



Full wwPDB EM Validation Report ⓘ

Mar 28, 2026 – 04:39 PM UTC

PDB ID : 8T3B / pdb_00008t3b
EMDB ID : EMD-40998
Title : Hypomethylated yeast 80S bound with Taura syndrome virus (TSV) internal ribosome entry site (IRES), eEF2, GDP, and sordarin, Structure I
Authors : Zhao, Y.; Li, H.
Deposited on : 2023-06-07
Resolution : 3.08 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

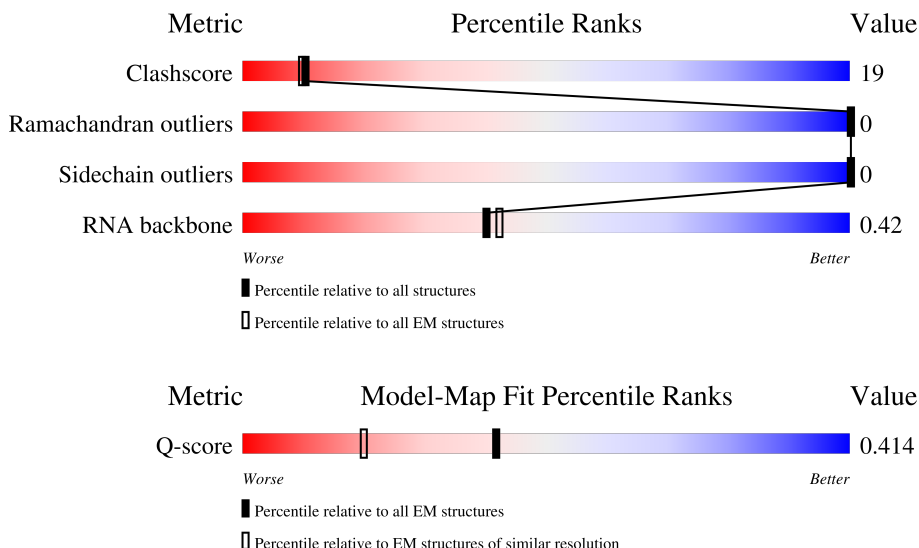
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.08 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	14000 (2.58 - 3.58)

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 $\leq 5\%$. 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	22% 38% 44% 18%
2	BB	255	25% 43% 41% 16%
3	BC	254	7% 48% 37% 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	3360	
39	A3	121	
40	A4	158	
41	AD	297	
42	AE	176	
43	AF	244	
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	
55	AS	178	
56	AT	160	
57	AU	121	
58	AV	137	
59	AW	155	
60	AX	142	
61	AY	127	
62	AZ	136	
63	Aa	149	
64	Ab	59	
65	Ac	105	
66	Ad	113	
67	Ae	130	
68	Af	107	
69	Ag	121	
70	Ah	120	
71	Ai	100	
72	Aj	88	
73	Ak	78	
74	Al	51	
75	Am	128	
76	An	25	
77	Ao	106	
78	Ap	92	

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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 212418 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
1	BA	206	Total	C	N	O	S	0	0
			1612	1034	285	291	2		

- Molecule 2 is a protein called RPS1A isoform 1.

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

- Molecule 3 is a protein called RPS2 isoform 1.

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

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

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

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

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

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

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

- 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	S	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	56	Total	C	N	O	S	0	0
			444	279	91	73	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	C	N	O	0	0
			1543	962	315	266		

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

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

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

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

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

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

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

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

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

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

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

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

- 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	S	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	S	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	C	N	O	0	0
			1092	710	202	180		

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

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

- Molecule 64 is a protein called RPL29 isoform 1.

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

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

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

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

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

- Molecule 67 is a protein called RPL32 isoform 1.

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

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

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

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

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

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

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

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

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

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

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

- Molecule 73 is a protein called RPL38 isoform 1.

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

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

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

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

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

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

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

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

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

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

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

- Molecule 79 is a protein called RPL1A isoform 1.

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

- Molecule 80 is a protein called Elongation factor 2.

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

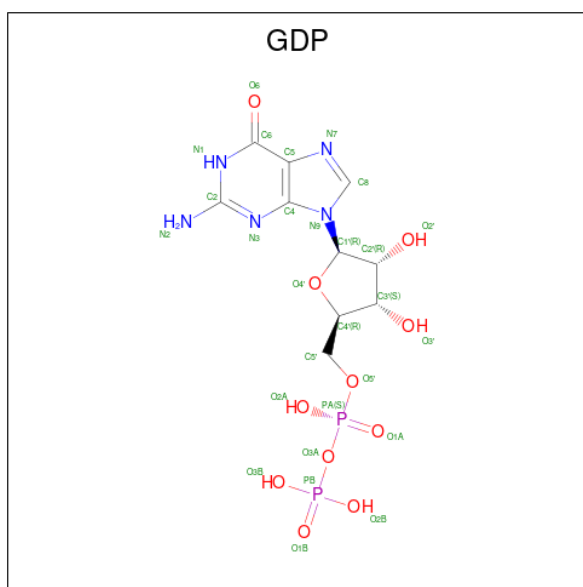
- Molecule 81 is a RNA chain called TSV IRES.

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

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

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

- Molecule 83 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: C₁₀H₁₅N₅O₁₁P₂).

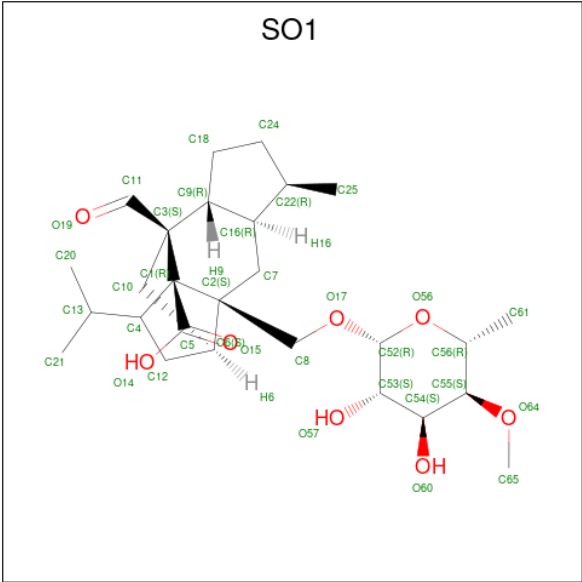


Mol	Chain	Residues	Atoms					AltConf
83	DC	1	Total	C	N	O	P	0
			28	10	5	11	2	

- 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: C₂₇H₄₂O₈).

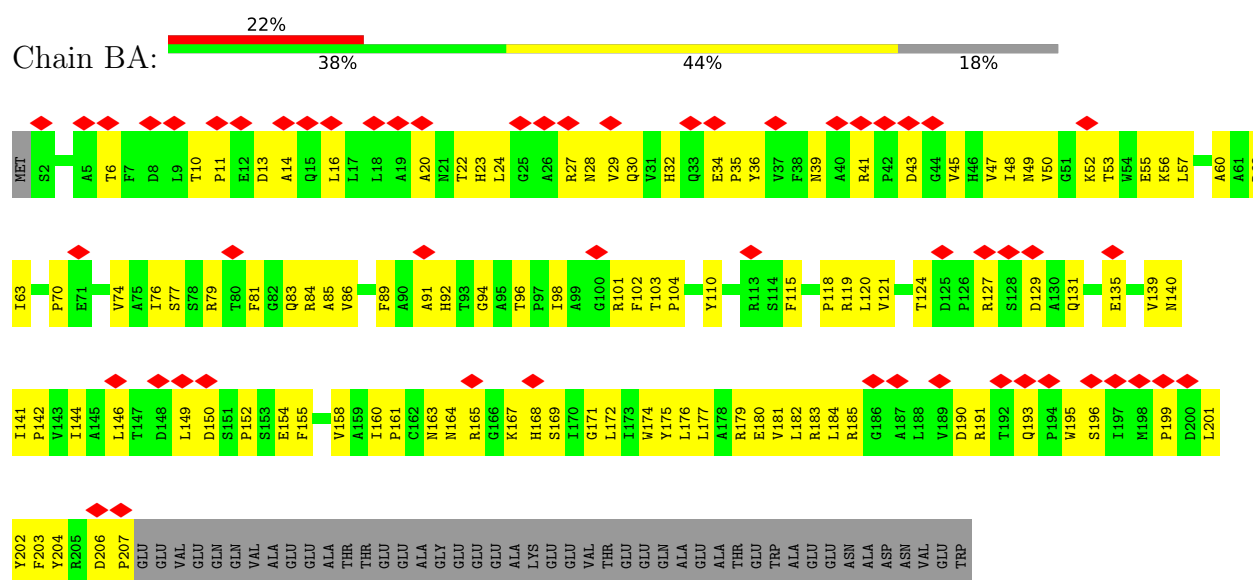


Mol	Chain	Residues	Atoms			AltConf
85	DC	1	Total	C	O	0
			35	27	8	

3 Residue-property plots

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.

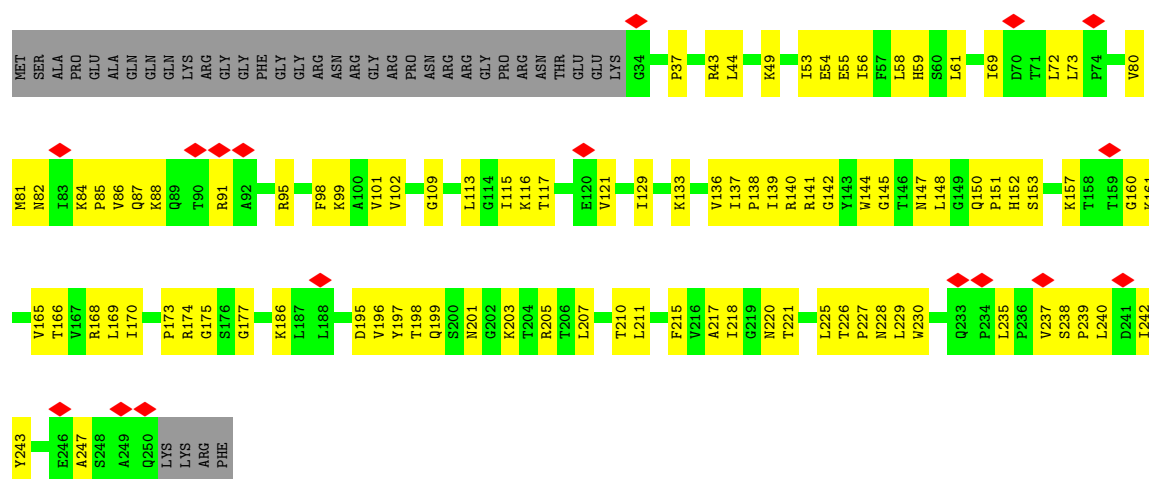
• Molecule 1: 40S ribosomal protein S0-A



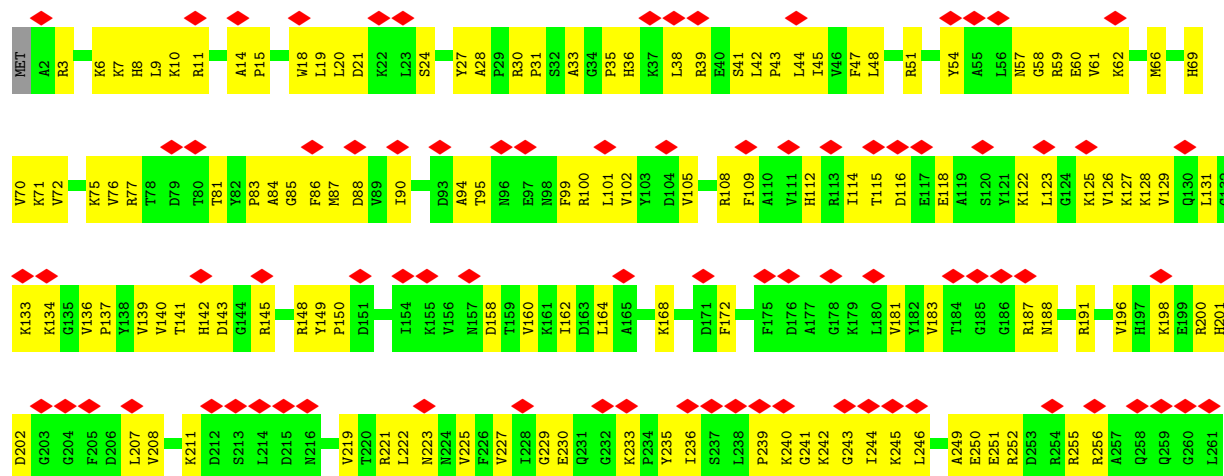
• Molecule 2: RPS1A isoform 1



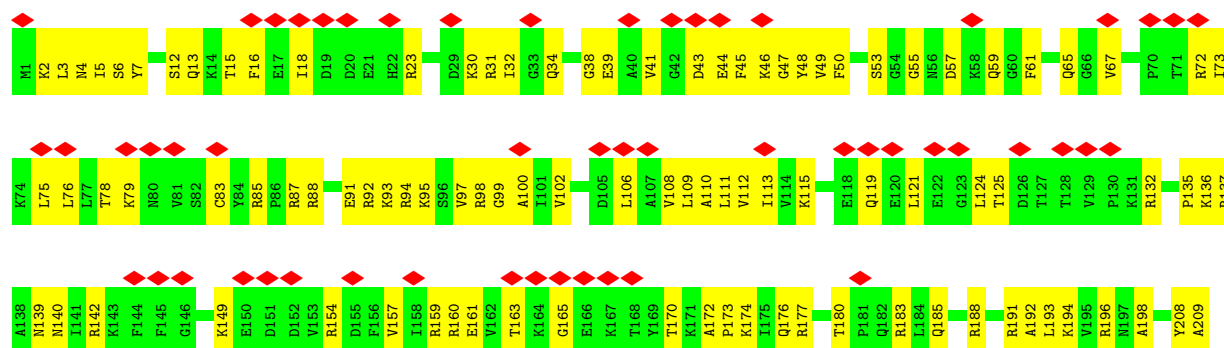
• Molecule 3: RPS2 isoform 1

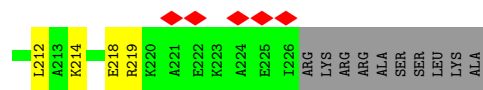


• Molecule 4: 40S ribosomal protein S4-A

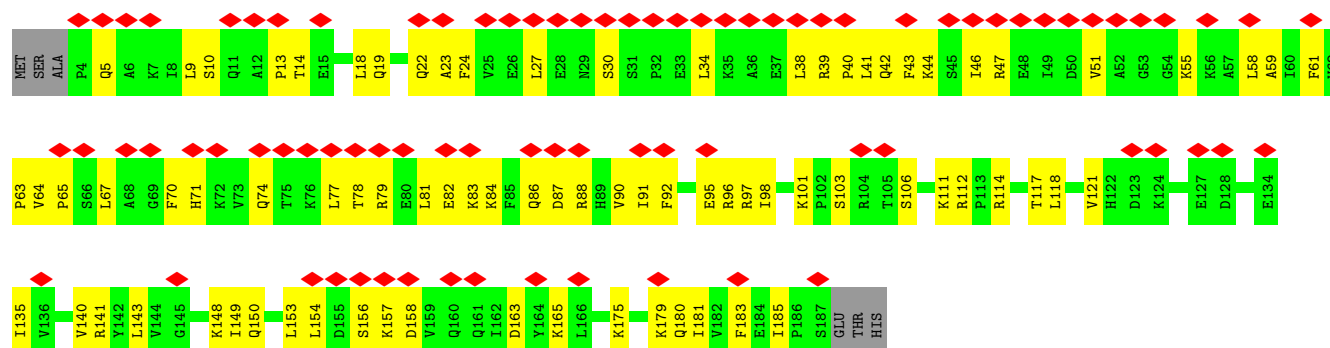
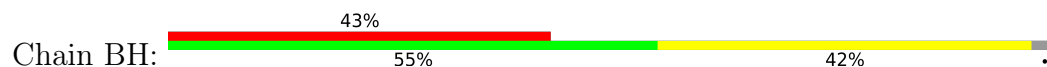


• Molecule 5: 40S ribosomal protein S6-A

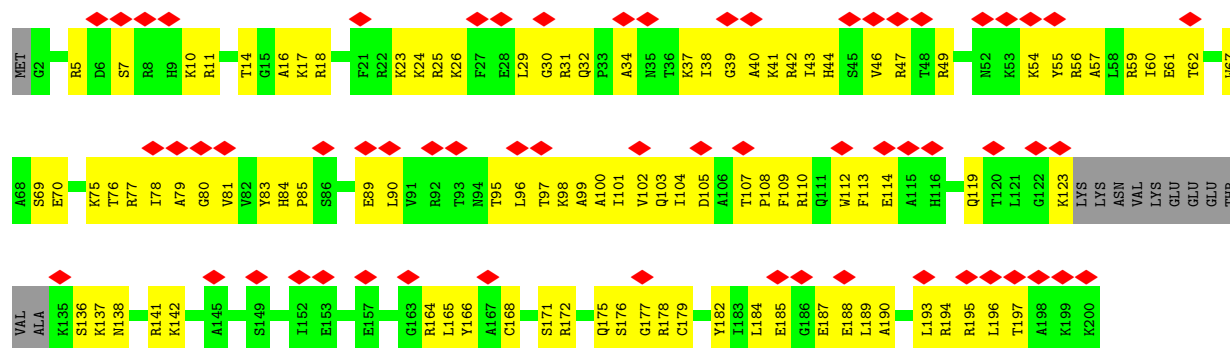




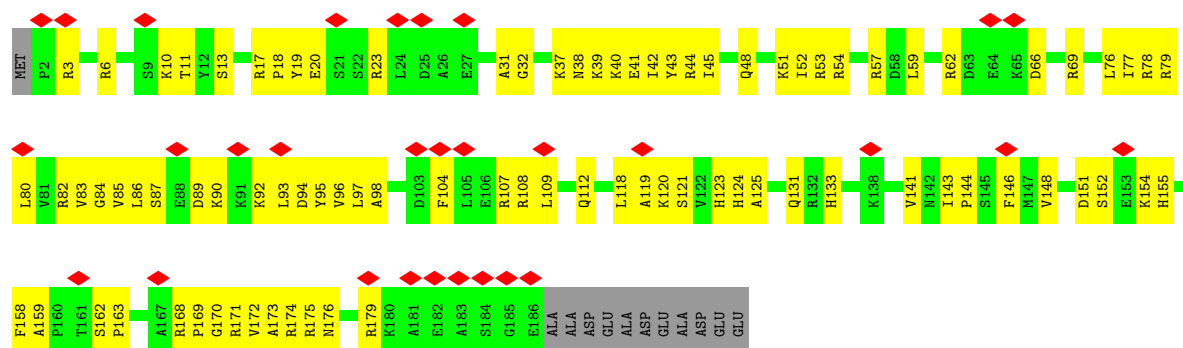
• Molecule 6: 40S ribosomal protein S7-A



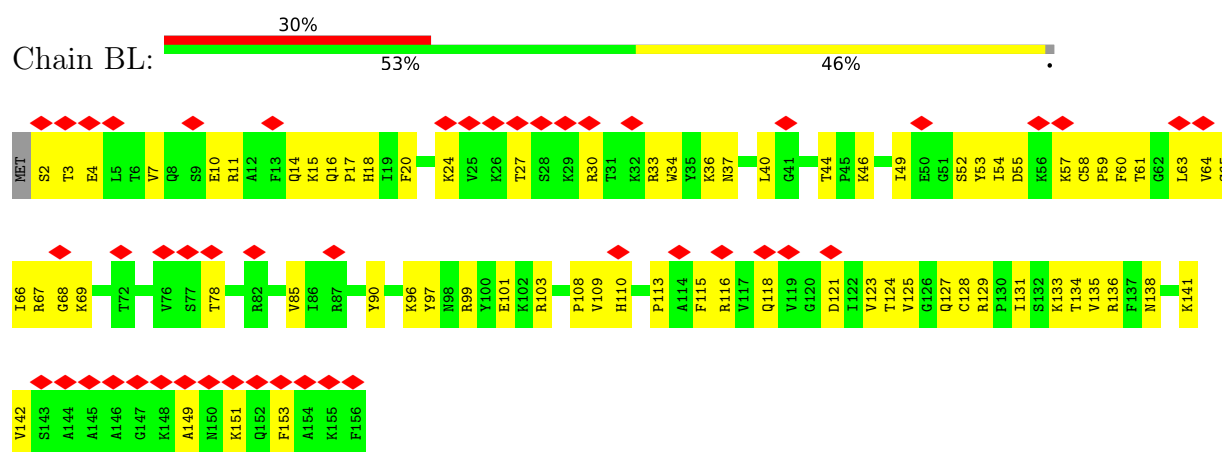
• Molecule 7: 40S ribosomal protein S8-A



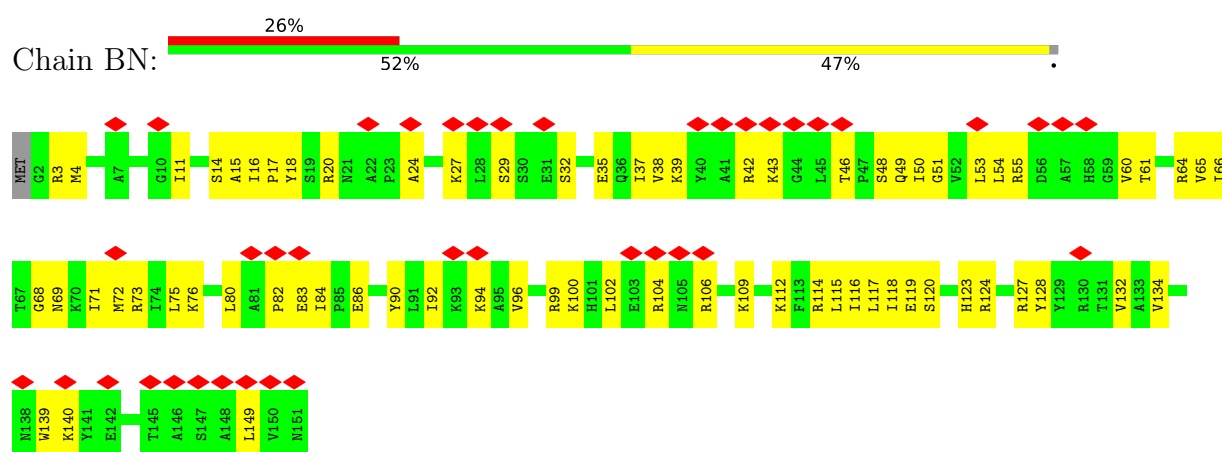
• Molecule 8: 40S ribosomal protein S9-A



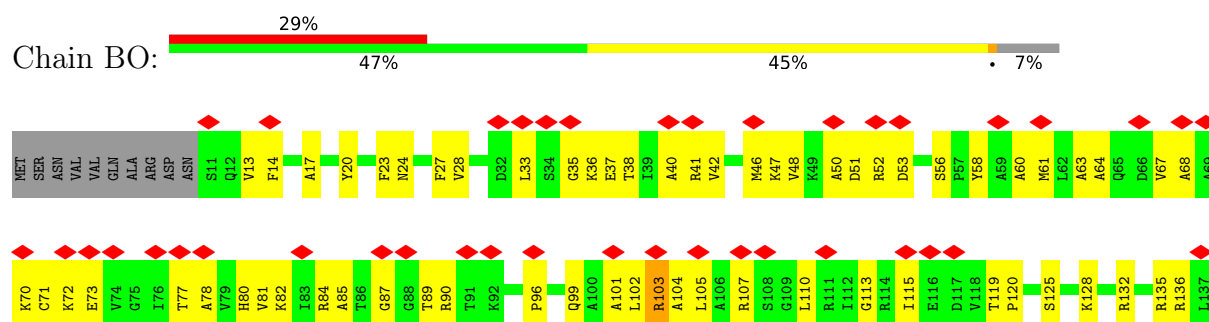
• Molecule 9: 40S ribosomal protein S11-A



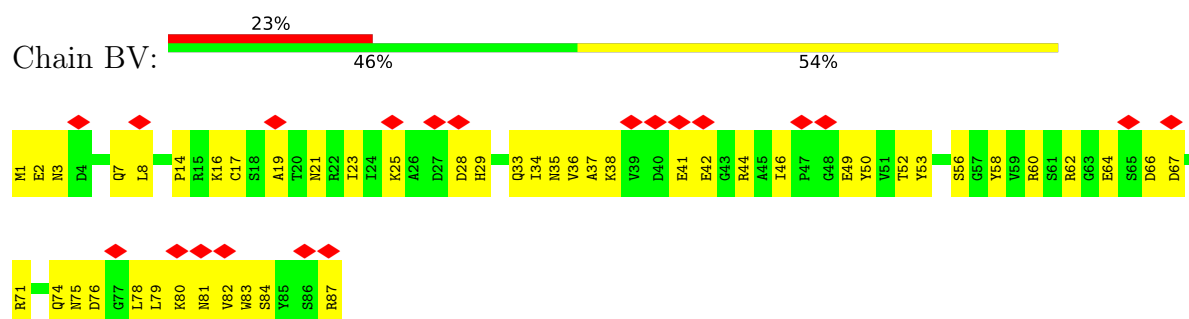
• Molecule 10: 40S ribosomal protein S13



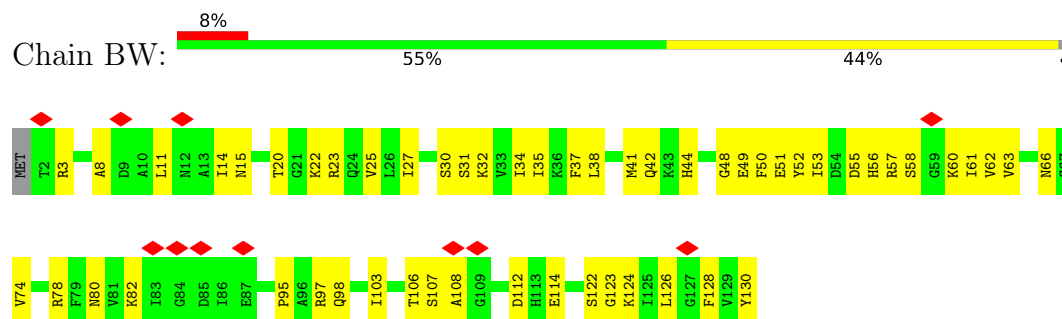
• Molecule 11: 40S ribosomal protein S14-A



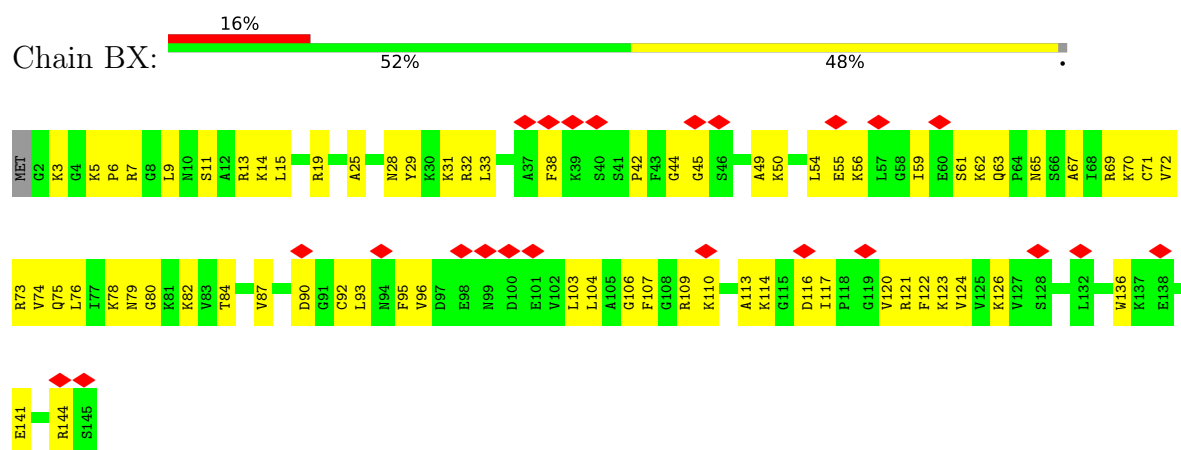
• Molecule 12: 40S ribosomal protein S21-A



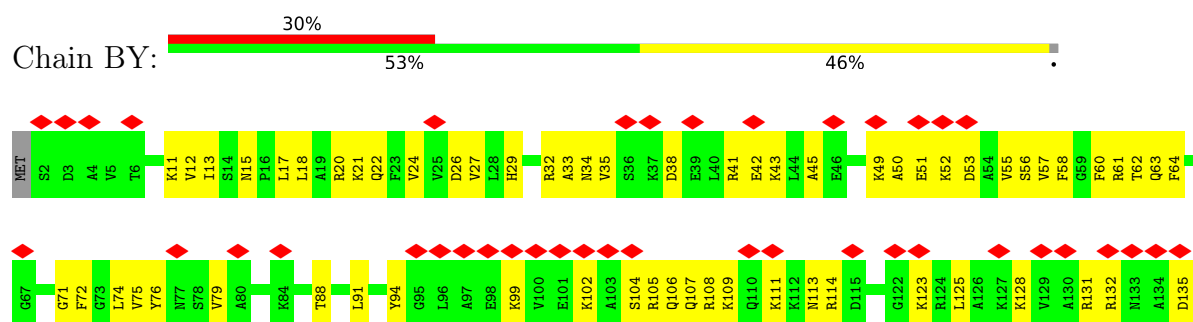
- Molecule 13: RPS22A isoform 1



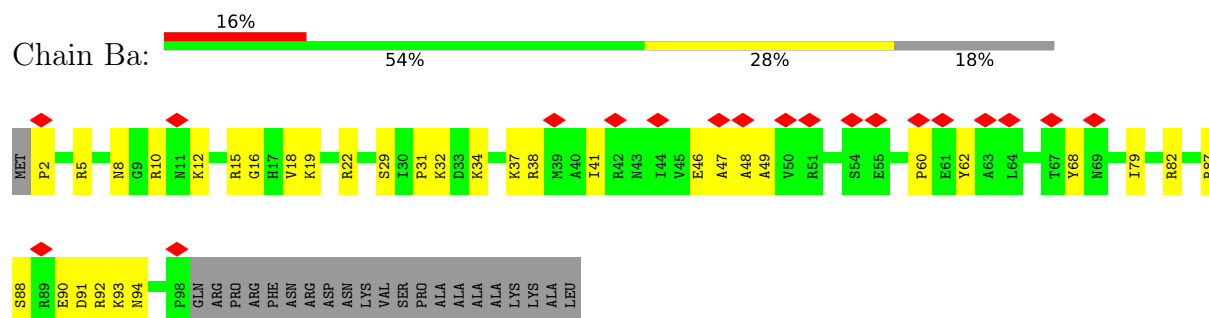
- Molecule 14: 40S ribosomal protein S23-A



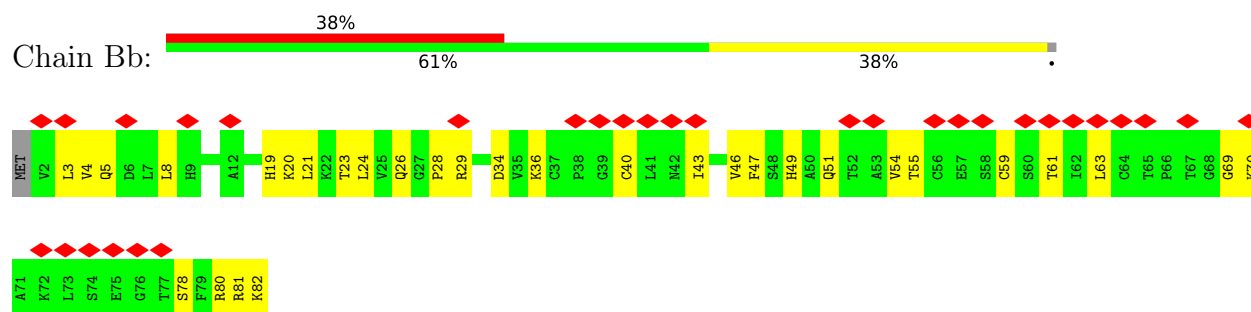
- Molecule 15: 40S ribosomal protein S24-A



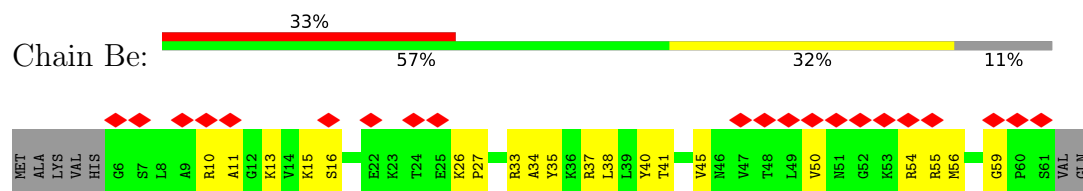
- Molecule 16: RPS26B isoform 1



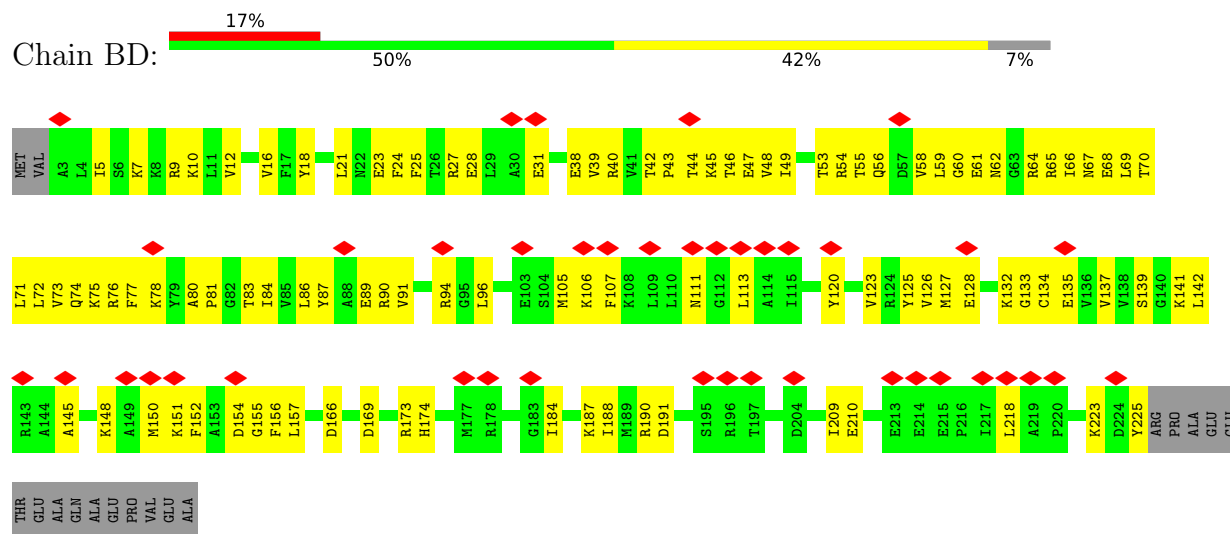
- Molecule 17: 40S ribosomal protein S27-A



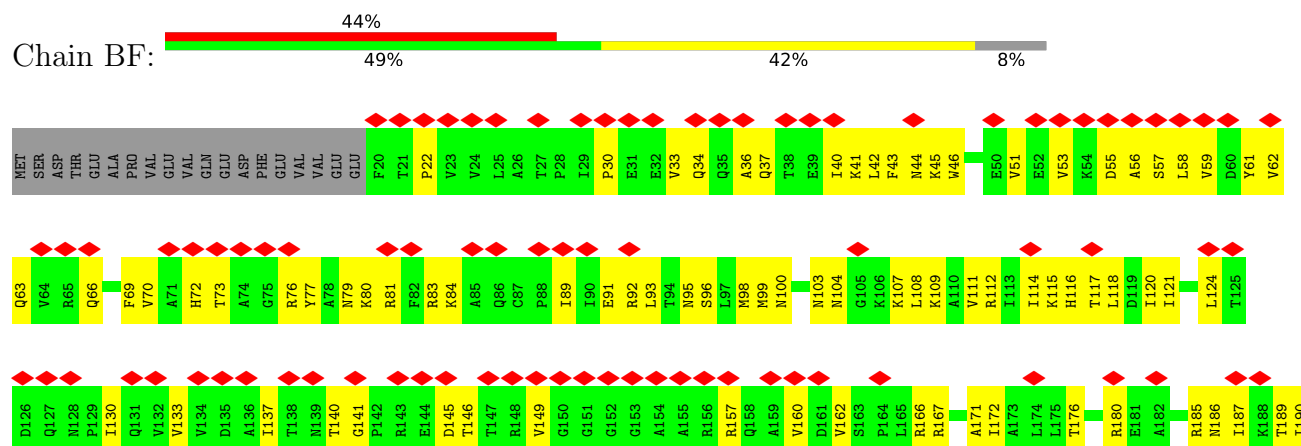
• Molecule 18: 40S ribosomal protein S30-A

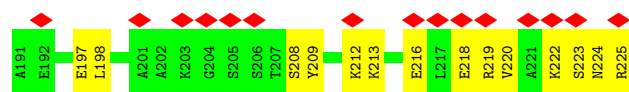


• Molecule 19: RPS3 isoform 1



• Molecule 20: Rps5p

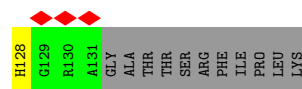
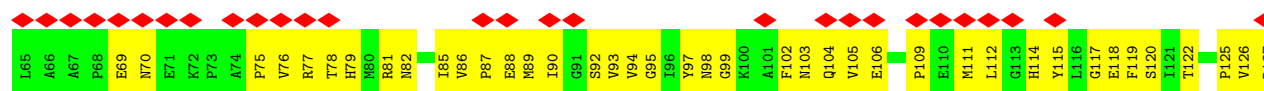
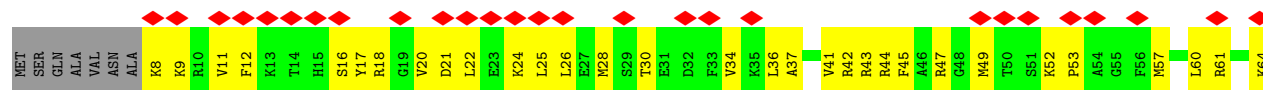
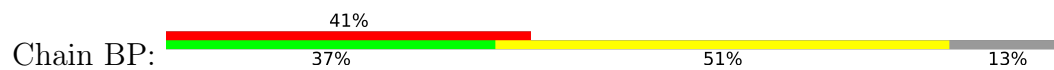




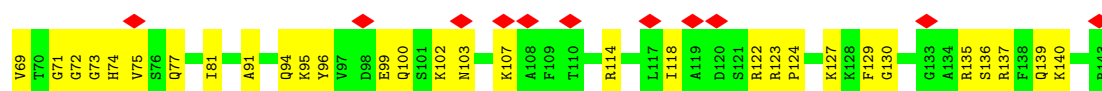
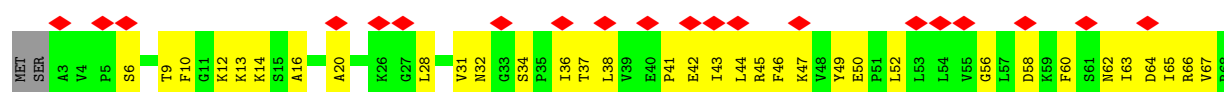
- Molecule 21: 40S ribosomal protein S10-A



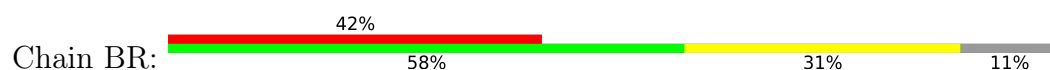
- Molecule 22: RPS15 isoform 1



- Molecule 23: 40S ribosomal protein S16-A

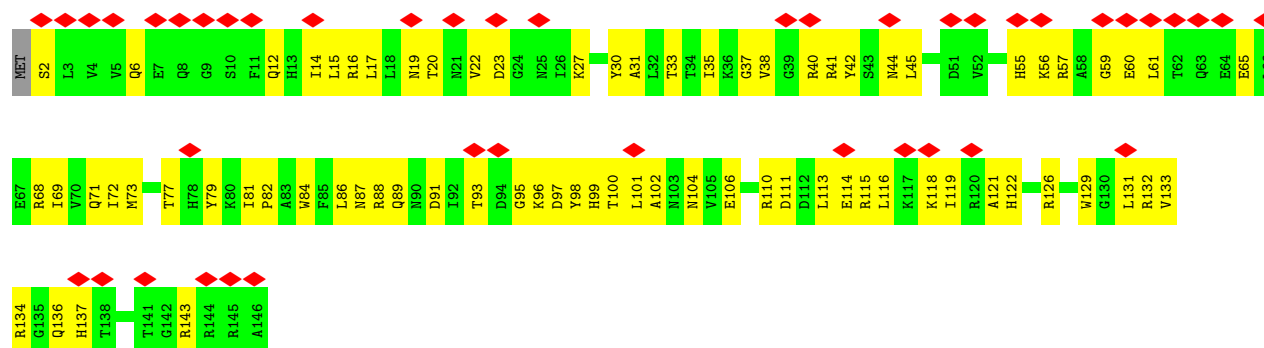


- Molecule 24: 40S ribosomal protein S17-A





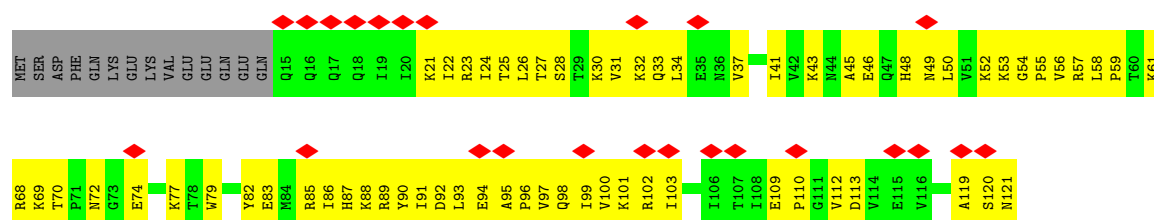
• Molecule 25: 40S ribosomal protein S18-A



• Molecule 26: 40S ribosomal protein S19-A

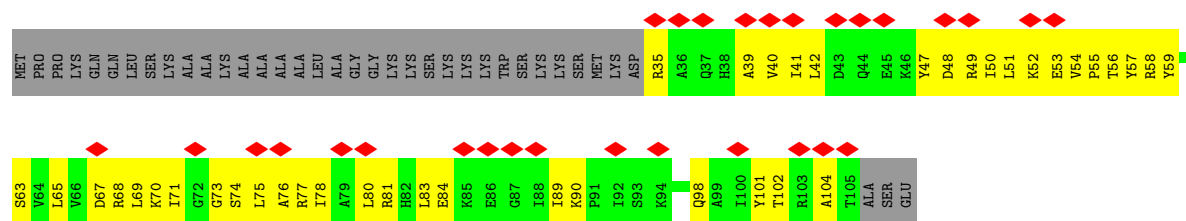


• Molecule 27: RPS20 isoform 1

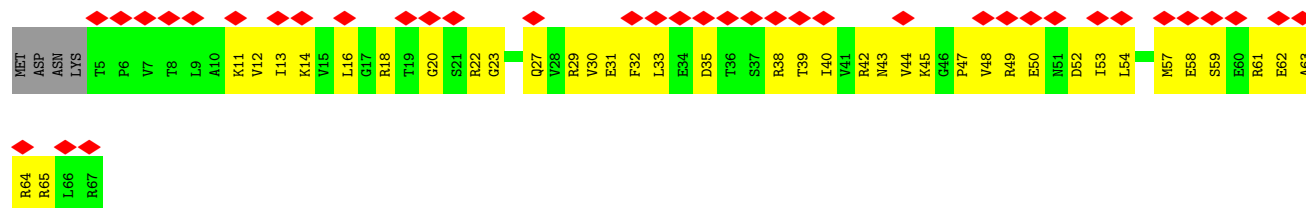


• Molecule 28: RPS25A isoform 1

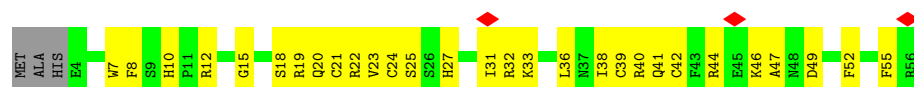
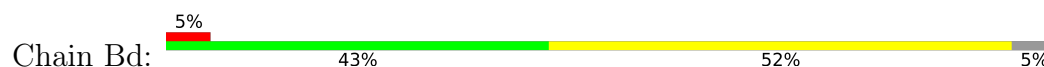




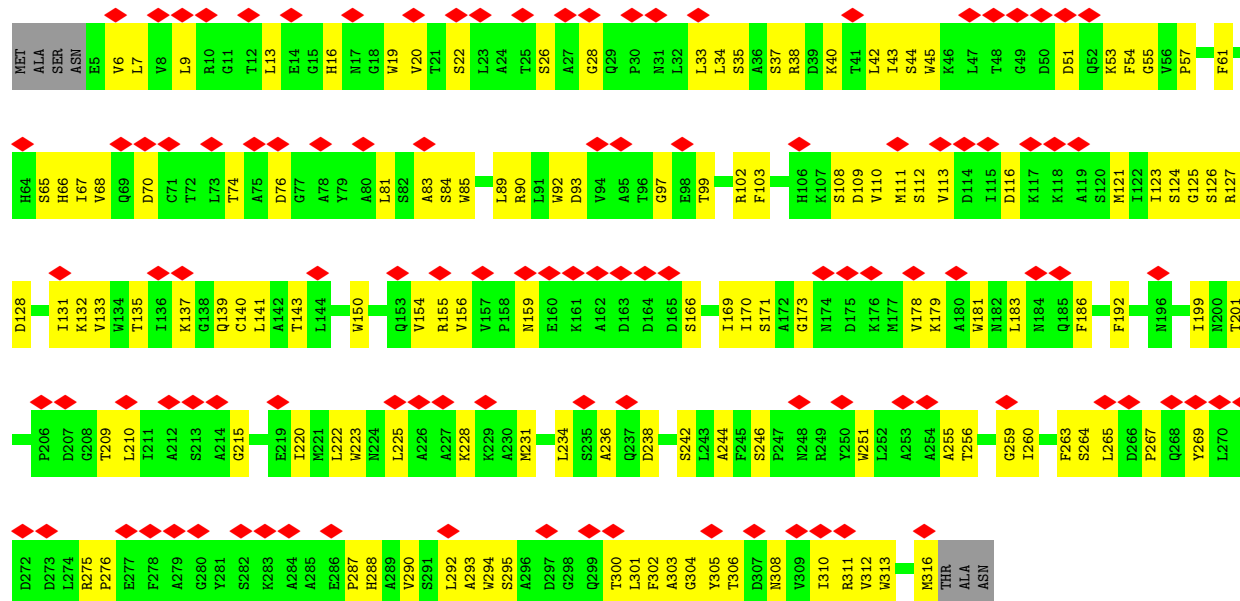
• Molecule 29: RPS28A isoform 1



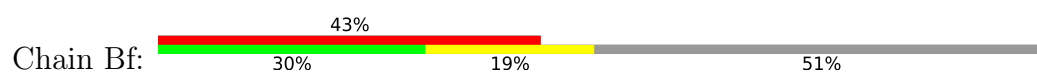
• Molecule 30: RPS29A isoform 1



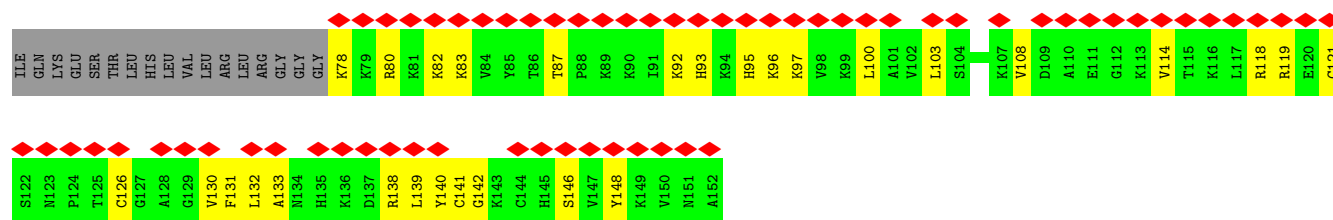
• Molecule 31: Guanine nucleotide-binding protein subunit beta-like protein



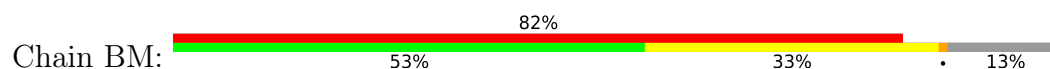
• Molecule 32: Ubiquitin-40S ribosomal protein S31



MET GLN ILE PHE VAL LYS THR THR GLY LYS THR ILE THR LEU GLY VAL SER SER ASP THR ILE ASP ASN VAL LYS SER LYS ILE GLN ASP LYS GLY ILE PRO PRO ASP GLN GLN ARG LEU PHE ALA LYS GLN LEU GLU ASP GLY ARG THR LEU SER ASP TYR ASN



• Molecule 33: 40S ribosomal protein S12



MET SER ASP VAL GLU VAL VAL GLU VAL THR VAL VAL GLN GLU THR VAL VAL GLN THR A20 E21 V22 T23 I24 E25 D26 A27 L28 K29 V30 V31 L32 R33 T34 A35 L36 V37 D38 D39 G40 L41 A42 R43 G44 L45 R46 E47 K50 A51 L52 T53 R54 G55 E56 A57 L58 L59 V60 V61



• Molecule 34: 18S rRNA



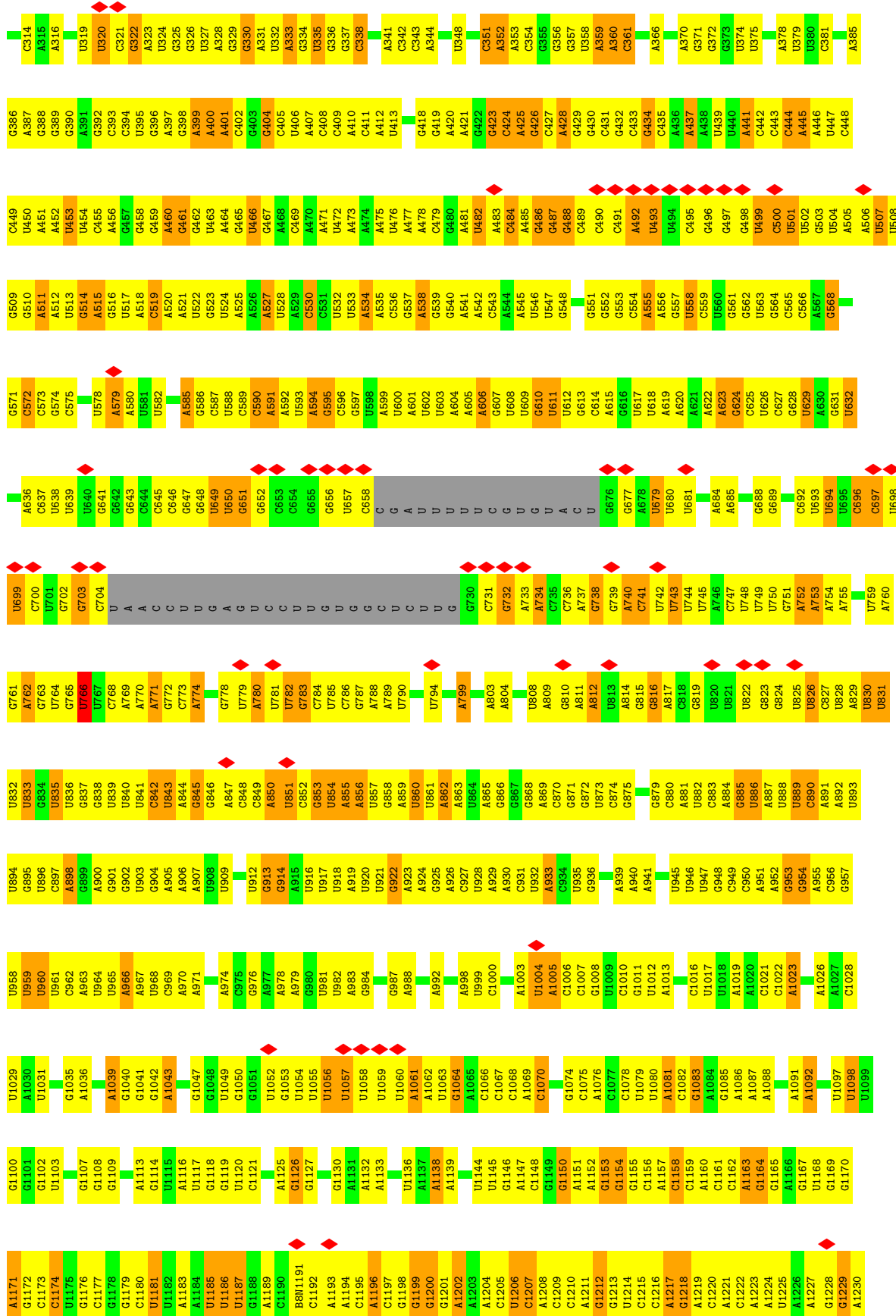
U1 A2 C4 U5 G6 G7 G10 A11 U12 C13 U15 G16 C17 C18 A19 G20 G23 U24 C25 A28 U29 G30 C31 G34 U35 C36 U37 C38 A39 A40 A41 G42 A43 U44 U45 A46 A47 G48 C49 C50 A51 U52 G53 C54 A55 U56 G57 U58 C59 U60 A61 A62 G63 U64

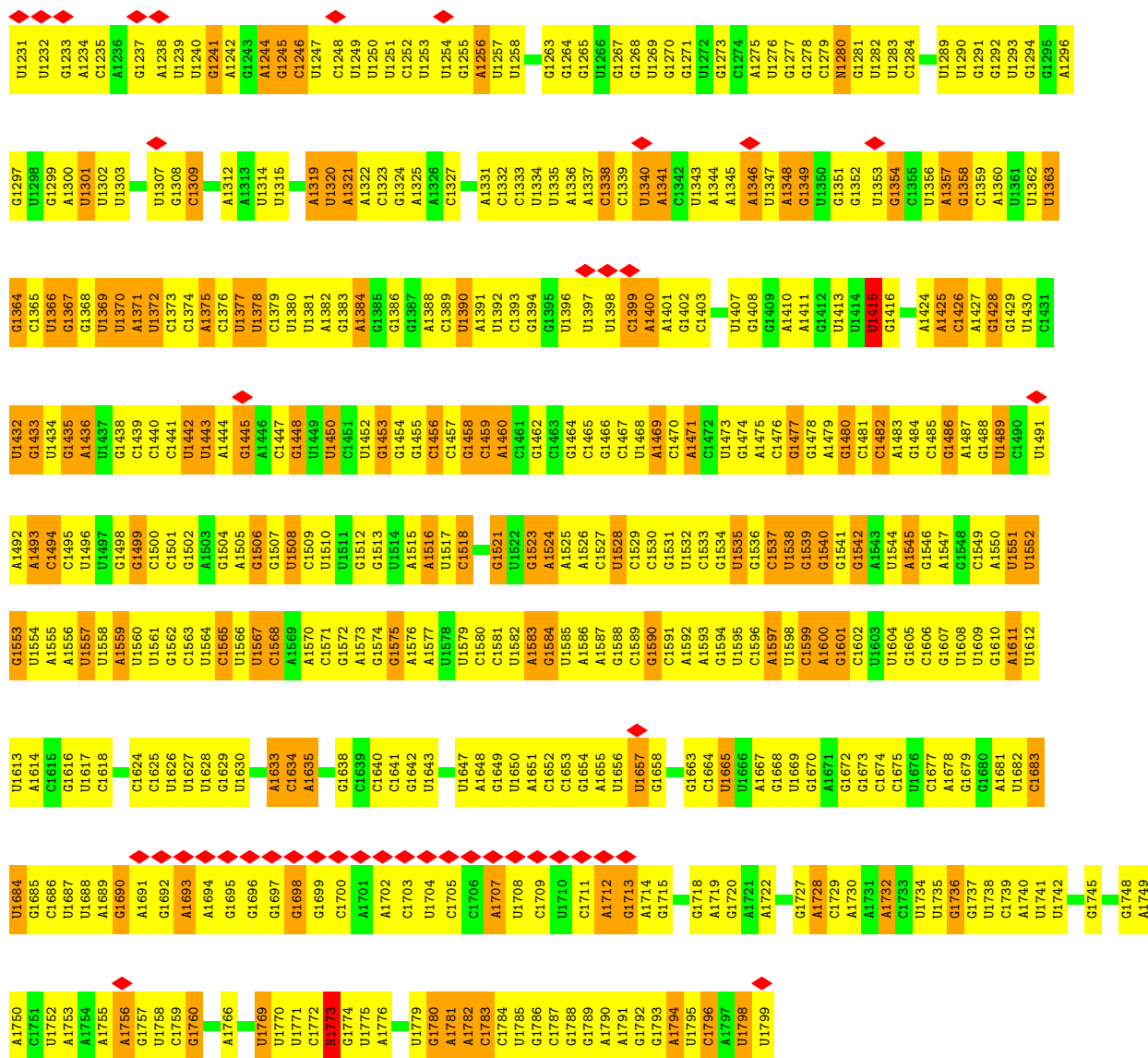
A65 U66 A67 A68 A71 A72 U73 U74 A75 U76 U77 C79 A80 U82 G83 A84 A85 A86 C87 U88 C89 C90 G91 A92 A93 U94 G95 G96 C97 U98 C99 A100 U101 U102 A103 A104 A105 U106 C107 A108 G109 U110 U111 A112 U113 G114 G115 C116 U117 U118 A119 U120 U121 U122 A123 U124 U125

A126 G127 U128 U129 C130 C131 U132 U133 U134 A135 C136 U137 A138 C139 A140 U141 G142 G143 U144 A145 U146 A147 A148 C149 U150 G151 U152 G153 U154 U155 A156 A157 U158 U159 C160 U161 A162 G163 U164 G165 C166 U167 A168 U169 A173 U174 G175 C176 U177 U178 A179 A180 U181 A182 U183 C184 U185 C186 G187

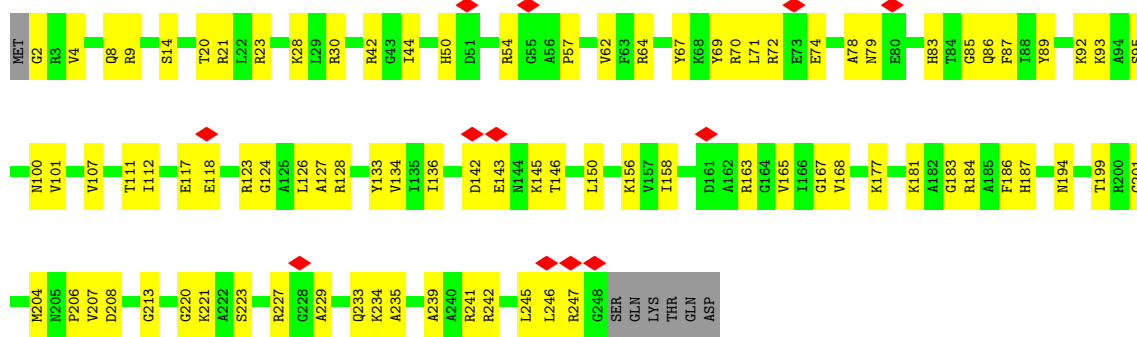
A188 C189 C190 C191 U192 U193 U194 G195 A196 A197 A198 G199 A200 G201 A202 U203 U204 U205 A206 G207 U208 U209 A210 U211 U212 A213 G214 A215 U216 A217 U218 C219 A220 A221 U222 U223 C224 A225 A226 U227 G228 U229 C230 U231 U232 C233 G234 G235 U236 C237 A238 U239 A240 U241 U242 G243 A244 U245 U246 A247

U248 U249 C250 A251 U252 A253 A254 U255 A256 A257 U258 U259 U260 U261 U262 C263 G264 A265 A266 U267 C268 G269 C270 A271 U272 G273 G274 U277 U278 G279 U280 G281 C282 U283 G284 C285 G286 G287 A288 U289 G290 G291 U292 U293 C294 A295 U296 U297 C298 A299 A300 A301 U302 U303 U304 C305 U306 G307 C308



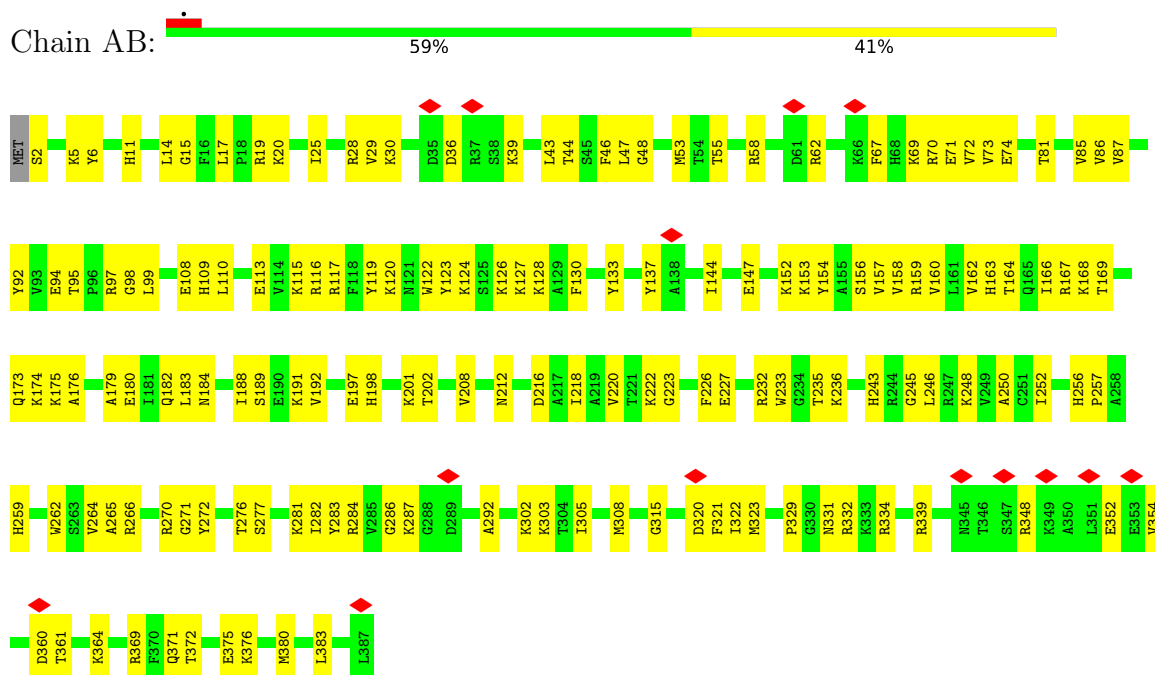


• Molecule 35: 60S ribosomal protein L2-A



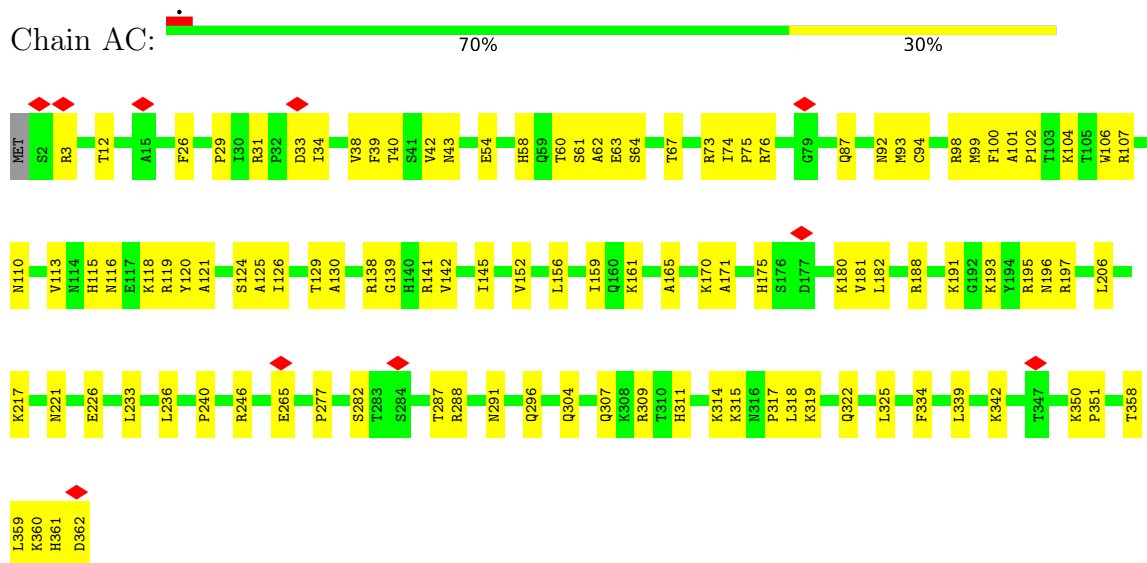
• Molecule 36: 60S ribosomal protein L3

Chain AB:



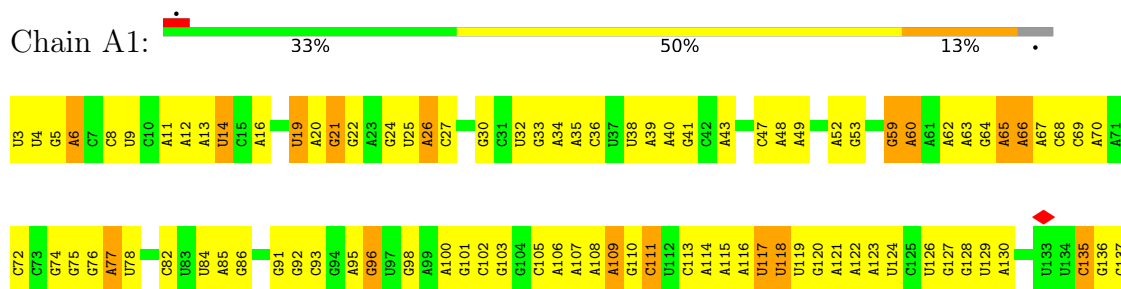
- Molecule 37: RPL4A isoform 1

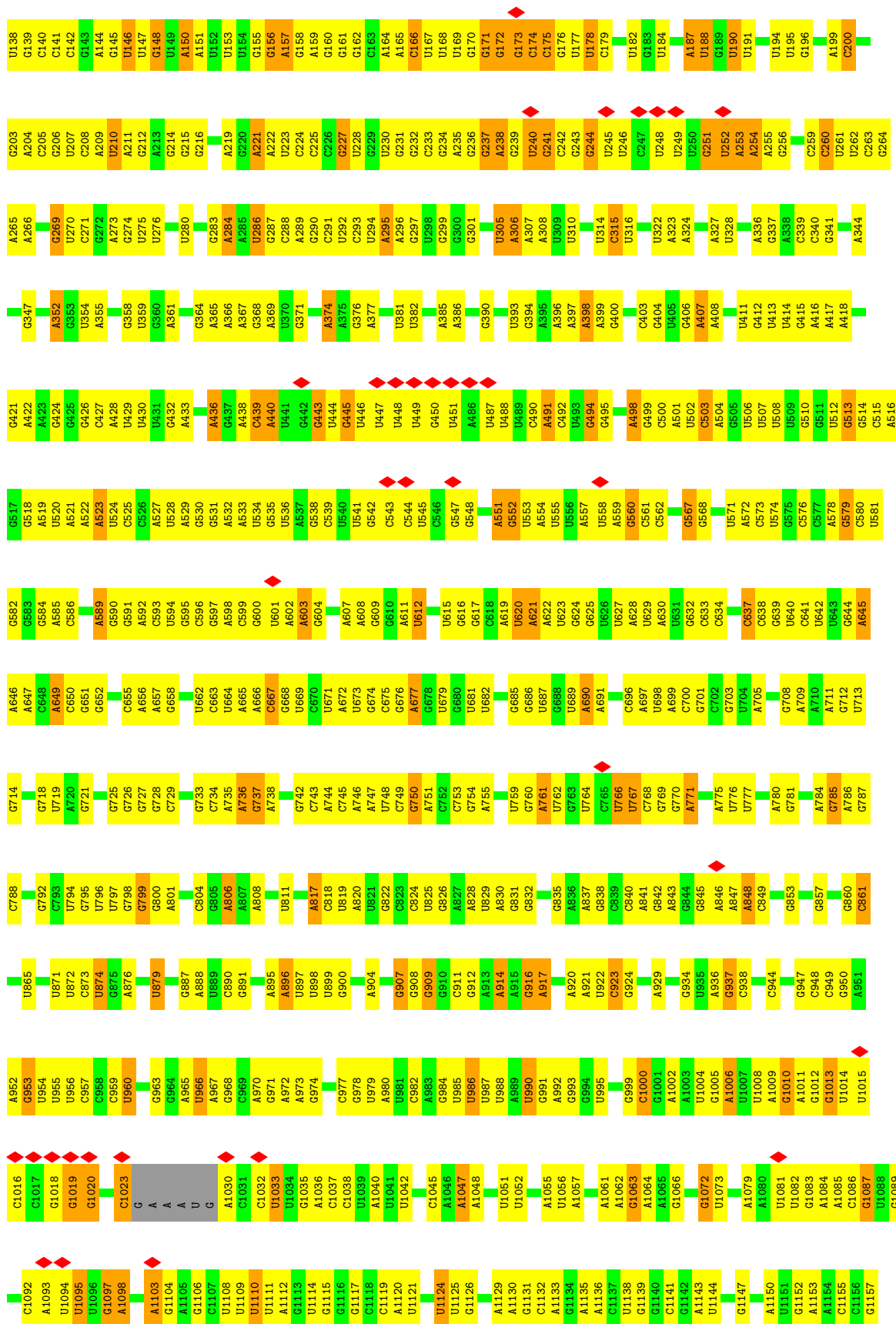
Chain AC:



- Molecule 38: 25S rRNA

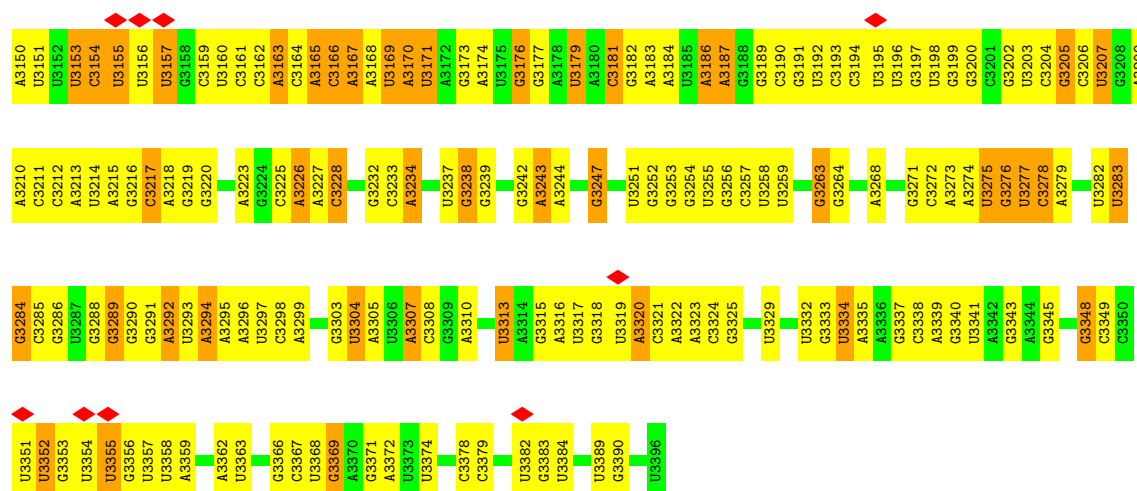
Chain A1:





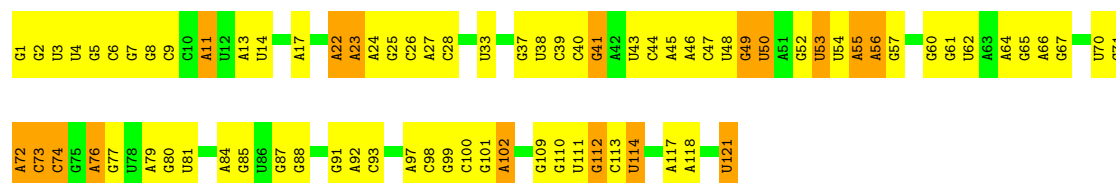


A3077	A3078	A3079	A3080	G3083	G3084	G3085	A3086	A3087	G3088	G3089	A3090	A3091	G3092	G3093	A3094	G3095	G3096	G3097	G3101	U3104	U3105	A3106	G3107	G3108	G3109	G3110	G3111	G3112	A3113	A3114	G3115	U3119	G3120	U3121	A3122	A3123	G3124	U3125	G3126	A3127	G3128	A3129	A3130	U3131	G3132	G3133	G3134	U3135	U3136	U3137	A3138	A3139	G3140	A3141	A3142	A3143	G3144	G3145	G3146	G3147	G3148	G3149	G3150	G3151	G3152	G3153	G3154	G3155	G3156	G3157	A3158	U3159	G3160	G3161	U3162	G3163	A3167	A3168	A3169	U3170	G3177	A3178	G3179	G3180	G3181	G3185	U3186	G3187	A3188	U3189	U3190	U3191	G3192	G3193	G3194	G3195	G3196	U3203	G3204	U3205	G3206	A3207	A3208	U3209	A3213	A3214	A3215	G3216	U3217	G3218	A3219	A3220																																																																																																																																																																																																																																																																																																																																																																							
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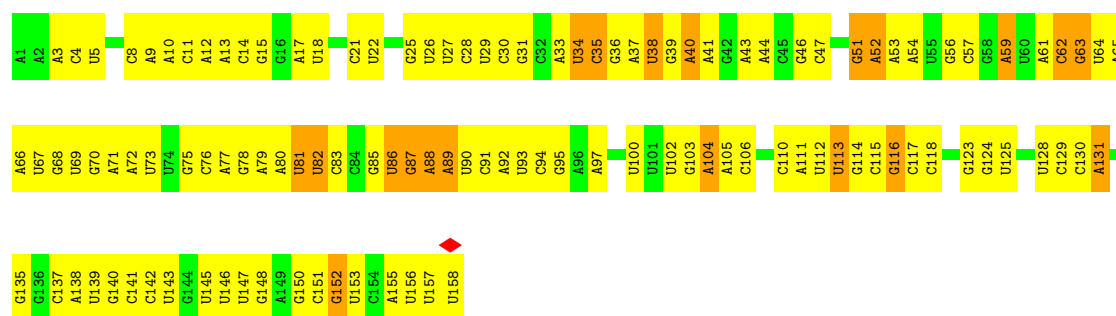
• Molecule 39: 5s rRNA

Chain A3: 35% 51% 14%



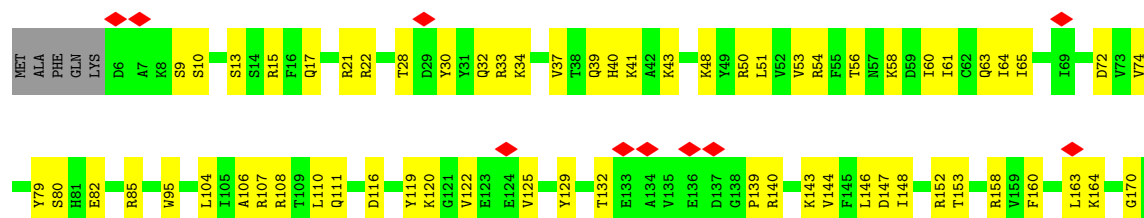
• Molecule 40: 5.8 S rRNA

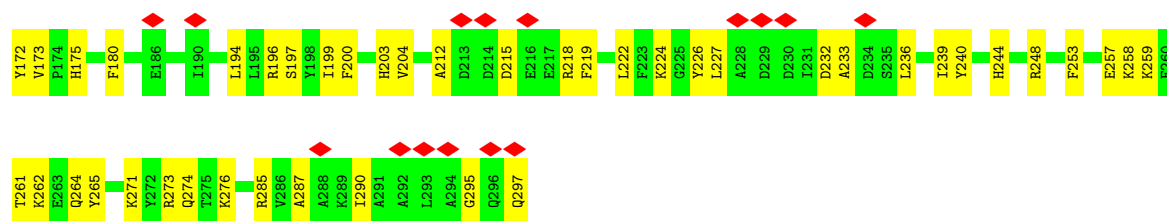
Chain A4: 25% 62% 13%



• Molecule 41: RPL5 isoform 1

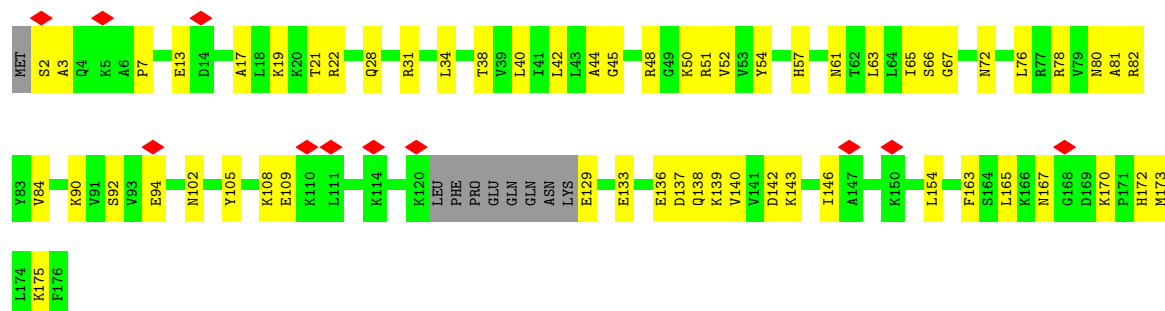
Chain AD: 8% 63% 36%





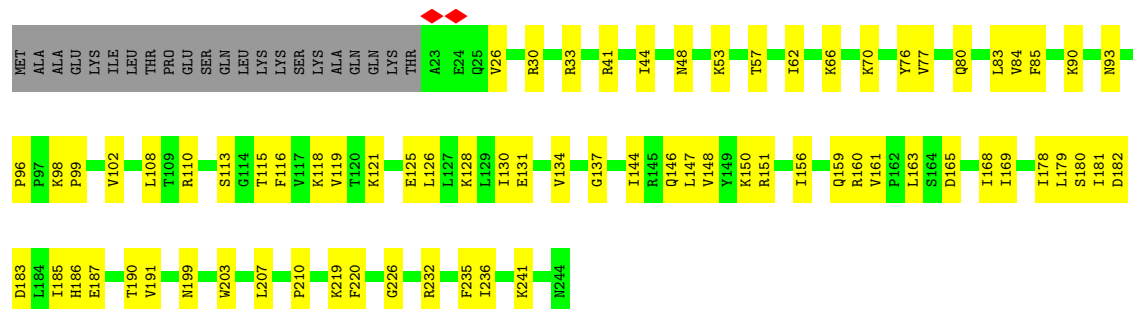
• Molecule 42: 60S ribosomal protein L6-A

Chain AE:



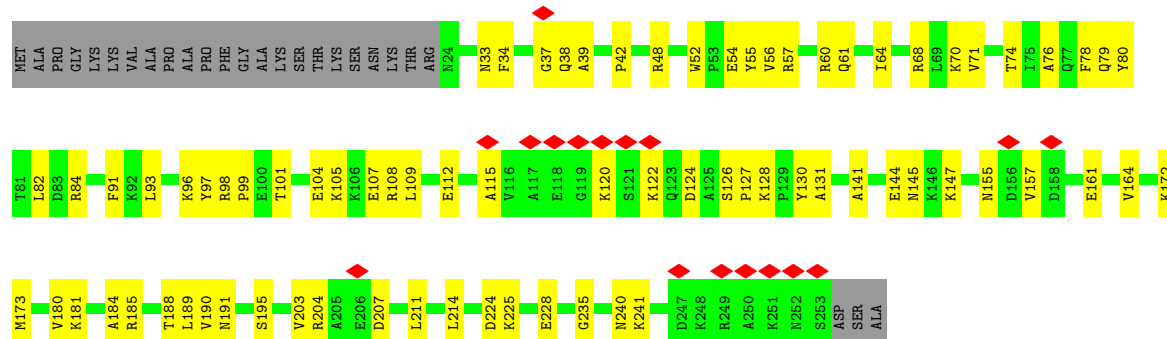
• Molecule 43: 60S ribosomal protein L7-A

Chain AF:



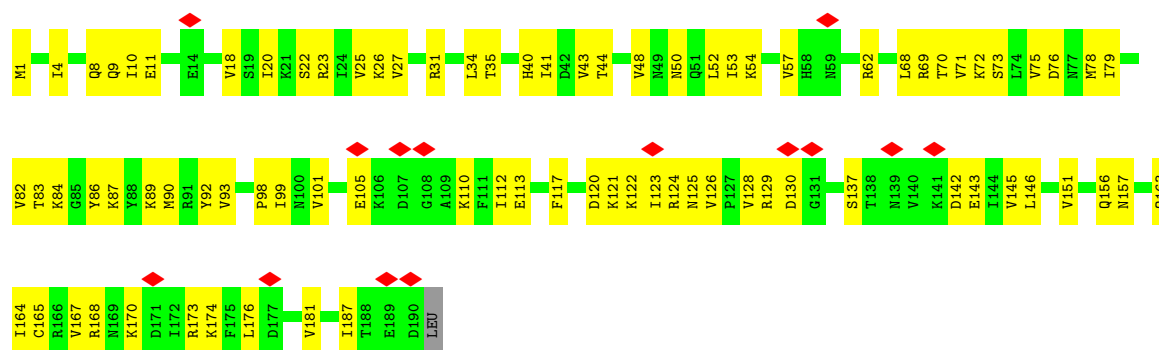
• Molecule 44: 60S ribosomal protein L8-A

Chain AG:



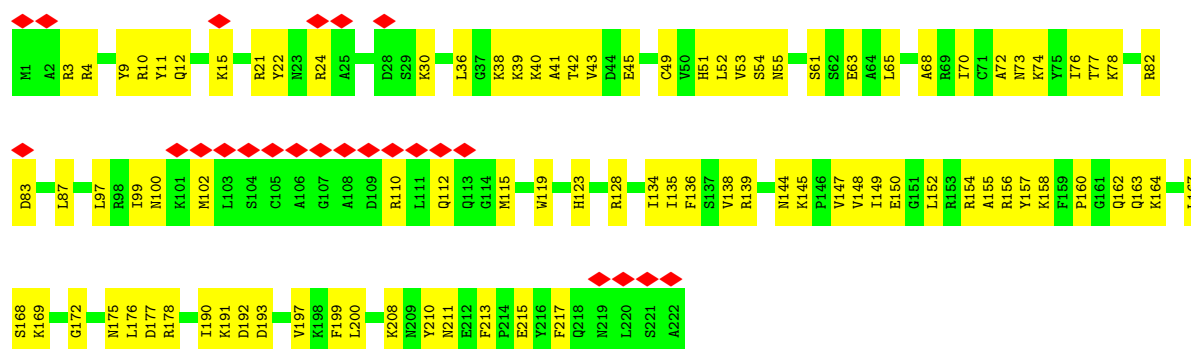
- Molecule 45: 60S ribosomal protein L9-A

Chain AH: 7% 56% 43%



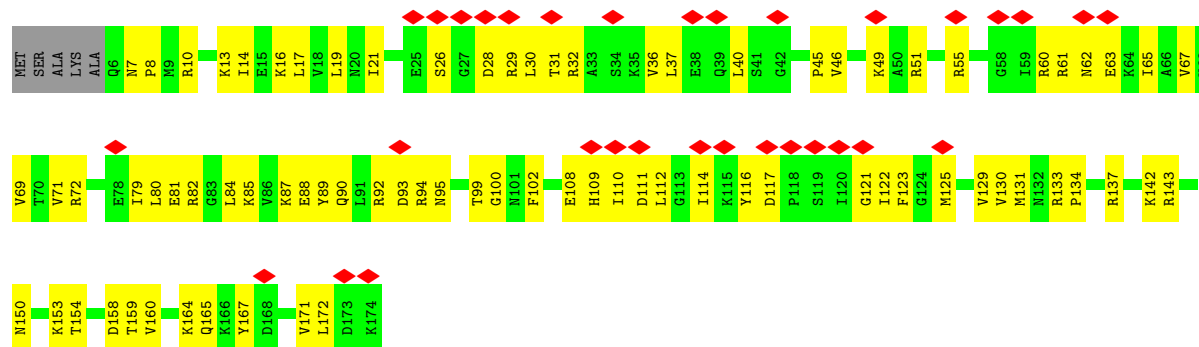
- Molecule 46: 60S ribosomal protein L10

Chain AI: 11% 59% 41%



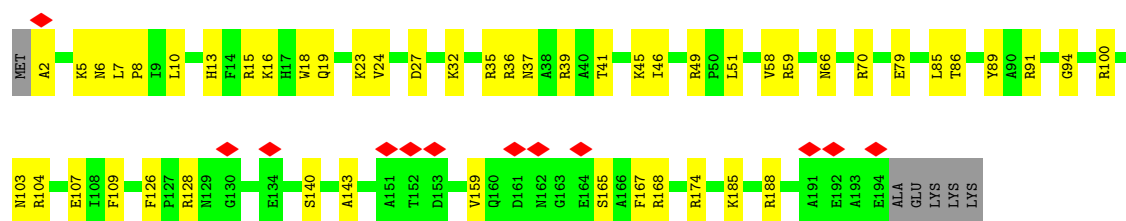
- Molecule 47: RPL11A isoform 1

Chain AJ: 18% 51% 46%



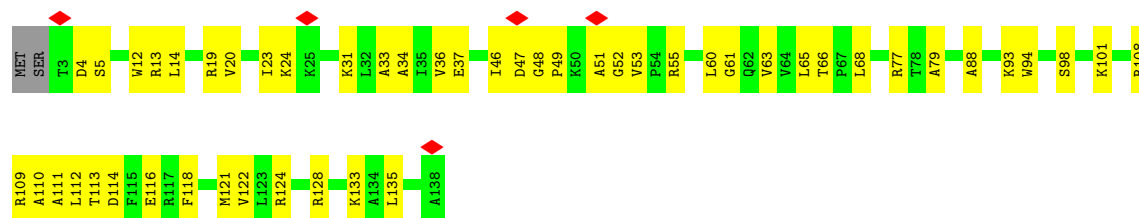
- Molecule 48: 60S ribosomal protein L13-A

Chain AL: 6% 72% 25%



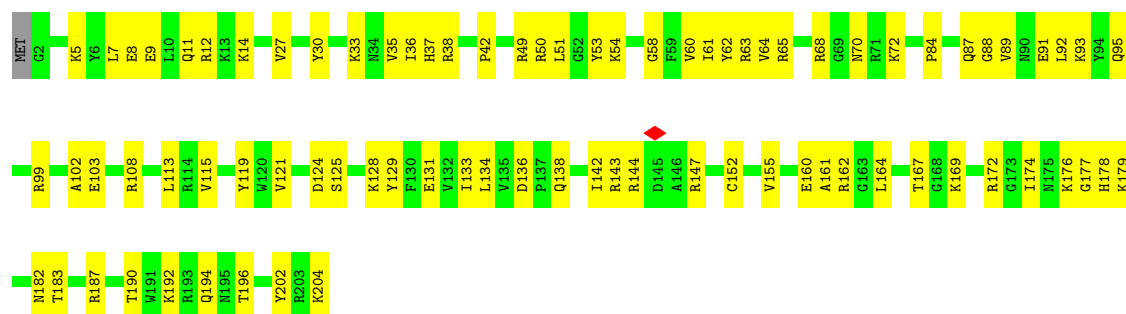
- Molecule 49: 60S ribosomal protein L14-A

Chain AM: 62% 36%



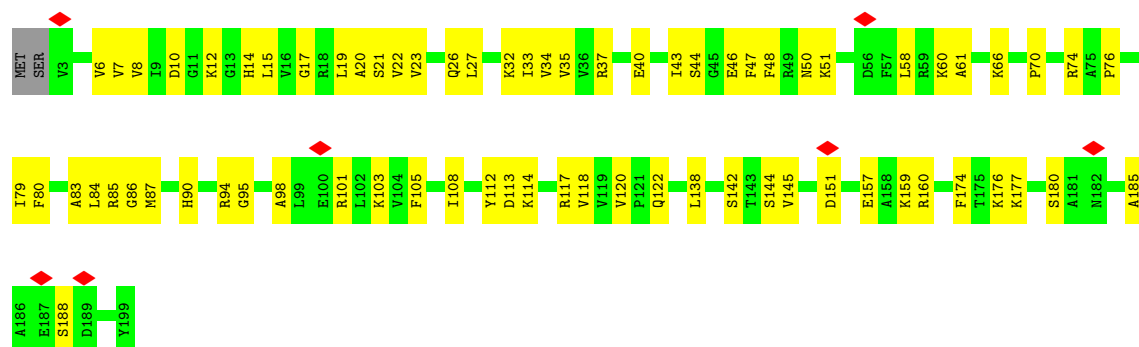
- Molecule 50: 60S ribosomal protein L15-A

Chain AN: 59% 40%



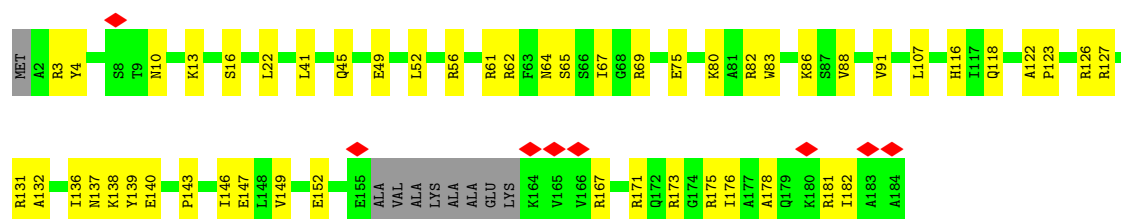
- Molecule 51: 60S ribosomal protein L16-A

Chain AO: 63% 36%

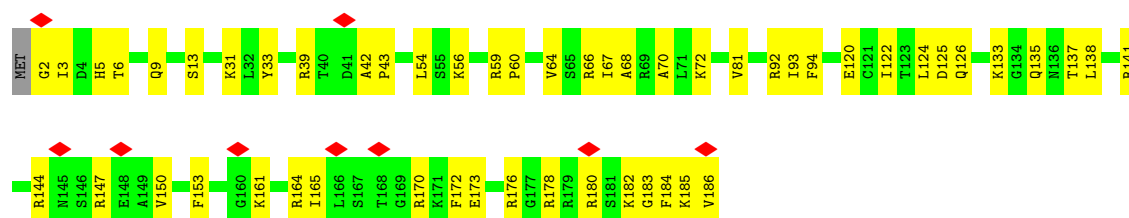
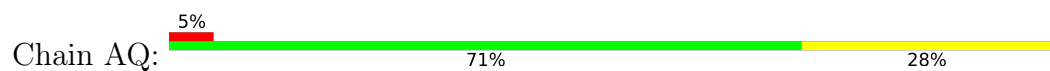


- Molecule 52: 60S ribosomal protein L17-A

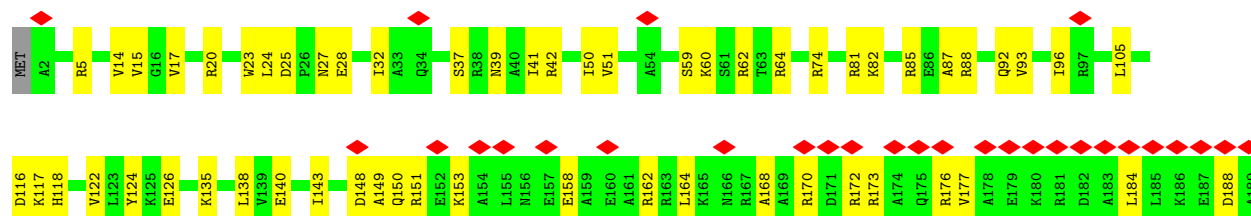
Chain AP: 67% 28% 5%



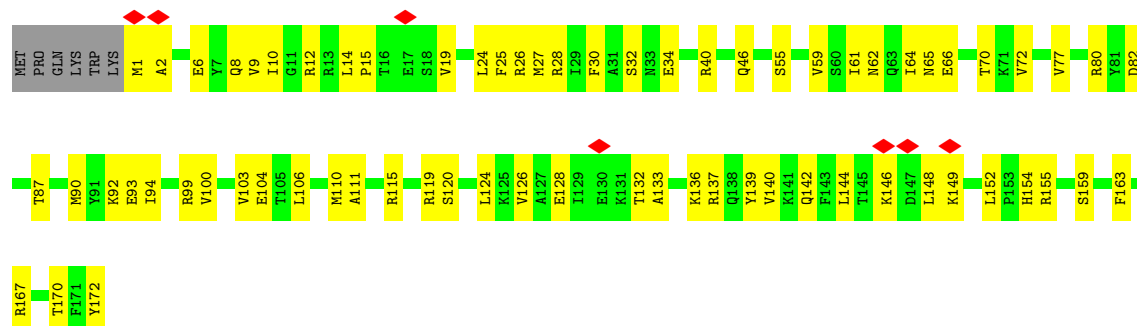
- Molecule 53: 60S ribosomal protein L18-A



- Molecule 54: 60S ribosomal protein L19-A

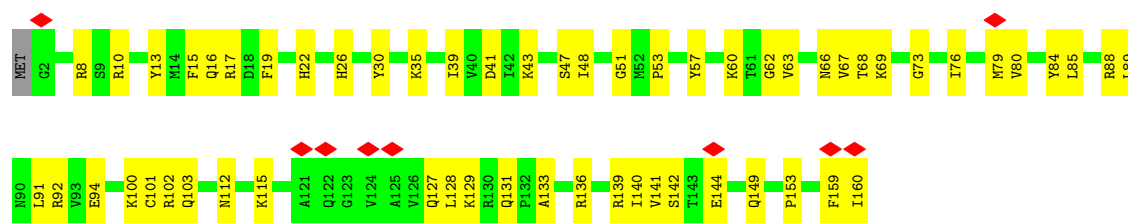


- Molecule 55: 60S ribosomal protein L20

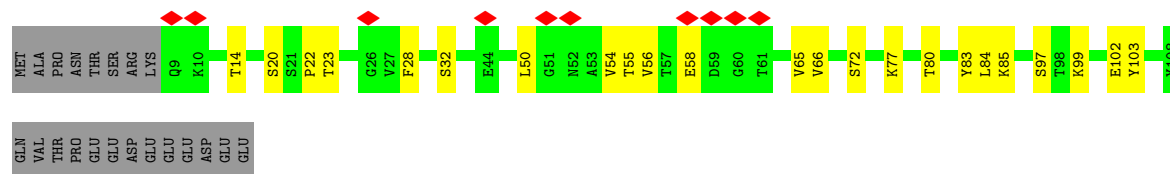


- Molecule 56: 60S ribosomal protein L21-A

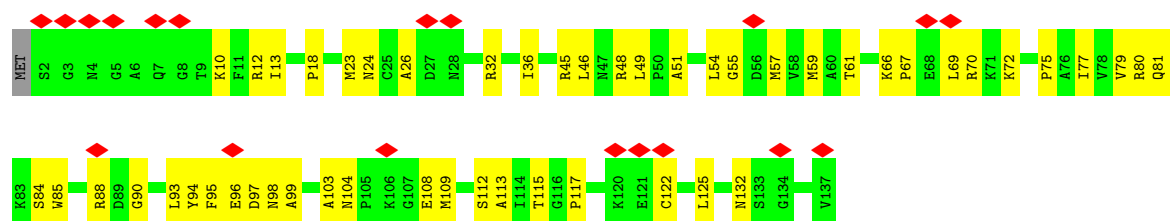




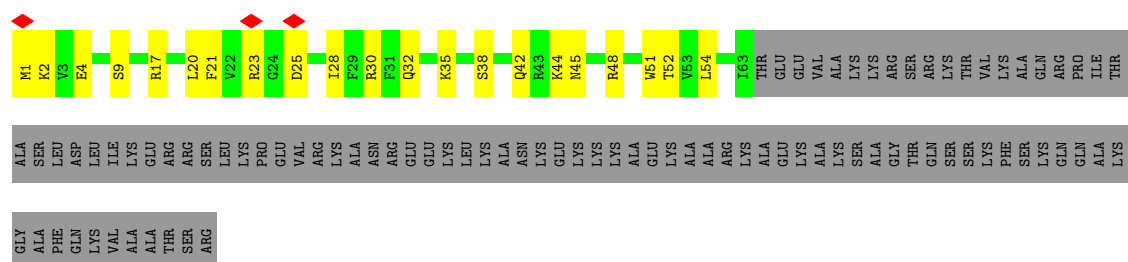
• Molecule 57: 60S ribosomal protein L22-A



• Molecule 58: 60S ribosomal protein L23-A

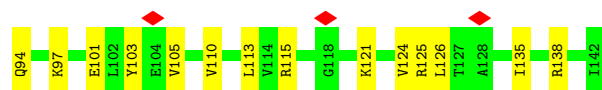


• Molecule 59: RPL24A isoform 1



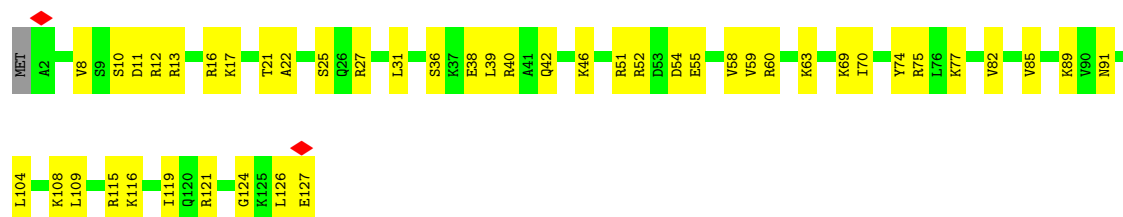
• Molecule 60: 60S ribosomal protein L25





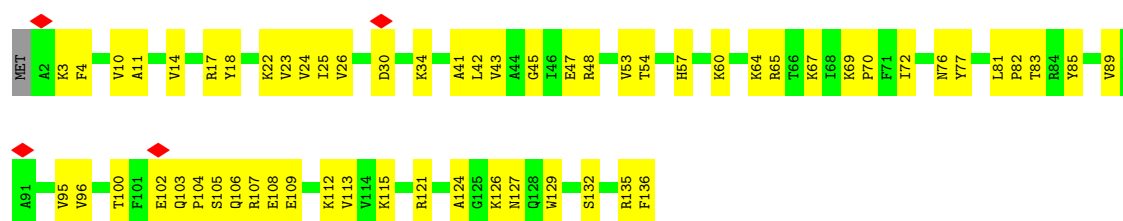
- Molecule 61: 60S ribosomal protein L26-A

Chain AY: 64% 35%



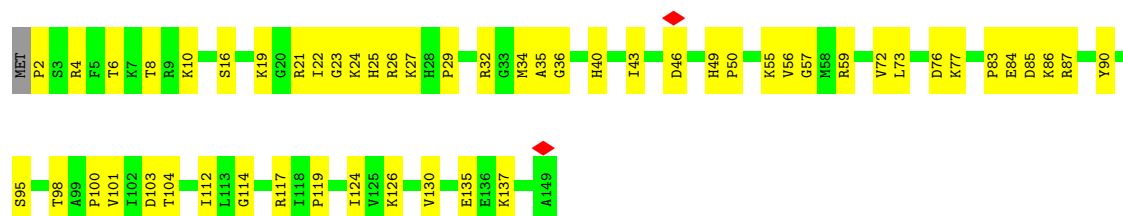
- Molecule 62: 60S ribosomal protein L27-A

Chain AZ: 56% 43%



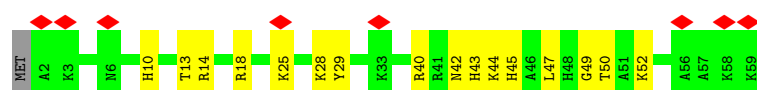
- Molecule 63: 60S ribosomal protein L28

Chain Aa: 64% 36%



- Molecule 64: RPL29 isoform 1

Chain Ab: 14% 71% 27%

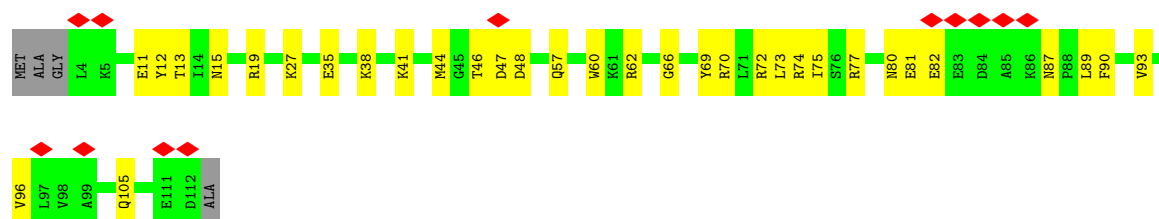


- Molecule 65: 60S ribosomal protein L30

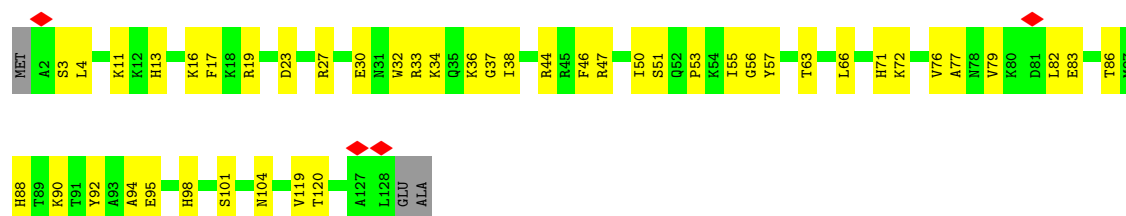
Chain Ac: 14% 63% 30% 8%



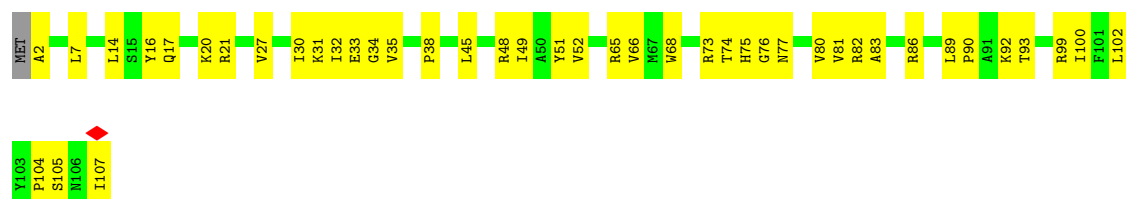
- Molecule 66: 60S ribosomal protein L31-A



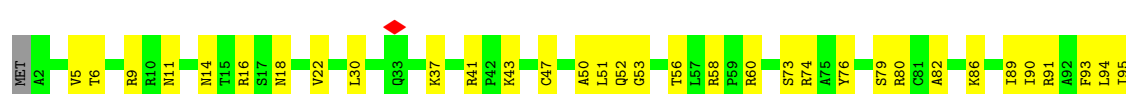
- Molecule 67: RPL32 isoform 1

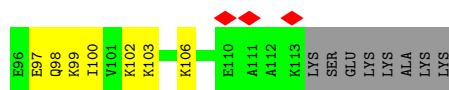


- Molecule 68: 60S ribosomal protein L33-A



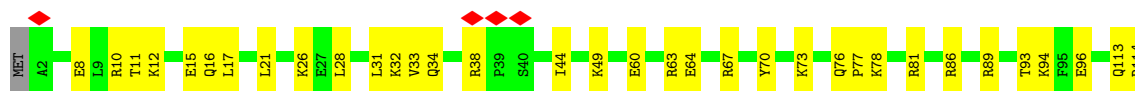
- Molecule 69: 60S ribosomal protein L34-A





- Molecule 70: 60S ribosomal protein L35-A

Chain Ah: 68% 31%



- Molecule 71: 60S ribosomal protein L36-A

Chain Ai: 5% 71% 28%



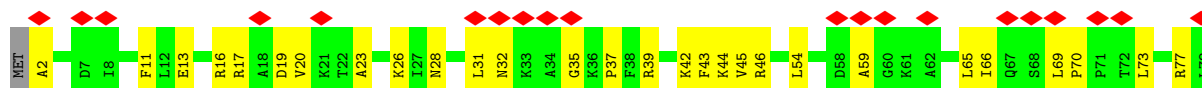
- Molecule 72: 60S ribosomal protein L37-A

Chain Aj: 82% 17%



- Molecule 73: RPL38 isoform 1

Chain Ak: 26% 63% 36%



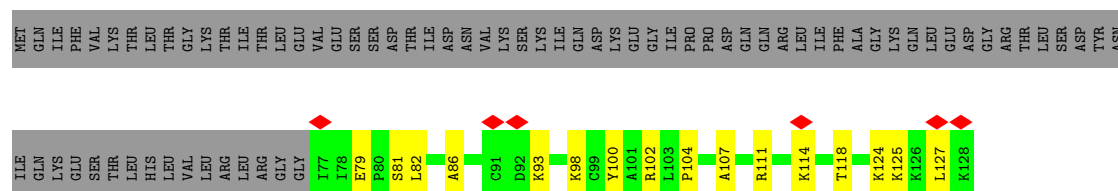
- Molecule 74: 60S ribosomal protein L39

Chain Al: 55% 43%



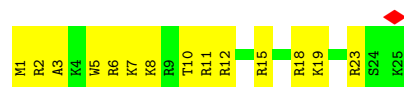
- Molecule 75: Ubiquitin-60S ribosomal protein L40

Chain Am: 5% 28% 12% 59%



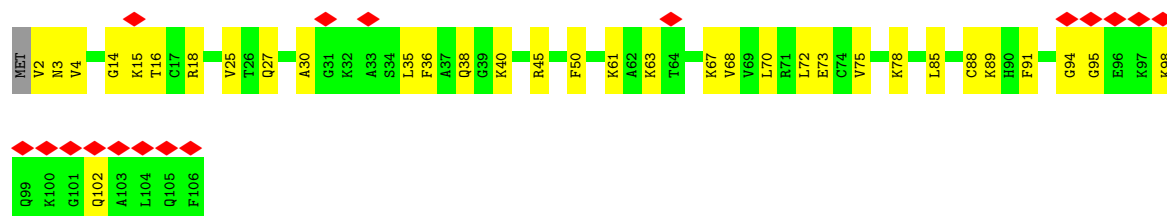
- Molecule 76: 60S ribosomal protein L41-A

Chain An: 44% 56%



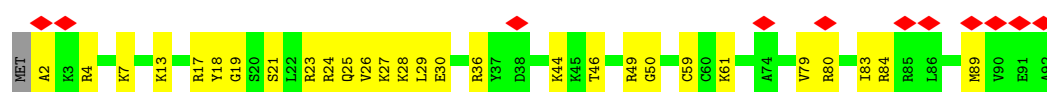
- Molecule 77: 60S ribosomal protein L42-A

Chain Ao: 16% 68% 31%



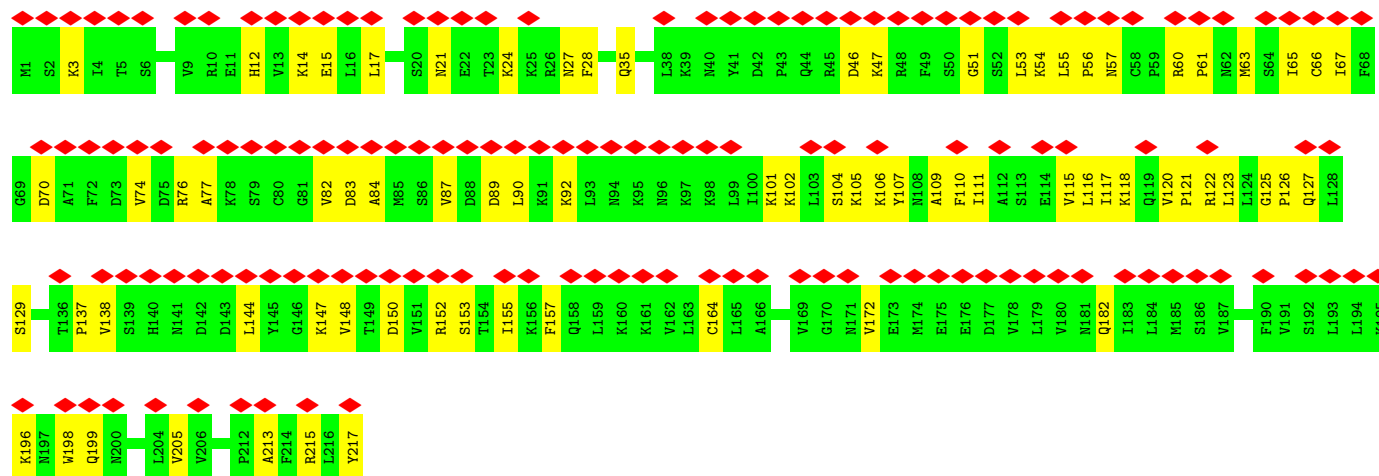
- Molecule 78: 60S ribosomal protein L43-A

Chain Ap: 12% 68% 30%

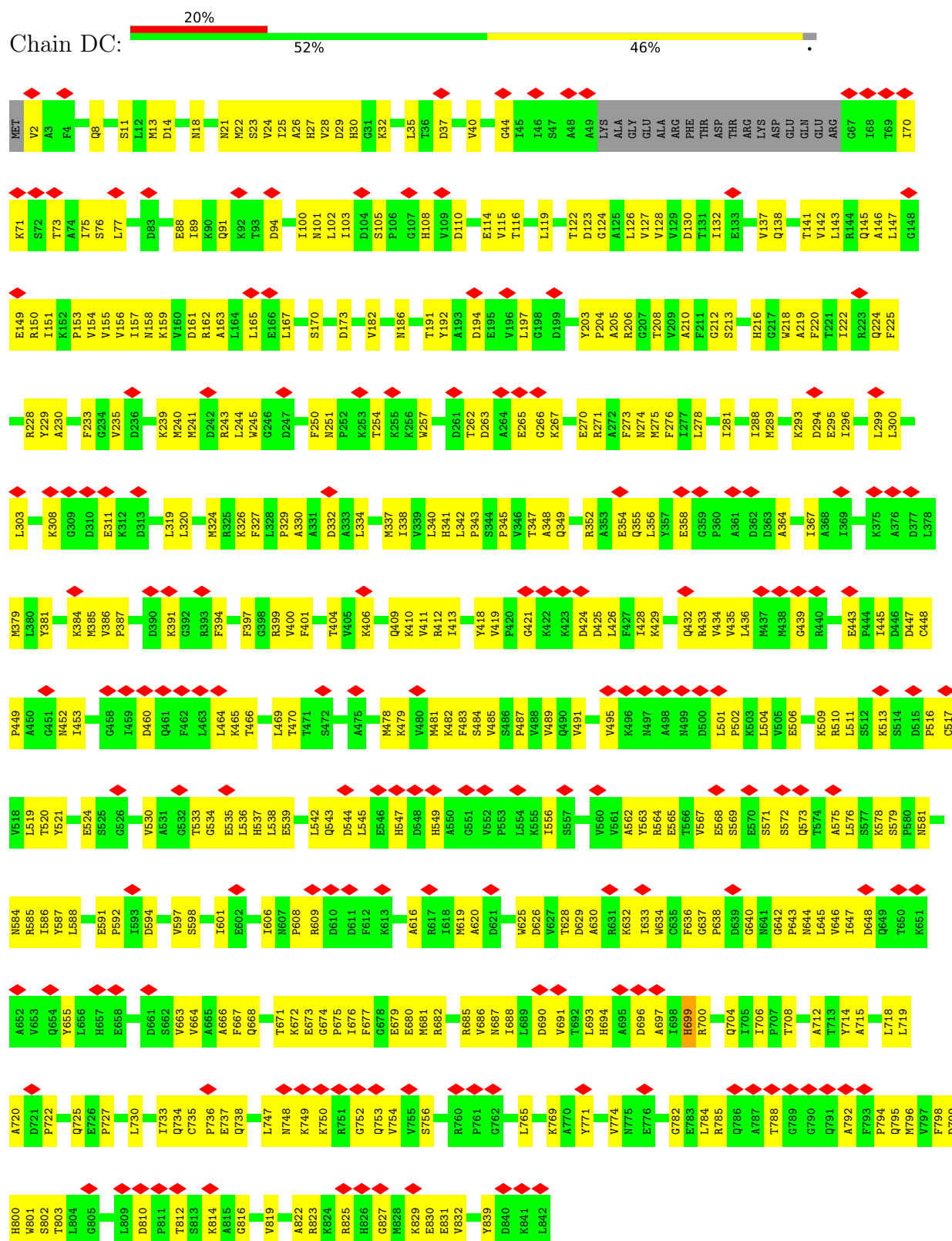


- Molecule 79: RPL1A isoform 1

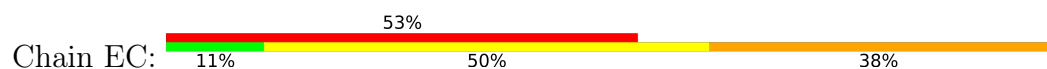
Chain E: 67% 65% 35%



• Molecule 80: Elongation factor 2



• Molecule 81: TSV IRES



C6939	C6878	C6818	A6758
U6940	U6879	C6819	A6759
U6941	C6880	C6820	A6760
A6942	U6881	U6821	C6761
A6943	C6882	U6822	U6762
U6944	A6883	U6823	C6763
U6945	C6884	C6824	C6764
A6946	C6885	A6825	A6765
A6947	A6886	U6826	U6766
U6948	C6887	C6827	C6767
C6950	A6888	C6828	U6768
C6951	C6889	A6829	A6769
U6952	A6890	C6830	U6770
A6953	C6891	U6831	U6771
U6954	U6892	C6832	C6772
U6955	C6893	C6833	C6773
A6956	C6894	U6834	U6774
A6957	C6895	U6835	U6775
C	C6897	U6836	A6776
C	U6898	C6837	C6777
	C6899	C6838	C6778
	A6900	U6839	C6779
	C6901	A6840	A6780
	U6902	U6841	U6781
	U6903	U6842	C6782
	U6904	U6843	C6783
	C6905	A6844	C6784
	C6906	C6845	C6785
	C6907	C6846	A6786
	C6908	C6847	U6787
	A6909	U6848	C6788
	A6910	A6849	C6789
	A6911	C6850	A6790
	C6912	C6851	A6791
	U6913	C6852	A6792
	A6914	C6853	A6793
	C6915	U6854	C6794
	A6916	A6855	U6795
	C6917	C6856	C6796
		C6857	U6797
		A6858	C6798
	C6920	U6859	C6799
	C6921	A6860	C6800
	C6922	C6861	A6901
	C6923	C6862	A6902
	C6924	C6863	A6903
	U6925	A6864	C6904
	U6926	C6865	C6905
	U6927	C6866	U6906
	C6928	C6867	A6907
	C6929	C6868	A6908
	C6930	A6870	U6909
	C6931	A6871	C6910
	C6932	A6872	C6911
	C6933	A6873	C6912
	U6934	A6874	C6913
	C6935	C6875	A6914
	C6936	A6876	A6915
	C6937	C6877	A6916
	A6938		

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	77938	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 ($e^-/\text{\AA}^2$)	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	2.034	Depositor
Minimum map value	-0.985	Depositor
Average map value	0.006	Depositor
Map value standard deviation	0.100	Depositor
Recommended contour level	0.3	Depositor
Map size (Å)	423.99997, 423.99997, 423.99997	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.06, 1.06, 1.06	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	0.18	0/1653	0.39	0/2261
2	BB	0.18	0/1735	0.38	0/2335
3	BC	0.55	2/1665 (0.1%)	0.85	4/2263 (0.2%)
4	BE	0.16	0/2109	0.39	0/2839
5	BG	0.14	0/1844	0.33	0/2464
6	BH	0.14	0/1506	0.36	0/2028
7	BI	0.19	0/1514	0.43	0/2021
8	BJ	0.17	0/1519	0.43	0/2035
9	BL	0.19	0/1272	0.38	0/1712
10	BN	0.18	0/1215	0.34	0/1638
11	BO	0.19	0/952	0.42	0/1279
12	BV	0.20	0/693	0.40	0/935
13	BW	0.20	0/1038	0.38	0/1395
14	BX	0.21	0/1139	0.37	0/1518
15	BY	0.13	0/1087	0.31	0/1449
16	Ba	0.74	3/782 (0.4%)	1.33	8/1047 (0.8%)
17	Bb	0.14	0/620	0.37	0/838
18	Be	0.14	0/451	0.37	0/600
19	BD	0.18	0/1759	0.44	0/2368
20	BF	0.15	0/1629	0.38	0/2202
21	BK	0.19	0/837	0.45	0/1131
22	BP	0.20	0/1012	0.44	0/1356
23	BQ	0.16	0/1125	0.35	0/1510
24	BR	0.15	0/957	0.32	0/1283
25	BS	0.15	0/1211	0.38	0/1628
26	BT	0.15	0/1113	0.38	0/1494
27	BU	0.25	0/865	0.50	0/1169
28	BZ	0.17	0/582	0.43	0/782
29	Bc	0.14	0/499	0.37	0/670
30	Bd	0.19	0/452	0.44	0/600
31	Bg	0.14	0/2454	0.35	0/3340
32	Bf	0.12	0/616	0.32	0/817

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	BM	0.14	0/943	0.45	2/1274 (0.2%)
34	B5	0.20	0/41450	0.31	0/64582
35	AA	0.28	0/1912	0.35	0/2569
36	AB	0.27	0/3139	0.39	0/4219
37	AC	0.25	0/2800	0.36	0/3790
38	A1	0.28	0/76161	0.30	0/118749
39	A3	0.26	0/2861	0.28	0/4457
40	A4	0.29	0/3724	0.29	0/5798
41	AD	0.20	0/2390	0.33	0/3225
42	AE	0.24	0/1324	0.42	1/1782 (0.1%)
43	AF	0.27	0/1821	0.35	0/2451
44	AG	0.21	0/1830	0.36	0/2469
45	AH	0.26	0/1531	0.45	0/2062
46	AI	0.25	0/1843	0.41	0/2471
47	AJ	0.19	0/1374	0.43	0/1842
48	AL	0.24	0/1568	0.33	0/2106
49	AM	0.24	0/1068	0.35	0/1438
50	AN	0.30	0/1757	0.36	0/2354
51	AO	0.27	0/1585	0.34	0/2128
52	AP	0.26	0/1410	0.36	0/1893
53	AQ	0.26	0/1465	0.38	0/1965
54	AR	0.23	0/1538	0.38	0/2050
55	AS	0.28	0/1481	0.40	0/1990
56	AT	0.26	0/1300	0.35	0/1743
57	AU	0.21	0/812	0.42	0/1099
58	AV	0.24	0/1018	0.37	0/1369
59	AW	0.23	0/533	0.35	0/707
60	AX	0.24	0/983	0.36	0/1325
61	AY	0.25	0/1004	0.35	0/1341
62	AZ	0.21	0/1118	0.37	0/1497
63	Aa	0.28	0/1204	0.36	0/1612
64	Ab	0.21	0/473	0.36	0/629
65	Ac	0.25	0/751	0.37	0/1008
66	Ad	0.24	0/904	0.30	0/1213
67	Ae	0.25	0/1041	0.33	0/1394
68	Af	0.31	0/868	0.39	0/1168
69	Ag	0.26	0/890	0.40	0/1189
70	Ah	0.21	0/978	0.36	0/1301
71	Ai	0.21	0/778	0.39	0/1034
72	Aj	0.29	0/696	0.33	0/923
73	Ak	0.18	0/618	0.34	0/826
74	Al	0.31	0/443	0.44	0/588
75	Am	0.23	0/423	0.38	0/562

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	An	0.25	0/234	0.43	0/300
77	Ao	0.21	0/860	0.32	0/1136
78	Ap	0.26	0/701	0.41	0/934
79	E	0.12	0/1745	0.33	0/2342
80	DC	0.19	0/6521	0.40	0/8830
81	EC	0.16	0/4733	0.35	0/7369
All	All	0.25	5/226509 (0.0%)	0.35	15/332110 (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
11	BO	0	1

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	BC	85	PRO	CB-CG	16.33	2.31	1.49
16	Ba	2	PRO	CB-CG	-12.06	0.89	1.49
3	BC	85	PRO	CG-CD	-11.99	1.09	1.50
16	Ba	60	PRO	CG-CD	-10.06	1.16	1.50
16	Ba	60	PRO	CB-CG	-8.32	1.08	1.49

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	BC	85	PRO	CB-CG-CD	-24.20	28.66	106.10
3	BC	85	PRO	CA-N-CD	-22.18	80.95	112.00
16	Ba	60	PRO	N-CD-CG	-20.37	72.65	103.20
16	Ba	60	PRO	CA-CB-CG	-18.94	68.51	104.50
16	Ba	2	PRO	CA-CB-CG	-16.59	72.99	104.50
16	Ba	2	PRO	N-CD-CG	-16.09	79.07	103.20
3	BC	85	PRO	N-CD-CG	13.39	123.29	103.20
16	Ba	2	PRO	CA-N-CD	-11.17	96.37	112.00
16	Ba	60	PRO	CB-CG-CD	10.79	140.64	106.10
3	BC	85	PRO	N-CA-CB	-7.51	97.12	103.36
16	Ba	60	PRO	CA-N-CD	-7.38	101.67	112.00
33	BM	126	TRP	CA-C-N	6.42	133.25	121.70
33	BM	126	TRP	C-N-CA	6.42	133.25	121.70
16	Ba	60	PRO	N-CA-CB	-5.44	97.34	103.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
42	AE	7	PRO	CA-N-CD	-5.36	104.50	112.00

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	BO	103	ARG	Sidechain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	BA	1612	0	1623	83	0
2	BB	1709	0	1784	83	0
3	BC	1635	0	1723	90	0
4	BE	2068	0	2154	126	0
5	BG	1820	0	1918	100	0
6	BH	1481	0	1572	69	0
7	BI	1489	0	1525	115	0
8	BJ	1494	0	1573	96	0
9	BL	1244	0	1314	74	0
10	BN	1192	0	1255	61	0
11	BO	941	0	979	71	0
12	BV	684	0	672	45	0
13	BW	1021	0	1060	55	0
14	BX	1121	0	1196	72	0
15	BY	1073	0	1132	60	0
16	Ba	769	0	818	35	0
17	Bb	610	0	633	39	0
18	Be	444	0	491	23	0
19	BD	1734	0	1817	106	0
20	BF	1609	0	1675	95	0
21	BK	817	0	804	57	0
22	BP	991	0	1035	84	0
23	BQ	1105	0	1166	67	0
24	BR	948	0	990	39	0
25	BS	1192	0	1222	74	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
26	BT	1095	0	1114	66	0
27	BU	855	0	915	71	0
28	BZ	574	0	616	46	0
29	Bc	497	0	535	42	0
30	Bd	442	0	429	38	0
31	Bg	2401	0	2356	119	0
32	Bf	605	0	654	27	0
33	BM	935	0	975	48	0
34	B5	37463	0	18838	1481	0
35	AA	1878	0	1946	83	0
36	AB	3081	0	3162	137	0
37	AC	2748	0	2859	101	0
38	A1	68786	0	34575	1817	0
39	A3	2579	0	1304	81	0
40	A4	3353	0	1695	110	0
41	AD	2341	0	2290	93	0
42	AE	1303	0	1376	59	0
43	AF	1784	0	1862	57	0
44	AG	1798	0	1894	59	0
45	AH	1510	0	1576	75	0
46	AI	1804	0	1856	83	0
47	AJ	1353	0	1383	77	0
48	AL	1543	0	1608	50	0
49	AM	1053	0	1149	49	0
50	AN	1720	0	1779	78	0
51	AO	1555	0	1659	64	0
52	AP	1388	0	1423	49	0
53	AQ	1441	0	1543	43	0
54	AR	1521	0	1617	51	0
55	AS	1445	0	1487	78	0
56	AT	1276	0	1322	58	0
57	AU	796	0	812	15	0
58	AV	1003	0	1046	40	0
59	AW	521	0	551	18	0
60	AX	968	0	1036	30	0
61	AY	993	0	1081	40	0
62	AZ	1092	0	1155	46	0
63	Aa	1173	0	1215	54	0
64	Ab	462	0	490	12	0
65	Ac	743	0	797	28	0
66	Ad	890	0	938	29	0
67	Ae	1020	0	1090	38	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
68	Af	850	0	880	44	0
69	Ag	880	0	945	34	0
70	Ah	969	0	1078	30	0
71	Ai	771	0	849	30	0
72	Aj	681	0	687	16	0
73	Ak	612	0	682	23	0
74	Al	436	0	475	27	0
75	Am	417	0	459	14	0
76	An	233	0	283	14	0
77	Ao	847	0	914	28	0
78	Ap	694	0	738	30	0
79	E	1718	0	1811	70	0
80	DC	6419	0	6492	315	0
81	EC	4235	0	2136	163	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	9	0
All	All	212418	0	158620	6914	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 (6914) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1679:G:N2	34:B5:1722:A:H62	1.51	1.08
34:B5:1471:A:N6	34:B5:1538:U:H3	1.55	1.03
34:B5:395:U:H3	34:B5:399:A:H62	1.10	1.00
34:B5:1541:G:N2	34:B5:1570:A:H62	1.58	0.99
34:B5:1679:G:H21	34:B5:1722:A:N6	1.59	0.99
34:B5:1230:A:H62	34:B5:1255:G:H21	0.99	0.98
38:A1:1717:U:H3	38:A1:1727:G:H1	1.05	0.96
38:A1:2465:G:N1	38:A1:2491:A:C6	2.36	0.93
39:A3:7:G:H1	39:A3:114:U:H3	1.14	0.91
34:B5:1229:G:H22	34:B5:1255:G:HO2'	1.18	0.91
38:A1:3348:G:H1	38:A1:3357:U:H3	1.02	0.91
81:EC:6922:G:H1	81:EC:6931:U:H3	0.98	0.91
34:B5:1541:G:H21	34:B5:1570:A:H62	1.17	0.90
27:BU:57:ARG:NH1	34:B5:1382:A:N3	2.20	0.90
27:BU:58:LEU:HD11	34:B5:1516:A:H5'	1.50	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1209:C:N3	34:B5:1455:G:N2	2.20	0.88
38:A1:538:G:H1	38:A1:553:U:H3	0.91	0.88
34:B5:61:A:HO2'	34:B5:269:G:HO2'	1.13	0.87
54:AR:150:GLN:HA	54:AR:153:LYS:HE3	1.55	0.87
21:BK:1:MET:HG3	21:BK:44:LYS:HB2	1.57	0.87
34:B5:1541:G:H21	34:B5:1570:A:N6	1.72	0.87
7:BI:37:LYS:HB2	7:BI:59:ARG:HG2	1.54	0.87
22:BP:77:ARG:HH21	34:B5:1240:U:H3'	1.37	0.87
38:A1:2756:C:O2	56:AT:8:ARG:NH2	2.08	0.86
34:B5:109:G:N1	34:B5:305:C:N3	2.22	0.86
34:B5:109:G:N2	34:B5:305:C:O2	2.09	0.86
3:BC:113:LEU:HD11	3:BC:211:LEU:HB3	1.56	0.86
38:A1:1010:G:N2	46:AI:193:ASP:OD2	2.08	0.86
79:E:126:PRO:HA	81:EC:6773:G:H4'	1.55	0.86
34:B5:1336:A:H61	34:B5:1415:PSU:HN3	1.21	0.86
27:BU:53:LYS:HB3	27:BU:92:ASP:HB2	1.57	0.85
1:BA:193:GLN:HG3	24:BR:88:VAL:HG11	1.57	0.85
11:BO:103:ARG:NH2	16:Ba:49:ALA:HB1	1.92	0.85
34:B5:1352:G:N1	34:B5:1373:C:N3	2.24	0.85
27:BU:69:LYS:HD3	34:B5:1280:4AC:H5''	1.56	0.85
34:B5:1171:A:H2'	34:B5:1172:G:H8	1.42	0.85
81:EC:6934:U:H5''	81:EC:6935:G:H4'	1.57	0.85
80:DC:591:GLU:OE2	80:DC:685:ARG:NH1	2.10	0.84
45:AH:50:ASN:HD21	49:AM:5:SER:H	1.23	0.84
34:B5:1081:A:O2'	34:B5:1083:G:N7	2.11	0.84
34:B5:1352:G:N2	34:B5:1373:C:O2	2.10	0.84
40:A4:52:A:H5'	74:Al:21:ARG:HD3	1.57	0.83
34:B5:976:G:H1	34:B5:1023:A:HO2'	0.86	0.83
8:BJ:171:ARG:HE	8:BJ:175:ARG:HH22	1.24	0.83
81:EC:6853:G:N1	81:EC:6876:A:C2	2.45	0.83
34:B5:477:A:N6	34:B5:539:G:N2	2.26	0.83
48:AL:185:LYS:HA	48:AL:188:ARG:HE	1.44	0.83
30:Bd:12:ARG:HB3	30:Bd:18:SER:HB3	1.61	0.82
80:DC:606:ILE:HD11	80:DC:619:MET:HB2	1.60	0.82
81:EC:6786:A:H1'	81:EC:6811:G:H1	1.44	0.82
35:AA:208:ASP:OD2	38:A1:912:G:N1	2.13	0.82
35:AA:71:LEU:HD22	38:A1:1651:U:H5''	1.62	0.82
38:A1:177:U:H2'	38:A1:241:G:H1	1.42	0.81
42:AE:52:VAL:HG21	42:AE:65:ILE:HD12	1.60	0.81
15:BY:42:GLU:HB2	15:BY:43:LYS:HZ2	1.45	0.81
7:BI:56:ARG:NH2	34:B5:331:A:OP1	2.14	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BT:86:ARG:HH12	26:BT:92:LYS:HE2	1.44	0.81
34:B5:75:U:H3'	34:B5:76:A:H4'	1.60	0.81
34:B5:1230:A:H62	34:B5:1255:G:N2	1.77	0.81
34:B5:1396:U:H3	34:B5:1402:G:H1	0.82	0.81
37:AC:98:ARG:NH2	38:A1:804:C:OP1	2.13	0.81
34:B5:1356:U:H3	34:B5:1367:G:H1	1.26	0.81
35:AA:28:LYS:HD3	35:AA:123:ARG:HE	1.45	0.81
6:BH:140:VAL:HB	13:BW:52:TYR:HB3	1.61	0.81
8:BJ:39:LYS:NZ	34:B5:592:A:O3'	2.14	0.81
8:BJ:48:GLN:HA	8:BJ:51:LYS:HG2	1.61	0.81
2:BB:61:LEU:HD22	2:BB:96:LEU:HD21	1.62	0.81
38:A1:1606:U:O4	69:Ag:9:ARG:NH1	2.13	0.81
38:A1:172:G:N3	38:A1:173:G:N2	2.28	0.81
3:BC:91:ARG:NH2	34:B5:1289:U:OP1	2.14	0.81
31:Bg:220:ILE:HB	31:Bg:234:LEU:HB2	1.63	0.81
34:B5:486:G:H1	34:B5:501:U:H3	0.83	0.81
69:Ag:41:ARG:HG2	69:Ag:56:THR:HG21	1.61	0.81
2:BB:27:LYS:HE3	2:BB:47:LEU:HD13	1.63	0.80
17:Bb:80:ARG:HE	17:Bb:81:ARG:H	1.29	0.80
38:A1:1474:A:O2'	66:Ad:57:GLN:NE2	2.14	0.80
38:A1:1805:C:H2'	38:A1:1806:A:H8	1.47	0.80
6:BH:114:ARG:HG2	34:B5:860:U:H1'	1.62	0.80
31:Bg:110:VAL:HA	31:Bg:126:SER:HA	1.62	0.80
50:AN:99:ARG:HG2	50:AN:167:THR:HG21	1.61	0.80
19:BD:49:ILE:HD12	19:BD:89:GLU:HG2	1.63	0.80
34:B5:871:G:H2'	34:B5:872:G:C8	2.17	0.80
34:B5:1600:A:H4'	34:B5:1601:G:H5'	1.62	0.80
37:AC:67:THR:HG21	38:A1:2402:A:H2'	1.64	0.80
38:A1:845:G:O2'	38:A1:848:A:N6	2.13	0.80
34:B5:1339:C:O2'	34:B5:1341:A:N7	2.15	0.80
38:A1:674:G:O6	53:AQ:56:LYS:NZ	2.14	0.80
57:AU:32:SER:HG	57:AU:83:TYR:HH	1.28	0.80
13:BW:57:ARG:HD2	17:Bb:26:GLN:HE21	1.47	0.80
34:B5:1521:G:O2'	34:B5:1523:G:OP2	2.00	0.79
7:BI:14:THR:HG23	34:B5:348:U:H1'	1.65	0.79
23:BQ:37:THR:O	23:BQ:45:ARG:NH1	2.14	0.79
38:A1:3189:G:H1	38:A1:3203:U:H3	1.29	0.79
47:AJ:88:GLU:OE1	47:AJ:90:GLN:NE2	2.16	0.79
29:Bc:61:ARG:HH12	29:Bc:64:ARG:HG2	1.44	0.79
34:B5:1346:A:OP2	34:B5:1348:A:N6	2.14	0.79
38:A1:1257:C:N4	38:A1:1262:G:OP2	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:31:ARG:NH1	38:A1:674:G:OP1	2.16	0.79
34:B5:752:A:O2'	34:B5:753:A:O5'	2.01	0.79
8:BJ:66:ASP:HB3	8:BJ:69:ARG:HB3	1.64	0.79
80:DC:495:VAL:HG22	80:DC:504:LEU:HD21	1.65	0.79
34:B5:126:A:N6	34:B5:291:G:N3	2.32	0.78
34:B5:1176:G:N3	34:B5:1195:C:O2'	2.16	0.78
63:Aa:6:THR:HG22	63:Aa:8:THR:H	1.46	0.78
5:BG:136:LYS:NZ	34:B5:66:U:OP2	2.13	0.78
38:A1:947:G:H5''	67:Ae:55:ILE:HG12	1.65	0.78
2:BB:33:LYS:HB2	2:BB:97:LEU:HA	1.66	0.78
20:BF:104:ASN:ND2	34:B5:1587:A:N3	2.32	0.78
4:BE:9:LEU:HB2	4:BE:30:ARG:HH11	1.49	0.78
5:BG:132:ARG:NH2	34:B5:149:C:O2	2.17	0.78
50:AN:84:PRO:HA	50:AN:87:GLN:HG3	1.63	0.78
80:DC:495:VAL:HG21	80:DC:501:LEU:HA	1.66	0.78
4:BE:11:ARG:HH12	4:BE:24:SER:HB2	1.49	0.78
7:BI:5:ARG:NH1	34:B5:336:G:O6	2.16	0.78
7:BI:175:GLN:NE2	34:B5:332:U:OP2	2.17	0.78
25:BS:56:LYS:HE2	25:BS:60:GLU:HG2	1.66	0.78
36:AB:372:THR:HG23	36:AB:375:GLU:H	1.48	0.78
34:B5:1452:U:H2'	34:B5:1453:G:C8	2.19	0.78
81:EC:6781:U:H1'	81:EC:6782:C:H5	1.49	0.77
27:BU:55:PRO:HA	27:BU:91:ILE:HG12	1.66	0.77
38:A1:364:G:OP2	72:Aj:52:LYS:NZ	2.13	0.77
59:AW:2:LYS:NZ	59:AW:4:GLU:OE1	2.17	0.77
60:AX:85:GLN:OE1	60:AX:115:ARG:NH2	2.18	0.77
38:A1:2469:G:H5''	79:E:27:ASN:HD21	1.49	0.77
5:BG:49:VAL:HB	5:BG:115:LYS:HB2	1.67	0.77
6:BH:150:GLN:HB3	6:BH:181:ILE:HG22	1.66	0.77
7:BI:34:ALA:HB2	7:BI:56:ARG:HH21	1.48	0.77
14:BX:61:SER:HB3	14:BX:69:ARG:HD3	1.66	0.77
36:AB:245:GLY:HA3	36:AB:248:LYS:HE3	1.66	0.77
38:A1:3275:U:H5'	68:Af:68:TRP:HZ2	1.50	0.77
65:Ac:17:VAL:HG11	65:Ac:92:ILE:HD12	1.66	0.77
26:BT:48:GLN:HE22	34:B5:1532:U:H1'	1.48	0.77
37:AC:38:VAL:HG23	37:AC:113:VAL:HG11	1.67	0.77
53:AQ:133:LYS:HB2	53:AQ:135:GLN:HE22	1.47	0.77
33:BM:30:VAL:HA	33:BM:33:ARG:HG2	1.67	0.77
36:AB:236:LYS:NZ	38:A1:2338:C:OP1	2.16	0.77
38:A1:2681:U:OP2	47:AJ:51:ARG:NH2	2.17	0.77
55:AS:8:GLN:HB3	55:AS:64:ILE:HD11	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BN:114:ARG:HD3	10:BN:117:LEU:HD12	1.64	0.77
17:Bb:70:LYS:HD2	34:B5:1049:U:H5''	1.67	0.77
34:B5:434:G:N1	34:B5:437:A:OP2	2.18	0.77
13:BW:106:THR:HG22	13:BW:108:ALA:H	1.47	0.77
23:BQ:42:GLU:HA	23:BQ:45:ARG:HE	1.50	0.77
34:B5:1220:C:H2'	34:B5:1221:A:H8	1.48	0.77
34:B5:1679:G:H21	34:B5:1722:A:H62	0.78	0.76
38:A1:3348:G:O6	38:A1:3357:U:O4	2.03	0.76
70:Ah:34:GLN:HB3	70:Ah:38:ARG:HH21	1.49	0.76
4:BE:10:LYS:NZ	34:B5:96:G:OP1	2.15	0.76
38:A1:865:U:O2	38:A1:1482:A:N6	2.19	0.76
38:A1:1634:G:N7	62:AZ:17:ARG:NH2	2.33	0.76
38:A1:3187:A:OP1	45:AH:23:ARG:NH1	2.17	0.76
40:A4:8:C:H2'	40:A4:9:A:H8	1.50	0.76
5:BG:13:GLN:NE2	34:B5:151:G:N3	2.33	0.76
34:B5:905:A:N1	34:B5:998:A:O2'	2.18	0.76
50:AN:27:VAL:HG23	50:AN:129:TYR:HE2	1.50	0.76
7:BI:84:HIS:NE2	7:BI:97:THR:OG1	2.19	0.76
14:BX:50:LYS:HG3	34:B5:435:C:H5''	1.66	0.76
31:Bg:304:GLY:HA2	31:Bg:310:ILE:HG13	1.67	0.76
38:A1:1390:A:N6	38:A1:1418:A:O2'	2.17	0.76
34:B5:138:A:H62	34:B5:266:A:H61	1.31	0.76
34:B5:764:U:H3	34:B5:772:G:H1	1.32	0.76
38:A1:835:G:O2'	38:A1:857:G:N2	2.19	0.76
79:E:76:ARG:HD3	79:E:144:LEU:HD23	1.67	0.76
38:A1:1309:U:O4	38:A1:1312:C:N4	2.19	0.76
38:A1:1471:U:H5'	54:AR:5:ARG:NH1	2.01	0.76
2:BB:111:ARG:NH2	34:B5:930:A:N3	2.34	0.76
9:BL:128:CYS:SG	9:BL:138:ASN:ND2	2.59	0.76
20:BF:145:ASP:HB3	29:Bc:45:LYS:HE3	1.67	0.76
2:BB:135:LEU:HB3	2:BB:217:LEU:HD13	1.67	0.76
7:BI:49:ARG:NH1	34:B5:399:A:OP1	2.18	0.76
34:B5:148:A:N6	34:B5:166:C:C2	2.54	0.76
38:A1:845:G:N2	38:A1:848:A:OP2	2.19	0.76
38:A1:2438:A:H2'	38:A1:2439:A:H8	1.49	0.76
80:DC:676:ILE:O	80:DC:823:ARG:NH1	2.19	0.76
38:A1:1238:C:O2	38:A1:1250:G:N2	2.16	0.75
38:A1:1942:U:OP2	54:AR:74:ARG:NH1	2.20	0.75
50:AN:143:ARG:NH1	50:AN:152:CYS:SG	2.59	0.75
27:BU:61:LYS:HB3	27:BU:86:ILE:HB	1.67	0.75
30:Bd:32:ARG:HH12	34:B5:1596:C:H3'	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:307:GLN:HE22	38:A1:1345:G:H21	1.31	0.75
78:Ap:13:LYS:NZ	78:Ap:30:GLU:OE2	2.18	0.75
13:BW:50:PHE:HB3	13:BW:63:VAL:HG13	1.68	0.75
19:BD:70:THR:HG22	19:BD:86:LEU:HB3	1.69	0.75
34:B5:472:U:H2'	34:B5:473:A:H8	1.51	0.75
38:A1:1333:C:OP1	53:AQ:2:GLY:N	2.19	0.75
80:DC:638:PRO:HB3	80:DC:672:LYS:HG3	1.67	0.75
38:A1:1238:C:N3	38:A1:1250:G:N1	2.27	0.75
11:BO:60:ALA:HB1	11:BO:101:ALA:HB2	1.69	0.75
43:AF:44:ILE:HD12	43:AF:180:SER:HB3	1.69	0.75
37:AC:31:ARG:NH2	37:AC:120:TYR:OH	2.19	0.75
38:A1:2790:A:OP1	53:AQ:180:ARG:NH1	2.19	0.75
39:A3:14:U:O4	39:A3:66:A:N6	2.18	0.75
50:AN:68:ARG:NH1	50:AN:124:ASP:O	2.20	0.75
63:Aa:101:VAL:HA	63:Aa:124:ILE:HB	1.68	0.75
34:B5:23:G:H1	34:B5:602:U:H3	1.34	0.74
38:A1:584:G:OP1	42:AE:82:ARG:NH2	2.19	0.74
38:A1:2457:G:O2'	38:A1:2486:A:N6	2.19	0.74
38:A1:2586:G:OP1	44:AG:240:ASN:ND2	2.18	0.74
62:AZ:103:GLN:HG2	62:AZ:104:PRO:HD2	1.69	0.74
4:BE:200:ARG:NH1	4:BE:202:ASP:OD1	2.20	0.74
22:BP:79:HIS:HB3	34:B5:1241:G:H1'	1.68	0.74
34:B5:1775:U:OP1	76:An:11:ARG:NH2	2.20	0.74
36:AB:380:MET:HE2	36:AB:383:LEU:HD21	1.68	0.74
38:A1:1336:U:H2'	38:A1:1337:A:H8	1.52	0.74
38:A1:633:C:O2'	68:Af:21:ARG:O	2.05	0.74
11:BO:20:TYR:HB3	11:BO:27:PHE:HB2	1.68	0.74
34:B5:486:G:O2'	34:B5:488:G:OP2	2.05	0.74
38:A1:184:U:H3	38:A1:232:G:H1	1.34	0.74
81:EC:6789:G:N2	81:EC:6790:A:O2'	2.21	0.74
5:BG:61:PHE:HD2	5:BG:72:ARG:HD2	1.51	0.74
15:BY:61:ARG:HE	15:BY:62:THR:H	1.35	0.74
16:Ba:82:ARG:NH2	34:B5:1153:G:OP1	2.19	0.74
80:DC:337:MET:HA	80:DC:340:LEU:HD12	1.69	0.74
37:AC:196:ASN:HD21	61:AY:11:ASP:HA	1.52	0.74
38:A1:595:G:O6	42:AE:22:ARG:NH2	2.16	0.74
38:A1:1863:G:N1	38:A1:1866:C:OP2	2.17	0.74
52:AP:118:GLN:NE2	52:AP:147:GLU:OE2	2.20	0.74
68:Af:45:LEU:HD21	68:Af:73:ARG:HA	1.70	0.74
34:B5:1229:G:N2	34:B5:1255:G:HO2'	1.85	0.74
45:AH:92:TYR:HD2	45:AH:142:ASP:HB2	1.53	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:610:G:N2	34:B5:1108:G:O6	2.20	0.74
38:A1:182:U:H3	38:A1:234:G:H1	1.33	0.74
49:AM:14:LEU:HD21	55:AS:149:LYS:HE2	1.70	0.74
57:AU:56:VAL:HG22	57:AU:65:VAL:HG12	1.69	0.74
14:BX:107:PHE:CE2	14:BX:114:LYS:HG3	2.23	0.73
20:BF:140:THR:HG23	20:BF:171:ALA:HB1	1.71	0.73
23:BQ:129:PHE:O	23:BQ:137:ARG:NH1	2.21	0.73
25:BS:87:ASN:OD1	34:B5:1546:G:N2	2.21	0.73
27:BU:85:ARG:NH2	34:B5:1334:U:O3'	2.20	0.73
49:AM:48:GLY:HA3	49:AM:53:VAL:HB	1.70	0.73
38:A1:2438:A:H2'	38:A1:2439:A:C8	2.23	0.73
80:DC:620:ALA:HA	80:DC:625:TRP:HB2	1.70	0.73
16:Ba:12:LYS:NZ	34:B5:1029:U:OP2	2.21	0.73
34:B5:918:U:H2'	34:B5:919:A:C8	2.24	0.73
36:AB:19:ARG:HB2	36:AB:232:ARG:HH21	1.53	0.73
38:A1:216:G:OP1	61:AY:16:ARG:NH1	2.22	0.73
2:BB:121:ILE:HB	2:BB:141:ALA:HB3	1.71	0.73
7:BI:40:ALA:N	7:BI:61:GLU:OE2	2.22	0.73
19:BD:46:THR:N	19:BD:83:THR:O	2.21	0.73
19:BD:141:LYS:NZ	34:B5:1275:A:N3	2.37	0.73
23:BQ:13:LYS:HG3	23:BQ:14:LYS:H	1.54	0.73
36:AB:232:ARG:NH1	36:AB:266:ARG:O	2.22	0.73
38:A1:2450:G:N2	38:A1:2496:C:O2'	2.19	0.73
3:BC:239:PRO:HA	3:BC:242:ILE:HG22	1.71	0.73
36:AB:71:GLU:OE2	59:AW:1:MET:N	2.20	0.73
38:A1:838:G:O6	78:Ap:4:ARG:NH1	2.18	0.73
79:E:122:ARG:HG3	79:E:123:LEU:HG	1.68	0.73
34:B5:197:A:H2'	34:B5:198:A:H8	1.53	0.73
34:B5:868:G:H1	34:B5:960:U:H3	1.37	0.73
38:A1:520:U:OP2	43:AF:70:LYS:NZ	2.21	0.73
38:A1:3276:G:O6	52:AP:171:ARG:NH1	2.22	0.73
67:Ae:95:GLU:OE1	67:Ae:120:THR:OG1	2.05	0.73
2:BB:23:PRO:O	2:BB:27:LYS:NZ	2.20	0.73
4:BE:201:HIS:NE2	34:B5:799:A:O2'	2.21	0.73
19:BD:105:MET:HE1	19:BD:184:ILE:HG21	1.70	0.73
23:BQ:69:VAL:HB	23:BQ:81:ILE:HD11	1.69	0.73
34:B5:923:A:H2'	34:B5:924:A:H8	1.53	0.73
39:A3:60:G:N2	41:AD:274:GLN:OE1	2.20	0.73
7:BI:103:GLN:HB3	7:BI:164:ARG:HB3	1.70	0.73
26:BT:45:MET:HE3	26:BT:46:PRO:HD2	1.71	0.73
29:Bc:16:LEU:HB2	29:Bc:27:GLN:HB3	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1665:U:H3	34:B5:1736:G:H1	1.36	0.73
79:E:67:ILE:HG12	79:E:111:ILE:HD11	1.71	0.73
26:BT:97:SER:O	26:BT:101:ASN:ND2	2.20	0.72
34:B5:1216:C:O2'	34:B5:1444:A:N1	2.21	0.72
48:AL:167:PHE:N	63:Aa:135:GLU:OE2	2.20	0.72
34:B5:1488:G:H3'	34:B5:1515:A:H61	1.54	0.72
80:DC:394:PHE:N	80:DC:460:ASP:OD2	2.23	0.72
34:B5:427:C:O2'	34:B5:459:G:N3	2.22	0.72
38:A1:374:A:OP1	61:AY:77:LYS:NZ	2.22	0.72
38:A1:785:G:O6	63:Aa:77:LYS:NZ	2.22	0.72
16:Ba:34:LYS:NZ	34:B5:1791:A:N7	2.37	0.72
19:BD:106:LYS:HD2	19:BD:173:ARG:HG3	1.71	0.72
33:BM:61:VAL:HG12	33:BM:89:ILE:HB	1.71	0.72
34:B5:1246:C:H2'	34:B5:1247:U:C6	2.24	0.72
38:A1:655:C:H2'	38:A1:656:A:H8	1.54	0.72
38:A1:649:A:OP2	38:A1:2868:U:O2'	2.05	0.72
38:A1:2609:A:H1'	50:AN:87:GLN:HE22	1.54	0.72
34:B5:1474:G:H2'	34:B5:1475:A:H8	1.53	0.72
38:A1:1208:U:O2'	38:A1:3115:C:N4	2.23	0.72
39:A3:8:G:O6	41:AD:21:ARG:NH2	2.21	0.72
62:AZ:47:GLU:OE1	62:AZ:69:LYS:NZ	2.18	0.72
73:Ak:17:ARG:HG3	73:Ak:19:ASP:H	1.55	0.72
19:BD:62:ASN:OD1	19:BD:64:ARG:NH1	2.21	0.72
38:A1:2767:U:O2'	77:Ao:30:ALA:O	2.08	0.72
78:Ap:21:SER:O	78:Ap:25:GLN:NE2	2.23	0.72
10:BN:54:LEU:HD23	10:BN:60:VAL:HG11	1.71	0.72
27:BU:30:LYS:NZ	27:BU:33:GLN:OE1	2.22	0.72
34:B5:1230:A:N6	34:B5:1255:G:H21	1.83	0.72
35:AA:118:GLU:OE2	38:A1:2177:G:N2	2.22	0.72
38:A1:160:G:H1	38:A1:261:U:H3	1.36	0.72
38:A1:727:G:OP2	38:A1:742:G:N2	2.21	0.72
80:DC:510:ARG:HG2	80:DC:549:HIS:HD2	1.52	0.72
16:Ba:37:LYS:O	16:Ba:38:ARG:NH1	2.23	0.71
38:A1:1268:G:N2	38:A1:1271:A:OP1	2.22	0.71
38:A1:1348:U:OP1	53:AQ:39:ARG:NH1	2.22	0.71
38:A1:1639:C:N4	69:Ag:73:SER:OG	2.23	0.71
80:DC:581:ASN:ND2	80:DC:704:GLN:OE1	2.23	0.71
34:B5:1041:G:H2'	34:B5:1042:G:C8	2.25	0.71
34:B5:1453:G:H2'	34:B5:1454:G:C8	2.25	0.71
34:B5:1584:G:N2	34:B5:1611:A:OP2	2.22	0.71
63:Aa:114:GLY:O	63:Aa:137:LYS:NZ	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6955:U:H3'	81:EC:6956:A:H8	1.53	0.71
34:B5:1426:C:O2'	34:B5:1428:G:OP2	2.08	0.71
3:BC:82:ASN:HD22	3:BC:207:LEU:HD11	1.56	0.71
13:BW:22:LYS:HA	17:Bb:3:LEU:HB2	1.72	0.71
15:BY:63:GLN:NE2	15:BY:64:PHE:O	2.23	0.71
34:B5:226:A:N6	34:B5:835:U:OP2	2.21	0.71
36:AB:126:LYS:NZ	38:A1:3294:A:OP2	2.22	0.71
3:BC:226:THR:OG1	3:BC:228:ASN:OD1	2.07	0.71
21:BK:61:TRP:CZ2	30:Bd:46:LYS:HE3	2.26	0.71
38:A1:2641:U:OP2	56:AT:10:ARG:NH2	2.22	0.71
49:AM:37:GLU:HG2	55:AS:72:VAL:HG11	1.71	0.71
26:BT:102:ARG:HG2	26:BT:106:GLN:HE22	1.53	0.71
34:B5:1280:4AC:H2'	34:B5:1281:G:H8	1.55	0.71
27:BU:69:LYS:O	30:Bd:44:ARG:NH1	2.24	0.71
38:A1:2257:C:H3'	38:A1:2258:PSU:H6	1.55	0.71
52:AP:152:GLU:N	52:AP:152:GLU:OE2	2.23	0.71
80:DC:170:SER:HB3	80:DC:173:ASP:HB2	1.72	0.71
34:B5:381:C:O2'	34:B5:755:A:N1	2.23	0.71
34:B5:754:A:H5'	34:B5:755:A:H5''	1.71	0.71
34:B5:1690:G:N7	34:B5:1707:A:N6	2.39	0.71
35:AA:101:VAL:HG22	35:AA:165:VAL:HG12	1.73	0.71
34:B5:1335:U:O2	34:B5:1416:G:N2	2.23	0.71
34:B5:1628:U:H2'	34:B5:1629:G:C8	2.25	0.71
37:AC:191:LYS:NZ	38:A1:341:G:OP2	2.23	0.71
38:A1:597:G:H2'	38:A1:598:A:H8	1.54	0.71
48:AL:6:ASN:O	53:AQ:164:ARG:NH1	2.24	0.71
2:BB:189:ILE:HG13	2:BB:190:PRO:HD3	1.73	0.70
19:BD:90:ARG:HG3	19:BD:91:VAL:H	1.55	0.70
34:B5:1297:G:N2	34:B5:1300:A:OP2	2.19	0.70
59:AW:45:ASN:HB3	59:AW:48:ARG:HG3	1.73	0.70
34:B5:1280:4AC:H2'	34:B5:1281:G:C8	2.25	0.70
47:AJ:51:ARG:O	47:AJ:61:ARG:NH1	2.23	0.70
62:AZ:83:THR:HG22	62:AZ:85:TYR:H	1.56	0.70
13:BW:53:ILE:HD13	17:Bb:24:LEU:HD11	1.72	0.70
20:BF:96:SER:HA	20:BF:99:MET:HE1	1.73	0.70
21:BK:61:TRP:HZ2	30:Bd:46:LYS:HE3	1.53	0.70
31:Bg:66:HIS:HB3	31:Bg:85:TRP:HB2	1.73	0.70
38:A1:1808:G:OP1	62:AZ:135:ARG:NH2	2.24	0.70
38:A1:86:G:O2'	38:A1:98:G:O6	2.10	0.70
38:A1:129:U:H3	38:A1:139:G:H1	1.39	0.70
71:Ai:4:LYS:HA	71:Ai:12:ASN:HB3	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BB:144:ARG:NH2	2:BB:207:LEU:O	2.24	0.70
4:BE:162:ILE:HG22	4:BE:164:LEU:H	1.55	0.70
7:BI:142:LYS:NZ	34:B5:186:C:O5'	2.24	0.70
10:BN:72:MET:HE1	10:BN:82:PRO:HD2	1.73	0.70
10:BN:127:ARG:HH22	34:B5:629:U:H5'	1.57	0.70
26:BT:16:ASN:OD1	26:BT:56:LYS:NZ	2.25	0.70
34:B5:319:U:H4'	34:B5:323:A:C8	2.26	0.70
34:B5:1273:G:N2	34:B5:1278:G:O6	2.25	0.70
80:DC:404:THR:HG22	80:DC:449:PRO:HA	1.74	0.70
7:BI:104:ILE:HG13	7:BI:105:ASP:H	1.56	0.70
34:B5:76:A:H62	34:B5:81:G:H8	1.40	0.70
38:A1:2193:U:H5''	38:A1:2194:G:H5'	1.71	0.70
8:BJ:171:ARG:NH2	34:B5:538:A:OP2	2.25	0.70
10:BN:55:ARG:NH1	34:B5:960:U:OP2	2.24	0.70
16:Ba:32:LYS:NZ	34:B5:932:U:O2	2.25	0.70
26:BT:30:VAL:HG12	26:BT:32:GLY:H	1.56	0.70
34:B5:998:A:N6	34:B5:1004:U:OP2	2.25	0.70
34:B5:1483:A:H2'	34:B5:1484:G:C8	2.27	0.70
81:EC:6878:G:H3'	81:EC:6879:U:H5'	1.72	0.70
62:AZ:26:VAL:HA	62:AZ:89:VAL:HG21	1.72	0.70
75:Am:104:PRO:HG2	75:Am:107:ALA:HB2	1.74	0.70
5:BG:180:THR:HG23	5:BG:183:ARG:H	1.57	0.70
38:A1:3184:A:OP2	51:AO:12[A]:LYS:NZ	2.24	0.70
57:AU:50:LEU:HD22	57:AU:54:VAL:HB	1.73	0.70
20:BF:112:ARG:HH11	23:BQ:43:ILE:HD12	1.57	0.70
23:BQ:123:ARG:NH1	34:B5:1337:A:H5'	2.07	0.70
36:AB:315:GLY:HA2	38:A1:3379:C:H4'	1.74	0.70
38:A1:1729:A:O4'	65:Ac:52:ARG:NH1	2.25	0.70
29:Bc:61:ARG:NH1	29:Bc:62:GLU:O	2.25	0.69
34:B5:98:U:HO2'	34:B5:99:C:H6	1.40	0.69
34:B5:195:G:H2'	34:B5:196:G:C8	2.27	0.69
34:B5:641:G:H1	34:B5:693:U:H3	1.40	0.69
38:A1:2185:G:O2'	38:A1:2314:PSU:OP2	2.10	0.69
40:A4:128:U:OP1	40:A4:129:C:N4	2.20	0.69
4:BE:183:VAL:HG11	4:BE:188:ASN:HB2	1.72	0.69
34:B5:330:G:H2'	34:B5:331:A:C8	2.27	0.69
38:A1:1814:A:H1'	38:A1:1817:G:H21	1.56	0.69
72:Aj:21:ARG:HE	72:Aj:39:TYR:HD1	1.41	0.69
22:BP:98:ASN:HB2	22:BP:122:THR:HA	1.75	0.69
34:B5:431:C:H5''	80:DC:391:LYS:H	1.58	0.69
15:BY:11:LYS:NZ	34:B5:785:U:O4	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Bb:36:LYS:NZ	17:Bb:40:CYS:SG	2.62	0.69
38:A1:196:G:N1	38:A1:199:A:OP2	2.26	0.69
38:A1:2138:A:HO2'	72:Aj:2:GLY:N	1.89	0.69
34:B5:400:A:H4'	34:B5:401:A:H5''	1.72	0.69
5:BG:159:ARG:NH1	34:B5:79:C:OP1	2.22	0.69
25:BS:16:ARG:HH11	25:BS:19:ASN:H	1.41	0.69
34:B5:897:C:O2'	34:B5:914:G:N2	2.26	0.69
34:B5:1773:4AC:H5'	76:An:3:ALA:HB3	1.74	0.69
46:AI:4:ARG:HH21	46:AI:99:ILE:HG13	1.58	0.69
54:AR:81:ARG:HD3	54:AR:88:ARG:HH11	1.57	0.69
80:DC:30:HIS:O	80:DC:158:ASN:ND2	2.19	0.69
20:BF:166:ARG:NH2	34:B5:1614:A:OP1	2.24	0.69
25:BS:143:ARG:NH1	34:B5:1462:G:N7	2.40	0.69
34:B5:628:G:N1	34:B5:970:A:OP2	2.20	0.69
34:B5:1752:U:H2'	34:B5:1753:A:H8	1.56	0.69
38:A1:1329:U:OP1	68:Af:82:ARG:NH2	2.25	0.69
44:AG:155:ASN:HD21	44:AG:181:LYS:HG3	1.56	0.69
11:BO:17:ALA:HB3	11:BO:81:VAL:HA	1.75	0.69
21:BK:14:TYR:HA	21:BK:17:GLN:HE21	1.57	0.69
25:BS:56:LYS:HZ1	25:BS:61:LEU:HD13	1.58	0.69
31:Bg:19:TRP:H	31:Bg:38:ARG:HB2	1.58	0.69
34:B5:395:U:O4	34:B5:399:A:N7	2.26	0.69
34:B5:1673:G:H1	34:B5:1728:A:H61	1.40	0.69
38:A1:1785:U:H2'	38:A1:1786:G:C8	2.27	0.69
38:A1:1953:G:H22	38:A1:2093:A:H2'	1.58	0.69
38:A1:2572:C:H1'	62:AZ:60:LYS:HE2	1.74	0.69
38:A1:2681:U:H5''	47:AJ:51:ARG:HH21	1.57	0.69
38:A1:3092:C:O2'	38:A1:3094:A:OP2	2.10	0.69
43:AF:150:LYS:HG3	43:AF:151:ARG:HG3	1.74	0.69
45:AH:87:LYS:HB2	45:AH:187:ILE:HD13	1.74	0.69
58:AV:81:GLN:O	58:AV:98:ASN:ND2	2.26	0.69
62:AZ:81:LEU:HD11	69:Ag:90:ILE:HG22	1.75	0.69
80:DC:203:TYR:O	80:DC:208:THR:OG1	2.11	0.69
34:B5:341:A:H2'	34:B5:342:C:C6	2.27	0.69
34:B5:409:C:H2'	34:B5:410:A:H8	1.58	0.69
38:A1:291:C:OP1	50:AN:68:ARG:NE	2.26	0.69
38:A1:1661:G:H2'	38:A1:1662:G:C8	2.28	0.69
38:A1:3291:G:H2'	38:A1:3292:A:C8	2.28	0.69
55:AS:12:ARG:HH12	55:AS:15:PRO:HD3	1.57	0.69
66:Ad:75:ILE:HG12	66:Ad:93:VAL:HG22	1.74	0.69
78:Ap:36:ARG:HD3	78:Ap:46:THR:HA	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BN:104:ARG:NH2	34:B5:950:C:O2'	2.26	0.69
23:BQ:135:ARG:NH1	34:B5:1583:A:OP1	2.26	0.69
34:B5:108:A:H2'	34:B5:109:G:H8	1.57	0.69
34:B5:1483:A:OP2	34:B5:1521:G:N2	2.22	0.69
35:AA:221:LYS:NZ	38:A1:2965:U:O2	2.26	0.69
36:AB:212:ASN:ND2	36:AB:352:GLU:O	2.26	0.69
38:A1:1493:G:N2	38:A1:1493:G:OP2	2.26	0.69
38:A1:3015:G:H2'	38:A1:3016:A:H8	1.57	0.69
50:AN:30:TYR:O	50:AN:65:ARG:NH2	2.23	0.69
50:AN:33:LYS:O	50:AN:65:ARG:NH2	2.23	0.69
6:BH:39:ARG:O	6:BH:42:GLN:NE2	2.26	0.68
11:BO:38:THR:HG21	34:B5:895:G:H21	1.56	0.68
15:BY:105:ARG:NH2	34:B5:458:G:OP2	2.26	0.68
21:BK:82:LEU:HD21	21:BK:87:VAL:HB	1.74	0.68
26:BT:68:ARG:NH2	34:B5:1481:C:OP1	2.22	0.68
32:Bf:78:LYS:NZ	34:B5:1271:G:OP1	2.20	0.68
36:AB:308:MET:HE2	38:A1:3329:U:H5''	1.74	0.68
71:Ai:68:ARG:HA	71:Ai:71:LYS:HD2	1.73	0.68
3:BC:170:ILE:HB	3:BC:197:TYR:HB2	1.75	0.68
7:BI:113:PHE:HE2	7:BI:119:GLN:HB2	1.58	0.68
14:BX:103:LEU:HB3	14:BX:126:LYS:HB2	1.75	0.68
22:BP:43:ARG:NH1	34:B5:1552:U:OP2	2.25	0.68
38:A1:1676:A:OP2	57:AU:72:SER:OG	2.11	0.68
38:A1:2444:C:H2'	38:A1:2445:A:C8	2.28	0.68
4:BE:246:LEU:HD13	4:BE:250:GLU:HB3	1.75	0.68
9:BL:85:VAL:HG22	9:BL:108:PRO:HB3	1.75	0.68
16:Ba:37:LYS:HE3	34:B5:1798:U:H3'	1.75	0.68
19:BD:209:ILE:O	24:BR:20:TYR:OH	2.10	0.68
34:B5:1471:A:N7	34:B5:1538:U:O4	2.26	0.68
34:B5:1665:U:O2	34:B5:1736:G:N2	2.24	0.68
38:A1:1628:C:O4'	38:A1:1814:A:N6	2.25	0.68
52:AP:122:ALA:HB3	52:AP:143:PRO:HB2	1.75	0.68
74:Al:25:GLN:HA	74:Al:28:ARG:HH21	1.58	0.68
9:BL:3:THR:HA	9:BL:52:SER:HB3	1.75	0.68
22:BP:114:HIS:HE1	22:BP:118:GLU:HG3	1.59	0.68
24:BR:27:ASP:OD1	31:Bg:38:ARG:NH2	2.26	0.68
26:BT:72:GLY:HA3	34:B5:1498:G:H5''	1.76	0.68
34:B5:1335:U:H3	34:B5:1416:G:H1	1.38	0.68
34:B5:1393:C:H2'	34:B5:1394:G:H8	1.59	0.68
34:B5:1443:U:H5''	34:B5:1444:A:H5'	1.76	0.68
36:AB:303:LYS:HD2	36:AB:361:THR:HG21	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:358:G:N2	38:A1:361:A:OP2	2.21	0.68
79:E:129:SER:OG	81:EC:6773:G:N3	2.25	0.68
20:BF:219:ARG:NH2	81:EC:6841:U:O2	2.27	0.68
26:BT:69:LYS:HG2	34:B5:1367:G:H5''	1.74	0.68
38:A1:769:G:O2'	48:AL:168:ARG:NH2	2.25	0.68
38:A1:1747:G:H21	73:AK:2:ALA:HB3	1.58	0.68
38:A1:2898:G:OP2	45:AH:173:ARG:NH2	2.26	0.68
45:AH:92:TYR:OH	45:AH:101:VAL:HG21	1.94	0.68
6:BH:114:ARG:HD3	6:BH:117:THR:HG21	1.76	0.68
9:BL:69:LYS:NZ	34:B5:111:U:O2'	2.23	0.68
14:BX:113:ALA:HB2	14:BX:121:ARG:HG3	1.76	0.68
19:BD:64:ARG:HH21	21:BK:91:TYR:HE1	1.42	0.68
27:BU:33:GLN:HE21	27:BU:109:GLU:HB2	1.58	0.68
38:A1:174:C:H2'	38:A1:175:C:C6	2.29	0.68
1:BA:190:ASP:OD1	1:BA:191:ARG:N	2.25	0.68
7:BI:67:TRP:NE1	7:BI:70:GLU:OE1	2.25	0.68
9:BL:16:GLN:NE2	9:BL:61:THR:O	2.25	0.68
13:BW:30:SER:HA	13:BW:34:ILE:HD11	1.76	0.68
19:BD:120:TYR:HA	19:BD:123:VAL:HG12	1.75	0.68
19:BD:135:GLU:HB3	19:BD:187:LYS:HB3	1.75	0.68
38:A1:159:A:H2'	38:A1:160:G:H8	1.58	0.68
38:A1:1139:G:OP2	64:Ab:14:ARG:NH2	2.24	0.68
38:A1:2383:C:OP2	51:AO:85[A]:ARG:NH2	2.27	0.68
38:A1:3068:U:OP2	54:AR:62:ARG:NH2	2.22	0.68
1:BA:49:ASN:HD21	1:BA:52:LYS:HG2	1.58	0.68
3:BC:199:GLN:NE2	34:B5:1097:U:O2	2.27	0.68
8:BJ:62:ARG:O	8:BJ:69:ARG:NH1	2.27	0.68
9:BL:37:ASN:O	34:B5:247:A:O2'	2.08	0.68
11:BO:84:ARG:HG3	11:BO:119:THR:HA	1.74	0.68
35:AA:2:GLY:HA2	35:AA:207:VAL:HG23	1.75	0.68
38:A1:627:U:H2'	38:A1:628:A:H8	1.57	0.68
38:A1:861:C:OP1	38:A1:2133:PSU:O2'	2.11	0.68
55:AS:12:ARG:HB3	55:AS:24:LEU:HA	1.74	0.68
79:E:66:CYS:HA	79:E:83:ASP:O	1.93	0.68
80:DC:733:ILE:HG22	80:DC:735:CYS:HB3	1.74	0.68
10:BN:37:ILE:HD11	10:BN:54:LEU:HD21	1.76	0.68
25:BS:44:ASN:OD1	25:BS:45:LEU:N	2.27	0.68
25:BS:55:HIS:CE1	34:B5:1532:U:H4'	2.28	0.68
34:B5:1180:C:H2'	34:B5:1181:PSU:C6	2.29	0.68
38:A1:190:U:H2'	61:AY:60:ARG:HH12	1.59	0.68
38:A1:2748:A:O2'	41:AD:48:LYS:NZ	2.25	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:Ad:13:THR:HB	66:Ad:72:ARG:HE	1.58	0.68
80:DC:251:ASN:ND2	80:DC:254:THR:OG1	2.27	0.68
81:EC:6789:G:N2	81:EC:6881:U:OP1	2.26	0.68
2:BB:27:LYS:HG2	2:BB:47:LEU:HB2	1.75	0.68
20:BF:220:VAL:O	81:EC:6840:A:N6	2.26	0.68
34:B5:1663:G:H1	34:B5:1738:U:H3	1.40	0.68
55:AS:34:GLU:HB2	55:AS:61:ILE:HD12	1.75	0.68
22:BP:60:LEU:HD13	22:BP:89:MET:HG3	1.75	0.67
26:BT:57:ARG:NH1	26:BT:101:ASN:OD1	2.26	0.67
34:B5:488:G:OP1	34:B5:492:A:O2'	2.10	0.67
34:B5:816:G:H2'	34:B5:817:A:H8	1.59	0.67
34:B5:1158:C:H5''	34:B5:1161:C:H41	1.59	0.67
34:B5:1335:U:O4	34:B5:1336:A:N6	2.27	0.67
38:A1:1602:A:N6	60:AX:70:GLU:OE2	2.27	0.67
71:AI:54:GLU:O	71:AI:58:ILE:N	2.25	0.67
6:BH:58:LEU:HD21	6:BH:90:VAL:HG12	1.74	0.67
28:BZ:39:ALA:HB3	28:BZ:71:ILE:HG12	1.76	0.67
29:Bc:11:LYS:HZ3	29:Bc:31:GLU:HG3	1.60	0.67
34:B5:1163:A:N3	34:B5:1613:U:O2'	2.26	0.67
34:B5:1561:U:H2'	34:B5:1562:G:H8	1.59	0.67
36:AB:152:LYS:NZ	36:AB:189:SER:O	2.26	0.67
38:A1:2816:G:N2	38:A1:2819:A:OP2	2.24	0.67
45:AH:128:VAL:HA	45:AH:157:ASN:HD21	1.59	0.67
51:AO:27[A]:LEU:O	51:AO:101[A]:ARG:NH1	2.28	0.67
19:BD:5:ILE:HD12	19:BD:9:ARG:HH22	1.60	0.67
29:Bc:42:ARG:NH1	29:Bc:61:ARG:O	2.27	0.67
34:B5:200:A:H2'	34:B5:201:G:C8	2.29	0.67
36:AB:348:ARG:HH22	38:A1:3038:U:P	2.16	0.67
38:A1:1010:G:H4'	46:AI:40:LYS:HD2	1.76	0.67
38:A1:3016:A:H2'	38:A1:3017:A:H8	1.59	0.67
4:BE:38:LEU:HD22	34:B5:298:C:H5''	1.76	0.67
20:BF:95:ASN:HA	20:BF:98:MET:HE3	1.76	0.67
34:B5:486:G:N2	34:B5:501:U:O2	2.19	0.67
34:B5:740:A:H5'	34:B5:741:C:H2'	1.77	0.67
34:B5:883:C:H42	34:B5:945:U:H3	1.42	0.67
34:B5:1000:C:N4	34:B5:1003:A:OP2	2.27	0.67
38:A1:394:G:N1	38:A1:397:A:OP2	2.23	0.67
38:A1:591:G:N2	38:A1:612:U:OP1	2.21	0.67
38:A1:1750:A:H5'	73:Ak:28:ASN:HD21	1.59	0.67
38:A1:2451:G:O2'	38:A1:2452:G:O4'	2.11	0.67
52:AP:22:LEU:HD12	52:AP:146:ILE:HD13	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6772:G:H1	81:EC:6820:C:H3'	1.60	0.67
81:EC:6929:C:H2'	81:EC:6930:G:H8	1.59	0.67
5:BG:137:ARG:HD2	5:BG:177:ARG:HH11	1.59	0.67
15:BY:33:ALA:HA	34:B5:533:U:H4'	1.76	0.67
30:Bd:40:ARG:HD3	34:B5:1199:G:C5	2.29	0.67
31:Bg:42:LEU:HB2	31:Bg:61:PHE:HB2	1.77	0.67
34:B5:891:A:H2'	34:B5:892:A:H8	1.60	0.67
34:B5:1179:G:N2	34:B5:1460:A:N1	2.43	0.67
36:AB:95:THR:HG22	36:AB:97:ARG:H	1.60	0.67
81:EC:6772:G:N1	81:EC:6821:U:OP2	2.27	0.67
81:EC:6853:G:C6	81:EC:6876:A:C2	2.83	0.67
9:BL:40:LEU:H	34:B5:246:G:H1'	1.59	0.67
14:BX:69:ARG:HG3	14:BX:117:ILE:HG22	1.75	0.67
27:BU:37:VAL:HG11	27:BU:112:VAL:HG11	1.75	0.67
34:B5:396:G:N2	34:B5:399:A:OP2	2.27	0.67
36:AB:53:MET:SD	38:A1:3047:U:O2'	2.53	0.67
36:AB:67:PHE:HA	36:AB:70:ARG:HD3	1.75	0.67
40:A4:156:U:OP2	44:AG:84:ARG:NH2	2.26	0.67
42:AE:66:SER:HB2	42:AE:76:LEU:HD13	1.77	0.67
43:AF:44:ILE:HD11	43:AF:179:LEU:HB2	1.76	0.67
25:BS:81:ILE:HG12	25:BS:86:LEU:HD11	1.77	0.67
37:AC:118:LYS:NZ	38:A1:681:U:O4	2.24	0.67
40:A4:135:G:OP2	60:AX:56:ARG:NH2	2.27	0.67
12:BV:2:GLU:HB3	12:BV:8:LEU:HG	1.76	0.67
32:Bf:121:CYS:HB2	32:Bf:130:VAL:HG11	1.76	0.67
35:AA:21:ARG:HD3	38:A1:824:C:H5''	1.74	0.67
38:A1:1448:U:OP1	52:AP:82:ARG:NH2	2.28	0.67
38:A1:2439:A:H2'	38:A1:2440:G:H8	1.60	0.67
81:EC:6853:G:O6	81:EC:6876:A:N1	2.28	0.67
18:Be:13:LYS:NZ	34:B5:563:U:O2'	2.27	0.67
61:AY:51:ARG:HG3	61:AY:52:ARG:H	1.58	0.67
81:EC:6808:G:N3	81:EC:6809:G:N1	2.42	0.67
3:BC:37:PRO:HB2	3:BC:43:ARG:HD3	1.77	0.66
11:BO:48:VAL:HG22	11:BO:50:ALA:H	1.59	0.66
14:BX:70:LYS:HZ3	18:Be:11:ALA:HB2	1.60	0.66
19:BD:49:ILE:HG22	19:BD:87:TYR:HB2	1.77	0.66
27:BU:48:HIS:CE1	27:BU:99:ILE:HG21	2.30	0.66
34:B5:830:U:H1'	34:B5:831:U:H5	1.60	0.66
34:B5:1588:G:H1	34:B5:1608:U:H3	0.76	0.66
38:A1:2106:A:H2'	38:A1:2107:A:H8	1.59	0.66
21:BK:8:ARG:HH12	34:B5:1257:U:H4'	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BZ:77:ARG:NH2	34:B5:1533:C:OP2	2.28	0.66
34:B5:115:G:H22	34:B5:302:PSU:H1'	1.58	0.66
38:A1:2837:A:H5''	46:AI:154:ARG:HH21	1.59	0.66
38:A1:3106:A:O3'	75:Am:114:LYS:NZ	2.29	0.66
8:BJ:148:VAL:HG13	8:BJ:152:SER:HB2	1.77	0.66
27:BU:87:HIS:ND1	34:B5:1383:G:OP1	2.28	0.66
38:A1:664:U:H2'	38:A1:665:A:C8	2.31	0.66
81:EC:6794:C:N4	81:EC:6940:U:O2'	2.25	0.66
1:BA:76:ILE:HD13	1:BA:98:ILE:HB	1.78	0.66
22:BP:77:ARG:NH2	34:B5:1242:A:OP2	2.28	0.66
31:Bg:236:ALA:HB2	31:Bg:263:PHE:HZ	1.60	0.66
34:B5:1245:G:N2	34:B5:1248:C:OP2	2.28	0.66
37:AC:73:ARG:NH1	38:A1:2814:G:OP1	2.28	0.66
38:A1:411:U:H2'	38:A1:412:G:H8	1.58	0.66
45:AH:26:LYS:NZ	45:AH:35:THR:OG1	2.29	0.66
59:AW:52:THR:HG22	59:AW:54:LEU:H	1.60	0.66
80:DC:738:GLN:HB2	80:DC:788:THR:HG22	1.78	0.66
5:BG:188:ARG:HH12	34:B5:284:G:H3'	1.61	0.66
22:BP:64:LYS:NZ	22:BP:88:GLU:O	2.29	0.66
32:Bf:114:VAL:HG11	33:BM:78:LEU:HD12	1.77	0.66
34:B5:923:A:H2'	34:B5:924:A:C8	2.30	0.66
35:AA:30:ARG:O	35:AA:163:ARG:NH2	2.28	0.66
38:A1:68:C:OP2	38:A1:301:G:N2	2.25	0.66
38:A1:760:G:O2'	38:A1:770:G:N2	2.26	0.66
4:BE:31:PRO:HG2	4:BE:38:LEU:HB2	1.76	0.66
4:BE:240:LYS:NZ	34:B5:786:C:OP1	2.27	0.66
33:BM:59:LEU:HB3	33:BM:137:MET:HE1	1.78	0.66
34:B5:1291:G:H1	34:B5:1324:G:H22	1.44	0.66
34:B5:1363:U:H1'	34:B5:1364:G:N7	2.11	0.66
38:A1:655:C:H2'	38:A1:656:A:C8	2.30	0.66
38:A1:938:C:HO2'	38:A1:2814:G:HO2'	1.44	0.66
38:A1:2357:A:H2'	38:A1:2358:A:C8	2.31	0.66
38:A1:2526:C:H2'	38:A1:2527:G:H8	1.61	0.66
56:AT:144:GLU:N	56:AT:144:GLU:OE2	2.28	0.66
2:BB:123:ALA:HB3	2:BB:139:ALA:HB3	1.76	0.66
2:BB:132:ASP:HB2	2:BB:221:PRO:HB3	1.76	0.66
2:BB:216:LYS:NZ	34:B5:885:G:OP1	2.28	0.66
32:Bf:83:LYS:NZ	34:B5:1211:A:OP2	2.23	0.66
34:B5:199:G:H2'	34:B5:200:A:C8	2.30	0.66
38:A1:571:U:H2'	38:A1:572:A:H8	1.59	0.66
40:A4:25:G:N7	61:AY:13:ARG:NH1	2.44	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AQ:153:PHE:O	53:AQ:161:LYS:NZ	2.25	0.66
11:BO:90:ARG:NH2	34:B5:902:G:OP1	2.28	0.66
26:BT:78:LYS:HZ3	34:B5:1523:G:H2'	1.58	0.66
30:Bd:39:CYS:N	30:Bd:42:CYS:SG	2.69	0.66
38:A1:2465:G:N1	38:A1:2491:A:N6	2.43	0.66
38:A1:2964:G:N2	38:A1:2967:A:OP2	2.23	0.66
38:A1:3154:C:O2'	38:A1:3157:U:O2	2.13	0.66
5:BG:159:ARG:HH21	5:BG:170:THR:HG23	1.61	0.66
8:BJ:31:ALA:HB2	8:BJ:42:ILE:HD11	1.78	0.66
27:BU:74:GLU:OE1	34:B5:1428:G:N2	2.24	0.66
34:B5:429:G:H2'	34:B5:430:G:H8	1.61	0.66
34:B5:1214:U:H4'	34:B5:1246:C:H4'	1.77	0.66
34:B5:1336:A:N6	34:B5:1415:PSU:HN3	1.94	0.66
38:A1:2533:G:H2'	38:A1:2534:G:H8	1.59	0.66
38:A1:2696:A:H2'	38:A1:2697:A:C8	2.31	0.66
48:AL:185:LYS:HG3	48:AL:188:ARG:HH21	1.61	0.66
80:DC:2:VAL:N	80:DC:44:GLY:O	2.28	0.66
80:DC:263:ASP:OD1	80:DC:267:LYS:N	2.28	0.66
81:EC:6936:G:H2'	81:EC:6937:G:H8	1.60	0.66
2:BB:58:SER:OG	2:BB:62:LYS:NZ	2.29	0.66
4:BE:18:TRP:HB3	4:BE:20:LEU:HG	1.78	0.66
17:Bb:29:ARG:NH2	34:B5:1049:U:O2'	2.28	0.66
31:Bg:156:VAL:HG22	31:Bg:169:ILE:HG22	1.77	0.66
38:A1:1234:G:H5'	38:A1:1235:U:H5'	1.77	0.66
38:A1:2115:G:O2'	54:AR:82:LYS:NZ	2.19	0.66
38:A1:3275:U:O2'	68:Af:99:ARG:NH1	2.29	0.66
62:AZ:41:ALA:HB2	62:AZ:77:TYR:HE2	1.61	0.66
80:DC:26:ALA:HB2	80:DC:128:VAL:HB	1.77	0.66
81:EC:6837:G:OP1	81:EC:6874:A:O2'	2.13	0.66
3:BC:55:GLU:OE2	3:BC:59:HIS:ND1	2.29	0.65
5:BG:3:LEU:HD23	5:BG:18:ILE:HG21	1.78	0.65
34:B5:1541:G:N2	34:B5:1570:A:N6	2.32	0.65
34:B5:1628:U:H2'	34:B5:1629:G:H8	1.60	0.65
34:B5:1669:U:H3	34:B5:1732:A:H62	1.44	0.65
36:AB:97:ARG:NH2	38:A1:3244:A:OP1	2.28	0.65
38:A1:831:G:O2'	38:A1:1864:A:N3	2.27	0.65
38:A1:1178:G:O6	68:Af:20:LYS:HG2	1.96	0.65
38:A1:1472:U:H2'	38:A1:1473:G:H8	1.61	0.65
38:A1:2510:U:H2'	38:A1:2511:A:H8	1.61	0.65
45:AH:9:GLN:HB3	45:AH:52:LEU:HD11	1.78	0.65
19:BD:68:GLU:HA	19:BD:71:LEU:HB2	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:315:LYS:NZ	38:A1:504:A:O2'	2.29	0.65
38:A1:2254:U:H2'	38:A1:2261:G:H22	1.59	0.65
38:A1:2871:G:H5''	38:A1:2872:A:H5''	1.78	0.65
39:A3:6:C:O2'	41:AD:50:ARG:NH2	2.29	0.65
70:Ah:31:LEU:HB3	70:Ah:44:ILE:HG22	1.77	0.65
8:BJ:151:ASP:O	8:BJ:154:LYS:NZ	2.27	0.65
22:BP:16:SER:OG	25:BS:93:THR:O	2.13	0.65
31:Bg:89:LEU:HB2	31:Bg:103:PHE:HB2	1.78	0.65
38:A1:1177:G:N7	68:Af:20:LYS:NZ	2.44	0.65
38:A1:2883:U:H3	38:A1:2939:G:H1	1.43	0.65
11:BO:64:ALA:HB3	11:BO:104:ALA:HB3	1.79	0.65
26:BT:71:VAL:HG13	26:BT:75:LYS:HB2	1.79	0.65
34:B5:477:A:H61	34:B5:539:G:N2	1.89	0.65
41:AD:132:THR:HG21	41:AD:170:GLY:HA2	1.79	0.65
46:AI:191:LYS:NZ	46:AI:215:GLU:OE1	2.21	0.65
80:DC:784:LEU:HG	80:DC:792:ALA:HB1	1.78	0.65
10:BN:46:THR:OG1	10:BN:90:TYR:OH	2.11	0.65
38:A1:1201:C:H42	38:A1:2857:C:H5''	1.61	0.65
38:A1:2526:C:H2'	38:A1:2527:G:C8	2.31	0.65
42:AE:67:GLY:HA3	42:AE:72:ASN:HD21	1.61	0.65
42:AE:139:LYS:HA	42:AE:139:LYS:HE3	1.77	0.65
71:AI:66:GLU:N	71:AI:66:GLU:OE1	2.29	0.65
81:EC:6878:G:H3'	81:EC:6879:U:C5'	2.27	0.65
5:BG:92:ARG:O	34:B5:405:C:O2'	2.15	0.65
14:BX:42:PRO:O	14:BX:79:ASN:ND2	2.30	0.65
14:BX:75:GLN:HE21	14:BX:80:GLY:HA2	1.61	0.65
34:B5:88:U:H2'	34:B5:89:G:H8	1.60	0.65
34:B5:1686:C:O2'	34:B5:1715:G:O6	2.14	0.65
47:AJ:110:ILE:HD13	47:AJ:122:ILE:HA	1.78	0.65
4:BE:3:ARG:HB3	34:B5:93:A:H1'	1.79	0.65
7:BI:38:ILE:HD13	7:BI:80:GLY:HA2	1.77	0.65
11:BO:40:ALA:HB2	11:BO:70:LYS:HZ2	1.61	0.65
31:Bg:112:SER:OG	31:Bg:155:ARG:NH2	2.29	0.65
38:A1:567:G:H2'	38:A1:568:G:C8	2.31	0.65
38:A1:597:G:H2'	38:A1:598:A:C8	2.32	0.65
12:BV:66:ASP:OD1	12:BV:67:ASP:N	2.29	0.65
27:BU:70:THR:HA	34:B5:1280:4AC:H4'	1.78	0.65
38:A1:63:A:N3	38:A1:78:U:O2'	2.28	0.65
38:A1:1009:A:O3'	46:AI:39:LYS:NZ	2.30	0.65
38:A1:3028:G:H4'	80:DC:28:VAL:HG21	1.77	0.65
39:A3:44:C:OP2	47:AJ:137:ARG:NH1	2.21	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:70:ILE:HG13	80:DC:71:LYS:HG2	1.78	0.65
1:BA:127:ARG:NH2	1:BA:150:ASP:OD1	2.28	0.65
25:BS:38:VAL:HG23	25:BS:42:TYR:HB3	1.77	0.65
38:A1:1119:C:H2'	38:A1:1120:A:H8	1.60	0.65
38:A1:1174:G:H21	51:AO:87[A]:MET:HE3	1.61	0.65
38:A1:1269:U:OP1	38:A1:1270:A:N6	2.30	0.65
80:DC:385:MET:HE1	80:DC:460:ASP:HA	1.79	0.65
80:DC:785:ARG:NH1	80:DC:792:ALA:O	2.30	0.65
81:EC:6836:U:OP1	81:EC:6847:G:N2	2.30	0.65
5:BG:94:ARG:NH2	34:B5:1673:G:OP1	2.30	0.65
20:BF:84:LYS:HD3	20:BF:92:ARG:NH2	2.12	0.65
31:Bg:34:LEU:HA	31:Bg:44:SER:HA	1.78	0.65
31:Bg:133:VAL:HG23	31:Bg:141:LEU:HB2	1.77	0.65
34:B5:699:U:O4	34:B5:741:C:N4	2.30	0.65
37:AC:139:GLY:O	37:AC:180:LYS:NZ	2.30	0.65
38:A1:2404:A:N7	38:A1:2872:A:N6	2.45	0.65
38:A1:2456:A:H4'	38:A1:2483:G:H4'	1.79	0.65
38:A1:2786:G:H5''	77:Ao:38:GLN:HB2	1.78	0.65
42:AE:50:LYS:NZ	42:AE:72:ASN:O	2.29	0.65
43:AF:108:LEU:HD21	43:AF:115:THR:HG22	1.78	0.65
79:E:3:LYS:HE3	79:E:217:TYR:HB3	1.78	0.65
81:EC:6852:U:H2'	81:EC:6853:G:C8	2.32	0.65
81:EC:6892:U:O2	81:EC:6938:A:O2'	2.14	0.65
5:BG:75:LEU:HD12	5:BG:76:LEU:H	1.62	0.64
7:BI:39:GLY:O	7:BI:59:ARG:HB3	1.97	0.64
10:BN:106:ARG:NH2	34:B5:1019:A:O3'	2.28	0.64
19:BD:42:THR:OG1	19:BD:45:LYS:O	2.15	0.64
23:BQ:139:GLN:NE2	34:B5:1465:C:OP1	2.29	0.64
34:B5:774:A:N6	34:B5:786:C:O2	2.29	0.64
55:AS:66:GLU:OE2	55:AS:66:GLU:N	2.26	0.64
63:Aa:104:THR:HG21	63:Aa:112:ILE:HD11	1.79	0.64
80:DC:149:GLU:OE1	80:DC:352:ARG:NH2	2.30	0.64
80:DC:406:LYS:HE2	80:DC:409:GLN:HG3	1.78	0.64
80:DC:636:PHE:O	80:DC:642:GLY:N	2.30	0.64
7:BI:184:LEU:HD23	7:BI:188:GLU:HG2	1.79	0.64
31:Bg:111:MET:N	31:Bg:125:GLY:O	2.29	0.64
34:B5:230:C:H2'	34:B5:235:G:H1	1.62	0.64
36:AB:28:ARG:NH2	38:A1:3140:G:N7	2.45	0.64
36:AB:216:ASP:OD2	36:AB:339:ARG:NH2	2.30	0.64
40:A4:88:A:O2'	40:A4:89:A:OP1	2.15	0.64
55:AS:9:VAL:HG13	55:AS:61:ILE:HG22	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:Ba:88:SER:HB2	16:Ba:91:ASP:HB2	1.78	0.64
34:B5:280:U:O2'	34:B5:281:G:N7	2.28	0.64
38:A1:1579:C:N4	38:A1:1581:C:O2	2.30	0.64
38:A1:2482:U:OP2	79:E:102:LYS:NZ	2.31	0.64
49:AM:20:VAL:HA	49:AM:34:ALA:HA	1.78	0.64
80:DC:76:SER:OG	80:DC:101:ASN:ND2	2.30	0.64
4:BE:48:LEU:HD11	4:BE:61:VAL:HG22	1.79	0.64
8:BJ:3:ARG:NH1	34:B5:40:A:OP1	2.27	0.64
11:BO:24:ASN:ND2	34:B5:903:U:OP2	2.29	0.64
18:Be:50:VAL:HG23	18:Be:54:ARG:HB3	1.80	0.64
21:BK:82:LEU:HD12	21:BK:83:PRO:HD2	1.80	0.64
38:A1:2223:A:OP2	71:Ai:67:LYS:NZ	2.26	0.64
42:AE:13:GLU:OE1	67:Ae:88:HIS:HA	1.97	0.64
79:E:14:LYS:HD2	79:E:17:LEU:HD21	1.79	0.64
6:BH:70:PHE:HE1	6:BH:77:LEU:HD13	1.63	0.64
15:BY:131:ARG:HH22	34:B5:153:G:H5'	1.63	0.64
25:BS:40:ARG:NH1	34:B5:1540:G:OP1	2.30	0.64
34:B5:1588:G:O6	34:B5:1608:U:O4	2.14	0.64
38:A1:949:C:O2'	38:A1:971:G:OP1	2.14	0.64
45:AH:22:SER:OG	45:AH:23:ARG:N	2.27	0.64
49:AM:112:LEU:HB2	49:AM:116:GLU:HG3	1.77	0.64
68:Af:16:TYR:OH	68:Af:89:LEU:O	2.15	0.64
81:EC:6929:C:H2'	81:EC:6930:G:C8	2.33	0.64
7:BI:81:VAL:HA	7:BI:102:VAL:HG22	1.79	0.64
10:BN:94:LYS:HD2	34:B5:952:A:H5''	1.78	0.64
32:Bf:97:LYS:NZ	34:B5:1230:A:OP1	2.27	0.64
38:A1:2305:G:N2	38:A1:2305:G:OP2	2.29	0.64
38:A1:3252:G:H2'	38:A1:3253:G:C8	2.33	0.64
41:AD:119:TYR:OH	41:AD:139:PRO:O	2.15	0.64
47:AJ:45:PRO:HB3	47:AJ:69:VAL:HB	1.80	0.64
77:Ao:3:ASN:ND2	77:Ao:95:GLY:O	2.31	0.64
2:BB:111:ARG:HB3	16:Ba:68:TYR:HB2	1.78	0.64
5:BG:188:ARG:O	5:BG:192:ALA:N	2.25	0.64
14:BX:90:ASP:OD1	14:BX:136:TRP:NE1	2.30	0.64
34:B5:1541:G:N1	34:B5:1568:C:O2'	2.31	0.64
38:A1:1083:G:H2'	38:A1:1084:A:C8	2.33	0.64
42:AE:108:LYS:HG2	42:AE:109:GLU:HG3	1.79	0.64
3:BC:177:GLY:N	3:BC:195:ASP:OD1	2.28	0.64
5:BG:57:ASP:HA	5:BG:106:LEU:HA	1.78	0.64
34:B5:108:A:H2'	34:B5:109:G:C8	2.32	0.64
37:AC:159:ILE:HG21	37:AC:165:ALA:HB2	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1114:U:OP1	63:Aa:23:GLY:N	2.30	0.64
38:A1:2854:U:OP2	46:AI:3:ARG:NH1	2.31	0.64
38:A1:3110:C:H2'	38:A1:3111:U:C6	2.33	0.64
40:A4:103:G:OP2	40:A4:105:A:O2'	2.15	0.64
41:AD:261:THR:OG1	41:AD:264:GLN:OE1	2.14	0.64
79:E:66:CYS:N	79:E:107:TYR:OH	2.23	0.64
4:BE:100:ARG:HH11	4:BE:236:ILE:HG23	1.62	0.64
23:BQ:127:LYS:NZ	34:B5:1605:G:OP2	2.26	0.64
38:A1:1497:C:H2'	38:A1:1498:A:H8	1.63	0.64
38:A1:2218:G:H2'	38:A1:2219:A:H8	1.63	0.64
38:A1:2515:A:N1	38:A1:2594:C:N4	2.43	0.64
42:AE:175:LYS:NZ	49:AM:110:ALA:O	2.30	0.64
81:EC:6790:A:N6	81:EC:6798:C:OP2	2.26	0.64
3:BC:157:LYS:HE2	34:B5:1098:U:H5''	1.78	0.64
15:BY:41:ARG:NH2	15:BY:52:LYS:O	2.30	0.64
22:BP:122:THR:HG21	34:B5:1454:G:H4'	1.79	0.64
26:BT:99:SER:N	34:B5:1504:G:OP1	2.20	0.64
34:B5:514:G:HO2'	34:B5:515:A:H8	1.46	0.64
34:B5:922:G:H2'	34:B5:923:A:C8	2.33	0.64
34:B5:947:U:H2'	34:B5:948:G:H8	1.62	0.64
38:A1:1214:U:OP2	55:AS:137:ARG:NH2	2.26	0.64
38:A1:3358:U:H2'	38:A1:3359:A:H8	1.63	0.64
4:BE:208:VAL:HG23	4:BE:222:LEU:HD21	1.80	0.63
12:BV:38:LYS:HB2	12:BV:49:GLU:HG3	1.79	0.63
31:Bg:67:ILE:HB	31:Bg:85:TRP:CD1	2.32	0.63
34:B5:498:G:O2'	34:B5:500:C:OP2	2.12	0.63
36:AB:11:HIS:NE2	38:A1:2881:C:OP1	2.31	0.63
38:A1:424:G:O2'	67:Ae:23:ASP:OD2	2.17	0.63
38:A1:584:G:H2'	38:A1:585:A:H8	1.62	0.63
38:A1:1729:A:C6	65:Ac:49:PRO:HD3	2.34	0.63
38:A1:2697:A:H2'	38:A1:2698:G:H8	1.63	0.63
80:DC:165:LEU:HD11	80:DC:289:MET:HG3	1.78	0.63
8:BJ:85:VAL:HA	8:BJ:107:ARG:HG3	1.79	0.63
13:BW:62:VAL:HG11	17:Bb:8:LEU:HD21	1.80	0.63
32:Bf:138:ARG:NH1	34:B5:1235:C:O2	2.30	0.63
34:B5:25:C:O2'	34:B5:366:A:O2'	2.16	0.63
38:A1:1460:A:H2'	38:A1:1461:A:C8	2.33	0.63
38:A1:2597:U:H2'	38:A1:2598:G:H8	1.63	0.63
65:Ac:50:VAL:HA	65:Ac:53:LYS:HE3	1.80	0.63
80:DC:295:GLU:HG3	80:DC:299:LEU:HD23	1.79	0.63
21:BK:59:PHE:CE2	21:BK:62:GLN:HA	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BR:88:VAL:HG22	24:BR:89:SER:H	1.61	0.63
26:BT:64:HIS:CE1	26:BT:79:LEU:HD21	2.33	0.63
34:B5:263:C:H4'	34:B5:292:U:H4'	1.80	0.63
34:B5:520:A:H2'	34:B5:521:A:C8	2.34	0.63
34:B5:922:G:H2'	34:B5:923:A:H8	1.63	0.63
34:B5:1564:U:H2'	34:B5:1565:C:C6	2.33	0.63
38:A1:3214:U:OP2	49:AM:128:ARG:NH1	2.20	0.63
54:AR:23:TRP:HB3	54:AR:51:VAL:HG22	1.79	0.63
7:BI:26:LYS:NZ	34:B5:399:A:O5'	2.32	0.63
45:AH:10:ILE:HB	45:AH:53:ILE:HB	1.80	0.63
45:AH:41:ILE:HG22	45:AH:43:VAL:HG13	1.78	0.63
46:AI:134:ILE:HD11	56:AT:160:ILE:HD11	1.79	0.63
48:AL:107:GLU:OE1	48:AL:107:GLU:N	2.31	0.63
3:BC:144:TRP:O	13:BW:97:ARG:NH2	2.27	0.63
3:BC:220:ASN:HA	12:BV:25:LYS:NZ	2.13	0.63
5:BG:183:ARG:NH2	34:B5:141:U:O2'	2.32	0.63
5:BG:185:GLN:HG3	5:BG:188:ARG:HH21	1.63	0.63
8:BJ:78:ARG:HH12	8:BJ:82:ARG:HD2	1.64	0.63
20:BF:109:LYS:NZ	34:B5:1528:U:OP1	2.26	0.63
23:BQ:114:ARG:NH1	34:B5:1411:A:OP1	2.26	0.63
34:B5:156:A:N6	34:B5:418:G:O6	2.30	0.63
34:B5:406:U:H2'	34:B5:407:A:H8	1.61	0.63
34:B5:1640:C:N4	81:EC:6952:U:OP1	2.32	0.63
36:AB:72:VAL:HG22	58:AV:88:ARG:HG3	1.79	0.63
38:A1:1139:G:O6	64:Ab:10:HIS:NE2	2.30	0.63
38:A1:1261:G:H5''	38:A1:1262:G:C8	2.33	0.63
38:A1:3206:C:N3	49:AM:13:ARG:NH2	2.42	0.63
17:Bb:21:LEU:HD12	17:Bb:26:GLN:HG2	1.80	0.63
19:BD:69:LEU:HG	19:BD:86:LEU:HD23	1.81	0.63
20:BF:22:PRO:HA	20:BF:34:GLN:HE22	1.64	0.63
31:Bg:169:ILE:HD11	31:Bg:181:TRP:HB2	1.79	0.63
38:A1:760:G:H1'	38:A1:771:A:N6	2.14	0.63
41:AD:146:LEU:HD22	41:AD:163:LEU:HD13	1.79	0.63
46:AI:102:MET:SD	46:AI:112:GLN:NE2	2.71	0.63
80:DC:428:ILE:O	80:DC:429:LYS:HD2	1.99	0.63
80:DC:694:HIS:O	80:DC:700:ARG:NH1	2.32	0.63
4:BE:200:ARG:HD2	4:BE:201:HIS:N	2.13	0.63
8:BJ:38:ASN:HD21	34:B5:593:U:H3'	1.63	0.63
34:B5:1268:G:H2'	34:B5:1270:G:H8	1.64	0.63
37:AC:107:ARG:NH2	38:A1:1429:G:OP2	2.30	0.63
38:A1:1084:A:H2'	38:A1:1085:A:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1696:A:H2'	38:A1:1697:A:C8	2.33	0.63
38:A1:2406:C:H2'	38:A1:2407:C:C6	2.34	0.63
38:A1:2663:G:O3'	41:AD:152:ARG:NH2	2.32	0.63
59:AW:42:GLN:HG3	59:AW:44:LYS:HG2	1.80	0.63
67:Ae:34:LYS:HG3	67:Ae:36:LYS:HG2	1.80	0.63
4:BE:90:ILE:HB	4:BE:99:PHE:HB2	1.81	0.63
4:BE:221:ARG:HD3	4:BE:223:ASN:H	1.63	0.63
4:BE:246:LEU:HD11	4:BE:251:GLU:HB3	1.81	0.63
10:BN:4:MET:HE1	34:B5:966:A:H5''	1.79	0.63
28:BZ:59:TYR:HB3	81:EC:6863:C:C4	2.33	0.63
28:BZ:68:ARG:HA	81:EC:6868:C:H1'	1.79	0.63
37:AC:196:ASN:ND2	61:AY:11:ASP:HA	2.14	0.63
38:A1:1307:G:H4'	38:A1:1308:A:H5'	1.81	0.63
38:A1:1534:A:OP2	38:A1:1586:G:N1	2.23	0.63
38:A1:2406:C:H2'	38:A1:2407:C:H6	1.64	0.63
38:A1:3268:A:OP2	52:AP:181:ARG:NH2	2.31	0.63
38:A1:3277:U:OP2	52:AP:175:ARG:NH1	2.31	0.63
47:AJ:79:ILE:HG13	47:AJ:82:ARG:HH21	1.63	0.63
54:AR:24:LEU:HD12	54:AR:32:ILE:HD13	1.79	0.63
80:DC:165:LEU:HD21	80:DC:289:MET:SD	2.39	0.63
81:EC:6915:G:H2'	81:EC:6916:A:C8	2.34	0.63
38:A1:2836:C:H5	38:A1:2852:C:H42	1.47	0.63
39:A3:37:G:N2	39:A3:41:G:N3	2.46	0.63
40:A4:75:G:OP2	61:AY:74:TYR:OH	2.13	0.63
52:AP:107:LEU:HB3	52:AP:152:GLU:OE1	1.99	0.63
61:AY:55:GLU:HB3	61:AY:108:LYS:HB3	1.80	0.63
6:BH:101:LYS:HD2	34:B5:639:U:H5'	1.79	0.62
24:BR:79:GLU:HA	24:BR:82:ASP:HB2	1.81	0.62
38:A1:91:G:OP2	38:A1:93:C:N4	2.30	0.62
38:A1:120:G:N2	44:AG:127:PRO:O	2.32	0.62
40:A4:103:G:OP1	40:A4:110:C:N4	2.33	0.62
41:AD:54:ARG:NH1	41:AD:148:ILE:O	2.32	0.62
2:BB:150:VAL:HG22	34:B5:1067:C:H5''	1.79	0.62
5:BG:173:PRO:HA	34:B5:66:U:H5'	1.81	0.62
5:BG:193:LEU:HD22	5:BG:196:ARG:HH12	1.64	0.62
28:BZ:48:ASP:OD2	28:BZ:49:ARG:N	2.31	0.62
34:B5:103:A:O3'	34:B5:308:C:N4	2.31	0.62
38:A1:1779:C:N4	38:A1:2102:U:OP1	2.32	0.62
38:A1:2697:A:H2'	38:A1:2698:G:C8	2.33	0.62
57:AU:20:SER:O	57:AU:23:THR:OG1	2.16	0.62
80:DC:338:ILE:HG23	80:DC:342:LEU:HD12	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:567:VAL:HG12	80:DC:722:PRO:HA	1.81	0.62
80:DC:685:ARG:NH1	80:DC:687:ASN:HD21	1.97	0.62
5:BG:154:ARG:NH1	34:B5:78:A:OP2	2.32	0.62
7:BI:182:TYR:OH	7:BI:188:GLU:OE2	2.11	0.62
9:BL:65:SER:OG	34:B5:114:C:O2'	2.12	0.62
26:BT:14:PHE:HZ	26:BT:132:LEU:HD22	1.64	0.62
33:BM:59:LEU:HG	33:BM:123:VAL:HG22	1.81	0.62
34:B5:872:G:H2'	34:B5:873:U:O4'	1.99	0.62
35:AA:220:GLY:O	38:A1:2245:C:O2'	2.17	0.62
38:A1:1671:C:OP1	54:AR:60:LYS:NZ	2.27	0.62
38:A1:2635:A:N6	38:A1:2642:A:OP2	2.28	0.62
50:AN:121:VAL:HG11	50:AN:131:GLU:HG3	1.81	0.62
81:EC:6853:G:C6	81:EC:6876:A:N1	2.67	0.62
15:BY:42:GLU:HB2	15:BY:43:LYS:NZ	2.15	0.62
34:B5:208:U:H2'	34:B5:209:U:C6	2.34	0.62
34:B5:1152:A:H2'	34:B5:1153:G:C8	2.35	0.62
34:B5:1213:G:H1'	34:B5:1242:A:H61	1.63	0.62
34:B5:1458:G:O2'	34:B5:1459:C:OP1	2.14	0.62
34:B5:1474:G:H2'	34:B5:1475:A:C8	2.34	0.62
38:A1:182:U:O4	38:A1:234:G:O6	2.17	0.62
38:A1:2700:G:O2'	38:A1:2705:A:N1	2.31	0.62
61:AY:58:VAL:HG22	61:AY:104:LEU:HD22	1.80	0.62
81:EC:6863:C:H2'	81:EC:6864:A:C5	2.33	0.62
4:BE:54:TYR:O	15:BY:20:ARG:NH2	2.32	0.62
8:BJ:37:LYS:NZ	34:B5:476:U:O4	2.33	0.62
18:Be:10:ARG:HH22	34:B5:566:C:H4'	1.64	0.62
34:B5:1171:A:H2'	34:B5:1172:G:C8	2.30	0.62
38:A1:310:U:H3	38:A1:2779:A:N6	1.97	0.62
38:A1:3015:G:H2'	38:A1:3016:A:C8	2.33	0.62
43:AF:77:VAL:HG12	55:AS:59:VAL:HA	1.80	0.62
55:AS:34:GLU:OE2	55:AS:34:GLU:N	2.24	0.62
1:BA:70:PRO:HB2	1:BA:94:GLY:H	1.65	0.62
3:BC:147:ASN:ND2	12:BV:2:GLU:O	2.18	0.62
5:BG:31:ARG:NH1	34:B5:1681:A:O3'	2.31	0.62
13:BW:31:SER:HB3	34:B5:636:A:H5''	1.82	0.62
23:BQ:130:GLY:N	34:B5:1604:U:OP1	2.32	0.62
34:B5:328:A:H2'	34:B5:329:G:C8	2.34	0.62
34:B5:1441:C:O2'	34:B5:1447:C:N4	2.30	0.62
38:A1:21:G:H1	40:A4:138:A:H61	1.47	0.62
38:A1:1084:A:H5''	56:AT:35:LYS:HE3	1.80	0.62
38:A1:2504:U:HO2'	38:A1:2505:U:H6	1.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3288:G:O2'	38:A1:3289:G:O5'	2.16	0.62
38:A1:3322:A:H2'	38:A1:3323:A:C8	2.34	0.62
45:AH:90:MET:HE3	45:AH:146:LEU:HD12	1.81	0.62
46:AI:191:LYS:HG2	46:AI:213:PHE:CE1	2.33	0.62
80:DC:27:HIS:O	80:DC:32:LYS:NZ	2.32	0.62
81:EC:6853:G:H1	81:EC:6875:C:H42	1.44	0.62
7:BI:85:PRO:O	9:BL:11:ARG:NE	2.23	0.62
29:Bc:12:VAL:HB	29:Bc:52:ASP:H	1.63	0.62
34:B5:865:A:H2'	34:B5:866:G:O4'	1.99	0.62
34:B5:1109:G:H1	34:B5:1136:U:H3	1.46	0.62
34:B5:1234:A:OP2	34:B5:1245:G:O2'	2.17	0.62
38:A1:138:U:H2'	38:A1:139:G:H8	1.65	0.62
38:A1:512:U:H3	38:A1:579:G:H1	1.48	0.62
47:AJ:16:LYS:HG2	47:AJ:130:VAL:HB	1.81	0.62
51:AO:12[A]:LYS:HD2	51:AO:37[A]:ARG:HH22	1.63	0.62
9:BL:20:PHE:CD1	34:B5:211:PSU:H4'	2.35	0.62
19:BD:74:GLN:HG3	19:BD:81:PRO:HG3	1.81	0.62
20:BF:92:ARG:NH2	34:B5:1613:U:OP2	2.33	0.62
28:BZ:75:LEU:HA	28:BZ:78:ILE:HB	1.82	0.62
30:Bd:15:GLY:H	30:Bd:19:ARG:HH21	1.47	0.62
31:Bg:159:ASN:ND2	31:Bg:166:SER:O	2.33	0.62
38:A1:733:G:N2	38:A1:736:A:OP2	2.23	0.62
38:A1:2486:A:H1'	38:A1:2487:U:H5'	1.81	0.62
38:A1:2735:PSU:H4'	56:AT:51:GLY:HA2	1.80	0.62
38:A1:3006:A:H2'	38:A1:3007:U:O4'	2.00	0.62
39:A3:4:U:H2'	39:A3:5:G:H8	1.64	0.62
43:AF:163:LEU:HA	43:AF:168:ILE:HD11	1.80	0.62
45:AH:92:TYR:CD2	45:AH:142:ASP:HB2	2.33	0.62
80:DC:22:MET:HA	80:DC:122:THR:HB	1.80	0.62
2:BB:139:ALA:HB2	2:BB:172:LEU:HD11	1.82	0.62
3:BC:230:TRP:CE2	13:BW:68:ARG:HD2	2.35	0.62
5:BG:177:ARG:NE	34:B5:142:G:OP2	2.30	0.62
33:BM:29:LYS:HD2	33:BM:32:LEU:HD11	1.81	0.62
38:A1:538:G:N2	38:A1:553:U:O2	2.24	0.62
38:A1:786:A:H4'	38:A1:787:G:H5'	1.81	0.62
62:AZ:103:GLN:HE22	62:AZ:105:SER:HB2	1.64	0.62
80:DC:14:ASP:HA	80:DC:449:PRO:HG3	1.81	0.62
3:BC:53:ILE:HG13	3:BC:72:LEU:HB3	1.82	0.62
3:BC:116:LYS:NZ	3:BC:117:THR:O	2.30	0.62
4:BE:222:LEU:HD13	4:BE:225:VAL:HG21	1.82	0.62
8:BJ:20:GLU:HB2	8:BJ:23:ARG:HB3	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BZ:53:GLU:O	28:BZ:56:THR:OG1	2.15	0.62
34:B5:1229:G:H1	34:B5:1255:G:HO2'	1.48	0.62
35:AA:83:HIS:CE1	35:AA:86:GLN:HB2	2.35	0.62
37:AC:54:GLU:OE1	37:AC:54:GLU:N	2.31	0.62
38:A1:26:A:N3	38:A1:328:U:O2'	2.33	0.62
80:DC:539:GLU:HA	80:DC:542:LEU:HB2	1.82	0.62
80:DC:730:LEU:HB2	80:DC:799:ASP:HB2	1.81	0.62
81:EC:6836:U:H4'	81:EC:6873:A:C8	2.34	0.62
12:BV:74:GLN:HG3	12:BV:83:TRP:HB3	1.82	0.61
16:Ba:90:GLU:OE2	16:Ba:90:GLU:N	2.27	0.61
31:Bg:38:ARG:HD2	31:Bg:67:ILE:HG13	1.81	0.61
37:AC:288:ARG:HH11	37:AC:288:ARG:HA	1.64	0.61
39:A3:97:A:OP1	55:AS:40:ARG:NH2	2.33	0.61
40:A4:69:U:H2'	40:A4:70:G:O4'	2.00	0.61
44:AG:172:LYS:HD3	71:Ai:39:PHE:HE1	1.65	0.61
47:AJ:49:LYS:HB3	47:AJ:62:ASN:HA	1.81	0.61
69:Ag:41:ARG:HD3	69:Ag:50:ALA:HB1	1.80	0.61
1:BA:27:ARG:NH2	1:BA:43:ASP:O	2.33	0.61
4:BE:108:ARG:NH2	34:B5:788:A:N7	2.48	0.61
13:BW:107:SER:HA	34:B5:804:A:C8	2.34	0.61
27:BU:82:TYR:HB3	30:Bd:52:PHE:HB3	1.81	0.61
33:BM:46:ARG:NH1	34:B5:1255:G:O6	2.32	0.61
34:B5:912:U:O2	34:B5:914:G:N1	2.33	0.61
38:A1:124:U:O4	38:A1:145:G:N2	2.33	0.61
38:A1:627:U:H2'	38:A1:628:A:C8	2.34	0.61
51:AO:14[A]:HIS:CD2	51:AO:19[A]:LEU:HD13	2.35	0.61
55:AS:1:MET:HA	55:AS:32:SER:HB2	1.82	0.61
2:BB:23:PRO:HA	2:BB:26:ARG:HE	1.65	0.61
2:BB:126:THR:OG1	2:BB:136:ARG:NH1	2.33	0.61
14:BX:93:LEU:HA	14:BX:96:VAL:HG12	1.83	0.61
22:BP:97:TYR:OH	34:B5:1211:A:N3	2.32	0.61
22:BP:118:GLU:O	25:BS:122:HIS:N	2.33	0.61
23:BQ:114:ARG:HH22	34:B5:1411:A:P	2.23	0.61
34:B5:1352:G:O6	34:B5:1373:C:N4	2.27	0.61
38:A1:1062:A:O2'	38:A1:1098:A:OP1	2.17	0.61
38:A1:2745:G:N2	38:A1:2748:A:OP2	2.24	0.61
38:A1:3119:U:H4'	75:Am:104:PRO:HG3	1.82	0.61
48:AL:79:GLU:HG3	48:AL:103:ASN:HD21	1.65	0.61
55:AS:12:ARG:HH21	56:AT:141:VAL:HG22	1.65	0.61
80:DC:634:TRP:HZ3	80:DC:663:VAL:HB	1.66	0.61
34:B5:851:U:H4'	34:B5:852:C:H5'	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1755:A:O2'	38:A1:2256:A:N6	2.33	0.61
38:A1:528:U:H2'	38:A1:529:A:C8	2.36	0.61
38:A1:1174:G:N2	51:AO:87[A]:MET:HE3	2.16	0.61
38:A1:2722:U:O2'	56:AT:88:ARG:O	2.14	0.61
63:Aa:95:SER:OG	63:Aa:98:THR:O	2.18	0.61
66:Ad:48:ASP:HB3	66:Ad:87:ASN:HD21	1.65	0.61
80:DC:386:VAL:O	80:DC:394:PHE:HB3	2.00	0.61
3:BC:150:GLN:OE1	3:BC:150:GLN:N	2.32	0.61
7:BI:89:GLU:OE2	38:A1:2106:A:O2'	2.19	0.61
10:BN:55:ARG:NH1	34:B5:958:U:O2'	2.34	0.61
33:BM:41:LEU:HD12	33:BM:123:VAL:HG12	1.82	0.61
33:BM:58:LEU:HD22	33:BM:126:TRP:HZ3	1.64	0.61
34:B5:1442:U:H2'	34:B5:1443:U:C2	2.36	0.61
35:AA:156:LYS:HZ3	38:A1:2158:A:P	2.24	0.61
35:AA:201:GLY:HA2	35:AA:204:MET:SD	2.40	0.61
38:A1:950:G:N1	38:A1:1368:U:OP2	2.26	0.61
38:A1:1174:G:H21	51:AO:87[A]:MET:CE	2.13	0.61
38:A1:3008:A:OP2	51:AO:74[A]:ARG:NH1	2.33	0.61
50:AN:42:PRO:HG3	50:AN:61:ILE:HG13	1.83	0.61
56:AT:92:ARG:HB3	56:AT:94:GLU:OE1	2.00	0.61
80:DC:543:GLN:O	80:DC:547:HIS:ND1	2.27	0.61
1:BA:81:PHE:HA	1:BA:167:LYS:HZ2	1.64	0.61
3:BC:226:THR:H	3:BC:229:LEU:HD12	1.65	0.61
8:BJ:79:ARG:NH1	34:B5:762:A:OP1	2.22	0.61
20:BF:98:MET:HE1	20:BF:107:LYS:HG2	1.82	0.61
34:B5:1478:G:H2'	34:B5:1479:A:H8	1.66	0.61
38:A1:2413:A:H2'	38:A1:2414:G:H8	1.64	0.61
38:A1:2895:G:O2'	75:Am:100:TYR:O	2.18	0.61
39:A3:40:C:O2	47:AJ:72:ARG:NE	2.28	0.61
43:AF:110:ARG:HB3	53:AQ:3:ILE:HG22	1.82	0.61
45:AH:112:ILE:HG23	45:AH:126:VAL:HB	1.83	0.61
49:AM:98:SER:HA	49:AM:101:LYS:HD3	1.82	0.61
55:AS:77:VAL:HG22	55:AS:126:VAL:HG23	1.82	0.61
55:AS:132:THR:HG22	55:AS:133:ALA:H	1.65	0.61
1:BA:101:ARG:HG3	1:BA:103:THR:H	1.66	0.61
11:BO:51:ASP:HB3	34:B5:906:A:OP1	2.00	0.61
22:BP:57:MET:HB3	22:BP:61:ARG:HH21	1.64	0.61
27:BU:25:THR:HA	27:BU:90:TYR:HA	1.82	0.61
31:Bg:199:ILE:HA	31:Bg:215:GLY:HA2	1.81	0.61
34:B5:146:U:H2'	34:B5:147:A:H8	1.66	0.61
34:B5:263:C:H2'	34:B5:264:G:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:891:A:H2'	34:B5:892:A:C8	2.36	0.61
38:A1:98:G:N7	48:AL:13:HIS:NE2	2.48	0.61
38:A1:153:U:H4'	38:A1:158:G:H4'	1.82	0.61
38:A1:207:U:H2'	38:A1:208:C:H6	1.65	0.61
38:A1:985:U:H2'	38:A1:986:PSU:H6	1.65	0.61
38:A1:1084:A:OP1	56:AT:35:LYS:NZ	2.29	0.61
38:A1:1472:U:H2'	38:A1:1473:G:C8	2.35	0.61
40:A4:4:C:H2'	40:A4:5:U:C6	2.36	0.61
44:AG:93:LEU:HD21	44:AG:214:LEU:HD22	1.81	0.61
62:AZ:23:VAL:HG12	62:AZ:45:GLY:HA3	1.82	0.61
7:BI:59:ARG:NH2	34:B5:1678:A:OP2	2.27	0.61
31:Bg:38:ARG:HA	31:Bg:67:ILE:HG23	1.83	0.61
34:B5:751:G:H2'	34:B5:752:A:C8	2.36	0.61
36:AB:220:VAL:O	36:AB:334:ARG:NH1	2.33	0.61
40:A4:8:C:H2'	40:A4:9:A:C8	2.32	0.61
44:AG:61:GLN:HA	44:AG:64:ILE:HG12	1.83	0.61
46:AI:87:LEU:HB3	46:AI:138:VAL:HG12	1.82	0.61
61:AY:116:LYS:HG2	61:AY:126:LEU:HD11	1.82	0.61
62:AZ:42:LEU:HD21	62:AZ:96:VAL:HG22	1.83	0.61
23:BQ:100:GLN:HE21	31:Bg:57:PRO:HG2	1.65	0.61
24:BR:110:VAL:HG22	24:BR:117:LEU:HD12	1.83	0.61
32:Bf:93:HIS:HB3	34:B5:1247:U:H5''	1.83	0.61
36:AB:85:VAL:HG22	36:AB:202:THR:HG22	1.82	0.61
38:A1:1247:U:H3	38:A1:1267:U:H6	1.48	0.61
45:AH:44:THR:HG21	49:AM:12:TRP:HH2	1.64	0.61
46:AI:156:ARG:HG3	46:AI:163:GLN:HB2	1.83	0.61
80:DC:638:PRO:HG2	80:DC:680:GLU:OE2	2.00	0.61
8:BJ:41:GLU:HG3	8:BJ:44:ARG:HH22	1.66	0.61
23:BQ:34:SER:HB3	26:BT:7:ARG:HH22	1.66	0.61
38:A1:158:G:H2'	38:A1:159:A:H8	1.66	0.61
38:A1:2615:G:H2'	38:A1:2616:C:H6	1.65	0.61
45:AH:120:ASP:OD2	45:AH:124:ARG:NH2	2.32	0.61
46:AI:99:ILE:HB	46:AI:123:HIS:HB2	1.82	0.61
77:Ao:15:LYS:HA	77:Ao:18:ARG:HH21	1.63	0.61
79:E:87:VAL:HG13	79:E:90:LEU:HD12	1.83	0.61
80:DC:182:VAL:HG21	80:DC:204:PRO:HG3	1.82	0.61
12:BV:14:PRO:HG2	12:BV:23:ILE:HD11	1.83	0.60
23:BQ:99:GLU:O	23:BQ:103:ASN:ND2	2.34	0.60
28:BZ:67:ASP:O	81:EC:6868:C:O2'	2.19	0.60
34:B5:148:A:N6	34:B5:166:C:O2	2.34	0.60
34:B5:987:G:H1	35:AA:247:ARG:HG2	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1535:U:H4'	34:B5:1536:G:C2	2.36	0.60
35:AA:204:MET:HG2	38:A1:914:A:C2	2.36	0.60
38:A1:591:G:O2'	42:AE:17:ALA:O	2.18	0.60
38:A1:1220:U:H5'	38:A1:1222:G:H1'	1.83	0.60
38:A1:3213:A:N7	49:AM:124:ARG:NH2	2.49	0.60
43:AF:121:LYS:HB2	56:AT:133:ALA:HB3	1.82	0.60
62:AZ:95:VAL:HG11	62:AZ:113:VAL:HG11	1.83	0.60
2:BB:28:GLU:OE1	2:BB:94:LYS:NZ	2.34	0.60
34:B5:329:G:H2'	34:B5:330:G:H8	1.64	0.60
34:B5:950:C:H2'	34:B5:951:A:C8	2.36	0.60
36:AB:180:GLU:OE2	38:A1:3002:C:O2'	2.19	0.60
38:A1:8:C:H2'	38:A1:9:U:C6	2.36	0.60
38:A1:1130:A:H61	46:AI:115:MET:HE2	1.66	0.60
40:A4:52:A:H62	74:AI:27:ILE:HD13	1.66	0.60
40:A4:142:C:H2'	40:A4:143:U:C6	2.36	0.60
61:AY:17:LYS:O	61:AY:21:THR:OG1	2.19	0.60
81:EC:6786:A:H1'	81:EC:6811:G:N1	2.15	0.60
81:EC:6923:C:H2'	81:EC:6924:G:H8	1.65	0.60
1:BA:85:ALA:O	1:BA:89:PHE:N	2.34	0.60
4:BE:127:LYS:N	4:BE:140:VAL:O	2.22	0.60
5:BG:39:GLU:HG3	5:BG:46:LYS:HD3	1.84	0.60
19:BD:76:ARG:HH12	21:BK:24:LYS:NZ	1.99	0.60
19:BD:166:ASP:O	19:BD:190:ARG:NH2	2.34	0.60
22:BP:114:HIS:CE1	22:BP:118:GLU:HG3	2.36	0.60
26:BT:47:PRO:HA	34:B5:1477:G:H4'	1.83	0.60
34:B5:104:A:H4'	34:B5:105:A:H5'	1.83	0.60
38:A1:157:A:C8	71:AI:26:ILE:HG13	2.35	0.60
46:AI:70:ILE:HG13	46:AI:74:LYS:HE2	1.83	0.60
47:AJ:19:LEU:HB3	47:AJ:125:MET:HE2	1.83	0.60
48:AL:8:PRO:HG2	48:AL:10:LEU:HD11	1.82	0.60
80:DC:429:LYS:HA	80:DC:429:LYS:HE3	1.83	0.60
3:BC:142:GLY:N	3:BC:153:SER:O	2.33	0.60
6:BH:97:ARG:HH21	34:B5:694:U:H1'	1.66	0.60
28:BZ:67:ASP:OD2	81:EC:6868:C:O2'	2.16	0.60
34:B5:388:G:H2'	34:B5:389:G:C8	2.36	0.60
34:B5:1055:U:O2	34:B5:1064:G:O6	2.19	0.60
35:AA:150:LEU:HD11	35:AA:156:LYS:HD2	1.81	0.60
38:A1:1411:C:H2'	38:A1:1412:G:H8	1.66	0.60
38:A1:1783:U:H2'	38:A1:1784:G:C8	2.36	0.60
38:A1:1899:G:O2'	38:A1:2334:U:O4	2.16	0.60
42:AE:172:HIS:HE1	68:Af:35:VAL:HG22	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:149:GLU:O	80:DC:355:GLN:NE2	2.25	0.60
81:EC:6943:A:O3'	81:EC:6944:U:H4'	2.00	0.60
81:EC:6950:C:H2'	81:EC:6951:C:C6	2.36	0.60
2:BB:88:VAL:HA	2:BB:98:THR:HG22	1.83	0.60
4:BE:87:MET:HE3	4:BE:123:LEU:H	1.67	0.60
11:BO:28:VAL:HG11	11:BO:64:ALA:HA	1.83	0.60
19:BD:80:ALA:O	19:BD:83:THR:OG1	2.20	0.60
20:BF:72:HIS:HB2	20:BF:111:VAL:HG11	1.82	0.60
27:BU:48:HIS:ND1	27:BU:50:LEU:HD21	2.16	0.60
27:BU:50:LEU:HD22	27:BU:94:GLU:O	2.00	0.60
34:B5:37:U:O2'	34:B5:770:A:N1	2.31	0.60
35:AA:186:PHE:HD2	35:AA:187:HIS:HD2	1.48	0.60
38:A1:518:G:OP2	38:A1:518:G:N2	2.27	0.60
38:A1:819:U:H2'	38:A1:820:A:H8	1.66	0.60
38:A1:1251:A:H5''	38:A1:1252:A:H4'	1.84	0.60
38:A1:1306:G:N2	38:A1:1307:G:N7	2.49	0.60
38:A1:1597:C:H2'	38:A1:1598:G:C8	2.37	0.60
38:A1:3183:A:H2'	38:A1:3184:A:H8	1.66	0.60
40:A4:9:A:H2'	40:A4:10:A:C8	2.36	0.60
40:A4:37:A:OP1	70:Ah:89:ARG:NH2	2.33	0.60
52:AP:126:ARG:HA	52:AP:140:GLU:HG3	1.82	0.60
62:AZ:22:LYS:NZ	62:AZ:129:TRP:O	2.30	0.60
34:B5:277:U:O2'	34:B5:279:G:N2	2.35	0.60
35:AA:67:TYR:OH	38:A1:2525:G:N7	2.27	0.60
36:AB:87:VAL:HG11	36:AB:163:HIS:HD2	1.66	0.60
38:A1:1916:U:O3'	54:AR:85:ARG:NH2	2.34	0.60
38:A1:2894:C:H5'	45:AH:168:ARG:NH2	2.17	0.60
42:AE:34:LEU:HD23	42:AE:63:LEU:HD21	1.83	0.60
62:AZ:121:ARG:HD3	62:AZ:127:ASN:HD22	1.66	0.60
69:Ag:11:ASN:OD1	69:Ag:18:ASN:ND2	2.35	0.60
3:BC:160:GLY:HA3	3:BC:217:ALA:HB2	1.83	0.60
5:BG:55:GLY:HA3	5:BG:109:LEU:HA	1.84	0.60
34:B5:205:U:O2'	34:B5:263:C:O2	2.17	0.60
38:A1:3165:A:H3'	38:A1:3166:C:H5''	1.84	0.60
39:A3:4:U:H2'	39:A3:5:G:C8	2.37	0.60
60:AX:105:VAL:HG11	60:AX:135:ILE:HD12	1.82	0.60
62:AZ:3:LYS:NZ	62:AZ:30:ASP:OD2	2.35	0.60
62:AZ:34:LYS:HA	62:AZ:34:LYS:HE3	1.83	0.60
78:Ap:24:ARG:NE	78:Ap:25:GLN:OE1	2.32	0.60
79:E:77:ALA:HB3	79:E:84:ALA:HB2	1.83	0.60
3:BC:161:LYS:NZ	34:B5:1086:A:OP2	2.29	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BG:85:ARG:NE	34:B5:161:U:OP2	2.35	0.60
8:BJ:84:GLY:O	8:BJ:107:ARG:NE	2.33	0.60
17:Bb:55:THR:HG23	17:Bb:61:THR:H	1.65	0.60
20:BF:124:LEU:HA	28:BZ:58:ARG:HH21	1.67	0.60
23:BQ:34:SER:HB2	23:BQ:38:LEU:HD12	1.82	0.60
27:BU:23:ARG:NH2	34:B5:1347:U:OP1	2.30	0.60
38:A1:799:G:O2'	48:AL:18:TRP:NE1	2.30	0.60
38:A1:860:G:H5'	38:A1:861:C:H5''	1.83	0.60
47:AJ:158:ASP:OD2	47:AJ:159:THR:N	2.34	0.60
61:AY:119:ILE:HG22	61:AY:124:GLY:HA3	1.84	0.60
80:DC:18:ASN:HD21	80:DC:94:ASP:H	1.50	0.60
16:Ba:15:ARG:NH2	34:B5:936:G:N7	2.50	0.60
26:BT:18:TYR:HD1	26:BT:135:ILE:HG13	1.67	0.60
27:BU:21:LYS:HG2	27:BU:120:SER:HA	1.82	0.60
28:BZ:65:LEU:O	28:BZ:69:LEU:HB3	2.00	0.60
34:B5:250:C:H2'	34:B5:251:A:H8	1.67	0.60
35:AA:206:PRO:HG3	35:AA:213:GLY:HA3	1.82	0.60
38:A1:1095:U:N3	56:AT:127:GLN:OE1	2.29	0.60
38:A1:1717:U:H2'	38:A1:1718:G:C8	2.36	0.60
46:AI:149:ILE:HD11	46:AI:167:LEU:HD21	1.83	0.60
47:AJ:99:THR:O	47:AJ:154:THR:OG1	2.19	0.60
52:AP:61:ARG:O	52:AP:64:ASN:ND2	2.35	0.60
80:DC:308:LYS:N	80:DC:311:GLU:OE2	2.35	0.60
80:DC:387:PRO:HA	80:DC:394:PHE:CG	2.37	0.60
81:EC:6828:G:H2'	81:EC:6829:A:H8	1.67	0.60
2:BB:161:ILE:HA	2:BB:164:ILE:HG22	1.84	0.60
4:BE:239:PRO:O	4:BE:242:LYS:NZ	2.35	0.60
29:Bc:29:ARG:HD3	29:Bc:30:VAL:N	2.17	0.60
30:Bd:21:CYS:SG	30:Bd:22:ARG:N	2.74	0.60
34:B5:862:A:N1	34:B5:963:A:O2'	2.35	0.60
80:DC:105:SER:HB2	80:DC:115:VAL:HG23	1.83	0.60
80:DC:126:LEU:HD12	80:DC:154:VAL:HG13	1.83	0.60
81:EC:6857:C:O2'	81:EC:6871:A:N1	2.35	0.60
7:BI:79:ALA:H	7:BI:104:ILE:HA	1.67	0.59
14:BX:107:PHE:HA	14:BX:123:LYS:HG2	1.83	0.59
24:BR:11:ARG:NH1	34:B5:1325:A:OP2	2.35	0.59
30:Bd:10:HIS:O	30:Bd:12:ARG:NH1	2.35	0.59
37:AC:115:HIS:N	38:A1:681:U:OP1	2.31	0.59
47:AJ:82:ARG:NH1	47:AJ:82:ARG:O	2.35	0.59
80:DC:629:ASP:HA	80:DC:632:LYS:HD3	1.84	0.59
8:BJ:6:ARG:NH1	34:B5:38:C:O3'	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:BJ:39:LYS:HA	8:BJ:42:ILE:HD12	1.84	0.59
22:BP:45:PHE:HD1	22:BP:49:MET:HG2	1.67	0.59
34:B5:520:A:H2'	34:B5:521:A:H8	1.67	0.59
34:B5:534:A:H3'	34:B5:535:A:H8	1.67	0.59
34:B5:692:C:OP1	34:B5:696:C:N4	2.33	0.59
35:AA:14:SER:OG	38:A1:911:C:OP1	2.13	0.59
35:AA:64:ARG:NH2	44:AG:37:GLY:O	2.35	0.59
38:A1:270:U:H2'	38:A1:271:C:H6	1.67	0.59
38:A1:3163:A:N6	38:A1:3288:G:O6	2.35	0.59
38:A1:3225:C:H2'	38:A1:3226:A:C8	2.37	0.59
40:A4:141:C:O3'	50:AN:62:TYR:OH	2.20	0.59
61:AY:54:ASP:HB2	61:AY:70:ILE:HD12	1.83	0.59
81:EC:6828:G:H2'	81:EC:6829:A:C8	2.36	0.59
5:BG:161:GLU:HG3	5:BG:170:THR:HB	1.83	0.59
17:Bb:51:GLN:OE1	34:B5:957:G:N2	2.35	0.59
34:B5:234:G:N2	34:B5:833:U:O2'	2.36	0.59
34:B5:924:A:H2'	34:B5:925:G:C8	2.36	0.59
34:B5:929:A:OP2	34:B5:931:C:N4	2.35	0.59
34:B5:1058:U:H3	34:B5:1061:A:H2'	1.67	0.59
34:B5:1367:G:N1	34:B5:1368:G:O6	2.34	0.59
38:A1:4:U:H2'	38:A1:5:G:H8	1.66	0.59
38:A1:534:U:H4'	55:AS:146:LYS:HE3	1.82	0.59
38:A1:999:G:H1'	38:A1:1002:A:H62	1.67	0.59
38:A1:1556:C:O2'	38:A1:2169:G:N2	2.35	0.59
38:A1:1635:G:N2	38:A1:1638:A:OP2	2.31	0.59
38:A1:2465:G:C6	38:A1:2491:A:N6	2.70	0.59
42:AE:51:ARG:O	42:AE:72:ASN:ND2	2.35	0.59
46:AI:30:LYS:HE2	46:AI:63:GLU:HG3	1.84	0.59
1:BA:30:GLN:HG3	1:BA:32:HIS:H	1.67	0.59
6:BH:23:ALA:HB1	6:BH:84:LYS:HD2	1.85	0.59
23:BQ:32:ASN:HD21	23:BQ:69:VAL:HG12	1.67	0.59
34:B5:925:G:H2'	34:B5:926:A:C8	2.37	0.59
34:B5:1477:G:H2'	34:B5:1478:G:H8	1.68	0.59
37:AC:240:PRO:HB2	38:A1:1383:G:H4'	1.85	0.59
38:A1:616:G:H2'	38:A1:617:G:H8	1.68	0.59
38:A1:900:G:H1'	38:A1:1589:A:N6	2.17	0.59
47:AJ:94:ARG:HD3	47:AJ:95:ASN:H	1.65	0.59
65:Ac:9:SER:OG	65:Ac:12:GLN:NE2	2.35	0.59
81:EC:6764:C:H2'	81:EC:6765:A:C8	2.37	0.59
8:BJ:123:HIS:CD2	18:Be:37:ARG:HE	2.21	0.59
12:BV:84:SER:O	12:BV:87:ARG:NH2	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:BW:78:ARG:HH12	13:BW:124:LYS:HD2	1.67	0.59
14:BX:54:LEU:HD12	14:BX:82:LYS:HE3	1.83	0.59
27:BU:45:ALA:HB1	27:BU:50:LEU:HD12	1.85	0.59
30:Bd:15:GLY:N	30:Bd:19:ARG:HH21	1.99	0.59
30:Bd:47:ALA:HB1	30:Bd:52:PHE:HB2	1.83	0.59
34:B5:73:U:H3	34:B5:76:A:H5'	1.67	0.59
38:A1:411:U:H2'	38:A1:412:G:C8	2.36	0.59
38:A1:1150:A:N6	38:A1:2369:G:O2'	2.35	0.59
38:A1:2094:C:H2'	38:A1:2095:G:C8	2.37	0.59
38:A1:2468:A:O2'	38:A1:2477:G:N2	2.32	0.59
45:AH:50:ASN:ND2	49:AM:4:ASP:OD1	2.35	0.59
61:AY:109:LEU:HD22	61:AY:115:ARG:HH21	1.67	0.59
8:BJ:59:LEU:HG	8:BJ:69:ARG:HG3	1.85	0.59
25:BS:41:ARG:NH1	34:B5:1564:U:O3'	2.36	0.59
31:Bg:33:LEU:HB3	31:Bg:45:TRP:HB2	1.84	0.59
38:A1:1010:G:H22	38:A1:1040:A:H2	1.51	0.59
38:A1:1110:PSU:H2'	38:A1:1111:U:C6	2.38	0.59
38:A1:2111:G:O2'	59:AW:44:LYS:NZ	2.34	0.59
47:AJ:102:PHE:O	47:AJ:129:VAL:N	2.36	0.59
51:AO:22[A]:VAL:HG11	51:AO:120[A]:VAL:HG11	1.82	0.59
58:AV:10:LYS:HD3	58:AV:125:LEU:HD11	1.84	0.59
4:BE:11:ARG:NH1	4:BE:21:ASP:O	2.32	0.59
7:BI:61:GLU:O	7:BI:78:ILE:HG12	2.01	0.59
22:BP:11:VAL:HG22	22:BP:12:PHE:H	1.66	0.59
34:B5:39:A:O2'	34:B5:469:C:N4	2.36	0.59
34:B5:183:U:H2'	34:B5:184:C:C6	2.38	0.59
34:B5:270:C:H2'	34:B5:271:A:C8	2.38	0.59
34:B5:553:G:N2	34:B5:571:G:N7	2.49	0.59
34:B5:1467:C:H2'	34:B5:1468:U:C6	2.36	0.59
36:AB:110:LEU:O	36:AB:115:LYS:NZ	2.35	0.59
38:A1:65:A:OP1	50:AN:176:LYS:NZ	2.36	0.59
38:A1:3322:A:H2'	38:A1:3323:A:H8	1.66	0.59
40:A4:51:G:O6	74:Al:30:ARG:NH2	2.35	0.59
50:AN:192:LYS:O	50:AN:196:THR:HG23	2.02	0.59
54:AR:27:ASN:OD1	54:AR:28:GLU:N	2.36	0.59
78:Ap:79:VAL:O	78:Ap:83:ILE:HG12	2.03	0.59
80:DC:364:ALA:HA	80:DC:367:ILE:HG12	1.85	0.59
5:BG:23:ARG:NH1	5:BG:41:VAL:O	2.36	0.59
6:BH:44:LYS:HD2	6:BH:63:PRO:HB3	1.85	0.59
14:BX:70:LYS:NZ	34:B5:568:G:OP2	2.31	0.59
19:BD:31:GLU:OE2	19:BD:31:GLU:N	2.34	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Bf:92:LYS:HE3	34:B5:1214:U:H5''	1.84	0.59
38:A1:266:A:OP1	50:AN:5:LYS:NZ	2.35	0.59
38:A1:671:U:H2'	38:A1:672:A:H8	1.68	0.59
38:A1:984:G:N2	38:A1:1138:U:OP1	2.35	0.59
38:A1:1336:U:H2'	38:A1:1337:A:C8	2.34	0.59
38:A1:2261:G:O2'	38:A1:2263:C:N4	2.35	0.59
38:A1:2533:G:H2'	38:A1:2534:G:C8	2.38	0.59
38:A1:2895:G:H5''	75:Am:102:ARG:HH21	1.68	0.59
38:A1:3108:G:N3	45:AH:163:GLN:NE2	2.51	0.59
38:A1:3343:G:O2'	38:A1:3362:A:N6	2.33	0.59
81:EC:6923:C:H2'	81:EC:6924:G:C8	2.38	0.59
29:Bc:13:ILE:HB	29:Bc:29:ARG:HG3	1.84	0.59
35:AA:57:PRO:HG2	35:AA:78:ALA:HB3	1.85	0.59
38:A1:764:U:O2'	38:A1:766:U:OP2	2.21	0.59
38:A1:1234:G:H4'	38:A1:1236:G:H22	1.68	0.59
38:A1:1264:G:N2	38:A1:1277:C:O2	2.36	0.59
38:A1:2482:U:H2'	38:A1:2483:G:C8	2.38	0.59
38:A1:2506:U:O2'	38:A1:2507:C:OP1	2.21	0.59
69:Ag:22:VAL:HG12	69:Ag:30:LEU:HD11	1.85	0.59
80:DC:747:LEU:O	80:DC:752:GLY:N	2.34	0.59
80:DC:823:ARG:O	80:DC:827:GLY:N	2.33	0.59
5:BG:76:LEU:HD21	5:BG:92:ARG:HD3	1.85	0.59
9:BL:46:LYS:HA	9:BL:49:ILE:HG12	1.84	0.59
34:B5:850:A:O4'	54:AR:170:ARG:NH2	2.36	0.59
34:B5:1582:U:C2	34:B5:1614:A:H2	2.21	0.59
38:A1:109:A:N1	38:A1:322:U:O2'	2.29	0.59
38:A1:584:G:H2'	38:A1:585:A:C8	2.37	0.59
38:A1:691:A:N1	40:A4:28:C:O2'	2.36	0.59
38:A1:1106:G:H4'	64:Ab:25:LYS:HE3	1.84	0.59
38:A1:2651:G:O2'	38:A1:2796:G:O6	2.21	0.59
38:A1:2843:U:OP2	38:A1:2844:C:N4	2.28	0.59
39:A3:7:G:H5''	41:AD:22:ARG:HD3	1.85	0.59
49:AM:20:VAL:O	49:AM:66:THR:OG1	2.12	0.59
55:AS:132:THR:HG23	55:AS:144:LEU:HD23	1.85	0.59
78:Ap:28:LYS:HG3	78:Ap:29:LEU:HD12	1.84	0.59
78:Ap:36:ARG:NH1	78:Ap:36:ARG:HB2	2.18	0.59
4:BE:198:LYS:HG3	4:BE:208:VAL:HG22	1.84	0.58
8:BJ:13:SER:OG	34:B5:1:U:O4	2.20	0.58
12:BV:2:GLU:HA	12:BV:8:LEU:HA	1.85	0.58
12:BV:71:ARG:HD3	17:Bb:4:VAL:HG21	1.85	0.58
27:BU:121:ASN:ND2	34:B5:1347:U:OP2	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:156:VAL:HA	31:Bg:169:ILE:HA	1.85	0.58
33:BM:113:ARG:NH2	34:B5:1224:A:OP2	2.36	0.58
34:B5:222:A:H2'	34:B5:224:C:H4'	1.84	0.58
34:B5:609:U:H4'	34:B5:610:G:H5'	1.83	0.58
38:A1:207:U:H2'	38:A1:208:C:C6	2.38	0.58
38:A1:541:U:H2'	38:A1:542:G:H8	1.68	0.58
38:A1:1404:G:N2	38:A1:1407:A:OP2	2.33	0.58
41:AD:196:ARG:HA	41:AD:199:ILE:HD12	1.84	0.58
58:AV:82:ALA:HA	58:AV:95:PHE:H	1.67	0.58
58:AV:103:ALA:HA	58:AV:109:MET:HA	1.85	0.58
80:DC:634:TRP:NE1	80:DC:648:ASP:OD2	2.35	0.58
80:DC:747:LEU:HD21	80:DC:754:VAL:HG23	1.83	0.58
80:DC:749:LYS:HG3	80:DC:750:LYS:HG2	1.83	0.58
7:BI:54:LYS:NZ	34:B5:333:A:OP2	2.19	0.58
10:BN:29:SER:N	10:BN:32:SER:OG	2.36	0.58
16:Ba:12:LYS:HE2	16:Ba:16:GLY:H	1.67	0.58
22:BP:75:PRO:HA	22:BP:93:VAL:HG13	1.85	0.58
35:AA:126:LEU:HD13	35:AA:150:LEU:HD21	1.85	0.58
38:A1:1950:U:H2'	38:A1:1951:C:C6	2.37	0.58
38:A1:3333:G:N2	38:A1:3369:G:O2'	2.36	0.58
80:DC:571:SER:HB2	80:DC:719:LEU:HB2	1.85	0.58
2:BB:140:ILE:HB	2:BB:213:ARG:HD2	1.86	0.58
7:BI:16:ALA:HB2	34:B5:354:C:H5''	1.86	0.58
7:BI:32:GLN:NE2	34:B5:1727:G:H21	2.01	0.58
15:BY:57:VAL:N	15:BY:94:TYR:OH	2.35	0.58
20:BF:219:ARG:HA	20:BF:222:LYS:HB2	1.85	0.58
22:BP:37:ALA:O	22:BP:42:ARG:NH1	2.36	0.58
34:B5:372:G:N2	34:B5:612:U:O4	2.19	0.58
34:B5:925:G:H2'	34:B5:926:A:H8	1.67	0.58
34:B5:1440:C:H2'	34:B5:1441:C:C6	2.38	0.58
36:AB:286:GLY:HA3	36:AB:321:PHE:CE1	2.38	0.58
37:AC:197:ARG:NH2	38:A1:339:C:OP2	2.36	0.58
38:A1:8:C:H2'	38:A1:9:U:H6	1.69	0.58
38:A1:337:G:H1	40:A4:26:U:H3	1.50	0.58
38:A1:1666:G:H2'	38:A1:1667:A:H8	1.67	0.58
38:A1:2458:A:N6	38:A1:2478:C:OP2	2.36	0.58
65:Ac:16:LEU:HB3	65:Ac:98:SER:HB2	1.84	0.58
66:Ad:15:ASN:OD1	66:Ad:70:ARG:NH1	2.37	0.58
74:Al:5:LYS:HE2	74:Al:13:MET:HE1	1.84	0.58
80:DC:222:ILE:HD13	80:DC:245:TRP:HE1	1.67	0.58
4:BE:87:MET:O	4:BE:122:LYS:NZ	2.35	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BI:83:TYR:HB2	7:BI:196:LEU:HD13	1.86	0.58
9:BL:113:PRO:O	9:BL:116:ARG:NH2	2.36	0.58
11:BO:135:ARG:NE	34:B5:1008:G:OP1	2.31	0.58
14:BX:3:LYS:HG3	14:BX:7:ARG:HH21	1.67	0.58
14:BX:73:ARG:HE	14:BX:84:THR:HB	1.68	0.58
20:BF:63:GLN:HE22	20:BF:66:GLN:H	1.52	0.58
27:BU:79:TRP:CE3	34:B5:1604:U:H4'	2.38	0.58
31:Bg:244:ALA:HB1	31:Bg:294:TRP:CD1	2.38	0.58
34:B5:36:C:H2'	34:B5:37:U:C6	2.38	0.58
34:B5:617:U:H2'	34:B5:618:U:C6	2.38	0.58
38:A1:286:U:O2'	50:AN:179:LYS:O	2.22	0.58
38:A1:990:PSU:H1'	56:AT:101:CYS:HB3	1.84	0.58
38:A1:2828:G:H4'	46:AI:4:ARG:HH11	1.67	0.58
38:A1:3305:A:O2'	38:A1:3310:A:N1	2.36	0.58
41:AD:15:ARG:HG2	56:AT:19:PHE:HZ	1.69	0.58
44:AG:161:GLU:N	44:AG:161:GLU:OE2	2.37	0.58
47:AJ:10:ARG:HG2	47:AJ:133:ARG:HH11	1.68	0.58
3:BC:229:LEU:O	12:BV:16:LYS:NZ	2.36	0.58
4:BE:75:LYS:HD2	4:BE:77:ARG:NH2	2.19	0.58
6:BH:67:LEU:O	6:BH:71:HIS:N	2.36	0.58
8:BJ:17:ARG:NH2	34:B5:3:U:O2'	2.36	0.58
19:BD:73:VAL:HG11	19:BD:84:ILE:HG12	1.84	0.58
23:BQ:75:VAL:CG1	34:B5:1609:U:H5''	2.34	0.58
34:B5:92:A:OP2	34:B5:398:G:N1	2.36	0.58
34:B5:411:C:H2'	34:B5:412:A:O4'	2.03	0.58
34:B5:956:C:N4	34:B5:957:G:O6	2.37	0.58
38:A1:36:C:H4'	38:A1:808:A:H2	1.68	0.58
38:A1:2261:G:H21	38:A1:2262:A:H62	1.50	0.58
40:A4:4:C:H2'	40:A4:5:U:H6	1.69	0.58
80:DC:147:LEU:HD21	80:DC:153:PRO:HG3	1.84	0.58
81:EC:6859:U:H3	81:EC:6871:A:N6	2.01	0.58
3:BC:230:TRP:CD2	13:BW:68:ARG:HD2	2.39	0.58
5:BG:136:LYS:HE2	5:BG:174:LYS:O	2.03	0.58
8:BJ:17:ARG:HH22	34:B5:4:C:H1'	1.69	0.58
8:BJ:119:ALA:O	8:BJ:124:HIS:ND1	2.36	0.58
31:Bg:19:TRP:HB2	31:Bg:38:ARG:HG3	1.86	0.58
31:Bg:90:ARG:HH12	31:Bg:102:ARG:HD2	1.68	0.58
34:B5:1396:U:O4	34:B5:1402:G:O6	2.21	0.58
34:B5:1429:G:H2'	34:B5:1430:U:C6	2.38	0.58
38:A1:529:A:H2'	38:A1:530:G:C8	2.38	0.58
38:A1:1378:U:H2'	38:A1:1379:G:H8	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1766:G:H2'	38:A1:1767:C:H6	1.67	0.58
38:A1:2923:PSU:H2'	38:A1:2924:U:H6	1.69	0.58
40:A4:147:U:H4'	60:AX:38:LEU:HD13	1.85	0.58
47:AJ:81:GLU:HA	47:AJ:167:TYR:HE1	1.68	0.58
54:AR:148:ASP:OD1	54:AR:149:ALA:N	2.37	0.58
3:BC:56:ILE:HG23	3:BC:61:LEU:HB2	1.85	0.58
5:BG:219:ARG:HH22	34:B5:239:C:H41	1.49	0.58
22:BP:60:LEU:HB3	22:BP:64:LYS:HE3	1.85	0.58
33:BM:31:VAL:HG13	33:BM:126:TRP:NE1	2.18	0.58
34:B5:331:A:H2'	34:B5:332:U:C6	2.39	0.58
34:B5:751:G:H2'	34:B5:752:A:H8	1.68	0.58
34:B5:903:U:O2'	34:B5:905:A:N7	2.33	0.58
34:B5:1672:G:H2'	34:B5:1673:G:C8	2.39	0.58
35:AA:62:VAL:HG11	35:AA:71:LEU:HD12	1.84	0.58
36:AB:48:GLY:HA3	36:AB:81:THR:HG22	1.86	0.58
38:A1:1411:C:OP1	67:Ae:98:HIS:ND1	2.34	0.58
38:A1:2221:G:N2	38:A1:2224:A:OP2	2.31	0.58
38:A1:3160:U:H3	38:A1:3290:G:H1	1.52	0.58
39:A3:47:C:OP1	41:AD:95:TRP:N	2.35	0.58
80:DC:114:GLU:HG3	80:DC:384:LYS:HZ2	1.69	0.58
7:BI:41:LYS:HB2	7:BI:61:GLU:OE1	2.02	0.58
8:BJ:48:GLN:O	8:BJ:52:ILE:HG12	2.04	0.58
19:BD:61:GLU:O	19:BD:62:ASN:ND2	2.36	0.58
31:Bg:19:TRP:N	31:Bg:38:ARG:HB2	2.19	0.58
31:Bg:33:LEU:O	31:Bg:45:TRP:N	2.35	0.58
34:B5:890:C:H2'	34:B5:891:A:H8	1.68	0.58
34:B5:1785:U:H2'	34:B5:1786:G:H8	1.69	0.58
35:AA:4:VAL:HG13	35:AA:8:GLN:HB2	1.86	0.58
38:A1:1765:U:OP1	54:AR:39:ASN:ND2	2.29	0.58
39:A3:84:A:H2'	39:A3:85:G:C8	2.39	0.58
40:A4:5:U:OP2	52:AP:62:ARG:NH1	2.36	0.58
52:AP:49:GLU:HA	52:AP:52:LEU:HD13	1.85	0.58
1:BA:76:ILE:HG21	1:BA:129:ASP:OD2	2.03	0.58
1:BA:77:SER:HB2	1:BA:86:VAL:HG21	1.85	0.58
7:BI:138:ASN:HD21	34:B5:187:G:H3'	1.68	0.58
11:BO:89:THR:HG22	11:BO:125:SER:HB2	1.86	0.58
20:BF:225:ARG:NH2	29:Bc:61:ARG:HE	2.02	0.58
22:BP:17:TYR:HB3	22:BP:25:LEU:HD21	1.84	0.58
24:BR:49:LYS:HG2	34:B5:1389:C:H4'	1.86	0.58
31:Bg:287:PRO:HB2	31:Bg:305:TYR:CE2	2.39	0.58
34:B5:464:A:H2'	34:B5:465:G:H8	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1483:A:H2	34:B5:1607:G:H1'	1.69	0.58
36:AB:108:GLU:HB2	36:AB:137:TYR:CE2	2.39	0.58
38:A1:748:U:H2'	38:A1:749:C:C6	2.38	0.58
38:A1:806:A:N3	38:A1:2812:C:O2'	2.32	0.58
38:A1:1119:C:H2'	38:A1:1120:A:C8	2.39	0.58
38:A1:1376:C:HO2'	38:A1:1408:G:HO2'	1.50	0.58
38:A1:1404:G:OP2	67:Ae:11:LYS:NZ	2.33	0.58
42:AE:92:SER:OG	42:AE:94:GLU:OE1	2.18	0.58
81:EC:6937:G:N2	81:EC:6938:A:O4'	2.37	0.58
1:BA:10:THR:OG1	1:BA:13:ASP:OD2	2.21	0.58
1:BA:176:LEU:O	1:BA:179:ARG:N	2.33	0.58
10:BN:75:LEU:HD12	10:BN:80:LEU:HB2	1.84	0.58
34:B5:1439:C:C4	34:B5:1440:C:N4	2.72	0.58
34:B5:1550:A:H3'	34:B5:1551:U:H6	1.69	0.58
36:AB:2:SER:N	38:A1:2940:A:OP2	2.37	0.58
38:A1:443:G:H5''	38:A1:491:A:H62	1.67	0.58
38:A1:1427:U:OP2	63:Aa:4:ARG:NH1	2.25	0.58
38:A1:2282:U:OP1	38:A1:2973:G:O2'	2.22	0.58
38:A1:2437:G:O2'	38:A1:2438:A:OP1	2.21	0.58
38:A1:2724:U:OP2	38:A1:2726:C:N4	2.37	0.58
38:A1:3170:A:H1'	38:A1:3171:U:H5'	1.86	0.58
41:AD:120:LYS:O	41:AD:248:ARG:NH2	2.28	0.58
60:AX:66:PRO:HD2	70:Ah:33:VAL:HG12	1.86	0.58
62:AZ:48:ARG:HE	62:AZ:69:LYS:HD2	1.68	0.58
2:BB:158:SER:HB3	34:B5:875:G:OP1	2.03	0.57
4:BE:42:LEU:N	4:BE:84:ALA:O	2.37	0.57
10:BN:17:PRO:HG3	17:Bb:28:PRO:HG2	1.86	0.57
11:BO:53:ASP:HA	11:BO:56:SER:HB3	1.84	0.57
14:BX:144:ARG:HB2	80:DC:464:LEU:HD13	1.86	0.57
34:B5:472:U:O2'	34:B5:769:A:N3	2.33	0.57
34:B5:1441:C:H2'	34:B5:1442:U:C6	2.38	0.57
34:B5:1478:G:H2'	34:B5:1479:A:C8	2.38	0.57
34:B5:1505:A:N3	34:B5:1550:A:H1'	2.19	0.57
38:A1:175:C:H2'	38:A1:176:G:C8	2.38	0.57
38:A1:1061:A:H4'	56:AT:102:ARG:HH21	1.68	0.57
38:A1:1108:U:H2'	38:A1:1109:U:C6	2.39	0.57
38:A1:2586:G:C6	44:AG:241:LYS:HB2	2.39	0.57
38:A1:3068:U:OP2	54:AR:59:SER:OG	2.21	0.57
41:AD:295:GLY:O	41:AD:297:GLN:NE2	2.33	0.57
45:AH:83:THR:HG23	45:AH:84:LYS:HG3	1.85	0.57
47:AJ:109:HIS:HA	47:AJ:112:LEU:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:AR:122:VAL:O	54:AR:126:GLU:HG3	2.04	0.57
5:BG:5:ILE:HB	5:BG:113:ILE:HD11	1.85	0.57
19:BD:156:PHE:HE1	34:B5:1327:C:H5''	1.69	0.57
34:B5:1611:A:H2'	34:B5:1612:U:H6	1.69	0.57
38:A1:53:G:OP1	72:Aj:48:ASN:N	2.30	0.57
38:A1:1807:G:O2'	38:A1:2559:U:O4	2.21	0.57
47:AJ:32:ARG:HH21	47:AJ:121:GLY:HA3	1.69	0.57
67:Ae:94:ALA:HB3	67:Ae:119:VAL:HG22	1.85	0.57
80:DC:727:PRO:HA	80:DC:801:TRP:HA	1.85	0.57
24:BR:61:ILE:HD11	24:BR:71:PHE:HE2	1.70	0.57
31:Bg:242:SER:HB3	31:Bg:292:LEU:HG	1.86	0.57
31:Bg:303:ALA:HB3	31:Bg:313:TRP:CZ3	2.40	0.57
32:Bf:87:THR:O	34:B5:1445:G:N2	2.37	0.57
34:B5:1484:G:H2'	34:B5:1485:C:C6	2.39	0.57
38:A1:307:A:H2'	38:A1:308:A:H8	1.68	0.57
38:A1:937:G:H5''	63:Aa:29:PRO:HA	1.87	0.57
38:A1:1055:A:N3	39:A3:81:U:O2'	2.36	0.57
48:AL:46:ILE:HD11	48:AL:51:LEU:HA	1.86	0.57
80:DC:694:HIS:ND1	80:DC:696:ASP:OD1	2.38	0.57
81:EC:6956:A:H2'	81:EC:6957:A:C4	2.39	0.57
1:BA:49:ASN:ND2	1:BA:52:LYS:HG2	2.19	0.57
6:BH:154:LEU:HD11	6:BH:183:PHE:HD2	1.69	0.57
7:BI:60:ILE:HD11	7:BI:96:LEU:HG	1.87	0.57
8:BJ:52:ILE:HB	8:BJ:76:LEU:HD21	1.86	0.57
8:BJ:176:ASN:ND2	34:B5:511:A:OP2	2.37	0.57
19:BD:126:VAL:HG21	19:BD:188:ILE:HD12	1.85	0.57
21:BK:25:LYS:HG3	21:BK:59:PHE:CZ	2.39	0.57
26:BT:78:LYS:NZ	34:B5:1523:G:H2'	2.18	0.57
38:A1:1799:A:H2'	38:A1:1800:A:C8	2.39	0.57
38:A1:2099:A:H2'	38:A1:2100:A:C8	2.39	0.57
38:A1:2844:C:H42	38:A1:2898:G:H22	1.53	0.57
38:A1:3343:G:H21	38:A1:3362:A:H2	1.52	0.57
38:A1:3348:G:H2'	38:A1:3349:C:C6	2.39	0.57
40:A4:91:C:O2	61:AY:25:SER:OG	2.22	0.57
62:AZ:100:THR:HA	62:AZ:106:GLN:HG3	1.85	0.57
66:Ad:12:TYR:O	66:Ad:73:LEU:N	2.34	0.57
66:Ad:87:ASN:ND2	66:Ad:89:LEU:O	2.37	0.57
4:BE:57:ASN:OD1	4:BE:58:GLY:N	2.36	0.57
19:BD:40:ARG:HH12	27:BU:109:GLU:C	2.13	0.57
27:BU:85:ARG:HH22	34:B5:1335:U:P	2.28	0.57
34:B5:1683:C:O2'	34:B5:1684:U:O5'	2.14	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:428:A:H2'	38:A1:429:U:C6	2.39	0.57
38:A1:1112:A:OP1	48:AL:5:LYS:NZ	2.35	0.57
38:A1:1234:G:H4'	38:A1:1236:G:N2	2.19	0.57
38:A1:1615:C:H2'	38:A1:1616:U:C6	2.40	0.57
38:A1:2351:PSU:H2'	38:A1:2352:A:H8	1.69	0.57
38:A1:2428:U:H2'	38:A1:2429:G:H8	1.68	0.57
38:A1:2676:A:H5'	38:A1:2677:G:C8	2.39	0.57
38:A1:3295:A:H2'	38:A1:3296:A:C8	2.39	0.57
39:A3:50:PSU:H4'	41:AD:224:LYS:HE2	1.86	0.57
43:AF:90:LYS:NZ	43:AF:93:ASN:O	2.38	0.57
52:AP:116:HIS:HB3	52:AP:149:VAL:HG22	1.86	0.57
68:Af:49:ILE:HG12	68:Af:100:ILE:HG13	1.86	0.57
81:EC:6955:U:H3'	81:EC:6956:A:C8	2.37	0.57
7:BI:25:ARG:NH2	34:B5:386:G:OP2	2.38	0.57
12:BV:17:CYS:O	12:BV:21:ASN:N	2.36	0.57
34:B5:1476:C:H2'	34:B5:1477:G:C8	2.40	0.57
34:B5:1524:A:N3	34:B5:1590:G:O2'	2.36	0.57
35:AA:183:GLY:HA2	38:A1:896:A:H5''	1.86	0.57
38:A1:708:G:N2	38:A1:711:A:OP2	2.28	0.57
38:A1:2828:G:H4'	46:AI:4:ARG:NH1	2.19	0.57
40:A4:9:A:H2'	40:A4:10:A:H8	1.69	0.57
51:AO:76[A]:PRO:HA	51:AO:79[A]:ILE:HG22	1.86	0.57
55:AS:93:GLU:HG2	55:AS:137:ARG:HG2	1.85	0.57
63:Aa:36:GLY:HA3	63:Aa:40:HIS:CE1	2.39	0.57
79:E:51:GLY:H	79:E:157:PHE:HB2	1.69	0.57
5:BG:209:ALA:HA	5:BG:212:LEU:HD12	1.87	0.57
7:BI:14:THR:HG21	34:B5:353:A:O2'	2.04	0.57
11:BO:42:VAL:HG23	11:BO:46:MET:HE3	1.87	0.57
30:Bd:10:HIS:HB3	30:Bd:12:ARG:HH12	1.70	0.57
34:B5:1247:U:H2'	34:B5:1248:C:C6	2.39	0.57
34:B5:1609:U:H2'	34:B5:1610:G:O4'	2.04	0.57
34:B5:1775:U:H3	34:B5:1786:G:H1	1.53	0.57
36:AB:292:ALA:HB2	36:AB:302:LYS:HD3	1.85	0.57
38:A1:228:U:H5''	61:AY:8:VAL:HG11	1.86	0.57
38:A1:1763:U:H2'	38:A1:1765:U:H1'	1.85	0.57
38:A1:1766:G:H2'	38:A1:1767:C:C6	2.40	0.57
38:A1:1810:A:H2'	38:A1:1811:G:C8	2.39	0.57
38:A1:2323:G:O2'	38:A1:2325:G:OP2	2.16	0.57
38:A1:2407:C:H2'	38:A1:2408:U:H6	1.69	0.57
38:A1:3023:U:OP2	38:A1:3031:G:N1	2.31	0.57
46:AI:55:ASN:HD22	46:AI:164:LYS:HZ3	1.51	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:AM:24:LYS:NZ	49:AM:61:GLY:O	2.37	0.57
6:BH:96:ARG:HD2	6:BH:121:VAL:HG23	1.85	0.57
9:BL:14:GLN:O	9:BL:15:LYS:HD3	2.04	0.57
23:BQ:140:LYS:NZ	34:B5:1192:C:O3'	2.37	0.57
34:B5:12:U:H2'	34:B5:13:C:C6	2.40	0.57
34:B5:131:C:O2'	34:B5:176:C:OP1	2.14	0.57
38:A1:1226:G:H2'	38:A1:1227:C:C6	2.39	0.57
38:A1:1950:U:H2'	38:A1:1951:C:H6	1.70	0.57
41:AD:61:ILE:HG12	41:AD:79:TYR:HD2	1.70	0.57
41:AD:64:ILE:HD12	41:AD:144:VAL:HG21	1.87	0.57
50:AN:9:GLU:OE2	71:AI:44:VAL:HG21	2.05	0.57
80:DC:123:ASP:OD1	80:DC:124:GLY:N	2.38	0.57
80:DC:643:PRO:HG2	80:DC:682:ARG:HA	1.85	0.57
1:BA:24:LEU:O	1:BA:163:ASN:ND2	2.35	0.57
4:BE:102:VAL:HG12	4:BE:112:HIS:HB2	1.86	0.57
7:BI:31:ARG:HH11	7:BI:31:ARG:HB2	1.70	0.57
8:BJ:83:VAL:HG23	8:BJ:85:VAL:H	1.69	0.57
9:BL:57:LYS:NZ	34:B5:326:G:OP1	2.33	0.57
14:BX:11:SER:HB3	34:B5:632:PSU:H4'	1.87	0.57
21:BK:40:LEU:HA	21:BK:43:ILE:HD12	1.87	0.57
22:BP:77:ARG:NH2	34:B5:1240:U:O5'	2.38	0.57
25:BS:133:VAL:HG13	25:BS:134:ARG:HG3	1.87	0.57
34:B5:1202:A:H1'	34:B5:1207:C:H41	1.70	0.57
38:A1:760:G:H1'	38:A1:771:A:H61	1.68	0.57
39:A3:11:A:N6	41:AD:13:SER:O	2.35	0.57
41:AD:107:ARG:NH1	41:AD:119:TYR:O	2.33	0.57
46:AI:76:ILE:HD11	46:AI:148:VAL:HA	1.87	0.57
65:Ac:48:THR:HG23	65:Ac:53:LYS:HE2	1.86	0.57
79:E:35:GLN:HB3	79:E:205:VAL:HB	1.87	0.57
3:BC:69:ILE:HG21	3:BC:133:LYS:HB3	1.87	0.57
5:BG:61:PHE:CD2	5:BG:72:ARG:HD2	2.37	0.57
5:BG:72:ARG:HA	5:BG:98:ARG:HA	1.86	0.57
7:BI:26:LYS:HB3	34:B5:400:A:C5	2.40	0.57
7:BI:61:GLU:O	7:BI:78:ILE:N	2.35	0.57
34:B5:329:G:H2'	34:B5:330:G:C8	2.40	0.57
34:B5:649:U:O2'	34:B5:650:U:O5'	2.22	0.57
34:B5:753:A:H2'	34:B5:754:A:C8	2.40	0.57
34:B5:1485:C:OP2	34:B5:1486:G:N2	2.37	0.57
34:B5:1585:U:H3	34:B5:1611:A:H2	1.51	0.57
35:AA:199:THR:HA	38:A1:2147:A:H5''	1.86	0.57
36:AB:124:LYS:NZ	38:A1:3297:U:O4	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:656:A:H2'	38:A1:657:A:C8	2.40	0.57
38:A1:873:C:H3'	38:A1:874:U:H4'	1.87	0.57
38:A1:1597:C:H2'	38:A1:1598:G:H8	1.70	0.57
38:A1:1622:U:H2'	38:A1:1623:G:H8	1.70	0.57
38:A1:1718:G:H2'	38:A1:1719:G:H8	1.69	0.57
60:AX:103:TYR:HB3	60:AX:138:ARG:HH22	1.70	0.57
80:DC:110:ASP:OD2	80:DC:537:HIS:N	2.37	0.57
4:BE:131:LEU:HD12	34:B5:251:A:H2	1.69	0.56
7:BI:60:ILE:HD13	7:BI:179:CYS:HB3	1.86	0.56
11:BO:136:ARG:NH2	34:B5:1785:U:OP1	2.38	0.56
14:BX:44:GLY:H	14:BX:78:LYS:HE2	1.69	0.56
19:BD:75:LYS:HZ1	21:BK:20:VAL:HG13	1.69	0.56
34:B5:279:G:H2'	34:B5:280:U:H4'	1.87	0.56
34:B5:406:U:H2'	34:B5:407:A:C8	2.40	0.56
34:B5:477:A:C6	34:B5:539:G:N2	2.73	0.56
34:B5:1091:A:H4'	34:B5:1092:A:O4'	2.05	0.56
34:B5:1296:A:N1	34:B5:1301:U:H5	2.03	0.56
34:B5:1535:U:H5''	34:B5:1536:G:C4	2.40	0.56
38:A1:297:G:OP2	38:A1:297:G:N2	2.25	0.56
38:A1:1324:U:OP1	55:AS:1:MET:N	2.38	0.56
38:A1:2116:G:OP1	38:A1:2118:C:N4	2.38	0.56
38:A1:2790:A:P	53:AQ:180:ARG:HH12	2.28	0.56
38:A1:2955:U:OP2	38:A1:2977:G:N1	2.37	0.56
39:A3:72:A:O2'	39:A3:74:C:OP1	2.22	0.56
69:Ag:91:ARG:O	69:Ag:95:ILE:HG12	2.05	0.56
2:BB:144:ARG:HD2	2:BB:206:PRO:HB2	1.87	0.56
4:BE:90:ILE:N	4:BE:99:PHE:O	2.35	0.56
5:BG:160:ARG:NH2	34:B5:68:A:OP1	2.37	0.56
8:BJ:109:LEU:HB2	8:BJ:146:PHE:HB3	1.87	0.56
13:BW:82:LYS:NZ	34:B5:748:U:OP1	2.30	0.56
20:BF:185:ARG:CZ	34:B5:1572:G:H1'	2.34	0.56
34:B5:330:G:C6	34:B5:331:A:C6	2.94	0.56
34:B5:750:U:H2'	34:B5:751:G:H8	1.69	0.56
34:B5:1471:A:H2	34:B5:1474:G:N3	2.03	0.56
34:B5:1748:G:H2'	34:B5:1749:A:C8	2.40	0.56
36:AB:212:ASN:O	36:AB:281:LYS:NZ	2.33	0.56
38:A1:412:G:H2'	38:A1:413:U:H6	1.69	0.56
39:A3:44:C:H4'	41:AD:152:ARG:HD2	1.86	0.56
61:AY:59:VAL:HG23	61:AY:60:ARG:HG2	1.86	0.56
3:BC:145:GLY:O	13:BW:98:GLN:NE2	2.36	0.56
4:BE:19:LEU:HD11	34:B5:788:A:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:BE:59:ARG:NH2	34:B5:446:A:OP2	2.35	0.56
5:BG:121:LEU:N	5:BG:125:THR:OG1	2.32	0.56
5:BG:142:ARG:HH22	5:BG:149:LYS:HD2	1.70	0.56
8:BJ:84:GLY:C	8:BJ:107:ARG:HE	2.12	0.56
8:BJ:131:GLN:NE2	34:B5:512:A:N3	2.49	0.56
9:BL:64:VAL:HG12	9:BL:129:ARG:HD3	1.86	0.56
14:BX:5:LYS:NZ	34:B5:611:U:OP2	2.32	0.56
18:Be:56:MET:SD	34:B5:589:C:O2'	2.62	0.56
19:BD:137:VAL:HG22	19:BD:151:LYS:HB3	1.87	0.56
20:BF:133:VAL:HA	20:BF:198:LEU:HD23	1.85	0.56
21:BK:25:LYS:HG3	21:BK:59:PHE:HZ	1.71	0.56
22:BP:53:PRO:O	22:BP:57:MET:N	2.38	0.56
26:BT:37:VAL:HG13	26:BT:39:THR:H	1.69	0.56
34:B5:58:U:H5''	34:B5:456:A:H1'	1.86	0.56
34:B5:751:G:O6	34:B5:799:A:N6	2.38	0.56
35:AA:112:ILE:HD13	78:Ap:79:VAL:HG22	1.86	0.56
37:AC:221:ASN:ND2	38:A1:209:A:N3	2.50	0.56
38:A1:853:G:O6	78:Ap:2:ALA:N	2.38	0.56
38:A1:1592:G:OP1	69:Ag:58:ARG:NH2	2.38	0.56
38:A1:2357:A:H2'	38:A1:2358:A:H8	1.68	0.56
38:A1:2474:G:H1'	38:A1:2476:C:H41	1.70	0.56
38:A1:2736:A:OP1	56:AT:92:ARG:NH2	2.38	0.56
43:AF:48:ASN:ND2	43:AF:182:ASP:OD2	2.37	0.56
43:AF:186:HIS:O	43:AF:190:THR:OG1	2.22	0.56
58:AV:80:ARG:HB2	58:AV:99:ALA:HB3	1.87	0.56
60:AX:67:ILE:HG22	60:AX:69:SER:H	1.70	0.56
80:DC:568:GLU:HA	80:DC:592:PRO:HG3	1.88	0.56
80:DC:584:ASN:HD22	80:DC:693:LEU:HA	1.69	0.56
9:BL:57:LYS:HD3	9:BL:131:ILE:CG2	2.35	0.56
19:BD:71:LEU:HA	19:BD:74:GLN:HE22	1.69	0.56
23:BQ:94:GLN:HE22	23:BQ:95:LYS:HE3	1.70	0.56
34:B5:53:G:H2'	34:B5:54:C:C6	2.40	0.56
34:B5:1502:G:N2	34:B5:1505:A:OP2	2.38	0.56
34:B5:1606:C:H2'	34:B5:1607:G:C8	2.41	0.56
38:A1:113:C:OP1	50:AN:147:ARG:NH1	2.38	0.56
38:A1:1497:C:H2'	38:A1:1498:A:C8	2.40	0.56
38:A1:1562:C:H3'	38:A1:1563:C:H5''	1.88	0.56
38:A1:1750:A:OP2	73:Ak:42:LYS:NZ	2.22	0.56
38:A1:1751:G:HO2'	38:A1:1752:A:P	2.29	0.56
38:A1:2439:A:H2'	38:A1:2440:G:C8	2.40	0.56
47:AJ:17:LEU:HB3	47:AJ:71:VAL:HG23	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:Ad:46:THR:HG21	66:Ad:90:PHE:HA	1.87	0.56
80:DC:637:GLY:HA2	80:DC:668:GLN:HE22	1.70	0.56
80:DC:676:ILE:HG23	80:DC:832:VAL:HG21	1.88	0.56
7:BI:90:LEU:HD11	7:BI:95:THR:HB	1.88	0.56
9:BL:99:ARG:NE	14:BX:7:ARG:O	2.34	0.56
14:BX:19:ARG:NH1	34:B5:609:U:O2	2.38	0.56
20:BF:145:ASP:OD1	20:BF:146:THR:N	2.36	0.56
34:B5:627:C:H2'	34:B5:628:G:O4'	2.05	0.56
38:A1:296:A:N3	38:A1:299:G:O2'	2.36	0.56
38:A1:307:A:H2'	38:A1:308:A:C8	2.41	0.56
38:A1:529:A:H2'	38:A1:530:G:H8	1.69	0.56
38:A1:1194:G:H2'	38:A1:1195:A:C8	2.41	0.56
79:E:53:LEU:HB3	79:E:155:ILE:HG12	1.87	0.56
79:E:55:LEU:O	79:E:153:SER:OG	2.22	0.56
80:DC:568:GLU:HG3	80:DC:592:PRO:HB3	1.88	0.56
2:BB:48:VAL:HG23	2:BB:49:ASN:H	1.70	0.56
3:BC:169:LEU:HD13	3:BC:198:THR:HG22	1.87	0.56
8:BJ:10:LYS:NZ	34:B5:471:A:H5'	2.20	0.56
9:BL:44:THR:HG23	9:BL:60:PHE:CD1	2.41	0.56
19:BD:132:LYS:HG2	19:BD:156:PHE:HD2	1.70	0.56
34:B5:752:A:O2'	34:B5:753:A:H8	1.88	0.56
34:B5:1635:A:H5'	34:B5:1638:G:H4'	1.88	0.56
38:A1:1361:U:O2	43:AF:159:GLN:NE2	2.37	0.56
38:A1:1715:A:N7	65:Ac:84:LEU:HD21	2.20	0.56
38:A1:2106:A:H2'	38:A1:2107:A:C8	2.40	0.56
38:A1:2815:G:H21	38:A1:2818:U:H3	1.53	0.56
38:A1:3084:C:O2'	38:A1:3332:U:OP1	2.20	0.56
42:AE:52:VAL:HG23	42:AE:67:GLY:H	1.71	0.56
42:AE:137:ASP:OD1	42:AE:138:GLN:N	2.39	0.56
68:Af:73:ARG:HH21	68:Af:82:ARG:NH1	2.03	0.56
74:Al:16:ALA:HB1	74:Al:42:ARG:HH21	1.71	0.56
3:BC:44:LEU:HD11	3:BC:243:TYR:HB3	1.87	0.56
8:BJ:168:ARG:HG3	8:BJ:170:GLY:H	1.71	0.56
31:Bg:81:LEU:HD11	31:Bg:89:LEU:HB3	1.87	0.56
32:Bf:96:LYS:HE2	34:B5:1252:C:H41	1.70	0.56
34:B5:1530:C:H2'	34:B5:1531:G:C8	2.41	0.56
36:AB:348:ARG:CZ	38:A1:3037:U:H5''	2.35	0.56
38:A1:999:G:O2'	38:A1:1002:A:N7	2.38	0.56
38:A1:1678:G:H2'	38:A1:1679:A:H8	1.71	0.56
39:A3:7:G:O6	39:A3:114:U:O4	2.23	0.56
42:AE:38:THR:HA	42:AE:90:LYS:HA	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:AJ:108:GLU:OE2	47:AJ:110:ILE:N	2.39	0.56
73:Ak:17:ARG:HD3	73:Ak:19:ASP:HB2	1.88	0.56
80:DC:601:ILE:HD13	80:DC:643:PRO:HA	1.87	0.56
80:DC:747:LEU:HB2	80:DC:752:GLY:HA3	1.88	0.56
80:DC:794:PRO:HB2	80:DC:796:MET:HE1	1.88	0.56
81:EC:6844:A:O2'	81:EC:6845:G:N7	2.35	0.56
4:BE:145:ARG:HH22	34:B5:123:G:H4'	1.71	0.56
13:BW:114:GLU:N	13:BW:114:GLU:OE2	2.39	0.56
19:BD:7:LYS:HA	19:BD:10:LYS:HB3	1.87	0.56
23:BQ:42:GLU:O	23:BQ:45:ARG:HG3	2.06	0.56
25:BS:134:ARG:NH2	34:B5:1546:G:N7	2.54	0.56
31:Bg:35:SER:OG	31:Bg:43:ILE:O	2.17	0.56
31:Bg:276:PRO:HG3	31:Bg:313:TRP:HZ2	1.71	0.56
34:B5:212:U:H2'	34:B5:213:A:C8	2.40	0.56
34:B5:591:A:H2'	34:B5:592:A:C8	2.40	0.56
34:B5:1606:C:H2'	34:B5:1607:G:H8	1.71	0.56
38:A1:796:U:H2'	38:A1:797:U:C6	2.40	0.56
38:A1:1362:G:H2'	38:A1:1363:A:C8	2.41	0.56
45:AH:9:GLN:O	45:AH:72:LYS:HD2	2.06	0.56
66:Ad:38:LYS:HA	66:Ad:41:LYS:HE3	1.87	0.56
66:Ad:80:ASN:ND2	66:Ad:87:ASN:O	2.29	0.56
4:BE:100:ARG:NH2	4:BE:118:GLU:O	2.39	0.56
7:BI:141:ARG:NH1	34:B5:196:G:OP2	2.39	0.56
8:BJ:133:HIS:CE1	8:BJ:163:PRO:HD2	2.41	0.56
8:BJ:168:ARG:HD3	8:BJ:169:PRO:HD2	1.88	0.56
32:Bf:141:CYS:O	34:B5:1252:C:O2'	2.24	0.56
34:B5:885:G:H2'	34:B5:886:U:C6	2.41	0.56
34:B5:1126:G:H2'	34:B5:1127:G:H8	1.70	0.56
35:AA:28:LYS:HB2	35:AA:123:ARG:HB3	1.88	0.56
35:AA:42:ARG:HG3	35:AA:89:TYR:HE1	1.70	0.56
36:AB:123:TYR:CE2	36:AB:124:LYS:HG3	2.41	0.56
37:AC:287:THR:O	37:AC:291:ASN:ND2	2.30	0.56
38:A1:443:G:N2	38:A1:492:C:O5'	2.38	0.56
38:A1:640:U:OP1	63:Aa:21:ARG:NH1	2.34	0.56
38:A1:712:G:H5'	48:AL:174:ARG:NH1	2.20	0.56
38:A1:947:G:H2'	38:A1:948:C:C6	2.41	0.56
38:A1:2640:A:OP2	56:AT:10:ARG:NH1	2.39	0.56
38:A1:3298:C:C2	38:A1:3299:A:C8	2.94	0.56
46:AI:39:LYS:HZ3	46:AI:40:LYS:HE3	1.70	0.56
53:AQ:176:ARG:HG3	53:AQ:183:GLY:HA3	1.87	0.56
60:AX:110:VAL:HG22	60:AX:124:VAL:HG22	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:229:TYR:HE2	80:DC:276:PHE:HB3	1.71	0.56
80:DC:677:PHE:HE1	80:DC:679:GLU:OE2	1.88	0.56
9:BL:136:ARG:NH2	34:B5:303:U:H4'	2.21	0.56
19:BD:125:TYR:O	19:BD:128:GLU:HG3	2.05	0.56
24:BR:48:ASN:ND2	34:B5:1389:C:OP1	2.39	0.56
34:B5:632:PSU:O2'	34:B5:1103:U:OP1	2.24	0.56
34:B5:1152:A:H2'	34:B5:1153:G:H8	1.70	0.56
34:B5:1164:G:H2'	34:B5:1165:G:H8	1.71	0.56
34:B5:1758:U:O2'	38:A1:2262:A:N1	2.31	0.56
36:AB:15:GLY:O	38:A1:3009:G:N2	2.32	0.56
38:A1:174:C:O2	38:A1:244:G:N1	2.39	0.56
38:A1:655:C:OP1	67:Ae:27:ARG:N	2.38	0.56
38:A1:1097:G:H4'	56:AT:129:LYS:HG2	1.88	0.56
38:A1:2218:G:H2'	38:A1:2219:A:C8	2.41	0.56
38:A1:2303:A:OP2	76:An:23:ARG:NH2	2.39	0.56
40:A4:83:C:N3	61:AY:52:ARG:NH2	2.53	0.56
62:AZ:25:ILE:HG23	62:AZ:41:ALA:HB1	1.87	0.56
80:DC:718:LEU:HD23	80:DC:722:PRO:HG3	1.88	0.56
81:EC:6800:G:OP2	81:EC:6800:G:N2	2.34	0.56
3:BC:144:TRP:H	3:BC:152:HIS:CE1	2.23	0.55
12:BV:1:MET:SD	12:BV:1:MET:N	2.76	0.55
20:BF:117:THR:O	20:BF:121:ILE:HG13	2.07	0.55
20:BF:219:ARG:NH1	81:EC:6841:U:O3'	2.40	0.55
21:BK:22:VAL:HG22	21:BK:65:TYR:HA	1.86	0.55
26:BT:90:PRO:HD2	34:B5:1601:G:H5''	1.87	0.55
27:BU:50:LEU:HD22	27:BU:95:ALA:HB2	1.88	0.55
27:BU:52:LYS:NZ	34:B5:1344:A:O3'	2.39	0.55
34:B5:702:G:O2'	34:B5:703:G:O5'	2.22	0.55
34:B5:1146:G:H2'	34:B5:1147:A:C8	2.41	0.55
34:B5:1242:A:O2'	34:B5:1244:A:OP1	2.24	0.55
38:A1:429:U:H2'	38:A1:430:U:H6	1.71	0.55
38:A1:1352:A:O2'	38:A1:1353:U:H4'	2.06	0.55
38:A1:2257:C:H3'	38:A1:2258:PSU:C6	2.39	0.55
80:DC:671:THR:HG23	80:DC:681:MET:HB2	1.86	0.55
5:BG:31:ARG:NH1	34:B5:1681:A:O2'	2.39	0.55
7:BI:103:GLN:HA	7:BI:165:LEU:O	2.06	0.55
8:BJ:11:THR:HG23	34:B5:472:U:H5''	1.87	0.55
11:BO:41:ARG:NH1	34:B5:917:U:O2	2.39	0.55
15:BY:104:SER:HB2	15:BY:107:GLN:HG2	1.88	0.55
28:BZ:77:ARG:NH2	34:B5:1534:G:N7	2.52	0.55
34:B5:947:U:H2'	34:B5:948:G:C8	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1335:U:N3	34:B5:1336:A:N7	2.54	0.55
36:AB:182:GLN:HE21	36:AB:184:ASN:HD21	1.54	0.55
38:A1:20:A:OP2	70:Ah:86:ARG:NH2	2.39	0.55
38:A1:616:G:H2'	38:A1:617:G:C8	2.42	0.55
38:A1:634:C:H5'	68:Af:21:ARG:O	2.05	0.55
38:A1:1203:A:OP2	38:A1:1301:A:N6	2.30	0.55
38:A1:2674:A:H2'	38:A1:2675:C:O4'	2.07	0.55
38:A1:2768:U:H2'	38:A1:2769:A:H8	1.69	0.55
38:A1:2933:A:H2'	38:A1:2934:A:C8	2.41	0.55
50:AN:91:GLU:O	50:AN:93:LYS:NZ	2.38	0.55
53:AQ:165:ILE:HD11	53:AQ:172:PHE:HB3	1.87	0.55
19:BD:132:LYS:N	19:BD:191:ASP:OD1	2.39	0.55
34:B5:325:G:O6	34:B5:344:A:N6	2.40	0.55
34:B5:486:G:O6	34:B5:501:U:O4	2.25	0.55
36:AB:128:LYS:NZ	38:A1:3294:A:OP1	2.32	0.55
36:AB:376:LYS:O	36:AB:380:MET:HB2	2.05	0.55
37:AC:195:ARG:NH1	38:A1:340:C:OP2	2.33	0.55
38:A1:3016:A:H2'	38:A1:3017:A:C8	2.39	0.55
38:A1:3252:G:H2'	38:A1:3253:G:H8	1.71	0.55
42:AE:139:LYS:O	42:AE:143:LYS:HG2	2.06	0.55
44:AG:76:ALA:O	44:AG:79:GLN:NE2	2.39	0.55
44:AG:228:GLU:OE1	44:AG:228:GLU:N	2.31	0.55
62:AZ:54:THR:H	62:AZ:57:HIS:CD2	2.24	0.55
62:AZ:57:HIS:CE1	62:AZ:65:ARG:HH22	2.24	0.55
66:Ad:12:TYR:CD2	66:Ad:75:ILE:HD12	2.42	0.55
80:DC:727:PRO:HG2	80:DC:774:VAL:HB	1.87	0.55
9:BL:34:TRP:HH2	9:BL:36:LYS:HD3	1.70	0.55
13:BW:32:LYS:HA	13:BW:35:ILE:HB	1.88	0.55
16:Ba:46:GLU:HB3	16:Ba:49:ALA:HB2	1.88	0.55
24:BR:61:ILE:HD12	24:BR:69:ILE:HG21	1.89	0.55
26:BT:105:LEU:HD13	26:BT:122:ARG:HH11	1.72	0.55
27:BU:97:VAL:O	27:BU:101:LYS:HG2	2.06	0.55
29:Bc:57:MET:HG2	29:Bc:58:GLU:HG3	1.87	0.55
34:B5:89:G:N2	34:B5:451:A:O3'	2.40	0.55
34:B5:1482:C:O5'	34:B5:1521:G:N2	2.28	0.55
34:B5:1545:A:H2'	34:B5:1546:G:C8	2.41	0.55
34:B5:1593:A:H2'	34:B5:1594:G:C8	2.42	0.55
36:AB:120:LYS:N	38:A1:3296:A:OP1	2.39	0.55
38:A1:412:G:H2'	38:A1:413:U:C6	2.41	0.55
38:A1:551:A:O2'	38:A1:552:G:O5'	2.20	0.55
38:A1:1223:A:OP2	38:A1:1285:G:N2	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1307:G:H5'	51:AO:60[A]:LYS:HE3	1.88	0.55
38:A1:1579:C:OP2	38:A1:1580:A:N6	2.39	0.55
38:A1:1659:U:H2'	38:A1:1660:C:C6	2.42	0.55
38:A1:2407:C:H2'	38:A1:2408:U:C6	2.42	0.55
47:AJ:92:ARG:HG2	47:AJ:94:ARG:H	1.70	0.55
49:AM:31:LYS:HB3	49:AM:51:ALA:HB1	1.88	0.55
68:Af:52:VAL:HG12	68:Af:66:VAL:HG12	1.86	0.55
72:Aj:52:LYS:HD3	72:Aj:55:ARG:HH21	1.71	0.55
80:DC:29:ASP:O	80:DC:30:HIS:ND1	2.39	0.55
80:DC:218:TRP:CD1	80:DC:324:MET:HE3	2.42	0.55
2:BB:155:TYR:OH	34:B5:932:U:OP2	2.21	0.55
4:BE:7:LYS:HD2	34:B5:450:U:OP1	2.06	0.55
10:BN:114:ARG:NH2	34:B5:953:G:O2'	2.40	0.55
18:Be:26:LYS:HG2	18:Be:27:PRO:HD2	1.89	0.55
19:BD:23:GLU:OE1	21:BK:61:TRP:CD1	2.59	0.55
24:BR:47:ARG:NH2	24:BR:48:ASN:OD1	2.39	0.55
31:Bg:288:HIS:O	31:Bg:306:THR:N	2.34	0.55
34:B5:555:A:O2'	34:B5:556:A:O4'	2.25	0.55
34:B5:750:U:H2'	34:B5:751:G:C8	2.41	0.55
38:A1:158:G:H2'	38:A1:159:A:C8	2.41	0.55
38:A1:847:A:H2'	38:A1:848:A:C8	2.42	0.55
38:A1:1311:G:N2	51:AO:86[A]:GLY:O	2.33	0.55
38:A1:3189:G:H2'	38:A1:3190:C:C6	2.42	0.55
46:AI:39:LYS:NZ	46:AI:40:LYS:HE3	2.21	0.55
47:AJ:93:ASP:HB2	47:AJ:172:LEU:HB2	1.87	0.55
56:AT:8:ARG:HD2	56:AT:15:PHE:CD2	2.42	0.55
71:Ai:58:ILE:HD11	71:Ai:94:ILE:HG13	1.88	0.55
81:EC:6885:G:H2'	81:EC:6886:A:C8	2.42	0.55
7:BI:84:HIS:CD2	7:BI:90:LEU:HD23	2.41	0.55
9:BL:109:VAL:HG21	9:BL:125:VAL:HG11	1.89	0.55
11:BO:103:ARG:O	11:BO:107:ARG:HG2	2.06	0.55
11:BO:132:ARG:NH1	16:Ba:29:SER:OG	2.40	0.55
14:BX:28:ASN:HA	14:BX:31:LYS:HE3	1.88	0.55
25:BS:35:ILE:HG23	25:BS:102:ALA:HB2	1.88	0.55
25:BS:126:ARG:NE	25:BS:132:ARG:O	2.37	0.55
34:B5:129:U:N3	34:B5:265:A:OP2	2.32	0.55
34:B5:163:G:OP2	34:B5:163:G:N2	2.26	0.55
34:B5:444:C:N4	34:B5:459:G:OP2	2.33	0.55
34:B5:984:G:H1	34:B5:1017:U:H3	1.55	0.55
37:AC:138:ARG:NH1	38:A1:1383:G:O2'	2.39	0.55
38:A1:1203:A:H2'	38:A1:1204:A:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1659:U:H3	38:A1:1790:G:H1	1.55	0.55
38:A1:2945:G:O2'	38:A1:2948:C:OP2	2.18	0.55
38:A1:3256:G:H2'	38:A1:3257:C:C6	2.42	0.55
40:A4:65:A:O3'	70:Ah:10:ARG:NH2	2.35	0.55
43:AF:118:LYS:HD3	43:AF:191:VAL:HG11	1.89	0.55
51:AO:20[A]:ALA:HB2	51:AO:80[A]:PHE:HE2	1.72	0.55
58:AV:54:LEU:HB2	58:AV:81:GLN:HB2	1.87	0.55
58:AV:96:GLU:OE2	59:AW:23:ARG:HG3	2.06	0.55
3:BC:225:LEU:HD11	3:BC:230:TRP:HD1	1.72	0.55
9:BL:20:PHE:HB2	34:B5:211:PSU:H5''	1.87	0.55
19:BD:106:LYS:HZ2	19:BD:173:ARG:HB3	1.72	0.55
20:BF:93:LEU:HA	20:BF:172:ILE:HD11	1.87	0.55
20:BF:137:ILE:HA	20:BF:140:THR:HG22	1.89	0.55
20:BF:160:VAL:HG21	29:Bc:43:ASN:HB2	1.88	0.55
22:BP:45:PHE:CD1	22:BP:49:MET:HG2	2.42	0.55
34:B5:1022:C:O2'	34:B5:1125:A:N1	2.33	0.55
34:B5:1035:G:H2'	34:B5:1036:A:H8	1.72	0.55
37:AC:288:ARG:HA	37:AC:288:ARG:NH1	2.20	0.55
38:A1:1174:G:HO2'	51:AO:21[A]:SER:HG	1.54	0.55
38:A1:1395:G:O2'	40:A4:18:U:O2	2.24	0.55
38:A1:1460:A:H2'	38:A1:1461:A:H8	1.72	0.55
38:A1:2205:U:H2'	38:A1:2206:G:C8	2.42	0.55
38:A1:3109:G:N2	45:AH:156:GLN:OE1	2.39	0.55
38:A1:3205:G:OP2	38:A1:3206:C:N4	2.39	0.55
58:AV:26:ALA:O	58:AV:115:THR:OG1	2.17	0.55
69:Ag:41:ARG:O	69:Ag:43:LYS:NZ	2.33	0.55
76:An:6:ARG:O	76:An:10:THR:HG23	2.07	0.55
80:DC:91:GLN:OE1	80:DC:347:THR:OG1	2.24	0.55
80:DC:464:LEU:O	80:DC:465:LYS:HG2	2.07	0.55
80:DC:666:ALA:HB2	80:DC:706:ILE:HA	1.89	0.55
1:BA:62:ARG:NE	12:BV:37:ALA:O	2.28	0.55
9:BL:123:VAL:HG12	9:BL:142:VAL:HG23	1.89	0.55
10:BN:83:GLU:HG2	10:BN:84:ILE:HG23	1.87	0.55
11:BO:48:VAL:HG21	11:BO:53:ASP:HB3	1.89	0.55
18:Be:10:ARG:NH1	34:B5:566:C:O2'	2.40	0.55
31:Bg:225:LEU:HA	31:Bg:228:LYS:HD2	1.89	0.55
34:B5:551:G:H2'	34:B5:552:G:H8	1.71	0.55
35:AA:30:ARG:HB3	35:AA:74:GLU:OE1	2.07	0.55
35:AA:127:ALA:HB2	35:AA:134:VAL:HG23	1.89	0.55
36:AB:158:VAL:HB	36:AB:191:LYS:HD2	1.88	0.55
38:A1:1114:U:H5''	63:Aa:22:ILE:HD11	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1922:A:H2'	38:A1:1923:C:O4'	2.06	0.55
38:A1:2756:C:H1'	56:AT:8:ARG:NH2	2.22	0.55
47:AJ:26:SER:HA	47:AJ:30:LEU:HD23	1.87	0.55
50:AN:183:THR:HG22	50:AN:187:ARG:HB2	1.89	0.55
53:AQ:176:ARG:NH2	63:Aa:46:ASP:OD2	2.30	0.55
58:AV:10:LYS:HB3	58:AV:125:LEU:HD11	1.89	0.55
1:BA:102:PHE:HE2	1:BA:135:GLU:HG3	1.72	0.55
7:BI:67:TRP:CD1	7:BI:70:GLU:HB2	2.41	0.55
14:BX:56:LYS:HD3	14:BX:72:VAL:HG12	1.89	0.55
14:BX:63:GLN:HE22	34:B5:1755:A:H5'	1.71	0.55
14:BX:141:GLU:HG3	80:DC:425:ASP:HA	1.88	0.55
15:BY:111:LYS:HG2	15:BY:114:ARG:HH21	1.71	0.55
25:BS:17:LEU:O	25:BS:20:THR:OG1	2.20	0.55
28:BZ:90:LYS:HD2	28:BZ:104:ALA:HA	1.89	0.55
31:Bg:295:SER:HB3	31:Bg:300:THR:HB	1.88	0.55
33:BM:43:ARG:HD3	33:BM:43:ARG:H	1.72	0.55
34:B5:182:A:H2'	34:B5:183:U:C6	2.42	0.55
34:B5:388:G:OP2	34:B5:423:G:O2'	2.25	0.55
34:B5:600:U:H2'	34:B5:601:A:H8	1.71	0.55
34:B5:1358:G:H2'	34:B5:1359:C:C5	2.42	0.55
38:A1:985:U:H2'	38:A1:986:PSU:C6	2.42	0.55
38:A1:1188:U:OP1	38:A1:1210:U:O2'	2.17	0.55
38:A1:2447:A:H2'	38:A1:2448:G:C8	2.42	0.55
38:A1:3274:A:OP2	52:AP:171:ARG:HD3	2.06	0.55
49:AM:135:LEU:HD11	51:AO:177[A]:LYS:HZ2	1.72	0.55
80:DC:432:GLN:HG3	80:DC:433:ARG:HG3	1.88	0.55
1:BA:74:VAL:HG23	1:BA:118:PRO:HB3	1.89	0.55
6:BH:118:LEU:N	34:B5:639:U:OP2	2.39	0.55
10:BN:114:ARG:NH1	34:B5:953:G:H4'	2.22	0.55
19:BD:77:PHE:O	19:BD:78:LYS:HG2	2.07	0.55
19:BD:154:ASP:OD1	19:BD:155:GLY:N	2.40	0.55
25:BS:12:GLN:HB3	25:BS:59:GLY:O	2.07	0.55
26:BT:105:LEU:O	26:BT:109:GLU:HG3	2.06	0.55
29:Bc:62:GLU:OE2	29:Bc:63:ALA:N	2.40	0.55
34:B5:1649:G:H2'	34:B5:1650:U:C6	2.42	0.55
38:A1:114:A:H5''	50:AN:49:ARG:HH21	1.72	0.55
38:A1:151:A:OP2	50:AN:147:ARG:NH2	2.40	0.55
45:AH:93:VAL:HG12	75:Am:82:LEU:HD13	1.89	0.55
80:DC:22:MET:HE1	80:DC:126:LEU:HB2	1.89	0.55
80:DC:697:ALA:HA	80:DC:700:ARG:HE	1.71	0.55
80:DC:785:ARG:HD3	80:DC:792:ALA:HB3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BH:96:ARG:O	34:B5:694:U:N3	2.39	0.54
34:B5:446:A:H62	34:B5:461:G:H21	1.55	0.54
34:B5:895:G:H2'	34:B5:896:U:C6	2.42	0.54
34:B5:1039:A:O2'	34:B5:1040:G:H5''	2.07	0.54
37:AC:317:PRO:C	37:AC:319:LYS:H	2.15	0.54
38:A1:96:G:OP1	63:Aa:34:MET:N	2.37	0.54
38:A1:135:C:C4	70:Ah:94:LYS:HD3	2.43	0.54
38:A1:671:U:H2'	38:A1:672:A:C8	2.42	0.54
38:A1:1301:A:H4'	38:A1:1302:A:H5''	1.88	0.54
38:A1:1547:G:OP1	50:AN:108:ARG:NH2	2.40	0.54
38:A1:2388:U:O3'	52:AP:80:LYS:NZ	2.40	0.54
38:A1:3064:U:H2'	38:A1:3065:G:H8	1.72	0.54
39:A3:22:A:H3'	39:A3:23:A:H8	1.72	0.54
40:A4:39:G:H1'	40:A4:104:A:N6	2.22	0.54
46:AI:197:VAL:HG23	46:AI:199:PHE:HE1	1.71	0.54
47:AJ:29:ARG:HA	47:AJ:32:ARG:HD3	1.89	0.54
63:Aa:85:ASP:OD1	63:Aa:86:LYS:N	2.41	0.54
69:Ag:102:LYS:HG3	69:Ag:106:LYS:HZ2	1.73	0.54
79:E:147:LYS:HD2	79:E:150:ASP:HB2	1.88	0.54
5:BG:39:GLU:OE2	5:BG:47:GLY:N	2.36	0.54
7:BI:44:HIS:O	7:BI:56:ARG:N	2.34	0.54
13:BW:52:TYR:HD1	13:BW:61:ILE:HG22	1.71	0.54
15:BY:20:ARG:HB3	15:BY:76:TYR:CD2	2.43	0.54
23:BQ:118:ILE:HG12	34:B5:1410:A:H5'	1.89	0.54
26:BT:112:GLY:O	26:BT:125:SER:OG	2.20	0.54
28:BZ:57:TYR:OH	81:EC:6867:C:N3	2.40	0.54
34:B5:121:U:H2'	34:B5:122:U:C6	2.42	0.54
34:B5:1477:G:H2'	34:B5:1478:G:C8	2.40	0.54
34:B5:1642:G:HO2'	34:B5:1781:MA6:HO2'	1.53	0.54
34:B5:1770:U:H2'	34:B5:1771:U:C6	2.43	0.54
36:AB:197:GLU:O	36:AB:201:LYS:NZ	2.25	0.54
38:A1:1103:A:C6	53:AQ:6:THR:HG21	2.42	0.54
38:A1:2455:U:H3'	38:A1:2456:A:H8	1.72	0.54
38:A1:3210:A:OP1	49:AM:109:ARG:NH1	2.32	0.54
40:A4:38:U:P	70:Ah:78:LYS:HZ3	2.30	0.54
42:AE:170:LYS:HD3	42:AE:172:HIS:NE2	2.22	0.54
47:AJ:62:ASN:HD21	77:Ao:102:GLN:C	2.15	0.54
70:Ah:8:GLU:O	70:Ah:11:THR:HG22	2.07	0.54
80:DC:535:GLU:HG2	80:DC:536:LEU:N	2.22	0.54
80:DC:579:SER:N	80:DC:584:ASN:O	2.39	0.54
80:DC:632:LYS:HB3	80:DC:648:ASP:OD1	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6899:C:H2'	81:EC:6900:A:H8	1.73	0.54
4:BE:87:MET:HE2	4:BE:123:LEU:HB2	1.88	0.54
13:BW:78:ARG:NH1	13:BW:124:LYS:HD2	2.22	0.54
14:BX:117:ILE:HD12	14:BX:120:VAL:HB	1.87	0.54
19:BD:106:LYS:NZ	19:BD:174:HIS:O	2.39	0.54
24:BR:41:ILE:HG23	24:BR:46:LEU:HD23	1.89	0.54
28:BZ:77:ARG:NH1	34:B5:1532:U:OP1	2.41	0.54
31:Bg:139:GLN:NE2	31:Bg:140:CYS:O	2.40	0.54
34:B5:519:C:H5'	34:B5:520:A:C8	2.43	0.54
34:B5:1489:U:OP2	34:B5:1515:A:N6	2.40	0.54
38:A1:159:A:H2'	38:A1:160:G:C8	2.41	0.54
38:A1:673:U:H2'	38:A1:674:G:C8	2.42	0.54
38:A1:1268:G:N7	38:A1:1269:U:O2'	2.40	0.54
38:A1:1658:G:H2'	38:A1:1659:U:C6	2.42	0.54
46:AI:38:LYS:HG3	46:AI:41:ALA:HB2	1.89	0.54
77:Ao:25:VAL:HG22	77:Ao:70:LEU:HD12	1.88	0.54
80:DC:329:PRO:HG2	80:DC:332:ASP:HB2	1.89	0.54
80:DC:572:SER:OG	80:DC:573:GLN:N	2.40	0.54
8:BJ:53:ARG:HG3	8:BJ:97:LEU:HD11	1.89	0.54
11:BO:84:ARG:HD2	11:BO:120:PRO:HD3	1.90	0.54
14:BX:75:GLN:NE2	14:BX:76:LEU:O	2.41	0.54
23:BQ:103:ASN:OD1	23:BQ:107:LYS:NZ	2.40	0.54
27:BU:59:PRO:HG3	34:B5:1381:U:H4'	1.88	0.54
34:B5:147:A:P	34:B5:166:C:H41	2.31	0.54
34:B5:1563:C:H2'	34:B5:1564:U:C6	2.43	0.54
34:B5:1641:C:H2'	34:B5:1642:G:C8	2.42	0.54
35:AA:177:LYS:HB2	78:Ap:29:LEU:HD22	1.90	0.54
38:A1:1247:U:H2'	38:A1:1266:G:H3'	1.89	0.54
38:A1:1471:U:H5'	54:AR:5:ARG:HH11	1.72	0.54
38:A1:2328:U:H2'	38:A1:2329:C:H6	1.72	0.54
38:A1:3165:A:H61	38:A1:3285:C:H42	1.54	0.54
38:A1:3192:U:H2'	38:A1:3193:C:C6	2.43	0.54
41:AD:262:LYS:HA	41:AD:265:TYR:HD2	1.71	0.54
43:AF:83:LEU:HD11	43:AF:116:PHE:HB3	1.88	0.54
79:E:196:LYS:HB3	79:E:199:GLN:HB2	1.90	0.54
80:DC:271:ARG:HB3	80:DC:274:ASN:HB2	1.89	0.54
1:BA:142:PRO:HB3	12:BV:34:ILE:HG22	1.90	0.54
2:BB:33:LYS:NZ	2:BB:92:GLN:OE1	2.40	0.54
3:BC:49:LYS:HD3	3:BC:243:TYR:HB3	1.90	0.54
13:BW:30:SER:OG	13:BW:58:SER:O	2.24	0.54
29:Bc:18:ARG:NH1	29:Bc:23:GLY:O	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BM:59:LEU:HD13	33:BM:61:VAL:HG13	1.88	0.54
34:B5:250:C:H2'	34:B5:251:A:C8	2.42	0.54
34:B5:628:G:O3'	38:A1:846:A:N6	2.40	0.54
38:A1:406:G:OP1	38:A1:1415:U:O2'	2.25	0.54
38:A1:871:U:H2'	38:A1:872:U:C6	2.42	0.54
38:A1:1926:C:OP1	78:Ap:23:ARG:NH1	2.33	0.54
38:A1:2529:A:C2	38:A1:2530:G:H1'	2.42	0.54
53:AQ:170:ARG:NH1	63:Aa:56:VAL:O	2.36	0.54
53:AQ:185:LYS:HG3	53:AQ:186:VAL:HG22	1.89	0.54
71:Ai:67:LYS:HZ2	71:Ai:71:LYS:HE3	1.73	0.54
80:DC:23:SER:HB2	80:DC:122:THR:HG21	1.90	0.54
4:BE:6:LYS:O	4:BE:30:ARG:NH2	2.40	0.54
4:BE:14:ALA:HB1	4:BE:18:TRP:CD1	2.42	0.54
5:BG:198:ALA:HB1	34:B5:127:G:C8	2.43	0.54
6:BH:47:ARG:O	6:BH:59:ALA:N	2.31	0.54
6:BH:141:ARG:HG2	13:BW:51:GLU:HG3	1.90	0.54
11:BO:120:PRO:HB2	34:B5:887:A:H5''	1.89	0.54
20:BF:111:VAL:HG23	23:BQ:43:ILE:HD13	1.88	0.54
33:BM:60:VAL:HA	33:BM:122:VAL:HG22	1.89	0.54
34:B5:327:U:H2'	34:B5:328:A:C8	2.43	0.54
34:B5:388:G:C6	34:B5:410:A:C6	2.96	0.54
34:B5:395:U:H3	34:B5:399:A:N6	1.92	0.54
34:B5:1480:G:H2'	34:B5:1481:C:O4'	2.08	0.54
35:AA:54:ARG:HH12	35:AA:128:ARG:HH21	1.54	0.54
36:AB:108:GLU:HG3	36:AB:109:HIS:CD2	2.43	0.54
38:A1:4:U:H2'	38:A1:5:G:C8	2.43	0.54
38:A1:41:G:N2	38:A1:2803:A:N7	2.54	0.54
38:A1:638:C:N4	38:A1:639:G:O6	2.41	0.54
42:AE:129:GLU:N	42:AE:129:GLU:OE1	2.40	0.54
56:AT:68:THR:HG22	56:AT:69:LYS:H	1.73	0.54
66:Ad:41:LYS:HG2	66:Ad:47:ASP:HA	1.88	0.54
66:Ad:77:ARG:HD2	66:Ad:89:LEU:HD13	1.90	0.54
79:E:67:ILE:HD12	79:E:77:ALA:HB2	1.90	0.54
3:BC:165:VAL:HG11	3:BC:210:THR:HG22	1.88	0.54
13:BW:122:SER:OG	13:BW:123:GLY:N	2.41	0.54
31:Bg:54:PHE:CD2	31:Bg:312:VAL:HG11	2.42	0.54
34:B5:131:C:H2'	34:B5:132:U:C5	2.43	0.54
34:B5:894:U:H2'	34:B5:895:G:C8	2.42	0.54
34:B5:1227:A:O4'	34:B5:1256:A:N6	2.40	0.54
38:A1:407:A:C2	40:A4:17:A:H1'	2.43	0.54
39:A3:11:A:N1	39:A3:67:G:O2'	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:AZ:53:VAL:HG22	62:AZ:65:ARG:HG2	1.89	0.54
79:E:60:ARG:NE	79:E:63:MET:SD	2.80	0.54
79:E:107:TYR:HE2	79:E:110:PHE:HA	1.73	0.54
80:DC:240:MET:HG2	80:DC:244:LEU:HD23	1.89	0.54
81:EC:6922:G:O6	81:EC:6931:U:O4	2.25	0.54
7:BI:195:ARG:NH2	9:BL:11:ARG:HA	2.23	0.54
8:BJ:79:ARG:HA	8:BJ:82:ARG:HG2	1.89	0.54
12:BV:46:ILE:O	12:BV:46:ILE:HG13	2.07	0.54
31:Bg:256:THR:OG1	31:Bg:259:GLY:O	2.15	0.54
34:B5:300:A:H2'	34:B5:301:A:C8	2.43	0.54
34:B5:304:U:H2'	34:B5:305:C:C6	2.43	0.54
34:B5:1087:A:H2'	34:B5:1088:A:C8	2.43	0.54
35:AA:194:ASN:HD22	38:A1:822:G:H4'	1.73	0.54
37:AC:126:ILE:HD11	37:AC:233:LEU:HD13	1.90	0.54
38:A1:187:A:H2'	38:A1:188:U:C6	2.43	0.54
38:A1:1343:A:H5''	53:AQ:13:SER:HB3	1.89	0.54
38:A1:1793:C:OP2	78:Ap:49:ARG:NH2	2.41	0.54
38:A1:3275:U:OP2	68:Af:66:VAL:HG21	2.08	0.54
50:AN:60:VAL:HG13	50:AN:134:LEU:HB2	1.89	0.54
64:Ab:42:ASN:O	64:Ab:45:HIS:N	2.41	0.54
66:Ad:19:ARG:HB3	66:Ad:35:GLU:OE1	2.08	0.54
5:BG:7:TYR:N	5:BG:12:SER:O	2.32	0.54
5:BG:163:THR:HG22	5:BG:165:GLY:H	1.73	0.54
9:BL:67:ARG:NH1	34:B5:112:A:O2'	2.38	0.54
11:BO:67:VAL:O	11:BO:71:CYS:N	2.38	0.54
27:BU:21:LYS:HA	27:BU:94:GLU:HG2	1.90	0.54
34:B5:36:C:H2'	34:B5:37:U:H6	1.71	0.54
37:AC:76:ARG:NH2	38:A1:1438:U:OP1	2.40	0.54
38:A1:697:A:H2'	38:A1:698:U:C6	2.42	0.54
38:A1:1498:A:H2'	38:A1:1499:C:C6	2.43	0.54
38:A1:1811:G:H2'	38:A1:1812:G:C8	2.41	0.54
38:A1:1836:C:H41	74:Al:3:ALA:HB2	1.73	0.54
38:A1:2428:U:H2'	38:A1:2429:G:C8	2.43	0.54
38:A1:2544:U:H3'	38:A1:2545:C:C6	2.43	0.54
41:AD:22:ARG:NE	41:AD:28:THR:OG1	2.36	0.54
80:DC:564:ARG:HB2	80:DC:725:GLN:HB3	1.89	0.54
81:EC:6897:G:H2'	81:EC:6898:U:C6	2.42	0.54
1:BA:127:ARG:HH12	1:BA:165:ARG:HH22	1.55	0.54
1:BA:171:GLY:O	1:BA:175:TYR:N	2.40	0.54
11:BO:58:TYR:OH	81:EC:6840:A:OP1	2.26	0.54
12:BV:19:ALA:O	12:BV:71:ARG:NH2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1003:A:H1'	34:B5:1005:A:N7	2.23	0.54
34:B5:1069:A:H2'	34:B5:1070:C:O4'	2.08	0.54
34:B5:1245:G:O6	34:B5:1251:U:O4	2.26	0.54
34:B5:1469:A:O2'	34:B5:1540:G:N2	2.32	0.54
37:AC:74:ILE:HD11	37:AC:94:CYS:SG	2.48	0.54
38:A1:123:A:OP1	44:AG:105:LYS:NZ	2.41	0.54
38:A1:240:U:H1'	38:A1:241:G:H2'	1.90	0.54
38:A1:271:C:O2	71:AI:82:ARG:NH2	2.38	0.54
38:A1:1721:U:OP2	54:AR:124:TYR:OH	2.26	0.54
38:A1:2429:G:H2'	38:A1:2430:A:C8	2.42	0.54
38:A1:2484:A:H2'	38:A1:2485:A:H8	1.73	0.54
38:A1:2961:G:H2'	38:A1:2962:U:C6	2.43	0.54
55:AS:132:THR:HG22	55:AS:133:ALA:N	2.23	0.54
81:EC:6821:U:H3'	81:EC:6822:U:H4'	1.90	0.54
4:BE:19:LEU:HD21	34:B5:788:A:C2	2.43	0.53
5:BG:136:LYS:HG3	5:BG:173:PRO:HB2	1.90	0.53
14:BX:50:LYS:HA	14:BX:103:LEU:HA	1.90	0.53
22:BP:47:ARG:HD3	34:B5:1555:A:OP1	2.08	0.53
27:BU:99:ILE:HD12	27:BU:102:ARG:HB2	1.91	0.53
34:B5:119:A:H3'	34:B5:120:PSU:H6	1.73	0.53
34:B5:591:A:H2'	34:B5:592:A:H8	1.73	0.53
34:B5:948:G:H2'	34:B5:949:C:C6	2.43	0.53
38:A1:69:C:O2'	38:A1:101:G:O2'	2.12	0.53
38:A1:236:G:H2'	38:A1:237:G:H8	1.73	0.53
38:A1:1340:G:H2'	38:A1:1341:U:C6	2.43	0.53
38:A1:1686:U:O2	38:A1:1688:U:O2'	2.23	0.53
38:A1:1786:G:H2'	38:A1:1787:A:C8	2.43	0.53
38:A1:2357:A:P	52:AP:138:LYS:HE3	2.48	0.53
38:A1:2507:C:H2'	38:A1:2508:U:C6	2.43	0.53
38:A1:2881:C:H2'	38:A1:2882:U:C6	2.43	0.53
38:A1:3006:A:C2	38:A1:3141:A:C4	2.96	0.53
41:AD:108:ARG:CZ	41:AD:253:PHE:HB2	2.38	0.53
58:AV:32:ARG:NH1	58:AV:32:ARG:HB3	2.23	0.53
58:AV:32:ARG:HB3	58:AV:32:ARG:HH11	1.72	0.53
62:AZ:64:LYS:HD2	62:AZ:67:LYS:HD3	1.91	0.53
62:AZ:72:ILE:HD11	62:AZ:107:ARG:HG2	1.90	0.53
3:BC:205:ARG:NH1	34:B5:7:G:O6	2.40	0.53
4:BE:75:LYS:HD2	4:BE:77:ARG:HH22	1.73	0.53
7:BI:69:SER:O	9:BL:24:LYS:NZ	2.41	0.53
7:BI:83:TYR:HB3	7:BI:101:ILE:HD11	1.91	0.53
7:BI:109:PHE:HA	7:BI:112:TRP:HB3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BN:119:GLU:O	10:BN:123:HIS:ND1	2.40	0.53
31:Bg:20:VAL:HA	31:Bg:37:SER:HA	1.90	0.53
33:BM:104:GLY:HA2	33:BM:115:VAL:HG21	1.90	0.53
34:B5:888:U:O2	34:B5:988:A:O2'	2.26	0.53
34:B5:1471:A:H62	34:B5:1538:U:H3	0.70	0.53
34:B5:1476:C:H2'	34:B5:1477:G:H8	1.73	0.53
34:B5:1752:U:H2'	34:B5:1753:A:C8	2.40	0.53
37:AC:61:SER:OG	38:A1:929:A:OP1	2.19	0.53
38:A1:75:G:H5''	48:AL:58:VAL:HB	1.89	0.53
38:A1:235:A:H2'	38:A1:236:G:H8	1.74	0.53
38:A1:269:G:N2	38:A1:295:A:OP2	2.31	0.53
38:A1:745:C:H2'	38:A1:746:A:H8	1.72	0.53
38:A1:1310:G:H2'	38:A1:1311:G:H8	1.73	0.53
38:A1:2865:PSU:O2'	38:A1:2866:U:O4'	2.27	0.53
38:A1:3095:U:H2'	38:A1:3096:C:C6	2.44	0.53
45:AH:86:TYR:CE2	45:AH:151:VAL:HB	2.43	0.53
47:AJ:14:ILE:HA	47:AJ:131:MET:SD	2.48	0.53
54:AR:105:LEU:HD13	54:AR:135:LYS:HE3	1.89	0.53
80:DC:114:GLU:HG3	80:DC:384:LYS:NZ	2.22	0.53
80:DC:156:VAL:HG23	80:DC:210:ALA:HB3	1.90	0.53
80:DC:225:PHE:HA	80:DC:228:ARG:HE	1.72	0.53
81:EC:6948:U:H4'	81:EC:6949:G:H2'	1.90	0.53
8:BJ:3:ARG:NH2	34:B5:39:A:O3'	2.42	0.53
19:BD:40:ARG:HB3	19:BD:47:GLU:O	2.09	0.53
20:BF:223:SER:HB2	81:EC:6840:A:N1	2.24	0.53
24:BR:61:ILE:HD11	24:BR:71:PHE:CE2	2.43	0.53
29:Bc:29:ARG:HE	29:Bc:40:ILE:C	2.17	0.53
34:B5:886:U:C2	34:B5:887:A:C8	2.96	0.53
34:B5:1415:PSU:H2'	34:B5:1416:G:C8	2.43	0.53
36:AB:46:PHE:CE1	36:AB:81:THR:HB	2.43	0.53
37:AC:33:ASP:OD1	37:AC:34:ILE:N	2.41	0.53
38:A1:443:G:N1	38:A1:492:C:OP2	2.27	0.53
38:A1:718:G:OP1	63:Aa:117:ARG:NH2	2.42	0.53
38:A1:2094:C:H2'	38:A1:2095:G:H8	1.73	0.53
44:AG:93:LEU:HA	44:AG:96:LYS:NZ	2.23	0.53
53:AQ:147:ARG:HB3	53:AQ:150:VAL:HG23	1.91	0.53
1:BA:63:ILE:HG12	12:BV:36:VAL:HG12	1.89	0.53
2:BB:149:GLN:NE2	2:BB:151:LYS:HB2	2.24	0.53
4:BE:36:HIS:CE1	4:BE:143:ASP:HB3	2.43	0.53
10:BN:120:SER:O	10:BN:124:ARG:HG2	2.08	0.53
11:BO:132:ARG:NH2	34:B5:1789:G:OP2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BP:18:ARG:HD3	25:BS:95:GLY:CA	2.38	0.53
23:BQ:74:HIS:NE2	34:B5:1482:C:O2	2.42	0.53
25:BS:27:LYS:NZ	34:B5:1534:G:OP2	2.40	0.53
36:AB:173:GLN:HG3	36:AB:175:LYS:H	1.74	0.53
38:A1:68:C:O3'	50:AN:177:GLY:HA2	2.08	0.53
38:A1:581:U:H2'	38:A1:582:G:H8	1.73	0.53
38:A1:1111:U:H2'	38:A1:1112:A:H8	1.74	0.53
38:A1:1203:A:N3	38:A1:2855:U:O2'	2.31	0.53
38:A1:1817:G:H8	38:A1:1818:U:C5	2.26	0.53
38:A1:2466:G:H4'	79:E:60:ARG:HH12	1.72	0.53
43:AF:53:LYS:O	43:AF:57:THR:HG23	2.08	0.53
55:AS:10:ILE:HG12	55:AS:26:ARG:HG3	1.90	0.53
58:AV:112:SER:O	58:AV:132:ASN:ND2	2.41	0.53
68:Af:48:ARG:HG3	68:Af:68:TRP:CZ3	2.43	0.53
81:EC:6880:G:H3'	81:EC:6881:U:C4'	2.39	0.53
5:BG:98:ARG:NH1	5:BG:99:GLY:O	2.41	0.53
6:BH:79:ARG:NH1	6:BH:82:GLU:OE1	2.41	0.53
34:B5:871:G:C6	34:B5:957:G:N1	2.77	0.53
34:B5:1144:U:H2'	34:B5:1145:U:C6	2.44	0.53
34:B5:1642:G:O2'	34:B5:1781:MA6:O2'	2.21	0.53
34:B5:1757:G:H5'	38:A1:2256:A:C8	2.43	0.53
36:AB:159:ARG:HB3	36:AB:180:GLU:HB3	1.91	0.53
38:A1:1381:A:H2'	38:A1:1382:G:H8	1.71	0.53
38:A1:3176:G:N7	42:AE:167:ASN:HB2	2.24	0.53
42:AE:3:ALA:HB2	67:Ae:77:ALA:HB2	1.90	0.53
48:AL:7:LEU:O	63:Aa:49:HIS:NE2	2.33	0.53
59:AW:20:LEU:HD12	59:AW:21:PHE:H	1.74	0.53
63:Aa:103:ASP:HB2	63:Aa:126:LYS:HD3	1.90	0.53
8:BJ:85:VAL:HG11	8:BJ:104:PHE:CD1	2.44	0.53
12:BV:79:LEU:HD12	12:BV:82:VAL:HG11	1.91	0.53
14:BX:70:LYS:O	14:BX:87:VAL:HG22	2.09	0.53
20:BF:197:GLU:HG2	20:BF:208:SER:HB2	1.90	0.53
21:BK:25:LYS:HB3	21:BK:62:GLN:HB2	1.91	0.53
34:B5:1479:A:H2'	34:B5:1480:G:C8	2.43	0.53
34:B5:1667:A:H2'	34:B5:1668:G:H8	1.74	0.53
38:A1:261:U:H2'	38:A1:262:U:C6	2.44	0.53
38:A1:1008:U:H2'	38:A1:1009:A:C8	2.43	0.53
38:A1:1504:A:N1	38:A1:1515:A:O2'	2.35	0.53
38:A1:2631:U:H2'	38:A1:2632:G:H8	1.74	0.53
38:A1:2730:G:H4'	53:AQ:184:PHE:CG	2.43	0.53
38:A1:2801:A:O2'	38:A1:2802:A:H2'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2882:U:H2'	38:A1:2883:U:C6	2.43	0.53
38:A1:3000:A:H2'	38:A1:3001:C:C6	2.44	0.53
38:A1:3215:A:N6	49:AM:122:VAL:HG22	2.24	0.53
40:A4:147:U:H1'	60:AX:37:THR:HG23	1.91	0.53
42:AE:54:TYR:HA	42:AE:65:ILE:HG22	1.90	0.53
46:AI:42:THR:HG22	46:AI:45:GLU:HG3	1.91	0.53
1:BA:110:TYR:HA	1:BA:115:PHE:CD1	2.44	0.53
8:BJ:54:ARG:HA	8:BJ:57:ARG:HB3	1.90	0.53
9:BL:57:LYS:HB2	9:BL:131:ILE:HD12	1.88	0.53
11:BO:87:GLY:HA3	11:BO:120:PRO:HG2	1.90	0.53
19:BD:53:THR:HG21	19:BD:94:ARG:HD3	1.91	0.53
19:BD:71:LEU:O	19:BD:75:LYS:NZ	2.40	0.53
21:BK:24:LYS:HB2	21:BK:39:ASN:CG	2.34	0.53
22:BP:20:VAL:HG13	22:BP:24:LYS:HG3	1.91	0.53
23:BQ:71:GLY:HA2	34:B5:1483:A:H4'	1.91	0.53
24:BR:2:GLY:N	34:B5:1403:C:OP1	2.42	0.53
28:BZ:53:GLU:HG2	81:EC:6865:G:C2	2.43	0.53
34:B5:86:A:H2'	34:B5:87:C:H6	1.74	0.53
34:B5:901:G:H2'	34:B5:902:G:C8	2.44	0.53
34:B5:1055:U:H2'	34:B5:1056:U:O2	2.09	0.53
36:AB:360:ASP:OD2	59:AW:17:ARG:NH2	2.42	0.53
38:A1:519:A:N6	55:AS:65:ASN:O	2.30	0.53
38:A1:1717:U:O4	38:A1:1727:G:O6	2.27	0.53
38:A1:1783:U:H2'	38:A1:1784:G:H8	1.73	0.53
38:A1:2344:U:H2'	38:A1:2345:A:C8	2.44	0.53
38:A1:2837:A:H2'	38:A1:2845:A:C2	2.44	0.53
38:A1:3275:U:H5'	68:Af:68:TRP:CZ2	2.39	0.53
62:AZ:25:ILE:HA	62:AZ:43:VAL:HG12	1.90	0.53
73:Ak:11:PHE:CD1	73:Ak:54:LEU:HD11	2.44	0.53
78:Ap:7:LYS:O	78:Ap:27:LYS:NZ	2.41	0.53
3:BC:227:PRO:HA	3:BC:230:TRP:CE2	2.43	0.53
4:BE:58:GLY:N	34:B5:447:U:OP1	2.41	0.53
5:BG:5:ILE:HG22	5:BG:111:LEU:HB2	1.90	0.53
9:BL:2:SER:HA	9:BL:53:TYR:H	1.74	0.53
13:BW:80:ASN:ND2	34:B5:747:C:O2'	2.40	0.53
14:BX:114:LYS:HB2	34:B5:572:C:OP1	2.09	0.53
31:Bg:275:ARG:HH21	31:Bg:276:PRO:HD2	1.74	0.53
33:BM:29:LYS:HA	33:BM:32:LEU:HG	1.91	0.53
34:B5:217:A:N1	34:B5:843:U:N3	2.54	0.53
38:A1:1009:A:O2'	46:AI:40:LYS:NZ	2.42	0.53
38:A1:1352:A:H2	38:A1:1355:A:H62	1.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1456:A:N1	38:A1:1476:G:O2'	2.40	0.53
38:A1:2353:G:H5''	52:AP:86:LYS:HB2	1.89	0.53
38:A1:2842:U:OP1	38:A1:2844:C:N4	2.39	0.53
38:A1:2984:C:H2'	38:A1:2985:C:C6	2.43	0.53
40:A4:11:C:O3'	52:AP:3:ARG:NH2	2.34	0.53
41:AD:258:LYS:NZ	41:AD:261:THR:HG22	2.23	0.53
47:AJ:84:LEU:HD13	47:AJ:87:LYS:HB2	1.91	0.53
78:Ap:80:ARG:O	78:Ap:84:ARG:HG3	2.09	0.53
79:E:104:SER:HB3	79:E:127:GLN:HG3	1.91	0.53
80:DC:218:TRP:HZ3	80:DC:220:PHE:HD1	1.57	0.53
2:BB:112:SER:HA	16:Ba:68:TYR:CE1	2.43	0.53
8:BJ:123:HIS:CE1	18:Be:37:ARG:HG3	2.44	0.53
25:BS:82:PRO:HB2	25:BS:84:TRP:NE1	2.23	0.53
26:BT:130:ARG:NH2	34:B5:1359:C:O2'	2.28	0.53
28:BZ:74:SER:OG	34:B5:1533:C:OP1	2.23	0.53
34:B5:481:A:O2'	34:B5:482:U:O5'	2.27	0.53
34:B5:538:A:H5'	34:B5:543:C:H41	1.74	0.53
34:B5:732:G:H8	34:B5:734:A:H8	1.57	0.53
34:B5:1356:U:O2	34:B5:1367:G:N2	2.27	0.53
34:B5:1499:G:N1	34:B5:1509:C:N3	2.57	0.53
34:B5:1739:C:H2'	34:B5:1740:A:H8	1.73	0.53
35:AA:111:THR:HG22	35:AA:136:ILE:HG22	1.90	0.53
36:AB:266:ARG:HH22	38:A1:2392:C:H1'	1.73	0.53
38:A1:753:C:H2'	38:A1:754:G:H8	1.74	0.53
38:A1:2419:A:H2'	38:A1:2420:C:C6	2.44	0.53
38:A1:2453:U:H5'	38:A1:2461:A:H5''	1.90	0.53
38:A1:2794:G:OP1	77:Ao:61:LYS:NZ	2.42	0.53
39:A3:6:C:OP1	41:AD:54:ARG:NE	2.37	0.53
39:A3:121:U:H5''	41:AD:259:LYS:NZ	2.24	0.53
44:AG:115:ALA:O	44:AG:120:LYS:N	2.41	0.53
45:AH:90:MET:HE2	45:AH:181:VAL:HG22	1.91	0.53
58:AV:97:ASP:OD1	58:AV:98:ASN:N	2.36	0.53
79:E:12:HIS:O	79:E:15:GLU:HG2	2.08	0.53
4:BE:139:VAL:HG13	4:BE:150:PRO:HG3	1.89	0.53
7:BI:99:ALA:HB3	34:B5:329:G:H5'	1.91	0.53
22:BP:122:THR:O	34:B5:1183:A:N6	2.42	0.53
27:BU:77:LYS:NZ	34:B5:1195:C:OP1	2.41	0.53
31:Bg:123:ILE:HD11	31:Bg:131:ILE:HD12	1.91	0.53
31:Bg:192:PHE:HB3	31:Bg:223:TRP:CE2	2.43	0.53
34:B5:5:U:O2'	34:B5:553:G:H4'	2.09	0.53
34:B5:1067:C:H2'	34:B5:1068:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1164:G:H2'	34:B5:1165:G:C8	2.43	0.53
34:B5:1168:U:H2'	34:B5:1169:G:H8	1.73	0.53
34:B5:1529:C:H2'	34:B5:1530:C:C6	2.44	0.53
38:A1:426:G:H5'	67:Ae:50:ILE:HG22	1.90	0.53
38:A1:761:A:H2'	38:A1:762:U:H6	1.73	0.53
38:A1:1310:G:H2'	38:A1:1311:G:C8	2.44	0.53
38:A1:1804:A:H2'	38:A1:1805:C:C6	2.43	0.53
38:A1:2611:U:H2'	38:A1:2612:U:C6	2.44	0.53
61:AY:70:ILE:HA	61:AY:82:VAL:HG12	1.91	0.53
61:AY:115:ARG:O	61:AY:119:ILE:HG12	2.09	0.53
62:AZ:109:GLU:OE2	62:AZ:109:GLU:N	2.36	0.53
80:DC:412:ARG:HE	80:DC:426:LEU:HD21	1.74	0.53
10:BN:16:ILE:HD11	34:B5:862:A:O5'	2.09	0.52
23:BQ:99:GLU:OE2	31:Bg:57:PRO:HB2	2.08	0.52
25:BS:2:SER:HB2	28:BZ:78:ILE:HG23	1.91	0.52
34:B5:1248:C:H2'	34:B5:1249:U:H6	1.74	0.52
34:B5:1487:A:H2'	34:B5:1488:G:C8	2.44	0.52
35:AA:95:SER:N	38:A1:2551:U:O4	2.41	0.52
38:A1:155:G:N2	38:A1:265:A:OP2	2.42	0.52
38:A1:1250:G:H5'	38:A1:1251:A:O5'	2.10	0.52
43:AF:160:ARG:HG2	43:AF:203:TRP:CD2	2.44	0.52
51:AO:35[A]:VAL:HG11	51:AO:80[A]:PHE:HE1	1.75	0.52
51:AO:83[A]:ALA:O	51:AO:87[A]:MET:HG3	2.10	0.52
61:AY:31:LEU:HD12	61:AY:75:ARG:HG2	1.91	0.52
79:E:125:GLY:H	79:E:126:PRO:HD2	1.74	0.52
80:DC:77:LEU:HB2	80:DC:100:ILE:HG23	1.90	0.52
81:EC:6936:G:H2'	81:EC:6937:G:C8	2.42	0.52
2:BB:114:VAL:HA	2:BB:142:PHE:CE2	2.44	0.52
4:BE:35:PRO:HD2	4:BE:83:PRO:HG2	1.92	0.52
5:BG:32:ILE:O	5:BG:34:GLN:NE2	2.28	0.52
6:BH:74:GLN:HG3	6:BH:92:PHE:CE2	2.44	0.52
8:BJ:176:ASN:HA	8:BJ:179:ARG:HG2	1.90	0.52
23:BQ:9:THR:OG1	34:B5:1340:U:O4	2.26	0.52
31:Bg:178:VAL:HB	31:Bg:192:PHE:HB2	1.90	0.52
34:B5:96:G:H1	34:B5:387:A:H61	1.55	0.52
34:B5:808:U:H2'	34:B5:809:A:C8	2.44	0.52
34:B5:1005:A:H2'	34:B5:1006:C:C6	2.44	0.52
34:B5:1333:C:H2'	34:B5:1334:U:H6	1.74	0.52
34:B5:1393:C:H2'	34:B5:1394:G:C8	2.41	0.52
38:A1:1598:G:H2'	38:A1:1599:G:C8	2.44	0.52
38:A1:1757:A:H2'	38:A1:1758:G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1799:A:H2'	38:A1:1800:A:H8	1.72	0.52
46:AI:4:ARG:HD2	46:AI:9:TYR:CE2	2.44	0.52
51:AO:21[A]:SER:HB2	51:AO:87[A]:MET:HE1	1.91	0.52
51:AO:90[A]:HIS:HA	51:AO:95[A]:GLY:HA3	1.92	0.52
65:Ac:24:THR:HG22	65:Ac:91:SER:HB3	1.90	0.52
74:AI:20:ASN:OD1	74:AI:41:ARG:NE	2.36	0.52
4:BE:44:LEU:HD13	4:BE:70:VAL:HG11	1.91	0.52
15:BY:128:LYS:HE2	15:BY:132:ARG:HH21	1.74	0.52
21:BK:62:GLN:HG3	30:Bd:20:GLN:HE22	1.75	0.52
38:A1:667:C:H1'	48:AL:10:LEU:HD21	1.90	0.52
38:A1:679:U:O2'	38:A1:788:C:O2	2.26	0.52
38:A1:860:G:OP1	78:Ap:17:ARG:NH1	2.25	0.52
38:A1:1047:A:N3	38:A1:2633:U:O2'	2.43	0.52
38:A1:1658:G:O4'	38:A1:1796:G:H2'	2.10	0.52
38:A1:2219:A:H2'	38:A1:2220:A:H8	1.75	0.52
38:A1:2280:A:H61	38:A1:2310:U:H1'	1.74	0.52
38:A1:2427:U:H3	38:A1:2602:G:H1	1.57	0.52
38:A1:2429:G:H2'	38:A1:2430:A:H8	1.73	0.52
38:A1:2683:U:H2'	38:A1:2684:C:C6	2.45	0.52
42:AE:142:ASP:O	42:AE:146:ILE:HG12	2.09	0.52
45:AH:1:MET:O	45:AH:1:MET:HE3	2.09	0.52
7:BI:46:VAL:HB	7:BI:54:LYS:HB2	1.91	0.52
9:BL:101:GLU:OE2	9:BL:103:ARG:HG3	2.10	0.52
28:BZ:39:ALA:N	28:BZ:70:LYS:O	2.36	0.52
28:BZ:50:ILE:O	28:BZ:55:PRO:HD3	2.10	0.52
34:B5:1218:G:N1	34:B5:1444:A:OP2	2.27	0.52
34:B5:1291:G:H22	34:B5:1324:G:N2	2.06	0.52
34:B5:1527:C:H2'	34:B5:1528:U:C6	2.44	0.52
38:A1:172:G:H21	38:A1:173:G:H1	1.56	0.52
38:A1:673:U:H2'	38:A1:674:G:H8	1.75	0.52
38:A1:920:A:OP1	38:A1:923:C:N4	2.39	0.52
38:A1:938:C:OP2	63:Aa:26:ARG:NH1	2.43	0.52
38:A1:1174:G:H2'	38:A1:1175:C:C6	2.44	0.52
38:A1:1566:A:C8	38:A1:1570:U:H1'	2.44	0.52
38:A1:2597:U:H2'	38:A1:2598:G:C8	2.44	0.52
38:A1:3290:G:H2'	38:A1:3291:G:H8	1.74	0.52
38:A1:3353:G:O2'	38:A1:3356:G:OP2	2.27	0.52
39:A3:13:A:OP2	39:A3:67:G:N2	2.42	0.52
51:AO:12[A]:LYS:HB3	55:AS:167:ARG:HH22	1.73	0.52
58:AV:67:PRO:HA	58:AV:70:ARG:NH1	2.25	0.52
61:AY:51:ARG:HG3	61:AY:52:ARG:N	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:AZ:76:ASN:OD1	62:AZ:77:TYR:N	2.43	0.52
63:Aa:24:LYS:O	63:Aa:26:ARG:HG2	2.08	0.52
79:E:144:LEU:HD12	79:E:147:LYS:HB3	1.91	0.52
80:DC:435:VAL:HG23	80:DC:443:GLU:H	1.73	0.52
5:BG:53:SER:OG	5:BG:110:ALA:O	2.28	0.52
7:BI:5:ARG:O	34:B5:336:G:N2	2.43	0.52
7:BI:26:LYS:HB2	7:BI:29:LEU:HD23	1.90	0.52
7:BI:190:ALA:HA	7:BI:193:LEU:HD12	1.91	0.52
13:BW:80:ASN:HD21	13:BW:124:LYS:NZ	2.07	0.52
14:BX:92:CYS:HA	14:BX:95:PHE:HB2	1.90	0.52
15:BY:21:LYS:NZ	34:B5:782:U:H1'	2.24	0.52
27:BU:28:SER:HB2	27:BU:34:LEU:HD13	1.91	0.52
31:Bg:83:ALA:HB2	31:Bg:113:VAL:HG13	1.91	0.52
33:BM:23:THR:OG1	33:BM:27:ALA:N	2.42	0.52
34:B5:204:G:H8	34:B5:204:G:OP2	1.92	0.52
34:B5:446:A:N6	34:B5:461:G:H21	2.07	0.52
34:B5:607:G:H5'	34:B5:613:G:N2	2.25	0.52
34:B5:1479:A:H2'	34:B5:1480:G:H8	1.75	0.52
35:AA:136:ILE:HD11	35:AA:146:THR:HB	1.92	0.52
38:A1:2436:U:H4'	44:AG:70:LYS:HG3	1.92	0.52
38:A1:2458:A:O2'	38:A1:2459:A:H5''	2.09	0.52
39:A3:62:U:O3'	41:AD:285:ARG:NH2	2.40	0.52
40:A4:52:A:N6	74:Al:27:ILE:HD13	2.24	0.52
55:AS:110:MET:HA	55:AS:110:MET:HE3	1.92	0.52
70:Ah:26:LYS:HA	70:Ah:26:LYS:HE3	1.91	0.52
76:An:15:ARG:O	76:An:19:LYS:HG2	2.09	0.52
80:DC:798:PHE:HB3	85:DC:903:SO1:O60	2.10	0.52
81:EC:6804:A:H4'	81:EC:6806:U:H5''	1.91	0.52
81:EC:6863:C:H2'	81:EC:6864:A:C4	2.44	0.52
81:EC:6933:G:H2'	81:EC:6934:U:H5'	1.91	0.52
3:BC:99:LYS:NZ	34:B5:1299:G:O3'	2.43	0.52
9:BL:133:LYS:HE2	34:B5:324:U:OP1	2.10	0.52
10:BN:100:LYS:O	10:BN:104:ARG:NH1	2.43	0.52
13:BW:32:LYS:HG3	34:B5:637:C:OP1	2.10	0.52
18:Be:41:THR:HG23	18:Be:45:VAL:HB	1.92	0.52
19:BD:38:GLU:HB3	19:BD:49:ILE:HG13	1.90	0.52
20:BF:53:VAL:HG12	20:BF:55:ASP:H	1.75	0.52
20:BF:100:ASN:HD22	20:BF:103:ASN:HD22	1.56	0.52
20:BF:141:GLY:HA2	20:BF:171:ALA:HB2	1.91	0.52
28:BZ:70:LYS:HE2	81:EC:6868:C:H5'	1.91	0.52
32:Bf:133:ALA:N	32:Bf:140:TYR:O	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:254:A:H3'	34:B5:255:U:H6	1.75	0.52
34:B5:290:G:H2'	34:B5:291:G:H8	1.75	0.52
34:B5:546:U:H2'	34:B5:547:U:C6	2.45	0.52
34:B5:1042:G:H2'	34:B5:1043:A:C8	2.45	0.52
34:B5:1244:A:O2'	34:B5:1246:C:OP1	2.21	0.52
34:B5:1541:G:C2	34:B5:1570:A:N6	2.76	0.52
35:AA:70:ARG:HH21	35:AA:72:ARG:HE	1.58	0.52
36:AB:116:ARG:NH2	38:A1:3315:G:OP1	2.43	0.52
38:A1:47:C:OP2	38:A1:48:A:O2'	2.24	0.52
38:A1:69:C:OP1	50:AN:178:HIS:ND1	2.39	0.52
38:A1:1082:U:H2'	38:A1:1083:G:O4'	2.10	0.52
38:A1:3225:C:H2'	38:A1:3226:A:H8	1.73	0.52
40:A4:36:G:C5	70:Ah:86:ARG:HD3	2.45	0.52
42:AE:170:LYS:NZ	68:Af:34:GLY:O	2.35	0.52
44:AG:141:ALA:O	44:AG:144:GLU:HG3	2.09	0.52
46:AI:43:VAL:HA	46:AI:139:ARG:HH12	1.75	0.52
61:AY:89:LYS:HE2	61:AY:91:ASN:HD21	1.73	0.52
7:BI:98:LYS:HB2	34:B5:329:G:H5''	1.91	0.52
28:BZ:68:ARG:NH1	81:EC:6868:C:N3	2.57	0.52
34:B5:79:C:H2'	34:B5:80:A:O4'	2.10	0.52
34:B5:749:U:H2'	34:B5:750:U:C6	2.45	0.52
34:B5:1525:A:H2'	34:B5:1526:A:C8	2.45	0.52
34:B5:1673:G:H1	34:B5:1728:A:N6	2.07	0.52
38:A1:656:A:H2'	38:A1:657:A:H8	1.74	0.52
38:A1:842:G:H2'	38:A1:843:A:H8	1.74	0.52
38:A1:1940:G:H21	38:A1:3362:A:H8	1.56	0.52
38:A1:1941:C:H2'	38:A1:1942:U:C6	2.44	0.52
48:AL:159:VAL:HG22	63:Aa:124:ILE:HD11	1.91	0.52
63:Aa:103:ASP:HA	63:Aa:126:LYS:HB2	1.91	0.52
65:Ac:86:ARG:NH1	78:Ap:44:LYS:HG2	2.25	0.52
77:Ao:27:GLN:HE22	77:Ao:68:VAL:HG12	1.73	0.52
79:E:57:ASN:OD1	79:E:182:GLN:NE2	2.36	0.52
4:BE:187:ARG:HH12	34:B5:753:A:H8	1.57	0.52
11:BO:35:GLY:O	34:B5:918:U:O2'	2.26	0.52
20:BF:42:LEU:N	20:BF:46:TRP:O	2.43	0.52
21:BK:62:GLN:HE22	30:Bd:25:SER:H	1.58	0.52
31:Bg:234:LEU:HD11	31:Bg:265:LEU:HD21	1.92	0.52
34:B5:121:U:H2'	34:B5:122:U:H6	1.74	0.52
34:B5:143:G:O2'	34:B5:144:U:O5'	2.25	0.52
34:B5:848:C:O2'	34:B5:850:A:N6	2.43	0.52
34:B5:1120:U:H2'	34:B5:1121:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1433:G:H2'	34:B5:1434:U:C6	2.45	0.52
34:B5:1739:C:H2'	34:B5:1740:A:C8	2.45	0.52
37:AC:152:VAL:HG21	37:AC:156:LEU:HD22	1.92	0.52
37:AC:304:GLN:HE22	38:A1:594:U:H3	1.55	0.52
38:A1:100:A:H2'	38:A1:101:G:N3	2.25	0.52
38:A1:120:G:N2	44:AG:126:SER:OG	2.43	0.52
38:A1:1870:C:O2	38:A1:3066:U:O2'	2.27	0.52
38:A1:1892:G:H2'	38:A1:1893:A:O4'	2.10	0.52
38:A1:2681:U:H5''	47:AJ:51:ARG:NH2	2.25	0.52
38:A1:3290:G:H2'	38:A1:3291:G:C8	2.45	0.52
40:A4:88:A:HO2'	40:A4:89:A:P	2.33	0.52
52:AP:64:ASN:O	52:AP:67:ILE:HG12	2.10	0.52
81:EC:6901:C:O2'	81:EC:6902:U:H5'	2.09	0.52
1:BA:180:GLU:HA	1:BA:183:ARG:HB3	1.92	0.52
4:BE:181:VAL:HG12	4:BE:227:VAL:HG22	1.90	0.52
20:BF:146:THR:HB	20:BF:157:ARG:HB3	1.91	0.52
26:BT:64:HIS:CE1	26:BT:68:ARG:HG3	2.44	0.52
34:B5:119:A:H5''	34:B5:120:PSU:HN1	1.74	0.52
34:B5:143:G:HO2'	34:B5:144:U:C5'	2.23	0.52
34:B5:948:G:H2'	34:B5:949:C:H6	1.74	0.52
34:B5:1528:U:H2'	34:B5:1529:C:C6	2.45	0.52
34:B5:1600:A:H1'	34:B5:1601:G:OP2	2.09	0.52
36:AB:227:GLU:HA	38:A1:1887:A:H4'	1.92	0.52
38:A1:596:C:H2'	38:A1:597:G:O4'	2.10	0.52
38:A1:2426:U:H2'	38:A1:2427:U:C6	2.45	0.52
38:A1:2427:U:H2'	38:A1:2428:U:C6	2.45	0.52
38:A1:2930:A:H2'	38:A1:2931:C:C6	2.45	0.52
39:A3:5:G:OP1	47:AJ:143:ARG:NH2	2.35	0.52
39:A3:6:C:OP2	41:AD:22:ARG:NH2	2.42	0.52
43:AF:148:VAL:HG12	43:AF:181:ILE:HD11	1.91	0.52
47:AJ:10:ARG:O	47:AJ:133:ARG:HD3	2.10	0.52
61:AY:22:ALA:O	61:AY:27:ARG:NH2	2.43	0.52
64:Ab:47:LEU:HA	64:Ab:50:THR:HG22	1.90	0.52
73:Ak:23:ALA:HB2	73:Ak:73:LEU:HD21	1.92	0.52
73:Ak:39:ARG:NH2	73:Ak:59:ALA:HA	2.24	0.52
80:DC:594:ASP:HB3	80:DC:597:VAL:HG23	1.91	0.52
3:BC:43:ARG:HB3	3:BC:247:ALA:HB3	1.92	0.52
4:BE:9:LEU:HB2	4:BE:30:ARG:HD3	1.92	0.52
16:Ba:8:ASN:ND2	34:B5:1791:A:OP1	2.34	0.52
20:BF:37:GLN:HE22	23:BQ:56:GLY:HA2	1.75	0.52
22:BP:44:ARG:HH12	22:BP:82:ASN:HB2	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BS:16:ARG:NH1	25:BS:19:ASN:H	2.05	0.52
31:Bg:19:TRP:O	31:Bg:38:ARG:N	2.42	0.52
31:Bg:26:SER:OG	31:Bg:74:THR:O	2.25	0.52
34:B5:175:G:N2	34:B5:266:A:O4'	2.43	0.52
34:B5:199:G:H2'	34:B5:200:A:H8	1.72	0.52
34:B5:1542:G:N2	34:B5:1568:C:O2'	2.41	0.52
35:AA:128:ARG:NE	38:A1:2177:G:OP2	2.43	0.52
38:A1:507:U:H2'	38:A1:508:U:C6	2.45	0.52
38:A1:1213:G:H4'	55:AS:90:MET:HB2	1.90	0.52
38:A1:1666:G:H2'	38:A1:1667:A:C8	2.44	0.52
38:A1:1856:C:N4	38:A1:1857:C:H41	2.08	0.52
38:A1:2480:A:OP1	79:E:106:LYS:HD3	2.10	0.52
38:A1:3095:U:H2'	38:A1:3096:C:H6	1.75	0.52
42:AE:40:LEU:HD11	42:AE:54:TYR:HB2	1.91	0.52
44:AG:189:LEU:HD12	44:AG:190:VAL:HG13	1.92	0.52
68:Af:38:PRO:HG3	68:Af:77:ASN:HA	1.92	0.52
70:Ah:93:THR:OG1	70:Ah:96:GLU:HB2	2.10	0.52
1:BA:53:THR:HB	1:BA:161:PRO:HG2	1.91	0.51
6:BH:112:ARG:NH2	34:B5:638:U:O2'	2.43	0.51
9:BL:7:VAL:O	9:BL:14:GLN:NE2	2.43	0.51
9:BL:57:LYS:HD3	9:BL:131:ILE:HG23	1.91	0.51
15:BY:88:THR:HA	15:BY:91:LEU:HD12	1.92	0.51
19:BD:139:SER:OG	34:B5:1277:G:OP1	2.26	0.51
21:BK:26:ASP:H	21:BK:39:ASN:ND2	2.08	0.51
22:BP:61:ARG:HA	22:BP:64:LYS:HD2	1.90	0.51
23:BQ:36:ILE:HG12	23:BQ:49:TYR:HE1	1.75	0.51
29:Bc:22:ARG:NH1	29:Bc:22:ARG:HA	2.25	0.51
33:BM:131:ASP:O	33:BM:135:MET:HB3	2.10	0.51
34:B5:522:U:H2'	34:B5:523:G:O4'	2.10	0.51
34:B5:1391:A:H2'	34:B5:1392:U:C6	2.45	0.51
34:B5:1684:U:H2'	34:B5:1685:G:H8	1.75	0.51
38:A1:794:U:H2'	38:A1:795:G:H8	1.74	0.51
38:A1:1396:C:H2'	38:A1:1397:C:C6	2.45	0.51
38:A1:1915:A:H2'	38:A1:1916:U:C6	2.44	0.51
38:A1:2613:U:O2'	38:A1:2805:G:OP2	2.22	0.51
41:AD:122:VAL:HG23	41:AD:125:VAL:HG22	1.90	0.51
41:AD:226:TYR:HE2	41:AD:236:LEU:HD21	1.74	0.51
43:AF:80:GLN:HG3	56:AT:136:ARG:HG2	1.91	0.51
43:AF:110:ARG:HG2	43:AF:113:SER:HB3	1.92	0.51
50:AN:103:GLU:OE2	50:AN:167:THR:OG1	2.25	0.51
63:Aa:76:ASP:OD1	63:Aa:77:LYS:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:Ad:72:ARG:HD3	66:Ad:73:LEU:H	1.75	0.51
79:E:65:ILE:HD11	79:E:111:ILE:HD13	1.92	0.51
81:EC:6787:U:P	81:EC:6804:A:H62	2.32	0.51
81:EC:6883:A:H1'	81:EC:6884:G:H5''	1.92	0.51
81:EC:6893:C:H41	81:EC:6938:A:H1'	1.75	0.51
1:BA:181:VAL:O	1:BA:185:ARG:N	2.43	0.51
2:BB:20:VAL:HG13	2:BB:21:VAL:HG23	1.91	0.51
3:BC:237:VAL:HG11	12:BV:50:TYR:HE1	1.74	0.51
8:BJ:89:ASP:CG	8:BJ:90:LYS:H	2.18	0.51
14:BX:62:LYS:NZ	34:B5:1136:U:H5''	2.25	0.51
15:BY:26:ASP:OD1	15:BY:26:ASP:N	2.43	0.51
17:Bb:51:GLN:NE2	34:B5:870:C:O2	2.43	0.51
20:BF:118:LEU:HA	20:BF:121:ILE:HD12	1.93	0.51
21:BK:14:TYR:HA	21:BK:17:GLN:NE2	2.24	0.51
27:BU:99:ILE:HA	27:BU:102:ARG:HB2	1.92	0.51
33:BM:41:LEU:HD21	33:BM:101:ALA:HB1	1.92	0.51
34:B5:1186:U:H2'	34:B5:1187:PSU:O4'	2.09	0.51
38:A1:1257:C:H5''	38:A1:1258:U:H5	1.74	0.51
38:A1:1798:A:H2'	38:A1:1799:A:C8	2.45	0.51
38:A1:2684:C:H2'	38:A1:2685:C:C6	2.45	0.51
38:A1:3308:C:N3	52:AP:69:ARG:NH2	2.55	0.51
39:A3:47:C:H5''	41:AD:204:VAL:HG22	1.91	0.51
53:AQ:120:GLU:OE2	53:AQ:122:ILE:HG23	2.09	0.51
80:DC:747:LEU:HD13	80:DC:753:GLN:HA	1.93	0.51
81:EC:6765:A:H2'	81:EC:6766:U:C6	2.45	0.51
4:BE:11:ARG:HA	4:BE:28:ALA:HB2	1.90	0.51
6:BH:87:ASP:OD1	6:BH:88:ARG:NH1	2.43	0.51
9:BL:27:THR:HG23	9:BL:30:ARG:H	1.75	0.51
10:BN:65:VAL:HG13	10:BN:66:ILE:HG13	1.92	0.51
10:BN:73:ARG:HD2	34:B5:859:A:C4	2.45	0.51
12:BV:25:LYS:HB3	12:BV:28:ASP:HB2	1.91	0.51
21:BK:54:TYR:HA	21:BK:71:GLU:HG3	1.92	0.51
22:BP:75:PRO:HB3	22:BP:104:GLN:HG2	1.91	0.51
34:B5:1373:C:H2'	34:B5:1374:C:C6	2.45	0.51
34:B5:1525:A:H2'	34:B5:1526:A:H8	1.74	0.51
38:A1:115:A:H2'	38:A1:265:A:H2'	1.92	0.51
38:A1:275:U:H2'	38:A1:276:U:C6	2.44	0.51
38:A1:642:U:P	63:Aa:22:ILE:HG22	2.51	0.51
38:A1:2842:U:OP1	38:A1:2898:G:N2	2.43	0.51
38:A1:3271:G:C5	42:AE:108:LYS:HD2	2.44	0.51
38:A1:3284:G:O2'	38:A1:3285:C:O4'	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3296:A:H2'	38:A1:3297:U:H6	1.75	0.51
39:A3:23:A:H2'	39:A3:24:A:C8	2.45	0.51
40:A4:26:U:H2'	40:A4:27:U:C6	2.45	0.51
41:AD:129:TYR:OH	41:AD:175:HIS:O	2.24	0.51
44:AG:54:GLU:HG3	44:AG:57:ARG:NH1	2.25	0.51
44:AG:190:VAL:HG21	44:AG:195:SER:HB2	1.91	0.51
47:AJ:29:ARG:HE	47:AJ:123:PHE:HE1	1.59	0.51
61:AY:55:GLU:OE1	61:AY:69:LYS:HB2	2.10	0.51
81:EC:6938:A:OP1	81:EC:6939:C:N4	2.43	0.51
15:BY:11:LYS:HD2	15:BY:13:ILE:HD11	1.92	0.51
20:BF:80:LYS:HB2	20:BF:83:ARG:HB2	1.91	0.51
22:BP:86:VAL:HB	22:BP:89:MET:CE	2.41	0.51
34:B5:487:G:H2'	34:B5:488:G:H4'	1.93	0.51
34:B5:628:G:H21	34:B5:971:A:H62	1.58	0.51
34:B5:1268:G:H2'	34:B5:1270:G:C8	2.45	0.51
34:B5:1482:C:H41	34:B5:1524:A:P	2.32	0.51
38:A1:619:A:OP1	52:AP:167:ARG:NH1	2.43	0.51
38:A1:1126:G:H5''	46:AI:119:TRP:HZ3	1.75	0.51
38:A1:1622:U:H2'	38:A1:1623:G:C8	2.45	0.51
38:A1:3237:U:H2'	38:A1:3238:G:O4'	2.11	0.51
39:A3:49:G:O2'	41:AD:58:LYS:NZ	2.33	0.51
45:AH:34:LEU:HB2	45:AH:78:MET:HE3	1.92	0.51
63:Aa:19:LYS:HB3	63:Aa:25:HIS:HB2	1.93	0.51
80:DC:412:ARG:HD2	80:DC:428:ILE:HG22	1.92	0.51
80:DC:564:ARG:HG2	80:DC:801:TRP:CZ3	2.44	0.51
81:EC:6815:U:H3'	81:EC:6816:A:H5''	1.91	0.51
4:BE:60:GLU:N	4:BE:60:GLU:OE1	2.43	0.51
5:BG:112:VAL:HG21	34:B5:164:A:H5'	1.92	0.51
6:BH:63:PRO:HG2	6:BH:65:PRO:HD3	1.93	0.51
15:BY:125:LEU:HD23	15:BY:125:LEU:H	1.76	0.51
34:B5:580:A:O2'	34:B5:582:U:OP2	2.24	0.51
34:B5:1779:U:O4	76:An:12:ARG:NH2	2.43	0.51
38:A1:377:A:N6	38:A1:400:G:O2'	2.44	0.51
38:A1:1598:G:H2'	38:A1:1599:G:H8	1.76	0.51
38:A1:2204:C:H2'	38:A1:2205:U:C6	2.45	0.51
38:A1:2467:G:H21	38:A1:2488:A:H62	1.57	0.51
38:A1:2648:G:OP1	46:AI:24:ARG:NH1	2.43	0.51
38:A1:2717:U:H2'	38:A1:2718:U:C6	2.46	0.51
38:A1:3192:U:P	51:AO:176[A]:LYS:HZ1	2.33	0.51
38:A1:3257:C:H2'	38:A1:3258:U:O4'	2.09	0.51
38:A1:3289:G:H2'	38:A1:3290:G:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AI:55:ASN:HD22	46:AI:164:LYS:NZ	2.09	0.51
65:Ac:84:LEU:HD23	65:Ac:84:LEU:H	1.76	0.51
80:DC:511:LEU:HD22	80:DC:545:LEU:HD21	1.91	0.51
1:BA:74:VAL:HB	1:BA:121:VAL:HG12	1.93	0.51
1:BA:104:PRO:HD2	34:B5:1320:U:H5	1.76	0.51
3:BC:81:MET:HB2	3:BC:101:VAL:HG23	1.92	0.51
8:BJ:82:ARG:NH1	34:B5:764:U:OP1	2.43	0.51
19:BD:126:VAL:HG13	19:BD:127:MET:SD	2.51	0.51
25:BS:2:SER:HB3	28:BZ:81:ARG:HE	1.76	0.51
31:Bg:9:LEU:HD12	31:Bg:313:TRP:CE2	2.46	0.51
31:Bg:90:ARG:HD2	31:Bg:92:TRP:CZ2	2.45	0.51
34:B5:290:G:H2'	34:B5:291:G:C8	2.46	0.51
34:B5:749:U:H2'	34:B5:750:U:H6	1.76	0.51
34:B5:1007:C:H2'	34:B5:1008:G:H8	1.76	0.51
34:B5:1078:C:H2'	34:B5:1079:U:C6	2.46	0.51
34:B5:1144:U:O2'	34:B5:1301:U:H4'	2.10	0.51
34:B5:1151:A:H2'	34:B5:1152:A:H8	1.76	0.51
34:B5:1443:U:O2'	34:B5:1444:A:N7	2.40	0.51
34:B5:1454:G:H2'	34:B5:1455:G:C8	2.46	0.51
35:AA:69:TYR:OH	38:A1:2557:A:OP1	2.26	0.51
38:A1:126:U:OP1	50:AN:144:ARG:NH1	2.44	0.51
38:A1:503:C:H2'	38:A1:504:A:H8	1.75	0.51
38:A1:585:A:H2'	38:A1:586:C:C6	2.45	0.51
38:A1:590:G:H21	42:AE:19:LYS:HD2	1.75	0.51
38:A1:737:G:H2'	38:A1:738:A:H8	1.74	0.51
38:A1:2837:A:P	38:A1:2845:A:H61	2.32	0.51
38:A1:3027:A:N6	80:DC:782:GLY:HA2	2.25	0.51
38:A1:3108:G:H21	45:AH:163:GLN:HE21	1.58	0.51
38:A1:3277:U:H5''	38:A1:3278:C:C5	2.45	0.51
39:A3:7:G:OP1	41:AD:33:ARG:HD2	2.10	0.51
45:AH:4:ILE:HD12	55:AS:148:LEU:HD11	1.92	0.51
49:AM:14:LEU:O	49:AM:19:ARG:NE	2.35	0.51
51:AO:105[A]:PHE:HE2	51:AO:112[A]:TYR:HE2	1.57	0.51
56:AT:127:GLN:OE1	56:AT:131:GLN:NE2	2.44	0.51
67:Ae:30:GLU:OE2	67:Ae:30:GLU:N	2.29	0.51
80:DC:37:ASP:HA	80:DC:40:VAL:HG22	1.91	0.51
80:DC:205:ALA:HA	80:DC:222:ILE:HD11	1.92	0.51
80:DC:262:THR:HB	80:DC:266:GLY:HA2	1.92	0.51
80:DC:608:PRO:HG3	80:DC:636:PHE:CD1	2.46	0.51
3:BC:148:LEU:HD21	8:BJ:94:ASP:HB3	1.93	0.51
25:BS:110:ARG:HG2	25:BS:114:GLU:OE1	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:201:THR:HG21	31:Bg:242:SER:HA	1.93	0.51
34:B5:44:U:OP2	34:B5:437:A:N6	2.43	0.51
34:B5:151:G:H2'	34:B5:152:U:C6	2.45	0.51
34:B5:1547:A:N6	34:B5:1565:C:H42	2.08	0.51
36:AB:99:LEU:O	38:A1:3004:C:O2'	2.25	0.51
37:AC:40:THR:HG23	38:A1:1426:C:H4'	1.92	0.51
38:A1:408:A:N3	38:A1:655:C:O2'	2.40	0.51
38:A1:1157:G:H2'	38:A1:1158:A:O4'	2.10	0.51
38:A1:1534:A:H2'	38:A1:1535:A:C8	2.46	0.51
38:A1:2705:A:N6	56:AT:47:SER:O	2.43	0.51
38:A1:3160:U:H2'	38:A1:3161:C:C6	2.46	0.51
80:DC:30:HIS:CE1	80:DC:130:ASP:HB2	2.45	0.51
80:DC:690:ASP:OD1	80:DC:691:VAL:N	2.43	0.51
15:BY:20:ARG:HD2	15:BY:74:LEU:HD12	1.93	0.51
19:BD:71:LEU:HD23	19:BD:74:GLN:HE22	1.75	0.51
19:BD:142:LEU:HD12	19:BD:148:LYS:HB2	1.93	0.51
32:Bf:118:ARG:HD2	32:Bf:131:PHE:HB3	1.92	0.51
34:B5:17:C:H2'	34:B5:18:C:C6	2.46	0.51
34:B5:95:G:O2'	34:B5:460:A:O2'	2.26	0.51
38:A1:1613:A:H2'	38:A1:1614:C:C6	2.45	0.51
38:A1:1699:A:H2'	38:A1:1700:G:H8	1.74	0.51
38:A1:2265:C:H2'	38:A1:2266:PSU:C6	2.45	0.51
38:A1:2698:G:H2'	38:A1:2699:G:H8	1.76	0.51
38:A1:3021:A:N1	38:A1:3032:A:H5''	2.26	0.51
38:A1:3176:G:C6	38:A1:3213:A:C2	2.99	0.51
56:AT:53:PRO:HB3	56:AT:91:LEU:HD21	1.93	0.51
58:AV:13:ILE:HG22	58:AV:81:GLN:HE22	1.76	0.51
80:DC:673:GLU:O	80:DC:714:TYR:OH	2.25	0.51
80:DC:810:ASP:OD2	80:DC:812:THR:OG1	2.28	0.51
81:EC:6767:G:H21	81:EC:6824:C:H5	1.58	0.51
4:BE:54:TYR:O	15:BY:15:ASN:ND2	2.44	0.51
6:BH:78:THR:HG23	6:BH:79:ARG:HD2	1.92	0.51
7:BI:44:HIS:HB2	7:BI:56:ARG:HB2	1.92	0.51
16:Ba:18:VAL:HG13	16:Ba:19:LYS:H	1.76	0.51
20:BF:53:VAL:HG21	20:BF:62:VAL:HG21	1.92	0.51
20:BF:63:GLN:H	20:BF:89:ILE:HG12	1.76	0.51
20:BF:162:VAL:HG22	29:Bc:45:LYS:HD2	1.92	0.51
34:B5:919:A:H2'	34:B5:920:U:C6	2.46	0.51
34:B5:1229:G:N2	34:B5:1255:G:O2'	2.20	0.51
36:AB:233:TRP:CD1	36:AB:265:ALA:HB1	2.46	0.51
36:AB:250:ALA:HB3	38:A1:2880:PSU:O4	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1132:C:H2'	38:A1:1133:A:C8	2.46	0.51
38:A1:1289:G:H2'	38:A1:1290:A:H8	1.76	0.51
38:A1:1667:A:H2'	38:A1:1668:G:C8	2.45	0.51
38:A1:1828:A:H2'	38:A1:1829:G:C8	2.45	0.51
38:A1:2328:U:H2'	38:A1:2329:C:C6	2.46	0.51
38:A1:2447:A:H2'	38:A1:2448:G:H8	1.74	0.51
38:A1:3324:C:H4'	66:Ad:13:THR:HG23	1.93	0.51
56:AT:17:ARG:HH11	56:AT:47:SER:HB3	1.76	0.51
58:AV:104:ASN:OD1	58:AV:108:GLU:N	2.36	0.51
63:Aa:16:SER:OG	63:Aa:21:ARG:HD3	2.11	0.51
71:Ai:50:LEU:O	71:Ai:55:ARG:NH1	2.44	0.51
80:DC:699:DDE:HAT3	81:EC:6906:G:H21	1.75	0.51
4:BE:221:ARG:HH11	4:BE:222:LEU:N	2.08	0.51
8:BJ:152:SER:HA	8:BJ:155:HIS:HD2	1.76	0.51
8:BJ:171:ARG:HD2	34:B5:537:G:C5	2.45	0.51
10:BN:115:LEU:O	10:BN:119:GLU:HG3	2.11	0.51
14:BX:7:ARG:HD2	34:B5:1102:G:OP2	2.11	0.51
19:BD:40:ARG:HG3	19:BD:42:THR:HG23	1.92	0.51
20:BF:190:ILE:H	20:BF:190:ILE:HD12	1.76	0.51
23:BQ:28:LEU:H	23:BQ:64:ASP:HB3	1.75	0.51
31:Bg:66:HIS:CB	31:Bg:85:TRP:HB2	2.40	0.51
31:Bg:246:SER:HB3	31:Bg:251:TRP:H	1.76	0.51
34:B5:443:C:O2	34:B5:445:A:N6	2.43	0.51
34:B5:1039:A:C4	34:B5:1040:G:C8	3.00	0.51
34:B5:1331:A:H2'	34:B5:1332:C:H5'	1.92	0.51
34:B5:1773:4AC:OP2	76:An:2:ARG:NE	2.42	0.51
36:AB:116:ARG:HH22	38:A1:3315:G:P	2.34	0.51
36:AB:182:GLN:HE21	36:AB:184:ASN:ND2	2.09	0.51
37:AC:106:TRP:HB3	48:AL:24:VAL:HG21	1.93	0.51
37:AC:107:ARG:HA	38:A1:664:U:H5'	1.93	0.51
38:A1:1120:A:H2'	38:A1:1121:U:H6	1.76	0.51
38:A1:1233:G:H2'	38:A1:1236:G:H1	1.75	0.51
38:A1:1710:C:H2'	38:A1:1711:C:C6	2.46	0.51
38:A1:1755:C:H2'	38:A1:1756:C:O4'	2.11	0.51
38:A1:2167:A:OP1	50:AN:72:LYS:NZ	2.44	0.51
38:A1:2217:U:H2'	38:A1:2218:G:H8	1.76	0.51
38:A1:2775:U:H2'	38:A1:2776:C:C6	2.46	0.51
38:A1:2837:A:H2	38:A1:2851:A:N7	2.09	0.51
40:A4:29:U:H5''	48:AL:27:ASP:HB3	1.93	0.51
46:AI:4:ARG:HH21	46:AI:99:ILE:CG1	2.22	0.51
54:AR:15:VAL:HG23	54:AR:17:VAL:HG22	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:AW:4:GLU:HG2	59:AW:30:ARG:NE	2.26	0.51
3:BC:220:ASN:HA	12:BV:25:LYS:HZ2	1.74	0.50
5:BG:4:ASN:HD21	34:B5:152:U:H1'	1.75	0.50
5:BG:177:ARG:O	5:BG:183:ARG:NH1	2.43	0.50
8:BJ:69:ARG:HH21	8:BJ:93:LEU:HD22	1.76	0.50
10:BN:11:ILE:HD12	17:Bb:21:LEU:HD23	1.93	0.50
10:BN:92:ILE:O	10:BN:96:VAL:HG23	2.11	0.50
11:BO:23:PHE:CE1	11:BO:96:PRO:HD3	2.47	0.50
21:BK:54:TYR:N	21:BK:71:GLU:OE2	2.32	0.50
22:BP:97:TYR:HD1	22:BP:102:PHE:CE1	2.29	0.50
24:BR:58:MET:HA	24:BR:61:ILE:HG22	1.93	0.50
25:BS:65:GLU:O	25:BS:69:ILE:HG12	2.11	0.50
27:BU:22:ILE:H	27:BU:94:GLU:HG3	1.76	0.50
34:B5:523:G:H21	34:B5:528:U:H5	1.59	0.50
34:B5:535:A:H2'	34:B5:536:C:H6	1.74	0.50
34:B5:1380:U:H6	34:B5:1516:A:H61	1.59	0.50
34:B5:1399:C:H2'	34:B5:1400:A:H5'	1.93	0.50
34:B5:1647:U:O4	34:B5:1648:A:N6	2.44	0.50
34:B5:1650:U:H2'	34:B5:1651:A:C8	2.45	0.50
37:AC:58:HIS:CE1	37:AC:98:ARG:HD3	2.46	0.50
38:A1:531:G:H2'	38:A1:532:A:C8	2.46	0.50
38:A1:1222:G:N1	38:A1:1285:G:O2'	2.42	0.50
38:A1:1493:G:O2'	74:A1:13:MET:HG3	2.10	0.50
38:A1:1661:G:H2'	38:A1:1662:G:H8	1.74	0.50
38:A1:3190:C:H2'	38:A1:3191:G:H8	1.75	0.50
38:A1:3272:C:OP2	42:AE:78:ARG:NE	2.41	0.50
47:AJ:13:LYS:HD3	47:AJ:134:PRO:HG3	1.92	0.50
54:AR:158:GLU:O	54:AR:162:ARG:HG2	2.11	0.50
58:AV:84:SER:HA	58:AV:94:TYR:HB3	1.92	0.50
80:DC:544:ASP:OD1	80:DC:545:LEU:N	2.44	0.50
3:BC:175:GLY:N	3:BC:195:ASP:OD2	2.43	0.50
4:BE:136:VAL:HG11	4:BE:148:ARG:HE	1.76	0.50
5:BG:4:ASN:HA	5:BG:15:THR:HA	1.94	0.50
5:BG:44:GLU:O	5:BG:119:GLN:NE2	2.44	0.50
7:BI:193:LEU:HA	7:BI:197:THR:OG1	2.12	0.50
14:BX:38:PHE:CD2	34:B5:359:A:H1'	2.46	0.50
15:BY:102:LYS:HG2	15:BY:108:ARG:HH22	1.77	0.50
28:BZ:58:ARG:NH2	81:EC:6863:C:OP1	2.43	0.50
33:BM:43:ARG:NH2	34:B5:1256:A:OP2	2.43	0.50
34:B5:358:U:O2'	34:B5:360:A:OP1	2.25	0.50
34:B5:764:U:O2	34:B5:772:G:N2	2.35	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:883:C:N4	34:B5:945:U:H3	2.08	0.50
34:B5:916:U:H2'	34:B5:917:U:O4'	2.12	0.50
34:B5:1217:A:N3	34:B5:1217:A:H5''	2.25	0.50
34:B5:1239:U:H3	34:B5:1246:C:H41	1.59	0.50
36:AB:47:LEU:HD11	36:AB:179:ALA:HB3	1.93	0.50
37:AC:38:VAL:HG11	37:AC:121:ALA:CB	2.41	0.50
37:AC:101:ALA:HA	38:A1:800:G:H22	1.77	0.50
37:AC:206:LEU:HD12	37:AC:226:GLU:O	2.10	0.50
38:A1:2426:U:H2'	38:A1:2427:U:H6	1.74	0.50
38:A1:2467:G:H1'	38:A1:2468:A:N7	2.26	0.50
38:A1:2896:A:OP1	75:Am:102:ARG:NH1	2.44	0.50
38:A1:3066:U:H2'	38:A1:3067:C:C6	2.45	0.50
38:A1:3183:A:H2'	38:A1:3184:A:C8	2.46	0.50
42:AE:48:ARG:HB3	68:Af:7:LEU:HD12	1.93	0.50
44:AG:105:LYS:HG2	44:AG:109:LEU:HD23	1.92	0.50
51:AO:142[A]:SER:HA	51:AO:145[A]:VAL:HG22	1.92	0.50
67:Ae:79:VAL:O	67:Ae:83:GLU:HG2	2.11	0.50
70:Ah:63:ARG:O	70:Ah:67:ARG:HG2	2.11	0.50
81:EC:6787:U:H1'	81:EC:6788:C:H5	1.75	0.50
3:BC:53:ILE:HD12	3:BC:53:ILE:H	1.76	0.50
17:Bb:20:LYS:O	17:Bb:23:THR:OG1	2.24	0.50
24:BR:103:ASP:O	24:BR:106:THR:HG22	2.12	0.50
27:BU:69:LYS:CD	34:B5:1280:4AC:H5''	2.36	0.50
31:Bg:9:LEU:HD11	31:Bg:311:ARG:HD2	1.93	0.50
31:Bg:276:PRO:HG2	31:Bg:311:ARG:HH21	1.76	0.50
34:B5:255:U:H2'	34:B5:256:A:C8	2.46	0.50
34:B5:256:A:H2'	34:B5:257:A:C8	2.46	0.50
34:B5:647:G:N2	34:B5:688:G:O6	2.43	0.50
34:B5:1237:G:H2'	34:B5:1238:A:C8	2.46	0.50
34:B5:1598:U:H2'	34:B5:1599:C:C6	2.47	0.50
36:AB:97:ARG:HD3	38:A1:3244:A:C6	2.46	0.50
38:A1:35:A:H2'	38:A1:36:C:H6	1.76	0.50
38:A1:64:G:OP2	50:AN:169:LYS:NZ	2.44	0.50
38:A1:527:A:H2'	38:A1:528:U:C6	2.46	0.50
38:A1:1767:C:H2'	38:A1:1768:U:C6	2.46	0.50
47:AJ:111:ASP:HB3	47:AJ:116:TYR:HB2	1.93	0.50
53:AQ:180:ARG:HB3	53:AQ:180:ARG:CZ	2.40	0.50
55:AS:61:ILE:O	55:AS:61:ILE:HG13	2.12	0.50
69:Ag:79:SER:HB3	69:Ag:80:ARG:HH11	1.76	0.50
69:Ag:102:LYS:HG3	69:Ag:106:LYS:NZ	2.27	0.50
73:Ak:69:LEU:HD21	73:Ak:73:LEU:HD23	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:E:76:ARG:CZ	79:E:144:LEU:HB3	2.41	0.50
80:DC:800:HIS:ND1	80:DC:801:TRP:O	2.41	0.50
81:EC:6773:G:O2'	81:EC:6819:G:H5'	2.11	0.50
81:EC:6889:A:H1'	81:EC:6890:A:H8	1.77	0.50
2:BB:134:VAL:HG12	2:BB:219:LYS:HB2	1.94	0.50
3:BC:147:ASN:OD1	12:BV:3:ASN:HA	2.12	0.50
7:BI:49:ARG:HD3	34:B5:333:A:N7	2.26	0.50
10:BN:48:SER:OG	34:B5:960:U:O2	2.27	0.50
13:BW:15:ASN:ND2	13:BW:72:CYS:O	2.44	0.50
13:BW:112:ASP:OD1	13:BW:112:ASP:N	2.45	0.50
20:BF:190:ILE:HD11	34:B5:1473:U:OP1	2.12	0.50
22:BP:25:LEU:HA	22:BP:28:MET:HE1	1.92	0.50
25:BS:37:GLY:O	25:BS:99:HIS:NE2	2.33	0.50
31:Bg:135:THR:HG22	31:Bg:139:GLN:O	2.11	0.50
34:B5:75:U:N3	34:B5:78:A:OP1	2.40	0.50
34:B5:1579:U:H2'	34:B5:1580:C:C6	2.46	0.50
37:AC:110:ASN:HB3	50:AN:202:TYR:CE1	2.47	0.50
38:A1:19:U:H4'	50:AN:138:GLN:OE1	2.11	0.50
38:A1:165:A:O2'	38:A1:166:C:H5''	2.11	0.50
38:A1:749:C:H2'	38:A1:750:G:O4'	2.11	0.50
38:A1:1517:G:P	74:A1:41:ARG:HH22	2.33	0.50
38:A1:2437:G:HO2'	38:A1:2438:A:P	2.33	0.50
38:A1:2696:A:N7	38:A1:2758:A:N6	2.60	0.50
39:A3:73:C:N4	55:AS:19:VAL:HG21	2.26	0.50
40:A4:47:C:H1'	40:A4:61:A:H2'	1.92	0.50
40:A4:71:A:O3'	61:AY:52:ARG:NH1	2.45	0.50
49:AM:48:GLY:O	49:AM:52:GLY:N	2.44	0.50
49:AM:60:LEU:HD13	55:AS:152:LEU:HD22	1.93	0.50
54:AR:172:ARG:O	54:AR:176:ARG:HG2	2.10	0.50
69:Ag:95:ILE:O	69:Ag:99:LYS:HG3	2.12	0.50
80:DC:727:PRO:HG3	85:DC:903:SO1:H101	1.93	0.50
3:BC:203:LYS:HE2	34:B5:14:C:H5''	1.94	0.50
8:BJ:159:ALA:O	8:BJ:162:SER:OG	2.20	0.50
8:BJ:169:PRO:O	8:BJ:173:ALA:HB3	2.12	0.50
23:BQ:122:ARG:CG	34:B5:1584:G:H5''	2.41	0.50
26:BT:44:GLU:OE1	26:BT:44:GLU:N	2.44	0.50
33:BM:50:LYS:HD3	34:B5:1254:U:P	2.51	0.50
34:B5:1550:A:H2'	34:B5:1550:A:N3	2.26	0.50
35:AA:227:ARG:HB2	35:AA:239:ALA:HB2	1.94	0.50
36:AB:332:ARG:HH22	38:A1:3304:U:P	2.34	0.50
38:A1:11:A:H2'	38:A1:12:A:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:178:U:O2	38:A1:239:G:N2	2.45	0.50
38:A1:668:G:H2'	38:A1:669:U:H6	1.75	0.50
38:A1:1343:A:H2'	38:A1:1344:G:C8	2.46	0.50
38:A1:1817:G:H8	38:A1:1818:U:H5	1.59	0.50
38:A1:1873:U:OP2	54:AR:20:ARG:NH1	2.45	0.50
38:A1:2538:U:C6	38:A1:2543:U:H2'	2.47	0.50
38:A1:2834:G:H2'	38:A1:2835:U:C6	2.47	0.50
38:A1:3059:G:OP2	66:Ad:69:TYR:OH	2.29	0.50
38:A1:3166:C:H2'	38:A1:3167:A:C8	2.47	0.50
40:A4:78:G:H2'	40:A4:79:A:C8	2.46	0.50
43:AF:226:GLY:HA3	55:AS:1:MET:HE1	1.93	0.50
46:AI:169:LYS:NZ	56:AT:159:PHE:HA	2.27	0.50
50:AN:162:ARG:HB2	50:AN:164:LEU:HD23	1.93	0.50
51:AO:61[A]:ALA:HA	51:AO:70[A]:PRO:HD2	1.92	0.50
54:AR:81:ARG:HG3	54:AR:88:ARG:HD2	1.92	0.50
55:AS:26:ARG:HG2	55:AS:27:MET:N	2.25	0.50
55:AS:80:ARG:HH21	55:AS:87:THR:HG21	1.77	0.50
3:BC:174:ARG:HG2	8:BJ:98:ALA:HB2	1.92	0.50
3:BC:227:PRO:HA	3:BC:230:TRP:CD1	2.46	0.50
4:BE:141:THR:CG2	4:BE:145:ARG:HB2	2.42	0.50
5:BG:32:ILE:HD11	34:B5:1682:U:H4'	1.93	0.50
6:BH:41:LEU:HD11	6:BH:70:PHE:HB2	1.94	0.50
7:BI:37:LYS:C	7:BI:59:ARG:HA	2.36	0.50
27:BU:43:LYS:HA	27:BU:46:GLU:HG3	1.93	0.50
34:B5:73:U:H2'	34:B5:74:U:H4'	1.94	0.50
34:B5:890:C:H2'	34:B5:891:A:C8	2.46	0.50
34:B5:1035:G:H2'	34:B5:1036:A:C8	2.46	0.50
34:B5:1237:G:H2'	34:B5:1238:A:H8	1.77	0.50
34:B5:1586:A:H2'	34:B5:1587:A:O4'	2.12	0.50
34:B5:1712:A:H2'	34:B5:1713:G:N2	2.27	0.50
38:A1:160:G:H2'	38:A1:161:G:H8	1.75	0.50
38:A1:1097:G:H4'	56:AT:129:LYS:HE2	1.93	0.50
38:A1:1136:A:O4'	38:A1:2636:A:N6	2.44	0.50
38:A1:1258:U:O2'	38:A1:1260:A:OP2	2.16	0.50
38:A1:3263:G:H2'	38:A1:3264:G:H8	1.77	0.50
46:AI:51:HIS:CD2	46:AI:168:SER:HB3	2.47	0.50
51:AO:157[A]:GLU:OE2	51:AO:160[A]:ARG:NH2	2.42	0.50
79:E:27:ASN:OD1	79:E:28:PHE:N	2.44	0.50
81:EC:6763:C:H2'	81:EC:6764:C:C6	2.46	0.50
7:BI:78:ILE:HA	7:BI:104:ILE:HG22	1.94	0.50
7:BI:136:SER:OG	7:BI:137:LYS:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:Ba:79:ILE:HD13	34:B5:1794:A:H1'	1.93	0.50
25:BS:73:MET:HE2	25:BS:100:THR:O	2.11	0.50
27:BU:27:THR:HB	27:BU:88:LYS:HG2	1.94	0.50
27:BU:68:ARG:NH2	27:BU:72:ASN:O	2.44	0.50
27:BU:82:TYR:CE2	30:Bd:44:ARG:HD2	2.47	0.50
28:BZ:42:LEU:HG	28:BZ:47:TYR:HA	1.93	0.50
31:Bg:66:HIS:NE2	34:B5:1386:G:O2'	2.35	0.50
34:B5:86:A:H2'	34:B5:87:C:C6	2.47	0.50
34:B5:385:A:H2'	34:B5:386:G:C8	2.47	0.50
34:B5:1654:G:N2	34:B5:1745:G:H2'	2.26	0.50
38:A1:235:A:H2'	38:A1:236:G:C8	2.46	0.50
38:A1:689:U:H3'	38:A1:690:A:H8	1.77	0.50
38:A1:1523:U:OP2	38:A1:1604:G:O2'	2.28	0.50
38:A1:1563:C:H4'	38:A1:1563:C:OP1	2.11	0.50
38:A1:1672:U:OP1	54:AR:64:ARG:NE	2.30	0.50
38:A1:1717:U:O2	38:A1:1727:G:N2	2.41	0.50
38:A1:1846:C:C4	52:AP:136:ILE:HD12	2.47	0.50
38:A1:3251:U:H2'	38:A1:3252:G:C8	2.47	0.50
39:A3:27:A:H2'	39:A3:28:C:C6	2.46	0.50
45:AH:117:PHE:CZ	45:AH:165:CYS:HB2	2.46	0.50
46:AI:12:GLN:NE2	46:AI:128:ARG:HB3	2.26	0.50
47:AJ:19:LEU:HB3	47:AJ:125:MET:CE	2.41	0.50
52:AP:126:ARG:HA	52:AP:140:GLU:CG	2.42	0.50
53:AQ:165:ILE:HD12	53:AQ:173:GLU:HG3	1.94	0.50
54:AR:25:ASP:N	54:AR:25:ASP:OD1	2.44	0.50
55:AS:24:LEU:HD11	55:AS:59:VAL:HG11	1.92	0.50
1:BA:36:TYR:OH	1:BA:56:LYS:NZ	2.45	0.50
4:BE:31:PRO:HB3	4:BE:43:PRO:HG3	1.94	0.50
4:BE:137:PRO:HG2	4:BE:149:TYR:HA	1.94	0.50
10:BN:24:ALA:O	10:BN:27:LYS:NZ	2.45	0.50
15:BY:24:VAL:HG22	15:BY:72:PHE:HD1	1.77	0.50
16:Ba:18:VAL:HG13	16:Ba:19:LYS:N	2.26	0.50
21:BK:28:ASN:H	21:BK:40:LEU:HD11	1.77	0.50
23:BQ:16:ALA:HB2	23:BQ:72:GLY:HA3	1.94	0.50
23:BQ:44:LEU:HD23	23:BQ:44:LEU:H	1.76	0.50
34:B5:431:C:H2'	34:B5:432:G:C8	2.47	0.50
34:B5:882:U:H2'	34:B5:883:C:H6	1.75	0.50
34:B5:889:U:O2'	34:B5:890:C:OP1	2.30	0.50
34:B5:1078:C:H2'	34:B5:1079:U:H6	1.77	0.50
34:B5:1333:C:H2'	34:B5:1334:U:C6	2.47	0.50
34:B5:1466:G:O2'	34:B5:1602:C:OP1	2.29	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1633:A:H4'	34:B5:1634:C:H5'	1.94	0.50
38:A1:204:A:H2'	38:A1:205:C:C6	2.47	0.50
38:A1:971:G:H2'	38:A1:972:A:C8	2.47	0.50
38:A1:991:G:O2'	56:AT:41:ASP:OD2	2.30	0.50
38:A1:993:G:N3	38:A1:2637:A:H2'	2.26	0.50
38:A1:1203:A:H2'	38:A1:1204:A:H8	1.77	0.50
38:A1:1320:C:O2	55:AS:115:ARG:NH2	2.45	0.50
38:A1:1517:G:OP2	74:Al:41:ARG:NH2	2.43	0.50
38:A1:1765:U:P	54:AR:39:ASN:HD21	2.34	0.50
38:A1:1795:U:N3	78:Ap:50:GLY:O	2.42	0.50
38:A1:1836:C:N4	74:Al:3:ALA:HB2	2.26	0.50
38:A1:2633:U:H3	38:A1:2645:G:H1	1.60	0.50
38:A1:3022:G:H1'	38:A1:3031:G:O6	2.11	0.50
38:A1:3243:A:OP1	51:AO:159[A]:LYS:NZ	2.34	0.50
39:A3:44:C:OP1	47:AJ:137:ARG:NH2	2.44	0.50
48:AL:128:ARG:HG2	70:Ah:114:ARG:NH1	2.26	0.50
76:An:12:ARG:HG2	76:An:15:ARG:HH21	1.77	0.50
2:BB:33:LYS:N	2:BB:96:LEU:O	2.37	0.50
6:BH:86:GLN:HG3	6:BH:87:ASP:H	1.76	0.50
26:BT:64:HIS:CD2	26:BT:71:VAL:HG21	2.47	0.50
34:B5:1173:C:H2'	34:B5:1174:C:H6	1.76	0.50
34:B5:1453:G:H2'	34:B5:1454:G:H8	1.72	0.50
34:B5:1483:A:C2	34:B5:1607:G:H1'	2.46	0.50
36:AB:246:LEU:N	38:A1:1889:G:OP1	2.45	0.50
38:A1:194:U:H2'	38:A1:195:U:C6	2.47	0.50
38:A1:297:G:O6	50:AN:12:ARG:NH1	2.36	0.50
38:A1:515:C:H2'	38:A1:516:A:H8	1.77	0.50
38:A1:686:G:OP2	48:AL:39:ARG:NH2	2.41	0.50
38:A1:999:G:N3	38:A1:1002:A:N6	2.60	0.50
38:A1:2339:C:OP2	58:AV:48:ARG:NE	2.33	0.50
38:A1:2346:C:OP1	66:Ad:27:LYS:NZ	2.42	0.50
38:A1:2698:G:H2'	38:A1:2699:G:C8	2.47	0.50
38:A1:3199:G:H2'	38:A1:3200:G:H8	1.76	0.50
38:A1:3338:C:H2'	38:A1:3339:A:C8	2.47	0.50
44:AG:224:ASP:OD1	44:AG:225:LYS:N	2.45	0.50
46:AI:53:VAL:HG22	46:AI:134:ILE:HA	1.94	0.50
46:AI:54:SER:HB3	46:AI:135:ILE:HD11	1.92	0.50
46:AI:73:ASN:OD1	46:AI:77:THR:OG1	2.29	0.50
56:AT:112:ASN:HA	56:AT:115:LYS:NZ	2.26	0.50
80:DC:616:ALA:HA	80:DC:630:ALA:HB1	1.92	0.50
3:BC:82:ASN:OD1	3:BC:84:LYS:HB3	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:BL:97:TYR:CE2	14:BX:15:LEU:HB3	2.46	0.49
10:BN:35:GLU:O	10:BN:39:LYS:HE2	2.12	0.49
34:B5:546:U:H2'	34:B5:547:U:H6	1.77	0.49
34:B5:1424:A:H2'	34:B5:1425:A:C8	2.47	0.49
34:B5:1734:U:H5''	58:AV:32:ARG:HH22	1.77	0.49
37:AC:119:ARG:NH2	38:A1:696:C:OP2	2.33	0.49
38:A1:432:G:OP1	68:Af:65:ARG:NH2	2.42	0.49
38:A1:603:A:H2'	38:A1:604:G:O4'	2.12	0.49
38:A1:876:A:H4'	38:A1:1890:U:H4'	1.93	0.49
38:A1:1447:G:OP1	52:AP:65:SER:OG	2.19	0.49
38:A1:1704:A:HO2'	38:A1:1705:U:H6	1.60	0.49
38:A1:1834:U:OP1	74:Al:10:LYS:NZ	2.45	0.49
38:A1:2213:A:H2'	38:A1:2214:A:H8	1.76	0.49
38:A1:2499:U:H2'	38:A1:2500:A:O4'	2.12	0.49
38:A1:3288:G:O2'	38:A1:3289:G:H8	1.94	0.49
43:AF:66:LYS:HD2	43:AF:76:TYR:CD2	2.47	0.49
47:AJ:165:GLN:OE1	47:AJ:165:GLN:N	2.41	0.49
49:AM:118:PHE:O	49:AM:121:MET:HB3	2.12	0.49
53:AQ:60:PRO:HD3	53:AQ:144:ARG:HH12	1.77	0.49
63:Aa:59:ARG:HH11	63:Aa:59:ARG:HG3	1.76	0.49
70:Ah:12:LYS:HB3	70:Ah:16:GLN:HB2	1.94	0.49
74:Al:8:ARG:O	74:Al:12:LYS:HG2	2.12	0.49
80:DC:281:ILE:HD11	80:DC:324:MET:SD	2.51	0.49
81:EC:6926:U:H2'	81:EC:6927:U:C6	2.47	0.49
1:BA:146:LEU:HD13	1:BA:160:ILE:HB	1.92	0.49
2:BB:203:ASP:OD1	2:BB:203:ASP:N	2.41	0.49
3:BC:140:ARG:HB3	3:BC:221:THR:HB	1.93	0.49
4:BE:35:PRO:HB3	4:BE:143:ASP:HB2	1.93	0.49
6:BH:97:ARG:N	34:B5:856:A:N7	2.50	0.49
10:BN:72:MET:HE3	10:BN:76:LYS:HE2	1.93	0.49
27:BU:50:LEU:CD2	27:BU:95:ALA:HB2	2.43	0.49
34:B5:51:A:OP2	34:B5:424:C:N4	2.45	0.49
34:B5:445:A:H2'	34:B5:446:A:H8	1.77	0.49
34:B5:1356:U:H2'	34:B5:1357:A:C8	2.47	0.49
34:B5:1370:U:H5'	34:B5:1371:A:C8	2.46	0.49
34:B5:1545:A:H2'	34:B5:1546:G:H8	1.77	0.49
37:AC:339:LEU:HA	37:AC:342:LYS:HG2	1.94	0.49
37:AC:358:THR:HA	37:AC:361:HIS:CE1	2.47	0.49
38:A1:21:G:OP2	40:A4:36:G:N2	2.45	0.49
38:A1:66:A:N6	38:A1:76:G:H1'	2.27	0.49
38:A1:1008:U:H2'	38:A1:1009:A:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3044:G:H2'	38:A1:3045:G:C8	2.47	0.49
38:A1:3214:U:C6	49:AM:121:MET:HE1	2.46	0.49
38:A1:3308:C:O2'	52:AP:69:ARG:O	2.24	0.49
39:A3:43:U:OP1	47:AJ:137:ARG:NH1	2.38	0.49
46:AI:177:ASP:OD1	46:AI:178:ARG:N	2.45	0.49
53:AQ:125:ASP:OD1	53:AQ:126:GLN:N	2.45	0.49
80:DC:163:ALA:HB3	80:DC:167:LEU:HB3	1.94	0.49
80:DC:293:LYS:HA	80:DC:296:ILE:HD12	1.93	0.49
80:DC:381:TYR:OH	80:DC:481:MET:HE2	2.12	0.49
81:EC:6782:C:O5'	81:EC:6782:C:H6	1.95	0.49
6:BH:10:SER:OG	6:BH:44:LYS:HA	2.12	0.49
8:BJ:107:ARG:NH1	8:BJ:112:GLN:OE1	2.45	0.49
20:BF:41:LYS:HG3	20:BF:44:ASN:HA	1.93	0.49
22:BP:12:PHE:HA	47:AJ:85:LYS:HE3	1.95	0.49
22:BP:77:ARG:NH2	34:B5:1240:U:H3'	2.17	0.49
24:BR:59:LYS:O	24:BR:63:LYS:HG2	2.13	0.49
25:BS:55:HIS:HE1	34:B5:1532:U:H4'	1.77	0.49
31:Bg:179:LYS:HB3	31:Bg:181:TRP:HE1	1.77	0.49
31:Bg:251:TRP:HE3	31:Bg:294:TRP:HH2	1.59	0.49
34:B5:184:C:H2'	34:B5:185:U:C6	2.47	0.49
34:B5:269:G:H2'	34:B5:270:C:C6	2.47	0.49
34:B5:1107:G:O2'	34:B5:1108:G:H5'	2.12	0.49
34:B5:1207:C:H42	34:B5:1456:C:N4	2.11	0.49
34:B5:1554:U:H2'	34:B5:1555:A:O4'	2.12	0.49
34:B5:1740:A:H2'	34:B5:1741:U:C6	2.47	0.49
36:AB:116:ARG:HD3	36:AB:174:LYS:O	2.12	0.49
36:AB:369:ARG:HG2	59:AW:32:GLN:HE21	1.76	0.49
38:A1:155:G:N1	38:A1:265:A:OP2	2.45	0.49
38:A1:817:A:OP1	72:AJ:30:GLN:NE2	2.45	0.49
38:A1:890:C:H2'	38:A1:891:G:H8	1.77	0.49
38:A1:966:PSU:H2'	38:A1:967:A:H8	1.77	0.49
38:A1:1295:G:H2'	38:A1:1296:C:C6	2.47	0.49
38:A1:1646:G:N2	38:A1:1808:G:O2'	2.36	0.49
38:A1:1660:C:H2'	38:A1:1661:G:H8	1.77	0.49
38:A1:1680:G:H2'	38:A1:1681:U:H6	1.77	0.49
38:A1:2433:U:H1'	50:AN:125:SER:HB3	1.94	0.49
41:AD:152:ARG:HH12	47:AJ:142:LYS:HB2	1.78	0.49
42:AE:175:LYS:NZ	49:AM:111:ALA:HA	2.27	0.49
47:AJ:130:VAL:O	47:AJ:131:MET:HE2	2.12	0.49
50:AN:38:ARG:HD2	50:AN:62:TYR:HE1	1.77	0.49
56:AT:68:THR:HG22	56:AT:69:LYS:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:Ai:90:MET:HE2	71:Ai:90:MET:HA	1.94	0.49
80:DC:40:VAL:HA	80:DC:77:LEU:HD21	1.94	0.49
80:DC:250:PHE:HB2	80:DC:257:TRP:CE3	2.47	0.49
80:DC:633:ILE:HD12	80:DC:645:LEU:HD12	1.94	0.49
80:DC:814:LYS:O	80:DC:814:LYS:NZ	2.45	0.49
1:BA:23:HIS:O	1:BA:48:ILE:N	2.43	0.49
1:BA:120:LEU:HD21	1:BA:144:ILE:HD12	1.93	0.49
4:BE:59:ARG:NH2	34:B5:445:A:O5'	2.45	0.49
6:BH:148:LYS:NZ	6:BH:179:LYS:HE3	2.28	0.49
9:BL:34:TRP:CH2	9:BL:36:LYS:HD3	2.47	0.49
11:BO:72:LYS:O	11:BO:73:GLU:HG2	2.13	0.49
14:BX:55:GLU:HG3	14:BX:73:ARG:HB3	1.94	0.49
19:BD:43:PRO:O	19:BD:44:THR:OG1	2.26	0.49
21:BK:52:LYS:HG2	34:B5:1220:C:H4'	1.93	0.49
22:BP:44:ARG:HE	22:BP:49:MET:HE1	1.77	0.49
25:BS:96:LYS:HE3	25:BS:98:TYR:CE1	2.47	0.49
31:Bg:108:SER:OG	31:Bg:109:ASP:N	2.45	0.49
32:Bf:82:LYS:H	32:Bf:82:LYS:HD2	1.78	0.49
32:Bf:100:LEU:HB3	32:Bf:103:LEU:HB2	1.95	0.49
34:B5:53:G:H2'	34:B5:54:C:H6	1.77	0.49
34:B5:140:A:H61	34:B5:281:G:P	2.35	0.49
34:B5:215:A:H3'	34:B5:216:U:H6	1.77	0.49
34:B5:1151:A:H2'	34:B5:1152:A:C8	2.47	0.49
34:B5:1186:U:N3	34:B5:1208:A:C5	2.80	0.49
34:B5:1196:A:N6	34:B5:1601:G:O2'	2.44	0.49
34:B5:1231:U:O4	34:B5:1255:G:N1	2.45	0.49
34:B5:1232:U:H2'	34:B5:1233:G:C8	2.47	0.49
34:B5:1277:G:H2'	34:B5:1278:G:C8	2.47	0.49
34:B5:1677:C:H2'	34:B5:1678:A:O4'	2.12	0.49
34:B5:1737:G:H2'	34:B5:1738:U:C6	2.48	0.49
36:AB:55:THR:HG22	38:A1:3049:A:N3	2.27	0.49
37:AC:156:LEU:HD12	37:AC:159:ILE:HD12	1.93	0.49
38:A1:1132:C:H2'	38:A1:1133:A:H8	1.76	0.49
38:A1:1681:U:H1'	38:A1:3069:G:N7	2.27	0.49
38:A1:2153:U:H2'	38:A1:2154:U:H6	1.77	0.49
38:A1:2825:C:H42	38:A1:2864:A:H61	1.59	0.49
38:A1:3113:A:H1'	45:AH:70:THR:HG22	1.95	0.49
38:A1:3334:U:H4'	38:A1:3335:A:H5'	1.93	0.49
40:A4:3:A:O2'	52:AP:61:ARG:NH1	2.46	0.49
45:AH:11:GLU:N	45:AH:11:GLU:OE2	2.45	0.49
55:AS:82:ASP:HB3	55:AS:120:SER:HB3	1.92	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:161:ASP:OD1	80:DC:162:ARG:N	2.45	0.49
80:DC:434:VAL:O	80:DC:445:ILE:N	2.29	0.49
2:BB:36:SER:HB3	2:BB:41:ARG:HH22	1.77	0.49
3:BC:109:GLY:HA3	3:BC:141:ARG:HH12	1.76	0.49
3:BC:215:PHE:HA	3:BC:218:ILE:HG22	1.94	0.49
7:BI:42:ARG:HH12	7:BI:59:ARG:NH2	2.10	0.49
12:BV:53:TYR:OH	12:BV:76:ASP:OD2	2.28	0.49
18:Be:55:ARG:NH2	18:Be:59:GLY:H	2.11	0.49
20:BF:63:GLN:HE22	20:BF:66:GLN:HB3	1.76	0.49
22:BP:8:LYS:HE2	47:AJ:90:GLN:HE22	1.76	0.49
22:BP:79:HIS:HB3	34:B5:1241:G:C1'	2.39	0.49
22:BP:126:VAL:HB	34:B5:1459:C:H5'	1.94	0.49
34:B5:255:U:H2'	34:B5:256:A:H8	1.78	0.49
34:B5:258:C:H2'	34:B5:259:U:C6	2.47	0.49
34:B5:454:U:OP1	34:B5:455:C:N4	2.30	0.49
34:B5:926:A:H2'	34:B5:927:C:C6	2.47	0.49
34:B5:1067:C:H2'	34:B5:1068:C:H6	1.78	0.49
36:AB:227:GLU:OE2	36:AB:270:ARG:NH2	2.44	0.49
36:AB:305:ILE:HD11	36:AB:323:MET:HE1	1.94	0.49
37:AC:359:LEU:HD12	55:AS:8:GLN:HG2	1.95	0.49
38:A1:385:A:H2'	38:A1:386:A:C8	2.47	0.49
38:A1:1219:C:O2'	38:A1:1286:A:N1	2.36	0.49
38:A1:1659:U:H2'	38:A1:1660:C:H6	1.75	0.49
38:A1:2366:C:C2	38:A1:2382:G:N2	2.80	0.49
38:A1:2883:U:H2'	38:A1:2884:C:H6	1.78	0.49
38:A1:3150:A:H2'	38:A1:3151:U:O4'	2.13	0.49
38:A1:3153:U:H4'	38:A1:3154:C:C4	2.47	0.49
38:A1:3202:G:H2'	38:A1:3203:U:C6	2.47	0.49
39:A3:121:U:H5''	41:AD:259:LYS:HZ2	1.77	0.49
42:AE:105:TYR:OH	42:AE:137:ASP:OD2	2.14	0.49
46:AI:51:HIS:HD2	46:AI:168:SER:HB3	1.77	0.49
46:AI:192:ASP:OD2	46:AI:193:ASP:N	2.46	0.49
55:AS:93:GLU:HG2	55:AS:137:ARG:CG	2.42	0.49
65:Ac:9:SER:O	65:Ac:13:LYS:NZ	2.45	0.49
65:Ac:50:VAL:HA	65:Ac:53:LYS:HG2	1.95	0.49
67:Ae:30:GLU:H	67:Ae:30:GLU:CD	2.18	0.49
80:DC:224:GLN:OE1	80:DC:228:ARG:NH2	2.45	0.49
81:EC:6883:A:H4'	81:EC:6884:G:OP1	2.11	0.49
1:BA:41:ARG:HB2	1:BA:45:VAL:HG12	1.94	0.49
1:BA:131:GLN:NE2	1:BA:135:GLU:OE2	2.34	0.49
3:BC:69:ILE:HD12	3:BC:136:VAL:HG11	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:BE:3:ARG:NH1	34:B5:401:A:H1'	2.27	0.49
6:BH:30:SER:O	6:BH:34:LEU:N	2.41	0.49
15:BY:123:LYS:NZ	34:B5:150:U:OP1	2.29	0.49
20:BF:30:PRO:HG2	20:BF:33:VAL:HG23	1.94	0.49
21:BK:15:LEU:HD21	21:BK:46:LEU:HD11	1.93	0.49
23:BQ:100:GLN:NE2	31:Bg:57:PRO:O	2.45	0.49
26:BT:78:LYS:NZ	34:B5:1523:G:N3	2.61	0.49
26:BT:106:GLN:NE2	34:B5:1500:C:OP1	2.41	0.49
31:Bg:45:TRP:HA	31:Bg:57:PRO:HA	1.95	0.49
34:B5:219:A:N6	34:B5:842:C:H1'	2.27	0.49
35:AA:89:TYR:HB2	35:AA:100:ASN:ND2	2.28	0.49
38:A1:2457:G:H21	38:A1:2483:G:H1'	1.78	0.49
38:A1:2592:G:H4'	38:A1:2594:C:C2	2.47	0.49
38:A1:2768:U:H2'	38:A1:2769:A:C8	2.47	0.49
38:A1:3223:A:C6	38:A1:3263:G:C6	3.00	0.49
41:AD:224:LYS:HA	41:AD:227:LEU:HG	1.93	0.49
47:AJ:87:LYS:O	47:AJ:90:GLN:NE2	2.45	0.49
51:AO:113[A]:ASP:N	51:AO:113[A]:ASP:OD1	2.45	0.49
68:Af:27:VAL:HG11	68:Af:82:ARG:HD3	1.94	0.49
80:DC:542:LEU:HD23	80:DC:545:LEU:HD12	1.94	0.49
80:DC:725:GLN:HG3	80:DC:802:SER:O	2.13	0.49
1:BA:60:ALA:HB2	1:BA:158:VAL:HG11	1.94	0.49
2:BB:137:ILE:HG21	2:BB:172:LEU:HD22	1.95	0.49
10:BN:16:ILE:HA	34:B5:959:U:H5''	1.94	0.49
12:BV:64:GLU:OE2	17:Bb:3:LEU:HG	2.12	0.49
13:BW:55:ASP:OD1	13:BW:56:HIS:N	2.46	0.49
15:BY:38:ASP:O	15:BY:42:GLU:HG2	2.13	0.49
20:BF:59:VAL:C	20:BF:61:TYR:H	2.21	0.49
20:BF:116:HIS:CE1	28:BZ:98:GLN:HE21	2.31	0.49
27:BU:98:GLN:NE2	27:BU:99:ILE:HB	2.27	0.49
34:B5:1157:A:N6	34:B5:1618:C:C2	2.81	0.49
34:B5:1267:G:H2'	34:B5:1268:G:C8	2.48	0.49
34:B5:1278:G:H2'	34:B5:1279:C:C6	2.48	0.49
34:B5:1489:U:C2	34:B5:1513:G:C2	3.00	0.49
35:AA:146:THR:N	35:AA:158:ILE:O	2.40	0.49
36:AB:153:LYS:HD2	36:AB:154:TYR:CE1	2.47	0.49
36:AB:252:ILE:HA	36:AB:264:VAL:HG21	1.94	0.49
36:AB:277:SER:HB3	36:AB:329:PRO:HD3	1.93	0.49
38:A1:3:U:C2	40:A4:157:U:H1'	2.48	0.49
38:A1:16:A:OP2	60:AX:42:ARG:NH1	2.46	0.49
38:A1:111:C:OP2	48:AL:91:ARG:NH1	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:538:G:H2'	38:A1:539:C:C6	2.47	0.49
38:A1:818:C:O2'	72:Aj:7:SER:OG	2.21	0.49
38:A1:1213:G:H4'	55:AS:90:MET:HE3	1.93	0.49
38:A1:1255:C:N4	38:A1:1257:C:H41	2.11	0.49
38:A1:1646:G:O2'	38:A1:1808:G:N2	2.46	0.49
38:A1:1696:A:H2'	38:A1:1697:A:H8	1.76	0.49
38:A1:1751:G:O6	73:Ak:44:LYS:NZ	2.37	0.49
38:A1:2385:G:N7	38:A1:3143:C:O2'	2.44	0.49
38:A1:2999:U:H2'	38:A1:3000:A:C8	2.48	0.49
38:A1:3107:U:H2'	38:A1:3108:G:C8	2.48	0.49
40:A4:68:G:H2'	40:A4:69:U:C6	2.48	0.49
47:AJ:160:VAL:O	47:AJ:164:LYS:HG2	2.12	0.49
55:AS:154:HIS:HA	55:AS:170:THR:HG22	1.93	0.49
58:AV:45:ARG:HD2	58:AV:46:LEU:H	1.75	0.49
60:AX:82:LEU:HD13	60:AX:126:LEU:HD23	1.95	0.49
77:Ao:35:LEU:HD23	77:Ao:36:PHE:HD2	1.77	0.49
79:E:120:VAL:HB	79:E:121:PRO:HD3	1.95	0.49
80:DC:150:ARG:HH22	80:DC:354:GLU:CD	2.21	0.49
80:DC:191:THR:HG23	80:DC:192:TYR:HD1	1.78	0.49
80:DC:397:PHE:HE1	80:DC:453:ILE:HG23	1.78	0.49
80:DC:487:PRO:HG3	80:DC:517:CYS:HB3	1.94	0.49
80:DC:626:ASP:OD2	80:DC:628:THR:OG1	2.30	0.49
81:EC:6812:C:H2'	81:EC:6813:A:C8	2.48	0.49
81:EC:6903:U:H3	81:EC:6910:A:H61	1.60	0.49
4:BE:15:PRO:HD3	4:BE:39:ARG:CZ	2.42	0.49
4:BE:69:HIS:HE1	4:BE:94:ALA:HB3	1.78	0.49
4:BE:87:MET:HE1	4:BE:236:ILE:HG12	1.94	0.49
5:BG:172:ALA:HB3	34:B5:79:C:H5'	1.94	0.49
7:BI:43:ILE:HD11	7:BI:55:TYR:HB3	1.94	0.49
9:BL:10:GLU:H	9:BL:14:GLN:HE22	1.59	0.49
19:BD:45:LYS:HE2	19:BD:47:GLU:OE1	2.12	0.49
20:BF:43:PHE:HB3	20:BF:45:LYS:HZ3	1.78	0.49
21:BK:64:TYR:HB3	21:BK:66:TYR:CE1	2.48	0.49
22:BP:103:ASN:HD21	22:BP:120:SER:HA	1.76	0.49
24:BR:49:LYS:NZ	34:B5:1390:U:OP1	2.33	0.49
31:Bg:267:PRO:HB2	31:Bg:269:TYR:HD1	1.77	0.49
33:BM:46:ARG:HG2	33:BM:50:LYS:HE2	1.95	0.49
35:AA:186:PHE:HD2	35:AA:187:HIS:CD2	2.28	0.49
36:AB:113:GLU:OE2	36:AB:176:ALA:N	2.46	0.49
36:AB:223:GLY:HA2	36:AB:271:GLY:HA3	1.94	0.49
37:AC:188:ARG:NH1	38:A1:1382:G:OP2	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:524:U:OP1	49:AM:77:ARG:NH2	2.38	0.49
38:A1:759:U:H2'	38:A1:760:G:O4'	2.12	0.49
38:A1:1184:A:H2'	38:A1:1185:C:C6	2.48	0.49
38:A1:1621:A:H2'	38:A1:1622:U:C6	2.48	0.49
38:A1:2213:A:H2'	38:A1:2214:A:C8	2.47	0.49
38:A1:3096:C:H2'	38:A1:3097:C:C6	2.48	0.49
38:A1:3207:U:H5	55:AS:159:SER:HA	1.77	0.49
39:A3:5:G:O3'	41:AD:54:ARG:HG3	2.12	0.49
39:A3:8:G:OP2	41:AD:30:TYR:OH	2.25	0.49
40:A4:57:C:H4'	40:A4:63:G:N7	2.27	0.49
40:A4:86:U:H4'	40:A4:87:G:H8	1.76	0.49
46:AI:190:ILE:HG23	46:AI:197:VAL:HB	1.94	0.49
62:AZ:54:THR:OG1	62:AZ:57:HIS:NE2	2.32	0.49
2:BB:167:VAL:O	2:BB:171:ILE:HG12	2.13	0.49
7:BI:189:LEU:O	7:BI:193:LEU:HG	2.12	0.49
8:BJ:38:ASN:ND2	34:B5:593:U:O5'	2.45	0.49
8:BJ:90:LYS:HG2	8:BJ:95:TYR:CE2	2.47	0.49
11:BO:14:PHE:CD1	11:BO:78:ALA:HB3	2.48	0.49
13:BW:57:ARG:HH21	34:B5:862:A:H5''	1.77	0.49
15:BY:131:ARG:NH2	34:B5:153:G:H5'	2.27	0.49
23:BQ:58:ASP:OD1	23:BQ:58:ASP:N	2.45	0.49
26:BT:37:VAL:O	26:BT:46:PRO:HB3	2.12	0.49
31:Bg:54:PHE:CE2	31:Bg:312:VAL:HG11	2.48	0.49
33:BM:46:ARG:NH2	34:B5:1253:U:OP2	2.46	0.49
34:B5:175:G:N2	34:B5:266:A:C4	2.81	0.49
34:B5:180:A:H2'	34:B5:181:A:C8	2.47	0.49
34:B5:431:C:H5''	80:DC:391:LYS:N	2.28	0.49
34:B5:587:C:H2'	34:B5:588:U:C6	2.48	0.49
36:AB:130:PHE:HD1	36:AB:133:TYR:HB3	1.78	0.49
36:AB:364:LYS:HD2	38:A1:3049:A:H4'	1.94	0.49
38:A1:93:C:OP2	38:A1:2764:C:O2'	2.29	0.49
38:A1:700:C:H2'	38:A1:701:G:H8	1.77	0.49
38:A1:1238:C:N4	38:A1:1250:G:O6	2.31	0.49
38:A1:2828:G:N1	38:A1:2863:G:H1'	2.28	0.49
38:A1:3113:A:H4'	45:AH:69:ARG:HG3	1.94	0.49
60:AX:97:LYS:NZ	60:AX:101:GLU:OE2	2.45	0.49
65:Ac:9:SER:O	65:Ac:12:GLN:NE2	2.44	0.49
67:Ae:83:GLU:O	67:Ae:86:THR:OG1	2.31	0.49
80:DC:141:THR:O	80:DC:145:GLN:N	2.39	0.49
80:DC:233:PHE:HD2	80:DC:235:VAL:HB	1.77	0.49
80:DC:401:PHE:CD2	80:DC:478:MET:HE1	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:DC:579:SER:OG	80:DC:584:ASN:N	2.42	0.49
80:DC:597:VAL:HG21	80:DC:625:TRP:HE1	1.78	0.49
81:EC:6880:G:H3'	81:EC:6881:U:O4'	2.13	0.49
1:BA:91:ALA:HA	24:BR:82:ASP:HA	1.94	0.49
5:BG:140:ASN:ND2	34:B5:167:U:H5''	2.28	0.49
7:BI:24:LYS:NZ	34:B5:400:A:H62	2.10	0.49
7:BI:77:ARG:O	7:BI:104:ILE:HB	2.13	0.49
19:BD:70:THR:HG22	19:BD:86:LEU:CB	2.41	0.49
34:B5:84:A:H3'	34:B5:85:A:C8	2.48	0.49
34:B5:1502:G:C2	34:B5:1506:G:C6	3.00	0.49
35:AA:223:SER:HG	38:A1:2244:A:HO2'	1.60	0.49
36:AB:122:TRP:CE2	36:AB:127:LYS:HE3	2.47	0.49
38:A1:291:C:H2'	38:A1:292:U:C6	2.48	0.49
38:A1:299:G:H1	38:A1:316:U:H3	1.59	0.49
38:A1:641:C:H42	38:A1:645:1MA:H8	1.61	0.49
38:A1:668:G:H2'	38:A1:669:U:C6	2.48	0.49
38:A1:832:G:H4'	54:AR:87:ALA:HB2	1.95	0.49
38:A1:907:G:OP1	38:A1:909:G:O2'	2.31	0.49
38:A1:1883:A:H2'	38:A1:1884:A:C8	2.48	0.49
38:A1:2454:G:O5'	38:A1:2484:A:N6	2.45	0.49
38:A1:3121:U:H1'	38:A1:3122:A:H5''	1.95	0.49
41:AD:41:LYS:HB2	56:AT:68:THR:O	2.13	0.49
46:AI:38:LYS:HB2	46:AI:83:ASP:HB2	1.95	0.49
77:Ao:4:VAL:O	77:Ao:94:GLY:N	2.46	0.49
79:E:21:ASN:HD21	79:E:172:VAL:HG22	1.77	0.49
79:E:117:ILE:HG12	79:E:137:PRO:HG3	1.94	0.49
80:DC:524:GLU:OE1	80:DC:524:GLU:N	2.36	0.49
80:DC:579:SER:HB3	80:DC:584:ASN:HB2	1.95	0.49
80:DC:588:LEU:HD12	80:DC:686:VAL:HG13	1.94	0.49
80:DC:638:PRO:HD2	80:DC:642:GLY:HA3	1.93	0.49
2:BB:29:TRP:HE3	2:BB:45:LYS:HG2	1.77	0.48
4:BE:45:ILE:HA	4:BE:61:VAL:HG11	1.95	0.48
10:BN:61:THR:HG23	34:B5:959:U:H1'	1.95	0.48
23:BQ:123:ARG:NH1	34:B5:1336:A:O3'	2.46	0.48
25:BS:132:ARG:HE	25:BS:136:GLN:HE21	1.61	0.48
31:Bg:113:VAL:HA	31:Bg:124:SER:HA	1.94	0.48
34:B5:107:C:H2'	34:B5:108:A:H8	1.78	0.48
34:B5:200:A:H2'	34:B5:201:G:H8	1.73	0.48
34:B5:1244:A:C5	34:B5:1246:C:C2	3.01	0.48
34:B5:1392:U:H2'	34:B5:1393:C:C6	2.48	0.48
34:B5:1400:A:H2'	34:B5:1401:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:110:ASN:HB3	50:AN:202:TYR:HE1	1.77	0.48
38:A1:589:A:H1'	38:A1:1337:A:H5''	1.95	0.48
38:A1:1426:C:OP2	63:Aa:4:ARG:NH2	2.46	0.48
38:A1:1493:G:OP1	74:A1:49:MET:N	2.35	0.48
38:A1:3122:A:N1	45:AH:70:THR:HG21	2.27	0.48
38:A1:3213:A:OP2	49:AM:128:ARG:HD2	2.13	0.48
38:A1:3232:G:O6	38:A1:3255:U:C2	2.66	0.48
39:A3:44:C:H2'	39:A3:45:A:H8	1.76	0.48
45:AH:99:ILE:HG22	45:AH:101:VAL:HG13	1.95	0.48
62:AZ:4:PHE:HE1	62:AZ:82:PRO:HG3	1.78	0.48
63:Aa:84:GLU:HA	63:Aa:87:ARG:HD3	1.94	0.48
77:Ao:35:LEU:HD23	77:Ao:36:PHE:CD2	2.48	0.48
77:Ao:73:GLU:OE1	77:Ao:78:LYS:HA	2.13	0.48
80:DC:21:ASN:O	80:DC:123:ASP:N	2.40	0.48
80:DC:110:ASP:HB3	80:DC:537:HIS:HB2	1.94	0.48
80:DC:138:GLN:O	80:DC:142:VAL:HG12	2.13	0.48
81:EC:6950:C:H2'	81:EC:6951:C:H6	1.77	0.48
4:BE:27:TYR:O	34:B5:447:U:O2'	2.27	0.48
5:BG:16:PHE:HE2	5:BG:18:ILE:HD12	1.77	0.48
6:BH:96:ARG:HB3	34:B5:856:A:N6	2.29	0.48
8:BJ:133:HIS:NE2	34:B5:512:A:O2'	2.27	0.48
13:BW:42:GLN:NE2	13:BW:48:GLY:O	2.34	0.48
16:Ba:19:LYS:O	16:Ba:31:PRO:HA	2.12	0.48
23:BQ:136:SER:HB3	34:B5:1586:A:H5''	1.94	0.48
25:BS:72:ILE:HA	25:BS:79:TYR:CE2	2.48	0.48
29:Bc:44:VAL:HG21	29:Bc:48:VAL:HG21	1.94	0.48
34:B5:194:U:H3'	34:B5:195:G:C8	2.47	0.48
34:B5:213:A:H2'	34:B5:214:G:O4'	2.13	0.48
34:B5:461:G:H2'	34:B5:462:G:H8	1.77	0.48
34:B5:913:G:O6	38:A1:2208:A:N6	2.45	0.48
34:B5:968:U:H2'	34:B5:969:C:O4'	2.14	0.48
35:AA:245:LEU:HD11	38:A1:2243:A:C8	2.48	0.48
38:A1:553:U:H2'	38:A1:554:A:O4'	2.14	0.48
38:A1:978:G:H1'	38:A1:979:U:H5	1.78	0.48
38:A1:1227:C:H2'	38:A1:1282:G:H22	1.78	0.48
38:A1:1632:A:OP1	62:AZ:48:ARG:NH2	2.46	0.48
38:A1:2413:A:H2'	38:A1:2414:G:C8	2.47	0.48
38:A1:2491:A:H4'	79:E:213:ALA:HA	1.95	0.48
38:A1:2618:G:OP1	38:A1:2644:C:O2'	2.28	0.48
38:A1:2847:A:O4'	75:Am:125:LYS:NZ	2.45	0.48
38:A1:3077:A:N6	38:A1:3080:G:C5	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3233:C:H2'	38:A1:3234:A:C8	2.49	0.48
49:AM:23:ILE:HA	49:AM:63:VAL:HG12	1.95	0.48
51:AO:108[A]:ILE:HD12	51:AO:160[A]:ARG:CZ	2.43	0.48
58:AV:94:TYR:CE2	59:AW:21:PHE:HD2	2.31	0.48
59:AW:23:ARG:NH2	59:AW:25:ASP:OD2	2.37	0.48
60:AX:57:LEU:HB3	60:AX:62:VAL:HG23	1.95	0.48
70:Ah:118:ILE:HG22	70:Ah:120:ALA:H	1.78	0.48
80:DC:576:LEU:H	80:DC:839:TYR:HE1	1.59	0.48
3:BC:95:ARG:NH2	34:B5:1291:G:OP1	2.44	0.48
4:BE:255:ARG:HG3	4:BE:256:ARG:HD2	1.95	0.48
12:BV:80:LYS:HD2	12:BV:80:LYS:N	2.27	0.48
14:BX:74:VAL:HG21	14:BX:104:LEU:HD21	1.95	0.48
15:BY:55:VAL:HA	15:BY:74:LEU:O	2.13	0.48
19:BD:67:ASN:O	19:BD:70:THR:OG1	2.20	0.48
19:BD:71:LEU:HD23	19:BD:74:GLN:NE2	2.28	0.48
19:BD:76:ARG:HH22	21:BK:24:LYS:CE	2.26	0.48
22:BP:76:VAL:HB	22:BP:94:VAL:HG22	1.94	0.48
25:BS:27:LYS:O	25:BS:31:ALA:N	2.36	0.48
34:B5:269:G:H2'	34:B5:270:C:H6	1.78	0.48
34:B5:737:A:HO2'	34:B5:738:G:H8	1.59	0.48
34:B5:918:U:H2'	34:B5:919:A:H8	1.73	0.48
37:AC:240:PRO:HG3	37:AC:246:ARG:HH11	1.79	0.48
38:A1:177:U:H2'	38:A1:241:G:N1	2.21	0.48
38:A1:1738:C:H2'	38:A1:1739:U:C6	2.47	0.48
38:A1:2254:U:H2'	38:A1:2261:G:N2	2.26	0.48
42:AE:52:VAL:HG23	42:AE:67:GLY:N	2.29	0.48
54:AR:116:ASP:OD2	54:AR:118:HIS:N	2.46	0.48
57:AU:80:THR:HG22	57:AU:84:LEU:HD23	1.95	0.48
79:E:101:LYS:HE3	79:E:105:LYS:HZ2	1.78	0.48
80:DC:816:GLY:O	80:DC:819:VAL:HG22	2.13	0.48
1:BA:29:VAL:HG13	1:BA:149:LEU:HB3	1.95	0.48
1:BA:79:ARG:O	1:BA:83:GLN:HG2	2.13	0.48
10:BN:50:ILE:HG13	10:BN:51:GLY:N	2.28	0.48
10:BN:132:VAL:HG13	10:BN:134:VAL:HG23	1.95	0.48
11:BO:41:ARG:HH12	34:B5:896:U:H3	1.62	0.48
15:BY:34:ASN:ND2	34:B5:521:A:N3	2.61	0.48
21:BK:46:LEU:HB3	21:BK:66:TYR:CE2	2.48	0.48
22:BP:21:ASP:O	22:BP:25:LEU:N	2.43	0.48
22:BP:60:LEU:HD23	22:BP:76:VAL:HG21	1.94	0.48
23:BQ:99:GLU:OE1	23:BQ:99:GLU:N	2.39	0.48
25:BS:41:ARG:HE	26:BT:46:PRO:HD3	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BU:26:LEU:HD13	27:BU:34:LEU:HD11	1.93	0.48
34:B5:114:C:O2'	34:B5:115:G:OP2	2.28	0.48
34:B5:214:G:O2'	34:B5:251:A:N6	2.44	0.48
34:B5:374:U:H2'	34:B5:375:U:C6	2.48	0.48
34:B5:1560:U:H2'	34:B5:1561:U:O4'	2.12	0.48
34:B5:1625:C:H2'	34:B5:1626:U:C6	2.49	0.48
34:B5:1741:U:H2'	34:B5:1742:U:C6	2.49	0.48
38:A1:336:A:OP1	61:AY:10:SER:N	2.34	0.48
38:A1:936:A:OP2	63:Aa:27:LYS:NZ	2.46	0.48
38:A1:1667:A:H2'	38:A1:1668:G:H8	1.78	0.48
38:A1:2219:A:H2'	38:A1:2220:A:C8	2.48	0.48
38:A1:2727:A:OP2	38:A1:2728:G:N2	2.44	0.48
38:A1:3094:A:H2'	38:A1:3095:U:C6	2.48	0.48
46:AI:163:GLN:C	46:AI:164:LYS:HD2	2.39	0.48
47:AJ:14:ILE:HG23	47:AJ:131:MET:HE1	1.95	0.48
49:AM:19:ARG:HD2	49:AM:65:LEU:HD23	1.95	0.48
49:AM:55:ARG:HG3	55:AS:70:THR:HB	1.95	0.48
50:AN:5:LYS:HB3	71:AI:36:ARG:HH22	1.77	0.48
59:AW:20:LEU:HD11	59:AW:28:ILE:HG23	1.94	0.48
69:Ag:16:ARG:HD2	69:Ag:37:LYS:NZ	2.28	0.48
74:Al:26:TRP:CD1	74:Al:26:TRP:H	2.30	0.48
80:DC:110:ASP:CG	80:DC:537:HIS:HB2	2.38	0.48
80:DC:182:VAL:O	80:DC:186:ASN:ND2	2.47	0.48
80:DC:250:PHE:HB3	80:DC:275:MET:SD	2.53	0.48
1:BA:11:PRO:HA	1:BA:14:ALA:HB3	1.95	0.48
2:BB:82:ARG:HB3	2:BB:105:PHE:CE1	2.49	0.48
7:BI:41:LYS:HZ2	7:BI:62:THR:HG22	1.79	0.48
7:BI:171:SER:HB3	34:B5:209:U:H5'	1.95	0.48
9:BL:14:GLN:O	9:BL:15:LYS:NZ	2.46	0.48
23:BQ:10:PHE:HE2	23:BQ:12:LYS:HE3	1.77	0.48
32:Bf:78:LYS:HD3	34:B5:1187:PSU:H4'	1.94	0.48
34:B5:449:C:H2'	34:B5:450:U:C6	2.48	0.48
34:B5:624:G:H2'	34:B5:625:C:C6	2.48	0.48
34:B5:1351:G:H2'	34:B5:1352:G:H8	1.78	0.48
38:A1:74:G:OP1	48:AL:104:ARG:HG3	2.13	0.48
38:A1:127:G:H2'	38:A1:128:G:C8	2.49	0.48
38:A1:156:G:OP2	71:AI:25:LYS:HB3	2.13	0.48
38:A1:188:U:C4	38:A1:223:U:H4'	2.49	0.48
38:A1:253:A:H2'	38:A1:254:A:H8	1.79	0.48
38:A1:264:G:OP1	71:AI:34:SER:HB2	2.12	0.48
38:A1:1152:G:OP2	38:A1:1152:G:N2	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1161:G:H21	67:Ae:56:GLY:HA2	1.79	0.48
38:A1:1596:C:H2'	38:A1:1597:C:C6	2.48	0.48
38:A1:1615:C:H2'	38:A1:1616:U:H6	1.77	0.48
38:A1:3295:A:H2'	38:A1:3296:A:H8	1.79	0.48
45:AH:8:GLN:HB3	45:AH:72:LYS:HD3	1.95	0.48
47:AJ:7:ASN:OD1	47:AJ:8:PRO:HD2	2.14	0.48
50:AN:38:ARG:HA	50:AN:62:TYR:CD1	2.49	0.48
56:AT:142:SER:HB2	56:AT:144:GLU:OE2	2.13	0.48
62:AZ:136:PHE:O	69:Ag:76:TYR:OH	2.22	0.48
80:DC:162:ARG:NH1	83:DC:901:GDP:N3	2.61	0.48
81:EC:6947:A:O2'	81:EC:6948:U:H3'	2.13	0.48
1:BA:34:GLU:N	1:BA:35:PRO:HD2	2.28	0.48
1:BA:144:ILE:HG12	1:BA:158:VAL:HB	1.93	0.48
2:BB:99:ASN:OD1	2:BB:100:PHE:N	2.46	0.48
4:BE:15:PRO:HD2	4:BE:18:TRP:HE1	1.79	0.48
5:BG:59:GLN:NE2	34:B5:419:G:O2'	2.46	0.48
7:BI:137:LYS:HG2	34:B5:188:A:H5'	1.94	0.48
7:BI:141:ARG:HH22	34:B5:197:A:H61	1.61	0.48
9:BL:68:GLY:HA3	9:BL:127:GLN:OE1	2.14	0.48
10:BN:46:THR:HG23	10:BN:86:GLU:HG2	1.95	0.48
17:Bb:34:ASP:HB3	17:Bb:82:LYS:HB2	1.96	0.48
19:BD:60:GLY:HA3	19:BD:65:ARG:HB2	1.96	0.48
20:BF:209:TYR:HA	20:BF:212:LYS:HD2	1.95	0.48
28:BZ:40:VAL:HG23	28:BZ:41:ILE:HG23	1.96	0.48
29:Bc:49:ARG:HG2	29:Bc:50:GLU:H	1.79	0.48
30:Bd:40:ARG:NH2	34:B5:1198:G:O3'	2.47	0.48
32:Bf:103:LEU:HD13	33:BM:71:ILE:HG22	1.94	0.48
34:B5:515:A:H2'	34:B5:516:G:O4'	2.14	0.48
34:B5:1206:U:H5''	34:B5:1207:C:OP2	2.13	0.48
34:B5:1294:G:H1	34:B5:1303:U:H3	1.61	0.48
36:AB:19:ARG:N	38:A1:2990:G:OP1	2.44	0.48
37:AC:92:ASN:HA	37:AC:98:ARG:O	2.14	0.48
38:A1:95:A:H5''	63:Aa:34:MET:HB2	1.96	0.48
38:A1:251:G:H1'	38:A1:253:A:C8	2.48	0.48
38:A1:371:G:O2'	38:A1:396:A:N6	2.38	0.48
38:A1:597:G:H5''	43:AF:41:ARG:HD2	1.94	0.48
38:A1:623:U:H2'	38:A1:624:G:O4'	2.13	0.48
38:A1:794:U:H2'	38:A1:795:G:C8	2.49	0.48
38:A1:1413:G:H2'	38:A1:1414:G:C8	2.49	0.48
38:A1:2154:U:H2'	38:A1:2155:G:C8	2.49	0.48
38:A1:2368:A:H2'	38:A1:2369:G:H8	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3072:C:H2'	38:A1:3073:A:O4'	2.14	0.48
38:A1:3297:U:H2'	38:A1:3298:C:H6	1.78	0.48
45:AH:89:LYS:HB2	45:AH:143:GLU:OE1	2.13	0.48
50:AN:37:HIS:CE1	50:AN:63:ARG:HB3	2.49	0.48
51:AO:23[A]:VAL:HG13	51:AO:33[A]:ILE:CD1	2.44	0.48
60:AX:94:GLN:OE1	60:AX:94:GLN:N	2.46	0.48
67:Ae:3:SER:HB3	67:Ae:71:HIS:CE1	2.49	0.48
78:Ap:89:MET:HE2	78:Ap:89:MET:HA	1.96	0.48
80:DC:75:ILE:HG22	80:DC:439:GLY:H	1.78	0.48
80:DC:88:GLU:OE1	80:DC:88:GLU:N	2.39	0.48
81:EC:6915:G:H2'	81:EC:6916:A:H8	1.79	0.48
9:BL:55:ASP:OD2	9:BL:58:CYS:HB2	2.14	0.48
11:BO:61:MET:HG2	11:BO:104:ALA:HB2	1.95	0.48
12:BV:33:GLN:HE21	12:BV:52:THR:HG1	1.62	0.48
15:BY:61:ARG:NE	15:BY:62:THR:H	2.05	0.48
19:BD:169:ASP:OD1	19:BD:169:ASP:N	2.47	0.48
21:BK:59:PHE:HB2	34:B5:1435:G:N3	2.29	0.48
23:BQ:66:ARG:NH2	34:B5:1351:G:H5''	2.28	0.48
25:BS:129:TRP:HB3	25:BS:131:LEU:HD13	1.96	0.48
34:B5:84:A:C4	34:B5:85:A:C8	3.02	0.48
34:B5:292:U:H2'	34:B5:293:U:O2	2.13	0.48
34:B5:461:G:H2'	34:B5:462:G:C8	2.48	0.48
34:B5:752:A:O2'	34:B5:753:A:C8	2.66	0.48
34:B5:889:U:H2'	34:B5:890:C:C6	2.49	0.48
34:B5:1125:A:O2'	34:B5:1776:A:OP1	2.23	0.48
34:B5:1382:A:O2'	34:B5:1383:G:H5''	2.14	0.48
34:B5:1600:A:H1'	34:B5:1602:C:C5	2.49	0.48
34:B5:1787:C:H2'	34:B5:1788:G:C8	2.48	0.48
35:AA:71:LEU:CD2	38:A1:1651:U:H5''	2.38	0.48
35:AA:177:LYS:HD2	78:Ap:26:VAL:HG23	1.95	0.48
36:AB:14:LEU:HD22	36:AB:262:TRP:CZ3	2.48	0.48
38:A1:273:A:H2'	38:A1:274:G:H8	1.77	0.48
38:A1:280:U:O2'	50:AN:182:ASN:ND2	2.37	0.48
38:A1:615:U:H2'	38:A1:616:G:C8	2.49	0.48
38:A1:952:A:OP1	64:Ab:18:ARG:NH2	2.46	0.48
38:A1:965:A:H2	63:Aa:43:ILE:HD12	1.78	0.48
38:A1:1203:A:N6	38:A1:1300:G:H2'	2.29	0.48
38:A1:1596:C:H2'	38:A1:1597:C:H6	1.78	0.48
38:A1:2261:G:H21	38:A1:2262:A:N6	2.10	0.48
38:A1:2473:C:H2'	38:A1:2474:G:H21	1.78	0.48
38:A1:2875:U:OP2	38:A1:2945:G:N1	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3324:C:OP1	66:Ad:15:ASN:HB3	2.13	0.48
44:AG:98:ARG:NH1	44:AG:188:THR:O	2.33	0.48
55:AS:6:GLU:HB2	55:AS:100:VAL:HG22	1.95	0.48
80:DC:579:SER:HA	80:DC:708:THR:HB	1.96	0.48
80:DC:675:PRO:HB3	80:DC:714:TYR:CD2	2.48	0.48
80:DC:734:GLN:OE1	80:DC:765:LEU:HB3	2.13	0.48
81:EC:6779:C:H2'	81:EC:6780:A:O4'	2.13	0.48
81:EC:6781:U:H1'	81:EC:6782:C:C5	2.39	0.48
81:EC:6897:G:H2'	81:EC:6898:U:H6	1.77	0.48
81:EC:6899:C:C2	81:EC:6900:A:C8	3.02	0.48
1:BA:62:ARG:HH21	12:BV:38:LYS:HD3	1.77	0.48
1:BA:184:LEU:O	12:BV:44:ARG:NH1	2.46	0.48
2:BB:144:ARG:NH1	2:BB:208:GLN:OE1	2.46	0.48
4:BE:105:VAL:HG21	4:BE:245:LYS:N	2.28	0.48
5:BG:135:PRO:HB3	5:BG:140:ASN:HB3	1.96	0.48
8:BJ:77:ILE:HD13	8:BJ:96:VAL:HG22	1.95	0.48
11:BO:53:ASP:OD1	11:BO:58:TYR:HB3	2.14	0.48
12:BV:3:ASN:HD21	12:BV:7:GLN:HG3	1.79	0.48
22:BP:30:THR:HG22	22:BP:86:VAL:HG11	1.96	0.48
34:B5:129:U:H5'	34:B5:264:G:H22	1.79	0.48
34:B5:146:U:H2'	34:B5:147:A:C8	2.48	0.48
34:B5:1039:A:O2'	34:B5:1040:G:H8	1.97	0.48
34:B5:1439:C:H2'	34:B5:1440:C:C6	2.49	0.48
34:B5:1556:A:C5	34:B5:1560:U:C2	3.02	0.48
34:B5:1579:U:H2'	34:B5:1580:C:H6	1.79	0.48
34:B5:1589:C:H2'	34:B5:1590:G:O4'	2.14	0.48
34:B5:1656:U:O2'	38:A1:2292:U:O2'	2.16	0.48
38:A1:127:G:H2'	38:A1:128:G:H8	1.78	0.48
38:A1:662:U:H2'	38:A1:663:C:C6	2.49	0.48
38:A1:1270:A:C2	80:DC:737:GLU:HB3	2.49	0.48
38:A1:1486:G:H21	69:Ag:6:THR:HG22	1.78	0.48
38:A1:1909:A:H2'	38:A1:1910:A:C8	2.48	0.48
38:A1:1920:U:O2'	38:A1:1932:A:N7	2.35	0.48
38:A1:2608:G:H2'	38:A1:2609:A:H8	1.78	0.48
38:A1:3167:A:H2'	38:A1:3168:A:C8	2.49	0.48
38:A1:3338:C:H2'	38:A1:3339:A:H8	1.78	0.48
38:A1:3371:G:H2'	38:A1:3372:A:H8	1.78	0.48
44:AG:99:PRO:HB3	44:AG:131:ALA:HB1	1.95	0.48
44:AG:145:ASN:HB3	44:AG:147:LYS:HG3	1.95	0.48
80:DC:132:ILE:HD12	80:DC:167:LEU:HD13	1.95	0.48
80:DC:785:ARG:NH1	80:DC:792:ALA:HB3	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BG:214:LYS:O	5:BG:218:GLU:HG2	2.12	0.48
8:BJ:159:ALA:HB3	8:BJ:162:SER:HB3	1.94	0.48
13:BW:3:ARG:NH2	34:B5:865:A:OP1	2.44	0.48
18:Be:37:ARG:NH1	34:B5:478:A:H5'	2.29	0.48
34:B5:514:G:H2'	34:B5:515:A:H8	1.77	0.48
34:B5:1074:G:H2'	34:B5:1075:C:C6	2.48	0.48
34:B5:1611:A:H2'	34:B5:1612:U:C6	2.48	0.48
38:A1:840:C:H2'	38:A1:841:A:C8	2.48	0.48
38:A1:1083:G:H2'	38:A1:1084:A:H8	1.78	0.48
38:A1:1129:A:H2'	38:A1:1130:A:C8	2.49	0.48
38:A1:1206:G:OP1	46:AI:157:TYR:OH	2.30	0.48
38:A1:2338:C:H1'	58:AV:49:LEU:HD12	1.95	0.48
38:A1:2468:A:N6	38:A1:2477:G:O2'	2.47	0.48
38:A1:2577:C:H2'	38:A1:2578:U:C6	2.48	0.48
38:A1:2720:G:H22	38:A1:2736:A:H2	1.60	0.48
38:A1:2864:A:C6	38:A1:2865:PSU:C2	3.02	0.48
38:A1:2999:U:H2'	38:A1:3000:A:H8	1.79	0.48
38:A1:3332:U:H2'	38:A1:3333:G:O4'	2.13	0.48
39:A3:1:G:H2'	39:A3:2:G:H8	1.79	0.48
39:A3:98:C:O2'	43:AF:131:GLU:OE1	2.22	0.48
50:AN:27:VAL:HG23	50:AN:129:TYR:CE2	2.39	0.48
53:AQ:94:PHE:CE2	63:Aa:119:PRO:HD3	2.48	0.48
71:AI:61:ILE:HD11	71:AI:87:VAL:HG13	1.96	0.48
80:DC:419:VAL:HG12	80:DC:421:GLY:H	1.79	0.48
81:EC:6835:U:H5''	81:EC:6873:A:C2	2.49	0.48
81:EC:6922:G:C6	81:EC:6932:G:C6	3.01	0.48
1:BA:39:ASN:O	1:BA:47:VAL:HG12	2.14	0.48
1:BA:55:GLU:HB3	12:BV:79:LEU:HD22	1.96	0.48
1:BA:139:VAL:O	1:BA:139:VAL:HG12	2.13	0.48
2:BB:29:TRP:HB3	2:BB:45:LYS:HD2	1.95	0.48
3:BC:168:ARG:HH21	34:B5:1098:U:P	2.36	0.48
4:BE:59:ARG:HE	34:B5:446:A:P	2.37	0.48
6:BH:163:ASP:N	6:BH:163:ASP:OD1	2.46	0.48
7:BI:10:LYS:HG3	34:B5:338:C:H5''	1.96	0.48
14:BX:75:GLN:CD	80:DC:502:PRO:HG3	2.39	0.48
21:BK:26:ASP:H	21:BK:39:ASN:HD21	1.62	0.48
22:BP:57:MET:HE3	22:BP:89:MET:SD	2.54	0.48
26:BT:22:LEU:HD22	26:BT:28:LEU:HD11	1.95	0.48
34:B5:86:A:H4'	34:B5:148:A:H4'	1.95	0.48
34:B5:513:U:H2'	34:B5:514:G:C8	2.48	0.48
34:B5:953:G:H2'	34:B5:954:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AA:79:ASN:ND2	35:AA:167:GLY:O	2.47	0.48
37:AC:31:ARG:HG2	37:AC:33:ASP:OD1	2.14	0.48
38:A1:1062:A:H5''	38:A1:1063:G:H5'	1.96	0.48
38:A1:1289:G:H2'	38:A1:1290:A:C8	2.49	0.48
38:A1:1340:G:H2'	38:A1:1341:U:H6	1.76	0.48
38:A1:1682:U:C4	57:AU:85:LYS:HG2	2.49	0.48
38:A1:2093:A:P	54:AR:143:ILE:HD11	2.54	0.48
38:A1:2101:C:HO2'	38:A1:2102:U:H6	1.61	0.48
38:A1:2760:C:N3	77:Ao:63:LYS:HE2	2.29	0.48
38:A1:3216:G:OP2	68:Af:2:ALA:N	2.46	0.48
43:AF:76:TYR:HB2	56:AT:140:ILE:HD13	1.96	0.48
45:AH:117:PHE:O	45:AH:120:ASP:HB2	2.14	0.48
46:AI:9:TYR:CD1	46:AI:97:LEU:HD12	2.49	0.48
62:AZ:22:LYS:NZ	62:AZ:132:SER:O	2.27	0.48
80:DC:823:ARG:NE	80:DC:829:LYS:O	2.36	0.48
7:BI:31:ARG:NH2	34:B5:332:U:OP1	2.46	0.47
9:BL:90:TYR:OH	34:B5:306:U:O3'	2.27	0.47
14:BX:109:ARG:HG3	14:BX:114:LYS:HB3	1.95	0.47
18:Be:16:SER:HB2	80:DC:609:ARG:HH12	1.79	0.47
19:BD:76:ARG:HH12	21:BK:24:LYS:HZ2	1.62	0.47
22:BP:87:PRO:HG3	22:BP:112:LEU:HD21	1.95	0.47
26:BT:78:LYS:NZ	34:B5:1523:G:OP1	2.47	0.47
34:B5:385:A:H2'	34:B5:386:G:H8	1.79	0.47
34:B5:961:U:H2'	34:B5:962:C:C6	2.49	0.47
34:B5:1068:C:H2'	34:B5:1069:A:C8	2.49	0.47
34:B5:1153:G:H2'	34:B5:1154:G:C8	2.49	0.47
35:AA:184:ARG:HH11	35:AA:184:ARG:HG3	1.79	0.47
38:A1:47:C:H5''	48:AL:16:LYS:HG2	1.96	0.47
38:A1:439:C:C4	38:A1:494:G:C6	3.02	0.47
38:A1:904:A:H5'	38:A1:1536:G:O2'	2.14	0.47
38:A1:1485:G:O2'	38:A1:1874:A:O2'	2.31	0.47
38:A1:1785:U:H2'	38:A1:1786:G:H8	1.75	0.47
38:A1:1942:U:H2'	38:A1:1943:C:O4'	2.14	0.47
38:A1:2160:G:H2'	38:A1:2161:G:H8	1.79	0.47
38:A1:2527:G:H2'	38:A1:2528:G:C8	2.49	0.47
39:A3:14:U:H5	39:A3:66:A:N1	2.11	0.47
47:AJ:28:ASP:O	47:AJ:31:THR:OG1	2.23	0.47
59:AW:38:SER:C	59:AW:42:GLN:HE21	2.20	0.47
79:E:115:VAL:HG13	79:E:116:LEU:HD12	1.96	0.47
80:DC:218:TRP:HZ3	80:DC:220:PHE:CD1	2.32	0.47
80:DC:270:GLU:OE2	80:DC:275:MET:HG2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:EC:6776:A:N3	81:EC:6818:G:N2	2.62	0.47
81:EC:6783:U:H2'	81:EC:6784:G:C8	2.49	0.47
1:BA:155:PHE:O	12:BV:60:ARG:NH2	2.47	0.47
1:BA:201:LEU:HD23	1:BA:201:LEU:H	1.79	0.47
4:BE:69:HIS:CE1	4:BE:94:ALA:HB3	2.48	0.47
13:BW:38:LEU:HA	13:BW:41:MET:HE3	1.95	0.47
25:BS:77:THR:HG21	25:BS:96:LYS:HD3	1.97	0.47
27:BU:24:ILE:N	27:BU:91:ILE:O	2.48	0.47
27:BU:56:VAL:HG22	34:B5:1345:A:H1'	1.96	0.47
31:Bg:6:VAL:O	31:Bg:316:MET:N	2.47	0.47
31:Bg:132:LYS:HG2	31:Bg:143:THR:HA	1.95	0.47
31:Bg:210:LEU:HD12	31:Bg:223:TRP:O	2.14	0.47
33:BM:32:LEU:HD11	33:BM:100:TRP:HB3	1.96	0.47
34:B5:107:C:H2'	34:B5:108:A:C8	2.48	0.47
34:B5:215:A:H3'	34:B5:216:U:C6	2.49	0.47
34:B5:870:C:H2'	34:B5:871:G:C8	2.49	0.47
34:B5:960:U:H2'	34:B5:961:U:C6	2.49	0.47
34:B5:1158:C:H5''	34:B5:1161:C:N4	2.29	0.47
36:AB:246:LEU:HD23	36:AB:246:LEU:H	1.79	0.47
38:A1:195:U:H2'	38:A1:196:G:O4'	2.14	0.47
38:A1:1290:A:H2'	38:A1:1291:A:C8	2.49	0.47
38:A1:1621:A:H2'	38:A1:1622:U:H6	1.79	0.47
38:A1:1929:G:OP2	38:A1:1930:A:O2'	2.27	0.47
38:A1:2203:U:H2'	38:A1:2204:C:C6	2.50	0.47
50:AN:115:VAL:HA	50:AN:134:LEU:HD23	1.95	0.47
55:AS:12:ARG:NH1	55:AS:15:PRO:HD3	2.28	0.47
62:AZ:11:ALA:O	62:AZ:23:VAL:N	2.36	0.47
67:Ae:32:TRP:C	67:Ae:33:ARG:HD2	2.39	0.47
81:EC:6801:A:C2	81:EC:6882:G:H5'	2.49	0.47
2:BB:31:ASP:CG	2:BB:32:ILE:H	2.22	0.47
2:BB:133:TYR:CE2	2:BB:181:LEU:HD22	2.49	0.47
4:BE:18:TRP:HZ3	4:BE:43:PRO:HD2	1.78	0.47
8:BJ:92:LYS:HG3	8:BJ:95:TYR:HB3	1.95	0.47
9:BL:57:LYS:HD2	9:BL:110:HIS:CE1	2.49	0.47
10:BN:99:ARG:O	10:BN:102:LEU:N	2.45	0.47
14:BX:50:LYS:NZ	34:B5:435:C:OP2	2.45	0.47
15:BY:12:VAL:HB	34:B5:783:G:H8	1.79	0.47
16:Ba:41:ILE:HG12	16:Ba:68:TYR:CE2	2.49	0.47
16:Ba:46:GLU:HG2	16:Ba:47:ALA:N	2.29	0.47
21:BK:27:PHE:HA	21:BK:40:LEU:HD21	1.96	0.47
22:BP:111:MET:SD	22:BP:119:PHE:HZ	2.36	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BQ:99:GLU:O	23:BQ:102:LYS:HG3	2.15	0.47
26:BT:130:ARG:HG3	26:BT:134:ARG:NH2	2.29	0.47
28:BZ:59:TYR:HB3	81:EC:6863:C:N4	2.30	0.47
34:B5:484:C:H1'	34:B5:485:A:H8	1.78	0.47
34:B5:954:G:H2'	34:B5:955:A:C8	2.50	0.47
34:B5:1211:A:H2'	34:B5:1212:G:O4'	2.14	0.47
34:B5:1214:U:O4	34:B5:1450:U:N3	2.47	0.47
34:B5:1498:G:H2'	34:B5:1499:G:C8	2.49	0.47
35:AA:186:PHE:CD2	35:AA:187:HIS:HD2	2.31	0.47
35:AA:233:GLN:O	35:AA:235:ALA:N	2.42	0.47
37:AC:334:PHE:HA	37:AC:339:LEU:HD12	1.95	0.47
38:A1:1823:A:H2'	38:A1:1824:U:O4'	2.14	0.47
38:A1:3189:G:H2'	38:A1:3190:C:H6	1.79	0.47
40:A4:22:U:OP1	61:AY:12:ARG:NH1	2.47	0.47
40:A4:71:A:H4'	40:A4:72:A:O5'	2.14	0.47
42:AE:170:LYS:HD3	42:AE:172:HIS:CE1	2.48	0.47
67:Ae:32:TRP:CZ2	67:Ae:53:PRO:HD2	2.50	0.47
72:Aj:27:PHE:HA	72:Aj:34:CYS:HA	1.95	0.47
80:DC:289:MET:HE3	80:DC:320:LEU:HD23	1.95	0.47
81:EC:6861:G:C8	81:EC:6862:G:N7	2.82	0.47
1:BA:175:TYR:HA	1:BA:202:TYR:HE2	1.78	0.47
4:BE:69:HIS:NE2	15:BY:17:LEU:HG	2.30	0.47
6:BH:43:PHE:CE2	6:BH:46:ILE:HD11	2.49	0.47
9:BL:127:GLN:HG2	9:BL:128:CYS:N	2.30	0.47
13:BW:80:ASN:HD21	13:BW:124:LYS:HZ3	1.63	0.47
15:BY:42:GLU:OE2	15:BY:52:LYS:HD3	2.14	0.47
16:Ba:90:GLU:O	16:Ba:93:LYS:NZ	2.39	0.47
20:BF:224:ASN:CG	81:EC:6840:A:H62	2.21	0.47
23:BQ:122:ARG:HG3	34:B5:1584:G:H5''	1.96	0.47
30:Bd:21:CYS:SG	30:Bd:23:VAL:N	2.72	0.47
31:Bg:22:SER:OG	31:Bg:70:ASP:HA	2.14	0.47
34:B5:532:U:H2'	34:B5:533:U:O4'	2.14	0.47
34:B5:1504:G:N1	34:B5:1549:C:O2'	2.43	0.47
34:B5:1580:C:H2'	34:B5:1581:C:C6	2.49	0.47
35:AA:150:LEU:HD13	38:A1:2157:G:C8	2.50	0.47
37:AC:181:VAL:O	37:AC:182:LEU:HG	2.14	0.47
38:A1:93:C:C2	63:Aa:55:LYS:NZ	2.82	0.47
38:A1:1595:U:O2'	38:A1:1606:U:O2	2.30	0.47
38:A1:1718:G:H2'	38:A1:1719:G:C8	2.48	0.47
38:A1:1772:U:H5''	38:A1:1773:C:H5'	1.96	0.47
38:A1:1827:C:H2'	38:A1:1828:A:C8	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2631:U:OP1	38:A1:2757:U:O2'	2.27	0.47
38:A1:2709:C:H2'	38:A1:2710:C:C6	2.49	0.47
38:A1:2837:A:H5''	46:A1:154:ARG:NH2	2.28	0.47
38:A1:2909:U:H2'	38:A1:2910:A:O4'	2.15	0.47
40:A4:76:C:H2'	40:A4:77:A:H8	1.80	0.47
40:A4:150:G:O2'	40:A4:152:G:OP1	2.23	0.47
41:AD:40:HIS:HA	56:AT:69:LYS:HD2	1.96	0.47
44:AG:122:LYS:HG3	44:AG:124:ASP:H	1.78	0.47
45:AH:117:PHE:CE1	45:AH:165:CYS:HB2	2.50	0.47
60:AX:62:VAL:O	60:AX:87:SER:N	2.40	0.47
81:EC:6891:G:N2	81:EC:6940:U:H3	2.12	0.47
2:BB:149:GLN:HG3	34:B5:1066:C:H4'	1.95	0.47
20:BF:58:LEU:O	20:BF:62:VAL:HG22	2.15	0.47
23:BQ:36:ILE:HG12	23:BQ:49:TYR:CE1	2.49	0.47
31:Bg:238:ASP:HB3	31:Bg:256:THR:HB	1.95	0.47
34:B5:213:A:H3'	34:B5:214:G:H8	1.79	0.47
34:B5:1010:C:H2'	34:B5:1011:G:O4'	2.15	0.47
34:B5:1219:A:N6	34:B5:1265:G:O4'	2.48	0.47
34:B5:1252:C:H2'	34:B5:1253:U:O4'	2.15	0.47
34:B5:1524:A:H2'	34:B5:1525:A:C8	2.50	0.47
34:B5:1756[A]:A:H3'	34:B5:1756[A]:A:OP2	2.14	0.47
35:AA:245:LEU:HD11	38:A1:2243:A:H8	1.78	0.47
36:AB:222:LYS:HD2	36:AB:331:ASN:HB3	1.96	0.47
37:AC:307:GLN:NE2	38:A1:1345:G:H21	2.07	0.47
38:A1:255:A:H2'	38:A1:256:G:H8	1.79	0.47
38:A1:501:A:H4'	42:AE:28:GLN:HG3	1.95	0.47
38:A1:2129:PSU:H2'	38:A1:2130:G:C8	2.50	0.47
38:A1:2807:U:O2'	38:A1:2809:C:OP1	2.28	0.47
38:A1:3355:U:O2'	38:A1:3356:G:H5''	2.15	0.47
41:AD:9:SER:OG	41:AD:10:SER:N	2.47	0.47
41:AD:53:VAL:O	41:AD:54:ARG:NH1	2.45	0.47
41:AD:232:ASP:OD1	41:AD:233:ALA:N	2.48	0.47
51:AO:22[A]:VAL:HG21	51:AO:122[A]:GLN:HE22	1.80	0.47
55:AS:90:MET:HE2	55:AS:92:LYS:HD2	1.95	0.47
79:E:67:ILE:HD13	79:E:144:LEU:HD21	1.96	0.47
2:BB:34:ALA:O	2:BB:41:ARG:HG3	2.15	0.47
3:BC:139:ILE:HD13	3:BC:218:ILE:HG13	1.95	0.47
6:BH:118:LEU:H	34:B5:639:U:P	2.37	0.47
7:BI:30:GLY:HA2	34:B5:331:A:O2'	2.14	0.47
9:BL:110:HIS:HB2	9:BL:135:VAL:HG11	1.96	0.47
10:BN:15:ALA:O	17:Bb:28:PRO:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BO:99:GLN:OE1	11:BO:99:GLN:N	2.46	0.47
14:BX:87:VAL:HG21	14:BX:93:LEU:HG	1.97	0.47
15:BY:13:ILE:O	15:BY:22:GLN:HG2	2.15	0.47
23:BQ:114:ARG:O	23:BQ:114:ARG:HG2	2.14	0.47
25:BS:134:ARG:HB2	25:BS:136:GLN:HE22	1.80	0.47
29:Bc:61:ARG:HH22	29:Bc:64:ARG:HB2	1.80	0.47
34:B5:1498:G:H2'	34:B5:1499:G:H8	1.78	0.47
35:AA:92:LYS:HD2	35:AA:93:LYS:NZ	2.30	0.47
36:AB:250:ALA:HB1	38:A1:2947:G:C2	2.50	0.47
38:A1:26:A:H2'	38:A1:27:C:H6	1.79	0.47
38:A1:75:G:O2'	48:AL:70:ARG:NH2	2.48	0.47
38:A1:1012:G:H2'	38:A1:1013:G:C8	2.50	0.47
38:A1:1086:C:H2'	38:A1:1087:G:O4'	2.15	0.47
38:A1:1259:A:H3'	38:A1:1260:A:H8	1.79	0.47
38:A1:1628:C:H5''	38:A1:1813:A:H2	1.78	0.47
38:A1:1715:A:C5	65:Ac:84:LEU:HD21	2.49	0.47
38:A1:2270:A:H2'	38:A1:2271:A:C8	2.49	0.47
38:A1:2367:A:H2'	38:A1:2368:A:C8	2.50	0.47
38:A1:2481:G:H5''	79:E:102:LYS:NZ	2.30	0.47
38:A1:2510:U:H2'	38:A1:2511:A:C8	2.46	0.47
38:A1:2844:C:H42	38:A1:2898:G:N2	2.11	0.47
38:A1:2927:C:H2'	38:A1:2928:C:C6	2.49	0.47
38:A1:3324:C:H2'	38:A1:3325:G:H8	1.80	0.47
50:AN:5:LYS:HG2	71:Ai:36:ARG:HH12	1.79	0.47
50:AN:11:GLN:HE22	50:AN:14:LYS:NZ	2.13	0.47
53:AQ:70:ALA:HB1	53:AQ:138:LEU:HD21	1.96	0.47
53:AQ:178:ARG:HH21	63:Aa:50:PRO:HG2	1.78	0.47
62:AZ:102:GLU:OE1	62:AZ:102:GLU:N	2.46	0.47
81:EC:6847:G:H1'	81:EC:6848:U:C6	2.49	0.47
2:BB:149:GLN:HG2	34:B5:1066:C:O3'	2.15	0.47
6:BH:74:GLN:HG3	6:BH:92:PHE:HE2	1.79	0.47
7:BI:47:ARG:HH12	34:B5:398:G:P	2.37	0.47
7:BI:76:THR:HG21	7:BI:109:PHE:CE2	2.49	0.47
14:BX:6:PRO:HG3	14:BX:14:LYS:HG3	1.96	0.47
15:BY:60:PHE:HB3	34:B5:523:G:H5'	1.96	0.47
17:Bb:40:CYS:HB3	17:Bb:59:CYS:SG	2.54	0.47
19:BD:23:GLU:O	19:BD:27:ARG:N	2.34	0.47
20:BF:108:LEU:HD11	34:B5:1527:C:O2'	2.14	0.47
23:BQ:123:ARG:HH11	34:B5:1337:A:H5'	1.79	0.47
24:BR:34:LEU:O	24:BR:38:ILE:HG12	2.15	0.47
33:BM:58:LEU:HD22	33:BM:126:TRP:CZ3	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:138:A:N6	34:B5:266:A:H61	2.04	0.47
34:B5:154:G:N1	34:B5:161:U:N3	2.62	0.47
34:B5:328:A:H2'	34:B5:329:G:H8	1.80	0.47
34:B5:388:G:O6	34:B5:410:A:N6	2.48	0.47
34:B5:419:G:H2'	34:B5:420:A:C8	2.49	0.47
34:B5:514:G:O2'	34:B5:515:A:O4'	2.31	0.47
34:B5:1220:C:H2'	34:B5:1221:A:C8	2.39	0.47
34:B5:1352:G:H2'	34:B5:1354:G:C8	2.50	0.47
34:B5:1655:A:N6	34:B5:1745:G:O2'	2.44	0.47
34:B5:1667:A:H2'	34:B5:1668:G:C8	2.49	0.47
35:AA:133:TYR:HB3	35:AA:168:VAL:HG12	1.96	0.47
36:AB:167:ARG:HH12	36:AB:168:LYS:HE2	1.79	0.47
36:AB:227:GLU:OE1	36:AB:270:ARG:NE	2.48	0.47
36:AB:266:ARG:NH2	38:A1:2392:C:H1'	2.30	0.47
37:AC:126:ILE:O	37:AC:129:THR:OG1	2.25	0.47
37:AC:307:GLN:HE22	38:A1:1345:G:N2	2.06	0.47
38:A1:160:G:H2'	38:A1:161:G:C8	2.50	0.47
38:A1:233:C:H2'	38:A1:234:G:O4'	2.14	0.47
38:A1:253:A:H2'	38:A1:254:A:C8	2.50	0.47
38:A1:359:U:H4'	38:A1:817:A:H62	1.80	0.47
38:A1:417:A:H2'	38:A1:418:A:C8	2.49	0.47
38:A1:538:G:O6	38:A1:553:U:O4	2.32	0.47
38:A1:916:G:H5'	38:A1:917:A:OP1	2.14	0.47
38:A1:987:U:H2'	38:A1:988:U:C6	2.49	0.47
38:A1:1343:A:H2'	38:A1:1344:G:H8	1.80	0.47
38:A1:1389:G:OP1	67:Ae:104:ASN:ND2	2.29	0.47
38:A1:1616:U:H2'	38:A1:1617:G:C8	2.49	0.47
38:A1:2653:C:O2'	38:A1:2657:A:N1	2.44	0.47
38:A1:2836:C:H2'	38:A1:2837:A:O4'	2.13	0.47
38:A1:3028:G:H5'	80:DC:28:VAL:HB	1.96	0.47
38:A1:3069:G:C2	38:A1:3070:A:C8	3.03	0.47
38:A1:3162:C:H3'	38:A1:3163:A:H5''	1.97	0.47
39:A3:37:G:H2'	39:A3:38:U:C6	2.50	0.47
40:A4:91:C:H2'	40:A4:92:A:C8	2.50	0.47
41:AD:82:GLU:OE1	41:AD:82:GLU:N	2.47	0.47
41:AD:196:ARG:HE	41:AD:200:PHE:HE2	1.61	0.47
43:AF:147:LEU:HD11	43:AF:207:LEU:HD21	1.97	0.47
44:AG:108:ARG:O	44:AG:112:GLU:HG2	2.14	0.47
45:AH:57:VAL:HG23	45:AH:68:LEU:HD13	1.95	0.47
47:AJ:21:ILE:HG12	47:AJ:67:VAL:O	2.14	0.47
47:AJ:100:GLY:O	47:AJ:159:THR:HG21	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AQ:54:LEU:HB2	53:AQ:59:ARG:HG3	1.97	0.47
55:AS:170:THR:HG22	55:AS:170:THR:O	2.14	0.47
56:AT:100:LYS:HB3	56:AT:103:GLN:HE21	1.79	0.47
63:Aa:84:GLU:H	63:Aa:84:GLU:CD	2.22	0.47
71:Ai:5:THR:HG23	71:Ai:12:ASN:HB2	1.97	0.47
73:Ak:13:GLU:HA	73:Ak:16:ARG:HE	1.80	0.47
73:Ak:26:LYS:HB3	73:Ak:42:LYS:HB2	1.96	0.47
79:E:101:LYS:HZ1	79:E:105:LYS:HD3	1.79	0.47
79:E:138:VAL:HG11	79:E:144:LEU:HD13	1.96	0.47
80:DC:21:ASN:HA	80:DC:101:ASN:HB2	1.96	0.47
80:DC:24:VAL:O	80:DC:105:SER:OG	2.18	0.47
80:DC:519:LEU:HG	80:DC:521:TYR:HB3	1.96	0.47
80:DC:587:TYR:CD1	80:DC:690:ASP:HB3	2.50	0.47
80:DC:730:LEU:HG	80:DC:769:LYS:HE2	1.94	0.47
81:EC:6937:G:H2'	81:EC:6937:G:N3	2.29	0.47
3:BC:144:TRP:CE2	3:BC:173:PRO:HG3	2.50	0.47
7:BI:7:SER:OG	7:BI:18:ARG:NH1	2.47	0.47
13:BW:14:ILE:HG12	13:BW:25:VAL:HG11	1.97	0.47
13:BW:37:PHE:HD1	13:BW:41:MET:HE2	1.79	0.47
19:BD:64:ARG:N	19:BD:64:ARG:HD2	2.29	0.47
25:BS:6:GLN:NE2	28:BZ:42:LEU:O	2.44	0.47
31:Bg:242:SER:HB2	31:Bg:290:VAL:O	2.15	0.47
34:B5:88:U:H2'	34:B5:89:G:C8	2.46	0.47
34:B5:94:U:H2'	34:B5:95:G:O4'	2.13	0.47
34:B5:98:U:O2'	34:B5:99:C:H6	1.98	0.47
34:B5:564:G:N1	34:B5:580:A:OP2	2.33	0.47
34:B5:1176:G:C6	34:B5:1464:G:C6	3.03	0.47
34:B5:1527:C:H2'	34:B5:1528:U:H6	1.79	0.47
34:B5:1591:C:H2'	34:B5:1592:A:C8	2.50	0.47
38:A1:30:G:P	50:AN:172:ARG:HE	2.38	0.47
38:A1:965:A:C2	63:Aa:43:ILE:HD12	2.49	0.47
38:A1:1226:G:O2'	38:A1:1227:C:OP1	2.31	0.47
38:A1:1392:G:H1'	38:A1:1418:A:N6	2.30	0.47
38:A1:1413:G:H2'	38:A1:1414:G:H8	1.80	0.47
38:A1:1482:A:OP2	38:A1:1858:A:O2'	2.20	0.47
38:A1:2374:C:N4	38:A1:2941:A:O4'	2.48	0.47
38:A1:2457:G:H8	38:A1:2458:A:HO2'	1.60	0.47
38:A1:2485:A:OP1	79:E:101:LYS:NZ	2.46	0.47
38:A1:3010:U:O2'	38:A1:3011:A:H2'	2.15	0.47
38:A1:3234:A:H61	38:A1:3253:G:H1	1.63	0.47
41:AD:257:GLU:O	41:AD:258:LYS:HB3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:AR:23:TRP:CH2	54:AR:25:ASP:HB3	2.49	0.47
58:AV:79:VAL:HG12	58:AV:122:CYS:SG	2.54	0.47
80:DC:127:VAL:HB	80:DC:155:VAL:HG22	1.97	0.47
80:DC:130:ASP:OD1	80:DC:132:ILE:N	2.43	0.47
80:DC:265:GLU:OE2	80:DC:267:LYS:HB2	2.15	0.47
80:DC:634:TRP:HB2	80:DC:646:VAL:HB	1.96	0.47
1:BA:92:HIS:HB3	1:BA:182:LEU:HD11	1.97	0.47
2:BB:212:VAL:O	2:BB:213:ARG:HG2	2.15	0.47
4:BE:15:PRO:HD2	4:BE:18:TRP:NE1	2.30	0.47
4:BE:137:PRO:HB2	4:BE:150:PRO:HD2	1.97	0.47
6:BH:61:PHE:HB3	6:BH:95:GLU:CD	2.40	0.47
6:BH:81:LEU:HA	6:BH:84:LYS:HE2	1.96	0.47
6:BH:91:ILE:HG22	6:BH:165:LYS:HZ2	1.80	0.47
11:BO:58:TYR:OH	81:EC:6840:A:H5''	2.15	0.47
16:Ba:88:SER:O	16:Ba:92:ARG:N	2.47	0.47
17:Bb:19:HIS:O	17:Bb:23:THR:HG23	2.15	0.47
19:BD:145:ALA:O	34:B5:1275:A:O2'	2.33	0.47
25:BS:106:GLU:OE2	25:BS:106:GLU:N	2.43	0.47
26:BT:126:GLU:OE1	34:B5:1358:G:O2'	2.18	0.47
31:Bg:42:LEU:O	31:Bg:61:PHE:N	2.43	0.47
31:Bg:133:VAL:HG11	31:Bg:183:LEU:HD21	1.95	0.47
32:Bf:141:CYS:HB2	32:Bf:146:SER:HB2	1.97	0.47
34:B5:888:U:H2'	34:B5:889:U:C6	2.50	0.47
34:B5:1247:U:H2'	34:B5:1248:C:H6	1.80	0.47
34:B5:1359:C:C4	34:B5:1360:A:C6	3.03	0.47
34:B5:1550:A:H5''	34:B5:1551:U:H5	1.80	0.47
34:B5:1787:C:H2'	34:B5:1788:G:H8	1.80	0.47
36:AB:25:ILE:HD12	36:AB:272:TYR:HE1	1.80	0.47
36:AB:62:ARG:NH1	38:A1:3039:C:OP1	2.45	0.47
36:AB:256:HIS:HA	36:AB:257:PRO:C	2.40	0.47
36:AB:283:TYR:CE1	36:AB:354:VAL:HG11	2.49	0.47
37:AC:170:LYS:HA	37:AC:175:HIS:HB3	1.97	0.47
37:AC:360:LYS:O	55:AS:28:ARG:NH2	2.48	0.47
38:A1:761:A:H2'	38:A1:762:U:C6	2.49	0.47
38:A1:2225:U:H4'	77:Ao:36:PHE:CZ	2.50	0.47
38:A1:2419:A:H2'	38:A1:2420:C:H6	1.80	0.47
38:A1:3371:G:H2'	38:A1:3372:A:C8	2.50	0.47
46:AI:150:GLU:O	46:AI:154:ARG:HG2	2.14	0.47
51:AO:185[A]:ALA:O	51:AO:188[A]:SER:OG	2.30	0.47
52:AP:173:ARG:HA	52:AP:176:ILE:HG12	1.97	0.47
57:AU:55:THR:HB	57:AU:66:VAL:HG22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:AV:23:MET:HE2	58:AV:36:ILE:HD11	1.97	0.47
80:DC:655:TYR:HB2	80:DC:693:LEU:HD12	1.96	0.47
80:DC:753:GLN:HE21	80:DC:771:TYR:HD2	1.63	0.47
3:BC:88:LYS:HE2	3:BC:88:LYS:HB2	1.60	0.47
3:BC:220:ASN:HA	12:BV:25:LYS:HZ1	1.80	0.47
9:BL:40:LEU:HG	34:B5:246:G:N3	2.30	0.47
12:BV:17:CYS:HB2	12:BV:56:SER:HB2	1.96	0.47
12:BV:87:ARG:HG2	17:Bb:5:GLN:NE2	2.30	0.47
15:BY:99:LYS:HD3	15:BY:99:LYS:HA	1.66	0.47
19:BD:56:GLN:HA	19:BD:59:LEU:HG	1.97	0.47
22:BP:44:ARG:NE	22:BP:49:MET:HE1	2.29	0.47
34:B5:778:G:H5''	34:B5:780:A:H62	1.80	0.47
34:B5:1242:A:H2'	34:B5:1244:A:C2	2.50	0.47
34:B5:1575:G7M:H2'	34:B5:1576:A:C8	2.50	0.47
34:B5:1729:C:H2'	34:B5:1730:A:O4'	2.15	0.47
35:AA:181:LYS:HB3	78:Ap:18:TYR:HE2	1.80	0.47
36:AB:284:ARG:HB3	36:AB:323:MET:HG2	1.97	0.47
38:A1:38:U:H4'	63:Aa:32:ARG:HD2	1.96	0.47
38:A1:38:U:O2'	48:AL:15:ARG:NH2	2.48	0.47
38:A1:77:A:H5'	48:AL:100:ARG:NH1	2.30	0.47
38:A1:91:G:N7	38:A1:93:C:C2	2.83	0.47
38:A1:368:G:O6	38:A1:369:A:N6	2.48	0.47
38:A1:2615:G:H2'	38:A1:2616:C:C6	2.47	0.47
38:A1:2767:U:H2'	38:A1:2768:U:C6	2.50	0.47
38:A1:2971:A:H5''	46:AI:110:ARG:HH22	1.80	0.47
38:A1:3022:G:H4'	38:A1:3023:U:O5'	2.14	0.47
38:A1:3127:A:H2'	38:A1:3128:G:O4'	2.15	0.47
38:A1:3133:C:H2'	38:A1:3134:A:O4'	2.14	0.47
40:A4:39:G:H1'	40:A4:104:A:H61	1.79	0.47
40:A4:93:U:H2'	40:A4:94:C:O4'	2.14	0.47
49:AM:33:ALA:HB1	49:AM:46:ILE:HB	1.97	0.47
50:AN:119:TYR:OH	50:AN:131:GLU:OE1	2.24	0.47
51:AO:46[A]:GLU:OE2	51:AO:48[A]:PHE:HB3	2.15	0.47
61:AY:36:SER:HG	61:AY:39:LEU:H	1.61	0.47
70:Ah:28:LEU:O	70:Ah:32:LYS:HG3	2.14	0.47
70:Ah:60:GLU:O	70:Ah:64:GLU:HG2	2.15	0.47
80:DC:535:GLU:HG2	80:DC:536:LEU:H	1.79	0.47
7:BI:41:LYS:NZ	7:BI:62:THR:HG22	2.30	0.46
8:BJ:17:ARG:NE	34:B5:3:U:O2	2.48	0.46
8:BJ:172:VAL:HG12	8:BJ:175:ARG:HH21	1.80	0.46
34:B5:40:A:H2'	34:B5:41:A:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:523:G:H22	34:B5:527:A:H3'	1.79	0.46
34:B5:600:U:H2'	34:B5:601:A:C8	2.49	0.46
34:B5:961:U:C2	34:B5:962:C:H5	2.32	0.46
34:B5:1467:C:H2'	34:B5:1468:U:H6	1.78	0.46
34:B5:1470:C:O2	34:B5:1571:C:O2'	2.29	0.46
34:B5:1499:G:O6	34:B5:1509:C:N4	2.49	0.46
34:B5:1508:U:H2'	34:B5:1509:C:C6	2.50	0.46
34:B5:1589:C:H2'	34:B5:1590:G:C1'	2.45	0.46
36:AB:99:LEU:HB2	38:A1:3004:C:H4'	1.96	0.46
38:A1:947:G:H2'	38:A1:948:C:H6	1.80	0.46
38:A1:1234:G:O6	38:A1:1254:C:N4	2.37	0.46
38:A1:1414:G:H2'	38:A1:1415:U:C6	2.50	0.46
38:A1:1448:U:OP2	38:A1:2355:G:N1	2.29	0.46
38:A1:1699:A:H2'	38:A1:1700:G:C8	2.49	0.46
38:A1:2190:U:H2'	38:A1:2191:PSU:H6	1.79	0.46
38:A1:2347:U:H2'	38:A1:2348:A:O4'	2.15	0.46
38:A1:2631:U:H2'	38:A1:2632:G:C8	2.50	0.46
38:A1:3065:G:H2'	38:A1:3066:U:C6	2.50	0.46
38:A1:3124:G:H2'	38:A1:3125:U:O4'	2.14	0.46
38:A1:3204:C:H2'	38:A1:3205:G:C8	2.49	0.46
41:AD:240:TYR:O	41:AD:244:HIS:ND1	2.33	0.46
47:AJ:93:ASP:HB2	47:AJ:172:LEU:HD13	1.97	0.46
80:DC:533:THR:O	80:DC:533:THR:HG22	2.15	0.46
80:DC:693:LEU:HB3	80:DC:700:ARG:HG3	1.97	0.46
80:DC:736:PRO:HD3	80:DC:792:ALA:HA	1.96	0.46
3:BC:175:GLY:O	8:BJ:53:ARG:NH1	2.48	0.46
4:BE:201:HIS:CD2	34:B5:799:A:HO2'	2.34	0.46
4:BE:230:GLU:HB3	4:BE:233:LYS:HB3	1.96	0.46
6:BH:19:GLN:HA	6:BH:22:GLN:NE2	2.30	0.46
7:BI:98:LYS:HE2	7:BI:172:ARG:HE	1.79	0.46
8:BJ:39:LYS:HD2	8:BJ:43:TYR:CE2	2.50	0.46
8:BJ:69:ARG:NH2	8:BJ:93:LEU:HD22	2.29	0.46
20:BF:77:TYR:HD1	20:BF:83:ARG:HG2	1.79	0.46
22:BP:76:VAL:HG12	22:BP:77:ARG:H	1.80	0.46
23:BQ:67:VAL:HG11	23:BQ:81:ILE:HD12	1.97	0.46
25:BS:61:LEU:HD11	25:BS:65:GLU:HG2	1.96	0.46
29:Bc:33:LEU:HD11	29:Bc:53:ILE:HD12	1.97	0.46
34:B5:478:A:H62	34:B5:510:G:H1	1.63	0.46
34:B5:752:A:H1'	34:B5:753:A:OP1	2.15	0.46
34:B5:851:U:O2	54:AR:176:ARG:HD2	2.15	0.46
34:B5:1308:G:H2'	34:B5:1309:C:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1649:G:H2'	34:B5:1650:U:H6	1.80	0.46
38:A1:209:A:H4'	38:A1:211:A:N7	2.30	0.46
38:A1:561:C:H2'	38:A1:562:C:C6	2.50	0.46
38:A1:1143:A:H5'	38:A1:1368:U:H1'	1.97	0.46
38:A1:1259:A:H1'	38:A1:1280:C:O2'	2.15	0.46
38:A1:1266:G:C2	38:A1:1276:U:O2	2.68	0.46
38:A1:1650:G:O2'	38:A1:1651:U:H5'	2.15	0.46
38:A1:2881:C:H2'	38:A1:2882:U:H6	1.79	0.46
38:A1:3296:A:H2'	38:A1:3297:U:C6	2.50	0.46
40:A4:70:G:H1'	40:A4:88:A:N6	2.30	0.46
41:AD:34:LYS:C	41:AD:34:LYS:HD3	2.40	0.46
45:AH:48:VAL:HG21	45:AH:54:LYS:HE2	1.98	0.46
47:AJ:40:LEU:HD21	47:AJ:79:ILE:HD11	1.97	0.46
48:AL:59:ARG:HD2	48:AL:66:ASN:O	2.15	0.46
49:AM:88:ALA:O	49:AM:93:LYS:NZ	2.46	0.46
50:AN:190:THR:O	50:AN:194:GLN:HG2	2.15	0.46
52:AP:127:ARG:HB2	52:AP:139:TYR:O	2.14	0.46
60:AX:66:PRO:HA	60:AX:84:PHE:HA	1.98	0.46
80:DC:27:HIS:CG	80:DC:28:VAL:H	2.33	0.46
80:DC:418:TYR:CD1	80:DC:426:LEU:HD13	2.50	0.46
81:EC:6777:C:C6	81:EC:6778:C:H5	2.34	0.46
81:EC:6777:C:O2'	81:EC:6818:G:O6	2.23	0.46
2:BB:152:ARG:NH2	34:B5:1799:U:O3'	2.40	0.46
5:BG:85:ARG:HG2	34:B5:161:U:P	2.56	0.46
6:BH:157:LYS:HZ2	6:BH:158:ASP:HB3	1.79	0.46
14:BX:28:ASN:O	14:BX:32:ARG:HG3	2.16	0.46
14:BX:78:LYS:HZ1	14:BX:79:ASN:HD22	1.63	0.46
17:Bb:54:VAL:HB	17:Bb:63:LEU:HB3	1.97	0.46
20:BF:187:ILE:HA	34:B5:1535:U:C4	2.49	0.46
22:BP:18:ARG:HB3	22:BP:36:LEU:HD23	1.97	0.46
22:BP:125:PRO:HG2	22:BP:127:ARG:HH12	1.81	0.46
24:BR:52:GLY:O	24:BR:56:HIS:ND1	2.45	0.46
29:Bc:29:ARG:HD2	29:Bc:39:THR:OG1	2.16	0.46
29:Bc:35:ASP:OD2	29:Bc:38:ARG:HD3	2.16	0.46
31:Bg:264:SER:OG	31:Bg:269:TYR:O	2.28	0.46
34:B5:58:U:O2'	34:B5:451:A:N3	2.44	0.46
34:B5:874:C:H2'	34:B5:875:G:C8	2.51	0.46
34:B5:1150:G:H1'	81:EC:6947:A:N1	2.29	0.46
34:B5:1471:A:O5'	34:B5:1573:A:N6	2.49	0.46
34:B5:1718:G:H2'	34:B5:1719:A:H8	1.79	0.46
34:B5:1738:U:H2'	34:B5:1739:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:30:LYS:HG3	38:A1:3138:U:OP2	2.14	0.46
36:AB:160:VAL:HG22	36:AB:183:LEU:HD21	1.97	0.46
38:A1:209:A:H4'	38:A1:211:A:C8	2.51	0.46
38:A1:255:A:H2'	38:A1:256:G:C8	2.49	0.46
38:A1:393:U:H2'	38:A1:394:G:O4'	2.16	0.46
38:A1:598:A:H2'	38:A1:599:C:C6	2.49	0.46
38:A1:644:G:H2'	38:A1:2372:A:N7	2.31	0.46
38:A1:1323:G:H5''	55:AS:1:MET:CG	2.44	0.46
38:A1:1476:G:H2'	38:A1:1477:A:O4'	2.15	0.46
38:A1:1616:U:H2'	38:A1:1617:G:H8	1.80	0.46
38:A1:2503:G:C2	38:A1:2504:U:C4	3.02	0.46
38:A1:2656:A:H4'	77:Ao:98:LYS:HD2	1.97	0.46
38:A1:2911:A:H4'	38:A1:2912:G:H8	1.80	0.46
40:A4:113:U:H5	60:AX:88:MET:HE3	1.80	0.46
45:AH:31:ARG:HB2	45:AH:82:VAL:O	2.14	0.46
48:AL:86:THR:HB	48:AL:89:TYR:HB3	1.97	0.46
50:AN:38:ARG:NE	50:AN:60:VAL:HG23	2.30	0.46
67:Ae:63:THR:HA	67:Ae:66:LEU:HD22	1.98	0.46
67:Ae:72:LYS:HD2	67:Ae:92:TYR:HE2	1.80	0.46
69:Ag:47:CYS:O	78:Ap:61:LYS:NZ	2.43	0.46
77:Ao:88:CYS:SG	77:Ao:91:PHE:HB2	2.55	0.46
2:BB:168:ILE:HG12	2:BB:197:ILE:HG23	1.96	0.46
4:BE:125:LYS:HE3	4:BE:125:LYS:HB3	1.77	0.46
5:BG:3:LEU:O	5:BG:16:PHE:N	2.29	0.46
7:BI:110:ARG:O	7:BI:114:GLU:HG2	2.16	0.46
7:BI:190:ALA:O	7:BI:194:ARG:NH1	2.48	0.46
9:BL:151:LYS:NZ	34:B5:811:A:OP2	2.46	0.46
16:Ba:41:ILE:HG12	16:Ba:68:TYR:CD2	2.50	0.46
22:BP:77:ARG:HG3	34:B5:1241:G:H5''	1.97	0.46
25:BS:14:ILE:HG12	25:BS:23:ASP:HA	1.96	0.46
25:BS:27:LYS:HA	25:BS:57:ARG:HA	1.98	0.46
33:BM:103:LEU:HD12	33:BM:116:VAL:O	2.15	0.46
34:B5:394:C:H2'	34:B5:395:U:H6	1.80	0.46
34:B5:432:G:H2'	34:B5:433:C:C6	2.51	0.46
34:B5:586:G:H2'	34:B5:587:C:C6	2.50	0.46
37:AC:93:MET:HB2	38:A1:658:G:N2	2.31	0.46
38:A1:84:U:O2'	38:A1:101:G:O6	2.27	0.46
38:A1:439:C:N4	38:A1:619:A:N1	2.63	0.46
38:A1:561:C:H2'	38:A1:562:C:H6	1.79	0.46
38:A1:640:U:OP2	67:Ae:38:ILE:HG12	2.16	0.46
38:A1:952:A:H4'	38:A1:968:G:N2	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1543:G:OP1	50:AN:35:VAL:HG23	2.15	0.46
38:A1:2794:G:H5''	77:Ao:61:LYS:NZ	2.31	0.46
38:A1:3154:C:H41	38:A1:3293:U:H3	1.63	0.46
39:A3:112:G:H2'	39:A3:113:C:C6	2.51	0.46
40:A4:145:U:H2'	40:A4:146:U:C6	2.51	0.46
46:AI:72:ALA:HB2	46:AI:155:ALA:HB2	1.97	0.46
51:AO:6[A]:VAL:HG12	51:AO:32[A]:LYS:HB2	1.98	0.46
52:AP:88:VAL:HA	52:AP:91:VAL:HG12	1.97	0.46
8:BJ:17:ARG:NH2	34:B5:4:C:H1'	2.30	0.46
10:BN:3:ARG:NH1	34:B5:955:A:OP1	2.44	0.46
17:Bb:49:HIS:CD2	17:Bb:70:LYS:HG3	2.50	0.46
20:BF:209:TYR:CZ	20:BF:213:LYS:HE2	2.50	0.46
26:BT:45:MET:HE3	26:BT:45:MET:HA	1.97	0.46
31:Bg:294:TRP:CD2	31:Bg:301:LEU:HD13	2.50	0.46
34:B5:180:A:H2'	34:B5:181:A:H8	1.80	0.46
34:B5:333:A:H5''	34:B5:334:G:OP2	2.15	0.46
34:B5:987:G:O6	35:AA:247:ARG:NE	2.49	0.46
34:B5:1592:A:H2'	34:B5:1593:A:C8	2.50	0.46
35:AA:87:PHE:HB3	35:AA:89:TYR:CE1	2.51	0.46
38:A1:24:G:H2'	38:A1:25:U:O4'	2.16	0.46
38:A1:284:A:H2'	38:A1:306:A:H4'	1.96	0.46
38:A1:1019:G:O2'	38:A1:1020:G:H8	1.98	0.46
38:A1:1658:G:H2'	38:A1:1659:U:H6	1.79	0.46
38:A1:2318:U:H2'	38:A1:2319:U:O4'	2.14	0.46
38:A1:2710:C:H2'	38:A1:2711:C:C6	2.50	0.46
39:A3:77:G:H3'	55:AS:46:GLN:O	2.16	0.46
41:AD:258:LYS:HZ2	41:AD:261:THR:HG22	1.78	0.46
41:AD:287:ALA:HA	41:AD:290:ILE:HG22	1.98	0.46
43:AF:116:PHE:CE1	43:AF:144:ILE:HG12	2.51	0.46
51:AO:34[A]:VAL:HG22	51:AO:103[A]:LYS:HB2	1.98	0.46
68:Af:14:LEU:HD11	68:Af:31:LYS:HB2	1.97	0.46
81:EC:6783:U:H2'	81:EC:6784:G:H8	1.81	0.46
81:EC:6956:A:H4'	81:EC:6957:A:OP1	2.14	0.46
1:BA:140:ASN:HD21	12:BV:29:HIS:HA	1.79	0.46
2:BB:64:ARG:NH1	11:BO:36:LYS:HB3	2.31	0.46
3:BC:44:LEU:HD23	3:BC:240:LEU:HD23	1.97	0.46
3:BC:81:MET:HG3	3:BC:211:LEU:HD11	1.97	0.46
3:BC:141:ARG:HD3	3:BC:151:PRO:HB2	1.98	0.46
5:BG:76:LEU:HD21	5:BG:92:ARG:HH11	1.80	0.46
6:BH:143:LEU:HA	13:BW:49:GLU:OE1	2.15	0.46
13:BW:80:ASN:ND2	34:B5:747:C:O3'	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BX:56:LYS:HD2	14:BX:93:LEU:HD22	1.97	0.46
21:BK:24:LYS:O	21:BK:43:ILE:HD11	2.15	0.46
21:BK:54:TYR:HD1	21:BK:72:GLY:HA2	1.81	0.46
23:BQ:94:GLN:NE2	23:BQ:95:LYS:HE3	2.30	0.46
27:BU:58:LEU:HD23	27:BU:88:LYS:HB2	1.98	0.46
31:Bg:40:LYS:HG2	31:Bg:67:ILE:HD13	1.98	0.46
31:Bg:255:ALA:HA	31:Bg:260:ILE:HG13	1.97	0.46
34:B5:409:C:H2'	34:B5:410:A:C8	2.45	0.46
34:B5:545:A:O4'	34:B5:594:A:N6	2.49	0.46
34:B5:752:A:HO2'	34:B5:753:A:P	2.37	0.46
34:B5:868:G:H2'	34:B5:869:A:H8	1.81	0.46
34:B5:945:U:H2'	34:B5:946:U:H6	1.81	0.46
34:B5:1058:U:H2'	34:B5:1061:A:C6	2.51	0.46
34:B5:1185:U:H4'	34:B5:1186:U:H5''	1.97	0.46
34:B5:1275:A:C2	34:B5:1438:G:C4	3.04	0.46
38:A1:63:A:H5''	50:AN:174:ILE:HG21	1.96	0.46
38:A1:139:G:H2'	38:A1:140:C:C6	2.50	0.46
38:A1:166:C:H2'	38:A1:167:U:H6	1.80	0.46
38:A1:677:A:N1	38:A1:703:G:O2'	2.35	0.46
38:A1:972:A:H2'	38:A1:973:A:C8	2.50	0.46
38:A1:1114:U:OP1	63:Aa:22:ILE:HG13	2.16	0.46
38:A1:1446:A:H5''	52:AP:65:SER:OG	2.16	0.46
38:A1:1530:U:O2'	40:A4:114:G:O2'	2.24	0.46
38:A1:2467:G:N2	38:A1:2488:A:H62	2.14	0.46
38:A1:2858:U:H2'	38:A1:2859:U:C2	2.51	0.46
38:A1:3193:C:H2'	38:A1:3194:C:C6	2.50	0.46
39:A3:24:A:H2'	39:A3:25:G:C8	2.51	0.46
44:AG:78:PHE:C	44:AG:80:TYR:H	2.24	0.46
46:AI:210:TYR:HA	46:AI:217:PHE:HE2	1.81	0.46
49:AM:31:LYS:HD3	49:AM:51:ALA:O	2.15	0.46
54:AR:105:LEU:HD23	54:AR:138:LEU:HD23	1.96	0.46
56:AT:79:MET:HG2	56:AT:84:TYR:HE1	1.80	0.46
80:DC:730:LEU:N	80:DC:799:ASP:HB2	2.31	0.46
2:BB:192:VAL:O	2:BB:196:GLU:HG2	2.16	0.46
5:BG:95:LYS:NZ	34:B5:160:C:O3'	2.49	0.46
6:BH:51:VAL:N	6:BH:55:LYS:O	2.45	0.46
6:BH:156:SER:HA	6:BH:185:ILE:HD11	1.97	0.46
17:Bb:49:HIS:HD2	17:Bb:69:GLY:C	2.24	0.46
20:BF:73:THR:OG1	20:BF:91:GLU:OE2	2.24	0.46
22:BP:18:ARG:HD3	25:BS:95:GLY:HA3	1.98	0.46
28:BZ:42:LEU:HD23	28:BZ:47:TYR:CD2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Bc:31:GLU:OE2	29:Bc:32:PHE:N	2.48	0.46
31:Bg:301:LEU:O	31:Bg:313:TRP:N	2.49	0.46
34:B5:65:A:N1	34:B5:83:G:H2'	2.31	0.46
34:B5:256:A:H2'	34:B5:257:A:H8	1.81	0.46
34:B5:370:A:H2'	34:B5:371:G:O4'	2.16	0.46
34:B5:395:U:H3'	34:B5:396:G:H8	1.79	0.46
34:B5:1221:A:H2'	34:B5:1222:C:C6	2.51	0.46
34:B5:1501:C:C2	34:B5:1502:G:C8	3.03	0.46
36:AB:166:ILE:O	36:AB:169:THR:HG22	2.15	0.46
37:AC:296:GLN:HB3	38:A1:1349:G:C8	2.51	0.46
38:A1:236:G:H2'	38:A1:237:G:C8	2.50	0.46
38:A1:1167:U:O2'	43:AF:210:PRO:O	2.33	0.46
38:A1:1449:A:H2'	38:A1:1450:G:O4'	2.16	0.46
38:A1:1560:G:H4'	38:A1:1561:G:OP1	2.14	0.46
38:A1:1653:G:H2'	38:A1:1654:A:C8	2.51	0.46
38:A1:1855:U:H2'	38:A1:1856:C:C6	2.51	0.46
38:A1:2484:A:H1'	81:EC:6775:U:C2	2.51	0.46
38:A1:2492:C:O2'	79:E:164:CYS:SG	2.58	0.46
38:A1:2908:G:H2'	38:A1:2909:U:C6	2.50	0.46
38:A1:2922:OMG:N1	38:A1:2923:PSU:O4	2.48	0.46
38:A1:3021:A:H61	38:A1:3032:A:H3'	1.80	0.46
38:A1:3186:A:N3	45:AH:44:THR:HG23	2.30	0.46
40:A4:27:U:H2'	40:A4:28:C:C6	2.51	0.46
40:A4:67:U:H2'	40:A4:68:G:H8	1.81	0.46
40:A4:139:U:H2'	40:A4:140:G:H8	1.80	0.46
43:AF:116:PHE:O	43:AF:199:ASN:ND2	2.48	0.46
46:AI:144:ASN:OD1	46:AI:147:VAL:HB	2.15	0.46
57:AU:14:THR:HG22	57:AU:66:VAL:HG12	1.97	0.46
80:DC:562:ALA:N	85:DC:903:SO1:O19	2.48	0.46
3:BC:82:ASN:HD22	3:BC:207:LEU:HD21	1.81	0.46
3:BC:137:ILE:HG13	3:BC:138:PRO:HD2	1.96	0.46
8:BJ:10:LYS:HD2	34:B5:471:A:H4'	1.98	0.46
9:BL:101:GLU:OE1	14:BX:13:ARG:NE	2.27	0.46
9:BL:149:ALA:HB1	9:BL:153:PHE:CE1	2.51	0.46
13:BW:11:LEU:HD12	13:BW:74:VAL:HB	1.98	0.46
17:Bb:29:ARG:HH22	34:B5:1049:U:H1'	1.81	0.46
20:BF:99:MET:H	20:BF:180:ARG:NH2	2.14	0.46
20:BF:186:ASN:O	34:B5:1535:U:N3	2.49	0.46
22:BP:18:ARG:HD3	25:BS:95:GLY:HA2	1.97	0.46
34:B5:34:G:O2'	34:B5:515:A:O2'	2.34	0.46
34:B5:66:U:O2'	34:B5:67:A:O5'	2.26	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:173:A:H2'	34:B5:174:U:O4'	2.16	0.46
34:B5:645:C:H2'	34:B5:646:C:C6	2.50	0.46
34:B5:927:C:H2'	34:B5:928:U:C6	2.50	0.46
34:B5:1085:G:N2	34:B5:1088:A:OP2	2.39	0.46
34:B5:1552:U:C4	34:B5:1553:G:C5	3.04	0.46
37:AC:87:GLN:CD	38:A1:1439:U:H5''	2.41	0.46
38:A1:107:A:H2'	38:A1:108:A:O4'	2.16	0.46
38:A1:576:C:OP1	43:AF:241:LYS:NZ	2.45	0.46
38:A1:899:U:H2'	38:A1:900:G:H8	1.81	0.46
38:A1:1327:C:O2'	68:Af:76:GLY:HA2	2.16	0.46
38:A1:2392:C:H2'	38:A1:2393:G:C4	2.50	0.46
38:A1:2744:U:H2'	38:A1:2745:G:C8	2.51	0.46
38:A1:2860:U:H1'	38:A1:2938:G:H4'	1.98	0.46
41:AD:60:ILE:H	41:AD:80:SER:HB2	1.81	0.46
44:AG:203:VAL:HG21	44:AG:211:LEU:HD22	1.97	0.46
45:AH:123:ILE:O	45:AH:125:ASN:N	2.49	0.46
46:AI:52:LEU:HB3	46:AI:136:PHE:HB2	1.96	0.46
46:AI:208:LYS:HA	46:AI:211:ASN:HD22	1.81	0.46
54:AR:62:ARG:NH1	54:AR:62:ARG:HB2	2.30	0.46
56:AT:66:ASN:OD1	56:AT:67:VAL:N	2.49	0.46
66:Ad:44:MET:HE3	66:Ad:77:ARG:HB2	1.97	0.46
68:Af:73:ARG:HH21	68:Af:82:ARG:CZ	2.28	0.46
79:E:14:LYS:O	79:E:17:LEU:HG	2.16	0.46
80:DC:410:LYS:HA	80:DC:410:LYS:HD2	1.78	0.46
1:BA:53:THR:O	1:BA:57:LEU:N	2.46	0.46
1:BA:168:HIS:HA	1:BA:203:PHE:CE1	2.51	0.46
4:BE:128:LYS:NZ	4:BE:129:VAL:O	2.48	0.46
4:BE:160:VAL:HA	4:BE:172:PHE:HA	1.97	0.46
7:BI:47:ARG:HH21	34:B5:396:G:H3'	1.81	0.46
13:BW:52:TYR:CD1	13:BW:61:ILE:HG22	2.50	0.46
20:BF:43:PHE:HB3	20:BF:45:LYS:NZ	2.29	0.46
29:Bc:29:ARG:HG2	29:Bc:29:ARG:HH11	1.81	0.46
34:B5:551:G:H2'	34:B5:552:G:C8	2.49	0.46
34:B5:1251:U:O2'	34:B5:1252:C:H5''	2.16	0.46
36:AB:87:VAL:HG11	36:AB:163:HIS:CD2	2.49	0.46
37:AC:142:VAL:HA	37:AC:145:ILE:HG12	1.98	0.46
37:AC:350:LYS:HG2	37:AC:351:PRO:HD2	1.97	0.46
38:A1:14:U:O4'	40:A4:137:C:H4'	2.16	0.46
38:A1:499:G:H2'	38:A1:500:C:C6	2.51	0.46
38:A1:1019:G:C2	38:A1:1033:U:H5''	2.51	0.46
38:A1:1174:G:O2'	51:AO:21[A]:SER:OG	2.27	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1915:A:H2'	38:A1:1916:U:H6	1.79	0.46
38:A1:2792:A:H5''	77:Ao:67:LYS:HE2	1.98	0.46
38:A1:2984:C:H2'	38:A1:2985:C:H6	1.78	0.46
38:A1:3092:C:H2'	58:AV:12:ARG:HH21	1.81	0.46
43:AF:96:PRO:HB2	43:AF:99:PRO:HD2	1.97	0.46
50:AN:60:VAL:HG11	50:AN:113:LEU:HD13	1.97	0.46
55:AS:155:ARG:HD3	55:AS:172:TYR:CE1	2.51	0.46
58:AV:66:LYS:HB2	58:AV:69:LEU:HD23	1.98	0.46
73:Ak:20:VAL:HG21	73:Ak:45:VAL:HG23	1.98	0.46
79:E:24:LYS:HD2	79:E:24:LYS:HA	1.79	0.46
80:DC:406:LYS:HB2	80:DC:409:GLN:HB2	1.97	0.46
1:BA:152:PRO:HB2	1:BA:154:GLU:OE1	2.16	0.46
3:BC:101:VAL:HG12	3:BC:115:ILE:HG22	1.98	0.46
10:BN:69:ASN:HB3	10:BN:73:ARG:HB3	1.98	0.46
19:BD:74:GLN:HG2	19:BD:75:LYS:N	2.30	0.46
19:BD:123:VAL:HG23	19:BD:134:CYS:SG	2.56	0.46
20:BF:84:LYS:NZ	34:B5:1614:A:H62	2.13	0.46
22:BP:97:TYR:HD1	22:BP:102:PHE:HE1	1.64	0.46
23:BQ:62:ASN:OD1	23:BQ:63:ILE:HG12	2.16	0.46
27:BU:57:ARG:HH11	34:B5:1382:A:H1'	1.80	0.46
34:B5:299:A:H2'	34:B5:300:A:C8	2.51	0.46
34:B5:361:C:N4	34:B5:379:U:OP1	2.49	0.46
34:B5:464:A:H2'	34:B5:465:G:C8	2.50	0.46
34:B5:521:A:H2'	34:B5:522:U:H6	1.81	0.46
34:B5:939:A:H2'	34:B5:940:A:C8	2.50	0.46
34:B5:982:U:H2'	34:B5:983:A:C8	2.50	0.46
34:B5:1281:G:H2'	34:B5:1282:U:C6	2.51	0.46
34:B5:1364:G:H5''	34:B5:1364:G:H8	1.81	0.46
34:B5:1509:C:H2'	34:B5:1510:U:O4'	2.16	0.46
34:B5:1540:G:C5	34:B5:1541:G:C5	3.04	0.46
34:B5:1657:U:O4	38:A1:2330:C:H1'	2.16	0.46
36:AB:152:LYS:HD3	36:AB:192:VAL:HB	1.97	0.46
36:AB:287:LYS:HA	36:AB:320:ASP:OD1	2.16	0.46
38:A1:144:A:H2'	38:A1:145:G:O4'	2.16	0.46
38:A1:1051:U:H4'	56:AT:19:PHE:CD2	2.51	0.46
38:A1:1678:G:H2'	38:A1:1679:A:C8	2.49	0.46
38:A1:1694:U:H5	38:A1:1752:A:N1	2.14	0.46
38:A1:1751:G:O2'	38:A1:1752:A:H8	1.98	0.46
38:A1:2589:G:H2'	38:A1:2590:A:H8	1.81	0.46
38:A1:2883:U:H2'	38:A1:2884:C:C6	2.50	0.46
38:A1:3038:U:H2'	38:A1:3039:C:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3190:C:H2'	38:A1:3191:G:C8	2.51	0.46
40:A4:27:U:H2'	40:A4:28:C:H6	1.80	0.46
41:AD:50:ARG:NH1	41:AD:147:ASP:OD2	2.49	0.46
41:AD:164:LYS:HD3	41:AD:180:PHE:CZ	2.51	0.46
45:AH:20:ILE:HG12	45:AH:25:VAL:HG12	1.98	0.46
70:Ah:113:GLN:NE2	70:Ah:114:ARG:O	2.49	0.46
79:E:107:TYR:OH	79:E:109:ALA:O	2.25	0.46
5:BG:76:LEU:HA	5:BG:94:ARG:HD3	1.97	0.45
6:BH:83:LYS:HB2	6:BH:83:LYS:HE3	1.79	0.45
9:BL:134:THR:HG22	34:B5:325:G:OP1	2.16	0.45
10:BN:112:LYS:NZ	34:B5:974:A:O3'	2.48	0.45
15:BY:11:LYS:HD3	15:BY:11:LYS:HA	1.75	0.45
20:BF:160:VAL:HG12	29:Bc:45:LYS:NZ	2.31	0.45
25:BS:119:ILE:HG13	25:BS:121:ALA:H	1.81	0.45
26:BT:48:GLN:OE1	34:B5:1531:G:N2	2.31	0.45
28:BZ:54:VAL:N	28:BZ:55:PRO:HD2	2.31	0.45
29:Bc:20:GLY:HA2	29:Bc:65:ARG:HH11	1.80	0.45
34:B5:96:G:H1	34:B5:387:A:N6	2.14	0.45
34:B5:146:U:O2	34:B5:169:A:N6	2.49	0.45
34:B5:222:A:C2	34:B5:837:G:H8	2.34	0.45
34:B5:517:U:H2'	34:B5:518:A:O4'	2.16	0.45
34:B5:1294:G:O2'	34:B5:1321:A:N1	2.41	0.45
34:B5:1550:A:N6	34:B5:1562:G:C5	2.85	0.45
34:B5:1553:G:H5''	34:B5:1554:U:OP2	2.17	0.45
34:B5:1563:C:C2	34:B5:1564:U:C5	3.04	0.45
34:B5:1668:G:H2'	34:B5:1669:U:C6	2.51	0.45
38:A1:59:G:H2'	40:A4:33:A:H2'	1.98	0.45
38:A1:175:C:N4	38:A1:240:U:O4	2.49	0.45
38:A1:270:U:H2'	38:A1:271:C:C6	2.47	0.45
38:A1:685:G:OP2	48:AL:35:ARG:NH2	2.36	0.45
38:A1:1369:A:H4'	63:Aa:21:ARG:HG2	1.98	0.45
38:A1:2582:C:H2'	38:A1:2583:C:C6	2.51	0.45
38:A1:2825:C:N4	38:A1:2864:A:H61	2.13	0.45
38:A1:3247:G:O2'	51:AO:114[A]:LYS:NZ	2.33	0.45
40:A4:131:A:H4'	60:AX:93:TYR:CE2	2.51	0.45
40:A4:151:C:O2'	40:A4:153:U:OP2	2.23	0.45
42:AE:165:LEU:HD11	68:Af:102:LEU:HD11	1.98	0.45
45:AH:40:HIS:ND1	45:AH:41:ILE:HG13	2.31	0.45
45:AH:120:ASP:OD1	45:AH:121:LYS:N	2.43	0.45
47:AJ:21:ILE:HD11	47:AJ:67:VAL:HB	1.97	0.45
50:AN:160:GLU:HG2	50:AN:161:ALA:N	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:AO:8[A]:VAL:O	51:AO:118[A]:VAL:N	2.46	0.45
62:AZ:26:VAL:HG11	62:AZ:96:VAL:HG13	1.97	0.45
62:AZ:64:LYS:HA	62:AZ:67:LYS:HD2	1.97	0.45
65:Ac:25:LEU:HD11	65:Ac:87:VAL:HG11	1.97	0.45
70:Ah:73:LYS:O	70:Ah:76:GLN:NE2	2.48	0.45
80:DC:239:LYS:HZ2	80:DC:243:ARG:HD3	1.81	0.45
80:DC:715:ALA:O	80:DC:719:LEU:HG	2.16	0.45
81:EC:6840:A:H2'	81:EC:6840:A:N3	2.31	0.45
1:BA:195:TRP:CD1	1:BA:196:SER:H	2.34	0.45
4:BE:126:VAL:N	4:BE:158:ASP:O	2.48	0.45
5:BG:2:LYS:HE3	5:BG:15:THR:HG21	1.99	0.45
5:BG:73:ILE:HG13	5:BG:97:VAL:HG23	1.97	0.45
6:BH:103:SER:O	6:BH:106:SER:OG	2.28	0.45
8:BJ:86:LEU:HG	8:BJ:90:LYS:HE2	1.99	0.45
10:BN:109:LYS:HA	10:BN:112:LYS:HB3	1.98	0.45
13:BW:23:ARG:HG2	17:Bb:4:VAL:HG22	1.97	0.45
15:BY:60:PHE:HD1	15:BY:71:GLY:HA3	1.81	0.45
16:Ba:92:ARG:HB3	34:B5:1796:C:H5	1.81	0.45
20:BF:51:VAL:HG11	20:BF:130:ILE:HG22	1.98	0.45
20:BF:120:ILE:O	20:BF:124:LEU:HG	2.16	0.45
27:BU:24:ILE:O	27:BU:91:ILE:N	2.32	0.45
29:Bc:49:ARG:HG2	29:Bc:50:GLU:N	2.32	0.45
30:Bd:21:CYS:SG	30:Bd:24:CYS:N	2.89	0.45
30:Bd:32:ARG:HG2	34:B5:1595:U:OP1	2.16	0.45
34:B5:85:A:H2'	34:B5:86:A:C8	2.51	0.45
34:B5:351:C:N4	34:B5:631:G:OP1	2.37	0.45
34:B5:452:A:H3'	34:B5:453:U:H6	1.81	0.45
34:B5:628:G:O2'	38:A1:846:A:N6	2.43	0.45
34:B5:751:G:C6	34:B5:799:A:N1	2.84	0.45
34:B5:808:U:H2'	34:B5:809:A:H8	1.80	0.45
34:B5:879:G:H2'	34:B5:880:C:C6	2.51	0.45
34:B5:882:U:H2'	34:B5:883:C:C6	2.51	0.45
34:B5:1224:A:H2'	34:B5:1225:U:C6	2.51	0.45
34:B5:1383:G:H2'	34:B5:1384:A:C8	2.51	0.45
34:B5:1643:U:O2	34:B5:1780:G:N2	2.42	0.45
34:B5:1682:U:O2'	34:B5:1683:C:O5'	2.30	0.45
35:AA:79:ASN:HD21	35:AA:165:VAL:HG23	1.81	0.45
35:AA:117:GLU:HG2	35:AA:124:GLY:H	1.79	0.45
36:AB:44:THR:HG21	36:AB:184:ASN:OD1	2.15	0.45
38:A1:591:G:H1'	42:AE:19:LYS:HG3	1.98	0.45
38:A1:733:G:H21	38:A1:736:A:H2	1.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:953:G:O2'	38:A1:1115:G:H4'	2.16	0.45
38:A1:1138:U:OP1	64:Ab:13:THR:HG21	2.16	0.45
38:A1:1233:G:H2'	38:A1:1236:G:N1	2.31	0.45
38:A1:1255:C:HO2'	38:A1:1256:G:H8	1.57	0.45
38:A1:1593:A:O4'	69:Ag:60:ARG:HD2	2.17	0.45
38:A1:1856:C:H5''	69:Ag:14:ASN:HD22	1.81	0.45
38:A1:2222:A:H2'	38:A1:2223:A:C8	2.51	0.45
38:A1:2772:C:H4'	38:A1:2773:C:H5'	1.98	0.45
40:A4:28:C:H2'	40:A4:29:U:H6	1.81	0.45
41:AD:39:GLN:NE2	41:AD:43:LYS:HD2	2.32	0.45
43:AF:181:ILE:O	43:AF:185:ILE:HG12	2.16	0.45
51:AO:23[A]:VAL:HG13	51:AO:33[A]:ILE:HD11	1.98	0.45
51:AO:151[A]:ASP:OD1	51:AO:151[A]:ASP:N	2.49	0.45
58:AV:18:PRO:HA	58:AV:51:ALA:HA	1.97	0.45
58:AV:59:MET:HE1	58:AV:75:PRO:HG3	1.98	0.45
58:AV:113:ALA:HA	58:AV:132:ASN:OD1	2.16	0.45
79:E:147:LYS:HA	79:E:150:ASP:HB2	1.97	0.45
80:DC:830:GLU:HG2	80:DC:831:GLU:N	2.31	0.45
3:BC:80:VAL:HG22	3:BC:102:VAL:HG22	1.99	0.45
4:BE:94:ALA:O	4:BE:95:THR:OG1	2.28	0.45
7:BI:166:TYR:HB3	7:BI:184:LEU:HD13	1.98	0.45
9:BL:15:LYS:HD3	9:BL:15:LYS:HA	1.81	0.45
13:BW:8:ALA:HA	13:BW:74:VAL:HG11	1.98	0.45
19:BD:107:PHE:O	19:BD:111:ASN:N	2.39	0.45
25:BS:27:LYS:HE2	34:B5:1533:C:H5''	1.98	0.45
27:BU:92:ASP:C	27:BU:93:LEU:HD12	2.41	0.45
29:Bc:12:VAL:HG23	29:Bc:54:LEU:HD23	1.99	0.45
31:Bg:109:ASP:O	31:Bg:127:ARG:N	2.49	0.45
31:Bg:275:ARG:HE	31:Bg:276:PRO:HD2	1.82	0.45
34:B5:93:A:C8	34:B5:398:G:H2'	2.51	0.45
34:B5:327:U:H2'	34:B5:328:A:H8	1.80	0.45
34:B5:688:G:H2'	34:B5:689:G:H8	1.81	0.45
34:B5:737:A:O2'	34:B5:738:G:H8	1.99	0.45
34:B5:1547:A:H61	34:B5:1565:C:H42	1.64	0.45
34:B5:1624:C:H2'	34:B5:1625:C:C6	2.51	0.45
36:AB:156:SER:O	36:AB:188:ILE:HD11	2.17	0.45
38:A1:20:A:H2'	38:A1:21:G:C8	2.51	0.45
38:A1:52:A:N3	38:A1:811:U:O2'	2.49	0.45
38:A1:874:U:N3	38:A1:2978:U:OP1	2.41	0.45
38:A1:887:G:H2'	38:A1:888:A:C8	2.51	0.45
38:A1:1299:U:H2'	38:A1:1300:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1329:U:P	68:Af:82:ARG:HH21	2.40	0.45
38:A1:1925:U:O2	78:Ap:19:GLY:HA2	2.16	0.45
38:A1:2560:C:N4	38:A1:2575:G:OP2	2.49	0.45
38:A1:2989:U:H2'	38:A1:2990:G:O4'	2.17	0.45
38:A1:3086:A:H3'	38:A1:3087:A:H8	1.81	0.45
38:A1:3191:G:H2'	38:A1:3192:U:C6	2.51	0.45
40:A4:66:A:P	70:Ah:10:ARG:HH22	2.39	0.45
40:A4:117:C:H2'	40:A4:118:C:H6	1.81	0.45
44:AG:144:GLU:HA	44:AG:173:MET:HE2	1.97	0.45
46:AI:78:LYS:HD2	46:AI:78:LYS:HA	1.61	0.45
49:AM:47:ASP:OD1	49:AM:55:ARG:HD3	2.17	0.45
51:AO:27[A]:LEU:HD12	51:AO:98[A]:ALA:O	2.16	0.45
54:AR:173:ARG:O	54:AR:177:VAL:HG22	2.16	0.45
62:AZ:10:VAL:HG22	62:AZ:24:VAL:HG12	1.98	0.45
67:Ae:44:ARG:HE	67:Ae:46:PHE:HE1	1.65	0.45
69:Ag:5:VAL:HG11	69:Ag:22:VAL:HG13	1.99	0.45
77:Ao:75:VAL:O	77:Ao:78:LYS:NZ	2.49	0.45
80:DC:22:MET:SD	80:DC:102:LEU:HD13	2.56	0.45
80:DC:586:ILE:HD11	80:DC:688:ILE:HG23	1.98	0.45
2:BB:116:LYS:NZ	34:B5:933:A:OP1	2.41	0.45
3:BC:86:VAL:HG11	34:B5:1300:A:H4'	1.98	0.45
4:BE:62:LYS:HD2	4:BE:66:MET:SD	2.56	0.45
4:BE:187:ARG:NH2	34:B5:752:A:H2'	2.32	0.45
6:BH:64:VAL:HG23	6:BH:67:LEU:HB2	1.98	0.45
8:BJ:171:ARG:NH1	34:B5:514:G:N7	2.65	0.45
10:BN:46:THR:HB	10:BN:49:GLN:HB2	1.99	0.45
21:BK:46:LEU:O	21:BK:50:THR:N	2.47	0.45
21:BK:73:VAL:O	21:BK:77:ARG:HG2	2.16	0.45
22:BP:69:GLU:HG3	22:BP:70:ASN:H	1.81	0.45
22:BP:93:VAL:HB	22:BP:106:GLU:OE2	2.16	0.45
30:Bd:40:ARG:HD3	34:B5:1199:G:N7	2.31	0.45
34:B5:967:A:H2'	34:B5:968:U:C6	2.51	0.45
34:B5:1170:G:C6	34:B5:1574:G:C5	3.04	0.45
34:B5:1553:G:H22	34:B5:1555:A:H3'	1.81	0.45
36:AB:92:TYR:HB2	36:AB:157:VAL:HB	1.98	0.45
37:AC:325:LEU:O	43:AF:41:ARG:NH2	2.49	0.45
38:A1:837:A:OP2	78:Ap:4:ARG:NE	2.49	0.45
38:A1:967:A:C4	38:A1:968:G:C8	3.04	0.45
38:A1:1660:C:H2'	38:A1:1661:G:C8	2.51	0.45
38:A1:1768:U:H2'	38:A1:1769:G:C8	2.52	0.45
38:A1:2155:G:H2'	38:A1:2156:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2186:U:O2'	38:A1:2313:A:N3	2.45	0.45
38:A1:2196:C:O2'	38:A1:2270:A:H1'	2.17	0.45
38:A1:2396:G:OP1	38:A1:2397:A:O2'	2.23	0.45
38:A1:2522:G:H2'	38:A1:2522:G:N3	2.32	0.45
38:A1:2876:C:H2'	38:A1:2877:G:O4'	2.16	0.45
38:A1:3256:G:H2'	38:A1:3257:C:H6	1.80	0.45
39:A3:9:C:OP1	56:AT:26:HIS:HB2	2.17	0.45
41:AD:82:GLU:O	41:AD:85:ARG:HG2	2.16	0.45
43:AF:125:GLU:HG3	43:AF:128:LYS:HE3	1.98	0.45
44:AG:104:GLU:HA	44:AG:107:GLU:OE2	2.16	0.45
45:AH:137:SER:HB3	45:AH:145:VAL:HG23	1.97	0.45
46:AI:10:ARG:HG2	46:AI:11:TYR:CE1	2.51	0.45
68:Af:45:LEU:HA	68:Af:45:LEU:HD23	1.59	0.45
80:DC:250:PHE:HB2	80:DC:257:TRP:CZ3	2.52	0.45
80:DC:424:ASP:OD1	80:DC:424:ASP:N	2.49	0.45
4:BE:137:PRO:HG3	5:BG:208:TYR:CZ	2.52	0.45
6:BH:98:ILE:N	34:B5:694:U:O2	2.43	0.45
7:BI:83:TYR:HB2	7:BI:196:LEU:HD22	1.97	0.45
11:BO:47:LYS:HE2	11:BO:63:ALA:HA	1.98	0.45
14:BX:28:ASN:O	14:BX:31:LYS:HG2	2.16	0.45
20:BF:160:VAL:O	29:Bc:45:LYS:HE2	2.16	0.45
22:BP:34:VAL:HG11	22:BP:45:PHE:CD2	2.52	0.45
25:BS:15:LEU:HD23	25:BS:22:VAL:O	2.17	0.45
27:BU:48:HIS:HE1	27:BU:96:PRO:HD2	1.81	0.45
31:Bg:13:LEU:HD11	31:Bg:55:GLY:O	2.17	0.45
31:Bg:16:HIS:O	31:Bg:308:ASN:HB3	2.17	0.45
34:B5:305:C:H2'	34:B5:306:U:C6	2.52	0.45
34:B5:1210:C:H2'	34:B5:1211:A:H8	1.80	0.45
34:B5:1506:G:HO2'	34:B5:1550:A:HO2'	1.63	0.45
34:B5:1617:U:H2'	34:B5:1618:C:C6	2.52	0.45
34:B5:1718:G:H2'	34:B5:1719:A:C8	2.50	0.45
34:B5:1784:C:H2'	34:B5:1785:U:C6	2.52	0.45
36:AB:235:THR:HG23	38:A1:2881:C:H5''	1.98	0.45
38:A1:21:G:H3'	38:A1:22:G:H8	1.82	0.45
38:A1:632:G:OP1	51:AO:94[A]:ARG:N	2.38	0.45
38:A1:737:G:H2'	38:A1:738:A:C8	2.51	0.45
38:A1:797:U:H5''	48:AL:2:ALA:O	2.17	0.45
38:A1:828:A:H2'	38:A1:829:U:C6	2.51	0.45
38:A1:1047:A:H2'	38:A1:1048:A:C8	2.52	0.45
38:A1:2560:C:H42	38:A1:2575:G:P	2.39	0.45
38:A1:3064:U:H2'	38:A1:3065:G:C8	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3214:U:C2	49:AM:121:MET:HE1	2.51	0.45
40:A4:130:C:H2'	40:A4:131:A:O4'	2.17	0.45
46:AI:100:ASN:OD1	46:AI:100:ASN:O	2.35	0.45
47:AJ:63:GLU:HB3	47:AJ:65:ILE:HG23	1.98	0.45
49:AM:113:THR:OG1	49:AM:114:ASP:N	2.49	0.45
62:AZ:70:PRO:HG3	62:AZ:115:LYS:HB2	1.99	0.45
76:An:6:ARG:O	76:An:6:ARG:HD3	2.17	0.45
1:BA:121:VAL:HG13	1:BA:141:ILE:HG21	1.97	0.45
2:BB:86:LEU:HD13	2:BB:100:PHE:HA	1.98	0.45
3:BC:82:ASN:HB3	3:BC:101:VAL:HG22	1.98	0.45
4:BE:229:GLY:HA2	4:BE:235:TYR:CE2	2.52	0.45
7:BI:84:HIS:CD2	7:BI:100:ALA:HB2	2.52	0.45
8:BJ:93:LEU:C	8:BJ:95:TYR:H	2.24	0.45
15:BY:56:SER:OG	15:BY:74:LEU:HB2	2.17	0.45
19:BD:21:LEU:HB3	19:BD:25:PHE:CE2	2.52	0.45
20:BF:57:SER:O	20:BF:167:ARG:NH2	2.49	0.45
23:BQ:52:LEU:HA	23:BQ:60:PHE:CE2	2.51	0.45
26:BT:99:SER:HA	26:BT:102:ARG:NH1	2.31	0.45
27:BU:21:LYS:HG3	27:BU:119:ALA:O	2.17	0.45
31:Bg:259:GLY:HA2	31:Bg:275:ARG:HD2	1.99	0.45
34:B5:14:C:H2'	34:B5:15:U:C6	2.51	0.45
34:B5:49:C:H2'	34:B5:50:C:O4'	2.16	0.45
34:B5:208:U:H2'	34:B5:209:U:H6	1.78	0.45
34:B5:295:A:H2'	34:B5:296:U:C6	2.52	0.45
34:B5:872:G:N2	34:B5:1047:G:H4'	2.32	0.45
34:B5:1207:C:H4'	34:B5:1208:A:O4'	2.16	0.45
34:B5:1301:U:H2'	34:B5:1302:U:H6	1.81	0.45
34:B5:1338:C:H2'	34:B5:1339:C:C6	2.51	0.45
34:B5:1550:A:H3'	34:B5:1551:U:C6	2.48	0.45
34:B5:1553:G:N1	34:B5:1556:A:OP2	2.37	0.45
34:B5:1567:U:H2'	34:B5:1568:C:C2	2.51	0.45
35:AA:245:LEU:HD12	35:AA:245:LEU:H	1.82	0.45
36:AB:198:HIS:HA	36:AB:201:LYS:HD2	1.98	0.45
37:AC:322:GLN:HB2	38:A1:608:A:H5'	1.98	0.45
38:A1:288:C:H2'	38:A1:289:A:C8	2.52	0.45
38:A1:314:U:H2'	38:A1:315:C:C6	2.51	0.45
38:A1:500:C:H2'	38:A1:501:A:C8	2.52	0.45
38:A1:595:G:H2'	38:A1:596:C:C6	2.50	0.45
38:A1:650:C:H2'	38:A1:651:G:C8	2.52	0.45
38:A1:1282:G:C5	38:A1:1283:C:N3	2.85	0.45
38:A1:1690:C:H2'	38:A1:1691:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2349:PSU:O2'	38:A1:3307:A:N3	2.50	0.45
39:A3:87:G:H2'	39:A3:88:G:H8	1.82	0.45
47:AJ:111:ASP:HA	47:AJ:114:ILE:O	2.16	0.45
48:AL:45:LYS:HB3	48:AL:45:LYS:HE2	1.81	0.45
48:AL:46:ILE:HG13	48:AL:49:ARG:HG2	1.99	0.45
49:AM:108:ARG:NH2	49:AM:116:GLU:OE2	2.40	0.45
56:AT:30:TYR:HE1	56:AT:94:GLU:HG3	1.82	0.45
66:Ad:44:MET:O	66:Ad:77:ARG:NH1	2.49	0.45
66:Ad:72:ARG:HG3	66:Ad:96:VAL:HB	1.97	0.45
68:Af:90:PRO:C	68:Af:92:LYS:H	2.25	0.45
75:Am:93:LYS:O	75:Am:124:LYS:HB2	2.17	0.45
77:Ao:14:GLY:C	77:Ao:16:THR:H	2.24	0.45
77:Ao:68:VAL:HG23	77:Ao:85:LEU:HB2	1.99	0.45
80:DC:145:GLN:NE2	80:DC:484:SER:OG	2.50	0.45
80:DC:244:LEU:HD12	80:DC:273:PHE:HD1	1.81	0.45
81:EC:6893:C:H3'	81:EC:6894:C:C6	2.52	0.45
81:EC:6932:G:H2'	81:EC:6933:G:C8	2.52	0.45
4:BE:15:PRO:HD3	4:BE:39:ARG:NH2	2.31	0.45
5:BG:87:ARG:NH1	5:BG:87:ARG:HB2	2.31	0.45
5:BG:91:GLU:HG2	5:BG:93:LYS:HD3	1.99	0.45
12:BV:74:GLN:HE22	12:BV:81:ASN:HA	1.80	0.45
19:BD:135:GLU:HB2	19:BD:157:LEU:HD11	1.98	0.45
23:BQ:73:GLY:HA3	34:B5:1608:U:H4'	1.99	0.45
33:BM:71:ILE:HG13	33:BM:72:ILE:N	2.31	0.45
34:B5:267:U:H2'	34:B5:268:C:C6	2.51	0.45
34:B5:1263:G:C2	34:B5:1264:G:H1'	2.52	0.45
34:B5:1381:U:O4	34:B5:1382:A:N6	2.49	0.45
34:B5:1565:C:H2'	34:B5:1566:U:C6	2.51	0.45
36:AB:36:ASP:HB3	36:AB:39:LYS:HD3	1.99	0.45
38:A1:184:U:O2'	61:AY:121:ARG:NH1	2.50	0.45
38:A1:500:C:O2'	42:AE:61:ASN:ND2	2.50	0.45
38:A1:1210:U:P	45:AH:62:ARG:HH21	2.39	0.45
38:A1:1259:A:H3'	38:A1:1260:A:C8	2.52	0.45
38:A1:1470:U:H2'	38:A1:1471:U:C6	2.52	0.45
38:A1:1652:G:H2'	38:A1:1653:G:H8	1.80	0.45
38:A1:2454:G:H5'	38:A1:2455:U:C6	2.52	0.45
38:A1:2494:A:H5'	38:A1:2495:C:H6	1.81	0.45
38:A1:2586:G:O2'	38:A1:2588:U:OP2	2.35	0.45
38:A1:2683:U:H2'	38:A1:2684:C:H6	1.81	0.45
38:A1:2923:PSU:H2'	38:A1:2924:U:C6	2.50	0.45
38:A1:3113:A:O2'	45:AH:69:ARG:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:A3:43:U:H2'	39:A3:44:C:O4'	2.17	0.45
44:AG:64:ILE:HB	44:AG:68:ARG:NH1	2.32	0.45
46:AI:30:LYS:HB3	46:AI:30:LYS:HE3	1.70	0.45
50:AN:64:VAL:HG11	50:AN:102:ALA:HB1	1.98	0.45
56:AT:66:ASN:HB3	56:AT:73:GLY:HA3	1.98	0.45
58:AV:80:ARG:NH1	58:AV:117:PRO:O	2.47	0.45
60:AX:61:LYS:O	60:AX:87:SER:HB2	2.16	0.45
68:Af:74:THR:HA	68:Af:81:VAL:HG12	1.99	0.45
68:Af:75:HIS:N	68:Af:80:VAL:O	2.49	0.45
73:Ak:32:ASN:HD21	73:Ak:35:GLY:HA3	1.80	0.45
75:Am:79:GLU:O	75:Am:81:SER:N	2.50	0.45
79:E:118:LYS:HD2	81:EC:6770:U:H5	1.81	0.45
79:E:122:ARG:HB2	81:EC:6770:U:H4'	1.99	0.45
81:EC:6777:C:H1'	81:EC:6818:G:H1	1.82	0.45
81:EC:6851:G:H1	81:EC:6879:U:C1'	2.30	0.45
81:EC:6916:A:H2'	81:EC:6917:C:C6	2.51	0.45
4:BE:145:ARG:NH2	34:B5:123:G:O2'	2.50	0.45
7:BI:107:THR:OG1	7:BI:108:PRO:HD3	2.17	0.45
8:BJ:10:LYS:HZ3	34:B5:471:A:H5'	1.82	0.45
10:BN:140:LYS:NZ	38:A1:847:A:OP1	2.36	0.45
13:BW:44:HIS:NE2	13:BW:112:ASP:OD2	2.48	0.45
14:BX:29:TYR:O	14:BX:33:LEU:HD23	2.17	0.45
14:BX:84:THR:HG23	14:BX:120:VAL:HG22	1.99	0.45
15:BY:22:GLN:HB2	15:BY:72:PHE:HZ	1.82	0.45
15:BY:29:HIS:HB2	15:BY:32:ARG:HB3	1.98	0.45
19:BD:150:MET:HE3	19:BD:152:PHE:HZ	1.81	0.45
22:BP:41:VAL:HG12	22:BP:115:TYR:HE1	1.82	0.45
25:BS:114:GLU:HB3	25:BS:118:LYS:HE3	1.99	0.45
25:BS:116:LEU:HD23	25:BS:119:ILE:HD11	1.98	0.45
30:Bd:31:ILE:C	30:Bd:33:LYS:H	2.25	0.45
31:Bg:112:SER:OG	31:Bg:113:VAL:N	2.50	0.45
31:Bg:112:SER:O	31:Bg:125:GLY:N	2.46	0.45
34:B5:19:A:H2'	34:B5:20:G:O4'	2.16	0.45
34:B5:85:A:H2'	34:B5:86:A:O4'	2.17	0.45
34:B5:614:C:C2	34:B5:615:A:C8	3.05	0.45
34:B5:1161:C:H2'	34:B5:1162:C:C6	2.52	0.45
34:B5:1187:PSU:HN3	34:B5:1200:G:H1	1.64	0.45
34:B5:1204:A:H2'	34:B5:1204:A:N3	2.31	0.45
34:B5:1550:A:N7	34:B5:1562:G:N1	2.65	0.45
36:AB:86:VAL:HG22	36:AB:162:VAL:HG12	1.99	0.45
36:AB:92:TYR:OH	38:A1:3003:G:O2'	2.23	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:233:TRP:CG	36:AB:265:ALA:HB1	2.52	0.45
37:AC:193:LYS:NZ	40:A4:21:C:OP1	2.36	0.45
38:A1:291:C:H2'	38:A1:292:U:H6	1.82	0.45
38:A1:513:G:H2'	38:A1:514:G:C8	2.52	0.45
38:A1:600:G:N2	38:A1:602:A:H3'	2.31	0.45
38:A1:846:A:C6	38:A1:847:A:C5	3.04	0.45
38:A1:1650:G:H2'	38:A1:1651:U:C6	2.51	0.45
38:A1:2326:A:H2'	38:A1:2327:U:O4'	2.17	0.45
38:A1:2527:G:H2'	38:A1:2528:G:H8	1.80	0.45
38:A1:2834:G:H2'	38:A1:2835:U:H6	1.82	0.45
39:A3:22:A:H3'	39:A3:23:A:C8	2.51	0.45
39:A3:39:C:O4'	47:AJ:46:VAL:HG13	2.17	0.45
40:A4:46:G:O2'	40:A4:61:A:N1	2.39	0.45
40:A4:51:G:C4	74:AI:26:TRP:HH2	2.35	0.45
44:AG:184:ALA:O	44:AG:188:THR:HG23	2.17	0.45
47:AJ:55:ARG:O	47:AJ:55:ARG:NH1	2.33	0.45
60:AX:81:ILE:HG22	60:AX:125:ARG:HB2	1.99	0.45
80:DC:212:GLY:HA3	80:DC:219:ALA:HA	1.99	0.45
80:DC:356:LEU:HD13	80:DC:478:MET:HE2	1.99	0.45
80:DC:483:PHE:CE2	80:DC:516:PRO:HB2	2.52	0.45
80:DC:565:GLU:HB2	80:DC:681:MET:SD	2.57	0.45
85:DC:903:SO1:H81	85:DC:903:SO1:H122	1.75	0.45
85:DC:903:SO1:H212	85:DC:903:SO1:C5	2.47	0.45
1:BA:131:GLN:NE2	34:B5:1321:A:N7	2.65	0.45
5:BG:2:LYS:HB3	5:BG:108:VAL:HG22	1.99	0.45
6:BH:180:GLN:N	6:BH:180:GLN:OE1	2.49	0.45
9:BL:17:PRO:HB2	9:BL:18:HIS:ND1	2.32	0.45
14:BX:110:LYS:HB3	34:B5:601:A:OP2	2.17	0.45
16:Ba:5:ARG:HH21	34:B5:1795:U:H3'	1.82	0.45
26:BT:92:LYS:HD2	26:BT:94:ILE:HD11	1.98	0.45
34:B5:771:A:H3'	34:B5:772:G:H8	1.82	0.45
34:B5:880:C:H2'	34:B5:881:A:C8	2.52	0.45
34:B5:1012:U:H2'	34:B5:1013:A:C8	2.52	0.45
34:B5:1079:U:H2'	34:B5:1080:U:C6	2.52	0.45
34:B5:1208:A:H5'	34:B5:1209:C:OP2	2.17	0.45
34:B5:1277:G:C5	34:B5:1278:G:C5	3.04	0.45
37:AC:3:ARG:HA	37:AC:3:ARG:HD2	1.72	0.45
38:A1:203:G:H2'	38:A1:204:A:H8	1.82	0.45
38:A1:443:G:H21	38:A1:492:C:H6	1.65	0.45
38:A1:507:U:H2'	38:A1:508:U:H6	1.81	0.45
38:A1:612:U:OP1	42:AE:21:THR:OG1	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:637:C:H5''	38:A1:2377:G:N2	2.30	0.45
38:A1:745:C:H2'	38:A1:746:A:C8	2.51	0.45
38:A1:1037:C:H2'	38:A1:1038:C:C6	2.52	0.45
38:A1:1490:A:H2'	38:A1:1491:A:O4'	2.17	0.45
38:A1:1797:A:H2'	38:A1:1798:A:C8	2.51	0.45
38:A1:1805:C:H2'	38:A1:1806:A:C8	2.37	0.45
38:A1:2511:A:H2'	38:A1:2512:C:H6	1.82	0.45
38:A1:3053:G:H2'	38:A1:3054:U:O4'	2.17	0.45
38:A1:3163:A:H2'	38:A1:3164:C:C6	2.52	0.45
39:A3:54:U:H4'	39:A3:55:A:H5'	1.99	0.45
40:A4:81:U:H4'	40:A4:82:U:H5'	1.99	0.45
45:AH:167:VAL:C	45:AH:168:ARG:HD2	2.42	0.45
45:AH:168:ARG:O	45:AH:170:LYS:HG2	2.17	0.45
48:AL:140:SER:OG	48:AL:143:ALA:HB3	2.17	0.45
51:AO:7[A]:VAL:HG22	51:AO:33[A]:ILE:HG22	1.98	0.45
51:AO:84[A]:LEU:O	51:AO:87[A]:MET:HB2	2.17	0.45
53:AQ:5:HIS:CD2	53:AQ:9:GLN:HG3	2.52	0.45
70:Ah:49:LYS:HD3	70:Ah:49:LYS:HA	1.74	0.45
80:DC:124:GLY:HA2	80:DC:151:ILE:HG12	1.99	0.45
4:BE:145:ARG:HH12	34:B5:123:G:H4'	1.82	0.45
4:BE:256:ARG:HH22	34:B5:763:G:H4'	1.82	0.45
5:BG:139:ASN:ND2	34:B5:142:G:O5'	2.50	0.45
6:BH:140:VAL:O	13:BW:52:TYR:N	2.49	0.45
11:BO:13:VAL:N	11:BO:77:THR:OG1	2.45	0.45
11:BO:102:LEU:HD21	11:BO:115:ILE:HD11	1.99	0.45
12:BV:41:GLU:O	12:BV:42:GLU:HG3	2.17	0.45
13:BW:103:ILE:HG22	13:BW:126:LEU:HD12	1.99	0.45
15:BY:53:ASP:HB2	15:BY:79:VAL:HG22	1.99	0.45
15:BY:56:SER:HB2	15:BY:94:TYR:HE2	1.82	0.45
17:Bb:36:LYS:HD3	17:Bb:43:ILE:HA	1.98	0.45
27:BU:48:HIS:CG	27:BU:99:ILE:HG12	2.52	0.45
29:Bc:42:ARG:HH12	29:Bc:61:ARG:HD2	1.82	0.45
34:B5:392:G:OP1	34:B5:1729:C:O2'	2.33	0.45
34:B5:441:A:H2'	34:B5:442:C:C6	2.52	0.45
34:B5:1160:A:H2'	34:B5:1161:C:C6	2.52	0.45
34:B5:1280:4AC:C2	34:B5:1428:G:H1	2.29	0.45
34:B5:1489:U:H1'	34:B5:1494:C:C2	2.52	0.45
34:B5:1542:G:C2	34:B5:1568:C:C2	3.05	0.45
34:B5:1697:G:H5''	34:B5:1698:G:H8	1.83	0.45
35:AA:9:ARG:HD2	38:A1:911:C:OP2	2.17	0.45
36:AB:5:LYS:O	36:AB:6:TYR:CD1	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:29:VAL:HG22	36:AB:218:ILE:HD12	1.98	0.45
36:AB:69:LYS:HB2	36:AB:69:LYS:HE2	1.79	0.45
38:A1:551:A:O2'	38:A1:552:G:H8	2.00	0.45
38:A1:798:G:H2'	38:A1:799:G:O4'	2.17	0.45
38:A1:1170:A:OP1	43:AF:219:LYS:N	2.47	0.45
38:A1:1225:A:H2'	38:A1:1226:G:C8	2.52	0.45
38:A1:1647:A:H2'	38:A1:1648:A:C8	2.51	0.45
38:A1:1750:A:OP1	73:AK:44:LYS:NZ	2.47	0.45
38:A1:2496:C:O2'	38:A1:2497:U:OP1	2.35	0.45
38:A1:3161:C:H2'	38:A1:3162:C:C6	2.52	0.45
40:A4:12:A:C6	40:A4:13:A:N7	2.85	0.45
48:AL:126:PHE:O	70:AH:114:ARG:NH2	2.50	0.45
50:AN:58:GLY:HA3	50:AN:142:ILE:HD11	1.99	0.45
50:AN:68:ARG:HD2	50:AN:128:LYS:HG3	1.98	0.45
50:AN:70:ASN:HB3	50:AN:92:LEU:O	2.16	0.45
53:AQ:42:ALA:HB2	53:AQ:133:LYS:HB3	1.97	0.45
53:AQ:133:LYS:HB2	53:AQ:135:GLN:NE2	2.22	0.45
56:AT:80:VAL:HG21	56:AT:85:LEU:HD12	1.99	0.45
80:DC:230:ALA:HA	80:DC:235:VAL:H	1.81	0.45
6:BH:71:HIS:ND1	6:BH:74:GLN:OE1	2.43	0.44
19:BD:10:LYS:NZ	27:BU:113:ASP:OD2	2.38	0.44
20:BF:42:LEU:HD22	20:BF:130:ILE:HD11	1.97	0.44
20:BF:70:VAL:HG11	23:BQ:47:LYS:HD3	1.98	0.44
23:BQ:38:LEU:HD11	26:BT:8:ASP:HA	1.99	0.44
25:BS:37:GLY:C	34:B5:1566:U:H4'	2.42	0.44
25:BS:111:ASP:O	25:BS:115:ARG:HG2	2.17	0.44
26:BT:18:TYR:CD1	26:BT:135:ILE:HG13	2.51	0.44
26:BT:28:LEU:HD22	26:BT:55:TYR:CG	2.52	0.44
31:Bg:28:GLY:HA3	31:Bg:76:ASP:HA	1.98	0.44
31:Bg:302:PHE:HD1	31:Bg:312:VAL:HG23	1.82	0.44
33:BM:83:GLU:HG2	33:BM:84:ASN:N	2.31	0.44
33:BM:125:ASN:C	33:BM:127:GLY:HA2	2.42	0.44
34:B5:78:A:H2'	34:B5:79:C:C6	2.52	0.44
34:B5:517:U:C2	34:B5:518:A:C8	3.05	0.44
34:B5:816:G:H2'	34:B5:817:A:C8	2.46	0.44
34:B5:1348:A:H2'	34:B5:1349:G:O4'	2.17	0.44
34:B5:1407:U:H2'	34:B5:1408:G:C8	2.52	0.44
36:AB:259:HIS:CE1	38:A1:2366:C:H4'	2.52	0.44
37:AC:104:LYS:NZ	38:A1:800:G:O6	2.36	0.44
37:AC:125:ALA:O	37:AC:129:THR:HG23	2.17	0.44
38:A1:137:G:H2'	38:A1:138:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:182:U:C4	38:A1:234:G:O6	2.70	0.44
38:A1:354:U:H2'	38:A1:355:A:H8	1.82	0.44
38:A1:432:G:H2'	38:A1:433:A:H8	1.82	0.44
38:A1:501:A:H2'	38:A1:502:U:C6	2.52	0.44
38:A1:503:C:H2'	38:A1:504:A:C8	2.52	0.44
38:A1:629:U:H2'	38:A1:630:A:C8	2.52	0.44
38:A1:640:U:H2'	38:A1:641:C:C6	2.52	0.44
38:A1:1072:G:H2'	38:A1:1073:U:C6	2.51	0.44
38:A1:1310:G:HO2'	38:A1:2380:U:HO2'	1.61	0.44
38:A1:1499:C:C2	38:A1:1500:G:N7	2.85	0.44
38:A1:1718:G:C2	38:A1:1727:G:C2	3.04	0.44
38:A1:2228:A:H2'	38:A1:2229:A:C8	2.51	0.44
38:A1:2912:G:H2'	38:A1:2913:C:O4'	2.17	0.44
38:A1:2991:A:N3	52:AP:69:ARG:NH1	2.63	0.44
38:A1:3228:C:H5''	49:AM:133:LYS:NZ	2.32	0.44
40:A4:57:C:OP2	72:Aj:68:LYS:NZ	2.40	0.44
41:AD:104:LEU:HD11	41:AD:108:ARG:HH21	1.82	0.44
41:AD:153:THR:HG23	41:AD:160:PHE:CE2	2.52	0.44
46:AI:68:ALA:HB2	46:AI:158:LYS:HB2	1.99	0.44
46:AI:145:LYS:HG2	46:AI:149:ILE:HD12	1.99	0.44
47:AJ:14:ILE:HA	47:AJ:131:MET:HE1	1.97	0.44
55:AS:124:LEU:HD23	56:AT:153:PRO:HB2	1.98	0.44
61:AY:38:GLU:O	61:AY:42:GLN:N	2.50	0.44
68:Af:51:TYR:CE2	68:Af:93:THR:HG21	2.52	0.44
69:Ag:100:ILE:HA	69:Ag:103:LYS:HG2	2.00	0.44
74:Al:23:LEU:HD12	74:Al:24:PRO:HD2	1.99	0.44
79:E:14:LYS:HD2	79:E:14:LYS:HA	1.85	0.44
80:DC:606:ILE:HD11	80:DC:619:MET:CB	2.40	0.44
3:BC:55:GLU:OE1	3:BC:58:LEU:HD23	2.16	0.44
3:BC:88:LYS:NZ	34:B5:1301:U:H5''	2.33	0.44
5:BG:135:PRO:HA	34:B5:167:U:H4'	1.98	0.44
6:BH:24:PHE:HE1	6:BH:81:LEU:HD13	1.82	0.44
21:BK:32:HIS:CE1	21:BK:35:ILE:HD12	2.52	0.44
22:BP:64:LYS:HE2	22:BP:92:SER:OG	2.17	0.44
22:BP:93:VAL:HG23	22:BP:105:VAL:C	2.42	0.44
28:BZ:52:LYS:HG3	28:BZ:53:GLU:N	2.32	0.44
34:B5:395:U:H3'	34:B5:396:G:C8	2.53	0.44
34:B5:949:C:H2'	34:B5:950:C:H6	1.81	0.44
34:B5:1114:G:O2'	34:B5:1130:G:O6	2.28	0.44
34:B5:1177:C:H4'	34:B5:1189:A:H61	1.83	0.44
34:B5:1282:U:H2'	34:B5:1283:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AA:107:VAL:CG2	35:AA:111:THR:HG21	2.47	0.44
35:AA:229:ALA:HB1	35:AA:233:GLN:HB2	1.98	0.44
36:AB:117:ARG:NH2	38:A1:3313:U:OP1	2.50	0.44
37:AC:39:PHE:O	37:AC:43:ASN:HB2	2.17	0.44
37:AC:120:TYR:CE2	37:AC:277:PRO:HB3	2.53	0.44
37:AC:141:ARG:HH22	38:A1:1386:A:H5''	1.82	0.44
38:A1:436:A:N1	38:A1:624:G:C2	2.85	0.44
38:A1:744:A:P	53:AQ:66:ARG:HH12	2.40	0.44
38:A1:1895:A:O2'	38:A1:3053:G:H4'	2.17	0.44
38:A1:1921:A:H2'	38:A1:1922:A:C8	2.52	0.44
38:A1:2457:G:O2'	38:A1:2481:G:N7	2.49	0.44
38:A1:2478:C:OP2	38:A1:2480:A:N6	2.38	0.44
42:AE:31:ARG:NH1	68:Af:107:ILE:O	2.48	0.44
42:AE:42:LEU:HD23	42:AE:84:VAL:HG12	1.98	0.44
44:AG:101:THR:HB	44:AG:191:ASN:HD22	1.82	0.44
45:AH:75:VAL:O	45:AH:79:ILE:N	2.47	0.44
46:AI:208:LYS:O	46:AI:208:LYS:HD3	2.16	0.44
51:AO:174[A]:PHE:HA	51:AO:177[A]:LYS:HE3	2.00	0.44
80:DC:594:ASP:O	80:DC:598:SER:N	2.41	0.44
2:BB:187:LYS:O	2:BB:190:PRO:HD2	2.17	0.44
3:BC:88:LYS:NZ	34:B5:1302:U:OP2	2.47	0.44
5:BG:78:THR:OG1	5:BG:79:LYS:N	2.51	0.44
7:BI:23:LYS:NZ	34:B5:386:G:H5''	2.33	0.44
8:BJ:39:LYS:O	8:BJ:42:ILE:N	2.50	0.44
13:BW:97:ARG:HD3	13:BW:97:ARG:N	2.32	0.44
21:BK:28:ASN:HD21	30:Bd:8:PHE:HB2	1.83	0.44
25:BS:68:ARG:O	25:BS:71:GLN:HG2	2.18	0.44
26:BT:28:LEU:HD13	26:BT:55:TYR:CE2	2.53	0.44
30:Bd:24:CYS:HB3	30:Bd:42:CYS:HB3	1.42	0.44
33:BM:59:LEU:HG	33:BM:123:VAL:CG2	2.45	0.44
34:B5:28:A:H2'	34:B5:29:U:O4'	2.17	0.44
34:B5:187:G:N2	34:B5:197:A:N7	2.64	0.44
34:B5:492:A:H5''	34:B5:493:U:H4'	1.99	0.44
34:B5:590:C:H2'	34:B5:591:A:C8	2.53	0.44
34:B5:870:C:H2'	34:B5:871:G:H8	1.81	0.44
34:B5:889:U:H2'	34:B5:890:C:H6	1.82	0.44
34:B5:1147:A:H2'	34:B5:1148:C:C6	2.52	0.44
34:B5:1173:C:H2'	34:B5:1174:C:C6	2.51	0.44
34:B5:1292:G:H2'	34:B5:1293:U:C6	2.52	0.44
34:B5:1501:C:C2	34:B5:1507:G:C2	3.06	0.44
34:B5:1693:A:O2'	34:B5:1695:G:O4'	2.25	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AA:112:ILE:HG12	35:AA:133:TYR:CD1	2.52	0.44
38:A1:107:A:O2'	38:A1:324:A:N3	2.40	0.44
38:A1:214:G:O6	38:A1:227:G:N2	2.51	0.44
38:A1:238:A:H2'	38:A1:239:G:C8	2.52	0.44
38:A1:1150:A:O3'	68:Af:21:ARG:NH2	2.50	0.44
38:A1:1381:A:H2'	38:A1:1382:G:C8	2.51	0.44
38:A1:2985:C:H2'	38:A1:2986:U:C6	2.52	0.44
38:A1:3034:C:H6	45:AH:122:LYS:NZ	2.16	0.44
38:A1:3383:G:H21	66:Ad:105:GLN:CG	2.31	0.44
39:A3:87:G:H1'	55:AS:119:ARG:NH2	2.32	0.44
40:A4:43:A:H2'	40:A4:44:A:C8	2.52	0.44
40:A4:115:C:H2'	40:A4:116:G:O4'	2.18	0.44
42:AE:51:ARG:NE	42:AE:163:PHE:HB2	2.33	0.44
42:AE:84:VAL:O	68:Af:105:SER:OG	2.32	0.44
43:AF:62:ILE:O	43:AF:66:LYS:HG2	2.17	0.44
43:AF:156:ILE:HD12	43:AF:161:VAL:HG21	1.99	0.44
46:AI:36:LEU:HD23	46:AI:73:ASN:ND2	2.30	0.44
54:AR:37:SER:O	54:AR:41:ILE:HG12	2.18	0.44
54:AR:92:GLN:O	54:AR:96:ILE:HG12	2.17	0.44
79:E:125:GLY:N	79:E:126:PRO:HD2	2.31	0.44
80:DC:278:LEU:HA	80:DC:281:ILE:HG22	1.99	0.44
3:BC:169:LEU:HD12	3:BC:196:VAL:HG21	1.99	0.44
4:BE:141:THR:HG1	4:BE:142:HIS:H	1.65	0.44
8:BJ:120:LYS:HD3	34:B5:479:C:H4'	2.00	0.44
10:BN:64:ARG:NH1	10:BN:68:GLY:O	2.50	0.44
11:BO:27:PHE:HZ	34:B5:900:A:H4'	1.83	0.44
11:BO:70:LYS:HE2	11:BO:70:LYS:HB2	1.87	0.44
15:BY:58:PHE:CE1	15:BY:74:LEU:HD23	2.52	0.44
19:BD:65:ARG:HA	19:BD:68:GLU:OE2	2.18	0.44
20:BF:37:GLN:NE2	23:BQ:56:GLY:HA2	2.33	0.44
25:BS:88:ARG:NH2	25:BS:99:HIS:O	2.50	0.44
31:Bg:84:SER:O	31:Bg:110:VAL:HG22	2.18	0.44
31:Bg:112:SER:C	31:Bg:125:GLY:H	2.25	0.44
34:B5:424:C:O2'	34:B5:426:G:OP1	2.19	0.44
34:B5:579:A:O2'	34:B5:580:A:H5''	2.16	0.44
34:B5:622:A:H4'	34:B5:623:A:H5''	1.98	0.44
34:B5:1368:G:N2	34:B5:1372:U:C2	2.85	0.44
34:B5:1559:A:H5'	34:B5:1560:U:H5''	1.98	0.44
34:B5:1654:G:C6	34:B5:1745:G:C6	3.05	0.44
34:B5:1674:C:H2'	34:B5:1675:C:C6	2.52	0.44
34:B5:1727:G:H2'	34:B5:1728:A:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AA:111:THR:HG22	35:AA:136:ILE:CG2	2.48	0.44
36:AB:58:ARG:HE	36:AB:74:GLU:CD	2.26	0.44
36:AB:226:PHE:HD2	38:A1:1887:A:H1'	1.82	0.44
38:A1:171:G:O2'	38:A1:172:G:O5'	2.30	0.44
38:A1:172:G:O2'	38:A1:173:G:N2	2.50	0.44
38:A1:426:G:H2'	38:A1:427:C:C6	2.53	0.44
38:A1:525:C:H5''	49:AM:79:ALA:HB2	1.99	0.44
38:A1:615:U:H2'	38:A1:616:G:H8	1.83	0.44
38:A1:712:G:H5'	48:AL:174:ARG:HH11	1.82	0.44
38:A1:726:G:N2	38:A1:743:C:OP2	2.47	0.44
38:A1:992:A:H5''	56:AT:43:LYS:HG3	2.00	0.44
38:A1:1270:A:N1	80:DC:737:GLU:HB3	2.31	0.44
38:A1:1473:G:H2'	38:A1:1474:A:H8	1.83	0.44
38:A1:1524:A:O2'	38:A1:1526:U:OP2	2.25	0.44
38:A1:1814:A:H4'	38:A1:1817:G:H5'	1.99	0.44
38:A1:2738:A:H2'	38:A1:2739:A:C8	2.52	0.44
38:A1:2918:G:H2'	38:A1:2919:A:H8	1.82	0.44
38:A1:2985:C:H2'	38:A1:2986:U:H6	1.83	0.44
38:A1:2998:U:H2'	38:A1:2999:U:C6	2.52	0.44
39:A3:26:C:H2'	39:A3:27:A:O4'	2.17	0.44
44:AG:97:TYR:OH	44:AG:204:ARG:N	2.41	0.44
47:AJ:80:LEU:HG	47:AJ:84:LEU:HD23	1.99	0.44
50:AN:88:GLY:HA3	77:Ao:50:PHE:CE2	2.53	0.44
54:AR:24:LEU:HD13	54:AR:50:ILE:HG12	2.00	0.44
55:AS:14:LEU:HD23	55:AS:55:SER:C	2.42	0.44
78:Ap:17:ARG:HB2	78:Ap:18:TYR:CD1	2.52	0.44
80:DC:8:GLN:O	80:DC:11:SER:OG	2.32	0.44
80:DC:32:LYS:NZ	83:DC:901:GDP:O3B	2.32	0.44
80:DC:753:GLN:HG2	80:DC:771:TYR:HB2	1.99	0.44
9:BL:33:ARG:HH12	9:BL:54:ILE:HD13	1.83	0.44
10:BN:38:VAL:O	10:BN:42:ARG:HG2	2.17	0.44
20:BF:96:SER:HB2	20:BF:176:THR:HG21	1.98	0.44
25:BS:41:ARG:HD3	34:B5:1565:C:OP1	2.17	0.44
32:Bf:80:ARG:HH22	34:B5:1270:G:H1'	1.83	0.44
34:B5:103:A:H4'	34:B5:105:A:C8	2.53	0.44
34:B5:153:G:C6	34:B5:162:A:C6	3.06	0.44
34:B5:253:A:H2'	34:B5:254:A:O4'	2.17	0.44
34:B5:961:U:H2'	34:B5:962:C:C5	2.53	0.44
34:B5:1351:G:H2'	34:B5:1352:G:C8	2.52	0.44
34:B5:1458:G:HO2'	34:B5:1459:C:P	2.36	0.44
34:B5:1634:C:H4'	34:B5:1635:A:O5'	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1783:C:H2'	34:B5:1784:C:C6	2.52	0.44
38:A1:117:U:O2'	38:A1:119:U:OP2	2.22	0.44
38:A1:168:U:H2'	38:A1:169:U:C6	2.52	0.44
38:A1:657:A:H2'	38:A1:658:G:H8	1.83	0.44
38:A1:1247:U:N3	38:A1:1267:U:H5''	2.33	0.44
38:A1:1630:U:H5''	62:AZ:67:LYS:NZ	2.33	0.44
38:A1:1703:U:H2'	38:A1:1704:A:H5''	1.99	0.44
38:A1:1836:C:O2'	38:A1:1842:A:N1	2.43	0.44
38:A1:2148:U:H2'	38:A1:2149:A:C8	2.53	0.44
38:A1:3005:A:N1	38:A1:3140:G:O2'	2.36	0.44
38:A1:3050:U:H2'	38:A1:3051:U:C6	2.52	0.44
38:A1:3191:G:H2'	38:A1:3192:U:H6	1.82	0.44
38:A1:3282:U:H2'	38:A1:3283:U:C6	2.52	0.44
39:A3:7:G:C8	41:AD:22:ARG:HD2	2.53	0.44
41:AD:32:GLN:HG3	41:AD:33:ARG:N	2.31	0.44
41:AD:63:GLN:OE1	41:AD:65:ILE:HD11	2.17	0.44
41:AD:203:HIS:CE1	41:AD:204:VAL:HG23	2.52	0.44
45:AH:113:GLU:HG2	45:AH:125:ASN:HB3	2.00	0.44
46:AI:200:LEU:HD13	46:AI:213:PHE:CD2	2.53	0.44
47:AJ:32:ARG:H	47:AJ:32:ARG:HG2	1.59	0.44
51:AO:40[A]:GLU:HG3	51:AO:40[A]:GLU:O	2.18	0.44
52:AP:16:SER:HB3	52:AP:149:VAL:HG12	1.99	0.44
55:AS:6:GLU:OE2	55:AS:64:ILE:HD12	2.17	0.44
72:Aj:43:LYS:HA	72:Aj:43:LYS:HD3	1.82	0.44
79:E:56:PRO:HD2	79:E:182:GLN:NE2	2.32	0.44
79:E:144:LEU:O	79:E:148:VAL:HG13	2.16	0.44
80:DC:413:ILE:HG12	80:DC:469:LEU:HD11	1.98	0.44
1:BA:174:TRP:CZ3	1:BA:177:LEU:HD23	2.52	0.44
2:BB:102:GLY:HA2	2:BB:215:VAL:HG23	1.99	0.44
5:BG:176:GLN:O	5:BG:177:ARG:HG2	2.17	0.44
9:BL:133:LYS:HG3	9:BL:134:THR:N	2.33	0.44
14:BX:38:PHE:HE1	14:BX:45:GLY:HA3	1.83	0.44
16:Ba:10:ARG:HD3	16:Ba:12:LYS:HB3	1.99	0.44
16:Ba:87:ARG:NH2	16:Ba:94:ASN:O	2.49	0.44
18:Be:26:LYS:HD3	18:Be:27:PRO:O	2.17	0.44
20:BF:77:TYR:CD1	20:BF:83:ARG:HG2	2.52	0.44
21:BK:40:LEU:O	21:BK:44:LYS:HG2	2.18	0.44
28:BZ:73:GLY:HA2	28:BZ:76:ALA:HB3	1.99	0.44
28:BZ:77:ARG:O	28:BZ:80:LEU:HG	2.18	0.44
29:Bc:65:ARG:O	29:Bc:65:ARG:HG3	2.17	0.44
33:BM:135:MET:SD	33:BM:139:HIS:NE2	2.90	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:212:U:H2'	34:B5:213:A:O4'	2.18	0.44
34:B5:408:C:H2'	34:B5:409:C:C6	2.53	0.44
34:B5:535:A:H2'	34:B5:536:C:C6	2.51	0.44
34:B5:1340:U:O5'	34:B5:1341:A:H5''	2.18	0.44
34:B5:1681:A:H2'	34:B5:1682:U:O4'	2.18	0.44
36:AB:256:HIS:ND1	38:A1:2941:A:OP2	2.46	0.44
38:A1:347:G:N7	72:Aj:55:ARG:NH1	2.65	0.44
38:A1:498:A:OP1	68:Af:86:ARG:HD3	2.17	0.44
38:A1:728:G:H5''	53:AQ:43:PRO:HB2	1.99	0.44
38:A1:1081:U:H5''	38:A1:1082:U:H5	1.83	0.44
38:A1:1613:A:H2'	38:A1:1614:C:H6	1.83	0.44
38:A1:2700:G:H5''	56:AT:17:ARG:HG2	1.99	0.44
38:A1:2978:U:O2'	38:A1:2979:U:H5'	2.18	0.44
40:A4:43:A:H2'	40:A4:44:A:H8	1.83	0.44
42:AE:28:GLN:OE1	42:AE:57:HIS:NE2	2.41	0.44
46:AI:39:LYS:O	46:AI:40:LYS:HE2	2.18	0.44
47:AJ:55:ARG:HH22	81:EC:6933:G:H1'	1.80	0.44
50:AN:65:ARG:HB2	50:AN:129:TYR:CE1	2.53	0.44
55:AS:94:ILE:CD1	55:AS:106:LEU:HB2	2.47	0.44
55:AS:99:ARG:NH2	55:AS:128:GLU:HG3	2.33	0.44
80:DC:25:ILE:HD11	80:DC:127:VAL:HG22	2.00	0.44
80:DC:116:THR:HA	80:DC:119:LEU:HG	2.00	0.44
80:DC:538:LEU:HG	80:DC:542:LEU:HD12	1.98	0.44
81:EC:6907:G:H2'	81:EC:6908:C:C6	2.53	0.44
1:BA:167:LYS:NZ	1:BA:204:TYR:HB3	2.32	0.44
2:BB:177:GLN:OE1	2:BB:177:GLN:HA	2.17	0.44
5:BG:43:ASP:O	5:BG:46:LYS:NZ	2.34	0.44
7:BI:137:LYS:NZ	34:B5:197:A:N1	2.65	0.44
10:BN:139:TRP:HZ2	10:BN:149:LEU:HD13	1.81	0.44
11:BO:14:PHE:HD1	11:BO:78:ALA:HB3	1.81	0.44
11:BO:41:ARG:HD2	34:B5:917:U:H1'	1.99	0.44
19:BD:39:VAL:HA	19:BD:48:VAL:HG13	2.00	0.44
19:BD:127:MET:HE1	19:BD:133:GLY:HA2	2.00	0.44
21:BK:16:PHE:HD1	21:BK:76:LEU:HD23	1.83	0.44
23:BQ:66:ARG:HD3	34:B5:1365:C:OP1	2.18	0.44
25:BS:115:ARG:HA	25:BS:118:LYS:HD2	1.99	0.44
30:Bd:31:ILE:HG13	30:Bd:32:ARG:N	2.33	0.44
31:Bg:93:ASP:N	31:Bg:97:GLY:O	2.51	0.44
33:BM:60:VAL:O	33:BM:62:LEU:HG	2.18	0.44
34:B5:97:C:O2	34:B5:425:A:O2'	2.36	0.44
34:B5:625:C:H2'	34:B5:626:U:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:743:U:H2'	34:B5:744:U:O4'	2.18	0.44
34:B5:1319:A:N6	34:B5:1320:U:O2	2.51	0.44
34:B5:1369:U:H1'	34:B5:1372:U:C2	2.53	0.44
37:AC:26:PHE:CD1	37:AC:130:ALA:HB2	2.52	0.44
38:A1:62:A:H5''	50:AN:164:LEU:HD11	1.99	0.44
38:A1:359:U:H4'	38:A1:817:A:N6	2.32	0.44
38:A1:1057:A:H5''	43:AF:98:LYS:HE3	2.00	0.44
38:A1:2100:A:H2'	38:A1:2101:C:C6	2.53	0.44
38:A1:2476:C:H2'	38:A1:2477:G:C8	2.53	0.44
38:A1:2565:U:H2'	38:A1:2566:C:H6	1.83	0.44
38:A1:2651:G:H5''	38:A1:2652:U:O4'	2.17	0.44
38:A1:2890:A:H2'	38:A1:2891:U:C6	2.53	0.44
38:A1:3092:C:H2'	58:AV:12:ARG:NH2	2.33	0.44
38:A1:3164:C:H2'	38:A1:3165:A:H8	1.83	0.44
46:AI:53:VAL:HG22	46:AI:134:ILE:HG13	2.00	0.44
52:AP:178:ALA:O	52:AP:182:ILE:HG12	2.18	0.44
61:AY:51:ARG:HB2	61:AY:115:ARG:NH1	2.32	0.44
62:AZ:14:VAL:HG12	69:Ag:89:ILE:HG21	2.00	0.44
69:Ag:86:LYS:O	69:Ag:90:ILE:HG12	2.18	0.44
73:Ak:31:LEU:HA	73:Ak:37:PRO:HA	2.00	0.44
80:DC:159:LYS:HE2	83:DC:901:GDP:N9	2.33	0.44
80:DC:491:VAL:HG11	80:DC:538:LEU:HD11	2.00	0.44
81:EC:6782:C:C2	81:EC:6783:U:H1'	2.53	0.44
81:EC:6789:G:O2'	81:EC:6790:A:O5'	2.32	0.44
81:EC:6889:A:H4'	81:EC:6890:A:OP1	2.16	0.44
1:BA:76:ILE:O	1:BA:124:THR:HG23	2.17	0.44
2:BB:58:SER:O	2:BB:62:LYS:HG2	2.18	0.44
4:BE:198:LYS:HA	4:BE:208:VAL:HG13	1.99	0.44
6:BH:27:LEU:HD11	6:BH:38:LEU:HD22	1.99	0.44
8:BJ:93:LEU:H	8:BJ:93:LEU:HD12	1.81	0.44
11:BO:68:ALA:HB2	11:BO:110:LEU:HD11	2.00	0.44
19:BD:77:PHE:C	19:BD:78:LYS:HG2	2.43	0.44
19:BD:209:ILE:O	24:BR:19:ARG:NH2	2.45	0.44
20:BF:149:VAL:HG22	29:Bc:65:ARG:HH22	1.83	0.44
20:BF:223:SER:HB2	81:EC:6840:A:C6	2.53	0.44
34:B5:957:G:C5	34:B5:958:U:C4	3.06	0.44
34:B5:1039:A:HO2'	34:B5:1040:G:H8	1.66	0.44
34:B5:1198:G:OP1	34:B5:1199:G:O2'	2.23	0.44
34:B5:1516:A:O2'	34:B5:1517:U:H5'	2.18	0.44
34:B5:1627:U:H2'	34:B5:1628:U:O4'	2.18	0.44
34:B5:1669:U:H2'	34:B5:1670:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:38:VAL:HG11	37:AC:121:ALA:HB2	1.98	0.44
37:AC:362:ASP:O	55:AS:28:ARG:NH2	2.51	0.44
38:A1:696:C:H2'	38:A1:697:A:C8	2.53	0.44
38:A1:842:G:H2'	38:A1:843:A:C8	2.53	0.44
38:A1:1011:A:H2'	38:A1:1012:G:H8	1.83	0.44
38:A1:1120:A:H2'	38:A1:1121:U:C6	2.52	0.44
38:A1:1314:C:H5'	51:AO:17[A]:GLY:HA3	1.99	0.44
38:A1:1493:G:O6	74:A1:2:ALA:N	2.51	0.44
38:A1:1831:U:H2'	38:A1:1832:C:C6	2.53	0.44
38:A1:2549:G:OP1	38:A1:2549:G:N2	2.51	0.44
38:A1:2828:G:H1	38:A1:2863:G:H1'	1.83	0.44
39:A3:100:C:H2'	39:A3:101:G:O4'	2.18	0.44
41:AD:17:GLN:NE2	56:AT:22:HIS:O	2.48	0.44
46:AI:61:SER:O	46:AI:65:LEU:HD12	2.17	0.44
58:AV:93:LEU:HB3	59:AW:20:LEU:HB3	2.00	0.44
69:Ag:74:ARG:NH2	69:Ag:82:ALA:HB2	2.33	0.44
80:DC:127:VAL:HG21	80:DC:143:LEU:HD12	1.99	0.44
80:DC:296:ILE:O	80:DC:300:LEU:HG	2.17	0.44
80:DC:342:LEU:HD23	80:DC:342:LEU:HA	1.78	0.44
4:BE:201:HIS:CE1	4:BE:207:LEU:HD12	2.53	0.44
6:BH:135:ILE:HG23	6:BH:153:LEU:O	2.18	0.44
8:BJ:89:ASP:CG	8:BJ:90:LYS:N	2.76	0.44
10:BN:114:ARG:O	10:BN:118:ILE:HD12	2.18	0.44
12:BV:58:TYR:O	12:BV:62:ARG:HG2	2.18	0.44
13:BW:60:LYS:HD2	17:Bb:24:LEU:HD12	2.00	0.44
14:BX:90:ASP:OD2	18:Be:15:LYS:HB2	2.18	0.44
19:BD:39:VAL:HA	19:BD:48:VAL:HG22	2.00	0.44
22:BP:77:ARG:HA	22:BP:95:GLY:O	2.17	0.44
26:BT:6:VAL:O	26:BT:6:VAL:HG13	2.18	0.44
31:Bg:275:ARG:NH2	31:Bg:276:PRO:HD2	2.33	0.44
31:Bg:302:PHE:CE2	31:Bg:310:ILE:HG12	2.53	0.44
33:BM:30:VAL:HA	33:BM:33:ARG:HH11	1.82	0.44
34:B5:175:G:H22	34:B5:266:A:C5'	2.31	0.44
34:B5:949:C:H2'	34:B5:950:C:C6	2.53	0.44
34:B5:1202:A:H1'	34:B5:1207:C:N4	2.33	0.44
34:B5:1275:A:N1	34:B5:1438:G:C5	2.86	0.44
34:B5:1369:U:H1'	34:B5:1372:U:O2	2.17	0.44
34:B5:1656:U:H5''	34:B5:1657:U:H5''	1.98	0.44
37:AC:221:ASN:O	38:A1:212:G:O2'	2.25	0.44
38:A1:1147:G:OP1	67:Ae:47:ARG:NH1	2.51	0.44
38:A1:1184:A:H2'	38:A1:1185:C:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1677:G:OP2	57:AU:103:TYR:OH	2.33	0.44
38:A1:2460:U:O2'	38:A1:2461:A:H5'	2.17	0.44
38:A1:2918:G:C2	38:A1:2919:A:N7	2.86	0.44
41:AD:295:GLY:C	41:AD:297:GLN:HE21	2.25	0.44
47:AJ:28:ASP:OD1	47:AJ:31:THR:OG1	2.36	0.44
47:AJ:81:GLU:HA	47:AJ:167:TYR:CE1	2.51	0.44
70:Ah:15:GLU:H	70:Ah:15:GLU:CD	2.26	0.44
80:DC:311:GLU:OE1	80:DC:311:GLU:N	2.44	0.44
80:DC:447:ASP:OD1	80:DC:448:CYS:N	2.50	0.44
1:BA:206:ASP:HA	1:BA:207:PRO:HA	1.83	0.43
4:BE:86:PHE:HE1	4:BE:102:VAL:HG23	1.82	0.43
4:BE:241:GLY:O	4:BE:244:ILE:HG12	2.18	0.43
5:BG:137:ARG:HE	34:B5:168:A:P	2.41	0.43
5:BG:157:VAL:HG11	34:B5:78:A:H4'	2.00	0.43
6:BH:24:PHE:CE1	6:BH:81:LEU:HD13	2.52	0.43
8:BJ:32:GLY:HA3	18:Be:40:TYR:CD1	2.53	0.43
10:BN:20:ARG:NH1	34:B5:862:A:OP1	2.50	0.43
15:BY:27:VAL:HG21	15:BY:35:VAL:HG11	1.99	0.43
22:BP:79:HIS:CB	34:B5:1241:G:H1'	2.43	0.43
22:BP:118:GLU:OE2	34:B5:1557:U:O2'	2.32	0.43
25:BS:113:LEU:HD23	25:BS:113:LEU:HA	1.89	0.43
25:BS:132:ARG:NH1	34:B5:1545:A:OP1	2.50	0.43
28:BZ:42:LEU:HG	28:BZ:47:TYR:CA	2.48	0.43
29:Bc:14:LYS:O	29:Bc:29:ARG:N	2.47	0.43
32:Bf:121:CYS:HB3	32:Bf:126:CYS:HB2	1.84	0.43
34:B5:118:U:HO2'	34:B5:119:A:H8	1.65	0.43
34:B5:204:G:N1	34:B5:264:G:C2	2.86	0.43
34:B5:215:A:H1'	34:B5:242:U:N3	2.33	0.43
34:B5:222:A:C2	34:B5:837:G:H3'	2.53	0.43
34:B5:477:A:H2'	34:B5:478:A:N3	2.33	0.43
34:B5:751:G:C2	34:B5:752:A:C5	3.06	0.43
34:B5:854:U:H5'	34:B5:855:A:P	2.58	0.43
34:B5:1374:C:N4	34:B5:1375:A:N6	2.66	0.43
34:B5:1550:A:H5''	34:B5:1551:U:C5	2.52	0.43
38:A1:594:U:H2'	38:A1:609:G:O6	2.17	0.43
38:A1:649:A:H2'	38:A1:650:C:C6	2.53	0.43
38:A1:744:A:H2'	38:A1:745:C:O4'	2.18	0.43
38:A1:750:G:C4	38:A1:751:A:C8	3.05	0.43
38:A1:853:G:N7	78:Ap:2:ALA:HB2	2.33	0.43
38:A1:1174:G:H2'	38:A1:1175:C:H6	1.81	0.43
38:A1:1224:C:C2	38:A1:1225:A:N7	2.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1307:G:H1'	38:A1:1308:A:C8	2.53	0.43
38:A1:1499:C:H2'	38:A1:1500:G:C8	2.53	0.43
38:A1:1576:G:H5''	38:A1:1577:G:H5'	2.00	0.43
38:A1:1718:G:H4'	54:AR:117:LYS:HD2	1.99	0.43
38:A1:2133:PSU:O2	38:A1:2147:A:H2	2.01	0.43
38:A1:2504:U:O2'	38:A1:2505:U:H6	2.00	0.43
38:A1:2565:U:H2'	38:A1:2566:C:C6	2.53	0.43
38:A1:3159:C:H2'	38:A1:3160:U:C6	2.53	0.43
39:A3:52:G:O2'	39:A3:53:U:H5'	2.18	0.43
41:AD:111:GLN:HA	41:AD:116:ASP:HB2	1.99	0.43
48:AL:165:SER:O	48:AL:168:ARG:N	2.50	0.43
55:AS:6:GLU:OE2	55:AS:6:GLU:C	2.60	0.43
68:Af:30:ILE:HD12	68:Af:83:ALA:HB3	2.00	0.43
80:DC:73:THR:O	80:DC:103:ILE:HG23	2.17	0.43
80:DC:675:PRO:HB3	80:DC:714:TYR:CG	2.52	0.43
80:DC:747:LEU:HD12	80:DC:748:ASN:N	2.33	0.43
1:BA:50:VAL:HA	1:BA:53:THR:HG22	1.99	0.43
4:BE:33:ALA:HB1	34:B5:297:U:H6	1.83	0.43
4:BE:57:ASN:HB3	4:BE:60:GLU:OE1	2.18	0.43
5:BG:108:VAL:HG21	34:B5:154:G:H5'	2.00	0.43
9:BL:85:VAL:HA	9:BL:108:PRO:HA	2.01	0.43
10:BN:55:ARG:NH1	34:B5:960:U:H5'	2.33	0.43
19:BD:18:TYR:HE2	30:Bd:49:ASP:HB3	1.83	0.43
20:BF:176:THR:O	20:BF:180:ARG:HG3	2.18	0.43
20:BF:189:THR:HG1	28:BZ:63:SER:HG	1.61	0.43
21:BK:32:HIS:ND1	21:BK:35:ILE:HB	2.33	0.43
25:BS:137:HIS:CD2	34:B5:1457:C:H4'	2.53	0.43
27:BU:54:GLY:C	27:BU:91:ILE:HG23	2.43	0.43
28:BZ:48:ASP:O	28:BZ:52:LYS:N	2.51	0.43
31:Bg:7:LEU:HD21	31:Bg:313:TRP:CD1	2.53	0.43
34:B5:67:A:C6	34:B5:84:A:C8	3.06	0.43
34:B5:138:A:H62	34:B5:266:A:N6	2.07	0.43
34:B5:254:A:H3'	34:B5:255:U:C6	2.53	0.43
34:B5:499:U:O2'	34:B5:501:U:O4	2.36	0.43
34:B5:812:A:H62	34:B5:858:G:H2'	1.82	0.43
34:B5:965:U:O2	34:B5:965:U:H2'	2.18	0.43
34:B5:1277:G:H2'	34:B5:1278:G:O4'	2.18	0.43
34:B5:1479:A:O2'	34:B5:1480:G:H5'	2.18	0.43
35:AA:234:LYS:HD2	38:A1:2163:C:P	2.57	0.43
36:AB:262:TRP:HE1	51:AO:66[A]:LYS:NZ	2.15	0.43
38:A1:533:A:O2'	38:A1:535:G:O5'	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:754:G:H2'	38:A1:755:A:H8	1.82	0.43
38:A1:876:A:H5''	38:A1:1890:U:H5''	2.00	0.43
38:A1:1023:C:O2'	38:A1:1030:A:N7	2.50	0.43
38:A1:1055:A:H5''	39:A3:100:C:O2'	2.18	0.43
38:A1:1321:G:O2'	55:AS:111:ALA:HB1	2.18	0.43
38:A1:1604:G:H4'	38:A1:1835:A:H4'	2.00	0.43
38:A1:2506:U:H2'	38:A1:2507:C:C6	2.53	0.43
38:A1:2656:A:C5	38:A1:2658:G:C8	3.06	0.43
38:A1:2947:G:OP2	38:A1:2947:G:H4'	2.18	0.43
38:A1:3337:G:H2'	38:A1:3338:C:C6	2.53	0.43
40:A4:112:U:P	74:A1:8:ARG:HH21	2.40	0.43
43:AF:178:ILE:HG23	43:AF:183:ASP:HB3	2.00	0.43
44:AG:161:GLU:HG2	50:AN:7:LEU:HD11	2.00	0.43
46:AI:55:ASN:HB2	46:AI:164:LYS:HD3	2.00	0.43
50:AN:53:TYR:HB2	50:AN:133:ILE:HG21	1.99	0.43
65:Ac:15:ALA:O	65:Ac:18:ILE:HG22	2.18	0.43
67:Ae:72:LYS:HD2	67:Ae:92:TYR:CE2	2.52	0.43
79:E:61:PRO:O	79:E:152:ARG:NH1	2.51	0.43
81:EC:6800:G:H5''	81:EC:6802:A:N6	2.33	0.43
4:BE:141:THR:HG21	4:BE:145:ARG:HB2	2.00	0.43
5:BG:38:GLY:O	5:BG:45:PHE:HB2	2.19	0.43
8:BJ:118:LEU:HB3	8:BJ:158:PHE:CE1	2.53	0.43
11:BO:82:LYS:HD3	11:BO:82:LYS:HA	1.82	0.43
23:BQ:13:LYS:HG3	23:BQ:14:LYS:HG3	1.99	0.43
23:BQ:31:VAL:HG22	23:BQ:32:ASN:OD1	2.18	0.43
23:BQ:123:ARG:HB3	23:BQ:124:PRO:HD2	2.00	0.43
26:BT:131:ASP:HA	26:BT:134:ARG:NH1	2.33	0.43
28:BZ:89:ILE:HG13	28:BZ:89:ILE:O	2.19	0.43
34:B5:158:U:C2	34:B5:421:A:H5''	2.53	0.43
34:B5:299:A:H2'	34:B5:300:A:H8	1.83	0.43
34:B5:351:C:H3'	34:B5:352:A:H5'	1.99	0.43
34:B5:477:A:N6	34:B5:541:A:O4'	2.51	0.43
34:B5:1168:U:H2'	34:B5:1169:G:C8	2.52	0.43
34:B5:1608:U:C2	34:B5:1609:U:C5	3.06	0.43
34:B5:1758:U:H2'	34:B5:1759:C:H6	1.82	0.43
35:AA:112:ILE:HG12	35:AA:133:TYR:CE1	2.53	0.43
36:AB:5:LYS:O	36:AB:6:TYR:HD1	2.01	0.43
36:AB:73:VAL:HG11	58:AV:90:GLY:HA3	1.99	0.43
36:AB:95:THR:HB	36:AB:98:GLY:O	2.18	0.43
37:AC:116:ASN:ND2	38:A1:675:C:H5'	2.33	0.43
37:AC:217:LYS:NZ	38:A1:210:U:O2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:275:U:H2'	38:A1:276:U:H6	1.83	0.43
38:A1:1005:G:H2'	38:A1:1006:A:O4'	2.17	0.43
38:A1:1643:A:H2'	38:A1:1644:C:C2	2.53	0.43
38:A1:1784:G:H2'	38:A1:1785:U:O4'	2.19	0.43
38:A1:2153:U:H2'	38:A1:2154:U:C6	2.54	0.43
38:A1:2190:U:H2'	38:A1:2191:PSU:C6	2.53	0.43
38:A1:2465:G:N2	38:A1:2491:A:N1	2.66	0.43
41:AD:106:ALA:O	41:AD:110:LEU:HD23	2.19	0.43
45:AH:126:VAL:HG22	45:AH:164:ILE:HG13	2.00	0.43
47:AJ:26:SER:OG	47:AJ:63:GLU:O	2.35	0.43
52:AP:41:LEU:HG	52:AP:45:GLN:HE21	1.83	0.43
58:AV:54:LEU:HD13	58:AV:85:TRP:CH2	2.53	0.43
67:Ae:76:VAL:HG21	67:Ae:82:LEU:HB2	2.00	0.43
79:E:121:PRO:O	81:EC:6772:G:H4'	2.18	0.43
80:DC:163:ALA:HB3	80:DC:167:LEU:CB	2.47	0.43
80:DC:489:VAL:HG11	80:DC:534:GLY:O	2.18	0.43
80:DC:565:GLU:OE1	80:DC:674:GLY:HA3	2.18	0.43
80:DC:647:ILE:HG13	80:DC:685:ARG:CZ	2.48	0.43
2:BB:70:LEU:HD22	2:BB:84:ILE:HD11	2.00	0.43
3:BC:55:GLU:CD	3:BC:239:PRO:HG2	2.44	0.43
7:BI:168:CYS:N	7:BI:182:TYR:O	2.49	0.43
8:BJ:18:PRO:HB2	8:BJ:19:TYR:CE1	2.53	0.43
10:BN:54:LEU:HB3	10:BN:60:VAL:HB	2.00	0.43
17:Bb:46:VAL:HG22	17:Bb:54:VAL:HG11	1.99	0.43
19:BD:76:ARG:HH12	21:BK:24:LYS:HZ1	1.67	0.43
19:BD:218:LEU:HD23	19:BD:218:LEU:H	1.82	0.43
26:BT:48:GLN:NE2	34:B5:1532:U:H1'	2.25	0.43
34:B5:16:G:H1'	34:B5:1138:A:H61	1.83	0.43
34:B5:518:A:H2'	34:B5:519:C:H5''	1.99	0.43
34:B5:1273:G:N7	34:B5:1430:U:H3'	2.33	0.43
34:B5:1278:G:H2'	34:B5:1279:C:H6	1.83	0.43
34:B5:1546:G:H2'	34:B5:1547:A:C8	2.53	0.43
34:B5:1629:G:H2'	34:B5:1630:U:C6	2.54	0.43
34:B5:1758:U:H2'	34:B5:1759:C:C6	2.52	0.43
36:AB:128:LYS:HZ1	38:A1:3293:U:H5''	1.84	0.43
38:A1:32:U:H2'	38:A1:33:G:O4'	2.18	0.43
38:A1:82:C:H4'	50:AN:204:LYS:HE3	2.01	0.43
38:A1:141:C:H2'	38:A1:142:C:C6	2.53	0.43
38:A1:533:A:O2'	38:A1:534:U:H3'	2.18	0.43
38:A1:571:U:H2'	38:A1:572:A:C8	2.47	0.43
38:A1:897:U:H2'	38:A1:898:U:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:954:U:O2'	38:A1:955:U:H5'	2.18	0.43
38:A1:966:PSU:H2'	38:A1:967:A:C8	2.52	0.43
38:A1:978:G:N2	38:A1:979:U:O4	2.38	0.43
38:A1:1180:A:O2'	38:A1:1182:A:H5''	2.18	0.43
38:A1:1700:G:H2'	38:A1:1701:C:C6	2.53	0.43
38:A1:2544:U:H3'	38:A1:2545:C:H6	1.83	0.43
38:A1:2585:G:H2'	38:A1:2585:G:N3	2.33	0.43
38:A1:2775:U:H2'	38:A1:2776:C:H6	1.83	0.43
40:A4:59:A:H1'	60:AX:61:LYS:HE2	2.01	0.43
40:A4:123:G:H2'	40:A4:124:G:H8	1.82	0.43
43:AF:85:PHE:CZ	43:AF:147:LEU:HD21	2.53	0.43
69:Ag:97:GLU:HA	69:Ag:100:ILE:HG22	2.00	0.43
80:DC:146:ALA:HB1	80:DC:151:ILE:HG21	1.99	0.43
80:DC:569:SER:HB2	80:DC:720:ALA:O	2.18	0.43
81:EC:6876:A:H3'	81:EC:6878:G:H1'	2.00	0.43
3:BC:168:ARG:HD3	3:BC:170:ILE:HD11	2.00	0.43
5:BG:5:ILE:O	5:BG:124:LEU:HD21	2.17	0.43
5:BG:196:ARG:NH2	34:B5:285:G:OP1	2.48	0.43
6:BH:148:LYS:HZ1	6:BH:179:LYS:HE3	1.83	0.43
7:BI:5:ARG:HG2	34:B5:338:C:H1'	2.00	0.43
7:BI:187:GLU:HA	7:BI:190:ALA:HB3	2.00	0.43
9:BL:96:LYS:HD3	9:BL:97:TYR:CE1	2.54	0.43
11:BO:40:ALA:HB2	11:BO:70:LYS:NZ	2.32	0.43
14:BX:25:ALA:HB1	34:B5:1108:G:H2'	1.99	0.43
15:BY:18:LEU:HD23	15:BY:20:ARG:NH1	2.34	0.43
20:BF:76:ARG:CZ	20:BF:79:ASN:HD21	2.31	0.43
23:BQ:6:SER:O	23:BQ:96:TYR:OH	2.37	0.43
24:BR:44:LYS:NZ	34:B5:1386:G:OP2	2.35	0.43
25:BS:89:GLN:HA	25:BS:97:ASP:OD1	2.19	0.43
28:BZ:51:LEU:HD13	28:BZ:83:LEU:HD23	2.00	0.43
30:Bd:36:LEU:O	30:Bd:38:ILE:HG13	2.19	0.43
31:Bg:186:PHE:O	31:Bg:186:PHE:CG	2.71	0.43
33:BM:30:VAL:HG22	33:BM:133:LEU:HD23	2.00	0.43
33:BM:113:ARG:HH21	34:B5:1223:A:H3'	1.84	0.43
34:B5:270:C:H2'	34:B5:271:A:H8	1.83	0.43
34:B5:1116:A:H2'	34:B5:1117:U:O4'	2.19	0.43
38:A1:172:G:C2	38:A1:244:G:C6	3.07	0.43
38:A1:172:G:H1'	38:A1:173:G:H21	1.84	0.43
38:A1:413:U:H2'	38:A1:414:U:C6	2.53	0.43
38:A1:639:G:OP1	67:Ae:37:GLY:HA3	2.19	0.43
38:A1:675:C:H2'	38:A1:676:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1032:C:H2'	38:A1:1033:U:O4'	2.18	0.43
38:A1:1503:A:C4	38:A1:1504:A:C8	3.06	0.43
38:A1:1564:U:H3	38:A1:1575:A:N6	2.17	0.43
38:A1:1575:A:H5'	38:A1:1576:G:OP1	2.18	0.43
38:A1:1781:C:H2'	38:A1:1782:U:C6	2.54	0.43
38:A1:1948:G:C2	38:A1:1949:G:N7	2.86	0.43
38:A1:2104:A:H2'	38:A1:2105:G:C8	2.54	0.43
38:A1:2653:C:OP1	77:Ao:89:LYS:HB2	2.18	0.43
38:A1:3187:A:H5'	45:AH:22:SER:HA	2.00	0.43
41:AD:65:ILE:HG12	41:AD:74:VAL:HG22	2.00	0.43
42:AE:31:ARG:CZ	42:AE:34:LEU:HD11	2.49	0.43
42:AE:45:GLY:O	42:AE:48:ARG:HG3	2.19	0.43
43:AF:26:VAL:O	43:AF:30:ARG:HG2	2.18	0.43
55:AS:25:PHE:HD1	56:AT:149:GLN:HE21	1.67	0.43
61:AY:40:ARG:HE	61:AY:46:LYS:HD3	1.83	0.43
80:DC:536:LEU:HA	80:DC:539:GLU:OE2	2.19	0.43
1:BA:39:ASN:ND2	24:BR:126:ALA:O	2.51	0.43
5:BG:13:GLN:HE21	34:B5:151:G:H1'	1.83	0.43
5:BG:67:VAL:HB	5:BG:99:GLY:HA2	2.01	0.43
5:BG:173:PRO:O	34:B5:78:A:O2'	2.35	0.43
6:BH:47:ARG:HB3	6:BH:59:ALA:HB3	2.00	0.43
9:BL:142:VAL:O	9:BL:142:VAL:HG13	2.18	0.43
14:BX:70:LYS:NZ	18:Be:11:ALA:HB2	2.31	0.43
15:BY:62:THR:HG22	15:BY:63:GLN:H	1.84	0.43
21:BK:63:TYR:OH	30:Bd:22:ARG:NH1	2.51	0.43
22:BP:79:HIS:HB2	22:BP:97:TYR:HB3	2.01	0.43
26:BT:37:VAL:HG22	26:BT:38:LYS:H	1.82	0.43
26:BT:135:ILE:O	26:BT:138:GLN:HG2	2.18	0.43
33:BM:46:ARG:O	33:BM:50:LYS:HG3	2.19	0.43
34:B5:150:U:H2'	34:B5:151:G:O4'	2.18	0.43
34:B5:209:U:C4	34:B5:210:A:N1	2.86	0.43
34:B5:507:U:H2'	34:B5:508:U:C6	2.53	0.43
34:B5:940:A:H2'	34:B5:941:A:H8	1.83	0.43
34:B5:1049:U:H2'	34:B5:1050:G:C8	2.54	0.43
34:B5:1542:G:H1'	34:B5:1544:U:O4	2.19	0.43
34:B5:1597:A:C2	34:B5:1598:U:C2	3.07	0.43
37:AC:342:LYS:HD2	37:AC:342:LYS:HA	1.71	0.43
38:A1:243:G:C6	38:A1:244:G:C8	3.06	0.43
38:A1:289:A:H2'	38:A1:290:G:H8	1.83	0.43
38:A1:308:A:H1'	38:A1:2222:A:N3	2.33	0.43
38:A1:666:A:H2'	38:A1:667:C:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1357:G:H2'	38:A1:1358:C:H6	1.83	0.43
38:A1:1500:G:H2'	38:A1:1501:U:H6	1.83	0.43
38:A1:2563:G:C4	38:A1:2564:G:C8	3.06	0.43
38:A1:3089:C:H2'	38:A1:3090:U:O4'	2.18	0.43
43:AF:137:GLY:HA3	43:AF:236:ILE:HB	2.01	0.43
44:AG:93:LEU:HA	44:AG:96:LYS:HZ2	1.83	0.43
49:AM:68:LEU:HD11	49:AM:94:TRP:HA	1.99	0.43
54:AR:14:VAL:HG11	54:AR:42:ARG:HG2	2.00	0.43
54:AR:140:GLU:HA	54:AR:143:ILE:HG22	1.99	0.43
63:Aa:90:TYR:CG	63:Aa:100:PRO:HG3	2.52	0.43
66:Ad:62:ARG:HB3	66:Ad:66:GLY:O	2.18	0.43
69:Ag:14:ASN:OD1	69:Ag:14:ASN:O	2.36	0.43
70:Ah:17:LEU:O	70:Ah:21:LEU:N	2.50	0.43
70:Ah:78:LYS:HA	70:Ah:81:ARG:HG2	1.99	0.43
73:Ak:20:VAL:HG23	73:Ak:46:ARG:O	2.18	0.43
79:E:54:LYS:HZ3	79:E:150:ASP:HB3	1.83	0.43
79:E:70:ASP:O	79:E:74:VAL:HG23	2.19	0.43
80:DC:206:ARG:HA	80:DC:241:MET:HE1	2.00	0.43
80:DC:410:LYS:NZ	80:DC:411:VAL:O	2.51	0.43
80:DC:784:LEU:H	80:DC:784:LEU:HD23	1.84	0.43
81:EC:6763:C:H2'	81:EC:6764:C:H6	1.84	0.43
2:BB:127:VAL:HG11	2:BB:173:THR:HG22	1.99	0.43
4:BE:19:LEU:HD22	4:BE:51:ARG:NH1	2.34	0.43
5:BG:75:LEU:HD12	5:BG:76:LEU:N	2.30	0.43
8:BJ:163:PRO:HA	8:BJ:168:ARG:HB3	1.99	0.43
11:BO:52:ARG:NE	34:B5:905:A:H5''	2.34	0.43
14:BX:61:SER:OG	14:BX:67:ALA:N	2.51	0.43
19:BD:62:ASN:HD21	19:BD:64:ARG:HD3	1.83	0.43
19:BD:210:GLU:HA	24:BR:19:ARG:HH22	1.84	0.43
21:BK:88:PRO:C	21:BK:90:THR:H	2.27	0.43
22:BP:28:MET:HG2	22:BP:87:PRO:HG2	2.00	0.43
23:BQ:46:PHE:O	23:BQ:50:GLU:HG2	2.18	0.43
24:BR:116:LYS:O	24:BR:117:LEU:HD23	2.19	0.43
33:BM:32:LEU:O	33:BM:36:LEU:HG	2.19	0.43
34:B5:175:G:H2'	34:B5:176:C:N1	2.34	0.43
34:B5:524:U:O2'	34:B5:527:A:N7	2.43	0.43
34:B5:603:U:H2'	34:B5:604:A:C8	2.54	0.43
34:B5:651:G:O2'	34:B5:652:G:H3'	2.19	0.43
34:B5:868:G:C2	34:B5:961:U:O2	2.72	0.43
34:B5:1179:G:H2'	34:B5:1179:G:N3	2.34	0.43
34:B5:1278:G:H2'	34:B5:1279:C:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AA:242:ARG:O	35:AA:242:ARG:HG3	2.19	0.43
37:AC:282:SER:HB3	53:AQ:126:GLN:NE2	2.34	0.43
38:A1:101:G:H2'	38:A1:102:C:O4'	2.19	0.43
38:A1:138:U:H2'	38:A1:139:G:C8	2.49	0.43
38:A1:728:G:H2'	38:A1:729:C:C6	2.54	0.43
38:A1:1566:A:N7	38:A1:1570:U:H1'	2.33	0.43
38:A1:1678:G:OP2	57:AU:77:LYS:NZ	2.36	0.43
38:A1:1838:G:H5''	38:A1:1839:A:O5'	2.19	0.43
38:A1:2161:G:H2'	38:A1:2162:U:C6	2.54	0.43
38:A1:2282:U:O2	38:A1:2310:U:H4'	2.18	0.43
38:A1:2556:C:H2'	38:A1:2557:A:C8	2.54	0.43
38:A1:2667:A:H2'	38:A1:2668:U:O4'	2.18	0.43
38:A1:3015:G:C2	38:A1:3016:A:C5	3.07	0.43
39:A3:56:A:H3'	39:A3:57:G:H8	1.82	0.43
40:A4:28:C:H2'	40:A4:29:U:C6	2.53	0.43
41:AD:236:LEU:HD23	41:AD:239:ILE:HD11	1.99	0.43
47:AJ:92:ARG:HE	47:AJ:94:ARG:HB3	1.84	0.43
51:AO:51[A]:LYS:HD2	51:AO:144[A]:SER:HB3	1.99	0.43
58:AV:24:ASN:ND2	58:AV:97:ASP:OD2	2.52	0.43
62:AZ:121:ARG:HD3	62:AZ:127:ASN:ND2	2.33	0.43
80:DC:13:MET:HE2	80:DC:436:LEU:HD22	2.01	0.43
80:DC:432:GLN:HG3	80:DC:433:ARG:CG	2.47	0.43
80:DC:576:LEU:HA	80:DC:586:ILE:O	2.19	0.43
81:EC:6853:G:O6	81:EC:6876:A:C6	2.71	0.43
1:BA:79:ARG:NH2	1:BA:164:ASN:O	2.38	0.43
2:BB:40:ASN:OD1	2:BB:40:ASN:N	2.52	0.43
2:BB:91:VAL:HG22	2:BB:96:LEU:HG	2.00	0.43
3:BC:98:PHE:CD2	3:BC:121:VAL:HG12	2.54	0.43
4:BE:100:ARG:HB2	4:BE:114:ILE:HD13	2.00	0.43
6:BH:44:LYS:HG3	6:BH:63:PRO:HD3	2.01	0.43
7:BI:26:LYS:NZ	34:B5:399:A:H2'	2.33	0.43
7:BI:47:ARG:NH2	34:B5:396:G:H3'	2.34	0.43
7:BI:178:ARG:NH1	34:B5:207:U:O2	2.40	0.43
7:BI:190:ALA:HB1	7:BI:194:ARG:HH12	1.84	0.43
8:BJ:143:ILE:HG13	34:B5:768:C:C2	2.53	0.43
9:BL:101:GLU:HG2	14:BX:13:ARG:HB2	2.01	0.43
19:BD:40:ARG:HH12	27:BU:110:PRO:N	2.16	0.43
19:BD:105:MET:HE3	19:BD:105:MET:HB3	1.90	0.43
25:BS:68:ARG:HE	25:BS:72:ILE:CG1	2.32	0.43
25:BS:86:LEU:HD13	25:BS:97:ASP:OD2	2.18	0.43
32:Bf:78:LYS:HG2	34:B5:1187:PSU:H4'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BM:37:VAL:HG12	33:BM:38:HIS:CD2	2.54	0.43
34:B5:182:A:H2'	34:B5:183:U:H6	1.83	0.43
34:B5:906:A:H2'	34:B5:907:A:C8	2.53	0.43
34:B5:1588:G:C6	34:B5:1589:C:C4	3.07	0.43
34:B5:1590:G:N1	34:B5:1607:G:C6	2.87	0.43
36:AB:270:ARG:HG2	36:AB:271:GLY:N	2.33	0.43
37:AC:12:THR:HA	37:AC:171:ALA:HB1	2.00	0.43
37:AC:60:THR:HG22	37:AC:62:ALA:H	1.83	0.43
38:A1:446:U:H5'	38:A1:488:U:O2'	2.18	0.43
38:A1:513:G:C6	38:A1:579:G:C6	3.07	0.43
38:A1:999:G:H2'	38:A1:1000:C:C6	2.54	0.43
38:A1:1202:A:C2	38:A1:2857:C:H5'	2.54	0.43
38:A1:1771:C:H2'	38:A1:1772:U:O4'	2.18	0.43
38:A1:1836:C:H2'	38:A1:1837:U:H6	1.83	0.43
38:A1:1846:C:N3	52:AP:136:ILE:HD12	2.34	0.43
38:A1:2273:G:O2'	38:A1:2311:G:O6	2.29	0.43
38:A1:2455:U:H3'	38:A1:2456:A:C8	2.53	0.43
38:A1:2661:G:H2'	38:A1:2662:G:H8	1.84	0.43
38:A1:3193:C:H2'	38:A1:3194:C:H6	1.84	0.43
40:A4:38:U:C4	70:Ah:89:ARG:HD2	2.54	0.43
44:AG:34:PHE:CD1	44:AG:42:PRO:HD3	2.53	0.43
45:AH:129:ARG:H	45:AH:157:ASN:ND2	2.16	0.43
49:AM:14:LEU:HD23	55:AS:149:LYS:HG2	2.01	0.43
52:AP:10:ASN:HB3	52:AP:13:LYS:HG2	2.01	0.43
60:AX:82:LEU:N	60:AX:124:VAL:O	2.45	0.43
69:Ag:93:PHE:CD1	69:Ag:93:PHE:C	2.97	0.43
74:Al:25:GLN:OE1	74:Al:28:ARG:NH2	2.52	0.43
80:DC:162:ARG:HA	80:DC:163:ALA:HA	1.41	0.43
80:DC:345:PRO:HA	80:DC:348:ALA:HB3	2.00	0.43
80:DC:520:THR:HG22	80:DC:530:VAL:HG12	2.01	0.43
80:DC:725:GLN:HA	80:DC:803:THR:HA	2.01	0.43
81:EC:6866:C:H5''	81:EC:6867:C:C6	2.53	0.43
3:BC:129:ILE:O	3:BC:133:LYS:HG2	2.18	0.43
6:BH:96:ARG:HB3	34:B5:856:A:C6	2.53	0.43
8:BJ:87:SER:H	8:BJ:90:LYS:NZ	2.17	0.43
16:Ba:82:ARG:HH22	34:B5:1153:G:H5''	1.83	0.43
21:BK:61:TRP:HB3	30:Bd:22:ARG:O	2.17	0.43
23:BQ:20:ALA:HB1	23:BQ:65:ILE:HD11	2.01	0.43
23:BQ:118:ILE:HG12	34:B5:1410:A:C5'	2.49	0.43
25:BS:88:ARG:NH2	25:BS:98:TYR:HD2	2.17	0.43
25:BS:132:ARG:HH22	34:B5:1545:A:C5'	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:293:ALA:O	31:Bg:301:LEU:HD12	2.19	0.43
33:BM:82:PRO:O	33:BM:85:LYS:HD3	2.18	0.43
34:B5:30:G:C6	34:B5:597:G:C6	3.06	0.43
34:B5:119:A:H3'	34:B5:120:PSU:C6	2.53	0.43
34:B5:1218:G:O4'	34:B5:1444:A:N6	2.51	0.43
34:B5:1484:G:H21	34:B5:1606:C:H1'	1.84	0.43
34:B5:1679:G:N2	34:B5:1722:A:N6	2.36	0.43
38:A1:147:U:C4	44:AG:157:VAL:HG13	2.54	0.43
38:A1:236:G:C2	38:A1:237:G:C5	3.06	0.43
38:A1:513:G:H2'	38:A1:514:G:H8	1.84	0.43
38:A1:714:G:N1	63:Aa:72:VAL:HG11	2.34	0.43
38:A1:1112:A:P	48:AL:5:LYS:HZ1	2.41	0.43
38:A1:1141:C:O2'	38:A1:1153:A:H1'	2.17	0.43
38:A1:2102:U:H2'	38:A1:2103:U:C6	2.53	0.43
38:A1:2352:A:H5''	52:AP:83:TRP:O	2.18	0.43
38:A1:2890:A:O2'	38:A1:2933:A:H1'	2.19	0.43
38:A1:3177:G:O2'	38:A1:3179:U:OP1	2.34	0.43
39:A3:37:G:C2	39:A3:41:G:C2	3.07	0.43
40:A4:62:C:H4'	40:A4:63:G:O5'	2.18	0.43
42:AE:172:HIS:CE1	68:Af:35:VAL:HG22	2.49	0.43
45:AH:4:ILE:HG23	55:AS:142:GLN:OE1	2.18	0.43
46:AI:208:LYS:HA	46:AI:208:LYS:HE2	2.00	0.43
47:AJ:150:ASN:HA	47:AJ:153:LYS:HG2	2.00	0.43
53:AQ:68:ALA:O	53:AQ:72:LYS:HG2	2.19	0.43
54:AR:105:LEU:HD22	54:AR:135:LYS:HG3	2.00	0.43
54:AR:184:LEU:O	54:AR:188:ASP:HB2	2.19	0.43
56:AT:39:ILE:HG12	56:AT:63:VAL:HG12	2.00	0.43
56:AT:112:ASN:HB3	56:AT:128:LEU:HD12	2.01	0.43
57:AU:22:PRO:HB2	57:AU:28:PHE:HB2	2.00	0.43
59:AW:9:SER:HB2	59:AW:51:TRP:HZ3	1.83	0.43
60:AX:49:LYS:C	60:AX:51:VAL:H	2.27	0.43
63:Aa:27:LYS:HB3	63:Aa:27:LYS:HE2	1.92	0.43
79:E:66:CYS:HB3	79:E:83:ASP:HB3	2.01	0.43
80:DC:216:HIS:CB	80:DC:218:TRP:HD1	2.31	0.43
80:DC:343:PRO:HB2	80:DC:347:THR:HB	1.99	0.43
81:EC:6772:G:C8	81:EC:6773:G:C8	3.07	0.43
2:BB:105:PHE:CZ	2:BB:213:ARG:HA	2.54	0.43
2:BB:129:THR:OG1	2:BB:131:ASP:OD1	2.27	0.43
7:BI:31:ARG:HB2	7:BI:31:ARG:NH1	2.32	0.43
11:BO:64:ALA:HB1	11:BO:105:LEU:HD13	2.01	0.43
15:BY:21:LYS:N	15:BY:75:VAL:O	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:BD:75:LYS:HZ1	21:BK:20:VAL:CG1	2.30	0.43
20:BF:133:VAL:O	20:BF:137:ILE:HG12	2.18	0.43
21:BK:8:ARG:NH1	34:B5:1257:U:O2'	2.52	0.43
29:Bc:18:ARG:HD2	29:Bc:23:GLY:HA2	2.01	0.43
31:Bg:131:ILE:HD13	31:Bg:154:VAL:HG11	2.01	0.43
31:Bg:209:THR:HG23	31:Bg:225:LEU:HB2	2.01	0.43
33:BM:72:ILE:O	33:BM:76:GLU:HG3	2.19	0.43
34:B5:512:A:H2'	34:B5:513:U:O4'	2.19	0.43
34:B5:749:U:C2	34:B5:750:U:C5	3.06	0.43
34:B5:868:G:N3	34:B5:869:A:C8	2.87	0.43
34:B5:926:A:OP1	34:B5:1016:C:O2'	2.32	0.43
34:B5:1471:A:N6	34:B5:1538:U:N3	2.35	0.43
34:B5:1774:G:OP1	76:An:7:LYS:NZ	2.47	0.43
38:A1:21:G:P	40:A4:36:G:H22	2.42	0.43
38:A1:39:A:H5''	63:Aa:35:ALA:HB2	2.00	0.43
38:A1:109:A:O2'	38:A1:323:A:N6	2.51	0.43
38:A1:381:U:H2'	38:A1:382:U:C6	2.54	0.43
38:A1:1693:C:O2'	38:A1:1772:U:O2'	2.19	0.43
38:A1:1738:C:H4'	69:Ag:53:GLY:HA2	2.01	0.43
38:A1:2260:PSU:H2'	38:A1:2261:G:O4'	2.18	0.43
38:A1:2585:G:H8	44:AG:48:ARG:HD2	1.83	0.43
38:A1:2654:C:OP2	77:Ao:2:VAL:N	2.51	0.43
38:A1:3044:G:O2'	38:A1:3045:G:H5'	2.19	0.43
39:A3:117:A:H2'	39:A3:118:A:C8	2.53	0.43
40:A4:155:A:H5'	44:AG:185:ARG:HD2	2.01	0.43
43:AF:66:LYS:HD2	43:AF:76:TYR:HD2	1.82	0.43
71:Ai:27:SER:C	71:Ai:29:LYS:H	2.27	0.43
80:DC:506:GLU:HA	80:DC:509:LYS:HG2	2.00	0.43
80:DC:756:SER:OG	80:DC:769:LYS:HB3	2.18	0.43
1:BA:81:PHE:HA	1:BA:167:LYS:NZ	2.34	0.42
5:BG:6:SER:HA	5:BG:13:GLN:HA	2.01	0.42
10:BN:14:SER:OG	34:B5:958:U:H2'	2.18	0.42
17:Bb:21:LEU:HA	17:Bb:26:GLN:HG3	2.01	0.42
20:BF:109:LYS:HE3	20:BF:109:LYS:HB3	1.87	0.42
22:BP:47:ARG:NH1	34:B5:1553:G:N7	2.67	0.42
26:BT:86:ARG:NH1	26:BT:92:LYS:HE2	2.22	0.42
34:B5:320:U:OP1	34:B5:322:G:H5''	2.19	0.42
34:B5:463:U:C2	34:B5:464:A:C8	3.07	0.42
34:B5:585:A:H2'	34:B5:586:G:H8	1.83	0.42
34:B5:1358:G:C6	34:B5:1359:C:N4	2.87	0.42
34:B5:1456:C:O5'	34:B5:1457:C:H2'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AB:43:LEU:HB2	36:AB:208:VAL:HG11	2.01	0.42
38:A1:21:G:H1	40:A4:138:A:N6	2.14	0.42
38:A1:130:A:C6	38:A1:139:G:C6	3.07	0.42
38:A1:440:A:H62	38:A1:619:A:H2'	1.82	0.42
38:A1:1408:G:OP1	67:Ae:33:ARG:NH2	2.53	0.42
38:A1:2104:A:H2'	38:A1:2105:G:H8	1.84	0.42
38:A1:2157:G:N2	38:A1:2177:G:O2'	2.52	0.42
38:A1:2215:A:H2'	38:A1:2216:G:O4'	2.19	0.42
38:A1:2226:U:H2'	38:A1:2227:C:C6	2.54	0.42
38:A1:2457:G:N2	38:A1:2483:G:O2'	2.50	0.42
38:A1:2594:C:H2'	38:A1:2595:A:O4'	2.19	0.42
38:A1:2911:A:H4'	38:A1:2912:G:C8	2.54	0.42
38:A1:3000:A:H2'	38:A1:3001:C:H6	1.83	0.42
38:A1:3217:C:C4	52:AP:182:ILE:HG23	2.53	0.42
41:AD:107:ARG:NH2	41:AD:116:ASP:OD1	2.52	0.42
53:AQ:176:ARG:HA	53:AQ:182:LYS:O	2.19	0.42
54:AR:27:ASN:OD1	54:AR:28:GLU:HG2	2.19	0.42
60:AX:113:LEU:HD23	60:AX:121:LYS:O	2.19	0.42
65:Ac:10:ILE:HG22	65:Ac:71:GLN:HE22	1.83	0.42
66:Ad:44:MET:HE2	66:Ad:75:ILE:HG22	2.00	0.42
74:Al:2:ALA:C	74:Al:4:GLN:H	2.27	0.42
79:E:102:LYS:HB2	79:E:102:LYS:HE2	1.78	0.42
80:DC:664:VAL:O	80:DC:668:GLN:HG2	2.19	0.42
81:EC:6837:G:H2'	81:EC:6838:C:O4'	2.19	0.42
1:BA:172:LEU:HD12	1:BA:175:TYR:HB3	2.01	0.42
1:BA:175:TYR:HA	1:BA:202:TYR:CE2	2.54	0.42
3:BC:53:ILE:HG12	3:BC:73:LEU:HG	2.01	0.42
6:BH:86:GLN:HG3	6:BH:87:ASP:N	2.34	0.42
8:BJ:121:SER:O	8:BJ:125:ALA:N	2.45	0.42
9:BL:99:ARG:HG2	14:BX:9:LEU:HA	2.01	0.42
10:BN:53:LEU:HA	10:BN:53:LEU:HD23	1.74	0.42
10:BN:114:ARG:HH12	34:B5:953:G:H4'	1.83	0.42
11:BO:115:ILE:HG22	16:Ba:62:TYR:OH	2.18	0.42
20:BF:114:ILE:O	20:BF:118:LEU:HG	2.19	0.42
22:BP:118:GLU:HB3	25:BS:121:ALA:HB1	2.01	0.42
23:BQ:91:ALA:O	23:BQ:94:GLN:HG3	2.19	0.42
26:BT:60:SER:HB2	34:B5:1479:A:H5''	2.00	0.42
27:BU:85:ARG:NH2	34:B5:1335:U:H5'	2.34	0.42
30:Bd:7:TRP:CD1	34:B5:1450:U:HO2'	2.36	0.42
34:B5:57:G:C6	34:B5:91:G:C2	3.07	0.42
34:B5:395:U:H2'	34:B5:396:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1213:G:C2	34:B5:1214:U:C2	3.07	0.42
34:B5:1363:U:H1'	34:B5:1364:G:C8	2.54	0.42
36:AB:144:ILE:HA	36:AB:147:GLU:HB2	2.02	0.42
37:AC:29:PRO:O	37:AC:124:SER:OG	2.31	0.42
37:AC:58:HIS:HE1	37:AC:98:ARG:HD3	1.82	0.42
38:A1:36:C:O2	38:A1:934:G:O2'	2.37	0.42
38:A1:398:A:H5'	52:AP:3:ARG:HG3	2.02	0.42
38:A1:506:U:H2'	38:A1:507:U:O4'	2.19	0.42
38:A1:652:G:OP1	38:A1:1436:U:O2'	2.38	0.42
38:A1:687:U:OP2	48:AL:36:ARG:NH2	2.43	0.42
38:A1:1767:C:H2'	38:A1:1768:U:H6	1.84	0.42
38:A1:2453:U:H3'	38:A1:2462:A:OP1	2.19	0.42
38:A1:2504:U:H4'	71:AI:55:ARG:HD3	2.02	0.42
38:A1:2507:C:H2'	38:A1:2508:U:H6	1.84	0.42
38:A1:2544:U:OP2	38:A1:2544:U:H6	2.02	0.42
38:A1:3383:G:H2'	38:A1:3384:U:C6	2.55	0.42
40:A4:11:C:H2'	40:A4:12:A:H8	1.84	0.42
41:AD:143:LYS:HA	41:AD:172:TYR:O	2.19	0.42
44:AG:52:TRP:CD1	44:AG:60:ARG:HH21	2.37	0.42
45:AH:105:GLU:OE2	45:AH:110:LYS:HD3	2.20	0.42
47:AJ:129:VAL:HG12	47:AJ:131:MET:HG2	2.01	0.42
49:AM:47:ASP:C	49:AM:49:PRO:HD3	2.43	0.42
51:AO:12[A]:LYS:O	55:AS:167:ARG:NH1	2.45	0.42
55:AS:8:GLN:HE21	55:AS:62:ASN:HB2	1.84	0.42
62:AZ:124:ALA:O	62:AZ:126:LYS:N	2.48	0.42
68:Af:48:ARG:HG3	68:Af:68:TRP:CE3	2.55	0.42
75:Am:98:LYS:HE2	75:Am:118:THR:HG21	2.00	0.42
78:Ap:23:ARG:HA	78:Ap:26:VAL:HG12	2.01	0.42
79:E:101:LYS:HE3	79:E:105:LYS:NZ	2.34	0.42
80:DC:483:PHE:C	80:DC:485:VAL:H	2.27	0.42
81:EC:6866:C:H5''	81:EC:6867:C:H6	1.84	0.42
3:BC:54:GLU:O	3:BC:58:LEU:N	2.48	0.42
4:BE:41:SER:HA	4:BE:85:GLY:HA2	2.00	0.42
5:BG:3:LEU:HD13	5:BG:109:LEU:HB2	2.01	0.42
6:BH:58:LEU:HD23	6:BH:58:LEU:H	1.84	0.42
6:BH:111:LYS:HB2	34:B5:810:G:O2'	2.18	0.42
9:BL:133:LYS:HB3	34:B5:338:C:OP1	2.20	0.42
11:BO:53:ASP:OD1	11:BO:56:SER:HB3	2.20	0.42
12:BV:74:GLN:NE2	12:BV:80:LYS:O	2.49	0.42
13:BW:73:GLY:HA3	13:BW:128:PHE:CZ	2.54	0.42
14:BX:59:ILE:HD12	14:BX:71:CYS:SG	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Bb:47:PHE:HD2	17:Bb:49:HIS:O	2.03	0.42
19:BD:54:ARG:O	19:BD:58:VAL:N	2.40	0.42
27:BU:89:ARG:HH22	34:B5:1383:G:P	2.42	0.42
28:BZ:35:ARG:CZ	34:B5:1536:G:H4'	2.50	0.42
34:B5:561:G:C6	34:B5:585:A:C6	3.06	0.42
34:B5:751:G:O2'	34:B5:752:A:H5'	2.20	0.42
34:B5:853:G:H5'	34:B5:854:U:OP2	2.19	0.42
34:B5:1041:G:H2'	34:B5:1042:G:H8	1.80	0.42
34:B5:1669:U:H3	34:B5:1732:A:N6	2.14	0.42
36:AB:348:ARG:O	36:AB:348:ARG:HG2	2.18	0.42
37:AC:92:ASN:HD22	37:AC:100:PHE:HB2	1.85	0.42
38:A1:129:U:H2'	38:A1:130:A:C8	2.54	0.42
38:A1:637:C:C2	38:A1:638:C:C5	3.08	0.42
38:A1:1282:G:C6	38:A1:1283:C:N3	2.87	0.42
38:A1:1462:A:H2'	38:A1:1463:U:C6	2.54	0.42
38:A1:1523:U:OP1	38:A1:1607:U:N3	2.43	0.42
38:A1:1733:G:H2'	38:A1:1734:G:H8	1.84	0.42
38:A1:1914:G:O2'	54:AR:82:LYS:O	2.29	0.42
38:A1:2138:A:O2'	72:Aj:2:GLY:N	2.50	0.42
38:A1:2493:U:OP2	79:E:215:ARG:NH1	2.50	0.42
38:A1:3332:U:OP1	59:AW:35:LYS:HD3	2.18	0.42
38:A1:3358:U:H2'	38:A1:3359:A:C8	2.48	0.42
40:A4:13:A:C4	40:A4:14:C:C5	3.07	0.42
40:A4:103:G:P	40:A4:105:A:HO2'	2.42	0.42
41:AD:218:ARG:HD3	41:AD:218:ARG:HA	1.79	0.42
50:AN:51:LEU:HD11	50:AN:119:TYR:HB3	2.02	0.42
55:AS:30:PHE:CD1	55:AS:103:VAL:HG11	2.55	0.42
77:Ao:40:LYS:HD2	77:Ao:40:LYS:HA	1.76	0.42
81:EC:6937:G:H3'	81:EC:6938:A:H8	1.84	0.42
4:BE:72:VAL:N	4:BE:75:LYS:O	2.38	0.42
5:BG:4:ASN:N	5:BG:109:LEU:O	2.44	0.42
8:BJ:108:ARG:HH21	8:BJ:144:PRO:HB2	1.85	0.42
9:BL:97:TYR:HD2	14:BX:15:LEU:HD13	1.83	0.42
9:BL:99:ARG:HE	14:BX:7:ARG:C	2.25	0.42
11:BO:36:LYS:HD3	34:B5:919:A:N3	2.34	0.42
17:Bb:36:LYS:HD2	17:Bb:36:LYS:HA	1.76	0.42
17:Bb:36:LYS:O	17:Bb:78:SER:OG	2.36	0.42
19:BD:120:TYR:HA	19:BD:123:VAL:CG1	2.46	0.42
21:BK:29:GLN:HB3	21:BK:39:ASN:HB2	2.00	0.42
22:BP:128:HIS:HD2	34:B5:1460:A:H5''	1.84	0.42
31:Bg:40:LYS:HD2	31:Bg:65:SER:O	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Bf:95:HIS:HB2	34:B5:1232:U:OP2	2.19	0.42
32:Bf:119:ARG:O	32:Bf:132:LEU:N	2.52	0.42
34:B5:300:A:H2'	34:B5:301:A:H8	1.83	0.42
34:B5:404:G:H2'	34:B5:405:C:C6	2.54	0.42
34:B5:431:C:H2'	34:B5:432:G:H8	1.84	0.42
34:B5:562:G:H2'	34:B5:563:U:C6	2.55	0.42
34:B5:1345:A:N6	34:B5:1377:U:O2'	2.53	0.42
35:AA:21:ARG:NH1	38:A1:825:U:OP1	2.52	0.42
35:AA:44:ILE:HD11	35:AA:85:GLY:HA2	2.02	0.42
35:AA:227:ARG:O	35:AA:227:ARG:HD3	2.18	0.42
38:A1:19:U:H2'	38:A1:20:A:C8	2.54	0.42
38:A1:60:A:C8	38:A1:327:A:C6	3.08	0.42
38:A1:291:C:H5''	50:AN:68:ARG:HH21	1.84	0.42
38:A1:532:A:H61	38:A1:560:G:H1	1.66	0.42
38:A1:590:G:N2	42:AE:19:LYS:HD2	2.33	0.42
38:A1:970:A:H2'	38:A1:971:G:H8	1.84	0.42
38:A1:1255:C:O2'	38:A1:1256:G:H3'	2.19	0.42
38:A1:2930:A:H2'	38:A1:2931:C:H6	1.84	0.42
38:A1:3164:C:H2'	38:A1:3165:A:C8	2.54	0.42
39:A3:6:C:H5''	41:AD:54:ARG:HH21	1.84	0.42
40:A4:123:G:H2'	40:A4:124:G:C8	2.54	0.42
40:A4:139:U:H2'	40:A4:140:G:C8	2.54	0.42
41:AD:261:THR:O	41:AD:264:GLN:N	2.49	0.42
45:AH:76:ASP:HA	45:AH:79:ILE:HB	2.01	0.42
47:AJ:26:SER:OG	47:AJ:63:GLU:HG2	2.19	0.42
48:AL:23:LYS:HD2	48:AL:23:LYS:HA	1.81	0.42
49:AM:60:LEU:HD23	49:AM:60:LEU:HA	1.83	0.42
51:AO:22[A]:VAL:HG21	51:AO:122[A]:GLN:NE2	2.34	0.42
53:AQ:33:TYR:HE2	53:AQ:124:LEU:HB3	1.84	0.42
61:AY:77:LYS:HD2	74:Al:31:THR:HG21	2.02	0.42
61:AY:82:VAL:HG23	61:AY:85:VAL:HB	2.00	0.42
73:Ak:69:LEU:HD23	73:Ak:70:PRO:O	2.19	0.42
80:DC:124:GLY:HA3	80:DC:342:LEU:HD22	2.02	0.42
80:DC:239:LYS:NZ	80:DC:243:ARG:HD3	2.34	0.42
80:DC:510:ARG:HA	80:DC:513:LYS:NZ	2.34	0.42
81:EC:6879:U:H2'	81:EC:6880:G:H4'	2.01	0.42
5:BG:48:TYR:HB3	5:BG:50:PHE:CE1	2.54	0.42
9:BL:97:TYR:CD2	14:BX:15:LEU:HB3	2.55	0.42
9:BL:124:THR:OG1	9:BL:141:LYS:O	2.24	0.42
11:BO:72:LYS:HA	11:BO:72:LYS:HE3	2.00	0.42
11:BO:103:ARG:HH22	16:Ba:49:ALA:HB1	1.79	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BV:75:ASN:OD1	12:BV:76:ASP:N	2.52	0.42
15:BY:45:ALA:HA	15:BY:50:ALA:HB3	2.01	0.42
20:BF:43:PHE:O	20:BF:45:LYS:NZ	2.36	0.42
20:BF:81:ARG:HE	29:Bc:47:PRO:HB3	1.84	0.42
20:BF:120:ILE:HG22	20:BF:124:LEU:HG	2.02	0.42
24:BR:58:MET:O	24:BR:61:ILE:HG22	2.20	0.42
34:B5:411:C:H2'	34:B5:412:A:C8	2.54	0.42
34:B5:1440:C:H2'	34:B5:1441:C:H6	1.83	0.42
36:AB:212:ASN:ND2	36:AB:354:VAL:H	2.18	0.42
38:A1:542:G:H2'	38:A1:542:G:N3	2.34	0.42
38:A1:1171:G:H2'	38:A1:1172:G:O4'	2.19	0.42
38:A1:1203:A:H61	38:A1:1300:G:H2'	1.83	0.42
38:A1:1385:C:O2	42:AE:2:SER:N	2.53	0.42
38:A1:1738:C:H1'	69:Ag:52:GLN:NE2	2.33	0.42
38:A1:1856:C:C4	38:A1:1857:C:N4	2.82	0.42
38:A1:2437:G:C6	38:A1:2511:A:C5	3.08	0.42
38:A1:2446:U:H5''	38:A1:2447:A:OP2	2.19	0.42
38:A1:2665:U:H4'	38:A1:2666:C:OP1	2.19	0.42
38:A1:2891:U:O2'	38:A1:3014:U:OP1	2.30	0.42
38:A1:3181:C:H2'	38:A1:3182:G:C8	2.53	0.42
39:A3:62:U:P	41:AD:276:LYS:HG3	2.59	0.42
39:A3:87:G:H2'	39:A3:88:G:C8	2.54	0.42
40:A4:30:C:H2'	40:A4:31:G:H8	1.83	0.42
40:A4:40:A:H2'	40:A4:41:A:C8	2.55	0.42
43:AF:102:VAL:HG13	43:AF:126:LEU:HD22	2.00	0.42
44:AG:64:ILE:O	44:AG:68:ARG:HG2	2.20	0.42
46:AI:169:LYS:O	46:AI:178:ARG:HG3	2.20	0.42
50:AN:155:VAL:O	50:AN:162:ARG:NH2	2.52	0.42
51:AO:15[A]:LEU:HD11	51:AO:44[A]:SER:HB2	2.01	0.42
51:AO:118[A]:VAL:CG1	55:AS:163:PHE:HB3	2.49	0.42
56:AT:13:TYR:HA	56:AT:16:GLN:HG3	2.00	0.42
61:AY:63:LYS:HA	61:AY:63:LYS:HD3	1.91	0.42
68:Af:20:LYS:HB3	68:Af:21:ARG:HH11	1.84	0.42
71:Ai:51:SER:HG	71:Ai:54:GLU:CD	2.27	0.42
79:E:102:LYS:HA	79:E:105:LYS:HZ1	1.84	0.42
80:DC:163:ALA:CB	80:DC:167:LEU:H	2.33	0.42
80:DC:194:ASP:OD1	80:DC:197:LEU:HD13	2.18	0.42
80:DC:482:LYS:C	80:DC:484:SER:H	2.26	0.42
80:DC:575:ALA:HA	80:DC:839:TYR:HE1	1.84	0.42
80:DC:588:LEU:HD21	80:DC:712:ALA:HB1	2.00	0.42
81:EC:6761:C:H2'	81:EC:6762:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:62:ARG:NH2	12:BV:38:LYS:HD3	2.34	0.42
2:BB:138:PHE:HB2	2:BB:214:LYS:HB3	2.02	0.42
5:BG:88:ARG:N	5:BG:91:GLU:OE1	2.52	0.42
5:BG:191:ARG:HA	5:BG:194:LYS:HD3	2.02	0.42
7:BI:55:TYR:HB2	7:BI:177:GLY:HA3	2.01	0.42
7:BI:113:PHE:CE2	7:BI:119:GLN:HB2	2.47	0.42
17:Bb:49:HIS:CE1	17:Bb:70:LYS:HE3	2.55	0.42
19:BD:72:LEU:O	19:BD:75:LYS:HG2	2.19	0.42
20:BF:22:PRO:HA	20:BF:34:GLN:NE2	2.31	0.42
20:BF:56:ALA:O	20:BF:57:SER:OG	2.33	0.42
24:BR:85:VAL:HA	24:BR:86:PRO:HD3	1.92	0.42
26:BT:64:HIS:NE2	26:BT:79:LEU:HD21	2.34	0.42
29:Bc:11:LYS:HB3	29:Bc:53:ILE:HD13	2.02	0.42
32:Bf:119:ARG:HB2	32:Bf:132:LEU:HB2	2.01	0.42
34:B5:222:A:N1	34:B5:837:G:H8	2.17	0.42
34:B5:412:A:H2'	34:B5:413:U:O2	2.19	0.42
34:B5:1504:G:H2'	34:B5:1505:A:O4'	2.20	0.42
34:B5:1698:G:N3	34:B5:1698:G:H2'	2.34	0.42
34:B5:1759:C:H2'	34:B5:1760:G:O4'	2.20	0.42
37:AC:304:GLN:NE2	38:A1:594:U:H3	2.18	0.42
37:AC:311:HIS:CE1	37:AC:314:LYS:HA	2.55	0.42
37:AC:360:LYS:HE3	37:AC:360:LYS:HB3	1.81	0.42
38:A1:595:G:OP1	43:AF:33:ARG:NH1	2.38	0.42
38:A1:632:G:H2'	38:A1:633:C:C6	2.55	0.42
38:A1:647:A:OP2	38:A1:647:A:H8	2.01	0.42
38:A1:819:U:H2'	38:A1:820:A:C8	2.51	0.42
38:A1:977:C:OP1	53:AQ:141:ARG:NH2	2.47	0.42
38:A1:1177:G:OP1	38:A1:1177:G:N2	2.29	0.42
38:A1:1313:G:OP2	38:A1:1313:G:H8	2.03	0.42
38:A1:1342:C:H2'	38:A1:1343:A:C8	2.54	0.42
38:A1:1362:G:H2'	38:A1:1363:A:H8	1.83	0.42
38:A1:1701:C:H2'	38:A1:1702:U:O4'	2.19	0.42
38:A1:1710:C:H2'	38:A1:1711:C:H6	1.83	0.42
38:A1:2095:G:H2'	38:A1:2096:A:C8	2.54	0.42
38:A1:2157:G:N2	38:A1:2178:A:OP2	2.45	0.42
38:A1:2177:G:H4'	38:A1:2180:G:H1'	2.01	0.42
38:A1:2562:A:H5'	62:AZ:54:THR:HG21	2.01	0.42
38:A1:2955:U:H2'	38:A1:2956:A:O4'	2.20	0.42
38:A1:3323:A:H2'	38:A1:3324:C:O4'	2.20	0.42
43:AF:84:VAL:HG13	43:AF:119:VAL:CG2	2.49	0.42
43:AF:163:LEU:HD22	43:AF:169:ILE:HD11	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:AO:43[A]:ILE:HG21	51:AO:50[A]:ASN:HD21	1.85	0.42
51:AO:177[A]:LYS:O	51:AO:180[A]:SER:OG	2.33	0.42
52:AP:56:ARG:NH2	52:AP:75:GLU:OE2	2.49	0.42
65:Ac:34:LEU:HD11	65:Ac:42:ILE:HG21	2.01	0.42
73:Ak:43:PHE:HB2	73:Ak:54:LEU:HD13	2.01	0.42
80:DC:428:ILE:O	80:DC:428:ILE:HG13	2.19	0.42
81:EC:6783:U:C2	81:EC:6784:G:C8	3.08	0.42
81:EC:6809:G:O2'	81:EC:6810:U:O4'	2.30	0.42
81:EC:6889:A:H1'	81:EC:6890:A:C8	2.54	0.42
81:EC:6926:U:O2'	81:EC:6927:U:O4'	2.28	0.42
2:BB:29:TRP:CE3	2:BB:45:LYS:HE3	2.54	0.42
4:BE:88:ASP:OD1	4:BE:101:LEU:HB2	2.20	0.42
5:BG:30:LYS:O	5:BG:102:VAL:HG22	2.19	0.42
7:BI:69:SER:N	7:BI:185:GLU:OE2	2.48	0.42
9:BL:78:THR:HG22	9:BL:78:THR:O	2.19	0.42
11:BO:46:MET:SD	34:B5:898:A:H4'	2.60	0.42
11:BO:128:LYS:HB2	16:Ba:22:ARG:HG3	2.01	0.42
14:BX:104:LEU:HD12	14:BX:122:PHE:HB3	2.02	0.42
17:Bb:34:ASP:HB3	17:Bb:82:LYS:HE3	2.01	0.42
19:BD:48:VAL:O	19:BD:87:TYR:N	2.51	0.42
24:BR:7:LYS:NZ	24:BR:11:ARG:HE	2.18	0.42
25:BS:91:ASP:OD1	25:BS:91:ASP:N	2.53	0.42
26:BT:7:ARG:HH11	26:BT:7:ARG:HA	1.85	0.42
26:BT:88:VAL:HG22	34:B5:1601:G:N1	2.35	0.42
26:BT:130:ARG:CZ	34:B5:1360:A:H5'	2.49	0.42
27:BU:24:ILE:O	27:BU:24:ILE:HG13	2.20	0.42
28:BZ:90:LYS:HG2	28:BZ:102:THR:O	2.19	0.42
30:Bd:41:GLN:HB3	34:B5:1433:G:C5	2.55	0.42
31:Bg:288:HIS:N	31:Bg:306:THR:OG1	2.50	0.42
32:Bf:140:TYR:CZ	32:Bf:142:GLY:HA2	2.55	0.42
34:B5:119:A:H1'	34:B5:397:A:C5	2.55	0.42
34:B5:143:G:C6	34:B5:144:U:C4	3.08	0.42
34:B5:144:U:O2'	34:B5:145:A:O4'	2.30	0.42
34:B5:702:G:C4	34:B5:703:G:H1'	2.55	0.42
34:B5:1156:C:H2'	34:B5:1157:A:C8	2.55	0.42
34:B5:1301:U:H2'	34:B5:1302:U:C6	2.55	0.42
34:B5:1383:G:O2'	34:B5:1384:A:H5'	2.20	0.42
38:A1:74:G:H5''	48:AL:104:ARG:HD2	2.00	0.42
38:A1:287:G:OP1	50:AN:179:LYS:HD3	2.19	0.42
38:A1:593:C:H2'	38:A1:594:U:O4'	2.19	0.42
38:A1:712:G:H2'	38:A1:713:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1010:G:C2	38:A1:1011:A:C8	3.08	0.42
38:A1:1456:A:C2	66:Ad:60:TRP:HZ3	2.38	0.42
38:A1:1530:U:HO2'	40:A4:114:G:HO2'	1.52	0.42
38:A1:1890:U:H2'	38:A1:1891:A:C8	2.55	0.42
38:A1:2285:C:OP2	38:A1:2286:U:O2'	2.33	0.42
38:A1:2389:C:H2'	38:A1:2390:A:C8	2.54	0.42
38:A1:2569:A:H4'	38:A1:2570:U:H5'	2.02	0.42
38:A1:2743:A:H2'	38:A1:2744:U:C6	2.54	0.42
38:A1:3017:A:H2'	38:A1:3018:C:C6	2.55	0.42
38:A1:3094:A:H2'	38:A1:3095:U:H6	1.83	0.42
38:A1:3153:U:H4'	38:A1:3154:C:C2	2.55	0.42
38:A1:3182:G:OP1	51:AO:117[A]:ARG:NH2	2.52	0.42
38:A1:3366:G:H2'	38:A1:3367:C:C6	2.55	0.42
41:AD:144:VAL:O	41:AD:173:VAL:HG23	2.19	0.42
45:AH:1:MET:HE1	55:AS:139:TYR:HA	2.01	0.42
45:AH:130:ASP:OD1	45:AH:130:ASP:N	2.52	0.42
49:AM:36:VAL:HG21	49:AM:47:ASP:OD1	2.19	0.42
62:AZ:108:GLU:O	62:AZ:112:LYS:N	2.50	0.42
65:Ac:36:GLN:HB2	65:Ac:38:LYS:HE2	2.02	0.42
66:Ad:81:GLU:HG2	66:Ad:82:GLU:H	1.85	0.42
70:Ah:70:TYR:CD2	70:Ah:77:PRO:HD3	2.54	0.42
73:Ak:66:ILE:HD13	73:Ak:77:ARG:NH2	2.35	0.42
80:DC:213:SER:OG	83:DC:901:GDP:N1	2.45	0.42
81:EC:6808:G:O2'	81:EC:6809:G:O4'	2.37	0.42
2:BB:104:ASP:OD1	2:BB:214:LYS:HG3	2.19	0.42
4:BE:105:VAL:HB	4:BE:243:GLY:HA2	2.01	0.42
5:BG:139:ASN:HA	5:BG:142:ARG:HD3	2.00	0.42
6:BH:64:VAL:HG23	6:BH:67:LEU:CB	2.49	0.42
8:BJ:41:GLU:HG3	8:BJ:44:ARG:NH2	2.33	0.42
25:BS:87:ASN:HB2	25:BS:99:HIS:CE1	2.55	0.42
26:BT:114:VAL:HG23	26:BT:123:ARG:O	2.20	0.42
27:BU:33:GLN:NE2	27:BU:109:GLU:HB2	2.32	0.42
34:B5:262:U:H2'	34:B5:263:C:C6	2.54	0.42
34:B5:419:G:H8	34:B5:419:G:OP2	2.03	0.42
34:B5:645:C:H2'	34:B5:646:C:H6	1.85	0.42
34:B5:646:C:C2	34:B5:689:G:C2	3.07	0.42
34:B5:1054:U:H2'	34:B5:1055:U:O4'	2.18	0.42
34:B5:1068:C:H2'	34:B5:1069:A:H8	1.85	0.42
34:B5:1209:C:H42	34:B5:1455:G:H22	1.67	0.42
34:B5:1270:G:H2'	34:B5:1271:G:C8	2.55	0.42
34:B5:1584:G:H1'	34:B5:1585:U:H5	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B5:1593:A:H2'	34:B5:1594:G:H8	1.83	0.42
34:B5:1678:A:H3'	34:B5:1679:G:H8	1.85	0.42
35:AA:142:ASP:OD1	35:AA:143:GLU:N	2.51	0.42
36:AB:99:LEU:HB2	38:A1:3004:C:O3'	2.20	0.42
36:AB:123:TYR:CE1	38:A1:3315:G:C5	3.08	0.42
38:A1:230:U:H2'	38:A1:231:G:O4'	2.20	0.42
38:A1:1294:A:O2'	38:A1:1295:G:H5''	2.20	0.42
38:A1:1374:G:O6	63:Aa:10:LYS:NZ	2.39	0.42
38:A1:1424:C:H2'	38:A1:1425:U:O4'	2.20	0.42
38:A1:1571:A:N6	38:A1:1573:G:O5'	2.53	0.42
38:A1:1740:U:H4'	38:A1:1741:A:H5'	2.01	0.42
38:A1:2366:C:H2'	38:A1:2367:A:H8	1.85	0.42
38:A1:2844:C:N4	38:A1:2898:G:H22	2.16	0.42
38:A1:3112:G:O6	38:A1:3120:C:H5''	2.20	0.42
39:A3:3:U:H2'	39:A3:4:U:C6	2.55	0.42
40:A4:34:U:O2'	40:A4:35:C:OP2	2.33	0.42
42:AE:44:ALA:HA	42:AE:48:ARG:HG2	2.02	0.42
43:AF:165:ASP:OD1	43:AF:168:ILE:HG12	2.20	0.42
44:AG:71:VAL:HG23	44:AG:235:GLY:HA3	2.01	0.42
44:AG:147:LYS:HB3	44:AG:147:LYS:HE2	1.83	0.42
49:AM:19:ARG:NH1	49:AM:66:THR:O	2.44	0.42
58:AV:61:THR:HG22	58:AV:72:LYS:O	2.19	0.42
61:AY:121:ARG:NH1	61:AY:121:ARG:HB3	2.34	0.42
65:Ac:62:LEU:HD23	65:Ac:62:LEU:HA	1.92	0.42
67:Ae:4:LEU:HD22	67:Ae:90:LYS:HE3	2.02	0.42
71:Ai:38:LYS:HE2	71:Ai:38:LYS:HB2	1.73	0.42
72:Aj:85:LYS:HD3	72:Aj:85:LYS:HA	1.77	0.42
77:Ao:25:VAL:HG23	77:Ao:72:LEU:HD22	2.01	0.42
79:E:147:LYS:HD2	79:E:147:LYS:HA	1.73	0.42
80:DC:206:ARG:O	80:DC:341:HIS:NE2	2.53	0.42
6:BH:13:PRO:HA	6:BH:14:THR:HA	1.73	0.42
7:BI:24:LYS:HZ1	34:B5:400:A:H62	1.68	0.42
14:BX:50:LYS:HG2	14:BX:103:LEU:HD12	2.00	0.42
15:BY:113:ASN:ND2	34:B5:55:A:OP2	2.35	0.42
16:Ba:82:ARG:HH22	34:B5:1153:G:C5'	2.32	0.42
19:BD:210:GLU:HA	24:BR:19:ARG:NH2	2.34	0.42
24:BR:15:ALA:O	24:BR:18:GLU:HG3	2.19	0.42
28:BZ:59:TYR:HD2	81:EC:6863:C:H42	1.68	0.42
28:BZ:69:LEU:HD11	28:BZ:71:ILE:HD12	2.00	0.42
28:BZ:81:ARG:O	28:BZ:84:GLU:HG2	2.20	0.42
29:Bc:32:PHE:HD2	29:Bc:38:ARG:O	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Bg:135:THR:HB	31:Bg:141:LEU:HD21	2.02	0.42
34:B5:71:A:H2'	34:B5:72:A:O4'	2.19	0.42
34:B5:201:G:H2'	34:B5:202:A:C8	2.55	0.42
34:B5:760:A:H2'	34:B5:761:G:O4'	2.19	0.42
34:B5:812:A:C4	34:B5:858:G:C2	3.08	0.42
34:B5:868:G:C2	34:B5:869:A:C8	3.08	0.42
34:B5:1234:A:N6	34:B5:1245:G:C6	2.88	0.42
34:B5:1374:C:N4	34:B5:1375:A:H62	2.17	0.42
36:AB:94:GLU:OE1	36:AB:94:GLU:HA	2.20	0.42
38:A1:146:U:H5''	38:A1:148:G:O4'	2.20	0.42
38:A1:162:G:O6	38:A1:259:C:N4	2.49	0.42
38:A1:243:G:C5	38:A1:244:G:C8	3.08	0.42
38:A1:287:G:H2'	38:A1:288:C:H6	1.84	0.42
38:A1:293:C:H2'	38:A1:294:U:O4'	2.20	0.42
38:A1:664:U:H2'	38:A1:665:A:H8	1.80	0.42
38:A1:1112:A:P	48:AL:5:LYS:NZ	2.93	0.42
38:A1:1197:A:H2'	38:A1:1197:A:N3	2.35	0.42
38:A1:1323:G:O2'	55:AS:2:ALA:HB3	2.20	0.42
38:A1:1389:G:H5''	67:Ae:101:SER:HB2	2.02	0.42
38:A1:2217:U:H2'	38:A1:2218:G:C8	2.54	0.42
38:A1:2966:G:H2'	38:A1:2967:A:C8	2.55	0.42
39:A3:76:A:H61	39:A3:102:A:H3'	1.85	0.42
42:AE:137:ASP:HA	42:AE:140:VAL:HG22	2.01	0.42
45:AH:41:ILE:HG21	45:AH:71:VAL:CG2	2.50	0.42
47:AJ:60:ARG:HD3	47:AJ:60:ARG:HA	1.91	0.42
51:AO:58[A]:LEU:HD11	51:AO:74[A]:ARG:NH2	2.35	0.42
67:Ae:47:ARG:HE	67:Ae:47:ARG:HB3	1.58	0.42
77:Ao:78:LYS:HA	77:Ao:78:LYS:HD3	1.78	0.42
80:DC:89:ILE:H	80:DC:89:ILE:HD12	1.84	0.42
80:DC:464:LEU:C	80:DC:466:THR:H	2.27	0.42
81:EC:6932:G:H2'	81:EC:6933:G:H8	1.83	0.42
1:BA:22:THR:HG23	1:BA:169:SER:OG	2.20	0.42
4:BE:42:LEU:HB2	4:BE:109:PHE:CZ	2.55	0.42
7:BI:90:LEU:CD1	7:BI:95:THR:HB	2.50	0.42
7:BI:137:LYS:HE3	34:B5:190:C:H5''	2.01	0.42
14:BX:141:GLU:N	14:BX:141:GLU:OE1	2.53	0.42
16:Ba:46:GLU:HG2	16:Ba:48:ALA:H	1.85	0.42
19:BD:23:GLU:OE1	21:BK:61:TRP:NE1	2.52	0.42
19:BD:55:THR:HA	19:BD:58:VAL:HB	2.02	0.42
21:BK:77:ARG:O	21:BK:82:LEU:N	2.52	0.42
22:BP:25:LEU:HD23	22:BP:28:MET:HE1	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BP:90:ILE:HD11	22:BP:109:PRO:N	2.35	0.42
24:BR:12:ALA:HB3	24:BR:50:ILE:HD12	2.01	0.42
26:BT:119:LYS:NZ	34:B5:1368:G:OP1	2.53	0.42
32:Bf:108:VAL:HG21	33:BM:74:LEU:HA	2.02	0.42
32:Bf:139:LEU:HD11	32:Bf:148:TYR:HB2	2.02	0.42
34:B5:62:A:C2	34:B5:288:A:H4'	2.55	0.42
34:B5:101:U:H2'	34:B5:102:U:O4'	2.20	0.42
34:B5:1402:G:H2'	34:B5:1403:C:C6	2.55	0.42
35:AA:62:VAL:CG1	35:AA:71:LEU:HD12	2.49	0.42
35:AA:229:ALA:HB1	35:AA:233:GLN:CB	2.50	0.42
35:AA:241:ARG:NH2	38:A1:2156:C:OP1	2.27	0.42
36:AB:14:LEU:HD13	36:AB:262:TRP:CH2	2.55	0.42
38:A1:601:U:H3'	38:A1:602:A:H8	1.84	0.42
38:A1:746:A:H2'	38:A1:747:A:C8	2.55	0.42
38:A1:750:G:OP2	64:Ab:40:ARG:NH2	2.52	0.42
38:A1:775:A:OP1	64:Ab:44:LYS:NZ	2.48	0.42
38:A1:1111:U:H2'	38:A1:1112:A:C8	2.55	0.42
38:A1:1576:G:N2	38:A1:1810:A:H5''	2.33	0.42
38:A1:1657:C:N4	38:A1:1798:A:OP2	2.39	0.42
38:A1:1697:A:N6	38:A1:1748:G:H1'	2.35	0.42
38:A1:1728:G:O2'	65:Ac:87:VAL:HA	2.20	0.42
38:A1:2810:C:OP2	38:A1:2955:U:O2'	2.37	0.42
38:A1:3002:C:H2'	38:A1:3003:G:O4'	2.19	0.42
38:A1:3303:G:O2'	38:A1:3305:A:N7	2.53	0.42
39:A3:26:C:H5''	41:AD:56:THR:OG1	2.20	0.42
39:A3:46:A:P	41:AD:158:ARG:HE	2.43	0.42
39:A3:110:G:H2'	39:A3:111:U:C6	2.55	0.42
40:A4:142:C:H2'	40:A4:143:U:H6	1.80	0.42
41:AD:194:LEU:O	41:AD:197:SER:OG	2.27	0.42
41:AD:212:ALA:HB2	41:AD:219:PHE:CE1	2.55	0.42
45:AH:18:VAL:HG22	45:AH:27:VAL:HG12	2.02	0.42
51:AO:35[A]:VAL:HG11	51:AO:80[A]:PHE:CE1	2.54	0.42
54:AR:93:VAL:HA	54:AR:96:ILE:HG12	2.02	0.42
55:AS:92:LYS:HE3	55:AS:92:LYS:HB3	1.62	0.42
60:AX:51:VAL:HG13	60:AX:51:VAL:O	2.20	0.42
81:EC:6785:C:H3'	81:EC:6786:A:H8	1.85	0.42
4:BE:8:HIS:HB2	34:B5:95:G:H5'	2.02	0.41
5:BG:115:LYS:HB3	5:BG:115:LYS:HE3	1.84	0.41
8:BJ:79:ARG:O	8:BJ:83:VAL:HG13	2.20	0.41
9:BL:63:LEU:HD11	34:B5:249:U:C2	2.55	0.41
9:BL:109:VAL:HA	9:BL:135:VAL:HG13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BO:48:VAL:HG11	11:BO:53:ASP:HB3	2.02	0.41
15:BY:51:GLU:O	15:BY:52:LYS:HB3	2.20	0.41
22:BP:125:PRO:HG2	22:BP:127:ARG:NH1	2.35	0.41
25:BS:101:LEU:H	25:BS:104:ASN:HB2	1.84	0.41
25:BS:115:ARG:O	25:BS:119:ILE:HG23	2.20	0.41
30:Bd:31:ILE:O	30:Bd:33:LYS:N	2.53	0.41
31:Bg:231:MET:N	31:Bg:231:MET:SD	2.93	0.41
34:B5:197:A:O2'	34:B5:198:A:O4'	2.28	0.41
34:B5:252:U:H2'	34:B5:253:A:N3	2.35	0.41
34:B5:334:G:H2'	34:B5:335:U:C5	2.55	0.41
34:B5:466:PSU:H2'	34:B5:467:G:O4'	2.19	0.41
34:B5:692:C:H2'	34:B5:693:U:H6	1.85	0.41
34:B5:1334:U:H2'	34:B5:1335:U:H6	1.85	0.41
34:B5:1652:C:H2'	34:B5:1653:C:H6	1.85	0.41
35:AA:112:ILE:CD1	78:Ap:79:VAL:HG22	2.50	0.41
38:A1:16:A:O2'	60:AX:45:LYS:NZ	2.34	0.41
38:A1:224:C:H2'	38:A1:225:C:C6	2.55	0.41
38:A1:291:C:C2	38:A1:292:U:C5	3.08	0.41
38:A1:352:A:N1	38:A1:365:A:H5''	2.35	0.41
38:A1:620:U:O5'	52:AP:167:ARG:NH2	2.53	0.41
38:A1:728:G:H2'	38:A1:729:C:H6	1.85	0.41
38:A1:729:C:P	53:AQ:43:PRO:HG2	2.60	0.41
38:A1:801:A:N6	48:AL:19:GLN:OE1	2.46	0.41
38:A1:1190:A:H2'	38:A1:1190:A:N3	2.35	0.41
38:A1:1275:C:H2'	38:A1:1276:U:C6	2.55	0.41
38:A1:1416:C:H2'	38:A1:1417:G:C4	2.54	0.41
38:A1:1504:A:C5	38:A1:1505:C:C5	3.07	0.41
38:A1:2356:A:H4'	52:AP:138:LYS:O	2.20	0.41
38:A1:2407:C:C2	38:A1:2408:U:C5	3.08	0.41
38:A1:2473:C:O5'	38:A1:2474:G:N2	2.53	0.41
38:A1:3129:A:C6	38:A1:3131:U:H1'	2.55	0.41
38:A1:3277:U:H5''	38:A1:3278:C:H5	1.85	0.41
40:A4:83:C:H4'	40:A4:85:G:N3	2.34	0.41
40:A4:152:G:OP1	44:AG:60:ARG:NH1	2.53	0.41
52:AP:4:TYR:HE1	52:AP:147:GLU:HB2	1.85	0.41
61:AY:42:GLN:O	61:AY:127:GLU:HB2	2.20	0.41
71:Ai:51:SER:OG	71:Ai:54:GLU:OE1	2.34	0.41
74:Al:21:ARG:HH12	74:Al:24:PRO:HG3	1.85	0.41
80:DC:491:VAL:HG21	80:DC:556:ILE:HG23	2.01	0.41
80:DC:798:PHE:CE1	85:DC:903:SO1:H6	2.54	0.41
80:DC:822:ALA:HA	80:DC:825:ARG:CZ	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BB:23:PRO:HA	2:BB:26:ARG:HH21	1.86	0.41
2:BB:32:ILE:HD12	11:BO:33:LEU:HD11	2.02	0.41
5:BG:137:ARG:HD2	5:BG:177:ARG:NH1	2.29	0.41
5:BG:188:ARG:NH2	34:B5:284:G:C5	2.88	0.41
6:BH:9:LEU:HD22	6:BH:18:LEU:HD21	2.02	0.41
9:BL:133:LYS:HE2	34:B5:324:U:P	2.60	0.41
11:BO:84:ARG:NH2	34:B5:918:U:OP1	2.46	0.41
12:BV:78:LEU:O	12:BV:79:LEU:HD23	2.21	0.41
14:BX:49:ALA:HA	34:B5:435:C:H5'	2.02	0.41
21:BK:88:PRO:HB2	21:BK:91:TYR:CZ	2.55	0.41
25:BS:44:ASN:ND2	26:BT:46:PRO:HG2	2.35	0.41
26:BT:116:ILE:HG23	26:BT:118:PRO:HD3	2.02	0.41
31:Bg:7:LEU:HD21	31:Bg:313:TRP:HB3	2.01	0.41
34:B5:29:U:H2'	34:B5:30:G:C8	2.54	0.41
34:B5:181:A:C4	34:B5:182:A:C8	3.09	0.41
34:B5:515:A:C8	34:B5:516:G:C8	3.08	0.41
34:B5:862:A:O2'	34:B5:963:A:N1	2.48	0.41
34:B5:1664:C:H2'	34:B5:1665:U:O4'	2.20	0.41
36:AB:17:LEU:HD11	36:AB:233:TRP:HH2	1.85	0.41
37:AC:63:GLU:OE1	37:AC:63:GLU:N	2.53	0.41
37:AC:181:VAL:HG22	37:AC:182:LEU:H	1.84	0.41
37:AC:265:GLU:H	37:AC:265:GLU:CD	2.26	0.41
38:A1:157:A:H8	71:Ai:26:ILE:HG13	1.82	0.41
38:A1:436:A:OP2	38:A1:621:A:N6	2.51	0.41
38:A1:995:U:H1'	38:A1:2637:A:H5'	2.01	0.41
38:A1:1495:U:H5	38:A1:1835:A:C2	2.38	0.41
38:A1:2097:U:H2'	38:A1:2098:C:C6	2.55	0.41
38:A1:2767:U:H2'	38:A1:2768:U:H6	1.85	0.41
38:A1:2993:G:H2'	38:A1:3142:A:N6	2.35	0.41
38:A1:3112:G:H5''	45:AH:73:SER:OG	2.20	0.41
38:A1:3154:C:H4'	38:A1:3155:U:O5'	2.20	0.41
38:A1:3214:U:O4	49:AM:124:ARG:NE	2.43	0.41
39:A3:52:G:H2'	39:A3:53:U:C6	2.55	0.41
40:A4:53:A:C4	40:A4:54:A:C8	3.08	0.41
40:A4:68:G:H2'	40:A4:69:U:H6	1.83	0.41
42:AE:82:ARG:HE	68:Af:104:PRO:HB3	1.84	0.41
42:AE:154:LEU:O	42:AE:154:LEU:HD23	2.20	0.41
46:AI:152:LEU:HD23	46:AI:152:LEU:HA	1.88	0.41
47:AJ:88:GLU:HB2	47:AJ:90:GLN:HE21	1.85	0.41
50:AN:36:ILE:HG13	50:AN:64:VAL:HG23	2.02	0.41
53:AQ:31:LYS:HB2	53:AQ:31:LYS:HE3	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AQ:67:ILE:HD12	53:AQ:81:VAL:HG11	2.02	0.41
57:AU:99:LYS:HB3	57:AU:102:GLU:HB3	2.02	0.41
58:AV:57:MET:HG2	58:AV:77:ILE:HG12	2.02	0.41
64:Ab:43:HIS:CE1	64:Ab:47:LEU:HD11	2.55	0.41
65:Ac:73:GLY:N	65:Ac:76:GLU:OE1	2.52	0.41
71:Ai:4:LYS:O	71:Ai:16:LYS:HE2	2.21	0.41
74:Al:23:LEU:HD23	74:Al:28:ARG:HD2	2.02	0.41
75:Am:104:PRO:HD3	75:Am:111:ARG:HH22	1.85	0.41
81:EC:6936:G:N7	81:EC:6938:A:N6	2.67	0.41
7:BI:26:LYS:HB3	34:B5:400:A:N7	2.35	0.41
11:BO:13:VAL:O	11:BO:77:THR:OG1	2.38	0.41
15:BY:61:ARG:NH2	34:B5:530:C:O2	2.45	0.41
15:BY:111:LYS:HA	15:BY:114:ARG:HH21	1.85	0.41
18:Be:11:ALA:HB1	34:B5:568:G:OP1	2.20	0.41
18:Be:55:ARG:HH21	18:Be:59:GLY:H	1.68	0.41
19:BD:223:LYS:NZ	19:BD:225:TYR:OH	2.52	0.41
22:BP:37:ALA:HB1	22:BP:41:VAL:HG23	2.03	0.41
22:BP:105:VAL:HG11	22:BP:119:PHE:CD1	2.55	0.41
23:BQ:41:PRO:HG2	23:BQ:44:LEU:HD22	2.03	0.41
27:BU:41:ILE:O	27:BU:103:ILE:HD11	2.19	0.41
28:BZ:50:ILE:HA	28:BZ:54:VAL:HB	2.02	0.41
31:Bg:61:PHE:HB3	31:Bg:92:TRP:CZ3	2.56	0.41
31:Bg:116:ASP:CG	31:Bg:121:MET:H	2.27	0.41
34:B5:67:A:O4'	34:B5:84:A:N6	2.52	0.41
34:B5:142:G:C8	34:B5:266:A:N6	2.88	0.41
34:B5:485:A:N1	34:B5:504:U:O2'	2.49	0.41
34:B5:768:C:H2'	34:B5:769:A:O4'	2.20	0.41
34:B5:978:A:C4	34:B5:979:A:C8	3.08	0.41
34:B5:1239:U:H3	34:B5:1246:C:N4	2.19	0.41
34:B5:1279:C:C2'	34:B5:1280:4AC:H5'	2.50	0.41
34:B5:1633:A:H4'	34:B5:1634:C:OP2	2.19	0.41
37:AC:42:VAL:HG12	37:AC:236:LEU:HD21	2.02	0.41
38:A1:103:G:OP1	48:AL:70:ARG:NE	2.45	0.41
38:A1:215:G:OP1	61:AY:12:ARG:NH2	2.53	0.41
38:A1:522:A:C2	38:A1:523:A:H1'	2.56	0.41
38:A1:681:U:H2'	38:A1:682:U:O4'	2.20	0.41
38:A1:709:A:H1'	63:Aa:57:GLY:HA2	2.03	0.41
38:A1:879:U:H4'	52:AP:132:ALA:HB3	2.01	0.41
38:A1:1744:G:H2'	38:A1:1745:C:C6	2.55	0.41
38:A1:2265:C:H2'	38:A1:2266:PSU:H6	1.85	0.41
38:A1:3169:U:O2'	38:A1:3170:A:H8	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:3198:U:C4	45:AH:26:LYS:HE2	2.56	0.41
38:A1:3362:A:H2'	38:A1:3363:U:O4'	2.21	0.41
40:A4:56:G:H2'	40:A4:57:C:O4'	2.20	0.41
42:AE:102:ASN:N	42:AE:102:ASN:OD1	2.52	0.41
45:AH:10:ILE:O	45:AH:52:LEU:HD12	2.20	0.41
54:AR:148:ASP:O	54:AR:151:ARG:N	2.49	0.41
64:Ab:28:LYS:HE3	64:Ab:29:TYR:CZ	2.55	0.41
64:Ab:49:GLY:O	64:Ab:52:LYS:HG3	2.20	0.41
74:Al:24:PRO:HD2	74:Al:27:ILE:HD12	2.02	0.41
80:DC:381:TYR:HB3	80:DC:401:PHE:HE2	1.85	0.41
80:DC:563:TYR:HB2	80:DC:679:GLU:OE2	2.19	0.41
80:DC:736:PRO:CD	80:DC:792:ALA:HA	2.50	0.41
80:DC:799:ASP:CG	80:DC:800:HIS:H	2.28	0.41
2:BB:81:PHE:CE2	2:BB:109:LYS:HE2	2.56	0.41
4:BE:188:ASN:HD22	4:BE:191:ARG:NH1	2.19	0.41
7:BI:165:LEU:HD23	7:BI:165:LEU:HA	1.92	0.41
10:BN:71:ILE:O	10:BN:75:LEU:HD23	2.21	0.41
10:BN:116:ILE:H	10:BN:116:ILE:HD12	1.85	0.41
13:BW:27:ILE:HB	13:BW:61:ILE:HG12	2.01	0.41
17:Bb:51:GLN:NE2	34:B5:871:G:O4'	2.52	0.41
19:BD:43:PRO:C	19:BD:45:LYS:H	2.28	0.41
20:BF:92:ARG:NH2	34:B5:1612:U:H5''	2.35	0.41
22:BP:86:VAL:HG12	22:BP:88:GLU:H	1.85	0.41
24:BR:32:LYS:HD2	24:BR:47:ARG:NH2	2.35	0.41
26:BT:65:ILE:HG22	26:BT:124:ILE:HB	2.02	0.41
27:BU:46:GLU:C	27:BU:49:ASN:H	2.28	0.41
31:Bg:169:ILE:HD13	31:Bg:183:LEU:HD11	2.03	0.41
31:Bg:246:SER:HB2	31:Bg:251:TRP:HB2	2.02	0.41
34:B5:29:U:H2'	34:B5:30:G:H8	1.85	0.41
34:B5:116:U:H2'	34:B5:117:U:C6	2.55	0.41
34:B5:183:U:H2'	34:B5:184:C:H6	1.84	0.41
34:B5:408:C:C4	34:B5:409:C:N4	2.89	0.41
34:B5:811:A:H2	34:B5:816:G:C2	2.37	0.41
34:B5:815:G:C4	54:AR:162:ARG:HG3	2.55	0.41
34:B5:845:G:N3	34:B5:845:G:H5'	2.35	0.41
34:B5:1080:U:H2'	34:B5:1081:A:O4'	2.20	0.41
34:B5:1322:A:H2'	34:B5:1323:C:C6	2.55	0.41
34:B5:1650:U:H2'	34:B5:1651:A:H8	1.85	0.41
36:AB:14:LEU:HD23	36:AB:14:LEU:HA	1.86	0.41
36:AB:20:LYS:NZ	38:A1:3140:G:H5'	2.35	0.41
38:A1:105:C:H2'	38:A1:106:A:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:947:G:H5''	67:Ae:55:ILE:CG1	2.45	0.41
38:A1:992:A:O2'	38:A1:993:G:H5'	2.20	0.41
38:A1:1473:G:H2'	38:A1:1474:A:C8	2.55	0.41
38:A1:2364:G:H22	38:A1:2396:G:H1'	1.85	0.41
38:A1:2488:A:N3	38:A1:2488:A:H2'	2.36	0.41
38:A1:2549:G:O2'	44:AG:33:ASN:ND2	2.37	0.41
38:A1:2703:A:N6	41:AD:28:THR:O	2.52	0.41
38:A1:3153:U:H4'	38:A1:3154:C:N3	2.35	0.41
41:AD:33:ARG:O	41:AD:37:VAL:HG22	2.20	0.41
42:AE:133:GLU:HA	42:AE:136:GLU:HG3	2.03	0.41
43:AF:130:ILE:O	43:AF:134:VAL:HG22	2.19	0.41
45:AH:174:LYS:HB3	75:Am:127:LEU:HD11	2.03	0.41
46:AI:21:ARG:NH1	46:AI:22:TYR:CZ	2.87	0.41
47:AJ:89:TYR:HB2	47:AJ:167:TYR:HB3	2.02	0.41
47:AJ:117:ASP:OD1	47:AJ:117:ASP:N	2.51	0.41
48:AL:85:LEU:HD12	48:AL:89:TYR:CD2	2.55	0.41
52:AP:131:ARG:HG3	52:AP:137:ASN:ND2	2.35	0.41
55:AS:10:ILE:O	55:AS:59:VAL:HG12	2.21	0.41
56:AT:8:ARG:HD2	56:AT:15:PHE:HD2	1.85	0.41
58:AV:104:ASN:ND2	58:AV:108:GLU:HB3	2.35	0.41
60:AX:38:LEU:HD12	60:AX:38:LEU:H	1.86	0.41
60:AX:77:GLU:HG2	60:AX:78:ASP:N	2.35	0.41
70:Ah:15:GLU:OE1	70:Ah:15:GLU:N	2.48	0.41
71:Ai:55:ARG:HA	71:Ai:58:ILE:HG22	2.02	0.41
76:An:6:ARG:HD3	76:An:6:ARG:C	2.46	0.41
80:DC:28:VAL:HG13	80:DC:108:HIS:CE1	2.56	0.41
80:DC:35:LEU:HD21	80:DC:158:ASN:HD22	1.84	0.41
80:DC:294:ASP:OD1	80:DC:294:ASP:N	2.53	0.41
1:BA:74:VAL:HA	1:BA:96:THR:O	2.20	0.41
2:BB:23:PRO:O	2:BB:26:ARG:HG2	2.21	0.41
4:BE:47:PHE:CE1	4:BE:101:LEU:HD21	2.56	0.41
4:BE:133:LYS:HD2	4:BE:134:LYS:HZ2	1.85	0.41
6:BH:143:LEU:HD13	6:BH:149:ILE:HG12	2.03	0.41
7:BI:24:LYS:NZ	34:B5:400:A:N7	2.45	0.41
7:BI:49:ARG:HD3	34:B5:333:A:C5	2.56	0.41
7:BI:57:ALA:HB2	7:BI:177:GLY:HA2	2.02	0.41
7:BI:70:GLU:HB3	7:BI:112:TRP:HH2	1.85	0.41
7:BI:75:LYS:HD3	34:B5:258:C:H4'	2.02	0.41
7:BI:123:LYS:HD2	7:BI:123:LYS:HA	1.83	0.41
7:BI:195:ARG:HH22	9:BL:11:ARG:HA	1.85	0.41
9:BL:2:SER:OG	9:BL:3:THR:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BN:18:TYR:O	13:BW:56:HIS:ND1	2.53	0.41
13:BW:66:ASN:OD1	13:BW:68:ARG:HB2	2.20	0.41
15:BY:22:GLN:HA	15:BY:74:LEU:HD13	2.01	0.41
21:BK:61:TRP:NE1	30:Bd:23:VAL:HG13	2.35	0.41
22:BP:21:ASP:OD1	22:BP:22:LEU:N	2.52	0.41
25:BS:68:ARG:O	25:BS:72:ILE:HG13	2.20	0.41
26:BT:28:LEU:HB2	26:BT:55:TYR:CZ	2.56	0.41
26:BT:73:VAL:HG13	34:B5:1499:G:OP1	2.20	0.41
34:B5:110:U:H2'	34:B5:111:U:O4'	2.20	0.41
34:B5:289:U:H2'	34:B5:290:G:O4'	2.20	0.41
34:B5:325:G:C6	34:B5:344:A:C6	3.08	0.41
34:B5:454:U:H3'	34:B5:455:C:C6	2.54	0.41
34:B5:595:G:H2'	34:B5:596:C:C6	2.56	0.41
34:B5:753:A:O2'	34:B5:754:A:O4'	2.22	0.41
34:B5:896:U:H2'	34:B5:897:C:O4'	2.21	0.41
34:B5:1469:A:HO2'	34:B5:1540:G:H21	1.60	0.41
34:B5:1597:A:C5	34:B5:1598:U:C4	3.09	0.41
35:AA:246:LEU:HD11	38:A1:2154:U:OP2	2.21	0.41
37:AC:188:ARG:NE	37:AC:197:ARG:O	2.37	0.41
38:A1:260:C:H2'	38:A1:261:U:C6	2.56	0.41
38:A1:290:G:C6	38:A1:291:C:C4	3.08	0.41
38:A1:551:A:HO2'	38:A1:552:G:P	2.41	0.41
38:A1:792:G:H4'	63:Aa:2:PRO:HD3	2.01	0.41
38:A1:2424:A:H5'	50:AN:89:VAL:HB	2.03	0.41
38:A1:3027:A:O2'	80:DC:27:HIS:NE2	2.53	0.41
38:A1:3211:C:H2'	38:A1:3212:C:C6	2.56	0.41
38:A1:3254:G:H2'	38:A1:3255:U:C6	2.55	0.41
38:A1:3320:A:H2'	38:A1:3321:C:C6	2.56	0.41
38:A1:3374:U:P	66:Ad:70:ARG:HH12	2.44	0.41
39:A3:13:A:OP1	39:A3:111:U:H1'	2.20	0.41
41:AD:51:LEU:HB3	41:AD:146:LEU:HA	2.03	0.41
42:AE:172:HIS:CD2	42:AE:173:MET:HG2	2.56	0.41
48:AL:94:GLY:HA3	70:Ah:116:TYR:OH	2.20	0.41
49:AM:36:VAL:HG21	49:AM:47:ASP:CG	2.46	0.41
51:AO:12[A]:LYS:HG3	51:AO:40[A]:GLU:HG2	2.01	0.41
56:AT:62:GLY:HA3	56:AT:76:ILE:HD13	2.03	0.41
56:AT:91:LEU:HD23	56:AT:91:LEU:HA	1.80	0.41
65:Ac:23:TYR:CD2	65:Ac:23:TYR:C	2.99	0.41
79:E:46:ASP:OD1	79:E:47:LYS:N	2.48	0.41
80:DC:578:LYS:HE2	80:DC:585:ARG:CZ	2.50	0.41
81:EC:6777:C:H5'	81:EC:6778:C:H2'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BB:109:LYS:O	2:BB:113:MET:HG2	2.21	0.41
3:BC:82:ASN:CB	3:BC:101:VAL:HG22	2.51	0.41
4:BE:196:VAL:HG21	4:BE:211:LYS:HG3	2.01	0.41
9:BL:118:GLN:HG2	9:BL:121:ASP:OD2	2.21	0.41
10:BN:114:ARG:CZ	34:B5:953:G:H4'	2.50	0.41
11:BO:64:ALA:HB1	11:BO:105:LEU:CD1	2.50	0.41
13:BW:95:PRO:HG3	13:BW:130:TYR:CD2	2.55	0.41
14:BX:106:GLY:O	34:B5:599:A:H4'	2.20	0.41
15:BY:49:LYS:HA	15:BY:49:LYS:HD3	1.90	0.41
19:BD:132:LYS:HE3	19:BD:156:PHE:HB3	2.03	0.41
19:BD:173:ARG:HD3	19:BD:173:ARG:HA	1.89	0.41
27:BU:31:VAL:HG13	27:BU:32:LYS:HD2	2.03	0.41
31:Bg:171:SER:O	31:Bg:179:LYS:N	2.41	0.41
31:Bg:210:LEU:HD11	31:Bg:222:LEU:HB3	2.03	0.41
31:Bg:210:LEU:HD11	31:Bg:222:LEU:HD12	2.01	0.41
34:B5:31:C:O2'	34:B5:547:U:OP1	2.38	0.41
34:B5:341:A:H2'	34:B5:342:C:H6	1.83	0.41
34:B5:534:A:C2	34:B5:535:A:H1'	2.56	0.41
34:B5:761:G:N2	34:B5:790:U:O4	2.54	0.41
34:B5:772:G:H2'	34:B5:773:C:C6	2.56	0.41
34:B5:848:C:HO2'	34:B5:850:A:N6	2.19	0.41
34:B5:1057:U:H2'	34:B5:1058:U:O4'	2.20	0.41
34:B5:1132:A:H2'	34:B5:1133:A:H8	1.85	0.41
34:B5:1156:C:H2'	34:B5:1157:A:H8	1.86	0.41
34:B5:1345:A:H2'	34:B5:1348:A:N6	2.35	0.41
34:B5:1378:U:H2'	34:B5:1379:C:C6	2.54	0.41
34:B5:1452:U:H2'	34:B5:1453:G:H8	1.77	0.41
34:B5:1769:U:O2'	34:B5:1770:U:H5'	2.20	0.41
34:B5:1790:A:O2'	34:B5:1791:A:H5'	2.21	0.41
36:AB:53:MET:HE2	38:A1:3049:A:C8	2.56	0.41
36:AB:113:GLU:HG3	36:AB:176:ALA:HB2	2.01	0.41
38:A1:179:C:N3	38:A1:238:A:N1	2.68	0.41
38:A1:698:U:H2'	38:A1:699:A:O4'	2.21	0.41
38:A1:970:A:H2'	38:A1:971:G:C8	2.55	0.41
38:A1:1211:U:H2'	38:A1:1212:A:C8	2.56	0.41
38:A1:1259:A:O2'	38:A1:1280:C:H1'	2.21	0.41
38:A1:1393:A:H2'	38:A1:1394:A:O4'	2.20	0.41
38:A1:1415:U:H2'	38:A1:1416:C:O4'	2.21	0.41
38:A1:1470:U:H2'	38:A1:1471:U:H6	1.85	0.41
38:A1:1729:A:N6	65:Ac:49:PRO:HD3	2.34	0.41
38:A1:2152:A:H2'	38:A1:2153:U:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:2279:A:N7	38:A1:2288:G:C8	2.89	0.41
38:A1:2505:U:H2'	38:A1:2506:U:H5''	2.02	0.41
38:A1:2717:U:H2'	38:A1:2718:U:H6	1.84	0.41
38:A1:3026:G:N2	38:A1:3028:G:H3'	2.34	0.41
38:A1:3277:U:H3'	38:A1:3278:C:H6	1.86	0.41
39:A3:27:A:O2'	39:A3:56:A:N1	2.48	0.41
42:AE:170:LYS:HD3	42:AE:172:HIS:HE2	1.85	0.41
43:AF:99:PRO:HA	43:AF:130:ILE:HG22	2.03	0.41
44:AG:128:LYS:HA	44:AG:128:LYS:HD2	1.89	0.41
46:AI:210:TYR:HA	46:AI:217:PHE:CE2	2.56	0.41
48:AL:103:ASN:ND2	48:AL:109:PHE:HD1	2.18	0.41
51:AO:47[A]:PHE:CD2	51:AO:47[A]:PHE:C	2.99	0.41
55:AS:136:LYS:O	55:AS:137:ARG:HD3	2.21	0.41
63:Aa:83:PRO:O	63:Aa:87:ARG:HG3	2.21	0.41
66:Ad:11:GLU:OE2	66:Ad:74:ARG:NE	2.49	0.41
69:Ag:51:LEU:HD23	69:Ag:51:LEU:HA	1.90	0.41
78:Ap:59:CYS:C	78:Ap:61:LYS:H	2.28	0.41
81:EC:6888:A:H2'	81:EC:6889:A:H2'	2.03	0.41
2:BB:64:ARG:NH1	11:BO:37:GLU:OE1	2.53	0.41
3:BC:144:TRP:C	13:BW:97:ARG:HH21	2.22	0.41
3:BC:238:SER:OG	3:BC:240:LEU:HB2	2.20	0.41
9:BL:4:GLU:H	9:BL:4:GLU:CD	2.28	0.41
18:Be:35:TYR:HA	18:Be:38:LEU:HG	2.02	0.41
19:BD:16:VAL:HG21	30:Bd:36:LEU:HD22	2.02	0.41
20:BF:98:MET:O	20:BF:104:ASN:HA	2.20	0.41
22:BP:9:LYS:HE2	22:BP:26:LEU:HD21	2.03	0.41
27:BU:83:GLU:OE2	30:Bd:55:PHE:HB2	2.20	0.41
34:B5:10:G:H1	34:B5:1144:U:H3	1.68	0.41
34:B5:182:A:O2'	34:B5:183:U:H5'	2.20	0.41
34:B5:206:A:C4	34:B5:262:U:C2	3.09	0.41
34:B5:605:A:OP2	34:B5:606:A:O2'	2.33	0.41
34:B5:1012:U:H2'	34:B5:1013:A:H8	1.85	0.41
34:B5:1120:U:H2'	34:B5:1121:C:H6	1.83	0.41
34:B5:1515:A:O2'	34:B5:1518:C:N4	2.53	0.41
34:B5:1547:A:H61	34:B5:1565:C:N4	2.19	0.41
34:B5:1781:MA6:H8	34:B5:1781:MA6:O5'	2.20	0.41
37:AC:309:ARG:HH21	38:A1:1361:U:P	2.43	0.41
38:A1:415:G:H2'	38:A1:416:A:H8	1.85	0.41
38:A1:443:G:H5'	38:A1:445:G:N2	2.36	0.41
38:A1:624:G:C2	38:A1:625:G:C8	3.08	0.41
38:A1:1047:A:N7	46:AI:15:LYS:HE3	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1176:C:H2'	38:A1:1177:G:N2	2.36	0.41
38:A1:1368:U:C2	38:A1:1369:A:C8	3.09	0.41
38:A1:1499:C:H2'	38:A1:1500:G:H8	1.86	0.41
38:A1:1602:A:H2'	38:A1:1603:A:C4	2.56	0.41
38:A1:2263:C:H2'	38:A1:2264:PSU:O4'	2.21	0.41
38:A1:2465:G:H2'	38:A1:2466:G:O4'	2.20	0.41
38:A1:2612:U:H2'	38:A1:2613:U:O4'	2.20	0.41
38:A1:2620:G:C4	38:A1:2621:G:C8	3.09	0.41
38:A1:2689:A:N3	38:A1:2689:A:H2'	2.36	0.41
38:A1:2879:C:C4	38:A1:2880:PSU:C2	3.09	0.41
38:A1:3182:G:H2'	38:A1:3183:A:C8	2.55	0.41
47:AJ:129:VAL:CG1	47:AJ:131:MET:HE3	2.51	0.41
50:AN:68:ARG:CD	50:AN:128:LYS:HG3	2.50	0.41
55:AS:139:TYR:CD1	55:AS:140:VAL:HG23	2.56	0.41
68:Af:32:ILE:HG22	68:Af:33:GLU:N	2.36	0.41
76:An:1:MET:HE3	76:An:6:ARG:HB2	2.02	0.41
80:DC:30:HIS:HB3	80:DC:128:VAL:HG12	2.02	0.41
80:DC:73:THR:HG21	80:DC:386:VAL:HG13	2.02	0.41
80:DC:161:ASP:O	80:DC:163:ALA:HA	2.20	0.41
1:BA:179:ARG:NH2	1:BA:191:ARG:HG2	2.36	0.41
3:BC:166:THR:HB	3:BC:201:ASN:HB2	2.03	0.41
4:BE:148:ARG:O	4:BE:168:LYS:NZ	2.53	0.41
5:BG:65:GLN:HA	5:BG:100:ALA:HB2	2.03	0.41
8:BJ:141:VAL:HG12	8:BJ:143:ILE:H	1.85	0.41
14:BX:3:LYS:HG3	14:BX:7:ARG:NH2	2.35	0.41
15:BY:62:THR:HG22	15:BY:63:GLN:N	2.36	0.41
20:BF:92:ARG:HA	20:BF:92:ARG:HD2	1.92	0.41
24:BR:20:TYR:CD2	24:BR:38:ILE:HD12	2.56	0.41
27:BU:21:LYS:CA	27:BU:94:GLU:HG2	2.51	0.41
34:B5:295:A:H2'	34:B5:296:U:H6	1.84	0.41
34:B5:419:G:H2'	34:B5:420:A:H8	1.86	0.41
34:B5:900:A:H2'	34:B5:901:G:H8	1.86	0.41
34:B5:1248:C:H2'	34:B5:1249:U:C6	2.53	0.41
34:B5:1360:A:H8	34:B5:1360:A:O5'	2.02	0.41
34:B5:1438:G:H2'	34:B5:1439:C:H6	1.86	0.41
34:B5:1533:C:H4'	34:B5:1539:G:C6	2.56	0.41
34:B5:1609:U:C4	34:B5:1610:G:C5	3.09	0.41
36:AB:163:HIS:ND1	36:AB:164:THR:O	2.53	0.41
37:AC:64:SER:HA	37:AC:75:PRO:HA	2.03	0.41
37:AC:141:ARG:NH1	38:A1:1385:C:OP1	2.54	0.41
38:A1:12:A:O2'	38:A1:13:A:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:273:A:H2'	38:A1:274:G:C8	2.55	0.41
38:A1:288:C:H2'	38:A1:289:A:H8	1.85	0.41
38:A1:686:G:O6	48:AL:32:LYS:NZ	2.53	0.41
38:A1:922:U:OP1	72:Aj:3:LYS:NZ	2.39	0.41
38:A1:1329:U:OP1	68:Af:17:GLN:NE2	2.39	0.41
38:A1:1337:A:C6	38:A1:1338:C:C4	3.09	0.41
38:A1:1342:C:H2'	38:A1:1343:A:H8	1.86	0.41
38:A1:1364:C:OP1	43:AF:110:ARG:NH2	2.30	0.41
38:A1:1477:A:OP1	38:A1:3075:G:O2'	2.38	0.41
38:A1:2368:A:H2'	38:A1:2369:G:C8	2.55	0.41
38:A1:3088:G:H2'	38:A1:3089:C:C6	2.56	0.41
38:A1:3203:U:H2'	38:A1:3204:C:C6	2.56	0.41
39:A3:79:A:H2'	39:A3:80:G:O4'	2.20	0.41
40:A4:64:U:C2	40:A4:65:A:C8	3.09	0.41
40:A4:82:U:H3'	40:A4:83:C:H6	1.85	0.41
45:AH:176:LEU:HD22	75:Am:86:ALA:HB1	2.02	0.41
47:AJ:171:VAL:HG22	47:AJ:172:LEU:H	1.85	0.41
48:AL:37:ASN:O	48:AL:41:THR:HG23	2.21	0.41
51:AO:26[A]:GLN:HG3	55:AS:163:PHE:HZ	1.85	0.41
55:AS:132:THR:CG2	55:AS:133:ALA:H	2.31	0.41
55:AS:152:LEU:HD12	55:AS:152:LEU:HA	1.86	0.41
56:AT:48:ILE:HG13	56:AT:94:GLU:HG2	2.03	0.41
73:Ak:20:VAL:HG21	73:Ak:45:VAL:CG2	2.51	0.41
76:An:5:TRP:HA	76:An:8:LYS:HB3	2.02	0.41
79:E:89:ASP:HB2	79:E:92:LYS:HE3	2.03	0.41
85:DC:903:SO1:H81	85:DC:903:SO1:H213	2.02	0.41
2:BB:71:ALA:HB2	2:BB:80:SER:HA	2.03	0.41
2:BB:120:LEU:HD23	2:BB:120:LEU:H	1.86	0.41
3:BC:82:ASN:OD1	3:BC:84:LYS:N	2.54	0.41
3:BC:168:ARG:NH2	34:B5:1098:U:O5'	2.41	0.41
4:BE:43:PRO:HB3	4:BE:81:THR:HA	2.03	0.41
4:BE:115:THR:HG22	4:BE:116:ASP:N	2.36	0.41
4:BE:208:VAL:C	4:BE:219:VAL:HG23	2.45	0.41
6:BH:5:GLN:HE22	6:BH:22:GLN:HA	1.85	0.41
6:BH:43:PHE:CD2	6:BH:46:ILE:HD11	2.56	0.41
8:BJ:38:ASN:HD22	8:BJ:40:LYS:HE2	1.84	0.41
8:BJ:45:ILE:HD11	8:BJ:104:PHE:HB3	2.03	0.41
8:BJ:170:GLY:O	8:BJ:174:ARG:NE	2.53	0.41
11:BO:41:ARG:NH1	34:B5:896:U:H3	2.19	0.41
11:BO:41:ARG:CZ	34:B5:916:U:H3	2.34	0.41
11:BO:42:VAL:HA	11:BO:46:MET:HE1	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BV:35:ASN:OD1	12:BV:50:TYR:HB2	2.21	0.41
14:BX:65:ASN:ND2	14:BX:116:ASP:OD2	2.44	0.41
14:BX:87:VAL:HA	14:BX:124:VAL:HG12	2.02	0.41
19:BD:7:LYS:HG2	34:B5:1515:A:OP2	2.21	0.41
19:BD:40:ARG:HG2	19:BD:47:GLU:OE2	2.21	0.41
19:BD:66:ILE:O	19:BD:70:THR:HG23	2.21	0.41
19:BD:96:LEU:HD13	19:BD:190:ARG:HB2	2.03	0.41
19:BD:106:LYS:NZ	19:BD:173:ARG:HB3	2.36	0.41
21:BK:32:HIS:N	21:BK:37:THR:O	2.36	0.41
24:BR:7:LYS:HE2	24:BR:7:LYS:HB2	1.89	0.41
25:BS:35:ILE:H	25:BS:35:ILE:HD12	1.86	0.41
26:BT:76:LEU:O	26:BT:80:TYR:HD2	2.04	0.41
31:Bg:90:ARG:HG2	31:Bg:99:THR:HG23	2.03	0.41
31:Bg:137:LYS:HE3	31:Bg:139:GLN:HB3	2.03	0.41
31:Bg:255:ALA:HB2	31:Bg:292:LEU:HD21	2.03	0.41
33:BM:29:LYS:HD3	33:BM:100:TRP:CD1	2.56	0.41
33:BM:34:THR:OG1	33:BM:126:TRP:HD1	2.03	0.41
33:BM:88:LEU:HD23	33:BM:88:LEU:H	1.86	0.41
34:B5:84:A:C5	34:B5:85:A:C5	3.09	0.41
34:B5:150:U:H2'	34:B5:151:G:C8	2.56	0.41
34:B5:164:A:H2'	34:B5:165:G:C8	2.56	0.41
34:B5:283:U:C2	34:B5:284:G:C8	3.09	0.41
34:B5:343:C:H2'	34:B5:344:A:C8	2.56	0.41
34:B5:394:C:H2'	34:B5:395:U:C6	2.56	0.41
34:B5:572:C:H2'	34:B5:573:C:C6	2.55	0.41
34:B5:766:PSU:O2	34:B5:769:A:H3'	2.21	0.41
34:B5:1118:G:H2'	34:B5:1119:G:C8	2.56	0.41
34:B5:1144:U:H2'	34:B5:1145:U:H6	1.86	0.41
34:B5:1181:PSU:N3	34:B5:1458:G:N1	2.68	0.41
34:B5:1366:U:H2'	34:B5:1367:G:C8	2.56	0.41
34:B5:1537:C:OP2	34:B5:1572:G:N2	2.52	0.41
34:B5:1607:G:C4	34:B5:1608:U:C5	3.09	0.41
34:B5:1772:C:H2'	34:B5:1773:4AC:O4'	2.21	0.41
36:AB:166:ILE:HD13	36:AB:173:GLN:HG2	2.02	0.41
37:AC:161:LYS:HB3	37:AC:161:LYS:HE3	1.90	0.41
38:A1:38:U:H2'	38:A1:39:A:O4'	2.20	0.41
38:A1:70:A:H2	38:A1:72:C:H42	1.69	0.41
38:A1:366:A:H2'	38:A1:367:A:O4'	2.21	0.41
38:A1:579:G:H2'	38:A1:580:C:C6	2.56	0.41
38:A1:646:A:C2	38:A1:2375:G:C2	3.09	0.41
38:A1:655:C:OP2	67:Ae:27:ARG:HD3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:682:U:H2'	50:AN:202:TYR:CD2	2.56	0.41
38:A1:749:C:C4	38:A1:750:G:C8	3.09	0.41
38:A1:1079:A:H4'	41:AD:140:ARG:O	2.20	0.41
38:A1:1213:G:O2'	38:A1:1214:U:H5'	2.21	0.41
38:A1:1223:A:N7	38:A1:1286:A:C6	2.89	0.41
38:A1:1341:U:H2'	38:A1:1342:C:C6	2.56	0.41
38:A1:1499:C:N4	38:A1:1500:G:O6	2.54	0.41
38:A1:1520:G:H2'	38:A1:1521:G:O4'	2.21	0.41
38:A1:1718:G:H4'	54:AR:117:LYS:HZ3	1.85	0.41
38:A1:1802:C:H2'	38:A1:1803:C:C6	2.55	0.41
38:A1:1861:G:H1'	38:A1:3066:U:H5''	2.03	0.41
38:A1:2128:C:C2	38:A1:2326:A:C2	3.09	0.41
38:A1:2180:G:H2'	38:A1:2181:C:C6	2.55	0.41
38:A1:2185:G:H2'	38:A1:2186:U:C6	2.55	0.41
38:A1:2258:PSU:C4	38:A1:2259:A:C8	3.09	0.41
38:A1:2568:C:O2'	38:A1:2569:A:O5'	2.35	0.41
38:A1:2656:A:N7	38:A1:2658:G:C8	2.89	0.41
38:A1:2685:C:H2'	38:A1:2686:A:C8	2.56	0.41
38:A1:2863:G:C4	38:A1:2864:A:C8	3.09	0.41
38:A1:2877:G:C4	38:A1:2878:G:C8	3.09	0.41
38:A1:2882:U:H2'	38:A1:2883:U:H6	1.84	0.41
38:A1:3051:U:C2	38:A1:3052:G:C8	3.09	0.41
38:A1:3083:G:H2'	38:A1:3084:C:C6	2.55	0.41
39:A3:22:A:H2'	39:A3:22:A:N3	2.35	0.41
39:A3:61:G:H5''	41:AD:276:LYS:HB2	2.02	0.41
44:AG:38:GLN:HB3	44:AG:39:ALA:H	1.79	0.41
44:AG:97:TYR:HH	44:AG:207:ASP:HB2	1.85	0.41
46:AI:10:ARG:HD2	46:AI:160:PRO:HB2	2.02	0.41
46:AI:162:GLN:HB3	46:AI:164:LYS:NZ	2.36	0.41
50:AN:9:GLU:O	50:AN:12:ARG:HB2	2.21	0.41
50:AN:54:LYS:HA	50:AN:54:LYS:HD2	1.84	0.41
51:AO:43[A]:ILE:HD11	51:AO:138[A]:LEU:HD13	2.03	0.41
57:AU:58:GLU:HA	57:AU:58:GLU:OE2	2.21	0.41
58:AV:55:GLY:HA2	58:AV:122:CYS:SG	2.61	0.41
67:Ae:51:SER:OG	67:Ae:57:TYR:OH	2.37	0.41
69:Ag:93:PHE:HD1	69:Ag:94:LEU:HD22	1.86	0.41
71:Ai:54:GLU:HB3	71:Ai:90:MET:SD	2.60	0.41
71:Ai:67:LYS:NZ	71:Ai:71:LYS:HE3	2.36	0.41
73:Ak:11:PHE:HE2	73:Ak:65:LEU:HD21	1.86	0.41
79:E:3:LYS:HD3	79:E:198:TRP:CH2	2.55	0.41
79:E:53:LEU:HB3	79:E:155:ILE:CG1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:E:65:ILE:HG23	79:E:82:VAL:HB	2.03	0.41
80:DC:157:ILE:N	80:DC:210:ALA:O	2.53	0.41
80:DC:204:PRO:O	80:DC:222:ILE:HD11	2.21	0.41
80:DC:330:ALA:O	80:DC:334:LEU:N	2.49	0.41
80:DC:358:GLU:HB2	80:DC:479:LYS:HZ2	1.86	0.41
80:DC:798:PHE:CD1	80:DC:799:ASP:N	2.89	0.41
80:DC:798:PHE:CE2	85:DC:903:SO1:O17	2.72	0.41
85:DC:903:SO1:O15	85:DC:903:SO1:H203	2.20	0.41
81:EC:6928:G:H3'	81:EC:6929:C:O4'	2.19	0.41
1:BA:52:LYS:HA	1:BA:52:LYS:HD3	1.88	0.41
3:BC:81:MET:HE1	3:BC:186:LYS:HB2	2.02	0.41
4:BE:43:PRO:HB2	4:BE:45:ILE:HG22	2.02	0.41
4:BE:101:LEU:HA	4:BE:101:LEU:HD23	1.83	0.41
4:BE:187:ARG:CZ	34:B5:752:A:H2'	2.50	0.41
6:BH:175:LYS:HD2	6:BH:175:LYS:HA	1.77	0.41
8:BJ:90:LYS:HE2	8:BJ:90:LYS:HB2	1.89	0.41
9:BL:2:SER:HA	9:BL:53:TYR:HB3	2.02	0.41
10:BN:43:LYS:O	65:Ac:16:LEU:HD11	2.21	0.41
14:BX:65:ASN:CG	34:B5:575:C:H41	2.27	0.41
15:BY:135:ASP:OD1	15:BY:135:ASP:N	2.54	0.41
19:BD:38:GLU:HB3	19:BD:49:ILE:CG1	2.51	0.41
20:BF:40:ILE:HG23	20:BF:69:PHE:CZ	2.56	0.41
20:BF:79:ASN:C	20:BF:80:LYS:HD2	2.46	0.41
20:BF:112:ARG:HH12	20:BF:115:LYS:HE2	1.86	0.41
22:BP:52:LYS:CG	22:BP:53:PRO:HD3	2.51	0.41
23:BQ:123:ARG:O	34:B5:1584:G:H5'	2.21	0.41
27:BU:21:LYS:HA	27:BU:21:LYS:HD3	1.79	0.41
27:BU:68:ARG:HH21	27:BU:70:THR:HB	1.85	0.41
28:BZ:59:TYR:HA	28:BZ:101:TYR:O	2.21	0.41
29:Bc:11:LYS:NZ	29:Bc:32:PHE:O	2.54	0.41
29:Bc:12:VAL:HA	29:Bc:30:VAL:HG12	2.01	0.41
30:Bd:20:GLN:HA	30:Bd:27:HIS:CD2	2.56	0.41
31:Bg:42:LEU:HG	31:Bg:68:VAL:HG21	2.02	0.41
33:BM:29:LYS:HE3	33:BM:33:ARG:HB3	2.03	0.41
34:B5:17:C:H2'	34:B5:18:C:H6	1.86	0.41
34:B5:53:G:O6	34:B5:428:A:N6	2.53	0.41
34:B5:306:U:H2'	34:B5:307:G:C8	2.56	0.41
34:B5:393:C:H2'	34:B5:394:C:H6	1.85	0.41
34:B5:1277:G:C5	34:B5:1436:A:N1	2.89	0.41
34:B5:1336:A:H2'	34:B5:1337:A:C8	2.56	0.41
36:AB:361:THR:HG23	36:AB:371:GLN:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AC:99:MET:HE3	37:AC:102:PRO:HA	2.02	0.41
38:A1:573:C:H2'	38:A1:574:U:C6	2.56	0.41
38:A1:729:C:H4'	53:AQ:137:THR:HG22	2.03	0.41
38:A1:1652:G:H2'	38:A1:1653:G:C8	2.55	0.41
38:A1:2389:C:H2'	38:A1:2390:A:H8	1.84	0.41
38:A1:2494:A:H5'	38:A1:2495:C:C6	2.56	0.41
38:A1:2588:U:OP1	44:AG:241:LYS:NZ	2.49	0.41
38:A1:3348:G:O6	38:A1:3357:U:C4	2.72	0.41
39:A3:92:A:H8	39:A3:92:A:O5'	2.04	0.41
41:AD:65:ILE:CG2	41:AD:72:ASP:HB3	2.51	0.41
44:AG:130:TYR:CD2	44:AG:204:ARG:HD2	2.56	0.41
45:AH:87:LYS:HB2	45:AH:87:LYS:HE3	1.89	0.41
46:AI:82:ARG:HD3	46:AI:82:ARG:C	2.46	0.41
48:AL:51:LEU:HD23	48:AL:51:LEU:O	2.21	0.41
53:AQ:64:VAL:HG23	53:AQ:93:ILE:HD11	2.03	0.41
55:AS:8:GLN:HB3	55:AS:64:ILE:CD1	2.44	0.41
63:Aa:112:ILE:HB	63:Aa:130:VAL:HG23	2.02	0.41
68:Af:20:LYS:HE3	68:Af:21:ARG:NH1	2.36	0.41
80:DC:137:VAL:O	80:DC:141:THR:HG23	2.21	0.41
80:DC:308:LYS:NZ	80:DC:326:LYS:HD3	2.36	0.41
80:DC:379:MET:HA	80:DC:470:THR:HG22	2.03	0.41
80:DC:567:VAL:O	80:DC:592:PRO:HB3	2.21	0.41
80:DC:644:ASN:HB3	80:DC:667:PHE:HZ	1.86	0.41
80:DC:733:ILE:HD13	80:DC:795:GLN:O	2.21	0.41
81:EC:6885:G:H2'	81:EC:6886:A:H8	1.86	0.41
1:BA:179:ARG:HH22	1:BA:191:ARG:HG2	1.86	0.40
2:BB:134:VAL:HG13	2:BB:218:LEU:HB2	2.03	0.40
2:BB:219:LYS:HD3	2:BB:219:LYS:HA	1.87	0.40
3:BC:82:ASN:ND2	3:BC:207:LEU:HD21	2.36	0.40
3:BC:157:LYS:HA	3:BC:169:LEU:O	2.21	0.40
3:BC:227:PRO:HA	3:BC:230:TRP:CD2	2.56	0.40
4:BE:30:ARG:HB3	34:B5:449:C:OP1	2.21	0.40
4:BE:136:VAL:HG21	4:BE:148:ARG:NE	2.35	0.40
5:BG:160:ARG:HD3	34:B5:66:U:H3	1.86	0.40
6:BH:39:ARG:N	6:BH:40:PRO:HD2	2.36	0.40
7:BI:138:ASN:ND2	34:B5:189:C:H41	2.19	0.40
9:BL:59:PRO:HB3	9:BL:66:ILE:HD11	2.03	0.40
10:BN:27:LYS:HA	10:BN:27:LYS:HD3	1.90	0.40
13:BW:20:THR:HG21	13:BW:22:LYS:NZ	2.37	0.40
18:Be:37:ARG:HH12	34:B5:478:A:H5'	1.86	0.40
19:BD:24:PHE:O	19:BD:28:GLU:HB3	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:BD:54:ARG:HE	19:BD:56:GLN:HE22	1.69	0.40
20:BF:36:ALA:HB1	20:BF:69:PHE:CE1	2.56	0.40
22:BP:76:VAL:O	22:BP:94:VAL:HA	2.21	0.40
22:BP:85:ILE:N	22:BP:114:HIS:O	2.47	0.40
22:BP:86:VAL:HB	22:BP:89:MET:HE2	2.03	0.40
25:BS:68:ARG:HA	25:BS:71:GLN:CD	2.47	0.40
29:Bc:49:ARG:NH2	29:Bc:50:GLU:O	2.54	0.40
31:Bg:150:TRP:O	31:Bg:173:GLY:HA3	2.21	0.40
34:B5:233:C:H5'	34:B5:234:G:OP1	2.21	0.40
34:B5:301:A:H2'	34:B5:302:PSU:C6	2.57	0.40
34:B5:585:A:H2'	34:B5:586:G:C8	2.56	0.40
36:AB:119:TYR:HD2	36:AB:122:TRP:CE3	2.39	0.40
36:AB:167:ARG:NH1	36:AB:168:LYS:HE2	2.36	0.40
36:AB:266:ARG:HH21	38:A1:2391:G:N2	2.19	0.40
38:A1:32:U:P	50:AN:95:GLN:HB2	2.61	0.40
38:A1:121:A:N6	44:AG:126:SER:HB2	2.36	0.40
38:A1:1175:C:H1'	51:AO:87[A]:MET:HE2	2.02	0.40
38:A1:1279:C:H2'	38:A1:1280:C:C6	2.56	0.40
38:A1:1623:G:OP2	38:A1:1816:A:N6	2.54	0.40
38:A1:1836:C:H2'	38:A1:1837:U:C6	2.56	0.40
38:A1:2355:G:H4'	52:AP:139:TYR:CE1	2.55	0.40
38:A1:2639:G:H2'	38:A1:2640:A:H8	1.85	0.40
38:A1:3033:A:H2'	38:A1:3034:C:C2	2.56	0.40
38:A1:3169:U:O2'	38:A1:3170:A:H2'	2.22	0.40
39:A3:2:G:H5''	41:AD:273:ARG:NH2	2.37	0.40
43:AF:232:ARG:O	43:AF:235:PHE:N	2.48	0.40
44:AG:74:THR:HG21	71:Ai:47:ILE:HB	2.04	0.40
44:AG:82:LEU:HD12	44:AG:180:VAL:HG22	2.02	0.40
46:AI:82:ARG:HD3	46:AI:82:ARG:O	2.21	0.40
46:AI:200:LEU:HD13	46:AI:213:PHE:HD2	1.86	0.40
47:AJ:36:VAL:HG13	47:AJ:37:LEU:HD22	2.02	0.40
49:AM:108:ARG:HA	49:AM:108:ARG:HD2	1.87	0.40
62:AZ:18:TYR:CE1	62:AZ:47:GLU:HG2	2.56	0.40
69:Ag:103:LYS:HD3	69:Ag:106:LYS:HZ1	1.85	0.40
80:DC:636:PHE:HB2	80:DC:640:GLY:O	2.21	0.40
1:BA:119:ARG:HD2	1:BA:119:ARG:HA	1.69	0.40
1:BA:175:TYR:CZ	1:BA:199:PRO:HB3	2.56	0.40
2:BB:89:ASP:HB2	2:BB:97:LEU:HD12	2.03	0.40
2:BB:121:ILE:HG13	2:BB:161:ILE:HD12	2.04	0.40
2:BB:154:SER:O	2:BB:154:SER:OG	2.33	0.40
3:BC:87:GLN:OE1	3:BC:87:GLN:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:BE:71:LYS:HD2	4:BE:76:VAL:HG22	2.04	0.40
4:BE:87:MET:CE	4:BE:123:LEU:HB2	2.51	0.40
7:BI:11:ARG:NH1	7:BI:17:LYS:HG2	2.37	0.40
8:BJ:10:LYS:HD3	34:B5:471:A:OP1	2.21	0.40
8:BJ:80:LEU:HA	8:BJ:83:VAL:HG22	2.03	0.40
10:BN:128:TYR:OH	34:B5:964:U:OP1	2.37	0.40
11:BO:84:ARG:HG2	11:BO:85:ALA:O	2.21	0.40
17:Bb:20:LYS:NZ	34:B5:958:U:OP2	2.42	0.40
18:Be:55:ARG:NH1	34:B5:558:U:OP2	2.54	0.40
19:BD:12:VAL:HB	30:Bd:36:LEU:HD11	2.04	0.40
20:BF:108:LEU:HA	20:BF:111:VAL:HG22	2.02	0.40
22:BP:81:ARG:HB3	22:BP:117:GLY:HA3	2.02	0.40
25:BS:30:TYR:HA	25:BS:33:THR:HG23	2.02	0.40
27:BU:54:GLY:HA3	34:B5:1344:A:O2'	2.21	0.40
33:BM:43:ARG:NH2	34:B5:1256:A:C8	2.89	0.40
34:B5:464:A:N3	34:B5:465:G:C8	2.90	0.40
34:B5:774:A:C4	34:B5:787:G:C2	3.09	0.40
34:B5:1185:U:H2'	34:B5:1458:G:O6	2.21	0.40
34:B5:1493:A:H1'	34:B5:1494:C:H5	1.86	0.40
35:AA:20:THR:HA	35:AA:23:ARG:HG3	2.03	0.40
37:AC:141:ARG:HH22	38:A1:1386:A:C5'	2.35	0.40
37:AC:240:PRO:HD3	37:AC:246:ARG:HB2	2.02	0.40
38:A1:5:G:H3'	38:A1:6:A:H5''	2.03	0.40
38:A1:11:A:H2'	38:A1:12:A:H8	1.85	0.40
38:A1:123:A:C6	38:A1:150:A:C5	3.09	0.40
38:A1:305:U:O2'	38:A1:306:A:N7	2.45	0.40
38:A1:408:A:N6	40:A4:15:G:H1'	2.36	0.40
38:A1:725:G:O6	38:A1:746:A:N6	2.54	0.40
38:A1:1157:G:H5''	43:AF:220:PHE:CE2	2.56	0.40
38:A1:1172:G:O2'	38:A1:1179:A:N1	2.52	0.40
38:A1:1194:G:H8	38:A1:1194:G:O5'	2.04	0.40
38:A1:1305:U:O2'	38:A1:1306:G:H2'	2.21	0.40
38:A1:1677:G:H5'	57:AU:97:SER:CB	2.52	0.40
38:A1:2390:A:H2'	38:A1:2391:G:O4'	2.22	0.40
38:A1:2764:C:N4	38:A1:2794:G:H1	2.20	0.40
38:A1:3073:A:H2'	38:A1:3074:G:O4'	2.21	0.40
39:A3:7:G:C2	39:A3:8:G:C5	3.09	0.40
41:AD:215:ASP:N	41:AD:215:ASP:OD1	2.54	0.40
41:AD:271:LYS:HA	41:AD:271:LYS:HD2	1.98	0.40
44:AG:91:PHE:CZ	44:AG:180:VAL:HG11	2.56	0.40
46:AI:4:ARG:NH2	46:AI:99:ILE:HG13	2.31	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:AN:136:ASP:C	50:AN:138:GLN:H	2.29	0.40
52:AP:41:LEU:HD12	52:AP:41:LEU:HA	1.91	0.40
55:AS:106:LEU:HD12	55:AS:110:MET:HG2	2.03	0.40
63:Aa:86:LYS:HB2	63:Aa:86:LYS:HE2	1.90	0.40
78:Ap:84:ARG:CZ	78:Ap:84:ARG:HB3	2.51	0.40
80:DC:400:VAL:HG22	80:DC:452:ASN:O	2.22	0.40
80:DC:511:LEU:HB2	80:DC:545:LEU:HD21	2.02	0.40
81:EC:6832:G:O2'	81:EC:6833:G:H5''	2.20	0.40
1:BA:6:THR:HB	1:BA:191:ARG:HD3	2.02	0.40
1:BA:16:LEU:O	1:BA:20:ALA:N	2.48	0.40
4:BE:249:ALA:O	4:BE:252:ARG:HG2	2.20	0.40
7:BI:43:ILE:HG23	34:B5:260:U:C5	2.56	0.40
7:BI:55:TYR:HB2	7:BI:176:SER:C	2.47	0.40
8:BJ:78:ARG:HH11	8:BJ:78:ARG:HG3	1.87	0.40
8:BJ:119:ALA:O	8:BJ:120:LYS:HG2	2.21	0.40
8:BJ:133:HIS:ND1	8:BJ:163:PRO:HD2	2.37	0.40
11:BO:99:GLN:N	11:BO:99:GLN:CD	2.79	0.40
15:BY:111:LYS:HA	15:BY:114:ARG:NH2	2.37	0.40
20:BF:216:GLU:HA	20:BF:219:ARG:HE	1.87	0.40
20:BF:218:GLU:O	20:BF:222:LYS:N	2.53	0.40
24:BR:10:LYS:HD3	24:BR:53:TYR:CE2	2.56	0.40
24:BR:55:THR:HA	24:BR:58:MET:HG2	2.02	0.40
26:BT:90:PRO:HG3	34:B5:1467:C:H4'	2.02	0.40
29:Bc:32:PHE:HE1	29:Bc:59:SER:HB3	1.87	0.40
31:Bg:51:ASP:O	31:Bg:53:LYS:N	2.55	0.40
33:BM:103:LEU:HD13	34:B5:1227:A:C4	2.57	0.40
34:B5:214:G:OP1	34:B5:215:A:H4'	2.21	0.40
34:B5:696:C:H3'	34:B5:697:C:H3'	2.03	0.40
34:B5:752:A:C6	34:B5:753:A:C6	3.10	0.40
34:B5:812:A:O4'	34:B5:858:G:N2	2.54	0.40
34:B5:940:A:H2'	34:B5:941:A:C8	2.55	0.40
34:B5:982:U:O4	34:B5:983:A:N6	2.55	0.40
35:AA:50:HIS:CD2	38:A1:1795:U:H2'	2.56	0.40
35:AA:143:GLU:HG3	35:AA:145:LYS:HB2	2.04	0.40
36:AB:282:ILE:HG23	36:AB:322:ILE:HG23	2.03	0.40
37:AC:318:LEU:HD11	43:AF:146:GLN:HE21	1.85	0.40
38:A1:200:C:H5'	38:A1:221:A:C2	2.56	0.40
38:A1:252:U:O2'	38:A1:253:A:OP2	2.36	0.40
38:A1:657:A:H2'	38:A1:658:G:C8	2.57	0.40
38:A1:767:U:O2'	38:A1:768:C:H6	2.04	0.40
38:A1:1214:U:H2'	38:A1:1215:U:C6	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1284:C:H5	38:A1:1285:G:C6	2.39	0.40
38:A1:1458:U:H2'	38:A1:1459:C:C6	2.56	0.40
38:A1:1480:G:O2'	38:A1:1871:U:O4	2.36	0.40
38:A1:1496:C:H5'	38:A1:1842:A:N1	2.36	0.40
38:A1:2765:C:H2'	38:A1:2766:U:H6	1.86	0.40
38:A1:3197:G:H2'	38:A1:3198:U:H3'	2.03	0.40
38:A1:3318:G:O2'	38:A1:3319:U:H5''	2.21	0.40
38:A1:3339:A:H2'	38:A1:3340:G:C8	2.56	0.40
39:A3:48:U:H1'	41:AD:222:LEU:HD12	2.04	0.40
43:AF:77:VAL:HG22	56:AT:139:ARG:HG2	2.03	0.40
50:AN:60:VAL:CG1	50:AN:134:LEU:HB2	2.52	0.40
56:AT:60:LYS:HA	56:AT:60:LYS:HD3	1.83	0.40
60:AX:115:ARG:HH11	60:AX:121:LYS:HE2	1.86	0.40
65:Ac:15:ALA:HA	65:Ac:18:ILE:HG22	2.03	0.40
67:Ae:11:LYS:C	67:Ae:13:HIS:H	2.30	0.40
67:Ae:16:LYS:HD3	67:Ae:17:PHE:N	2.37	0.40
81:EC:6833:G:O2'	81:EC:6872:A:N6	2.55	0.40
81:EC:6891:G:H22	81:EC:6940:U:H3	1.69	0.40
1:BA:29:VAL:HG22	1:BA:149:LEU:HB3	2.03	0.40
2:BB:193:ILE:H	2:BB:193:ILE:HD12	1.85	0.40
3:BC:235:LEU:HD23	12:BV:52:THR:HG23	2.03	0.40
5:BG:83:CYS:HA	34:B5:161:U:O3'	2.21	0.40
7:BI:136:SER:OG	34:B5:188:A:O5'	2.36	0.40
9:BL:40:LEU:HG	34:B5:246:G:C4	2.56	0.40
13:BW:22:LYS:HG2	17:Bb:3:LEU:CB	2.51	0.40
15:BY:106:GLN:HA	15:BY:109:LYS:HD2	2.03	0.40
18:Be:33:ARG:HG3	18:Be:34:ALA:N	2.36	0.40
19:BD:76:ARG:HE	21:BK:22:VAL:HG11	1.86	0.40
21:BK:59:PHE:CZ	21:BK:62:GLN:HA	2.56	0.40
23:BQ:77:GLN:O	23:BQ:81:ILE:HG12	2.21	0.40
27:BU:27:THR:CB	27:BU:88:LYS:HG2	2.51	0.40
27:BU:97:VAL:O	27:BU:100:VAL:HG22	2.21	0.40
31:Bg:128:ASP:OD1	31:Bg:128:ASP:N	2.46	0.40
34:B5:300:A:C6	34:B5:301:A:C6	3.09	0.40
34:B5:449:C:H2'	34:B5:450:U:H6	1.86	0.40
34:B5:1391:A:H2'	34:B5:1392:U:H6	1.86	0.40
34:B5:1454:G:C5	34:B5:1455:G:C5	3.10	0.40
34:B5:1553:G:N2	34:B5:1555:A:H3'	2.36	0.40
34:B5:1691:A:H61	34:B5:1712:A:N6	2.19	0.40
38:A1:118:U:O2	38:A1:121:A:H5''	2.22	0.40
38:A1:173:G:H5''	38:A1:174:C:H5''	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:269:G:H5''	50:AN:14:LYS:NZ	2.36	0.40
38:A1:600:G:N2	38:A1:603:A:OP2	2.53	0.40
38:A1:760:G:HO2'	38:A1:770:G:H22	1.60	0.40
38:A1:956:U:H2'	38:A1:957:C:C6	2.57	0.40
38:A1:1253:U:N3	38:A1:1263:A:C6	2.89	0.40
38:A1:1845:G:O2'	72:Aj:5:THR:HG22	2.21	0.40
38:A1:2118:C:H2'	38:A1:2119:A:O4'	2.21	0.40
38:A1:2161:G:H2'	38:A1:2162:U:H6	1.86	0.40
38:A1:2283:G:H1'	38:A1:2285:C:H41	1.86	0.40
38:A1:2294:U:C2	38:A1:2296:A:OP2	2.75	0.40
38:A1:2436:U:H2'	38:A1:2437:G:O4'	2.22	0.40
38:A1:2469:G:H5''	79:E:27:ASN:ND2	2.28	0.40
38:A1:2745:G:N2	38:A1:2747:A:H3'	2.36	0.40
38:A1:3063:C:H2'	38:A1:3064:U:H6	1.86	0.40
39:A3:47:C:OP2	41:AD:158:ARG:HD3	2.22	0.40
42:AE:80:ASN:OD1	42:AE:81:ALA:N	2.54	0.40
43:AF:125:GLU:HA	43:AF:128:LYS:HB2	2.03	0.40
43:AF:178:ILE:HD11	43:AF:187:GLU:HG3	2.03	0.40
45:AH:44:THR:HG21	49:AM:12:TRP:CH2	2.49	0.40
45:AH:112:ILE:CG2	45:AH:126:VAL:HB	2.49	0.40
46:AI:175:ASN:C	46:AI:176:LEU:HD12	2.47	0.40
47:AJ:94:ARG:CD	47:AJ:95:ASN:H	2.33	0.40
51:AO:10[A]:ASP:HB2	51:AO:117[A]:ARG:HB3	2.04	0.40
54:AR:164:LEU:HA	54:AR:168:ALA:HB2	2.04	0.40
55:AS:100:VAL:O	55:AS:104:GLU:HG3	2.20	0.40
56:AT:57:TYR:CG	56:AT:89:LEU:HD21	2.56	0.40
80:DC:288:ILE:HG23	80:DC:319:LEU:HD23	2.02	0.40
80:DC:349:GLN:HE22	80:DC:399:ARG:NH2	2.20	0.40
80:DC:619:MET:SD	80:DC:625:TRP:CG	3.14	0.40
80:DC:628:THR:HG1	80:DC:629:ASP:H	1.68	0.40
81:EC:6851:G:H1	81:EC:6879:U:H1'	1.87	0.40
81:EC:6922:G:H2'	81:EC:6923:C:C6	2.55	0.40
1:BA:28:ASN:O	1:BA:150:ASP:HB3	2.21	0.40
1:BA:84:ARG:NH1	1:BA:203:PHE:O	2.55	0.40
1:BA:179:ARG:HD3	24:BR:89:SER:HB2	2.04	0.40
2:BB:50:LYS:HB2	2:BB:50:LYS:HE2	1.84	0.40
4:BE:133:LYS:HZ2	4:BE:134:LYS:HD2	1.87	0.40
7:BI:176:SER:C	7:BI:178:ARG:H	2.29	0.40
9:BL:115:PHE:O	9:BL:116:ARG:NE	2.54	0.40
11:BO:52:ARG:CZ	34:B5:905:A:H5''	2.51	0.40
11:BO:80:HIS:HA	11:BO:113:GLY:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BO:135:ARG:NH1	11:BO:135:ARG:HB2	2.36	0.40
14:BX:62:LYS:HZ3	34:B5:1136:U:H5''	1.85	0.40
15:BY:29:HIS:CE1	15:BY:34:ASN:HA	2.57	0.40
19:BD:46:THR:O	19:BD:84:ILE:HD12	2.21	0.40
19:BD:113:LEU:HD12	19:BD:113:LEU:HA	1.88	0.40
20:BF:76:ARG:NH2	20:BF:79:ASN:HD21	2.19	0.40
22:BP:78:THR:O	22:BP:97:TYR:N	2.43	0.40
22:BP:99:GLY:HA3	34:B5:1183:A:N1	2.36	0.40
26:BT:114:VAL:HG21	26:BT:122:ARG:HB3	2.04	0.40
27:BU:95:ALA:HB1	27:BU:99:ILE:CG2	2.51	0.40
31:Bg:170:ILE:HD11	31:Bg:178:VAL:HG12	2.02	0.40
34:B5:114:C:HO2'	34:B5:115:G:P	2.44	0.40
34:B5:356:G:H2'	34:B5:357:G:C8	2.56	0.40
34:B5:477:A:H62	34:B5:541:A:H5''	1.87	0.40
34:B5:679:U:H2'	34:B5:680:U:O4'	2.21	0.40
34:B5:825:U:H2'	34:B5:826:U:C2	2.56	0.40
34:B5:1216:C:C2	34:B5:1448:G:N2	2.90	0.40
34:B5:1432:U:H5''	34:B5:1434:U:OP2	2.21	0.40
36:AB:218:ILE:HG12	36:AB:276:THR:HG23	2.02	0.40
38:A1:283:G:P	77:Ao:45:ARG:HH12	2.42	0.40
38:A1:767:U:C2	38:A1:768:C:C6	3.09	0.40
38:A1:1011:A:H2'	38:A1:1012:G:C8	2.56	0.40
38:A1:1210:U:H2'	38:A1:1211:U:C6	2.56	0.40
38:A1:1433:A:N7	67:Ae:19:ARG:NH2	2.68	0.40
38:A1:1518:U:H2'	38:A1:1519:G:O4'	2.22	0.40
38:A1:2094:C:O2'	38:A1:2095:G:O5'	2.35	0.40
38:A1:2379:U:H2'	38:A1:2380:U:C6	2.56	0.40
38:A1:2461:A:N6	38:A1:2486:A:H2	2.19	0.40
38:A1:2553:U:O4	69:Ag:98:GLN:HG3	2.22	0.40
38:A1:2648:G:P	46:AI:24:ARG:HH12	2.44	0.40
38:A1:2805:G:H2'	38:A1:2806:U:C6	2.56	0.40
38:A1:3234:A:N6	38:A1:3253:G:H1	2.19	0.40
38:A1:3352:U:H6	38:A1:3352:U:P	2.45	0.40
40:A4:14:C:H5''	52:AP:123:PRO:HG3	2.03	0.40
40:A4:67:U:H5''	72:Aj:85:LYS:O	2.21	0.40
41:AD:226:TYR:CE2	41:AD:236:LEU:HD21	2.56	0.40
44:AG:55:TYR:CE2	44:AG:56:VAL:HG23	2.57	0.40
44:AG:161:GLU:HA	44:AG:164:VAL:HG13	2.02	0.40
45:AH:98:PRO:HD3	80:DC:167:LEU:HA	2.02	0.40
46:AI:49:CYS:HB2	46:AI:172:GLY:HA2	2.03	0.40
50:AN:8:GLU:HB2	50:AN:50:ARG:HH22	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AQ:92:ARG:HG3	63:Aa:76:ASP:HB2	2.02	0.40
54:AR:62:ARG:HB2	54:AR:62:ARG:HH11	1.87	0.40
63:Aa:73:LEU:HB3	63:Aa:112:ILE:HD13	2.03	0.40
65:Ac:32:LYS:O	65:Ac:36:GLN:HG2	2.21	0.40
73:Ak:42:LYS:HA	73:Ak:54:LEU:O	2.22	0.40
76:An:18:ARG:HG3	76:An:19:LYS:HD2	2.04	0.40
80:DC:191:THR:HG23	80:DC:192:TYR:CD1	2.56	0.40
80:DC:303:LEU:HD23	80:DC:327:PHE:CE2	2.57	0.40
81:EC:6760:A:H2'	81:EC:6761:C:C6	2.56	0.40
81:EC:6874:A:H1'	81:EC:6875:C:C6	2.56	0.40
81:EC:6947:A:O2'	81:EC:6948:U:O5'	2.39	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%)	184 (90%)	20 (10%)	0	100	100
2	BB	212/255 (83%)	188 (89%)	24 (11%)	0	100	100
3	BC	215/254 (85%)	203 (94%)	12 (6%)	0	100	100
4	BE	258/261 (99%)	238 (92%)	20 (8%)	0	100	100
5	BG	224/236 (95%)	204 (91%)	20 (9%)	0	100	100
6	BH	182/190 (96%)	170 (93%)	12 (7%)	0	100	100
7	BI	184/200 (92%)	164 (89%)	20 (11%)	0	100	100
8	BJ	183/197 (93%)	163 (89%)	20 (11%)	0	100	100
9	BL	153/156 (98%)	133 (87%)	20 (13%)	0	100	100
10	BN	148/151 (98%)	140 (95%)	8 (5%)	0	100	100
11	BO	125/137 (91%)	114 (91%)	11 (9%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	BV	85/87 (98%)	75 (88%)	10 (12%)	0	100	100
13	BW	127/130 (98%)	119 (94%)	8 (6%)	0	100	100
14	BX	142/145 (98%)	130 (92%)	12 (8%)	0	100	100
15	BY	132/135 (98%)	123 (93%)	9 (7%)	0	100	100
16	Ba	95/119 (80%)	86 (90%)	9 (10%)	0	100	100
17	Bb	79/82 (96%)	75 (95%)	4 (5%)	0	100	100
18	Be	54/63 (86%)	50 (93%)	4 (7%)	0	100	100
19	BD	221/240 (92%)	200 (90%)	21 (10%)	0	100	100
20	BF	204/225 (91%)	192 (94%)	12 (6%)	0	100	100
21	BK	94/105 (90%)	76 (81%)	18 (19%)	0	100	100
22	BP	122/142 (86%)	109 (89%)	13 (11%)	0	100	100
23	BQ	139/143 (97%)	132 (95%)	7 (5%)	0	100	100
24	BR	117/136 (86%)	111 (95%)	6 (5%)	0	100	100
25	BS	143/146 (98%)	126 (88%)	17 (12%)	0	100	100
26	BT	139/144 (96%)	123 (88%)	16 (12%)	0	100	100
27	BU	105/121 (87%)	99 (94%)	6 (6%)	0	100	100
28	BZ	69/108 (64%)	63 (91%)	6 (9%)	0	100	100
29	Bc	61/67 (91%)	57 (93%)	4 (7%)	0	100	100
30	Bd	51/56 (91%)	45 (88%)	6 (12%)	0	100	100
31	Bg	310/319 (97%)	273 (88%)	37 (12%)	0	100	100
32	Bf	73/152 (48%)	62 (85%)	11 (15%)	0	100	100
33	BM	122/143 (85%)	114 (93%)	8 (7%)	0	100	100
35	AA	245/254 (96%)	230 (94%)	15 (6%)	0	100	100
36	AB	383/387 (99%)	357 (93%)	26 (7%)	0	100	100
37	AC	359/362 (99%)	329 (92%)	30 (8%)	0	100	100
41	AD	290/297 (98%)	273 (94%)	17 (6%)	0	100	100
42	AE	163/176 (93%)	145 (89%)	18 (11%)	0	100	100
43	AF	220/244 (90%)	207 (94%)	13 (6%)	0	100	100
44	AG	228/256 (89%)	216 (95%)	12 (5%)	0	100	100
45	AH	188/191 (98%)	169 (90%)	19 (10%)	0	100	100
46	AI	220/222 (99%)	214 (97%)	6 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
47	AJ	167/174 (96%)	154 (92%)	13 (8%)	0	100	100
48	AL	191/199 (96%)	183 (96%)	8 (4%)	0	100	100
49	AM	134/138 (97%)	128 (96%)	6 (4%)	0	100	100
50	AN	201/204 (98%)	188 (94%)	13 (6%)	0	100	100
51	AO	195/199 (98%)	191 (98%)	4 (2%)	0	100	100
52	AP	171/184 (93%)	165 (96%)	6 (4%)	0	100	100
53	AQ	183/186 (98%)	173 (94%)	10 (6%)	0	100	100
54	AR	186/189 (98%)	179 (96%)	7 (4%)	0	100	100
55	AS	170/178 (96%)	159 (94%)	11 (6%)	0	100	100
56	AT	157/160 (98%)	148 (94%)	9 (6%)	0	100	100
57	AU	98/121 (81%)	83 (85%)	15 (15%)	0	100	100
58	AV	134/137 (98%)	132 (98%)	2 (2%)	0	100	100
59	AW	61/155 (39%)	59 (97%)	2 (3%)	0	100	100
60	AX	119/142 (84%)	111 (93%)	8 (7%)	0	100	100
61	AY	124/127 (98%)	121 (98%)	3 (2%)	0	100	100
62	AZ	133/136 (98%)	123 (92%)	10 (8%)	0	100	100
63	Aa	146/149 (98%)	135 (92%)	11 (8%)	0	100	100
64	Ab	56/59 (95%)	50 (89%)	6 (11%)	0	100	100
65	Ac	95/105 (90%)	92 (97%)	3 (3%)	0	100	100
66	Ad	107/113 (95%)	99 (92%)	8 (8%)	0	100	100
67	Ae	125/130 (96%)	121 (97%)	4 (3%)	0	100	100
68	Af	104/107 (97%)	99 (95%)	5 (5%)	0	100	100
69	Ag	110/121 (91%)	101 (92%)	9 (8%)	0	100	100
70	Ah	117/120 (98%)	112 (96%)	5 (4%)	0	100	100
71	Ai	97/100 (97%)	89 (92%)	8 (8%)	0	100	100
72	Aj	85/88 (97%)	79 (93%)	6 (7%)	0	100	100
73	Ak	75/78 (96%)	67 (89%)	8 (11%)	0	100	100
74	Al	48/51 (94%)	43 (90%)	5 (10%)	0	100	100
75	Am	50/128 (39%)	47 (94%)	3 (6%)	0	100	100
76	An	23/25 (92%)	23 (100%)	0	0	100	100
77	Ao	103/106 (97%)	92 (89%)	11 (11%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
78	Ap	89/92 (97%)	84 (94%)	5 (6%)	0	100	100
79	E	215/217 (99%)	204 (95%)	11 (5%)	0	100	100
80	DC	819/842 (97%)	749 (92%)	70 (8%)	0	100	100
All	All	11956/12946 (92%)	11064 (92%)	892 (8%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

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
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	48/54 (89%)	48 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
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
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

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
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
80	DC	699/714 (98%)	699 (100%)	0	100	100
All	All	10192/10903 (94%)	10192 (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 (154) such sidechains are listed below:

Mol	Chain	Res	Type
1	BA	15	GLN
1	BA	23	HIS
1	BA	32	HIS
1	BA	164	ASN
2	BB	49	ASN
2	BB	157	GLN
3	BC	209	ASN
4	BE	17	HIS
4	BE	36	HIS
4	BE	69	HIS
4	BE	188	ASN
4	BE	258	GLN
5	BG	4	ASN
5	BG	59	GLN
6	BH	22	GLN
7	BI	20	GLN
8	BJ	38	ASN
8	BJ	123	HIS
8	BJ	139	GLN
8	BJ	155	HIS
8	BJ	176	ASN
9	BL	8	GLN
9	BL	21	ASN
9	BL	118	GLN
9	BL	138	ASN
9	BL	152	GLN
10	BN	62	GLN
12	BV	21	ASN
12	BV	33	GLN
13	BW	16	ASN
13	BW	80	ASN
13	BW	92	ASN
14	BX	21	ASN
14	BX	75	GLN
17	Bb	26	GLN
19	BD	162	GLN
20	BF	34	GLN
20	BF	63	GLN
20	BF	79	ASN
20	BF	86	GLN
20	BF	103	ASN
20	BF	116	HIS
20	BF	169	ASN

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Mol	Chain	Res	Type
20	BF	186	ASN
20	BF	200	ASN
22	BP	128	HIS
24	BR	74	GLN
25	BS	12	GLN
25	BS	63	GLN
25	BS	78	HIS
25	BS	136	GLN
27	BU	98	GLN
27	BU	121	ASN
29	Bc	27	GLN
30	Bd	27	HIS
31	Bg	224	ASN
32	Bf	95	HIS
33	BM	38	HIS
33	BM	80	ASN
35	AA	194	ASN
36	AB	109	HIS
36	AB	121	ASN
36	AB	184	ASN
36	AB	198	HIS
36	AB	212	ASN
36	AB	377	HIS
37	AC	9	HIS
37	AC	48	GLN
37	AC	58	HIS
37	AC	116	ASN
37	AC	196	ASN
37	AC	304	GLN
37	AC	316	ASN
41	AD	57	ASN
42	AE	4	GLN
42	AE	61	ASN
43	AF	104	GLN
43	AF	146	GLN
44	AG	28	HIS
44	AG	77	GLN
44	AG	123	GLN
44	AG	191	ASN
45	AH	50	ASN
45	AH	157	ASN
46	AI	23	ASN

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Mol	Chain	Res	Type
46	AI	55	ASN
46	AI	100	ASN
46	AI	211	ASN
47	AJ	90	GLN
47	AJ	101	ASN
47	AJ	150	ASN
48	AL	103	ASN
48	AL	160	GLN
49	AM	41	GLN
50	AN	11	GLN
50	AN	70	ASN
50	AN	87	GLN
50	AN	182	ASN
51	AO	29[A]	ASN
51	AO	42[A]	ASN
51	AO	50[A]	ASN
51	AO	193[A]	GLN
52	AP	45	GLN
53	AQ	5	HIS
53	AQ	45	ASN
53	AQ	135	GLN
54	AR	130	ASN
55	AS	68	HIS
55	AS	138	GLN
56	AT	5	HIS
56	AT	22	HIS
56	AT	112	ASN
56	AT	146	ASN
57	AU	40	HIS
58	AV	7	GLN
58	AV	81	GLN
58	AV	98	ASN
59	AW	32	GLN
59	AW	42	GLN
61	AY	26	GLN
62	AZ	40	HIS
62	AZ	103	GLN
62	AZ	127	ASN
63	Aa	28	HIS
63	Aa	44	ASN
63	Aa	64	GLN
64	Ab	42	ASN

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Mol	Chain	Res	Type
64	Ab	43	HIS
66	Ad	57	GLN
66	Ad	105	GLN
67	Ae	6	HIS
67	Ae	20	HIS
67	Ae	71	HIS
69	Ag	14	ASN
69	Ag	108	GLN
70	Ah	68	GLN
71	Ai	92	ASN
73	Ak	28	ASN
73	Ak	76	ASN
77	Ao	27	GLN
77	Ao	102	GLN
79	E	21	ASN
79	E	94	ASN
79	E	200	ASN
80	DC	101	ASN
80	DC	145	GLN
80	DC	251	ASN
80	DC	414	GLN
80	DC	549	HIS
80	DC	584	ASN
80	DC	668	GLN
80	DC	687	ASN
80	DC	738	GLN
80	DC	795	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
34	B5	1754/1798 (97%)	564 (32%)	10 (0%)
38	A1	3212/3360 (95%)	714 (22%)	20 (0%)
39	A3	120/121 (99%)	26 (21%)	0
40	A4	157/158 (99%)	30 (19%)	1 (0%)
81	EC	196/202 (97%)	114 (58%)	7 (3%)
All	All	5439/5639 (96%)	1448 (26%)	38 (0%)

All (1448) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
34	B5	4	C
34	B5	14	C
34	B5	25	C
34	B5	34	G
34	B5	42	G
34	B5	43	A
34	B5	45	U
34	B5	47	A
34	B5	57	G
34	B5	59	C
34	B5	60	U
34	B5	61	A
34	B5	62	A
34	B5	63	G
34	B5	64	U
34	B5	66	U
34	B5	67	A
34	B5	68	A
34	B5	72	A
34	B5	73	U
34	B5	74	U
34	B5	75	U
34	B5	76	A
34	B5	77	U
34	B5	81	G
34	B5	82	U
34	B5	84	A
34	B5	85	A
34	B5	87	C
34	B5	90	C
34	B5	99	C
34	B5	103	A
34	B5	104	A
34	B5	105	A
34	B5	108	A
34	B5	109	G
34	B5	111	U
34	B5	114	C
34	B5	115	G
34	B5	116	U
34	B5	119	A
34	B5	121	U
34	B5	123	G

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Mol	Chain	Res	Type
34	B5	124	A
34	B5	127	G
34	B5	128	U
34	B5	129	U
34	B5	130	C
34	B5	131	C
34	B5	132	U
34	B5	133	U
34	B5	134	U
34	B5	135	A
34	B5	136	C
34	B5	137	U
34	B5	138	A
34	B5	139	C
34	B5	140	A
34	B5	141	U
34	B5	144	U
34	B5	145	A
34	B5	147	A
34	B5	153	G
34	B5	159	U
34	B5	166	C
34	B5	168	A
34	B5	176	C
34	B5	178	U
34	B5	179	A
34	B5	180	A
34	B5	183	U
34	B5	188	A
34	B5	189	C
34	B5	190	C
34	B5	191	C
34	B5	192	U
34	B5	193	U
34	B5	194	U
34	B5	195	G
34	B5	197	A
34	B5	206	A
34	B5	207	U
34	B5	208	U
34	B5	210	A
34	B5	211	PSU

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Mol	Chain	Res	Type
34	B5	215	A
34	B5	217	A
34	B5	218	A
34	B5	220	A
34	B5	221	A
34	B5	224	C
34	B5	225	A
34	B5	226	A
34	B5	227	U
34	B5	228	G
34	B5	230	C
34	B5	231	U
34	B5	232	U
34	B5	233	C
34	B5	234	G
34	B5	235	G
34	B5	236	A
34	B5	238	U
34	B5	239	C
34	B5	240	U
34	B5	241	U
34	B5	242	U
34	B5	244	A
34	B5	249	U
34	B5	254	A
34	B5	255	U
34	B5	256	A
34	B5	260	U
34	B5	261	U
34	B5	262	U
34	B5	263	C
34	B5	265	A
34	B5	267	U
34	B5	271	A
34	B5	272	U
34	B5	274	G
34	B5	278	U
34	B5	279	G
34	B5	280	U
34	B5	281	G
34	B5	285	G
34	B5	286	C

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Mol	Chain	Res	Type
34	B5	287	G
34	B5	299	A
34	B5	308	C
34	B5	314	C
34	B5	316	A
34	B5	320	U
34	B5	321	C
34	B5	322	G
34	B5	330	G
34	B5	333	A
34	B5	335	U
34	B5	337	G
34	B5	338	C
34	B5	351	C
34	B5	352	A
34	B5	359	A
34	B5	360	A
34	B5	361	C
34	B5	378	A
34	B5	390	G
34	B5	399	A
34	B5	400	A
34	B5	401	A
34	B5	402	C
34	B5	404	G
34	B5	423	G
34	B5	424	C
34	B5	425	A
34	B5	426	G
34	B5	428	A
34	B5	434	G
34	B5	437	A
34	B5	439	U
34	B5	441	A
34	B5	444	C
34	B5	445	A
34	B5	448	C
34	B5	453	U
34	B5	460	A
34	B5	461	G
34	B5	475	A
34	B5	482	U

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Mol	Chain	Res	Type
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	507	U
34	B5	509	G
34	B5	511	A
34	B5	514	G
34	B5	515	A
34	B5	519	C
34	B5	525	A
34	B5	527	A
34	B5	530	C
34	B5	534	A
34	B5	538	A
34	B5	540	G
34	B5	542	A
34	B5	548	G
34	B5	554	C
34	B5	555	A
34	B5	557	G
34	B5	558	U
34	B5	559	C
34	B5	565	C
34	B5	568	G
34	B5	572	C

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Mol	Chain	Res	Type
34	B5	574	G
34	B5	578	U
34	B5	579	A
34	B5	585	A
34	B5	590	C
34	B5	591	A
34	B5	594	A
34	B5	595	G
34	B5	606	A
34	B5	608	U
34	B5	610	G
34	B5	611	U
34	B5	619	A
34	B5	620	A
34	B5	623	A
34	B5	624	G
34	B5	629	U
34	B5	643	G
34	B5	648	G
34	B5	649	U
34	B5	650	U
34	B5	651	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	684	A
34	B5	685	A
34	B5	694	U
34	B5	696	C
34	B5	697	C
34	B5	698	U
34	B5	699	U
34	B5	700	C
34	B5	703	G
34	B5	704	C
34	B5	731	C
34	B5	732	G
34	B5	733	A
34	B5	734	A

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Mol	Chain	Res	Type
34	B5	736	C
34	B5	738	G
34	B5	739	G
34	B5	740	A
34	B5	741	C
34	B5	742	U
34	B5	743	U
34	B5	745	U
34	B5	753	A
34	B5	762	A
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	781	U
34	B5	782	U
34	B5	783	G
34	B5	784	C
34	B5	789	A
34	B5	794	U
34	B5	799	A
34	B5	803	A
34	B5	812	A
34	B5	814	A
34	B5	816	G
34	B5	819	G
34	B5	822	U
34	B5	823	G
34	B5	824	G
34	B5	826	U
34	B5	827	C
34	B5	828	U
34	B5	829	A
34	B5	830	U
34	B5	831	U
34	B5	832	U
34	B5	833	U
34	B5	835	U
34	B5	836	U
34	B5	838	G

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Mol	Chain	Res	Type
34	B5	839	U
34	B5	840	U
34	B5	841	U
34	B5	842	C
34	B5	843	U
34	B5	844	A
34	B5	845	G
34	B5	846	G
34	B5	847	A
34	B5	849	C
34	B5	850	A
34	B5	851	U
34	B5	853	G
34	B5	854	U
34	B5	855	A
34	B5	856	A
34	B5	857	U
34	B5	860	U
34	B5	861	U
34	B5	862	A
34	B5	863	A
34	B5	884	A
34	B5	885	G
34	B5	886	U
34	B5	890	C
34	B5	893	U
34	B5	898	A
34	B5	904	G
34	B5	909	U
34	B5	913	G
34	B5	914	G
34	B5	921	U
34	B5	922	G
34	B5	933	A
34	B5	935	U
34	B5	953	G
34	B5	954	G
34	B5	959	U
34	B5	960	U
34	B5	966	A
34	B5	981	U
34	B5	992	A

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Mol	Chain	Res	Type
34	B5	1004	U
34	B5	1005	A
34	B5	1021	C
34	B5	1023	A
34	B5	1026	A
34	B5	1028	C
34	B5	1031	U
34	B5	1039	A
34	B5	1043	A
34	B5	1052	U
34	B5	1053	G
34	B5	1056	U
34	B5	1057	U
34	B5	1059	U
34	B5	1060	U
34	B5	1061	A
34	B5	1062	A
34	B5	1063	U
34	B5	1064	G
34	B5	1070	C
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	1126	G
34	B5	1138	A
34	B5	1139	A
34	B5	1150	G
34	B5	1154	G
34	B5	1155	G
34	B5	1158	C
34	B5	1159	C
34	B5	1163	A
34	B5	1164	G
34	B5	1167	G
34	B5	1171	A
34	B5	1174	C
34	B5	1185	U

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Mol	Chain	Res	Type
34	B5	1186	U
34	B5	1193	A
34	B5	1194	A
34	B5	1196	A
34	B5	1197	C
34	B5	1199	G
34	B5	1200	G
34	B5	1201	G
34	B5	1202	A
34	B5	1205	C
34	B5	1206	U
34	B5	1207	C
34	B5	1212	G
34	B5	1215	C
34	B5	1217	A
34	B5	1218	G
34	B5	1228	G
34	B5	1229	G
34	B5	1241	G
34	B5	1244	A
34	B5	1245	G
34	B5	1246	C
34	B5	1250	U
34	B5	1256	A
34	B5	1258	U
34	B5	1269	U
34	B5	1276	U
34	B5	1284	C
34	B5	1301	U
34	B5	1307	U
34	B5	1309	C
34	B5	1312	A
34	B5	1314	U
34	B5	1315	U
34	B5	1319	A
34	B5	1320	U
34	B5	1321	A
34	B5	1338	C
34	B5	1340	U
34	B5	1341	A
34	B5	1343	U
34	B5	1346	A

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Mol	Chain	Res	Type
34	B5	1348	A
34	B5	1349	G
34	B5	1353	U
34	B5	1354	G
34	B5	1357	A
34	B5	1358	G
34	B5	1362	U
34	B5	1363	U
34	B5	1364	G
34	B5	1366	U
34	B5	1367	G
34	B5	1369	U
34	B5	1370	U
34	B5	1371	A
34	B5	1372	U
34	B5	1375	A
34	B5	1376	C
34	B5	1377	U
34	B5	1378	U
34	B5	1384	A
34	B5	1388	A
34	B5	1390	U
34	B5	1397	U
34	B5	1398	U
34	B5	1399	C
34	B5	1400	A
34	B5	1413	U
34	B5	1415	PSU
34	B5	1425	A
34	B5	1426	C
34	B5	1427	A
34	B5	1428	G
34	B5	1432	U
34	B5	1433	G
34	B5	1435	G
34	B5	1436	A
34	B5	1442	U
34	B5	1443	U
34	B5	1445	G
34	B5	1448	G
34	B5	1450	U
34	B5	1453	G

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Mol	Chain	Res	Type
34	B5	1456	C
34	B5	1458	G
34	B5	1459	C
34	B5	1460	A
34	B5	1469	A
34	B5	1471	A
34	B5	1477	G
34	B5	1480	G
34	B5	1482	C
34	B5	1486	G
34	B5	1489	U
34	B5	1491	U
34	B5	1492	A
34	B5	1493	A
34	B5	1494	C
34	B5	1495	C
34	B5	1496	U
34	B5	1499	G
34	B5	1506	G
34	B5	1508	U
34	B5	1512	G
34	B5	1516	A
34	B5	1518	C
34	B5	1521	G
34	B5	1523	G
34	B5	1524	A
34	B5	1528	U
34	B5	1535	U
34	B5	1537	C
34	B5	1538	U
34	B5	1539	G
34	B5	1540	G
34	B5	1542	G
34	B5	1545	A
34	B5	1551	U
34	B5	1552	U
34	B5	1553	G
34	B5	1557	U
34	B5	1558	U
34	B5	1559	A
34	B5	1565	C
34	B5	1567	U

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Mol	Chain	Res	Type
34	B5	1568	C
34	B5	1577	A
34	B5	1583	A
34	B5	1584	G
34	B5	1590	G
34	B5	1597	A
34	B5	1599	C
34	B5	1601	G
34	B5	1611	A
34	B5	1616	G
34	B5	1633	A
34	B5	1634	C
34	B5	1635	A
34	B5	1657	U
34	B5	1658	G
34	B5	1665	U
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	1696	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
34	B5	1713	G
34	B5	1714	A
34	B5	1720	G
34	B5	1728	A

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Mol	Chain	Res	Type
34	B5	1732	A
34	B5	1735	U
34	B5	1736	G
34	B5	1750	A
34	B5	1756[A]	A
34	B5	1760	G
34	B5	1766	A
34	B5	1769	U
34	B5	1773	4AC
34	B5	1780	G
34	B5	1782	MA6
34	B5	1783	C
34	B5	1792	G
34	B5	1793	G
34	B5	1794	A
34	B5	1796	C
34	B5	1798	U
38	A1	6	A
38	A1	14	U
38	A1	19	U
38	A1	21	G
38	A1	26	A
38	A1	34	A
38	A1	40	A
38	A1	43	A
38	A1	49	A
38	A1	59	G
38	A1	60	A
38	A1	65	A
38	A1	66	A
38	A1	67	A
38	A1	77	A
38	A1	85	A
38	A1	92	G
38	A1	96	G
38	A1	109	A
38	A1	110	G
38	A1	111	C
38	A1	116	A
38	A1	117	U
38	A1	118	U
38	A1	122	A

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Mol	Chain	Res	Type
38	A1	135	C
38	A1	136	G
38	A1	146	U
38	A1	148	G
38	A1	150	A
38	A1	156	G
38	A1	157	A
38	A1	164	A
38	A1	166	C
38	A1	170	G
38	A1	171	G
38	A1	172	G
38	A1	173	G
38	A1	174	C
38	A1	175	C
38	A1	178	U
38	A1	187	A
38	A1	188	U
38	A1	190	U
38	A1	191	U
38	A1	200	C
38	A1	206	G
38	A1	210	U
38	A1	219	A
38	A1	221	A
38	A1	222	A
38	A1	227	G
38	A1	237	G
38	A1	238	A
38	A1	240	U
38	A1	241	G
38	A1	242	C
38	A1	244	G
38	A1	245	U
38	A1	246	U
38	A1	248	U
38	A1	249	U
38	A1	251	G
38	A1	252	U
38	A1	253	A
38	A1	254	A
38	A1	260	C

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Mol	Chain	Res	Type
38	A1	263	C
38	A1	269	G
38	A1	284	A
38	A1	286	U
38	A1	295	A
38	A1	305	U
38	A1	306	A
38	A1	315	C
38	A1	344	A
38	A1	352	A
38	A1	374	A
38	A1	376	G
38	A1	390	G
38	A1	398	A
38	A1	399	A
38	A1	403	C
38	A1	404	G
38	A1	407	A
38	A1	421	G
38	A1	422	A
38	A1	436	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	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	494	G
38	A1	495	G
38	A1	498	A
38	A1	503	C
38	A1	510	G
38	A1	513	G
38	A1	521	A

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Mol	Chain	Res	Type
38	A1	523	A
38	A1	536	U
38	A1	543	C
38	A1	544	C
38	A1	545	U
38	A1	547	G
38	A1	548	G
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	567	G
38	A1	578	A
38	A1	579	G
38	A1	589	A
38	A1	592	A
38	A1	603	A
38	A1	607	A
38	A1	611	A
38	A1	612	U
38	A1	620	U
38	A1	621	A
38	A1	622	A
38	A1	637	C
38	A1	649	A
38	A1	667	C
38	A1	677	A
38	A1	690	A
38	A1	705	A
38	A1	719	U
38	A1	721	G
38	A1	734	C
38	A1	735	A
38	A1	736	A
38	A1	737	G
38	A1	750	G
38	A1	761	A
38	A1	766	U
38	A1	767	U

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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	784	A
38	A1	785	G
38	A1	799	G
38	A1	806	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	895	A
38	A1	896	A
38	A1	907	G
38	A1	908	G
38	A1	909	G
38	A1	914	A
38	A1	916	G
38	A1	917	A
38	A1	921	A
38	A1	923	C
38	A1	924	G
38	A1	937	G
38	A1	944	C
38	A1	953	G
38	A1	959	C
38	A1	960	PSU
38	A1	963	G
38	A1	974	G
38	A1	980	A
38	A1	982	C
38	A1	1000	C
38	A1	1006	A
38	A1	1010	G
38	A1	1013	G
38	A1	1014	U
38	A1	1015	U

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Mol	Chain	Res	Type
38	A1	1016	C
38	A1	1018	G
38	A1	1019	G
38	A1	1020	G
38	A1	1023	C
38	A1	1033	U
38	A1	1035	G
38	A1	1036	A
38	A1	1045	C
38	A1	1047	A
38	A1	1063	G
38	A1	1064	A
38	A1	1066	G
38	A1	1072	G
38	A1	1087	G
38	A1	1089	G
38	A1	1092	C
38	A1	1093	A
38	A1	1094	U
38	A1	1095	U
38	A1	1097	G
38	A1	1098	A
38	A1	1103	A
38	A1	1104	G
38	A1	1117	G
38	A1	1124	PSU
38	A1	1125	U
38	A1	1131	G
38	A1	1135	A
38	A1	1144	U
38	A1	1155	C
38	A1	1159	A
38	A1	1179	A
38	A1	1180	A
38	A1	1181	U
38	A1	1182	A
38	A1	1186	G
38	A1	1192	C
38	A1	1193	A
38	A1	1196	C
38	A1	1201	C
38	A1	1208	U

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Mol	Chain	Res	Type
38	A1	1209	G
38	A1	1212	A
38	A1	1218	U
38	A1	1220	U
38	A1	1221	A
38	A1	1222	G
38	A1	1227	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	1245	A
38	A1	1246	G
38	A1	1247	U
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

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Mol	Chain	Res	Type
38	A1	1272	C
38	A1	1273	A
38	A1	1274	A
38	A1	1275	C
38	A1	1278	A
38	A1	1280	C
38	A1	1281	G
38	A1	1283	C
38	A1	1284	C
38	A1	1285	G
38	A1	1286	A
38	A1	1287	A
38	A1	1288	U
38	A1	1307	G
38	A1	1309	U
38	A1	1313	G
38	A1	1325	U
38	A1	1330	A
38	A1	1331	U
38	A1	1345	G
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	1399	A
38	A1	1400	G
38	A1	1408	G
38	A1	1417	G
38	A1	1418	A
38	A1	1419	A
38	A1	1425	U
38	A1	1434	G
38	A1	1437	C
38	A1	1446	A
38	A1	1455	U

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Mol	Chain	Res	Type
38	A1	1471	U
38	A1	1472	U
38	A1	1475	A
38	A1	1477	A
38	A1	1478	C
38	A1	1481	A
38	A1	1482	A
38	A1	1483	G
38	A1	1487	G
38	A1	1488	G
38	A1	1496	C
38	A1	1507	G
38	A1	1508	C
38	A1	1533	U
38	A1	1536	G
38	A1	1539	A
38	A1	1556	C
38	A1	1557	A
38	A1	1561	G
38	A1	1562	C
38	A1	1563	C
38	A1	1564	U
38	A1	1566	A
38	A1	1569	U
38	A1	1570	U
38	A1	1571	A
38	A1	1572	U
38	A1	1573	G
38	A1	1574	C
38	A1	1575	A
38	A1	1576	G
38	A1	1577	G
38	A1	1580	A
38	A1	1582	C
38	A1	1583	A
38	A1	1587	A
38	A1	1589	A
38	A1	1593	A
38	A1	1594	A
38	A1	1605	A
38	A1	1628	C
38	A1	1632	A

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Mol	Chain	Res	Type
38	A1	1642	A
38	A1	1643	A
38	A1	1645	U
38	A1	1647	A
38	A1	1651	U
38	A1	1683	A
38	A1	1688	U
38	A1	1694	U
38	A1	1696	A
38	A1	1705	U
38	A1	1724	U
38	A1	1736	G
38	A1	1741	A
38	A1	1750	A
38	A1	1751	G
38	A1	1752	A
38	A1	1756	C
38	A1	1760	A
38	A1	1762	C
38	A1	1763	U
38	A1	1764	U
38	A1	1765	U
38	A1	1766	G
38	A1	1775	G
38	A1	1778	G
38	A1	1779	C
38	A1	1780	G
38	A1	1788	C
38	A1	1797	A
38	A1	1808	G
38	A1	1813	A
38	A1	1816	A
38	A1	1817	G
38	A1	1818	U
38	A1	1819	U
38	A1	1821	U
38	A1	1830	G
38	A1	1835	A
38	A1	1842	A
38	A1	1849	C
38	A1	1850	A
38	A1	1851	G

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Mol	Chain	Res	Type
38	A1	1866	C
38	A1	1878	G
38	A1	1880	U
38	A1	1886	A
38	A1	1893	A
38	A1	1897	G
38	A1	1906	G
38	A1	1921	A
38	A1	1943	C
38	A1	1952	G
38	A1	1953	G
38	A1	1954	G
38	A1	2094	C
38	A1	2095	G
38	A1	2101	C
38	A1	2111	G
38	A1	2114	C
38	A1	2122	G
38	A1	2131	A
38	A1	2144	A
38	A1	2158	A
38	A1	2169	G
38	A1	2170	U
38	A1	2188	A
38	A1	2194	G
38	A1	2206	G
38	A1	2207	A
38	A1	2209	U
38	A1	2222	A
38	A1	2223	A
38	A1	2244	A
38	A1	2249	G
38	A1	2250	G
38	A1	2252	A
38	A1	2253	G
38	A1	2256	A
38	A1	2257	C
38	A1	2258	PSU
38	A1	2264	PSU
38	A1	2269	U
38	A1	2270	A
38	A1	2272	G

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Mol	Chain	Res	Type
38	A1	2273	G
38	A1	2274	U
38	A1	2280	A
38	A1	2282	U
38	A1	2307	G
38	A1	2310	U
38	A1	2313	A
38	A1	2315	G
38	A1	2335	G
38	A1	2336	U
38	A1	2356	A
38	A1	2372	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	2412	G
38	A1	2422	C
38	A1	2435	G
38	A1	2437	G
38	A1	2438	A
38	A1	2442	G
38	A1	2445	A
38	A1	2446	U
38	A1	2447	A
38	A1	2448	G
38	A1	2449	A
38	A1	2450	G
38	A1	2451	G
38	A1	2453	U
38	A1	2454	G
38	A1	2455	U
38	A1	2457	G
38	A1	2458	A
38	A1	2459	A
38	A1	2461	A

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Mol	Chain	Res	Type
38	A1	2462	A
38	A1	2463	G
38	A1	2467	G
38	A1	2468	A
38	A1	2469	G
38	A1	2470	C
38	A1	2474	G
38	A1	2475	G
38	A1	2479	C
38	A1	2484	A
38	A1	2485	A
38	A1	2486	A
38	A1	2487	U
38	A1	2489	C
38	A1	2490	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	2500	A
38	A1	2502	A
38	A1	2503	G
38	A1	2504	U
38	A1	2506	U
38	A1	2507	C
38	A1	2514	U
38	A1	2515	A
38	A1	2522	G
38	A1	2526	C
38	A1	2530	G
38	A1	2532	U
38	A1	2536	A
38	A1	2537	U
38	A1	2538	U
38	A1	2539	C
38	A1	2540	A
38	A1	2542	U
38	A1	2543	U
38	A1	2545	C
38	A1	2546	C

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Mol	Chain	Res	Type
38	A1	2549	G
38	A1	2552	C
38	A1	2553	U
38	A1	2558	U
38	A1	2559	U
38	A1	2562	A
38	A1	2569	A
38	A1	2570	U
38	A1	2571	U
38	A1	2573	G
38	A1	2578	U
38	A1	2585	G
38	A1	2593	A
38	A1	2606	G
38	A1	2607	G
38	A1	2614	G
38	A1	2637	A
38	A1	2648	G
38	A1	2651	G
38	A1	2652	U
38	A1	2656	A
38	A1	2657	A
38	A1	2672	G
38	A1	2674	A
38	A1	2677	G
38	A1	2678	A
38	A1	2681	U
38	A1	2688	U
38	A1	2689	A
38	A1	2691	A
38	A1	2694	A
38	A1	2704	A
38	A1	2713	U
38	A1	2714	G
38	A1	2719	U
38	A1	2728	G
38	A1	2729	U
38	A1	2737	C
38	A1	2740	A
38	A1	2747	A
38	A1	2752	U
38	A1	2753	G

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Mol	Chain	Res	Type
38	A1	2772	C
38	A1	2773	C
38	A1	2777	G
38	A1	2778	G
38	A1	2779	A
38	A1	2796	G
38	A1	2800	G
38	A1	2801	A
38	A1	2808	A
38	A1	2810	C
38	A1	2814	G
38	A1	2817	A
38	A1	2821	C
38	A1	2838	A
38	A1	2842	U
38	A1	2845	A
38	A1	2847	A
38	A1	2849	C
38	A1	2853	A
38	A1	2859	U
38	A1	2860	U
38	A1	2861	U
38	A1	2863	G
38	A1	2865	PSU
38	A1	2866	U
38	A1	2871	G
38	A1	2873	U
38	A1	2887	A
38	A1	2889	C
38	A1	2894	C
38	A1	2904	U
38	A1	2914	G
38	A1	2923	PSU
38	A1	2933	A
38	A1	2935	U
38	A1	2936	A
38	A1	2938	G
38	A1	2941	A
38	A1	2942	C
38	A1	2947	G
38	A1	2952	G
38	A1	2971	A

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Mol	Chain	Res	Type
38	A1	2983	C
38	A1	2990	G
38	A1	2996	U
38	A1	2997	G
38	A1	3003	G
38	A1	3012	A
38	A1	3017	A
38	A1	3018	C
38	A1	3022	G
38	A1	3023	U
38	A1	3028	G
38	A1	3030	G
38	A1	3039	C
38	A1	3045	G
38	A1	3048	A
38	A1	3055	U
38	A1	3056	U
38	A1	3059	G
38	A1	3074	G
38	A1	3078	U
38	A1	3086	A
38	A1	3087	A
38	A1	3092	C
38	A1	3094	A
38	A1	3101	G
38	A1	3104	U
38	A1	3109	G
38	A1	3122	A
38	A1	3129	A
38	A1	3130	A
38	A1	3131	U
38	A1	3142	A
38	A1	3143	C
38	A1	3153	U
38	A1	3155	U
38	A1	3156	U
38	A1	3157	U
38	A1	3163	A
38	A1	3165	A
38	A1	3166	C
38	A1	3167	A
38	A1	3170	A

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Mol	Chain	Res	Type
38	A1	3171	U
38	A1	3173	G
38	A1	3174	A
38	A1	3176	G
38	A1	3179	U
38	A1	3181	C
38	A1	3186	A
38	A1	3187	A
38	A1	3195	U
38	A1	3196	U
38	A1	3205	G
38	A1	3207	U
38	A1	3209	A
38	A1	3217	C
38	A1	3218	A
38	A1	3219	G
38	A1	3220	G
38	A1	3226	A
38	A1	3228	C
38	A1	3234	A
38	A1	3238	G
38	A1	3239	G
38	A1	3242	G
38	A1	3243	A
38	A1	3247	G
38	A1	3259	U
38	A1	3263	G
38	A1	3273	A
38	A1	3275	U
38	A1	3276	G
38	A1	3277	U
38	A1	3278	C
38	A1	3279	A
38	A1	3283	U
38	A1	3284	G
38	A1	3286	G
38	A1	3289	G
38	A1	3292	A
38	A1	3294	A
38	A1	3304	U
38	A1	3307	A
38	A1	3313	U

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Mol	Chain	Res	Type
38	A1	3316	A
38	A1	3317	U
38	A1	3320	A
38	A1	3334	U
38	A1	3341	U
38	A1	3345	G
38	A1	3348	G
38	A1	3351	U
38	A1	3352	U
38	A1	3354	U
38	A1	3355	U
38	A1	3368	U
38	A1	3369	G
38	A1	3378	C
38	A1	3382	U
38	A1	3389	U
38	A1	3390	G
39	A3	11	A
39	A3	17	A
39	A3	22	A
39	A3	23	A
39	A3	33	U
39	A3	41	G
39	A3	49	G
39	A3	53	U
39	A3	55	A
39	A3	56	A
39	A3	64	A
39	A3	65	G
39	A3	70	U
39	A3	71	G
39	A3	72	A
39	A3	73	C
39	A3	74	C
39	A3	76	A
39	A3	91	G
39	A3	93	C
39	A3	99	G
39	A3	102	A
39	A3	109	G
39	A3	112	G
39	A3	114	U

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Mol	Chain	Res	Type
39	A3	121	U
40	A4	34	U
40	A4	35	C
40	A4	38	U
40	A4	40	A
40	A4	51	G
40	A4	52	A
40	A4	59	A
40	A4	62	C
40	A4	63	G
40	A4	80	A
40	A4	81	U
40	A4	82	U
40	A4	86	U
40	A4	87	G
40	A4	89	A
40	A4	90	U
40	A4	95	G
40	A4	97	A
40	A4	100	U
40	A4	102	U
40	A4	104	A
40	A4	106	C
40	A4	111	A
40	A4	113	U
40	A4	116	G
40	A4	125	U
40	A4	131	A
40	A4	148	G
40	A4	152	G
40	A4	158	U
81	EC	6759	A
81	EC	6768	U
81	EC	6769	A
81	EC	6771	U
81	EC	6772	G
81	EC	6773	G
81	EC	6774	U
81	EC	6775	U
81	EC	6776	A
81	EC	6778	C
81	EC	6779	C

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Mol	Chain	Res	Type
81	EC	6781	U
81	EC	6782	C
81	EC	6783	U
81	EC	6784	G
81	EC	6786	A
81	EC	6789	G
81	EC	6790	A
81	EC	6791	A
81	EC	6792	A
81	EC	6793	A
81	EC	6794	C
81	EC	6795	U
81	EC	6799	C
81	EC	6801	A
81	EC	6803	C
81	EC	6804	A
81	EC	6805	C
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	6822	U
81	EC	6823	U
81	EC	6825	A
81	EC	6831	U
81	EC	6832	G
81	EC	6835	U
81	EC	6837	G
81	EC	6840	A
81	EC	6841	U
81	EC	6842	U
81	EC	6843	U
81	EC	6844	A
81	EC	6845	G
81	EC	6847	G
81	EC	6848	U
81	EC	6849	A
81	EC	6850	C
81	EC	6851	G
81	EC	6852	U

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Mol	Chain	Res	Type
81	EC	6855	A
81	EC	6856	C
81	EC	6857	C
81	EC	6858	A
81	EC	6859	U
81	EC	6860	A
81	EC	6861	G
81	EC	6863	C
81	EC	6864	A
81	EC	6865	G
81	EC	6867	C
81	EC	6869	C
81	EC	6870	A
81	EC	6871	A
81	EC	6873	A
81	EC	6874	A
81	EC	6875	C
81	EC	6877	C
81	EC	6879	U
81	EC	6880	G
81	EC	6881	U
81	EC	6882	G
81	EC	6883	A
81	EC	6884	G
81	EC	6885	G
81	EC	6887	G
81	EC	6889	A
81	EC	6890	A
81	EC	6895	C
81	EC	6896	A
81	EC	6897	G
81	EC	6901	C
81	EC	6902	U
81	EC	6903	U
81	EC	6908	C
81	EC	6911	A
81	EC	6912	G
81	EC	6914	A
81	EC	6915	G
81	EC	6916	A
81	EC	6922	G
81	EC	6925	C

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Mol	Chain	Res	Type
81	EC	6929	C
81	EC	6934	U
81	EC	6935	G
81	EC	6936	G
81	EC	6937	G
81	EC	6938	A
81	EC	6939	C
81	EC	6940	U
81	EC	6941	U
81	EC	6942	A
81	EC	6943	A
81	EC	6944	U
81	EC	6945	U
81	EC	6946	A
81	EC	6947	A
81	EC	6949	G
81	EC	6951	C
81	EC	6956	A
81	EC	6957	A

All (38) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
34	B5	196	G
34	B5	752	A
34	B5	889	U
34	B5	1059	U
34	B5	1153	G
34	B5	1458	G
34	B5	1600	A
34	B5	1633	A
34	B5	1634	C
34	B5	1683	C
38	A1	252	U
38	A1	916	G
38	A1	1226	G
38	A1	1285	G
38	A1	1287	A
38	A1	1560	G
38	A1	1818	U
38	A1	2094	C
38	A1	2222	A

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Mol	Chain	Res	Type
38	A1	2249	G
38	A1	2437	G
38	A1	2497	U
38	A1	2506	U
38	A1	2772	C
38	A1	2865	PSU
38	A1	3022	G
38	A1	3121	U
38	A1	3154	C
38	A1	3169	U
38	A1	3227	A
40	A4	88	A
81	EC	6780	A
81	EC	6781	U
81	EC	6789	G
81	EC	6879	U
81	EC	6883	A
81	EC	6889	A
81	EC	6956	A

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
38	PSU	A1	1042	38	18,21,22	1.42	4 (22%)	21,30,33	1.97	3 (14%)
38	PSU	A1	2133	38	18,21,22	1.49	3 (16%)	21,30,33	2.19	5 (23%)
38	PSU	A1	1056	38	18,21,22	1.43	4 (22%)	21,30,33	2.10	3 (14%)
34	4AC	B5	1773	34	21,24,25	1.19	2 (9%)	28,34,37	1.13	1 (3%)
38	PSU	A1	2260	38	18,21,22	1.39	3 (16%)	21,30,33	2.12	4 (19%)
38	PSU	A1	2349	38	18,21,22	1.42	4 (22%)	21,30,33	2.08	3 (14%)
38	UR3	A1	2634	38	19,22,23	0.94	1 (5%)	26,32,35	1.64	3 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
38	PSU	A1	2865	38	18,21,22	1.48	3 (16%)	21,30,33	2.07	4 (19%)
38	PSU	A1	2266	38	18,21,22	1.36	3 (16%)	21,30,33	1.95	3 (14%)
38	PSU	A1	2416	38	18,21,22	1.46	5 (27%)	21,30,33	2.11	4 (19%)
38	OMU	A1	2921	38	19,22,23	1.27	3 (15%)	25,31,34	1.85	5 (20%)
34	PSU	B5	759	34	18,21,22	1.34	2 (11%)	21,30,33	2.07	4 (19%)
38	PSU	A1	2258	38	18,21,22	1.34	2 (11%)	21,30,33	2.13	3 (14%)
38	PSU	A1	2944	38	18,21,22	1.39	2 (11%)	21,30,33	2.15	4 (19%)
34	PSU	B5	766	34	18,21,22	1.44	3 (16%)	21,30,33	2.17	5 (23%)
38	PSU	A1	2340	38	18,21,22	1.42	4 (22%)	21,30,33	1.97	3 (14%)
38	PSU	A1	1004	38	18,21,22	1.43	4 (22%)	21,30,33	2.09	3 (14%)
34	MA6	B5	1781	34	23,26,27	1.45	5 (21%)	33,38,41	2.11	10 (30%)
38	PSU	A1	960	38	18,21,22	1.40	3 (16%)	21,30,33	2.07	5 (23%)
34	G7M	B5	1575	34	23,26,27	2.52	7 (30%)	34,39,42	1.75	7 (20%)
38	PSU	A1	776	38	18,21,22	1.42	4 (22%)	21,30,33	2.00	4 (19%)
38	PSU	A1	1052	38	18,21,22	1.40	3 (16%)	21,30,33	2.07	4 (19%)
38	PSU	A1	2314	38	18,21,22	1.44	4 (22%)	21,30,33	2.02	5 (23%)
38	PSU	A1	2880	38	18,21,22	1.42	4 (22%)	21,30,33	2.11	5 (23%)
38	PSU	A1	2351	38	18,21,22	1.42	4 (22%)	21,30,33	2.15	4 (19%)
38	PSU	A1	2191	38	18,21,22	1.37	4 (22%)	21,30,33	2.06	3 (14%)
34	PSU	B5	106	34	18,21,22	1.40	2 (11%)	21,30,33	2.02	3 (14%)
34	PSU	B5	1290	34	18,21,22	1.36	3 (16%)	21,30,33	2.09	4 (19%)
38	1MA	A1	645	38	21,25,26	1.35	4 (19%)	30,37,40	1.76	6 (20%)
38	5MC	A1	2278	38	19,22,23	1.34	3 (15%)	26,32,35	1.25	4 (15%)
34	PSU	B5	120	34	18,21,22	1.36	2 (11%)	21,30,33	2.00	3 (14%)
34	PSU	B5	1181	34	18,21,22	1.42	4 (22%)	21,30,33	1.95	4 (19%)
38	PSU	A1	2826	38	18,21,22	1.44	5 (27%)	21,30,33	2.08	4 (19%)
34	PSU	B5	466	34	18,21,22	1.39	3 (16%)	21,30,33	2.06	4 (19%)
38	PSU	A1	1124	38	18,21,22	1.43	4 (22%)	21,30,33	2.06	3 (14%)
38	PSU	A1	2923	38	18,21,22	1.42	3 (16%)	21,30,33	2.12	4 (19%)
34	B8N	B5	1191	34	25,29,30	1.37	3 (12%)	28,42,45	6.51	5 (17%)
34	PSU	B5	211	34	18,21,22	1.44	2 (11%)	21,30,33	2.14	3 (14%)
34	PSU	B5	999	34	18,21,22	1.40	4 (22%)	21,30,33	2.04	4 (19%)
39	PSU	A3	50	39	18,21,22	1.36	2 (11%)	21,30,33	2.06	4 (19%)
40	PSU	A4	73	40	18,21,22	1.38	3 (16%)	21,30,33	1.99	3 (14%)
34	4AC	B5	1280	34	21,24,25	1.16	3 (14%)	28,34,37	0.96	1 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
38	PSU	A1	986	38	18,21,22	1.39	4 (22%)	21,30,33	2.07	3 (14%)
38	PSU	A1	990	38	18,21,22	1.40	4 (22%)	21,30,33	2.06	3 (14%)
38	PSU	A1	2735	38	18,21,22	1.76	4 (22%)	21,30,33	1.67	2 (9%)
38	5MC	A1	2870	38	19,22,23	1.33	3 (15%)	26,32,35	1.19	2 (7%)
34	PSU	B5	302	34	18,21,22	1.37	3 (16%)	21,30,33	2.10	4 (19%)
34	MA6	B5	1782	34	23,26,27	1.43	5 (21%)	33,38,41	2.12	11 (33%)
38	PSU	A1	1110	38	18,21,22	1.42	4 (22%)	21,30,33	2.04	3 (14%)
38	PSU	A1	966	38	18,21,22	1.40	4 (22%)	21,30,33	2.16	4 (19%)
38	OMG	A1	2922	38	23,26,27	1.21	3 (13%)	32,38,41	1.97	6 (18%)
34	PSU	B5	632	34	18,21,22	1.41	3 (16%)	21,30,33	2.14	4 (19%)
38	PSU	A1	2129	38	18,21,22	1.42	4 (22%)	21,30,33	2.10	4 (19%)
38	PSU	A1	2975	38	18,21,22	1.44	4 (22%)	21,30,33	2.12	4 (19%)
80	DDE	DC	699	-	18,20,21	0.91	1 (5%)	17,28,30	1.30	2 (11%)
34	PSU	B5	1187	34	18,21,22	1.40	2 (11%)	21,30,33	2.07	3 (14%)
38	1MA	A1	2142	38	21,25,26	1.34	5 (23%)	30,37,40	1.69	5 (16%)
34	PSU	B5	1415	34	18,21,22	1.47	3 (16%)	21,30,33	1.81	3 (14%)
38	PSU	A1	2264	38	18,21,22	1.47	4 (22%)	21,30,33	2.14	3 (14%)
36	HIC	AB	243	36	10,11,12	1.45	1 (10%)	9,14,16	1.27	1 (11%)

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	1042	38	-	2/7/25/26	0/2/2/2
38	PSU	A1	2133	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	1056	38	-	0/7/25/26	0/2/2/2
34	4AC	B5	1773	34	-	6/11/29/30	0/2/2/2
38	PSU	A1	2260	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2349	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	2865	38	-	1/7/25/26	0/2/2/2
38	PSU	A1	2266	38	-	2/7/25/26	0/2/2/2
38	PSU	A1	2416	38	-	0/7/25/26	0/2/2/2
38	OMU	A1	2921	38	-	0/9/27/28	0/2/2/2
34	PSU	B5	759	34	-	0/7/25/26	0/2/2/2
38	PSU	A1	2258	38	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
38	PSU	A1	2944	38	-	2/7/25/26	0/2/2/2
34	PSU	B5	766	34	-	0/7/25/26	0/2/2/2
38	PSU	A1	2340	38	-	1/7/25/26	0/2/2/2
38	PSU	A1	1004	38	-	0/7/25/26	0/2/2/2
34	MA6	B5	1781	34	-	3/11/29/30	0/3/3/3
38	PSU	A1	960	38	-	2/7/25/26	0/2/2/2
34	G7M	B5	1575	34	-	2/7/25/26	0/3/3/3
38	PSU	A1	776	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	1052	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2314	38	-	2/7/25/26	0/2/2/2
38	PSU	A1	2880	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2351	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2191	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	106	34	-	0/7/25/26	0/2/2/2
34	PSU	B5	1290	34	-	0/7/25/26	0/2/2/2
38	1MA	A1	645	38	-	1/7/25/26	0/3/3/3
38	5MC	A1	2278	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	120	34	-	0/7/25/26	0/2/2/2
34	PSU	B5	1181	34	-	0/7/25/26	0/2/2/2
38	PSU	A1	2826	38	-	0/7/25/26	0/2/2/2
34	PSU	B5	466	34	-	0/7/25/26	0/2/2/2
38	PSU	A1	1124	38	-	2/7/25/26	0/2/2/2
38	PSU	A1	2923	38	-	5/7/25/26	0/2/2/2
34	B8N	B5	1191	34	-	5/16/34/35	0/2/2/2
34	PSU	B5	211	34	-	1/7/25/26	0/2/2/2
34	PSU	B5	999	34	-	1/7/25/26	0/2/2/2
39	PSU	A3	50	39	-	0/7/25/26	0/2/2/2
40	PSU	A4	73	40	-	0/7/25/26	0/2/2/2
34	4AC	B5	1280	34	-	2/11/29/30	0/2/2/2
38	PSU	A1	986	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	990	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2735	38	-	0/7/25/26	0/2/2/2
38	5MC	A1	2870	38	-	4/7/25/26	0/2/2/2
34	PSU	B5	302	34	-	0/7/25/26	0/2/2/2
34	MA6	B5	1782	34	-	5/11/29/30	0/3/3/3
38	PSU	A1	1110	38	-	2/7/25/26	0/2/2/2
38	PSU	A1	966	38	-	0/7/25/26	0/2/2/2
38	OMG	A1	2922	38	-	0/9/27/28	0/3/3/3
34	PSU	B5	632	34	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
38	PSU	A1	2129	38	-	0/7/25/26	0/2/2/2
38	PSU	A1	2975	38	-	0/7/25/26	0/2/2/2
80	DDE	DC	699	-	-	8/20/21/23	0/1/1/1
34	PSU	B5	1187	34	-	2/7/25/26	0/2/2/2
38	1MA	A1	2142	38	-	0/7/25/26	0/3/3/3
34	PSU	B5	1415	34	-	2/7/25/26	0/2/2/2
38	PSU	A1	2264	38	-	2/7/25/26	0/2/2/2
36	HIC	AB	243	36	-	2/5/6/8	0/1/1/1

All (201) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	B5	1575	G7M	O6-C6	7.40	1.37	1.23
34	B5	1575	G7M	C2-N2	5.60	1.47	1.34
34	B5	1575	G7M	C5-N7	-5.09	1.33	1.39
34	B5	1781	MA6	C5-C4	4.38	1.46	1.39
34	B5	1782	MA6	C5-C4	4.33	1.46	1.39
38	A1	2278	5MC	C5-C4	4.31	1.47	1.44
38	A1	2735	PSU	O4-C4	4.20	1.31	1.23
38	A1	2870	5MC	C5-C4	4.13	1.47	1.44
38	A1	2735	PSU	C6-C5	4.02	1.39	1.35
34	B5	1191	B8N	C4-C5	-3.70	1.39	1.47
34	B5	1773	4AC	C4-N4	-3.62	1.34	1.39
34	B5	1415	PSU	C6-C5	3.48	1.39	1.35
38	A1	2133	PSU	C4-N3	-3.37	1.32	1.38
34	B5	106	PSU	C6-C5	3.33	1.39	1.35
34	B5	1280	4AC	C4-N4	-3.28	1.35	1.39
34	B5	1187	PSU	C6-C5	3.24	1.38	1.35
34	B5	766	PSU	C6-C5	3.23	1.38	1.35
34	B5	211	PSU	C6-C5	3.23	1.38	1.35
34	B5	302	PSU	C6-C5	3.22	1.38	1.35
38	A1	1004	PSU	C6-C5	3.18	1.38	1.35
38	A1	2264	PSU	C6-C5	3.17	1.38	1.35
34	B5	120	PSU	C6-C5	3.17	1.38	1.35
34	B5	1575	G7M	C6-N1	-3.16	1.32	1.38
34	B5	1191	B8N	C6-C5	3.14	1.39	1.35
34	B5	1181	PSU	C6-C5	3.13	1.38	1.35
38	A1	960	PSU	C6-C5	3.13	1.38	1.35
34	B5	466	PSU	C6-C5	3.13	1.38	1.35
38	A1	2880	PSU	C4-N3	-3.11	1.33	1.38
38	A1	2260	PSU	C6-C5	3.11	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	1056	PSU	C4-N3	-3.07	1.33	1.38
39	A3	50	PSU	C6-C5	3.06	1.38	1.35
38	A1	2351	PSU	C4-N3	-3.06	1.33	1.38
38	A1	2923	PSU	C6-C5	3.05	1.38	1.35
34	B5	759	PSU	C6-C5	3.05	1.38	1.35
38	A1	2258	PSU	C6-C5	3.02	1.38	1.35
38	A1	2266	PSU	C6-C5	3.01	1.38	1.35
38	A1	2944	PSU	C4-N3	-2.99	1.33	1.38
38	A1	2975	PSU	C4-N3	-2.99	1.33	1.38
38	A1	1042	PSU	C4-N3	-2.98	1.33	1.38
38	A1	1124	PSU	C6-C5	2.97	1.38	1.35
38	A1	2416	PSU	C4-N3	-2.97	1.33	1.38
38	A1	2142	1MA	C6-N6	2.97	1.35	1.28
38	A1	2340	PSU	C6-C5	2.97	1.38	1.35
38	A1	2129	PSU	C4-N3	-2.96	1.33	1.38
38	A1	645	1MA	C6-N6	2.96	1.35	1.28
40	A4	73	PSU	C6-C5	2.96	1.38	1.35
38	A1	1110	PSU	C4-N3	-2.96	1.33	1.38
38	A1	2314	PSU	C6-C5	2.94	1.38	1.35
38	A1	2340	PSU	C4-N3	-2.94	1.33	1.38
34	B5	632	PSU	C4-N3	-2.94	1.33	1.38
38	A1	2921	OMU	C4-N3	-2.93	1.33	1.38
38	A1	776	PSU	C6-C5	2.92	1.38	1.35
34	B5	1575	G7M	CN7-N7	2.92	1.51	1.46
38	A1	986	PSU	C4-N3	-2.92	1.33	1.38
34	B5	1290	PSU	C6-C5	2.91	1.38	1.35
34	B5	632	PSU	C6-C5	2.91	1.38	1.35
38	A1	1052	PSU	C4-N3	-2.90	1.33	1.38
38	A1	2349	PSU	C4-N3	-2.88	1.33	1.38
38	A1	966	PSU	C6-C5	2.88	1.38	1.35
38	A1	2923	PSU	C4-N3	-2.88	1.33	1.38
34	B5	1290	PSU	C4-N3	-2.88	1.33	1.38
34	B5	999	PSU	C4-N3	-2.87	1.33	1.38
36	AB	243	HIC	CD2-CG	2.87	1.41	1.36
38	A1	2826	PSU	C4-N3	-2.87	1.33	1.38
38	A1	1056	PSU	C6-C5	2.87	1.38	1.35
38	A1	966	PSU	C4-N3	-2.86	1.33	1.38
38	A1	1124	PSU	C4-N3	-2.86	1.33	1.38
38	A1	2865	PSU	C4-N3	-2.85	1.33	1.38
38	A1	2922	OMG	C5-C4	2.84	1.46	1.38
38	A1	960	PSU	C4-N3	-2.83	1.33	1.38
38	A1	2142	1MA	C5-C4	2.83	1.46	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2349	PSU	C6-C5	2.83	1.38	1.35
34	B5	766	PSU	C4-N3	-2.83	1.33	1.38
38	A1	2260	PSU	C4-N3	-2.80	1.33	1.38
38	A1	1042	PSU	C6-C5	2.80	1.38	1.35
38	A1	990	PSU	C6-C5	2.80	1.38	1.35
38	A1	2865	PSU	C6-C5	2.80	1.38	1.35
38	A1	2314	PSU	C4-N3	-2.79	1.33	1.38
34	B5	211	PSU	C4-N3	-2.79	1.33	1.38
38	A1	1004	PSU	C4-N3	-2.79	1.33	1.38
38	A1	776	PSU	C4-N3	-2.78	1.33	1.38
40	A4	73	PSU	C4-N3	-2.78	1.33	1.38
38	A1	990	PSU	C4-N3	-2.78	1.33	1.38
34	B5	302	PSU	C4-N3	-2.78	1.33	1.38
34	B5	466	PSU	C4-N3	-2.77	1.33	1.38
39	A3	50	PSU	C4-N3	-2.77	1.33	1.38
38	A1	2191	PSU	C4-N3	-2.76	1.33	1.38
38	A1	1052	PSU	C6-C5	2.76	1.38	1.35
34	B5	1187	PSU	C4-N3	-2.75	1.33	1.38
34	B5	106	PSU	C4-N3	-2.75	1.33	1.38
38	A1	2278	5MC	C6-N1	-2.72	1.33	1.38
34	B5	759	PSU	C4-N3	-2.71	1.33	1.38
38	A1	2944	PSU	C6-C5	2.71	1.38	1.35
38	A1	2133	PSU	C2-N3	-2.70	1.33	1.37
34	B5	999	PSU	C6-C5	2.70	1.38	1.35
38	A1	645	1MA	C5-C4	2.69	1.46	1.38
38	A1	2922	OMG	C6-N1	-2.69	1.33	1.38
38	A1	2826	PSU	C6-C5	2.69	1.38	1.35
38	A1	2191	PSU	C6-C5	2.67	1.38	1.35
34	B5	1782	MA6	C5-C6	2.67	1.48	1.41
38	A1	2258	PSU	C4-N3	-2.65	1.33	1.38
38	A1	2880	PSU	C6-C5	2.64	1.38	1.35
34	B5	1181	PSU	C4-N3	-2.64	1.33	1.38
38	A1	2264	PSU	C4-N3	-2.64	1.33	1.38
38	A1	1110	PSU	C6-C5	2.63	1.38	1.35
34	B5	1415	PSU	C4-N3	-2.62	1.33	1.38
34	B5	1781	MA6	C5-C6	2.62	1.48	1.41
38	A1	2921	OMU	C2-N3	-2.62	1.33	1.38
38	A1	2975	PSU	C6-C5	2.59	1.38	1.35
34	B5	120	PSU	C4-N3	-2.59	1.34	1.38
38	A1	2133	PSU	C6-C5	2.58	1.38	1.35
38	A1	2266	PSU	C4-N3	-2.56	1.34	1.38
38	A1	2129	PSU	C6-C5	2.55	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2416	PSU	C6-C5	2.50	1.38	1.35
38	A1	2870	5MC	C6-N1	-2.49	1.33	1.38
38	A1	2870	5MC	C6-C5	2.49	1.38	1.34
38	A1	2865	PSU	O4'-C1'	-2.48	1.40	1.43
38	A1	2351	PSU	C6-C5	2.47	1.38	1.35
38	A1	986	PSU	C6-C5	2.47	1.38	1.35
38	A1	2880	PSU	C2-N3	-2.47	1.33	1.37
38	A1	645	1MA	C5-N7	-2.46	1.34	1.39
34	B5	1781	MA6	C5-N7	-2.45	1.34	1.39
38	A1	2416	PSU	C2-N1	-2.44	1.33	1.36
38	A1	2314	PSU	O4'-C1'	-2.43	1.40	1.43
38	A1	2129	PSU	C2-N3	-2.40	1.33	1.37
38	A1	1110	PSU	C2-N3	-2.39	1.33	1.37
38	A1	2351	PSU	C2-N3	-2.38	1.33	1.37
38	A1	1056	PSU	C2-N3	-2.37	1.33	1.37
34	B5	1782	MA6	C5-N7	-2.36	1.34	1.39
38	A1	2142	1MA	C5-N7	-2.35	1.34	1.39
34	B5	1280	4AC	C7-N4	-2.33	1.32	1.37
34	B5	1181	PSU	C2-N3	-2.32	1.33	1.37
38	A1	1004	PSU	C2-N1	-2.31	1.33	1.36
38	A1	2416	PSU	C2-N3	-2.31	1.33	1.37
34	B5	632	PSU	C2-N3	-2.30	1.33	1.37
38	A1	2922	OMG	C5-N7	-2.30	1.34	1.39
38	A1	1042	PSU	C2-N3	-2.29	1.33	1.37
38	A1	960	PSU	O4'-C1'	-2.28	1.40	1.43
34	B5	1575	G7M	C2-N1	-2.25	1.32	1.37
38	A1	2975	PSU	C2-N1	-2.25	1.33	1.36
38	A1	2975	PSU	C2-N3	-2.25	1.33	1.37
38	A1	2826	PSU	C2-N3	-2.24	1.33	1.37
34	B5	1191	B8N	CN1-N1	2.24	1.51	1.46
38	A1	966	PSU	C2-N3	-2.23	1.33	1.37
38	A1	2264	PSU	O4'-C1'	-2.22	1.40	1.43
38	A1	2735	PSU	C2-N1	-2.22	1.33	1.36
38	A1	986	PSU	C2-N3	-2.22	1.33	1.37
38	A1	2826	PSU	C2-N1	-2.22	1.33	1.36
38	A1	1052	PSU	C2-N3	-2.22	1.33	1.37
38	A1	2278	5MC	C6-C5	2.21	1.38	1.34
38	A1	986	PSU	C2-N1	-2.21	1.33	1.36
38	A1	2351	PSU	C2-N1	-2.21	1.33	1.36
38	A1	2349	PSU	C2-N1	-2.18	1.33	1.36
34	B5	1782	MA6	C4-N9	-2.18	1.33	1.37
34	B5	999	PSU	C2-N3	-2.18	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	1004	PSU	C2-N3	-2.18	1.33	1.37
34	B5	1781	MA6	C4-N9	-2.18	1.33	1.37
38	A1	1042	PSU	C2-N1	-2.17	1.33	1.36
38	A1	1124	PSU	C2-N3	-2.17	1.33	1.37
34	B5	766	PSU	O4'-C1'	-2.16	1.40	1.43
38	A1	2191	PSU	C2-N3	-2.16	1.33	1.37
38	A1	990	PSU	C2-N1	-2.15	1.33	1.36
80	DC	699	DDE	CD2-CG	2.15	1.40	1.36
38	A1	2921	OMU	C5-C4	-2.14	1.39	1.43
38	A1	2264	PSU	C2-N1	-2.13	1.33	1.36
38	A1	776	PSU	C2-N3	-2.13	1.34	1.37
38	A1	990	PSU	C2-N3	-2.13	1.34	1.37
38	A1	1110	PSU	C2-N1	-2.13	1.33	1.36
34	B5	1773	4AC	C7-N4	-2.13	1.32	1.37
34	B5	466	PSU	C2-N3	-2.13	1.34	1.37
38	A1	2349	PSU	C2-N3	-2.13	1.34	1.37
38	A1	2340	PSU	C2-N3	-2.12	1.34	1.37
34	B5	1782	MA6	C8-N7	2.12	1.35	1.31
38	A1	2191	PSU	C2-N1	-2.12	1.33	1.36
38	A1	2129	PSU	C2-N1	-2.12	1.33	1.36
38	A1	2634	UR3	C5-C4	-2.11	1.38	1.43
34	B5	999	PSU	C2-N1	-2.10	1.33	1.36
38	A1	2340	PSU	C2-N1	-2.10	1.33	1.36
38	A1	1056	PSU	C2-N1	-2.10	1.33	1.36
38	A1	2416	PSU	O4'-C1'	-2.08	1.41	1.43
34	B5	1181	PSU	C2-N1	-2.08	1.34	1.36
38	A1	2142	1MA	C2-N3	2.07	1.34	1.30
38	A1	2923	PSU	O4'-C1'	-2.06	1.41	1.43
34	B5	1781	MA6	C8-N7	2.06	1.35	1.31
34	B5	1290	PSU	C2-N3	-2.06	1.34	1.37
38	A1	776	PSU	C2-N1	-2.05	1.34	1.36
40	A4	73	PSU	C2-N3	-2.05	1.34	1.37
34	B5	1575	G7M	C4-N9	-2.04	1.32	1.38
38	A1	2735	PSU	C4-N3	-2.04	1.35	1.38
38	A1	2142	1MA	C4-N9	-2.04	1.32	1.38
38	A1	2260	PSU	C2-N3	-2.04	1.34	1.37
38	A1	2826	PSU	O4'-C1'	-2.04	1.41	1.43
34	B5	1280	4AC	C6-C5	2.03	1.39	1.35
38	A1	2266	PSU	C2-N1	-2.02	1.34	1.36
38	A1	2880	PSU	C2-N1	-2.01	1.34	1.36
38	A1	966	PSU	C2-N1	-2.01	1.34	1.36
38	A1	645	1MA	C4-N9	-2.01	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	B5	1415	PSU	C2-N1	-2.01	1.34	1.36
38	A1	2314	PSU	C2-N3	-2.01	1.34	1.37
34	B5	302	PSU	C2-N3	-2.00	1.34	1.37
38	A1	1124	PSU	C2-N1	-2.00	1.34	1.36

All (233) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	B5	1191	B8N	C32-C31-N3	33.41	170.55	112.16
38	A1	2133	PSU	N1-C2-N3	6.99	122.55	115.17
34	B5	766	PSU	N1-C2-N3	6.90	122.44	115.17
34	B5	211	PSU	N1-C2-N3	6.88	122.43	115.17
38	A1	2258	PSU	N1-C2-N3	6.75	122.29	115.17
38	A1	2975	PSU	N1-C2-N3	6.68	122.21	115.17
38	A1	2260	PSU	N1-C2-N3	6.67	122.20	115.17
38	A1	2264	PSU	N1-C2-N3	6.64	122.17	115.17
34	B5	632	PSU	N1-C2-N3	6.63	122.17	115.17
38	A1	2351	PSU	N1-C2-N3	6.63	122.17	115.17
38	A1	2923	PSU	N1-C2-N3	6.63	122.16	115.17
38	A1	966	PSU	N1-C2-N3	6.59	122.12	115.17
38	A1	2416	PSU	N1-C2-N3	6.58	122.11	115.17
38	A1	2865	PSU	N1-C2-N3	6.57	122.10	115.17
38	A1	1124	PSU	N1-C2-N3	6.56	122.08	115.17
38	A1	2944	PSU	N1-C2-N3	6.55	122.08	115.17
38	A1	2634	UR3	C4-N3-C2	-6.53	119.33	124.58
38	A1	1056	PSU	N1-C2-N3	6.50	122.02	115.17
38	A1	2129	PSU	N1-C2-N3	6.48	122.00	115.17
34	B5	302	PSU	N1-C2-N3	6.45	121.97	115.17
38	A1	986	PSU	N1-C2-N3	6.43	121.95	115.17
34	B5	1187	PSU	N1-C2-N3	6.40	121.92	115.17
38	A1	990	PSU	N1-C2-N3	6.40	121.92	115.17
38	A1	1004	PSU	N1-C2-N3	6.39	121.91	115.17
38	A1	2826	PSU	N1-C2-N3	6.39	121.91	115.17
38	A1	2349	PSU	N1-C2-N3	6.38	121.90	115.17
38	A1	2880	PSU	N1-C2-N3	6.38	121.90	115.17
39	A3	50	PSU	N1-C2-N3	6.38	121.90	115.17
34	B5	1290	PSU	N1-C2-N3	6.36	121.88	115.17
38	A1	2191	PSU	N1-C2-N3	6.36	121.87	115.17
38	A1	1052	PSU	N1-C2-N3	6.35	121.87	115.17
34	B5	759	PSU	N1-C2-N3	6.34	121.86	115.17
34	B5	466	PSU	N1-C2-N3	6.34	121.86	115.17
38	A1	960	PSU	N1-C2-N3	6.31	121.83	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	B5	106	PSU	N1-C2-N3	6.31	121.83	115.17
38	A1	776	PSU	N1-C2-N3	6.31	121.82	115.17
38	A1	1110	PSU	N1-C2-N3	6.25	121.76	115.17
38	A1	2314	PSU	N1-C2-N3	6.25	121.76	115.17
40	A4	73	PSU	N1-C2-N3	6.24	121.75	115.17
34	B5	999	PSU	N1-C2-N3	6.21	121.72	115.17
38	A1	1042	PSU	N1-C2-N3	6.16	121.67	115.17
34	B5	120	PSU	N1-C2-N3	6.12	121.63	115.17
38	A1	2922	OMG	C5-C4-N3	-6.11	118.66	128.39
38	A1	2340	PSU	N1-C2-N3	6.08	121.58	115.17
38	A1	2266	PSU	N1-C2-N3	6.04	121.54	115.17
34	B5	1181	PSU	N1-C2-N3	5.90	121.40	115.17
34	B5	1415	PSU	N1-C2-N3	5.87	121.36	115.17
38	A1	645	1MA	C5-C4-N3	-5.68	118.91	127.27
34	B5	1781	MA6	C5-C4-N3	-5.66	118.92	126.72
34	B5	1782	MA6	C5-C4-N3	-5.53	119.11	126.72
34	B5	1191	B8N	C4-N3-C2	-5.48	118.87	125.62
38	A1	2735	PSU	N1-C2-N3	5.38	120.85	115.17
38	A1	2142	1MA	C5-C4-N3	-5.30	119.47	127.27
38	A1	2921	OMU	C4-N3-C2	-5.03	120.37	126.61
38	A1	2922	OMG	C2-N3-C4	5.01	120.93	112.30
38	A1	645	1MA	C2-N3-C4	4.81	121.97	112.53
34	B5	1575	G7M	C2-N3-C4	4.71	120.41	112.30
38	A1	2264	PSU	O2-C2-N1	-4.61	118.04	122.79
38	A1	2922	OMG	N9-C4-N3	4.60	135.15	125.95
38	A1	2133	PSU	C4-N3-C2	-4.59	120.05	126.37
38	A1	2142	1MA	C2-N3-C4	4.59	121.53	112.53
34	B5	632	PSU	C4-N3-C2	-4.56	120.09	126.37
38	A1	2880	PSU	C4-N3-C2	-4.50	120.18	126.37
38	A1	966	PSU	C4-N3-C2	-4.48	120.20	126.37
34	B5	1575	G7M	C5-C4-N3	-4.47	119.70	128.15
38	A1	2921	OMU	N3-C2-N1	4.46	120.70	114.89
38	A1	2944	PSU	C4-N3-C2	-4.41	120.29	126.37
38	A1	2351	PSU	C4-N3-C2	-4.41	120.30	126.37
34	B5	1290	PSU	C4-N3-C2	-4.39	120.32	126.37
34	B5	1781	MA6	N3-C4-N9	4.39	134.63	127.17
34	B5	302	PSU	C4-N3-C2	-4.37	120.36	126.37
38	A1	2129	PSU	C4-N3-C2	-4.35	120.38	126.37
34	B5	1782	MA6	N3-C4-N9	4.34	134.54	127.17
38	A1	2260	PSU	C4-N3-C2	-4.33	120.40	126.37
38	A1	1052	PSU	C4-N3-C2	-4.31	120.44	126.37
38	A1	2975	PSU	C4-N3-C2	-4.31	120.44	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2923	PSU	C4-N3-C2	-4.29	120.46	126.37
38	A1	960	PSU	C4-N3-C2	-4.25	120.51	126.37
34	B5	759	PSU	C4-N3-C2	-4.23	120.54	126.37
34	B5	466	PSU	C4-N3-C2	-4.23	120.55	126.37
39	A3	50	PSU	C4-N3-C2	-4.22	120.55	126.37
38	A1	1056	PSU	C4-N3-C2	-4.22	120.56	126.37
38	A1	1110	PSU	C4-N3-C2	-4.21	120.57	126.37
38	A1	2349	PSU	C4-N3-C2	-4.21	120.57	126.37
38	A1	2826	PSU	C4-N3-C2	-4.19	120.59	126.37
38	A1	990	PSU	C4-N3-C2	-4.18	120.61	126.37
38	A1	2191	PSU	C4-N3-C2	-4.18	120.61	126.37
38	A1	2944	PSU	O2-C2-N1	-4.17	118.49	122.79
38	A1	986	PSU	C4-N3-C2	-4.13	120.68	126.37
34	B5	999	PSU	C4-N3-C2	-4.13	120.69	126.37
34	B5	1782	MA6	C2-N1-C6	4.12	121.90	111.83
38	A1	2865	PSU	C4-N3-C2	-4.12	120.70	126.37
34	B5	766	PSU	C4-N3-C2	-4.11	120.71	126.37
38	A1	2416	PSU	C4-N3-C2	-4.10	120.72	126.37
38	A1	2258	PSU	O2-C2-N1	-4.10	118.56	122.79
38	A1	2264	PSU	C4-N3-C2	-4.09	120.73	126.37
34	B5	211	PSU	C4-N3-C2	-4.09	120.74	126.37
38	A1	1124	PSU	C4-N3-C2	-4.08	120.75	126.37
34	B5	1187	PSU	O2-C2-N1	-4.07	118.59	122.79
34	B5	1187	PSU	C4-N3-C2	-4.06	120.78	126.37
34	B5	120	PSU	C4-N3-C2	-4.05	120.80	126.37
34	B5	1781	MA6	C2-N1-C6	4.00	121.61	111.83
80	DC	699	DDE	CAU-CBW-CBI	-4.00	103.39	111.22
38	A1	1004	PSU	C4-N3-C2	-4.00	120.86	126.37
34	B5	106	PSU	C4-N3-C2	-3.99	120.88	126.37
38	A1	2416	PSU	O2-C2-N1	-3.96	118.71	122.79
38	A1	1004	PSU	O2-C2-N1	-3.95	118.71	122.79
40	A4	73	PSU	C4-N3-C2	-3.94	120.94	126.37
38	A1	2258	PSU	C4-N3-C2	-3.94	120.94	126.37
38	A1	1042	PSU	C4-N3-C2	-3.94	120.95	126.37
34	B5	766	PSU	O2-C2-N1	-3.93	118.73	122.79
38	A1	2314	PSU	C4-N3-C2	-3.93	120.96	126.37
38	A1	2921	OMU	C5-C4-N3	3.92	120.28	114.80
34	B5	211	PSU	O2-C2-N1	-3.91	118.75	122.79
38	A1	2351	PSU	O2-C2-N1	-3.89	118.78	122.79
38	A1	2340	PSU	C4-N3-C2	-3.89	121.01	126.37
38	A1	986	PSU	O2-C2-N1	-3.87	118.80	122.79
38	A1	2975	PSU	O2-C2-N1	-3.82	118.84	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2870	5MC	C5-C6-N1	-3.81	119.17	123.31
34	B5	1575	G7M	N9-C4-N3	3.80	133.56	125.95
38	A1	2349	PSU	O2-C2-N1	-3.80	118.87	122.79
38	A1	990	PSU	O2-C2-N1	-3.80	118.87	122.79
38	A1	2266	PSU	C4-N3-C2	-3.79	121.15	126.37
38	A1	2826	PSU	O2-C2-N1	-3.79	118.88	122.79
38	A1	776	PSU	C4-N3-C2	-3.78	121.16	126.37
34	B5	1782	MA6	C4-C5-N7	-3.78	106.26	110.58
34	B5	120	PSU	O2-C2-N1	-3.77	118.90	122.79
38	A1	2923	PSU	O2-C2-N1	-3.77	118.90	122.79
38	A1	2314	PSU	O2-C2-N1	-3.73	118.94	122.79
34	B5	1575	G7M	C5-C6-N1	3.71	119.52	111.84
38	A1	966	PSU	O2-C2-N1	-3.71	118.96	122.79
38	A1	2865	PSU	O2-C2-N1	-3.70	118.97	122.79
34	B5	759	PSU	O2-C2-N1	-3.70	118.97	122.79
38	A1	2260	PSU	O2-C2-N1	-3.69	118.98	122.79
38	A1	1124	PSU	O2-C2-N1	-3.67	119.01	122.79
38	A1	1052	PSU	O2-C2-N1	-3.66	119.02	122.79
39	A3	50	PSU	O2-C2-N1	-3.65	119.02	122.79
34	B5	1782	MA6	C2-N3-C4	3.64	120.71	111.83
38	A1	2266	PSU	O2-C2-N1	-3.61	119.07	122.79
34	B5	999	PSU	O2-C2-N1	-3.60	119.07	122.79
38	A1	2129	PSU	O2-C2-N1	-3.60	119.07	122.79
38	A1	2191	PSU	O2-C2-N1	-3.60	119.07	122.79
34	B5	1781	MA6	C4-C5-N7	-3.59	106.47	110.58
34	B5	1181	PSU	C4-N3-C2	-3.58	121.44	126.37
34	B5	106	PSU	O2-C2-N1	-3.57	119.11	122.79
38	A1	776	PSU	O2-C2-N1	-3.57	119.11	122.79
34	B5	1290	PSU	O2-C2-N1	-3.55	119.13	122.79
38	A1	2142	1MA	N9-C4-N3	3.55	134.98	126.90
34	B5	1781	MA6	C2-N3-C4	3.54	120.47	111.83
38	A1	1056	PSU	O2-C2-N1	-3.53	119.15	122.79
34	B5	1773	4AC	N4-C4-N3	3.51	119.57	113.87
34	B5	466	PSU	O2-C2-N1	-3.51	119.17	122.79
38	A1	645	1MA	N9-C4-N3	3.51	134.89	126.90
34	B5	302	PSU	O2-C2-N1	-3.49	119.19	122.79
38	A1	960	PSU	O2-C2-N1	-3.47	119.21	122.79
40	A4	73	PSU	O2-C2-N1	-3.46	119.22	122.79
34	B5	1781	MA6	N1-C6-N6	3.42	121.03	116.86
34	B5	1415	PSU	O2-C2-N1	-3.41	119.27	122.79
38	A1	2634	UR3	C5-C4-N3	3.35	119.45	115.04
38	A1	2880	PSU	O2-C2-N1	-3.35	119.34	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2340	PSU	O2-C2-N1	-3.34	119.34	122.79
34	B5	1181	PSU	O2-C2-N1	-3.33	119.35	122.79
38	A1	1110	PSU	O2-C2-N1	-3.31	119.38	122.79
34	B5	1782	MA6	N1-C2-N3	-3.29	123.60	128.58
34	B5	1191	B8N	N3-C2-N1	3.27	120.71	116.72
34	B5	632	PSU	O2-C2-N1	-3.20	119.49	122.79
38	A1	2278	5MC	C5-C6-N1	-3.17	119.87	123.31
34	B5	1575	G7M	O6-C6-C5	-3.16	120.95	128.01
38	A1	2922	OMG	C6-C5-N7	3.13	135.98	130.29
38	A1	1042	PSU	O2-C2-N1	-3.11	119.58	122.79
34	B5	1782	MA6	C4-N9-C8	3.09	108.98	105.74
38	A1	2133	PSU	O2-C2-N1	-3.01	119.68	122.79
36	AB	243	HIC	NE2-CE1-ND1	-3.00	111.52	112.66
34	B5	1781	MA6	N1-C2-N3	-2.99	124.06	128.58
38	A1	2921	OMU	O4-C4-C5	-2.90	120.15	125.16
34	B5	1575	G7M	C6-C5-N7	2.90	135.81	132.17
34	B5	1280	4AC	N4-C4-N3	2.89	118.56	113.87
34	B5	1191	B8N	C31-N3-C2	2.84	121.84	117.64
34	B5	1415	PSU	C4-N3-C2	-2.82	122.48	126.37
34	B5	1782	MA6	C5-N7-C8	2.79	107.84	103.45
34	B5	1781	MA6	C4-N9-C8	2.63	108.50	105.74
34	B5	1181	PSU	C6-C5-C4	-2.62	116.41	118.17
38	A1	2921	OMU	O2-C2-N1	-2.56	119.46	122.80
38	A1	2870	5MC	C5-C4-N3	-2.54	119.15	121.75
34	B5	1575	G7M	C2-N1-C6	-2.53	120.52	125.11
38	A1	2133	PSU	C5-C6-N1	-2.52	118.64	122.14
34	B5	632	PSU	C5-C6-N1	-2.52	118.64	122.14
34	B5	1782	MA6	N1-C6-N6	2.51	119.92	116.86
34	B5	1290	PSU	C5-C6-N1	-2.51	118.66	122.14
34	B5	1781	MA6	C5-N7-C8	2.51	107.39	103.45
38	A1	2278	5MC	C5-C4-N3	-2.51	119.18	121.75
34	B5	1781	MA6	C5-C6-N6	-2.48	121.41	125.33
38	A1	2278	5MC	C1'-N1-C6	-2.45	117.11	121.15
38	A1	2922	OMG	C4-C5-N7	-2.45	106.79	110.67
38	A1	2735	PSU	O2-C2-N1	-2.41	120.30	122.79
38	A1	645	1MA	C4-C5-N7	-2.39	106.89	110.67
34	B5	1782	MA6	N9-C8-N7	-2.38	110.56	113.94
38	A1	960	PSU	C5-C6-N1	-2.36	118.87	122.14
34	B5	466	PSU	C5-C6-N1	-2.34	118.89	122.14
34	B5	759	PSU	C5-C6-N1	-2.31	118.94	122.14
38	A1	2133	PSU	O2-C2-N3	-2.30	117.77	121.86
38	A1	2351	PSU	C5-C6-N1	-2.30	118.95	122.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2278	5MC	O2-C2-N3	-2.29	118.72	122.33
34	B5	302	PSU	C5-C6-N1	-2.24	119.04	122.14
38	A1	645	1MA	N1-C2-N3	-2.23	123.34	126.00
39	A3	50	PSU	C5-C6-N1	-2.21	119.07	122.14
38	A1	2260	PSU	C5-C6-N1	-2.21	119.07	122.14
38	A1	966	PSU	C5-C6-N1	-2.21	119.08	122.14
34	B5	766	PSU	C5-C6-N1	-2.19	119.11	122.14
38	A1	2922	OMG	O6-C6-C5	-2.18	120.78	126.53
38	A1	1052	PSU	C5-C6-N1	-2.18	119.12	122.14
34	B5	1191	B8N	O4'-C1'-C2'	2.18	108.16	105.15
38	A1	2129	PSU	C5-C6-N1	-2.16	119.14	122.14
38	A1	2923	PSU	C5-C6-N1	-2.14	119.18	122.14
38	A1	2142	1MA	N1-C2-N3	-2.13	123.47	126.00
34	B5	999	PSU	O4'-C1'-C2'	2.12	108.09	105.15
38	A1	2865	PSU	C5-C6-N1	-2.11	119.21	122.14
38	A1	960	PSU	O4'-C1'-C2'	2.11	108.07	105.15
34	B5	766	PSU	O4'-C1'-C2'	2.10	108.06	105.15
38	A1	2944	PSU	C5-C6-N1	-2.10	119.22	122.14
38	A1	2880	PSU	C5-C6-N1	-2.10	119.22	122.14
34	B5	1782	MA6	C6-C5-N7	2.08	136.76	133.43
38	A1	645	1MA	C6-C5-N7	2.06	135.81	132.16
38	A1	2975	PSU	C5-C6-N1	-2.06	119.28	122.14
38	A1	2826	PSU	O4'-C1'-C2'	2.06	108.00	105.15
38	A1	2142	1MA	C4-C5-N7	-2.05	107.42	110.67
80	DC	699	DDE	CAC-NCB-CBW	2.04	115.41	110.52
38	A1	2634	UR3	C3U-N3-C2	2.04	120.89	117.33
38	A1	2314	PSU	O4'-C1'-C2'	2.03	107.96	105.15
38	A1	2880	PSU	O4'-C1'-C2'	2.02	107.95	105.15
38	A1	2314	PSU	C5-C6-N1	-2.02	119.34	122.14
38	A1	776	PSU	O4'-C1'-C2'	2.02	107.94	105.15
38	A1	2416	PSU	O4'-C1'-C2'	2.00	107.92	105.15

There are no chirality outliers.

All (67) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
80	DC	699	DDE	CBI-CBW-NCB-CAB
80	DC	699	DDE	CBI-CBW-NCB-CAC
80	DC	699	DDE	CBI-CBW-NCB-CAA
80	DC	699	DDE	CAU-CBW-NCB-CAB
80	DC	699	DDE	CAU-CBW-NCB-CAC
80	DC	699	DDE	CAU-CBW-NCB-CAA

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Mol	Chain	Res	Type	Atoms
34	B5	1280	4AC	N3-C4-N4-C7
34	B5	1280	4AC	C5-C4-N4-C7
34	B5	1773	4AC	O4'-C4'-C5'-O5'
34	B5	1773	4AC	N3-C4-N4-C7
34	B5	1773	4AC	C5-C4-N4-C7
34	B5	1773	4AC	O7-C7-N4-C4
34	B5	1773	4AC	CM7-C7-N4-C4
34	B5	1781	MA6	C5-C6-N6-C9
34	B5	1782	MA6	C5-C6-N6-C9
38	A1	1042	PSU	O4'-C1'-C5-C4
38	A1	1042	PSU	O4'-C1'-C5-C6
34	B5	1415	PSU	C3'-C4'-C5'-O5'
34	B5	1773	4AC	C3'-C4'-C5'-O5'
38	A1	2264	PSU	O4'-C4'-C5'-O5'
34	B5	1415	PSU	O4'-C4'-C5'-O5'
34	B5	1782	MA6	O4'-C4'-C5'-O5'
38	A1	2264	PSU	C3'-C4'-C5'-O5'
38	A1	2923	PSU	O4'-C4'-C5'-O5'
34	B5	1781	MA6	N1-C6-N6-C9
34	B5	1782	MA6	N1-C6-N6-C9
38	A1	2870	5MC	C2'-C1'-N1-C6
38	A1	2923	PSU	C3'-C4'-C5'-O5'
80	DC	699	DDE	CE1-CAT-CAU-CBW
38	A1	1124	PSU	C3'-C4'-C5'-O5'
38	A1	2314	PSU	C3'-C4'-C5'-O5'
36	AB	243	HIC	CA-CB-CG-ND1
34	B5	1782	MA6	C5-C6-N6-C10
38	A1	1124	PSU	O4'-C4'-C5'-O5'
34	B5	1191	B8N	N34-C33-C34-O36
34	B5	1782	MA6	C3'-C4'-C5'-O5'
38	A1	2870	5MC	C2'-C1'-N1-C2
36	AB	243	HIC	CA-CB-CG-CD2
34	B5	1781	MA6	C5-C6-N6-C10
38	A1	2266	PSU	C3'-C4'-C5'-O5'
38	A1	2870	5MC	O4'-C1'-N1-C6
38	A1	2314	PSU	O4'-C4'-C5'-O5'
38	A1	2870	5MC	O4'-C1'-N1-C2
34	B5	211	PSU	C4'-C5'-O5'-P
38	A1	2340	PSU	C4'-C5'-O5'-P
34	B5	999	PSU	O4'-C1'-C5-C4
34	B5	1187	PSU	O4'-C1'-C5-C4
34	B5	1191	B8N	O4'-C1'-C5-C4

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Mol	Chain	Res	Type	Atoms
38	A1	1110	PSU	O4'-C1'-C5-C4
38	A1	2865	PSU	O4'-C1'-C5-C4
38	A1	2923	PSU	O4'-C1'-C5-C4
38	A1	2944	PSU	O4'-C1'-C5-C4
80	DC	699	DDE	N-CA-CB-CG
34	B5	1191	B8N	C32-C33-C34-O35
38	A1	2923	PSU	C4'-C5'-O5'-P
38	A1	2266	PSU	O4'-C4'-C5'-O5'
34	B5	1187	PSU	O4'-C1'-C5-C6
38	A1	960	PSU	O4'-C1'-C5-C6
38	A1	1110	PSU	O4'-C1'-C5-C6
38	A1	2923	PSU	O4'-C1'-C5-C6
38	A1	2944	PSU	O4'-C1'-C5-C6
34	B5	1191	B8N	C32-C33-C34-O36
38	A1	645	1MA	C2'-C1'-N9-C8
38	A1	960	PSU	C2'-C1'-C5-C6
34	B5	1575	G7M	O4'-C4'-C5'-O5'
34	B5	1191	B8N	N34-C33-C34-O35
34	B5	1575	G7M	C3'-C4'-C5'-O5'

There are no ring outliers.

35 monomers are involved in 66 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
38	A1	2133	PSU	2	0
34	B5	1773	4AC	3	0
38	A1	2260	PSU	1	0
38	A1	2349	PSU	1	0
38	A1	2865	PSU	2	0
38	A1	2266	PSU	2	0
38	A1	2258	PSU	3	0
34	B5	766	PSU	1	0
34	B5	1781	MA6	3	0
34	B5	1575	G7M	1	0
38	A1	2314	PSU	1	0
38	A1	2880	PSU	2	0
38	A1	2351	PSU	1	0
38	A1	2191	PSU	2	0
38	A1	645	1MA	1	0
34	B5	120	PSU	3	0
34	B5	1181	PSU	2	0
34	B5	466	PSU	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
38	A1	2923	PSU	3	0
34	B5	211	PSU	2	0
39	A3	50	PSU	1	0
34	B5	1280	4AC	7	0
38	A1	986	PSU	2	0
38	A1	990	PSU	1	0
38	A1	2735	PSU	1	0
34	B5	302	PSU	2	0
38	A1	1110	PSU	1	0
38	A1	966	PSU	2	0
38	A1	2922	OMG	1	0
34	B5	632	PSU	2	0
38	A1	2129	PSU	1	0
80	DC	699	DDE	1	0
34	B5	1187	PSU	4	0
34	B5	1415	PSU	3	0
38	A1	2264	PSU	1	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 4 ligands modelled in this entry, 2 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
85	SO1	DC	903	-	34,39,39	0.67	1 (2%)	38,64,64	1.19	5 (13%)
83	GDP	DC	901	84	29,30,30	1.16	3 (10%)	45,47,47	1.71	6 (13%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns.

'-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
85	SO1	DC	903	-	1/1/15/16	7/21/104/104	0/7/5/5
83	GDP	DC	901	84	-	5/16/32/32	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	3.09	1.47	1.38
85	DC	903	SO1	O14-C5	-2.96	1.19	1.30
83	DC	901	GDP	C6-N1	-2.58	1.34	1.38
83	DC	901	GDP	C5-N7	-2.21	1.34	1.39

All (11) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	DC	901	GDP	C5-C4-N3	-5.97	118.89	128.39
83	DC	901	GDP	N9-C4-N3	4.64	135.24	125.95
83	DC	901	GDP	C2-N3-C4	4.62	120.26	112.30
85	DC	903	SO1	C12-C6-C2	-4.46	98.17	105.09
83	DC	901	GDP	C6-C5-N7	2.81	135.41	130.29
83	DC	901	GDP	C3'-C2'-C1'	2.47	106.13	101.46
83	DC	901	GDP	C4-C5-N7	-2.39	106.89	110.67
85	DC	903	SO1	C21-C13-C4	2.34	118.65	112.41
85	DC	903	SO1	O57-C53-C54	-2.23	105.12	110.38
85	DC	903	SO1	C18-C9-C16	-2.18	100.74	103.72
85	DC	903	SO1	C7-C2-C6	2.10	116.07	112.05

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
85	DC	903	SO1	C4

All (12) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
83	DC	901	GDP	C5'-O5'-PA-O3A
83	DC	901	GDP	C5'-O5'-PA-O2A
85	DC	903	SO1	C2-C1-C5-O14
85	DC	903	SO1	C2-C1-C5-O15
85	DC	903	SO1	C54-C55-O64-C65
83	DC	901	GDP	C3'-C4'-C5'-O5'

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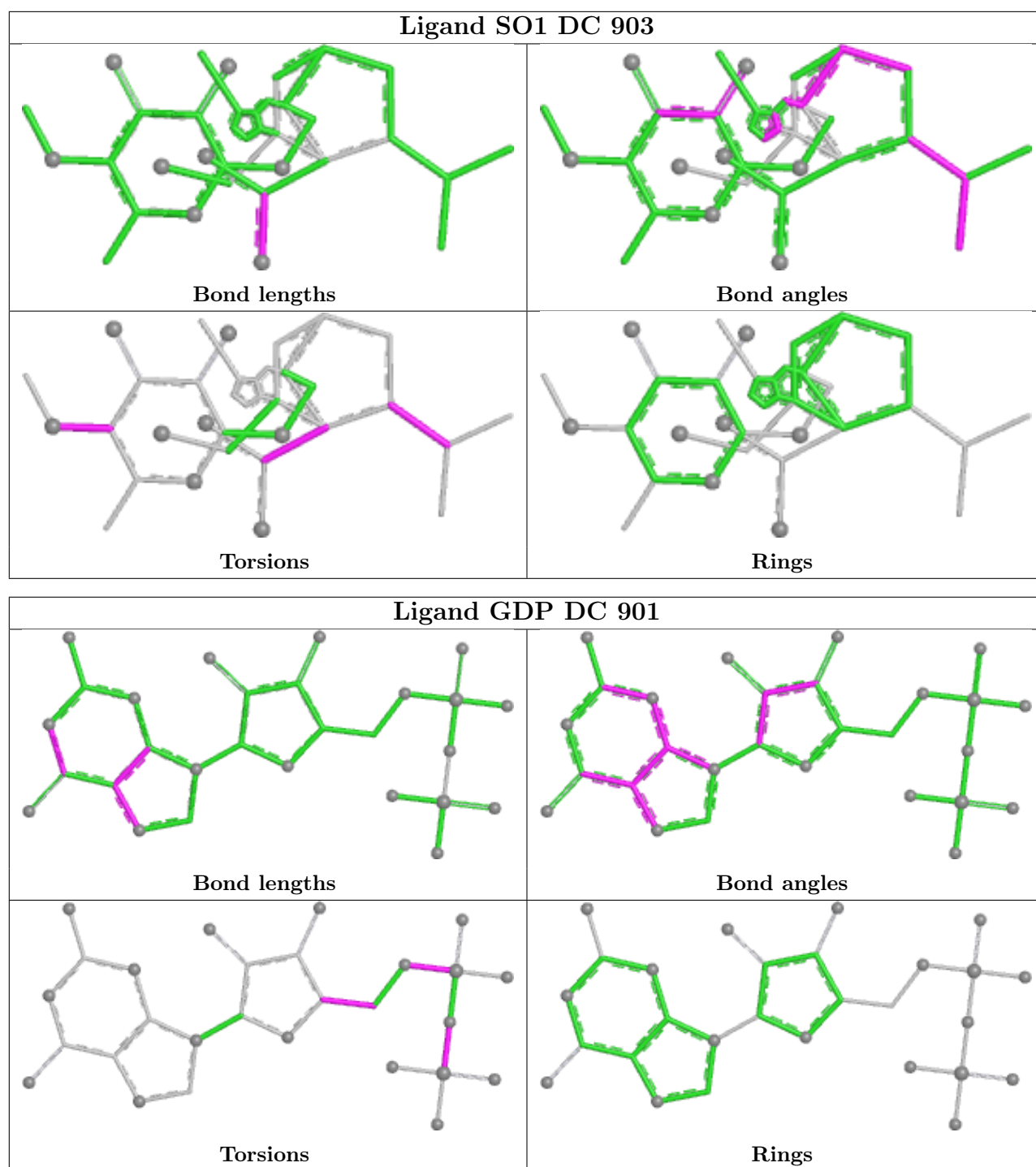
Mol	Chain	Res	Type	Atoms
83	DC	901	GDP	PA-O3A-PB-O2B
83	DC	901	GDP	O4'-C4'-C5'-O5'
85	DC	903	SO1	C20-C13-C4-C12
85	DC	903	SO1	C21-C13-C4-C1
85	DC	903	SO1	C56-C55-O64-C65
85	DC	903	SO1	C20-C13-C4-C1

There are no ring outliers.

2 monomers are involved in 13 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
85	DC	903	SO1	9	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 than 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.



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

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A1	451:U	O3'	486:A	P	17.02

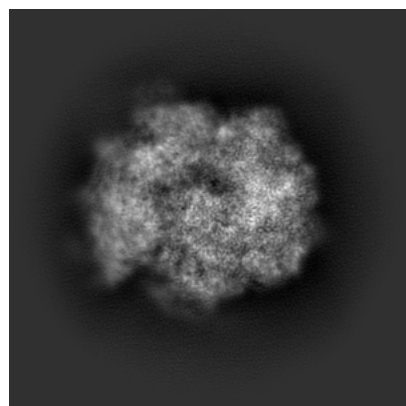
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-40998. These allow visual inspection of the internal detail of the map and identification of artifacts.

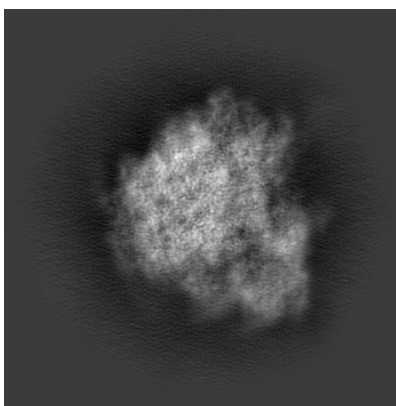
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

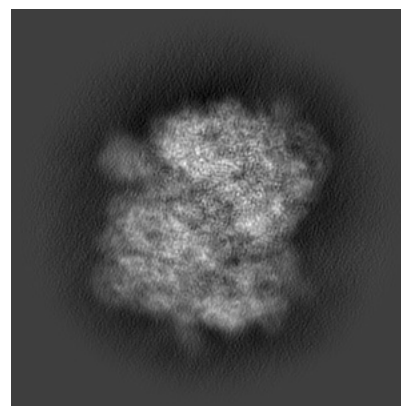
6.1.1 Primary map



X

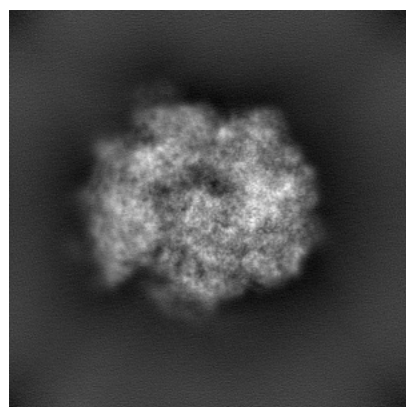


Y

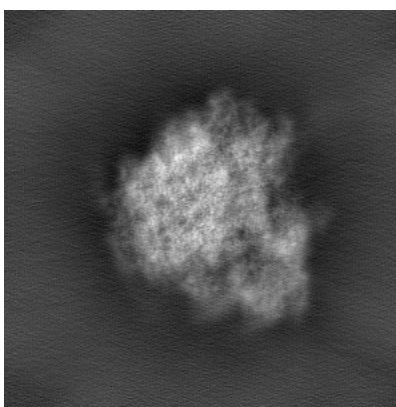


Z

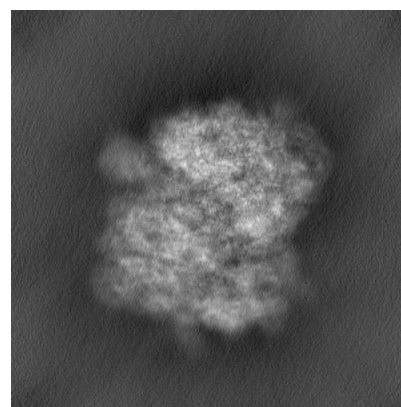
6.1.2 Raw map



X



Y

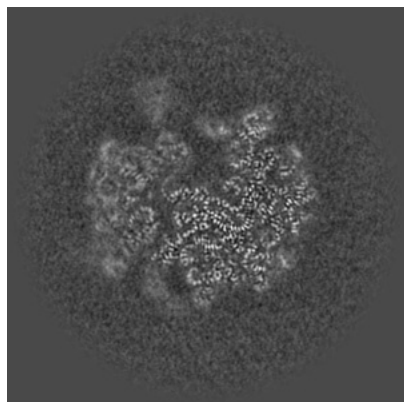


Z

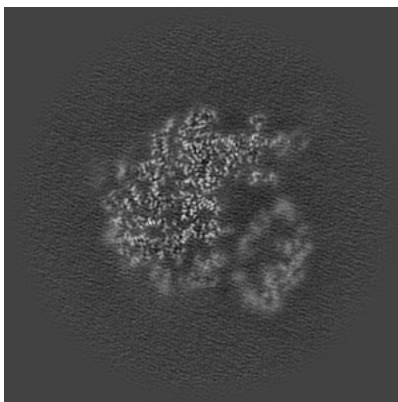
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

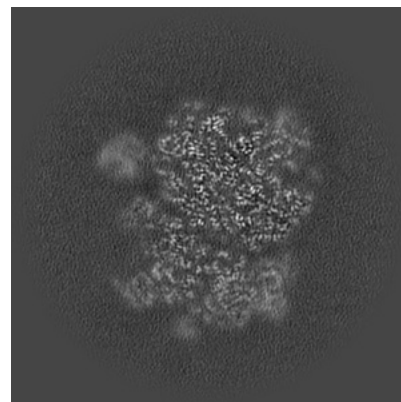
6.2.1 Primary map



X Index: 200

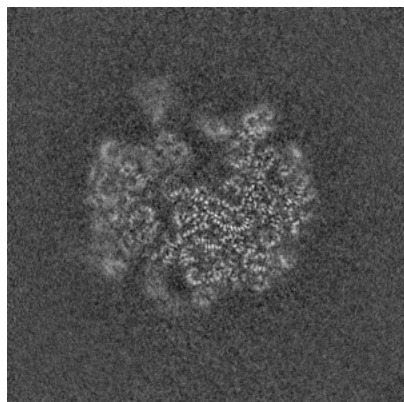


Y Index: 200

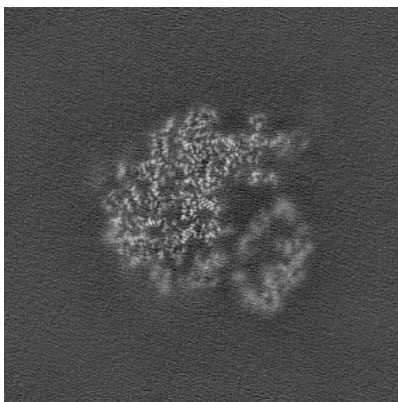


Z Index: 200

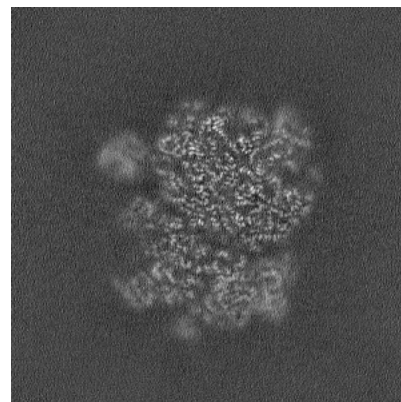
6.2.2 Raw map



X Index: 200



Y Index: 200

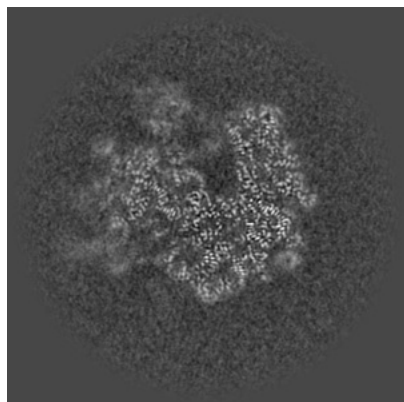


Z Index: 200

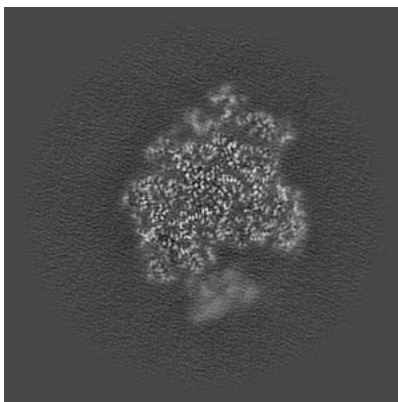
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

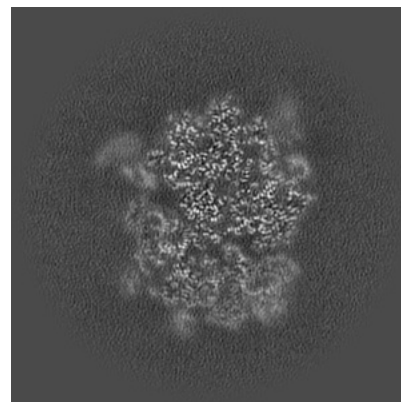
6.3.1 Primary map



X Index: 185

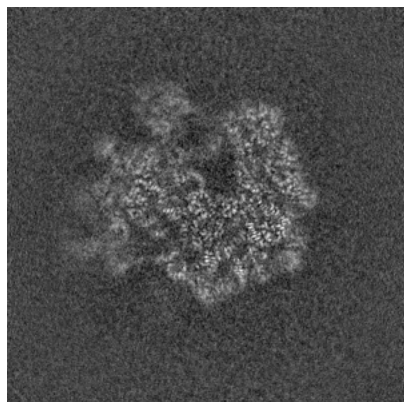


Y Index: 245

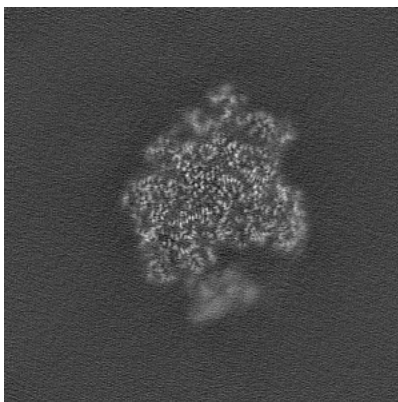


Z Index: 190

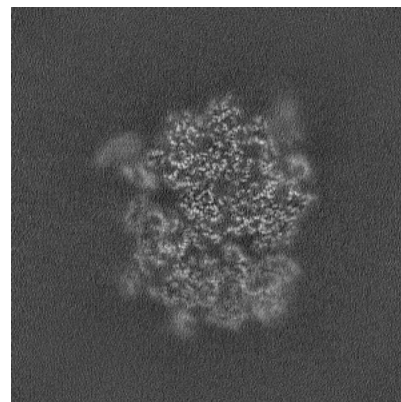
6.3.2 Raw map



X Index: 184



Y Index: 245

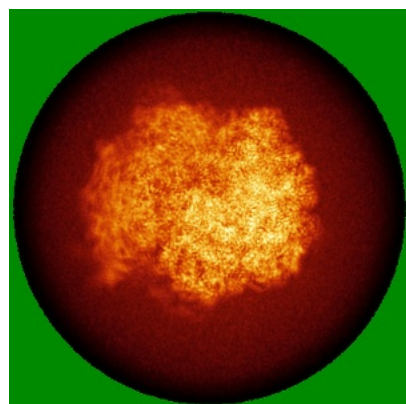


Z Index: 190

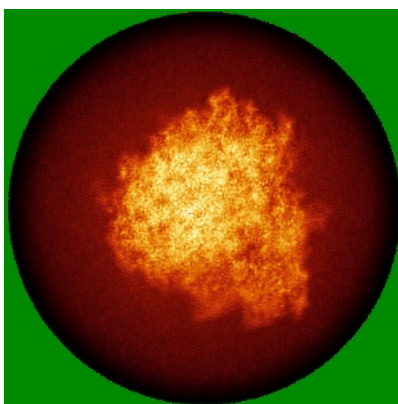
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

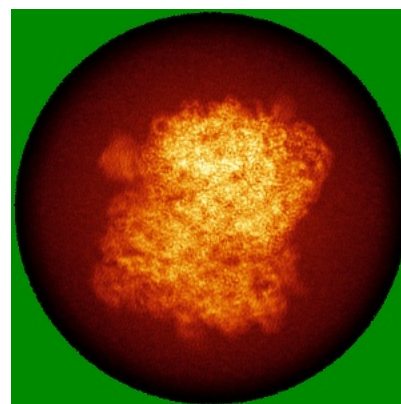
6.4.1 Primary map



X

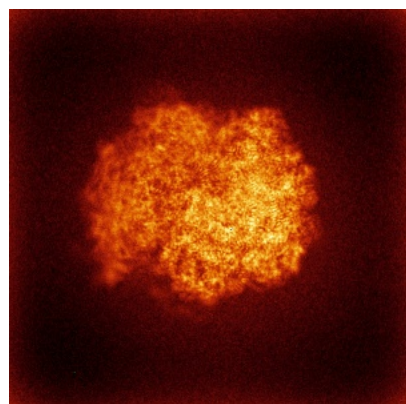


Y

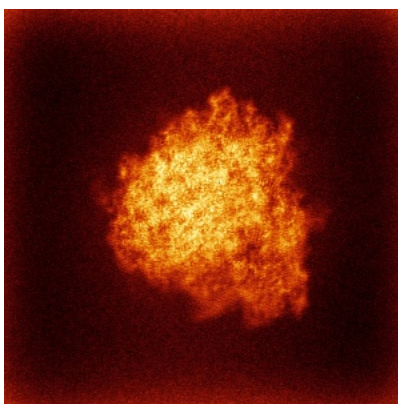


Z

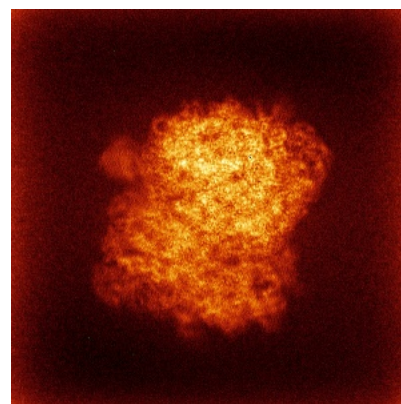
6.4.2 Raw map



X



Y

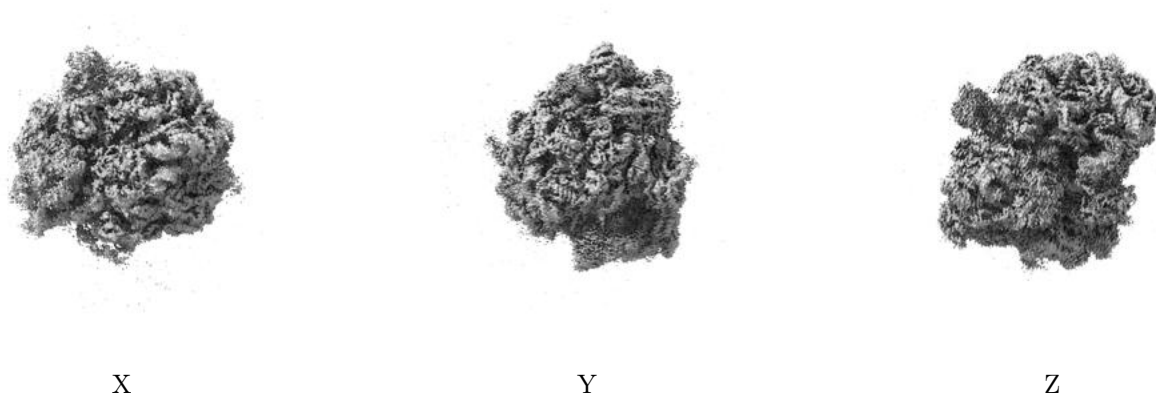


Z

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.

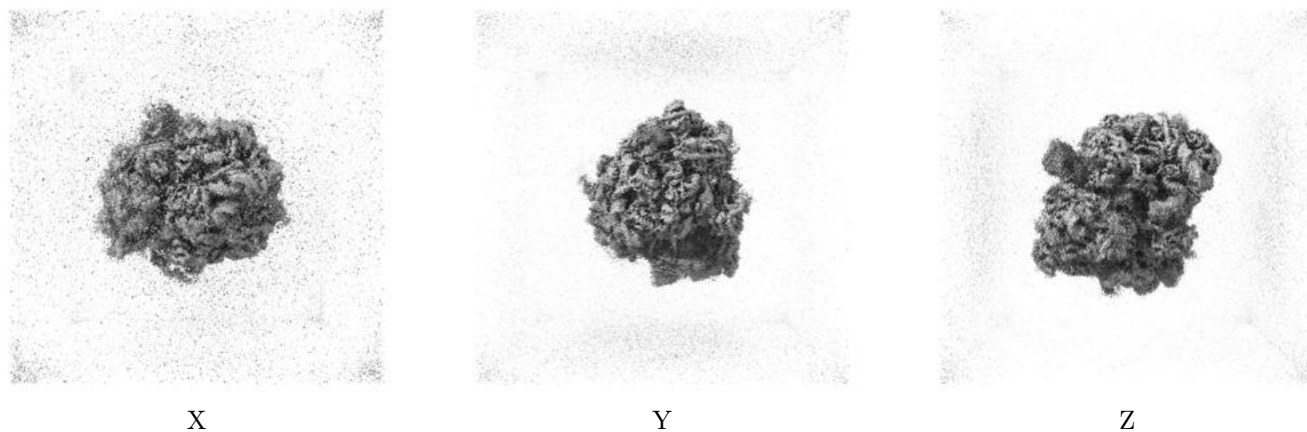
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



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



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.

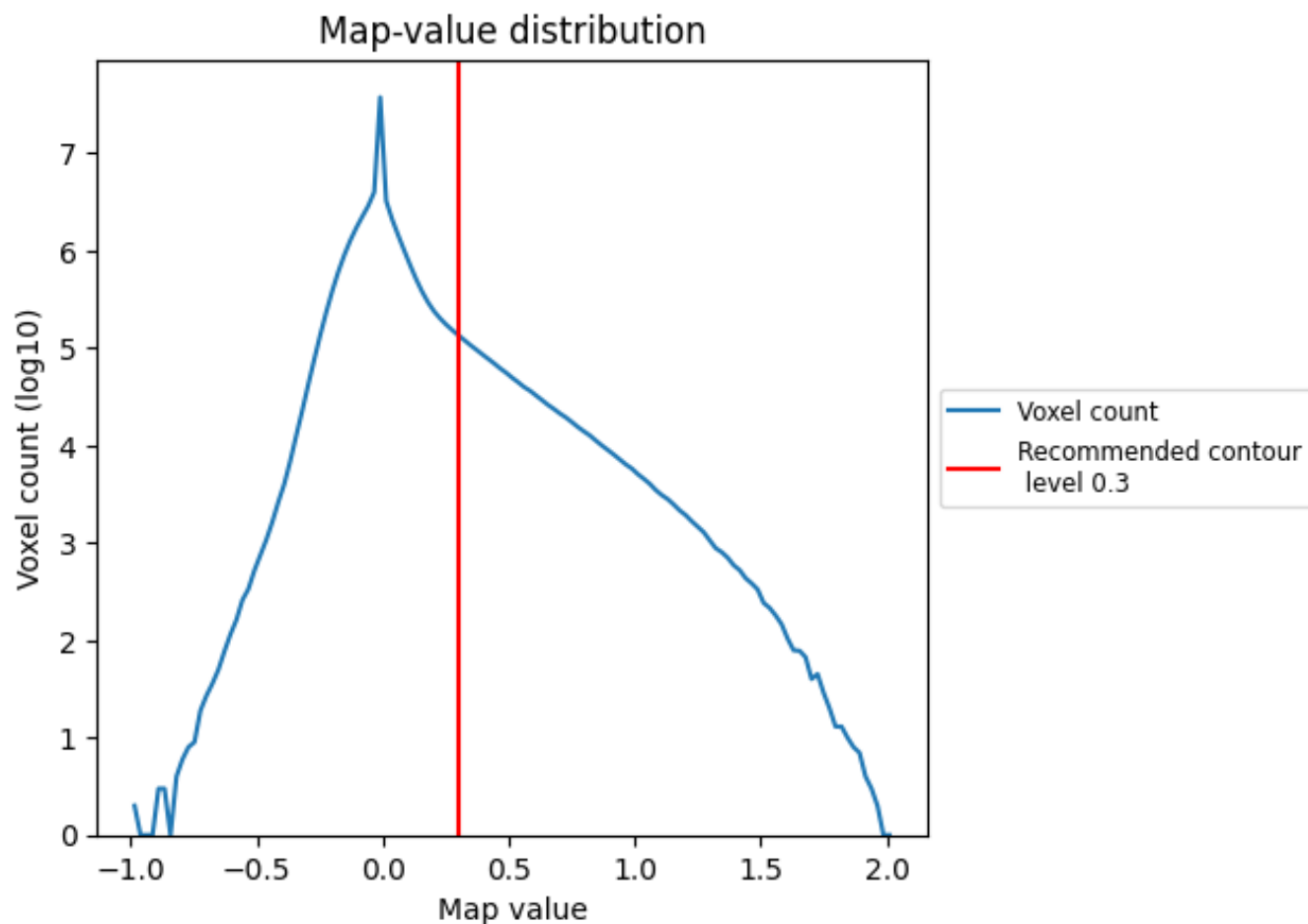
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

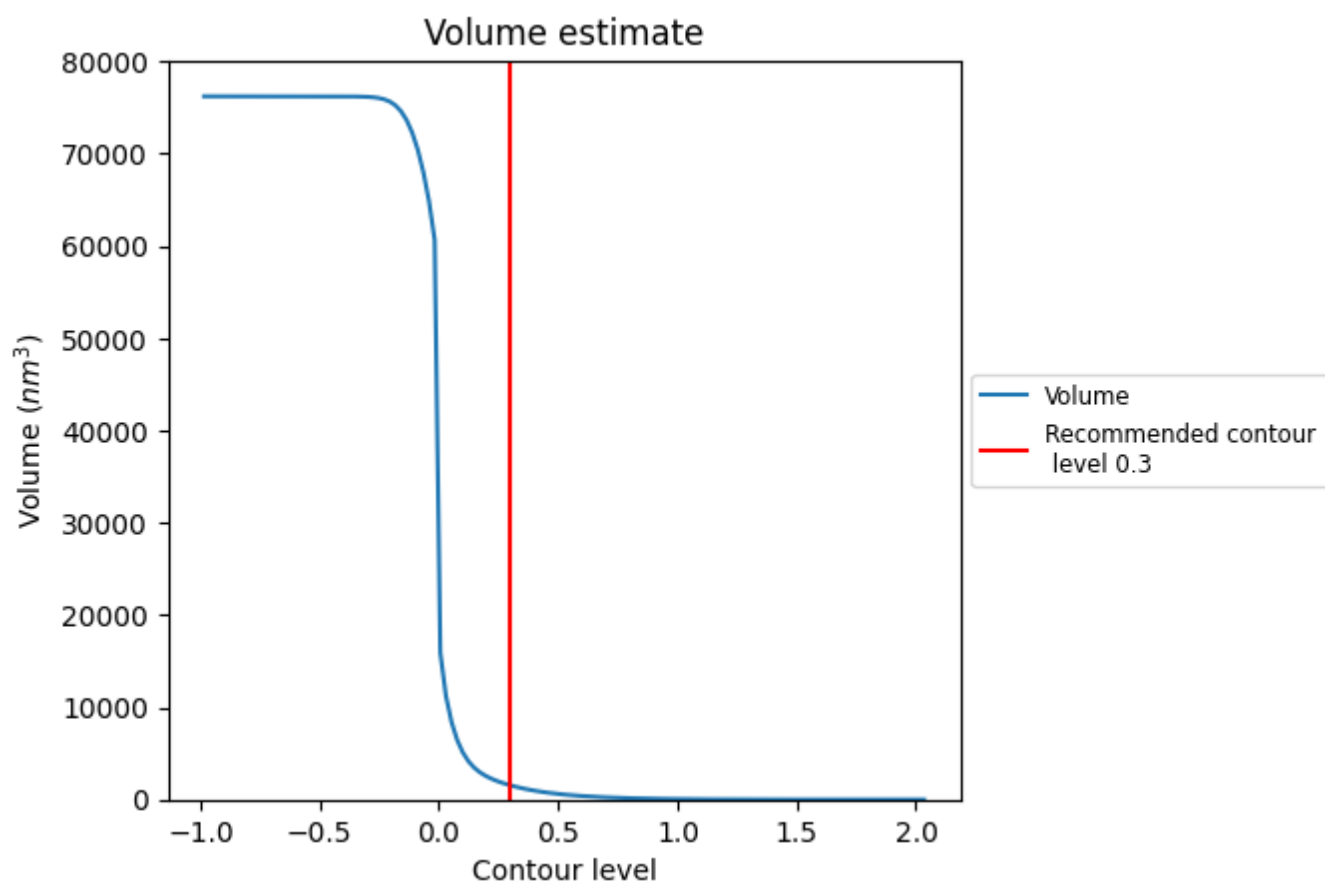
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

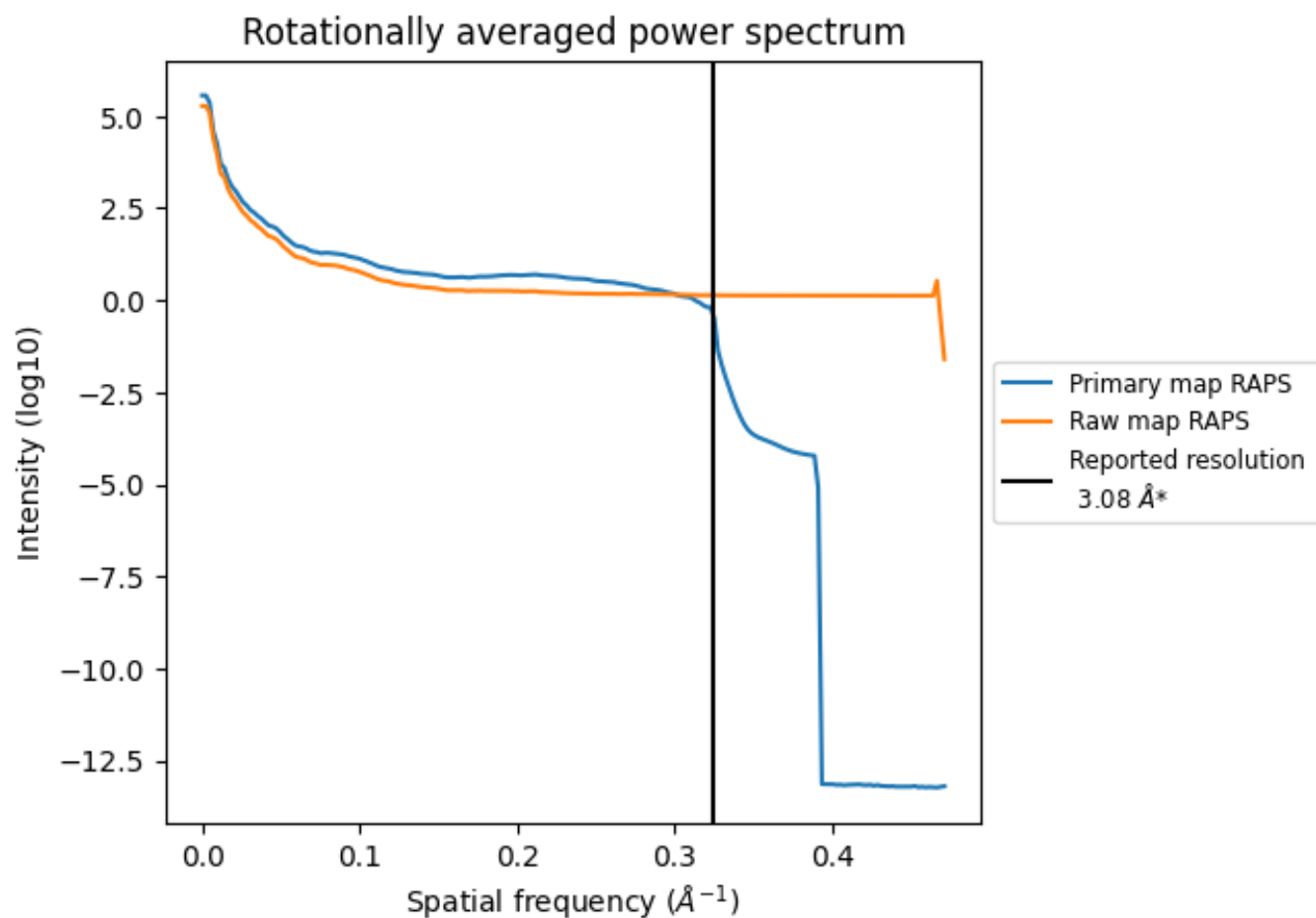
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1538 nm³; this corresponds to an approximate mass of 1389 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 ⓘ

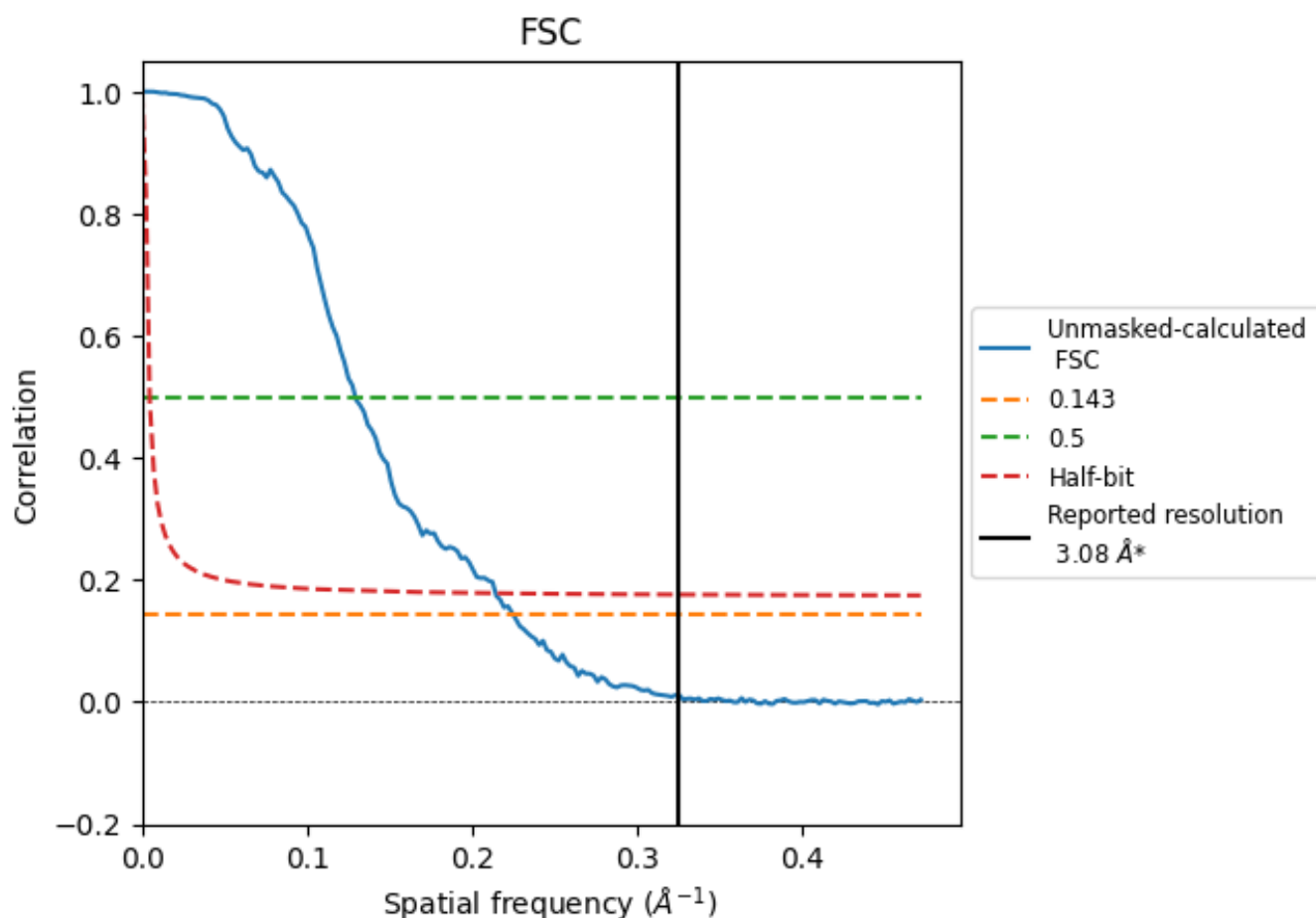


*Reported resolution corresponds to spatial frequency of 0.325 Å⁻¹

8 Fourier-Shell correlation [i](#)

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 [i](#)



*Reported resolution corresponds to spatial frequency of 0.325 Å⁻¹

8.2 Resolution estimates [i](#)

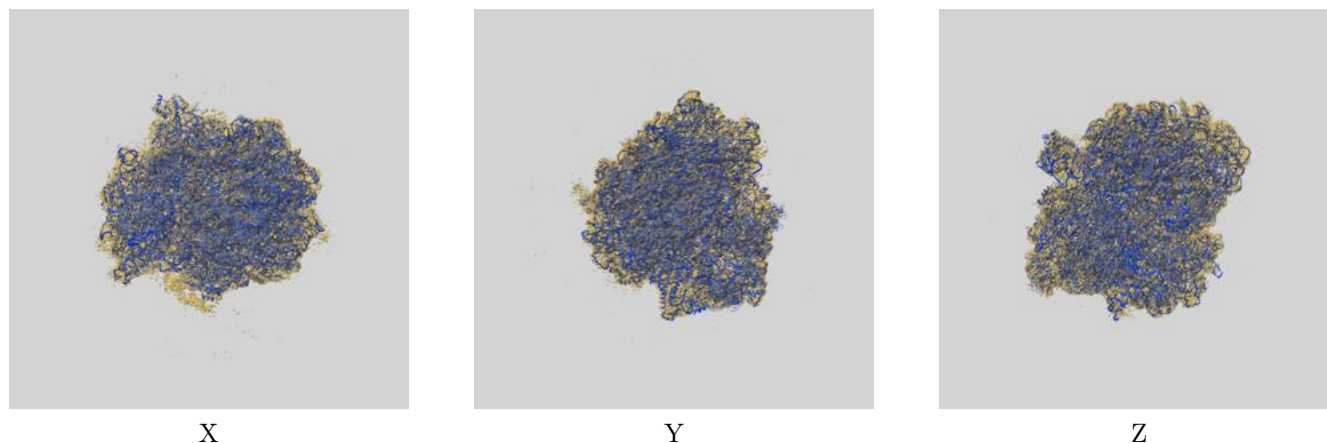
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.08	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.45	7.74	4.67

*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 4.45 differs from the reported value 3.08 by more than 10 %

9 Map-model fit [i](#)

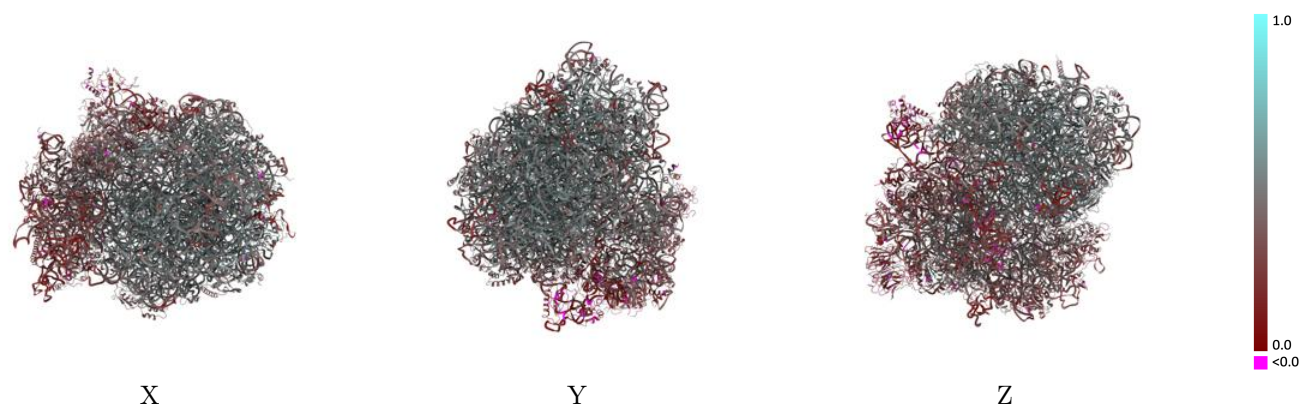
This section contains information regarding the fit between EMDB map EMD-40998 and PDB model 8T3B. Per-residue inclusion information can be found in section [3](#) on page [21](#).

9.1 Map-model overlay [i](#)



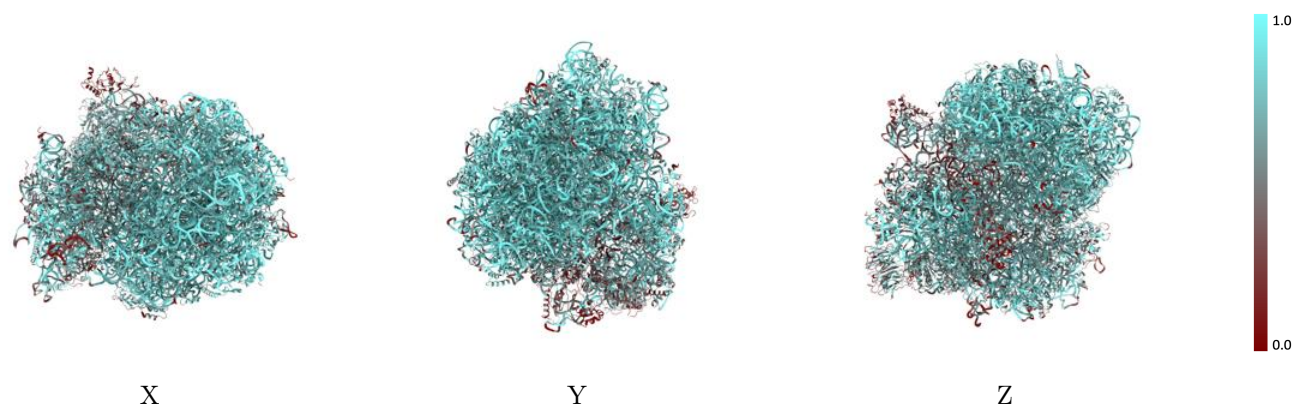
The images above show the 3D surface view of the map at the recommended contour level 0.3 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



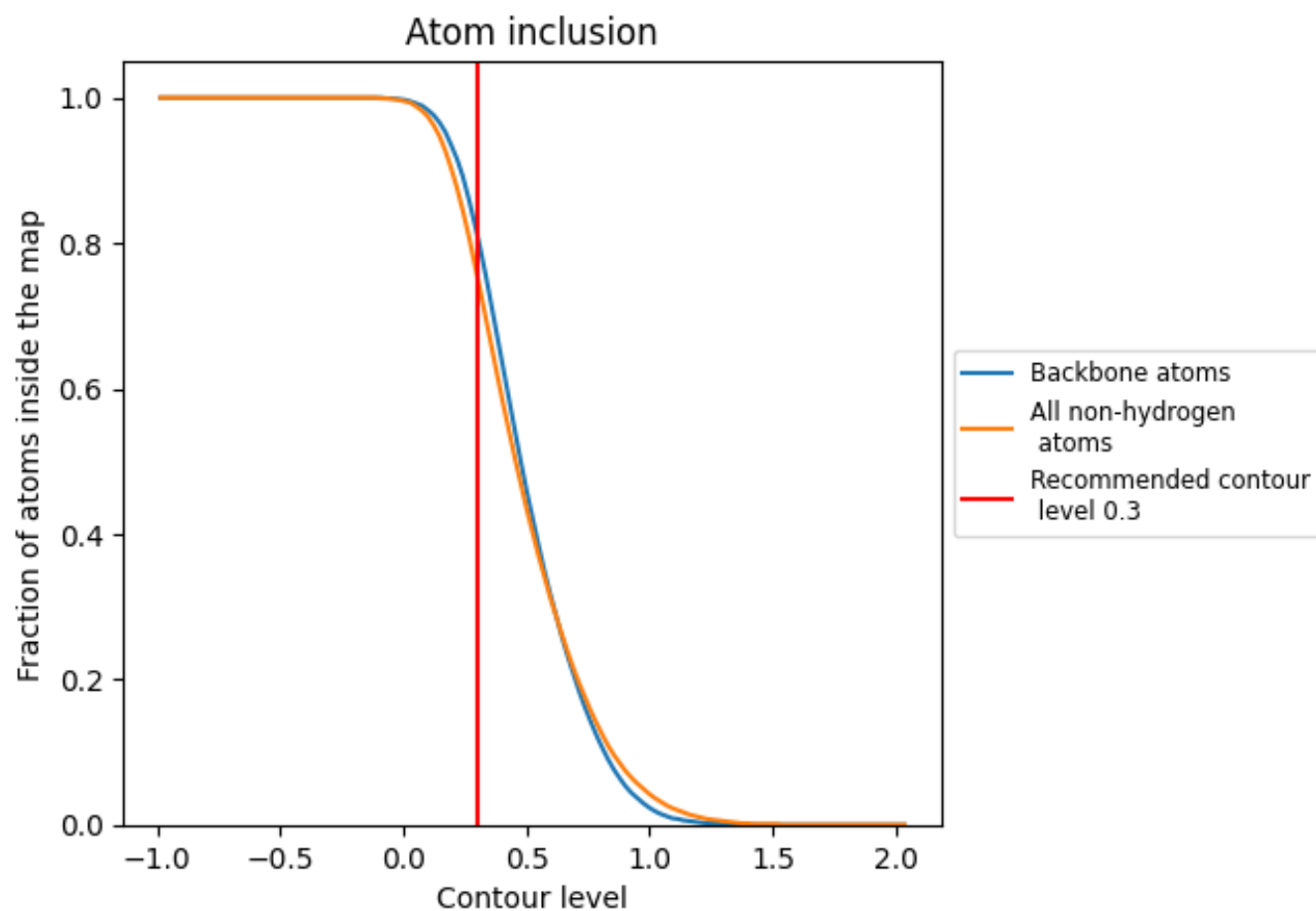
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model [i](#)



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, 81% of all backbone atoms, 76% 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	 0.7550	 0.4140
A1	 0.8810	 0.4690
A3	 0.9470	 0.4700
A4	 0.9270	 0.4930
AA	 0.7220	 0.5210
AB	 0.7860	 0.4940
AC	 0.7920	 0.4940
AD	 0.7710	 0.4250
AE	 0.7810	 0.4390
AF	 0.8390	 0.4970
AG	 0.7450	 0.4530
AH	 0.7290	 0.4730
AI	 0.6990	 0.4250
AJ	 0.6140	 0.3810
AL	 0.8050	 0.4790
AM	 0.7750	 0.4760
AN	 0.8190	 0.5230
AO	 0.7890	 0.4990
AP	 0.7790	 0.4900
AQ	 0.7890	 0.5030
AR	 0.6610	 0.4470
AS	 0.8160	 0.4920
AT	 0.7740	 0.4930
AU	 0.7570	 0.4200
AV	 0.6380	 0.4990
AW	 0.7490	 0.4890
AX	 0.7350	 0.4680
AY	 0.8140	 0.4810
AZ	 0.7560	 0.4480
Aa	 0.8260	 0.5140
Ab	 0.7120	 0.4880
Ac	 0.6370	 0.4480
Ad	 0.7720	 0.4660
Ae	 0.8070	 0.5100
Af	 0.8480	 0.5250



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Chain	Atom inclusion	Q-score
Ag	 0.7400	 0.4920
Ah	 0.7790	 0.4440
Ai	 0.7580	 0.4570
Aj	 0.8210	 0.5240
Ak	 0.5860	 0.4210
Al	 0.7980	 0.5090
Am	 0.7400	 0.4830
An	 0.6740	 0.4950
Ao	 0.6190	 0.4690
Ap	 0.6680	 0.4860
B5	 0.7950	 0.3590
BA	 0.5570	 0.3520
BB	 0.5040	 0.3640
BC	 0.6830	 0.4130
BD	 0.6070	 0.3600
BE	 0.5410	 0.3010
BF	 0.4170	 0.2670
BG	 0.5790	 0.2710
BH	 0.4610	 0.3130
BI	 0.5560	 0.3350
BJ	 0.6570	 0.3280
BK	 0.5880	 0.2590
BL	 0.5450	 0.3680
BM	 0.0980	 0.1970
BN	 0.5780	 0.3970
BO	 0.5250	 0.4030
BP	 0.4690	 0.2530
BQ	 0.5910	 0.3250
BR	 0.4560	 0.2860
BS	 0.5590	 0.2810
BT	 0.5870	 0.2850
BU	 0.5770	 0.3100
BV	 0.6370	 0.3840
BW	 0.6820	 0.4130
BX	 0.5950	 0.4350
BY	 0.5600	 0.2880
BZ	 0.4980	 0.2450
Ba	 0.6130	 0.4460
Bb	 0.4770	 0.3390
Bc	 0.3270	 0.2090
Bd	 0.8270	 0.4010
Be	 0.5370	 0.3780

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Chain	Atom inclusion	Q-score
Bf	 0.1320	 0.2090
Bg	 0.5240	 0.2130
DC	 0.6020	 0.3560
E	 0.3230	 0.1800
EC	 0.3860	 0.2020