:79:GLU:O	75:Am:81:SER:N	2.53	0.42
80:DC:736:PRO:HA	80:DC:791:GLN:CD	2.44	0.42
80:DC:753:GLN:NE2	80:DC:754:VAL:O	2.52	0.42
85:DC:903:SO1:H81	85:DC:903:SO1:H122	1.73	0.42
1:BA:195:TRP:CZ3	1:BA:197:ILE:HD11	2.55	0.42
3:BC:183:ALA:CB	3:BC:207:LEU:HD11	2.50	0.42
5:BG:177:ARG:NH1	34:B5:143:G:N7	2.63	0.42
7:BI:141:ARG:NH2	34:B5:196:G:O6	2.51	0.42
8:BJ:126:ARG:CZ	18:Be:33:ARG:HD3	2.49	0.42
8:BJ:131:GLN:HA	34:B5:513:U:O2'	2.20	0.42
8:BJ:137:GLY:HA2	8:BJ:155:HIS:CB	2.47	0.42
10:BN:115:LEU:HD23	10:BN:119:GLU:HG3	2.02	0.42
11:BO:22:SER:HB2	11:BO:86:THR:HB	2.00	0.42
11:BO:110:LEU:HD12	11:BO:111:ARG:H	1.83	0.42
13:BW:2:THR:HB	13:BW:3:ARG:H	1.70	0.42
14:BX:77:ILE:HG22	80:DC:502:PRO:HB3	2.02	0.42
18:Be:55:ARG:HB2	18:Be:58:PRO:HB3	2.02	0.42
18:Be:56:MET:O	34:B5:589:C:H4'	2.18	0.42
20:BF:46:TRP:CZ2	20:BF:119:ASP:HA	2.54	0.42
21:BK:4:PRO:HD2	21:BK:41:TYR:CE2	2.55	0.42
21:BK:26:ASP:HB2	21:BK:39:ASN:HD22	1.85	0.42
23:BQ:45:ARG:O	23:BQ:48:VAL:HG22	2.19	0.42
31:Bg:69:GLN:HB2	31:Bg:85:TRP:NE1	2.34	0.42
32:Bf:143:LYS:HB2	34:B5:1253:U:O2'	2.20	0.42
34:B5:151:G:O6	34:B5:164:A:N6	2.53	0.42
34:B5:185:U:H2'	34:B5:186:C:H6	1.84	0.42
34:B5:480:G:C2	34:B5:509:G:C2	3.08	0.42
34:B5:1158:C:N4	34:B5:1163:A:H61	2.15	0.42
34:B5:1471:A:C8	34:B5:1540:G:H1'	2.55	0.42
34:B5:1511:U:H2'	34:B5:1512:G:H8	1.83	0.42
34:B5:1552:U:H2'	34:B5:1553:G:C8	2.54	0.42
38:A1:159:A:H2'	38:A1:160:G:C8	2.54	0.42
38:A1:237:G:H2'	38:A1:238:A:C8	2.55	0.42
38:A1:432:G:H2'	38:A1:433:A:H8	1.84	0.42
38:A1:625:G:H2'	38:A1:626:U:C6	2.54	0.42
38:A1:655:C:OP2	67:Ae:27:ARG:HD3	2.19	0.42
38:A1:1235:U:H4'	38:A1:1239:C:H5	1.84	0.42
38:A1:1340:G:H2'	38:A1:1341:U:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1504:A:C5	38:A1:1505:C:C5	3.07	0.42
38:A1:1817:G:H2'	38:A1:1818:U:C6	2.55	0.42
38:A1:2118:C:H2'	38:A1:2119:A:O4'	2.19	0.42
38:A1:2233:A:H2'	38:A1:2234:G:O4'	2.19	0.42
38:A1:2447:A:C6	38:A1:2448:G:C6	3.07	0.42
38:A1:2676:A:H5'	38:A1:2677:G:N7	2.35	0.42
38:A1:3057:U:H4'	66:Ad:21:HIS:CE1	2.54	0.42
44:AG:91:PHE:CE2	44:AG:185:ARG:HB3	2.54	0.42
45:AH:187:ILE:HD13	45:AH:187:ILE:HA	1.84	0.42
46:AI:82:ARG:CZ	46:AI:82:ARG:HB3	2.48	0.42
46:AI:89:VAL:HG13	46:AI:136:PHE:CE1	2.55	0.42
47:AJ:157:GLU:HA	47:AJ:160:VAL:HG22	2.01	0.42
52:AP:58:ILE:N	52:AP:82:ARG:O	2.51	0.42
53:AQ:29:LEU:HD23	53:AQ:29:LEU:HA	1.87	0.42
53:AQ:34:THR:HA	53:AQ:49:LEU:HD22	2.02	0.42
54:AR:7:GLN:NE2	54:AR:36:ASN:HA	2.35	0.42
54:AR:37:SER:O	54:AR:41:ILE:HG12	2.20	0.42
54:AR:80:LYS:HA	54:AR:80:LYS:HD2	1.93	0.42
55:AS:32:SER:HB2	55:AS:36:ILE:HD12	2.00	0.42
61:AY:111:LEU:HG	61:AY:116:LYS:HG3	2.02	0.42
69:Ag:38:LEU:HA	69:Ag:38:LEU:HD12	1.78	0.42
70:Ah:6:ALA:HA	70:Ah:9:LEU:HB2	2.02	0.42
80:DC:73:THR:O	80:DC:103:ILE:HG23	2.19	0.42
80:DC:188:ILE:O	80:DC:192:TYR:HB2	2.20	0.42
80:DC:518:VAL:HA	80:DC:531:ALA:O	2.19	0.42
80:DC:554:LEU:HD23	80:DC:554:LEU:H	1.85	0.42
81:EC:6766:U:C2	81:EC:6825:A:N6	2.88	0.42
1:BA:63:ILE:HD13	12:BV:34:ILE:HG23	2.02	0.42
2:BB:34:ALA:HB3	2:BB:41:ARG:NH2	2.35	0.42
2:BB:121:ILE:HD12	2:BB:161:ILE:HG23	2.01	0.42
4:BE:87:MET:SD	4:BE:100:ARG:HD3	2.60	0.42
5:BG:175:ILE:HG22	34:B5:78:A:N3	2.35	0.42
7:BI:59:ARG:NH2	34:B5:1677:C:O3'	2.52	0.42
7:BI:81:VAL:HG22	7:BI:94:ASN:HA	2.01	0.42
17:Bb:20:LYS:HE2	34:B5:958:U:OP2	2.19	0.42
20:BF:200:ASN:O	20:BF:205:SER:HB3	2.19	0.42
25:BS:115:ARG:HE	25:BS:116:LEU:HD22	1.84	0.42
27:BU:26:LEU:O	27:BU:88:LYS:HA	2.19	0.42
27:BU:78:THR:HG21	34:B5:1281:G:H5"	2.02	0.42
27:BU:103:ILE:HA	27:BU:106:ILE:HG12	2.01	0.42
31:Bg:72:THR:OG1	31:Bg:81:LEU:HB3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Bf:97:LYS:HA	32:Bf:97:LYS:HD2	1.85	0.42
34:B5:74:U:O2'	34:B5:76:A:OP2	2.34	0.42
34:B5:244:A:H2'	34:B5:245:U:H6	1.85	0.42
34:B5:430:G:C3'	80:DC:390:ASP:O	2.68	0.42
34:B5:445:A:N6	34:B5:461:G:N2	2.68	0.42
34:B5:1208:A:H5'	34:B5:1209:C:OP2	2.19	0.42
34:B5:1373:C:H2'	34:B5:1374:C:C6	2.55	0.42
38:A1:187:A:H2'	38:A1:188:U:C6	2.55	0.42
38:A1:915:A:H8	38:A1:2136:C:O2'	2.03	0.42
38:A1:916:G:H5'	38:A1:917:A:OP1	2.20	0.42
38:A1:1593:A:N3	38:A1:1615:C:O2'	2.46	0.42
38:A1:1596:C:H2'	38:A1:1597:C:H6	1.84	0.42
38:A1:2152:A:H2'	38:A1:2153:U:C6	2.53	0.42
38:A1:2355:G:H4'	52:AP:139:TYR:CZ	2.54	0.42
38:A1:2368:A:H2'	38:A1:2369:G:H8	1.84	0.42
38:A1:3108:G:H21	45:AH:163:GLN:NE2	2.18	0.42
38:A1:3131:U:H2'	38:A1:3132:C:C6	2.55	0.42
40:A4:74:U:C4	61:AY:74:TYR:HD1	2.38	0.42
44:AG:195:SER:C	44:AG:197:VAL:H	2.28	0.42
45:AH:87:LYS:HG3	45:AH:145:VAL:HG13	2.01	0.42
48:AL:124:ILE:HG12	70:Ah:119:LYS:NZ	2.23	0.42
51:AO:84[A]:LEU:O	51:AO:87[A]:MET:HB2	2.20	0.42
54:AR:66:HIS:HE1	54:AR:70:LYS:HE3	1.84	0.42
55:AS:129:ILE:HG21	55:AS:135:VAL:HG22	2.00	0.42
58:AV:75:PRO:HG2	58:AV:105:PRO:HD3	2.00	0.42
60:AX:36:LYS:HB3	60:AX:36:LYS:HE2	1.79	0.42
70:Ah:32:LYS:O	70:Ah:35:LYS:HG2	2.20	0.42
73:Ak:70:PRO:HA	73:Ak:71:PRO:HD3	1.93	0.42
80:DC:82:SER:OG	80:DC:84:GLU:OE1	2.36	0.42
80:DC:502:PRO:HA	80:DC:505:VAL:HG12	2.02	0.42
80:DC:740:VAL:HA	80:DC:743:ILE:HD12	2.02	0.42
81:EC:6804:A:O2'	81:EC:6809:G:N1	2.53	0.42
81:EC:6839:U:H3'	81:EC:6840:A:O4'	2.19	0.42
1:BA:181:VAL:O	1:BA:185:ARG:N	2.53	0.42
2:BB:187:LYS:O	2:BB:190:PRO:HD2	2.19	0.42
4:BE:162:ILE:HG22	4:BE:164:LEU:H	1.84	0.42
4:BE:186:GLY:O	4:BE:189:LEU:HB2	2.19	0.42
13:BW:30:SER:O	13:BW:30:SER:OG	2.38	0.42
15:BY:47:VAL:HG12	15:BY:48:TYR:CD1	2.54	0.42
19:BD:11:LEU:HD23	19:BD:11:LEU:HA	1.93	0.42
23:BQ:22:VAL:HG22	23:BQ:65:ILE:HG23	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BQ:77:GLN:O	23:BQ:80:ALA:N	2.53	0.42
25:BS:42:TYR:HA	25:BS:85:PHE:HE1	1.85	0.42
31:Bg:38:ARG:HG3	31:Bg:67:ILE:HG23	2.02	0.42
32:Bf:121:CYS:HB3	32:Bf:126:CYS:HB3	1.80	0.42
33:BM:59:LEU:HB2	33:BM:123:VAL:CG2	2.44	0.42
33:BM:76:GLU:OE2	33:BM:90:LYS:NZ	2.52	0.42
33:BM:93:ASP:OD2	33:BM:95:LYS:HB2	2.20	0.42
34:B5:529:A:C6	34:B5:530:C:C4	3.07	0.42
34:B5:967:A:H2'	34:B5:968:U:C6	2.55	0.42
34:B5:1208:A:O2'	34:B5:1270:G:OP2	2.32	0.42
37:AC:3:ARG:HH21	37:AC:22:LEU:HB2	1.85	0.42
38:A1:69:C:O2'	38:A1:101:G:O2'	2.23	0.42
38:A1:153:U:O2'	38:A1:154:U:H5'	2.20	0.42
38:A1:1062:A:H5"	38:A1:1063:G:H5'	2.00	0.42
38:A1:1257:C:H3'	38:A1:1257:C:H6	1.85	0.42
38:A1:1612:A:H5"	73:Ak:51:LEU:CD2	2.50	0.42
38:A1:1632:A:H2'	38:A1:1633:C:C6	2.55	0.42
38:A1:1715:A:C8	65:Ac:84:LEU:HD21	2.55	0.42
38:A1:1864:A:OP1	54:AR:83:GLY:N	2.37	0.42
38:A1:2262:A:H2'	38:A1:2262:A:N3	2.35	0.42
38:A1:2909:U:H2'	38:A1:2910:A:O4'	2.20	0.42
39:A3:47:C:OP2	41:AD:158:ARG:HD3	2.20	0.42
40:A4:71:A:H4'	40:A4:72:A:O5'	2.20	0.42
41:AD:60:ILE:H	41:AD:80:SER:HB2	1.85	0.42
41:AD:117:GLU:OE1	41:AD:117:GLU:N	2.41	0.42
41:AD:117:GLU:O	41:AD:120:LYS:NZ	2.52	0.42
41:AD:180:PHE:HB3	41:AD:195:LEU:HD12	2.01	0.42
44:AG:152:LEU:HD22	44:AG:178:ALA:HB3	2.00	0.42
45:AH:104:VAL:HG23	45:AH:111:PHE:HB2	2.02	0.42
47:AJ:81:GLU:HB3	47:AJ:167:TYR:HE2	1.84	0.42
49:AM:89:ALA:HB1	49:AM:92:GLU:CD	2.44	0.42
50:AN:43:THR:HG23	50:AN:63:ARG:HH21	1.83	0.42
58:AV:136:VAL:O	58:AV:136:VAL:HG13	2.20	0.42
59:AW:37:ALA:O	59:AW:41:LYS:HG3	2.20	0.42
63:Aa:59:ARG:HE	63:Aa:59:ARG:HB2	1.59	0.42
69:Ag:26:PRO:C	69:Ag:28:GLY:H	2.28	0.42
76:An:1:MET:HE2	76:An:1:MET:HB3	1.78	0.42
80:DC:210:ALA:HB2	80:DC:337:MET:SD	2.60	0.42
80:DC:612:PHE:HA	80:DC:615:ARG:HG2	2.01	0.42
80:DC:659:ILE:O	80:DC:663:VAL:N	2.53	0.42
5:BG:173:PRO:HG3	34:B5:66:U:C5	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:BJ:2:PRO:HB2	8:BJ:3:ARG:H	1.65	0.42
11:BO:41:ARG:NH1	34:B5:917:U:O2	2.53	0.42
12:BV:5:LYS:O	12:BV:7:GLN:HG3	2.20	0.42
19:BD:39:VAL:HG22	19:BD:48:VAL:HG22	2.02	0.42
19:BD:105:MET:SD	19:BD:118:ALA:HB1	2.60	0.42
20:BF:188:LYS:HB3	20:BF:193:THR:OG1	2.19	0.42
23:BQ:36:ILE:O	23:BQ:39:VAL:HG12	2.19	0.42
27:BU:34:LEU:HD22	27:BU:87:HIS:HB2	2.01	0.42
28:BZ:54:VAL:CG2	28:BZ:88:ILE:HD12	2.50	0.42
33:BM:48:SER:O	33:BM:52:LEU:HG	2.20	0.42
34:B5:17:C:O2'	34:B5:1137:A:N1	2.47	0.42
34:B5:571:G:C8	34:B5:572:C:C5	3.08	0.42
36:AB:14:LEU:HD23	36:AB:14:LEU:HA	1.89	0.42
36:AB:237:LYS:NZ	36:AB:247:ARG:HG2	2.35	0.42
37:AC:109:TRP:CD1	48:AL:26:PHE:HE1	2.38	0.42
37:AC:112:LYS:HE2	37:AC:112:LYS:HB3	1.85	0.42
37:AC:174:ALA:HB2	37:AC:249:ILE:HD11	2.02	0.42
38:A1:515:C:H2'	38:A1:516:A:H8	1.85	0.42
38:A1:617:G:O2'	52:AP:171:ARG:NH2	2.53	0.42
38:A1:687:U:OP2	48:AL:36:ARG:NH1	2.38	0.42
38:A1:714:G:N1	63:Aa:72:VAL:HG11	2.34	0.42
38:A1:879:U:H4'	52:AP:132:ALA:HB3	2.00	0.42
38:A1:1190:A:H2'	38:A1:1190:A:N3	2.35	0.42
38:A1:1308:A:N3	38:A1:1311:G:H5"	2.35	0.42
38:A1:1855:U:H2'	38:A1:1856:C:C6	2.55	0.42
38:A1:1927:G:C8	78:Ap:16:VAL:HA	2.54	0.42
38:A1:1946:A:H2'	38:A1:1947:G:O4'	2.19	0.42
38:A1:2467:G:N3	38:A1:2468:A:C6	2.88	0.42
38:A1:2491:A:H1'	79:E:35:GLN:HE22	1.84	0.42
38:A1:2882:U:H2'	38:A1:2883:U:H6	1.81	0.42
41:AD:212:ALA:HB2	41:AD:219:PHE:CE1	2.55	0.42
42:AE:137:ASP:O	42:AE:141:VAL:HG23	2.19	0.42
49:AM:35:ILE:H	49:AM:35:ILE:HD12	1.85	0.42
55:AS:99:ARG:NH2	55:AS:126:VAL:HB	2.35	0.42
58:AV:40:LYS:HE3	58:AV:40:LYS:HB3	1.80	0.42
62:AZ:46:ILE:HG21	62:AZ:49:TYR:HA	2.02	0.42
63:Aa:59:ARG:HH22	77:Ao:38:GLN:NE2	2.17	0.42
65:Ac:68:TYR:OH	65:Ac:71:GLN:NE2	2.37	0.42
79:E:31:THR:HG21	79:E:168:ALA:HB1	2.01	0.42
80:DC:287:ALA:O	80:DC:291:PHE:N	2.52	0.42
80:DC:337:MET:O	80:DC:341:HIS:ND1	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6827:G:H2'	81:EC:6828:G:C8	2.55	0.42
81:EC:6853:G:C4	81:EC:6854:U:C5	3.08	0.42
1:BA:162:CYS:HB3	1:BA:173:ILE:HD13	2.02	0.42
1:BA:185:ARG:HA	1:BA:185:ARG:HD2	1.75	0.42
1:BA:188:LEU:HD23	1:BA:188:LEU:HA	1.73	0.42
2:BB:67:GLU:HA	2:BB:84:ILE:O	2.20	0.42
4:BE:64:ILE:HD12	15:BY:17:LEU:HB3	2.01	0.42
6:BH:67:LEU:HD13	6:BH:70:PHE:CD2	2.51	0.42
6:BH:126:LEU:HD13	6:BH:152:VAL:HG11	2.02	0.42
8:BJ:20:GLU:OE2	8:BJ:20:GLU:HA	2.19	0.42
8:BJ:123:HIS:CE1	18:Be:37:ARG:HH11	2.36	0.42
19:BD:70:THR:HG23	19:BD:86:LEU:HD13	2.02	0.42
19:BD:106:LYS:HD3	19:BD:107:PHE:CE1	2.55	0.42
21:BK:19:GLY:HA2	21:BK:68:LEU:HD23	2.02	0.42
22:BP:47:ARG:NH2	34:B5:1554:U:OP2	2.51	0.42
22:BP:60:LEU:HB3	22:BP:64:LYS:HZ2	1.85	0.42
23:BQ:13:LYS:HD2	23:BQ:13:LYS:HA	1.85	0.42
25:BS:30:TYR:HD2	34:B5:1539:G:C4	2.38	0.42
25:BS:37:GLY:H	34:B5:1567:U:H5"	1.85	0.42
25:BS:114:GLU:HA	25:BS:117:LYS:HD2	2.00	0.42
34:B5:407:A:H2'	34:B5:408:C:C6	2.55	0.42
34:B5:489:C:N3	34:B5:499:U:H5"	2.35	0.42
34:B5:560:U:H2'	34:B5:561:G:H8	1.85	0.42
34:B5:626:U:H2'	34:B5:627:C:H6	1.85	0.42
34:B5:642:G:H2'	34:B5:643:G:H8	1.84	0.42
34:B5:775:G:C2	34:B5:786:C:C2	3.08	0.42
34:B5:833:U:H2'	34:B5:834:G:C8	2.54	0.42
34:B5:1170:G:C6	34:B5:1574:G:C6	3.08	0.42
34:B5:1315:U:OP1	34:B5:1328:G:N2	2.34	0.42
34:B5:1373:C:H2'	34:B5:1374:C:H6	1.85	0.42
35:AA:46:LYS:HD2	35:AA:46:LYS:HA	1.72	0.42
36:AB:147:GLU:O	36:AB:151:ILE:HG13	2.19	0.42
36:AB:152:LYS:HE3	36:AB:192:VAL:HB	2.02	0.42
38:A1:252:U:O2'	38:A1:253:A:OP1	2.34	0.42
38:A1:269:G:O6	50:AN:15:GLN:HG2	2.19	0.42
38:A1:776:PSU:N1	38:A1:2737:C:N3	2.63	0.42
38:A1:1088:U:C2	38:A1:1089:G:C8	3.07	0.42
38:A1:1291:A:H2'	38:A1:1292:C:O4'	2.20	0.42
38:A1:1553:U:H4'	38:A1:1554:U:H5'	2.02	0.42
38:A1:1718:G:H2'	38:A1:1719:G:C8	2.54	0.42
38:A1:1822:C:H2'	38:A1:1823:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2455:U:H3'	38:A1:2456:A:H8	1.84	0.42
38:A1:3058:U:OP1	66:Ad:28:ARG:NH2	2.52	0.42
40:A4:6:U:H2'	40:A4:7:U:C6	2.55	0.42
40:A4:51:G:H4'	74:Al:21:ARG:NH2	2.35	0.42
40:A4:125:U:H3'	40:A4:126:A:H8	1.84	0.42
41:AD:111:GLN:HG2	41:AD:251:PRO:HG2	2.00	0.42
45:AH:55:VAL:HG13	45:AH:68:LEU:HD11	2.00	0.42
45:AH:92:TYR:HD2	45:AH:142:ASP:HB2	1.81	0.42
45:AH:98:PRO:HB2	80:DC:168:GLN:NE2	2.34	0.42
50:AN:46:ASP:OD1	50:AN:46:ASP:N	2.50	0.42
52:AP:115:SER:OG	52:AP:149:VAL:HG23	2.20	0.42
58:AV:46:LEU:HG	58:AV:47:ASN:HB2	2.02	0.42
67:Ae:20:HIS:HD2	67:Ae:35:GLN:HE21	1.68	0.42
79:E:118:LYS:HD2	81:EC:6770:U:O4	2.20	0.42
79:E:124:LEU:H	79:E:124:LEU:HD23	1.85	0.42
80:DC:311:GLU:HA	80:DC:314:LEU:HD13	2.02	0.42
80:DC:429:LYS:HD2	80:DC:462:PHE:CD2	2.55	0.42
80:DC:443:GLU:OE1	80:DC:443:GLU:N	2.53	0.42
7:BI:72:ILE:HD13	7:BI:112:TRP:CE2	2.55	0.41
8:BJ:171:ARG:CZ	34:B5:513:U:H3'	2.49	0.41
10:BN:47:PRO:HD2	10:BN:86:GLU:OE1	2.19	0.41
11:BO:71:CYS:SG	11:BO:110:LEU:HD22	2.60	0.41
19:BD:40:ARG:NH1	27:BU:109:GLU:HA	2.34	0.41
19:BD:141:LYS:HD2	19:BD:179:GLN:HB3	2.02	0.41
23:BQ:32:ASN:ND2	23:BQ:69:VAL:H	2.15	0.41
25:BS:111:ASP:O	25:BS:115:ARG:HG2	2.20	0.41
26:BT:121:GLY:C	26:BT:122:ARG:HD3	2.45	0.41
30:Bd:12:ARG:HH22	34:B5:1451:C:P	2.43	0.41
30:Bd:41:GLN:HG2	34:B5:1433:G:C8	2.55	0.41
31:Bg:6:VAL:O	31:Bg:315:VAL:HA	2.19	0.41
31:Bg:258:THR:O	31:Bg:275:ARG:NH1	2.49	0.41
32:Bf:131:PHE:HB2	34:B5:1253:U:OP1	2.20	0.41
33:BM:72:ILE:HA	33:BM:75:VAL:HG22	2.02	0.41
34:B5:517:U:O4	34:B5:518:A:N6	2.53	0.41
34:B5:691:C:H2'	34:B5:692:C:C6	2.55	0.41
34:B5:1325:A:H2'	34:B5:1326:A:H8	1.85	0.41
34:B5:1351:G:H2'	34:B5:1352:G:H8	1.85	0.41
34:B5:1525:A:H2'	34:B5:1526:A:O4'	2.19	0.41
34:B5:1579:U:H2'	34:B5:1580:C:C6	2.55	0.41
34:B5:1734:U:H3'	58:AV:32:ARG:HH22	1.84	0.41
36:AB:180:GLU:OE1	38:A1:3002:C:O2'	2.26	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:74:ILE:HG13	37:AC:75:PRO:HD2	2.02	0.41
37:AC:181:VAL:C	37:AC:183:LYS:H	2.28	0.41
38:A1:152:U:OP2	70:Ah:103:LYS:HB2	2.20	0.41
38:A1:207:U:H2'	38:A1:208:C:C6	2.55	0.41
38:A1:987:U:H2'	38:A1:988:U:H6	1.84	0.41
38:A1:1259:A:H2'	38:A1:1280:C:O2'	2.20	0.41
38:A1:1422:G:H21	42:AE:5:LYS:HZ1	1.63	0.41
38:A1:1769:G:H2'	38:A1:1770:G:H8	1.85	0.41
38:A1:1857:C:O2	69:Ag:4:ARG:HB3	2.20	0.41
38:A1:2368:A:H2'	38:A1:2369:G:C8	2.55	0.41
38:A1:2457:G:H4'	38:A1:2482:U:H1'	2.02	0.41
39:A3:22:A:H2'	39:A3:22:A:N3	2.35	0.41
47:AJ:41:SER:HB2	47:AJ:71:VAL:HG11	2.02	0.41
47:AJ:80:LEU:HD23	47:AJ:167:TYR:OH	2.20	0.41
52:AP:118:GLN:NE2	52:AP:120:ASN:HD21	2.18	0.41
55:AS:23:LYS:HD3	55:AS:23:LYS:HA	1.85	0.41
60:AX:51:VAL:HG13	70:Ah:62:GLN:HG2	2.01	0.41
62:AZ:106:GLN:HA	62:AZ:109:GLU:OE2	2.20	0.41
67:Ae:20:HIS:CD2	67:Ae:35:GLN:HE21	2.38	0.41
78:Ap:80:ARG:CZ	78:Ap:80:ARG:HB3	2.50	0.41
80:DC:136:CYS:H	80:DC:139:THR:HG22	1.85	0.41
80:DC:161:ASP:N	80:DC:161:ASP:OD1	2.52	0.41
80:DC:561:VAL:HG21	80:DC:774:VAL:CG2	2.50	0.41
80:DC:742:GLY:O	80:DC:745:SER:OG	2.36	0.41
2:BB:46:THR:HG21	2:BB:96:LEU:HD22	2.01	0.41
2:BB:209:ASN:HB2	2:BB:211:HIS:CE1	2.54	0.41
3:BC:90:THR:OG1	3:BC:93:GLY:O	2.33	0.41
3:BC:98:PHE:O	3:BC:117:THR:HA	2.19	0.41
8:BJ:25:ASP:OD1	8:BJ:26:ALA:N	2.53	0.41
14:BX:43:PHE:CZ	14:BX:49:ALA:HB3	2.55	0.41
20:BF:73:THR:N	20:BF:91:GLU:OE2	2.50	0.41
20:BF:205:SER:OG	20:BF:206:SER:N	2.52	0.41
21:BK:47:GLN:O	34:B5:1219:A:O2'	2.37	0.41
24:BR:37:GLU:OE1	31:Bg:150:TRP:NE1	2.53	0.41
26:BT:104:VAL:O	26:BT:108:LEU:HD23	2.20	0.41
26:BT:129:GLN:NE2	34:B5:1358:G:H21	2.18	0.41
31:Bg:159:ASN:HD21	31:Bg:165:ASP:H	1.67	0.41
34:B5:119:A:H1'	34:B5:397:A:N9	2.35	0.41
34:B5:730:G:H21	34:B5:731:C:H2'	1.85	0.41
34:B5:879:G:H2'	34:B5:880:C:C6	2.56	0.41
34:B5:923:A:O2'	34:B5:924:A:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1117:U:H2'	34:B5:1118:G:C8	2.55	0.41
34:B5:1157:A:H2'	34:B5:1160:A:N7	2.35	0.41
34:B5:1375:A:H2'	34:B5:1376:C:H6	1.85	0.41
34:B5:1563:C:H2'	34:B5:1564:U:C6	2.55	0.41
34:B5:1563:C:H2'	34:B5:1564:U:H6	1.85	0.41
38:A1:298:U:H5"	38:A1:299:G:O4'	2.20	0.41
38:A1:351:A:N7	74:Al:35:ILE:HG12	2.36	0.41
38:A1:529:A:H2'	38:A1:530:G:C8	2.55	0.41
38:A1:596:C:OP1	43:AF:33:ARG:NE	2.53	0.41
38:A1:712:G:H5'	48:AL:174:ARG:CZ	2.50	0.41
38:A1:734:C:O2	38:A1:734:C:H2'	2.19	0.41
38:A1:1619:A:H2'	38:A1:1620:U:O4'	2.20	0.41
38:A1:1674:G:H5"	57:AU:70:LYS:HE3	2.03	0.41
38:A1:1740:U:H4'	38:A1:1741:A:H5'	2.02	0.41
38:A1:2263:C:O2'	38:A1:2264:PSU:P	2.78	0.41
38:A1:2582:C:H2'	38:A1:2583:C:C6	2.54	0.41
38:A1:2656:A:C8	38:A1:2658:G:C8	3.08	0.41
38:A1:2881:C:H2'	38:A1:2882:U:H6	1.85	0.41
38:A1:3330:A:H2'	38:A1:3331:U:C6	2.55	0.41
39:A3:3:U:H2'	39:A3:4:U:H6	1.84	0.41
39:A3:13:A:O2'	41:AD:24:ARG:NH2	2.54	0.41
40:A4:139:U:H2'	40:A4:140:G:C8	2.56	0.41
54:AR:153:LYS:HA	54:AR:156:ASN:HB2	2.01	0.41
80:DC:624:GLY:O	80:DC:625:TRP:HD1	2.02	0.41
1:BA:199:PRO:HD3	24:BR:90:ALA:HB2	2.02	0.41
2:BB:91:VAL:HG23	2:BB:95:ASN:O	2.19	0.41
2:BB:132:ASP:HB3	2:BB:221:PRO:HG3	2.02	0.41
3:BC:138:PRO:HG2	3:BC:222:TYR:HE2	1.84	0.41
4:BE:188:ASN:HD21	34:B5:752:A:H5"	1.86	0.41
6:BH:79:ARG:O	6:BH:83:LYS:HG3	2.19	0.41
7:BI:56:ARG:HD3	7:BI:56:ARG:HA	1.75	0.41
7:BI:170:SER:HB2	7:BI:182:TYR:CD1	2.55	0.41
7:BI:184:LEU:HD22	7:BI:188:GLU:HG3	2.02	0.41
15:BY:15:ASN:ND2	15:BY:22:GLN:HE21	2.19	0.41
18:Be:26:LYS:NZ	34:B5:588:U:OP2	2.49	0.41
19:BD:42:THR:HG22	27:BU:108:ILE:HD12	2.02	0.41
22:BP:32:ASP:O	22:BP:35:LYS:HB2	2.20	0.41
23:BQ:39:VAL:O	23:BQ:45:ARG:NE	2.53	0.41
23:BQ:79:TYR:O	23:BQ:83:GLN:HG2	2.20	0.41
24:BR:60:ARG:HH22	24:BR:66:VAL:HG13	1.85	0.41
26:BT:122:ARG:HH12	34:B5:1499:G:P	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:175:ASP:N	31:Bg:175:ASP:OD1	2.52	0.41
34:B5:538:A:C6	34:B5:541:A:C6	3.08	0.41
34:B5:1216:C:O2'	34:B5:1218:G:H5"	2.20	0.41
34:B5:1391:A:H2'	34:B5:1392:U:H6	1.84	0.41
34:B5:1392:U:H2'	34:B5:1393:C:C6	2.55	0.41
34:B5:1546:G:H2'	34:B5:1547:A:C8	2.55	0.41
35:AA:28:LYS:HD3	35:AA:123:ARG:HE	1.85	0.41
35:AA:117:GLU:HG2	35:AA:122:ASP:HB2	2.02	0.41
36:AB:256:HIS:HA	36:AB:257:PRO:C	2.44	0.41
37:AC:178:LEU:HD23	37:AC:178:LEU:HA	1.81	0.41
38:A1:172:G:H21	38:A1:173:G:H22	1.67	0.41
38:A1:584:G:H2'	38:A1:585:A:H8	1.86	0.41
38:A1:676:G:C6	53:AQ:86:THR:HG21	2.55	0.41
38:A1:1641:U:O2'	38:A1:1642:A:H3'	2.20	0.41
38:A1:2216:G:H22	38:A1:2229:A:H2	1.67	0.41
38:A1:2263:C:C4	38:A1:2264:PSU:C2	3.08	0.41
38:A1:2508:U:C2	38:A1:2509:U:C5	3.08	0.41
38:A1:2796:G:OP2	38:A1:2797:C:O2'	2.27	0.41
38:A1:3077:A:N6	38:A1:3080:G:C5	2.88	0.41
38:A1:3320:A:H2'	38:A1:3321:C:H6	1.82	0.41
40:A4:104:A:OP1	72:Aj:21:ARG:NH1	2.53	0.41
42:AE:72:ASN:OD1	42:AE:72:ASN:N	2.51	0.41
44:AG:101:THR:N	44:AG:104:GLU:OE2	2.49	0.41
44:AG:155:ASN:ND2	44:AG:181:LYS:HA	2.34	0.41
46:AI:166:ILE:O	46:AI:166:ILE:HG13	2.19	0.41
52:AP:138:LYS:HB2	52:AP:140:GLU:OE1	2.20	0.41
65:Ac:23:TYR:HE2	65:Ac:25:LEU:HD13	1.85	0.41
77:Ao:29:LYS:HD2	77:Ao:29:LYS:HA	1.89	0.41
80:DC:17:THR:HG21	80:DC:93:THR:HA	2.02	0.41
80:DC:164:LEU:HA	80:DC:169:VAL:HG12	2.01	0.41
80:DC:380:LEU:HG	80:DC:469:LEU:HB2	2.02	0.41
80:DC:619:MET:SD	80:DC:619:MET:C	3.03	0.41
80:DC:753:GLN:HE22	80:DC:755:VAL:HG22	1.85	0.41
3:BC:224:PHE:CZ	13:BW:99:PHE:HZ	2.38	0.41
4:BE:62:LYS:HE3	34:B5:455:C:OP1	2.20	0.41
4:BE:173:ILE:HD13	4:BE:229:GLY:HA2	2.02	0.41
6:BH:27:LEU:HD11	6:BH:34:LEU:HD13	2.02	0.41
8:BJ:31:ALA:CB	18:Be:36:LYS:HD3	2.50	0.41
8:BJ:123:HIS:HD2	34:B5:478:A:OP1	2.02	0.41
15:BY:48:TYR:OH	34:B5:782:U:O5'	2.36	0.41
15:BY:106:GLN:HE22	34:B5:441:A:P	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BF:140:THR:HG21	20:BF:201:ALA:HB1	2.03	0.41
21:BK:40:LEU:HD11	34:B5:1217:A:C2	2.55	0.41
22:BP:18:ARG:NH1	25:BS:91:ASP:O	2.53	0.41
22:BP:30:THR:HG22	22:BP:86:VAL:HB	2.03	0.41
22:BP:57:MET:HE3	22:BP:57:MET:HB3	1.88	0.41
25:BS:138:THR:HG23	34:B5:1459:C:H6	1.86	0.41
26:BT:60:SER:OG	34:B5:1479:A:H5"	2.21	0.41
28:BZ:54:VAL:HG23	28:BZ:55:PRO:HD3	2.03	0.41
31:Bg:133:VAL:HG13	31:Bg:141:LEU:HB2	2.03	0.41
31:Bg:244:ALA:HB1	31:Bg:294:TRP:CD1	2.55	0.41
34:B5:198:A:H2'	34:B5:199:G:O4'	2.21	0.41
34:B5:400:A:H4'	34:B5:401:A:H5"	2.01	0.41
36:AB:99:LEU:HB2	38:A1:3004:C:H4'	2.01	0.41
36:AB:173:GLN:O	36:AB:174:LYS:HB2	2.20	0.41
38:A1:833:G:OP1	54:AR:86:GLU:HB2	2.21	0.41
38:A1:1169:A:H2'	38:A1:1170:A:C8	2.54	0.41
38:A1:1517:G:P	74:Al:41:ARG:HH12	2.43	0.41
38:A1:1667:A:H2'	38:A1:1668:G:C8	2.56	0.41
38:A1:1673:G:C6	38:A1:1775:G:C6	3.09	0.41
38:A1:1727:G:OP1	78:Ap:44:LYS:NZ	2.51	0.41
38:A1:2269:U:O2	38:A1:2272:G:N2	2.53	0.41
38:A1:2464:U:OP1	38:A1:2485:A:O2'	2.29	0.41
38:A1:2527:G:H2'	38:A1:2528:G:H8	1.85	0.41
38:A1:2703:A:H1'	47:AJ:142:LYS:HZ3	1.84	0.41
38:A1:2765:C:H2'	38:A1:2766:U:C6	2.56	0.41
38:A1:3028:G:H5'	80:DC:28:VAL:CG2	2.50	0.41
38:A1:3223:A:C5	38:A1:3263:G:C6	3.08	0.41
38:A1:3393:U:H2'	38:A1:3394:U:H6	1.82	0.41
41:AD:64:ILE:HG22	41:AD:75:LEU:HD13	2.02	0.41
44:AG:143:ILE:HD12	44:AG:175:VAL:HG21	2.02	0.41
44:AG:171:LYS:HD2	44:AG:171:LYS:HA	1.86	0.41
46:AI:141:LYS:HB3	46:AI:141:LYS:HE2	1.89	0.41
53:AQ:8:LYS:HB2	53:AQ:8:LYS:HE2	1.74	0.41
53:AQ:90:ASP:CG	53:AQ:92:ARG:HE	2.26	0.41
55:AS:19:VAL:O	55:AS:19:VAL:HG23	2.19	0.41
55:AS:166:LYS:HB3	55:AS:166:LYS:HE3	1.81	0.41
60:AX:88:MET:HE3	60:AX:88:MET:HB3	1.82	0.41
67:Ae:76:VAL:HG23	67:Ae:81:ASP:HB3	2.02	0.41
69:Ag:5:VAL:HB	69:Ag:32:ALA:HB2	2.01	0.41
76:An:7:LYS:O	76:An:11:ARG:HG2	2.20	0.41
80:DC:563:TYR:CE2	80:DC:818:ILE:HD12	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:591:GLU:OE2	80:DC:685:ARG:HD3	2.20	0.41
81:EC:6837:G:O2'	81:EC:6838:C:O4'	2.29	0.41
81:EC:6845:G:HO2'	81:EC:6846:C:P	2.44	0.41
1:BA:36:TYR:CD1	1:BA:161:PRO:HG2	2.54	0.41
2:BB:68:VAL:CG1	2:BB:69:CYS:N	2.82	0.41
2:BB:163:ALA:O	2:BB:167:VAL:HG23	2.20	0.41
4:BE:19:LEU:HD22	34:B5:788:A:H2'	2.02	0.41
6:BH:173:TYR:CE2	6:BH:179:LYS:HB2	2.55	0.41
7:BI:10:LYS:HE2	7:BI:10:LYS:HB3	1.82	0.41
11:BO:111:ARG:CZ	16:Ba:57:SER:HA	2.50	0.41
14:BX:69:ARG:HA	14:BX:69:ARG:HD3	1.71	0.41
15:BY:7:ILE:HG22	15:BY:8:ARG:H	1.86	0.41
20:BF:76:ARG:HA	23:BQ:122:ARG:HH22	1.85	0.41
28:BZ:62:VAL:HG21	34:B5:1534:G:N1	2.35	0.41
31:Bg:294:TRP:CZ2	31:Bg:301:LEU:HD22	2.56	0.41
34:B5:34:G:O2'	34:B5:515:A:O2'	2.38	0.41
34:B5:156:A:H2'	34:B5:157:A:O4'	2.21	0.41
34:B5:198:A:H3'	34:B5:199:G:C8	2.49	0.41
34:B5:494:U:H3'	34:B5:495:C:H4'	2.02	0.41
34:B5:895:G:O2'	34:B5:896:U:O4'	2.28	0.41
34:B5:1078:C:H2'	34:B5:1079:U:C6	2.55	0.41
34:B5:1107:G:O2'	34:B5:1108:G:H5'	2.20	0.41
34:B5:1113:A:N6	34:B5:1132:A:OP2	2.48	0.41
34:B5:1586:A:H2'	34:B5:1587:A:O4'	2.20	0.41
34:B5:1729:C:H2'	34:B5:1730:A:O4'	2.21	0.41
34:B5:1734:U:O5'	58:AV:32:ARG:NH2	2.53	0.41
35:AA:70:ARG:HH12	38:A1:1580:A:P	2.43	0.41
36:AB:84:VAL:HG23	36:AB:163:HIS:O	2.20	0.41
36:AB:87:VAL:HG11	36:AB:163:HIS:HD2	1.85	0.41
37:AC:191:LYS:NZ	38:A1:341:G:H2'	2.35	0.41
37:AC:262:TRP:CH2	37:AC:271:LYS:HE3	2.55	0.41
38:A1:291:C:OP1	50:AN:68:ARG:NE	2.35	0.41
38:A1:675:C:H2'	38:A1:676:G:O4'	2.19	0.41
38:A1:1070:U:H2'	38:A1:1071:U:C6	2.56	0.41
38:A1:1361:U:O2	43:AF:159:GLN:NE2	2.48	0.41
38:A1:2258:PSU:H2'	38:A1:2259:A:C4	2.56	0.41
38:A1:2455:U:O4	38:A1:2461:A:H2'	2.20	0.41
38:A1:2577:C:H2'	38:A1:2578:U:C6	2.55	0.41
38:A1:2746:A:O2'	41:AD:175:HIS:HA	2.20	0.41
38:A1:2762:A:C8	38:A1:2800:G:C2	3.09	0.41
38:A1:2908:G:O3'	75:Am:114:LYS:NZ	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2960:C:H2'	38:A1:2961:G:C8	2.55	0.41
38:A1:3112:G:O2'	45:AH:70:THR:HG22	2.20	0.41
38:A1:3186:A:H1'	45:AH:44:THR:HG22	2.02	0.41
38:A1:3270:U:C4	42:AE:46:ARG:HD3	2.55	0.41
38:A1:3358:U:H2'	38:A1:3359:A:C8	2.55	0.41
39:A3:16:U:H2'	39:A3:17:A:C8	2.56	0.41
41:AD:55:PHE:HE1	41:AD:159:VAL:HA	1.85	0.41
44:AG:54:GLU:OE1	44:AG:54:GLU:N	2.50	0.41
44:AG:161:GLU:O	44:AG:164:VAL:HG12	2.21	0.41
48:AL:2:ALA:HB3	63:Aa:41:HIS:HE1	1.85	0.41
63:Aa:59:ARG:HH12	77:Ao:38:GLN:HE21	1.69	0.41
65:Ac:24:THR:CG2	65:Ac:91:SER:HB2	2.51	0.41
67:Ae:103:LYS:O	67:Ae:106:VAL:HG22	2.19	0.41
67:Ae:111:ARG:HD2	67:Ae:111:ARG:HA	1.77	0.41
80:DC:342:LEU:HD23	80:DC:342:LEU:HA	1.86	0.41
80:DC:420:PRO:HG3	80:DC:476:HIS:NE2	2.36	0.41
80:DC:539:GLU:O	80:DC:543:GLN:HG2	2.21	0.41
80:DC:670:ALA:HB1	80:DC:713:THR:HB	2.02	0.41
81:EC:6855:A:H2'	81:EC:6856:C:C2	2.54	0.41
1:BA:123:VAL:HG21	1:BA:133:ILE:HD11	2.01	0.41
3:BC:164:SER:HB3	34:B5:1086:A:H5'	2.03	0.41
3:BC:201:ASN:ND2	34:B5:1097:U:O4	2.37	0.41
4:BE:3:ARG:NH1	34:B5:93:A:O4'	2.54	0.41
4:BE:31:PRO:HG2	4:BE:38:LEU:HB2	2.03	0.41
4:BE:200:ARG:NH1	34:B5:739:G:N7	2.69	0.41
7:BI:109:PHE:HA	7:BI:112:TRP:CD1	2.56	0.41
11:BO:32:ASP:OD1	11:BO:35:GLY:N	2.46	0.41
11:BO:83:ILE:HB	11:BO:117:ASP:OD1	2.19	0.41
14:BX:87:VAL:HA	14:BX:124:VAL:HG12	2.02	0.41
16:Ba:82:ARG:NH2	34:B5:1152:A:O3'	2.50	0.41
23:BQ:13:LYS:HG2	23:BQ:76:SER:HA	2.01	0.41
23:BQ:28:LEU:HD11	23:BQ:30:LYS:HD3	2.02	0.41
25:BS:48:LYS:H	25:BS:48:LYS:HG2	1.69	0.41
28:BZ:97:LYS:NZ	34:B5:1531:G:N7	2.68	0.41
34:B5:67:A:H3'	34:B5:69:G:H8	1.86	0.41
34:B5:185:U:H2'	34:B5:186:C:C6	2.56	0.41
34:B5:754:A:N6	34:B5:793:A:N7	2.69	0.41
34:B5:1170:G:H1'	34:B5:1574:G:H1'	2.03	0.41
34:B5:1277:G:H2'	34:B5:1278:G:O4'	2.21	0.41
34:B5:1278:G:H2'	34:B5:1279:C:O4'	2.21	0.41
34:B5:1471:A:H2'	34:B5:1471:A:N3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AA:104:LEU:HD22	35:AA:136:ILE:HD11	2.02	0.41
35:AA:132:ASN:ND2	38:A1:2178:A:H5"	2.35	0.41
36:AB:43:LEU:HB2	36:AB:208:VAL:HG22	2.01	0.41
37:AC:205:PRO:HG2	37:AC:225:VAL:HG23	2.03	0.41
37:AC:307:GLN:NE2	38:A1:1345:G:H21	2.17	0.41
38:A1:35:A:H2'	38:A1:36:C:H6	1.85	0.41
38:A1:121:A:C2	44:AG:129:PRO:HB3	2.56	0.41
38:A1:581:U:H2'	38:A1:582:G:C8	2.54	0.41
38:A1:887:G:H2'	38:A1:888:A:C8	2.56	0.41
38:A1:947:G:H2'	38:A1:948:C:C6	2.55	0.41
38:A1:1710:C:H2'	38:A1:1711:C:H6	1.86	0.41
38:A1:1712:G:O2'	38:A1:1713:G:O4'	2.27	0.41
38:A1:2265:C:H2'	38:A1:2266:PSU:C6	2.55	0.41
38:A1:2296:A:OP2	58:AV:71:LYS:NZ	2.53	0.41
38:A1:2572:C:O2	62:AZ:60:LYS:NZ	2.52	0.41
38:A1:2884:C:H2'	38:A1:2885:C:H6	1.85	0.41
38:A1:3344:A:H61	38:A1:3361:G:H1'	1.85	0.41
39:A3:112:G:H2'	39:A3:113:C:H6	1.82	0.41
40:A4:130:C:H2'	40:A4:131:A:O4'	2.21	0.41
43:AF:165:ASP:OD1	43:AF:166:ASN:N	2.51	0.41
44:AG:84:ARG:HD3	44:AG:84:ARG:HA	1.76	0.41
46:AI:55:ASN:ND2	46:AI:162:GLN:OE1	2.54	0.41
46:AI:153:ARG:NH1	46:AI:157:TYR:OH	2.52	0.41
48:AL:106:GLN:HE21	48:AL:110:ASP:CG	2.29	0.41
49:AM:37:GLU:HG2	55:AS:72:VAL:HG11	2.03	0.41
50:AN:154:PRO:O	50:AN:157:LYS:HG2	2.20	0.41
79:E:40:ASN:HD21	79:E:199:GLN:C	2.28	0.41
80:DC:39:LEU:HB3	80:DC:77:LEU:CD2	2.49	0.41
80:DC:128:VAL:HG22	80:DC:156:VAL:CG1	2.51	0.41
80:DC:202:VAL:HG23	80:DC:208:THR:HB	2.02	0.41
80:DC:564:ARG:NH1	80:DC:680:GLU:HB2	2.34	0.41
80:DC:705:ILE:HA	80:DC:708:THR:HG22	2.01	0.41
3:BC:219:GLY:C	12:BV:25:LYS:HZ1	2.27	0.41
4:BE:133:LYS:HA	4:BE:133:LYS:HD2	1.70	0.41
9:BL:146:ALA:HB1	9:BL:150:ASN:HB2	2.02	0.41
10:BN:17:PRO:HG3	34:B5:959:U:C2	2.56	0.41
11:BO:29:HIS:NE2	34:B5:895:G:N2	2.68	0.41
11:BO:99:GLN:OE1	16:Ba:46:GLU:N	2.51	0.41
11:BO:111:ARG:CZ	16:Ba:58:VAL:H	2.34	0.41
12:BV:73:ALA:HB1	12:BV:78:LEU:HB2	2.01	0.41
13:BW:118:ARG:NH1	34:B5:687:G:H5'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Be:39:LEU:HD21	18:Be:43:ARG:HH21	1.85	0.41
25:BS:57:ARG:N	25:BS:60:GLU:OE2	2.51	0.41
26:BT:22:LEU:HD21	26:BT:28:LEU:HB2	2.01	0.41
29:Bc:13:ILE:HD11	29:Bc:31:GLU:HG3	2.03	0.41
31:Bg:114:ASP:OD2	31:Bg:155:ARG:HD2	2.20	0.41
34:B5:94:U:H2'	34:B5:95:G:O4'	2.20	0.41
34:B5:430:G:C2'	80:DC:390:ASP:O	2.69	0.41
34:B5:978:A:H2'	34:B5:979:A:O4'	2.21	0.41
34:B5:1330:G:H2'	34:B5:1331:A:O4'	2.20	0.41
34:B5:1628:U:H2'	34:B5:1629:G:C8	2.56	0.41
34:B5:1681:A:H2'	34:B5:1682:U:O4'	2.21	0.41
35:AA:49:VAL:HG23	35:AA:58:LEU:HB2	2.01	0.41
36:AB:44:THR:HG22	36:AB:184:ASN:OD1	2.20	0.41
38:A1:125:C:H2'	38:A1:126:U:H6	1.85	0.41
38:A1:921:A:C6	72:Aj:8:PHE:HE2	2.38	0.41
38:A1:1120:A:H2'	38:A1:1121:U:C6	2.55	0.41
38:A1:1201:C:N4	38:A1:2857:C:H5"	2.30	0.41
38:A1:1814:A:N3	38:A1:1817:G:N2	2.69	0.41
38:A1:2150:G:H4'	78:Ap:22:LEU:HD21	2.03	0.41
38:A1:2680:A:N3	47:AJ:57:PHE:HB3	2.36	0.41
40:A4:125:U:H3'	40:A4:126:A:C8	2.56	0.41
41:AD:17:GLN:HE21	56:AT:20:ARG:C	2.29	0.41
41:AD:59:ASP:C	41:AD:60:ILE:HD13	2.46	0.41
41:AD:131:LEU:HD22	41:AD:172:TYR:CE1	2.55	0.41
44:AG:75:ILE:HG22	44:AG:76:ALA:N	2.36	0.41
47:AJ:9:MET:HE2	47:AJ:9:MET:HB2	1.54	0.41
47:AJ:85:LYS:HE3	47:AJ:89:TYR:HB3	2.02	0.41
49:AM:33:ALA:HB1	49:AM:46:ILE:HB	2.03	0.41
57:AU:15:PHE:N	57:AU:65:VAL:O	2.54	0.41
58:AV:129:VAL:O	58:AV:133:SER:HB3	2.21	0.41
65:Ac:9:SER:HA	65:Ac:12:GLN:HE22	1.86	0.41
68:Af:60:ARG:HD3	68:Af:60:ARG:HA	1.89	0.41
78:Ap:75:ALA:O	78:Ap:79:VAL:HG23	2.21	0.41
79:E:8:GLN:HE21	79:E:12:HIS:HB3	1.85	0.41
80:DC:35:LEU:HD23	80:DC:35:LEU:HA	1.89	0.41
80:DC:659:ILE:HD12	80:DC:693:LEU:HD23	2.03	0.41
81:EC:6874:A:O2'	81:EC:6875:C:P	2.79	0.41
2:BB:134:VAL:HG13	2:BB:218:LEU:HB2	2.02	0.41
5:BG:220:LYS:HA	5:BG:223:LYS:HE3	2.03	0.41
7:BI:11:ARG:HH11	7:BI:17:LYS:NZ	2.19	0.41
10:BN:99:ARG:NH2	10:BN:119:GLU:OE2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BO:27:PHE:CD1	11:BO:43:THR:HG22	2.56	0.41
14:BX:48:HIS:CD2	14:BX:105:ALA:HB2	2.55	0.41
15:BY:60:PHE:O	15:BY:60:PHE:CG	2.73	0.41
23:BQ:117:LEU:HD23	23:BQ:117:LEU:H	1.86	0.41
24:BR:100:LEU:N	24:BR:120:SER:HB2	2.35	0.41
25:BS:63:GLN:OE1	25:BS:63:GLN:N	2.53	0.41
26:BT:22:LEU:CD2	26:BT:28:LEU:HB2	2.51	0.41
26:BT:86:ARG:NH1	26:BT:90:PRO:O	2.45	0.41
29:Bc:11:LYS:HE2	29:Bc:51:ASN:HA	2.03	0.41
30:Bd:14:TYR:HB2	34:B5:1597:A:H8	1.86	0.41
31:Bg:145:LEU:O	31:Bg:181:TRP:HH2	2.03	0.41
31:Bg:180:ALA:HB2	31:Bg:192:PHE:HE2	1.85	0.41
33:BM:31:VAL:HG13	33:BM:126:TRP:CD1	2.56	0.41
34:B5:423:G:H8	34:B5:423:G:OP2	2.04	0.41
34:B5:702:G:N2	34:B5:703:G:O2'	2.52	0.41
34:B5:774:A:C6	34:B5:775:G:H1'	2.55	0.41
34:B5:841:U:H2'	34:B5:842:C:O4'	2.21	0.41
34:B5:1354:G:N2	34:B5:1373:C:C2	2.88	0.41
34:B5:1585:U:N3	34:B5:1611:A:H2	2.07	0.41
35:AA:60:LYS:NZ	35:AA:73:GLU:HG3	2.35	0.41
36:AB:5:LYS:HE2	38:A1:2878:G:H5"	2.02	0.41
36:AB:85:VAL:CG2	36:AB:165:GLN:HE21	2.34	0.41
38:A1:701:G:H2'	38:A1:702:C:C6	2.56	0.41
38:A1:748:U:H2'	38:A1:749:C:C6	2.55	0.41
38:A1:1235:U:O4	38:A1:1246:G:O2'	2.34	0.41
38:A1:2131:A:C8	38:A1:2188:A:C8	3.09	0.41
38:A1:2837:A:H2	38:A1:2851:A:N7	2.19	0.41
38:A1:2945:G:O2'	38:A1:2948:C:OP2	2.34	0.41
38:A1:3002:C:H2'	38:A1:3003:G:O4'	2.21	0.41
38:A1:3014:U:H2'	38:A1:3015:G:C8	2.56	0.41
38:A1:3018:C:C4	38:A1:3019:U:C4	3.08	0.41
55:AS:140:VAL:O	55:AS:144:LEU:HD12	2.21	0.41
58:AV:86:ARG:HD2	58:AV:92:PHE:CZ	2.56	0.41
61:AY:16:ARG:HE	61:AY:16:ARG:HB3	1.64	0.41
63:Aa:133:LEU:HD21	63:Aa:137:LYS:NZ	2.36	0.41
70:Ah:74:LYS:HD2	70:Ah:75:TYR:CZ	2.56	0.41
79:E:184:LEU:HD23	79:E:184:LEU:HA	1.85	0.41
80:DC:83:ASP:O	80:DC:86:VAL:HG12	2.21	0.41
80:DC:412:ARG:HD2	80:DC:426:LEU:HD21	2.03	0.41
80:DC:723:LYS:HE2	80:DC:723:LYS:HB3	1.88	0.41
1:BA:34:GLU:N	1:BA:35:PRO:HD2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:147:THR:O	1:BA:161:PRO:HA	2.21	0.41
1:BA:183:ARG:N	1:BA:188:LEU:HD12	2.36	0.41
2:BB:118:GLN:O	2:BB:118:GLN:HG2	2.21	0.41
3:BC:138:PRO:HB2	3:BC:222:TYR:HE2	1.85	0.41
4:BE:27:TYR:O	34:B5:447:U:O2'	2.38	0.41
4:BE:37:LYS:HE2	34:B5:297:U:OP1	2.21	0.41
4:BE:62:LYS:HZ1	34:B5:454:U:C4'	2.34	0.41
5:BG:44:GLU:OE1	5:BG:44:GLU:N	2.54	0.41
5:BG:84:TYR:OH	5:BG:91:GLU:OE2	2.39	0.41
5:BG:108:VAL:C	5:BG:109:LEU:HD22	2.46	0.41
7:BI:43:ILE:HD13	7:BI:57:ALA:HA	2.02	0.41
7:BI:87:ASN:ND2	7:BI:89:GLU:HG3	2.36	0.41
7:BI:171:SER:O	7:BI:173:PRO:HD3	2.21	0.41
8:BJ:23:ARG:O	8:BJ:24:LEU:C	2.64	0.41
8:BJ:61:THR:HB	8:BJ:62:ARG:NH2	2.35	0.41
8:BJ:66:ASP:OD2	8:BJ:69:ARG:N	2.54	0.41
8:BJ:86:LEU:HD23	8:BJ:87:SER:O	2.20	0.41
8:BJ:112:GLN:HG3	8:BJ:148:VAL:HG21	2.02	0.41
10:BN:16:ILE:HD11	34:B5:862:A:O5'	2.20	0.41
11:BO:112:ILE:HG22	11:BO:115:ILE:HD11	2.03	0.41
12:BV:74:GLN:HG2	12:BV:83:TRP:HE3	1.85	0.41
14:BX:6:PRO:HG3	14:BX:14:LYS:HG2	2.02	0.41
20:BF:130:ILE:H	20:BF:130:ILE:HD12	1.84	0.41
22:BP:37:ALA:HB1	22:BP:41:VAL:HG23	2.03	0.41
23:BQ:99:GLU:HG3	23:BQ:102:LYS:HE3	2.03	0.41
25:BS:41:ARG:HB3	34:B5:1566:U:P	2.61	0.41
26:BT:47:PRO:HB3	34:B5:1478:G:H5'	2.02	0.41
27:BU:35:GLU:O	27:BU:39:SER:OG	2.25	0.41
27:BU:88:LYS:C	27:BU:89:ARG:HD2	2.46	0.41
28:BZ:66:VAL:O	28:BZ:70:LYS:N	2.44	0.41
28:BZ:99:ALA:O	81:EC:6863:C:N4	2.54	0.41
31:Bg:13:LEU:HB3	31:Bg:310:ILE:HB	2.03	0.41
31:Bg:54:PHE:CE2	31:Bg:312:VAL:HG11	2.56	0.41
31:Bg:234:LEU:HD23	31:Bg:234:LEU:HA	1.92	0.41
34:B5:90:C:O2'	34:B5:451:A:H5"	2.21	0.41
34:B5:198:A:C2	34:B5:199:G:H1'	2.56	0.41
34:B5:522:U:O2'	34:B5:523:G:O4'	2.27	0.41
34:B5:1103:U:H2'	34:B5:1104:U:C6	2.55	0.41
34:B5:1518:C:H2'	34:B5:1519:U:C6	2.56	0.41
34:B5:1532:U:H2'	34:B5:1533:C:O4'	2.21	0.41
36:AB:70:ARG:NH1	58:AV:88:ARG:NH2	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:81:THR:O	36:AB:320:ASP:HB2	2.21	0.41
36:AB:212:ASN:HD21	36:AB:354:VAL:N	2.19	0.41
36:AB:256:HIS:HE1	38:A1:2941:A:N7	2.19	0.41
36:AB:348:ARG:HD3	38:A1:3037:U:H5"	2.02	0.41
38:A1:77:A:H5'	48:AL:100:ARG:NH1	2.35	0.41
38:A1:513:G:H2'	38:A1:514:G:H8	1.83	0.41
38:A1:601:U:H3'	38:A1:602:A:H8	1.86	0.41
38:A1:632:G:OP1	51:AO:92[A]:THR:HB	2.21	0.41
38:A1:633:C:H2'	38:A1:634:C:O4'	2.21	0.41
38:A1:694:C:H2'	38:A1:695:C:C6	2.56	0.41
38:A1:966:PSU:H2'	38:A1:967:A:H8	1.85	0.41
38:A1:1541:G:H1'	38:A1:1557:A:C5	2.56	0.41
38:A1:1803:C:H4'	69:Ag:62:TYR:HB3	2.03	0.41
38:A1:1836:C:N4	74:Al:3:ALA:HB2	2.34	0.41
38:A1:2256:A:H4'	38:A1:2257:C:O5'	2.21	0.41
38:A1:2282:U:O2	38:A1:2310:U:H4'	2.21	0.41
39:A3:55:A:C6	47:AJ:9:MET:HG2	2.56	0.41
39:A3:73:C:H41	55:AS:19:VAL:HG21	1.86	0.41
41:AD:19:PRO:HD2	41:AD:24:ARG:HG2	2.03	0.41
41:AD:179:ARG:HD3	41:AD:179:ARG:HA	1.73	0.41
42:AE:37:GLY:O	42:AE:91:VAL:HG22	2.20	0.41
42:AE:68:PRO:HB3	42:AE:142:ASP:HB2	2.03	0.41
44:AG:24:ASN:HA	44:AG:25:PRO:HD3	1.91	0.41
44:AG:146:LYS:HE3	44:AG:173:MET:SD	2.61	0.41
45:AH:138:THR:O	45:AH:140:VAL:HG12	2.21	0.41
46:AI:181:TYR:CE2	46:AI:185:ARG:HD2	2.55	0.41
49:AM:37:GLU:CG	55:AS:72:VAL:HG11	2.51	0.41
49:AM:123:LEU:HB3	51:AO:194[A]:LEU:HD13	2.01	0.41
55:AS:74:ASN:HD21	55:AS:144:LEU:HD21	1.86	0.41
55:AS:139:TYR:CD1	55:AS:140:VAL:HG23	2.56	0.41
57:AU:32:SER:HA	57:AU:35:LYS:HG2	2.02	0.41
57:AU:33:TYR:CE1	57:AU:80:THR:HG23	2.56	0.41
58:AV:62:VAL:HG23	58:AV:70:ARG:HA	2.03	0.41
60:AX:75:LYS:HE2	60:AX:75:LYS:HB2	1.72	0.41
61:AY:16:ARG:NH2	61:AY:20:PHE:HE2	2.17	0.41
61:AY:54:ASP:O	61:AY:70:ILE:HG12	2.20	0.41
62:AZ:117:ALA:O	62:AZ:120:GLU:HG2	2.21	0.41
69:Ag:85:VAL:O	69:Ag:89:ILE:HG13	2.21	0.41
71:Ai:36:ARG:O	71:Ai:40:VAL:HG23	2.20	0.41
71:Ai:91:ASN:HA	71:Ai:94:ILE:HG22	2.03	0.41
78:Ap:36:ARG:HD3	78:Ap:48:LYS:HE2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:E:83:ASP:OD1	79:E:84:ALA:N	2.54	0.41
80:DC:544:ASP:HB2	80:DC:549:HIS:CD2	2.55	0.41
80:DC:577:SER:O	80:DC:585:ARG:HD2	2.21	0.41
80:DC:711:ARG:HA	80:DC:714:TYR:CD1	2.56	0.41
80:DC:799:ASP:CG	80:DC:800:HIS:H	2.29	0.41
81:EC:6877:C:H4'	81:EC:6878:G:O5'	2.21	0.41
1:BA:182:LEU:HA	1:BA:182:LEU:HD23	1.89	0.41
2:BB:176:VAL:HG12	2:BB:177:GLN:H	1.86	0.41
2:BB:214:LYS:NZ	2:BB:216:LYS:HD2	2.35	0.41
4:BE:202:ASP:OD1	4:BE:203:GLY:N	2.52	0.41
5:BG:85:ARG:HH22	5:BG:87:ARG:NH1	2.18	0.41
6:BH:63:PRO:C	6:BH:65:PRO:HD3	2.46	0.41
8:BJ:133:HIS:ND1	8:BJ:162:SER:HB2	2.36	0.41
20:BF:22:PRO:HB3	20:BF:34:GLN:HE21	1.85	0.41
22:BP:45:PHE:N	22:BP:45:PHE:CD1	2.89	0.41
22:BP:79:HIS:HD2	22:BP:102:PHE:HE2	1.69	0.41
27:BU:26:LEU:CD1	27:BU:114:VAL:HG12	2.51	0.41
34:B5:100:A:H2'	34:B5:101:U:O4'	2.20	0.41
34:B5:388:G:H5"	34:B5:425:A:N6	2.36	0.41
34:B5:477:A:H2'	34:B5:478:A:N3	2.35	0.41
34:B5:517:U:C4	34:B5:518:A:N7	2.89	0.41
34:B5:947:U:H2'	34:B5:948:G:H8	1.86	0.41
34:B5:954:G:H2'	34:B5:955:A:C8	2.56	0.41
34:B5:1246:C:C4	34:B5:1247:U:C4	3.09	0.41
34:B5:1724:U:H2'	34:B5:1725:U:C6	2.56	0.41
36:AB:348:ARG:HH11	36:AB:348:ARG:HG3	1.86	0.41
37:AC:317:PRO:O	37:AC:318:LEU:HB2	2.21	0.41
38:A1:174:C:H2'	38:A1:175:C:O4'	2.21	0.41
38:A1:293:C:H2'	38:A1:294:U:O4'	2.21	0.41
38:A1:355:A:H2'	38:A1:356:C:O4'	2.21	0.41
38:A1:712:G:H2'	38:A1:713:U:C6	2.56	0.41
38:A1:780:A:H4'	38:A1:781:G:OP2	2.21	0.41
38:A1:946:U:H2'	38:A1:947:G:C8	2.56	0.41
38:A1:1495:U:H5	38:A1:1835:A:C2	2.39	0.41
38:A1:1679:A:OP1	57:AU:94:ARG:NH1	2.46	0.41
38:A1:1747:G:H4'	73:Ak:4:GLU:OE1	2.21	0.41
38:A1:1862:U:O2	38:A1:1868:G:O6	2.39	0.41
38:A1:2249:G:C2	38:A1:2250:G:H1'	2.56	0.41
38:A1:2333:C:H2'	38:A1:2334:U:O4'	2.21	0.41
38:A1:2383:C:N4	51:AO:91[A]:LYS:HG2	2.36	0.41
38:A1:2423:U:H2'	38:A1:2424:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2639:G:OP1	56:AT:14:MET:HE1	2.20	0.41
38:A1:2688:U:N3	41:AD:17:GLN:O	2.47	0.41
38:A1:2706:G:H2'	38:A1:2707:C:C6	2.56	0.41
38:A1:2853:A:H5'	46:AI:3:ARG:NH1	2.33	0.41
44:AG:109:LEU:O	44:AG:112:GLU:HG2	2.20	0.41
47:AJ:37:LEU:HD23	47:AJ:37:LEU:HA	1.91	0.41
47:AJ:110:ILE:H	47:AJ:110:ILE:HD12	1.85	0.41
49:AM:23:ILE:HD12	49:AM:23:ILE:H	1.86	0.41
55:AS:38:LYS:HE2	55:AS:61:ILE:HD13	2.02	0.41
57:AU:42:LYS:HG2	57:AU:47:VAL:HG22	2.03	0.41
80:DC:343:PRO:HB2	80:DC:347:THR:HB	2.03	0.41
80:DC:784:LEU:H	80:DC:784:LEU:HD23	1.86	0.41
2:BB:92:GLN:N	2:BB:92:GLN:OE1	2.54	0.40
3:BC:152:HIS:CE1	3:BC:174:ARG:HD2	2.56	0.40
4:BE:69:HIS:CE1	4:BE:94:ALA:HB3	2.56	0.40
8:BJ:44:ARG:HD3	34:B5:473:A:OP1	2.21	0.40
8:BJ:143:ILE:HG13	8:BJ:143:ILE:O	2.21	0.40
8:BJ:170:GLY:HA2	34:B5:513:U:OP1	2.21	0.40
11:BO:27:PHE:HD1	11:BO:43:THR:HG22	1.85	0.40
14:BX:50:LYS:HG3	34:B5:435:C:H5"	2.02	0.40
14:BX:131:SER:HB2	34:B5:30:G:H4'	2.02	0.40
15:BY:29:HIS:H	15:BY:67:GLY:C	2.28	0.40
20:BF:166:ARG:HH22	34:B5:1164:G:P	2.45	0.40
22:BP:18:ARG:CB	22:BP:36:LEU:HD11	2.50	0.40
22:BP:96:ILE:HD12	22:BP:116:LEU:HB3	2.03	0.40
23:BQ:10:PHE:HD2	23:BQ:12:LYS:HG2	1.86	0.40
28:BZ:40:VAL:HG13	28:BZ:74:SER:HB3	2.03	0.40
31:Bg:115:ILE:HG13	31:Bg:119:ALA:HA	2.04	0.40
34:B5:36:C:H2'	34:B5:37:U:C6	2.55	0.40
34:B5:119:A:H3'	34:B5:120:PSU:C6	2.56	0.40
34:B5:119:A:H1'	34:B5:397:A:C8	2.56	0.40
34:B5:391:A:H4'	34:B5:1730:A:H4'	2.02	0.40
34:B5:526:A:H2'	34:B5:527:A:O4'	2.21	0.40
34:B5:913:G:N1	38:A1:2206:G:OP1	2.49	0.40
34:B5:1185:U:O2'	34:B5:1456:C:H4'	2.21	0.40
34:B5:1291:G:H1	34:B5:1324:G:N2	2.03	0.40
34:B5:1490:C:H5'	34:B5:1514:U:O4	2.21	0.40
34:B5:1712:A:H3'	34:B5:1712:A:N3	2.37	0.40
36:AB:113:GLU:OE1	36:AB:165:GLN:HA	2.21	0.40
36:AB:215:ILE:CG2	36:AB:282:ILE:HD11	2.52	0.40
37:AC:309:ARG:HB3	37:AC:312:VAL:HG12	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:127:G:H2'	38:A1:128:G:C8	2.56	0.40
38:A1:129:U:H3	38:A1:139:G:H1	1.69	0.40
38:A1:142:C:H2'	38:A1:143:G:O4'	2.21	0.40
38:A1:674:G:H2'	38:A1:675:C:O4'	2.21	0.40
38:A1:1157:G:H2'	38:A1:1158:A:O4'	2.21	0.40
38:A1:2110:G:O2'	38:A1:2111:G:H5"	2.21	0.40
38:A1:2997:G:H2'	38:A1:2998:U:C6	2.56	0.40
38:A1:3044:G:H2'	38:A1:3045:G:C8	2.56	0.40
38:A1:3237:U:H2'	38:A1:3238:G:C1'	2.51	0.40
41:AD:195:LEU:HD23	41:AD:199:ILE:HD11	2.01	0.40
42:AE:150:LYS:HA	42:AE:150:LYS:HD3	1.64	0.40
45:AH:50:ASN:OD1	49:AM:5:SER:OG	2.25	0.40
47:AJ:53:THR:HG23	47:AJ:61:ARG:NE	2.35	0.40
50:AN:64:VAL:HG11	50:AN:102:ALA:HB1	2.03	0.40
51:AO:12[A]:LYS:HD2	51:AO:40[A]:GLU:HB3	2.03	0.40
55:AS:146:LYS:HG3	55:AS:147:ASP:OD1	2.20	0.40
55:AS:164:SER:OG	55:AS:165:TYR:N	2.52	0.40
60:AX:27:ARG:NH1	60:AX:27:ARG:HB2	2.36	0.40
73:Ak:20:VAL:HG11	73:Ak:45:VAL:CG2	2.51	0.40
80:DC:158:ASN:HA	80:DC:212:GLY:O	2.21	0.40
80:DC:798:PHE:CZ	85:DC:903:SO1:H54	2.37	0.40
80:DC:810:ASP:OD2	80:DC:812:THR:HB	2.20	0.40
81:EC:6775:U:H5'	81:EC:6776:A:H8	1.85	0.40
2:BB:84:ILE:CG2	2:BB:86:LEU:HD23	2.50	0.40
2:BB:229:MET:O	2:BB:229:MET:HE3	2.21	0.40
5:BG:46:LYS:HA	5:BG:46:LYS:HD2	1.85	0.40
10:BN:119:GLU:OE1	10:BN:141:TYR:CE2	2.74	0.40
14:BX:54:LEU:HB2	14:BX:55:GLU:OE1	2.21	0.40
15:BY:38:ASP:O	15:BY:52:LYS:NZ	2.49	0.40
26:BT:107:ALA:O	26:BT:110:LYS:HG2	2.20	0.40
27:BU:71:PRO:O	30:Bd:40:ARG:NH2	2.50	0.40
28:BZ:36:ALA:HB1	28:BZ:70:LYS:HZ3	1.86	0.40
28:BZ:47:TYR:HA	28:BZ:50:ILE:HD12	2.03	0.40
28:BZ:62:VAL:O	28:BZ:66:VAL:HG23	2.20	0.40
34:B5:196:G:HO2'	34:B5:197:A:P	2.44	0.40
34:B5:328:A:H2'	34:B5:329:G:H8	1.86	0.40
34:B5:686:C:H2'	34:B5:687:G:C8	2.57	0.40
34:B5:754:A:H5'	34:B5:755:A:H5'	2.01	0.40
34:B5:900:A:H2'	34:B5:901:G:C8	2.55	0.40
34:B5:1650:U:H2'	34:B5:1651:A:H8	1.80	0.40
34:B5:1756[A]:A:H4'	34:B5:1757:G:OP1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:364:LYS:HD2	38:A1:3049:A:H4'	2.03	0.40
37:AC:125:ALA:O	37:AC:129:THR:HG23	2.21	0.40
37:AC:233:LEU:HD23	37:AC:233:LEU:HA	1.76	0.40
38:A1:38:U:H4'	63:Aa:32:ARG:HD2	2.04	0.40
38:A1:269:G:N2	38:A1:295:A:OP2	2.39	0.40
38:A1:1093:A:H4'	38:A1:1096:U:OP2	2.22	0.40
38:A1:1719:G:H5"	54:AR:110:ARG:HH12	1.86	0.40
38:A1:2154:U:H2'	38:A1:2155:G:H8	1.84	0.40
38:A1:2476:C:H2'	38:A1:2477:G:C8	2.56	0.40
38:A1:2676:A:H4'	38:A1:2677:G:O5'	2.22	0.40
38:A1:2686:A:H2'	38:A1:2687:G:O4'	2.20	0.40
40:A4:68:G:H2'	40:A4:69:U:O4'	2.21	0.40
41:AD:82:GLU:OE1	41:AD:82:GLU:N	2.54	0.40
42:AE:96:VAL:HG21	42:AE:141:VAL:HG13	2.02	0.40
45:AH:38:LEU:HG	45:AH:41:ILE:HD12	2.03	0.40
54:AR:123:LEU:HD22	54:AR:138:LEU:HD11	2.02	0.40
59:AW:10:GLY:HA3	59:AW:53:VAL:HG12	2.03	0.40
62:AZ:112:LYS:O	62:AZ:116:LYS:HE3	2.21	0.40
63:Aa:105:LEU:HD12	63:Aa:105:LEU:HA	1.82	0.40
69:Ag:82:ALA:HA	69:Ag:85:VAL:HG12	2.03	0.40
77:Ao:52:GLY:O	77:Ao:54:THR:HG23	2.21	0.40
78:Ap:84:ARG:O	78:Ap:87:ARG:HG2	2.21	0.40
80:DC:211:PHE:N	80:DC:220:PHE:O	2.42	0.40
81:EC:6763:C:H2'	81:EC:6764:C:C6	2.56	0.40
81:EC:6827:G:H2'	81:EC:6828:G:H8	1.85	0.40
81:EC:6849:A:H1'	81:EC:6879:U:C6	2.56	0.40
1:BA:30:GLN:HB2	1:BA:150:ASP:HA	2.03	0.40
2:BB:81:PHE:O	2:BB:82:ARG:HG2	2.21	0.40
2:BB:136:ARG:CZ	34:B5:884:A:H5'	2.51	0.40
4:BE:171:ASP:OD1	4:BE:171:ASP:N	2.54	0.40
4:BE:249:ALA:O	4:BE:252:ARG:HB2	2.21	0.40
11:BO:80:HIS:CD2	11:BO:114:ARG:HB3	2.56	0.40
14:BX:68:ILE:HB	14:BX:70:LYS:HZ2	1.86	0.40
15:BY:29:HIS:C	15:BY:67:GLY:HA2	2.46	0.40
15:BY:81:GLU:HA	15:BY:84:LYS:HG2	2.04	0.40
24:BR:5:ARG:HB2	34:B5:1402:G:OP1	2.21	0.40
25:BS:116:LEU:HD12	25:BS:121:ALA:HB3	2.02	0.40
26:BT:83:ALA:HB2	34:B5:1525:A:H4'	2.02	0.40
28:BZ:92:ILE:HD11	28:BZ:102:THR:CG2	2.52	0.40
31:Bg:69:GLN:HB2	31:Bg:85:TRP:CD1	2.56	0.40
31:Bg:183:LEU:HD13	31:Bg:186:PHE:HA	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:429:G:C4	34:B5:430:G:C8	3.09	0.40
34:B5:463:U:H2'	34:B5:464:A:O4'	2.21	0.40
34:B5:552:G:C6	34:B5:553:G:C6	3.10	0.40
34:B5:1036:A:H2'	34:B5:1037:C:C6	2.56	0.40
34:B5:1610:G:O5'	34:B5:1610:G:H8	2.04	0.40
37:AC:360:LYS:HB3	37:AC:360:LYS:HE3	1.91	0.40
38:A1:66:A:P	48:AL:100:ARG:HH21	2.44	0.40
38:A1:109:A:N1	38:A1:322:U:O2'	2.53	0.40
38:A1:179:C:N3	38:A1:238:A:N1	2.69	0.40
38:A1:236:G:C6	38:A1:237:G:O6	2.75	0.40
38:A1:598:A:H2'	38:A1:599:C:C6	2.57	0.40
38:A1:740:G:H2'	38:A1:741:U:O4'	2.20	0.40
38:A1:1069:C:H2'	38:A1:1070:U:C6	2.56	0.40
38:A1:1081:U:H5"	38:A1:1082:U:H5	1.87	0.40
38:A1:1223:A:N7	38:A1:1286:A:C6	2.89	0.40
38:A1:1296:C:OP1	55:AS:84:ARG:NH2	2.45	0.40
38:A1:1610:G:C6	38:A1:1611:G:C5	3.10	0.40
38:A1:1886:A:N1	38:A1:2390:A:O2'	2.54	0.40
38:A1:1914:G:N2	54:AR:81:ARG:O	2.31	0.40
38:A1:2098:C:O5'	38:A1:2098:C:H6	2.04	0.40
38:A1:2256:A:N6	80:DC:703:GLY:HA2	2.35	0.40
38:A1:2928:C:H2'	38:A1:2929:C:H6	1.86	0.40
38:A1:3163:A:N6	38:A1:3288:G:C6	2.89	0.40
38:A1:3277:U:H3'	38:A1:3278:C:H5'	2.02	0.40
38:A1:3359:A:H2'	38:A1:3360:C:C6	2.56	0.40
40:A4:39:G:H1'	40:A4:104:A:H61	1.86	0.40
41:AD:262:LYS:HA	41:AD:265:TYR:HB2	2.03	0.40
42:AE:166:LYS:H	42:AE:166:LYS:HG2	1.66	0.40
45:AH:103:ILE:HD11	45:AH:136:PHE:CZ	2.53	0.40
47:AJ:92:ARG:NH1	47:AJ:174:LYS:HG2	2.36	0.40
49:AM:89:ALA:HB1	49:AM:92:GLU:OE2	2.22	0.40
54:AR:6:THR:OG1	54:AR:7:GLN:NE2	2.55	0.40
54:AR:43:LYS:O	54:AR:46:LYS:HG2	2.22	0.40
54:AR:90:PRO:O	54:AR:94:VAL:HG23	2.21	0.40
55:AS:24:LEU:HG	56:AT:148:PRO:HG3	2.02	0.40
57:AU:94:ARG:O	57:AU:96:VAL:HG23	2.22	0.40
60:AX:29:SER:OG	60:AX:31:THR:HG22	2.21	0.40
62:AZ:107:ARG:H	62:AZ:107:ARG:HG2	1.74	0.40
67:Ae:22:SER:HA	67:Ae:28:VAL:HG12	2.03	0.40
69:Ag:87:GLU:O	69:Ag:91:ARG:HG3	2.21	0.40
79:E:17:LEU:HD22	79:E:176:GLU:HG3	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:256:LYS:HD3	80:DC:256:LYS:HA	1.84	0.40
80:DC:358:GLU:OE2	80:DC:479:LYS:HB3	2.22	0.40
80:DC:396:ALA:N	80:DC:456:LEU:O	2.54	0.40
80:DC:672:LYS:NZ	80:DC:673:GLU:OE1	2.54	0.40
81:EC:6852:U:C2	81:EC:6853:G:N7	2.89	0.40
1:BA:108:THR:CA	3:BC:64:LYS:HZ1	2.33	0.40
3:BC:140:ARG:HB2	3:BC:222:TYR:CD1	2.57	0.40
3:BC:214:ALA:O	3:BC:218:ILE:HG12	2.21	0.40
4:BE:11:ARG:CZ	4:BE:20:LEU:HD12	2.51	0.40
5:BG:180:THR:HG23	5:BG:183:ARG:H	1.87	0.40
6:BH:17:GLU:OE1	6:BH:17:GLU:N	2.54	0.40
6:BH:134:GLU:CD	10:BN:21:ASN:HD21	2.30	0.40
9:BL:56:LYS:NZ	34:B5:328:A:P	2.94	0.40
9:BL:111:VAL:HG12	9:BL:139:VAL:HG21	2.02	0.40
11:BO:111:ARG:NE	16:Ba:58:VAL:HG22	2.34	0.40
15:BY:124:ARG:HA	15:BY:127:LYS:HE2	2.03	0.40
17:Bb:50:ALA:O	17:Bb:51:GLN:HB3	2.20	0.40
20:BF:60:ASP:N	20:BF:65:ARG:HH22	2.05	0.40
20:BF:111:VAL:HA	20:BF:114:ILE:HG22	2.02	0.40
20:BF:216:GLU:O	20:BF:220:VAL:HG13	2.21	0.40
21:BK:11:ILE:HD13	21:BK:11:ILE:HA	1.91	0.40
23:BQ:10:PHE:CD2	23:BQ:12:LYS:HG2	2.56	0.40
23:BQ:25:GLY:O	23:BQ:62:ASN:HA	2.22	0.40
29:Bc:42:ARG:CZ	29:Bc:56:LEU:HD13	2.51	0.40
31:Bg:155:ARG:NE	31:Bg:156:VAL:O	2.54	0.40
33:BM:112:ALA:HB3	33:BM:115:VAL:HG23	2.02	0.40
34:B5:32:U:H2'	34:B5:33:U:O4'	2.21	0.40
34:B5:75:U:P	34:B5:76:A:H5"	2.61	0.40
34:B5:1210:C:C2	34:B5:1454:G:C2	3.09	0.40
34:B5:1424:A:H2'	34:B5:1425:A:O4'	2.22	0.40
34:B5:1471:A:N3	34:B5:1474:G:O2'	2.47	0.40
34:B5:1775:U:H2'	34:B5:1776:A:C8	2.57	0.40
36:AB:165:GLN:HE22	36:AB:202:THR:HG21	1.86	0.40
36:AB:266:ARG:HG2	36:AB:266:ARG:NH1	2.35	0.40
38:A1:12:A:O2'	38:A1:13:A:H5'	2.21	0.40
38:A1:1214:U:OP2	55:AS:137:ARG:NH2	2.55	0.40
38:A1:1336:U:H2'	38:A1:1337:A:H8	1.86	0.40
38:A1:1473:G:H5'	54:AR:24:LEU:O	2.20	0.40
38:A1:2262:A:C5	38:A1:2263:C:C2	3.09	0.40
38:A1:2506:U:H2'	38:A1:2507:C:C6	2.57	0.40
38:A1:2714:G:H4'	38:A1:2715:A:H5"	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2730:G:H4'	53:AQ:184:PHE:CG	2.56	0.40
38:A1:2813:A:H2'	38:A1:2814:G:O4'	2.21	0.40
38:A1:3005:A:O2'	38:A1:3140:G:N2	2.52	0.40
38:A1:3233:C:H2'	38:A1:3234:A:C8	2.56	0.40
39:A3:28:C:H1'	39:A3:55:A:H61	1.85	0.40
39:A3:37:G:H2'	39:A3:38:U:C6	2.56	0.40
39:A3:73:C:N4	55:AS:19:VAL:HG21	2.36	0.40
40:A4:36:G:O2'	40:A4:104:A:N1	2.49	0.40
42:AE:173:MET:HE2	42:AE:173:MET:HB2	1.96	0.40
43:AF:84:VAL:HG23	43:AF:117:VAL:HB	2.04	0.40
48:AL:63:VAL:HG22	63:Aa:128:ARG:HH12	1.83	0.40
52:AP:176:ILE:O	52:AP:179:GLN:HG3	2.21	0.40
54:AR:23:TRP:CH2	54:AR:25:ASP:HB3	2.56	0.40
55:AS:48:LEU:HD11	56:AT:154:VAL:HG13	2.03	0.40
56:AT:8:ARG:HE	56:AT:8:ARG:HB3	1.65	0.40
57:AU:37:LEU:O	57:AU:41:ILE:HG13	2.20	0.40
61:AY:120:GLN:HE22	61:AY:126:LEU:HD22	1.86	0.40
63:Aa:24:LYS:O	63:Aa:25:HIS:C	2.64	0.40
68:Af:45:LEU:HD23	68:Af:71:VAL:HG12	2.04	0.40
79:E:201:VAL:O	79:E:201:VAL:HG12	2.21	0.40
80:DC:454:ILE:HG13	80:DC:455:GLY:N	2.36	0.40
80:DC:729:PHE:HB3	80:DC:797:VAL:O	2.21	0.40
81:EC:6841:U:H5"	81:EC:6844:A:H61	1.86	0.40
81:EC:6853:G:H5'	81:EC:6874:A:N1	2.37	0.40
1:BA:55:GLU:HG2	12:BV:82:VAL:HB	2.02	0.40
2:BB:84:ILE:HA	2:BB:103:MET:HE1	2.03	0.40
4:BE:57:ASN:OD1	4:BE:60:GLU:HG2	2.21	0.40
6:BH:20:VAL:HA	6:BH:85:PHE:HZ	1.87	0.40
6:BH:63:PRO:HG2	6:BH:65:PRO:HD3	2.03	0.40
16:Ba:97:PRO:CG	16:Ba:98:PRO:HD3	2.49	0.40
19:BD:80:ALA:O	19:BD:83:THR:HG22	2.21	0.40
19:BD:97:SER:HB3	19:BD:100:ALA:HB3	2.03	0.40
20:BF:60:ASP:O	20:BF:85:ALA:HB1	2.22	0.40
20:BF:117:THR:HG23	20:BF:195:ALA:HB2	2.04	0.40
20:BF:197:GLU:OE2	20:BF:209:TYR:N	2.54	0.40
21:BK:74:GLU:HG2	21:BK:75:TYR:N	2.36	0.40
23:BQ:58:ASP:OD1	23:BQ:59:LYS:N	2.55	0.40
26:BT:39:THR:HA	26:BT:100:ILE:HD13	2.03	0.40
27:BU:95:ALA:HB1	27:BU:99:ILE:HD11	2.02	0.40
34:B5:267:U:H2'	34:B5:268:C:C6	2.57	0.40
34:B5:419:G:H2'	34:B5:420:A:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:875:G:O2'	34:B5:877:G:OP2	2.27	0.40
34:B5:1240:U:H1'	34:B5:1244:A:N1	2.37	0.40
34:B5:1443:U:H5"	34:B5:1444:A:H5'	2.03	0.40
34:B5:1475:A:C6	34:B5:1476:C:C4	3.09	0.40
36:AB:41:VAL:HA	36:AB:184:ASN:O	2.21	0.40
38:A1:251:G:H1'	38:A1:253:A:C8	2.57	0.40
38:A1:443:G:O6	38:A1:491:A:H5"	2.21	0.40
38:A1:590:G:O6	38:A1:611:A:H3'	2.22	0.40
38:A1:676:G:O6	53:AQ:86:THR:HG21	2.21	0.40
38:A1:1102:A:H4'	38:A1:1103:A:C8	2.56	0.40
38:A1:1310:G:H2'	38:A1:1311:G:C8	2.57	0.40
38:A1:1718:G:H2'	38:A1:1719:G:H8	1.86	0.40
38:A1:2353:G:H5"	52:AP:86:LYS:HB2	2.04	0.40
38:A1:2390:A:H2'	38:A1:2391:G:O4'	2.21	0.40
38:A1:2773:C:C2	38:A1:2774:C:C5	3.09	0.40
43:AF:77:VAL:HG22	55:AS:59:VAL:HG23	2.04	0.40
44:AG:81:THR:HG21	44:AG:181:LYS:HE3	2.03	0.40
44:AG:92:LYS:HA	44:AG:92:LYS:HD2	1.82	0.40
45:AH:130:ASP:OD1	45:AH:130:ASP:N	2.54	0.40
48:AL:174:ARG:NH2	71:Ai:9:ILE:HG21	2.36	0.40
51:AO:65[A]:ASN:OD1	51:AO:67[A]:THR:HB	2.22	0.40
57:AU:19:VAL:HG21	57:AU:30:PRO:HB3	2.04	0.40
57:AU:57:THR:OG1	57:AU:64:THR:HB	2.21	0.40
67:Ae:111:ARG:HG3	67:Ae:111:ARG:NH1	2.36	0.40
70:Ah:26:LYS:O	70:Ah:30:GLU:HG3	2.22	0.40
77:Ao:53:GLN:HE21	77:Ao:57:VAL:HB	1.86	0.40
79:E:41:TYR:CZ	79:E:46:ASP:HB3	2.57	0.40
79:E:147:LYS:HA	79:E:147:LYS:HD3	1.92	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%)	177 (87%)	27 (13%)	0	100	100
2	BB	212/255 (83%)	179 (84%)	33 (16%)	0	100	100
3	BC	215/254 (85%)	208 (97%)	7 (3%)	0	100	100
4	BE	258/261 (99%)	228 (88%)	30 (12%)	0	100	100
5	BG	224/236 (95%)	212 (95%)	12 (5%)	0	100	100
6	BH	182/190 (96%)	166 (91%)	16 (9%)	0	100	100
7	BI	184/200 (92%)	160 (87%)	24 (13%)	0	100	100
8	BJ	183/197 (93%)	163 (89%)	20 (11%)	0	100	100
9	BL	153/156 (98%)	140 (92%)	13 (8%)	0	100	100
10	BN	148/151 (98%)	139 (94%)	9 (6%)	0	100	100
11	BO	125/137 (91%)	111 (89%)	14 (11%)	0	100	100
12	BV	85/87 (98%)	75 (88%)	10 (12%)	0	100	100
13	BW	127/130 (98%)	119 (94%)	8 (6%)	0	100	100
14	BX	142/145 (98%)	131 (92%)	11 (8%)	0	100	100
15	BY	132/135 (98%)	122 (92%)	10 (8%)	0	100	100
16	Ba	95/119 (80%)	89 (94%)	6 (6%)	0	100	100
17	Bb	79/82 (96%)	74 (94%)	5 (6%)	0	100	100
18	Be	58/63 (92%)	51 (88%)	7 (12%)	0	100	100
19	BD	221/240 (92%)	211 (96%)	10 (4%)	0	100	100
20	BF	204/225 (91%)	187 (92%)	17 (8%)	0	100	100
21	BK	94/105 (90%)	78 (83%)	16 (17%)	0	100	100
22	BP	122/142 (86%)	115 (94%)	7 (6%)	0	100	100
23	BQ	139/143 (97%)	131 (94%)	8 (6%)	0	100	100
24	BR	117/136 (86%)	109 (93%)	8 (7%)	0	100	100
25	BS	143/146 (98%)	133 (93%)	10 (7%)	0	100	100
26	BT	139/144 (96%)	124 (89%)	15 (11%)	0	100	100
27	BU	105/121 (87%)	95 (90%)	10 (10%)	0	100	100
28	BZ	69/108 (64%)	60 (87%)	9 (13%)	0	100	100
29	Bc	61/67 (91%)	57 (93%)	4 (7%)	0	100	100
30	Bd	51/56 (91%)	50 (98%)	1 (2%)	0	100	100
31	Bg	310/319 (97%)	275 (89%)	35 (11%)	0	100	100
32	Bf	73/152 (48%)	67 (92%)	6 (8%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
33	BM	122/143 (85%)	108 (88%)	14 (12%)	0	100	100
35	AA	245/254 (96%)	228 (93%)	17 (7%)	0	100	100
36	AB	383/387 (99%)	350 (91%)	33 (9%)	0	100	100
37	AC	359/362 (99%)	330 (92%)	29 (8%)	0	100	100
41	AD	290/297 (98%)	270 (93%)	20 (7%)	0	100	100
42	AE	163/176 (93%)	148 (91%)	15 (9%)	0	100	100
43	AF	220/244 (90%)	207 (94%)	13 (6%)	0	100	100
44	AG	228/256 (89%)	216 (95%)	12 (5%)	0	100	100
45	AH	188/191 (98%)	169 (90%)	19 (10%)	0	100	100
46	AI	220/222 (99%)	211 (96%)	9 (4%)	0	100	100
47	AJ	167/174 (96%)	152 (91%)	15 (9%)	0	100	100
48	AL	191/199 (96%)	181 (95%)	10 (5%)	0	100	100
49	AM	134/138 (97%)	127 (95%)	7 (5%)	0	100	100
50	AN	201/204 (98%)	188 (94%)	13 (6%)	0	100	100
51	AO	195/199 (98%)	190 (97%)	5 (3%)	0	100	100
52	AP	171/184 (93%)	163 (95%)	8 (5%)	0	100	100
53	AQ	183/186 (98%)	170 (93%)	13 (7%)	0	100	100
54	AR	186/189 (98%)	171 (92%)	15 (8%)	0	100	100
55	AS	170/178 (96%)	154 (91%)	16 (9%)	0	100	100
56	AT	157/160 (98%)	149 (95%)	8 (5%)	0	100	100
57	AU	98/121 (81%)	89 (91%)	9 (9%)	0	100	100
58	AV	134/137 (98%)	128 (96%)	6 (4%)	0	100	100
59	AW	61/155 (39%)	59 (97%)	2 (3%)	0	100	100
60	AX	119/142 (84%)	108 (91%)	11 (9%)	0	100	100
61	AY	124/127 (98%)	118 (95%)	6 (5%)	0	100	100
62	AZ	133/136 (98%)	126 (95%)	7 (5%)	0	100	100
63	Aa	146/149 (98%)	136 (93%)	10 (7%)	0	100	100
64	Ab	56/59 (95%)	50 (89%)	6 (11%)	0	100	100
65	Ac	95/105 (90%)	95 (100%)	0	0	100	100
66	Ad	107/113 (95%)	102 (95%)	5 (5%)	0	100	100
67	Ae	125/130 (96%)	121 (97%)	4 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
68	Af	104/107 (97%)	99 (95%)	5 (5%)	0	100	100
69	Ag	110/121 (91%)	103 (94%)	7 (6%)	0	100	100
70	Ah	117/120 (98%)	112 (96%)	5 (4%)	0	100	100
71	Ai	97/100 (97%)	90 (93%)	7 (7%)	0	100	100
72	Aj	85/88 (97%)	83 (98%)	2 (2%)	0	100	100
73	Ak	75/78 (96%)	69 (92%)	6 (8%)	0	100	100
74	Al	48/51 (94%)	45 (94%)	3 (6%)	0	100	100
75	Am	50/128 (39%)	47 (94%)	3 (6%)	0	100	100
76	An	23/25 (92%)	23 (100%)	0	0	100	100
77	Ao	103/106 (97%)	95 (92%)	8 (8%)	0	100	100
78	Ap	89/92 (97%)	83 (93%)	6 (7%)	0	100	100
79	E	215/217 (99%)	194 (90%)	21 (10%)	0	100	100
80	DC	819/842 (97%)	728 (89%)	89 (11%)	2 (0%)	43	66
All	All	11960/12946 (92%)	11021 (92%)	937 (8%)	2 (0%)	100	100

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
80	DC	775	ASN
80	DC	698	ILE

5.3.2 Protein sidechains (i)

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

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
34	B5	1754/1798 (97%)	476 (27%)	8 (0%)
38	A1	3212/3360 (95%)	711 (22%)	24 (0%)
39	A3	120/121 (99%)	14 (11%)	1 (0%)
40	A4	157/158 (99%)	29 (18%)	1 (0%)
81	EC	131/202 (64%)	103 (78%)	18 (13%)
All	All	5374/5639 (95%)	1333 (24%)	52 (0%)

All (1333) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
34	B5	2	A
34	B5	4	C
34	B5	25	C
34	B5	34	G
34	B5	42	G
34	B5	43	A
34	B5	45	U
34	B5	47	A
34	B5	57	G
34	B5	59	C
34	B5	60	U
34	B5	63	G
34	B5	67	A
34	B5	68	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	79	C
34	B5	80	A
34	B5	81	G
34	B5	84	A
34	B5	104	A
34	B5	111	U
34	B5	114	C
34	B5	116	U
34	B5	119	A
34	B5	121	U
34	B5	124	A
34	B5	127	G
34	B5	130	C
34	B5	131	C
34	B5	132	U
34	B5	133	U
34	B5	134	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

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Mol	Chain	Res	Type
34	B5	145	A
34	B5	153	G
34	B5	156	A
34	B5	159	U
34	B5	160	C
34	B5	161	U
34	B5	166	C
34	B5	176	C
34	B5	178	U
34	B5	179	A
34	B5	180	A
34	B5	188	A
34	B5	189	C
34	B5	190	C
34	B5	191	C
34	B5	193	U
34	B5	194	U
34	B5	195	G
34	B5	196	G
34	B5	197	A
34	B5	210	A
34	B5	211	PSU
34	B5	215	A
34	B5	216	U
34	B5	217	A
34	B5	218	A
34	B5	220	A
34	B5	224	C
34	B5	225	A
34	B5	226	A
34	B5	227	U
34	B5	228	G
34	B5	229	U
34	B5	230	C
34	B5	231	U
34	B5	233	C
34	B5	234	G
34	B5	235	G
34	B5	238	U
34	B5	239	C
34	B5	240	U
34	B5	241	U

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Mol	Chain	Res	Type
34	B5	242	U
34	B5	249	U
34	B5	252	U
34	B5	255	U
34	B5	257	A
34	B5	260	U
34	B5	261	U
34	B5	265	A
34	B5	272	U
34	B5	273	G
34	B5	280	U
34	B5	285	G
34	B5	287	G
34	B5	299	A
34	B5	309	C
34	B5	314	C
34	B5	316	A
34	B5	320	U
34	B5	322	G
34	B5	333	A
34	B5	337	G
34	B5	338	C
34	B5	346	G
34	B5	350	U
34	B5	352	A
34	B5	359	A
34	B5	360	A
34	B5	361	C
34	B5	370	A
34	B5	380	U
34	B5	390	G
34	B5	400	A
34	B5	401	A
34	B5	402	C
34	B5	404	G
34	B5	417	A
34	B5	423	G
34	B5	424	C
34	B5	425	A
34	B5	426	G
34	B5	430	G
34	B5	431	C

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Mol	Chain	Res	Type
34	B5	432	G
34	B5	437	A
34	B5	439	U
34	B5	444	C
34	B5	453	U
34	B5	454	U
34	B5	460	A
34	B5	461	G
34	B5	468	A
34	B5	475	A
34	B5	479	C
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	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	499	U
34	B5	500	C
34	B5	501	U
34	B5	502	U
34	B5	505	A
34	B5	506	A
34	B5	509	G
34	B5	514	G
34	B5	515	A
34	B5	519	C
34	B5	527	A
34	B5	533	U
34	B5	534	A
34	B5	538	A
34	B5	540	G
34	B5	541	A

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Mol	Chain	Res	Type
34	B5	542	A
34	B5	544	A
34	B5	548	G
34	B5	551	G
34	B5	555	A
34	B5	557	G
34	B5	558	U
34	B5	559	C
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	585	A
34	B5	594	A
34	B5	595	G
34	B5	606	A
34	B5	610	G
34	B5	611	U
34	B5	619	A
34	B5	620	A
34	B5	623	A
34	B5	624	G
34	B5	644	C
34	B5	648	G
34	B5	649	U
34	B5	650	U
34	B5	652	G
34	B5	657	U
34	B5	658	C
34	B5	677	G
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	692	C
34	B5	694	U
34	B5	698	U

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Mol	Chain	Res	Type
34	B5	699	U
34	B5	700	C
34	B5	702	G
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	745	U
34	B5	753	A
34	B5	765	G
34	B5	771	A
34	B5	774	A
34	B5	779	U
34	B5	780	A
34	B5	782	U
34	B5	783	G
34	B5	784	C
34	B5	786	C
34	B5	787	G
34	B5	789	A
34	B5	794	U
34	B5	799	A
34	B5	806	A
34	B5	812	A
34	B5	814	A
34	B5	819	G
34	B5	823	G
34	B5	825	U
34	B5	826	U
34	B5	827	C
34	B5	828	U
34	B5	829	A

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Mol	Chain	Res	Type
34	B5	830	U
34	B5	831	U
34	B5	832	U
34	B5	834	G
34	B5	835	U
34	B5	836	U
34	B5	838	G
34	B5	839	U
34	B5	842	C
34	B5	843	U
34	B5	845	G
34	B5	846	G
34	B5	847	A
34	B5	849	C
34	B5	851	U
34	B5	852	C
34	B5	856	A
34	B5	857	U
34	B5	860	U
34	B5	863	A
34	B5	864	U
34	B5	870	C
34	B5	877	G
34	B5	890	C
34	B5	897	C
34	B5	898	A
34	B5	901	G
34	B5	902	G
34	B5	913	G
34	B5	918	U
34	B5	920	U
34	B5	927	C
34	B5	928	U
34	B5	931	C
34	B5	933	A
34	B5	935	U
34	B5	945	U
34	B5	959	U
34	B5	960	U
34	B5	966	A
34	B5	969	C
34	B5	988	A

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Mol	Chain	Res	Type
34	B5	992	A
34	B5	997	G
34	B5	1003	A
34	B5	1004	U
34	B5	1005	A
34	B5	1021	C
34	B5	1023	A
34	B5	1026	A
34	B5	1028	C
34	B5	1031	U
34	B5	1032	G
34	B5	1039	A
34	B5	1043	A
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	1070	C
34	B5	1076	A
34	B5	1081	A
34	B5	1082	C
34	B5	1091	A
34	B5	1092	A
34	B5	1093	A
34	B5	1098	U
34	B5	1100	G
34	B5	1113	A
34	B5	1126	G
34	B5	1132	A
34	B5	1138	A
34	B5	1150	G
34	B5	1158	C
34	B5	1185	U
34	B5	1186	U
34	B5	1193	A
34	B5	1194	A
34	B5	1196	A

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Mol	Chain	Res	Type
34	B5	1199	G
34	B5	1200	G
34	B5	1201	G
34	B5	1214	U
34	B5	1217	A
34	B5	1218	G
34	B5	1228	G
34	B5	1229	G
34	B5	1244	A
34	B5	1245	G
34	B5	1246	C
34	B5	1248	C
34	B5	1250	U
34	B5	1251	U
34	B5	1256	A
34	B5	1264	G
34	B5	1265	G
34	B5	1285	U
34	B5	1291	G
34	B5	1307	U
34	B5	1314	U
34	B5	1315	U
34	B5	1321	A
34	B5	1325	A
34	B5	1340	U
34	B5	1344	A
34	B5	1345	A
34	B5	1346	A
34	B5	1348	A
34	B5	1350	U
34	B5	1353	U
34	B5	1354	G
34	B5	1362	U
34	B5	1363	U
34	B5	1364	G
34	B5	1366	U
34	B5	1368	G
34	B5	1369	U
34	B5	1370	U
34	B5	1378	U
34	B5	1383	G
34	B5	1385	G

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Mol	Chain	Res	Type
34	B5	1388	A
34	B5	1390	U
34	B5	1398	U
34	B5	1399	C
34	B5	1400	A
34	B5	1413	U
34	B5	1418	G
34	B5	1425	A
34	B5	1426	C
34	B5	1427	A
34	B5	1428	G
34	B5	1432	U
34	B5	1435	G
34	B5	1436	A
34	B5	1445	G
34	B5	1447	C
34	B5	1450	U
34	B5	1458	G
34	B5	1459	C
34	B5	1471	A
34	B5	1473	U
34	B5	1486	G
34	B5	1491	U
34	B5	1492	A
34	B5	1493	A
34	B5	1496	U
34	B5	1505	A
34	B5	1516	A
34	B5	1521	G
34	B5	1523	G
34	B5	1524	A
34	B5	1537	C
34	B5	1540	G
34	B5	1542	G
34	B5	1554	U
34	B5	1557	U
34	B5	1559	A
34	B5	1573	A
34	B5	1575	G7M
34	B5	1576	A
34	B5	1584	G
34	B5	1590	G

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Mol	Chain	Res	Type
34	B5	1601	G
34	B5	1610	G
34	B5	1611	A
34	B5	1619	C
34	B5	1631	A
34	B5	1634	C
34	B5	1637	C
34	B5	1638	G
34	B5	1658	G
34	B5	1663	G
34	B5	1678	A
34	B5	1680	G
34	B5	1683	C
34	B5	1684	U
34	B5	1687	U
34	B5	1688	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	1702	A
34	B5	1703	C
34	B5	1704	U
34	B5	1705	C
34	B5	1707	A
34	B5	1708	U
34	B5	1709	C
34	B5	1711	C
34	B5	1712	A
34	B5	1713	G
34	B5	1714	A
34	B5	1728	A
34	B5	1732	A
34	B5	1735	U
34	B5	1742	U
34	B5	1744	A
34	B5	1750	A
34	B5	1755	A

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Mol	Chain	Res	Type
34	B5	1756[A]	A
34	B5	1757	G
34	B5	1760	G
34	B5	1766	A
34	B5	1769	U
34	B5	1780	G
34	B5	1782	MA6
34	B5	1792	G
34	B5	1793	G
34	B5	1794	A
34	B5	1796	C
34	B5	1798	U
34	B5	1799	U
38	A1	6	A
38	A1	12	A
38	A1	14	U
38	A1	26	A
38	A1	30	G
38	A1	34	A
38	A1	40	A
38	A1	43	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	72	C
38	A1	74	G
38	A1	85	A
38	A1	92	G
38	A1	99	A
38	A1	109	A
38	A1	110	G
38	A1	111	C
38	A1	116	A
38	A1	122	A
38	A1	135	C
38	A1	136	G
38	A1	147	U
38	A1	148	G
38	A1	155	G

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Mol	Chain	Res	Type
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	177	U
38	A1	178	U
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	211	A
38	A1	219	A
38	A1	240	U
38	A1	241	G
38	A1	242	C
38	A1	244	G
38	A1	245	U
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	260	C
38	A1	263	C
38	A1	269	G
38	A1	284	A
38	A1	286	U
38	A1	295	A
38	A1	305	U
38	A1	311	C
38	A1	315	C
38	A1	329	U

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Mol	Chain	Res	Type
38	A1	337	G
38	A1	342	A
38	A1	375	A
38	A1	376	G
38	A1	387	A
38	A1	390	G
38	A1	398	A
38	A1	399	A
38	A1	403	C
38	A1	407	A
38	A1	421	G
38	A1	422	A
38	A1	423	A
38	A1	438	A
38	A1	439	C
38	A1	440	A
38	A1	442	G
38	A1	443	G
38	A1	444	U
38	A1	445	G
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	493	U
38	A1	494	G
38	A1	495	G
38	A1	503	C
38	A1	518	G
38	A1	520	U
38	A1	521	A
38	A1	523	A
38	A1	536	U
38	A1	540	U
38	A1	543	C
38	A1	544	C
38	A1	545	U
38	A1	546	C
38	A1	547	G

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Mol	Chain	Res	Type
38	A1	548	G
38	A1	549	U
38	A1	552	G
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
38	A1	570	A
38	A1	578	A
38	A1	579	G
38	A1	592	A
38	A1	593	C
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	637	C
38	A1	649	A
38	A1	660	A
38	A1	667	C
38	A1	677	A
38	A1	690	A
38	A1	691	A
38	A1	705	A
38	A1	719	U
38	A1	734	C
38	A1	735	A
38	A1	736	A
38	A1	742	G
38	A1	766	U
38	A1	767	U
38	A1	771	A
38	A1	775	A
38	A1	776	PSU
38	A1	777	U

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Mol	Chain	Res	Type
38	A1	780	A
38	A1	781	G
38	A1	785	G
38	A1	799	G
38	A1	801	A
38	A1	806	A
38	A1	816	A
38	A1	817	A
38	A1	830	A
38	A1	832	G
38	A1	847	A
38	A1	848	A
38	A1	849	C
38	A1	861	C
38	A1	871	U
38	A1	874	U
38	A1	879	U
38	A1	880	G
38	A1	896	A
38	A1	907	G
38	A1	908	G
38	A1	914	A
38	A1	916	G
38	A1	917	A
38	A1	921	A
38	A1	923	C
38	A1	937	G
38	A1	944	C
38	A1	959	C
38	A1	960	PSU
38	A1	963	G
38	A1	974	G
38	A1	980	A
38	A1	992	A
38	A1	1000	C
38	A1	1006	A
38	A1	1008	U
38	A1	1010	G
38	A1	1013	G
38	A1	1014	U
38	A1	1016	C
38	A1	1018	G

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Mol	Chain	Res	Type
38	A1	1019	G
38	A1	1020	G
38	A1	1021	G
38	A1	1023	C
38	A1	1031	C
38	A1	1033	U
38	A1	1034	U
38	A1	1035	G
38	A1	1047	A
38	A1	1063	G
38	A1	1064	A
38	A1	1066	G
38	A1	1072	G
38	A1	1075	A
38	A1	1082	U
38	A1	1092	C
38	A1	1093	A
38	A1	1094	U
38	A1	1095	U
38	A1	1096	U
38	A1	1097	G
38	A1	1098	A
38	A1	1103	A
38	A1	1104	G
38	A1	1117	G
38	A1	1131	G
38	A1	1143	A
38	A1	1144	U
38	A1	1155	C
38	A1	1159	A
38	A1	1161	G
38	A1	1172	G
38	A1	1180	A
38	A1	1181	U
38	A1	1182	A
38	A1	1186	G
38	A1	1192	C
38	A1	1193	A
38	A1	1196	C
38	A1	1201	C
38	A1	1208	U
38	A1	1209	G

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Mol	Chain	Res	Type
38	A1	1215	U
38	A1	1218	U
38	A1	1220	U
38	A1	1221	A
38	A1	1222	G
38	A1	1226	G
38	A1	1228	C
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
38	A1	1252	A
38	A1	1253	U
38	A1	1255	C
38	A1	1256	G
38	A1	1257	C
38	A1	1258	U
38	A1	1259	A
38	A1	1260	A
38	A1	1262	G
38	A1	1263	A
38	A1	1264	G
38	A1	1265	U
38	A1	1267	U
38	A1	1268	G
38	A1	1269	U
38	A1	1270	A
38	A1	1271	A
38	A1	1272	C
38	A1	1273	A

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Mol	Chain	Res	Type
38	A1	1274	A
38	A1	1275	C
38	A1	1278	A
38	A1	1282	G
38	A1	1284	C
38	A1	1285	G
38	A1	1286	A
38	A1	1287	A
38	A1	1288	U
38	A1	1307	G
38	A1	1309	U
38	A1	1325	U
38	A1	1330	A
38	A1	1331	U
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	1419	A
38	A1	1425	U
38	A1	1431	G
38	A1	1434	G
38	A1	1437	C
38	A1	1446	A
38	A1	1475	A
38	A1	1477	A
38	A1	1481	A
38	A1	1482	A
38	A1	1483	G
38	A1	1484	U

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Mol	Chain	Res	Type
38	A1	1487	G
38	A1	1488	G
38	A1	1494	U
38	A1	1507	G
38	A1	1508	C
38	A1	1510	G
38	A1	1533	U
38	A1	1536	G
38	A1	1539	A
38	A1	1547	G
38	A1	1555	U
38	A1	1556	C
38	A1	1557	A
38	A1	1561	G
38	A1	1562	C
38	A1	1563	C
38	A1	1564	U
38	A1	1566	A
38	A1	1568	U
38	A1	1569	U
38	A1	1570	U
38	A1	1571	A
38	A1	1572	U
38	A1	1573	G
38	A1	1575	A
38	A1	1576	G
38	A1	1580	A
38	A1	1581	C
38	A1	1582	C
38	A1	1583	A
38	A1	1589	A
38	A1	1593	A
38	A1	1605	A
38	A1	1606	U
38	A1	1628	C
38	A1	1629	U
38	A1	1642	A
38	A1	1643	A
38	A1	1645	U
38	A1	1683	A
38	A1	1694	U
38	A1	1696	A

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Mol	Chain	Res	Type
38	A1	1705	U
38	A1	1724	U
38	A1	1736	G
38	A1	1741	A
38	A1	1742	U
38	A1	1750	A
38	A1	1751	G
38	A1	1756	C
38	A1	1762	C
38	A1	1763	U
38	A1	1764	U
38	A1	1765	U
38	A1	1766	G
38	A1	1775	G
38	A1	1778	G
38	A1	1794	G
38	A1	1797	A
38	A1	1808	G
38	A1	1813	A
38	A1	1816	A
38	A1	1817	G
38	A1	1818	U
38	A1	1819	U
38	A1	1821	U
38	A1	1840	U
38	A1	1842	A
38	A1	1849	C
38	A1	1850	A
38	A1	1866	C
38	A1	1874	A
38	A1	1878	G
38	A1	1880	U
38	A1	1886	A
38	A1	1893	A
38	A1	1897	G
38	A1	1899	G
38	A1	1901	A
38	A1	1906	G
38	A1	1921	A
38	A1	1943	C
38	A1	1953	G
38	A1	2094	C

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Mol	Chain	Res	Type
38	A1	2095	G
38	A1	2101	C
38	A1	2102	U
38	A1	2112	U
38	A1	2114	C
38	A1	2122	G
38	A1	2126	A
38	A1	2131	A
38	A1	2140	U
38	A1	2142	1MA
38	A1	2144	A
38	A1	2145	A
38	A1	2158	A
38	A1	2169	G
38	A1	2170	U
38	A1	2171	G
38	A1	2188	A
38	A1	2194	G
38	A1	2201	G
38	A1	2207	A
38	A1	2208	A
38	A1	2209	U
38	A1	2211	U
38	A1	2222	A
38	A1	2223	A
38	A1	2227	C
38	A1	2251	G
38	A1	2252	A
38	A1	2253	G
38	A1	2255	A
38	A1	2256	A
38	A1	2257	C
38	A1	2258	PSU
38	A1	2259	A
38	A1	2260	PSU
38	A1	2261	G
38	A1	2262	A
38	A1	2263	C
38	A1	2264	PSU
38	A1	2265	C
38	A1	2266	PSU
38	A1	2267	C

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Mol	Chain	Res	Type
38	A1	2268	U
38	A1	2269	U
38	A1	2270	A
38	A1	2272	G
38	A1	2273	G
38	A1	2274	U
38	A1	2276	G
38	A1	2280	A
38	A1	2282	U
38	A1	2298	U
38	A1	2307	G
38	A1	2308	C
38	A1	2310	U
38	A1	2313	A
38	A1	2314	PSU
38	A1	2315	G
38	A1	2334	U
38	A1	2335	G
38	A1	2336	U
38	A1	2363	A
38	A1	2373	A
38	A1	2374	C
38	A1	2375	G
38	A1	2383	C
38	A1	2388	U
38	A1	2393	G
38	A1	2394	G
38	A1	2397	A
38	A1	2401	A
38	A1	2402	A
38	A1	2403	G
38	A1	2404	A
38	A1	2411	U
38	A1	2412	G
38	A1	2435	G
38	A1	2438	A
38	A1	2442	G
38	A1	2445	A
38	A1	2446	U
38	A1	2448	G
38	A1	2449	A
38	A1	2450	G

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Mol	Chain	Res	Type
38	A1	2454	G
38	A1	2455	U
38	A1	2458	A
38	A1	2459	A
38	A1	2460	U
38	A1	2461	A
38	A1	2462	A
38	A1	2466	G
38	A1	2467	G
38	A1	2468	A
38	A1	2469	G
38	A1	2471	U
38	A1	2474	G
38	A1	2475	G
38	A1	2479	C
38	A1	2480	A
38	A1	2487	U
38	A1	2490	C
38	A1	2492	C
38	A1	2493	U
38	A1	2494	A
38	A1	2495	C
38	A1	2496	C
38	A1	2497	U
38	A1	2498	U
38	A1	2502	A
38	A1	2503	G
38	A1	2506	U
38	A1	2507	C
38	A1	2509	U
38	A1	2514	U
38	A1	2515	A
38	A1	2526	C
38	A1	2530	G
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

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Mol	Chain	Res	Type
38	A1	2544	U
38	A1	2545	C
38	A1	2546	C
38	A1	2549	G
38	A1	2550	U
38	A1	2552	C
38	A1	2554	A
38	A1	2555	G
38	A1	2559	U
38	A1	2562	A
38	A1	2569	A
38	A1	2570	U
38	A1	2571	U
38	A1	2572	C
38	A1	2573	G
38	A1	2578	U
38	A1	2585	G
38	A1	2593	A
38	A1	2606	G
38	A1	2607	G
38	A1	2614	G
38	A1	2626	A
38	A1	2629	U
38	A1	2637	A
38	A1	2648	G
38	A1	2652	U
38	A1	2656	A
38	A1	2672	G
38	A1	2674	A
38	A1	2677	G
38	A1	2681	U
38	A1	2688	U
38	A1	2689	A
38	A1	2691	A
38	A1	2694	A
38	A1	2704	A
38	A1	2705	A
38	A1	2714	G
38	A1	2719	U
38	A1	2728	G
38	A1	2729	U
38	A1	2737	C

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Mol	Chain	Res	Type
38	A1	2740	A
38	A1	2741	C
38	A1	2744	U
38	A1	2749	G
38	A1	2752	U
38	A1	2753	G
38	A1	2771	U
38	A1	2772	C
38	A1	2773	C
38	A1	2777	G
38	A1	2779	A
38	A1	2787	G
38	A1	2796	G
38	A1	2799	A
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	2818	U
38	A1	2821	C
38	A1	2838	A
38	A1	2842	U
38	A1	2845	A
38	A1	2847	A
38	A1	2861	U
38	A1	2871	G
38	A1	2876	C
38	A1	2887	A
38	A1	2894	C
38	A1	2899	C
38	A1	2904	U
38	A1	2923	PSU
38	A1	2935	U
38	A1	2936	A
38	A1	2938	G
38	A1	2942	C
38	A1	2947	G
38	A1	2971	A

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Mol	Chain	Res	Type
38	A1	2983	C
38	A1	2990	G
38	A1	2997	G
38	A1	3012	A
38	A1	3017	A
38	A1	3018	C
38	A1	3022	G
38	A1	3023	U
38	A1	3035	A
38	A1	3048	A
38	A1	3049	A
38	A1	3055	U
38	A1	3056	U
38	A1	3059	G
38	A1	3069	G
38	A1	3074	G
38	A1	3078	U
38	A1	3079	U
38	A1	3080	G
38	A1	3086	A
38	A1	3087	A
38	A1	3092	C
38	A1	3094	A
38	A1	3101	G
38	A1	3104	U
38	A1	3109	G
38	A1	3115	C
38	A1	3122	A
38	A1	3129	A
38	A1	3130	A
38	A1	3131	U
38	A1	3142	A
38	A1	3143	C
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

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Mol	Chain	Res	Type
38	A1	3169	U
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	3187	A
38	A1	3196	U
38	A1	3207	U
38	A1	3209	A
38	A1	3216	G
38	A1	3217	C
38	A1	3218	A
38	A1	3219	G
38	A1	3233	C
38	A1	3235	C
38	A1	3238	G
38	A1	3239	G
38	A1	3242	G
38	A1	3243	A
38	A1	3247	G
38	A1	3259	U
38	A1	3263	G
38	A1	3273	A
38	A1	3276	G
38	A1	3277	U
38	A1	3278	C
38	A1	3279	A
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	3294	A
38	A1	3304	U
38	A1	3307	A
38	A1	3313	U
38	A1	3316	A
38	A1	3341	U

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Mol	Chain	Res	Type
38	A1	3342	A
38	A1	3345	G
38	A1	3352	U
38	A1	3353	G
38	A1	3354	U
38	A1	3368	U
38	A1	3369	G
38	A1	3378	C
38	A1	3382	U
38	A1	3390	G
39	A3	11	A
39	A3	17	A
39	A3	22	A
39	A3	23	A
39	A3	24	A
39	A3	38	U
39	A3	49	G
39	A3	54	U
39	A3	55	A
39	A3	65	G
39	A3	78	U
39	A3	102	A
39	A3	112	G
39	A3	121	U
40	A4	14	C
40	A4	23	U
40	A4	25	G
40	A4	34	U
40	A4	35	C
40	A4	46	G
40	A4	51	G
40	A4	52	A
40	A4	59	A
40	A4	62	C
40	A4	63	G
40	A4	81	U
40	A4	82	U
40	A4	84	C
40	A4	86	U
40	A4	87	G
40	A4	89	A
40	A4	90	U

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Mol	Chain	Res	Type
40	A4	91	C
40	A4	95	G
40	A4	104	A
40	A4	106	C
40	A4	111	A
40	A4	113	U
40	A4	116	G
40	A4	125	U
40	A4	131	A
40	A4	148	G
40	A4	152	G
81	EC	6762	U
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
81	EC	6774	U
81	EC	6775	U
81	EC	6776	A
81	EC	6778	C
81	EC	6779	C
81	EC	6780	A
81	EC	6781	U
81	EC	6782	C
81	EC	6786	A
81	EC	6787	U
81	EC	6788	C
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	6795	U
81	EC	6797	U
81	EC	6799	C
81	EC	6800	G
81	EC	6801	A
81	EC	6802	A

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Mol	Chain	Res	Type
81	EC	6803	C
81	EC	6804	A
81	EC	6805	C
81	EC	6809	G
81	EC	6811	G
81	EC	6814	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	6827	G
81	EC	6831	U
81	EC	6832	G
81	EC	6834	U
81	EC	6835	U
81	EC	6837	G
81	EC	6839	U
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	6846	C
81	EC	6847	G
81	EC	6848	U
81	EC	6849	A
81	EC	6850	C
81	EC	6851	G
81	EC	6852	U
81	EC	6853	G
81	EC	6854	U
81	EC	6855	A
81	EC	6856	C
81	EC	6857	C
81	EC	6858	A

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Mol	Chain	Res	Type
81	EC	6859	U
81	EC	6860	A
81	EC	6861	G
81	EC	6862	G
81	EC	6864	A
81	EC	6866	C
81	EC	6867	C
81	EC	6868	C
81	EC	6869	C
81	EC	6870	A
81	EC	6871	A
81	EC	6872	A
81	EC	6873	A
81	EC	6874	A
81	EC	6875	C
81	EC	6876	A
81	EC	6877	C
81	EC	6878	G
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	6886	A
81	EC	6889	A
81	EC	6890	A
81	EC	6941	U
81	EC	6942	A

All (52) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
34	B5	130	C
34	B5	196	G
34	B5	431	C
34	B5	752	A
34	B5	889	U
34	B5	1061	A
34	B5	1344	A
34	B5	1683	C

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Mol	Chain	Res	Type
38	A1	239	G
38	A1	240	U
38	A1	252	U
38	A1	847	A
38	A1	916	G
38	A1	1287	A
38	A1	1560	G
38	A1	1818	U
38	A1	2094	C
38	A1	2222	A
38	A1	2255	A
38	A1	2256	A
38	A1	2258	PSU
38	A1	2266	PSU
38	A1	2268	U
38	A1	2437	G
38	A1	2478	C
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
39	A3	23	A
40	A4	88	A
81	EC	6770	U
81	EC	6780	A
81	EC	6789	G
81	EC	6818	G
81	EC	6840	A
81	EC	6842	U
81	EC	6843	U
81	EC	6845	G
81	EC	6852	U
81	EC	6853	G
81	EC	6856	C
81	EC	6859	U
81	EC	6860	A
81	EC	6861	G
81	EC	6865	G
81	EC	6881	U

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Mol	Chain	Res	Type
81	EC	6882	G
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	$\#\|Z\| > 2$
38	PSU	A1	986	38	18,21,22	1.44	4 (22%)	21,30,33	1.93	3 (14%)
34	PSU	B5	632	34	18,21,22	1.46	4 (22%)	21,30,33	2.08	3 (14%)
34	PSU	B5	759	34	18,21,22	1.38	3 (16%)	21,30,33	2.16	4 (19%)
34	4AC	B5	1280	34	21,24,25	1.08	1 (4%)	28,34,37	1.11	2 (7%)
34	MA6	B5	1781	34	23,26,27	1.48	5 (21%)	33,38,41	2.08	10 (30%)
38	PSU	A1	2944	38	18,21,22	1.45	4 (22%)	21,30,33	2.13	4 (19%)
38	PSU	A1	2129	38	18,21,22	1.41	4 (22%)	21,30,33	2.07	3 (14%)
38	PSU	A1	2266	38	18,21,22	1.43	3 (16%)	21,30,33	2.15	3 (14%)
38	PSU	A1	2191	38	18,21,22	1.38	3 (16%)	21,30,33	2.10	5 (23%)
38	PSU	A1	2975	38	18,21,22	1.46	4 (22%)	21,30,33	2.15	4 (19%)
34	PSU	B5	211	34	18,21,22	1.38	2 (11%)	21,30,33	1.98	3 (14%)
34	PSU	B5	1415	34	18,21,22	1.37	3 (16%)	21,30,33	2.03	4 (19%)
34	PSU	B5	120	34	18,21,22	1.34	2 (11%)	21,30,33	2.16	4 (19%)
34	PSU	B5	1181	34	18,21,22	1.40	3 (16%)	21,30,33	2.14	4 (19%)
38	PSU	A1	1110	38	18,21,22	1.45	4 (22%)	21,30,33	2.13	4 (19%)
38	PSU	A1	2258	38	18,21,22	1.45	3 (16%)	21,30,33	2.14	4 (19%)
38	OMU	A1	2921	38	19,22,23	1.32	3 (15%)	25,31,34	1.86	5 (20%)
38	PSU	A1	776	38	18,21,22	1.51	5 (27%)	21,30,33	2.03	4 (19%)
38	UR3	A1	2634	38	19,22,23	0.93	1 (5%)	26,32,35	1.76	3 (11%)
34	PSU	B5	466	34	18,21,22	1.37	3 (16%)	21,30,33	2.10	4 (19%)
34	PSU	B5	106	34	18,21,22	1.40	2 (11%)	21,30,33	2.04	3 (14%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
36	HIC	AB	243	36	10,11,12	1.43	1 (10%)	9,14,16	1.43	2 (22%)
38	PSU	A1	2735	38	18,21,22	1.43	4 (22%)	21,30,33	2.05	3 (14%)
38	PSU	A1	2923	38	18,21,22	1.43	3 (16%)	21,30,33	2.11	4 (19%)
38	PSU	A1	2880	38	18,21,22	1.38	4 (22%)	21,30,33	2.07	3 (14%)
38	PSU	A1	2349	38	18,21,22	1.43	4 (22%)	21,30,33	2.06	3 (14%)
38	PSU	A1	2826	38	18,21,22	1.43	5 (27%)	21,30,33	2.23	5 (23%)
38	PSU	A1	2314	38	18,21,22	1.41	3 (16%)	21,30,33	2.11	5 (23%)
38	PSU	A1	2133	38	18,21,22	1.51	4 (22%)	21,30,33	2.19	5 (23%)
39	PSU	A3	50	39	18,21,22	1.35	3 (16%)	21,30,33	2.12	4 (19%)
38	PSU	A1	2264	38	18,21,22	1.40	4 (22%)	21,30,33	1.88	3 (14%)
38	PSU	A1	966	38	18,21,22	1.46	4 (22%)	21,30,33	2.16	4 (19%)
34	PSU	B5	302	34	18,21,22	1.40	4 (22%)	21,30,33	2.09	3 (14%)
80	DDE	DC	699	-	18,20,21	1.11	1 (5%)	17,28,30	0.74	0
34	PSU	B5	766	34	18,21,22	1.41	3 (16%)	21,30,33	2.11	5 (23%)
34	PSU	B5	1290	34	18,21,22	1.35	3 (16%)	21,30,33	2.08	4 (19%)
38	1MA	A1	645	38	21,25,26	1.34	4 (19%)	30,37,40	1.73	6 (20%)
34	PSU	B5	1187	34	18,21,22	1.41	3 (16%)	21,30,33	2.02	4 (19%)
38	PSU	A1	1004	38	18,21,22	1.43	4 (22%)	21,30,33	2.03	3 (14%)
38	1MA	A1	2142	38	21,25,26	1.32	4 (19%)	30,37,40	1.75	6 (20%)
38	PSU	A1	2260	38	18,21,22	1.31	3 (16%)	21,30,33	2.14	4 (19%)
34	B8N	B5	1191	34	25,29,30	1.40	3 (12%)	28,42,45	2.18	5 (17%)
38	PSU	A1	2416	38	18,21,22	1.50	5 (27%)	21,30,33	2.13	3 (14%)
38	PSU	A1	1124	38	18,21,22	1.41	3 (16%)	21,30,33	2.07	4 (19%)
34	4AC	B5	1773	34	21,24,25	1.10	2 (9%)	28,34,37	2.06	5 (17%)
34	G7M	B5	1575	34	23,26,27	2.56	7 (30%)	34,39,42	1.72	7 (20%)
34	PSU	B5	999	34	18,21,22	1.39	4 (22%)	21,30,33	2.08	3 (14%)
38	PSU	A1	990	38	18,21,22	1.39	3 (16%)	21,30,33	2.07	4 (19%)
38	PSU	A1	1042	38	18,21,22	1.41	4 (22%)	21,30,33	1.95	4 (19%)
38	PSU	A1	2351	38	18,21,22	1.45	4 (22%)	21,30,33	2.09	3 (14%)
38	PSU	A1	2340	38	18,21,22	1.48	4 (22%)	21,30,33	2.05	3 (14%)
38	5MC	A1	2278	38	19,22,23	1.32	3 (15%)	26,32,35	1.17	3 (11%)
38	PSU	A1	960	38	18,21,22	1.47	3 (16%)	21,30,33	2.09	3 (14%)
40	PSU	A4	73	40	18,21,22	1.37	3 (16%)	21,30,33	2.10	5 (23%)
34	MA6	B5	1782	34	23,26,27	1.43	4 (17%)	33,38,41	2.09	11 (33%)
38	PSU	A1	1056	38	18,21,22	1.44	4 (22%)	21,30,33	2.17	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
38	5MC	A1	2870	38	19,22,23	1.31	3 (15%)	26,32,35	1.29	3 (11%)
38	OMG	A1	2922	38	23,26,27	1.23	3 (13%)	32,38,41	2.01	6 (18%)
38	PSU	A1	1052	38	18,21,22	1.40	4 (22%)	21,30,33	2.11	3 (14%)
38	PSU	A1	2865	38	18,21,22	1.46	5 (27%)	21,30,33	2.15	5 (23%)

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
38	PSU	A1	986	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	632	34	-	0/7/25/26	0/2/2/2
34	PSU	B5	759	34	-	0/7/25/26	0/2/2/2
34	4AC	B5	1280	34	-	2/11/29/30	0/2/2/2
34	MA6	B5	1781	34	-	0/11/29/30	0/3/3/3
38	PSU	A1	2944	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2129	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2266	38	-	2/7/25/26	0/2/2/2
38	PSU	A1	2191	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2975	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	211	34	-	2/7/25/26	0/2/2/2
34	PSU	B5	1415	34	-	0/7/25/26	0/2/2/2
34	PSU	B5	120	34	-	0/7/25/26	0/2/2/2
34	PSU	B5	1181	34	-	0/7/25/26	0/2/2/2
38	PSU	A1	1110	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2258	38	-	0/7/25/26	0/2/2/2
38	OMU	A1	2921	38	-	0/9/27/28	0/2/2/2
38	PSU	A1	776	38	-	1/7/25/26	0/2/2/2
38	UR3	A1	2634	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	466	34	-	0/7/25/26	0/2/2/2
34	PSU	B5	106	34	-	0/7/25/26	0/2/2/2
36	HIC	AB	243	36	-	2/5/6/8	0/1/1/1
38	PSU	A1	2735	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2923	38	-	5/7/25/26	0/2/2/2
38	PSU	A1	2880	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2349	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2826	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2314	38	-	2/7/25/26	0/2/2/2
38	PSU	A1	2133	38	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
39	PSU	A3	50	39	-	0/7/25/26	0/2/2/2
38	PSU	A1	2264	38	-	2/7/25/26	0/2/2/2
38	PSU	A1	966	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	302	34	-	0/7/25/26	0/2/2/2
80	DDE	DC	699	-	-	3/20/21/23	0/1/1/1
34	PSU	B5	766	34	-	1/7/25/26	0/2/2/2
34	PSU	B5	1290	34	-	0/7/25/26	0/2/2/2
38	1MA	A1	645	38	-	0/7/25/26	0/3/3/3
34	PSU	B5	1187	34	-	0/7/25/26	0/2/2/2
38	PSU	A1	1004	38	-	0/7/25/26	0/2/2/2
38	1MA	A1	2142	38	-	0/7/25/26	0/3/3/3
38	PSU	A1	2260	38	-	3/7/25/26	0/2/2/2
34	B8N	B5	1191	34	-	4/16/34/35	0/2/2/2
38	PSU	A1	2416	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	1124	38	-	0/7/25/26	0/2/2/2
34	4AC	B5	1773	34	-	4/11/29/30	0/2/2/2
34	G7M	B5	1575	34	-	2/7/25/26	0/3/3/3
34	PSU	B5	999	34	-	0/7/25/26	0/2/2/2
38	PSU	A1	990	38	-	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	2340	38	-	2/7/25/26	0/2/2/2
38	5MC	A1	2278	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	960	38	-	2/7/25/26	0/2/2/2
40	PSU	A4	73	40	-	0/7/25/26	0/2/2/2
34	MA6	B5	1782	34	-	4/11/29/30	0/3/3/3
38	PSU	A1	1056	38	-	0/7/25/26	0/2/2/2
38	5MC	A1	2870	38	-	4/7/25/26	0/2/2/2
38	OMG	A1	2922	38	-	0/9/27/28	0/3/3/3
38	PSU	A1	1052	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2865	38	-	0/7/25/26	0/2/2/2

All (205) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	B5	1575	G7M	O6-C6	7.60	1.38	1.23
34	B5	1575	G7M	C2-N2	5.54	1.47	1.34
34	B5	1575	G7M	C5-N7	-5.21	1.33	1.39
34	B5	1781	MA6	C5-C4	4.45	1.47	1.39
38	A1	2278	5MC	C5-C4	4.19	1.47	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	B5	1782	MA6	C5-C4	4.18	1.46	1.39
34	B5	1191	B8N	C4-C5	-4.03	1.38	1.47
38	A1	2870	5MC	C5-C4	3.97	1.47	1.44
38	A1	2133	PSU	C4-N3	-3.47	1.32	1.38
34	B5	1575	G7M	CN7-N7	3.39	1.52	1.46
38	A1	960	PSU	C6-C5	3.26	1.38	1.35
38	A1	2944	PSU	C4-N3	-3.25	1.32	1.38
38	A1	2266	PSU	C6-C5	3.21	1.38	1.35
38	A1	2975	PSU	C4-N3	-3.20	1.32	1.38
38	A1	2416	PSU	C4-N3	-3.17	1.32	1.38
34	B5	1181	PSU	C6-C5	3.17	1.38	1.35
34	B5	1280	4AC	C4-N4	-3.17	1.35	1.39
38	A1	2735	PSU	C6-C5	3.16	1.38	1.35
34	B5	211	PSU	C6-C5	3.15	1.38	1.35
38	A1	2921	OMU	C4-N3	-3.14	1.33	1.38
38	A1	966	PSU	C4-N3	-3.14	1.33	1.38
34	B5	1187	PSU	C6-C5	3.14	1.38	1.35
38	A1	2880	PSU	C4-N3	-3.12	1.33	1.38
34	B5	106	PSU	C6-C5	3.10	1.38	1.35
38	A1	2340	PSU	C6-C5	3.10	1.38	1.35
38	A1	1056	PSU	C4-N3	-3.08	1.33	1.38
38	A1	1124	PSU	C6-C5	3.07	1.38	1.35
38	A1	776	PSU	C4-N3	-3.06	1.33	1.38
38	A1	1124	PSU	C4-N3	-3.05	1.33	1.38
38	A1	2258	PSU	C6-C5	3.04	1.38	1.35
34	B5	466	PSU	C6-C5	3.03	1.38	1.35
38	A1	1004	PSU	C6-C5	3.03	1.38	1.35
38	A1	1110	PSU	C4-N3	-3.02	1.33	1.38
38	A1	1004	PSU	C4-N3	-3.02	1.33	1.38
39	A3	50	PSU	C6-C5	3.01	1.38	1.35
38	A1	2351	PSU	C4-N3	-3.01	1.33	1.38
38	A1	2923	PSU	C6-C5	3.01	1.38	1.35
34	B5	766	PSU	C6-C5	3.01	1.38	1.35
38	A1	2349	PSU	C4-N3	-2.99	1.33	1.38
34	B5	1575	G7M	C6-N1	-2.97	1.33	1.38
34	B5	1773	4AC	C4-N4	-2.97	1.35	1.39
38	A1	990	PSU	C6-C5	2.97	1.38	1.35
34	B5	1415	PSU	C6-C5	2.97	1.38	1.35
34	B5	632	PSU	C4-N3	-2.96	1.33	1.38
38	A1	1052	PSU	C6-C5	2.96	1.38	1.35
38	A1	2340	PSU	C4-N3	-2.95	1.33	1.38
38	A1	2923	PSU	C4-N3	-2.95	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2129	PSU	C4-N3	-2.94	1.33	1.38
38	A1	1042	PSU	C4-N3	-2.93	1.33	1.38
38	A1	2865	PSU	C4-N3	-2.93	1.33	1.38
38	A1	2260	PSU	C4-N3	-2.93	1.33	1.38
34	B5	466	PSU	C4-N3	-2.92	1.33	1.38
38	A1	2191	PSU	C4-N3	-2.92	1.33	1.38
34	B5	759	PSU	C4-N3	-2.91	1.33	1.38
34	B5	302	PSU	C6-C5	2.90	1.38	1.35
38	A1	2735	PSU	C4-N3	-2.89	1.33	1.38
38	A1	986	PSU	C4-N3	-2.89	1.33	1.38
38	A1	2142	1MA	C6-N6	2.88	1.34	1.28
38	A1	2826	PSU	C4-N3	-2.88	1.33	1.38
38	A1	2349	PSU	C6-C5	2.88	1.38	1.35
34	B5	1181	PSU	C4-N3	-2.87	1.33	1.38
38	A1	2314	PSU	C4-N3	-2.86	1.33	1.38
38	A1	645	1MA	C6-N6	2.85	1.34	1.28
38	A1	2922	OMG	C5-C4	2.85	1.46	1.38
34	B5	1415	PSU	C4-N3	-2.84	1.33	1.38
34	B5	999	PSU	C6-C5	2.83	1.38	1.35
34	B5	1187	PSU	C4-N3	-2.83	1.33	1.38
38	A1	2314	PSU	C6-C5	2.82	1.38	1.35
34	B5	999	PSU	C4-N3	-2.82	1.33	1.38
38	A1	2260	PSU	C6-C5	2.82	1.38	1.35
38	A1	990	PSU	C4-N3	-2.81	1.33	1.38
38	A1	2922	OMG	C6-N1	-2.81	1.33	1.38
34	B5	1290	PSU	C4-N3	-2.81	1.33	1.38
38	A1	2133	PSU	C2-N3	-2.81	1.32	1.37
34	B5	120	PSU	C6-C5	2.81	1.38	1.35
38	A1	960	PSU	C4-N3	-2.80	1.33	1.38
34	B5	302	PSU	C4-N3	-2.80	1.33	1.38
38	A1	1052	PSU	C4-N3	-2.79	1.33	1.38
34	B5	106	PSU	C4-N3	-2.77	1.33	1.38
34	B5	1191	B8N	C6-C5	2.77	1.39	1.35
39	A3	50	PSU	C4-N3	-2.77	1.33	1.38
40	A4	73	PSU	C4-N3	-2.77	1.33	1.38
38	A1	2258	PSU	C4-N3	-2.76	1.33	1.38
38	A1	2921	OMU	C2-N3	-2.75	1.33	1.38
34	B5	766	PSU	C4-N3	-2.74	1.33	1.38
34	B5	1781	MA6	C5-C6	2.74	1.48	1.41
80	DC	699	DDE	CD2-CG	2.74	1.42	1.36
38	A1	2264	PSU	C6-C5	2.73	1.38	1.35
38	A1	2870	5MC	C6-N1	-2.73	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	645	1MA	C5-C4	2.72	1.46	1.38
40	A4	73	PSU	C6-C5	2.71	1.38	1.35
34	B5	1290	PSU	C6-C5	2.71	1.38	1.35
34	B5	759	PSU	C6-C5	2.70	1.38	1.35
38	A1	2191	PSU	C6-C5	2.70	1.38	1.35
38	A1	1042	PSU	C6-C5	2.70	1.38	1.35
38	A1	2416	PSU	C2-N1	-2.69	1.33	1.36
38	A1	2142	1MA	C5-C4	2.68	1.46	1.38
38	A1	2266	PSU	C4-N3	-2.68	1.33	1.38
38	A1	2129	PSU	C6-C5	2.68	1.38	1.35
38	A1	2278	5MC	C6-N1	-2.67	1.33	1.38
38	A1	1110	PSU	C6-C5	2.67	1.38	1.35
36	AB	243	HIC	CD2-CG	2.65	1.40	1.36
34	B5	632	PSU	C6-C5	2.64	1.38	1.35
34	B5	211	PSU	C4-N3	-2.63	1.33	1.38
38	A1	2944	PSU	C6-C5	2.63	1.38	1.35
38	A1	2264	PSU	C4-N3	-2.63	1.33	1.38
38	A1	776	PSU	C6-C5	2.63	1.38	1.35
38	A1	2975	PSU	C6-C5	2.61	1.38	1.35
38	A1	1056	PSU	C6-C5	2.59	1.38	1.35
38	A1	776	PSU	O4'-C1'	-2.59	1.40	1.43
34	B5	120	PSU	C4-N3	-2.58	1.34	1.38
38	A1	986	PSU	C6-C5	2.58	1.38	1.35
38	A1	966	PSU	C6-C5	2.57	1.38	1.35
34	B5	1782	MA6	C5-C6	2.56	1.48	1.41
38	A1	960	PSU	O4'-C1'	-2.56	1.40	1.43
34	B5	1782	MA6	C5-N7	-2.53	1.34	1.39
38	A1	2351	PSU	C2-N1	-2.53	1.33	1.36
34	B5	632	PSU	C2-N3	-2.53	1.33	1.37
38	A1	1042	PSU	C2-N3	-2.50	1.33	1.37
38	A1	2826	PSU	C6-C5	2.49	1.38	1.35
38	A1	2865	PSU	C6-C5	2.49	1.38	1.35
38	A1	2416	PSU	C2-N3	-2.49	1.33	1.37
38	A1	2133	PSU	C6-C5	2.45	1.38	1.35
38	A1	2258	PSU	O4'-C1'	-2.45	1.40	1.43
34	B5	1781	MA6	C4-N9	-2.44	1.32	1.37
38	A1	2351	PSU	C6-C5	2.43	1.38	1.35
38	A1	2880	PSU	C2-N3	-2.42	1.33	1.37
38	A1	2922	OMG	C5-N7	-2.41	1.34	1.39
38	A1	2944	PSU	C2-N3	-2.40	1.33	1.37
38	A1	2865	PSU	C2-N1	-2.39	1.33	1.36
34	B5	1782	MA6	C4-N9	-2.39	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	1056	PSU	C2-N3	-2.39	1.33	1.37
38	A1	645	1MA	C5-N7	-2.39	1.34	1.39
34	B5	1575	G7M	C4-N9	-2.36	1.32	1.38
38	A1	2142	1MA	C5-N7	-2.36	1.34	1.39
38	A1	2351	PSU	C2-N3	-2.35	1.33	1.37
38	A1	966	PSU	C2-N3	-2.34	1.33	1.37
38	A1	2870	5MC	C6-C5	2.34	1.38	1.34
34	B5	1781	MA6	C5-N7	-2.33	1.34	1.39
38	A1	1110	PSU	C2-N1	-2.33	1.33	1.36
38	A1	776	PSU	C2-N3	-2.33	1.33	1.37
38	A1	2264	PSU	C2-N1	-2.32	1.33	1.36
38	A1	2975	PSU	C2-N1	-2.32	1.33	1.36
34	B5	1773	4AC	C6-N1	-2.31	1.32	1.38
38	A1	2880	PSU	C6-C5	2.31	1.37	1.35
38	A1	2129	PSU	C2-N3	-2.29	1.33	1.37
38	A1	2921	OMU	C5-C4	-2.29	1.38	1.43
34	B5	1191	B8N	CN1-N1	2.29	1.51	1.46
38	A1	2314	PSU	O4'-C1'	-2.28	1.40	1.43
38	A1	1110	PSU	C2-N3	-2.28	1.33	1.37
38	A1	2865	PSU	O4'-C1'	-2.28	1.40	1.43
38	A1	986	PSU	C2-N1	-2.27	1.33	1.36
38	A1	986	PSU	C2-N3	-2.27	1.33	1.37
38	A1	2278	5MC	C6-C5	2.27	1.38	1.34
38	A1	2975	PSU	C2-N3	-2.26	1.33	1.37
38	A1	2349	PSU	C2-N3	-2.26	1.33	1.37
38	A1	2735	PSU	C2-N3	-2.25	1.33	1.37
34	B5	759	PSU	C2-N3	-2.23	1.33	1.37
38	A1	2340	PSU	C2-N3	-2.23	1.33	1.37
38	A1	2266	PSU	C2-N1	-2.23	1.33	1.36
38	A1	2826	PSU	C2-N3	-2.22	1.33	1.37
38	A1	1124	PSU	C2-N3	-2.22	1.33	1.37
34	B5	632	PSU	C2-N1	-2.22	1.33	1.36
38	A1	2260	PSU	C2-N3	-2.21	1.33	1.37
38	A1	966	PSU	C2-N1	-2.19	1.33	1.36
38	A1	2129	PSU	C2-N1	-2.19	1.33	1.36
38	A1	2191	PSU	C2-N3	-2.19	1.33	1.37
38	A1	1042	PSU	C2-N1	-2.18	1.33	1.36
38	A1	1052	PSU	C2-N1	-2.17	1.33	1.36
34	B5	302	PSU	C2-N1	-2.17	1.33	1.36
38	A1	1004	PSU	C2-N3	-2.17	1.33	1.37
38	A1	645	1MA	C4-N9	-2.16	1.32	1.38
38	A1	776	PSU	C2-N1	-2.16	1.33	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	B5	1575	G7M	C2-N1	-2.15	1.32	1.37
38	A1	2264	PSU	C2-N3	-2.15	1.33	1.37
34	B5	1187	PSU	C2-N3	-2.13	1.34	1.37
34	B5	1781	MA6	C8-N7	2.12	1.35	1.31
38	A1	2826	PSU	O4'-C1'	-2.12	1.40	1.43
38	A1	2349	PSU	C2-N1	-2.11	1.33	1.36
38	A1	2142	1MA	C4-N9	-2.11	1.32	1.38
34	B5	1290	PSU	C2-N3	-2.10	1.34	1.37
38	A1	2923	PSU	C2-N3	-2.10	1.34	1.37
38	A1	990	PSU	C2-N3	-2.09	1.34	1.37
38	A1	1056	PSU	C2-N1	-2.08	1.33	1.36
38	A1	2340	PSU	C2-N1	-2.08	1.33	1.36
40	A4	73	PSU	C2-N3	-2.08	1.34	1.37
38	A1	2880	PSU	C2-N1	-2.08	1.34	1.36
34	B5	766	PSU	C2-N3	-2.08	1.34	1.37
34	B5	1415	PSU	C2-N3	-2.07	1.34	1.37
38	A1	2133	PSU	C2-N1	-2.07	1.34	1.36
34	B5	466	PSU	C2-N3	-2.07	1.34	1.37
34	B5	1181	PSU	C2-N3	-2.06	1.34	1.37
38	A1	2826	PSU	C2-N1	-2.06	1.34	1.36
34	B5	999	PSU	C2-N3	-2.06	1.34	1.37
34	B5	999	PSU	C2-N1	-2.06	1.34	1.36
38	A1	2865	PSU	C2-N3	-2.05	1.34	1.37
38	A1	2634	UR3	C5-C4	-2.05	1.38	1.43
38	A1	2416	PSU	C6-C5	2.05	1.37	1.35
38	A1	1052	PSU	C2-N3	-2.04	1.34	1.37
39	A3	50	PSU	C2-N3	-2.03	1.34	1.37
34	B5	302	PSU	C2-N3	-2.03	1.34	1.37
38	A1	2944	PSU	C2-N1	-2.03	1.34	1.36
38	A1	2416	PSU	O4'-C1'	-2.03	1.41	1.43
38	A1	1004	PSU	C2-N1	-2.02	1.34	1.36
38	A1	2735	PSU	C2-N1	-2.02	1.34	1.36

All (243) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	B5	1191	B8N	C32-C31-N3	8.12	126.36	112.16
34	B5	1773	4AC	N4-C4-N3	7.50	126.04	113.87
38	A1	2133	PSU	N1-C2-N3	7.03	122.58	115.17
38	A1	2634	UR3	C4-N3-C2	-6.99	118.96	124.58
38	A1	2826	PSU	N1-C2-N3	6.85	122.39	115.17
38	A1	1056	PSU	N1-C2-N3	6.81	122.35	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	A1	2258	PSU	N1-C2-N3	6.79	122.33	115.17
34	B5	1181	PSU	N1-C2-N3	6.74	122.27	115.17
38	A1	966	PSU	N1-C2-N3	6.69	122.23	115.17
38	A1	2944	PSU	N1-C2-N3	6.67	122.20	115.17
34	B5	759	PSU	N1-C2-N3	6.67	122.20	115.17
39	A3	50	PSU	N1-C2-N3	6.64	122.17	115.17
38	A1	2416	PSU	N1-C2-N3	6.63	122.16	115.17
34	B5	766	PSU	N1-C2-N3	6.62	122.15	115.17
38	A1	2865	PSU	N1-C2-N3	6.61	122.15	115.17
38	A1	2923	PSU	N1-C2-N3	6.61	122.14	115.17
38	A1	2266	PSU	N1-C2-N3	6.60	122.13	115.17
38	A1	1110	PSU	N1-C2-N3	6.56	122.09	115.17
38	A1	2351	PSU	N1-C2-N3	6.54	122.07	115.17
34	B5	999	PSU	N1-C2-N3	6.54	122.07	115.17
34	B5	302	PSU	N1-C2-N3	6.53	122.06	115.17
38	A1	2975	PSU	N1-C2-N3	6.53	122.06	115.17
34	B5	466	PSU	N1-C2-N3	6.52	122.04	115.17
34	B5	106	PSU	N1-C2-N3	6.51	122.04	115.17
40	A4	73	PSU	N1-C2-N3	6.51	122.03	115.17
38	A1	1052	PSU	N1-C2-N3	6.50	122.03	115.17
38	A1	2191	PSU	N1-C2-N3	6.50	122.02	115.17
38	A1	960	PSU	N1-C2-N3	6.49	122.01	115.17
38	A1	2340	PSU	N1-C2-N3	6.49	122.01	115.17
34	B5	632	PSU	N1-C2-N3	6.46	121.98	115.17
38	A1	2314	PSU	N1-C2-N3	6.45	121.97	115.17
34	B5	120	PSU	N1-C2-N3	6.44	121.96	115.17
38	A1	2349	PSU	N1-C2-N3	6.43	121.95	115.17
38	A1	2922	OMG	C5-C4-N3	-6.42	118.17	128.39
38	A1	1124	PSU	N1-C2-N3	6.42	121.94	115.17
38	A1	990	PSU	N1-C2-N3	6.41	121.92	115.17
38	A1	1004	PSU	N1-C2-N3	6.40	121.92	115.17
38	A1	776	PSU	N1-C2-N3	6.38	121.90	115.17
34	B5	1290	PSU	N1-C2-N3	6.35	121.86	115.17
34	B5	1415	PSU	N1-C2-N3	6.34	121.86	115.17
34	B5	1187	PSU	N1-C2-N3	6.33	121.85	115.17
38	A1	2735	PSU	N1-C2-N3	6.33	121.84	115.17
38	A1	2129	PSU	N1-C2-N3	6.31	121.82	115.17
34	B5	211	PSU	N1-C2-N3	6.29	121.80	115.17
38	A1	2260	PSU	N1-C2-N3	6.25	121.77	115.17
38	A1	2880	PSU	N1-C2-N3	6.22	121.73	115.17
38	A1	986	PSU	N1-C2-N3	6.16	121.67	115.17
38	A1	2264	PSU	N1-C2-N3	5.99	121.48	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	A1	1042	PSU	N1-C2-N3	5.89	121.38	115.17
34	B5	1191	B8N	C4-N3-C2	-5.37	119.01	125.62
34	B5	1781	MA6	C5-C4-N3	-5.35	119.36	126.72
34	B5	1782	MA6	C5-C4-N3	-5.30	119.42	126.72
38	A1	2142	1MA	C5-C4-N3	-5.30	119.47	127.27
38	A1	645	1MA	C5-C4-N3	-5.28	119.50	127.27
38	A1	2922	OMG	C2-N3-C4	5.10	121.08	112.30
38	A1	2921	OMU	C4-N3-C2	-4.93	120.50	126.61
34	B5	120	PSU	O2-C2-N1	-4.82	117.81	122.79
38	A1	2922	OMG	N9-C4-N3	4.80	135.55	125.95
38	A1	2142	1MA	C2-N3-C4	4.77	121.89	112.53
38	A1	2260	PSU	C4-N3-C2	-4.72	119.88	126.37
38	A1	2826	PSU	C4-N3-C2	-4.58	120.06	126.37
34	B5	1575	G7M	C2-N3-C4	4.57	120.17	112.30
38	A1	645	1MA	C2-N3-C4	4.56	121.47	112.53
38	A1	2133	PSU	C4-N3-C2	-4.55	120.10	126.37
34	B5	759	PSU	C4-N3-C2	-4.54	120.11	126.37
38	A1	1056	PSU	C4-N3-C2	-4.54	120.12	126.37
34	B5	1773	4AC	C5-C4-N4	-4.53	115.31	122.94
38	A1	2921	OMU	N3-C2-N1	4.52	120.77	114.89
38	A1	2944	PSU	C4-N3-C2	-4.50	120.17	126.37
38	A1	2975	PSU	C4-N3-C2	-4.40	120.31	126.37
34	B5	1290	PSU	C4-N3-C2	-4.39	120.32	126.37
38	A1	2865	PSU	O2-C2-N1	-4.39	118.27	122.79
34	B5	1181	PSU	C4-N3-C2	-4.38	120.33	126.37
38	A1	2880	PSU	C4-N3-C2	-4.37	120.35	126.37
39	A3	50	PSU	C4-N3-C2	-4.36	120.36	126.37
38	A1	2870	5MC	C5-C6-N1	-4.35	118.59	123.31
34	B5	120	PSU	C4-N3-C2	-4.34	120.40	126.37
40	A4	73	PSU	C4-N3-C2	-4.33	120.40	126.37
38	A1	966	PSU	C4-N3-C2	-4.33	120.41	126.37
34	B5	466	PSU	C4-N3-C2	-4.32	120.41	126.37
38	A1	2258	PSU	C4-N3-C2	-4.31	120.43	126.37
38	A1	2314	PSU	C4-N3-C2	-4.30	120.45	126.37
38	A1	2923	PSU	C4-N3-C2	-4.29	120.47	126.37
38	A1	2416	PSU	C4-N3-C2	-4.24	120.53	126.37
34	B5	1781	MA6	C2-N1-C6	4.24	122.19	111.83
38	A1	2129	PSU	C4-N3-C2	-4.24	120.53	126.37
38	A1	2191	PSU	C4-N3-C2	-4.23	120.54	126.37
34	B5	1782	MA6	N3-C4-N9	4.23	134.36	127.17
34	B5	632	PSU	C4-N3-C2	-4.22	120.56	126.37
38	A1	1110	PSU	C4-N3-C2	-4.21	120.57	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	A1	1052	PSU	C4-N3-C2	-4.20	120.59	126.37
38	A1	990	PSU	C4-N3-C2	-4.17	120.63	126.37
38	A1	2975	PSU	O2-C2-N1	-4.16	118.49	122.79
34	B5	1782	MA6	C2-N1-C6	4.16	122.00	111.83
38	A1	1124	PSU	C4-N3-C2	-4.16	120.65	126.37
38	A1	966	PSU	O2-C2-N1	-4.15	118.51	122.79
34	B5	766	PSU	C4-N3-C2	-4.15	120.65	126.37
38	A1	2351	PSU	C4-N3-C2	-4.15	120.65	126.37
34	B5	1781	MA6	N3-C4-N9	4.15	134.22	127.17
34	B5	999	PSU	C4-N3-C2	-4.14	120.66	126.37
38	A1	2258	PSU	O2-C2-N1	-4.13	118.53	122.79
34	B5	1415	PSU	C4-N3-C2	-4.13	120.68	126.37
38	A1	2865	PSU	C4-N3-C2	-4.12	120.69	126.37
38	A1	2826	PSU	O2-C2-N1	-4.11	118.55	122.79
34	B5	302	PSU	O2-C2-N1	-4.10	118.56	122.79
34	B5	1575	G7M	C5-C4-N3	-4.09	120.42	128.15
38	A1	1052	PSU	O2-C2-N1	-4.07	118.59	122.79
34	B5	1187	PSU	C4-N3-C2	-4.05	120.80	126.37
38	A1	2735	PSU	C4-N3-C2	-4.04	120.81	126.37
38	A1	960	PSU	C4-N3-C2	-4.04	120.81	126.37
34	B5	302	PSU	C4-N3-C2	-4.03	120.82	126.37
38	A1	2349	PSU	C4-N3-C2	-4.02	120.83	126.37
38	A1	2266	PSU	O2-C2-N1	-4.02	118.65	122.79
38	A1	1042	PSU	C4-N3-C2	-4.01	120.84	126.37
38	A1	1004	PSU	C4-N3-C2	-4.00	120.86	126.37
38	A1	2921	OMU	C5-C4-N3	4.00	120.40	114.80
38	A1	1110	PSU	O2-C2-N1	-3.98	118.69	122.79
38	A1	960	PSU	O2-C2-N1	-3.95	118.71	122.79
38	A1	2314	PSU	O2-C2-N1	-3.93	118.73	122.79
38	A1	2416	PSU	O2-C2-N1	-3.93	118.73	122.79
34	B5	106	PSU	C4-N3-C2	-3.89	121.02	126.37
34	B5	1781	MA6	C4-C5-N7	-3.88	106.14	110.58
38	A1	2340	PSU	C4-N3-C2	-3.87	121.04	126.37
34	B5	211	PSU	C4-N3-C2	-3.86	121.05	126.37
34	B5	766	PSU	O2-C2-N1	-3.86	118.81	122.79
38	A1	776	PSU	C4-N3-C2	-3.79	121.15	126.37
38	A1	990	PSU	O2-C2-N1	-3.78	118.89	122.79
34	B5	999	PSU	O2-C2-N1	-3.78	118.89	122.79
34	B5	1280	4AC	N4-C4-N3	3.77	119.99	113.87
34	B5	106	PSU	O2-C2-N1	-3.77	118.91	122.79
38	A1	986	PSU	C4-N3-C2	-3.75	121.20	126.37
38	A1	2266	PSU	C4-N3-C2	-3.75	121.21	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	B5	1781	MA6	C2-N3-C4	3.67	120.80	111.83
34	B5	1181	PSU	O2-C2-N1	-3.63	119.05	122.79
38	A1	2191	PSU	O2-C2-N1	-3.62	119.05	122.79
34	B5	1782	MA6	C4-C5-N7	-3.62	106.44	110.58
34	B5	1575	G7M	C5-C6-N1	3.61	119.31	111.84
38	A1	2340	PSU	O2-C2-N1	-3.61	119.07	122.79
34	B5	211	PSU	O2-C2-N1	-3.60	119.08	122.79
34	B5	1782	MA6	C2-N3-C4	3.60	120.61	111.83
38	A1	1004	PSU	O2-C2-N1	-3.59	119.09	122.79
38	A1	776	PSU	O2-C2-N1	-3.57	119.10	122.79
38	A1	2349	PSU	O2-C2-N1	-3.56	119.11	122.79
38	A1	2129	PSU	O2-C2-N1	-3.56	119.12	122.79
38	A1	2923	PSU	O2-C2-N1	-3.55	119.12	122.79
34	B5	759	PSU	O2-C2-N1	-3.55	119.13	122.79
38	A1	2142	1MA	N9-C4-N3	3.54	134.98	126.90
38	A1	2351	PSU	O2-C2-N1	-3.54	119.13	122.79
34	B5	1187	PSU	O2-C2-N1	-3.54	119.14	122.79
40	A4	73	PSU	O2-C2-N1	-3.54	119.14	122.79
39	A3	50	PSU	O2-C2-N1	-3.51	119.17	122.79
38	A1	1056	PSU	O2-C2-N1	-3.50	119.18	122.79
34	B5	1773	4AC	CM7-C7-N4	3.49	120.90	115.27
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
34	B5	1781	MA6	N1-C2-N3	-3.46	123.35	128.58
38	A1	2735	PSU	O2-C2-N1	-3.44	119.24	122.79
36	AB	243	HIC	NE2-CE1-ND1	-3.42	111.35	112.66
38	A1	2264	PSU	O2-C2-N1	-3.42	119.26	122.79
34	B5	1290	PSU	O2-C2-N1	-3.42	119.26	122.79
34	B5	1782	MA6	N1-C2-N3	-3.39	123.45	128.58
34	B5	466	PSU	O2-C2-N1	-3.37	119.32	122.79
34	B5	632	PSU	O2-C2-N1	-3.35	119.33	122.79
38	A1	645	1MA	N9-C4-N3	3.35	134.53	126.90
38	A1	2944	PSU	O2-C2-N1	-3.32	119.36	122.79
38	A1	2634	UR3	C5-C4-N3	3.32	119.41	115.04
38	A1	2264	PSU	C4-N3-C2	-3.28	121.85	126.37
38	A1	986	PSU	O2-C2-N1	-3.26	119.43	122.79
34	B5	1575	G7M	N9-C4-N3	3.21	132.37	125.95
34	B5	1781	MA6	C4-N9-C8	3.17	109.07	105.74
34	B5	1782	MA6	C4-N9-C8	3.16	109.06	105.74
38	A1	2278	5MC	C5-C6-N1	-3.13	119.91	123.31
38	A1	1124	PSU	O2-C2-N1	-3.11	119.58	122.79
34	B5	1575	G7M	O6-C6-C5	-3.10	121.09	128.01

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	A1	2921	OMU	O4-C4-C5	-3.06	119.89	125.16
34	B5	1773	4AC	C6-C5-C4	3.02	120.64	117.00
38	A1	2922	OMG	C6-C5-N7	3.00	135.75	130.29
34	B5	1191	B8N	N3-C2-N1	2.99	120.37	116.72
38	A1	2260	PSU	O2-C2-N1	-2.98	119.72	122.79
38	A1	2133	PSU	O2-C2-N1	-2.93	119.76	122.79
34	B5	1575	G7M	C6-C5-N7	2.90	135.81	132.17
38	A1	1042	PSU	O2-C2-N1	-2.86	119.84	122.79
38	A1	2278	5MC	C5-C4-N3	-2.79	118.89	121.75
34	B5	1781	MA6	C5-N7-C8	2.70	107.70	103.45
34	B5	1782	MA6	C5-N7-C8	2.68	107.66	103.45
34	B5	1191	B8N	C31-N3-C2	2.59	121.47	117.64
34	B5	1773	4AC	C5-C4-N3	-2.54	118.62	122.60
38	A1	2922	OMG	C4-C5-N7	-2.53	106.66	110.67
34	B5	759	PSU	C5-C6-N1	-2.53	118.64	122.14
38	A1	2133	PSU	C5-C6-N1	-2.51	118.65	122.14
38	A1	1056	PSU	C5-C6-N1	-2.47	118.71	122.14
38	A1	645	1MA	C4-C5-N7	-2.47	106.76	110.67
34	B5	1781	MA6	C6-C5-N7	2.45	137.35	133.43
38	A1	2870	5MC	C5-C4-N3	-2.45	119.24	121.75
34	B5	466	PSU	C5-C6-N1	-2.44	118.75	122.14
34	B5	1575	G7M	C2-N1-C6	-2.43	120.71	125.11
38	A1	2923	PSU	C5-C6-N1	-2.42	118.78	122.14
38	A1	2142	1MA	N1-C2-N3	-2.42	123.12	126.00
34	B5	1290	PSU	C5-C6-N1	-2.41	118.80	122.14
39	A3	50	PSU	C5-C6-N1	-2.40	118.81	122.14
38	A1	2826	PSU	C5-C6-N1	-2.37	118.85	122.14
38	A1	2133	PSU	O2-C2-N3	-2.37	117.65	121.86
38	A1	1042	PSU	C6-C5-C4	-2.36	116.58	118.17
38	A1	776	PSU	O4'-C1'-C2'	2.35	108.41	105.15
34	B5	1280	4AC	C6-C5-C4	2.35	119.83	117.00
34	B5	1782	MA6	N9-C8-N7	-2.34	110.62	113.94
34	B5	1181	PSU	C5-C6-N1	-2.31	118.94	122.14
34	B5	1781	MA6	N9-C8-N7	-2.30	110.67	113.94
40	A4	73	PSU	C5-C6-N1	-2.29	118.96	122.14
38	A1	2865	PSU	O4'-C1'-C2'	2.29	108.32	105.15
38	A1	2314	PSU	C5-C6-N1	-2.29	118.97	122.14
38	A1	2975	PSU	C5-C6-N1	-2.25	119.02	122.14
38	A1	645	1MA	C6-C5-N7	2.22	136.08	132.16
38	A1	2258	PSU	C5-C6-N1	-2.21	119.07	122.14
34	B5	1782	MA6	N1-C6-N6	2.20	119.54	116.86
38	A1	2826	PSU	O4'-C1'-C2'	2.20	108.19	105.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	A1	645	1MA	N1-C2-N3	-2.20	123.39	126.00
38	A1	2870	5MC	O2-C2-N3	-2.19	118.88	122.33
38	A1	1124	PSU	C5-C6-N1	-2.16	119.14	122.14
38	A1	2142	1MA	C4-C5-N7	-2.14	107.27	110.67
38	A1	2142	1MA	C6-C5-N7	2.14	135.94	132.16
38	A1	2278	5MC	O2-C2-N3	-2.12	118.98	122.33
38	A1	2314	PSU	O4'-C1'-C2'	2.12	108.08	105.15
38	A1	990	PSU	C5-C6-N1	-2.12	119.20	122.14
34	B5	1782	MA6	C6-C5-N7	2.11	136.81	133.43
34	B5	120	PSU	C5-C6-N1	-2.11	119.21	122.14
34	B5	766	PSU	O4'-C1'-C2'	2.09	108.05	105.15
38	A1	2191	PSU	C5-C6-N1	-2.09	119.24	122.14
38	A1	2944	PSU	C5-C6-N1	-2.08	119.25	122.14
34	B5	766	PSU	C5-C6-N1	-2.08	119.26	122.14
34	B5	1191	B8N	O4'-C1'-C2'	2.08	108.02	105.15
38	A1	2921	OMU	O2-C2-N1	-2.07	120.10	122.80
36	AB	243	HIC	CB-CG-CD2	-2.06	124.98	129.96
38	A1	2260	PSU	C6-C5-C4	-2.06	116.78	118.17
34	B5	1415	PSU	C5-C6-N1	-2.06	119.28	122.14
38	A1	2865	PSU	C5-C6-N1	-2.06	119.28	122.14
38	A1	2922	OMG	O6-C6-C5	-2.05	121.11	126.53
34	B5	1187	PSU	C5-C6-N1	-2.05	119.29	122.14
38	A1	1110	PSU	C5-C6-N1	-2.05	119.30	122.14
38	A1	966	PSU	C5-C6-N1	-2.03	119.32	122.14
38	A1	2191	PSU	O4'-C1'-C2'	2.01	107.94	105.15
40	A4	73	PSU	O4'-C1'-C2'	2.01	107.93	105.15
38	A1	2634	UR3	C6-N1-C2	-2.00	120.16	121.80

There are no chirality outliers.

All (49) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
80	DC	699	DDE	CAT-CAU-CBW-CBI
80	DC	699	DDE	CAT-CAU-CBW-NCB
34	B5	1280	4AC	N3-C4-N4-C7
34	B5	1280	4AC	C5-C4-N4-C7
34	B5	1773	4AC	N3-C4-N4-C7
34	B5	1773	4AC	C5-C4-N4-C7
34	B5	1773	4AC	O7-C7-N4-C4
34	B5	1773	4AC	CM7-C7-N4-C4
34	B5	1782	MA6	O4'-C4'-C5'-O5'
34	B5	1782	MA6	C5-C6-N6-C9

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Mol	Chain	Res	Type	Atoms
38	A1	1042	PSU	O4'-C1'-C5-C4
38	A1	1042	PSU	O4'-C1'-C5-C6
38	A1	2260	PSU	C2'-C1'-C5-C4
38	A1	2314	PSU	O4'-C4'-C5'-O5'
38	A1	2923	PSU	C3'-C4'-C5'-O5'
34	B5	211	PSU	C3'-C4'-C5'-O5'
38	A1	2266	PSU	C3'-C4'-C5'-O5'
38	A1	2314	PSU	C3'-C4'-C5'-O5'
80	DC	699	DDE	CE1-CAT-CAU-CBW
34	B5	211	PSU	O4'-C4'-C5'-O5'
34	B5	1575	G7M	O4'-C4'-C5'-O5'
34	B5	1575	G7M	C3'-C4'-C5'-O5'
38	A1	2266	PSU	O4'-C4'-C5'-O5'
38	A1	2923	PSU	O4'-C4'-C5'-O5'
34	B5	1191	B8N	C32-C31-N3-C4
34	B5	1782	MA6	C3'-C4'-C5'-O5'
38	A1	2260	PSU	O4'-C4'-C5'-O5'
36	AB	243	HIC	CA-CB-CG-ND1
38	A1	2340	PSU	C3'-C4'-C5'-O5'
34	B5	1191	B8N	C32-C33-C34-O35
38	A1	2870	5MC	C2'-C1'-N1-C6
38	A1	2340	PSU	C4'-C5'-O5'-P
38	A1	2870	5MC	O4'-C1'-N1-C6
36	AB	243	HIC	CA-CB-CG-CD2
34	B5	1191	B8N	O4'-C1'-C5-C4
38	A1	2260	PSU	O4'-C1'-C5-C4
38	A1	2264	PSU	O4'-C1'-C5-C4
38	A1	2923	PSU	O4'-C1'-C5-C4
34	B5	766	PSU	C3'-C4'-C5'-O5'
34	B5	1191	B8N	C32-C31-N3-C2
38	A1	776	PSU	C4'-C5'-O5'-P
38	A1	2923	PSU	C4'-C5'-O5'-P
38	A1	960	PSU	O4'-C1'-C5-C6
38	A1	2264	PSU	O4'-C1'-C5-C6
38	A1	2923	PSU	O4'-C1'-C5-C6
38	A1	2870	5MC	O4'-C1'-N1-C2
38	A1	960	PSU	C2'-C1'-C5-C6
34	B5	1782	MA6	C4'-C5'-O5'-P
38	A1	2870	5MC	C2'-C1'-N1-C2

There are no ring outliers.

26 monomers are involved in 53 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
38	A1	986	PSU	1	0
34	B5	632	PSU	1	0
34	B5	1280	4AC	5	0
34	B5	1781	MA6	1	0
38	A1	2266	PSU	2	0
34	B5	120	PSU	2	0
34	B5	1181	PSU	2	0
38	A1	1110	PSU	2	0
38	A1	2258	PSU	2	0
38	A1	776	PSU	2	0
34	B5	106	PSU	1	0
38	A1	2735	PSU	1	0
38	A1	2923	PSU	1	0
38	A1	2880	PSU	2	0
38	A1	2314	PSU	2	0
38	A1	2133	PSU	1	0
38	A1	2264	PSU	7	0
38	A1	966	PSU	2	0
34	B5	302	PSU	1	0
80	DC	699	DDE	1	0
34	B5	766	PSU	2	0
34	B5	1290	PSU	1	0
38	A1	2260	PSU	3	0
34	B5	1773	4AC	2	0
34	B5	1575	G7M	5	0
34	B5	1782	MA6	1	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	$\#\|Z\|>2$
85	SO1	DC	903	-	34,39,39	0.67	1 (2%)	38,64,64	1.18	4 (10%)
83	GDP	DC	901	84	29,30,30	1.20	3 (10%)	45,47,47	1.90	6 (13%)

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
85	SO1	DC	903	-	1/1/15/16	8/21/104/104	0/7/5/5
83	GDP	DC	901	84	-	4/16/32/32	0/3/3/3

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	DC	901	GDP	C5-C4	3.08	1.47	1.38
85	DC	903	SO1	O14-C5	-3.02	1.19	1.30
83	DC	901	GDP	C6-N1	-2.73	1.33	1.38
83	DC	901	GDP	C5-N7	-2.39	1.34	1.39

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
83	DC	901	GDP	C5-C4-N3	-6.96	117.31	128.39
83	DC	901	GDP	N9-C4-N3	5.22	136.40	125.95
83	DC	901	GDP	C2-N3-C4	5.20	121.25	112.30
85	DC	903	SO1	C12-C6-C2	-4.22	98.55	105.09
83	DC	901	GDP	C3'-C2'-C1'	2.96	107.07	101.46
85	DC	903	SO1	C21-C13-C4	2.90	120.16	112.41
83	DC	901	GDP	C4-C5-N7	-2.67	106.44	110.67
83	DC	901	GDP	C6-C5-N7	2.63	135.07	130.29
85	DC	903	SO1	C18-C9-C16	-2.33	100.54	103.72
85	DC	903	SO1	C7-C2-C6	2.14	116.15	112.05

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
85	DC	903	SO1	C4

All (12) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
83	DC	901	GDP	C5'-O5'-PA-O3A
85	DC	903	SO1	C2-C1-C5-O14
85	DC	903	SO1	C2-C1-C5-O15
85	DC	903	SO1	C6-C2-C8-O17
85	DC	903	SO1	C7-C2-C8-O17
83	DC	901	GDP	C3'-C4'-C5'-O5'
85	DC	903	SO1	C54-C55-O64-C65
83	DC	901	GDP	O4'-C4'-C5'-O5'
83	DC	901	GDP	PA-O3A-PB-O2B
85	DC	903	SO1	C1-C2-C8-O17
85	DC	903	SO1	C20-C13-C4-C12
85	DC	903	SO1	C20-C13-C4-C1

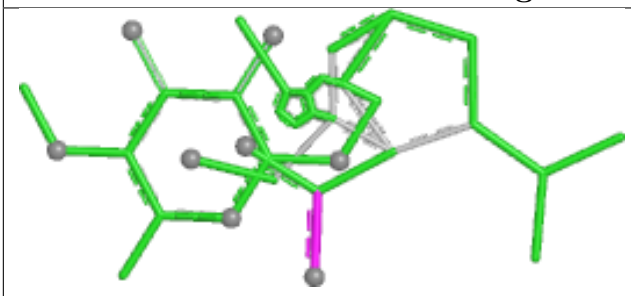
There are no ring outliers.

2 monomers are involved in 12 short contacts:

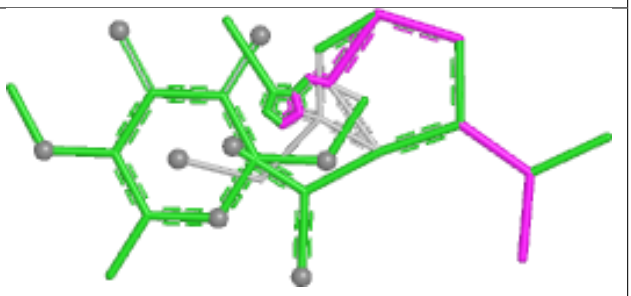
Mol	Chain	Res	Type	Clashes	Symm-Clashes
85	DC	903	SO1	3	0
83	DC	901	GDP	9	0

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.

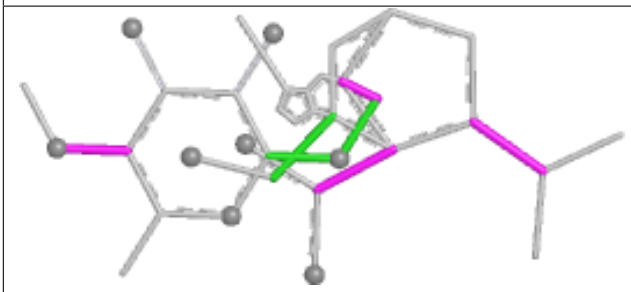
Ligand SO1 DC 903



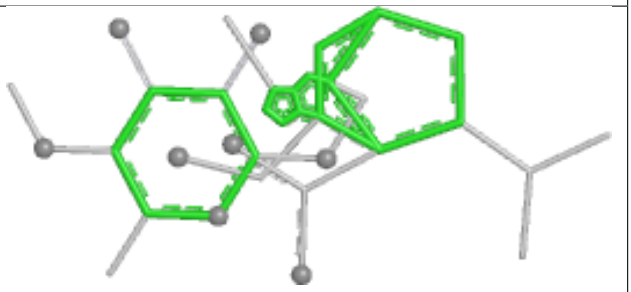
Bond lengths



Bond angles

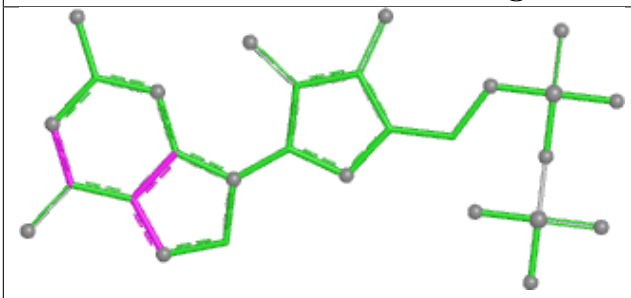


Torsions

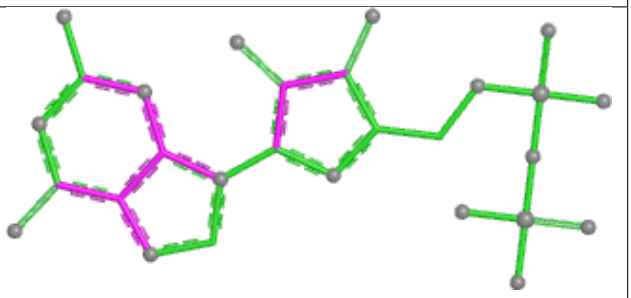


Rings

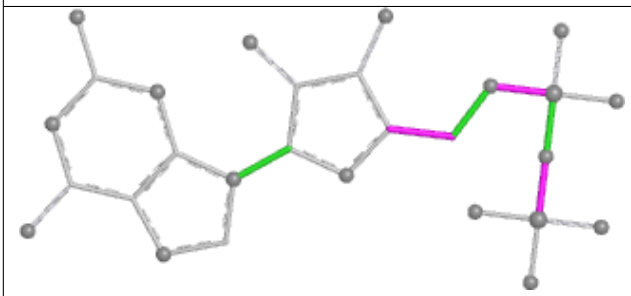
Ligand GDP DC 901



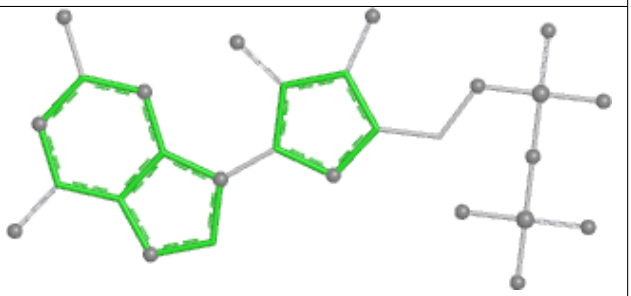
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
81	EC	1
38	A1	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	EC	6890:A	O3’	6940:U	P	19.24
1	A1	451:U	O3’	486:A	P	17.14

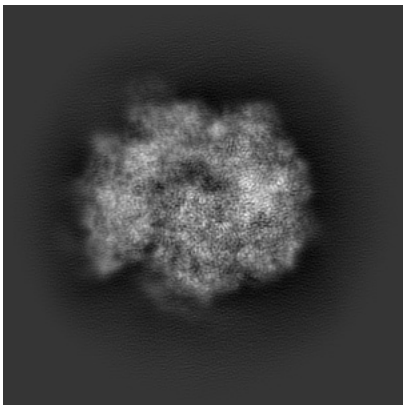
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-41000. These allow visual inspection of the internal detail of the map and identification of artifacts.

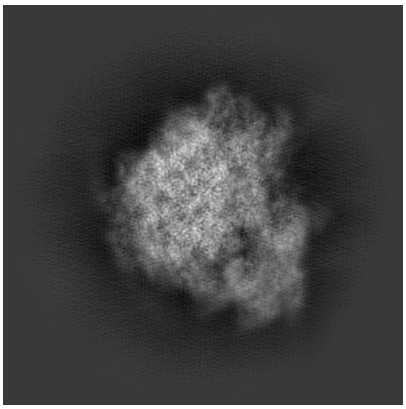
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

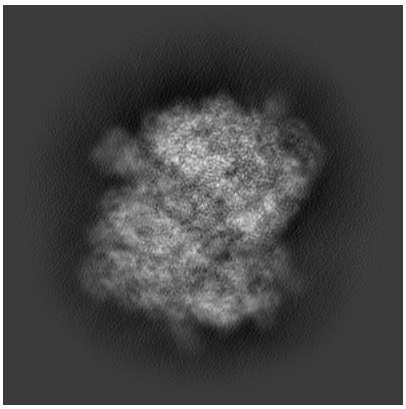
6.1.1 Primary map



X

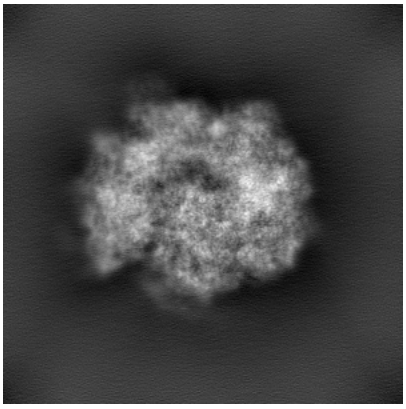


Y

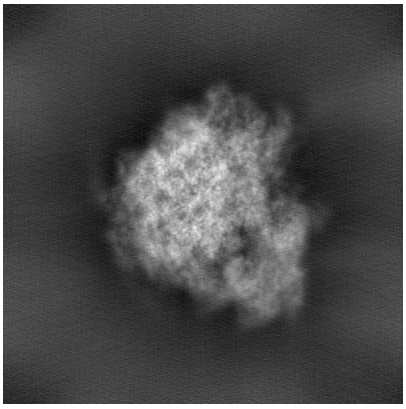


Z

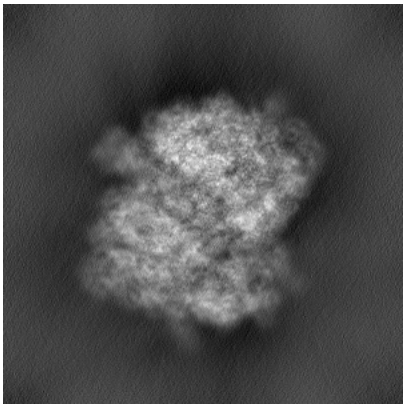
6.1.2 Raw map



X



Y

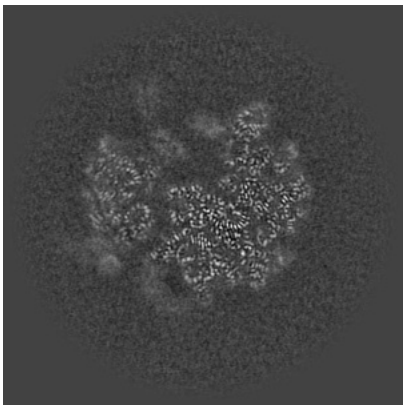


Z

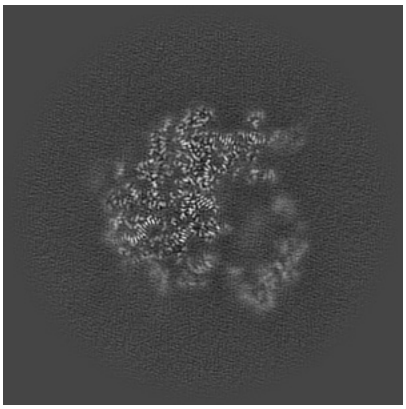
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

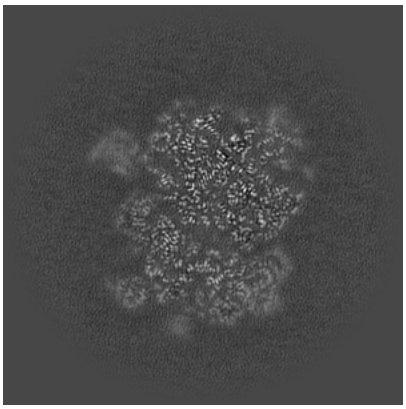
6.2.1 Primary map



X Index: 200

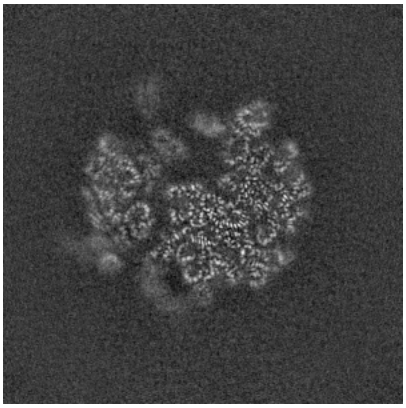


Y Index: 200

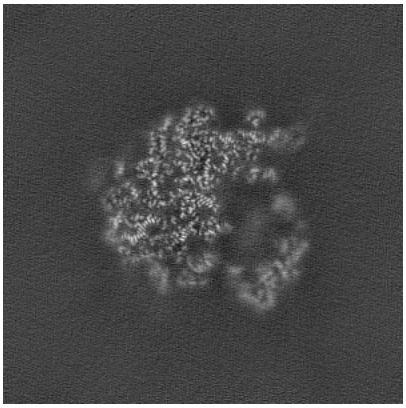


Z Index: 200

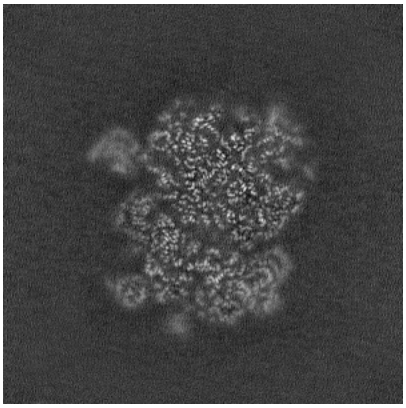
6.2.2 Raw map



X Index: 200



Y Index: 200

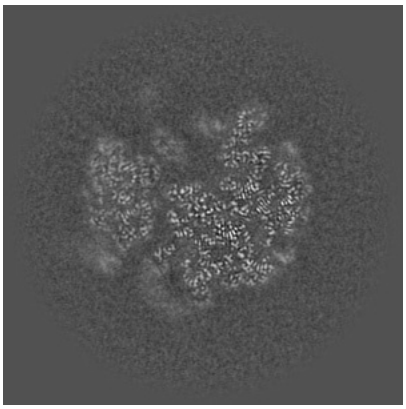


Z Index: 200

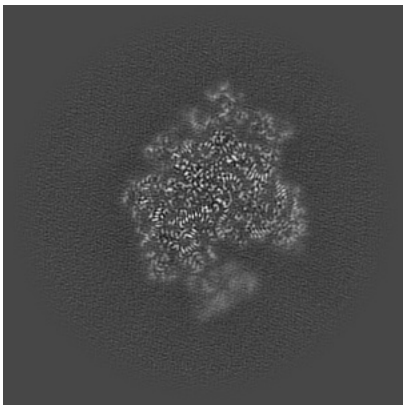
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

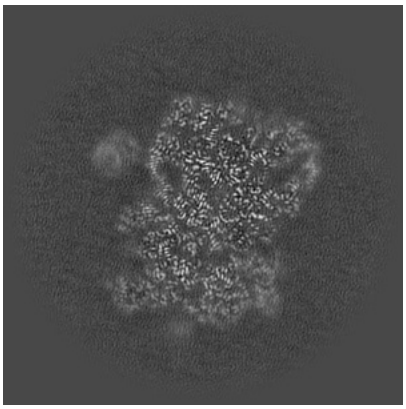
6.3.1 Primary map



X Index: 203

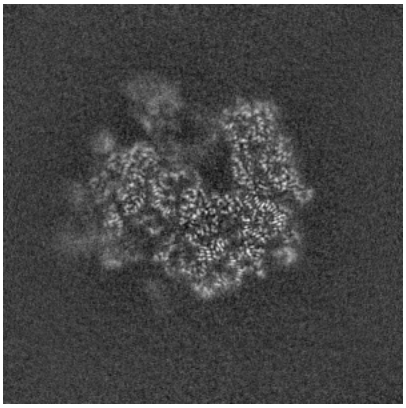


Y Index: 245

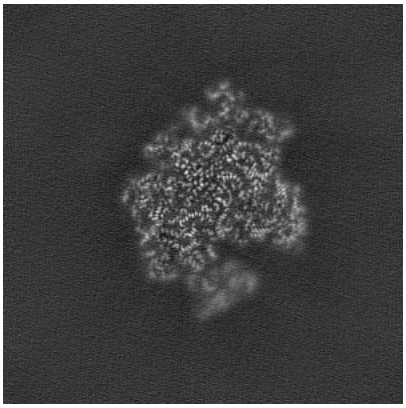


Z Index: 207

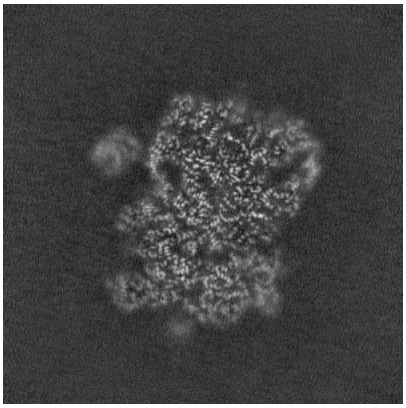
6.3.2 Raw map



X Index: 185



Y Index: 245

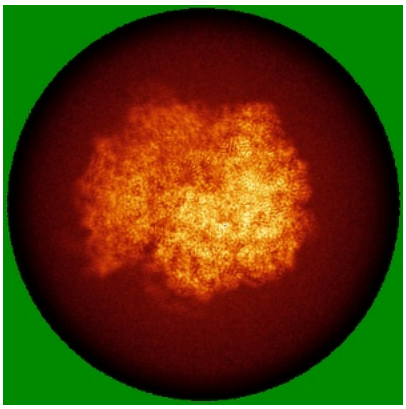


Z Index: 207

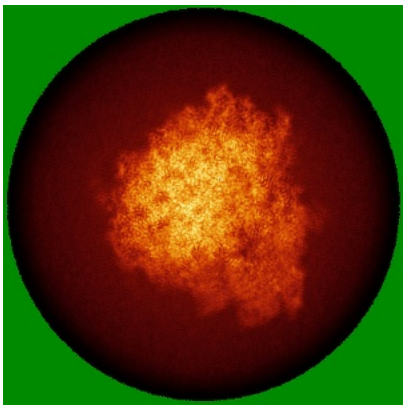
The images above show the largest variance slices of the map in three orthogonal directions.

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

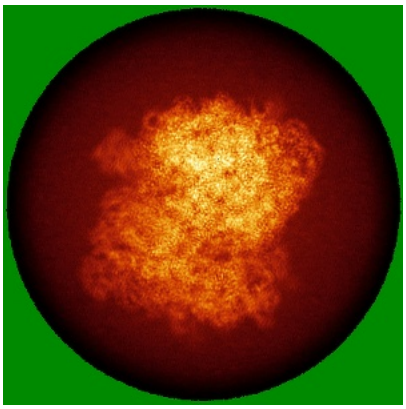
6.4.1 Primary map



X

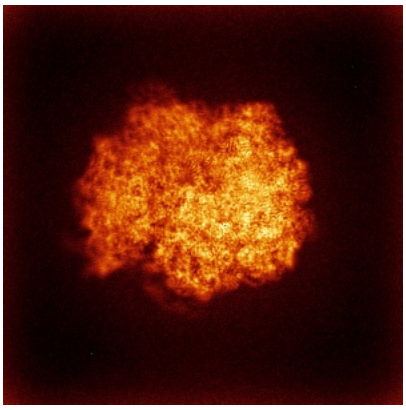


Y

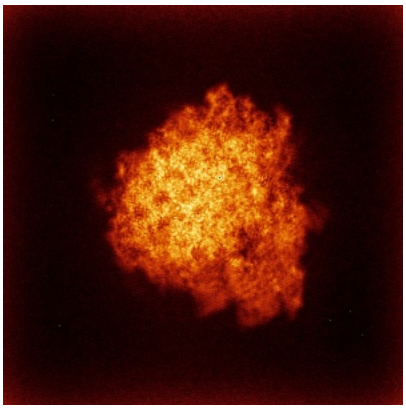


Z

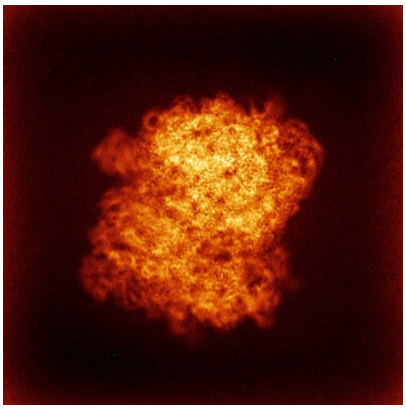
6.4.2 Raw map



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)

This section was not generated.

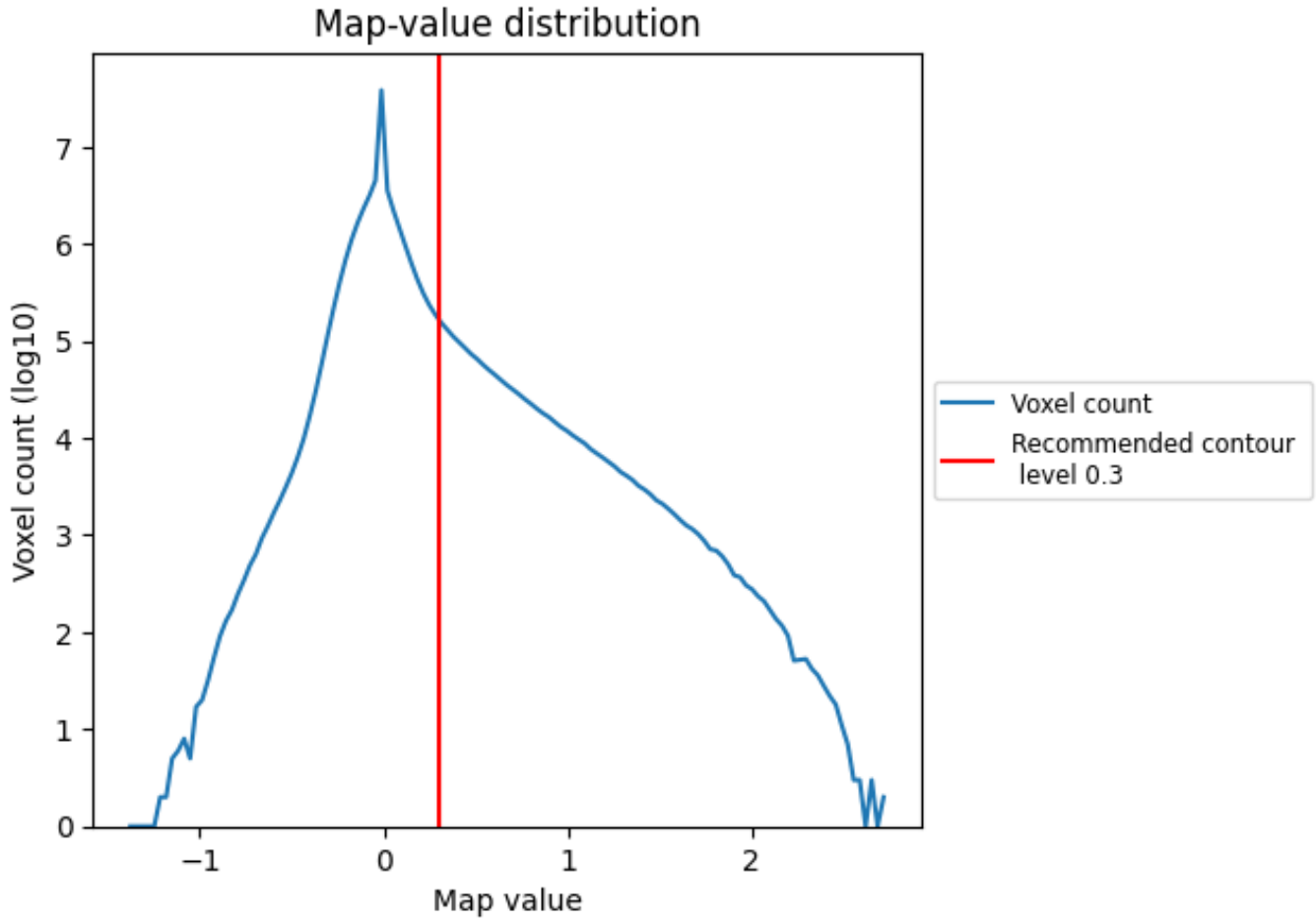
6.6 Mask visualisation (i)

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

7 Map analysis

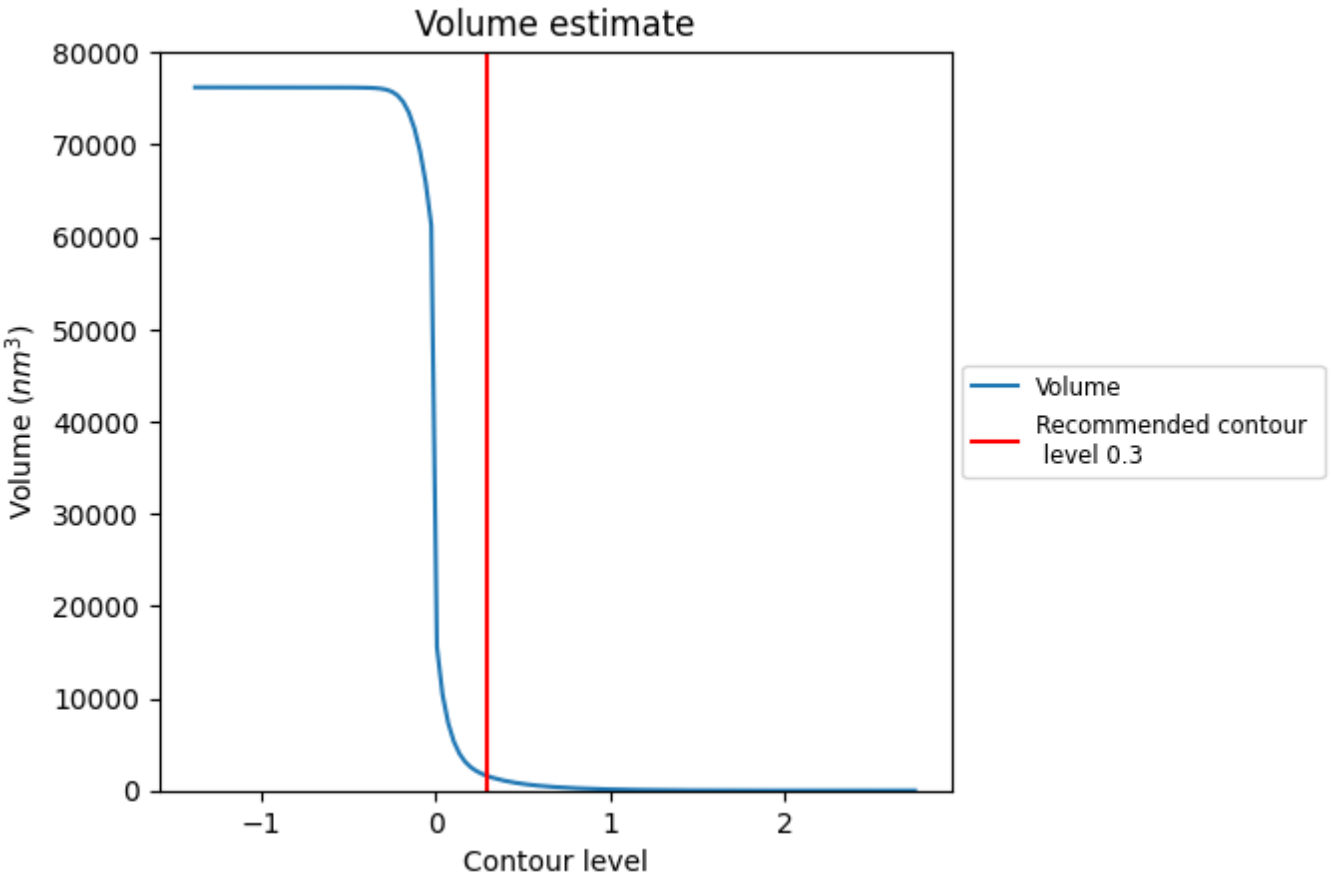
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

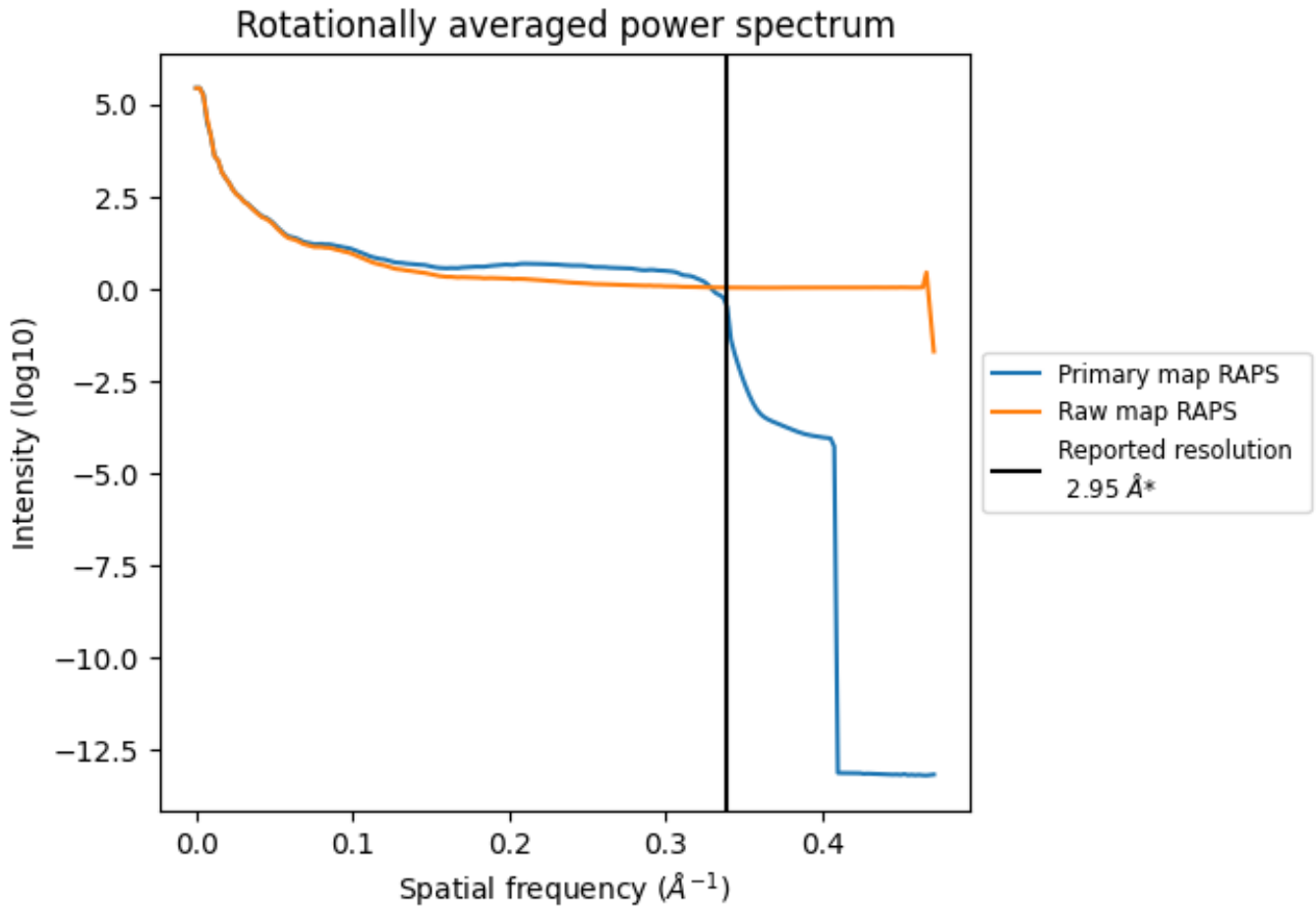
7.2 Volume estimate



The volume at the recommended contour level is 1565 nm^3; this corresponds to an approximate mass of 1414 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)

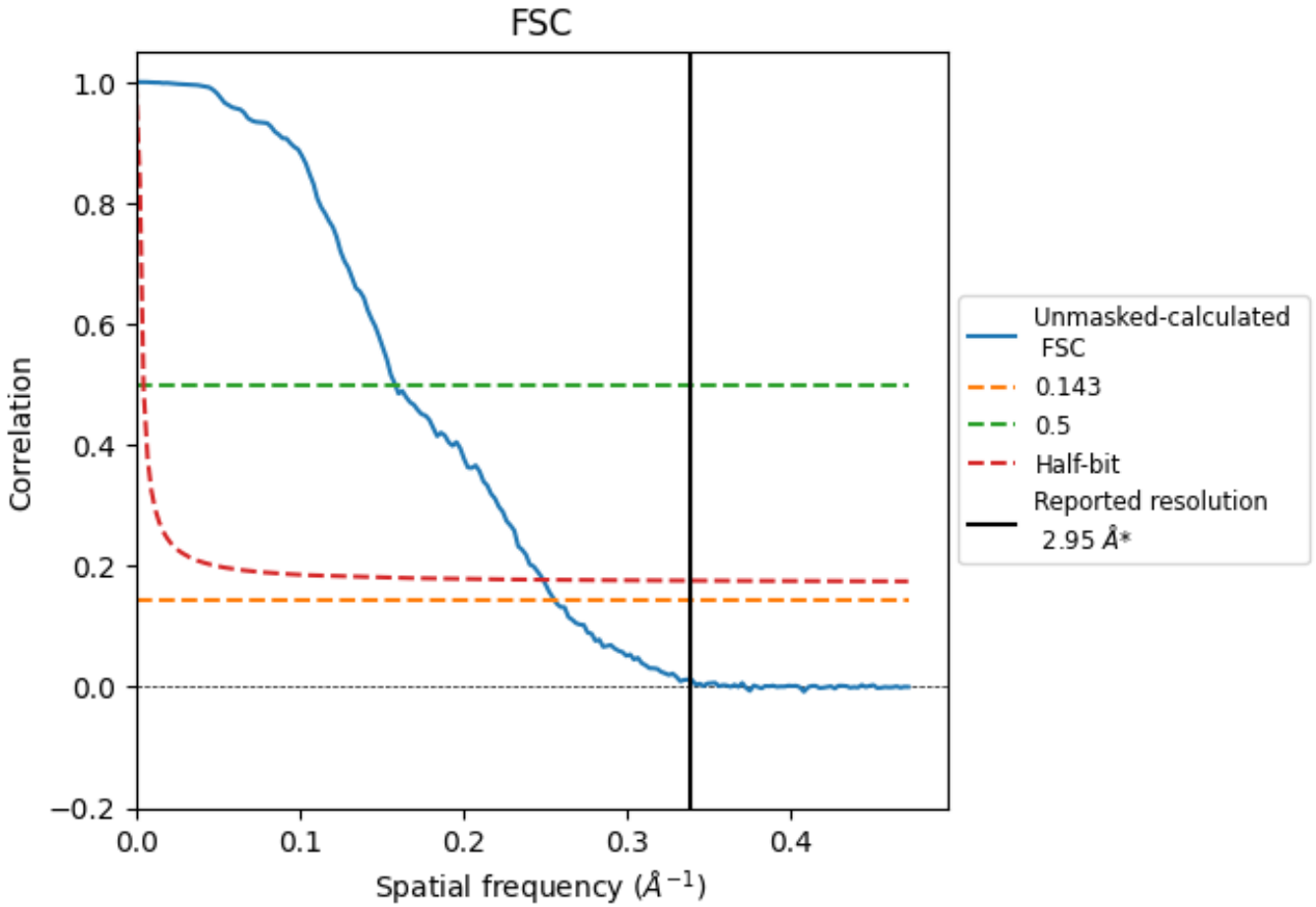


*Reported resolution corresponds to spatial frequency of 0.339 $Å^{-1}$

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 0.339 Å^{-1}

8.2 Resolution estimates (i)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.95	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.91	6.32	4.02

*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 3.91 differs from the reported value 2.95 by more than 10 %

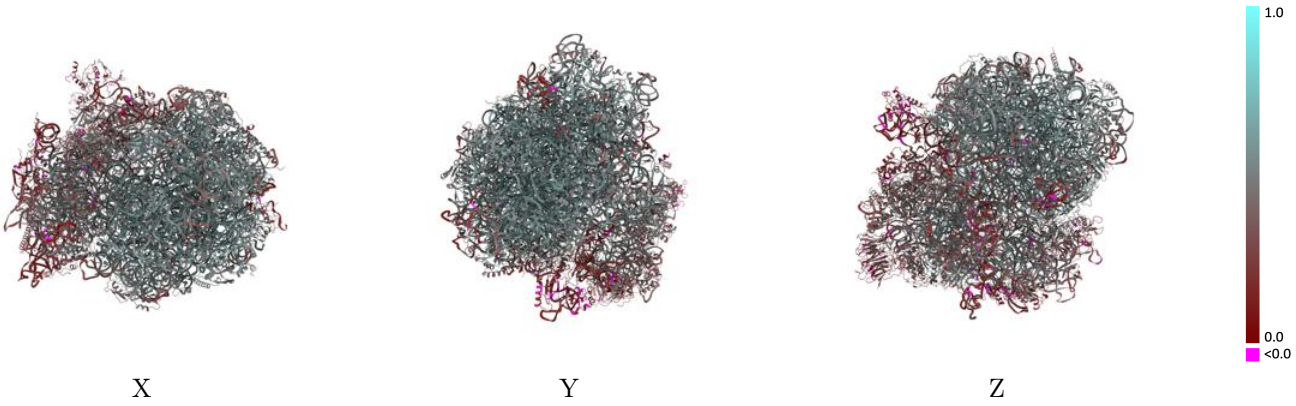
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-41000 and PDB model 8T3D. Per-residue inclusion information can be found in section 3 on page 21.

9.1 Map-model overlay

This section was not generated.

9.2 Q-score mapped to coordinate model



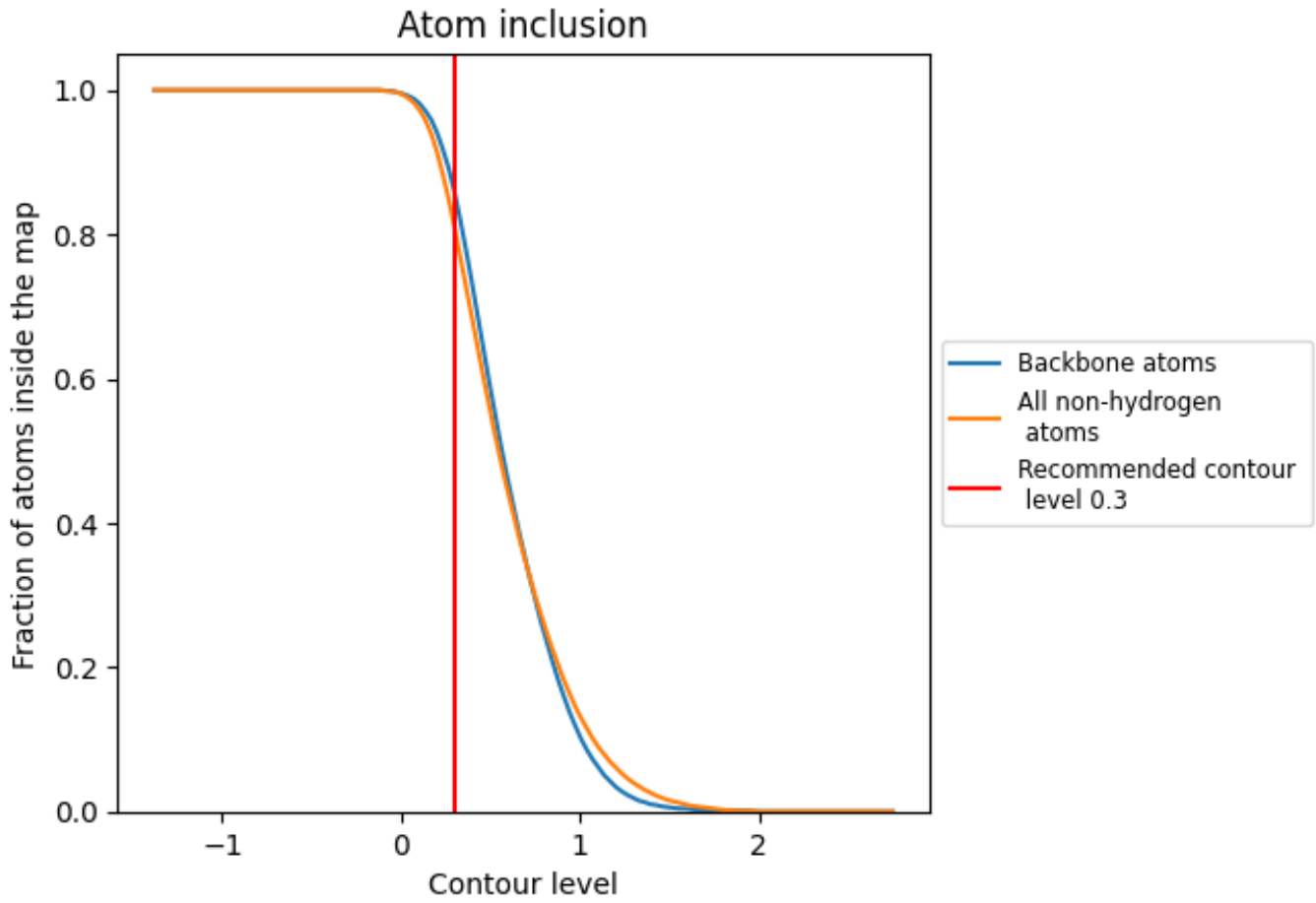
X Y Z

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

9.3 Atom inclusion mapped to coordinate model

This section was not generated.

9.4 Atom inclusion (i)



At the recommended contour level, 86% of all backbone atoms, 81% 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	0.8090	0.4650
A1	0.9100	0.5190
A3	0.9620	0.5240
A4	0.9360	0.5470
AA	0.8040	0.5540
AB	0.8470	0.5340
AC	0.8560	0.5360
AD	0.8220	0.4700
AE	0.8390	0.4850
AF	0.8790	0.5360
AG	0.7990	0.4840
AH	0.8020	0.5090
AI	0.7330	0.4540
AJ	0.6810	0.4220
AL	0.8490	0.5380
AM	0.8350	0.5070
AN	0.8750	0.5710
AO	0.8570	0.5380
AP	0.8440	0.5420
AQ	0.8460	0.5460
AR	0.6920	0.4590
AS	0.8570	0.5310
AT	0.8310	0.5220
AU	0.7990	0.4510
AV	0.7680	0.5290
AW	0.8160	0.5380
AX	0.7950	0.5180
AY	0.8700	0.5180
AZ	0.8110	0.4870
Aa	0.8820	0.5560
Ab	0.7830	0.5230
Ac	0.7460	0.4990
Ad	0.8210	0.5200
Ae	0.8580	0.5530
Af	0.9030	0.5710

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Chain	Atom inclusion	Q-score
Ag	0.7970	0.5260
Ah	0.8570	0.5190
Ai	0.8030	0.4900
Aj	0.8960	0.5720
Ak	0.6180	0.4560
Al	0.8410	0.5560
Am	0.8090	0.5350
An	0.7590	0.5280
Ao	0.7140	0.5070
Ap	0.7580	0.5450
B5	0.8480	0.4310
BA	0.7000	0.4210
BB	0.5760	0.3590
BC	0.7630	0.4840
BD	0.6700	0.3770
BE	0.7200	0.4230
BF	0.5810	0.3510
BG	0.6750	0.3490
BH	0.5670	0.3540
BI	0.7310	0.4310
BJ	0.6240	0.2600
BK	0.6140	0.3140
BL	0.6970	0.4610
BM	0.1620	0.2360
BN	0.7000	0.4640
BO	0.6290	0.4130
BP	0.5590	0.3240
BQ	0.6810	0.3900
BR	0.5020	0.3040
BS	0.6340	0.3470
BT	0.7290	0.3820
BU	0.6760	0.3640
BV	0.7410	0.4440
BW	0.7990	0.5180
BX	0.7380	0.5040
BY	0.6540	0.2990
BZ	0.6210	0.2650
Ba	0.7380	0.4950
Bb	0.6360	0.4110
Bc	0.4910	0.3420
Bd	0.8390	0.4610
Be	0.5730	0.3740

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Chain	Atom inclusion	Q-score
Bf	0.2040	0.2430
Bg	0.6340	0.2830
DC	0.5330	0.3490
E	0.3390	0.1570
EC	0.5020	0.1860