Full wwPDB EM Validation Report

Mar 6, 2026 – 11:13 AM UTC

PDB ID	:	8T3E / pdb_00008t3e
EMDB ID	:	EMD-41001
Title	:	Hypomethylated yeast 80S bound with Taura syndrome virus (TSV) internal ribosome entry site (IRES), eEF2, GDP, and sordarin, Structure IV
Authors	:	Zhao, Y.; Li, H.
Deposited on	:	2023-06-07
Resolution	:	3.04 Å(reported)

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

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

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

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

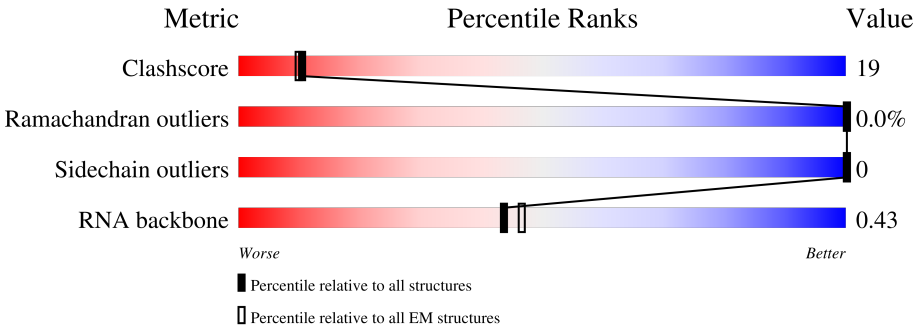
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

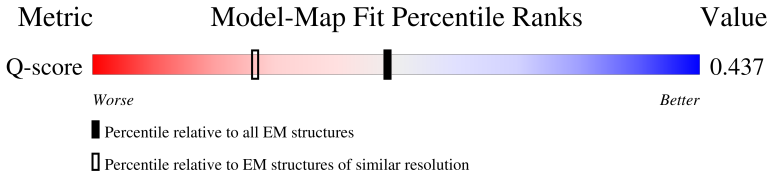
1 Overall quality at a glance

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

The reported resolution of this entry is 3.04 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.





Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	13952 (2.54 - 3.54)

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	8% 42% 40% 18%
2	BB	255	11% 40% 44% 16%
3	BC	254	45% 40% 15%

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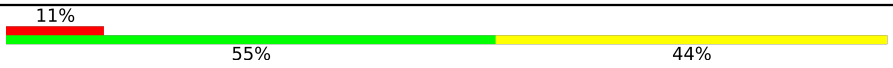
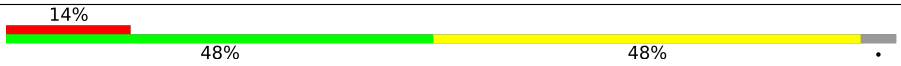
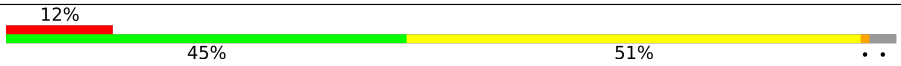
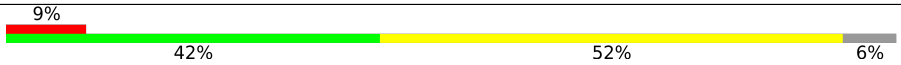
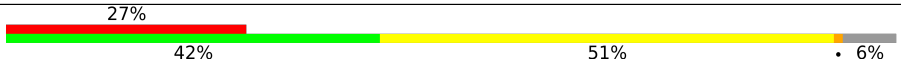
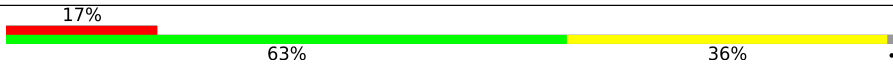
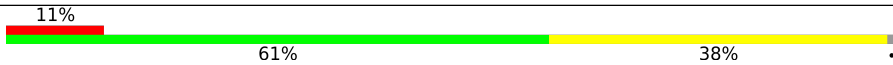
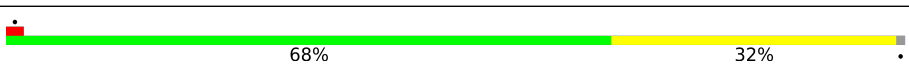
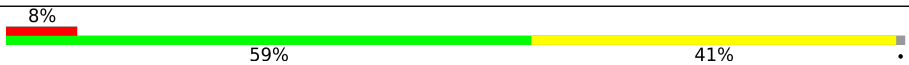
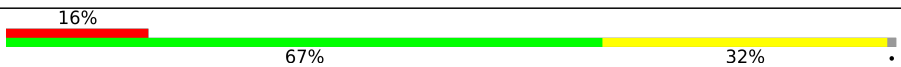
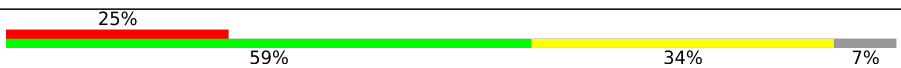
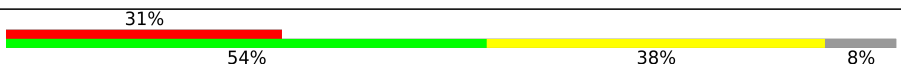
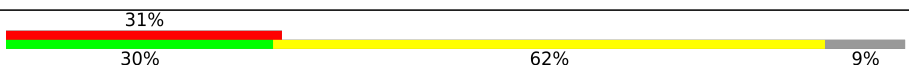
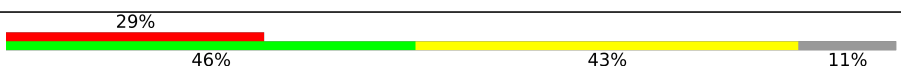
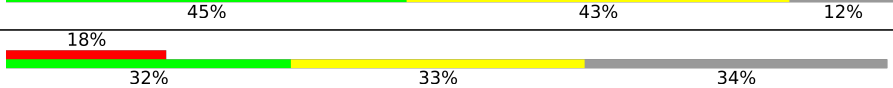
Mol	Chain	Length	Quality of chain
4	BE	261	
5	BG	236	
6	BH	190	
7	BI	200	
8	BJ	197	
9	BL	156	
10	BN	151	
11	BO	137	
12	BV	87	
13	BW	130	
14	BX	145	
15	BY	135	
16	Ba	119	
17	Bb	82	
18	Be	63	
19	BD	240	
20	BF	225	
21	BK	105	
22	BP	142	
23	BQ	143	
24	BR	136	
25	BS	146	
26	BT	144	
27	BU	121	
28	BZ	108	

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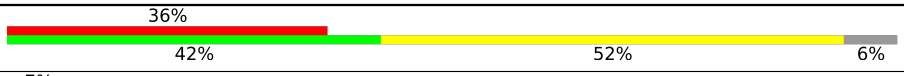
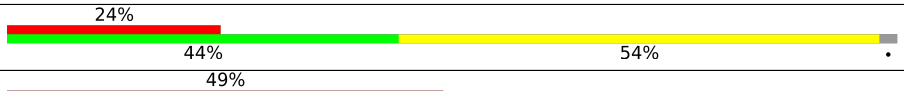
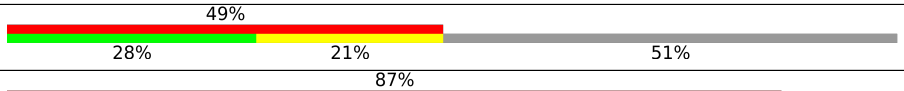
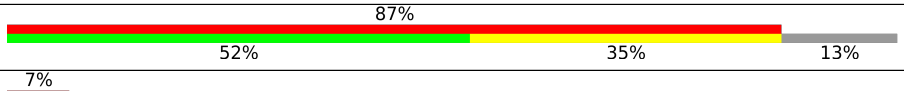
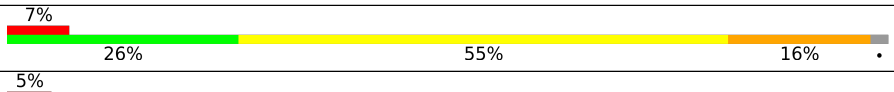
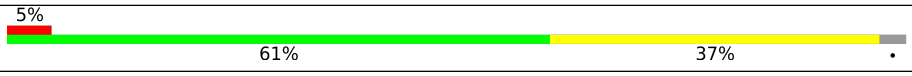
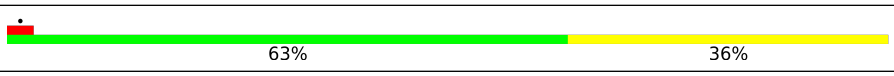
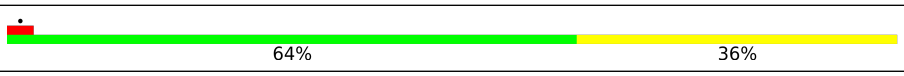
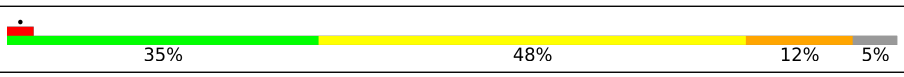
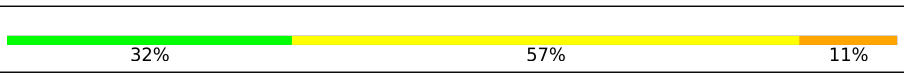
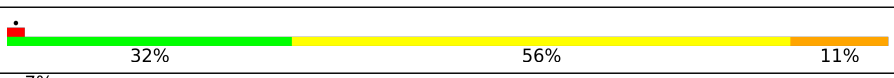
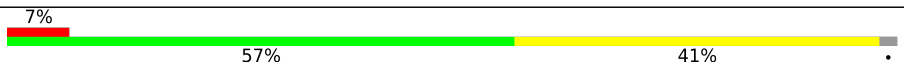
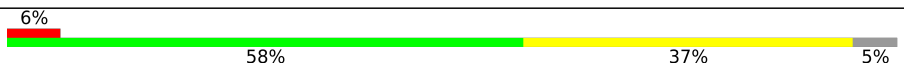
Mol	Chain	Length	Quality of chain
29	Bc	67	
30	Bd	56	
31	Bg	319	
32	Bf	152	
33	BM	143	
34	B5	1798	
35	AA	254	
36	AB	387	
37	AC	362	
38	A1	3394	
39	A3	121	
40	A4	158	
41	AD	297	
42	AE	176	
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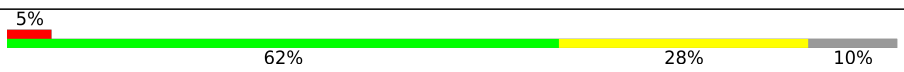
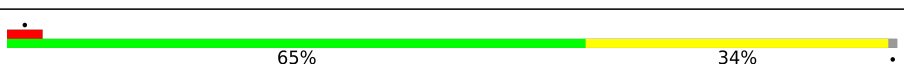
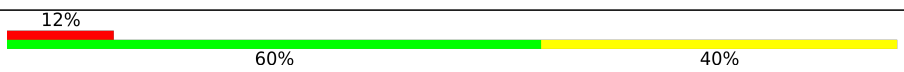
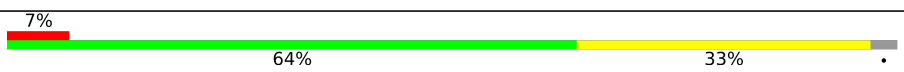
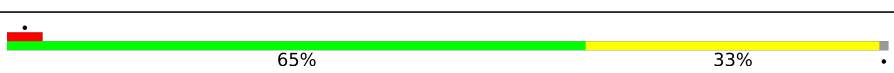
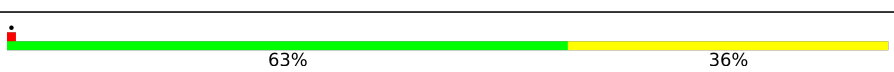
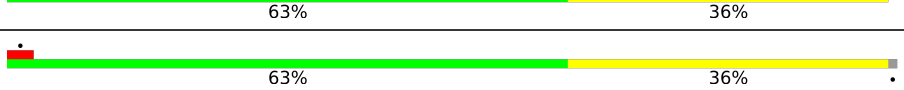
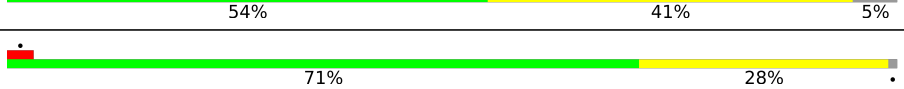
44	AG	256	
45	AH	191	
46	AI	222	
47	AJ	174	
48	AL	199	
49	AM	138	
50	AN	204	
51	AO	199	
52	AP	184	
53	AQ	186	

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Mol	Chain	Length	Quality of chain
54	AR	189	13% 60% 40%
55	AS	178	65% 32%
56	AT	160	6% 53% 46%
57	AU	121	6% 45% 37% 17%
58	AV	137	11% 55% 45%
59	AW	155	28% 13% 59%
60	AX	142	6% 61% 25% 15%
61	AY	127	62% 37%
62	AZ	136	54% 45%
63	Aa	149	61% 38%
64	Ab	59	17% 68% 31%
65	Ac	105	10% 62% 30% 8%
66	Ad	113	11% 58% 38%
67	Ae	130	68% 30%
68	Af	107	73% 26%
69	Ag	121	5% 54% 39% 7%
70	Ah	120	62% 38%
71	Ai	100	5% 64% 35%
72	Aj	88	69% 30%
73	Ak	78	22% 53% 46%
74	Al	51	51% 47%
75	Am	128	24% 16% 59%
76	An	25	12% 44% 56%
77	Ao	106	15% 57% 42%
78	Ap	92	12% 54% 45%

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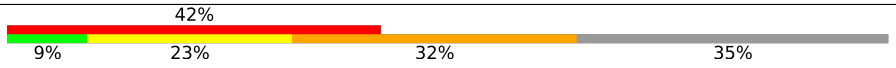
Mol	Chain	Length	Quality of chain
79	E	217	
80	DC	842	
81	EC	202	

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
85	SO1	DC	903	X	-	-	-

2 Entry composition

There are 85 unique types of molecules in this entry. The entry contains 210978 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		

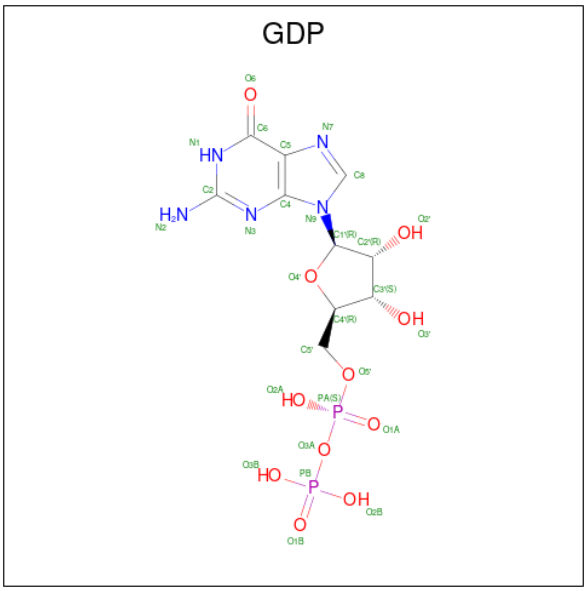
- Molecule 81 is a RNA chain called TSV IRES.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	EC	131	Total	C	N	O	P	0	0
			2764	1234	489	910	131		

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

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

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

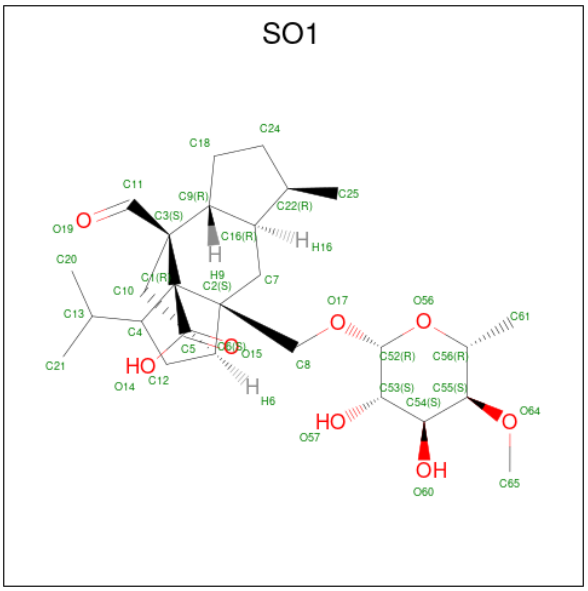


Mol	Chain	Residues	Atoms					AltConf
83	DC	1	Total	C	N	O	P	0
			28	10	5	11	2	

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

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

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



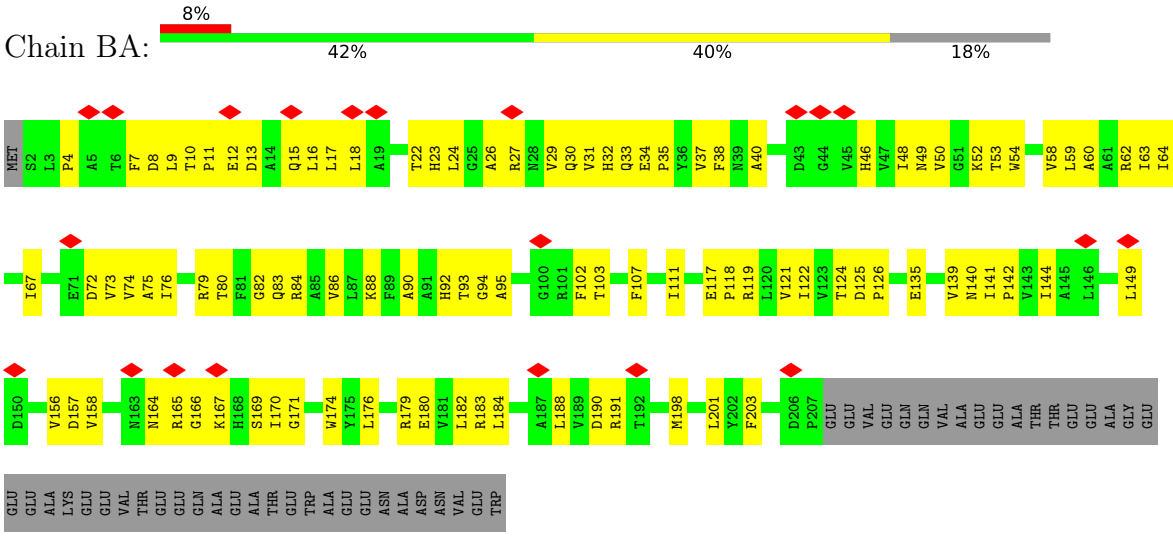
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
85	DC	1	35	27	8	0

3 Residue-property plots (i)

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

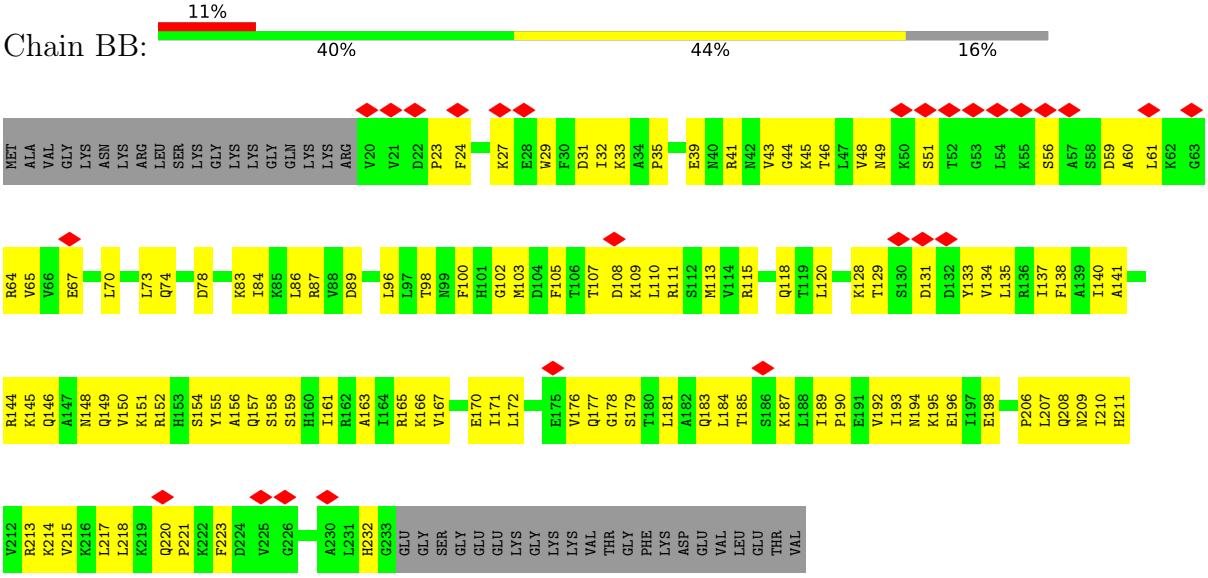
• Molecule 1: 40S ribosomal protein S0-A

Chain BA:



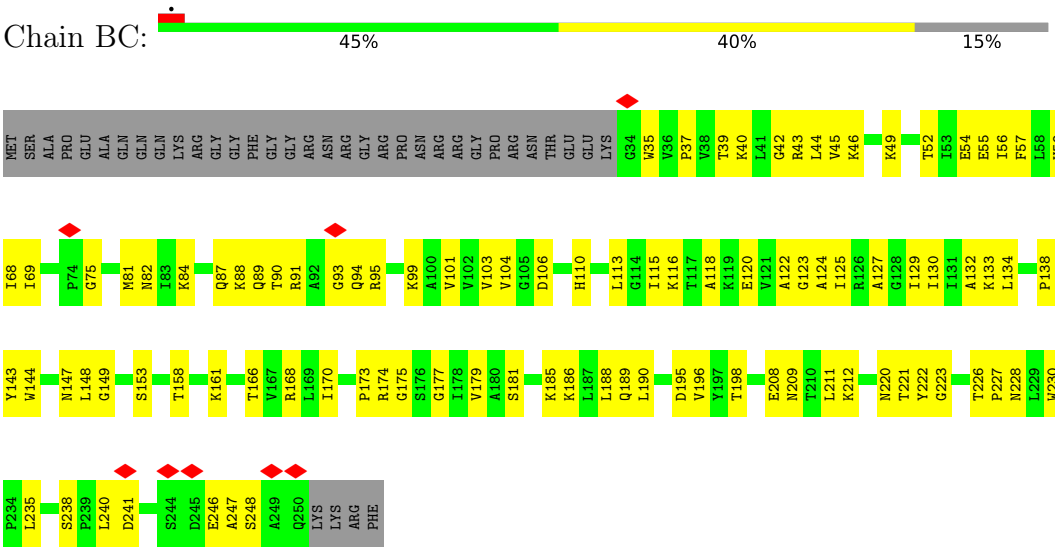
• Molecule 2: RPS1A isoform 1

Chain BB:



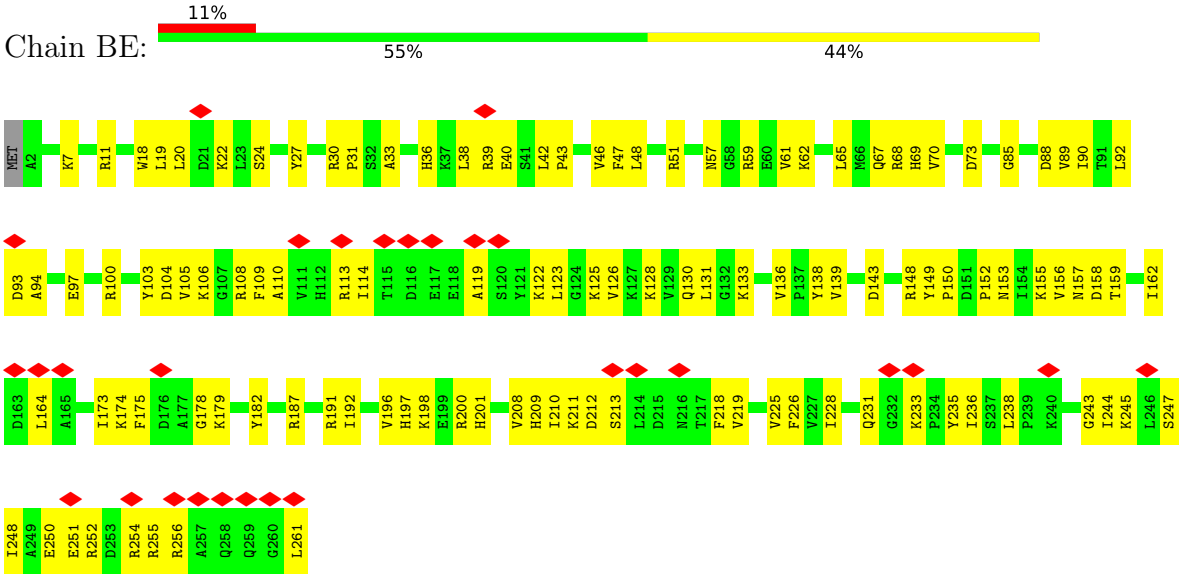
• Molecule 3: RPS2 isoform 1

Chain BC:



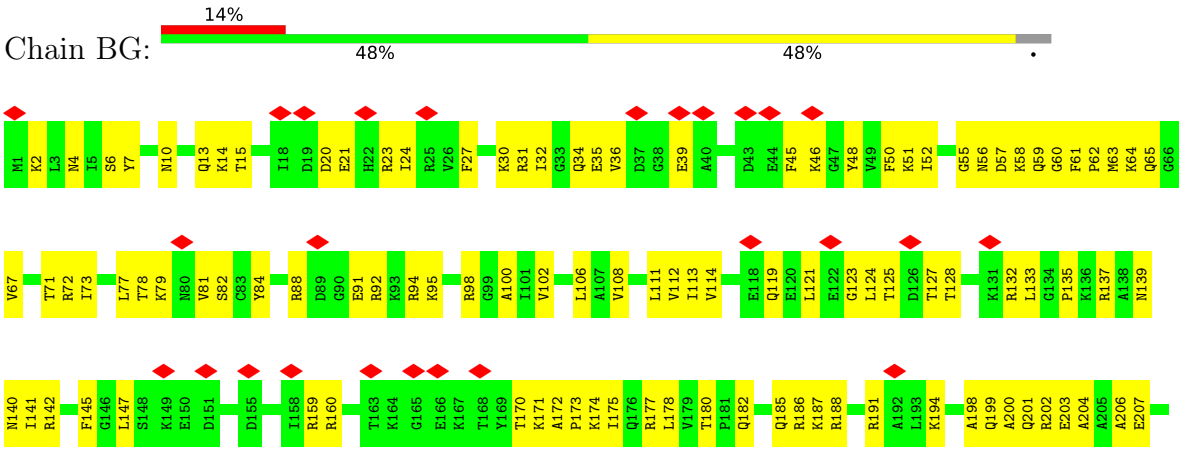
• Molecule 4: 40S ribosomal protein S4-A

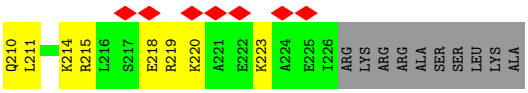
Chain BE:



• Molecule 5: 40S ribosomal protein S6-A

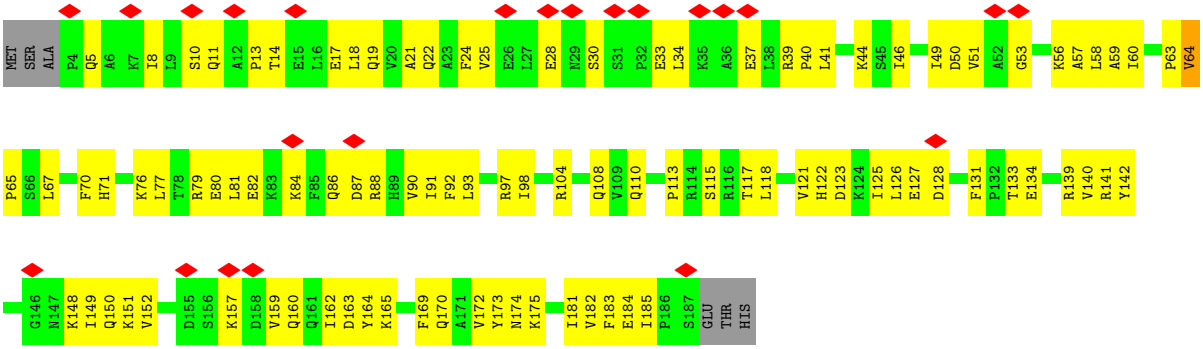
Chain BG:





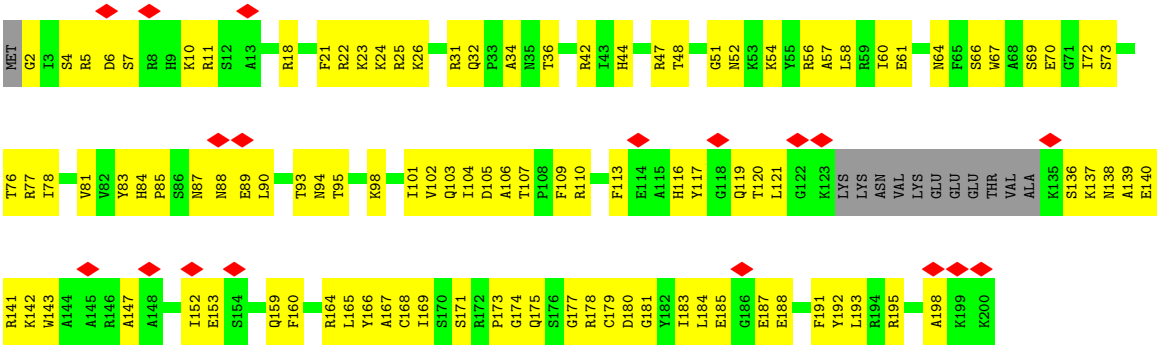
• Molecule 6: 40S ribosomal protein S7-A

Chain BH:



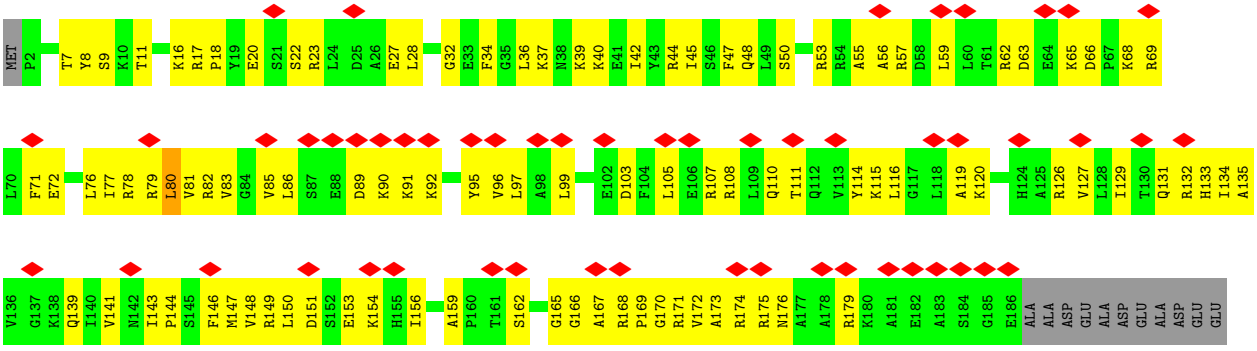
• Molecule 7: 40S ribosomal protein S8-A

Chain BI:



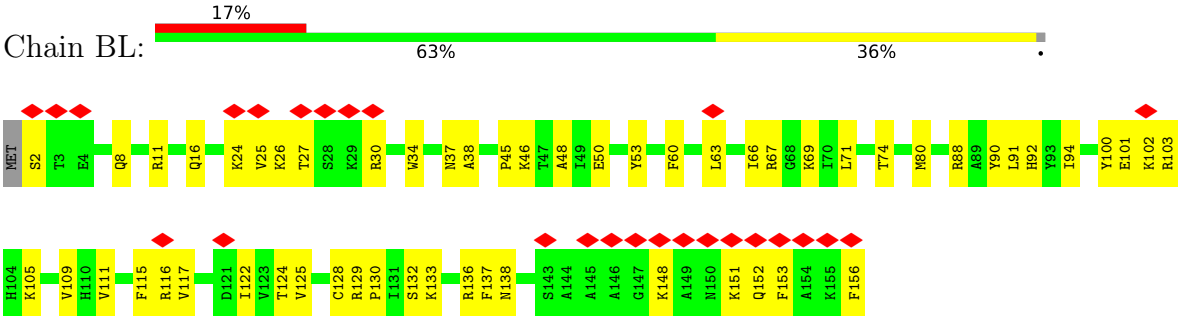
• Molecule 8: 40S ribosomal protein S9-A

Chain BJ:



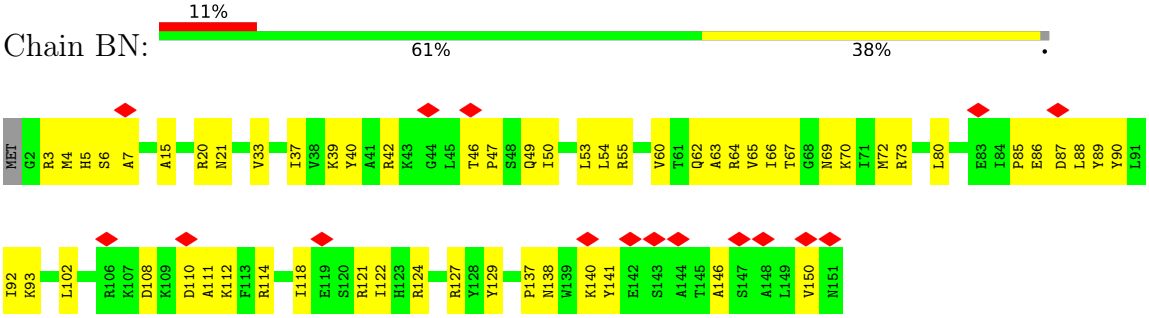
• Molecule 9: 40S ribosomal protein S11-A

Chain BL:



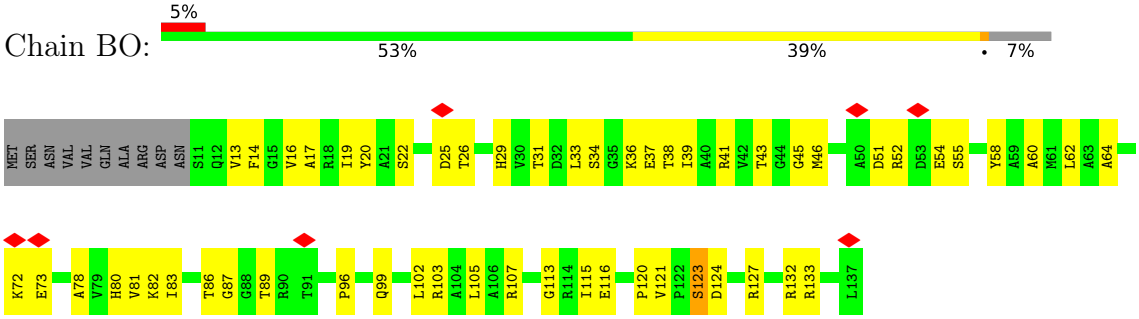
• Molecule 10: 40S ribosomal protein S13

Chain BN:



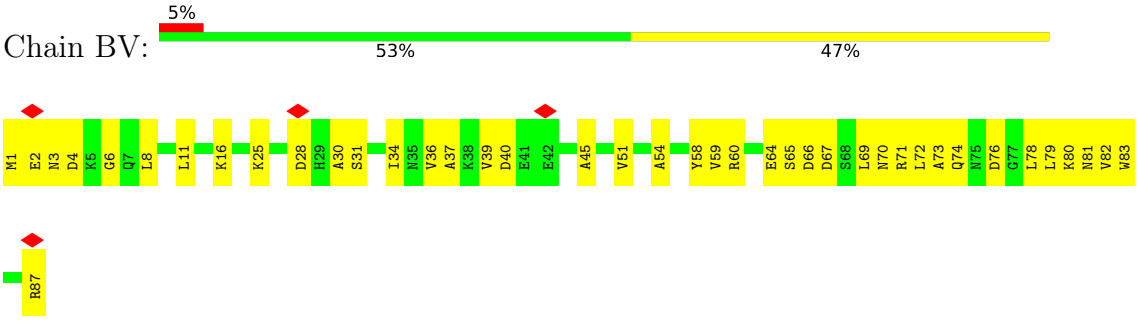
• Molecule 11: 40S ribosomal protein S14-A

Chain BO:



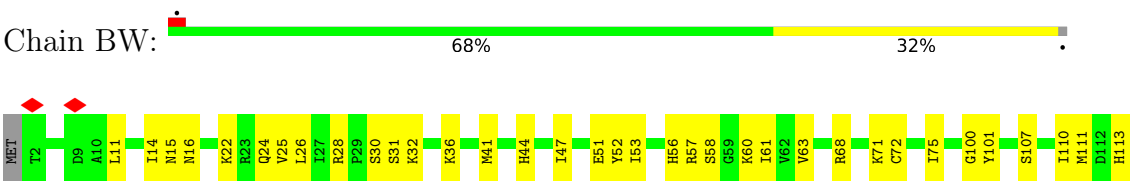
• Molecule 12: 40S ribosomal protein S21-A

Chain BV:



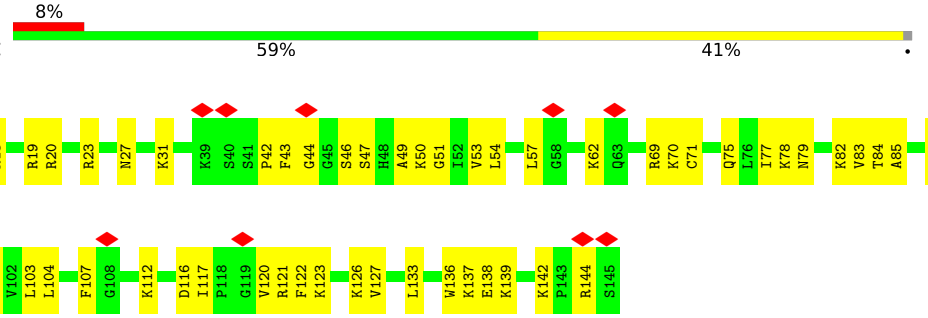
• Molecule 13: RPS22A isoform 1

Chain BW:



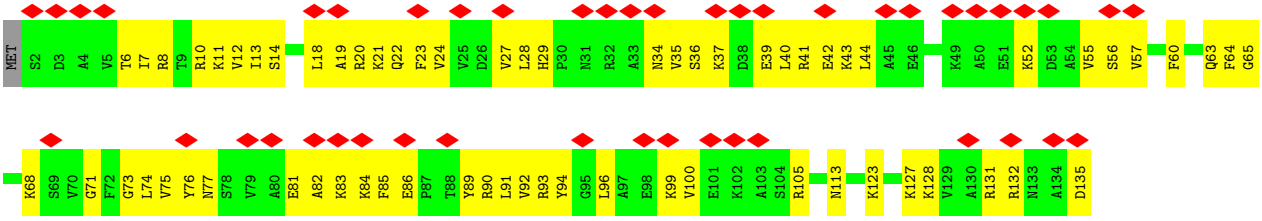
• Molecule 14: 40S ribosomal protein S23-A

Chain BX:



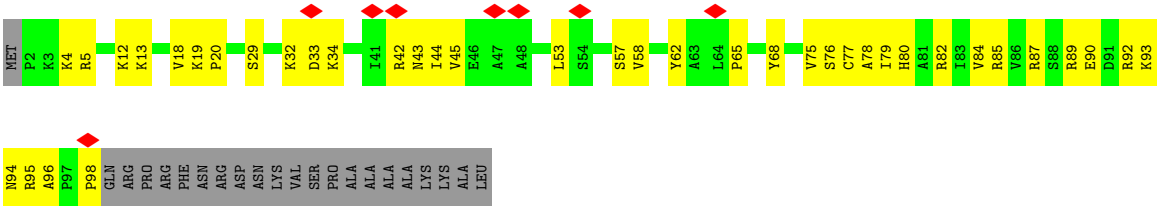
• Molecule 15: 40S ribosomal protein S24-A

Chain BY:



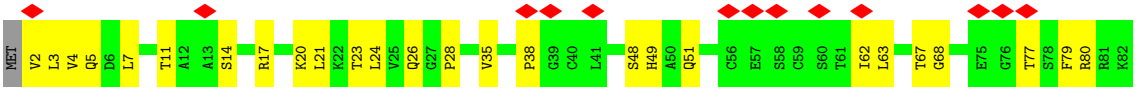
• Molecule 16: RPS26B isoform 1

Chain Ba:



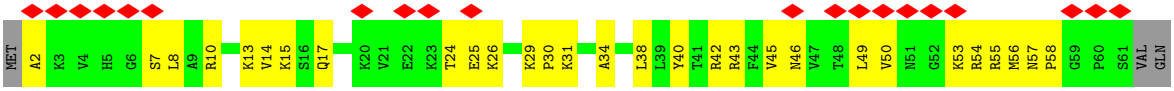
• Molecule 17: 40S ribosomal protein S27-A

Chain Bb:



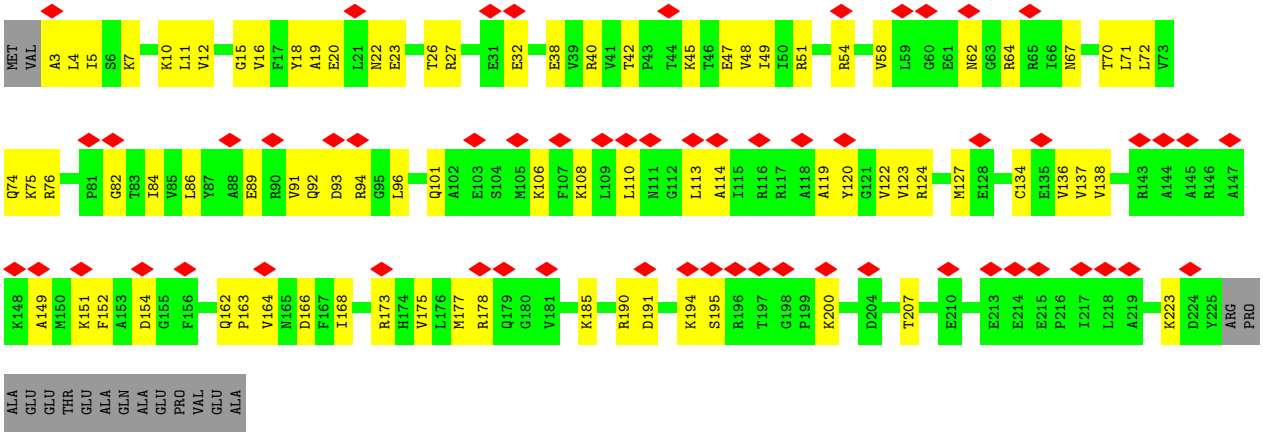
• Molecule 18: 40S ribosomal protein S30-A

Chain Be:



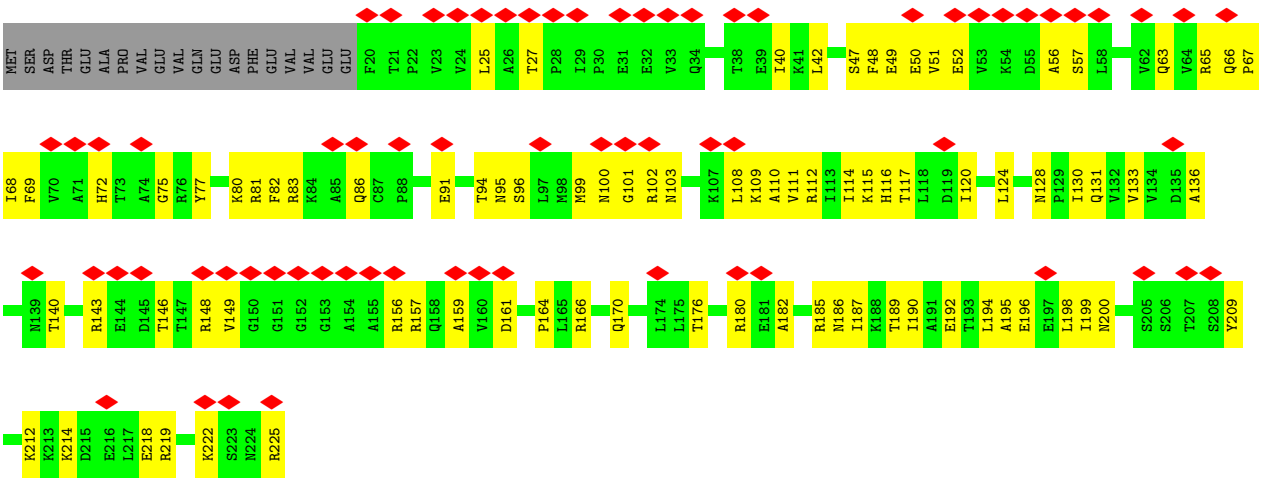
• Molecule 19: RPS3 isoform 1

Chain BD:



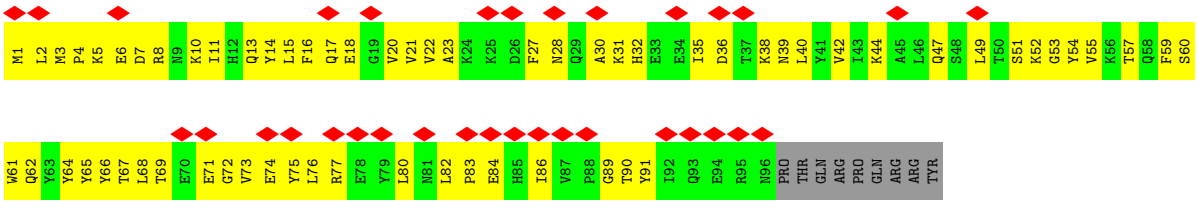
• Molecule 20: Rps5p

Chain BF:



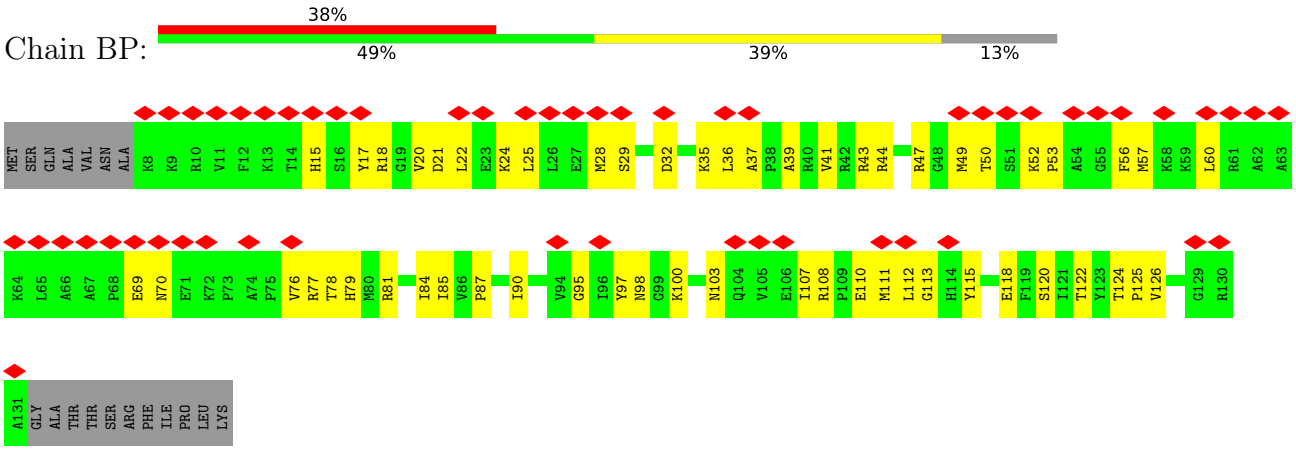
• Molecule 21: 40S ribosomal protein S10-A

Chain BK:



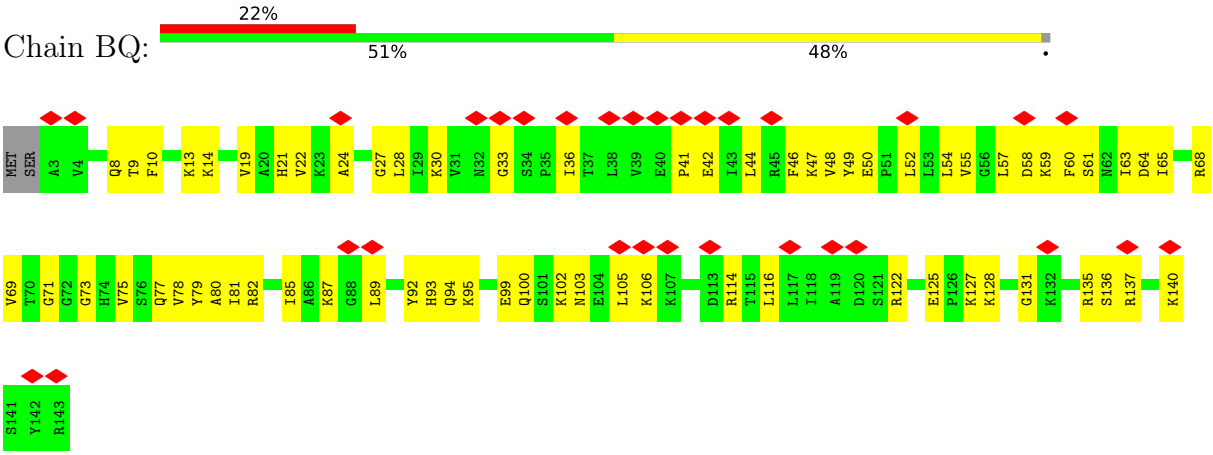
• Molecule 22: RPS15 isoform 1

Chain BP:



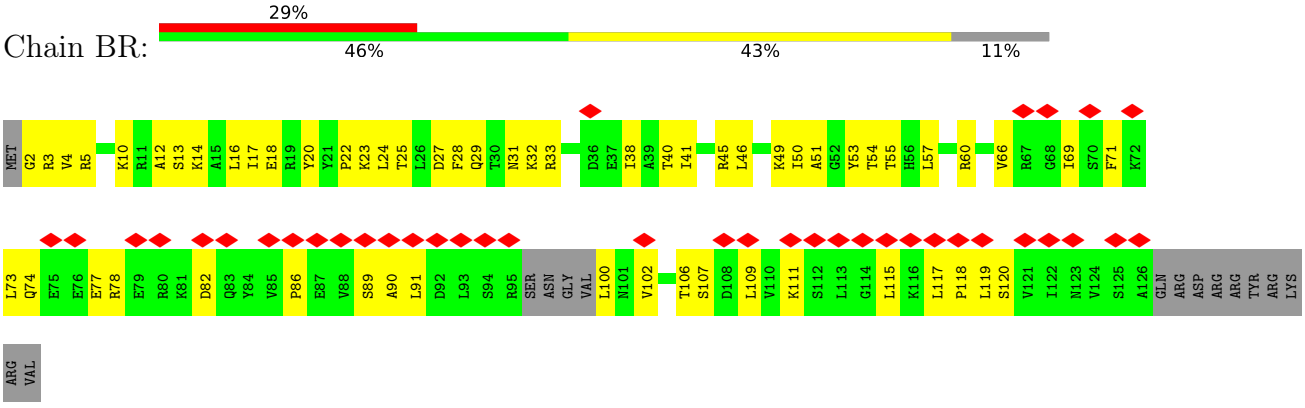
• Molecule 23: 40S ribosomal protein S16-A

Chain BQ:



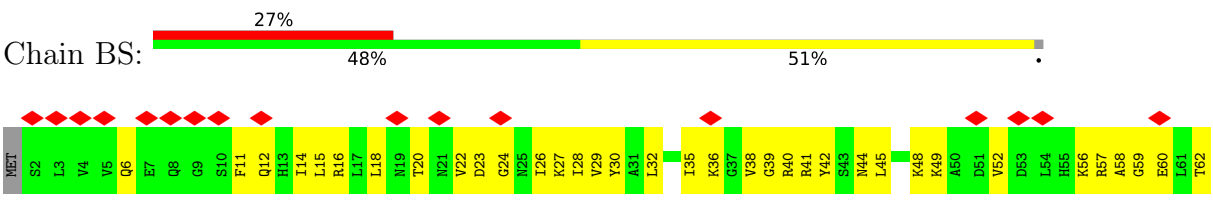
• Molecule 24: 40S ribosomal protein S17-A

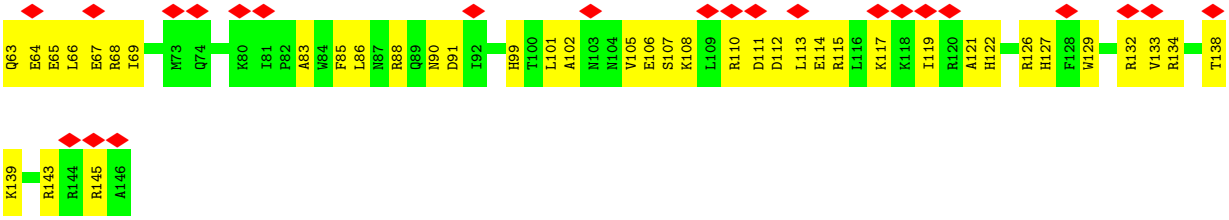
Chain BR:



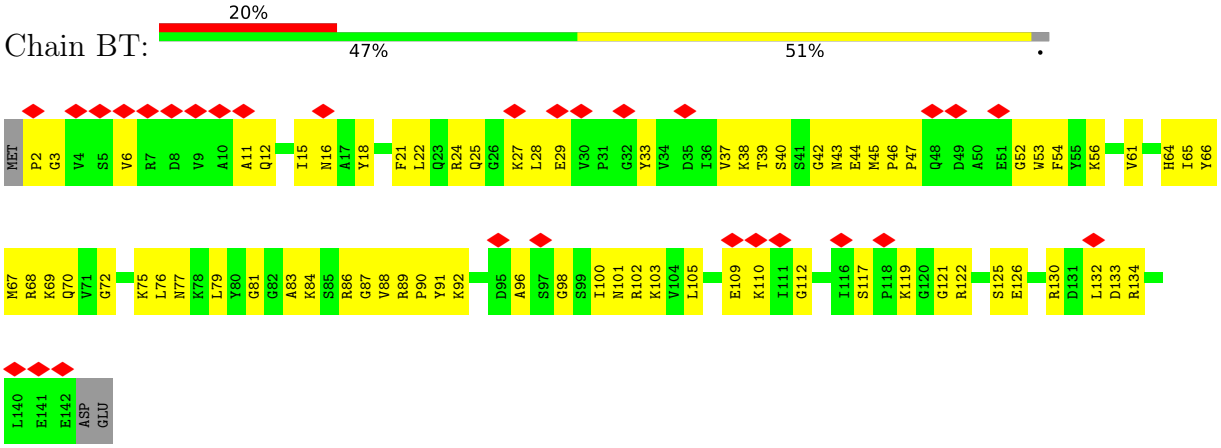
• Molecule 25: 40S ribosomal protein S18-A

Chain BS:

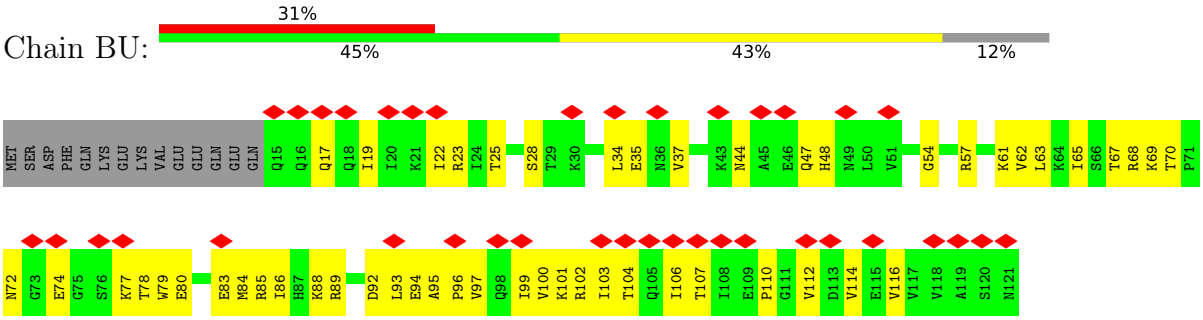




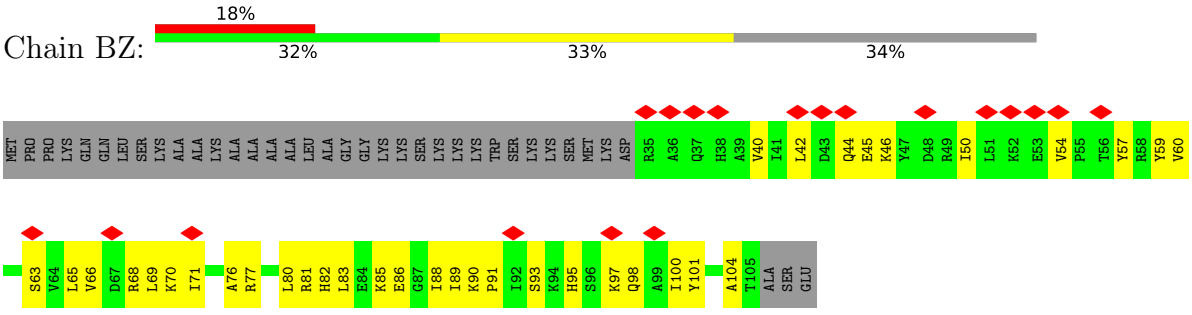
• Molecule 26: 40S ribosomal protein S19-A



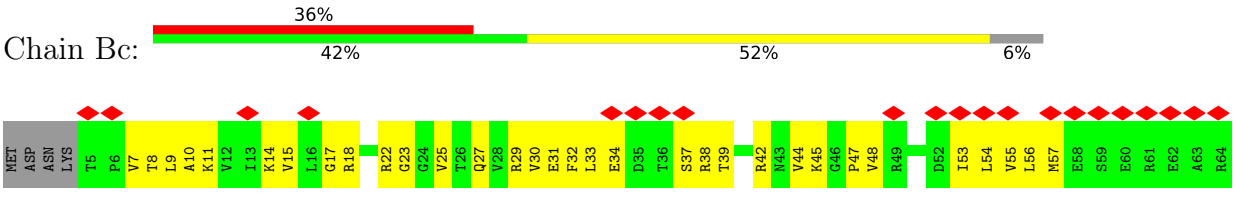
• Molecule 27: RPS20 isoform 1



• Molecule 28: RPS25A isoform 1

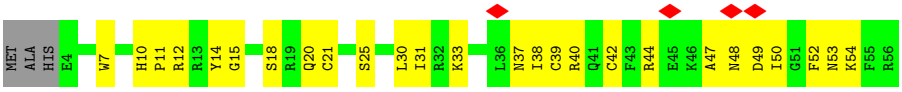


• Molecule 29: RPS28A isoform 1



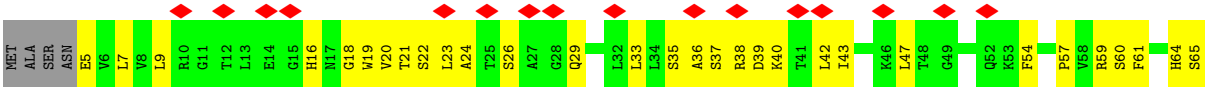
• Molecule 30: RPS29A isoform 1

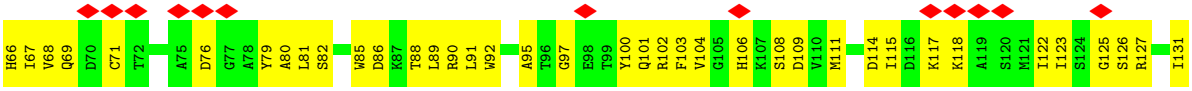
Chain Bd:

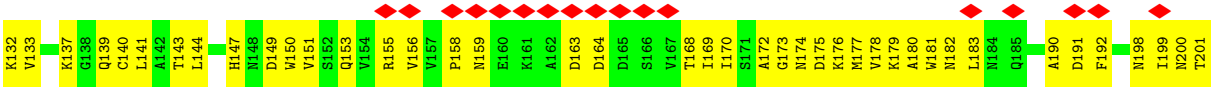


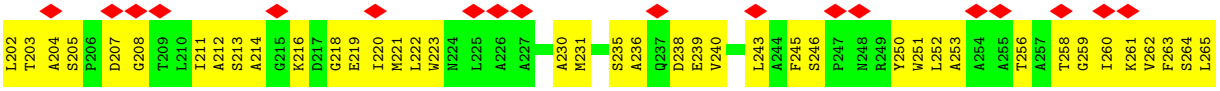
• Molecule 31: Guanine nucleotide-binding protein subunit beta-like protein

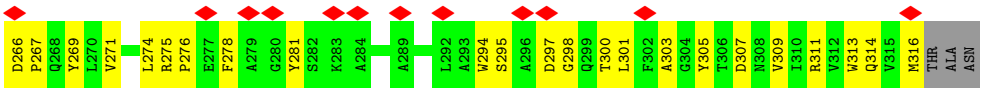
Chain Bg:





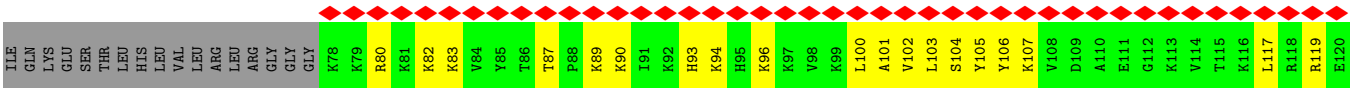


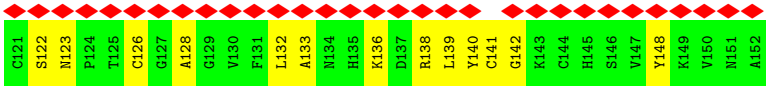




• Molecule 32: Ubiquitin-40S ribosomal protein S31

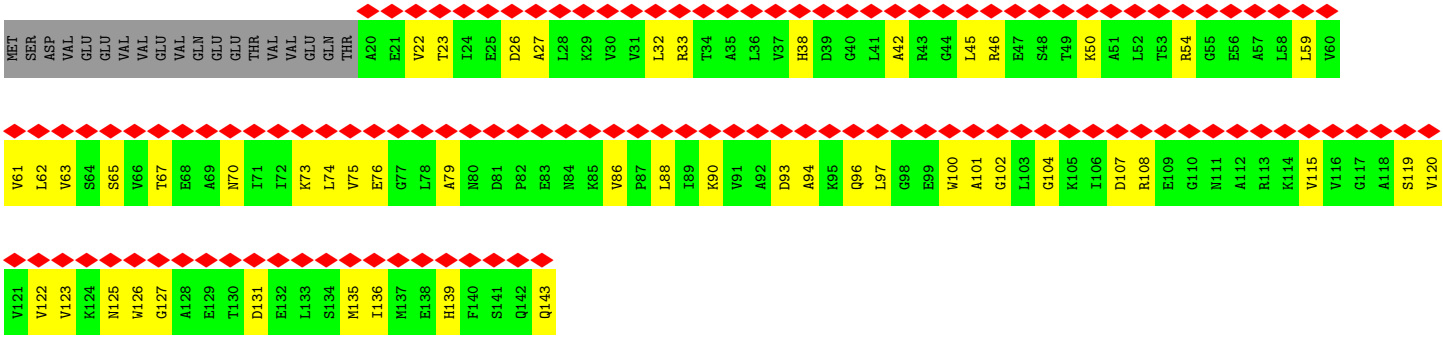
Chain Bf:





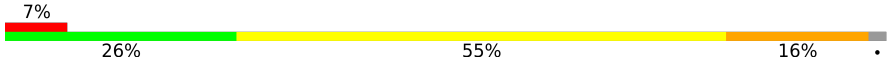
• Molecule 33: 40S ribosomal protein S12

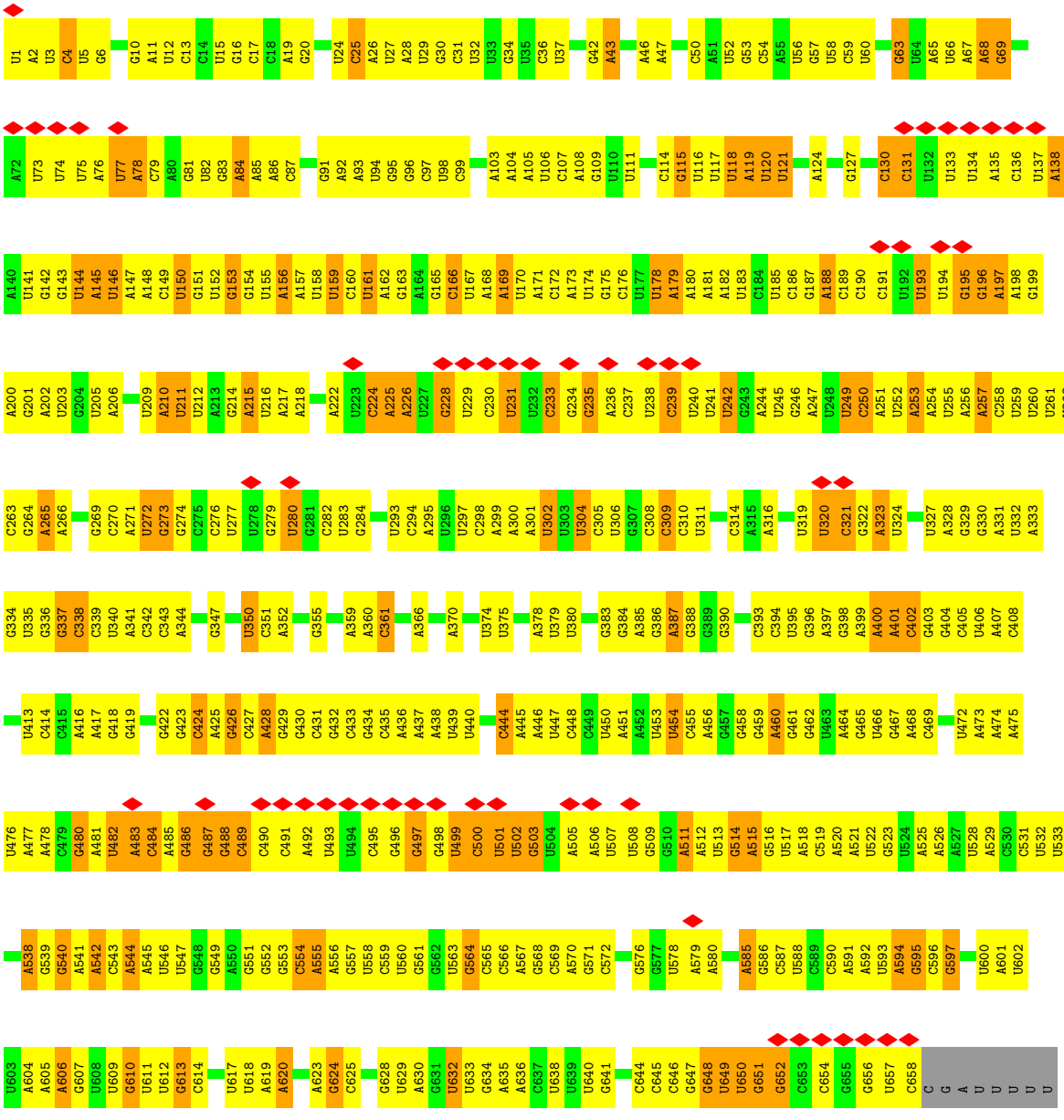
Chain BM:

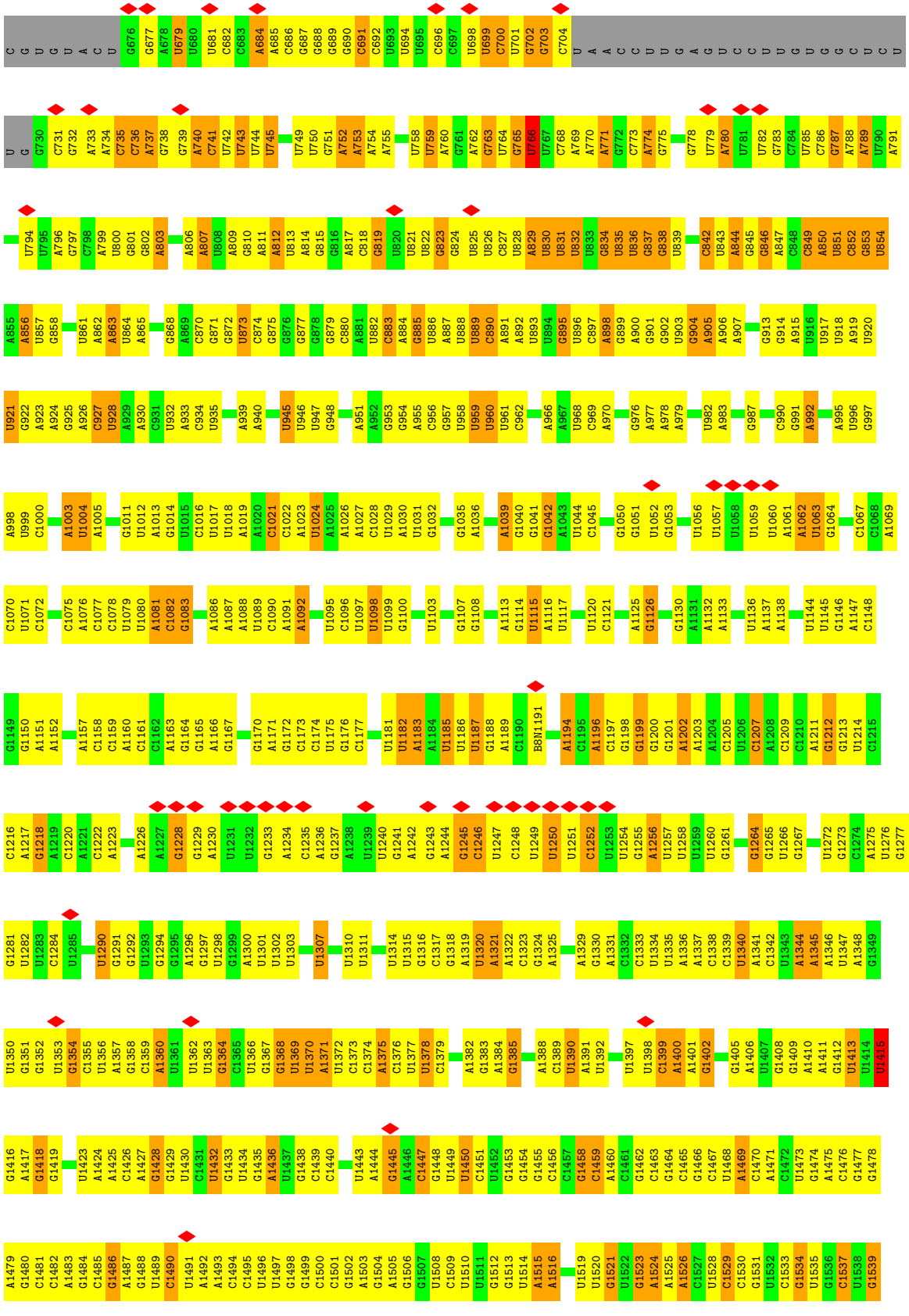


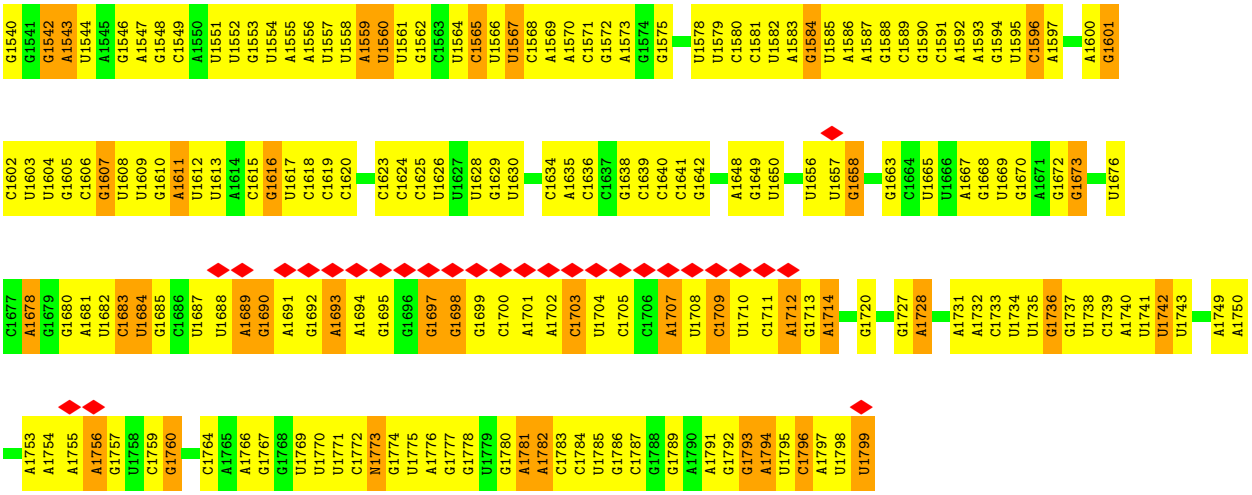
- Molecule 34: 18S rRNA

Chain B5:



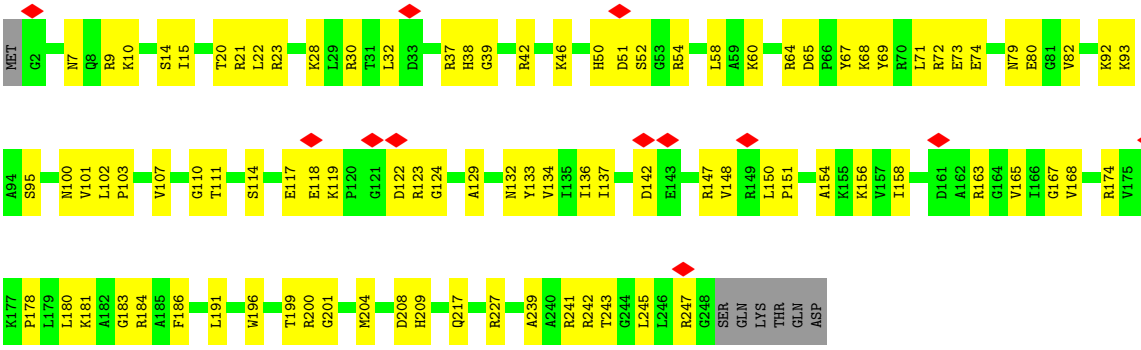






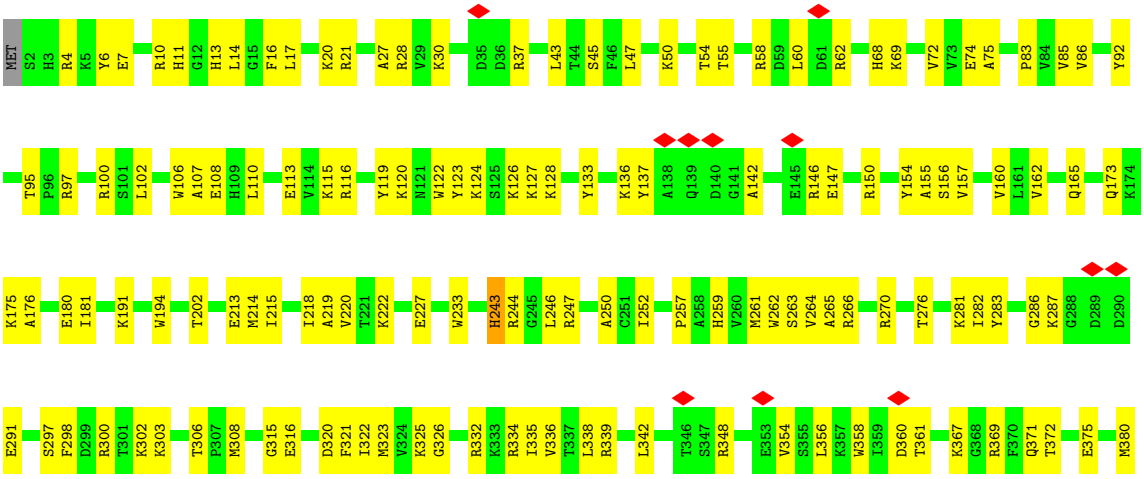
• Molecule 35: 60S ribosomal protein L2-A

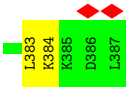
Chain AA:



• Molecule 36: 60S ribosomal protein L3

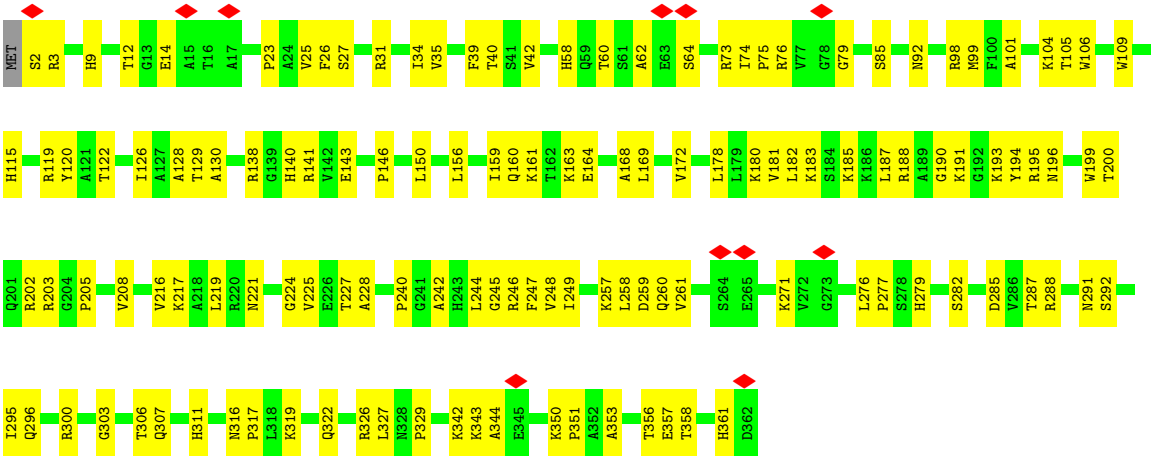
Chain AB:





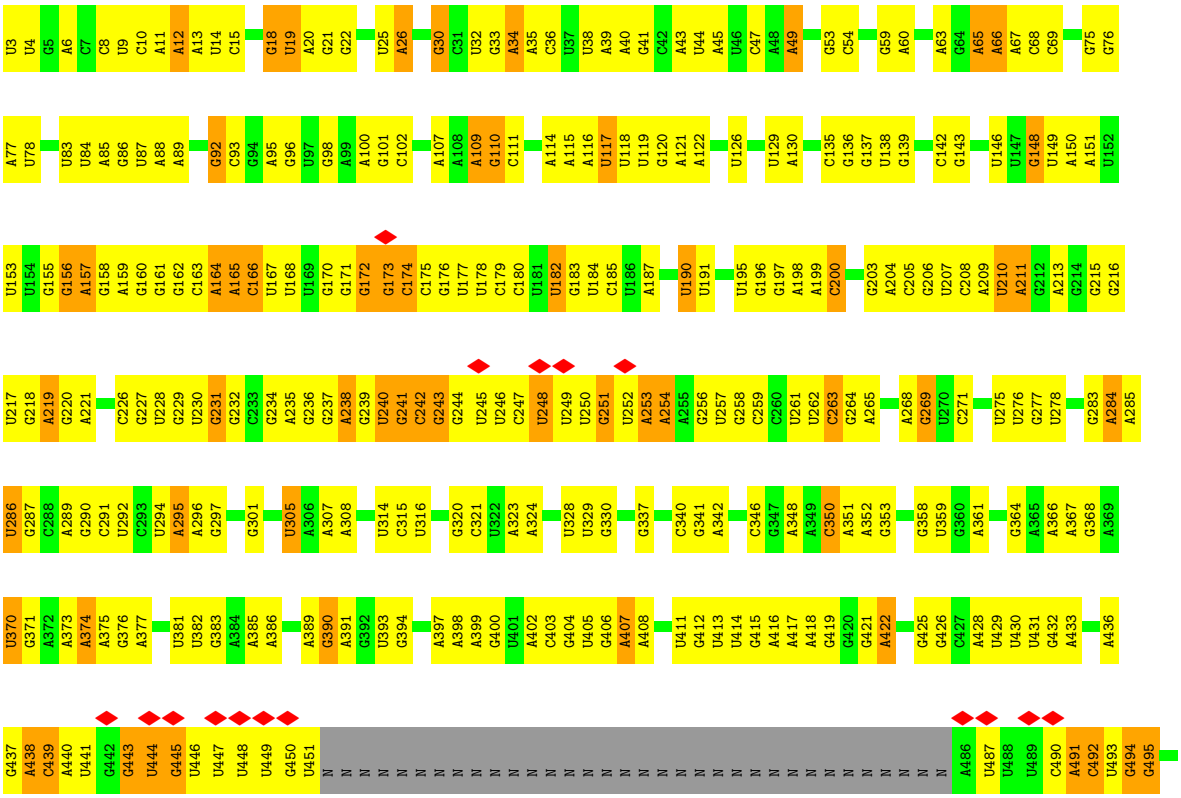
• Molecule 37: RPL4A isoform 1

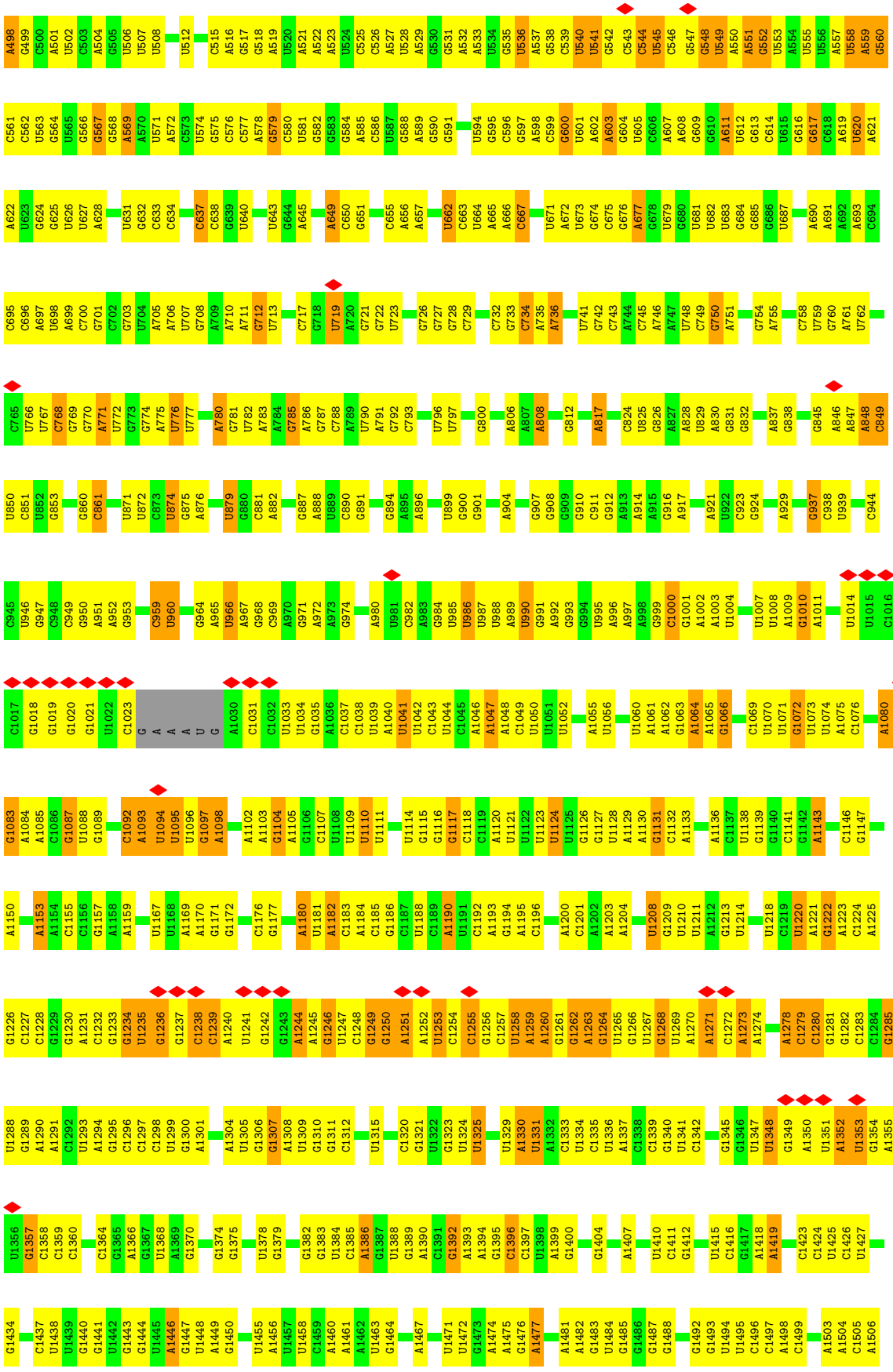
Chain AC:

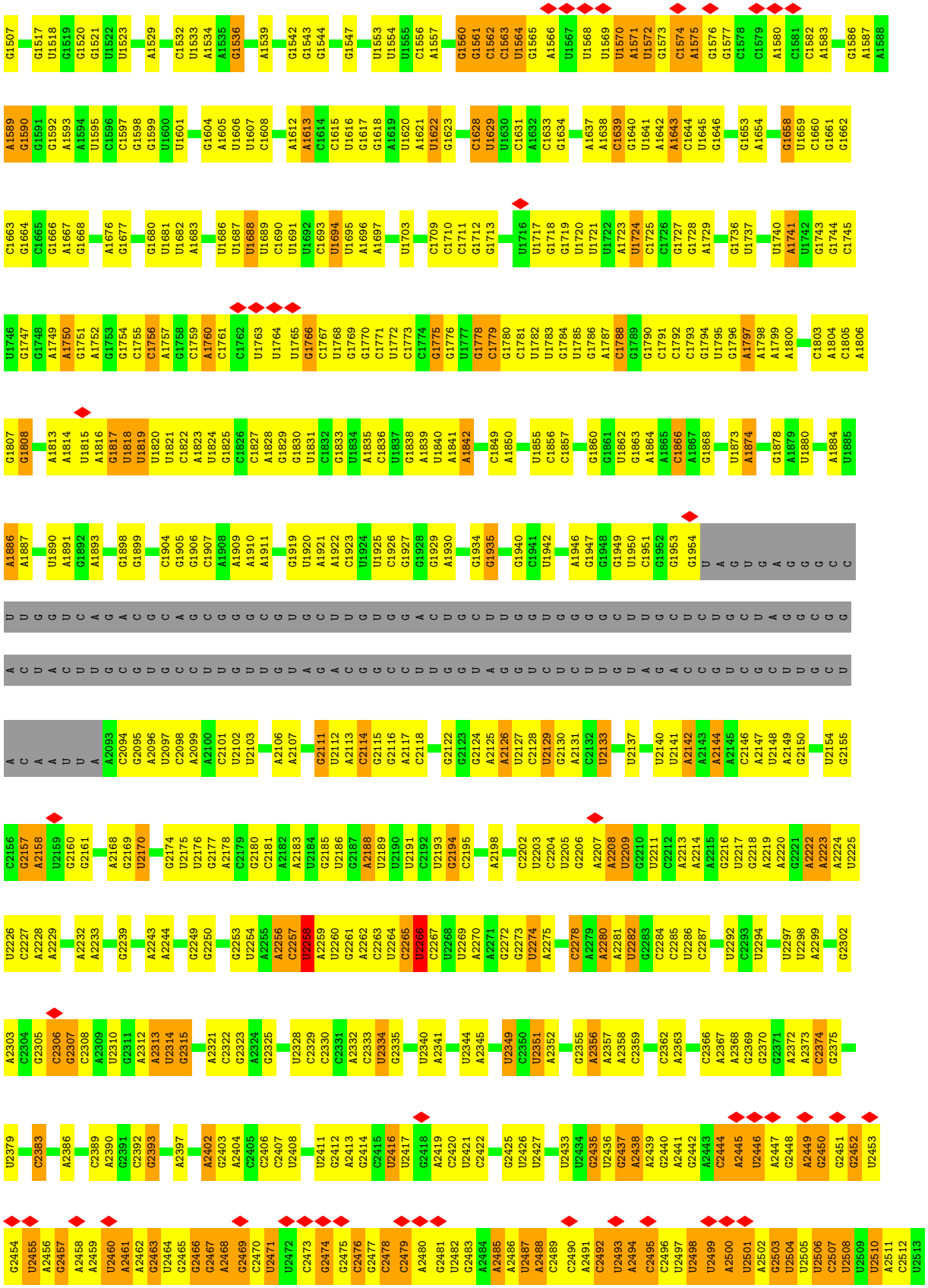


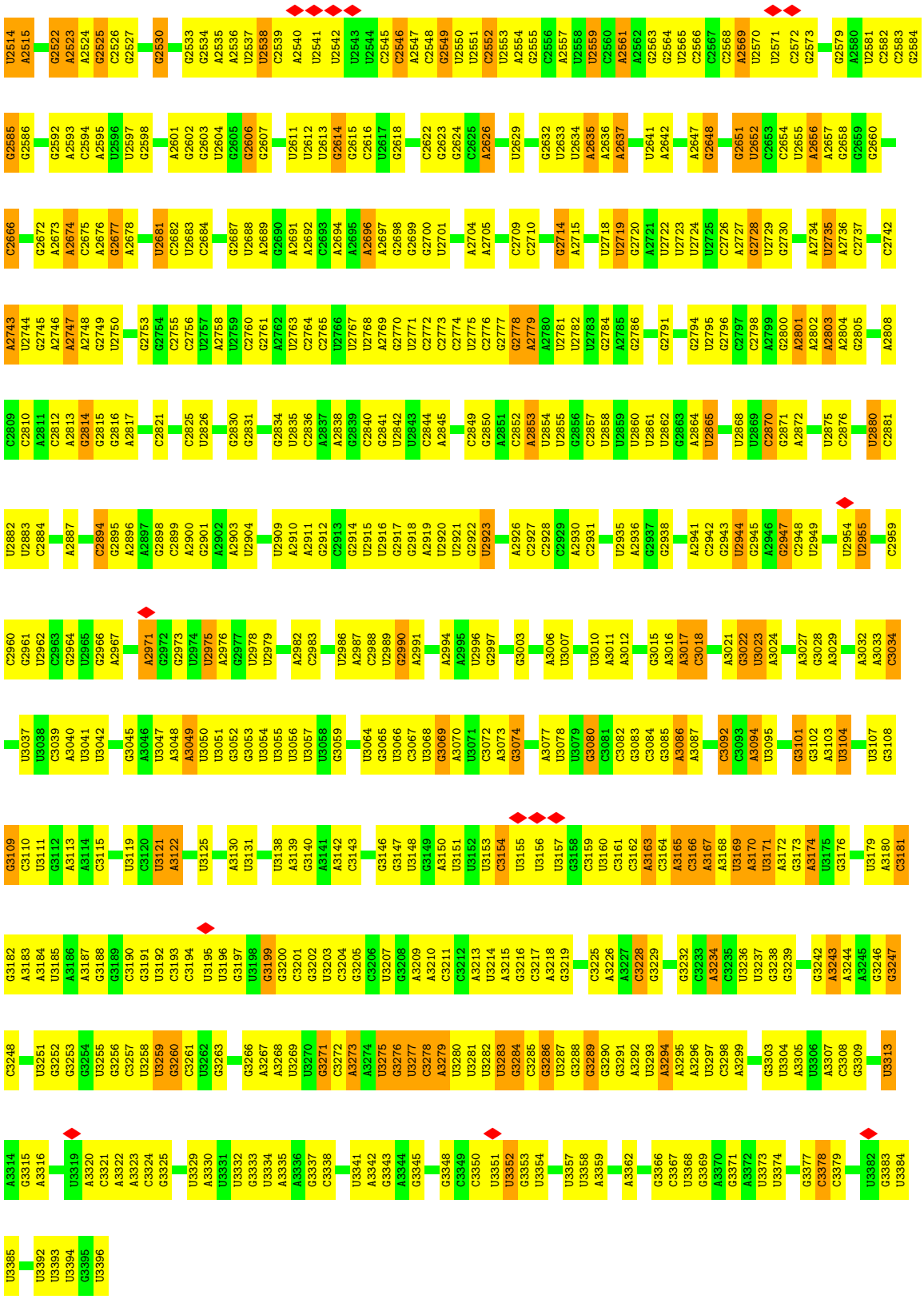
• Molecule 38: 25S rRNA

Chain A1:


U3 U4 G5 A6 C7 C8 U9 C10 A11 A12 A13 U14 C15 G18 U19 A20 G21 G22 U25 A26 G30 C31 U32 G33 A34 A35 C36 U37 U38 A39 A40 G41 C42 A43 U44 A45 U46 C47 A48 A49 G53 C54 G59 A60 A63 G64 A65 A66 A67 C68 C69 G75 G76
A77 U78 U83 U84 A85 G86 U87 A88 A89 G92 C93 G94 A95 G96 U97 G98 A99 A100 G101 C102 A107 A108 A109 G110 C111 A114 A115 A116 U117 U118 U119 G120 A121 A122 U126 U129 A130 C135 G136 G137 U138 G139 C142 G143 U146 U147 G148 U149 A150 A151 U152
U153 U154 G155 G156 A157 G158 A159 G160 G161 G162 C163 A164 A165 C166 U167 U168 U169 G170 G171 G172 G173 C174 C175 G176 U177 U178 C179 C180 U181 U182 G183 U184 C185 U186 A187 U190 U191 U195 G196 G197 A198 A199 C200 G203 A204 C205 G206 U207 C208 A209 U210 A211 G212 A213 G214 G215 G216
U217 G218 A219 G220 A221 C226 G227 U228 G229 U230 G231 G232 C233 G234 A235 G236 G237 A238 G239 U240 G241 C242 G243 G244 U245 U246 C247 U248 U249 U250 G251 U252 A253 A254 A255 G256 U257 G258 C259 C260 U261 U262 C263 G264 A265 A268 G269 U270 C271 U275 U276 G277 U278 G283 A284 A285
U286 G287 C288 A289 G290 C291 U292 C293 U294 A295 A296 G297 G301 U305 A306 A307 A308 U314 C315 U316 G320 C321 U322 A323 A324 U328 U329 G330 G337 C340 G341 A342 C346 G347 A348 A349 C350 A351 A352 G353 G358 U359 G360 A361 G364 A365 A366 A367 G368 A369
U370 G371 A372 A373 A374 A375 G376 A377 U381 U382 G383 A384 A385 A386 A389 G390 A391 G392 U393 G394 A397 A398 A399 G400 U401 A402 C403 G404 U405 G406 A407 A408 U411 G412 U413 U414 G415 A416 A417 A418 G419 G420 G421 A422 G425 G426 C427 A428 U429 U430 U431 G432 A433 A436
G437 A438 C439 A440 U441 G442 G443 U444 G445 U446 U447 U448 U449 G450 U451 N N N

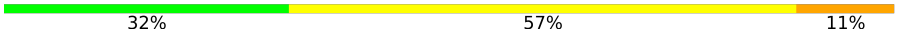


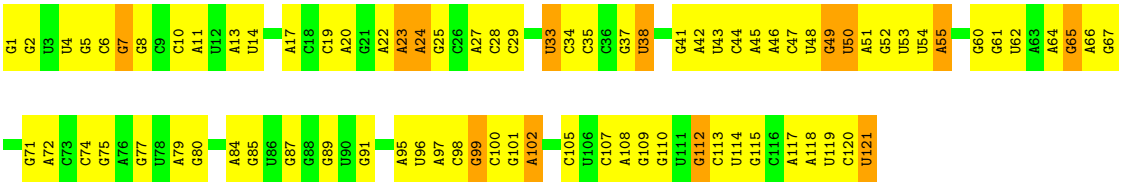




• Molecule 39: 5s rRNA

Chain A3:



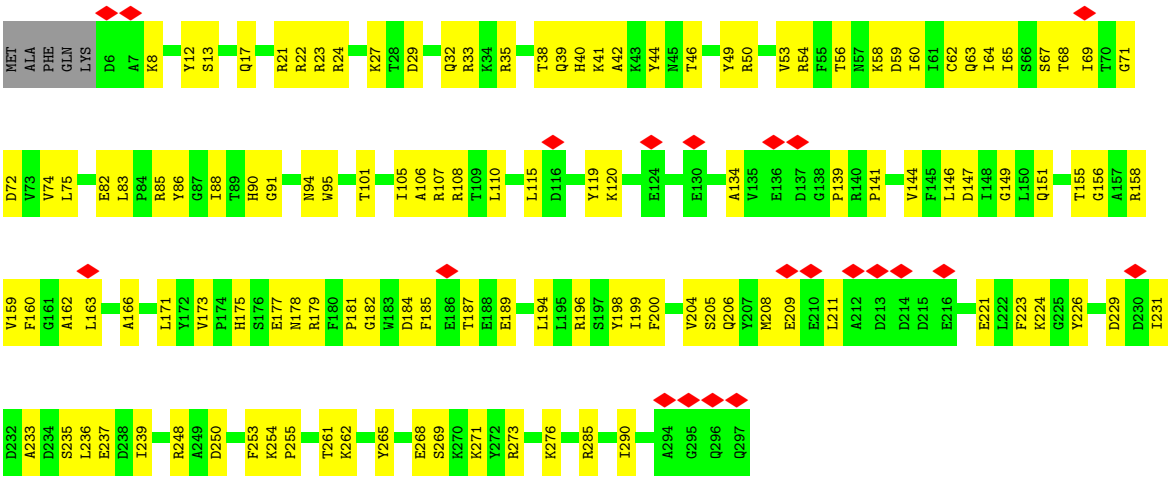


• Molecule 40: 5.8 S rRNA

Chain A4:

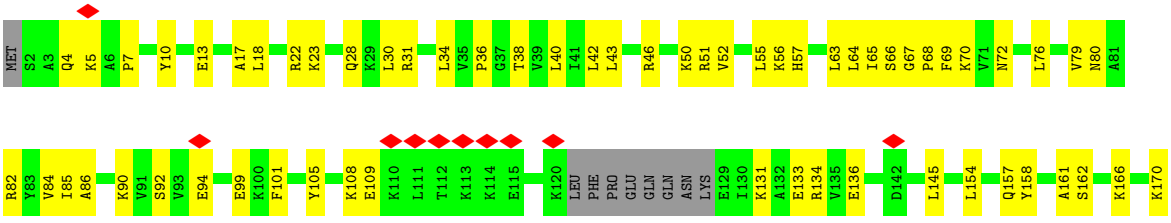
• Molecule 41: RPL5 isoform 1

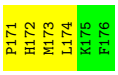
Chain AD:



• Molecule 42: 60S ribosomal protein L6-A

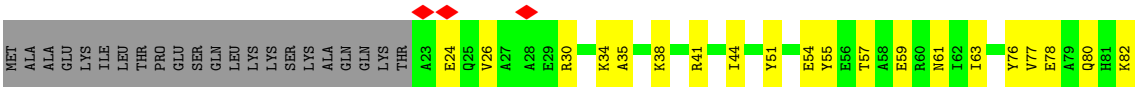
Chain AE:

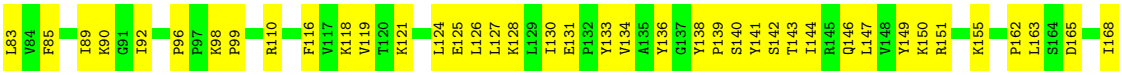


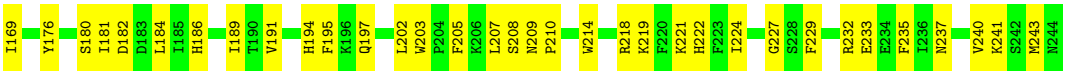


• Molecule 43: 60S ribosomal protein L7-A

Chain AF:

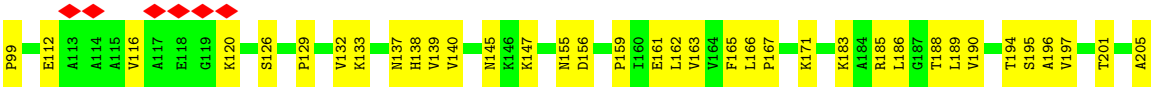






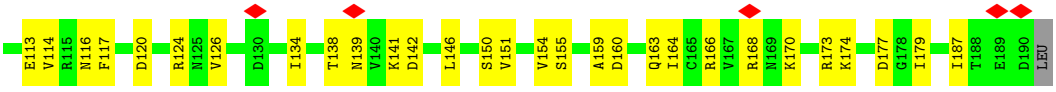
• Molecule 44: 60S ribosomal protein L8-A

Chain AG:



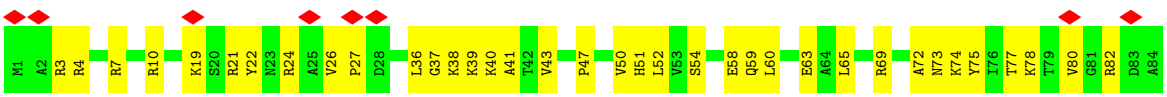
• Molecule 45: 60S ribosomal protein L9-A

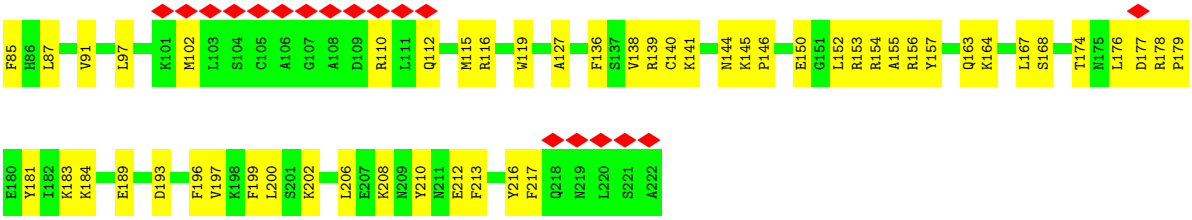
Chain AH:



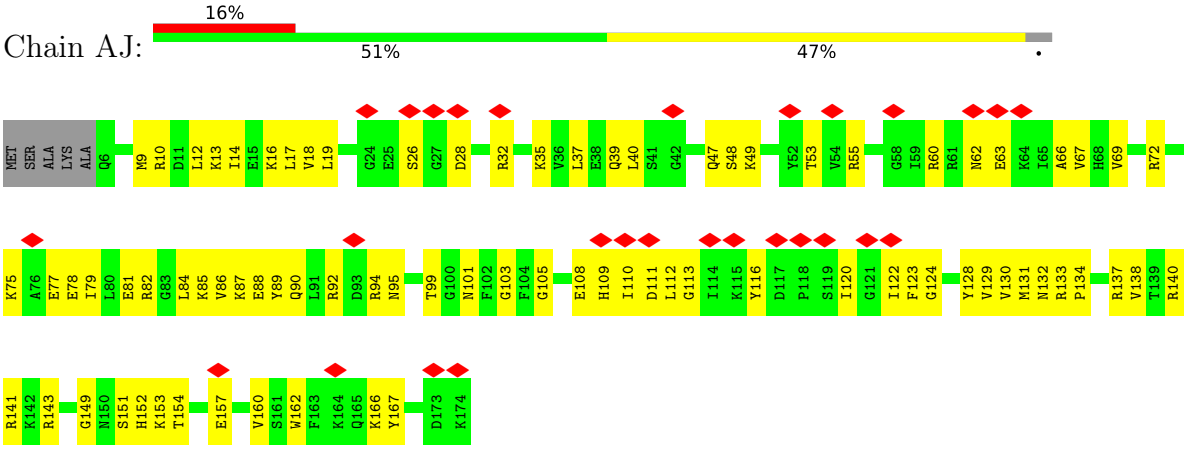
• Molecule 46: 60S ribosomal protein L10

Chain AI:

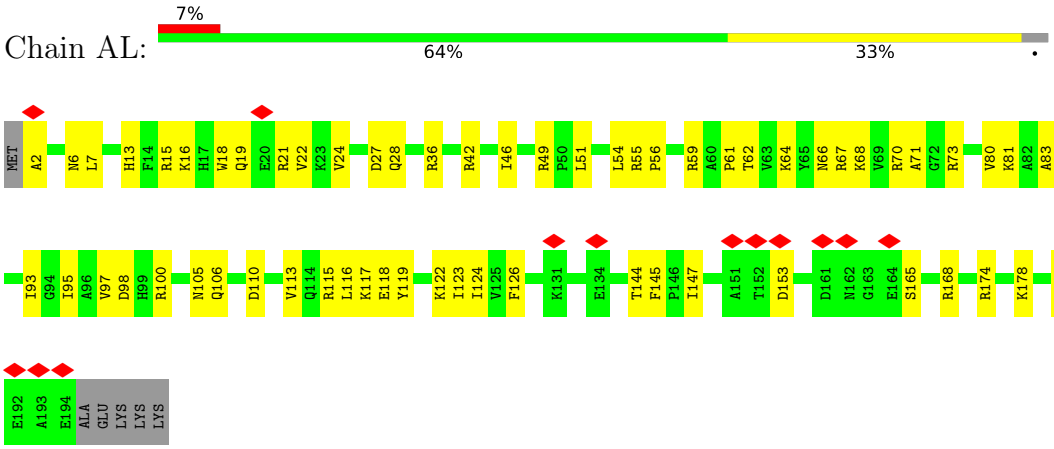




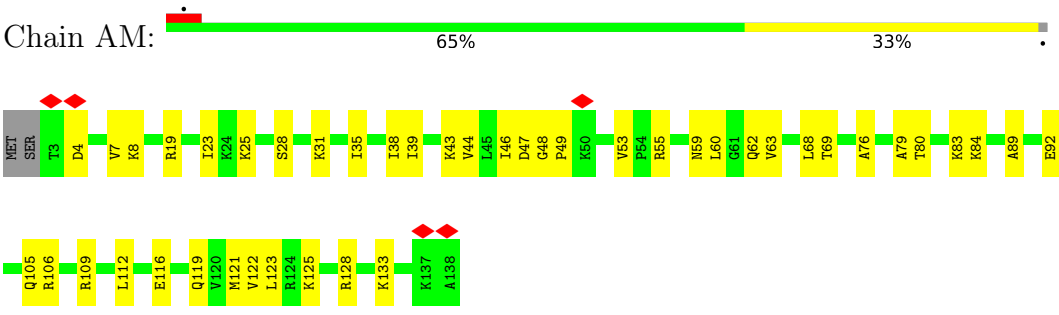
• Molecule 47: RPL11A isoform 1



• Molecule 48: 60S ribosomal protein L13-A

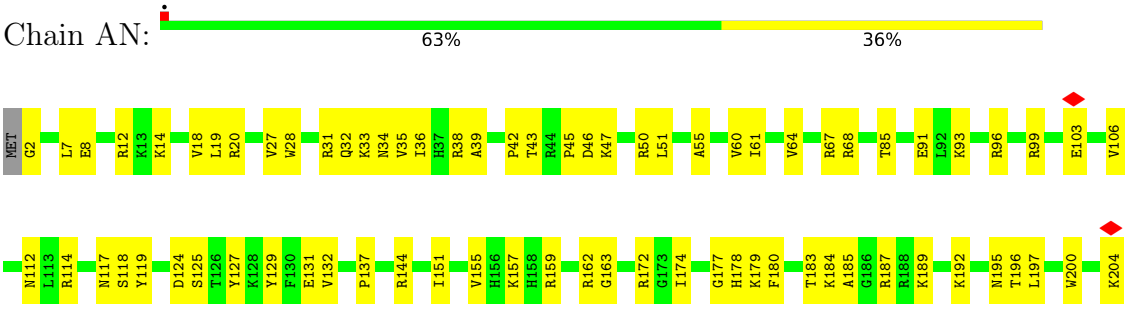


• Molecule 49: 60S ribosomal protein L14-A



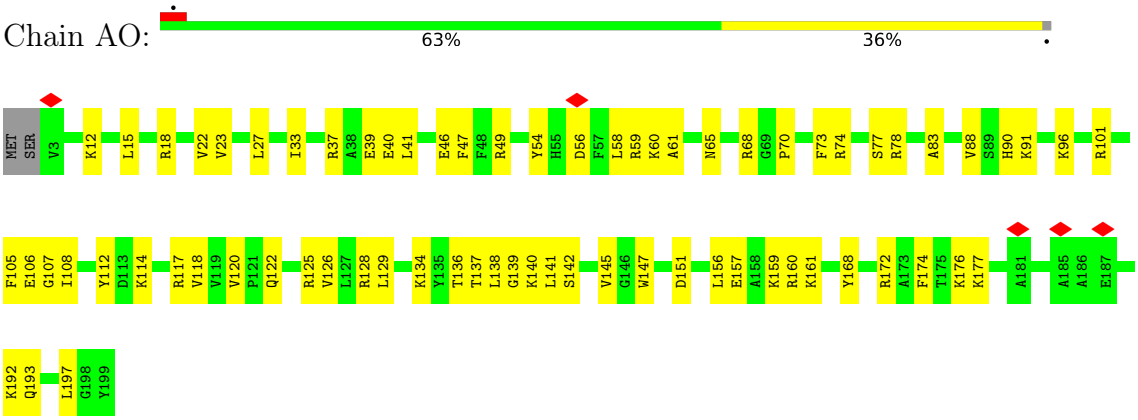
• Molecule 50: 60S ribosomal protein L15-A

Chain AN:



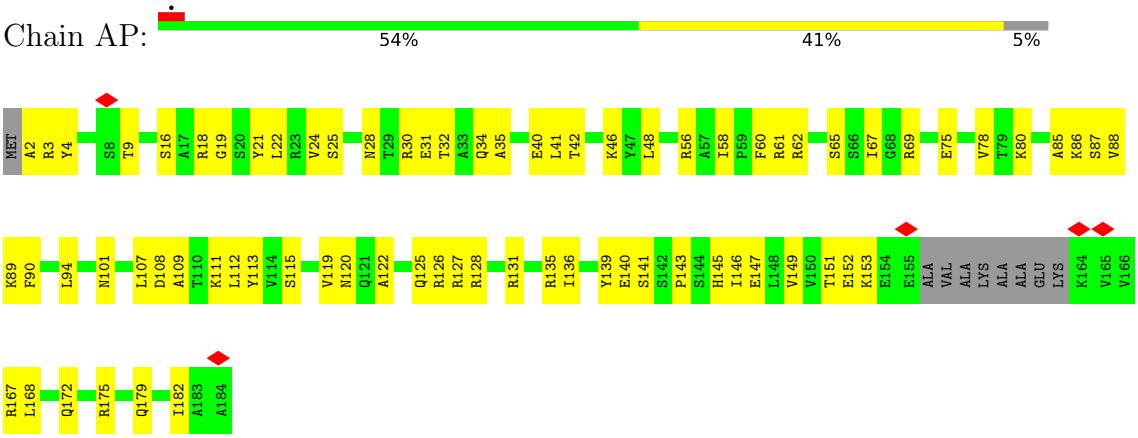
• Molecule 51: 60S ribosomal protein L16-A

Chain AO:



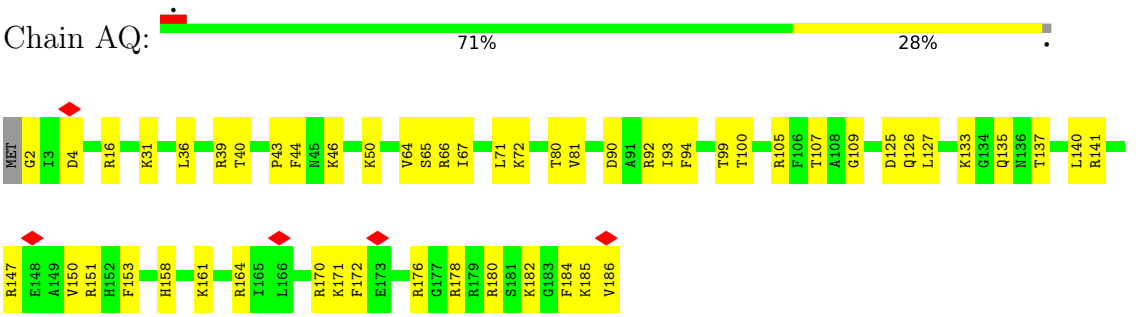
• Molecule 52: 60S ribosomal protein L17-A

Chain AP:



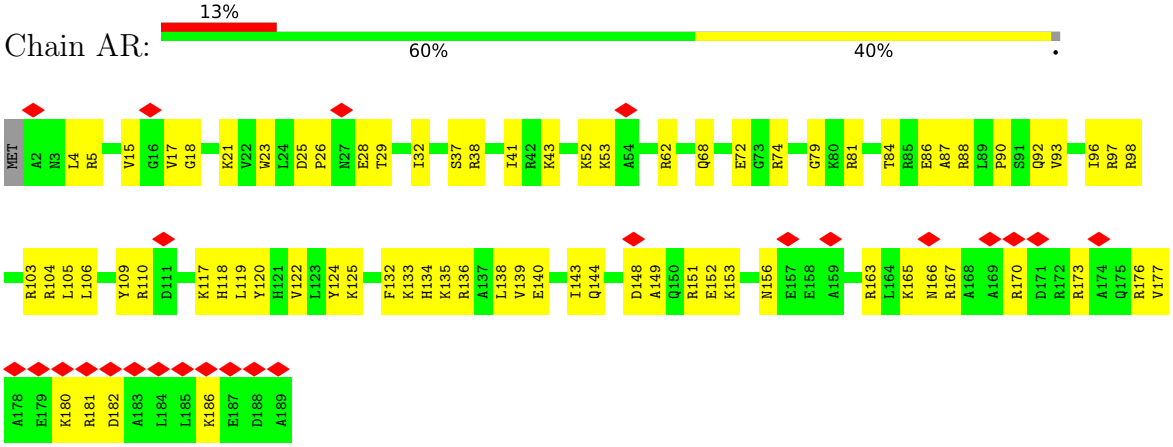
• Molecule 53: 60S ribosomal protein L18-A

Chain AQ:



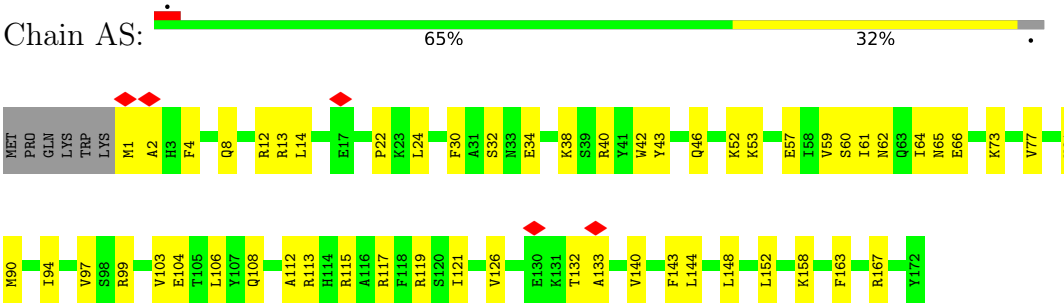
• Molecule 54: 60S ribosomal protein L19-A

Chain AR:



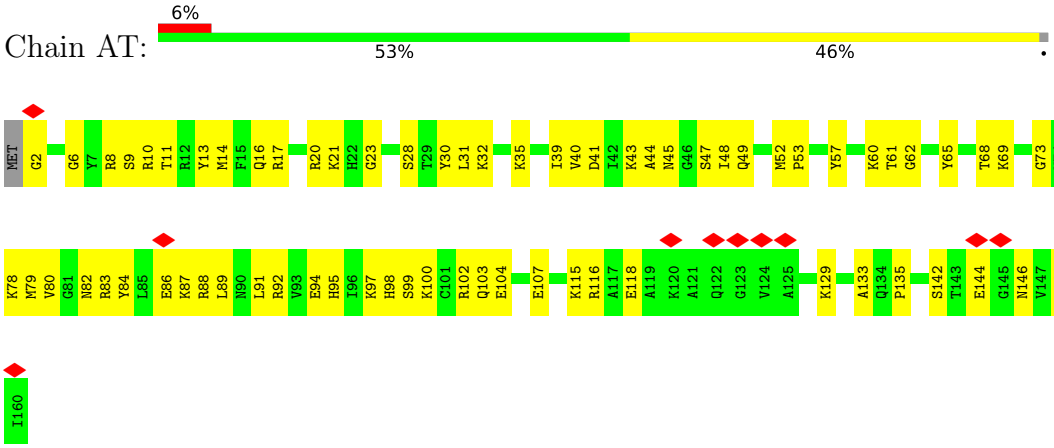
• Molecule 55: 60S ribosomal protein L20

Chain AS:



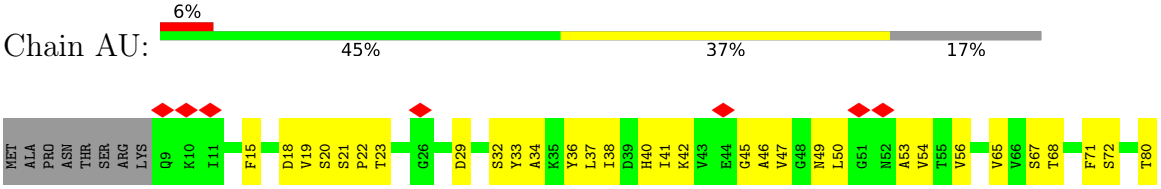
• Molecule 56: 60S ribosomal protein L21-A

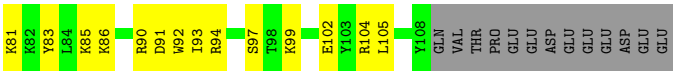
Chain AT:



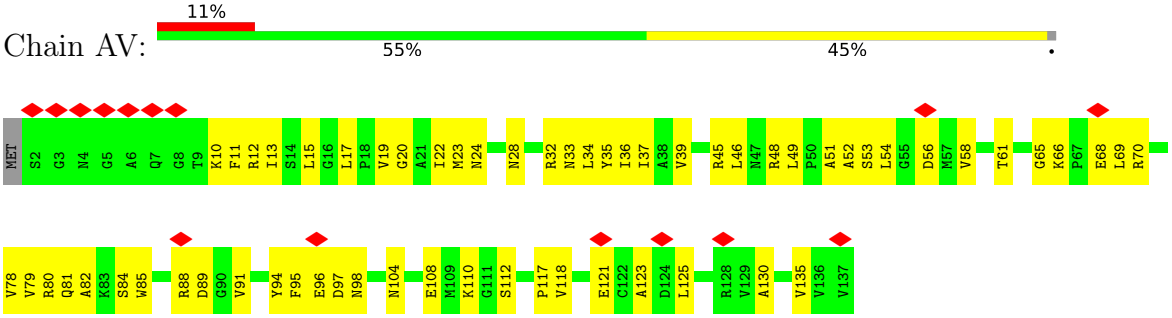
• Molecule 57: 60S ribosomal protein L22-A

Chain AU:

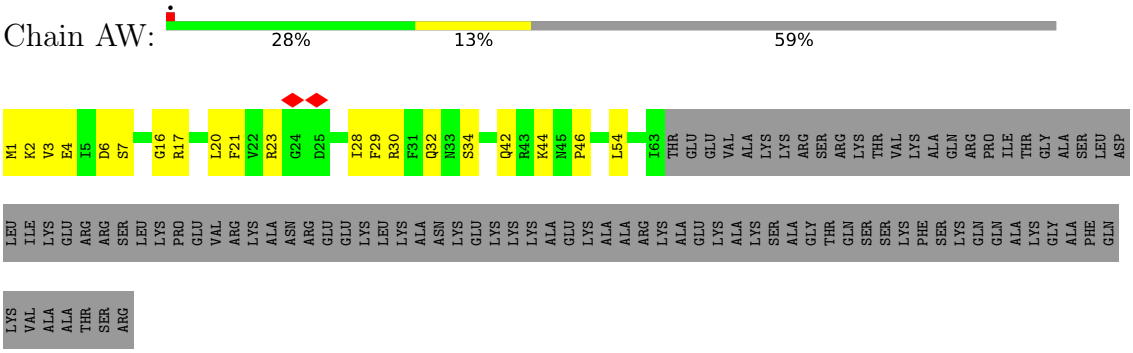




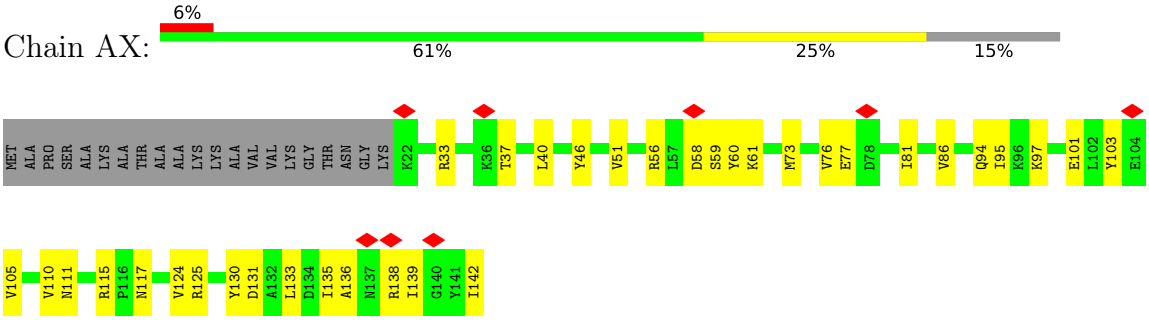
• Molecule 58: 60S ribosomal protein L23-A



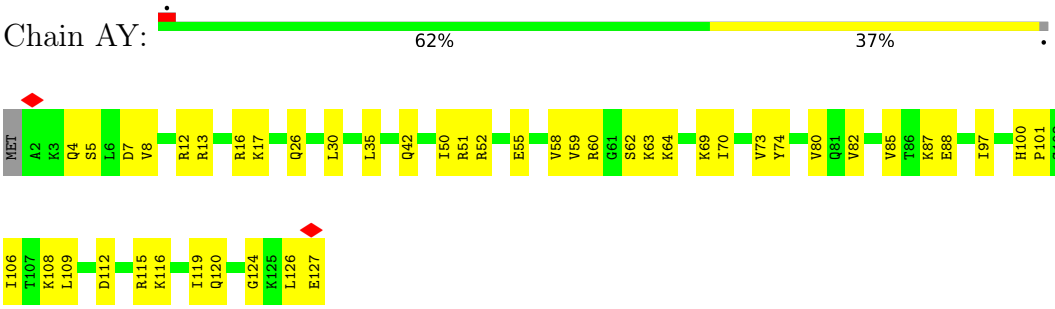
• Molecule 59: RPL24A isoform 1



• Molecule 60: 60S ribosomal protein L25



• Molecule 61: 60S ribosomal protein L26-A

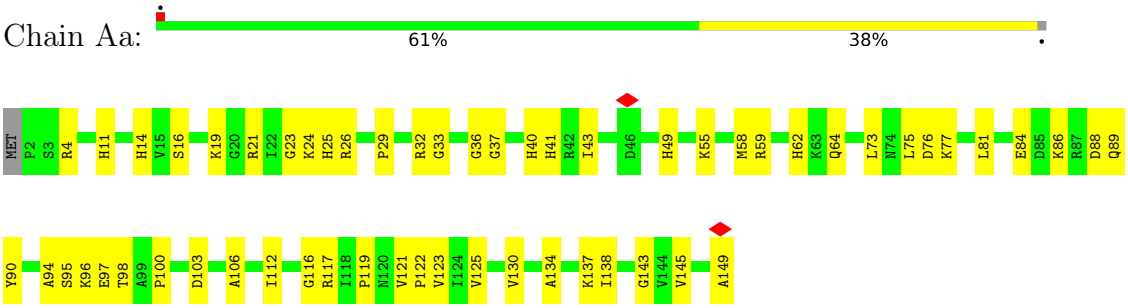


• Molecule 62: 60S ribosomal protein L27-A

Chain AZ:

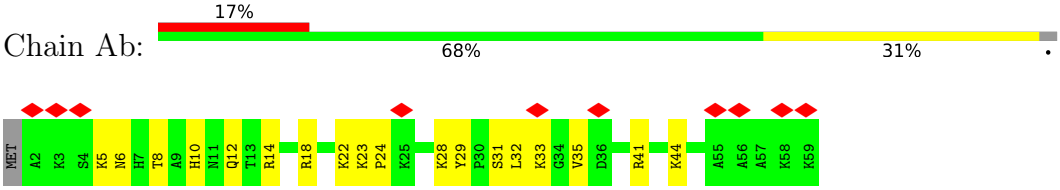
• Molecule 63: 60S ribosomal protein L28

Chain Aa:



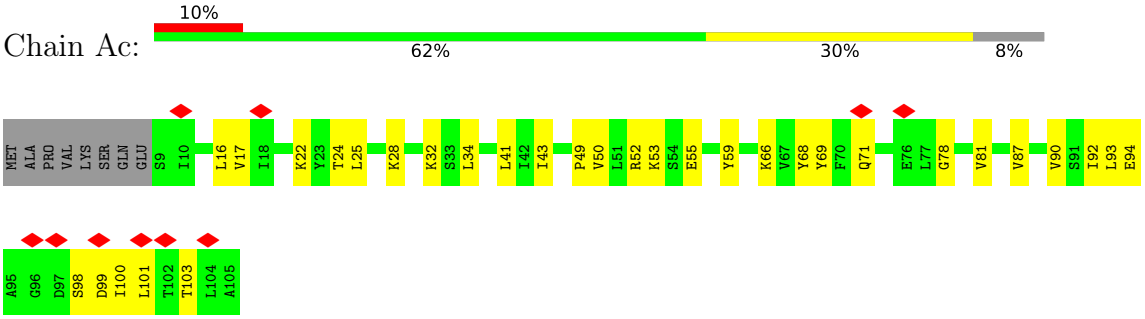
• Molecule 64: RPL29 isoform 1

Chain Ab:



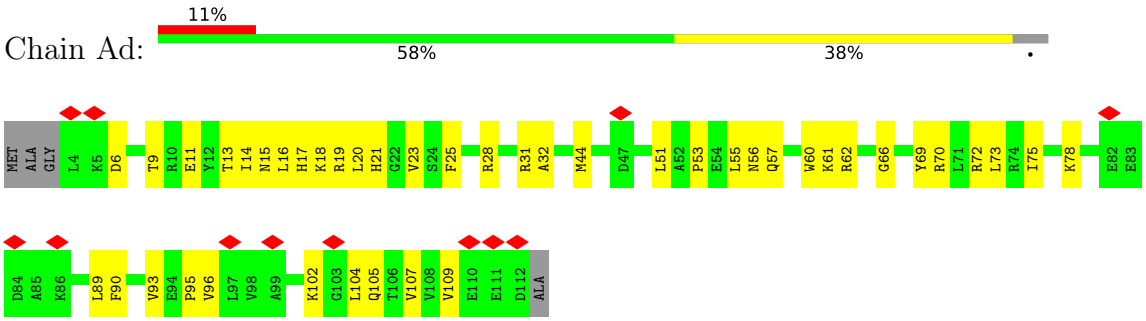
• Molecule 65: 60S ribosomal protein L30

Chain Ac:



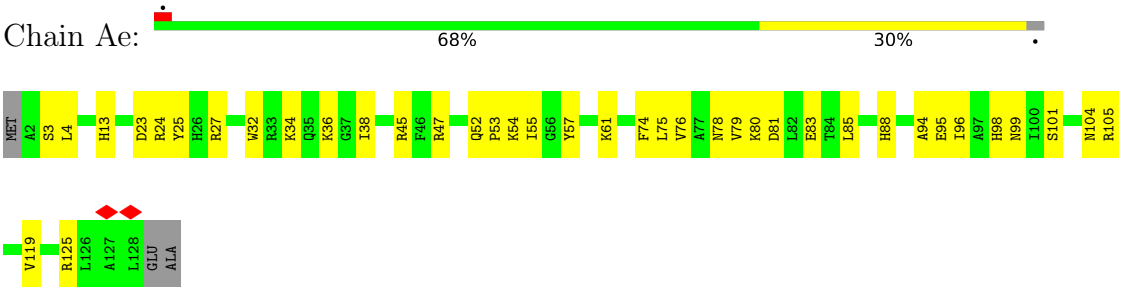
• Molecule 66: 60S ribosomal protein L31-A

Chain Ad:



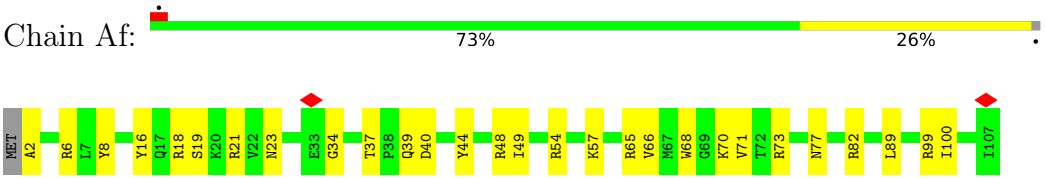
• Molecule 67: RPL32 isoform 1

Chain Ae:



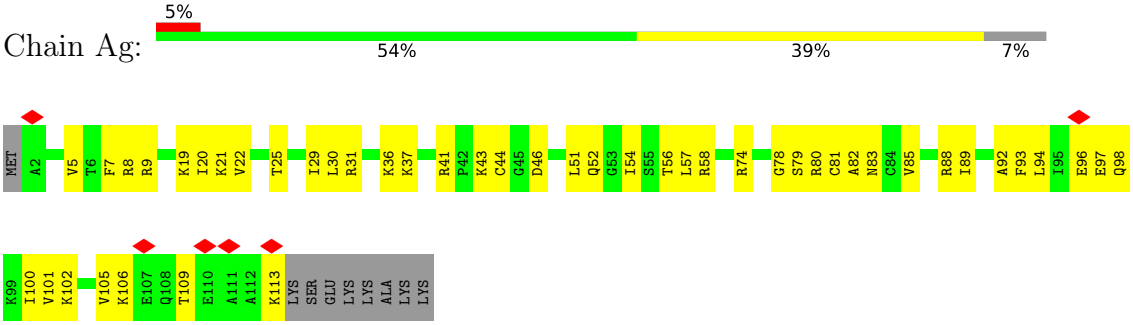
• Molecule 68: 60S ribosomal protein L33-A

Chain Af:



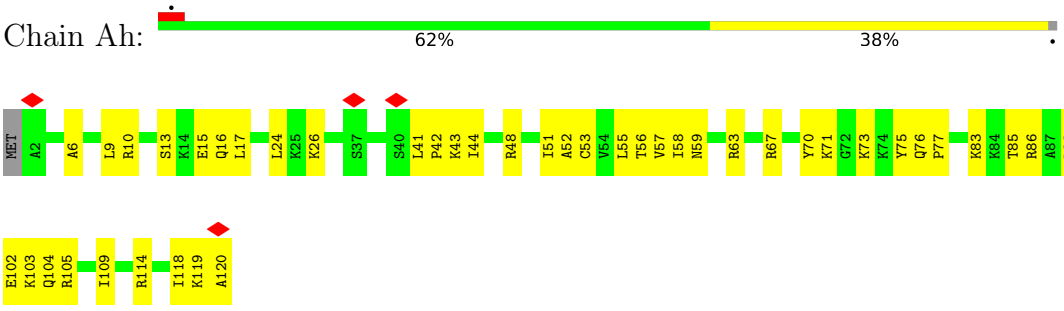
• Molecule 69: 60S ribosomal protein L34-A

Chain Ag:



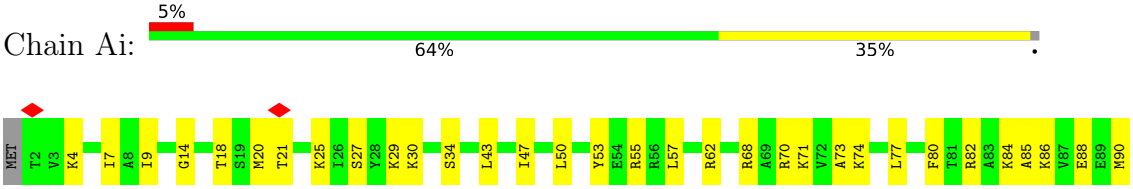
• Molecule 70: 60S ribosomal protein L35-A

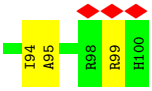
Chain Ah:



• Molecule 71: 60S ribosomal protein L36-A

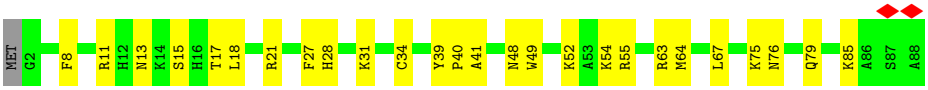
Chain Ai:





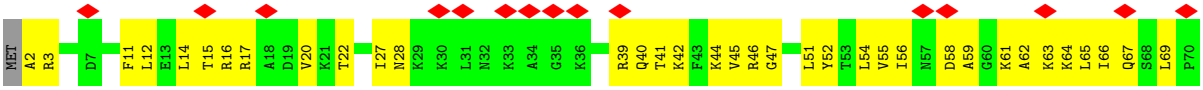
• Molecule 72: 60S ribosomal protein L37-A

Chain Aj:



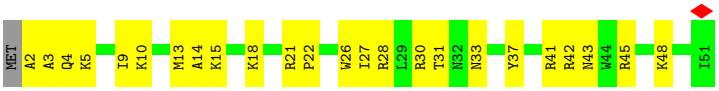
• Molecule 73: RPL38 isoform 1

Chain Ak:



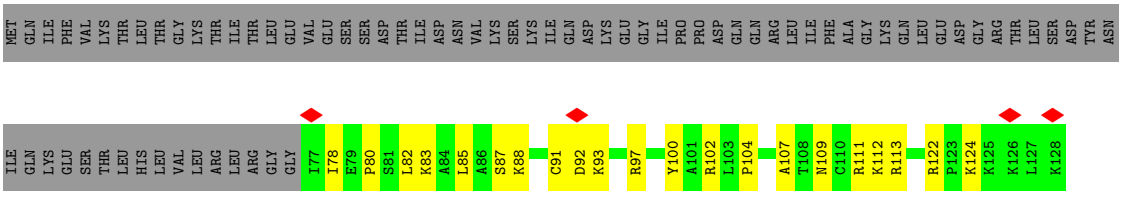
• Molecule 74: 60S ribosomal protein L39

Chain Al:



• Molecule 75: Ubiquitin-60S ribosomal protein L40

Chain Am:

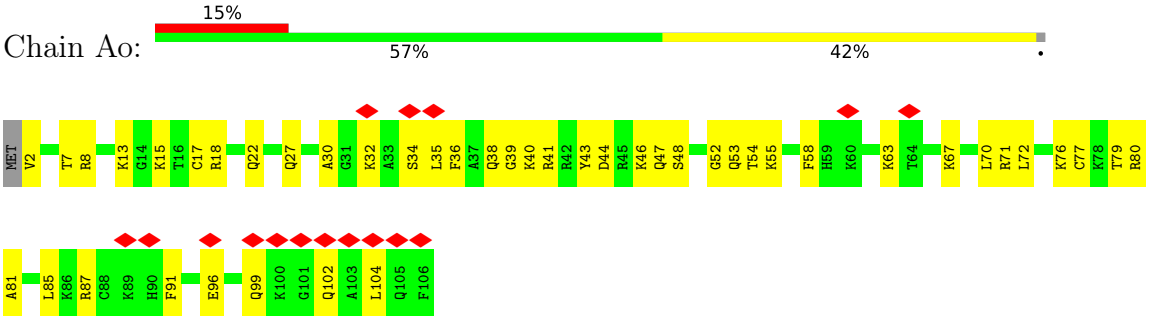


• Molecule 76: 60S ribosomal protein L41-A

Chain An:

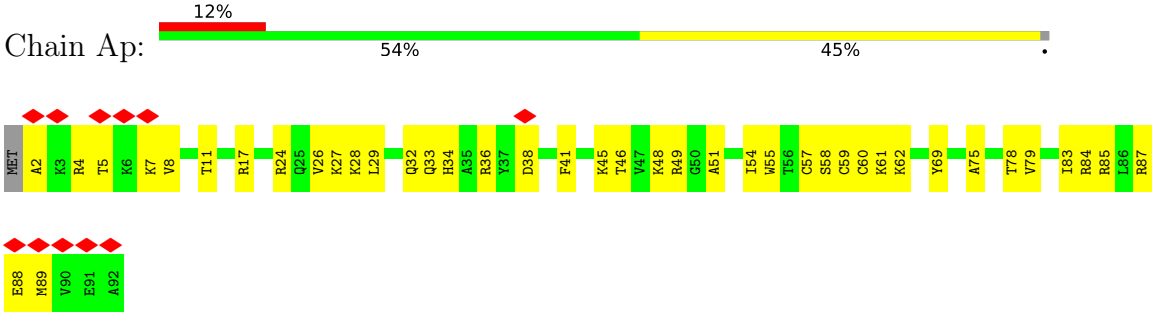
• Molecule 77: 60S ribosomal protein L42-A

Chain Ao:



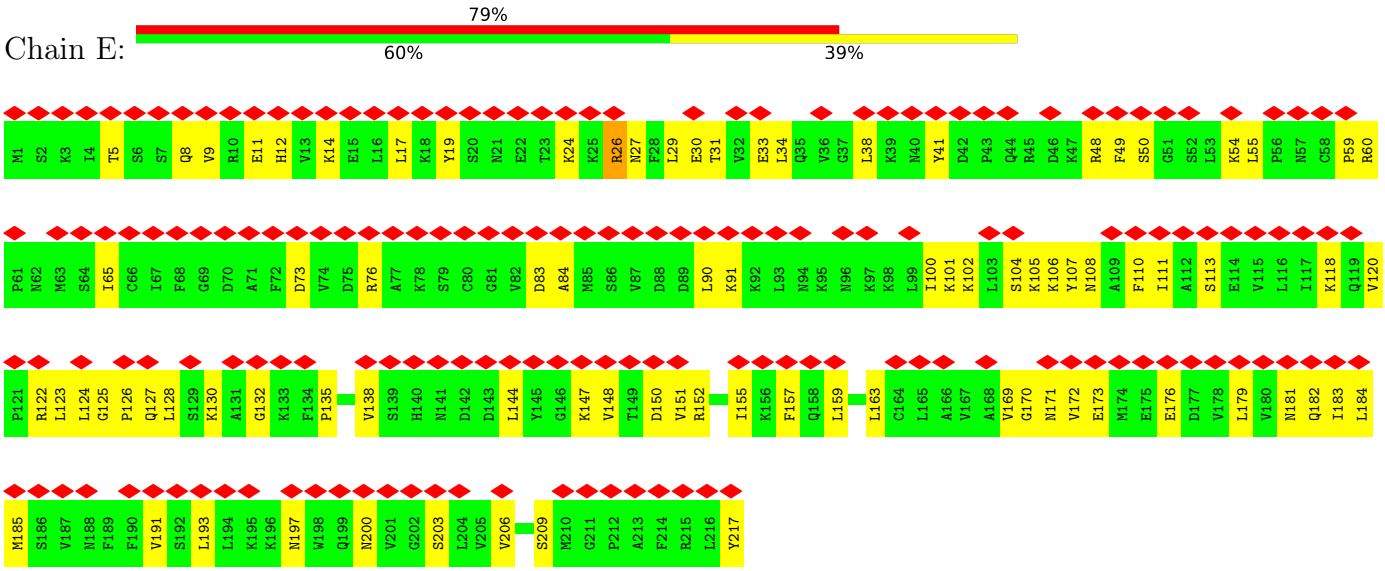
• Molecule 78: 60S ribosomal protein L43-A

Chain Ap:



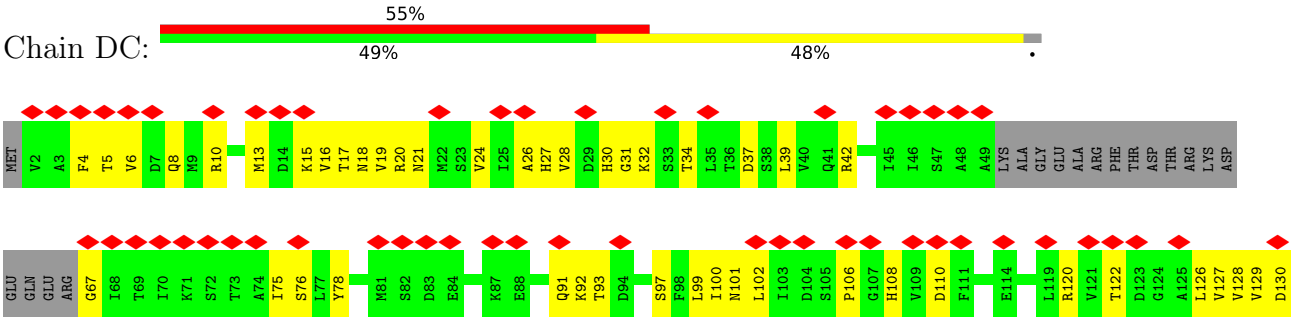
• Molecule 79: RPL1A isoform 1

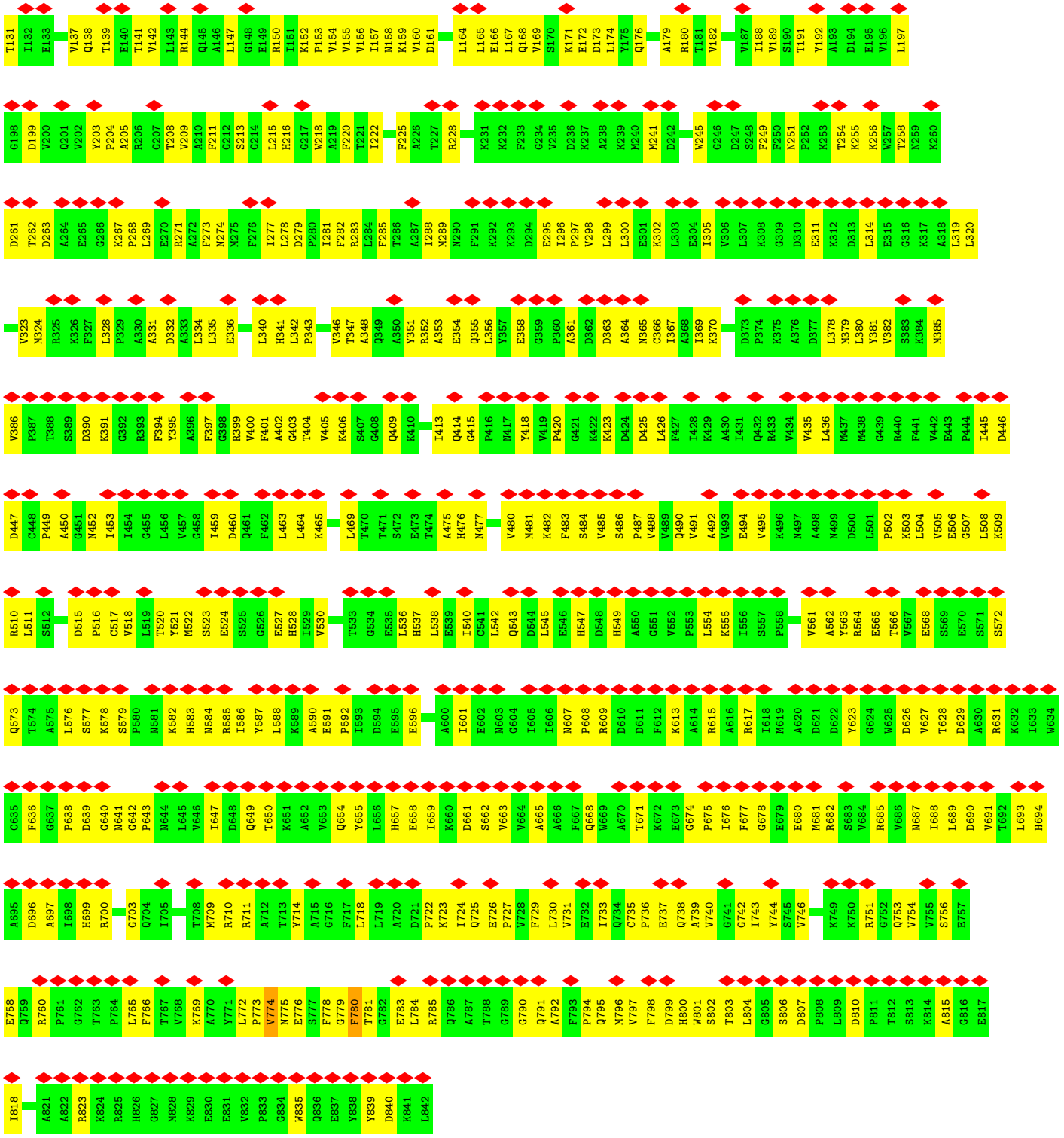
Chain E:



• Molecule 80: Elongation factor 2

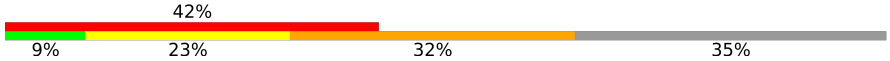
Chain DC:

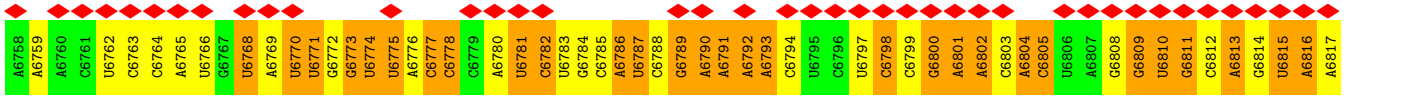


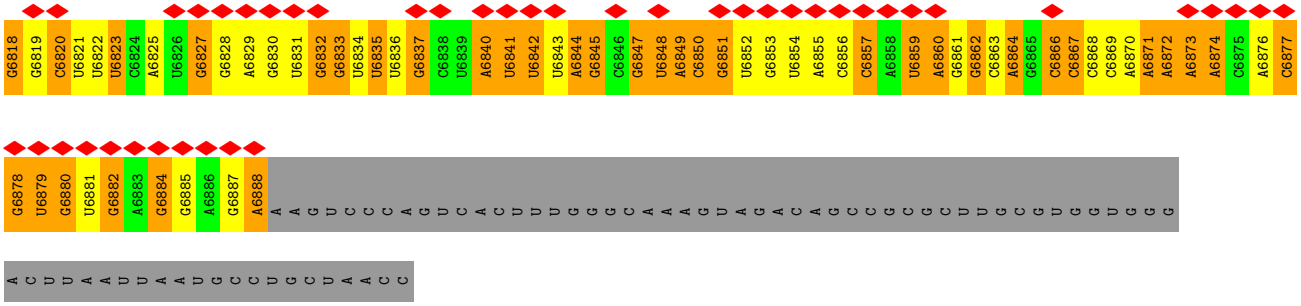


• Molecule 81: TSV IRES

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 C6845 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 A A G U C 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 G C G C U U G C G U G 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	75068	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	2.167	Depositor
Minimum map value	-1.037	Depositor
Average map value	0.006	Depositor
Map value standard deviation	0.104	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, SO1, OMU, OMG, GDP, PSU, HIC, G7M, ZN, MG, MA6, 4AC, B8N, 1MA, DDE, 5MC

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	0.27	0/1653	0.53	0/2261
2	BB	0.27	0/1735	0.49	0/2335
3	BC	0.27	0/1665	0.41	0/2263
4	BE	0.25	0/2109	0.47	0/2839
5	BG	0.22	0/1844	0.43	0/2464
6	BH	0.23	0/1506	0.50	2/2028 (0.1%)
7	BI	0.27	0/1514	0.49	0/2021
8	BJ	0.26	0/1519	0.53	1/2035 (0.0%)
9	BL	0.26	0/1272	0.41	0/1712
10	BN	0.29	0/1215	0.48	0/1638
11	BO	0.31	0/952	0.59	2/1279 (0.2%)
12	BV	0.23	0/693	0.41	0/935
13	BW	0.32	0/1038	0.48	0/1395
14	BX	0.28	0/1139	0.44	0/1518
15	BY	0.21	0/1087	0.44	0/1449
16	Ba	0.34	0/782	0.69	3/1047 (0.3%)
17	Bb	0.24	0/620	0.45	0/838
18	Be	0.18	0/483	0.42	0/643
19	BD	0.21	0/1759	0.44	0/2368
20	BF	0.21	0/1629	0.44	0/2202
21	BK	0.22	0/837	0.59	0/1131
22	BP	0.18	0/1012	0.40	0/1356
23	BQ	0.20	0/1125	0.42	0/1510
24	BR	0.22	0/957	0.45	0/1283
25	BS	0.22	0/1211	0.48	0/1628
26	BT	0.19	0/1113	0.43	0/1494
27	BU	0.24	0/865	0.46	0/1169
28	BZ	0.21	0/582	0.41	0/782
29	Bc	0.21	0/499	0.47	0/670
30	Bd	0.21	0/452	0.40	0/600
31	Bg	0.18	0/2454	0.43	0/3340
32	Bf	0.11	0/616	0.29	0/817

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	BM	0.14	0/943	0.43	2/1274 (0.2%)
34	B5	0.26	0/41450	0.31	0/64582
35	AA	0.35	0/1912	0.45	0/2569
36	AB	0.32	0/3139	0.43	0/4219
37	AC	0.30	0/2800	0.40	0/3790
38	A1	0.33	0/76160	0.32	0/118745
39	A3	0.26	0/2861	0.30	0/4457
40	A4	0.33	0/3724	0.32	0/5798
41	AD	0.22	0/2390	0.37	0/3225
42	AE	0.26	0/1324	0.39	0/1782
43	AF	0.35	0/1821	0.47	0/2451
44	AG	0.27	0/1830	0.45	0/2469
45	AH	0.27	0/1531	0.46	0/2062
46	AI	0.24	0/1843	0.40	0/2471
47	AJ	0.22	0/1374	0.47	0/1842
48	AL	0.29	0/1568	0.39	0/2106
49	AM	0.28	0/1068	0.43	0/1438
50	AN	0.35	0/1757	0.45	0/2354
51	AO	0.33	0/1585	0.44	0/2128
52	AP	0.33	0/1410	0.44	0/1893
53	AQ	0.29	0/1465	0.39	0/1965
54	AR	0.31	0/1538	0.47	0/2050
55	AS	0.34	0/1481	0.48	0/1990
56	AT	0.28	0/1300	0.45	0/1743
57	AU	0.26	0/812	0.47	0/1099
58	AV	0.33	0/1018	0.50	0/1369
59	AW	0.31	0/533	0.50	0/707
60	AX	0.29	0/983	0.43	0/1325
61	AY	0.27	0/1004	0.42	0/1341
62	AZ	0.29	0/1118	0.45	0/1497
63	Aa	0.31	0/1204	0.40	0/1612
64	Ab	0.34	0/473	0.57	0/629
65	Ac	0.27	0/751	0.39	0/1008
66	Ad	0.29	0/904	0.41	0/1213
67	Ae	0.30	0/1041	0.37	0/1394
68	Af	0.34	0/868	0.40	0/1168
69	Ag	0.33	0/890	0.40	0/1189
70	Ah	0.26	0/978	0.43	0/1301
71	Ai	0.26	0/778	0.48	0/1034
72	Aj	0.34	0/696	0.41	0/923
73	Ak	0.27	0/618	0.52	0/826
74	Al	0.35	0/443	0.52	0/588
75	Am	0.26	0/423	0.45	0/562

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
76	An	0.38	0/234	0.61	0/300
77	Ao	0.23	0/859	0.42	0/1133
78	Ap	0.31	0/701	0.47	0/934
79	E	0.17	0/1745	0.43	0/2342
80	DC	0.18	0/6521	0.41	1/8830 (0.0%)
81	EC	0.16	0/3088	0.37	0/4805
All	All	0.29	0/224894	0.38	11/329582 (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
6	BH	0	1
43	AF	0	1
64	Ab	0	1
79	E	0	1
All	All	0	4

There are no bond length outliers.

All (11) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	Ba	20	PRO	N-CD-CG	-10.63	87.26	103.20
16	Ba	20	PRO	CA-N-CD	-7.99	100.81	112.00
16	Ba	20	PRO	CA-CB-CG	-7.65	89.97	104.50
8	BJ	80	LEU	CA-CB-CG	6.19	137.98	116.30
11	BO	123	SER	CA-C-N	6.14	133.28	121.54
11	BO	123	SER	C-N-CA	6.14	133.28	121.54
33	BM	126	TRP	CA-C-N	5.44	131.49	121.70
33	BM	126	TRP	C-N-CA	5.44	131.49	121.70
6	BH	86	GLN	CA-C-N	5.08	133.86	124.82
6	BH	86	GLN	C-N-CA	5.08	133.86	124.82
80	DC	780	PHE	N-CA-C	-5.00	107.46	113.21

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
43	AF	232	ARG	Peptide

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Mol	Chain	Res	Type	Group
64	Ab	41	ARG	Sidechain
6	BH	64	VAL	Peptide
79	E	26	ARG	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	91	0
2	BB	1709	0	1784	106	0
3	BC	1635	0	1723	91	0
4	BE	2068	0	2154	103	0
5	BG	1820	0	1918	111	0
6	BH	1481	0	1572	82	0
7	BI	1489	0	1525	106	0
8	BJ	1494	0	1573	121	0
9	BL	1244	0	1312	46	0
10	BN	1192	0	1255	49	0
11	BO	941	0	979	61	0
12	BV	684	0	672	46	0
13	BW	1021	0	1060	47	0
14	BX	1121	0	1196	53	0
15	BY	1073	0	1132	85	0
16	Ba	769	0	818	38	0
17	Bb	610	0	633	27	0
18	Be	475	0	525	35	0
19	BD	1734	0	1817	71	0
20	BF	1609	0	1675	97	0
21	BK	817	0	804	61	0
22	BP	991	0	1035	55	0
23	BQ	1105	0	1166	75	0
24	BR	948	0	990	62	0
25	BS	1192	0	1222	78	0
26	BT	1095	0	1114	69	0
27	BU	855	0	917	57	0
28	BZ	574	0	616	41	0
29	Bc	497	0	535	31	0
30	Bd	442	0	432	27	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
31	Bg	2401	0	2356	148	0
32	Bf	605	0	654	32	0
33	BM	935	0	975	38	0
34	B5	37463	0	18842	1276	0
35	AA	1878	0	1946	89	0
36	AB	3081	0	3162	119	0
37	AC	2748	0	2859	114	0
38	A1	68786	0	34576	1749	0
39	A3	2579	0	1304	91	0
40	A4	3353	0	1695	101	0
41	AD	2341	0	2290	108	0
42	AE	1303	0	1376	59	0
43	AF	1784	0	1862	77	0
44	AG	1798	0	1894	65	0
45	AH	1510	0	1576	55	0
46	AI	1804	0	1856	74	0
47	AJ	1353	0	1383	70	0
48	AL	1543	0	1608	66	0
49	AM	1053	0	1149	39	0
50	AN	1720	0	1779	67	0
51	AO	1555	0	1659	61	0
52	AP	1388	0	1423	68	0
53	AQ	1441	0	1543	48	0
54	AR	1521	0	1617	76	0
55	AS	1445	0	1487	61	0
56	AT	1276	0	1323	79	0
57	AU	796	0	812	33	0
58	AV	1003	0	1046	56	0
59	AW	521	0	551	23	0
60	AX	968	0	1036	32	0
61	AY	993	0	1081	47	0
62	AZ	1092	0	1155	52	0
63	Aa	1173	0	1215	49	0
64	Ab	462	0	490	21	0
65	Ac	743	0	797	27	0
66	Ad	890	0	938	38	0
67	Ae	1020	0	1090	37	0
68	Af	850	0	880	32	0
69	Ag	880	0	945	41	0
70	Ah	969	0	1078	41	0
71	Ai	771	0	849	30	0
72	Aj	681	0	687	24	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
73	Ak	612	0	682	40	0
74	Al	436	0	475	31	0
75	Am	417	0	459	24	0
76	An	233	0	283	23	0
77	Ao	847	0	913	45	0
78	Ap	694	0	738	34	0
79	E	1718	0	1811	86	0
80	DC	6419	0	6492	363	0
81	EC	2764	0	1394	105	0
82	Ao	1	0	0	0	0
83	DC	28	0	12	4	0
84	DC	1	0	0	0	0
85	DC	35	0	40	8	0
All	All	210978	0	157920	6840	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 19.

All (6840) 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)
79:E:126:PRO:O	79:E:130:LYS:HB2	1.31	1.26
34:B5:976:G:H1	34:B5:1023:A:HO2'	1.06	1.03
34:B5:649:U:H3	34:B5:684:A:N6	1.55	1.03
34:B5:1335:U:H3	34:B5:1416:G:H1	1.05	0.98
5:BG:56:ASN:HD21	34:B5:153:G:H21	1.09	0.97
13:BW:36:LYS:HB3	13:BW:110:ILE:HG21	1.46	0.97
38:A1:538:G:H1	38:A1:553:U:H3	1.08	0.96
25:BS:40:ARG:HH12	25:BS:44:ASN:HB2	1.31	0.95
38:A1:2442:G:H1	38:A1:2505:U:H3	1.05	0.95
38:A1:162:G:N7	38:A1:259:C:N4	2.15	0.94
55:AS:89:ASN:HD21	56:AT:156:TYR:H	1.11	0.93
20:BF:143:ARG:HH22	29:Bc:54:LEU:HB3	1.36	0.91
15:BY:123:LYS:NZ	34:B5:150:U:OP1	2.04	0.90
38:A1:182:U:H3	38:A1:234:G:H1	0.93	0.90
2:BB:103:MET:HG3	2:BB:215:VAL:HG12	1.54	0.90
13:BW:32:LYS:NZ	34:B5:638:U:OP2	2.05	0.90
38:A1:1293:U:HO2'	55:AS:88:HIS:HE2	1.18	0.89
51:AO:22[A]:VAL:HG11	51:AO:122[A]:GLN:HE22	1.38	0.89
38:A1:3192:U:H3	38:A1:3200:G:H1	0.92	0.87
1:BA:30:GLN:HE21	1:BA:33:GLN:HG2	1.39	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:178:VAL:HB	31:Bg:192:PHE:HB2	1.56	0.87
46:AI:189:GLU:HB2	46:AI:200:LEU:HB3	1.54	0.87
34:B5:774:A:N6	34:B5:786:C:O2	2.07	0.86
75:Am:80:PRO:HA	75:Am:83:LYS:HD3	1.57	0.86
21:BK:8:ARG:NH2	34:B5:1257:U:O2'	2.09	0.86
43:AF:144:ILE:HD11	43:AF:189:ILE:HG12	1.57	0.86
49:AM:121:MET:HE3	49:AM:125:LYS:HD2	1.56	0.86
80:DC:727:PRO:HA	80:DC:801:TRP:HA	1.58	0.86
34:B5:1774:G:OP1	76:An:7:LYS:NZ	2.09	0.86
34:B5:226:A:N3	34:B5:837:G:N1	2.23	0.85
38:A1:1863:G:N1	38:A1:1866:C:OP2	2.07	0.85
44:AG:163:VAL:HA	44:AG:166:LEU:HD23	1.58	0.85
23:BQ:71:GLY:HA2	34:B5:1483:A:H4'	1.59	0.85
38:A1:512:U:H3	38:A1:579:G:H1	1.20	0.85
5:BG:13:GLN:NE2	34:B5:151:G:N3	2.23	0.85
38:A1:2433:U:H1'	50:AN:125:SER:HB3	1.59	0.84
80:DC:785:ARG:NH1	80:DC:792:ALA:O	2.11	0.84
20:BF:57:SER:HA	29:Bc:53:ILE:HB	1.59	0.84
15:BY:8:ARG:HB3	15:BY:10:ARG:HH22	1.42	0.84
38:A1:1786:G:H2'	38:A1:1787:A:C8	2.12	0.84
9:BL:102:LYS:HB3	14:BX:13:ARG:HH21	1.41	0.84
31:Bg:151:VAL:HA	31:Bg:173:GLY:HA2	1.60	0.84
18:Be:55:ARG:NH2	18:Be:56:MET:SD	2.51	0.83
1:BA:140:ASN:ND2	12:BV:31:SER:O	2.12	0.83
80:DC:775:ASN:HA	80:DC:776:GLU:HB2	1.60	0.83
41:AD:95:TRP:HD1	41:AD:158:ARG:HA	1.40	0.82
69:Ag:22:VAL:HG12	69:Ag:30:LEU:HD11	1.60	0.82
34:B5:628:G:N1	34:B5:970:A:OP2	2.11	0.82
34:B5:212:U:H3	34:B5:253:A:H62	1.25	0.82
79:E:126:PRO:O	79:E:130:LYS:CB	2.21	0.82
38:A1:129:U:H3	38:A1:139:G:H1	1.27	0.82
38:A1:950:G:N1	38:A1:1368:U:OP2	2.10	0.82
31:Bg:38:ARG:HD3	31:Bg:67:ILE:HD12	1.61	0.82
66:Ad:72:ARG:HH22	66:Ad:104:LEU:HB2	1.42	0.82
68:Af:49:ILE:HG12	68:Af:100:ILE:HG13	1.62	0.82
12:BV:25:LYS:HB2	12:BV:28:ASP:HB2	1.61	0.82
34:B5:774:A:N1	34:B5:786:C:N3	2.28	0.81
34:B5:1355:C:N4	34:B5:1369:U:H3	1.78	0.81
34:B5:1543:A:N6	34:B5:1568:C:O2	2.13	0.81
38:A1:1203:A:OP2	38:A1:1301:A:N6	2.14	0.81
8:BJ:83:VAL:HA	8:BJ:149:ARG:HA	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:BY:6:THR:O	15:BY:8:ARG:NH1	2.13	0.81
46:AI:37:GLY:HA2	46:AI:82:ARG:HH12	1.46	0.81
34:B5:480:G:H1	34:B5:508:U:H3	1.29	0.81
35:AA:21:ARG:HH21	35:AA:22:LEU:HD11	1.46	0.81
38:A1:2470:C:H2'	79:E:27:ASN:HB2	1.60	0.81
25:BS:86:LEU:HD12	25:BS:99:HIS:HB2	1.63	0.81
38:A1:2696:A:N7	38:A1:2758:A:N6	2.29	0.81
47:AJ:55:ARG:NH2	81:EC:6887:G:O3'	2.14	0.81
13:BW:24:GLN:HE22	17:Bb:5:GLN:H	1.27	0.81
21:BK:1:MET:HG3	21:BK:44:LYS:HG2	1.63	0.81
60:AX:60:TYR:OH	70:Ah:26:LYS:NZ	2.14	0.81
5:BG:78:THR:HG22	5:BG:79:LYS:H	1.47	0.80
12:BV:73:ALA:HB1	12:BV:79:LEU:HD23	1.63	0.80
38:A1:1238:C:O2	38:A1:1250:G:N2	2.14	0.80
38:A1:1805:C:H2'	38:A1:1806:A:H8	1.44	0.80
38:A1:2193:U:H5"	38:A1:2194:G:H5'	1.63	0.80
1:BA:49:ASN:HD21	24:BR:109:LEU:HD22	1.46	0.80
34:B5:1039:A:HO2'	34:B5:1040:G:H8	1.28	0.80
71:Ai:62:ARG:HH21	71:Ai:94:ILE:HG23	1.46	0.80
34:B5:1355:C:O2	34:B5:1368:G:N2	2.10	0.80
38:A1:1634:G:N7	62:AZ:17:ARG:NH2	2.30	0.80
7:BI:32:GLN:NE2	34:B5:1727:G:H21	1.80	0.80
38:A1:3268:A:OP1	42:AE:46:ARG:NH2	2.14	0.80
4:BE:11:ARG:NH1	4:BE:24:SER:OG	2.14	0.80
12:BV:70:ASN:HB3	12:BV:83:TRP:HB2	1.63	0.80
34:B5:648:G:N1	34:B5:686:C:N3	2.26	0.80
34:B5:648:G:N2	34:B5:686:C:O2	2.14	0.80
38:A1:1390:A:N6	38:A1:1418:A:O2'	2.14	0.80
42:AE:43:LEU:HD21	42:AE:85:ILE:HG12	1.63	0.80
2:BB:198:GLU:HG2	2:BB:210:ILE:HD13	1.64	0.79
11:BO:52:ARG:HH21	34:B5:905:A:H3'	1.46	0.79
38:A1:411:U:H2'	38:A1:412:G:H8	1.46	0.79
38:A1:1238:C:N3	38:A1:1250:G:N1	2.30	0.79
80:DC:164:LEU:HD22	80:DC:282:PHE:HE1	1.47	0.79
28:BZ:77:ARG:NH2	34:B5:1534:G:N7	2.31	0.79
77:Ao:38:GLN:OE1	77:Ao:41:ARG:NH2	2.15	0.79
80:DC:685:ARG:HH11	80:DC:687:ASN:HD21	1.29	0.79
37:AC:196:ASN:HD21	61:AY:12:ARG:H	1.31	0.79
4:BE:73:ASP:HA	4:BE:164:LEU:HD21	1.64	0.79
2:BB:111:ARG:NH2	34:B5:930:A:O2'	2.16	0.79
18:Be:31:LYS:HD3	34:B5:545:A:H2'	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:180:ALA:HB3	31:Bg:190:ALA:HB3	1.63	0.79
38:A1:3204:C:H2'	38:A1:3205:G:C8	2.17	0.79
25:BS:40:ARG:NH1	25:BS:40:ARG:O	2.15	0.78
34:B5:628:G:O3'	38:A1:846:A:N6	2.16	0.78
34:B5:1673:G:O6	34:B5:1728:A:N1	2.15	0.78
38:A1:845:G:O2'	38:A1:848:A:N6	2.14	0.78
38:A1:1474:A:O2'	66:Ad:57:GLN:NE2	2.16	0.78
34:B5:340:U:H2'	34:B5:341:A:H8	1.48	0.78
34:B5:883:C:H42	34:B5:945:U:H3	1.29	0.78
36:AB:261:MET:HB2	36:AB:264:VAL:HG23	1.66	0.78
80:DC:369:ILE:HD11	80:DC:401:PHE:HB3	1.65	0.78
27:BU:79:TRP:HE3	34:B5:1604:U:H5'	1.48	0.78
3:BC:113:LEU:HD11	3:BC:211:LEU:HB3	1.65	0.78
38:A1:1833:G:OP1	74:Al:10:LYS:NZ	2.17	0.78
34:B5:1591:C:H2'	34:B5:1592:A:H8	1.49	0.78
35:AA:183:GLY:HA2	38:A1:896:A:H5"	1.66	0.78
36:AB:266:ARG:NH2	38:A1:2392:C:O2'	2.17	0.77
28:BZ:82:HIS:HA	28:BZ:85:LYS:HE2	1.64	0.77
34:B5:868:G:H1	34:B5:960:U:H3	1.33	0.77
80:DC:563:TYR:HB3	80:DC:724:ILE:HD11	1.66	0.77
80:DC:797:VAL:HG12	80:DC:798:PHE:H	1.49	0.77
19:BD:62:ASN:OD1	19:BD:64:ARG:NH1	2.17	0.77
34:B5:1566:U:C4	34:B5:1567:U:O4	2.38	0.77
80:DC:677:PHE:HB3	80:DC:823:ARG:HH21	1.49	0.77
38:A1:1757:A:H5"	57:AU:94:ARG:HH22	1.50	0.77
10:BN:72:MET:HG2	34:B5:962:C:H5"	1.64	0.77
26:BT:12:GLN:NE2	34:B5:1479:A:N3	2.33	0.77
79:E:124:LEU:HG	79:E:128:LEU:HB2	1.65	0.77
11:BO:99:GLN:NE2	16:Ba:44:ILE:O	2.17	0.77
19:BD:164:VAL:HA	19:BD:168:ILE:HD12	1.67	0.77
34:B5:775:G:O6	34:B5:785:U:O2	2.03	0.77
34:B5:1339:C:O2'	34:B5:1341:A:N7	2.18	0.77
51:AO:91[A]:LYS:O	51:AO:96[A]:LYS:NZ	2.18	0.77
22:BP:108:ARG:HB2	22:BP:111:MET:HE1	1.67	0.77
36:AB:220:VAL:O	36:AB:334:ARG:NH1	2.17	0.77
8:BJ:168:ARG:NH2	34:B5:535:A:OP2	2.17	0.77
37:AC:35:VAL:HG21	37:AC:244:LEU:HD21	1.64	0.77
38:A1:184:U:H3	38:A1:232:G:H1	1.30	0.77
58:AV:10:LYS:NZ	58:AV:53:SER:OG	2.18	0.77
7:BI:152:ILE:HG13	7:BI:153:GLU:H	1.49	0.77
14:BX:20:ARG:NH2	34:B5:311:U:OP2	2.18	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BR:31:ASN:HD21	24:BR:54:THR:HG23	1.50	0.76
38:A1:394:G:N1	38:A1:397:A:OP2	2.18	0.76
38:A1:2534:G:N1	38:A1:2545:C:O2	2.17	0.76
34:B5:480:G:O6	34:B5:481:A:N6	2.18	0.76
38:A1:3266:G:OP2	42:AE:70:LYS:NZ	2.17	0.76
6:BH:22:GLN:HA	6:BH:25:VAL:HG22	1.67	0.76
52:AP:56:ARG:NH2	52:AP:75:GLU:OE2	2.17	0.76
65:Ac:25:LEU:HD13	65:Ac:87:VAL:HG11	1.67	0.76
38:A1:1130:A:H61	46:AI:115:MET:HE1	1.50	0.76
79:E:34:LEU:HD11	79:E:183:ILE:HG12	1.66	0.76
34:B5:871:G:H2'	34:B5:872:G:C8	2.21	0.76
41:AD:119:TYR:OH	41:AD:139:PRO:O	2.04	0.76
3:BC:88:LYS:NZ	34:B5:1145:U:O2'	2.19	0.76
4:BE:133:LYS:NZ	34:B5:293:U:O2'	2.18	0.76
16:Ba:82:ARG:NH1	16:Ba:82:ARG:O	2.19	0.76
38:A1:776:PSU:N3	38:A1:2719:U:O2	2.19	0.76
38:A1:1208:U:O2'	38:A1:3115:C:N4	2.19	0.76
38:A1:1412:G:OP1	67:Ae:105:ARG:NH2	2.18	0.76
52:AP:126:ARG:HA	52:AP:140:GLU:HG2	1.68	0.76
7:BI:76:THR:OG1	7:BI:105:ASP:OD2	2.01	0.76
34:B5:1356:U:H3	34:B5:1367:G:H1	1.33	0.76
8:BJ:86:LEU:HD12	8:BJ:99:LEU:HD11	1.66	0.75
38:A1:1779:C:N4	38:A1:2102:U:OP1	2.19	0.75
66:Ad:72:ARG:HG3	66:Ad:96:VAL:HB	1.67	0.75
75:Am:104:PRO:HG2	75:Am:107:ALA:HB2	1.68	0.75
26:BT:69:LYS:HG2	34:B5:1367:G:H5"	1.68	0.75
34:B5:1775:U:P	76:An:11:ARG:HH22	2.09	0.75
57:AU:18:ASP:HB3	57:AU:104:ARG:HB3	1.66	0.75
8:BJ:110:GLN:OE1	8:BJ:126:ARG:NH1	2.19	0.75
18:Be:43:ARG:O	18:Be:54:ARG:NH1	2.19	0.75
38:A1:2899:C:N3	45:AH:173:ARG:NH1	2.32	0.75
38:A1:3324:C:OP1	66:Ad:19:ARG:NH1	2.18	0.75
27:BU:85:ARG:HH22	34:B5:1335:U:H5'	1.49	0.75
38:A1:269:G:H5"	50:AN:14:LYS:HE2	1.68	0.75
38:A1:1592:G:OP2	69:Ag:37:LYS:NZ	2.20	0.75
35:AA:79:ASN:HD21	35:AA:165:VAL:HG13	1.52	0.75
35:AA:150:LEU:HD21	38:A1:2157:G:C5	2.20	0.75
50:AN:42:PRO:HG3	50:AN:61:ILE:HG13	1.68	0.75
69:Ag:7:PHE:HE1	69:Ag:20:ILE:HD13	1.51	0.75
34:B5:1081:A:O2'	34:B5:1083:G:N7	2.17	0.75
79:E:90:LEU:HB3	79:E:123:LEU:HD11	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:AS:81:TYR:HE1	55:AS:90:MET:HE1	1.52	0.75
24:BR:5:ARG:O	24:BR:10:LYS:NZ	2.20	0.75
38:A1:2261:G:O2'	38:A1:2263:C:N4	2.20	0.75
47:AJ:88:GLU:HB3	47:AJ:90:GLN:HE21	1.52	0.75
4:BE:27:TYR:O	34:B5:447:U:O2'	2.04	0.74
20:BF:95:ASN:OD1	34:B5:1611:A:O2'	2.03	0.74
31:Bg:19:TRP:HB2	31:Bg:38:ARG:HB2	1.69	0.74
38:A1:655:C:H2'	38:A1:656:A:H8	1.52	0.74
38:A1:1064:A:H61	38:A1:1092:C:H2'	1.51	0.74
41:AD:120:LYS:O	41:AD:248:ARG:NH1	2.19	0.74
11:BO:127:ARG:NH2	34:B5:1787:C:OP1	2.20	0.74
23:BQ:13:LYS:HG3	23:BQ:14:LYS:H	1.52	0.74
54:AR:23:TRP:CZ3	54:AR:25:ASP:HB3	2.21	0.74
81:EC:6864:A:H1'	81:EC:6868:C:H42	1.52	0.74
48:AL:64:LYS:O	48:AL:67:ARG:NH1	2.20	0.74
23:BQ:99:GLU:HA	23:BQ:102:LYS:HB3	1.67	0.74
38:A1:1323:G:O3'	55:AS:1:MET:N	2.21	0.74
19:BD:110:LEU:HA	19:BD:177:MET:HE1	1.70	0.74
36:AB:47:LEU:HD22	36:AB:335:ILE:HD11	1.68	0.74
37:AC:31:ARG:NH1	38:A1:674:G:OP1	2.21	0.74
38:A1:1523:U:OP2	38:A1:1604:G:O2'	2.04	0.74
3:BC:55:GLU:OE2	3:BC:59:HIS:ND1	2.20	0.74
26:BT:83:ALA:HB2	34:B5:1525:A:H4'	1.70	0.74
26:BT:105:LEU:HD23	26:BT:122:ARG:HD3	1.69	0.74
38:A1:3068:U:OP2	54:AR:62:ARG:NH2	2.17	0.74
29:Bc:14:LYS:NZ	29:Bc:15:VAL:O	2.19	0.73
80:DC:723:LYS:NZ	80:DC:807:ASP:OD1	2.21	0.73
9:BL:94:ILE:HD12	14:BX:12:ALA:HB1	1.70	0.73
33:BM:67:THR:HB	34:B5:1228:G:H1	1.53	0.73
8:BJ:80:LEU:HD12	8:BJ:85:VAL:HG13	1.68	0.73
38:A1:649:A:OP2	38:A1:2868:U:O2'	2.06	0.73
47:AJ:16:LYS:HE3	47:AJ:130:VAL:HG21	1.71	0.73
24:BR:25:THR:HG23	24:BR:27:ASP:H	1.52	0.73
60:AX:136:ALA:HA	60:AX:139:ILE:HD12	1.71	0.73
70:Ah:59:ASN:O	70:Ah:63:ARG:HG2	1.88	0.73
37:AC:163:LYS:HZ1	38:A1:208:C:H3'	1.52	0.73
46:AI:38:LYS:HG3	46:AI:41:ALA:HB2	1.69	0.73
56:AT:68:THR:HG22	56:AT:69:LYS:H	1.52	0.73
8:BJ:144:PRO:HD2	34:B5:474:A:H5"	1.69	0.73
13:BW:24:GLN:NE2	17:Bb:5:GLN:H	1.86	0.73
16:Ba:45:VAL:HG21	16:Ba:53:LEU:HD22	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Bb:35:VAL:HG21	17:Bb:63:LEU:HD21	1.71	0.73
38:A1:992:A:H5"	56:AT:43:LYS:HD3	1.71	0.73
63:Aa:88:ASP:OD1	63:Aa:89:GLN:N	2.22	0.73
80:DC:663:VAL:HG13	80:DC:709:MET:HE1	1.69	0.73
13:BW:53:ILE:HD13	17:Bb:24:LEU:HD11	1.71	0.73
20:BF:185:ARG:NH1	34:B5:1572:G:N3	2.37	0.73
35:AA:117:GLU:HG2	35:AA:124:GLY:H	1.54	0.73
7:BI:5:ARG:NH1	34:B5:332:U:O2'	2.22	0.73
24:BR:3:ARG:HH21	34:B5:1413:U:H5'	1.54	0.73
47:AJ:48:SER:HB3	47:AJ:66:ALA:HB3	1.70	0.73
3:BC:91:ARG:NH1	34:B5:1147:A:OP1	2.20	0.73
5:BG:140:ASN:ND2	34:B5:168:A:OP1	2.19	0.73
7:BI:23:LYS:NZ	34:B5:401:A:OP1	2.15	0.73
34:B5:1553:G:N1	34:B5:1556:A:OP2	2.21	0.73
38:A1:158:G:H2'	38:A1:159:A:H8	1.53	0.73
38:A1:3085:G:OP1	59:AW:34:SER:OG	2.07	0.73
48:AL:122:LYS:HG3	70:Ah:118:ILE:HG23	1.69	0.73
50:AN:91:GLU:O	50:AN:93:LYS:NZ	2.22	0.73
7:BI:184:LEU:HD22	7:BI:188:GLU:HG3	1.70	0.73
23:BQ:8:GLN:HE21	23:BQ:19:VAL:HG13	1.54	0.73
34:B5:1656:U:HO2'	38:A1:2292:U:HO2'	1.36	0.73
19:BD:162:GLN:NE2	34:B5:1333:C:O2'	2.21	0.72
34:B5:226:A:N6	34:B5:835:U:OP2	2.21	0.72
81:EC:6812:C:H2'	81:EC:6813:A:C8	2.24	0.72
38:A1:1304:A:H61	38:A1:2860:U:H5"	1.54	0.72
21:BK:62:GLN:NE2	30:Bd:25:SER:OG	2.22	0.72
34:B5:205:U:H2'	34:B5:206:A:H8	1.53	0.72
40:A4:25:G:N7	61:AY:13:ARG:NH1	2.37	0.72
79:E:127:GLN:HA	79:E:130:LYS:HB3	1.71	0.72
2:BB:109:LYS:HG3	2:BB:113:MET:HE3	1.71	0.72
17:Bb:20:LYS:NZ	34:B5:958:U:OP2	2.22	0.72
28:BZ:93:SER:HB3	28:BZ:100:ILE:HD12	1.69	0.72
37:AC:119:ARG:NH2	38:A1:696:C:OP2	2.22	0.72
3:BC:181:SER:OG	34:B5:4:C:H4'	1.90	0.72
19:BD:32:GLU:N	19:BD:32:GLU:OE2	2.21	0.72
27:BU:68:ARG:HG2	27:BU:79:TRP:HE1	1.53	0.72
34:B5:233:C:O2'	34:B5:237:C:N4	2.23	0.72
38:A1:591:G:N2	38:A1:612:U:OP1	2.19	0.72
38:A1:3113:A:H4'	45:AH:69:ARG:HG3	1.70	0.72
19:BD:75:LYS:HE2	21:BK:22:VAL:HG23	1.71	0.72
34:B5:1297:G:N2	34:B5:1300:A:OP2	2.21	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2768:U:O2'	77:Ao:71:ARG:NH2	2.22	0.72
39:A3:99:G:H4'	43:AF:128:LYS:HD3	1.70	0.72
27:BU:44:ASN:OD1	27:BU:47:GLN:NE2	2.20	0.72
39:A3:107:C:H2'	39:A3:108:A:H8	1.53	0.72
50:AN:183:THR:HG22	50:AN:187:ARG:HB2	1.70	0.72
20:BF:143:ARG:NE	29:Bc:55:VAL:O	2.22	0.72
38:A1:2446:U:N3	38:A1:2501:U:O4	2.23	0.72
39:A3:1:G:O6	41:AD:262:LYS:NZ	2.22	0.72
66:Ad:51:LEU:HD12	66:Ad:55:LEU:HD22	1.71	0.72
80:DC:365:ASN:HD22	80:DC:475:ALA:HB2	1.53	0.72
8:BJ:77:ILE:HD12	8:BJ:80:LEU:HD23	1.72	0.72
75:Am:78:ILE:HG23	75:Am:83:LYS:HD2	1.71	0.72
80:DC:10:ARG:NH1	80:DC:10:ARG:O	2.23	0.72
9:BL:109:VAL:HG12	9:BL:137:PHE:HB2	1.72	0.71
21:BK:20:VAL:HG12	21:BK:67:THR:HA	1.71	0.71
38:A1:3092:C:O2'	38:A1:3094:A:OP2	2.07	0.71
47:AJ:132:ASN:HA	47:AJ:154:THR:HG21	1.72	0.71
59:AW:6:ASP:OD1	59:AW:7:SER:N	2.22	0.71
61:AY:120:GLN:HE22	61:AY:126:LEU:HB2	1.54	0.71
4:BE:152:PRO:O	4:BE:155:LYS:NZ	2.21	0.71
7:BI:26:LYS:NZ	34:B5:399:A:OP2	2.20	0.71
8:BJ:53:ARG:HD2	8:BJ:57:ARG:HH22	1.54	0.71
8:BJ:63:ASP:OD2	8:BJ:65:LYS:NZ	2.22	0.71
40:A4:58:G:N7	72:Aj:63:ARG:NH1	2.32	0.71
61:AY:70:ILE:HD13	61:AY:82:VAL:HG12	1.72	0.71
1:BA:156:VAL:O	12:BV:65:SER:OG	2.08	0.71
2:BB:137:ILE:HD12	2:BB:215:VAL:HB	1.72	0.71
4:BE:200:ARG:NH1	34:B5:737:A:OP2	2.23	0.71
13:BW:118:ARG:NH2	34:B5:686:C:O3'	2.23	0.71
38:A1:733:G:N2	38:A1:736:A:OP2	2.23	0.71
38:A1:2185:G:O2'	38:A1:2314:PSU:OP2	2.07	0.71
34:B5:905:A:N1	34:B5:998:A:O2'	2.22	0.71
37:AC:58:HIS:HE1	37:AC:98:ARG:HE	1.37	0.71
40:A4:65:A:O3'	70:Ah:10:ARG:NH2	2.23	0.71
46:AI:82:ARG:NH1	46:AI:82:ARG:O	2.23	0.71
54:AR:92:GLN:O	54:AR:96:ILE:HG12	1.90	0.71
73:Ak:46:ARG:NH1	73:Ak:47:GLY:O	2.23	0.71
8:BJ:27:GLU:HG3	8:BJ:39:LYS:HD3	1.73	0.71
41:AD:196:ARG:HA	41:AD:199:ILE:HD12	1.72	0.71
19:BD:42:THR:OG1	19:BD:45:LYS:O	2.09	0.71
34:B5:534:A:H3'	34:B5:535:A:H8	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1335:U:O2	34:B5:1416:G:N2	2.19	0.71
38:A1:1257:C:N4	38:A1:1262:G:OP2	2.22	0.71
38:A1:2727:A:OP2	38:A1:2728:G:N2	2.23	0.71
45:AH:126:VAL:HG22	45:AH:164:ILE:HG13	1.72	0.71
69:Ag:79:SER:OG	69:Ag:80:ARG:NH1	2.23	0.71
22:BP:122:THR:O	34:B5:1183:A:N6	2.23	0.71
3:BC:142:GLY:N	3:BC:153:SER:O	2.24	0.71
19:BD:195:SER:OG	19:BD:200:LYS:NZ	2.24	0.71
25:BS:41:ARG:HH21	25:BS:85:PHE:HE1	1.39	0.71
36:AB:214:MET:HE1	36:AB:281:LYS:HG2	1.72	0.71
80:DC:697:ALA:HA	80:DC:700:ARG:HB3	1.72	0.71
11:BO:52:ARG:HH22	34:B5:904:G:H3'	1.55	0.70
27:BU:79:TRP:CE3	34:B5:1604:U:H5'	2.26	0.70
38:A1:951:A:O3'	64:Ab:18:ARG:NH1	2.21	0.70
38:A1:1222:G:H21	38:A1:1286:A:N6	1.88	0.70
38:A1:2469:G:O2'	38:A1:2470:C:O4'	2.08	0.70
31:Bg:155:ARG:NH1	31:Bg:202:LEU:O	2.23	0.70
34:B5:924:A:H2'	34:B5:925:G:C8	2.26	0.70
48:AL:55:ARG:NH1	48:AL:73:ARG:O	2.24	0.70
56:AT:97:LYS:NZ	56:AT:98:HIS:O	2.24	0.70
79:E:90:LEU:HD21	79:E:124:LEU:HD22	1.72	0.70
81:EC:6857:C:H1'	81:EC:6872:A:H1'	1.71	0.70
2:BB:64:ARG:NH2	11:BO:37:GLU:OE1	2.25	0.70
34:B5:1727:G:H2'	34:B5:1728:A:C8	2.26	0.70
38:A1:849:C:H2'	38:A1:850:U:H6	1.57	0.70
7:BI:31:ARG:NH1	34:B5:332:U:OP1	2.22	0.70
22:BP:57:MET:HA	22:BP:60:LEU:HD12	1.73	0.70
34:B5:1656:U:O2'	38:A1:2292:U:O2'	2.08	0.70
38:A1:1622:U:H2'	38:A1:1623:G:H8	1.55	0.70
51:AO:157[A]:GLU:O	51:AO:161[A]:LYS:HG2	1.90	0.70
52:AP:122:ALA:HB3	52:AP:143:PRO:HB2	1.73	0.70
8:BJ:78:ARG:HH22	8:BJ:82:ARG:HE	1.37	0.70
9:BL:101:GLU:HB3	9:BL:103:ARG:HG3	1.72	0.70
37:AC:288:ARG:HH12	37:AC:292:SER:HB3	1.55	0.70
38:A1:258:G:OP1	48:AL:81:LYS:NZ	2.24	0.70
5:BG:92:ARG:O	34:B5:405:C:O2'	2.10	0.70
15:BY:11:LYS:NZ	34:B5:785:U:O4	2.24	0.70
22:BP:97:TYR:OH	34:B5:1211:A:N3	2.24	0.70
29:Bc:31:GLU:OE1	29:Bc:39:THR:OG1	2.09	0.70
38:A1:1729:A:N6	78:Ap:41:PHE:O	2.25	0.70
38:A1:2746:A:H5"	41:AD:178:ASN:HD22	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AH:50:ASN:HD21	49:AM:4:ASP:HA	1.55	0.70
51:AO:77[A]:SER:N	51:AO:106[A]:GLU:OE2	2.24	0.70
4:BE:153:ASN:O	4:BE:174:LYS:NZ	2.24	0.70
38:A1:239:G:H2'	38:A1:240:U:H4'	1.73	0.70
38:A1:3291:G:H2'	38:A1:3292:A:C8	2.26	0.70
11:BO:41:ARG:NH1	34:B5:896:U:O2	2.23	0.70
27:BU:106:ILE:HG13	27:BU:107:THR:HG23	1.73	0.70
38:A1:1333:C:OP1	53:AQ:2:GLY:N	2.24	0.70
38:A1:1565:G:N1	38:A1:1573:G:N7	2.39	0.70
38:A1:2898:G:OP2	45:AH:173:ARG:NH2	2.23	0.70
40:A4:23:U:OP2	61:AY:16:ARG:NE	2.24	0.70
5:BG:14:LYS:HD2	5:BG:123:GLY:HA3	1.73	0.70
7:BI:178:ARG:NH1	34:B5:258:C:O2	2.25	0.70
38:A1:551:A:O2'	38:A1:552:G:O5'	2.09	0.70
38:A1:2222:A:N6	38:A1:2782:U:O2'	2.25	0.70
25:BS:41:ARG:HA	26:BT:45:MET:HE1	1.73	0.70
38:A1:879:U:O2'	52:AP:135:ARG:NH2	2.24	0.70
4:BE:162:ILE:HG22	4:BE:164:LEU:H	1.56	0.69
8:BJ:85:VAL:HB	8:BJ:107:ARG:HG3	1.74	0.69
36:AB:173:GLN:HG3	36:AB:175:LYS:H	1.57	0.69
38:A1:3374:U:OP2	66:Ad:70:ARG:NH2	2.24	0.69
79:E:17:LEU:HD22	79:E:176:GLU:HG3	1.73	0.69
80:DC:798:PHE:HB3	85:DC:903:SO1:O60	1.92	0.69
23:BQ:13:LYS:HG3	23:BQ:14:LYS:HG3	1.74	0.69
34:B5:566:C:N4	34:B5:576:G:O2'	2.25	0.69
38:A1:126:U:OP1	50:AN:144:ARG:NH1	2.25	0.69
58:AV:80:ARG:HB3	58:AV:95:PHE:HD2	1.55	0.69
66:Ad:11:GLU:OE2	66:Ad:72:ARG:NH1	2.24	0.69
2:BB:115:ARG:HB2	2:BB:118:GLN:HE22	1.56	0.69
3:BC:52:THR:OG1	3:BC:54:GLU:OE1	2.10	0.69
19:BD:94:ARG:O	19:BD:101:GLN:NE2	2.26	0.69
34:B5:486:G:N2	34:B5:501:U:O2	2.25	0.69
60:AX:86:VAL:HG21	60:AX:95:ILE:HD11	1.73	0.69
12:BV:71:ARG:HG2	12:BV:72:LEU:HD22	1.75	0.69
15:BY:28:LEU:HG	15:BY:68:LYS:HB2	1.74	0.69
20:BF:182:ALA:O	20:BF:186:ASN:ND2	2.25	0.69
21:BK:16:PHE:CZ	21:BK:76:LEU:HG	2.27	0.69
38:A1:2113:A:O2'	38:A1:2116:G:N7	2.22	0.69
38:A1:3232:G:O6	38:A1:3255:U:O2	2.10	0.69
63:Aa:125:VAL:HB	63:Aa:145:VAL:HG22	1.73	0.69
10:BN:140:LYS:NZ	38:A1:847:A:OP1	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:609:U:H4'	34:B5:610:G:H5'	1.74	0.69
34:B5:1672:G:H2'	34:B5:1673:G:C8	2.28	0.69
37:AC:163:LYS:NZ	38:A1:209:A:OP2	2.25	0.69
38:A1:98:G:N7	48:AL:13:HIS:NE2	2.40	0.69
38:A1:412:G:OP1	52:AP:62:ARG:NH1	2.25	0.69
38:A1:2278:5MC:OP2	76:An:23:ARG:NH2	2.25	0.69
23:BQ:125:GLU:N	23:BQ:125:GLU:OE2	2.25	0.69
34:B5:5:U:H2'	34:B5:6:G:H8	1.57	0.69
80:DC:10:ARG:HA	80:DC:13:MET:HE2	1.73	0.69
21:BK:5:LYS:HA	21:BK:8:ARG:HG2	1.74	0.69
34:B5:228:G:N1	34:B5:834:G:O2'	2.25	0.69
37:AC:282:SER:N	53:AQ:125:ASP:OD2	2.18	0.69
81:EC:6841:U:N3	81:EC:6845:G:H1'	2.08	0.69
2:BB:141:ALA:HB1	2:BB:207:LEU:HD23	1.75	0.69
19:BD:7:LYS:NZ	34:B5:1516:A:OP2	2.24	0.69
25:BS:39:GLY:H	34:B5:1566:U:H5"	1.57	0.69
35:AA:181:LYS:HE2	35:AA:184:ARG:NH1	2.08	0.69
36:AB:126:LYS:NZ	38:A1:3294:A:OP2	2.21	0.69
38:A1:845:G:N2	38:A1:848:A:OP2	2.26	0.69
80:DC:543:GLN:O	80:DC:547:HIS:ND1	2.21	0.69
80:DC:694:HIS:O	80:DC:700:ARG:NH1	2.26	0.69
16:Ba:12:LYS:NZ	34:B5:1029:U:OP2	2.19	0.69
34:B5:1773:4AC:H5"	76:An:3:ALA:HB3	1.73	0.69
23:BQ:44:LEU:HB3	23:BQ:78:VAL:HG11	1.74	0.69
38:A1:3225:C:H2'	38:A1:3226:A:H8	1.57	0.69
41:AD:50:ARG:NH1	41:AD:147:ASP:OD2	2.26	0.69
7:BI:32:GLN:HE21	34:B5:1727:G:H21	1.41	0.68
25:BS:143:ARG:NH1	34:B5:1462:G:OP2	2.27	0.68
34:B5:1087:A:H2'	34:B5:1088:A:C8	2.29	0.68
38:A1:443:G:H5"	38:A1:491:A:H62	1.57	0.68
38:A1:2515:A:N1	38:A1:2594:C:N4	2.41	0.68
38:A1:3252:G:H2'	38:A1:3253:G:C8	2.28	0.68
77:Ao:32:LYS:HZ2	77:Ao:34:SER:H	1.40	0.68
30:Bd:12:ARG:HH12	34:B5:1205:C:H1'	1.57	0.68
36:AB:147:GLU:OE2	36:AB:150:ARG:NH2	2.26	0.68
38:A1:158:G:H2'	38:A1:159:A:C8	2.28	0.68
38:A1:838:G:O6	78:Ap:4:ARG:NH1	2.27	0.68
50:AN:8:GLU:OE1	50:AN:50:ARG:NH1	2.25	0.68
8:BJ:76:LEU:HD21	8:BJ:96:VAL:HG11	1.73	0.68
13:BW:24:GLN:N	13:BW:24:GLN:OE1	2.26	0.68
17:Bb:67:THR:HG22	17:Bb:68:GLY:H	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1146:G:H2'	34:B5:1147:A:C8	2.29	0.68
36:AB:113:GLU:HG2	36:AB:176:ALA:HB2	1.74	0.68
41:AD:95:TRP:CD1	41:AD:158:ARG:HA	2.26	0.68
2:BB:46:THR:OG1	2:BB:64:ARG:NH1	2.26	0.68
2:BB:149:GLN:HE21	2:BB:151:LYS:HB3	1.57	0.68
8:BJ:17:ARG:NH2	34:B5:3:U:O2'	2.25	0.68
16:Ba:79:ILE:HD11	34:B5:1794:A:H1'	1.76	0.68
37:AC:73:ARG:NH1	38:A1:2814:G:OP1	2.27	0.68
38:A1:2305:G:OP2	38:A1:2305:G:N2	2.22	0.68
44:AG:42:PRO:HD2	44:AG:44:ARG:HH12	1.58	0.68
62:AZ:111:LYS:O	62:AZ:115:LYS:HG3	1.93	0.68
81:EC:6791:A:H2'	81:EC:6792:A:H3'	1.76	0.68
34:B5:1188:G:OP1	80:DC:654:GLN:NE2	2.27	0.68
36:AB:62:ARG:NH1	38:A1:3039:C:OP1	2.27	0.68
38:A1:2218:G:OP1	71:Ai:68:ARG:NH1	2.26	0.68
45:AH:120:ASP:OD2	45:AH:124:ARG:NH2	2.26	0.68
80:DC:27:HIS:HB3	80:DC:30:HIS:CD2	2.28	0.68
27:BU:72:ASN:ND2	34:B5:1429:G:O2'	2.26	0.68
34:B5:1116:A:OP1	76:An:17:ARG:NH2	2.25	0.68
38:A1:1740:U:H4'	38:A1:1741:A:H5'	1.76	0.68
45:AH:83:THR:HG23	45:AH:84:LYS:HG3	1.76	0.68
13:BW:57:ARG:HG2	34:B5:863:A:H4'	1.75	0.68
20:BF:156:ARG:HE	20:BF:157:ARG:H	1.40	0.68
34:B5:445:A:H61	34:B5:462:G:H1'	1.58	0.68
34:B5:593:U:H4'	34:B5:595:G:H4'	1.74	0.68
38:A1:1114:U:OP1	63:Aa:23:GLY:N	2.27	0.68
39:A3:35:C:O2	39:A3:45:A:O2'	2.10	0.68
40:A4:103:G:OP2	40:A4:105:A:O2'	2.12	0.68
80:DC:164:LEU:HD22	80:DC:282:PHE:CE1	2.27	0.68
30:Bd:14:TYR:HB2	34:B5:1597:A:H8	1.58	0.68
38:A1:1606:U:O4	69:Ag:9:ARG:NH1	2.26	0.68
5:BG:199:GLN:OE1	5:BG:202:ARG:NH2	2.26	0.68
8:BJ:76:LEU:HG	8:BJ:80:LEU:HD22	1.76	0.68
35:AA:46:LYS:HA	35:AA:46:LYS:HE3	1.76	0.68
43:AF:83:LEU:HD11	43:AF:116:PHE:HB3	1.75	0.68
11:BO:124:ASP:OD2	34:B5:928:U:H1'	1.93	0.68
30:Bd:42:CYS:SG	34:B5:1433:G:N2	2.66	0.68
34:B5:523:G:N1	34:B5:528:U:OP2	2.21	0.68
34:B5:907:A:N3	34:B5:997:G:O2'	2.25	0.68
36:AB:124:LYS:NZ	38:A1:3297:U:O4	2.27	0.68
38:A1:1427:U:OP2	63:Aa:4:ARG:NH2	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:A3:97:A:OP1	55:AS:40:ARG:NH1	2.27	0.68
43:AF:163:LEU:HA	43:AF:168:ILE:HD11	1.76	0.68
66:Ad:9:THR:HG23	66:Ad:109:VAL:HG23	1.76	0.68
80:DC:273:PHE:HA	80:DC:277:ILE:HD13	1.76	0.68
81:EC:6764:C:H2'	81:EC:6765:A:H8	1.58	0.68
8:BJ:146:PHE:O	34:B5:765:G:N2	2.20	0.67
10:BN:118:ILE:O	10:BN:122:ILE:HG13	1.94	0.67
11:BO:17:ALA:HB3	11:BO:81:VAL:HA	1.76	0.67
11:BO:54:GLU:N	11:BO:54:GLU:OE1	2.27	0.67
15:BY:34:ASN:ND2	34:B5:521:A:N3	2.41	0.67
34:B5:845:G:H1'	34:B5:846:G:C4	2.29	0.67
38:A1:2895:G:O2'	75:Am:100:TYR:O	2.11	0.67
80:DC:150:ARG:NH1	80:DC:351:TYR:O	2.26	0.67
4:BE:201:HIS:NE2	34:B5:799:A:H5"	2.09	0.67
14:BX:144:ARG:HG3	80:DC:464:LEU:HB2	1.76	0.67
20:BF:72:HIS:NE2	34:B5:1610:G:OP1	2.28	0.67
20:BF:219:ARG:NH1	81:EC:6841:U:O3'	2.27	0.67
26:BT:22:LEU:HD22	26:BT:28:LEU:HD21	1.76	0.67
28:BZ:65:LEU:HG	28:BZ:69:LEU:HD22	1.76	0.67
38:A1:1009:A:O3'	46:AI:39:LYS:NZ	2.28	0.67
43:AF:118:LYS:HG3	43:AF:191:VAL:HG11	1.75	0.67
80:DC:289:MET:HE1	80:DC:320:LEU:HD21	1.76	0.67
8:BJ:159:ALA:HB3	8:BJ:162:SER:HB3	1.76	0.67
25:BS:63:GLN:O	25:BS:67:GLU:HG2	1.94	0.67
34:B5:1693:A:H2'	34:B5:1695:G:H8	1.59	0.67
36:AB:283:TYR:HB2	36:AB:323:MET:HG3	1.75	0.67
38:A1:929:A:O2'	72:Aj:49:TRP:O	2.11	0.67
5:BG:132:ARG:NH1	34:B5:150:U:O4'	2.27	0.67
31:Bg:61:PHE:HE1	31:Bg:97:GLY:HA2	1.59	0.67
31:Bg:221:MET:HE1	31:Bg:223:TRP:CZ2	2.29	0.67
38:A1:358:G:N2	38:A1:361:A:OP2	2.22	0.67
38:A1:619:A:OP1	52:AP:167:ARG:NH1	2.24	0.67
38:A1:3070:A:OP1	54:AR:62:ARG:NH1	2.27	0.67
42:AE:99:GLU:OE2	42:AE:99:GLU:N	2.26	0.67
80:DC:106:PRO:O	80:DC:108:HIS:ND1	2.28	0.67
4:BE:256:ARG:O	4:BE:261:LEU:N	2.26	0.67
26:BT:72:GLY:HA3	34:B5:1498:G:H5"	1.76	0.67
34:B5:853:G:H5'	54:AR:177:VAL:HB	1.76	0.67
38:A1:860:G:OP1	78:Ap:17:ARG:NH1	2.23	0.67
39:A3:44:C:OP2	47:AJ:137:ARG:NH1	2.23	0.67
42:AE:66:SER:HB2	42:AE:76:LEU:HA	1.74	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:Ak:22:THR:HG23	73:Ak:46:ARG:HB3	1.75	0.67
8:BJ:45:ILE:HG21	8:BJ:105:LEU:HD21	1.77	0.67
34:B5:273:G:O6	34:B5:283:U:O2	2.11	0.67
34:B5:853:G:N7	54:AR:173:ARG:NH2	2.43	0.67
34:B5:1497:U:O4	34:B5:1510:U:N3	2.19	0.67
66:Ad:72:ARG:HD3	66:Ad:73:LEU:H	1.59	0.67
79:E:54:LYS:HD2	79:E:150:ASP:HB3	1.77	0.67
4:BE:192:ILE:HG22	4:BE:243:GLY:HA3	1.77	0.67
9:BL:151:LYS:HE2	34:B5:810:G:H5"	1.76	0.67
20:BF:51:VAL:O	20:BF:65:ARG:NH2	2.24	0.67
23:BQ:77:GLN:O	23:BQ:81:ILE:HD12	1.94	0.67
28:BZ:77:ARG:HA	28:BZ:80:LEU:HD12	1.77	0.67
38:A1:719:U:O2	53:AQ:72:LYS:NZ	2.26	0.67
38:A1:989:A:O2'	56:AT:104:GLU:OE2	2.11	0.67
50:AN:114:ARG:HD3	50:AN:151:ILE:HG12	1.77	0.67
51:AO:46[A]:GLU:HG3	51:AO:134[A]:LYS:HZ1	1.58	0.67
62:AZ:96:VAL:HG12	62:AZ:110:ALA:HB1	1.77	0.67
80:DC:568:GLU:HA	80:DC:592:PRO:HG3	1.76	0.67
80:DC:735:CYS:HB2	80:DC:739:ALA:HB3	1.77	0.67
19:BD:191:ASP:OD2	19:BD:194:LYS:NZ	2.28	0.67
28:BZ:68:ARG:NH2	81:EC:6864:A:N1	2.43	0.67
35:AA:132:ASN:ND2	38:A1:2178:A:H5"	2.09	0.67
80:DC:601:ILE:HD13	80:DC:643:PRO:HA	1.75	0.67
35:AA:21:ARG:HD3	38:A1:824:C:H5"	1.75	0.67
36:AB:92:TYR:HB2	36:AB:157:VAL:HB	1.77	0.67
38:A1:525:C:H5"	49:AM:79:ALA:HB2	1.76	0.67
38:A1:969:C:OP1	56:AT:82:ASN:ND2	2.27	0.67
38:A1:3325:G:OP1	66:Ad:70:ARG:NH1	2.28	0.67
39:A3:42:A:O2'	47:AJ:140:ARG:NH1	2.28	0.67
80:DC:649:GLN:HB2	80:DC:689:LEU:HA	1.77	0.67
4:BE:38:LEU:HD22	34:B5:298:C:H5"	1.77	0.67
8:BJ:83:VAL:HG21	8:BJ:147:MET:HG3	1.77	0.67
34:B5:591:A:H2'	34:B5:592:A:C8	2.30	0.67
38:A1:541:U:H2'	38:A1:542:G:H8	1.60	0.67
38:A1:2228:A:H2'	38:A1:2229:A:H8	1.59	0.67
38:A1:2465:G:H1	38:A1:2492:C:N4	1.93	0.67
79:E:19:TYR:OH	79:E:24:LYS:NZ	2.26	0.67
10:BN:55:ARG:NH2	17:Bb:51:GLN:OE1	2.26	0.66
16:Ba:90:GLU:OE2	16:Ba:90:GLU:N	2.23	0.66
38:A1:591:G:O2'	42:AE:17:ALA:O	2.13	0.66
38:A1:2483:G:O6	79:E:101:LYS:NZ	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:A3:49:G:O2'	41:AD:58:LYS:NZ	2.27	0.66
54:AR:23:TRP:HB2	54:AR:53:LYS:HD2	1.77	0.66
72:Aj:76:ASN:HB3	72:Aj:79:GLN:HE21	1.60	0.66
79:E:90:LEU:HD13	79:E:123:LEU:HD21	1.77	0.66
80:DC:751:ARG:HH21	80:DC:804:LEU:HB2	1.60	0.66
11:BO:87:GLY:HA3	11:BO:120:PRO:HD2	1.78	0.66
25:BS:45:LEU:HD13	25:BS:48:LYS:HD2	1.76	0.66
26:BT:130:ARG:NH2	34:B5:1360:A:OP1	2.28	0.66
38:A1:1388:U:O2'	67:Ae:99:ASN:O	2.12	0.66
39:A3:114:U:H2'	39:A3:115:G:H8	1.60	0.66
51:AO:12[A]:LYS:HG3	51:AO:40[A]:GLU:HG2	1.77	0.66
52:AP:94:LEU:HD11	52:AP:146:ILE:HG23	1.77	0.66
80:DC:172:GLU:OE2	80:DC:271:ARG:NH1	2.28	0.66
5:BG:94:ARG:NH2	34:B5:1673:G:OP1	2.27	0.66
30:Bd:14:TYR:HB2	34:B5:1597:A:C8	2.30	0.66
38:A1:1264:G:N1	38:A1:1266:G:O6	2.29	0.66
38:A1:1542:G:OP1	50:AN:34:ASN:ND2	2.29	0.66
38:A1:1729:A:C6	65:Ac:49:PRO:HD3	2.30	0.66
70:Ah:118:ILE:HG22	70:Ah:120:ALA:H	1.60	0.66
25:BS:52:VAL:HG11	25:BS:69:ILE:HD11	1.77	0.66
34:B5:451:A:N6	34:B5:453:U:O2	2.29	0.66
38:A1:1062:A:O2'	38:A1:1098:A:OP1	2.12	0.66
38:A1:2217:U:H2'	38:A1:2218:G:H8	1.60	0.66
52:AP:22:LEU:HD12	52:AP:90:PHE:HE2	1.60	0.66
3:BC:158:THR:HG21	3:BC:221:THR:HG22	1.78	0.66
8:BJ:20:GLU:CD	8:BJ:22:SER:HG	2.04	0.66
34:B5:478:A:H61	34:B5:539:G:H1	1.44	0.66
38:A1:173:G:H5"	38:A1:174:C:H5"	1.78	0.66
38:A1:3023:U:O2	38:A1:3032:A:N7	2.29	0.66
41:AD:91:GLY:O	41:AD:94:ASN:ND2	2.29	0.66
56:AT:11:THR:HG23	56:AT:14:MET:HB3	1.77	0.66
79:E:104:SER:HB3	79:E:127:GLN:HB3	1.77	0.66
7:BI:4:SER:OG	7:BI:6:ASP:OD1	2.12	0.66
20:BF:75:GLY:O	23:BQ:122:ARG:NH1	2.28	0.66
20:BF:209:TYR:HA	20:BF:212:LYS:HE3	1.78	0.66
28:BZ:65:LEU:O	28:BZ:69:LEU:HB2	1.96	0.66
38:A1:1687:U:O4	57:AU:45:GLY:N	2.28	0.66
38:A1:1949:G:OP2	54:AR:135:LYS:NZ	2.26	0.66
41:AD:54:ARG:HE	41:AD:149:GLY:HA3	1.60	0.66
58:AV:96:GLU:OE2	59:AW:23:ARG:HA	1.95	0.66
74:Al:27:ILE:O	74:Al:33:ASN:ND2	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:91:GLN:HE22	80:DC:343:PRO:HA	1.60	0.66
1:BA:18:LEU:HD22	24:BR:102:VAL:HA	1.77	0.66
3:BC:148:LEU:O	3:BC:174:ARG:NH1	2.24	0.66
5:BG:51:LYS:HZ3	5:BG:112:VAL:HG12	1.60	0.66
6:BH:44:LYS:HG2	6:BH:63:PRO:HG3	1.76	0.66
7:BI:104:ILE:HG13	7:BI:105:ASP:H	1.61	0.66
19:BD:108:LYS:HD2	19:BD:113:LEU:HD13	1.77	0.66
38:A1:1493:G:C5	74:Al:13:MET:HE2	2.31	0.66
45:AH:12:VAL:O	45:AH:51:GLN:NE2	2.29	0.66
65:Ac:16:LEU:HD22	65:Ac:98:SER:HB2	1.76	0.66
7:BI:78:ILE:HD11	7:BI:102:VAL:HG11	1.77	0.66
13:BW:71:LYS:NZ	34:B5:1099:U:OP1	2.28	0.66
15:BY:57:VAL:HG12	15:BY:73:GLY:HA2	1.78	0.66
19:BD:166:ASP:O	19:BD:190:ARG:NH2	2.25	0.66
22:BP:24:LYS:O	22:BP:24:LYS:NZ	2.27	0.66
23:BQ:102:LYS:HA	23:BQ:105:LEU:HD12	1.77	0.66
34:B5:272:U:O2'	34:B5:284:G:N2	2.29	0.66
38:A1:876:A:H5"	38:A1:1890:U:H5"	1.77	0.66
55:AS:12:ARG:HH11	55:AS:22:PRO:HD2	1.61	0.66
15:BY:28:LEU:HA	15:BY:68:LYS:HA	1.78	0.66
31:Bg:9:LEU:HD11	31:Bg:311:ARG:HG2	1.78	0.66
34:B5:850:A:OP1	54:AR:170:ARG:NH2	2.29	0.66
38:A1:1093:A:H1'	38:A1:1094:U:H4'	1.77	0.66
38:A1:2971:A:H5"	46:AI:110:ARG:HH22	1.61	0.66
40:A4:135:G:OP2	60:AX:56:ARG:NH2	2.28	0.66
56:AT:8:ARG:HG3	56:AT:11:THR:HB	1.77	0.66
2:BB:64:ARG:NH1	11:BO:34:SER:OG	2.27	0.66
7:BI:93:THR:HG23	7:BI:95:THR:HG23	1.77	0.66
8:BJ:96:VAL:HG13	8:BJ:99:LEU:HD12	1.78	0.66
25:BS:106:GLU:OE1	25:BS:106:GLU:N	2.26	0.66
25:BS:114:GLU:HA	25:BS:117:LYS:HG2	1.77	0.66
37:AC:161:LYS:NZ	38:A1:210:U:OP1	2.27	0.66
47:AJ:26:SER:OG	47:AJ:63:GLU:O	2.13	0.66
51:AO:142[A]:SER:HA	51:AO:145[A]:VAL:HG22	1.78	0.66
23:BQ:94:GLN:NE2	31:Bg:60:SER:O	2.29	0.65
28:BZ:42:LEU:HA	28:BZ:46:LYS:HD2	1.77	0.65
34:B5:1356:U:O2	34:B5:1367:G:N2	2.26	0.65
38:A1:1050:U:OP2	56:AT:13:TYR:OH	2.09	0.65
38:A1:2471:U:O4'	79:E:27:ASN:ND2	2.29	0.65
39:A3:23:A:H2'	39:A3:24:A:C8	2.30	0.65
43:AF:140:SER:H	43:AF:237:ASN:HD21	1.43	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AI:52:LEU:HB3	46:AI:136:PHE:HB2	1.77	0.65
47:AJ:86:VAL:HG21	47:AJ:112:LEU:HD11	1.78	0.65
55:AS:4:PHE:HD2	55:AS:103:VAL:HG13	1.61	0.65
2:BB:152:ARG:NH2	34:B5:1799:U:O3'	2.28	0.65
26:BT:86:ARG:NH2	34:B5:1601:G:OP1	2.30	0.65
34:B5:939:A:H2'	34:B5:940:A:C8	2.31	0.65
38:A1:429:U:H2'	38:A1:430:U:H6	1.62	0.65
38:A1:1336:U:H2'	38:A1:1337:A:H8	1.62	0.65
38:A1:1718:G:H4'	54:AR:117:LYS:HD2	1.78	0.65
38:A1:2533:G:H2'	38:A1:2534:G:H8	1.61	0.65
22:BP:124:THR:OG1	34:B5:1182:U:O2'	2.14	0.65
36:AB:28:ARG:NH2	38:A1:3140:G:N7	2.44	0.65
38:A1:1234:G:H4'	38:A1:1236:G:H22	1.61	0.65
38:A1:1564:U:H3	38:A1:1575:A:H61	1.44	0.65
38:A1:1784:G:H4'	69:Ag:19:LYS:NZ	2.11	0.65
38:A1:2749:G:O2'	41:AD:35:ARG:NH1	2.30	0.65
38:A1:3119:U:H4'	75:Am:104:PRO:HG3	1.77	0.65
38:A1:3373:U:OP1	66:Ad:102:LYS:NZ	2.29	0.65
44:AG:190:VAL:HG21	44:AG:195:SER:HB2	1.78	0.65
71:Ai:53:TYR:OH	71:Ai:86:LYS:NZ	2.28	0.65
1:BA:30:GLN:HE22	1:BA:32:HIS:HB2	1.61	0.65
2:BB:107:THR:O	2:BB:111:ARG:HG2	1.96	0.65
4:BE:125:LYS:HB2	4:BE:226:PHE:CD1	2.32	0.65
5:BG:121:LEU:N	5:BG:125:THR:OG1	2.29	0.65
7:BI:42:ARG:NH2	34:B5:1678:A:OP2	2.25	0.65
20:BF:48:PHE:HE1	20:BF:68:ILE:H	1.45	0.65
41:AD:23:ARG:NH1	41:AD:23:ARG:O	2.28	0.65
7:BI:136:SER:HB3	7:BI:139:ALA:HB3	1.78	0.65
34:B5:1542:G:N1	34:B5:1568:C:O2'	2.26	0.65
38:A1:519:A:N6	55:AS:65:ASN:O	2.26	0.65
47:AJ:111:ASP:HB3	47:AJ:116:TYR:HB2	1.78	0.65
56:AT:8:ARG:HH12	56:AT:52:MET:HE3	1.62	0.65
63:Aa:24:LYS:O	63:Aa:26:ARG:HG2	1.96	0.65
79:E:48:ARG:NH2	79:E:159:LEU:O	2.29	0.65
80:DC:354:GLU:OE2	80:DC:370:LYS:NZ	2.29	0.65
4:BE:39:ARG:HG3	4:BE:40:GLU:OE1	1.97	0.65
10:BN:108:ASP:HB3	10:BN:111:ALA:HB3	1.78	0.65
34:B5:998:A:N6	34:B5:1004:U:OP2	2.28	0.65
38:A1:2228:A:H2'	38:A1:2229:A:C8	2.31	0.65
38:A1:2552:C:O2	65:Ac:53:LYS:NZ	2.30	0.65
38:A1:3016:A:H2'	38:A1:3017:A:H8	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:A3:6:C:OP1	41:AD:54:ARG:NH1	2.29	0.65
61:AY:50:ILE:HD13	61:AY:80:VAL:HG11	1.77	0.65
79:E:5:THR:OG1	79:E:8:GLN:NE2	2.27	0.65
81:EC:6835:U:H4'	81:EC:6836:U:H5'	1.78	0.65
2:BB:108:ASP:OD1	2:BB:109:LYS:N	2.29	0.65
34:B5:762:A:H2'	34:B5:763:G:C8	2.31	0.65
34:B5:1213:G:H1	34:B5:1450:U:H5	1.42	0.65
38:A1:3190:C:OP1	51:AO:172[A]:ARG:NH1	2.22	0.65
44:AG:93:LEU:HD21	44:AG:214:LEU:HD22	1.77	0.65
66:Ad:62:ARG:NH1	66:Ad:66:GLY:O	2.30	0.65
68:Af:16:TYR:OH	68:Af:89:LEU:O	2.15	0.65
73:Ak:27:ILE:HG23	73:Ak:39:ARG:HD3	1.78	0.65
81:EC:6777:C:H5'	81:EC:6778:C:H2'	1.78	0.65
21:BK:69:THR:HG22	21:BK:71:GLU:H	1.62	0.65
34:B5:787:G:H3'	34:B5:788:A:H8	1.61	0.65
38:A1:2635:A:N6	38:A1:2642:A:OP2	2.26	0.65
80:DC:740:VAL:O	80:DC:744:TYR:N	2.22	0.65
3:BC:233:GLN:HG2	3:BC:235:LEU:H	1.61	0.65
33:BM:22:VAL:HG13	33:BM:135:MET:HE1	1.79	0.65
38:A1:1210:U:H5'	45:AH:63:LYS:HD3	1.79	0.65
40:A4:29:U:H5"	48:AL:27:ASP:HB3	1.79	0.65
53:AQ:125:ASP:OD1	53:AQ:126:GLN:N	2.29	0.65
1:BA:48:ILE:HD13	1:BA:149:LEU:HD21	1.79	0.65
5:BG:188:ARG:NH2	34:B5:284:G:O5'	2.29	0.65
34:B5:222:A:H62	34:B5:832:U:H5'	1.61	0.65
34:B5:408:C:HO2'	34:B5:1732:A:HO2'	1.44	0.65
38:A1:640:U:OP1	63:Aa:21:ARG:NH2	2.30	0.65
38:A1:849:C:H2'	38:A1:850:U:C6	2.32	0.65
23:BQ:75:VAL:HG12	34:B5:1609:U:H5"	1.79	0.64
34:B5:1236:A:H2'	34:B5:1237:G:H8	1.63	0.64
34:B5:1537:C:O2'	34:B5:1571:C:N4	2.30	0.64
36:AB:315:GLY:HA2	38:A1:3379:C:H4'	1.78	0.64
37:AC:311:HIS:ND1	37:AC:311:HIS:O	2.29	0.64
80:DC:418:TYR:HB3	80:DC:477:ASN:HD21	1.62	0.64
1:BA:38:PHE:HE2	1:BA:49:ASN:OD1	1.80	0.64
5:BG:173:PRO:HA	34:B5:66:U:H5'	1.79	0.64
33:BM:33:ARG:HH12	33:BM:102:GLY:H	1.45	0.64
34:B5:1756[A]:A:OP2	38:A1:2256:A:N6	2.23	0.64
38:A1:411:U:H2'	38:A1:412:G:C8	2.31	0.64
38:A1:1456:A:H2	66:Ad:60:TRP:HZ3	1.46	0.64
38:A1:2222:A:H2'	38:A1:2223:A:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:AM:19:ARG:NH1	49:AM:69:THR:OG1	2.30	0.64
63:Aa:62:HIS:NE2	63:Aa:64:GLN:OE1	2.30	0.64
65:Ac:25:LEU:HD22	65:Ac:90:VAL:HG22	1.79	0.64
1:BA:30:GLN:NE2	1:BA:33:GLN:HG2	2.12	0.64
34:B5:953:G:H2'	34:B5:954:G:C8	2.32	0.64
34:B5:1280:4AC:H2'	34:B5:1281:G:C8	2.33	0.64
34:B5:1591:C:H2'	34:B5:1592:A:C8	2.33	0.64
38:A1:173:G:O6	38:A1:244:G:N2	2.30	0.64
38:A1:1784:G:H4'	69:Ag:19:LYS:HZ3	1.62	0.64
39:A3:8:G:O6	41:AD:21:ARG:NH2	2.30	0.64
44:AG:171:LYS:NZ	44:AG:223:ALA:O	2.27	0.64
45:AH:170:LYS:HA	45:AH:170:LYS:HE3	1.80	0.64
50:AN:96:ARG:HH22	50:AN:163:GLY:HA2	1.62	0.64
80:DC:42:ARG:HE	80:DC:331:ALA:HB3	1.62	0.64
8:BJ:150:LEU:O	8:BJ:154:LYS:NZ	2.30	0.64
38:A1:1128:U:OP1	46:AI:4:ARG:NH1	2.30	0.64
52:AP:48:LEU:HD22	52:AP:88:VAL:HG23	1.78	0.64
66:Ad:6:ASP:HB3	66:Ad:89:LEU:HD11	1.77	0.64
70:Ah:24:LEU:HB3	70:Ah:51:ILE:HG22	1.80	0.64
25:BS:40:ARG:CZ	26:BT:45:MET:HE3	2.28	0.64
39:A3:33:U:O2	41:AD:206:GLN:NE2	2.30	0.64
40:A4:22:U:OP1	61:AY:12:ARG:NH1	2.30	0.64
45:AH:87:LYS:HB2	45:AH:187:ILE:HD13	1.79	0.64
50:AN:67:ARG:NH2	50:AN:127:TYR:OH	2.28	0.64
3:BC:226:THR:OG1	3:BC:228:ASN:OD1	2.16	0.64
4:BE:187:ARG:HH12	34:B5:753:A:H8	1.43	0.64
23:BQ:81:ILE:O	23:BQ:85:ILE:HG12	1.98	0.64
28:BZ:46:LYS:O	28:BZ:50:ILE:HG12	1.97	0.64
34:B5:210:A:H62	34:B5:255:U:H3	1.46	0.64
38:A1:662:U:H2'	38:A1:663:C:C6	2.33	0.64
38:A1:759:U:OP1	77:Ao:18:ARG:NH1	2.29	0.64
38:A1:831:G:O2'	38:A1:1864:A:N3	2.30	0.64
38:A1:1874:A:OP2	54:AR:21:LYS:NZ	2.21	0.64
45:AH:69:ARG:O	45:AH:69:ARG:HD3	1.97	0.64
62:AZ:87:LEU:HD12	62:AZ:127:ASN:HD22	1.62	0.64
1:BA:49:ASN:O	1:BA:53:THR:HG23	1.98	0.64
5:BG:10:ASN:ND2	5:BG:127:THR:O	2.28	0.64
5:BG:172:ALA:HB3	34:B5:79:C:H5'	1.80	0.64
13:BW:31:SER:HB2	34:B5:636:A:H5"	1.79	0.64
31:Bg:66:HIS:CE1	31:Bg:67:ILE:HG12	2.33	0.64
33:BM:139:HIS:HB3	33:BM:143:GLN:HE21	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:58:ARG:NE	36:AB:74:GLU:OE1	2.31	0.64
38:A1:84:U:O2'	38:A1:101:G:O6	2.09	0.64
38:A1:664:U:H2'	38:A1:665:A:C8	2.32	0.64
38:A1:2769:A:H4'	77:Ao:80:ARG:HB2	1.80	0.64
39:A3:60:G:H4'	41:AD:273:ARG:NH2	2.12	0.64
81:EC:6790:A:H62	81:EC:6797:U:H5"	1.62	0.64
18:Be:34:ALA:HB2	34:B5:477:A:H5"	1.78	0.64
32:Bf:119:ARG:HB3	32:Bf:132:LEU:HD12	1.78	0.64
36:AB:97:ARG:NH2	38:A1:3244:A:OP1	2.31	0.64
38:A1:110:G:OP2	48:AL:73:ARG:NH1	2.30	0.64
38:A1:1280:C:H2'	38:A1:1281:G:C8	2.33	0.64
38:A1:2216:G:H22	38:A1:2229:A:H2	1.46	0.64
38:A1:2419:A:H2'	38:A1:2420:C:C6	2.32	0.64
38:A1:2438:A:H2'	38:A1:2439:A:C8	2.33	0.64
38:A1:2464:U:H2'	38:A1:2465:G:O4'	1.97	0.64
41:AD:64:ILE:HD12	41:AD:144:VAL:HG21	1.80	0.64
78:Ap:46:THR:OG1	78:Ap:57:CYS:SG	2.50	0.64
10:BN:69:ASN:HB3	10:BN:73:ARG:HB3	1.79	0.64
13:BW:14:ILE:HG22	13:BW:25:VAL:HG11	1.80	0.64
34:B5:25:C:HO2'	34:B5:366:A:HO2'	1.45	0.64
34:B5:499:U:O2'	34:B5:501:U:O4	2.15	0.64
38:A1:655:C:H2'	38:A1:656:A:C8	2.32	0.64
40:A4:147:U:H1'	60:AX:37:THR:HG23	1.78	0.64
42:AE:51:ARG:O	42:AE:72:ASN:ND2	2.29	0.64
62:AZ:107:ARG:O	62:AZ:111:LYS:HG2	1.98	0.64
80:DC:120:ARG:HH22	80:DC:481:MET:HA	1.62	0.64
1:BA:119:ARG:HH12	3:BC:240:LEU:C	2.06	0.64
4:BE:122:LYS:NZ	4:BE:123:LEU:O	2.31	0.64
34:B5:823:G:O6	34:B5:849:C:O2'	2.16	0.64
38:A1:1141:C:O2'	38:A1:1153:A:N3	2.30	0.64
38:A1:1628:C:O4'	38:A1:1814:A:N6	2.31	0.64
38:A1:1817:G:H8	38:A1:1818:U:H5	1.45	0.64
38:A1:2510:U:H2'	38:A1:2511:A:H8	1.63	0.64
38:A1:2896:A:OP1	75:Am:124:LYS:NZ	2.31	0.64
58:AV:45:ARG:HG2	58:AV:48:ARG:HE	1.61	0.64
3:BC:220:ASN:HA	12:BV:25:LYS:NZ	2.13	0.63
8:BJ:96:VAL:HA	8:BJ:99:LEU:HG	1.79	0.63
12:BV:2:GLU:N	12:BV:2:GLU:OE2	2.30	0.63
34:B5:1041:G:H2'	34:B5:1042:G:C8	2.32	0.63
34:B5:1346:A:H61	34:B5:1369:U:H3'	1.61	0.63
38:A1:305:U:O2	38:A1:2784:G:N2	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1083:G:H2'	38:A1:1084:A:C8	2.33	0.63
38:A1:2303:A:OP1	76:An:23:ARG:NH1	2.30	0.63
45:AH:163:GLN:OE1	45:AH:166:ARG:NH2	2.31	0.63
53:AQ:43:PRO:HA	53:AQ:46:LYS:HE2	1.80	0.63
61:AY:51:ARG:HG2	61:AY:52:ARG:H	1.63	0.63
23:BQ:94:GLN:OE1	31:Bg:60:SER:OG	2.16	0.63
34:B5:983:A:N1	34:B5:1018:U:H5	1.96	0.63
38:A1:63:A:N3	38:A1:78:U:O2'	2.28	0.63
38:A1:1130:A:HO2'	38:A1:2825:C:HO2'	1.46	0.63
38:A1:1471:U:OP1	54:AR:5:ARG:NH2	2.30	0.63
41:AD:107:ARG:NH1	41:AD:119:TYR:O	2.30	0.63
49:AM:19:ARG:HB3	49:AM:35:ILE:HD12	1.79	0.63
69:Ag:25:THR:OG1	69:Ag:29:ILE:O	2.15	0.63
69:Ag:41:ARG:O	69:Ag:43:LYS:NZ	2.29	0.63
8:BJ:80:LEU:HD12	8:BJ:85:VAL:CG1	2.28	0.63
31:Bg:42:LEU:HB2	31:Bg:61:PHE:HB2	1.79	0.63
31:Bg:123:ILE:HG22	31:Bg:133:VAL:HG12	1.80	0.63
34:B5:1071:U:H2'	34:B5:1072:C:C6	2.33	0.63
38:A1:443:G:N1	38:A1:492:C:OP2	2.25	0.63
51:AO:12[A]:LYS:O	55:AS:167:ARG:NH1	2.30	0.63
1:BA:88:LYS:HE2	1:BA:201:LEU:HD12	1.81	0.63
7:BI:137:LYS:O	34:B5:190:C:N4	2.32	0.63
29:Bc:44:VAL:HG21	29:Bc:48:VAL:HG11	1.81	0.63
37:AC:185:LYS:HZ3	37:AC:199:TRP:CG	2.17	0.63
38:A1:196:G:N1	38:A1:199:A:OP2	2.31	0.63
38:A1:1310:G:H2'	38:A1:1311:G:H8	1.64	0.63
38:A1:3146:G:H2'	38:A1:3147:G:H8	1.62	0.63
65:Ac:43:ILE:HG13	65:Ac:68:TYR:HB3	1.80	0.63
80:DC:465:LYS:HD3	80:DC:516:PRO:HA	1.80	0.63
7:BI:191:PHE:HB3	7:BI:195:ARG:NH2	2.14	0.63
31:Bg:259:GLY:HA3	31:Bg:275:ARG:HG2	1.81	0.63
34:B5:239:C:N4	34:B5:242:U:OP1	2.31	0.63
34:B5:1474:G:H2'	34:B5:1475:A:H8	1.63	0.63
36:AB:30:LYS:NZ	38:A1:3138:U:OP2	2.24	0.63
38:A1:597:G:H2'	38:A1:598:A:H8	1.61	0.63
38:A1:2504:U:HO2'	38:A1:2505:U:H6	1.46	0.63
43:AF:150:LYS:HG3	43:AF:151:ARG:HG2	1.80	0.63
57:AU:34:ALA:O	57:AU:38:ILE:HD12	1.99	0.63
14:BX:75:GLN:OE1	14:BX:82:LYS:NZ	2.23	0.63
15:BY:20:ARG:HE	15:BY:74:LEU:HD23	1.62	0.63
20:BF:51:VAL:HG22	20:BF:131:GLN:HG2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BF:120:ILE:HD11	28:BZ:100:ILE:HG12	1.81	0.63
32:Bf:133:ALA:N	32:Bf:140:TYR:O	2.31	0.63
34:B5:199:G:H2'	34:B5:200:A:H8	1.63	0.63
34:B5:1484:G:N2	34:B5:1606:C:O2	2.32	0.63
38:A1:952:A:H4'	38:A1:968:G:H22	1.64	0.63
42:AE:56:LYS:NZ	42:AE:101:PHE:O	2.31	0.63
10:BN:110:ASP:O	10:BN:114:ARG:HG2	1.99	0.63
19:BD:5:ILE:HG23	19:BD:10:LYS:HB2	1.80	0.63
34:B5:1426:C:O2'	34:B5:1428:G:OP2	2.14	0.63
34:B5:1524:A:N3	34:B5:1590:G:O2'	2.29	0.63
35:AA:227:ARG:HB2	35:AA:239:ALA:HB2	1.79	0.63
38:A1:1094:U:OP1	56:AT:116:ARG:NH1	2.31	0.63
38:A1:1661:G:H2'	38:A1:1662:G:C8	2.34	0.63
38:A1:1831:U:O2'	40:A4:114:G:OP1	2.14	0.63
72:Aj:48:ASN:OD1	72:Aj:54:LYS:NZ	2.28	0.63
3:BC:39:THR:HG23	3:BC:42:GLY:H	1.63	0.63
13:BW:22:LYS:HG2	17:Bb:3:LEU:HA	1.81	0.63
27:BU:85:ARG:NH2	34:B5:1334:U:O2'	2.31	0.63
28:BZ:83:LEU:HD23	28:BZ:86:GLU:HG3	1.79	0.63
34:B5:1266:U:H2'	34:B5:1267:G:C8	2.34	0.63
34:B5:1267:G:O2'	34:B5:1448:G:O2'	2.16	0.63
35:AA:64:ARG:NH2	44:AG:38:GLN:O	2.32	0.63
36:AB:227:GLU:CD	36:AB:270:ARG:HE	2.06	0.63
38:A1:182:U:O2	38:A1:234:G:N2	2.26	0.63
56:AT:45:ASN:H	56:AT:95:HIS:HD2	1.47	0.63
8:BJ:129:ILE:HA	8:BJ:134:ILE:HB	1.81	0.63
15:BY:60:PHE:HB3	34:B5:523:G:H5'	1.81	0.63
21:BK:11:ILE:HG12	21:BK:42:VAL:HG22	1.80	0.63
26:BT:86:ARG:NH1	26:BT:90:PRO:O	2.31	0.63
34:B5:15:U:O2'	34:B5:620:A:N6	2.31	0.63
34:B5:29:U:H2'	34:B5:30:G:H8	1.63	0.63
38:A1:443:G:O2'	38:A1:492:C:N4	2.32	0.63
38:A1:847:A:H2'	38:A1:848:A:C8	2.33	0.63
38:A1:2468:A:N1	38:A1:2477:G:H2'	2.14	0.63
38:A1:2468:A:O2'	38:A1:2478:C:O2	2.17	0.63
38:A1:2555:G:N1	69:Ag:96:GLU:OE2	2.32	0.63
38:A1:2681:U:O3'	47:AJ:48:SER:OG	2.13	0.63
40:A4:81:U:H4'	40:A4:82:U:H5'	1.81	0.63
80:DC:122:THR:O	80:DC:352:ARG:NH1	2.28	0.63
7:BI:140:GLU:HA	7:BI:143:TRP:CE2	2.34	0.62
8:BJ:171:ARG:HH22	34:B5:538:A:H8	1.46	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BF:111:VAL:HA	20:BF:114:ILE:HG12	1.81	0.62
20:BF:196:GLU:O	20:BF:200:ASN:ND2	2.31	0.62
38:A1:589:A:H1'	38:A1:1337:A:H5"	1.79	0.62
38:A1:616:G:H2'	38:A1:617:G:C8	2.34	0.62
38:A1:677:A:N1	38:A1:703:G:O2'	2.29	0.62
38:A1:1307:G:O4'	51:AO:60[A]:LYS:NZ	2.32	0.62
38:A1:1348:U:OP1	53:AQ:39:ARG:NH1	2.32	0.62
38:A1:2986:U:H2'	38:A1:2987:A:H8	1.64	0.62
62:AZ:113:VAL:HA	62:AZ:116:LYS:HE3	1.80	0.62
81:EC:6788:C:H3'	81:EC:6805:C:H42	1.63	0.62
81:EC:6862:G:H1	81:EC:6868:C:H2'	1.65	0.62
2:BB:209:ASN:HB2	2:BB:211:HIS:CE1	2.34	0.62
14:BX:89:ASN:N	34:B5:569:C:OP1	2.28	0.62
14:BX:90:ASP:OD1	14:BX:136:TRP:NE1	2.30	0.62
15:BY:42:GLU:HB3	15:BY:52:LYS:HE2	1.81	0.62
31:Bg:252:LEU:HB3	31:Bg:263:PHE:HB2	1.82	0.62
34:B5:1114:G:O2'	34:B5:1130:G:O6	2.16	0.62
38:A1:531:G:H2'	38:A1:532:A:C8	2.34	0.62
38:A1:1492:G:O3'	74:Al:48:LYS:NZ	2.31	0.62
40:A4:133:G:OP1	60:AX:94:GLN:NE2	2.32	0.62
42:AE:108:LYS:HG2	42:AE:109:GLU:HG3	1.79	0.62
57:AU:20:SER:HA	57:AU:23:THR:HG22	1.81	0.62
62:AZ:52:LYS:O	62:AZ:65:ARG:NH2	2.31	0.62
7:BI:57:ALA:HB2	7:BI:177:GLY:HA2	1.80	0.62
35:AA:168:VAL:HG13	78:Ap:79:VAL:HG21	1.81	0.62
36:AB:380:MET:HE2	36:AB:383:LEU:HD21	1.80	0.62
38:A1:377:A:N6	38:A1:400:G:O2'	2.33	0.62
38:A1:627:U:H2'	38:A1:628:A:C8	2.34	0.62
38:A1:780:A:N7	53:AQ:178:ARG:NH2	2.47	0.62
38:A1:1814:A:H1'	38:A1:1817:G:H21	1.63	0.62
38:A1:2991:A:O2'	38:A1:3309:G:N7	2.31	0.62
4:BE:175:PHE:HE1	4:BE:198:LYS:HD2	1.64	0.62
28:BZ:60:VAL:HG13	28:BZ:65:LEU:HD11	1.80	0.62
34:B5:65:A:H2	34:B5:84:A:H62	1.47	0.62
38:A1:2465:G:H1	38:A1:2492:C:H42	1.46	0.62
38:A1:3289:G:H2'	38:A1:3290:G:H8	1.64	0.62
40:A4:52:A:H5'	74:Al:21:ARG:HH21	1.65	0.62
80:DC:647:ILE:O	80:DC:688:ILE:N	2.26	0.62
5:BG:219:ARG:NH2	34:B5:242:U:OP1	2.32	0.62
9:BL:103:ARG:NH1	34:B5:308:C:OP2	2.32	0.62
16:Ba:19:LYS:NZ	34:B5:928:U:OP1	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:295:SER:OG	31:Bg:297:ASP:OD1	2.10	0.62
33:BM:62:LEU:HD22	33:BM:75:VAL:HG11	1.81	0.62
38:A1:1310:G:H2'	38:A1:1311:G:C8	2.35	0.62
46:AI:19:LYS:NZ	46:AI:24:ARG:O	2.33	0.62
47:AJ:84:LEU:HD13	47:AJ:87:LYS:HB3	1.81	0.62
7:BI:44:HIS:ND1	34:B5:1676:U:OP1	2.33	0.62
7:BI:137:LYS:HG2	34:B5:188:A:H5'	1.82	0.62
8:BJ:110:GLN:NE2	8:BJ:126:ARG:HB2	2.14	0.62
19:BD:27:ARG:HD2	21:BK:60:SER:HB2	1.82	0.62
27:BU:79:TRP:HZ3	34:B5:1603:U:O3'	1.82	0.62
27:BU:97:VAL:HA	27:BU:100:VAL:HG22	1.81	0.62
30:Bd:30:LEU:HD21	30:Bd:37:ASN:HA	1.82	0.62
31:Bg:114:ASP:OD2	31:Bg:156:VAL:N	2.32	0.62
34:B5:1483:A:H2'	34:B5:1484:G:C8	2.34	0.62
35:AA:38:HIS:O	35:AA:92:LYS:HE3	2.00	0.62
38:A1:1110:PSU:OP1	53:AQ:164:ARG:NH2	2.32	0.62
38:A1:1836:C:O2'	38:A1:1842:A:N1	2.30	0.62
38:A1:2421:U:H4'	77:Ao:53:GLN:HB3	1.82	0.62
47:AJ:109:HIS:HA	47:AJ:112:LEU:HB3	1.80	0.62
48:AL:2:ALA:HB3	63:Aa:41:HIS:CE1	2.35	0.62
2:BB:165:ARG:NH1	34:B5:946:U:H5"	2.15	0.62
4:BE:208:VAL:HG21	4:BE:225:VAL:HG11	1.82	0.62
26:BT:22:LEU:HD13	26:BT:28:LEU:HD11	1.80	0.62
34:B5:107:C:H2'	34:B5:108:A:H8	1.64	0.62
36:AB:45:SER:HB3	36:AB:181:ILE:HD12	1.82	0.62
38:A1:2611:U:H2'	38:A1:2612:U:C6	2.35	0.62
41:AD:95:TRP:HA	41:AD:158:ARG:HG3	1.81	0.62
20:BF:40:ILE:HG21	20:BF:67:PRO:HB2	1.81	0.62
31:Bg:16:HIS:NE2	31:Bg:35:SER:OG	2.30	0.62
34:B5:632:PSU:O2'	34:B5:1103:U:OP1	2.17	0.62
34:B5:1552:U:H2'	34:B5:1553:G:C8	2.34	0.62
38:A1:297:G:OP2	38:A1:297:G:N2	2.29	0.62
38:A1:786:A:H4'	38:A1:787:G:H5'	1.80	0.62
44:AG:183:LYS:HD2	44:AG:194:THR:HG21	1.82	0.62
80:DC:608:PRO:HA	80:DC:615:ARG:HH12	1.64	0.62
8:BJ:139:GLN:NE2	15:BY:64:PHE:O	2.32	0.62
34:B5:534:A:H3'	34:B5:535:A:C8	2.34	0.62
34:B5:891:A:H2'	34:B5:892:A:H8	1.64	0.62
34:B5:1132:A:H2'	34:B5:1133:A:H8	1.64	0.62
34:B5:1272:U:O2'	34:B5:1275:A:OP2	2.18	0.62
34:B5:1521:G:O2'	34:B5:1523:G:OP2	2.17	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:838:G:N7	78:Ap:4:ARG:NH2	2.46	0.62
38:A1:1613:A:OP1	73:Ak:51:LEU:N	2.27	0.62
80:DC:172:GLU:HA	80:DC:274:ASN:HD21	1.65	0.62
7:BI:180:ASP:OD2	34:B5:209:U:H1'	2.00	0.62
20:BF:94:THR:HG21	20:BF:111:VAL:HG12	1.81	0.62
23:BQ:24:ALA:HA	23:BQ:63:ILE:HD13	1.80	0.62
36:AB:4:ARG:HD3	36:AB:7:GLU:HA	1.81	0.62
37:AC:195:ARG:NH1	38:A1:340:C:OP2	2.26	0.62
38:A1:2854:U:OP2	46:AI:3:ARG:NH1	2.32	0.62
39:A3:107:C:H2'	39:A3:108:A:C8	2.35	0.62
79:E:31:THR:OG1	79:E:60:ARG:NH1	2.33	0.62
80:DC:27:HIS:HB2	80:DC:139:THR:HG23	1.81	0.62
21:BK:55:VAL:HA	21:BK:67:THR:O	1.99	0.61
22:BP:126:VAL:HG11	34:B5:1458:G:H21	1.63	0.61
24:BR:31:ASN:ND2	24:BR:54:THR:HG23	2.15	0.61
38:A1:268:A:O2'	50:AN:14:LYS:NZ	2.30	0.61
38:A1:3163:A:N6	38:A1:3288:G:O6	2.33	0.61
41:AD:83:LEU:HD12	41:AD:88:ILE:HD12	1.82	0.61
55:AS:73:LYS:NZ	55:AS:97:VAL:O	2.32	0.61
78:Ap:46:THR:HB	78:Ap:58:SER:HB3	1.82	0.61
80:DC:18:ASN:ND2	80:DC:93:THR:OG1	2.33	0.61
1:BA:11:PRO:HD3	24:BR:117:LEU:HD11	1.82	0.61
5:BG:2:LYS:O	5:BG:108:VAL:HA	1.98	0.61
5:BG:31:ARG:NH2	34:B5:1681:A:O3'	2.28	0.61
5:BG:48:TYR:HE2	5:BG:119:GLN:HG3	1.65	0.61
34:B5:1355:C:H42	34:B5:1369:U:H3	1.47	0.61
38:A1:129:U:H2'	38:A1:130:A:C8	2.35	0.61
38:A1:1523:U:O2'	60:AX:111:ASN:ND2	2.32	0.61
40:A4:59:A:O3'	60:AX:61:LYS:NZ	2.32	0.61
47:AJ:13:LYS:N	47:AJ:132:ASN:O	2.32	0.61
79:E:50:SER:HA	79:E:157:PHE:HB2	1.81	0.61
80:DC:367:ILE:HD12	80:DC:370:LYS:HD3	1.83	0.61
19:BD:70:THR:HG23	19:BD:86:LEU:HD13	1.82	0.61
27:BU:77:LYS:NZ	34:B5:1197:C:OP1	2.32	0.61
34:B5:58:U:O2'	34:B5:451:A:N3	2.31	0.61
34:B5:163:G:N2	34:B5:163:G:OP2	2.30	0.61
34:B5:1042:G:N2	34:B5:1077:C:O2	2.33	0.61
34:B5:1245:G:N1	34:B5:1249:U:O4	2.32	0.61
36:AB:100:ARG:NH2	38:A1:3244:A:OP2	2.31	0.61
38:A1:228:U:H5"	61:AY:8:VAL:HG11	1.82	0.61
38:A1:2654:C:OP2	77:Ao:2:VAL:N	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:A3:34:C:O2'	41:AD:198:TYR:OH	2.17	0.61
39:A3:50:PSU:O2'	41:AD:221:GLU:O	2.17	0.61
41:AD:184:ASP:OD1	41:AD:185:PHE:N	2.33	0.61
80:DC:24:VAL:HG22	80:DC:126:LEU:HD23	1.80	0.61
80:DC:285:PHE:O	80:DC:289:MET:HG2	2.00	0.61
14:BX:70:LYS:HB3	14:BX:93:LEU:HD22	1.82	0.61
19:BD:127:MET:HE2	19:BD:127:MET:HA	1.83	0.61
28:BZ:88:ILE:HG13	28:BZ:89:ILE:HG23	1.82	0.61
34:B5:1366:U:H2'	34:B5:1367:G:C8	2.35	0.61
38:A1:617:G:OP1	42:AE:108:LYS:NZ	2.32	0.61
38:A1:986:PSU:H2'	38:A1:987:U:C6	2.35	0.61
38:A1:1062:A:H5"	38:A1:1063:G:H5'	1.81	0.61
38:A1:1497:C:H2'	38:A1:1498:A:H8	1.63	0.61
41:AD:166:ALA:HB1	41:AD:171:LEU:HD23	1.82	0.61
47:AJ:32:ARG:NH1	47:AJ:120:ILE:O	2.29	0.61
77:Ao:7:THR:HB	77:Ao:22:GLN:NE2	2.14	0.61
80:DC:404:THR:HG22	80:DC:449:PRO:HA	1.82	0.61
1:BA:67:ILE:HD11	1:BA:119:ARG:HE	1.66	0.61
2:BB:89:ASP:HB3	2:BB:223:PHE:HZ	1.65	0.61
3:BC:90:THR:OG1	3:BC:93:GLY:O	2.16	0.61
6:BH:162:ILE:HG22	6:BH:165:LYS:HE3	1.82	0.61
37:AC:191:LYS:NZ	38:A1:341:G:OP2	2.27	0.61
38:A1:1621:A:H2'	38:A1:1622:U:C6	2.36	0.61
38:A1:3028:G:H4'	80:DC:28:VAL:HG21	1.82	0.61
55:AS:66:GLU:OE2	55:AS:99:ARG:N	2.29	0.61
58:AV:85:TRP:NE1	58:AV:121:GLU:OE2	2.27	0.61
63:Aa:19:LYS:HB3	63:Aa:25:HIS:HB2	1.82	0.61
66:Ad:51:LEU:HD13	66:Ad:93:VAL:HB	1.81	0.61
80:DC:542:LEU:HG	80:DC:545:LEU:HD12	1.82	0.61
5:BG:39:GLU:HG3	5:BG:46:LYS:HA	1.81	0.61
6:BH:115:SER:O	34:B5:856:A:N6	2.33	0.61
8:BJ:37:LYS:NZ	34:B5:476:U:O4	2.30	0.61
8:BJ:162:SER:O	8:BJ:166:GLY:N	2.33	0.61
17:Bb:51:GLN:NE2	34:B5:870:C:O2	2.33	0.61
21:BK:7:ASP:O	21:BK:11:ILE:HD12	2.00	0.61
23:BQ:41:PRO:HD2	23:BQ:44:LEU:HB2	1.83	0.61
26:BT:38:LYS:NZ	34:B5:1564:U:OP1	2.25	0.61
36:AB:227:GLU:OE1	36:AB:270:ARG:NE	2.33	0.61
38:A1:1817:G:H8	38:A1:1818:U:C5	2.19	0.61
38:A1:2356:A:H2	52:AP:131:ARG:HH22	1.48	0.61
38:A1:3192:U:O4	38:A1:3200:G:O6	2.19	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:AG:139:VAL:HG11	44:AG:197:VAL:HG11	1.82	0.61
51:AO:118[A]:VAL:HG11	55:AS:163:PHE:HB3	1.82	0.61
52:AP:67:ILE:HD11	52:AP:80:LYS:HB3	1.82	0.61
78:Ap:7:LYS:O	78:Ap:27:LYS:NZ	2.31	0.61
4:BE:139:VAL:HG13	4:BE:150:PRO:HG3	1.82	0.61
7:BI:67:TRP:HB2	7:BI:109:PHE:HE1	1.65	0.61
20:BF:95:ASN:HD21	34:B5:1611:A:H4'	1.64	0.61
20:BF:99:MET:HE1	34:B5:1165:G:H4'	1.82	0.61
28:BZ:95:HIS:HB3	28:BZ:98:GLN:HE21	1.66	0.61
31:Bg:61:PHE:CE1	31:Bg:97:GLY:HA2	2.36	0.61
34:B5:105:A:N6	34:B5:308:C:O2	2.33	0.61
34:B5:1603:U:H2'	34:B5:1604:U:C6	2.36	0.61
36:AB:54:THR:OG1	36:AB:360:ASP:O	2.17	0.61
38:A1:2674:A:H5"	47:AJ:105:GLY:HA3	1.82	0.61
63:Aa:36:GLY:HA3	63:Aa:40:HIS:CE1	2.35	0.61
2:BB:179:SER:HB2	2:BB:183:GLN:HG3	1.83	0.61
3:BC:141:ARG:HH12	12:BV:11:LEU:HD11	1.64	0.61
20:BF:112:ARG:NH2	23:BQ:42:GLU:OE2	2.33	0.61
26:BT:130:ARG:HH22	34:B5:1359:C:H5"	1.64	0.61
38:A1:673:U:H2'	38:A1:674:G:C8	2.36	0.61
38:A1:683:U:OP1	50:AN:204:LYS:NZ	2.33	0.61
38:A1:1686:U:OP1	57:AU:42:LYS:NZ	2.33	0.61
38:A1:1884:A:P	66:Ad:31:ARG:HH22	2.23	0.61
38:A1:2344:U:H2'	38:A1:2345:A:C8	2.35	0.61
38:A1:3247:G:H2'	38:A1:3248:C:C6	2.36	0.61
45:AH:21:LYS:HD2	49:AM:8:LYS:HG3	1.82	0.61
52:AP:42:THR:O	52:AP:46:LYS:HG2	2.00	0.61
69:Ag:106:LYS:HA	69:Ag:109:THR:HG22	1.82	0.61
77:Ao:70:LEU:HD13	77:Ao:85:LEU:HD13	1.82	0.61
5:BG:174:LYS:HG3	34:B5:78:A:H2	1.65	0.61
7:BI:47:ARG:NH1	7:BI:48:THR:O	2.33	0.61
10:BN:5:HIS:CD2	10:BN:121:ARG:HH21	2.18	0.61
26:BT:112:GLY:O	26:BT:125:SER:OG	2.16	0.61
32:Bf:87:THR:O	34:B5:1445:G:N2	2.28	0.61
34:B5:1280:4AC:H2'	34:B5:1281:G:H8	1.66	0.61
34:B5:1594:G:OP2	34:B5:1596:C:N4	2.33	0.61
38:A1:428:A:H2'	38:A1:429:U:C6	2.35	0.61
38:A1:2217:U:H2'	38:A1:2218:G:C8	2.36	0.61
39:A3:23:A:H2'	39:A3:24:A:H8	1.64	0.61
46:AI:189:GLU:HB3	46:AI:216:TYR:CD2	2.35	0.61
47:AJ:47:GLN:HE22	47:AJ:67:VAL:HG22	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:Af:39:GLN:OE1	68:Af:39:GLN:N	2.23	0.61
4:BE:30:ARG:NH2	34:B5:298:C:O3'	2.33	0.61
19:BD:76:ARG:NH1	19:BD:76:ARG:O	2.33	0.61
22:BP:25:LEU:HA	22:BP:28:MET:HB2	1.83	0.61
34:B5:1360:A:N6	34:B5:1364:G:O6	2.34	0.61
34:B5:1477:G:H2'	34:B5:1478:G:H8	1.66	0.61
38:A1:2406:C:H2'	38:A1:2407:C:C6	2.35	0.61
38:A1:2745:G:N2	38:A1:2748:A:OP2	2.24	0.61
38:A1:3029:A:H4'	80:DC:536:LEU:HD13	1.82	0.61
20:BF:130:ILE:HA	20:BF:133:VAL:HG12	1.81	0.60
24:BR:111:LYS:HE3	24:BR:119:LEU:HD22	1.82	0.60
37:AC:58:HIS:CE1	37:AC:98:ARG:HE	2.17	0.60
38:A1:1157:G:O2'	38:A1:1169:A:N3	2.32	0.60
38:A1:2438:A:H2'	38:A1:2439:A:H8	1.66	0.60
38:A1:2642:A:O2'	64:Ab:6:ASN:ND2	2.34	0.60
46:AI:74:LYS:HD3	46:AI:78:LYS:HZ1	1.65	0.60
50:AN:38:ARG:NH1	50:AN:39:ALA:O	2.34	0.60
27:BU:74:GLU:OE1	34:B5:1428:G:N2	2.21	0.60
34:B5:702:G:O2'	34:B5:703:G:O5'	2.17	0.60
34:B5:754:A:H5'	34:B5:755:A:H5'	1.82	0.60
34:B5:1690:G:O6	34:B5:1707:A:N6	2.34	0.60
35:AA:156:LYS:HG2	35:AA:158:ILE:HG23	1.83	0.60
38:A1:2954:U:H4'	38:A1:2955:U:H5'	1.82	0.60
38:A1:3066:U:H2'	38:A1:3067:C:C6	2.36	0.60
53:AQ:107:THR:HG22	53:AQ:109:GLY:H	1.67	0.60
80:DC:736:PRO:HG3	80:DC:791:GLN:HB3	1.82	0.60
3:BC:56:ILE:HG23	3:BC:61:LEU:HB2	1.82	0.60
19:BD:38:GLU:HG3	19:BD:49:ILE:HB	1.83	0.60
34:B5:752:A:O2'	34:B5:753:A:OP1	2.19	0.60
34:B5:1157:A:N6	34:B5:1618:C:O2	2.35	0.60
34:B5:1474:G:H2'	34:B5:1475:A:C8	2.36	0.60
34:B5:1588:G:H1	34:B5:1608:U:H3	1.49	0.60
35:AA:52:SER:HB3	35:AA:191:LEU:HD12	1.82	0.60
38:A1:3308:C:O2'	52:AP:69:ARG:O	2.18	0.60
49:AM:116:GLU:HA	49:AM:119:GLN:OE1	2.01	0.60
63:Aa:94:ALA:HB2	63:Aa:121:VAL:HG12	1.84	0.60
68:Af:49:ILE:HD11	68:Af:71:VAL:HG22	1.82	0.60
80:DC:694:HIS:H	80:DC:700:ARG:HD3	1.66	0.60
15:BY:86:GLU:OE2	15:BY:90:ARG:HB3	2.00	0.60
19:BD:51:ARG:HB3	19:BD:91:VAL:HG22	1.83	0.60
20:BF:133:VAL:HG23	20:BF:198:LEU:HD22	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:221:ASN:ND2	38:A1:209:A:N3	2.50	0.60
37:AC:350:LYS:HD2	37:AC:351:PRO:HD2	1.83	0.60
38:A1:68:C:OP2	38:A1:301:G:N2	2.28	0.60
38:A1:577:C:O2'	38:A1:579:G:OP1	2.18	0.60
38:A1:1315:U:O4	51:AO:49[A]:ARG:NH1	2.34	0.60
38:A1:1497:C:H2'	38:A1:1498:A:C8	2.36	0.60
38:A1:2836:C:H5	38:A1:2852:C:H42	1.47	0.60
38:A1:2901:G:O3'	45:AH:170:LYS:NZ	2.35	0.60
80:DC:504:LEU:HD23	80:DC:504:LEU:H	1.67	0.60
1:BA:180:GLU:HA	1:BA:183:ARG:HG2	1.84	0.60
5:BG:56:ASN:ND2	34:B5:153:G:H21	1.92	0.60
8:BJ:20:GLU:OE2	8:BJ:22:SER:OG	2.19	0.60
13:BW:28:ARG:HH22	34:B5:864:U:P	2.24	0.60
23:BQ:46:PHE:HA	23:BQ:49:TYR:HB2	1.83	0.60
31:Bg:219:GLU:HA	31:Bg:235:SER:HA	1.84	0.60
35:AA:39:GLY:HA2	35:AA:93:LYS:HD3	1.84	0.60
38:A1:172:G:N3	38:A1:173:G:N2	2.38	0.60
38:A1:1694:U:H5	38:A1:1752:A:N1	2.00	0.60
55:AS:8:GLN:HB3	55:AS:64:ILE:HD11	1.84	0.60
73:Ak:63:LYS:O	73:Ak:67:GLN:HG2	2.01	0.60
1:BA:184:LEU:HD21	12:BV:45:ALA:HB3	1.82	0.60
4:BE:104:ASP:HB3	4:BE:110:ALA:HB2	1.83	0.60
8:BJ:55:ALA:O	8:BJ:59:LEU:HB2	2.02	0.60
10:BN:64:ARG:HH11	10:BN:70:LYS:HE3	1.66	0.60
12:BV:66:ASP:OD1	12:BV:67:ASP:N	2.34	0.60
25:BS:38:VAL:HG13	25:BS:42:TYR:HD1	1.65	0.60
34:B5:29:U:H2'	34:B5:30:G:C8	2.37	0.60
34:B5:86:A:H2'	34:B5:87:C:H6	1.66	0.60
34:B5:1567:U:H2'	34:B5:1568:C:C2	2.37	0.60
38:A1:26:A:N3	38:A1:328:U:O2'	2.35	0.60
38:A1:708:G:N2	38:A1:711:A:OP2	2.32	0.60
38:A1:1290:A:H2'	38:A1:1291:A:C8	2.37	0.60
38:A1:1646:G:O2'	38:A1:1808:G:N2	2.33	0.60
38:A1:3214:U:OP2	49:AM:128:ARG:NH1	2.28	0.60
38:A1:3225:C:H2'	38:A1:3226:A:C8	2.37	0.60
40:A4:9:A:H2'	40:A4:10:A:C8	2.36	0.60
40:A4:94:C:OP1	72:Aj:75:LYS:NZ	2.33	0.60
43:AF:149:TYR:OH	43:AF:182:ASP:OD1	2.16	0.60
48:AL:42:ARG:O	48:AL:46:ILE:HG12	2.01	0.60
50:AN:163:GLY:O	50:AN:172:ARG:NH1	2.34	0.60
80:DC:586:ILE:HG23	80:DC:691:VAL:HG12	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:135:GLU:OE1	34:B5:1321:A:N6	2.34	0.60
7:BI:5:ARG:NH2	34:B5:334:G:O6	2.34	0.60
8:BJ:78:ARG:HH21	8:BJ:79:ARG:HG2	1.67	0.60
12:BV:74:GLN:HG3	12:BV:83:TRP:HB3	1.83	0.60
15:BY:8:ARG:HH22	15:BY:28:LEU:HD13	1.67	0.60
34:B5:487:G:H2'	34:B5:488:G:H4'	1.84	0.60
34:B5:647:G:N2	34:B5:648:G:O6	2.34	0.60
37:AC:74:ILE:HD12	37:AC:75:PRO:HD2	1.82	0.60
38:A1:307:A:H2'	38:A1:308:A:C8	2.37	0.60
38:A1:535:G:N2	38:A1:536:U:O4	2.32	0.60
38:A1:745:C:H2'	38:A1:746:A:H8	1.66	0.60
38:A1:1320:C:O2	55:AS:115:ARG:NH2	2.35	0.60
38:A1:1340:G:H2'	38:A1:1341:U:C6	2.36	0.60
73:Ak:3:ARG:O	73:Ak:52:TYR:HA	2.02	0.60
80:DC:403:GLY:H	80:DC:450:ALA:HB2	1.67	0.60
4:BE:69:HIS:CE1	4:BE:92:LEU:HD12	2.37	0.60
4:BE:131:LEU:HD12	34:B5:251:A:H2	1.65	0.60
11:BO:127:ARG:HH22	34:B5:1787:C:H5"	1.66	0.60
24:BR:4:VAL:HG12	34:B5:1402:G:H4'	1.83	0.60
34:B5:1174:C:H42	34:B5:1465:C:H42	1.49	0.60
38:A1:1553:U:H4'	38:A1:1554:U:H5'	1.83	0.60
80:DC:108:HIS:O	80:DC:138:GLN:NE2	2.34	0.60
6:BH:141:ARG:HH11	6:BH:149:ILE:HG21	1.66	0.60
10:BN:46:THR:OG1	10:BN:90:TYR:OH	2.19	0.60
21:BK:89:GLY:H	21:BK:91:TYR:HE2	1.50	0.60
34:B5:532:U:H2'	34:B5:533:U:O4'	2.02	0.60
34:B5:1146:G:H2'	34:B5:1147:A:H8	1.65	0.60
34:B5:1525:A:H2'	34:B5:1526:A:C8	2.36	0.60
37:AC:129:THR:HG21	37:AC:248:VAL:HB	1.83	0.60
37:AC:291:ASN:HA	37:AC:296:GLN:HE21	1.66	0.60
38:A1:242:C:N4	38:A1:243:G:O6	2.34	0.60
38:A1:792:G:H2'	38:A1:793:C:H6	1.66	0.60
38:A1:1120:A:H2'	38:A1:1121:U:H6	1.67	0.60
38:A1:3277:U:H5"	38:A1:3278:C:C5	2.37	0.60
40:A4:152:G:OP1	44:AG:60:ARG:NH1	2.35	0.60
47:AJ:10:ARG:HH21	47:AJ:151:SER:HB2	1.66	0.60
61:AY:69:LYS:NZ	61:AY:70:ILE:O	2.34	0.60
1:BA:8:ASP:HB2	24:BR:115:LEU:HD11	1.84	0.60
6:BH:51:VAL:HG23	6:BH:53:GLY:H	1.65	0.60
20:BF:83:ARG:O	20:BF:86:GLN:NE2	2.35	0.60
34:B5:340:U:H2'	34:B5:341:A:C8	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:649:U:C2	34:B5:684:A:N6	2.70	0.60
34:B5:1290:PSU:H2'	34:B5:1291:G:C8	2.37	0.60
34:B5:1669:U:H3	34:B5:1732:A:H62	1.48	0.60
35:AA:217:GLN:NE2	38:A1:2959:C:OP1	2.34	0.60
38:A1:41:G:N2	38:A1:2803:A:N7	2.49	0.60
38:A1:1037:C:H2'	38:A1:1038:C:C6	2.37	0.60
40:A4:9:A:H2'	40:A4:10:A:H8	1.66	0.60
40:A4:107:G:H4'	40:A4:138:A:H5'	1.84	0.60
41:AD:155:THR:HG23	41:AD:179:ARG:HA	1.84	0.60
43:AF:125:GLU:HA	43:AF:128:LYS:HE2	1.83	0.60
48:AL:105:ASN:N	71:Ai:20:MET:HE1	2.17	0.60
51:AO:137[A]:THR:HB	51:AO:140[A]:LYS:HE2	1.83	0.60
53:AQ:81:VAL:HG13	53:AQ:140:LEU:HD13	1.83	0.60
55:AS:1:MET:HE2	55:AS:32:SER:OG	2.02	0.60
16:Ba:5:ARG:HH21	34:B5:1795:U:H3'	1.67	0.59
34:B5:649:U:H3	34:B5:684:A:H62	0.70	0.59
38:A1:19:U:H2'	38:A1:20:A:C8	2.37	0.59
38:A1:146:U:H5"	38:A1:148:G:O4'	2.02	0.59
38:A1:528:U:H2'	38:A1:529:A:C8	2.37	0.59
38:A1:952:A:P	64:Ab:18:ARG:HH22	2.25	0.59
38:A1:1130:A:O2'	38:A1:2825:C:O2'	2.16	0.59
38:A1:1222:G:N2	38:A1:1286:A:C5	2.70	0.59
38:A1:1791:C:OP1	78:Ap:34:HIS:NE2	2.35	0.59
38:A1:2261:G:H21	38:A1:2262:A:N6	2.00	0.59
69:Ag:85:VAL:O	69:Ag:89:ILE:HD12	2.02	0.59
7:BI:5:ARG:NE	34:B5:336:G:O6	2.34	0.59
7:BI:36:THR:HG21	7:BI:173:PRO:HB2	1.82	0.59
25:BS:112:ASP:HA	25:BS:115:ARG:HG2	1.84	0.59
34:B5:1196:A:H4'	34:B5:1197:C:H5"	1.84	0.59
34:B5:1530:C:H2'	34:B5:1531:G:H8	1.66	0.59
38:A1:627:U:H2'	38:A1:628:A:H8	1.67	0.59
38:A1:1922:A:H2'	38:A1:1923:C:O4'	2.02	0.59
38:A1:2506:U:O2'	38:A1:2507:C:OP1	2.20	0.59
38:A1:2533:G:H2'	38:A1:2534:G:C8	2.37	0.59
38:A1:2815:G:N7	38:A1:2870:5MC:O2'	2.35	0.59
38:A1:3191:G:O3'	51:AO:176[A]:LYS:NZ	2.35	0.59
38:A1:3277:U:H5"	38:A1:3278:C:H5	1.67	0.59
65:Ac:41:LEU:HD13	65:Ac:66:LYS:HG3	1.85	0.59
2:BB:129:THR:HA	2:BB:177:GLN:HA	1.84	0.59
4:BE:125:LYS:HB2	4:BE:226:PHE:HD1	1.65	0.59
10:BN:64:ARG:NH2	34:B5:862:A:OP2	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BZ:65:LEU:HA	28:BZ:69:LEU:HD13	1.84	0.59
34:B5:1147:A:O2'	34:B5:1636:C:OP2	2.19	0.59
34:B5:1584:G:N2	34:B5:1585:U:O4	2.35	0.59
37:AC:295:ILE:HD11	53:AQ:36:LEU:HD21	1.84	0.59
38:A1:1781:C:H2'	38:A1:1782:U:C6	2.36	0.59
38:A1:3203:U:H2'	38:A1:3204:C:C6	2.37	0.59
46:AI:74:LYS:O	46:AI:78:LYS:HG2	2.02	0.59
62:AZ:104:PRO:HA	62:AZ:107:ARG:HG3	1.85	0.59
73:Ak:64:LYS:HA	73:Ak:67:GLN:HE21	1.67	0.59
77:Ao:17:CYS:SG	77:Ao:76:LYS:NZ	2.67	0.59
80:DC:815:ALA:HA	80:DC:818:ILE:HG12	1.82	0.59
2:BB:158:SER:HA	2:BB:161:ILE:HD13	1.84	0.59
4:BE:191:ARG:HH21	4:BE:245:LYS:HB2	1.67	0.59
7:BI:171:SER:OG	7:BI:178:ARG:O	2.12	0.59
8:BJ:50:SER:HA	8:BJ:53:ARG:HG2	1.84	0.59
9:BL:91:LEU:HD12	9:BL:100:TYR:HB3	1.82	0.59
19:BD:137:VAL:HG22	19:BD:151:LYS:HG2	1.83	0.59
34:B5:1434:U:O2'	34:B5:1436:A:OP1	2.19	0.59
37:AC:217:LYS:NZ	38:A1:210:U:O2	2.35	0.59
38:A1:824:C:O2'	38:A1:1534:A:N3	2.32	0.59
38:A1:1097:G:H4'	56:AT:129:LYS:HG2	1.85	0.59
38:A1:1712:G:O2'	38:A1:1713:G:O4'	2.16	0.59
44:AG:161:GLU:N	44:AG:161:GLU:OE2	2.33	0.59
63:Aa:4:ARG:HG2	63:Aa:4:ARG:HH11	1.67	0.59
66:Ad:20:LEU:HD11	66:Ad:32:ALA:HB2	1.83	0.59
80:DC:806:SER:HB3	80:DC:815:ALA:HB3	1.83	0.59
1:BA:119:ARG:O	1:BA:142:PRO:HD2	2.03	0.59
2:BB:172:LEU:O	2:BB:176:VAL:HG12	2.02	0.59
20:BF:94:THR:OG1	20:BF:114:ILE:HD13	2.03	0.59
24:BR:46:LEU:O	24:BR:50:ILE:HG12	2.03	0.59
34:B5:649:U:O2'	34:B5:650:U:O5'	2.19	0.59
34:B5:1039:A:O2'	34:B5:1040:G:H8	1.86	0.59
37:AC:64:SER:HA	37:AC:75:PRO:HA	1.85	0.59
38:A1:937:G:H5"	63:Aa:29:PRO:HA	1.84	0.59
38:A1:1571:A:N6	38:A1:1573:G:O5'	2.35	0.59
38:A1:2473:C:H2'	38:A1:2474:G:N2	2.17	0.59
39:A3:62:U:OP2	41:AD:276:LYS:NZ	2.34	0.59
41:AD:56:THR:HG23	41:AD:59:ASP:HB3	1.84	0.59
42:AE:4:GLN:HB2	67:Ae:75:LEU:HB2	1.84	0.59
42:AE:92:SER:OG	42:AE:94:GLU:OE1	2.19	0.59
47:AJ:10:ARG:CZ	47:AJ:133:ARG:HH12	2.14	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:AS:60:SER:OG	55:AS:62:ASN:OD1	2.21	0.59
79:E:122:ARG:HD3	79:E:123:LEU:HB3	1.84	0.59
79:E:144:LEU:HA	79:E:147:LYS:HB2	1.84	0.59
80:DC:731:VAL:HG12	80:DC:796:MET:HB2	1.83	0.59
81:EC:6836:U:O4	81:EC:6850:C:N4	2.35	0.59
4:BE:251:GLU:HA	4:BE:254:ARG:HG2	1.84	0.59
7:BI:87:ASN:OD1	7:BI:88:ASN:N	2.35	0.59
15:BY:37:LYS:HA	15:BY:40:LEU:HD12	1.84	0.59
26:BT:2:PRO:O	34:B5:1360:A:O2'	2.15	0.59
29:Bc:10:ALA:HA	29:Bc:32:PHE:HA	1.83	0.59
34:B5:408:C:O2'	34:B5:1732:A:O2'	2.18	0.59
35:AA:69:TYR:OH	38:A1:2557:A:OP1	2.20	0.59
38:A1:182:U:O4	38:A1:234:G:O6	2.21	0.59
38:A1:1622:U:H2'	38:A1:1623:G:C8	2.35	0.59
38:A1:2479:C:H5'	79:E:106:LYS:HB3	1.83	0.59
52:AP:28:ASN:HD22	52:AP:60:PHE:HZ	1.51	0.59
62:AZ:10:VAL:HG22	62:AZ:24:VAL:HG12	1.82	0.59
80:DC:674:GLY:H	80:DC:678:GLY:HA2	1.68	0.59
32:Bf:107:LYS:HD3	32:Bf:117:LEU:HD13	1.83	0.59
34:B5:472:U:O2'	34:B5:769:A:N3	2.36	0.59
34:B5:1035:G:H2'	34:B5:1036:A:H8	1.67	0.59
34:B5:1649:G:H2'	34:B5:1650:U:C6	2.36	0.59
38:A1:1080:A:H5'	41:AD:139:PRO:HB3	1.84	0.59
38:A1:2445:A:O2'	38:A1:2446:U:O5'	2.21	0.59
40:A4:85:G:N1	61:AY:112:ASP:OD2	2.34	0.59
42:AE:170:LYS:HE3	68:Af:34:GLY:HA3	1.84	0.59
44:AG:171:LYS:HZ1	44:AG:226:TYR:HB3	1.68	0.59
62:AZ:47:GLU:HB2	62:AZ:69:LYS:HG3	1.83	0.59
80:DC:311:GLU:HA	80:DC:314:LEU:HD13	1.85	0.59
6:BH:18:LEU:HD12	6:BH:21:ALA:HB3	1.85	0.59
25:BS:39:GLY:N	34:B5:1566:U:H5"	2.18	0.59
26:BT:70:GLN:HE22	26:BT:119:LYS:HE3	1.68	0.59
26:BT:133:ASP:OD2	34:B5:1359:C:O2'	2.21	0.59
33:BM:63:VAL:HG22	33:BM:65:SER:H	1.68	0.59
35:AA:92:LYS:HB3	35:AA:103:PRO:HG2	1.84	0.59
38:A1:49:A:OP1	48:AL:16:LYS:NZ	2.36	0.59
38:A1:348:A:N3	38:A1:352:A:O2'	2.35	0.59
38:A1:1750:A:OP1	73:Ak:44:LYS:NZ	2.30	0.59
38:A1:2767:U:O2'	77:Ao:30:ALA:O	2.18	0.59
79:E:124:LEU:HD23	79:E:128:LEU:HD12	1.84	0.59
4:BE:159:THR:HB	4:BE:173:ILE:HB	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:BE:191:ARG:HD3	4:BE:218:PHE:CE1	2.37	0.59
11:BO:83:ILE:HD13	11:BO:102:LEU:HD11	1.83	0.59
34:B5:1489:U:OP2	34:B5:1515:A:N6	2.32	0.59
34:B5:1684:U:H2'	34:B5:1685:G:C8	2.38	0.59
38:A1:261:U:H2'	38:A1:262:U:C6	2.38	0.59
38:A1:1460:A:H2'	38:A1:1461:A:C8	2.38	0.59
38:A1:2254:U:H2'	38:A1:2261:G:N2	2.17	0.59
38:A1:2466:G:N2	79:E:209:SER:OG	2.36	0.59
80:DC:352:ARG:HA	80:DC:355:GLN:HE22	1.68	0.59
3:BC:168:ARG:HG2	3:BC:170:ILE:HD11	1.82	0.59
3:BC:177:GLY:N	3:BC:195:ASP:OD1	2.36	0.59
11:BO:52:ARG:NH2	34:B5:905:A:H8	2.01	0.59
16:Ba:79:ILE:HG22	16:Ba:84:VAL:HG23	1.85	0.59
20:BF:143:ARG:HH21	29:Bc:56:LEU:HD23	1.66	0.59
21:BK:30:ALA:HA	21:BK:38:LYS:HG3	1.84	0.59
30:Bd:10:HIS:H	34:B5:1451:C:H5"	1.68	0.59
31:Bg:19:TRP:H	31:Bg:38:ARG:HB3	1.68	0.59
34:B5:1017:U:H2'	34:B5:1018:U:O2	2.02	0.59
34:B5:1502:G:N2	34:B5:1505:A:OP2	2.36	0.59
38:A1:20:A:H2'	38:A1:21:G:C8	2.38	0.59
38:A1:277:G:OP2	77:Ao:48:SER:OG	2.21	0.59
38:A1:1147:G:OP1	67:Ae:47:ARG:NH1	2.33	0.59
38:A1:2451:G:O2'	38:A1:2452:G:O4'	2.17	0.59
38:A1:2764:C:OP1	53:AQ:182:LYS:NZ	2.33	0.59
42:AE:51:ARG:NH1	42:AE:161:ALA:O	2.36	0.59
44:AG:73:PRO:HD3	44:AG:233:TRP:CE3	2.38	0.59
46:AI:153:ARG:NH1	46:AI:157:TYR:OH	2.35	0.59
47:AJ:17:LEU:HD13	47:AJ:129:VAL:HG22	1.84	0.59
48:AL:144:THR:HG21	70:Ah:118:ILE:HG21	1.84	0.59
80:DC:213:SER:HB3	80:DC:218:TRP:NE1	2.18	0.59
81:EC:6850:C:H1'	81:EC:6851:G:C8	2.37	0.59
7:BI:159:GLN:OE1	7:BI:166:TYR:N	2.28	0.58
33:BM:107:ASP:OD1	33:BM:108:ARG:N	2.34	0.58
34:B5:91:G:OP1	34:B5:397:A:N6	2.36	0.58
38:A1:1131:G:N2	38:A1:2372:A:OP2	2.36	0.58
38:A1:3016:A:H2'	38:A1:3017:A:C8	2.38	0.58
39:A3:84:A:H2'	39:A3:85:G:C8	2.38	0.58
55:AS:12:ARG:NE	55:AS:57:GLU:OE2	2.36	0.58
68:Af:18:ARG:HG3	68:Af:19:SER:O	2.03	0.58
7:BI:73:SER:HB2	34:B5:257:A:H1'	1.84	0.58
26:BT:3:GLY:HA2	34:B5:1360:A:H1'	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:406:G:OP1	38:A1:1415:U:O2'	2.21	0.58
38:A1:579:G:H2'	38:A1:580:C:C6	2.38	0.58
38:A1:1245:A:H2'	38:A1:1271:A:H4'	1.84	0.58
38:A1:1493:G:N2	38:A1:1493:G:OP2	2.36	0.58
38:A1:3040:A:H5"	58:AV:12:ARG:HB2	1.85	0.58
38:A1:3291:G:H2'	38:A1:3292:A:H8	1.67	0.58
53:AQ:150:VAL:HA	53:AQ:153:PHE:CD2	2.38	0.58
60:AX:135:ILE:O	60:AX:139:ILE:HG13	2.03	0.58
61:AY:119:ILE:HG22	61:AY:124:GLY:HA3	1.85	0.58
80:DC:753:GLN:HG2	80:DC:754:VAL:H	1.68	0.58
3:BC:227:PRO:HA	3:BC:230:TRP:CD2	2.38	0.58
11:BO:80:HIS:HA	11:BO:113:GLY:O	2.04	0.58
30:Bd:20:GLN:HB3	30:Bd:25:SER:HA	1.84	0.58
34:B5:116:U:H2'	34:B5:117:U:C6	2.39	0.58
36:AB:106:TRP:O	36:AB:137:TYR:OH	2.20	0.58
38:A1:584:G:OP1	42:AE:82:ARG:NH2	2.34	0.58
38:A1:1447:G:OP1	52:AP:65:SER:OG	2.12	0.58
38:A1:2284:C:N4	38:A1:2308:C:OP2	2.35	0.58
40:A4:67:U:H2'	40:A4:68:G:H8	1.68	0.58
76:An:7:LYS:HD3	76:An:11:ARG:HH21	1.68	0.58
80:DC:576:LEU:HB2	80:DC:585:ARG:HD2	1.84	0.58
80:DC:661:ASP:OD1	80:DC:662:SER:N	2.36	0.58
80:DC:730:LEU:HB2	80:DC:799:ASP:HB2	1.85	0.58
1:BA:121:VAL:HG13	1:BA:141:ILE:HG21	1.85	0.58
2:BB:146:GLN:OE1	2:BB:146:GLN:N	2.27	0.58
3:BC:101:VAL:HG12	3:BC:115:ILE:HD13	1.86	0.58
4:BE:187:ARG:NH2	34:B5:752:A:H3'	2.18	0.58
5:BG:135:PRO:HG2	5:BG:141:ILE:HD13	1.86	0.58
15:BY:13:ILE:HB	15:BY:22:GLN:HE21	1.68	0.58
20:BF:81:ARG:HH21	29:Bc:47:PRO:HA	1.67	0.58
23:BQ:71:GLY:N	34:B5:1483:A:OP1	2.32	0.58
31:Bg:59:ARG:NE	31:Bg:95:ALA:O	2.37	0.58
34:B5:153:G:H2'	34:B5:154:G:C8	2.38	0.58
38:A1:264:G:OP1	71:Ai:34:SER:HB2	2.04	0.58
38:A1:673:U:H2'	38:A1:674:G:H8	1.69	0.58
40:A4:75:G:OP2	61:AY:74:TYR:OH	2.21	0.58
44:AG:183:LYS:HB2	44:AG:194:THR:HG23	1.85	0.58
56:AT:13:TYR:HA	56:AT:16:GLN:HG2	1.85	0.58
4:BE:36:HIS:CE1	4:BE:143:ASP:HB3	2.38	0.58
15:BY:94:TYR:HB2	15:BY:96:LEU:HD13	1.83	0.58
20:BF:25:LEU:HG	20:BF:27:THR:H	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BS:62:THR:O	25:BS:66:LEU:HG	2.03	0.58
29:Bc:10:ALA:HB1	29:Bc:30:VAL:HG22	1.85	0.58
31:Bg:260:ILE:O	31:Bg:274:LEU:N	2.37	0.58
34:B5:5:U:H2'	34:B5:6:G:C8	2.37	0.58
34:B5:237:C:N3	34:B5:834:G:O2'	2.31	0.58
34:B5:254:A:H2'	34:B5:255:U:H6	1.69	0.58
34:B5:649:U:N3	34:B5:684:A:N6	2.29	0.58
34:B5:1740:A:H2'	34:B5:1741:U:C6	2.39	0.58
38:A1:518:G:OP2	38:A1:518:G:N2	2.28	0.58
38:A1:1786:G:H2'	38:A1:1787:A:H8	1.66	0.58
38:A1:1926:C:OP2	78:Ap:24:ARG:NH2	2.36	0.58
38:A1:2407:C:H2'	38:A1:2408:U:H6	1.68	0.58
38:A1:2483:G:N1	38:A1:2486:A:OP2	2.31	0.58
39:A3:119:U:H2'	39:A3:120:C:C6	2.39	0.58
52:AP:16:SER:O	52:AP:101:ASN:ND2	2.35	0.58
70:Ah:118:ILE:H	70:Ah:118:ILE:HD12	1.69	0.58
80:DC:591:GLU:OE2	80:DC:685:ARG:NH1	2.36	0.58
81:EC:6837:G:N7	81:EC:6873:A:N6	2.51	0.58
1:BA:84:ARG:O	1:BA:88:LYS:HG2	2.03	0.58
7:BI:47:ARG:HH12	7:BI:51:GLY:H	1.51	0.58
8:BJ:85:VAL:HA	8:BJ:107:ARG:HD3	1.85	0.58
31:Bg:198:ASN:OD1	31:Bg:216:LYS:NZ	2.26	0.58
34:B5:886:U:H2'	34:B5:887:A:H8	1.68	0.58
34:B5:1530:C:H2'	34:B5:1531:G:C8	2.39	0.58
58:AV:15:LEU:HD13	58:AV:51:ALA:HB3	1.85	0.58
79:E:9:VAL:HG11	79:E:184:LEU:HD12	1.86	0.58
80:DC:205:ALA:HB1	80:DC:241:MET:HA	1.85	0.58
80:DC:729:PHE:HB2	80:DC:772:LEU:HD13	1.85	0.58
81:EC:6798:C:H2'	81:EC:6799:C:O4'	2.03	0.58
23:BQ:28:LEU:H	23:BQ:64:ASP:HB3	1.69	0.58
34:B5:481:A:HO2'	34:B5:482:U:H6	1.51	0.58
35:AA:50:HIS:HE1	38:A1:1795:U:OP2	1.87	0.58
38:A1:1824:U:OP1	73:Ak:3:ARG:NH2	2.36	0.58
52:AP:41:LEU:HD22	52:AP:112:LEU:HB3	1.85	0.58
64:Ab:32:LEU:HD12	64:Ab:35:VAL:HG21	1.86	0.58
80:DC:203:TYR:N	80:DC:208:THR:OG1	2.36	0.58
38:A1:1921:A:OP2	38:A1:1930:A:N6	2.33	0.58
38:A1:2111:G:O2'	59:AW:44:LYS:NZ	2.34	0.58
38:A1:2154:U:H2'	38:A1:2155:G:H8	1.67	0.58
38:A1:3248:C:O4'	51:AO:114[A]:LYS:NZ	2.37	0.58
46:AI:85:PHE:HE2	46:AI:87:LEU:HD23	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:AP:30:ARG:NH1	52:AP:31:GLU:OE2	2.35	0.58
56:AT:68:THR:HG22	56:AT:69:LYS:N	2.19	0.58
62:AZ:54:THR:HG23	62:AZ:56:LYS:H	1.68	0.58
5:BG:20:ASP:OD1	5:BG:23:ARG:NE	2.37	0.58
6:BH:134:GLU:OE2	10:BN:21:ASN:ND2	2.35	0.58
10:BN:37:ILE:HD11	10:BN:54:LEU:HD11	1.86	0.58
13:BW:107:SER:HG	34:B5:802:G:N2	2.02	0.58
18:Be:17:GLN:HB3	80:DC:609:ARG:HH22	1.68	0.58
27:BU:84:MET:CE	30:Bd:52:PHE:HA	2.34	0.58
34:B5:233:C:H1'	34:B5:235:G:C6	2.39	0.58
36:AB:215:ILE:HD12	36:AB:338:LEU:HD22	1.84	0.58
37:AC:343:LYS:HD2	38:A1:515:C:H5"	1.85	0.58
38:A1:297:G:O6	50:AN:12:ARG:NH1	2.29	0.58
61:AY:88:GLU:OE1	61:AY:88:GLU:N	2.37	0.58
69:Ag:7:PHE:CE1	69:Ag:20:ILE:HD13	2.37	0.58
80:DC:138:GLN:OE1	80:DC:141:THR:OG1	2.22	0.58
2:BB:87:ARG:NH2	2:BB:89:ASP:OD1	2.33	0.58
3:BC:143:TYR:OH	3:BC:149:GLY:O	2.21	0.58
9:BL:38:ALA:O	34:B5:246:G:N2	2.34	0.58
16:Ba:18:VAL:O	16:Ba:19:LYS:HG2	2.03	0.58
18:Be:55:ARG:HH22	34:B5:556:A:H5"	1.69	0.58
20:BF:148:ARG:HD2	29:Bc:22:ARG:NH2	2.19	0.58
25:BS:35:ILE:HG23	25:BS:38:VAL:HB	1.86	0.58
34:B5:787:G:H3'	34:B5:788:A:C8	2.39	0.58
34:B5:819:G:O2'	34:B5:821:U:OP1	2.22	0.58
34:B5:1000:C:N4	34:B5:1003:A:OP2	2.36	0.58
34:B5:1356:U:H2'	34:B5:1357:A:C8	2.38	0.58
38:A1:969:C:O2'	64:Ab:18:ARG:NH1	2.37	0.58
38:A1:1211:U:O2'	55:AS:113:ARG:NH1	2.36	0.58
38:A1:1498:A:H2'	38:A1:1499:C:C6	2.39	0.58
38:A1:2768:U:H2'	38:A1:2769:A:H8	1.67	0.58
40:A4:103:G:H4'	72:Aj:21:ARG:HG3	1.85	0.58
41:AD:17:GLN:HA	56:AT:20:ARG:HG3	1.86	0.58
8:BJ:169:PRO:HD2	8:BJ:174:ARG:HH21	1.69	0.57
13:BW:119:LYS:NZ	34:B5:688:G:OP1	2.30	0.57
38:A1:1676:A:OP2	57:AU:72:SER:OG	2.21	0.57
47:AJ:133:ARG:NH2	47:AJ:153:LYS:O	2.36	0.57
48:AL:71:ALA:HB2	48:AL:147:ILE:HD11	1.85	0.57
55:AS:143:PHE:HD2	55:AS:148:LEU:HD21	1.69	0.57
80:DC:729:PHE:HD2	80:DC:772:LEU:HB2	1.69	0.57
16:Ba:79:ILE:HD11	34:B5:1794:A:N3	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Bf:90:LYS:NZ	34:B5:1214:U:OP1	2.33	0.57
34:B5:277:U:O2'	34:B5:279:G:N2	2.37	0.57
34:B5:1578:U:H2'	34:B5:1579:U:H6	1.69	0.57
38:A1:174:C:H2'	38:A1:175:C:O4'	2.04	0.57
38:A1:1298:C:O2'	75:Am:113:ARG:NH1	2.37	0.57
38:A1:2413:A:H2'	38:A1:2414:G:H8	1.69	0.57
38:A1:2960:C:H2'	38:A1:2961:G:H8	1.69	0.57
49:AM:112:LEU:HB2	49:AM:116:GLU:HB3	1.86	0.57
56:AT:88:ARG:NH1	64:Ab:33:LYS:O	2.36	0.57
77:Ao:27:GLN:HB3	77:Ao:91:PHE:CE2	2.40	0.57
7:BI:10:LYS:NZ	34:B5:337:G:O3'	2.37	0.57
7:BI:136:SER:OG	34:B5:188:A:OP2	2.15	0.57
8:BJ:114:TYR:HA	8:BJ:119:ALA:HB3	1.85	0.57
13:BW:100:GLY:C	13:BW:101:TYR:HD1	2.12	0.57
18:Be:31:LYS:NZ	34:B5:544:A:O3'	2.36	0.57
20:BF:102:ARG:NH2	34:B5:1474:G:O3'	2.37	0.57
22:BP:122:THR:OG1	34:B5:1558:U:N3	2.33	0.57
25:BS:12:GLN:HE22	25:BS:15:LEU:HB3	1.69	0.57
38:A1:2510:U:H2'	38:A1:2511:A:C8	2.39	0.57
1:BA:22:THR:HG22	1:BA:169:SER:HB2	1.85	0.57
4:BE:192:ILE:HD13	4:BE:238:LEU:HD21	1.86	0.57
11:BO:19:ILE:HG23	11:BO:83:ILE:HD12	1.85	0.57
14:BX:93:LEU:HD21	18:Be:8:LEU:HD11	1.85	0.57
15:BY:8:ARG:HB3	15:BY:10:ARG:NH2	2.16	0.57
36:AB:60:LEU:HD11	36:AB:72:VAL:HB	1.85	0.57
36:AB:348:ARG:NH1	38:A1:3037:U:OP1	2.32	0.57
37:AC:40:THR:HG23	38:A1:1426:C:H4'	1.86	0.57
38:A1:115:A:H2'	38:A1:265:A:H2'	1.86	0.57
38:A1:2467:G:OP2	79:E:108:ASN:ND2	2.37	0.57
38:A1:2641:U:OP2	56:AT:10:ARG:NH2	2.36	0.57
38:A1:2801:A:O2'	38:A1:2802:A:H2'	2.05	0.57
41:AD:63:GLN:HG3	41:AD:65:ILE:HD11	1.87	0.57
68:Af:73:ARG:HD3	68:Af:82:ARG:HE	1.69	0.57
80:DC:216:HIS:HB2	80:DC:218:TRP:HD1	1.68	0.57
2:BB:133:TYR:CE1	2:BB:221:PRO:HD2	2.39	0.57
11:BO:16:VAL:HG23	11:BO:33:LEU:HA	1.86	0.57
20:BF:143:ARG:NH2	29:Bc:54:LEU:HB3	2.15	0.57
38:A1:68:C:N4	38:A1:314:U:O2'	2.38	0.57
38:A1:172:G:H1'	38:A1:173:G:N2	2.19	0.57
38:A1:443:G:N2	38:A1:492:C:O5'	2.35	0.57
38:A1:1235:U:H3	38:A1:1246:G:H4'	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1696:A:H2'	38:A1:1697:A:C8	2.39	0.57
38:A1:2756:C:H1'	56:AT:8:ARG:NH2	2.19	0.57
43:AF:163:LEU:HD22	43:AF:169:ILE:HD11	1.86	0.57
46:AI:200:LEU:HB2	46:AI:213:PHE:CD2	2.40	0.57
75:Am:97:ARG:NE	75:Am:122:ARG:HB3	2.20	0.57
80:DC:249:PHE:CE1	80:DC:261:ASP:HA	2.40	0.57
3:BC:81:MET:HB2	3:BC:101:VAL:HG23	1.87	0.57
3:BC:168:ARG:HH12	34:B5:1098:U:P	2.27	0.57
4:BE:103:TYR:O	4:BE:182:TYR:OH	2.22	0.57
7:BI:191:PHE:HB3	7:BI:195:ARG:HH21	1.69	0.57
21:BK:80:LEU:HB2	21:BK:82:LEU:HG	1.87	0.57
29:Bc:18:ARG:NE	34:B5:1616:G:O2'	2.33	0.57
38:A1:1289:G:H2'	38:A1:1290:A:H8	1.69	0.57
38:A1:1562:C:H3'	38:A1:1563:C:H5"	1.87	0.57
38:A1:2407:C:H2'	38:A1:2408:U:C6	2.39	0.57
38:A1:2456:A:O2'	38:A1:2457:G:N3	2.34	0.57
40:A4:88:A:O2'	40:A4:89:A:OP1	2.22	0.57
47:AJ:47:GLN:NE2	47:AJ:67:VAL:HG22	2.20	0.57
47:AJ:157:GLU:HA	47:AJ:160:VAL:HG22	1.86	0.57
53:AQ:44:PHE:HZ	53:AQ:127:LEU:HD21	1.69	0.57
57:AU:53:ALA:O	57:AU:68:THR:OG1	2.16	0.57
81:EC:6784:G:H2'	81:EC:6785:C:O4'	2.05	0.57
8:BJ:149:ARG:NH1	34:B5:765:G:O4'	2.38	0.57
23:BQ:59:LYS:HE2	23:BQ:105:LEU:HD21	1.85	0.57
34:B5:139:C:N4	34:B5:175:G:O2'	2.38	0.57
34:B5:264:G:H5"	34:B5:265:A:H5'	1.86	0.57
34:B5:891:A:H2'	34:B5:892:A:C8	2.39	0.57
38:A1:20:A:OP2	70:Ah:86:ARG:NH2	2.38	0.57
38:A1:952:A:H4'	38:A1:968:G:N2	2.20	0.57
38:A1:987:U:H2'	38:A1:988:U:C6	2.40	0.57
38:A1:2457:G:H1'	38:A1:2486:A:H61	1.69	0.57
38:A1:2770:G:H2'	38:A1:2771:U:C6	2.40	0.57
56:AT:92:ARG:HB3	56:AT:94:GLU:OE1	2.05	0.57
80:DC:629:ASP:HB3	80:DC:647:ILE:HD12	1.87	0.57
81:EC:6788:C:H42	81:EC:6808:G:H21	1.50	0.57
8:BJ:141:VAL:HG21	8:BJ:146:PHE:CZ	2.39	0.57
14:BX:107:PHE:HD2	14:BX:123:LYS:HE2	1.68	0.57
15:BY:99:LYS:HD3	15:BY:100:VAL:H	1.69	0.57
20:BF:63:GLN:HE22	20:BF:66:GLN:HB2	1.70	0.57
20:BF:75:GLY:HA3	20:BF:77:TYR:CZ	2.40	0.57
30:Bd:7:TRP:HZ3	34:B5:1214:U:H6	1.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AA:54:ARG:NH2	38:A1:2176:U:OP1	2.28	0.57
36:AB:83:PRO:O	36:AB:165:GLN:NE2	2.37	0.57
36:AB:115:LYS:HE3	36:AB:122:TRP:HH2	1.69	0.57
36:AB:282:ILE:HG23	36:AB:322:ILE:HG23	1.86	0.57
38:A1:498:A:O2'	38:A1:3273:A:N1	2.36	0.57
38:A1:2328:U:H2'	38:A1:2329:C:H6	1.70	0.57
41:AD:60:ILE:HD13	41:AD:101:THR:HG21	1.86	0.57
43:AF:121:LYS:HB2	56:AT:133:ALA:HB3	1.86	0.57
61:AY:5:SER:OG	61:AY:7:ASP:OD1	2.18	0.57
1:BA:179:ARG:HH12	24:BR:91:LEU:HD11	1.69	0.57
4:BE:247:SER:N	4:BE:250:GLU:OE2	2.38	0.57
7:BI:67:TRP:HD1	7:BI:183:ILE:HB	1.70	0.57
10:BN:63:ALA:O	10:BN:67:THR:OG1	2.17	0.57
26:BT:126:GLU:OE2	26:BT:130:ARG:NH1	2.38	0.57
29:Bc:18:ARG:NH2	29:Bc:23:GLY:O	2.38	0.57
38:A1:1220:U:H5'	38:A1:1222:G:H1'	1.86	0.57
38:A1:2583:C:H2'	38:A1:2584:G:C8	2.40	0.57
38:A1:2825:C:H42	38:A1:2864:A:H61	1.51	0.57
45:AH:7:GLU:OE1	45:AH:54:LYS:HG2	2.05	0.57
48:AL:2:ALA:HB3	63:Aa:41:HIS:HE1	1.70	0.57
60:AX:115:ARG:HE	60:AX:117:ASN:HD21	1.53	0.57
81:EC:6812:C:H2'	81:EC:6813:A:H8	1.70	0.57
2:BB:89:ASP:HB3	2:BB:223:PHE:CZ	2.40	0.57
27:BU:62:VAL:HA	27:BU:84:MET:O	2.04	0.57
34:B5:199:G:H2'	34:B5:200:A:C8	2.40	0.57
34:B5:1350:U:H2'	34:B5:1351:G:C8	2.40	0.57
36:AB:37:ARG:NH2	36:AB:156:SER:O	2.37	0.57
36:AB:384:LYS:NZ	38:A1:3371:G:OP1	2.32	0.57
38:A1:93:C:H2'	63:Aa:55:LYS:HE3	1.87	0.57
38:A1:1222:G:N2	38:A1:1286:A:H62	2.02	0.57
52:AP:22:LEU:HD12	52:AP:90:PHE:CE2	2.39	0.57
77:Ao:67:LYS:HG3	77:Ao:87:ARG:HH11	1.69	0.57
4:BE:93:ASP:OD1	4:BE:94:ALA:N	2.38	0.56
7:BI:102:VAL:O	7:BI:167:ALA:N	2.37	0.56
9:BL:27:THR:HG23	9:BL:30:ARG:H	1.70	0.56
14:BX:71:CYS:SG	14:BX:84:THR:OG1	2.62	0.56
15:BY:14:SER:HA	15:BY:21:LYS:HA	1.86	0.56
22:BP:90:ILE:HD11	22:BP:112:LEU:HD13	1.86	0.56
27:BU:63:LEU:HB3	27:BU:84:MET:HB2	1.86	0.56
32:Bf:80:ARG:NH1	34:B5:1447:C:O4'	2.38	0.56
38:A1:364:G:OP2	72:Aj:52:LYS:NZ	2.27	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:700:C:H2'	38:A1:701:G:H8	1.70	0.56
38:A1:1087:G:OP1	64:Ab:29:TYR:OH	2.22	0.56
38:A1:2323:G:O2'	38:A1:2325:G:OP2	2.17	0.56
67:Ae:34:LYS:HG3	67:Ae:36:LYS:HG2	1.86	0.56
80:DC:488:VAL:O	80:DC:490:GLN:NE2	2.33	0.56
5:BG:65:GLN:NE2	34:B5:1681:A:O2'	2.38	0.56
9:BL:116:ARG:HH12	54:AR:151:ARG:NH1	2.02	0.56
15:BY:82:ALA:O	15:BY:86:GLU:HB2	2.05	0.56
16:Ba:5:ARG:NH2	34:B5:1796:C:OP2	2.38	0.56
27:BU:19:ILE:HD11	27:BU:94:GLU:HB3	1.87	0.56
31:Bg:47:LEU:HD12	31:Bg:54:PHE:HD1	1.69	0.56
31:Bg:88:THR:HG21	31:Bg:90:ARG:HE	1.69	0.56
34:B5:514:G:P	34:B5:514:G:H8	2.28	0.56
34:B5:1170:G:C2	34:B5:1171:A:C8	2.94	0.56
34:B5:1368:G:O2'	34:B5:1372:U:O4	2.22	0.56
34:B5:1617:U:H2'	34:B5:1618:C:C6	2.39	0.56
38:A1:286:U:O2'	50:AN:179:LYS:O	2.24	0.56
38:A1:1183:C:OP1	55:AS:158:LYS:NZ	2.35	0.56
38:A1:1868:G:HO2'	38:A1:2118:C:HO2'	1.53	0.56
38:A1:2205:U:H2'	38:A1:2206:G:C8	2.40	0.56
38:A1:3160:U:H2'	38:A1:3161:C:C6	2.40	0.56
57:AU:83:TYR:O	57:AU:86:LYS:HG2	2.05	0.56
63:Aa:59:ARG:HH22	77:Ao:38:GLN:CD	2.14	0.56
73:Ak:40:GLN:NE2	73:Ak:55:VAL:HB	2.20	0.56
80:DC:730:LEU:HA	80:DC:769:LYS:HZ2	1.70	0.56
3:BC:138:PRO:HB2	3:BC:222:TYR:HE1	1.69	0.56
3:BC:223:GLY:HA3	12:BV:25:LYS:HZ3	1.69	0.56
5:BG:188:ARG:HH22	34:B5:284:G:H8	1.54	0.56
6:BH:64:VAL:HA	6:BH:67:LEU:HD23	1.86	0.56
8:BJ:8:TYR:O	34:B5:25:C:N4	2.38	0.56
18:Be:43:ARG:HB3	18:Be:54:ARG:CZ	2.34	0.56
19:BD:178:ARG:O	34:B5:579:A:N6	2.37	0.56
27:BU:28:SER:HB2	27:BU:112:VAL:HG22	1.86	0.56
31:Bg:69:GLN:OE1	31:Bg:85:TRP:NE1	2.38	0.56
34:B5:231:U:OP2	34:B5:233:C:N4	2.38	0.56
34:B5:520:A:H2'	34:B5:521:A:C8	2.41	0.56
34:B5:1236:A:H2'	34:B5:1237:G:C8	2.40	0.56
34:B5:1484:G:H2'	34:B5:1485:C:C6	2.40	0.56
34:B5:1689:A:N6	34:B5:1714:A:O2'	2.38	0.56
36:AB:233:TRP:CD1	36:AB:265:ALA:HB1	2.39	0.56
38:A1:585:A:H5"	68:Af:70:LYS:HD3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1037:C:H2'	38:A1:1038:C:H6	1.70	0.56
38:A1:1177:G:OP1	38:A1:1177:G:N2	2.23	0.56
38:A1:1666:G:H2'	38:A1:1667:A:H8	1.70	0.56
38:A1:1717:U:H2'	38:A1:1718:G:C8	2.39	0.56
38:A1:1747:G:H21	73:Ak:2:ALA:HB3	1.71	0.56
38:A1:2494:A:H5"	38:A1:2495:C:C6	2.41	0.56
38:A1:2549:G:OP1	38:A1:2549:G:N2	2.36	0.56
40:A4:83:C:N3	61:AY:52:ARG:NH2	2.53	0.56
47:AJ:92:ARG:HD2	47:AJ:94:ARG:HG2	1.87	0.56
71:Ai:86:LYS:O	71:Ai:90:MET:HG2	2.05	0.56
80:DC:262:THR:HG22	80:DC:268:PRO:HA	1.86	0.56
80:DC:591:GLU:HG2	80:DC:685:ARG:HG2	1.87	0.56
5:BG:160:ARG:O	5:BG:170:THR:OG1	2.19	0.56
6:BH:50:ASP:HA	6:BH:56:LYS:HG2	1.88	0.56
20:BF:114:ILE:HA	20:BF:117:THR:HG22	1.88	0.56
29:Bc:31:GLU:OE2	29:Bc:38:ARG:N	2.37	0.56
34:B5:556:A:H1'	34:B5:590:C:H1'	1.86	0.56
34:B5:1543:A:H2'	34:B5:1544:U:C6	2.40	0.56
38:A1:2683:U:H2'	38:A1:2684:C:C6	2.41	0.56
48:AL:124:ILE:HG12	70:Ah:119:LYS:HE3	1.88	0.56
54:AR:68:GLN:O	54:AR:72:GLU:HG3	2.05	0.56
71:Ai:84:LYS:O	71:Ai:88:GLU:HG3	2.04	0.56
73:Ak:62:ALA:O	73:Ak:66:ILE:HD12	2.06	0.56
80:DC:491:VAL:HG11	80:DC:538:LEU:HD11	1.87	0.56
80:DC:537:HIS:HD2	80:DC:540:ILE:HD11	1.71	0.56
3:BC:99:LYS:HE3	3:BC:208:GLU:HG2	1.88	0.56
5:BG:55:GLY:C	5:BG:63:MET:HE3	2.30	0.56
6:BH:28:GLU:HA	6:BH:34:LEU:HD22	1.88	0.56
14:BX:70:LYS:NZ	34:B5:567:A:OP1	2.38	0.56
18:Be:14:VAL:HA	18:Be:17:GLN:HG3	1.86	0.56
34:B5:86:A:H2'	34:B5:87:C:C6	2.41	0.56
34:B5:1684:U:H2'	34:B5:1685:G:H8	1.70	0.56
38:A1:1460:A:H2'	38:A1:1461:A:H8	1.70	0.56
38:A1:2419:A:H2'	38:A1:2420:C:H6	1.70	0.56
38:A1:2494:A:H5"	38:A1:2495:C:H6	1.70	0.56
39:A3:62:U:O2'	41:AD:285:ARG:NH2	2.38	0.56
49:AM:105:GLN:O	49:AM:109:ARG:HG2	2.04	0.56
59:AW:20:LEU:HD11	59:AW:28:ILE:HG23	1.88	0.56
63:Aa:37:GLY:HA2	63:Aa:41:HIS:HB2	1.88	0.56
66:Ad:72:ARG:NH2	66:Ad:104:LEU:HB2	2.18	0.56
79:E:29:LEU:HD23	79:E:171:ASN:HD22	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:198:MET:HA	24:BR:89:SER:HA	1.88	0.56
7:BI:136:SER:OG	7:BI:138:ASN:OD1	2.24	0.56
8:BJ:7:THR:HG23	34:B5:771:A:H5'	1.87	0.56
15:BY:89:TYR:CG	34:B5:525:A:H4'	2.41	0.56
17:Bb:21:LEU:HG	17:Bb:26:GLN:OE1	2.06	0.56
31:Bg:101:GLN:NE2	31:Bg:137:LYS:O	2.38	0.56
34:B5:12:U:H2'	34:B5:13:C:C6	2.41	0.56
34:B5:736:C:H2'	34:B5:737:A:C8	2.40	0.56
34:B5:1433:G:H2'	34:B5:1434:U:C6	2.41	0.56
38:A1:1289:G:H2'	38:A1:1290:A:C8	2.41	0.56
38:A1:2481:G:N7	79:E:102:LYS:NZ	2.53	0.56
38:A1:2769:A:OP1	77:Ao:80:ARG:NH1	2.39	0.56
38:A1:3324:C:P	66:Ad:19:ARG:HH12	2.29	0.56
48:AL:22:VAL:HG23	50:AN:197:LEU:HB3	1.88	0.56
77:Ao:77:CYS:SG	77:Ao:79:THR:OG1	2.58	0.56
79:E:55:LEU:HD13	79:E:182:GLN:NE2	2.21	0.56
3:BC:168:ARG:NH1	34:B5:1097:U:O3'	2.37	0.56
4:BE:62:LYS:HE3	34:B5:454:U:H4'	1.86	0.56
7:BI:60:ILE:HG21	7:BI:179:CYS:SG	2.46	0.56
19:BD:93:ASP:HB2	19:BD:96:LEU:HD13	1.87	0.56
34:B5:226:A:H2	34:B5:836:U:H5	1.53	0.56
34:B5:648:G:O6	34:B5:686:C:N4	2.25	0.56
38:A1:2613:U:O2'	38:A1:2805:G:OP2	2.16	0.56
38:A1:2882:U:H2'	38:A1:2883:U:C6	2.40	0.56
60:AX:58:ASP:OD1	60:AX:61:LYS:HG2	2.06	0.56
63:Aa:123:VAL:H	63:Aa:143:GLY:HA3	1.70	0.56
80:DC:436:LEU:HB2	80:DC:445:ILE:HG13	1.88	0.56
20:BF:63:GLN:NE2	20:BF:66:GLN:H	2.03	0.56
29:Bc:17:GLY:HA3	29:Bc:67:ARG:HH21	1.71	0.56
29:Bc:33:LEU:HD11	29:Bc:53:ILE:HD12	1.88	0.56
31:Bg:221:MET:SD	31:Bg:223:TRP:NE1	2.79	0.56
34:B5:1570:A:H2'	34:B5:1571:C:O4'	2.06	0.56
36:AB:250:ALA:HB3	38:A1:2880:PSU:O4	2.05	0.56
36:AB:283:TYR:HB3	36:AB:356:LEU:HD21	1.88	0.56
38:A1:1686:U:O2	38:A1:1688:U:O2'	2.21	0.56
38:A1:1712:G:H2'	38:A1:1713:G:C8	2.41	0.56
38:A1:2154:U:H2'	38:A1:2155:G:C8	2.40	0.56
38:A1:2722:U:O2'	56:AT:88:ARG:O	2.23	0.56
40:A4:52:A:H5'	74:Al:21:ARG:NH2	2.21	0.56
41:AD:290:ILE:HB	46:AI:206:LEU:HD21	1.87	0.56
46:AI:177:ASP:OD1	46:AI:178:ARG:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:AJ:40:LEU:HD13	47:AJ:109:HIS:NE2	2.20	0.56
48:AL:83:ALA:HA	48:AL:117:LYS:HE3	1.88	0.56
52:AP:127:ARG:HB3	52:AP:139:TYR:O	2.06	0.56
53:AQ:133:LYS:HB2	53:AQ:135:GLN:OE1	2.05	0.56
73:Ak:14:LEU:HD12	73:Ak:17:ARG:HD3	1.88	0.56
80:DC:300:LEU:HD12	80:DC:305:ILE:HB	1.88	0.56
1:BA:139:VAL:HG13	1:BA:141:ILE:CD1	2.36	0.56
3:BC:173:PRO:HG2	8:BJ:57:ARG:HG3	1.88	0.56
7:BI:10:LYS:HD2	9:BL:133:LYS:HE3	1.87	0.56
7:BI:152:ILE:HG13	7:BI:153:GLU:N	2.19	0.56
21:BK:2:LEU:HA	34:B5:1257:U:H2'	1.88	0.56
30:Bd:21:CYS:SG	30:Bd:39:CYS:N	2.74	0.56
31:Bg:115:ILE:HG22	31:Bg:122:ILE:HG22	1.88	0.56
34:B5:107:C:H2'	34:B5:108:A:C8	2.41	0.56
34:B5:883:C:N4	34:B5:945:U:H3	2.02	0.56
34:B5:1091:A:H4'	34:B5:1092:A:O4'	2.06	0.56
37:AC:60:THR:HG22	37:AC:62:ALA:H	1.71	0.56
38:A1:1494:U:P	74:Al:42:ARG:HH22	2.29	0.56
38:A1:1517:G:H5"	74:Al:22:PRO:HG3	1.86	0.56
38:A1:2437:G:O2'	38:A1:2438:A:OP1	2.24	0.56
38:A1:2526:C:H2'	38:A1:2527:G:C8	2.40	0.56
38:A1:3228:C:H5'	49:AM:133:LYS:HE3	1.88	0.56
38:A1:3303:G:C6	38:A1:3305:A:C2	2.94	0.56
39:A3:6:C:OP2	41:AD:22:ARG:NH2	2.38	0.56
44:AG:72:PRO:HG3	50:AN:18:VAL:HA	1.86	0.56
51:AO:39[A]:GLU:OE2	51:AO:107[A]:GLY:N	2.38	0.56
77:Ao:27:GLN:HB3	77:Ao:91:PHE:HE2	1.70	0.56
77:Ao:47:GLN:HE22	77:Ao:54:THR:N	2.03	0.56
80:DC:347:THR:HG22	80:DC:351:TYR:HE2	1.70	0.56
2:BB:110:LEU:HD21	2:BB:213:ARG:HG3	1.88	0.56
6:BH:30:SER:O	6:BH:34:LEU:N	2.23	0.56
7:BI:76:THR:HG21	7:BI:104:ILE:HD12	1.86	0.56
35:AA:21:ARG:HE	35:AA:22:LEU:HD12	1.70	0.56
35:AA:133:TYR:HB3	35:AA:168:VAL:HG12	1.86	0.56
38:A1:1132:C:H2'	38:A1:1133:A:H8	1.70	0.56
38:A1:3324:C:H4'	66:Ad:13:THR:HG23	1.88	0.56
41:AD:82:GLU:OE1	41:AD:82:GLU:N	2.39	0.56
46:AI:189:GLU:HB2	46:AI:200:LEU:CB	2.32	0.56
58:AV:15:LEU:HD23	58:AV:53:SER:HB3	1.86	0.56
59:AW:20:LEU:HD12	59:AW:21:PHE:H	1.70	0.56
63:Aa:112:ILE:HB	63:Aa:130:VAL:HG23	1.89	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:Al:5:LYS:HD3	74:Al:13:MET:HE1	1.87	0.56
80:DC:26:ALA:HB2	80:DC:128:VAL:HB	1.88	0.56
80:DC:147:LEU:HD11	80:DC:189:VAL:HG22	1.88	0.56
7:BI:103:GLN:HA	7:BI:165:LEU:O	2.06	0.55
15:BY:41:ARG:HA	15:BY:55:VAL:HG11	1.86	0.55
34:B5:147:A:OP2	34:B5:166:C:N4	2.39	0.55
34:B5:1355:C:N4	34:B5:1369:U:N3	2.52	0.55
34:B5:1477:G:H2'	34:B5:1478:G:C8	2.40	0.55
38:A1:164:A:N6	38:A1:258:G:O6	2.39	0.55
38:A1:938:C:OP2	63:Aa:26:ARG:NH1	2.39	0.55
38:A1:3234:A:H2	38:A1:3253:G:H22	1.54	0.55
43:AF:127:LEU:HD12	43:AF:136:TYR:CD1	2.41	0.55
80:DC:564:ARG:HD2	80:DC:682:ARG:HB2	1.87	0.55
6:BH:49:ILE:HD11	6:BH:175:LYS:HE3	1.87	0.55
9:BL:25:VAL:O	9:BL:26:LYS:NZ	2.32	0.55
13:BW:57:ARG:NH1	34:B5:862:A:H5"	2.21	0.55
14:BX:46:SER:OG	14:BX:47:SER:N	2.38	0.55
14:BX:75:GLN:NE2	80:DC:503:LYS:HE3	2.21	0.55
19:BD:7:LYS:HD2	27:BU:88:LYS:HD2	1.87	0.55
25:BS:32:LEU:O	25:BS:35:ILE:HG22	2.06	0.55
32:Bf:136:LYS:NZ	34:B5:1250:U:O2'	2.39	0.55
34:B5:5:U:O2'	34:B5:553:G:H4'	2.07	0.55
34:B5:205:U:H2'	34:B5:206:A:C8	2.39	0.55
34:B5:1039:A:O2'	34:B5:1040:G:H5"	2.05	0.55
34:B5:1793:G:O2'	34:B5:1795:U:OP2	2.25	0.55
38:A1:676:G:O6	53:AQ:105:ARG:NH2	2.39	0.55
38:A1:1534:A:OP2	38:A1:1586:G:N1	2.30	0.55
38:A1:1768:U:H2'	38:A1:1769:G:C8	2.40	0.55
38:A1:3216:G:OP2	68:Af:2:ALA:N	2.39	0.55
43:AF:140:SER:N	43:AF:237:ASN:HD21	2.04	0.55
49:AM:102:LYS:HZ2	49:AM:106:ARG:HE	1.53	0.55
60:AX:103:TYR:CE1	60:AX:139:ILE:HG12	2.41	0.55
2:BB:41:ARG:HH22	2:BB:232:HIS:HA	1.72	0.55
2:BB:105:PHE:CD1	2:BB:213:ARG:HA	2.41	0.55
2:BB:150:VAL:HG12	34:B5:1067:C:H5"	1.88	0.55
14:BX:43:PHE:CE1	14:BX:49:ALA:HB3	2.41	0.55
32:Bf:106:TYR:HB2	33:BM:74:LEU:HD11	1.88	0.55
34:B5:1733:C:H2'	34:B5:1734:U:H6	1.71	0.55
35:AA:204:MET:HB3	35:AA:208:ASP:HB2	1.88	0.55
38:A1:1394:A:OP1	67:Ae:98:HIS:NE2	2.37	0.55
38:A1:2445:A:H2'	38:A1:2446:U:C6	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:AT:100:LYS:HA	56:AT:103:GLN:HG2	1.88	0.55
80:DC:655:TYR:HA	80:DC:657:HIS:CE1	2.41	0.55
3:BC:140:ARG:HH21	3:BC:228:ASN:HD21	1.54	0.55
4:BE:105:VAL:HG22	4:BE:245:LYS:HG3	1.89	0.55
11:BO:52:ARG:NH2	34:B5:905:A:O5'	2.39	0.55
13:BW:56:HIS:O	34:B5:861:U:O2'	2.23	0.55
15:BY:29:HIS:NE2	15:BY:34:ASN:HA	2.21	0.55
15:BY:131:ARG:CZ	34:B5:153:G:H5'	2.36	0.55
22:BP:29:SER:OG	22:BP:32:ASP:OD1	2.22	0.55
26:BT:130:ARG:NH2	34:B5:1359:C:H5"	2.21	0.55
28:BZ:77:ARG:HB3	28:BZ:81:ARG:HH21	1.72	0.55
34:B5:244:A:H2'	34:B5:245:U:C6	2.42	0.55
35:AA:37:ARG:NH2	38:A1:2526:C:OP1	2.33	0.55
38:A1:594:U:OP2	38:A1:609:G:N1	2.28	0.55
38:A1:1194:G:H2'	38:A1:1195:A:C8	2.41	0.55
38:A1:1222:G:N2	38:A1:1286:A:N6	2.53	0.55
38:A1:1225:A:H2'	38:A1:1226:G:H8	1.72	0.55
38:A1:1807:G:O2'	38:A1:2559:U:O4	2.21	0.55
38:A1:2213:A:H2'	38:A1:2214:A:C8	2.41	0.55
38:A1:3042:U:OP2	38:A1:3092:C:N4	2.39	0.55
42:AE:133:GLU:HA	42:AE:136:GLU:OE2	2.06	0.55
42:AE:154:LEU:HD12	42:AE:157:GLN:NE2	2.21	0.55
62:AZ:99:GLU:OE2	62:AZ:99:GLU:N	2.27	0.55
69:Ag:54:ILE:HD11	69:Ag:78:GLY:HA2	1.87	0.55
80:DC:507:GLY:O	80:DC:511:LEU:N	2.30	0.55
8:BJ:133:HIS:HE2	34:B5:513:U:H5'	1.71	0.55
24:BR:29:GLN:OE1	24:BR:29:GLN:N	2.38	0.55
34:B5:82:U:H2'	34:B5:83:G:O4'	2.06	0.55
34:B5:895:G:H1	34:B5:917:U:H3	1.52	0.55
34:B5:1432:U:H4'	34:B5:1433:G:H5"	1.87	0.55
35:AA:14:SER:OG	38:A1:911:C:OP1	2.21	0.55
35:AA:134:VAL:HG22	35:AA:151:PRO:HD3	1.88	0.55
35:AA:199:THR:HA	38:A1:2147:A:H5"	1.88	0.55
38:A1:2674:A:N6	47:AJ:124:GLY:O	2.39	0.55
40:A4:142:C:H2'	40:A4:143:U:C6	2.42	0.55
46:AI:174:THR:HA	46:AI:196:PHE:HZ	1.70	0.55
51:AO:108[A]:ILE:HD12	51:AO:160[A]:ARG:CZ	2.36	0.55
58:AV:11:PHE:CD2	58:AV:88:ARG:HD3	2.41	0.55
66:Ad:53:PRO:O	66:Ad:57:GLN:HG2	2.05	0.55
79:E:73:ASP:HA	79:E:76:ARG:HG2	1.89	0.55
4:BE:122:LYS:HG2	4:BE:164:LEU:HB2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:BE:178:GLY:O	4:BE:231:GLN:NE2	2.40	0.55
5:BG:175:ILE:HB	5:BG:178:LEU:HD23	1.87	0.55
5:BG:187:LYS:O	5:BG:191:ARG:HG2	2.06	0.55
8:BJ:62:ARG:O	8:BJ:69:ARG:NH1	2.40	0.55
20:BF:95:ASN:OD1	34:B5:1612:U:H5'	2.07	0.55
23:BQ:128:LYS:HB2	23:BQ:137:ARG:HH22	1.72	0.55
26:BT:47:PRO:HG2	26:BT:53:TRP:CD2	2.41	0.55
26:BT:77:ASN:HD21	26:BT:98:GLY:HA2	1.72	0.55
34:B5:424:C:O2'	34:B5:426:G:OP1	2.20	0.55
34:B5:1736:G:H2'	34:B5:1737:G:H8	1.72	0.55
38:A1:1061:A:O2'	56:AT:102:ARG:NH2	2.39	0.55
38:A1:3180:A:O2'	51:AO:117[A]:ARG:NH2	2.40	0.55
38:A1:3322:A:H2'	38:A1:3323:A:H8	1.71	0.55
39:A3:74:C:H2'	39:A3:75:G:C8	2.41	0.55
58:AV:79:VAL:HG11	58:AV:118:VAL:HG22	1.88	0.55
68:Af:37:THR:OG1	68:Af:40:ASP:OD2	2.25	0.55
70:Ah:101:THR:HG23	70:Ah:104:GLN:H	1.72	0.55
6:BH:98:ILE:HD12	6:BH:121:VAL:HG21	1.89	0.55
8:BJ:16:LYS:NZ	34:B5:1:U:O2	2.25	0.55
8:BJ:78:ARG:NH2	8:BJ:79:ARG:HG2	2.21	0.55
21:BK:74:GLU:HG2	21:BK:75:TYR:N	2.20	0.55
26:BT:45:MET:SD	26:BT:46:PRO:HD2	2.46	0.55
27:BU:17:GLN:HE21	27:BU:96:PRO:HG3	1.70	0.55
34:B5:67:A:O2'	34:B5:69:G:OP1	2.18	0.55
34:B5:130:C:O2'	34:B5:131:C:OP1	2.23	0.55
34:B5:181:A:H2'	34:B5:182:A:C8	2.42	0.55
34:B5:923:A:H2'	34:B5:924:A:C8	2.40	0.55
36:AB:339:ARG:HH12	36:AB:342:LEU:HG	1.71	0.55
38:A1:89:A:OP2	53:AQ:171:LYS:NZ	2.35	0.55
38:A1:501:A:H2'	38:A1:502:U:C6	2.42	0.55
38:A1:1766:G:OP2	54:AR:43:LYS:NZ	2.26	0.55
38:A1:2767:U:H3	38:A1:2791:G:H1	1.54	0.55
41:AD:40:HIS:CE1	41:AD:42:ALA:HB3	2.41	0.55
52:AP:40:GLU:HA	52:AP:113:TYR:HA	1.87	0.55
73:Ak:61:LYS:HA	73:Ak:64:LYS:HE3	1.87	0.55
80:DC:675:PRO:HB3	80:DC:714:TYR:CD2	2.42	0.55
1:BA:49:ASN:ND2	24:BR:109:LEU:HD22	2.19	0.55
14:BX:43:PHE:CE1	14:BX:122:PHE:HE1	2.24	0.55
15:BY:60:PHE:H	15:BY:71:GLY:HA2	1.72	0.55
19:BD:16:VAL:O	19:BD:19:ALA:N	2.39	0.55
24:BR:33:ARG:HH22	31:Bg:66:HIS:CE1	2.24	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BS:145:ARG:NH1	34:B5:1172:G:H5"	2.22	0.55
32:Bf:102:VAL:HG21	33:BM:46:ARG:HB2	1.88	0.55
34:B5:629:U:H5'	38:A1:846:A:C6	2.42	0.55
34:B5:686:C:H2'	34:B5:687:G:C8	2.42	0.55
36:AB:75:ALA:HB2	38:A1:3049:A:C2	2.42	0.55
38:A1:129:U:H2'	38:A1:130:A:H8	1.71	0.55
38:A1:1485:G:O2'	38:A1:1874:A:O2'	2.23	0.55
38:A1:1712:G:OP2	65:Ac:32:LYS:NZ	2.37	0.55
38:A1:2449:A:HO2'	38:A1:2450:G:H8	1.54	0.55
38:A1:2883:U:H2'	38:A1:2884:C:C6	2.42	0.55
54:AR:132:PHE:CE2	54:AR:138:LEU:HD13	2.42	0.55
62:AZ:51:LEU:HB2	62:AZ:65:ARG:HE	1.71	0.55
65:Ac:99:ASP:O	65:Ac:103:THR:OG1	2.17	0.55
67:Ae:94:ALA:HB3	67:Ae:119:VAL:HG22	1.89	0.55
70:Ah:15:GLU:HG2	70:Ah:16:GLN:N	2.22	0.55
80:DC:110:ASP:CG	80:DC:537:HIS:HB2	2.32	0.55
9:BL:69:LYS:NZ	34:B5:797:G:O2'	2.40	0.55
12:BV:34:ILE:HG13	12:BV:69:LEU:HD11	1.89	0.55
16:Ba:85:ARG:H	34:B5:1797:A:H61	1.54	0.55
31:Bg:21:THR:N	31:Bg:36:ALA:O	2.36	0.55
34:B5:145:A:O2'	34:B5:146:U:H5"	2.07	0.55
34:B5:454:U:O2'	34:B5:455:C:O4'	2.24	0.55
38:A1:1781:C:H2'	38:A1:1782:U:H6	1.70	0.55
38:A1:2097:U:H2'	38:A1:2098:C:C6	2.41	0.55
38:A1:3322:A:H2'	38:A1:3323:A:C8	2.41	0.55
38:A1:3358:U:H2'	38:A1:3359:A:H8	1.72	0.55
61:AY:116:LYS:O	61:AY:120:GLN:HG2	2.05	0.55
62:AZ:71:PHE:HA	62:AZ:111:LYS:HE3	1.89	0.55
4:BE:36:HIS:CD2	4:BE:85:GLY:HA3	2.41	0.55
4:BE:114:ILE:HD12	4:BE:119:ALA:HB2	1.89	0.55
14:BX:103:LEU:HB3	14:BX:126:LYS:HB2	1.89	0.55
16:Ba:13:LYS:O	34:B5:1075:C:O2'	2.23	0.55
16:Ba:57:SER:OG	16:Ba:58:VAL:N	2.40	0.55
31:Bg:127:ARG:HG2	31:Bg:150:TRP:CD2	2.41	0.55
31:Bg:139:GLN:OE1	31:Bg:140:CYS:N	2.40	0.55
34:B5:1508:U:H2'	34:B5:1509:C:C6	2.42	0.55
37:AC:307:GLN:HE22	38:A1:1345:G:H21	1.55	0.55
38:A1:321:C:OP1	50:AN:159:ARG:NH2	2.40	0.55
38:A1:441:U:O4	38:A1:443:G:N2	2.39	0.55
38:A1:2203:U:H2'	38:A1:2204:C:C6	2.42	0.55
38:A1:2406:C:H2'	38:A1:2407:C:H6	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2960:C:H2’	38:A1:2961:G:C8	2.42	0.55
46:AI:72:ALA:HB2	46:AI:155:ALA:HB2	1.89	0.55
49:AM:23:ILE:HG13	49:AM:63:VAL:HG12	1.88	0.55
51:AO:61[A]:ALA:HA	51:AO:70[A]:PRO:HD2	1.88	0.55
81:EC:6867:C:H2’	81:EC:6868:C:O4’	2.06	0.55
4:BE:97:GLU:CD	4:BE:113:ARG:HH21	2.15	0.54
9:BL:16:GLN:NE2	9:BL:34:TRP:O	2.38	0.54
25:BS:40:ARG:NH1	25:BS:44:ASN:HB2	2.12	0.54
27:BU:65:ILE:HG22	30:Bd:33:LYS:HD3	1.90	0.54
34:B5:172:C:H2’	34:B5:173:A:C8	2.42	0.54
34:B5:179:A:H3’	34:B5:180:A:H8	1.71	0.54
34:B5:517:U:H2’	34:B5:518:A:C8	2.42	0.54
38:A1:528:U:H2’	38:A1:529:A:H8	1.71	0.54
38:A1:987:U:H5’	43:AF:125:GLU:HG2	1.89	0.54
38:A1:1563:C:H4’	38:A1:1563:C:OP1	2.07	0.54
38:A1:3165:A:H61	38:A1:3285:C:N4	2.05	0.54
40:A4:8:C:H2’	40:A4:9:A:C8	2.42	0.54
50:AN:99:ARG:O	50:AN:103:GLU:HG3	2.07	0.54
58:AV:54:LEU:HD11	58:AV:79:VAL:C	2.31	0.54
7:BI:98:LYS:HG3	34:B5:329:G:H5”	1.89	0.54
19:BD:75:LYS:HZ1	21:BK:20:VAL:HG23	1.71	0.54
19:BD:163:PRO:HA	19:BD:166:ASP:HB2	1.89	0.54
20:BF:187:ILE:HG21	28:BZ:66:VAL:HG21	1.89	0.54
20:BF:196:GLU:HG3	20:BF:200:ASN:ND2	2.22	0.54
22:BP:77:ARG:NH2	34:B5:1241:G:OP2	2.38	0.54
23:BQ:48:VAL:HA	23:BQ:82:ARG:HB3	1.89	0.54
34:B5:320:U:OP1	34:B5:321:C:O2’	2.24	0.54
34:B5:336:G:H2’	34:B5:338:C:H5	1.71	0.54
34:B5:1376:C:H2’	34:B5:1377:U:C6	2.42	0.54
35:AA:107:VAL:HB	35:AA:111:THR:HG21	1.89	0.54
35:AA:201:GLY:HA2	35:AA:204:MET:CE	2.37	0.54
38:A1:876:A:H4’	38:A1:1890:U:H4’	1.88	0.54
38:A1:1088:U:C2	38:A1:1089:G:C8	2.96	0.54
38:A1:1225:A:H2’	38:A1:1226:G:C8	2.42	0.54
38:A1:2549:G:O2’	44:AG:38:GLN:NE2	2.40	0.54
38:A1:2947:G:OP1	38:A1:2982:A:N6	2.34	0.54
38:A1:3193:C:H2’	38:A1:3194:C:C6	2.43	0.54
51:AO:65[A]:ASN:HB3	51:AO:68[A]:ARG:HD3	1.88	0.54
56:AT:39:ILE:O	56:AT:99:SER:OG	2.23	0.54
72:Aj:21:ARG:NH1	72:Aj:41:ALA:O	2.35	0.54
81:EC:6793:A:N1	81:EC:6880:G:H1’	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:BC:120:GLU:OE1	3:BC:123:GLY:N	2.39	0.54
8:BJ:111:THR:O	8:BJ:115:LYS:HG2	2.07	0.54
15:BY:127:LYS:NZ	34:B5:152:U:OP2	2.25	0.54
19:BD:74:GLN:HE22	19:BD:82:GLY:H	1.54	0.54
20:BF:80:LYS:HE3	34:B5:1406:A:P	2.48	0.54
28:BZ:54:VAL:HA	28:BZ:57:TYR:HB2	1.90	0.54
34:B5:256:A:H2'	34:B5:257:A:O4'	2.07	0.54
34:B5:1240:U:O2'	34:B5:1242:A:N6	2.39	0.54
34:B5:1587:A:H2'	34:B5:1588:G:H8	1.72	0.54
36:AB:154:TYR:CE2	38:A1:3242:G:H2'	2.42	0.54
38:A1:149:U:OP1	50:AN:55:ALA:N	2.39	0.54
38:A1:159:A:H2'	38:A1:160:G:H8	1.70	0.54
38:A1:218:G:O6	61:AY:62:SER:OG	2.19	0.54
38:A1:2948:C:H2'	38:A1:2949:U:H6	1.72	0.54
38:A1:3321:C:H2'	38:A1:3322:A:H8	1.72	0.54
45:AH:91:ARG:CZ	75:Am:82:LEU:HD21	2.38	0.54
47:AJ:16:LYS:HB3	47:AJ:72:ARG:HG2	1.88	0.54
73:Ak:41:THR:HG21	73:Ak:62:ALA:HB2	1.89	0.54
74:Al:21:ARG:HG2	74:Al:22:PRO:HD2	1.90	0.54
75:Am:85:LEU:HD12	75:Am:88:LYS:HD3	1.90	0.54
80:DC:131:THR:HG21	80:DC:160:VAL:HA	1.89	0.54
3:BC:94:GLN:OE1	3:BC:94:GLN:N	2.41	0.54
8:BJ:168:ARG:HH22	34:B5:535:A:P	2.29	0.54
26:BT:37:VAL:HG12	26:BT:39:THR:H	1.73	0.54
32:Bf:138:ARG:NH2	34:B5:1235:C:O2	2.41	0.54
34:B5:1584:G:N2	34:B5:1611:A:OP2	2.41	0.54
38:A1:44:U:OP1	50:AN:85:THR:HG23	2.07	0.54
38:A1:216:G:OP1	61:AY:16:ARG:NH1	2.39	0.54
79:E:130:LYS:HE3	81:EC:6774:U:H1'	1.88	0.54
80:DC:395:TYR:HE1	80:DC:435:VAL:HG11	1.71	0.54
11:BO:14:PHE:HA	11:BO:78:ALA:O	2.07	0.54
24:BR:12:ALA:HB3	24:BR:50:ILE:HD12	1.89	0.54
31:Bg:300:THR:HG22	31:Bg:314:GLN:HG2	1.89	0.54
33:BM:104:GLY:HA2	33:BM:115:VAL:HG21	1.89	0.54
36:AB:348:ARG:CZ	38:A1:3037:U:H5"	2.38	0.54
37:AC:307:GLN:NE2	38:A1:1345:G:H21	2.05	0.54
38:A1:178:U:N3	38:A1:241:G:O6	2.40	0.54
38:A1:899:U:H2'	38:A1:900:G:H8	1.73	0.54
48:AL:95:ILE:HD13	48:AL:116:LEU:HD22	1.89	0.54
52:AP:111:LYS:HE2	52:AP:153:LYS:HB2	1.88	0.54
52:AP:120:ASN:HB2	52:AP:145:HIS:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:AR:28:GLU:OE1	54:AR:28:GLU:N	2.41	0.54
56:AT:39:ILE:HG22	56:AT:102:ARG:CG	2.37	0.54
58:AV:69:LEU:HD21	58:AV:110:LYS:HE3	1.89	0.54
63:Aa:21:ARG:HH21	67:Ae:38:ILE:HG23	1.73	0.54
65:Ac:49:PRO:HG2	65:Ac:52:ARG:HB2	1.90	0.54
80:DC:75:ILE:HG13	80:DC:102:LEU:HB3	1.89	0.54
80:DC:591:GLU:O	80:DC:685:ARG:HB3	2.08	0.54
2:BB:33:LYS:O	2:BB:98:THR:HG22	2.07	0.54
2:BB:176:VAL:O	2:BB:177:GLN:HG2	2.07	0.54
5:BG:32:ILE:HA	5:BG:52:ILE:HB	1.90	0.54
11:BO:103:ARG:O	11:BO:107:ARG:HG2	2.07	0.54
19:BD:75:LYS:NZ	21:BK:20:VAL:HG23	2.22	0.54
34:B5:144:U:H3	34:B5:171:A:H61	1.53	0.54
34:B5:150:U:H2'	34:B5:151:G:C8	2.42	0.54
34:B5:586:G:H2'	34:B5:587:C:C6	2.43	0.54
34:B5:594:A:H4'	34:B5:595:G:H5'	1.89	0.54
34:B5:763:G:H2'	34:B5:764:U:C6	2.43	0.54
34:B5:982:U:H2'	34:B5:983:A:C8	2.42	0.54
34:B5:1785:U:H2'	34:B5:1786:G:H8	1.72	0.54
38:A1:86:G:O2'	38:A1:98:G:O6	2.22	0.54
38:A1:596:C:H2'	38:A1:597:G:O4'	2.08	0.54
38:A1:1873:U:H5"	54:AR:21:LYS:HE2	1.89	0.54
38:A1:2504:U:C2	38:A1:2505:U:C6	2.96	0.54
38:A1:2724:U:OP2	38:A1:2726:C:N4	2.41	0.54
39:A3:27:A:H2'	39:A3:28:C:C6	2.42	0.54
3:BC:45:VAL:HG11	3:BC:68:ILE:HG12	1.88	0.54
4:BE:128:LYS:NZ	34:B5:295:A:O3'	2.34	0.54
8:BJ:53:ARG:HG3	8:BJ:57:ARG:HH12	1.73	0.54
8:BJ:78:ARG:HH22	8:BJ:82:ARG:NE	2.05	0.54
10:BN:5:HIS:HD2	10:BN:121:ARG:HH21	1.54	0.54
11:BO:31:THR:HG22	11:BO:38:THR:HA	1.88	0.54
15:BY:29:HIS:HD2	15:BY:35:VAL:HG13	1.72	0.54
22:BP:49:MET:HA	22:BP:52:LYS:NZ	2.23	0.54
23:BQ:103:ASN:HA	23:BQ:106:LYS:HG2	1.90	0.54
31:Bg:38:ARG:CD	31:Bg:67:ILE:HD12	2.36	0.54
34:B5:224:C:N4	34:B5:225:A:H62	2.05	0.54
38:A1:77:A:N7	48:AL:73:ARG:NH2	2.56	0.54
38:A1:83:U:HO2'	38:A1:700:C:HO2'	1.54	0.54
38:A1:584:G:H2'	38:A1:585:A:H8	1.73	0.54
38:A1:726:G:N2	38:A1:743:C:OP2	2.38	0.54
38:A1:1364:C:OP1	43:AF:110:ARG:NH2	2.29	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2464:U:H4'	81:EC:6774:U:C6	2.42	0.54
38:A1:2705:A:N6	56:AT:47:SER:O	2.40	0.54
38:A1:3183:A:P	51:AO:37[A]:ARG:HH12	2.30	0.54
38:A1:3232:G:O6	38:A1:3255:U:C2	2.61	0.54
57:AU:81:LYS:HE3	57:AU:90:ARG:HH22	1.71	0.54
1:BA:84:ARG:HD3	1:BA:203:PHE:O	2.08	0.54
2:BB:133:TYR:HD2	2:BB:181:LEU:HD13	1.73	0.54
20:BF:149:VAL:HG21	29:Bc:65:ARG:CZ	2.38	0.54
34:B5:1222:C:H2'	34:B5:1223:A:H8	1.73	0.54
34:B5:1359:C:H2'	34:B5:1360:A:C8	2.42	0.54
34:B5:1772:C:H2'	34:B5:1773:4AC:H6	1.89	0.54
38:A1:952:A:OP1	64:Ab:18:ARG:NH2	2.40	0.54
38:A1:996:A:N3	39:A3:80:G:O2'	2.39	0.54
38:A1:1170:A:OP1	43:AF:218:ARG:HA	2.08	0.54
38:A1:1395:G:O2'	40:A4:18:U:O2	2.25	0.54
38:A1:1778:G:O2'	38:A1:1780:G:OP2	2.25	0.54
38:A1:2218:G:H2'	38:A1:2219:A:H8	1.72	0.54
38:A1:3022:G:H4'	38:A1:3023:U:O5'	2.08	0.54
38:A1:3348:G:H1	38:A1:3357:U:H3	1.56	0.54
40:A4:109:A:O2'	40:A4:112:U:O4	2.25	0.54
41:AD:68:THR:OG1	41:AD:71:GLY:O	2.20	0.54
44:AG:139:VAL:HG11	44:AG:197:VAL:CG1	2.38	0.54
47:AJ:12:LEU:HD23	47:AJ:133:ARG:HG2	1.90	0.54
48:AL:174:ARG:HB2	71:Ai:9:ILE:HD12	1.90	0.54
63:Aa:103:ASP:OD2	63:Aa:106:ALA:N	2.37	0.54
79:E:59:PRO:O	79:E:171:ASN:ND2	2.41	0.54
80:DC:729:PHE:HB3	80:DC:797:VAL:O	2.08	0.54
81:EC:6788:C:H3'	81:EC:6805:C:N4	2.23	0.54
3:BC:209:ASN:ND2	34:B5:1298:U:O2	2.39	0.54
8:BJ:91:LYS:O	8:BJ:92:LYS:HE2	2.07	0.54
8:BJ:149:ARG:HG2	34:B5:765:G:C6	2.43	0.54
31:Bg:150:TRP:HB2	31:Bg:174:ASN:HD22	1.72	0.54
34:B5:956:C:OP1	34:B5:1072:C:O2'	2.26	0.54
34:B5:1216:C:O2'	34:B5:1444:A:N1	2.27	0.54
38:A1:251:G:H1'	38:A1:253:A:C8	2.43	0.54
38:A1:562:C:H2'	38:A1:563:U:C6	2.43	0.54
38:A1:2208:A:H5'	38:A1:2209:U:H5"	1.90	0.54
47:AJ:55:ARG:HH21	81:EC:6888:A:H5'	1.72	0.54
75:Am:93:LYS:HD2	75:Am:102:ARG:HG2	1.90	0.54
79:E:120:VAL:HG11	79:E:135:PRO:HG3	1.88	0.54
80:DC:740:VAL:HA	80:DC:743:ILE:HB	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6829:A:H2'	81:EC:6830:G:C8	2.42	0.54
23:BQ:55:VAL:O	23:BQ:59:LYS:NZ	2.41	0.54
24:BR:22:PRO:HG3	24:BR:73:LEU:HD11	1.88	0.54
27:BU:37:VAL:HG21	27:BU:112:VAL:HG11	1.90	0.54
28:BZ:76:ALA:O	28:BZ:80:LEU:HG	2.08	0.54
34:B5:182:A:H2'	34:B5:183:U:C6	2.43	0.54
34:B5:445:A:H62	34:B5:461:G:N2	2.06	0.54
34:B5:483:A:H5"	34:B5:485:A:H62	1.73	0.54
34:B5:818:C:O2	34:B5:853:G:N2	2.35	0.54
37:AC:79:GLY:O	37:AC:85:SER:OG	2.26	0.54
38:A1:874:U:N3	38:A1:2978:U:OP1	2.40	0.54
38:A1:1060:U:H2'	38:A1:1061:A:C8	2.43	0.54
38:A1:1942:U:P	54:AR:74:ARG:HH21	2.31	0.54
38:A1:2714:G:H4'	38:A1:2715:A:H5"	1.89	0.54
38:A1:3110:C:H2'	38:A1:3111:U:C6	2.43	0.54
38:A1:3332:U:H2'	38:A1:3333:G:O4'	2.07	0.54
45:AH:101:VAL:HG12	45:AH:114:VAL:HG22	1.89	0.54
45:AH:159:ALA:O	45:AH:163:GLN:HG2	2.08	0.54
53:AQ:16:ARG:O	53:AQ:50:LYS:NZ	2.41	0.54
54:AR:81:ARG:HG3	54:AR:88:ARG:HD2	1.88	0.54
54:AR:148:ASP:O	54:AR:152:GLU:HG2	2.08	0.54
58:AV:88:ARG:HG3	58:AV:88:ARG:HH11	1.72	0.54
80:DC:20:ARG:HB2	80:DC:100:ILE:HD12	1.89	0.54
80:DC:21:ASN:ND2	80:DC:101:ASN:OD1	2.40	0.54
80:DC:218:TRP:CE2	80:DC:324:MET:HE2	2.42	0.54
20:BF:100:ASN:HD22	20:BF:103:ASN:HD22	1.56	0.53
22:BP:78:THR:HA	34:B5:1241:G:H4'	1.90	0.53
23:BQ:47:LYS:HZ1	23:BQ:79:TYR:HE1	1.55	0.53
24:BR:33:ARG:HG2	24:BR:33:ARG:HH11	1.72	0.53
24:BR:49:LYS:NZ	34:B5:1390:U:OP1	2.41	0.53
26:BT:105:LEU:O	26:BT:109:GLU:HG3	2.08	0.53
31:Bg:168:THR:HG22	31:Bg:182:ASN:HA	1.90	0.53
38:A1:407:A:C2	40:A4:17:A:H1'	2.43	0.53
38:A1:1785:U:H2'	38:A1:1786:G:C8	2.43	0.53
38:A1:2761:G:H22	38:A1:2798:C:H4'	1.73	0.53
38:A1:2986:U:H2'	38:A1:2987:A:C8	2.43	0.53
38:A1:3146:G:H2'	38:A1:3147:G:C8	2.42	0.53
39:A3:6:C:P	41:AD:54:ARG:HH12	2.31	0.53
46:AI:41:ALA:O	46:AI:139:ARG:NH2	2.39	0.53
51:AO:22[A]:VAL:HG21	51:AO:120[A]:VAL:HG11	1.90	0.53
58:AV:28:ASN:ND2	58:AV:112:SER:OG	2.35	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:AZ:42:LEU:HD11	62:AZ:101:PHE:HZ	1.73	0.53
70:Ah:67:ARG:O	70:Ah:71:LYS:HB2	2.08	0.53
80:DC:67:GLY:HA3	83:DC:901:GDP:H5'	1.88	0.53
7:BI:10:LYS:NZ	34:B5:339:C:OP2	2.41	0.53
19:BD:207:THR:HB	24:BR:40:THR:HG22	1.89	0.53
22:BP:87:PRO:HG3	22:BP:112:LEU:HD21	1.89	0.53
35:AA:32:LEU:HD13	35:AA:163:ARG:HE	1.73	0.53
38:A1:432:G:H2'	38:A1:433:A:H8	1.74	0.53
38:A1:679:U:O2'	38:A1:788:C:O2	2.23	0.53
38:A1:1259:A:H1'	38:A1:1280:C:H1'	1.89	0.53
38:A1:1447:G:O2'	38:A1:2355:G:O6	2.26	0.53
38:A1:3015:G:H2'	38:A1:3016:A:H8	1.72	0.53
40:A4:57:C:H4'	40:A4:63:G:N7	2.23	0.53
42:AE:7:PRO:HD3	67:Ae:74:PHE:HE1	1.73	0.53
46:AI:54:SER:HA	46:AI:163:GLN:HG3	1.90	0.53
49:AM:59:ASN:OD1	49:AM:60:LEU:N	2.41	0.53
58:AV:13:ILE:HG23	58:AV:85:TRP:CG	2.43	0.53
2:BB:157:GLN:NE2	34:B5:874:C:OP1	2.36	0.53
5:BG:177:ARG:NH2	34:B5:169:A:OP1	2.34	0.53
7:BI:78:ILE:HA	7:BI:104:ILE:HG22	1.90	0.53
8:BJ:176:ASN:HA	8:BJ:179:ARG:HG2	1.90	0.53
25:BS:63:GLN:N	25:BS:63:GLN:OE1	2.39	0.53
34:B5:903:U:O2'	34:B5:905:A:N7	2.40	0.53
37:AC:31:ARG:HH12	38:A1:674:G:P	2.32	0.53
37:AC:285:ASP:OD1	37:AC:287:THR:OG1	2.14	0.53
38:A1:1307:G:H4'	38:A1:1308:A:H5'	1.91	0.53
38:A1:1631:C:OP2	62:AZ:48:ARG:NH2	2.42	0.53
38:A1:2148:U:H2'	38:A1:2149:A:C8	2.43	0.53
38:A1:3275:U:OP2	68:Af:68:TRP:NE1	2.41	0.53
39:A3:112:G:H2'	39:A3:113:C:C6	2.43	0.53
40:A4:78:G:H2'	40:A4:79:A:C8	2.43	0.53
44:AG:246:MET:HA	44:AG:249:ARG:HG2	1.89	0.53
57:AU:93:ILE:HG21	57:AU:105:LEU:HD23	1.91	0.53
66:Ad:55:LEU:HD12	66:Ad:73:LEU:HD11	1.89	0.53
80:DC:576:LEU:HD13	80:DC:585:ARG:NH1	2.24	0.53
81:EC:6816:A:O2'	81:EC:6818:G:H5'	2.09	0.53
81:EC:6871:A:H2'	81:EC:6872:A:C8	2.43	0.53
3:BC:89:GLN:HB2	34:B5:10:G:H1'	1.89	0.53
4:BE:136:VAL:HG23	4:BE:149:TYR:CE1	2.44	0.53
13:BW:107:SER:OG	34:B5:802:G:N2	2.41	0.53
20:BF:218:GLU:O	20:BF:222:LYS:HG3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BQ:50:GLU:O	23:BQ:54:LEU:HG	2.09	0.53
25:BS:122:HIS:CE1	25:BS:126:ARG:HD2	2.43	0.53
27:BU:85:ARG:NH2	34:B5:1335:U:H5'	2.23	0.53
34:B5:427:C:O2'	34:B5:459:G:N3	2.35	0.53
34:B5:879:G:H2'	34:B5:880:C:C6	2.42	0.53
34:B5:1346:A:C6	34:B5:1370:U:H5"	2.44	0.53
34:B5:1733:C:H2'	34:B5:1734:U:C6	2.44	0.53
34:B5:1770:U:H2'	34:B5:1771:U:C6	2.44	0.53
36:AB:123:TYR:CZ	36:AB:124:LYS:HG3	2.42	0.53
38:A1:1203:A:H2'	38:A1:1204:A:C8	2.44	0.53
38:A1:3374:U:H2'	38:A1:3378:C:H41	1.72	0.53
48:AL:7:LEU:O	63:Aa:49:HIS:NE2	2.37	0.53
57:AU:42:LYS:HG2	57:AU:47:VAL:HG22	1.90	0.53
58:AV:79:VAL:HG13	58:AV:118:VAL:HG13	1.90	0.53
60:AX:46:TYR:CD2	70:Ah:75:TYR:HB3	2.43	0.53
62:AZ:9:LYS:HB3	62:AZ:25:ILE:HD13	1.91	0.53
62:AZ:33:SER:OG	62:AZ:35:SER:O	2.17	0.53
80:DC:150:ARG:HH22	80:DC:351:TYR:HB2	1.73	0.53
80:DC:216:HIS:HB2	80:DC:218:TRP:CD1	2.44	0.53
1:BA:171:GLY:HA2	1:BA:174:TRP:HD1	1.73	0.53
11:BO:132:ARG:NH2	34:B5:1789:G:OP2	2.37	0.53
13:BW:15:ASN:ND2	13:BW:72:CYS:O	2.42	0.53
16:Ba:76:SER:HB3	34:B5:1793:G:H22	1.73	0.53
26:BT:130:ARG:HH21	26:BT:134:ARG:HH12	1.55	0.53
31:Bg:65:SER:OG	34:B5:1341:A:H1'	2.08	0.53
34:B5:95:G:HO2'	34:B5:460:A:HO2'	1.57	0.53
34:B5:181:A:H2'	34:B5:182:A:H8	1.73	0.53
34:B5:1044:U:H2'	34:B5:1045:C:C6	2.43	0.53
34:B5:1218:G:O4'	34:B5:1444:A:N6	2.40	0.53
36:AB:116:ARG:NH2	38:A1:3315:G:OP1	2.35	0.53
37:AC:358:THR:HG21	56:AT:148:PRO:HG2	1.91	0.53
38:A1:597:G:H2'	38:A1:598:A:C8	2.42	0.53
38:A1:1262:G:H21	38:A1:1264:G:H1'	1.73	0.53
38:A1:1717:U:H2'	38:A1:1718:G:H8	1.72	0.53
38:A1:3288:G:O2'	38:A1:3289:G:O5'	2.23	0.53
50:AN:46:ASP:OD1	50:AN:47:LYS:N	2.41	0.53
51:AO:46[A]:GLU:HG3	51:AO:134[A]:LYS:NZ	2.23	0.53
56:AT:40:VAL:HG12	56:AT:98:HIS:HA	1.91	0.53
56:AT:45:ASN:H	56:AT:95:HIS:CD2	2.27	0.53
58:AV:24:ASN:ND2	58:AV:97:ASP:OD2	2.39	0.53
78:Ap:33:GLN:HG3	78:Ap:34:HIS:ND1	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:779:GLY:C	80:DC:781:THR:H	2.16	0.53
5:BG:132:ARG:NH2	34:B5:149:C:O2	2.42	0.53
20:BF:190:ILE:HG12	34:B5:1473:U:C5	2.44	0.53
26:BT:87:GLY:C	34:B5:1542:G:H5"	2.34	0.53
31:Bg:305:TYR:HE2	31:Bg:311:ARG:HH11	1.54	0.53
34:B5:884:A:H2'	34:B5:885:G:C8	2.44	0.53
34:B5:1638:G:O6	34:B5:1767:G:N2	2.42	0.53
35:AA:64:ARG:HA	35:AA:71:LEU:HD13	1.91	0.53
36:AB:243:HIC:HB2	38:A1:2948:C:H5"	1.90	0.53
38:A1:732:C:H2'	38:A1:733:G:O4'	2.08	0.53
42:AE:51:ARG:HH12	42:AE:162:SER:C	2.16	0.53
48:AL:110:ASP:HA	48:AL:113:VAL:HG12	1.90	0.53
79:E:91:LYS:HD3	81:EC:6768:U:OP1	2.09	0.53
80:DC:279:ASP:O	80:DC:283:ARG:HG2	2.09	0.53
6:BH:139:ARG:HD2	13:BW:53:ILE:HG12	1.91	0.53
25:BS:24:GLY:HA2	25:BS:58:ALA:HB3	1.90	0.53
26:BT:21:PHE:HA	26:BT:24:ARG:NH1	2.24	0.53
26:BT:25:GLN:NE2	26:BT:27:LYS:HE2	2.23	0.53
32:Bf:82:LYS:HB2	80:DC:631:ARG:HD2	1.91	0.53
34:B5:103:A:H4'	34:B5:105:A:C8	2.44	0.53
34:B5:153:G:H2'	34:B5:154:G:H8	1.73	0.53
34:B5:1592:A:H2'	34:B5:1593:A:C8	2.43	0.53
37:AC:163:LYS:NZ	38:A1:208:C:H3'	2.21	0.53
38:A1:429:U:H2'	38:A1:430:U:C6	2.44	0.53
38:A1:1255:C:O2'	38:A1:1256:G:H8	1.91	0.53
38:A1:3092:C:H2'	58:AV:12:ARG:NH2	2.24	0.53
39:A3:37:G:H2'	39:A3:38:U:C6	2.42	0.53
51:AO:27[A]:LEU:O	51:AO:101[A]:ARG:NH1	2.42	0.53
54:AR:84:THR:HG23	54:AR:87:ALA:H	1.73	0.53
60:AX:73:MET:O	60:AX:76:VAL:HG12	2.08	0.53
80:DC:420:PRO:HG3	80:DC:476:HIS:CE1	2.44	0.53
80:DC:693:LEU:HB3	80:DC:700:ARG:HD2	1.91	0.53
80:DC:756:SER:OG	80:DC:758:GLU:OE1	2.25	0.53
81:EC:6844:A:H1'	81:EC:6845:G:C8	2.44	0.53
2:BB:120:LEU:HD23	2:BB:120:LEU:H	1.73	0.53
4:BE:47:PHE:HD2	4:BE:48:LEU:HD12	1.74	0.53
7:BI:77:ARG:NH1	38:A1:3353:G:OP2	2.41	0.53
8:BJ:71:PHE:CE2	34:B5:762:A:H4'	2.44	0.53
8:BJ:133:HIS:NE2	34:B5:513:U:H5'	2.24	0.53
20:BF:108:LEU:HA	20:BF:111:VAL:HG22	1.90	0.53
30:Bd:30:LEU:HA	30:Bd:39:CYS:HA	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:428:A:N3	34:B5:440:U:O2'	2.39	0.53
34:B5:549:G:O2'	34:B5:556:A:N1	2.36	0.53
36:AB:303:LYS:HD2	36:AB:361:THR:HG21	1.91	0.53
38:A1:576:C:O3'	43:AF:142:SER:OG	2.20	0.53
38:A1:966:PSU:H2'	38:A1:967:A:C8	2.43	0.53
38:A1:1188:U:OP1	38:A1:1210:U:O2'	2.16	0.53
38:A1:1357:G:H2'	38:A1:1358:C:C6	2.43	0.53
38:A1:1874:A:H5"	54:AR:18:GLY:HA3	1.91	0.53
46:AI:51:HIS:CD2	46:AI:168:SER:HB2	2.43	0.53
46:AI:58:GLU:OE1	46:AI:58:GLU:N	2.42	0.53
55:AS:81:TYR:CE1	55:AS:90:MET:HE1	2.39	0.53
16:Ba:44:ILE:HG22	16:Ba:45:VAL:HG23	1.91	0.53
20:BF:117:THR:HG21	20:BF:194:LEU:HD23	1.91	0.53
23:BQ:128:LYS:NZ	34:B5:1417:A:O3'	2.37	0.53
27:BU:95:ALA:HB1	27:BU:99:ILE:HD11	1.90	0.53
34:B5:819:G:O6	54:AR:173:ARG:NH2	2.41	0.53
34:B5:1126:G:OP2	76:An:15:ARG:NH1	2.41	0.53
34:B5:1484:G:H21	34:B5:1606:C:H1'	1.73	0.53
36:AB:173:GLN:OE1	38:A1:3313:U:H4'	2.09	0.53
38:A1:351:A:N6	74:Al:37:TYR:O	2.39	0.53
38:A1:1824:U:O3'	73:Ak:17:ARG:NH2	2.41	0.53
40:A4:36:G:C5	70:Ah:86:ARG:HD3	2.43	0.53
50:AN:106:VAL:HG11	50:AN:132:VAL:HG11	1.91	0.53
56:AT:39:ILE:HG22	56:AT:102:ARG:HG2	1.90	0.53
61:AY:70:ILE:HD13	61:AY:82:VAL:CG1	2.39	0.53
5:BG:72:ARG:HB2	5:BG:98:ARG:HD2	1.90	0.53
6:BH:24:PHE:CZ	6:BH:77:LEU:HD11	2.44	0.53
6:BH:134:GLU:CD	10:BN:21:ASN:HD21	2.17	0.53
10:BN:47:PRO:O	10:BN:50:ILE:HG12	2.08	0.53
20:BF:146:THR:HA	20:BF:159:ALA:HA	1.90	0.53
23:BQ:10:PHE:O	23:BQ:87:LYS:NZ	2.27	0.53
24:BR:71:PHE:CE2	24:BR:74:GLN:HB2	2.44	0.53
27:BU:78:THR:HG21	34:B5:1281:G:H5"	1.91	0.53
32:Bf:128:ALA:HB3	33:BM:54:ARG:HA	1.91	0.53
34:B5:157:A:H2	34:B5:419:G:H21	1.57	0.53
34:B5:551:G:H2'	34:B5:552:G:H8	1.74	0.53
34:B5:1439:C:H2'	34:B5:1440:C:H6	1.74	0.53
37:AC:76:ARG:NH2	38:A1:1438:U:OP1	2.42	0.53
38:A1:3181:C:C2	51:AO:168[A]:TYR:CD1	2.97	0.53
41:AD:53:VAL:HG22	41:AD:62:CYS:SG	2.49	0.53
46:AI:91:VAL:HG22	46:AI:127:ALA:HB1	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:AT:80:VAL:HG13	56:AT:83:ARG:HH12	1.74	0.53
63:Aa:97:GLU:OE2	63:Aa:97:GLU:N	2.24	0.53
69:Ag:102:LYS:HA	69:Ag:105:VAL:HG12	1.90	0.53
80:DC:480:VAL:O	80:DC:482:LYS:HD3	2.09	0.53
80:DC:563:TYR:O	80:DC:564:ARG:NH1	2.38	0.53
81:EC:6862:G:H2'	81:EC:6864:A:N7	2.24	0.53
14:BX:112:LYS:NZ	34:B5:1137:A:N7	2.57	0.52
22:BP:56:PHE:CZ	22:BP:78:THR:HB	2.44	0.52
34:B5:489:C:N3	34:B5:499:U:H5"	2.25	0.52
35:AA:28:LYS:HB2	35:AA:123:ARG:HB3	1.91	0.52
35:AA:201:GLY:HA2	35:AA:204:MET:HE2	1.90	0.52
37:AC:2:SER:OG	37:AC:3:ARG:N	2.37	0.52
38:A1:38:U:H4'	63:Aa:32:ARG:HD2	1.90	0.52
38:A1:153:U:OP2	70:Ah:103:LYS:NZ	2.40	0.52
38:A1:1616:U:H2'	38:A1:1617:G:H8	1.73	0.52
38:A1:1682:U:C5	57:AU:85:LYS:HG2	2.44	0.52
57:AU:21:SER:OG	57:AU:105:LEU:O	2.19	0.52
57:AU:46:ALA:HB3	57:AU:49:ASN:ND2	2.24	0.52
75:Am:97:ARG:HE	75:Am:122:ARG:HB3	1.74	0.52
4:BE:73:ASP:HB3	4:BE:164:LEU:HD11	1.91	0.52
5:BG:185:GLN:HG3	34:B5:284:G:C5	2.45	0.52
7:BI:77:ARG:N	7:BI:105:ASP:OD2	2.42	0.52
7:BI:187:GLU:HG2	7:BI:188:GLU:N	2.23	0.52
8:BJ:169:PRO:O	8:BJ:173:ALA:HB3	2.09	0.52
21:BK:54:TYR:CD1	21:BK:72:GLY:HA2	2.44	0.52
25:BS:62:THR:O	25:BS:65:GLU:HG2	2.08	0.52
34:B5:1171:A:H2'	34:B5:1172:G:H8	1.73	0.52
34:B5:1480:G:H2'	34:B5:1481:C:O4'	2.09	0.52
35:AA:7:ASN:HB2	38:A1:2183:A:H5"	1.91	0.52
37:AC:122:THR:O	37:AC:126:ILE:HG12	2.10	0.52
38:A1:166:C:H2'	38:A1:167:U:C6	2.44	0.52
38:A1:292:U:P	50:AN:68:ARG:HH22	2.32	0.52
38:A1:366:A:H2'	38:A1:367:A:O4'	2.09	0.52
38:A1:515:C:H2'	38:A1:516:A:H8	1.73	0.52
38:A1:2774:C:OP1	48:AL:178:LYS:NZ	2.42	0.52
38:A1:3201:C:H2'	38:A1:3202:G:C8	2.45	0.52
39:A3:64:A:H5'	39:A3:65:G:H5"	1.91	0.52
40:A4:38:U:O2'	70:Ah:83:LYS:NZ	2.42	0.52
54:AR:105:LEU:HD11	54:AR:109:TYR:HE2	1.74	0.52
55:AS:77:VAL:HG13	55:AS:126:VAL:HG22	1.91	0.52
56:AT:53:PRO:HB3	56:AT:91:LEU:HD21	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:AT:57:TYR:CD2	56:AT:89:LEU:HD11	2.44	0.52
73:Ak:11:PHE:HB2	73:Ak:54:LEU:HD21	1.91	0.52
79:E:29:LEU:HG	79:E:173:GLU:HG3	1.91	0.52
81:EC:6851:G:N1	81:EC:6879:U:O2'	2.30	0.52
1:BA:17:LEU:HD13	1:BA:50:VAL:HB	1.90	0.52
2:BB:133:TYR:HE1	2:BB:221:PRO:HD2	1.75	0.52
4:BE:197:HIS:ND1	4:BE:198:LYS:O	2.38	0.52
7:BI:81:VAL:HG12	7:BI:94:ASN:HA	1.90	0.52
20:BF:219:ARG:NH2	81:EC:6844:A:O4'	2.42	0.52
22:BP:37:ALA:HB1	22:BP:41:VAL:HB	1.91	0.52
33:BM:46:ARG:NH1	34:B5:1255:G:O6	2.42	0.52
34:B5:800:U:H2'	34:B5:801:G:C8	2.44	0.52
34:B5:1693:A:H61	34:B5:1707:A:H8	1.57	0.52
35:AA:200:ARG:NH2	38:A1:2146:C:OP1	2.42	0.52
36:AB:332:ARG:NH2	38:A1:3377:G:H21	2.06	0.52
37:AC:39:PHE:HA	37:AC:42:VAL:HG12	1.91	0.52
38:A1:160:G:H1	38:A1:261:U:H3	1.55	0.52
38:A1:522:A:O2'	55:AS:66:GLU:O	2.21	0.52
38:A1:1560:G:H4'	38:A1:1561:G:OP1	2.09	0.52
38:A1:1667:A:H1'	69:Ag:21:LYS:NZ	2.25	0.52
38:A1:2344:U:H2'	38:A1:2345:A:H8	1.74	0.52
54:AR:26:PRO:O	54:AR:29:THR:HG23	2.09	0.52
59:AW:42:GLN:HG3	59:AW:44:LYS:HE3	1.91	0.52
5:BG:145:PHE:HB2	5:BG:147:LEU:HG	1.92	0.52
8:BJ:78:ARG:NH2	8:BJ:82:ARG:HE	2.05	0.52
8:BJ:143:ILE:O	8:BJ:146:PHE:HB2	2.09	0.52
15:BY:132:ARG:NH1	34:B5:155:U:O4	2.38	0.52
22:BP:18:ARG:NH2	25:BS:91:ASP:O	2.42	0.52
26:BT:91:TYR:HB2	34:B5:1590:G:OP1	2.09	0.52
31:Bg:218:GLY:O	31:Bg:236:ALA:N	2.37	0.52
34:B5:743:U:H2'	34:B5:744:U:C6	2.44	0.52
34:B5:1035:G:H2'	34:B5:1036:A:C8	2.44	0.52
38:A1:69:C:HO2'	38:A1:101:G:HO2'	1.57	0.52
38:A1:413:U:OP1	52:AP:30:ARG:NH2	2.35	0.52
38:A1:594:U:P	38:A1:609:G:H1	2.32	0.52
38:A1:1213:G:H2'	38:A1:1214:U:C6	2.44	0.52
38:A1:1268:G:N2	38:A1:1271:A:OP1	2.42	0.52
38:A1:1498:A:H2'	38:A1:1499:C:H6	1.74	0.52
38:A1:1737:U:O2	69:Ag:52:GLN:NE2	2.43	0.52
38:A1:2683:U:H2'	38:A1:2684:C:H6	1.74	0.52
47:AJ:77:GLU:O	47:AJ:81:GLU:HG2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:AV:80:ARG:CB	58:AV:95:PHE:HD2	2.23	0.52
62:AZ:25:ILE:HA	62:AZ:43:VAL:HG12	1.90	0.52
69:Ag:74:ARG:NH2	69:Ag:82:ALA:HB2	2.25	0.52
81:EC:6832:G:H1'	81:EC:6833:G:O4'	2.09	0.52
8:BJ:77:ILE:HD11	8:BJ:86:LEU:HD22	1.91	0.52
10:BN:20:ARG:HH21	13:BW:56:HIS:HB3	1.75	0.52
22:BP:85:ILE:HG23	22:BP:113:GLY:H	1.74	0.52
31:Bg:67:ILE:O	31:Bg:85:TRP:N	2.27	0.52
31:Bg:108:SER:OG	31:Bg:109:ASP:N	2.42	0.52
34:B5:1586:A:H1'	34:B5:1611:A:H61	1.74	0.52
34:B5:1737:G:H2'	34:B5:1738:U:C6	2.45	0.52
38:A1:383:G:N2	38:A1:386:A:OP2	2.28	0.52
38:A1:712:G:H5'	48:AL:174:ARG:CZ	2.39	0.52
38:A1:2369:G:H2'	38:A1:2370:G:C8	2.45	0.52
41:AD:173:VAL:HG23	41:AD:175:HIS:CD2	2.44	0.52
43:AF:24:GLU:HG2	43:AF:26:VAL:H	1.74	0.52
43:AF:144:ILE:HD11	43:AF:189:ILE:CG1	2.37	0.52
49:AM:123:LEU:HD21	51:AO:193[A]:GLN:HE22	1.75	0.52
51:AO:18[A]:ARG:HD2	51:AO:128[A]:ARG:HG2	1.92	0.52
70:Ah:51:ILE:O	70:Ah:55:LEU:HG	2.09	0.52
73:Ak:28:ASN:OD1	73:Ak:40:GLN:HB3	2.09	0.52
76:An:1:MET:HE2	76:An:1:MET:HA	1.91	0.52
81:EC:6822:U:H2'	81:EC:6823:U:H5"	1.91	0.52
2:BB:155:TYR:OH	34:B5:932:U:OP2	2.26	0.52
5:BG:57:ASP:HA	5:BG:106:LEU:HA	1.89	0.52
7:BI:81:VAL:HA	7:BI:102:VAL:HG12	1.91	0.52
15:BY:29:HIS:CE1	15:BY:34:ASN:HA	2.44	0.52
24:BR:32:LYS:NZ	34:B5:1388:A:OP2	2.42	0.52
34:B5:274:G:N2	34:B5:283:U:H1'	2.25	0.52
34:B5:1736:G:H2'	34:B5:1737:G:C8	2.45	0.52
35:AA:150:LEU:HD22	35:AA:154:ALA:HB3	1.90	0.52
38:A1:900:G:H1'	38:A1:1589:A:N6	2.24	0.52
38:A1:1336:U:H2'	38:A1:1337:A:C8	2.42	0.52
57:AU:29:ASP:OD2	57:AU:32:SER:N	2.30	0.52
66:Ad:55:LEU:HB2	66:Ad:95:PRO:HD3	1.92	0.52
80:DC:332:ASP:O	80:DC:336:GLU:HG3	2.09	0.52
80:DC:415:GLY:O	80:DC:477:ASN:ND2	2.43	0.52
2:BB:87:ARG:HB3	2:BB:87:ARG:NH1	2.25	0.52
5:BG:30:LYS:HZ1	5:BG:35:GLU:C	2.18	0.52
8:BJ:171:ARG:NH2	34:B5:513:U:O4	2.42	0.52
14:BX:27:ASN:O	14:BX:31:LYS:HG2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BP:79:HIS:HA	22:BP:97:TYR:HB2	1.91	0.52
31:Bg:7:LEU:HB3	31:Bg:313:TRP:HB3	1.92	0.52
34:B5:1415:PSU:H2'	34:B5:1416:G:H8	1.74	0.52
34:B5:1628:U:H2'	34:B5:1629:G:C8	2.44	0.52
38:A1:3295:A:H2'	38:A1:3296:A:C8	2.45	0.52
44:AG:57:ARG:O	44:AG:61:GLN:HG2	2.10	0.52
48:AL:61:PRO:O	48:AL:62:THR:OG1	2.24	0.52
80:DC:561:VAL:HG13	80:DC:563:TYR:HE1	1.73	0.52
80:DC:578:LYS:HD3	80:DC:582:LYS:HD2	1.90	0.52
13:BW:111:MET:HE1	13:BW:116:ALA:HA	1.92	0.52
20:BF:214:LYS:HE2	20:BF:218:GLU:OE2	2.10	0.52
21:BK:17:GLN:HA	21:BK:90:THR:HG21	1.92	0.52
21:BK:23:ALA:O	21:BK:64:TYR:HB2	2.10	0.52
28:BZ:57:TYR:HE1	81:EC:6866:C:H41	1.58	0.52
31:Bg:131:ILE:HD11	31:Bg:151:VAL:HG21	1.91	0.52
34:B5:99:C:OP2	34:B5:378:A:O2'	2.20	0.52
34:B5:863:A:O2'	34:B5:865:A:O5'	2.28	0.52
34:B5:872:G:H2'	34:B5:873:U:O4'	2.10	0.52
35:AA:181:LYS:NZ	38:A1:860:G:O4'	2.34	0.52
37:AC:344:ALA:HB2	38:A1:516:A:H5"	1.91	0.52
38:A1:30:G:H5'	50:AN:172:ARG:HG2	1.91	0.52
38:A1:45:A:OP2	50:AN:85:THR:HG21	2.08	0.52
38:A1:69:C:OP1	50:AN:178:HIS:ND1	2.42	0.52
38:A1:595:G:O6	42:AE:22:ARG:NH2	2.32	0.52
38:A1:2684:C:H1'	47:AJ:99:THR:HG21	1.90	0.52
39:A3:60:G:O2'	41:AD:273:ARG:NH1	2.40	0.52
40:A4:39:G:H1'	40:A4:104:A:N6	2.25	0.52
40:A4:71:A:O3'	61:AY:52:ARG:NH1	2.43	0.52
41:AD:160:PHE:CD2	41:AD:179:ARG:HB2	2.45	0.52
42:AE:170:LYS:H	42:AE:174:LEU:HD13	1.73	0.52
52:AP:168:LEU:HD23	52:AP:172:GLN:HB3	1.92	0.52
73:Ak:11:PHE:CD2	73:Ak:54:LEU:HD11	2.44	0.52
80:DC:378:LEU:HD21	80:DC:405:VAL:HG22	1.92	0.52
5:BG:72:ARG:HB2	5:BG:98:ARG:HH11	1.74	0.52
5:BG:88:ARG:N	5:BG:91:GLU:OE2	2.37	0.52
16:Ba:42:ARG:NE	16:Ba:42:ARG:HA	2.25	0.52
24:BR:13:SER:OG	24:BR:57:LEU:HD12	2.10	0.52
31:Bg:214:ALA:HB2	31:Bg:220:ILE:HG22	1.92	0.52
34:B5:774:A:H3'	34:B5:774:A:N3	2.25	0.52
34:B5:900:A:H2'	34:B5:901:G:H8	1.75	0.52
35:AA:67:TYR:OH	38:A1:2525:G:N7	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:74:GLU:OE2	36:AB:283:TYR:OH	2.10	0.52
36:AB:214:MET:HE2	36:AB:214:MET:HA	1.92	0.52
38:A1:3159:C:H2'	38:A1:3160:U:C6	2.45	0.52
47:AJ:95:ASN:HB3	47:AJ:103:GLY:O	2.09	0.52
54:AR:106:LEU:HB3	54:AR:120:TYR:CE1	2.45	0.52
62:AZ:72:ILE:HD12	62:AZ:101:PHE:HE1	1.75	0.52
63:Aa:11:HIS:HA	63:Aa:14:HIS:CD2	2.45	0.52
80:DC:781:THR:O	80:DC:785:ARG:HG3	2.10	0.52
1:BA:16:LEU:HD13	24:BR:90:ALA:HB3	1.90	0.52
2:BB:31:ASP:OD1	2:BB:45:LYS:HG3	2.10	0.52
8:BJ:34:PHE:O	8:BJ:108:ARG:NH2	2.43	0.52
8:BJ:162:SER:OG	8:BJ:165:GLY:N	2.43	0.52
20:BF:143:ARG:O	20:BF:143:ARG:HD2	2.10	0.52
27:BU:68:ARG:HA	27:BU:79:TRP:HD1	1.74	0.52
33:BM:45:LEU:HG	34:B5:1228:G:H5'	1.92	0.52
34:B5:1409:G:N2	34:B5:1412:G:OP2	2.41	0.52
34:B5:1590:G:H2'	34:B5:1591:C:C6	2.45	0.52
34:B5:1727:G:H2'	34:B5:1728:A:H8	1.74	0.52
35:AA:21:ARG:HE	35:AA:22:LEU:CD1	2.22	0.52
37:AC:300:ARG:NH1	38:A1:1347:U:OP1	2.42	0.52
38:A1:66:A:P	48:AL:100:ARG:HH21	2.34	0.52
38:A1:67:A:N6	38:A1:271:C:O2'	2.42	0.52
38:A1:200:C:H5'	38:A1:221:A:C2	2.44	0.52
38:A1:291:C:H2'	38:A1:292:U:H6	1.75	0.52
38:A1:408:A:H61	40:A4:15:G:H1'	1.75	0.52
38:A1:1898:G:H5"	58:AV:98:ASN:HD21	1.75	0.52
38:A1:2674:A:H2'	38:A1:2675:C:O4'	2.10	0.52
38:A1:2943:G:H2'	38:A1:2944:PSU:O4'	2.10	0.52
38:A1:2989:U:H2'	38:A1:2990:G:O4'	2.10	0.52
38:A1:3150:A:H2'	38:A1:3151:U:O4'	2.10	0.52
38:A1:3236:U:H2'	38:A1:3237:U:H6	1.75	0.52
40:A4:67:U:H2'	40:A4:68:G:C8	2.45	0.52
54:AR:81:ARG:HG3	54:AR:88:ARG:HH11	1.75	0.52
57:AU:37:LEU:O	57:AU:41:ILE:HB	2.10	0.52
80:DC:515:ASP:HB2	80:DC:518:VAL:HG12	1.92	0.52
1:BA:107:PHE:HB3	1:BA:139:VAL:HG11	1.91	0.51
6:BH:46:ILE:HD11	6:BH:58:LEU:HD21	1.92	0.51
6:BH:160:GLN:HA	6:BH:163:ASP:HB3	1.92	0.51
7:BI:191:PHE:O	7:BI:195:ARG:HG2	2.10	0.51
9:BL:132:SER:OG	9:BL:133:LYS:N	2.39	0.51
15:BY:23:PHE:HZ	15:BY:44:LEU:HD13	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:BY:128:LYS:HG3	15:BY:131:ARG:NH2	2.25	0.51
19:BD:64:ARG:HH21	19:BD:67:ASN:HD21	1.58	0.51
34:B5:52:U:H2'	34:B5:53:G:C8	2.45	0.51
34:B5:108:A:H2'	34:B5:109:G:C8	2.45	0.51
34:B5:138:A:C8	34:B5:142:G:H5'	2.45	0.51
34:B5:1027:A:OP1	34:B5:1789:G:O2'	2.25	0.51
38:A1:633:C:H4'	68:Af:18:ARG:HH21	1.75	0.51
38:A1:683:U:OP2	48:AL:28:GLN:NE2	2.40	0.51
38:A1:1083:G:H2'	38:A1:1084:A:H8	1.74	0.51
38:A1:1565:G:N2	38:A1:1573:G:O6	2.43	0.51
38:A1:2282:U:OP1	38:A1:2973:G:O2'	2.26	0.51
39:A3:100:C:H2'	39:A3:101:G:O4'	2.11	0.51
46:AI:60:LEU:HB3	46:AI:65:LEU:HD21	1.92	0.51
48:AL:6:ASN:HD21	53:AQ:164:ARG:HG3	1.75	0.51
58:AV:17:LEU:HD21	58:AV:98:ASN:CG	2.35	0.51
81:EC:6835:U:O2	81:EC:6836:U:N3	2.43	0.51
2:BB:29:TRP:CH2	11:BO:13:VAL:HG11	2.46	0.51
2:BB:157:GLN:C	2:BB:159:SER:H	2.16	0.51
5:BG:188:ARG:NH2	34:B5:284:G:H8	2.07	0.51
8:BJ:120:LYS:NZ	34:B5:480:G:OP1	2.25	0.51
15:BY:12:VAL:HG12	15:BY:23:PHE:HB3	1.92	0.51
19:BD:93:ASP:HB2	19:BD:96:LEU:HB2	1.91	0.51
22:BP:39:ALA:N	34:B5:1549:C:OP2	2.38	0.51
23:BQ:79:TYR:O	23:BQ:82:ARG:HG2	2.10	0.51
32:Bf:82:LYS:HE3	80:DC:627:VAL:HB	1.93	0.51
34:B5:595:G:H2'	34:B5:596:C:C6	2.45	0.51
34:B5:885:G:H2'	34:B5:886:U:C6	2.45	0.51
34:B5:1683:C:O2'	34:B5:1684:U:O5'	2.28	0.51
38:A1:114:A:H2'	38:A1:115:A:O4'	2.10	0.51
38:A1:166:C:H2'	38:A1:167:U:H6	1.74	0.51
38:A1:291:C:H2'	38:A1:292:U:C6	2.46	0.51
38:A1:432:G:H2'	38:A1:433:A:C8	2.45	0.51
38:A1:1721:U:O2'	38:A1:1723:A:N7	2.28	0.51
38:A1:2486:A:H5"	79:E:105:LYS:HZ1	1.74	0.51
38:A1:3021:A:N6	38:A1:3032:A:H5"	2.26	0.51
46:AI:208:LYS:O	46:AI:212:GLU:HG2	2.11	0.51
55:AS:42:TRP:CD1	55:AS:53:LYS:HE2	2.45	0.51
61:AY:109:LEU:HD22	61:AY:115:ARG:HH21	1.75	0.51
62:AZ:26:VAL:HG11	62:AZ:96:VAL:HG23	1.92	0.51
76:An:12:ARG:HH11	76:An:12:ARG:HG3	1.75	0.51
80:DC:39:LEU:HD21	80:DC:334:LEU:HD23	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:353:ALA:HA	80:DC:356:LEU:HG	1.92	0.51
2:BB:187:LYS:HG3	2:BB:193:ILE:HD11	1.92	0.51
4:BE:19:LEU:HD11	34:B5:788:A:H2'	1.92	0.51
5:BG:198:ALA:HA	5:BG:201:GLN:CD	2.36	0.51
6:BH:56:LYS:HB2	6:BH:88:ARG:HE	1.76	0.51
8:BJ:44:ARG:O	8:BJ:47:PHE:N	2.38	0.51
10:BN:146:ALA:O	10:BN:150:VAL:HG22	2.11	0.51
13:BW:41:MET:HG2	13:BW:129:VAL:HG11	1.92	0.51
15:BY:10:ARG:NH2	34:B5:780:A:H1'	2.26	0.51
33:BM:131:ASP:OD1	33:BM:131:ASP:N	2.43	0.51
34:B5:1564:U:H2'	34:B5:1565:C:C6	2.44	0.51
38:A1:183:G:H2'	38:A1:184:U:C6	2.45	0.51
38:A1:229:G:H5"	61:AY:4:GLN:HB2	1.92	0.51
38:A1:443:G:H5"	38:A1:491:A:N6	2.22	0.51
38:A1:1104:G:H2'	38:A1:1105:A:H8	1.76	0.51
38:A1:1463:U:H2'	38:A1:1464:G:O4'	2.11	0.51
38:A1:2257:C:H3'	38:A1:2258:PSU:H6	1.74	0.51
38:A1:2349:PSU:O2'	38:A1:3307:A:N3	2.43	0.51
38:A1:2357:A:H2'	38:A1:2358:A:H8	1.74	0.51
38:A1:3183:A:H2	38:A1:3188:G:H4'	1.75	0.51
44:AG:162:LEU:HG	50:AN:7:LEU:HD11	1.92	0.51
64:Ab:8:THR:HG22	64:Ab:10:HIS:H	1.76	0.51
72:Aj:21:ARG:HD3	72:Aj:39:TYR:CD1	2.46	0.51
80:DC:120:ARG:HH22	80:DC:482:LYS:H	1.58	0.51
81:EC:6815:U:H3'	81:EC:6816:A:H5"	1.92	0.51
5:BG:58:LYS:HD2	5:BG:59:GLN:N	2.24	0.51
22:BP:43:ARG:CZ	22:BP:47:ARG:HD2	2.41	0.51
25:BS:134:ARG:NH2	34:B5:1546:G:N7	2.58	0.51
31:Bg:278:PHE:HB3	31:Bg:281:TYR:CD2	2.45	0.51
32:Bf:103:LEU:HD23	33:BM:70:ASN:HB2	1.93	0.51
34:B5:52:U:H2'	34:B5:53:G:H8	1.75	0.51
36:AB:14:LEU:HA	36:AB:17:LEU:HD13	1.90	0.51
38:A1:1755:C:H2'	38:A1:1756:C:O4'	2.11	0.51
38:A1:1768:U:H2'	38:A1:1769:G:H8	1.75	0.51
38:A1:2261:G:HO2'	38:A1:2263:C:N4	2.09	0.51
38:A1:3084:C:O2'	38:A1:3332:U:OP1	2.22	0.51
38:A1:3166:C:H2'	38:A1:3167:A:C8	2.46	0.51
54:AR:134:HIS:HE1	54:AR:136:ARG:HG2	1.76	0.51
57:AU:99:LYS:HE3	57:AU:102:GLU:HG3	1.92	0.51
79:E:191:VAL:O	79:E:197:ASN:ND2	2.44	0.51
80:DC:176:GLN:HE21	80:DC:180:ARG:HH11	1.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:565:GLU:OE2	80:DC:565:GLU:N	2.44	0.51
80:DC:659:ILE:HD13	80:DC:693:LEU:HD21	1.92	0.51
81:EC:6790:A:O2'	81:EC:6793:A:N6	2.31	0.51
2:BB:67:GLU:OE2	2:BB:83:LYS:HB3	2.10	0.51
3:BC:143:TYR:OH	12:BV:3:ASN:OD1	2.16	0.51
6:BH:151:LYS:HG2	6:BH:184:GLU:OE2	2.11	0.51
7:BI:67:TRP:HB2	7:BI:109:PHE:CE1	2.44	0.51
8:BJ:18:PRO:O	8:BJ:23:ARG:NH2	2.44	0.51
10:BN:3:ARG:HB3	10:BN:6:SER:HB3	1.92	0.51
13:BW:24:GLN:HA	13:BW:63:VAL:O	2.10	0.51
19:BD:137:VAL:HB	19:BD:185:LYS:HB2	1.91	0.51
24:BR:14:LYS:O	24:BR:17:ILE:HG22	2.11	0.51
26:BT:130:ARG:HH21	26:BT:134:ARG:NH1	2.07	0.51
31:Bg:64:HIS:ND1	31:Bg:86:ASP:OD2	2.32	0.51
31:Bg:91:LEU:HD23	31:Bg:100:TYR:HD2	1.76	0.51
31:Bg:305:TYR:HB2	31:Bg:307:ASP:OD1	2.10	0.51
34:B5:1107:G:O2'	34:B5:1108:G:H5'	2.10	0.51
38:A1:439:C:O4'	38:A1:494:G:N2	2.44	0.51
38:A1:792:G:H2'	38:A1:793:C:C6	2.45	0.51
38:A1:1208:U:H5'	75:Am:109:ASN:HD21	1.75	0.51
38:A1:1213:G:H2'	38:A1:1214:U:H6	1.76	0.51
38:A1:1329:U:O2'	38:A1:1330:A:O5'	2.29	0.51
38:A1:1703:U:H1'	38:A1:1743:G:C2	2.45	0.51
38:A1:1926:C:H2'	78:Ap:7:LYS:NZ	2.25	0.51
38:A1:2765:C:O3'	77:Ao:39:GLY:HA3	2.10	0.51
45:AH:9:GLN:HG3	45:AH:52:LEU:HD21	1.93	0.51
52:AP:21:TYR:CE1	52:AP:145:HIS:HE1	2.29	0.51
60:AX:135:ILE:HA	60:AX:138:ARG:HG2	1.91	0.51
1:BA:198:MET:HE1	24:BR:90:ALA:HB2	1.93	0.51
4:BE:65:LEU:HD13	4:BE:70:VAL:HB	1.92	0.51
4:BE:187:ARG:NH2	34:B5:752:A:O5'	2.44	0.51
8:BJ:77:ILE:HA	8:BJ:80:LEU:HD23	1.93	0.51
11:BO:115:ILE:O	16:Ba:65:PRO:HG3	2.11	0.51
18:Be:24:THR:HB	18:Be:26:LYS:HZ2	1.75	0.51
24:BR:100:LEU:O	24:BR:120:SER:OG	2.26	0.51
27:BU:61:LYS:HB2	27:BU:86:ILE:HB	1.93	0.51
31:Bg:262:VAL:HB	31:Bg:271:VAL:HB	1.93	0.51
35:AA:21:ARG:HH11	38:A1:825:U:P	2.33	0.51
38:A1:92:G:P	77:Ao:46:LYS:HZ3	2.33	0.51
38:A1:758:C:H5"	77:Ao:15:LYS:HZ1	1.75	0.51
38:A1:1612:A:H5"	73:Ak:51:LEU:HD23	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:A4:69:U:H2'	40:A4:70:G:O4'	2.10	0.51
47:AJ:17:LEU:HD23	47:AJ:79:ILE:HG23	1.93	0.51
50:AN:27:VAL:HG23	50:AN:129:TYR:CE2	2.45	0.51
57:AU:99:LYS:HB2	57:AU:102:GLU:HB2	1.92	0.51
60:AX:110:VAL:HG22	60:AX:124:VAL:HG22	1.93	0.51
63:Aa:138:ILE:HG21	63:Aa:145:VAL:HG23	1.92	0.51
80:DC:797:VAL:HG12	80:DC:798:PHE:N	2.23	0.51
6:BH:50:ASP:HB3	6:BH:56:LYS:HE2	1.93	0.51
9:BL:156:PHE:HB2	54:AR:156:ASN:HD21	1.76	0.51
11:BO:26:THR:HG21	11:BO:60:ALA:HB2	1.92	0.51
12:BV:2:GLU:HA	12:BV:8:LEU:HA	1.93	0.51
18:Be:34:ALA:CB	34:B5:477:A:H5"	2.41	0.51
23:BQ:127:LYS:NZ	34:B5:1604:U:O5'	2.43	0.51
24:BR:10:LYS:HG2	24:BR:53:TYR:CZ	2.46	0.51
27:BU:67:THR:OG1	30:Bd:40:ARG:HG3	2.09	0.51
31:Bg:159:ASN:HB3	31:Bg:163:ASP:HA	1.92	0.51
34:B5:922:G:H2'	34:B5:923:A:C8	2.46	0.51
34:B5:922:G:H2'	34:B5:923:A:H8	1.76	0.51
34:B5:1374:C:H2'	34:B5:1375:A:C8	2.46	0.51
38:A1:1010:G:H4'	46:AI:40:LYS:HD2	1.91	0.51
38:A1:1234:G:H4'	38:A1:1236:G:N2	2.24	0.51
38:A1:2744:U:H2'	38:A1:2745:G:C8	2.46	0.51
38:A1:3153:U:H4'	38:A1:3154:C:N3	2.25	0.51
39:A3:6:C:C5'	41:AD:54:ARG:HH12	2.23	0.51
51:AO:27[A]:LEU:HD22	51:AO:33[A]:ILE:HD12	1.92	0.51
60:AX:130:TYR:HB3	60:AX:135:ILE:HD11	1.93	0.51
65:Ac:24:THR:HG23	65:Ac:93:LEU:HD11	1.91	0.51
80:DC:774:VAL:HG11	85:DC:903:SO1:H121	1.93	0.51
1:BA:144:ILE:HD12	1:BA:158:VAL:HB	1.92	0.51
2:BB:165:ARG:HH12	34:B5:946:U:H5"	1.76	0.51
7:BI:113:PHE:CE2	7:BI:121:LEU:HD12	2.45	0.51
10:BN:54:LEU:HD13	10:BN:60:VAL:HG11	1.93	0.51
12:BV:36:VAL:HG11	12:BV:78:LEU:HD13	1.93	0.51
14:BX:104:LEU:HD23	14:BX:122:PHE:HD1	1.75	0.51
18:Be:17:GLN:CB	80:DC:609:ARG:HH12	2.23	0.51
24:BR:2:GLY:N	34:B5:1311:U:O3'	2.44	0.51
27:BU:85:ARG:NH1	34:B5:1335:U:OP1	2.43	0.51
31:Bg:149:ASP:OD1	31:Bg:150:TRP:N	2.38	0.51
34:B5:1542:G:H22	34:B5:1568:C:H1'	1.75	0.51
35:AA:28:LYS:HE3	35:AA:123:ARG:HH21	1.75	0.51
38:A1:184:U:H2'	38:A1:185:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:501:A:H4'	42:AE:28:GLN:OE1	2.11	0.51
61:AY:73:VAL:HG23	61:AY:80:VAL:HG12	1.93	0.51
63:Aa:75:LEU:HD11	63:Aa:134:ALA:HA	1.93	0.51
80:DC:120:ARG:HH12	80:DC:481:MET:HA	1.75	0.51
80:DC:665:ALA:O	80:DC:668:GLN:NE2	2.41	0.51
80:DC:776:GLU:HG3	80:DC:778:PHE:HD1	1.75	0.51
81:EC:6847:G:H8	81:EC:6847:G:OP2	1.93	0.51
14:BX:19:ARG:O	14:BX:23:ARG:HG3	2.10	0.51
33:BM:23:THR:HB	33:BM:26:ASP:HB3	1.92	0.51
34:B5:1741:U:H2'	34:B5:1742:U:C6	2.46	0.51
37:AC:317:PRO:C	37:AC:319:LYS:H	2.19	0.51
38:A1:215:G:OP1	61:AY:12:ARG:NE	2.43	0.51
38:A1:1666:G:H2'	38:A1:1667:A:C8	2.45	0.51
38:A1:1772:U:H5"	38:A1:1773:C:H5'	1.93	0.51
38:A1:1804:A:H2'	38:A1:1805:C:C6	2.46	0.51
38:A1:2442:G:N2	38:A1:2505:U:O2	2.36	0.51
38:A1:2477:G:H4'	38:A1:2487:U:C2	2.46	0.51
38:A1:2700:G:H5"	56:AT:17:ARG:HG2	1.92	0.51
77:Ao:35:LEU:O	77:Ao:36:PHE:HB2	2.10	0.51
80:DC:774:VAL:O	80:DC:774:VAL:HG12	2.11	0.51
2:BB:140:ILE:HB	2:BB:213:ARG:HD3	1.92	0.51
5:BG:64:LYS:HD2	5:BG:82:SER:HB2	1.93	0.51
6:BH:10:SER:OG	6:BH:44:LYS:NZ	2.34	0.51
6:BH:41:LEU:HB2	6:BH:70:PHE:CE1	2.46	0.51
6:BH:141:ARG:HG2	13:BW:51:GLU:OE1	2.11	0.51
9:BL:111:VAL:HG11	9:BL:117:VAL:HG21	1.92	0.51
11:BO:72:LYS:O	11:BO:73:GLU:HG3	2.10	0.51
15:BY:7:ILE:HG12	15:BY:43:LYS:HD2	1.93	0.51
21:BK:13:GLN:HA	21:BK:16:PHE:HD2	1.76	0.51
31:Bg:200:ASN:ND2	31:Bg:240:VAL:O	2.32	0.51
34:B5:472:U:H2'	34:B5:473:A:H8	1.76	0.51
34:B5:1375:A:H2'	34:B5:1376:C:C6	2.46	0.51
38:A1:371:G:N1	38:A1:374:A:OP2	2.45	0.51
38:A1:939:U:O2'	38:A1:2402:A:N1	2.35	0.51
38:A1:1120:A:H2'	38:A1:1121:U:C6	2.45	0.51
38:A1:1223:A:OP2	38:A1:1285:G:N1	2.44	0.51
39:A3:7:G:H5"	41:AD:22:ARG:HD3	1.92	0.51
39:A3:52:G:H2'	39:A3:53:U:C6	2.46	0.51
42:AE:13:GLU:N	42:AE:13:GLU:OE2	2.44	0.51
44:AG:91:PHE:CE2	44:AG:185:ARG:HB3	2.46	0.51
44:AG:226:TYR:HA	44:AG:229:VAL:HG12	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AH:20:ILE:HD11	45:AH:23:ARG:HA	1.93	0.51
50:AN:28:TRP:O	50:AN:32:GLN:HG2	2.10	0.51
60:AX:73:MET:SD	60:AX:142:ILE:HG21	2.51	0.51
61:AY:35:LEU:HD23	61:AY:106:ILE:HB	1.92	0.51
79:E:130:LYS:HG3	81:EC:6774:U:C1'	2.41	0.51
80:DC:483:PHE:HE2	80:DC:486:SER:HB3	1.76	0.51
1:BA:13:ASP:OD1	1:BA:13:ASP:N	2.41	0.50
2:BB:185:THR:O	2:BB:189:ILE:HG12	2.10	0.50
3:BC:230:TRP:CG	13:BW:68:ARG:HD2	2.46	0.50
3:BC:231:ALA:O	12:BV:16:LYS:NZ	2.34	0.50
5:BG:21:GLU:HA	5:BG:24:ILE:HG22	1.94	0.50
5:BG:63:MET:HA	5:BG:98:ARG:HB2	1.92	0.50
6:BH:104:ARG:NE	34:B5:803:A:O2'	2.43	0.50
16:Ba:85:ARG:O	34:B5:1797:A:N6	2.44	0.50
19:BD:123:VAL:HG13	19:BD:134:CYS:SG	2.51	0.50
20:BF:195:ALA:O	20:BF:199:ILE:HG12	2.11	0.50
22:BP:81:ARG:NH1	22:BP:120:SER:O	2.35	0.50
23:BQ:63:ILE:HD11	23:BQ:92:TYR:CE2	2.46	0.50
25:BS:20:THR:HG21	25:BS:35:ILE:HG13	1.92	0.50
26:BT:21:PHE:HA	26:BT:24:ARG:HH11	1.77	0.50
27:BU:48:HIS:CE1	27:BU:102:ARG:HH22	2.29	0.50
27:BU:100:VAL:O	27:BU:103:ILE:HG22	2.12	0.50
29:Bc:27:GLN:NE2	29:Bc:66:LEU:HA	2.26	0.50
31:Bg:170:ILE:HD13	31:Bg:211:ILE:HD12	1.92	0.50
34:B5:182:A:H2'	34:B5:183:U:H6	1.75	0.50
37:AC:101:ALA:HA	38:A1:800:G:H22	1.76	0.50
37:AC:169:LEU:HA	37:AC:172:VAL:HG22	1.93	0.50
38:A1:107:A:O2'	38:A1:324:A:N3	2.43	0.50
38:A1:1084:A:H2'	38:A1:1085:A:C8	2.46	0.50
38:A1:1167:U:P	68:Af:73:ARG:HH12	2.34	0.50
38:A1:1340:G:H2'	38:A1:1341:U:H6	1.76	0.50
38:A1:2160:G:H2'	38:A1:2161:G:H8	1.76	0.50
38:A1:2592:G:H4'	38:A1:2594:C:C2	2.45	0.50
39:A3:48:U:H2'	39:A3:49:G:O4'	2.11	0.50
48:AL:123:ILE:HG22	70:Ah:118:ILE:HG13	1.92	0.50
69:Ag:41:ARG:HA	69:Ag:56:THR:HG22	1.92	0.50
80:DC:274:ASN:OD1	80:DC:278:LEU:HD13	2.11	0.50
80:DC:379:MET:HG2	80:DC:402:ALA:HB3	1.93	0.50
80:DC:510:ARG:HG2	80:DC:549:HIS:HD2	1.75	0.50
5:BG:204:ALA:HA	5:BG:207:GLU:HG2	1.93	0.50
21:BK:2:LEU:HD12	34:B5:1258:U:H4'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BQ:8:GLN:NE2	23:BQ:9:THR:O	2.44	0.50
31:Bg:24:ALA:O	31:Bg:33:LEU:HD12	2.11	0.50
31:Bg:202:LEU:HA	31:Bg:212:ALA:O	2.11	0.50
34:B5:487:G:N2	34:B5:489:C:OP1	2.44	0.50
34:B5:640:U:H2'	34:B5:641:G:O4'	2.11	0.50
34:B5:886:U:H2'	34:B5:887:A:C8	2.47	0.50
34:B5:1382:A:HO2'	34:B5:1383:G:H8	1.57	0.50
36:AB:142:ALA:HB1	36:AB:146:ARG:HH22	1.76	0.50
38:A1:748:U:H2'	38:A1:749:C:C6	2.47	0.50
38:A1:785:G:OP2	53:AQ:66:ARG:NH2	2.41	0.50
38:A1:1695:U:O2'	38:A1:1749:A:N1	2.33	0.50
38:A1:1771:C:H2'	38:A1:1772:U:O4'	2.11	0.50
38:A1:1950:U:H2'	38:A1:1951:C:C6	2.46	0.50
41:AD:187:THR:OG1	41:AD:189:GLU:OE1	2.26	0.50
41:AD:208:MET:HE1	41:AD:223:PHE:CD1	2.45	0.50
43:AF:98:LYS:HB3	43:AF:99:PRO:HD3	1.92	0.50
52:AP:78:VAL:HG22	52:AP:80:LYS:H	1.75	0.50
54:AR:140:GLU:HA	54:AR:143:ILE:HG12	1.92	0.50
55:AS:99:ARG:NH1	55:AS:126:VAL:O	2.37	0.50
77:Ao:40:LYS:NZ	77:Ao:44:ASP:OD2	2.44	0.50
79:E:59:PRO:HB3	79:E:170:GLY:HA2	1.93	0.50
80:DC:588:LEU:HB3	80:DC:688:ILE:HD13	1.94	0.50
80:DC:608:PRO:HG3	80:DC:636:PHE:CD2	2.46	0.50
1:BA:72:ASP:OD2	1:BA:119:ARG:N	2.43	0.50
5:BG:160:ARG:NE	34:B5:66:U:O2	2.44	0.50
8:BJ:108:ARG:HB2	8:BJ:111:THR:OG1	2.12	0.50
16:Ba:43:ASN:OD1	16:Ba:45:VAL:N	2.44	0.50
17:Bb:48:SER:OG	17:Bb:49:HIS:N	2.43	0.50
21:BK:57:THR:HA	21:BK:65:TYR:O	2.11	0.50
34:B5:142:G:C2	34:B5:266:A:C4	2.99	0.50
34:B5:282:C:H2'	34:B5:283:U:O4'	2.11	0.50
34:B5:341:A:H2'	34:B5:342:C:C6	2.47	0.50
34:B5:387:A:H3'	34:B5:402:C:H5	1.76	0.50
34:B5:1163:A:N3	34:B5:1613:U:O2'	2.40	0.50
34:B5:1307:U:O4	34:B5:1318:G:N2	2.19	0.50
38:A1:541:U:H2'	38:A1:542:G:C8	2.42	0.50
38:A1:585:A:H2'	38:A1:586:C:C6	2.47	0.50
38:A1:717:C:OP1	38:A1:751:A:O2'	2.27	0.50
38:A1:986:PSU:O2'	43:AF:125:GLU:OE2	2.17	0.50
38:A1:1294:A:O2'	38:A1:1295:G:H8	1.94	0.50
38:A1:2534:G:H2'	38:A1:2535:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:A4:93:U:H2'	40:A4:94:C:O4'	2.11	0.50
62:AZ:76:ASN:OD1	62:AZ:77:TYR:N	2.44	0.50
67:Ae:45:ARG:HH22	67:Ae:54:LYS:NZ	2.09	0.50
77:Ao:96:GLU:N	81:EC:6800:G:OP1	2.41	0.50
80:DC:561:VAL:HG13	80:DC:563:TYR:CE1	2.46	0.50
80:DC:638:PRO:HG3	80:DC:671:THR:HG23	1.94	0.50
2:BB:32:ILE:HG22	2:BB:44:GLY:O	2.12	0.50
5:BG:133:LEU:O	34:B5:166:C:O2'	2.29	0.50
10:BN:39:LYS:HG3	10:BN:40:TYR:HD1	1.76	0.50
11:BO:43:THR:HG22	11:BO:45:GLY:H	1.77	0.50
21:BK:27:PHE:O	21:BK:28:ASN:ND2	2.45	0.50
31:Bg:172:ALA:HB1	31:Bg:199:ILE:HG21	1.92	0.50
34:B5:253:A:H2'	34:B5:254:A:C8	2.46	0.50
34:B5:992:A:OP2	34:B5:1011:G:N1	2.33	0.50
34:B5:1294:G:H1	34:B5:1303:U:H3	1.58	0.50
35:AA:23:ARG:HD2	38:A1:2175:U:O2'	2.11	0.50
38:A1:791:A:H2'	38:A1:792:G:H8	1.76	0.50
38:A1:853:G:O6	78:Ap:2:ALA:N	2.45	0.50
38:A1:1143:A:H5'	38:A1:1368:U:H1'	1.93	0.50
38:A1:2471:U:O2	38:A1:2475:G:O6	2.29	0.50
43:AF:222:HIS:ND1	43:AF:224:ILE:HG12	2.26	0.50
44:AG:205:ALA:HA	44:AG:208:GLU:HG2	1.94	0.50
49:AM:80:THR:HA	49:AM:83:LYS:HE2	1.94	0.50
79:E:8:GLN:HA	79:E:11:GLU:OE1	2.12	0.50
80:DC:188:ILE:O	80:DC:192:TYR:HB2	2.11	0.50
3:BC:179:VAL:O	3:BC:198:THR:OG1	2.27	0.50
5:BG:31:ARG:HG3	5:BG:34:GLN:HG3	1.92	0.50
5:BG:159:ARG:NH1	34:B5:77:U:O4'	2.45	0.50
7:BI:64:ASN:HD21	34:B5:258:C:C1'	2.24	0.50
26:BT:12:GLN:HE22	34:B5:1478:G:N2	2.09	0.50
34:B5:384:G:H2'	34:B5:385:A:C8	2.47	0.50
34:B5:600:U:O4	34:B5:601:A:N6	2.45	0.50
34:B5:1508:U:H2'	34:B5:1509:C:C5	2.46	0.50
34:B5:1528:U:H2'	34:B5:1529:C:C6	2.47	0.50
36:AB:128:LYS:NZ	38:A1:3151:U:OP1	2.44	0.50
37:AC:160:GLN:OE1	37:AC:160:GLN:N	2.43	0.50
37:AC:188:ARG:NH1	38:A1:1382:G:OP2	2.40	0.50
38:A1:1176:C:H2'	38:A1:1177:G:N2	2.26	0.50
38:A1:1389:G:H5"	67:Ae:101:SER:HB3	1.93	0.50
38:A1:1643:A:N3	38:A1:1822:C:H1'	2.27	0.50
38:A1:1803:C:H2'	38:A1:1804:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2615:G:H2'	38:A1:2616:C:H6	1.77	0.50
38:A1:2794:G:O2'	38:A1:2795:U:OP2	2.29	0.50
39:A3:4:U:H2'	39:A3:5:G:H8	1.76	0.50
39:A3:121:U:OP2	41:AD:265:TYR:OH	2.23	0.50
43:AF:89:ILE:HD11	43:AF:229:PHE:HB3	1.94	0.50
46:AI:52:LEU:HB2	46:AI:152:LEU:HD22	1.92	0.50
49:AM:47:ASP:C	49:AM:49:PRO:HD3	2.37	0.50
49:AM:55:ARG:HH11	49:AM:55:ARG:HG3	1.77	0.50
62:AZ:64:LYS:HA	62:AZ:67:LYS:HD2	1.93	0.50
66:Ad:15:ASN:CG	66:Ad:18:LYS:HG2	2.35	0.50
71:Ai:74:LYS:HD2	71:Ai:80:PHE:HD2	1.77	0.50
80:DC:150:ARG:HE	80:DC:197:LEU:HD11	1.76	0.50
1:BA:124:THR:HG22	1:BA:174:TRP:HZ2	1.77	0.50
3:BC:220:ASN:HA	12:BV:25:LYS:HZ1	1.75	0.50
7:BI:89:GLU:O	7:BI:93:THR:HG22	2.10	0.50
14:BX:84:THR:HG23	14:BX:120:VAL:HG22	1.94	0.50
19:BD:91:VAL:HG12	19:BD:92:GLN:O	2.11	0.50
23:BQ:49:TYR:HA	23:BQ:52:LEU:HD12	1.93	0.50
27:BU:70:THR:HG22	34:B5:1280:4AC:O2'	2.12	0.50
34:B5:258:C:H2'	34:B5:259:U:C6	2.47	0.50
35:AA:137:ILE:HD11	35:AA:147:ARG:HG2	1.94	0.50
36:AB:150:ARG:NH1	38:A1:3242:G:O6	2.44	0.50
36:AB:222:LYS:HG2	38:A1:3047:U:OP1	2.11	0.50
38:A1:240:U:O3'	38:A1:241:G:H2'	2.12	0.50
38:A1:761:A:H2'	38:A1:762:U:H6	1.77	0.50
38:A1:1580:A:C8	38:A1:2522:G:H8	2.30	0.50
38:A1:2538:U:O4	38:A1:2541:U:O2'	2.23	0.50
38:A1:2728:G:O6	56:AT:78:LYS:NZ	2.34	0.50
38:A1:2857:C:H2'	38:A1:2858:U:C6	2.47	0.50
38:A1:3321:C:H2'	38:A1:3322:A:C8	2.47	0.50
52:AP:109:ALA:HA	52:AP:112:LEU:HG	1.92	0.50
58:AV:10:LYS:HB3	58:AV:125:LEU:HD12	1.93	0.50
59:AW:7:SER:OG	59:AW:30:ARG:N	2.40	0.50
62:AZ:50:PRO:HD3	62:AZ:68:ILE:HG12	1.93	0.50
66:Ad:61:LYS:HG3	66:Ad:62:ARG:HG3	1.94	0.50
80:DC:414:GLN:NE2	80:DC:475:ALA:O	2.44	0.50
80:DC:578:LYS:N	80:DC:840:ASP:OD2	2.45	0.50
1:BA:26:ALA:H	1:BA:149:LEU:HD12	1.76	0.50
7:BI:140:GLU:HA	7:BI:143:TRP:CZ2	2.47	0.50
10:BN:49:GLN:HE22	10:BN:53:LEU:HD11	1.76	0.50
11:BO:22:SER:OG	11:BO:25:ASP:OD1	2.18	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BO:58:TYR:HE2	81:EC:6840:A:C4	2.29	0.50
27:BU:35:GLU:OE2	27:BU:89:ARG:NE	2.44	0.50
34:B5:36:C:H2'	34:B5:37:U:C6	2.47	0.50
34:B5:198:A:H2'	34:B5:199:G:O4'	2.11	0.50
34:B5:361:C:N4	34:B5:379:U:OP1	2.37	0.50
34:B5:424:C:O2	34:B5:427:C:N4	2.44	0.50
34:B5:875:G:O2'	34:B5:877:G:OP2	2.26	0.50
34:B5:1366:U:H2'	34:B5:1367:G:H8	1.76	0.50
34:B5:1648:A:H2'	34:B5:1649:G:C8	2.47	0.50
34:B5:1658:G:O6	34:B5:1743:U:O2	2.29	0.50
35:AA:204:MET:HE3	35:AA:209:HIS:HB2	1.93	0.50
36:AB:45:SER:HB3	36:AB:181:ILE:HG23	1.93	0.50
37:AC:23:PRO:HG2	37:AC:25:VAL:HG12	1.94	0.50
38:A1:291:C:OP1	50:AN:68:ARG:NE	2.39	0.50
38:A1:2328:U:H2'	38:A1:2329:C:C6	2.45	0.50
38:A1:2470:C:H2'	79:E:27:ASN:CB	2.36	0.50
38:A1:2514:U:OP2	38:A1:2586:G:N2	2.45	0.50
38:A1:3110:C:HO2'	45:AH:155:SER:HG	1.49	0.50
39:A3:6:C:O2'	41:AD:50:ARG:NH2	2.45	0.50
41:AD:49:TYR:CE1	41:AD:75:LEU:HD11	2.46	0.50
43:AF:202:LEU:HD13	43:AF:205:PHE:HZ	1.77	0.50
47:AJ:108:GLU:OE2	47:AJ:111:ASP:N	2.37	0.50
67:Ae:24:ARG:HG2	67:Ae:25:TYR:CD1	2.47	0.50
69:Ag:98:GLN:HA	69:Ag:101:VAL:HG22	1.94	0.50
80:DC:19:VAL:HG23	80:DC:99:LEU:HB3	1.94	0.50
5:BG:142:ARG:NH2	5:BG:147:LEU:O	2.44	0.50
8:BJ:45:ILE:HD12	8:BJ:48:GLN:NE2	2.27	0.50
15:BY:20:ARG:HG3	15:BY:76:TYR:HA	1.94	0.50
21:BK:6:GLU:HG3	21:BK:10:LYS:NZ	2.27	0.50
26:BT:47:PRO:HG2	26:BT:53:TRP:CG	2.47	0.50
26:BT:126:GLU:OE1	34:B5:1358:G:O2'	2.29	0.50
28:BZ:60:VAL:HG12	28:BZ:80:LEU:HD23	1.93	0.50
31:Bg:89:LEU:HB3	31:Bg:103:PHE:HB2	1.93	0.50
31:Bg:153:GLN:HG3	31:Bg:201:THR:HA	1.94	0.50
34:B5:629:U:H5'	38:A1:846:A:C5	2.46	0.50
34:B5:1160:A:H2'	34:B5:1161:C:C6	2.47	0.50
34:B5:1400:A:H2'	34:B5:1401:A:C8	2.46	0.50
34:B5:1586:A:H1'	34:B5:1611:A:N6	2.26	0.50
38:A1:413:U:H5"	52:AP:34:GLN:NE2	2.27	0.50
38:A1:1130:A:H61	46:AI:115:MET:CE	2.20	0.50
38:A1:2688:U:OP1	41:AD:12:TYR:OH	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AH:98:PRO:O	45:AH:116:ASN:ND2	2.42	0.50
45:AH:103:ILE:HD11	45:AH:134:ILE:HG21	1.94	0.50
50:AN:34:ASN:OD1	50:AN:35:VAL:N	2.42	0.50
56:AT:39:ILE:HG13	56:AT:62:GLY:C	2.36	0.50
58:AV:19:VAL:HB	58:AV:49:LEU:HD22	1.93	0.50
63:Aa:4:ARG:HG2	63:Aa:4:ARG:NH1	2.27	0.50
71:Ai:70:ARG:HE	71:Ai:84:LYS:HG2	1.77	0.50
80:DC:487:PRO:HG3	80:DC:517:CYS:HB3	1.93	0.50
2:BB:105:PHE:HE2	2:BB:113:MET:HE1	1.76	0.50
3:BC:103:VAL:HG23	3:BC:190:LEU:HD12	1.94	0.50
5:BG:67:VAL:O	5:BG:100:ALA:N	2.44	0.50
6:BH:56:LYS:HB2	6:BH:88:ARG:NE	2.27	0.50
10:BN:4:MET:SD	10:BN:124:ARG:NH1	2.85	0.50
10:BN:47:PRO:CB	10:BN:72:MET:HE1	2.42	0.50
11:BO:133:ARG:NH2	34:B5:1785:U:OP2	2.35	0.50
22:BP:20:VAL:HG21	22:BP:36:LEU:HD21	1.93	0.50
23:BQ:127:LYS:HD3	34:B5:1605:G:OP2	2.12	0.50
26:BT:29:GLU:CD	26:BT:110:LYS:HD3	2.37	0.50
31:Bg:176:LYS:O	31:Bg:177:MET:HE2	2.11	0.50
33:BM:45:LEU:HD23	33:BM:120:VAL:HG12	1.92	0.50
34:B5:36:C:H2'	34:B5:37:U:H6	1.77	0.50
34:B5:699:U:H2'	34:B5:700:C:C6	2.47	0.50
38:A1:235:A:H2'	38:A1:236:G:C8	2.46	0.50
38:A1:294:U:H4'	71:Ai:77:LEU:HD23	1.93	0.50
38:A1:656:A:H2'	38:A1:657:A:C8	2.46	0.50
38:A1:1072:G:H2'	38:A1:1073:U:C6	2.47	0.50
38:A1:1107:C:OP2	64:Ab:22:LYS:NZ	2.31	0.50
38:A1:2812:C:H2'	38:A1:2813:A:C8	2.47	0.50
38:A1:3170:A:O2'	38:A1:3171:U:OP2	2.24	0.50
40:A4:26:U:H2'	40:A4:27:U:C6	2.46	0.50
46:AI:184:LYS:HG3	46:AI:189:GLU:OE2	2.12	0.50
58:AV:82:ALA:HA	58:AV:95:PHE:H	1.77	0.50
80:DC:446:ASP:OD1	80:DC:447:ASP:N	2.40	0.50
80:DC:798:PHE:CE2	85:DC:903:SO1:H72	2.47	0.50
2:BB:64:ARG:HH11	11:BO:34:SER:HG	1.57	0.49
3:BC:43:ARG:HE	3:BC:248:SER:HA	1.76	0.49
5:BG:121:LEU:H	5:BG:125:THR:HG1	1.56	0.49
9:BL:92:HIS:HB3	9:BL:101:GLU:HB2	1.94	0.49
10:BN:54:LEU:HB3	10:BN:60:VAL:HB	1.94	0.49
23:BQ:8:GLN:OE1	34:B5:1378:U:H1'	2.12	0.49
23:BQ:100:GLN:NE2	31:Bg:57:PRO:HD2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BT:126:GLU:O	26:BT:130:ARG:HG2	2.12	0.49
27:BU:54:GLY:N	34:B5:1345:A:OP1	2.33	0.49
27:BU:96:PRO:O	27:BU:100:VAL:HG13	2.11	0.49
29:Bc:8:THR:HG23	29:Bc:34:GLU:OE2	2.12	0.49
31:Bg:5:GLU:N	31:Bg:316:MET:HE3	2.26	0.49
34:B5:507:U:H2'	34:B5:508:U:C6	2.46	0.49
34:B5:1171:A:H2'	34:B5:1172:G:C8	2.47	0.49
34:B5:1439:C:H2'	34:B5:1440:C:C6	2.47	0.49
38:A1:408:A:N6	40:A4:15:G:H1'	2.27	0.49
38:A1:745:C:H2'	38:A1:746:A:C8	2.46	0.49
38:A1:1246:G:O5'	38:A1:1268:G:N2	2.45	0.49
38:A1:2728:G:N7	56:AT:87:LYS:NZ	2.59	0.49
38:A1:2742:C:H2'	38:A1:2743:A:C8	2.47	0.49
38:A1:3021:A:H61	38:A1:3032:A:H5"	1.77	0.49
38:A1:3050:U:O2'	59:AW:16:GLY:O	2.29	0.49
38:A1:3276:G:O2'	52:AP:175:ARG:HD2	2.12	0.49
42:AE:170:LYS:HB2	42:AE:173:MET:SD	2.52	0.49
45:AH:94:TYR:HB3	45:AH:99:ILE:HD12	1.93	0.49
46:AI:174:THR:HA	46:AI:196:PHE:CZ	2.47	0.49
58:AV:54:LEU:HD12	58:AV:78:VAL:HG12	1.94	0.49
80:DC:17:THR:OG1	80:DC:92:LYS:O	2.30	0.49
80:DC:710:ARG:C	80:DC:711:ARG:HD2	2.37	0.49
1:BA:124:THR:HG22	1:BA:174:TRP:CZ2	2.46	0.49
3:BC:227:PRO:HA	3:BC:230:TRP:CE2	2.46	0.49
6:BH:46:ILE:HD11	6:BH:60:ILE:HG13	1.94	0.49
7:BI:187:GLU:HB2	7:BI:191:PHE:CZ	2.48	0.49
12:BV:39:VAL:HG22	12:BV:40:ASP:H	1.75	0.49
13:BW:57:ARG:NE	17:Bb:26:GLN:HE21	2.10	0.49
17:Bb:51:GLN:HE21	34:B5:870:C:H1'	1.77	0.49
24:BR:60:ARG:HH12	24:BR:66:VAL:HG11	1.77	0.49
26:BT:52:GLY:O	26:BT:56:LYS:HG2	2.12	0.49
31:Bg:276:PRO:HG2	31:Bg:278:PHE:CE2	2.47	0.49
31:Bg:303:ALA:HB3	31:Bg:313:TRP:HZ3	1.77	0.49
34:B5:63:G:O2'	34:B5:170:U:OP1	2.29	0.49
34:B5:902:G:H2'	34:B5:903:U:C6	2.47	0.49
34:B5:1498:G:H2'	34:B5:1499:G:H8	1.75	0.49
38:A1:8:C:H2'	38:A1:9:U:C6	2.47	0.49
38:A1:38:U:O2'	48:AL:15:ARG:NH2	2.45	0.49
38:A1:316:U:O2'	71:Ai:30:LYS:HD2	2.12	0.49
38:A1:499:G:H5"	68:Af:48:ARG:HH22	1.76	0.49
38:A1:551:A:O2'	38:A1:552:G:H8	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1306:G:N2	38:A1:1307:G:N7	2.58	0.49
38:A1:1787:A:H2'	38:A1:1788:C:O4'	2.12	0.49
38:A1:2115:G:H4'	54:AR:79:GLY:O	2.12	0.49
38:A1:2894:C:H5"	45:AH:168:ARG:HH22	1.77	0.49
44:AG:72:PRO:HA	44:AG:233:TRP:CZ3	2.47	0.49
44:AG:75:ILE:HG22	44:AG:76:ALA:H	1.78	0.49
44:AG:99:PRO:HD3	44:AG:132:VAL:HG12	1.92	0.49
47:AJ:53:THR:HG23	47:AJ:60:ARG:HA	1.94	0.49
51:AO:58[A]:LEU:HD11	51:AO:74[A]:ARG:HH21	1.77	0.49
56:AT:11:THR:O	56:AT:11:THR:HG22	2.12	0.49
56:AT:115:LYS:HA	56:AT:118:GLU:OE2	2.12	0.49
61:AY:87:LYS:HB3	61:AY:97:ILE:HD11	1.94	0.49
67:Ae:79:VAL:O	67:Ae:83:GLU:HG3	2.11	0.49
80:DC:155:VAL:HB	80:DC:209:VAL:HG22	1.94	0.49
80:DC:161:ASP:HA	80:DC:164:LEU:HB2	1.93	0.49
80:DC:225:PHE:HA	80:DC:228:ARG:HG3	1.92	0.49
80:DC:726:GLU:N	80:DC:802:SER:O	2.36	0.49
2:BB:64:ARG:HG2	11:BO:36:LYS:NZ	2.27	0.49
5:BG:58:LYS:HD2	5:BG:59:GLN:H	1.77	0.49
9:BL:80:MET:HE2	34:B5:347:G:H5'	1.94	0.49
10:BN:114:ARG:O	10:BN:118:ILE:HG12	2.12	0.49
11:BO:29:HIS:CD2	11:BO:41:ARG:HB2	2.47	0.49
15:BY:20:ARG:HA	15:BY:76:TYR:HA	1.94	0.49
16:Ba:32:LYS:NZ	34:B5:932:U:O2	2.45	0.49
24:BR:71:PHE:CZ	24:BR:74:GLN:HB2	2.47	0.49
26:BT:25:GLN:HG2	26:BT:27:LYS:HG3	1.94	0.49
28:BZ:69:LEU:O	28:BZ:70:LYS:HG3	2.12	0.49
31:Bg:294:TRP:CD1	31:Bg:301:LEU:HD13	2.47	0.49
33:BM:97:LEU:HA	33:BM:100:TRP:HB2	1.94	0.49
34:B5:1336:A:H2'	34:B5:1337:A:C8	2.48	0.49
36:AB:250:ALA:HB1	38:A1:2947:G:N3	2.27	0.49
38:A1:528:U:H3	38:A1:564:G:H1	1.60	0.49
38:A1:1139:G:O6	64:Ab:10:HIS:NE2	2.45	0.49
38:A1:2709:C:H2'	38:A1:2710:C:C6	2.48	0.49
38:A1:3203:U:H2'	38:A1:3204:C:H6	1.76	0.49
39:A3:1:G:N2	41:AD:269:SER:HG	2.11	0.49
40:A4:37:A:OP2	70:Ah:86:ARG:HD2	2.13	0.49
41:AD:39:GLN:NE2	41:AD:46:THR:OG1	2.45	0.49
44:AG:75:ILE:HG22	44:AG:76:ALA:N	2.27	0.49
51:AO:23[A]:VAL:O	51:AO:27[A]:LEU:HD23	2.13	0.49
60:AX:46:TYR:HD2	70:Ah:75:TYR:HB3	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:AZ:108:GLU:CD	62:AZ:108:GLU:H	2.20	0.49
72:Aj:28:HIS:HB3	72:Aj:31:LYS:HB2	1.94	0.49
78:Ap:61:LYS:HE2	78:Ap:61:LYS:HA	1.93	0.49
80:DC:199:ASP:OD1	80:DC:199:ASP:N	2.43	0.49
80:DC:505:VAL:HA	80:DC:508:LEU:HD13	1.94	0.49
6:BH:79:ARG:N	6:BH:79:ARG:HD3	2.28	0.49
15:BY:39:GLU:O	15:BY:43:LYS:HG2	2.12	0.49
15:BY:60:PHE:HB3	34:B5:523:G:C5'	2.42	0.49
19:BD:92:GLN:OE1	19:BD:92:GLN:N	2.44	0.49
21:BK:14:TYR:CD2	21:BK:35:ILE:HD11	2.47	0.49
23:BQ:77:GLN:O	23:BQ:80:ALA:N	2.45	0.49
24:BR:23:LYS:HE3	31:Bg:198:ASN:HD21	1.76	0.49
33:BM:70:ASN:O	33:BM:73:LYS:HG3	2.12	0.49
34:B5:477:A:H2	34:B5:512:A:H2	1.61	0.49
34:B5:1174:C:O2'	34:B5:1196:A:N6	2.45	0.49
34:B5:1397:U:O2'	34:B5:1400:A:N6	2.44	0.49
34:B5:1579:U:H2'	34:B5:1580:C:C6	2.47	0.49
34:B5:1753:A:H2'	34:B5:1754:A:C8	2.48	0.49
38:A1:1659:U:H2'	38:A1:1660:C:C6	2.47	0.49
38:A1:2106:A:H2'	38:A1:2107:A:C8	2.48	0.49
38:A1:2656:A:C5	38:A1:2658:G:C8	3.00	0.49
38:A1:3049:A:H61	38:A1:3095:U:H1'	1.77	0.49
38:A1:3086:A:H3'	38:A1:3087:A:H8	1.77	0.49
38:A1:3182:G:H4'	51:AO:161[A]:LYS:HD2	1.95	0.49
39:A3:1:G:H2'	39:A3:2:G:H8	1.78	0.49
40:A4:2:A:H2'	40:A4:3:A:C8	2.48	0.49
40:A4:141:C:O2	50:AN:112:ASN:ND2	2.45	0.49
47:AJ:101:ASN:CG	47:AJ:130:VAL:HA	2.37	0.49
55:AS:81:TYR:HB3	55:AS:121:ILE:HD13	1.94	0.49
80:DC:75:ILE:HD11	80:DC:102:LEU:HD23	1.94	0.49
80:DC:144:ARG:HB2	80:DC:192:TYR:HD2	1.76	0.49
80:DC:160:VAL:O	80:DC:164:LEU:HG	2.11	0.49
80:DC:495:VAL:HG21	80:DC:504:LEU:HD21	1.95	0.49
2:BB:129:THR:OG1	2:BB:131:ASP:O	2.28	0.49
6:BH:64:VAL:HG23	6:BH:67:LEU:HD23	1.93	0.49
6:BH:170:GLN:O	6:BH:174:ASN:ND2	2.45	0.49
12:BV:3:ASN:N	12:BV:6:GLY:O	2.38	0.49
15:BY:13:ILE:HB	15:BY:22:GLN:NE2	2.27	0.49
15:BY:20:ARG:HG2	15:BY:21:LYS:H	1.77	0.49
15:BY:105:ARG:NH1	34:B5:458:G:OP1	2.46	0.49
18:Be:24:THR:HB	18:Be:26:LYS:NZ	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BP:50:THR:H	22:BP:52:LYS:NZ	2.11	0.49
23:BQ:89:LEU:HD23	23:BQ:93:HIS:HD2	1.77	0.49
31:Bg:231:MET:N	31:Bg:231:MET:SD	2.85	0.49
31:Bg:276:PRO:HG3	31:Bg:305:TYR:CZ	2.47	0.49
34:B5:17:C:O2'	34:B5:1137:A:N1	2.39	0.49
34:B5:502:U:H2'	34:B5:503:G:C8	2.47	0.49
34:B5:515:A:H2'	34:B5:516:G:O4'	2.13	0.49
34:B5:765:G:N3	34:B5:768:C:H5'	2.28	0.49
34:B5:1187:PSU:H2'	34:B5:1188:G:C8	2.47	0.49
34:B5:1233:G:H2'	34:B5:1234:A:O4'	2.12	0.49
34:B5:1316:G:HO2'	34:B5:1401:A:HO2'	1.60	0.49
34:B5:1346:A:C8	34:B5:1370:U:H2'	2.47	0.49
34:B5:1429:G:H2'	34:B5:1430:U:C6	2.46	0.49
34:B5:1488:G:H3'	34:B5:1515:A:H61	1.78	0.49
35:AA:136:ILE:HD13	35:AA:148:VAL:HG12	1.93	0.49
38:A1:431:U:OP1	68:Af:65:ARG:NH1	2.45	0.49
38:A1:1132:C:H2'	38:A1:1133:A:C8	2.47	0.49
38:A1:1766:G:H2'	38:A1:1767:C:H6	1.77	0.49
38:A1:2448:G:N2	38:A1:2449:A:N1	2.61	0.49
38:A1:3290:G:H2'	38:A1:3291:G:H8	1.77	0.49
39:A3:6:C:H5"	41:AD:54:ARG:HH22	1.77	0.49
45:AH:90:MET:HE2	45:AH:179:ILE:HG22	1.95	0.49
45:AH:107:ASP:OD1	45:AH:107:ASP:N	2.44	0.49
45:AH:117:PHE:O	45:AH:120:ASP:HB2	2.12	0.49
48:AL:46:ILE:O	48:AL:49:ARG:HG2	2.13	0.49
60:AX:77:GLU:HB3	60:AX:133:LEU:HD21	1.93	0.49
78:Ap:28:LYS:HG3	78:Ap:29:LEU:HD22	1.95	0.49
79:E:9:VAL:HA	79:E:12:HIS:CE1	2.47	0.49
80:DC:502:PRO:HA	80:DC:505:VAL:HG22	1.93	0.49
2:BB:187:LYS:C	2:BB:190:PRO:HD2	2.37	0.49
3:BC:57:PHE:CD2	3:BC:138:PRO:HG3	2.47	0.49
5:BG:137:ARG:O	5:BG:141:ILE:HG12	2.12	0.49
8:BJ:78:ARG:HH22	8:BJ:82:ARG:HH21	1.59	0.49
8:BJ:78:ARG:NH2	8:BJ:82:ARG:HH21	2.11	0.49
20:BF:143:ARG:CZ	29:Bc:55:VAL:H	2.24	0.49
21:BK:38:LYS:HD3	21:BK:40:LEU:HB3	1.95	0.49
31:Bg:258:THR:HB	31:Bg:275:ARG:HE	1.77	0.49
34:B5:1081:A:H2	34:B5:1082:C:H41	1.60	0.49
34:B5:1356:U:H2'	34:B5:1357:A:H8	1.76	0.49
38:A1:67:A:O2'	38:A1:315:C:O2	2.28	0.49
38:A1:203:G:H2'	38:A1:204:A:H8	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1615:C:H2'	38:A1:1616:U:C6	2.48	0.49
38:A1:1637:A:H2'	38:A1:1638:A:C8	2.48	0.49
38:A1:2523:A:H5"	44:AG:51:LYS:HB2	1.95	0.49
38:A1:3200:G:H2'	38:A1:3201:C:H6	1.77	0.49
45:AH:141:LYS:NZ	80:DC:173:ASP:OD2	2.45	0.49
53:AQ:170:ARG:O	53:AQ:171:LYS:HG2	2.12	0.49
58:AV:123:ALA:O	58:AV:130:ALA:HB2	2.12	0.49
81:EC:6842:U:H1'	81:EC:6844:A:C5	2.47	0.49
11:BO:132:ARG:HG3	16:Ba:29:SER:HB3	1.95	0.49
34:B5:319:U:H4'	34:B5:323:A:C8	2.47	0.49
34:B5:407:A:H2'	34:B5:408:C:C6	2.48	0.49
34:B5:882:U:H2'	34:B5:883:C:C6	2.46	0.49
34:B5:1322:A:H2'	34:B5:1323:C:C6	2.48	0.49
34:B5:1333:C:H2'	34:B5:1334:U:H6	1.76	0.49
34:B5:1709:C:H4'	34:B5:1710:U:H5'	1.94	0.49
36:AB:120:LYS:N	38:A1:3296:A:OP1	2.41	0.49
38:A1:256:G:H2'	38:A1:257:U:C6	2.47	0.49
38:A1:655:C:OP1	67:Ae:27:ARG:N	2.45	0.49
38:A1:729:C:H4'	53:AQ:137:THR:HG22	1.94	0.49
38:A1:770:G:H5'	48:AL:168:ARG:HH22	1.77	0.49
38:A1:999:G:H2'	38:A1:1000:C:C6	2.47	0.49
38:A1:1244:A:N7	38:A1:1249:G:N2	2.60	0.49
38:A1:1564:U:H3	38:A1:1575:A:N6	2.09	0.49
38:A1:2769:A:H5"	77:Ao:80:ARG:HD3	1.95	0.49
38:A1:3027:A:C4	80:DC:785:ARG:HD2	2.47	0.49
41:AD:134:ALA:HA	41:AD:141:PRO:HD3	1.95	0.49
42:AE:30:LEU:HD21	42:AE:57:HIS:CD2	2.47	0.49
44:AG:98:ARG:HD3	44:AG:99:PRO:HD2	1.94	0.49
46:AI:59:GLN:HE22	46:AI:97:LEU:HD21	1.78	0.49
52:AP:125:GLN:HB2	52:AP:141:SER:OG	2.12	0.49
66:Ad:14:ILE:HG23	66:Ad:16:LEU:HG	1.94	0.49
67:Ae:45:ARG:HH12	67:Ae:54:LYS:HE2	1.77	0.49
75:Am:104:PRO:HD3	75:Am:111:ARG:HH22	1.77	0.49
2:BB:64:ARG:NH1	11:BO:34:SER:HG	2.11	0.49
5:BG:139:ASN:HD21	34:B5:142:G:P	2.36	0.49
8:BJ:36:LEU:HD11	8:BJ:105:LEU:HD13	1.95	0.49
13:BW:44:HIS:CE1	13:BW:101:TYR:HE2	2.30	0.49
14:BX:50:LYS:NZ	34:B5:436:A:OP1	2.46	0.49
15:BY:89:TYR:CE2	15:BY:90:ARG:HG3	2.47	0.49
20:BF:40:ILE:HG12	20:BF:69:PHE:CZ	2.48	0.49
23:BQ:8:GLN:NE2	23:BQ:19:VAL:HG13	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:117:LYS:HG2	31:Bg:118:LYS:HD3	1.95	0.49
31:Bg:260:ILE:HB	31:Bg:274:LEU:HB2	1.95	0.49
34:B5:1211:A:H2'	34:B5:1212:G:O4'	2.13	0.49
34:B5:1273:G:N7	34:B5:1430:U:H3'	2.28	0.49
34:B5:1279:C:H2'	34:B5:1280:4AC:H6	1.92	0.49
35:AA:51:ASP:HB2	35:AA:58:LEU:HG	1.94	0.49
35:AA:117:GLU:OE2	35:AA:122:ASP:N	2.46	0.49
37:AC:150:LEU:HD22	37:AC:249:ILE:HG12	1.94	0.49
38:A1:118:U:O2	38:A1:121:A:H5"	2.13	0.49
38:A1:3298:C:C2	38:A1:3299:A:C8	3.01	0.49
41:AD:235:SER:O	41:AD:239:ILE:HG23	2.13	0.49
46:AI:75:TYR:OH	46:AI:150:GLU:OE1	2.26	0.49
71:Ai:68:ARG:HA	71:Ai:71:LYS:HG2	1.95	0.49
6:BH:110:GLN:NE2	34:B5:817:A:O4'	2.46	0.49
15:BY:105:ARG:HH21	34:B5:444:C:P	2.36	0.49
16:Ba:87:ARG:HH21	16:Ba:92:ARG:HA	1.78	0.49
23:BQ:99:GLU:O	23:BQ:103:ASN:ND2	2.46	0.49
27:BU:80:GLU:OE2	30:Bd:54:LYS:HD2	2.12	0.49
28:BZ:77:ARG:NE	34:B5:1534:G:O6	2.43	0.49
34:B5:430:G:H2'	34:B5:431:C:H6	1.78	0.49
34:B5:651:G:H2'	34:B5:652:G:H3'	1.95	0.49
34:B5:1226:A:O2'	34:B5:1256:A:N1	2.34	0.49
34:B5:1356:U:N3	34:B5:1368:G:O6	2.46	0.49
37:AC:141:ARG:NH1	37:AC:180:LYS:HG3	2.27	0.49
38:A1:374:A:H4'	38:A1:375:A:H5'	1.95	0.49
38:A1:1760:A:H2'	38:A1:1761:C:C6	2.48	0.49
38:A1:1819:U:H2'	38:A1:1820:U:C6	2.47	0.49
38:A1:2278:5MC:P	76:An:23:ARG:HH22	2.35	0.49
38:A1:2761:G:C4	38:A1:2795:U:H5	2.31	0.49
38:A1:3246:G:H4'	38:A1:3247:G:C8	2.48	0.49
43:AF:44:ILE:HG12	43:AF:180:SER:HB3	1.94	0.49
48:AL:90:ALA:HA	48:AL:93:ILE:HG12	1.95	0.49
54:AR:134:HIS:CE1	54:AR:136:ARG:HG2	2.48	0.49
65:Ac:100:ILE:HA	65:Ac:103:THR:HB	1.94	0.49
80:DC:608:PRO:HG3	80:DC:636:PHE:HD2	1.78	0.49
1:BA:190:ASP:OD1	1:BA:191:ARG:N	2.45	0.49
8:BJ:32:GLY:HA3	18:Be:40:TYR:CG	2.47	0.49
8:BJ:172:VAL:HA	8:BJ:175:ARG:HG2	1.94	0.49
11:BO:58:TYR:CE1	11:BO:62:LEU:HD11	2.48	0.49
11:BO:99:GLN:O	11:BO:103:ARG:HG3	2.13	0.49
19:BD:64:ARG:HH21	19:BD:67:ASN:ND2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BU:44:ASN:O	27:BU:47:GLN:HG3	2.13	0.49
34:B5:253:A:H2'	34:B5:254:A:O4'	2.13	0.49
34:B5:1590:G:H2'	34:B5:1591:C:H6	1.76	0.49
34:B5:1625:C:H2'	34:B5:1626:U:C6	2.47	0.49
35:AA:200:ARG:NH1	38:A1:2186:U:OP2	2.39	0.49
37:AC:190:GLY:O	37:AC:193:LYS:HG2	2.13	0.49
37:AC:311:HIS:CE1	43:AF:162:PRO:HG2	2.48	0.49
38:A1:2312:A:H2'	38:A1:2315:G:H21	1.78	0.49
38:A1:2564:G:H2'	38:A1:2565:U:C6	2.48	0.49
38:A1:2883:U:H2'	38:A1:2884:C:H6	1.77	0.49
38:A1:2926:A:H2'	38:A1:2927:C:C6	2.47	0.49
38:A1:3023:U:C2	38:A1:3032:A:N7	2.80	0.49
38:A1:3027:A:N9	80:DC:785:ARG:HD2	2.28	0.49
39:A3:19:C:H2'	39:A3:20:A:H8	1.77	0.49
40:A4:6:U:H2'	40:A4:7:U:C6	2.48	0.49
40:A4:6:U:H2'	40:A4:7:U:H6	1.78	0.49
40:A4:75:G:N7	74:Al:30:ARG:NH1	2.61	0.49
41:AD:62:CYS:SG	41:AD:105:ILE:HG21	2.53	0.49
42:AE:31:ARG:HB2	42:AE:34:LEU:HD13	1.95	0.49
43:AF:138:TYR:HE2	43:AF:233:GLU:OE1	1.96	0.49
46:AI:7:ARG:HA	46:AI:10:ARG:HG3	1.93	0.49
46:AI:102:MET:HG2	46:AI:112:GLN:HE22	1.78	0.49
56:AT:6:GLY:N	56:AT:9:SER:OG	2.46	0.49
61:AY:70:ILE:HA	61:AY:82:VAL:HG12	1.95	0.49
80:DC:737:GLU:HG2	80:DC:738:GLN:N	2.28	0.49
2:BB:158:SER:HB3	34:B5:875:G:P	2.53	0.48
4:BE:128:LYS:HD2	4:BE:130:GLN:NE2	2.28	0.48
5:BG:57:ASP:OD1	5:BG:61:PHE:N	2.46	0.48
6:BH:63:PRO:C	6:BH:65:PRO:HD3	2.38	0.48
6:BH:97:ARG:N	34:B5:856:A:N7	2.61	0.48
12:BV:1:MET:N	12:BV:2:GLU:OE2	2.43	0.48
15:BY:10:ARG:NE	34:B5:778:G:O6	2.20	0.48
15:BY:76:TYR:CD2	15:BY:82:ALA:HA	2.48	0.48
24:BR:32:LYS:HE3	24:BR:33:ARG:HH12	1.78	0.48
25:BS:11:PHE:CE1	25:BS:59:GLY:HA3	2.47	0.48
34:B5:158:U:O2'	34:B5:160:C:O5'	2.31	0.48
34:B5:1333:C:H2'	34:B5:1334:U:C6	2.47	0.48
34:B5:1391:A:H2'	34:B5:1392:U:C6	2.47	0.48
34:B5:1482:C:P	34:B5:1521:G:H22	2.35	0.48
38:A1:533:A:N3	38:A1:535:G:H5'	2.27	0.48
38:A1:1011:A:H1'	46:AI:193:ASP:OD1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1411:C:OP1	67:Ae:98:HIS:ND1	2.46	0.48
38:A1:1660:C:H2'	38:A1:1661:G:C8	2.47	0.48
38:A1:2463:G:O3'	38:A1:2485:A:O2'	2.31	0.48
38:A1:2507:C:H2'	38:A1:2508:U:C6	2.48	0.48
38:A1:2550:U:O4'	44:AG:38:GLN:NE2	2.46	0.48
39:A3:60:G:H2'	39:A3:61:G:C8	2.47	0.48
43:AF:127:LEU:O	43:AF:131:GLU:HG3	2.12	0.48
45:AH:96:HIS:CD2	80:DC:167:LEU:HD21	2.47	0.48
46:AI:39:LYS:NZ	46:AI:40:LYS:HE3	2.28	0.48
48:AL:56:PRO:O	48:AL:71:ALA:HA	2.13	0.48
48:AL:80:VAL:HG21	48:AL:97:VAL:HG22	1.95	0.48
48:AL:165:SER:O	48:AL:168:ARG:N	2.46	0.48
1:BA:176:LEU:O	1:BA:179:ARG:N	2.46	0.48
2:BB:51:SER:HA	2:BB:56:SER:HA	1.94	0.48
4:BE:133:LYS:O	4:BE:136:VAL:HG12	2.12	0.48
8:BJ:82:ARG:HD2	8:BJ:149:ARG:HD3	1.95	0.48
12:BV:36:VAL:HB	12:BV:51:VAL:HB	1.95	0.48
13:BW:30:SER:HB2	13:BW:61:ILE:HG13	1.94	0.48
14:BX:42:PRO:O	14:BX:79:ASN:ND2	2.46	0.48
21:BK:3:MET:SD	21:BK:7:ASP:HB2	2.53	0.48
25:BS:62:THR:HG23	25:BS:64:GLU:HG2	1.95	0.48
26:BT:89:ARG:NH1	34:B5:1562:G:OP1	2.46	0.48
31:Bg:159:ASN:OD1	31:Bg:164:ASP:N	2.43	0.48
31:Bg:303:ALA:HB3	31:Bg:313:TRP:CZ3	2.47	0.48
33:BM:76:GLU:HG2	33:BM:88:LEU:HD11	1.94	0.48
34:B5:97:C:H2'	34:B5:98:U:C6	2.48	0.48
34:B5:252:U:H2'	34:B5:253:A:H5'	1.95	0.48
34:B5:406:U:H2'	34:B5:407:A:H8	1.78	0.48
34:B5:569:C:H2'	34:B5:570:A:O4'	2.13	0.48
38:A1:172:G:O2'	38:A1:244:G:O6	2.19	0.48
38:A1:507:U:H2'	38:A1:508:U:C6	2.48	0.48
38:A1:584:G:H2'	38:A1:585:A:C8	2.47	0.48
38:A1:727:G:OP2	38:A1:742:G:N2	2.44	0.48
38:A1:890:C:H2'	38:A1:891:G:H8	1.78	0.48
38:A1:1226:G:H2'	38:A1:1227:C:C6	2.48	0.48
38:A1:1246:G:H2'	38:A1:1247:U:C6	2.48	0.48
38:A1:1926:C:H2'	78:Ap:7:LYS:HZ1	1.78	0.48
38:A1:2853:A:H4'	46:AI:63:GLU:OE1	2.13	0.48
38:A1:2961:G:H2'	38:A1:2962:U:C6	2.48	0.48
40:A4:2:A:C4	40:A4:3:A:C8	3.00	0.48
41:AD:67:SER:HA	41:AD:72:ASP:OD1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:AE:136:GLU:OE1	42:AE:136:GLU:N	2.35	0.48
48:AL:18:TRP:H	48:AL:18:TRP:CD1	2.31	0.48
58:AV:65:GLY:H	58:AV:70:ARG:HH21	1.61	0.48
70:Ah:73:LYS:O	70:Ah:76:GLN:NE2	2.46	0.48
80:DC:507:GLY:HA2	80:DC:510:ARG:HB3	1.95	0.48
80:DC:775:ASN:HA	80:DC:776:GLU:CB	2.34	0.48
1:BA:80:THR:HA	1:BA:83:GLN:NE2	2.28	0.48
7:BI:23:LYS:HG2	34:B5:386:G:OP1	2.13	0.48
13:BW:57:ARG:CD	17:Bb:26:GLN:HE21	2.26	0.48
14:BX:127:VAL:HB	14:BX:142:LYS:HZ3	1.79	0.48
17:Bb:67:THR:HG22	17:Bb:68:GLY:N	2.25	0.48
19:BD:175:VAL:HG12	19:BD:177:MET:SD	2.54	0.48
24:BR:45:ARG:HE	34:B5:1389:C:H5'	1.79	0.48
34:B5:172:C:H2'	34:B5:173:A:H8	1.78	0.48
34:B5:390:G:O2'	34:B5:1731:A:H5"	2.13	0.48
34:B5:809:A:H2'	34:B5:810:G:C8	2.48	0.48
36:AB:297:SER:HA	36:AB:300:ARG:NE	2.28	0.48
38:A1:567:G:H2'	38:A1:568:G:C8	2.48	0.48
38:A1:604:G:H2'	38:A1:605:U:H6	1.78	0.48
38:A1:3337:G:H2'	38:A1:3338:C:C6	2.47	0.48
49:AM:48:GLY:HA3	49:AM:53:VAL:HB	1.95	0.48
54:AR:106:LEU:HB3	54:AR:120:TYR:HE1	1.79	0.48
55:AS:22:PRO:O	56:AT:146:ASN:ND2	2.47	0.48
65:Ac:69:TYR:O	65:Ac:71:GLN:NE2	2.46	0.48
80:DC:225:PHE:CZ	80:DC:277:ILE:HG12	2.48	0.48
80:DC:263:ASP:OD1	80:DC:267:LYS:N	2.41	0.48
81:EC:6785:C:H3'	81:EC:6786:A:H5"	1.95	0.48
81:EC:6853:G:H2'	81:EC:6854:U:O4'	2.12	0.48
1:BA:88:LYS:NZ	24:BR:82:ASP:O	2.30	0.48
1:BA:117:GLU:HB2	3:BC:40:LYS:NZ	2.27	0.48
8:BJ:132:ARG:HH22	34:B5:533:U:P	2.37	0.48
14:BX:138:GLU:OE1	80:DC:423:LYS:NZ	2.41	0.48
27:BU:96:PRO:HD2	27:BU:99:ILE:HD11	1.94	0.48
28:BZ:83:LEU:HA	28:BZ:86:GLU:HB2	1.96	0.48
29:Bc:57:MET:N	29:Bc:57:MET:SD	2.87	0.48
31:Bg:144:LEU:HD22	31:Bg:181:TRP:CE3	2.49	0.48
34:B5:343:C:H2'	34:B5:344:A:H8	1.78	0.48
34:B5:514:G:O2'	34:B5:515:A:O4'	2.30	0.48
34:B5:1222:C:H2'	34:B5:1223:A:C8	2.48	0.48
34:B5:1673:G:C6	34:B5:1728:A:N1	2.80	0.48
36:AB:358:TRP:CD1	59:AW:1:MET:HE2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:115:HIS:N	38:A1:681:U:OP1	2.42	0.48
37:AC:208:VAL:HA	37:AC:228:ALA:O	2.14	0.48
38:A1:176:G:H2'	38:A1:177:U:O4'	2.13	0.48
38:A1:1169:A:H4'	43:AF:219:LYS:HD3	1.95	0.48
38:A1:1281:G:C4	38:A1:1282:G:C8	3.01	0.48
38:A1:1446:A:H5"	52:AP:65:SER:OG	2.14	0.48
38:A1:1643:A:H2'	38:A1:1644:C:C2	2.47	0.48
38:A1:1710:C:H2'	38:A1:1711:C:H6	1.79	0.48
38:A1:2357:A:H2'	38:A1:2358:A:C8	2.47	0.48
38:A1:2742:C:H2'	38:A1:2743:A:H8	1.79	0.48
38:A1:2875:U:OP2	38:A1:2945:G:N1	2.39	0.48
38:A1:3077:A:N6	38:A1:3080:G:C5	2.81	0.48
38:A1:3184:A:O2'	45:AH:39:LYS:NZ	2.42	0.48
38:A1:3200:G:H2'	38:A1:3201:C:C6	2.49	0.48
43:AF:59:GLU:O	43:AF:63:ILE:HG12	2.12	0.48
51:AO:22[A]:VAL:HG11	51:AO:122[A]:GLN:NE2	2.19	0.48
52:AP:94:LEU:HD11	52:AP:146:ILE:CG2	2.42	0.48
80:DC:191:THR:HG23	80:DC:192:TYR:HD1	1.79	0.48
80:DC:249:PHE:HB2	80:DC:258:THR:HB	1.95	0.48
81:EC:6808:G:H2'	81:EC:6809:G:C8	2.48	0.48
81:EC:6841:U:C4	81:EC:6845:G:H1'	2.49	0.48
7:BI:31:ARG:O	34:B5:331:A:H4'	2.13	0.48
11:BO:52:ARG:NH2	34:B5:904:G:H3'	2.27	0.48
15:BY:65:GLY:N	34:B5:532:U:OP1	2.47	0.48
26:BT:40:SER:HB3	26:BT:43:ASN:HB2	1.96	0.48
34:B5:1018:U:H2'	34:B5:1019:A:C8	2.49	0.48
37:AC:183:LYS:HE3	38:A1:1386:A:N7	2.29	0.48
38:A1:171:G:O2'	38:A1:172:G:O5'	2.30	0.48
38:A1:412:G:H2'	38:A1:413:U:C6	2.49	0.48
38:A1:531:G:H2'	38:A1:532:A:H8	1.78	0.48
38:A1:1721:U:OP2	54:AR:124:TYR:OH	2.13	0.48
38:A1:1766:G:H2'	38:A1:1767:C:C6	2.49	0.48
38:A1:2106:A:H2'	38:A1:2107:A:H8	1.77	0.48
38:A1:2168:A:H2'	38:A1:2170:U:H5'	1.95	0.48
38:A1:2612:U:H2'	38:A1:2613:U:O4'	2.13	0.48
38:A1:2915:U:H5"	38:A1:2916:U:H5'	1.96	0.48
40:A4:75:G:OP1	74:Al:31:THR:HG23	2.14	0.48
52:AP:108:ASP:N	52:AP:108:ASP:OD1	2.45	0.48
57:AU:91:ASP:OD1	57:AU:92:TRP:N	2.47	0.48
58:AV:36:ILE:HD12	58:AV:58:VAL:HG21	1.95	0.48
76:An:15:ARG:NH1	76:An:15:ARG:HB2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:E:181:ASN:O	79:E:185:MET:HG2	2.13	0.48
80:DC:91:GLN:NE2	80:DC:343:PRO:HA	2.26	0.48
80:DC:380:LEU:HG	80:DC:469:LEU:HB2	1.94	0.48
80:DC:464:LEU:O	80:DC:465:LYS:HG2	2.14	0.48
80:DC:729:PHE:HE2	80:DC:774:VAL:HA	1.78	0.48
1:BA:59:LEU:O	1:BA:63:ILE:HG12	2.14	0.48
1:BA:102:PHE:O	1:BA:103:THR:OG1	2.29	0.48
8:BJ:172:VAL:O	8:BJ:175:ARG:HG2	2.14	0.48
15:BY:11:LYS:HB2	15:BY:24:VAL:HG12	1.96	0.48
16:Ba:95:ARG:NH1	34:B5:1796:C:O2'	2.47	0.48
19:BD:106:LYS:HD3	19:BD:173:ARG:HB3	1.95	0.48
30:Bd:44:ARG:CZ	30:Bd:44:ARG:HB3	2.44	0.48
31:Bg:47:LEU:HD12	31:Bg:54:PHE:CD1	2.47	0.48
34:B5:329:G:H2'	34:B5:330:G:H8	1.78	0.48
34:B5:1266:U:H2'	34:B5:1267:G:H8	1.77	0.48
34:B5:1595:U:O2	34:B5:1600:A:N7	2.46	0.48
38:A1:161:G:C5	38:A1:162:G:C2	3.01	0.48
38:A1:226:C:H2'	38:A1:227:G:O4'	2.14	0.48
38:A1:278:U:H3	38:A1:287:G:H1	1.62	0.48
38:A1:516:A:H2'	38:A1:517:G:C8	2.48	0.48
38:A1:861:C:OP1	38:A1:2133:PSU:O2'	2.16	0.48
38:A1:1680:G:H2'	38:A1:1681:U:H6	1.78	0.48
38:A1:2306:C:H5"	38:A1:2307:G:C8	2.49	0.48
39:A3:43:U:OP1	47:AJ:137:ARG:NH1	2.42	0.48
42:AE:105:TYR:OH	42:AE:134:ARG:HD2	2.13	0.48
48:AL:90:ALA:HB1	48:AL:95:ILE:HB	1.95	0.48
65:Ac:66:LYS:NZ	65:Ac:103:THR:O	2.47	0.48
80:DC:694:HIS:ND1	80:DC:696:ASP:OD1	2.44	0.48
4:BE:156:VAL:HG23	4:BE:157:ASN:ND2	2.28	0.48
4:BE:191:ARG:NE	4:BE:245:LYS:HD2	2.28	0.48
6:BH:118:LEU:HD23	6:BH:118:LEU:O	2.14	0.48
8:BJ:68:LYS:HD3	8:BJ:71:PHE:HB3	1.96	0.48
13:BW:28:ARG:HB3	13:BW:60:LYS:HG2	1.95	0.48
14:BX:3:LYS:NZ	34:B5:614:C:OP1	2.34	0.48
15:BY:83:LYS:HG2	15:BY:96:LEU:HD23	1.95	0.48
20:BF:63:GLN:HE22	20:BF:66:GLN:H	1.61	0.48
23:BQ:57:LEU:HA	23:BQ:60:PHE:HD2	1.79	0.48
25:BS:16:ARG:NH2	47:AJ:111:ASP:OD2	2.46	0.48
28:BZ:45:GLU:HG2	28:BZ:46:LYS:N	2.29	0.48
31:Bg:22:SER:OG	31:Bg:71:CYS:SG	2.53	0.48
31:Bg:79:TYR:CD2	31:Bg:91:LEU:HD11	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:133:VAL:O	31:Bg:141:LEU:N	2.46	0.48
34:B5:540:G:N7	34:B5:542:A:H2'	2.28	0.48
34:B5:607:G:H5'	34:B5:613:G:N2	2.29	0.48
34:B5:629:U:H5'	38:A1:846:A:N6	2.29	0.48
38:A1:383:G:N2	38:A1:385:A:H3'	2.28	0.48
38:A1:499:G:H5"	68:Af:48:ARG:HH12	1.78	0.48
38:A1:760:G:H1'	38:A1:771:A:N6	2.29	0.48
38:A1:1184:A:H2'	38:A1:1185:C:C6	2.48	0.48
38:A1:1247:U:H3	38:A1:1267:U:H5	1.61	0.48
38:A1:1370:G:OP1	63:Aa:16:SER:OG	2.27	0.48
38:A1:1899:G:O2'	38:A1:2334:U:O4	2.25	0.48
38:A1:2499:U:H2'	38:A1:2500:A:O4'	2.13	0.48
40:A4:8:C:H2'	40:A4:9:A:H8	1.79	0.48
45:AH:104:VAL:HG21	45:AH:113:GLU:OE1	2.13	0.48
53:AQ:71:LEU:HD11	53:AQ:99:THR:HG21	1.96	0.48
61:AY:17:LYS:HA	61:AY:17:LYS:HE2	1.96	0.48
61:AY:60:ARG:HB2	61:AY:103:LYS:HD2	1.95	0.48
71:Ai:20:MET:O	71:Ai:21:THR:OG1	2.30	0.48
73:Ak:11:PHE:CG	73:Ak:54:LEU:HD11	2.49	0.48
79:E:49:PHE:HB2	79:E:193:LEU:HD23	1.95	0.48
79:E:107:TYR:HE2	79:E:110:PHE:HA	1.78	0.48
80:DC:296:ILE:HB	80:DC:297:PRO:HD3	1.94	0.48
80:DC:607:ASN:OD1	80:DC:608:PRO:HD2	2.13	0.48
4:BE:187:ARG:HD3	4:BE:187:ARG:N	2.29	0.48
7:BI:106:ALA:HB2	7:BI:165:LEU:HG	1.95	0.48
13:BW:75:ILE:HG12	13:BW:127:GLY:HA2	1.96	0.48
19:BD:120:TYR:HB3	19:BD:124:ARG:HE	1.77	0.48
24:BR:78:ARG:NE	24:BR:78:ARG:HA	2.28	0.48
33:BM:38:HIS:CD2	33:BM:127:GLY:HA3	2.49	0.48
34:B5:395:U:H2'	34:B5:396:G:O4'	2.13	0.48
34:B5:434:G:N1	34:B5:437:A:OP2	2.46	0.48
34:B5:886:U:C2	34:B5:887:A:C8	3.02	0.48
34:B5:888:U:H2'	34:B5:889:U:C6	2.49	0.48
34:B5:1151:A:H2'	34:B5:1152:A:H8	1.78	0.48
34:B5:1553:G:N2	34:B5:1555:A:H3'	2.27	0.48
34:B5:1566:U:O4	34:B5:1567:U:O4	2.32	0.48
37:AC:205:PRO:O	37:AC:246:ARG:NH2	2.47	0.48
38:A1:1250:G:H5'	38:A1:1251:A:O5'	2.14	0.48
38:A1:1474:A:OP2	54:AR:53:LYS:NZ	2.45	0.48
38:A1:1680:G:H2'	38:A1:1681:U:C6	2.49	0.48
38:A1:1829:G:H5"	38:A1:1830:G:H5'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1868:G:O2'	38:A1:2118:C:O2'	2.27	0.48
40:A4:24:G:N7	61:AY:13:ARG:HD2	2.28	0.48
40:A4:66:A:P	70:Ah:10:ARG:HH22	2.36	0.48
41:AD:44:TYR:CE1	56:AT:35:LYS:HA	2.49	0.48
41:AD:261:THR:OG1	41:AD:262:LYS:N	2.46	0.48
42:AE:67:GLY:HA3	42:AE:72:ASN:HD21	1.77	0.48
47:AJ:110:ILE:HD11	47:AJ:123:PHE:HB2	1.96	0.48
59:AW:23:ARG:HE	59:AW:29:PHE:HE2	1.61	0.48
66:Ad:17:HIS:HB2	66:Ad:69:TYR:HB3	1.96	0.48
79:E:111:ILE:HG12	79:E:151:VAL:HG21	1.94	0.48
80:DC:772:LEU:O	80:DC:774:VAL:N	2.39	0.48
7:BI:67:TRP:HZ3	7:BI:70:GLU:HG3	1.77	0.48
7:BI:116:HIS:HD2	7:BI:142:LYS:NZ	2.11	0.48
15:BY:10:ARG:HH21	34:B5:780:A:H1'	1.77	0.48
15:BY:18:LEU:HD12	15:BY:85:PHE:CG	2.48	0.48
19:BD:40:ARG:NH1	27:BU:110:PRO:HD3	2.29	0.48
26:BT:33:TYR:OH	26:BT:103:LYS:HG3	2.13	0.48
33:BM:61:VAL:O	33:BM:120:VAL:HA	2.13	0.48
34:B5:151:G:H2'	34:B5:152:U:C6	2.49	0.48
34:B5:429:G:C2	34:B5:430:G:C8	3.02	0.48
34:B5:1071:U:H2'	34:B5:1072:C:H6	1.75	0.48
34:B5:1667:A:H2'	34:B5:1668:G:C8	2.49	0.48
37:AC:12:THR:OG1	37:AC:14:GLU:OE2	2.30	0.48
37:AC:203:ARG:NE	38:A1:1383:G:OP1	2.43	0.48
38:A1:580:C:H2'	38:A1:581:U:O4'	2.13	0.48
38:A1:1278:A:OP2	38:A1:1279:C:H5	1.97	0.48
38:A1:1476:G:H2'	38:A1:1477:A:O4'	2.13	0.48
38:A1:3167:A:C2	38:A1:3284:G:C2	3.02	0.48
39:A3:23:A:O2'	39:A3:24:A:OP1	2.30	0.48
40:A4:27:U:H2'	40:A4:28:C:C6	2.49	0.48
42:AE:52:VAL:HG21	42:AE:65:ILE:HD12	1.95	0.48
43:AF:35:ALA:O	43:AF:38:LYS:N	2.47	0.48
43:AF:214:TRP:CE2	43:AF:219:LYS:HD2	2.48	0.48
62:AZ:90:GLU:HA	62:AZ:93:LYS:HG2	1.95	0.48
1:BA:35:PRO:HB3	12:BV:87:ARG:HH12	1.78	0.48
1:BA:49:ASN:HD22	1:BA:52:LYS:HG3	1.79	0.48
1:BA:135:GLU:O	1:BA:139:VAL:HG12	2.14	0.48
5:BG:173:PRO:HB3	34:B5:66:U:C6	2.48	0.48
5:BG:185:GLN:HG3	34:B5:284:G:C6	2.49	0.48
7:BI:7:SER:O	7:BI:18:ARG:NH2	2.45	0.48
8:BJ:110:GLN:CD	8:BJ:126:ARG:HB2	2.39	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:BL:71:LEU:O	9:BL:124:THR:HA	2.13	0.48
20:BF:99:MET:O	20:BF:180:ARG:NE	2.47	0.48
24:BR:117:LEU:HB3	24:BR:119:LEU:HD12	1.95	0.48
31:Bg:200:ASN:N	31:Bg:214:ALA:O	2.31	0.48
34:B5:97:C:H2'	34:B5:98:U:H6	1.79	0.48
34:B5:179:A:H2'	34:B5:180:A:O4'	2.14	0.48
34:B5:366:A:OP1	34:B5:758:U:O2'	2.22	0.48
34:B5:472:U:H2'	34:B5:473:A:C8	2.49	0.48
34:B5:1512:G:H2'	34:B5:1513:G:H8	1.78	0.48
34:B5:1578:U:H2'	34:B5:1579:U:C6	2.46	0.48
36:AB:107:ALA:HB3	36:AB:110:LEU:HD23	1.96	0.48
38:A1:178:U:H2'	38:A1:179:C:C6	2.49	0.48
38:A1:204:A:H2'	38:A1:205:C:C6	2.49	0.48
38:A1:271:C:O2	71:Ai:82:ARG:NH2	2.32	0.48
38:A1:418:A:H2'	38:A1:419:G:C8	2.48	0.48
38:A1:759:U:H2'	38:A1:760:G:O4'	2.14	0.48
38:A1:1767:C:H2'	38:A1:1768:U:C6	2.49	0.48
39:A3:19:C:H2'	39:A3:20:A:C8	2.49	0.48
39:A3:95:A:H2'	39:A3:96:U:O4'	2.13	0.48
52:AP:35:ALA:HB2	52:AP:58:ILE:HG23	1.95	0.48
52:AP:127:ARG:HG2	52:AP:128:ARG:H	1.78	0.48
71:Ai:27:SER:C	71:Ai:29:LYS:H	2.20	0.48
71:Ai:43:LEU:O	71:Ai:47:ILE:HD12	2.14	0.48
72:Aj:21:ARG:HD3	72:Aj:39:TYR:HD1	1.77	0.48
80:DC:5:THR:HG23	80:DC:8:GLN:H	1.79	0.48
1:BA:164:ASN:OD1	1:BA:165:ARG:N	2.48	0.47
2:BB:194:ASN:OD1	2:BB:195:LYS:N	2.47	0.47
3:BC:40:LYS:O	3:BC:44:LEU:HD23	2.14	0.47
15:BY:56:SER:O	15:BY:74:LEU:HB2	2.14	0.47
31:Bg:102:ARG:CZ	31:Bg:104:VAL:HG11	2.44	0.47
34:B5:214:G:H5"	34:B5:215:A:H4'	1.96	0.47
34:B5:1115:U:H2'	34:B5:1116:A:H8	1.79	0.47
34:B5:1423:U:H2'	34:B5:1424:A:O4'	2.14	0.47
34:B5:1648:A:H2'	34:B5:1649:G:H8	1.78	0.47
34:B5:1773:4AC:H5	76:An:2:ARG:NH2	2.28	0.47
35:AA:180:LEU:HD11	78:Ap:26:VAL:HG21	1.96	0.47
38:A1:54:C:O2'	38:A1:1547:G:O2'	2.31	0.47
38:A1:183:G:H2'	38:A1:184:U:H6	1.79	0.47
38:A1:710:A:H2'	38:A1:711:A:C8	2.49	0.47
38:A1:1710:C:H2'	38:A1:1711:C:C6	2.49	0.47
38:A1:2581:U:H2'	38:A1:2582:C:H6	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2675:C:OP2	38:A1:2676:A:O2'	2.25	0.47
38:A1:2927:C:H2'	38:A1:2928:C:C6	2.48	0.47
38:A1:3121:U:H1'	38:A1:3122:A:H5"	1.96	0.47
41:AD:254:LYS:HD3	41:AD:254:LYS:HA	1.71	0.47
48:AL:165:SER:OG	48:AL:168:ARG:HB2	2.14	0.47
50:AN:155:VAL:O	50:AN:162:ARG:NH2	2.44	0.47
52:AP:111:LYS:HB3	52:AP:152:GLU:HG3	1.95	0.47
59:AW:20:LEU:HD12	59:AW:21:PHE:N	2.29	0.47
63:Aa:95:SER:OG	63:Aa:98:THR:OG1	2.27	0.47
67:Ae:13:HIS:HB2	67:Ae:57:TYR:HD2	1.79	0.47
80:DC:650:THR:HG22	80:DC:690:ASP:HA	1.96	0.47
2:BB:48:VAL:HG13	2:BB:49:ASN:N	2.29	0.47
2:BB:140:ILE:HG22	2:BB:211:HIS:HB2	1.96	0.47
3:BC:175:GLY:N	3:BC:195:ASP:OD2	2.47	0.47
8:BJ:9:SER:OG	34:B5:770:A:O3'	2.30	0.47
15:BY:8:ARG:HB3	15:BY:10:ARG:HH12	1.79	0.47
18:Be:50:VAL:O	18:Be:50:VAL:HG12	2.14	0.47
20:BF:196:GLU:HG3	20:BF:200:ASN:HD21	1.80	0.47
21:BK:15:LEU:HD21	21:BK:68:LEU:HD13	1.95	0.47
25:BS:107:SER:O	25:BS:110:ARG:HG2	2.13	0.47
26:BT:11:ALA:O	26:BT:15:ILE:HG12	2.13	0.47
26:BT:16:ASN:HA	26:BT:56:LYS:HE3	1.97	0.47
28:BZ:90:LYS:HD2	28:BZ:104:ALA:HA	1.96	0.47
34:B5:1164:G:H2'	34:B5:1165:G:H8	1.78	0.47
34:B5:1165:G:H2'	34:B5:1166:A:H8	1.79	0.47
34:B5:1335:U:N3	34:B5:1336:A:N7	2.62	0.47
34:B5:1378:U:H2'	34:B5:1379:C:H6	1.79	0.47
34:B5:1625:C:H2'	34:B5:1626:U:H6	1.78	0.47
35:AA:9:ARG:NH2	38:A1:912:G:N7	2.61	0.47
36:AB:291:GLU:HG3	36:AB:302:LYS:HD2	1.95	0.47
38:A1:12:A:H2'	38:A1:13:A:C8	2.49	0.47
38:A1:832:G:H4'	54:AR:87:ALA:HB2	1.95	0.47
38:A1:993:G:N3	38:A1:2637:A:H2'	2.29	0.47
38:A1:1290:A:H2'	38:A1:1291:A:H8	1.76	0.47
38:A1:1598:G:OP2	69:Ag:31:ARG:NH2	2.36	0.47
38:A1:1909:A:H2'	38:A1:1910:A:C8	2.49	0.47
38:A1:1942:U:H3'	54:AR:74:ARG:HH22	1.77	0.47
39:A3:67:G:O2'	41:AD:13:SER:O	2.32	0.47
40:A4:147:U:H2'	40:A4:148:G:O4'	2.14	0.47
51:AO:125[A]:ARG:HG2	51:AO:129[A]:LEU:HD12	1.96	0.47
54:AR:165:LYS:HD3	54:AR:166:ASN:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:AY:42:GLN:HG2	61:AY:127:GLU:HB2	1.96	0.47
62:AZ:113:VAL:O	62:AZ:116:LYS:HG2	2.14	0.47
67:Ae:3:SER:OG	67:Ae:4:LEU:N	2.47	0.47
67:Ae:45:ARG:HH12	67:Ae:54:LYS:CE	2.27	0.47
68:Af:73:ARG:CZ	68:Af:82:ARG:HH21	2.27	0.47
75:Am:85:LEU:O	75:Am:88:LYS:HG2	2.14	0.47
75:Am:87:SER:OG	75:Am:92:ASP:OD1	2.32	0.47
76:An:2:ARG:HD3	76:An:5:TRP:CE3	2.49	0.47
78:Ap:59:CYS:C	78:Ap:61:LYS:H	2.23	0.47
80:DC:42:ARG:NH2	80:DC:335:LEU:HD12	2.29	0.47
80:DC:218:TRP:CD2	80:DC:324:MET:HE2	2.48	0.47
2:BB:135:LEU:HD11	2:BB:176:VAL:HG21	1.95	0.47
2:BB:209:ASN:HB2	2:BB:211:HIS:HE1	1.74	0.47
4:BE:192:ILE:HD11	4:BE:228:ILE:HG21	1.97	0.47
5:BG:4:ASN:ND2	34:B5:152:U:O2	2.45	0.47
6:BH:17:GLU:HB2	6:BH:46:ILE:HG21	1.94	0.47
6:BH:113:PRO:HD3	34:B5:811:A:H62	1.80	0.47
9:BL:34:TRP:NE1	34:B5:249:U:H5	2.13	0.47
9:BL:91:LEU:HD13	9:BL:101:GLU:O	2.14	0.47
16:Ba:34:LYS:NZ	34:B5:1791:A:N7	2.61	0.47
28:BZ:97:LYS:HE3	34:B5:1473:U:H5"	1.96	0.47
31:Bg:264:SER:HB2	31:Bg:267:PRO:HD2	1.95	0.47
34:B5:560:U:H2'	34:B5:561:G:H8	1.79	0.47
34:B5:617:U:H2'	34:B5:618:U:C6	2.50	0.47
34:B5:806:A:H2'	34:B5:807:A:O4'	2.14	0.47
34:B5:838:G:H3'	34:B5:838:G:N3	2.29	0.47
34:B5:1277:G:C6	34:B5:1436:A:C6	3.01	0.47
34:B5:1519:U:OP2	34:B5:1520:U:O2'	2.29	0.47
34:B5:1738:U:H2'	34:B5:1739:C:C6	2.48	0.47
34:B5:1756[A]:A:H8	38:A1:2256:A:H62	1.60	0.47
38:A1:253:A:H2'	38:A1:254:A:C8	2.49	0.47
38:A1:542:G:N2	38:A1:544:C:OP1	2.48	0.47
38:A1:837:A:OP2	78:Ap:4:ARG:NE	2.24	0.47
38:A1:1065:A:C8	64:Ab:28:LYS:HE2	2.49	0.47
38:A1:1570:U:H4'	38:A1:1571:A:O3'	2.14	0.47
38:A1:2585:G:H2'	38:A1:2585:G:N3	2.28	0.47
38:A1:3289:G:N3	38:A1:3290:G:C8	2.82	0.47
43:AF:55:TYR:OH	43:AF:186:HIS:HA	2.14	0.47
45:AH:92:TYR:HD1	45:AH:142:ASP:HB2	1.79	0.47
49:AM:92:GLU:H	49:AM:92:GLU:CD	2.22	0.47
54:AR:98:ARG:HD2	54:AR:133:LYS:O	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:AV:89:ASP:OD1	58:AV:91:VAL:HG12	2.14	0.47
61:AY:82:VAL:HG23	61:AY:85:VAL:HG12	1.96	0.47
62:AZ:49:TYR:CD2	62:AZ:133:LYS:HG3	2.50	0.47
79:E:125:GLY:N	79:E:126:PRO:HD2	2.29	0.47
80:DC:152:LYS:HD2	80:DC:153:PRO:HD2	1.96	0.47
2:BB:45:LYS:HD3	11:BO:13:VAL:HG23	1.95	0.47
4:BE:209:HIS:ND1	4:BE:219:VAL:HG22	2.29	0.47
8:BJ:82:ARG:HG2	8:BJ:149:ARG:HB2	1.97	0.47
10:BN:33:VAL:HG21	10:BN:66:ILE:HG21	1.95	0.47
12:BV:74:GLN:HE22	12:BV:81:ASN:HA	1.78	0.47
14:BX:70:LYS:HG2	18:Be:8:LEU:HD12	1.95	0.47
29:Bc:7:VAL:HG13	29:Bc:55:VAL:HG13	1.96	0.47
31:Bg:82:SER:CB	31:Bg:92:TRP:HE1	2.26	0.47
34:B5:26:A:H2'	34:B5:27:U:H6	1.80	0.47
34:B5:686:C:H2'	34:B5:687:G:H8	1.77	0.47
34:B5:934:C:N4	34:B5:1077:C:O3'	2.47	0.47
34:B5:1542:G:N2	34:B5:1568:C:H1'	2.29	0.47
35:AA:142:ASP:OD1	35:AA:142:ASP:N	2.47	0.47
38:A1:604:G:H2'	38:A1:605:U:C6	2.50	0.47
38:A1:733:G:H21	38:A1:736:A:H2	1.63	0.47
38:A1:1094:U:O2'	38:A1:1095:U:OP1	2.32	0.47
38:A1:1118:C:P	64:Ab:5:LYS:HZ3	2.37	0.47
38:A1:2223:A:H2'	38:A1:2224:A:C8	2.50	0.47
38:A1:2769:A:H2'	38:A1:2770:G:C8	2.50	0.47
51:AO:56[A]:ASP:O	51:AO:60[A]:LYS:HD3	2.14	0.47
52:AP:127:ARG:CG	52:AP:128:ARG:H	2.27	0.47
56:AT:65:TYR:CD1	56:AT:75:ILE:HG12	2.49	0.47
66:Ad:44:MET:N	66:Ad:44:MET:SD	2.87	0.47
69:Ag:46:ASP:OD2	69:Ag:88:ARG:NH2	2.47	0.47
80:DC:718:LEU:HB3	80:DC:835:TRP:HB3	1.97	0.47
81:EC:6782:C:N4	81:EC:6815:U:H3	2.11	0.47
1:BA:75:ALA:HB3	1:BA:86:VAL:HG23	1.97	0.47
2:BB:163:ALA:O	2:BB:167:VAL:HG13	2.14	0.47
4:BE:89:VAL:HG12	4:BE:100:ARG:HG3	1.96	0.47
4:BE:100:ARG:NH1	4:BE:114:ILE:HG21	2.29	0.47
7:BI:26:LYS:HG3	34:B5:400:A:C2	2.50	0.47
23:BQ:13:LYS:HG3	23:BQ:14:LYS:N	2.25	0.47
31:Bg:216:LYS:HA	31:Bg:239:GLU:HG3	1.97	0.47
34:B5:297:U:H2'	34:B5:298:C:C6	2.50	0.47
34:B5:301:A:H2'	34:B5:302:PSU:C6	2.49	0.47
34:B5:447:U:H2'	34:B5:448:C:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:977:A:H62	34:B5:1024:U:H3	1.60	0.47
34:B5:1132:A:H2'	34:B5:1133:A:C8	2.46	0.47
36:AB:119:TYR:HE2	36:AB:127:LYS:HA	1.80	0.47
38:A1:373:A:N1	38:A1:394:G:H4'	2.30	0.47
38:A1:444:U:P	38:A1:445:G:H21	2.36	0.47
38:A1:1110:PSU:H2'	38:A1:1111:U:C6	2.49	0.47
38:A1:1208:U:H5'	75:Am:109:ASN:ND2	2.29	0.47
38:A1:1827:C:H2'	38:A1:1828:A:C8	2.49	0.47
38:A1:1856:C:H2'	38:A1:1857:C:H6	1.77	0.47
38:A1:3103:A:H2'	38:A1:3104:U:O4'	2.14	0.47
44:AG:82:LEU:HB3	44:AG:86:THR:OG1	2.14	0.47
46:AI:43:VAL:HG21	46:AI:197:VAL:HG13	1.96	0.47
46:AI:80:VAL:HG21	46:AI:144:ASN:HD21	1.78	0.47
70:Ah:70:TYR:HD2	70:Ah:77:PRO:HD3	1.79	0.47
2:BB:138:PHE:HB2	2:BB:214:LYS:HB3	1.96	0.47
4:BE:85:GLY:N	4:BE:88:ASP:OD2	2.39	0.47
5:BG:159:ARG:HH21	5:BG:171:LYS:HA	1.78	0.47
7:BI:67:TRP:CZ3	7:BI:70:GLU:HG3	2.48	0.47
7:BI:152:ILE:HA	9:BL:24:LYS:HZ1	1.79	0.47
18:Be:2:ALA:HA	38:A1:2256:A:C2	2.50	0.47
25:BS:83:ALA:HA	25:BS:86:LEU:HD23	1.97	0.47
25:BS:101:LEU:O	25:BS:105:VAL:N	2.45	0.47
34:B5:148:A:H3'	34:B5:149:C:H6	1.79	0.47
34:B5:237:C:O2'	34:B5:835:U:OP1	2.33	0.47
34:B5:1165:G:H2'	34:B5:1166:A:C8	2.49	0.47
34:B5:1503:A:H2'	34:B5:1504:G:O4'	2.14	0.47
36:AB:372:THR:HG22	36:AB:375:GLU:HG2	1.97	0.47
37:AC:219:LEU:HD12	37:AC:225:VAL:HG11	1.96	0.47
38:A1:35:A:H2'	38:A1:36:C:H6	1.78	0.47
38:A1:179:C:H2'	38:A1:180:C:C6	2.49	0.47
38:A1:675:C:O2'	38:A1:679:U:OP1	2.30	0.47
38:A1:697:A:H2'	38:A1:698:U:C6	2.49	0.47
38:A1:1279:C:H2'	38:A1:1280:C:C6	2.49	0.47
38:A1:1389:G:OP1	67:Ae:104:ASN:ND2	2.33	0.47
38:A1:1565:G:C6	38:A1:1571:A:H5'	2.50	0.47
38:A1:3296:A:H2'	38:A1:3297:U:H6	1.80	0.47
47:AJ:49:LYS:HB3	47:AJ:62:ASN:HA	1.97	0.47
60:AX:58:ASP:OD1	60:AX:61:LYS:N	2.32	0.47
61:AY:58:VAL:HG22	61:AY:104:LEU:HD22	1.97	0.47
66:Ad:23:VAL:HG11	66:Ad:31:ARG:HD2	1.95	0.47
80:DC:299:LEU:HA	80:DC:302:LYS:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:576:LEU:HG	80:DC:839:TYR:CE1	2.49	0.47
80:DC:729:PHE:CE2	80:DC:774:VAL:HA	2.50	0.47
80:DC:735:CYS:SG	80:DC:766:PHE:HB2	2.55	0.47
1:BA:176:LEU:HA	1:BA:179:ARG:HG2	1.96	0.47
5:BG:2:LYS:HB3	5:BG:108:VAL:HG22	1.96	0.47
5:BG:186:ARG:NH2	34:B5:269:G:N7	2.63	0.47
8:BJ:81:VAL:HG12	8:BJ:86:LEU:O	2.14	0.47
8:BJ:90:LYS:NZ	8:BJ:95:TYR:HB3	2.29	0.47
10:BN:89:TYR:CE1	10:BN:93:LYS:HE3	2.49	0.47
13:BW:26:LEU:HD13	17:Bb:7:LEU:HD23	1.97	0.47
24:BR:10:LYS:O	24:BR:14:LYS:HG2	2.15	0.47
27:BU:68:ARG:HG2	27:BU:79:TRP:NE1	2.25	0.47
30:Bd:31:ILE:HG22	30:Bd:38:ILE:O	2.15	0.47
31:Bg:29:GLN:NE2	31:Bg:76:ASP:O	2.42	0.47
31:Bg:201:THR:HG21	31:Bg:243:LEU:N	2.29	0.47
33:BM:93:ASP:HB3	33:BM:96:GLN:HB2	1.96	0.47
33:BM:97:LEU:HD11	33:BM:119:SER:O	2.15	0.47
34:B5:279:G:H8	34:B5:280:U:H4'	1.80	0.47
34:B5:341:A:H2'	34:B5:342:C:H6	1.78	0.47
34:B5:749:U:H2'	34:B5:750:U:C6	2.50	0.47
34:B5:905:A:H2'	34:B5:906:A:O4'	2.15	0.47
34:B5:979:A:N3	34:B5:1775:U:O2'	2.47	0.47
34:B5:1344:A:H4'	34:B5:1345:A:OP1	2.14	0.47
36:AB:21:ARG:NH1	38:A1:3309:G:O6	2.48	0.47
36:AB:95:THR:HG22	38:A1:3243:A:H4'	1.96	0.47
37:AC:353:ALA:HA	37:AC:356:THR:HG22	1.96	0.47
38:A1:65:A:H1'	38:A1:77:A:H1'	1.97	0.47
38:A1:118:U:N3	38:A1:122:A:OP2	2.36	0.47
38:A1:238:A:H2'	38:A1:239:G:C4	2.50	0.47
38:A1:949:C:O2'	38:A1:971:G:OP1	2.32	0.47
38:A1:1069:C:H2'	38:A1:1070:U:C6	2.50	0.47
38:A1:1410:U:H4'	67:Ae:75:LEU:HD11	1.97	0.47
38:A1:1709:C:H2'	38:A1:1710:C:H6	1.78	0.47
38:A1:1779:C:H1'	54:AR:93:VAL:HG11	1.95	0.47
38:A1:1817:G:C8	38:A1:1818:U:H5	2.31	0.47
38:A1:1856:C:H2'	38:A1:1857:C:C6	2.50	0.47
38:A1:2622:C:H42	46:AI:116:ARG:HH22	1.62	0.47
38:A1:2660:G:OP1	38:A1:2750:U:O2'	2.33	0.47
38:A1:2688:U:N3	41:AD:17:GLN:O	2.38	0.47
38:A1:2699:G:N2	56:AT:49:GLN:HE22	2.12	0.47
38:A1:3017:A:H2'	38:A1:3018:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3255:U:H2'	38:A1:3256:G:C8	2.49	0.47
39:A3:13:A:O2'	41:AD:24:ARG:NH2	2.47	0.47
41:AD:44:TYR:HE1	56:AT:35:LYS:HA	1.80	0.47
42:AE:38:THR:HA	42:AE:90:LYS:HA	1.97	0.47
43:AF:176:TYR:CE2	43:AF:197:GLN:HG2	2.50	0.47
44:AG:42:PRO:HD2	44:AG:44:ARG:NH1	2.27	0.47
53:AQ:44:PHE:CZ	53:AQ:127:LEU:HD21	2.49	0.47
58:AV:39:VAL:HG12	58:AV:58:VAL:HG12	1.96	0.47
62:AZ:24:VAL:HG11	62:AZ:87:LEU:HD13	1.97	0.47
63:Aa:94:ALA:HB1	63:Aa:122:PRO:HD2	1.96	0.47
71:Ai:70:ARG:HD3	71:Ai:80:PHE:CZ	2.50	0.47
80:DC:76:SER:OG	80:DC:101:ASN:ND2	2.45	0.47
80:DC:144:ARG:HB2	80:DC:192:TYR:CD2	2.50	0.47
80:DC:520:THR:HB	80:DC:530:VAL:HG12	1.96	0.47
80:DC:565:GLU:HB2	80:DC:681:MET:SD	2.54	0.47
80:DC:568:GLU:OE2	80:DC:723:LYS:HG3	2.15	0.47
80:DC:647:ILE:HG21	80:DC:687:ASN:HD22	1.80	0.47
80:DC:803:THR:O	80:DC:804:LEU:HD12	2.15	0.47
81:EC:6827:G:H2'	81:EC:6828:G:H8	1.79	0.47
2:BB:41:ARG:NH2	2:BB:232:HIS:HA	2.29	0.47
4:BE:33:ALA:O	34:B5:121:U:H1'	2.14	0.47
6:BH:24:PHE:HZ	6:BH:77:LEU:HD11	1.79	0.47
8:BJ:77:ILE:HG12	8:BJ:91:LYS:HB3	1.97	0.47
20:BF:124:LEU:HD22	28:BZ:59:TYR:CZ	2.50	0.47
26:BT:64:HIS:HA	26:BT:67:MET:HE2	1.96	0.47
27:BU:25:THR:O	27:BU:114:VAL:HA	2.15	0.47
29:Bc:25:VAL:HG12	29:Bc:45:LYS:HD2	1.96	0.47
34:B5:193:U:HO2'	34:B5:195:G:H8	1.58	0.47
34:B5:521:A:C6	34:B5:522:U:C2	3.03	0.47
34:B5:647:G:H21	34:B5:687:G:H1	1.63	0.47
34:B5:690:G:H2'	34:B5:691:C:C6	2.49	0.47
34:B5:765:G:H21	34:B5:768:C:C4'	2.28	0.47
34:B5:1177:C:H4'	34:B5:1189:A:N1	2.30	0.47
34:B5:1196:A:C8	34:B5:1602:C:H4'	2.50	0.47
36:AB:68:HIS:CE1	36:AB:69:LYS:HG3	2.50	0.47
36:AB:298:PHE:HE2	59:AW:1:MET:HG3	1.80	0.47
38:A1:359:U:H4'	38:A1:817:A:N6	2.29	0.47
38:A1:1419:A:OP1	40:A4:20:U:O2'	2.32	0.47
38:A1:1855:U:H2'	38:A1:1856:C:C6	2.50	0.47
38:A1:2265:C:H3'	38:A1:2266:PSU:H6	1.80	0.47
38:A1:2505:U:H2'	38:A1:2506:U:H5'	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2581:U:H2'	38:A1:2582:C:C6	2.50	0.47
38:A1:3006:A:H2'	38:A1:3007:U:O4'	2.15	0.47
38:A1:3010:U:O2'	38:A1:3011:A:H2'	2.15	0.47
43:AF:85:PHE:HB2	43:AF:139:PRO:HG3	1.97	0.47
43:AF:210:PRO:HD3	43:AF:243:MET:HE2	1.96	0.47
44:AG:140:VAL:HG22	44:AG:166:LEU:HD11	1.97	0.47
68:Af:8:TYR:CD1	68:Af:99:ARG:HB3	2.50	0.47
80:DC:380:LEU:HB3	80:DC:400:VAL:HA	1.96	0.47
81:EC:6832:G:O2'	81:EC:6833:G:H5"	2.14	0.47
3:BC:75:GLY:O	3:BC:106:ASP:HB3	2.14	0.47
3:BC:161:LYS:NZ	34:B5:1086:A:OP2	2.48	0.47
5:BG:27:PHE:CE1	5:BG:36:VAL:HG11	2.49	0.47
14:BX:121:ARG:C	14:BX:122:PHE:HD2	2.23	0.47
15:BY:13:ILE:O	15:BY:22:GLN:HG3	2.15	0.47
19:BD:194:LYS:O	19:BD:200:LYS:NZ	2.42	0.47
26:BT:102:ARG:NH1	34:B5:1502:G:O6	2.42	0.47
31:Bg:300:THR:HA	31:Bg:313:TRP:O	2.15	0.47
34:B5:300:A:H2'	34:B5:301:A:C8	2.50	0.47
34:B5:1081:A:N7	34:B5:1090:C:N4	2.63	0.47
34:B5:1359:C:H2'	34:B5:1360:A:H8	1.78	0.47
34:B5:1512:G:H2'	34:B5:1513:G:C8	2.50	0.47
34:B5:1701:A:H4'	34:B5:1703:C:C5	2.50	0.47
36:AB:306:THR:HG21	36:AB:316:GLU:HA	1.97	0.47
37:AC:181:VAL:O	37:AC:182:LEU:HG	2.14	0.47
38:A1:375:A:H1'	61:AY:87:LYS:HE3	1.97	0.47
38:A1:581:U:H2'	38:A1:582:G:H8	1.80	0.47
38:A1:637:C:C2	38:A1:638:C:C5	3.03	0.47
38:A1:1616:U:H2'	38:A1:1617:G:C8	2.49	0.47
38:A1:2838:A:OP1	46:AI:154:ARG:NH2	2.48	0.47
38:A1:3072:C:H2'	38:A1:3073:A:O4'	2.15	0.47
38:A1:3213:A:H2'	38:A1:3214:U:O4'	2.15	0.47
39:A3:7:G:OP1	41:AD:33:ARG:NH1	2.48	0.47
40:A4:2:A:H2'	40:A4:3:A:H8	1.80	0.47
40:A4:12:A:H5"	52:AP:3:ARG:HB3	1.95	0.47
40:A4:62:C:H4'	40:A4:63:G:O5'	2.15	0.47
47:AJ:35:LYS:HE2	47:AJ:120:ILE:HD13	1.97	0.47
51:AO:54[A]:TYR:OH	51:AO:73[A]:PHE:O	2.32	0.47
51:AO:137[A]:THR:HG22	51:AO:139[A]:GLY:H	1.79	0.47
56:AT:52:MET:HE2	56:AT:52:MET:HB2	1.88	0.47
58:AV:23:MET:HE3	58:AV:34:LEU:HD22	1.95	0.47
66:Ad:25:PHE:HD1	66:Ad:28:ARG:HD2	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:Af:18:ARG:HA	68:Af:23:ASN:HA	1.96	0.47
70:Ah:13:SER:H	70:Ah:16:GLN:NE2	2.12	0.47
80:DC:484:SER:O	80:DC:795:GLN:HG2	2.15	0.47
80:DC:520:THR:OG1	80:DC:528:HIS:NE2	2.47	0.47
80:DC:671:THR:OG1	80:DC:681:MET:HB2	2.15	0.47
81:EC:6859:U:H1'	81:EC:6860:A:N7	2.29	0.47
1:BA:183:ARG:HA	1:BA:188:LEU:HB2	1.96	0.47
3:BC:122:ALA:HA	3:BC:125:ILE:HD12	1.97	0.47
4:BE:212:ASP:OD1	4:BE:213:SER:N	2.41	0.47
7:BI:101:ILE:HD13	7:BI:192:TYR:CD1	2.50	0.47
11:BO:51:ASP:HB3	34:B5:906:A:OP1	2.14	0.47
14:BX:97:ASP:N	14:BX:100:ASP:OD2	2.37	0.47
15:BY:135:ASP:OD1	15:BY:135:ASP:N	2.46	0.47
19:BD:67:ASN:O	19:BD:71:LEU:HG	2.15	0.47
26:BT:45:MET:HG3	26:BT:46:PRO:O	2.15	0.47
31:Bg:16:HIS:CD2	31:Bg:43:ILE:HD12	2.50	0.47
31:Bg:297:ASP:OD1	31:Bg:298:GLY:N	2.46	0.47
34:B5:851:U:H3	54:AR:176:ARG:HB2	1.80	0.47
34:B5:1018:U:H2'	34:B5:1019:A:H8	1.80	0.47
34:B5:1698:G:N3	34:B5:1698:G:H2'	2.30	0.47
35:AA:30:ARG:CB	35:AA:74:GLU:HG2	2.45	0.47
36:AB:74:GLU:OE2	36:AB:325:LYS:HD3	2.15	0.47
36:AB:133:TYR:HA	36:AB:136:LYS:HG3	1.96	0.47
36:AB:246:LEU:HD23	36:AB:246:LEU:H	1.79	0.47
38:A1:671:U:H2'	38:A1:672:A:H8	1.80	0.47
38:A1:698:U:H2'	38:A1:699:A:O4'	2.15	0.47
38:A1:1298:C:C3'	75:Am:113:ARG:HH12	2.28	0.47
38:A1:1717:U:H3	38:A1:1727:G:H1	1.61	0.47
38:A1:2651:G:H1'	38:A1:2760:C:N4	2.29	0.47
38:A1:3174:A:H62	68:Af:54:ARG:NH2	2.13	0.47
40:A4:88:A:HO2'	40:A4:89:A:P	2.37	0.47
40:A4:154:C:H2'	40:A4:155:A:C8	2.50	0.47
55:AS:4:PHE:CD2	55:AS:103:VAL:HG13	2.46	0.47
56:AT:57:TYR:CZ	56:AT:89:LEU:HD21	2.50	0.47
58:AV:84:SER:HA	58:AV:94:TYR:HB3	1.97	0.47
64:Ab:10:HIS:O	64:Ab:12:GLN:NE2	2.40	0.47
75:Am:112:LYS:HD3	75:Am:112:LYS:HA	1.68	0.47
80:DC:15:LYS:HG3	80:DC:18:ASN:HB2	1.97	0.47
80:DC:169:VAL:HG11	80:DC:174:LEU:HD13	1.96	0.47
80:DC:613:LYS:O	80:DC:617:ARG:HG3	2.15	0.47
81:EC:6810:U:N3	81:EC:6811:G:N7	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6860:A:H2'	81:EC:6861:G:O4'	2.14	0.47
1:BA:93:THR:HG22	1:BA:94:GLY:N	2.30	0.46
2:BB:23:PRO:O	2:BB:27:LYS:NZ	2.42	0.46
4:BE:7:LYS:HB3	34:B5:94:U:O2'	2.15	0.46
5:BG:160:ARG:NH1	34:B5:68:A:N7	2.62	0.46
6:BH:126:LEU:HG	6:BH:173:TYR:CE2	2.50	0.46
8:BJ:59:LEU:HD21	8:BJ:69:ARG:HA	1.97	0.46
9:BL:90:TYR:OH	9:BL:105:LYS:NZ	2.48	0.46
20:BF:187:ILE:HG12	34:B5:1535:U:C5	2.50	0.46
26:BT:18:TYR:HE2	26:BT:132:LEU:HA	1.81	0.46
26:BT:134:ARG:NH1	34:B5:1360:A:OP1	2.40	0.46
27:BU:22:ILE:HD11	27:BU:116:VAL:HG12	1.97	0.46
27:BU:83:GLU:O	27:BU:84:MET:HE2	2.16	0.46
30:Bd:15:GLY:N	34:B5:1597:A:OP1	2.46	0.46
30:Bd:38:ILE:HG22	30:Bd:39:CYS:O	2.15	0.46
34:B5:1120:U:H2'	34:B5:1121:C:C6	2.50	0.46
34:B5:1497:U:H5'	34:B5:1519:U:H4'	1.97	0.46
34:B5:1670:G:O2'	34:B5:1731:A:N6	2.47	0.46
34:B5:1759:C:H2'	34:B5:1760:G:O4'	2.15	0.46
35:AA:129:ALA:HB3	35:AA:132:ASN:HD22	1.81	0.46
35:AA:180:LEU:HD11	78:Ap:26:VAL:HG11	1.96	0.46
36:AB:276:THR:HG23	38:A1:3138:U:OP1	2.15	0.46
36:AB:367:LYS:HB3	59:AW:17:ARG:HH22	1.80	0.46
38:A1:1180:A:H5"	68:Af:77:ASN:HB2	1.95	0.46
38:A1:1203:A:N3	38:A1:2855:U:O2'	2.35	0.46
38:A1:1523:U:OP1	38:A1:1607:U:N3	2.40	0.46
38:A1:3069:G:C2	38:A1:3070:A:C8	3.03	0.46
38:A1:3255:U:H2'	38:A1:3256:G:H8	1.80	0.46
38:A1:3383:G:H21	66:Ad:105:GLN:HG2	1.80	0.46
40:A4:78:G:H2'	40:A4:79:A:H8	1.80	0.46
41:AD:156:GLY:HA2	41:AD:181:PRO:HD3	1.97	0.46
44:AG:147:LYS:HB3	44:AG:201:THR:HG23	1.97	0.46
45:AH:92:TYR:OH	45:AH:101:VAL:HG21	2.15	0.46
50:AN:68:ARG:NH1	50:AN:124:ASP:O	2.48	0.46
56:AT:28:SER:O	56:AT:32:LYS:HG3	2.16	0.46
58:AV:13:ILE:HG22	58:AV:81:GLN:HE22	1.80	0.46
58:AV:17:LEU:HD21	58:AV:98:ASN:ND2	2.30	0.46
58:AV:104:ASN:ND2	58:AV:108:GLU:HB3	2.31	0.46
72:Aj:8:PHE:HD1	72:Aj:11:ARG:HH11	1.62	0.46
79:E:90:LEU:HA	79:E:90:LEU:HD23	1.76	0.46
80:DC:636:PHE:HB2	80:DC:640:GLY:C	2.40	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6774:U:O2'	81:EC:6775:U:H5'	2.15	0.46
1:BA:4:PRO:HD2	1:BA:7:PHE:CD1	2.50	0.46
1:BA:122:ILE:HA	1:BA:144:ILE:O	2.16	0.46
1:BA:184:LEU:HD21	12:BV:45:ALA:CB	2.45	0.46
2:BB:133:TYR:CD2	2:BB:181:LEU:HD22	2.50	0.46
3:BC:116:LYS:HG2	3:BC:127:ALA:HB3	1.96	0.46
3:BC:138:PRO:HB3	12:BV:11:LEU:HD22	1.96	0.46
4:BE:31:PRO:HG3	4:BE:43:PRO:HG3	1.96	0.46
5:BG:77:LEU:HD13	5:BG:84:TYR:HB2	1.97	0.46
8:BJ:39:LYS:HG2	8:BJ:42:ILE:HD12	1.97	0.46
14:BX:75:GLN:NE2	80:DC:502:PRO:HG2	2.30	0.46
15:BY:40:LEU:HD23	15:BY:43:LYS:HE3	1.98	0.46
22:BP:17:TYR:HB3	22:BP:25:LEU:HD11	1.97	0.46
32:Bf:139:LEU:HB2	32:Bf:148:TYR:HB2	1.97	0.46
34:B5:305:C:H2'	34:B5:306:U:C6	2.50	0.46
34:B5:486:G:O2'	34:B5:488:G:OP2	2.34	0.46
34:B5:521:A:H2'	34:B5:522:U:O4'	2.15	0.46
34:B5:551:G:H2'	34:B5:552:G:C8	2.50	0.46
34:B5:633:U:H2'	34:B5:634:G:O4'	2.15	0.46
34:B5:1494:C:H2'	34:B5:1495:C:C6	2.50	0.46
34:B5:1681:A:H61	34:B5:1720:G:H2'	1.80	0.46
35:AA:79:ASN:ND2	35:AA:167:GLY:O	2.49	0.46
38:A1:996:A:H2'	38:A1:997:A:O4'	2.16	0.46
38:A1:1102:A:OP1	43:AF:155:LYS:NZ	2.48	0.46
38:A1:1150:A:C8	38:A1:1310:G:O4'	2.68	0.46
38:A1:1213:G:O3'	55:AS:90:MET:HB2	2.15	0.46
38:A1:1517:G:OP2	74:Al:41:ARG:NH2	2.43	0.46
38:A1:1660:C:H2'	38:A1:1661:G:H8	1.80	0.46
38:A1:1864:A:H5'	54:AR:88:ARG:HG2	1.97	0.46
38:A1:2413:A:H2'	38:A1:2414:G:C8	2.50	0.46
38:A1:2417:U:OP2	38:A1:2606:G:O2'	2.29	0.46
38:A1:2445:A:N1	38:A1:2503:G:N2	2.63	0.46
38:A1:2964:G:N2	38:A1:2967:A:OP2	2.28	0.46
38:A1:3163:A:H2'	38:A1:3164:C:C6	2.50	0.46
38:A1:3285:C:H3'	38:A1:3286:G:H5"	1.97	0.46
38:A1:3288:G:C2	38:A1:3289:G:C5	3.03	0.46
38:A1:3289:G:H2'	38:A1:3290:G:C8	2.47	0.46
41:AD:35:ARG:HA	41:AD:38:THR:HG22	1.97	0.46
46:AI:36:LEU:HD21	46:AI:69:ARG:HH11	1.80	0.46
53:AQ:158:HIS:CE1	53:AQ:186:VAL:HG23	2.50	0.46
80:DC:129:VAL:HG23	80:DC:157:ILE:HD13	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:415:GLY:HA3	80:DC:425:ASP:CG	2.40	0.46
80:DC:564:ARG:O	80:DC:725:GLN:N	2.37	0.46
81:EC:6786:A:OP1	81:EC:6786:A:H4'	2.15	0.46
81:EC:6842:U:O2	81:EC:6844:A:N6	2.48	0.46
1:BA:167:LYS:HE3	1:BA:167:LYS:HB3	1.64	0.46
2:BB:70:LEU:HD21	2:BB:189:ILE:HD12	1.97	0.46
3:BC:87:GLN:OE1	34:B5:11:A:H5'	2.16	0.46
3:BC:147:ASN:ND2	12:BV:2:GLU:O	2.35	0.46
5:BG:59:GLN:HE22	34:B5:418:G:H2'	1.80	0.46
5:BG:180:THR:HG22	5:BG:182:GLN:H	1.80	0.46
6:BH:152:VAL:HB	6:BH:183:PHE:CD1	2.50	0.46
7:BI:48:THR:OG1	7:BI:51:GLY:O	2.29	0.46
22:BP:85:ILE:HG12	22:BP:112:LEU:HD12	1.97	0.46
34:B5:304:U:H2'	34:B5:305:C:C6	2.50	0.46
34:B5:606:A:H4'	34:B5:607:G:H3'	1.97	0.46
34:B5:1358:G:H2'	34:B5:1359:C:C6	2.50	0.46
34:B5:1482:C:O5'	34:B5:1521:G:N2	2.44	0.46
34:B5:1623:C:H2'	34:B5:1624:C:H6	1.79	0.46
34:B5:1784:C:H2'	34:B5:1785:U:C6	2.51	0.46
35:AA:60:LYS:HE2	35:AA:73:GLU:OE2	2.15	0.46
37:AC:191:LYS:HG2	37:AC:194:TYR:OH	2.16	0.46
38:A1:1620:U:H2'	38:A1:1621:A:H8	1.80	0.46
38:A1:1690:C:H2'	38:A1:1691:U:C6	2.50	0.46
38:A1:2655:U:O4	77:Ao:8:ARG:NH1	2.48	0.46
38:A1:3057:U:H4'	66:Ad:21:HIS:CE1	2.51	0.46
39:A3:108:A:C4	39:A3:109:G:C8	3.03	0.46
46:AI:164:LYS:HD2	46:AI:164:LYS:HA	1.64	0.46
46:AI:176:LEU:HD11	46:AI:199:PHE:HE1	1.80	0.46
52:AP:128:ARG:HG2	52:AP:128:ARG:HH11	1.79	0.46
55:AS:34:GLU:OE2	55:AS:34:GLU:N	2.31	0.46
59:AW:2:LYS:HD2	59:AW:2:LYS:HA	1.74	0.46
67:Ae:74:PHE:CD2	67:Ae:85:LEU:HD11	2.51	0.46
70:Ah:17:LEU:HD23	70:Ah:58:ILE:HD13	1.97	0.46
80:DC:760:ARG:HH11	80:DC:760:ARG:HG3	1.81	0.46
80:DC:784:LEU:HG	80:DC:792:ALA:HB1	1.96	0.46
2:BB:61:LEU:CD2	2:BB:96:LEU:HD21	2.45	0.46
2:BB:86:LEU:HB3	2:BB:98:THR:OG1	2.16	0.46
3:BC:42:GLY:HA2	3:BC:45:VAL:HG12	1.96	0.46
14:BX:50:LYS:HB3	14:BX:101:GLU:OE1	2.15	0.46
14:BX:107:PHE:CD2	14:BX:123:LYS:HB3	2.51	0.46
15:BY:19:ALA:HB1	15:BY:77:ASN:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:BY:91:LEU:HD12	15:BY:96:LEU:HB2	1.97	0.46
20:BF:81:ARG:NH2	34:B5:1615:C:OP1	2.49	0.46
28:BZ:95:HIS:NE2	34:B5:1529:C:OP1	2.39	0.46
34:B5:15:U:H2'	34:B5:16:G:O4'	2.15	0.46
34:B5:26:A:H2'	34:B5:27:U:C6	2.50	0.46
34:B5:156:A:H2'	34:B5:157:A:C8	2.50	0.46
34:B5:350:U:O2'	34:B5:970:A:N1	2.48	0.46
34:B5:774:A:N6	34:B5:786:C:C2	2.68	0.46
34:B5:1202:A:H1'	34:B5:1207:C:N4	2.30	0.46
34:B5:1580:C:H2'	34:B5:1581:C:C6	2.50	0.46
34:B5:1737:G:H2'	34:B5:1738:U:H6	1.80	0.46
35:AA:181:LYS:HE2	35:AA:184:ARG:HH11	1.81	0.46
36:AB:286:GLY:HA3	36:AB:321:PHE:CZ	2.51	0.46
37:AC:168:ALA:O	37:AC:172:VAL:HG13	2.16	0.46
38:A1:92:G:OP1	77:Ao:46:LYS:NZ	2.38	0.46
38:A1:100:A:H2'	38:A1:101:G:N3	2.31	0.46
38:A1:2778:G:C6	38:A1:2779:A:C2	3.03	0.46
38:A1:2881:C:H2'	38:A1:2882:U:C6	2.50	0.46
51:AO:105[A]:PHE:HE2	51:AO:112[A]:TYR:HE2	1.62	0.46
53:AQ:31:LYS:HE3	53:AQ:31:LYS:HB2	1.59	0.46
58:AV:22:ILE:HG23	58:AV:33:ASN:HB2	1.96	0.46
61:AY:26:GLN:O	61:AY:30:LEU:HG	2.15	0.46
62:AZ:70:PRO:CD	62:AZ:115:LYS:HG2	2.44	0.46
79:E:14:LYS:HA	79:E:17:LEU:HG	1.97	0.46
80:DC:34:THR:HA	80:DC:37:ASP:HB3	1.97	0.46
80:DC:583:HIS:NE2	80:DC:694:HIS:HD2	2.13	0.46
1:BA:92:HIS:HB3	1:BA:182:LEU:HD11	1.97	0.46
1:BA:119:ARG:HH22	3:BC:241:ASP:HA	1.81	0.46
6:BH:159:VAL:HG11	6:BH:185:ILE:HD12	1.98	0.46
6:BH:164:TYR:CE1	6:BH:165:LYS:HE2	2.51	0.46
7:BI:169:ILE:HA	7:BI:181:GLY:HA3	1.97	0.46
8:BJ:132:ARG:NH2	34:B5:533:U:OP1	2.49	0.46
16:Ba:4:LYS:HE3	16:Ba:5:ARG:HH12	1.80	0.46
18:Be:49:LEU:HG	18:Be:58:PRO:HG2	1.97	0.46
20:BF:108:LEU:O	20:BF:111:VAL:HG22	2.15	0.46
25:BS:28:ILE:HG13	25:BS:32:LEU:HD11	1.98	0.46
31:Bg:67:ILE:HB	31:Bg:85:TRP:CG	2.51	0.46
31:Bg:278:PHE:HB3	31:Bg:281:TYR:HD2	1.79	0.46
33:BM:62:LEU:HB3	33:BM:90:LYS:NZ	2.30	0.46
34:B5:158:U:O2'	34:B5:159:U:H3'	2.15	0.46
34:B5:1170:G:N1	34:B5:1171:A:N7	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:175:C:N3	38:A1:176:G:O6	2.49	0.46
38:A1:1261:G:OP1	38:A1:1278:A:N6	2.47	0.46
38:A1:2374:C:N4	38:A1:2941:A:O4'	2.48	0.46
38:A1:2511:A:H2'	38:A1:2512:C:H6	1.80	0.46
38:A1:2594:C:H2'	38:A1:2595:A:O4'	2.16	0.46
38:A1:2745:G:N2	38:A1:2747:A:H3'	2.31	0.46
38:A1:3023:U:H3	38:A1:3032:A:H8	1.57	0.46
38:A1:3343:G:O2'	38:A1:3362:A:N6	2.48	0.46
50:AN:117:ASN:OD1	50:AN:118:SER:N	2.41	0.46
56:AT:39:ILE:HG12	56:AT:61:THR:HG22	1.97	0.46
59:AW:4:GLU:HG2	59:AW:30:ARG:NH1	2.31	0.46
60:AX:103:TYR:O	60:AX:105:VAL:HG13	2.15	0.46
69:Ag:5:VAL:HG11	69:Ag:22:VAL:HG13	1.97	0.46
74:Al:27:ILE:HD12	74:Al:30:ARG:HG3	1.97	0.46
80:DC:28:VAL:HG22	80:DC:108:HIS:CG	2.51	0.46
80:DC:159:LYS:HG2	83:DC:901:GDP:C5	2.50	0.46
80:DC:295:GLU:HA	80:DC:298:VAL:HG22	1.98	0.46
80:DC:773:PRO:C	80:DC:775:ASN:N	2.71	0.46
1:BA:31:VAL:O	1:BA:34:GLU:HB3	2.15	0.46
1:BA:40:ALA:HB2	1:BA:46:HIS:CD2	2.51	0.46
2:BB:105:PHE:CE2	2:BB:113:MET:HE1	2.51	0.46
4:BE:200:ARG:NH2	34:B5:736:C:H5"	2.31	0.46
4:BE:212:ASP:OD2	4:BE:244:ILE:HA	2.15	0.46
9:BL:2:SER:HA	9:BL:53:TYR:CD2	2.49	0.46
9:BL:109:VAL:HG11	9:BL:125:VAL:HG11	1.98	0.46
15:BY:36:SER:N	15:BY:39:GLU:OE2	2.49	0.46
31:Bg:111:MET:H	31:Bg:126:SER:HA	1.81	0.46
31:Bg:256:THR:HG21	31:Bg:261:LYS:HD2	1.98	0.46
34:B5:16:G:H2'	34:B5:17:C:C6	2.51	0.46
34:B5:148:A:N6	34:B5:166:C:N3	2.64	0.46
34:B5:180:A:C4	34:B5:181:A:C8	3.04	0.46
34:B5:396:G:N2	34:B5:398:G:H3'	2.31	0.46
34:B5:554:C:N4	34:B5:571:G:O6	2.49	0.46
34:B5:1176:G:C6	34:B5:1464:G:C6	3.04	0.46
34:B5:1291:G:H22	34:B5:1324:G:N2	2.13	0.46
34:B5:1604:U:C4	34:B5:1605:G:N7	2.84	0.46
35:AA:95:SER:O	35:AA:100:ASN:ND2	2.29	0.46
35:AA:245:LEU:HD21	38:A1:2243:A:C8	2.50	0.46
37:AC:79:GLY:C	37:AC:85:SER:HG	2.20	0.46
38:A1:87:U:H2'	38:A1:88:A:C8	2.50	0.46
38:A1:269:G:N2	38:A1:295:A:OP2	2.37	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:417:A:H2'	38:A1:418:A:C8	2.51	0.46
38:A1:550:A:H3'	38:A1:551:A:H8	1.81	0.46
38:A1:796:U:H2'	38:A1:797:U:H6	1.81	0.46
38:A1:3288:G:O2'	38:A1:3289:G:H8	1.98	0.46
39:A3:5:G:OP1	47:AJ:143:ARG:NH2	2.44	0.46
43:AF:96:PRO:HB2	43:AF:99:PRO:HD2	1.96	0.46
46:AI:210:TYR:HA	46:AI:217:PHE:HE2	1.80	0.46
48:AL:106:GLN:HB2	71:Ai:18:THR:CG2	2.45	0.46
49:AM:44:VAL:HG13	49:AM:60:LEU:HD21	1.95	0.46
52:AP:151:THR:HG22	52:AP:152:GLU:H	1.80	0.46
69:Ag:97:GLU:O	69:Ag:101:VAL:HG13	2.16	0.46
81:EC:6804:A:H1'	81:EC:6808:G:H22	1.81	0.46
7:BI:166:TYR:HB3	7:BI:184:LEU:HD12	1.98	0.46
10:BN:86:GLU:HG3	10:BN:87:ASP:N	2.30	0.46
15:BY:37:LYS:O	15:BY:41:ARG:HG3	2.15	0.46
21:BK:32:HIS:CD2	21:BK:35:ILE:HD12	2.50	0.46
23:BQ:55:VAL:HG11	23:BQ:105:LEU:HD23	1.97	0.46
23:BQ:69:VAL:HG11	23:BQ:77:GLN:HG2	1.97	0.46
23:BQ:140:LYS:NZ	34:B5:1159:C:O2'	2.40	0.46
31:Bg:23:LEU:HD12	31:Bg:33:LEU:HD11	1.97	0.46
31:Bg:205:SER:HB2	31:Bg:207:ASP:OD1	2.16	0.46
34:B5:5:U:HO2'	34:B5:553:G:H4'	1.81	0.46
34:B5:179:A:H3'	34:B5:180:A:C8	2.49	0.46
34:B5:224:C:H41	34:B5:225:A:H62	1.62	0.46
34:B5:1336:A:C6	34:B5:1416:G:C6	3.04	0.46
34:B5:1384:A:H2'	34:B5:1385:G:O4'	2.15	0.46
35:AA:245:LEU:HD21	38:A1:2243:A:N7	2.31	0.46
36:AB:252:ILE:HG21	36:AB:266:ARG:HH12	1.80	0.46
37:AC:105:THR:O	37:AC:109:TRP:NE1	2.43	0.46
38:A1:340:C:H2'	38:A1:341:G:O4'	2.15	0.46
38:A1:1580:A:H8	38:A1:2522:G:H8	1.64	0.46
38:A1:2203:U:C2	38:A1:2204:C:C5	3.04	0.46
40:A4:39:G:O2'	40:A4:105:A:N1	2.45	0.46
40:A4:117:C:H2'	40:A4:118:C:H6	1.80	0.46
41:AD:156:GLY:N	41:AD:179:ARG:O	2.34	0.46
41:AD:159:VAL:HG23	41:AD:160:PHE:CD1	2.50	0.46
44:AG:196:ALA:O	44:AG:197:VAL:HG23	2.15	0.46
45:AH:69:ARG:HE	45:AH:72:LYS:HD2	1.80	0.46
46:AI:184:LYS:HG3	46:AI:189:GLU:CD	2.40	0.46
47:AJ:166:LYS:HE3	47:AJ:167:TYR:CE2	2.50	0.46
80:DC:261:ASP:O	80:DC:269:LEU:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:BE:59:ARG:CZ	34:B5:446:A:OP2	2.64	0.46
4:BE:233:LYS:NZ	4:BE:235:TYR:HE1	2.14	0.46
4:BE:252:ARG:NH2	34:B5:763:G:O4'	2.48	0.46
5:BG:7:TYR:HD1	5:BG:113:ILE:HB	1.80	0.46
6:BH:133:THR:HG21	6:BH:159:VAL:HG23	1.98	0.46
7:BI:61:GLU:O	7:BI:78:ILE:HG22	2.16	0.46
8:BJ:85:VAL:HG23	8:BJ:103:ASP:C	2.41	0.46
10:BN:72:MET:HE2	10:BN:72:MET:N	2.30	0.46
22:BP:90:ILE:HA	22:BP:107:ILE:HG22	1.98	0.46
23:BQ:99:GLU:HG3	31:Bg:57:PRO:HB2	1.97	0.46
25:BS:127:HIS:CE1	25:BS:133:VAL:HG21	2.50	0.46
26:BT:42:GLY:O	26:BT:84:LYS:HG3	2.16	0.46
26:BT:76:LEU:HB3	26:BT:101:ASN:ND2	2.31	0.46
28:BZ:77:ARG:NH1	34:B5:1533:C:OP2	2.44	0.46
34:B5:190:C:N3	34:B5:193:U:H5"	2.31	0.46
34:B5:445:A:N1	34:B5:462:G:O2'	2.37	0.46
34:B5:898:A:C2	34:B5:915:A:C4	3.04	0.46
34:B5:1115:U:H2'	34:B5:1116:A:C8	2.51	0.46
37:AC:98:ARG:HG3	37:AC:99:MET:O	2.16	0.46
38:A1:34:A:H2'	38:A1:35:A:O4'	2.15	0.46
38:A1:190:U:H2'	61:AY:60:ARG:HH12	1.80	0.46
38:A1:314:U:H2'	38:A1:315:C:C6	2.50	0.46
38:A1:611:A:OP1	42:AE:23:LYS:NZ	2.41	0.46
38:A1:1532:C:H2'	38:A1:1533:U:C6	2.51	0.46
38:A1:1590:G:O2'	38:A1:1797:A:N6	2.49	0.46
38:A1:1814:A:H4'	38:A1:1817:G:H5'	1.98	0.46
38:A1:1884:A:OP1	66:Ad:31:ARG:NH2	2.49	0.46
38:A1:1946:A:H2'	38:A1:1947:G:O4'	2.16	0.46
38:A1:2526:C:H2'	38:A1:2527:G:H8	1.79	0.46
38:A1:2768:U:H2'	38:A1:2769:A:C8	2.48	0.46
38:A1:3215:A:H2	42:AE:157:GLN:HB2	1.81	0.46
39:A3:97:A:H2'	39:A3:98:C:C6	2.51	0.46
67:Ae:80:LYS:HA	67:Ae:83:GLU:HG3	1.97	0.46
69:Ag:92:ALA:O	69:Ag:96:GLU:HG2	2.16	0.46
73:Ak:20:VAL:HG21	73:Ak:45:VAL:CG1	2.46	0.46
77:Ao:43:TYR:HE2	77:Ao:55:LYS:HB2	1.79	0.46
78:Ap:32:GLN:HB3	78:Ap:69:TYR:O	2.16	0.46
80:DC:577:SER:O	80:DC:585:ARG:NE	2.38	0.46
80:DC:742:GLY:O	80:DC:746:VAL:HG23	2.15	0.46
81:EC:6801:A:C8	81:EC:6882:G:H8	2.34	0.46
2:BB:134:VAL:HG13	2:BB:218:LEU:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:BC:168:ARG:NH1	34:B5:1098:U:P	2.89	0.46
9:BL:11:ARG:NH1	9:BL:11:ARG:HB2	2.31	0.46
12:BV:59:VAL:HG13	12:BV:64:GLU:OE2	2.16	0.46
12:BV:80:LYS:H	12:BV:80:LYS:HD2	1.81	0.46
17:Bb:28:PRO:HB3	34:B5:959:U:H5'	1.97	0.46
19:BD:40:ARG:CG	19:BD:47:GLU:HB2	2.46	0.46
22:BP:95:GLY:HA2	22:BP:103:ASN:O	2.16	0.46
24:BR:106:THR:O	24:BR:109:LEU:HG	2.16	0.46
25:BS:56:LYS:HD3	25:BS:60:GLU:HB3	1.98	0.46
26:BT:122:ARG:NH1	34:B5:1499:G:OP1	2.48	0.46
30:Bd:15:GLY:O	30:Bd:18:SER:OG	2.29	0.46
34:B5:29:U:O2	34:B5:597:G:O6	2.33	0.46
34:B5:477:A:C2	34:B5:512:A:H2	2.34	0.46
34:B5:762:A:C8	34:B5:789:A:N6	2.83	0.46
34:B5:1370:U:H5'	34:B5:1371:A:H8	1.80	0.46
34:B5:1560:U:H2'	34:B5:1561:U:O4'	2.16	0.46
37:AC:311:HIS:O	37:AC:311:HIS:CG	2.69	0.46
38:A1:11:A:H2'	38:A1:12:A:C8	2.51	0.46
38:A1:696:C:H2'	38:A1:697:A:C8	2.51	0.46
38:A1:1127:G:N2	38:A1:1129:A:H3'	2.30	0.46
38:A1:1307:G:H5'	51:AO:60[A]:LYS:NZ	2.31	0.46
38:A1:1637:A:H1'	38:A1:1709:C:O2'	2.15	0.46
38:A1:1798:A:H2'	38:A1:1799:A:C8	2.50	0.46
38:A1:1805:C:H2'	38:A1:1806:A:C8	2.36	0.46
38:A1:1940:G:H21	38:A1:3362:A:H8	1.63	0.46
38:A1:2426:U:H2'	38:A1:2427:U:C6	2.51	0.46
38:A1:2565:U:H2'	38:A1:2566:C:C6	2.50	0.46
38:A1:2618:G:O2'	38:A1:2865:PSU:OP1	2.31	0.46
38:A1:2899:C:O2'	38:A1:2901:G:OP2	2.30	0.46
38:A1:2918:G:H2'	38:A1:2919:A:H8	1.81	0.46
38:A1:3343:G:H21	38:A1:3362:A:H2	1.62	0.46
40:A4:78:G:H1'	70:Ah:42:PRO:HG2	1.98	0.46
43:AF:76:TYR:HE2	43:AF:78:GLU:HA	1.80	0.46
43:AF:163:LEU:O	43:AF:165:ASP:N	2.49	0.46
43:AF:221:LYS:O	43:AF:227:GLY:HA3	2.16	0.46
46:AI:60:LEU:HB3	46:AI:65:LEU:CD2	2.45	0.46
47:AJ:14:ILE:HG13	47:AJ:131:MET:SD	2.55	0.46
52:AP:151:THR:HG22	52:AP:152:GLU:N	2.31	0.46
53:AQ:40:THR:O	53:AQ:46:LYS:NZ	2.48	0.46
54:AR:4:LEU:HD22	54:AR:32:ILE:HG22	1.97	0.46
55:AS:89:ASN:HD21	56:AT:156:TYR:N	1.94	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:AS:90:MET:HE3	55:AS:90:MET:HB3	1.84	0.46
65:Ac:34:LEU:HD13	65:Ac:59:TYR:HB3	1.97	0.46
71:Ai:4:LYS:HG2	71:Ai:14:GLY:HA3	1.97	0.46
72:Aj:17:THR:OG1	72:Aj:18:LEU:N	2.48	0.46
80:DC:459:ILE:O	80:DC:463:LEU:HG	2.15	0.46
1:BA:90:ALA:HA	1:BA:95:ALA:HB3	1.97	0.46
3:BC:144:TRP:CE2	3:BC:173:PRO:HG3	2.51	0.46
4:BE:100:ARG:NE	4:BE:236:ILE:HD12	2.31	0.46
5:BG:61:PHE:HD2	5:BG:72:ARG:HD2	1.81	0.46
6:BH:5:GLN:HG3	6:BH:25:VAL:HG11	1.98	0.46
6:BH:63:PRO:O	6:BH:64:VAL:HG12	2.16	0.46
9:BL:45:PRO:HG2	9:BL:48:ALA:HB2	1.98	0.46
9:BL:66:ILE:HD13	9:BL:128:CYS:HB3	1.98	0.46
11:BO:121:VAL:O	34:B5:886:U:O2’	2.34	0.46
12:BV:69:LEU:HD23	12:BV:69:LEU:HA	1.81	0.46
20:BF:114:ILE:HG13	20:BF:115:LYS:N	2.30	0.46
21:BK:4:PRO:HG2	21:BK:7:ASP:OD2	2.16	0.46
21:BK:49:LEU:HD12	21:BK:52:LYS:HE3	1.98	0.46
34:B5:480:G:O6	34:B5:508:U:O4	2.34	0.46
34:B5:766:PSU:HN3	34:B5:770:A:H62	1.64	0.46
34:B5:1426:C:O2’	34:B5:1428:G:H5’	2.16	0.46
34:B5:1673:G:H1	34:B5:1728:A:H2	1.60	0.46
35:AA:186:PHE:HB2	35:AA:196:TRP:CZ3	2.50	0.46
36:AB:257:PRO:HG2	36:AB:261:MET:HE1	1.97	0.46
37:AC:39:PHE:CD1	37:AC:242:ALA:HB2	2.50	0.46
37:AC:196:ASN:HD21	61:AY:12:ARG:N	2.06	0.46
37:AC:287:THR:O	37:AC:291:ASN:ND2	2.43	0.46
38:A1:422:A:C2	38:A1:2363:A:H4’	2.51	0.46
38:A1:516:A:H2’	38:A1:517:G:H8	1.81	0.46
38:A1:1464:G:H22	38:A1:1467:A:P	2.39	0.46
38:A1:1471:U:H2’	38:A1:1472:U:C6	2.51	0.46
38:A1:1543:G:OP1	50:AN:35:VAL:HG23	2.16	0.46
38:A1:1718:G:H2’	38:A1:1719:G:C8	2.51	0.46
38:A1:2367:A:H2’	38:A1:2368:A:C8	2.51	0.46
38:A1:2622:C:H42	46:AI:116:ARG:NH2	2.14	0.46
38:A1:2775:U:H2’	38:A1:2776:C:C6	2.51	0.46
40:A4:70:G:H1’	40:A4:88:A:N6	2.31	0.46
43:AF:92:ILE:HB	53:AQ:4:ASP:OD1	2.16	0.46
50:AN:185:ALA:O	50:AN:189:LYS:HD2	2.16	0.46
70:Ah:44:ILE:HG22	70:Ah:48:ARG:HD2	1.98	0.46
70:Ah:85:THR:O	70:Ah:89:ARG:HG3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Ah:105:ARG:NH1	70:Ah:109:ILE:HG13	2.30	0.46
80:DC:138:GLN:O	80:DC:142:VAL:HG22	2.16	0.46
80:DC:166:GLU:OE2	80:DC:166:GLU:N	2.41	0.46
81:EC:6801:A:H3'	81:EC:6802:A:C5'	2.47	0.46
8:BJ:28:LEU:HD23	18:Be:43:ARG:HH21	1.81	0.45
13:BW:41:MET:HE2	13:BW:47:ILE:CD1	2.45	0.45
14:BX:69:ARG:NH2	14:BX:116:ASP:OD2	2.43	0.45
14:BX:112:LYS:HE2	34:B5:1136:U:O4	2.17	0.45
15:BY:27:VAL:HG11	15:BY:35:VAL:HG11	1.97	0.45
16:Ba:92:ARG:HB3	34:B5:1796:C:C5	2.50	0.45
17:Bb:2:VAL:HG23	17:Bb:4:VAL:H	1.82	0.45
21:BK:51:SER:HB2	34:B5:1220:C:H5'	1.98	0.45
34:B5:81:G:H2'	34:B5:82:U:O4'	2.16	0.45
34:B5:478:A:N7	34:B5:511:A:N6	2.65	0.45
34:B5:540:G:C8	34:B5:542:A:H2'	2.51	0.45
34:B5:624:G:H2'	34:B5:625:C:C6	2.52	0.45
34:B5:845:G:H4'	34:B5:846:G:H5'	1.97	0.45
34:B5:1050:G:O6	34:B5:1069:A:N6	2.49	0.45
34:B5:1209:C:C2	34:B5:1455:G:N2	2.84	0.45
34:B5:1247:U:H2'	34:B5:1248:C:C6	2.51	0.45
34:B5:1399:C:H2'	34:B5:1400:A:H5'	1.96	0.45
34:B5:1408:G:H2'	34:B5:1409:G:O4'	2.16	0.45
34:B5:1623:C:H2'	34:B5:1624:C:C6	2.51	0.45
36:AB:6:TYR:HB3	58:AV:46:LEU:CD1	2.46	0.45
36:AB:219:ALA:HB2	36:AB:336:VAL:HG12	1.98	0.45
37:AC:326:ARG:NH2	38:A1:608:A:O3'	2.49	0.45
38:A1:68:C:O3'	50:AN:177:GLY:HA2	2.16	0.45
38:A1:284:A:C8	77:Ao:41:ARG:NH1	2.84	0.45
38:A1:748:U:H2'	38:A1:749:C:H6	1.81	0.45
38:A1:1073:U:H2'	38:A1:1074:U:C6	2.51	0.45
38:A1:1087:G:C2	38:A1:1088:U:C5	3.04	0.45
38:A1:1190:A:H2'	38:A1:1190:A:N3	2.31	0.45
38:A1:1517:G:P	74:Al:41:ARG:HH22	2.39	0.45
38:A1:1710:C:C2	38:A1:1711:C:C5	3.04	0.45
38:A1:2204:C:H2'	38:A1:2205:U:C6	2.50	0.45
38:A1:2218:G:C2	38:A1:2219:A:C5	3.04	0.45
38:A1:3236:U:H2'	38:A1:3237:U:C6	2.51	0.45
41:AD:68:THR:C	56:AT:31:LEU:HD21	2.41	0.45
42:AE:85:ILE:HG22	42:AE:86:ALA:O	2.16	0.45
43:AF:90:LYS:HD3	43:AF:133:TYR:HD1	1.81	0.45
44:AG:159:PRO:HB2	44:AG:161:GLU:OE2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AH:104:VAL:HG11	45:AH:113:GLU:OE1	2.16	0.45
49:AM:133:LYS:HD2	49:AM:133:LYS:HA	1.77	0.45
52:AP:9:THR:HG21	52:AP:115:SER:HB2	1.98	0.45
54:AR:86:GLU:HG2	54:AR:90:PRO:HA	1.97	0.45
56:AT:104:GLU:HA	56:AT:107:GLU:OE1	2.16	0.45
67:Ae:13:HIS:HB2	67:Ae:57:TYR:CD2	2.51	0.45
73:Ak:14:LEU:CD1	73:Ak:17:ARG:HH11	2.30	0.45
77:Ao:15:LYS:HZ3	77:Ao:18:ARG:HH11	1.64	0.45
80:DC:137:VAL:HG21	80:DC:785:ARG:HH11	1.80	0.45
3:BC:46:LYS:HD2	3:BC:46:LYS:HA	1.74	0.45
5:BG:194:LYS:HD3	34:B5:178:U:O4	2.17	0.45
6:BH:170:GLN:NE2	6:BH:182:VAL:HA	2.31	0.45
9:BL:67:ARG:NH2	34:B5:115:G:N7	2.63	0.45
14:BX:54:LEU:HD11	14:BX:82:LYS:HD2	1.98	0.45
14:BX:69:ARG:HG3	14:BX:117:ILE:HG12	1.96	0.45
20:BF:57:SER:O	20:BF:164:PRO:HB3	2.16	0.45
22:BP:44:ARG:NE	22:BP:49:MET:HE1	2.31	0.45
27:BU:69:LYS:HB2	27:BU:78:THR:OG1	2.16	0.45
29:Bc:37:SER:C	29:Bc:38:ARG:HD2	2.41	0.45
32:Bf:105:TYR:OH	34:B5:1252:C:OP2	2.33	0.45
34:B5:24:U:H2'	34:B5:26:A:C8	2.52	0.45
34:B5:744:U:H2'	34:B5:745:U:O4'	2.15	0.45
34:B5:812:A:H62	34:B5:858:G:H2'	1.81	0.45
34:B5:1125:A:C5	34:B5:1126:G:H1'	2.51	0.45
34:B5:1352:G:H2'	34:B5:1354:G:C8	2.51	0.45
34:B5:1418:G:N3	34:B5:1419:G:C8	2.84	0.45
34:B5:1453:G:H2'	34:B5:1454:G:H8	1.81	0.45
34:B5:1476:C:H2'	34:B5:1477:G:C8	2.52	0.45
36:AB:7:GLU:OE2	38:A1:2915:U:H3'	2.17	0.45
37:AC:271:LYS:HZ2	38:A1:695:C:H5"	1.81	0.45
38:A1:562:C:H2'	38:A1:563:U:H6	1.81	0.45
38:A1:1167:U:OP2	68:Af:73:ARG:NH1	2.45	0.45
38:A1:1503:A:C4	38:A1:1504:A:C8	3.05	0.45
38:A1:1949:G:H5"	54:AR:104:ARG:HH21	1.81	0.45
38:A1:2274:U:H2'	38:A1:2275:A:C8	2.51	0.45
38:A1:2498:U:H2'	38:A1:2499:U:C5	2.51	0.45
38:A1:2623:G:C6	38:A1:2624:G:C5	3.05	0.45
38:A1:3064:U:H2'	38:A1:3065:G:C8	2.51	0.45
41:AD:226:TYR:HE2	41:AD:236:LEU:HD11	1.81	0.45
42:AE:36:PRO:O	42:AE:90:LYS:NZ	2.49	0.45
43:AF:55:TYR:OH	43:AF:189:ILE:HD12	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AH:94:TYR:HB3	45:AH:99:ILE:CD1	2.46	0.45
48:AL:21:ARG:HG3	50:AN:196:THR:HA	1.98	0.45
52:AP:24:VAL:HG21	52:AP:87:SER:HA	1.97	0.45
52:AP:32:THR:HA	52:AP:58:ILE:HG21	1.97	0.45
55:AS:14:LEU:HD23	55:AS:14:LEU:HA	1.85	0.45
65:Ac:22:LYS:N	65:Ac:94:GLU:O	2.28	0.45
67:Ae:78:ASN:OD1	67:Ae:81:ASP:N	2.40	0.45
72:Aj:31:LYS:HE3	72:Aj:31:LYS:HB3	1.82	0.45
73:Ak:61:LYS:O	73:Ak:65:LEU:HD13	2.16	0.45
80:DC:32:LYS:HE2	80:DC:106:PRO:HA	1.98	0.45
80:DC:494:GLU:HB2	80:DC:555:LYS:HZ1	1.82	0.45
81:EC:6790:A:N6	81:EC:6797:U:H5"	2.28	0.45
81:EC:6827:G:H2'	81:EC:6828:G:C8	2.51	0.45
6:BH:11:GLN:HB2	6:BH:44:LYS:NZ	2.31	0.45
8:BJ:116:LEU:HD11	8:BJ:156:ILE:HG12	1.96	0.45
10:BN:102:LEU:HD11	10:BN:112:LYS:HG3	1.98	0.45
10:BN:124:ARG:HG2	10:BN:127:ARG:HH12	1.80	0.45
10:BN:127:ARG:NH2	34:B5:629:U:OP1	2.46	0.45
22:BP:126:VAL:HB	34:B5:1459:C:H5'	1.98	0.45
23:BQ:116:LEU:HA	23:BQ:116:LEU:HD23	1.75	0.45
25:BS:139:LYS:HZ1	34:B5:1177:C:H5	1.59	0.45
27:BU:102:ARG:O	27:BU:106:ILE:HG12	2.16	0.45
31:Bg:246:SER:HB3	31:Bg:251:TRP:H	1.81	0.45
34:B5:393:C:H2'	34:B5:394:C:C6	2.51	0.45
34:B5:752:A:O2'	34:B5:753:A:P	2.74	0.45
34:B5:900:A:H2'	34:B5:901:G:C8	2.50	0.45
34:B5:990:C:H2'	34:B5:991:G:O4'	2.17	0.45
34:B5:1039:A:C4	34:B5:1040:G:C8	3.05	0.45
34:B5:1483:A:N3	34:B5:1607:G:O2'	2.42	0.45
36:AB:92:TYR:O	36:AB:155:ALA:HA	2.15	0.45
38:A1:142:C:H2'	38:A1:143:G:O4'	2.16	0.45
38:A1:283:G:OP2	38:A1:285:A:O2'	2.29	0.45
38:A1:796:U:H2'	38:A1:797:U:C6	2.52	0.45
38:A1:1886:A:O4'	38:A1:3307:A:H5'	2.16	0.45
38:A1:2436:U:H2'	38:A1:2437:G:O4'	2.17	0.45
38:A1:2722:U:H2'	38:A1:2723:U:C6	2.51	0.45
38:A1:2964:G:N2	38:A1:2966:G:H3'	2.32	0.45
38:A1:3275:U:H5'	68:Af:68:TRP:HZ2	1.80	0.45
39:A3:37:G:C2	39:A3:41:G:C2	3.05	0.45
40:A4:27:U:H2'	40:A4:28:C:H6	1.81	0.45
45:AH:24:ILE:HG13	45:AH:24:ILE:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AI:47:PRO:HD2	46:AI:141:LYS:HA	1.97	0.45
49:AM:80:THR:HA	49:AM:83:LYS:HG2	1.98	0.45
49:AM:116:GLU:OE2	51:AO:197[A]:LEU:HG	2.16	0.45
66:Ad:75:ILE:HG12	66:Ad:93:VAL:HG22	1.98	0.45
71:Ai:50:LEU:HD23	71:Ai:55:ARG:HG3	1.98	0.45
77:Ao:72:LEU:HB2	77:Ao:81:ALA:HB3	1.98	0.45
4:BE:191:ARG:HB2	4:BE:245:LYS:HE2	1.98	0.45
8:BJ:32:GLY:HA3	18:Be:40:TYR:CD1	2.52	0.45
11:BO:81:VAL:O	11:BO:82:LYS:HE2	2.15	0.45
18:Be:29:LYS:HB2	18:Be:29:LYS:HE2	1.81	0.45
20:BF:25:LEU:HD11	23:BQ:27:GLY:HA3	1.97	0.45
20:BF:112:ARG:HH22	23:BQ:42:GLU:CD	2.23	0.45
24:BR:91:LEU:HD12	24:BR:91:LEU:O	2.17	0.45
30:Bd:12:ARG:HH12	34:B5:1205:C:C1’	2.24	0.45
31:Bg:66:HIS:ND1	31:Bg:67:ILE:HG12	2.31	0.45
31:Bg:150:TRP:O	31:Bg:174:ASN:N	2.46	0.45
34:B5:340:U:C2	34:B5:341:A:N7	2.85	0.45
34:B5:853:G:OP1	54:AR:180:LYS:HD3	2.16	0.45
34:B5:1079:U:H2’	34:B5:1080:U:C6	2.52	0.45
34:B5:1151:A:H2’	34:B5:1152:A:C8	2.52	0.45
34:B5:1273:G:C2	34:B5:1276:U:C4	3.05	0.45
34:B5:1278:G:H2’	34:B5:1279:C:C6	2.52	0.45
34:B5:1405:G:H2’	34:B5:1406:A:H8	1.81	0.45
34:B5:1476:C:H2’	34:B5:1477:G:H8	1.81	0.45
34:B5:1641:C:H2’	34:B5:1642:G:C8	2.52	0.45
34:B5:1697:G:N2	34:B5:1698:G:H4’	2.31	0.45
36:AB:215:ILE:HG23	36:AB:282:ILE:HD11	1.99	0.45
37:AC:143:GLU:H	37:AC:143:GLU:CD	2.24	0.45
37:AC:163:LYS:HE2	38:A1:208:C:OP2	2.16	0.45
38:A1:53:G:H4’	38:A1:812:G:H4’	1.98	0.45
38:A1:1104:G:H2’	38:A1:1105:A:C8	2.51	0.45
38:A1:1117:G:O3’	64:Ab:5:LYS:NZ	2.48	0.45
38:A1:1304:A:O2’	38:A1:2884:C:O2	2.34	0.45
38:A1:1663:C:H2’	38:A1:1664:G:H8	1.81	0.45
38:A1:2219:A:H2’	38:A1:2220:A:H8	1.82	0.45
38:A1:2987:A:H2’	38:A1:2988:C:C6	2.51	0.45
38:A1:3053:G:H2’	38:A1:3054:U:O4’	2.16	0.45
38:A1:3101:G:H2’	38:A1:3102:G:H8	1.81	0.45
38:A1:3282:U:H2’	38:A1:3283:U:C6	2.52	0.45
39:A3:47:C:H2’	39:A3:48:U:C6	2.52	0.45
40:A4:46:G:O2’	40:A4:61:A:N1	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:AD:108:ARG:CZ	41:AD:253:PHE:HB2	2.47	0.45
44:AG:77:GLN:HE21	44:AG:167:PRO:HG2	1.82	0.45
44:AG:145:ASN:O	44:AG:147:LYS:NZ	2.35	0.45
46:AI:21:ARG:NH2	46:AI:22:TYR:OH	2.50	0.45
46:AI:39:LYS:HZ3	46:AI:40:LYS:HE3	1.81	0.45
47:AJ:28:ASP:O	47:AJ:32:ARG:HG3	2.17	0.45
49:AM:38:ILE:HD13	49:AM:44:VAL:HG12	1.99	0.45
52:AP:119:VAL:HG22	52:AP:146:ILE:HD12	1.97	0.45
54:AR:15:VAL:HG23	54:AR:17:VAL:HG22	1.97	0.45
65:Ac:78:GLY:HA2	65:Ac:87:VAL:HG22	1.99	0.45
70:Ah:44:ILE:H	70:Ah:44:ILE:HD12	1.81	0.45
77:Ao:99:GLN:NE2	77:Ao:102:GLN:HE21	2.15	0.45
80:DC:731:VAL:HA	80:DC:797:VAL:H	1.80	0.45
1:BA:15:GLN:HB2	24:BR:100:LEU:HB2	1.99	0.45
5:BG:2:LYS:HE2	5:BG:108:VAL:HG22	1.99	0.45
5:BG:48:TYR:OH	5:BG:119:GLN:O	2.32	0.45
5:BG:159:ARG:CZ	5:BG:170:THR:HG23	2.46	0.45
6:BH:77:LEU:HD22	6:BH:92:PHE:CZ	2.52	0.45
6:BH:126:LEU:HG	6:BH:173:TYR:HE2	1.82	0.45
8:BJ:89:ASP:OD1	8:BJ:90:LYS:N	2.43	0.45
9:BL:37:ASN:O	34:B5:247:A:O2'	2.31	0.45
9:BL:129:ARG:HD2	34:B5:335:U:H4'	1.98	0.45
19:BD:38:GLU:CG	19:BD:49:ILE:HB	2.47	0.45
23:BQ:114:ARG:HH22	34:B5:1411:A:P	2.39	0.45
28:BZ:63:SER:HA	28:BZ:66:VAL:HG22	1.97	0.45
31:Bg:218:GLY:HA2	31:Bg:238:ASP:O	2.15	0.45
34:B5:197:A:H2'	34:B5:198:A:C8	2.51	0.45
34:B5:625:C:O2'	34:B5:939:A:O2'	2.26	0.45
34:B5:815:G:H4'	54:AR:166:ASN:HB3	1.97	0.45
34:B5:954:G:H2'	34:B5:955:A:C8	2.52	0.45
34:B5:1302:U:H2'	34:B5:1303:U:H6	1.81	0.45
35:AA:118:GLU:OE1	38:A1:2158:A:O2'	2.27	0.45
36:AB:86:VAL:HG22	36:AB:162:VAL:HG12	1.99	0.45
36:AB:287:LYS:HA	36:AB:320:ASP:OD1	2.16	0.45
37:AC:27:SER:O	37:AC:279:HIS:HE1	1.99	0.45
38:A1:428:A:H2'	38:A1:429:U:H6	1.82	0.45
38:A1:495:G:N2	38:A1:620:U:O4	2.37	0.45
38:A1:1392:G:H1'	38:A1:1418:A:N6	2.32	0.45
38:A1:1396:C:H2'	38:A1:1397:C:C6	2.51	0.45
38:A1:1750:A:OP2	73:Ak:42:LYS:NZ	2.27	0.45
38:A1:2137:U:H2'	38:A1:2141:U:H5	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2213:A:H2'	38:A1:2214:A:H8	1.81	0.45
38:A1:3199:G:H2'	38:A1:3200:G:H8	1.81	0.45
38:A1:3384:U:H2'	38:A1:3385:U:C6	2.52	0.45
41:AD:69:ILE:H	41:AD:69:ILE:HD12	1.81	0.45
41:AD:229:ASP:HB3	41:AD:231:ILE:HG23	1.97	0.45
46:AI:202:LYS:O	46:AI:202:LYS:HG3	2.16	0.45
47:AJ:18:VAL:CG2	47:AJ:128:TYR:HB3	2.46	0.45
56:AT:57:TYR:HA	56:AT:60:LYS:HG2	1.99	0.45
60:AX:81:ILE:HG22	60:AX:125:ARG:HB2	1.98	0.45
63:Aa:73:LEU:HD22	63:Aa:81:LEU:HD11	1.98	0.45
79:E:179:LEU:HA	79:E:182:GLN:HB3	1.99	0.45
80:DC:192:TYR:OH	80:DC:791:GLN:NE2	2.49	0.45
80:DC:385:MET:HG3	80:DC:394:PHE:HD2	1.82	0.45
80:DC:676:ILE:HD11	80:DC:722:PRO:HB2	1.98	0.45
1:BA:8:ASP:C	1:BA:54:TRP:HE1	2.23	0.45
5:BG:198:ALA:O	5:BG:201:GLN:HG2	2.16	0.45
7:BI:11:ARG:O	9:BL:133:LYS:NZ	2.37	0.45
10:BN:37:ILE:HD11	10:BN:54:LEU:CD1	2.47	0.45
15:BY:40:LEU:HA	15:BY:43:LYS:HE3	1.99	0.45
21:BK:3:MET:HE1	21:BK:8:ARG:HB3	1.98	0.45
23:BQ:52:LEU:HA	23:BQ:60:PHE:CZ	2.52	0.45
25:BS:110:ARG:O	25:BS:113:LEU:HB3	2.17	0.45
25:BS:138:THR:O	34:B5:1459:C:O2'	2.20	0.45
31:Bg:9:LEU:HD12	31:Bg:313:TRP:CE2	2.52	0.45
31:Bg:19:TRP:H	31:Bg:38:ARG:CB	2.29	0.45
34:B5:852:C:N3	54:AR:173:ARG:NH2	2.64	0.45
34:B5:889:U:H2'	34:B5:890:C:C6	2.52	0.45
34:B5:961:U:H2'	34:B5:962:C:C6	2.51	0.45
38:A1:598:A:H2'	38:A1:599:C:C6	2.51	0.45
38:A1:649:A:H2'	38:A1:650:C:C6	2.52	0.45
38:A1:687:U:OP2	48:AL:36:ARG:NH2	2.21	0.45
38:A1:971:G:H2'	38:A1:972:A:C8	2.52	0.45
38:A1:1055:A:H4'	39:A3:100:C:O2	2.17	0.45
38:A1:1074:U:H2'	38:A1:1076:C:C5	2.52	0.45
38:A1:1571:A:H3'	38:A1:1572:U:C5'	2.46	0.45
38:A1:1662:G:H22	38:A1:1787:A:H2	1.63	0.45
38:A1:2355:G:H4'	52:AP:139:TYR:CZ	2.51	0.45
38:A1:2894:C:OP2	45:AH:168:ARG:NH2	2.49	0.45
42:AE:10:TYR:HD2	67:Ae:88:HIS:CD2	2.35	0.45
65:Ac:81:VAL:HG21	65:Ac:90:VAL:HG21	1.98	0.45
80:DC:506:GLU:OE1	80:DC:509:LYS:HD3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:545:LEU:HD13	80:DC:554:LEU:HD21	1.98	0.45
81:EC:6841:U:C2	81:EC:6845:G:H1'	2.51	0.45
1:BA:74:VAL:HG23	1:BA:118:PRO:HB3	1.98	0.45
4:BE:105:VAL:HB	4:BE:243:GLY:HA2	1.97	0.45
4:BE:126:VAL:HB	4:BE:158:ASP:H	1.82	0.45
5:BG:21:GLU:O	5:BG:24:ILE:HG22	2.17	0.45
5:BG:198:ALA:HA	5:BG:201:GLN:NE2	2.31	0.45
15:BY:20:ARG:HG2	15:BY:21:LYS:N	2.32	0.45
15:BY:63:GLN:CD	15:BY:68:LYS:HB3	2.42	0.45
20:BF:94:THR:OG1	20:BF:114:ILE:HG21	2.16	0.45
21:BK:6:GLU:O	21:BK:10:LYS:HG3	2.17	0.45
22:BP:44:ARG:HG2	22:BP:84:ILE:HD11	1.98	0.45
24:BR:32:LYS:HE3	24:BR:33:ARG:NH1	2.32	0.45
25:BS:62:THR:HG22	25:BS:65:GLU:OE2	2.16	0.45
25:BS:113:LEU:O	25:BS:117:LYS:HG2	2.17	0.45
26:BT:117:SER:HB3	26:BT:121:GLY:O	2.17	0.45
34:B5:1213:G:N1	34:B5:1450:U:H5	2.11	0.45
35:AA:7:ASN:HA	35:AA:10:LYS:HG3	1.99	0.45
38:A1:415:G:H2'	38:A1:416:A:H8	1.81	0.45
38:A1:515:C:H2'	38:A1:516:A:C8	2.51	0.45
38:A1:687:U:H3	38:A1:693:A:H61	1.63	0.45
38:A1:1258:U:H4'	38:A1:1260:A:OP2	2.16	0.45
38:A1:1720:U:OP2	54:AR:110:ARG:NH1	2.50	0.45
38:A1:2351:PSU:N3	38:A1:2352:A:N7	2.64	0.45
38:A1:2488:A:OP2	38:A1:2489:C:H5	1.99	0.45
38:A1:2718:U:P	77:Ao:13:LYS:HZ1	2.39	0.45
38:A1:2830:G:H2'	38:A1:2831:G:O4'	2.16	0.45
38:A1:3027:A:H2'	38:A1:3028:G:O4'	2.17	0.45
38:A1:3064:U:H2'	38:A1:3065:G:H8	1.82	0.45
38:A1:3107:U:H2'	38:A1:3108:G:C8	2.52	0.45
39:A3:22:A:H2'	39:A3:22:A:N3	2.32	0.45
39:A3:37:G:N1	39:A3:41:G:C2	2.84	0.45
40:A4:21:C:O2'	40:A4:22:U:H5'	2.16	0.45
41:AD:106:ALA:O	41:AD:110:LEU:HD23	2.16	0.45
43:AF:147:LEU:HD11	43:AF:207:LEU:HD21	1.99	0.45
45:AH:20:ILE:HG23	49:AM:7:VAL:HA	1.98	0.45
46:AI:50:VAL:HG13	46:AI:167:LEU:HD23	1.97	0.45
62:AZ:25:ILE:HG23	62:AZ:41:ALA:HB1	1.99	0.45
73:Ak:41:THR:HG21	73:Ak:62:ALA:CB	2.47	0.45
74:Al:5:LYS:HB3	74:Al:5:LYS:HE2	1.69	0.45
80:DC:204:PRO:C	80:DC:222:ILE:HD11	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:DC:903:SO1:H81	85:DC:903:SO1:H122	1.71	0.45
4:BE:22:LYS:N	34:B5:773:C:OP1	2.50	0.45
8:BJ:167:ALA:O	8:BJ:168:ARG:HD2	2.16	0.45
12:BV:11:LEU:H	12:BV:11:LEU:HD12	1.82	0.45
14:BX:57:LEU:HB2	14:BX:71:CYS:SG	2.57	0.45
14:BX:69:ARG:HA	14:BX:69:ARG:HD3	1.69	0.45
21:BK:44:LYS:HA	21:BK:47:GLN:OE1	2.17	0.45
23:BQ:9:THR:HA	34:B5:1340:U:O4	2.16	0.45
24:BR:106:THR:HA	24:BR:109:LEU:CD2	2.47	0.45
26:BT:122:ARG:HH22	34:B5:1500:C:P	2.40	0.45
31:Bg:114:ASP:OD1	31:Bg:115:ILE:N	2.49	0.45
34:B5:829:A:H2'	34:B5:830:U:C5	2.52	0.45
34:B5:889:U:H2'	34:B5:890:C:H6	1.82	0.45
34:B5:968:U:H2'	34:B5:969:C:O4'	2.17	0.45
34:B5:1433:G:H2'	34:B5:1434:U:H6	1.81	0.45
34:B5:1500:C:H2'	34:B5:1501:C:H6	1.82	0.45
34:B5:1749:A:O2'	76:An:13:LEU:HD11	2.17	0.45
34:B5:1783:C:H3'	76:An:5:TRP:CZ3	2.52	0.45
36:AB:120:LYS:HE3	36:AB:120:LYS:HB3	1.73	0.45
36:AB:173:GLN:HE22	38:A1:3313:U:P	2.40	0.45
37:AC:26:PHE:CD1	37:AC:130:ALA:HB2	2.52	0.45
37:AC:188:ARG:HB2	37:AC:200:THR:HG23	1.99	0.45
38:A1:109:A:O2'	38:A1:323:A:N6	2.50	0.45
38:A1:251:G:H1'	38:A1:253:A:N7	2.32	0.45
38:A1:413:U:H2'	38:A1:414:U:C6	2.52	0.45
38:A1:436:A:H2'	38:A1:437:G:C8	2.52	0.45
38:A1:1039:U:H2'	38:A1:1040:A:C8	2.52	0.45
38:A1:1063:G:N3	38:A1:1066:G:H1'	2.32	0.45
38:A1:1223:A:C8	38:A1:1286:A:C6	3.05	0.45
38:A1:2718:U:H2'	38:A1:2719:U:O4'	2.16	0.45
38:A1:3267:A:H2'	42:AE:69:PHE:CE1	2.52	0.45
43:AF:51:TYR:HA	43:AF:54:GLU:HG3	1.99	0.45
44:AG:186:LEU:HD23	44:AG:189:LEU:HD21	1.99	0.45
45:AH:138:THR:HG22	45:AH:139:ASN:H	1.81	0.45
54:AR:68:GLN:OE1	54:AR:68:GLN:HA	2.16	0.45
56:AT:21:LYS:HE3	56:AT:21:LYS:HB3	1.78	0.45
62:AZ:83:THR:HG23	69:Ag:93:PHE:CZ	2.51	0.45
79:E:8:GLN:HB2	79:E:11:GLU:HB2	1.99	0.45
2:BB:206:PRO:C	2:BB:207:LEU:HD12	2.42	0.45
4:BE:33:ALA:HB1	34:B5:297:U:H6	1.81	0.45
7:BI:160:PHE:CE2	7:BI:165:LEU:HD21	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BN:137:PRO:O	10:BN:138:ASN:OD1	2.35	0.45
13:BW:11:LEU:HA	13:BW:14:ILE:HG12	1.99	0.45
19:BD:48:VAL:HG23	19:BD:84:ILE:HD11	1.99	0.45
19:BD:134:CYS:SG	19:BD:154:ASP:HB3	2.57	0.45
20:BF:48:PHE:HE1	20:BF:68:ILE:N	2.12	0.45
22:BP:69:GLU:HG3	22:BP:70:ASN:H	1.81	0.45
24:BR:5:ARG:HD3	34:B5:1402:G:OP1	2.17	0.45
34:B5:823:G:H2'	34:B5:824:G:O4'	2.16	0.45
34:B5:851:U:P	34:B5:852:C:H41	2.40	0.45
34:B5:926:A:H2'	34:B5:927:C:C6	2.52	0.45
34:B5:1329:A:H2'	34:B5:1330:G:O4'	2.16	0.45
34:B5:1777:G:O6	76:An:8:LYS:HE3	2.17	0.45
35:AA:9:ARG:HD2	38:A1:911:C:OP2	2.17	0.45
35:AA:22:LEU:HD22	35:AA:191:LEU:HD11	1.99	0.45
36:AB:10:ARG:NH2	36:AB:263:SER:O	2.50	0.45
38:A1:389:A:H2'	38:A1:390:G:O4'	2.17	0.45
38:A1:774:G:H2'	38:A1:775:A:C8	2.52	0.45
38:A1:1003:A:N1	38:A1:1049:C:O2'	2.47	0.45
38:A1:1203:A:H2'	38:A1:1204:A:H8	1.81	0.45
38:A1:1529:A:P	38:A1:1592:G:H22	2.40	0.45
38:A1:1718:G:H2'	38:A1:1719:G:H8	1.80	0.45
38:A1:1769:G:H2'	38:A1:1770:G:H8	1.82	0.45
38:A1:1825:G:H5'	73:Ak:17:ARG:HH21	1.82	0.45
38:A1:2425:G:H1	38:A1:2604:U:H3	1.64	0.45
38:A1:2553:U:H4'	65:Ac:50:VAL:HG11	1.98	0.45
38:A1:2834:G:H2'	38:A1:2835:U:C6	2.52	0.45
39:A3:114:U:H2'	39:A3:115:G:C8	2.45	0.45
43:AF:141:TYR:HD1	43:AF:189:ILE:CD1	2.30	0.45
44:AG:137:ASN:HD22	50:AN:2:GLY:N	2.14	0.45
48:AL:59:ARG:HD2	48:AL:66:ASN:O	2.16	0.45
65:Ac:55:GLU:HB3	69:Ag:94:LEU:HD21	1.98	0.45
69:Ag:51:LEU:HB3	69:Ag:54:ILE:HD12	1.99	0.45
80:DC:363:ASP:O	80:DC:367:ILE:N	2.50	0.45
80:DC:399:ARG:HB2	80:DC:453:ILE:HD13	1.98	0.45
80:DC:729:PHE:CD1	80:DC:798:PHE:HD1	2.34	0.45
81:EC:6783:U:H2'	81:EC:6784:G:C8	2.52	0.45
81:EC:6799:C:O5'	81:EC:6800:G:N2	2.50	0.45
1:BA:16:LEU:HD23	24:BR:91:LEU:HD23	1.99	0.45
2:BB:167:VAL:O	2:BB:170:GLU:HG3	2.17	0.45
3:BC:181:SER:O	3:BC:185:LYS:HB3	2.17	0.45
4:BE:67:GLN:NE2	4:BE:69:HIS:HB2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:BJ:97:LEU:HD23	8:BJ:97:LEU:HA	1.84	0.45
10:BN:62:GLN:HB3	10:BN:65:VAL:HG22	1.98	0.45
17:Bb:48:SER:OG	17:Bb:49:HIS:ND1	2.34	0.45
19:BD:40:ARG:HD2	19:BD:47:GLU:OE1	2.17	0.45
21:BK:64:TYR:HB3	21:BK:66:TYR:CE2	2.52	0.45
28:BZ:68:ARG:C	28:BZ:69:LEU:HD12	2.42	0.45
31:Bg:125:GLY:HA2	31:Bg:131:ILE:HA	1.98	0.45
31:Bg:132:LYS:HA	31:Bg:143:THR:HA	1.98	0.45
31:Bg:170:ILE:HD11	31:Bg:204:ALA:HB2	1.98	0.45
32:Bf:100:LEU:HB3	32:Bf:103:LEU:HD13	1.99	0.45
33:BM:42:ALA:HB3	33:BM:122:VAL:HB	1.98	0.45
34:B5:195:G:H2'	34:B5:196:G:C4	2.52	0.45
34:B5:222:A:N7	34:B5:832:U:H3'	2.32	0.45
34:B5:773:C:O2'	34:B5:788:A:O2'	2.27	0.45
34:B5:854:U:C5'	54:AR:181:ARG:HH21	2.30	0.45
34:B5:895:G:H2'	34:B5:896:U:C6	2.52	0.45
34:B5:1504:G:H2'	34:B5:1505:A:O4'	2.17	0.45
34:B5:1611:A:H2'	34:B5:1612:U:C6	2.52	0.45
36:AB:11:HIS:NE2	38:A1:2881:C:OP1	2.50	0.45
37:AC:329:PRO:HB3	43:AF:41:ARG:NH2	2.32	0.45
38:A1:8:C:H2'	38:A1:9:U:H6	1.82	0.45
38:A1:159:A:H2'	38:A1:160:G:C8	2.50	0.45
38:A1:393:U:H2'	38:A1:394:G:O4'	2.17	0.45
38:A1:601:U:H2'	38:A1:602:A:O4'	2.17	0.45
38:A1:790:U:H2'	38:A1:791:A:H8	1.82	0.45
38:A1:952:A:P	64:Ab:18:ARG:HH12	2.37	0.45
38:A1:1321:G:H22	55:AS:108:GLN:HE21	1.65	0.45
38:A1:1352:A:O2'	38:A1:1353:U:H4'	2.17	0.45
38:A1:1817:G:H2'	38:A1:1818:U:C6	2.52	0.45
38:A1:1841:A:N3	74:Al:45:ARG:NH2	2.64	0.45
38:A1:2647:A:H2'	38:A1:2648:G:O4'	2.16	0.45
38:A1:3015:G:H2'	38:A1:3016:A:C8	2.51	0.45
38:A1:3032:A:H3'	38:A1:3033:A:H8	1.82	0.45
39:A3:5:G:OP2	41:AD:27:LYS:NZ	2.34	0.45
41:AD:53:VAL:HG11	41:AD:162:ALA:CB	2.47	0.45
42:AE:55:LEU:HD21	42:AE:145:LEU:HD21	1.98	0.45
47:AJ:37:LEU:HD21	47:AJ:69:VAL:HG12	1.99	0.45
48:AL:21:ARG:HD2	50:AN:195:ASN:O	2.17	0.45
48:AL:28:GLN:HG3	50:AN:200:TRP:HZ3	1.82	0.45
53:AQ:94:PHE:CE1	63:Aa:119:PRO:HD3	2.52	0.45
54:AR:93:VAL:O	54:AR:97:ARG:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:AR:149:ALA:O	54:AR:153:LYS:HG2	2.16	0.45
56:AT:13:TYR:HA	56:AT:16:GLN:CG	2.46	0.45
57:AU:54:VAL:HG22	57:AU:67:SER:HA	1.99	0.45
61:AY:85:VAL:O	61:AY:85:VAL:HG13	2.17	0.45
72:Aj:27:PHE:HA	72:Aj:34:CYS:HA	1.99	0.45
79:E:83:ASP:OD1	79:E:84:ALA:N	2.50	0.45
79:E:203:SER:HA	79:E:217:TYR:HB2	1.99	0.45
80:DC:364:ALA:HA	80:DC:367:ILE:HG22	1.99	0.45
80:DC:676:ILE:HG22	80:DC:677:PHE:HD1	1.82	0.45
81:EC:6763:C:H2'	81:EC:6764:C:C6	2.52	0.45
2:BB:145:LYS:HZ1	2:BB:154:SER:HB3	1.83	0.44
5:BG:78:THR:HG22	5:BG:79:LYS:N	2.24	0.44
6:BH:140:VAL:CG2	13:BW:52:TYR:HB3	2.47	0.44
7:BI:103:GLN:HG3	7:BI:164:ARG:HB3	1.98	0.44
11:BO:38:THR:OG1	34:B5:896:U:H1'	2.18	0.44
12:BV:64:GLU:HG3	17:Bb:3:LEU:HG	1.99	0.44
15:BY:36:SER:O	15:BY:40:LEU:HG	2.17	0.44
19:BD:113:LEU:HD23	19:BD:114:ALA:N	2.32	0.44
27:BU:57:ARG:HA	27:BU:89:ARG:HG3	1.99	0.44
30:Bd:48:ASN:OD1	30:Bd:49:ASP:N	2.50	0.44
33:BM:27:ALA:HB3	33:BM:136:ILE:HB	1.99	0.44
34:B5:46:A:N1	34:B5:432:G:O2'	2.44	0.44
34:B5:253:A:H2'	34:B5:254:A:H8	1.82	0.44
34:B5:269:G:H2'	34:B5:270:C:C6	2.51	0.44
34:B5:394:C:H2'	34:B5:395:U:C6	2.52	0.44
34:B5:740:A:H5'	34:B5:741:C:H5'	1.99	0.44
34:B5:751:G:H2'	34:B5:752:A:C8	2.52	0.44
34:B5:995:A:H2'	34:B5:996:U:O4'	2.17	0.44
34:B5:1166:A:H2'	34:B5:1167:G:O4'	2.16	0.44
34:B5:1367:G:N1	34:B5:1368:G:O6	2.49	0.44
34:B5:1735:U:H3'	34:B5:1736:G:H8	1.82	0.44
36:AB:369:ARG:HG2	59:AW:32:GLN:HE22	1.82	0.44
37:AC:181:VAL:HG22	37:AC:182:LEU:H	1.83	0.44
37:AC:187:LEU:HD23	38:A1:1419:A:C8	2.52	0.44
38:A1:32:U:H2'	38:A1:33:G:O4'	2.17	0.44
38:A1:87:U:H2'	38:A1:88:A:H8	1.82	0.44
38:A1:527:A:H2'	38:A1:528:U:H6	1.82	0.44
38:A1:631:U:H4'	38:A1:3172:A:N6	2.31	0.44
38:A1:782:U:H2'	38:A1:783:A:O4'	2.18	0.44
38:A1:991:G:O2'	56:AT:41:ASP:OD2	2.35	0.44
38:A1:1443:G:H2'	38:A1:1444:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1633:C:OP2	62:AZ:69:LYS:NZ	2.50	0.44
38:A1:2158:A:O4'	38:A1:2160:G:C8	2.70	0.44
38:A1:2445:A:H61	38:A1:2503:G:H1	1.64	0.44
38:A1:2720:G:OP2	53:AQ:180:ARG:NH2	2.50	0.44
38:A1:2730:G:H4'	53:AQ:184:PHE:CG	2.52	0.44
38:A1:3051:U:H2'	38:A1:3052:G:H8	1.81	0.44
38:A1:3190:C:H2'	38:A1:3191:G:C8	2.52	0.44
38:A1:3278:C:OP1	68:Af:54:ARG:NH2	2.50	0.44
39:A3:87:G:O2'	55:AS:119:ARG:NH1	2.49	0.44
43:AF:163:LEU:C	43:AF:165:ASP:H	2.25	0.44
50:AN:35:VAL:HG12	50:AN:36:ILE:HG13	2.00	0.44
51:AO:59[A]:ARG:O	51:AO:59[A]:ARG:HD2	2.17	0.44
57:AU:19:VAL:C	57:AU:22:PRO:HD2	2.42	0.44
64:Ab:23:LYS:HE3	64:Ab:24:PRO:HD3	2.00	0.44
73:Ak:39:ARG:HH21	73:Ak:59:ALA:HA	1.81	0.44
78:Ap:75:ALA:O	78:Ap:79:VAL:HG23	2.17	0.44
80:DC:413:ILE:HG12	80:DC:469:LEU:HD11	1.99	0.44
1:BA:59:LEU:HD22	12:BV:79:LEU:HD21	2.00	0.44
4:BE:42:LEU:HB2	4:BE:109:PHE:CE2	2.52	0.44
8:BJ:159:ALA:O	8:BJ:165:GLY:HA3	2.17	0.44
9:BL:133:LYS:HD3	34:B5:324:U:OP1	2.16	0.44
14:BX:139:LYS:NZ	34:B5:32:U:OP1	2.29	0.44
18:Be:17:GLN:HB2	80:DC:609:ARG:HH12	1.82	0.44
19:BD:54:ARG:O	19:BD:58:VAL:HG23	2.18	0.44
20:BF:115:LYS:NZ	28:BZ:93:SER:OG	2.48	0.44
22:BP:15:HIS:HB3	22:BP:22:LEU:HD12	1.98	0.44
23:BQ:64:ASP:OD1	23:BQ:64:ASP:N	2.48	0.44
29:Bc:11:LYS:C	29:Bc:30:VAL:HG23	2.42	0.44
31:Bg:158:PRO:O	31:Bg:208:GLY:HA3	2.17	0.44
31:Bg:223:TRP:CZ3	31:Bg:230:ALA:HB2	2.52	0.44
33:BM:62:LEU:HG	33:BM:63:VAL:O	2.18	0.44
33:BM:63:VAL:HG11	33:BM:94:ALA:HB2	1.98	0.44
34:B5:1453:G:H2'	34:B5:1454:G:C8	2.53	0.44
34:B5:1483:A:C5	34:B5:1524:A:C6	3.05	0.44
34:B5:1592:A:C2	34:B5:1593:A:C4	3.06	0.44
34:B5:1609:U:H2'	34:B5:1610:G:O4'	2.17	0.44
35:AA:107:VAL:HG21	35:AA:136:ILE:HG13	1.98	0.44
38:A1:117:U:H1'	38:A1:119:U:OP2	2.17	0.44
38:A1:216:G:H2'	38:A1:217:U:O4'	2.18	0.44
38:A1:808:A:HO2'	38:A1:2412:G:HO2'	1.58	0.44
38:A1:1324:U:P	55:AS:1:MET:H1	2.40	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1378:U:H2'	38:A1:1379:G:H8	1.83	0.44
38:A1:1724:U:O4	54:AR:125:LYS:NZ	2.41	0.44
38:A1:2223:A:H5"	71:Ai:71:LYS:NZ	2.32	0.44
38:A1:2243:A:C6	38:A1:2313:A:N7	2.86	0.44
38:A1:2503:G:C8	38:A1:2504:U:C4	3.05	0.44
38:A1:2761:G:C4	38:A1:2795:U:C5	3.05	0.44
38:A1:3084:C:H2'	38:A1:3085:G:O4'	2.16	0.44
38:A1:3211:C:OP2	49:AM:109:ARG:NH2	2.51	0.44
50:AN:51:LEU:HD11	50:AN:119:TYR:HB3	1.99	0.44
52:AP:21:TYR:CD1	52:AP:145:HIS:HE1	2.35	0.44
54:AR:103:ARG:HG2	54:AR:124:TYR:CE1	2.53	0.44
55:AS:30:PHE:CD1	55:AS:103:VAL:HG11	2.51	0.44
58:AV:23:MET:HE2	58:AV:36:ILE:HD11	1.99	0.44
67:Ae:23:ASP:OD1	67:Ae:24:ARG:N	2.51	0.44
79:E:191:VAL:HB	79:E:197:ASN:HD21	1.81	0.44
80:DC:126:LEU:HD12	80:DC:154:VAL:HG13	1.98	0.44
80:DC:180:ARG:HA	80:DC:180:ARG:NE	2.31	0.44
80:DC:255:LYS:HD3	80:DC:255:LYS:HA	1.84	0.44
80:DC:561:VAL:HG23	85:DC:903:SO1:H101	1.98	0.44
1:BA:10:THR:HB	1:BA:13:ASP:OD1	2.17	0.44
7:BI:84:HIS:HD2	7:BI:85:PRO:HD2	1.82	0.44
8:BJ:149:ARG:O	8:BJ:151:ASP:N	2.50	0.44
10:BN:64:ARG:HD3	10:BN:70:LYS:HG2	1.99	0.44
13:BW:113:HIS:HD2	13:BW:117:ARG:HH11	1.64	0.44
20:BF:42:LEU:HD12	20:BF:69:PHE:O	2.16	0.44
22:BP:43:ARG:HD2	34:B5:1551:U:OP2	2.17	0.44
22:BP:98:ASN:HB3	22:BP:120:SER:OG	2.17	0.44
23:BQ:13:LYS:CG	23:BQ:14:LYS:H	2.27	0.44
24:BR:20:TYR:O	24:BR:24:LEU:HG	2.17	0.44
27:BU:23:ARG:NH2	34:B5:1347:U:OP1	2.46	0.44
31:Bg:245:PHE:CE1	31:Bg:252:LEU:HD13	2.52	0.44
32:Bf:140:TYR:CZ	32:Bf:142:GLY:HA2	2.53	0.44
33:BM:45:LEU:HD21	33:BM:119:SER:HB2	1.98	0.44
34:B5:153:G:C6	34:B5:162:A:N6	2.86	0.44
34:B5:700:C:N4	34:B5:741:C:H41	2.16	0.44
34:B5:1013:A:H2'	34:B5:1014:G:O4'	2.17	0.44
34:B5:1044:U:H2'	34:B5:1045:C:H6	1.83	0.44
34:B5:1086:A:H2'	34:B5:1087:A:C8	2.52	0.44
34:B5:1409:G:N2	34:B5:1411:A:H3'	2.32	0.44
35:AA:181:LYS:HB2	38:A1:860:G:C6	2.52	0.44
36:AB:50:LYS:HG2	36:AB:332:ARG:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:213:GLU:O	36:AB:282:ILE:HD12	2.18	0.44
38:A1:120:G:O4'	44:AG:129:PRO:HG3	2.17	0.44
38:A1:229:G:H2'	38:A1:230:U:C6	2.53	0.44
38:A1:307:A:H2'	38:A1:308:A:H8	1.82	0.44
38:A1:600:G:N2	38:A1:603:A:OP2	2.50	0.44
38:A1:663:C:H2'	38:A1:664:U:C6	2.53	0.44
38:A1:684:G:H2'	38:A1:685:G:H8	1.83	0.44
38:A1:754:G:H2'	38:A1:755:A:H8	1.80	0.44
38:A1:875:G:O2'	38:A1:1891:A:OP1	2.30	0.44
38:A1:1136:A:O4'	38:A1:2636:A:N6	2.51	0.44
38:A1:1246:G:H5'	38:A1:1273:A:H61	1.82	0.44
38:A1:1667:A:H2'	38:A1:1668:G:C8	2.52	0.44
38:A1:1744:G:H2'	38:A1:1745:C:C6	2.52	0.44
38:A1:1775:G:H2'	38:A1:1776:G:O4'	2.18	0.44
38:A1:2278:5MC:P	76:An:23:ARG:NH2	2.91	0.44
38:A1:2871:G:H5"	38:A1:2872:A:H5"	2.00	0.44
38:A1:3202:G:H2'	38:A1:3203:U:H6	1.81	0.44
38:A1:3275:U:OP2	68:Af:66:VAL:HG11	2.17	0.44
38:A1:3329:U:H2'	38:A1:3330:A:O4'	2.16	0.44
41:AD:65:ILE:HD13	41:AD:74:VAL:HG13	1.99	0.44
42:AE:166:LYS:O	68:Af:6:ARG:NH2	2.32	0.44
43:AF:30:ARG:HD3	43:AF:30:ARG:HA	1.78	0.44
47:AJ:84:LEU:HB3	47:AJ:89:TYR:CD1	2.52	0.44
50:AN:38:ARG:NE	50:AN:60:VAL:HG13	2.33	0.44
56:AT:157:GLU:HB2	56:AT:159:PHE:CE2	2.53	0.44
61:AY:115:ARG:O	61:AY:119:ILE:HG12	2.17	0.44
67:Ae:96:ILE:HG21	67:Ae:105:ARG:HG2	1.99	0.44
79:E:90:LEU:HD21	79:E:124:LEU:HB2	1.97	0.44
80:DC:179:ALA:HA	80:DC:182:VAL:HG12	1.99	0.44
85:DC:903:SO1:H102	85:DC:903:SO1:H16	1.70	0.44
81:EC:6836:U:H3	81:EC:6850:C:H41	1.65	0.44
2:BB:32:ILE:HD12	2:BB:96:LEU:HB2	1.99	0.44
2:BB:35:PRO:HD3	2:BB:98:THR:HG23	1.98	0.44
4:BE:233:LYS:O	4:BE:233:LYS:HD2	2.17	0.44
6:BH:152:VAL:HB	6:BH:183:PHE:HD1	1.82	0.44
7:BI:64:ASN:HD21	34:B5:258:C:H1'	1.82	0.44
7:BI:141:ARG:NH2	34:B5:197:A:H61	2.16	0.44
11:BO:38:THR:HG21	34:B5:895:G:H21	1.82	0.44
11:BO:51:ASP:OD2	34:B5:906:A:H5'	2.17	0.44
14:BX:51:GLY:HA2	14:BX:77:ILE:HG13	1.97	0.44
22:BP:77:ARG:HH21	34:B5:1241:G:P	2.40	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BQ:58:ASP:O	23:BQ:61:SER:OG	2.25	0.44
23:BQ:89:LEU:HD23	23:BQ:93:HIS:CD2	2.52	0.44
26:BT:88:VAL:HG22	34:B5:1601:G:N2	2.32	0.44
34:B5:1172:G:H2'	34:B5:1173:C:C6	2.53	0.44
34:B5:1294:G:O2'	34:B5:1321:A:N1	2.42	0.44
34:B5:1359:C:N4	34:B5:1360:A:H62	2.14	0.44
34:B5:1682:U:O2'	34:B5:1683:C:O5'	2.33	0.44
35:AA:79:ASN:O	35:AA:82:VAL:HG22	2.18	0.44
38:A1:207:U:H2'	38:A1:208:C:C6	2.52	0.44
38:A1:666:A:H2'	38:A1:667:C:O4'	2.17	0.44
38:A1:1257:C:H2'	38:A1:1261:G:N7	2.32	0.44
38:A1:1443:G:H2'	38:A1:1444:G:C8	2.52	0.44
38:A1:1639:C:OP1	69:Ag:74:ARG:NH2	2.46	0.44
38:A1:2257:C:H3'	38:A1:2258:PSU:C6	2.53	0.44
38:A1:2601:A:H2'	38:A1:2602:G:H8	1.81	0.44
38:A1:3092:C:C2	58:AV:12:ARG:NH1	2.86	0.44
41:AD:146:LEU:HD22	41:AD:163:LEU:HD13	2.00	0.44
54:AR:37:SER:O	54:AR:41:ILE:HG12	2.18	0.44
65:Ac:17:VAL:HG21	65:Ac:100:ILE:HD11	2.00	0.44
78:Ap:83:ILE:HG22	78:Ap:87:ARG:HH12	1.83	0.44
79:E:100:ILE:C	79:E:127:GLN:HG3	2.42	0.44
79:E:125:GLY:H	79:E:126:PRO:HD2	1.82	0.44
80:DC:16:VAL:O	80:DC:19:VAL:HG12	2.18	0.44
80:DC:733:ILE:HG23	80:DC:794:PRO:HA	1.98	0.44
3:BC:40:LYS:HB2	3:BC:247:ALA:HB1	2.00	0.44
3:BC:81:MET:HE1	3:BC:186:LYS:HB2	1.99	0.44
7:BI:25:ARG:NH2	34:B5:386:G:OP2	2.39	0.44
7:BI:193:LEU:HD23	7:BI:198:ALA:HB3	2.00	0.44
8:BJ:56:ALA:HA	8:BJ:59:LEU:CB	2.48	0.44
11:BO:36:LYS:HG2	34:B5:919:A:H1'	1.98	0.44
14:BX:112:LYS:HE2	34:B5:1136:U:C4	2.53	0.44
15:BY:19:ALA:HB3	15:BY:81:GLU:CD	2.43	0.44
21:BK:16:PHE:HZ	21:BK:76:LEU:O	2.00	0.44
26:BT:133:ASP:OD1	26:BT:134:ARG:N	2.50	0.44
27:BU:85:ARG:NH2	34:B5:1334:U:O3'	2.50	0.44
34:B5:117:U:C2'	34:B5:118:U:H5'	2.48	0.44
34:B5:691:C:H2'	34:B5:692:C:H6	1.82	0.44
34:B5:836:U:O4	34:B5:837:G:N2	2.51	0.44
34:B5:1741:U:H2'	34:B5:1742:U:H6	1.82	0.44
38:A1:63:A:H5"	50:AN:174:ILE:HG21	1.99	0.44
38:A1:253:A:H2'	38:A1:254:A:H8	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:634:C:H5'	68:Af:21:ARG:O	2.17	0.44
38:A1:728:G:H5"	53:AQ:43:PRO:HB2	2.00	0.44
38:A1:1666:G:H21	69:Ag:21:LYS:HZ3	1.65	0.44
38:A1:2666:C:OP2	38:A1:2687:G:N1	2.47	0.44
38:A1:2687:G:OP1	41:AD:8:LYS:NZ	2.27	0.44
38:A1:3295:A:H2'	38:A1:3296:A:H8	1.82	0.44
40:A4:47:C:H1'	40:A4:61:A:H2'	1.98	0.44
49:AM:76:ALA:HB1	49:AM:80:THR:OG1	2.17	0.44
50:AN:106:VAL:HG11	50:AN:132:VAL:HG21	1.98	0.44
50:AN:180:PHE:O	50:AN:184:LYS:HG3	2.17	0.44
56:AT:79:MET:HB2	56:AT:84:TYR:CE2	2.52	0.44
80:DC:490:GLN:OE1	80:DC:521:TYR:OH	2.31	0.44
2:BB:59:ASP:OD1	2:BB:60:ALA:N	2.50	0.44
5:BG:50:PHE:HB3	5:BG:111:LEU:HB3	1.99	0.44
6:BH:57:ALA:HB1	6:BH:91:ILE:HD13	2.00	0.44
6:BH:87:ASP:OD1	6:BH:88:ARG:HG2	2.18	0.44
7:BI:2:GLY:N	34:B5:393:C:OP2	2.50	0.44
11:BO:55:SER:O	11:BO:96:PRO:HG2	2.17	0.44
19:BD:75:LYS:HE3	21:BK:21:VAL:HA	1.99	0.44
22:BP:79:HIS:HB2	34:B5:1241:G:H1'	2.00	0.44
25:BS:65:GLU:O	25:BS:68:ARG:HG2	2.18	0.44
33:BM:125:ASN:HB3	33:BM:127:GLY:O	2.18	0.44
34:B5:201:G:H2'	34:B5:202:A:C8	2.52	0.44
34:B5:913:G:C8	38:A1:2208:A:H2'	2.53	0.44
34:B5:1080:U:H3	34:B5:1091:A:H62	1.66	0.44
35:AA:14:SER:OG	35:AA:15:ILE:N	2.50	0.44
38:A1:1719:G:H2'	38:A1:1720:U:O4'	2.18	0.44
38:A1:1799:A:H2'	38:A1:1800:A:C8	2.52	0.44
38:A1:1942:U:O5'	54:AR:74:ARG:NH2	2.49	0.44
38:A1:2947:G:OP2	38:A1:2947:G:H4'	2.17	0.44
38:A1:3094:A:H2'	38:A1:3095:U:C6	2.52	0.44
38:A1:3121:U:H4'	38:A1:3122:A:OP1	2.18	0.44
43:AF:207:LEU:HB3	43:AF:243:MET:HB3	2.00	0.44
46:AI:47:PRO:HB2	46:AI:178:ARG:NH2	2.32	0.44
48:AL:46:ILE:HD11	48:AL:51:LEU:HA	1.99	0.44
51:AO:73[A]:PHE:HB3	51:AO:78[A]:ARG:HB2	1.99	0.44
51:AO:141[A]:LEU:O	51:AO:145[A]:VAL:HG13	2.18	0.44
52:AP:4:TYR:HD2	52:AP:147:GLU:OE2	2.01	0.44
62:AZ:41:ALA:HB2	62:AZ:77:TYR:HE1	1.81	0.44
62:AZ:70:PRO:HD3	62:AZ:115:LYS:HG2	1.98	0.44
73:Ak:12:LEU:HG	73:Ak:16:ARG:HH21	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:Ao:47:GLN:HE22	77:Ao:54:THR:H	1.65	0.44
81:EC:6849:A:H3'	81:EC:6850:C:C6	2.53	0.44
1:BA:119:ARG:HH12	3:BC:241:ASP:N	2.16	0.44
2:BB:176:VAL:C	2:BB:178:GLY:H	2.26	0.44
3:BC:238:SER:HB3	3:BC:241:ASP:H	1.82	0.44
4:BE:47:PHE:O	4:BE:51:ARG:HB2	2.17	0.44
5:BG:132:ARG:HH21	34:B5:165:G:N2	2.16	0.44
6:BH:151:LYS:HG3	6:BH:182:VAL:HG13	1.99	0.44
8:BJ:56:ALA:HA	8:BJ:59:LEU:HB3	1.99	0.44
8:BJ:92:LYS:HB2	8:BJ:95:TYR:CD2	2.53	0.44
16:Ba:75:VAL:HA	16:Ba:78:ALA:HB3	2.00	0.44
19:BD:23:GLU:O	19:BD:27:ARG:HG2	2.17	0.44
22:BP:125:PRO:HB3	25:BS:129:TRP:CH2	2.53	0.44
25:BS:57:ARG:CZ	28:BZ:40:VAL:HG21	2.48	0.44
25:BS:115:ARG:O	25:BS:119:ILE:HG12	2.18	0.44
34:B5:119:A:H5'	34:B5:120:PSU:OP2	2.17	0.44
34:B5:199:G:C2	34:B5:200:A:C5	3.05	0.44
34:B5:1350:U:H2'	34:B5:1351:G:H8	1.80	0.44
34:B5:1355:C:N3	34:B5:1368:G:N1	2.58	0.44
34:B5:1486:G:H2'	34:B5:1487:A:O4'	2.18	0.44
34:B5:1583:A:N6	34:B5:1612:U:OP2	2.42	0.44
35:AA:242:ARG:NH2	35:AA:243:THR:O	2.50	0.44
36:AB:332:ARG:HH22	38:A1:3377:G:H21	1.66	0.44
37:AC:303:GLY:H	38:A1:1347:U:H5"	1.82	0.44
38:A1:165:A:H2'	38:A1:165:A:OP2	2.17	0.44
38:A1:350:C:N3	38:A1:368:G:H5'	2.32	0.44
38:A1:1282:G:H5"	38:A1:1283:C:OP1	2.17	0.44
38:A1:1340:G:OP1	67:Ae:61:LYS:HE2	2.17	0.44
38:A1:1607:U:OP2	38:A1:1608:C:N4	2.30	0.44
38:A1:2533:G:H4'	69:Ag:113:LYS:HE3	2.00	0.44
38:A1:2564:G:H2'	38:A1:2565:U:H6	1.83	0.44
39:A3:46:A:OP1	41:AD:158:ARG:HB2	2.17	0.44
40:A4:51:G:C5	74:Al:26:TRP:HH2	2.36	0.44
40:A4:67:U:H5"	72:Aj:85:LYS:O	2.18	0.44
42:AE:154:LEU:HD11	49:AM:122:VAL:HG21	2.00	0.44
43:AF:176:TYR:HD2	43:AF:194:HIS:CG	2.35	0.44
44:AG:195:SER:C	44:AG:197:VAL:H	2.26	0.44
48:AL:126:PHE:O	70:Ah:114:ARG:NH2	2.51	0.44
49:AM:35:ILE:HA	49:AM:46:ILE:HG22	2.00	0.44
56:AT:75:ILE:O	56:AT:76:ILE:HD13	2.17	0.44
56:AT:144:GLU:N	56:AT:144:GLU:OE1	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:Ak:20:VAL:HG21	73:Ak:45:VAL:HG13	1.98	0.44
74:Al:2:ALA:C	74:Al:4:GLN:H	2.26	0.44
75:Am:78:ILE:CG2	75:Am:83:LYS:HD2	2.46	0.44
79:E:34:LEU:HD22	79:E:206:VAL:HG22	1.99	0.44
79:E:38:LEU:HD22	79:E:41:TYR:CG	2.52	0.44
80:DC:92:LYS:HD2	80:DC:93:THR:H	1.83	0.44
80:DC:128:VAL:HG22	80:DC:156:VAL:HB	1.99	0.44
80:DC:380:LEU:CB	80:DC:400:VAL:HA	2.47	0.44
80:DC:564:ARG:HD3	80:DC:564:ARG:HA	1.76	0.44
80:DC:636:PHE:O	80:DC:641:ASN:N	2.50	0.44
80:DC:658:GLU:OE2	80:DC:700:ARG:NH2	2.50	0.44
80:DC:718:LEU:HA	80:DC:722:PRO:HD3	2.00	0.44
1:BA:54:TRP:O	1:BA:58:VAL:HG23	2.18	0.44
1:BA:64:ILE:HG23	1:BA:73:VAL:HG21	2.00	0.44
4:BE:201:HIS:CE1	34:B5:799:A:H5"	2.52	0.44
8:BJ:78:ARG:HH12	8:BJ:82:ARG:HE	1.64	0.44
9:BL:46:LYS:O	9:BL:50:GLU:HG3	2.18	0.44
13:BW:24:GLN:NE2	17:Bb:5:GLN:O	2.49	0.44
15:BY:37:LYS:HE3	15:BY:93:ARG:HG2	2.00	0.44
15:BY:93:ARG:HH21	34:B5:526:A:P	2.41	0.44
21:BK:53:GLY:C	21:BK:55:VAL:H	2.25	0.44
23:BQ:22:VAL:HG22	23:BQ:65:ILE:CG1	2.48	0.44
34:B5:148:A:N6	34:B5:166:C:C2	2.85	0.44
34:B5:890:C:H2'	34:B5:891:A:C8	2.53	0.44
34:B5:890:C:H2'	34:B5:891:A:H8	1.81	0.44
34:B5:921:U:H2'	34:B5:922:G:H8	1.83	0.44
34:B5:1371:A:H3'	34:B5:1373:C:OP1	2.18	0.44
34:B5:1410:A:H2'	34:B5:1411:A:O4'	2.18	0.44
36:AB:108:GLU:HB2	36:AB:137:TYR:CE2	2.52	0.44
37:AC:31:ARG:HB2	37:AC:34:ILE:HG22	1.98	0.44
38:A1:337:G:H1	40:A4:26:U:H3	1.65	0.44
38:A1:422:A:N1	38:A1:2362:C:O2'	2.44	0.44
38:A1:986:PSU:H2'	38:A1:987:U:H6	1.79	0.44
38:A1:1109:U:H2'	38:A1:1110:PSU:O4'	2.18	0.44
38:A1:1235:U:H4'	38:A1:1239:C:H5	1.80	0.44
38:A1:1334:U:H2'	38:A1:1335:C:C6	2.53	0.44
38:A1:3027:A:C8	80:DC:785:ARG:HD2	2.52	0.44
38:A1:3392:U:H2'	38:A1:3393:U:C6	2.53	0.44
39:A3:71:G:H2'	39:A3:72:A:C8	2.53	0.44
39:A3:79:A:H2'	39:A3:80:G:O4'	2.17	0.44
39:A3:109:G:C4	39:A3:110:G:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:AD:90:HIS:HB2	41:AD:226:TYR:HE1	1.83	0.44
41:AD:204:VAL:O	41:AD:208:MET:HG2	2.18	0.44
50:AN:35:VAL:O	50:AN:64:VAL:HA	2.17	0.44
52:AP:19:GLY:C	52:AP:22:LEU:HD23	2.43	0.44
55:AS:24:LEU:O	55:AS:24:LEU:HD23	2.17	0.44
70:Ah:52:ALA:O	70:Ah:56:THR:OG1	2.33	0.44
75:Am:87:SER:HA	75:Am:91:CYS:HB3	1.99	0.44
80:DC:13:MET:HG3	80:DC:452:ASN:OD1	2.18	0.44
80:DC:495:VAL:CG2	80:DC:504:LEU:HD21	2.48	0.44
81:EC:6781:U:O2'	81:EC:6782:C:O5'	2.32	0.44
1:BA:125:ASP:HA	1:BA:126:PRO:HD3	1.86	0.44
1:BA:198:MET:HB3	24:BR:86:PRO:HG2	2.00	0.44
11:BO:81:VAL:HG12	11:BO:115:ILE:HG13	2.00	0.44
20:BF:101:GLY:HA2	34:B5:1166:A:H5"	1.98	0.44
21:BK:1:MET:HG3	21:BK:44:LYS:HE3	1.98	0.44
21:BK:6:GLU:HG3	21:BK:10:LYS:HZ3	1.82	0.44
22:BP:15:HIS:CE1	22:BP:110:GLU:HA	2.53	0.44
26:BT:25:GLN:HE21	26:BT:27:LYS:HE2	1.82	0.44
31:Bg:239:GLU:O	31:Bg:256:THR:HA	2.18	0.44
34:B5:103:A:O3'	34:B5:308:C:N4	2.51	0.44
34:B5:644:C:H2'	34:B5:645:C:H6	1.82	0.44
34:B5:775:G:O6	34:B5:785:U:C2	2.69	0.44
34:B5:1277:G:C5	34:B5:1278:G:C5	3.05	0.44
34:B5:1524:A:C6	34:B5:1525:A:N6	2.86	0.44
34:B5:1619:C:H2'	34:B5:1620:C:H6	1.83	0.44
37:AC:216:VAL:HG23	37:AC:227:THR:HG21	1.99	0.44
37:AC:257:LYS:O	37:AC:261:VAL:HG23	2.17	0.44
38:A1:47:C:H5"	48:AL:16:LYS:HG2	1.99	0.44
38:A1:197:G:H2'	38:A1:198:A:C8	2.52	0.44
38:A1:846:A:N7	38:A1:847:A:C8	2.85	0.44
38:A1:995:U:H1'	38:A1:2637:A:H5'	2.00	0.44
38:A1:2218:G:H2'	38:A1:2219:A:C8	2.50	0.44
38:A1:2930:A:H2'	38:A1:2931:C:C6	2.52	0.44
38:A1:3153:U:H4'	38:A1:3154:C:C4	2.53	0.44
38:A1:3267:A:H2'	42:AE:69:PHE:HE1	1.83	0.44
38:A1:3296:A:H2'	38:A1:3297:U:C6	2.53	0.44
41:AD:208:MET:HE1	41:AD:223:PHE:CE1	2.53	0.44
41:AD:211:LEU:HD12	41:AD:223:PHE:HE2	1.83	0.44
57:AU:36:TYR:CZ	57:AU:40:HIS:CD2	3.05	0.44
70:Ah:53:CYS:O	70:Ah:57:VAL:HG23	2.16	0.44
78:Ap:8:VAL:O	78:Ap:11:THR:OG1	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:E:65:ILE:HD12	79:E:152:ARG:HD3	1.99	0.44
80:DC:27:HIS:CD2	80:DC:28:VAL:H	2.36	0.44
80:DC:204:PRO:HG2	80:DC:245:TRP:CE2	2.53	0.44
80:DC:418:TYR:CE1	80:DC:426:LEU:HD22	2.53	0.44
81:EC:6862:G:H22	81:EC:6868:C:H2'	1.82	0.44
2:BB:193:ILE:H	2:BB:193:ILE:HD12	1.82	0.43
3:BC:84:LYS:HD3	3:BC:208:GLU:OE2	2.18	0.43
3:BC:235:LEU:HD11	12:BV:54:ALA:HB2	2.00	0.43
4:BE:59:ARG:NH2	34:B5:446:A:O5'	2.51	0.43
6:BH:142:TYR:CE2	6:BH:148:LYS:HE2	2.52	0.43
8:BJ:11:THR:HG22	34:B5:472:U:H5"	2.00	0.43
8:BJ:66:ASP:HB3	8:BJ:69:ARG:HB3	2.00	0.43
15:BY:92:VAL:HG11	15:BY:99:LYS:HE2	2.00	0.43
16:Ba:96:ALA:HB1	16:Ba:98:PRO:HD2	2.00	0.43
25:BS:57:ARG:HA	25:BS:57:ARG:HD3	1.82	0.43
25:BS:108:LYS:HA	25:BS:111:ASP:HB3	1.99	0.43
31:Bg:89:LEU:HD23	31:Bg:103:PHE:CD1	2.53	0.43
34:B5:255:U:C2	34:B5:256:A:C8	3.06	0.43
34:B5:1449:U:C2	34:B5:1450:U:C2	3.06	0.43
34:B5:1738:U:H2'	34:B5:1739:C:H6	1.82	0.43
35:AA:118:GLU:OE2	38:A1:2177:G:N2	2.48	0.43
38:A1:761:A:H2'	38:A1:762:U:C6	2.53	0.43
38:A1:879:U:H4'	52:AP:135:ARG:HH22	1.82	0.43
38:A1:1123:U:H2'	38:A1:1124:PSU:O4'	2.17	0.43
38:A1:1493:G:C4	74:Al:13:MET:HE2	2.53	0.43
38:A1:2769:A:O2'	77:Ao:80:ARG:O	2.35	0.43
39:A3:121:U:O3'	41:AD:268:GLU:HG2	2.17	0.43
40:A4:145:U:H2'	40:A4:146:U:C6	2.53	0.43
43:AF:118:LYS:HB2	43:AF:195:PHE:CE2	2.53	0.43
44:AG:171:LYS:NZ	44:AG:226:TYR:HB3	2.32	0.43
45:AH:7:GLU:OE1	45:AH:56:ALA:HB2	2.18	0.43
46:AI:177:ASP:CG	46:AI:179:PRO:HD2	2.43	0.43
52:AP:107:LEU:HD12	52:AP:152:GLU:CD	2.43	0.43
53:AQ:36:LEU:O	53:AQ:40:THR:OG1	2.36	0.43
58:AV:20:GLY:HA2	58:AV:35:TYR:CE1	2.52	0.43
60:AX:131:ASP:OD2	60:AX:133:LEU:HB2	2.18	0.43
61:AY:51:ARG:HD2	61:AY:115:ARG:HD2	1.99	0.43
63:Aa:90:TYR:CG	63:Aa:100:PRO:HG3	2.53	0.43
78:Ap:75:ALA:HA	78:Ap:78:THR:HG22	2.00	0.43
80:DC:120:ARG:HH11	80:DC:381:TYR:HE2	1.64	0.43
80:DC:369:ILE:HD13	80:DC:379:MET:SD	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6788:C:H5”	81:EC:6789:G:OP2	2.18	0.43
1:BA:13:ASP:HB3	24:BR:91:LEU:HD22	1.99	0.43
2:BB:39:GLU:HB2	2:BB:73:LEU:O	2.18	0.43
7:BI:56:ARG:HD3	7:BI:174:GLY:O	2.18	0.43
8:BJ:133:HIS:ND1	8:BJ:162:SER:HB2	2.33	0.43
11:BO:82:LYS:HD3	11:BO:116:GLU:OE2	2.17	0.43
19:BD:23:GLU:HG2	21:BK:61:TRP:CZ2	2.53	0.43
22:BP:57:MET:HE2	22:BP:57:MET:HB3	1.91	0.43
27:BU:69:LYS:HD3	30:Bd:44:ARG:CZ	2.48	0.43
28:BZ:66:VAL:HA	28:BZ:71:ILE:O	2.18	0.43
28:BZ:95:HIS:CB	28:BZ:98:GLN:HE21	2.29	0.43
33:BM:125:ASN:C	33:BM:127:GLY:HA2	2.43	0.43
34:B5:98:U:H2’	34:B5:99:C:C6	2.53	0.43
34:B5:179:A:C6	34:B5:180:A:C6	3.05	0.43
34:B5:467:G:O2’	34:B5:469:C:OP2	2.29	0.43
34:B5:735:C:O2’	34:B5:736:C:C5	2.71	0.43
34:B5:842:C:N4	34:B5:844:A:N7	2.66	0.43
34:B5:1087:A:H5’	34:B5:1298:U:O4	2.18	0.43
34:B5:1462:G:H2’	34:B5:1463:C:C6	2.54	0.43
34:B5:1469:A:H2’	34:B5:1470:C:C6	2.53	0.43
34:B5:1691:A:N6	34:B5:1712:A:H61	2.16	0.43
36:AB:160:VAL:HG11	36:AB:194:TRP:HZ3	1.83	0.43
38:A1:353:G:N7	72:Aj:55:ARG:HD2	2.32	0.43
38:A1:881:C:H2’	38:A1:882:A:H8	1.83	0.43
38:A1:1126:G:H5”	46:AI:119:TRP:HZ3	1.83	0.43
38:A1:1235:U:H4’	38:A1:1239:C:C5	2.52	0.43
38:A1:1304:A:N6	38:A1:2860:U:H5”	2.29	0.43
38:A1:1307:G:N3	51:AO:60[A]:LYS:NZ	2.54	0.43
38:A1:1694:U:O2’	38:A1:1695:U:H5’	2.18	0.43
38:A1:2285:C:OP2	38:A1:2286:U:O2’	2.24	0.43
38:A1:2416:PSU:H2’	38:A1:2417:U:C6	2.54	0.43
38:A1:3169:U:O2’	38:A1:3170:A:H2’	2.18	0.43
41:AD:254:LYS:HD3	41:AD:255:PRO:HD2	2.01	0.43
42:AE:171:PRO:HA	42:AE:174:LEU:HB2	1.99	0.43
43:AF:80:GLN:HB2	56:AT:135:PRO:HB2	1.99	0.43
47:AJ:138:VAL:HA	47:AJ:141:ARG:NH1	2.33	0.43
55:AS:94:ILE:HD11	55:AS:106:LEU:HD13	2.01	0.43
55:AS:115:ARG:O	55:AS:117:ARG:NH1	2.51	0.43
55:AS:143:PHE:CD2	55:AS:148:LEU:HD21	2.50	0.43
56:AT:47:SER:OG	56:AT:48:ILE:HD12	2.18	0.43
80:DC:150:ARG:HE	80:DC:197:LEU:CD1	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:725:GLN:HG3	80:DC:802:SER:C	2.42	0.43
1:BA:29:VAL:HG13	1:BA:149:LEU:HB3	1.99	0.43
1:BA:82:GLY:O	1:BA:86:VAL:HG12	2.18	0.43
2:BB:137:ILE:HG23	2:BB:172:LEU:HD13	2.01	0.43
5:BG:77:LEU:HD12	5:BG:95:LYS:HD3	2.01	0.43
11:BO:20:TYR:HE1	11:BO:86:THR:HA	1.83	0.43
11:BO:81:VAL:CG1	11:BO:115:ILE:HG13	2.48	0.43
19:BD:136:VAL:HG23	19:BD:152:PHE:HD2	1.83	0.43
22:BP:35:LYS:HD3	22:BP:35:LYS:C	2.42	0.43
27:BU:28:SER:HB3	27:BU:34:LEU:HB2	2.00	0.43
32:Bf:123:ASN:HB2	32:Bf:126:CYS:SG	2.58	0.43
34:B5:186:C:H2'	34:B5:187:G:O4'	2.18	0.43
34:B5:271:A:N1	34:B5:284:G:N2	2.67	0.43
34:B5:431:C:C2	34:B5:432:G:C8	3.07	0.43
34:B5:438:A:H1'	34:B5:465:G:H22	1.83	0.43
34:B5:478:A:C8	34:B5:511:A:N6	2.86	0.43
34:B5:851:U:N3	54:AR:176:ARG:HB2	2.33	0.43
34:B5:874:C:H2'	34:B5:875:G:C8	2.53	0.43
34:B5:1628:U:H2'	34:B5:1629:G:H8	1.83	0.43
37:AC:285:ASP:OD2	37:AC:288:ARG:HB2	2.18	0.43
38:A1:151:A:H5"	70:Ah:102:GLU:HB2	2.00	0.43
38:A1:230:U:H2'	38:A1:231:G:O4'	2.19	0.43
38:A1:539:C:H2'	38:A1:540:U:C6	2.53	0.43
38:A1:791:A:H2'	38:A1:792:G:C8	2.53	0.43
38:A1:837:A:OP1	78:Ap:5:THR:HG22	2.18	0.43
38:A1:1595:U:OP2	69:Ag:36:LYS:NZ	2.35	0.43
38:A1:1606:U:H5'	69:Ag:8:ARG:HH22	1.82	0.43
38:A1:1629:U:C2	62:AZ:115:LYS:HD2	2.52	0.43
38:A1:2911:A:H4'	38:A1:2912:G:C8	2.53	0.43
43:AF:76:TYR:CE2	43:AF:78:GLU:HA	2.53	0.43
46:AI:156:ARG:HG3	46:AI:163:GLN:HB2	2.00	0.43
49:AM:28:SER:HB3	49:AM:31:LYS:HB2	1.99	0.43
55:AS:140:VAL:O	55:AS:144:LEU:HD23	2.18	0.43
73:Ak:40:GLN:OE1	73:Ak:40:GLN:HA	2.17	0.43
74:Al:9:ILE:O	74:Al:13:MET:HG3	2.17	0.43
79:E:30:GLU:HB2	79:E:172:VAL:HG12	2.00	0.43
81:EC:6862:G:N1	81:EC:6868:C:H2'	2.32	0.43
1:BA:23:HIS:CE1	1:BA:24:LEU:HD12	2.53	0.43
1:BA:166:GLY:O	1:BA:170:ILE:HG22	2.18	0.43
3:BC:129:ILE:HG13	3:BC:130:ILE:N	2.33	0.43
5:BG:51:LYS:NZ	5:BG:114:VAL:HB	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:BJ:68:LYS:O	8:BJ:72:GLU:HG2	2.18	0.43
8:BJ:135:ALA:O	8:BJ:156:ILE:HD12	2.17	0.43
8:BJ:141:VAL:HG11	8:BJ:146:PHE:CD2	2.53	0.43
10:BN:15:ALA:O	34:B5:959:U:H5"	2.19	0.43
22:BP:100:LYS:HE3	34:B5:1183:A:N3	2.33	0.43
23:BQ:47:LYS:NZ	23:BQ:79:TYR:HE1	2.16	0.43
31:Bg:109:ASP:HB2	31:Bg:127:ARG:HD2	1.99	0.43
32:Bf:122:SER:N	32:Bf:148:TYR:OH	2.46	0.43
34:B5:150:U:H2'	34:B5:151:G:H8	1.83	0.43
34:B5:407:A:H2'	34:B5:408:C:H6	1.83	0.43
34:B5:563:U:H3'	34:B5:564:G:C8	2.53	0.43
34:B5:987:G:H1	35:AA:247:ARG:CD	2.31	0.43
34:B5:1172:G:C6	34:B5:1173:C:C4	3.07	0.43
34:B5:1429:G:C5	34:B5:1430:U:C4	3.06	0.43
34:B5:1657:U:O4	38:A1:2330:C:H1'	2.18	0.43
37:AC:92:ASN:HA	37:AC:98:ARG:O	2.19	0.43
37:AC:164:GLU:N	37:AC:164:GLU:OE1	2.51	0.43
38:A1:167:U:H2'	38:A1:168:U:C6	2.53	0.43
38:A1:296:A:H2'	38:A1:297:G:C4	2.54	0.43
38:A1:402:A:C5	52:AP:21:TYR:CE2	3.07	0.43
38:A1:551:A:HO2'	38:A1:552:G:P	2.37	0.43
38:A1:887:G:H2'	38:A1:888:A:C8	2.53	0.43
38:A1:946:U:H2'	38:A1:947:G:H8	1.83	0.43
38:A1:1001:G:O2'	38:A1:1041:U:OP2	2.26	0.43
38:A1:1838:G:H5"	38:A1:1839:A:O5'	2.18	0.43
38:A1:1929:G:H4'	38:A1:2321:A:H5"	2.00	0.43
38:A1:2203:U:H2'	38:A1:2204:C:H6	1.82	0.43
38:A1:2473:C:H2'	38:A1:2474:G:H21	1.82	0.43
38:A1:2505:U:N3	38:A1:2506:U:C5	2.87	0.43
38:A1:3243:A:C4	51:AO:156[A]:LEU:HD23	2.54	0.43
39:A3:29:C:O2'	39:A3:51:A:N1	2.44	0.43
39:A3:34:C:H2'	39:A3:35:C:H6	1.84	0.43
40:A4:146:U:H2'	40:A4:147:U:C6	2.53	0.43
48:AL:106:GLN:HB2	71:Ai:18:THR:HG23	1.99	0.43
48:AL:153:ASP:OD1	48:AL:153:ASP:N	2.50	0.43
49:AM:68:LEU:HD11	49:AM:94:TRP:HB2	2.00	0.43
51:AO:74[A]:ARG:HG3	51:AO:145[A]:VAL:HG23	1.99	0.43
54:AR:119:LEU:HA	54:AR:122:VAL:HG12	2.01	0.43
58:AV:117:PRO:HA	58:AV:135:VAL:HG13	2.00	0.43
62:AZ:26:VAL:N	62:AZ:42:LEU:O	2.52	0.43
71:Ai:57:LEU:HD21	71:Ai:73:ALA:HB2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:Ap:51:ALA:HB3	78:Ap:54:ILE:HD12	2.00	0.43
78:Ap:60:CYS:O	78:Ap:62:LYS:HG2	2.18	0.43
79:E:105:LYS:HG3	79:E:106:LYS:HZ2	1.84	0.43
80:DC:281:ILE:HG13	80:DC:282:PHE:N	2.34	0.43
80:DC:508:LEU:HD23	80:DC:530:VAL:HG13	2.00	0.43
2:BB:48:VAL:HG13	2:BB:49:ASN:H	1.84	0.43
2:BB:84:ILE:HD11	2:BB:100:PHE:CE1	2.52	0.43
5:BG:71:THR:OG1	5:BG:72:ARG:N	2.52	0.43
6:BH:5:GLN:H	6:BH:5:GLN:CD	2.27	0.43
10:BN:85:PRO:HG2	10:BN:129:TYR:CE2	2.53	0.43
15:BY:56:SER:N	15:BY:74:LEU:O	2.48	0.43
16:Ba:94:ASN:OD1	16:Ba:95:ARG:N	2.52	0.43
17:Bb:62:ILE:H	17:Bb:62:ILE:HD12	1.84	0.43
22:BP:52:LYS:HG2	22:BP:53:PRO:HD3	1.99	0.43
23:BQ:36:ILE:HG23	23:BQ:49:TYR:CE1	2.53	0.43
25:BS:29:VAL:HG13	25:BS:44:ASN:HA	2.00	0.43
25:BS:36:LYS:NZ	34:B5:1568:C:OP1	2.51	0.43
34:B5:691:C:H2'	34:B5:692:C:C6	2.53	0.43
34:B5:765:G:H21	34:B5:768:C:H4'	1.83	0.43
34:B5:1050:G:H2'	34:B5:1051:G:C8	2.53	0.43
34:B5:1260:U:H2'	34:B5:1261:G:H8	1.83	0.43
34:B5:1340:U:H4'	34:B5:1341:A:H5"	2.01	0.43
34:B5:1498:G:H2'	34:B5:1499:G:C8	2.52	0.43
34:B5:1556:A:H1'	34:B5:1560:U:OP2	2.19	0.43
34:B5:1778:G:N2	34:B5:1784:C:C2	2.86	0.43
36:AB:85:VAL:O	36:AB:162:VAL:HA	2.19	0.43
37:AC:104:LYS:HE2	37:AC:106:TRP:CH2	2.54	0.43
38:A1:26:A:C4	38:A1:330:G:C8	3.07	0.43
38:A1:269:G:C5'	50:AN:14:LYS:HE2	2.44	0.43
38:A1:320:G:H2'	38:A1:321:C:H6	1.82	0.43
38:A1:671:U:H2'	38:A1:672:A:C8	2.54	0.43
38:A1:1323:G:H4'	55:AS:2:ALA:HB2	2.01	0.43
38:A1:1404:G:N2	38:A1:1407:A:OP2	2.49	0.43
38:A1:1925:U:O2'	38:A1:1927:G:N7	2.52	0.43
38:A1:2160:G:H2'	38:A1:2161:G:C8	2.53	0.43
38:A1:2160:G:C2	38:A1:2161:G:C5	3.06	0.43
38:A1:2383:C:N4	51:AO:91[A]:LYS:HG2	2.33	0.43
38:A1:2511:A:H2'	38:A1:2512:C:C6	2.54	0.43
38:A1:2948:C:H2'	38:A1:2949:U:C6	2.51	0.43
38:A1:3374:U:H2'	38:A1:3378:C:N4	2.34	0.43
39:A3:22:A:H3'	39:A3:23:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:A4:53:A:C4	40:A4:54:A:C8	3.06	0.43
40:A4:71:A:H4'	40:A4:72:A:O5'	2.18	0.43
40:A4:143:U:H2'	40:A4:144:G:C8	2.52	0.43
41:AD:159:VAL:HG23	41:AD:160:PHE:HD1	1.84	0.43
41:AD:200:PHE:HB3	41:AD:237:GLU:HA	1.99	0.43
43:AF:124:LEU:HA	43:AF:124:LEU:HD23	1.78	0.43
43:AF:139:PRO:HB2	43:AF:144:ILE:CG2	2.49	0.43
43:AF:143:THR:HG21	43:AF:237:ASN:HA	2.01	0.43
44:AG:159:PRO:HG2	44:AG:162:LEU:CD1	2.48	0.43
44:AG:185:ARG:HA	44:AG:188:THR:HG22	2.00	0.43
47:AJ:9:MET:O	47:AJ:134:PRO:HG2	2.19	0.43
47:AJ:35:LYS:O	47:AJ:39:GLN:OE1	2.37	0.43
48:AL:85:LEU:HD13	48:AL:93:ILE:HD11	1.99	0.43
51:AO:88[A]:VAL:O	51:AO:90[A]:HIS:N	2.52	0.43
51:AO:174[A]:PHE:HA	51:AO:177[A]:LYS:HG2	2.00	0.43
61:AY:51:ARG:O	61:AY:70:ILE:HG21	2.18	0.43
70:Ah:6:ALA:HB2	70:Ah:53:CYS:SG	2.59	0.43
79:E:169:VAL:O	79:E:182:GLN:NE2	2.50	0.43
80:DC:636:PHE:O	80:DC:642:GLY:N	2.51	0.43
80:DC:780:PHE:O	80:DC:783:GLU:N	2.52	0.43
80:DC:791:GLN:O	80:DC:791:GLN:HG2	2.18	0.43
81:EC:6771:U:H5"	81:EC:6823:U:O2	2.18	0.43
4:BE:187:ARG:CZ	34:B5:752:A:H3'	2.48	0.43
4:BE:254:ARG:HG3	4:BE:255:ARG:N	2.33	0.43
7:BI:168:CYS:HB2	7:BI:184:LEU:HD21	1.99	0.43
18:Be:2:ALA:N	34:B5:1754:A:N3	2.67	0.43
21:BK:14:TYR:HA	21:BK:17:GLN:HG3	2.00	0.43
23:BQ:21:HIS:CE1	23:BQ:68:ARG:HH22	2.35	0.43
26:BT:86:ARG:HD2	26:BT:92:LYS:HB2	2.00	0.43
27:BU:63:LEU:O	27:BU:83:GLU:HA	2.18	0.43
34:B5:28:A:H2'	34:B5:29:U:O4'	2.19	0.43
34:B5:43:A:C6	34:B5:378:A:C6	3.07	0.43
34:B5:350:U:H5"	34:B5:351:C:H3'	1.99	0.43
34:B5:386:G:H2'	34:B5:387:A:C8	2.54	0.43
34:B5:586:G:H2'	34:B5:587:C:H6	1.84	0.43
34:B5:1434:U:H2'	34:B5:1436:A:H5"	2.01	0.43
34:B5:1443:U:O3'	34:B5:1444:A:H8	2.02	0.43
34:B5:1529:C:H2'	34:B5:1530:C:C6	2.53	0.43
34:B5:1649:G:H2'	34:B5:1650:U:H6	1.82	0.43
36:AB:27:ALA:HB2	36:AB:220:VAL:HG23	2.00	0.43
37:AC:9:HIS:HE1	37:AC:146:PRO:HG2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:178:LEU:HD23	37:AC:178:LEU:HA	1.87	0.43
38:A1:101:G:H2'	38:A1:102:C:O4'	2.18	0.43
38:A1:415:G:H2'	38:A1:416:A:C8	2.52	0.43
38:A1:871:U:H2'	38:A1:872:U:C6	2.54	0.43
38:A1:1640:G:O2'	38:A1:1641:U:H5'	2.18	0.43
38:A1:2101:C:O2'	38:A1:2102:U:H5"	2.18	0.43
38:A1:2651:G:H5"	38:A1:2652:U:O4'	2.19	0.43
38:A1:3092:C:H2'	58:AV:12:ARG:HH22	1.84	0.43
38:A1:3147:G:H2'	38:A1:3148:U:C6	2.54	0.43
38:A1:3269:U:O4	42:AE:131:LYS:HD3	2.18	0.43
39:A3:96:U:OP1	55:AS:43:TYR:OH	2.29	0.43
39:A3:119:U:H2'	39:A3:120:C:H6	1.81	0.43
40:A4:103:G:OP1	40:A4:110:C:N4	2.49	0.43
42:AE:170:LYS:CE	68:Af:34:GLY:HA3	2.48	0.43
43:AF:235:PHE:N	43:AF:235:PHE:CD1	2.86	0.43
44:AG:162:LEU:HD11	50:AN:45:PRO:HG2	2.01	0.43
46:AI:140:CYS:SG	46:AI:144:ASN:HB3	2.59	0.43
47:AJ:19:LEU:HD13	47:AJ:19:LEU:HA	1.90	0.43
47:AJ:87:LYS:HD3	47:AJ:87:LYS:HA	1.84	0.43
50:AN:114:ARG:NH1	50:AN:137:PRO:HG3	2.34	0.43
51:AO:12[A]:LYS:HA	51:AO:40[A]:GLU:HG3	2.01	0.43
53:AQ:107:THR:HG22	53:AQ:109:GLY:N	2.34	0.43
54:AR:52:LYS:HB3	54:AR:52:LYS:HE3	1.71	0.43
55:AS:24:LEU:HD13	56:AT:146:ASN:OD1	2.18	0.43
55:AS:132:THR:OG1	55:AS:133:ALA:N	2.51	0.43
63:Aa:86:LYS:HE2	63:Aa:86:LYS:HB2	1.89	0.43
70:Ah:6:ALA:HA	70:Ah:9:LEU:HB2	2.00	0.43
79:E:14:LYS:HD3	79:E:17:LEU:HD21	2.01	0.43
80:DC:288:ILE:HA	80:DC:296:ILE:HD11	2.00	0.43
80:DC:510:ARG:HG2	80:DC:549:HIS:CD2	2.52	0.43
81:EC:6791:A:H8	81:EC:6793:A:N3	2.17	0.43
3:BC:88:LYS:HD2	3:BC:95:ARG:HH21	1.83	0.43
4:BE:196:VAL:CG2	4:BE:211:LYS:HG3	2.49	0.43
8:BJ:150:LEU:HA	8:BJ:153:GLU:OE2	2.19	0.43
20:BF:47:SER:O	20:BF:128:ASN:ND2	2.51	0.43
20:BF:63:GLN:NE2	20:BF:66:GLN:HB2	2.33	0.43
20:BF:80:LYS:NZ	34:B5:1405:G:H5"	2.34	0.43
24:BR:18:GLU:HA	24:BR:71:PHE:HB3	2.01	0.43
25:BS:62:THR:N	25:BS:65:GLU:OE2	2.45	0.43
34:B5:151:G:H2'	34:B5:152:U:H6	1.84	0.43
34:B5:488:G:C6	34:B5:500:C:H5	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1466:G:H2'	34:B5:1467:C:C6	2.54	0.43
34:B5:1509:C:H2'	34:B5:1510:U:O4'	2.18	0.43
35:AA:110:GLY:N	35:AA:136:ILE:O	2.36	0.43
36:AB:191:LYS:HB2	36:AB:191:LYS:HE3	1.82	0.43
38:A1:439:C:N4	38:A1:619:A:N1	2.67	0.43
38:A1:561:C:H2'	38:A1:562:C:H6	1.84	0.43
38:A1:568:G:H2'	38:A1:569:A:O4'	2.18	0.43
38:A1:1423:C:O2'	42:AE:5:LYS:HE2	2.18	0.43
38:A1:2743:A:H2'	38:A1:2744:U:C6	2.53	0.43
38:A1:2927:C:H2'	38:A1:2928:C:H6	1.83	0.43
40:A4:11:C:C2	40:A4:12:A:C8	3.07	0.43
40:A4:104:A:OP2	40:A4:105:A:H2'	2.19	0.43
41:AD:224:LYS:HE3	41:AD:224:LYS:HB3	1.84	0.43
42:AE:7:PRO:HD3	67:Ae:74:PHE:CE1	2.53	0.43
42:AE:51:ARG:HD3	42:AE:158:TYR:CE2	2.54	0.43
43:AF:155:LYS:HB2	43:AF:203:TRP:HE3	1.84	0.43
45:AH:138:THR:HG22	45:AH:139:ASN:N	2.34	0.43
45:AH:146:LEU:HB3	45:AH:154:VAL:HG23	2.00	0.43
48:AL:185:LYS:HG3	48:AL:188:ARG:NH2	2.33	0.43
54:AR:181:ARG:NH1	54:AR:182:ASP:HB2	2.34	0.43
55:AS:152:LEU:HD23	55:AS:152:LEU:HA	1.90	0.43
58:AV:45:ARG:HH12	58:AV:46:LEU:HB3	1.84	0.43
62:AZ:88:ASP:OD1	62:AZ:90:GLU:HG2	2.18	0.43
63:Aa:117:ARG:HD3	63:Aa:117:ARG:HA	1.84	0.43
71:Ai:85:ALA:HA	71:Ai:88:GLU:OE2	2.19	0.43
79:E:41:TYR:HD2	79:E:200:ASN:HB2	1.84	0.43
80:DC:4:PHE:HB2	80:DC:8:GLN:OE1	2.19	0.43
80:DC:319:LEU:HG	80:DC:323:VAL:HB	2.00	0.43
80:DC:736:PRO:HG3	80:DC:791:GLN:CB	2.48	0.43
81:EC:6790:A:H2	81:EC:6800:G:N7	2.15	0.43
1:BA:60:ALA:O	1:BA:64:ILE:HD12	2.18	0.43
3:BC:69:ILE:HG13	3:BC:133:LYS:O	2.19	0.43
3:BC:212:LYS:NZ	34:B5:1298:U:O3'	2.51	0.43
6:BH:5:GLN:O	6:BH:8:ILE:HG22	2.19	0.43
6:BH:164:TYR:CZ	6:BH:165:LYS:HG3	2.54	0.43
20:BF:49:GLU:O	20:BF:50:GLU:HG3	2.18	0.43
20:BF:72:HIS:ND1	23:BQ:79:TYR:OH	2.47	0.43
21:BK:59:PHE:CZ	21:BK:62:GLN:HA	2.54	0.43
31:Bg:133:VAL:HG11	31:Bg:183:LEU:HD11	2.01	0.43
34:B5:236:A:H2'	34:B5:237:C:H5'	1.99	0.43
34:B5:327:U:H2'	34:B5:328:A:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:329:G:H2'	34:B5:330:G:C8	2.54	0.43
34:B5:480:G:C5	34:B5:509:G:C6	3.07	0.43
34:B5:1198:G:OP1	34:B5:1199:G:O2'	2.23	0.43
34:B5:1543:A:C8	34:B5:1569:A:N6	2.87	0.43
36:AB:247:ARG:NH1	38:A1:2341:A:OP2	2.47	0.43
37:AC:140:HIS:CD2	37:AC:247:PHE:H	2.36	0.43
38:A1:574:U:H2'	38:A1:575:G:O4'	2.19	0.43
38:A1:999:G:N3	38:A1:1002:A:N6	2.66	0.43
38:A1:1170:A:H2'	38:A1:1171:G:O4'	2.19	0.43
38:A1:1339:C:H2'	38:A1:1340:G:C8	2.54	0.43
38:A1:1374:G:H2'	38:A1:1375:G:O4'	2.19	0.43
38:A1:2673:A:H4'	47:AJ:103:GLY:C	2.43	0.43
38:A1:3203:U:C2	38:A1:3204:C:C5	3.07	0.43
38:A1:3290:G:C4	38:A1:3291:G:C8	3.07	0.43
39:A3:48:U:OP2	41:AD:94:ASN:HB3	2.18	0.43
43:AF:82:LYS:O	43:AF:119:VAL:HG12	2.18	0.43
45:AH:27:VAL:HG23	45:AH:82:VAL:HG21	2.01	0.43
50:AN:27:VAL:HG21	50:AN:124:ASP:HB3	2.01	0.43
52:AP:128:ARG:CD	52:AP:136:ILE:HG23	2.48	0.43
56:AT:68:THR:CG2	56:AT:69:LYS:H	2.25	0.43
57:AU:15:PHE:HD2	57:AU:71:PHE:CE2	2.36	0.43
60:AX:59:SER:HB3	60:AX:101:GLU:OE2	2.19	0.43
62:AZ:54:THR:HG22	62:AZ:57:HIS:NE2	2.34	0.43
69:Ag:44:CYS:HB2	69:Ag:81:CYS:HB3	2.00	0.43
76:An:25:LYS:HD3	76:An:25:LYS:HA	1.84	0.43
79:E:122:ARG:HG2	81:EC:6771:U:OP1	2.19	0.43
79:E:130:LYS:HG3	81:EC:6774:U:O4'	2.18	0.43
79:E:152:ARG:HD2	79:E:152:ARG:HA	1.82	0.43
80:DC:6:VAL:O	80:DC:10:ARG:N	2.49	0.43
80:DC:564:ARG:HG2	80:DC:801:TRP:CZ3	2.54	0.43
80:DC:626:ASP:N	80:DC:626:ASP:OD1	2.51	0.43
80:DC:680:GLU:HG2	80:DC:681:MET:O	2.18	0.43
5:BG:215:ARG:O	5:BG:218:GLU:HG2	2.19	0.43
6:BH:79:ARG:O	6:BH:82:GLU:HG2	2.17	0.43
7:BI:107:THR:O	7:BI:110:ARG:N	2.51	0.43
10:BN:6:SER:OG	10:BN:7:ALA:N	2.52	0.43
12:BV:76:ASP:HB3	12:BV:78:LEU:HG	2.01	0.43
14:BX:53:VAL:O	14:BX:99:ASN:HA	2.19	0.43
14:BX:127:VAL:HB	14:BX:142:LYS:NZ	2.34	0.43
19:BD:138:VAL:O	19:BD:149:ALA:HA	2.19	0.43
20:BF:161:ASP:OD1	29:Bc:42:ARG:NH2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:BK:73:VAL:HG12	21:BK:77:ARG:HH11	1.84	0.43
33:BM:63:VAL:HG21	33:BM:94:ALA:N	2.34	0.43
34:B5:174:U:H2'	34:B5:175:G:C8	2.54	0.43
34:B5:845:G:H1'	34:B5:846:G:C5	2.54	0.43
34:B5:1701:A:H4'	34:B5:1703:C:C6	2.54	0.43
34:B5:1781:MA6:H8	34:B5:1781:MA6:O5'	2.19	0.43
35:AA:20:THR:HG22	35:AA:23:ARG:NE	2.33	0.43
38:A1:432:G:H5"	68:Af:57:LYS:HE3	2.00	0.43
38:A1:594:U:H2'	38:A1:609:G:O6	2.19	0.43
38:A1:1185:C:OP1	49:AM:59:ASN:ND2	2.50	0.43
38:A1:1639:C:P	69:Ag:74:ARG:HH22	2.41	0.43
38:A1:2298:U:O2'	38:A1:2299:A:H5'	2.19	0.43
38:A1:2692:A:H8	38:A1:2692:A:O5'	2.02	0.43
38:A1:2696:A:H2'	38:A1:2697:A:C8	2.54	0.43
38:A1:3073:A:H2'	38:A1:3074:G:O4'	2.18	0.43
42:AE:18:LEU:HD23	42:AE:18:LEU:HA	1.86	0.43
47:AJ:110:ILE:HD12	47:AJ:122:ILE:HA	2.01	0.43
48:AL:42:ARG:HH11	48:AL:51:LEU:HD12	1.84	0.43
51:AO:47[A]:PHE:HD1	51:AO:136[A]:THR:HG23	1.82	0.43
53:AQ:90:ASP:OD2	53:AQ:92:ARG:NH2	2.51	0.43
65:Ac:41:LEU:HD23	65:Ac:92:ILE:HD12	2.01	0.43
79:E:26:ARG:HA	79:E:26:ARG:NH1	2.34	0.43
80:DC:28:VAL:HG13	80:DC:108:HIS:NE2	2.34	0.43
80:DC:269:LEU:HD23	80:DC:269:LEU:HA	1.90	0.43
80:DC:348:ALA:O	80:DC:352:ARG:HB2	2.18	0.43
80:DC:524:GLU:N	80:DC:524:GLU:OE1	2.51	0.43
3:BC:82:ASN:H	3:BC:101:VAL:HG23	1.84	0.43
9:BL:24:LYS:HD3	9:BL:24:LYS:HA	1.86	0.43
19:BD:119:ALA:HB1	19:BD:136:VAL:HG21	2.00	0.43
19:BD:191:ASP:HB3	19:BD:194:LYS:HG2	2.01	0.43
24:BR:28:PHE:HA	24:BR:55:THR:HG21	2.01	0.43
27:BU:84:MET:HE1	30:Bd:53:ASN:H	1.82	0.43
27:BU:84:MET:HE3	30:Bd:52:PHE:HA	2.00	0.43
29:Bc:9:LEU:HB3	29:Bc:33:LEU:HD13	2.00	0.43
31:Bg:175:ASP:OD2	31:Bg:179:LYS:NZ	2.52	0.43
34:B5:276:C:HO2'	34:B5:277:U:H2'	1.84	0.43
34:B5:542:A:H4'	34:B5:543:C:H5"	2.01	0.43
34:B5:610:G:H2'	34:B5:610:G:N3	2.34	0.43
34:B5:774:A:C4	34:B5:787:G:C2	3.06	0.43
34:B5:819:G:C6	34:B5:853:G:C5	3.07	0.43
34:B5:1080:U:H2'	34:B5:1081:A:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1203:A:H61	34:B5:1553:G:H1'	1.84	0.43
34:B5:1373:C:H2'	34:B5:1374:C:H6	1.84	0.43
34:B5:1592:A:H2'	34:B5:1593:A:H8	1.84	0.43
38:A1:207:U:H2'	38:A1:208:C:H6	1.84	0.43
38:A1:1324:U:H2'	38:A1:1325:U:O4'	2.19	0.43
38:A1:1544:G:OP1	50:AN:127:TYR:OH	2.29	0.43
38:A1:1604:G:H4'	38:A1:1835:A:H4'	1.99	0.43
38:A1:1782:U:H2'	38:A1:1783:U:O4'	2.19	0.43
38:A1:1942:U:OP2	54:AR:74:ARG:NE	2.41	0.43
38:A1:2144:A:H1'	38:A1:2281:A:N6	2.34	0.43
38:A1:2486:A:H5"	79:E:105:LYS:NZ	2.33	0.43
38:A1:2498:U:H2'	38:A1:2499:U:C6	2.54	0.43
38:A1:2547:A:H2'	38:A1:2548:C:O4'	2.19	0.43
38:A1:2720:G:OP1	53:AQ:180:ARG:NH1	2.51	0.43
38:A1:2722:U:H2'	38:A1:2723:U:H6	1.83	0.43
38:A1:2812:C:H2'	38:A1:2813:A:H8	1.83	0.43
38:A1:3225:C:N4	38:A1:3226:A:H62	2.17	0.43
38:A1:3273:A:OP1	42:AE:79:VAL:HG23	2.19	0.43
38:A1:3284:G:H2'	38:A1:3285:C:C6	2.54	0.43
38:A1:3334:U:H4'	38:A1:3335:A:H5'	2.01	0.43
40:A4:13:A:O2'	52:AP:120:ASN:HB3	2.18	0.43
44:AG:112:GLU:O	44:AG:116:VAL:HG23	2.18	0.43
53:AQ:151:ARG:O	53:AQ:161:LYS:HD2	2.19	0.43
58:AV:17:LEU:HB2	58:AV:52:ALA:HB3	2.01	0.43
58:AV:37:ILE:HD11	58:AV:61:THR:HG23	2.01	0.43
63:Aa:116:GLY:HA3	63:Aa:137:LYS:NZ	2.33	0.43
78:Ap:49:ARG:HB2	78:Ap:55:TRP:CH2	2.54	0.43
79:E:130:LYS:C	79:E:132:GLY:H	2.25	0.43
80:DC:127:VAL:HG23	80:DC:155:VAL:HA	2.00	0.43
80:DC:562:ALA:N	85:DC:903:SO1:O19	2.39	0.43
80:DC:572:SER:OG	80:DC:573:GLN:N	2.51	0.43
80:DC:639:ASP:HB3	80:DC:641:ASN:ND2	2.34	0.43
81:EC:6801:A:H8	81:EC:6882:G:H8	1.67	0.43
2:BB:156:ALA:HB3	2:BB:161:ILE:HD11	2.00	0.42
5:BG:171:LYS:HE3	5:BG:171:LYS:HB3	1.88	0.42
16:Ba:93:LYS:HB3	16:Ba:93:LYS:HE2	1.68	0.42
20:BF:166:ARG:NH2	34:B5:1163:A:O3'	2.52	0.42
24:BR:14:LYS:NZ	24:BR:69:ILE:HD11	2.34	0.42
25:BS:62:THR:HG22	25:BS:65:GLU:CD	2.43	0.42
34:B5:30:G:H2'	34:B5:31:C:C6	2.54	0.42
34:B5:78:A:H2'	34:B5:79:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:202:A:H2'	34:B5:203:U:O4'	2.19	0.42
34:B5:978:A:H2'	34:B5:979:A:O4'	2.19	0.42
34:B5:1352:G:H2'	34:B5:1354:G:H8	1.84	0.42
34:B5:1475:A:C6	34:B5:1476:C:C4	3.06	0.42
36:AB:325:LYS:HD2	36:AB:326:GLY:N	2.34	0.42
38:A1:76:G:O2'	48:AL:98:ASP:OD2	2.37	0.42
38:A1:290:G:H2'	38:A1:291:C:C6	2.54	0.42
38:A1:559:A:N6	38:A1:560:G:N3	2.66	0.42
38:A1:721:G:C2	38:A1:722:G:C8	3.07	0.42
38:A1:901:G:OP1	72:Aj:13:ASN:ND2	2.52	0.42
38:A1:904:A:H5'	38:A1:1536:G:O2'	2.19	0.42
38:A1:947:G:H5"	67:Ae:55:ILE:HB	2.01	0.42
38:A1:1254:C:H2'	38:A1:1255:C:C2	2.54	0.42
38:A1:1836:C:H41	74:Al:3:ALA:HB2	1.84	0.42
38:A1:2133:PSU:O2	38:A1:2147:A:H2	2.01	0.42
38:A1:2597:U:H2'	38:A1:2598:G:H8	1.83	0.42
38:A1:2676:A:H5'	38:A1:2677:G:C5	2.54	0.42
38:A1:2756:C:H1'	56:AT:8:ARG:HH22	1.83	0.42
39:A3:22:A:H3'	39:A3:23:A:H8	1.84	0.42
40:A4:138:A:H2'	40:A4:139:U:H6	1.84	0.42
41:AD:144:VAL:HG11	41:AD:171:LEU:HD21	2.00	0.42
44:AG:238:LEU:HD23	44:AG:242:ALA:HB1	2.01	0.42
45:AH:86:TYR:CE2	45:AH:151:VAL:HB	2.54	0.42
46:AI:26:VAL:HG12	46:AI:27:PRO:O	2.19	0.42
58:AV:54:LEU:N	58:AV:81:GLN:HE21	2.17	0.42
60:AX:61:LYS:HE3	60:AX:61:LYS:HB3	1.83	0.42
74:Al:28:ARG:NH1	74:Al:28:ARG:HB3	2.34	0.42
78:Ap:38:ASP:OD1	78:Ap:45:LYS:NZ	2.35	0.42
80:DC:281:ILE:O	80:DC:285:PHE:HD1	2.02	0.42
80:DC:563:TYR:HD2	80:DC:677:PHE:CE2	2.37	0.42
80:DC:588:LEU:HA	80:DC:687:ASN:O	2.19	0.42
80:DC:733:ILE:HD13	80:DC:795:GLN:O	2.18	0.42
80:DC:735:CYS:O	80:DC:765:LEU:HA	2.19	0.42
80:DC:739:ALA:O	80:DC:743:ILE:N	2.40	0.42
2:BB:24:PHE:CZ	11:BO:39:ILE:HG23	2.54	0.42
5:BG:6:SER:OG	5:BG:112:VAL:HG22	2.19	0.42
5:BG:10:ASN:HB2	5:BG:128:THR:HA	2.01	0.42
5:BG:77:LEU:HB3	5:BG:81:VAL:HG21	2.01	0.42
5:BG:200:ALA:O	5:BG:203:GLU:HG3	2.19	0.42
9:BL:60:PHE:HE2	9:BL:115:PHE:CZ	2.37	0.42
9:BL:153:PHE:HA	10:BN:137:PRO:HG2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BO:123:SER:O	11:BO:124:ASP:CG	2.62	0.42
13:BW:44:HIS:CG	13:BW:101:TYR:HE2	2.37	0.42
15:BY:81:GLU:O	15:BY:84:LYS:HG2	2.19	0.42
16:Ba:89:ARG:NH1	34:B5:1089:U:OP1	2.52	0.42
18:Be:30:PRO:HB2	18:Be:38:LEU:HD23	2.00	0.42
24:BR:16:LEU:HD11	24:BR:38:ILE:CD1	2.50	0.42
24:BR:117:LEU:HD12	24:BR:118:PRO:HD2	2.02	0.42
26:BT:79:LEU:HD13	34:B5:1523:G:H1'	2.01	0.42
31:Bg:20:VAL:HA	31:Bg:37:SER:HA	2.00	0.42
34:B5:898:A:C2	34:B5:915:A:C5	3.07	0.42
34:B5:1260:U:H2'	34:B5:1261:G:C8	2.55	0.42
34:B5:1310:U:H2'	34:B5:1311:U:C6	2.54	0.42
34:B5:1382:A:O2'	34:B5:1383:G:H8	2.01	0.42
35:AA:114:SER:OG	35:AA:167:GLY:O	2.37	0.42
37:AC:23:PRO:HD2	37:AC:26:PHE:CD2	2.54	0.42
37:AC:156:LEU:HD12	37:AC:159:ILE:HD12	2.01	0.42
38:A1:44:U:O2'	77:Ao:46:LYS:HE3	2.19	0.42
38:A1:209:A:O2'	38:A1:211:A:OP2	2.32	0.42
38:A1:682:U:H5"	38:A1:683:U:H5	1.84	0.42
38:A1:1323:G:O2'	55:AS:2:ALA:HB3	2.18	0.42
38:A1:1393:A:H2'	38:A1:1394:A:O4'	2.19	0.42
38:A1:1424:C:H2'	38:A1:1425:U:O4'	2.19	0.42
38:A1:1615:C:H2'	38:A1:1616:U:H6	1.83	0.42
38:A1:2786:G:H5"	77:Ao:38:GLN:HB2	2.01	0.42
38:A1:2830:G:H2'	38:A1:2831:G:C8	2.54	0.42
38:A1:2900:A:H4'	45:AH:174:LYS:HD3	2.00	0.42
41:AD:182:GLY:HA2	41:AD:194:LEU:HD23	2.01	0.42
43:AF:208:SER:OG	43:AF:209:ASN:N	2.53	0.42
45:AH:93:VAL:HG22	75:Am:82:LEU:HB3	2.00	0.42
46:AI:87:LEU:HB3	46:AI:138:VAL:HG12	2.01	0.42
47:AJ:82:ARG:HH11	47:AJ:85:LYS:NZ	2.17	0.42
52:AP:175:ARG:O	52:AP:179:GLN:HG2	2.20	0.42
73:Ak:11:PHE:O	73:Ak:15:THR:HG23	2.18	0.42
79:E:155:ILE:HG21	79:E:169:VAL:HG12	2.01	0.42
80:DC:211:PHE:HB2	80:DC:220:PHE:CE1	2.54	0.42
80:DC:564:ARG:NE	80:DC:680:GLU:OE2	2.52	0.42
80:DC:583:HIS:CE1	80:DC:694:HIS:HD2	2.38	0.42
1:BA:76:ILE:O	1:BA:124:THR:HG23	2.19	0.42
2:BB:32:ILE:HG23	2:BB:43:VAL:HB	2.00	0.42
2:BB:65:VAL:CG1	34:B5:920:U:H5'	2.49	0.42
7:BI:84:HIS:CE1	7:BI:90:LEU:HD13	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:BJ:127:VAL:O	8:BJ:131:GLN:HG3	2.18	0.42
9:BL:74:THR:HG22	9:BL:122:ILE:CD1	2.49	0.42
15:BY:55:VAL:HG13	15:BY:75:VAL:HG22	2.00	0.42
15:BY:113:ASN:HD22	34:B5:54:C:P	2.42	0.42
17:Bb:23:THR:OG1	17:Bb:24:LEU:N	2.51	0.42
19:BD:3:ALA:C	19:BD:4:LEU:HD23	2.43	0.42
20:BF:81:ARG:HA	34:B5:1615:C:C5	2.54	0.42
20:BF:148:ARG:HD2	29:Bc:22:ARG:HH22	1.85	0.42
22:BP:115:TYR:OH	34:B5:1556:A:OP1	2.31	0.42
23:BQ:58:ASP:OD1	23:BQ:58:ASP:N	2.51	0.42
31:Bg:61:PHE:CE1	31:Bg:92:TRP:HB3	2.54	0.42
31:Bg:264:SER:HG	31:Bg:269:TYR:H	1.66	0.42
32:Bf:82:LYS:HB3	80:DC:628:THR:HG22	2.01	0.42
34:B5:119:A:H1'	34:B5:397:A:C8	2.54	0.42
34:B5:644:C:H2'	34:B5:645:C:C6	2.54	0.42
34:B5:1405:G:H2'	34:B5:1406:A:C8	2.55	0.42
34:B5:1695:G:H2'	34:B5:1695:G:N3	2.35	0.42
34:B5:1756[A]:A:H2'	80:DC:703:GLY:HA3	2.02	0.42
36:AB:4:ARG:NH2	38:A1:2882:U:OP2	2.45	0.42
36:AB:20:LYS:HD3	38:A1:3139:A:O3'	2.19	0.42
36:AB:308:MET:HE3	38:A1:3329:U:H5"	2.00	0.42
38:A1:38:U:H2'	38:A1:39:A:O4'	2.20	0.42
38:A1:47:C:OP1	48:AL:16:LYS:HE2	2.19	0.42
38:A1:504:A:N6	38:A1:588:G:O6	2.52	0.42
38:A1:506:U:H2'	38:A1:507:U:O4'	2.19	0.42
38:A1:1055:A:H5"	39:A3:100:C:O2'	2.19	0.42
38:A1:2103:U:P	54:AR:81:ARG:HH21	2.42	0.42
38:A1:2460:U:O2'	38:A1:2461:A:H5'	2.19	0.42
38:A1:3041:U:C4	38:A1:3042:U:C4	3.07	0.42
38:A1:3191:G:H2'	38:A1:3192:U:H6	1.84	0.42
38:A1:3297:U:H2'	38:A1:3298:C:H6	1.85	0.42
44:AG:190:VAL:CG2	44:AG:195:SER:HB2	2.46	0.42
46:AI:36:LEU:HD21	46:AI:69:ARG:NH1	2.34	0.42
49:AM:39:ILE:HB	49:AM:43:LYS:HB2	2.01	0.42
54:AR:106:LEU:HD23	54:AR:106:LEU:HA	1.72	0.42
54:AR:170:ARG:NH1	54:AR:173:ARG:HH22	2.16	0.42
55:AS:12:ARG:HG3	55:AS:13:ARG:O	2.19	0.42
58:AV:20:GLY:HA2	58:AV:35:TYR:CZ	2.53	0.42
62:AZ:22:LYS:HE3	62:AZ:134:LEU:HB2	1.99	0.42
80:DC:10:ARG:CZ	80:DC:449:PRO:HD3	2.49	0.42
80:DC:16:VAL:HG13	80:DC:346:VAL:HG23	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:220:PHE:HB3	80:DC:328:LEU:HD13	2.01	0.42
80:DC:426:LEU:HD12	80:DC:426:LEU:HA	1.85	0.42
80:DC:810:ASP:OD1	80:DC:810:ASP:N	2.43	0.42
81:EC:6816:A:H5'	81:EC:6820:C:OP2	2.19	0.42
81:EC:6833:G:H2'	81:EC:6834:U:H6	1.85	0.42
1:BA:9:LEU:HD12	24:BR:109:LEU:HD11	2.01	0.42
1:BA:111:ILE:HD11	34:B5:1292:G:H21	1.84	0.42
2:BB:145:LYS:HZ2	2:BB:152:ARG:C	2.28	0.42
3:BC:138:PRO:HB2	3:BC:222:TYR:CE1	2.51	0.42
3:BC:161:LYS:HG3	3:BC:166:THR:HG22	2.02	0.42
4:BE:7:LYS:HD3	34:B5:450:U:H5"	2.02	0.42
5:BG:32:ILE:H	5:BG:32:ILE:HD12	1.84	0.42
5:BG:220:LYS:HG3	5:BG:223:LYS:HE3	2.01	0.42
6:BH:46:ILE:HD12	6:BH:60:ILE:HA	2.01	0.42
6:BH:80:GLU:O	6:BH:84:LYS:HG2	2.19	0.42
10:BN:92:ILE:HG23	10:BN:141:TYR:HE1	1.85	0.42
18:Be:57:ASN:ND2	34:B5:588:U:O2	2.48	0.42
20:BF:166:ARG:NH2	20:BF:170:GLN:HE21	2.18	0.42
25:BS:14:ILE:HD12	25:BS:22:VAL:O	2.19	0.42
25:BS:45:LEU:HA	25:BS:48:LYS:HG2	2.01	0.42
27:BU:44:ASN:HD21	27:BU:102:ARG:NE	2.18	0.42
27:BU:92:ASP:OD1	27:BU:93:LEU:N	2.53	0.42
28:BZ:83:LEU:O	28:BZ:89:ILE:HG12	2.19	0.42
28:BZ:91:PRO:HB3	28:BZ:101:TYR:CZ	2.54	0.42
31:Bg:20:VAL:HG12	31:Bg:37:SER:OG	2.19	0.42
34:B5:185:U:H2'	34:B5:186:C:O4'	2.20	0.42
34:B5:254:A:H2'	34:B5:255:U:C6	2.51	0.42
34:B5:853:G:O2'	34:B5:854:U:H5'	2.19	0.42
34:B5:1175:U:H2'	34:B5:1176:G:H8	1.84	0.42
34:B5:1338:C:H1'	34:B5:1410:A:C4	2.55	0.42
34:B5:1630:U:O2'	34:B5:1764:C:O2'	2.34	0.42
37:AC:128:ALA:HB1	37:AC:244:LEU:HB3	2.01	0.42
37:AC:357:GLU:O	37:AC:361:HIS:HB3	2.19	0.42
38:A1:289:A:H2'	38:A1:290:G:H8	1.84	0.42
38:A1:1307:G:H5'	51:AO:60[A]:LYS:HZ3	1.84	0.42
38:A1:2476:C:H2'	38:A1:2477:G:C8	2.54	0.42
38:A1:2493:U:O2'	38:A1:2494:A:O5'	2.36	0.42
38:A1:3190:C:H2'	38:A1:3191:G:H8	1.83	0.42
41:AD:205:SER:HB2	41:AD:233:ALA:HB1	2.01	0.42
43:AF:38:LYS:HD3	43:AF:38:LYS:HA	1.77	0.42
44:AG:92:LYS:HD2	44:AG:92:LYS:HA	1.89	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:AJ:32:ARG:HD2	47:AJ:120:ILE:C	2.44	0.42
47:AJ:60:ARG:HB2	47:AJ:63:GLU:CD	2.44	0.42
50:AN:114:ARG:NH2	50:AN:157:LYS:HB3	2.34	0.42
51:AO:151[A]:ASP:OD1	51:AO:151[A]:ASP:N	2.52	0.42
52:AP:25:SER:OG	52:AP:28:ASN:OD1	2.21	0.42
66:Ad:78:LYS:HG3	66:Ad:90:PHE:CE1	2.55	0.42
67:Ae:32:TRP:CZ2	67:Ae:53:PRO:HD2	2.54	0.42
67:Ae:45:ARG:HH11	67:Ae:52:GLN:NE2	2.16	0.42
85:DC:903:SO1:H203	85:DC:903:SO1:O15	2.19	0.42
81:EC:6773:G:H5"	81:EC:6818:G:C8	2.54	0.42
81:EC:6813:A:H2'	81:EC:6814:G:C8	2.54	0.42
81:EC:6877:C:O2'	81:EC:6878:G:O5'	2.32	0.42
1:BA:10:THR:HG22	1:BA:12:GLU:OE1	2.18	0.42
2:BB:39:GLU:OE1	2:BB:74:GLN:HA	2.19	0.42
2:BB:78:ASP:N	2:BB:78:ASP:OD1	2.52	0.42
2:BB:128:LYS:HA	2:BB:134:VAL:HA	2.02	0.42
3:BC:140:ARG:NH2	3:BC:228:ASN:HD21	2.18	0.42
3:BC:188:LEU:HD13	3:BC:196:VAL:HG11	2.00	0.42
4:BE:196:VAL:HG22	4:BE:211:LYS:HG3	1.99	0.42
6:BH:169:PHE:HA	6:BH:172:VAL:HG22	2.02	0.42
7:BI:83:TYR:HB3	7:BI:101:ILE:HD11	2.02	0.42
7:BI:143:TRP:O	7:BI:147:ALA:HB2	2.19	0.42
11:BO:115:ILE:N	16:Ba:62:TYR:OH	2.53	0.42
20:BF:56:ALA:O	20:BF:57:SER:OG	2.31	0.42
21:BK:32:HIS:HB2	21:BK:39:ASN:HA	2.01	0.42
23:BQ:57:LEU:HA	23:BQ:60:PHE:CD2	2.55	0.42
25:BS:30:TYR:HD2	34:B5:1539:G:C5	2.37	0.42
27:BU:101:LYS:HA	27:BU:104:THR:HG22	2.00	0.42
31:Bg:90:ARG:HB2	31:Bg:92:TRP:CZ2	2.55	0.42
34:B5:148:A:C2	34:B5:149:C:H1'	2.55	0.42
34:B5:585:A:N6	34:B5:586:G:O6	2.51	0.42
34:B5:654:C:N1	34:B5:679:U:H1'	2.35	0.42
34:B5:1594:G:H2'	34:B5:1595:U:O4'	2.19	0.42
34:B5:1600:A:H1'	34:B5:1602:C:C5	2.54	0.42
35:AA:241:ARG:HG3	38:A1:2155:G:OP1	2.20	0.42
37:AC:259:ASP:OD1	37:AC:260:GLN:N	2.53	0.42
38:A1:1440:G:H2'	38:A1:1441:G:O4'	2.18	0.42
38:A1:1836:C:N4	74:Al:3:ALA:HB2	2.35	0.42
38:A1:2530:G:H4'	38:A1:2530:G:OP1	2.20	0.42
38:A1:2681:U:H2'	38:A1:2682:C:C6	2.55	0.42
38:A1:2767:U:H2'	38:A1:2768:U:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2781:U:H5”	48:AL:182:ILE:HD13	2.01	0.42
38:A1:3066:U:H2’	38:A1:3067:C:H6	1.83	0.42
38:A1:3154:C:H41	38:A1:3293:U:H3	1.66	0.42
38:A1:3291:G:C2	38:A1:3292:A:C5	3.07	0.42
39:A3:4:U:H2’	39:A3:5:G:C8	2.53	0.42
39:A3:113:C:H2’	39:A3:114:U:O4’	2.20	0.42
40:A4:12:A:C6	40:A4:13:A:N7	2.87	0.42
47:AJ:108:GLU:OE2	47:AJ:110:ILE:N	2.52	0.42
49:AM:84:LYS:HD2	49:AM:84:LYS:HA	1.78	0.42
51:AO:159[A]:LYS:HB3	51:AO:159[A]:LYS:HE2	1.88	0.42
63:Aa:86:LYS:HA	63:Aa:89:GLN:OE1	2.19	0.42
70:Ah:105:ARG:O	70:Ah:109:ILE:HG12	2.20	0.42
74:Al:14:ALA:O	74:Al:18:LYS:HG2	2.20	0.42
77:Ao:71:ARG:HD3	77:Ao:80:ARG:NH2	2.34	0.42
78:Ap:84:ARG:O	78:Ap:88:GLU:HG3	2.19	0.42
79:E:120:VAL:HG22	79:E:128:LEU:HD13	2.02	0.42
79:E:130:LYS:HG3	81:EC:6774:U:H1’	2.01	0.42
80:DC:587:TYR:CD1	80:DC:690:ASP:HB3	2.54	0.42
80:DC:596:GLU:HG3	80:DC:623:TYR:CE1	2.54	0.42
1:BA:72:ASP:OD2	1:BA:119:ARG:HG3	2.19	0.42
4:BE:18:TRP:HB3	4:BE:46:VAL:HG11	2.01	0.42
5:BG:13:GLN:C	5:BG:124:LEU:HD21	2.44	0.42
5:BG:123:GLY:O	5:BG:124:LEU:HD23	2.19	0.42
7:BI:54:LYS:HD3	7:BI:175:GLN:HG3	2.01	0.42
7:BI:66:SER:HA	7:BI:72:ILE:O	2.20	0.42
11:BO:89:THR:HG22	11:BO:89:THR:O	2.20	0.42
14:BX:7:ARG:NH2	34:B5:612:U:OP1	2.52	0.42
14:BX:90:ASP:OD2	18:Be:15:LYS:HB2	2.20	0.42
17:Bb:38:PRO:HD3	17:Bb:77:THR:HA	2.01	0.42
19:BD:40:ARG:HG3	19:BD:47:GLU:HB2	2.01	0.42
21:BK:16:PHE:HZ	21:BK:76:LEU:C	2.27	0.42
24:BR:40:THR:O	24:BR:41:ILE:HD13	2.19	0.42
25:BS:127:HIS:CD2	25:BS:133:VAL:HG21	2.55	0.42
28:BZ:81:ARG:HH12	34:B5:1531:G:H5”	1.84	0.42
31:Bg:80:ALA:HB3	31:Bg:92:TRP:HB2	2.01	0.42
32:Bf:96:LYS:HE2	32:Bf:96:LYS:HB2	1.87	0.42
34:B5:19:A:H2’	34:B5:20:G:O4’	2.20	0.42
34:B5:92:A:H5”	34:B5:93:A:H5”	2.01	0.42
34:B5:274:G:H22	34:B5:283:U:H1’	1.84	0.42
34:B5:384:G:H2’	34:B5:385:A:H8	1.83	0.42
34:B5:514:G:HO2’	34:B5:515:A:H8	1.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:629:U:H2'	34:B5:630:A:H8	1.85	0.42
34:B5:645:C:H2'	34:B5:646:C:H6	1.83	0.42
34:B5:786:C:H2'	34:B5:787:G:O4'	2.19	0.42
34:B5:1546:G:H2'	34:B5:1547:A:C8	2.54	0.42
34:B5:1624:C:H2'	34:B5:1625:C:H6	1.84	0.42
35:AA:21:ARG:NH2	35:AA:22:LEU:HD11	2.25	0.42
35:AA:72:ARG:NH2	38:A1:2522:G:OP1	2.52	0.42
35:AA:80:GLU:HG3	35:AA:168:VAL:HG23	2.01	0.42
37:AC:327:LEU:HD22	43:AF:181:ILE:HG21	2.01	0.42
38:A1:21:G:H3'	38:A1:22:G:H8	1.84	0.42
38:A1:96:G:OP1	63:Aa:33:GLY:HA3	2.20	0.42
38:A1:425:G:H2'	38:A1:426:G:H8	1.85	0.42
38:A1:612:U:H2'	38:A1:613:G:H8	1.83	0.42
38:A1:727:G:O6	38:A1:742:G:O2'	2.30	0.42
38:A1:1046:A:H2'	38:A1:1049:C:C5	2.54	0.42
38:A1:1359:C:H2'	38:A1:1360:C:H6	1.84	0.42
38:A1:2437:G:HO2'	38:A1:2438:A:P	2.43	0.42
38:A1:2493:U:OP1	79:E:163:LEU:HD11	2.18	0.42
38:A1:2553:U:C4'	65:Ac:50:VAL:HG11	2.50	0.42
38:A1:3201:C:H2'	38:A1:3202:G:H8	1.83	0.42
38:A1:3269:U:H5'	38:A1:3271:G:O4'	2.19	0.42
39:A3:41:G:C2	39:A3:45:A:C2	3.08	0.42
40:A4:118:C:H2'	40:A4:119:C:C6	2.55	0.42
41:AD:206:GLN:O	41:AD:209:GLU:HG3	2.20	0.42
43:AF:143:THR:HG23	43:AF:241:LYS:HG2	2.02	0.42
53:AQ:64:VAL:HG23	53:AQ:93:ILE:HD11	2.02	0.42
58:AV:66:LYS:HG2	58:AV:69:LEU:HD12	2.01	0.42
59:AW:46:PRO:HG2	59:AW:54:LEU:HD13	2.02	0.42
62:AZ:69:LYS:HG3	62:AZ:69:LYS:O	2.20	0.42
62:AZ:89:VAL:HG22	62:AZ:93:LYS:HB3	2.01	0.42
80:DC:340:LEU:HB2	80:DC:341:HIS:CE1	2.55	0.42
80:DC:485:VAL:HA	80:DC:795:GLN:HG2	2.01	0.42
80:DC:800:HIS:ND1	80:DC:801:TRP:O	2.52	0.42
2:BB:131:ASP:OD1	2:BB:131:ASP:N	2.52	0.42
3:BC:168:ARG:HH22	34:B5:1098:U:H5"	1.84	0.42
3:BC:185:LYS:O	3:BC:189:GLN:HG3	2.20	0.42
7:BI:119:GLN:OE1	7:BI:121:LEU:HG	2.20	0.42
9:BL:63:LEU:HD23	9:BL:63:LEU:HA	1.80	0.42
13:BW:57:ARG:O	13:BW:58:SER:OG	2.29	0.42
15:BY:64:PHE:HA	34:B5:531:C:O3'	2.19	0.42
15:BY:65:GLY:H	34:B5:532:U:H5"	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Be:42:ARG:HA	18:Be:46:ASN:OD1	2.20	0.42
21:BK:77:ARG:HG2	21:BK:82:LEU:HB2	2.01	0.42
25:BS:139:LYS:HG3	34:B5:1459:C:N4	2.35	0.42
30:Bd:47:ALA:O	30:Bd:50:ILE:HG12	2.20	0.42
31:Bg:19:TRP:N	31:Bg:38:ARG:HB3	2.34	0.42
31:Bg:305:TYR:CE2	31:Bg:311:ARG:HD3	2.55	0.42
33:BM:59:LEU:HD12	33:BM:123:VAL:HB	2.02	0.42
34:B5:1096:C:H4'	34:B5:1099:U:H4'	2.01	0.42
34:B5:1116:A:H2'	34:B5:1117:U:O4'	2.19	0.42
34:B5:1182:U:H3	34:B5:1185:U:H5"	1.85	0.42
34:B5:1310:U:H2'	34:B5:1311:U:H6	1.85	0.42
34:B5:1697:G:H5"	34:B5:1698:G:O4'	2.19	0.42
36:AB:6:TYR:HB3	58:AV:46:LEU:HD13	2.01	0.42
37:AC:322:GLN:HE22	38:A1:598:A:H1'	1.85	0.42
38:A1:405:U:H4'	38:A1:1416:C:H4'	2.01	0.42
38:A1:537:A:H3'	38:A1:538:G:H8	1.84	0.42
38:A1:722:G:H2'	38:A1:723:U:H6	1.85	0.42
38:A1:1180:A:O2'	38:A1:1182:A:H5"	2.19	0.42
38:A1:1210:U:O5'	45:AH:62:ARG:NH2	2.53	0.42
38:A1:1312:C:O2'	51:AO:83[A]:ALA:O	2.35	0.42
38:A1:2219:A:H2'	38:A1:2220:A:C8	2.54	0.42
38:A1:2358:A:H2'	38:A1:2359:C:O4'	2.20	0.42
38:A1:2455:U:H5"	38:A1:2456:A:OP2	2.20	0.42
38:A1:2618:G:C8	38:A1:2865:PSU:H5'	2.54	0.42
38:A1:2987:A:H2'	38:A1:2988:C:H6	1.85	0.42
38:A1:3185:U:O2'	51:AO:126[A]:VAL:HG13	2.20	0.42
39:A3:23:A:H1'	39:A3:121:U:H3'	2.01	0.42
40:A4:19:C:H2'	40:A4:20:U:C6	2.54	0.42
42:AE:40:LEU:HD13	42:AE:84:VAL:HG21	2.02	0.42
42:AE:42:LEU:HA	42:AE:42:LEU:HD23	1.80	0.42
42:AE:172:HIS:HB3	68:Af:44:TYR:CE2	2.54	0.42
44:AG:72:PRO:HA	44:AG:233:TRP:CE3	2.55	0.42
44:AG:120:LYS:HE3	44:AG:120:LYS:HB2	1.86	0.42
52:AP:86:LYS:O	52:AP:90:PHE:HD1	2.01	0.42
56:AT:142:SER:OG	56:AT:144:GLU:OE1	2.32	0.42
63:Aa:96:LYS:HD2	63:Aa:122:PRO:HB3	2.01	0.42
80:DC:555:LYS:HE3	80:DC:555:LYS:HB3	1.71	0.42
80:DC:730:LEU:O	80:DC:797:VAL:HB	2.20	0.42
1:BA:27:ARG:HD3	1:BA:27:ARG:C	2.44	0.42
3:BC:106:ASP:N	3:BC:106:ASP:OD1	2.51	0.42
3:BC:153:SER:OG	3:BC:195:ASP:O	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:BC:190:LEU:HD23	3:BC:190:LEU:HA	1.71	0.42
4:BE:18:TRP:N	4:BE:18:TRP:CD1	2.85	0.42
4:BE:143:ASP:N	4:BE:143:ASP:OD1	2.44	0.42
5:BG:102:VAL:HG13	5:BG:106:LEU:HD12	2.00	0.42
5:BG:188:ARG:NH2	34:B5:284:G:C8	2.87	0.42
6:BH:13:PRO:HA	6:BH:14:THR:HA	1.72	0.42
6:BH:39:ARG:N	6:BH:40:PRO:HD2	2.34	0.42
6:BH:76:LYS:HB3	6:BH:76:LYS:HE2	1.89	0.42
6:BH:123:ASP:O	6:BH:127:GLU:HG2	2.20	0.42
9:BL:148:LYS:O	9:BL:152:GLN:HB2	2.20	0.42
14:BX:62:LYS:H	14:BX:116:ASP:HB2	1.84	0.42
15:BY:10:ARG:NH2	34:B5:780:A:N3	2.68	0.42
15:BY:20:ARG:NE	15:BY:74:LEU:HD23	2.32	0.42
20:BF:100:ASN:HD22	20:BF:103:ASN:ND2	2.16	0.42
20:BF:189:THR:HB	20:BF:192:GLU:HG3	2.02	0.42
23:BQ:30:LYS:HD3	23:BQ:33:GLY:H	1.85	0.42
24:BR:46:LEU:HD12	24:BR:46:LEU:HA	1.94	0.42
25:BS:111:ASP:HA	25:BS:114:GLU:OE1	2.19	0.42
25:BS:134:ARG:HD3	34:B5:1559:A:C6	2.55	0.42
25:BS:138:THR:N	34:B5:1458:G:OP1	2.53	0.42
34:B5:263:C:H2'	34:B5:264:G:O4'	2.20	0.42
34:B5:343:C:H2'	34:B5:344:A:C8	2.54	0.42
34:B5:1358:G:H2'	34:B5:1359:C:H6	1.84	0.42
34:B5:1389:C:N4	34:B5:1391:A:O4'	2.53	0.42
36:AB:218:ILE:HG13	36:AB:276:THR:HG22	2.01	0.42
36:AB:227:GLU:HA	38:A1:1887:A:H4'	2.01	0.42
38:A1:203:G:H2'	38:A1:204:A:C8	2.54	0.42
38:A1:548:G:O2'	38:A1:549:U:OP2	2.31	0.42
38:A1:768:C:H2'	38:A1:769:G:C8	2.54	0.42
38:A1:771:A:H2'	38:A1:772:U:O4'	2.19	0.42
38:A1:965:A:C2	63:Aa:43:ILE:HD12	2.54	0.42
38:A1:1087:G:C2	38:A1:1088:U:C6	3.08	0.42
38:A1:1307:G:H1'	38:A1:1308:A:C8	2.55	0.42
38:A1:1449:A:H2'	38:A1:1450:G:O4'	2.19	0.42
38:A1:1597:C:H2'	38:A1:1598:G:C8	2.54	0.42
38:A1:1658:G:H2'	38:A1:1659:U:C6	2.55	0.42
38:A1:1677:G:H1	38:A1:1691:U:H3	1.67	0.42
38:A1:1910:A:H2'	38:A1:1911:A:C8	2.54	0.42
38:A1:2124:G:H2'	38:A1:2125:A:H8	1.85	0.42
38:A1:2389:C:O2'	38:A1:3307:A:N1	2.49	0.42
38:A1:2545:C:H2'	38:A1:2546:C:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2582:C:H2'	38:A1:2583:C:C6	2.55	0.42
38:A1:2651:G:N3	38:A1:2760:C:N4	2.68	0.42
38:A1:3182:G:C6	38:A1:3183:A:C6	3.08	0.42
43:AF:146:GLN:OE1	43:AF:241:LYS:HE3	2.20	0.42
52:AP:85:ALA:O	52:AP:89:LYS:HG2	2.19	0.42
52:AP:107:LEU:HD12	52:AP:152:GLU:OE2	2.20	0.42
54:AR:143:ILE:HG13	54:AR:144:GLN:NE2	2.35	0.42
57:AU:41:ILE:HD11	57:AU:71:PHE:CE1	2.54	0.42
58:AV:10:LYS:NZ	58:AV:56:ASP:HB2	2.34	0.42
61:AY:63:LYS:HD3	61:AY:63:LYS:HA	1.79	0.42
70:Ah:88:LEU:HD23	70:Ah:88:LEU:HA	1.82	0.42
74:Al:5:LYS:HD3	74:Al:13:MET:CE	2.49	0.42
76:An:7:LYS:HD3	76:An:11:ARG:NH2	2.34	0.42
76:An:12:ARG:HE	76:An:15:ARG:NH2	2.17	0.42
2:BB:166:LYS:HE2	2:BB:166:LYS:HB3	1.81	0.42
2:BB:194:ASN:O	2:BB:198:GLU:HG3	2.19	0.42
3:BC:35:TRP:O	3:BC:37:PRO:HD3	2.20	0.42
7:BI:42:ARG:HG3	7:BI:58:LEU:HB2	2.02	0.42
7:BI:83:TYR:HB3	7:BI:101:ILE:CG1	2.49	0.42
7:BI:120:THR:O	7:BI:120:THR:HG23	2.20	0.42
7:BI:141:ARG:NH1	34:B5:196:G:N7	2.67	0.42
9:BL:66:ILE:HD11	9:BL:138:ASN:HB2	2.02	0.42
13:BW:44:HIS:ND1	13:BW:101:TYR:HE2	2.18	0.42
15:BY:29:HIS:CD2	15:BY:35:VAL:HG13	2.54	0.42
21:BK:32:HIS:HD2	21:BK:35:ILE:HB	1.85	0.42
31:Bg:18:GLY:N	31:Bg:39:ASP:OD2	2.52	0.42
33:BM:46:ARG:NH2	34:B5:1254:U:OP2	2.53	0.42
34:B5:85:A:H2'	34:B5:86:A:C8	2.55	0.42
34:B5:830:U:H1'	34:B5:831:U:C5	2.55	0.42
34:B5:906:A:H2'	34:B5:907:A:C8	2.55	0.42
34:B5:1264:G:H2'	34:B5:1265:G:O4'	2.20	0.42
34:B5:1281:G:H2'	34:B5:1282:U:C6	2.55	0.42
34:B5:1319:A:N6	34:B5:1320:U:O2	2.53	0.42
34:B5:1330:G:C2	34:B5:1331:A:H1'	2.55	0.42
34:B5:1357:A:H2'	34:B5:1358:G:H8	1.85	0.42
34:B5:1554:U:H2'	34:B5:1555:A:O4'	2.20	0.42
35:AA:178:PRO:HB3	38:A1:2150:G:H5"	2.01	0.42
37:AC:276:LEU:HG	37:AC:277:PRO:HD2	2.02	0.42
38:A1:219:A:O2'	38:A1:220:G:N2	2.42	0.42
38:A1:612:U:H2'	38:A1:613:G:C8	2.55	0.42
38:A1:1047:A:N3	38:A1:2633:U:O2'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1601:U:H3'	54:AR:38:ARG:HD2	2.01	0.42
38:A1:1862:U:H2'	38:A1:1863:G:O4'	2.20	0.42
38:A1:2232:A:H2'	38:A1:2233:A:C8	2.55	0.42
38:A1:2435:G:OP1	50:AN:20:ARG:NH2	2.53	0.42
38:A1:2470:C:C2'	79:E:27:ASN:HB2	2.40	0.42
38:A1:2615:G:H2'	38:A1:2616:C:C6	2.55	0.42
38:A1:2699:G:H21	56:AT:49:GLN:HE22	1.68	0.42
38:A1:3051:U:H2'	38:A1:3052:G:C8	2.55	0.42
38:A1:3366:G:H2'	38:A1:3367:C:C6	2.55	0.42
41:AD:250:ASP:N	41:AD:250:ASP:OD1	2.51	0.42
42:AE:79:VAL:HG22	42:AE:80:ASN:H	1.85	0.42
50:AN:192:LYS:O	50:AN:196:THR:HG23	2.20	0.42
51:AO:192[A]:LYS:HE3	51:AO:192[A]:LYS:HB3	1.86	0.42
54:AR:135:LYS:O	54:AR:139:VAL:HG23	2.19	0.42
59:AW:4:GLU:HG2	59:AW:30:ARG:CZ	2.50	0.42
62:AZ:5:LEU:HD13	62:AZ:77:TYR:CD1	2.55	0.42
77:Ao:47:GLN:NE2	77:Ao:52:GLY:O	2.52	0.42
80:DC:78:TYR:HE1	80:DC:97:SER:HB3	1.85	0.42
80:DC:391:LYS:HE2	80:DC:391:LYS:HB3	1.87	0.42
80:DC:797:VAL:CG1	80:DC:798:PHE:H	2.24	0.42
2:BB:170:GLU:OE2	2:BB:171:ILE:HG13	2.20	0.42
8:BJ:77:ILE:O	8:BJ:81:VAL:HG22	2.20	0.42
9:BL:130:PRO:HB3	9:BL:136:ARG:NH1	2.35	0.42
11:BO:124:ASP:HB2	34:B5:927:C:O2	2.20	0.42
12:BV:58:TYR:CD1	12:BV:58:TYR:C	2.98	0.42
14:BX:133:LEU:O	14:BX:137:LYS:HG2	2.20	0.42
15:BY:21:LYS:O	15:BY:74:LEU:HA	2.20	0.42
18:Be:45:VAL:HG11	34:B5:502:U:O2'	2.20	0.42
20:BF:124:LEU:HG	20:BF:199:ILE:HD13	2.02	0.42
23:BQ:128:LYS:NZ	34:B5:1417:A:O2'	2.53	0.42
34:B5:560:U:H2'	34:B5:561:G:C8	2.54	0.42
34:B5:628:G:H4'	38:A1:846:A:H61	1.85	0.42
34:B5:796:A:C4	34:B5:797:G:C8	3.07	0.42
34:B5:879:G:H2'	34:B5:880:C:H6	1.83	0.42
34:B5:1347:U:O2	34:B5:1516:A:H2'	2.20	0.42
35:AA:32:LEU:HD13	35:AA:163:ARG:NE	2.34	0.42
36:AB:43:LEU:HD23	36:AB:43:LEU:HA	1.91	0.42
37:AC:34:ILE:HD13	38:A1:673:U:O2'	2.20	0.42
38:A1:235:A:H2'	38:A1:236:G:H8	1.84	0.42
38:A1:741:U:H2'	38:A1:742:G:O4'	2.19	0.42
38:A1:964:G:O2'	63:Aa:41:HIS:NE2	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1224:C:C2	38:A1:1225:A:C8	3.08	0.42
38:A1:1606:U:O4'	69:Ag:8:ARG:NH2	2.53	0.42
38:A1:1677:G:OP1	57:AU:97:SER:OG	2.38	0.42
38:A1:2896:A:O2'	75:Am:122:ARG:NH2	2.53	0.42
38:A1:3050:U:H5"	59:AW:17:ARG:HH11	1.85	0.42
38:A1:3166:C:H2'	38:A1:3167:A:H8	1.85	0.42
38:A1:3279:A:H2'	38:A1:3280:U:C6	2.55	0.42
38:A1:3308:C:N3	52:AP:69:ARG:NH2	2.55	0.42
39:A3:87:G:O2'	55:AS:119:ARG:NH2	2.52	0.42
43:AF:57:THR:O	43:AF:61:ASN:HB2	2.20	0.42
43:AF:85:PHE:CE2	43:AF:240:VAL:HG21	2.55	0.42
44:AG:41:GLN:OE1	44:AG:44:ARG:NH2	2.51	0.42
46:AI:74:LYS:HD3	46:AI:78:LYS:NZ	2.32	0.42
59:AW:23:ARG:NE	59:AW:29:PHE:HE2	2.17	0.42
69:Ag:56:THR:O	69:Ag:57:LEU:HD23	2.20	0.42
72:Aj:85:LYS:HE3	72:Aj:85:LYS:HB3	1.76	0.42
79:E:113:SER:HA	79:E:138:VAL:H	1.85	0.42
80:DC:165:LEU:O	80:DC:168:GLN:NE2	2.49	0.42
80:DC:352:ARG:HG2	80:DC:356:LEU:HD23	2.02	0.42
81:EC:6851:G:N1	81:EC:6879:U:H1'	2.35	0.42
81:EC:6862:G:H2'	81:EC:6864:A:C8	2.55	0.42
2:BB:111:ARG:HB2	16:Ba:68:TYR:CD1	2.55	0.41
5:BG:45:PHE:HB3	5:BG:48:TYR:HB2	2.02	0.41
7:BI:164:ARG:HD3	7:BI:164:ARG:HA	1.94	0.41
13:BW:41:MET:HE2	13:BW:47:ILE:HD11	2.01	0.41
15:BY:22:GLN:HA	15:BY:74:LEU:HG	2.02	0.41
15:BY:76:TYR:CE2	15:BY:82:ALA:HA	2.54	0.41
17:Bb:17:ARG:O	34:B5:1070:C:O2'	2.33	0.41
18:Be:14:VAL:HG21	34:B5:567:A:N3	2.34	0.41
18:Be:31:LYS:HE3	18:Be:31:LYS:HB2	1.92	0.41
23:BQ:14:LYS:NZ	34:B5:1610:G:N7	2.67	0.41
23:BQ:95:LYS:O	31:Bg:59:ARG:NH1	2.52	0.41
23:BQ:99:GLU:CG	31:Bg:57:PRO:HB2	2.50	0.41
25:BS:23:ASP:OD2	25:BS:26:ILE:HG12	2.19	0.41
26:BT:6:VAL:HG13	26:BT:66:TYR:CE2	2.55	0.41
31:Bg:9:LEU:HD12	31:Bg:313:TRP:CZ2	2.55	0.41
31:Bg:238:ASP:OD2	31:Bg:258:THR:N	2.28	0.41
32:Bf:142:GLY:HA3	34:B5:1252:C:O2'	2.20	0.41
34:B5:107:C:H5"	34:B5:383:G:O2'	2.20	0.41
34:B5:250:C:H2'	34:B5:251:A:C8	2.55	0.41
34:B5:335:U:H2'	34:B5:336:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:528:U:C4	34:B5:529:A:N7	2.88	0.41
34:B5:592:A:H2'	34:B5:593:U:O4'	2.20	0.41
34:B5:751:G:H2'	34:B5:752:A:H8	1.85	0.41
34:B5:918:U:H2'	34:B5:919:A:C8	2.55	0.41
37:AC:115:HIS:NE2	38:A1:695:C:OP2	2.40	0.41
38:A1:213:A:H61	38:A1:227:G:H2'	1.85	0.41
38:A1:262:U:H2'	38:A1:263:C:O4'	2.20	0.41
38:A1:1384:U:H2'	38:A1:1385:C:C6	2.55	0.41
38:A1:1517:G:OP1	74:Al:22:PRO:HG3	2.20	0.41
38:A1:1709:C:C2	38:A1:1710:C:C5	3.08	0.41
38:A1:2188:A:C5	38:A1:2189:U:C6	3.08	0.41
38:A1:2794:G:H4'	77:Ao:58:PHE:CE1	2.55	0.41
38:A1:2881:C:H2'	38:A1:2882:U:H6	1.84	0.41
38:A1:2916:U:O2'	38:A1:2917:G:H5'	2.20	0.41
38:A1:3082:C:H2'	38:A1:3083:G:H8	1.84	0.41
38:A1:3320:A:H2'	38:A1:3321:C:C6	2.55	0.41
39:A3:33:U:H2'	39:A3:34:C:C6	2.55	0.41
39:A3:89:G:O2'	39:A3:91:G:O6	2.38	0.41
40:A4:139:U:H2'	40:A4:140:G:C8	2.54	0.41
41:AD:236:LEU:HD23	41:AD:236:LEU:HA	1.89	0.41
41:AD:268:GLU:O	41:AD:271:LYS:HG2	2.19	0.41
44:AG:186:LEU:HA	44:AG:189:LEU:HG	2.02	0.41
47:AJ:32:ARG:HA	47:AJ:35:LYS:HG2	2.01	0.41
48:AL:18:TRP:CE2	48:AL:19:GLN:OE1	2.73	0.41
52:AP:31:GLU:CD	52:AP:61:ARG:H	2.28	0.41
52:AP:179:GLN:HA	52:AP:182:ILE:HG22	2.02	0.41
53:AQ:65:SER:HA	53:AQ:93:ILE:HD13	2.02	0.41
55:AS:8:GLN:HG3	55:AS:8:GLN:O	2.20	0.41
55:AS:106:LEU:HD12	55:AS:106:LEU:HA	1.83	0.41
57:AU:33:TYR:OH	57:AU:80:THR:OG1	2.23	0.41
63:Aa:84:GLU:H	63:Aa:84:GLU:CD	2.27	0.41
69:Ag:74:ARG:CZ	69:Ag:82:ALA:HB2	2.50	0.41
73:Ak:58:ASP:HB3	73:Ak:61:LYS:HB3	2.02	0.41
80:DC:130:ASP:OD1	80:DC:159:LYS:HB2	2.19	0.41
80:DC:251:ASN:O	80:DC:255:LYS:N	2.53	0.41
80:DC:254:THR:HB	80:DC:256:LYS:HG2	2.02	0.41
80:DC:285:PHE:HD2	80:DC:289:MET:HE2	1.85	0.41
80:DC:342:LEU:HD23	80:DC:342:LEU:HA	1.86	0.41
80:DC:358:GLU:CD	80:DC:476:HIS:HB2	2.45	0.41
80:DC:406:LYS:H	80:DC:409:GLN:CD	2.28	0.41
1:BA:79:ARG:NH1	1:BA:80:THR:HG22	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:BE:57:ASN:CG	34:B5:446:A:H5”	2.45	0.41
5:BG:132:ARG:HG3	34:B5:68:A:N6	2.34	0.41
5:BG:211:LEU:O	5:BG:214:LYS:HG3	2.20	0.41
12:BV:39:VAL:HG22	12:BV:40:ASP:N	2.35	0.41
12:BV:74:GLN:HE21	12:BV:82:VAL:H	1.68	0.41
21:BK:18:GLU:HG3	21:BK:20:VAL:O	2.20	0.41
22:BP:32:ASP:OD1	22:BP:32:ASP:N	2.48	0.41
22:BP:44:ARG:HE	22:BP:49:MET:HE1	1.85	0.41
22:BP:126:VAL:HG11	34:B5:1458:G:N2	2.34	0.41
24:BR:77:GLU:HG3	24:BR:78:ARG:NH2	2.34	0.41
31:Bg:81:LEU:HD23	31:Bg:81:LEU:HA	1.81	0.41
34:B5:762:A:C8	34:B5:789:A:C6	3.07	0.41
34:B5:1115:U:H5”	76:An:10:THR:HG21	2.01	0.41
34:B5:1189:A:N3	34:B5:1194:A:O2’	2.46	0.41
34:B5:1207:C:N3	34:B5:1456:C:H5	2.18	0.41
34:B5:1588:G:C6	34:B5:1589:C:C4	3.08	0.41
34:B5:1642:G:O2’	34:B5:1781:MA6:O2’	2.34	0.41
37:AC:23:PRO:HG3	37:AC:258:LEU:HD23	2.01	0.41
37:AC:183:LYS:HE3	38:A1:1386:A:C8	2.55	0.41
37:AC:288:ARG:NH1	37:AC:292:SER:HB3	2.29	0.41
38:A1:9:U:H2’	38:A1:10:C:C6	2.54	0.41
38:A1:75:G:O2’	48:AL:70:ARG:NH2	2.52	0.41
38:A1:291:C:C2	38:A1:292:U:C5	3.08	0.41
38:A1:527:A:H2’	38:A1:528:U:C6	2.54	0.41
38:A1:616:G:H2’	38:A1:617:G:H8	1.81	0.41
38:A1:625:G:H2’	38:A1:626:U:C6	2.56	0.41
38:A1:1074:U:H2’	38:A1:1076:C:H5	1.85	0.41
38:A1:1253:U:O2	38:A1:1263:A:N6	2.54	0.41
38:A1:1321:G:N2	55:AS:112:ALA:HB2	2.35	0.41
38:A1:1790:G:H2’	38:A1:1791:C:C6	2.55	0.41
38:A1:2265:C:C4	38:A1:2266:PSU:C2	3.08	0.41
38:A1:2461:A:N6	38:A1:2486:A:N3	2.68	0.41
38:A1:2499:U:N3	38:A1:2500:A:C8	2.88	0.41
38:A1:2726:C:O2’	38:A1:2727:A:H2’	2.20	0.41
38:A1:3393:U:H2’	38:A1:3394:U:C6	2.55	0.41
40:A4:13:A:C4	40:A4:14:C:C5	3.08	0.41
40:A4:39:G:H1’	40:A4:104:A:H61	1.85	0.41
40:A4:138:A:H2’	40:A4:139:U:C6	2.55	0.41
43:AF:130:ILE:HD12	43:AF:134:VAL:HG11	2.01	0.41
46:AI:77:THR:HG23	46:AI:82:ARG:HA	2.02	0.41
46:AI:145:LYS:HB3	46:AI:146:PRO:HD3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:AJ:133:ARG:HB2	47:AJ:152:HIS:CE1	2.56	0.41
49:AM:55:ARG:HG3	49:AM:55:ARG:NH1	2.34	0.41
51:AO:142[A]:SER:HB3	51:AO:147[A]:TRP:HB2	2.01	0.41
52:AP:115:SER:OG	52:AP:149:VAL:HG23	2.20	0.41
54:AR:163:ARG:O	54:AR:167:ARG:HB3	2.20	0.41
58:AV:104:ASN:OD1	58:AV:104:ASN:C	2.63	0.41
62:AZ:29:HIS:HB2	62:AZ:40:HIS:CE1	2.55	0.41
62:AZ:83:THR:HG22	62:AZ:84:ARG:N	2.35	0.41
68:Af:48:ARG:HB3	68:Af:68:TRP:CZ3	2.56	0.41
80:DC:137:VAL:HG23	80:DC:790:GLY:C	2.45	0.41
80:DC:566:THR:HG22	80:DC:682:ARG:O	2.20	0.41
80:DC:711:ARG:HD2	80:DC:711:ARG:N	2.35	0.41
3:BC:125:ILE:O	3:BC:129:ILE:HG23	2.21	0.41
4:BE:210:ILE:HG22	4:BE:211:LYS:O	2.20	0.41
7:BI:87:ASN:HB3	7:BI:90:LEU:HD12	2.02	0.41
10:BN:88:LEU:O	10:BN:92:ILE:HG13	2.20	0.41
14:BX:91:GLY:C	14:BX:93:LEU:H	2.28	0.41
15:BY:34:ASN:HD21	34:B5:521:A:C2’	2.34	0.41
17:Bb:11:THR:O	17:Bb:14:SER:OG	2.30	0.41
19:BD:96:LEU:HD23	19:BD:190:ARG:HB2	2.02	0.41
19:BD:223:LYS:HB3	31:Bg:191:ASP:HB3	2.02	0.41
21:BK:84:GLU:O	21:BK:86:ILE:HD12	2.20	0.41
22:BP:47:ARG:HE	34:B5:1555:A:P	2.43	0.41
22:BP:79:HIS:CG	34:B5:1241:G:H1’	2.54	0.41
26:BT:54:PHE:HD1	26:BT:100:ILE:HD11	1.86	0.41
26:BT:77:ASN:HD21	26:BT:98:GLY:CA	2.32	0.41
31:Bg:201:THR:HB	31:Bg:243:LEU:HD12	2.01	0.41
31:Bg:203:THR:O	31:Bg:211:ILE:HA	2.20	0.41
34:B5:95:G:C4	34:B5:96:G:C8	3.08	0.41
34:B5:193:U:O2’	34:B5:195:G:H8	2.02	0.41
34:B5:294:C:H2’	34:B5:295:A:C8	2.54	0.41
34:B5:554:C:H1’	34:B5:555:A:N7	2.35	0.41
34:B5:759:PSU:H2’	34:B5:760:A:H8	1.85	0.41
35:AA:101:VAL:C	35:AA:102:LEU:HD23	2.46	0.41
35:AA:119:LYS:NZ	35:AA:122:ASP:OD2	2.36	0.41
38:A1:155:G:H5”	38:A1:156:G:H2’	2.01	0.41
38:A1:234:G:C2	38:A1:235:A:C5	3.09	0.41
38:A1:386:A:H2	52:AP:22:LEU:HD11	1.86	0.41
38:A1:438:A:H3’	38:A1:439:C:H3’	2.02	0.41
38:A1:537:A:O2’	38:A1:558:U:O2’	2.35	0.41
38:A1:1071:U:H3	38:A1:1087:G:H1	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1226:G:C5	38:A1:1227:C:C4	3.08	0.41
38:A1:1236:G:H5'	38:A1:1239:C:OP2	2.21	0.41
38:A1:1458:U:O2	66:Ad:56:ASN:ND2	2.53	0.41
38:A1:1728:G:O2'	65:Ac:87:VAL:HG12	2.20	0.41
38:A1:1934:G:H2'	38:A1:1935:G:O4'	2.19	0.41
38:A1:2194:G:H2'	38:A1:2195:C:C6	2.55	0.41
38:A1:2332:A:H2'	38:A1:2333:C:O4'	2.20	0.41
38:A1:2386:A:N7	38:A1:2994:A:C6	2.89	0.41
38:A1:2407:C:C2	38:A1:2408:U:C5	3.08	0.41
38:A1:2632:G:O6	38:A1:2647:A:N6	2.54	0.41
38:A1:2861:U:H2'	38:A1:2862:U:O4'	2.20	0.41
38:A1:3034:C:C6	45:AH:120:ASP:OD1	2.73	0.41
38:A1:3226:A:N6	38:A1:3260:G:O6	2.53	0.41
38:A1:3251:U:H2'	38:A1:3252:G:O4'	2.19	0.41
39:A3:117:A:H2'	39:A3:118:A:H8	1.85	0.41
42:AE:55:LEU:HB2	42:AE:64:LEU:O	2.20	0.41
43:AF:34:LYS:O	43:AF:38:LYS:HG2	2.21	0.41
43:AF:82:LYS:C	43:AF:119:VAL:HG12	2.45	0.41
44:AG:186:LEU:HD23	44:AG:186:LEU:HA	1.84	0.41
46:AI:183:LYS:HD2	46:AI:183:LYS:HA	1.85	0.41
56:AT:14:MET:HE2	56:AT:14:MET:HB2	1.89	0.41
58:AV:32:ARG:NE	58:AV:32:ARG:HA	2.35	0.41
65:Ac:28:LYS:HB3	65:Ac:28:LYS:HE2	1.81	0.41
65:Ac:43:ILE:HA	65:Ac:68:TYR:O	2.21	0.41
67:Ae:24:ARG:HG2	67:Ae:25:TYR:HD1	1.84	0.41
74:Al:21:ARG:HD2	74:Al:22:PRO:O	2.19	0.41
80:DC:418:TYR:CZ	80:DC:426:LEU:HD22	2.55	0.41
81:EC:6785:C:H3'	81:EC:6786:A:C5'	2.50	0.41
3:BC:49:LYS:NZ	3:BC:246:GLU:HG2	2.36	0.41
4:BE:128:LYS:HB3	4:BE:128:LYS:HE2	1.85	0.41
6:BH:33:GLU:HA	6:BH:37:GLU:OE2	2.21	0.41
7:BI:4:SER:HB2	7:BI:24:LYS:HD3	2.02	0.41
7:BI:21:PHE:CE2	7:BI:22:ARG:HD3	2.55	0.41
14:BX:85:ALA:HB2	14:BX:104:LEU:HD21	2.01	0.41
16:Ba:77:CYS:HA	16:Ba:80:HIS:HB3	2.02	0.41
19:BD:20:GLU:HG3	21:BK:61:TRP:CE3	2.56	0.41
20:BF:108:LEU:CD1	34:B5:1528:U:H5'	2.50	0.41
20:BF:222:LYS:HA	20:BF:225:ARG:NH1	2.35	0.41
22:BP:56:PHE:CE2	22:BP:76:VAL:HG12	2.56	0.41
23:BQ:135:ARG:NH1	34:B5:1582:U:H5"	2.36	0.41
24:BR:51:ALA:O	24:BR:55:THR:HG23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BS:139:LYS:NZ	34:B5:1177:C:C5	2.85	0.41
31:Bg:26:SER:HB3	31:Bg:29:GLN:OE1	2.19	0.41
32:Bf:89:LYS:HG3	34:B5:1445:G:C4	2.55	0.41
32:Bf:94:LYS:HB2	32:Bf:94:LYS:HE2	1.81	0.41
34:B5:480:G:O6	34:B5:481:A:C6	2.72	0.41
34:B5:903:U:H1'	34:B5:906:A:N7	2.35	0.41
34:B5:1542:G:H1	34:B5:1568:C:C2'	2.31	0.41
36:AB:10:ARG:HH22	36:AB:14:LEU:HD21	1.85	0.41
36:AB:361:THR:HG23	36:AB:371:GLN:HG3	2.03	0.41
37:AC:342:LYS:HE2	37:AC:342:LYS:HB2	1.94	0.41
38:A1:138:U:C2	38:A1:139:G:C8	3.08	0.41
38:A1:546:C:H5"	38:A1:548:G:O4'	2.20	0.41
38:A1:631:U:H2'	38:A1:632:G:C8	2.55	0.41
38:A1:748:U:H5"	64:Ab:31:SER:HA	2.02	0.41
38:A1:750:G:O3'	64:Ab:44:LYS:NZ	2.40	0.41
38:A1:953:G:O2'	38:A1:1115:G:H4'	2.21	0.41
38:A1:1171:G:H2'	38:A1:1172:G:O4'	2.21	0.41
38:A1:1574:C:H5	38:A1:1575:A:C8	2.38	0.41
38:A1:2835:U:H2'	38:A1:2836:C:O2	2.21	0.41
38:A1:2840:C:H2'	38:A1:2841:G:O4'	2.20	0.41
38:A1:2978:U:O2'	38:A1:2979:U:H5'	2.21	0.41
38:A1:3213:A:OP2	49:AM:128:ARG:HD2	2.20	0.41
39:A3:120:C:C4	41:AD:265:TYR:CD2	3.08	0.41
43:AF:77:VAL:HG23	55:AS:59:VAL:HG23	2.01	0.41
43:AF:184:LEU:HD21	43:AF:202:LEU:HD21	2.02	0.41
47:AJ:14:ILE:HD11	47:AJ:162:TRP:CH2	2.55	0.41
60:AX:77:GLU:OE1	60:AX:77:GLU:N	2.53	0.41
70:Ah:41:LEU:HD23	70:Ah:43:LYS:H	1.84	0.41
71:Ai:71:LYS:HD2	71:Ai:71:LYS:N	2.35	0.41
73:Ak:14:LEU:HD12	73:Ak:17:ARG:HH11	1.85	0.41
77:Ao:32:LYS:HZ1	77:Ao:34:SER:HA	1.84	0.41
77:Ao:47:GLN:NE2	77:Ao:53:GLN:HA	2.36	0.41
80:DC:20:ARG:HH21	80:DC:91:GLN:HE21	1.69	0.41
4:BE:61:VAL:O	4:BE:65:LEU:HD23	2.20	0.41
4:BE:130:GLN:HB2	4:BE:138:TYR:CE1	2.56	0.41
4:BE:148:ARG:NH2	34:B5:124:A:O2'	2.54	0.41
4:BE:251:GLU:HG2	4:BE:252:ARG:N	2.35	0.41
5:BG:31:ARG:HE	5:BG:31:ARG:HB2	1.70	0.41
6:BH:108:GLN:HG3	34:B5:743:U:H5'	2.03	0.41
6:BH:150:GLN:HB3	6:BH:181:ILE:HD13	2.02	0.41
11:BO:41:ARG:NH2	34:B5:897:C:O2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:BW:100:GLY:O	13:BW:101:TYR:HD1	2.03	0.41
16:Ba:79:ILE:CD1	34:B5:1794:A:H1'	2.45	0.41
18:Be:53:LYS:HG2	18:Be:54:ARG:H	1.85	0.41
19:BD:119:ALA:HA	19:BD:122:VAL:HG12	2.01	0.41
21:BK:31:LYS:NZ	21:BK:36:ASP:HA	2.36	0.41
22:BP:111:MET:HE3	25:BS:119:ILE:HG22	2.03	0.41
25:BS:18:LEU:O	25:BS:20:THR:HG23	2.21	0.41
25:BS:49:LYS:HA	25:BS:49:LYS:HD2	1.79	0.41
25:BS:145:ARG:NH2	34:B5:1172:G:O3'	2.44	0.41
26:BT:6:VAL:HG13	26:BT:6:VAL:O	2.21	0.41
33:BM:32:LEU:HD21	33:BM:101:ALA:HB2	2.03	0.41
34:B5:419:G:H8	34:B5:419:G:OP2	2.03	0.41
34:B5:601:A:H2'	34:B5:602:U:C6	2.56	0.41
34:B5:1144:U:H2'	34:B5:1145:U:C6	2.55	0.41
34:B5:1580:C:H2'	34:B5:1581:C:H6	1.86	0.41
37:AC:240:PRO:HB2	38:A1:1383:G:H4'	2.02	0.41
38:A1:25:U:H4'	38:A1:26:A:N7	2.35	0.41
38:A1:137:G:H2'	38:A1:138:U:H6	1.86	0.41
38:A1:624:G:C2	38:A1:625:G:C8	3.09	0.41
38:A1:726:G:N1	38:A1:743:C:OP2	2.52	0.41
38:A1:1299:U:H2'	38:A1:1300:G:O4'	2.21	0.41
38:A1:2113:A:H2'	38:A1:2114:C:O4'	2.20	0.41
38:A1:2125:A:H2'	38:A1:2126:A:O4'	2.20	0.41
38:A1:2180:G:H2'	38:A1:2181:C:C6	2.55	0.41
38:A1:2421:U:H2'	38:A1:2422:C:O4'	2.21	0.41
38:A1:2491:A:O2'	79:E:33:GLU:OE2	2.38	0.41
38:A1:2503:G:H2'	38:A1:2504:U:C2	2.56	0.41
38:A1:2666:C:OP2	38:A1:2687:G:N2	2.51	0.41
38:A1:3266:G:H2'	38:A1:3267:A:C8	2.55	0.41
39:A3:77:G:N1	39:A3:102:A:OP2	2.50	0.41
40:A4:1:A:C4	40:A4:2:A:C8	3.08	0.41
44:AG:86:THR:O	44:AG:90:THR:OG1	2.35	0.41
44:AG:133:LYS:HB3	44:AG:138:HIS:CD2	2.55	0.41
46:AI:36:LEU:HD23	46:AI:73:ASN:ND2	2.35	0.41
47:AJ:75:LYS:O	47:AJ:78:GLU:HG3	2.20	0.41
50:AN:31:ARG:NH1	50:AN:124:ASP:OD2	2.53	0.41
50:AN:43:THR:OG1	50:AN:131:GLU:OE2	2.27	0.41
60:AX:103:TYR:HA	60:AX:138:ARG:HH12	1.84	0.41
72:Aj:64:MET:CE	72:Aj:67:LEU:HD22	2.49	0.41
76:An:8:LYS:O	76:An:12:ARG:HG2	2.20	0.41
78:Ap:36:ARG:NH1	78:Ap:48:LYS:HD2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:E:118:LYS:HG2	81:EC:6770:U:H5”	2.02	0.41
80:DC:361:ALA:HA	80:DC:366:CYS:SG	2.60	0.41
80:DC:523:SER:OG	80:DC:527:GLU:O	2.34	0.41
80:DC:751:ARG:NH2	80:DC:804:LEU:HB2	2.31	0.41
2:BB:115:ARG:O	2:BB:118:GLN:NE2	2.54	0.41
2:BB:184:LEU:HA	2:BB:187:LYS:NZ	2.35	0.41
8:BJ:146:PHE:HD2	8:BJ:148:VAL:HG12	1.86	0.41
11:BO:64:ALA:HB1	11:BO:105:LEU:HD12	2.02	0.41
13:BW:16:ASN:OD1	34:B5:1095:U:H1’	2.20	0.41
20:BF:109:LYS:HE2	20:BF:109:LYS:HB2	1.78	0.41
20:BF:136:ALA:O	20:BF:140:THR:OG1	2.27	0.41
31:Bg:16:HIS:CE1	31:Bg:37:SER:HG	2.34	0.41
31:Bg:67:ILE:HB	31:Bg:85:TRP:CD2	2.55	0.41
31:Bg:253:ALA:HB2	31:Bg:294:TRP:HE1	1.85	0.41
34:B5:56:U:OP1	34:B5:403:G:N1	2.47	0.41
34:B5:94:U:H2’	34:B5:95:G:O4’	2.20	0.41
34:B5:160:C:H2’	34:B5:161:U:O4’	2.20	0.41
34:B5:413:U:H2’	34:B5:414:C:C6	2.55	0.41
34:B5:956:C:H2’	34:B5:957:G:H8	1.86	0.41
38:A1:15:C:H1’	60:AX:40:LEU:HD11	2.03	0.41
38:A1:18:G:H2’	38:A1:19:U:C6	2.55	0.41
38:A1:967:A:H2’	38:A1:968:G:O4’	2.21	0.41
38:A1:1150:A:H2	38:A1:2379:U:O2	2.03	0.41
38:A1:1341:U:H2’	38:A1:1342:C:C6	2.56	0.41
38:A1:1393:A:OP1	67:Ae:125:ARG:NH2	2.53	0.41
38:A1:1426:C:H3’	63:Aa:4:ARG:HH22	1.84	0.41
38:A1:1598:G:H2’	38:A1:1599:G:C8	2.55	0.41
38:A1:1693:C:O2’	38:A1:1772:U:O2’	2.26	0.41
38:A1:2392:C:H2’	38:A1:2393:G:C4	2.56	0.41
38:A1:2407:C:C2	38:A1:2815:G:N2	2.88	0.41
38:A1:2470:C:C2	79:E:27:ASN:ND2	2.89	0.41
38:A1:2697:A:H2’	38:A1:2698:G:C8	2.55	0.41
38:A1:2763:U:H4’	53:AQ:176:ARG:HD2	2.02	0.41
38:A1:2911:A:H4’	38:A1:2912:G:H8	1.83	0.41
38:A1:3232:G:C6	38:A1:3256:G:C5	3.09	0.41
38:A1:3257:C:H2’	38:A1:3258:U:O4’	2.21	0.41
39:A3:112:G:H2’	39:A3:113:C:H6	1.85	0.41
40:A4:68:G:H2’	40:A4:69:U:C6	2.56	0.41
41:AD:205:SER:O	41:AD:208:MET:HB2	2.20	0.41
42:AE:7:PRO:HG2	42:AE:10:TYR:CE1	2.55	0.41
43:AF:155:LYS:HG3	43:AF:203:TRP:HZ3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:AG:90:THR:HG23	44:AG:214:LEU:HD21	2.02	0.41
44:AG:155:ASN:OD1	44:AG:156:ASP:N	2.53	0.41
51:AO:129[A]:LEU:HA	51:AO:129[A]:LEU:HD23	1.81	0.41
52:AP:128:ARG:HD2	52:AP:136:ILE:HG23	2.02	0.41
55:AS:46:GLN:NE2	55:AS:52:LYS:HA	2.36	0.41
62:AZ:27:LYS:HG3	62:AZ:42:LEU:HB3	2.03	0.41
63:Aa:76:ASP:OD2	63:Aa:77:LYS:N	2.53	0.41
69:Ag:58:ARG:HD2	69:Ag:58:ARG:HA	1.81	0.41
73:Ak:41:THR:CG2	73:Ak:56:ILE:HB	2.50	0.41
73:Ak:42:LYS:HA	73:Ak:54:LEU:O	2.21	0.41
73:Ak:65:LEU:O	73:Ak:69:LEU:HG	2.21	0.41
79:E:124:LEU:HD12	79:E:124:LEU:HA	1.78	0.41
80:DC:129:VAL:HG12	80:DC:139:THR:HG21	2.03	0.41
80:DC:693:LEU:HB3	80:DC:700:ARG:CD	2.51	0.41
81:EC:6833:G:H2'	81:EC:6834:U:C6	2.55	0.41
2:BB:100:PHE:HD2	2:BB:181:LEU:HD23	1.86	0.41
3:BC:118:ALA:HB3	3:BC:124:ALA:HB2	2.03	0.41
5:BG:60:GLY:O	34:B5:154:G:N2	2.44	0.41
6:BH:19:GLN:HA	6:BH:22:GLN:OE1	2.20	0.41
6:BH:81:LEU:HD22	6:BH:90:VAL:HB	2.03	0.41
8:BJ:80:LEU:HG	8:BJ:86:LEU:CB	2.50	0.41
19:BD:72:LEU:HG	21:BK:20:VAL:HG21	2.03	0.41
21:BK:7:ASP:OD1	21:BK:10:LYS:NZ	2.34	0.41
21:BK:73:VAL:HG12	21:BK:77:ARG:NH1	2.36	0.41
22:BP:18:ARG:NH2	25:BS:90:ASN:O	2.54	0.41
23:BQ:75:VAL:HG22	23:BQ:79:TYR:CE2	2.56	0.41
23:BQ:131:GLY:HA3	23:BQ:136:SER:O	2.21	0.41
25:BS:139:LYS:NZ	34:B5:1177:C:H5	2.19	0.41
30:Bd:11:PRO:O	30:Bd:12:ARG:HD3	2.21	0.41
31:Bg:250:TYR:HE1	31:Bg:265:LEU:HB2	1.86	0.41
34:B5:250:C:H2'	34:B5:251:A:H8	1.85	0.41
34:B5:497:G:O2'	34:B5:498:G:H4'	2.20	0.41
34:B5:812:A:N6	34:B5:858:G:H2'	2.35	0.41
34:B5:861:U:H3'	34:B5:862:A:C8	2.56	0.41
34:B5:882:U:O2'	34:B5:883:C:H5'	2.20	0.41
34:B5:1369:U:HO2'	34:B5:1373:C:H41	1.68	0.41
34:B5:1591:C:C2	34:B5:1592:A:C8	3.08	0.41
36:AB:13:HIS:HB3	36:AB:16:PHE:HD2	1.86	0.41
36:AB:85:VAL:HG22	36:AB:202:THR:HG22	2.03	0.41
36:AB:250:ALA:HB1	38:A1:2947:G:C2	2.56	0.41
36:AB:300:ARG:HD3	36:AB:300:ARG:HA	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:120:TYR:CE2	37:AC:277:PRO:HB3	2.56	0.41
38:A1:174:C:H2'	38:A1:175:C:C1'	2.51	0.41
38:A1:359:U:OP1	72:Aj:11:ARG:NH2	2.53	0.41
38:A1:633:C:O2'	68:Af:21:ARG:O	2.39	0.41
38:A1:643:U:OP1	38:A1:1116:G:O2'	2.20	0.41
38:A1:706:A:H2'	38:A1:707:U:O4'	2.20	0.41
38:A1:713:U:O2	38:A1:754:G:H4'	2.21	0.41
38:A1:727:G:H2'	38:A1:728:G:O4'	2.19	0.41
38:A1:828:A:H2'	38:A1:829:U:C6	2.56	0.41
38:A1:984:G:N2	38:A1:1138:U:OP1	2.51	0.41
38:A1:1293:U:H2'	38:A1:1294:A:C8	2.56	0.41
38:A1:1653:G:H2'	38:A1:1654:A:C8	2.56	0.41
38:A1:1662:G:H2'	38:A1:1663:C:C6	2.56	0.41
38:A1:1784:G:H2'	38:A1:1785:U:O4'	2.21	0.41
38:A1:2362:C:H2'	38:A1:2363:A:O4'	2.20	0.41
38:A1:2426:U:H2'	38:A1:2427:U:H6	1.86	0.41
38:A1:2453:U:OP2	38:A1:2460:U:N3	2.53	0.41
38:A1:2482:U:C2	38:A1:2486:A:N6	2.89	0.41
38:A1:2626:A:O5'	56:AT:2:GLY:N	2.54	0.41
38:A1:2834:G:H2'	38:A1:2835:U:H6	1.85	0.41
38:A1:3032:A:C4	38:A1:3033:A:C8	3.08	0.41
38:A1:3153:U:H4'	38:A1:3154:C:C2	2.56	0.41
38:A1:3159:C:H2'	38:A1:3160:U:H6	1.86	0.41
38:A1:3164:C:C2	38:A1:3165:A:C8	3.08	0.41
38:A1:3165:A:H61	38:A1:3285:C:H41	1.66	0.41
39:A3:28:C:H1'	39:A3:55:A:H61	1.85	0.41
41:AD:29:ASP:HB3	41:AD:32:GLN:HG2	2.02	0.41
41:AD:110:LEU:HD12	41:AD:115:LEU:HB2	2.02	0.41
45:AH:22:SER:OG	45:AH:23:ARG:N	2.54	0.41
50:AN:18:VAL:HG13	50:AN:19:LEU:HD22	2.03	0.41
54:AR:182:ASP:HA	54:AR:186:LYS:HB2	2.03	0.41
55:AS:81:TYR:HE1	55:AS:90:MET:CE	2.26	0.41
56:AT:44:ALA:HA	56:AT:95:HIS:HB3	2.03	0.41
59:AW:2:LYS:NZ	59:AW:3:VAL:O	2.53	0.41
73:Ak:27:ILE:HB	73:Ak:78:LEU:HD21	2.03	0.41
79:E:130:LYS:NZ	81:EC:6818:G:O4'	2.54	0.41
80:DC:180:ARG:HA	80:DC:180:ARG:HE	1.85	0.41
81:EC:6847:G:H1'	81:EC:6848:U:O5'	2.21	0.41
4:BE:18:TRP:HB2	4:BE:20:LEU:HG	2.03	0.41
4:BE:100:ARG:HB2	4:BE:114:ILE:HD13	2.02	0.41
5:BG:56:ASN:HD22	34:B5:154:G:H1'	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BI:48:THR:OG1	7:BI:52:ASN:O	2.39	0.41
8:BJ:132:ARG:HG3	34:B5:514:G:H5'	2.03	0.41
11:BO:46:MET:HE3	34:B5:898:A:H4'	2.03	0.41
11:BO:103:ARG:HH22	11:BO:107:ARG:HH21	1.68	0.41
15:BY:20:ARG:HD2	15:BY:74:LEU:HB3	2.03	0.41
18:Be:13:LYS:NZ	34:B5:566:C:O2	2.30	0.41
20:BF:69:PHE:CD1	23:BQ:46:PHE:CE2	3.08	0.41
20:BF:156:ARG:NE	20:BF:157:ARG:H	2.13	0.41
21:BK:83:PRO:CB	21:BK:86:ILE:HD13	2.51	0.41
24:BR:28:PHE:CZ	34:B5:1389:C:H6	2.39	0.41
25:BS:88:ARG:HH22	25:BS:108:LYS:HG2	1.86	0.41
31:Bg:102:ARG:CZ	34:B5:1342:C:H4'	2.51	0.41
31:Bg:147:HIS:CD2	31:Bg:179:LYS:HD2	2.55	0.41
31:Bg:169:ILE:HG12	31:Bg:183:LEU:HD23	2.02	0.41
31:Bg:307:ASP:OD1	31:Bg:309:VAL:HG22	2.20	0.41
34:B5:107:C:OP1	34:B5:383:G:O2'	2.39	0.41
34:B5:147:A:C5	34:B5:148:A:C8	3.09	0.41
34:B5:604:A:H2'	34:B5:605:A:O4'	2.20	0.41
34:B5:821:U:H2'	34:B5:822:U:C6	2.56	0.41
34:B5:991:G:N1	34:B5:1012:U:OP2	2.43	0.41
34:B5:1160:A:H2'	34:B5:1161:C:H6	1.85	0.41
34:B5:1438:G:H2'	34:B5:1439:C:C6	2.55	0.41
34:B5:1466:G:O2'	34:B5:1602:C:OP1	2.38	0.41
34:B5:1469:A:H2'	34:B5:1470:C:H6	1.86	0.41
34:B5:1548:G:N1	34:B5:1564:U:C4	2.89	0.41
35:AA:174:ARG:NH1	38:A1:1793:C:O2	2.54	0.41
36:AB:14:LEU:HD22	36:AB:262:TRP:CZ3	2.56	0.41
36:AB:123:TYR:OH	36:AB:124:LYS:HE3	2.20	0.41
37:AC:202:ARG:HA	38:A1:1384:U:OP2	2.21	0.41
38:A1:45:A:O2'	38:A1:95:A:N1	2.43	0.41
38:A1:195:U:H2'	38:A1:196:G:O4'	2.21	0.41
38:A1:290:G:H2'	38:A1:291:C:H6	1.86	0.41
38:A1:292:U:OP2	50:AN:68:ARG:NH2	2.48	0.41
38:A1:677:A:OP2	53:AQ:107:THR:HG21	2.21	0.41
38:A1:848:A:OP2	38:A1:848:A:H8	2.03	0.41
38:A1:1598:G:H2'	38:A1:1599:G:H8	1.86	0.41
38:A1:1720:U:P	54:AR:110:ARG:HH12	2.44	0.41
38:A1:2298:U:H2'	38:A1:2920:U:O2'	2.20	0.41
38:A1:2505:U:C2'	38:A1:2506:U:H5'	2.50	0.41
38:A1:2603:G:H2'	38:A1:2604:U:O4'	2.20	0.41
38:A1:2734:A:H2'	38:A1:2735:PSU:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:AG:89:GLU:HG2	44:AG:213:LYS:NZ	2.36	0.41
44:AG:245:LYS:O	44:AG:249:ARG:HG2	2.21	0.41
45:AH:160:ASP:O	45:AH:164:ILE:HG12	2.21	0.41
47:AJ:62:ASN:HB2	77:Ao:104:LEU:HD23	2.02	0.41
47:AJ:109:HIS:HE1	47:AJ:113:GLY:HA3	1.86	0.41
49:AM:25:LYS:HE3	49:AM:62:GLN:HG3	2.02	0.41
53:AQ:147:ARG:HB3	53:AQ:150:VAL:HG23	2.02	0.41
53:AQ:170:ARG:C	53:AQ:172:PHE:H	2.28	0.41
56:AT:86:GLU:OE2	64:Ab:24:PRO:HG2	2.20	0.41
60:AX:51:VAL:O	60:AX:51:VAL:HG13	2.21	0.41
61:AY:55:GLU:OE1	61:AY:108:LYS:HB3	2.21	0.41
71:Ai:20:MET:HE2	71:Ai:20:MET:HB2	1.67	0.41
73:Ak:40:GLN:HE21	73:Ak:55:VAL:HB	1.85	0.41
78:Ap:85:ARG:NE	78:Ap:89:MET:HE3	2.35	0.41
79:E:148:VAL:HA	79:E:151:VAL:HG12	2.02	0.41
81:EC:6800:G:O3'	81:EC:6884:G:N2	2.53	0.41
81:EC:6849:A:H3'	81:EC:6850:C:C5	2.56	0.41
1:BA:12:GLU:OE1	1:BA:12:GLU:N	2.39	0.41
1:BA:139:VAL:O	1:BA:139:VAL:HG22	2.21	0.41
1:BA:157:ASP:O	12:BV:69:LEU:HD12	2.21	0.41
2:BB:87:ARG:HH21	2:BB:89:ASP:CG	2.25	0.41
2:BB:148:ASN:OD1	2:BB:148:ASN:C	2.64	0.41
4:BE:179:LYS:HD3	4:BE:179:LYS:HA	1.83	0.41
6:BH:93:LEU:HA	6:BH:128:ASP:HB3	2.02	0.41
6:BH:122:HIS:HA	6:BH:125:ILE:HD12	2.02	0.41
7:BI:116:HIS:CE1	7:BI:117:TYR:HE2	2.38	0.41
8:BJ:141:VAL:HG21	8:BJ:146:PHE:CE2	2.56	0.41
8:BJ:170:GLY:HA3	34:B5:512:A:OP1	2.21	0.41
10:BN:20:ARG:NH2	34:B5:861:U:H4'	2.35	0.41
10:BN:92:ILE:CG2	10:BN:146:ALA:HB1	2.51	0.41
13:BW:32:LYS:O	13:BW:36:LYS:HG2	2.21	0.41
14:BX:44:GLY:H	14:BX:78:LYS:NZ	2.19	0.41
15:BY:7:ILE:HG13	15:BY:27:VAL:HG23	2.03	0.41
19:BD:11:LEU:HD12	19:BD:12:VAL:N	2.36	0.41
20:BF:91:GLU:OE1	20:BF:91:GLU:N	2.54	0.41
20:BF:166:ARG:HH12	20:BF:170:GLN:NE2	2.18	0.41
24:BR:107:SER:HB2	24:BR:119:LEU:HD23	2.03	0.41
25:BS:27:LYS:HA	25:BS:57:ARG:HA	2.03	0.41
25:BS:126:ARG:NE	25:BS:132:ARG:O	2.53	0.41
25:BS:145:ARG:HH12	34:B5:1173:C:P	2.44	0.41
27:BU:68:ARG:NH2	27:BU:70:THR:OG1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BZ:82:HIS:O	28:BZ:85:LYS:HG2	2.20	0.41
31:Bg:40:LYS:HA	31:Bg:68:VAL:HG23	2.03	0.41
32:Bf:140:TYR:HB2	34:B5:1235:C:O2	2.21	0.41
33:BM:79:ALA:O	33:BM:86:VAL:HG12	2.21	0.41
34:B5:36:C:N4	34:B5:473:A:N6	2.68	0.41
34:B5:67:A:H61	34:B5:83:G:C2'	2.34	0.41
34:B5:327:U:C2	34:B5:328:A:C8	3.09	0.41
34:B5:374:U:H2'	34:B5:375:U:C6	2.56	0.41
34:B5:416:A:H5"	34:B5:417:A:C8	2.56	0.41
34:B5:427:C:H2'	34:B5:428:A:O4'	2.21	0.41
34:B5:514:G:H2'	34:B5:515:A:H8	1.84	0.41
34:B5:590:C:N4	34:B5:591:A:H62	2.18	0.41
34:B5:947:U:H2'	34:B5:948:G:H8	1.85	0.41
34:B5:1062:A:H5'	34:B5:1063:U:C5	2.56	0.41
34:B5:1335:U:O4	34:B5:1416:G:O6	2.39	0.41
34:B5:1482:C:P	34:B5:1521:G:H1	2.44	0.41
34:B5:1565:C:H2'	34:B5:1566:U:C6	2.56	0.41
34:B5:1593:A:H2'	34:B5:1594:G:H8	1.85	0.41
34:B5:1602:C:H2'	34:B5:1603:U:O4'	2.21	0.41
35:AA:117:GLU:CD	35:AA:123:ARG:H	2.29	0.41
36:AB:283:TYR:CD1	36:AB:354:VAL:HG11	2.56	0.41
37:AC:161:LYS:HA	37:AC:161:LYS:HD2	1.94	0.41
37:AC:246:ARG:O	37:AC:248:VAL:HG23	2.21	0.41
37:AC:300:ARG:H	37:AC:300:ARG:HG3	1.76	0.41
38:A1:501:A:H5"	42:AE:28:GLN:HE22	1.86	0.41
38:A1:526:C:H2'	38:A1:527:A:H8	1.86	0.41
38:A1:613:G:H2'	38:A1:614:C:C6	2.55	0.41
38:A1:700:C:H2'	38:A1:701:G:C8	2.53	0.41
38:A1:850:U:H2'	38:A1:851:C:H6	1.86	0.41
38:A1:850:U:H2'	38:A1:851:C:C6	2.56	0.41
38:A1:1048:A:H2'	46:AI:22:TYR:CZ	2.56	0.41
38:A1:1096:U:OP2	56:AT:116:ARG:NH1	2.48	0.41
38:A1:1146:C:H4'	38:A1:1331:U:C4	2.55	0.41
38:A1:1410:U:O2'	67:Ae:95:GLU:OE1	2.38	0.41
38:A1:1456:A:N1	38:A1:1476:G:O2'	2.53	0.41
38:A1:1580:A:H2	60:AX:33:ARG:NH1	2.19	0.41
38:A1:1750:A:N3	38:A1:1752:A:C8	2.89	0.41
38:A1:1807:G:OP1	62:AZ:133:LYS:NZ	2.49	0.41
38:A1:2117:A:C8	38:A1:3064:U:H1'	2.56	0.41
38:A1:2127:U:C2	38:A1:2128:C:C5	3.09	0.41
38:A1:2129:PSU:H2'	38:A1:2130:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2225:U:H2'	38:A1:2226:U:C6	2.56	0.41
38:A1:2294:U:C2	38:A1:2297:U:C5	3.09	0.41
38:A1:2321:A:H2'	38:A1:2322:C:O4'	2.21	0.41
38:A1:2504:U:O2'	38:A1:2505:U:H6	2.01	0.41
38:A1:2563:G:OP1	62:AZ:55:LYS:N	2.52	0.41
38:A1:2565:U:H2'	38:A1:2566:C:H6	1.86	0.41
38:A1:2568:C:O2'	38:A1:2569:A:O4'	2.35	0.41
38:A1:2838:A:N6	38:A1:2850:G:O2'	2.42	0.41
38:A1:2909:U:H2'	38:A1:2910:A:O4'	2.20	0.41
38:A1:3191:G:H2'	38:A1:3192:U:C6	2.56	0.41
38:A1:3259:U:H5"	38:A1:3261:C:H5	1.86	0.41
38:A1:3277:U:H3'	38:A1:3278:C:C6	2.56	0.41
38:A1:3289:G:C2	38:A1:3290:G:C5	3.09	0.41
40:A4:46:G:OP2	74:Al:15:LYS:NZ	2.28	0.41
41:AD:85:ARG:NH1	41:AD:86:TYR:OH	2.54	0.41
43:AF:143:THR:CB	43:AF:237:ASN:HD22	2.33	0.41
44:AG:71:VAL:N	44:AG:234:GLY:O	2.53	0.41
44:AG:96:LYS:HE3	44:AG:96:LYS:HB3	1.90	0.41
47:AJ:134:PRO:O	47:AJ:152:HIS:HE1	2.04	0.41
48:AL:115:ARG:NH1	48:AL:145:PHE:O	2.47	0.41
49:AM:89:ALA:HB1	49:AM:92:GLU:OE2	2.20	0.41
50:AN:33:LYS:HG2	50:AN:34:ASN:N	2.36	0.41
50:AN:103:GLU:OE2	50:AN:118:SER:HB3	2.21	0.41
52:AP:21:TYR:CE1	52:AP:145:HIS:CE1	3.09	0.41
54:AR:173:ARG:O	54:AR:177:VAL:HG22	2.21	0.41
57:AU:41:ILE:HG21	57:AU:50:LEU:HD11	2.02	0.41
59:AW:30:ARG:HH11	59:AW:30:ARG:CB	2.34	0.41
60:AX:97:LYS:HA	60:AX:97:LYS:HD2	1.70	0.41
61:AY:51:ARG:NH1	61:AY:112:ASP:HB2	2.36	0.41
64:Ab:14:ARG:HD2	64:Ab:18:ARG:HH21	1.86	0.41
66:Ad:11:GLU:OE1	66:Ad:107:VAL:HG22	2.20	0.41
67:Ae:76:VAL:HG23	67:Ae:96:ILE:HD13	2.02	0.41
78:Ap:45:LYS:HA	78:Ap:45:LYS:HD3	1.88	0.41
79:E:14:LYS:HD3	79:E:17:LEU:HD11	2.03	0.41
79:E:65:ILE:HD11	79:E:111:ILE:HD13	2.03	0.41
79:E:122:ARG:HB2	81:EC:6770:U:H4'	2.02	0.41
80:DC:159:LYS:HG2	83:DC:901:GDP:C4	2.55	0.41
80:DC:222:ILE:HA	80:DC:225:PHE:CE2	2.56	0.41
80:DC:522:MET:HG2	80:DC:523:SER:O	2.21	0.41
80:DC:579:SER:HB3	80:DC:584:ASN:HB3	2.03	0.41
80:DC:739:ALA:O	80:DC:743:ILE:HG13	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6781:U:C6	81:EC:6782:C:H5	2.38	0.41
81:EC:6800:G:H3'	81:EC:6802:A:C6	2.56	0.41
1:BA:62:ARG:NE	12:BV:37:ALA:O	2.53	0.41
2:BB:100:PHE:CZ	2:BB:102:GLY:HA2	2.55	0.41
3:BC:82:ASN:O	3:BC:101:VAL:HG22	2.21	0.41
5:BG:14:LYS:HG2	5:BG:15:THR:H	1.86	0.41
6:BH:160:GLN:H	6:BH:160:GLN:CD	2.29	0.41
8:BJ:133:HIS:O	8:BJ:134:ILE:HD13	2.21	0.41
8:BJ:150:LEU:HA	8:BJ:153:GLU:CD	2.46	0.41
10:BN:46:THR:HB	10:BN:49:GLN:HB3	2.02	0.41
18:Be:7:SER:HB3	18:Be:10:ARG:NH2	2.36	0.41
20:BF:52:GLU:HA	20:BF:65:ARG:NH2	2.36	0.41
20:BF:96:SER:HB2	20:BF:176:THR:HG21	2.03	0.41
20:BF:219:ARG:HH12	81:EC:6841:U:H1'	1.86	0.41
23:BQ:22:VAL:HG22	23:BQ:65:ILE:HG13	2.03	0.41
23:BQ:73:GLY:O	23:BQ:77:GLN:HG3	2.20	0.41
25:BS:6:GLN:HE22	28:BZ:44:GLN:HA	1.86	0.41
25:BS:110:ARG:O	25:BS:114:GLU:OE1	2.38	0.41
31:Bg:212:ALA:HA	31:Bg:222:LEU:HD13	2.03	0.41
34:B5:309:C:H2'	34:B5:310:C:H6	1.86	0.41
34:B5:432:G:H2'	34:B5:433:C:C6	2.55	0.41
34:B5:1247:U:H2'	34:B5:1248:C:H6	1.85	0.41
34:B5:1296:A:N1	34:B5:1301:U:H5	2.19	0.41
34:B5:1525:A:H1'	34:B5:1589:C:O2'	2.21	0.41
38:A1:138:U:H2'	38:A1:139:G:H8	1.85	0.41
38:A1:172:G:H1'	38:A1:173:G:H21	1.84	0.41
38:A1:734:C:O2	38:A1:734:C:H2'	2.21	0.41
38:A1:959:C:O2	38:A1:2614:G:O2'	2.39	0.41
38:A1:1296:C:H2'	38:A1:1297:C:O4'	2.21	0.41
38:A1:1904:C:H2'	38:A1:1905:G:O4'	2.21	0.41
38:A1:2463:G:H1'	81:EC:6775:U:N3	2.36	0.41
38:A1:2901:G:O2'	38:A1:3024:A:N1	2.43	0.41
41:AD:151:GLN:NE2	41:AD:159:VAL:HG21	2.36	0.41
42:AE:50:LYS:HD3	42:AE:50:LYS:HA	1.83	0.41
42:AE:67:GLY:O	42:AE:68:PRO:C	2.64	0.41
43:AF:78:GLU:OE2	43:AF:78:GLU:N	2.46	0.41
47:AJ:82:ARG:HA	47:AJ:85:LYS:HD3	2.03	0.41
53:AQ:67:ILE:HD12	53:AQ:81:VAL:HG11	2.02	0.41
55:AS:2:ALA:O	55:AS:104:GLU:HG3	2.21	0.41
56:AT:115:LYS:O	56:AT:118:GLU:HG2	2.21	0.41
57:AU:15:PHE:HB2	57:AU:65:VAL:HG13	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AU:56:VAL:HA	57:AU:65:VAL:HA	2.03	0.41
58:AV:11:PHE:HD2	58:AV:88:ARG:HD3	1.82	0.41
62:AZ:103:GLN:HA	62:AZ:104:PRO:HD3	1.91	0.41
72:Aj:67:LEU:HD23	72:Aj:67:LEU:O	2.21	0.41
80:DC:102:LEU:HD12	80:DC:102:LEU:HA	1.89	0.41
80:DC:254:THR:HG21	80:DC:256:LYS:HE3	2.02	0.41
80:DC:492:ALA:HB1	80:DC:527:GLU:OE2	2.21	0.41
81:EC:6801:A:H3'	81:EC:6802:A:H5'	2.03	0.41
3:BC:110:HIS:CE1	12:BV:11:LEU:HD23	2.56	0.40
5:BG:56:ASN:HA	5:BG:62:PRO:HA	2.03	0.40
5:BG:206:ALA:O	5:BG:210:GLN:HG2	2.21	0.40
6:BH:59:ALA:HB1	6:BH:93:LEU:HD12	2.03	0.40
6:BH:60:ILE:HD13	6:BH:92:PHE:CD1	2.56	0.40
7:BI:195:ARG:NH2	9:BL:8:GLN:HG3	2.36	0.40
8:BJ:76:LEU:O	8:BJ:80:LEU:CB	2.69	0.40
8:BJ:78:ARG:HH22	8:BJ:82:ARG:NH2	2.19	0.40
8:BJ:133:HIS:NE2	34:B5:512:A:O2'	2.55	0.40
9:BL:133:LYS:HB2	34:B5:337:G:H3'	2.02	0.40
10:BN:5:HIS:HE1	34:B5:628:G:P	2.45	0.40
14:BX:3:LYS:HG2	14:BX:7:ARG:HH21	1.86	0.40
19:BD:22:ASN:O	19:BD:26:THR:OG1	2.29	0.40
20:BF:82:PHE:CZ	29:Bc:47:PRO:HB2	2.56	0.40
25:BS:111:ASP:OD1	25:BS:111:ASP:C	2.64	0.40
26:BT:44:GLU:OE1	26:BT:44:GLU:N	2.53	0.40
26:BT:61:VAL:O	26:BT:65:ILE:HG12	2.20	0.40
31:Bg:133:VAL:HG23	31:Bg:141:LEU:HB2	2.02	0.40
32:Bf:101:ALA:O	32:Bf:104:SER:OG	2.33	0.40
34:B5:276:C:O2'	34:B5:277:U:H2'	2.20	0.40
34:B5:484:C:H1'	34:B5:485:A:C8	2.57	0.40
34:B5:601:A:H2'	34:B5:602:U:H6	1.85	0.40
34:B5:620:A:H3'	34:B5:620:A:OP2	2.20	0.40
34:B5:1489:U:H2'	34:B5:1490:C:H5"	2.03	0.40
36:AB:259:HIS:CE1	38:A1:2366:C:H4'	2.55	0.40
37:AC:106:TRP:HB3	48:AL:24:VAL:HG21	2.03	0.40
38:A1:532:A:H2'	38:A1:533:A:C8	2.56	0.40
38:A1:538:G:H2'	38:A1:539:C:C6	2.56	0.40
38:A1:544:C:H5"	38:A1:545:U:C5	2.56	0.40
38:A1:1069:C:H2'	38:A1:1070:U:H6	1.86	0.40
38:A1:1213:G:H4'	55:AS:90:MET:HG3	2.03	0.40
38:A1:1257:C:C2	38:A1:1261:G:C8	3.08	0.40
38:A1:1293:U:O2'	55:AS:88:HIS:NE2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1298:C:O3'	75:Am:113:ARG:NH1	2.44	0.40
38:A1:1447:G:N2	38:A1:1448:U:O4	2.41	0.40
38:A1:1505:C:N4	38:A1:1506:A:H62	2.19	0.40
38:A1:1618:G:O2'	40:A4:126:A:N1	2.55	0.40
38:A1:1660:C:O2'	38:A1:1661:G:H5'	2.20	0.40
38:A1:1754:G:H2'	38:A1:1755:C:C6	2.56	0.40
38:A1:1886:A:N1	38:A1:2390:A:O2'	2.53	0.40
38:A1:2096:A:H2'	38:A1:2097:U:O4'	2.21	0.40
38:A1:2203:U:H3	38:A1:2239:G:H1	1.69	0.40
38:A1:2366:C:H2'	38:A1:2367:A:H8	1.86	0.40
38:A1:2439:A:H2'	38:A1:2440:G:C8	2.55	0.40
38:A1:2701:U:OP1	56:AT:23:GLY:N	2.50	0.40
38:A1:2975:PSU:H2'	38:A1:2976:A:C8	2.56	0.40
38:A1:3163:A:N6	38:A1:3288:G:C6	2.89	0.40
38:A1:3181:C:C4	38:A1:3182:G:C5	3.09	0.40
38:A1:3247:G:H2'	38:A1:3248:C:H6	1.83	0.40
38:A1:3290:G:H2'	38:A1:3291:G:C8	2.54	0.40
39:A3:71:G:H2'	39:A3:72:A:H8	1.86	0.40
43:AF:126:LEU:HD23	43:AF:126:LEU:HA	1.89	0.40
44:AG:165:PHE:C	44:AG:165:PHE:CD2	2.99	0.40
47:AJ:14:ILE:HG23	47:AJ:129:VAL:HG13	2.03	0.40
47:AJ:149:GLY:O	47:AJ:153:LYS:HG3	2.21	0.40
48:AL:54:LEU:HD22	48:AL:119:TYR:CG	2.56	0.40
48:AL:122:LYS:HA	48:AL:122:LYS:HD2	1.83	0.40
51:AO:140[A]:LYS:H	51:AO:140[A]:LYS:HG2	1.70	0.40
52:AP:2:ALA:O	52:AP:18:ARG:NH2	2.54	0.40
54:AR:138:LEU:HD12	54:AR:138:LEU:O	2.21	0.40
55:AS:38:LYS:HG2	55:AS:61:ILE:HD11	2.03	0.40
57:AU:22:PRO:HD3	57:AU:105:LEU:O	2.20	0.40
61:AY:100:HIS:CG	61:AY:101:PRO:HD2	2.57	0.40
62:AZ:95:VAL:HG13	62:AZ:96:VAL:HG13	2.03	0.40
65:Ac:101:LEU:HD23	65:Ac:101:LEU:HA	1.80	0.40
69:Ag:81:CYS:C	69:Ag:83:ASN:H	2.29	0.40
70:Ah:105:ARG:HH12	70:Ah:109:ILE:HG13	1.87	0.40
71:Ai:95:ALA:HB1	71:Ai:99:ARG:HH21	1.87	0.40
80:DC:386:VAL:O	80:DC:394:PHE:HB3	2.20	0.40
80:DC:406:LYS:HD2	80:DC:446:ASP:O	2.21	0.40
80:DC:460:ASP:N	80:DC:460:ASP:OD1	2.54	0.40
80:DC:536:LEU:O	80:DC:540:ILE:HG12	2.21	0.40
1:BA:37:VAL:HG12	1:BA:48:ILE:HA	2.03	0.40
2:BB:217:LEU:HD21	2:BB:220:GLN:HG3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:BE:90:ILE:HG22	4:BE:92:LEU:CD2	2.51	0.40
5:BG:30:LYS:HG3	5:BG:34:GLN:OE1	2.21	0.40
5:BG:135:PRO:HA	34:B5:167:U:H5"	2.03	0.40
5:BG:139:ASN:ND2	34:B5:143:G:OP2	2.54	0.40
6:BH:46:ILE:HD12	6:BH:46:ILE:HA	1.94	0.40
6:BH:117:THR:HB	34:B5:638:U:H4'	2.04	0.40
6:BH:157:LYS:HB3	6:BH:157:LYS:HE2	1.86	0.40
10:BN:42:ARG:HE	10:BN:80:LEU:HD21	1.86	0.40
11:BO:52:ARG:HH22	34:B5:905:A:H8	1.66	0.40
15:BY:7:ILE:HG12	15:BY:43:LYS:CD	2.51	0.40
16:Ba:33:ASP:N	16:Ba:33:ASP:OD1	2.52	0.40
19:BD:15:GLY:O	19:BD:18:TYR:HB3	2.21	0.40
19:BD:49:ILE:HG23	19:BD:89:GLU:HG2	2.03	0.40
22:BP:118:GLU:HG3	25:BS:121:ALA:HB1	2.03	0.40
26:BT:75:LYS:NZ	34:B5:1497:U:O3'	2.55	0.40
27:BU:67:THR:O	27:BU:79:TRP:HA	2.21	0.40
31:Bg:201:THR:O	31:Bg:213:SER:HA	2.21	0.40
32:Bf:83:LYS:NZ	34:B5:1211:A:OP2	2.50	0.40
32:Bf:119:ARG:NH2	32:Bf:148:TYR:HB3	2.37	0.40
34:B5:919:A:H2'	34:B5:920:U:C6	2.56	0.40
34:B5:1021:C:C4	34:B5:1022:C:C5	3.10	0.40
34:B5:1209:C:N3	34:B5:1455:G:N2	2.69	0.40
34:B5:1526:A:N1	34:B5:1608:U:O2'	2.46	0.40
34:B5:1616:G:H2'	34:B5:1617:U:C6	2.56	0.40
36:AB:160:VAL:O	36:AB:180:GLU:HA	2.21	0.40
37:AC:138:ARG:HD3	37:AC:245:GLY:C	2.46	0.40
38:A1:156:G:OP2	71:Ai:25:LYS:HB3	2.21	0.40
38:A1:163:C:H2'	38:A1:164:A:C8	2.56	0.40
38:A1:743:C:O2	53:AQ:141:ARG:HB2	2.21	0.40
38:A1:1689:U:H2'	38:A1:1690:C:C6	2.57	0.40
38:A1:1724:U:O2'	38:A1:1725:C:H5"	2.21	0.40
38:A1:2302:G:C6	38:A1:2303:A:N7	2.89	0.40
38:A1:2655:U:H5	38:A1:2715:A:C6	2.38	0.40
38:A1:2786:G:N2	63:Aa:58:MET:SD	2.90	0.40
38:A1:3163:A:H2'	38:A1:3164:C:H6	1.87	0.40
39:A3:5:G:O2'	41:AD:63:GLN:NE2	2.54	0.40
40:A4:68:G:H2'	40:A4:69:U:H6	1.86	0.40
41:AD:41:LYS:NZ	56:AT:30:TYR:O	2.54	0.40
46:AI:181:TYR:CD1	46:AI:181:TYR:C	2.99	0.40
48:AL:21:ARG:O	50:AN:196:THR:HG22	2.21	0.40
48:AL:67:ARG:HG3	48:AL:68:LYS:HG3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:AZ:42:LEU:HD12	62:AZ:42:LEU:HA	1.75	0.40
66:Ad:73:LEU:HD12	66:Ad:73:LEU:HA	1.69	0.40
80:DC:21:ASN:HD22	80:DC:101:ASN:HB2	1.86	0.40
80:DC:24:VAL:HG23	80:DC:102:LEU:HD11	2.02	0.40
3:BC:130:ILE:O	3:BC:134:LEU:HD23	2.21	0.40
3:BC:147:ASN:O	12:BV:4:ASP:HB3	2.20	0.40
4:BE:106:LYS:HD2	4:BE:108:ARG:HE	1.85	0.40
4:BE:248:ILE:HD12	4:BE:248:ILE:H	1.86	0.40
7:BI:69:SER:OG	7:BI:185:GLU:OE1	2.30	0.40
8:BJ:108:ARG:HH12	8:BJ:110:GLN:HB3	1.87	0.40
12:BV:39:VAL:HA	12:BV:45:ALA:HA	2.03	0.40
17:Bb:79:PHE:O	17:Bb:80:ARG:HD2	2.21	0.40
19:BD:23:GLU:HG2	21:BK:61:TRP:CE2	2.56	0.40
19:BD:72:LEU:HA	19:BD:75:LYS:NZ	2.36	0.40
20:BF:110:ALA:O	20:BF:114:ILE:HG23	2.22	0.40
26:BT:64:HIS:O	26:BT:68:ARG:HG2	2.21	0.40
26:BT:81:GLY:HA2	26:BT:96:ALA:HB2	2.04	0.40
31:Bg:250:TYR:O	31:Bg:250:TYR:CD1	2.74	0.40
31:Bg:266:ASP:HB2	31:Bg:267:PRO:HD3	2.02	0.40
32:Bf:102:VAL:HA	32:Bf:105:TYR:CD2	2.57	0.40
33:BM:50:LYS:HB2	33:BM:50:LYS:HE2	1.79	0.40
34:B5:546:U:H2'	34:B5:547:U:C6	2.55	0.40
34:B5:1077:C:H2'	34:B5:1078:C:C6	2.56	0.40
34:B5:1077:C:H2'	34:B5:1078:C:H6	1.87	0.40
34:B5:1147:A:H2'	34:B5:1148:C:C6	2.57	0.40
34:B5:1499:G:O6	34:B5:1509:C:N4	2.55	0.40
36:AB:55:THR:HG23	38:A1:3049:A:H1'	2.03	0.40
36:AB:102:LEU:HD12	36:AB:102:LEU:HA	1.90	0.40
37:AC:181:VAL:HG21	37:AC:224:GLY:HA3	2.02	0.40
37:AC:306:THR:HG23	38:A1:1359:C:O2'	2.21	0.40
38:A1:120:G:N2	44:AG:126:SER:O	2.49	0.40
38:A1:247:C:H4'	38:A1:248:U:C5	2.57	0.40
38:A1:275:U:H2'	38:A1:276:U:C6	2.55	0.40
38:A1:377:A:O2'	38:A1:391:A:N1	2.54	0.40
38:A1:571:U:H2'	38:A1:572:A:H8	1.87	0.40
38:A1:750:G:H2'	38:A1:750:G:N3	2.35	0.40
38:A1:760:G:O2'	38:A1:770:G:N2	2.54	0.40
38:A1:989:A:H2'	38:A1:990:PSU:O4'	2.20	0.40
38:A1:1043:C:H2'	38:A1:1044:U:C6	2.56	0.40
38:A1:1464:G:N1	38:A1:1467:A:OP2	2.47	0.40
38:A1:1495:U:H5	38:A1:1835:A:N1	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1517:G:C6	38:A1:1518:U:C4	3.09	0.40
38:A1:1823:A:H2'	38:A1:1824:U:C6	2.56	0.40
38:A1:1919:G:H2'	38:A1:1920:U:O4'	2.21	0.40
38:A1:2128:C:H2'	38:A1:2129:PSU:O4'	2.20	0.40
38:A1:2254:U:H2'	38:A1:2261:G:C2	2.56	0.40
38:A1:2561:A:N6	38:A1:2579:G:H2'	2.36	0.40
38:A1:2656:A:N7	38:A1:2658:G:C8	2.90	0.40
38:A1:2795:U:OP2	77:Ao:63:LYS:HG2	2.21	0.40
39:A3:14:U:H5	39:A3:66:A:N1	2.19	0.40
41:AD:177:GLU:H	41:AD:177:GLU:CD	2.27	0.40
44:AG:195:SER:OG	44:AG:197:VAL:O	2.34	0.40
46:AI:197:VAL:HG23	46:AI:199:PHE:HE2	1.86	0.40
47:AJ:55:ARG:HH21	81:EC:6888:A:C5'	2.34	0.40
53:AQ:185:LYS:HG2	53:AQ:186:VAL:HG22	2.03	0.40
55:AS:89:ASN:ND2	56:AT:156:TYR:H	1.95	0.40
57:AU:81:LYS:CE	57:AU:90:ARG:HH22	2.33	0.40
58:AV:66:LYS:HE3	58:AV:68:GLU:HG2	2.03	0.40
62:AZ:13:VAL:HG12	62:AZ:15:ARG:H	1.86	0.40
63:Aa:149:ALA:HB2	71:Ai:7:ILE:C	2.46	0.40
72:Aj:39:TYR:CD1	72:Aj:40:PRO:HA	2.56	0.40
81:EC:6787:U:H2'	81:EC:6804:A:N3	2.36	0.40
81:EC:6834:U:H1'	81:EC:6872:A:C8	2.57	0.40
81:EC:6873:A:O2'	81:EC:6874:A:H5'	2.20	0.40
3:BC:43:ARG:NE	3:BC:248:SER:HA	2.37	0.40
3:BC:104:VAL:HG22	3:BC:132:ALA:HB1	2.03	0.40
5:BG:142:ARG:HA	5:BG:147:LEU:HD12	2.03	0.40
6:BH:71:HIS:HB3	6:BH:131:PHE:CZ	2.57	0.40
7:BI:116:HIS:ND1	7:BI:117:TYR:HE2	2.20	0.40
8:BJ:40:LYS:HB2	8:BJ:40:LYS:HE2	1.81	0.40
8:BJ:107:ARG:N	8:BJ:107:ARG:HD2	2.37	0.40
12:BV:72:LEU:HD13	12:BV:72:LEU:HA	1.93	0.40
19:BD:71:LEU:O	19:BD:75:LYS:HG2	2.22	0.40
22:BP:21:ASP:O	22:BP:25:LEU:HG	2.22	0.40
25:BS:35:ILE:HG13	25:BS:102:ALA:HB2	2.03	0.40
32:Bf:93:HIS:N	34:B5:1247:U:H5"	2.36	0.40
32:Bf:132:LEU:HD23	32:Bf:141:CYS:HA	2.03	0.40
34:B5:237:C:C4	34:B5:834:G:H4'	2.55	0.40
34:B5:314:C:C2	34:B5:355:G:C2	3.10	0.40
34:B5:735:C:O2'	34:B5:736:C:H5	2.05	0.40
34:B5:1246:C:C4	34:B5:1247:U:C4	3.10	0.40
34:B5:1277:G:H2'	34:B5:1278:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1467:C:H2'	34:B5:1468:U:C6	2.56	0.40
34:B5:1606:C:H2'	34:B5:1607:G:O4'	2.21	0.40
34:B5:1611:A:H2'	34:B5:1612:U:H6	1.86	0.40
34:B5:1776:A:H2'	34:B5:1777:G:C8	2.56	0.40
35:AA:42:ARG:HH22	38:A1:2551:U:H5'	1.86	0.40
35:AA:65:ASP:HB3	35:AA:68:LYS:O	2.21	0.40
35:AA:79:ASN:HD22	35:AA:167:GLY:C	2.29	0.40
36:AB:243:HIC:O	36:AB:244:ARG:HG2	2.21	0.40
38:A1:370:U:H4'	38:A1:404:G:H5'	2.03	0.40
38:A1:381:U:H2'	38:A1:382:U:C6	2.57	0.40
38:A1:651:G:H5'	38:A1:2871:G:C2	2.56	0.40
38:A1:1259:A:C8	38:A1:1260:A:C5	3.10	0.40
38:A1:1262:G:N2	38:A1:1264:G:H1'	2.35	0.40
38:A1:1520:G:H2'	38:A1:1521:G:O4'	2.21	0.40
38:A1:2506:U:O2'	38:A1:2507:C:P	2.79	0.40
38:A1:3023:U:H2'	38:A1:3024:A:H8	1.86	0.40
38:A1:3194:C:H2'	38:A1:3195:U:H3'	2.03	0.40
38:A1:3352:U:H6	38:A1:3352:U:P	2.44	0.40
40:A4:107:G:H2'	40:A4:108:C:C6	2.56	0.40
40:A4:115:C:H2'	40:A4:116:G:O4'	2.22	0.40
40:A4:118:C:H2'	40:A4:119:C:H6	1.86	0.40
42:AE:34:LEU:HD23	42:AE:63:LEU:HD21	2.04	0.40
45:AH:93:VAL:O	45:AH:177:ASP:HA	2.21	0.40
45:AH:150:SER:O	45:AH:154:VAL:HG12	2.21	0.40
48:AL:119:TYR:CE2	48:AL:123:ILE:HD13	2.56	0.40
51:AO:15[A]:LEU:HD11	51:AO:128[A]:ARG:HB3	2.02	0.40
51:AO:41[A]:LEU:HB3	51:AO:138[A]:LEU:HD12	2.03	0.40
53:AQ:80:THR:OG1	53:AQ:100:THR:HG23	2.21	0.40
56:AT:73:GLY:HA2	56:AT:89:LEU:O	2.22	0.40
57:AU:93:ILE:HA	57:AU:93:ILE:HD13	1.86	0.40
61:AY:59:VAL:O	61:AY:64:LYS:HG3	2.22	0.40
69:Ag:97:GLU:O	69:Ag:100:ILE:HG22	2.22	0.40
74:Al:43:ASN:ND2	74:Al:45:ARG:HB2	2.37	0.40
80:DC:31:GLY:HA3	80:DC:158:ASN:ND2	2.36	0.40
80:DC:174:LEU:HB3	80:DC:278:LEU:HD11	2.03	0.40
80:DC:215:LEU:HD11	83:DC:901:GDP:H2'	2.03	0.40
80:DC:382:VAL:HG13	80:DC:397:PHE:O	2.22	0.40
80:DC:390:ASP:OD1	80:DC:390:ASP:N	2.45	0.40
80:DC:725:GLN:HA	80:DC:803:THR:HA	2.04	0.40
80:DC:744:TYR:CD1	80:DC:754:VAL:HG21	2.55	0.40
2:BB:65:VAL:HG11	34:B5:920:U:H5'	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BB:120:LEU:HD12	2:BB:140:ILE:HD11	2.02	0.40
2:BB:144:ARG:HD3	2:BB:208:GLN:HA	2.03	0.40
2:BB:192:VAL:O	2:BB:196:GLU:HG2	2.21	0.40
3:BC:57:PHE:CE2	3:BC:138:PRO:HG3	2.57	0.40
4:BE:68:ARG:HA	4:BE:68:ARG:NE	2.37	0.40
4:BE:187:ARG:HH22	34:B5:752:A:H3'	1.85	0.40
5:BG:39:GLU:CD	5:BG:39:GLU:H	2.30	0.40
5:BG:67:VAL:HG11	5:BG:73:ILE:HG21	2.03	0.40
6:BH:11:GLN:CD	6:BH:13:PRO:HD2	2.46	0.40
6:BH:49:ILE:HG12	6:BH:175:LYS:HG2	2.02	0.40
7:BI:34:ALA:HB2	7:BI:56:ARG:HD2	2.04	0.40
7:BI:47:ARG:NH1	7:BI:51:GLY:H	2.16	0.40
9:BL:71:LEU:HD22	9:BL:88:ARG:NH2	2.37	0.40
12:BV:30:ALA:O	12:BV:60:ARG:HD3	2.21	0.40
13:BW:118:ARG:NH2	34:B5:687:G:H5'	2.37	0.40
14:BX:42:PRO:HB3	14:BX:83:VAL:HG11	2.04	0.40
18:Be:25:GLU:HG2	34:B5:542:A:H61	1.85	0.40
20:BF:116:HIS:O	20:BF:120:ILE:HG12	2.21	0.40
29:Bc:29:ARG:NE	29:Bc:39:THR:HG22	2.36	0.40
31:Bg:106:HIS:CD2	31:Bg:132:LYS:HD2	2.57	0.40
34:B5:93:A:H4'	34:B5:94:U:OP2	2.22	0.40
34:B5:689:G:H2'	34:B5:690:G:H8	1.87	0.40
34:B5:1016:C:H2'	34:B5:1017:U:O4'	2.21	0.40
34:B5:1317:C:H2'	34:B5:1318:G:O4'	2.22	0.40
34:B5:1639:C:H2'	34:B5:1640:C:O4'	2.20	0.40
37:AC:316:ASN:HB2	38:A1:506:U:OP1	2.22	0.40
38:A1:3:U:H2'	38:A1:4:U:C6	2.56	0.40
38:A1:157:A:H2'	38:A1:158:G:O4'	2.20	0.40
38:A1:320:G:H2'	38:A1:321:C:C6	2.56	0.40
38:A1:538:G:O6	38:A1:553:U:O4	2.40	0.40
38:A1:542:G:N1	38:A1:549:U:O4	2.54	0.40
38:A1:598:A:H2'	38:A1:599:C:H6	1.86	0.40
38:A1:817:A:H8	72:Aj:15:SER:OG	2.03	0.40
38:A1:894:G:N2	38:A1:1660:C:H5'	2.37	0.40
38:A1:1126:G:H5"	46:AI:119:TRP:CZ3	2.57	0.40
38:A1:1138:U:H2'	38:A1:1139:G:C8	2.56	0.40
38:A1:1718:G:OP1	54:AR:118:HIS:HA	2.21	0.40
38:A1:1794:G:O2'	38:A1:1796:G:N2	2.55	0.40
38:A1:1950:U:H2'	38:A1:1951:C:H6	1.84	0.40
38:A1:2280:A:O2'	38:A1:2281:A:H3'	2.21	0.40
38:A1:2444:C:N3	38:A1:2445:A:N6	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2504:U:O2'	38:A1:2505:U:H5"	2.21	0.40
38:A1:2736:A:OP1	56:AT:92:ARG:NH2	2.55	0.40
38:A1:2918:G:C2	38:A1:2919:A:N7	2.89	0.40
38:A1:3109:G:H1	38:A1:3125:U:H3	1.70	0.40
38:A1:3183:A:C2	38:A1:3188:G:H4'	2.55	0.40
39:A3:24:A:H2'	39:A3:25:G:C8	2.56	0.40
40:A4:73:PSU:H2'	40:A4:74:U:O4'	2.22	0.40
40:A4:140:G:H2'	40:A4:141:C:O4'	2.22	0.40
48:AL:118:GLU:O	48:AL:122:LYS:HB2	2.21	0.40
53:AQ:92:ARG:HG3	63:Aa:76:ASP:HB2	2.04	0.40
58:AV:17:LEU:HD23	58:AV:17:LEU:HA	1.70	0.40
58:AV:54:LEU:HD12	58:AV:54:LEU:HA	1.61	0.40
73:Ak:20:VAL:HG23	73:Ak:46:ARG:O	2.22	0.40
80:DC:590:ALA:HA	80:DC:685:ARG:O	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	BA	204/252 (81%)	185 (91%)	19 (9%)	0	100	100
2	BB	212/255 (83%)	185 (87%)	27 (13%)	0	100	100
3	BC	215/254 (85%)	208 (97%)	7 (3%)	0	100	100
4	BE	258/261 (99%)	235 (91%)	23 (9%)	0	100	100
5	BG	224/236 (95%)	209 (93%)	15 (7%)	0	100	100
6	BH	182/190 (96%)	168 (92%)	14 (8%)	0	100	100
7	BI	184/200 (92%)	162 (88%)	22 (12%)	0	100	100
8	BJ	183/197 (93%)	164 (90%)	19 (10%)	0	100	100
9	BL	153/156 (98%)	138 (90%)	15 (10%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	BN	148/151 (98%)	137 (93%)	11 (7%)	0	100	100
11	BO	125/137 (91%)	111 (89%)	14 (11%)	0	100	100
12	BV	85/87 (98%)	76 (89%)	9 (11%)	0	100	100
13	BW	127/130 (98%)	118 (93%)	9 (7%)	0	100	100
14	BX	142/145 (98%)	127 (89%)	15 (11%)	0	100	100
15	BY	132/135 (98%)	125 (95%)	7 (5%)	0	100	100
16	Ba	95/119 (80%)	82 (86%)	13 (14%)	0	100	100
17	Bb	79/82 (96%)	74 (94%)	5 (6%)	0	100	100
18	Be	58/63 (92%)	49 (84%)	9 (16%)	0	100	100
19	BD	221/240 (92%)	209 (95%)	12 (5%)	0	100	100
20	BF	204/225 (91%)	189 (93%)	15 (7%)	0	100	100
21	BK	94/105 (90%)	80 (85%)	14 (15%)	0	100	100
22	BP	122/142 (86%)	114 (93%)	8 (7%)	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%)	129 (90%)	14 (10%)	0	100	100
26	BT	139/144 (96%)	125 (90%)	14 (10%)	0	100	100
27	BU	105/121 (87%)	99 (94%)	6 (6%)	0	100	100
28	BZ	69/108 (64%)	64 (93%)	5 (7%)	0	100	100
29	Bc	61/67 (91%)	58 (95%)	3 (5%)	0	100	100
30	Bd	51/56 (91%)	49 (96%)	2 (4%)	0	100	100
31	Bg	310/319 (97%)	276 (89%)	34 (11%)	0	100	100
32	Bf	73/152 (48%)	65 (89%)	8 (11%)	0	100	100
33	BM	122/143 (85%)	114 (93%)	8 (7%)	0	100	100
35	AA	245/254 (96%)	231 (94%)	14 (6%)	0	100	100
36	AB	383/387 (99%)	355 (93%)	28 (7%)	0	100	100
37	AC	359/362 (99%)	332 (92%)	27 (8%)	0	100	100
41	AD	290/297 (98%)	271 (93%)	19 (7%)	0	100	100
42	AE	163/176 (93%)	146 (90%)	17 (10%)	0	100	100
43	AF	220/244 (90%)	208 (94%)	12 (6%)	0	100	100
44	AG	228/256 (89%)	213 (93%)	15 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
45	AH	188/191 (98%)	175 (93%)	13 (7%)	0	100	100
46	AI	220/222 (99%)	209 (95%)	11 (5%)	0	100	100
47	AJ	167/174 (96%)	154 (92%)	13 (8%)	0	100	100
48	AL	191/199 (96%)	178 (93%)	13 (7%)	0	100	100
49	AM	134/138 (97%)	128 (96%)	6 (4%)	0	100	100
50	AN	201/204 (98%)	186 (92%)	15 (8%)	0	100	100
51	AO	195/199 (98%)	188 (96%)	7 (4%)	0	100	100
52	AP	171/184 (93%)	165 (96%)	6 (4%)	0	100	100
53	AQ	183/186 (98%)	174 (95%)	9 (5%)	0	100	100
54	AR	186/189 (98%)	172 (92%)	14 (8%)	0	100	100
55	AS	170/178 (96%)	155 (91%)	15 (9%)	0	100	100
56	AT	157/160 (98%)	141 (90%)	16 (10%)	0	100	100
57	AU	98/121 (81%)	92 (94%)	6 (6%)	0	100	100
58	AV	134/137 (98%)	127 (95%)	7 (5%)	0	100	100
59	AW	61/155 (39%)	58 (95%)	3 (5%)	0	100	100
60	AX	119/142 (84%)	113 (95%)	6 (5%)	0	100	100
61	AY	124/127 (98%)	116 (94%)	8 (6%)	0	100	100
62	AZ	133/136 (98%)	121 (91%)	12 (9%)	0	100	100
63	Aa	146/149 (98%)	134 (92%)	12 (8%)	0	100	100
64	Ab	56/59 (95%)	49 (88%)	7 (12%)	0	100	100
65	Ac	95/105 (90%)	92 (97%)	3 (3%)	0	100	100
66	Ad	107/113 (95%)	97 (91%)	10 (9%)	0	100	100
67	Ae	125/130 (96%)	121 (97%)	4 (3%)	0	100	100
68	Af	104/107 (97%)	98 (94%)	6 (6%)	0	100	100
69	Ag	110/121 (91%)	107 (97%)	3 (3%)	0	100	100
70	Ah	117/120 (98%)	113 (97%)	4 (3%)	0	100	100
71	Ai	97/100 (97%)	89 (92%)	8 (8%)	0	100	100
72	Aj	85/88 (97%)	80 (94%)	5 (6%)	0	100	100
73	Ak	75/78 (96%)	70 (93%)	5 (7%)	0	100	100
74	Al	48/51 (94%)	44 (92%)	4 (8%)	0	100	100
75	Am	50/128 (39%)	48 (96%)	2 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
76	An	23/25 (92%)	23 (100%)	0	0	100	100
77	Ao	102/106 (96%)	95 (93%)	7 (7%)	0	100	100
78	Ap	89/92 (97%)	85 (96%)	4 (4%)	0	100	100
79	E	215/217 (99%)	190 (88%)	25 (12%)	0	100	100
80	DC	819/842 (97%)	744 (91%)	73 (9%)	2 (0%)	43	73
All	All	11959/12946 (92%)	11051 (92%)	906 (8%)	2 (0%)	100	100

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
80	DC	171	LYS
80	DC	774	VAL

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	BA	173/210 (82%)	173 (100%)	0	100	100
2	BB	191/224 (85%)	191 (100%)	0	100	100
3	BC	176/205 (86%)	176 (100%)	0	100	100
4	BE	221/222 (100%)	221 (100%)	0	100	100
5	BG	193/201 (96%)	193 (100%)	0	100	100
6	BH	165/170 (97%)	165 (100%)	0	100	100
7	BI	150/161 (93%)	150 (100%)	0	100	100
8	BJ	158/166 (95%)	158 (100%)	0	100	100
9	BL	136/137 (99%)	136 (100%)	0	100	100
10	BN	127/128 (99%)	127 (100%)	0	100	100
11	BO	96/105 (91%)	96 (100%)	0	100	100
12	BV	74/74 (100%)	74 (100%)	0	100	100
13	BW	110/111 (99%)	110 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
14	BX	119/120 (99%)	119 (100%)	0	100	100
15	BY	112/113 (99%)	112 (100%)	0	100	100
16	Ba	83/100 (83%)	83 (100%)	0	100	100
17	Bb	70/71 (99%)	70 (100%)	0	100	100
18	Be	51/54 (94%)	51 (100%)	0	100	100
19	BD	182/195 (93%)	182 (100%)	0	100	100
20	BF	173/191 (91%)	173 (100%)	0	100	100
21	BK	89/98 (91%)	89 (100%)	0	100	100
22	BP	104/118 (88%)	104 (100%)	0	100	100
23	BQ	117/119 (98%)	117 (100%)	0	100	100
24	BR	101/124 (82%)	101 (100%)	0	100	100
25	BS	128/129 (99%)	128 (100%)	0	100	100
26	BT	113/116 (97%)	113 (100%)	0	100	100
27	BU	100/114 (88%)	100 (100%)	0	100	100
28	BZ	62/89 (70%)	62 (100%)	0	100	100
29	Bc	56/60 (93%)	56 (100%)	0	100	100
30	Bd	47/49 (96%)	47 (100%)	0	100	100
31	Bg	256/262 (98%)	256 (100%)	0	100	100
32	Bf	66/135 (49%)	66 (100%)	0	100	100
33	BM	100/119 (84%)	100 (100%)	0	100	100
35	AA	189/196 (96%)	189 (100%)	0	100	100
36	AB	321/322 (100%)	321 (100%)	0	100	100
37	AC	288/289 (100%)	288 (100%)	0	100	100
41	AD	241/245 (98%)	241 (100%)	0	100	100
42	AE	137/153 (90%)	137 (100%)	0	100	100
43	AF	186/205 (91%)	186 (100%)	0	100	100
44	AG	189/208 (91%)	189 (100%)	0	100	100
45	AH	170/171 (99%)	170 (100%)	0	100	100
46	AI	190/190 (100%)	190 (100%)	0	100	100
47	AJ	147/150 (98%)	147 (100%)	0	100	100
48	AL	154/159 (97%)	154 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
49	AM	107/109 (98%)	107 (100%)	0	100	100
50	AN	175/176 (99%)	175 (100%)	0	100	100
51	AO	160/162 (99%)	160 (100%)	0	100	100
52	AP	141/146 (97%)	141 (100%)	0	100	100
53	AQ	150/151 (99%)	150 (100%)	0	100	100
54	AR	153/154 (99%)	153 (100%)	0	100	100
55	AS	156/162 (96%)	156 (100%)	0	100	100
56	AT	136/137 (99%)	136 (100%)	0	100	100
57	AU	87/107 (81%)	87 (100%)	0	100	100
58	AV	104/105 (99%)	104 (100%)	0	100	100
59	AW	55/129 (43%)	55 (100%)	0	100	100
60	AX	105/118 (89%)	105 (100%)	0	100	100
61	AY	109/110 (99%)	109 (100%)	0	100	100
62	AZ	115/116 (99%)	115 (100%)	0	100	100
63	Aa	118/119 (99%)	118 (100%)	0	100	100
64	Ab	46/47 (98%)	46 (100%)	0	100	100
65	Ac	81/88 (92%)	81 (100%)	0	100	100
66	Ad	96/97 (99%)	96 (100%)	0	100	100
67	Ae	109/111 (98%)	109 (100%)	0	100	100
68	Af	90/91 (99%)	90 (100%)	0	100	100
69	Ag	95/103 (92%)	95 (100%)	0	100	100
70	Ah	104/105 (99%)	104 (100%)	0	100	100
71	Ai	81/82 (99%)	81 (100%)	0	100	100
72	Aj	70/71 (99%)	70 (100%)	0	100	100
73	Ak	68/69 (99%)	68 (100%)	0	100	100
74	Al	45/46 (98%)	45 (100%)	0	100	100
75	Am	47/116 (40%)	47 (100%)	0	100	100
76	An	23/23 (100%)	23 (100%)	0	100	100
77	Ao	90/91 (99%)	90 (100%)	0	100	100
78	Ap	71/72 (99%)	71 (100%)	0	100	100
79	E	198/198 (100%)	198 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
80	DC	699/714 (98%)	699 (100%)	0	100 100
All	All	10195/10903 (94%)	10195 (100%)	0	100 100

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

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (190) such sidechains are listed below:

Mol	Chain	Res	Type
1	BA	21	ASN
1	BA	30	GLN
1	BA	49	ASN
1	BA	131	GLN
2	BB	74	GLN
2	BB	79	HIS
2	BB	95	ASN
2	BB	118	GLN
2	BB	149	GLN
2	BB	211	HIS
2	BB	220	GLN
3	BC	110	HIS
3	BC	189	GLN
3	BC	233	GLN
4	BE	36	HIS
4	BE	57	ASN
4	BE	130	GLN
4	BE	157	ASN
5	BG	56	ASN
5	BG	59	GLN
5	BG	65	GLN
5	BG	139	ASN
5	BG	182	GLN
6	BH	122	HIS
7	BI	32	GLN
7	BI	84	HIS
7	BI	88	ASN
7	BI	116	HIS
9	BL	81	HIS
9	BL	106	ASN
9	BL	150	ASN
10	BN	5	HIS
10	BN	62	GLN

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Mol	Chain	Res	Type
10	BN	123	HIS
12	BV	33	GLN
12	BV	74	GLN
13	BW	12	ASN
13	BW	42	GLN
13	BW	44	HIS
13	BW	56	HIS
13	BW	70	ASN
13	BW	80	ASN
13	BW	120	HIS
15	BY	15	ASN
15	BY	22	GLN
17	Bb	19	HIS
17	Bb	26	GLN
19	BD	101	GLN
19	BD	162	GLN
20	BF	35	GLN
20	BF	63	GLN
20	BF	103	ASN
20	BF	122	ASN
20	BF	170	GLN
20	BF	200	ASN
21	BK	32	HIS
21	BK	62	GLN
22	BP	15	HIS
22	BP	79	HIS
23	BQ	93	HIS
23	BQ	100	GLN
24	BR	42	GLN
25	BS	6	GLN
25	BS	44	ASN
26	BT	12	GLN
26	BT	70	GLN
26	BT	77	ASN
26	BT	93	HIS
26	BT	101	ASN
27	BU	17	GLN
27	BU	48	HIS
30	Bd	37	ASN
31	Bg	174	ASN
31	Bg	308	ASN
33	BM	38	HIS

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Mol	Chain	Res	Type
33	BM	125	ASN
33	BM	143	GLN
35	AA	24	GLN
35	AA	50	HIS
35	AA	79	ASN
35	AA	132	ASN
36	AB	182	GLN
36	AB	184	ASN
36	AB	212	ASN
36	AB	224	HIS
37	AC	5	GLN
37	AC	9	HIS
37	AC	58	HIS
37	AC	110	ASN
37	AC	175	HIS
37	AC	196	ASN
37	AC	279	HIS
37	AC	322	GLN
41	AD	39	GLN
41	AD	40	HIS
41	AD	63	GLN
41	AD	175	HIS
41	AD	178	ASN
41	AD	244	HIS
42	AE	138	GLN
43	AF	25	GLN
43	AF	61	ASN
43	AF	81	HIS
43	AF	104	GLN
43	AF	172	ASN
43	AF	186	HIS
43	AF	237	ASN
44	AG	38	GLN
44	AG	137	ASN
44	AG	191	ASN
45	AH	9	GLN
45	AH	169	ASN
46	AI	12	GLN
46	AI	59	GLN
46	AI	112	GLN
46	AI	162	GLN
47	AJ	152	HIS

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Mol	Chain	Res	Type
47	AJ	165	GLN
48	AL	6	ASN
48	AL	99	HIS
50	AN	86	ASN
50	AN	195	ASN
51	AO	29[A]	ASN
51	AO	193[A]	GLN
52	AP	34	GLN
52	AP	50	GLN
52	AP	145	HIS
53	AQ	145	ASN
53	AQ	158	HIS
54	AR	118	HIS
54	AR	130	ASN
54	AR	134	HIS
55	AS	3	HIS
55	AS	46	GLN
55	AS	89	ASN
55	AS	138	GLN
56	AT	49	GLN
56	AT	95	HIS
56	AT	127	GLN
57	AU	87	ASN
58	AV	81	GLN
58	AV	98	ASN
59	AW	32	GLN
59	AW	59	HIS
60	AX	55	ASN
60	AX	85	GLN
60	AX	111	ASN
60	AX	117	ASN
61	AY	120	GLN
63	Aa	28	HIS
63	Aa	67	HIS
64	Ab	6	ASN
64	Ab	42	ASN
64	Ab	43	HIS
64	Ab	48	HIS
65	Ac	36	GLN
65	Ac	47	ASN
65	Ac	71	GLN
66	Ad	21	HIS

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Mol	Chain	Res	Type
66	Ad	57	GLN
67	Ae	35	GLN
67	Ae	49	ASN
67	Ae	52	GLN
67	Ae	71	HIS
69	Ag	61	GLN
71	Ai	92	ASN
72	Aj	79	GLN
73	Ak	67	GLN
74	Al	4	GLN
74	Al	50	ASN
77	Ao	3	ASN
77	Ao	22	GLN
77	Ao	47	GLN
77	Ao	82	GLN
77	Ao	102	GLN
79	E	119	GLN
79	E	188	ASN
80	DC	21	ASN
80	DC	101	ASN
80	DC	176	GLN
80	DC	274	ASN
80	DC	414	GLN
80	DC	461	GLN
80	DC	476	HIS
80	DC	549	HIS
80	DC	603	ASN
80	DC	687	ASN
80	DC	694	HIS
80	DC	791	GLN
80	DC	795	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
34	B5	1754/1798 (97%)	482 (27%)	11 (0%)
38	A1	3211/3394 (94%)	698 (21%)	22 (0%)
39	A3	120/121 (99%)	17 (14%)	1 (0%)
40	A4	157/158 (99%)	29 (18%)	1 (0%)
81	EC	127/202 (62%)	88 (69%)	7 (5%)
All	All	5369/5673 (94%)	1314 (24%)	42 (0%)

All (1314) 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	47	A
34	B5	50	C
34	B5	57	G
34	B5	59	C
34	B5	60	U
34	B5	63	G
34	B5	68	A
34	B5	69	G
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	84	A
34	B5	104	A
34	B5	111	U
34	B5	114	C
34	B5	115	G
34	B5	118	U
34	B5	119	A
34	B5	121	U
34	B5	127	G
34	B5	130	C
34	B5	131	C
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
34	B5	145	A
34	B5	146	U
34	B5	150	U

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Mol	Chain	Res	Type
34	B5	153	G
34	B5	156	A
34	B5	159	U
34	B5	161	U
34	B5	166	C
34	B5	169	A
34	B5	176	C
34	B5	178	U
34	B5	179	A
34	B5	188	A
34	B5	189	C
34	B5	191	C
34	B5	193	U
34	B5	194	U
34	B5	195	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	224	C
34	B5	225	A
34	B5	226	A
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
34	B5	242	U
34	B5	249	U
34	B5	250	C
34	B5	253	A
34	B5	257	A
34	B5	260	U

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Mol	Chain	Res	Type
34	B5	261	U
34	B5	262	U
34	B5	265	A
34	B5	272	U
34	B5	273	G
34	B5	280	U
34	B5	299	A
34	B5	304	U
34	B5	309	C
34	B5	316	A
34	B5	320	U
34	B5	321	C
34	B5	322	G
34	B5	323	A
34	B5	333	A
34	B5	337	G
34	B5	338	C
34	B5	350	U
34	B5	352	A
34	B5	359	A
34	B5	360	A
34	B5	361	C
34	B5	370	A
34	B5	380	U
34	B5	387	A
34	B5	388	G
34	B5	400	A
34	B5	401	A
34	B5	402	C
34	B5	404	G
34	B5	422	G
34	B5	423	G
34	B5	424	C
34	B5	425	A
34	B5	426	G
34	B5	428	A
34	B5	435	C
34	B5	439	U
34	B5	444	C
34	B5	454	U
34	B5	456	A
34	B5	460	A

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Mol	Chain	Res	Type
34	B5	464	A
34	B5	468	A
34	B5	475	A
34	B5	480	G
34	B5	482	U
34	B5	483	A
34	B5	484	C
34	B5	486	G
34	B5	487	G
34	B5	488	G
34	B5	489	C
34	B5	490	C
34	B5	491	C
34	B5	492	A
34	B5	493	U
34	B5	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	503	G
34	B5	505	A
34	B5	506	A
34	B5	511	A
34	B5	514	G
34	B5	515	A
34	B5	519	C
34	B5	534	A
34	B5	538	A
34	B5	540	G
34	B5	541	A
34	B5	542	A
34	B5	544	A
34	B5	554	C
34	B5	555	A
34	B5	557	G
34	B5	558	U
34	B5	559	C
34	B5	564	G
34	B5	565	C

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Mol	Chain	Res	Type
34	B5	568	G
34	B5	572	C
34	B5	578	U
34	B5	580	A
34	B5	585	A
34	B5	594	A
34	B5	595	G
34	B5	597	G
34	B5	606	A
34	B5	610	G
34	B5	611	U
34	B5	613	G
34	B5	619	A
34	B5	620	A
34	B5	623	A
34	B5	624	G
34	B5	635	A
34	B5	648	G
34	B5	649	U
34	B5	650	U
34	B5	651	G
34	B5	652	G
34	B5	656	G
34	B5	657	U
34	B5	658	C
34	B5	677	G
34	B5	679	U
34	B5	681	U
34	B5	682	C
34	B5	684	A
34	B5	685	A
34	B5	691	C
34	B5	694	U
34	B5	696	C
34	B5	698	U
34	B5	699	U
34	B5	700	C
34	B5	701	U
34	B5	702	G
34	B5	703	G
34	B5	704	C
34	B5	731	C

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Mol	Chain	Res	Type
34	B5	732	G
34	B5	733	A
34	B5	734	A
34	B5	735	C
34	B5	736	C
34	B5	737	A
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	763	G
34	B5	765	G
34	B5	766	PSU
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	787	G
34	B5	789	A
34	B5	791	A
34	B5	794	U
34	B5	803	A
34	B5	807	A
34	B5	812	A
34	B5	813	U
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
34	B5	830	U
34	B5	831	U
34	B5	832	U

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Mol	Chain	Res	Type
34	B5	834	G
34	B5	835	U
34	B5	836	U
34	B5	837	G
34	B5	838	G
34	B5	839	U
34	B5	842	C
34	B5	843	U
34	B5	844	A
34	B5	846	G
34	B5	847	A
34	B5	849	C
34	B5	850	A
34	B5	851	U
34	B5	852	C
34	B5	853	G
34	B5	854	U
34	B5	856	A
34	B5	857	U
34	B5	863	A
34	B5	873	U
34	B5	883	C
34	B5	885	G
34	B5	890	C
34	B5	893	U
34	B5	895	G
34	B5	898	A
34	B5	899	G
34	B5	905	A
34	B5	914	G
34	B5	921	U
34	B5	927	C
34	B5	928	U
34	B5	933	A
34	B5	935	U
34	B5	945	U
34	B5	951	A
34	B5	959	U
34	B5	960	U
34	B5	966	A
34	B5	992	A
34	B5	1003	A

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Mol	Chain	Res	Type
34	B5	1004	U
34	B5	1005	A
34	B5	1021	C
34	B5	1024	U
34	B5	1026	A
34	B5	1028	C
34	B5	1030	A
34	B5	1031	U
34	B5	1032	G
34	B5	1039	A
34	B5	1042	G
34	B5	1052	U
34	B5	1053	G
34	B5	1056	U
34	B5	1057	U
34	B5	1059	U
34	B5	1060	U
34	B5	1061	A
34	B5	1062	A
34	B5	1063	U
34	B5	1064	G
34	B5	1076	A
34	B5	1081	A
34	B5	1082	C
34	B5	1083	G
34	B5	1092	A
34	B5	1098	U
34	B5	1100	G
34	B5	1113	A
34	B5	1115	U
34	B5	1126	G
34	B5	1138	A
34	B5	1150	G
34	B5	1158	C
34	B5	1182	U
34	B5	1183	A
34	B5	1185	U
34	B5	1186	U
34	B5	1194	A
34	B5	1196	A
34	B5	1199	G
34	B5	1200	G

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Mol	Chain	Res	Type
34	B5	1201	G
34	B5	1202	A
34	B5	1207	C
34	B5	1212	G
34	B5	1217	A
34	B5	1218	G
34	B5	1228	G
34	B5	1229	G
34	B5	1230	A
34	B5	1243	G
34	B5	1244	A
34	B5	1245	G
34	B5	1246	C
34	B5	1250	U
34	B5	1251	U
34	B5	1252	C
34	B5	1256	A
34	B5	1264	G
34	B5	1284	C
34	B5	1307	U
34	B5	1314	U
34	B5	1315	U
34	B5	1320	U
34	B5	1321	A
34	B5	1325	A
34	B5	1340	U
34	B5	1344	A
34	B5	1345	A
34	B5	1348	A
34	B5	1353	U
34	B5	1354	G
34	B5	1360	A
34	B5	1362	U
34	B5	1363	U
34	B5	1364	G
34	B5	1368	G
34	B5	1369	U
34	B5	1370	U
34	B5	1371	A
34	B5	1375	A
34	B5	1378	U
34	B5	1385	G

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Mol	Chain	Res	Type
34	B5	1390	U
34	B5	1398	U
34	B5	1399	C
34	B5	1400	A
34	B5	1402	G
34	B5	1413	U
34	B5	1415	PSU
34	B5	1418	G
34	B5	1425	A
34	B5	1427	A
34	B5	1428	G
34	B5	1432	U
34	B5	1435	G
34	B5	1436	A
34	B5	1445	G
34	B5	1447	C
34	B5	1450	U
34	B5	1459	C
34	B5	1460	A
34	B5	1469	A
34	B5	1471	A
34	B5	1486	G
34	B5	1490	C
34	B5	1491	U
34	B5	1492	A
34	B5	1493	A
34	B5	1496	U
34	B5	1506	G
34	B5	1514	U
34	B5	1515	A
34	B5	1516	A
34	B5	1521	G
34	B5	1523	G
34	B5	1524	A
34	B5	1526	A
34	B5	1529	C
34	B5	1534	G
34	B5	1537	C
34	B5	1539	G
34	B5	1540	G
34	B5	1542	G
34	B5	1543	A

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Mol	Chain	Res	Type
34	B5	1557	U
34	B5	1559	A
34	B5	1560	U
34	B5	1565	C
34	B5	1567	U
34	B5	1573	A
34	B5	1584	G
34	B5	1596	C
34	B5	1601	G
34	B5	1607	G
34	B5	1611	A
34	B5	1616	G
34	B5	1634	C
34	B5	1635	A
34	B5	1658	G
34	B5	1663	G
34	B5	1665	U
34	B5	1673	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	1697	G
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

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Mol	Chain	Res	Type
34	B5	1713	G
34	B5	1714	A
34	B5	1728	A
34	B5	1736	G
34	B5	1742	U
34	B5	1750	A
34	B5	1755	A
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	18	G
38	A1	19	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	85	A
38	A1	92	G
38	A1	109	A
38	A1	110	G
38	A1	111	C
38	A1	116	A
38	A1	117	U

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Mol	Chain	Res	Type
38	A1	135	C
38	A1	136	G
38	A1	148	G
38	A1	150	A
38	A1	156	G
38	A1	157	A
38	A1	164	A
38	A1	165	A
38	A1	166	C
38	A1	170	G
38	A1	172	G
38	A1	173	G
38	A1	174	C
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	231	G
38	A1	237	G
38	A1	238	A
38	A1	241	G
38	A1	242	C
38	A1	243	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	254	A
38	A1	263	C
38	A1	269	G
38	A1	284	A
38	A1	286	U
38	A1	295	A

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Mol	Chain	Res	Type
38	A1	305	U
38	A1	329	U
38	A1	342	A
38	A1	346	C
38	A1	350	C
38	A1	370	U
38	A1	374	A
38	A1	376	G
38	A1	390	G
38	A1	398	A
38	A1	399	A
38	A1	403	C
38	A1	407	A
38	A1	421	G
38	A1	422	A
38	A1	438	A
38	A1	439	C
38	A1	440	A
38	A1	443	G
38	A1	444	U
38	A1	445	G
38	A1	446	U
38	A1	447	U
38	A1	448	U
38	A1	449	U
38	A1	450	G
38	A1	451	U
38	A1	487	U
38	A1	490	C
38	A1	491	A
38	A1	492	C
38	A1	493	U
38	A1	494	G
38	A1	495	G
38	A1	498	A
38	A1	521	A
38	A1	523	A
38	A1	536	U
38	A1	540	U
38	A1	541	U
38	A1	543	C
38	A1	544	C

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Mol	Chain	Res	Type
38	A1	545	U
38	A1	547	G
38	A1	548	G
38	A1	549	U
38	A1	551	A
38	A1	552	G
38	A1	555	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	578	A
38	A1	579	G
38	A1	590	G
38	A1	600	G
38	A1	603	A
38	A1	607	A
38	A1	611	A
38	A1	617	G
38	A1	620	U
38	A1	621	A
38	A1	622	A
38	A1	637	C
38	A1	649	A
38	A1	662	U
38	A1	667	C
38	A1	677	A
38	A1	690	A
38	A1	691	A
38	A1	705	A
38	A1	712	G
38	A1	719	U
38	A1	734	C
38	A1	735	A
38	A1	736	A
38	A1	750	G
38	A1	766	U
38	A1	767	U
38	A1	768	C

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Mol	Chain	Res	Type
38	A1	771	A
38	A1	777	U
38	A1	780	A
38	A1	781	G
38	A1	785	G
38	A1	806	A
38	A1	808	A
38	A1	817	A
38	A1	826	G
38	A1	830	A
38	A1	848	A
38	A1	849	C
38	A1	861	C
38	A1	874	U
38	A1	879	U
38	A1	907	G
38	A1	908	G
38	A1	910	G
38	A1	914	A
38	A1	916	G
38	A1	917	A
38	A1	921	A
38	A1	923	C
38	A1	924	G
38	A1	937	G
38	A1	944	C
38	A1	959	C
38	A1	960	PSU
38	A1	974	G
38	A1	980	A
38	A1	982	C
38	A1	985	U
38	A1	1000	C
38	A1	1007	U
38	A1	1008	U
38	A1	1010	G
38	A1	1014	U
38	A1	1018	G
38	A1	1019	G
38	A1	1020	G
38	A1	1021	G
38	A1	1023	C

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Mol	Chain	Res	Type
38	A1	1031	C
38	A1	1033	U
38	A1	1034	U
38	A1	1035	G
38	A1	1041	U
38	A1	1047	A
38	A1	1064	A
38	A1	1066	G
38	A1	1072	G
38	A1	1075	A
38	A1	1080	A
38	A1	1083	G
38	A1	1087	G
38	A1	1092	C
38	A1	1093	A
38	A1	1094	U
38	A1	1095	U
38	A1	1097	G
38	A1	1098	A
38	A1	1103	A
38	A1	1104	G
38	A1	1117	G
38	A1	1131	G
38	A1	1143	A
38	A1	1153	A
38	A1	1155	C
38	A1	1159	A
38	A1	1180	A
38	A1	1181	U
38	A1	1182	A
38	A1	1186	G
38	A1	1190	A
38	A1	1192	C
38	A1	1193	A
38	A1	1196	C
38	A1	1200	A
38	A1	1201	C
38	A1	1208	U
38	A1	1209	G
38	A1	1218	U
38	A1	1220	U
38	A1	1221	A

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Mol	Chain	Res	Type
38	A1	1222	G
38	A1	1228	C
38	A1	1230	G
38	A1	1231	A
38	A1	1232	C
38	A1	1233	G
38	A1	1234	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	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	1268	G
38	A1	1269	U
38	A1	1270	A
38	A1	1271	A
38	A1	1272	C
38	A1	1273	A
38	A1	1274	A
38	A1	1278	A
38	A1	1279	C
38	A1	1280	C
38	A1	1285	G

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Mol	Chain	Res	Type
38	A1	1286	A
38	A1	1287	A
38	A1	1288	U
38	A1	1305	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	1366	A
38	A1	1386	A
38	A1	1392	G
38	A1	1396	C
38	A1	1399	A
38	A1	1400	G
38	A1	1419	A
38	A1	1434	G
38	A1	1437	C
38	A1	1446	A
38	A1	1455	U
38	A1	1475	A
38	A1	1477	A
38	A1	1481	A
38	A1	1482	A
38	A1	1483	G
38	A1	1484	U
38	A1	1487	G
38	A1	1488	G
38	A1	1496	C
38	A1	1507	G
38	A1	1536	G
38	A1	1539	A
38	A1	1556	C

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Mol	Chain	Res	Type
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	1574	C
38	A1	1575	A
38	A1	1576	G
38	A1	1577	G
38	A1	1582	C
38	A1	1583	A
38	A1	1587	A
38	A1	1589	A
38	A1	1590	G
38	A1	1593	A
38	A1	1605	A
38	A1	1613	A
38	A1	1622	U
38	A1	1628	C
38	A1	1629	U
38	A1	1639	C
38	A1	1642	A
38	A1	1643	A
38	A1	1645	U
38	A1	1658	G
38	A1	1683	A
38	A1	1688	U
38	A1	1694	U
38	A1	1724	U
38	A1	1736	G
38	A1	1741	A
38	A1	1750	A
38	A1	1751	G
38	A1	1756	C
38	A1	1759	C
38	A1	1760	A

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Mol	Chain	Res	Type
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	1779	C
38	A1	1788	C
38	A1	1792	C
38	A1	1797	A
38	A1	1808	G
38	A1	1813	A
38	A1	1815	U
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	1860	G
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	1906	G
38	A1	1907	C
38	A1	1935	G
38	A1	1953	G
38	A1	1954	G
38	A1	2094	C
38	A1	2095	G
38	A1	2099	A
38	A1	2111	G
38	A1	2112	U
38	A1	2114	C
38	A1	2122	G
38	A1	2126	A

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Mol	Chain	Res	Type
38	A1	2131	A
38	A1	2140	U
38	A1	2142	1MA
38	A1	2144	A
38	A1	2157	G
38	A1	2158	A
38	A1	2169	G
38	A1	2170	U
38	A1	2174	G
38	A1	2188	A
38	A1	2194	G
38	A1	2198	A
38	A1	2202	C
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	2244	A
38	A1	2249	G
38	A1	2250	G
38	A1	2253	G
38	A1	2256	A
38	A1	2257	C
38	A1	2258	PSU
38	A1	2259	A
38	A1	2265	C
38	A1	2266	PSU
38	A1	2267	C
38	A1	2269	U
38	A1	2270	A
38	A1	2272	G
38	A1	2273	G
38	A1	2274	U
38	A1	2280	A
38	A1	2282	U
38	A1	2287	C
38	A1	2306	C
38	A1	2307	G
38	A1	2310	U

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Mol	Chain	Res	Type
38	A1	2313	A
38	A1	2315	G
38	A1	2334	U
38	A1	2335	G
38	A1	2356	A
38	A1	2373	A
38	A1	2374	C
38	A1	2375	G
38	A1	2383	C
38	A1	2393	G
38	A1	2397	A
38	A1	2402	A
38	A1	2403	G
38	A1	2404	A
38	A1	2411	U
38	A1	2435	G
38	A1	2438	A
38	A1	2441	A
38	A1	2444	C
38	A1	2445	A
38	A1	2446	U
38	A1	2447	A
38	A1	2449	A
38	A1	2450	G
38	A1	2452	G
38	A1	2454	G
38	A1	2455	U
38	A1	2457	G
38	A1	2458	A
38	A1	2459	A
38	A1	2460	U
38	A1	2461	A
38	A1	2462	A
38	A1	2463	G
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	2476	C
38	A1	2478	C

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Mol	Chain	Res	Type
38	A1	2479	C
38	A1	2480	A
38	A1	2485	A
38	A1	2487	U
38	A1	2488	A
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	2499	U
38	A1	2500	A
38	A1	2501	U
38	A1	2502	A
38	A1	2503	G
38	A1	2504	U
38	A1	2506	U
38	A1	2507	C
38	A1	2508	U
38	A1	2510	U
38	A1	2514	U
38	A1	2515	A
38	A1	2522	G
38	A1	2523	A
38	A1	2524	A
38	A1	2525	G
38	A1	2530	G
38	A1	2536	A
38	A1	2537	U
38	A1	2538	U
38	A1	2539	C
38	A1	2540	A
38	A1	2542	U
38	A1	2546	C
38	A1	2549	G
38	A1	2552	C
38	A1	2554	A
38	A1	2559	U
38	A1	2561	A

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Mol	Chain	Res	Type
38	A1	2569	A
38	A1	2570	U
38	A1	2571	U
38	A1	2572	C
38	A1	2573	G
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	2635	A
38	A1	2637	A
38	A1	2648	G
38	A1	2651	G
38	A1	2652	U
38	A1	2656	A
38	A1	2657	A
38	A1	2666	C
38	A1	2672	G
38	A1	2674	A
38	A1	2677	G
38	A1	2678	A
38	A1	2681	U
38	A1	2689	A
38	A1	2691	A
38	A1	2694	A
38	A1	2696	A
38	A1	2704	A
38	A1	2714	G
38	A1	2719	U
38	A1	2728	G
38	A1	2729	U
38	A1	2737	C
38	A1	2743	A
38	A1	2747	A
38	A1	2753	G
38	A1	2755	C
38	A1	2772	C
38	A1	2773	C
38	A1	2777	G

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Mol	Chain	Res	Type
38	A1	2778	G
38	A1	2779	A
38	A1	2796	G
38	A1	2800	G
38	A1	2801	A
38	A1	2803	A
38	A1	2804	A
38	A1	2808	A
38	A1	2810	C
38	A1	2814	G
38	A1	2816	G
38	A1	2817	A
38	A1	2821	C
38	A1	2842	U
38	A1	2844	C
38	A1	2845	A
38	A1	2849	C
38	A1	2853	A
38	A1	2876	C
38	A1	2887	A
38	A1	2894	C
38	A1	2903	A
38	A1	2904	U
38	A1	2914	G
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	2955	U
38	A1	2971	A
38	A1	2983	C
38	A1	2990	G
38	A1	2996	U
38	A1	2997	G
38	A1	3003	G
38	A1	3012	A
38	A1	3017	A
38	A1	3018	C
38	A1	3022	G
38	A1	3023	U

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Mol	Chain	Res	Type
38	A1	3034	C
38	A1	3045	G
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	3080	G
38	A1	3086	A
38	A1	3092	C
38	A1	3094	A
38	A1	3101	G
38	A1	3104	U
38	A1	3109	G
38	A1	3122	A
38	A1	3130	A
38	A1	3131	U
38	A1	3142	A
38	A1	3143	C
38	A1	3155	U
38	A1	3156	U
38	A1	3157	U
38	A1	3162	C
38	A1	3163	A
38	A1	3165	A
38	A1	3166	C
38	A1	3167	A
38	A1	3168	A
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	3197	G

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Mol	Chain	Res	Type
38	A1	3199	G
38	A1	3207	U
38	A1	3209	A
38	A1	3210	A
38	A1	3217	C
38	A1	3218	A
38	A1	3219	G
38	A1	3228	C
38	A1	3229	G
38	A1	3234	A
38	A1	3238	G
38	A1	3239	G
38	A1	3243	A
38	A1	3247	G
38	A1	3259	U
38	A1	3260	G
38	A1	3263	G
38	A1	3271	G
38	A1	3272	C
38	A1	3273	A
38	A1	3275	U
38	A1	3276	G
38	A1	3277	U
38	A1	3278	C
38	A1	3279	A
38	A1	3281	U
38	A1	3283	U
38	A1	3284	G
38	A1	3286	G
38	A1	3287	U
38	A1	3289	G
38	A1	3294	A
38	A1	3304	U
38	A1	3313	U
38	A1	3316	A
38	A1	3341	U
38	A1	3342	A
38	A1	3345	G
38	A1	3350	C
38	A1	3351	U
38	A1	3352	U
38	A1	3354	U

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Mol	Chain	Res	Type
38	A1	3368	U
38	A1	3369	G
38	A1	3378	C
38	A1	3396	U
39	A3	7	G
39	A3	10	C
39	A3	11	A
39	A3	17	A
39	A3	23	A
39	A3	24	A
39	A3	33	U
39	A3	38	U
39	A3	49	G
39	A3	54	U
39	A3	55	A
39	A3	65	G
39	A3	99	G
39	A3	102	A
39	A3	105	C
39	A3	112	G
39	A3	121	U
40	A4	34	U
40	A4	35	C
40	A4	39	G
40	A4	51	G
40	A4	52	A
40	A4	59	A
40	A4	61	A
40	A4	62	C
40	A4	63	G
40	A4	81	U
40	A4	82	U
40	A4	85	G
40	A4	86	U
40	A4	87	G
40	A4	89	A
40	A4	90	U
40	A4	95	G
40	A4	102	U
40	A4	104	A
40	A4	106	C
40	A4	111	A

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Mol	Chain	Res	Type
40	A4	113	U
40	A4	114	G
40	A4	116	G
40	A4	125	U
40	A4	131	A
40	A4	148	G
40	A4	152	G
40	A4	158	U
81	EC	6759	A
81	EC	6762	U
81	EC	6766	U
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	6777	C
81	EC	6778	C
81	EC	6780	A
81	EC	6781	U
81	EC	6782	C
81	EC	6786	A
81	EC	6787	U
81	EC	6789	G
81	EC	6790	A
81	EC	6791	A
81	EC	6792	A
81	EC	6793	A
81	EC	6794	C
81	EC	6798	C
81	EC	6800	G
81	EC	6801	A
81	EC	6802	A
81	EC	6803	C
81	EC	6804	A
81	EC	6805	C
81	EC	6809	G
81	EC	6810	U

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Mol	Chain	Res	Type
81	EC	6811	G
81	EC	6813	A
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	6823	U
81	EC	6825	A
81	EC	6827	G
81	EC	6831	U
81	EC	6832	G
81	EC	6833	G
81	EC	6835	U
81	EC	6837	G
81	EC	6840	A
81	EC	6841	U
81	EC	6842	U
81	EC	6843	U
81	EC	6844	A
81	EC	6845	G
81	EC	6847	G
81	EC	6848	U
81	EC	6849	A
81	EC	6850	C
81	EC	6852	U
81	EC	6855	A
81	EC	6856	C
81	EC	6857	C
81	EC	6859	U
81	EC	6860	A
81	EC	6862	G
81	EC	6863	C
81	EC	6864	A
81	EC	6866	C
81	EC	6867	C
81	EC	6869	C
81	EC	6870	A
81	EC	6871	A
81	EC	6872	A

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Mol	Chain	Res	Type
81	EC	6873	A
81	EC	6874	A
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	6884	G
81	EC	6885	G
81	EC	6888	A

All (42) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
34	B5	130	C
34	B5	196	G
34	B5	752	A
34	B5	889	U
34	B5	904	G
34	B5	1061	A
34	B5	1344	A
34	B5	1363	U
34	B5	1458	G
34	B5	1683	C
34	B5	1689	A
38	A1	116	A
38	A1	165	A
38	A1	240	U
38	A1	252	U
38	A1	916	G
38	A1	1287	A
38	A1	1560	G
38	A1	1818	U
38	A1	1953	G
38	A1	2094	C
38	A1	2207	A
38	A1	2222	A
38	A1	2437	G
38	A1	2468	A
38	A1	2493	U

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Mol	Chain	Res	Type
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	6789	G
81	EC	6802	A
81	EC	6818	G
81	EC	6819	G
81	EC	6847	G
81	EC	6851	G
81	EC	6877	C

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

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	776	38	18,21,22	1.29	3 (16%)	21,30,33	2.19	6 (28%)
38	PSU	A1	2735	38	18,21,22	1.40	4 (22%)	21,30,33	2.11	4 (19%)
38	PSU	A1	960	38	18,21,22	1.45	3 (16%)	21,30,33	2.07	4 (19%)
38	PSU	A1	2340	38	18,21,22	1.47	4 (22%)	21,30,33	2.04	3 (14%)
80	DDE	DC	699	-	18,20,21	1.02	1 (5%)	17,28,30	0.79	1 (5%)
38	PSU	A1	2975	38	18,21,22	1.46	4 (22%)	21,30,33	2.20	4 (19%)
34	MA6	B5	1781	34	23,26,27	1.49	6 (26%)	33,38,41	2.01	11 (33%)
34	PSU	B5	211	34	18,21,22	1.41	3 (16%)	21,30,33	2.01	3 (14%)
34	PSU	B5	1290	34	18,21,22	1.39	3 (16%)	21,30,33	2.15	4 (19%)
38	PSU	A1	2349	38	18,21,22	1.39	4 (22%)	21,30,33	2.07	3 (14%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
38	PSU	A1	1042	38	18,21,22	1.36	3 (16%)	21,30,33	1.96	3 (14%)
34	PSU	B5	106	34	18,21,22	1.41	3 (16%)	21,30,33	2.01	3 (14%)
34	PSU	B5	1181	34	18,21,22	1.39	2 (11%)	21,30,33	2.15	4 (19%)
34	MA6	B5	1782	34	23,26,27	1.47	5 (21%)	33,38,41	2.14	10 (30%)
38	PSU	A1	2133	38	18,21,22	1.55	4 (22%)	21,30,33	2.26	5 (23%)
34	PSU	B5	766	34	18,21,22	1.41	4 (22%)	21,30,33	2.22	5 (23%)
38	PSU	A1	1004	38	18,21,22	1.43	4 (22%)	21,30,33	2.09	3 (14%)
38	1MA	A1	2142	38	21,25,26	1.33	3 (14%)	30,37,40	1.72	5 (16%)
38	PSU	A1	2191	38	18,21,22	1.43	4 (22%)	21,30,33	2.15	4 (19%)
34	4AC	B5	1773	34	21,24,25	1.11	2 (9%)	28,34,37	2.10	5 (17%)
38	PSU	A1	2264	38	18,21,22	1.42	3 (16%)	21,30,33	2.08	3 (14%)
38	OMU	A1	2921	38	19,22,23	1.26	4 (21%)	25,31,34	1.89	6 (24%)
34	PSU	B5	466	34	18,21,22	1.39	3 (16%)	21,30,33	2.07	4 (19%)
38	PSU	A1	2266	38	18,21,22	1.46	5 (27%)	21,30,33	2.02	3 (14%)
38	OMG	A1	2922	38	23,26,27	1.19	4 (17%)	32,38,41	1.98	6 (18%)
38	5MC	A1	2870	38	19,22,23	1.30	3 (15%)	26,32,35	1.12	2 (7%)
38	PSU	A1	2880	38	18,21,22	1.45	4 (22%)	21,30,33	2.19	4 (19%)
34	PSU	B5	120	34	18,21,22	1.36	3 (16%)	21,30,33	2.03	4 (19%)
34	B8N	B5	1191	34	25,29,30	1.38	3 (12%)	28,42,45	7.25	5 (17%)
38	PSU	A1	1124	38	18,21,22	1.40	4 (22%)	21,30,33	2.09	4 (19%)
38	PSU	A1	966	38	18,21,22	1.41	4 (22%)	21,30,33	2.10	4 (19%)
38	PSU	A1	990	38	18,21,22	1.39	3 (16%)	21,30,33	2.07	4 (19%)
34	PSU	B5	999	34	18,21,22	1.43	4 (22%)	21,30,33	2.17	4 (19%)
38	1MA	A1	645	38	21,25,26	1.33	4 (19%)	30,37,40	1.75	6 (20%)
39	PSU	A3	50	39	18,21,22	1.39	2 (11%)	21,30,33	2.06	3 (14%)
34	PSU	B5	759	34	18,21,22	1.40	3 (16%)	21,30,33	2.12	4 (19%)
36	HIC	AB	243	36	10,11,12	1.43	1 (10%)	9,14,16	1.22	1 (11%)
38	PSU	A1	2416	38	18,21,22	1.52	5 (27%)	21,30,33	2.13	4 (19%)
38	PSU	A1	2923	38	18,21,22	1.35	2 (11%)	21,30,33	2.10	3 (14%)
38	PSU	A1	2351	38	18,21,22	1.44	4 (22%)	21,30,33	2.10	4 (19%)
38	PSU	A1	2865	38	18,21,22	1.48	4 (22%)	21,30,33	2.15	4 (19%)
38	PSU	A1	1056	38	18,21,22	1.43	4 (22%)	21,30,33	2.19	4 (19%)
34	G7M	B5	1575	34	23,26,27	2.48	6 (26%)	34,39,42	1.82	7 (20%)
38	PSU	A1	2314	38	18,21,22	1.37	3 (16%)	21,30,33	2.04	4 (19%)
40	PSU	A4	73	40	18,21,22	1.36	3 (16%)	21,30,33	1.99	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
38	PSU	A1	2944	38	18,21,22	1.44	5 (27%)	21,30,33	2.23	5 (23%)
38	PSU	A1	986	38	18,21,22	1.46	5 (27%)	21,30,33	2.18	5 (23%)
38	UR3	A1	2634	38	19,22,23	0.93	0	26,32,35	1.76	3 (11%)
38	PSU	A1	1110	38	18,21,22	1.43	4 (22%)	21,30,33	2.14	3 (14%)
38	PSU	A1	1052	38	18,21,22	1.38	4 (22%)	21,30,33	2.10	4 (19%)
38	5MC	A1	2278	38	19,22,23	1.37	3 (15%)	26,32,35	1.13	3 (11%)
34	PSU	B5	1415	34	18,21,22	1.35	3 (16%)	21,30,33	2.07	4 (19%)
34	PSU	B5	302	34	18,21,22	1.44	4 (22%)	21,30,33	2.16	4 (19%)
34	PSU	B5	1187	34	18,21,22	1.38	3 (16%)	21,30,33	2.05	3 (14%)
34	PSU	B5	632	34	18,21,22	1.47	4 (22%)	21,30,33	2.16	4 (19%)
34	4AC	B5	1280	34	21,24,25	1.11	1 (4%)	28,34,37	0.98	1 (3%)
38	PSU	A1	2258	38	18,21,22	1.37	3 (16%)	21,30,33	2.16	4 (19%)
38	PSU	A1	2826	38	18,21,22	1.42	5 (27%)	21,30,33	2.12	5 (23%)
38	PSU	A1	2260	38	18,21,22	1.38	2 (11%)	21,30,33	2.14	5 (23%)
38	PSU	A1	2129	38	18,21,22	1.47	4 (22%)	21,30,33	2.18	4 (19%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
38	PSU	A1	776	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2735	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	960	38	-	1/7/25/26	0/2/2/2
38	PSU	A1	2340	38	-	2/7/25/26	0/2/2/2
80	DDE	DC	699	-	-	12/20/21/23	0/1/1/1
38	PSU	A1	2975	38	-	0/7/25/26	0/2/2/2
34	MA6	B5	1781	34	-	3/11/29/30	0/3/3/3
34	PSU	B5	211	34	-	2/7/25/26	0/2/2/2
34	PSU	B5	1290	34	-	0/7/25/26	0/2/2/2
38	PSU	A1	2349	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	1042	38	-	2/7/25/26	0/2/2/2
34	PSU	B5	106	34	-	0/7/25/26	0/2/2/2
34	PSU	B5	1181	34	-	1/7/25/26	0/2/2/2
34	MA6	B5	1782	34	-	5/11/29/30	0/3/3/3
38	PSU	A1	2133	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	766	34	-	2/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
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	2191	38	-	0/7/25/26	0/2/2/2
34	4AC	B5	1773	34	-	3/11/29/30	0/2/2/2
38	PSU	A1	2264	38	-	1/7/25/26	0/2/2/2
38	OMU	A1	2921	38	-	0/9/27/28	0/2/2/2
34	PSU	B5	466	34	-	0/7/25/26	0/2/2/2
38	PSU	A1	2266	38	-	3/7/25/26	0/2/2/2
38	OMG	A1	2922	38	-	0/9/27/28	0/3/3/3
38	5MC	A1	2870	38	-	4/7/25/26	0/2/2/2
38	PSU	A1	2880	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	120	34	-	0/7/25/26	0/2/2/2
34	B8N	B5	1191	34	-	1/16/34/35	0/2/2/2
38	PSU	A1	1124	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	966	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	990	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	999	34	-	0/7/25/26	0/2/2/2
38	1MA	A1	645	38	-	2/7/25/26	0/3/3/3
39	PSU	A3	50	39	-	0/7/25/26	0/2/2/2
34	PSU	B5	759	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	2416	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2923	38	-	3/7/25/26	0/2/2/2
38	PSU	A1	2351	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2865	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	1056	38	-	0/7/25/26	0/2/2/2
34	G7M	B5	1575	34	-	2/7/25/26	0/3/3/3
38	PSU	A1	2314	38	-	1/7/25/26	0/2/2/2
40	PSU	A4	73	40	-	0/7/25/26	0/2/2/2
38	PSU	A1	2944	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	986	38	-	0/7/25/26	0/2/2/2
38	UR3	A1	2634	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	1110	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	1052	38	-	0/7/25/26	0/2/2/2
38	5MC	A1	2278	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	1415	34	-	1/7/25/26	0/2/2/2
34	PSU	B5	302	34	-	0/7/25/26	0/2/2/2
34	PSU	B5	1187	34	-	2/7/25/26	0/2/2/2
34	PSU	B5	632	34	-	0/7/25/26	0/2/2/2
34	4AC	B5	1280	34	-	2/11/29/30	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
38	PSU	A1	2258	38	-	2/7/25/26	0/2/2/2
38	PSU	A1	2826	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2260	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2129	38	-	0/7/25/26	0/2/2/2

All (207) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	B5	1575	G7M	O6-C6	7.11	1.37	1.23
34	B5	1575	G7M	C2-N2	5.74	1.47	1.34
34	B5	1575	G7M	C5-N7	-4.66	1.33	1.39
34	B5	1781	MA6	C5-C4	4.46	1.47	1.39
38	A1	2278	5MC	C5-C4	4.42	1.47	1.44
34	B5	1782	MA6	C5-C4	4.28	1.46	1.39
38	A1	2870	5MC	C5-C4	4.20	1.47	1.44
34	B5	1191	B8N	C4-C5	-3.83	1.38	1.47
38	A1	2133	PSU	C4-N3	-3.49	1.32	1.38
39	A3	50	PSU	C6-C5	3.49	1.39	1.35
34	B5	1575	G7M	CN7-N7	3.32	1.52	1.46
34	B5	1280	4AC	C4-N4	-3.26	1.35	1.39
34	B5	632	PSU	C4-N3	-3.23	1.32	1.38
38	A1	2416	PSU	C4-N3	-3.23	1.32	1.38
38	A1	2129	PSU	C4-N3	-3.22	1.32	1.38
34	B5	1181	PSU	C6-C5	3.18	1.38	1.35
34	B5	1187	PSU	C6-C5	3.17	1.38	1.35
38	A1	2975	PSU	C4-N3	-3.17	1.32	1.38
38	A1	1056	PSU	C4-N3	-3.14	1.33	1.38
38	A1	2880	PSU	C4-N3	-3.14	1.33	1.38
38	A1	1004	PSU	C6-C5	3.14	1.38	1.35
38	A1	2944	PSU	C4-N3	-3.12	1.33	1.38
38	A1	960	PSU	C6-C5	3.11	1.38	1.35
38	A1	966	PSU	C4-N3	-3.11	1.33	1.38
38	A1	986	PSU	C4-N3	-3.11	1.33	1.38
38	A1	2266	PSU	C6-C5	3.10	1.38	1.35
34	B5	1191	B8N	C6-C5	3.08	1.39	1.35
34	B5	1575	G7M	C6-N1	-3.07	1.33	1.38
38	A1	2351	PSU	C4-N3	-3.07	1.33	1.38
34	B5	106	PSU	C6-C5	3.06	1.38	1.35
34	B5	1290	PSU	C4-N3	-3.04	1.33	1.38
34	B5	302	PSU	C4-N3	-3.04	1.33	1.38
34	B5	211	PSU	C6-C5	3.03	1.38	1.35
38	A1	2191	PSU	C4-N3	-3.03	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	B5	466	PSU	C6-C5	3.02	1.38	1.35
34	B5	759	PSU	C4-N3	-2.99	1.33	1.38
38	A1	2349	PSU	C4-N3	-2.98	1.33	1.38
34	B5	999	PSU	C4-N3	-2.98	1.33	1.38
38	A1	2264	PSU	C4-N3	-2.97	1.33	1.38
34	B5	759	PSU	C6-C5	2.95	1.38	1.35
38	A1	2340	PSU	C4-N3	-2.94	1.33	1.38
38	A1	1124	PSU	C4-N3	-2.94	1.33	1.38
38	A1	2258	PSU	C4-N3	-2.94	1.33	1.38
38	A1	990	PSU	C4-N3	-2.93	1.33	1.38
38	A1	2826	PSU	C4-N3	-2.92	1.33	1.38
38	A1	2923	PSU	C6-C5	2.91	1.38	1.35
34	B5	999	PSU	C6-C5	2.91	1.38	1.35
38	A1	2865	PSU	C6-C5	2.90	1.38	1.35
34	B5	211	PSU	C4-N3	-2.90	1.33	1.38
38	A1	2142	1MA	C6-N6	2.89	1.35	1.28
38	A1	2258	PSU	C6-C5	2.89	1.38	1.35
38	A1	2260	PSU	C6-C5	2.89	1.38	1.35
38	A1	1110	PSU	C4-N3	-2.89	1.33	1.38
38	A1	1004	PSU	C4-N3	-2.89	1.33	1.38
38	A1	1042	PSU	C4-N3	-2.88	1.33	1.38
38	A1	1052	PSU	C4-N3	-2.88	1.33	1.38
34	B5	1773	4AC	C4-N4	-2.88	1.35	1.39
38	A1	990	PSU	C6-C5	2.88	1.38	1.35
38	A1	2921	OMU	C4-N3	-2.87	1.33	1.38
38	A1	2314	PSU	C4-N3	-2.87	1.33	1.38
34	B5	466	PSU	C4-N3	-2.87	1.33	1.38
38	A1	645	1MA	C6-N6	2.87	1.34	1.28
38	A1	2260	PSU	C4-N3	-2.86	1.33	1.38
38	A1	1124	PSU	C6-C5	2.86	1.38	1.35
40	A4	73	PSU	C4-N3	-2.85	1.33	1.38
34	B5	106	PSU	C4-N3	-2.85	1.33	1.38
38	A1	2735	PSU	C4-N3	-2.84	1.33	1.38
34	B5	1415	PSU	C6-C5	2.84	1.38	1.35
34	B5	120	PSU	C6-C5	2.84	1.38	1.35
34	B5	302	PSU	C6-C5	2.84	1.38	1.35
38	A1	2865	PSU	C4-N3	-2.83	1.33	1.38
34	B5	1181	PSU	C4-N3	-2.82	1.33	1.38
34	B5	766	PSU	C6-C5	2.82	1.38	1.35
34	B5	766	PSU	C4-N3	-2.81	1.33	1.38
38	A1	2264	PSU	C6-C5	2.81	1.38	1.35
38	A1	2142	1MA	C5-C4	2.81	1.46	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	960	PSU	C4-N3	-2.80	1.33	1.38
38	A1	2133	PSU	C2-N3	-2.80	1.32	1.37
38	A1	1052	PSU	C6-C5	2.80	1.38	1.35
38	A1	2922	OMG	C5-C4	2.79	1.46	1.38
34	B5	120	PSU	C4-N3	-2.79	1.33	1.38
34	B5	1415	PSU	C4-N3	-2.78	1.33	1.38
38	A1	2266	PSU	C4-N3	-2.77	1.33	1.38
38	A1	2314	PSU	C6-C5	2.77	1.38	1.35
36	AB	243	HIC	CD2-CG	2.74	1.41	1.36
38	A1	2340	PSU	C6-C5	2.74	1.38	1.35
34	B5	1290	PSU	C6-C5	2.73	1.38	1.35
38	A1	645	1MA	C5-C4	2.73	1.46	1.38
38	A1	1042	PSU	C6-C5	2.72	1.38	1.35
38	A1	2923	PSU	C4-N3	-2.71	1.33	1.38
34	B5	1187	PSU	C4-N3	-2.71	1.33	1.38
40	A4	73	PSU	C6-C5	2.69	1.38	1.35
38	A1	2278	5MC	C6-N1	-2.69	1.33	1.38
38	A1	2191	PSU	C6-C5	2.67	1.38	1.35
38	A1	2416	PSU	C2-N3	-2.66	1.33	1.37
38	A1	2416	PSU	C2-N1	-2.65	1.33	1.36
34	B5	1782	MA6	C5-C6	2.65	1.48	1.41
39	A3	50	PSU	C4-N3	-2.64	1.33	1.38
38	A1	2921	OMU	C2-N3	-2.64	1.33	1.38
34	B5	1781	MA6	C5-C6	2.62	1.48	1.41
80	DC	699	DDE	CD2-CG	2.61	1.41	1.36
34	B5	632	PSU	C6-C5	2.60	1.38	1.35
38	A1	2880	PSU	C2-N3	-2.60	1.33	1.37
38	A1	2922	OMG	C6-N1	-2.60	1.34	1.38
38	A1	776	PSU	C6-C5	2.59	1.38	1.35
38	A1	2870	5MC	C6-C5	2.58	1.38	1.34
38	A1	960	PSU	O4'-C1'	-2.58	1.40	1.43
38	A1	2865	PSU	O4'-C1'	-2.56	1.40	1.43
38	A1	2735	PSU	C6-C5	2.56	1.38	1.35
34	B5	1781	MA6	C4-N9	-2.56	1.32	1.37
38	A1	2351	PSU	C6-C5	2.55	1.38	1.35
34	B5	632	PSU	C2-N3	-2.54	1.33	1.37
38	A1	2944	PSU	C6-C5	2.54	1.38	1.35
38	A1	2975	PSU	C2-N1	-2.52	1.33	1.36
38	A1	1110	PSU	C6-C5	2.51	1.38	1.35
38	A1	966	PSU	C6-C5	2.51	1.38	1.35
38	A1	1056	PSU	C6-C5	2.51	1.38	1.35
34	B5	1782	MA6	C5-N7	-2.48	1.34	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	986	PSU	C6-C5	2.47	1.38	1.35
34	B5	1781	MA6	C5-N7	-2.46	1.34	1.39
38	A1	2129	PSU	C2-N3	-2.44	1.33	1.37
34	B5	1782	MA6	C4-N9	-2.43	1.32	1.37
38	A1	2826	PSU	C6-C5	2.43	1.38	1.35
38	A1	2351	PSU	C2-N3	-2.42	1.33	1.37
38	A1	1110	PSU	C2-N1	-2.41	1.33	1.36
38	A1	2351	PSU	C2-N1	-2.41	1.33	1.36
38	A1	2142	1MA	C5-N7	-2.38	1.34	1.39
38	A1	2191	PSU	C2-N3	-2.36	1.33	1.37
38	A1	2278	5MC	C6-C5	2.35	1.38	1.34
38	A1	2129	PSU	C2-N1	-2.35	1.33	1.36
38	A1	2975	PSU	C2-N3	-2.34	1.33	1.37
38	A1	2870	5MC	C6-N1	-2.34	1.34	1.38
38	A1	2880	PSU	C6-C5	2.34	1.37	1.35
34	B5	1575	G7M	C2-N1	-2.33	1.31	1.37
38	A1	2133	PSU	C2-N1	-2.33	1.33	1.36
38	A1	2340	PSU	C2-N1	-2.33	1.33	1.36
34	B5	302	PSU	C2-N3	-2.31	1.33	1.37
34	B5	999	PSU	C2-N1	-2.31	1.33	1.36
38	A1	2129	PSU	C6-C5	2.31	1.37	1.35
38	A1	1056	PSU	C2-N3	-2.30	1.33	1.37
38	A1	2880	PSU	C2-N1	-2.29	1.33	1.36
38	A1	645	1MA	C5-N7	-2.28	1.34	1.39
38	A1	2349	PSU	C6-C5	2.28	1.37	1.35
38	A1	2133	PSU	C6-C5	2.27	1.37	1.35
38	A1	776	PSU	C2-N3	-2.27	1.33	1.37
34	B5	1773	4AC	C6-N1	-2.26	1.32	1.38
38	A1	2826	PSU	C2-N3	-2.26	1.33	1.37
38	A1	2735	PSU	C2-N1	-2.26	1.33	1.36
38	A1	2340	PSU	C2-N3	-2.24	1.33	1.37
38	A1	986	PSU	C2-N3	-2.22	1.33	1.37
38	A1	776	PSU	C4-N3	-2.22	1.34	1.38
38	A1	1042	PSU	C2-N3	-2.22	1.33	1.37
38	A1	2191	PSU	C2-N1	-2.21	1.33	1.36
38	A1	2735	PSU	C2-N3	-2.20	1.33	1.37
38	A1	2349	PSU	C2-N3	-2.20	1.33	1.37
38	A1	645	1MA	C4-N9	-2.20	1.32	1.38
38	A1	1056	PSU	C2-N1	-2.20	1.33	1.36
38	A1	2314	PSU	C2-N3	-2.19	1.33	1.37
34	B5	106	PSU	C2-N3	-2.19	1.33	1.37
38	A1	2349	PSU	C2-N1	-2.19	1.33	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2416	PSU	C6-C5	2.19	1.37	1.35
38	A1	2975	PSU	C6-C5	2.19	1.37	1.35
38	A1	966	PSU	C2-N3	-2.17	1.33	1.37
40	A4	73	PSU	C2-N3	-2.17	1.33	1.37
38	A1	2921	OMU	C5-C4	-2.17	1.39	1.43
34	B5	999	PSU	C2-N3	-2.17	1.33	1.37
38	A1	2944	PSU	O4'-C1'	-2.16	1.40	1.43
34	B5	1782	MA6	C8-N9	-2.16	1.33	1.37
38	A1	1004	PSU	C2-N1	-2.16	1.33	1.36
38	A1	2826	PSU	O4'-C1'	-2.16	1.40	1.43
38	A1	1124	PSU	C2-N3	-2.15	1.33	1.37
38	A1	2922	OMG	C5-N7	-2.14	1.34	1.39
34	B5	211	PSU	C2-N3	-2.13	1.34	1.37
34	B5	302	PSU	C2-N1	-2.13	1.33	1.36
34	B5	466	PSU	C2-N3	-2.13	1.34	1.37
38	A1	2266	PSU	O4'-C1'	-2.12	1.40	1.43
34	B5	1191	B8N	CN1-N1	2.12	1.50	1.46
38	A1	2922	OMG	C4-N9	-2.11	1.32	1.38
38	A1	986	PSU	O4'-C1'	-2.11	1.40	1.43
34	B5	1781	MA6	C8-N7	2.11	1.35	1.31
34	B5	1290	PSU	C2-N3	-2.10	1.34	1.37
38	A1	2865	PSU	C2-N1	-2.09	1.33	1.36
34	B5	766	PSU	O4'-C1'	-2.08	1.41	1.43
38	A1	1110	PSU	C2-N3	-2.08	1.34	1.37
38	A1	1124	PSU	C2-N1	-2.08	1.33	1.36
38	A1	2944	PSU	C2-N1	-2.08	1.33	1.36
34	B5	759	PSU	C2-N3	-2.08	1.34	1.37
38	A1	990	PSU	C2-N3	-2.07	1.34	1.37
38	A1	2258	PSU	C2-N3	-2.07	1.34	1.37
34	B5	120	PSU	C2-N3	-2.07	1.34	1.37
38	A1	1004	PSU	C2-N3	-2.07	1.34	1.37
38	A1	986	PSU	C2-N1	-2.06	1.34	1.36
34	B5	1415	PSU	C2-N3	-2.06	1.34	1.37
38	A1	2266	PSU	C2-N3	-2.05	1.34	1.37
38	A1	1052	PSU	C2-N3	-2.04	1.34	1.37
38	A1	2264	PSU	C2-N3	-2.04	1.34	1.37
38	A1	2944	PSU	C2-N3	-2.04	1.34	1.37
38	A1	2826	PSU	C2-N1	-2.04	1.34	1.36
34	B5	632	PSU	C2-N1	-2.03	1.34	1.36
34	B5	1781	MA6	C8-N9	-2.03	1.34	1.37
34	B5	1187	PSU	C2-N3	-2.03	1.34	1.37
34	B5	766	PSU	C2-N1	-2.03	1.34	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2921	OMU	C6-N1	-2.03	1.33	1.38
38	A1	2266	PSU	C2-N1	-2.02	1.34	1.36
38	A1	966	PSU	C2-N1	-2.02	1.34	1.36
38	A1	2416	PSU	O4'-C1'	-2.01	1.41	1.43
38	A1	1052	PSU	C2-N1	-2.01	1.34	1.36

All (248) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	B5	1191	B8N	C32-C31-N3	37.44	177.60	112.16
34	B5	1773	4AC	N4-C4-N3	7.81	126.55	113.87
38	A1	2133	PSU	N1-C2-N3	7.25	122.82	115.17
38	A1	2634	UR3	C4-N3-C2	-7.13	118.84	124.58
34	B5	766	PSU	N1-C2-N3	7.00	122.55	115.17
38	A1	2944	PSU	N1-C2-N3	6.98	122.53	115.17
38	A1	2258	PSU	N1-C2-N3	6.89	122.43	115.17
38	A1	2975	PSU	N1-C2-N3	6.80	122.34	115.17
38	A1	1056	PSU	N1-C2-N3	6.76	122.30	115.17
38	A1	986	PSU	N1-C2-N3	6.75	122.29	115.17
38	A1	2129	PSU	N1-C2-N3	6.75	122.29	115.17
34	B5	999	PSU	N1-C2-N3	6.75	122.29	115.17
38	A1	1110	PSU	N1-C2-N3	6.71	122.24	115.17
34	B5	302	PSU	N1-C2-N3	6.68	122.22	115.17
34	B5	1181	PSU	N1-C2-N3	6.66	122.20	115.17
38	A1	2865	PSU	N1-C2-N3	6.66	122.19	115.17
34	B5	632	PSU	N1-C2-N3	6.66	122.19	115.17
34	B5	1290	PSU	N1-C2-N3	6.65	122.18	115.17
38	A1	2264	PSU	N1-C2-N3	6.64	122.18	115.17
38	A1	2191	PSU	N1-C2-N3	6.64	122.18	115.17
38	A1	2880	PSU	N1-C2-N3	6.60	122.13	115.17
38	A1	2260	PSU	N1-C2-N3	6.58	122.11	115.17
34	B5	759	PSU	N1-C2-N3	6.56	122.09	115.17
34	B5	466	PSU	N1-C2-N3	6.53	122.06	115.17
34	B5	1415	PSU	N1-C2-N3	6.51	122.04	115.17
39	A3	50	PSU	N1-C2-N3	6.51	122.03	115.17
38	A1	2416	PSU	N1-C2-N3	6.50	122.02	115.17
34	B5	211	PSU	N1-C2-N3	6.48	122.00	115.17
38	A1	2923	PSU	N1-C2-N3	6.48	122.00	115.17
34	B5	1187	PSU	N1-C2-N3	6.47	122.00	115.17
38	A1	1052	PSU	N1-C2-N3	6.47	121.99	115.17
38	A1	1004	PSU	N1-C2-N3	6.45	121.97	115.17
38	A1	990	PSU	N1-C2-N3	6.44	121.96	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	A1	966	PSU	N1-C2-N3	6.43	121.95	115.17
38	A1	1124	PSU	N1-C2-N3	6.41	121.94	115.17
38	A1	2340	PSU	N1-C2-N3	6.40	121.92	115.17
38	A1	2351	PSU	N1-C2-N3	6.37	121.89	115.17
38	A1	2266	PSU	N1-C2-N3	6.37	121.88	115.17
38	A1	2826	PSU	N1-C2-N3	6.36	121.88	115.17
38	A1	960	PSU	N1-C2-N3	6.35	121.87	115.17
38	A1	2735	PSU	N1-C2-N3	6.33	121.85	115.17
38	A1	2314	PSU	N1-C2-N3	6.28	121.80	115.17
34	B5	120	PSU	N1-C2-N3	6.27	121.78	115.17
34	B5	106	PSU	N1-C2-N3	6.26	121.77	115.17
38	A1	2349	PSU	N1-C2-N3	6.26	121.77	115.17
38	A1	776	PSU	N1-C2-N3	6.22	121.73	115.17
40	A4	73	PSU	N1-C2-N3	6.10	121.60	115.17
38	A1	1042	PSU	N1-C2-N3	6.05	121.55	115.17
38	A1	2922	OMG	C5-C4-N3	-5.82	119.14	128.39
38	A1	2142	1MA	C5-C4-N3	-5.40	119.32	127.27
34	B5	1782	MA6	C5-C4-N3	-5.40	119.29	126.72
34	B5	1191	B8N	C4-N3-C2	-5.35	119.03	125.62
38	A1	645	1MA	C5-C4-N3	-5.16	119.67	127.27
34	B5	1781	MA6	C5-C4-N3	-5.06	119.75	126.72
34	B5	1773	4AC	C5-C4-N4	-5.04	114.44	122.94
38	A1	2921	OMU	C4-N3-C2	-4.98	120.42	126.61
38	A1	2922	OMG	C2-N3-C4	4.95	120.83	112.30
34	B5	1575	G7M	C2-N3-C4	4.92	120.77	112.30
38	A1	645	1MA	C2-N3-C4	4.70	121.75	112.53
38	A1	2133	PSU	C4-N3-C2	-4.63	120.00	126.37
38	A1	2880	PSU	C4-N3-C2	-4.61	120.02	126.37
38	A1	2142	1MA	C2-N3-C4	4.60	121.54	112.53
34	B5	632	PSU	C4-N3-C2	-4.59	120.05	126.37
34	B5	1290	PSU	C4-N3-C2	-4.51	120.16	126.37
34	B5	302	PSU	C4-N3-C2	-4.47	120.21	126.37
38	A1	2129	PSU	C4-N3-C2	-4.47	120.22	126.37
38	A1	1056	PSU	C4-N3-C2	-4.46	120.23	126.37
38	A1	2975	PSU	C4-N3-C2	-4.45	120.24	126.37
38	A1	986	PSU	C4-N3-C2	-4.44	120.25	126.37
38	A1	776	PSU	C6-C5-C4	-4.40	115.20	118.17
38	A1	2944	PSU	C4-N3-C2	-4.40	120.31	126.37
38	A1	2191	PSU	C4-N3-C2	-4.40	120.32	126.37
34	B5	759	PSU	C4-N3-C2	-4.39	120.33	126.37
38	A1	2258	PSU	C4-N3-C2	-4.37	120.35	126.37
38	A1	2826	PSU	C4-N3-C2	-4.36	120.36	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	A1	2922	OMG	N9-C4-N3	4.35	134.66	125.95
38	A1	2351	PSU	C4-N3-C2	-4.35	120.38	126.37
34	B5	1181	PSU	C4-N3-C2	-4.34	120.39	126.37
38	A1	2349	PSU	C4-N3-C2	-4.34	120.39	126.37
38	A1	2735	PSU	C4-N3-C2	-4.34	120.39	126.37
38	A1	966	PSU	C4-N3-C2	-4.32	120.42	126.37
38	A1	2416	PSU	C4-N3-C2	-4.32	120.43	126.37
34	B5	1782	MA6	N3-C4-N9	4.31	134.49	127.17
34	B5	766	PSU	C4-N3-C2	-4.30	120.44	126.37
38	A1	1052	PSU	C4-N3-C2	-4.30	120.45	126.37
34	B5	1415	PSU	C4-N3-C2	-4.30	120.45	126.37
38	A1	2921	OMU	N3-C2-N1	4.28	120.46	114.89
38	A1	1110	PSU	C4-N3-C2	-4.27	120.48	126.37
38	A1	2314	PSU	C4-N3-C2	-4.27	120.49	126.37
38	A1	2260	PSU	C4-N3-C2	-4.27	120.50	126.37
34	B5	1782	MA6	C2-N1-C6	4.26	122.23	111.83
38	A1	990	PSU	C4-N3-C2	-4.25	120.51	126.37
34	B5	1781	MA6	C2-N1-C6	4.24	122.19	111.83
34	B5	766	PSU	O2-C2-N1	-4.23	118.43	122.79
34	B5	999	PSU	C4-N3-C2	-4.23	120.55	126.37
38	A1	2923	PSU	C4-N3-C2	-4.23	120.55	126.37
38	A1	2260	PSU	O2-C2-N1	-4.23	118.43	122.79
34	B5	999	PSU	O2-C2-N1	-4.22	118.43	122.79
38	A1	1124	PSU	C4-N3-C2	-4.21	120.57	126.37
38	A1	2865	PSU	O2-C2-N1	-4.19	118.47	122.79
38	A1	776	PSU	C4-N3-C2	-4.17	120.62	126.37
34	B5	466	PSU	C4-N3-C2	-4.17	120.62	126.37
34	B5	1575	G7M	C5-C4-N3	-4.17	120.27	128.15
38	A1	2975	PSU	O2-C2-N1	-4.17	118.49	122.79
38	A1	960	PSU	C4-N3-C2	-4.16	120.64	126.37
40	A4	73	PSU	C4-N3-C2	-4.15	120.65	126.37
38	A1	2944	PSU	O2-C2-N1	-4.09	118.57	122.79
34	B5	120	PSU	C4-N3-C2	-4.08	120.74	126.37
38	A1	1056	PSU	O2-C2-N1	-4.08	118.58	122.79
38	A1	2264	PSU	C4-N3-C2	-4.08	120.75	126.37
38	A1	1004	PSU	C4-N3-C2	-4.07	120.77	126.37
38	A1	1004	PSU	O2-C2-N1	-4.07	118.60	122.79
38	A1	1110	PSU	O2-C2-N1	-4.05	118.61	122.79
38	A1	2735	PSU	O2-C2-N1	-4.05	118.61	122.79
38	A1	2865	PSU	C4-N3-C2	-4.04	120.80	126.37
34	B5	106	PSU	C4-N3-C2	-4.04	120.81	126.37
34	B5	1187	PSU	C4-N3-C2	-4.02	120.83	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	A1	1042	PSU	C4-N3-C2	-3.96	120.92	126.37
34	B5	1781	MA6	N3-C4-N9	3.94	133.87	127.17
38	A1	2826	PSU	O2-C2-N1	-3.94	118.72	122.79
38	A1	2340	PSU	C4-N3-C2	-3.94	120.95	126.37
34	B5	1575	G7M	C5-C6-N1	3.91	119.92	111.84
39	A3	50	PSU	C4-N3-C2	-3.90	121.00	126.37
34	B5	211	PSU	C4-N3-C2	-3.90	121.00	126.37
38	A1	2921	OMU	C5-C4-N3	3.89	120.25	114.80
38	A1	1052	PSU	O2-C2-N1	-3.88	118.78	122.79
38	A1	2923	PSU	O2-C2-N1	-3.87	118.80	122.79
38	A1	2349	PSU	O2-C2-N1	-3.87	118.80	122.79
38	A1	2880	PSU	O2-C2-N1	-3.86	118.80	122.79
34	B5	1181	PSU	O2-C2-N1	-3.86	118.81	122.79
38	A1	2416	PSU	O2-C2-N1	-3.86	118.81	122.79
38	A1	2129	PSU	O2-C2-N1	-3.83	118.84	122.79
38	A1	1124	PSU	O2-C2-N1	-3.82	118.85	122.79
34	B5	1782	MA6	C4-C5-N7	-3.81	106.22	110.58
38	A1	966	PSU	O2-C2-N1	-3.80	118.87	122.79
39	A3	50	PSU	O2-C2-N1	-3.76	118.91	122.79
34	B5	1575	G7M	O6-C6-C5	-3.76	119.61	128.01
34	B5	1781	MA6	C4-C5-N7	-3.76	106.29	110.58
38	A1	2264	PSU	O2-C2-N1	-3.75	118.92	122.79
38	A1	2266	PSU	C4-N3-C2	-3.75	121.20	126.37
38	A1	960	PSU	O2-C2-N1	-3.75	118.92	122.79
38	A1	986	PSU	O2-C2-N1	-3.75	118.92	122.79
38	A1	2266	PSU	O2-C2-N1	-3.73	118.94	122.79
38	A1	2340	PSU	O2-C2-N1	-3.71	118.96	122.79
34	B5	1187	PSU	O2-C2-N1	-3.71	118.97	122.79
38	A1	2258	PSU	O2-C2-N1	-3.71	118.97	122.79
38	A1	2351	PSU	O2-C2-N1	-3.68	118.99	122.79
34	B5	759	PSU	O2-C2-N1	-3.68	118.99	122.79
34	B5	1290	PSU	O2-C2-N1	-3.68	119.00	122.79
34	B5	302	PSU	O2-C2-N1	-3.62	119.06	122.79
34	B5	1575	G7M	N9-C4-N3	3.61	133.18	125.95
38	A1	2142	1MA	N9-C4-N3	3.59	135.08	126.90
34	B5	466	PSU	O2-C2-N1	-3.59	119.09	122.79
38	A1	990	PSU	O2-C2-N1	-3.54	119.14	122.79
34	B5	120	PSU	O2-C2-N1	-3.51	119.17	122.79
38	A1	2191	PSU	O2-C2-N1	-3.51	119.17	122.79
34	B5	106	PSU	O2-C2-N1	-3.48	119.20	122.79
34	B5	1782	MA6	C2-N3-C4	3.47	120.31	111.83
34	B5	1415	PSU	O2-C2-N1	-3.46	119.22	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	A1	2922	OMG	C6-C5-N7	3.45	136.57	130.29
38	A1	2314	PSU	O2-C2-N1	-3.43	119.25	122.79
38	A1	2870	5MC	C5-C6-N1	-3.43	119.59	123.31
34	B5	1781	MA6	C2-N3-C4	3.41	120.17	111.83
34	B5	1575	G7M	C6-C5-N7	3.38	136.41	132.17
38	A1	2278	5MC	C5-C6-N1	-3.38	119.64	123.31
38	A1	2634	UR3	C5-C4-N3	3.32	119.42	115.04
34	B5	632	PSU	O2-C2-N1	-3.31	119.38	122.79
34	B5	1782	MA6	C4-N9-C8	3.30	109.21	105.74
34	B5	1280	4AC	N4-C4-N3	3.25	119.15	113.87
34	B5	1773	4AC	CM7-C7-N4	3.25	120.51	115.27
40	A4	73	PSU	O2-C2-N1	-3.23	119.45	122.79
34	B5	1191	B8N	N3-C2-N1	3.20	120.63	116.72
34	B5	1781	MA6	N1-C2-N3	-3.20	123.73	128.58
38	A1	2133	PSU	O2-C2-N1	-3.20	119.49	122.79
34	B5	211	PSU	O2-C2-N1	-3.18	119.51	122.79
34	B5	1782	MA6	N1-C2-N3	-3.17	123.78	128.58
34	B5	1781	MA6	C4-N9-C8	3.12	109.02	105.74
38	A1	645	1MA	N9-C4-N3	3.08	133.92	126.90
38	A1	1042	PSU	O2-C2-N1	-3.08	119.61	122.79
38	A1	2921	OMU	O4-C4-C5	-3.04	119.92	125.16
36	AB	243	HIC	NE2-CE1-ND1	-2.83	111.58	112.66
34	B5	1773	4AC	C6-C5-C4	2.75	120.32	117.00
34	B5	1191	B8N	C31-N3-C2	2.75	121.70	117.64
34	B5	1782	MA6	C5-N7-C8	2.75	107.77	103.45
38	A1	2133	PSU	C5-C6-N1	-2.71	118.39	122.14
38	A1	2921	OMU	O2-C2-N1	-2.67	119.32	122.80
34	B5	1782	MA6	N1-C6-N6	2.60	120.02	116.86
38	A1	2870	5MC	C5-C4-N3	-2.59	119.10	121.75
38	A1	645	1MA	C6-C5-N7	2.58	136.72	132.16
34	B5	632	PSU	C5-C6-N1	-2.57	118.57	122.14
38	A1	645	1MA	C4-C5-N7	-2.57	106.59	110.67
34	B5	1781	MA6	C5-N7-C8	2.57	107.48	103.45
34	B5	1290	PSU	C5-C6-N1	-2.56	118.59	122.14
38	A1	986	PSU	C5-C6-N1	-2.52	118.64	122.14
38	A1	2922	OMG	C4-C5-N7	-2.51	106.69	110.67
38	A1	2826	PSU	C5-C6-N1	-2.48	118.69	122.14
38	A1	2278	5MC	C5-C4-N3	-2.48	119.21	121.75
38	A1	645	1MA	N1-C2-N3	-2.46	123.08	126.00
38	A1	776	PSU	O2-C2-N1	-2.38	120.34	122.79
34	B5	1782	MA6	N9-C8-N7	-2.38	110.56	113.94
38	A1	2314	PSU	C5-C6-N1	-2.37	118.86	122.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	A1	2133	PSU	O2-C2-N3	-2.35	117.69	121.86
34	B5	1415	PSU	C5-C6-N1	-2.33	118.90	122.14
34	B5	759	PSU	C5-C6-N1	-2.32	118.93	122.14
34	B5	1575	G7M	C2-N1-C6	-2.31	120.92	125.11
38	A1	2975	PSU	C5-C6-N1	-2.31	118.94	122.14
38	A1	2129	PSU	C5-C6-N1	-2.30	118.94	122.14
38	A1	2258	PSU	C5-C6-N1	-2.30	118.95	122.14
34	B5	1773	4AC	C5-C4-N3	-2.29	119.01	122.60
38	A1	990	PSU	C5-C6-N1	-2.27	118.99	122.14
38	A1	2634	UR3	C3U-N3-C2	2.26	121.27	117.33
38	A1	2922	OMG	O6-C6-C5	-2.24	120.62	126.53
34	B5	302	PSU	C5-C6-N1	-2.24	119.03	122.14
38	A1	2142	1MA	N1-C2-N3	-2.23	123.34	126.00
34	B5	1781	MA6	C6-C5-N7	2.23	136.99	133.43
38	A1	776	PSU	O2-C2-N3	-2.21	117.94	121.86
38	A1	2880	PSU	C5-C6-N1	-2.20	119.08	122.14
38	A1	2865	PSU	O4'-C1'-C2'	2.20	108.20	105.15
38	A1	2944	PSU	C5-C6-N1	-2.20	119.09	122.14
38	A1	966	PSU	C5-C6-N1	-2.19	119.10	122.14
34	B5	1781	MA6	N9-C8-N7	-2.18	110.84	113.94
38	A1	2142	1MA	C4-C5-N7	-2.17	107.23	110.67
34	B5	999	PSU	O4'-C1'-C2'	2.15	108.13	105.15
34	B5	1781	MA6	N1-C6-N6	2.15	119.48	116.86
34	B5	1181	PSU	C5-C6-N1	-2.15	119.15	122.14
34	B5	766	PSU	O4'-C1'-C2'	2.15	108.13	105.15
38	A1	2191	PSU	O4'-C1'-C2'	2.15	108.13	105.15
38	A1	2351	PSU	C5-C6-N1	-2.14	119.17	122.14
38	A1	960	PSU	C5-C6-N1	-2.13	119.18	122.14
34	B5	766	PSU	C5-C6-N1	-2.10	119.23	122.14
38	A1	1056	PSU	C5-C6-N1	-2.10	119.23	122.14
34	B5	1191	B8N	O4'-C1'-C2'	2.10	108.05	105.15
38	A1	2826	PSU	O4'-C1'-C2'	2.10	108.05	105.15
38	A1	2278	5MC	O2-C2-N3	-2.10	119.02	122.33
38	A1	2921	OMU	CM2-O2'-C2'	-2.09	109.10	114.47
80	DC	699	DDE	CAU-CBW-CBI	-2.09	107.13	111.22
38	A1	2260	PSU	C5-C6-N1	-2.09	119.25	122.14
38	A1	2260	PSU	O4'-C1'-C2'	2.09	108.04	105.15
38	A1	1124	PSU	C5-C6-N1	-2.08	119.26	122.14
34	B5	466	PSU	C5-C6-N1	-2.07	119.26	122.14
38	A1	776	PSU	O4'-C1'-C2'	2.06	108.01	105.15
34	B5	120	PSU	C5-C6-N1	-2.06	119.28	122.14
38	A1	1052	PSU	C5-C6-N1	-2.05	119.29	122.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	A4	73	PSU	C5-C6-N1	-2.05	119.30	122.14
38	A1	2944	PSU	O4'-C1'-C2'	2.03	107.96	105.15
38	A1	2735	PSU	C5-C6-N1	-2.03	119.33	122.14
38	A1	986	PSU	O4'-C1'-C2'	2.02	107.95	105.15
38	A1	2416	PSU	C5-C6-N1	-2.02	119.33	122.14

There are no chirality outliers.

All (59) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
80	DC	699	DDE	O-C-CA-CB
80	DC	699	DDE	N-CA-CB-CG
80	DC	699	DDE	C-CA-CB-CG
80	DC	699	DDE	CBI-CBW-NCB-CAB
80	DC	699	DDE	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	O7-C7-N4-C4
34	B5	1773	4AC	CM7-C7-N4-C4
34	B5	1781	MA6	C5-C6-N6-C9
34	B5	1782	MA6	O4'-C4'-C5'-O5'
34	B5	1782	MA6	C5-C6-N6-C9
38	A1	1042	PSU	O4'-C1'-C5-C4
38	A1	1042	PSU	O4'-C1'-C5-C6
38	A1	2258	PSU	O4'-C4'-C5'-O5'
38	A1	2266	PSU	C2'-C1'-C5-C4
38	A1	2870	5MC	C2'-C1'-N1-C2
38	A1	2870	5MC	C2'-C1'-N1-C6
34	B5	211	PSU	C3'-C4'-C5'-O5'
34	B5	1187	PSU	O4'-C4'-C5'-O5'
38	A1	2923	PSU	C3'-C4'-C5'-O5'
80	DC	699	DDE	CAT-CAU-CBW-CBI
38	A1	2923	PSU	O4'-C4'-C5'-O5'
34	B5	1782	MA6	N1-C6-N6-C9
34	B5	1782	MA6	C3'-C4'-C5'-O5'
38	A1	2258	PSU	C3'-C4'-C5'-O5'
34	B5	1781	MA6	N1-C6-N6-C9
34	B5	211	PSU	O4'-C4'-C5'-O5'
36	AB	243	HIC	CA-CB-CG-ND1
36	AB	243	HIC	CA-CB-CG-CD2
34	B5	1187	PSU	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
80	DC	699	DDE	CBI-CBW-NCB-CAC
80	DC	699	DDE	CAU-CBW-NCB-CAB
80	DC	699	DDE	CAU-CBW-NCB-CAC
34	B5	766	PSU	C3'-C4'-C5'-O5'
34	B5	1575	G7M	O4'-C4'-C5'-O5'
38	A1	2923	PSU	C4'-C5'-O5'-P
34	B5	1575	G7M	C3'-C4'-C5'-O5'
38	A1	2870	5MC	O4'-C1'-N1-C6
80	DC	699	DDE	CA-CB-CG-ND1
38	A1	2340	PSU	C4'-C5'-O5'-P
34	B5	1181	PSU	O4'-C1'-C5-C4
34	B5	1191	B8N	O4'-C1'-C5-C4
38	A1	2340	PSU	C3'-C4'-C5'-O5'
38	A1	2266	PSU	C4'-C5'-O5'-P
34	B5	1781	MA6	C5-C6-N6-C10
34	B5	1782	MA6	C5-C6-N6-C10
38	A1	645	1MA	C2'-C1'-N9-C8
38	A1	2870	5MC	O4'-C1'-N1-C2
38	A1	2264	PSU	C3'-C4'-C5'-O5'
38	A1	645	1MA	C2'-C1'-N9-C4
80	DC	699	DDE	CE1-CAT-CAU-CBW
38	A1	2314	PSU	C4'-C5'-O5'-P
34	B5	766	PSU	O4'-C4'-C5'-O5'
38	A1	960	PSU	O4'-C1'-C5-C6
34	B5	1415	PSU	C3'-C4'-C5'-O5'
80	DC	699	DDE	CA-CB-CG-CD2
38	A1	2266	PSU	C3'-C4'-C5'-O5'

There are no ring outliers.

35 monomers are involved in 53 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
38	A1	776	PSU	1	0
38	A1	2735	PSU	1	0
38	A1	2975	PSU	1	0
34	B5	1781	MA6	2	0
34	B5	1290	PSU	1	0
38	A1	2349	PSU	1	0
38	A1	2133	PSU	2	0
34	B5	766	PSU	1	0
34	B5	1773	4AC	3	0
38	A1	2266	PSU	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
38	A1	2870	5MC	1	0
38	A1	2880	PSU	1	0
34	B5	120	PSU	1	0
38	A1	1124	PSU	1	0
38	A1	966	PSU	1	0
38	A1	990	PSU	1	0
39	A3	50	PSU	1	0
34	B5	759	PSU	1	0
36	AB	243	HIC	2	0
38	A1	2416	PSU	1	0
38	A1	2351	PSU	1	0
38	A1	2865	PSU	2	0
38	A1	2314	PSU	1	0
40	A4	73	PSU	1	0
38	A1	2944	PSU	1	0
38	A1	986	PSU	3	0
38	A1	1110	PSU	3	0
38	A1	2278	5MC	3	0
34	B5	1415	PSU	1	0
34	B5	302	PSU	1	0
34	B5	1187	PSU	1	0
34	B5	632	PSU	1	0
34	B5	1280	4AC	4	0
38	A1	2258	PSU	2	0
38	A1	2129	PSU	2	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	0.68	1 (2%)	38,64,64	1.23	5 (13%)
83	GDP	DC	901	84	29,30,30	1.16	3 (10%)	45,47,47	1.79	7 (15%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
85	SO1	DC	903	-	1/1/15/16	4/21/104/104	0/7/5/5
83	GDP	DC	901	84	-	3/16/32/32	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	3.17	1.47	1.38
85	DC	903	SO1	O14-C5	-2.95	1.19	1.30
83	DC	901	GDP	C5-N7	-2.31	1.34	1.39
83	DC	901	GDP	C6-N1	-2.28	1.34	1.38

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
83	DC	901	GDP	C5-C4-N3	-6.41	118.19	128.39
83	DC	901	GDP	C2-N3-C4	4.97	120.85	112.30
83	DC	901	GDP	N9-C4-N3	4.92	135.79	125.95
85	DC	903	SO1	C12-C6-C2	-4.51	98.10	105.09
83	DC	901	GDP	C6-C5-N7	2.66	135.13	130.29
83	DC	901	GDP	C3'-C2'-C1'	2.61	106.39	101.46
83	DC	901	GDP	C4-C5-N7	-2.47	106.75	110.67
85	DC	903	SO1	C7-C2-C6	2.37	116.58	112.05
83	DC	901	GDP	O6-C6-C5	-2.29	120.48	126.53
85	DC	903	SO1	O57-C53-C54	-2.29	104.98	110.38
85	DC	903	SO1	C21-C13-C4	2.28	118.49	112.41
85	DC	903	SO1	C18-C9-C16	-2.11	100.84	103.72

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
85	DC	903	SO1	C4

All (7) torsion outliers are listed below:

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

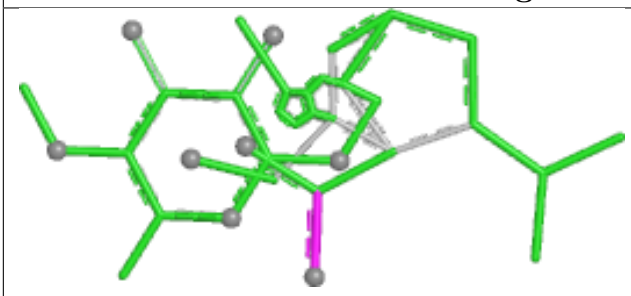
There are no ring outliers.

2 monomers are involved in 12 short contacts:

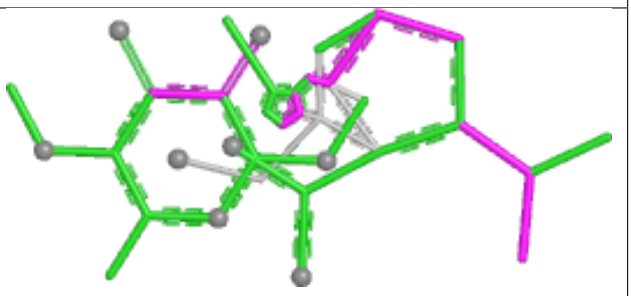
Mol	Chain	Res	Type	Clashes	Symm-Clashes
85	DC	903	SO1	8	0
83	DC	901	GDP	4	0

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.

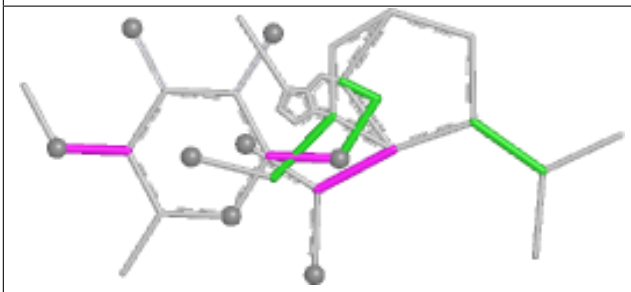
Ligand SO1 DC 903



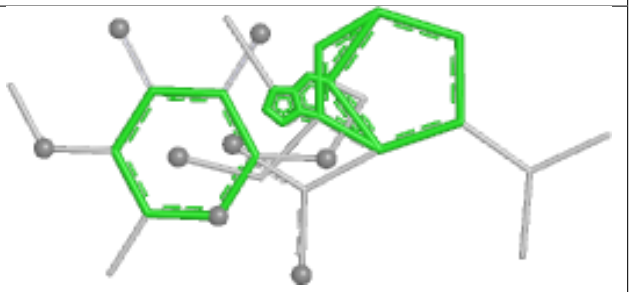
Bond lengths



Bond angles

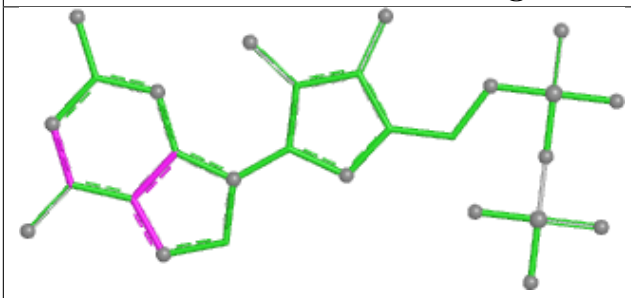


Torsions

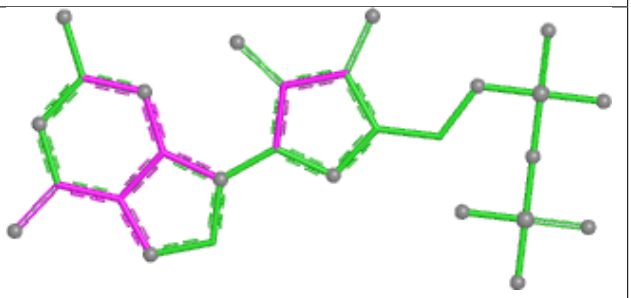


Rings

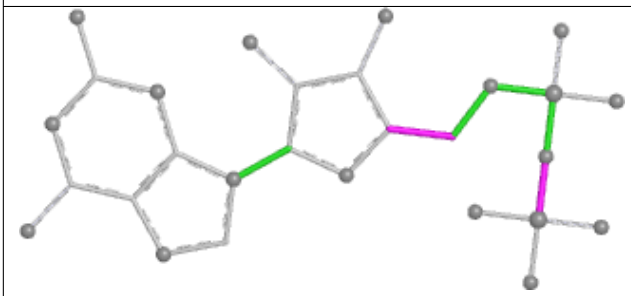
Ligand GDP DC 901



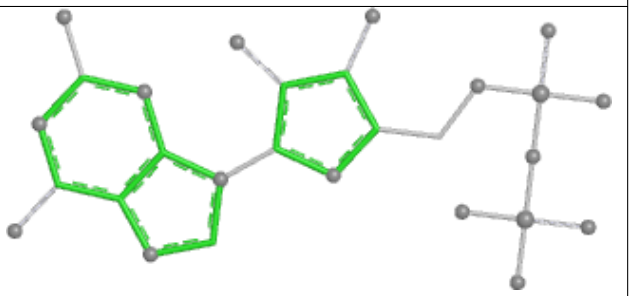
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
38	A1	1
77	Ao	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A1	1282:G	O3'	1283:C	P	4.95
1	Ao	105:GLN	C	106:PHE	N	3.24

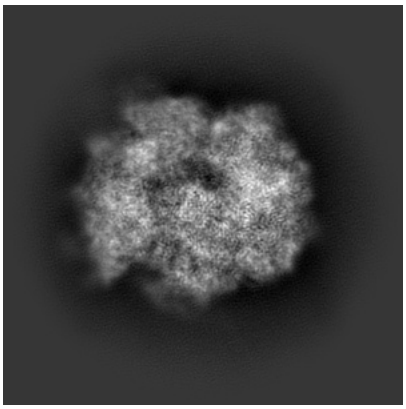
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-41001. These allow visual inspection of the internal detail of the map and identification of artifacts.

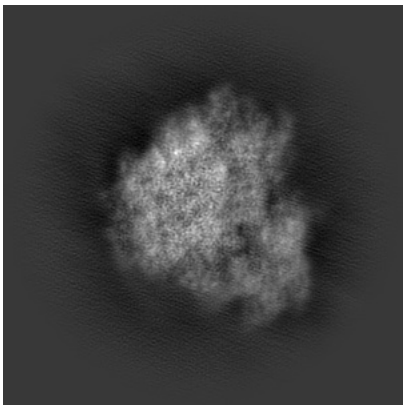
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

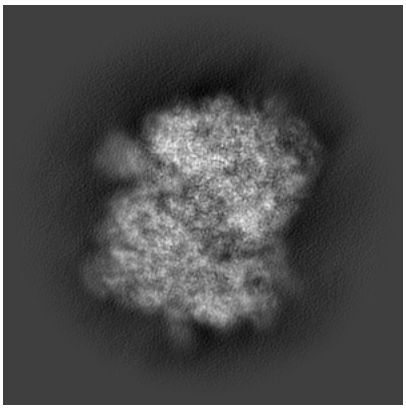
6.1.1 Primary map



X

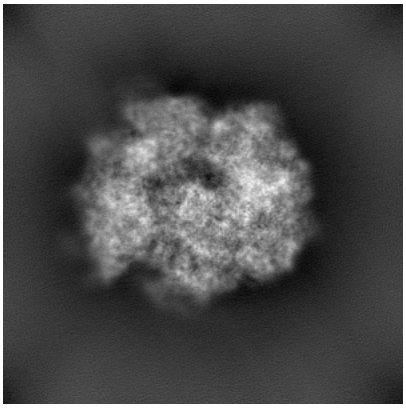


Y

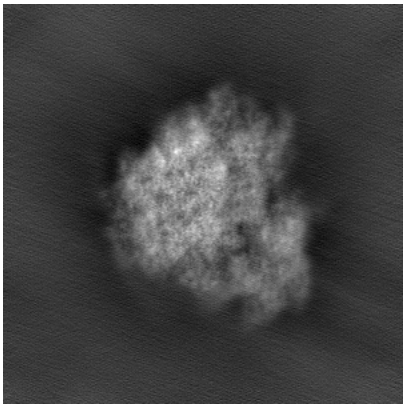


Z

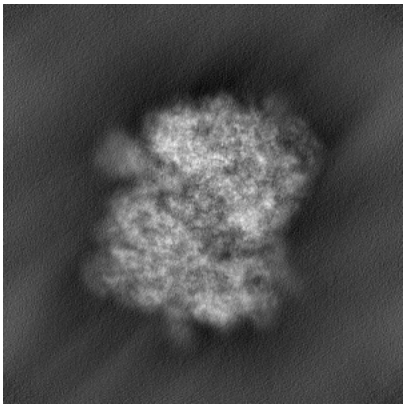
6.1.2 Raw map



X



Y

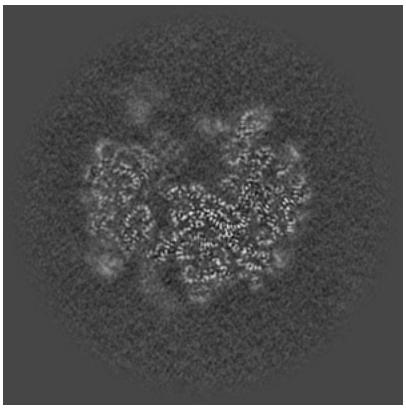


Z

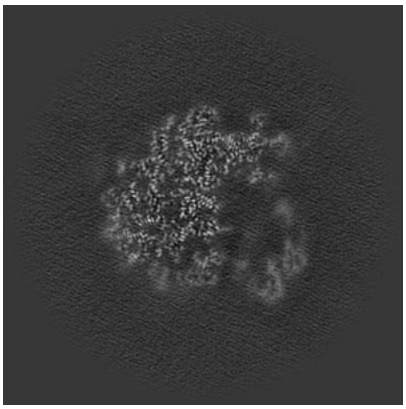
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

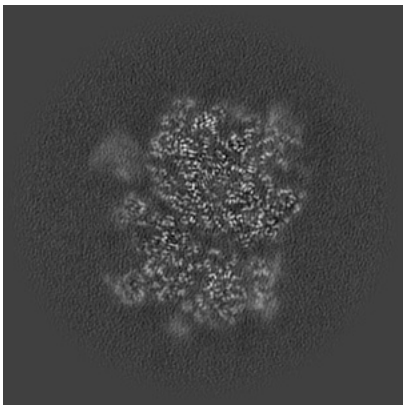
6.2.1 Primary map



X Index: 200

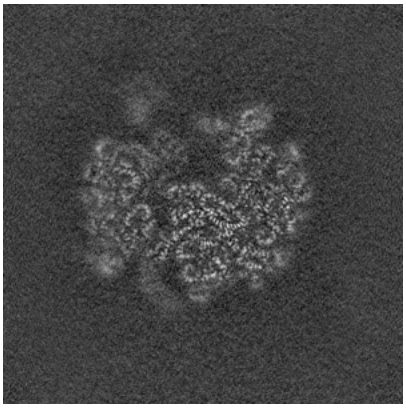


Y Index: 200

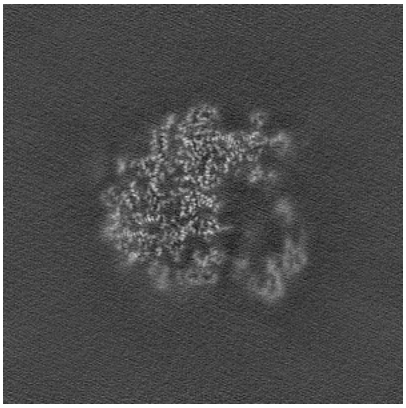


Z Index: 200

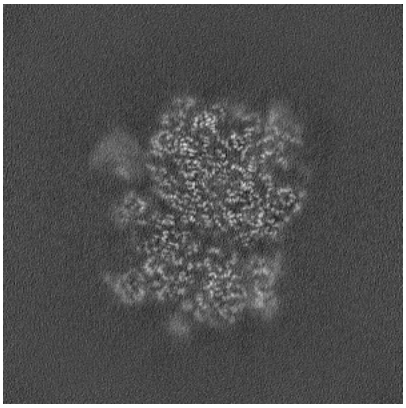
6.2.2 Raw map



X Index: 200



Y Index: 200

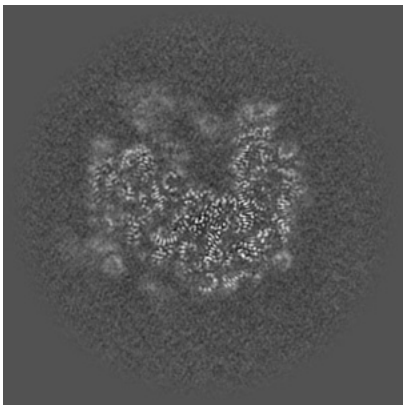


Z Index: 200

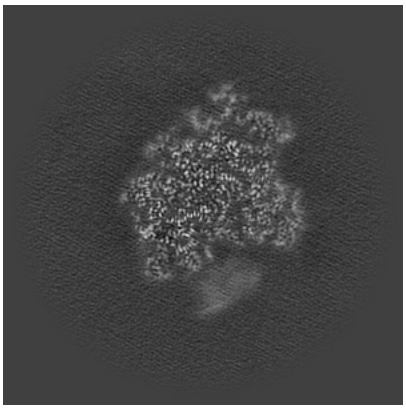
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

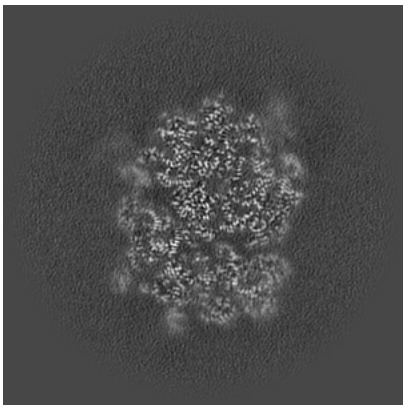
6.3.1 Primary map



X Index: 192

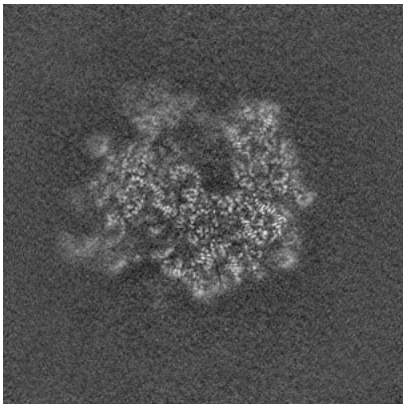


Y Index: 245

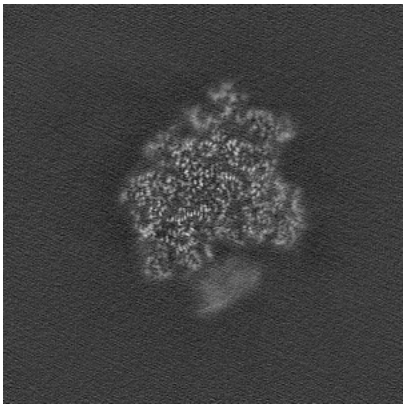


Z Index: 190

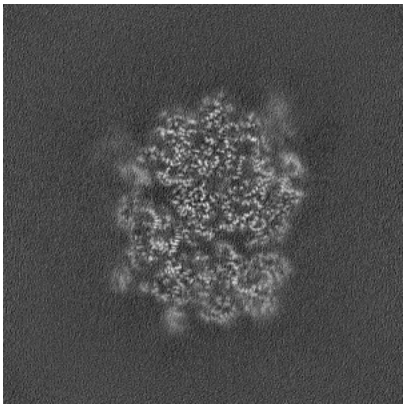
6.3.2 Raw map



X Index: 185



Y Index: 245

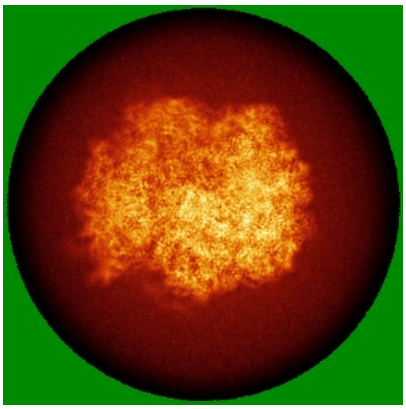


Z Index: 190

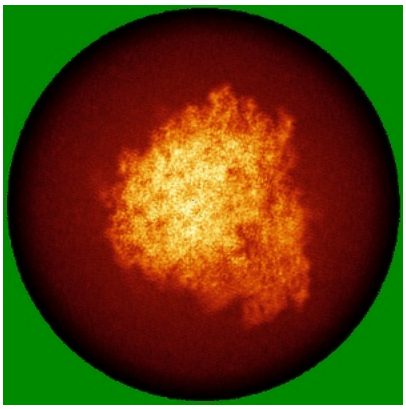
The images above show the largest variance slices of the map in three orthogonal directions.

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

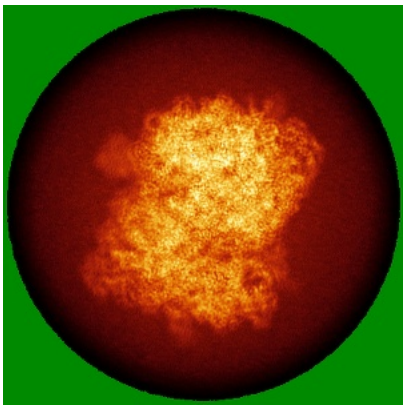
6.4.1 Primary map



X

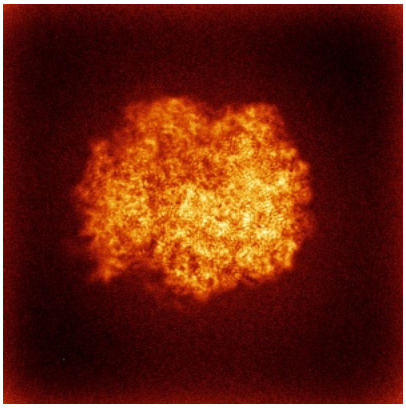


Y

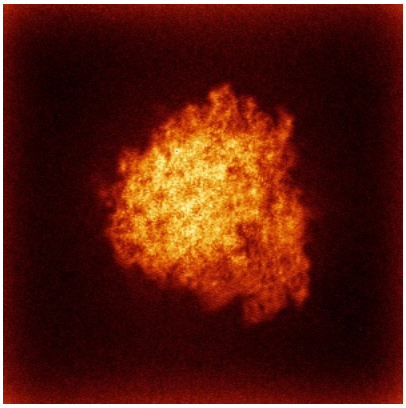


Z

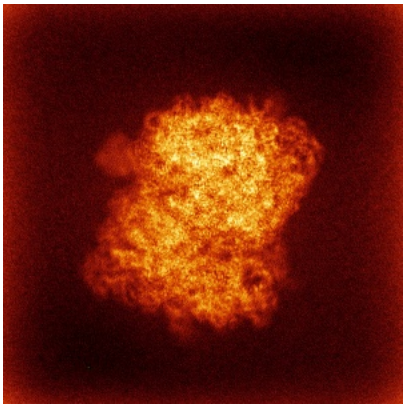
6.4.2 Raw map



X



Y



Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map

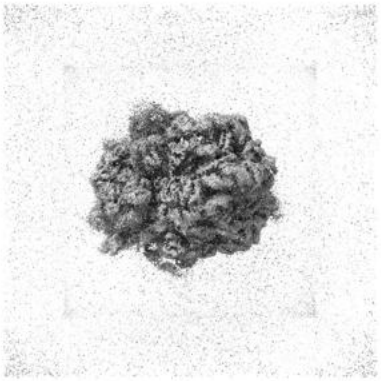
X

Y

Z

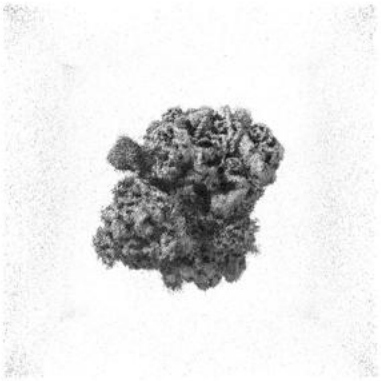
The images above show the 3D surface view of the map at the recommended contour level 0.3. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X

Y



Z

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

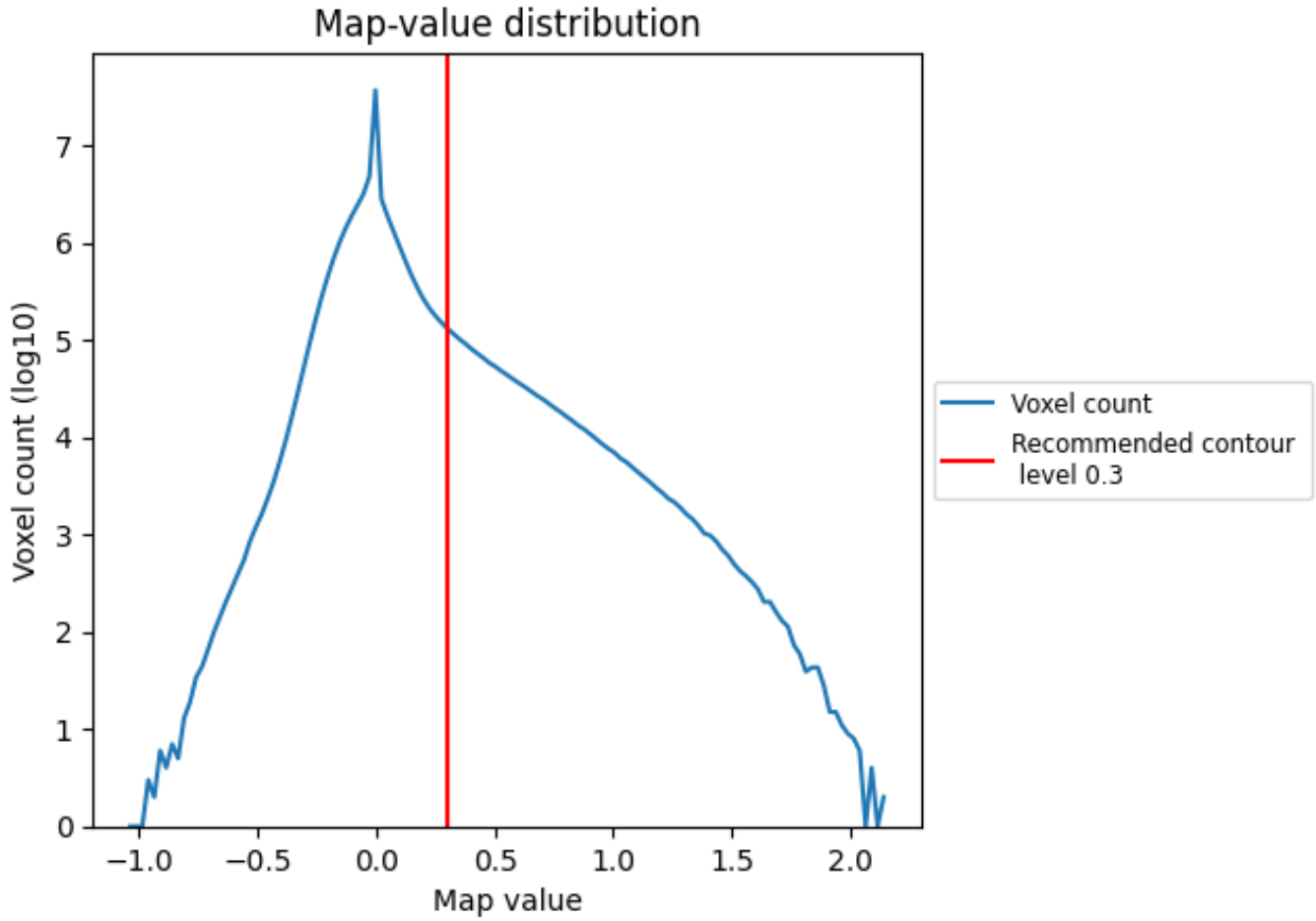
6.6 Mask visualisation (i)

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

7 Map analysis

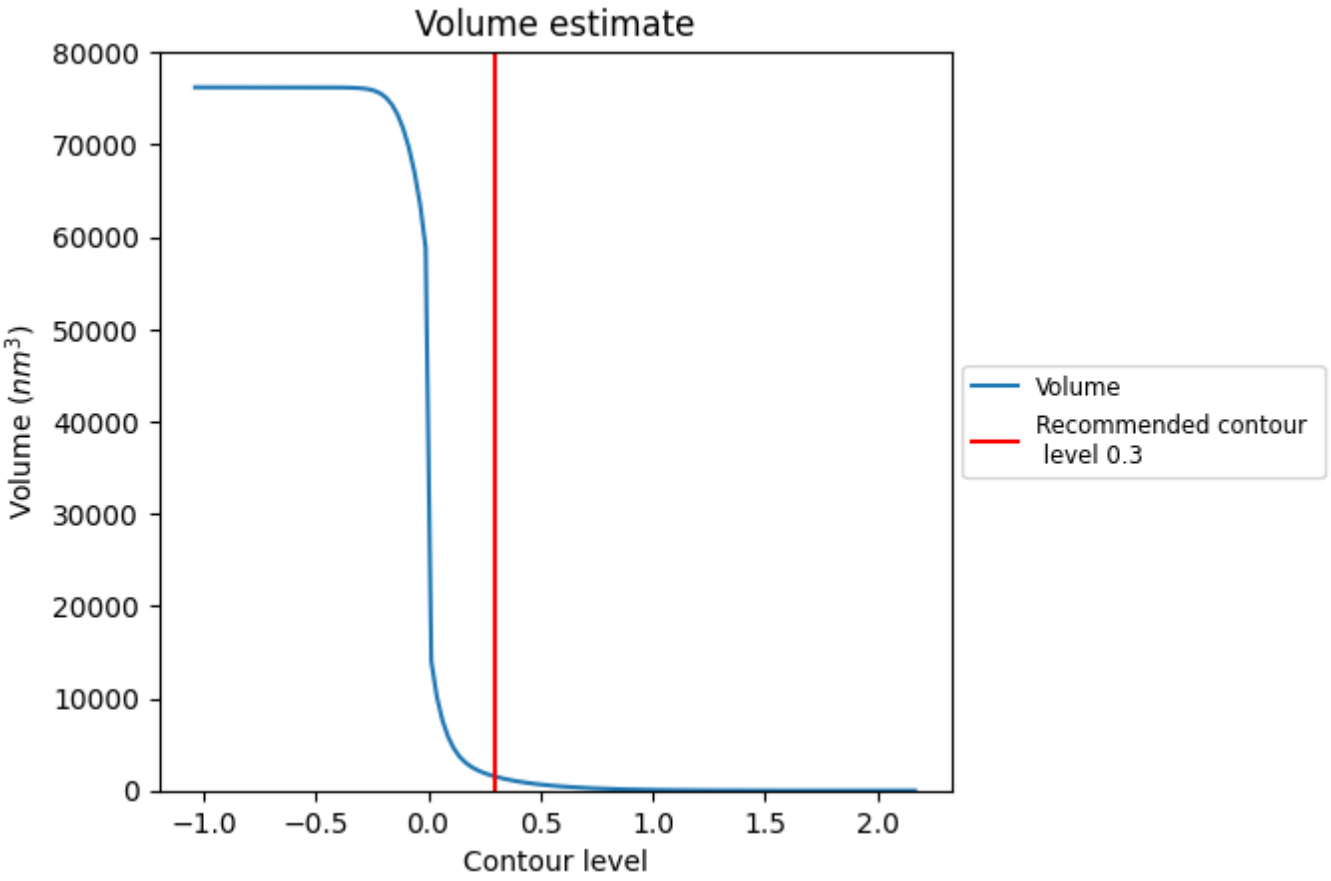
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

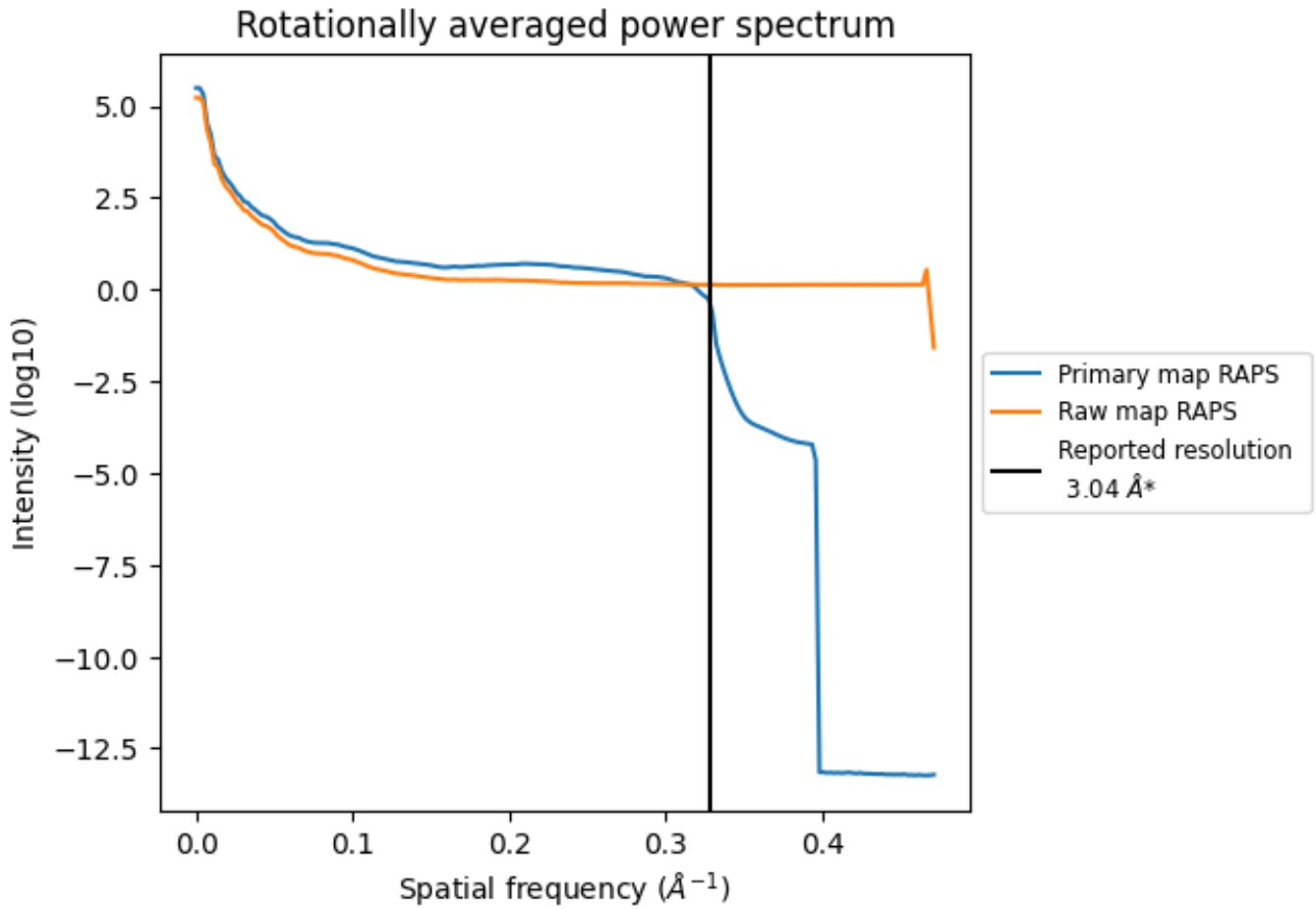
7.2 Volume estimate



The volume at the recommended contour level is 1514 nm^3; this corresponds to an approximate mass of 1367 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)

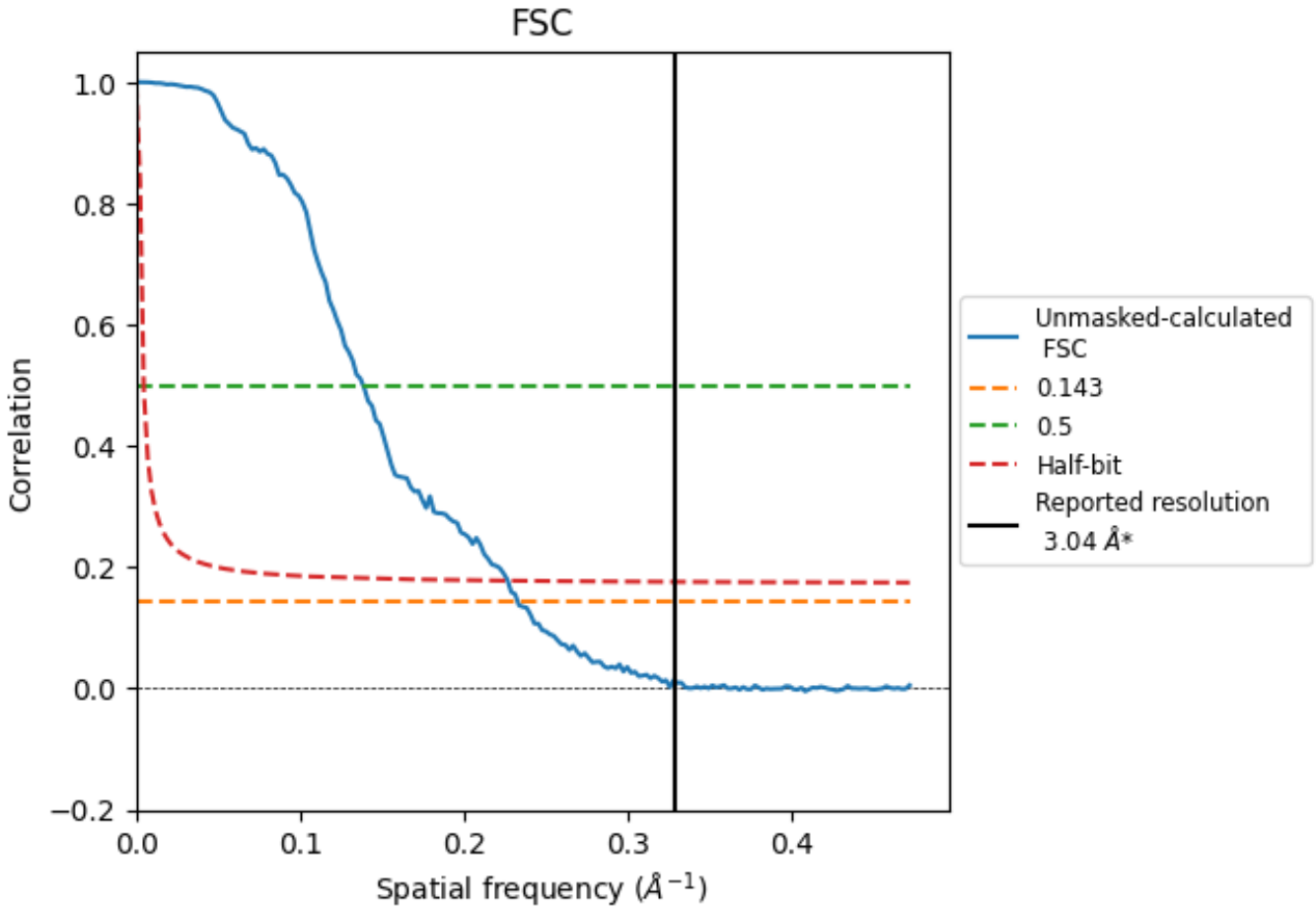


*Reported resolution corresponds to spatial frequency of 0.329 $Å^{-1}$

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 0.329 Å^{-1}

8.2 Resolution estimates (i)

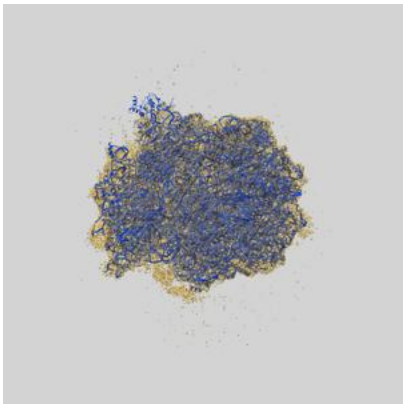
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.04	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.30	7.23	4.41

*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 4.30 differs from the reported value 3.04 by more than 10 %

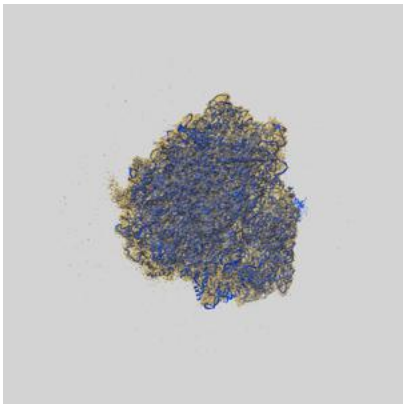
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-41001 and PDB model 8T3E. Per-residue inclusion information can be found in section 3 on page 21.

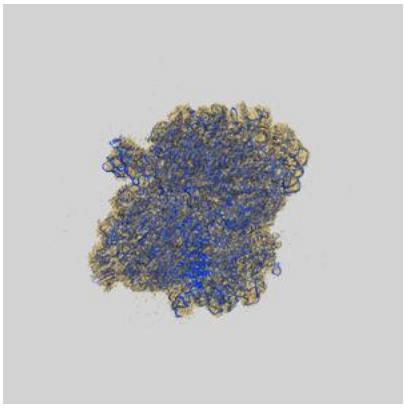
9.1 Map-model overlay



X



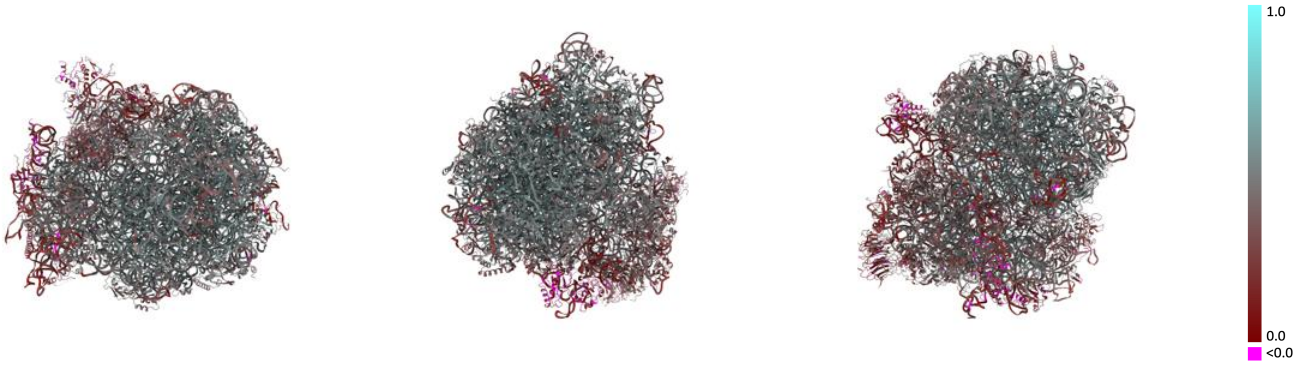
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.3 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

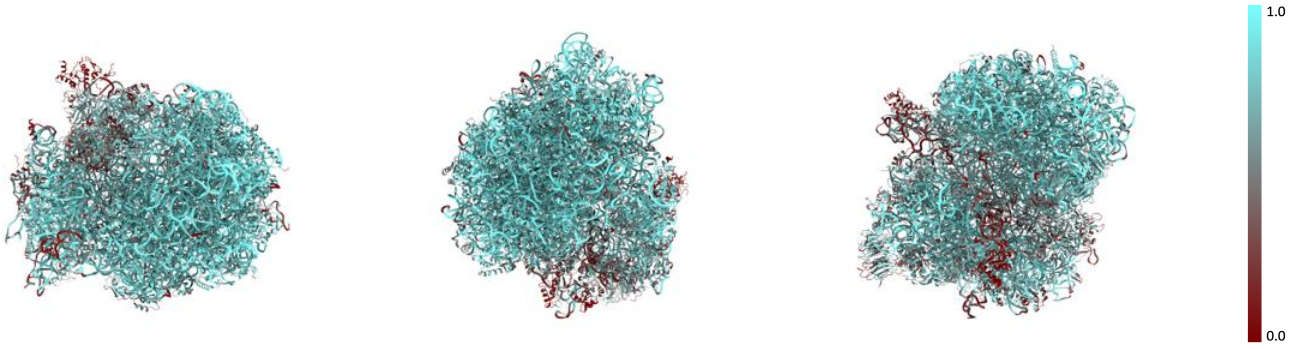
9.2 Q-score mapped to coordinate model



X Y Z

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

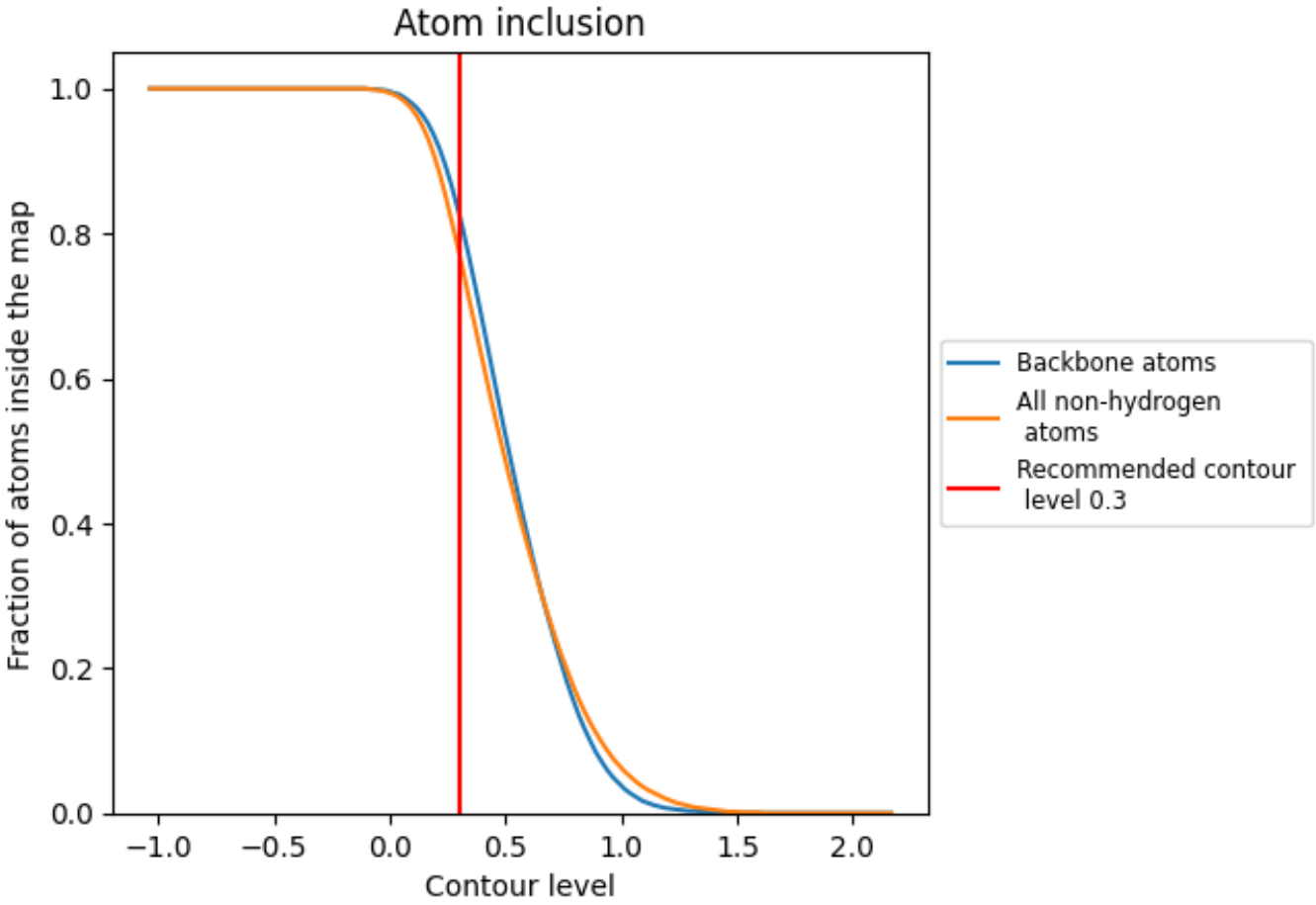
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.3).

9.4 Atom inclusion (i)



At the recommended contour level, 83% of all backbone atoms, 77% 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	0.7720	0.4370
A1	0.8870	0.4840
A3	0.9390	0.4710
A4	0.9290	0.5070
AA	0.7400	0.5350
AB	0.8200	0.5040
AC	0.8130	0.5060
AD	0.7520	0.4110
AE	0.8030	0.4450
AF	0.8400	0.5040
AG	0.7820	0.4580
AH	0.7600	0.4780
AI	0.7100	0.4540
AJ	0.6210	0.3900
AL	0.8200	0.4960
AM	0.7890	0.4660
AN	0.8170	0.5300
AO	0.7960	0.4990
AP	0.8200	0.5080
AQ	0.7840	0.5120
AR	0.6920	0.4560
AS	0.8240	0.4970
AT	0.7640	0.4940
AU	0.7350	0.4280
AV	0.7140	0.4980
AW	0.8080	0.4940
AX	0.7470	0.4860
AY	0.8180	0.4920
AZ	0.8260	0.4790
Aa	0.8350	0.5110
Ab	0.6440	0.4660
Ac	0.6840	0.4830
Ad	0.7750	0.4700
Ae	0.8060	0.5190
Af	0.8660	0.5360

Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
Ag	0.7560	0.5020
Ah	0.7980	0.4800
Ai	0.7600	0.4590
Aj	0.8630	0.5480
Ak	0.5930	0.4110
Al	0.7900	0.5240
Am	0.7490	0.5000
An	0.7080	0.5070
Ao	0.6250	0.4820
Ap	0.6790	0.4890
B5	0.8200	0.4070
BA	0.6870	0.4000
BB	0.6770	0.4040
BC	0.7450	0.4620
BD	0.5620	0.3630
BE	0.6930	0.4060
BF	0.5080	0.3340
BG	0.6830	0.3420
BH	0.6710	0.3880
BI	0.7230	0.4390
BJ	0.5830	0.2440
BK	0.5220	0.2880
BL	0.6860	0.4610
BM	0.0210	0.1830
BN	0.7090	0.4750
BO	0.7140	0.4630
BP	0.4510	0.2980
BQ	0.5850	0.3350
BR	0.5480	0.3170
BS	0.5690	0.3310
BT	0.6330	0.3160
BU	0.5120	0.3430
BV	0.7400	0.4430
BW	0.8030	0.5010
BX	0.6710	0.4880
BY	0.5470	0.2320
BZ	0.5580	0.2970
Ba	0.7280	0.4830
Bb	0.6960	0.4340
Bc	0.4650	0.3270
Bd	0.7590	0.4110
Be	0.5250	0.3320

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Chain	Atom inclusion	Q-score
Bf	0.0350	0.1960
Bg	0.5830	0.2470
DC	0.3660	0.3210
E	0.2200	0.1130
EC	0.3200	0.2000