



Full wwPDB EM Validation Report ⓘ

Mar 10, 2026 – 11:55 AM UTC

PDB ID : 6FXC / pdb_00006fxc
EMDB ID : EMD-3637
Title : The cryo-EM structure of hibernating 100S ribosome dimer from pathogenic *Staphylococcus aureus*
Authors : Matzov, D.; Aibara, S.; Zimmerman, E.; Bashan, A.; Kidmose, R.; Amunts, A.; Yonath, A.
Deposited on : 2018-03-08
Resolution : 6.76 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:

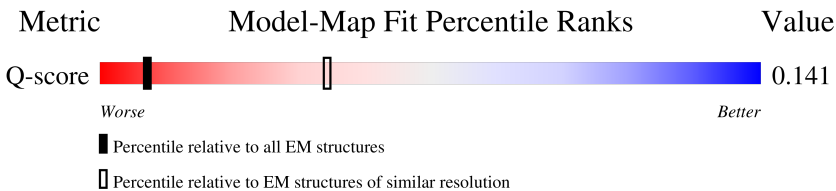
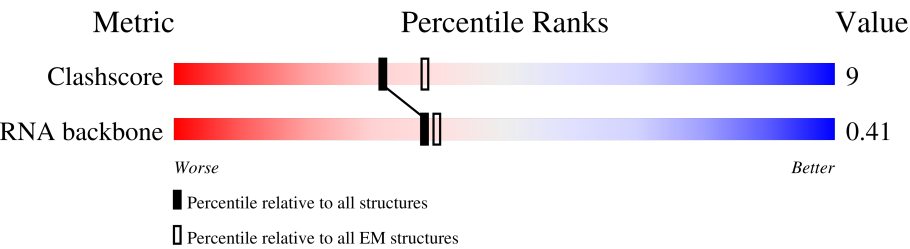
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDb archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & 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 6.76 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	-
RNA backbone	8273	3508	-
Q-score	-	25397	476 (6.29 - 7.25)

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	Aa	1539	5% 59% 34% 7%
1	Ba	1539	5% 59% 33% 7%
2	Ab	226	64% 77% 23%
2	Bb	226	64% 76% 24%
3	Ac	202	73% 83% 17%

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Mol	Chain	Length	Quality of chain
3	Bc	202	73% 83%17%
4	Ad	198	41% 86%14%
4	Bd	198	41% 88%12%
5	Ae	156	74% 85%15%
5	Be	156	74% 83%16%
6	Af	95	59% 86%14%
6	Bf	95	59% 83%17%
7	Ag	152	68% 85%15%
7	Bg	152	68% 87%13%
8	Ah	131	51% 84%16%
8	Bh	131	51% 83%17%
9	Ai	127	55% 80%20%
9	Bi	127	55% 80%20%
10	Aj	97	56% 84%16%
10	Bj	97	56% 86%14%
11	Ak	114	54% 75%25%
11	Bk	114	54% 75%25%
12	Al	135	66% 81%19%
12	Bl	135	66% 80%20%
13	Am	121	49% 78%8%14%
13	Bm	121	49% 78%8%14%
14	An	60	22% 78%22%
14	Bn	60	22% 78%22%
15	Ao	88	40% 85%15%
15	Bo	88	40% 85%15%

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Mol	Chain	Length	Quality of chain
16	Ap	89	42% 83% 17%
16	Bp	89	42% 85% 15%
17	Aq	80	52% 81% 19%
17	Bq	80	54% 81% 19%
18	Ar	54	59% 76% 24%
18	Br	54	59% 80% 20%
19	As	80	32% 82% 18%
19	Bs	80	32% 82% 18%
20	At	81	33% 86% 14%
20	Bt	81	33% 89% 11%
21	Au	52	94% 94% 6%
21	Bu	52	94% 96% .
22	Av	190	57% 71% 14% 15%
22	Bv	190	57% 71% 14% 15%
23	AA	2923	7% 56% 35% 9% .
23	BA	2923	7% 57% 34% 9% .
24	AB	115	6% 74% 23% .
24	BB	115	6% 74% 23% .
25	AC	274	56% 75% 24%
25	BC	274	56% 77% 23%
26	AD	215	33% 74% 26%
26	BD	215	33% 74% 26%
27	AE	206	46% 81% 19%
27	BE	206	46% 82% 18%
28	AF	175	59% 81% 19%

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Mol	Chain	Length	Quality of chain
28	BF	175	59% 82%18%
29	AG	175	55% 84%16%
29	BG	175	55% 86%14%
30	AH	145	27% 91%9%
30	BH	145	27% 92%8%
31	AI	122	64% 69%30%
31	BI	122	64% 68%31%
32	AJ	146	47% 79%21%
32	BJ	146	47% 79%21%
33	AK	137	36% 74%26%
33	BK	137	36% 77%23%
34	AL	120	31% 86%14%
34	BL	120	31% 86%14%
35	AM	119	30% 75%25%
35	BM	119	30% 74%26%
36	AN	114	46% 82%18%
36	BN	114	46% 81%19%
37	AO	116	20% 85%15%
37	BO	116	20% 85%15%
38	AP	102	42% 88%12%
38	BP	102	42% 88%12%
39	AQ	112	41% 84%16%
39	BQ	112	41% 85%15%
40	AR	89	31% 83%17%
40	BR	89	31% 83%17%

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Mol	Chain	Length	Quality of chain
41	AS	103	52% 79%21%
41	BS	103	52% 79%21%
42	AT	94	76% 91%9%
42	BT	94	76% 89%11%
43	AU	82	18% 85%15%
43	BU	82	18% 84%16%
44	AV	58	59% 84%16%
44	BV	58	59% 84%16%
45	AW	67	48% 84%16%
45	BW	67	48% 85%15%
46	AX	58	62% 83%17%
46	BX	58	62% 83%17%
47	AY	59	90% 92%8%
47	BY	59	90% 92%8%
48	AZ	48	40% 79%21%
48	BZ	48	40% 81%19%
49	A1	47	83% 77%23%
49	B1	47	83% 79%21%
50	A2	43	30% 81%19%
50	B2	43	30% 84%16%
51	A3	64	27% 84%16%
51	B3	64	27% 84%16%
52	A4	37	11% 62%38%
52	B4	37	11% 65%35%

2 Entry composition

There are 52 unique types of molecules in this entry. The entry contains 281510 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	Aa	1539	Total	C	N	O	P	0	0
			32969	14719	6017	10694	1539		
1	Ba	1539	Total	C	N	O	P	0	0
			32969	14719	6017	10694	1539		

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	Ab	226	Total	C	N	O	S	0	0
			1813	1156	314	335	8		
2	Bb	226	Total	C	N	O	S	0	0
			1813	1156	314	335	8		

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	Ac	202	Total	C	N	O	S	0	0
			1501	945	284	271	1		
3	Bc	202	Total	C	N	O	S	0	0
			1501	945	284	271	1		

- Molecule 4 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	Ad	198	Total	C	N	O	S	0	0
			1497	952	275	268	2		
4	Bd	198	Total	C	N	O	S	0	0
			1497	952	275	268	2		

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	Ae	156	Total	C	N	O	S	0	0
			1145	723	211	209	2		
5	Be	156	Total	C	N	O	S	0	0
			1145	723	211	209	2		

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	Af	95	Total	C	N	O	S	0	0
			778	493	138	145	2		
6	Bf	95	Total	C	N	O	S	0	0
			778	493	138	145	2		

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	Ag	152	Total	C	N	O	S	0	0
			1161	722	218	217	4		
7	Bg	152	Total	C	N	O	S	0	0
			1161	722	218	217	4		

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	Ah	131	Total	C	N	O	S	0	0
			1026	650	183	189	4		
8	Bh	131	Total	C	N	O	S	0	0
			1026	650	183	189	4		

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	Ai	127	Total	C	N	O	S	0	0
			922	576	179	166	1		
9	Bi	127	Total	C	N	O	S	0	0
			922	576	179	166	1		

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	Aj	97	Total	C	N	O	S	0	0
			752	475	140	136	1		

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Mol	Chain	Residues	Atoms					AltConf	Trace
10	Bj	97	Total	C	N	O	S	0	0
			752	475	140	136	1		

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	Ak	114	Total	C	N	O	S	0	0
			810	498	151	159	2		
11	Bk	114	Total	C	N	O	S	0	0
			810	498	151	159	2		

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	Al	135	Total	C	N	O	S	0	0
			1037	646	211	178	2		
12	Bl	135	Total	C	N	O	S	0	0
			1037	646	211	178	2		

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	Am	104	Total	C	N	O		0	0
			727	453	139	135			
13	Bm	104	Total	C	N	O		0	0
			727	453	139	135			

- Molecule 14 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	An	60	Total	C	N	O	S	0	0
			487	307	98	77	5		
14	Bn	60	Total	C	N	O	S	0	0
			487	307	98	77	5		

- Molecule 15 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	Ao	88	Total	C	N	O	S	0	0
			723	448	150	124	1		
15	Bo	88	Total	C	N	O	S	0	0
			723	448	150	124	1		

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	Ap	89	Total	C	N	O	S	0	0
			694	436	128	129	1		
16	Bp	89	Total	C	N	O	S	0	0
			694	436	128	129	1		

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	Aq	80	Total	C	N	O	0	0
			621	392	112	117		
17	Bq	80	Total	C	N	O	0	0
			621	392	112	117		

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	Ar	54	Total	C	N	O	S	0	0
			446	284	86	74	2		
18	Br	54	Total	C	N	O	S	0	0
			446	284	86	74	2		

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	As	80	Total	C	N	O	S	0	0
			636	410	113	111	2		
19	Bs	80	Total	C	N	O	S	0	0
			636	410	113	111	2		

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	At	81	Total	C	N	O	S	0	0
			591	358	117	115	1		
20	Bt	81	Total	C	N	O	S	0	0
			591	358	117	115	1		

- Molecule 21 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms				AltConf	Trace
21	Au	52	Total	C	N	O	0	0
			400	249	79	72		
21	Bu	52	Total	C	N	O	0	0
			400	249	79	72		

- Molecule 22 is a protein called Ribosome hibernation promotion factor.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	Av	162	Total	C	N	O	S	0	0
			1333	835	242	254	2		
22	Bv	162	Total	C	N	O	S	0	0
			1333	835	242	254	2		

- Molecule 23 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	AA	2905	Total	C	N	O	P	0	0
			62277	27803	11387	20182	2905		
23	BA	2905	Total	C	N	O	P	0	0
			62277	27803	11387	20182	2905		

- Molecule 24 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	AB	115	Total	C	N	O	P	0	0
			2445	1094	436	801	114		
24	BB	115	Total	C	N	O	P	0	0
			2445	1094	436	801	114		

- Molecule 25 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	AC	274	Total	C	N	O	S	0	0
			2094	1303	415	371	5		
25	BC	274	Total	C	N	O	S	0	0
			2094	1303	415	371	5		

- Molecule 26 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	AD	215	Total	C	N	O	S	0	0
			1627	1018	299	305	5		

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Mol	Chain	Residues	Atoms					AltConf	Trace
26	BD	215	Total	C	N	O	S	0	0
			1627	1018	299	305	5		

- Molecule 27 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	AE	206	Total	C	N	O	S	0	0
			1572	986	288	296	2		
27	BE	206	Total	C	N	O	S	0	0
			1572	986	288	296	2		

- Molecule 28 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	AF	175	Total	C	N	O	S	0	0
			1325	837	227	255	6		
28	BF	175	Total	C	N	O	S	0	0
			1325	837	227	255	6		

- Molecule 29 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	AG	175	Total	C	N	O	S	0	0
			1263	790	239	231	3		
29	BG	175	Total	C	N	O	S	0	0
			1263	790	239	231	3		

- Molecule 30 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	AH	145	Total	C	N	O	S	0	0
			1143	714	208	218	3		
30	BH	145	Total	C	N	O	S	0	0
			1143	714	208	218	3		

- Molecule 31 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	AI	122	Total	C	N	O	S	0	0
			918	572	174	168	4		
31	BI	122	Total	C	N	O	S	0	0
			918	572	174	168	4		

- Molecule 32 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	AJ	146	Total	C	N	O	S	0	0
			1086	674	214	197	1		
32	BJ	146	Total	C	N	O	S	0	0
			1086	674	214	197	1		

- Molecule 33 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	AK	137	Total	C	N	O	S	0	0
			1071	689	203	175	4		
33	BK	137	Total	C	N	O	S	0	0
			1071	689	203	175	4		

- Molecule 34 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	AL	120	Total	C	N	O	S	0	0
			932	576	182	173	1		
34	BL	120	Total	C	N	O	S	0	0
			932	576	182	173	1		

- Molecule 35 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	AM	119	Total	C	N	O	S	0	0
			891	557	174	159	1		
35	BM	119	Total	C	N	O	S	0	0
			891	557	174	159	1		

- Molecule 36 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms				AltConf	Trace
36	AN	114	Total	C	N	O	0	0
			889	563	175	151		
36	BN	114	Total	C	N	O	0	0
			889	563	175	151		

- Molecule 37 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	AO	116	Total	C	N	O	S	0	0
			942	593	189	156	4		
37	BO	116	Total	C	N	O	S	0	0
			942	593	189	156	4		

- Molecule 38 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	AP	102	Total	C	N	O	S	0	0
			790	503	142	144	1		
38	BP	102	Total	C	N	O	S	0	0
			790	503	142	144	1		

- Molecule 39 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	AQ	112	Total	C	N	O	S	0	0
			854	534	164	153	3		
39	BQ	112	Total	C	N	O	S	0	0
			854	534	164	153	3		

- Molecule 40 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	AR	89	Total	C	N	O	S	0	0
			715	453	127	131	4		
40	BR	89	Total	C	N	O	S	0	0
			715	453	127	131	4		

- Molecule 41 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	AS	103	Total	C	N	O	S	0	0
			770	486	142	141	1		
41	BS	103	Total	C	N	O	S	0	0
			770	486	142	141	1		

- Molecule 42 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms				AltConf	Trace
42	AT	94	Total	C	N	O	0	0
			722	463	130	129		

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Mol	Chain	Residues	Atoms				AltConf	Trace
42	BT	94	Total	C	N	O	0	0
			722	463	130	129		

- Molecule 43 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms				AltConf	Trace
43	AU	82	Total	C	N	O	0	0
			622	385	122	115		
43	BU	82	Total	C	N	O	0	0
			622	385	122	115		

- Molecule 44 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms				AltConf	Trace
44	AV	58	Total	C	N	O	0	0
			445	277	96	72		
44	BV	58	Total	C	N	O	0	0
			445	277	96	72		

- Molecule 45 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms				AltConf	Trace
45	AW	67	Total	C	N	O	0	0
			541	333	102	106		
45	BW	67	Total	C	N	O	0	0
			541	333	102	106		

- Molecule 46 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				AltConf	Trace
46	AX	58	Total	C	N	O	0	0
			449	280	85	84		
46	BX	58	Total	C	N	O	0	0
			449	280	85	84		

- Molecule 47 is a protein called 50S ribosomal protein L31 type B.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	AY	59	Total	C	N	O	S	0	0
			370	225	68	76	1		
47	BY	59	Total	C	N	O	S	0	0
			370	225	68	76	1		

- Molecule 48 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	AZ	48	Total	C	N	O	S	0	0
			360	222	77	59	2		
48	BZ	48	Total	C	N	O	S	0	0
			360	222	77	59	2		

- Molecule 49 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	A1	47	Total	C	N	O	S	0	0
			390	238	78	70	4		
49	B1	47	Total	C	N	O	S	0	0
			390	238	78	70	4		

- Molecule 50 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	A2	43	Total	C	N	O	S	0	0
			367	225	89	52	1		
50	B2	43	Total	C	N	O	S	0	0
			367	225	89	52	1		

- Molecule 51 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	A3	64	Total	C	N	O	S	0	0
			521	324	113	82	2		
51	B3	64	Total	C	N	O	S	0	0
			521	324	113	82	2		

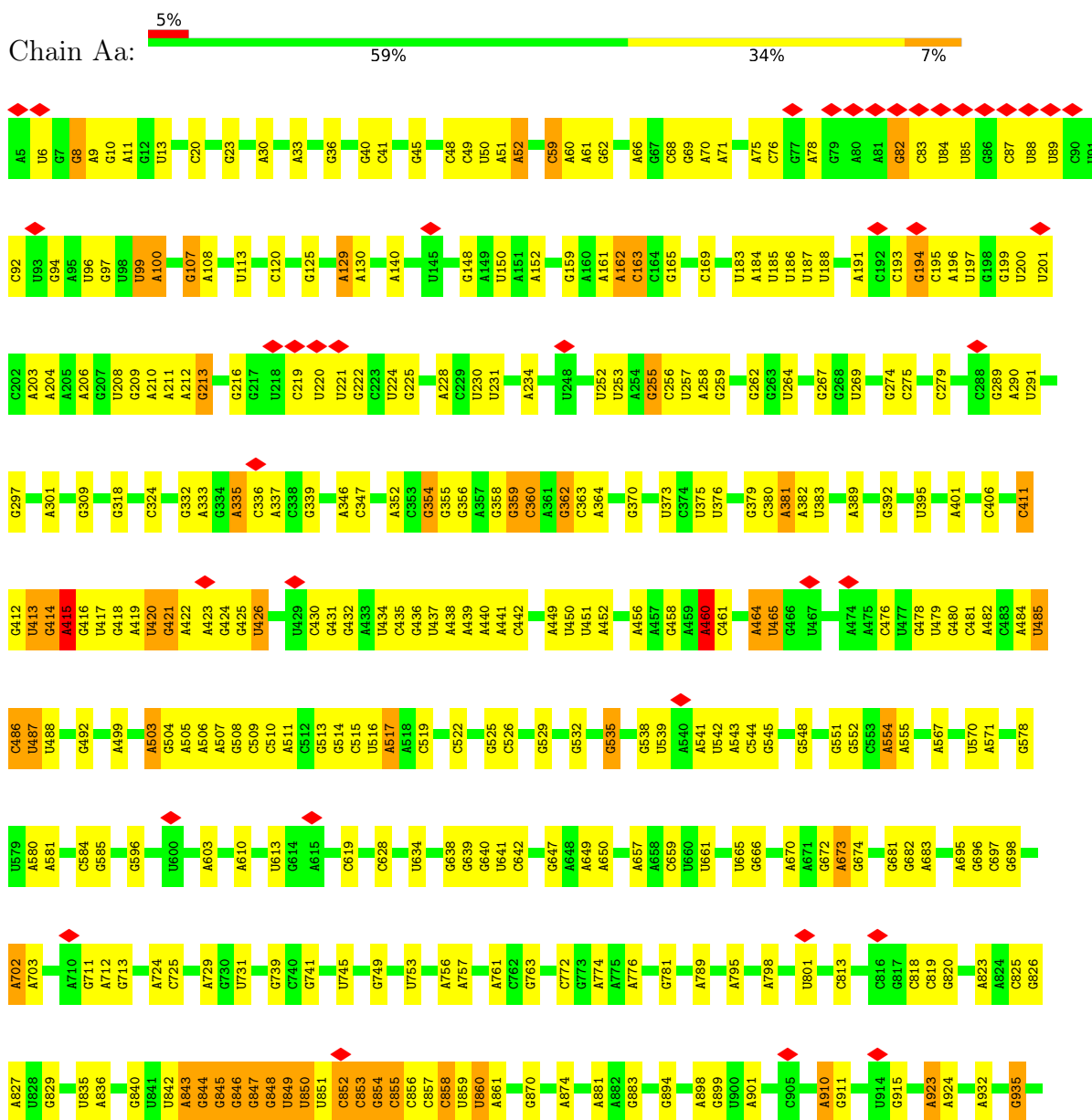
- Molecule 52 is a protein called 50S ribosomal protein L36.

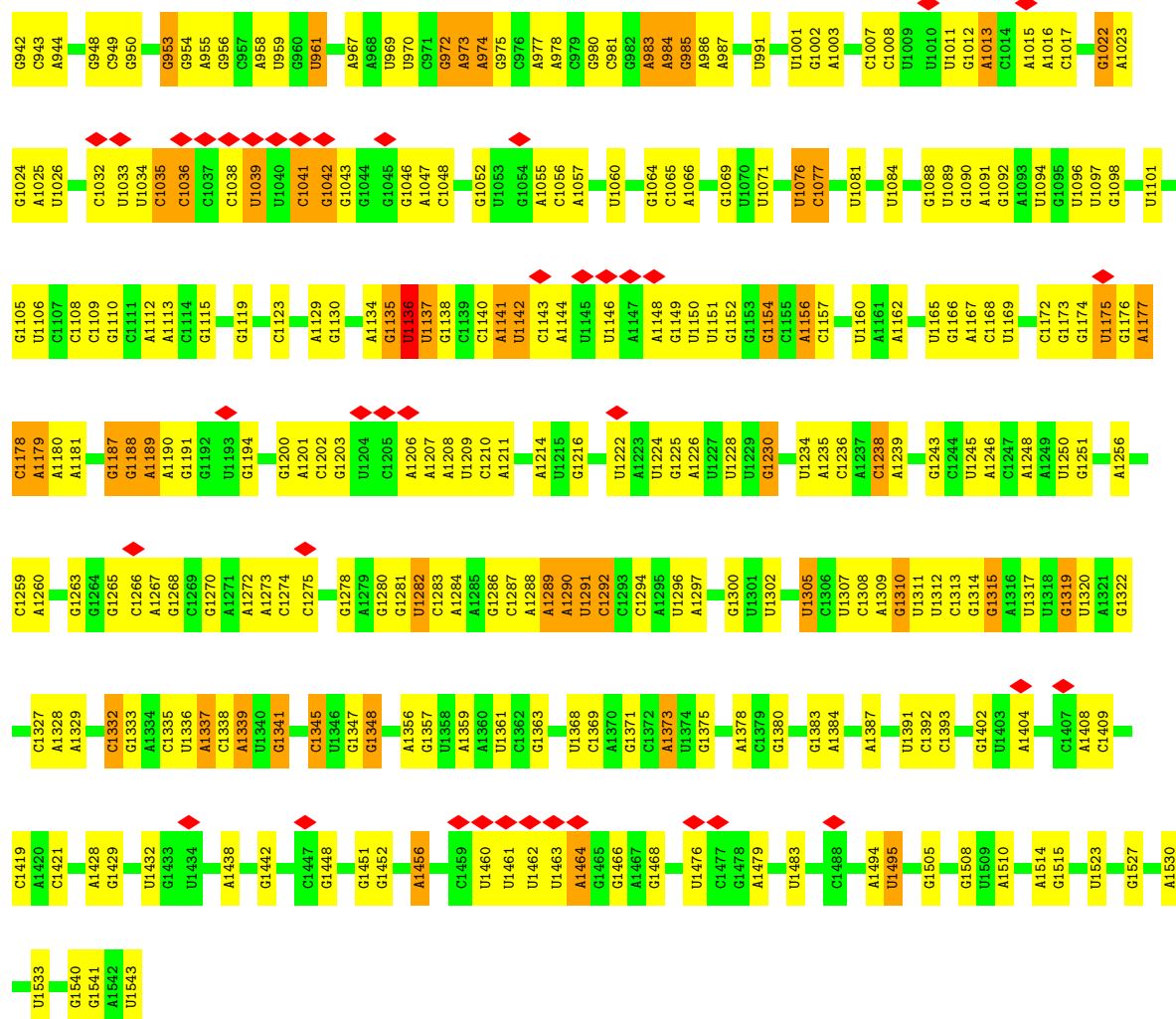
Mol	Chain	Residues	Atoms					AltConf	Trace
52	A4	37	Total	C	N	O	S	0	0
			295	186	60	44	5		
52	B4	37	Total	C	N	O	S	0	0
			295	186	60	44	5		

3 Residue-property plots

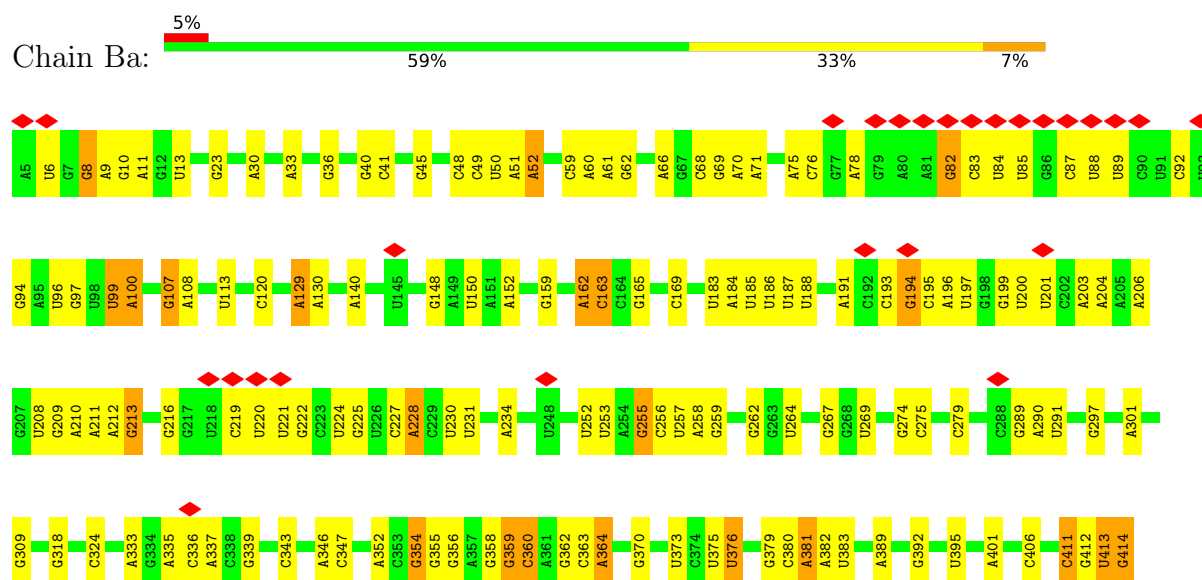
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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.

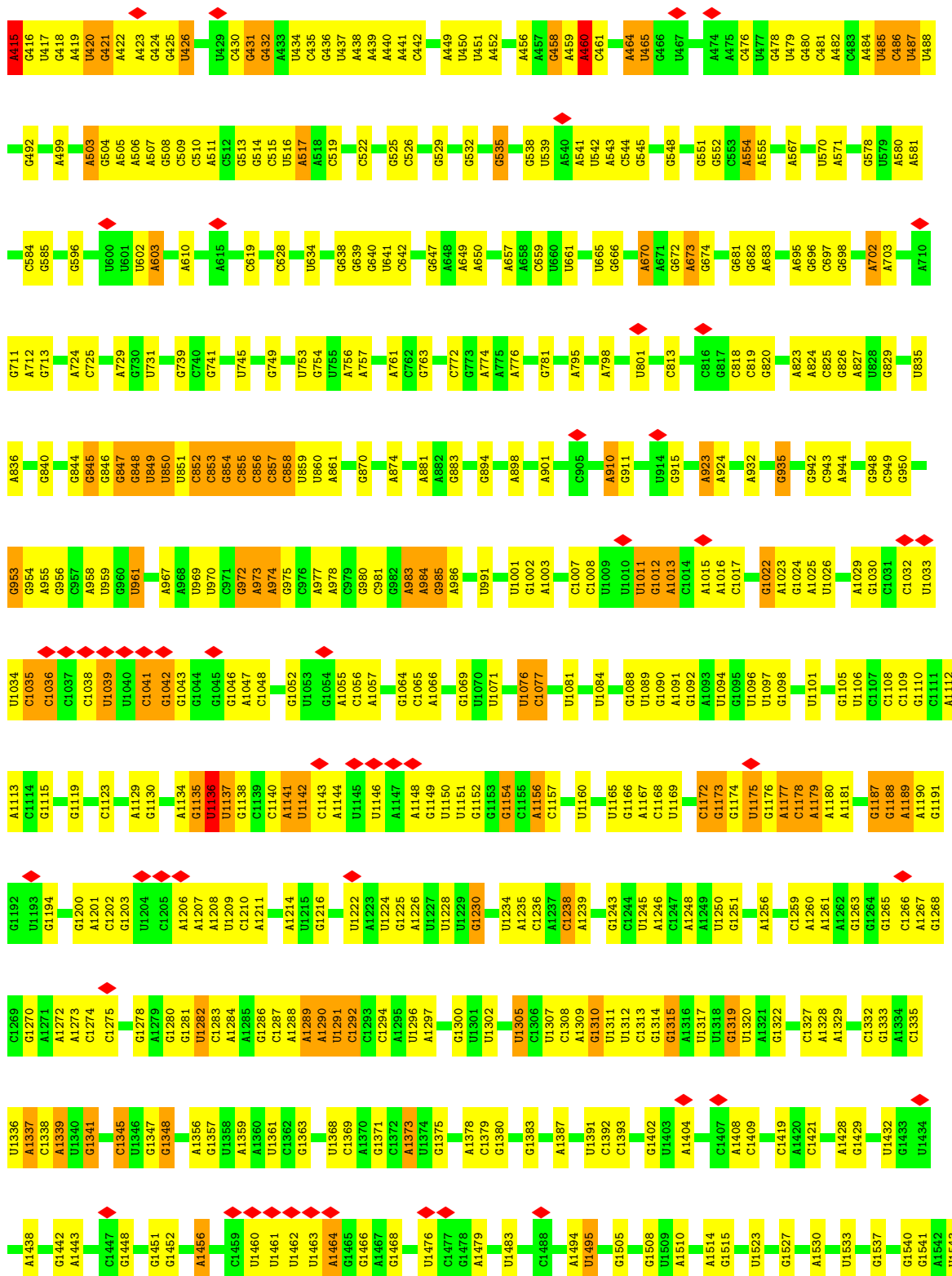
• Molecule 1: 16S ribosomal RNA



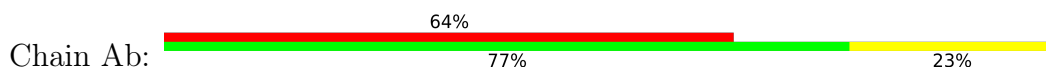


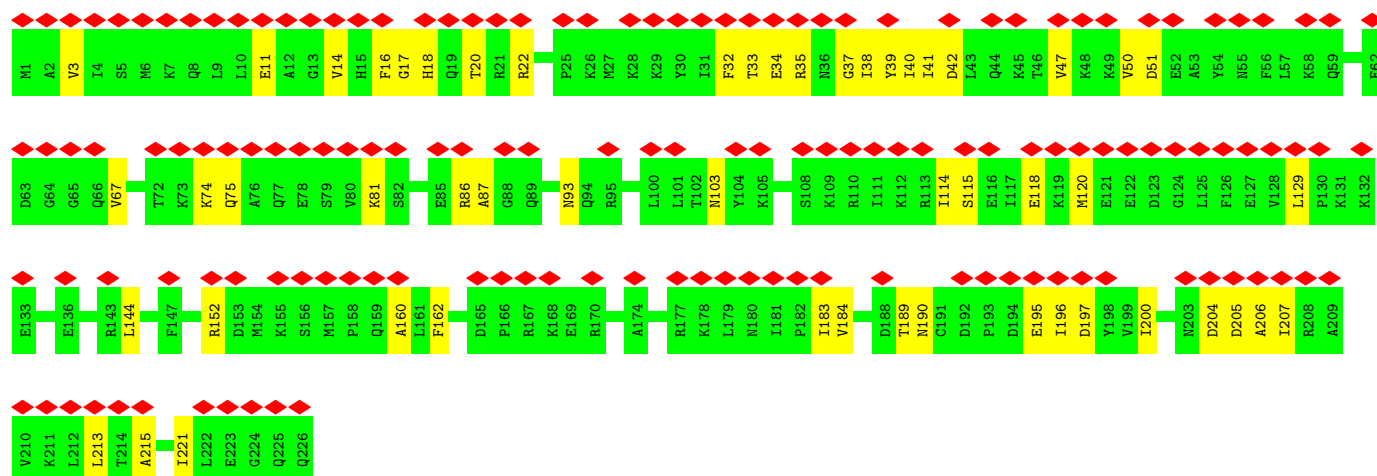
• Molecule 1: 16S ribosomal RNA



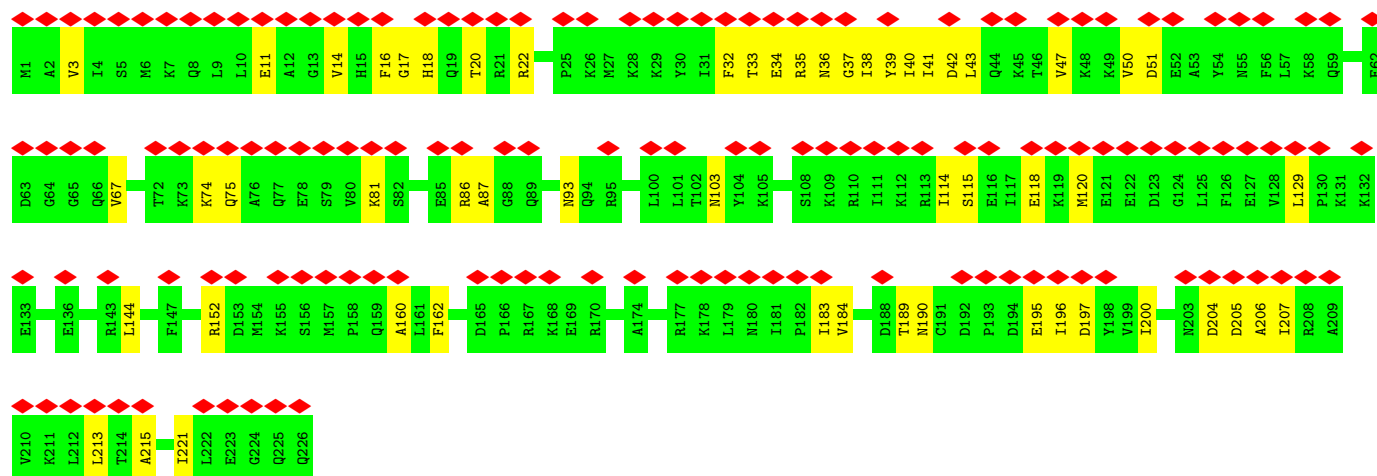
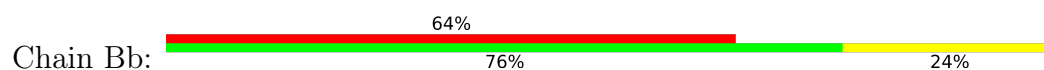


• Molecule 2: 30S ribosomal protein S2

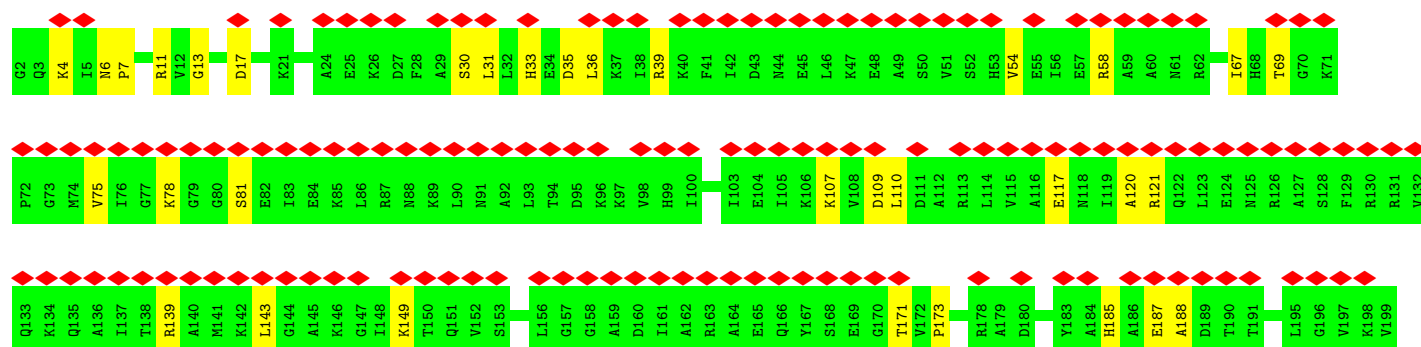
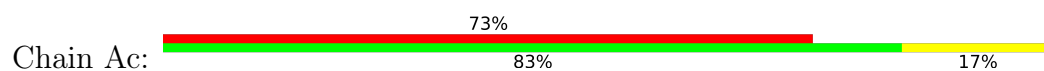




• Molecule 2: 30S ribosomal protein S2

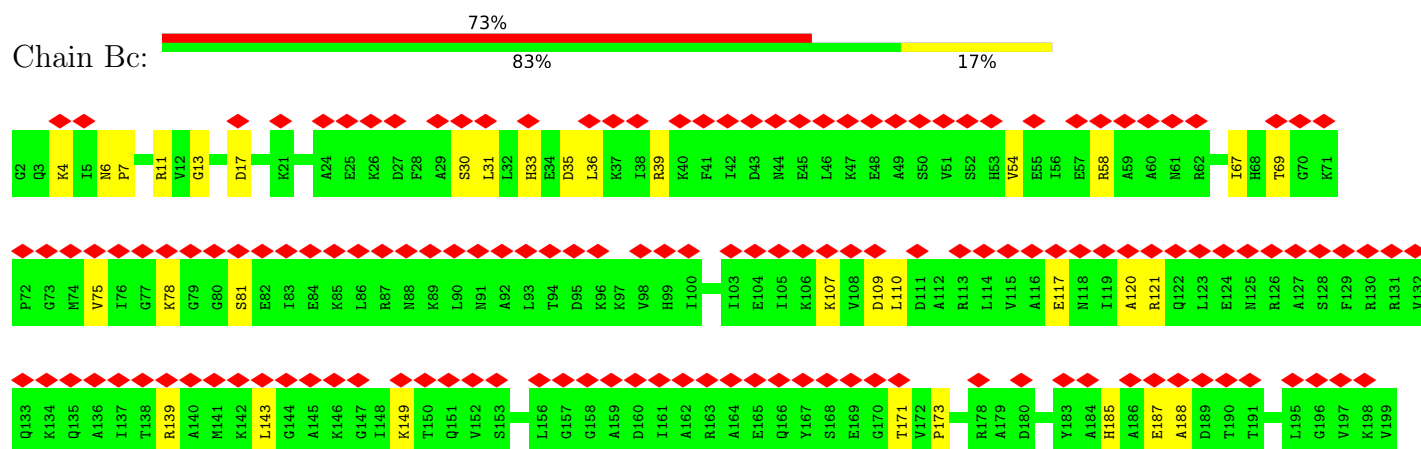


• Molecule 3: 30S ribosomal protein S3

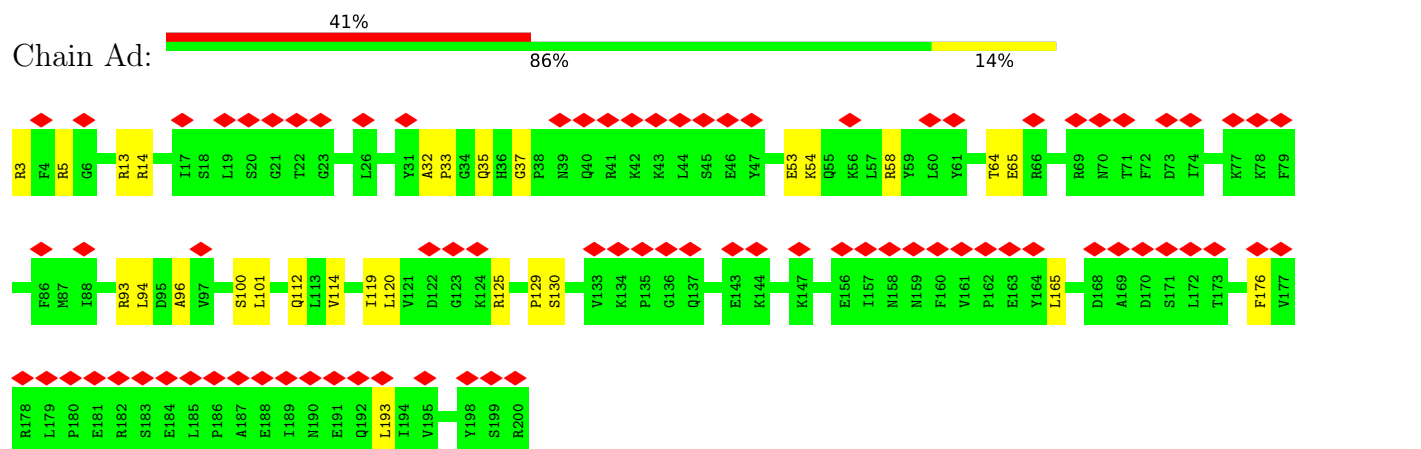




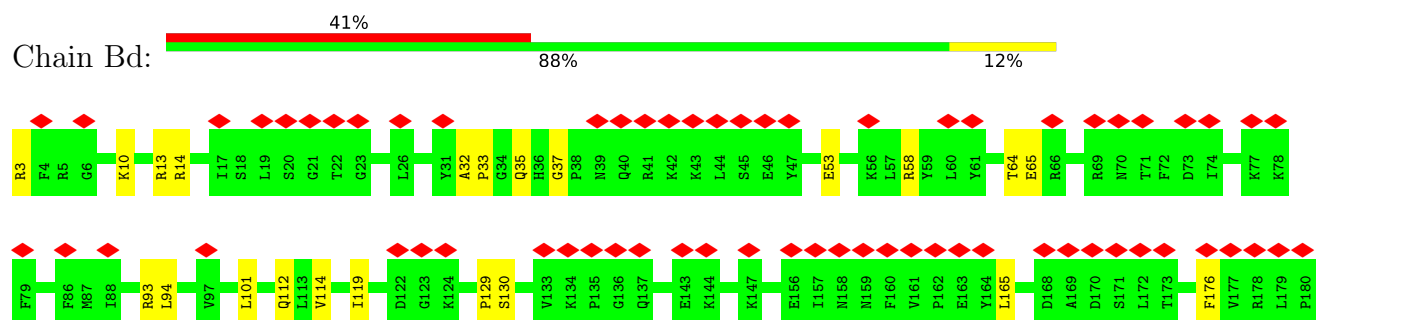
• Molecule 3: 30S ribosomal protein S3

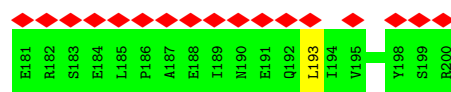


• Molecule 4: 30S ribosomal protein S4

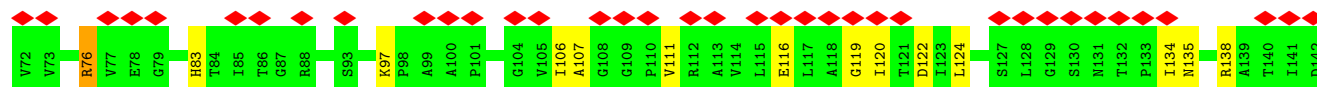
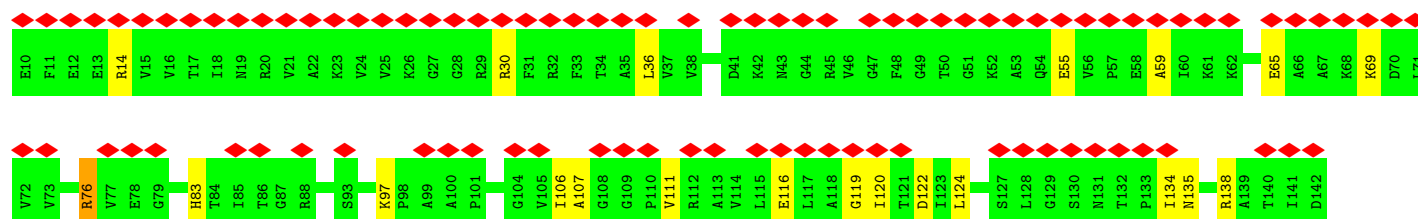
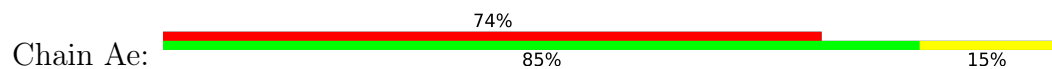


• Molecule 4: 30S ribosomal protein S4

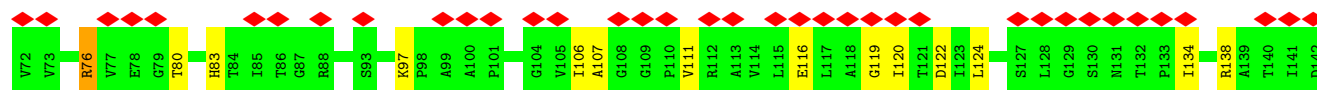
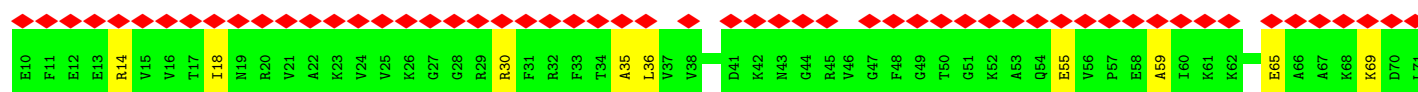
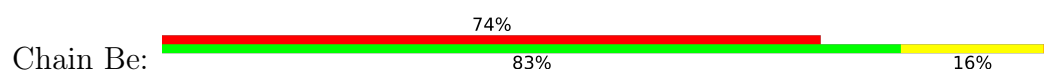




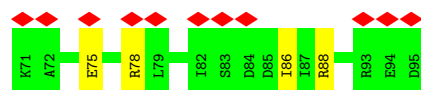
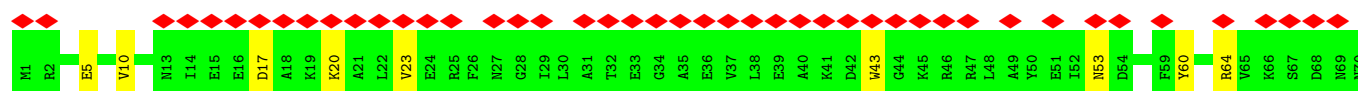
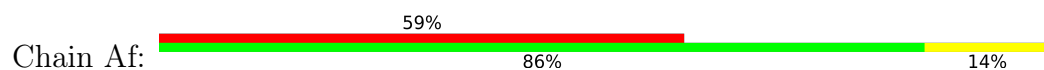
• Molecule 5: 30S ribosomal protein S5



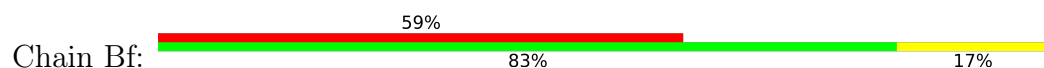
• Molecule 5: 30S ribosomal protein S5

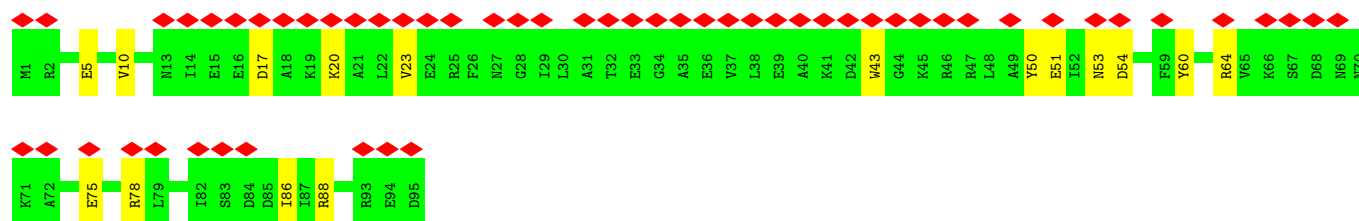


• Molecule 6: 30S ribosomal protein S6

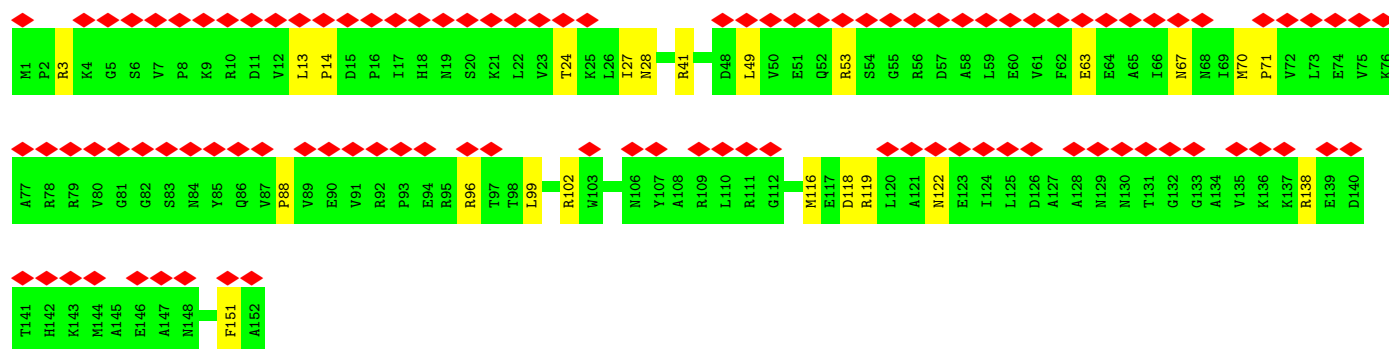
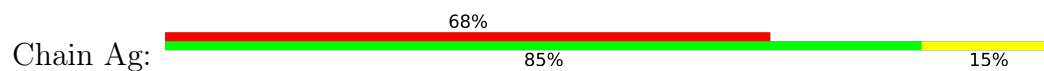


• Molecule 6: 30S ribosomal protein S6

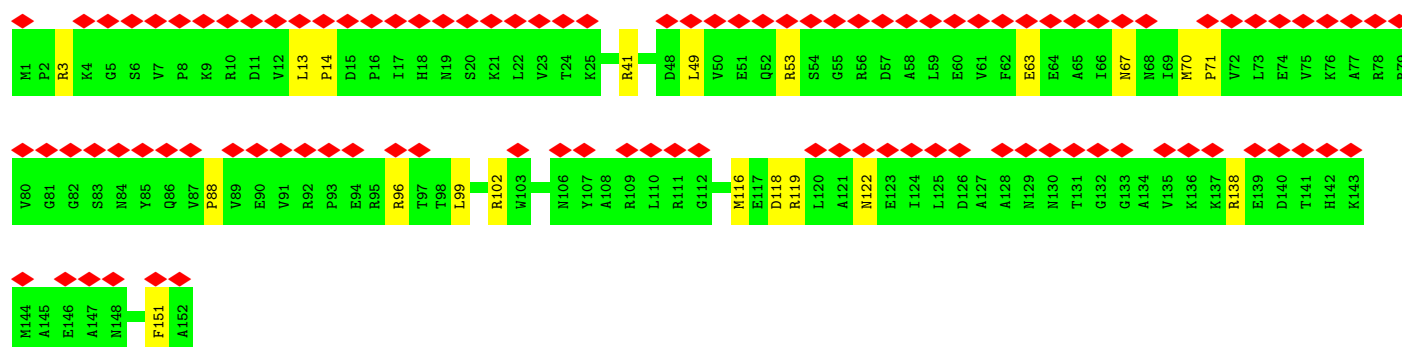
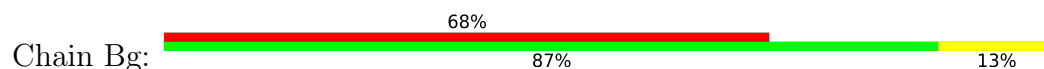




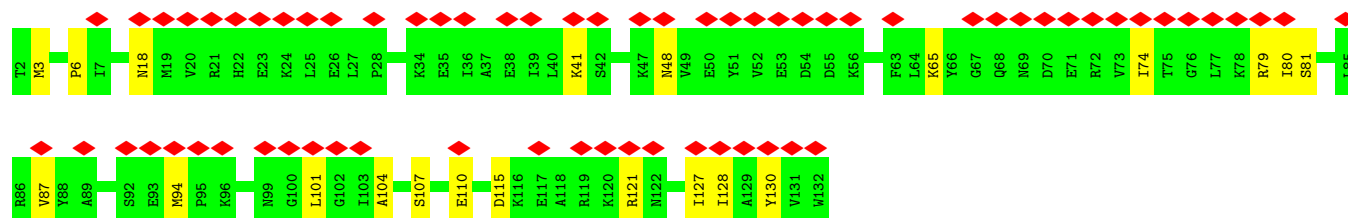
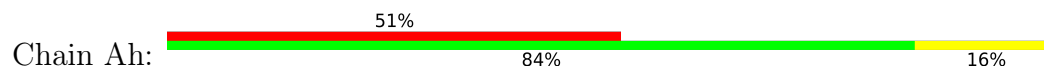
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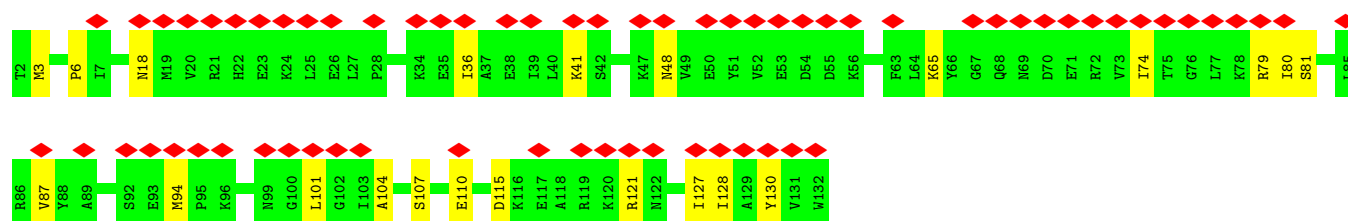
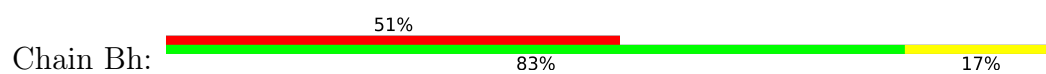
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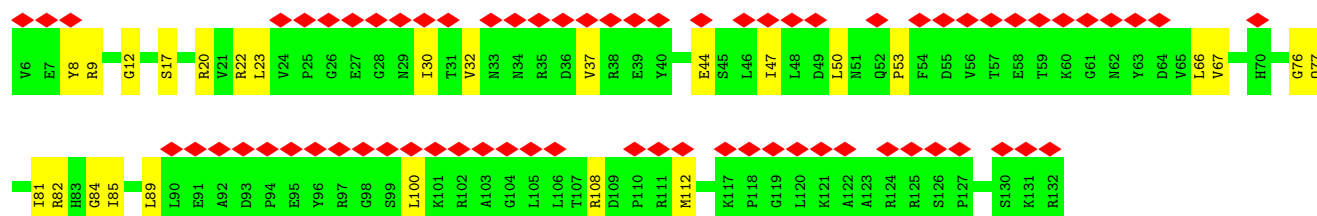
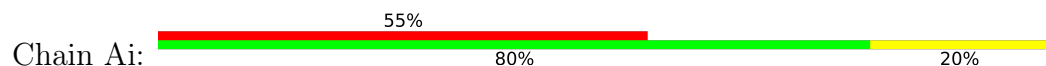
• Molecule 8: 30S ribosomal protein S8



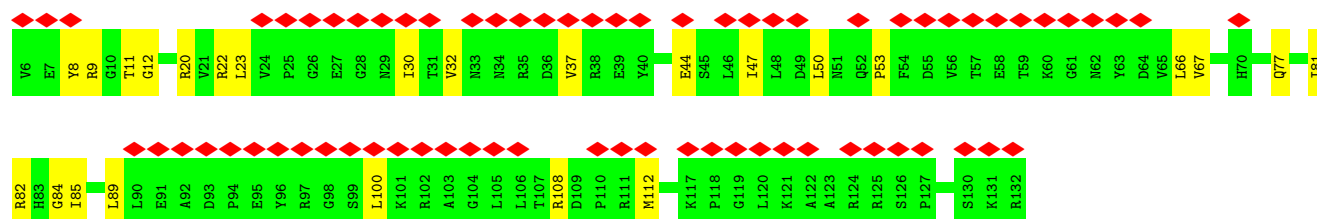
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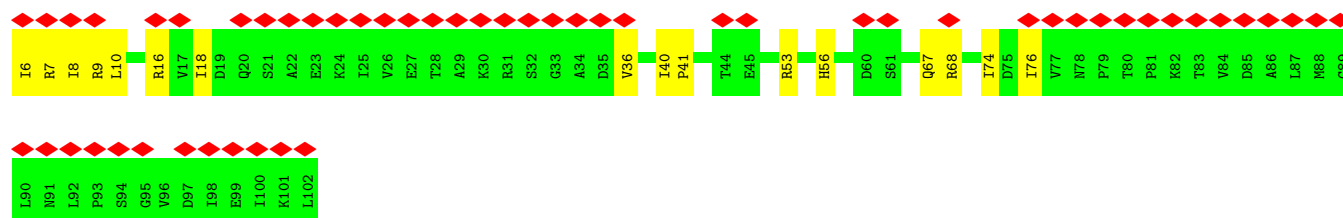
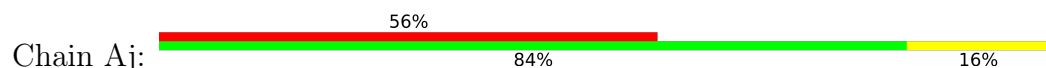
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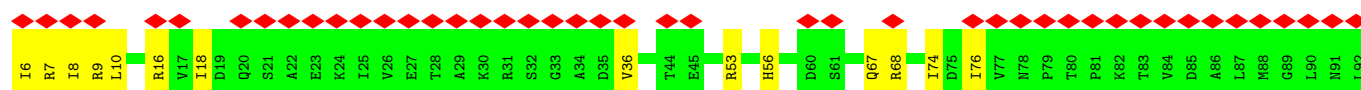
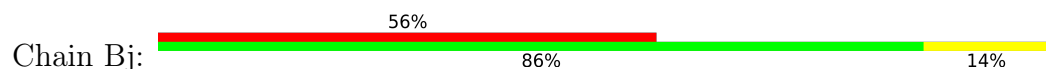
• Molecule 9: 30S ribosomal protein S9

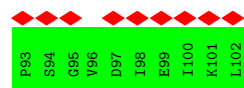


• Molecule 10: 30S ribosomal protein S10

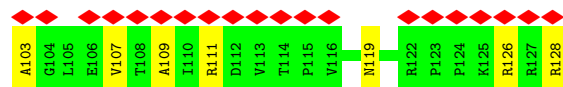
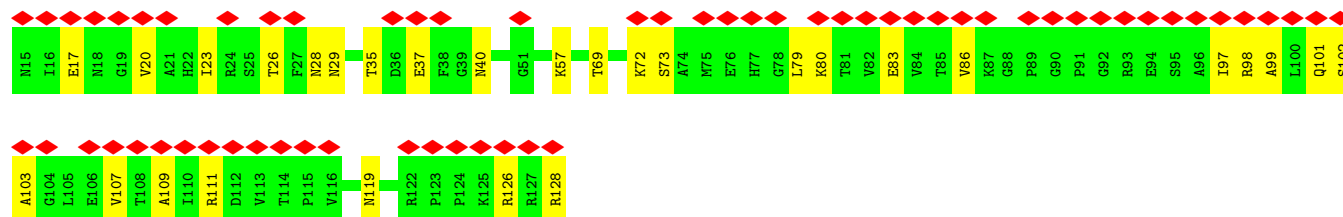
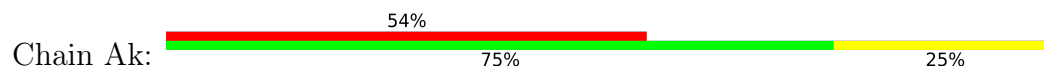


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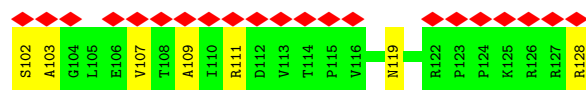
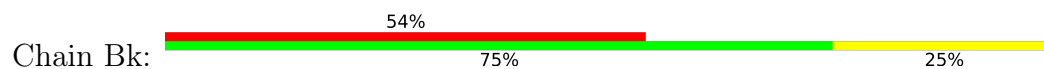




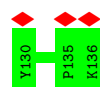
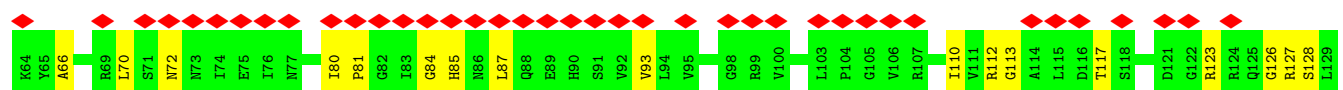
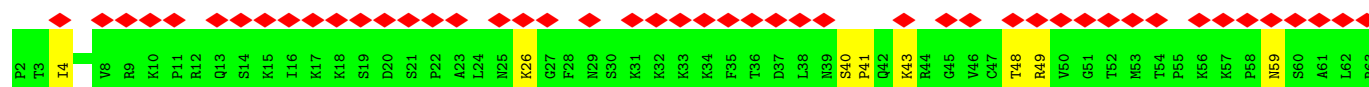
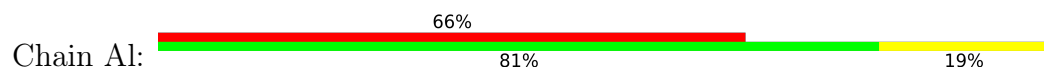
- Molecule 11: 30S ribosomal protein S11



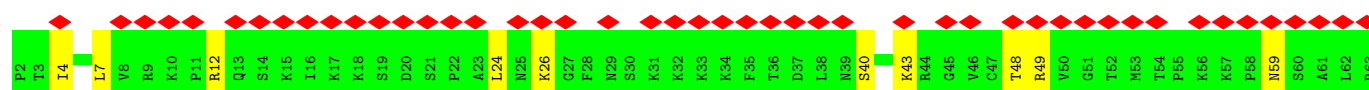
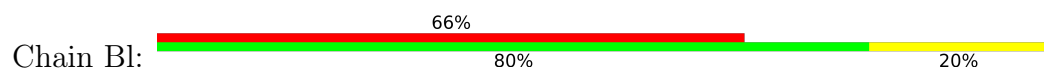
- Molecule 11: 30S ribosomal protein S11

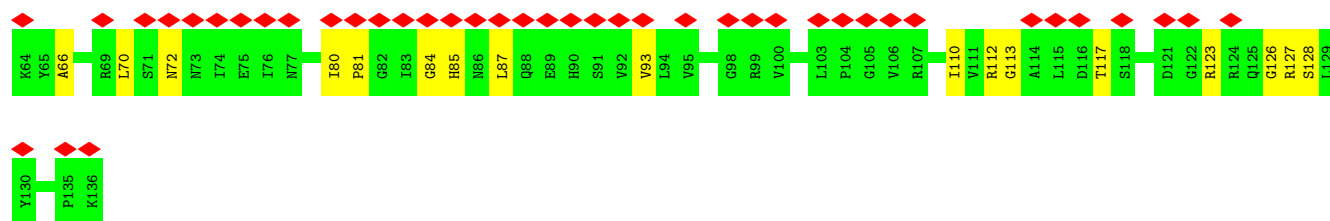


- Molecule 12: 30S ribosomal protein S12

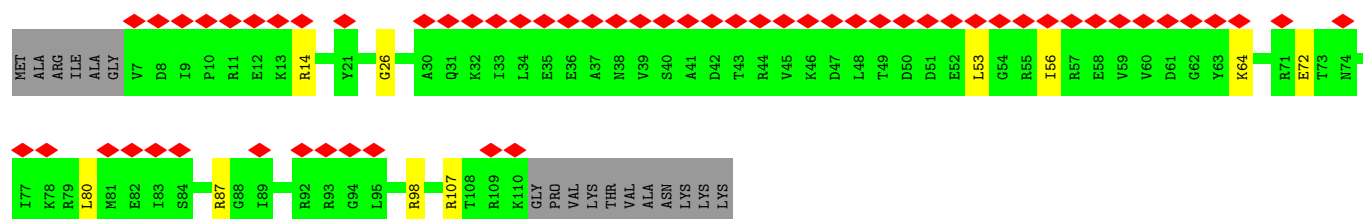
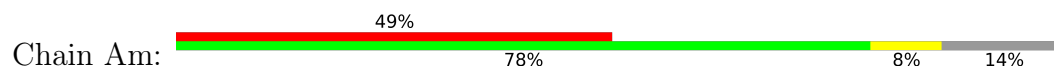


- Molecule 12: 30S ribosomal protein S12

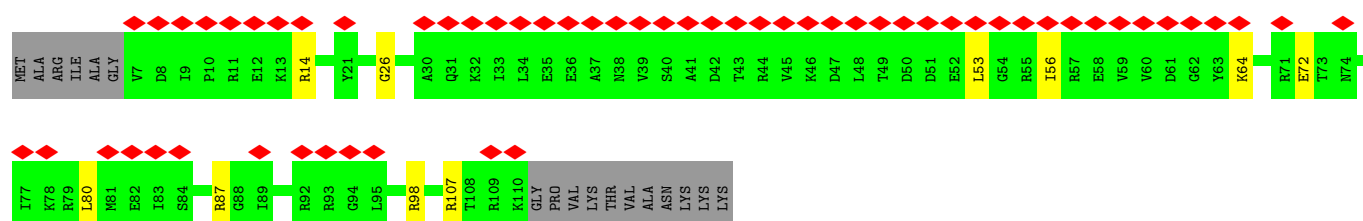
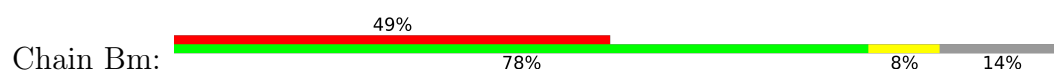




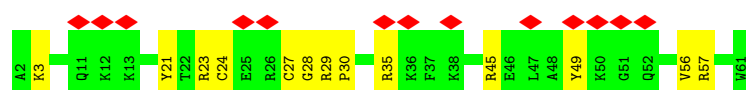
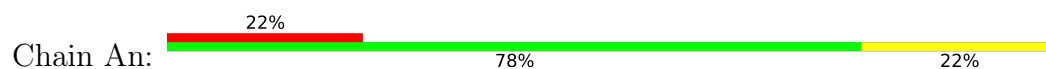
- Molecule 13: 30S ribosomal protein S13



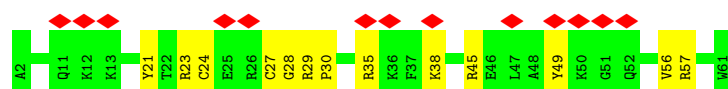
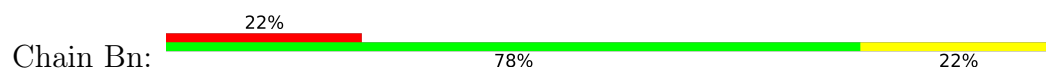
- Molecule 13: 30S ribosomal protein S13



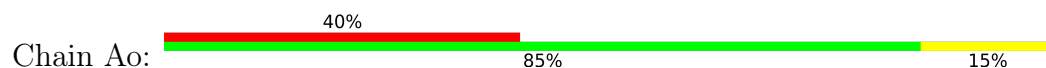
- Molecule 14: 30S ribosomal protein S14 type Z

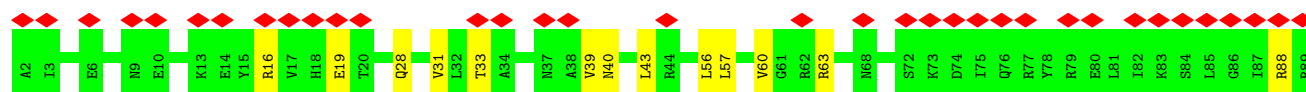


- Molecule 14: 30S ribosomal protein S14 type Z

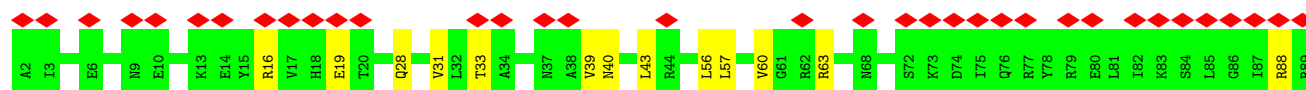
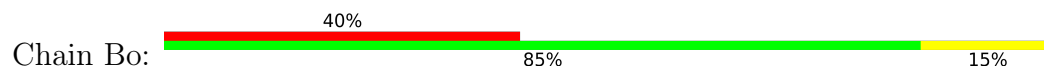


- Molecule 15: 30S ribosomal protein S15

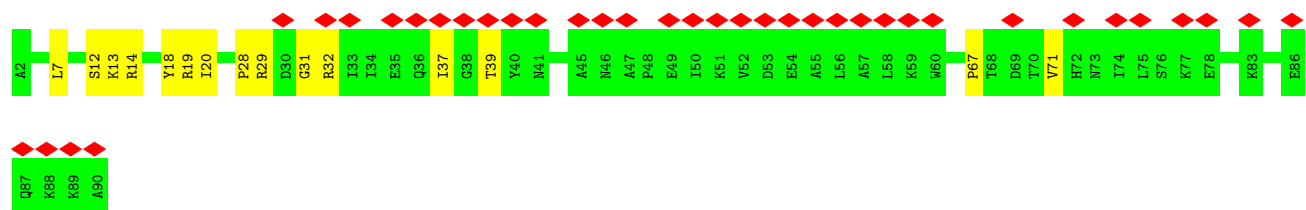
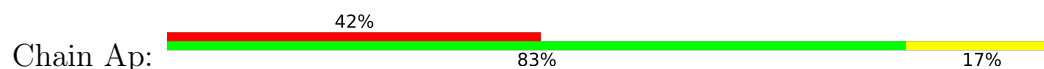




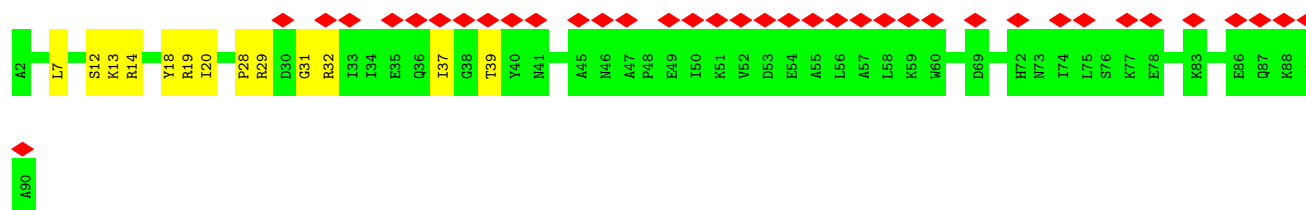
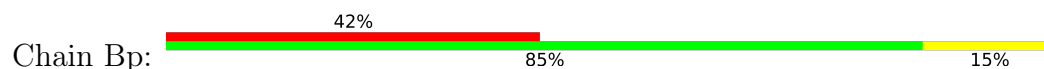
- Molecule 15: 30S ribosomal protein S15



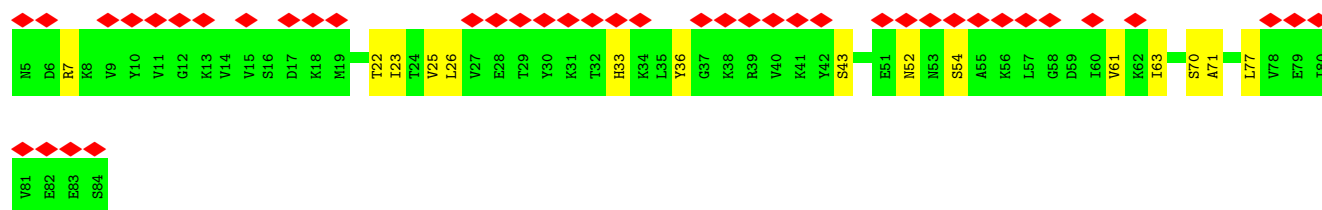
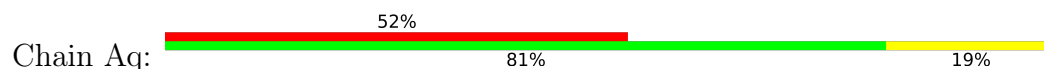
- Molecule 16: 30S ribosomal protein S16



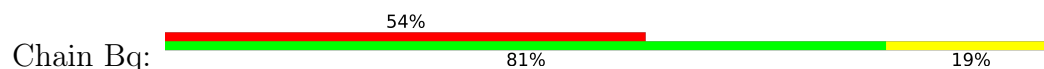
- Molecule 16: 30S ribosomal protein S16

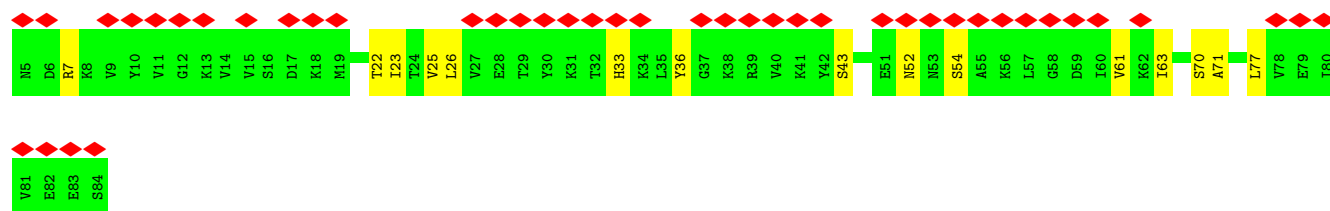


- Molecule 17: 30S ribosomal protein S17

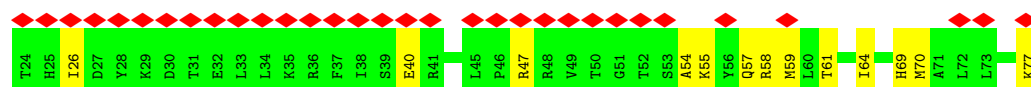
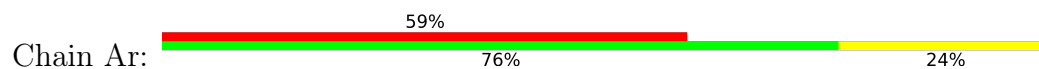


- Molecule 17: 30S ribosomal protein S17

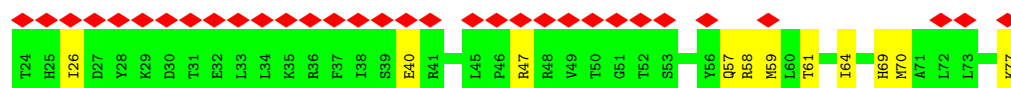
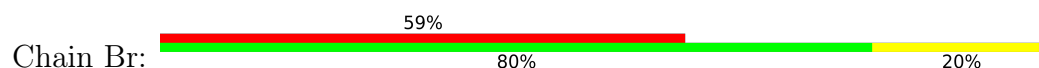




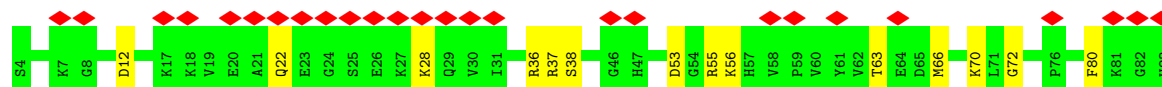
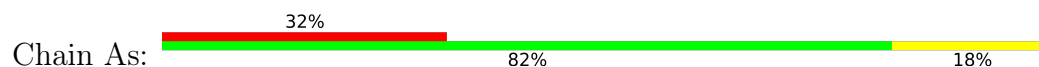
• Molecule 18: 30S ribosomal protein S18



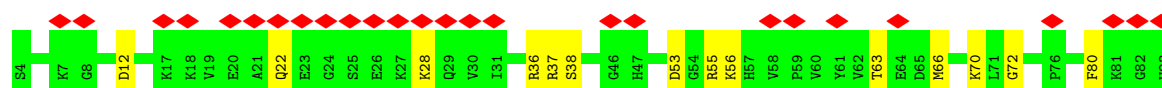
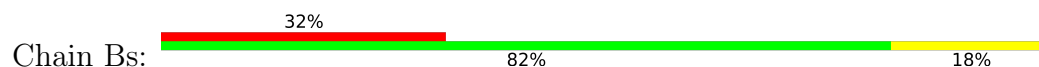
• Molecule 18: 30S ribosomal protein S18



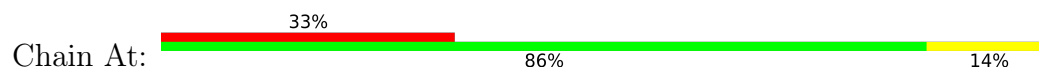
• Molecule 19: 30S ribosomal protein S19



• Molecule 19: 30S ribosomal protein S19

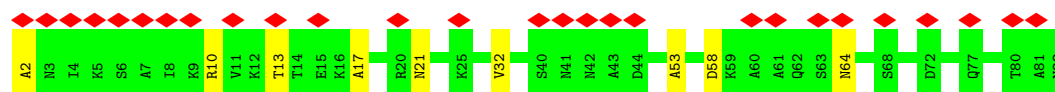


• Molecule 20: 30S ribosomal protein S20

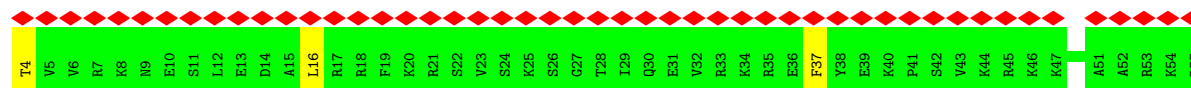


• Molecule 20: 30S ribosomal protein S20

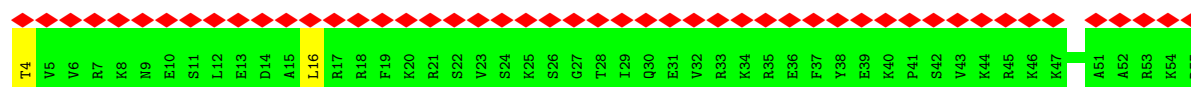




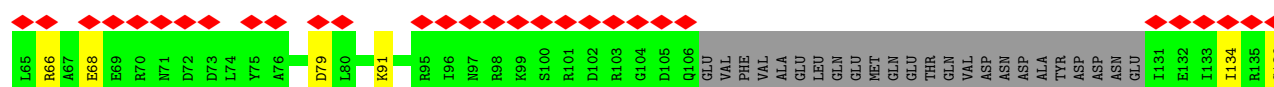
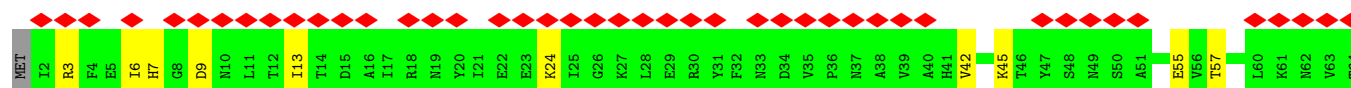
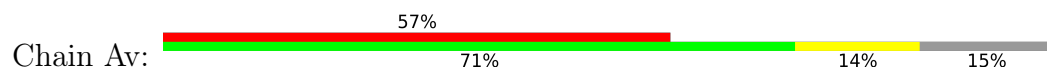
- Molecule 21: 30S ribosomal protein S21



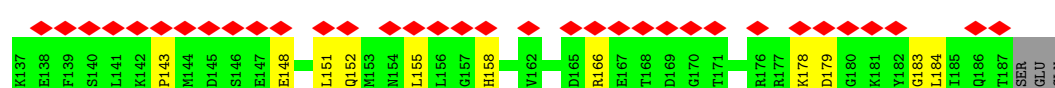
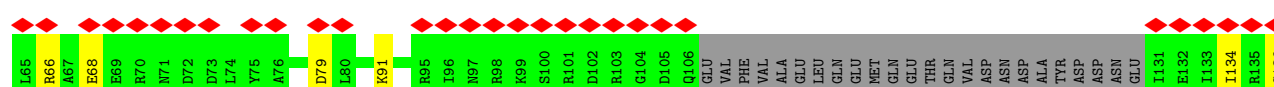
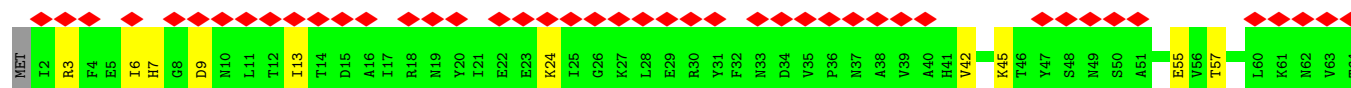
- Molecule 21: 30S ribosomal protein S21



- Molecule 22: Ribosome hibernation promotion factor



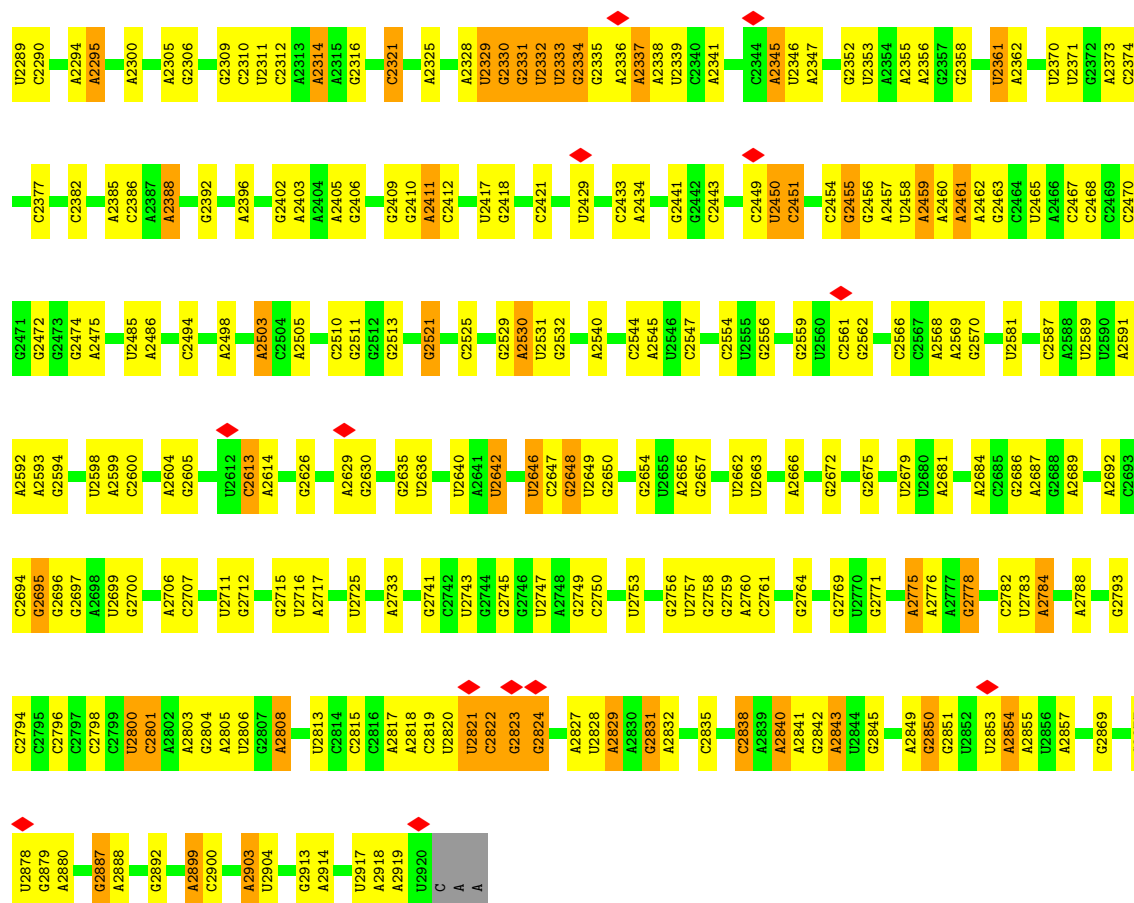
- Molecule 22: Ribosome hibernation promotion factor



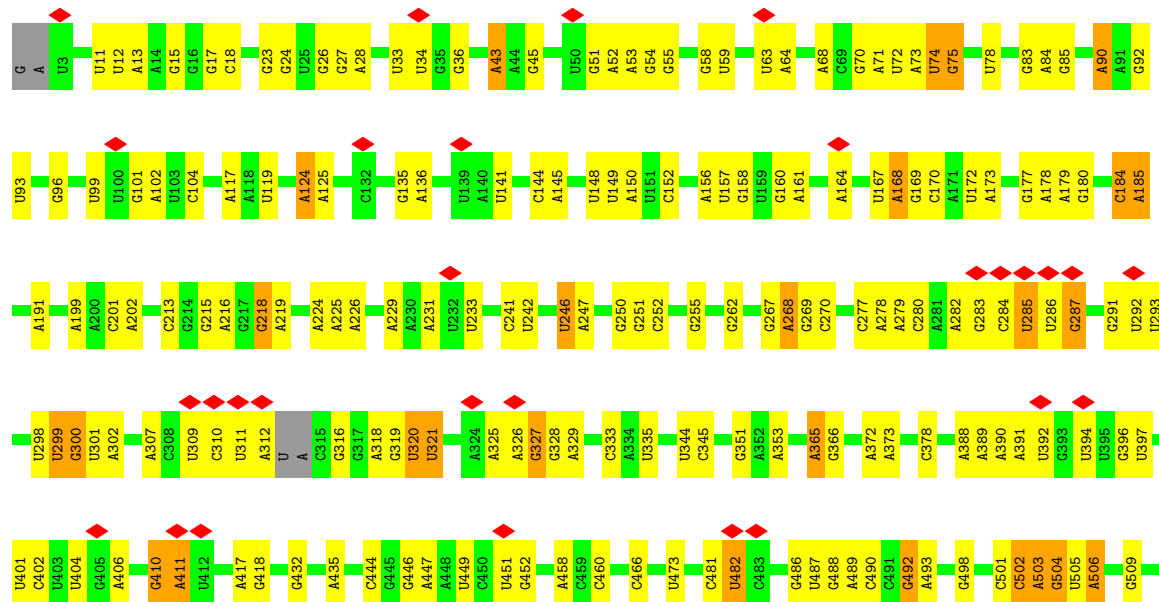
- Molecule 23: 23S ribosomal RNA

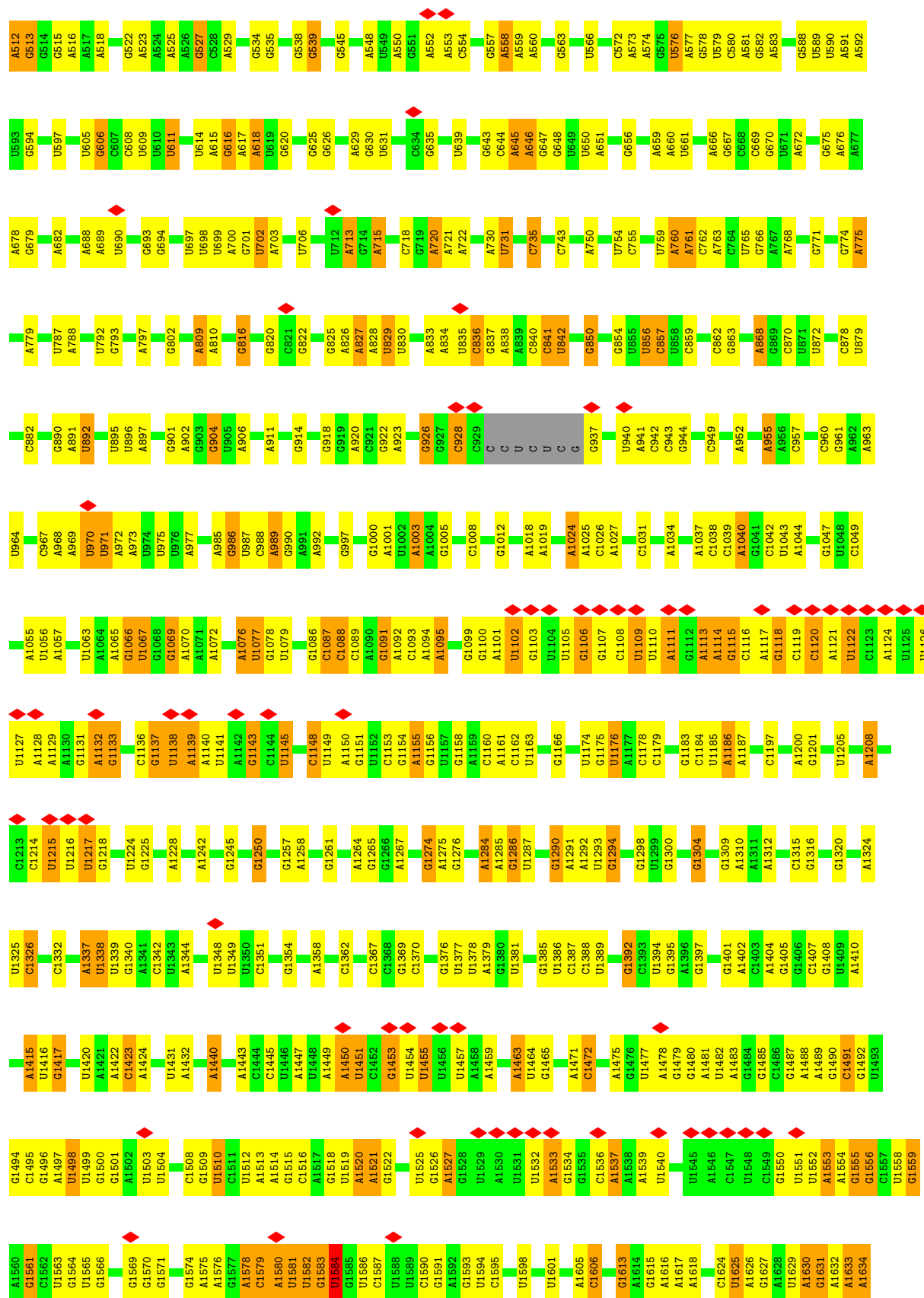




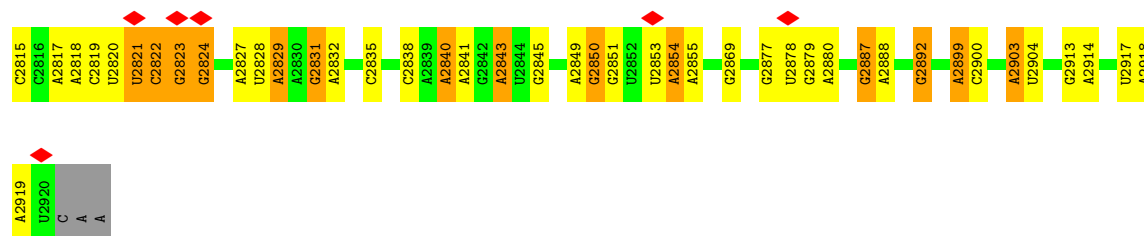


• Molecule 23: 23S ribosomal RNA

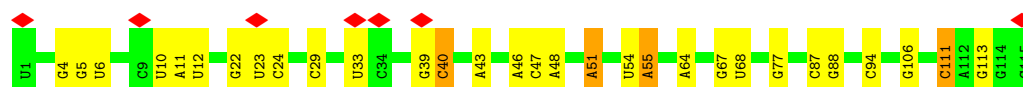
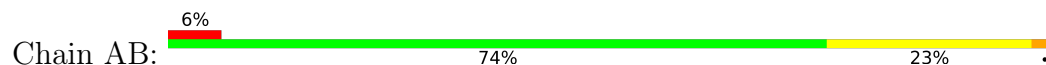




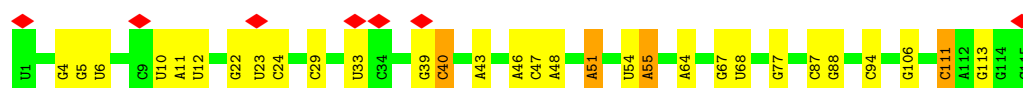
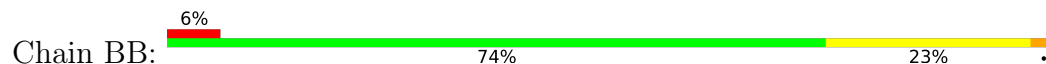
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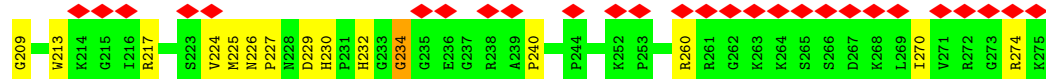
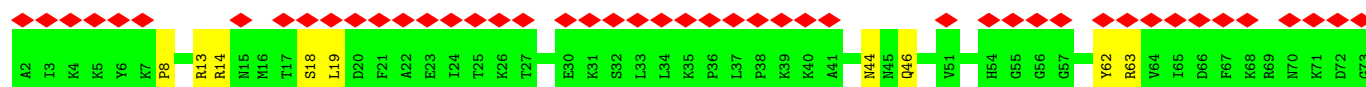
• Molecule 24: 5S ribosomal RNA



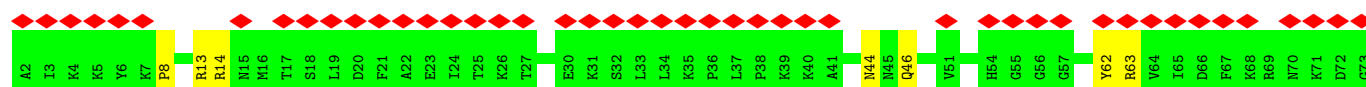
• Molecule 24: 5S ribosomal RNA

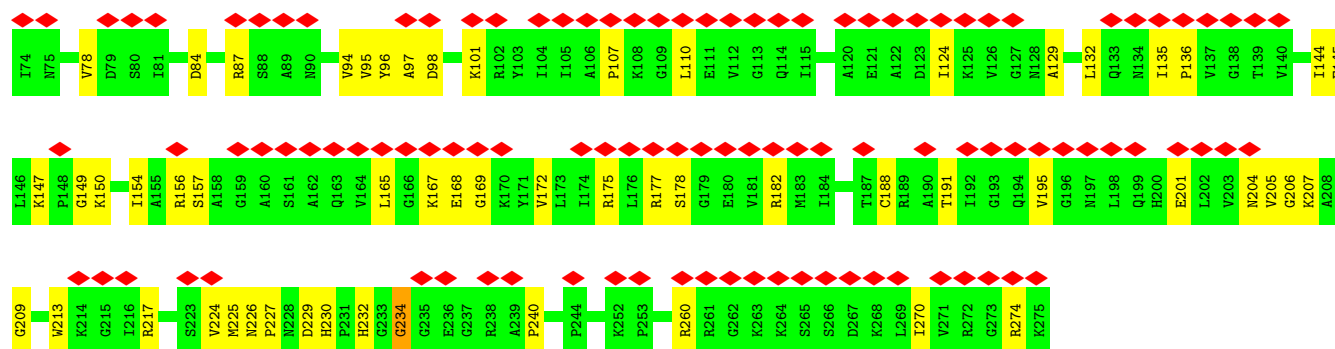


• Molecule 25: 50S ribosomal protein L2

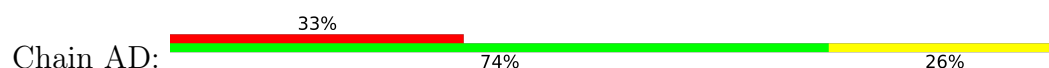


• Molecule 25: 50S ribosomal protein L2

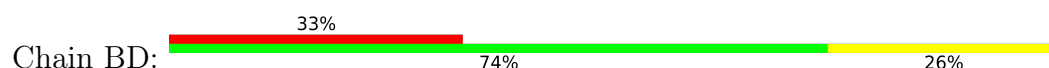




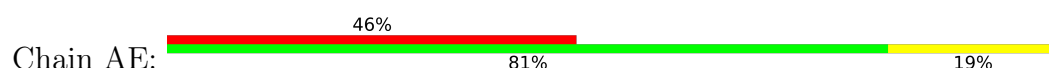
• Molecule 26: 50S ribosomal protein L3

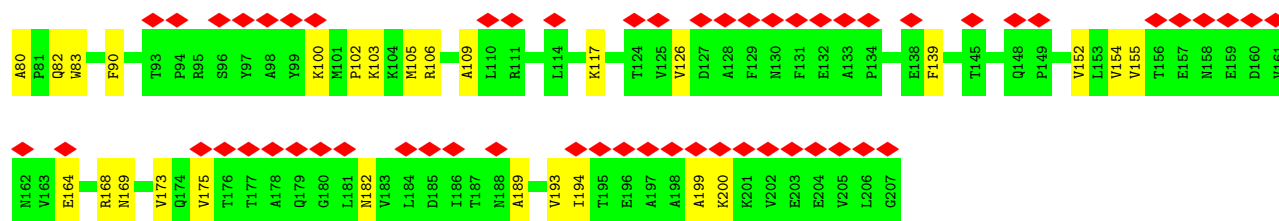


• Molecule 26: 50S ribosomal protein L3

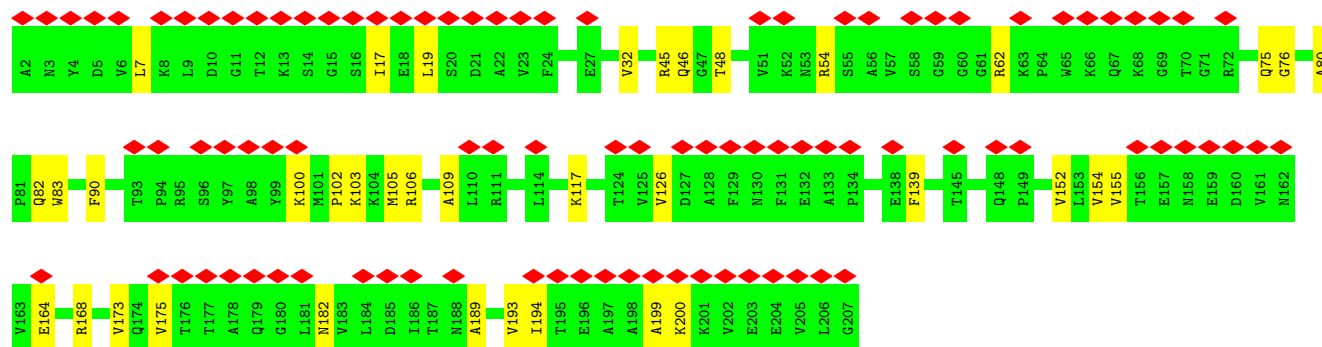
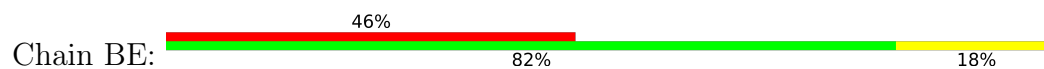


• Molecule 27: 50S ribosomal protein L4

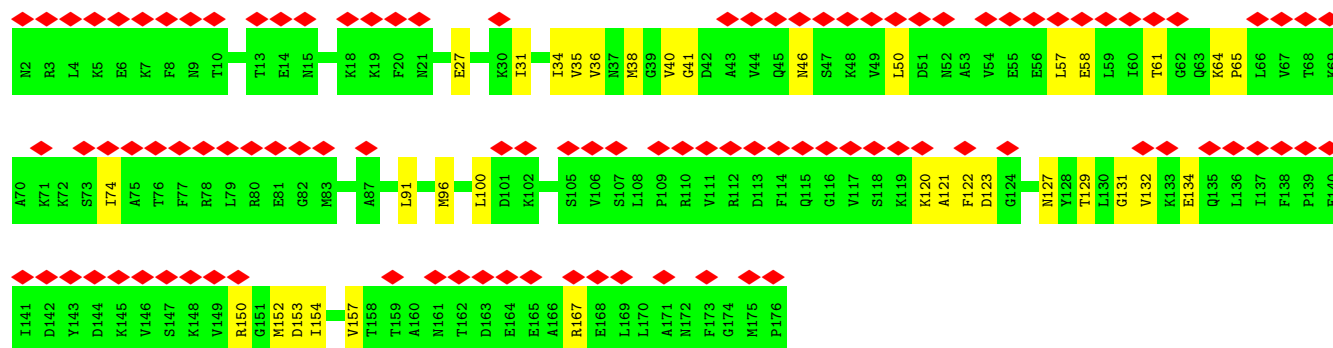
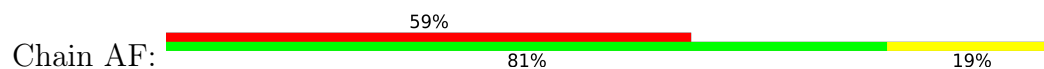




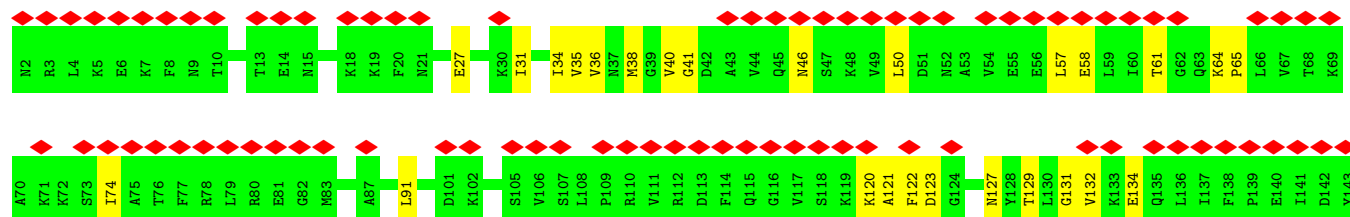
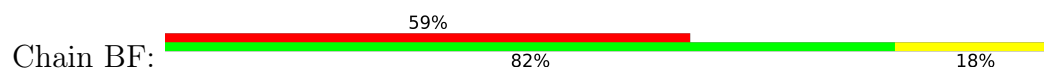
• Molecule 27: 50S ribosomal protein L4

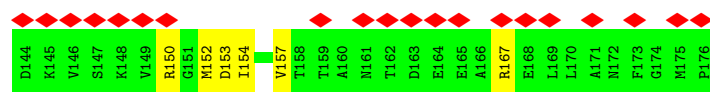


• Molecule 28: 50S ribosomal protein L5

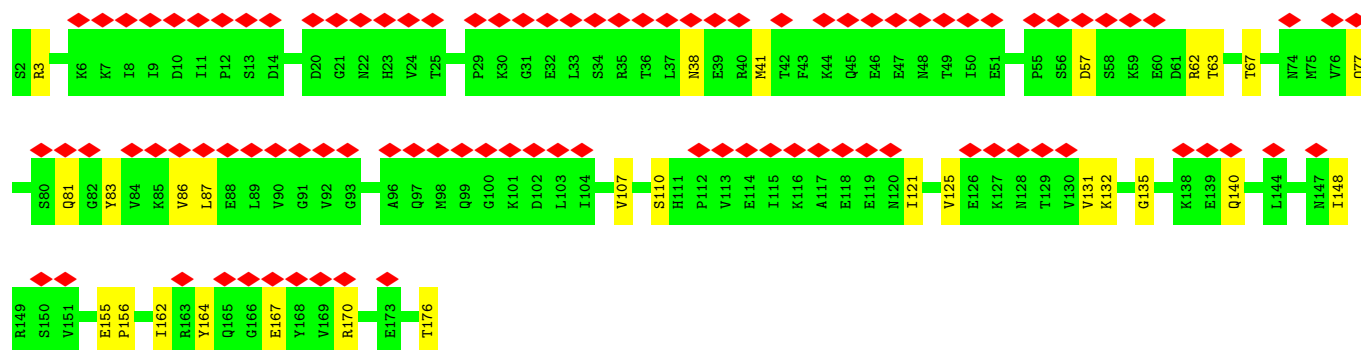
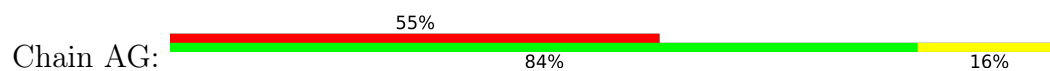


• Molecule 28: 50S ribosomal protein L5

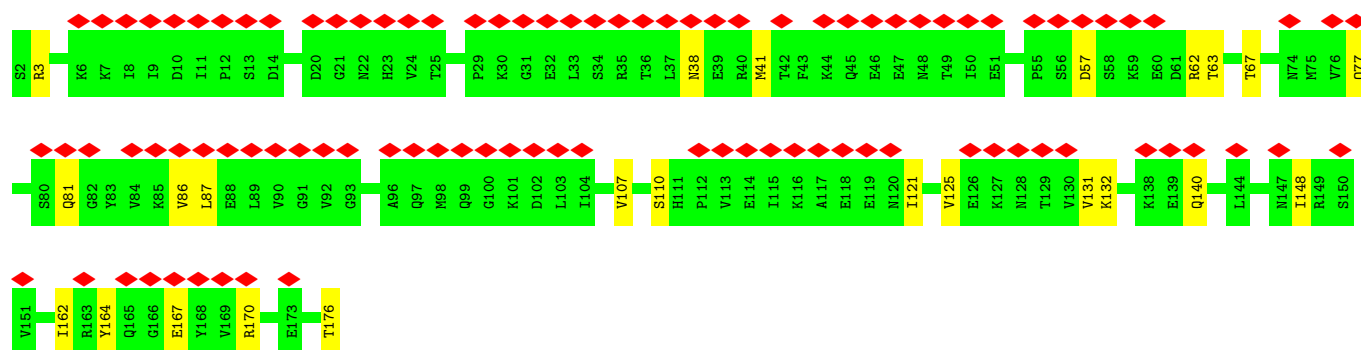
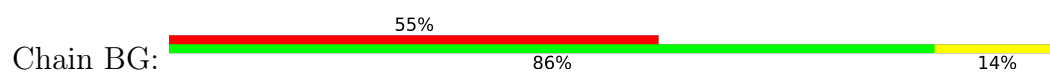




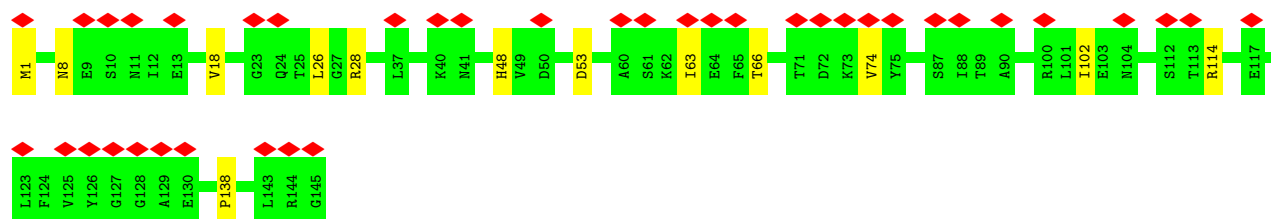
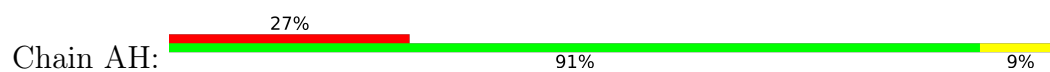
- Molecule 29: 50S ribosomal protein L6



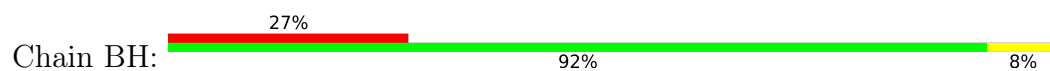
- Molecule 29: 50S ribosomal protein L6

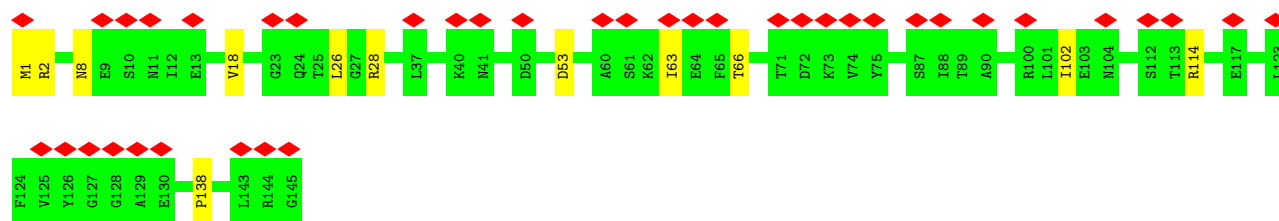


- Molecule 30: 50S ribosomal protein L13

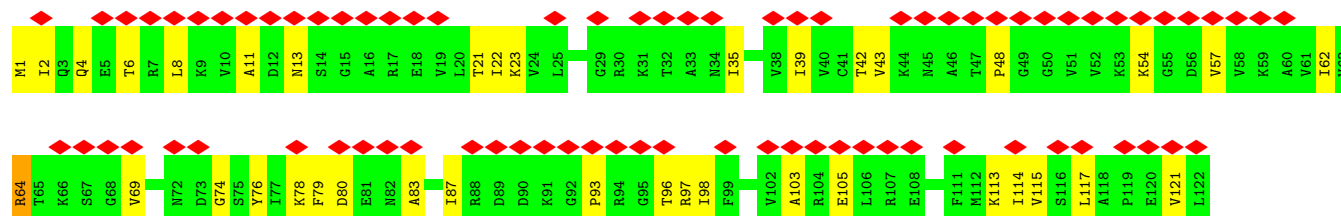


- Molecule 30: 50S ribosomal protein L13

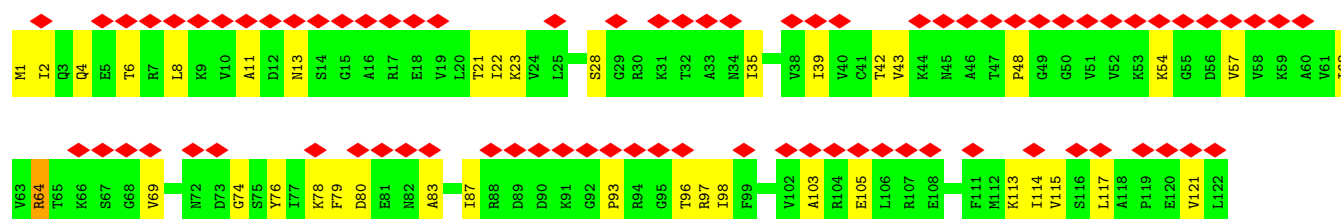




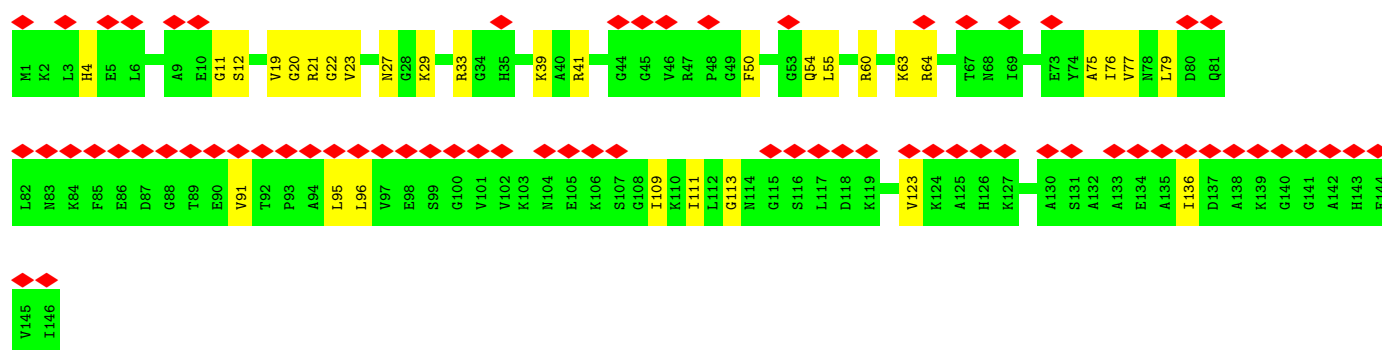
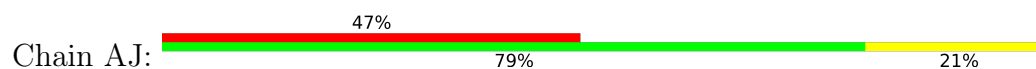
• Molecule 31: 50S ribosomal protein L14



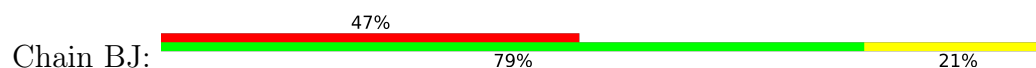
• Molecule 31: 50S ribosomal protein L14

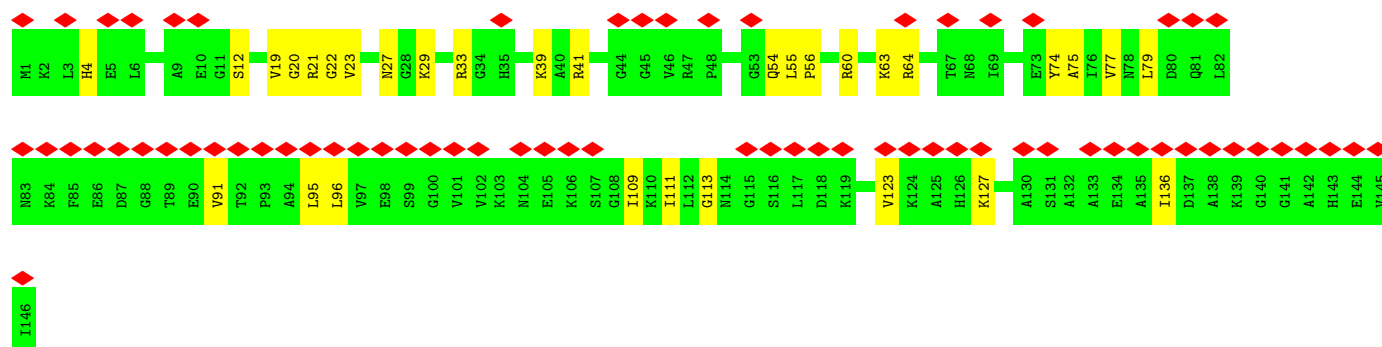


• Molecule 32: 50S ribosomal protein L15

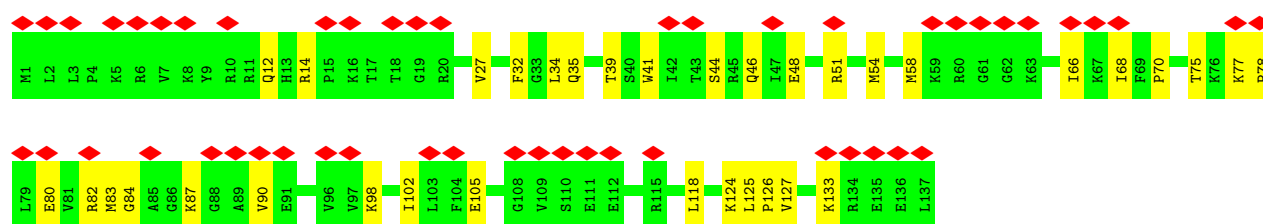
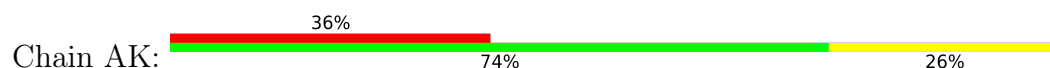


• Molecule 32: 50S ribosomal protein L15

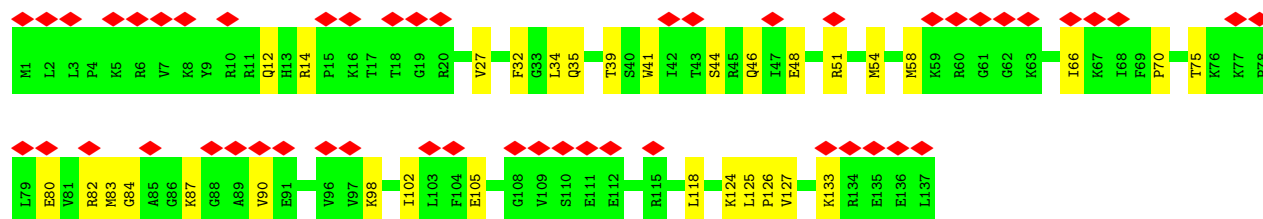
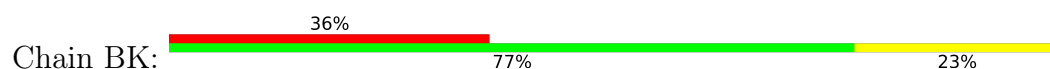




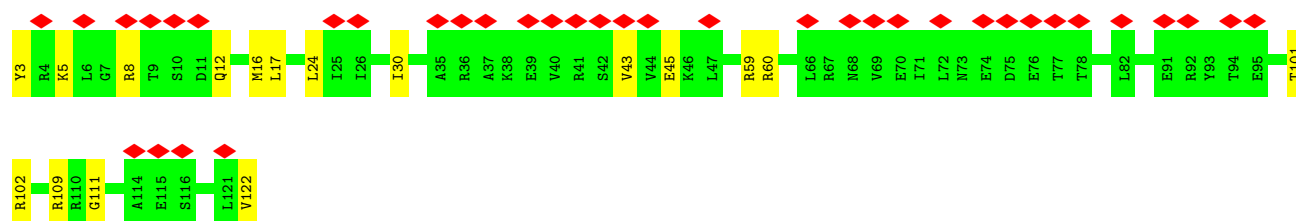
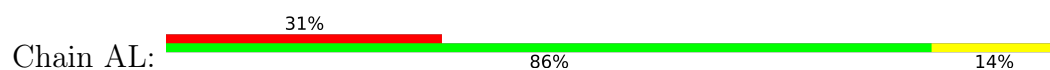
• Molecule 33: 50S ribosomal protein L16



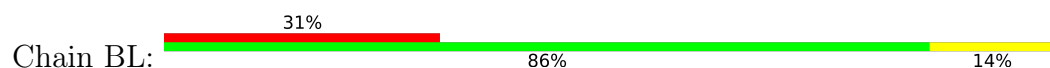
• Molecule 33: 50S ribosomal protein L16

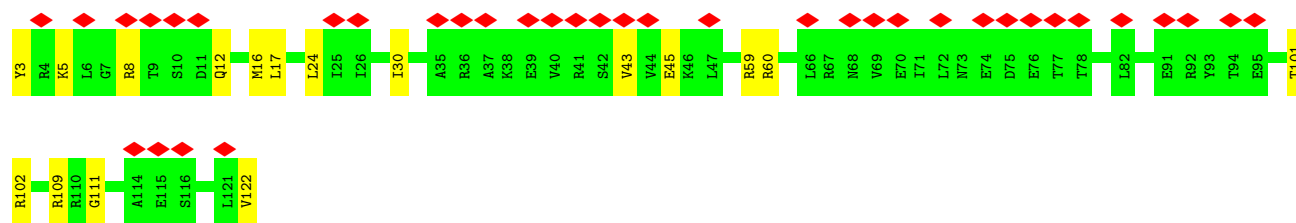


• Molecule 34: 50S ribosomal protein L17

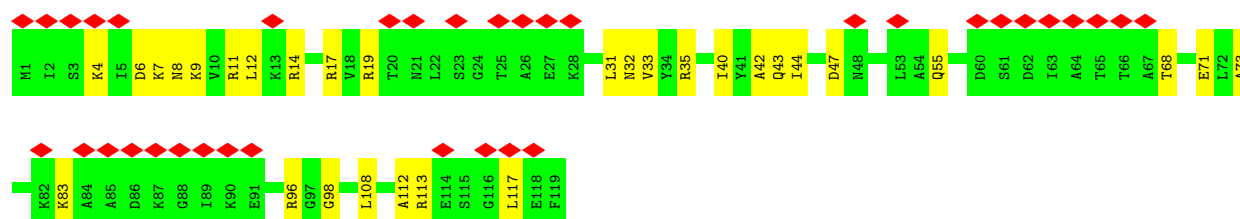
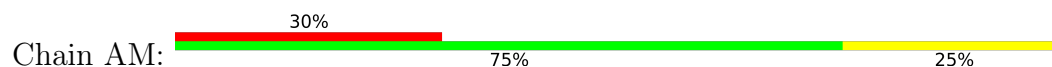


• Molecule 34: 50S ribosomal protein L17

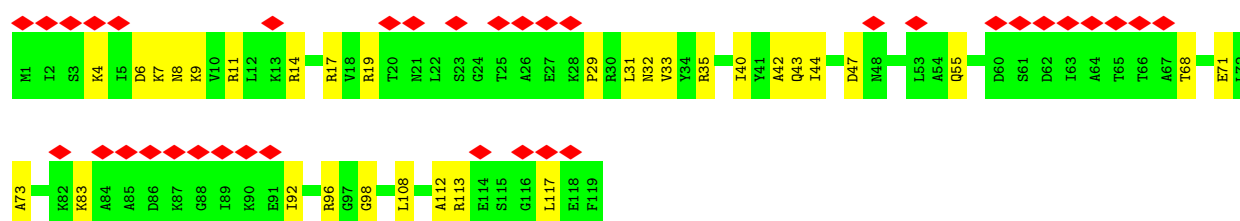
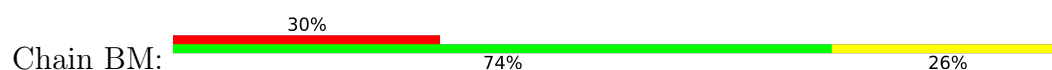




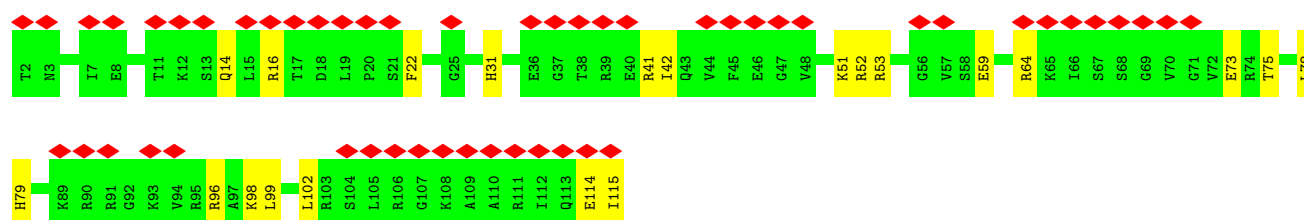
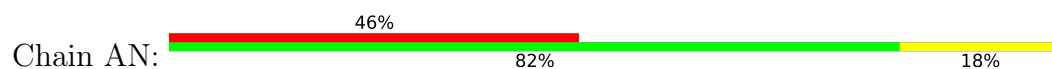
- Molecule 35: 50S ribosomal protein L18



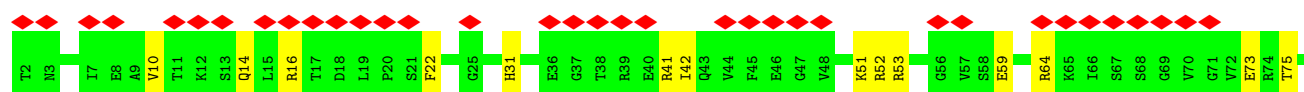
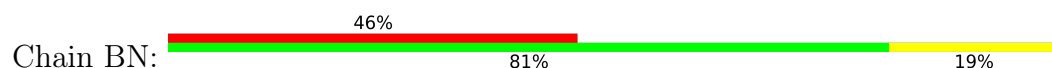
- Molecule 35: 50S ribosomal protein L18

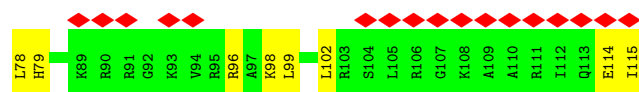


- Molecule 36: 50S ribosomal protein L19

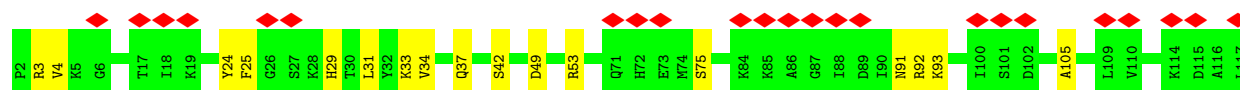
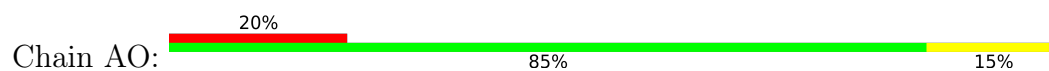


- Molecule 36: 50S ribosomal protein L19

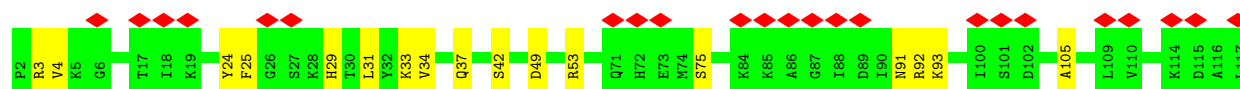
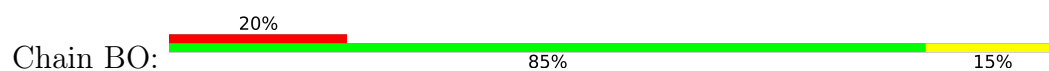




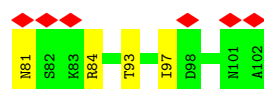
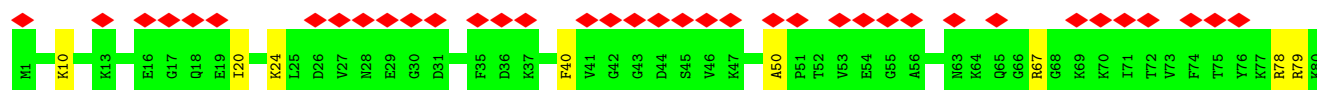
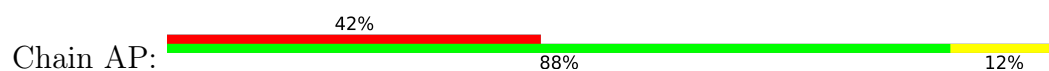
- Molecule 37: 50S ribosomal protein L20



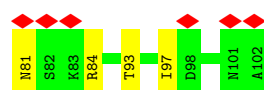
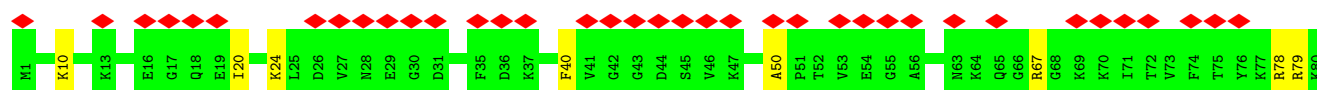
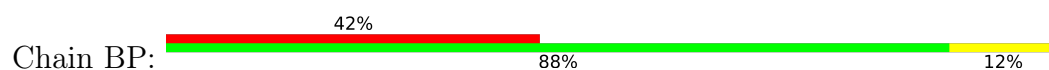
- Molecule 37: 50S ribosomal protein L20



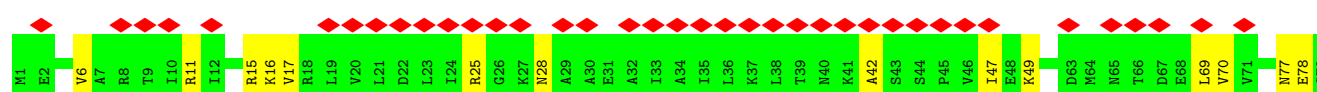
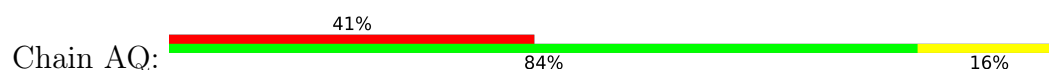
- Molecule 38: 50S ribosomal protein L21

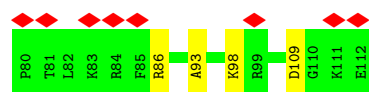


- Molecule 38: 50S ribosomal protein L21

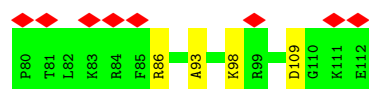
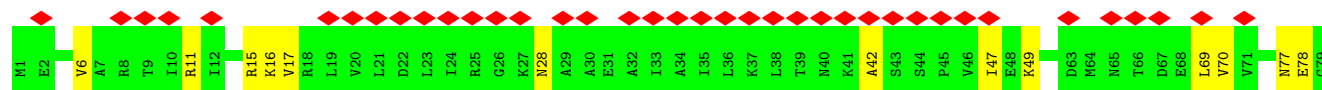
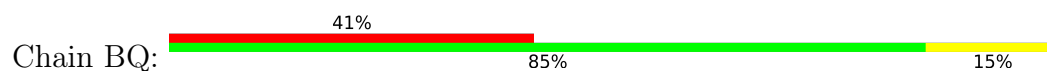


- Molecule 39: 50S ribosomal protein L22

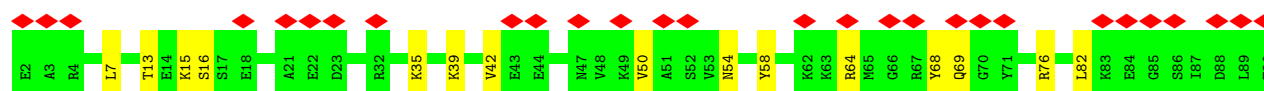
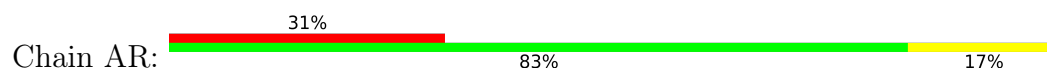




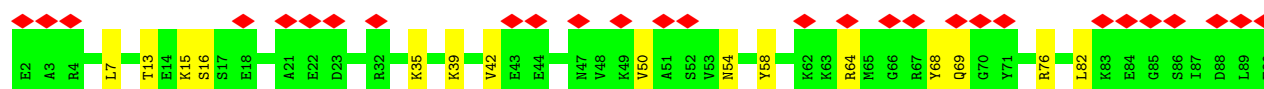
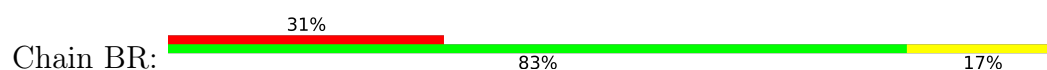
- Molecule 39: 50S ribosomal protein L22



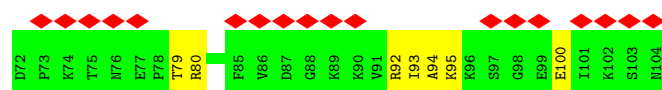
- Molecule 40: 50S ribosomal protein L23



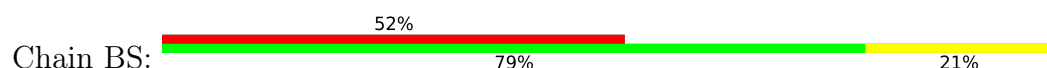
- Molecule 40: 50S ribosomal protein L23

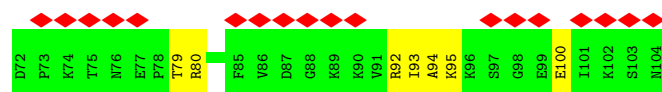


- Molecule 41: 50S ribosomal protein L24

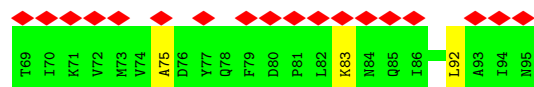
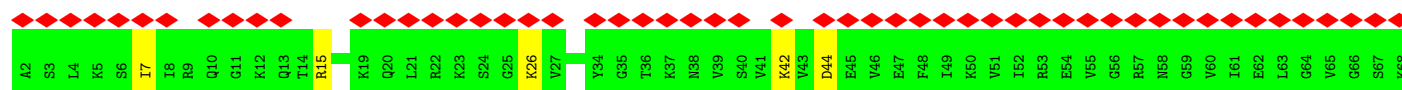
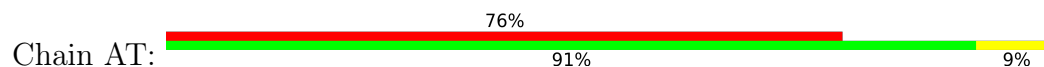


- Molecule 41: 50S ribosomal protein L24

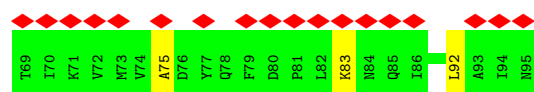
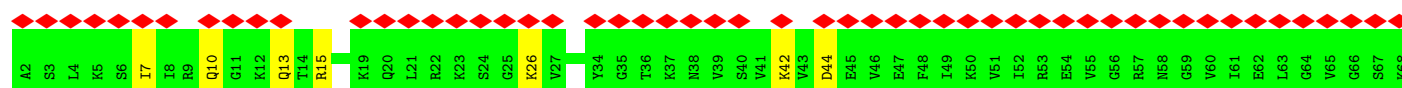
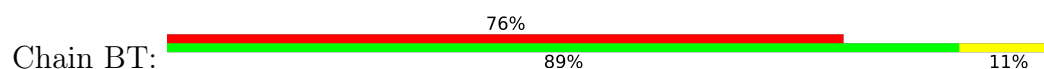




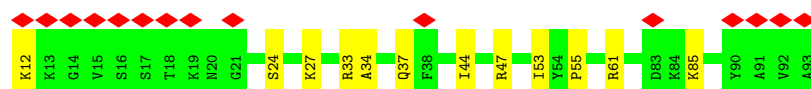
- Molecule 42: 50S ribosomal protein L25



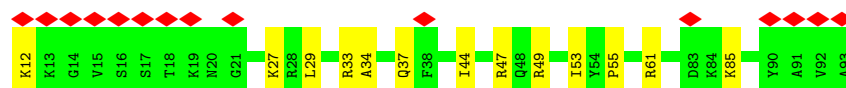
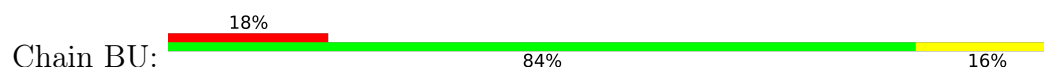
- Molecule 42: 50S ribosomal protein L25



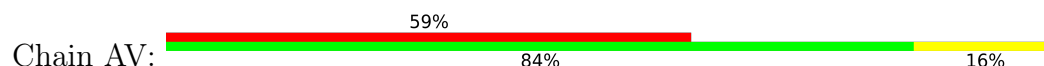
- Molecule 43: 50S ribosomal protein L27



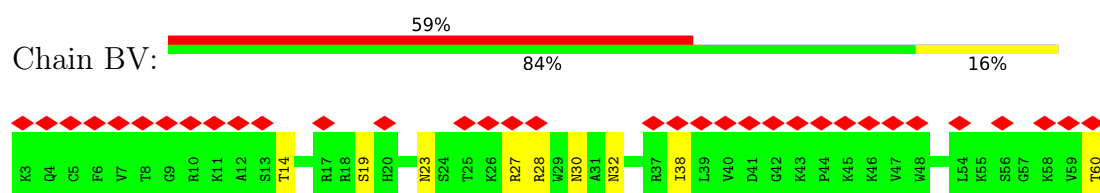
- Molecule 43: 50S ribosomal protein L27



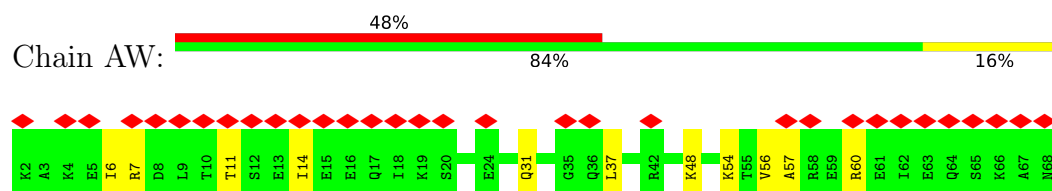
- Molecule 44: 50S ribosomal protein L28



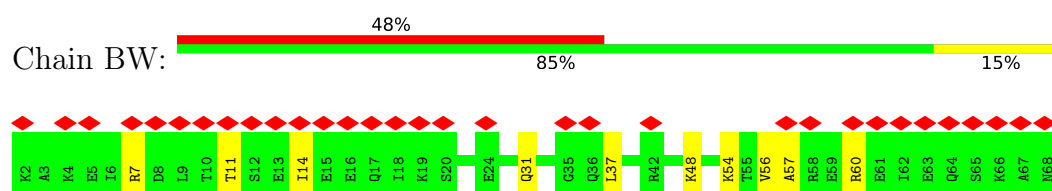
- Molecule 44: 50S ribosomal protein L28



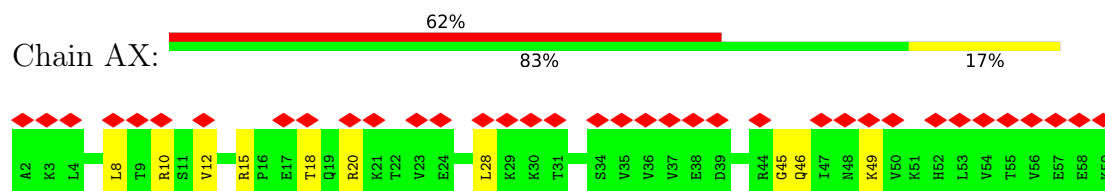
- Molecule 45: 50S ribosomal protein L29



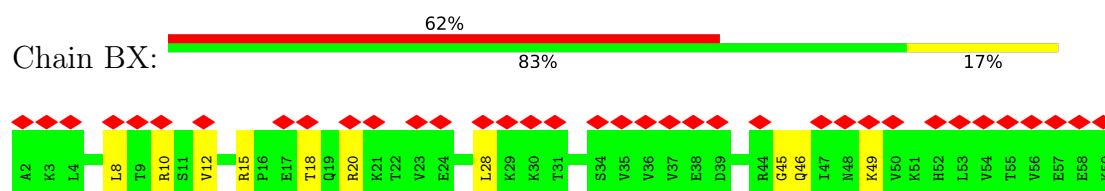
- Molecule 45: 50S ribosomal protein L29



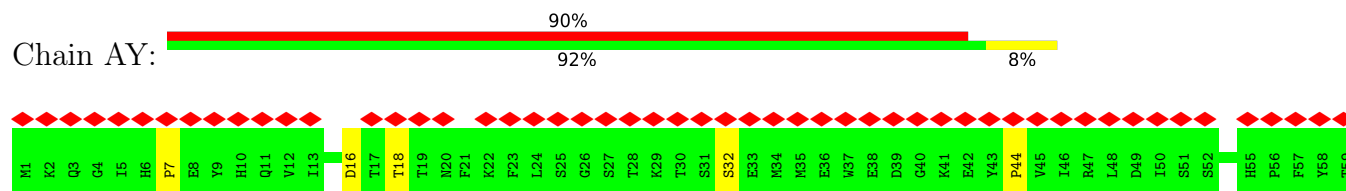
- Molecule 46: 50S ribosomal protein L30



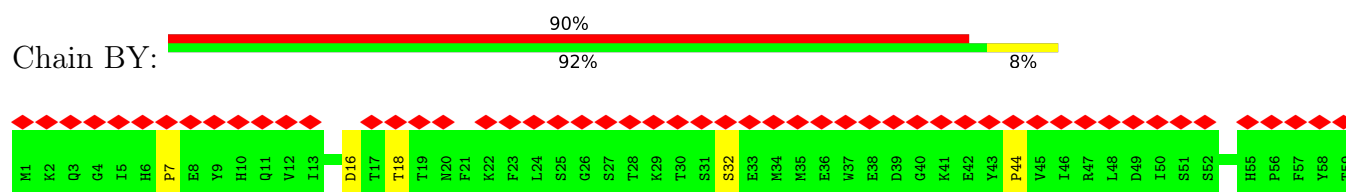
- Molecule 46: 50S ribosomal protein L30



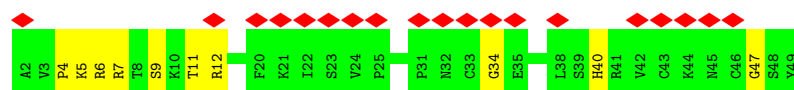
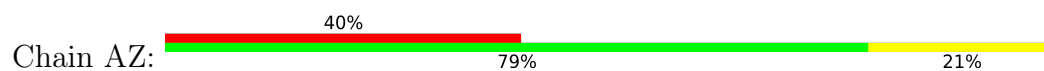
- Molecule 47: 50S ribosomal protein L31 type B



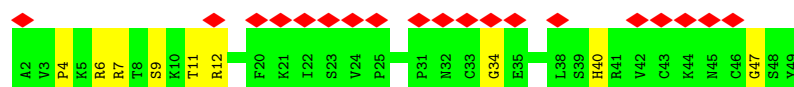
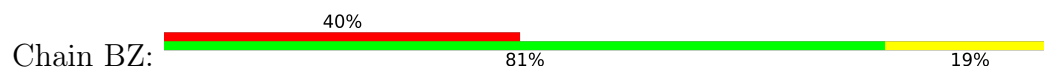
- Molecule 47: 50S ribosomal protein L31 type B



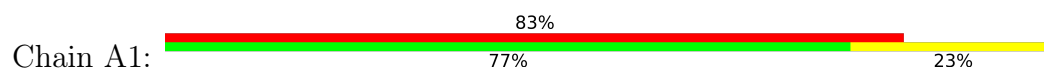
● Molecule 48: 50S ribosomal protein L32



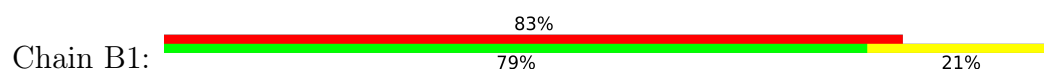
● Molecule 48: 50S ribosomal protein L32



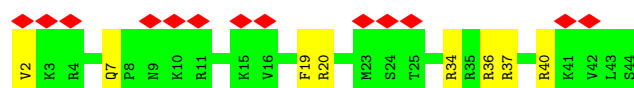
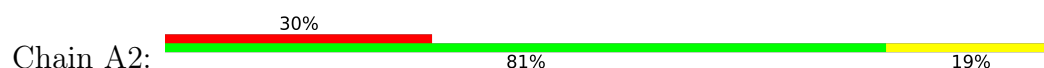
● Molecule 49: 50S ribosomal protein L33



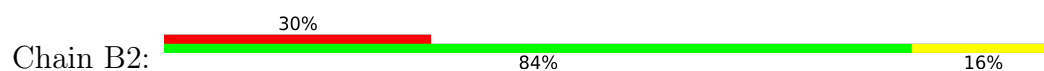
● Molecule 49: 50S ribosomal protein L33



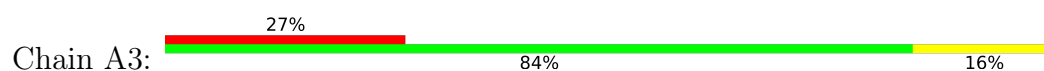
● Molecule 50: 50S ribosomal protein L34



● Molecule 50: 50S ribosomal protein L34

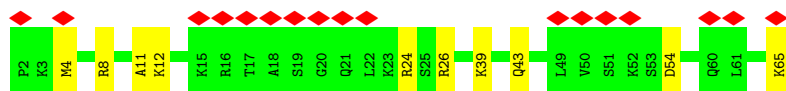
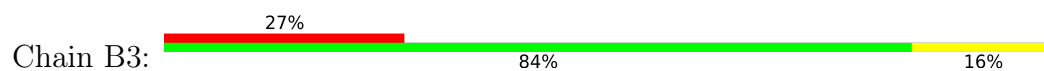


● Molecule 51: 50S ribosomal protein L35

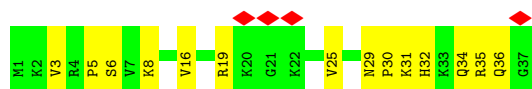




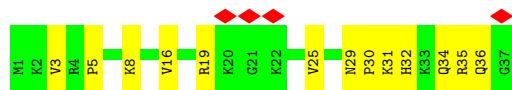
- Molecule 51: 50S ribosomal protein L35



- Molecule 52: 50S ribosomal protein L36



- Molecule 52: 50S ribosomal protein L36



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	12570	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	2.3	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.059	Depositor
Minimum map value	-0.021	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.000	Depositor
Recommended contour level	0.023	Depositor
Map size ($\text{\AA}$)	642.0, 642.0, 642.0	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.605, 1.605, 1.605	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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	Aa	0.19	0/36913	0.36	5/57564 (0.0%)
1	Ba	0.19	0/36913	0.36	5/57564 (0.0%)
2	Ab	0.18	0/1840	0.50	0/2470
2	Bb	0.18	0/1840	0.50	0/2470
3	Ac	0.21	0/1523	0.60	0/2062
3	Bc	0.21	0/1523	0.59	0/2062
4	Ad	0.20	0/1526	0.58	0/2063
4	Bd	0.21	0/1526	0.58	0/2063
5	Ae	0.22	0/1159	0.53	0/1566
5	Be	0.21	0/1159	0.53	0/1566
6	Af	0.23	0/789	0.61	2/1060 (0.2%)
6	Bf	0.23	0/789	0.61	2/1060 (0.2%)
7	Ag	0.16	0/1176	0.48	0/1588
7	Bg	0.16	0/1176	0.48	0/1588
8	Ah	0.26	0/1038	0.61	0/1395
8	Bh	0.26	0/1038	0.61	0/1395
9	Ai	0.22	0/937	0.66	1/1269 (0.1%)
9	Bi	0.22	0/937	0.66	1/1269 (0.1%)
10	Aj	0.21	0/764	0.54	0/1034
10	Bj	0.21	0/764	0.54	0/1034
11	Ak	0.22	0/824	0.62	0/1119
11	Bk	0.22	0/824	0.62	0/1119
12	Al	0.24	0/1054	0.61	0/1415
12	Bl	0.24	0/1054	0.61	0/1415
13	Am	0.20	0/732	0.60	0/991
13	Bm	0.20	0/732	0.60	0/991
14	An	0.27	0/497	0.71	0/662
14	Bn	0.26	0/497	0.71	0/662
15	Ao	0.22	0/732	0.54	0/979
15	Bo	0.22	0/732	0.54	0/979
16	Ap	0.24	0/705	0.55	0/952
16	Bp	0.24	0/705	0.55	0/952
17	Aq	0.23	0/629	0.54	0/849
17	Bq	0.24	0/629	0.54	0/849

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
18	Ar	0.24	0/453	0.59	0/604
18	Br	0.24	0/453	0.59	0/604
19	As	0.27	0/654	0.63	0/879
19	Bs	0.27	0/654	0.63	0/879
20	At	0.18	0/591	0.48	0/793
20	Bt	0.18	0/591	0.48	0/793
21	Au	0.18	0/403	0.47	0/535
21	Bu	0.18	0/403	0.47	0/535
22	Av	0.54	0/1350	1.01	4/1812 (0.2%)
22	Bv	0.54	0/1350	1.01	4/1812 (0.2%)
23	AA	0.36	1/69738 (0.0%)	0.36	1/108747 (0.0%)
23	BA	0.36	1/69738 (0.0%)	0.36	2/108747 (0.0%)
24	AB	0.30	0/2732	0.39	0/4253
24	BB	0.30	0/2732	0.39	0/4253
25	AC	0.45	0/2129	0.67	2/2858 (0.1%)
25	BC	0.45	0/2129	0.67	2/2858 (0.1%)
26	AD	0.43	0/1651	0.69	0/2215
26	BD	0.43	0/1651	0.69	0/2215
27	AE	0.41	0/1595	0.62	0/2154
27	BE	0.41	0/1595	0.62	0/2154
28	AF	0.25	0/1339	0.60	0/1805
28	BF	0.26	0/1339	0.60	0/1805
29	AG	0.27	0/1281	0.54	0/1736
29	BG	0.27	0/1281	0.54	0/1736
30	AH	0.43	0/1165	0.64	0/1570
30	BH	0.43	0/1165	0.64	0/1570
31	AI	0.40	0/925	0.70	1/1242 (0.1%)
31	BI	0.40	0/925	0.70	1/1242 (0.1%)
32	AJ	0.42	0/1100	0.66	0/1467
32	BJ	0.42	0/1100	0.66	0/1467
33	AK	0.40	0/1095	0.62	0/1472
33	BK	0.40	0/1095	0.62	0/1472
34	AL	0.41	0/936	0.70	0/1253
34	BL	0.41	0/936	0.70	0/1253
35	AM	0.49	0/900	0.73	1/1205 (0.1%)
35	BM	0.49	0/900	0.73	1/1205 (0.1%)
36	AN	0.37	0/901	0.66	0/1209
36	BN	0.38	0/901	0.66	0/1209
37	AO	0.48	0/954	0.65	0/1264
37	BO	0.48	0/954	0.65	0/1264
38	AP	0.42	0/800	0.63	0/1070
38	BP	0.42	0/800	0.63	0/1070
39	AQ	0.44	0/862	0.66	0/1161

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
39	BQ	0.44	0/862	0.65	0/1161
40	AR	0.36	0/723	0.65	0/966
40	BR	0.36	0/723	0.65	0/966
41	AS	0.32	0/779	0.69	2/1043 (0.2%)
41	BS	0.32	0/779	0.69	2/1043 (0.2%)
42	AT	0.31	0/730	0.64	2/981 (0.2%)
42	BT	0.31	0/730	0.64	2/981 (0.2%)
43	AU	0.46	0/628	0.69	2/833 (0.2%)
43	BU	0.46	0/628	0.69	2/833 (0.2%)
44	AV	0.34	0/451	0.64	0/603
44	BV	0.34	0/451	0.64	0/603
45	AW	0.36	0/542	0.71	0/722
45	BW	0.35	0/542	0.72	0/722
46	AX	0.39	0/451	0.60	0/606
46	BX	0.39	0/451	0.60	0/606
47	AY	0.17	0/378	0.46	0/521
47	BY	0.16	0/378	0.46	0/521
48	AZ	0.41	0/366	0.66	0/489
48	BZ	0.41	0/366	0.65	0/489
49	A1	0.24	0/395	0.60	0/530
49	B1	0.24	0/395	0.60	0/530
50	A2	0.46	0/371	0.71	0/484
50	B2	0.46	0/371	0.71	0/484
51	A3	0.39	0/526	0.65	0/690
51	B3	0.39	0/526	0.66	0/690
52	A4	0.47	0/298	0.64	0/392
52	B4	0.46	0/298	0.64	0/392
All	All	0.32	2/306060 (0.0%)	0.45	47/458404 (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
5	Ae	0	1
5	Be	0	1
9	Ai	0	1
9	Bi	0	1
12	Al	0	1
12	Bl	0	1
19	As	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
19	Bs	0	1
20	At	0	1
20	Bt	0	1
26	AD	0	1
26	BD	0	1
38	AP	0	1
38	BP	0	1
All	All	0	14

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	AA	1584	U	C1'-N1	6.18	1.56	1.47
23	BA	1584	U	C1'-N1	6.18	1.56	1.47

All (47) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	Aa	745	U	OP1-P-O3'	-9.30	80.09	108.00
1	Ba	745	U	OP1-P-O3'	-9.29	80.12	108.00
22	Bv	178	LYS	CA-C-N	7.58	130.43	120.28
22	Bv	178	LYS	C-N-CA	7.58	130.43	120.28
22	Av	178	LYS	CA-C-N	7.56	130.41	120.28
22	Av	178	LYS	C-N-CA	7.56	130.41	120.28
22	Bv	179	ASP	CA-CB-CG	6.90	119.50	112.60
22	Av	179	ASP	CA-CB-CG	6.88	119.48	112.60
1	Ba	745	U	OP2-P-O3'	-6.64	88.07	108.00
1	Aa	745	U	OP2-P-O3'	-6.64	88.09	108.00
35	AM	8	ASN	N-CA-C	6.30	118.22	111.36
35	BM	8	ASN	N-CA-C	6.29	118.22	111.36
22	Av	158	HIS	N-CA-C	6.21	121.79	113.72
22	Bv	158	HIS	N-CA-C	6.19	121.76	113.72
23	BA	2261	G	P-O3'-C3'	-5.93	111.31	120.20
23	AA	2261	G	P-O3'-C3'	-5.88	111.38	120.20
1	Ba	415	A	P-O3'-C3'	5.55	128.52	120.20
31	BI	64	ARG	CA-CB-CG	5.50	125.11	114.10
1	Aa	415	A	P-O3'-C3'	5.50	128.45	120.20
31	AI	64	ARG	CA-CB-CG	5.50	125.09	114.10
41	AS	30	LYS	CA-C-N	5.44	131.94	121.54
41	AS	30	LYS	C-N-CA	5.44	131.94	121.54
41	BS	30	LYS	CA-C-N	5.43	131.91	121.54
41	BS	30	LYS	C-N-CA	5.43	131.91	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BC	13	ARG	CA-CB-CG	5.38	124.85	114.10
25	AC	13	ARG	CA-CB-CG	5.36	124.82	114.10
6	Af	53	ASN	CA-C-N	5.33	131.72	121.54
6	Af	53	ASN	C-N-CA	5.33	131.72	121.54
43	BU	53	ILE	CA-C-N	5.32	136.38	120.69
43	BU	53	ILE	C-N-CA	5.32	136.38	120.69
43	AU	53	ILE	CA-C-N	5.30	136.32	120.69
43	AU	53	ILE	C-N-CA	5.30	136.32	120.69
6	Bf	53	ASN	CA-C-N	5.28	131.63	121.54
6	Bf	53	ASN	C-N-CA	5.28	131.63	121.54
1	Aa	460	A	P-O3'-C3'	5.26	128.09	120.20
1	Ba	460	A	P-O3'-C3'	5.21	128.01	120.20
25	AC	234	GLY	N-CA-C	5.17	119.04	110.97
9	Bi	66	LEU	CA-CB-CG	5.17	134.38	116.30
9	Ai	66	LEU	CA-CB-CG	5.16	134.37	116.30
25	BC	234	GLY	N-CA-C	5.15	119.01	110.97
1	Aa	1136	U	O3'-P-O5'	5.09	111.64	104.00
1	Ba	1136	U	O3'-P-O5'	5.09	111.64	104.00
42	AT	83	LYS	CA-C-N	5.05	129.59	122.46
42	AT	83	LYS	C-N-CA	5.05	129.59	122.46
42	BT	83	LYS	CA-C-N	5.05	129.58	122.46
42	BT	83	LYS	C-N-CA	5.05	129.58	122.46
23	BA	2749	G	C2'-C3'-O3'	5.01	121.22	113.70

There are no chirality outliers.

All (14) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
26	AD	158	SER	Peptide
38	AP	50	ALA	Peptide
5	Ae	76	ARG	Peptide
9	Ai	108	ARG	Peptide
12	Al	126	GLY	Peptide
19	As	80	PHE	Peptide
20	At	58	ASP	Peptide
26	BD	158	SER	Peptide
38	BP	50	ALA	Peptide
5	Be	76	ARG	Peptide
9	Bi	108	ARG	Peptide
12	Bl	126	GLY	Peptide
19	Bs	80	PHE	Peptide
20	Bt	58	ASP	Peptide

5.2 Too-close contacts ⓘ

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	Aa	32969	0	16595	372	0
1	Ba	32969	0	16595	374	0
2	Ab	1813	0	1875	100	0
2	Bb	1813	0	1875	96	0
3	Ac	1501	0	1464	22	0
3	Bc	1501	0	1464	22	0
4	Ad	1497	0	1449	20	0
4	Bd	1497	0	1449	16	0
5	Ae	1145	0	1202	17	0
5	Be	1145	0	1202	18	0
6	Af	778	0	775	9	0
6	Bf	778	0	775	11	0
7	Ag	1161	0	1165	14	0
7	Bg	1161	0	1165	12	0
8	Ah	1026	0	1078	12	0
8	Bh	1026	0	1078	13	0
9	Ai	922	0	890	16	0
9	Bi	922	0	890	15	0
10	Aj	752	0	775	14	0
10	Bj	752	0	775	12	0
11	Ak	810	0	784	22	0
11	Bk	810	0	784	19	0
12	Al	1037	0	1091	18	0
12	Bl	1037	0	1091	18	0
13	Am	727	0	674	7	0
13	Bm	727	0	674	7	0
14	An	487	0	492	13	0
14	Bn	487	0	492	13	0
15	Ao	723	0	749	24	0
15	Bo	723	0	749	25	0
16	Ap	694	0	709	10	0
16	Bp	694	0	709	9	0
17	Aq	621	0	615	10	0
17	Bq	621	0	615	10	0
18	Ar	446	0	482	18	0
18	Br	446	0	482	7	0
19	As	636	0	626	10	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	Bs	636	0	626	10	0
20	At	591	0	616	6	0
20	Bt	591	0	616	5	0
21	Au	400	0	407	4	0
21	Bu	400	0	407	3	0
22	Av	1333	0	1349	83	0
22	Bv	1333	0	1349	85	0
23	AA	62277	0	31301	723	0
23	BA	62277	0	31301	721	0
24	AB	2445	0	1241	16	0
24	BB	2445	0	1241	16	0
25	AC	2094	0	2203	86	0
25	BC	2094	0	2203	86	0
26	AD	1627	0	1667	61	0
26	BD	1627	0	1667	59	0
27	AE	1572	0	1619	43	0
27	BE	1572	0	1619	44	0
28	AF	1325	0	1342	52	0
28	BF	1325	0	1342	54	0
29	AG	1263	0	1225	25	0
29	BG	1263	0	1225	24	0
30	AH	1143	0	1134	15	0
30	BH	1143	0	1134	14	0
31	AI	918	0	980	35	0
31	BI	918	0	980	36	0
32	AJ	1086	0	1125	28	0
32	BJ	1086	0	1125	27	0
33	AK	1071	0	1123	27	0
33	BK	1071	0	1123	25	0
34	AL	932	0	983	27	0
34	BL	932	0	983	27	0
35	AM	891	0	925	21	0
35	BM	891	0	925	21	0
36	AN	889	0	937	21	0
36	BN	889	0	937	22	0
37	AO	942	0	1014	28	0
37	BO	942	0	1014	29	0
38	AP	790	0	830	13	0
38	BP	790	0	830	12	0
39	AQ	854	0	914	17	0
39	BQ	854	0	914	16	0
40	AR	715	0	748	22	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	BR	715	0	748	21	0
41	AS	770	0	809	19	0
41	BS	770	0	809	19	0
42	AT	722	0	766	4	0
42	BT	722	0	766	5	0
43	AU	622	0	643	9	0
43	BU	622	0	643	9	0
44	AV	445	0	466	7	0
44	BV	445	0	466	7	0
45	AW	541	0	563	9	0
45	BW	541	0	563	8	0
46	AX	449	0	491	8	0
46	BX	449	0	491	8	0
47	AY	370	0	243	3	0
47	BY	370	0	243	3	0
48	AZ	360	0	358	23	0
48	BZ	360	0	358	20	0
49	A1	390	0	394	9	0
49	B1	390	0	394	8	0
50	A2	367	0	415	11	0
50	B2	367	0	415	11	0
51	A3	521	0	586	10	0
51	B3	521	0	586	10	0
52	A4	295	0	340	14	0
52	B4	295	0	340	14	0
All	All	281510	0	186494	3203	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 9.

All (3203) 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)
23:BA:2717:A:N7	34:BL:3:TYR:CD1	1.68	1.59
23:AA:2717:A:N7	34:AL:3:TYR:CD1	1.68	1.57
15:Ao:56:LEU:CD2	23:AA:761:A:C5'	1.84	1.54
15:Bo:56:LEU:CD2	23:BA:761:A:C5'	1.84	1.52
15:Bo:56:LEU:CD2	23:BA:761:A:O5'	1.65	1.43
23:BA:1533:A:N7	25:BC:96:TYR:C	1.79	1.40
23:AA:1533:A:N7	25:AC:96:TYR:C	1.79	1.39
15:Ao:56:LEU:CD2	23:AA:761:A:O5'	1.65	1.39

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:Ao:56:LEU:CD2	23:AA:761:A:H5'	1.43	1.38
15:Bo:56:LEU:CD2	23:BA:761:A:H5'	1.44	1.38
15:Ao:56:LEU:HD21	23:AA:761:A:C5'	0.90	1.37
15:Bo:56:LEU:HD21	23:BA:761:A:C5'	0.90	1.37
23:BA:581:A:OP1	30:BH:1:MET:CE	1.72	1.37
23:AA:581:A:OP1	30:AH:1:MET:CE	1.72	1.35
23:AA:2717:A:N7	34:AL:3:TYR:CE1	1.94	1.35
2:Ab:206:ALA:CA	22:Av:148:GLU:OE1	1.73	1.34
2:Bb:206:ALA:CA	22:Bv:148:GLU:OE1	1.73	1.33
23:BA:2717:A:N7	34:BL:3:TYR:CE1	1.94	1.32
23:BA:581:A:OP1	30:BH:1:MET:HE1	1.15	1.32
23:AA:581:A:OP1	30:AH:1:MET:HE1	1.15	1.31
1:Ba:844:G:C4	1:Ba:845:G:C8	2.18	1.31
2:Ab:17:GLY:O	2:Ab:38:ILE:HD11	1.23	1.28
2:Ab:206:ALA:HA	22:Av:148:GLU:CD	1.60	1.26
15:Bo:56:LEU:HD21	23:BA:761:A:O5'	1.10	1.25
1:Aa:844:G:OP2	18:Ar:55:LYS:NZ	1.69	1.25
2:Bb:206:ALA:HA	22:Bv:148:GLU:CD	1.60	1.25
1:Ba:844:G:C6	1:Ba:845:G:C5	2.23	1.24
1:Ba:844:G:C2'	1:Ba:845:G:H5'	1.67	1.24
23:BA:2046:U:OP2	48:BZ:6:ARG:NH1	1.72	1.22
23:AA:2046:U:OP2	48:AZ:6:ARG:NH1	1.72	1.22
15:Ao:56:LEU:HD21	23:AA:761:A:O5'	1.10	1.22
23:AA:2332:U:H1'	28:AF:132:VAL:O	1.05	1.21
1:Ba:844:G:C5	1:Ba:845:G:N7	2.08	1.20
2:Ab:16:PHE:CE1	22:Av:143:PRO:CG	2.26	1.19
2:Bb:207:ILE:HD11	22:Bv:151:LEU:HB3	1.25	1.19
2:Bb:16:PHE:CE1	22:Bv:143:PRO:CG	2.26	1.18
23:BA:2332:U:H1'	28:BF:132:VAL:O	1.05	1.18
15:Bo:43:LEU:HB3	23:BA:761:A:C4	1.75	1.16
23:BA:1613:G:C4	25:BC:213:TRP:CE3	2.23	1.15
23:AA:2648:G:OP1	26:AD:133:ARG:NH2	1.79	1.15
23:AA:2717:A:C8	34:AL:3:TYR:CE1	2.35	1.15
1:Aa:844:G:OP2	18:Ar:55:LYS:CE	1.95	1.14
23:AA:1613:G:C4	25:AC:213:TRP:CE3	2.23	1.14
2:Ab:207:ILE:HD11	22:Av:151:LEU:HB3	1.25	1.14
2:Bb:75:GLN:HA	22:Bv:155:LEU:CD1	1.77	1.14
23:BA:2648:G:OP1	26:BD:133:ARG:NH2	1.79	1.14
23:AA:1819:G:OP1	25:AC:205:VAL:N	1.81	1.13
23:BA:2717:A:C8	34:BL:3:TYR:CE1	2.35	1.13
2:Ab:75:GLN:HA	22:Av:155:LEU:CD1	1.77	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aa:753:U:OP1	1:Aa:860:U:O2'	1.68	1.12
23:AA:1663:G:HO2'	50:A2:2:VAL:N	1.48	1.11
1:Ba:753:U:OP1	1:Ba:860:U:O2'	1.68	1.11
2:Ab:74:LYS:HD3	22:Av:155:LEU:HD22	1.17	1.11
23:BA:1819:G:OP1	25:BC:205:VAL:N	1.81	1.11
1:Aa:848:G:H3'	1:Aa:849:U:H5''	1.32	1.11
23:AA:1818:A:O2'	25:AC:206:GLY:HA2	1.49	1.10
23:AA:2332:U:C1'	28:AF:132:VAL:O	1.99	1.10
23:AA:2338:A:H8	28:AF:40:VAL:HG21	1.13	1.10
23:BA:2332:U:C1'	28:BF:132:VAL:O	1.99	1.10
23:AA:2717:A:N6	34:AL:3:TYR:HB2	1.67	1.10
23:BA:2717:A:N6	34:BL:3:TYR:HB2	1.67	1.10
1:Ba:347:C:OP2	31:BI:97:ARG:NH1	1.79	1.09
23:BA:1818:A:O2'	25:BC:206:GLY:CA	2.00	1.09
23:BA:1818:A:O2'	25:BC:206:GLY:HA2	1.49	1.09
15:Ao:43:LEU:HB3	23:AA:761:A:C4	1.75	1.09
1:Ba:851:U:N3	1:Ba:853:C:C5	2.20	1.09
2:Bb:74:LYS:HD3	22:Bv:155:LEU:HD22	1.17	1.09
2:Bb:207:ILE:CD1	22:Bv:151:LEU:HB3	1.81	1.09
23:AA:1818:A:O2'	25:AC:206:GLY:CA	2.00	1.09
2:Ab:207:ILE:CD1	22:Av:151:LEU:HB3	1.81	1.08
23:BA:1663:G:HO2'	50:B2:2:VAL:N	1.50	1.08
22:Av:136:SER:HA	22:Bv:184:LEU:O	1.53	1.08
2:Bb:75:GLN:HA	22:Bv:155:LEU:HD11	1.13	1.07
2:Bb:207:ILE:CD1	22:Bv:151:LEU:CB	2.31	1.07
23:BA:2338:A:H8	28:BF:40:VAL:HG21	1.13	1.07
2:Ab:207:ILE:CD1	22:Av:151:LEU:CB	2.31	1.07
23:BA:2331:G:H4'	28:BF:129:THR:O	1.54	1.07
1:Ba:844:G:H2'	1:Ba:845:G:H5'	1.31	1.07
23:AA:2331:G:H4'	28:AF:129:THR:O	1.54	1.06
2:Ab:75:GLN:HA	22:Av:155:LEU:HD11	1.13	1.06
22:Av:184:LEU:O	22:Bv:136:SER:HA	1.53	1.06
1:Aa:347:C:OP2	31:AI:97:ARG:NH1	1.79	1.06
27:BE:17:ILE:HD11	27:BE:200:LYS:HE3	1.35	1.06
2:Ab:34:GLU:OE2	2:Ab:37:GLY:N	1.88	1.06
1:Aa:844:G:N1	1:Aa:859:U:O2	1.88	1.05
1:Aa:846:G:C5	1:Aa:847:G:C8	2.45	1.05
2:Ab:207:ILE:N	22:Av:148:GLU:OE2	1.88	1.05
2:Bb:207:ILE:N	22:Bv:148:GLU:OE2	1.88	1.05
1:Aa:843:A:H5''	18:Ar:58:ARG:NH2	1.73	1.04
1:Aa:846:G:H3'	1:Aa:847:G:H5''	1.36	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Ab:14:VAL:O	2:Ab:41:ILE:HD12	1.58	1.04
23:AA:1533:A:N7	25:AC:97:ALA:N	1.91	1.04
2:Bb:17:GLY:O	2:Bb:38:ILE:HD11	1.58	1.03
1:Aa:844:G:H2'	1:Aa:845:G:H5'	1.40	1.03
1:Aa:753:U:H5''	1:Aa:860:U:H1'	1.39	1.03
23:BA:1533:A:N7	25:BC:97:ALA:N	1.91	1.02
27:AE:17:ILE:HD11	27:AE:200:LYS:HE3	1.35	1.02
23:BA:2312:C:OP2	49:B1:2:ARG:NH2	1.92	1.02
1:Aa:846:G:C6	1:Aa:847:G:N7	2.27	1.02
2:Bb:16:PHE:CD1	22:Bv:143:PRO:HG2	1.95	1.01
23:AA:2332:U:C6	28:AF:152:MET:O	2.14	1.01
2:Ab:16:PHE:CD1	22:Av:143:PRO:HG2	1.95	1.01
23:AA:513:G:OP1	50:A2:34:ARG:NH1	1.94	1.00
1:Ba:853:C:H4'	1:Ba:854:G:C5'	1.91	1.00
2:Bb:34:GLU:OE2	2:Bb:37:GLY:N	1.94	1.00
1:Aa:850:U:O2'	1:Aa:854:G:N2	1.93	1.00
23:AA:2312:C:OP2	49:A1:2:ARG:NH2	1.92	1.00
23:BA:2332:U:C6	28:BF:152:MET:O	2.14	1.00
2:Ab:17:GLY:O	2:Ab:38:ILE:CD1	2.09	1.00
1:Ba:753:U:O2'	1:Ba:845:G:O4'	1.80	1.00
1:Ba:844:G:C6	1:Ba:845:G:C6	2.49	1.00
23:BA:513:G:OP1	50:B2:34:ARG:NH1	1.94	0.99
1:Aa:843:A:H5''	18:Ar:58:ARG:HH22	1.25	0.98
1:Ba:846:G:C5	1:Ba:847:G:C8	2.50	0.98
1:Aa:850:U:O4	1:Aa:853:C:N4	1.95	0.98
15:Ao:56:LEU:HD22	23:AA:761:A:H5'	1.45	0.98
23:BA:1818:A:HO2'	25:BC:206:GLY:HA2	1.28	0.98
1:Aa:853:C:H4'	1:Aa:854:G:C5'	1.94	0.97
1:Ba:855:C:H2'	1:Ba:856:C:C6	1.98	0.97
23:BA:606:G:H21	37:BO:37:GLN:HE22	1.09	0.97
23:BA:2776:A:H1'	29:BG:63:THR:HG22	1.46	0.97
23:AA:2776:A:H1'	29:AG:63:THR:HG22	1.46	0.97
1:Ba:844:G:C5	1:Ba:845:G:C5	2.49	0.97
23:AA:2330:G:H5''	28:AF:122:PHE:O	1.65	0.97
1:Ba:347:C:OP2	31:BI:97:ARG:CZ	2.13	0.97
2:Bb:74:LYS:HD3	22:Bv:155:LEU:CD2	1.95	0.96
1:Aa:844:G:C2'	1:Aa:845:G:H5'	1.95	0.96
1:Aa:855:C:H2'	1:Aa:856:C:C6	1.99	0.96
1:Aa:846:G:C4	1:Aa:847:G:C8	2.53	0.96
2:Ab:75:GLN:CA	22:Av:155:LEU:CD1	2.44	0.96
1:Ba:846:G:C6	1:Ba:847:G:C8	2.53	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aa:347:C:OP2	31:AI:97:ARG:CZ	2.13	0.96
23:BA:492:G:OP1	37:BO:3:ARG:HB3	1.66	0.96
2:Ab:74:LYS:HD3	22:Av:155:LEU:CD2	1.95	0.95
1:Ba:849:U:H3	1:Ba:854:G:H1	0.99	0.95
1:Ba:854:G:C6	1:Ba:855:C:C4	2.54	0.95
15:Bo:56:LEU:HD22	23:BA:761:A:H5'	1.45	0.95
2:Ab:16:PHE:CE1	22:Av:143:PRO:HG2	2.01	0.95
23:BA:2330:G:H5''	28:BF:122:PHE:O	1.65	0.95
2:Ab:16:PHE:CE1	22:Av:143:PRO:HG3	2.02	0.95
1:Ba:844:G:O6	1:Ba:845:G:C6	2.20	0.95
1:Ba:853:C:H4'	1:Ba:854:G:H5'	1.45	0.95
2:Bb:75:GLN:CA	22:Bv:155:LEU:CD1	2.44	0.95
2:Bb:14:VAL:O	2:Bb:41:ILE:HD12	1.67	0.95
23:AA:1533:A:N6	25:AC:96:TYR:O	2.00	0.94
23:AA:492:G:OP1	37:AO:3:ARG:HB3	1.66	0.94
23:AA:660:A:H8	27:AE:182:ASN:HB3	1.33	0.94
2:Bb:206:ALA:HA	22:Bv:148:GLU:OE1	0.76	0.94
2:Ab:206:ALA:HA	22:Av:148:GLU:OE1	0.76	0.94
2:Bb:16:PHE:CE1	22:Bv:143:PRO:HG2	2.01	0.94
23:BA:1533:A:N6	25:BC:96:TYR:O	2.00	0.93
1:Aa:851:U:C1'	1:Aa:853:C:H5''	1.98	0.93
2:Bb:74:LYS:HD2	22:Bv:155:LEU:HB3	1.48	0.93
2:Bb:207:ILE:HD11	22:Bv:151:LEU:CB	1.91	0.93
2:Bb:16:PHE:CE1	22:Bv:143:PRO:HG3	2.02	0.93
2:Ab:74:LYS:HD2	22:Av:155:LEU:HB3	1.48	0.93
1:Ba:846:G:C2	1:Ba:847:G:H1'	2.04	0.93
2:Bb:207:ILE:HD13	22:Bv:151:LEU:CB	1.96	0.93
1:Ba:851:U:O2'	1:Ba:853:C:O5'	1.85	0.93
23:BA:2800:U:OP1	26:BD:179:THR:HG23	1.68	0.93
23:AA:1613:G:C5	25:AC:213:TRP:CE3	2.36	0.92
15:Ao:56:LEU:HD21	23:AA:761:A:H5'	0.93	0.92
23:AA:606:G:H21	37:AO:37:GLN:HE22	1.09	0.92
15:Bo:56:LEU:HD23	23:BA:761:A:O5'	1.68	0.92
23:BA:74:U:OP1	45:BW:48:LYS:NZ	2.02	0.92
23:AA:2642:U:C2	48:AZ:4:PRO:HA	2.05	0.92
1:Ba:846:G:H2'	1:Ba:847:G:C4'	1.99	0.92
23:AA:74:U:OP1	45:AW:48:LYS:NZ	2.02	0.92
1:Ba:848:G:N1	1:Ba:849:U:C2	2.37	0.92
23:BA:1377:U:OP2	40:BR:58:TYR:OH	1.87	0.92
1:Aa:347:C:P	31:AI:97:ARG:CZ	2.58	0.91
23:AA:2800:U:OP1	26:AD:179:THR:HG23	1.68	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Ab:74:LYS:CD	22:Av:155:LEU:HB3	2.01	0.91
23:BA:2642:U:C2	48:BZ:4:PRO:HA	2.05	0.91
1:Ba:854:G:C6	1:Ba:855:C:C5	2.59	0.91
1:Ba:753:U:H5''	1:Ba:860:U:H1'	1.49	0.91
1:Aa:844:G:O6	1:Aa:859:U:N3	2.03	0.91
2:Ab:207:ILE:HD13	22:Av:151:LEU:CB	1.96	0.91
2:Bb:74:LYS:CD	22:Bv:155:LEU:HB3	2.01	0.90
23:BA:660:A:H8	27:BE:182:ASN:HB3	1.33	0.90
1:Aa:851:U:N3	1:Aa:853:C:C5	2.40	0.90
15:Ao:56:LEU:HD23	23:AA:761:A:O5'	1.68	0.90
23:BA:2338:A:C8	28:BF:40:VAL:HG21	2.05	0.90
2:Ab:33:THR:O	2:Ab:40:ILE:N	2.04	0.90
23:AA:2717:A:N7	34:AL:3:TYR:CG	2.40	0.90
23:AA:1377:U:OP2	40:AR:58:TYR:OH	1.87	0.90
1:Aa:846:G:C6	1:Aa:847:G:C5	2.60	0.89
23:BA:1613:G:C5	25:BC:213:TRP:CE3	2.36	0.89
23:BA:2775:A:H1'	29:BG:67:THR:HG22	1.55	0.89
23:AA:2338:A:C8	28:AF:40:VAL:HG21	2.05	0.89
2:Ab:11:GLU:O	22:Av:166:ARG:NH2	2.06	0.89
1:Ba:851:U:C2	1:Ba:853:C:C6	2.61	0.89
2:Bb:11:GLU:O	22:Bv:166:ARG:NH2	2.06	0.89
23:BA:2717:A:N7	34:BL:3:TYR:CG	2.40	0.89
23:BA:2717:A:C8	34:BL:3:TYR:CZ	2.62	0.88
1:Ba:846:G:H3'	1:Ba:847:G:H5''	1.56	0.88
1:Ba:846:G:N2	1:Ba:858:C:N3	2.21	0.88
23:AA:2775:A:H1'	29:AG:67:THR:HG22	1.55	0.88
23:AA:2717:A:C8	34:AL:3:TYR:CZ	2.62	0.88
1:Ba:844:G:C4	1:Ba:845:G:N7	2.36	0.88
1:Ba:347:C:P	31:BI:97:ARG:CZ	2.58	0.88
1:Aa:845:G:C2	1:Aa:859:U:C2	2.61	0.87
1:Ba:844:G:N1	1:Ba:845:G:C4	2.42	0.87
23:AA:2717:A:C5	34:AL:3:TYR:CD1	2.63	0.87
23:BA:581:A:OP1	30:BH:1:MET:SD	2.33	0.87
35:AM:19:ARG:HH21	35:AM:47:ASP:CG	1.83	0.86
1:Aa:848:G:N2	1:Aa:856:C:O2	2.08	0.86
1:Aa:852:C:H4'	1:Aa:853:C:C5'	2.04	0.86
23:AA:372:A:H61	41:AS:15:LYS:HG2	1.40	0.86
1:Ba:844:G:N3	1:Ba:845:G:C8	2.43	0.86
1:Aa:849:U:H3	1:Aa:854:G:H1	1.21	0.86
23:AA:581:A:OP1	30:AH:1:MET:SD	2.33	0.86
2:Ab:17:GLY:C	2:Ab:38:ILE:HD11	1.99	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2717:A:C5	34:BL:3:TYR:CD1	2.63	0.86
23:BA:731:U:O2	50:B2:7:GLN:O	1.94	0.86
15:Bo:56:LEU:HD21	23:BA:761:A:H5'	0.93	0.85
23:AA:731:U:O2	50:A2:7:GLN:O	1.94	0.85
35:BM:19:ARG:HH21	35:BM:47:ASP:CG	1.84	0.85
2:Ab:75:GLN:CA	22:Av:155:LEU:HD11	2.03	0.85
15:Ao:60:VAL:HG21	23:AA:761:A:OP2	1.77	0.85
23:BA:2338:A:C8	28:BF:40:VAL:HG11	2.11	0.85
23:AA:2338:A:C8	28:AF:40:VAL:HG11	2.11	0.84
15:Bo:60:VAL:HG21	23:BA:761:A:OP2	1.77	0.84
1:Ba:847:G:C2	1:Ba:848:G:C5	2.66	0.84
2:Bb:75:GLN:CA	22:Bv:155:LEU:HD11	2.03	0.84
23:BA:1324:A:H5'	34:BL:109:ARG:HD2	1.58	0.84
15:Bo:43:LEU:CB	23:BA:761:A:C4	2.56	0.84
23:BA:372:A:H61	41:BS:15:LYS:HG2	1.40	0.84
23:AA:1324:A:H5'	34:AL:109:ARG:HD2	1.58	0.84
27:BE:17:ILE:CD1	27:BE:200:LYS:HE3	2.07	0.84
1:Aa:851:U:C4	1:Aa:853:C:C5	2.66	0.84
23:AA:2231:C:H5''	25:AC:147:LYS:CE	2.08	0.84
1:Ba:844:G:C2	1:Ba:845:G:C4	2.66	0.84
23:BA:2231:C:H5''	25:BC:147:LYS:HE3	1.60	0.84
27:AE:17:ILE:CD1	27:AE:200:LYS:HE3	2.07	0.83
1:Ba:848:G:C2	1:Ba:849:U:C2	2.65	0.83
23:AA:902:A:OP1	43:AU:85:LYS:NZ	2.10	0.83
23:AA:1781:C:H5	36:AN:96:ARG:HH21	1.22	0.83
1:Ba:844:G:C2	1:Ba:845:G:N9	2.45	0.83
23:BA:1781:C:H5	36:BN:96:ARG:HH21	1.22	0.83
1:Aa:851:U:H1'	1:Aa:853:C:H5''	1.58	0.83
2:Ab:16:PHE:CD1	22:Av:143:PRO:CG	2.59	0.83
23:BA:2333:U:H3	28:BF:40:VAL:CG2	1.91	0.83
2:Ab:14:VAL:O	2:Ab:41:ILE:CD1	2.27	0.83
23:AA:2333:U:H3	28:AF:40:VAL:CG2	1.91	0.83
23:BA:1533:A:N7	25:BC:96:TYR:O	2.10	0.83
1:Ba:854:G:C2	1:Ba:855:C:C2	2.67	0.83
23:BA:902:A:OP1	43:BU:85:LYS:NZ	2.10	0.83
1:Aa:354:G:H5'	36:AN:41:ARG:CD	2.09	0.82
23:AA:1533:A:N7	25:AC:96:TYR:O	2.10	0.82
1:Ba:849:U:O2	1:Ba:854:G:N2	2.12	0.82
1:Aa:854:G:H2'	1:Aa:855:C:O4'	1.79	0.82
23:AA:1818:A:HO2'	25:AC:206:GLY:HA2	1.40	0.82
2:Ab:74:LYS:CD	22:Av:155:LEU:HD22	2.06	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AA:2706:A:H2	26:AD:200:ASN:HD21	1.27	0.82
1:Ba:850:U:O4	1:Ba:853:C:N4	2.13	0.82
23:BA:1613:G:C5	25:BC:213:TRP:CZ3	2.62	0.82
2:Ab:206:ALA:CA	22:Av:148:GLU:CD	2.37	0.82
23:AA:2231:C:H5''	25:AC:147:LYS:HE3	1.60	0.82
1:Ba:354:G:H5'	36:BN:41:ARG:CD	2.09	0.82
2:Bb:74:LYS:CD	22:Bv:155:LEU:HD22	2.06	0.82
2:Ab:16:PHE:CZ	22:Av:143:PRO:HB2	2.14	0.82
23:AA:2337:A:H2	28:AF:74:ILE:CG2	1.93	0.82
1:Ba:858:C:C4	1:Ba:859:U:C5	2.68	0.82
2:Bb:33:THR:O	2:Bb:40:ILE:N	2.12	0.82
23:BA:2231:C:H5''	25:BC:147:LYS:CE	2.08	0.82
1:Aa:853:C:H4'	1:Aa:854:G:H5'	1.60	0.82
1:Ba:844:G:O2'	1:Ba:845:G:H5'	1.79	0.82
1:Ba:846:G:H2'	1:Ba:847:G:O4'	1.79	0.82
23:BA:1701:U:OP1	26:BD:149:ARG:N	2.13	0.82
1:Aa:848:G:C2	1:Aa:849:U:C2	2.68	0.81
23:AA:54:G:O2'	50:A2:36:ARG:NH1	2.13	0.81
23:AA:2332:U:N1	28:AF:152:MET:O	2.13	0.81
23:AA:1290:G:H1	37:AO:37:GLN:HE21	1.27	0.81
2:Bb:206:ALA:CA	22:Bv:148:GLU:CD	2.37	0.81
23:BA:2337:A:H2	28:BF:74:ILE:CG2	1.93	0.81
2:Bb:16:PHE:CZ	22:Bv:143:PRO:HB2	2.14	0.81
23:BA:54:G:O2'	50:B2:36:ARG:NH1	2.13	0.81
23:BA:2800:U:OP1	26:BD:179:THR:CG2	2.28	0.81
1:Aa:850:U:O2'	1:Aa:851:U:H5'	1.81	0.81
2:Ab:35:ARG:O	2:Ab:38:ILE:HG22	1.81	0.81
23:AA:2800:U:OP1	26:AD:179:THR:CG2	2.28	0.81
23:BA:1040:A:OP2	38:BP:10:LYS:HD3	1.81	0.81
1:Aa:848:G:H2'	1:Aa:849:U:O4'	1.80	0.81
1:Aa:844:G:OP2	18:Ar:55:LYS:CD	2.28	0.80
23:BA:2332:U:N1	28:BF:152:MET:O	2.13	0.80
23:BA:2717:A:C6	34:BL:3:TYR:HB2	2.16	0.80
1:Ba:847:G:H4'	1:Ba:847:G:OP1	1.79	0.80
2:Bb:16:PHE:CD1	22:Bv:143:PRO:CG	2.58	0.80
23:AA:2337:A:C2	28:AF:74:ILE:HG21	2.16	0.80
23:BA:2337:A:C2	28:BF:74:ILE:HG21	2.16	0.80
1:Aa:846:G:C5	1:Aa:847:G:N7	2.47	0.80
23:AA:967:C:O2'	43:AU:34:ALA:HB2	1.82	0.80
1:Ba:854:G:H2'	1:Ba:855:C:O4'	1.82	0.80
23:BA:967:C:O2'	43:BU:34:ALA:HB2	1.82	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AA:2717:A:C6	34:AL:3:TYR:HB2	2.16	0.80
23:BA:1290:G:H1	37:BO:37:GLN:HE21	1.27	0.80
23:AA:1040:A:OP2	38:AP:10:LYS:HD3	1.81	0.79
23:AA:1701:U:OP1	26:AD:149:ARG:N	2.13	0.79
23:AA:1514:A:H61	23:AA:1566:G:H1	1.30	0.79
23:BA:2706:A:H2	26:BD:200:ASN:HD21	1.27	0.79
1:Aa:846:G:C6	1:Aa:847:G:C8	2.68	0.79
2:Bb:35:ARG:O	2:Bb:38:ILE:HG22	1.84	0.78
23:BA:1710:G:O2'	31:BI:6:THR:HG22	1.83	0.78
23:BA:2333:U:O2	28:BF:40:VAL:HB	1.84	0.78
23:AA:1498:U:P	34:AL:59:ARG:HH12	2.06	0.78
23:AA:1710:G:O2'	31:AI:6:THR:HG22	1.83	0.78
23:AA:1613:G:C5	25:AC:213:TRP:CZ3	2.62	0.78
1:Ba:854:G:C5	1:Ba:855:C:C5	2.71	0.78
23:AA:1819:G:P	25:AC:205:VAL:HG22	2.23	0.78
1:Ba:845:G:N2	1:Ba:859:U:H1'	1.99	0.78
1:Aa:851:U:H2'	1:Aa:852:C:H4'	1.65	0.78
23:AA:2048:G:N2	37:AO:25:PHE:CD2	2.52	0.78
1:Aa:843:A:OP1	18:Ar:54:ALA:HB3	1.84	0.78
23:AA:247:A:OP2	51:A3:8:ARG:NH2	2.17	0.78
23:BA:492:G:OP1	37:BO:3:ARG:HD3	1.84	0.78
23:AA:2333:U:O2	28:AF:40:VAL:HB	1.84	0.77
23:BA:2048:G:N2	37:BO:25:PHE:CD2	2.52	0.77
1:Aa:848:G:C3'	1:Aa:849:U:H5''	2.11	0.77
23:BA:1498:U:P	34:BL:59:ARG:HH12	2.06	0.77
23:BA:1819:G:P	25:BC:205:VAL:HG22	2.23	0.77
1:Aa:847:G:H2'	1:Aa:848:G:C8	2.19	0.77
1:Ba:848:G:N2	1:Ba:849:U:O2	2.17	0.77
23:BA:703:A:O2'	27:BE:102:PRO:HG3	1.84	0.77
23:BA:1514:A:H61	23:BA:1566:G:H1	1.30	0.77
22:Av:134:ILE:HG21	22:Bv:184:LEU:HB2	1.67	0.77
1:Ba:851:U:N3	1:Ba:853:C:C6	2.52	0.77
23:BA:2039:G:N7	39:BQ:16:LYS:NZ	2.31	0.77
23:AA:1185:U:OP2	30:AH:66:THR:OG1	2.01	0.77
23:AA:703:A:O2'	27:AE:102:PRO:HG3	1.84	0.77
1:Aa:843:A:H2'	1:Aa:844:G:O4'	1.85	0.77
23:BA:2694:C:N3	29:BG:110:SER:OG	2.17	0.77
1:Aa:843:A:C5'	18:Ar:58:ARG:HH22	1.98	0.77
1:Aa:852:C:C2	2:Bb:32:PHE:CE2	2.73	0.77
1:Ba:851:U:O2'	1:Ba:854:G:O4'	2.02	0.77
23:AA:492:G:OP1	37:AO:3:ARG:HD3	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AA:2835:C:O2'	48:AZ:40:HIS:HD2	1.67	0.76
22:Av:184:LEU:N	22:Bv:134:ILE:CG2	2.49	0.76
23:BA:2835:C:O2'	48:BZ:40:HIS:HD2	1.67	0.76
23:BA:1185:U:OP2	30:BH:66:THR:OG1	2.01	0.76
22:Av:184:LEU:HB2	22:Bv:134:ILE:HG21	1.65	0.76
1:Ba:850:U:H6	1:Ba:850:U:H5''	1.49	0.76
23:BA:2337:A:H2	28:BF:74:ILE:HG21	1.48	0.76
1:Ba:844:G:H2'	1:Ba:845:G:H8	1.50	0.76
23:BA:247:A:OP2	51:B3:8:ARG:NH2	2.17	0.76
23:AA:1533:A:C5	25:AC:96:TYR:O	2.39	0.75
23:AA:2694:C:N3	29:AG:110:SER:OG	2.17	0.75
23:AA:2337:A:H2	28:AF:74:ILE:HG21	1.48	0.75
2:Bb:34:GLU:HG2	2:Bb:38:ILE:O	1.85	0.75
23:BA:1533:A:C5	25:BC:96:TYR:O	2.39	0.75
22:Av:134:ILE:CG2	22:Bv:184:LEU:N	2.49	0.75
23:AA:2039:G:N7	39:AQ:16:LYS:NZ	2.31	0.75
2:Ab:34:GLU:HA	2:Ab:39:TYR:HA	1.67	0.74
1:Ba:849:U:H4'	1:Ba:849:U:OP1	1.86	0.74
2:Ab:16:PHE:CE1	22:Av:143:PRO:CB	2.70	0.74
2:Ab:16:PHE:O	2:Ab:41:ILE:HD11	1.87	0.74
23:BA:651:A:OP1	27:BE:100:LYS:NZ	2.18	0.74
1:Aa:844:G:OP1	1:Aa:844:G:H4'	1.88	0.74
23:BA:2332:U:O5'	28:BF:131:GLY:HA3	1.88	0.74
23:AA:2332:U:O5'	28:AF:131:GLY:HA3	1.88	0.73
1:Ba:848:G:C2	1:Ba:849:U:H1'	2.22	0.73
2:Bb:16:PHE:CE1	22:Bv:143:PRO:CB	2.70	0.73
1:Ba:858:C:C4	1:Ba:859:U:C4	2.76	0.73
23:AA:651:A:OP1	27:AE:100:LYS:NZ	2.18	0.73
1:Ba:855:C:N3	1:Ba:856:C:C4	2.56	0.73
2:Bb:207:ILE:HD13	22:Bv:151:LEU:HB2	1.68	0.73
1:Ba:854:G:N1	1:Ba:855:C:C4	2.56	0.73
15:Ao:88:ARG:NH1	23:AA:760:A:OP2	2.22	0.73
15:Bo:57:LEU:HD21	23:BA:761:A:OP1	1.88	0.73
23:AA:351:G:O2'	41:AS:15:LYS:NZ	2.20	0.73
2:Ab:207:ILE:HD13	22:Av:151:LEU:HB2	1.68	0.73
15:Ao:57:LEU:HD21	23:AA:761:A:OP1	1.88	0.73
23:BA:1449:A:N7	23:BA:1635:A:N6	2.37	0.73
1:Aa:847:G:C2	1:Aa:857:C:C2	2.77	0.72
23:AA:2835:C:O2'	48:AZ:40:HIS:CD2	2.42	0.72
23:BA:660:A:C8	27:BE:182:ASN:HB3	2.22	0.72
23:BA:2288:C:OP1	43:BU:27:LYS:HE3	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aa:850:U:C2'	1:Aa:851:U:H5'	2.19	0.72
23:AA:1449:A:N7	23:AA:1635:A:N6	2.37	0.72
23:BA:1515:G:H1	23:BA:1565:U:H3	1.37	0.72
23:BA:1533:A:C6	25:BC:96:TYR:O	2.43	0.72
2:Ab:34:GLU:HG2	2:Ab:38:ILE:O	1.89	0.72
23:BA:1261:G:OP1	38:BP:67:ARG:NH2	2.23	0.72
1:Aa:851:U:O2'	1:Aa:853:C:O5'	2.07	0.72
1:Ba:1494:A:HO2'	23:BA:1974:C:HO2'	1.35	0.72
23:AA:529:A:O2'	41:AS:54:GLY:O	2.08	0.72
23:AA:1533:A:C6	25:AC:96:TYR:O	2.43	0.72
15:Bo:88:ARG:NH1	23:BA:760:A:OP2	2.22	0.72
23:BA:2835:C:O2'	48:BZ:40:HIS:CD2	2.42	0.72
1:Aa:844:G:OP2	18:Ar:55:LYS:HD2	1.88	0.71
23:AA:1261:G:OP1	38:AP:67:ARG:NH2	2.23	0.71
23:AA:1998:A:C2	25:AC:240:PRO:HD3	2.25	0.71
23:AA:2288:C:OP1	43:AU:27:LYS:HE3	1.89	0.71
23:BA:2231:C:H5'	25:BC:147:LYS:HD2	1.71	0.71
23:AA:252:C:O2	51:A3:12:LYS:NZ	2.24	0.71
23:BA:252:C:O2	51:B3:12:LYS:NZ	2.24	0.71
23:BA:1998:A:C2	25:BC:240:PRO:HD3	2.25	0.71
1:Aa:847:G:C2	1:Aa:848:G:C5	2.78	0.71
23:AA:2259:C:OP2	44:AV:27:ARG:NH2	2.24	0.71
23:BA:2259:C:OP2	44:BV:27:ARG:NH2	2.24	0.71
23:BA:2801:C:OP1	26:BD:177:THR:OG1	2.09	0.71
1:Aa:1495:U:HO2'	23:AA:1987:A:HO2'	1.36	0.70
23:BA:529:A:O2'	41:BS:54:GLY:O	2.08	0.70
1:Ba:851:U:C4	1:Ba:853:C:C5	2.79	0.70
2:Bb:74:LYS:HE3	22:Bv:155:LEU:HA	1.73	0.70
1:Aa:851:U:C2'	1:Aa:853:C:H5''	2.21	0.70
23:AA:2338:A:H8	28:AF:40:VAL:CG2	2.00	0.70
1:Ba:855:C:C2	1:Ba:856:C:C4	2.79	0.70
23:AA:2231:C:H5'	25:AC:147:LYS:HD2	1.71	0.70
23:AA:2455:G:N2	32:AJ:54:GLN:HE21	1.89	0.70
1:Ba:1494:A:O2'	23:BA:1974:C:O2'	2.09	0.70
23:AA:660:A:C8	27:AE:182:ASN:HB3	2.22	0.70
23:AA:1515:G:H1	23:AA:1565:U:H3	1.37	0.70
1:Ba:850:U:O2'	1:Ba:851:U:H5'	1.92	0.70
1:Ba:858:C:C5	1:Ba:859:U:C5	2.80	0.70
23:BA:351:G:O2'	41:BS:15:LYS:NZ	2.20	0.70
23:BA:2455:G:N2	32:BJ:54:GLN:HE21	1.89	0.70
1:Aa:845:G:H2'	1:Aa:846:G:O4'	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ba:844:G:C6	1:Ba:845:G:C4	2.78	0.70
1:Aa:860:U:C5	1:Aa:861:A:N7	2.60	0.70
27:AE:17:ILE:HD11	27:AE:200:LYS:CE	2.18	0.69
1:Ba:1495:U:HO2'	23:BA:1987:A:HO2'	1.36	0.69
23:BA:1287:U:H5'	37:BO:4:VAL:CG1	2.22	0.69
2:Ab:35:ARG:N	2:Ab:38:ILE:O	2.24	0.69
22:Av:134:ILE:HG23	22:Bv:183:GLY:CA	2.22	0.69
1:Ba:853:C:H1'	1:Ba:854:G:OP2	1.92	0.69
31:BI:76:TYR:HB2	36:BN:75:THR:HB	1.74	0.69
15:Bo:57:LEU:CD2	23:BA:761:A:OP1	2.39	0.69
23:AA:2904:U:O4	48:AZ:40:HIS:N	2.24	0.69
15:Ao:57:LEU:CD2	23:AA:761:A:OP1	2.39	0.69
23:AA:1287:U:H5'	37:AO:4:VAL:CG1	2.22	0.69
23:AA:2332:U:H1'	28:AF:132:VAL:C	2.11	0.69
2:Bb:34:GLU:HG2	2:Bb:38:ILE:C	2.17	0.69
24:BB:5:G:H21	35:BM:43:GLN:HE22	1.40	0.69
33:BK:82:ARG:HH11	43:BU:12:LYS:HE3	1.58	0.69
1:Aa:851:U:O2'	1:Aa:854:G:O4'	2.11	0.69
1:Aa:860:U:H2'	1:Aa:861:A:O4'	1.93	0.69
23:AA:2049:U:OP2	48:AZ:12:ARG:NH2	2.26	0.69
23:AA:2801:C:OP1	26:AD:177:THR:OG1	2.09	0.69
1:Aa:851:U:H2'	1:Aa:852:C:C4'	2.22	0.69
23:BA:2338:A:H8	28:BF:40:VAL:CG2	2.00	0.69
2:Ab:74:LYS:HE3	22:Av:155:LEU:HA	1.73	0.69
15:Ao:43:LEU:CB	23:AA:761:A:C4	2.56	0.69
1:Ba:853:C:H4'	1:Ba:854:G:O5'	1.93	0.69
2:Ab:75:GLN:CA	22:Av:155:LEU:HD13	2.23	0.68
1:Aa:845:G:C6	1:Aa:846:G:C5	2.82	0.68
28:AF:132:VAL:HG12	28:AF:134:GLU:H	1.58	0.68
24:AB:5:G:H21	35:AM:43:GLN:HE22	1.40	0.68
1:Ba:844:G:H2'	1:Ba:845:G:C5'	2.19	0.68
23:BA:1498:U:P	34:BL:59:ARG:NH1	2.66	0.68
1:Aa:347:C:OP2	31:AI:97:ARG:HD3	1.93	0.68
23:AA:2331:G:O2'	28:AF:153:ASP:OD1	2.10	0.68
1:Ba:855:C:C2	1:Ba:856:C:C5	2.81	0.68
23:BA:1284:A:HO2'	27:BE:45:ARG:HH22	1.40	0.68
1:Aa:846:G:C2	1:Aa:847:G:N9	2.60	0.68
23:BA:2331:G:O2'	28:BF:153:ASP:OD1	2.10	0.68
27:BE:17:ILE:HD11	27:BE:200:LYS:CE	2.18	0.68
2:Ab:16:PHE:HE1	22:Av:143:PRO:HG3	1.57	0.68
1:Ba:347:C:OP2	31:BI:97:ARG:HD3	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AA:1498:U:P	34:AL:59:ARG:NH1	2.66	0.68
31:AI:76:TYR:HB2	36:AN:75:THR:HB	1.74	0.68
22:Av:134:ILE:CG2	22:Bv:183:GLY:C	2.67	0.68
23:AA:721:A:H8	23:AA:2096:G:H21	1.42	0.68
23:BA:2904:U:H5	48:BZ:40:HIS:CE1	2.12	0.68
23:BA:1818:A:O2'	25:BC:206:GLY:C	2.37	0.68
23:AA:1818:A:O2'	25:AC:206:GLY:C	2.37	0.67
1:Ba:846:G:C3'	1:Ba:847:G:H5''	2.24	0.67
23:BA:2049:U:OP2	48:BZ:12:ARG:NH2	2.26	0.67
1:Aa:672:G:H22	1:Aa:749:G:H1	1.43	0.67
22:Av:134:ILE:HG22	22:Bv:184:LEU:N	2.10	0.67
2:Bb:75:GLN:CA	22:Bv:155:LEU:HD13	2.23	0.67
23:BA:1533:A:C8	25:BC:98:ASP:CB	2.47	0.67
22:Av:183:GLY:CA	22:Bv:134:ILE:HG23	2.23	0.67
23:AA:2904:U:H5	48:AZ:40:HIS:CE1	2.12	0.67
1:Ba:846:G:N3	1:Ba:847:G:H1'	2.09	0.67
1:Aa:854:G:H3'	1:Aa:855:C:H5''	1.76	0.67
23:AA:2037:G:H5''	39:AQ:42:ALA:HB2	1.76	0.67
23:BA:252:C:O2'	32:BJ:63:LYS:NZ	2.19	0.67
23:BA:492:G:OP1	37:BO:3:ARG:CB	2.42	0.67
22:Av:183:GLY:C	22:Bv:134:ILE:CG2	2.68	0.67
1:Aa:853:C:H4'	1:Aa:854:G:O5'	1.95	0.67
23:AA:2554:C:H5''	52:A4:30:PRO:HB2	1.76	0.67
23:BA:606:G:N2	37:BO:37:GLN:HE22	1.89	0.67
28:BF:132:VAL:HG12	28:BF:134:GLU:H	1.58	0.67
23:AA:492:G:OP1	37:AO:3:ARG:CB	2.42	0.67
1:Ba:851:U:H4'	1:Ba:854:G:H1'	1.76	0.67
23:BA:2663:U:HO2'	26:BD:46:TYR:HH	1.40	0.67
1:Aa:847:G:N1	1:Aa:848:G:C6	2.63	0.67
35:BM:19:ARG:NH2	35:BM:47:ASP:CG	2.53	0.67
23:AA:2314:A:H62	23:AA:2371:U:H3	1.41	0.66
1:Ba:347:C:P	31:BI:13:ASN:HD22	2.18	0.66
22:Av:184:LEU:HB2	22:Bv:134:ILE:CG2	2.24	0.66
23:BA:721:A:H8	23:BA:2096:G:H21	1.42	0.66
1:Aa:852:C:H4'	1:Aa:853:C:O5'	1.95	0.66
23:AA:2841:A:OP1	26:AD:123:LYS:O	2.14	0.66
1:Ba:847:G:H2'	1:Ba:848:G:C8	2.31	0.66
23:BA:2314:A:H62	23:BA:2371:U:H3	1.40	0.66
23:BA:2904:U:O4	48:BZ:40:HIS:N	2.24	0.66
33:AK:82:ARG:HH11	43:AU:12:LYS:HE3	1.58	0.66
1:Aa:852:C:C2	2:Bb:32:PHE:CZ	2.84	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aa:1460:U:H3	1:Aa:1464:A:H61	1.44	0.66
2:Ab:22:ARG:HB3	2:Ab:190:ASN:HD21	1.61	0.66
23:BA:1578:A:N6	23:BA:1590:C:N3	2.44	0.66
1:Aa:846:G:C3'	1:Aa:847:G:H5''	2.22	0.66
2:Ab:74:LYS:HE3	22:Av:155:LEU:CA	2.26	0.66
23:AA:2277:G:N2	33:AK:84:GLY:HA3	2.10	0.66
23:AA:2330:G:C5'	28:AF:122:PHE:O	2.44	0.65
2:Bb:74:LYS:HE3	22:Bv:155:LEU:CA	2.26	0.65
1:Aa:846:G:H2'	1:Aa:847:G:O4'	1.97	0.65
1:Aa:848:G:N1	1:Aa:849:U:C2	2.64	0.65
1:Ba:850:U:N3	1:Ba:851:U:N3	2.44	0.65
23:BA:1663:G:O2'	50:B2:2:VAL:N	2.26	0.65
23:BA:2046:U:OP1	48:BZ:7:ARG:HD3	1.97	0.65
23:BA:2554:C:H5''	52:B4:30:PRO:HB2	1.76	0.65
22:Av:184:LEU:N	22:Bv:134:ILE:HG22	2.09	0.65
23:AA:606:G:N2	37:AO:37:GLN:HE22	1.89	0.65
1:Ba:844:G:N2	1:Ba:845:G:H1'	2.11	0.65
1:Ba:854:G:C4	1:Ba:855:C:C6	2.84	0.65
2:Bb:11:GLU:O	22:Bv:166:ARG:CZ	2.44	0.65
23:BA:2037:G:H5''	39:BQ:42:ALA:HB2	1.76	0.65
23:BA:2277:G:N2	33:BK:84:GLY:HA3	2.11	0.65
1:Aa:347:C:P	31:AI:13:ASN:HD22	2.18	0.65
1:Aa:854:G:N1	1:Aa:855:C:C2	2.64	0.65
2:Ab:207:ILE:H	22:Av:148:GLU:CD	2.02	0.65
23:AA:2046:U:OP1	48:AZ:7:ARG:HD3	1.97	0.65
36:AN:59:GLU:HG2	36:AN:78:LEU:HD23	1.79	0.65
25:BC:167:LYS:HG2	25:BC:172:VAL:HG12	1.79	0.65
1:Aa:851:U:N3	1:Aa:853:C:C6	2.64	0.65
1:Aa:854:G:C2	1:Aa:855:C:C2	2.84	0.65
23:AA:1578:A:N6	23:AA:1590:C:N3	2.44	0.65
23:AA:1663:G:O2'	50:A2:2:VAL:N	2.26	0.65
2:Bb:20:THR:OG1	2:Bb:34:GLU:HG3	1.96	0.65
2:Bb:22:ARG:HB3	2:Bb:190:ASN:HD21	1.61	0.65
23:BA:1641:G:OP1	40:BR:39:LYS:NZ	2.18	0.65
23:BA:1701:U:OP1	26:BD:149:ARG:HB2	1.97	0.65
23:AA:502:C:H5	40:AR:68:TYR:CD1	2.15	0.65
1:Ba:847:G:N3	1:Ba:848:G:C8	2.65	0.65
2:Bb:75:GLN:N	22:Bv:155:LEU:HD13	2.12	0.65
2:Ab:11:GLU:O	22:Av:166:ARG:CZ	2.44	0.65
23:AA:1510:U:H3	23:AA:1571:G:H1	1.44	0.65
1:Ba:1460:U:H3	1:Ba:1464:A:H61	1.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aa:852:C:O2	2:Bb:32:PHE:CZ	2.50	0.65
8:Bh:94:MET:HE1	8:Bh:115:ASP:HA	1.79	0.65
23:BA:1510:U:H3	23:BA:1571:G:H1	1.44	0.65
23:BA:2841:A:OP1	26:BD:123:LYS:O	2.14	0.65
1:Aa:846:G:H3'	1:Aa:847:G:C5'	2.21	0.65
1:Ba:318:G:H5''	16:Bp:32:ARG:HB3	1.79	0.65
1:Aa:1494:A:O2'	23:AA:1974:C:O2'	2.09	0.64
2:Ab:75:GLN:N	22:Av:155:LEU:HD13	2.12	0.64
23:BA:502:C:H5	40:BR:68:TYR:CD1	2.15	0.64
1:Aa:318:G:H5''	16:Ap:32:ARG:HB3	1.80	0.64
22:Av:134:ILE:CG2	22:Bv:184:LEU:HB2	2.26	0.64
1:Ba:672:G:H22	1:Ba:749:G:H1	1.43	0.64
36:BN:59:GLU:HG2	36:BN:78:LEU:HD23	1.79	0.64
23:AA:539:G:H4'	39:AQ:6:VAL:HG22	1.80	0.64
23:BA:1533:A:C5	25:BC:96:TYR:C	2.71	0.64
1:Aa:854:G:O5'	1:Aa:854:G:H8	1.81	0.64
23:BA:539:G:H4'	39:BQ:6:VAL:HG22	1.80	0.64
23:AA:1287:U:H5'	37:AO:4:VAL:HG13	1.80	0.64
23:AA:2646:U:H5'	26:AD:165:LYS:HB3	1.78	0.64
2:Bb:207:ILE:H	22:Bv:148:GLU:CD	2.02	0.64
23:BA:643:G:H1'	27:BE:105:MET:HE2	1.80	0.64
23:BA:2225:A:N7	23:BA:2252:A:N6	2.45	0.64
23:AA:1701:U:OP1	26:AD:149:ARG:HB2	1.97	0.64
8:Ah:94:MET:HE1	8:Ah:115:ASP:HA	1.79	0.64
23:AA:2225:A:N7	23:AA:2252:A:N6	2.45	0.64
1:Aa:354:G:H5'	36:AN:41:ARG:NE	2.13	0.64
23:AA:365:A:OP1	27:AE:168:ARG:NE	2.31	0.64
23:AA:643:G:H1'	27:AE:105:MET:HE2	1.80	0.64
23:BA:1522:G:H1	23:BA:1558:U:H3	1.46	0.64
28:BF:38:MET:HE3	28:BF:150:ARG:HH21	1.63	0.64
23:AA:498:G:H21	23:AA:503:A:H8	1.45	0.64
23:AA:2717:A:H8	34:AL:3:TYR:CZ	2.16	0.64
23:BA:2332:U:H1'	28:BF:132:VAL:C	2.11	0.64
23:BA:2646:U:H5'	26:BD:165:LYS:HB3	1.78	0.64
23:AA:252:C:O2'	32:AJ:63:LYS:NZ	2.19	0.63
23:AA:1555:G:N2	23:AA:1556:G:O6	2.32	0.63
1:Ba:844:G:N1	1:Ba:845:G:C5	2.62	0.63
23:AA:75:G:O2'	45:AW:48:LYS:NZ	2.26	0.63
25:AC:167:LYS:HG2	25:AC:172:VAL:HG12	1.79	0.63
23:AA:2904:U:C5	48:AZ:40:HIS:CE1	2.87	0.63
23:BA:1555:G:N2	23:BA:1556:G:O6	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ba:847:G:H2'	1:Ba:848:G:H8	1.64	0.63
1:Aa:509:C:OP1	12:Al:127:ARG:NH1	2.32	0.63
1:Aa:848:G:N2	1:Aa:849:U:O2	2.30	0.63
35:AM:19:ARG:NH2	35:AM:47:ASP:CG	2.53	0.63
1:Ba:860:U:O2'	1:Ba:861:A:H5'	1.98	0.63
23:AA:17:G:OP1	48:AZ:11:THR:HG22	1.99	0.63
23:AA:856:U:OP2	32:AJ:20:GLY:C	2.41	0.63
23:AA:1522:G:H1	23:AA:1558:U:H3	1.46	0.63
28:AF:38:MET:HE3	28:AF:150:ARG:HH21	1.63	0.63
1:Ba:354:G:H5'	36:BN:41:ARG:NE	2.13	0.63
1:Ba:847:G:C2	1:Ba:848:G:N7	2.67	0.63
23:BA:1042:C:OP1	37:BO:92:ARG:NH2	2.31	0.63
1:Ba:509:C:OP1	12:Bl:127:ARG:NH1	2.32	0.63
23:BA:2717:A:H8	34:BL:3:TYR:CZ	2.16	0.63
23:AA:2388:A:OP2	51:A3:24:ARG:NH2	2.32	0.63
2:Bb:16:PHE:CE1	22:Bv:143:PRO:HB2	2.34	0.63
23:BA:498:G:H21	23:BA:503:A:H8	1.45	0.63
35:BM:31:LEU:HB3	35:BM:44:ILE:HD13	1.81	0.63
1:Aa:850:U:H2'	1:Aa:851:U:H5'	1.79	0.62
23:AA:2733:A:O2'	34:AL:60:ARG:NH1	2.32	0.62
1:Aa:856:C:O5'	1:Aa:856:C:H6	1.82	0.62
1:Ba:961:U:H4'	1:Ba:973:A:H61	1.64	0.62
23:BA:75:G:O2'	45:BW:48:LYS:NZ	2.26	0.62
23:BA:856:U:OP2	32:BJ:20:GLY:C	2.41	0.62
23:BA:2733:A:O2'	34:BL:60:ARG:NH1	2.32	0.62
23:AA:2043:U:O2	48:AZ:4:PRO:HG2	1.99	0.62
23:BA:17:G:OP1	48:BZ:11:THR:HG22	1.99	0.62
23:BA:2325:A:H62	23:BA:2345:A:H8	1.45	0.62
23:BA:2904:U:C5	48:BZ:40:HIS:CE1	2.87	0.62
41:BS:3:ILE:HD11	41:BS:33:VAL:HG11	1.82	0.62
19:As:12:ASP:HB2	19:As:38:SER:HB3	1.81	0.62
23:AA:1042:C:OP1	37:AO:92:ARG:NH2	2.31	0.62
23:AA:1651:C:N4	23:AA:1666:A:OP2	2.33	0.62
23:AA:2325:A:H62	23:AA:2345:A:H8	1.45	0.62
23:BA:1287:U:H5'	37:BO:4:VAL:HG13	1.80	0.62
23:BA:2231:C:C5'	25:BC:147:LYS:HD2	2.29	0.62
25:BC:230:HIS:HD2	25:BC:232:HIS:H	1.47	0.62
1:Aa:961:U:H4'	1:Aa:973:A:H61	1.64	0.62
7:Ag:116:MET:HA	7:Ag:119:ARG:HB2	1.82	0.62
23:AA:2403:A:N3	35:AM:113:ARG:NH2	2.47	0.62
26:BD:16:PHE:O	36:BN:14:GLN:NE2	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BN:31:HIS:HB3	36:BN:42:ILE:HD11	1.80	0.62
2:Ab:20:THR:HG23	2:Ab:39:TYR:OH	2.00	0.62
14:An:21:TYR:OH	14:An:23:ARG:NH2	2.33	0.62
25:AC:230:HIS:HD2	25:AC:232:HIS:H	1.46	0.62
33:AK:51:ARG:HG3	33:AK:66:ILE:HD11	1.82	0.62
23:BA:1967:U:O2	23:BA:1969:C:N4	2.33	0.62
23:BA:2043:U:O2	48:BZ:4:PRO:HG2	1.99	0.62
1:Aa:846:G:N1	1:Aa:847:G:C4	2.67	0.62
15:Ao:39:VAL:O	23:AA:761:A:C6	2.36	0.62
23:AA:2494:C:OP1	52:A4:6:SER:OG	2.12	0.62
14:Bn:21:TYR:OH	14:Bn:23:ARG:NH2	2.33	0.62
23:BA:1651:C:N4	23:BA:1666:A:OP2	2.33	0.62
1:Aa:848:G:C6	1:Aa:849:U:C4	2.87	0.62
23:AA:1710:G:HO2'	31:Al:6:THR:HG22	1.65	0.62
23:AA:2046:U:P	48:AZ:6:ARG:HH12	2.22	0.62
25:AC:107:PRO:HA	25:AC:195:VAL:HA	1.82	0.62
35:AM:31:LEU:HB3	35:AM:44:ILE:HD13	1.81	0.62
46:AX:12:VAL:HG22	46:AX:20:ARG:HG2	1.82	0.62
9:Bi:8:TYR:HB2	9:Bi:23:LEU:HB2	1.82	0.62
19:Bs:12:ASP:HB2	19:Bs:38:SER:HB3	1.81	0.62
23:AA:1492:G:N3	23:AA:1574:G:N2	2.48	0.62
41:AS:3:ILE:HD11	41:AS:33:VAL:HG11	1.82	0.62
23:BA:2039:G:OP1	39:BQ:11:ARG:NH1	2.30	0.62
14:An:23:ARG:HG2	14:An:30:PRO:HB3	1.80	0.61
23:AA:1533:A:C8	25:AC:98:ASP:HB2	2.35	0.61
26:AD:16:PHE:O	36:AN:14:GLN:NE2	2.32	0.61
36:AN:31:HIS:HB3	36:AN:42:ILE:HD11	1.80	0.61
14:Bn:23:ARG:HG2	14:Bn:30:PRO:HB3	1.80	0.61
33:BK:51:ARG:HG3	33:BK:66:ILE:HD11	1.82	0.61
9:Ai:8:TYR:HB2	9:Ai:23:LEU:HB2	1.82	0.61
23:AA:2039:G:OP1	39:AQ:11:ARG:NH1	2.30	0.61
1:Ba:844:G:N9	1:Ba:845:G:C8	2.67	0.61
23:BA:1492:G:N3	23:BA:1574:G:N2	2.48	0.61
23:AA:1967:U:O2	23:AA:1969:C:N4	2.33	0.61
2:Bb:32:PHE:O	2:Bb:33:THR:HB	2.00	0.61
41:BS:12:ILE:HD11	41:BS:69:GLN:HB2	1.81	0.61
2:Ab:16:PHE:CE1	22:Av:143:PRO:HB2	2.34	0.61
23:AA:2717:A:C5	34:AL:3:TYR:CG	2.88	0.61
39:AQ:11:ARG:O	39:AQ:11:ARG:NH2	2.33	0.61
2:Bb:16:PHE:HE1	22:Bv:143:PRO:HG3	1.57	0.61
35:BM:68:THR:HG1	35:BM:71:GLU:H	1.47	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AA:2784:A:N1	29:AG:67:THR:HG21	2.16	0.61
23:BA:2080:G:H5'	26:BD:157:ALA:O	2.01	0.61
23:BA:2784:A:N1	29:BG:67:THR:HG21	2.16	0.61
23:AA:1076:A:OP1	52:A4:8:LYS:HG2	2.00	0.61
23:BA:2046:U:P	48:BZ:6:ARG:HH12	2.22	0.61
23:BA:2333:U:H3	28:BF:40:VAL:HG21	1.65	0.61
41:AS:12:ILE:HD11	41:AS:69:GLN:HB2	1.81	0.61
1:Ba:1272:A:N6	1:Ba:1284:A:N1	2.49	0.61
12:Bl:85:HIS:HD2	12:Bl:87:LEU:HB2	1.66	0.61
23:AA:1641:G:OP1	40:AR:39:LYS:NZ	2.18	0.61
2:Bb:20:THR:HG23	2:Bb:39:TYR:OH	2.00	0.61
7:Bg:116:MET:HA	7:Bg:119:ARG:HB2	1.82	0.61
23:BA:1581:U:O5'	23:BA:1584:U:H5	1.83	0.61
23:BA:1761:G:H1	23:BA:1768:C:H42	1.49	0.61
22:Av:134:ILE:HG23	22:Bv:183:GLY:C	2.26	0.61
23:AA:2649:U:O3'	23:AA:2845:G:N2	2.33	0.61
23:BA:2649:U:O3'	23:BA:2845:G:N2	2.33	0.61
23:BA:2706:A:H2	26:BD:200:ASN:ND2	1.97	0.61
39:BQ:11:ARG:O	39:BQ:11:ARG:NH2	2.33	0.61
1:Aa:851:U:O4'	1:Aa:854:G:H1'	2.01	0.61
31:AI:78:LYS:HB2	36:AN:73:GLU:HB2	1.82	0.61
1:Ba:848:G:N2	1:Ba:849:U:H1'	2.15	0.61
1:Ba:942:G:N7	7:Bg:3:ARG:NH1	2.49	0.61
6:Bf:43:TRP:HB2	6:Bf:60:TYR:HB2	1.83	0.61
23:BA:268:A:N6	23:BA:473:U:O2'	2.34	0.61
23:BA:2330:G:H4'	28:BF:122:PHE:O	2.01	0.61
31:BI:78:LYS:HB2	36:BN:73:GLU:HB2	1.83	0.61
1:Aa:1272:A:N6	1:Aa:1284:A:N1	2.49	0.60
3:Ac:36:LEU:HA	3:Ac:39:ARG:HB2	1.83	0.60
23:AA:1581:U:O5'	23:AA:1584:U:H5	1.83	0.60
23:AA:2851:G:OP2	26:AD:65:SER:OG	2.13	0.60
2:Bb:75:GLN:CB	22:Bv:155:LEU:CD1	2.78	0.60
23:BA:1833:C:O2'	25:BC:46:GLN:OE1	2.19	0.60
23:BA:2278:G:OP1	33:BK:82:ARG:NH2	2.34	0.60
23:BA:2851:G:OP2	26:BD:65:SER:OG	2.13	0.60
1:Aa:354:G:H5'	36:AN:41:ARG:HD3	1.81	0.60
1:Aa:961:U:OP1	1:Aa:981:C:N4	2.34	0.60
23:AA:2231:C:C5'	25:AC:147:LYS:HD2	2.30	0.60
1:Ba:858:C:O5'	1:Ba:858:C:H6	1.83	0.60
23:BA:2089:A:N6	23:BA:2530:A:N7	2.50	0.60
23:BA:2717:A:C5	34:BL:3:TYR:CG	2.88	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AA:2330:G:H4'	28:AF:122:PHE:O	2.01	0.60
1:Ba:844:G:N3	1:Ba:845:G:N9	2.47	0.60
2:Bb:74:LYS:C	22:Bv:155:LEU:HD13	2.27	0.60
23:BA:1037:A:H62	23:BA:1205:U:H3	1.49	0.60
23:BA:2403:A:N3	35:BM:113:ARG:NH2	2.47	0.60
22:Av:183:GLY:C	22:Bv:134:ILE:HG23	2.25	0.60
23:AA:1037:A:H62	23:AA:1205:U:H3	1.49	0.60
46:BX:12:VAL:HG22	46:BX:20:ARG:HG2	1.82	0.60
1:Aa:413:U:O4	4:Ad:3:ARG:N	2.34	0.60
1:Aa:942:G:N7	7:Ag:3:ARG:NH1	2.49	0.60
23:AA:2278:G:OP1	33:AK:82:ARG:NH2	2.34	0.60
23:BA:583:A:O2'	30:BH:8:ASN:OD1	2.20	0.60
29:BG:164:TYR:HB2	29:BG:167:GLU:HB2	1.84	0.60
23:AA:268:A:N6	23:AA:473:U:O2'	2.34	0.60
23:AA:579:U:H5'	37:AO:42:SER:HB2	1.84	0.60
23:AA:2080:G:H5'	26:AD:157:ALA:O	2.01	0.60
1:Ba:847:G:N1	1:Ba:848:G:C6	2.69	0.60
25:BC:107:PRO:HA	25:BC:195:VAL:HA	1.82	0.60
6:Af:43:TRP:HB2	6:Af:60:TYR:HB2	1.83	0.60
23:AA:1833:C:O2'	25:AC:46:GLN:OE1	2.19	0.60
23:AA:2231:C:C5'	25:AC:147:LYS:HE3	2.32	0.60
25:AC:78:VAL:HG22	25:AC:94:VAL:HG12	1.84	0.60
1:Ba:354:G:H5'	36:BN:41:ARG:HD3	1.81	0.60
1:Ba:961:U:OP1	1:Ba:981:C:N4	2.34	0.60
1:Aa:851:U:H2'	1:Aa:852:C:C5'	2.32	0.60
2:Ab:75:GLN:CB	22:Av:155:LEU:CD1	2.78	0.60
23:BA:579:U:H5'	37:BO:42:SER:HB2	1.84	0.60
1:Aa:853:C:H1'	1:Aa:854:G:OP2	2.02	0.60
12:Al:85:HIS:HD2	12:Al:87:LEU:HB2	1.66	0.60
23:AA:648:G:N3	23:AA:702:U:O2'	2.35	0.60
23:AA:1038:C:OP1	37:AO:53:ARG:NH2	2.35	0.60
23:AA:2321:C:OP1	35:AM:96:ARG:NH2	2.35	0.60
23:BA:2258:U:OP1	44:BV:30:ASN:N	2.35	0.60
18:Ar:47:ARG:HB3	18:Ar:57:GLN:HE21	1.67	0.60
1:Ba:967:A:OP1	19:Bs:55:ARG:NH1	2.35	0.60
3:Bc:109:ASP:O	3:Bc:139:ARG:NH2	2.35	0.60
1:Aa:967:A:OP1	19:As:55:ARG:NH1	2.35	0.59
2:Ab:39:TYR:O	2:Ab:40:ILE:HD13	2.01	0.59
22:Av:134:ILE:HG23	22:Bv:183:GLY:HA2	1.84	0.59
23:AA:2120:G:N3	23:AA:2225:A:N6	2.49	0.59
1:Ba:844:G:N7	1:Ba:845:G:N7	2.48	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Bl:81:PRO:O	12:Bl:112:ARG:NH2	2.34	0.59
23:BA:365:A:OP1	27:BE:168:ARG:NE	2.31	0.59
23:BA:1076:A:OP1	52:B4:8:LYS:HG2	2.00	0.59
23:BA:2388:A:OP2	51:B3:24:ARG:NH2	2.32	0.59
23:AA:1761:G:H1	23:AA:1768:C:H42	1.49	0.59
27:AE:17:ILE:CG1	27:AE:200:LYS:HE3	2.32	0.59
2:Bb:74:LYS:CD	22:Bv:155:LEU:CB	2.79	0.59
3:Bc:36:LEU:HA	3:Bc:39:ARG:HB2	1.83	0.59
23:BA:2333:U:N3	28:BF:40:VAL:CG2	2.64	0.59
1:Aa:697:C:HO2'	1:Aa:713:G:HO2'	1.50	0.59
1:Aa:846:G:N1	1:Aa:847:G:C5	2.69	0.59
2:Ab:74:LYS:C	22:Av:155:LEU:HD13	2.27	0.59
35:AM:68:THR:HG1	35:AM:71:GLU:H	1.47	0.59
19:Bs:63:THR:HG22	19:Bs:66:MET:HE3	1.84	0.59
23:BA:2231:C:C5'	25:BC:147:LYS:HE3	2.32	0.59
23:AA:1197:C:OP1	37:AO:92:ARG:NH2	2.29	0.59
23:AA:2089:A:N6	23:AA:2530:A:N7	2.50	0.59
23:AA:2333:U:H3	28:AF:40:VAL:HG21	1.65	0.59
23:BA:648:G:N3	23:BA:702:U:O2'	2.35	0.59
1:Aa:860:U:C4	1:Aa:861:A:N7	2.71	0.59
23:AA:1521:A:H61	23:AA:1559:G:H1	1.50	0.59
29:AG:164:TYR:HB2	29:AG:167:GLU:HB2	1.84	0.59
1:Ba:847:G:N1	1:Ba:848:G:C5	2.71	0.59
23:BA:1129:A:N3	23:BA:1148:C:O2'	2.35	0.59
25:BC:78:VAL:HG22	25:BC:94:VAL:HG12	1.84	0.59
12:Al:81:PRO:O	12:Al:112:ARG:NH2	2.34	0.59
23:AA:1533:A:C8	25:AC:98:ASP:CB	2.47	0.59
1:Ba:413:U:O4	4:Bd:3:ARG:N	2.34	0.59
23:BA:1038:C:OP1	37:BO:53:ARG:NH2	2.35	0.59
23:BA:1122:U:O2'	23:BA:1132:A:N3	2.35	0.59
1:Aa:847:G:C2	1:Aa:848:G:C6	2.91	0.59
1:Aa:851:U:C4'	1:Aa:854:G:H1'	2.32	0.59
23:AA:1109:U:O2'	23:AA:1118:G:N1	2.33	0.59
23:AA:1122:U:O2'	23:AA:1132:A:N3	2.35	0.59
23:AA:2566:C:H5'	52:A4:3:VAL:HG21	1.85	0.59
26:AD:128:GLN:HE21	26:AD:132:LYS:HG2	1.67	0.59
1:Ba:697:C:HO2'	1:Ba:713:G:HO2'	1.50	0.59
41:BS:39:ASN:HB3	41:BS:61:ALA:HB3	1.84	0.59
23:AA:2195:G:N1	23:AA:2197:G:N7	2.51	0.59
26:AD:129:GLY:HA2	26:AD:170:PRO:HB3	1.85	0.59
23:BA:1521:A:H61	23:BA:1559:G:H1	1.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2047:A:H5'	48:BZ:9:SER:HB3	1.84	0.59
23:BA:2717:A:H62	34:BL:3:TYR:HB2	1.66	0.59
27:BE:17:ILE:CG1	27:BE:200:LYS:HE3	2.32	0.59
29:BG:57:ASP:OD1	29:BG:62:ARG:NH1	2.36	0.59
3:Ac:109:ASP:O	3:Ac:139:ARG:NH2	2.35	0.59
23:AA:856:U:OP2	32:AJ:20:GLY:O	2.21	0.59
23:AA:2258:U:OP1	44:AV:30:ASN:N	2.35	0.59
28:AF:41:GLY:HA3	28:AF:150:ARG:HH22	1.67	0.59
23:BA:856:U:OP2	32:BJ:20:GLY:O	2.21	0.59
33:BK:39:THR:HG23	33:BK:98:LYS:HA	1.85	0.59
1:Aa:848:G:N1	1:Aa:849:U:N3	2.51	0.59
19:As:36:ARG:NH1	19:As:72:GLY:O	2.36	0.59
1:Ba:851:U:C4'	1:Ba:854:G:H1'	2.33	0.59
1:Aa:846:G:C2	1:Aa:847:G:H1'	2.38	0.58
1:Aa:847:G:C2	1:Aa:848:G:C4	2.91	0.58
1:Aa:851:U:H1'	1:Aa:853:C:C5'	2.30	0.58
23:AA:1284:A:HO2'	27:AE:45:ARG:HH22	1.51	0.58
23:AA:1938:U:O2'	23:AA:1945:A:N6	2.36	0.58
23:AA:2047:A:H5'	48:AZ:9:SER:HB3	1.84	0.58
23:AA:2706:A:H2	26:AD:200:ASN:ND2	1.97	0.58
2:Bb:75:GLN:HB3	22:Bv:155:LEU:HD12	1.83	0.58
23:BA:1040:A:O2'	37:BO:91:ASN:ND2	2.36	0.58
23:BA:1101:A:OP2	23:BA:1133:G:N2	2.36	0.58
23:BA:2321:C:OP1	35:BM:96:ARG:NH2	2.35	0.58
26:BD:128:GLN:HE21	26:BD:132:LYS:HG2	1.67	0.58
2:Ab:75:GLN:HB3	22:Av:155:LEU:HD12	1.84	0.58
23:AA:1133:G:N2	23:AA:1145:U:O4	2.36	0.58
1:Ba:974:A:O2'	22:Bv:7:HIS:NE2	2.36	0.58
18:Br:47:ARG:HB3	18:Br:57:GLN:HE21	1.67	0.58
1:Aa:847:G:C2'	1:Aa:848:G:C8	2.85	0.58
1:Aa:974:A:O2'	22:Av:7:HIS:NE2	2.36	0.58
16:Ap:28:PRO:HG2	16:Ap:31:GLY:HA3	1.85	0.58
19:As:63:THR:HG22	19:As:66:MET:HE3	1.84	0.58
23:AA:583:A:O2'	30:AH:8:ASN:OD1	2.20	0.58
23:AA:1063:U:H3	23:AA:1186:A:H62	1.51	0.58
23:AA:2778:G:N2	29:AG:3:ARG:HH21	2.01	0.58
1:Ba:848:G:C2	1:Ba:849:U:C1'	2.85	0.58
23:BA:1133:G:N2	23:BA:1145:U:O4	2.36	0.58
23:BA:1197:C:OP1	37:BO:92:ARG:NH2	2.29	0.58
23:BA:2120:G:N3	23:BA:2225:A:N6	2.49	0.58
41:BS:93:ILE:HG22	41:BS:95:LYS:H	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:Ad:114:VAL:HG23	4:Ad:119:ILE:HG13	1.85	0.58
6:Af:88:ARG:NH2	18:Ar:69:HIS:O	2.36	0.58
23:AA:1101:A:OP2	23:AA:1133:G:N2	2.36	0.58
23:AA:1450:A:N1	23:AA:1634:A:N6	2.52	0.58
23:AA:2232:A:OP1	25:AC:150:LYS:HG3	2.03	0.58
1:Ba:1137:U:OP2	10:Bj:7:ARG:NH2	2.36	0.58
11:Bk:72:LYS:HE3	11:Bk:103:ALA:HB1	1.85	0.58
23:BA:2330:G:C5'	28:BF:122:PHE:O	2.43	0.58
1:Aa:1136:U:OP2	1:Aa:1156:A:N6	2.36	0.58
23:BA:1063:U:H3	23:BA:1186:A:H62	1.51	0.58
28:BF:41:GLY:HA3	28:BF:150:ARG:HH22	1.67	0.58
24:AB:77:G:O6	42:AT:15:ARG:NH2	2.37	0.58
33:AK:39:THR:HG23	33:AK:98:LYS:HA	1.85	0.58
1:Ba:845:G:N1	1:Ba:859:U:C2	2.71	0.58
23:BA:1099:G:N2	23:BA:1149:U:O2	2.37	0.58
2:Ab:33:THR:O	2:Ab:40:ILE:HG12	2.03	0.58
22:Av:55:GLU:HG2	22:Av:68:GLU:HG2	1.86	0.58
23:AA:611:U:OP1	23:AA:989:A:N6	2.33	0.58
1:Ba:844:G:O2'	1:Ba:845:G:C5'	2.50	0.58
1:Ba:1136:U:OP2	1:Ba:1156:A:N6	2.36	0.58
3:Bc:171:THR:HG22	3:Bc:173:PRO:HD3	1.86	0.58
2:Ab:32:PHE:HZ	1:Ba:852:C:C4	2.22	0.58
23:AA:1099:G:N2	23:AA:1149:U:O2	2.36	0.58
29:AG:57:ASP:OD1	29:AG:62:ARG:NH1	2.36	0.58
1:Ba:847:G:C2	1:Ba:857:C:C2	2.92	0.58
1:Ba:848:G:C2	1:Ba:849:U:N1	2.72	0.58
1:Ba:853:C:C4'	1:Ba:854:G:H5'	2.27	0.58
2:Bb:39:TYR:O	2:Bb:40:ILE:HD13	2.03	0.58
1:Aa:847:G:C3'	1:Aa:848:G:C8	2.85	0.58
2:Ab:206:ALA:CB	22:Av:148:GLU:CD	2.76	0.58
23:AA:1040:A:O2'	37:AO:91:ASN:ND2	2.36	0.58
23:AA:1450:A:H61	23:AA:1635:A:H62	1.52	0.58
29:AG:86:VAL:HG22	29:AG:132:LYS:HG2	1.85	0.58
6:Bf:88:ARG:NH2	18:Br:69:HIS:O	2.36	0.58
19:Bs:36:ARG:NH1	19:Bs:72:GLY:O	2.36	0.58
23:BA:1533:A:C8	25:BC:98:ASP:HB2	2.35	0.58
1:Ba:854:G:N1	1:Ba:855:C:N3	2.52	0.58
22:Bv:55:GLU:HG2	22:Bv:68:GLU:HG2	1.86	0.58
23:BA:1450:A:H61	23:BA:1635:A:H62	1.52	0.58
23:BA:1864:C:O2'	23:BA:1954:A:N3	2.36	0.58
23:BA:2333:U:C2	28:BF:40:VAL:HB	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BB:77:G:O6	42:BT:15:ARG:NH2	2.37	0.58
43:BU:44:ILE:HD13	43:BU:47:ARG:HH21	1.69	0.58
1:Aa:517:A:N7	1:Aa:551:G:O2'	2.37	0.57
2:Ab:75:GLN:HB3	22:Av:155:LEU:CD1	2.34	0.57
3:Ac:171:THR:HG22	3:Ac:173:PRO:HD3	1.86	0.57
23:AA:2717:A:H62	34:AL:3:TYR:HB2	1.66	0.57
41:AS:39:ASN:HB3	41:AS:61:ALA:HB3	1.84	0.57
1:Ba:953:G:N1	1:Ba:1348:G:OP2	2.37	0.57
4:Bd:114:VAL:HG23	4:Bd:119:ILE:HG13	1.85	0.57
16:Bp:28:PRO:HG2	16:Bp:31:GLY:HA3	1.85	0.57
23:BA:502:C:C5	40:BR:68:TYR:CD1	2.92	0.57
23:BA:1379:A:OP1	40:BR:35:LYS:NZ	2.37	0.57
23:BA:1450:A:N1	23:BA:1634:A:N6	2.52	0.57
23:BA:1938:U:O2'	23:BA:1945:A:N6	2.36	0.57
23:BA:2329:U:O2'	28:BF:123:ASP:HB2	2.04	0.57
25:BC:95:VAL:HG22	25:BC:101:LYS:HG2	1.86	0.57
26:BD:129:GLY:HA2	26:BD:170:PRO:HB3	1.85	0.57
23:AA:635:G:H21	51:A3:4:MET:HE3	1.68	0.57
23:AA:1533:A:C5	25:AC:96:TYR:C	2.71	0.57
23:AA:1917:A:C8	23:AA:2261:G:N2	2.72	0.57
23:AA:2046:U:OP1	48:AZ:7:ARG:CD	2.53	0.57
41:AS:93:ILE:HG22	41:AS:95:LYS:H	1.69	0.57
23:BA:2046:U:OP1	48:BZ:7:ARG:CD	2.53	0.57
23:BA:2776:A:C1'	29:BG:63:THR:HG22	2.30	0.57
29:BG:86:VAL:HG22	29:BG:132:LYS:HG2	1.85	0.57
1:Aa:1273:A:H61	1:Aa:1282:U:H3	1.52	0.57
23:AA:2333:U:C2	28:AF:40:VAL:HB	2.38	0.57
5:Ae:107:ALA:HB1	5:Ae:111:VAL:HG13	1.85	0.57
23:AA:2329:U:O2'	28:AF:123:ASP:HB2	2.05	0.57
5:Be:107:ALA:HB1	5:Be:111:VAL:HG13	1.85	0.57
23:BA:1091:G:O2'	23:BA:1155:A:N6	2.37	0.57
23:BA:1401:G:N2	23:BA:1404:A:OP2	2.37	0.57
23:BA:2232:A:OP1	25:BC:150:LYS:HG3	2.03	0.57
23:BA:2778:G:N2	29:BG:3:ARG:HH21	2.01	0.57
23:BA:2869:G:N7	23:BA:2887:G:N2	2.53	0.57
1:Aa:847:G:N2	1:Aa:848:G:N3	2.53	0.57
1:Aa:851:U:C2	1:Aa:853:C:C6	2.93	0.57
11:Ak:72:LYS:HE3	11:Ak:103:ALA:HB1	1.85	0.57
1:Ba:854:G:N2	1:Ba:855:C:C2	2.73	0.57
23:BA:2566:C:H5'	52:B4:3:VAL:HG21	1.85	0.57
40:BR:50:VAL:HA	40:BR:82:LEU:HA	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:Av:183:GLY:HA2	22:Bv:134:ILE:HG23	1.85	0.57
23:AA:506:A:H2	23:AA:515:G:H21	1.52	0.57
23:AA:1091:G:O2'	23:AA:1155:A:N6	2.37	0.57
23:AA:1818:A:O3'	25:AC:205:VAL:HG22	2.05	0.57
24:AB:46:A:OP1	35:AM:35:ARG:NH1	2.38	0.57
1:Ba:844:G:H2'	1:Ba:845:G:C8	2.36	0.57
23:BA:635:G:H21	51:B3:4:MET:HE3	1.69	0.57
23:BA:1818:A:O3'	25:BC:205:VAL:HG22	2.05	0.57
1:Aa:1137:U:OP2	10:Aj:7:ARG:NH2	2.36	0.57
2:Ab:74:LYS:CD	22:Av:155:LEU:CB	2.79	0.57
23:AA:1527:A:OP1	23:AA:1556:G:N2	2.38	0.57
43:AU:44:ILE:HD13	43:AU:47:ARG:HH21	1.69	0.57
1:Ba:517:A:N7	1:Ba:551:G:O2'	2.37	0.57
1:Ba:844:G:C3'	1:Ba:845:G:H5'	2.34	0.57
1:Ba:846:G:N2	1:Ba:858:C:C2	2.73	0.57
1:Ba:870:G:HO2'	1:Ba:883:G:HO2'	1.51	0.57
24:BB:46:A:OP1	35:BM:35:ARG:NH1	2.37	0.57
42:BT:75:ALA:HB2	42:BT:92:LEU:HB2	1.86	0.57
23:AA:1379:A:OP1	40:AR:35:LYS:NZ	2.37	0.57
40:AR:50:VAL:HA	40:AR:82:LEU:HA	1.86	0.57
42:AT:26:LYS:NZ	42:AT:44:ASP:OD1	2.37	0.57
2:Bb:206:ALA:CB	22:Bv:148:GLU:CD	2.76	0.57
23:AA:2333:U:N3	28:AF:40:VAL:CG2	2.64	0.57
23:AA:2694:C:O2	29:AG:110:SER:N	2.37	0.57
25:AC:95:VAL:HG22	25:AC:101:LYS:HG2	1.86	0.57
2:Bb:75:GLN:HB3	22:Bv:155:LEU:CD1	2.34	0.57
1:Aa:1238:C:OP2	13:Am:107:ARG:NH1	2.37	0.57
23:AA:502:C:C5	40:AR:68:TYR:CD1	2.92	0.57
23:AA:1401:G:N2	23:AA:1404:A:OP2	2.37	0.57
1:Ba:847:G:N2	1:Ba:857:C:C2	2.73	0.57
1:Ba:852:C:H4'	1:Ba:853:C:O5'	2.05	0.57
23:BA:868:A:H62	23:BA:879:U:H3	1.50	0.57
23:BA:1845:U:OP2	25:BC:156:ARG:NH2	2.38	0.57
32:BJ:91:VAL:HA	32:BJ:95:LEU:HD12	1.87	0.57
1:Aa:847:G:N2	1:Aa:848:G:C4	2.73	0.56
3:Ac:120:ALA:HB1	3:Ac:188:ALA:HB2	1.87	0.56
23:AA:492:G:OP1	37:AO:3:ARG:CD	2.53	0.56
23:AA:1847:U:O2	25:AC:201:GLU:HB3	2.05	0.56
23:AA:2510:C:O2	33:AK:124:LYS:HE2	2.05	0.56
42:AT:75:ALA:HB2	42:AT:92:LEU:HB2	1.86	0.56
45:AW:11:THR:OG1	45:AW:60:ARG:NH2	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ba:1089:U:O2'	5:Be:138:ARG:NH1	2.38	0.56
23:BA:611:U:OP1	23:BA:989:A:N6	2.33	0.56
23:BA:1109:U:O2'	23:BA:1118:G:N1	2.33	0.56
23:BA:1527:A:OP1	23:BA:1556:G:N2	2.38	0.56
23:BA:1917:A:C8	23:BA:2261:G:N2	2.72	0.56
1:Aa:847:G:N2	1:Aa:848:G:C2	2.73	0.56
23:AA:191:A:H5'	44:AV:14:THR:HG21	1.88	0.56
23:AA:2136:U:H3	23:AA:2207:U:H3	1.52	0.56
23:BA:1488:A:H61	23:BA:1595:C:H42	1.53	0.56
1:Aa:846:G:N2	1:Aa:858:C:C2	2.73	0.56
1:Aa:847:G:N2	1:Aa:857:C:C2	2.73	0.56
1:Aa:855:C:C4	1:Aa:856:C:N4	2.73	0.56
1:Aa:1089:U:O2'	5:Ae:138:ARG:NH1	2.38	0.56
4:Ad:58:ARG:NH2	4:Ad:65:GLU:OE1	2.38	0.56
11:Ak:20:VAL:HG23	11:Ak:37:GLU:HA	1.86	0.56
23:AA:868:A:H62	23:AA:879:U:H3	1.50	0.56
23:AA:1287:U:C5'	37:AO:4:VAL:HG13	2.35	0.56
23:AA:1369:G:N7	23:AA:1653:A:O2'	2.36	0.56
1:Ba:844:G:C2	1:Ba:845:G:C1'	2.88	0.56
1:Ba:848:G:N2	1:Ba:849:U:C2	2.73	0.56
1:Ba:1238:C:OP2	13:Bm:107:ARG:NH1	2.37	0.56
1:Ba:1373:A:O2'	1:Ba:1375:G:N7	2.34	0.56
2:Bb:75:GLN:NE2	2:Bb:204:ASP:O	2.39	0.56
4:Bd:58:ARG:NH2	4:Bd:65:GLU:OE1	2.39	0.56
23:BA:1008:C:O2'	23:BA:2300:A:N3	2.38	0.56
23:BA:2136:U:H3	23:BA:2207:U:H3	1.52	0.56
1:Aa:856:C:H2'	1:Aa:857:C:H6	1.71	0.56
1:Aa:953:G:N1	1:Aa:1348:G:OP2	2.37	0.56
1:Aa:1373:A:O2'	1:Aa:1375:G:N7	2.34	0.56
1:Ba:844:G:C2'	1:Ba:845:G:H8	2.19	0.56
1:Ba:1071:U:OP1	14:Bn:45:ARG:NH2	2.37	0.56
23:BA:125:A:OP2	50:B2:19:PHE:N	2.38	0.56
23:BA:2195:G:N1	23:BA:2197:G:N7	2.51	0.56
1:Aa:510:C:H42	1:Aa:552:G:H1	1.52	0.56
1:Aa:848:G:H3'	1:Aa:849:U:C5'	2.20	0.56
23:AA:1488:A:H61	23:AA:1595:C:H42	1.53	0.56
1:Ba:379:G:O2'	1:Ba:381:A:N7	2.37	0.56
23:BA:1847:U:O2	25:BC:201:GLU:HB3	2.05	0.56
1:Aa:382:A:OP1	1:Aa:460:A:N6	2.39	0.56
1:Ba:858:C:N4	1:Ba:859:U:C4	2.73	0.56
15:Bo:39:VAL:O	23:BA:761:A:C6	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Bs:22:GLN:HE22	19:Bs:28:LYS:HB2	1.69	0.56
45:BW:11:THR:OG1	45:BW:60:ARG:NH2	2.38	0.56
8:Ah:3:MET:HE1	8:Ah:6:PRO:HA	1.88	0.56
23:AA:125:A:OP2	50:A2:19:PHE:N	2.38	0.56
1:Ba:698:G:OP2	11:Bk:29:ASN:ND2	2.39	0.56
23:BA:506:A:H2	23:BA:515:G:H21	1.52	0.56
23:BA:656:G:H21	23:BA:660:A:H2	1.54	0.56
23:BA:1287:U:C5'	37:BO:4:VAL:HG13	2.35	0.56
1:Aa:870:G:HO2'	1:Aa:883:G:HO2'	1.52	0.56
1:Aa:1071:U:OP1	14:An:45:ARG:NH2	2.37	0.56
2:Ab:75:GLN:NE2	2:Ab:204:ASP:O	2.39	0.56
1:Ba:162:A:O2'	1:Ba:163:C:O4'	2.24	0.56
3:Bc:120:ALA:HB1	3:Bc:188:ALA:HB2	1.87	0.56
11:Bk:20:VAL:HG23	11:Bk:37:GLU:HA	1.86	0.56
23:BA:713:A:H2'	23:BA:715:A:H62	1.71	0.56
1:Aa:844:G:C3'	1:Aa:845:G:H5'	2.35	0.56
2:Ab:120:MET:HE1	2:Ab:129:LEU:HD11	1.88	0.56
19:As:22:GLN:HE22	19:As:28:LYS:HB2	1.69	0.56
1:Ba:846:G:H2'	1:Ba:847:G:H4'	1.85	0.56
23:BA:2877:G:N2	23:BA:2880:A:OP2	2.32	0.56
23:AA:713:A:H2'	23:AA:715:A:H62	1.71	0.56
23:AA:2869:G:N7	23:AA:2887:G:N2	2.53	0.56
31:AI:69:VAL:HG21	31:AI:105:GLU:HG3	1.88	0.56
32:AJ:91:VAL:HA	32:AJ:95:LEU:HD12	1.87	0.56
1:Ba:702:A:N1	1:Ba:795:A:O2'	2.39	0.56
1:Ba:847:G:N2	1:Ba:848:G:C4	2.73	0.56
1:Ba:854:G:C5	1:Ba:855:C:C6	2.94	0.56
5:Be:83:HIS:HE1	5:Be:148:LYS:H	1.53	0.56
8:Bh:3:MET:HE1	8:Bh:6:PRO:HA	1.88	0.56
31:BI:69:VAL:HG21	31:BI:105:GLU:HG3	1.88	0.56
1:Aa:162:A:O2'	1:Aa:163:C:O4'	2.24	0.55
1:Aa:1201:A:H5''	3:Ac:4:LYS:HE3	1.88	0.55
35:AM:6:ASP:OD2	35:AM:9:LYS:HG3	2.06	0.55
23:BA:2510:C:O2	33:BK:124:LYS:HE2	2.06	0.55
1:Aa:845:G:C5	1:Aa:846:G:C8	2.95	0.55
23:AA:45:G:N7	23:AA:218:G:O2'	2.38	0.55
23:AA:2686:G:N2	23:AA:2689:A:OP2	2.39	0.55
1:Ba:347:C:OP2	31:BI:97:ARG:CD	2.55	0.55
1:Ba:354:G:C5'	36:BN:41:ARG:CD	2.83	0.55
1:Ba:1273:A:H61	1:Ba:1282:U:H3	1.52	0.55
1:Ba:1319:G:N7	13:Bm:98:ARG:NH2	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:Bv:57:THR:HG22	22:Bv:66:ARG:HG2	1.88	0.55
23:BA:1101:A:N6	23:BA:1131:G:OP2	2.35	0.55
1:Aa:702:A:N1	1:Aa:795:A:O2'	2.39	0.55
1:Aa:844:G:OP2	18:Ar:55:LYS:HE3	1.96	0.55
1:Ba:754:G:C5'	1:Ba:845:G:O2'	2.54	0.55
1:Ba:851:U:H1'	1:Ba:854:G:C8	2.41	0.55
23:BA:124:A:H5''	50:B2:20:ARG:HB2	1.88	0.55
23:BA:191:A:H5'	44:BV:14:THR:HG21	1.87	0.55
23:AA:1521:A:N3	23:AA:1561:G:N2	2.54	0.55
1:Ba:510:C:H42	1:Ba:552:G:H1	1.52	0.55
1:Ba:847:G:C2	1:Ba:848:G:C8	2.95	0.55
23:BA:250:G:OP2	23:BA:252:C:N4	2.40	0.55
23:BA:492:G:OP1	37:BO:3:ARG:CD	2.53	0.55
23:BA:2136:U:O4	23:BA:2206:C:N4	2.39	0.55
23:AA:1325:U:O2'	23:AA:1691:G:N2	2.34	0.55
23:AA:2559:G:O2'	23:AA:2684:A:N1	2.39	0.55
2:Bb:120:MET:HE1	2:Bb:129:LEU:HD11	1.88	0.55
1:Aa:853:C:OP2	1:Aa:854:G:H5'	2.06	0.55
1:Aa:1319:G:N7	13:Am:98:ARG:NH2	2.54	0.55
5:Ae:83:HIS:HE1	5:Ae:148:LYS:H	1.54	0.55
23:AA:250:G:OP2	23:AA:252:C:N4	2.40	0.55
23:AA:1960:G:H1	23:AA:1994:C:H5	1.55	0.55
23:AA:2695:G:H1'	29:AG:110:SER:HB2	1.88	0.55
31:AI:21:THR:HG22	31:AI:39:ILE:HD13	1.87	0.55
5:Be:97:LYS:HB3	5:Be:124:LEU:HB2	1.89	0.55
11:Bk:111:ARG:HG2	21:Bu:4:THR:HA	1.89	0.55
23:BA:1107:G:N2	23:BA:1120:C:O3'	2.39	0.55
23:BA:1369:G:N7	23:BA:1653:A:O2'	2.36	0.55
23:BA:1498:U:OP2	34:BL:59:ARG:NH1	2.29	0.55
23:BA:1648:C:O2'	23:BA:1654:A:N6	2.40	0.55
1:Aa:1108:C:O2'	1:Aa:1179:A:O2'	2.24	0.55
23:AA:246:U:OP2	51:A3:8:ARG:NH1	2.40	0.55
23:AA:650:U:OP1	27:AE:102:PRO:HA	2.07	0.55
23:AA:1378:U:H1'	40:AR:54:ASN:HB3	1.88	0.55
1:Ba:853:C:OP2	1:Ba:854:G:H5'	2.06	0.55
1:Aa:698:G:OP2	11:Ak:29:ASN:ND2	2.39	0.55
1:Aa:819:C:O2'	1:Aa:910:A:N1	2.40	0.55
1:Aa:854:G:C6	1:Aa:855:C:C4	2.95	0.55
23:AA:319:G:H22	23:AA:326:A:H61	1.54	0.55
23:AA:1107:G:N2	23:AA:1120:C:O3'	2.39	0.55
23:AA:2877:G:N2	23:AA:2880:A:OP2	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ba:360:C:O2	1:Ba:363:C:N4	2.39	0.55
23:BA:2717:A:H8	34:BL:3:TYR:CE1	2.19	0.55
23:AA:788:A:O2'	23:AA:1703:U:OP1	2.25	0.55
23:AA:1845:U:OP2	25:AC:156:ARG:NH2	2.38	0.55
23:AA:2079:G:OP1	26:AD:154:VAL:HG22	2.07	0.55
1:Ba:382:A:OP1	1:Ba:460:A:N6	2.39	0.55
1:Ba:847:G:N3	1:Ba:848:G:N7	2.55	0.55
1:Ba:860:U:H2'	1:Ba:861:A:O4'	2.07	0.55
8:Bh:18:ASN:ND2	8:Bh:74:ILE:O	2.38	0.55
23:BA:718:C:OP1	27:BE:54:ARG:HD2	2.07	0.55
23:BA:2695:G:H1'	29:BG:110:SER:HB2	1.88	0.55
35:BM:6:ASP:OD2	35:BM:9:LYS:HG3	2.06	0.55
1:Aa:360:C:O2	1:Aa:363:C:N4	2.39	0.55
1:Aa:464:A:N6	1:Aa:485:U:O4	2.36	0.55
1:Aa:1140:C:OP1	9:Ai:20:ARG:NH2	2.40	0.55
8:Ah:18:ASN:ND2	8:Ah:74:ILE:O	2.38	0.55
23:AA:608:C:OP2	38:AP:78:ARG:O	2.25	0.55
23:AA:863:G:H21	23:AA:1228:A:H2	1.55	0.55
23:AA:1533:A:N7	25:AC:96:TYR:CB	2.70	0.55
23:AA:2647:C:O2'	26:AD:170:PRO:O	2.18	0.55
1:Ba:1077:C:O2	1:Ba:1201:A:N6	2.40	0.55
49:B1:9:CYS:SG	49:B1:10:THR:N	2.80	0.55
27:AE:32:VAL:HG12	27:AE:109:ALA:HB2	1.89	0.54
44:AV:38:ILE:HG22	44:AV:60:THR:HA	1.89	0.54
1:Ba:464:A:N6	1:Ba:485:U:O4	2.36	0.54
1:Ba:846:G:C2	1:Ba:847:G:C1'	2.85	0.54
1:Ba:851:U:H2'	1:Ba:852:C:C4'	2.36	0.54
1:Ba:855:C:C4	1:Ba:856:C:N4	2.75	0.54
1:Ba:1140:C:OP1	9:Bi:20:ARG:NH2	2.40	0.54
2:Bb:74:LYS:CE	22:Bv:155:LEU:O	2.55	0.54
23:BA:1960:G:H1	23:BA:1994:C:H5	1.55	0.54
31:BI:21:THR:HG22	31:BI:39:ILE:HD13	1.87	0.54
42:BT:26:LYS:NZ	42:BT:44:ASP:OD1	2.37	0.54
5:Ae:97:LYS:HB3	5:Ae:124:LEU:HB2	1.89	0.54
23:AA:718:C:OP1	27:AE:54:ARG:HD2	2.07	0.54
1:Ba:850:U:C2'	1:Ba:851:U:H5'	2.37	0.54
1:Ba:1201:A:H5''	3:Bc:4:LYS:HE3	1.88	0.54
23:BA:299:U:O2'	23:BA:300:G:N2	2.41	0.54
23:BA:922:G:H2'	23:BA:923:A:H8	1.71	0.54
23:BA:1215:U:O2'	23:BA:1217:U:OP2	2.22	0.54
15:Ao:56:LEU:CG	23:AA:761:A:O5'	2.50	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AA:124:A:H5''	50:A2:20:ARG:HB2	1.88	0.54
23:BA:1115:G:N1	23:BA:1136:C:OP2	2.36	0.54
23:BA:1378:U:H1'	40:BR:54:ASN:HB3	1.88	0.54
23:BA:1487:G:H2'	23:BA:1488:A:H8	1.73	0.54
23:BA:2079:G:OP1	26:BD:154:VAL:HG22	2.07	0.54
23:BA:2331:G:OP1	28:BF:121:ALA:HA	2.08	0.54
23:BA:2559:G:O2'	23:BA:2684:A:N1	2.40	0.54
23:AA:656:G:H21	23:AA:660:A:H2	1.54	0.54
23:AA:922:G:H2'	23:AA:923:A:H8	1.72	0.54
23:AA:2314:A:H2	23:AA:2373:A:H62	1.56	0.54
1:Ba:819:C:O2'	1:Ba:910:A:N1	2.40	0.54
23:BA:502:C:H5	40:BR:68:TYR:CE1	2.25	0.54
23:BA:608:C:OP2	38:BP:78:ARG:O	2.25	0.54
23:BA:650:U:OP1	27:BE:102:PRO:HA	2.07	0.54
1:Aa:347:C:OP2	31:AI:97:ARG:CD	2.55	0.54
23:AA:1613:G:N2	25:AC:209:GLY:O	2.41	0.54
23:AA:2758:G:OP1	26:AD:182:ASN:ND2	2.40	0.54
12:Bl:26:LYS:O	12:Bl:72:ASN:ND2	2.41	0.54
23:BA:826:A:OP1	25:BC:217:ARG:NH2	2.39	0.54
23:BA:2694:C:O2	29:BG:110:SER:N	2.37	0.54
33:BK:75:THR:HA	33:BK:90:VAL:HA	1.89	0.54
1:Ba:1108:C:O2'	1:Ba:1179:A:O2'	2.24	0.54
1:Ba:1310:G:O4'	1:Ba:1345:C:N4	2.41	0.54
23:BA:246:U:OP2	51:B3:8:ARG:NH1	2.40	0.54
23:BA:735:C:O2'	23:BA:825:G:OP1	2.26	0.54
23:BA:1613:G:N2	25:BC:209:GLY:O	2.41	0.54
35:BM:55:GLN:O	35:BM:83:LYS:NZ	2.35	0.54
1:Aa:379:G:O2'	1:Aa:381:A:N7	2.37	0.54
23:AA:1102:U:H3	23:AA:1124:A:H61	1.56	0.54
23:AA:1472:C:N4	23:AA:1617:A:OP2	2.34	0.54
23:AA:2776:A:C1'	29:AG:63:THR:HG22	2.30	0.54
1:Ba:854:G:O6	1:Ba:855:C:N4	2.40	0.54
27:BE:32:VAL:HG12	27:BE:109:ALA:HB2	1.89	0.54
1:Aa:1310:G:O4'	1:Aa:1345:C:N4	2.41	0.54
6:Af:17:ASP:HA	6:Af:20:LYS:HG2	1.90	0.54
23:AA:344:U:OP2	41:AS:80:ARG:NH2	2.32	0.54
23:AA:1077:U:H3	23:AA:1166:G:H1	1.55	0.54
23:AA:2227:C:O2	23:AA:2253:C:N4	2.41	0.54
1:Ba:847:G:C4	1:Ba:848:G:N7	2.76	0.54
1:Ba:1081:U:H5'	5:Be:30:ARG:HH12	1.72	0.54
23:BA:863:G:H21	23:BA:1228:A:H2	1.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1521:A:N3	23:BA:1561:G:N2	2.54	0.54
23:BA:1710:G:HO2'	31:BI:6:THR:HG22	1.72	0.54
45:BW:31:GLN:HG3	45:BW:37:LEU:HD12	1.90	0.54
1:Aa:853:C:C4'	1:Aa:854:G:H5'	2.35	0.54
1:Aa:1081:U:H5'	5:Ae:30:ARG:HH12	1.72	0.54
1:Aa:1432:U:H5''	31:AI:48:PRO:HB3	1.90	0.54
2:Ab:74:LYS:HE3	22:Av:155:LEU:O	2.08	0.54
1:Ba:8:G:H2'	5:Be:124:LEU:HD12	1.90	0.54
1:Ba:370:G:N2	1:Ba:373:U:OP2	2.40	0.54
23:BA:2337:A:C2	28:BF:74:ILE:CG2	2.80	0.54
23:BA:2813:U:O2	26:BD:72:PRO:HB3	2.08	0.54
1:Aa:846:G:H5'	1:Aa:847:G:OP2	2.07	0.54
1:Aa:1035:C:O2'	1:Aa:1046:G:N2	2.40	0.54
1:Aa:1077:C:O2	1:Aa:1201:A:N6	2.40	0.54
23:AA:502:C:H5	40:AR:68:TYR:CE1	2.25	0.54
23:AA:1648:C:O2'	23:AA:1654:A:N6	2.40	0.54
23:AA:2331:G:OP1	28:AF:121:ALA:HA	2.08	0.54
23:AA:2819:C:N4	23:AA:2822:C:O2	2.41	0.54
6:Bf:17:ASP:HA	6:Bf:20:LYS:HG2	1.90	0.54
23:BA:579:U:O2'	37:BO:49:ASP:OD2	2.20	0.54
23:BA:1131:G:H1	23:BA:1133:G:H21	1.56	0.54
23:BA:1533:A:N7	25:BC:96:TYR:CB	2.70	0.54
23:BA:2029:G:OP1	34:BL:5:LYS:HD3	2.08	0.54
23:BA:2162:A:H62	23:BA:2183:G:H21	1.55	0.54
1:Aa:855:C:C5	1:Aa:856:C:N4	2.76	0.53
1:Aa:1259:C:H4'	9:Ai:77:GLN:HE22	1.73	0.53
11:Ak:111:ARG:HG2	21:Au:4:THR:HA	1.89	0.53
23:AA:1008:C:O2'	23:AA:2300:A:N3	2.38	0.53
23:AA:1101:A:N6	23:AA:1131:G:OP2	2.35	0.53
1:Ba:753:U:O2'	1:Ba:845:G:C4'	2.57	0.53
1:Ba:851:U:H2'	1:Ba:852:C:H4'	1.90	0.53
23:BA:78:U:H5'	45:BW:7:ARG:HH22	1.73	0.53
23:BA:590:U:OP1	23:BA:1257:G:O2'	2.26	0.53
44:BV:38:ILE:HG22	44:BV:60:THR:HA	1.89	0.53
1:Aa:370:G:N2	1:Aa:373:U:OP2	2.40	0.53
2:Ab:74:LYS:CE	22:Av:155:LEU:O	2.55	0.53
8:Ah:110:GLU:OE1	8:Ah:121:ARG:NH1	2.42	0.53
12:Al:26:LYS:O	12:Al:72:ASN:ND2	2.41	0.53
22:Av:57:THR:HG22	22:Av:66:ARG:HG2	1.89	0.53
23:AA:2289:U:OP2	43:AU:24:SER:OG	2.17	0.53
23:AA:2361:U:O3'	35:AM:17:ARG:HG2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AN:51:LYS:HG3	36:AN:98:LYS:HE2	1.90	0.53
49:A1:9:CYS:SG	49:A1:10:THR:N	2.80	0.53
2:Bb:74:LYS:HE3	22:Bv:155:LEU:O	2.08	0.53
23:BA:788:A:O2'	23:BA:1703:U:OP1	2.25	0.53
23:BA:2758:G:OP1	26:BD:182:ASN:ND2	2.40	0.53
31:BI:42:THR:HG22	31:BI:57:VAL:HG22	1.91	0.53
1:Aa:347:C:OP1	31:AI:13:ASN:ND2	2.38	0.53
1:Aa:354:G:C5'	36:AN:41:ARG:CD	2.83	0.53
2:Ab:32:PHE:O	2:Ab:33:THR:HB	2.08	0.53
10:Aj:68:ARG:HH21	14:An:57:ARG:HD2	1.73	0.53
23:AA:706:U:H1'	32:AJ:12:SER:O	2.08	0.53
23:AA:735:C:O2'	23:AA:825:G:OP1	2.26	0.53
23:AA:1491:C:O2'	23:AA:1574:G:N2	2.39	0.53
32:AJ:55:LEU:O	32:AJ:60:ARG:NH1	2.41	0.53
45:AW:31:GLN:HG3	45:AW:37:LEU:HD12	1.90	0.53
22:Bv:6:ILE:HD13	22:Bv:13:ILE:HG12	1.91	0.53
23:BA:1643:C:OP2	40:BR:35:LYS:HD3	2.09	0.53
23:BA:2227:C:O2	23:BA:2253:C:N4	2.41	0.53
23:BA:2312:C:P	49:B1:2:ARG:HH21	2.28	0.53
23:BA:2642:U:O2	48:BZ:4:PRO:HA	2.08	0.53
24:BB:11:A:N1	24:BB:67:G:O2'	2.41	0.53
31:BI:22:ILE:HG22	31:BI:23:LYS:HG2	1.90	0.53
31:BI:35:ILE:HG21	31:BI:103:ALA:HB3	1.91	0.53
32:BJ:55:LEU:O	32:BJ:60:ARG:NH1	2.41	0.53
36:BN:51:LYS:HG3	36:BN:98:LYS:HE2	1.90	0.53
1:Aa:851:U:C2'	1:Aa:853:C:C5'	2.86	0.53
23:AA:1487:G:H2'	23:AA:1488:A:H8	1.73	0.53
23:AA:2813:U:O2	26:AD:72:PRO:HB3	2.08	0.53
26:AD:93:ASN:HD21	26:AD:212:ARG:HB2	1.74	0.53
29:AG:125:VAL:HG22	29:AG:131:VAL:HG22	1.89	0.53
29:BG:125:VAL:HG22	29:BG:131:VAL:HG22	1.89	0.53
23:AA:78:U:H5'	45:AW:7:ARG:HH22	1.73	0.53
34:AL:45:GLU:OE2	34:AL:101:THR:OG1	2.24	0.53
37:AO:24:TYR:O	37:AO:29:HIS:ND1	2.42	0.53
23:BA:1777:G:O2'	23:BA:2880:A:N1	2.40	0.53
23:BA:2314:A:H2	23:BA:2373:A:H62	1.56	0.53
40:BR:7:LEU:HD21	40:BR:42:VAL:HG12	1.91	0.53
2:Ab:207:ILE:HD11	22:Av:151:LEU:CB	1.91	0.53
19:As:36:ARG:O	19:As:70:LYS:NZ	2.42	0.53
23:AA:299:U:O2'	23:AA:300:G:N2	2.41	0.53
23:AA:838:A:OP2	23:AA:2098:A:O2'	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ba:754:G:H4'	1:Ba:845:G:O2'	2.08	0.53
1:Ba:847:G:C2	1:Ba:857:C:N3	2.77	0.53
1:Aa:510:C:OP1	12:Al:128:SER:N	2.38	0.53
1:Aa:554:A:OP2	4:Ad:64:THR:OG1	2.25	0.53
1:Aa:1494:A:H2	23:AA:1986:G:N3	2.06	0.53
5:Ae:106:ILE:HD11	5:Ae:124:LEU:HD13	1.90	0.53
23:AA:1106:G:O2'	23:AA:1121:A:N6	2.42	0.53
33:AK:75:THR:HA	33:AK:90:VAL:HA	1.89	0.53
1:Ba:347:C:OP1	31:BI:13:ASN:ND2	2.38	0.53
5:Be:106:ILE:HD11	5:Be:124:LEU:HD13	1.90	0.53
10:Bj:68:ARG:HH21	14:Bn:57:ARG:HD2	1.73	0.53
23:BA:319:G:H22	23:BA:326:A:H61	1.54	0.53
23:BA:2686:G:N2	23:BA:2689:A:OP2	2.39	0.53
23:BA:2706:A:C2	26:BD:200:ASN:ND2	2.77	0.53
23:BA:2782:C:H3'	52:B4:19:ARG:HH22	1.74	0.53
1:Aa:225:G:O2'	1:Aa:478:G:N3	2.42	0.53
1:Aa:1144:A:N6	1:Aa:1152:G:O6	2.42	0.53
23:AA:184:C:O2'	23:AA:185:A:N7	2.40	0.53
31:AI:42:THR:HG22	31:AI:57:VAL:HG22	1.91	0.53
23:BA:2778:G:N1	29:BG:3:ARG:NH2	2.56	0.53
1:Aa:8:G:H2'	5:Ae:124:LEU:HD12	1.90	0.53
1:Aa:359:G:OP1	20:At:2:ALA:N	2.41	0.53
1:Aa:847:G:C6	1:Aa:848:G:C6	2.96	0.53
2:Ab:67:VAL:HG22	2:Ab:160:ALA:HB3	1.91	0.53
23:AA:229:A:O2'	23:AA:231:A:N1	2.41	0.53
1:Ba:1259:C:H4'	9:Bi:77:GLN:HE22	1.73	0.53
25:BC:230:HIS:CD2	25:BC:232:HIS:H	2.27	0.53
1:Aa:347:C:OP2	31:AI:97:ARG:NE	2.42	0.53
1:Aa:846:G:N2	1:Aa:847:G:H1'	2.24	0.53
23:AA:1581:U:O5'	23:AA:1584:U:C5	2.62	0.53
31:AI:22:ILE:HG22	31:AI:23:LYS:HG2	1.90	0.53
41:AS:16:ASP:HB2	41:AS:38:VAL:HG13	1.91	0.53
11:Bk:17:GLU:H	11:Bk:79:LEU:HA	1.74	0.53
22:Bv:24:LYS:NZ	22:Bv:79:ASP:OD1	2.41	0.53
23:BA:1077:U:H3	23:BA:1166:G:H1	1.55	0.53
23:BA:1106:G:O2'	23:BA:1121:A:N6	2.42	0.53
23:BA:1843:U:C5	25:BC:62:TYR:CD2	2.97	0.53
23:BA:2707:C:OP1	26:BD:123:LYS:HG2	2.09	0.53
29:BG:38:ASN:ND2	29:BG:41:MET:SD	2.82	0.53
50:B2:34:ARG:HG2	50:B2:37:ARG:HH22	1.74	0.53
1:Aa:681:G:O3'	6:Af:88:ARG:NH1	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aa:1084:U:O2	2:Ab:103:ASN:ND2	2.41	0.52
6:Af:88:ARG:HB3	18:Ar:70:MET:HE1	1.91	0.52
23:AA:895:U:O2	46:AX:46:GLN:NE2	2.42	0.52
23:AA:1131:G:H1	23:AA:1133:G:H21	1.56	0.52
23:AA:1643:C:OP2	40:AR:35:LYS:HD3	2.09	0.52
23:AA:1701:U:OP1	26:AD:149:ARG:CA	2.57	0.52
23:AA:2136:U:O4	23:AA:2206:C:N4	2.39	0.52
23:AA:2231:C:C5'	25:AC:147:LYS:CE	2.84	0.52
23:AA:2707:C:OP1	26:AD:123:LYS:HG2	2.09	0.52
23:AA:2782:C:H3'	52:A4:19:ARG:HH22	1.74	0.52
48:AZ:34:GLY:HA3	48:AZ:47:GLY:HA2	1.90	0.52
50:A2:34:ARG:HG2	50:A2:37:ARG:HH22	1.74	0.52
1:Ba:1144:A:N6	1:Ba:1152:G:O6	2.42	0.52
1:Ba:1265:G:H2'	1:Ba:1289:A:H61	1.74	0.52
23:BA:1102:U:H3	23:BA:1124:A:H61	1.56	0.52
23:BA:2819:C:N4	23:BA:2822:C:O2	2.41	0.52
26:BD:93:ASN:HD21	26:BD:212:ARG:HB2	1.74	0.52
41:BS:16:ASP:HB2	41:BS:38:VAL:HG13	1.91	0.52
1:Aa:774:A:OP2	1:Aa:820:G:N2	2.42	0.52
1:Aa:852:C:H5'	1:Aa:853:C:OP1	2.09	0.52
2:Ab:74:LYS:HD3	22:Av:155:LEU:HB3	1.90	0.52
1:Ba:1432:U:H5''	31:BI:48:PRO:HB3	1.90	0.52
1:Ba:1452:G:OP2	1:Ba:1452:G:N2	2.40	0.52
19:Bs:36:ARG:O	19:Bs:70:LYS:NZ	2.42	0.52
23:BA:2361:U:O3'	35:BM:17:ARG:HG2	2.09	0.52
25:BC:227:PRO:HD3	25:BC:234:GLY:H	1.74	0.52
22:Av:6:ILE:HD13	22:Av:13:ILE:HG12	1.91	0.52
23:AA:2162:A:H62	23:AA:2183:G:H21	1.55	0.52
25:AC:230:HIS:CD2	25:AC:232:HIS:H	2.27	0.52
26:AD:22:LEU:HD13	31:AI:74:GLY:HA3	1.92	0.52
38:AP:24:LYS:HA	38:AP:93:THR:HG23	1.91	0.52
1:Ba:681:G:O3'	6:Bf:88:ARG:NH1	2.43	0.52
22:Bv:6:ILE:HG22	22:Bv:42:VAL:HB	1.92	0.52
23:BA:184:C:O2'	23:BA:185:A:N7	2.40	0.52
23:BA:502:C:C5	40:BR:68:TYR:CG	2.97	0.52
23:BA:1581:U:O5'	23:BA:1584:U:C5	2.62	0.52
23:BA:1818:A:O2'	25:BC:206:GLY:N	2.42	0.52
23:BA:2371:U:OP1	49:B1:33:LYS:HD2	2.09	0.52
1:Aa:850:U:H2'	1:Aa:851:U:C5'	2.39	0.52
1:Aa:1265:G:H2'	1:Aa:1289:A:H61	1.74	0.52
11:Ak:17:GLU:H	11:Ak:79:LEU:HA	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AA:1031:C:H5''	46:AX:10:ARG:HH11	1.74	0.52
23:AA:2778:G:N1	29:AG:3:ARG:NH2	2.56	0.52
25:AC:227:PRO:HD3	25:AC:234:GLY:H	1.74	0.52
31:AI:35:ILE:HG21	31:AI:103:ALA:HB3	1.91	0.52
35:AM:112:ALA:HB1	35:AM:117:LEU:HD12	1.92	0.52
52:A4:25:VAL:HG22	52:A4:34:GLN:HB2	1.92	0.52
23:BA:838:A:OP2	23:BA:2098:A:O2'	2.27	0.52
49:B1:22:ASN:ND2	49:B1:25:ASN:OD1	2.40	0.52
1:Aa:847:G:H3'	1:Aa:848:G:N7	2.25	0.52
23:AA:650:U:O5'	27:AE:103:LYS:HE3	2.09	0.52
23:AA:1864:C:O2'	23:AA:1954:A:N3	2.36	0.52
40:AR:7:LEU:HD21	40:AR:42:VAL:HG12	1.91	0.52
1:Ba:354:G:H4'	36:BN:41:ARG:HD2	1.92	0.52
1:Ba:359:G:OP1	20:Bt:2:ALA:N	2.41	0.52
23:BA:1031:C:H5''	46:BX:10:ARG:HH11	1.74	0.52
23:BA:1701:U:OP1	26:BD:149:ARG:CA	2.57	0.52
23:BA:1845:U:OP2	25:BC:156:ARG:NE	2.43	0.52
23:BA:2140:C:N3	23:BA:2195:G:O2'	2.41	0.52
23:AA:488:G:O4'	27:AE:46:GLN:NE2	2.43	0.52
23:AA:502:C:C5	40:AR:68:TYR:CG	2.97	0.52
23:AA:1312:A:N1	23:AA:1332:C:O2'	2.43	0.52
23:AA:1362:C:OP1	23:AA:1691:G:O2'	2.26	0.52
23:AA:1451:U:H3	23:AA:1633:A:H62	1.57	0.52
23:AA:1843:U:C5	25:AC:62:TYR:CD2	2.97	0.52
1:Ba:844:G:C2	1:Ba:845:G:C8	2.95	0.52
1:Ba:1494:A:H2	23:BA:1986:G:N3	2.07	0.52
8:Bh:110:GLU:OE1	8:Bh:121:ARG:NH1	2.42	0.52
23:BA:706:U:H1'	32:BJ:12:SER:O	2.08	0.52
23:BA:895:U:O2	46:BX:46:GLN:NE2	2.42	0.52
28:BF:127:ASN:HD22	28:BF:157:VAL:HA	1.74	0.52
23:AA:492:G:OP1	37:AO:3:ARG:CG	2.58	0.52
23:AA:2642:U:O2	48:AZ:4:PRO:HA	2.09	0.52
28:AF:127:ASN:HD22	28:AF:157:VAL:HA	1.74	0.52
6:Bf:88:ARG:HB3	18:Br:70:MET:HE1	1.91	0.52
48:BZ:34:GLY:HA3	48:BZ:47:GLY:HA2	1.90	0.52
52:B4:25:VAL:HG22	52:B4:34:GLN:HB2	1.92	0.52
1:Aa:846:G:C2	1:Aa:847:G:C1'	2.92	0.52
1:Aa:860:U:H3'	1:Aa:860:U:H6	1.75	0.52
11:Ak:69:THR:O	11:Ak:73:SER:OG	2.28	0.52
11:Ak:101:GLN:HE21	11:Ak:107:VAL:HG23	1.75	0.52
23:AA:1304:G:OP2	39:AQ:15:ARG:NH2	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ba:1035:C:O2'	1:Ba:1046:G:N2	2.40	0.52
23:BA:743:C:O2'	23:BA:779:A:N6	2.42	0.52
23:BA:2843:A:OP1	26:BD:127:PHE:HB2	2.10	0.52
1:Aa:845:G:N1	1:Aa:859:U:N3	2.57	0.52
22:Av:6:ILE:HG22	22:Av:42:VAL:HB	1.92	0.52
23:AA:1818:A:O2'	25:AC:206:GLY:N	2.42	0.52
23:AA:2706:A:C2	26:AD:200:ASN:ND2	2.77	0.52
1:Ba:383:U:O2	16:Bp:29:ARG:NH2	2.40	0.52
1:Ba:774:A:OP2	1:Ba:820:G:N2	2.42	0.52
23:BA:1304:G:OP2	39:BQ:15:ARG:NH2	2.43	0.52
23:BA:1449:A:H62	23:BA:1635:A:H61	1.57	0.52
1:Aa:426:U:O2	4:Ad:35:GLN:NE2	2.43	0.52
1:Aa:857:C:O2	1:Aa:857:C:H2'	2.09	0.52
23:AA:743:C:O2'	23:AA:779:A:N6	2.42	0.52
23:AA:2029:G:OP1	34:AL:5:LYS:HD3	2.08	0.52
29:AG:38:ASN:ND2	29:AG:41:MET:SD	2.82	0.52
23:BA:2388:A:OP2	51:B3:24:ARG:NH1	2.43	0.52
38:BP:24:LYS:HA	38:BP:93:THR:HG23	1.91	0.52
24:AB:11:A:N1	24:AB:67:G:O2'	2.40	0.51
11:Bk:101:GLN:HE21	11:Bk:107:VAL:HG23	1.75	0.51
23:BA:229:A:O2'	23:BA:231:A:N1	2.40	0.51
23:BA:2840:A:C6	26:BD:206:LYS:HD2	2.45	0.51
28:BF:46:ASN:O	28:BF:50:LEU:N	2.40	0.51
32:BJ:79:LEU:HB2	32:BJ:113:GLY:HA2	1.92	0.51
1:Aa:846:G:C2	1:Aa:847:G:C8	2.98	0.51
1:Aa:860:U:H3'	1:Aa:860:U:C6	2.45	0.51
2:Ab:20:THR:OG1	2:Ab:34:GLU:HG3	2.11	0.51
3:Ac:31:LEU:O	3:Ac:58:ARG:NH1	2.43	0.51
23:AA:609:U:H5''	32:AJ:29:LYS:HD2	1.92	0.51
23:AA:1129:A:N3	23:AA:1148:C:O2'	2.35	0.51
23:AA:2843:A:OP1	26:AD:127:PHE:HB2	2.10	0.51
3:Bc:31:LEU:O	3:Bc:58:ARG:NH1	2.43	0.51
23:BA:168:A:H5''	23:BA:169:G:C8	2.46	0.51
23:BA:492:G:OP1	37:BO:3:ARG:CG	2.58	0.51
23:BA:1290:G:H1	37:BO:37:GLN:NE2	2.04	0.51
7:Ag:70:MET:HB3	7:Ag:96:ARG:HE	1.76	0.51
23:AA:1183:G:O2'	23:AA:1187:A:N1	2.40	0.51
23:AA:1284:A:O2'	27:AE:45:ARG:NH2	2.32	0.51
23:AA:1492:G:N2	23:AA:1508:C:N3	2.59	0.51
23:AA:2312:C:P	49:A1:2:ARG:HH21	2.28	0.51
23:AA:2371:U:OP1	49:A1:33:LYS:HD2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Br:40:GLU:O	18:Br:77:LYS:NZ	2.43	0.51
23:BA:650:U:O5'	27:BE:103:LYS:HE3	2.09	0.51
27:BE:75:GLN:HE22	27:BE:82:GLN:HE21	1.58	0.51
1:Aa:415:A:N7	1:Aa:503:A:N6	2.59	0.51
1:Ba:225:G:O2'	1:Ba:478:G:N3	2.42	0.51
1:Ba:347:C:OP2	31:BI:97:ARG:NE	2.42	0.51
2:Bb:67:VAL:HG22	2:Bb:160:ALA:HB3	1.91	0.51
2:Bb:74:LYS:HD3	22:Bv:155:LEU:HB3	1.90	0.51
23:BA:609:U:H5''	32:BJ:29:LYS:HD2	1.92	0.51
23:BA:1491:C:O2'	23:BA:1574:G:N2	2.39	0.51
23:BA:2850:G:P	26:BD:67:LYS:HB3	2.51	0.51
26:BD:22:LEU:HD13	31:BI:74:GLY:HA3	1.92	0.51
35:BM:112:ALA:HB1	35:BM:117:LEU:HD12	1.92	0.51
1:Aa:845:G:N1	1:Aa:859:U:C2	2.79	0.51
1:Aa:860:U:C6	1:Aa:860:U:C3'	2.94	0.51
1:Aa:1359:A:H62	1:Aa:1383:G:H8	1.58	0.51
2:Ab:207:ILE:N	22:Av:148:GLU:CD	2.66	0.51
15:Ao:60:VAL:CG2	23:AA:761:A:OP2	2.56	0.51
23:AA:2056:G:N1	23:AA:2060:A:OP2	2.38	0.51
23:AA:2134:C:N4	23:AA:2208:A:OP2	2.41	0.51
23:AA:2331:G:H5'	28:AF:129:THR:OG1	2.10	0.51
13:Bm:64:LYS:NZ	13:Bm:72:GLU:OE1	2.44	0.51
15:Bo:60:VAL:CG2	23:BA:761:A:OP2	2.56	0.51
23:BA:12:U:O4	23:BA:13:A:N6	2.44	0.51
23:BA:720:A:OP1	27:BE:76:GLY:CA	2.59	0.51
1:Aa:545:G:OP1	12:Al:123:ARG:NH1	2.44	0.51
23:AA:522:G:N1	23:AA:525:A:OP2	2.44	0.51
23:AA:1847:U:O2	25:AC:201:GLU:N	2.43	0.51
23:AA:2465:U:O2'	23:AA:2467:C:OP1	2.29	0.51
23:AA:2854:A:H2'	23:AA:2899:A:H61	1.75	0.51
25:AC:165:LEU:HD11	25:AC:175:ARG:HB2	1.92	0.51
1:Ba:1359:A:H62	1:Ba:1383:G:H8	1.58	0.51
15:Bo:16:ARG:HD3	15:Bo:19:GLU:HA	1.92	0.51
23:BA:85:G:OP1	41:BS:26:THR:HG21	2.11	0.51
23:BA:606:G:H21	37:BO:37:GLN:NE2	1.92	0.51
23:BA:1137:G:O2'	23:BA:1143:G:O6	2.29	0.51
23:BA:1286:G:C5	37:BO:3:ARG:HB2	2.45	0.51
36:BN:16:ARG:H	36:BN:79:HIS:CD2	2.29	0.51
1:Aa:383:U:O2	16:Ap:29:ARG:NH2	2.40	0.51
1:Aa:851:U:C1'	1:Aa:854:G:C1'	2.88	0.51
8:Ah:104:ALA:H	8:Ah:115:ASP:HB2	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:Ao:16:ARG:HD3	15:Ao:19:GLU:HA	1.92	0.51
23:AA:85:G:OP1	41:AS:26:THR:HG21	2.11	0.51
23:AA:573:A:H5'	30:AH:114:ARG:HG2	1.93	0.51
23:AA:720:A:OP1	27:AE:76:GLY:HA2	2.11	0.51
23:AA:720:A:OP1	27:AE:76:GLY:CA	2.59	0.51
23:AA:827:A:O2'	25:AC:224:VAL:O	2.29	0.51
23:AA:2331:G:C4'	28:AF:129:THR:O	2.45	0.51
28:AF:31:ILE:HD11	28:AF:34:ILE:HD11	1.93	0.51
9:Bi:32:VAL:HG12	9:Bi:67:VAL:HB	1.93	0.51
23:BA:372:A:N6	41:BS:15:LYS:HG2	2.19	0.51
23:BA:502:C:H41	40:BR:68:TYR:CB	2.24	0.51
23:BA:1284:A:O2'	27:BE:45:ARG:NH2	2.32	0.51
23:BA:2144:A:HO2'	23:BA:2175:G:HO2'	1.59	0.51
23:BA:2402:G:N2	23:BA:2405:A:OP2	2.43	0.51
25:BC:165:LEU:HD11	25:BC:175:ARG:HB2	1.93	0.51
1:Aa:354:G:H4'	36:AN:41:ARG:HD2	1.92	0.51
3:Ac:17:ASP:OD1	10:Aj:16:ARG:NH1	2.44	0.51
8:Ah:79:ARG:NE	8:Ah:81:SER:O	2.44	0.51
23:AA:1509:G:N2	23:AA:1593:G:O2'	2.43	0.51
23:AA:2715:G:N2	23:AA:2747:U:O2	2.43	0.51
27:AE:80:ALA:HB3	27:AE:83:TRP:HD1	1.76	0.51
1:Ba:426:U:O2	4:Bd:35:GLN:NE2	2.43	0.51
23:BA:522:G:N1	23:BA:525:A:OP2	2.44	0.51
23:BA:1844:G:OP1	25:BC:87:ARG:NH2	2.44	0.51
23:BA:1847:U:O2	25:BC:201:GLU:N	2.43	0.51
23:BA:2231:C:C5'	25:BC:147:LYS:CE	2.85	0.51
23:BA:2715:G:N2	23:BA:2747:U:O2	2.43	0.51
24:BB:29:C:OP1	35:BM:4:LYS:NZ	2.44	0.51
28:BF:57:LEU:HD22	28:BF:65:PRO:HG3	1.93	0.51
23:AA:1286:G:C5	37:AO:3:ARG:HB2	2.45	0.51
23:AA:1726:A:H61	23:AA:1750:U:H3	1.59	0.51
23:AA:2388:A:OP2	51:A3:24:ARG:NH1	2.43	0.51
24:AB:29:C:O2'	24:AB:51:A:N1	2.41	0.51
34:AL:8:ARG:HH21	34:AL:16:MET:HE2	1.76	0.51
1:Ba:1039:U:O2	1:Ba:1041:C:N4	2.44	0.51
23:BA:320:U:H5'	23:BA:321:U:H3'	1.92	0.51
23:BA:1509:G:N2	23:BA:1593:G:O2'	2.43	0.51
23:BA:2331:G:H5'	28:BF:129:THR:OG1	2.10	0.51
23:AA:502:C:H5	40:AR:68:TYR:CG	2.28	0.51
23:AA:503:A:H62	23:AA:516:A:H5''	1.76	0.51
23:AA:1376:G:H5''	40:AR:15:LYS:HG2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AA:2840:A:C6	26:AD:206:LYS:HD2	2.45	0.51
25:AC:182:ARG:HG3	25:AC:270:ILE:HD13	1.93	0.51
8:Bh:104:ALA:H	8:Bh:115:ASP:HB2	1.76	0.51
9:Bi:112:MET:SD	9:Bi:112:MET:N	2.84	0.51
15:Bo:56:LEU:CG	23:BA:761:A:O5'	2.50	0.51
34:BL:45:GLU:OE2	34:BL:101:THR:OG1	2.24	0.51
42:BT:7:ILE:HB	42:BT:42:LYS:HB2	1.93	0.51
1:Aa:850:U:C5	1:Aa:851:U:C4	2.99	0.50
1:Aa:853:C:H4'	1:Aa:854:G:O4'	2.11	0.50
1:Aa:1452:G:OP2	1:Aa:1452:G:N2	2.40	0.50
18:Ar:40:GLU:O	18:Ar:77:LYS:NZ	2.43	0.50
23:AA:576:U:O2	23:AA:605:U:O2'	2.29	0.50
23:AA:1449:A:H62	23:AA:1635:A:H61	1.57	0.50
23:AA:1579:C:H3'	23:AA:1581:U:H3	1.75	0.50
23:AA:2333:U:H3	28:AF:40:VAL:CB	2.24	0.50
32:AJ:79:LEU:HB2	32:AJ:113:GLY:HA2	1.92	0.50
1:Ba:844:G:O6	1:Ba:859:U:C2	2.64	0.50
9:Bi:9:ARG:HA	9:Bi:22:ARG:HA	1.93	0.50
11:Bk:23:ILE:HD11	11:Bk:86:VAL:HG22	1.93	0.50
23:BA:2782:C:H3'	52:B4:19:ARG:NH2	2.26	0.50
1:Aa:1022:G:N1	1:Aa:1025:A:OP2	2.38	0.50
9:Bi:9:ARG:HA	9:Bi:22:ARG:HA	1.93	0.50
23:AA:1844:G:OP1	25:AC:87:ARG:NH2	2.44	0.50
25:AC:144:ILE:HB	25:AC:154:ILE:HB	1.92	0.50
28:AF:57:LEU:HD22	28:AF:65:PRO:HG3	1.93	0.50
23:BA:502:C:H5	40:BR:68:TYR:CG	2.28	0.50
23:BA:2465:U:O2'	23:BA:2467:C:OP1	2.29	0.50
23:BA:2854:A:H2'	23:BA:2899:A:H61	1.75	0.50
43:BU:55:PRO:HG3	43:BU:61:ARG:HB2	1.93	0.50
1:Aa:855:C:C2'	1:Aa:856:C:C6	2.86	0.50
2:Ab:74:LYS:HD3	22:Av:155:LEU:CG	2.42	0.50
13:Am:64:LYS:NZ	13:Am:72:GLU:OE1	2.44	0.50
23:AA:168:A:H5''	23:AA:169:G:C8	2.46	0.50
23:AA:320:U:H5'	23:AA:321:U:H3'	1.92	0.50
23:AA:926:G:O2'	23:AA:941:A:N1	2.41	0.50
23:AA:1242:A:N3	32:AJ:4:HIS:HB3	2.27	0.50
23:AA:1777:G:O2'	23:AA:2880:A:N1	2.40	0.50
23:AA:2157:U:O2'	23:AA:2185:A:N1	2.42	0.50
24:AB:29:C:OP1	35:AM:4:LYS:NZ	2.44	0.50
36:AN:16:ARG:H	36:AN:79:HIS:CD2	2.29	0.50
49:A1:22:ASN:ND2	49:A1:25:ASN:OD1	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:928:C:N4	23:BA:937:G:OP2	2.42	0.50
23:BA:1451:U:H3	23:BA:1633:A:H62	1.57	0.50
25:BC:144:ILE:HB	25:BC:154:ILE:HB	1.92	0.50
23:AA:590:U:OP1	23:AA:1257:G:O2'	2.26	0.50
23:AA:606:G:H21	37:AO:37:GLN:NE2	1.92	0.50
23:AA:826:A:OP1	25:AC:217:ARG:NH2	2.39	0.50
23:AA:2332:U:C1'	28:AF:152:MET:O	2.60	0.50
23:AA:2455:G:N2	32:AJ:54:GLN:NE2	2.57	0.50
23:AA:2850:G:P	26:AD:67:LYS:HB3	2.51	0.50
26:AD:119:THR:HB	26:AD:210:GLU:HB2	1.93	0.50
27:AE:75:GLN:HE22	27:AE:82:GLN:HE21	1.58	0.50
1:Ba:846:G:C3'	1:Ba:847:G:C5'	2.90	0.50
23:BA:720:A:OP1	27:BE:76:GLY:HA2	2.11	0.50
23:BA:2778:G:C2	29:BG:3:ARG:NH2	2.72	0.50
30:BH:53:ASP:N	30:BH:53:ASP:OD1	2.44	0.50
2:Ab:34:GLU:HG2	2:Ab:38:ILE:C	2.36	0.50
11:Ak:35:THR:OG1	11:Ak:40:ASN:N	2.44	0.50
23:AA:12:U:O4	23:AA:13:A:N6	2.44	0.50
23:AA:842:U:OP1	27:AE:62:ARG:NH2	2.42	0.50
23:AA:2778:G:C2	29:AG:3:ARG:NH2	2.71	0.50
43:AU:55:PRO:HG3	43:AU:61:ARG:HB2	1.93	0.50
1:Ba:846:G:C6	1:Ba:847:G:N7	2.80	0.50
1:Ba:848:G:N1	1:Ba:849:U:N3	2.60	0.50
2:Bb:207:ILE:N	22:Bv:148:GLU:CD	2.66	0.50
23:BA:1242:A:N3	32:BJ:4:HIS:HB3	2.27	0.50
23:BA:1376:G:H5''	40:BR:15:LYS:HG2	1.93	0.50
23:BA:1726:A:H61	23:BA:1750:U:H3	1.59	0.50
23:BA:2157:U:O2'	23:BA:2185:A:N1	2.42	0.50
36:BN:16:ARG:H	36:BN:79:HIS:HD2	1.57	0.50
2:Ab:32:PHE:CZ	1:Ba:852:C:C4	2.99	0.50
9:Ai:32:VAL:HG12	9:Ai:67:VAL:HB	1.93	0.50
22:Av:9:ASP:HB3	22:Av:45:LYS:HA	1.92	0.50
23:AA:502:C:H41	40:AR:68:TYR:CB	2.24	0.50
23:AA:579:U:O2'	37:AO:49:ASP:OD2	2.20	0.50
23:AA:1498:U:OP2	34:AL:59:ARG:NH1	2.29	0.50
23:AA:2402:G:N2	23:AA:2405:A:OP2	2.43	0.50
23:AA:2831:G:OP1	26:AD:70:ASN:HB2	2.11	0.50
36:AN:16:ARG:H	36:AN:79:HIS:HD2	1.57	0.50
1:Ba:855:C:H2'	1:Ba:855:C:O2	2.10	0.50
2:Bb:74:LYS:HD3	22:Bv:155:LEU:CG	2.42	0.50
2:Bb:74:LYS:HE3	22:Bv:155:LEU:C	2.37	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Bb:118:GLU:OE2	2:Bb:152:ARG:NH1	2.41	0.50
23:BA:18:C:O2'	23:BA:597:U:OP1	2.29	0.50
23:BA:1208:A:H62	23:BA:1224:U:H3	1.60	0.50
23:BA:1498:U:O5'	34:BL:59:ARG:NH1	2.45	0.50
23:BA:1579:C:H3'	23:BA:1581:U:H3	1.75	0.50
25:BC:84:ASP:OD2	25:BC:87:ARG:NH1	2.41	0.50
11:Ak:23:ILE:HD11	11:Ak:86:VAL:HG22	1.93	0.50
23:AA:878:C:OP1	32:AJ:39:LYS:HE3	2.12	0.50
23:AA:1845:U:OP2	25:AC:156:ARG:NE	2.43	0.50
35:AM:55:GLN:O	35:AM:83:LYS:NZ	2.35	0.50
1:Ba:1090:G:H5'	5:Be:134:ILE:HG21	1.94	0.50
23:BA:926:G:O2'	23:BA:941:A:N1	2.41	0.50
23:BA:1440:A:HO2'	23:BA:1514:A:HO2'	1.60	0.50
23:BA:2831:G:OP1	26:BD:70:ASN:HB2	2.11	0.50
1:Aa:659:C:N4	1:Aa:761:A:OP2	2.45	0.50
1:Aa:848:G:P	1:Aa:848:G:H8	2.34	0.50
1:Aa:852:C:H4'	1:Aa:853:C:H5'	1.88	0.50
2:Ab:74:LYS:HE3	22:Av:155:LEU:C	2.37	0.50
3:Ac:110:LEU:HG	3:Ac:143:LEU:HD23	1.93	0.50
23:AA:2341:A:H5'	28:AF:35:VAL:HG11	1.94	0.50
29:AG:87:LEU:HD13	29:AG:148:ILE:HD13	1.94	0.50
3:Bc:17:ASP:OD1	10:Bj:16:ARG:NH1	2.44	0.50
11:Bk:35:THR:OG1	11:Bk:40:ASN:N	2.44	0.50
22:Bv:9:ASP:HB3	22:Bv:45:LYS:HA	1.92	0.50
23:BA:1039:C:C6	30:BH:1:MET:HA	2.47	0.50
23:BA:1312:A:N1	23:BA:1332:C:O2'	2.43	0.50
23:BA:1492:G:N2	23:BA:1508:C:N3	2.59	0.50
24:BB:29:C:O2'	24:BB:51:A:N1	2.41	0.50
26:BD:156:MET:HE1	26:BD:164:PHE:HE2	1.77	0.50
1:Aa:511:A:H62	1:Aa:551:G:H22	1.59	0.50
1:Aa:848:G:C3'	1:Aa:849:U:C5'	2.86	0.50
1:Aa:852:C:H42	2:Bb:43:LEU:H	1.60	0.50
1:Aa:1090:G:H5'	5:Ae:134:ILE:HG21	1.94	0.50
2:Ab:32:PHE:HB3	2:Ab:40:ILE:O	2.12	0.50
23:AA:1937:G:O6	23:AA:1946:A:N6	2.45	0.50
23:AA:2598:U:O2	26:AD:156:MET:HG2	2.12	0.50
23:AA:2782:C:H3'	52:A4:19:ARG:NH2	2.26	0.50
30:AH:53:ASP:OD1	30:AH:53:ASP:N	2.44	0.50
1:Ba:415:A:N7	1:Ba:503:A:N6	2.59	0.50
1:Ba:510:C:OP1	12:Bl:128:SER:N	2.38	0.50
1:Ba:659:C:N4	1:Ba:761:A:OP2	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Bg:70:MET:HB3	7:Bg:96:ARG:HE	1.76	0.50
8:Bh:79:ARG:NE	8:Bh:81:SER:O	2.44	0.50
23:BA:488:G:O4'	27:BE:46:GLN:NE2	2.43	0.50
23:BA:675:G:N2	23:BA:678:A:OP2	2.39	0.50
23:BA:1407:C:O2'	23:BA:1838:G:O2'	2.30	0.50
23:BA:1533:A:N7	25:BC:96:TYR:HB3	2.27	0.50
23:BA:1937:G:O6	23:BA:1946:A:N6	2.45	0.50
28:BF:61:THR:HG21	28:BF:91:LEU:HD11	1.94	0.50
1:Aa:535:G:O6	12:Al:59:ASN:ND2	2.40	0.49
1:Aa:1039:U:O2	1:Aa:1041:C:N4	2.44	0.49
9:Ai:112:MET:N	9:Ai:112:MET:SD	2.84	0.49
23:AA:1337:A:H4'	23:AA:1338:U:H5''	1.94	0.49
23:AA:1533:A:N7	25:AC:96:TYR:HB3	2.27	0.49
23:AA:1819:G:OP1	25:AC:204:ASN:HA	2.12	0.49
2:Bb:114:ILE:HB	2:Bb:144:LEU:HD23	1.94	0.49
7:Bg:13:LEU:HD22	7:Bg:14:PRO:HD2	1.93	0.49
23:BA:326:A:H1'	23:BA:327:G:H5'	1.93	0.49
23:BA:573:A:H5'	30:BH:114:ARG:HG2	1.93	0.49
23:BA:1818:A:N6	23:BA:1855:G:O2'	2.42	0.49
23:BA:1819:G:OP1	25:BC:204:ASN:HA	2.12	0.49
23:BA:2778:G:N2	29:BG:3:ARG:NH2	2.59	0.49
32:BJ:75:ALA:HB3	32:BJ:109:ILE:HG12	1.94	0.49
34:BL:8:ARG:HH21	34:BL:16:MET:HE2	1.77	0.49
37:BO:24:TYR:O	37:BO:29:HIS:ND1	2.42	0.49
23:AA:2140:C:N3	23:AA:2195:G:O2'	2.41	0.49
23:AA:2778:G:N2	29:AG:3:ARG:NH2	2.59	0.49
32:AJ:19:VAL:HG13	32:AJ:27:ASN:HB3	1.94	0.49
44:AV:19:SER:OG	44:AV:23:ASN:OD1	2.25	0.49
1:Ba:845:G:N2	1:Ba:859:U:C1'	2.73	0.49
1:Ba:847:G:C2	1:Ba:848:G:C4	3.00	0.49
23:BA:344:U:OP2	41:BS:80:ARG:NH2	2.32	0.49
23:BA:842:U:OP1	27:BE:62:ARG:NH2	2.42	0.49
23:BA:1453:G:H4'	23:BA:1455:U:H3	1.77	0.49
23:BA:2341:A:H5'	28:BF:35:VAL:HG11	1.94	0.49
1:Aa:578:G:O6	1:Aa:874:A:N6	2.45	0.49
1:Aa:983:A:OP1	14:An:29:ARG:NH1	2.45	0.49
8:Ah:107:SER:HB2	8:Ah:128:ILE:HD11	1.94	0.49
23:AA:326:A:H1'	23:AA:327:G:H5'	1.93	0.49
23:AA:1175:G:N2	23:AA:1176:U:O4	2.43	0.49
23:AA:1498:U:O5'	34:AL:59:ARG:NH1	2.45	0.49
23:AA:1508:C:N4	23:AA:1509:G:O6	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AJ:75:ALA:HB3	32:AJ:109:ILE:HG12	1.94	0.49
1:Ba:754:G:H5'	1:Ba:845:G:O2'	2.12	0.49
3:Bc:110:LEU:HG	3:Bc:143:LEU:HD23	1.93	0.49
17:Bq:25:VAL:HG21	17:Bq:63:ILE:HD13	1.95	0.49
23:BA:503:A:H62	23:BA:516:A:H5''	1.76	0.49
23:BA:2333:U:H3	28:BF:40:VAL:CB	2.24	0.49
23:BA:2455:G:N2	32:BJ:54:GLN:NE2	2.57	0.49
25:BC:182:ARG:HG3	25:BC:270:ILE:HD13	1.93	0.49
27:BE:80:ALA:HB3	27:BE:83:TRP:HD1	1.76	0.49
2:Ab:33:THR:HG23	2:Ab:40:ILE:CG1	2.42	0.49
10:Aj:6:ILE:HD12	10:Aj:76:ILE:HG13	1.95	0.49
23:AA:18:C:O2'	23:AA:597:U:OP1	2.29	0.49
23:AA:351:G:HO2'	41:AS:15:LYS:HD3	1.77	0.49
23:AA:616:G:O2'	23:AA:618:A:OP1	2.30	0.49
23:AA:1024:A:OP1	23:AA:1026:C:N4	2.46	0.49
23:AA:1072:A:N3	23:AA:2513:G:O2'	2.37	0.49
23:AA:2418:G:O2'	23:AA:2451:C:N4	2.46	0.49
27:AE:117:LYS:NZ	27:AE:189:ALA:O	2.39	0.49
1:Ba:845:G:C2	1:Ba:859:U:C2	3.00	0.49
1:Ba:846:G:H3'	1:Ba:847:G:C5'	2.37	0.49
1:Ba:1069:G:O5'	3:Bc:185:HIS:NE2	2.45	0.49
1:Ba:1084:U:O2	2:Bb:103:ASN:ND2	2.41	0.49
1:Ba:1442:G:O2'	1:Ba:1479:A:N6	2.46	0.49
19:Bs:36:ARG:HH21	19:Bs:53:ASP:HA	1.77	0.49
23:BA:545:G:N1	23:BA:548:A:OP2	2.45	0.49
23:BA:1024:A:OP1	23:BA:1026:C:N4	2.46	0.49
23:BA:1682:C:O2	23:BA:2725:U:O2'	2.28	0.49
26:BD:119:THR:HB	26:BD:210:GLU:HB2	1.93	0.49
1:Aa:846:G:C2	1:Aa:847:G:C4	3.00	0.49
1:Aa:851:U:HO2'	1:Aa:853:C:C5'	2.25	0.49
1:Aa:1060:U:OP1	14:An:3:LYS:NZ	2.41	0.49
17:Aq:25:VAL:HG21	17:Aq:63:ILE:HD13	1.95	0.49
19:As:36:ARG:HH21	19:As:53:ASP:HA	1.77	0.49
22:Av:24:LYS:NZ	22:Av:79:ASP:OD1	2.41	0.49
23:BA:1067:U:OP2	23:BA:1069:G:O2'	2.31	0.49
23:BA:2337:A:H2	28:BF:74:ILE:HG22	1.76	0.49
25:BC:129:ALA:HB2	25:BC:191:THR:HG22	1.95	0.49
23:AA:1115:G:N1	23:AA:1136:C:OP2	2.36	0.49
23:AA:2800:U:OP1	26:AD:179:THR:HG21	2.12	0.49
25:AC:129:ALA:HB2	25:AC:191:THR:HG22	1.95	0.49
42:AT:7:ILE:HB	42:AT:42:LYS:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ba:545:G:OP1	12:Bl:123:ARG:NH1	2.44	0.49
8:Bh:107:SER:HB2	8:Bh:128:ILE:HD11	1.94	0.49
23:BA:827:A:O2'	25:BC:224:VAL:O	2.29	0.49
28:BF:31:ILE:HD11	28:BF:34:ILE:HD11	1.93	0.49
1:Aa:848:G:C8	1:Aa:848:G:P	3.05	0.49
7:Ag:13:LEU:HD22	7:Ag:14:PRO:HD2	1.93	0.49
14:An:23:ARG:NH1	14:An:28:GLY:O	2.44	0.49
23:AA:1312:A:N7	34:AL:12:GLN:HG2	2.28	0.49
23:AA:2818:A:N6	23:AA:2824:G:O6	2.45	0.49
26:AD:37:GLN:HB3	26:AD:50:GLN:HG2	1.95	0.49
26:AD:156:MET:HE1	26:AD:164:PHE:HE2	1.77	0.49
1:Ba:107:G:H5''	1:Ba:108:A:H5''	1.94	0.49
1:Ba:578:G:O6	1:Ba:874:A:N6	2.45	0.49
3:Bc:7:PRO:O	3:Bc:11:ARG:NH1	2.44	0.49
23:BA:1325:U:O2'	23:BA:1691:G:N2	2.34	0.49
23:BA:1508:C:N4	23:BA:1509:G:O6	2.45	0.49
23:BA:2418:G:O2'	23:BA:2451:C:N4	2.46	0.49
23:BA:2598:U:O2	26:BD:156:MET:HG2	2.12	0.49
52:B4:5:PRO:O	52:B4:36:GLN:NE2	2.45	0.49
1:Aa:1069:G:O5'	3:Ac:185:HIS:NE2	2.45	0.49
7:Ag:118:ASP:O	7:Ag:122:ASN:ND2	2.46	0.49
23:AA:1067:U:OP2	23:AA:1069:G:O2'	2.31	0.49
23:AA:1208:A:H62	23:AA:1224:U:H3	1.60	0.49
23:AA:2663:U:HO2'	26:AD:46:TYR:HH	1.49	0.49
1:Ba:983:A:OP1	14:Bn:29:ARG:NH1	2.45	0.49
1:Ba:1245:U:O2'	1:Ba:1315:G:OP2	2.31	0.49
1:Ba:1302:U:OP2	7:Bg:41:ARG:NH1	2.46	0.49
23:BA:901:G:H2'	23:BA:902:A:C8	2.48	0.49
26:BD:37:GLN:HB3	26:BD:50:GLN:HG2	1.94	0.49
1:Aa:852:C:N4	2:Bb:43:LEU:H	2.11	0.49
1:Aa:1245:U:O2'	1:Aa:1315:G:OP2	2.31	0.49
23:AA:922:G:H2'	23:AA:923:A:C8	2.48	0.49
23:AA:1039:C:C6	30:AH:1:MET:HA	2.47	0.49
23:AA:1708:A:H2	31:AI:1:MET:HE3	1.78	0.49
23:AA:1759:G:H21	23:AA:1772:G:H5'	1.77	0.49
1:Ba:401:A:OP1	16:Bp:14:ARG:NH2	2.41	0.49
23:BA:1764:A:N7	23:BA:1765:A:N6	2.61	0.49
23:BA:2332:U:C1'	28:BF:152:MET:O	2.60	0.49
23:BA:2647:C:O2'	26:BD:170:PRO:O	2.18	0.49
29:BG:87:LEU:HD13	29:BG:148:ILE:HD13	1.94	0.49
1:Aa:107:G:H5''	1:Aa:108:A:H5''	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aa:1442:G:O2'	1:Aa:1479:A:N6	2.46	0.49
2:Ab:3:VAL:HG12	2:Ab:51:ASP:HB3	1.95	0.49
2:Ab:205:ASP:O	22:Av:152:GLN:NE2	2.46	0.49
5:Ae:65:GLU:OE1	5:Ae:69:LYS:NZ	2.46	0.49
19:As:55:ARG:HG2	19:As:56:LYS:HG2	1.95	0.49
28:AF:46:ASN:O	28:AF:50:LEU:N	2.40	0.49
52:A4:5:PRO:O	52:A4:36:GLN:NE2	2.45	0.49
1:Ba:194:G:H21	1:Ba:195:C:H41	1.60	0.49
1:Ba:346:A:O5'	31:Bl:97:ARG:NH1	2.46	0.49
10:Bj:6:ILE:HD12	10:Bj:76:ILE:HG13	1.95	0.49
23:BA:878:C:OP1	32:BJ:39:LYS:HE3	2.12	0.49
23:BA:2818:A:N6	23:BA:2824:G:O6	2.45	0.49
32:BJ:19:VAL:HG13	32:BJ:27:ASN:HB3	1.94	0.49
1:Aa:36:G:O2'	12:Al:128:SER:O	2.29	0.48
1:Aa:194:G:H21	1:Aa:195:C:H41	1.60	0.48
1:Aa:420:U:OP1	1:Aa:439:A:N6	2.46	0.48
1:Aa:847:G:H3'	1:Aa:848:G:C8	2.49	0.48
9:Ai:85:ILE:O	9:Ai:89:LEU:N	2.46	0.48
23:AA:928:C:N4	23:AA:937:G:OP2	2.42	0.48
23:AA:1726:A:OP2	23:AA:1743:G:N2	2.46	0.48
1:Ba:262:G:H4'	17:Bq:22:THR:HG21	1.95	0.48
1:Ba:845:G:H2'	1:Ba:846:G:O4'	2.13	0.48
2:Bb:205:ASP:O	22:Bv:152:GLN:NE2	2.45	0.48
23:BA:1072:A:N3	23:BA:2513:G:O2'	2.37	0.48
23:BA:1472:C:N4	23:BA:1617:A:OP2	2.34	0.48
1:Aa:262:G:H4'	17:Aq:22:THR:HG21	1.95	0.48
1:Aa:1137:U:O4	10:Aj:9:ARG:NH1	2.47	0.48
2:Ab:114:ILE:HB	2:Ab:144:LEU:HD23	1.94	0.48
9:Ai:89:LEU:HD23	9:Ai:100:LEU:HD21	1.95	0.48
23:AA:896:U:H2'	23:AA:897:A:H8	1.79	0.48
23:AA:901:G:H2'	23:AA:902:A:C8	2.48	0.48
23:AA:904:G:O2'	23:AA:961:G:O6	2.28	0.48
23:AA:1215:U:O2'	23:AA:1217:U:OP2	2.22	0.48
23:AA:1701:U:OP1	26:AD:149:ARG:CB	2.61	0.48
23:AA:2591:A:OP1	23:AA:2675:G:O2'	2.31	0.48
34:AL:102:ARG:HH21	34:AL:122:VAL:HG21	1.78	0.48
1:Ba:511:A:H62	1:Ba:551:G:H22	1.59	0.48
1:Ba:854:G:O5'	1:Ba:854:G:H8	1.96	0.48
7:Bg:118:ASP:O	7:Bg:122:ASN:ND2	2.46	0.48
23:BA:1003:A:N6	33:BK:83:MET:HE3	2.28	0.48
23:BA:1701:U:OP1	26:BD:149:ARG:CB	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1715:U:O2'	23:BA:1717:G:N7	2.46	0.48
23:BA:2309:G:N2	23:BA:2417:U:O2	2.43	0.48
1:Aa:860:U:C4	1:Aa:861:A:C5	3.01	0.48
10:Aj:53:ARG:O	14:An:45:ARG:NH1	2.47	0.48
12:Al:80:ILE:HG13	12:Al:110:ILE:HD12	1.95	0.48
23:AA:1453:G:H4'	23:AA:1455:U:H3	1.77	0.48
23:AA:1845:U:H3'	25:AC:157:SER:N	2.29	0.48
9:Bi:85:ILE:O	9:Bi:89:LEU:N	2.46	0.48
23:BA:1337:A:H4'	23:BA:1338:U:H5''	1.94	0.48
23:BA:2007:G:O2'	23:BA:2009:U:OP2	2.29	0.48
1:Aa:1135:G:H1	1:Aa:1160:U:H3	1.61	0.48
3:Ac:7:PRO:O	3:Ac:11:ARG:NH1	2.44	0.48
4:Ad:93:ARG:HE	4:Ad:130:SER:HA	1.78	0.48
23:AA:850:G:OP2	32:AJ:41:ARG:HG2	2.14	0.48
23:AA:1407:C:O2'	23:AA:1838:G:O2'	2.30	0.48
28:AF:61:THR:HG21	28:AF:91:LEU:HD11	1.94	0.48
1:Ba:1239:A:O2'	22:Bv:3:ARG:NH1	2.47	0.48
5:Be:65:GLU:OE1	5:Be:69:LYS:NZ	2.46	0.48
23:BA:1111:A:N1	23:BA:1139:A:O2'	2.36	0.48
23:BA:1312:A:N7	34:BL:12:GLN:HG2	2.28	0.48
23:BA:1759:G:H21	23:BA:1772:G:H5'	1.78	0.48
1:Aa:856:C:N3	1:Aa:857:C:C5	2.81	0.48
3:Ac:149:LYS:HB3	3:Ac:200:TRP:HB2	1.95	0.48
11:Ak:26:THR:OG1	11:Ak:28:ASN:O	2.30	0.48
23:AA:284:C:O2'	23:AA:287:G:N2	2.32	0.48
23:AA:2642:U:H1'	48:AZ:4:PRO:HB3	1.96	0.48
26:AD:56:LYS:HD3	26:AD:86:ARG:HG2	1.96	0.48
1:Ba:420:U:OP1	1:Ba:439:A:N6	2.46	0.48
1:Ba:1135:G:H1	1:Ba:1160:U:H3	1.61	0.48
1:Ba:1137:U:O4	10:Bj:9:ARG:NH1	2.47	0.48
2:Bb:86:ARG:NH1	2:Bb:215:ALA:O	2.47	0.48
23:BA:809:A:H61	23:BA:1816:A:H8	1.61	0.48
23:BA:1510:U:O2	23:BA:1571:G:N2	2.43	0.48
23:AA:588:G:N2	23:AA:589:U:O4	2.40	0.48
23:AA:955:A:H62	33:AK:12:GLN:HA	1.78	0.48
23:AA:2392:G:N7	51:A3:39:LYS:NZ	2.57	0.48
1:Ba:846:G:C5	1:Ba:847:G:H8	2.21	0.48
2:Bb:3:VAL:HG12	2:Bb:51:ASP:HB3	1.95	0.48
15:Bo:40:ASN:HB3	23:BA:761:A:H5'	1.93	0.48
23:BA:896:U:H2'	23:BA:897:A:H8	1.79	0.48
23:BA:2642:U:H1'	48:BZ:4:PRO:HB3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2715:G:N1	23:BA:2747:U:OP2	2.32	0.48
1:Aa:843:A:OP1	18:Ar:54:ALA:CB	2.57	0.48
10:Aj:67:GLN:HB3	14:An:56:VAL:HG22	1.96	0.48
23:AA:675:G:N2	23:AA:678:A:OP2	2.39	0.48
27:AE:139:PHE:HZ	27:AE:154:VAL:HG11	1.78	0.48
27:AE:154:VAL:HA	27:AE:193:VAL:HG23	1.96	0.48
1:Ba:1533:U:H5''	11:Bk:128:ARG:HH22	1.78	0.48
4:Bd:93:ARG:HE	4:Bd:130:SER:HA	1.78	0.48
10:Bj:67:GLN:HB3	14:Bn:56:VAL:HG22	1.96	0.48
14:Bn:23:ARG:NH1	14:Bn:28:GLY:O	2.44	0.48
19:Bs:55:ARG:HG2	19:Bs:56:LYS:HG2	1.95	0.48
23:BA:1708:A:H2	31:BI:1:MET:HE3	1.78	0.48
23:BA:1781:C:N3	23:BA:2743:U:O2'	2.44	0.48
23:BA:1845:U:H3'	25:BC:157:SER:N	2.29	0.48
27:BE:164:GLU:HA	27:BE:175:VAL:HG21	1.95	0.48
1:Aa:346:A:O5'	31:AI:97:ARG:NH1	2.46	0.48
1:Aa:856:C:C2	1:Aa:857:C:C5	3.01	0.48
1:Aa:1239:A:O2'	22:Av:3:ARG:NH1	2.47	0.48
23:AA:1764:A:N7	23:AA:1765:A:N6	2.61	0.48
23:AA:2147:G:O6	23:AA:2199:U:O2'	2.28	0.48
1:Ba:13:U:O2'	1:Ba:923:A:OP2	2.31	0.48
9:Bi:50:LEU:HD11	9:Bi:81:ILE:HG13	1.96	0.48
23:BA:650:U:OP1	27:BE:103:LYS:N	2.47	0.48
23:BA:922:G:H2'	23:BA:923:A:C8	2.48	0.48
1:Aa:1302:U:OP2	7:Ag:41:ARG:NH1	2.46	0.48
23:AA:1003:A:N6	33:AK:83:MET:HE3	2.28	0.48
1:Ba:1022:G:N1	1:Ba:1025:A:OP2	2.38	0.48
23:BA:489:A:OP1	27:BE:45:ARG:HG3	2.14	0.48
26:BD:10:ILE:HB	26:BD:27:VAL:HG13	1.96	0.48
27:BE:139:PHE:HZ	27:BE:154:VAL:HG11	1.78	0.48
1:Aa:503:A:H61	4:Ad:112:GLN:HE22	1.62	0.48
22:Av:136:SER:CA	22:Bv:184:LEU:O	2.44	0.48
23:AA:1979:A:N3	23:AA:2587:C:O2'	2.42	0.48
24:AB:12:U:OP2	24:AB:68:U:O2'	2.32	0.48
25:AC:84:ASP:OD2	25:AC:87:ARG:NH1	2.41	0.48
1:Ba:11:A:O2'	1:Ba:515:C:O2'	2.31	0.48
2:Bb:16:PHE:CD1	22:Bv:143:PRO:HG3	2.40	0.48
6:Bf:5:GLU:HG3	6:Bf:64:ARG:HG2	1.96	0.48
12:Bl:80:ILE:HG13	12:Bl:110:ILE:HD12	1.95	0.48
23:BA:1324:A:N7	34:BL:111:GLY:HA3	2.29	0.48
23:BA:2134:C:N4	23:BA:2208:A:OP2	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BL:102:ARG:HH21	34:BL:122:VAL:HG21	1.78	0.48
1:Aa:13:U:O2'	1:Aa:923:A:OP2	2.31	0.47
1:Aa:634:U:OP1	16:Ap:19:ARG:NH1	2.47	0.47
2:Ab:39:TYR:C	2:Ab:40:ILE:HD13	2.38	0.47
6:Af:5:GLU:HG3	6:Af:64:ARG:HG2	1.96	0.47
23:AA:1065:A:H2'	23:AA:1066:G:H4'	1.96	0.47
23:AA:1737:U:H5''	23:AA:1738:C:H5	1.79	0.47
23:AA:1826:G:O6	25:AC:178:SER:HB2	2.14	0.47
4:Bd:53:GLU:HG3	4:Bd:193:LEU:HD21	1.96	0.47
9:Bi:89:LEU:HD23	9:Bi:100:LEU:HD21	1.95	0.47
23:BA:576:U:O2	23:BA:605:U:O2'	2.29	0.47
23:BA:629:A:N1	23:BA:854:G:O2'	2.44	0.47
23:BA:2707:C:H1'	26:BD:200:ASN:HD22	1.78	0.47
41:BS:79:THR:OG1	41:BS:94:ALA:O	2.32	0.47
1:Aa:846:G:N2	1:Aa:858:C:N3	2.61	0.47
2:Ab:200:ILE:HG21	2:Ab:213:LEU:HD11	1.96	0.47
20:At:17:ALA:O	20:At:21:ASN:ND2	2.47	0.47
23:AA:1388:C:O2'	23:AA:1618:A:N3	2.45	0.47
23:AA:1825:U:OP2	25:AC:274:ARG:NH2	2.47	0.47
1:Ba:82:G:N1	1:Ba:87:C:O2	2.48	0.47
1:Ba:634:U:OP1	16:Bp:19:ARG:NH1	2.47	0.47
1:Ba:846:G:O2'	1:Ba:847:G:OP1	2.27	0.47
1:Ba:1230:G:OP2	19:Bs:37:ARG:NH2	2.47	0.47
23:BA:1826:G:O6	25:BC:178:SER:HB2	2.14	0.47
33:BK:54:MET:HG3	33:BK:58:MET:HE2	1.97	0.47
23:AA:1137:G:O2'	23:AA:1143:G:O6	2.29	0.47
23:AA:1553:A:O2'	23:AA:1555:G:N2	2.48	0.47
23:AA:1581:U:C5	23:AA:1584:U:H6	2.32	0.47
23:AA:2338:A:O2'	23:AA:2339:U:O4'	2.31	0.47
1:Ba:52:A:N7	1:Ba:113:U:O2'	2.48	0.47
20:Bt:17:ALA:O	20:Bt:21:ASN:ND2	2.47	0.47
23:BA:1581:U:C5	23:BA:1584:U:H6	2.32	0.47
23:BA:2591:A:OP1	23:BA:2675:G:O2'	2.31	0.47
24:BB:4:G:H1	24:BB:111:C:H41	1.63	0.47
27:BE:154:VAL:HA	27:BE:193:VAL:HG23	1.96	0.47
1:Aa:11:A:O2'	1:Aa:515:C:O2'	2.31	0.47
1:Aa:324:C:OP2	1:Aa:359:G:O2'	2.31	0.47
1:Aa:1230:G:OP2	19:As:37:ARG:NH2	2.47	0.47
23:AA:545:G:N1	23:AA:548:A:OP2	2.45	0.47
11:Bk:17:GLU:HA	11:Bk:80:LYS:H	1.79	0.47
15:Bo:33:THR:HG22	15:Bo:63:ARG:HH21	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1175:G:N2	23:BA:1176:U:O4	2.43	0.47
23:BA:1553:A:O2'	23:BA:1555:G:N2	2.48	0.47
23:BA:2392:G:N7	51:B3:39:LYS:NZ	2.57	0.47
1:Aa:846:G:C2	1:Aa:858:C:N3	2.82	0.47
2:Ab:86:ARG:NH1	2:Ab:215:ALA:O	2.47	0.47
23:AA:614:U:H3'	38:AP:79:ARG:HH12	1.80	0.47
23:AA:1715:U:O2'	23:AA:1717:G:N7	2.46	0.47
23:AA:2707:C:H1'	26:AD:200:ASN:HD22	1.78	0.47
27:AE:164:GLU:HA	27:AE:175:VAL:HG21	1.95	0.47
51:A3:26:ARG:NH1	51:A3:43:GLN:O	2.48	0.47
1:Ba:421:G:H4'	1:Ba:436:G:H22	1.79	0.47
1:Ba:854:G:C2	1:Ba:855:C:N1	2.82	0.47
23:BA:850:G:OP2	32:BJ:41:ARG:HG2	2.14	0.47
26:BD:189:ASP:OD2	26:BD:192:ASN:ND2	2.42	0.47
1:Aa:401:A:OP1	16:Ap:14:ARG:NH2	2.41	0.47
1:Aa:1533:U:H5''	11:Ak:128:ARG:HH22	1.78	0.47
23:AA:661:U:C5'	27:AE:106:ARG:HD3	2.45	0.47
3:Bc:78:LYS:H	3:Bc:81:SER:HB2	1.80	0.47
15:Bo:57:LEU:HD23	23:BA:761:A:OP1	2.14	0.47
23:BA:45:G:N7	23:BA:218:G:O2'	2.38	0.47
23:BA:926:G:O2'	23:BA:942:C:O2	2.33	0.47
23:BA:1512:U:H2'	23:BA:1513:A:C8	2.49	0.47
23:BA:1796:A:O2'	23:BA:1985:C:OP1	2.33	0.47
23:BA:1918:G:HO2'	23:BA:2262:G:HO2'	1.61	0.47
23:BA:2775:A:H1'	29:BG:67:THR:CG2	2.36	0.47
26:BD:56:LYS:HD3	26:BD:86:ARG:HG2	1.96	0.47
1:Aa:421:G:H4'	1:Aa:436:G:H22	1.79	0.47
2:Ab:183:ILE:HG23	2:Ab:197:ASP:H	1.80	0.47
4:Ad:53:GLU:HG3	4:Ad:193:LEU:HD21	1.96	0.47
15:Ao:40:ASN:HB3	23:AA:761:A:H5'	1.93	0.47
23:AA:489:A:OP1	27:AE:45:ARG:HG3	2.14	0.47
23:AA:614:U:O2'	38:AP:79:ARG:NH2	2.48	0.47
23:AA:650:U:OP1	27:AE:103:LYS:N	2.47	0.47
23:AA:1113:A:H2	23:AA:1138:U:H3	1.63	0.47
23:AA:1682:C:O2	23:AA:2725:U:O2'	2.28	0.47
2:Bb:183:ILE:HG23	2:Bb:197:ASP:H	1.80	0.47
2:Bb:195:GLU:HG2	2:Bb:196:ILE:HD12	1.97	0.47
2:Bb:200:ILE:HG21	2:Bb:213:LEU:HD11	1.96	0.47
3:Bc:149:LYS:HB3	3:Bc:200:TRP:HB2	1.95	0.47
5:Be:36:LEU:HD13	5:Be:134:ILE:HD13	1.96	0.47
23:BA:1065:A:H2'	23:BA:1066:G:H4'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1315:C:H2'	23:BA:1316:G:H8	1.80	0.47
31:BI:80:ASP:OD2	36:BN:64:ARG:NH2	2.39	0.47
31:BI:115:VAL:HG13	31:BI:121:VAL:HG21	1.97	0.47
35:BM:14:ARG:HD2	35:BM:98:GLY:O	2.15	0.47
35:BM:42:ALA:HB2	35:BM:108:LEU:HD21	1.96	0.47
39:BQ:28:ASN:HA	39:BQ:70:VAL:HA	1.96	0.47
1:Aa:845:G:N2	1:Aa:859:U:N1	2.63	0.47
23:AA:504:G:N2	23:AA:505:U:O4	2.45	0.47
23:AA:809:A:H61	23:AA:1816:A:H8	1.61	0.47
23:AA:926:G:O2'	23:AA:942:C:O2	2.33	0.47
23:AA:1455:U:O2'	23:AA:1457:U:O4	2.31	0.47
23:AA:1512:U:H2'	23:AA:1513:A:C8	2.49	0.47
23:AA:1818:A:N6	23:AA:1855:G:O2'	2.42	0.47
23:AA:1826:G:OP1	25:AC:260:ARG:HD2	2.15	0.47
23:AA:1862:G:H1	23:AA:1932:C:H5	1.63	0.47
23:AA:2663:U:O2'	26:AD:46:TYR:OH	2.16	0.47
23:AA:2715:G:N1	23:AA:2747:U:OP2	2.32	0.47
23:AA:2904:U:H5	48:AZ:40:HIS:CD2	2.33	0.47
31:AI:115:VAL:HG13	31:AI:121:VAL:HG21	1.97	0.47
1:Ba:855:C:C2'	1:Ba:856:C:C6	2.86	0.47
1:Ba:858:C:N4	1:Ba:859:U:O4	2.48	0.47
1:Ba:1179:A:O2'	1:Ba:1180:A:O4'	2.33	0.47
20:Bt:32:VAL:HG12	20:Bt:53:ALA:HB1	1.97	0.47
46:BX:15:ARG:O	46:BX:20:ARG:NH1	2.48	0.47
1:Aa:1076:U:OP2	1:Aa:1200:G:N2	2.47	0.47
3:Ac:78:LYS:H	3:Ac:81:SER:HB2	1.80	0.47
11:Ak:17:GLU:HA	11:Ak:80:LYS:H	1.79	0.47
23:AA:1326:C:OP1	23:AA:1691:G:N1	2.47	0.47
33:AK:54:MET:HG3	33:AK:58:MET:HE2	1.97	0.47
1:Ba:503:A:H61	4:Bd:112:GLN:HE22	1.62	0.47
1:Ba:535:G:O6	12:Bl:59:ASN:ND2	2.40	0.47
1:Ba:670:A:O2'	1:Ba:844:G:OP1	2.31	0.47
4:Bd:94:LEU:HB3	4:Bd:114:VAL:HG21	1.97	0.47
6:Bf:10:VAL:HG12	6:Bf:86:ILE:HG13	1.97	0.47
23:BA:700:A:H4'	23:BA:701:G:H5'	1.97	0.47
23:BA:1625:U:H2'	23:BA:1626:A:H8	1.80	0.47
23:BA:1826:G:OP1	25:BC:260:ARG:HD2	2.15	0.47
51:B3:26:ARG:NH1	51:B3:43:GLN:O	2.48	0.47
8:Ah:127:ILE:HD11	8:Ah:130:TYR:HE1	1.80	0.47
23:AA:372:A:N6	41:AS:15:LYS:HG2	2.19	0.47
23:AA:1055:A:OP1	37:AO:75:SER:HB3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AA:1290:G:H1	37:AO:37:GLN:NE2	2.04	0.47
23:AA:1324:A:N7	34:AL:111:GLY:HA3	2.29	0.47
26:AD:50:GLN:HB3	26:AD:90:GLU:HG2	1.97	0.47
49:A1:17:TYR:OH	49:A1:35:TYR:O	2.32	0.47
1:Ba:846:G:H2'	1:Ba:847:G:C5'	2.45	0.47
13:Bm:53:LEU:HD12	13:Bm:56:ILE:HD11	1.97	0.47
24:BB:12:U:OP2	24:BB:68:U:O2'	2.32	0.47
1:Aa:52:A:N7	1:Aa:113:U:O2'	2.48	0.46
23:AA:2686:G:O2'	29:AG:176:THR:HG21	2.15	0.46
39:AQ:28:ASN:HA	39:AQ:70:VAL:HA	1.96	0.46
1:Ba:1041:C:O2'	1:Ba:1042:G:O4'	2.33	0.46
1:Ba:1263:G:H1	1:Ba:1294:C:H42	1.62	0.46
12:Bl:43:LYS:HB3	12:Bl:70:LEU:HD23	1.98	0.46
23:BA:614:U:H3'	38:BP:79:ARG:HH12	1.80	0.46
23:BA:615:A:OP2	38:BP:79:ARG:NH2	2.49	0.46
23:BA:616:G:O2'	23:BA:618:A:OP1	2.30	0.46
23:BA:2598:U:O2'	26:BD:159:ASP:HB2	2.15	0.46
2:Ab:195:GLU:HG2	2:Ab:196:ILE:HD12	1.97	0.46
3:Ac:6:ASN:HD21	14:An:49:TYR:HB3	1.80	0.46
9:Ai:17:SER:OG	9:Ai:76:GLY:O	2.34	0.46
23:AA:1448:U:N3	23:AA:1635:A:N1	2.45	0.46
23:AA:1818:A:O3'	25:AC:205:VAL:CG2	2.63	0.46
24:AB:6:U:H4'	35:AM:32:ASN:HD21	1.80	0.46
32:AJ:23:VAL:HG13	38:AP:81:ASN:HB3	1.97	0.46
1:Ba:1187:G:N2	1:Ba:1188:G:N7	2.63	0.46
23:BA:201:C:H1'	23:BA:2461:A:H61	1.80	0.46
23:BA:351:G:HO2'	41:BS:15:LYS:HZ2	1.57	0.46
23:BA:661:U:C5'	27:BE:106:ARG:HD3	2.45	0.46
23:BA:1110:U:N3	23:BA:1114:A:OP2	2.42	0.46
23:BA:1737:U:H5''	23:BA:1738:C:H5	1.79	0.46
23:BA:1818:A:O3'	25:BC:205:VAL:CG2	2.63	0.46
24:BB:6:U:H4'	35:BM:32:ASN:HD21	1.80	0.46
26:BD:50:GLN:HB3	26:BD:90:GLU:HG2	1.97	0.46
52:B4:3:VAL:HG12	52:B4:35:ARG:HG3	1.97	0.46
1:Aa:1290:A:OP2	10:Aj:9:ARG:NH2	2.47	0.46
9:Ai:50:LEU:HD11	9:Ai:81:ILE:HG13	1.96	0.46
23:AA:1110:U:N3	23:AA:1114:A:OP2	2.42	0.46
23:AA:2022:U:H3'	23:AA:2023:C:H2'	1.97	0.46
23:AA:2775:A:H1'	29:AG:67:THR:CG2	2.36	0.46
24:AB:4:G:H1	24:AB:111:C:H41	1.62	0.46
26:AD:10:ILE:HB	26:AD:27:VAL:HG13	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AF:36:VAL:HG12	28:AF:154:ILE:HG13	1.97	0.46
1:Ba:413:U:H5''	1:Ba:414:G:H5'	1.97	0.46
1:Ba:848:G:C6	1:Ba:849:U:C4	3.04	0.46
1:Ba:850:U:H3	1:Ba:851:U:H3	1.63	0.46
23:BA:829:U:H5''	25:BC:226:ASN:HD21	1.81	0.46
23:BA:1475:A:N6	23:BA:1606:C:O2	2.48	0.46
23:BA:1726:A:OP2	23:BA:1743:G:N2	2.46	0.46
23:BA:2231:C:H5'	25:BC:147:LYS:CD	2.43	0.46
23:BA:2815:C:O2'	23:BA:2829:A:N3	2.44	0.46
1:Aa:82:G:N1	1:Aa:87:C:O2	2.48	0.46
12:Al:4:ILE:HD11	17:Aq:36:TYR:HB3	1.98	0.46
23:AA:1781:C:N3	23:AA:2743:U:O2'	2.44	0.46
23:AA:1796:A:O2'	23:AA:1985:C:OP1	2.33	0.46
23:AA:1807:A:H3'	23:AA:1808:U:H2'	1.97	0.46
31:Al:80:ASP:OD2	36:AN:64:ARG:NH2	2.39	0.46
1:Ba:844:G:O6	1:Ba:859:U:O2	2.34	0.46
1:Ba:849:U:H2'	1:Ba:850:U:H4'	1.98	0.46
1:Ba:932:A:O2'	1:Ba:1409:C:OP2	2.33	0.46
3:Bc:6:ASN:HD21	14:Bn:49:TYR:HB3	1.80	0.46
23:BA:418:G:O2'	23:BA:446:G:O6	2.31	0.46
23:BA:1482:U:H2'	23:BA:1483:A:H8	1.80	0.46
1:Aa:856:C:C2	1:Aa:857:C:C6	3.04	0.46
12:Al:43:LYS:HB3	12:Al:70:LEU:HD23	1.98	0.46
23:AA:26:G:N2	23:AA:558:A:OP2	2.38	0.46
23:AA:33:U:O4	23:AA:492:G:O2'	2.34	0.46
23:AA:282:A:H2'	23:AA:283:G:H8	1.81	0.46
23:AA:615:A:OP2	38:AP:79:ARG:NH2	2.49	0.46
23:AA:640:G:O2'	32:AJ:11:GLY:O	2.28	0.46
23:AA:1284:A:H4'	27:AE:45:ARG:HH12	1.81	0.46
23:AA:2648:G:P	26:AD:133:ARG:HH22	2.29	0.46
25:AC:107:PRO:HD2	25:AC:110:LEU:HD22	1.98	0.46
35:AM:14:ARG:HD2	35:AM:98:GLY:O	2.15	0.46
2:Bb:74:LYS:CD	22:Bv:155:LEU:CD2	2.82	0.46
10:Bj:53:ARG:O	14:Bn:45:ARG:NH1	2.47	0.46
23:BA:242:U:O2'	23:BA:667:G:O2'	2.29	0.46
23:BA:504:G:O2'	23:BA:515:G:O6	2.30	0.46
23:BA:2231:C:C5'	25:BC:147:LYS:CD	2.94	0.46
25:BC:132:LEU:HD23	25:BC:135:ILE:HD12	1.98	0.46
30:BH:2:ARG:HB2	37:BO:93:LYS:HZ3	1.80	0.46
1:Aa:725:C:H4'	11:Ak:119:ASN:HB3	1.98	0.46
1:Aa:1041:C:O2'	1:Aa:1042:G:O4'	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aa:1179:A:O2'	1:Aa:1180:A:O4'	2.33	0.46
1:Aa:1527:G:N2	1:Aa:1530:A:OP2	2.39	0.46
5:Ae:36:LEU:HD13	5:Ae:134:ILE:HD13	1.96	0.46
22:Av:184:LEU:O	22:Bv:136:SER:CA	2.44	0.46
23:AA:378:C:OP2	41:AS:80:ARG:NH1	2.48	0.46
23:AA:1475:A:N6	23:AA:1606:C:O2	2.48	0.46
23:AA:1625:U:H2'	23:AA:1626:A:H8	1.80	0.46
23:AA:1708:A:C2	31:AI:1:MET:HE3	2.51	0.46
23:AA:1930:G:OP1	25:AC:240:PRO:HB2	2.16	0.46
46:AX:15:ARG:O	46:AX:20:ARG:NH1	2.48	0.46
1:Ba:525:G:N2	1:Ba:538:G:OP1	2.44	0.46
12:Bl:4:ILE:HD11	17:Bq:36:TYR:HB3	1.98	0.46
23:BA:955:A:H62	33:BK:12:GLN:HA	1.78	0.46
23:BA:1284:A:H4'	27:BE:45:ARG:HH12	1.81	0.46
23:BA:1930:G:OP1	25:BC:240:PRO:HB2	2.16	0.46
26:BD:189:ASP:HB3	26:BD:194:VAL:HG22	1.98	0.46
1:Aa:850:U:C4	1:Aa:851:U:C4	3.03	0.46
6:Af:10:VAL:HG12	6:Af:86:ILE:HG13	1.97	0.46
23:AA:329:A:N6	23:AA:396:G:O6	2.49	0.46
23:AA:2838:C:OP1	23:AA:2857:A:O2'	2.32	0.46
26:AD:189:ASP:HB3	26:AD:194:VAL:HG22	1.98	0.46
23:BA:43:A:H62	23:BA:482:U:H3	1.64	0.46
23:BA:614:U:O2'	38:BP:79:ARG:NH2	2.48	0.46
23:BA:2443:C:OP1	32:BJ:64:ARG:HB2	2.16	0.46
23:BA:2663:U:O2'	26:BD:46:TYR:OH	2.16	0.46
23:BA:2904:U:H5	48:BZ:40:HIS:CD2	2.33	0.46
23:AA:1944:U:H4'	23:AA:1947:C:H41	1.81	0.46
23:AA:2443:C:OP1	32:AJ:64:ARG:HB2	2.15	0.46
27:AE:7:LEU:HB2	27:AE:126:VAL:HG12	1.98	0.46
1:Ba:858:C:C5	1:Ba:859:U:H5	2.31	0.46
8:Bh:127:ILE:HD11	8:Bh:130:TYR:HE1	1.80	0.46
16:Bp:19:ARG:HA	16:Bp:39:THR:HA	1.98	0.46
23:BA:631:U:H1'	27:BE:90:PHE:HB3	1.98	0.46
23:BA:1184:C:OP1	30:BH:26:LEU:HB3	2.16	0.46
23:BA:2022:U:H3'	23:BA:2023:C:H2'	1.97	0.46
28:BF:58:GLU:HB3	47:BY:7:PRO:HG2	1.98	0.46
29:BG:121:ILE:HD11	29:BG:140:GLN:HG3	1.98	0.46
33:BK:46:GLN:HB3	33:BK:125:LEU:HD13	1.97	0.46
34:BL:24:LEU:HD23	34:BL:30:ILE:HG12	1.97	0.46
41:BS:33:VAL:HG13	41:BS:65:VAL:HG22	1.98	0.46
1:Aa:1263:G:H1	1:Aa:1294:C:H42	1.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Ab:32:PHE:HD2	2:Ab:40:ILE:HG21	1.81	0.46
2:Ab:162:PHE:HD1	2:Ab:184:VAL:HG13	1.81	0.46
23:AA:201:C:H1'	23:AA:2461:A:H61	1.80	0.46
23:AA:720:A:N3	23:AA:2470:C:O2'	2.47	0.46
23:AA:2598:U:O2'	26:AD:159:ASP:HB2	2.15	0.46
28:AF:58:GLU:HB3	47:AY:7:PRO:HG2	1.98	0.46
33:AK:46:GLN:HB3	33:AK:125:LEU:HD13	1.98	0.46
34:AL:24:LEU:HD23	34:AL:30:ILE:HG12	1.97	0.46
39:AQ:11:ARG:NH1	39:AQ:98:LYS:HG3	2.31	0.46
1:Ba:847:G:C6	1:Ba:848:G:C6	3.03	0.46
1:Ba:1134:A:N6	1:Ba:1135:G:O6	2.49	0.46
12:Bl:113:GLY:H	12:Bl:117:THR:HG23	1.81	0.46
23:BA:1708:A:C2	31:Bl:1:MET:HE3	2.51	0.46
36:BN:114:GLU:HG2	36:BN:115:ILE:HG13	1.98	0.46
13:Am:53:LEU:HD12	13:Am:56:ILE:HD11	1.97	0.46
15:Ao:33:THR:HG22	15:Ao:63:ARG:HH21	1.79	0.46
23:AA:1315:C:H2'	23:AA:1316:G:H8	1.80	0.46
23:AA:2309:G:N2	23:AA:2417:U:O2	2.43	0.46
23:AA:2333:U:H3	28:AF:40:VAL:HB	1.81	0.46
52:A4:3:VAL:HG12	52:A4:35:ARG:HG3	1.97	0.46
1:Ba:411:C:H5'	4:Bd:129:PRO:HD2	1.98	0.46
1:Ba:846:G:N3	1:Ba:847:G:C1'	2.75	0.46
1:Ba:852:C:O4'	1:Ba:853:C:H5''	2.16	0.46
1:Ba:857:C:O2	1:Ba:857:C:H2'	2.15	0.46
26:BD:122:SER:HB2	26:BD:175:GLY:HA2	1.98	0.46
11:Ak:98:ARG:HH21	21:Au:16:LEU:HD13	1.81	0.45
18:Ar:61:THR:HA	18:Ar:64:ILE:HG22	1.98	0.45
20:At:32:VAL:HG12	20:At:53:ALA:HB1	1.97	0.45
23:AA:43:A:H62	23:AA:482:U:H3	1.64	0.45
23:AA:631:U:H1'	27:AE:90:PHE:HB3	1.98	0.45
23:AA:750:A:OP2	23:AA:770:G:N2	2.44	0.45
23:AA:963:A:H4'	24:AB:94:C:O2	2.16	0.45
23:AA:1184:C:OP1	30:AH:26:LEU:HB3	2.16	0.45
23:AA:2216:U:H2'	23:AA:2217:G:C8	2.51	0.45
23:AA:2277:G:H22	33:AK:84:GLY:HA3	1.81	0.45
1:Ba:844:G:C8	1:Ba:845:G:N7	2.83	0.45
1:Ba:855:C:N3	1:Ba:856:C:N4	2.64	0.45
1:Ba:1290:A:OP2	10:Bj:9:ARG:NH2	2.47	0.45
11:Bk:26:THR:OG1	11:Bk:28:ASN:O	2.30	0.45
23:BA:1121:A:O2'	23:BA:1122:U:O4'	2.34	0.45
23:BA:2232:A:H5''	25:BC:149:GLY:C	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2331:G:C4'	28:BF:129:THR:O	2.45	0.45
23:BA:2663:U:H4'	26:BD:90:GLU:OE1	2.16	0.45
23:BA:2783:U:OP2	52:B4:19:ARG:NH2	2.49	0.45
35:BM:40:ILE:HG21	35:BM:73:ALA:HA	1.98	0.45
39:BQ:11:ARG:NH1	39:BQ:98:LYS:HG3	2.31	0.45
2:Ab:81:LYS:HD3	2:Ab:93:ASN:HD21	1.81	0.45
4:Ad:101:LEU:HD23	4:Ad:165:LEU:HD22	1.98	0.45
22:Av:184:LEU:CB	22:Bv:134:ILE:CG2	2.94	0.45
23:AA:829:U:H5''	25:AC:226:ASN:HD21	1.81	0.45
23:AA:1658:A:H2	39:AQ:93:ALA:HB2	1.81	0.45
1:Ba:860:U:O5'	1:Ba:860:U:H6	1.99	0.45
2:Bb:35:ARG:N	2:Bb:38:ILE:O	2.47	0.45
23:BA:226:A:O2'	23:BA:466:C:O2	2.34	0.45
23:BA:1055:A:OP1	37:BO:75:SER:HB3	2.15	0.45
23:BA:1807:A:H3'	23:BA:1808:U:H2'	1.97	0.45
23:BA:2216:U:H2'	23:BA:2217:G:C8	2.51	0.45
23:BA:2331:G:H2'	23:BA:2334:G:H22	1.81	0.45
23:BA:2686:G:O2'	29:BG:176:THR:HG21	2.15	0.45
28:BF:36:VAL:HG12	28:BF:154:ILE:HG13	1.97	0.45
35:BM:19:ARG:NH2	35:BM:47:ASP:OD1	2.45	0.45
1:Aa:842:U:H2'	1:Aa:843:A:C8	2.51	0.45
1:Aa:849:U:H2'	1:Aa:850:U:H4'	1.99	0.45
23:AA:1039:C:C5	30:AH:1:MET:HA	2.51	0.45
1:Ba:333:A:OP2	20:Bt:64:ASN:ND2	2.50	0.45
1:Ba:1166:G:H21	1:Ba:1189:A:H61	1.63	0.45
11:Bk:83:GLU:HB2	11:Bk:109:ALA:HB3	1.98	0.45
11:Bk:98:ARG:HH21	21:Bu:16:LEU:HD13	1.81	0.45
17:Bq:23:ILE:HD11	17:Bq:77:LEU:HD21	1.98	0.45
23:BA:378:C:OP2	41:BS:80:ARG:NH1	2.48	0.45
23:BA:1095:A:N6	23:BA:1153:C:O2	2.50	0.45
23:BA:1862:G:H1	23:BA:1932:C:H5	1.63	0.45
23:BA:1944:U:H4'	23:BA:1947:C:H41	1.81	0.45
23:BA:2333:U:H3	28:BF:40:VAL:HB	1.81	0.45
23:BA:2904:U:C5	48:BZ:40:HIS:ND1	2.84	0.45
27:BE:7:LEU:HB2	27:BE:126:VAL:HG12	1.98	0.45
1:Aa:413:U:H5''	1:Aa:414:G:H5'	1.97	0.45
1:Aa:435:C:OP1	4:Ad:13:ARG:NH1	2.50	0.45
23:AA:410:G:O2'	23:AA:411:A:N7	2.49	0.45
23:AA:1102:U:H2'	23:AA:1103:G:C8	2.51	0.45
23:AA:1845:U:H5''	25:AC:157:SER:HB2	1.98	0.45
23:AA:2231:C:H5'	25:AC:147:LYS:CD	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AA:2783:U:OP2	52:A4:19:ARG:NH2	2.49	0.45
25:AC:132:LEU:HD23	25:AC:135:ILE:HD12	1.98	0.45
7:Bg:49:LEU:HG	7:Bg:53:ARG:HE	1.82	0.45
23:BA:1102:U:H2'	23:BA:1103:G:C8	2.51	0.45
23:BA:1113:A:H2	23:BA:1138:U:H3	1.63	0.45
23:BA:2277:G:H22	33:BK:84:GLY:HA3	1.81	0.45
1:Aa:846:G:C4	1:Aa:847:G:H8	2.25	0.45
1:Aa:854:G:H2'	1:Aa:855:C:C4'	2.47	0.45
4:Ad:94:LEU:HB3	4:Ad:114:VAL:HG21	1.97	0.45
17:Aq:23:ILE:HD11	17:Aq:77:LEU:HD21	1.98	0.45
23:AA:325:A:H2	23:AA:401:U:H1'	1.82	0.45
23:AA:629:A:N1	23:AA:854:G:O2'	2.44	0.45
23:AA:878:C:OP1	32:AJ:39:LYS:CE	2.65	0.45
23:AA:2231:C:C5'	25:AC:147:LYS:CD	2.94	0.45
23:AA:2272:U:H5''	23:AA:2273:G:H5'	1.99	0.45
35:AM:40:ILE:HG21	35:AM:73:ALA:HA	1.98	0.45
1:Ba:36:G:O2'	12:Bl:128:SER:O	2.29	0.45
2:Bb:36:ASN:C	2:Bb:38:ILE:H	2.25	0.45
23:BA:282:A:H2'	23:BA:283:G:H8	1.81	0.45
23:BA:1039:C:C5	30:BH:1:MET:HA	2.51	0.45
25:BC:107:PRO:HD2	25:BC:110:LEU:HD22	1.98	0.45
31:BI:87:ILE:HA	31:BI:93:PRO:HA	1.99	0.45
32:BJ:23:VAL:HG13	38:BP:81:ASN:HB3	1.97	0.45
40:BR:64:ARG:HG3	40:BR:69:GLN:HA	1.99	0.45
23:AA:700:A:H4'	23:AA:701:G:H5'	1.97	0.45
23:AA:1415:A:O2'	23:AA:1417:G:OP2	2.35	0.45
23:AA:1819:G:O2'	23:AA:1857:C:OP1	2.34	0.45
23:AA:2232:A:H5''	25:AC:149:GLY:C	2.41	0.45
23:AA:2331:G:H2'	23:AA:2334:G:H22	1.81	0.45
23:AA:2386:C:O2'	51:A3:54:ASP:OD2	2.31	0.45
23:AA:2663:U:H4'	26:AD:90:GLU:OE1	2.16	0.45
23:AA:2904:U:C5	48:AZ:40:HIS:ND1	2.84	0.45
1:Ba:858:C:C2	1:Ba:859:U:C6	3.04	0.45
1:Ba:984:A:H4'	1:Ba:985:G:H5''	1.99	0.45
2:Bb:162:PHE:HD1	2:Bb:184:VAL:HG13	1.81	0.45
8:Bh:41:LYS:NZ	8:Bh:48:ASN:OD1	2.39	0.45
23:BA:1038:C:O2'	38:BP:10:LYS:HE2	2.16	0.45
23:BA:1415:A:O2'	23:BA:1417:G:OP2	2.35	0.45
27:BE:117:LYS:NZ	27:BE:189:ALA:O	2.39	0.45
1:Aa:850:U:C4	1:Aa:851:U:N3	2.84	0.45
1:Aa:1134:A:N6	1:Aa:1135:G:O6	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Ag:99:LEU:HA	7:Ag:102:ARG:HD3	1.98	0.45
23:AA:226:A:O2'	23:AA:466:C:O2	2.34	0.45
29:AG:121:ILE:HD11	29:AG:140:GLN:HG3	1.98	0.45
1:Ba:725:C:H4'	11:Bk:119:ASN:HB3	1.98	0.45
1:Ba:848:G:N3	1:Ba:848:G:H2'	2.31	0.45
4:Bd:101:LEU:HD23	4:Bd:165:LEU:HD22	1.98	0.45
23:BA:33:U:O4	23:BA:492:G:O2'	2.34	0.45
23:BA:329:A:N6	23:BA:396:G:O6	2.49	0.45
23:BA:1039:C:O2'	37:BO:93:LYS:NZ	2.49	0.45
23:BA:1284:A:HO2'	27:BE:45:ARG:NH2	2.08	0.45
23:BA:1463:A:H2'	23:BA:1465:G:C8	2.51	0.45
23:BA:1482:U:H3	23:BA:1601:U:H5	1.65	0.45
23:BA:1582:U:O5'	23:BA:1583:G:N2	2.50	0.45
23:BA:2231:C:OP2	25:BC:150:LYS:NZ	2.42	0.45
38:BP:20:ILE:HG12	38:BP:97:ILE:HD11	1.99	0.45
5:Ae:156:LEU:O	8:Ah:65:LYS:NZ	2.50	0.45
11:Ak:83:GLU:HB2	11:Ak:109:ALA:HB3	1.98	0.45
15:Ao:43:LEU:HD13	23:AA:761:A:H2'	1.99	0.45
23:AA:1113:A:O2'	23:AA:1141:U:OP1	2.35	0.45
23:AA:1290:G:N2	37:AO:33:LYS:HB3	2.32	0.45
23:AA:2338:A:C8	28:AF:40:VAL:CG1	2.94	0.45
23:AA:2662:U:O2'	26:AD:90:GLU:OE2	2.28	0.45
35:AM:7:LYS:O	35:AM:11:ARG:HB2	2.16	0.45
36:AN:114:GLU:HG2	36:AN:115:ILE:HG13	1.98	0.45
1:Ba:216:G:O2'	1:Ba:476:C:O2	2.32	0.45
2:Bb:81:LYS:HD3	2:Bb:93:ASN:HD21	1.81	0.45
10:Bj:8:ILE:N	10:Bj:74:ILE:O	2.42	0.45
14:Bn:24:CYS:HB2	14:Bn:27:CYS:HB2	1.99	0.45
18:Br:61:THR:HA	18:Br:64:ILE:HG22	1.98	0.45
23:BA:252:C:OP2	23:BA:2421:C:O2'	2.33	0.45
23:BA:325:A:H2	23:BA:401:U:H1'	1.82	0.45
23:BA:787:U:H2'	23:BA:788:A:C8	2.52	0.45
23:BA:1326:C:OP1	23:BA:1691:G:N1	2.47	0.45
23:BA:1819:G:O2'	23:BA:1857:C:OP1	2.34	0.45
23:BA:1825:U:OP2	25:BC:274:ARG:NH2	2.47	0.45
23:BA:2056:G:N1	23:BA:2060:A:OP2	2.38	0.45
1:Aa:851:U:N1	1:Aa:853:C:H5''	2.30	0.45
8:Ah:41:LYS:NZ	8:Ah:48:ASN:OD1	2.39	0.45
23:AA:1095:A:N6	23:AA:1153:C:O2	2.50	0.45
23:AA:1242:A:O2'	32:AJ:4:HIS:HD2	2.00	0.45
23:AA:1463:A:H2'	23:AA:1465:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:AI:87:ILE:HA	31:AI:93:PRO:HA	1.99	0.45
35:AM:42:ALA:HB2	35:AM:108:LEU:HD21	1.97	0.45
40:AR:64:ARG:HG3	40:AR:69:GLN:HA	1.99	0.45
1:Ba:435:C:OP1	4:Bd:13:ARG:NH1	2.50	0.45
23:BA:54:G:HO2'	50:B2:36:ARG:HH11	1.57	0.45
23:BA:1482:U:H2'	23:BA:1483:A:C8	2.52	0.45
23:BA:1533:A:N7	25:BC:96:TYR:CA	2.73	0.45
23:BA:1539:A:N3	23:BA:1624:C:O2'	2.47	0.45
23:BA:1847:U:C2	25:BC:201:GLU:HB3	2.51	0.45
23:BA:2272:U:H5''	23:BA:2273:G:H5'	1.99	0.45
1:Aa:464:A:N6	1:Aa:465:U:O4	2.50	0.45
1:Aa:847:G:C6	1:Aa:848:G:O6	2.70	0.45
1:Aa:848:G:C8	1:Aa:848:G:OP2	2.70	0.45
1:Aa:1187:G:N2	1:Aa:1188:G:N7	2.63	0.45
5:Ae:14:ARG:NH1	5:Ae:116:GLU:OE1	2.46	0.45
23:AA:1038:C:O2'	38:AP:10:LYS:HE2	2.16	0.45
23:AA:1539:A:N3	23:AA:1624:C:O2'	2.47	0.45
23:AA:2333:U:N3	28:AF:40:VAL:HG23	2.32	0.45
23:AA:2450:U:O2	23:AA:2459:A:O2'	2.31	0.45
32:AJ:77:VAL:HG13	32:AJ:111:ILE:HD13	1.99	0.45
1:Ba:848:G:O6	1:Ba:849:U:C4	2.70	0.45
1:Ba:854:G:O5'	1:Ba:854:G:C8	2.70	0.45
2:Bb:18:HIS:HB2	2:Bb:189:THR:HB	1.99	0.45
3:Bc:30:SER:HA	3:Bc:33:HIS:HD2	1.82	0.45
11:Bk:17:GLU:HG2	11:Bk:80:LYS:HB2	2.00	0.45
23:BA:26:G:N2	23:BA:558:A:OP2	2.37	0.45
23:BA:534:G:H4'	39:BQ:49:LYS:HD2	1.98	0.45
23:BA:963:A:H4'	24:BB:94:C:O2	2.16	0.45
23:BA:2903:A:H5'	23:BA:2904:U:H5'	1.99	0.45
51:B3:11:ALA:O	51:B3:65:LYS:NZ	2.50	0.45
1:Aa:858:C:OP2	1:Aa:858:C:H6	1.99	0.44
2:Ab:17:GLY:C	2:Ab:38:ILE:CD1	2.79	0.44
2:Ab:32:PHE:CZ	1:Ba:852:C:C5	3.05	0.44
7:Ag:49:LEU:HG	7:Ag:53:ARG:HE	1.81	0.44
23:AA:646:A:N1	23:AA:670:G:O2'	2.48	0.44
23:AA:1039:C:O2'	37:AO:93:LYS:NZ	2.49	0.44
23:AA:1581:U:P	23:AA:1584:U:C5	3.10	0.44
23:AA:1847:U:OP1	25:AC:177:ARG:HG2	2.17	0.44
23:AA:2521:G:O2'	33:AK:80:GLU:HA	2.17	0.44
26:AD:122:SER:HB2	26:AD:175:GLY:HA2	1.98	0.44
26:AD:189:ASP:OD2	26:AD:192:ASN:ND2	2.42	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AG:83:TYR:N	29:AG:135:GLY:O	2.46	0.44
38:AP:20:ILE:HG12	38:AP:97:ILE:HD11	1.99	0.44
1:Ba:554:A:OP2	4:Bd:64:THR:OG1	2.25	0.44
13:Bm:80:LEU:HD21	13:Bm:87:ARG:HG3	2.00	0.44
23:BA:1875:A:O2'	23:BA:1876:G:O4'	2.35	0.44
32:BJ:77:VAL:HG11	32:BJ:96:LEU:HD21	1.99	0.44
1:Aa:848:G:O6	1:Aa:849:U:C4	2.70	0.44
1:Aa:850:U:C4	1:Aa:851:U:O4	2.70	0.44
1:Aa:853:C:O4'	1:Aa:854:G:C8	2.70	0.44
1:Aa:984:A:H4'	1:Aa:985:G:H5''	1.99	0.44
2:Ab:18:HIS:HB2	2:Ab:189:THR:HB	1.99	0.44
3:Ac:149:LYS:O	3:Ac:200:TRP:N	2.50	0.44
4:Ad:32:ALA:HB3	4:Ad:37:GLY:HA2	1.99	0.44
23:AA:1450:A:H61	23:AA:1635:A:N6	2.16	0.44
41:AS:33:VAL:HG13	41:AS:65:VAL:HG22	1.98	0.44
1:Ba:848:G:C2	1:Ba:856:C:O2	2.70	0.44
3:Bc:35:ASP:OD1	3:Bc:58:ARG:NH2	2.50	0.44
3:Bc:149:LYS:O	3:Bc:200:TRP:N	2.50	0.44
5:Be:156:LEU:O	8:Bh:65:LYS:NZ	2.50	0.44
23:BA:897:A:H5'	46:BX:45:GLY:HA3	2.00	0.44
23:BA:1242:A:O2'	32:BJ:4:HIS:HD2	2.00	0.44
35:BM:7:LYS:O	35:BM:11:ARG:HB2	2.16	0.44
41:BS:3:ILE:HG22	41:BS:70:LEU:HG	1.99	0.44
1:Aa:851:U:C1'	1:Aa:854:G:H1'	2.47	0.44
1:Aa:1166:G:H21	1:Aa:1189:A:H61	1.63	0.44
15:Ao:57:LEU:HD23	23:AA:761:A:OP1	2.14	0.44
23:AA:223:G:O2'	23:AA:236:A:N3	2.45	0.44
23:AA:1482:U:H2'	23:AA:1483:A:H8	1.81	0.44
23:AA:1500:G:H2'	23:AA:1501:G:H8	1.82	0.44
23:AA:1843:U:C5	25:AC:62:TYR:CE2	3.06	0.44
23:AA:2311:U:H3	23:AA:2411:A:H62	1.65	0.44
26:AD:140:PRO:O	26:AD:145:SER:OG	2.29	0.44
35:AM:19:ARG:NH2	35:AM:47:ASP:OD1	2.45	0.44
23:BA:878:C:OP1	32:BJ:39:LYS:CE	2.65	0.44
23:BA:1113:A:O2'	23:BA:1141:U:OP1	2.35	0.44
23:BA:1845:U:H5''	25:BC:157:SER:HB2	1.98	0.44
23:BA:2593:A:N1	31:BI:28:SER:OG	2.46	0.44
32:BJ:77:VAL:HG13	32:BJ:111:ILE:HD13	1.99	0.44
1:Aa:411:C:H5'	4:Ad:129:PRO:HD2	1.98	0.44
3:Ac:35:ASP:OD1	3:Ac:58:ARG:NH2	2.50	0.44
7:Ag:88:PRO:HD2	7:Ag:151:PHE:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Aq:26:LEU:HD21	17:Aq:43:SER:HB3	1.99	0.44
23:AA:54:G:HO2'	50:A2:36:ARG:HH11	1.62	0.44
23:AA:58:G:O6	23:AA:68:A:N6	2.51	0.44
23:AA:774:G:H5'	23:AA:775:A:H5''	1.99	0.44
23:AA:787:U:H2'	23:AA:788:A:C8	2.52	0.44
23:AA:890:G:O2'	23:AA:892:U:O4	2.33	0.44
23:AA:1022:G:HO2'	23:AA:1046:G:HO2'	1.65	0.44
23:AA:1582:U:O5'	23:AA:1583:G:N2	2.50	0.44
23:AA:1847:U:C2	25:AC:201:GLU:HB3	2.52	0.44
23:AA:2717:A:H8	34:AL:3:TYR:CE1	2.19	0.44
25:AC:145:GLU:HB2	25:AC:188:CYS:HB3	2.00	0.44
29:AG:77:GLN:NE2	29:AG:81:GLN:OE1	2.51	0.44
1:Ba:464:A:N6	1:Ba:465:U:O4	2.50	0.44
1:Ba:850:U:O2	1:Ba:854:G:C6	2.70	0.44
1:Ba:855:C:O2	1:Ba:856:C:C6	2.70	0.44
7:Bg:99:LEU:HA	7:Bg:102:ARG:HD3	1.98	0.44
23:BA:144:C:H2'	23:BA:145:A:H8	1.83	0.44
23:BA:582:G:OP1	23:BA:1039:C:N4	2.50	0.44
23:BA:896:U:H2'	23:BA:897:A:C8	2.53	0.44
31:BI:2:ILE:HD13	31:BI:8:LEU:HD21	2.00	0.44
1:Aa:1384:A:O2'	7:Ag:28:ASN:O	2.35	0.44
8:Ah:80:ILE:HG12	8:Ah:87:VAL:HG21	1.99	0.44
11:Ak:17:GLU:HG2	11:Ak:80:LYS:HB2	2.00	0.44
12:Al:84:GLY:O	12:Al:112:ARG:NH1	2.51	0.44
16:Ap:19:ARG:HA	16:Ap:39:THR:HA	1.98	0.44
23:AA:582:G:OP1	23:AA:1039:C:N4	2.50	0.44
23:AA:1031:C:H5''	46:AX:10:ARG:NH1	2.33	0.44
23:AA:2903:A:H5'	23:AA:2904:U:H5'	1.99	0.44
35:AM:33:VAL:HG22	35:AM:108:LEU:HD23	2.00	0.44
1:Ba:853:C:O4'	1:Ba:854:G:C8	2.71	0.44
12:Bl:84:GLY:O	12:Bl:112:ARG:NH1	2.51	0.44
23:BA:64:A:H61	23:BA:90:A:H62	1.65	0.44
23:BA:502:C:H41	40:BR:68:TYR:HB2	1.83	0.44
23:BA:630:G:N7	32:BJ:33:ARG:NH2	2.63	0.44
23:BA:645:A:O2'	23:BA:700:A:N1	2.42	0.44
23:BA:906:A:N3	24:BB:77:G:O2'	2.50	0.44
23:BA:1388:C:O2'	23:BA:1618:A:N3	2.45	0.44
26:BD:140:PRO:O	26:BD:145:SER:OG	2.29	0.44
36:BN:99:LEU:HB3	36:BN:102:LEU:HD13	2.00	0.44
1:Aa:847:G:C2	1:Aa:857:C:O2	2.70	0.44
1:Aa:854:G:O6	1:Aa:855:C:C4	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aa:1013:A:N6	1:Aa:1034:U:O2'	2.51	0.44
2:Ab:74:LYS:HD3	22:Av:155:LEU:CB	2.46	0.44
12:Al:113:GLY:H	12:Al:117:THR:HG23	1.81	0.44
27:AE:75:GLN:HE21	27:AE:83:TRP:NE1	2.16	0.44
27:AE:194:ILE:HD12	27:AE:199:ALA:HB2	1.99	0.44
1:Ba:845:G:C2	1:Ba:859:U:O2	2.70	0.44
1:Ba:850:U:HO2'	1:Ba:854:G:N2	2.15	0.44
1:Ba:1175:U:O2	1:Ba:1176:G:O2'	2.36	0.44
23:BA:720:A:N3	23:BA:2470:C:O2'	2.47	0.44
23:BA:1031:C:H5''	46:BX:10:ARG:NH1	2.33	0.44
23:BA:1500:G:H2'	23:BA:1501:G:H8	1.82	0.44
23:BA:1581:U:P	23:BA:1584:U:C5	3.10	0.44
23:BA:2386:C:O2'	51:B3:54:ASP:OD2	2.31	0.44
23:BA:2711:U:OP1	36:BN:53:ARG:HD3	2.17	0.44
27:BE:75:GLN:HE21	27:BE:83:TRP:NE1	2.16	0.44
1:Aa:848:G:C2	1:Aa:849:U:O2	2.70	0.44
1:Aa:854:G:C2	1:Aa:855:C:O2	2.70	0.44
23:AA:509:G:N2	23:AA:512:A:OP2	2.45	0.44
23:AA:534:G:H4'	39:AQ:49:LYS:HD2	1.98	0.44
23:AA:1121:A:O2'	23:AA:1122:U:O4'	2.34	0.44
23:AA:1521:A:H2'	23:AA:1522:G:H8	1.83	0.44
23:AA:2711:U:OP1	36:AN:53:ARG:HD3	2.17	0.44
25:AC:124:ILE:HD13	25:AC:136:PRO:HG3	1.99	0.44
33:AK:125:LEU:HB3	33:AK:127:VAL:HG12	2.00	0.44
1:Ba:130:A:OP1	17:Bq:7:ARG:NH2	2.50	0.44
1:Ba:851:U:O4'	1:Ba:854:G:C4	2.70	0.44
2:Bb:33:THR:O	2:Bb:40:ILE:HB	2.18	0.44
3:Bc:54:VAL:HG12	3:Bc:67:ILE:HG23	2.00	0.44
23:BA:2311:U:H3	23:BA:2411:A:H62	1.65	0.44
23:BA:2649:U:O2'	23:BA:2845:G:N2	2.51	0.44
23:BA:2800:U:OP1	26:BD:179:THR:HG21	2.12	0.44
52:B4:16:VAL:HG22	52:B4:25:VAL:HG12	1.99	0.44
1:Aa:544:C:N4	1:Aa:545:G:O6	2.51	0.44
1:Aa:851:U:O4	1:Aa:853:C:C5	2.71	0.44
23:AA:620:G:O2'	23:AA:1292:A:OP1	2.35	0.44
23:AA:630:G:N7	32:AJ:33:ARG:NH2	2.63	0.44
23:AA:1293:U:H5''	23:AA:1294:G:H5''	2.00	0.44
31:AI:64:ARG:HB2	31:AI:79:PHE:CG	2.53	0.44
41:AS:3:ILE:HG22	41:AS:70:LEU:HG	1.99	0.44
1:Ba:846:G:C4	1:Ba:847:G:C1'	3.01	0.44
1:Ba:1076:U:OP2	1:Ba:1200:G:N2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ba:1317:U:O4	1:Ba:1341:G:N2	2.51	0.44
1:Ba:1495:U:O2'	23:BA:1987:A:O2'	2.15	0.44
2:Bb:74:LYS:HD3	22:Bv:155:LEU:CB	2.46	0.44
7:Bg:88:PRO:HD2	7:Bg:151:PHE:HB2	1.99	0.44
15:Bo:43:LEU:HB3	23:BA:761:A:N9	2.27	0.44
23:BA:774:G:H5'	23:BA:775:A:H5''	1.99	0.44
23:BA:1183:G:O2'	23:BA:1187:A:N1	2.40	0.44
23:BA:2144:A:N6	23:BA:2188:C:OP2	2.42	0.44
23:BA:2330:G:C4'	28:BF:122:PHE:O	2.66	0.44
29:BG:77:GLN:NE2	29:BG:81:GLN:OE1	2.51	0.44
31:BI:98:ILE:HD12	31:BI:117:LEU:HB2	2.00	0.44
35:BM:33:VAL:HG22	35:BM:108:LEU:HD23	2.00	0.44
42:BT:10:GLN:O	42:BT:13:GLN:NE2	2.49	0.44
1:Aa:860:U:C6	1:Aa:860:U:O5'	2.71	0.44
1:Aa:1291:U:H5''	1:Aa:1292:C:H5	1.83	0.44
20:At:10:ARG:HA	20:At:13:THR:HG22	1.99	0.44
23:AA:144:C:H2'	23:AA:145:A:H8	1.83	0.44
23:AA:418:G:O2'	23:AA:446:G:O6	2.31	0.44
23:AA:906:A:N3	24:AB:77:G:O2'	2.50	0.44
23:AA:1395:G:N1	23:AA:1408:G:N7	2.66	0.44
23:AA:2007:G:O2'	23:AA:2009:U:OP2	2.29	0.44
23:AA:2613:C:H2'	23:AA:2614:A:C8	2.53	0.44
24:AB:40:C:OP1	28:AF:64:LYS:NZ	2.45	0.44
52:A4:16:VAL:HG22	52:A4:25:VAL:HG12	1.99	0.44
1:Ba:844:G:C6	1:Ba:859:U:O2	2.70	0.44
2:Bb:47:VAL:HA	2:Bb:50:VAL:HG12	2.00	0.44
23:BA:1290:G:N2	37:BO:33:LYS:HB3	2.32	0.44
23:BA:1533:A:H62	25:BC:96:TYR:C	2.21	0.44
23:BA:1643:C:OP1	40:BR:35:LYS:N	2.39	0.44
1:Aa:851:U:H1'	1:Aa:854:G:C1'	2.48	0.43
23:AA:896:U:H2'	23:AA:897:A:C8	2.53	0.43
23:AA:1482:U:H2'	23:AA:1483:A:C8	2.53	0.43
23:AA:1875:A:O2'	23:AA:1876:G:O4'	2.35	0.43
23:AA:2849:A:OP1	26:AD:86:ARG:NH2	2.47	0.43
46:AX:8:LEU:HB2	46:AX:28:LEU:HD13	2.00	0.43
1:Ba:850:U:C4	1:Ba:851:U:O4	2.71	0.43
1:Ba:1141:A:O2'	1:Ba:1142:U:O4'	2.35	0.43
7:Bg:63:GLU:O	7:Bg:67:ASN:ND2	2.51	0.43
11:Bk:99:ALA:O	11:Bk:102:SER:OG	2.34	0.43
20:Bt:10:ARG:HA	20:Bt:13:THR:HG22	1.99	0.43
23:BA:620:G:O2'	23:BA:1292:A:OP1	2.35	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1630:A:H2'	23:BA:1631:G:H2'	2.00	0.43
23:BA:1658:A:H2	39:BQ:93:ALA:HB2	1.82	0.43
23:BA:1847:U:OP1	25:BC:177:ARG:HG2	2.17	0.43
23:BA:2355:A:H2'	23:BA:2356:A:C8	2.53	0.43
1:Aa:479:U:H2'	1:Aa:480:G:H8	1.83	0.43
1:Aa:846:G:O6	1:Aa:847:G:C5	2.70	0.43
1:Aa:987:A:O2'	1:Aa:1332:C:N3	2.50	0.43
23:AA:600:U:O2'	30:AH:48:HIS:O	2.31	0.43
23:AA:1482:U:H3	23:AA:1601:U:H5	1.65	0.43
23:AA:1630:A:H2'	23:AA:1631:G:H2'	2.00	0.43
23:AA:2231:C:OP2	25:AC:150:LYS:NZ	2.42	0.43
33:AK:46:GLN:HG2	33:AK:126:PRO:HD3	2.01	0.43
1:Ba:859:U:O2'	1:Ba:860:U:O5'	2.35	0.43
2:Bb:34:GLU:HA	2:Bb:38:ILE:O	2.18	0.43
15:Bo:56:LEU:CG	23:BA:761:A:C5'	2.84	0.43
23:BA:59:U:H1'	23:BA:73:A:H2'	2.00	0.43
23:BA:504:G:N2	23:BA:505:U:O4	2.45	0.43
23:BA:676:A:N3	23:BA:2442:G:O2'	2.46	0.43
23:BA:1315:C:H2'	23:BA:1316:G:C8	2.53	0.43
26:BD:8:ARG:NH2	26:BD:54:GLU:OE1	2.43	0.43
31:BI:39:ILE:HG12	31:BI:62:ILE:HD11	2.01	0.43
1:Aa:1339:A:H5'	13:Am:26:GLY:H	1.83	0.43
2:Ab:16:PHE:CD1	22:Av:143:PRO:HG3	2.40	0.43
2:Ab:34:GLU:HA	2:Ab:38:ILE:O	2.18	0.43
13:Am:80:LEU:HD21	13:Am:87:ARG:HG3	2.00	0.43
23:AA:1315:C:H2'	23:AA:1316:G:C8	2.53	0.43
1:Ba:847:G:C6	1:Ba:848:G:O6	2.70	0.43
2:Bb:34:GLU:C	2:Bb:34:GLU:CD	2.86	0.43
10:Bj:36:VAL:HG22	10:Bj:76:ILE:HG22	2.00	0.43
17:Bq:26:LEU:HD21	17:Bq:43:SER:HB3	1.99	0.43
18:Br:58:ARG:HA	18:Br:61:THR:HG22	2.01	0.43
23:BA:2521:G:O2'	33:BK:80:GLU:HA	2.17	0.43
24:BB:4:G:H22	24:BB:111:C:H5	1.66	0.43
25:BC:145:GLU:HB2	25:BC:188:CYS:HB3	2.00	0.43
25:BC:168:GLU:HG3	25:BC:169:GLY:H	1.84	0.43
27:BE:194:ILE:HD12	27:BE:199:ALA:HB2	1.99	0.43
31:BI:96:THR:HA	31:BI:117:LEU:HD13	2.00	0.43
1:Aa:148:G:O2'	1:Aa:1456:A:N3	2.51	0.43
1:Aa:333:A:OP2	20:At:64:ASN:ND2	2.50	0.43
1:Aa:1305:U:O2'	13:Am:14:ARG:NH2	2.51	0.43
2:Ab:47:VAL:HA	2:Ab:50:VAL:HG12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Ae:120:ILE:HG22	5:Ae:122:ASP:H	1.84	0.43
6:Af:75:GLU:OE2	6:Af:78:ARG:NH1	2.51	0.43
23:AA:125:A:P	50:A2:19:PHE:H	2.42	0.43
23:AA:502:C:N4	40:AR:68:TYR:CG	2.84	0.43
23:AA:669:C:H2'	23:AA:670:G:H8	1.83	0.43
23:AA:1395:G:H8	23:AA:1410:A:H62	1.66	0.43
32:AJ:77:VAL:HG11	32:AJ:96:LEU:HD21	1.99	0.43
51:A3:11:ALA:O	51:A3:65:LYS:NZ	2.50	0.43
1:Ba:544:C:N4	1:Ba:545:G:O6	2.51	0.43
1:Ba:1035:C:N3	1:Ba:1036:C:N4	2.66	0.43
2:Bb:34:GLU:HA	2:Bb:39:TYR:HA	1.99	0.43
8:Bh:80:ILE:HG12	8:Bh:87:VAL:HG21	1.99	0.43
15:Bo:43:LEU:HD13	23:BA:761:A:H2'	1.99	0.43
23:BA:509:G:N2	23:BA:512:A:OP2	2.45	0.43
23:BA:646:A:N1	23:BA:670:G:O2'	2.48	0.43
23:BA:1580:A:OP2	23:BA:1581:U:N3	2.51	0.43
23:BA:2333:U:N3	28:BF:40:VAL:HG23	2.32	0.43
23:BA:2716:U:OP2	23:BA:2892:G:N1	2.38	0.43
31:BI:64:ARG:HB2	31:BI:79:PHE:CG	2.53	0.43
33:BK:125:LEU:HB3	33:BK:127:VAL:HG12	2.00	0.43
39:BQ:17:VAL:HG23	39:BQ:47:ILE:HD11	2.00	0.43
1:Aa:850:U:O2	1:Aa:854:G:C6	2.70	0.43
1:Aa:1035:C:N3	1:Aa:1036:C:N4	2.66	0.43
2:Ab:34:GLU:CD	2:Ab:34:GLU:C	2.86	0.43
5:Ae:55:GLU:O	5:Ae:59:ALA:N	2.51	0.43
10:Aj:10:LEU:HB3	10:Aj:18:ILE:HD11	2.00	0.43
10:Aj:36:VAL:HG22	10:Aj:76:ILE:HG22	2.00	0.43
23:AA:502:C:H41	40:AR:68:TYR:HB2	1.83	0.43
23:AA:1091:G:N2	23:AA:1154:G:O2'	2.51	0.43
23:AA:1510:U:O2	23:AA:1571:G:N2	2.43	0.43
23:AA:1615:G:P	25:AC:63:ARG:HH22	2.42	0.43
23:AA:1886:A:N6	23:AA:1910:G:O2'	2.51	0.43
23:AA:2649:U:O2'	23:AA:2845:G:N2	2.51	0.43
23:AA:2904:U:H5	48:AZ:40:HIS:CG	2.37	0.43
31:AI:98:ILE:HD12	31:AI:117:LEU:HB2	2.00	0.43
1:Ba:479:U:H2'	1:Ba:480:G:H8	1.83	0.43
5:Be:14:ARG:NH1	5:Be:116:GLU:OE1	2.46	0.43
5:Be:120:ILE:HG22	5:Be:122:ASP:H	1.84	0.43
23:BA:125:A:P	50:B2:19:PHE:H	2.42	0.43
23:BA:661:U:H5'	27:BE:106:ARG:HD3	2.01	0.43
23:BA:1293:U:H5''	23:BA:1294:G:H5''	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1395:G:H8	23:BA:1410:A:H62	1.66	0.43
23:BA:1521:A:H2'	23:BA:1522:G:H8	1.83	0.43
23:BA:1843:U:C5	25:BC:62:TYR:CE2	3.06	0.43
23:BA:2505:A:H5'	52:B4:31:LYS:HE3	2.01	0.43
23:BA:2904:U:H5	48:BZ:40:HIS:CG	2.37	0.43
33:BK:27:VAL:HG12	33:BK:105:GLU:HG2	2.00	0.43
1:Aa:845:G:O6	1:Aa:846:G:C6	2.70	0.43
1:Aa:850:U:C3'	1:Aa:850:U:C6	3.02	0.43
1:Aa:901:A:H2	1:Aa:915:G:H21	1.66	0.43
1:Aa:1369:C:H3'	14:An:35:ARG:HH22	1.84	0.43
3:Ac:30:SER:HA	3:Ac:33:HIS:HD2	1.82	0.43
14:An:24:CYS:HB2	14:An:27:CYS:HB2	1.99	0.43
23:AA:318:A:N6	23:AA:319:G:O6	2.52	0.43
23:AA:1479:G:H2'	23:AA:1480:G:H8	1.84	0.43
23:AA:2152:G:N2	23:AA:2189:G:O2'	2.52	0.43
23:AA:2257:G:H1'	44:AV:32:ASN:CG	2.44	0.43
23:AA:2355:A:H2'	23:AA:2356:A:C8	2.53	0.43
33:AK:14:ARG:HD2	33:AK:41:TRP:HH2	1.83	0.43
33:AK:27:VAL:HG12	33:AK:105:GLU:HG2	2.00	0.43
1:Ba:1011:U:O2'	1:Ba:1012:G:N7	2.48	0.43
1:Ba:1339:A:H5'	13:Bm:26:GLY:H	1.83	0.43
1:Ba:1527:G:N2	1:Ba:1530:A:OP2	2.39	0.43
6:Bf:75:GLU:OE2	6:Bf:78:ARG:NH1	2.51	0.43
15:Bo:28:GLN:HA	15:Bo:31:VAL:HG12	2.00	0.43
23:BA:372:A:N6	41:BS:15:LYS:H	2.17	0.43
23:BA:410:G:O2'	23:BA:411:A:N7	2.49	0.43
23:BA:513:G:O2'	23:BA:841:C:O3'	2.37	0.43
23:BA:693:G:H2'	23:BA:694:G:H8	1.84	0.43
17:Aq:52:ASN:OD1	17:Aq:54:SER:OG	2.36	0.43
23:AA:504:G:O2'	23:AA:515:G:O6	2.30	0.43
23:AA:970:U:H3'	23:AA:971:U:H4'	2.01	0.43
23:AA:1580:A:OP2	23:AA:1581:U:N3	2.51	0.43
31:AI:113:LYS:HE3	31:AI:117:LEU:HD11	2.01	0.43
1:Ba:354:G:H4'	36:BN:41:ARG:CD	2.49	0.43
5:Be:153:VAL:HG21	8:Bh:101:LEU:HD11	2.00	0.43
6:Bf:50:TYR:OH	6:Bf:88:ARG:NH2	2.34	0.43
23:BA:2152:G:N2	23:BA:2189:G:O2'	2.52	0.43
24:BB:54:U:H4'	24:BB:55:A:H5'	2.00	0.43
25:BC:124:ILE:HD13	25:BC:136:PRO:HG3	1.99	0.43
1:Aa:130:A:OP1	17:Aq:7:ARG:NH2	2.50	0.43
1:Aa:845:G:N2	1:Aa:859:U:C2	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aa:1317:U:O4	1:Aa:1341:G:N2	2.51	0.43
3:Ac:54:VAL:HG12	3:Ac:67:ILE:HG23	2.00	0.43
23:AA:59:U:H1'	23:AA:73:A:H2'	2.00	0.43
23:AA:372:A:N6	41:AS:15:LYS:H	2.17	0.43
23:AA:897:A:H5'	46:AX:45:GLY:HA3	2.00	0.43
23:AA:1818:A:H4'	25:AC:207:LYS:H	1.83	0.43
1:Ba:324:C:OP2	1:Ba:359:G:O2'	2.31	0.43
4:Bd:32:ALA:HB3	4:Bd:37:GLY:HA2	2.00	0.43
16:Bp:12:SER:OG	16:Bp:13:LYS:N	2.52	0.43
17:Bq:52:ASN:OD1	17:Bq:54:SER:OG	2.36	0.43
23:BA:58:G:O6	23:BA:68:A:N6	2.51	0.43
23:BA:857:C:OP2	32:BJ:22:GLY:HA2	2.19	0.43
23:BA:1395:G:N1	23:BA:1408:G:N7	2.66	0.43
23:BA:1479:G:H2'	23:BA:1480:G:H8	1.84	0.43
23:BA:1828:U:OP2	25:BC:150:LYS:NZ	2.44	0.43
23:BA:2338:A:O2'	23:BA:2339:U:O4'	2.31	0.43
23:BA:2613:C:H2'	23:BA:2614:A:C8	2.53	0.43
27:BE:46:GLN:HG3	27:BE:48:THR:HG22	2.01	0.43
31:BI:113:LYS:HE3	31:BI:117:LEU:HD11	2.01	0.43
1:Aa:216:G:O2'	1:Aa:476:C:O2	2.32	0.43
1:Aa:332:G:N2	1:Aa:335:A:OP2	2.52	0.43
1:Aa:525:G:N2	1:Aa:538:G:OP1	2.44	0.43
1:Aa:682:G:H2'	1:Aa:683:A:C8	2.54	0.43
1:Aa:851:U:O4'	1:Aa:854:G:C4	2.72	0.43
1:Aa:853:C:H4'	1:Aa:854:G:C4'	2.48	0.43
1:Aa:854:G:N1	1:Aa:855:C:N3	2.67	0.43
1:Aa:1175:U:O2	1:Aa:1176:G:O2'	2.36	0.43
5:Ae:153:VAL:HG21	8:Ah:101:LEU:HD11	2.00	0.43
23:AA:1108:C:H3'	23:AA:1109:U:H4'	2.01	0.43
23:AA:1643:C:OP1	40:AR:35:LYS:N	2.39	0.43
23:AA:1852:G:OP1	25:AC:230:HIS:HE1	2.02	0.43
23:AA:2654:G:O2'	23:AA:2808:A:N1	2.48	0.43
25:AC:176:LEU:HA	25:AC:176:LEU:HD13	1.79	0.43
27:AE:46:GLN:HG3	27:AE:48:THR:HG22	2.01	0.43
31:AI:96:THR:HA	31:AI:117:LEU:HD13	2.00	0.43
35:AM:12:LEU:HA	35:AM:12:LEU:HD23	1.61	0.43
36:AN:99:LEU:HB3	36:AN:102:LEU:HD13	2.00	0.43
1:Ba:99:U:H2'	1:Ba:100:A:C8	2.54	0.43
1:Ba:846:G:C4	1:Ba:847:G:O4'	2.72	0.43
1:Ba:1291:U:H5''	1:Ba:1292:C:H5	1.83	0.43
23:BA:124:A:OP2	50:B2:20:ARG:NE	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:318:A:N6	23:BA:319:G:O6	2.52	0.43
23:BA:1362:C:OP1	23:BA:1691:G:O2'	2.26	0.43
1:Aa:59:C:O2	1:Aa:362:G:N1	2.39	0.43
1:Aa:858:C:OP2	1:Aa:858:C:C6	2.71	0.43
2:Ab:118:GLU:OE2	2:Ab:152:ARG:NH1	2.41	0.43
23:AA:64:A:H61	23:AA:90:A:H62	1.65	0.43
23:AA:282:A:H2'	23:AA:283:G:C8	2.54	0.43
23:AA:1379:A:O2'	23:AA:1381:U:OP2	2.31	0.43
23:AA:2505:A:H5'	52:A4:31:LYS:HE3	2.00	0.43
23:AA:2510:C:O2	33:AK:124:LYS:CE	2.67	0.43
31:AI:2:ILE:HD13	31:AI:8:LEU:HD21	2.00	0.43
40:AR:13:THR:H	40:AR:16:SER:HB3	1.84	0.43
41:AS:92:ARG:NH1	41:AS:100:GLU:OE2	2.52	0.43
1:Ba:343:C:O2'	1:Ba:1443:A:N3	2.50	0.43
1:Ba:1013:A:N6	1:Ba:1034:U:O2'	2.51	0.43
23:BA:135:G:H2'	23:BA:136:A:H8	1.84	0.43
23:BA:284:C:O2'	23:BA:287:G:N2	2.32	0.43
23:BA:2311:U:OP2	49:B1:2:ARG:HG2	2.19	0.43
41:BS:92:ARG:NH1	41:BS:100:GLU:OE2	2.52	0.43
47:BY:16:ASP:OD2	47:BY:18:THR:OG1	2.35	0.43
7:Ag:63:GLU:O	7:Ag:67:ASN:ND2	2.51	0.42
23:AA:135:G:H2'	23:AA:136:A:H8	1.84	0.42
23:AA:502:C:N4	40:AR:68:TYR:CB	2.83	0.42
23:AA:2783:U:H1'	23:AA:2784:A:H5''	2.00	0.42
24:AB:4:G:H22	24:AB:111:C:H5	1.66	0.42
25:AC:168:GLU:HG3	25:AC:169:GLY:H	1.84	0.42
28:AF:96:MET:O	28:AF:100:LEU:N	2.47	0.42
31:AI:39:ILE:HG12	31:AI:62:ILE:HD11	2.01	0.42
1:Ba:1178:C:H2'	1:Ba:1179:A:H3'	2.01	0.42
23:BA:669:C:H2'	23:BA:670:G:H8	1.83	0.42
23:BA:904:G:O2'	23:BA:961:G:O6	2.28	0.42
23:BA:1449:A:H2'	23:BA:1450:A:C4	2.54	0.42
23:BA:2168:A:H61	23:BA:2176:C:H41	1.67	0.42
23:BA:2257:G:H1'	44:BV:32:ASN:CG	2.44	0.42
26:BD:2:THR:HA	26:BD:94:VAL:HA	2.01	0.42
20:At:37:THR:O	20:At:40:SER:OG	2.36	0.42
23:AA:1000:G:H2'	23:AA:1001:A:H2'	2.00	0.42
23:AA:2815:C:O2'	23:AA:2829:A:N3	2.44	0.42
33:AK:68:ILE:HD13	33:AK:68:ILE:HA	1.88	0.42
1:Ba:508:G:H22	1:Ba:554:A:H1'	1.84	0.42
23:BA:502:C:N4	40:BR:68:TYR:CG	2.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1000:G:H2'	23:BA:1001:A:H2'	2.00	0.42
23:BA:1423:C:H2'	23:BA:1424:A:C8	2.54	0.42
1:Aa:860:U:C5	1:Aa:861:A:C8	3.08	0.42
5:Ae:76:ARG:NE	5:Ae:119:GLY:O	2.52	0.42
23:AA:693:G:H2'	23:AA:694:G:H8	1.84	0.42
23:AA:857:C:OP2	32:AJ:22:GLY:HA2	2.19	0.42
23:AA:1250:G:N2	23:AA:1274:G:O2'	2.52	0.42
23:AA:2168:A:H61	23:AA:2176:C:H41	1.67	0.42
26:AD:40:THR:HG22	26:AD:42:GLU:H	1.85	0.42
47:AY:16:ASP:OD2	47:AY:18:THR:OG1	2.35	0.42
47:AY:32:SER:HA	47:AY:44:PRO:HD2	2.02	0.42
49:A1:9:CYS:HB3	49:A1:12:CYS:HB2	1.94	0.42
1:Ba:148:G:O2'	1:Ba:1456:A:N3	2.51	0.42
1:Ba:511:A:H62	1:Ba:551:G:H1	1.68	0.42
1:Ba:665:U:H3	1:Ba:757:A:H61	1.68	0.42
23:BA:923:A:H2	23:BA:944:G:H22	1.66	0.42
23:BA:970:U:H3'	23:BA:971:U:H4'	2.01	0.42
23:BA:1631:G:OP1	23:BA:1631:G:N2	2.52	0.42
33:BK:14:ARG:HD2	33:BK:41:TRP:HH2	1.83	0.42
33:BK:46:GLN:HG2	33:BK:126:PRO:HD3	2.01	0.42
47:BY:32:SER:HA	47:BY:44:PRO:HD2	2.02	0.42
15:Ao:28:GLN:HA	15:Ao:31:VAL:HG12	2.00	0.42
18:Ar:58:ARG:HA	18:Ar:61:THR:HG22	2.01	0.42
22:Av:134:ILE:CG2	22:Bv:184:LEU:CB	2.96	0.42
23:AA:513:G:O2'	23:AA:841:C:O3'	2.37	0.42
33:AK:48:GLU:OE2	33:AK:51:ARG:NH1	2.53	0.42
33:AK:77:LYS:HA	33:AK:78:PRO:HD3	1.93	0.42
1:Ba:129:A:O2'	1:Ba:196:A:N6	2.52	0.42
1:Ba:847:G:C2	1:Ba:857:C:C4	3.07	0.42
17:Bq:61:VAL:HG11	17:Bq:77:LEU:HD22	2.01	0.42
23:BA:284:C:H2'	23:BA:285:U:C2	2.55	0.42
23:BA:1111:A:N6	23:BA:1139:A:O3'	2.52	0.42
23:BA:1379:A:O2'	23:BA:1381:U:OP2	2.31	0.42
23:BA:1431:U:H4'	23:BA:1647:A:H4'	2.01	0.42
23:BA:1485:G:H1	23:BA:1598:U:H3	1.68	0.42
23:BA:2338:A:C8	28:BF:40:VAL:CG1	2.94	0.42
23:BA:2603:G:O2'	23:BA:2606:C:OP2	2.35	0.42
27:BE:117:LYS:HD3	27:BE:117:LYS:HA	1.87	0.42
34:BL:17:LEU:HG	34:BL:43:VAL:HG21	2.02	0.42
1:Aa:354:G:H4'	36:AN:41:ARG:CD	2.49	0.42
1:Aa:511:A:H62	1:Aa:551:G:H1	1.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:Ap:12:SER:OG	16:Ap:13:LYS:N	2.52	0.42
23:AA:241:C:O2'	23:AA:651:A:N3	2.48	0.42
23:AA:1631:G:OP1	23:AA:1631:G:N2	2.52	0.42
23:AA:2311:U:OP2	49:A1:2:ARG:HG2	2.19	0.42
30:AH:18:VAL:HG23	30:AH:138:PRO:HB2	2.01	0.42
45:AW:14:ILE:HG21	45:AW:57:ALA:HB2	2.02	0.42
23:BA:1108:C:H3'	23:BA:1109:U:H4'	2.01	0.42
23:BA:1110:U:O2'	23:BA:1113:A:N6	2.53	0.42
23:BA:1615:G:P	25:BC:63:ARG:HH22	2.41	0.42
23:BA:1697:G:C6	34:BL:5:LYS:HB2	2.55	0.42
23:BA:1818:A:H4'	25:BC:207:LYS:H	1.83	0.42
26:BD:40:THR:HG22	26:BD:42:GLU:H	1.85	0.42
1:Aa:99:U:H2'	1:Aa:100:A:C8	2.54	0.42
23:AA:1847:U:O2	25:AC:201:GLU:CB	2.68	0.42
23:AA:2332:U:O4	28:AF:38:MET:HG2	2.19	0.42
24:AB:54:U:H4'	24:AB:55:A:H5'	2.00	0.42
1:Ba:854:G:O6	1:Ba:855:C:C4	2.70	0.42
1:Ba:1305:U:O2'	13:Bm:14:ARG:NH2	2.51	0.42
3:Bc:117:GLU:OE2	3:Bc:121:ARG:NH2	2.53	0.42
23:BA:150:A:H61	23:BA:179:A:H2	1.68	0.42
23:BA:2510:C:O2	33:BK:124:LYS:CE	2.67	0.42
25:BC:8:PRO:HB3	25:BC:14:ARG:HG3	2.02	0.42
49:B1:17:TYR:OH	49:B1:35:TYR:O	2.32	0.42
1:Aa:850:U:C2'	1:Aa:851:U:C5'	2.92	0.42
1:Aa:1097:U:H2'	1:Aa:1098:G:H8	1.84	0.42
1:Aa:1178:C:H2'	1:Aa:1179:A:H3'	2.01	0.42
1:Aa:1214:A:O2'	3:Ac:187:GLU:OE2	2.38	0.42
23:AA:72:U:OP2	45:AW:54:LYS:NZ	2.53	0.42
23:AA:284:C:H2'	23:AA:285:U:C2	2.55	0.42
23:AA:1000:G:OP1	33:AK:87:LYS:HG3	2.20	0.42
23:AA:2405:A:C5	23:AA:2406:G:H1'	2.55	0.42
39:AQ:17:VAL:HG23	39:AQ:47:ILE:HD11	2.00	0.42
1:Ba:1097:U:H2'	1:Ba:1098:G:H8	1.84	0.42
2:Bb:32:PHE:N	2:Bb:40:ILE:O	2.35	0.42
23:BA:2332:U:O4	28:BF:38:MET:HG2	2.19	0.42
23:BA:2566:C:C5'	52:B4:3:VAL:HG21	2.50	0.42
23:BA:2850:G:OP1	26:BD:67:LYS:HB3	2.20	0.42
24:BB:40:C:OP1	28:BF:64:LYS:NZ	2.45	0.42
26:BD:128:GLN:HG3	26:BD:173:MET:HE2	2.01	0.42
26:BD:156:MET:N	26:BD:156:MET:SD	2.93	0.42
32:BJ:123:VAL:HG21	32:BJ:136:ILE:HD13	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BQ:86:ARG:HD2	39:BQ:86:ARG:HA	1.61	0.42
41:BS:39:ASN:HD22	41:BS:63:ILE:HG12	1.85	0.42
1:Aa:129:A:O2'	1:Aa:196:A:N6	2.52	0.42
1:Aa:673:A:H1'	1:Aa:741:G:H5'	2.02	0.42
1:Aa:789:A:O2'	1:Aa:1533:U:O2	2.33	0.42
1:Aa:932:A:O2'	1:Aa:1409:C:OP2	2.33	0.42
1:Aa:1088:G:N2	1:Aa:1090:G:O2'	2.53	0.42
1:Aa:1176:G:O2'	1:Aa:1177:A:N7	2.48	0.42
1:Aa:1533:U:OP1	11:Ak:128:ARG:NH1	2.44	0.42
2:Ab:87:ALA:HB1	2:Ab:221:ILE:HD11	2.02	0.42
7:Ag:71:PRO:HB3	7:Ag:138:ARG:HG3	2.00	0.42
23:AA:150:A:H61	23:AA:179:A:H2	1.68	0.42
23:AA:828:A:H2'	23:AA:829:U:H4'	2.02	0.42
23:AA:1423:C:H2'	23:AA:1424:A:C8	2.54	0.42
23:AA:1477:U:H2'	23:AA:1478:A:C8	2.55	0.42
23:AA:2337:A:H2	28:AF:74:ILE:HG22	1.76	0.42
25:AC:225:MET:HB3	25:AC:229:ASP:HB2	2.02	0.42
26:AD:156:MET:N	26:AD:156:MET:SD	2.93	0.42
29:AG:155:GLU:HA	29:AG:156:PRO:HD3	1.93	0.42
1:Ba:431:G:O2'	1:Ba:432:G:O4'	2.31	0.42
1:Ba:844:G:C5	1:Ba:845:G:C8	2.64	0.42
1:Ba:901:A:H2	1:Ba:915:G:H21	1.66	0.42
1:Ba:1088:G:N2	1:Ba:1090:G:O2'	2.53	0.42
3:Bc:13:GLY:HA3	14:Bn:57:ARG:HH22	1.85	0.42
17:Bq:33:HIS:HD2	17:Bq:36:TYR:H	1.68	0.42
23:BA:72:U:OP2	45:BW:54:LYS:NZ	2.53	0.42
23:BA:856:U:H2'	32:BJ:21:ARG:HA	2.01	0.42
23:BA:1000:G:OP1	33:BK:87:LYS:HG3	2.20	0.42
23:BA:2277:G:C2	33:BK:84:GLY:HA3	2.55	0.42
24:BB:55:A:H1'	28:BF:27:GLU:HB3	2.02	0.42
40:BR:13:THR:H	40:BR:16:SER:HB3	1.84	0.42
46:BX:8:LEU:HB2	46:BX:28:LEU:HD13	2.00	0.42
1:Aa:508:G:H22	1:Aa:554:A:H1'	1.84	0.42
1:Aa:1177:A:H1'	1:Aa:1178:C:H4'	2.02	0.42
3:Ac:13:GLY:HA3	14:An:57:ARG:HH22	1.85	0.42
12:Al:66:ALA:HB2	12:Al:80:ILE:HD11	2.02	0.42
15:Ao:43:LEU:HB3	23:AA:761:A:N9	2.27	0.42
23:AA:720:A:OP1	27:AE:76:GLY:HA3	2.20	0.42
23:AA:923:A:H2	23:AA:944:G:H22	1.66	0.42
23:AA:1485:G:H1	23:AA:1598:U:H3	1.68	0.42
23:AA:1918:G:O2'	23:AA:2262:G:O2'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AA:2842:G:O2'	23:AA:2845:G:O6	2.32	0.42
26:AD:128:GLN:HG3	26:AD:173:MET:HE2	2.01	0.42
28:AF:132:VAL:HB	28:AF:152:MET:HB2	2.02	0.42
31:AI:98:ILE:HD13	31:AI:114:ILE:HG23	2.02	0.42
34:AL:17:LEU:HG	34:AL:43:VAL:HG21	2.02	0.42
2:Bb:32:PHE:HB2	2:Bb:42:ASP:HA	2.02	0.42
2:Bb:87:ALA:HB1	2:Bb:221:ILE:HD11	2.02	0.42
23:BA:1479:G:H2'	23:BA:1480:G:C8	2.55	0.42
23:BA:2382:C:OP1	43:BU:33:ARG:NH1	2.53	0.42
23:BA:2648:G:P	26:BD:133:ARG:HH22	2.29	0.42
27:BE:152:VAL:HG12	27:BE:173:VAL:HG22	2.02	0.42
1:Aa:20:C:OP1	5:Ae:135:ASN:ND2	2.53	0.42
1:Aa:850:U:H3'	1:Aa:850:U:H6	1.84	0.42
1:Aa:855:C:C4	1:Aa:856:C:C4	3.07	0.42
1:Aa:972:G:H21	10:Aj:56:HIS:CE1	2.37	0.42
7:Ag:24:THR:HA	7:Ag:27:ILE:HD12	2.02	0.42
17:Aq:61:VAL:HG11	17:Aq:77:LEU:HD22	2.01	0.42
23:AA:859:C:OP1	38:AP:84:ARG:HA	2.20	0.42
23:AA:1110:U:O2'	23:AA:1113:A:N6	2.53	0.42
23:AA:1431:U:H4'	23:AA:1647:A:H4'	2.01	0.42
23:AA:2382:C:OP1	43:AU:33:ARG:NH1	2.53	0.42
29:AG:107:VAL:HG11	29:AG:162:ILE:HD11	2.02	0.42
1:Ba:1278:G:H1'	1:Ba:1337:A:H5''	2.02	0.42
9:Bi:30:ILE:HB	9:Bi:37:VAL:HG21	2.02	0.42
23:BA:890:G:O2'	23:BA:892:U:O4	2.33	0.42
23:BA:1063:U:OP1	23:BA:1079:U:O2'	2.35	0.42
23:BA:2783:U:H1'	23:BA:2784:A:H5''	2.01	0.42
27:BE:19:LEU:HD21	27:BE:199:ALA:HB1	2.02	0.42
28:BF:132:VAL:HB	28:BF:152:MET:HB2	2.02	0.42
33:BK:32:PHE:HE1	33:BK:133:LYS:HE2	1.85	0.42
1:Aa:844:G:C6	1:Aa:859:U:O2	2.70	0.41
1:Aa:948:G:H3'	7:Ag:102:ARG:HH12	1.85	0.41
1:Aa:1137:U:H1'	1:Aa:1291:U:H1'	2.02	0.41
2:Ab:18:HIS:O	2:Ab:38:ILE:HD12	2.20	0.41
2:Ab:115:SER:HA	2:Ab:152:ARG:HH12	1.85	0.41
3:Ac:117:GLU:OE2	3:Ac:121:ARG:NH2	2.53	0.41
23:AA:661:U:H5'	27:AE:106:ARG:HD3	2.01	0.41
23:AA:1806:U:H2'	23:AA:1810:A:H62	1.85	0.41
23:AA:1828:U:OP2	25:AC:150:LYS:NZ	2.44	0.41
23:AA:2821:U:H5''	23:AA:2823:G:C2	2.55	0.41
24:AB:47:C:H2'	24:AB:48:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AK:32:PHE:HE1	33:AK:133:LYS:HE2	1.85	0.41
1:Ba:846:G:C6	1:Ba:847:G:N9	2.87	0.41
1:Ba:1369:C:H3'	14:Bn:35:ARG:HH22	1.84	0.41
5:Be:76:ARG:NE	5:Be:119:GLY:O	2.52	0.41
7:Bg:71:PRO:HB3	7:Bg:138:ARG:HG3	2.01	0.41
9:Bi:44:GLU:HA	9:Bi:47:ILE:HD12	2.02	0.41
10:Bj:10:LEU:HB3	10:Bj:18:ILE:HD11	2.00	0.41
23:BA:24:G:O2'	39:BQ:78:GLU:O	2.36	0.41
23:BA:282:A:H2'	23:BA:283:G:C8	2.54	0.41
23:BA:1031:C:O2'	23:BA:1044:A:N3	2.46	0.41
23:BA:1261:G:N2	23:BA:1264:A:OP2	2.46	0.41
23:BA:1563:U:H2'	23:BA:1564:G:C8	2.55	0.41
23:BA:1713:A:O2'	31:BI:4:GLN:NE2	2.53	0.41
24:BB:47:C:H2'	24:BB:48:A:C8	2.55	0.41
25:BC:207:LYS:HG2	25:BC:209:GLY:H	1.85	0.41
30:BH:18:VAL:HG23	30:BH:138:PRO:HB2	2.01	0.41
1:Aa:851:U:H4'	1:Aa:854:G:H1'	2.00	0.41
23:AA:856:U:H2'	32:AJ:21:ARG:HA	2.01	0.41
23:AA:1111:A:N6	23:AA:1139:A:O3'	2.52	0.41
23:AA:1449:A:H2'	23:AA:1450:A:C4	2.54	0.41
23:AA:1893:A:C5	23:AA:1894:G:H1'	2.55	0.41
1:Ba:96:U:H2'	1:Ba:97:G:H8	1.85	0.41
1:Ba:682:G:H2'	1:Ba:683:A:C8	2.54	0.41
1:Ba:1024:G:H2'	1:Ba:1025:A:C8	2.56	0.41
9:Bi:53:PRO:HG2	9:Bi:85:ILE:HD11	2.02	0.41
12:Bl:24:LEU:O	12:Bl:40:SER:OG	2.35	0.41
23:BA:26:G:H1'	23:BA:560:A:H61	1.85	0.41
23:BA:241:C:O2'	23:BA:651:A:N3	2.48	0.41
23:BA:502:C:N4	40:BR:68:TYR:CB	2.82	0.41
23:BA:720:A:OP1	27:BE:76:GLY:HA3	2.20	0.41
23:BA:816:G:O2'	23:BA:1392:G:O2'	2.24	0.41
23:BA:1830:A:N1	23:BA:1849:G:O2'	2.46	0.41
23:BA:1852:G:OP1	25:BC:230:HIS:HE1	2.02	0.41
23:BA:1886:A:N6	23:BA:1910:G:O2'	2.51	0.41
23:BA:2147:G:O6	23:BA:2199:U:O2'	2.28	0.41
25:BC:225:MET:HB3	25:BC:229:ASP:HB2	2.02	0.41
26:BD:34:VAL:HG22	26:BD:85:LYS:HE3	2.02	0.41
29:BG:107:VAL:HG11	29:BG:162:ILE:HD11	2.02	0.41
1:Aa:860:U:C5	1:Aa:860:U:OP2	2.72	0.41
6:Af:20:LYS:HA	6:Af:23:VAL:HG22	2.02	0.41
11:Ak:97:ILE:HD11	21:Au:16:LEU:HD12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Ak:99:ALA:O	11:Ak:102:SER:OG	2.34	0.41
23:AA:277:C:H2'	23:AA:278:A:H8	1.85	0.41
23:AA:1040:A:OP2	38:AP:10:LYS:CD	2.62	0.41
23:AA:1658:A:C2	39:AQ:93:ALA:HB2	2.55	0.41
23:AA:2048:G:N2	37:AO:25:PHE:CG	2.89	0.41
23:AA:2904:U:H5	48:AZ:40:HIS:NE2	2.18	0.41
25:AC:108:LYS:N	25:AC:194:GLN:O	2.52	0.41
29:AG:170:ARG:HH12	52:A4:29:ASN:HB3	1.86	0.41
37:AO:31:LEU:HB2	37:AO:34:VAL:HG12	2.03	0.41
1:Ba:364:A:N3	1:Ba:376:U:O2'	2.42	0.41
1:Ba:847:G:N2	1:Ba:857:C:N1	2.69	0.41
1:Ba:851:U:C2'	1:Ba:852:C:H4'	2.50	0.41
1:Ba:854:G:N1	1:Ba:855:C:C2	2.89	0.41
1:Ba:860:U:H2'	1:Ba:861:A:C8	2.55	0.41
23:BA:859:C:OP1	38:BP:84:ARG:HA	2.20	0.41
23:BA:1829:A:H2'	23:BA:1830:A:C8	2.55	0.41
23:BA:2849:A:OP1	26:BD:86:ARG:NH2	2.47	0.41
31:BI:43:VAL:HG23	31:BI:54:LYS:HA	2.02	0.41
33:BK:48:GLU:OE2	33:BK:51:ARG:NH1	2.53	0.41
45:BW:14:ILE:HG21	45:BW:57:ALA:HB2	2.02	0.41
45:BW:56:VAL:O	45:BW:60:ARG:HG2	2.20	0.41
1:Aa:125:G:OP1	1:Aa:613:U:O2'	2.32	0.41
1:Aa:776:A:N3	1:Aa:1523:U:O2'	2.51	0.41
2:Ab:205:ASP:O	22:Av:148:GLU:OE1	2.39	0.41
23:AA:1591:G:O2'	23:AA:1592:A:O4'	2.38	0.41
23:AA:1697:G:C6	34:AL:5:LYS:HB2	2.55	0.41
23:AA:1767:G:OP2	23:AA:1768:C:N4	2.38	0.41
23:AA:1829:A:H2'	23:AA:1830:A:C8	2.56	0.41
27:AE:19:LEU:HD21	27:AE:199:ALA:HB1	2.02	0.41
28:AF:120:LYS:HB3	28:AF:167:ARG:HH22	1.85	0.41
37:AO:105:ALA:HB1	38:AP:40:PHE:HZ	1.85	0.41
16:Bp:7:LEU:HD22	16:Bp:18:TYR:HB3	2.02	0.41
23:BA:669:C:H2'	23:BA:670:G:C8	2.56	0.41
23:BA:1917:A:H8	23:BA:2261:G:N2	2.18	0.41
33:BK:35:GLN:HB3	33:BK:102:ILE:HD13	2.02	0.41
52:B4:29:ASN:HD21	52:B4:32:HIS:CE1	2.39	0.41
1:Aa:854:G:N2	1:Aa:855:C:O2	2.54	0.41
1:Aa:1024:G:H2'	1:Aa:1025:A:C8	2.56	0.41
23:AA:152:C:OP1	23:AA:1396:A:O2'	2.37	0.41
23:AA:2285:C:O2'	23:AA:2454:C:OP2	2.37	0.41
26:AD:34:VAL:HG22	26:AD:85:LYS:HE3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AF:34:ILE:HB	28:AF:91:LEU:HB2	2.03	0.41
30:AH:63:ILE:HG13	30:AH:102:ILE:HD11	2.03	0.41
33:AK:35:GLN:HB3	33:AK:102:ILE:HD13	2.02	0.41
39:AQ:86:ARG:HA	39:AQ:86:ARG:HD2	1.60	0.41
50:A2:40:ARG:HA	50:A2:40:ARG:HD3	1.92	0.41
1:Ba:935:G:C5	22:Bv:91:LYS:HG3	2.55	0.41
1:Ba:972:G:H21	10:Bj:56:HIS:CE1	2.37	0.41
1:Ba:1137:U:H1'	1:Ba:1291:U:H1'	2.02	0.41
5:Be:55:GLU:O	5:Be:59:ALA:N	2.51	0.41
12:Bl:66:ALA:HB2	12:Bl:80:ILE:HD11	2.02	0.41
23:BA:390:A:H2'	23:BA:391:A:C8	2.55	0.41
23:BA:828:A:H2'	23:BA:829:U:H4'	2.02	0.41
23:BA:1644:C:OP1	40:BR:76:ARG:NH2	2.54	0.41
27:BE:32:VAL:HG13	27:BE:105:MET:HG2	2.03	0.41
1:Aa:159:G:N2	1:Aa:162:A:OP2	2.54	0.41
1:Aa:1097:U:H3	1:Aa:1110:G:H22	1.68	0.41
4:Ad:96:ALA:O	4:Ad:100:SER:N	2.46	0.41
9:Ai:50:LEU:HA	9:Ai:82:ARG:HD2	2.02	0.41
9:Ai:112:MET:HE3	9:Ai:112:MET:HB3	1.95	0.41
16:Ap:20:ILE:HG13	16:Ap:37:ILE:HB	2.02	0.41
23:AA:366:G:O2'	27:AE:169:ASN:O	2.33	0.41
23:AA:390:A:H2'	23:AA:391:A:C8	2.55	0.41
23:AA:1563:U:H2'	23:AA:1564:G:C8	2.55	0.41
26:AD:2:THR:HA	26:AD:94:VAL:HA	2.01	0.41
36:AN:59:GLU:CG	36:AN:78:LEU:HD23	2.48	0.41
1:Ba:1154:G:N7	1:Ba:1156:A:N6	2.68	0.41
2:Bb:205:ASP:O	22:Bv:148:GLU:OE1	2.38	0.41
11:Bk:97:ILE:HD11	21:Bu:16:LEU:HD12	2.02	0.41
23:BA:23:G:H21	39:BQ:77:ASN:ND2	2.19	0.41
23:BA:833:A:OP1	23:BA:836:C:N4	2.49	0.41
23:BA:1250:G:N2	23:BA:1274:G:O2'	2.52	0.41
23:BA:1450:A:H61	23:BA:1635:A:N6	2.15	0.41
23:BA:1658:A:C2	39:BQ:93:ALA:HB2	2.55	0.41
23:BA:2405:A:C5	23:BA:2406:G:H1'	2.55	0.41
28:BF:34:ILE:HB	28:BF:91:LEU:HB2	2.03	0.41
44:BV:14:THR:HG22	44:BV:28:ARG:HD2	2.03	0.41
46:BX:18:THR:HG22	46:BX:49:LYS:NZ	2.36	0.41
1:Aa:753:U:C5'	1:Aa:860:U:O2	2.68	0.41
1:Aa:846:G:N1	1:Aa:847:G:C8	2.88	0.41
1:Aa:899:G:O2'	1:Aa:915:G:O6	2.34	0.41
4:Ad:58:ARG:HH21	4:Ad:64:THR:HA	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Al:85:HIS:CD2	12:Al:87:LEU:HB2	2.52	0.41
23:AA:564:U:H5''	39:AQ:25:ARG:HH12	1.86	0.41
23:AA:617:A:N6	23:AA:2061:U:OP1	2.54	0.41
23:AA:1713:A:O2'	31:Al:4:GLN:NE2	2.53	0.41
23:AA:2330:G:C4'	28:AF:122:PHE:O	2.66	0.41
23:AA:2850:G:OP1	26:AD:67:LYS:HB3	2.20	0.41
25:AC:8:PRO:HB3	25:AC:14:ARG:HG3	2.02	0.41
25:AC:207:LYS:HG2	25:AC:209:GLY:H	1.85	0.41
30:AH:74:VAL:H	30:AH:74:VAL:HG22	1.62	0.41
31:Al:43:VAL:HG23	31:Al:54:LYS:HA	2.03	0.41
39:AQ:69:LEU:HD23	39:AQ:109:ASP:HB3	2.03	0.41
41:AS:39:ASN:HD22	41:AS:63:ILE:HG12	1.85	0.41
52:A4:29:ASN:HD21	52:A4:32:HIS:CE1	2.39	0.41
1:Ba:776:A:N3	1:Ba:1523:U:O2'	2.51	0.41
1:Ba:846:G:N2	1:Ba:858:C:C4	2.88	0.41
1:Ba:1129:A:H1'	1:Ba:1189:A:C4	2.56	0.41
1:Ba:1177:A:H1'	1:Ba:1178:C:H4'	2.02	0.41
17:Bq:70:SER:OG	17:Bq:71:ALA:N	2.53	0.41
27:BE:80:ALA:HB3	27:BE:83:TRP:CD1	2.55	0.41
28:BF:120:LYS:HB3	28:BF:167:ARG:HH22	1.85	0.41
31:BI:11:ALA:HB2	31:BI:83:ALA:HB1	2.03	0.41
43:BU:29:LEU:HD21	43:BU:49:ARG:HG2	2.03	0.41
1:Aa:844:G:N2	1:Aa:845:G:H1'	2.36	0.41
1:Aa:851:U:H2'	1:Aa:852:C:O5'	2.19	0.41
1:Aa:860:U:C6	1:Aa:861:A:C8	3.09	0.41
1:Aa:1162:A:H1'	10:Aj:41:PRO:HG2	2.03	0.41
3:Ac:69:THR:HG21	3:Ac:75:VAL:HG11	2.02	0.41
9:Ai:12:GLY:HA3	9:Ai:84:GLY:HA2	2.03	0.41
23:AA:23:G:H21	39:AQ:77:ASN:HD22	1.69	0.41
23:AA:24:G:O2'	39:AQ:78:GLU:O	2.36	0.41
23:AA:252:C:OP2	23:AA:2421:C:O2'	2.33	0.41
23:AA:669:C:H2'	23:AA:670:G:C8	2.56	0.41
23:AA:1698:A:O2'	26:AD:127:PHE:O	2.35	0.41
23:AA:1701:U:P	26:AD:149:ARG:HB2	2.60	0.41
23:AA:2260:A:H2'	23:AA:2261:G:C8	2.55	0.41
23:AA:2277:G:C2	33:AK:84:GLY:HA3	2.55	0.41
45:AW:56:VAL:O	45:AW:60:ARG:HG2	2.21	0.41
1:Ba:212:A:H2'	1:Ba:213:G:C8	2.55	0.41
1:Ba:255:G:H21	1:Ba:290:A:H8	1.68	0.41
1:Ba:1029:A:H2'	1:Ba:1030:G:H8	1.85	0.41
6:Bf:20:LYS:HA	6:Bf:23:VAL:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Bk:29:ASN:HA	11:Bk:57:LYS:HB3	2.03	0.41
12:Bl:87:LEU:HD11	12:Bl:93:VAL:HG11	2.02	0.41
23:BA:1477:U:H2'	23:BA:1478:A:C8	2.55	0.41
23:BA:2498:A:N6	23:BA:2503:A:O2'	2.54	0.41
29:BG:170:ARG:HH12	52:B4:29:ASN:HB3	1.86	0.41
32:BJ:74:TYR:CE2	32:BJ:127:LYS:HE2	2.56	0.41
37:BO:31:LEU:HB2	37:BO:34:VAL:HG12	2.03	0.41
1:Aa:152:A:N6	1:Aa:169:C:N3	2.68	0.41
1:Aa:481:C:H2'	1:Aa:482:A:H8	1.86	0.41
1:Aa:665:U:H3	1:Aa:757:A:H61	1.68	0.41
1:Aa:935:G:C5	22:Av:91:LYS:HG3	2.55	0.41
1:Aa:1129:A:H1'	1:Aa:1189:A:C4	2.56	0.41
1:Aa:1141:A:O2'	1:Aa:1142:U:O4'	2.35	0.41
4:Ad:14:ARG:HH21	4:Ad:33:PRO:HD2	1.86	0.41
4:Ad:165:LEU:HD23	4:Ad:176:PHE:HA	2.03	0.41
9:Ai:30:ILE:HB	9:Ai:37:VAL:HG21	2.02	0.41
17:Aq:33:HIS:HD2	17:Aq:36:TYR:H	1.68	0.41
18:Ar:26:ILE:HD12	18:Ar:59:MET:HE3	2.03	0.41
23:AA:26:G:H1'	23:AA:560:A:H61	1.85	0.41
23:AA:527:G:O2'	23:AA:552:A:N6	2.52	0.41
23:AA:625:G:H2'	23:AA:626:G:C8	2.56	0.41
23:AA:1087:C:N4	23:AA:1088:C:H41	2.19	0.41
23:AA:1107:G:H22	23:AA:1120:C:H1'	1.86	0.41
23:AA:1111:A:N1	23:AA:1139:A:O2'	2.36	0.41
23:AA:1187:A:OP1	30:AH:28:ARG:NH2	2.50	0.41
23:AA:1479:G:H2'	23:AA:1480:G:C8	2.55	0.41
23:AA:1644:C:OP1	40:AR:76:ARG:NH2	2.54	0.41
23:AA:1809:C:O2	23:AA:2635:G:O2'	2.37	0.41
23:AA:2498:A:N6	23:AA:2503:A:O2'	2.54	0.41
27:AE:32:VAL:HG13	27:AE:105:MET:HG2	2.03	0.41
27:AE:152:VAL:HG12	27:AE:173:VAL:HG22	2.02	0.41
33:AK:34:LEU:HB2	33:AK:118:LEU:HD22	2.03	0.41
46:AX:18:THR:HG22	46:AX:49:LYS:NZ	2.36	0.41
1:Ba:844:G:C2	1:Ba:845:G:H1'	2.55	0.41
1:Ba:845:G:P	1:Ba:846:G:OP2	2.79	0.41
1:Ba:850:U:C4	1:Ba:851:U:C4	3.09	0.41
1:Ba:859:U:O2'	1:Ba:860:U:H5'	2.20	0.41
2:Bb:115:SER:HA	2:Bb:152:ARG:HH12	1.86	0.41
3:Bc:69:THR:HG21	3:Bc:75:VAL:HG11	2.02	0.41
8:Bh:36:ILE:HD13	8:Bh:36:ILE:HA	1.96	0.41
11:Bk:34:ILE:HD12	11:Bk:42:LEU:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Bl:48:THR:HG22	12:Bl:49:ARG:HG3	2.03	0.41
23:BA:262:G:H21	23:BA:666:A:H8	1.69	0.41
23:BA:1107:G:H22	23:BA:1120:C:H1'	1.86	0.41
23:BA:1521:A:N6	23:BA:1559:G:H1	2.18	0.41
23:BA:1583:G:H5''	23:BA:1584:U:C2	2.55	0.41
23:BA:1708:A:H61	23:BA:2023:C:H42	1.69	0.41
23:BA:1754:C:H4'	23:BA:2878:U:H3	1.86	0.41
23:BA:1758:A:H1'	23:BA:1772:G:C5	2.56	0.41
23:BA:1771:A:O2'	23:BA:1772:G:N7	2.52	0.41
23:BA:1893:A:C5	23:BA:1894:G:H1'	2.55	0.41
23:BA:2024:A:O5'	26:BD:138:ARG:NH1	2.44	0.41
23:BA:2333:U:N3	28:BF:40:VAL:HB	2.36	0.41
23:BA:2821:U:H5''	23:BA:2823:G:C2	2.56	0.41
30:BH:63:ILE:HG13	30:BH:102:ILE:HD11	2.03	0.41
31:BI:98:ILE:HD13	31:BI:114:ILE:HG23	2.02	0.41
49:B1:31:GLU:HB2	49:B1:44:LEU:HD12	2.03	0.41
1:Aa:161:A:N6	1:Aa:162:A:H62	2.19	0.41
9:Ai:44:GLU:HA	9:Ai:47:ILE:HD12	2.02	0.41
10:Aj:40:ILE:HA	10:Aj:41:PRO:HD3	1.86	0.41
23:AA:229:A:N1	23:AA:464:U:O2'	2.48	0.41
23:AA:1583:G:H5''	23:AA:1584:U:C2	2.55	0.41
23:AA:2294:A:H5''	23:AA:2295:A:H5''	2.02	0.41
26:AD:8:ARG:NH2	26:AD:54:GLU:OE1	2.43	0.41
32:AJ:76:ILE:HD13	32:AJ:76:ILE:HA	1.89	0.41
44:AV:39:LEU:HD12	44:AV:39:LEU:HA	1.95	0.41
45:AW:6:ILE:HG22	45:AW:56:VAL:HG21	2.03	0.41
1:Ba:159:G:N2	1:Ba:162:A:OP2	2.54	0.41
1:Ba:673:A:H1'	1:Ba:741:G:H5'	2.02	0.41
1:Ba:1214:A:O2'	3:Bc:187:GLU:OE2	2.38	0.41
9:Bi:12:GLY:HA3	9:Bi:84:GLY:HA2	2.03	0.41
23:BA:503:A:N6	23:BA:516:A:H5''	2.36	0.41
23:BA:1520:A:H61	23:BA:1561:G:H2'	1.86	0.41
23:BA:1701:U:P	26:BD:149:ARG:HB2	2.60	0.41
23:BA:2260:A:H2'	23:BA:2261:G:C8	2.55	0.41
23:BA:2654:G:O2'	23:BA:2808:A:N1	2.48	0.41
23:BA:2707:C:H1'	26:BD:200:ASN:ND2	2.36	0.41
29:BG:148:ILE:H	29:BG:148:ILE:HG13	1.55	0.41
1:Aa:96:U:H2'	1:Aa:97:G:H8	1.86	0.40
1:Aa:847:G:N1	1:Aa:848:G:N1	2.69	0.40
1:Aa:1154:G:N7	1:Aa:1156:A:N6	2.68	0.40
1:Aa:1278:G:H1'	1:Aa:1337:A:H5''	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:Ad:120:LEU:HA	4:Ad:125:ARG:HA	2.03	0.40
9:Ai:53:PRO:HG2	9:Ai:85:ILE:HD11	2.02	0.40
11:Ak:29:ASN:HA	11:Ak:57:LYS:HB3	2.03	0.40
11:Ak:126:ARG:HA	21:Au:37:PHE:HB2	2.03	0.40
12:Al:87:LEU:HD11	12:Al:93:VAL:HG11	2.02	0.40
23:AA:302:A:O2'	23:AA:410:G:O6	2.33	0.40
23:AA:1847:U:OP1	25:AC:177:ARG:CG	2.69	0.40
23:AA:2046:U:P	48:AZ:6:ARG:NH1	2.85	0.40
23:AA:2642:U:O2	48:AZ:5:LYS:N	2.53	0.40
23:AA:2917:U:H2'	23:AA:2918:A:H8	1.86	0.40
31:AI:11:ALA:HB2	31:AI:83:ALA:HB1	2.02	0.40
33:AK:44:SER:HB2	33:AK:70:PRO:HG3	2.03	0.40
1:Ba:152:A:N6	1:Ba:169:C:N3	2.68	0.40
1:Ba:227:C:O2'	1:Ba:228:A:N3	2.54	0.40
1:Ba:486:C:H1'	1:Ba:487:U:H5'	2.03	0.40
1:Ba:602:U:O2'	1:Ba:603:A:O4'	2.39	0.40
1:Ba:848:G:C6	1:Ba:849:U:C5	3.09	0.40
1:Ba:932:A:N6	1:Ba:1402:G:O6	2.55	0.40
1:Ba:948:G:H3'	7:Bg:102:ARG:HH12	1.85	0.40
1:Ba:1261:A:N3	1:Ba:1379:C:O2'	2.54	0.40
3:Bc:107:LYS:HG3	3:Bc:143:LEU:HG	2.03	0.40
16:Bp:20:ILE:HG13	16:Bp:37:ILE:HB	2.02	0.40
23:BA:527:G:O2'	23:BA:552:A:N6	2.52	0.40
23:BA:625:G:H2'	23:BA:626:G:C8	2.56	0.40
23:BA:1091:G:N2	23:BA:1154:G:O2'	2.51	0.40
23:BA:1839:G:O2'	25:BC:44:ASN:HB2	2.21	0.40
23:BA:2917:U:H2'	23:BA:2918:A:H8	1.86	0.40
36:BN:22:PHE:O	36:BN:52:ARG:NH1	2.54	0.40
1:Aa:486:C:H1'	1:Aa:487:U:H5'	2.03	0.40
1:Aa:844:G:P	18:Ar:55:LYS:NZ	2.86	0.40
12:Al:40:SER:HA	12:Al:41:PRO:HD3	1.94	0.40
16:Ap:7:LEU:HD22	16:Ap:18:TYR:HB3	2.02	0.40
23:AA:503:A:N1	23:AA:518:A:N6	2.69	0.40
23:AA:862:C:H3'	23:AA:863:G:H8	1.86	0.40
23:AA:1839:G:O2'	25:AC:44:ASN:HB2	2.22	0.40
23:AA:1985:C:H2'	23:AA:1986:G:H8	1.87	0.40
36:AN:22:PHE:O	36:AN:52:ARG:NH1	2.55	0.40
1:Ba:850:U:H6	1:Ba:850:U:C5'	2.26	0.40
1:Ba:851:U:C4	1:Ba:853:C:H5	2.32	0.40
1:Ba:1097:U:H3	1:Ba:1110:G:H22	1.68	0.40
1:Ba:1172:C:O2'	1:Ba:1173:G:O4'	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Be:80:THR:HA	5:Be:120:ILE:HG23	2.03	0.40
6:Bf:51:GLU:HG3	6:Bf:54:ASP:HA	2.03	0.40
9:Bi:50:LEU:HA	9:Bi:82:ARG:HD2	2.03	0.40
23:BA:588:G:N2	23:BA:589:U:O4	2.40	0.40
23:BA:2294:A:H5''	23:BA:2295:A:H5''	2.03	0.40
33:BK:44:SER:HB2	33:BK:70:PRO:HG3	2.03	0.40
37:BO:105:ALA:HB1	38:BP:40:PHE:HZ	1.85	0.40
39:BQ:69:LEU:HD23	39:BQ:109:ASP:HB3	2.03	0.40
1:Aa:212:A:H2'	1:Aa:213:G:C8	2.55	0.40
1:Aa:255:G:H21	1:Aa:290:A:H8	1.68	0.40
1:Aa:932:A:N6	1:Aa:1402:G:O6	2.55	0.40
16:Ap:67:PRO:HB3	16:Ap:71:VAL:HG23	2.04	0.40
17:Aq:70:SER:OG	17:Aq:71:ALA:N	2.53	0.40
23:AA:262:G:H21	23:AA:666:A:H8	1.69	0.40
23:AA:2156:C:H42	23:AA:2186:G:H1	1.69	0.40
23:AA:2663:U:O2'	26:AD:46:TYR:CZ	2.74	0.40
25:AC:18:SER:OG	25:AC:19:LEU:N	2.54	0.40
32:AJ:123:VAL:HG21	32:AJ:136:ILE:HD13	2.02	0.40
1:Ba:481:C:H2'	1:Ba:482:A:H8	1.86	0.40
1:Ba:858:C:O2'	1:Ba:859:U:H5'	2.21	0.40
2:Bb:206:ALA:HB1	22:Bv:148:GLU:CD	2.47	0.40
4:Bd:165:LEU:HD23	4:Bd:176:PHE:HA	2.03	0.40
5:Be:18:ILE:HG22	5:Be:35:ALA:HB2	2.04	0.40
23:BA:862:C:H3'	23:BA:863:G:H8	1.86	0.40
23:BA:882:C:H5	23:BA:986:G:H1	1.67	0.40
23:BA:1465:G:O2'	23:BA:1537:A:N6	2.54	0.40
23:BA:2422:C:H42	23:BA:2448:G:H1	1.69	0.40
36:BN:59:GLU:CG	36:BN:78:LEU:HD23	2.48	0.40
10:Aj:8:ILE:N	10:Aj:74:ILE:O	2.42	0.40
12:Al:48:THR:HG22	12:Al:49:ARG:HG3	2.03	0.40
23:AA:745:G:O2'	23:AA:1676:A:N3	2.49	0.40
24:AB:55:A:H1'	28:AF:27:GLU:HB3	2.02	0.40
41:AS:79:THR:OG1	41:AS:94:ALA:O	2.32	0.40
43:AU:34:ALA:H	43:AU:37:GLN:HE21	1.70	0.40
49:A1:31:GLU:HB2	49:A1:44:LEU:HD12	2.03	0.40
9:Bi:11:THR:HA	9:Bi:20:ARG:HA	2.03	0.40
23:BA:277:C:H2'	23:BA:278:A:H8	1.86	0.40
23:BA:1087:C:N4	23:BA:1088:C:H41	2.19	0.40
23:BA:1847:U:OP1	25:BC:177:ARG:CG	2.69	0.40
23:BA:2332:U:O5'	28:BF:131:GLY:CA	2.65	0.40
23:BA:2622:G:N2	23:BA:2625:A:OP2	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BJ:55:LEU:HA	32:BJ:56:PRO:HD3	1.96	0.40
43:BU:34:ALA:H	43:BU:37:GLN:HE21	1.70	0.40
1:Aa:413:U:H2'	4:Ad:5:ARG:HH11	1.86	0.40
1:Aa:697:C:P	11:Ak:29:ASN:HD21	2.45	0.40
1:Aa:1328:A:H1'	19:As:37:ARG:HH11	1.86	0.40
2:Ab:32:PHE:HB2	2:Ab:42:ASP:HA	2.03	0.40
3:Ac:107:LYS:HG3	3:Ac:143:LEU:HG	2.04	0.40
4:Ad:54:LYS:NZ	4:Ad:65:GLU:OE2	2.53	0.40
23:AA:199:A:C2	32:AJ:50:PHE:HZ	2.39	0.40
23:AA:503:A:N6	23:AA:516:A:H5''	2.36	0.40
23:AA:882:C:H5	23:AA:986:G:H1	1.67	0.40
23:AA:1293:U:C5	27:AE:73:ALA:HA	2.57	0.40
23:AA:1397:G:N7	23:AA:1408:G:N2	2.70	0.40
23:AA:1465:G:O2'	23:AA:1537:A:N6	2.54	0.40
23:AA:1643:C:OP2	40:AR:35:LYS:CD	2.70	0.40
23:AA:1754:C:H4'	23:AA:2878:U:H3	1.85	0.40
23:AA:2024:A:O5'	26:AD:138:ARG:NH1	2.44	0.40
26:AD:12:MET:HE3	26:AD:12:MET:HB2	1.89	0.40
27:AE:155:VAL:HB	27:AE:194:ILE:HG22	2.03	0.40
1:Ba:436:G:H5''	4:Bd:10:LYS:HD2	2.03	0.40
1:Ba:458:G:OP2	1:Ba:459:A:O2'	2.35	0.40
1:Ba:824:A:OP1	1:Ba:1537:G:O2'	2.32	0.40
1:Ba:858:C:C6	1:Ba:859:U:C5	3.09	0.40
1:Ba:1328:A:H1'	19:Bs:37:ARG:HH11	1.86	0.40
4:Bd:14:ARG:HH21	4:Bd:33:PRO:HD2	1.86	0.40
12:Bl:7:LEU:HD11	12:Bl:12:ARG:HG2	2.04	0.40
14:Bn:23:ARG:O	14:Bn:38:LYS:NZ	2.54	0.40
18:Br:26:ILE:HD12	18:Br:59:MET:HE3	2.03	0.40
23:BA:809:A:H5'	25:BC:209:GLY:HA3	2.04	0.40
23:BA:1187:A:OP1	30:BH:28:ARG:NH2	2.50	0.40
23:BA:1397:G:N7	23:BA:1408:G:N2	2.70	0.40
23:BA:1847:U:O2	25:BC:201:GLU:CB	2.68	0.40
23:BA:2048:G:N2	37:BO:25:PHE:CG	2.89	0.40
26:BD:196:LEU:HD21	36:BN:10:VAL:HG11	2.04	0.40
27:BE:155:VAL:HB	27:BE:194:ILE:HG22	2.03	0.40
33:BK:34:LEU:HB2	33:BK:118:LEU:HD22	2.03	0.40
35:BM:29:PRO:HD2	35:BM:92:ILE:HG22	2.04	0.40
44:BV:19:SER:OG	44:BV:23:ASN:OD1	2.25	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

There are no protein backbone outliers to report in this entry.

5.3.2 Protein sidechains [i](#)

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

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	Aa	1537/1539 (99%)	470 (30%)	0
1	Ba	1537/1539 (99%)	468 (30%)	0
23	AA	2896/2923 (99%)	795 (27%)	26 (0%)
23	BA	2896/2923 (99%)	795 (27%)	24 (0%)
24	AB	114/115 (99%)	16 (14%)	0
24	BB	114/115 (99%)	16 (14%)	0
All	All	9094/9154 (99%)	2560 (28%)	50 (0%)

All (2560) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	Aa	6	U
1	Aa	8	G
1	Aa	9	A
1	Aa	10	G
1	Aa	23	G
1	Aa	30	A
1	Aa	33	A
1	Aa	40	G
1	Aa	41	C
1	Aa	45	G
1	Aa	48	C
1	Aa	49	C
1	Aa	50	U
1	Aa	51	A
1	Aa	52	A
1	Aa	59	C
1	Aa	60	A
1	Aa	61	A
1	Aa	62	G

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Mol	Chain	Res	Type
1	Aa	66	A
1	Aa	68	C
1	Aa	69	G
1	Aa	70	A
1	Aa	71	A
1	Aa	75	A
1	Aa	76	C
1	Aa	78	A
1	Aa	82	G
1	Aa	83	C
1	Aa	84	U
1	Aa	85	U
1	Aa	88	U
1	Aa	89	U
1	Aa	92	C
1	Aa	94	G
1	Aa	99	U
1	Aa	100	A
1	Aa	107	G
1	Aa	120	C
1	Aa	129	A
1	Aa	140	A
1	Aa	150	U
1	Aa	162	A
1	Aa	163	C
1	Aa	165	G
1	Aa	183	U
1	Aa	184	A
1	Aa	185	U
1	Aa	186	U
1	Aa	187	U
1	Aa	188	U
1	Aa	191	A
1	Aa	193	C
1	Aa	194	G
1	Aa	197	U
1	Aa	199	G
1	Aa	200	U
1	Aa	201	U
1	Aa	203	A
1	Aa	204	A
1	Aa	206	A

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Mol	Chain	Res	Type
1	Aa	208	U
1	Aa	209	G
1	Aa	210	A
1	Aa	211	A
1	Aa	213	G
1	Aa	219	C
1	Aa	220	U
1	Aa	221	U
1	Aa	222	G
1	Aa	224	U
1	Aa	228	A
1	Aa	230	U
1	Aa	231	U
1	Aa	234	A
1	Aa	252	U
1	Aa	253	U
1	Aa	255	G
1	Aa	256	C
1	Aa	257	U
1	Aa	258	A
1	Aa	259	G
1	Aa	264	U
1	Aa	267	G
1	Aa	269	U
1	Aa	274	G
1	Aa	275	C
1	Aa	279	C
1	Aa	289	G
1	Aa	291	U
1	Aa	297	G
1	Aa	301	A
1	Aa	309	G
1	Aa	335	A
1	Aa	336	C
1	Aa	337	A
1	Aa	339	G
1	Aa	352	A
1	Aa	354	G
1	Aa	355	G
1	Aa	356	G
1	Aa	358	G
1	Aa	359	G

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Mol	Chain	Res	Type
1	Aa	360	C
1	Aa	362	G
1	Aa	364	A
1	Aa	375	U
1	Aa	376	U
1	Aa	380	C
1	Aa	381	A
1	Aa	389	A
1	Aa	392	G
1	Aa	395	U
1	Aa	406	C
1	Aa	411	C
1	Aa	412	G
1	Aa	413	U
1	Aa	414	G
1	Aa	415	A
1	Aa	416	G
1	Aa	417	U
1	Aa	418	G
1	Aa	419	A
1	Aa	420	U
1	Aa	421	G
1	Aa	422	A
1	Aa	423	A
1	Aa	424	G
1	Aa	425	G
1	Aa	426	U
1	Aa	430	C
1	Aa	431	G
1	Aa	432	G
1	Aa	434	U
1	Aa	437	U
1	Aa	438	A
1	Aa	440	A
1	Aa	441	A
1	Aa	442	C
1	Aa	449	A
1	Aa	450	U
1	Aa	451	U
1	Aa	452	A
1	Aa	456	A
1	Aa	458	G

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Mol	Chain	Res	Type
1	Aa	460	A
1	Aa	461	C
1	Aa	464	A
1	Aa	465	U
1	Aa	484	A
1	Aa	485	U
1	Aa	486	C
1	Aa	487	U
1	Aa	488	U
1	Aa	492	G
1	Aa	499	A
1	Aa	503	A
1	Aa	504	G
1	Aa	505	A
1	Aa	506	A
1	Aa	507	A
1	Aa	513	G
1	Aa	514	G
1	Aa	516	U
1	Aa	517	A
1	Aa	519	C
1	Aa	522	C
1	Aa	526	C
1	Aa	529	G
1	Aa	532	G
1	Aa	535	G
1	Aa	539	U
1	Aa	541	A
1	Aa	542	U
1	Aa	543	A
1	Aa	548	G
1	Aa	554	A
1	Aa	555	A
1	Aa	567	A
1	Aa	570	U
1	Aa	571	A
1	Aa	580	A
1	Aa	581	A
1	Aa	584	C
1	Aa	585	G
1	Aa	596	G
1	Aa	603	A

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Mol	Chain	Res	Type
1	Aa	610	A
1	Aa	619	C
1	Aa	628	C
1	Aa	638	G
1	Aa	639	G
1	Aa	640	G
1	Aa	641	U
1	Aa	642	C
1	Aa	647	G
1	Aa	649	A
1	Aa	650	A
1	Aa	657	A
1	Aa	661	U
1	Aa	666	G
1	Aa	670	A
1	Aa	673	A
1	Aa	674	G
1	Aa	695	A
1	Aa	696	G
1	Aa	702	A
1	Aa	703	A
1	Aa	711	G
1	Aa	712	A
1	Aa	724	A
1	Aa	729	A
1	Aa	731	U
1	Aa	739	G
1	Aa	756	A
1	Aa	763	G
1	Aa	772	C
1	Aa	781	G
1	Aa	798	A
1	Aa	801	U
1	Aa	813	C
1	Aa	818	C
1	Aa	823	A
1	Aa	825	C
1	Aa	826	G
1	Aa	827	A
1	Aa	829	G
1	Aa	835	U
1	Aa	836	A

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Mol	Chain	Res	Type
1	Aa	840	G
1	Aa	843	A
1	Aa	844	G
1	Aa	845	G
1	Aa	846	G
1	Aa	847	G
1	Aa	848	G
1	Aa	849	U
1	Aa	850	U
1	Aa	852	C
1	Aa	853	C
1	Aa	854	G
1	Aa	855	C
1	Aa	858	C
1	Aa	860	U
1	Aa	881	A
1	Aa	894	G
1	Aa	898	A
1	Aa	910	A
1	Aa	911	G
1	Aa	923	A
1	Aa	924	A
1	Aa	935	G
1	Aa	943	C
1	Aa	944	A
1	Aa	949	C
1	Aa	950	G
1	Aa	953	G
1	Aa	954	G
1	Aa	955	A
1	Aa	956	G
1	Aa	958	A
1	Aa	959	U
1	Aa	961	U
1	Aa	969	U
1	Aa	970	U
1	Aa	972	G
1	Aa	973	A
1	Aa	974	A
1	Aa	975	G
1	Aa	977	A
1	Aa	978	A

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Mol	Chain	Res	Type
1	Aa	980	G
1	Aa	983	A
1	Aa	984	A
1	Aa	985	G
1	Aa	986	A
1	Aa	991	U
1	Aa	1001	U
1	Aa	1002	G
1	Aa	1003	A
1	Aa	1007	C
1	Aa	1008	C
1	Aa	1011	U
1	Aa	1012	G
1	Aa	1013	A
1	Aa	1015	A
1	Aa	1016	A
1	Aa	1017	C
1	Aa	1022	G
1	Aa	1023	A
1	Aa	1026	U
1	Aa	1032	C
1	Aa	1033	U
1	Aa	1035	C
1	Aa	1036	C
1	Aa	1038	C
1	Aa	1039	U
1	Aa	1041	C
1	Aa	1042	G
1	Aa	1043	G
1	Aa	1047	A
1	Aa	1048	C
1	Aa	1052	G
1	Aa	1055	A
1	Aa	1056	C
1	Aa	1057	A
1	Aa	1064	G
1	Aa	1065	C
1	Aa	1066	A
1	Aa	1076	U
1	Aa	1077	C
1	Aa	1091	A
1	Aa	1092	G

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Mol	Chain	Res	Type
1	Aa	1094	U
1	Aa	1096	U
1	Aa	1101	U
1	Aa	1105	G
1	Aa	1106	U
1	Aa	1109	C
1	Aa	1112	A
1	Aa	1113	A
1	Aa	1115	G
1	Aa	1119	G
1	Aa	1123	C
1	Aa	1130	G
1	Aa	1135	G
1	Aa	1136	U
1	Aa	1137	U
1	Aa	1138	G
1	Aa	1141	A
1	Aa	1142	U
1	Aa	1143	C
1	Aa	1146	U
1	Aa	1148	A
1	Aa	1149	G
1	Aa	1150	U
1	Aa	1151	U
1	Aa	1154	G
1	Aa	1156	A
1	Aa	1157	C
1	Aa	1165	U
1	Aa	1167	A
1	Aa	1168	C
1	Aa	1169	U
1	Aa	1172	C
1	Aa	1173	G
1	Aa	1174	G
1	Aa	1175	U
1	Aa	1177	A
1	Aa	1178	C
1	Aa	1179	A
1	Aa	1181	A
1	Aa	1187	G
1	Aa	1188	G
1	Aa	1189	A

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Mol	Chain	Res	Type
1	Aa	1190	A
1	Aa	1191	G
1	Aa	1194	G
1	Aa	1202	C
1	Aa	1203	G
1	Aa	1206	A
1	Aa	1207	A
1	Aa	1208	A
1	Aa	1209	U
1	Aa	1210	C
1	Aa	1211	A
1	Aa	1216	G
1	Aa	1222	U
1	Aa	1224	U
1	Aa	1225	G
1	Aa	1226	A
1	Aa	1228	U
1	Aa	1230	G
1	Aa	1234	U
1	Aa	1235	A
1	Aa	1236	C
1	Aa	1238	C
1	Aa	1243	G
1	Aa	1246	A
1	Aa	1248	A
1	Aa	1250	U
1	Aa	1251	G
1	Aa	1256	A
1	Aa	1260	A
1	Aa	1266	C
1	Aa	1267	A
1	Aa	1268	G
1	Aa	1270	G
1	Aa	1274	C
1	Aa	1275	C
1	Aa	1280	G
1	Aa	1281	G
1	Aa	1282	U
1	Aa	1283	C
1	Aa	1286	G
1	Aa	1287	C
1	Aa	1288	A

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Mol	Chain	Res	Type
1	Aa	1289	A
1	Aa	1290	A
1	Aa	1291	U
1	Aa	1292	C
1	Aa	1296	U
1	Aa	1297	A
1	Aa	1300	G
1	Aa	1305	U
1	Aa	1307	U
1	Aa	1308	C
1	Aa	1309	A
1	Aa	1310	G
1	Aa	1311	U
1	Aa	1312	U
1	Aa	1313	C
1	Aa	1314	G
1	Aa	1315	G
1	Aa	1319	G
1	Aa	1320	U
1	Aa	1322	G
1	Aa	1327	C
1	Aa	1329	A
1	Aa	1332	C
1	Aa	1333	G
1	Aa	1335	C
1	Aa	1336	U
1	Aa	1337	A
1	Aa	1338	C
1	Aa	1339	A
1	Aa	1341	G
1	Aa	1345	C
1	Aa	1347	G
1	Aa	1348	G
1	Aa	1356	A
1	Aa	1357	G
1	Aa	1361	U
1	Aa	1363	G
1	Aa	1368	U
1	Aa	1371	G
1	Aa	1373	A
1	Aa	1378	A
1	Aa	1380	G

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Mol	Chain	Res	Type
1	Aa	1387	A
1	Aa	1391	U
1	Aa	1392	C
1	Aa	1393	C
1	Aa	1404	A
1	Aa	1408	A
1	Aa	1419	C
1	Aa	1421	C
1	Aa	1428	A
1	Aa	1429	G
1	Aa	1438	A
1	Aa	1448	G
1	Aa	1451	G
1	Aa	1456	A
1	Aa	1461	U
1	Aa	1462	U
1	Aa	1463	U
1	Aa	1464	A
1	Aa	1466	G
1	Aa	1468	G
1	Aa	1476	U
1	Aa	1483	U
1	Aa	1495	U
1	Aa	1505	G
1	Aa	1508	G
1	Aa	1510	A
1	Aa	1514	A
1	Aa	1515	G
1	Aa	1540	G
1	Aa	1541	G
1	Aa	1543	U
23	AA	11	U
23	AA	15	G
23	AA	27	G
23	AA	28	A
23	AA	34	U
23	AA	36	G
23	AA	43	A
23	AA	51	G
23	AA	52	A
23	AA	53	A
23	AA	55	G

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Mol	Chain	Res	Type
23	AA	63	U
23	AA	70	G
23	AA	71	A
23	AA	74	U
23	AA	75	G
23	AA	83	G
23	AA	84	A
23	AA	90	A
23	AA	92	G
23	AA	93	U
23	AA	96	G
23	AA	101	G
23	AA	102	A
23	AA	104	C
23	AA	117	A
23	AA	119	U
23	AA	124	A
23	AA	141	U
23	AA	148	U
23	AA	149	U
23	AA	152	C
23	AA	156	A
23	AA	157	U
23	AA	158	G
23	AA	161	A
23	AA	164	A
23	AA	167	U
23	AA	168	A
23	AA	170	C
23	AA	172	U
23	AA	173	A
23	AA	177	G
23	AA	178	A
23	AA	180	G
23	AA	184	C
23	AA	185	A
23	AA	199	A
23	AA	202	A
23	AA	213	C
23	AA	215	G
23	AA	216	A
23	AA	218	G

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Mol	Chain	Res	Type
23	AA	219	A
23	AA	224	A
23	AA	225	A
23	AA	233	U
23	AA	246	U
23	AA	251	G
23	AA	255	G
23	AA	268	A
23	AA	269	G
23	AA	270	C
23	AA	279	A
23	AA	280	C
23	AA	285	U
23	AA	286	U
23	AA	287	G
23	AA	292	U
23	AA	293	U
23	AA	298	U
23	AA	299	U
23	AA	300	G
23	AA	301	U
23	AA	302	A
23	AA	307	A
23	AA	309	U
23	AA	310	C
23	AA	311	U
23	AA	312	A
23	AA	316	G
23	AA	320	U
23	AA	321	U
23	AA	327	G
23	AA	328	G
23	AA	333	C
23	AA	335	U
23	AA	345	C
23	AA	353	A
23	AA	365	A
23	AA	366	G
23	AA	373	A
23	AA	388	A
23	AA	389	A
23	AA	392	U

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Mol	Chain	Res	Type
23	AA	394	U
23	AA	397	U
23	AA	402	C
23	AA	404	U
23	AA	406	A
23	AA	410	G
23	AA	411	A
23	AA	417	A
23	AA	432	G
23	AA	435	A
23	AA	444	C
23	AA	447	A
23	AA	449	U
23	AA	451	U
23	AA	452	G
23	AA	458	A
23	AA	460	C
23	AA	481	C
23	AA	482	U
23	AA	486	G
23	AA	490	C
23	AA	492	G
23	AA	493	A
23	AA	501	C
23	AA	502	C
23	AA	503	A
23	AA	504	G
23	AA	506	A
23	AA	512	A
23	AA	513	G
23	AA	518	A
23	AA	523	A
23	AA	527	G
23	AA	535	G
23	AA	538	G
23	AA	539	G
23	AA	550	A
23	AA	553	A
23	AA	554	C
23	AA	557	G
23	AA	558	A
23	AA	559	A

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Mol	Chain	Res	Type
23	AA	563	G
23	AA	566	U
23	AA	572	C
23	AA	574	A
23	AA	576	U
23	AA	577	A
23	AA	578	G
23	AA	580	C
23	AA	591	A
23	AA	592	A
23	AA	594	G
23	AA	606	G
23	AA	611	U
23	AA	616	G
23	AA	617	A
23	AA	618	A
23	AA	639	U
23	AA	644	C
23	AA	645	A
23	AA	646	A
23	AA	647	G
23	AA	659	A
23	AA	672	A
23	AA	679	G
23	AA	682	A
23	AA	689	A
23	AA	690	U
23	AA	698	U
23	AA	699	U
23	AA	702	U
23	AA	713	A
23	AA	715	A
23	AA	720	A
23	AA	722	A
23	AA	730	A
23	AA	731	U
23	AA	735	C
23	AA	750	A
23	AA	754	U
23	AA	755	C
23	AA	759	U
23	AA	760	A

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Mol	Chain	Res	Type
23	AA	761	A
23	AA	762	C
23	AA	763	A
23	AA	765	U
23	AA	766	G
23	AA	768	A
23	AA	771	G
23	AA	775	A
23	AA	792	U
23	AA	793	G
23	AA	797	A
23	AA	802	G
23	AA	809	A
23	AA	810	A
23	AA	816	G
23	AA	820	G
23	AA	822	G
23	AA	827	A
23	AA	829	U
23	AA	830	U
23	AA	834	A
23	AA	835	U
23	AA	836	C
23	AA	837	G
23	AA	840	C
23	AA	841	C
23	AA	842	U
23	AA	850	G
23	AA	856	U
23	AA	857	C
23	AA	868	A
23	AA	870	C
23	AA	872	U
23	AA	891	A
23	AA	892	U
23	AA	904	G
23	AA	911	A
23	AA	914	G
23	AA	918	G
23	AA	920	A
23	AA	926	G
23	AA	928	C

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Mol	Chain	Res	Type
23	AA	940	U
23	AA	943	C
23	AA	949	C
23	AA	952	A
23	AA	955	A
23	AA	957	C
23	AA	960	C
23	AA	964	U
23	AA	968	A
23	AA	969	A
23	AA	970	U
23	AA	971	U
23	AA	972	A
23	AA	973	A
23	AA	975	U
23	AA	977	A
23	AA	985	A
23	AA	986	G
23	AA	988	C
23	AA	989	A
23	AA	990	G
23	AA	992	A
23	AA	997	G
23	AA	1003	A
23	AA	1005	G
23	AA	1012	G
23	AA	1018	A
23	AA	1019	A
23	AA	1024	A
23	AA	1025	A
23	AA	1027	A
23	AA	1034	A
23	AA	1040	A
23	AA	1043	U
23	AA	1047	G
23	AA	1049	C
23	AA	1056	U
23	AA	1057	A
23	AA	1066	G
23	AA	1067	U
23	AA	1069	G
23	AA	1070	A

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Mol	Chain	Res	Type
23	AA	1076	A
23	AA	1077	U
23	AA	1078	G
23	AA	1086	G
23	AA	1087	C
23	AA	1088	C
23	AA	1089	C
23	AA	1091	G
23	AA	1092	A
23	AA	1093	C
23	AA	1094	A
23	AA	1095	A
23	AA	1100	G
23	AA	1102	U
23	AA	1105	U
23	AA	1106	G
23	AA	1109	U
23	AA	1111	A
23	AA	1113	A
23	AA	1114	A
23	AA	1115	G
23	AA	1116	C
23	AA	1117	A
23	AA	1118	G
23	AA	1119	C
23	AA	1120	C
23	AA	1122	U
23	AA	1126	U
23	AA	1127	U
23	AA	1128	A
23	AA	1132	A
23	AA	1133	G
23	AA	1137	G
23	AA	1138	U
23	AA	1139	A
23	AA	1140	A
23	AA	1143	G
23	AA	1145	U
23	AA	1148	C
23	AA	1150	A
23	AA	1151	G
23	AA	1155	A

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Mol	Chain	Res	Type
23	AA	1156	G
23	AA	1158	G
23	AA	1160	C
23	AA	1161	A
23	AA	1162	C
23	AA	1163	U
23	AA	1174	U
23	AA	1176	U
23	AA	1178	C
23	AA	1179	C
23	AA	1186	A
23	AA	1200	A
23	AA	1201	G
23	AA	1208	A
23	AA	1214	C
23	AA	1215	U
23	AA	1216	U
23	AA	1217	U
23	AA	1218	G
23	AA	1225	G
23	AA	1245	G
23	AA	1250	G
23	AA	1258	A
23	AA	1265	G
23	AA	1267	A
23	AA	1274	G
23	AA	1275	A
23	AA	1276	G
23	AA	1284	A
23	AA	1285	A
23	AA	1286	G
23	AA	1290	G
23	AA	1291	A
23	AA	1294	G
23	AA	1298	G
23	AA	1300	G
23	AA	1304	G
23	AA	1309	G
23	AA	1310	A
23	AA	1320	G
23	AA	1326	C
23	AA	1337	A

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Mol	Chain	Res	Type
23	AA	1338	U
23	AA	1339	U
23	AA	1340	G
23	AA	1342	C
23	AA	1344	A
23	AA	1348	U
23	AA	1349	U
23	AA	1351	C
23	AA	1354	G
23	AA	1358	A
23	AA	1367	C
23	AA	1370	C
23	AA	1386	U
23	AA	1387	C
23	AA	1389	U
23	AA	1392	G
23	AA	1394	U
23	AA	1402	A
23	AA	1405	G
23	AA	1415	A
23	AA	1416	U
23	AA	1417	G
23	AA	1420	U
23	AA	1422	A
23	AA	1423	C
23	AA	1432	A
23	AA	1440	A
23	AA	1443	A
23	AA	1445	C
23	AA	1447	A
23	AA	1450	A
23	AA	1451	U
23	AA	1453	G
23	AA	1454	U
23	AA	1455	U
23	AA	1457	U
23	AA	1459	A
23	AA	1463	A
23	AA	1464	U
23	AA	1471	A
23	AA	1472	C
23	AA	1481	A

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Mol	Chain	Res	Type
23	AA	1489	A
23	AA	1490	G
23	AA	1491	C
23	AA	1494	G
23	AA	1495	C
23	AA	1496	G
23	AA	1497	A
23	AA	1498	U
23	AA	1499	U
23	AA	1503	U
23	AA	1504	U
23	AA	1510	U
23	AA	1516	C
23	AA	1518	G
23	AA	1519	U
23	AA	1520	A
23	AA	1521	A
23	AA	1525	U
23	AA	1526	G
23	AA	1527	A
23	AA	1532	U
23	AA	1533	A
23	AA	1534	G
23	AA	1536	C
23	AA	1537	A
23	AA	1540	U
23	AA	1550	G
23	AA	1551	U
23	AA	1552	U
23	AA	1553	A
23	AA	1554	A
23	AA	1555	G
23	AA	1556	G
23	AA	1559	G
23	AA	1561	G
23	AA	1569	G
23	AA	1570	G
23	AA	1575	A
23	AA	1576	A
23	AA	1578	A
23	AA	1579	C
23	AA	1580	A

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Mol	Chain	Res	Type
23	AA	1581	U
23	AA	1582	U
23	AA	1583	G
23	AA	1584	U
23	AA	1586	U
23	AA	1587	C
23	AA	1591	G
23	AA	1594	U
23	AA	1605	A
23	AA	1606	C
23	AA	1613	G
23	AA	1616	A
23	AA	1625	U
23	AA	1627	G
23	AA	1629	U
23	AA	1630	A
23	AA	1631	G
23	AA	1632	A
23	AA	1633	A
23	AA	1634	A
23	AA	1635	A
23	AA	1636	U
23	AA	1639	G
23	AA	1652	A
23	AA	1653	A
23	AA	1654	A
23	AA	1661	C
23	AA	1666	A
23	AA	1675	G
23	AA	1679	A
23	AA	1683	U
23	AA	1684	A
23	AA	1690	A
23	AA	1691	G
23	AA	1692	C
23	AA	1693	G
23	AA	1718	G
23	AA	1719	C
23	AA	1732	U
23	AA	1737	U
23	AA	1738	C
23	AA	1740	G

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Mol	Chain	Res	Type
23	AA	1745	A
23	AA	1747	G
23	AA	1757	U
23	AA	1758	A
23	AA	1759	G
23	AA	1760	G
23	AA	1761	G
23	AA	1762	U
23	AA	1765	A
23	AA	1768	C
23	AA	1771	A
23	AA	1772	G
23	AA	1790	G
23	AA	1791	G
23	AA	1797	G
23	AA	1800	A
23	AA	1806	U
23	AA	1808	U
23	AA	1809	C
23	AA	1811	A
23	AA	1813	A
23	AA	1814	A
23	AA	1818	A
23	AA	1826	G
23	AA	1827	C
23	AA	1828	U
23	AA	1829	A
23	AA	1830	A
23	AA	1835	U
23	AA	1843	U
23	AA	1846	A
23	AA	1856	A
23	AA	1860	C
23	AA	1878	U
23	AA	1879	U
23	AA	1880	A
23	AA	1885	G
23	AA	1889	G
23	AA	1895	C
23	AA	1897	U
23	AA	1898	C
23	AA	1899	U

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Mol	Chain	Res	Type
23	AA	1900	G
23	AA	1901	C
23	AA	1902	G
23	AA	1903	A
23	AA	1904	A
23	AA	1907	U
23	AA	1909	C
23	AA	1911	A
23	AA	1912	A
23	AA	1914	C
23	AA	1918	G
23	AA	1933	G
23	AA	1935	C
23	AA	1937	G
23	AA	1938	U
23	AA	1945	A
23	AA	1950	U
23	AA	1956	G
23	AA	1958	U
23	AA	1963	A
23	AA	1964	A
23	AA	1965	A
23	AA	1966	U
23	AA	1971	U
23	AA	1982	U
23	AA	1989	C
23	AA	1990	C
23	AA	1992	C
23	AA	1994	C
23	AA	1996	A
23	AA	1997	A
23	AA	1998	A
23	AA	1999	G
23	AA	2009	U
23	AA	2018	U
23	AA	2019	G
23	AA	2020	U
23	AA	2023	C
23	AA	2024	A
23	AA	2029	G
23	AA	2030	A
23	AA	2047	A

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Mol	Chain	Res	Type
23	AA	2057	A
23	AA	2058	A
23	AA	2059	G
23	AA	2060	A
23	AA	2062	G
23	AA	2070	C
23	AA	2073	G
23	AA	2075	G
23	AA	2076	A
23	AA	2082	C
23	AA	2083	G
23	AA	2085	A
23	AA	2087	A
23	AA	2088	G
23	AA	2089	A
23	AA	2096	G
23	AA	2097	G
23	AA	2103	U
23	AA	2107	G
23	AA	2109	A
23	AA	2110	G
23	AA	2111	C
23	AA	2115	A
23	AA	2117	A
23	AA	2118	U
23	AA	2119	U
23	AA	2120	G
23	AA	2126	C
23	AA	2129	C
23	AA	2139	A
23	AA	2140	C
23	AA	2143	G
23	AA	2145	U
23	AA	2147	G
23	AA	2153	A
23	AA	2155	C
23	AA	2157	U
23	AA	2158	U
23	AA	2160	G
23	AA	2161	A
23	AA	2164	C
23	AA	2172	C

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Mol	Chain	Res	Type
23	AA	2173	U
23	AA	2174	A
23	AA	2175	G
23	AA	2176	C
23	AA	2183	G
23	AA	2185	A
23	AA	2186	G
23	AA	2188	C
23	AA	2190	C
23	AA	2193	G
23	AA	2194	U
23	AA	2195	G
23	AA	2198	A
23	AA	2204	C
23	AA	2215	U
23	AA	2224	U
23	AA	2225	A
23	AA	2229	C
23	AA	2230	G
23	AA	2231	C
23	AA	2232	A
23	AA	2238	U
23	AA	2240	U
23	AA	2241	C
23	AA	2243	U
23	AA	2252	A
23	AA	2261	G
23	AA	2262	G
23	AA	2263	C
23	AA	2265	G
23	AA	2266	G
23	AA	2290	C
23	AA	2295	A
23	AA	2305	A
23	AA	2306	G
23	AA	2310	C
23	AA	2314	A
23	AA	2316	G
23	AA	2321	C
23	AA	2328	A
23	AA	2329	U
23	AA	2330	G

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Mol	Chain	Res	Type
23	AA	2331	G
23	AA	2332	U
23	AA	2333	U
23	AA	2334	G
23	AA	2335	G
23	AA	2336	A
23	AA	2337	A
23	AA	2345	A
23	AA	2346	U
23	AA	2347	A
23	AA	2352	G
23	AA	2353	U
23	AA	2358	G
23	AA	2361	U
23	AA	2362	A
23	AA	2370	U
23	AA	2374	C
23	AA	2377	C
23	AA	2385	A
23	AA	2388	A
23	AA	2396	A
23	AA	2409	G
23	AA	2410	G
23	AA	2411	A
23	AA	2412	C
23	AA	2429	U
23	AA	2433	C
23	AA	2434	A
23	AA	2441	G
23	AA	2449	C
23	AA	2450	U
23	AA	2451	C
23	AA	2455	G
23	AA	2456	G
23	AA	2457	A
23	AA	2458	U
23	AA	2459	A
23	AA	2460	A
23	AA	2461	A
23	AA	2462	A
23	AA	2463	G
23	AA	2468	C

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Mol	Chain	Res	Type
23	AA	2472	G
23	AA	2474	G
23	AA	2475	A
23	AA	2485	U
23	AA	2486	A
23	AA	2503	A
23	AA	2511	G
23	AA	2521	G
23	AA	2525	C
23	AA	2529	G
23	AA	2530	A
23	AA	2531	U
23	AA	2532	G
23	AA	2540	A
23	AA	2544	C
23	AA	2545	A
23	AA	2547	C
23	AA	2556	G
23	AA	2561	C
23	AA	2562	G
23	AA	2568	A
23	AA	2569	A
23	AA	2570	G
23	AA	2581	U
23	AA	2589	U
23	AA	2592	A
23	AA	2593	A
23	AA	2594	G
23	AA	2599	A
23	AA	2600	C
23	AA	2604	A
23	AA	2605	G
23	AA	2613	C
23	AA	2626	G
23	AA	2629	A
23	AA	2630	G
23	AA	2636	U
23	AA	2640	U
23	AA	2642	U
23	AA	2646	U
23	AA	2648	G
23	AA	2650	G

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Mol	Chain	Res	Type
23	AA	2656	A
23	AA	2657	G
23	AA	2666	A
23	AA	2672	G
23	AA	2679	U
23	AA	2681	A
23	AA	2687	A
23	AA	2692	A
23	AA	2695	G
23	AA	2696	G
23	AA	2697	G
23	AA	2699	U
23	AA	2700	G
23	AA	2712	G
23	AA	2716	U
23	AA	2741	G
23	AA	2745	G
23	AA	2750	C
23	AA	2753	U
23	AA	2756	G
23	AA	2757	U
23	AA	2759	G
23	AA	2760	A
23	AA	2761	C
23	AA	2764	G
23	AA	2769	G
23	AA	2771	G
23	AA	2775	A
23	AA	2778	G
23	AA	2784	A
23	AA	2788	A
23	AA	2793	G
23	AA	2794	C
23	AA	2796	C
23	AA	2798	C
23	AA	2800	U
23	AA	2801	C
23	AA	2803	A
23	AA	2804	G
23	AA	2805	A
23	AA	2806	U
23	AA	2808	A

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Mol	Chain	Res	Type
23	AA	2817	A
23	AA	2820	U
23	AA	2821	U
23	AA	2822	C
23	AA	2823	G
23	AA	2824	G
23	AA	2827	A
23	AA	2828	U
23	AA	2829	A
23	AA	2831	G
23	AA	2832	A
23	AA	2838	C
23	AA	2840	A
23	AA	2843	A
23	AA	2850	G
23	AA	2853	U
23	AA	2854	A
23	AA	2855	A
23	AA	2879	G
23	AA	2887	G
23	AA	2888	A
23	AA	2892	G
23	AA	2899	A
23	AA	2900	C
23	AA	2903	A
23	AA	2913	G
23	AA	2914	A
23	AA	2919	A
24	AB	10	U
24	AB	22	G
24	AB	23	U
24	AB	24	C
24	AB	33	U
24	AB	39	G
24	AB	40	C
24	AB	43	A
24	AB	51	A
24	AB	55	A
24	AB	64	A
24	AB	87	C
24	AB	88	G
24	AB	106	G

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Mol	Chain	Res	Type
24	AB	111	C
24	AB	113	G
1	Ba	6	U
1	Ba	8	G
1	Ba	9	A
1	Ba	10	G
1	Ba	23	G
1	Ba	30	A
1	Ba	33	A
1	Ba	40	G
1	Ba	41	C
1	Ba	45	G
1	Ba	48	C
1	Ba	49	C
1	Ba	50	U
1	Ba	51	A
1	Ba	52	A
1	Ba	59	C
1	Ba	60	A
1	Ba	61	A
1	Ba	62	G
1	Ba	66	A
1	Ba	68	C
1	Ba	69	G
1	Ba	70	A
1	Ba	71	A
1	Ba	75	A
1	Ba	76	C
1	Ba	78	A
1	Ba	82	G
1	Ba	83	C
1	Ba	84	U
1	Ba	85	U
1	Ba	88	U
1	Ba	89	U
1	Ba	92	C
1	Ba	94	G
1	Ba	99	U
1	Ba	100	A
1	Ba	107	G
1	Ba	120	C
1	Ba	129	A

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Mol	Chain	Res	Type
1	Ba	140	A
1	Ba	150	U
1	Ba	162	A
1	Ba	163	C
1	Ba	165	G
1	Ba	183	U
1	Ba	184	A
1	Ba	185	U
1	Ba	186	U
1	Ba	187	U
1	Ba	188	U
1	Ba	191	A
1	Ba	193	C
1	Ba	194	G
1	Ba	197	U
1	Ba	199	G
1	Ba	200	U
1	Ba	201	U
1	Ba	203	A
1	Ba	204	A
1	Ba	206	A
1	Ba	208	U
1	Ba	209	G
1	Ba	210	A
1	Ba	211	A
1	Ba	213	G
1	Ba	219	C
1	Ba	220	U
1	Ba	221	U
1	Ba	222	G
1	Ba	224	U
1	Ba	228	A
1	Ba	230	U
1	Ba	231	U
1	Ba	234	A
1	Ba	252	U
1	Ba	253	U
1	Ba	255	G
1	Ba	256	C
1	Ba	257	U
1	Ba	258	A
1	Ba	259	G

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Mol	Chain	Res	Type
1	Ba	264	U
1	Ba	267	G
1	Ba	269	U
1	Ba	274	G
1	Ba	275	C
1	Ba	279	C
1	Ba	289	G
1	Ba	291	U
1	Ba	297	G
1	Ba	301	A
1	Ba	309	G
1	Ba	335	A
1	Ba	336	C
1	Ba	337	A
1	Ba	339	G
1	Ba	352	A
1	Ba	354	G
1	Ba	355	G
1	Ba	356	G
1	Ba	358	G
1	Ba	359	G
1	Ba	360	C
1	Ba	362	G
1	Ba	364	A
1	Ba	375	U
1	Ba	376	U
1	Ba	380	C
1	Ba	381	A
1	Ba	389	A
1	Ba	392	G
1	Ba	395	U
1	Ba	406	C
1	Ba	411	C
1	Ba	412	G
1	Ba	413	U
1	Ba	414	G
1	Ba	415	A
1	Ba	416	G
1	Ba	417	U
1	Ba	418	G
1	Ba	419	A
1	Ba	420	U

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Mol	Chain	Res	Type
1	Ba	421	G
1	Ba	422	A
1	Ba	423	A
1	Ba	424	G
1	Ba	425	G
1	Ba	426	U
1	Ba	430	C
1	Ba	431	G
1	Ba	432	G
1	Ba	434	U
1	Ba	437	U
1	Ba	438	A
1	Ba	440	A
1	Ba	441	A
1	Ba	442	C
1	Ba	449	A
1	Ba	450	U
1	Ba	451	U
1	Ba	452	A
1	Ba	456	A
1	Ba	458	G
1	Ba	460	A
1	Ba	461	C
1	Ba	464	A
1	Ba	465	U
1	Ba	484	A
1	Ba	485	U
1	Ba	486	C
1	Ba	487	U
1	Ba	488	U
1	Ba	492	G
1	Ba	499	A
1	Ba	503	A
1	Ba	504	G
1	Ba	505	A
1	Ba	506	A
1	Ba	507	A
1	Ba	513	G
1	Ba	514	G
1	Ba	516	U
1	Ba	517	A
1	Ba	519	C

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Mol	Chain	Res	Type
1	Ba	522	C
1	Ba	526	C
1	Ba	529	G
1	Ba	532	G
1	Ba	535	G
1	Ba	539	U
1	Ba	541	A
1	Ba	542	U
1	Ba	543	A
1	Ba	548	G
1	Ba	554	A
1	Ba	555	A
1	Ba	567	A
1	Ba	570	U
1	Ba	571	A
1	Ba	580	A
1	Ba	581	A
1	Ba	584	C
1	Ba	585	G
1	Ba	596	G
1	Ba	603	A
1	Ba	610	A
1	Ba	619	C
1	Ba	628	C
1	Ba	638	G
1	Ba	639	G
1	Ba	640	G
1	Ba	641	U
1	Ba	642	C
1	Ba	647	G
1	Ba	649	A
1	Ba	650	A
1	Ba	657	A
1	Ba	661	U
1	Ba	666	G
1	Ba	670	A
1	Ba	673	A
1	Ba	674	G
1	Ba	695	A
1	Ba	696	G
1	Ba	702	A
1	Ba	703	A

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Mol	Chain	Res	Type
1	Ba	711	G
1	Ba	712	A
1	Ba	724	A
1	Ba	729	A
1	Ba	731	U
1	Ba	739	G
1	Ba	756	A
1	Ba	763	G
1	Ba	772	C
1	Ba	781	G
1	Ba	798	A
1	Ba	801	U
1	Ba	813	C
1	Ba	818	C
1	Ba	823	A
1	Ba	825	C
1	Ba	826	G
1	Ba	827	A
1	Ba	829	G
1	Ba	835	U
1	Ba	836	A
1	Ba	840	G
1	Ba	845	G
1	Ba	847	G
1	Ba	848	G
1	Ba	849	U
1	Ba	850	U
1	Ba	852	C
1	Ba	853	C
1	Ba	854	G
1	Ba	855	C
1	Ba	856	C
1	Ba	857	C
1	Ba	858	C
1	Ba	881	A
1	Ba	894	G
1	Ba	898	A
1	Ba	910	A
1	Ba	911	G
1	Ba	923	A
1	Ba	924	A
1	Ba	935	G

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Mol	Chain	Res	Type
1	Ba	943	C
1	Ba	944	A
1	Ba	949	C
1	Ba	950	G
1	Ba	953	G
1	Ba	954	G
1	Ba	955	A
1	Ba	956	G
1	Ba	958	A
1	Ba	959	U
1	Ba	961	U
1	Ba	969	U
1	Ba	970	U
1	Ba	972	G
1	Ba	973	A
1	Ba	974	A
1	Ba	975	G
1	Ba	977	A
1	Ba	978	A
1	Ba	980	G
1	Ba	983	A
1	Ba	984	A
1	Ba	985	G
1	Ba	986	A
1	Ba	991	U
1	Ba	1001	U
1	Ba	1002	G
1	Ba	1003	A
1	Ba	1007	C
1	Ba	1008	C
1	Ba	1011	U
1	Ba	1012	G
1	Ba	1013	A
1	Ba	1015	A
1	Ba	1016	A
1	Ba	1017	C
1	Ba	1022	G
1	Ba	1023	A
1	Ba	1026	U
1	Ba	1032	C
1	Ba	1033	U
1	Ba	1035	C

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Mol	Chain	Res	Type
1	Ba	1036	C
1	Ba	1038	C
1	Ba	1039	U
1	Ba	1041	C
1	Ba	1042	G
1	Ba	1043	G
1	Ba	1047	A
1	Ba	1048	C
1	Ba	1052	G
1	Ba	1055	A
1	Ba	1056	C
1	Ba	1057	A
1	Ba	1064	G
1	Ba	1065	C
1	Ba	1066	A
1	Ba	1076	U
1	Ba	1077	C
1	Ba	1091	A
1	Ba	1092	G
1	Ba	1094	U
1	Ba	1096	U
1	Ba	1101	U
1	Ba	1105	G
1	Ba	1106	U
1	Ba	1109	C
1	Ba	1112	A
1	Ba	1113	A
1	Ba	1115	G
1	Ba	1119	G
1	Ba	1123	C
1	Ba	1130	G
1	Ba	1135	G
1	Ba	1136	U
1	Ba	1137	U
1	Ba	1138	G
1	Ba	1141	A
1	Ba	1142	U
1	Ba	1143	C
1	Ba	1146	U
1	Ba	1148	A
1	Ba	1149	G
1	Ba	1150	U

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Mol	Chain	Res	Type
1	Ba	1151	U
1	Ba	1154	G
1	Ba	1156	A
1	Ba	1157	C
1	Ba	1165	U
1	Ba	1167	A
1	Ba	1168	C
1	Ba	1169	U
1	Ba	1172	C
1	Ba	1173	G
1	Ba	1174	G
1	Ba	1175	U
1	Ba	1177	A
1	Ba	1178	C
1	Ba	1179	A
1	Ba	1181	A
1	Ba	1187	G
1	Ba	1188	G
1	Ba	1189	A
1	Ba	1190	A
1	Ba	1191	G
1	Ba	1194	G
1	Ba	1202	C
1	Ba	1203	G
1	Ba	1206	A
1	Ba	1207	A
1	Ba	1208	A
1	Ba	1209	U
1	Ba	1210	C
1	Ba	1211	A
1	Ba	1216	G
1	Ba	1222	U
1	Ba	1224	U
1	Ba	1225	G
1	Ba	1226	A
1	Ba	1228	U
1	Ba	1230	G
1	Ba	1234	U
1	Ba	1235	A
1	Ba	1236	C
1	Ba	1238	C
1	Ba	1243	G

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Mol	Chain	Res	Type
1	Ba	1246	A
1	Ba	1248	A
1	Ba	1250	U
1	Ba	1251	G
1	Ba	1256	A
1	Ba	1260	A
1	Ba	1266	C
1	Ba	1267	A
1	Ba	1268	G
1	Ba	1270	G
1	Ba	1274	C
1	Ba	1275	C
1	Ba	1280	G
1	Ba	1281	G
1	Ba	1282	U
1	Ba	1283	C
1	Ba	1286	G
1	Ba	1287	C
1	Ba	1288	A
1	Ba	1289	A
1	Ba	1290	A
1	Ba	1291	U
1	Ba	1292	C
1	Ba	1296	U
1	Ba	1297	A
1	Ba	1300	G
1	Ba	1305	U
1	Ba	1307	U
1	Ba	1308	C
1	Ba	1309	A
1	Ba	1310	G
1	Ba	1311	U
1	Ba	1312	U
1	Ba	1313	C
1	Ba	1314	G
1	Ba	1315	G
1	Ba	1319	G
1	Ba	1320	U
1	Ba	1322	G
1	Ba	1327	C
1	Ba	1329	A
1	Ba	1332	C

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Mol	Chain	Res	Type
1	Ba	1333	G
1	Ba	1335	C
1	Ba	1336	U
1	Ba	1337	A
1	Ba	1338	C
1	Ba	1339	A
1	Ba	1341	G
1	Ba	1345	C
1	Ba	1347	G
1	Ba	1348	G
1	Ba	1356	A
1	Ba	1357	G
1	Ba	1361	U
1	Ba	1363	G
1	Ba	1368	U
1	Ba	1371	G
1	Ba	1373	A
1	Ba	1378	A
1	Ba	1380	G
1	Ba	1387	A
1	Ba	1391	U
1	Ba	1392	C
1	Ba	1393	C
1	Ba	1404	A
1	Ba	1408	A
1	Ba	1419	C
1	Ba	1421	C
1	Ba	1428	A
1	Ba	1429	G
1	Ba	1438	A
1	Ba	1448	G
1	Ba	1451	G
1	Ba	1456	A
1	Ba	1461	U
1	Ba	1462	U
1	Ba	1463	U
1	Ba	1464	A
1	Ba	1466	G
1	Ba	1468	G
1	Ba	1476	U
1	Ba	1483	U
1	Ba	1495	U

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Mol	Chain	Res	Type
1	Ba	1505	G
1	Ba	1508	G
1	Ba	1510	A
1	Ba	1514	A
1	Ba	1515	G
1	Ba	1540	G
1	Ba	1541	G
1	Ba	1543	U
23	BA	11	U
23	BA	15	G
23	BA	27	G
23	BA	28	A
23	BA	34	U
23	BA	36	G
23	BA	43	A
23	BA	51	G
23	BA	52	A
23	BA	53	A
23	BA	55	G
23	BA	63	U
23	BA	70	G
23	BA	71	A
23	BA	74	U
23	BA	75	G
23	BA	83	G
23	BA	84	A
23	BA	90	A
23	BA	92	G
23	BA	93	U
23	BA	96	G
23	BA	101	G
23	BA	102	A
23	BA	104	C
23	BA	117	A
23	BA	119	U
23	BA	124	A
23	BA	141	U
23	BA	148	U
23	BA	149	U
23	BA	152	C
23	BA	156	A
23	BA	157	U

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Mol	Chain	Res	Type
23	BA	158	G
23	BA	161	A
23	BA	164	A
23	BA	167	U
23	BA	168	A
23	BA	170	C
23	BA	172	U
23	BA	173	A
23	BA	177	G
23	BA	178	A
23	BA	180	G
23	BA	184	C
23	BA	185	A
23	BA	199	A
23	BA	202	A
23	BA	213	C
23	BA	215	G
23	BA	216	A
23	BA	218	G
23	BA	219	A
23	BA	224	A
23	BA	225	A
23	BA	233	U
23	BA	246	U
23	BA	251	G
23	BA	255	G
23	BA	268	A
23	BA	269	G
23	BA	270	C
23	BA	279	A
23	BA	280	C
23	BA	285	U
23	BA	286	U
23	BA	287	G
23	BA	292	U
23	BA	293	U
23	BA	298	U
23	BA	299	U
23	BA	300	G
23	BA	301	U
23	BA	302	A
23	BA	307	A

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Mol	Chain	Res	Type
23	BA	309	U
23	BA	310	C
23	BA	311	U
23	BA	312	A
23	BA	316	G
23	BA	320	U
23	BA	321	U
23	BA	327	G
23	BA	328	G
23	BA	333	C
23	BA	335	U
23	BA	345	C
23	BA	353	A
23	BA	365	A
23	BA	366	G
23	BA	373	A
23	BA	388	A
23	BA	389	A
23	BA	392	U
23	BA	394	U
23	BA	397	U
23	BA	402	C
23	BA	404	U
23	BA	406	A
23	BA	410	G
23	BA	411	A
23	BA	417	A
23	BA	432	G
23	BA	435	A
23	BA	444	C
23	BA	447	A
23	BA	449	U
23	BA	451	U
23	BA	452	G
23	BA	458	A
23	BA	460	C
23	BA	481	C
23	BA	482	U
23	BA	486	G
23	BA	490	C
23	BA	492	G
23	BA	493	A

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Mol	Chain	Res	Type
23	BA	501	C
23	BA	502	C
23	BA	503	A
23	BA	504	G
23	BA	506	A
23	BA	512	A
23	BA	513	G
23	BA	518	A
23	BA	523	A
23	BA	527	G
23	BA	535	G
23	BA	538	G
23	BA	539	G
23	BA	550	A
23	BA	553	A
23	BA	554	C
23	BA	557	G
23	BA	558	A
23	BA	559	A
23	BA	563	G
23	BA	566	U
23	BA	572	C
23	BA	574	A
23	BA	576	U
23	BA	577	A
23	BA	578	G
23	BA	580	C
23	BA	591	A
23	BA	592	A
23	BA	594	G
23	BA	606	G
23	BA	611	U
23	BA	616	G
23	BA	617	A
23	BA	618	A
23	BA	639	U
23	BA	644	C
23	BA	645	A
23	BA	646	A
23	BA	647	G
23	BA	659	A
23	BA	672	A

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Mol	Chain	Res	Type
23	BA	679	G
23	BA	682	A
23	BA	689	A
23	BA	690	U
23	BA	698	U
23	BA	699	U
23	BA	702	U
23	BA	713	A
23	BA	715	A
23	BA	720	A
23	BA	722	A
23	BA	730	A
23	BA	731	U
23	BA	735	C
23	BA	750	A
23	BA	754	U
23	BA	755	C
23	BA	759	U
23	BA	760	A
23	BA	761	A
23	BA	762	C
23	BA	763	A
23	BA	765	U
23	BA	766	G
23	BA	768	A
23	BA	771	G
23	BA	775	A
23	BA	792	U
23	BA	793	G
23	BA	797	A
23	BA	802	G
23	BA	809	A
23	BA	810	A
23	BA	816	G
23	BA	820	G
23	BA	822	G
23	BA	827	A
23	BA	829	U
23	BA	830	U
23	BA	834	A
23	BA	835	U
23	BA	836	C

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Mol	Chain	Res	Type
23	BA	837	G
23	BA	840	C
23	BA	841	C
23	BA	842	U
23	BA	850	G
23	BA	856	U
23	BA	857	C
23	BA	868	A
23	BA	870	C
23	BA	872	U
23	BA	891	A
23	BA	892	U
23	BA	904	G
23	BA	911	A
23	BA	914	G
23	BA	918	G
23	BA	920	A
23	BA	926	G
23	BA	928	C
23	BA	940	U
23	BA	943	C
23	BA	949	C
23	BA	952	A
23	BA	955	A
23	BA	957	C
23	BA	960	C
23	BA	964	U
23	BA	968	A
23	BA	969	A
23	BA	970	U
23	BA	971	U
23	BA	972	A
23	BA	973	A
23	BA	975	U
23	BA	977	A
23	BA	985	A
23	BA	986	G
23	BA	988	C
23	BA	989	A
23	BA	990	G
23	BA	992	A
23	BA	997	G

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Mol	Chain	Res	Type
23	BA	1003	A
23	BA	1005	G
23	BA	1012	G
23	BA	1018	A
23	BA	1019	A
23	BA	1024	A
23	BA	1025	A
23	BA	1027	A
23	BA	1034	A
23	BA	1040	A
23	BA	1043	U
23	BA	1047	G
23	BA	1049	C
23	BA	1056	U
23	BA	1057	A
23	BA	1066	G
23	BA	1067	U
23	BA	1069	G
23	BA	1070	A
23	BA	1076	A
23	BA	1077	U
23	BA	1078	G
23	BA	1086	G
23	BA	1087	C
23	BA	1088	C
23	BA	1089	C
23	BA	1091	G
23	BA	1092	A
23	BA	1093	C
23	BA	1094	A
23	BA	1095	A
23	BA	1100	G
23	BA	1102	U
23	BA	1105	U
23	BA	1106	G
23	BA	1109	U
23	BA	1111	A
23	BA	1113	A
23	BA	1114	A
23	BA	1115	G
23	BA	1116	C
23	BA	1117	A

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Mol	Chain	Res	Type
23	BA	1118	G
23	BA	1119	C
23	BA	1120	C
23	BA	1122	U
23	BA	1126	U
23	BA	1127	U
23	BA	1128	A
23	BA	1132	A
23	BA	1133	G
23	BA	1137	G
23	BA	1138	U
23	BA	1139	A
23	BA	1140	A
23	BA	1143	G
23	BA	1145	U
23	BA	1148	C
23	BA	1150	A
23	BA	1151	G
23	BA	1155	A
23	BA	1156	G
23	BA	1158	G
23	BA	1160	C
23	BA	1161	A
23	BA	1162	C
23	BA	1163	U
23	BA	1174	U
23	BA	1176	U
23	BA	1178	C
23	BA	1179	C
23	BA	1186	A
23	BA	1200	A
23	BA	1201	G
23	BA	1208	A
23	BA	1214	C
23	BA	1215	U
23	BA	1216	U
23	BA	1217	U
23	BA	1218	G
23	BA	1225	G
23	BA	1245	G
23	BA	1250	G
23	BA	1258	A

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Mol	Chain	Res	Type
23	BA	1265	G
23	BA	1267	A
23	BA	1274	G
23	BA	1275	A
23	BA	1276	G
23	BA	1284	A
23	BA	1285	A
23	BA	1286	G
23	BA	1290	G
23	BA	1291	A
23	BA	1294	G
23	BA	1298	G
23	BA	1300	G
23	BA	1304	G
23	BA	1309	G
23	BA	1310	A
23	BA	1320	G
23	BA	1326	C
23	BA	1337	A
23	BA	1338	U
23	BA	1339	U
23	BA	1340	G
23	BA	1342	C
23	BA	1344	A
23	BA	1348	U
23	BA	1349	U
23	BA	1351	C
23	BA	1354	G
23	BA	1358	A
23	BA	1367	C
23	BA	1370	C
23	BA	1386	U
23	BA	1387	C
23	BA	1389	U
23	BA	1392	G
23	BA	1394	U
23	BA	1402	A
23	BA	1405	G
23	BA	1415	A
23	BA	1416	U
23	BA	1417	G
23	BA	1420	U

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Mol	Chain	Res	Type
23	BA	1422	A
23	BA	1423	C
23	BA	1432	A
23	BA	1440	A
23	BA	1443	A
23	BA	1445	C
23	BA	1447	A
23	BA	1450	A
23	BA	1451	U
23	BA	1453	G
23	BA	1454	U
23	BA	1455	U
23	BA	1457	U
23	BA	1459	A
23	BA	1463	A
23	BA	1464	U
23	BA	1471	A
23	BA	1472	C
23	BA	1481	A
23	BA	1489	A
23	BA	1490	G
23	BA	1491	C
23	BA	1494	G
23	BA	1495	C
23	BA	1496	G
23	BA	1497	A
23	BA	1498	U
23	BA	1499	U
23	BA	1503	U
23	BA	1504	U
23	BA	1510	U
23	BA	1516	C
23	BA	1518	G
23	BA	1519	U
23	BA	1520	A
23	BA	1521	A
23	BA	1525	U
23	BA	1526	G
23	BA	1527	A
23	BA	1532	U
23	BA	1533	A
23	BA	1534	G

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Mol	Chain	Res	Type
23	BA	1536	C
23	BA	1537	A
23	BA	1540	U
23	BA	1550	G
23	BA	1551	U
23	BA	1552	U
23	BA	1553	A
23	BA	1554	A
23	BA	1555	G
23	BA	1556	G
23	BA	1559	G
23	BA	1561	G
23	BA	1569	G
23	BA	1570	G
23	BA	1575	A
23	BA	1576	A
23	BA	1578	A
23	BA	1579	C
23	BA	1580	A
23	BA	1581	U
23	BA	1582	U
23	BA	1583	G
23	BA	1584	U
23	BA	1586	U
23	BA	1587	C
23	BA	1591	G
23	BA	1594	U
23	BA	1605	A
23	BA	1606	C
23	BA	1613	G
23	BA	1616	A
23	BA	1625	U
23	BA	1627	G
23	BA	1629	U
23	BA	1630	A
23	BA	1631	G
23	BA	1632	A
23	BA	1633	A
23	BA	1634	A
23	BA	1635	A
23	BA	1636	U
23	BA	1639	G

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Mol	Chain	Res	Type
23	BA	1652	A
23	BA	1653	A
23	BA	1654	A
23	BA	1661	C
23	BA	1666	A
23	BA	1675	G
23	BA	1679	A
23	BA	1683	U
23	BA	1684	A
23	BA	1690	A
23	BA	1691	G
23	BA	1692	C
23	BA	1693	G
23	BA	1718	G
23	BA	1719	C
23	BA	1732	U
23	BA	1737	U
23	BA	1738	C
23	BA	1740	G
23	BA	1745	A
23	BA	1747	G
23	BA	1757	U
23	BA	1758	A
23	BA	1759	G
23	BA	1760	G
23	BA	1761	G
23	BA	1762	U
23	BA	1765	A
23	BA	1768	C
23	BA	1771	A
23	BA	1772	G
23	BA	1790	G
23	BA	1791	G
23	BA	1797	G
23	BA	1800	A
23	BA	1806	U
23	BA	1808	U
23	BA	1809	C
23	BA	1811	A
23	BA	1813	A
23	BA	1814	A
23	BA	1818	A

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Mol	Chain	Res	Type
23	BA	1826	G
23	BA	1827	C
23	BA	1828	U
23	BA	1829	A
23	BA	1830	A
23	BA	1835	U
23	BA	1843	U
23	BA	1846	A
23	BA	1856	A
23	BA	1860	C
23	BA	1878	U
23	BA	1879	U
23	BA	1880	A
23	BA	1885	G
23	BA	1889	G
23	BA	1895	C
23	BA	1897	U
23	BA	1898	C
23	BA	1899	U
23	BA	1900	G
23	BA	1901	C
23	BA	1902	G
23	BA	1903	A
23	BA	1904	A
23	BA	1907	U
23	BA	1909	C
23	BA	1911	A
23	BA	1912	A
23	BA	1914	C
23	BA	1918	G
23	BA	1933	G
23	BA	1935	C
23	BA	1937	G
23	BA	1938	U
23	BA	1945	A
23	BA	1950	U
23	BA	1956	G
23	BA	1958	U
23	BA	1963	A
23	BA	1964	A
23	BA	1965	A
23	BA	1966	U

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Mol	Chain	Res	Type
23	BA	1971	U
23	BA	1982	U
23	BA	1989	C
23	BA	1990	C
23	BA	1992	C
23	BA	1994	C
23	BA	1996	A
23	BA	1997	A
23	BA	1998	A
23	BA	1999	G
23	BA	2009	U
23	BA	2018	U
23	BA	2019	G
23	BA	2020	U
23	BA	2023	C
23	BA	2024	A
23	BA	2029	G
23	BA	2030	A
23	BA	2047	A
23	BA	2057	A
23	BA	2058	A
23	BA	2059	G
23	BA	2060	A
23	BA	2062	G
23	BA	2070	C
23	BA	2073	G
23	BA	2075	G
23	BA	2076	A
23	BA	2082	C
23	BA	2083	G
23	BA	2085	A
23	BA	2087	A
23	BA	2088	G
23	BA	2089	A
23	BA	2096	G
23	BA	2097	G
23	BA	2103	U
23	BA	2107	G
23	BA	2109	A
23	BA	2110	G
23	BA	2111	C
23	BA	2115	A

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Mol	Chain	Res	Type
23	BA	2117	A
23	BA	2118	U
23	BA	2119	U
23	BA	2120	G
23	BA	2126	C
23	BA	2129	C
23	BA	2139	A
23	BA	2140	C
23	BA	2143	G
23	BA	2145	U
23	BA	2147	G
23	BA	2153	A
23	BA	2155	C
23	BA	2157	U
23	BA	2158	U
23	BA	2160	G
23	BA	2161	A
23	BA	2164	C
23	BA	2172	C
23	BA	2173	U
23	BA	2174	A
23	BA	2175	G
23	BA	2176	C
23	BA	2183	G
23	BA	2185	A
23	BA	2186	G
23	BA	2188	C
23	BA	2190	C
23	BA	2193	G
23	BA	2194	U
23	BA	2195	G
23	BA	2198	A
23	BA	2204	C
23	BA	2215	U
23	BA	2224	U
23	BA	2225	A
23	BA	2229	C
23	BA	2230	G
23	BA	2231	C
23	BA	2232	A
23	BA	2238	U
23	BA	2240	U

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Mol	Chain	Res	Type
23	BA	2241	C
23	BA	2243	U
23	BA	2252	A
23	BA	2261	G
23	BA	2262	G
23	BA	2263	C
23	BA	2265	G
23	BA	2266	G
23	BA	2290	C
23	BA	2295	A
23	BA	2305	A
23	BA	2306	G
23	BA	2310	C
23	BA	2314	A
23	BA	2316	G
23	BA	2321	C
23	BA	2328	A
23	BA	2329	U
23	BA	2330	G
23	BA	2331	G
23	BA	2332	U
23	BA	2333	U
23	BA	2334	G
23	BA	2335	G
23	BA	2336	A
23	BA	2337	A
23	BA	2345	A
23	BA	2346	U
23	BA	2347	A
23	BA	2352	G
23	BA	2353	U
23	BA	2358	G
23	BA	2361	U
23	BA	2362	A
23	BA	2370	U
23	BA	2374	C
23	BA	2377	C
23	BA	2385	A
23	BA	2388	A
23	BA	2396	A
23	BA	2409	G
23	BA	2410	G

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Mol	Chain	Res	Type
23	BA	2411	A
23	BA	2412	C
23	BA	2429	U
23	BA	2433	C
23	BA	2434	A
23	BA	2441	G
23	BA	2449	C
23	BA	2450	U
23	BA	2451	C
23	BA	2455	G
23	BA	2456	G
23	BA	2457	A
23	BA	2458	U
23	BA	2459	A
23	BA	2460	A
23	BA	2461	A
23	BA	2462	A
23	BA	2463	G
23	BA	2468	C
23	BA	2472	G
23	BA	2474	G
23	BA	2475	A
23	BA	2485	U
23	BA	2486	A
23	BA	2503	A
23	BA	2511	G
23	BA	2521	G
23	BA	2525	C
23	BA	2529	G
23	BA	2530	A
23	BA	2531	U
23	BA	2532	G
23	BA	2540	A
23	BA	2544	C
23	BA	2545	A
23	BA	2547	C
23	BA	2556	G
23	BA	2561	C
23	BA	2562	G
23	BA	2568	A
23	BA	2569	A
23	BA	2570	G

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Mol	Chain	Res	Type
23	BA	2581	U
23	BA	2589	U
23	BA	2592	A
23	BA	2593	A
23	BA	2594	G
23	BA	2599	A
23	BA	2600	C
23	BA	2604	A
23	BA	2605	G
23	BA	2613	C
23	BA	2626	G
23	BA	2629	A
23	BA	2630	G
23	BA	2636	U
23	BA	2640	U
23	BA	2642	U
23	BA	2646	U
23	BA	2648	G
23	BA	2650	G
23	BA	2656	A
23	BA	2657	G
23	BA	2666	A
23	BA	2672	G
23	BA	2679	U
23	BA	2681	A
23	BA	2687	A
23	BA	2692	A
23	BA	2695	G
23	BA	2696	G
23	BA	2697	G
23	BA	2699	U
23	BA	2700	G
23	BA	2712	G
23	BA	2716	U
23	BA	2741	G
23	BA	2745	G
23	BA	2750	C
23	BA	2753	U
23	BA	2756	G
23	BA	2757	U
23	BA	2759	G
23	BA	2760	A

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Mol	Chain	Res	Type
23	BA	2761	C
23	BA	2764	G
23	BA	2769	G
23	BA	2771	G
23	BA	2775	A
23	BA	2778	G
23	BA	2784	A
23	BA	2788	A
23	BA	2793	G
23	BA	2794	C
23	BA	2796	C
23	BA	2798	C
23	BA	2800	U
23	BA	2801	C
23	BA	2803	A
23	BA	2804	G
23	BA	2805	A
23	BA	2806	U
23	BA	2808	A
23	BA	2817	A
23	BA	2820	U
23	BA	2821	U
23	BA	2822	C
23	BA	2823	G
23	BA	2824	G
23	BA	2827	A
23	BA	2828	U
23	BA	2829	A
23	BA	2831	G
23	BA	2832	A
23	BA	2838	C
23	BA	2840	A
23	BA	2843	A
23	BA	2850	G
23	BA	2853	U
23	BA	2854	A
23	BA	2855	A
23	BA	2879	G
23	BA	2887	G
23	BA	2888	A
23	BA	2892	G
23	BA	2899	A

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Mol	Chain	Res	Type
23	BA	2900	C
23	BA	2903	A
23	BA	2913	G
23	BA	2914	A
23	BA	2919	A
24	BB	10	U
24	BB	22	G
24	BB	23	U
24	BB	24	C
24	BB	33	U
24	BB	39	G
24	BB	40	C
24	BB	43	A
24	BB	51	A
24	BB	55	A
24	BB	64	A
24	BB	87	C
24	BB	88	G
24	BB	106	G
24	BB	111	C
24	BB	113	G

All (50) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
23	AA	76	C
23	AA	99	U
23	AA	160	G
23	AA	267	G
23	AA	268	A
23	AA	291	G
23	AA	451	U
23	AA	487	U
23	AA	513	G
23	AA	576	U
23	AA	577	A
23	AA	688	A
23	AA	697	U
23	AA	711	G
23	AA	835	U
23	AA	840	C
23	AA	987	U

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Mol	Chain	Res	Type
23	AA	1024	A
23	AA	1190	A
23	AA	1267	A
23	AA	1372	C
23	AA	1385	G
23	AA	1845	U
23	AA	2117	A
23	AA	2568	A
23	AA	2749	G
23	BA	99	U
23	BA	160	G
23	BA	267	G
23	BA	268	A
23	BA	291	G
23	BA	451	U
23	BA	487	U
23	BA	513	G
23	BA	576	U
23	BA	577	A
23	BA	688	A
23	BA	697	U
23	BA	840	C
23	BA	987	U
23	BA	1024	A
23	BA	1267	A
23	BA	1385	G
23	BA	1731	G
23	BA	1845	U
23	BA	2117	A
23	BA	2450	U
23	BA	2568	A
23	BA	2749	G
23	BA	2783	U

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

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
23	AA	6
23	BA	6
1	Aa	1
1	Ba	1
24	BB	1
24	AB	1
13	Am	1
13	Bm	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	2207:U	O3'	2208:A	P	9.06
1	BA	2207:U	O3'	2208:A	P	9.06
1	AA	2132:A	O3'	2133:G	P	8.44
1	BA	2132:A	O3'	2133:G	P	8.44
1	AA	1096:C	O3'	1097:U	P	6.77
1	BA	1096:C	O3'	1097:U	P	6.77
1	Aa	465:U	O3'	466:G	P	3.97
1	Ba	465:U	O3'	466:G	P	3.97
1	AA	1153:C	O3'	1154:G	P	3.61
1	BA	1153:C	O3'	1154:G	P	3.61
1	AA	1448:U	O3'	1449:A	P	3.51
1	BA	1448:U	O3'	1449:A	P	3.51
1	BB	114:G	O3'	115:C	P	3.40
1	AA	2217:G	O3'	2218:G	P	3.39
1	AB	114:G	O3'	115:C	P	3.39
1	BA	2217:G	O3'	2218:G	P	3.39
1	Am	93:ARG	C	94:GLY	N	3.26
1	Bm	93:ARG	C	94:GLY	N	3.26

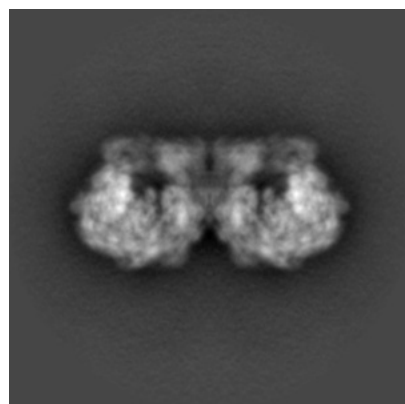
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-3637. These allow visual inspection of the internal detail of the map and identification of artifacts.

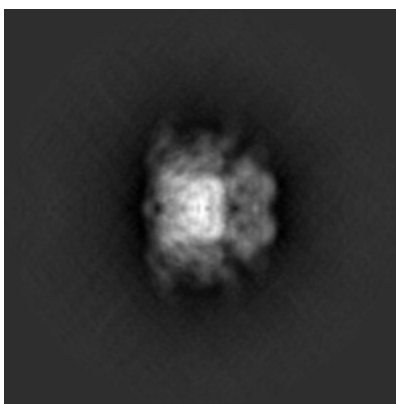
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

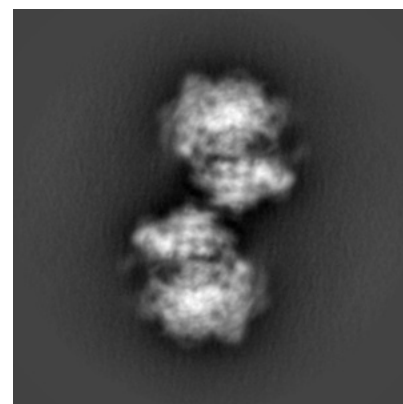
6.1.1 Primary map



X

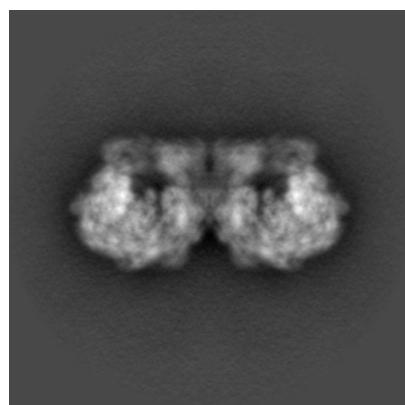


Y

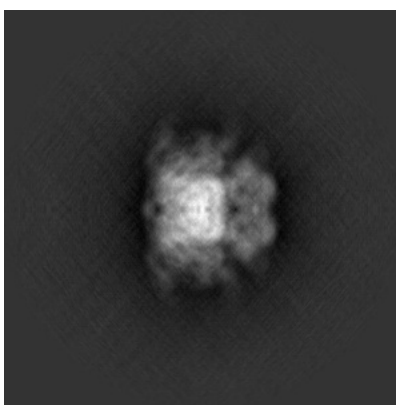


Z

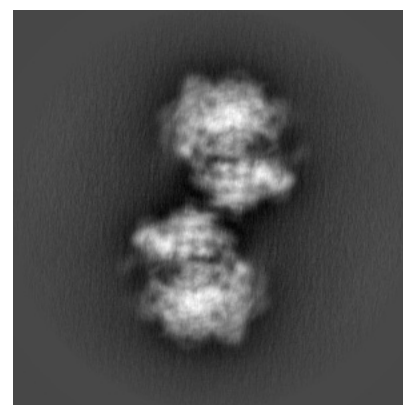
6.1.2 Raw map



X



Y

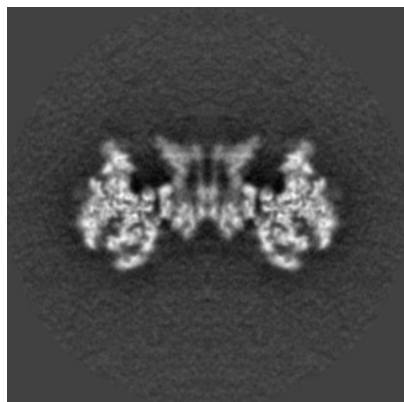


Z

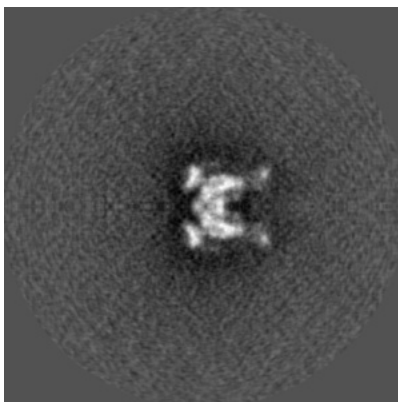
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

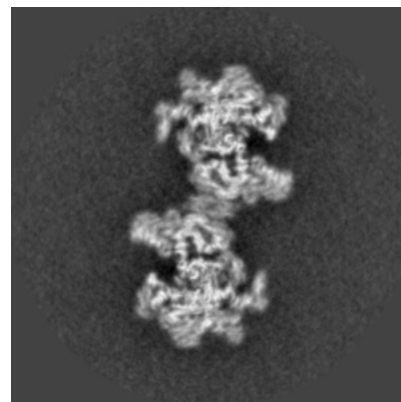
6.2.1 Primary map



X Index: 200

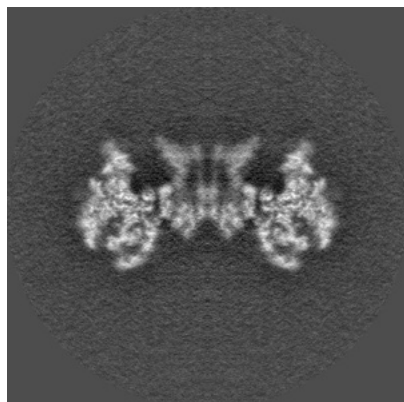


Y Index: 200

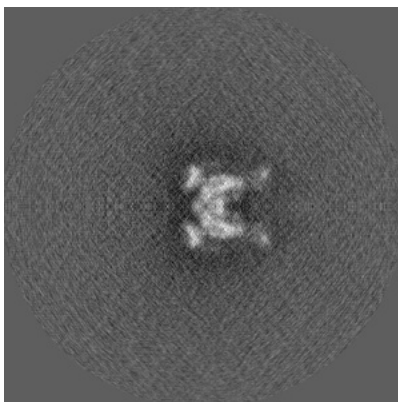


Z Index: 200

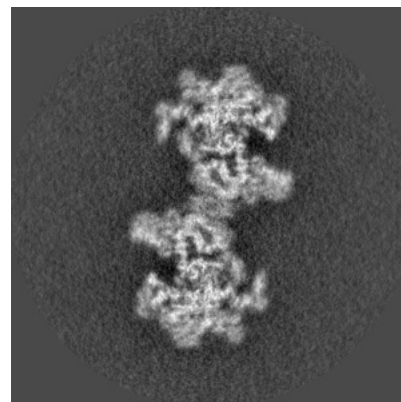
6.2.2 Raw map



X Index: 200



Y Index: 200

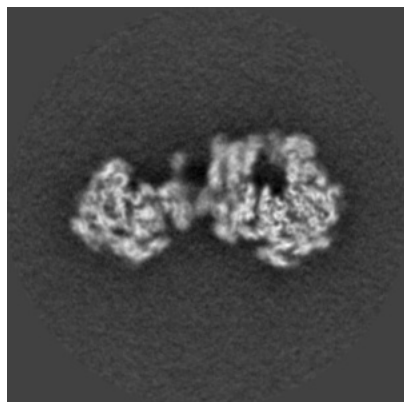


Z Index: 200

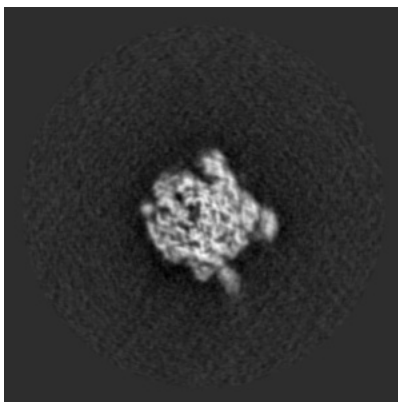
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

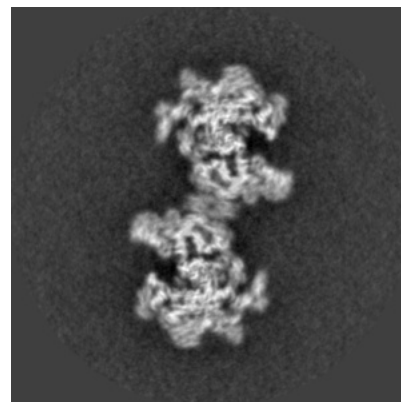
6.3.1 Primary map



X Index: 210

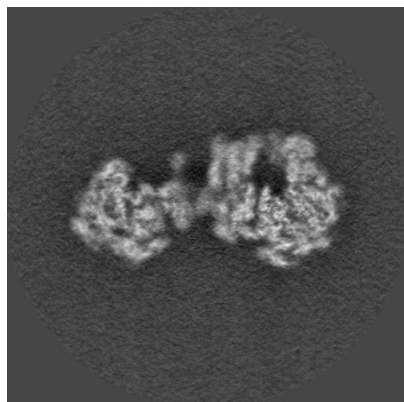


Y Index: 113

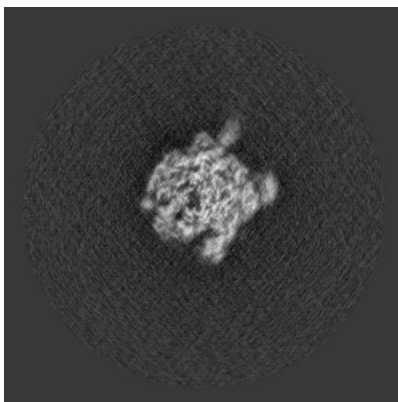


Z Index: 201

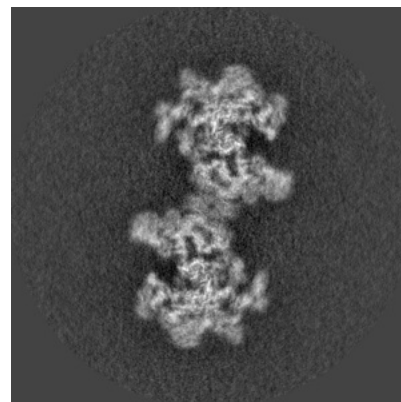
6.3.2 Raw map



X Index: 210



Y Index: 287

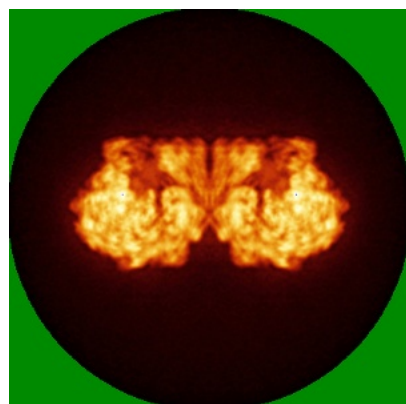


Z Index: 201

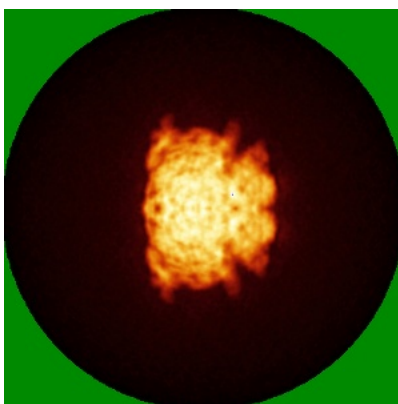
The images above show the largest variance slices of the map in three orthogonal directions.

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

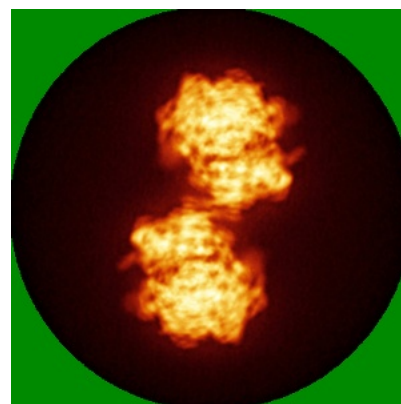
6.4.1 Primary map



X

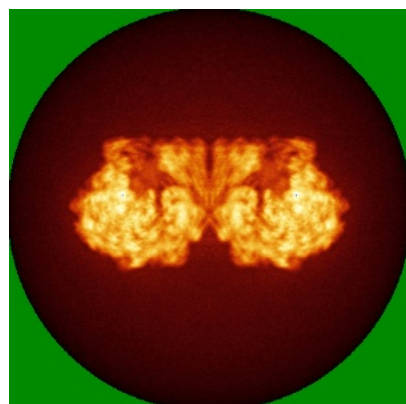


Y

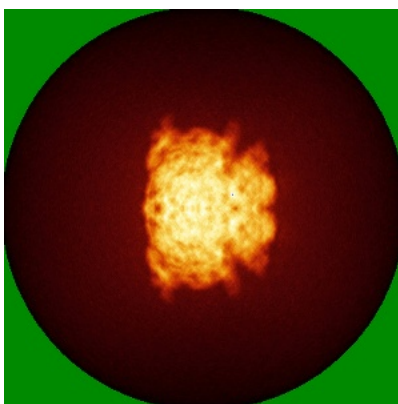


Z

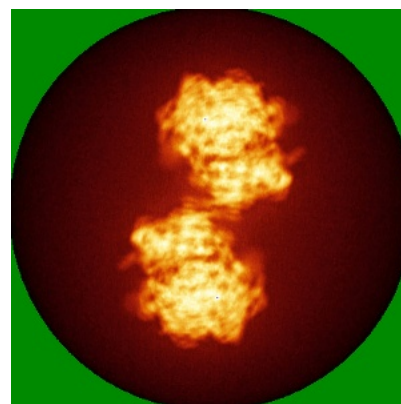
6.4.2 Raw map



X



Y

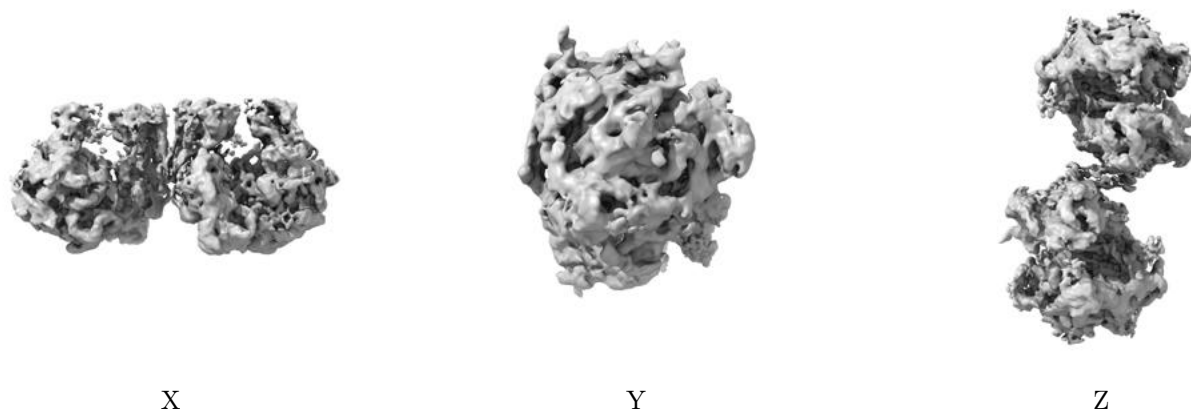


Z

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 0.023. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

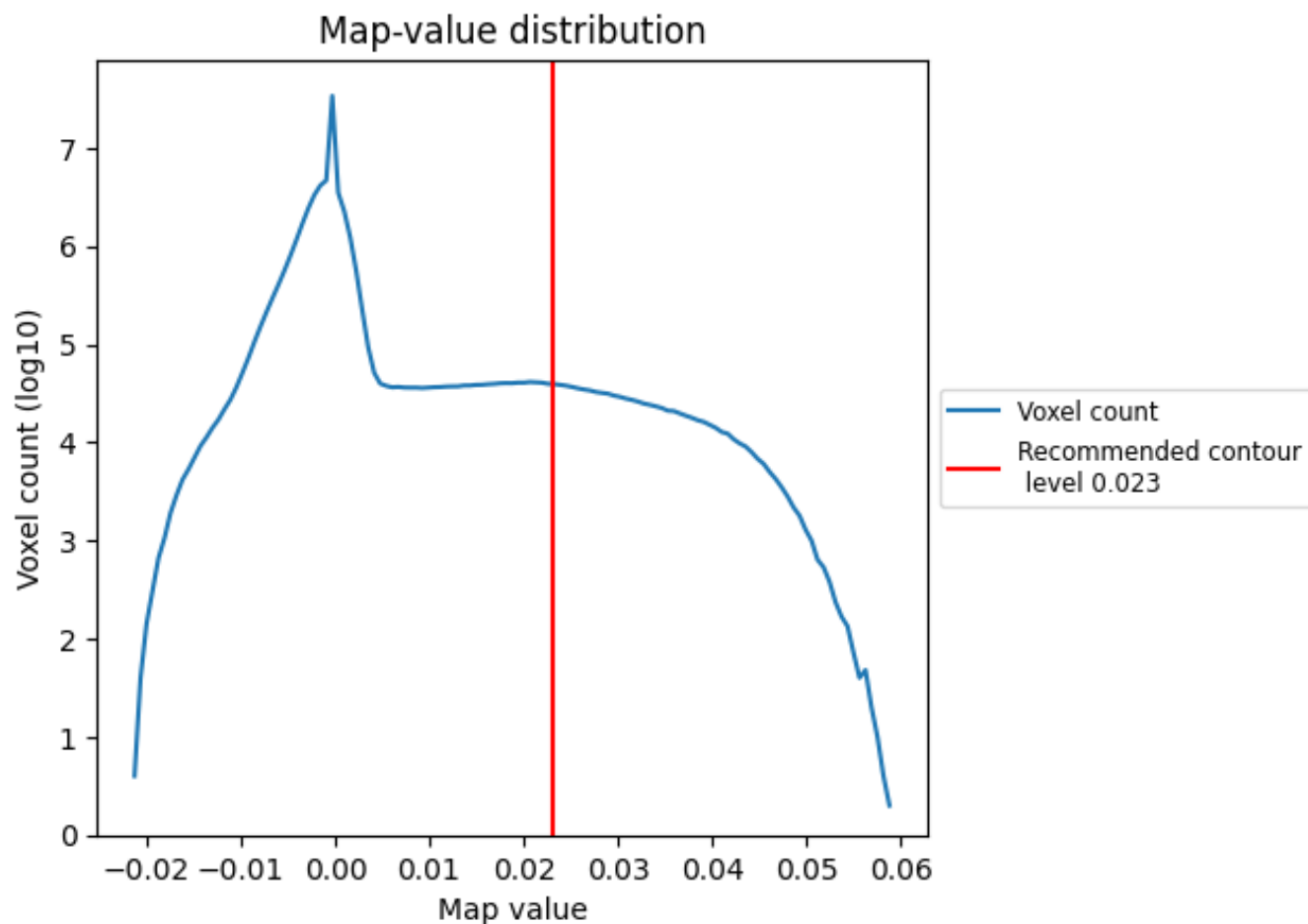
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

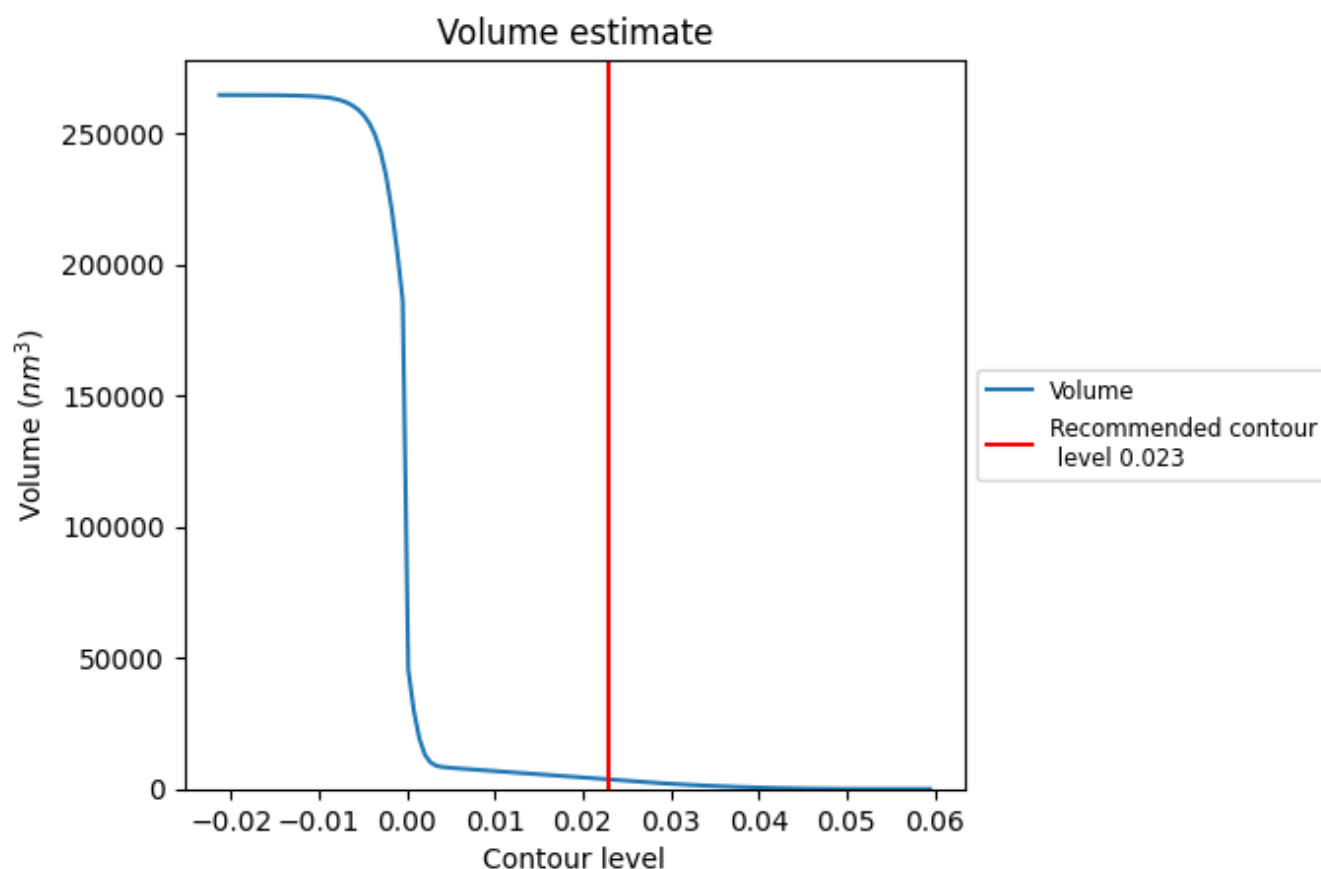
This section contains the results of statistical analysis of the map.

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.

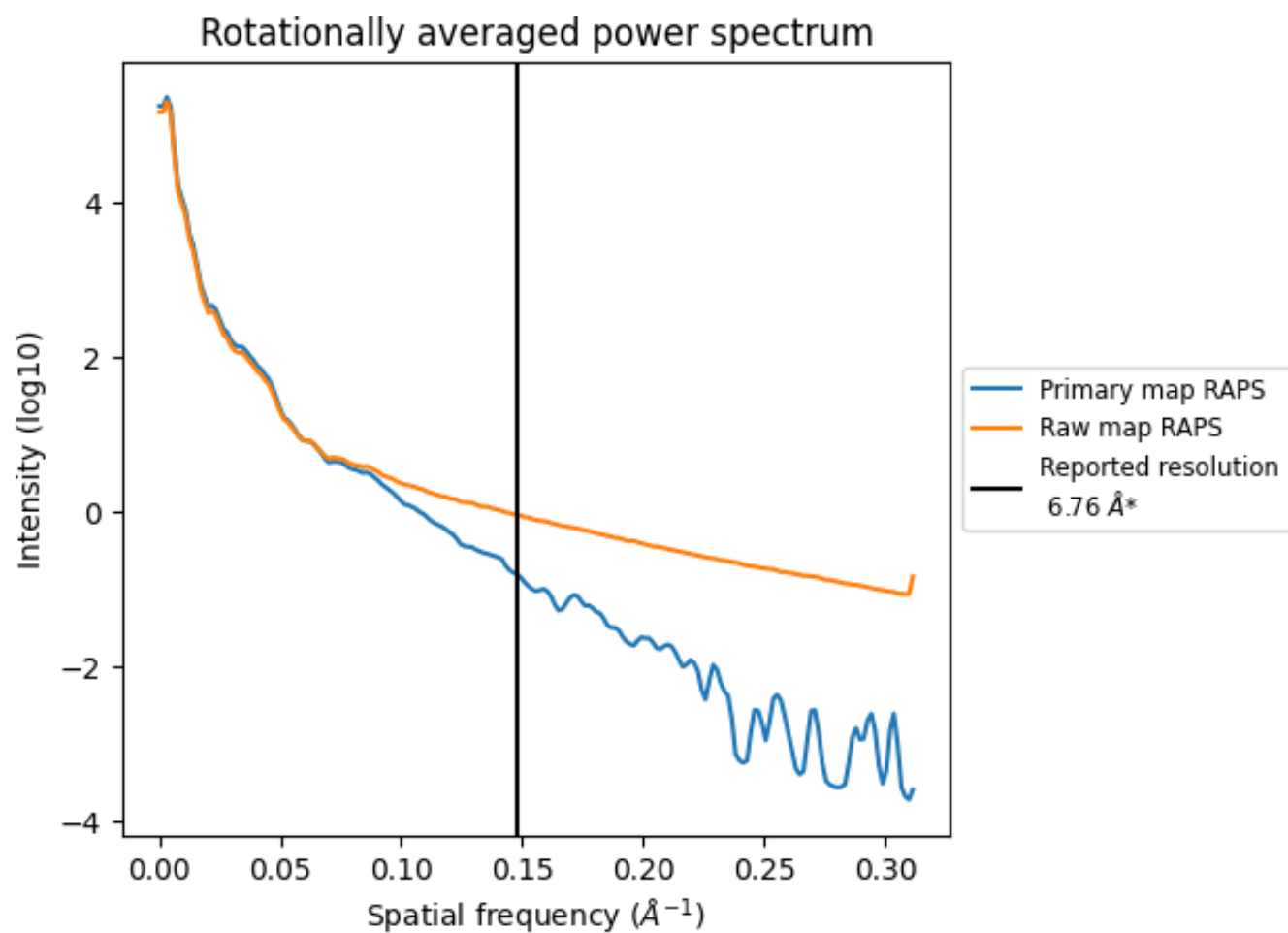
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 3567 nm^3 ; this corresponds to an approximate mass of 3222 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 ⓘ

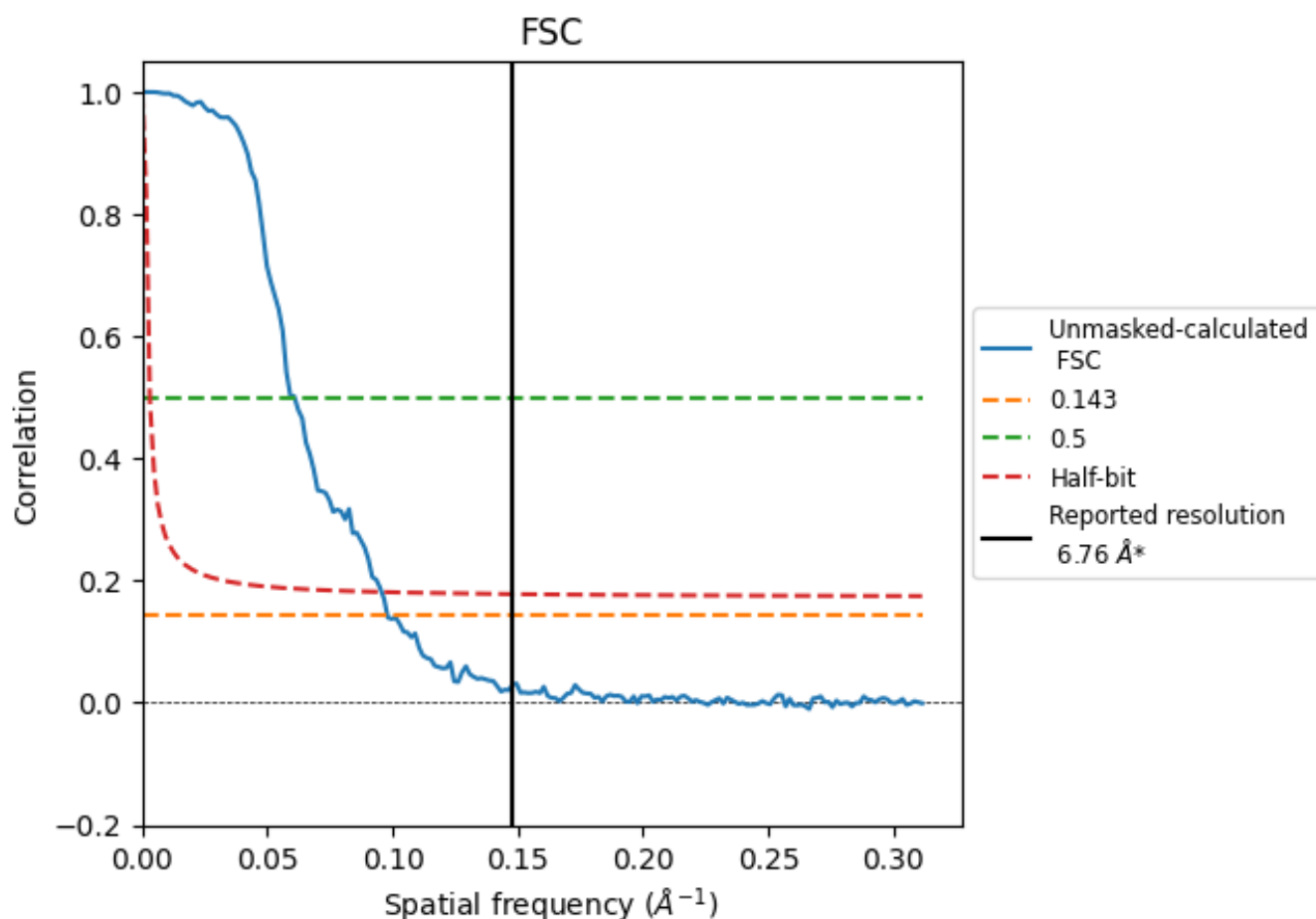


*Reported resolution corresponds to spatial frequency of 0.148 Å⁻¹

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 0.148 Å⁻¹

8.2 Resolution estimates [i](#)

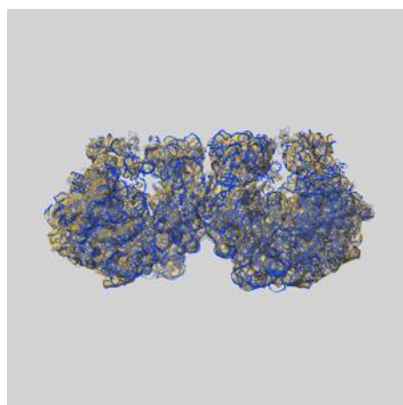
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	6.76	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	10.21	16.42	10.46

*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 10.21 differs from the reported value 6.76 by more than 10 %

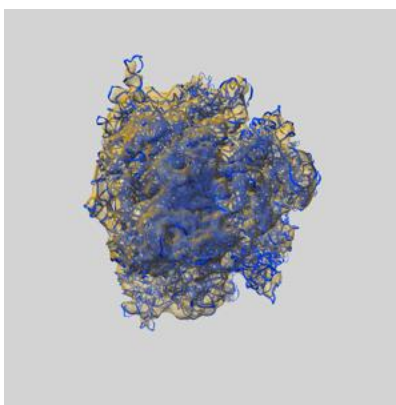
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-3637 and PDB model 6FXC. Per-residue inclusion information can be found in section 3 on page 17.

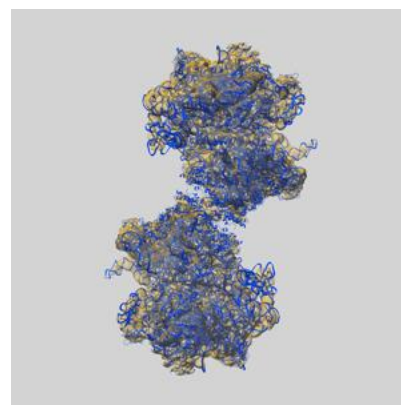
9.1 Map-model overlay [i](#)



X



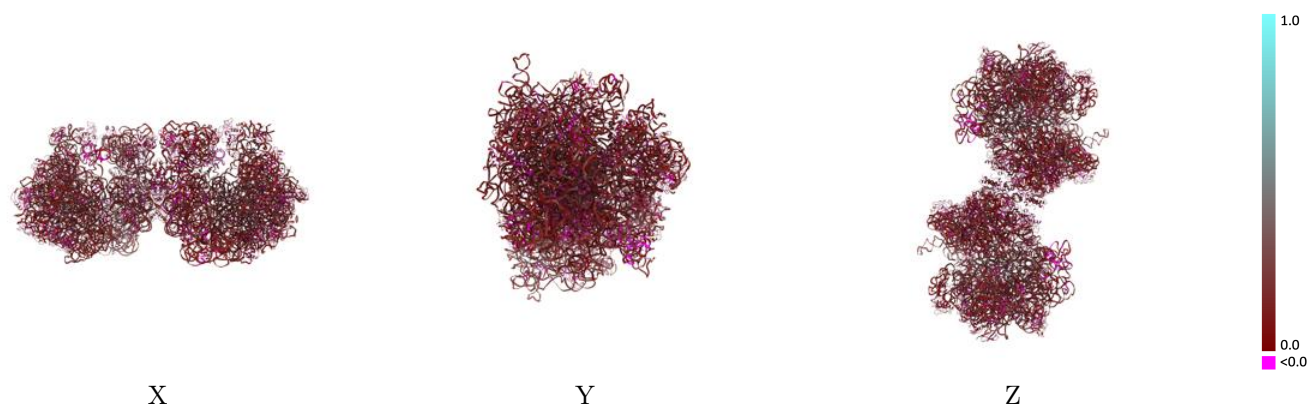
Y



Z

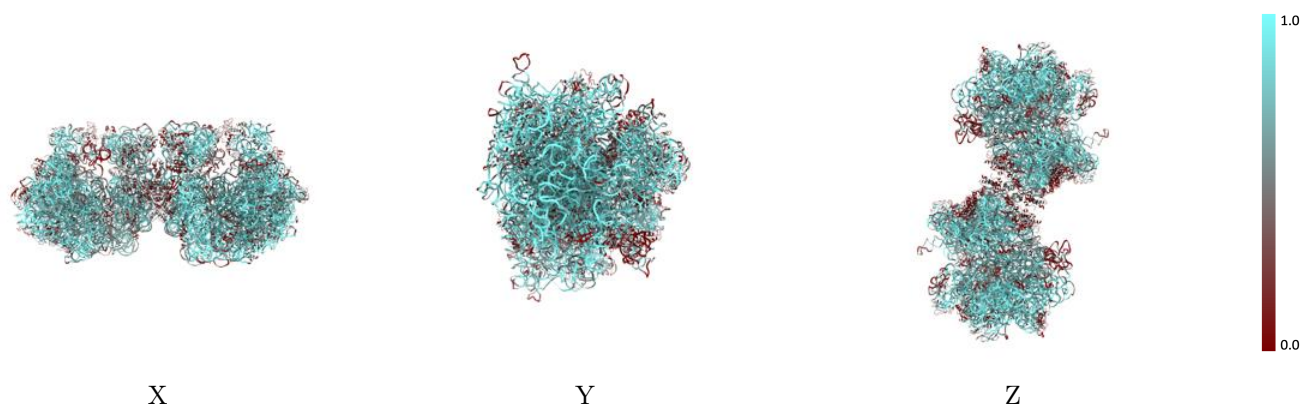
The images above show the 3D surface view of the map at the recommended contour level 0.023 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



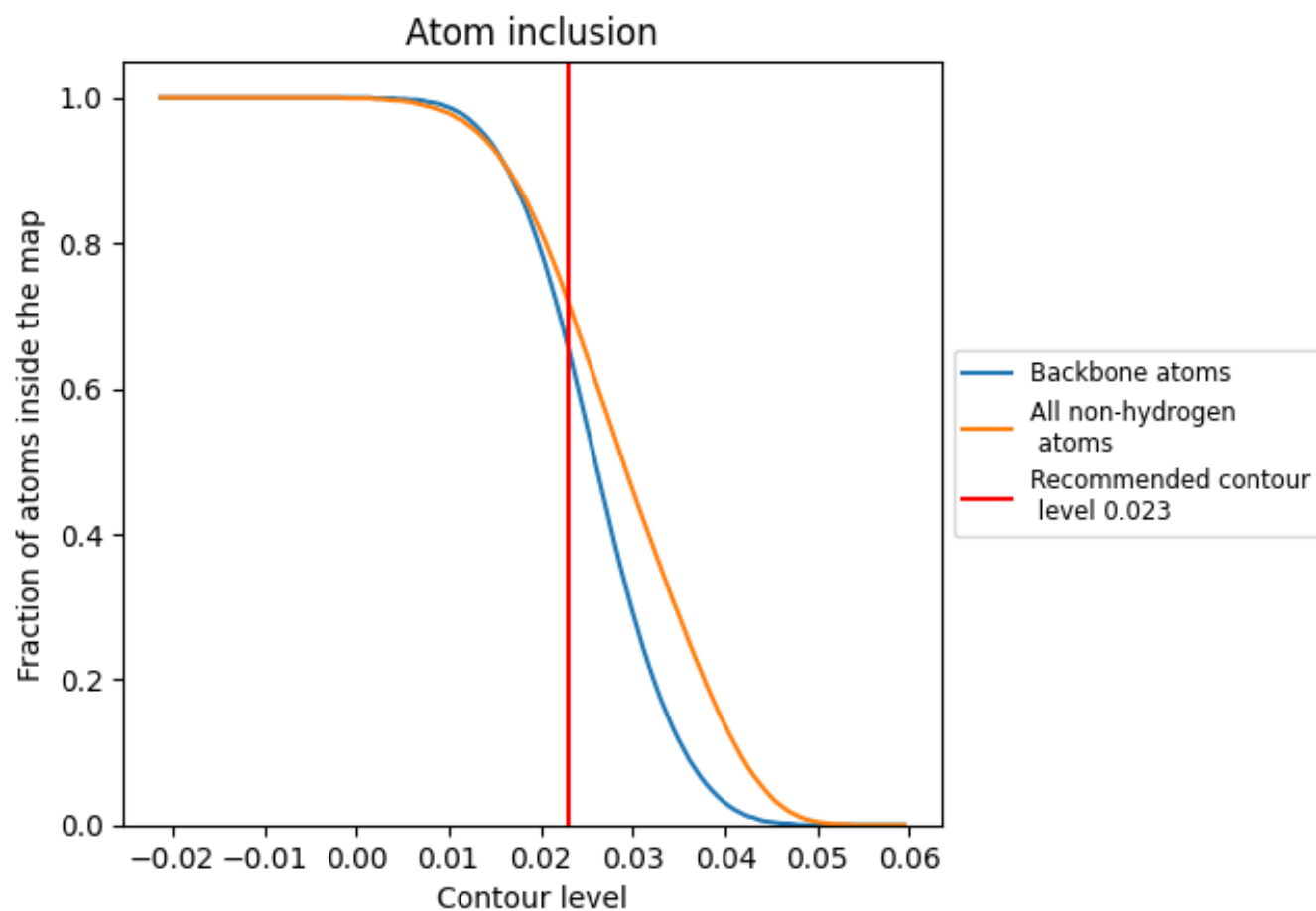
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.023).

9.4 Atom inclusion [i](#)



At the recommended contour level, 66% of all backbone atoms, 72% 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 (0.023) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7190	 0.1410
A1	 0.1950	 0.0740
A2	 0.6360	 0.0860
A3	 0.6430	 0.0790
A4	 0.7820	 0.0730
AA	 0.8410	 0.1650
AB	 0.8150	 0.1500
AC	 0.3940	 0.0970
AD	 0.5880	 0.1020
AE	 0.4630	 0.1010
AF	 0.3550	 0.1100
AG	 0.3850	 0.1160
AH	 0.6240	 0.0920
AI	 0.2980	 0.1400
AJ	 0.4470	 0.0740
AK	 0.5650	 0.1370
AL	 0.5920	 0.0940
AM	 0.6570	 0.1060
AN	 0.4770	 0.1290
AO	 0.7150	 0.0990
AP	 0.5130	 0.1050
AQ	 0.4950	 0.0790
AR	 0.6220	 0.0850
AS	 0.4400	 0.0870
AT	 0.2370	 0.0990
AU	 0.7100	 0.1040
AV	 0.3380	 0.0690
AW	 0.4420	 0.1080
AX	 0.3450	 0.1120
AY	 0.1170	 0.1090
AZ	 0.5590	 0.0690
Aa	 0.8310	 0.1470
Ab	 0.3010	 0.1100
Ac	 0.2630	 0.1170
Ad	 0.5460	 0.1000



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Chain	Atom inclusion	Q-score
Ae	0.2430	0.1020
Af	0.3780	0.1040
Ag	0.2830	0.1110
Ah	0.4310	0.1020
Ai	0.4220	0.0680
Aj	0.4240	0.0600
Ak	0.4080	0.1020
Al	0.3380	0.1140
Am	0.4160	0.0890
An	0.7470	0.0700
Ao	0.5750	0.0960
Ap	0.5260	0.0830
Aq	0.4370	0.0900
Ar	0.3610	0.1070
As	0.6060	0.0900
At	0.5570	0.0980
Au	0.0650	0.0350
Av	0.2790	0.1120
B1	0.1970	0.0840
B2	0.6360	0.0930
B3	0.6430	0.0810
B4	0.7820	0.0720
BA	0.8410	0.1670
BB	0.8150	0.1460
BC	0.3930	0.0990
BD	0.5880	0.0970
BE	0.4630	0.1040
BF	0.3550	0.1090
BG	0.3850	0.1140
BH	0.6230	0.0910
BI	0.2980	0.1420
BJ	0.4470	0.0790
BK	0.5650	0.1350
BL	0.5930	0.0930
BM	0.6560	0.1100
BN	0.4760	0.1250
BO	0.7150	0.0970
BP	0.5130	0.1060
BQ	0.4950	0.0760
BR	0.6210	0.0870
BS	0.4400	0.0890
BT	0.2370	0.0930

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Chain	Atom inclusion	Q-score
BU	 0.7100	 0.0990
BV	 0.3380	 0.0710
BW	 0.4400	 0.1140
BX	 0.3450	 0.1090
BY	 0.1170	 0.1110
BZ	 0.5590	 0.0670
Ba	 0.8310	 0.1470
Bb	 0.3010	 0.1110
Bc	 0.2630	 0.1140
Bd	 0.5470	 0.1000
Be	 0.2430	 0.0970
Bf	 0.3780	 0.1110
Bg	 0.2840	 0.1120
Bh	 0.4310	 0.0990
Bi	 0.4240	 0.0750
Bj	 0.4230	 0.0550
Bk	 0.4080	 0.1060
Bl	 0.3380	 0.1140
Bm	 0.4160	 0.0920
Bn	 0.7470	 0.0610
Bo	 0.5750	 0.0980
Bp	 0.5260	 0.0890
Bq	 0.4360	 0.0940
Br	 0.3610	 0.1120
Bs	 0.6060	 0.0860
Bt	 0.5570	 0.0990
Bu	 0.0650	 0.0430
Bv	 0.2790	 0.1120