Full wwPDB X-ray Structure Validation Report ⓘ

Mar 15, 2026 – 02:48 PM UTC

PDB ID	:	4WQF / pdb_00004wqf
Title	:	Crystal structure of the Thermus thermophilus 70S ribosome in complex with elongation factor G and fusidic acid in the post-translocational state
Authors	:	Lin, J.; Gagnon, M.G.; Steitz, T.A.
Deposited on	:	2014-10-21
Resolution	:	2.80 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp
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:

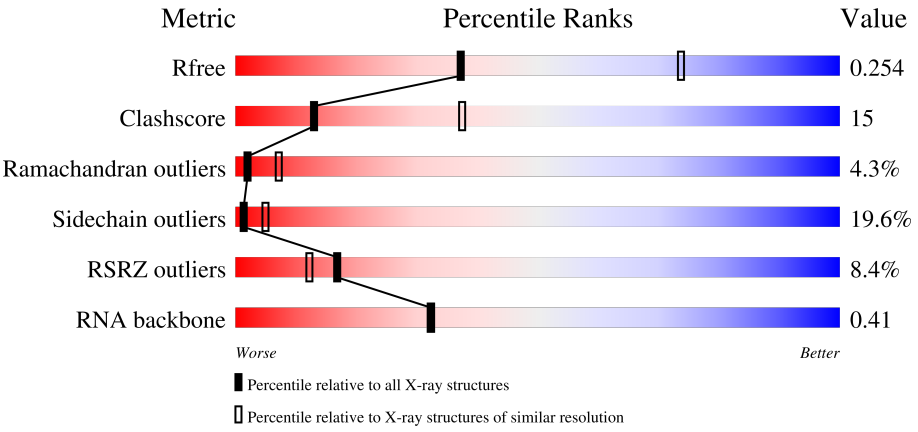
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal 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:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.80 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)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	3866 (2.80-2.80)
Clashscore	190562	4276 (2.80-2.80)
Ramachandran outliers	187476	4196 (2.80-2.80)
Sidechain outliers	187428	4198 (2.80-2.80)
RSRZ outliers	180081	3869 (2.80-2.80)
RNA backbone	3983	1114 (3.00-2.60)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	2915	2% 54% 35% 9%
1	CA	2915	3% 47% 41% 9%
2	AB	121	% 55% 34% 11%
2	CB	121	% 47% 45% 7%

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Mol	Chain	Length	Quality of chain
3	AC	228	48% 21% 28% 10% 40%
3	CC	228	46% 19% 29% 10% 40%
4	AD	276	% 56% 33% 11%
4	CD	276	% 59% 31% 9%
5	AE	206	55% 31% 11%
5	CE	206	3% 39% 45% 12%
6	AF	210	50% 36% 9%
6	CF	210	51% 34% 10%
7	AG	182	5% 41% 42% 15%
7	CG	182	13% 42% 47% 9%
8	AH	180	% 62% 27% 7%
8	CH	180	18% 48% 38% 8%
9	AK	173	23% 47% 21% 6% 25%
9	CK	173	38% 46% 22% 8% 25%
10	AL	147	31% 35% 46% 14% 5%
10	CL	147	52% 43% 38% 13% 5%
11	AN	140	56% 35% 9%
11	CN	140	4% 48% 41% 11%
12	AO	122	53% 37% 10%
12	CO	122	53% 36% 7%
13	AP	150	53% 35% 11%
13	CP	150	3% 51% 37% 11%
14	AQ	141	% 67% 27% 6%
14	CQ	141	5% 48% 39% 11%
15	AR	118	55% 37% 6%

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Mol	Chain	Length	Quality of chain
15	CR	118	2% 41% 43% 14%
16	AS	112	49% 41% 8%
16	CS	112	10% 46% 38% 12%
17	AT	146	2% 53% 32% 5% 10%
17	CT	146	2% 38% 40% 11% 10%
18	AU	118	56% 34% 8%
18	CU	118	54% 38% 6%
19	AV	101	56% 32% 9%
19	CV	101	60% 35% 5%
20	AW	113	50% 41% 8%
20	CW	113	59% 31% 9%
21	AX	96	58% 32% 8%
21	CX	96	5% 55% 34% 9%
22	AY	110	59% 26% 11%
22	CY	110	4% 45% 41% 11%
23	AZ	206	46% 29% 13% 10%
23	CZ	206	6% 38% 40% 9% 10%
24	A0	85	6% 53% 39% 6%
24	C0	85	9% 64% 31%
25	A1	98	2% 50% 35% 11%
25	C1	98	3% 58% 34% 7%
26	A2	72	53% 36% 6%
26	C2	72	4% 54% 29% 14%
27	A3	60	2% 63% 25% 8%
27	C3	60	3% 65% 25% 8%

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Mol	Chain	Length	Quality of chain
28	A4	71	18% 32% 42% 21%
28	C4	71	17% 55% 37% 6%
29	A5	60	67% 25% 5%
29	C5	60	48% 43% 7%
30	A6	54	43% 41% 15%
30	C6	54	41% 50% 7%
31	A7	49	4% 53% 39% 6%
31	C7	49	6% 43% 45% 10%
32	A8	65	57% 32% 9%
32	C8	65	2% 49% 38% 11%
33	A9	37	59% 27% 14%
33	C9	37	14% 49% 43% 8%
34	BA	1521	3% 41% 46% 12%
34	DA	1521	5% 41% 47% 11%
35	BB	256	14% 36% 40% 12% 10%
35	DB	256	20% 41% 38% 11% 10%
36	BC	239	13% 49% 33% 14%
36	DC	239	15% 45% 33% 7% 14%
37	BD	209	21% 44% 39% 14%
37	DD	209	16% 44% 39% 15%
38	BE	162	2% 33% 46% 12% 9%
38	DE	162	3% 37% 40% 13% 9%
39	BF	101	2% 58% 30% 10%
39	DF	101	2% 63% 32%
40	BG	156	16% 56% 32% 12%

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Mol	Chain	Length	Quality of chain
40	DG	156	26% 54% 42%
41	BH	138	% 41% 43% 12%
41	DH	138	2% 51% 38% 10%
42	BI	128	36% 48% 39% 12%
42	DI	128	50% 52% 41% 6%
43	BJ	105	38% 53% 34% 5% 8%
43	DJ	105	40% 41% 43% 8% 9%
44	BK	129	7% 51% 29% 7% 12%
44	DK	129	4% 56% 26% 6% 12%
45	BL	132	3% 50% 38% 8%
45	DL	132	5% 47% 37% 7% 8%
46	BM	126	25% 50% 36% 6% 7%
46	DM	126	29% 55% 31% 11%
47	BN	61	39% 49% 38% 10%
47	DN	61	67% 62% 26% 10%
48	BO	89	3% 48% 39% 11%
48	DO	89	3% 58% 34% 7%
49	BP	88	13% 27% 36% 26% 7%
49	DP	88	10% 45% 39% 9% 7%
50	BQ	105	3% 48% 34% 11% 6%
50	DQ	105	3% 46% 36% 11% 6%
51	BR	88	2% 43% 33% 23%
51	DR	88	% 36% 28% 11% 23%
52	BS	93	51% 42% 43% 10%
52	DS	93	51% 46% 35% 8% 11%

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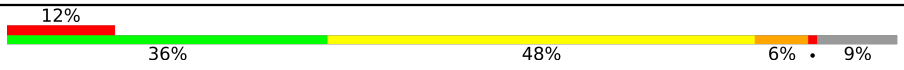
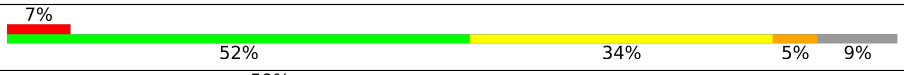
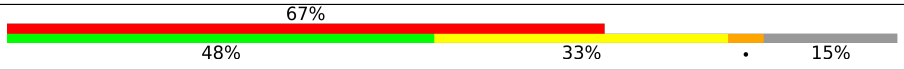
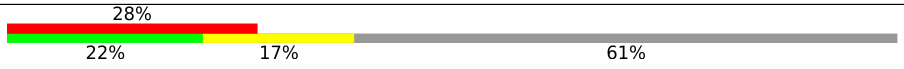
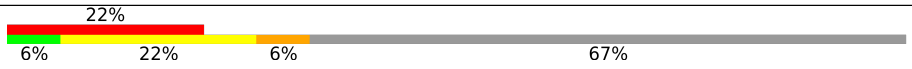
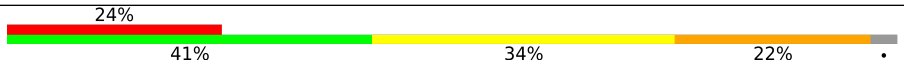
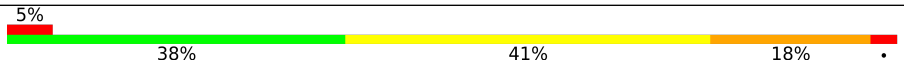
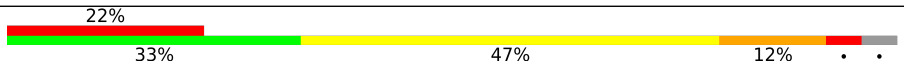
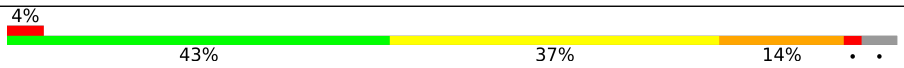
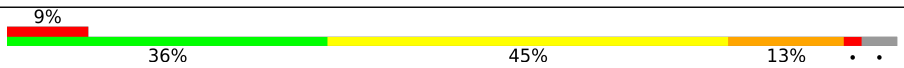
Mol	Chain	Length	Quality of chain
53	BT	106	
53	DT	106	
54	BU	27	
54	DU	27	
55	BV	18	
55	DV	18	
56	BW	76	
56	BY	76	
56	DW	76	
56	DY	76	
57	BZ	758	
57	DZ	758	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MG	AA	3094	-	-	-	X
58	MG	CA	3180	-	-	-	X
60	SF4	DD	501	-	-	X	-
62	GDP	DZ	704	-	-	X	-

2 Entry composition

There are 63 unique types of molecules in this entry. The entry contains 310279 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 23S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	2852	Total	C	N	O	P	0	0	0
			61426	27339	11489	19747	2851			
1	CA	2848	Total	C	N	O	P	0	0	0
			61337	27299	11470	19721	2847			

- Molecule 2 is a RNA chain called 5S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			
2	CB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

- Molecule 3 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	137	Total	C	N	O	S	0	0	0
			1063	669	201	192	1			
3	CC	137	Total	C	N	O	S	0	0	0
			1063	669	201	192	1			

- Molecule 4 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	275	Total	C	N	O	S	0	0	0
			2136	1349	423	361	3			
4	CD	275	Total	C	N	O	S	0	0	0
			2142	1352	426	361	3			

- Molecule 5 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			
5	CE	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			

- Molecule 6 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	203	Total	C	N	O	S	0	0	1
			1584	1009	298	275	2			
6	CF	203	Total	C	N	O	S	0	0	1
			1580	1007	297	274	2			

- Molecule 7 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	181	Total	C	N	O	S	0	0	0
			1425	914	256	251	4			
7	CG	181	Total	C	N	O	S	0	0	0
			1424	911	258	251	4			

- Molecule 8 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	174	Total	C	N	O	S	0	0	0
			1330	845	248	236	1			
8	CH	174	Total	C	N	O	S	0	0	0
			1330	845	248	236	1			

- Molecule 9 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	AK	130	Total	C	N	O	0	0	0
			641	381	130	130			
9	CK	130	Total	C	N	O	0	0	0
			641	381	130	130			

- Molecule 10 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AL	139	Total	C	N	O	S	0	0	0
			1025	653	181	186	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CL	139	Total	C	N	O	S	0	0	0
			1025	653	181	186	5			

- Molecule 11 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AN	140	Total	C	N	O	S	0	0	0
			1117	719	207	187	4			
11	CN	140	Total	C	N	O	S	0	0	0
			1117	719	207	187	4			

- Molecule 12 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			
12	CO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

- Molecule 13 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AP	149	Total	C	N	O	S	0	0	0
			1139	709	231	196	3			
13	CP	149	Total	C	N	O	S	0	0	0
			1135	706	230	196	3			

- Molecule 14 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
14	CQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

- Molecule 15 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
15	CR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

- Molecule 16 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
16	AS	110	Total	C	N	O	0	0	0
			877	553	175	149			
16	CS	110	Total	C	N	O	0	0	0
			870	549	173	148			

- Molecule 17 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AT	131	Total	C	N	O	S	0	0	0
			1091	680	225	185	1			
17	CT	131	Total	C	N	O	S	0	0	0
			1083	675	224	183	1			

- Molecule 18 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			
18	CU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			

- Molecule 19 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AV	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			
19	CV	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			

- Molecule 20 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AW	112	Total	C	N	O	S	0	0	0
			886	557	174	153	2			
20	CW	112	Total	C	N	O	S	0	0	0
			886	557	174	153	2			

- Molecule 21 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AX	95	Total	C	N	O	S	0	0	0
			750	488	135	126	1			
21	CX	95	Total	C	N	O	S	0	0	0
			750	488	135	126	1			

- Molecule 22 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AY	107	Total	C	N	O	S	0	0	0
			806	517	152	131	6			
22	CY	107	Total	C	N	O	S	0	0	0
			806	517	152	131	6			

- Molecule 23 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AZ	185	Total	C	N	O	S	0	0	0
			1451	927	258	264	2			
23	CZ	185	Total	C	N	O	S	0	0	0
			1451	927	258	264	2			

- Molecule 24 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	A0	83	Total	C	N	O	S	0	0	0
			653	404	139	109	1			
24	C0	83	Total	C	N	O	S	0	0	0
			653	404	139	109	1			

- Molecule 25 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	A1	97	Total	C	N	O	S	0	0	0
			755	475	148	131	1			
25	C1	97	Total	C	N	O	S	0	0	0
			755	475	148	131	1			

- Molecule 26 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	A2	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	C2	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			

- Molecule 27 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
27	A3	59	Total	C	N	O	0	0	0
			469	298	90	81			
27	C3	59	Total	C	N	O	0	0	0
			464	296	90	78			

- Molecule 28 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	A4	69	Total	C	N	O	S	0	0	0
			558	352	102	99	5			
28	C4	69	Total	C	N	O	S	0	0	0
			532	339	97	91	5			

- Molecule 29 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	A5	59	Total	C	N	O	S	0	0	0
			455	285	89	76	5			
29	C5	59	Total	C	N	O	S	0	0	0
			455	285	89	76	5			

- Molecule 30 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	A6	53	Total	C	N	O	S	0	0	0
			453	281	91	77	4			
30	C6	53	Total	C	N	O	S	0	0	0
			449	279	91	75	4			

- Molecule 31 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	A7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			
31	C7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 32 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	A8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			
32	C8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 33 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	A9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
33	C9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 34 is a RNA chain called 16S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BA	1495	Total	C	N	O	P	0	0	0
			32141	14304	5958	10384	1495			
34	DA	1501	Total	C	N	O	P	0	0	0
			32268	14361	5980	10426	1501			

- Molecule 35 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BB	231	Total	C	N	O	S	0	0	0
			1846	1179	331	331	5			
35	DB	231	Total	C	N	O	S	0	0	0
			1825	1167	326	327	5			

- Molecule 36 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BC	206	Total	C	N	O	S	0	0	0
			1552	976	302	273	1			
36	DC	206	Total	C	N	O	S	0	0	0
			1544	970	300	273	1			

- Molecule 37 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BD	208	Total	C	N	O	S	0	0	0
			1659	1040	326	286	7			
37	DD	208	Total	C	N	O	S	0	0	0
			1678	1052	333	286	7			

- Molecule 38 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BE	148	Total	C	N	O	S	0	0	0
			1129	714	213	198	4			
38	DE	148	Total	C	N	O	S	0	0	0
			1133	716	214	199	4			

- Molecule 39 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BF	100	Total	C	N	O	S	0	0	0
			812	514	146	149	3			
39	DF	100	Total	C	N	O	S	0	0	0
			820	518	147	152	3			

- Molecule 40 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BG	155	Total	C	N	O	S	0	0	0
			1231	766	243	216	6			
40	DG	155	Total	C	N	O	S	0	0	0
			1235	769	244	216	6			

- Molecule 41 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BH	137	Total	C	N	O	S	0	0	0
			1088	689	206	191	2			
41	DH	137	Total	C	N	O	S	0	0	0
			1088	689	206	191	2			

- Molecule 42 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	BI	127	Total	C	N	O	0	0	0
			986	626	193	167			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	DI	127	Total 978	C 619	N 190	O 169	0	0	0

- Molecule 43 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
43	BJ	97	Total 709	C 440	N 138	O 131	0	0	0
43	DJ	96	Total 714	C 445	N 138	O 131	0	0	0

- Molecule 44 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BK	114	Total 833	C 519	N 156	O 155	S 3	0	0	0
44	DK	114	Total 833	C 519	N 156	O 155	S 3	0	0	0

- Molecule 45 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BL	122	Total 930	C 585	N 185	O 159	S 1	0	0	0
45	DL	122	Total 930	C 585	N 185	O 159	S 1	0	0	0

- Molecule 46 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BM	117	Total 923	C 570	N 191	O 160	S 2	0	0	0
46	DM	122	Total 950	C 586	N 197	O 165	S 2	0	0	0

- Molecule 47 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BN	60	Total 492	C 312	N 104	O 72	S 4	0	0	0
47	DN	60	Total 492	C 312	N 104	O 72	S 4	0	0	0

- Molecule 48 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BO	88	Total	C	N	O	S	0	0	0
			728	456	144	126	2			
48	DO	88	Total	C	N	O	S	0	0	0
			728	456	144	126	2			

- Molecule 49 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	BP	82	Total	C	N	O	S	0	0	0
			681	433	134	113	1			
49	DP	82	Total	C	N	O	S	0	0	0
			677	430	133	113	1			

- Molecule 50 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	BQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
50	DQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

- Molecule 51 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
51	BR	68	Total	C	N	O	0	0	0
			555	355	108	92			
51	DR	68	Total	C	N	O	0	0	0
			555	355	108	92			

- Molecule 52 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	BS	84	Total	C	N	O	S	0	0	0
			661	423	122	114	2			
52	DS	83	Total	C	N	O	S	0	0	0
			646	412	119	113	2			

- Molecule 53 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	BT	96	Total	C	N	O	S	0	0	0
			728	446	156	124	2			
53	DT	96	Total	C	N	O	S	0	0	0
			731	449	156	124	2			

- Molecule 54 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
54	BU	23	Total	C	N	O	0	0	0
			199	122	48	29			
54	DU	23	Total	C	N	O	0	0	0
			199	122	48	29			

- Molecule 55 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	BV	7	Total	C	N	O	P	0	0	0
			148	67	27	47	7			
55	DV	6	Total	C	N	O	P	0	0	0
			123	57	22	39	5			

- Molecule 56 is a RNA chain called P-site tRNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
56	BW	76	Total	C	N	O	P	S	0	0	0
			1631	731	290	532	76	2			
56	BY	74	Total	C	N	O	P	S	0	0	0
			1581	707	285	515	73	1			
56	DW	76	Total	C	N	O	P	S	0	0	0
			1631	731	290	532	76	2			
56	DY	73	Total	C	N	O	P	S	0	0	0
			1561	698	283	507	72	1			

- Molecule 57 is a protein called 50S ribosomal protein L9,Elongation factor G.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	BZ	730	Total	C	N	O	S	0	0	0
			5690	3616	980	1075	19			
57	DZ	730	Total	C	N	O	S	0	0	0
			5690	3616	980	1075	19			

- Molecule 58 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	AA	815	Total Mg 815 815	0	0
58	AB	23	Total Mg 23 23	0	0
58	AD	12	Total Mg 12 12	0	0
58	AE	5	Total Mg 5 5	0	0
58	AF	8	Total Mg 8 8	0	0
58	AG	2	Total Mg 2 2	0	0
58	AH	2	Total Mg 2 2	0	0
58	AN	3	Total Mg 3 3	0	0
58	AO	1	Total Mg 1 1	0	0
58	AP	3	Total Mg 3 3	0	0
58	AQ	3	Total Mg 3 3	0	0
58	AR	2	Total Mg 2 2	0	0
58	AU	4	Total Mg 4 4	0	0
58	AV	6	Total Mg 6 6	0	0
58	AW	4	Total Mg 4 4	0	0
58	AX	1	Total Mg 1 1	0	0
58	AY	1	Total Mg 1 1	0	0
58	AZ	2	Total Mg 2 2	0	0
58	A0	3	Total Mg 3 3	0	0
58	A2	2	Total Mg 2 2	0	0
58	A4	1	Total Mg 1 1	0	0
58	A5	4	Total Mg 4 4	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	A6	1	Total Mg 1 1	0	0
58	A7	6	Total Mg 6 6	0	0
58	A8	2	Total Mg 2 2	0	0
58	A9	1	Total Mg 1 1	0	0
58	BA	213	Total Mg 213 213	0	0
58	BB	1	Total Mg 1 1	0	0
58	BD	1	Total Mg 1 1	0	0
58	BE	1	Total Mg 1 1	0	0
58	BF	1	Total Mg 1 1	0	0
58	BK	1	Total Mg 1 1	0	0
58	BL	2	Total Mg 2 2	0	0
58	BM	2	Total Mg 2 2	0	0
58	BN	1	Total Mg 1 1	0	0
58	BT	1	Total Mg 1 1	0	0
58	BV	1	Total Mg 1 1	0	0
58	BW	3	Total Mg 3 3	0	0
58	BZ	2	Total Mg 2 2	0	0
58	CA	664	Total Mg 664 664	0	0
58	CB	13	Total Mg 13 13	0	0
58	CD	3	Total Mg 3 3	0	0
58	CE	6	Total Mg 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	CF	5	Total Mg 5 5	0	0
58	CG	1	Total Mg 1 1	0	0
58	CN	1	Total Mg 1 1	0	0
58	CO	2	Total Mg 2 2	0	0
58	CP	3	Total Mg 3 3	0	0
58	CQ	5	Total Mg 5 5	0	0
58	CR	1	Total Mg 1 1	0	0
58	CU	1	Total Mg 1 1	0	0
58	CV	2	Total Mg 2 2	0	0
58	CW	1	Total Mg 1 1	0	0
58	CY	1	Total Mg 1 1	0	0
58	C3	1	Total Mg 1 1	0	0
58	C5	1	Total Mg 1 1	0	0
58	C7	1	Total Mg 1 1	0	0
58	C8	1	Total Mg 1 1	0	0
58	DA	168	Total Mg 168 168	0	0
58	DD	1	Total Mg 1 1	0	0
58	DE	2	Total Mg 2 2	0	0
58	DF	1	Total Mg 1 1	0	0
58	DJ	1	Total Mg 1 1	0	0
58	DK	1	Total Mg 1 1	0	0

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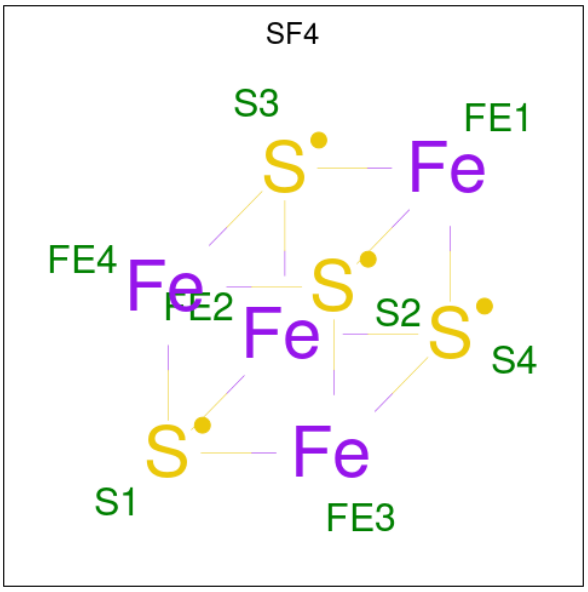
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	DT	1	Total Mg 1 1	0	0
58	DW	3	Total Mg 3 3	0	0
58	DZ	2	Total Mg 2 2	0	0

- Molecule 59 is ZINC ION (CCD ID: ZN) (formula: Zn).

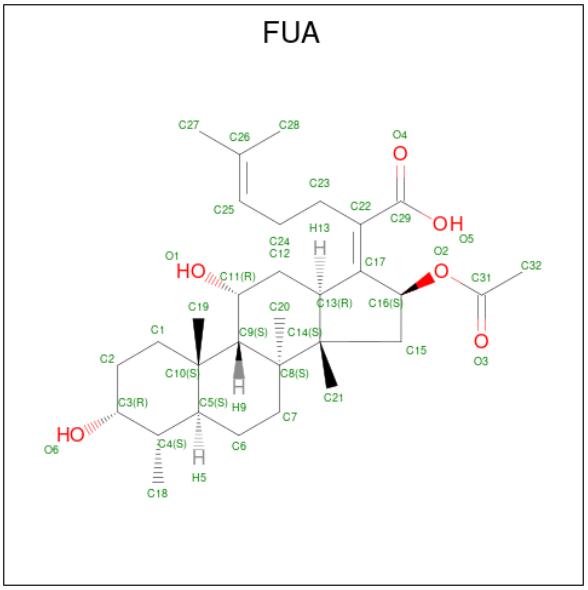
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	AY	1	Total Zn 1 1	0	0
59	A4	1	Total Zn 1 1	0	0
59	A5	1	Total Zn 1 1	0	0
59	A6	1	Total Zn 1 1	0	0
59	A9	1	Total Zn 1 1	0	0
59	BN	1	Total Zn 1 1	0	0
59	CY	1	Total Zn 1 1	0	0
59	C4	1	Total Zn 1 1	0	0
59	C5	1	Total Zn 1 1	0	0
59	C6	1	Total Zn 1 1	0	0
59	C9	1	Total Zn 1 1	0	0
59	DN	1	Total Zn 1 1	0	0

- Molecule 60 is IRON/SULFUR CLUSTER (CCD ID: SF4) (formula: Fe_4S_4).



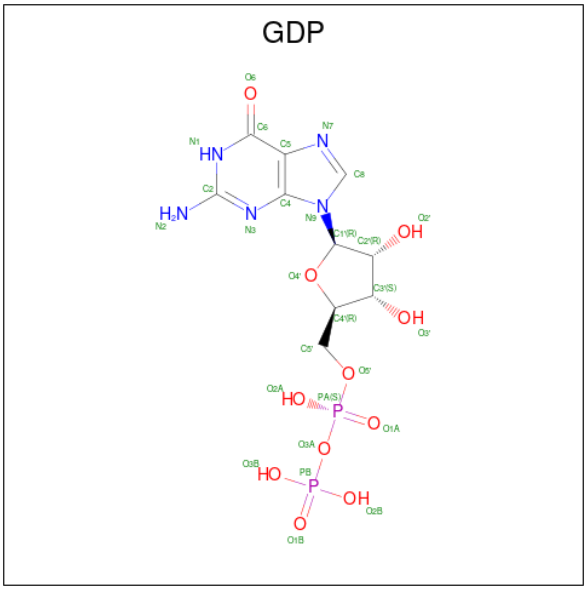
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	BD	1	Total Fe S 8 4 4	0	0
60	DD	1	Total Fe S 8 4 4	0	0

- Molecule 61 is FUSIDIC ACID (CCD ID: FUA) (formula: $C_{31}H_{48}O_6$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	BZ	1	Total C O 37 31 6	0	0
61	DZ	1	Total C O 37 31 6	0	0

- Molecule 62 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	BZ	1	Total C N O P 28 10 5 11 2	0	0
62	DZ	1	Total C N O P 28 10 5 11 2	0	0

- Molecule 63 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
63	AA	1408	Total O 1408 1408	0	0
63	AB	36	Total O 36 36	0	0
63	AD	15	Total O 15 15	0	0
63	AE	19	Total O 19 19	0	0
63	AF	8	Total O 8 8	0	0
63	AG	3	Total O 3 3	0	0
63	AH	1	Total O 1 1	0	0
63	AN	2	Total O 2 2	0	0
63	AO	3	Total O 3 3	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
63	AP	15	Total O 15 15	0	0
63	AQ	3	Total O 3 3	0	0
63	AR	3	Total O 3 3	0	0
63	AS	1	Total O 1 1	0	0
63	AT	2	Total O 2 2	0	0
63	AU	6	Total O 6 6	0	0
63	AW	1	Total O 1 1	0	0
63	AX	2	Total O 2 2	0	0
63	AZ	1	Total O 1 1	0	0
63	A0	7	Total O 7 7	0	0
63	A1	3	Total O 3 3	0	0
63	A3	1	Total O 1 1	0	0
63	A5	2	Total O 2 2	0	0
63	A6	1	Total O 1 1	0	0
63	A7	3	Total O 3 3	0	0
63	A8	11	Total O 11 11	0	0
63	BA	205	Total O 205 205	0	0
63	BD	3	Total O 3 3	0	0
63	BE	3	Total O 3 3	0	0
63	BJ	1	Total O 1 1	0	0
63	BL	2	Total O 2 2	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
63	BM	1	Total O 1 1	0	0
63	BO	1	Total O 1 1	0	0
63	BV	2	Total O 2 2	0	0
63	BW	1	Total O 1 1	0	0
63	BZ	3	Total O 3 3	0	0
63	CA	981	Total O 981 981	0	0
63	CB	9	Total O 9 9	0	0
63	CD	15	Total O 15 15	0	0
63	CE	9	Total O 9 9	0	0
63	CF	6	Total O 6 6	0	0
63	CP	13	Total O 13 13	0	0
63	CQ	1	Total O 1 1	0	0
63	CT	3	Total O 3 3	0	0
63	CU	4	Total O 4 4	0	0
63	CV	1	Total O 1 1	0	0
63	CW	1	Total O 1 1	0	0
63	CX	1	Total O 1 1	0	0
63	CY	1	Total O 1 1	0	0
63	C0	5	Total O 5 5	0	0
63	C1	3	Total O 3 3	0	0
63	C3	1	Total O 1 1	0	0

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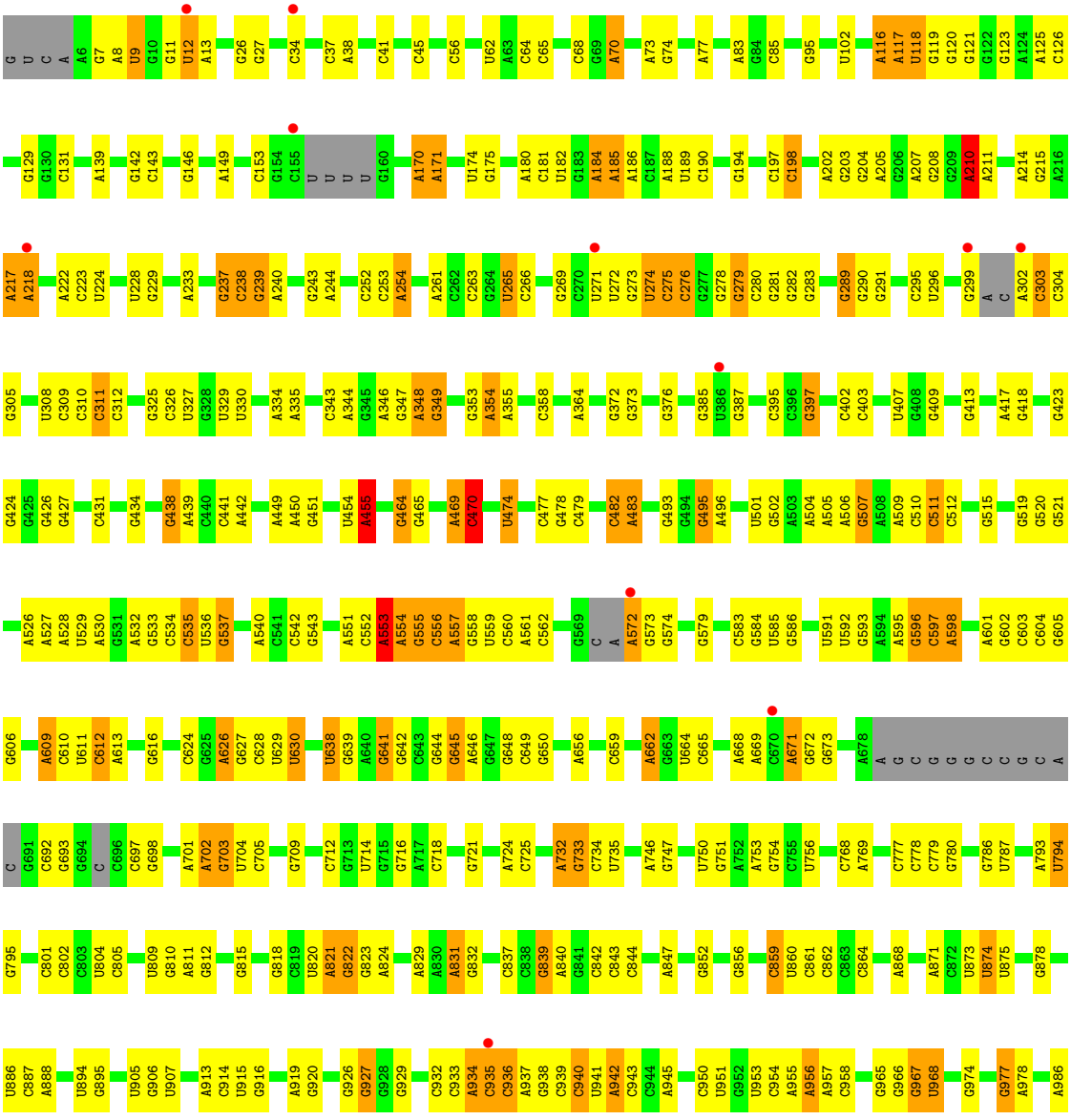
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
63	C5	1	Total O 1 1	0	0
63	C7	3	Total O 3 3	0	0
63	C8	3	Total O 3 3	0	0
63	DA	153	Total O 153 153	0	0
63	DE	2	Total O 2 2	0	0
63	DH	1	Total O 1 1	0	0
63	DJ	1	Total O 1 1	0	0
63	DK	2	Total O 2 2	0	0
63	DL	1	Total O 1 1	0	0
63	DP	1	Total O 1 1	0	0
63	DT	1	Total O 1 1	0	0
63	DY	1	Total O 1 1	0	0
63	DZ	2	Total O 2 2	0	0

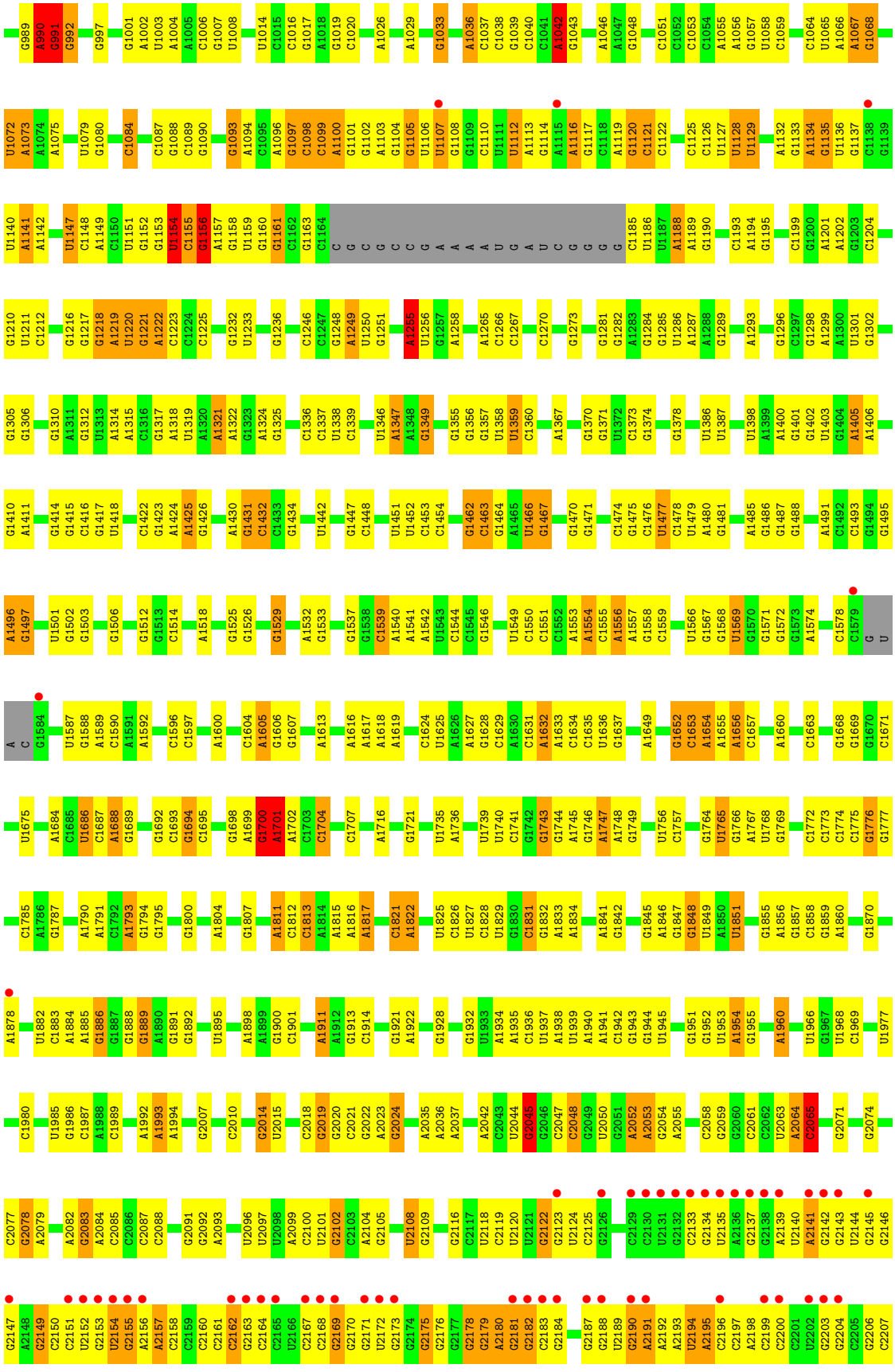
3 Residue-property plots (i)

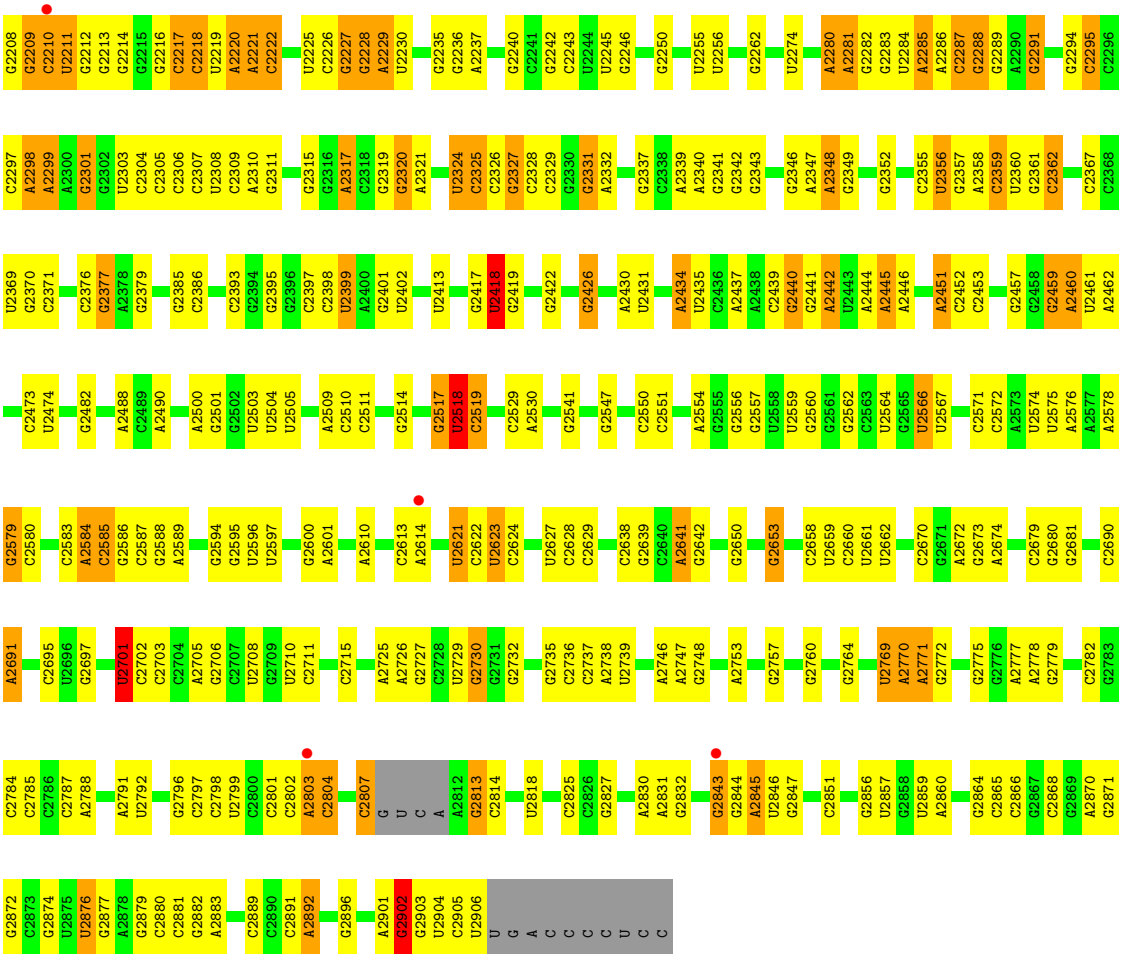
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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 dot above a residue indicates a poor fit to the electron density (RSRZ > 2). 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: 23S Ribosomal RNA

Chain AA: 2% 54% 35% 9%

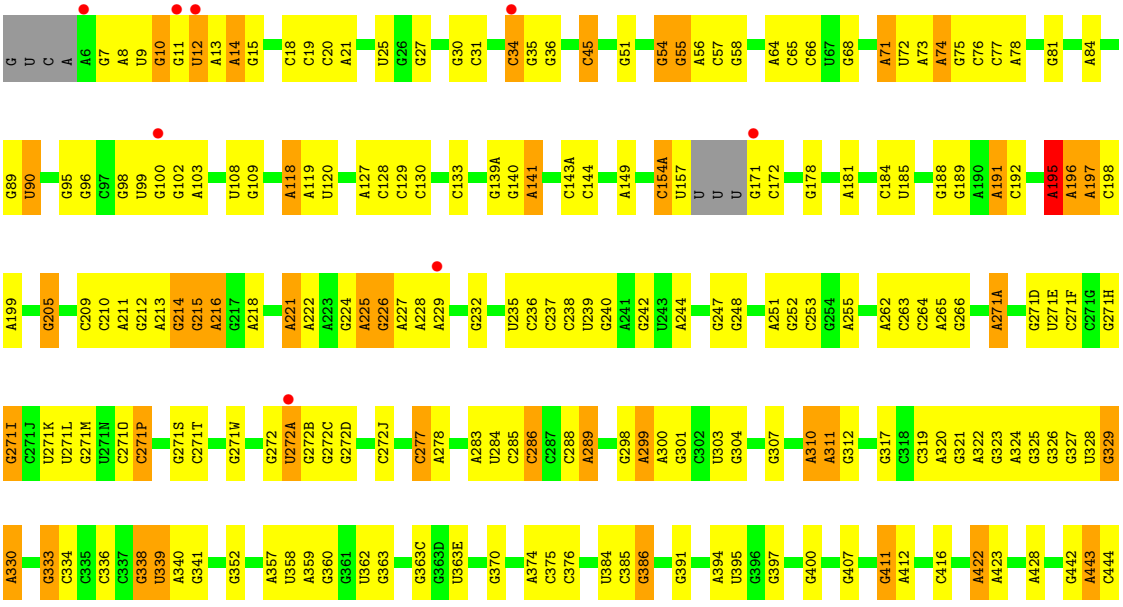


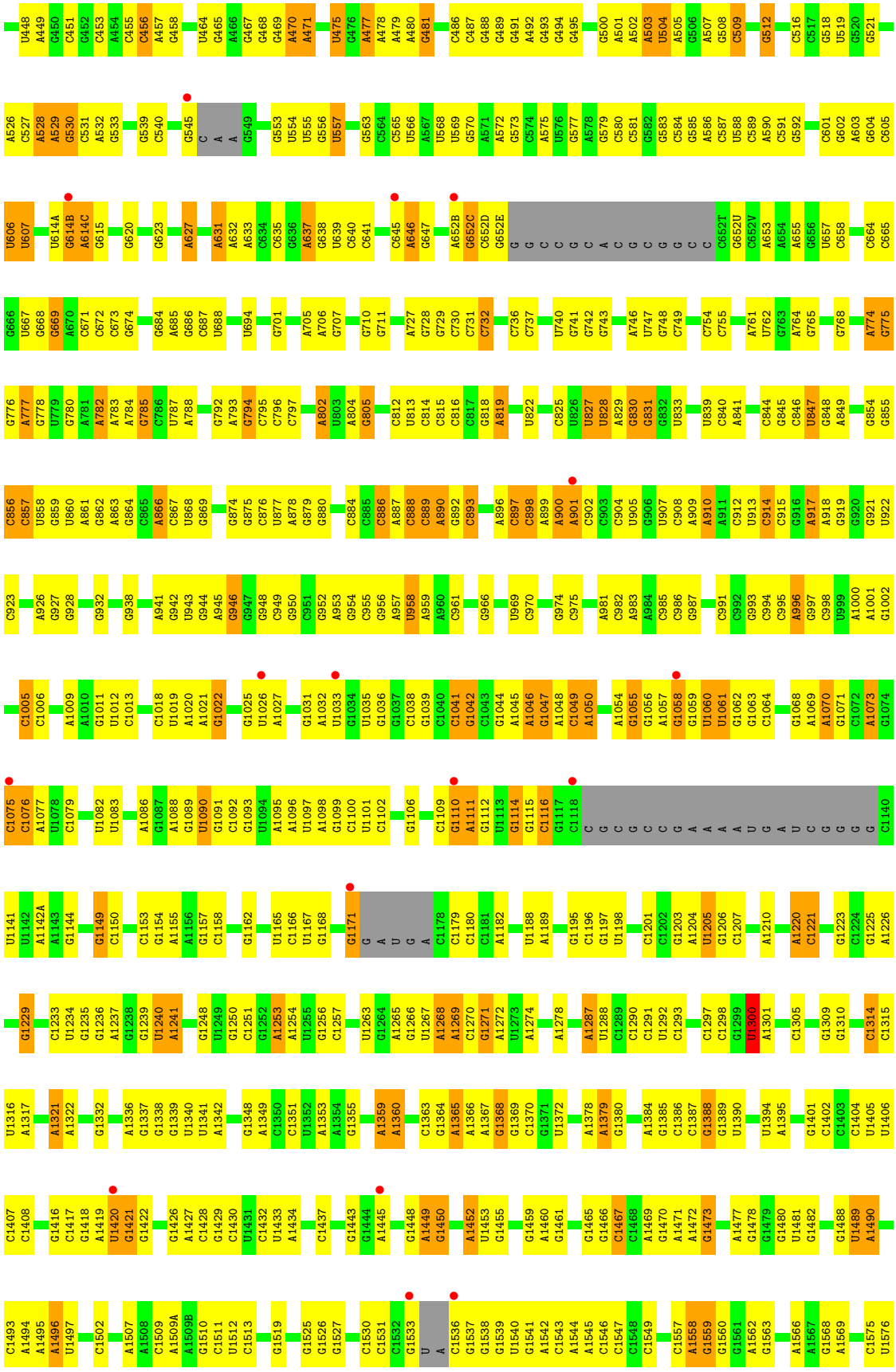


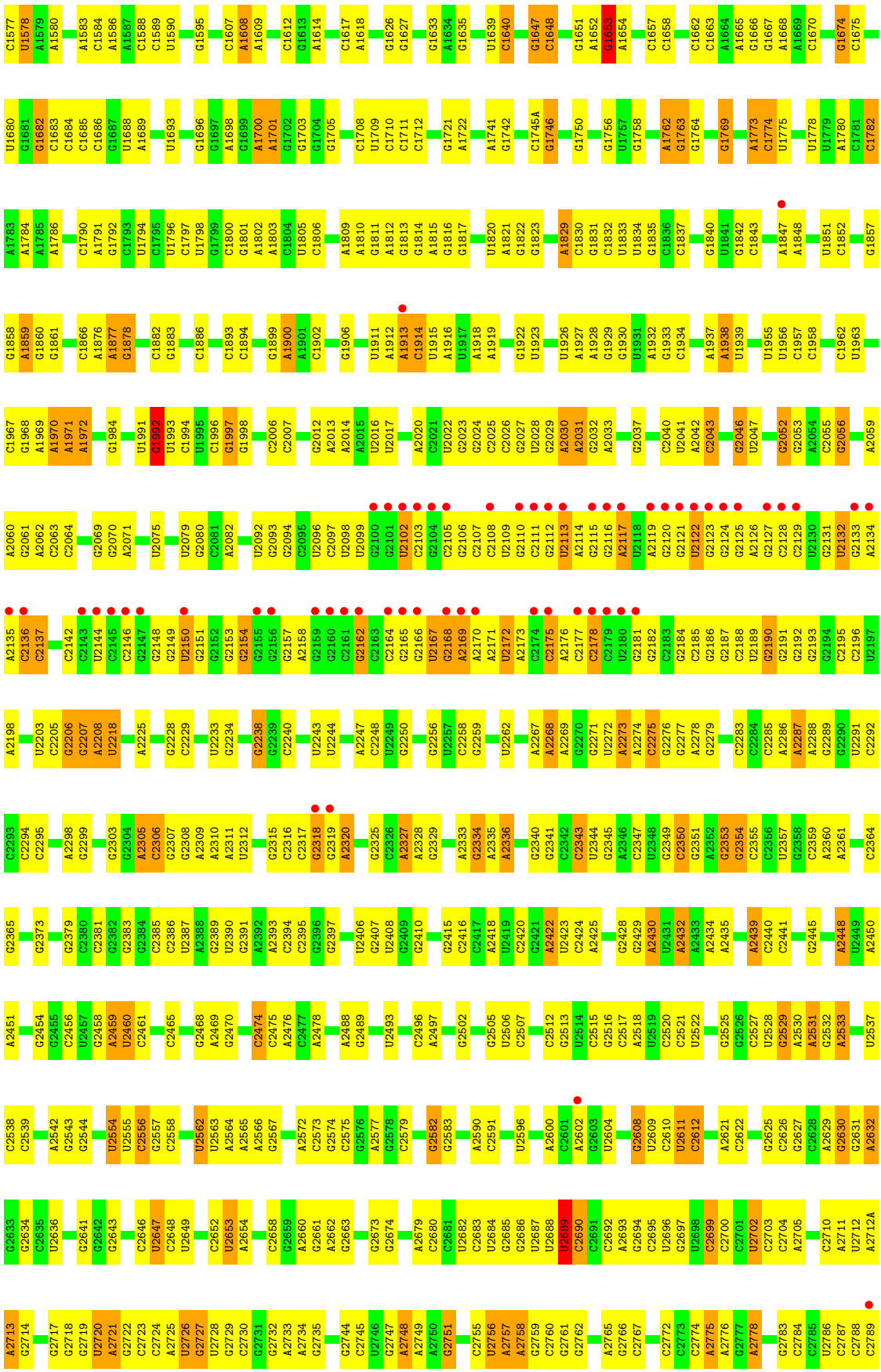


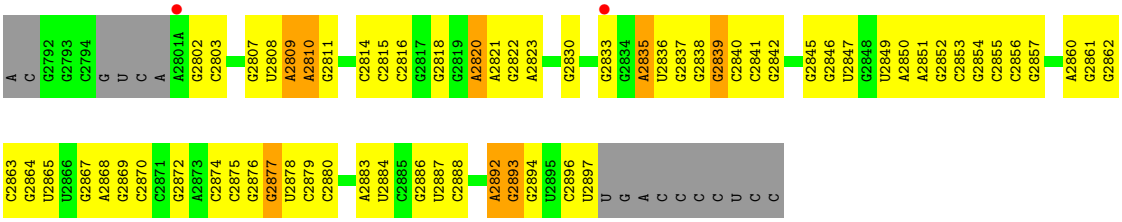
• Molecule 1: 23S Ribosomal RNA

Chain CA:



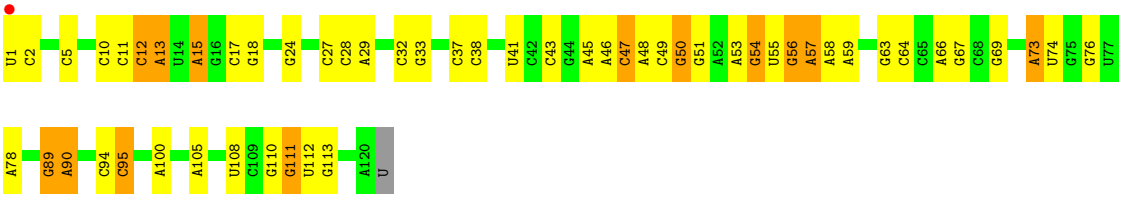






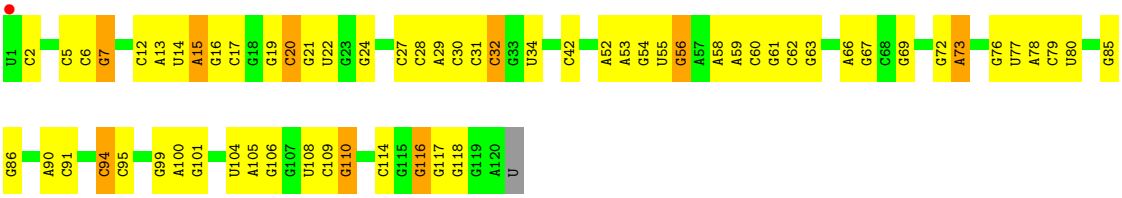
• Molecule 2: 5S Ribosomal RNA

Chain AB:



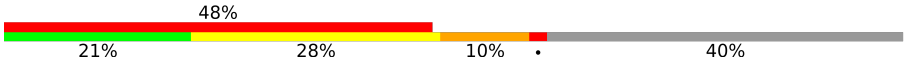
• Molecule 2: 5S Ribosomal RNA

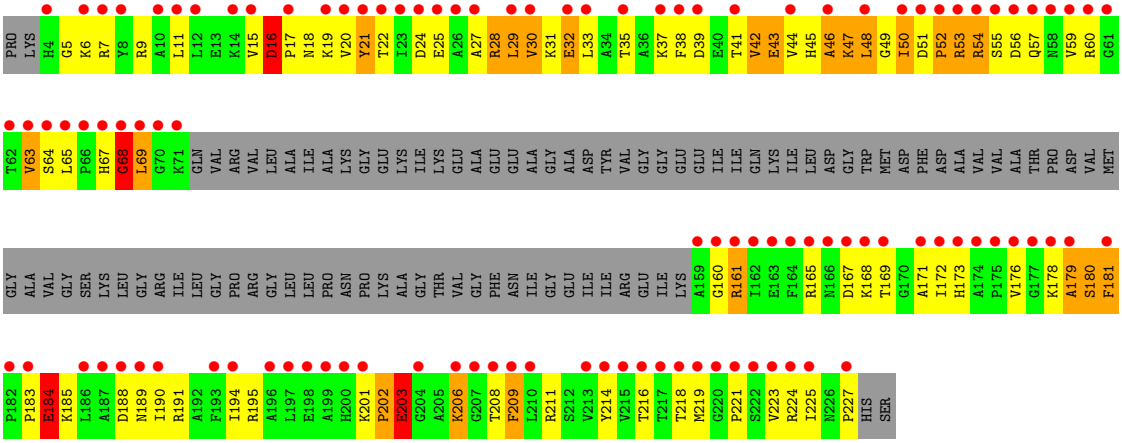
Chain CB:



• Molecule 3: 50S ribosomal protein L1

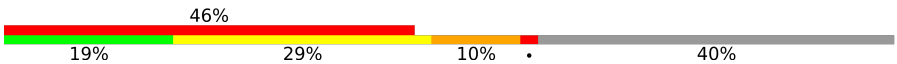
Chain AC:

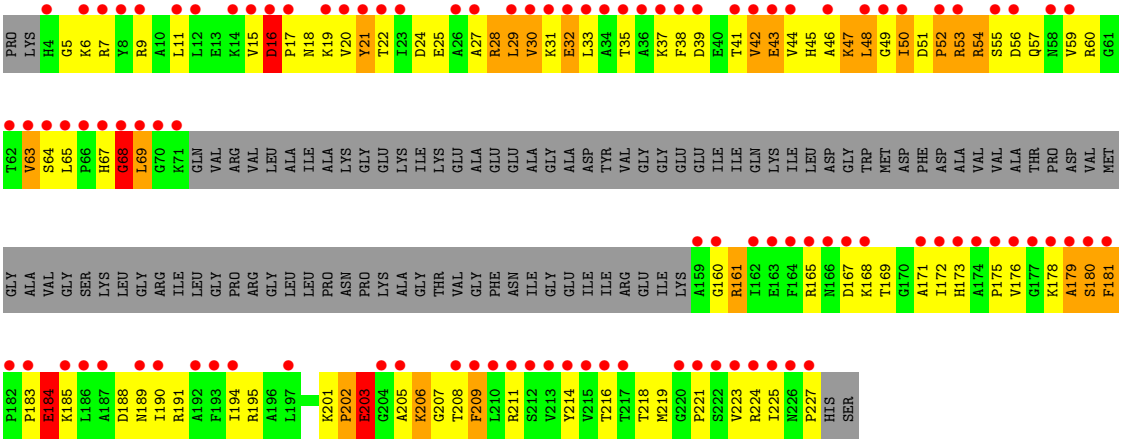




• Molecule 3: 50S ribosomal protein L1

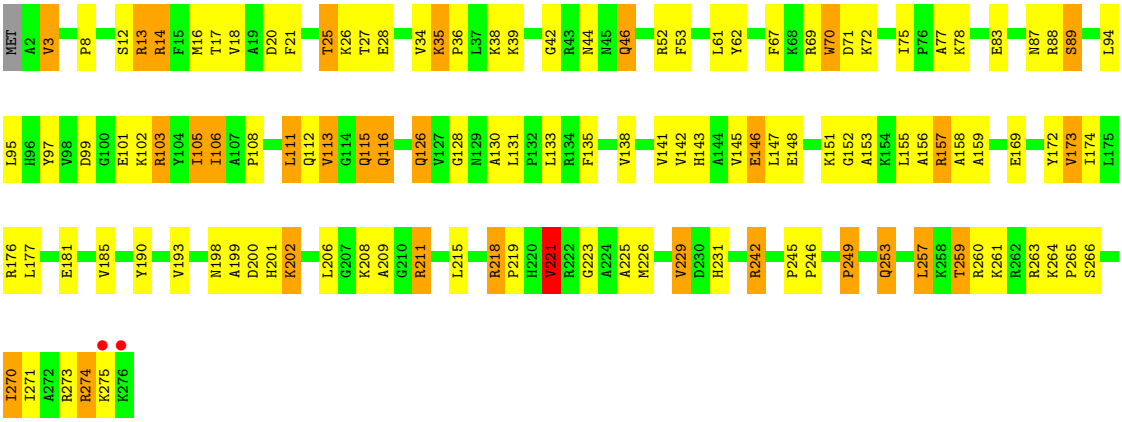
Chain CC:





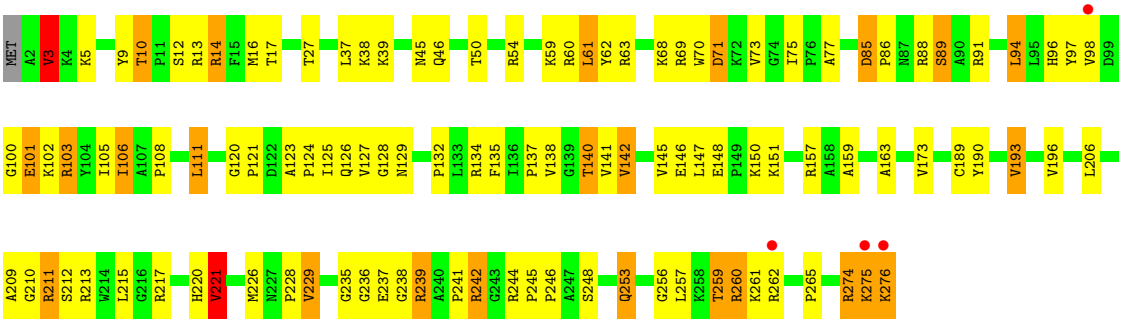
• Molecule 4: 50S ribosomal protein L2

Chain AD:



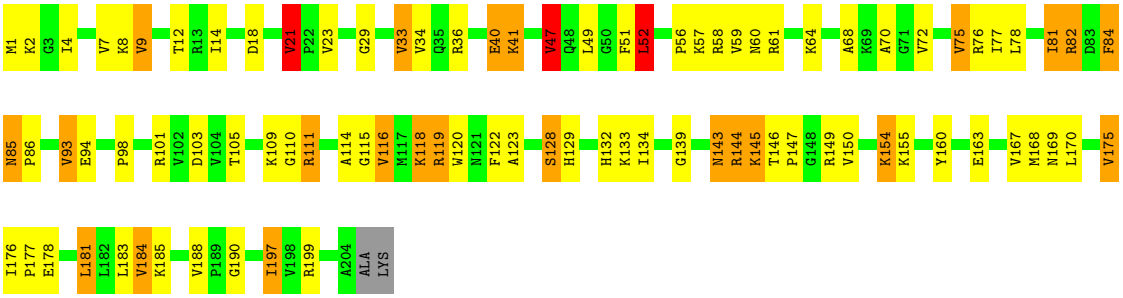
• Molecule 4: 50S ribosomal protein L2

Chain CD:



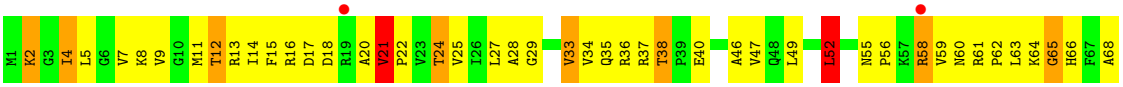
• Molecule 5: 50S ribosomal protein L3

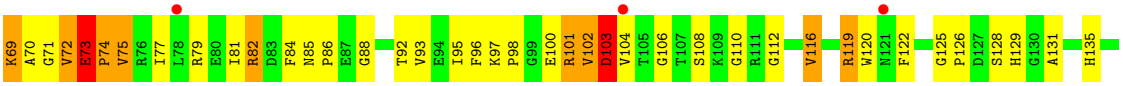
Chain AE:



• Molecule 5: 50S ribosomal protein L3

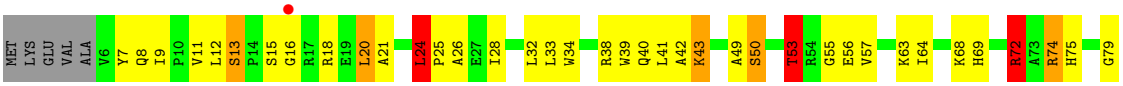
Chain CE:

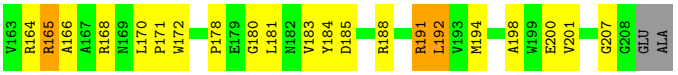




• Molecule 6: 50S ribosomal protein L4

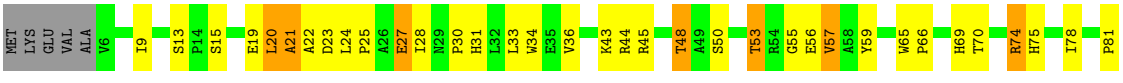
Chain AF:

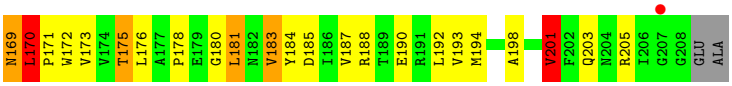




• Molecule 6: 50S ribosomal protein L4

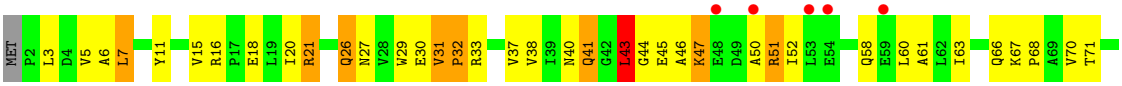
Chain CF:

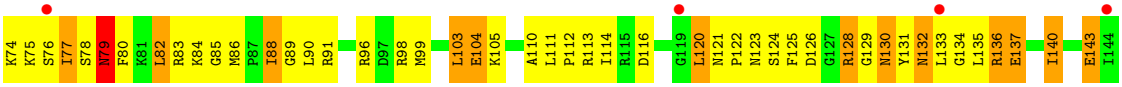


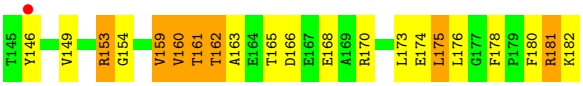


• Molecule 7: 50S ribosomal protein L5

Chain AG:

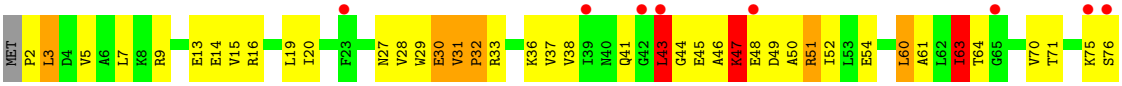






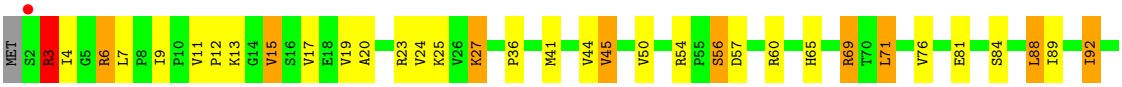
• Molecule 7: 50S ribosomal protein L5

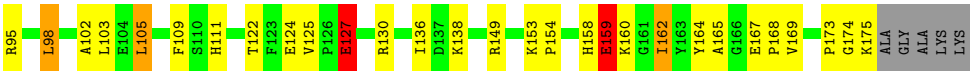
Chain CG:



• Molecule 8: 50S ribosomal protein L6

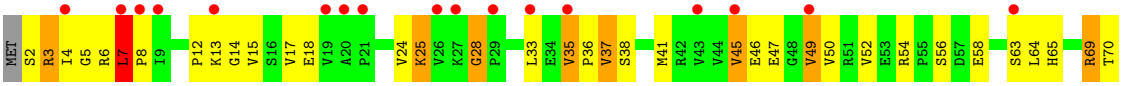
Chain AH:

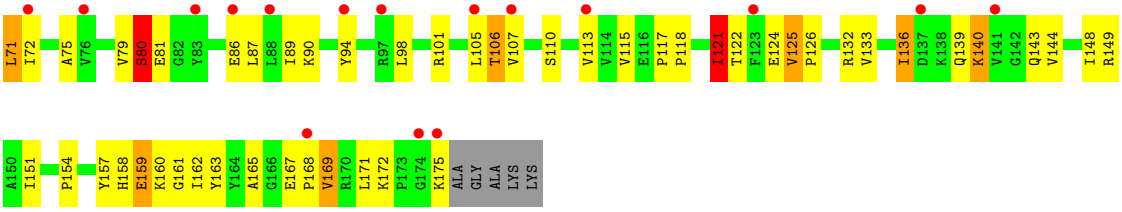




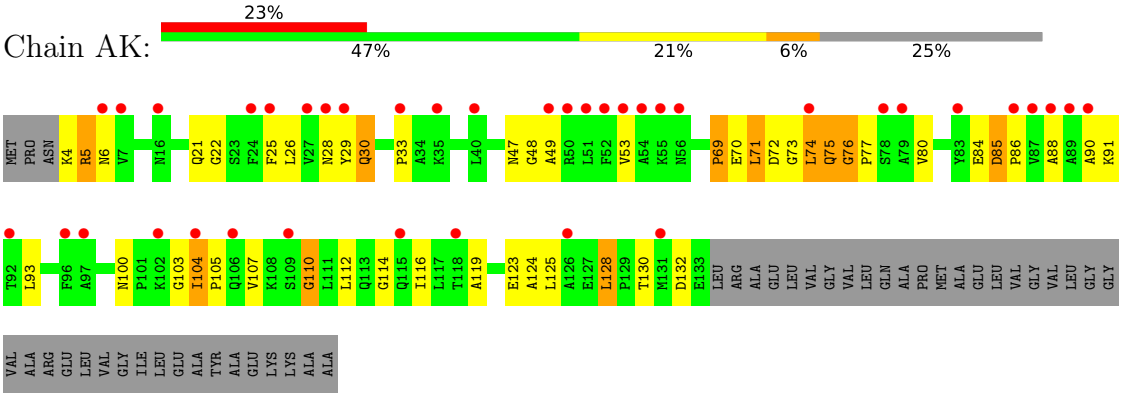
• Molecule 8: 50S ribosomal protein L6

Chain CH:

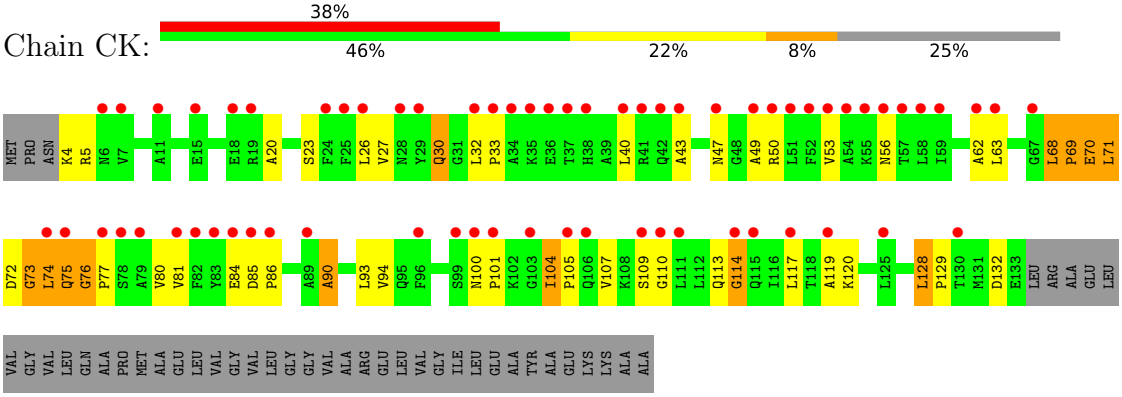




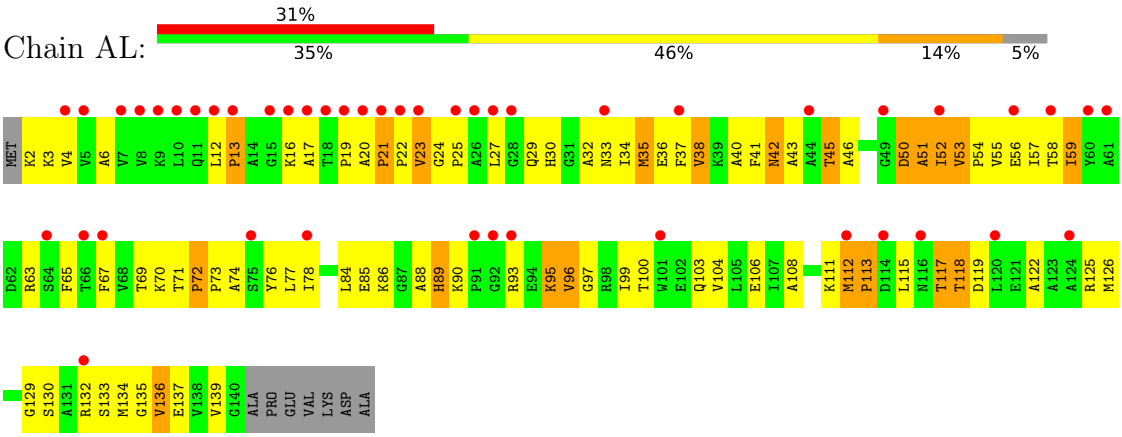
• Molecule 9: 50S ribosomal protein L10



• Molecule 9: 50S ribosomal protein L10

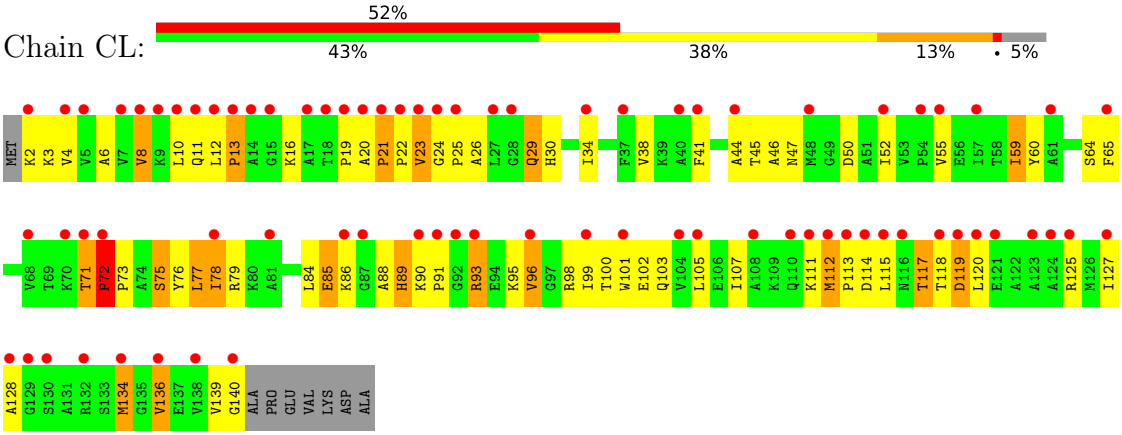


• Molecule 10: 50S ribosomal protein L11



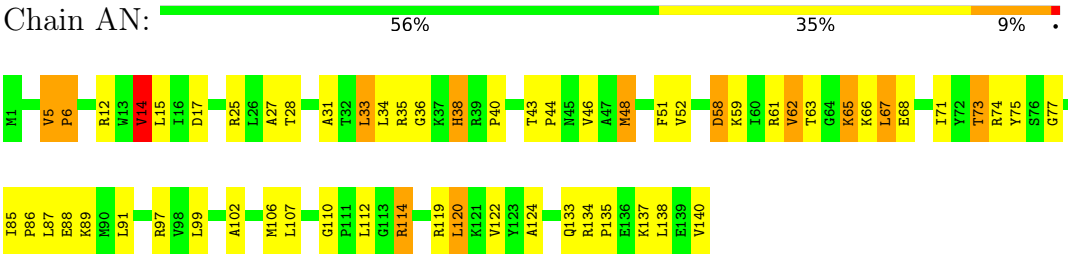
• Molecule 10: 50S ribosomal protein L11

Chain CL:



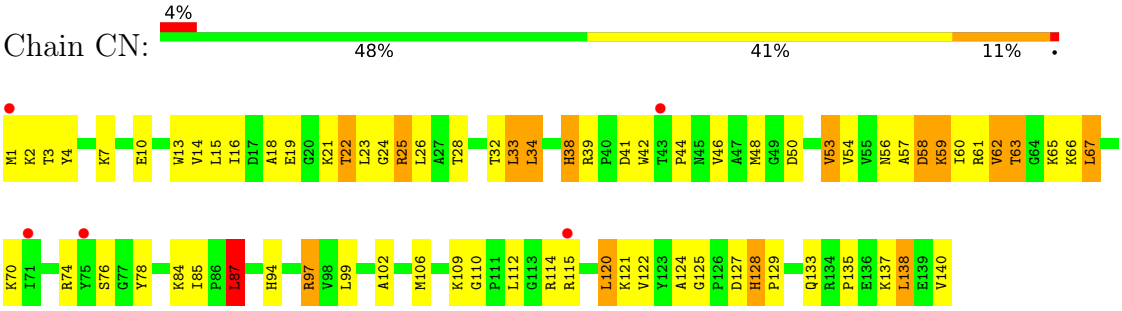
• Molecule 11: 50S ribosomal protein L13

Chain AN:



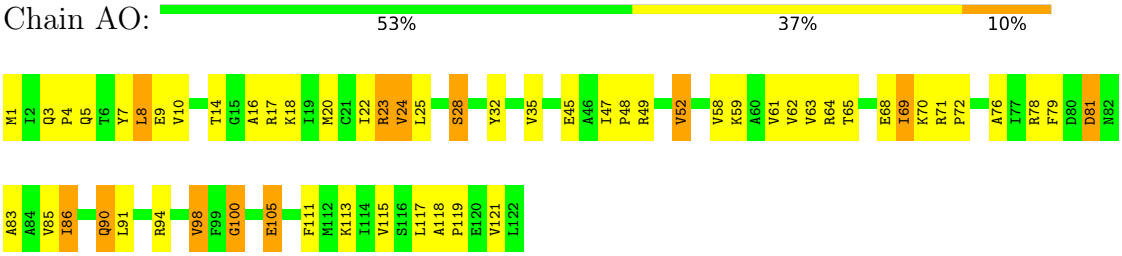
• Molecule 11: 50S ribosomal protein L13

Chain CN:



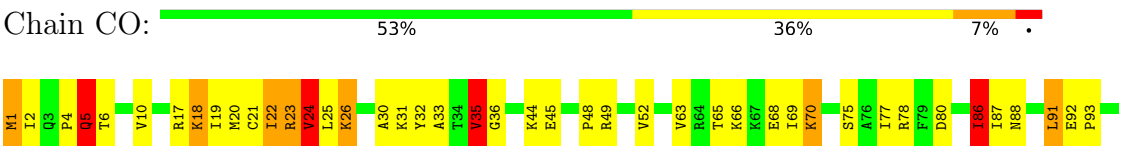
• Molecule 12: 50S ribosomal protein L14

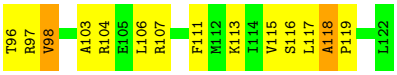
Chain AO:



• Molecule 12: 50S ribosomal protein L14

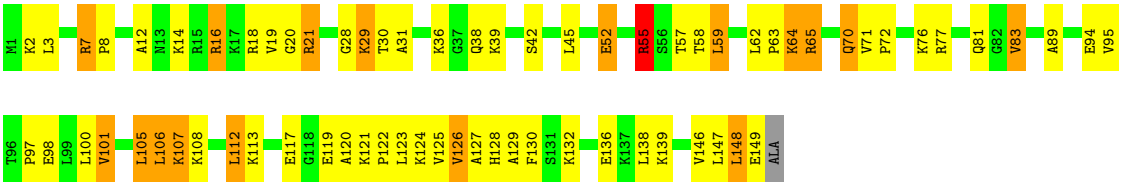
Chain CO:





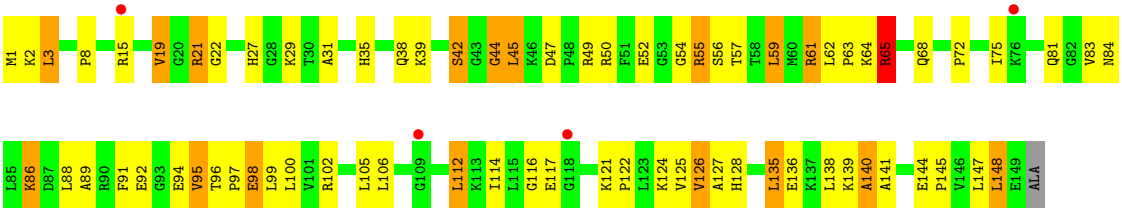
• Molecule 13: 50S ribosomal protein L15

Chain AP:



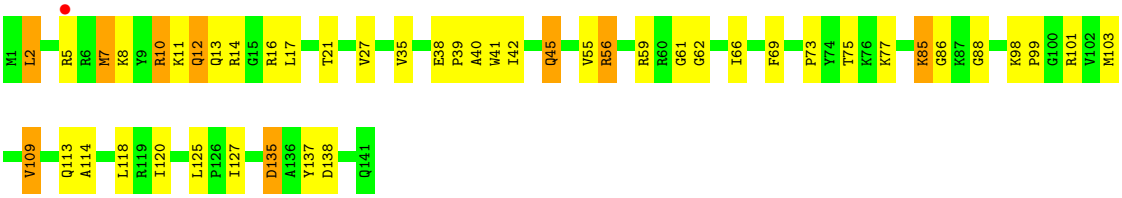
• Molecule 13: 50S ribosomal protein L15

Chain CP:



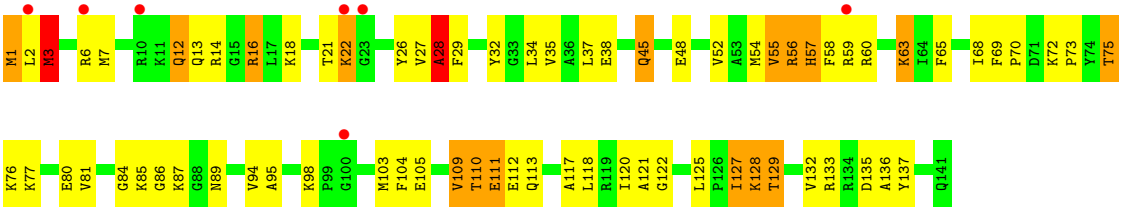
• Molecule 14: 50S ribosomal protein L16

Chain AQ:



• Molecule 14: 50S ribosomal protein L16

Chain CQ:

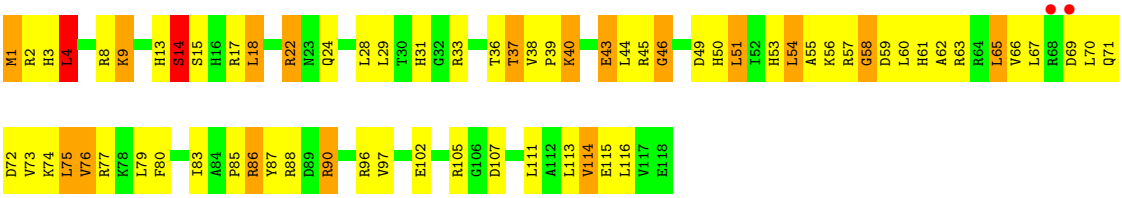


• Molecule 15: 50S ribosomal protein L17

Chain AR:

• Molecule 15: 50S ribosomal protein L17

Chain CR:

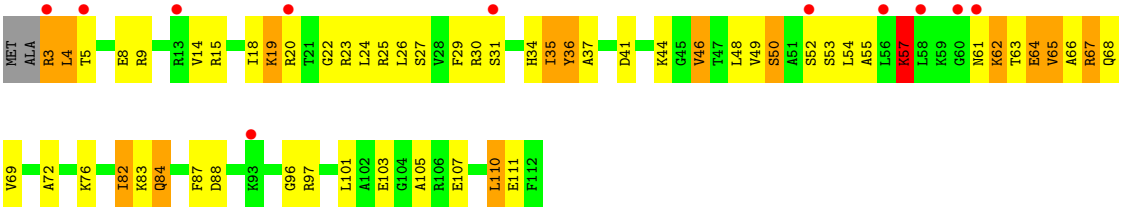


• Molecule 16: 50S ribosomal protein L18

Chain AS:

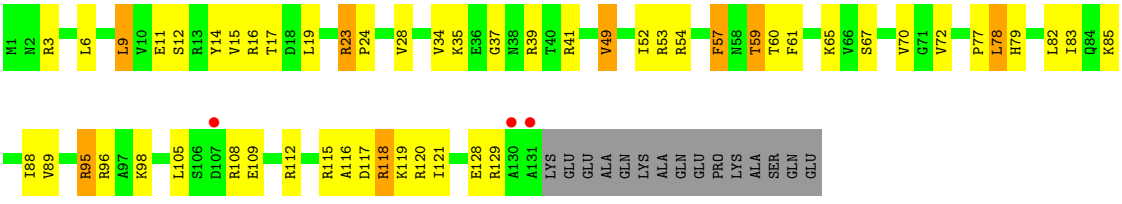
• Molecule 16: 50S ribosomal protein L18

Chain CS:



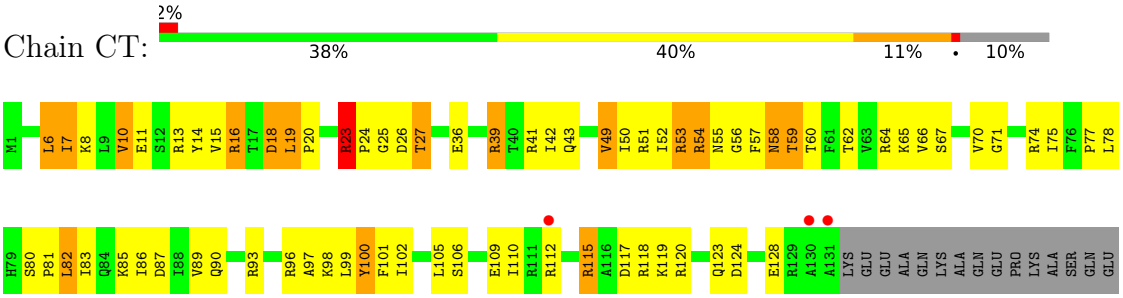
• Molecule 17: 50S ribosomal protein L19

Chain AT:



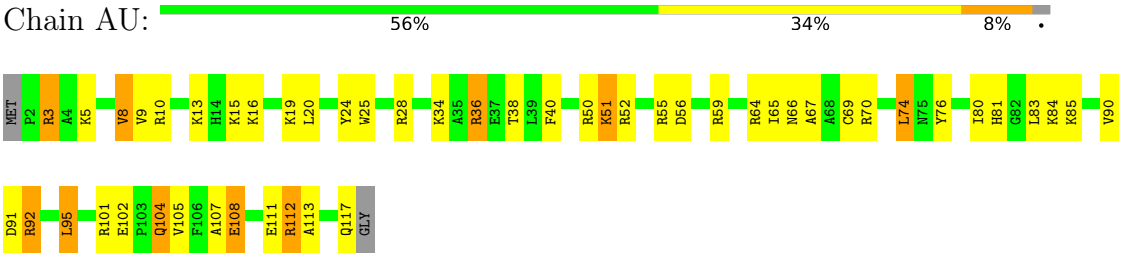
• Molecule 17: 50S ribosomal protein L19

Chain CT:



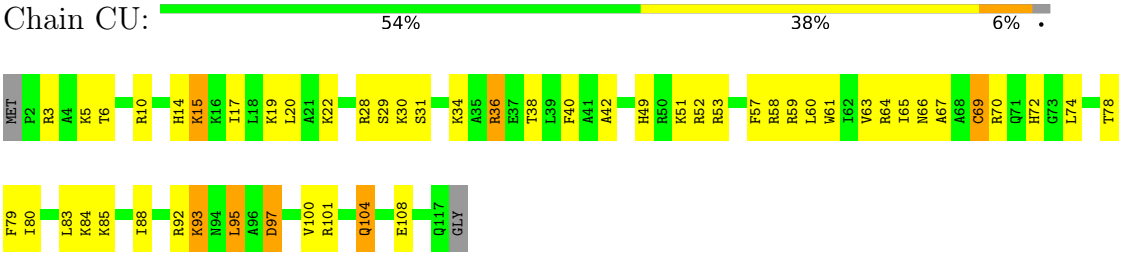
• Molecule 18: 50S ribosomal protein L20

Chain AU:



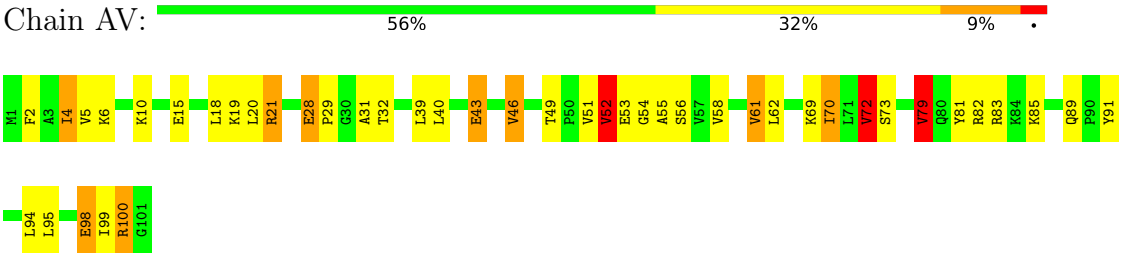
• Molecule 18: 50S ribosomal protein L20

Chain CU:



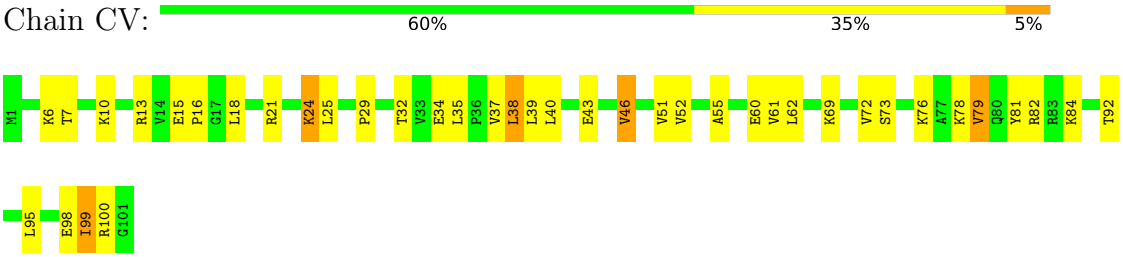
• Molecule 19: 50S ribosomal protein L21

Chain AV:



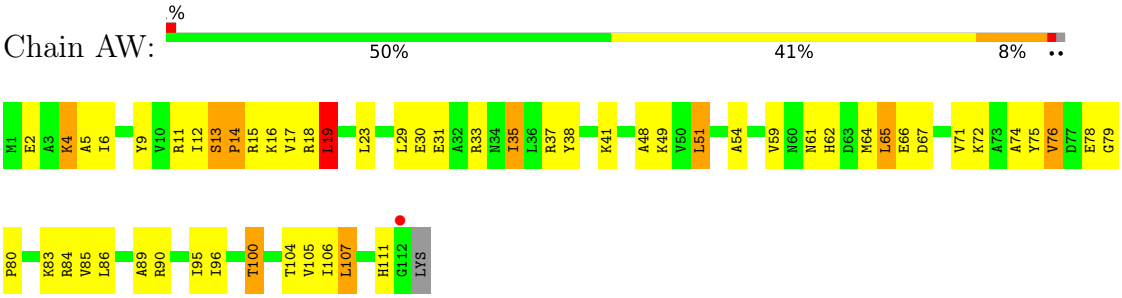
• Molecule 19: 50S ribosomal protein L21

Chain CV:



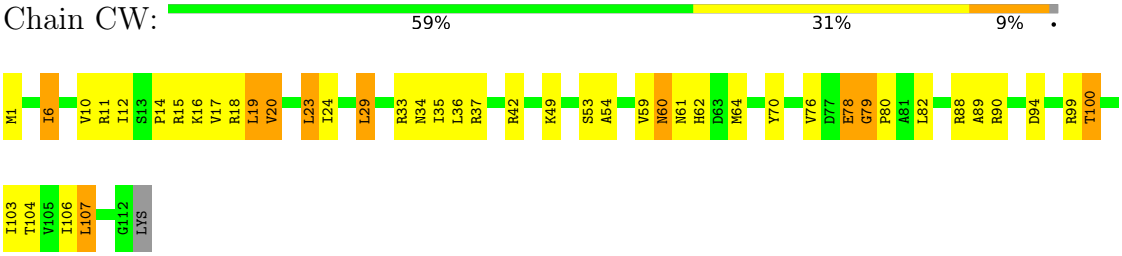
• Molecule 20: 50S ribosomal protein L22

Chain AW:



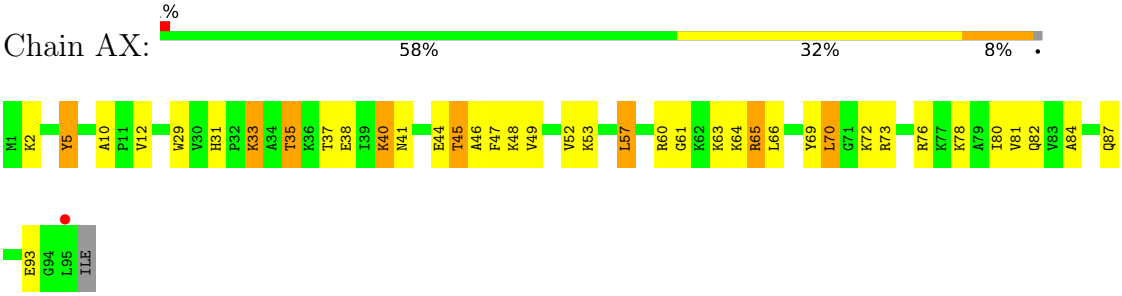
• Molecule 20: 50S ribosomal protein L22

Chain CW:



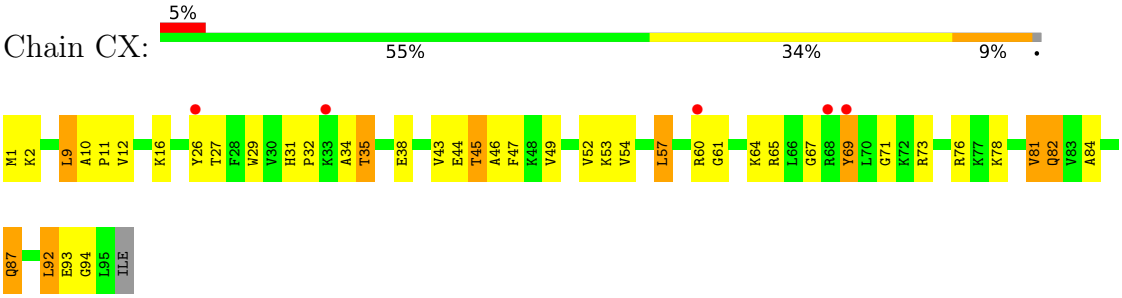
• Molecule 21: 50S ribosomal protein L23

Chain AX:



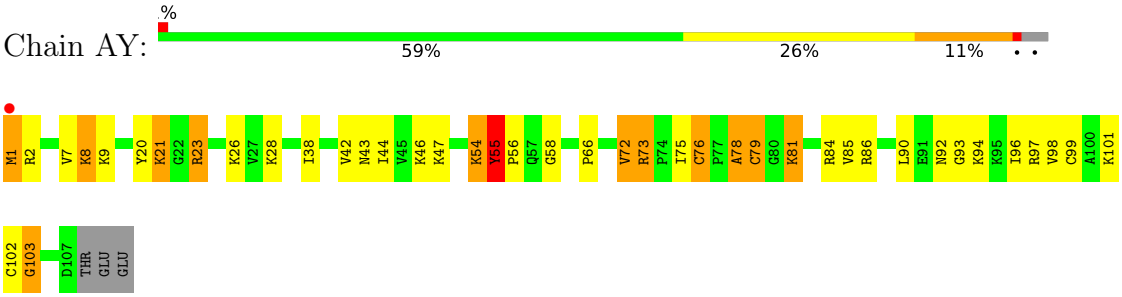
• Molecule 21: 50S ribosomal protein L23

Chain CX:



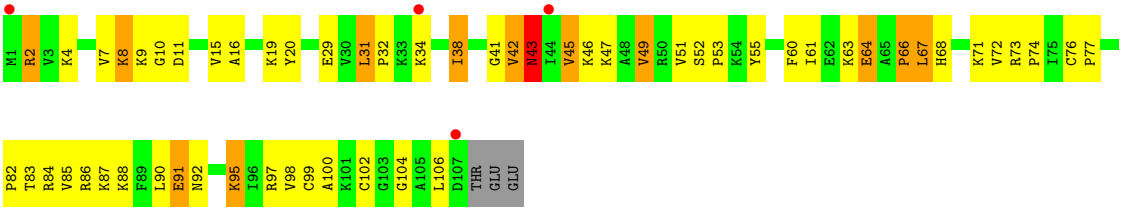
• Molecule 22: 50S ribosomal protein L24

Chain AY:



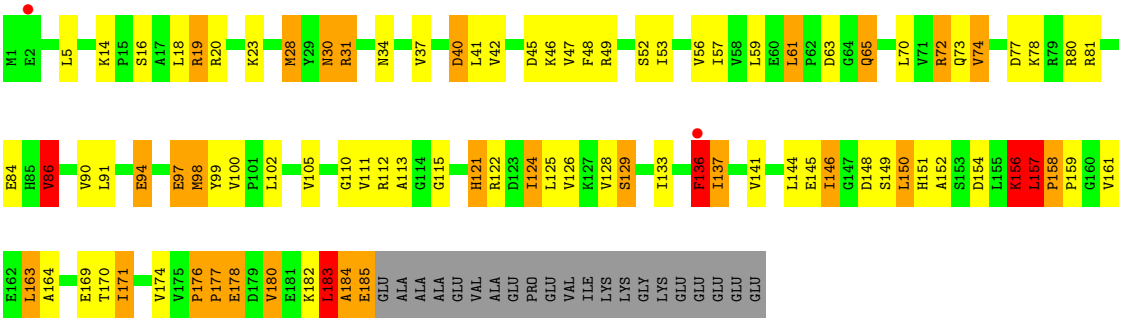
• Molecule 22: 50S ribosomal protein L24

Chain CY:



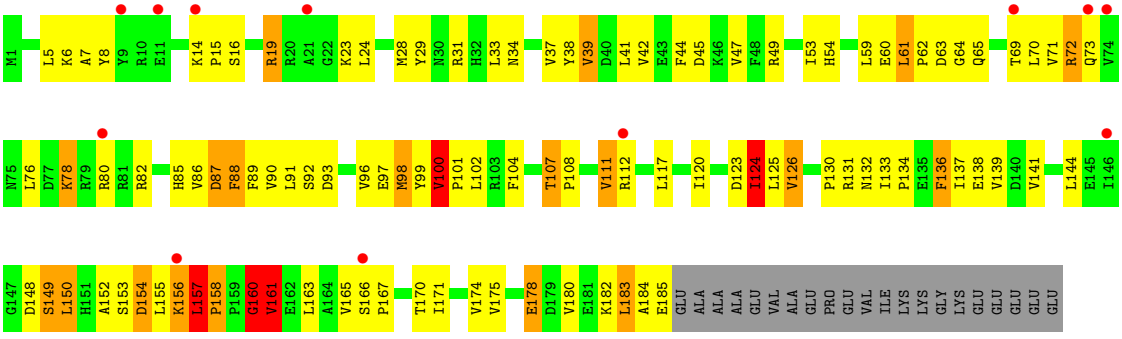
• Molecule 23: 50S ribosomal protein L25

Chain AZ:



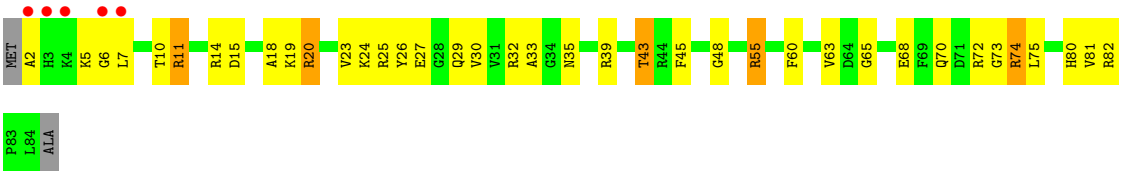
• Molecule 23: 50S ribosomal protein L25

Chain CZ:



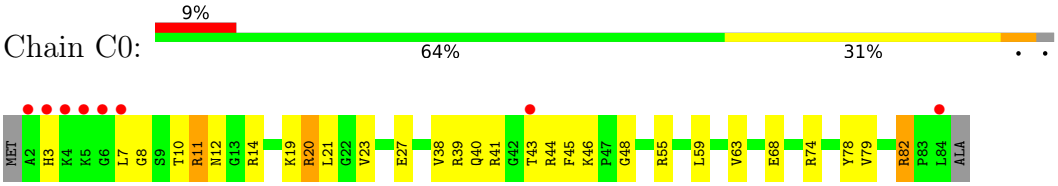
• Molecule 24: 50S ribosomal protein L27

Chain A0:



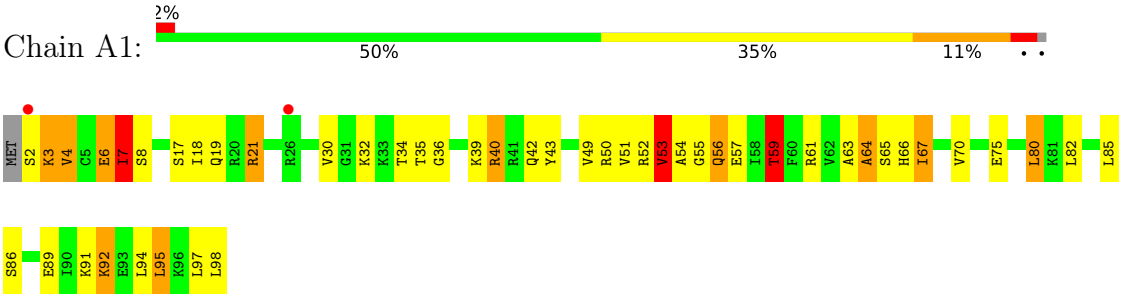
• Molecule 24: 50S ribosomal protein L27

Chain C0:



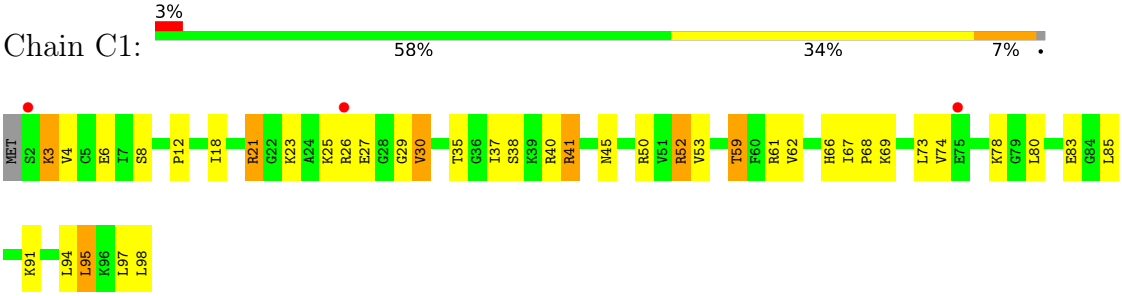
• Molecule 25: 50S ribosomal protein L28

Chain A1:



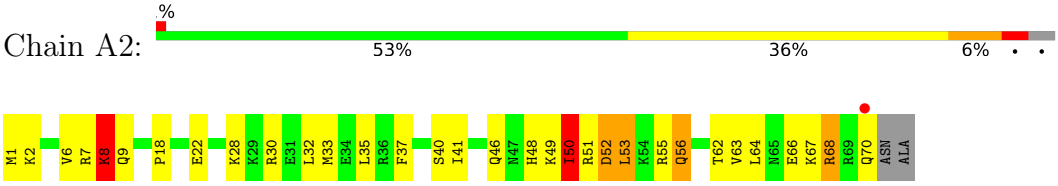
• Molecule 25: 50S ribosomal protein L28

Chain C1:



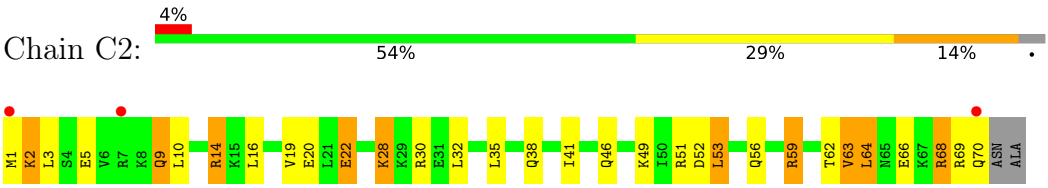
• Molecule 26: 50S ribosomal protein L29

Chain A2:



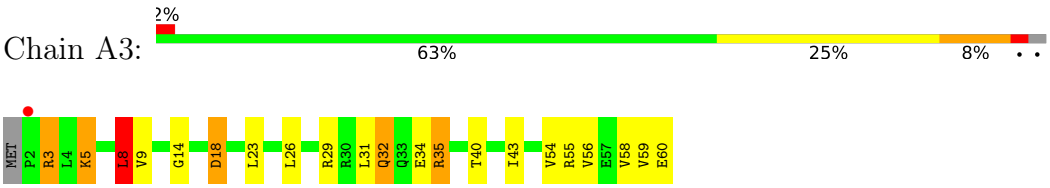
• Molecule 26: 50S ribosomal protein L29

Chain C2:



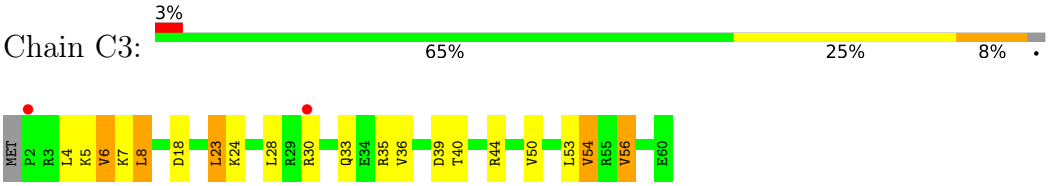
• Molecule 27: 50S ribosomal protein L30

Chain A3:



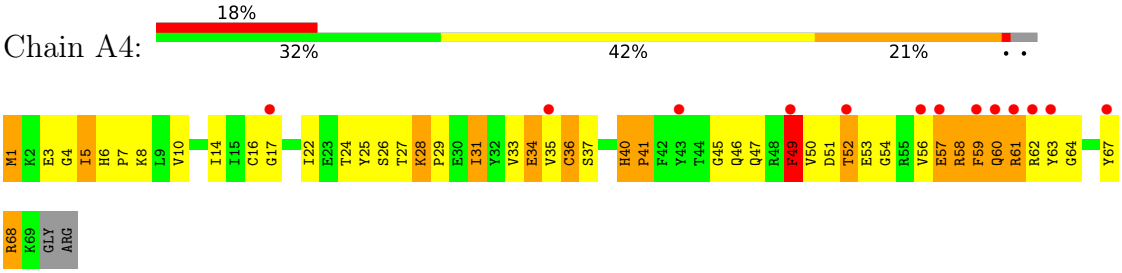
• Molecule 27: 50S ribosomal protein L30

Chain C3:



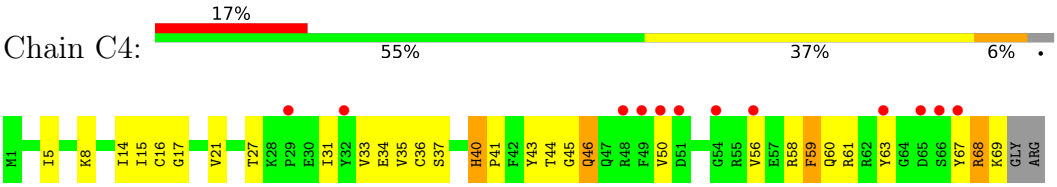
• Molecule 28: 50S ribosomal protein L31

Chain A4:



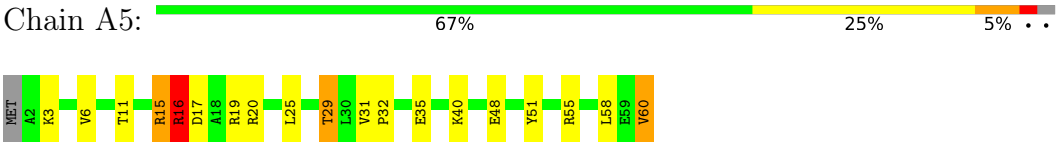
• Molecule 28: 50S ribosomal protein L31

Chain C4:



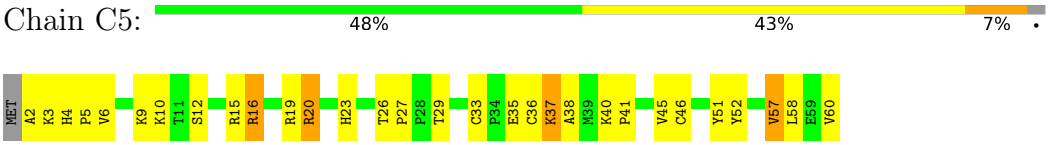
• Molecule 29: 50S ribosomal protein L32

Chain A5:



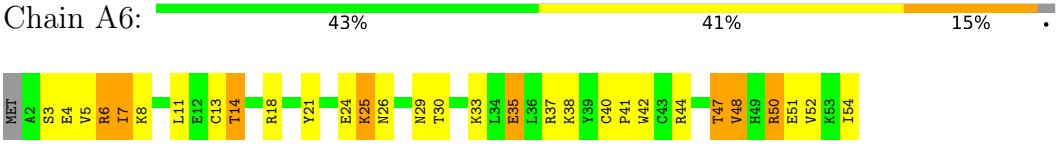
• Molecule 29: 50S ribosomal protein L32

Chain C5:



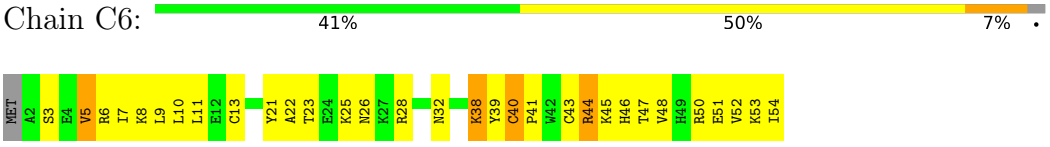
• Molecule 30: 50S ribosomal protein L33

Chain A6:



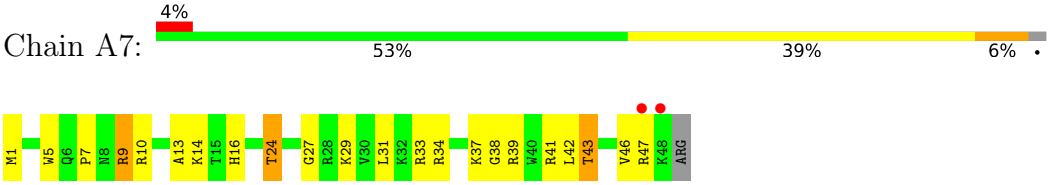
• Molecule 30: 50S ribosomal protein L33

Chain C6:



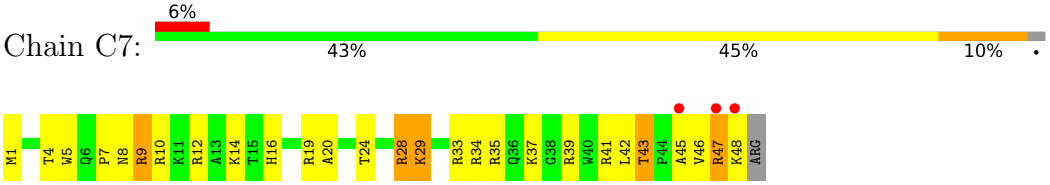
• Molecule 31: 50S ribosomal protein L34

Chain A7:



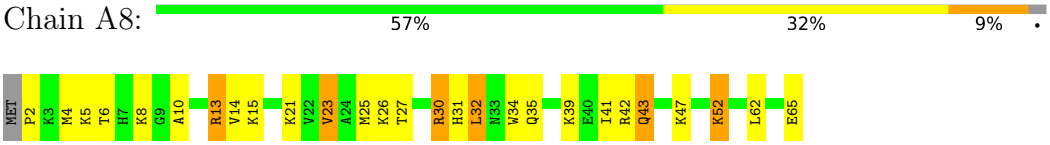
• Molecule 31: 50S ribosomal protein L34

Chain C7:



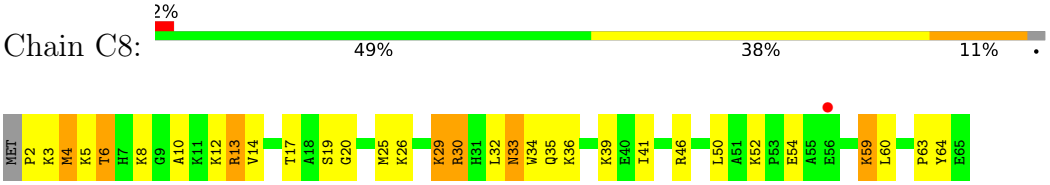
• Molecule 32: 50S ribosomal protein L35

Chain A8:



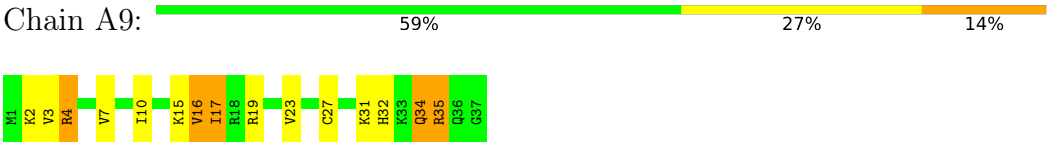
• Molecule 32: 50S ribosomal protein L35

Chain C8:



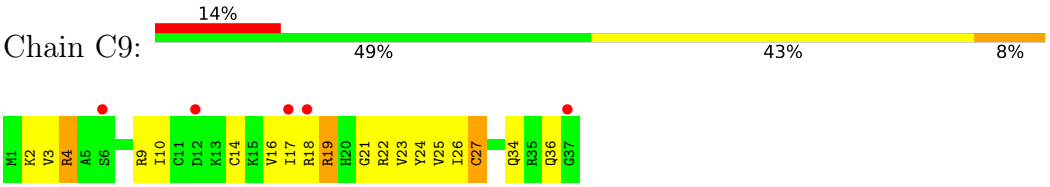
• Molecule 33: 50S ribosomal protein L36

Chain A9:



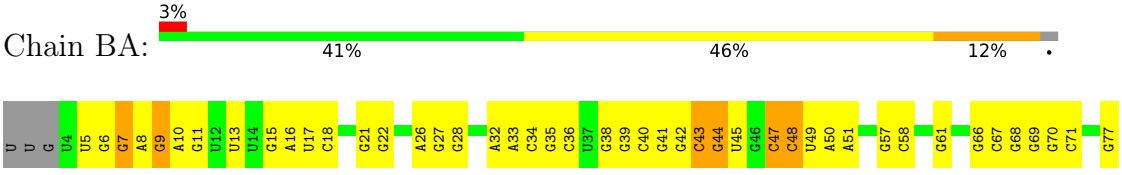
• Molecule 33: 50S ribosomal protein L36

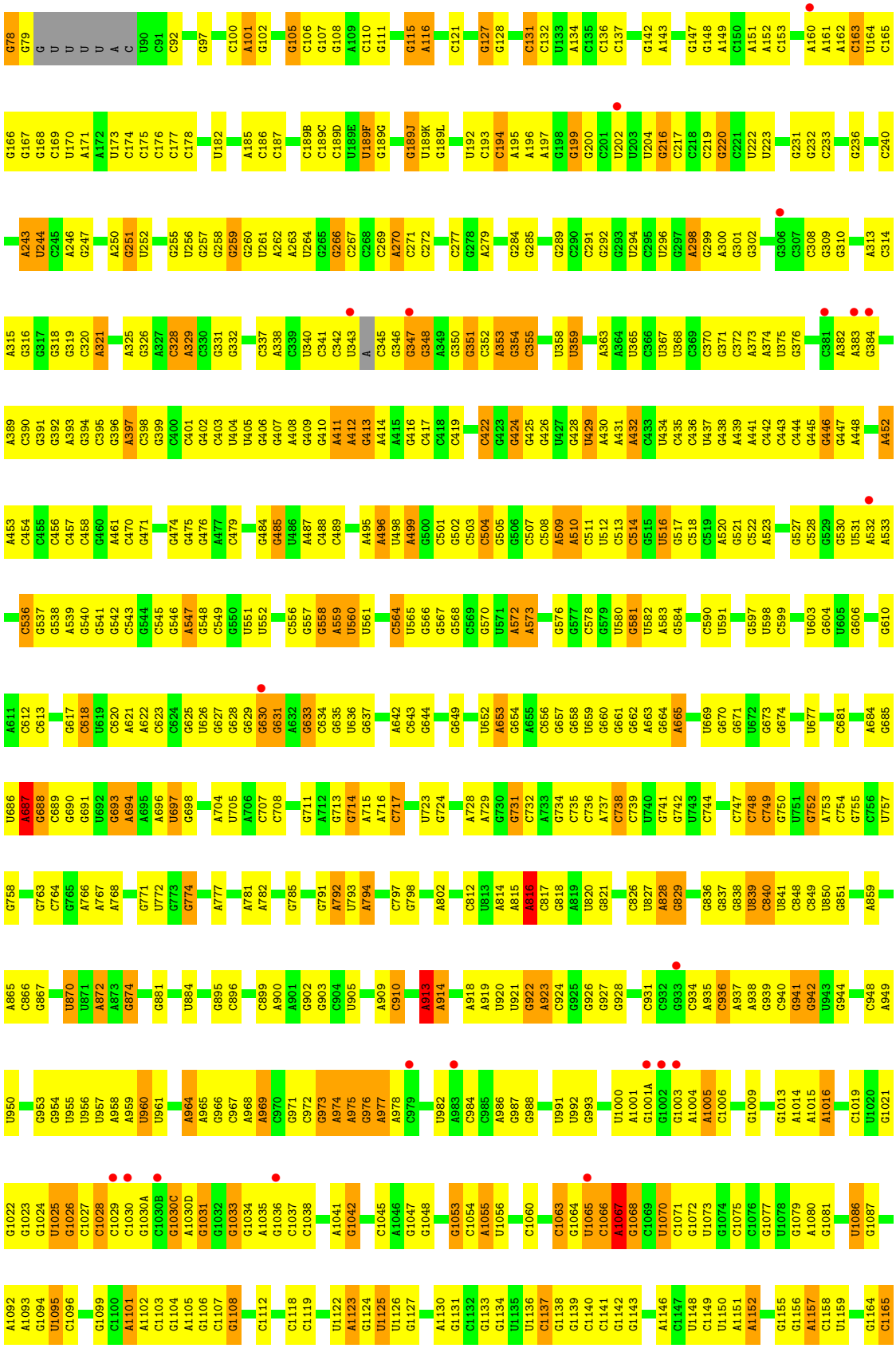
Chain C9:

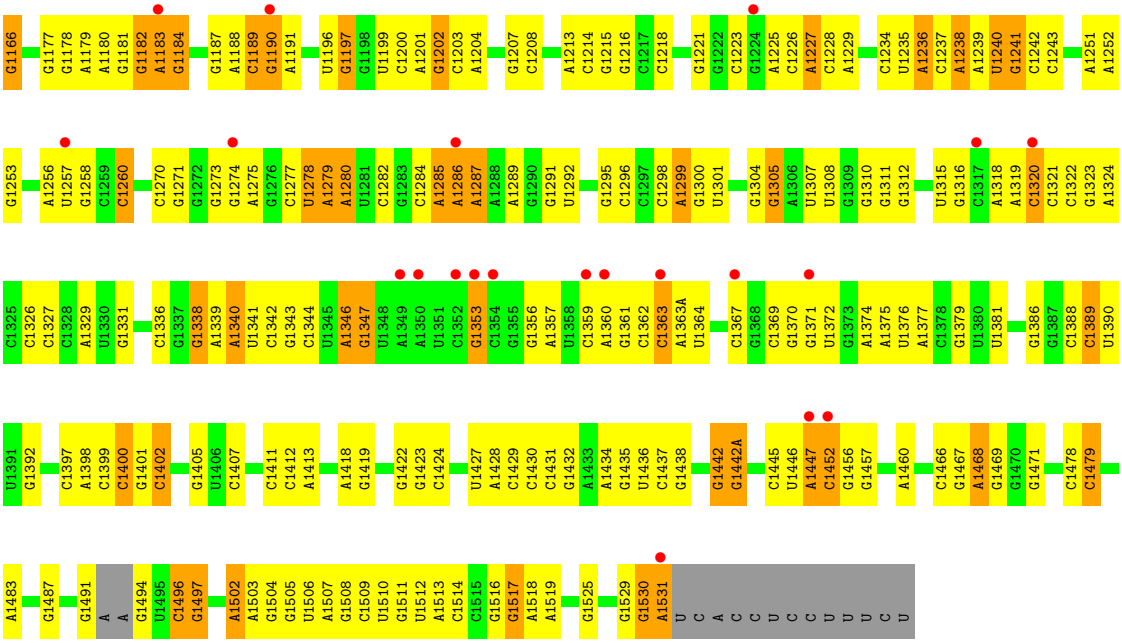


• Molecule 34: 16S Ribosomal RNA

Chain BA:

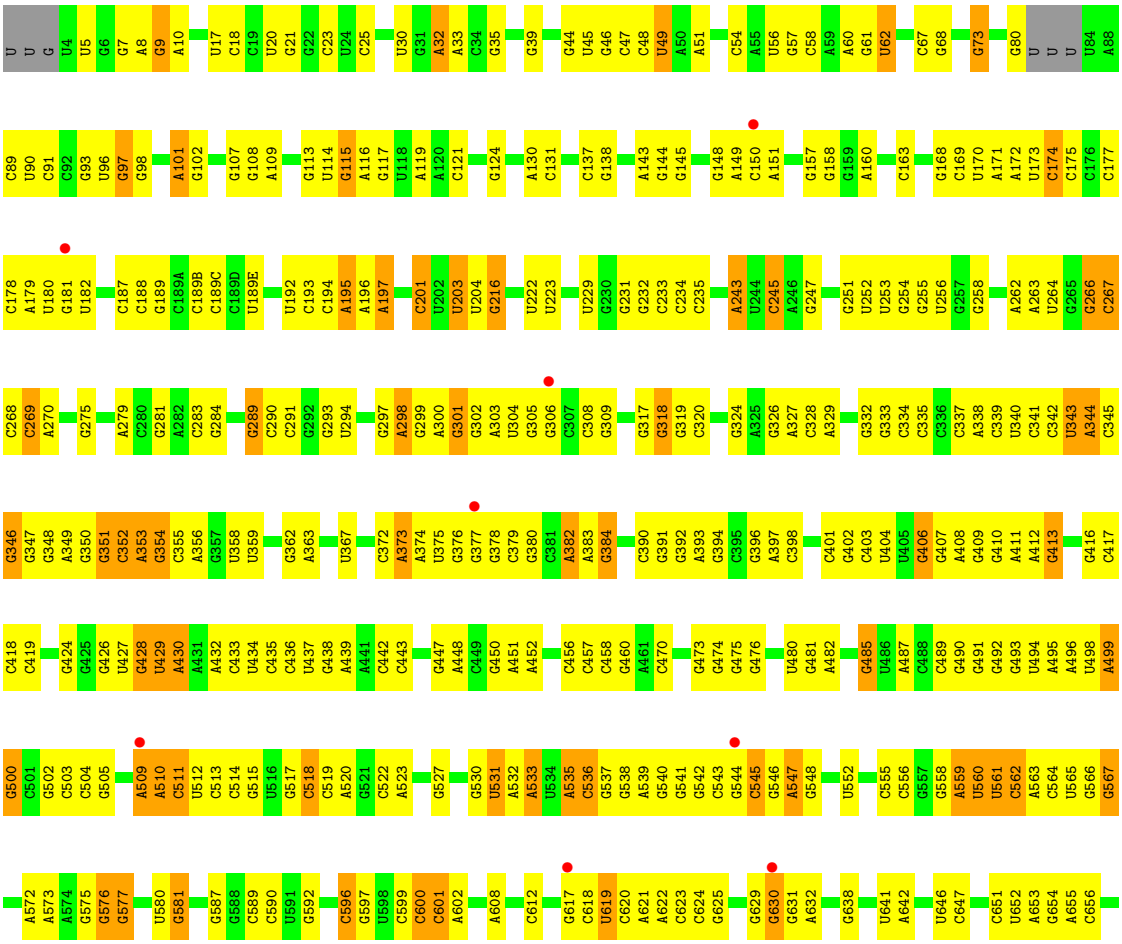


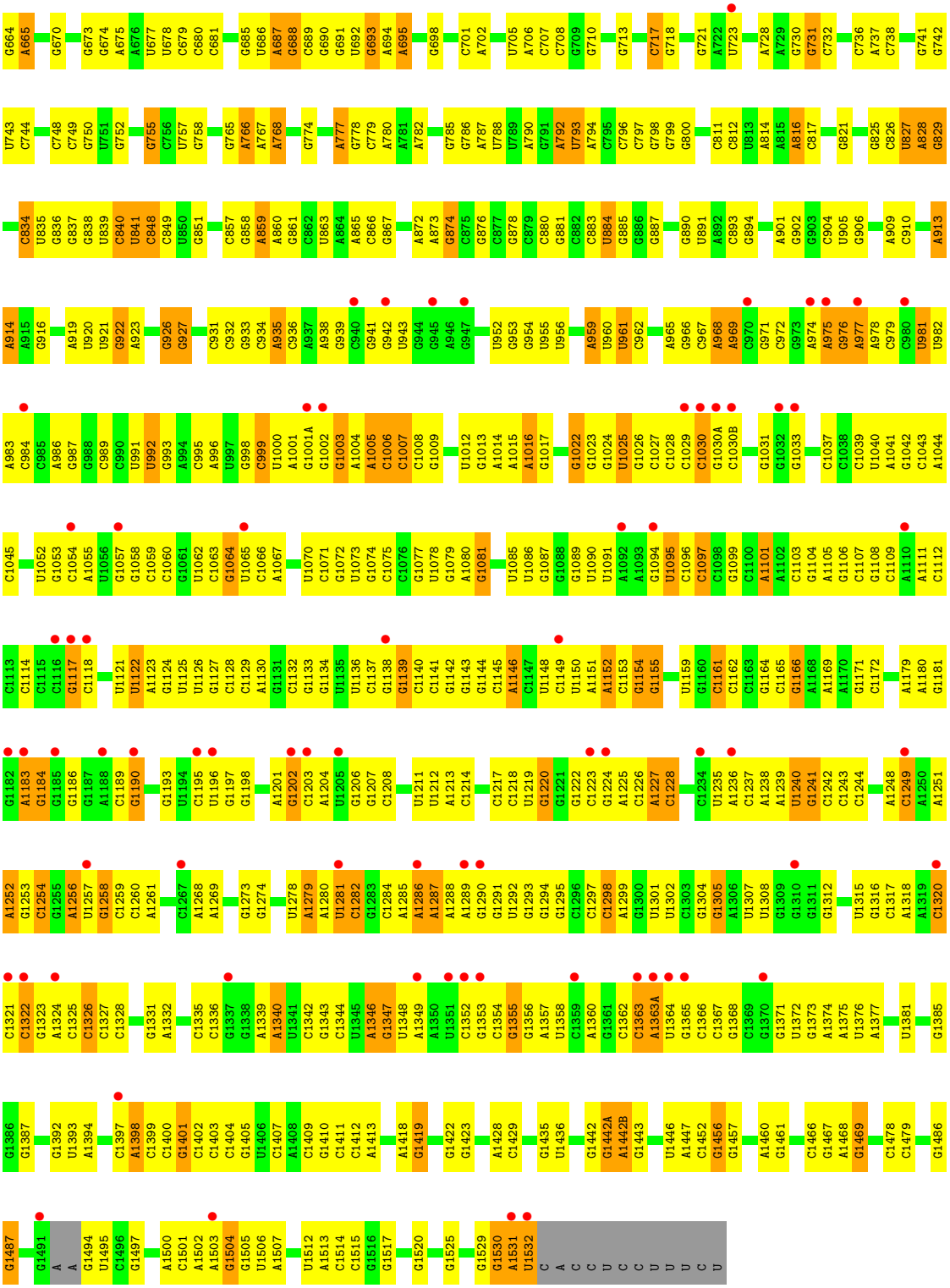




• Molecule 34: 16S Ribosomal RNA

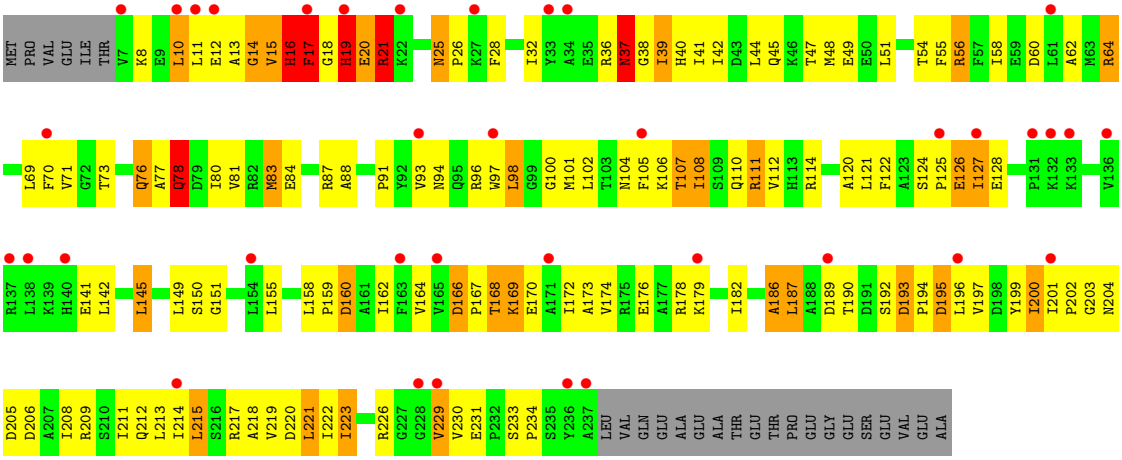
Chain DA:





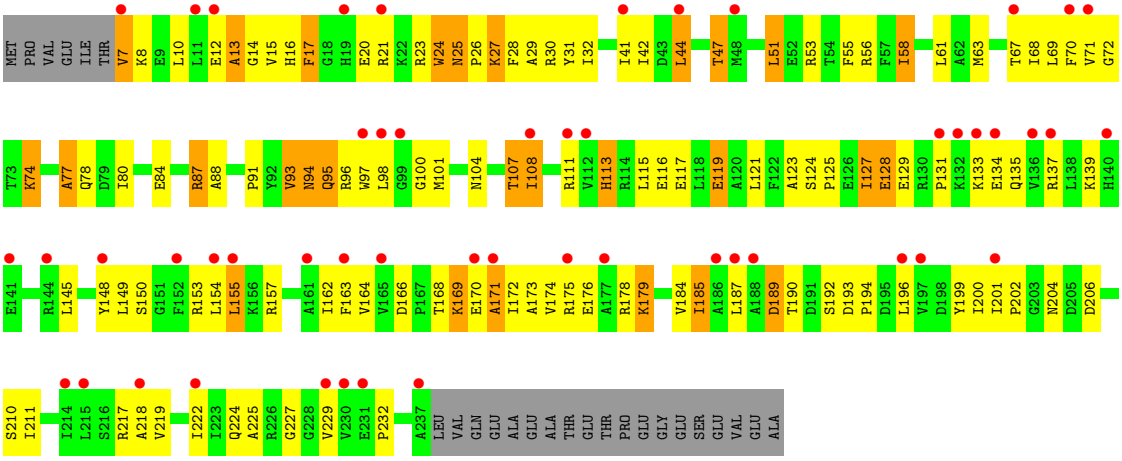
• Molecule 35: 30S ribosomal protein S2

Chain BB:



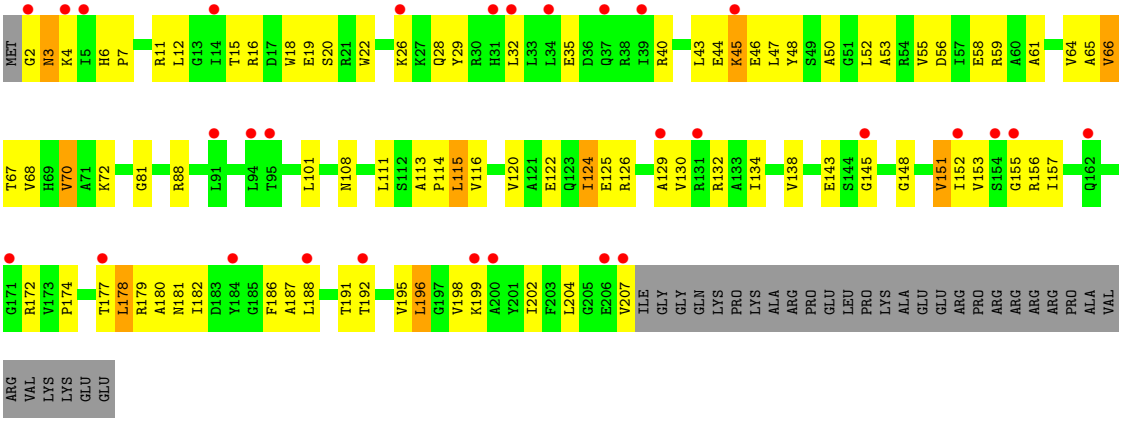
• Molecule 35: 30S ribosomal protein S2

Chain DB:



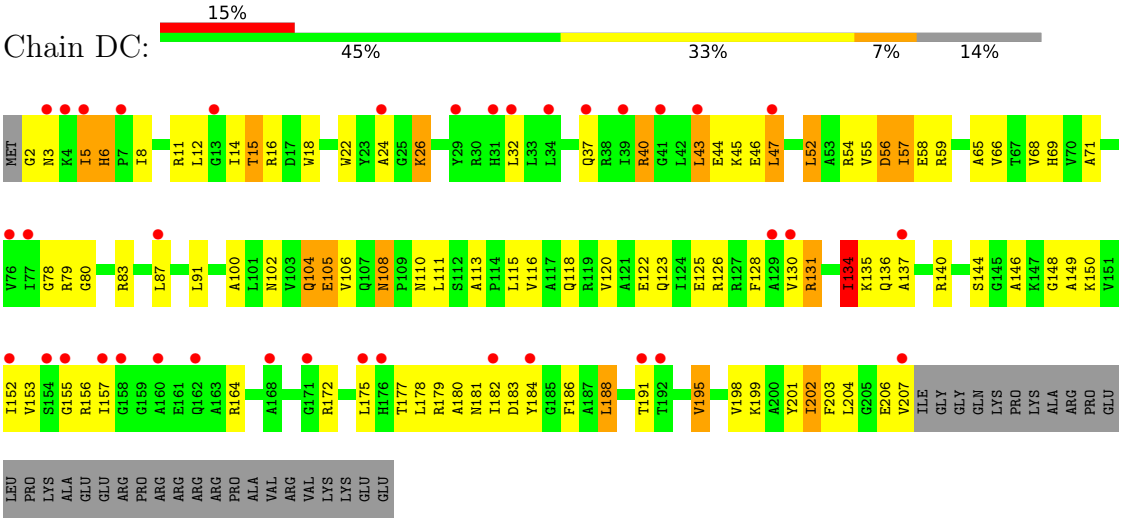
• Molecule 36: 30S ribosomal protein S3

Chain BC:



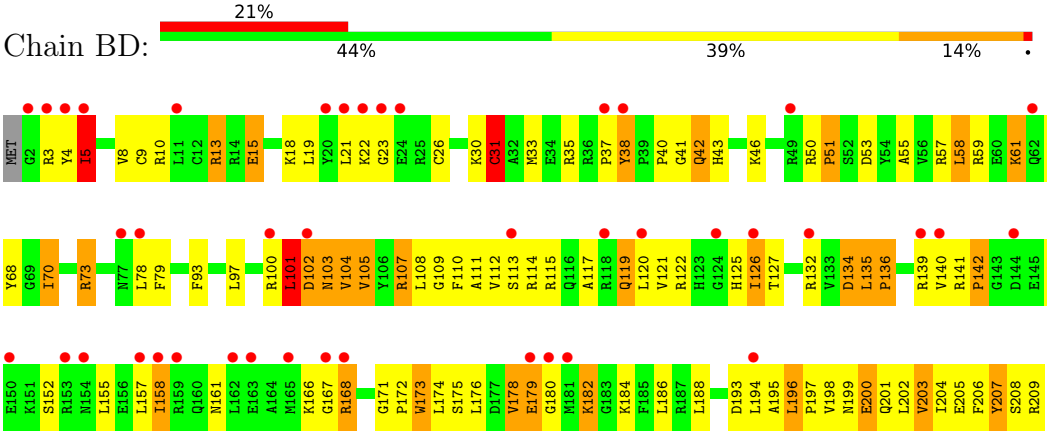
• Molecule 36: 30S ribosomal protein S3

Chain DC:



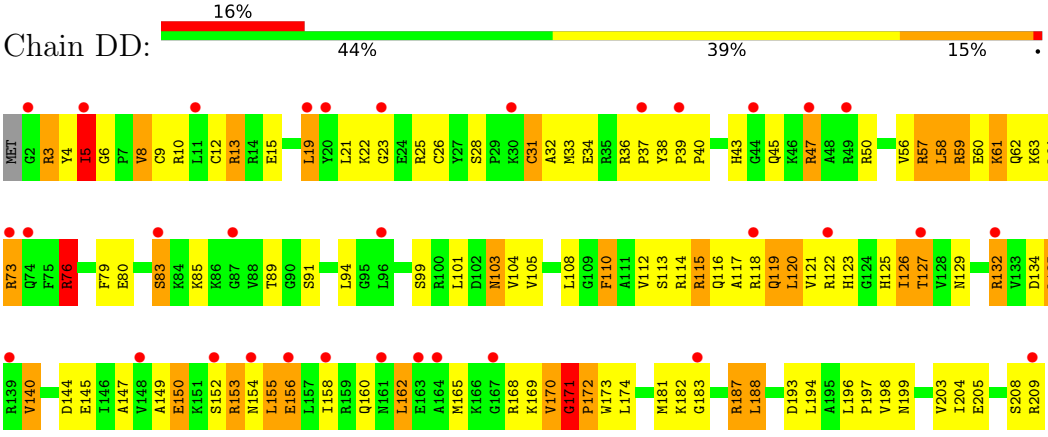
• Molecule 37: 30S ribosomal protein S4

Chain BD:



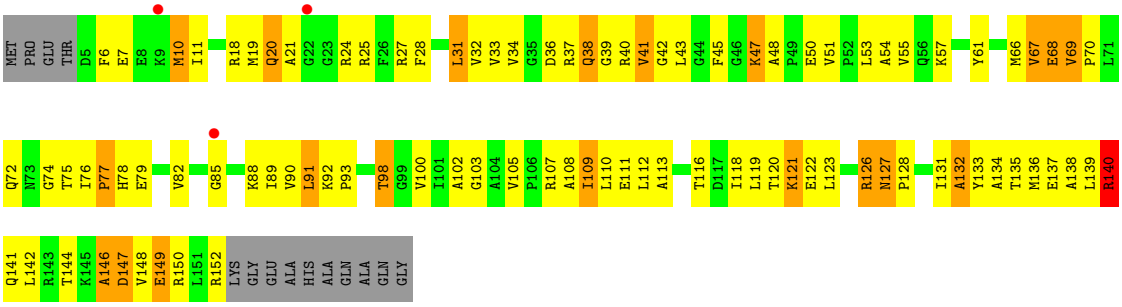
• Molecule 37: 30S ribosomal protein S4

Chain DD:



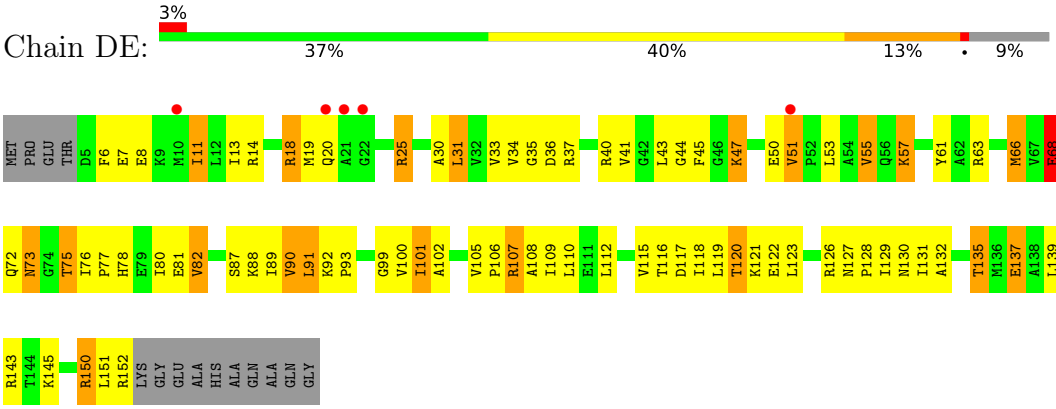
• Molecule 38: 30S ribosomal protein S5

Chain BE:



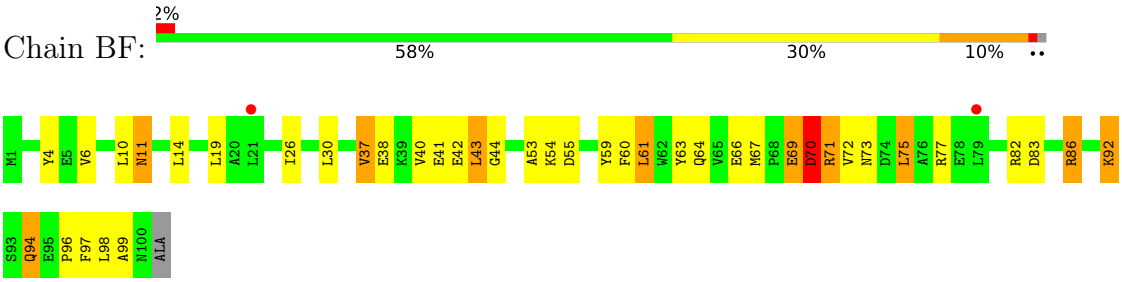
• Molecule 38: 30S ribosomal protein S5

Chain DE:



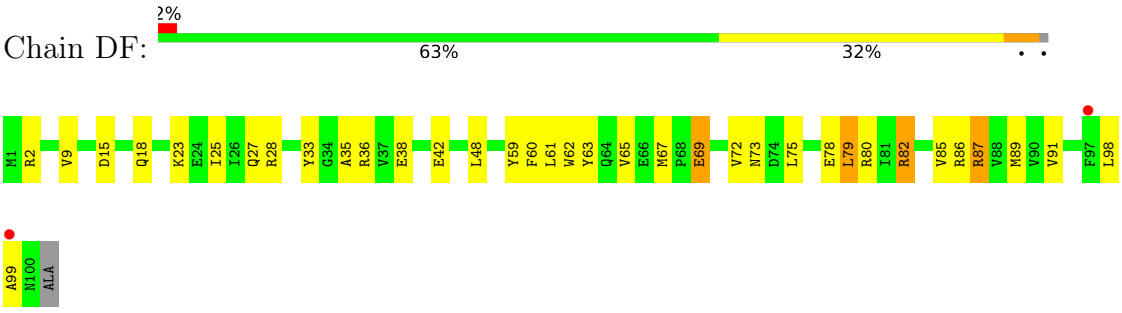
• Molecule 39: 30S ribosomal protein S6

Chain BF:



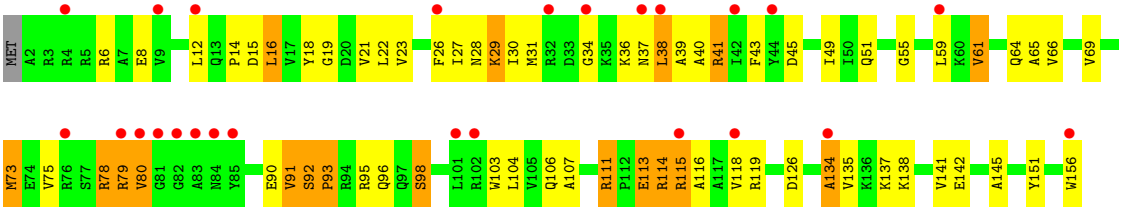
• Molecule 39: 30S ribosomal protein S6

Chain DF:



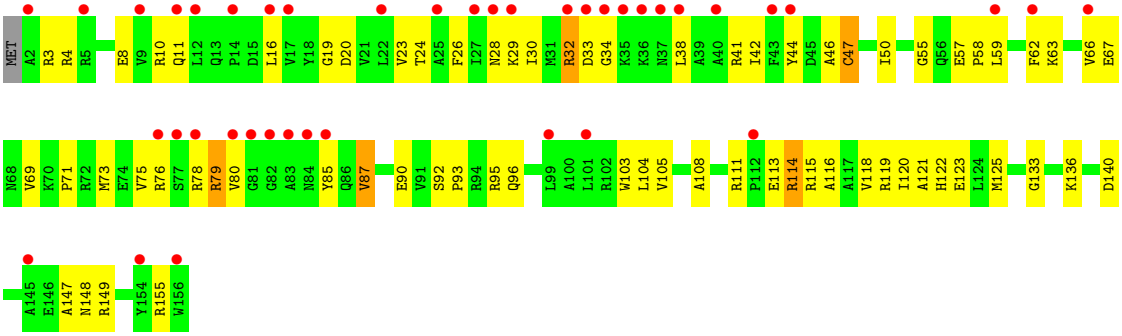
• Molecule 40: 30S ribosomal protein S7

Chain BG:



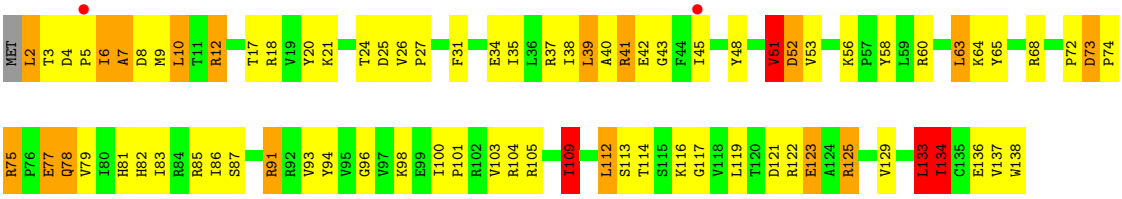
• Molecule 40: 30S ribosomal protein S7

Chain DG:



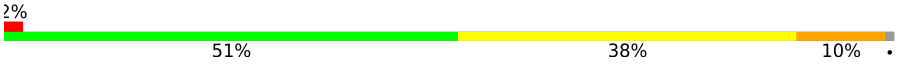
• Molecule 41: 30S ribosomal protein S8

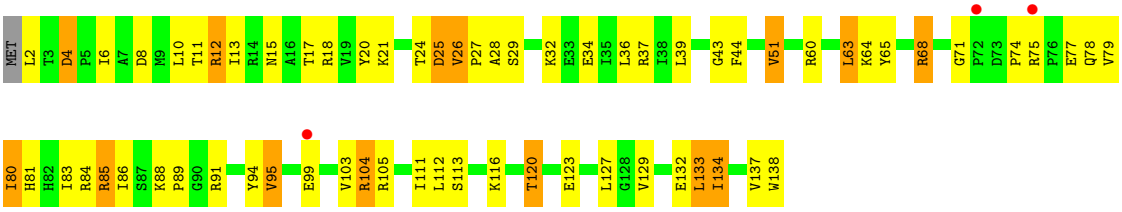
Chain BH:



• Molecule 41: 30S ribosomal protein S8

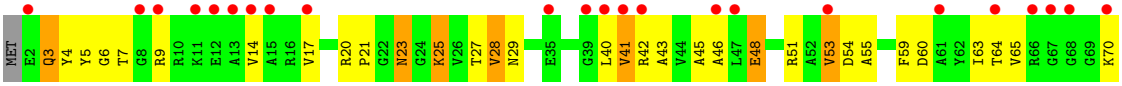
Chain DH:

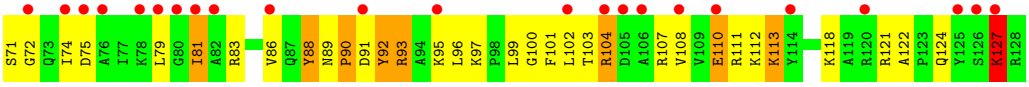




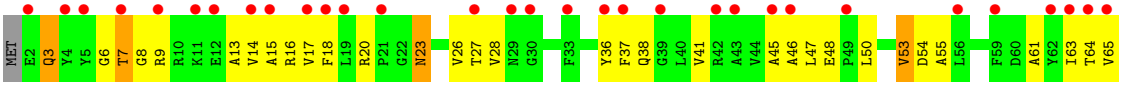
• Molecule 42: 30S ribosomal protein S9

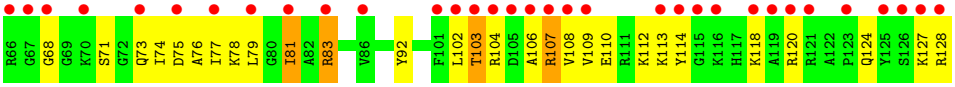
Chain BI:



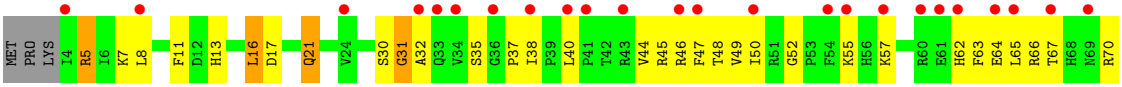


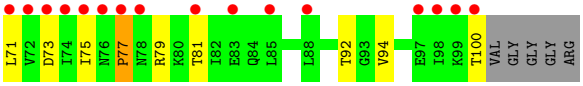
• Molecule 42: 30S ribosomal protein S9



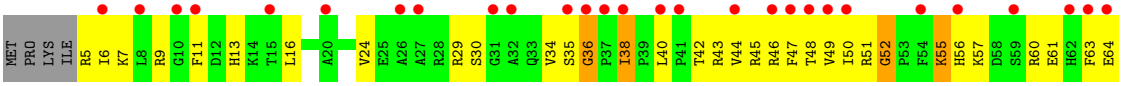


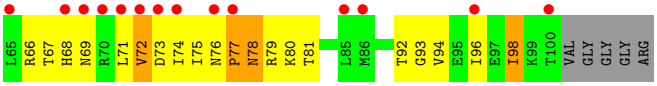
• Molecule 43: 30S ribosomal protein S10



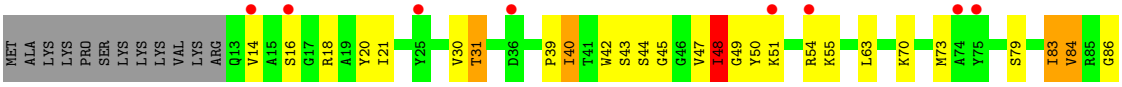


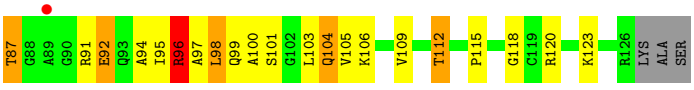
• Molecule 43: 30S ribosomal protein S10



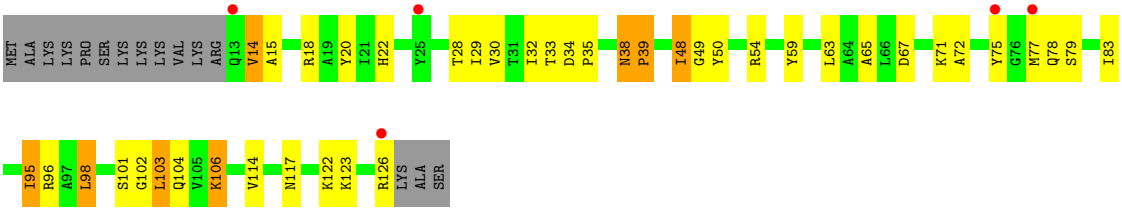


• Molecule 44: 30S ribosomal protein S11



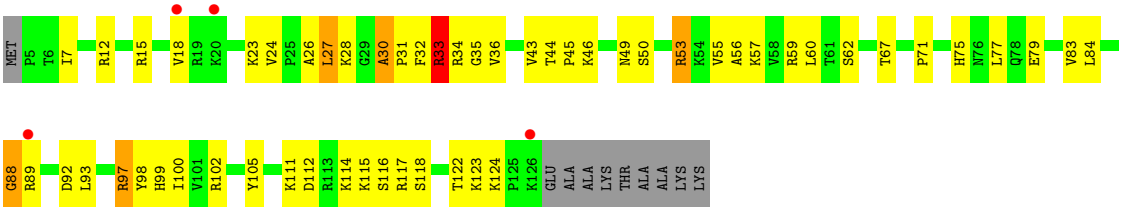


• Molecule 44: 30S ribosomal protein S11



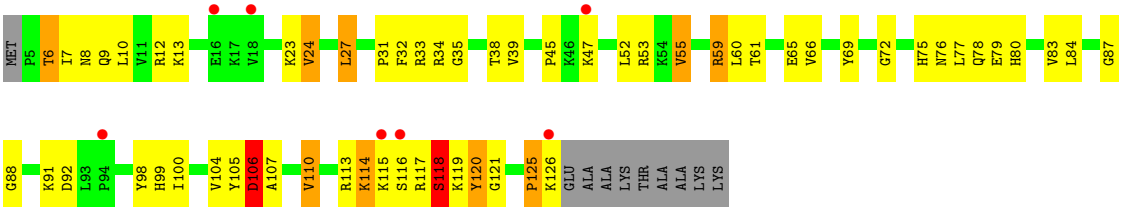
• Molecule 45: 30S ribosomal protein S12

Chain BL:



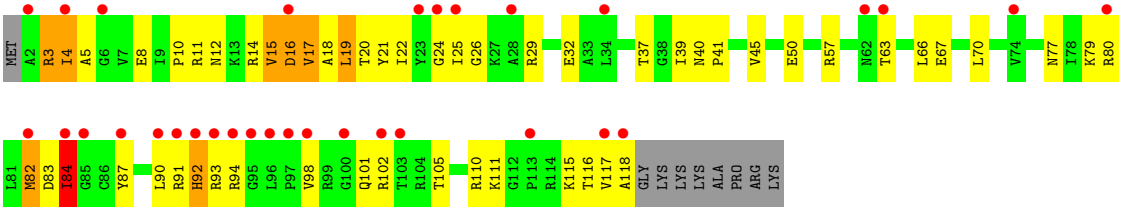
• Molecule 45: 30S ribosomal protein S12

Chain DL:



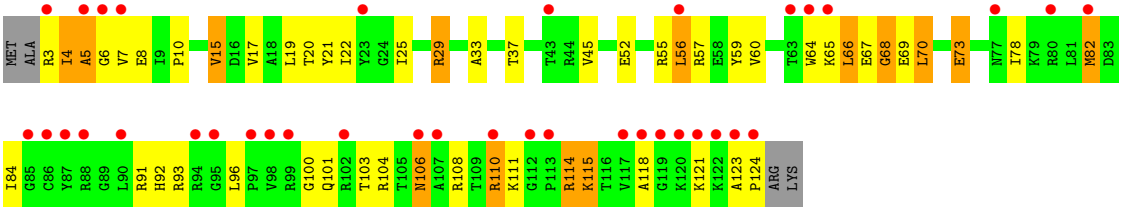
• Molecule 46: 30S ribosomal protein S13

Chain BM:



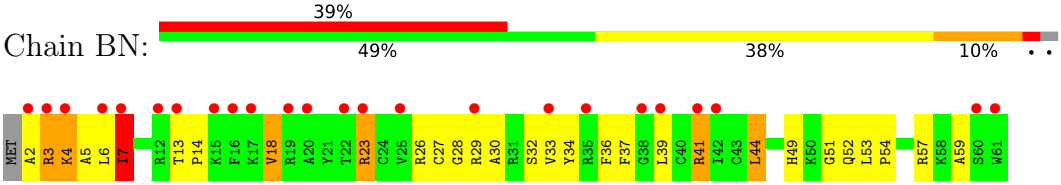
• Molecule 46: 30S ribosomal protein S13

Chain DM:



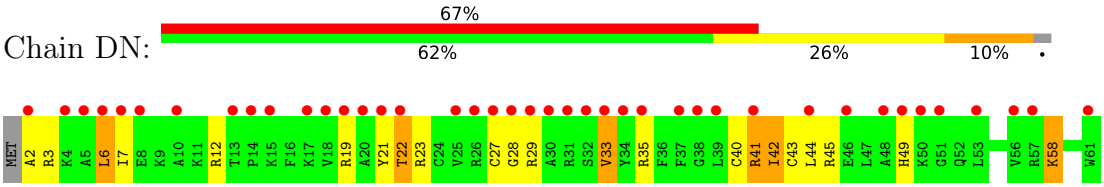
• Molecule 47: 30S ribosomal protein S14 type Z

Chain BN:



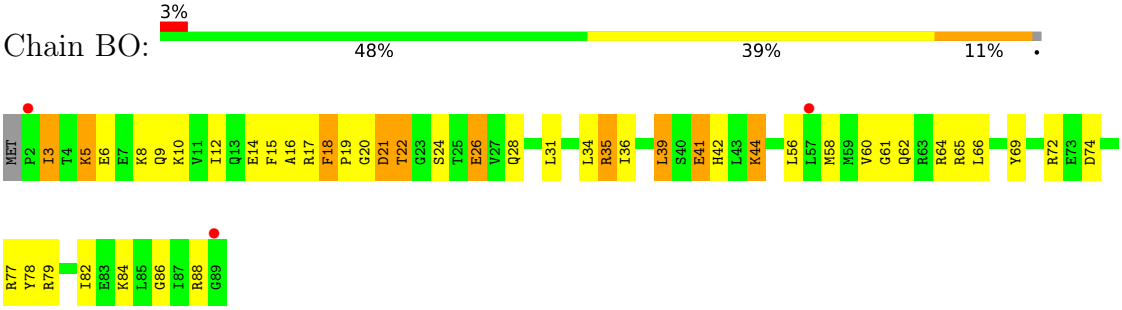
• Molecule 47: 30S ribosomal protein S14 type Z

Chain DN:



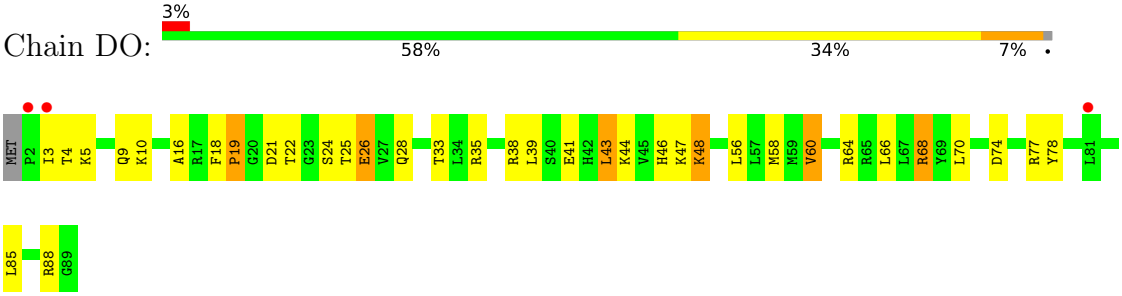
• Molecule 48: 30S ribosomal protein S15

Chain BO:



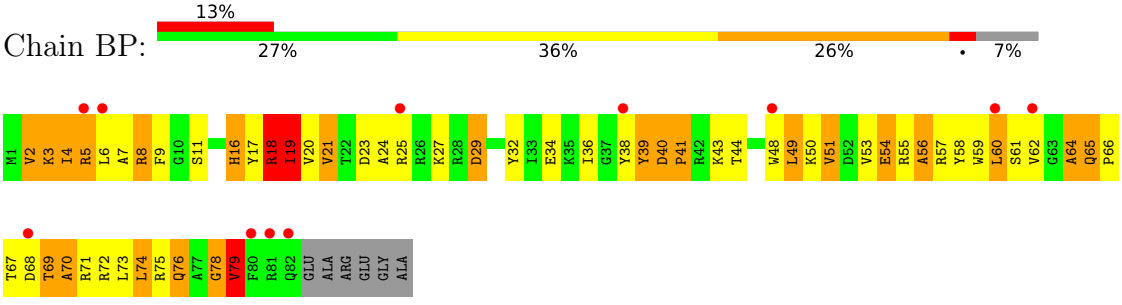
• Molecule 48: 30S ribosomal protein S15

Chain DO:



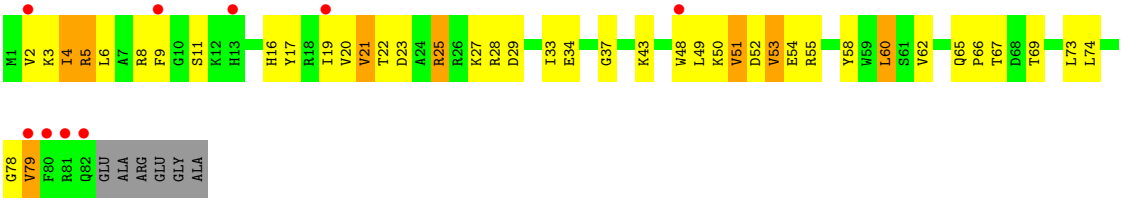
• Molecule 49: 30S ribosomal protein S16

Chain BP:

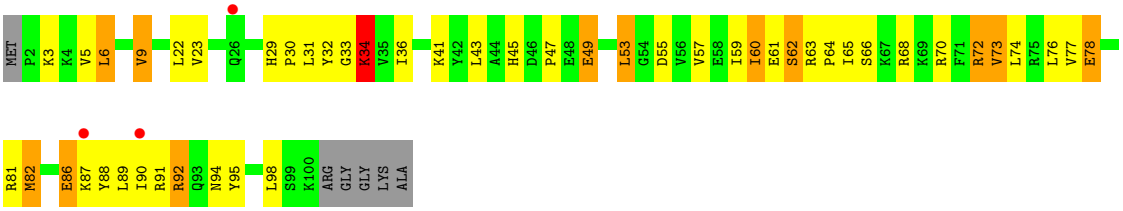


• Molecule 49: 30S ribosomal protein S16

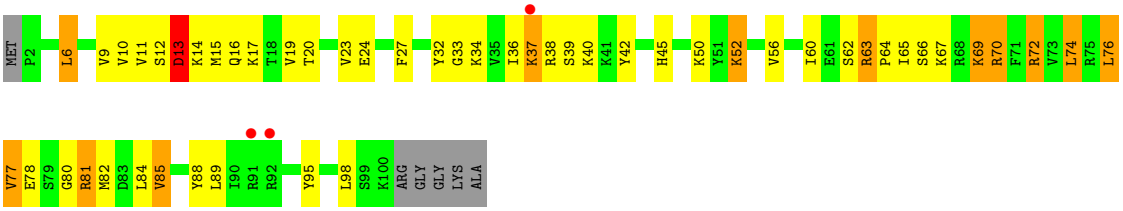
Chain DP:



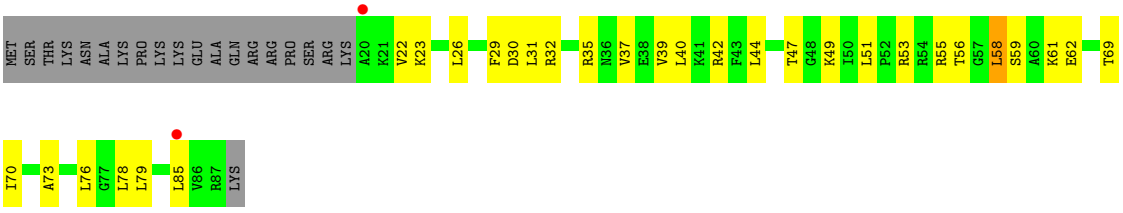
• Molecule 50: 30S ribosomal protein S17



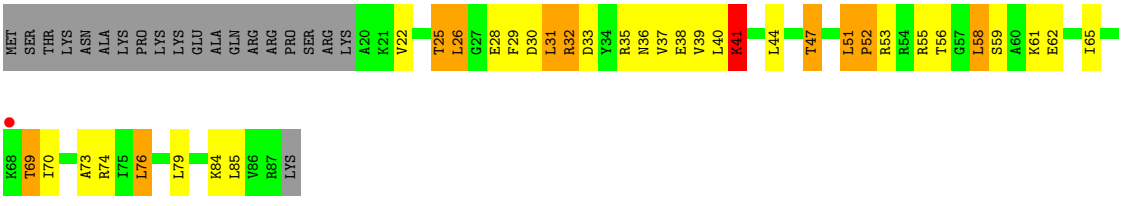
• Molecule 50: 30S ribosomal protein S17



• Molecule 51: 30S ribosomal protein S18

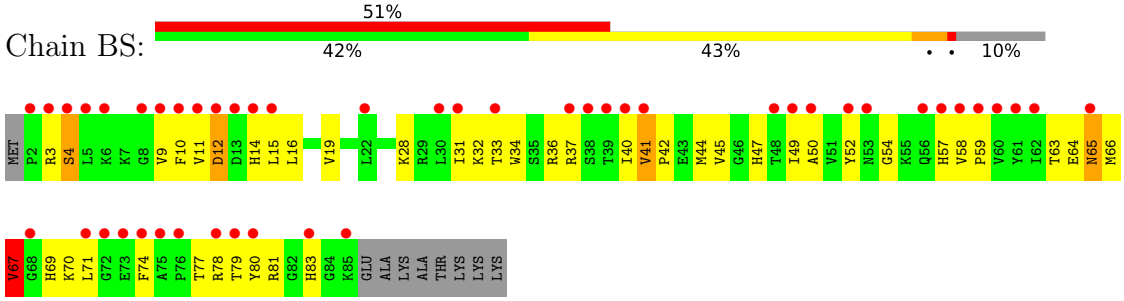


• Molecule 51: 30S ribosomal protein S18



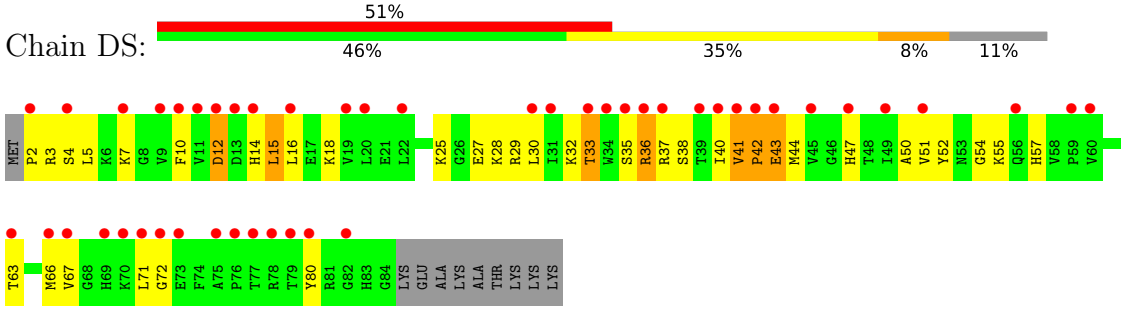
• Molecule 52: 30S ribosomal protein S19

Chain BS:



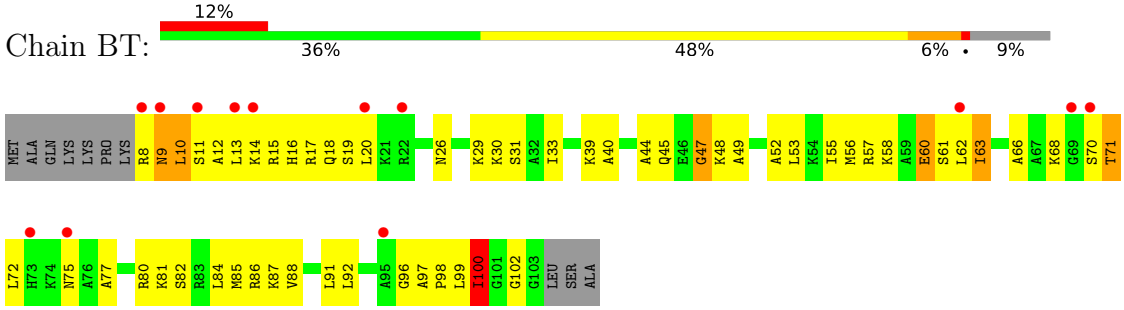
• Molecule 52: 30S ribosomal protein S19

Chain DS:



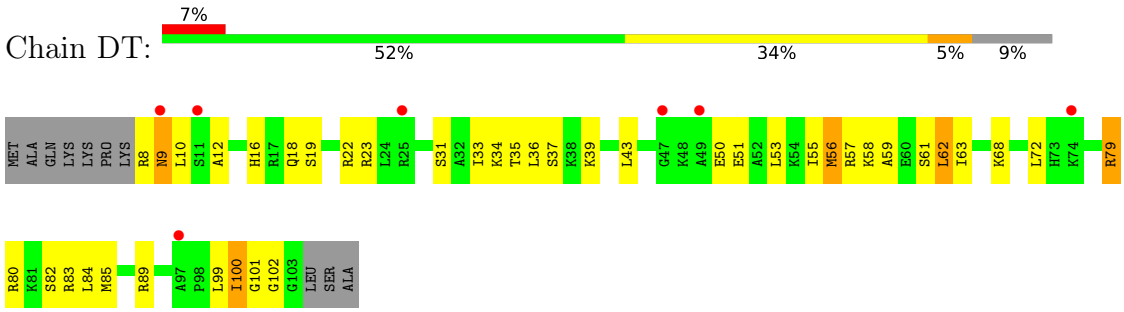
• Molecule 53: 30S ribosomal protein S20

Chain BT:



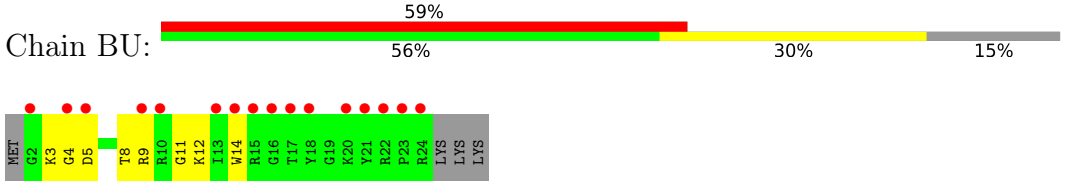
• Molecule 53: 30S ribosomal protein S20

Chain DT:



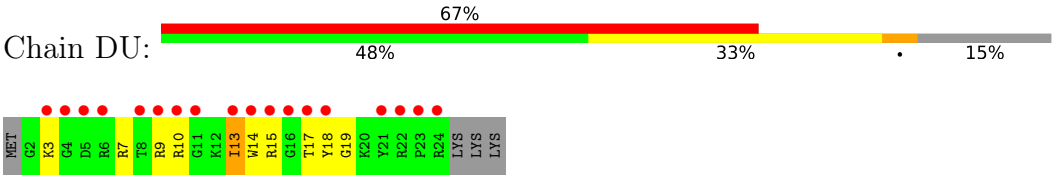
• Molecule 54: 30S ribosomal protein Thx

Chain BU:



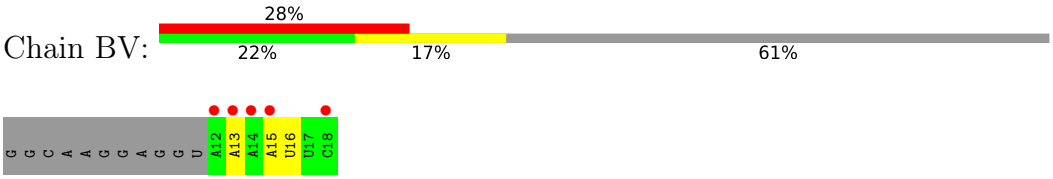
• Molecule 54: 30S ribosomal protein Thx

Chain DU:



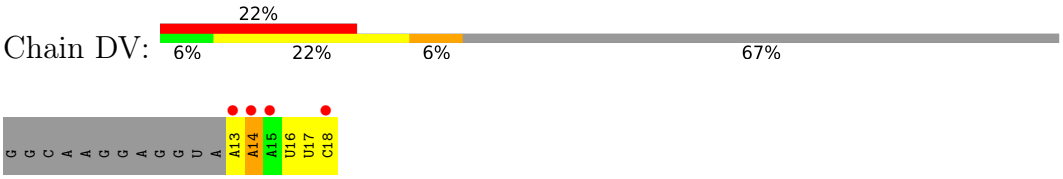
• Molecule 55: mRNA

Chain BV:



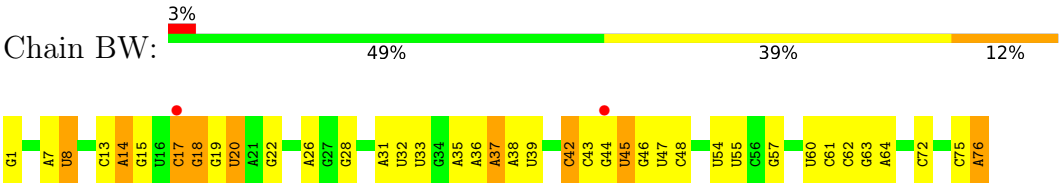
• Molecule 55: mRNA

Chain DV:



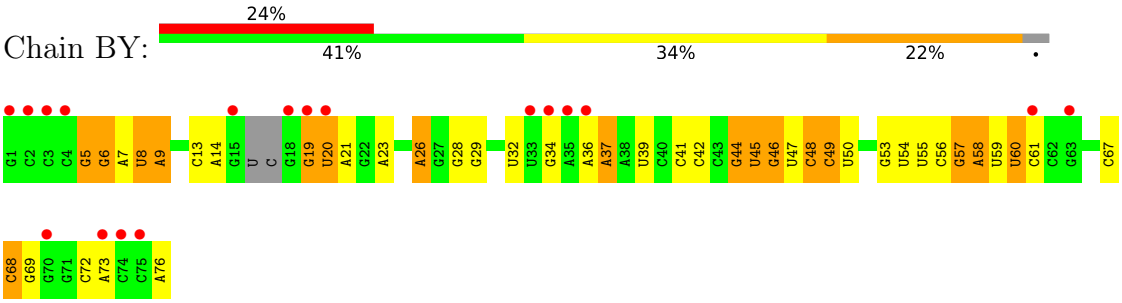
• Molecule 56: P-site tRNA

Chain BW:



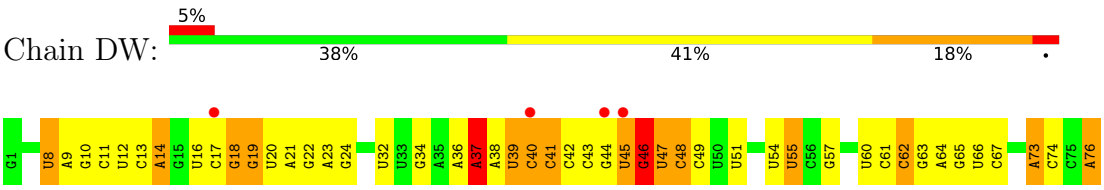
• Molecule 56: P-site tRNA

Chain BY:



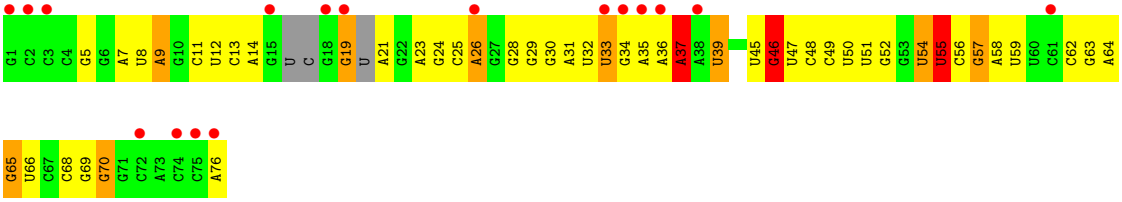
• Molecule 56: P-site tRNA

Chain DW:



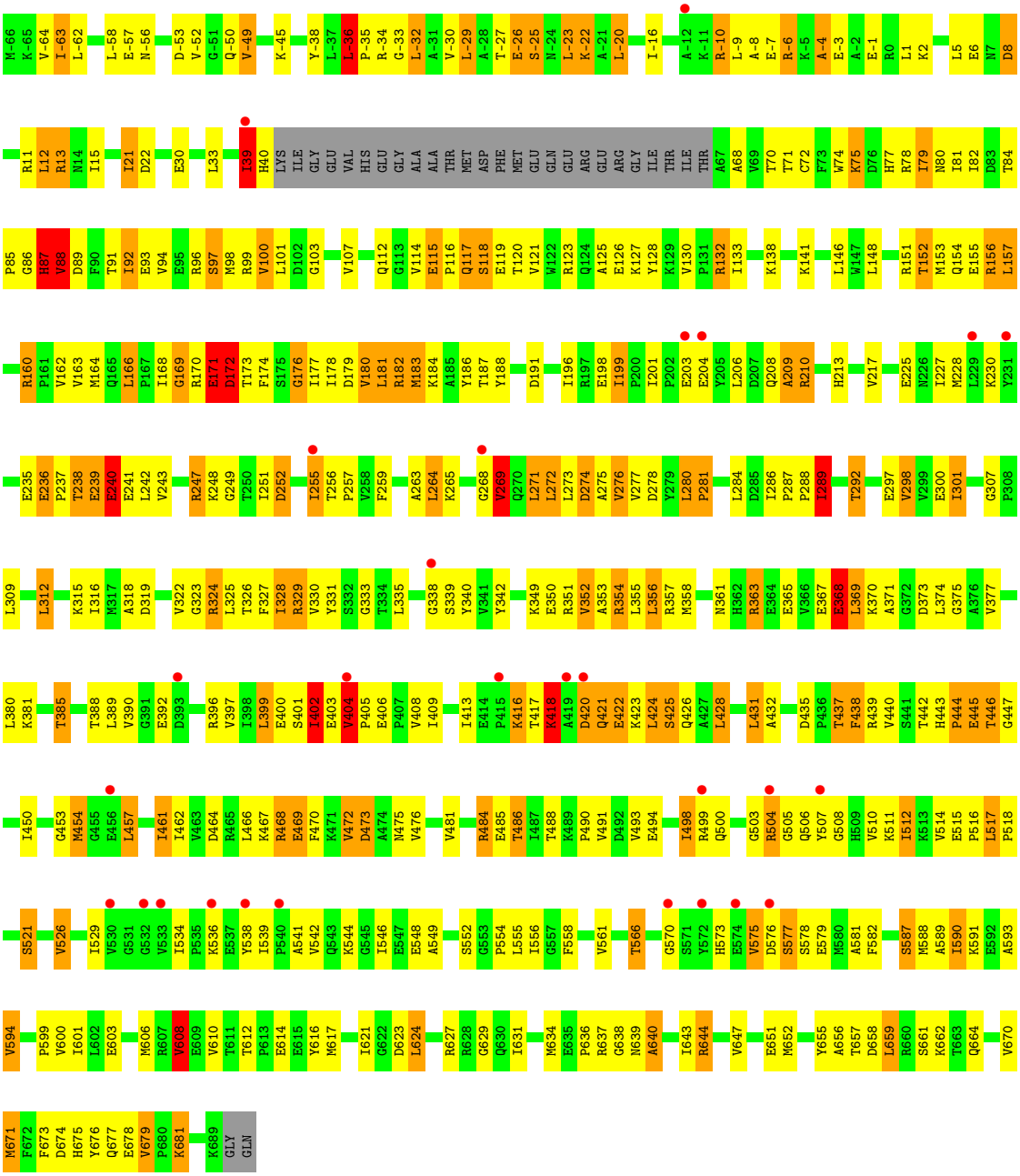
• Molecule 56: P-site tRNA

Chain DY:



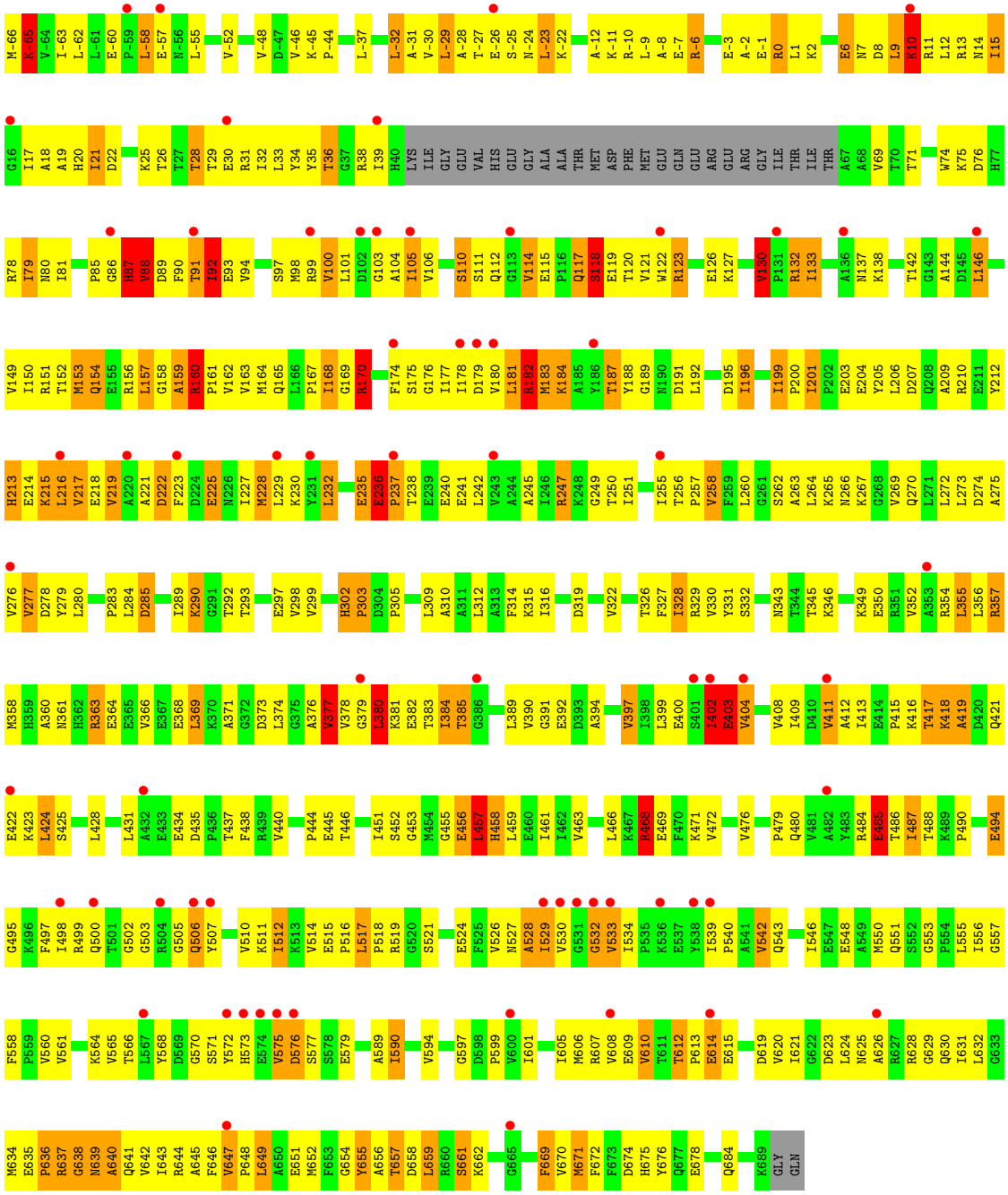
• Molecule 57: 50S ribosomal protein L9,Elongation factor G

Chain BZ:



• Molecule 57: 50S ribosomal protein L9,Elongation factor G

Chain DZ:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	210.45Å 449.00Å 625.37Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.74 – 2.80 49.74 – 2.80	Depositor EDS
% Data completeness (in resolution range)	99.8 (49.74-2.80) 99.8 (49.74-2.80)	Depositor EDS
R_{merge}	0.20	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.08 (at 2.77Å)	Xtriage
Refinement program	PHENIX (PHENIX.REFINE: 1.8.2_1309)	Depositor
R, R_{free}	0.200 , 0.255 0.202 , 0.254	Depositor DCC
R_{free} test set	72267 reflections (4.97%)	wwPDB-VP
Wilson B-factor (Å^2)	54.2	Xtriage
Anisotropy	0.399	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.28 , 69.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.46$, $< L^2 > = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	310279	wwPDB-VP
Average B, all atoms (Å^2)	81.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.54% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, 4SU, MG, GDP, MIA, SF4, 5MU, 7MG, PSU, FUA

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	0.81	2/68792 (0.0%)	0.97	73/107377 (0.1%)
1	CA	0.55	0/68691	0.77	14/107219 (0.0%)
2	AB	0.66	0/2878	0.93	0/4490
2	CB	0.39	0/2878	0.62	0/4490
3	AC	0.42	0/1083	0.97	6/1460 (0.4%)
3	CC	0.42	0/1083	0.97	5/1460 (0.3%)
4	AD	1.18	5/2186 (0.2%)	1.49	24/2944 (0.8%)
4	CD	0.94	0/2192	1.33	21/2951 (0.7%)
5	AE	1.28	4/1592 (0.3%)	1.52	23/2149 (1.1%)
5	CE	0.91	0/1592	1.26	20/2149 (0.9%)
6	AF	1.18	5/1619 (0.3%)	1.42	14/2193 (0.6%)
6	CF	0.79	1/1615 (0.1%)	1.25	11/2188 (0.5%)
7	AG	0.71	1/1450 (0.1%)	1.16	11/1959 (0.6%)
7	CG	0.51	0/1449	1.05	11/1958 (0.6%)
8	AH	1.06	1/1356 (0.1%)	1.36	10/1834 (0.5%)
8	CH	0.58	1/1356 (0.1%)	1.11	11/1834 (0.6%)
9	AK	0.72	0/640	1.64	14/889 (1.6%)
9	CK	0.49	0/640	1.65	10/889 (1.1%)
10	AL	0.50	0/1044	1.09	10/1416 (0.7%)
10	CL	0.49	0/1044	1.11	13/1416 (0.9%)
11	AN	1.31	3/1144 (0.3%)	1.47	14/1543 (0.9%)
11	CN	0.70	0/1144	1.18	7/1543 (0.5%)
12	AO	1.25	4/943 (0.4%)	1.50	11/1269 (0.9%)
12	CO	0.86	0/943	1.21	6/1269 (0.5%)
13	AP	1.09	0/1156	1.35	4/1537 (0.3%)
13	CP	0.71	0/1152	1.23	16/1533 (1.0%)
14	AQ	1.18	3/1143 (0.3%)	1.40	6/1527 (0.4%)
14	CQ	0.74	0/1143	1.16	6/1527 (0.4%)
15	AR	1.21	0/982	1.36	7/1312 (0.5%)
15	CR	0.82	0/982	1.20	2/1312 (0.2%)
16	AS	0.91	0/887	1.24	3/1180 (0.3%)
16	CS	0.68	0/880	1.07	3/1172 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AT	1.08	0/1105	1.35	7/1477 (0.5%)
17	CT	0.84	0/1097	1.29	11/1468 (0.7%)
18	AU	1.35	3/977 (0.3%)	1.44	10/1301 (0.8%)
18	CU	0.86	0/977	1.11	3/1301 (0.2%)
19	AV	1.25	1/782 (0.1%)	1.53	11/1049 (1.0%)
19	CV	0.68	0/782	1.02	0/1049
20	AW	1.49	7/897 (0.8%)	1.50	13/1205 (1.1%)
20	CW	1.01	1/897 (0.1%)	1.27	3/1205 (0.2%)
21	AX	1.13	0/764	1.33	4/1025 (0.4%)
21	CX	0.86	0/764	1.18	4/1025 (0.4%)
22	AY	1.08	1/819 (0.1%)	1.44	9/1095 (0.8%)
22	CY	0.75	0/819	1.13	4/1095 (0.4%)
23	AZ	0.96	0/1483	1.44	19/2017 (0.9%)
23	CZ	0.59	0/1483	1.14	14/2017 (0.7%)
24	A0	1.19	0/662	1.32	4/881 (0.5%)
24	C0	0.75	0/662	1.08	2/881 (0.2%)
25	A1	1.18	4/762 (0.5%)	1.43	10/1014 (1.0%)
25	C1	0.88	0/762	1.20	3/1014 (0.3%)
26	A2	1.08	1/590 (0.2%)	1.26	4/781 (0.5%)
26	C2	0.71	0/590	1.05	2/781 (0.3%)
27	A3	1.23	0/474	1.47	5/635 (0.8%)
27	C3	0.65	0/469	1.15	3/630 (0.5%)
28	A4	0.55	0/571	1.30	10/768 (1.3%)
28	C4	0.52	0/545	0.99	2/737 (0.3%)
29	A5	1.39	0/469	1.55	4/635 (0.6%)
29	C5	0.95	0/469	1.41	8/635 (1.3%)
30	A6	1.03	0/460	1.29	2/613 (0.3%)
30	C6	0.82	0/456	1.09	1/608 (0.2%)
31	A7	1.33	1/426 (0.2%)	1.40	2/561 (0.4%)
31	C7	1.06	1/426 (0.2%)	1.26	3/561 (0.5%)
32	A8	1.24	0/525	1.35	4/691 (0.6%)
32	C8	0.87	0/525	1.30	6/691 (0.9%)
33	A9	1.30	2/310 (0.6%)	1.29	2/407 (0.5%)
33	C9	0.69	0/310	0.97	1/407 (0.2%)
34	BA	0.44	0/35976	0.67	5/56145 (0.0%)
34	DA	0.39	0/36119	0.61	2/56370 (0.0%)
35	BB	0.60	0/1881	1.15	15/2542 (0.6%)
35	DB	0.52	0/1860	1.03	8/2518 (0.3%)
36	BC	0.51	0/1576	0.91	1/2130 (0.0%)
36	DC	0.49	0/1568	0.91	5/2122 (0.2%)
37	BD	0.64	0/1689	1.12	10/2267 (0.4%)
37	DD	0.64	0/1708	1.13	12/2289 (0.5%)
38	BE	0.78	0/1145	1.21	8/1543 (0.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DE	0.73	0/1149	1.18	8/1548 (0.5%)
39	BF	0.68	0/825	1.02	2/1118 (0.2%)
39	DF	0.70	0/833	1.09	1/1128 (0.1%)
40	BG	0.52	0/1250	1.00	5/1679 (0.3%)
40	DG	0.45	0/1254	0.91	1/1683 (0.1%)
41	BH	0.74	0/1108	1.21	8/1494 (0.5%)
41	DH	0.62	0/1108	1.16	10/1494 (0.7%)
42	BI	0.50	0/1005	1.03	7/1350 (0.5%)
42	DI	0.46	0/997	0.94	0/1343
43	BJ	0.56	0/722	1.05	3/982 (0.3%)
43	DJ	0.50	0/727	0.99	3/988 (0.3%)
44	BK	0.71	0/848	1.15	3/1149 (0.3%)
44	DK	0.64	0/848	1.12	4/1149 (0.3%)
45	BL	0.86	0/946	1.18	5/1274 (0.4%)
45	DL	0.70	0/946	1.11	5/1274 (0.4%)
46	BM	0.53	0/933	1.01	2/1253 (0.2%)
46	DM	0.47	0/961	0.87	0/1291
47	BN	0.54	0/501	1.00	1/664 (0.2%)
47	DN	0.46	0/501	0.82	0/664
48	BO	0.71	0/739	1.09	3/985 (0.3%)
48	DO	0.68	0/739	1.03	3/985 (0.3%)
49	BP	0.74	1/697 (0.1%)	1.19	8/939 (0.9%)
49	DP	0.69	0/693	1.05	1/935 (0.1%)
50	BQ	0.74	0/836	1.15	5/1117 (0.4%)
50	DQ	0.64	0/836	1.09	4/1117 (0.4%)
51	BR	0.69	0/560	1.12	1/746 (0.1%)
51	DR	0.67	0/560	1.12	2/746 (0.3%)
52	BS	0.50	0/676	0.97	2/911 (0.2%)
52	DS	0.45	0/661	0.98	2/893 (0.2%)
53	BT	0.62	0/730	1.14	1/965 (0.1%)
53	DT	0.62	0/733	1.05	1/969 (0.1%)
54	BU	0.49	0/203	1.03	0/266
54	DU	0.43	0/203	0.87	1/266 (0.4%)
55	BV	0.54	0/165	0.64	0/254
55	DV	0.50	0/137	0.56	0/211
56	BW	0.51	0/1650	0.75	0/2569
56	BY	0.27	1/1602 (0.1%)	0.43	0/2493
56	DW	0.41	0/1650	0.63	0/2569
56	DY	0.23	0/1579	0.33	0/2455
57	BZ	0.76	2/5792 (0.0%)	1.18	26/7844 (0.3%)
57	DZ	0.64	0/5792	1.10	42/7844 (0.5%)
All	All	0.68	56/330005 (0.0%)	0.93	812/491779 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	CA	0	1
17	CT	0	1
19	AV	0	1
21	AX	0	1
21	CX	0	1
23	AZ	0	1
24	A0	0	1
25	A1	0	1
28	A4	0	1
53	BT	0	1
53	DT	0	1
57	BZ	0	1
57	DZ	0	3
All	All	0	15

All (56) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	AW	95	ILE	CA-CB	-7.85	1.44	1.53
31	A7	13	ALA	CA-CB	-6.58	1.42	1.53
12	AO	121	VAL	CA-CB	-6.57	1.46	1.54
7	AG	159	VAL	CA-CB	6.28	1.61	1.53
14	AQ	73	PRO	CA-C	6.20	1.59	1.52
6	AF	86	GLY	C-O	6.17	1.29	1.23
11	AN	31	ALA	CA-CB	-6.15	1.43	1.53
18	AU	105	VAL	CA-CB	-6.07	1.47	1.54
31	C7	20	ALA	CA-CB	-6.04	1.44	1.53
22	AY	46	LYS	CA-C	6.01	1.60	1.52
20	CW	106	ILE	CA-CB	-6.00	1.46	1.54
20	AW	76	VAL	CA-CB	-6.00	1.46	1.54
4	AD	28	GLU	CG-CD	5.93	1.66	1.52
8	CH	80	SER	CA-C	5.88	1.55	1.52
12	AO	76	ALA	CA-CB	-5.86	1.44	1.53
25	A1	64	ALA	CA-CB	-5.75	1.44	1.53
11	AN	15	LEU	CA-C	-5.74	1.45	1.52
5	AE	149	ARG	C-O	-5.62	1.17	1.23
20	AW	85	VAL	CA-CB	-5.62	1.47	1.54
1	AA	1067	A	N9-C4	-5.61	1.26	1.37
18	AU	9	VAL	CA-CB	-5.56	1.47	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	A9	34	GLN	CA-C	-5.55	1.45	1.52
57	BZ	404	VAL	CA-CB	5.52	1.61	1.54
4	AD	39	LYS	CE-NZ	5.50	1.65	1.49
6	AF	42	ALA	CA-CB	-5.48	1.44	1.53
25	A1	18	ILE	CA-CB	-5.47	1.47	1.54
33	A9	23	VAL	CA-CB	-5.46	1.47	1.54
57	BZ	385	THR	CA-CB	5.42	1.61	1.53
4	AD	221	VAL	CA-CB	5.36	1.60	1.54
49	BP	16	HIS	CA-C	-5.31	1.48	1.53
11	AN	27	ALA	CA-CB	-5.30	1.44	1.53
19	AV	4	ILE	CA-CB	-5.29	1.47	1.54
6	AF	84	VAL	CA-CB	-5.29	1.48	1.54
20	AW	96	ILE	CA-CB	-5.28	1.48	1.54
25	A1	67	ILE	CA-CB	-5.27	1.51	1.54
25	A1	56	GLN	CA-C	5.26	1.59	1.52
12	AO	58	VAL	CA-CB	-5.25	1.47	1.54
5	AE	123	ALA	CA-CB	-5.21	1.44	1.53
8	AH	45	VAL	CA-CB	-5.21	1.48	1.54
14	AQ	127	ILE	CA-CB	-5.21	1.47	1.54
56	BY	8	4SU	O3'-P	5.21	1.61	1.56
4	AD	199	ALA	CA-CB	-5.19	1.44	1.53
6	AF	103	LYS	CE-NZ	5.19	1.65	1.49
4	AD	209	ALA	CA-CB	-5.16	1.45	1.53
20	AW	48	ALA	C-O	5.16	1.29	1.24
20	AW	105	VAL	CA-CB	-5.13	1.48	1.54
20	AW	74	ALA	CA-CB	-5.11	1.45	1.53
12	AO	4	PRO	C-O	-5.09	1.17	1.23
14	AQ	135	ASP	CA-C	-5.08	1.46	1.52
26	A2	50	ILE	CA-CB	-5.08	1.48	1.54
5	AE	114	ALA	CA-CB	-5.06	1.45	1.53
6	CF	201	VAL	CA-CB	5.04	1.60	1.54
18	AU	50	ARG	N-CA	-5.04	1.40	1.46
5	AE	197	ILE	CA-CB	-5.03	1.48	1.54
6	AF	88	VAL	CA-CB	-5.02	1.48	1.54
1	AA	553	A	C5-C6	-5.00	1.31	1.41

All (812) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	AK	128	LEU	CA-C-N	19.29	144.38	121.04
9	AK	128	LEU	C-N-CA	19.29	144.38	121.04
9	CK	76	GLY	CA-C-N	16.86	140.91	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	CK	76	GLY	C-N-CA	16.86	140.91	119.84
9	CK	128	LEU	CA-C-N	13.01	136.11	119.84
9	CK	128	LEU	C-N-CA	13.01	136.11	119.84
23	AZ	176	PRO	CA-C-N	-11.50	105.46	119.84
23	AZ	176	PRO	C-N-CA	-11.50	105.46	119.84
6	AF	89	VAL	CA-C-N	-11.23	107.98	123.03
6	AF	89	VAL	C-N-CA	-11.23	107.98	123.03
4	CD	244	ARG	CA-C-N	-11.22	108.82	120.38
4	CD	244	ARG	C-N-CA	-11.22	108.82	120.38
1	AA	2014	G	C2'-C3'-O3'	11.16	126.23	109.50
49	BP	79	VAL	N-CA-C	-10.83	102.50	112.90
57	BZ	280	LEU	CA-C-N	10.27	132.67	119.84
57	BZ	280	LEU	C-N-CA	10.27	132.67	119.84
17	CT	23	ARG	CA-C-N	-10.27	109.26	120.14
17	CT	23	ARG	C-N-CA	-10.27	109.26	120.14
23	AZ	157	LEU	CA-C-N	10.18	130.87	120.38
23	AZ	157	LEU	C-N-CA	10.18	130.87	120.38
4	CD	229	VAL	CB-CA-C	-10.13	97.26	112.05
57	BZ	-22	LYS	N-CA-C	-10.11	100.23	111.14
22	AY	76	CYS	CA-C-N	10.01	129.38	118.97
22	AY	76	CYS	C-N-CA	10.01	129.38	118.97
10	CL	71	THR	CA-C-N	9.70	130.37	120.38
10	CL	71	THR	C-N-CA	9.70	130.37	120.38
9	CK	68	LEU	CA-C-N	9.63	131.88	119.84
9	CK	68	LEU	C-N-CA	9.63	131.88	119.84
44	BK	40	ILE	N-CA-C	-9.53	104.12	112.12
11	AN	43	THR	CA-C-N	-9.50	107.96	119.84
11	AN	43	THR	C-N-CA	-9.50	107.96	119.84
1	CA	2193	G	OP1-P-O3'	-9.44	79.68	108.00
28	A4	60	GLN	N-CA-C	-9.33	101.90	113.28
57	DZ	-22	LYS	N-CA-C	-9.30	100.25	111.69
1	AA	1701	A	O5'-P-OP2	-9.19	80.44	108.00
9	CK	32	LEU	CA-C-N	9.17	131.31	119.84
9	CK	32	LEU	C-N-CA	9.17	131.31	119.84
6	AF	89	VAL	N-CA-C	9.16	119.03	110.42
4	CD	245	PRO	CA-C-N	9.12	131.24	119.84
4	CD	245	PRO	C-N-CA	9.12	131.24	119.84
53	BT	11	SER	N-CA-C	-8.96	100.31	112.94
28	A4	40	HIS	CA-C-N	8.94	131.01	119.84
28	A4	40	HIS	C-N-CA	8.94	131.01	119.84
34	DA	1045	C	OP1-P-O3'	-8.92	81.23	108.00
21	AX	40	LYS	N-CA-C	-8.87	100.20	111.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	DZ	98	MET	N-CA-C	-8.84	104.55	114.62
46	BM	84	ILE	N-CA-C	8.69	119.27	110.23
51	DR	51	LEU	CA-C-N	8.64	130.64	119.84
51	DR	51	LEU	C-N-CA	8.64	130.64	119.84
38	DE	69	VAL	CA-C-N	8.50	130.47	119.84
38	DE	69	VAL	C-N-CA	8.50	130.47	119.84
12	CO	118	ALA	CA-C-N	8.46	128.66	119.87
12	CO	118	ALA	C-N-CA	8.46	128.66	119.87
13	CP	44	GLY	N-CA-C	-8.43	101.73	111.85
17	AT	57	PHE	N-CA-C	-8.42	102.79	113.23
11	CN	110	GLY	CA-C-N	8.41	130.35	119.84
11	CN	110	GLY	C-N-CA	8.41	130.35	119.84
14	AQ	98	LYS	CA-C-N	-8.37	111.14	119.76
14	AQ	98	LYS	C-N-CA	-8.37	111.14	119.76
15	AR	114	VAL	CB-CA-C	-8.37	98.36	110.83
9	AK	104	ILE	CA-C-N	8.27	130.18	119.84
9	AK	104	ILE	C-N-CA	8.27	130.18	119.84
1	AA	1700	G	C2'-C3'-O3'	8.26	121.90	109.50
27	A3	40	THR	CA-C-N	-8.26	110.43	119.19
27	A3	40	THR	C-N-CA	-8.26	110.43	119.19
9	CK	94	VAL	N-CA-C	-8.23	103.16	111.88
7	CG	45	GLU	N-CA-C	-8.15	103.34	113.28
20	AW	35	ILE	N-CA-C	-8.11	102.16	111.00
23	AZ	30	ASN	N-CA-C	-8.10	97.74	108.19
4	AD	42	GLY	N-CA-C	-8.10	103.34	115.00
44	DK	38	ASN	CA-C-N	8.07	129.93	119.84
44	DK	38	ASN	C-N-CA	8.07	129.93	119.84
35	BB	193	ASP	CA-C-N	8.06	127.63	119.24
35	BB	193	ASP	C-N-CA	8.06	127.63	119.24
8	CH	35	VAL	CA-C-N	8.03	128.08	119.89
8	CH	35	VAL	C-N-CA	8.03	128.08	119.89
57	DZ	-60	GLU	CA-C-N	-7.99	111.36	119.99
57	DZ	-60	GLU	C-N-CA	-7.99	111.36	119.99
4	AD	229	VAL	CB-CA-C	-7.98	99.33	112.26
21	AX	46	ALA	N-CA-C	-7.95	102.21	112.23
38	DE	18	ARG	N-CA-C	-7.94	97.14	108.96
57	DZ	319	ASP	CA-C-N	7.91	129.73	119.84
57	DZ	319	ASP	C-N-CA	7.91	129.73	119.84
35	BB	168	THR	N-CA-C	-7.86	104.21	113.88
21	CX	10	ALA	CA-C-N	-7.82	112.14	120.66
21	CX	10	ALA	C-N-CA	-7.82	112.14	120.66
57	DZ	0	ARG	N-CA-C	-7.82	103.72	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	CZ	157	LEU	CA-C-N	7.77	128.39	120.38
23	CZ	157	LEU	C-N-CA	7.77	128.39	120.38
57	BZ	670	VAL	N-CA-C	7.75	117.74	111.62
36	DC	125	GLU	N-CA-C	-7.73	103.64	113.23
29	C5	26	THR	CA-C-N	7.72	125.22	119.66
29	C5	26	THR	C-N-CA	7.72	125.22	119.66
34	DA	1045	C	OP2-P-O3'	-7.64	85.08	108.00
8	AH	127	GLU	CA-C-N	-7.63	112.24	120.94
8	AH	127	GLU	C-N-CA	-7.63	112.24	120.94
29	C5	46	CYS	CA-C-N	7.62	127.34	119.64
29	C5	46	CYS	C-N-CA	7.62	127.34	119.64
35	BB	128	GLU	N-CA-C	-7.56	104.02	112.57
41	DH	75	ARG	CA-C-N	7.54	129.27	119.84
41	DH	75	ARG	C-N-CA	7.54	129.27	119.84
1	AA	474	U	O5'-P-OP2	-7.52	85.44	108.00
49	BP	70	ALA	N-CA-C	-7.51	101.23	112.04
8	CH	7	LEU	CA-C-N	7.49	127.47	119.76
8	CH	7	LEU	C-N-CA	7.49	127.47	119.76
12	AO	100	GLY	CA-C-N	-7.48	113.11	120.52
12	AO	100	GLY	C-N-CA	-7.48	113.11	120.52
23	AZ	122	ARG	N-CA-C	-7.48	102.40	112.94
20	AW	86	LEU	CA-C-N	-7.47	112.31	119.85
20	AW	86	LEU	C-N-CA	-7.47	112.31	119.85
10	CL	20	ALA	CA-C-N	7.43	128.03	120.38
10	CL	20	ALA	C-N-CA	7.43	128.03	120.38
57	DZ	302	HIS	CA-C-N	7.41	129.10	119.84
57	DZ	302	HIS	C-N-CA	7.41	129.10	119.84
10	CL	72	PRO	CA-C-N	7.39	127.44	119.90
10	CL	72	PRO	C-N-CA	7.39	127.44	119.90
1	CA	1992	G	C2'-C3'-O3'	7.39	120.58	109.50
1	AA	455	A	C5'-C4'-C3'	-7.36	104.97	116.00
6	AF	85	GLY	N-CA-C	7.36	125.11	115.40
5	AE	33	VAL	N-CA-C	-7.35	100.10	109.58
1	AA	1255	A	P-O3'-C3'	7.34	131.21	120.20
4	AD	135	PHE	N-CA-C	-7.34	102.87	112.41
6	CF	101	LEU	CA-C-N	7.33	129.00	119.84
6	CF	101	LEU	C-N-CA	7.33	129.00	119.84
1	AA	553	A	O4'-C1'-N9	-7.26	97.61	108.50
57	DZ	10	LYS	N-CA-C	-7.25	104.58	113.50
37	DD	170	VAL	N-CA-C	7.22	118.72	108.17
1	AA	1255	A	C4'-C3'-O3'	7.21	120.22	109.40
45	BL	124	LYS	CA-C-N	7.20	127.23	119.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	BL	124	LYS	C-N-CA	7.20	127.23	119.89
29	C5	27	PRO	O-C-N	7.18	124.53	121.15
32	C8	19	SER	N-CA-C	-7.17	104.53	113.28
41	DH	4	ASP	CA-C-N	7.14	126.98	119.05
41	DH	4	ASP	C-N-CA	7.14	126.98	119.05
40	BG	92	SER	CA-C-N	7.14	128.77	119.84
40	BG	92	SER	C-N-CA	7.14	128.77	119.84
41	BH	109	ILE	N-CA-C	7.14	120.73	108.95
4	AD	27	THR	N-CA-C	7.14	122.01	113.16
11	AN	110	GLY	CA-C-N	-7.12	111.14	119.05
11	AN	110	GLY	C-N-CA	-7.12	111.14	119.05
37	BD	171	GLY	CA-C-N	7.10	128.72	119.84
37	BD	171	GLY	C-N-CA	7.10	128.72	119.84
30	C6	28	ARG	N-CA-C	-7.10	104.43	113.23
39	DF	60	PHE	N-CA-C	7.08	120.31	108.20
25	A1	4	VAL	N-CA-C	7.07	118.05	107.80
28	A4	36	CYS	N-CA-C	7.06	117.30	108.19
50	BQ	65	ILE	N-CA-C	-7.06	107.01	113.71
6	AF	24	LEU	CA-C-N	7.05	128.65	119.84
6	AF	24	LEU	C-N-CA	7.05	128.65	119.84
42	BI	88	TYR	N-CA-C	-7.05	103.21	111.03
45	DL	118	SER	N-CA-C	-7.04	103.54	111.14
22	AY	73	ARG	CA-C-N	-7.02	113.08	120.03
22	AY	73	ARG	C-N-CA	-7.02	113.08	120.03
24	C0	44	ARG	N-CA-C	-7.01	105.00	113.97
1	CA	1653	G	C2'-C3'-O3'	7.00	120.00	109.50
25	C1	21	ARG	N-CA-C	-7.00	97.70	108.76
18	AU	67	ALA	N-CA-C	-6.98	103.75	111.36
5	AE	85	ASN	CA-C-N	6.97	127.35	119.83
5	AE	85	ASN	C-N-CA	6.97	127.35	119.83
57	BZ	87	HIS	N-CA-C	-6.94	96.02	110.80
35	BB	166	ASP	CA-C-N	6.93	128.14	120.45
35	BB	166	ASP	C-N-CA	6.93	128.14	120.45
1	AA	2518	U	P-O3'-C3'	6.92	130.58	120.20
4	CD	221	VAL	N-CA-C	6.92	118.25	108.36
13	CP	44	GLY	CA-C-O	-6.91	115.98	122.13
7	CG	31	VAL	N-CA-C	6.90	114.73	107.76
38	BE	32	VAL	N-CA-C	6.87	117.73	108.11
22	CY	31	LEU	CA-C-N	6.87	126.34	118.85
22	CY	31	LEU	C-N-CA	6.87	126.34	118.85
7	AG	58	GLN	N-CA-C	-6.87	105.03	113.41
57	BZ	88	VAL	CB-CA-C	-6.86	100.03	111.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	DC	108	ASN	CA-C-N	6.85	126.48	119.56
36	DC	108	ASN	C-N-CA	6.85	126.48	119.56
1	AA	2701	U	C4'-C3'-O3'	6.84	119.67	109.40
7	AG	159	VAL	CB-CA-C	6.80	120.37	111.53
28	C4	40	HIS	CA-C-N	6.80	126.76	119.28
28	C4	40	HIS	C-N-CA	6.80	126.76	119.28
35	DB	25	ASN	CA-C-N	6.80	128.34	119.84
35	DB	25	ASN	C-N-CA	6.80	128.34	119.84
7	AG	85	GLY	N-CA-C	-6.79	105.81	114.37
6	AF	74	ARG	N-CA-C	-6.75	100.30	110.28
26	A2	56	GLN	N-CA-C	-6.74	103.40	111.69
3	AC	203	GLU	N-CA-C	-6.72	104.64	114.39
1	AA	184	A	P-O3'-C3'	6.72	130.28	120.20
4	AD	264	LYS	CA-C-N	6.70	128.22	119.84
4	AD	264	LYS	C-N-CA	6.70	128.22	119.84
3	CC	203	GLU	N-CA-C	-6.69	104.69	114.39
18	AU	50	ARG	NE-CZ-NH2	6.68	125.21	119.20
7	CG	180	PHE	N-CA-C	6.66	118.27	110.41
1	CA	512	G	O4'-C1'-N9	6.66	118.19	108.20
1	AA	1807	G	O5'-P-OP2	-6.65	88.05	108.00
12	AO	4	PRO	CA-C-O	-6.65	113.84	121.56
10	AL	72	PRO	CA-C-N	6.61	126.64	119.89
10	AL	72	PRO	C-N-CA	6.61	126.64	119.89
28	A4	26	SER	N-CA-C	6.61	116.96	108.24
20	AW	13	SER	CA-C-N	6.60	128.09	119.84
20	AW	13	SER	C-N-CA	6.60	128.09	119.84
1	CA	2193	G	OP2-P-O3'	-6.60	88.19	108.00
32	C8	33	ASN	N-CA-C	6.59	121.48	113.38
37	DD	188	LEU	CA-C-N	6.59	126.62	119.90
37	DD	188	LEU	C-N-CA	6.59	126.62	119.90
35	BB	14	GLY	N-CA-C	-6.58	105.40	115.66
48	BO	22	THR	N-CA-C	-6.58	100.79	110.52
4	CD	85	ASP	CA-C-N	6.57	127.41	120.12
4	CD	85	ASP	C-N-CA	6.57	127.41	120.12
25	A1	70	VAL	CB-CA-C	-6.55	103.58	111.97
4	AD	221	VAL	N-CA-C	6.55	117.73	108.36
4	AD	46	GLN	N-CA-C	-6.54	105.21	113.72
8	AH	9	ILE	CB-CA-C	-6.54	103.66	111.18
13	CP	22	GLY	CA-C-N	6.54	126.31	119.05
13	CP	22	GLY	C-N-CA	6.54	126.31	119.05
9	AK	21	GLN	N-CA-C	6.53	116.86	108.24
45	BL	30	ALA	CA-C-N	6.53	125.76	118.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	BL	30	ALA	C-N-CA	6.53	125.76	118.97
57	DZ	572	TYR	N-CA-C	6.52	116.47	107.73
57	BZ	118	SER	N-CA-C	-6.50	105.33	113.20
5	CE	193	GLY	N-CA-C	-6.50	106.62	113.58
7	CG	54	GLU	N-CA-C	-6.50	105.31	112.72
35	DB	13	ALA	N-CA-C	6.49	120.83	112.26
5	CE	103	ASP	N-CA-C	-6.49	96.98	110.80
50	BQ	68	ARG	CB-CA-C	6.48	116.25	109.83
4	CD	220	HIS	CA-C-N	-6.47	114.78	122.93
4	CD	220	HIS	C-N-CA	-6.47	114.78	122.93
24	A0	45	PHE	N-CA-C	-6.46	99.50	109.52
26	A2	7	ARG	N-CA-C	-6.46	104.33	111.82
5	AE	47	VAL	CB-CA-C	-6.46	101.00	110.81
43	DJ	52	GLY	CA-C-N	6.45	127.01	120.04
43	DJ	52	GLY	C-N-CA	6.45	127.01	120.04
1	AA	198	C	OP1-P-O3'	-6.45	88.65	108.00
5	CE	190	GLY	CA-C-N	-6.44	113.65	120.03
5	CE	190	GLY	C-N-CA	-6.44	113.65	120.03
1	AA	2045	G	O5'-P-OP1	-6.44	88.68	108.00
1	AA	2518	U	OP2-P-O3'	6.44	127.32	108.00
38	DE	6	PHE	N-CA-C	6.43	118.83	110.53
35	BB	21	ARG	N-CA-C	6.43	119.61	109.39
18	AU	9	VAL	N-CA-C	6.42	116.58	110.42
3	AC	16	ASP	CA-C-N	6.42	125.64	118.97
3	AC	16	ASP	C-N-CA	6.42	125.64	118.97
17	AT	88	ILE	CA-C-N	-6.42	114.21	121.85
17	AT	88	ILE	C-N-CA	-6.42	114.21	121.85
57	DZ	377	VAL	N-CA-C	6.41	117.14	108.17
49	DP	79	VAL	N-CA-C	-6.41	106.48	112.83
1	AA	2083	G	O5'-P-OP2	-6.40	88.80	108.00
1	CA	2689	U	C4'-C3'-O3'	6.39	118.99	109.40
23	CZ	107	THR	CA-C-N	6.39	126.41	119.89
23	CZ	107	THR	C-N-CA	6.39	126.41	119.89
33	A9	16	VAL	CB-CA-C	-6.39	103.23	110.96
23	AZ	57	ILE	N-CA-C	-6.38	98.86	108.17
3	CC	16	ASP	CA-C-N	6.38	125.60	118.97
3	CC	16	ASP	C-N-CA	6.38	125.60	118.97
38	BE	105	VAL	CA-C-N	-6.37	113.24	119.87
38	BE	105	VAL	C-N-CA	-6.37	113.24	119.87
32	C8	52	LYS	CA-C-N	-6.37	111.87	119.84
32	C8	52	LYS	C-N-CA	-6.37	111.87	119.84
17	AT	88	ILE	CB-CA-C	-6.36	102.88	111.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	A3	56	VAL	CB-CA-C	-6.36	101.22	110.63
13	CP	65	ARG	N-CA-C	6.35	119.93	108.69
6	CF	65	TRP	N-CA-C	6.35	113.93	108.22
38	BE	67	VAL	N-CA-C	6.34	117.23	107.78
57	BZ	289	ILE	CB-CA-C	-6.32	104.37	111.45
5	AE	84	PHE	CA-C-N	-6.32	116.04	122.74
5	AE	84	PHE	C-N-CA	-6.32	116.04	122.74
50	DQ	13	ASP	N-CA-C	-6.32	103.71	112.30
4	CD	46	GLN	N-CA-C	-6.31	105.62	113.38
18	AU	51	LYS	CA-C-N	-6.30	110.98	122.38
18	AU	51	LYS	C-N-CA	-6.30	110.98	122.38
6	CF	9	ILE	N-CA-C	6.30	114.82	107.77
5	CE	65	GLY	N-CA-C	-6.29	106.86	114.66
25	A1	53	VAL	N-CA-C	-6.28	99.11	108.46
15	CR	43	GLU	N-CA-C	-6.26	104.22	113.61
5	AE	8	LYS	CA-C-N	-6.26	114.77	121.84
5	AE	8	LYS	C-N-CA	-6.26	114.77	121.84
22	CY	91	GLU	N-CA-C	-6.26	104.56	111.82
57	BZ	236	GLU	CA-C-N	6.25	127.66	119.84
57	BZ	236	GLU	C-N-CA	6.25	127.66	119.84
29	C5	4	HIS	CB-CA-C	-6.24	105.57	111.00
18	AU	50	ARG	NE-CZ-NH1	-6.23	115.27	121.50
25	A1	7	ILE	CB-CA-C	-6.23	105.32	111.30
14	CQ	136	ALA	N-CA-C	-6.22	104.60	111.82
57	DZ	178	ILE	CB-CA-C	-6.22	102.60	111.31
5	AE	132	HIS	N-CA-C	6.21	119.63	107.57
41	BH	112	LEU	N-CA-C	6.21	118.55	107.80
10	CL	46	ALA	N-CA-C	-6.19	105.59	113.02
4	AD	135	PHE	CA-C-N	-6.19	116.62	123.43
4	AD	135	PHE	C-N-CA	-6.19	116.62	123.43
48	DO	60	VAL	CB-CA-C	-6.19	103.94	112.04
8	CH	28	GLY	CA-C-N	6.18	127.57	119.84
8	CH	28	GLY	C-N-CA	6.18	127.57	119.84
11	CN	7	LYS	N-CA-C	-6.18	102.56	110.53
41	BH	134	ILE	N-CA-C	6.18	116.35	110.42
57	BZ	276	VAL	N-CA-C	-6.18	104.31	110.30
27	A3	8	LEU	CA-C-N	-6.17	114.14	122.72
27	A3	8	LEU	C-N-CA	-6.17	114.14	122.72
38	DE	101	ILE	CB-CA-C	-6.16	104.81	112.45
35	BB	233	SER	CA-C-N	6.16	127.54	119.84
35	BB	233	SER	C-N-CA	6.16	127.54	119.84
5	CE	73	GLU	CA-C-N	6.16	127.54	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	CE	73	GLU	C-N-CA	6.16	127.54	119.84
28	A4	52	THR	N-CA-C	-6.16	104.35	112.72
5	AE	81	ILE	CB-CA-C	-6.15	101.66	110.83
1	AA	1811	A	O5'-P-OP2	-6.14	89.56	108.00
40	DG	69	VAL	N-CA-C	-6.14	107.27	113.47
20	AW	59	VAL	N-CA-C	-6.14	104.31	111.00
5	AE	143	ASN	CA-C-O	-6.13	114.47	118.33
15	AR	36	THR	CB-CA-C	-6.13	99.16	114.11
19	AV	28	GLU	CA-C-N	-6.13	113.63	119.76
19	AV	28	GLU	C-N-CA	-6.13	113.63	119.76
8	AH	3	ARG	CG-CD-NE	-6.13	98.52	112.00
38	BE	47	LYS	N-CA-C	6.12	120.50	107.70
8	AH	173	PRO	CA-C-O	-6.11	114.41	121.86
42	BI	48	GLU	CA-C-N	-6.09	113.49	119.64
42	BI	48	GLU	C-N-CA	-6.09	113.49	119.64
49	BP	51	VAL	CB-CA-C	-6.09	101.30	111.29
45	DL	23	LYS	N-CA-C	-6.09	105.50	113.17
37	BD	38	TYR	CA-C-N	-6.08	115.28	119.66
37	BD	38	TYR	C-N-CA	-6.08	115.28	119.66
57	DZ	458	HIS	N-CA-C	-6.08	105.89	113.55
57	DZ	469	GLU	N-CA-C	-6.07	105.91	113.38
57	DZ	160	ARG	N-CA-C	6.07	123.22	109.81
7	AG	38	VAL	N-CA-C	6.06	116.59	107.80
21	AX	69	TYR	N-CA-C	6.06	118.39	108.52
13	CP	128	HIS	N-CA-C	-6.06	105.93	113.38
10	AL	53	VAL	CA-C-N	6.05	126.89	120.11
10	AL	53	VAL	C-N-CA	6.05	126.89	120.11
27	C3	40	THR	CA-C-N	-6.04	113.53	119.64
27	C3	40	THR	C-N-CA	-6.04	113.53	119.64
24	C0	45	PHE	N-CA-C	-6.04	100.22	109.41
8	AH	20	ALA	CA-C-N	-6.04	112.10	120.25
8	AH	20	ALA	C-N-CA	-6.04	112.10	120.25
41	DH	12	ARG	N-CA-C	-6.04	104.61	111.07
1	AA	210	A	P-O5'-C5'	-6.02	111.87	120.90
37	BD	5	ILE	N-CA-C	6.02	121.86	109.34
26	A2	8	LYS	N-CA-C	-6.02	104.35	111.03
26	A2	33	MET	N-CA-C	-6.01	104.84	111.82
18	AU	8	VAL	N-CA-C	-6.01	106.88	113.43
29	C5	41	PRO	CA-C-N	6.00	126.32	119.83
29	C5	41	PRO	C-N-CA	6.00	126.32	119.83
1	AA	2222	C	O5'-P-OP2	-6.00	89.99	108.00
6	CF	93	LYS	CA-C-N	-6.00	113.76	119.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	CF	93	LYS	C-N-CA	-6.00	113.76	119.76
1	AA	2610	A	OP2-P-O3'	6.00	126.00	108.00
42	BI	46	ALA	N-CA-C	-5.99	105.80	113.23
36	DC	14	ILE	N-CA-C	-5.99	107.08	112.12
34	BA	1067	A	C2'-C3'-O3'	5.99	118.48	109.50
7	CG	127	GLY	N-CA-C	-5.98	106.26	114.64
18	AU	8	VAL	N-CA-CB	-5.98	105.63	112.21
22	AY	55	TYR	CA-C-N	-5.98	112.36	119.84
22	AY	55	TYR	C-N-CA	-5.98	112.36	119.84
4	CD	256	GLY	N-CA-C	5.98	120.79	113.79
50	BQ	63	ARG	CA-C-N	5.98	125.92	119.76
50	BQ	63	ARG	C-N-CA	5.98	125.92	119.76
4	AD	75	ILE	N-CA-C	5.97	113.00	107.56
1	AA	1707	C	O5'-P-OP2	-5.96	90.13	108.00
11	AN	5	VAL	CA-C-N	5.95	125.96	119.89
11	AN	5	VAL	C-N-CA	5.95	125.96	119.89
23	AZ	158	PRO	N-CA-C	5.95	117.95	110.70
7	CG	31	VAL	CA-C-N	5.95	127.27	119.84
7	CG	31	VAL	C-N-CA	5.95	127.27	119.84
38	BE	113	ALA	N-CA-C	-5.95	106.01	113.20
6	AF	72	ARG	N-CA-C	5.94	118.25	109.69
38	DE	68	GLU	N-CA-C	5.94	117.84	111.36
40	BG	64	GLN	N-CA-C	-5.93	106.08	113.38
5	AE	52	LEU	CA-C-N	5.93	125.87	119.76
5	AE	52	LEU	C-N-CA	5.93	125.87	119.76
1	CA	195	A	P-O3'-C3'	5.93	129.09	120.20
32	A8	23	VAL	N-CA-C	5.93	117.12	108.53
37	DD	171	GLY	CA-C-N	5.92	127.25	119.84
37	DD	171	GLY	C-N-CA	5.92	127.25	119.84
41	BH	73	ASP	CA-C-N	5.92	126.69	120.12
41	BH	73	ASP	C-N-CA	5.92	126.69	120.12
8	AH	45	VAL	N-CA-C	5.91	117.51	108.71
4	AD	70	TRP	CA-C-N	5.90	128.19	120.28
4	AD	70	TRP	C-N-CA	5.90	128.19	120.28
11	CN	128	HIS	CA-C-N	5.89	126.66	120.12
11	CN	128	HIS	C-N-CA	5.89	126.66	120.12
12	AO	22	ILE	N-CA-C	5.89	120.31	113.42
1	AA	1821	C	OP1-P-O3'	5.88	125.64	108.00
21	AX	5	TYR	N-CA-C	-5.88	105.60	112.89
13	CP	116	GLY	N-CA-C	5.87	125.23	115.66
31	C7	43	THR	N-CA-C	-5.86	100.02	109.58
4	AD	225	ALA	N-CA-C	-5.86	105.79	113.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	551	A	OP1-P-O3'	-5.86	90.44	108.00
29	A5	31	VAL	CA-C-N	-5.84	113.95	119.85
29	A5	31	VAL	C-N-CA	-5.84	113.95	119.85
37	DD	50	ARG	CA-C-N	5.84	127.14	119.84
37	DD	50	ARG	C-N-CA	5.84	127.14	119.84
6	AF	53	THR	N-CA-C	-5.83	102.68	110.55
5	CE	38	THR	CA-C-N	5.83	127.12	119.84
5	CE	38	THR	C-N-CA	5.83	127.12	119.84
23	CZ	124	ILE	N-CA-C	5.83	115.52	108.06
41	DH	134	ILE	N-CA-C	5.82	116.01	110.42
1	AA	1371	G	O4'-C1'-N9	5.82	116.93	108.20
50	BQ	9	VAL	CB-CA-C	-5.81	103.25	111.21
14	AQ	135	ASP	CB-CA-C	-5.80	97.92	111.09
28	A4	28	LYS	CA-C-N	5.80	126.56	120.12
28	A4	28	LYS	C-N-CA	5.80	126.56	120.12
4	CD	71	ASP	N-CA-C	-5.79	104.97	111.28
57	DZ	642	VAL	N-CA-C	5.79	116.21	107.75
57	BZ	392	GLU	N-CA-C	5.79	117.26	111.07
7	AG	31	VAL	CA-C-N	5.79	127.07	119.84
7	AG	31	VAL	C-N-CA	5.79	127.07	119.84
57	BZ	-36	LEU	CA-C-N	-5.79	114.03	120.45
57	BZ	-36	LEU	C-N-CA	-5.79	114.03	120.45
57	BZ	453	GLY	N-CA-C	5.79	119.74	111.12
4	CD	248	SER	N-CA-C	-5.78	103.37	110.31
57	DZ	92	ILE	N-CA-C	-5.77	97.33	109.34
4	AD	116	GLN	N-CA-C	-5.77	100.30	109.76
1	CA	1353	A	O5'-P-OP2	-5.76	90.71	108.00
9	AK	100	ASN	CA-C-N	5.76	127.04	119.84
9	AK	100	ASN	C-N-CA	5.76	127.04	119.84
1	AA	2014	G	P-O3'-C3'	5.76	128.83	120.20
1	AA	537	G	O4'-C1'-N9	5.75	116.83	108.20
13	CP	35	HIS	N-CA-C	5.75	118.09	108.02
32	A8	30	ARG	N-CA-C	-5.75	104.99	112.23
1	AA	991	G	O5'-P-OP1	-5.75	90.77	108.00
41	DH	28	ALA	N-CA-C	5.74	118.09	108.96
57	DZ	647	VAL	N-CA-C	5.74	114.44	107.61
57	BZ	263	ALA	N-CA-C	-5.74	104.02	111.02
13	CP	44	GLY	CA-C-N	5.73	132.02	121.70
13	CP	44	GLY	C-N-CA	5.73	132.02	121.70
12	AO	65	THR	N-CA-C	5.73	118.11	109.23
24	A0	60	PHE	N-CA-C	5.72	117.77	109.07
11	AN	33	LEU	N-CA-C	-5.71	105.14	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	2065	C	O5'-P-OP2	5.71	125.13	108.00
19	AV	83	ARG	CA-C-N	-5.71	114.95	123.00
19	AV	83	ARG	C-N-CA	-5.71	114.95	123.00
5	CE	21	VAL	CA-C-N	5.70	125.46	119.76
5	CE	21	VAL	C-N-CA	5.70	125.46	119.76
13	CP	42	SER	N-CA-C	-5.70	101.86	110.24
1	CA	1300	U	C2'-C3'-O3'	5.69	118.03	109.50
1	AA	2426	G	O5'-P-OP1	5.69	125.07	108.00
1	AA	1298	G	OP2-P-O3'	5.69	125.06	108.00
43	BJ	52	GLY	CA-C-N	5.69	125.39	119.82
43	BJ	52	GLY	C-N-CA	5.69	125.39	119.82
9	CK	81	VAL	N-CA-C	5.68	116.34	108.84
13	AP	146	VAL	CB-CA-C	-5.68	104.14	111.53
10	CL	85	GLU	N-CA-C	-5.68	107.59	114.75
57	DZ	394	ALA	CA-C-N	-5.68	114.11	119.85
57	DZ	394	ALA	C-N-CA	-5.68	114.11	119.85
1	AA	2701	U	C2'-C3'-O3'	5.68	118.02	109.50
1	AA	2024	G	OP2-P-O3'	-5.68	90.97	108.00
7	AG	132	ASN	N-CA-C	5.67	117.64	108.34
6	CF	147	GLY	N-CA-C	-5.67	107.36	115.64
57	DZ	236	GLU	CA-C-N	5.66	126.92	119.84
57	DZ	236	GLU	C-N-CA	5.66	126.92	119.84
57	DZ	397	VAL	N-CA-C	5.66	116.22	110.05
5	AE	60	ASN	N-CA-C	5.64	117.61	110.33
11	AN	44	PRO	CA-C-N	-5.64	113.64	122.73
11	AN	44	PRO	C-N-CA	-5.64	113.64	122.73
23	AZ	80	ARG	N-CA-C	5.64	119.16	112.72
23	AZ	152	ALA	N-CA-C	-5.64	105.27	111.82
41	DH	103	VAL	N-CA-C	5.64	115.78	107.15
10	CL	29	GLN	N-CA-C	-5.64	106.45	113.38
17	CT	25	GLY	N-CA-C	-5.64	107.59	114.92
35	DB	193	ASP	CA-C-N	5.64	126.89	119.84
35	DB	193	ASP	C-N-CA	5.64	126.89	119.84
32	A8	21	LYS	CA-C-N	-5.63	115.83	122.93
32	A8	21	LYS	C-N-CA	-5.63	115.83	122.93
26	C2	68	ARG	N-CA-C	-5.63	107.04	114.31
11	AN	124	ALA	N-CA-C	-5.63	103.10	110.53
20	AW	111	HIS	N-CA-C	5.63	118.58	108.17
5	AE	139	GLY	N-CA-C	-5.63	103.95	112.84
45	DL	72	GLY	N-CA-C	5.63	118.90	111.70
5	AE	184	VAL	N-CA-C	-5.62	100.23	108.11
4	AD	126	GLN	N-CA-C	5.62	118.72	109.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	A0	23	VAL	CB-CA-C	-5.62	104.51	111.08
15	AR	77	ARG	N-CA-C	-5.61	105.06	111.07
30	A6	5	VAL	N-CA-C	5.61	116.67	111.45
16	AS	34	HIS	N-CA-C	5.61	117.77	109.69
4	CD	106	ILE	N-CA-CB	5.61	117.64	110.13
23	CZ	82	ARG	CA-C-N	5.60	125.53	119.76
23	CZ	82	ARG	C-N-CA	5.60	125.53	119.76
17	CT	97	ALA	N-CA-C	5.60	117.46	111.36
57	BZ	408	VAL	CB-CA-C	-5.59	104.78	110.88
12	CO	22	ILE	N-CA-C	-5.59	108.40	113.71
5	CE	141	ILE	CB-CA-C	-5.59	104.70	112.36
42	BI	127	LYS	N-CA-C	-5.59	101.64	109.96
10	AL	71	THR	CA-C-N	5.58	126.13	120.38
10	AL	71	THR	C-N-CA	5.58	126.13	120.38
4	AD	35	LYS	CB-CA-C	5.58	118.31	109.55
10	CL	98	ARG	N-CA-C	5.57	116.74	108.60
14	CQ	28	ALA	N-CA-C	5.57	122.67	110.80
10	CL	78	ILE	N-CA-C	-5.57	107.30	112.43
57	DZ	-10	ARG	N-CA-C	-5.57	105.74	112.54
57	BZ	577	SER	N-CA-C	5.57	117.72	110.43
5	CE	7	VAL	N-CA-C	5.56	116.29	108.17
1	AA	1080	G	OP1-P-OP2	5.56	136.28	119.60
8	CH	101	ARG	N-CA-C	-5.55	106.36	113.02
1	AA	2418	U	O5'-P-OP1	-5.55	91.36	108.00
52	BS	41	VAL	CA-C-N	5.55	126.77	119.84
52	BS	41	VAL	C-N-CA	5.55	126.77	119.84
1	AA	873	U	OP1-P-O3'	-5.54	91.37	108.00
13	AP	130	PHE	N-CA-C	-5.54	100.98	109.41
31	A7	43	THR	CA-C-N	-5.54	114.06	119.76
31	A7	43	THR	C-N-CA	-5.54	114.06	119.76
35	BB	25	ASN	N-CA-C	-5.53	102.68	109.65
57	BZ	322	VAL	N-CA-C	5.53	119.46	113.43
15	AR	28	LEU	N-CA-C	-5.53	104.66	111.40
17	AT	52	ILE	CB-CA-C	-5.53	104.15	110.73
19	AV	53	GLU	N-CA-C	5.53	116.98	111.07
1	AA	756	U	OP1-P-O3'	-5.52	91.44	108.00
12	AO	8	LEU	N-CA-C	5.52	118.46	109.24
5	AE	118	LYS	N-CA-C	5.51	117.73	111.11
7	AG	6	ALA	N-CA-C	5.51	117.73	111.11
23	CZ	100	VAL	CA-C-N	5.51	126.29	120.11
23	CZ	100	VAL	C-N-CA	5.51	126.29	120.11
7	AG	120	LEU	N-CA-C	5.51	118.21	110.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	BA	687	A	C2'-C3'-O3'	5.50	117.76	109.50
18	AU	3	ARG	NE-CZ-NH1	-5.50	116.00	121.50
11	AN	114	ARG	N-CA-C	-5.50	105.44	111.82
21	CX	69	TYR	N-CA-C	5.49	118.23	107.57
9	AK	124	ALA	N-CA-C	5.49	115.27	108.19
6	CF	194	MET	N-CA-C	5.48	118.34	109.40
31	C7	43	THR	CB-CA-C	5.48	117.37	108.87
37	DD	6	GLY	CA-C-N	5.48	126.69	119.84
37	DD	6	GLY	C-N-CA	5.48	126.69	119.84
9	AK	130	THR	N-CA-C	-5.48	105.23	113.89
4	CD	91	ARG	N-CA-C	-5.48	102.65	110.59
49	BP	3	LYS	N-CA-C	5.48	117.51	109.24
1	AA	1154	U	C4'-C3'-O3'	5.47	117.61	109.40
57	BZ	-63	ILE	CB-CA-C	-5.47	104.41	111.53
25	A1	57	GLU	N-CA-C	5.47	117.44	108.52
57	DZ	-45	LYS	CA-C-N	5.47	126.68	119.84
57	DZ	-45	LYS	C-N-CA	5.47	126.68	119.84
19	AV	99	ILE	CB-CA-C	-5.47	103.66	111.31
22	CY	2	ARG	N-CA-C	5.47	116.97	110.19
11	AN	86	PRO	CA-C-O	-5.46	115.19	121.86
50	DQ	85	VAL	CB-CA-C	-5.46	103.70	112.16
57	DZ	419	ALA	N-CA-C	-5.46	106.60	113.20
25	A1	18	ILE	N-CA-C	5.45	115.95	107.99
1	CA	1790	C	O3'-P-O5'	-5.45	95.82	104.00
20	AW	19	LEU	N-CA-C	-5.45	105.34	111.28
1	AA	2518	U	OP1-P-O3'	-5.45	91.67	108.00
40	BG	78	ARG	N-CA-C	5.45	117.25	109.14
16	CS	87	PHE	N-CA-C	5.45	117.58	107.99
1	AA	2220	A	O3'-P-O5'	-5.44	95.84	104.00
44	DK	95	ILE	CB-CA-C	-5.44	105.01	111.81
20	CW	79	GLY	CA-C-N	5.43	126.63	119.84
20	CW	79	GLY	C-N-CA	5.43	126.63	119.84
12	AO	59	LYS	N-CA-C	-5.43	101.32	109.95
23	AZ	20	ARG	N-CA-C	-5.42	105.37	111.28
4	AD	271	ILE	N-CA-C	-5.42	107.15	111.81
31	C7	42	LEU	N-CA-C	-5.42	107.21	113.88
57	DZ	105	ILE	N-CA-C	5.42	116.38	108.58
51	BR	22	VAL	N-CA-C	5.42	116.19	110.72
1	AA	1660	A	OP1-P-O3'	-5.41	91.76	108.00
1	AA	1817	A	OP2-P-O3'	-5.41	91.76	108.00
25	A1	21	ARG	N-CA-C	-5.41	100.84	109.07
43	BJ	5	ARG	N-CA-C	5.41	117.91	108.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
39	BF	11	ASN	CA-C-N	5.41	125.23	119.28
39	BF	11	ASN	C-N-CA	5.41	125.23	119.28
1	AA	1704	C	OP1-P-O3'	-5.41	91.78	108.00
1	AA	1813	C	O5'-P-OP1	-5.41	91.78	108.00
49	BP	40	ASP	CA-C-N	5.41	126.60	119.84
49	BP	40	ASP	C-N-CA	5.41	126.60	119.84
4	CD	212	SER	N-CA-C	-5.41	105.39	111.28
22	AY	72	VAL	N-CA-CB	-5.39	102.59	111.44
15	CR	46	GLY	N-CA-C	5.39	119.41	112.83
44	DK	75	TYR	N-CA-C	-5.38	106.76	113.38
21	CX	34	ALA	N-CA-C	5.38	117.48	109.25
6	CF	151	SER	N-CA-C	-5.37	106.50	113.16
35	BB	160	ASP	N-CA-C	-5.37	106.11	113.30
35	DB	23	ARG	N-CA-C	-5.37	104.95	112.25
19	AV	5	VAL	CB-CA-C	-5.37	104.40	111.70
18	AU	51	LYS	N-CA-C	-5.37	104.67	111.11
15	AR	72	ASP	N-CA-C	5.36	117.47	108.73
29	A5	15	ARG	NE-CZ-NH1	-5.36	116.14	121.50
13	CP	47	ASP	CA-C-N	5.36	125.00	119.05
13	CP	47	ASP	C-N-CA	5.36	125.00	119.05
1	CA	191	A	OP1-P-O3'	-5.36	91.92	108.00
1	CA	2608	G	O5'-P-OP2	-5.36	91.93	108.00
10	CL	72	PRO	N-CA-C	5.35	117.23	110.70
16	CS	37	ALA	N-CA-C	5.35	116.14	107.32
40	BG	134	ALA	N-CA-C	-5.35	105.37	111.14
35	BB	108	ILE	N-CA-C	-5.34	105.51	110.53
17	CT	70	VAL	CB-CA-C	-5.34	104.04	110.99
14	AQ	86	GLY	CA-C-O	-5.34	118.55	122.23
23	CZ	88	PHE	N-CA-C	5.34	117.01	108.41
7	AG	160	VAL	CB-CA-C	-5.33	102.89	110.83
27	C3	35	ARG	N-CA-C	5.33	117.49	109.23
4	CD	100	GLY	N-CA-C	-5.32	108.28	115.36
57	BZ	368	GLU	N-CA-C	5.32	117.16	109.07
17	CT	128	GLU	N-CA-C	-5.32	106.09	112.58
38	DE	115	VAL	N-CA-C	-5.31	102.72	109.58
17	AT	53	ARG	CB-CA-C	-5.31	101.58	110.29
1	AA	2399	U	OP1-P-O3'	-5.31	92.07	108.00
1	AA	470	C	O5'-P-OP1	5.31	123.92	108.00
1	AA	2220	A	OP1-P-O3'	5.31	123.92	108.00
28	A4	5	ILE	CB-CA-C	-5.30	104.62	111.20
57	DZ	130	VAL	CA-C-N	5.30	125.06	119.76
57	DZ	130	VAL	C-N-CA	5.30	125.06	119.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	DZ	260	LEU	N-CA-C	5.30	115.35	107.88
57	DZ	379	GLY	N-CA-C	-5.30	104.46	112.84
7	CG	48	GLU	N-CA-C	-5.30	106.40	112.92
4	AD	177	LEU	CA-C-N	-5.30	114.21	119.56
4	AD	177	LEU	C-N-CA	-5.30	114.21	119.56
7	AG	40	ASN	N-CA-C	5.30	116.08	107.23
10	CL	23	VAL	N-CA-C	-5.30	106.26	111.77
57	DZ	88	VAL	N-CA-C	-5.29	98.34	109.34
29	A5	16	ARG	N-CA-C	-5.29	105.41	111.07
47	BN	7	ILE	N-CA-C	-5.28	105.39	110.72
10	AL	36	GLU	N-CA-C	-5.28	106.84	113.28
5	CE	125	GLY	CA-C-N	5.28	125.56	119.92
5	CE	125	GLY	C-N-CA	5.28	125.56	119.92
15	AR	35	THR	CB-CA-C	-5.27	101.65	110.19
38	DE	35	GLY	N-CA-C	5.27	118.10	111.09
23	AZ	100	VAL	CA-C-N	5.27	126.43	119.84
23	AZ	100	VAL	C-N-CA	5.27	126.43	119.84
1	AA	1249	A	O4'-C1'-N9	5.27	116.10	108.20
44	BK	48	ILE	N-CA-C	-5.26	102.79	109.58
9	AK	6	ASN	N-CA-C	-5.26	106.83	113.20
1	AA	1700	G	O3'-P-O5'	5.26	111.89	104.00
6	CF	170	LEU	CA-C-N	5.25	126.41	119.84
6	CF	170	LEU	C-N-CA	5.25	126.41	119.84
1	AA	2641	A	N9-C1'-C2'	5.25	121.88	114.00
1	AA	873	U	OP2-P-O3'	5.25	123.75	108.00
20	AW	100	THR	N-CA-CB	-5.25	102.24	110.69
37	BD	51	PRO	N-CA-C	5.25	118.82	110.21
1	AA	1855	G	OP2-P-O3'	5.25	123.74	108.00
1	AA	786	G	OP2-P-O3'	-5.24	92.27	108.00
10	AL	112	MET	CA-C-N	-5.24	113.29	119.84
10	AL	112	MET	C-N-CA	-5.24	113.29	119.84
30	A6	7	ILE	N-CA-C	5.24	117.17	108.99
4	CD	237	GLU	CA-C-N	-5.24	117.21	123.08
4	CD	237	GLU	C-N-CA	-5.24	117.21	123.08
4	AD	106	ILE	N-CA-CB	5.24	118.31	110.13
12	AO	3	GLN	CA-C-N	-5.24	114.38	119.78
12	AO	3	GLN	C-N-CA	-5.24	114.38	119.78
4	AD	174	ILE	CB-CA-C	-5.24	103.71	110.84
23	CZ	160	GLY	CA-C-N	5.24	131.13	121.70
23	CZ	160	GLY	C-N-CA	5.24	131.13	121.70
15	AR	74	LYS	N-CA-C	-5.24	104.63	111.02
13	CP	144	GLU	CA-C-N	5.24	125.40	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	CP	144	GLU	C-N-CA	5.24	125.40	119.90
6	AF	26	ALA	N-CA-C	-5.24	105.57	111.28
23	CZ	175	VAL	CA-C-N	5.24	125.77	120.38
23	CZ	175	VAL	C-N-CA	5.24	125.77	120.38
48	DO	43	LEU	N-CA-C	-5.24	105.63	112.23
1	AA	990	A	N9-C1'-C2'	5.23	121.85	114.00
1	AA	2331	G	N9-C1'-C2'	5.23	121.85	114.00
57	DZ	658	ASP	N-CA-C	-5.23	105.64	112.23
5	AE	21	VAL	CA-C-N	5.23	124.99	119.76
5	AE	21	VAL	C-N-CA	5.23	124.99	119.76
18	CU	97	ASP	N-CA-C	-5.23	105.50	111.14
13	AP	55	ARG	N-CA-C	-5.22	102.75	110.48
17	CT	54	ARG	N-CA-C	5.22	118.07	109.76
57	DZ	485	GLU	N-CA-C	5.22	117.13	109.24
3	AC	201	LYS	N-CA-C	-5.22	102.88	110.08
7	CG	30	GLU	CA-C-N	-5.22	118.83	122.59
7	CG	30	GLU	C-N-CA	-5.22	118.83	122.59
32	C8	13	ARG	CA-C-N	-5.22	116.68	122.27
32	C8	13	ARG	C-N-CA	-5.22	116.68	122.27
57	DZ	-31	ALA	N-CA-C	5.22	115.13	108.24
22	AY	79	CYS	N-CA-C	5.22	119.65	113.28
3	CC	201	LYS	N-CA-C	-5.21	102.89	110.08
3	AC	68	GLY	N-CA-C	5.21	125.53	113.18
14	CQ	132	VAL	N-CA-C	5.21	116.41	108.80
1	AA	612	C	O5'-P-OP2	-5.21	92.37	108.00
37	BD	141	ARG	CA-C-N	5.21	126.35	119.84
37	BD	141	ARG	C-N-CA	5.21	126.35	119.84
11	CN	78	TYR	CA-C-N	-5.21	114.43	119.90
11	CN	78	TYR	C-N-CA	-5.21	114.43	119.90
45	DL	55	VAL	N-CA-C	5.21	115.87	108.42
42	BI	41	VAL	N-CA-C	5.21	120.17	109.34
12	AO	90	GLN	N-CA-C	-5.21	107.10	112.93
6	AF	63	LYS	N-CA-C	-5.20	102.16	109.96
20	AW	74	ALA	CA-C-N	-5.20	112.76	121.75
20	AW	74	ALA	C-N-CA	-5.20	112.76	121.75
3	CC	68	GLY	N-CA-C	5.20	125.50	113.18
37	BD	175	SER	N-CA-C	5.19	117.10	107.60
1	AA	2610	A	OP1-P-O3'	-5.19	92.44	108.00
4	AD	249	PRO	N-CA-C	-5.19	107.10	113.84
36	BC	48	TYR	N-CA-C	-5.19	106.21	112.54
1	AA	184	A	OP1-P-O3'	-5.18	92.45	108.00
9	AK	69	PRO	N-CA-C	-5.18	105.94	114.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	DZ	118	SER	N-CA-C	-5.18	106.05	112.38
1	AA	2621	U	O5'-C5'-C4'	-5.18	103.92	111.70
8	AH	19	VAL	N-CA-C	5.18	116.26	109.21
33	A9	23	VAL	CB-CA-C	-5.18	104.69	110.96
57	BZ	176	GLY	N-CA-C	5.18	120.73	110.83
8	CH	121	ILE	N-CA-C	5.18	115.58	108.12
18	CU	42	ALA	N-CA-C	-5.18	105.63	111.28
12	AO	81	ASP	N-CA-CB	-5.18	101.90	111.53
17	CT	124	ASP	N-CA-C	-5.18	106.74	113.16
1	CA	2451	A	P-O3'-C3'	-5.18	112.43	120.20
11	AN	17	ASP	N-CA-C	-5.17	101.28	109.96
28	A4	51	ASP	N-CA-C	5.17	117.03	107.73
57	BZ	169	GLY	N-CA-C	5.17	125.43	113.18
50	DQ	63	ARG	CA-C-N	5.17	125.17	119.90
50	DQ	63	ARG	C-N-CA	5.17	125.17	119.90
14	AQ	12	GLN	N-CA-C	5.17	117.66	109.50
1	AA	2042	A	C4'-C3'-O3'	-5.16	105.26	113.00
25	A1	42	GLN	N-CA-C	-5.16	100.49	108.90
9	AK	116	ILE	N-CA-C	5.16	114.66	108.06
44	BK	92	GLU	N-CA-C	-5.16	105.66	111.28
57	BZ	472	VAL	N-CA-C	5.16	120.07	109.34
14	CQ	3	MET	CA-C-N	5.16	125.15	119.89
14	CQ	3	MET	C-N-CA	5.16	125.15	119.89
26	C2	64	LEU	N-CA-C	-5.16	105.66	111.28
24	A0	30	VAL	CB-CA-C	-5.16	104.72	110.96
35	BB	186	ALA	N-CA-C	5.15	117.56	108.75
6	AF	69	HIS	N-CA-C	5.15	121.55	113.72
48	DO	25	THR	N-CA-C	-5.15	105.58	111.14
6	AF	74	ARG	CB-CA-C	-5.15	100.85	109.65
17	CT	16	ARG	N-CA-C	5.15	116.12	108.86
12	CO	24	VAL	CB-CA-C	5.14	117.67	110.99
17	CT	58	ASN	CA-C-N	-5.14	112.99	120.75
17	CT	58	ASN	C-N-CA	-5.14	112.99	120.75
1	AA	1486	G	O5'-P-OP2	-5.13	92.60	108.00
1	AA	2902	G	C4'-C3'-O3'	5.13	117.10	109.40
34	BA	797	C	O5'-P-OP1	-5.13	92.60	108.00
37	DD	39	PRO	N-CA-C	5.13	116.07	110.58
1	AA	1686	U	O5'-P-OP2	-5.13	92.61	108.00
1	AA	2325	C	OP2-P-O3'	5.13	123.39	108.00
25	A1	59	THR	N-CA-C	5.13	116.78	108.26
5	CE	168	MET	N-CA-C	5.13	117.47	109.52
25	C1	12	PRO	CA-C-N	-5.13	116.69	122.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	C1	12	PRO	C-N-CA	-5.13	116.69	122.48
22	AY	75	ILE	CB-CA-C	-5.12	103.96	110.98
6	AF	79	GLY	N-CA-C	-5.12	107.67	115.66
13	AP	14	LYS	N-CA-C	5.12	117.29	110.53
23	AZ	94	GLU	CA-C-N	-5.12	114.96	120.03
23	AZ	94	GLU	C-N-CA	-5.12	114.96	120.03
49	BP	65	GLN	CA-C-N	-5.12	113.44	119.84
49	BP	65	GLN	C-N-CA	-5.12	113.44	119.84
14	CQ	22	LYS	N-CA-C	-5.12	104.78	111.02
41	BH	12	ARG	N-CA-C	-5.11	105.60	111.07
41	BH	48	TYR	N-CA-C	5.11	116.61	108.79
23	AZ	61	LEU	CA-C-N	5.11	124.72	119.05
23	AZ	61	LEU	C-N-CA	5.11	124.72	119.05
17	AT	95	ARG	NE-CZ-NH1	-5.11	116.39	121.50
42	BI	3	GLN	N-CA-C	5.11	116.84	109.07
5	CE	203	LYS	N-CA-C	5.11	116.85	108.52
14	AQ	85	LYS	CG-CD-CE	5.11	123.05	111.30
13	CP	61	ARG	N-CA-C	-5.11	106.90	113.23
37	DD	156	GLU	N-CA-C	5.10	116.65	111.14
5	AE	119	ARG	CB-CA-C	-5.10	103.11	110.96
19	AV	4	ILE	N-CA-C	-5.10	100.41	107.80
45	BL	33	ARG	N-CA-C	5.10	117.75	109.24
8	CH	45	VAL	N-CA-C	5.10	114.63	106.88
57	DZ	-11	LYS	N-CA-C	-5.10	107.73	114.31
35	DB	171	ALA	N-CA-C	-5.09	106.90	113.01
5	CE	84	PHE	CA-C-N	-5.09	116.58	123.46
5	CE	84	PHE	C-N-CA	-5.09	116.58	123.46
5	AE	14	ILE	N-CA-C	-5.09	102.32	108.53
57	DZ	-23	LEU	N-CA-C	-5.09	106.62	114.16
1	AA	1042	A	O5'-P-OP2	5.09	123.27	108.00
8	AH	76	VAL	N-CA-C	-5.09	105.53	110.42
9	AK	76	GLY	CA-C-N	5.08	126.19	119.84
9	AK	76	GLY	C-N-CA	5.08	126.19	119.84
20	CW	20	VAL	N-CA-C	5.08	115.30	110.42
1	AA	1249	A	N9-C1'-C2'	5.08	121.62	114.00
57	BZ	608	VAL	N-CA-C	5.08	115.28	108.17
37	BD	184	LYS	N-CA-C	5.08	116.96	108.99
48	BO	18	PHE	CA-C-N	5.07	126.18	119.84
48	BO	18	PHE	C-N-CA	5.07	126.18	119.84
52	DS	41	VAL	CA-C-N	5.07	126.18	119.84
52	DS	41	VAL	C-N-CA	5.07	126.18	119.84
1	AA	2108	U	OP1-P-O3'	-5.07	92.79	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	AW	79	GLY	CA-C-N	5.07	125.00	119.78
20	AW	79	GLY	C-N-CA	5.07	125.00	119.78
34	BA	816	A	O5'-P-OP1	5.07	123.21	108.00
12	CO	36	GLY	N-CA-C	-5.07	108.33	114.92
5	CE	104	VAL	N-CA-C	5.07	115.61	108.36
25	A1	39	LYS	N-CA-C	5.07	117.24	110.35
16	CS	65	VAL	CB-CA-C	-5.07	105.48	111.81
5	AE	146	THR	C-N-CD	-5.06	109.46	120.60
41	BH	134	ILE	CB-CA-C	-5.06	105.49	111.97
4	AD	87	ASN	N-CA-C	5.06	119.17	113.15
11	AN	6	PRO	CB-CA-C	-5.06	104.91	111.39
34	BA	913	A	P-O3'-C3'	5.06	127.79	120.20
19	AV	52	VAL	N-CA-C	5.06	115.57	108.89
8	CH	54	ARG	CA-C-N	5.06	126.16	119.84
8	CH	54	ARG	C-N-CA	5.06	126.16	119.84
1	AA	1694	G	O5'-P-OP1	-5.05	92.85	108.00
16	AS	53	SER	N-CA-C	-5.05	105.42	111.03
12	CO	86	ILE	CB-CA-C	-5.05	103.59	111.26
36	DC	134	ILE	N-CA-C	5.05	115.27	110.42
45	DL	6	THR	N-CA-C	-5.05	104.20	110.41
1	AA	2048	C	OP1-P-O3'	-5.04	92.86	108.00
57	BZ	272	LEU	N-CA-C	-5.04	105.49	111.69
57	DZ	168	ILE	N-CA-C	5.04	113.64	106.53
54	DU	13	ILE	CB-CA-C	-5.04	105.42	112.02
3	AC	46	ALA	CA-C-O	5.04	120.86	117.94
1	AA	553	A	N1-C6-N6	5.04	133.71	118.60
16	AS	56	LEU	N-CA-C	-5.04	105.84	112.94
1	AA	1156	G	P-O3'-C3'	-5.04	112.65	120.20
23	AZ	86	VAL	CB-CA-C	-5.04	102.63	110.69
35	DB	173	ALA	N-CA-C	-5.04	105.68	111.07
1	CA	1998	G	O5'-P-OP2	-5.03	92.90	108.00
53	DT	12	ALA	N-CA-C	-5.03	105.89	112.23
7	CG	61	ALA	N-CA-C	-5.03	106.99	113.23
33	C9	4	ARG	N-CA-C	5.03	114.47	107.73
35	BB	17	PHE	N-CA-C	5.03	121.51	110.80
57	DZ	655	TYR	N-CA-C	-5.03	106.32	112.90
10	AL	46	ALA	N-CA-C	-5.02	107.83	114.31
1	AA	495	G	O3'-P-O5'	5.02	111.53	104.00
5	AE	190	GLY	N-CA-C	5.02	122.57	112.34
18	CU	34	LYS	N-CA-C	5.02	117.40	111.33
37	DD	4	TYR	N-CA-C	5.02	117.13	111.11
38	BE	127	ASN	CA-C-N	5.01	126.11	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	BE	127	ASN	C-N-CA	5.01	126.11	119.84
41	DH	88	LYS	CA-C-N	-5.01	114.50	119.56
41	DH	88	LYS	C-N-CA	-5.01	114.50	119.56
46	BM	92	HIS	N-CA-C	-5.01	107.30	113.41
1	AA	2065	C	O5'-P-OP1	-5.01	92.97	108.00
4	CD	215	LEU	N-CA-C	-5.01	107.12	113.18
23	AZ	47	VAL	CB-CA-C	-5.01	105.41	111.87
1	AA	1033	G	OP1-P-OP2	-5.00	104.59	119.60
19	AV	72	VAL	CA-C-N	-5.00	114.95	122.81
19	AV	72	VAL	C-N-CA	-5.00	114.95	122.81
43	DJ	98	ILE	N-CA-C	5.00	115.12	108.27

There are no chirality outliers.

All (15) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
24	A0	11	ARG	Peptide
25	A1	2	SER	Peptide
28	A4	52	THR	Peptide
19	AV	54	GLY	Peptide
21	AX	93	GLU	Peptide
23	AZ	176	PRO	Peptide
53	BT	9	ASN	Peptide
57	BZ	404	VAL	Peptide
1	CA	512	G	Sidechain
17	CT	27	THR	Peptide
21	CX	93	GLU	Peptide
53	DT	9	ASN	Peptide
57	DZ	159	ALA	Peptide
57	DZ	87	HIS	Peptide
57	DZ	91	THR	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	61426	0	30937	937	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	CA	61337	0	30928	1114	0
2	AB	2573	0	1306	39	0
2	CB	2573	0	1306	50	0
3	AC	1063	0	1089	168	0
3	CC	1063	0	1091	209	0
4	AD	2136	0	2218	77	0
4	CD	2142	0	2229	75	0
5	AE	1559	0	1618	48	0
5	CE	1559	0	1618	95	0
6	AF	1584	0	1625	64	0
6	CF	1580	0	1619	69	0
7	AG	1425	0	1443	72	0
7	CG	1424	0	1434	63	0
8	AH	1330	0	1407	41	0
8	CH	1330	0	1407	52	0
9	AK	641	0	309	13	0
9	CK	641	0	309	13	0
10	AL	1025	0	1066	58	0
10	CL	1025	0	1066	51	0
11	AN	1117	0	1184	33	0
11	CN	1117	0	1184	45	0
12	AO	933	0	996	35	0
12	CO	933	0	996	39	0
13	AP	1139	0	1223	50	0
13	CP	1135	0	1212	48	0
14	AQ	1122	0	1179	37	0
14	CQ	1122	0	1179	60	0
15	AR	968	0	1033	26	0
15	CR	968	0	1033	49	0
16	AS	877	0	938	31	0
16	CS	870	0	923	45	0
17	AT	1091	0	1151	36	0
17	CT	1083	0	1136	56	0
18	AU	959	0	1019	30	0
18	CU	959	0	1018	38	0
19	AV	771	0	829	25	0
19	CV	771	0	830	17	0
20	AW	886	0	940	27	0
20	CW	886	0	940	32	0
21	AX	750	0	814	29	0
21	CX	750	0	814	29	0
22	AY	806	0	881	24	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	CY	806	0	881	39	0
23	AZ	1451	0	1457	56	0
23	CZ	1451	0	1457	68	0
24	A0	653	0	674	29	0
24	C0	653	0	674	22	0
25	A1	755	0	826	25	0
25	C1	755	0	826	23	0
26	A2	588	0	643	15	0
26	C2	588	0	643	20	0
27	A3	469	0	518	14	0
27	C3	464	0	514	11	0
28	A4	558	0	547	24	0
28	C4	532	0	505	14	0
29	A5	455	0	465	18	0
29	C5	455	0	465	20	0
30	A6	453	0	473	19	0
30	C6	449	0	469	12	0
31	A7	418	0	467	17	0
31	C7	418	0	467	18	0
32	A8	517	0	582	22	0
32	C8	517	0	582	30	0
33	A9	307	0	335	10	0
33	C9	307	0	335	15	0
34	BA	32141	0	16224	677	0
34	DA	32268	0	16287	694	0
35	BB	1846	0	1867	106	0
35	DB	1825	0	1828	85	0
36	BC	1552	0	1546	61	0
36	DC	1544	0	1524	64	0
37	BD	1659	0	1678	96	0
37	DD	1678	0	1720	93	0
38	BE	1129	0	1185	74	0
38	DE	1133	0	1191	66	0
39	BF	812	0	804	27	0
39	DF	820	0	814	23	0
40	BG	1231	0	1238	44	0
40	DG	1235	0	1249	32	0
41	BH	1088	0	1126	65	0
41	DH	1088	0	1126	37	0
42	BI	986	0	995	42	0
42	DI	978	0	966	40	0
43	BJ	709	0	650	37	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
43	DJ	714	0	672	47	0
44	BK	833	0	836	32	0
44	DK	833	0	836	25	0
45	BL	930	0	980	37	0
45	DL	930	0	980	44	0
46	BM	923	0	970	30	0
46	DM	950	0	988	49	0
47	BN	492	0	529	31	0
47	DN	492	0	531	20	0
48	BO	728	0	760	30	0
48	DO	728	0	760	20	0
49	BP	681	0	697	52	0
49	DP	677	0	686	33	0
50	BQ	823	0	891	30	0
50	DQ	823	0	891	39	0
51	BR	555	0	618	23	0
51	DR	555	0	618	25	0
52	BS	661	0	675	35	0
52	DS	646	0	644	33	0
53	BT	728	0	798	37	0
53	DT	731	0	807	25	0
54	BU	199	0	208	5	0
54	DU	199	0	208	8	0
55	BV	148	0	76	6	0
55	DV	123	0	66	6	0
56	BW	1631	0	839	24	0
56	BY	1581	0	805	25	0
56	DW	1631	0	839	44	0
56	DY	1561	0	796	38	0
57	BZ	5690	0	5783	286	0
57	DZ	5690	0	5783	332	0
58	A0	3	0	0	0	0
58	A2	2	0	0	0	0
58	A4	1	0	0	0	0
58	A5	4	0	0	0	0
58	A6	1	0	0	0	0
58	A7	6	0	0	0	0
58	A8	2	0	0	0	0
58	A9	1	0	0	0	0
58	AA	815	0	0	0	0
58	AB	23	0	0	0	0
58	AD	12	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	AE	5	0	0	0	0
58	AF	8	0	0	0	0
58	AG	2	0	0	0	0
58	AH	2	0	0	0	0
58	AN	3	0	0	0	0
58	AO	1	0	0	0	0
58	AP	3	0	0	0	0
58	AQ	3	0	0	0	0
58	AR	2	0	0	0	0
58	AU	4	0	0	0	0
58	AV	6	0	0	0	0
58	AW	4	0	0	0	0
58	AX	1	0	0	0	0
58	AY	1	0	0	0	0
58	AZ	2	0	0	0	0
58	BA	213	0	0	0	0
58	BB	1	0	0	0	0
58	BD	1	0	0	0	0
58	BE	1	0	0	0	0
58	BF	1	0	0	0	0
58	BK	1	0	0	0	0
58	BL	2	0	0	0	0
58	BM	2	0	0	0	0
58	BN	1	0	0	0	0
58	BT	1	0	0	0	0
58	BV	1	0	0	0	0
58	BW	3	0	0	0	0
58	BZ	2	0	0	0	0
58	C3	1	0	0	0	0
58	C5	1	0	0	0	0
58	C7	1	0	0	0	0
58	C8	1	0	0	0	0
58	CA	664	0	0	0	0
58	CB	13	0	0	0	0
58	CD	3	0	0	0	0
58	CE	6	0	0	0	0
58	CF	5	0	0	0	0
58	CG	1	0	0	0	0
58	CN	1	0	0	0	0
58	CO	2	0	0	0	0
58	CP	3	0	0	0	0
58	CQ	5	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	CR	1	0	0	0	0
58	CU	1	0	0	0	0
58	CV	2	0	0	0	0
58	CW	1	0	0	0	0
58	CY	1	0	0	0	0
58	DA	168	0	0	0	0
58	DD	1	0	0	0	0
58	DE	2	0	0	0	0
58	DF	1	0	0	0	0
58	DJ	1	0	0	0	0
58	DK	1	0	0	0	0
58	DT	1	0	0	0	0
58	DW	3	0	0	0	0
58	DZ	2	0	0	0	0
59	A4	1	0	0	0	0
59	A5	1	0	0	0	0
59	A6	1	0	0	0	0
59	A9	1	0	0	0	0
59	AY	1	0	0	0	0
59	BN	1	0	0	0	0
59	C4	1	0	0	0	0
59	C5	1	0	0	0	0
59	C6	1	0	0	0	0
59	C9	1	0	0	0	0
59	CY	1	0	0	0	0
59	DN	1	0	0	0	0
60	BD	8	0	0	1	0
60	DD	8	0	0	2	0
61	BZ	37	0	47	11	0
61	DZ	37	0	47	17	0
62	BZ	28	0	12	5	0
62	DZ	28	0	12	9	0
63	A0	7	0	0	1	0
63	A1	3	0	0	0	0
63	A3	1	0	0	0	0
63	A5	2	0	0	0	0
63	A6	1	0	0	0	0
63	A7	3	0	0	2	0
63	A8	11	0	0	2	0
63	AA	1408	0	0	60	0
63	AB	36	0	0	1	0
63	AD	15	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
63	AE	19	0	0	5	0
63	AF	8	0	0	1	0
63	AG	3	0	0	1	0
63	AH	1	0	0	0	0
63	AN	2	0	0	1	0
63	AO	3	0	0	0	0
63	AP	15	0	0	0	0
63	AQ	3	0	0	0	0
63	AR	3	0	0	0	0
63	AS	1	0	0	0	0
63	AT	2	0	0	0	0
63	AU	6	0	0	0	0
63	AW	1	0	0	0	0
63	AX	2	0	0	0	0
63	AZ	1	0	0	0	0
63	BA	205	0	0	13	0
63	BD	3	0	0	0	0
63	BE	3	0	0	0	0
63	BJ	1	0	0	0	0
63	BL	2	0	0	0	0
63	BM	1	0	0	0	0
63	BO	1	0	0	0	0
63	BV	2	0	0	0	0
63	BW	1	0	0	0	0
63	BZ	3	0	0	0	0
63	C0	5	0	0	0	0
63	C1	3	0	0	0	0
63	C3	1	0	0	0	0
63	C5	1	0	0	0	0
63	C7	3	0	0	0	0
63	C8	3	0	0	1	0
63	CA	981	0	0	65	0
63	CB	9	0	0	0	0
63	CD	15	0	0	0	0
63	CE	9	0	0	1	0
63	CF	6	0	0	0	0
63	CP	13	0	0	3	0
63	CQ	1	0	0	0	0
63	CT	3	0	0	0	0
63	CU	4	0	0	1	0
63	CV	1	0	0	0	0
63	CW	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
63	CX	1	0	0	0	0
63	CY	1	0	0	0	0
63	DA	153	0	0	11	0
63	DE	2	0	0	0	0
63	DH	1	0	0	1	0
63	DJ	1	0	0	0	0
63	DK	2	0	0	0	0
63	DL	1	0	0	0	0
63	DP	1	0	0	0	0
63	DT	1	0	0	0	0
63	DY	1	0	0	0	0
63	DZ	2	0	0	0	0
All	All	310279	0	209988	7477	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 15.

All (7477) 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)
1:AA:1891:G:C5'	3:AC:206:LYS:CG	1.80	1.55
1:AA:1891:G:H5"	3:AC:206:LYS:CG	1.26	1.54
1:AA:1891:G:C5'	3:AC:206:LYS:HG3	1.40	1.40
1:CA:2128:C:H5"	3:CC:219:MET:CE	1.55	1.37
1:AA:2143:G:N2	3:AC:169:THR:OG1	1.57	1.36
1:CA:2176:A:H4'	3:CC:45:HIS:CD2	1.62	1.32
1:AA:1891:G:H5'	3:AC:206:LYS:CD	1.61	1.30
1:CA:2121:G:N2	3:CC:169:THR:OG1	1.63	1.26
1:CA:2121:G:O2'	3:CC:168:LYS:HB3	1.17	1.26
1:CA:2177:C:H1'	3:CC:171:ALA:CB	1.64	1.25
1:CA:2128:C:C5'	3:CC:219:MET:HE1	1.64	1.25
1:CA:2177:C:H4'	3:CC:46:ALA:O	1.40	1.20
57:DZ:87:HIS:NE2	61:DZ:703:FUA:H283	1.55	1.20
1:CA:2176:A:O2'	3:CC:45:HIS:ND1	1.74	1.19
1:CA:1859:A:O2'	3:CC:206:LYS:HE3	1.42	1.18
1:AA:2143:G:O2'	3:AC:168:LYS:HD3	1.43	1.16
1:CA:2121:G:C1'	3:CC:168:LYS:HD3	1.75	1.16
1:CA:2121:G:H1'	3:CC:168:LYS:CD	1.74	1.16
1:AA:2143:G:O2'	3:AC:168:LYS:HB3	1.48	1.14
46:DM:123:ALA:HB3	57:DZ:573:HIS:HB2	1.31	1.12
1:CA:2177:C:H1'	3:CC:171:ALA:HB1	1.32	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1891:G:H5'	3:AC:206:LYS:HD2	1.12	1.10
1:AA:1891:G:C5'	3:AC:206:LYS:CD	2.21	1.10
1:AA:1891:G:H5"	3:AC:206:LYS:HG2	1.25	1.09
1:AA:2143:G:C2'	3:AC:168:LYS:HD3	1.79	1.09
61:BZ:703:FUA:H5	61:BZ:703:FUA:H202	1.29	1.08
1:CA:2121:G:O2'	3:CC:168:LYS:CB	2.02	1.07
1:CA:2176:A:O2'	3:CC:45:HIS:CG	2.06	1.07
61:DZ:703:FUA:H202	61:DZ:703:FUA:H5	1.29	1.06
1:AA:1891:G:C4'	3:AC:206:LYS:HG3	1.84	1.06
1:AA:1891:G:C5'	3:AC:206:LYS:HD2	1.85	1.05
17:CT:54:ARG:HA	17:CT:59:THR:HB	1.33	1.05
1:CA:1859:A:H2'	3:CC:206:LYS:CD	1.85	1.05
1:CA:1859:A:H2'	3:CC:206:LYS:HD2	1.09	1.05
1:CA:2176:A:O2'	3:CC:45:HIS:CE1	2.09	1.04
1:CA:1861:G:P	3:CC:206:LYS:HA	1.98	1.04
1:CA:1798:U:H5'	4:CD:259:THR:HG22	1.35	1.03
1:CA:2121:G:C1'	3:CC:168:LYS:CD	2.34	1.02
1:CA:2177:C:H1'	3:CC:171:ALA:HB2	1.37	1.02
57:DZ:160:ARG:NH1	57:DZ:256:THR:OG1	1.93	1.01
1:CA:1860:G:H5'	3:CC:206:LYS:C	1.60	1.01
1:CA:1859:A:C2'	3:CC:206:LYS:HD2	1.92	0.99
35:DB:185:ILE:HG22	35:DB:199:TYR:HB2	1.40	0.99
1:AA:2331:G:H22	16:AS:3:ARG:HG2	1.26	0.98
1:CA:2124:G:H4'	3:CC:175:PRO:HG3	1.44	0.98
21:AX:31:HIS:HD2	21:AX:33:LYS:H	1.09	0.97
4:CD:60:ARG:HD3	4:CD:86:PRO:HB2	1.45	0.97
1:AA:2143:G:O2'	3:AC:168:LYS:CD	2.13	0.97
1:AA:9:U:H3	1:AA:2641:A:H2	1.06	0.96
1:CA:2176:A:C4'	3:CC:45:HIS:CD2	2.48	0.96
57:BZ:644:ARG:HB2	57:BZ:644:ARG:HH11	1.29	0.96
1:CA:2132:U:H1'	3:CC:6:LYS:HB3	1.48	0.95
1:AA:1219:A:H1'	1:AA:1220:U:H5"	1.46	0.95
4:AD:148:GLU:HB2	4:AD:151:LYS:HD2	1.49	0.95
1:CA:2121:G:H1'	3:CC:168:LYS:CE	1.97	0.95
35:BB:16:HIS:HB2	35:BB:204:ASN:HB3	1.48	0.94
1:AA:1891:G:H5'	3:AC:206:LYS:CG	1.77	0.93
57:DZ:191:ASP:OD1	57:DZ:267:LYS:NZ	2.02	0.93
34:DA:396:G:OP1	57:DZ:349:LYS:NZ	2.01	0.93
1:AA:1736:A:H62	1:AA:1745:A:H2	1.17	0.92
1:AA:2459:G:OP2	63:AA:3901:HOH:O	1.87	0.92
1:AA:1154:U:HO2'	1:AA:1155:C:H6	0.97	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2206:G:H3'	1:CA:2207:G:C8	2.05	0.92
1:AA:2143:G:O2'	3:AC:168:LYS:CB	2.17	0.92
31:A7:24:THR:HG22	31:A7:27:GLY:H	1.32	0.92
1:CA:1861:G:OP2	3:CC:206:LYS:HA	1.69	0.92
1:CA:1782:C:OP1	63:CA:3701:HOH:O	1.88	0.91
1:AA:1829:U:H5'	4:AD:259:THR:HG22	1.51	0.91
14:CQ:110:THR:HG23	14:CQ:113:GLN:HB2	1.52	0.91
1:CA:1019:U:HO2'	1:CA:1021:A:H2	0.98	0.91
53:DT:57:ARG:HH22	53:DT:100:ILE:HD12	1.33	0.91
57:BZ:210:ARG:HB2	57:BZ:210:ARG:HH11	1.35	0.91
1:CA:1271:G:OP2	63:CA:3703:HOH:O	1.89	0.91
1:CA:1689:A:H62	1:CA:1698:A:H2	1.15	0.91
7:AG:41:GLN:NE2	7:AG:154:GLY:O	2.03	0.90
1:AA:1090:G:O2'	1:AA:1157:A:N6	2.04	0.90
57:BZ:13:ARG:HH12	57:BZ:247:ARG:HH12	0.96	0.90
1:CA:2177:C:O2	3:CC:171:ALA:CB	2.19	0.90
34:BA:559:A:OP1	38:BE:126:ARG:NH2	2.04	0.90
34:BA:160:A:N6	34:BA:345:C:OP2	2.02	0.90
1:AA:1891:G:H4'	3:AC:206:LYS:CD	2.01	0.90
57:DZ:169:GLY:H	57:DZ:170:ARG:NH1	1.69	0.90
37:DD:13:ARG:NH1	37:DD:38:TYR:O	2.05	0.89
37:BD:41:GLY:O	37:BD:43:HIS:N	2.05	0.89
1:CA:1021:A:H62	1:CA:1141:U:H3	1.18	0.89
20:AW:14:PRO:HG2	20:AW:78:GLU:HG2	1.53	0.89
37:BD:104:VAL:HG11	37:BD:146:ILE:HD13	1.55	0.89
1:AA:1100:A:H62	1:AA:1151:U:H3	1.20	0.89
3:CC:31:LYS:NZ	3:CC:181:PHE:O	2.06	0.89
1:CA:2128:C:H5"	3:CC:219:MET:HE1	0.90	0.89
1:CA:1332:G:OP1	63:CA:3702:HOH:O	1.89	0.89
1:CA:2788:C:OP1	5:CE:61:ARG:NH2	2.06	0.89
39:DF:87:ARG:HH11	39:DF:87:ARG:HG3	1.36	0.89
34:DA:1129:C:H42	34:DA:1143:G:H1	1.17	0.88
34:DA:922:G:H4'	38:DE:20:GLN:HA	1.53	0.88
1:CA:198:C:OP2	63:CA:3704:HOH:O	1.89	0.88
1:CA:2177:C:O2	3:CC:171:ALA:HB3	1.74	0.88
1:AA:535:C:OP1	63:AA:3902:HOH:O	1.90	0.88
57:BZ:114:VAL:HG23	57:BZ:152:THR:HB	1.56	0.87
1:CA:2046:G:H5'	29:C5:19:ARG:HA	1.55	0.87
1:AA:553:A:C8	1:AA:553:A:H3'	2.09	0.87
57:DZ:88:VAL:O	57:DZ:90:PHE:N	2.08	0.87
16:AS:52:SER:HB2	16:AS:55:ALA:H	1.38	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DY:7:A:H61	56:DY:66:U:H3	1.23	0.87
3:AC:31:LYS:NZ	3:AC:181:PHE:O	2.06	0.86
57:BZ:373:ASP:OD2	57:BZ:374:LEU:N	2.07	0.86
1:AA:1065:U:HO2'	1:AA:1067:A:H2	1.21	0.86
22:AY:102:CYS:SG	22:AY:103:GLY:N	2.44	0.86
24:C0:11:ARG:O	24:C0:14:ARG:NH2	2.09	0.86
37:BD:167:GLY:H	37:BD:168:ARG:HH12	1.20	0.86
1:CA:2177:C:C1'	3:CC:171:ALA:HB2	2.04	0.86
1:CA:2121:G:C1'	3:CC:168:LYS:CE	2.53	0.86
1:CA:2124:G:H4'	3:CC:175:PRO:CG	2.06	0.86
34:DA:1502:A:H2	34:DA:1505:G:H1	1.19	0.86
3:AC:52:PRO:HG2	3:AC:53:ARG:HD3	1.57	0.85
34:BA:560:U:H5'	34:BA:566:G:N2	1.91	0.85
57:DZ:169:GLY:HA3	57:DZ:174:PHE:HA	1.58	0.85
34:DA:959:A:O2'	34:DA:984:C:O2'	1.93	0.85
34:DA:1320:C:N3	52:DS:36:ARG:NH2	2.24	0.85
1:AA:778:C:OP2	63:AA:3904:HOH:O	1.95	0.85
34:BA:406:G:H21	37:BD:119:GLN:HE22	1.22	0.85
57:BZ:132:ARG:HH11	57:BZ:160:ARG:NH1	1.75	0.85
1:CA:1268:A:OP1	63:CA:3705:HOH:O	1.94	0.85
1:AA:1891:G:C5'	3:AC:206:LYS:HG2	1.84	0.85
34:BA:343:U:H3	34:BA:347:G:H22	1.21	0.85
1:CA:1315:C:OP2	63:CA:3702:HOH:O	1.94	0.85
57:BZ:225:GLU:HA	57:BZ:228:MET:HB3	1.59	0.84
1:AA:874:U:OP1	63:AA:3903:HOH:O	1.93	0.84
1:AA:2143:G:H1'	3:AC:168:LYS:HG2	1.57	0.84
1:CA:2121:G:HO2'	3:CC:168:LYS:HB3	1.35	0.84
1:CA:2121:G:H1'	3:CC:168:LYS:HE2	1.59	0.84
28:C4:40:HIS:HB3	28:C4:43:TYR:HB2	1.58	0.84
1:CA:2206:G:H3'	1:CA:2207:G:H8	1.42	0.84
34:BA:1125:U:H4'	43:BJ:5:ARG:HH22	1.42	0.84
3:CC:52:PRO:HG2	3:CC:53:ARG:HD3	1.58	0.84
34:BA:1356:G:H2'	34:BA:1357:A:C8	2.13	0.84
63:AE:401:HOH:O	15:AR:3:HIS:NE2	2.10	0.84
53:DT:56:MET:HE1	53:DT:85:MET:HG2	1.60	0.84
56:DW:40:C:H4'	56:DY:36:A:H5'	1.59	0.83
34:BA:78:G:H22	34:BA:92:C:H42	1.27	0.83
34:DA:355:C:OP2	63:DA:1801:HOH:O	1.96	0.83
1:AA:1541:A:OP2	63:AA:3905:HOH:O	1.96	0.83
1:AA:553:A:H2'	1:AA:554:A:H5'	1.60	0.83
21:CX:43:VAL:HG11	21:CX:81:VAL:HG21	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:50:SER:HB2	6:AF:94:PRO:HD3	1.61	0.83
17:CT:39:ARG:NH2	34:DA:345:C:OP2	2.11	0.83
21:CX:60:ARG:HH22	31:C7:47:ARG:HH22	1.26	0.83
14:AQ:14:ARG:HG2	14:AQ:41:TRP:HH2	1.43	0.83
1:CA:1022:G:H22	1:CA:1142(A):A:H2	1.24	0.82
20:CW:34:ASN:OD1	20:CW:37:ARG:NH2	2.11	0.82
34:BA:812:C:N3	63:BA:1904:HOH:O	2.10	0.82
1:CA:1204:A:H2	1:CA:1241:A:H62	1.26	0.82
1:AA:427:G:N7	63:AA:3916:HOH:O	2.11	0.82
1:AA:656:A:OP1	13:AP:65:ARG:NH1	2.12	0.82
1:AA:2801:C:OP1	5:AE:61:ARG:NH2	2.11	0.82
2:CB:66:A:H61	2:CB:109:C:H5"	1.43	0.82
43:BJ:35:SER:HB3	43:BJ:73:ASP:HB2	1.61	0.82
57:BZ:13:ARG:NH1	57:BZ:247:ARG:HH12	1.76	0.82
1:CA:397:G:N7	63:CA:3722:HOH:O	2.11	0.82
34:BA:456:C:H42	34:BA:475:G:H1	1.25	0.82
57:DZ:553:GLY:H	57:DZ:557:GLY:HA2	1.42	0.82
34:BA:262:A:H2'	34:BA:263:A:C8	2.15	0.82
1:CA:218:A:OP2	63:CA:3707:HOH:O	1.96	0.82
1:CA:2836:U:H2'	1:CA:2837:G:C8	2.13	0.82
34:DA:1279:A:O2'	34:DA:1282:C:N4	2.13	0.82
36:DC:180:ALA:HB1	36:DC:182:ILE:HG13	1.62	0.82
57:BZ:357:ARG:NH1	57:BZ:373:ASP:OD1	2.12	0.82
1:CA:1658:C:OP1	63:CA:3706:HOH:O	1.95	0.82
34:DA:266:G:H5"	34:DA:268:C:H41	1.45	0.82
1:AA:1891:G:C4'	3:AC:206:LYS:CD	2.57	0.82
1:CA:1861:G:OP1	3:CC:205:ALA:O	1.97	0.82
6:AF:53:THR:HG22	6:AF:55:GLY:H	1.45	0.82
34:BA:1158:C:H5	34:BA:1181:G:H1	1.28	0.82
1:CA:2121:G:H1'	3:CC:168:LYS:CG	2.10	0.82
57:BZ:13:ARG:NH1	57:BZ:280:LEU:O	2.11	0.81
34:DA:742:G:OP2	48:DO:35:ARG:NH2	2.13	0.81
34:BA:392:G:H2'	34:BA:393:A:H8	1.45	0.81
1:CA:2287:A:H62	1:CA:2344:U:H3	1.27	0.81
1:CA:1859:A:O2'	3:CC:206:LYS:CE	2.27	0.81
1:AA:1016:C:OP2	63:AA:3906:HOH:O	1.97	0.81
3:AC:54:ARG:NH2	3:AC:56:ASP:HB3	1.95	0.81
34:BA:538:G:H5"	45:BL:114:LYS:HB2	1.60	0.81
34:BA:1399:C:H4'	34:BA:1400:C:H5"	1.63	0.81
57:BZ:93:GLU:OE2	57:BZ:96:ARG:NH2	2.13	0.81
34:DA:998:G:H1	34:DA:1043:C:H42	1.29	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:878:G:OP1	63:AA:3907:HOH:O	1.98	0.81
1:AA:2143:G:O2'	3:AC:168:LYS:CG	2.29	0.81
1:CA:2448:A:N1	63:CA:3729:HOH:O	2.13	0.81
3:CC:54:ARG:NH2	3:CC:56:ASP:HB3	1.95	0.81
1:CA:855:G:O2'	24:C0:27:GLU:OE2	1.98	0.81
38:DE:126:ARG:HA	38:DE:131:ILE:HD11	1.62	0.81
46:DM:25:ILE:HG13	46:DM:29:ARG:HG2	1.62	0.81
10:CL:84:LEU:HD21	10:CL:96:VAL:HB	1.63	0.81
35:DB:69:LEU:HB3	35:DB:162:ILE:HG22	1.61	0.81
1:CA:601:C:OP1	6:CF:108:LYS:NZ	2.14	0.80
37:DD:13:ARG:HB2	37:DD:40:PRO:HD3	1.61	0.80
42:BI:17:VAL:HG21	42:BI:81:ILE:HG22	1.63	0.80
49:DP:53:VAL:HG13	49:DP:79:VAL:HG13	1.63	0.80
34:BA:1502:A:H2	34:BA:1505:G:H1	1.29	0.80
57:BZ:92:ILE:HG21	57:BZ:437:THR:HG21	1.64	0.80
14:CQ:34:LEU:HD11	14:CQ:129:THR:HB	1.61	0.80
25:C1:3:LYS:HB2	25:C1:61:ARG:NH1	1.97	0.80
56:BW:26:A:H61	56:BW:44:G:H1	1.29	0.80
41:DH:64:LYS:HG2	41:DH:79:VAL:HG21	1.63	0.80
34:BA:1375:A:H4'	40:BG:29:LYS:HE2	1.64	0.80
37:BD:178:VAL:O	37:BD:180:GLY:N	2.14	0.80
1:CA:1082:U:H5'	10:CL:117:THR:HA	1.63	0.80
34:BA:674:G:N2	34:BA:717:C:O2	2.14	0.80
1:CA:2176:A:H4'	3:CC:45:HIS:HD2	1.40	0.80
34:DA:838:G:H1	34:DA:848:C:H42	1.30	0.80
35:DB:178:ARG:NH1	35:DB:196:LEU:O	2.15	0.80
1:CA:1557:C:OP2	1:CA:1558:A:O2'	2.00	0.79
5:CE:106:GLY:HA3	5:CE:189:PRO:HB2	1.63	0.79
9:CK:73:GLY:O	9:CK:75:GLN:N	2.13	0.79
6:AF:191:ARG:HG2	6:AF:191:ARG:HH11	1.46	0.79
56:BW:28:G:H1	56:BW:42:C:H42	1.29	0.79
35:DB:16:HIS:HB2	35:DB:204:ASN:HB3	1.64	0.79
1:AA:1891:G:C4'	3:AC:206:LYS:CG	2.53	0.79
1:CA:2121:G:O4'	3:CC:168:LYS:HD3	1.82	0.79
5:AE:105:THR:OG1	5:AE:199:ARG:NH2	2.16	0.79
17:AT:65:LYS:HE2	17:AT:67:SER:HB2	1.64	0.79
44:BK:79:SER:HA	44:BK:104:GLN:HB2	1.62	0.79
1:AA:553:A:H3'	1:AA:553:A:H8	1.48	0.79
14:AQ:109:VAL:HG13	14:AQ:113:GLN:HB3	1.63	0.79
38:BE:147:ASP:OD1	38:BE:147:ASP:N	2.16	0.79
55:BV:15:A:HO2'	55:BV:16:U:H5	0.90	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1151:U:H2'	1:AA:1152:G:H8	1.47	0.79
20:AW:18:ARG:NH1	20:AW:76:VAL:O	2.16	0.79
1:AA:1891:G:H5"	3:AC:206:LYS:HG3	0.83	0.79
1:CA:568:U:O4	63:CA:3708:HOH:O	1.99	0.79
15:CR:33:ARG:NH2	29:C5:57:VAL:O	2.16	0.79
13:AP:100:LEU:HD12	13:AP:112:LEU:HD11	1.65	0.79
1:AA:2299:A:H62	1:AA:2356:U:H3	1.30	0.78
38:BE:100:VAL:O	38:BE:107:ARG:NH2	2.16	0.78
37:DD:64:LEU:HD13	37:DD:198:VAL:HG11	1.65	0.78
1:AA:2328:C:H2'	1:AA:2329:C:H6	1.48	0.78
5:AE:111:ARG:HG3	5:AE:160:TYR:CD2	2.18	0.78
34:BA:1305:G:H22	34:BA:1331:G:H1'	1.48	0.78
35:BB:111:ARG:HG2	35:BB:111:ARG:HH11	1.49	0.78
29:C5:45:VAL:HG11	29:C5:58:LEU:HD13	1.65	0.78
34:BA:452:A:OP1	49:BP:43:LYS:NZ	2.15	0.78
34:DA:115:G:OP1	63:DA:1802:HOH:O	2.00	0.78
1:AA:554:A:N6	1:AA:2063:U:O2	2.17	0.78
1:AA:1201:A:OP1	18:AU:55:ARG:HD3	1.83	0.78
1:AA:2143:G:H1'	3:AC:168:LYS:CG	2.05	0.78
1:CA:2137:C:H42	1:CA:2154:G:H1	1.30	0.78
10:CL:6:ALA:HB3	10:CL:30:HIS:HE1	1.48	0.78
14:CQ:34:LEU:HB2	14:CQ:118:LEU:HD22	1.66	0.78
57:DZ:-66:MET:N	57:DZ:-46:VAL:O	2.15	0.78
1:AA:1378:G:OP1	63:AA:3908:HOH:O	2.01	0.78
34:BA:1353:G:N2	34:BA:1369:C:O2	2.14	0.78
14:CQ:18:LYS:O	14:CQ:98:LYS:NZ	2.16	0.78
36:BC:70:VAL:HG22	36:BC:72:LYS:H	1.47	0.78
34:DA:656:C:O2'	48:DO:28:GLN:NE2	2.13	0.78
1:AA:1749:G:N7	63:AA:3928:HOH:O	2.17	0.78
15:CR:97:VAL:HG22	15:CR:114:VAL:HG13	1.65	0.78
20:CW:18:ARG:NH1	20:CW:76:VAL:O	2.17	0.78
57:DZ:87:HIS:NE2	61:DZ:703:FUA:C28	2.42	0.78
1:AA:11:G:H2'	1:AA:12:U:H5"	1.66	0.78
57:DZ:182:ARG:O	57:DZ:184:LYS:N	2.17	0.78
1:AA:1312:G:O5'	20:AW:15:ARG:NH2	2.17	0.78
34:BA:972:C:OP2	43:BJ:57:LYS:NZ	2.17	0.78
57:BZ:132:ARG:HH11	57:BZ:160:ARG:HH12	1.32	0.78
25:C1:3:LYS:HB2	25:C1:61:ARG:HH12	1.47	0.78
34:DA:1086:U:H3	34:DA:1099:G:H22	1.29	0.78
34:BA:514:C:O2	34:BA:538:G:N2	2.17	0.78
1:CA:2124:G:C4'	3:CC:175:PRO:HG3	2.14	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CX:35:THR:HG22	21:CX:38:GLU:H	1.48	0.78
57:DZ:169:GLY:H	57:DZ:170:ARG:HH12	1.28	0.78
1:AA:1151:U:H2'	1:AA:1152:G:C8	2.19	0.77
1:AA:1501:U:OP1	15:AR:77:ARG:NH1	2.16	0.77
38:BE:33:VAL:HG13	38:BE:112:LEU:HD12	1.66	0.77
57:BZ:119:GLU:OE1	57:BZ:156:ARG:NH1	2.17	0.77
57:BZ:330:VAL:HG12	57:BZ:371:ALA:HA	1.63	0.77
1:CA:1970:A:OP1	63:CA:3710:HOH:O	2.02	0.77
1:CA:2022:U:OP1	63:CA:3709:HOH:O	2.01	0.77
34:DA:1004:A:H62	34:DA:1037:C:H2'	1.48	0.77
38:BE:48:ALA:H	38:BE:54:ALA:HB2	1.48	0.77
1:CA:761:A:OP1	63:CA:3711:HOH:O	2.03	0.77
2:AB:105:A:OP1	23:AZ:72:ARG:NH1	2.18	0.77
1:AA:839:G:H5"	1:AA:840:A:H5'	1.66	0.77
21:AX:31:HIS:CD2	21:AX:33:LYS:H	2.00	0.77
34:BA:128:G:O2'	50:BQ:3:LYS:NZ	2.17	0.77
34:BA:382:A:H2'	34:BA:383:A:H8	1.48	0.77
56:DW:39:PSU:O3'	56:DY:35:A:O2'	2.02	0.77
34:BA:978:A:OP2	34:BA:1363:C:N4	2.17	0.77
3:CC:24:ASP:O	3:CC:28:ARG:HG3	1.85	0.77
1:AA:2198:A:O2'	3:AC:45:HIS:CD2	2.38	0.77
34:BA:656:C:O2'	48:BO:28:GLN:NE2	2.15	0.77
34:BA:1086:U:H3	34:BA:1099:G:H22	1.29	0.77
1:CA:2178:C:O2	3:CC:169:THR:HG21	1.85	0.77
34:DA:878:G:H5'	41:DH:89:PRO:HG2	1.66	0.77
49:DP:43:LYS:HG2	49:DP:48:TRP:CD2	2.19	0.77
55:BV:15:A:O2'	55:BV:16:U:H5	1.66	0.77
57:BZ:87:HIS:O	57:BZ:89:ASP:N	2.17	0.77
1:CA:2124:G:O3'	3:CC:175:PRO:CG	2.33	0.77
57:BZ:148:LEU:O	57:BZ:152:THR:OG1	2.02	0.77
3:AC:24:ASP:O	3:AC:28:ARG:HG3	1.85	0.77
49:BP:53:VAL:HG13	49:BP:79:VAL:HG13	1.66	0.77
4:CD:69:ARG:NH2	4:CD:128:GLY:O	2.18	0.77
6:AF:53:THR:CG2	6:AF:55:GLY:H	1.97	0.77
14:AQ:56:ARG:HG3	14:AQ:56:ARG:HH11	1.50	0.77
34:BA:1118:C:H1'	34:BA:1179:A:C4	2.19	0.77
57:BZ:428:LEU:HD13	57:BZ:440:VAL:HG21	1.66	0.77
34:DA:358:U:OP1	57:DZ:381:LYS:NZ	2.15	0.77
34:BA:392:G:H2'	34:BA:393:A:C8	2.19	0.76
1:CA:2808:U:O2	1:CA:2892:A:N6	2.18	0.76
57:DZ:170:ARG:N	57:DZ:170:ARG:HH11	1.82	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:27:ALA:O	3:AC:30:VAL:HG22	1.85	0.76
35:BB:47:THR:HA	35:BB:202:PRO:HG2	1.67	0.76
7:AG:41:GLN:HG3	7:AG:60:LEU:HD21	1.67	0.76
39:BF:97:PHE:HD1	51:BR:31:LEU:HD21	1.50	0.76
1:CA:2070:G:OP2	63:CA:3712:HOH:O	2.03	0.76
1:CA:2285:C:OP2	30:C6:6:ARG:NH1	2.18	0.76
4:CD:276:LYS:H	4:CD:276:LYS:HD3	1.48	0.76
38:DE:122:GLU:O	38:DE:126:ARG:NH1	2.18	0.76
16:AS:58:LEU:HD22	16:AS:59:LYS:HG3	1.67	0.76
13:CP:44:GLY:O	63:CP:301:HOH:O	2.04	0.76
23:AZ:52:SER:OG	23:AZ:53:ILE:N	2.17	0.76
1:CA:1278:A:OP1	15:CR:36:THR:HG22	1.86	0.76
3:CC:20:VAL:O	3:CC:21:TYR:HB2	1.83	0.76
3:CC:27:ALA:O	3:CC:30:VAL:HG22	1.85	0.76
57:DZ:74:TRP:CE2	57:DZ:273:LEU:HB3	2.19	0.76
34:BA:1274:G:N2	34:BA:1275:A:N7	2.33	0.76
3:AC:20:VAL:O	3:AC:21:TYR:HB2	1.83	0.76
19:AV:29:PRO:HA	19:AV:61:VAL:HG22	1.66	0.76
1:CA:1627:G:OP1	63:CA:3713:HOH:O	2.04	0.76
34:DA:1302:U:OP2	46:DM:21:TYR:OH	2.04	0.76
57:BZ:422:GLU:HA	57:BZ:425:SER:HB2	1.68	0.76
36:BC:58:GLU:HB3	43:BJ:92:THR:HG21	1.66	0.76
33:C9:25:VAL:HB	33:C9:34:GLN:HB2	1.68	0.76
57:DZ:526:VAL:HB	57:DZ:566:THR:HA	1.68	0.76
34:BA:941:G:O6	34:BA:1342:C:N4	2.17	0.76
1:CA:2849:U:O4	17:CT:23:ARG:NH2	2.18	0.76
1:CA:1817:G:OP1	4:CD:88:ARG:NH2	2.20	0.75
1:CA:1021:A:OP2	11:CN:65:LYS:NZ	2.19	0.75
1:AA:2772:G:OP2	63:AA:3909:HOH:O	2.03	0.75
36:BC:19:GLU:HB3	36:BC:40:ARG:HH22	1.51	0.75
1:CA:1653:G:OP1	1:CA:2822:G:N2	2.19	0.75
35:DB:189:ASP:OD1	35:DB:189:ASP:N	2.19	0.75
23:AZ:72:ARG:NH2	23:AZ:97:GLU:O	2.19	0.75
1:CA:2121:G:C2'	3:CC:168:LYS:HD3	2.17	0.75
16:CS:27:SER:HA	16:CS:88:ASP:HB3	1.67	0.75
23:CZ:144:LEU:HD11	23:CZ:150:LEU:HD23	1.67	0.75
1:AA:1249:A:N6	63:AA:3923:HOH:O	2.15	0.75
1:CA:54:G:N7	63:CA:3742:HOH:O	2.18	0.75
1:CA:641:C:O2'	1:CA:2350:C:OP1	2.01	0.75
34:DA:1318:A:H1'	52:DS:37:ARG:HD3	1.67	0.75
57:DZ:33:LEU:HD12	57:DZ:360:ALA:HB2	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:300:A:OP1	22:CY:86:ARG:NH2	2.19	0.75
34:BA:972:C:O2'	43:BJ:55:LYS:O	2.05	0.75
43:BJ:49:VAL:HG23	47:BN:41:ARG:HB2	1.68	0.75
57:BZ:404:VAL:HG13	57:BZ:405:PRO:HD3	1.67	0.75
1:AA:1831:C:OP1	4:AD:260:ARG:NH2	2.19	0.75
61:BZ:703:FUA:H202	61:BZ:703:FUA:C5	2.15	0.75
1:AA:1084:C:H42	1:AA:1163:G:H1	1.31	0.75
34:BA:401:C:OP2	37:BD:73:ARG:NH1	2.20	0.75
34:BA:1182:G:H4'	34:BA:1183:A:H5'	1.67	0.75
13:CP:89:ALA:O	13:CP:121:LYS:NZ	2.18	0.75
17:CT:16:ARG:HD2	17:CT:19:LEU:HD11	1.69	0.75
34:DA:493:G:O6	63:DA:1803:HOH:O	2.02	0.75
57:BZ:13:ARG:HH12	57:BZ:247:ARG:NH1	1.81	0.74
38:DE:33:VAL:HG21	38:DE:109:ILE:HA	1.67	0.74
57:DZ:13:ARG:NE	57:DZ:280:LEU:O	2.18	0.74
8:AH:98:LEU:HD22	8:AH:125:VAL:HG23	1.70	0.74
1:CA:825:C:OP1	63:CA:3714:HOH:O	2.05	0.74
6:CF:129:PHE:HB2	6:CF:132:VAL:HG21	1.68	0.74
7:CG:122:PRO:HB3	7:CG:170:ARG:HH21	1.50	0.74
41:BH:113:SER:HB2	41:BH:134:ILE:HD11	1.69	0.74
48:BO:26:GLU:OE2	48:BO:77:ARG:NE	2.16	0.74
37:DD:8:VAL:HG22	37:DD:21:LEU:HD13	1.69	0.74
46:DM:15:VAL:HG13	46:DM:45:VAL:HG22	1.69	0.74
16:AS:84:GLN:HA	16:AS:111:GLU:HB2	1.70	0.74
44:BK:86:GLY:N	44:BK:112:THR:OG1	2.16	0.74
14:CQ:85:LYS:HG2	24:C0:7:LEU:HB3	1.70	0.74
56:DW:39:PSU:O2'	56:DY:35:A:H1'	1.87	0.74
3:CC:48:LEU:HB3	3:CC:50:ILE:HD12	1.70	0.74
35:DB:163:PHE:HD1	35:DB:185:ILE:HG13	1.51	0.74
1:AA:1093:G:H21	1:AA:1157:A:H2	1.35	0.74
1:AA:1891:G:C4'	3:AC:206:LYS:HD2	2.18	0.74
34:BA:200:G:H1	34:BA:217:C:H42	1.35	0.74
6:CF:164:ARG:HD2	6:CF:175:THR:HG23	1.70	0.74
1:AA:1154:U:O2'	1:AA:1155:C:H5"	1.88	0.74
34:BA:382:A:H2'	34:BA:383:A:C8	2.22	0.74
1:CA:2612:C:OP2	29:C5:2:ALA:N	2.20	0.74
12:CO:2:ILE:HB	12:CO:33:ALA:HB3	1.70	0.74
1:AA:1199:C:OP2	63:AA:3910:HOH:O	2.06	0.74
1:AA:2317:A:H5"	7:AG:134:GLY:HA3	1.69	0.74
37:DD:135:LEU:O	37:DD:137:SER:N	2.19	0.74
1:AA:1094:A:OP2	1:AA:1155:C:N4	2.21	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AV:40:LEU:HB2	19:AV:46:VAL:HG13	1.70	0.74
53:BT:10:LEU:HB3	53:BT:12:ALA:H	1.52	0.74
61:DZ:703:FUA:H202	61:DZ:703:FUA:C5	2.15	0.74
61:DZ:703:FUA:H5	61:DZ:703:FUA:C20	2.12	0.74
1:AA:1001:G:OP2	14:AQ:14:ARG:NH2	2.21	0.73
34:BA:1197:G:OP2	63:BA:1901:HOH:O	2.05	0.73
57:BZ:132:ARG:HD3	57:BZ:160:ARG:HH12	1.51	0.73
1:CA:2121:G:O4'	3:CC:168:LYS:NZ	2.20	0.73
15:CR:70:LEU:O	15:CR:72:ASP:N	2.19	0.73
34:DA:337:C:H2'	34:DA:338:A:C8	2.22	0.73
15:CR:85:PRO:O	15:CR:87:TYR:N	2.22	0.73
35:DB:16:HIS:CD2	35:DB:17:PHE:H	2.06	0.73
2:AB:13:A:N1	2:AB:69:G:O2'	2.19	0.73
34:BA:972:C:OP1	63:BA:1902:HOH:O	2.07	0.73
1:CA:11:G:H2'	1:CA:12:U:H5"	1.70	0.73
47:BN:27:CYS:SG	47:BN:28:GLY:N	2.61	0.73
7:CG:43:LEU:HD11	7:CG:153:ARG:HG2	1.70	0.73
29:C5:16:ARG:HG2	29:C5:16:ARG:HH11	1.53	0.73
39:DF:2:ARG:NE	39:DF:69:GLU:HG2	2.02	0.73
57:DZ:69:VAL:HG21	57:DZ:374:LEU:HD23	1.71	0.73
1:AA:2601:A:OP2	63:AA:3911:HOH:O	2.06	0.73
13:AP:38:GLN:HG2	13:AP:45:LEU:HD23	1.70	0.73
34:BA:711:G:OP1	39:BF:54:LYS:NZ	2.17	0.73
1:CA:2107:C:H42	1:CA:2182:G:H1	1.36	0.73
49:DP:21:VAL:HG13	49:DP:34:GLU:HB3	1.71	0.73
4:AD:8:PRO:HB3	4:AD:14:ARG:HB2	1.70	0.73
50:BQ:66:SER:O	50:BQ:70:ARG:NH1	2.22	0.73
53:BT:10:LEU:HD23	53:BT:12:ALA:HB2	1.71	0.73
57:BZ:210:ARG:HH11	57:BZ:210:ARG:CB	2.01	0.73
13:CP:100:LEU:HD12	13:CP:112:LEU:HD11	1.71	0.73
30:C6:6:ARG:NH1	30:C6:26:ASN:HB2	2.04	0.73
34:BA:820:U:H4'	34:BA:821:G:OP2	1.89	0.73
6:CF:101:LEU:O	6:CF:106:ARG:NH1	2.21	0.73
7:CG:113:ARG:NH1	7:CG:139:LEU:O	2.21	0.73
34:DA:1347:G:N2	34:DA:1373:G:H2'	2.04	0.73
1:AA:965:G:N2	1:AA:2281:A:OP2	2.22	0.73
22:AY:92:ASN:HB2	22:AY:94:LYS:H	1.51	0.73
34:BA:560:U:H5'	34:BA:566:G:H22	1.51	0.73
34:BA:564:C:O2'	41:BH:91:ARG:NH2	2.20	0.73
39:BF:97:PHE:HB2	51:BR:32:ARG:HD2	1.68	0.73
34:DA:664:G:H22	34:DA:741:G:H1	1.37	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2199:C:O2	3:AC:173:HIS:CE1	2.42	0.72
5:AE:110:GLY:O	63:AE:401:HOH:O	2.06	0.72
11:AN:75:TYR:CE2	11:AN:77:GLY:HA2	2.23	0.72
4:CD:206:LEU:HD22	4:CD:211:ARG:HG2	1.70	0.72
13:CP:88:LEU:HD11	13:CP:114:ILE:HD12	1.69	0.72
6:AF:135:LYS:HB2	6:AF:138:GLU:HG3	1.70	0.72
37:BD:101:LEU:O	37:BD:103:ASN:N	2.22	0.72
41:BH:6:ILE:HG22	41:BH:10:LEU:HD21	1.71	0.72
1:CA:854:G:O6	63:CA:3715:HOH:O	2.07	0.72
1:CA:1418:G:N7	63:CA:3748:HOH:O	2.20	0.72
1:CA:2178:C:OP1	3:CC:47:LYS:HG2	1.88	0.72
2:CB:86:G:N2	2:CB:91:C:O2	2.18	0.72
35:BB:179:LYS:HA	41:BH:72:PRO:HG3	1.70	0.72
12:CO:20:MET:HE3	12:CO:44:LYS:HE3	1.71	0.72
41:DH:86:ILE:HG21	41:DH:133:LEU:HD13	1.69	0.72
37:BD:167:GLY:H	37:BD:168:ARG:NH1	1.87	0.72
34:BA:664:G:H22	34:BA:741:G:H1	1.37	0.72
57:DZ:103:GLY:H	57:DZ:130:VAL:HG23	1.54	0.72
1:AA:2200:C:H4'	3:AC:47:LYS:NZ	2.05	0.72
10:AL:17:ALA:HB3	10:AL:38:VAL:HG13	1.70	0.72
35:DB:119:GLU:OE2	35:DB:153:ARG:NH1	2.22	0.72
1:AA:2297:C:OP2	30:A6:6:ARG:NH1	2.23	0.72
3:AC:48:LEU:HB3	3:AC:50:ILE:HD12	1.70	0.72
23:AZ:70:LEU:HD11	23:AZ:98:MET:HE2	1.71	0.72
1:CA:981:A:OP1	63:CA:3716:HOH:O	2.08	0.72
1:CA:1798:U:OP2	4:CD:274:ARG:NH2	2.23	0.72
34:DA:1304:G:N2	34:DA:1332:A:OP2	2.21	0.72
35:DB:178:ARG:HH21	41:DH:74:PRO:HB3	1.55	0.72
37:BD:176:LEU:HG	37:BD:178:VAL:HG22	1.71	0.72
1:CA:2121:G:C1'	3:CC:168:LYS:HE2	2.16	0.72
1:CA:2439:A:H5"	1:CA:2439:A:C8	2.24	0.72
1:CA:2660:A:N6	57:DZ:661:SER:OG	2.22	0.72
1:AA:1154:U:O2'	1:AA:1155:C:H6	1.72	0.72
8:CH:3:ARG:HH22	8:CH:5:GLY:H	1.37	0.72
14:CQ:57:HIS:CD2	14:CQ:117:ALA:HB2	2.25	0.72
34:BA:395:C:O3'	57:BZ:349:LYS:NZ	2.22	0.72
37:BD:13:ARG:NH1	37:BD:38:TYR:O	2.23	0.72
1:CA:740:U:OP2	63:CA:3717:HOH:O	2.08	0.72
34:DA:677:U:H3	34:DA:713:G:H22	1.38	0.72
34:DA:1344:C:H4'	42:DI:120:ARG:HB3	1.72	0.72
1:AA:2199:C:O2	3:AC:173:HIS:HE1	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BE:152:ARG:HB3	41:BH:43:GLY:HA3	1.72	0.71
57:DZ:127:LYS:NZ	57:DZ:404:VAL:HG11	2.05	0.71
57:DZ:132:ARG:N	57:DZ:132:ARG:HD2	2.05	0.71
1:AA:2457:G:OP1	6:AF:74:ARG:NH2	2.23	0.71
1:CA:1268:A:OP1	63:CA:3718:HOH:O	2.08	0.71
1:CA:1310:G:OP2	31:C7:9:ARG:NH1	2.22	0.71
1:CA:2445:G:OP1	6:CF:74:ARG:NH2	2.23	0.71
8:CH:149:ARG:NH1	8:CH:167:GLU:OE2	2.23	0.71
57:DZ:146:LEU:HD12	57:DZ:167:PRO:HD3	1.70	0.71
47:BN:3:ARG:O	47:BN:6:LEU:N	2.19	0.71
16:CS:83:LYS:HG3	16:CS:84:GLN:HG3	1.72	0.71
23:CZ:29:TYR:HB3	23:CZ:34:ASN:HD22	1.54	0.71
56:DY:19:G:N2	56:DY:56:C:N3	2.37	0.71
1:AA:1466:U:O2'	1:AA:1467:G:OP1	2.09	0.71
1:AA:1480:A:H61	1:AA:1605:A:N6	1.88	0.71
1:AA:2154:U:C5	3:AC:6:LYS:HB2	2.25	0.71
12:AO:64:ARG:NH1	12:AO:81:ASP:OD1	2.18	0.71
17:AT:54:ARG:HA	17:AT:59:THR:HB	1.71	0.71
30:A6:14:THR:HB	30:A6:48:VAL:O	1.90	0.71
47:BN:3:ARG:O	47:BN:5:ALA:N	2.24	0.71
52:BS:63:THR:OG1	52:BS:65:ASN:ND2	2.24	0.71
57:DZ:92:ILE:HD13	57:DZ:93:GLU:H	1.55	0.71
34:DA:1106:G:H5"	36:DC:172:ARG:HG2	1.72	0.71
57:DZ:71:THR:HG22	57:DZ:80:ASN:OD1	1.90	0.71
1:CA:323:G:HO2'	1:CA:1205:U:H3	1.39	0.71
3:CC:51:ASP:HB3	3:CC:57:GLN:OE1	1.91	0.71
11:CN:22:THR:HB	11:CN:25:ARG:HG3	1.71	0.71
45:DL:75:HIS:CD2	45:DL:77:LEU:H	2.08	0.71
1:AA:2108:U:N3	1:AA:2245:U:O4	2.18	0.71
13:AP:62:LEU:O	32:A8:13:ARG:HD3	1.91	0.71
41:BH:86:ILE:HG21	41:BH:133:LEU:HD13	1.72	0.71
1:CA:1971:A:OP2	4:CD:242:ARG:NH2	2.24	0.71
46:DM:123:ALA:HB3	57:DZ:573:HIS:CB	2.16	0.71
1:AA:1105:G:H1'	10:AL:126:MET:HE3	1.73	0.71
5:AE:40:GLU:CD	5:AE:40:GLU:H	1.97	0.71
2:CB:56:G:H5'	7:CG:27:ASN:ND2	2.05	0.71
7:CG:27:ASN:HB3	7:CG:30:GLU:HG3	1.72	0.71
12:CO:104:ARG:HH22	17:CT:43:GLN:HE22	1.36	0.71
14:CQ:63:LYS:HG2	23:CZ:178:GLU:HG2	1.73	0.71
34:BA:782:A:OP1	63:BA:1903:HOH:O	2.08	0.71
35:BB:187:LEU:HA	35:BB:201:ILE:HB	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1386:C:H2'	1:CA:1387:C:H6	1.54	0.71
1:CA:1434:A:H61	1:CA:1558:A:H62	1.39	0.71
1:CA:2132:U:C1'	3:CC:6:LYS:HB3	2.21	0.71
1:CA:2176:A:H4'	3:CC:45:HIS:NE2	2.06	0.71
2:CB:62:C:H2'	2:CB:63:G:H8	1.55	0.71
35:BB:69:LEU:HB3	35:BB:162:ILE:HG22	1.72	0.71
1:CA:1064:C:H4'	10:CL:89:HIS:HA	1.72	0.71
19:CV:6:LYS:HB2	19:CV:38:LEU:HD21	1.71	0.71
34:DA:920:U:H2'	34:DA:921:U:C6	2.25	0.71
6:AF:75:HIS:ND1	63:AF:401:HOH:O	2.23	0.70
57:BZ:169:GLY:O	57:BZ:173:THR:OG1	2.09	0.70
1:CA:1647:G:OP1	63:CA:3703:HOH:O	2.09	0.70
1:CA:2839:G:H5'	15:CR:46:GLY:HA2	1.73	0.70
19:CV:40:LEU:HB2	19:CV:46:VAL:HG13	1.73	0.70
37:DD:132:ARG:HB3	37:DD:132:ARG:HH21	1.56	0.70
42:DI:9:ARG:H	42:DI:79:LEU:HD23	1.55	0.70
1:AA:181:C:H2'	1:AA:182:U:H5'	1.71	0.70
36:BC:130:VAL:HG11	36:BC:153:VAL:HG11	1.73	0.70
44:BK:98:LEU:O	44:BK:101:SER:OG	2.07	0.70
37:DD:119:GLN:HG3	37:DD:123:HIS:CD2	2.26	0.70
4:AD:95:LEU:HD11	4:AD:105:ILE:HD13	1.73	0.70
6:AF:185:ASP:HA	6:AF:188:ARG:HD3	1.72	0.70
9:AK:73:GLY:O	9:AK:75:GLN:N	2.19	0.70
57:BZ:-53:ASP:H	57:BZ:-50:GLN:NE2	1.89	0.70
1:CA:9:U:H3	1:CA:2629:A:H2	1.39	0.70
1:CA:214:G:O2'	1:CA:216:A:O2'	2.08	0.70
1:CA:1309:G:H4'	31:C7:7:PRO:HB2	1.74	0.70
1:CA:2121:G:O2'	3:CC:168:LYS:HD3	1.91	0.70
10:CL:76:TYR:HD1	10:CL:79:ARG:HH21	1.39	0.70
11:CN:14:VAL:HG11	11:CN:138:LEU:HD12	1.71	0.70
34:DA:1075:C:OP1	35:DB:179:LYS:NZ	2.24	0.70
34:DA:1226:C:O2'	46:DM:111:LYS:NZ	2.24	0.70
35:DB:189:ASP:O	35:DB:192:SER:OG	2.09	0.70
1:AA:455:A:OP2	1:AA:455:A:H8	1.74	0.70
56:BY:60:U:H5"	56:BY:61:C:H5	1.56	0.70
61:BZ:703:FUA:H122	61:BZ:703:FUA:H231	1.73	0.70
1:CA:2128:C:C5'	3:CC:219:MET:CE	2.42	0.70
12:CO:2:ILE:HD12	12:CO:6:THR:HG21	1.72	0.70
1:AA:2143:G:HO2'	3:AC:168:LYS:HB3	1.55	0.70
34:BA:501:C:H2'	34:BA:502:G:C8	2.27	0.70
41:DH:120:THR:H	41:DH:123:GLU:HB3	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:9:ILE:HG21	6:AF:125:LEU:HD22	1.72	0.70
38:BE:36:ASP:OD1	38:BE:38:GLN:N	2.20	0.70
1:CA:2631:G:O2'	1:CA:2810:A:N1	2.24	0.70
35:DB:162:ILE:HD11	35:DB:184:VAL:HG22	1.73	0.70
61:DZ:703:FUA:H231	61:DZ:703:FUA:H122	1.73	0.70
3:AC:51:ASP:HB3	3:AC:57:GLN:OE1	1.91	0.70
3:CC:15:VAL:O	3:CC:16:ASP:HB3	1.92	0.70
19:CV:25:LEU:N	19:CV:92:THR:OG1	2.21	0.70
57:DZ:110:SER:OG	57:DZ:137:ASN:O	2.08	0.70
44:BK:86:GLY:H	44:BK:112:THR:HG1	1.37	0.70
1:CA:2124:G:O3'	3:CC:175:PRO:HG3	1.91	0.70
8:CH:86:GLU:HB2	8:CH:165:ALA:HB2	1.74	0.70
30:C6:8:LYS:HD3	32:C8:34:TRP:CD2	2.27	0.70
34:DA:1111:A:N1	36:DC:177:THR:OG1	2.22	0.70
34:DA:1240:U:OP2	40:DG:116:ALA:N	2.23	0.70
38:DE:50:GLU:HB2	38:DE:53:LEU:HD13	1.73	0.70
57:DZ:92:ILE:O	57:DZ:94:VAL:N	2.25	0.69
57:DZ:117:GLN:NE2	57:DZ:120:THR:OG1	2.24	0.69
1:AA:1740:U:O2'	4:AD:14:ARG:NH2	2.24	0.69
37:BD:23:GLY:N	37:BD:26:CYS:SG	2.65	0.69
14:CQ:57:HIS:HD2	14:CQ:117:ALA:HB2	1.56	0.69
15:AR:67:LEU:HD13	15:AR:76:VAL:HG21	1.74	0.69
57:BZ:264:LEU:HB2	62:BZ:704:GDP:C6	2.26	0.69
1:CA:1349:A:OP1	63:CA:3721:HOH:O	2.10	0.69
8:CH:3:ARG:NH2	8:CH:5:GLY:H	1.91	0.69
1:AA:2827:G:OP1	15:AR:99:LYS:NZ	2.25	0.69
10:AL:72:PRO:O	10:AL:111:LYS:NZ	2.24	0.69
34:DA:23:C:OP2	34:DA:561:U:N3	2.21	0.69
41:DH:51:VAL:HG11	41:DH:60:ARG:HH11	1.56	0.69
46:DM:108:ARG:HD2	46:DM:114:ARG:HD2	1.74	0.69
57:DZ:619:ASP:HB3	57:DZ:662:LYS:HD2	1.74	0.69
30:A6:13:CYS:SG	30:A6:47:THR:HG21	2.32	0.69
44:BK:73:MET:HG2	44:BK:103:LEU:HD21	1.73	0.69
47:BN:3:ARG:HB3	47:BN:3:ARG:HH21	1.56	0.69
57:BZ:428:LEU:HA	57:BZ:431:LEU:HB2	1.74	0.69
57:BZ:552:SER:O	57:BZ:591:LYS:NZ	2.25	0.69
47:DN:27:CYS:SG	47:DN:28:GLY:N	2.64	0.69
1:CA:1842:G:O2'	4:CD:253:GLN:NE2	2.26	0.69
1:CA:2150:U:H2'	1:CA:2151:G:H8	1.58	0.69
3:CC:46:ALA:HB3	3:CC:172:ILE:HG22	1.75	0.69
1:AA:2118:U:H2'	1:AA:2119:C:C6	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:A4:61:ARG:HH21	52:BS:42:PRO:HD2	1.55	0.69
57:BZ:485:GLU:HG2	57:BZ:554:PRO:HD2	1.74	0.69
1:CA:323:G:O2'	1:CA:1205:U:N3	2.26	0.69
57:DZ:485:GLU:HG2	57:DZ:555:LEU:HD12	1.72	0.69
1:AA:354:A:H2	1:AA:1255:A:HO2'	1.40	0.69
1:AA:1189:A:OP1	11:AN:25:ARG:NH2	2.25	0.69
3:AC:57:GLN:HG3	3:AC:57:GLN:O	1.93	0.69
3:AC:183:PRO:HG2	3:AC:184:GLU:OE2	1.92	0.69
8:AH:3:ARG:HH12	8:AH:65:HIS:HB3	1.58	0.69
34:BA:36:C:O2'	45:BL:117:ARG:NH2	2.26	0.69
40:BG:111:ARG:NH2	40:BG:126:ASP:OD2	2.26	0.69
1:CA:1253:A:N7	63:CA:3763:HOH:O	2.26	0.69
1:CA:1860:G:C5'	3:CC:207:GLY:N	2.56	0.69
1:CA:2022:U:OP1	63:CA:3719:HOH:O	2.10	0.69
1:CA:2836:U:H2'	1:CA:2837:G:H8	1.58	0.69
2:CB:104:U:O3'	23:CZ:72:ARG:NH1	2.25	0.69
3:CC:57:GLN:O	3:CC:57:GLN:HG3	1.93	0.69
6:CF:110:LEU:HD11	6:CF:181:LEU:HD23	1.73	0.69
34:DA:352:C:OP2	63:DA:1805:HOH:O	2.11	0.69
1:AA:555:G:N3	1:AA:555:G:O4'	2.18	0.69
1:AA:1056:A:OP2	63:AA:3914:HOH:O	2.11	0.69
15:AR:55:ALA:HB2	15:AR:79:LEU:HD13	1.74	0.69
61:BZ:703:FUA:H5	61:BZ:703:FUA:C20	2.12	0.69
1:CA:1837:C:O2'	1:CA:1927:A:N3	2.22	0.69
5:CE:33:VAL:HG21	5:CE:36:ARG:HE	1.58	0.69
34:DA:188:C:H2'	34:DA:189:G:H8	1.57	0.69
1:AA:9:U:N3	1:AA:2641:A:H2	1.88	0.69
57:BZ:99:ARG:C	57:BZ:101:LEU:H	2.00	0.69
1:CA:646:A:H2'	1:CA:647:G:O4'	1.93	0.69
1:CA:1651:G:OP1	15:CR:40:LYS:NZ	2.25	0.69
1:CA:2059:A:OP2	63:CA:3724:HOH:O	2.11	0.69
1:AA:2255:U:OP1	63:AA:3912:HOH:O	2.10	0.68
55:BV:15:A:O2'	55:BV:16:U:C5	2.39	0.68
1:CA:816:C:OP2	63:CA:3720:HOH:O	2.10	0.68
1:CA:2177:C:H5'	3:CC:45:HIS:HB3	1.75	0.68
4:AD:108:PRO:HD2	4:AD:111:LEU:HG	1.75	0.68
7:AG:83:ARG:N	7:AG:86:MET:SD	2.60	0.68
3:CC:183:PRO:HG2	3:CC:184:GLU:OE2	1.92	0.68
14:CQ:65:PHE:HB2	14:CQ:105:GLU:HB2	1.74	0.68
27:C3:39:ASP:OD2	27:C3:44:ARG:NH1	2.27	0.68
34:DA:1279:A:O2'	34:DA:1281:U:OP2	2.10	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:121:G:OP2	63:AA:3913:HOH:O	2.11	0.68
1:AA:2564:U:OP2	63:AA:3915:HOH:O	2.11	0.68
1:AA:2825:C:H5'	29:A5:29:THR:HG21	1.74	0.68
3:AC:55:SER:O	3:AC:57:GLN:N	2.22	0.68
1:CA:1588:C:H2'	1:CA:1589:C:H6	1.58	0.68
1:CA:1860:G:H5'	3:CC:207:GLY:N	2.08	0.68
36:DC:122:GLU:O	36:DC:126:ARG:NH1	2.26	0.68
48:DO:16:ALA:HB1	48:DO:21:ASP:HB3	1.75	0.68
1:AA:2262:G:OP1	14:AQ:85:LYS:NZ	2.22	0.68
37:BD:50:ARG:HE	38:BE:10:MET:HE3	1.57	0.68
1:AA:2764:G:H4'	8:AH:4:ILE:HD11	1.76	0.68
23:AZ:45:ASP:OD1	23:AZ:49:ARG:HD2	1.92	0.68
1:CA:528:A:O2'	1:CA:529:A:H5"	1.94	0.68
1:CA:991:C:OP2	63:CA:3727:HOH:O	2.12	0.68
1:CA:2286:A:H4'	1:CA:2287:A:O4'	1.94	0.68
3:CC:25:GLU:HA	3:CC:28:ARG:HD2	1.74	0.68
16:CS:34:HIS:O	16:CS:97:ARG:NH2	2.26	0.68
34:DA:624:C:H2'	34:DA:625:G:H8	1.58	0.68
1:AA:243:G:O6	32:A8:5:LYS:HG2	1.94	0.68
1:CA:2128:C:H5"	3:CC:219:MET:HE3	1.69	0.68
34:DA:457:C:H2'	34:DA:458:C:H6	1.59	0.68
34:DA:522:C:H41	45:DL:53:ARG:HH22	1.39	0.68
34:DA:1129:C:N3	34:DA:1143:G:N2	2.33	0.68
51:DR:32:ARG:HA	51:DR:69:THR:HG21	1.76	0.68
3:AC:25:GLU:HA	3:AC:28:ARG:HD2	1.74	0.68
35:BB:21:ARG:H	35:BB:21:ARG:HH21	1.40	0.68
1:CA:1153:C:OP1	18:CU:92:ARG:NH1	2.20	0.68
3:AC:46:ALA:HB3	3:AC:172:ILE:HG22	1.75	0.68
22:AY:23:ARG:HG2	22:AY:42:VAL:HG22	1.74	0.68
34:BA:1238:A:OP2	63:BA:1905:HOH:O	2.12	0.68
38:BE:50:GLU:HB2	38:BE:53:LEU:HD13	1.76	0.68
49:BP:58:TYR:O	49:BP:61:SER:OG	2.11	0.68
57:BZ:99:ARG:O	57:BZ:101:LEU:N	2.27	0.68
1:CA:1336:A:OP2	21:CX:64:LYS:NZ	2.25	0.68
36:DC:40:ARG:NH2	36:DC:55:VAL:O	2.26	0.68
3:AC:15:VAL:O	3:AC:16:ASP:HB3	1.92	0.68
34:BA:259:G:H2'	34:BA:260:G:H8	1.59	0.68
40:BG:113:GLU:HB2	40:BG:119:ARG:HG2	1.76	0.68
53:BT:26:ASN:ND2	53:BT:71:THR:OG1	2.23	0.68
1:CA:1405:U:H2'	1:CA:1406:U:C6	2.29	0.68
3:CC:30:VAL:HG23	3:CC:31:LYS:N	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:41:THR:O	3:CC:42:VAL:HB	1.94	0.68
34:DA:736:C:H2'	34:DA:737:A:C8	2.27	0.68
1:AA:1249:A:H2	1:AA:1287:A:H62	1.42	0.68
3:AC:30:VAL:HG23	3:AC:31:LYS:H	1.58	0.68
3:AC:46:ALA:HB3	3:AC:172:ILE:CG2	2.23	0.68
9:AK:70:GLU:O	9:AK:72:ASP:N	2.27	0.68
57:BZ:388:THR:HG23	57:BZ:399:LEU:HD22	1.74	0.68
1:CA:1784:A:O2'	63:CA:3726:HOH:O	2.11	0.68
4:CD:71:ASP:CG	4:CD:103:ARG:HH22	2.01	0.68
23:CZ:45:ASP:OD1	23:CZ:49:ARG:NH1	2.27	0.68
25:C1:25:LYS:O	25:C1:27:GLU:N	2.27	0.68
41:DH:10:LEU:HD22	41:DH:83:ILE:HD11	1.76	0.68
57:DZ:285:ASP:OD2	57:DZ:285:ASP:N	2.25	0.68
57:DZ:533:VAL:HG12	57:DZ:534:ILE:HG13	1.76	0.68
1:AA:2623:U:H6	1:AA:2623:U:H5'	1.58	0.67
34:BA:406:G:N2	37:BD:119:GLN:HE22	1.92	0.67
7:CG:64:THR:HB	7:CG:94:LEU:HD21	1.76	0.67
23:CZ:5:LEU:HD23	23:CZ:47:VAL:HG21	1.76	0.67
23:CZ:183:LEU:O	23:CZ:185:GLU:N	2.28	0.67
1:AA:2771:A:OP2	63:AA:3909:HOH:O	2.12	0.67
35:BB:21:ARG:HB3	35:BB:39:ILE:HG12	1.75	0.67
57:BZ:99:ARG:NH1	57:BZ:401:SER:O	2.27	0.67
57:BZ:316:ILE:HD12	57:BZ:326:THR:HG23	1.76	0.67
34:DA:1335:C:O2	63:DA:1804:HOH:O	2.09	0.67
34:DA:1352:C:H2'	34:DA:1353:G:C8	2.29	0.67
1:AA:2775:G:OP2	63:AA:3918:HOH:O	2.12	0.67
23:AZ:31:ARG:NH1	23:AZ:94:GLU:OE1	2.27	0.67
34:BA:67:C:H2'	34:BA:68:G:C8	2.29	0.67
34:BA:1369:C:H2'	34:BA:1370:G:C8	2.29	0.67
51:BR:59:SER:H	51:BR:62:GLU:HG3	1.59	0.67
57:BZ:573:HIS:CD2	57:BZ:576:ASP:H	2.12	0.67
57:BZ:616:TYR:CE2	57:BZ:664:GLN:HG3	2.30	0.67
1:CA:2357:U:OP1	24:C0:20:ARG:NH1	2.28	0.67
5:CE:175:VAL:HG23	5:CE:177:PRO:HD3	1.77	0.67
34:DA:512:U:H2'	34:DA:513:C:C6	2.30	0.67
34:DA:512:U:H2'	34:DA:513:C:H6	1.58	0.67
34:DA:891:U:OP2	63:DA:1806:HOH:O	2.11	0.67
53:DT:33:ILE:O	53:DT:37:SER:OG	2.11	0.67
1:AA:2703:C:OP2	63:AA:3917:HOH:O	2.12	0.67
3:AC:30:VAL:HG23	3:AC:31:LYS:N	2.09	0.67
34:BA:738:C:H2'	34:BA:739:C:H6	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2120:G:H21	3:CC:168:LYS:HE2	1.59	0.67
1:CA:2684:U:H1'	12:CO:70:LYS:HD2	1.76	0.67
45:DL:80:HIS:ND1	57:DZ:425:SER:OG	2.26	0.67
52:DS:15:LEU:HD22	52:DS:33:THR:HB	1.76	0.67
57:DZ:-65:LYS:HB3	57:DZ:-28:ALA:HB3	1.75	0.67
38:BE:78:HIS:CD2	38:BE:142:LEU:HD23	2.29	0.67
1:CA:994:C:OP1	18:CU:53:ARG:NH2	2.28	0.67
1:CA:1269:A:OP2	63:CA:3723:HOH:O	2.11	0.67
34:DA:392:G:H2'	34:DA:393:A:H8	1.60	0.67
34:DA:542:G:OP1	37:DD:10:ARG:NH1	2.26	0.67
37:DD:153:ARG:O	37:DD:155:LEU:N	2.28	0.67
50:BQ:55:ASP:O	50:BQ:57:VAL:HG13	1.95	0.67
57:BZ:369:LEU:HD21	57:BZ:375:GLY:HA3	1.76	0.67
3:CC:30:VAL:HG23	3:CC:31:LYS:H	1.58	0.67
1:AA:1360:C:OP1	63:AA:3908:HOH:O	2.11	0.67
57:BZ:84:THR:HB	57:BZ:94:VAL:HG22	1.75	0.67
57:BZ:276:VAL:HG13	57:BZ:280:LEU:HD12	1.75	0.67
1:CA:2150:U:H2'	1:CA:2151:G:C8	2.30	0.67
22:CY:19:LYS:NZ	22:CY:20:TYR:OH	2.27	0.67
36:DC:47:LEU:HG	36:DC:68:VAL:HG11	1.76	0.67
1:AA:553:A:C8	1:AA:553:A:C3'	2.76	0.67
1:AA:1133:G:N2	1:AA:1148:C:O2	2.25	0.67
1:AA:1846:A:H8	1:AA:1846:A:OP1	1.78	0.67
1:AA:2442:A:OP2	63:AA:3903:HOH:O	2.13	0.67
41:BH:101:PRO:HG3	41:BH:133:LEU:HD11	1.76	0.67
45:BL:89:ARG:HA	45:BL:97:ARG:HA	1.77	0.67
57:BZ:275:ALA:HA	57:BZ:278:ASP:HB2	1.77	0.67
1:CA:1859:A:C2'	3:CC:206:LYS:CD	2.64	0.67
3:CC:46:ALA:HB3	3:CC:172:ILE:CG2	2.23	0.67
38:DE:7:GLU:OE1	38:DE:37:ARG:NH2	2.20	0.67
49:DP:52:ASP:O	49:DP:54:GLU:N	2.28	0.67
53:DT:50:GLU:H	53:DT:99:LEU:HD12	1.60	0.67
56:DW:41:C:P	56:DY:36:A:OP1	2.53	0.67
38:BE:140:ARG:O	38:BE:140:ARG:HG3	1.93	0.67
1:CA:572:A:N7	63:CA:3766:HOH:O	2.27	0.67
1:CA:668:G:H5'	1:CA:669:G:OP2	1.94	0.67
1:CA:2693:A:H2'	1:CA:2694:G:H8	1.60	0.67
3:CC:55:SER:O	3:CC:57:GLN:N	2.22	0.67
34:DA:35:G:O2'	45:DL:118:SER:O	2.13	0.67
57:DZ:120:THR:HG22	57:DZ:123:ARG:HH22	1.59	0.67
34:BA:1137:C:H4'	34:BA:1138:G:C2	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BD:157:LEU:O	37:BD:161:ASN:ND2	2.28	0.67
41:BH:51:VAL:HG12	41:BH:52:ASP:H	1.59	0.67
6:CF:101:LEU:HD12	6:CF:102:PRO:HD2	1.77	0.67
14:CQ:65:PHE:N	14:CQ:105:GLU:O	2.24	0.67
34:DA:352:C:O2'	34:DA:354:G:OP1	2.12	0.67
57:DZ:138:LYS:HG2	62:DZ:704:GDP:C6	2.29	0.67
1:AA:929:G:N2	1:AA:941:U:O2	2.28	0.66
1:AA:2562:G:OP1	63:AA:3920:HOH:O	2.13	0.66
57:BZ:358:MET:HE1	57:BZ:363:ARG:HG2	1.77	0.66
3:CC:42:VAL:HG13	3:CC:43:GLU:N	2.10	0.66
7:CG:170:ARG:NH1	7:CG:174:GLU:OE2	2.27	0.66
34:DA:619:U:N3	37:DD:134:ASP:OD1	2.27	0.66
46:DM:25:ILE:HG23	46:DM:29:ARG:HB3	1.75	0.66
1:AA:1716:A:OP2	63:AA:3920:HOH:O	2.13	0.66
3:AC:41:THR:O	3:AC:42:VAL:HB	1.94	0.66
34:BA:403:C:H2'	34:BA:404:U:H6	1.61	0.66
34:BA:1399:C:C2	34:BA:1502:A:N6	2.64	0.66
1:CA:2450:A:O2'	56:DW:76:A:N6	2.28	0.66
1:AA:1336:C:H2'	1:AA:1337:C:H6	1.58	0.66
1:AA:2807:C:H42	1:AA:2813:G:H1	1.43	0.66
6:AF:32:LEU:HB3	6:AF:112:MET:HE1	1.78	0.66
45:BL:59:ARG:HE	57:BZ:422:GLU:HG2	1.59	0.66
57:BZ:606:MET:HE2	57:BZ:671:MET:HE3	1.77	0.66
1:CA:2177:C:H5'	3:CC:45:HIS:CB	2.25	0.66
1:CA:2632:A:HO2'	1:CA:2811:G:HO2'	1.26	0.66
15:CR:74:LYS:HG2	15:CR:77:ARG:HH21	1.60	0.66
34:BA:881:G:P	45:BL:12:ARG:HH22	2.19	0.66
35:BB:16:HIS:O	35:BB:18:GLY:N	2.29	0.66
57:BZ:546:ILE:HG23	57:BZ:590:ILE:HG13	1.78	0.66
1:CA:2121:G:H1'	3:CC:168:LYS:HG2	1.76	0.66
3:CC:31:LYS:NZ	3:CC:180:SER:O	2.28	0.66
4:CD:242:ARG:HD3	4:CD:242:ARG:N	2.10	0.66
7:CG:13:GLU:O	7:CG:15:VAL:N	2.28	0.66
40:DG:133:GLY:HA2	40:DG:136:LYS:HB2	1.75	0.66
1:AA:664:U:H2'	1:AA:665:C:C6	2.30	0.66
26:A2:1:MET:HE2	26:A2:6:VAL:HG22	1.78	0.66
29:A5:16:ARG:HG2	29:A5:16:ARG:HH11	1.60	0.66
39:BF:55:ASP:OD2	39:BF:86:ARG:NH1	2.26	0.66
43:BJ:50:ILE:HD11	43:BJ:57:LYS:HD3	1.77	0.66
61:BZ:703:FUA:H201	61:BZ:703:FUA:O1	1.95	0.66
1:CA:1919:A:N1	34:DA:1495:U:O2'	2.23	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2177:C:C1'	3:CC:171:ALA:CB	2.56	0.66
19:CV:25:LEU:H	19:CV:92:THR:HG1	1.41	0.66
3:AC:176:VAL:HG11	3:AC:190:ILE:HD13	1.76	0.66
17:AT:24:PRO:HA	17:AT:49:VAL:HG22	1.76	0.66
34:BA:17:U:H2'	34:BA:18:C:C6	2.31	0.66
1:CA:2025:C:H2'	1:CA:2026:C:C6	2.30	0.66
1:CA:2121:G:O4'	3:CC:168:LYS:CE	2.44	0.66
3:CC:176:VAL:HG11	3:CC:190:ILE:HD13	1.76	0.66
43:DJ:61:GLU:OE2	47:DN:49:HIS:NE2	2.27	0.66
1:AA:1525:G:O2'	1:AA:1605:A:H2	1.77	0.66
1:CA:195:A:N7	63:CA:3704:HOH:O	2.27	0.66
1:CA:2422:A:O4'	56:DY:76:A:N6	2.29	0.66
4:CD:68:LYS:HD2	4:CD:70:TRP:CZ2	2.31	0.66
4:AD:69:ARG:NH2	4:AD:128:GLY:O	2.26	0.66
34:BA:1304:G:OP2	63:BA:1906:HOH:O	2.14	0.66
57:BZ:603:GLU:HG2	57:BZ:679:VAL:HG12	1.77	0.66
5:CE:36:ARG:NH2	5:CE:88:GLY:O	2.29	0.66
34:DA:1279:A:OP2	43:DJ:9:ARG:NH1	2.29	0.66
3:AC:65:LEU:HB3	3:AC:189:ASN:ND2	2.11	0.66
38:BE:102:ALA:H	38:BE:107:ARG:NH2	1.94	0.66
1:CA:858:U:O2	1:CA:2268:A:H2'	1.96	0.66
1:CA:2695:C:H2'	1:CA:2696:U:H6	1.61	0.66
14:CQ:63:LYS:HA	23:CZ:178:GLU:HG3	1.77	0.66
34:DA:999:C:H42	34:DA:1042:G:H1	1.42	0.66
6:AF:192:LEU:HD22	6:AF:194:MET:HE2	1.78	0.66
50:BQ:53:LEU:HB3	50:BQ:82:MET:HE1	1.77	0.66
5:CE:36:ARG:HG2	5:CE:47:VAL:HG12	1.78	0.66
34:DA:975:A:H4'	34:DA:976:G:H5"	1.78	0.66
3:AC:42:VAL:HG13	3:AC:43:GLU:N	2.10	0.65
3:AC:63:VAL:O	3:AC:161:ARG:HA	1.96	0.65
34:BA:1047:G:O2'	34:BA:1215:G:O2'	2.13	0.65
1:CA:400:G:N7	63:CA:3769:HOH:O	2.28	0.65
10:CL:88:ALA:O	10:CL:90:LYS:N	2.29	0.65
17:CT:117:ASP:OD2	17:CT:120:ARG:NE	2.26	0.65
34:DA:222:U:H2'	34:DA:223:U:C6	2.31	0.65
57:DZ:13:ARG:HH21	57:DZ:247:ARG:NH1	1.94	0.65
1:AA:1100:A:N6	1:AA:1151:U:H3	1.92	0.65
36:BC:111:LEU:HB3	36:BC:204:LEU:HD21	1.77	0.65
48:BO:39:LEU:HD13	48:BO:56:LEU:HB2	1.78	0.65
56:BY:53:G:H1	56:BY:61:C:H42	1.42	0.65
20:CW:88:ARG:NH1	20:CW:94:ASP:OD2	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:127:LYS:HZ3	57:DZ:404:VAL:HG11	1.60	0.65
57:DZ:601:ILE:HD12	57:DZ:684:GLN:HB2	1.78	0.65
34:BA:1329:A:H5"	46:BM:26:GLY:H	1.61	0.65
42:BI:45:ALA:HA	42:BI:48:GLU:HB2	1.77	0.65
1:CA:1019:U:H3	1:CA:1142(A):A:H62	1.42	0.65
1:CA:2583:G:OP2	63:CA:3733:HOH:O	2.14	0.65
12:CO:75:SER:HB2	17:CT:75:ILE:O	1.97	0.65
34:DA:229:U:O2'	49:DP:23:ASP:OD2	2.14	0.65
1:AA:2255:U:H2'	1:AA:2256:U:C6	2.32	0.65
1:AA:2574:U:H1'	12:AO:23:ARG:HH11	1.60	0.65
3:AC:31:LYS:NZ	3:AC:180:SER:O	2.28	0.65
3:CC:65:LEU:HB3	3:CC:189:ASN:ND2	2.11	0.65
34:DA:1312:G:H5'	52:DS:5:LEU:HD11	1.78	0.65
45:DL:24:VAL:HG12	45:DL:98:TYR:CE1	2.32	0.65
1:AA:542:C:OP1	29:A5:16:ARG:NH2	2.29	0.65
1:AA:1825:U:H2'	1:AA:1826:C:H6	1.60	0.65
1:AA:1891:G:H4'	3:AC:206:LYS:CG	2.26	0.65
3:AC:206:LYS:HB3	3:AC:206:LYS:NZ	2.12	0.65
16:AS:15:ARG:O	16:AS:19:LYS:HG2	1.97	0.65
36:BC:134:ILE:HG23	36:BC:151:VAL:HB	1.79	0.65
1:CA:2572:A:N7	5:CE:145:LYS:HB2	2.12	0.65
17:CT:24:PRO:HG3	17:CT:52:ILE:HG13	1.77	0.65
34:DA:812:C:N3	63:DA:1814:HOH:O	2.30	0.65
46:DM:124:PRO:HB3	57:DZ:500:GLN:HG3	1.78	0.65
57:DZ:637:ARG:C	57:DZ:639:ASN:H	2.05	0.65
61:DZ:703:FUA:H201	61:DZ:703:FUA:O1	1.95	0.65
34:BA:259:G:H2'	34:BA:260:G:C8	2.31	0.65
34:BA:542:G:OP1	37:BD:10:ARG:NH2	2.26	0.65
34:BA:1445:C:O2'	34:BA:1447:A:N6	2.29	0.65
41:BH:34:GLU:OE1	41:BH:37:ARG:NH2	2.30	0.65
57:BZ:498:ILE:HB	57:BZ:507:TYR:HD1	1.61	0.65
2:CB:105:A:P	23:CZ:72:ARG:HH12	2.18	0.65
43:DJ:30:SER:O	43:DJ:81:THR:OG1	2.10	0.65
50:DQ:95:TYR:HA	50:DQ:98:LEU:HD12	1.77	0.65
1:AA:139:A:H8	1:AA:1454:C:HO2'	1.42	0.65
8:AH:149:ARG:NH1	8:AH:167:GLU:OE2	2.29	0.65
43:BJ:17:ASP:OD1	43:BJ:70:ARG:NH1	2.30	0.65
1:CA:614(B):G:H2'	6:CF:44:ARG:HH11	1.61	0.65
11:CN:58:ASP:OD1	11:CN:125:GLY:N	2.24	0.65
43:DJ:6:ILE:HG12	43:DJ:98:ILE:HG12	1.78	0.65
1:AA:1067:A:C8	1:AA:1067:A:H3'	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1117:G:O2'	1:AA:1135:G:OP2	2.13	0.65
4:AD:77:ALA:O	4:AD:116:GLN:HA	1.97	0.65
42:BI:40:LEU:O	42:BI:42:ARG:N	2.29	0.65
57:BZ:120:THR:HG22	57:BZ:123:ARG:NH1	2.12	0.65
1:CA:1316:U:H2'	1:CA:1317:A:C8	2.31	0.65
1:CA:2316:C:H2'	1:CA:2317:C:C6	2.30	0.65
3:CC:63:VAL:O	3:CC:161:ARG:HA	1.96	0.65
11:CN:15:LEU:HD23	11:CN:53:VAL:HB	1.79	0.65
34:DA:881:G:P	45:DL:12:ARG:HH22	2.20	0.65
37:DD:129:ASN:ND2	37:DD:145:GLU:H	1.95	0.65
57:DZ:90:PHE:CE1	61:DZ:703:FUA:H122	2.31	0.65
1:AA:638:U:O5'	1:AA:638:U:H6	1.79	0.65
1:AA:2227:G:H5'	1:AA:2228:G:N7	2.11	0.65
14:AQ:21:THR:HG21	14:AQ:101:ARG:HB2	1.78	0.65
34:BA:757:U:H2'	34:BA:758:G:O4'	1.97	0.65
41:BH:81:HIS:N	41:BH:138:TRP:O	2.30	0.65
3:CC:206:LYS:NZ	3:CC:206:LYS:HB3	2.12	0.65
16:CS:63:THR:HG23	16:CS:64:GLU:H	1.62	0.65
1:AA:426:G:OP2	63:AA:3922:HOH:O	2.14	0.65
8:AH:159:GLU:HG3	8:AH:169:VAL:HG11	1.79	0.65
34:BA:1015:A:N3	34:BA:1218:C:O2'	2.30	0.65
1:CA:2176:A:O2'	3:CC:45:HIS:CD2	2.50	0.65
7:CG:28:VAL:O	7:CG:31:VAL:HG12	1.97	0.65
34:DA:235:C:H5'	50:DQ:70:ARG:HG2	1.79	0.65
34:DA:1227:A:OP1	52:DS:80:TYR:OH	2.07	0.65
35:DB:74:LYS:NZ	35:DB:206:ASP:OD1	2.30	0.65
42:DI:53:VAL:O	42:DI:55:ALA:N	2.31	0.65
57:DZ:181:LEU:HD12	57:DZ:216:LEU:HD21	1.78	0.65
57:DZ:505:GLY:HA2	57:DZ:576:ASP:HB2	1.79	0.65
57:DZ:631:ILE:HD12	57:DZ:645:ALA:HB2	1.79	0.65
10:AL:13:PRO:HA	10:AL:52:ILE:HG12	1.79	0.64
24:A0:32:ARG:H	24:A0:35:ASN:ND2	1.96	0.64
34:BA:164:U:H2'	34:BA:165:C:C6	2.32	0.64
1:CA:831:G:O2'	13:CP:38:GLN:NE2	2.30	0.64
1:CA:1803:A:O2'	4:CD:259:THR:HG21	1.96	0.64
36:DC:47:LEU:HB3	36:DC:52:LEU:HB3	1.79	0.64
1:AA:1356:G:OP2	31:A7:9:ARG:NH1	2.29	0.64
7:AG:173:LEU:HA	7:AG:176:LEU:HD12	1.80	0.64
33:C9:14:CYS:HA	33:C9:27:CYS:HB2	1.80	0.64
49:DP:43:LYS:HG2	49:DP:48:TRP:CG	2.31	0.64
56:DY:50:U:H3	56:DY:64:A:H61	1.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:553:A:C2'	1:AA:554:A:H5'	2.26	0.64
1:AA:1829:U:OP2	4:AD:274:ARG:NH2	2.30	0.64
1:CA:2268:A:OP1	63:CA:3732:HOH:O	2.14	0.64
23:CZ:93:ASP:HB2	23:CZ:131:ARG:HH22	1.62	0.64
30:C6:9:LEU:HA	30:C6:54:ILE:HB	1.79	0.64
34:DA:1207:G:H2'	34:DA:1208:C:C6	2.32	0.64
35:DB:95:GLN:HG3	35:DB:148:TYR:HA	1.78	0.64
1:AA:1848:G:H2'	1:AA:1849:U:H5'	1.79	0.64
34:BA:108:G:C6	53:BT:15:ARG:HD2	2.33	0.64
1:CA:527:C:OP1	63:CA:3736:HOH:O	2.15	0.64
1:CA:2124:G:O3'	3:CC:175:PRO:HG2	1.98	0.64
10:CL:79:ARG:NH1	10:CL:85:GLU:O	2.31	0.64
11:CN:62:VAL:HG21	11:CN:87:LEU:HD11	1.79	0.64
34:DA:179:A:H2'	34:DA:180:U:C6	2.32	0.64
34:DA:1097:C:O2'	34:DA:1169:A:N3	2.30	0.64
37:DD:171:GLY:O	37:DD:174:LEU:N	2.30	0.64
50:DQ:32:TYR:O	50:DQ:34:LYS:N	2.30	0.64
57:DZ:518:PRO:O	57:DZ:521:SER:OG	2.12	0.64
34:BA:973:G:H3'	34:BA:974:A:H5"	1.80	0.64
34:BA:1014:A:H2'	34:BA:1015:A:C8	2.33	0.64
34:BA:1442:G:O2'	34:BA:1442(A):G:OP1	2.16	0.64
48:BO:17:ARG:HG3	48:BO:17:ARG:HH11	1.62	0.64
5:CE:97:LYS:N	5:CE:100:GLU:OE1	2.19	0.64
23:CZ:138:GLU:HG2	23:CZ:156:LYS:HZ1	1.62	0.64
25:C1:8:SER:HB3	25:C1:66:HIS:CD2	2.32	0.64
41:DH:104:ARG:NH2	63:DH:4001:HOH:O	2.22	0.64
57:DZ:532:GLY:O	57:DZ:534:ILE:N	2.31	0.64
1:AA:2510:C:OP2	63:AA:3921:HOH:O	2.14	0.64
3:AC:69:LEU:O	3:AC:178:LYS:HG3	1.97	0.64
8:AH:54:ARG:HD3	8:AH:65:HIS:ND1	2.12	0.64
11:AN:74:ARG:HH12	11:AN:85:ILE:CD1	2.10	0.64
17:AT:23:ARG:HG3	17:AT:120:ARG:CZ	2.28	0.64
1:CA:1466:G:O2'	1:CA:1546:C:O2'	2.13	0.64
30:C6:43:CYS:O	30:C6:45:LYS:N	2.30	0.64
34:DA:978:A:O2'	34:DA:1322:C:N3	2.29	0.64
42:DI:46:ALA:HA	42:DI:78:LYS:HB2	1.79	0.64
49:DP:23:ASP:OD1	49:DP:25:ARG:HD3	1.97	0.64
1:AA:2860:A:OP2	1:AA:2876:U:H5	1.79	0.64
34:BA:1077:G:N2	34:BA:1080:A:OP2	2.30	0.64
1:CA:848:G:H2'	1:CA:849:A:C8	2.31	0.64
1:CA:1237:A:OP1	63:CA:3735:HOH:O	2.15	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1588:C:H2'	1:CA:1589:C:C6	2.32	0.64
1:CA:2820:A:C4	15:CR:4:LEU:HD21	2.32	0.64
8:CH:18:GLU:HB3	8:CH:25:LYS:HB2	1.77	0.64
16:CS:35:ILE:HD12	16:CS:101:LEU:HD12	1.78	0.64
34:DA:1435:G:H2'	34:DA:1436:U:C6	2.33	0.64
1:AA:483:A:OP1	63:AA:3924:HOH:O	2.15	0.64
1:AA:1233:U:H4'	19:AV:79:VAL:HG22	1.78	0.64
1:AA:1475:G:H2'	1:AA:1476:C:C6	2.32	0.64
1:AA:1634:C:H2'	1:AA:1635:C:H6	1.62	0.64
1:AA:2052:A:H5"	1:AA:2053:A:OP1	1.98	0.64
3:AC:44:VAL:CG2	3:AC:176:VAL:HG21	2.28	0.64
23:AZ:145:GLU:N	23:AZ:148:ASP:OD2	2.27	0.64
35:BB:195:ASP:O	41:BH:68:ARG:NH2	2.31	0.64
56:BY:8:4SU:H4'	56:BY:48:C:H4'	1.79	0.64
1:CA:2456:C:N4	63:CA:3782:HOH:O	2.30	0.64
8:CH:38:SER:HB3	8:CH:41:MET:HG2	1.80	0.64
13:CP:38:GLN:HG2	13:CP:45:LEU:H	1.62	0.64
34:DA:922:G:H2'	34:DA:923:A:C8	2.33	0.64
1:AA:2434:A:O4'	56:BY:76:A:N6	2.31	0.64
34:BA:390:C:H2'	34:BA:391:G:H8	1.63	0.64
1:CA:2218:U:O4'	25:C1:52:ARG:NH2	2.31	0.64
10:CL:30:HIS:HA	10:CL:59:ILE:HD12	1.80	0.64
1:AA:1675:U:O4	63:AA:3919:HOH:O	2.12	0.64
1:AA:2832:G:OP2	63:AE:401:HOH:O	2.15	0.64
34:BA:435:C:H2'	34:BA:436:C:H6	1.62	0.64
37:BD:155:LEU:HD13	37:BD:158:ILE:HD11	1.79	0.64
1:CA:997:G:OP1	18:CU:92:ARG:HG2	1.97	0.64
1:CA:2096:U:H2'	1:CA:2097:C:C6	2.33	0.64
34:DA:517:G:N2	34:DA:533:A:OP2	2.31	0.64
37:DD:57:ARG:NH2	37:DD:205:GLU:OE2	2.26	0.64
37:DD:165:MET:SD	37:DD:168:ARG:NH1	2.60	0.64
11:AN:46:VAL:HG23	11:AN:48:MET:HG2	1.80	0.63
34:BA:626:U:H2'	34:BA:627:G:H8	1.62	0.63
1:CA:2064:C:OP2	63:CA:3734:HOH:O	2.14	0.63
1:CA:2168:G:H2'	1:CA:2169:A:H8	1.62	0.63
3:CC:29:LEU:O	3:CC:32:GLU:N	2.31	0.63
3:CC:68:GLY:N	3:CC:189:ASN:HD21	1.96	0.63
3:CC:69:LEU:O	3:CC:178:LYS:HG3	1.97	0.63
34:DA:673:G:H2'	34:DA:674:G:C8	2.33	0.63
39:DF:23:LYS:NZ	39:DF:42:GLU:OE2	2.31	0.63
57:DZ:168:ILE:HG23	57:DZ:205:TYR:HE2	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:179:ASP:OD2	57:DZ:182:ARG:HD2	1.97	0.63
57:DZ:517:LEU:HG	57:DZ:518:PRO:HD2	1.80	0.63
1:AA:303:C:H42	1:AA:385:G:H1	1.46	0.63
3:AC:29:LEU:O	3:AC:32:GLU:N	2.32	0.63
37:BD:57:ARG:NH2	37:BD:205:GLU:OE2	2.31	0.63
1:CA:2867:G:OP2	17:CT:119:LYS:NZ	2.32	0.63
30:C6:13:CYS:SG	30:C6:47:THR:HG21	2.39	0.63
34:DA:403:C:H2'	34:DA:404:U:H6	1.64	0.63
34:DA:1143:G:H2'	34:DA:1144:G:H8	1.63	0.63
44:DK:79:SER:HA	44:DK:104:GLN:HB3	1.79	0.63
46:DM:33:ALA:HA	46:DM:59:TYR:HE2	1.63	0.63
1:AA:671:A:H2'	1:AA:672:G:O4'	1.99	0.63
1:AA:1935:A:OP1	57:BZ:499:ARG:NH2	2.31	0.63
3:AC:68:GLY:N	3:AC:189:ASN:HD21	1.96	0.63
34:BA:321:A:N7	34:BA:328:C:O2'	2.29	0.63
34:BA:1063:C:H2'	34:BA:1064:G:C8	2.32	0.63
46:BM:90:LEU:HD23	46:BM:93:ARG:HD2	1.79	0.63
57:BZ:637:ARG:C	57:BZ:639:ASN:H	2.06	0.63
16:CS:84:GLN:HA	16:CS:111:GLU:HB2	1.80	0.63
17:CT:16:ARG:HH11	17:CT:19:LEU:HD21	1.61	0.63
56:DW:40:C:H1'	56:DY:35:A:H4'	1.79	0.63
57:DZ:230:LYS:HB3	57:DZ:235:GLU:HB3	1.78	0.63
1:AA:2367:C:H1'	24:A0:39:ARG:HH21	1.62	0.63
3:AC:7:ARG:O	3:AC:11:LEU:HD23	1.99	0.63
53:BT:56:MET:CE	53:BT:85:MET:HA	2.29	0.63
1:CA:2037:G:O6	63:CA:3725:HOH:O	2.11	0.63
3:CC:44:VAL:CG2	3:CC:176:VAL:HG21	2.28	0.63
5:CE:73:GLU:OE2	5:CE:73:GLU:N	2.31	0.63
5:CE:143:ASN:HD22	5:CE:147:PRO:HD3	1.63	0.63
34:DA:148:G:H2'	34:DA:149:A:H8	1.62	0.63
1:AA:1296:G:OP2	13:AP:21:ARG:NH1	2.31	0.63
1:AA:2326:C:H2'	1:AA:2327:G:H8	1.63	0.63
22:AY:8:LYS:HD3	22:AY:97:ARG:NH1	2.14	0.63
28:A4:53:GLU:HB3	28:A4:54:GLY:HA2	1.80	0.63
48:BO:16:ALA:HB1	48:BO:21:ASP:HB3	1.79	0.63
1:CA:2646:C:OP2	1:CA:2732:G:O2'	2.15	0.63
57:DZ:358:MET:HE1	57:DZ:363:ARG:HG2	1.80	0.63
1:AA:1701:A:OP1	15:AR:1:MET:N	2.25	0.63
7:AG:143:GLU:O	28:A4:28:LYS:NZ	2.30	0.63
57:BZ:264:LEU:HB2	62:BZ:704:GDP:C5	2.33	0.63
8:CH:113:VAL:HG11	8:CH:151:ILE:HG21	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CU:49:HIS:HA	18:CU:52:ARG:HB3	1.80	0.63
34:DA:404:U:H5'	37:DD:122:ARG:HE	1.61	0.63
34:DA:811:C:O2'	34:DA:901:A:N1	2.30	0.63
35:DB:16:HIS:CG	35:DB:17:PHE:H	2.16	0.63
57:DZ:497:PHE:CE2	57:DZ:506:GLN:HG3	2.32	0.63
23:AZ:28:MET:HE3	23:AZ:59:LEU:HD12	1.81	0.63
34:BA:921:U:O2	38:BE:19:MET:HB2	1.99	0.63
57:BZ:-9:LEU:O	57:BZ:-6:ARG:N	2.20	0.63
57:BZ:629:GLY:HA3	57:BZ:647:VAL:HG12	1.79	0.63
23:CZ:104:PHE:HA	23:CZ:139:VAL:HG22	1.80	0.63
34:DA:932:C:H2'	34:DA:933:G:C8	2.33	0.63
2:AB:66:A:H61	2:AB:108:U:H2'	1.64	0.63
9:AK:28:ASN:O	9:AK:30:GLN:N	2.31	0.63
30:A6:35:GLU:OE2	30:A6:50:ARG:NH1	2.31	0.63
57:BZ:239:GLU:O	57:BZ:241:GLU:N	2.32	0.63
57:BZ:508:GLY:HA3	57:BZ:581:ALA:O	1.98	0.63
1:CA:830:G:H4'	1:CA:831:G:OP2	1.97	0.63
3:CC:7:ARG:O	3:CC:11:LEU:HD23	1.99	0.63
15:CR:57:ARG:O	15:CR:59:ASP:N	2.32	0.63
36:DC:113:ALA:HB2	36:DC:202:ILE:HG13	1.79	0.63
57:DZ:497:PHE:O	57:DZ:507:TYR:HA	1.99	0.63
1:AA:1003:U:OP2	14:AQ:14:ARG:HD3	1.99	0.63
1:AA:2152:U:H4'	1:AA:2155:G:H4'	1.80	0.63
8:AH:88:LEU:HD12	8:AH:130:ARG:HG2	1.79	0.63
10:AL:100:THR:HA	10:AL:139:VAL:HB	1.81	0.63
35:BB:55:PHE:CD1	35:BB:58:ILE:HD12	2.34	0.63
40:BG:31:MET:SD	40:BG:34:GLY:HA2	2.39	0.63
1:CA:486:C:O2'	20:CW:60:ASN:OD1	2.12	0.63
1:CA:1859:A:C2'	3:CC:206:LYS:CE	2.77	0.63
34:DA:1456:G:O3'	53:DT:39:LYS:NZ	2.31	0.63
56:DW:55:PSU:O2'	56:DW:57:G:N7	2.20	0.63
57:DZ:215:LYS:HA	57:DZ:218:GLU:HB3	1.81	0.63
57:DZ:524:GLU:HB3	57:DZ:564:LYS:HA	1.81	0.63
1:AA:1324:A:OP1	15:AR:36:THR:HG22	1.98	0.62
1:AA:2331:G:H22	16:AS:3:ARG:CG	2.06	0.62
1:CA:340:A:H2'	1:CA:341:G:O4'	1.99	0.62
1:CA:1705:G:O6	63:CA:3731:HOH:O	2.13	0.62
7:CG:80:PHE:O	7:CG:82:LEU:N	2.31	0.62
10:CL:71:THR:O	10:CL:111:LYS:NZ	2.32	0.62
11:CN:42:TRP:CH2	11:CN:44:PRO:HB3	2.34	0.62
14:CQ:38:GLU:HG3	14:CQ:127:ILE:HG22	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:437:U:O2'	37:DD:125:HIS:HE1	1.81	0.62
37:DD:23:GLY:N	37:DD:26:CYS:SG	2.61	0.62
54:DU:3:LYS:HB3	54:DU:14:TRP:CD1	2.33	0.62
1:AA:482:C:H4'	63:AA:3924:HOH:O	1.99	0.62
10:AL:45:THR:O	10:AL:45:THR:OG1	2.16	0.62
20:AW:4:LYS:HB2	20:AW:106:ILE:HG12	1.82	0.62
34:BA:1240:U:OP2	40:BG:116:ALA:N	2.26	0.62
57:BZ:356:LEU:HD12	57:BZ:365:GLU:HA	1.79	0.62
57:BZ:549:ALA:HB1	57:BZ:591:LYS:HE2	1.81	0.62
1:CA:1913:A:H4'	1:CA:1914:C:H5'	1.80	0.62
57:DZ:332:SER:HA	57:DZ:371:ALA:HB2	1.79	0.62
1:AA:714:U:O2	32:A8:2:PRO:HD2	1.98	0.62
1:AA:831:A:OP2	63:AA:3925:HOH:O	2.15	0.62
2:AB:66:A:N6	2:AB:108:U:H2'	2.15	0.62
34:BA:437:U:O2'	37:BD:125:HIS:HE1	1.81	0.62
36:BC:35:GLU:OE2	36:BC:59:ARG:NH2	2.31	0.62
1:CA:328:U:H4'	22:CY:68:HIS:CD2	2.34	0.62
1:CA:922:U:H2'	1:CA:923:C:C6	2.33	0.62
1:CA:1859:A:C2'	3:CC:206:LYS:HE3	2.29	0.62
3:CC:6:LYS:HG3	3:CC:7:ARG:N	2.14	0.62
8:CH:45:VAL:HG22	8:CH:50:VAL:HG22	1.81	0.62
34:DA:473:G:H2'	34:DA:474:G:H8	1.62	0.62
34:DA:1228:C:OP1	46:DM:115:LYS:N	2.29	0.62
4:AD:223:GLY:HA3	4:AD:231:HIS:CE1	2.34	0.62
6:AF:24:LEU:HB3	6:AF:115:ALA:HB2	1.79	0.62
20:AW:14:PRO:CG	20:AW:78:GLU:HG2	2.29	0.62
34:BA:565:U:OP2	34:BA:566:G:O2'	2.14	0.62
35:BB:55:PHE:HD1	35:BB:58:ILE:HD12	1.65	0.62
1:CA:1815:A:OP2	4:CD:54:ARG:NH2	2.32	0.62
35:DB:13:ALA:N	35:DB:14:GLY:HA3	2.14	0.62
47:DN:27:CYS:SG	47:DN:29:ARG:N	2.73	0.62
1:AA:2175:G:H2'	1:AA:2176:G:H8	1.63	0.62
4:AD:145:VAL:HG12	4:AD:146:GLU:O	2.00	0.62
18:AU:66:ASN:O	18:AU:70:ARG:HG3	2.00	0.62
27:A3:3:ARG:HH11	27:A3:60:GLU:CD	2.07	0.62
34:BA:1238:A:O5'	34:BA:1336:C:N4	2.33	0.62
34:BA:1316:G:H4'	47:BN:18:VAL:HG13	1.81	0.62
37:BD:57:ARG:HG2	37:BD:202:LEU:HD22	1.81	0.62
1:CA:813:U:H2'	1:CA:814:C:C6	2.34	0.62
5:CE:11:MET:HE3	5:CE:24:THR:HG22	1.81	0.62
34:DA:560:U:O2'	34:DA:561:U:OP2	2.18	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:-9:LEU:O	57:DZ:-6:ARG:N	2.32	0.62
1:AA:116:A:C8	1:AA:117:A:C8	2.87	0.62
1:AA:1627:A:OP2	1:AA:1627:A:H8	1.82	0.62
3:AC:53:ARG:HD3	3:AC:53:ARG:H	1.65	0.62
28:A4:10:VAL:HG21	28:A4:29:PRO:HG3	1.81	0.62
34:BA:499:A:O2'	34:BA:546:G:N2	2.32	0.62
50:BQ:6:LEU:HD23	50:BQ:23:VAL:HG11	1.80	0.62
3:CC:68:GLY:H	3:CC:189:ASN:HD21	1.47	0.62
28:C4:44:THR:O	28:C4:46:GLN:N	2.31	0.62
1:AA:552:C:C5	1:AA:2792:U:H2'	2.35	0.62
1:AA:553:A:H2	1:AA:2065:C:H5'	1.63	0.62
3:AC:6:LYS:HG3	3:AC:7:ARG:N	2.14	0.62
36:BC:116:VAL:HG21	36:BC:202:ILE:HD11	1.82	0.62
57:BZ:432:ALA:HA	57:BZ:438:PHE:HE1	1.65	0.62
1:CA:307:G:N1	1:CA:310:A:OP2	2.29	0.62
1:CA:2124:G:C3'	3:CC:175:PRO:HG3	2.30	0.62
1:CA:2562:U:H1'	12:CO:23:ARG:HH11	1.63	0.62
6:CF:118:ALA:HB2	6:CF:123:LEU:HD23	1.81	0.62
9:CK:104:ILE:HA	9:CK:109:SER:HA	1.82	0.62
34:DA:1292:U:OP2	40:DG:41:ARG:NH2	2.32	0.62
34:DA:1339:A:O3'	56:DY:35:A:OP1	2.16	0.62
57:DZ:87:HIS:CD2	61:DZ:703:FUA:H283	2.31	0.62
1:AA:1891:G:H4'	3:AC:206:LYS:HD3	1.79	0.62
34:BA:501:C:H2'	34:BA:502:G:H8	1.64	0.62
35:BB:166:ASP:HB3	35:BB:169:LYS:HB2	1.81	0.62
34:DA:9:G:OP2	38:DE:121:LYS:NZ	2.31	0.62
34:DA:1347:G:H22	34:DA:1373:G:H2'	1.62	0.62
36:DC:11:ARG:HB3	36:DC:15:THR:HB	1.82	0.62
1:AA:215:G:H21	1:AA:217:A:H62	1.48	0.62
40:BG:36:LYS:HA	40:BG:39:ALA:HB3	1.81	0.62
61:BZ:703:FUA:H211	61:BZ:703:FUA:O2	2.00	0.62
5:CE:47:VAL:HG11	5:CE:86:PRO:HD2	1.81	0.62
51:DR:58:LEU:HD12	51:DR:62:GLU:HB3	1.82	0.62
6:AF:148:LEU:HD13	6:AF:154:VAL:HG21	1.82	0.62
34:BA:1497:G:O6	63:BA:1907:HOH:O	2.15	0.62
38:BE:31:LEU:HD23	38:BE:45:PHE:HB2	1.81	0.62
1:CA:1877:A:H5'	1:CA:1878:G:OP2	2.00	0.62
57:DZ:138:LYS:HG2	62:DZ:704:GDP:C5	2.34	0.62
61:DZ:703:FUA:O2	61:DZ:703:FUA:H211	2.00	0.62
1:AA:1825:U:H2'	1:AA:1826:C:C6	2.34	0.61
14:AQ:135:ASP:HB3	14:AQ:137:TYR:H	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BU:3:LYS:HB3	54:BU:14:TRP:CG	2.35	0.61
1:CA:1665:A:H1'	12:CO:1:MET:HG3	1.82	0.61
1:CA:2892:A:H2'	1:CA:2893:G:H8	1.65	0.61
3:CC:53:ARG:HD3	3:CC:53:ARG:H	1.65	0.61
12:CO:4:PRO:O	12:CO:5:GLN:HB2	1.99	0.61
34:DA:255:G:H1'	50:DQ:16:GLN:NE2	2.15	0.61
34:DA:1016:A:HO2'	34:DA:1217:C:HO2'	1.44	0.61
34:DA:1468:A:H2'	34:DA:1469:G:O4'	1.99	0.61
45:DL:113:ARG:HG2	45:DL:117:ARG:HG2	1.80	0.61
3:AC:68:GLY:H	3:AC:189:ASN:HD21	1.47	0.61
7:AG:180:PHE:O	7:AG:182:LYS:N	2.33	0.61
57:BZ:210:ARG:HB2	57:BZ:210:ARG:NH1	2.12	0.61
35:DB:55:PHE:HA	35:DB:58:ILE:HG13	1.81	0.61
38:DE:77:PRO:HD2	38:DE:142:LEU:HD22	1.82	0.61
57:DZ:328:ILE:HD12	57:DZ:377:VAL:HG12	1.81	0.61
57:DZ:363:ARG:HH11	57:DZ:363:ARG:CG	2.13	0.61
20:AW:13:SER:HB3	20:AW:16:LYS:HD2	1.82	0.61
34:BA:345:C:H4'	34:BA:346:G:C2	2.35	0.61
34:BA:1318:A:H2'	34:BA:1319:A:H5"	1.82	0.61
2:CB:76:G:H2'	2:CB:77:U:O4'	2.00	0.61
6:CF:20:LEU:HD13	6:CF:21:ALA:H	1.65	0.61
25:C1:83:GLU:N	25:C1:83:GLU:OE1	2.33	0.61
34:DA:353:A:H8	34:DA:353:A:H5'	1.66	0.61
34:DA:1059:C:OP2	36:DC:199:LYS:NZ	2.33	0.61
1:AA:868:A:H2'	1:AA:991:G:H5"	1.82	0.61
6:AF:191:ARG:HG2	6:AF:191:ARG:NH1	2.11	0.61
34:BA:1013:G:N2	34:BA:1016:A:OP2	2.32	0.61
42:BI:110:GLU:OE2	42:BI:113:LYS:NZ	2.33	0.61
46:BM:84:ILE:HB	52:BS:74:PHE:HE1	1.65	0.61
6:CF:120:GLU:HB2	6:CF:122:LYS:HG2	1.81	0.61
34:DA:559:A:OP1	38:DE:126:ARG:NH2	2.33	0.61
36:DC:111:LEU:HD22	36:DC:146:ALA:HB2	1.83	0.61
37:DD:187:ARG:NH2	37:DD:193:ASP:OD2	2.34	0.61
38:DE:57:LYS:HD3	38:DE:61:TYR:HE2	1.64	0.61
57:DZ:177:ILE:HG13	57:DZ:188:TYR:HE2	1.64	0.61
57:DZ:223:PHE:CZ	57:DZ:249:GLY:HA3	2.35	0.61
1:AA:1935:A:H4'	1:AA:1936:C:C5'	2.30	0.61
1:AA:1935:A:H4'	1:AA:1936:C:H5"	1.81	0.61
30:A6:25:LYS:HE3	30:A6:30:THR:O	2.00	0.61
34:BA:1347:G:H5"	42:BI:107:ARG:HB3	1.81	0.61
34:DA:1494:G:H5"	57:DZ:506:GLN:HE22	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:347:G:H2'	34:BA:348:G:O4'	1.99	0.61
34:BA:407:G:H5"	37:BD:115:ARG:HB3	1.83	0.61
45:BL:34:ARG:HG2	45:BL:35:GLY:N	2.16	0.61
1:CA:2631:G:N3	1:CA:2810:A:H2	1.98	0.61
10:CL:64:SER:OG	10:CL:65:PHE:N	2.33	0.61
57:DZ:264:LEU:HD12	62:DZ:704:GDP:C4	2.35	0.61
5:AE:116:VAL:HG13	5:AE:122:PHE:HB2	1.83	0.61
7:AG:124:SER:HB2	7:AG:131:TYR:CE1	2.36	0.61
7:AG:140:ILE:H	7:AG:140:ILE:HD12	1.66	0.61
12:AO:64:ARG:HD3	17:AT:70:VAL:HG11	1.83	0.61
18:AU:76:TYR:CE1	18:AU:80:ILE:HG13	2.36	0.61
34:BA:1372:U:OP1	42:BI:72:GLY:N	2.33	0.61
49:BP:67:THR:HB	49:BP:70:ALA:HB2	1.82	0.61
57:DZ:74:TRP:NE1	57:DZ:273:LEU:HB3	2.16	0.61
1:AA:2023:A:H2'	1:AA:2024:G:C8	2.36	0.61
20:AW:14:PRO:HG2	20:AW:78:GLU:CG	2.30	0.61
34:BA:308:C:H2'	34:BA:309:G:H8	1.66	0.61
50:BQ:86:GLU:O	50:BQ:88:TYR:N	2.33	0.61
51:BR:32:ARG:HA	51:BR:69:THR:HG21	1.83	0.61
61:BZ:703:FUA:O1	61:BZ:703:FUA:H12	2.00	0.61
1:CA:1095:A:N6	57:DZ:614:GLU:OE1	2.33	0.61
1:CA:1803:A:H4'	4:CD:259:THR:HG23	1.83	0.61
3:CC:11:LEU:HD12	3:CC:33:LEU:HA	1.82	0.61
4:CD:238:GLY:O	4:CD:239:ARG:HB2	1.98	0.61
50:DQ:10:VAL:HG13	50:DQ:19:VAL:HB	1.83	0.61
56:DW:47:U:O2'	56:DW:48:C:OP1	2.18	0.61
1:AA:2658:C:H2'	1:AA:2659:U:O4'	2.01	0.61
45:BL:33:ARG:HD3	45:BL:62:SER:HB3	1.83	0.61
48:BO:74:ASP:CG	48:BO:77:ARG:HG3	2.26	0.61
57:BZ:512:ILE:HD12	57:BZ:589:ALA:HB1	1.82	0.61
1:CA:338:G:N7	63:CA:3786:HOH:O	2.31	0.61
1:CA:2121:G:O2'	3:CC:168:LYS:CG	2.49	0.61
7:CG:126:ASP:HB3	7:CG:128:ARG:H	1.66	0.61
17:CT:83:ILE:HD13	17:CT:86:ILE:HD11	1.83	0.61
49:DP:53:VAL:HG22	49:DP:79:VAL:HG22	1.82	0.61
21:AX:65:ARG:HB2	21:AX:70:LEU:HD22	1.83	0.61
22:AY:92:ASN:H	22:AY:92:ASN:HD22	1.49	0.61
25:A1:49:VAL:HG21	25:A1:67:ILE:HG23	1.81	0.61
34:BA:1227:A:O3'	46:BM:115:LYS:HD2	2.01	0.61
35:BB:178:ARG:NH1	35:BB:196:LEU:O	2.34	0.61
1:CA:775:G:N2	1:CA:794:G:H5'	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:407:G:H5"	37:DD:115:ARG:HD2	1.81	0.61
42:DI:3:GLN:OE1	42:DI:20:ARG:NH2	2.30	0.61
56:DW:9:A:O2'	56:DW:10:G:N7	2.34	0.61
57:DZ:169:GLY:N	57:DZ:170:ARG:HH12	1.99	0.61
1:AA:591:U:OP1	13:AP:36:LYS:HE3	2.01	0.60
1:AA:1125:C:O2'	10:AL:132:ARG:NH1	2.34	0.60
1:AA:2451:A:C8	1:AA:2451:A:H5'	2.36	0.60
2:AB:45:A:OP2	7:AG:96:ARG:NH2	2.30	0.60
17:AT:60:THR:HG22	17:AT:77:PRO:HA	1.83	0.60
34:BA:1055:A:H2'	36:BC:156:ARG:HD2	1.83	0.60
40:BG:69:VAL:HG22	40:BG:135:VAL:HG22	1.82	0.60
40:BG:92:SER:O	40:BG:95:ARG:N	2.32	0.60
51:BR:59:SER:H	51:BR:62:GLU:CG	2.14	0.60
1:CA:2168:G:H2'	1:CA:2169:A:C8	2.36	0.60
34:DA:972:C:OP2	43:DJ:57:LYS:NZ	2.24	0.60
57:DZ:32:ILE:O	57:DZ:36:THR:OG1	2.19	0.60
1:AA:1848:G:OP1	4:AD:88:ARG:NH2	2.33	0.60
1:AA:2328:C:H2'	1:AA:2329:C:C6	2.34	0.60
1:AA:2349:G:OP1	63:AA:3926:HOH:O	2.16	0.60
1:AA:2859:U:OP2	17:AT:95:ARG:NH1	2.34	0.60
16:AS:10:ARG:O	16:AS:14:VAL:HG13	2.01	0.60
18:AU:25:TRP:O	18:AU:28:ARG:HB2	2.01	0.60
34:BA:1221:G:H4'	52:BS:77:THR:HG21	1.83	0.60
50:BQ:86:GLU:C	50:BQ:88:TYR:H	2.09	0.60
57:BZ:99:ARG:NH1	57:BZ:312:LEU:HD11	2.16	0.60
1:CA:1693:U:O2'	4:CD:14:ARG:NH2	2.33	0.60
5:CE:35:GLN:OE1	5:CE:66:HIS:HE1	1.84	0.60
5:CE:68:ALA:O	5:CE:70:ALA:N	2.34	0.60
8:CH:144:VAL:O	8:CH:148:ILE:HG12	2.01	0.60
11:CN:21:LYS:NZ	11:CN:140:VAL:OXT	2.31	0.60
36:DC:157:ILE:HD12	36:DC:164:ARG:HB3	1.82	0.60
10:AL:30:HIS:HD2	10:AL:65:PHE:HB2	1.66	0.60
38:BE:152:ARG:HA	41:BH:64:LYS:NZ	2.17	0.60
1:CA:77:C:OP1	26:C2:59:ARG:HD3	2.00	0.60
1:CA:1364:G:N7	25:C1:3:LYS:HE2	2.16	0.60
1:CA:1912:A:O3'	57:DZ:499:ARG:NH2	2.34	0.60
1:CA:2113:U:H2'	1:CA:2114:A:H8	1.64	0.60
1:CA:2177:C:C2'	3:CC:171:ALA:HB2	2.31	0.60
1:CA:2298:A:H2'	1:CA:2299:G:O4'	2.01	0.60
34:DA:620:C:C2	37:DD:135:LEU:HG	2.36	0.60
35:DB:219:VAL:HA	35:DB:222:ILE:HG12	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:43:LEU:HD11	7:AG:153:ARG:HG2	1.83	0.60
7:AG:77:ILE:HG22	7:AG:80:PHE:H	1.65	0.60
34:BA:509:A:H3'	34:BA:509:A:C8	2.36	0.60
1:CA:2162:G:OP1	1:CA:2172:U:O2'	2.17	0.60
1:CA:2364:C:H2'	1:CA:2365:G:O4'	2.01	0.60
15:CR:85:PRO:C	15:CR:87:TYR:H	2.09	0.60
23:CZ:132:ASN:O	23:CZ:134:PRO:HD3	2.02	0.60
34:DA:343:U:O2'	34:DA:344:A:H2'	2.02	0.60
34:DA:982:U:H5"	47:DN:6:LEU:HD21	1.81	0.60
1:AA:2695:C:O2	12:AO:70:LYS:NZ	2.29	0.60
11:AN:75:TYR:CZ	11:AN:77:GLY:HA2	2.37	0.60
16:AS:27:SER:HA	16:AS:88:ASP:HB3	1.84	0.60
41:BH:51:VAL:HG21	41:BH:60:ARG:HD2	1.83	0.60
1:CA:1709:U:H2'	1:CA:1710:C:C6	2.37	0.60
37:DD:36:ARG:HG3	37:DD:38:TYR:CE2	2.37	0.60
61:DZ:703:FUA:O1	61:DZ:703:FUA:H12	2.00	0.60
1:AA:2331:G:N1	16:AS:3:ARG:HA	2.16	0.60
1:AA:2402:U:P	32:A8:35:GLN:HE22	2.25	0.60
34:BA:167:G:H2'	34:BA:168:G:C8	2.36	0.60
34:BA:1372:U:H5"	42:BI:71:SER:HB3	1.81	0.60
53:BT:77:ALA:O	53:BT:81:LYS:HG3	2.00	0.60
57:BZ:350:GLU:OE1	57:BZ:381:LYS:N	2.17	0.60
1:CA:1683:C:H2'	1:CA:1684:C:C6	2.36	0.60
16:CS:14:VAL:O	16:CS:18:ILE:HG12	2.01	0.60
23:CZ:69:THR:HG22	23:CZ:90:VAL:HG22	1.82	0.60
56:DW:40:C:O2'	56:DY:36:A:OP1	2.19	0.60
1:AA:469:A:H1'	1:AA:1246:C:O4'	2.02	0.60
1:AA:1405:A:N1	1:AA:1418:U:C4	2.69	0.60
34:BA:964:A:N3	34:BA:969:A:O2'	2.35	0.60
46:BM:16:ASP:OD1	46:BM:16:ASP:N	2.31	0.60
1:CA:889:C:O2'	1:CA:890:A:O4'	2.19	0.60
24:C0:10:THR:HG22	24:C0:12:ASN:H	1.66	0.60
3:AC:214:TYR:CE2	3:AC:224:ARG:HG2	2.37	0.60
24:A0:11:ARG:O	24:A0:14:ARG:NH2	2.26	0.60
42:BI:23:ASN:HD22	42:BI:25:LYS:HG2	1.66	0.60
1:CA:748:G:O6	20:CW:90:ARG:NH1	2.35	0.60
1:CA:1420:U:O2'	1:CA:1421:G:OP1	2.19	0.60
1:CA:2176:A:HO2'	3:CC:45:HIS:CG	2.20	0.60
1:CA:2317:C:N4	1:CA:2318:G:O6	2.35	0.60
5:CE:16:ARG:NH1	5:CE:171:GLU:OE2	2.31	0.60
6:CF:129:PHE:O	6:CF:132:VAL:HG22	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1347:G:C8	42:DI:107:ARG:HB3	2.36	0.60
35:DB:166:ASP:OD2	35:DB:169:LYS:N	2.34	0.60
36:DC:65:ALA:HA	36:DC:100:ALA:HB3	1.83	0.60
1:AA:2157:A:N6	1:AA:2178:G:O2'	2.23	0.60
1:AA:2511:C:N3	63:AA:3976:HOH:O	2.31	0.60
34:BA:1030(C):G:H2'	34:BA:1030(D):A:H8	1.65	0.60
25:C1:50:ARG:HG2	25:C1:59:THR:HB	1.83	0.60
34:DA:976:G:OP2	34:DA:1358:U:O2'	2.15	0.60
53:DT:18:GLN:O	53:DT:22:ARG:HG3	2.01	0.60
18:AU:76:TYR:CZ	18:AU:80:ILE:HG13	2.37	0.60
45:BL:53:ARG:HG3	45:BL:93:LEU:HD21	1.84	0.60
1:CA:2307:G:N1	7:CG:43:LEU:O	2.34	0.60
3:CC:194:ILE:HD11	3:CC:227:PRO:CB	2.32	0.60
34:DA:187:C:OP1	53:DT:82:SER:OG	2.18	0.60
1:AA:818:G:OP1	31:A7:10:ARG:NH1	2.35	0.59
1:AA:1065:U:O2'	1:AA:1067:A:H2	1.83	0.59
1:AA:2473:C:H2'	1:AA:2474:U:C6	2.37	0.59
3:AC:194:ILE:HD11	3:AC:227:PRO:CB	2.32	0.59
28:A4:58:ARG:O	28:A4:60:GLN:N	2.35	0.59
34:BA:279:A:N6	50:BQ:98:LEU:O	2.35	0.59
34:BA:508:C:OP1	37:BD:209:ARG:NH2	2.34	0.59
34:BA:828:A:H2'	34:BA:829:G:O4'	2.02	0.59
57:BZ:74:TRP:CD1	57:BZ:273:LEU:HB3	2.37	0.59
57:BZ:639:ASN:HA	57:BZ:640:ALA:O	2.02	0.59
38:DE:11:ILE:HG22	38:DE:31:LEU:HB3	1.84	0.59
49:DP:55:ARG:O	49:DP:58:TYR:N	2.35	0.59
57:DZ:510:VAL:HG21	57:DZ:542:VAL:HG21	1.84	0.59
57:DZ:606:MET:HG3	57:DZ:649:LEU:HD23	1.84	0.59
1:AA:1219:A:H4'	1:AA:1220:U:OP1	2.01	0.59
1:AA:2230:U:O4'	25:A1:52:ARG:NH2	2.34	0.59
3:AC:11:LEU:HD12	3:AC:33:LEU:HA	1.82	0.59
24:A0:6:GLY:O	56:BW:1:G:O2'	2.19	0.59
1:CA:1359:A:H2'	1:CA:1360:A:H5'	1.83	0.59
6:CF:36:VAL:HG11	6:CF:183:VAL:HG13	1.83	0.59
43:DJ:52:GLY:O	47:DN:41:ARG:NH2	2.33	0.59
57:DZ:630:GLN:O	57:DZ:646:PHE:N	2.34	0.59
1:AA:483:A:H5"	63:AA:3924:HOH:O	2.03	0.59
5:AE:120:TRP:CD2	5:AE:155:LYS:HG2	2.37	0.59
6:AF:191:ARG:HH11	6:AF:191:ARG:CG	2.14	0.59
7:AG:130:ASN:HB3	7:AG:160:VAL:HA	1.84	0.59
10:AL:99:ILE:HG23	10:AL:103:GLN:HB3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AP:101:VAL:HG23	13:AP:106:LEU:HB3	1.84	0.59
34:BA:671:G:H5'	39:BF:77:ARG:HH22	1.66	0.59
56:BY:6:G:O6	56:BY:7:A:N6	2.36	0.59
57:BZ:512:ILE:HB	57:BZ:566:THR:O	2.02	0.59
4:CD:146:GLU:HB2	4:CD:189:CYS:HB3	1.84	0.59
10:CL:125:ARG:HA	10:CL:128:ALA:HB3	1.84	0.59
17:CT:50:ILE:HA	17:CT:99:LEU:HB2	1.84	0.59
34:DA:493:G:N2	34:DA:494:U:O4	2.36	0.59
38:DE:88:LYS:HB3	38:DE:123:LEU:HB2	1.84	0.59
49:DP:28:ARG:NH1	49:DP:29:ASP:OD1	2.36	0.59
1:AA:794:U:O2	1:AA:2036:A:H1'	2.02	0.59
1:AA:1410:G:C8	25:A1:3:LYS:HE2	2.37	0.59
1:AA:2658:C:O5'	1:AA:2658:C:H6	1.85	0.59
10:AL:51:ALA:HB1	10:AL:72:PRO:HB3	1.85	0.59
34:BA:539:A:OP2	45:BL:115:LYS:NZ	2.35	0.59
57:BZ:210:ARG:HH11	57:BZ:210:ARG:CG	2.16	0.59
1:CA:72:U:OP2	21:CX:1:MET:N	2.35	0.59
1:CA:81:G:O6	63:CA:3738:HOH:O	2.17	0.59
1:CA:528:A:OP2	11:CN:114:ARG:NH1	2.35	0.59
1:CA:1859:A:N6	1:CA:1883:G:O2'	2.35	0.59
6:CF:129:PHE:CD2	6:CF:163:VAL:HG21	2.37	0.59
13:CP:63:PRO:HG2	32:C8:25:MET:HB2	1.83	0.59
34:DA:737:A:H1'	39:DF:73:ASN:OD1	2.03	0.59
34:DA:1133:G:H2'	34:DA:1134:G:H8	1.65	0.59
37:DD:26:CYS:HA	60:DD:501:SF4:S3	2.43	0.59
42:DI:9:ARG:HG2	42:DI:14:VAL:HG12	1.84	0.59
49:DP:5:ARG:HH12	49:DP:28:ARG:HA	1.67	0.59
1:AA:1935:A:H8	1:AA:1935:A:H5'	1.67	0.59
16:AS:14:VAL:O	16:AS:18:ILE:HG12	2.02	0.59
34:BA:435:C:H2'	34:BA:436:C:C6	2.36	0.59
34:BA:1525:G:P	44:BK:120:ARG:HH22	2.25	0.59
35:BB:204:ASN:OD1	35:BB:205:ASP:N	2.35	0.59
41:BH:4:ASP:OD2	41:BH:85:ARG:NH1	2.33	0.59
44:BK:84:VAL:HG21	44:BK:95:ILE:HD11	1.85	0.59
57:BZ:338:GLY:O	57:BZ:351:ARG:NH2	2.34	0.59
57:BZ:402:ILE:HG23	57:BZ:403:GLU:H	1.67	0.59
57:BZ:421:GLN:O	57:BZ:424:LEU:HB3	2.01	0.59
1:CA:1292:U:H2'	1:CA:1293:C:C6	2.38	0.59
1:CA:1466:G:HO2'	1:CA:1546:C:HO2'	1.50	0.59
7:CG:15:VAL:HA	7:CG:175:LEU:HD23	1.83	0.59
10:CL:100:THR:HA	10:CL:139:VAL:HB	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:C4:41:PRO:HA	28:C4:44:THR:HG22	1.84	0.59
34:DA:1457:G:H5"	53:DT:35:THR:HG21	1.84	0.59
1:AA:1793:A:H2'	63:AA:5095:HOH:O	2.02	0.59
1:AA:2298:A:H4'	1:AA:2299:A:O4'	2.01	0.59
7:AG:146:TYR:O	7:AG:149:VAL:HG12	2.03	0.59
20:AW:62:HIS:O	20:AW:64:MET:HG3	2.03	0.59
34:BA:1356:G:H2'	34:BA:1357:A:H8	1.63	0.59
37:BD:18:LYS:HG2	37:BD:33:MET:HG2	1.84	0.59
26:C2:19:VAL:HA	26:C2:22:GLU:HG3	1.85	0.59
34:DA:1342:C:O2'	42:DI:124:GLN:HG2	2.02	0.59
1:AA:2331:G:N2	16:AS:3:ARG:HG2	2.09	0.59
18:AU:28:ARG:HG2	18:AU:38:THR:OG1	2.02	0.59
36:BC:40:ARG:HG2	36:BC:55:VAL:HG11	1.85	0.59
1:CA:25:U:H5"	20:CW:80:PRO:HD3	1.84	0.59
14:CQ:27:VAL:O	14:CQ:29:PHE:N	2.35	0.59
16:CS:50:SER:O	16:CS:50:SER:OG	2.17	0.59
35:DB:127:ILE:HG12	35:DB:128:GLU:H	1.65	0.59
42:DI:16:ARG:HB2	42:DI:64:THR:HG23	1.84	0.59
1:AA:41:C:H42	1:AA:464:G:H1	1.49	0.59
1:AA:2362:C:OP2	63:AA:3930:HOH:O	2.17	0.59
3:AC:214:TYR:CZ	3:AC:224:ARG:HG2	2.37	0.59
12:AO:7:TYR:HE1	12:AO:20:MET:HE3	1.68	0.59
33:A9:15:LYS:HE2	33:A9:17:ILE:HD11	1.85	0.59
34:BA:43:C:H42	34:BA:399:G:H1	1.50	0.59
34:BA:222:U:H2'	34:BA:223:U:C6	2.37	0.59
34:BA:688:G:O2'	34:BA:704:A:N1	2.27	0.59
43:BJ:45:ARG:HH11	47:BN:36:PHE:HE1	1.49	0.59
49:BP:69:THR:HA	49:BP:72:ARG:HB2	1.84	0.59
49:BP:74:LEU:O	49:BP:79:VAL:HG23	2.03	0.59
57:BZ:601:ILE:O	57:BZ:679:VAL:HG13	2.02	0.59
1:CA:2121:G:O4'	3:CC:168:LYS:CD	2.47	0.59
23:CZ:63:ASP:C	23:CZ:65:GLN:H	2.10	0.59
23:CZ:156:LYS:HD2	23:CZ:158:PRO:HD3	1.85	0.59
34:DA:390:C:O3'	49:DP:28:ARG:NH2	2.36	0.59
34:DA:1363(A):A:H1'	34:DA:1365:G:N7	2.17	0.59
56:DY:33:U:H2'	56:DY:35:A:OP2	2.02	0.59
6:AF:178:PRO:HB3	6:AF:198:ALA:HB1	1.83	0.59
7:AG:129:GLY:O	7:AG:161:THR:HG22	2.03	0.59
34:BA:147:G:N2	34:BA:175:C:O2	2.31	0.59
34:BA:412:A:H8	37:BD:35:ARG:HH21	1.50	0.59
37:BD:105:VAL:HG13	37:BD:110:PHE:HB2	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1044:G:H21	1:CA:1111:A:H2	1.51	0.59
1:CA:1055:G:H3'	1:CA:1056:G:H8	1.66	0.59
1:CA:1429:G:H2'	1:CA:1430:C:C6	2.37	0.59
3:CC:214:TYR:CZ	3:CC:224:ARG:HG2	2.37	0.59
9:CK:27:VAL:HA	9:CK:113:GLN:HA	1.85	0.59
12:CO:104:ARG:HH22	17:CT:43:GLN:NE2	2.00	0.59
17:CT:6:LEU:O	17:CT:10:VAL:HG23	2.03	0.59
34:DA:624:C:H2'	34:DA:625:G:C8	2.38	0.59
34:DA:981:U:H5'	47:DN:21:TYR:CE2	2.38	0.59
39:DF:78:GLU:C	39:DF:80:ARG:H	2.11	0.59
34:BA:447:G:H2'	34:BA:485:G:N2	2.18	0.59
56:BY:67:C:H2'	56:BY:68:C:C6	2.38	0.59
1:CA:1769:G:O2'	1:CA:1958:C:OP1	2.20	0.59
17:CT:16:ARG:NH1	17:CT:19:LEU:HD21	2.18	0.59
34:DA:1143:G:H2'	34:DA:1144:G:C8	2.38	0.59
43:DJ:6:ILE:HB	43:DJ:72:VAL:HG23	1.84	0.59
57:DZ:413:ILE:HB	57:DZ:476:VAL:HG12	1.84	0.59
4:AD:148:GLU:O	4:AD:151:LYS:HB2	2.03	0.58
14:AQ:16:ARG:C	14:AQ:17:LEU:HD23	2.27	0.58
1:CA:1359:A:H2	1:CA:1372:U:O4	1.86	0.58
15:CR:33:ARG:HE	15:CR:113:LEU:HD22	1.67	0.58
29:C5:20:ARG:O	29:C5:23:HIS:HB2	2.02	0.58
34:DA:978:A:OP2	34:DA:1363:C:N4	2.36	0.58
34:DA:1348:U:H4'	42:DI:120:ARG:HD3	1.85	0.58
57:DZ:114:VAL:HG21	57:DZ:156:ARG:HB2	1.85	0.58
57:DZ:264:LEU:HB2	62:DZ:704:GDP:C5	2.38	0.58
1:AA:595:A:H5"	1:AA:596:G:OP2	2.02	0.58
1:AA:692:C:H2'	1:AA:693:G:C8	2.38	0.58
1:AA:2250:G:N3	1:AA:2250:G:H2'	2.18	0.58
14:AQ:38:GLU:HA	14:AQ:99:PRO:HG3	1.85	0.58
34:BA:186:C:H2'	34:BA:187:C:H6	1.68	0.58
35:BB:158:LEU:HG	35:BB:182:ILE:HD11	1.85	0.58
35:BB:170:GLU:HB3	35:BB:173:ALA:HB3	1.83	0.58
36:BC:6:HIS:HB2	47:BN:49:HIS:HD2	1.67	0.58
36:BC:11:ARG:HH21	36:BC:180:ALA:HB3	1.67	0.58
38:BE:152:ARG:HA	41:BH:64:LYS:HZ2	1.68	0.58
44:BK:44:SER:OG	44:BK:47:VAL:HG23	2.03	0.58
1:CA:946:G:OP1	63:CA:3737:HOH:O	2.16	0.58
34:DA:426:G:OP1	37:DD:38:TYR:OH	2.21	0.58
34:DA:537:G:H2'	34:DA:538:G:C8	2.38	0.58
41:DH:44:PHE:HB3	41:DH:80:ILE:HD11	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:53:THR:HG22	6:AF:55:GLY:N	2.17	0.58
6:AF:161:GLU:OE1	6:AF:165:ARG:NH1	2.36	0.58
23:AZ:183:LEU:O	23:AZ:185:GLU:N	2.37	0.58
34:BA:1095:U:OP1	34:BA:1108:G:N1	2.33	0.58
34:BA:1305:G:N2	34:BA:1331:G:H1'	2.15	0.58
1:CA:284:U:H2'	1:CA:285:C:C6	2.38	0.58
1:CA:829:A:N7	1:CA:2247:A:O2'	2.37	0.58
1:CA:1006:C:O2'	11:CN:106:MET:HB3	2.03	0.58
1:CA:2861:G:H2'	1:CA:2862:G:H8	1.67	0.58
2:CB:66:A:N6	2:CB:109:C:H5"	2.16	0.58
3:CC:214:TYR:CE2	3:CC:224:ARG:HG2	2.37	0.58
56:DW:36:A:N6	56:DW:37:MIA:H152	2.18	0.58
56:DY:5:G:H1	56:DY:68:C:H42	1.48	0.58
57:DZ:225:GLU:HA	57:DZ:228:MET:HB3	1.84	0.58
1:AA:1338:U:H2'	1:AA:1339:C:C6	2.38	0.58
1:AA:1700:G:H3'	15:AR:2:ARG:HD3	1.84	0.58
13:AP:52:GLU:HG3	13:AP:57:THR:HG22	1.86	0.58
34:BA:102:G:O2'	34:BA:151:A:N3	2.32	0.58
34:BA:358:U:OP1	57:BZ:381:LYS:NZ	2.37	0.58
34:BA:1226:C:P	46:BM:91:ARG:HH22	2.26	0.58
34:BA:1239:A:H4'	34:BA:1240:U:H5"	1.86	0.58
43:BJ:38:ILE:HD11	43:BJ:71:LEU:HD23	1.85	0.58
57:BZ:-4:ALA:HA	57:BZ:-1:GLU:HB3	1.85	0.58
2:CB:6:C:H2'	2:CB:7:G:O4'	2.04	0.58
34:DA:976:G:H5'	34:DA:1358:U:O2'	2.03	0.58
57:DZ:35:TYR:CE2	57:DZ:269:VAL:HB	2.38	0.58
1:AA:116:A:H5'	1:AA:117:A:H8	1.68	0.58
1:AA:992:G:OP2	63:AA:3929:HOH:O	2.17	0.58
3:AC:41:THR:HG22	3:AC:42:VAL:N	2.17	0.58
34:BA:243:A:H4'	34:BA:244:U:O5'	2.02	0.58
34:BA:942:G:H21	42:BI:124:GLN:NE2	2.00	0.58
36:BC:11:ARG:NH2	36:BC:177:THR:O	2.36	0.58
38:BE:57:LYS:HG2	38:BE:61:TYR:HE2	1.67	0.58
1:CA:787:U:OP2	63:CA:3740:HOH:O	2.17	0.58
1:CA:2121:G:C4'	3:CC:168:LYS:HD3	2.34	0.58
11:CN:58:ASP:OD1	11:CN:58:ASP:N	2.35	0.58
23:CZ:70:LEU:HD11	23:CZ:98:MET:HE3	1.86	0.58
33:C9:18:ARG:NH1	33:C9:21:GLY:HA2	2.18	0.58
34:DA:670:G:H21	39:DF:73:ASN:HD21	1.51	0.58
27:A3:3:ARG:NH1	27:A3:60:GLU:OE1	2.37	0.58
34:BA:1125:U:H4'	43:BJ:5:ARG:NH2	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1376:U:OP1	40:BG:98:SER:OG	2.21	0.58
14:CQ:52:VAL:HG22	23:CZ:183:LEU:HD11	1.86	0.58
34:DA:60:A:N1	34:DA:107:G:O2'	2.26	0.58
34:DA:1189:C:OP1	43:DJ:51:ARG:NH2	2.36	0.58
34:DA:1190:G:OP1	36:DC:5:ILE:N	2.36	0.58
34:DA:1243:C:O2	34:DA:1295:G:N2	2.37	0.58
34:DA:1346:A:OP1	42:DI:120:ARG:NH2	2.28	0.58
57:DZ:99:ARG:HD2	57:DZ:289:ILE:HD11	1.86	0.58
1:AA:1452:U:H2'	1:AA:1453:C:C6	2.39	0.58
1:AA:1891:G:H4'	3:AC:206:LYS:HG3	1.80	0.58
34:BA:1030(C):G:N7	34:BA:1031:G:N2	2.52	0.58
41:BH:64:LYS:HG2	41:BH:79:VAL:HG21	1.85	0.58
1:CA:1840:G:OP2	63:CA:3739:HOH:O	2.17	0.58
3:CC:41:THR:HG22	3:CC:42:VAL:N	2.17	0.58
17:CT:23:ARG:HG3	17:CT:120:ARG:NH1	2.19	0.58
34:DA:678:U:H2'	34:DA:679:C:C6	2.37	0.58
46:DM:84:ILE:HB	52:DS:66:MET:HE2	1.85	0.58
1:AA:409:G:OP2	63:AA:3927:HOH:O	2.16	0.58
1:AA:662:A:H8	13:AP:117:GLU:HG3	1.68	0.58
10:AL:53:VAL:HG12	10:AL:69:THR:HB	1.85	0.58
12:AO:18:LYS:HB2	12:AO:45:GLU:HB3	1.85	0.58
28:A4:3:GLU:O	28:A4:5:ILE:N	2.36	0.58
34:BA:452:A:H4'	49:BP:72:ARG:NH1	2.19	0.58
35:BB:215:LEU:O	35:BB:219:VAL:HG23	2.04	0.58
1:CA:774:A:HO2'	1:CA:775:G:H8	1.51	0.58
34:DA:456:C:H42	34:DA:475:G:H1	1.50	0.58
34:DA:1071:C:H2'	34:DA:1072:G:H8	1.69	0.58
34:DA:1412:C:H2'	34:DA:1413:A:C8	2.38	0.58
42:DI:13:ALA:HB2	42:DI:68:GLY:HA3	1.86	0.58
49:DP:5:ARG:HB3	49:DP:67:THR:HG23	1.86	0.58
57:DZ:15:ILE:HA	57:DZ:103:GLY:O	2.04	0.58
57:DZ:175:SER:O	57:DZ:188:TYR:N	2.34	0.58
57:DZ:316:ILE:HG12	57:DZ:385:THR:HG22	1.86	0.58
10:AL:50:ASP:OD1	10:AL:50:ASP:N	2.37	0.58
11:AN:48:MET:HE3	11:AN:48:MET:C	2.29	0.58
28:A4:16:CYS:SG	28:A4:17:GLY:N	2.75	0.58
35:BB:15:VAL:HB	35:BB:209:ARG:HD3	1.85	0.58
1:CA:492:A:H2'	1:CA:493:G:O4'	2.03	0.58
12:CO:35:VAL:HG13	12:CO:65:THR:HG23	1.85	0.58
34:DA:337:C:H2'	34:DA:338:A:H8	1.67	0.58
34:DA:433:C:H2'	34:DA:434:U:H6	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1273:G:OP1	18:AU:13:LYS:HE3	2.03	0.58
1:AA:2856:G:H2'	1:AA:2857:U:O4'	2.04	0.58
6:AF:34:TRP:CE2	13:AP:8:PRO:HD3	2.38	0.58
17:AT:16:ARG:NH2	17:AT:83:ILE:O	2.33	0.58
34:BA:42:G:OP1	63:BA:1908:HOH:O	2.16	0.58
57:BZ:71:THR:HG22	57:BZ:80:ASN:OD1	2.04	0.58
1:CA:307:G:H21	1:CA:330:A:H62	1.52	0.58
1:CA:2864:G:O2'	1:CA:2865:U:H5'	2.04	0.58
35:DB:12:GLU:C	35:DB:14:GLY:HA3	2.28	0.58
43:DJ:34:VAL:HG12	43:DJ:74:ILE:HG12	1.86	0.58
49:DP:74:LEU:O	49:DP:79:VAL:HG23	2.04	0.58
1:AA:1652:G:H5"	1:AA:1653:C:OP1	2.03	0.57
1:AA:2274:U:OP2	24:A0:19:LYS:NZ	2.37	0.57
34:BA:434:U:H2'	34:BA:435:C:O4'	2.04	0.57
34:BA:687:A:N3	34:BA:688:G:H1'	2.19	0.57
34:BA:955:U:H2'	34:BA:956:U:H6	1.69	0.57
35:BB:18:GLY:O	35:BB:19:HIS:HB3	2.03	0.57
49:BP:49:LEU:HD12	49:BP:50:LYS:N	2.19	0.57
57:BZ:318:ALA:O	57:BZ:319:ASP:HB2	2.04	0.57
1:CA:1240:U:O4	63:CA:3730:HOH:O	2.13	0.57
1:CA:1902:C:H5'	4:CD:246:PRO:HD3	1.85	0.57
7:CG:107:LEU:HD21	7:CG:178:PHE:CE2	2.39	0.57
10:CL:101:TRP:HE1	10:CL:140:GLY:HA3	1.69	0.57
42:DI:112:LYS:NZ	42:DI:113:LYS:O	2.35	0.57
57:DZ:519:ARG:NH1	57:DZ:678:GLU:H	2.02	0.57
1:AA:2303:U:H2'	1:AA:2304:C:C6	2.38	0.57
34:BA:222:U:H2'	34:BA:223:U:H6	1.68	0.57
34:BA:661:G:H1	34:BA:744:C:H42	1.52	0.57
34:BA:814:A:H2'	34:BA:816:A:H5"	1.86	0.57
37:BD:117:ALA:O	37:BD:121:VAL:HG23	2.04	0.57
1:CA:1263:U:H1'	29:C5:10:LYS:HG3	1.86	0.57
1:CA:2387:U:OP1	24:C0:55:ARG:NH1	2.32	0.57
25:C1:25:LYS:C	25:C1:27:GLU:H	2.12	0.57
32:C8:6:THR:HG22	32:C8:64:TYR:HD2	1.68	0.57
34:DA:1224:G:OP1	63:DA:1807:HOH:O	2.17	0.57
36:DC:78:GLY:HA3	36:DC:83:ARG:H	1.68	0.57
1:AA:1055:A:OP2	63:AA:3914:HOH:O	2.17	0.57
1:AA:1285:G:H2'	1:AA:1286:U:O4'	2.04	0.57
8:AH:7:LEU:O	8:AH:69:ARG:HD3	2.03	0.57
34:BA:1014:A:H4'	52:BS:14:HIS:CE1	2.39	0.57
35:BB:100:GLY:N	35:BB:176:GLU:OE2	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:178:ARG:HH22	41:BH:68:ARG:NH1	2.02	0.57
1:CA:530:G:N1	63:CA:3719:HOH:O	2.22	0.57
1:CA:2345:G:N3	1:CA:2381:C:H2'	2.19	0.57
34:DA:765:G:H5"	34:DA:766:A:OP1	2.04	0.57
34:DA:1289:A:H3'	34:DA:1290:G:H8	1.69	0.57
36:DC:44:GLU:HG3	36:DC:52:LEU:HD11	1.86	0.57
43:DJ:63:PHE:HE2	47:DN:45:ARG:HA	1.69	0.57
46:DM:65:LYS:HB2	46:DM:69:GLU:HB2	1.85	0.57
51:DR:25:THR:O	51:DR:25:THR:OG1	2.23	0.57
54:DU:9:ARG:O	54:DU:13:ILE:HG13	2.04	0.57
57:DZ:402:ILE:HG23	57:DZ:403:GLU:H	1.69	0.57
57:DZ:494:GLU:HB2	57:DZ:511:LYS:HE2	1.86	0.57
32:A8:39:LYS:O	32:A8:43:GLN:HB2	2.05	0.57
34:BA:458:C:N4	34:BA:474:G:O6	2.37	0.57
34:BA:920:U:H2'	34:BA:921:U:C6	2.39	0.57
34:BA:1070:U:H2'	34:BA:1071:C:H6	1.69	0.57
50:BQ:45:HIS:HB3	50:BQ:72:ARG:HB3	1.86	0.57
57:BZ:227:ILE:HA	57:BZ:230:LYS:HG3	1.86	0.57
1:CA:1339:G:H5"	21:CX:16:LYS:HD2	1.85	0.57
1:CA:2751:G:N2	8:CH:2:SER:OG	2.38	0.57
12:CO:48:PRO:HB3	34:DA:1422:G:H5'	1.86	0.57
1:AA:2144:U:O2'	3:AC:167:ASP:HB3	2.03	0.57
22:AY:54:LYS:HA	22:AY:56:PRO:HD3	1.86	0.57
34:BA:375:U:C2	34:BA:376:G:C8	2.93	0.57
35:BB:219:VAL:HA	35:BB:222:ILE:HD12	1.86	0.57
1:CA:674:G:H1'	6:CF:74:ARG:HD3	1.86	0.57
17:CT:82:LEU:H	17:CT:82:LEU:HD12	1.68	0.57
46:DM:17:VAL:O	46:DM:20:THR:OG1	2.22	0.57
1:AA:1451:U:H2'	1:AA:1452:U:C6	2.40	0.57
1:AA:2054:G:O2'	5:AE:145:LYS:HE3	2.05	0.57
1:AA:2245:U:H2'	1:AA:2246:G:C8	2.40	0.57
1:AA:2289:G:P	24:A0:10:THR:HG21	2.45	0.57
42:BI:21:PRO:HA	42:BI:59:PHE:HA	1.87	0.57
43:BJ:8:LEU:HB2	43:BJ:70:ARG:HB2	1.85	0.57
1:CA:526:A:N1	1:CA:2625:G:O2'	2.29	0.57
1:CA:1266:G:O2'	1:CA:2012:G:O6	2.20	0.57
1:CA:2320:A:H2'	1:CA:2320:A:N3	2.18	0.57
1:CA:2539:C:H4'	33:C9:3:VAL:HG21	1.85	0.57
7:CG:120:LEU:HB3	7:CG:131:TYR:OH	2.04	0.57
34:DA:798:G:OP1	44:DK:122:LYS:NZ	2.37	0.57
57:DZ:169:GLY:N	57:DZ:170:ARG:NH1	2.48	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:801:C:H2'	1:AA:802:C:C6	2.39	0.57
1:AA:2357:G:OP2	30:A6:38:LYS:HD3	2.04	0.57
1:AA:2576:A:OP1	1:AA:2660:C:O2'	2.23	0.57
5:AE:4:ILE:HD11	5:AE:29:GLY:HA2	1.86	0.57
12:AO:16:ALA:HB2	12:AO:52:VAL:CG2	2.35	0.57
16:AS:39:ILE:HB	16:AS:49:VAL:HG12	1.86	0.57
34:BA:67:C:H2'	34:BA:68:G:H8	1.69	0.57
34:BA:413:G:H1'	34:BA:428:G:H21	1.69	0.57
43:BJ:38:ILE:HG13	43:BJ:71:LEU:HB3	1.86	0.57
1:CA:1154:G:H8	1:CA:1154:G:O5'	1.87	0.57
1:CA:2177:C:O2	3:CC:171:ALA:HB2	2.04	0.57
3:CC:6:LYS:HG3	3:CC:7:ARG:H	1.69	0.57
5:CE:181:LEU:HD21	17:CT:6:LEU:HD12	1.86	0.57
34:DA:303:A:HO2'	34:DA:555:C:HO2'	1.49	0.57
34:DA:1151:A:O2'	34:DA:1152:A:O5'	2.21	0.57
57:DZ:363:ARG:HG2	57:DZ:363:ARG:HH11	1.68	0.57
1:AA:1800:G:O2'	1:AA:1980:C:OP1	2.18	0.57
1:AA:2559:U:H2'	1:AA:2560:G:C8	2.40	0.57
6:AF:28:ILE:HD13	6:AF:119:ARG:HH21	1.69	0.57
7:AG:11:TYR:HA	7:AG:15:VAL:HB	1.86	0.57
42:BI:93:ARG:HB2	42:BI:93:ARG:HH11	1.70	0.57
57:BZ:526:VAL:HG23	57:BZ:566:THR:HA	1.87	0.57
1:CA:731:C:OP1	63:CA:3741:HOH:O	2.18	0.57
1:CA:1386:C:H2'	1:CA:1387:C:C6	2.39	0.57
1:CA:1530:C:H42	1:CA:1539:G:H1	1.51	0.57
1:CA:2267:A:H5"	1:CA:2268:A:H5'	1.86	0.57
1:CA:2365:G:O6	32:C8:39:LYS:HE3	2.04	0.57
26:C2:64:LEU:HD11	26:C2:68:ARG:HH21	1.69	0.57
34:DA:17:U:H2'	34:DA:18:C:C6	2.40	0.57
34:DA:1288:A:N1	34:DA:1371:G:H1'	2.20	0.57
34:DA:1356:G:H2'	34:DA:1357:A:C8	2.39	0.57
37:DD:103:ASN:OD1	37:DD:114:ARG:NE	2.36	0.57
39:DF:82:ARG:HB2	39:DF:85:VAL:HG23	1.86	0.57
48:DO:26:GLU:OE2	48:DO:77:ARG:NE	2.20	0.57
57:DZ:177:ILE:HG13	57:DZ:188:TYR:CE2	2.39	0.57
1:AA:927:G:H8	1:AA:927:G:OP2	1.88	0.57
1:AA:1529:G:O6	1:AA:1553:A:N6	2.38	0.57
34:BA:189(C):C:H2'	34:BA:189(D):C:O4'	2.05	0.57
47:BN:4:LYS:HA	47:BN:7:ILE:HG23	1.87	0.57
49:BP:49:LEU:HD11	49:BP:51:VAL:HG23	1.86	0.57
52:BS:3:ARG:NH1	52:BS:10:PHE:HB2	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:627:ARG:HH22	57:BZ:658:ASP:CG	2.12	0.57
1:CA:584:C:OP2	18:CU:6:THR:OG1	2.21	0.57
10:CL:8:VAL:HG21	10:CL:26:ALA:HB1	1.87	0.57
34:DA:157:G:H2'	34:DA:158:G:H8	1.70	0.57
34:DA:646:U:H2'	34:DA:647:C:C6	2.39	0.57
42:DI:77:ILE:O	42:DI:81:ILE:HG22	2.05	0.57
43:DJ:43:ARG:HB2	43:DJ:67:THR:HG23	1.85	0.57
57:DZ:210:ARG:HG3	57:DZ:210:ARG:HH11	1.70	0.57
57:DZ:326:THR:HB	57:DZ:377:VAL:HG13	1.86	0.57
1:AA:630:U:OP1	6:AF:102:PRO:HA	2.05	0.57
1:AA:847:A:H8	1:AA:847:A:OP1	1.88	0.57
7:AG:41:GLN:CG	7:AG:60:LEU:HD21	2.35	0.57
23:AZ:19:ARG:NH1	23:AZ:84:GLU:O	2.37	0.57
34:BA:408:A:OP1	37:BD:113:SER:OG	2.18	0.57
35:BB:73:THR:OG1	35:BB:170:GLU:OE2	2.20	0.57
37:BD:110:PHE:CE2	37:BD:148:VAL:HG23	2.40	0.57
38:BE:36:ASP:OD1	38:BE:39:GLY:N	2.34	0.57
41:BH:77:GLU:HG3	41:BH:78:GLN:N	2.19	0.57
56:BW:44:G:O2'	56:BW:45:U:H5'	2.05	0.57
57:BZ:-10:ARG:HB2	57:BZ:-10:ARG:HH11	1.70	0.57
1:CA:184:C:H2'	1:CA:185:U:C6	2.39	0.57
1:CA:1956:U:H2'	1:CA:1957:C:H5'	1.86	0.57
1:CA:2291:U:H2'	1:CA:2292:C:C6	2.40	0.57
1:CA:2727:G:O3'	12:CO:70:LYS:NZ	2.38	0.57
15:CR:18:LEU:HD22	15:CR:22:ARG:HD2	1.87	0.57
34:DA:1022:G:H2'	34:DA:1023:G:H8	1.69	0.57
34:DA:1305:G:O2'	34:DA:1331:G:N2	2.37	0.57
41:DH:8:ASP:OD2	41:DH:12:ARG:NH1	2.38	0.57
45:DL:76:ASN:ND2	45:DL:106:ASP:O	2.37	0.57
52:DS:33:THR:OG1	52:DS:35:SER:O	2.23	0.57
14:AQ:56:ARG:HG3	14:AQ:56:ARG:NH1	2.19	0.56
34:BA:633:G:H2'	34:BA:634:C:C6	2.40	0.56
34:BA:1530:G:H4'	34:BA:1530:G:OP1	2.05	0.56
36:BC:53:ALA:HB2	36:BC:115:LEU:HD13	1.86	0.56
1:CA:64:A:O3'	21:CX:71:GLY:HA3	2.05	0.56
1:CA:1270:C:H5"	1:CA:1271:G:O5'	2.05	0.56
1:CA:2554:U:H2'	1:CA:2555:U:C6	2.39	0.56
7:CG:117:PHE:CE1	7:CG:119:GLY:HA2	2.40	0.56
13:CP:84:ASN:CG	13:CP:117:GLU:HB2	2.29	0.56
34:DA:1412:C:H2'	34:DA:1413:A:H8	1.69	0.56
50:DQ:76:LEU:HD12	50:DQ:77:VAL:H	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:326:THR:HG21	57:DZ:380:LEU:HD23	1.87	0.56
57:DZ:555:LEU:HD11	57:DZ:599:PRO:HB2	1.87	0.56
1:AA:1084:C:N4	1:AA:1163:G:H1	2.03	0.56
3:AC:6:LYS:HG3	3:AC:7:ARG:H	1.69	0.56
10:AL:99:ILE:O	10:AL:139:VAL:N	2.36	0.56
12:AO:64:ARG:HG2	12:AO:79:PHE:CG	2.40	0.56
13:AP:81:GLN:OE1	13:AP:106:LEU:HD23	2.05	0.56
33:A9:2:LYS:HE2	33:A9:31:LYS:O	2.05	0.56
38:BE:78:HIS:HD2	38:BE:142:LEU:HD23	1.69	0.56
42:BI:9:ARG:H	42:BI:79:LEU:HD23	1.69	0.56
48:BO:69:TYR:HA	48:BO:72:ARG:HH11	1.70	0.56
6:CF:167:ALA:HB1	6:CF:173:VAL:HG11	1.87	0.56
8:CH:41:MET:HE2	8:CH:64:LEU:HB3	1.87	0.56
10:CL:6:ALA:HB3	10:CL:30:HIS:CE1	2.36	0.56
34:DA:1220:G:N2	52:DS:54:GLY:O	2.38	0.56
35:DB:58:ILE:HA	35:DB:61:LEU:HB3	1.86	0.56
1:AA:1250:U:C2	6:AF:171:PRO:HB3	2.41	0.56
1:AA:1487:G:H2'	1:AA:1488:G:H8	1.70	0.56
1:AA:1532:A:H2'	1:AA:1533:G:H8	1.70	0.56
1:AA:2379:G:N7	63:AA:3979:HOH:O	2.33	0.56
1:AA:2736:C:OP2	5:AE:109:LYS:HE2	2.06	0.56
3:AC:29:LEU:O	3:AC:30:VAL:C	2.48	0.56
7:AG:16:ARG:O	7:AG:20:ILE:HG13	2.06	0.56
34:BA:394:G:H2'	34:BA:395:C:H6	1.70	0.56
35:BB:212:GLN:NE2	35:BB:234:PRO:O	2.38	0.56
36:BC:18:TRP:CD1	47:BN:54:PRO:HA	2.41	0.56
40:BG:138:LYS:NZ	40:BG:142:GLU:OE2	2.34	0.56
49:BP:6:LEU:HB3	49:BP:17:TYR:CD1	2.40	0.56
49:BP:18:ARG:O	49:BP:20:VAL:HB	2.06	0.56
53:BT:9:ASN:O	53:BT:10:LEU:HB2	2.05	0.56
1:CA:1657:C:H2'	1:CA:1658:C:C6	2.41	0.56
1:CA:2692:C:H2'	1:CA:2693:A:H8	1.70	0.56
3:CC:49:GLY:N	3:CC:209:PHE:O	2.39	0.56
6:CF:157:VAL:HG11	6:CF:181:LEU:HD12	1.87	0.56
22:CY:77:PRO:HD3	22:CY:106:LEU:HD23	1.86	0.56
32:C8:34:TRP:CD2	32:C8:35:GLN:HG2	2.40	0.56
34:DA:174:C:H2'	34:DA:175:C:H6	1.70	0.56
34:DA:392:G:H2'	34:DA:393:A:C8	2.39	0.56
34:DA:685:G:C2	34:DA:686:U:C4	2.93	0.56
35:DB:51:LEU:HD11	35:DB:201:ILE:HG23	1.88	0.56
35:DB:93:VAL:HG21	35:DB:97:TRP:CD1	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DD:3:ARG:HG2	37:DD:118:ARG:NE	2.20	0.56
57:DZ:15:ILE:HB	57:DZ:104:ALA:HA	1.87	0.56
57:DZ:222:ASP:OD2	57:DZ:222:ASP:N	2.35	0.56
57:DZ:373:ASP:OD2	57:DZ:374:LEU:N	2.33	0.56
57:DZ:546:ILE:HG23	57:DZ:590:ILE:HG13	1.86	0.56
1:AA:650:G:N7	13:AP:107:LYS:NZ	2.54	0.56
1:AA:815:G:O2'	1:AA:1425:A:N1	2.35	0.56
1:AA:2326:C:H2'	1:AA:2327:G:C8	2.40	0.56
1:AA:2672:A:N6	57:BZ:661:SER:OG	2.38	0.56
1:AA:2851:C:OP1	15:AR:53:HIS:NE2	2.39	0.56
21:AX:63:LYS:O	21:AX:64:LYS:HD3	2.04	0.56
57:BZ:98:MET:HE2	57:BZ:98:MET:HA	1.88	0.56
1:CA:528:A:C2	1:CA:2043:C:H4'	2.39	0.56
1:CA:566:U:O4	19:CV:78:LYS:HE2	2.05	0.56
1:CA:1022:G:N7	11:CN:66:LYS:HE2	2.20	0.56
1:CA:1899:G:O2'	1:CA:1900:A:OP2	2.18	0.56
2:CB:100:A:H3'	2:CB:101:G:H8	1.71	0.56
6:CF:34:TRP:CZ2	13:CP:8:PRO:HG3	2.40	0.56
34:DA:519:C:H2'	34:DA:520:A:O4'	2.06	0.56
1:AA:1405:A:C2	1:AA:1418:U:O4	2.58	0.56
1:AA:2340:A:H2'	1:AA:2341:G:C8	2.40	0.56
1:AA:2574:U:H1'	12:AO:23:ARG:HD3	1.87	0.56
1:AA:2807:C:N4	1:AA:2813:G:H1	2.03	0.56
5:AE:103:ASP:OD2	5:AE:168:MET:HE3	2.05	0.56
11:AN:120:LEU:HD22	11:AN:122:VAL:HG23	1.88	0.56
34:BA:507:C:OP2	34:BA:508:C:O2'	2.17	0.56
34:BA:559:A:H4'	34:BA:560:U:H3'	1.87	0.56
37:BD:23:GLY:HA3	37:BD:112:VAL:HG12	1.88	0.56
42:BI:5:TYR:OH	42:BI:7:THR:OG1	2.21	0.56
57:BZ:257:PRO:HB2	57:BZ:259:PHE:HE1	1.69	0.56
1:CA:2343:C:O2'	1:CA:2373:G:O2'	2.16	0.56
1:CA:2693:A:H2'	1:CA:2694:G:C8	2.39	0.56
3:CC:29:LEU:O	3:CC:30:VAL:C	2.48	0.56
5:CE:135:HIS:H	5:CE:135:HIS:CD2	2.21	0.56
33:C9:9:ARG:HG2	33:C9:14:CYS:HB2	1.87	0.56
34:DA:691:G:H2'	34:DA:692:U:C6	2.41	0.56
34:DA:1014:A:N3	34:DA:1219:U:O2'	2.38	0.56
34:DA:1150:U:O4	34:DA:1151:A:N6	2.39	0.56
35:DB:104:ASN:HB3	35:DB:108:ILE:HD11	1.88	0.56
38:DE:139:LEU:O	38:DE:141:GLN:N	2.37	0.56
57:DZ:13:ARG:HH21	57:DZ:247:ARG:HH12	1.51	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:32:ILE:HG23	57:DZ:273:LEU:HD21	1.88	0.56
1:AA:597:C:H4'	1:AA:598:A:O5'	2.05	0.56
1:AA:613:A:OP1	6:AF:95:ARG:NH1	2.38	0.56
57:BZ:494:GLU:HG2	57:BZ:511:LYS:HG2	1.88	0.56
1:CA:271(E):U:H2'	1:CA:271(F):C:C6	2.40	0.56
1:CA:898:C:H2'	1:CA:899:A:O4'	2.05	0.56
1:CA:987:G:O2'	1:CA:1000:A:N3	2.34	0.56
1:CA:1090:U:H2'	1:CA:1091:G:C8	2.40	0.56
23:CZ:160:GLY:HA2	23:CZ:161:VAL:HG12	1.88	0.56
34:DA:652:U:O4	34:DA:752:G:O2'	2.16	0.56
34:DA:922:G:O2'	34:DA:1398:A:N1	2.38	0.56
37:DD:118:ARG:O	37:DD:121:VAL:N	2.38	0.56
1:AA:2661:U:H2'	1:AA:2662:U:C6	2.41	0.56
13:AP:94:GLU:HG3	13:AP:124:LYS:HB3	1.88	0.56
34:BA:328:C:H4'	34:BA:329:A:H5"	1.88	0.56
34:BA:1305:G:H5"	54:BU:4:GLY:HA3	1.87	0.56
34:BA:1388:C:H2'	34:BA:1389:C:C6	2.41	0.56
34:BA:1530:G:H2'	34:BA:1531:A:O4'	2.04	0.56
50:BQ:41:LYS:HZ2	50:BQ:92:ARG:HH21	1.54	0.56
53:BT:56:MET:HE3	53:BT:88:VAL:HB	1.88	0.56
1:CA:477:A:H2'	1:CA:478:A:C8	2.40	0.56
1:CA:747:U:O2	1:CA:2014:A:H1'	2.06	0.56
1:CA:869:G:N1	1:CA:909:A:C6	2.74	0.56
1:CA:2124:G:H4'	3:CC:175:PRO:CD	2.35	0.56
3:CC:42:VAL:O	3:CC:216:THR:O	2.24	0.56
4:CD:75:ILE:H	4:CD:75:ILE:HD12	1.70	0.56
34:DA:1237:C:H2'	34:DA:1336:C:C5	2.41	0.56
1:CA:2572:A:C8	5:CE:144:ARG:HD2	2.40	0.56
8:CH:159:GLU:HG3	8:CH:169:VAL:HG11	1.87	0.56
13:CP:139:LYS:C	13:CP:141:ALA:H	2.14	0.56
13:CP:139:LYS:O	13:CP:141:ALA:N	2.38	0.56
34:DA:537:G:H2'	34:DA:538:G:H8	1.71	0.56
36:DC:71:ALA:HB2	36:DC:106:VAL:HB	1.87	0.56
37:DD:10:ARG:HA	37:DD:13:ARG:HG3	1.86	0.56
37:DD:150:GLU:HA	37:DD:153:ARG:HE	1.71	0.56
1:AA:533:G:N2	20:AW:80:PRO:HG2	2.21	0.56
1:AA:1856:A:OP1	4:AD:249:PRO:HD3	2.06	0.56
1:AA:1900:G:H2'	1:AA:1901:C:C6	2.41	0.56
1:AA:2798:C:OP1	5:AE:41:LYS:HE3	2.05	0.56
5:AE:36:ARG:HH11	5:AE:85:ASN:ND2	2.03	0.56
7:AG:15:VAL:HG22	7:AG:175:LEU:HB3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1401:G:C2	34:BA:1402:C:H1'	2.41	0.56
34:BA:1496:C:OP2	57:BZ:504:ARG:NH2	2.38	0.56
45:BL:71:PRO:O	45:BL:102:ARG:NH1	2.33	0.56
1:CA:2641:G:P	11:CN:74:ARG:HH21	2.29	0.56
13:CP:59:LEU:O	32:C8:13:ARG:HD2	2.06	0.56
13:CP:94:GLU:HG3	13:CP:124:LYS:HD3	1.86	0.56
23:CZ:63:ASP:O	23:CZ:65:GLN:N	2.34	0.56
34:DA:1022:G:H2'	34:DA:1023:G:C8	2.41	0.56
1:AA:418:G:H1'	1:AA:438:G:O4'	2.06	0.56
7:AG:165:THR:OG1	7:AG:168:GLU:HG3	2.06	0.56
24:A0:27:GLU:HG3	24:A0:68:GLU:HA	1.86	0.56
34:BA:959:A:HO2'	34:BA:984:C:HO2'	1.37	0.56
45:BL:34:ARG:HG3	45:BL:105:TYR:CE2	2.41	0.56
49:BP:3:LYS:O	49:BP:21:VAL:HA	2.06	0.56
49:BP:6:LEU:HB3	49:BP:17:TYR:HD1	1.71	0.56
1:CA:127:A:H5"	1:CA:128:C:C6	2.41	0.56
1:CA:321:G:OP2	6:CF:135:LYS:HG3	2.05	0.56
1:CA:796:C:H2'	1:CA:797:C:C6	2.41	0.56
1:CA:829:A:N7	1:CA:2248:C:H5'	2.21	0.56
1:CA:1657:C:H2'	1:CA:1658:C:H6	1.71	0.56
1:CA:2379:G:H8	1:CA:2379:G:H5"	1.71	0.56
7:CG:41:GLN:NE2	7:CG:154:GLY:O	2.27	0.56
34:DA:97:G:O2'	34:DA:98:G:OP2	2.19	0.56
34:DA:407:G:O2'	37:DD:116:GLN:HG3	2.06	0.56
57:DZ:176:GLY:HA2	57:DZ:187:THR:HA	1.88	0.56
57:DZ:484:ARG:HD2	57:DZ:676:TYR:CE1	2.40	0.56
1:AA:1114:G:O2'	1:AA:1142:A:O2'	2.24	0.55
1:AA:2571:C:O2'	1:AA:2572:C:H5'	2.07	0.55
1:AA:2679:C:H2'	1:AA:2680:G:O4'	2.05	0.55
22:AY:8:LYS:HD3	22:AY:97:ARG:HH12	1.70	0.55
23:AZ:110:GLY:N	23:AZ:144:LEU:O	2.39	0.55
23:AZ:150:LEU:O	23:AZ:171:ILE:HG13	2.07	0.55
34:BA:353:A:H5'	34:BA:353:A:H8	1.71	0.55
34:BA:742:G:OP2	48:BO:35:ARG:NH2	2.38	0.55
34:BA:1053:G:O2'	34:BA:1199:U:OP2	2.14	0.55
34:BA:1326:C:H2'	34:BA:1327:C:C6	2.40	0.55
35:BB:19:HIS:HE1	35:BB:189:ASP:HB3	1.71	0.55
35:BB:218:ALA:O	35:BB:222:ILE:HG13	2.07	0.55
36:BC:3:ASN:OD1	36:BC:3:ASN:N	2.37	0.55
1:CA:205:G:OP2	63:CA:3743:HOH:O	2.18	0.55
1:CA:1778:U:H2'	1:CA:1784:A:N6	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2474:C:H5"	1:CA:2475:C:OP2	2.06	0.55
7:CG:49:ASP:C	7:CG:51:ARG:H	2.13	0.55
20:CW:1:MET:HE2	20:CW:62:HIS:HB3	1.88	0.55
34:DA:1318:A:OP1	52:DS:3:ARG:NH1	2.38	0.55
50:DQ:63:ARG:HG2	50:DQ:64:PRO:HD2	1.88	0.55
57:DZ:132:ARG:HD3	57:DZ:160:ARG:CZ	2.36	0.55
57:DZ:573:HIS:CE1	57:DZ:575:VAL:HB	2.41	0.55
1:AA:1099:C:H2'	1:AA:1100:A:H5"	1.87	0.55
1:AA:2153:G:OP1	3:AC:6:LYS:CD	2.54	0.55
1:AA:2331:G:H1	16:AS:3:ARG:HA	1.71	0.55
34:BA:617:G:C6	34:BA:618:C:C5	2.94	0.55
34:BA:1177:G:H2'	34:BA:1178:G:O4'	2.05	0.55
57:BZ:240:GLU:H	57:BZ:240:GLU:CD	2.14	0.55
1:CA:1861:G:OP1	3:CC:205:ALA:C	2.48	0.55
8:CH:46:GLU:HB2	8:CH:49:VAL:HG12	1.87	0.55
31:C7:19:ARG:HG2	31:C7:19:ARG:HH11	1.71	0.55
35:DB:171:ALA:O	35:DB:175:ARG:N	2.37	0.55
36:DC:8:ILE:HD13	36:DC:184:TYR:HD2	1.72	0.55
37:DD:64:LEU:HD11	37:DD:94:LEU:HD21	1.89	0.55
39:DF:35:ALA:HA	39:DF:67:MET:HB3	1.87	0.55
1:AA:1211:U:H2'	1:AA:1212:C:C6	2.40	0.55
1:AA:2585:C:H3'	63:AA:4161:HOH:O	2.05	0.55
9:AK:73:GLY:C	9:AK:75:GLN:H	2.11	0.55
21:AX:57:LEU:CD1	21:AX:78:LYS:HB2	2.36	0.55
34:BA:736:C:H2'	34:BA:737:A:C8	2.40	0.55
34:BA:1005:A:H1'	34:BA:1036:G:H22	1.71	0.55
57:BZ:177:ILE:HD12	57:BZ:188:TYR:CE2	2.41	0.55
57:BZ:498:ILE:HB	57:BZ:507:TYR:CD1	2.41	0.55
1:CA:479:A:N3	1:CA:481:G:H5"	2.21	0.55
1:CA:1796:U:H2'	1:CA:1797:C:C6	2.42	0.55
1:CA:2176:A:C4'	3:CC:45:HIS:NE2	2.67	0.55
13:CP:62:LEU:HD11	32:C8:50:LEU:HD11	1.87	0.55
17:CT:16:ARG:NH1	17:CT:18:ASP:OD2	2.40	0.55
34:DA:173:U:H5"	34:DA:197:A:O4'	2.07	0.55
43:DJ:13:HIS:HB3	43:DJ:68:HIS:CE1	2.41	0.55
55:DV:13:A:O2'	55:DV:14:A:H5"	2.06	0.55
57:DZ:264:LEU:HD12	62:DZ:704:GDP:N3	2.20	0.55
57:DZ:512:ILE:HG13	57:DZ:514:VAL:HG23	1.88	0.55
1:AA:1417:G:H2'	1:AA:1418:U:H5	1.70	0.55
1:AA:1634:C:H2'	1:AA:1635:C:C6	2.41	0.55
8:AH:3:ARG:HG2	8:AH:6:ARG:HG2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:A8:23:VAL:HG11	32:A8:47:LYS:HD3	1.89	0.55
34:BA:200:G:H1	34:BA:217:C:N4	2.04	0.55
49:BP:4:ILE:HA	49:BP:20:VAL:O	2.07	0.55
57:BZ:416:LYS:HE2	57:BZ:475:ASN:HD22	1.70	0.55
1:CA:2059:A:O2'	6:CF:69:HIS:HD2	1.89	0.55
7:CG:29:TRP:O	7:CG:33:ARG:NH1	2.38	0.55
7:CG:126:ASP:HB2	7:CG:130:ASN:H	1.71	0.55
34:DA:339:C:H2'	34:DA:340:U:C6	2.41	0.55
36:DC:45:LYS:HG3	36:DC:46:GLU:HG2	1.87	0.55
1:AA:935:C:N3	1:AA:936:C:N4	2.54	0.55
1:AA:1558:G:H2'	1:AA:1559:C:O4'	2.07	0.55
34:BA:598:U:H4'	41:BH:94:TYR:CD2	2.42	0.55
37:BD:110:PHE:HE2	37:BD:148:VAL:HG23	1.71	0.55
39:BF:61:LEU:HD12	39:BF:63:TYR:OH	2.07	0.55
51:BR:39:VAL:O	51:BR:42:ARG:HB2	2.06	0.55
57:BZ:-6:ARG:C	57:BZ:-4:ALA:H	2.14	0.55
57:BZ:227:ILE:HG12	57:BZ:237:PRO:HG3	1.89	0.55
14:CQ:109:VAL:HG13	14:CQ:113:GLN:HB3	1.88	0.55
19:CV:37:VAL:HG12	19:CV:39:LEU:H	1.71	0.55
34:DA:1409:C:H2'	34:DA:1410:G:H8	1.71	0.55
57:DZ:25:LYS:NZ	62:DZ:704:GDP:O2B	2.27	0.55
1:AA:554:A:H62	1:AA:2063:U:H3	1.55	0.55
1:AA:1735:U:O2	1:AA:1747:A:H5'	2.05	0.55
12:AO:49:ARG:NH2	34:BA:1423:G:OP1	2.30	0.55
22:AY:92:ASN:CB	22:AY:94:LYS:H	2.19	0.55
34:BA:1000:U:H2'	34:BA:1001:A:H8	1.71	0.55
34:BA:1227:A:OP2	46:BM:111:LYS:HD2	2.07	0.55
57:BZ:309:LEU:HA	57:BZ:333:GLY:HA3	1.87	0.55
7:CG:136:ARG:HH11	7:CG:137:GLU:H	1.54	0.55
35:DB:16:HIS:HB2	35:DB:204:ASN:CB	2.36	0.55
57:DZ:-37:LEU:HD23	57:DZ:-32:LEU:HD12	1.89	0.55
57:DZ:38:ARG:NH1	57:DZ:270:GLN:NE2	2.55	0.55
1:AA:561:A:H2'	1:AA:562:C:C6	2.41	0.55
1:AA:1653:C:H4'	1:AA:1654:A:O5'	2.06	0.55
34:BA:127:G:OP1	34:BA:635:G:H1'	2.06	0.55
34:BA:489:C:OP1	37:BD:132:ARG:NH2	2.39	0.55
34:BA:1225:A:H2'	34:BA:1226:C:C5	2.42	0.55
35:BB:174:VAL:O	35:BB:178:ARG:HB2	2.06	0.55
36:BC:19:GLU:OE1	36:BC:40:ARG:NH2	2.40	0.55
42:BI:23:ASN:ND2	42:BI:25:LYS:HG2	2.22	0.55
56:BW:7:A:H5"	56:BW:7:A:H8	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:500:G:N2	1:CA:502:A:H3'	2.21	0.55
1:CA:1494:A:H2'	1:CA:1495:A:C8	2.42	0.55
1:CA:1510:G:H2'	1:CA:1511:C:O4'	2.07	0.55
3:CC:52:PRO:HB2	3:CC:168:LYS:O	2.06	0.55
6:CF:153:SER:OG	6:CF:190:GLU:N	2.38	0.55
10:CL:21:PRO:HD2	57:DZ:641:GLN:NE2	2.21	0.55
11:CN:19:GLU:HG3	11:CN:59:LYS:HB3	1.89	0.55
15:CR:38:VAL:HB	15:CR:39:PRO:HD3	1.89	0.55
15:CR:72:ASP:OD2	15:CR:75:LEU:HB2	2.06	0.55
34:DA:1260:C:O5'	34:DA:1284:C:H4'	2.07	0.55
35:DB:95:GLN:HB2	35:DB:148:TYR:HD1	1.72	0.55
40:DG:113:GLU:HB2	40:DG:119:ARG:HG2	1.87	0.55
57:DZ:132:ARG:HD2	57:DZ:132:ARG:H	1.70	0.55
57:DZ:264:LEU:HB2	62:DZ:704:GDP:C6	2.42	0.55
1:AA:2140:U:C4	1:AA:2171:G:H1'	2.42	0.55
35:BB:17:PHE:HA	35:BB:44:LEU:HD11	1.88	0.55
37:BD:134:ASP:O	37:BD:136:PRO:HD3	2.06	0.55
57:BZ:644:ARG:HH11	57:BZ:644:ARG:CB	2.10	0.55
1:CA:30:G:H2'	1:CA:31:C:C6	2.41	0.55
1:CA:2022:U:OP2	29:C5:15:ARG:NH2	2.40	0.55
2:CB:56:G:H5'	7:CG:27:ASN:HD22	1.70	0.55
4:CD:221:VAL:HG22	4:CD:226:MET:HE2	1.89	0.55
34:DA:263:A:OP1	53:DT:79:ARG:NH1	2.40	0.55
34:DA:363:A:OP2	45:DL:34:ARG:NH2	2.40	0.55
34:DA:622:A:C8	34:DA:623:C:C6	2.94	0.55
37:DD:15:GLU:OE1	37:DD:63:LYS:HG3	2.06	0.55
38:DE:57:LYS:HD3	38:DE:61:TYR:CE2	2.41	0.55
43:DJ:63:PHE:HE1	47:DN:58:LYS:HG2	1.71	0.55
49:DP:4:ILE:O	49:DP:66:PRO:HA	2.06	0.55
1:AA:142:G:H1'	21:AX:37:THR:HG21	1.88	0.55
1:AA:278:G:H2'	1:AA:279:G:H5"	1.89	0.55
1:AA:1072:U:H4'	1:AA:1073:A:OP1	2.07	0.55
34:BA:1435:G:H2'	34:BA:1436:U:C6	2.41	0.55
35:BB:104:ASN:OD1	35:BB:107:THR:OG1	2.23	0.55
51:BR:47:THR:HG23	51:BR:49:LYS:HG3	1.89	0.55
57:BZ:127:LYS:HB3	57:BZ:128:TYR:CD2	2.41	0.55
57:BZ:329:ARG:HB2	57:BZ:374:LEU:HG	1.89	0.55
1:CA:375:C:H2'	1:CA:376:C:C6	2.42	0.55
1:CA:528:A:N1	1:CA:2042:A:H2'	2.22	0.55
7:CG:146:TYR:O	7:CG:149:VAL:HG12	2.07	0.55
26:C2:35:LEU:HD12	26:C2:53:LEU:HD12	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:C9:25:VAL:HG11	33:C9:34:GLN:NE2	2.21	0.55
34:DA:481:G:H21	34:DA:482:A:N6	2.05	0.55
34:DA:1141:C:H2'	34:DA:1142:G:H8	1.71	0.55
34:DA:1305:G:N2	34:DA:1331:G:H1'	2.21	0.55
3:AC:42:VAL:O	3:AC:216:THR:O	2.24	0.55
13:AP:63:PRO:HG2	32:A8:25:MET:HB2	1.89	0.55
23:AZ:115:GLY:HA2	23:AZ:177:PRO:HB3	1.89	0.55
57:BZ:445:GLU:OE1	57:BZ:484:ARG:NH1	2.39	0.55
1:CA:754:C:H2'	1:CA:755:C:C6	2.42	0.55
1:CA:2132:U:C1'	3:CC:6:LYS:CB	2.86	0.55
1:CA:2386:C:H2'	1:CA:2387:U:C6	2.42	0.55
3:CC:44:VAL:HG23	3:CC:176:VAL:HG21	1.89	0.55
26:C2:2:LYS:O	26:C2:5:GLU:N	2.40	0.55
34:DA:275:G:H5'	50:DQ:14:LYS:HB3	1.88	0.55
42:DI:23:ASN:ND2	42:DI:23:ASN:H	2.05	0.55
44:DK:123:LYS:O	44:DK:126:ARG:HG3	2.06	0.55
55:DV:16:U:C2	56:DW:37:MIA:H112	2.42	0.55
1:AA:354:A:HO2'	1:AA:355:A:H8	1.53	0.54
1:AA:1553:A:O2'	1:AA:1554:A:O5'	2.25	0.54
3:AC:54:ARG:CZ	3:AC:56:ASP:HB3	2.37	0.54
3:AC:194:ILE:HD11	3:AC:227:PRO:HB3	1.89	0.54
9:AK:69:PRO:C	9:AK:71:LEU:H	2.15	0.54
16:AS:82:ILE:H	16:AS:82:ILE:HD12	1.71	0.54
17:AT:119:LYS:HB2	34:BA:1442(A):G:N2	2.22	0.54
57:BZ:12:LEU:HD12	57:BZ:78:ARG:HB3	1.90	0.54
1:CA:2102:U:H2'	1:CA:2103:C:C6	2.42	0.54
3:CC:6:LYS:HA	3:CC:9:ARG:HH11	1.73	0.54
28:C4:59:PHE:HA	28:C4:61:ARG:N	2.23	0.54
34:DA:67:C:H2'	34:DA:68:G:C8	2.41	0.54
34:DA:93:G:H2'	34:DA:96:U:O4'	2.06	0.54
34:DA:1289:A:N1	34:DA:1371:G:O2'	2.32	0.54
38:DE:8:GLU:HG2	38:DE:34:VAL:HG23	1.89	0.54
38:DE:36:ASP:OD2	38:DE:40:ARG:HB2	2.06	0.54
40:DG:93:PRO:HA	40:DG:96:GLN:HB2	1.88	0.54
43:DJ:49:VAL:HG23	47:DN:41:ARG:HB2	1.88	0.54
51:DR:70:ILE:O	51:DR:74:ARG:HG3	2.07	0.54
53:DT:53:LEU:HA	53:DT:56:MET:HG2	1.89	0.54
57:DZ:160:ARG:HH11	57:DZ:256:THR:HG1	1.55	0.54
1:AA:1218:G:O2'	1:AA:1219:A:O4'	2.21	0.54
1:AA:1305:G:O2'	1:AA:1306:G:H5'	2.08	0.54
1:AA:1848:G:C2'	1:AA:1849:U:H5'	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2324:U:H5'	7:AG:88:ILE:HD11	1.89	0.54
5:AE:128:SER:OG	5:AE:129:HIS:N	2.38	0.54
23:AZ:45:ASP:O	23:AZ:49:ARG:HG3	2.07	0.54
27:A3:59:VAL:O	27:A3:60:GLU:HG2	2.07	0.54
35:BB:17:PHE:HB2	35:BB:44:LEU:HD21	1.89	0.54
42:BI:4:TYR:CE1	42:BI:88:TYR:HA	2.42	0.54
45:BL:31:PRO:HB2	45:BL:32:PHE:CD2	2.42	0.54
57:BZ:179:ASP:OD2	57:BZ:182:ARG:HD2	2.07	0.54
1:CA:639:U:H2'	1:CA:640:C:C6	2.41	0.54
1:CA:749:C:O2	1:CA:1618:A:H2'	2.07	0.54
1:CA:1404:C:O2'	1:CA:1405:U:H5'	2.06	0.54
1:CA:1939:U:OP1	1:CA:2604:U:O2'	2.25	0.54
5:CE:60:ASN:OD1	5:CE:62:PRO:HD2	2.07	0.54
11:CN:128:HIS:CE1	11:CN:135:PRO:HG2	2.43	0.54
23:CZ:54:HIS:O	23:CZ:98:MET:HE1	2.08	0.54
23:CZ:92:SER:O	23:CZ:130:PRO:HG2	2.07	0.54
30:C6:21:TYR:CE1	30:C6:38:LYS:HG2	2.42	0.54
34:DA:435:C:H2'	34:DA:436:C:C6	2.42	0.54
34:DA:1504:G:OP1	34:DA:1507:A:H4'	2.07	0.54
38:DE:53:LEU:H	38:DE:53:LEU:HD12	1.71	0.54
1:AA:553:A:C2	1:AA:2064:A:H2'	2.42	0.54
3:AC:183:PRO:C	3:AC:185:LYS:H	2.16	0.54
13:AP:83:VAL:HG13	13:AP:112:LEU:HD21	1.89	0.54
34:BA:100:C:H2'	34:BA:101:A:O4'	2.06	0.54
34:BA:161:A:H2'	34:BA:162:A:C8	2.42	0.54
35:BB:20:GLU:HA	35:BB:21:ARG:NH2	2.21	0.54
36:BC:6:HIS:HB2	47:BN:49:HIS:CD2	2.41	0.54
39:BF:70:ASP:HB2	39:BF:71:ARG:HG2	1.89	0.54
46:BM:11:ARG:HA	46:BM:45:VAL:HB	1.89	0.54
1:CA:98:G:OP1	26:C2:3:LEU:N	2.31	0.54
1:CA:631:A:OP1	13:CP:65:ARG:NH1	2.39	0.54
1:CA:1969:A:O2'	1:CA:1972:A:N3	2.31	0.54
14:CQ:37:LEU:HB2	14:CQ:128:LYS:HB2	1.89	0.54
34:DA:45:U:O5'	34:DA:45:U:H6	1.90	0.54
34:DA:137:C:H2'	34:DA:138:G:C8	2.42	0.54
34:DA:499:A:H4'	34:DA:500:G:OP1	2.08	0.54
1:AA:1093:G:N2	1:AA:1157:A:H2	2.04	0.54
3:AC:49:GLY:N	3:AC:209:PHE:O	2.39	0.54
20:AW:19:LEU:HB3	29:A5:25:LEU:HD11	1.90	0.54
34:BA:1216:G:OP1	47:BN:2:ALA:N	2.40	0.54
37:BD:104:VAL:O	37:BD:107:ARG:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BI:86:VAL:O	42:BI:90:PRO:HG3	2.07	0.54
52:BS:33:THR:OG1	52:BS:34:TRP:N	2.39	0.54
57:BZ:443:HIS:ND1	57:BZ:446:THR:HG22	2.22	0.54
1:CA:45:C:OP2	1:CA:215:G:H5'	2.08	0.54
1:CA:221:A:O2'	1:CA:266:G:N7	2.32	0.54
1:CA:299:A:N1	1:CA:322:A:O2'	2.38	0.54
1:CA:1860:G:C5'	3:CC:206:LYS:C	2.47	0.54
1:CA:1914:C:H5"	1:CA:1915:U:OP2	2.08	0.54
1:CA:2121:G:O2'	3:CC:168:LYS:CD	2.54	0.54
1:CA:2389:G:H5"	1:CA:2390:U:O4'	2.06	0.54
1:CA:2394:C:OP1	32:C8:30:ARG:NH1	2.40	0.54
10:CL:19:PRO:HB3	10:CL:34:ILE:HD12	1.89	0.54
16:CS:23:ARG:HH21	16:CS:84:GLN:HB3	1.71	0.54
41:DH:25:ASP:OD1	41:DH:25:ASP:N	2.40	0.54
50:DQ:56:VAL:HB	50:DQ:78:GLU:HB3	1.88	0.54
1:AA:1286:U:H3'	63:AA:3923:HOH:O	2.06	0.54
3:AC:52:PRO:HB2	3:AC:168:LYS:O	2.07	0.54
19:AV:52:VAL:HG22	19:AV:55:ALA:HB3	1.90	0.54
34:BA:167:G:H2'	34:BA:168:G:H8	1.72	0.54
34:BA:1095:U:H2'	34:BA:1096:C:O4'	2.07	0.54
35:BB:204:ASN:OD1	35:BB:206:ASP:N	2.40	0.54
37:BD:31:CYS:SG	37:BD:33:MET:N	2.80	0.54
39:BF:97:PHE:CB	51:BR:32:ARG:HD2	2.37	0.54
52:BS:40:ILE:HB	52:BS:67:VAL:HA	1.89	0.54
57:BZ:406:GLU:HG2	57:BZ:439:ARG:HH22	1.73	0.54
5:CE:2:LYS:HG3	5:CE:200:GLU:HB2	1.90	0.54
25:C1:23:LYS:HB3	25:C1:29:GLY:HA3	1.90	0.54
34:DA:909:A:H2'	34:DA:910:C:O4'	2.07	0.54
36:DC:137:ALA:HA	36:DC:140:ARG:HD3	1.90	0.54
39:DF:42:GLU:OE1	39:DF:59:TYR:OH	2.19	0.54
53:DT:16:HIS:O	53:DT:19:SER:OG	2.16	0.54
3:AC:52:PRO:HG2	3:AC:53:ARG:H	1.73	0.54
6:AF:150:GLY:HA2	6:AF:172:TRP:CD2	2.43	0.54
34:BA:677:U:H3	34:BA:713:G:H22	1.56	0.54
38:BE:67:VAL:HG12	38:BE:69:VAL:HG12	1.88	0.54
38:BE:93:PRO:HG2	41:BH:105:ARG:HE	1.72	0.54
57:BZ:329:ARG:HD3	57:BZ:331:TYR:CZ	2.42	0.54
57:BZ:518:PRO:O	57:BZ:521:SER:OG	2.19	0.54
1:CA:299:A:N3	1:CA:319:C:O2'	2.33	0.54
1:CA:1843:C:H5'	4:CD:253:GLN:NE2	2.22	0.54
1:CA:1970:A:H4'	1:CA:1971:A:OP1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CL:75:SER:HA	10:CL:78:ILE:HG22	1.88	0.54
12:CO:49:ARG:NH1	34:DA:1423:G:OP1	2.41	0.54
14:CQ:38:GLU:OE2	14:CQ:128:LYS:HG2	2.08	0.54
26:C2:10:LEU:HD21	26:C2:59:ARG:HD2	1.90	0.54
31:C7:34:ARG:NH1	31:C7:41:ARG:O	2.41	0.54
1:AA:611:U:H2'	1:AA:612:C:C6	2.43	0.54
32:A8:42:ARG:HD2	63:A8:5109:HOH:O	2.08	0.54
34:BA:193:C:H2'	34:BA:194:C:C6	2.42	0.54
34:BA:373:A:C2	34:BA:374:A:C8	2.94	0.54
34:BA:975:A:N1	43:BJ:48:THR:HB	2.22	0.54
34:BA:1068:G:H8	34:BA:1068:G:OP2	1.90	0.54
37:BD:149:ALA:HB3	37:BD:152:SER:HB2	1.89	0.54
57:BZ:466:LEU:O	57:BZ:470:PHE:HB2	2.07	0.54
1:CA:7:G:H4'	11:CN:13:TRP:HH2	1.72	0.54
1:CA:861:A:C2	1:CA:917:A:C4	2.96	0.54
1:CA:1297:C:H2'	1:CA:1298:C:H6	1.72	0.54
1:CA:1297:C:OP1	1:CA:2710:C:H4'	2.08	0.54
1:CA:2726:U:O2'	1:CA:2727:G:H5'	2.08	0.54
3:CC:30:VAL:HG23	3:CC:31:LYS:HG2	1.89	0.54
3:CC:52:PRO:HG2	3:CC:53:ARG:H	1.73	0.54
21:CX:57:LEU:HD13	21:CX:78:LYS:HB3	1.89	0.54
34:DA:416:G:C5	34:DA:417:C:C4	2.96	0.54
35:DB:47:THR:O	35:DB:51:LEU:HD22	2.07	0.54
57:DZ:35:TYR:HE2	57:DZ:269:VAL:HB	1.73	0.54
1:AA:1633:A:H2'	1:AA:1634:C:C6	2.42	0.54
4:AD:8:PRO:CB	4:AD:14:ARG:HB2	2.38	0.54
26:A2:2:LYS:O	26:A2:6:VAL:HG23	2.08	0.54
34:BA:134:A:H61	49:BP:25:ARG:HH12	1.56	0.54
34:BA:435:C:C2	34:BA:436:C:C5	2.96	0.54
34:BA:487:A:H2'	34:BA:488:C:O4'	2.08	0.54
34:BA:643:C:H5'	41:BH:31:PHE:CD1	2.43	0.54
34:BA:1086:U:H2'	34:BA:1087:G:O4'	2.07	0.54
34:BA:1338:G:H2'	34:BA:1339:A:C8	2.42	0.54
46:BM:3:ARG:NH2	46:BM:11:ARG:HH12	2.04	0.54
1:CA:1786:A:H1'	1:CA:1938:A:N6	2.22	0.54
1:CA:2117:A:N6	1:CA:2171:A:N1	2.56	0.54
1:CA:2432:A:H4'	56:DY:76:A:P	2.47	0.54
1:CA:2590:A:O2'	1:CA:2591:C:H5'	2.07	0.54
5:CE:2:LYS:HB2	5:CE:95:ILE:HD12	1.90	0.54
8:CH:154:PRO:HA	8:CH:161:GLY:HA3	1.90	0.54
14:CQ:70:PRO:HA	14:CQ:95:ALA:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CR:13:HIS:O	15:CR:15:SER:N	2.41	0.54
34:DA:333:G:H4'	53:DT:16:HIS:CE1	2.42	0.54
50:DQ:40:LYS:HD3	50:DQ:42:TYR:CZ	2.42	0.54
56:DW:40:C:H4'	56:DY:35:A:O3'	2.08	0.54
25:A1:80:LEU:HB3	25:A1:82:LEU:HG	1.90	0.54
34:BA:685:G:C2	34:BA:686:U:C4	2.96	0.54
34:BA:973:G:OP1	43:BJ:57:LYS:HE3	2.08	0.54
34:BA:1070:U:H2'	34:BA:1071:C:C6	2.43	0.54
35:BB:12:GLU:HA	35:BB:213:LEU:HD11	1.89	0.54
36:BC:155:GLY:HA3	36:BC:196:LEU:HD12	1.88	0.54
38:BE:139:LEU:C	38:BE:141:GLN:H	2.15	0.54
1:CA:192:C:O2'	1:CA:802:A:N3	2.37	0.54
1:CA:601:C:O2'	1:CA:605:C:H5"	2.08	0.54
1:CA:1708:C:H2'	1:CA:1709:U:H6	1.72	0.54
1:CA:2121:G:H21	3:CC:169:THR:HG1	1.40	0.54
5:CE:59:VAL:HG12	5:CE:64:LYS:HE2	1.90	0.54
20:CW:29:LEU:O	20:CW:33:ARG:HG3	2.08	0.54
34:DA:177:C:H2'	34:DA:178:C:H6	1.73	0.54
34:DA:1207:G:H2'	34:DA:1208:C:H6	1.71	0.54
34:DA:1281:U:P	34:DA:1282:C:H41	2.30	0.54
35:DB:25:ASN:O	35:DB:27:LYS:N	2.40	0.54
37:DD:25:ARG:HG2	37:DD:25:ARG:O	2.08	0.54
40:DG:26:PHE:O	40:DG:30:ILE:HG13	2.08	0.54
1:AA:1476:C:H2'	1:AA:1477:U:C6	2.43	0.54
7:AG:123:ASN:O	63:AG:301:HOH:O	2.18	0.54
8:AH:4:ILE:O	8:AH:69:ARG:HG2	2.07	0.54
19:AV:98:GLU:CD	19:AV:100:ARG:HH11	2.15	0.54
34:BA:630:G:O2'	34:BA:631:G:H5'	2.08	0.54
39:BF:10:LEU:HB2	39:BF:59:TYR:HB3	1.90	0.54
56:BY:53:G:H1	56:BY:61:C:N4	2.06	0.54
57:BZ:484:ARG:HG2	57:BZ:561:VAL:HG22	1.90	0.54
57:BZ:503:GLY:O	57:BZ:505:GLY:N	2.41	0.54
1:CA:375:C:H2'	1:CA:376:C:H6	1.73	0.54
1:CA:1991:U:H2'	1:CA:1992:G:H5"	1.89	0.54
2:CB:62:C:H2'	2:CB:63:G:C8	2.41	0.54
3:CC:171:ALA:HB1	3:CC:173:HIS:CE1	2.43	0.54
5:CE:101:ARG:NH1	5:CE:169:ASN:O	2.40	0.54
5:CE:119:ARG:HD2	5:CE:120:TRP:CE2	2.43	0.54
34:DA:1004:A:H8	34:DA:1005:A:H4'	1.73	0.54
35:DB:133:LYS:C	35:DB:135:GLN:H	2.16	0.54
41:DH:116:LYS:HD2	41:DH:129:VAL:HG11	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DL:119:LYS:C	45:DL:121:GLY:H	2.15	0.54
57:DZ:514:VAL:HG22	57:DZ:565:VAL:HA	1.90	0.54
57:DZ:620:VAL:O	57:DZ:624:LEU:HB2	2.08	0.54
1:AA:559:U:H2'	1:AA:560:C:C6	2.43	0.53
4:AD:242:ARG:N	4:AD:242:ARG:HD3	2.23	0.53
6:AF:20:LEU:HD22	6:AF:21:ALA:O	2.08	0.53
7:AG:98:ARG:CZ	28:A4:1:MET:HE3	2.38	0.53
7:AG:131:TYR:O	7:AG:159:VAL:HG12	2.08	0.53
11:AN:65:LYS:HB2	11:AN:65:LYS:NZ	2.23	0.53
23:AZ:63:ASP:OD1	23:AZ:65:GLN:HB2	2.07	0.53
34:BA:502:G:C2	34:BA:503:C:C2	2.96	0.53
50:BQ:88:TYR:HD2	50:BQ:89:LEU:HD23	1.71	0.53
52:BS:50:ALA:HB1	52:BS:57:HIS:HB3	1.90	0.53
57:BZ:655:TYR:CE2	57:BZ:659:LEU:HG	2.42	0.53
3:CC:183:PRO:C	3:CC:185:LYS:H	2.16	0.53
38:DE:80:ILE:HD13	41:DH:104:ARG:HH21	1.72	0.53
48:DO:70:LEU:HD23	48:DO:78:TYR:HA	1.88	0.53
57:DZ:250:THR:HG21	57:DZ:279:TYR:O	2.08	0.53
1:AA:254:A:N6	1:AA:454:U:O2'	2.41	0.53
1:AA:1336:C:H2'	1:AA:1337:C:C6	2.41	0.53
1:AA:1540:A:H2'	1:AA:1541:A:C8	2.43	0.53
1:AA:1604:C:H5"	1:AA:1605:A:OP2	2.08	0.53
1:AA:2096:U:H2'	1:AA:2097:U:C6	2.43	0.53
3:AC:171:ALA:HB1	3:AC:173:HIS:CE1	2.44	0.53
4:AD:102:LYS:C	4:AD:103:ARG:HG2	2.28	0.53
25:A1:6:GLU:HB2	25:A1:61:ARG:O	2.08	0.53
34:BA:300:A:H1'	34:BA:565:U:O2	2.08	0.53
34:BA:345:C:O5'	34:BA:345:C:H6	1.91	0.53
39:BF:37:VAL:HG12	39:BF:38:GLU:H	1.73	0.53
40:BG:115:ARG:HH11	40:BG:118:VAL:HG21	1.73	0.53
1:CA:2355:C:H1'	24:C0:39:ARG:HH21	1.73	0.53
1:CA:2454:G:H1'	63:CA:3857:HOH:O	2.07	0.53
1:CA:2880:C:O3'	15:CR:90:ARG:NH1	2.37	0.53
1:CA:2892:A:H2'	1:CA:2893:G:C8	2.43	0.53
3:CC:194:ILE:HD11	3:CC:227:PRO:HB3	1.89	0.53
17:CT:26:ASP:O	17:CT:49:VAL:HG12	2.09	0.53
32:C8:36:LYS:HB2	32:C8:41:ILE:HD11	1.90	0.53
34:DA:160:A:H1'	34:DA:344:A:C5	2.43	0.53
34:DA:1073:U:OP1	38:DE:57:LYS:HE3	2.08	0.53
1:AA:1136:U:O2	1:AA:1148:C:H1'	2.08	0.53
3:AC:42:VAL:HG13	3:AC:43:GLU:H	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:196:A:OP1	53:BT:68:LYS:NZ	2.40	0.53
34:BA:626:U:H2'	34:BA:627:G:C8	2.43	0.53
34:BA:1241:G:H2'	34:BA:1242:C:C6	2.43	0.53
39:BF:94:GLN:OE1	51:BR:32:ARG:NH2	2.42	0.53
46:BM:118:ALA:HB1	56:BW:28:G:H4'	1.89	0.53
50:BQ:59:ILE:HG22	50:BQ:73:VAL:HA	1.90	0.53
57:BZ:289:ILE:HD11	57:BZ:331:TYR:CG	2.43	0.53
57:BZ:490:PRO:HG3	57:BZ:515:GLU:HB3	1.90	0.53
1:CA:1558:A:H4'	1:CA:1559:G:O5'	2.08	0.53
1:CA:2315:G:H2'	1:CA:2316:C:C6	2.43	0.53
1:CA:2408:U:OP2	63:CA:3744:HOH:O	2.19	0.53
8:CH:80:SER:OG	8:CH:81:GLU:N	2.41	0.53
20:CW:6:ILE:HD13	20:CW:104:THR:HG23	1.90	0.53
34:DA:827:U:H5"	34:DA:828:A:OP2	2.08	0.53
37:DD:3:ARG:NH1	37:DD:5:ILE:HG13	2.24	0.53
57:DZ:456:GLU:C	57:DZ:458:HIS:H	2.17	0.53
57:DZ:490:PRO:HG3	57:DZ:516:PRO:HD2	1.89	0.53
1:AA:1093:G:N2	1:AA:1156:G:O2'	2.41	0.53
1:AA:2198:A:H2'	1:AA:2199:C:C6	2.42	0.53
1:AA:2209:G:O2'	1:AA:2210:C:OP1	2.24	0.53
34:BA:396:G:P	57:BZ:349:LYS:HZ1	2.32	0.53
34:BA:1510:U:H2'	34:BA:1511:G:C8	2.42	0.53
35:BB:45:GLN:O	35:BB:49:GLU:HB2	2.08	0.53
57:BZ:269:VAL:O	57:BZ:272:LEU:HB3	2.08	0.53
1:CA:1792:G:O2'	1:CA:1830:C:OP1	2.26	0.53
5:CE:176:ILE:HB	5:CE:181:LEU:HB2	1.91	0.53
11:CN:120:LEU:HD22	11:CN:122:VAL:HG23	1.90	0.53
23:CZ:8:TYR:HB2	23:CZ:38:TYR:CZ	2.44	0.53
34:DA:269:C:H2'	34:DA:270:A:C8	2.43	0.53
34:DA:828:A:H2'	34:DA:829:G:O4'	2.08	0.53
34:DA:1142:G:H2'	34:DA:1143:G:O4'	2.08	0.53
39:DF:99:ALA:O	51:DR:28:GLU:HA	2.08	0.53
40:DG:50:ILE:HD11	40:DG:58:PRO:HB3	1.89	0.53
41:DH:26:VAL:HG23	41:DH:27:PRO:O	2.09	0.53
1:AA:325:G:OP2	22:AY:84:ARG:NH2	2.42	0.53
1:AA:354:A:H2	1:AA:1255:A:O2'	1.92	0.53
5:AE:68:ALA:C	5:AE:70:ALA:H	2.17	0.53
13:AP:39:LYS:HG3	13:AP:45:LEU:HD11	1.90	0.53
54:BU:3:LYS:HA	54:BU:11:GLY:HA2	1.88	0.53
1:CA:329:G:OP2	22:CY:71:LYS:HD2	2.08	0.53
1:CA:1070:A:H2'	1:CA:1097:U:OP1	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1860:G:H8	1:CA:1860:G:OP2	1.92	0.53
1:CA:2837:G:O2'	1:CA:2838:G:H5'	2.09	0.53
1:CA:2850:A:H2'	1:CA:2851:A:C8	2.43	0.53
2:CB:54:G:H2'	2:CB:55:U:H6	1.74	0.53
4:CD:108:PRO:HD2	4:CD:111:LEU:HG	1.89	0.53
34:DA:448:A:C4	34:DA:487:A:C2	2.96	0.53
34:DA:642:A:N3	41:DH:113:SER:OG	2.37	0.53
34:DA:737:A:H2'	34:DA:738:C:C6	2.44	0.53
34:DA:953:G:H5'	34:DA:965:A:H61	1.73	0.53
37:DD:153:ARG:HD3	37:DD:181:MET:HE1	1.91	0.53
40:DG:30:ILE:HD13	40:DG:120:ILE:HD13	1.91	0.53
1:AA:721:G:H1'	6:AF:74:ARG:HD3	1.90	0.53
1:AA:1587:U:H2'	1:AA:1588:G:O4'	2.09	0.53
1:AA:1604:C:OP2	1:AA:1605:A:O2'	2.24	0.53
1:AA:1941:A:O3'	34:BA:1517:G:H1'	2.09	0.53
1:AA:2325:C:H4'	7:AG:91:ARG:HG3	1.89	0.53
3:AC:30:VAL:HG23	3:AC:31:LYS:HG2	1.89	0.53
48:BO:24:SER:O	48:BO:28:GLN:N	2.34	0.53
53:BT:87:LYS:O	53:BT:91:LEU:HG	2.09	0.53
1:CA:583:G:OP2	18:CU:10:ARG:HD2	2.09	0.53
5:CE:21:VAL:HG23	5:CE:185:LYS:HD2	1.90	0.53
8:CH:107:VAL:HG11	8:CH:162:ILE:HD11	1.90	0.53
13:CP:99:LEU:HA	13:CP:102:ARG:HB2	1.90	0.53
18:CU:92:ARG:HA	18:CU:95:LEU:HB2	1.88	0.53
34:DA:1129:C:H2'	34:DA:1139:G:N7	2.24	0.53
34:DA:1304:G:C6	34:DA:1305:G:N1	2.77	0.53
38:DE:131:ILE:O	38:DE:135:THR:OG1	2.26	0.53
57:DZ:503:GLY:C	57:DZ:505:GLY:H	2.17	0.53
1:AA:1133:G:C2	1:AA:1149:A:C2	2.97	0.53
1:AA:2294:G:H4'	1:AA:2401:G:O2'	2.09	0.53
7:AG:111:LEU:HD22	7:AG:120:LEU:HD21	1.89	0.53
34:BA:1207:G:H2'	34:BA:1208:C:C6	2.44	0.53
49:BP:75:ARG:O	49:BP:78:GLY:N	2.31	0.53
57:BZ:330:VAL:CG1	57:BZ:371:ALA:HA	2.37	0.53
1:CA:301:G:OP2	22:CY:84:ARG:NH2	2.42	0.53
1:CA:579:G:H2'	1:CA:580:C:C6	2.44	0.53
1:CA:1059:G:H5"	1:CA:1060:U:H2'	1.91	0.53
1:CA:2531:A:H5"	8:CH:157:TYR:CE2	2.44	0.53
3:CC:51:ASP:OD2	3:CC:54:ARG:HB2	2.09	0.53
3:CC:54:ARG:CZ	3:CC:56:ASP:HB3	2.37	0.53
7:CG:19:LEU:HG	7:CG:175:LEU:HD22	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:107:G:H2'	34:DA:108:G:O4'	2.08	0.53
37:DD:121:VAL:HG22	37:DD:126:ILE:HG13	1.91	0.53
57:DZ:526:VAL:HG11	57:DZ:566:THR:HG23	1.91	0.53
1:AA:1014:U:O3'	27:A3:14:GLY:HA2	2.08	0.53
1:AA:1100:A:H2'	1:AA:1101:G:O4'	2.09	0.53
1:AA:2044:U:O2'	1:AA:2629:C:H5'	2.09	0.53
3:AC:6:LYS:HA	3:AC:9:ARG:HH11	1.72	0.53
8:AH:11:VAL:HG13	8:AH:15:VAL:HG22	1.91	0.53
11:AN:12:ARG:HH21	11:AN:138:LEU:HD21	1.73	0.53
34:BA:28:G:O2'	34:BA:296:U:OP1	2.27	0.53
34:BA:148:G:H2'	34:BA:149:A:C8	2.43	0.53
34:BA:1278:U:H5'	34:BA:1279:A:H5'	1.91	0.53
34:BA:1431:C:H2'	34:BA:1432:G:O4'	2.09	0.53
34:BA:1516:G:N1	34:BA:1519:A:OP2	2.42	0.53
39:BF:19:LEU:HD11	39:BF:59:TYR:CE2	2.44	0.53
50:BQ:41:LYS:HZ2	50:BQ:92:ARG:NH2	2.07	0.53
57:BZ:608:VAL:HG21	57:BZ:647:VAL:HG22	1.91	0.53
1:CA:910:A:H62	14:CQ:12:GLN:HA	1.73	0.53
1:CA:2689:U:P	1:CA:2719:G:H22	2.32	0.53
1:CA:2869:G:H2'	1:CA:2870:C:O4'	2.09	0.53
2:CB:116:G:H8	2:CB:116:G:OP2	1.92	0.53
4:CD:142:VAL:HG12	4:CD:163:ALA:HB3	1.91	0.53
8:CH:157:TYR:HE1	8:CH:172:LYS:HG2	1.74	0.53
16:CS:65:VAL:O	16:CS:68:GLN:HB2	2.09	0.53
17:CT:60:THR:HG22	17:CT:77:PRO:HA	1.91	0.53
34:DA:786:G:H2'	34:DA:787:A:O4'	2.09	0.53
37:DD:129:ASN:HD21	37:DD:144:ASP:HA	1.74	0.53
48:DO:5:LYS:H	48:DO:5:LYS:HD2	1.74	0.53
57:DZ:609:GLU:HG2	57:DZ:644:ARG:HG2	1.91	0.53
1:AA:1325:G:H4'	15:AR:31:HIS:CD2	2.44	0.53
1:AA:1358:U:H4'	1:AA:1359:U:O5'	2.09	0.53
1:AA:1571:G:H2'	1:AA:1572:G:O4'	2.09	0.53
1:AA:1686:U:O2'	1:AA:1687:C:H5'	2.08	0.53
7:AG:178:PHE:O	7:AG:180:PHE:HD2	1.91	0.53
14:AQ:103:MET:HE1	14:AQ:125:LEU:HD13	1.91	0.53
34:BA:1292:U:OP2	40:BG:41:ARG:NH2	2.41	0.53
35:BB:105:PHE:C	35:BB:107:THR:H	2.16	0.53
38:BE:93:PRO:HG2	41:BH:105:ARG:NE	2.24	0.53
43:BJ:17:ASP:O	43:BJ:21:GLN:HB2	2.09	0.53
44:BK:99:GLN:HG2	44:BK:105:VAL:HG11	1.91	0.53
52:BS:36:ARG:NH1	52:BS:52:TYR:O	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:273:LEU:O	57:BZ:276:VAL:N	2.42	0.53
57:BZ:490:PRO:HB3	57:BZ:515:GLU:HG2	1.91	0.53
1:CA:323:G:C8	6:CF:171:PRO:HG3	2.44	0.53
1:CA:2120:G:H21	3:CC:168:LYS:CE	2.20	0.53
2:CB:66:A:N6	2:CB:108:U:H3'	2.24	0.53
4:CD:3:VAL:HG13	4:CD:17:THR:HB	1.90	0.53
27:C3:18:ASP:OD1	27:C3:18:ASP:N	2.42	0.53
34:DA:612:C:O2	34:DA:629:G:N2	2.41	0.53
1:AA:1188:A:C4	1:AA:1190:G:C8	2.97	0.53
1:AA:1452:U:H2'	1:AA:1453:C:H6	1.74	0.53
2:AB:89:G:H2'	2:AB:90:A:C8	2.43	0.53
3:AC:44:VAL:HG23	3:AC:176:VAL:HG21	1.89	0.53
17:AT:108:ARG:HH12	17:AT:112:ARG:HE	1.57	0.53
24:A0:43:THR:O	24:A0:43:THR:HG23	2.08	0.53
29:A5:16:ARG:NH1	29:A5:17:ASP:OD1	2.39	0.53
34:BA:38:G:H22	34:BA:397:A:H5"	1.73	0.53
34:BA:368:U:N3	57:BZ:354:ARG:NH1	2.50	0.53
34:BA:375:U:N3	34:BA:376:G:N7	2.57	0.53
35:BB:21:ARG:HA	35:BB:39:ILE:HG23	1.90	0.53
43:BJ:45:ARG:HG2	43:BJ:47:PHE:CZ	2.44	0.53
1:CA:443:A:H1'	1:CA:1201:C:O4'	2.08	0.53
1:CA:1046:A:H3'	1:CA:1047:G:H5'	1.91	0.53
1:CA:1049:C:H3'	1:CA:1050:A:H8	1.73	0.53
1:CA:1639:U:H2'	1:CA:1640:C:H5"	1.91	0.53
1:CA:2682:U:H5'	5:CE:11:MET:O	2.08	0.53
1:CA:2887:U:H2'	1:CA:2888:C:H6	1.74	0.53
11:CN:14:VAL:HG12	11:CN:15:LEU:H	1.73	0.53
16:CS:66:ALA:O	16:CS:69:VAL:N	2.42	0.53
20:CW:20:VAL:O	20:CW:23:LEU:HB2	2.09	0.53
34:DA:253:U:H2'	34:DA:254:G:C8	2.44	0.53
34:DA:544:G:OP1	37:DD:59:ARG:NH2	2.31	0.53
34:DA:1179:A:H4'	42:DI:103:THR:HA	1.90	0.53
47:DN:7:ILE:HG22	47:DN:23:ARG:HD2	1.90	0.53
1:AA:1405:A:N6	1:AA:1418:U:H3	2.07	0.52
3:AC:65:LEU:HD22	3:AC:189:ASN:HB3	1.91	0.52
20:AW:5:ALA:C	20:AW:6:ILE:HG13	2.33	0.52
23:AZ:23:LYS:HD2	23:AZ:40:ASP:HA	1.90	0.52
31:A7:33:ARG:NH2	63:A7:201:HOH:O	2.41	0.52
34:BA:251:G:H4'	34:BA:252:U:O5'	2.09	0.52
34:BA:731:G:H5'	34:BA:766:A:H4'	1.91	0.52
35:BB:51:LEU:HD22	35:BB:55:PHE:CE2	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:77:ALA:HB2	35:BB:211:ILE:HD13	1.90	0.52
45:BL:34:ARG:HG2	45:BL:35:GLY:H	1.74	0.52
46:BM:20:THR:HA	46:BM:25:ILE:O	2.08	0.52
49:BP:18:ARG:NH1	49:BP:32:TYR:OH	2.42	0.52
57:BZ:182:ARG:O	57:BZ:184:LYS:N	2.42	0.52
57:BZ:342:TYR:N	57:BZ:390:VAL:O	2.38	0.52
1:CA:1068:G:H21	1:CA:1096:A:H5'	1.74	0.52
1:CA:2572:A:N7	5:CE:144:ARG:HD2	2.25	0.52
3:CC:48:LEU:CB	3:CC:50:ILE:HD12	2.38	0.52
5:CE:70:ALA:O	5:CE:72:VAL:N	2.38	0.52
6:CF:25:PRO:HD2	6:CF:115:ALA:HB2	1.91	0.52
17:CT:66:VAL:HA	17:CT:71:GLY:HA2	1.91	0.52
17:CT:99:LEU:HD22	17:CT:101:PHE:HE1	1.74	0.52
23:CZ:85:HIS:HE1	23:CZ:87:ASP:OD2	1.92	0.52
34:DA:938:A:H2'	34:DA:939:G:O4'	2.09	0.52
37:DD:60:GLU:OE1	37:DD:199:ASN:N	2.40	0.52
38:DE:53:LEU:O	38:DE:57:LYS:HB2	2.08	0.52
57:DZ:612:THR:OG1	57:DZ:613:PRO:O	2.26	0.52
1:AA:934:A:OP1	1:AA:935:C:N4	2.42	0.52
1:AA:2584:A:N7	5:AE:144:ARG:HD2	2.24	0.52
1:AA:2880:C:H2'	1:AA:2881:C:O4'	2.08	0.52
2:AB:24:G:H3'	63:AB:3102:HOH:O	2.08	0.52
6:AF:178:PRO:C	6:AF:180:GLY:H	2.17	0.52
7:AG:110:ALA:HB1	7:AG:140:ILE:HG22	1.91	0.52
34:BA:1243:C:N3	34:BA:1295:G:N2	2.57	0.52
35:BB:111:ARG:HG2	35:BB:111:ARG:NH1	2.20	0.52
50:BQ:88:TYR:CD2	50:BQ:89:LEU:HD23	2.44	0.52
57:BZ:133:ILE:HG22	57:BZ:257:PRO:HB2	1.90	0.52
1:CA:272:G:H4'	1:CA:272(A):U:H5"	1.90	0.52
1:CA:1639:U:C2'	1:CA:1640:C:H5"	2.39	0.52
1:CA:1651:G:N2	1:CA:2007:C:C2	2.77	0.52
1:CA:2148:G:H2'	1:CA:2149:G:C8	2.43	0.52
1:CA:2458:G:O2'	1:CA:2460:U:O4	2.21	0.52
14:CQ:37:LEU:HD12	14:CQ:128:LYS:HB3	1.91	0.52
20:CW:76:VAL:HG22	20:CW:103:ILE:HG23	1.92	0.52
34:DA:148:G:H2'	34:DA:149:A:C8	2.43	0.52
34:DA:1219:U:OP1	47:DN:19:ARG:NH1	2.41	0.52
34:DA:1347:G:O2'	34:DA:1373:G:O6	2.27	0.52
36:DC:182:ILE:HG12	36:DC:203:PHE:HD1	1.74	0.52
57:DZ:534:ILE:HD11	57:DZ:570:GLY:HA3	1.91	0.52
57:DZ:546:ILE:H	57:DZ:546:ILE:HD12	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:346:A:H4'	1:AA:347:G:OP2	2.09	0.52
1:AA:1698:G:OP1	15:AR:40:LYS:HE3	2.08	0.52
3:AC:48:LEU:CB	3:AC:50:ILE:HD12	2.38	0.52
3:AC:64:SER:HA	3:AC:161:ARG:H	1.74	0.52
13:AP:120:ALA:HB1	13:AP:138:LEU:HD12	1.92	0.52
13:AP:132:LYS:O	13:AP:136:GLU:HG3	2.08	0.52
34:BA:659:U:C2	34:BA:660:G:C8	2.98	0.52
41:BH:2:LEU:HD11	41:BH:8:ASP:HB2	1.91	0.52
45:BL:24:VAL:HB	45:BL:27:LEU:HD22	1.92	0.52
56:BW:35:A:H4'	57:BZ:575:VAL:HG21	1.92	0.52
1:CA:664:C:H2'	1:CA:665:C:H6	1.74	0.52
1:CA:2712:U:H2'	1:CA:2714:G:H5"	1.90	0.52
10:CL:41:PHE:O	10:CL:45:THR:OG1	2.21	0.52
13:CP:97:PRO:HG3	13:CP:112:LEU:HD12	1.91	0.52
34:DA:1057:G:N2	34:DA:1204:A:H1'	2.24	0.52
34:DA:1189:C:O5'	34:DA:1189:C:H6	1.92	0.52
38:DE:127:ASN:O	38:DE:131:ILE:HG12	2.10	0.52
53:DT:59:ALA:O	53:DT:62:LEU:N	2.42	0.52
1:AA:238:C:O2'	13:AP:64:LYS:HE3	2.09	0.52
1:AA:1199:C:OP1	18:AU:92:ARG:NH1	2.43	0.52
1:AA:1222:A:H2'	1:AA:1222:A:N3	2.24	0.52
1:AA:1636:U:H2'	1:AA:1637:G:C8	2.45	0.52
1:AA:2187:G:H1	1:AA:2194:U:H5	1.57	0.52
1:AA:2200:C:H4'	3:AC:47:LYS:HZ3	1.74	0.52
1:AA:2413:U:OP1	30:A6:18:ARG:NH2	2.42	0.52
14:AQ:27:VAL:N	14:AQ:138:ASP:OD1	2.39	0.52
34:BA:310:G:OP2	49:BP:27:LYS:NZ	2.38	0.52
34:BA:397:A:N6	34:BA:548:G:C5	2.78	0.52
34:BA:922:G:C6	34:BA:923:A:C6	2.98	0.52
34:BA:1131:G:OP1	42:BI:20:ARG:NH2	2.41	0.52
53:BT:82:SER:O	53:BT:86:ARG:HG3	2.09	0.52
57:BZ:166:LEU:HB3	57:BZ:178:ILE:HD12	1.92	0.52
57:BZ:273:LEU:HA	57:BZ:276:VAL:HG23	1.92	0.52
57:BZ:323:GLY:O	57:BZ:325:LEU:N	2.42	0.52
1:CA:394:A:O2'	1:CA:395:U:H5'	2.09	0.52
1:CA:1001:A:H2'	1:CA:1002:G:O4'	2.08	0.52
1:CA:2166:G:H3'	1:CA:2167:U:H5"	1.91	0.52
1:CA:2648:C:H2'	1:CA:2649:U:C6	2.44	0.52
25:C1:67:ILE:N	25:C1:68:PRO:HD2	2.24	0.52
34:DA:411:A:H62	34:DA:413:G:H21	1.55	0.52
34:DA:933:G:O6	40:DG:3:ARG:NH2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1053:G:O5'	34:DA:1054:C:H5'	2.10	0.52
35:DB:93:VAL:HG21	35:DB:97:TRP:HD1	1.74	0.52
37:DD:3:ARG:HE	37:DD:118:ARG:HD3	1.75	0.52
44:DK:48:ILE:O	44:DK:50:TYR:N	2.42	0.52
57:DZ:363:ARG:HG2	57:DZ:363:ARG:NH1	2.24	0.52
1:AA:70:A:N7	21:AX:31:HIS:HE1	2.06	0.52
1:AA:1106:U:O4	10:AL:130:SER:OG	2.11	0.52
1:AA:1296:G:N7	13:AP:18:ARG:NH2	2.57	0.52
1:AA:1857:G:H4'	4:AD:242:ARG:CZ	2.39	0.52
1:AA:2211:U:H2'	1:AA:2212:G:C8	2.44	0.52
7:AG:27:ASN:HB3	7:AG:30:GLU:HG3	1.92	0.52
7:AG:47:LYS:O	7:AG:51:ARG:HG2	2.09	0.52
7:AG:66:GLN:HG3	28:A4:1:MET:CE	2.40	0.52
10:AL:59:ILE:HD11	10:AL:63:ARG:HA	1.90	0.52
23:AZ:111:VAL:C	23:AZ:113:ALA:H	2.17	0.52
34:BA:402:G:C6	34:BA:403:C:C4	2.98	0.52
34:BA:714:G:H2'	34:BA:715:A:C8	2.45	0.52
34:BA:814:A:N7	34:BA:816:A:C4	2.77	0.52
57:BZ:443:HIS:ND1	57:BZ:445:GLU:O	2.39	0.52
1:CA:108:U:H2'	1:CA:109:G:H8	1.75	0.52
1:CA:635:C:O2'	1:CA:639:U:OP1	2.27	0.52
1:CA:1058:G:O2'	10:CL:114:ASP:O	2.26	0.52
1:CA:2028:U:H2'	1:CA:2029:G:O4'	2.10	0.52
1:CA:2756:U:H1'	1:CA:2757:A:H5"	1.91	0.52
8:CH:24:VAL:HG13	8:CH:37:VAL:HG21	1.91	0.52
15:CR:51:LEU:HD23	15:CR:66:VAL:HG22	1.91	0.52
16:CS:69:VAL:O	16:CS:72:ALA:HB3	2.10	0.52
22:CY:86:ARG:HB2	22:CY:98:VAL:HG23	1.91	0.52
27:C3:30:ARG:HB3	27:C3:33:GLN:HB2	1.92	0.52
41:DH:20:TYR:HD2	41:DH:65:TYR:CE2	2.27	0.52
44:DK:59:TYR:CE1	44:DK:63:LEU:HD21	2.44	0.52
1:AA:27:G:N7	63:AA:3983:HOH:O	2.34	0.52
1:AA:1475:G:H2'	1:AA:1476:C:H6	1.74	0.52
1:AA:2143:G:N2	3:AC:169:THR:CB	2.68	0.52
1:AA:2200:C:OP1	3:AC:47:LYS:HG2	2.09	0.52
13:AP:52:GLU:HB2	13:AP:55:ARG:HD2	1.91	0.52
23:AZ:30:ASN:ND2	23:AZ:90:VAL:HB	2.23	0.52
37:BD:55:ALA:O	37:BD:58:LEU:N	2.43	0.52
43:BJ:5:ARG:NH2	43:BJ:73:ASP:OD2	2.43	0.52
46:BM:15:VAL:O	46:BM:19:LEU:HD13	2.09	0.52
57:BZ:357:ARG:HH11	57:BZ:373:ASP:CG	2.17	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:740:U:H2'	1:CA:741:G:C8	2.45	0.52
1:CA:996:A:C2	1:CA:997:G:C8	2.97	0.52
1:CA:1401:G:C6	1:CA:1402:C:C4	2.98	0.52
1:CA:2682:U:OP2	63:CA:3745:HOH:O	2.19	0.52
4:CD:121:PRO:HB3	4:CD:135:PHE:CE2	2.45	0.52
6:CF:53:THR:HB	6:CF:56:GLU:OE2	2.09	0.52
6:CF:53:THR:HG22	6:CF:56:GLU:HG3	1.92	0.52
10:CL:99:ILE:O	10:CL:139:VAL:N	2.41	0.52
21:CX:43:VAL:HG21	21:CX:81:VAL:HG11	1.91	0.52
28:C4:36:CYS:SG	28:C4:37:SER:N	2.83	0.52
34:DA:1095:U:H5'	34:DA:1109:C:O2	2.10	0.52
34:DA:1224:G:O2'	34:DA:1322:C:OP1	2.26	0.52
35:DB:100:GLY:O	35:DB:104:ASN:N	2.39	0.52
36:DC:22:TRP:HA	43:DJ:93:GLY:HA2	1.91	0.52
38:DE:143:ARG:HD2	41:DH:77:GLU:OE2	2.10	0.52
57:DZ:528:ALA:O	57:DZ:568:TYR:HA	2.10	0.52
6:AF:34:TRP:CH2	13:AP:8:PRO:HB3	2.45	0.52
13:AP:121:LYS:O	13:AP:123:LEU:N	2.43	0.52
34:BA:44:G:H2'	34:BA:45:U:O4'	2.09	0.52
34:BA:175:C:H2'	34:BA:176:C:C6	2.44	0.52
34:BA:509:A:H3'	34:BA:509:A:H8	1.73	0.52
34:BA:1063:C:H3'	34:BA:1064:G:H2'	1.92	0.52
38:BE:43:LEU:HD21	38:BE:132:ALA:HB1	1.92	0.52
52:BS:40:ILE:HG12	52:BS:71:LEU:HD12	1.91	0.52
1:CA:1653:G:H3'	15:CR:2:ARG:HD3	1.92	0.52
1:CA:2120:G:N2	3:CC:168:LYS:HE2	2.23	0.52
1:CA:2683:C:H4'	5:CE:13:ARG:NH2	2.24	0.52
13:CP:91:PHE:O	13:CP:121:LYS:NZ	2.39	0.52
34:DA:1161:C:H2'	34:DA:1162:C:H6	1.75	0.52
44:DK:98:LEU:O	44:DK:101:SER:OG	2.19	0.52
49:DP:51:VAL:O	49:DP:53:VAL:HG23	2.10	0.52
1:AA:515:G:N7	20:AW:49:LYS:NZ	2.57	0.52
1:AA:1851:U:C2	4:AD:202:LYS:HG2	2.45	0.52
3:AC:51:ASP:OD2	3:AC:54:ARG:HB2	2.09	0.52
4:AD:130:ALA:C	4:AD:131:LEU:HD12	2.34	0.52
4:AD:147:LEU:HD22	4:AD:155:LEU:HD11	1.91	0.52
15:AR:97:VAL:HG22	15:AR:114:VAL:HG13	1.92	0.52
23:AZ:110:GLY:O	23:AZ:113:ALA:HB3	2.10	0.52
33:A9:15:LYS:HG2	33:A9:17:ILE:HD13	1.91	0.52
34:BA:153:C:H42	34:BA:169:C:N4	2.06	0.52
34:BA:368:U:C4	57:BZ:354:ARG:NH1	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:735:C:H2'	34:BA:736:C:H6	1.75	0.52
35:BB:62:ALA:HB1	35:BB:226:ARG:HD3	1.92	0.52
35:BB:108:ILE:O	35:BB:111:ARG:HB2	2.10	0.52
37:BD:108:LEU:HB3	37:BD:110:PHE:CE1	2.45	0.52
38:BE:100:VAL:HG22	38:BE:118:ILE:HG22	1.92	0.52
57:BZ:89:ASP:OD1	57:BZ:457:LEU:HB2	2.09	0.52
1:CA:2653:U:O2'	8:CH:110:SER:HB2	2.10	0.52
11:CN:112:LEU:O	11:CN:115:ARG:N	2.42	0.52
16:CS:105:ALA:O	16:CS:110:LEU:HB2	2.10	0.52
21:CX:53:LYS:HB3	21:CX:82:GLN:HB3	1.90	0.52
23:CZ:125:LEU:HB3	23:CZ:165:VAL:HG13	1.90	0.52
34:DA:149:A:H2'	34:DA:150:C:C6	2.45	0.52
34:DA:253:U:H2'	34:DA:254:G:H8	1.74	0.52
34:DA:255:G:H1'	50:DQ:16:GLN:HE21	1.75	0.52
34:DA:522:C:H41	45:DL:53:ARG:NH2	2.05	0.52
34:DA:977:A:H2'	34:DA:978:A:H5"	1.92	0.52
35:DB:178:ARG:O	41:DH:71:GLY:HA2	2.08	0.52
56:DW:73:A:H5"	56:DW:74:C:H5'	1.91	0.52
1:AA:692:C:H2'	1:AA:693:G:H8	1.75	0.52
1:AA:1068:G:N7	11:AN:66:LYS:HE2	2.24	0.52
1:AA:1525:G:H2'	1:AA:1526:G:H8	1.75	0.52
1:AA:2124:U:H2'	1:AA:2125:C:C6	2.44	0.52
10:AL:134:MET:HG3	10:AL:136:VAL:HG12	1.91	0.52
12:AO:100:GLY:O	12:AO:119:PRO:HD2	2.10	0.52
17:AT:9:LEU:C	17:AT:9:LEU:HD23	2.34	0.52
41:BH:87:SER:HA	41:BH:93:VAL:HG23	1.92	0.52
57:BZ:217:VAL:HG22	57:BZ:242:LEU:HD21	1.92	0.52
57:BZ:437:THR:HG22	57:BZ:454:MET:HE3	1.92	0.52
1:CA:570:G:H2'	1:CA:2030:A:C5	2.44	0.52
1:CA:958:U:O2	2:CB:90:A:O2'	2.23	0.52
1:CA:2327:A:H2'	1:CA:2328:A:C8	2.44	0.52
1:CA:2600:A:N6	63:CA:3834:HOH:O	2.42	0.52
2:CB:15:A:H1'	2:CB:110:G:C5	2.45	0.52
3:CC:67:HIS:CG	3:CC:185:LYS:HD2	2.45	0.52
4:CD:148:GLU:OE1	4:CD:151:LYS:NZ	2.33	0.52
7:CG:37:VAL:HG23	7:CG:99:MET:HG3	1.92	0.52
14:CQ:122:GLY:HA2	14:CQ:125:LEU:HD12	1.92	0.52
18:CU:65:ILE:O	18:CU:69:CYS:HB2	2.09	0.52
20:CW:14:PRO:HG2	20:CW:78:GLU:HG2	1.91	0.52
34:DA:229:U:H5"	49:DP:33:ILE:HD13	1.92	0.52
43:DJ:55:LYS:O	43:DJ:57:LYS:N	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:152:THR:C	57:DZ:154:GLN:H	2.18	0.52
57:DZ:213:HIS:HD1	57:DZ:213:HIS:C	2.18	0.52
1:AA:1846:A:O3'	63:AA:3935:HOH:O	2.19	0.52
1:AA:2891:C:H2'	1:AA:2892:A:O4'	2.10	0.52
4:AD:18:VAL:HG12	4:AD:211:ARG:NH2	2.25	0.52
4:AD:133:LEU:HB3	4:AD:173:VAL:HG11	1.92	0.52
4:AD:206:LEU:HD22	4:AD:211:ARG:HG2	1.91	0.52
17:AT:15:VAL:HG13	17:AT:79:HIS:CE1	2.46	0.52
34:BA:559:A:P	38:BE:126:ARG:HH22	2.31	0.52
38:BE:109:ILE:HD12	38:BE:135:THR:HB	1.91	0.52
44:BK:115:PRO:HB2	44:BK:118:GLY:H	1.75	0.52
49:BP:54:GLU:HG3	49:BP:55:ARG:N	2.24	0.52
57:BZ:539:ILE:HA	57:BZ:542:VAL:HG12	1.91	0.52
1:CA:374:A:H2'	1:CA:375:C:H5'	1.92	0.52
1:CA:527:C:H4'	1:CA:528:A:O5'	2.10	0.52
1:CA:857:C:H2'	1:CA:858:U:C6	2.44	0.52
1:CA:1337:G:OP2	21:CX:73:ARG:NH2	2.42	0.52
1:CA:2177:C:O2'	3:CC:47:LYS:HD3	2.09	0.52
1:CA:2788:C:O2'	1:CA:2809:A:N3	2.39	0.52
3:CC:65:LEU:HD22	3:CC:189:ASN:HB3	1.91	0.52
13:CP:81:GLN:NE2	13:CP:105:LEU:O	2.42	0.52
20:CW:12:ILE:HD13	20:CW:17:VAL:HG13	1.92	0.52
34:DA:297:G:N2	34:DA:300:A:OP2	2.42	0.52
34:DA:433:C:H2'	34:DA:434:U:C6	2.44	0.52
34:DA:967:C:O5'	34:DA:967:C:H6	1.93	0.52
37:DD:135:LEU:C	37:DD:137:SER:H	2.13	0.52
38:DE:107:ARG:HG2	38:DE:108:ALA:N	2.25	0.52
46:DM:37:THR:HG21	46:DM:56:LEU:HA	1.92	0.52
48:DO:64:ARG:O	48:DO:68:ARG:N	2.43	0.52
50:DQ:32:TYR:C	50:DQ:34:LYS:H	2.17	0.52
1:AA:1067:A:H3'	1:AA:1067:A:H8	1.72	0.51
1:AA:1218:G:OP2	1:AA:1218:G:H2'	2.10	0.51
1:AA:1817:A:H1'	1:AA:1960:A:N6	2.25	0.51
1:AA:2022:G:OP1	15:AR:5:LYS:NZ	2.43	0.51
1:AA:2705:A:H2'	1:AA:2706:G:H8	1.75	0.51
3:AC:67:HIS:CG	3:AC:185:LYS:HD2	2.45	0.51
4:AD:69:ARG:C	4:AD:71:ASP:H	2.18	0.51
11:AN:51:PHE:CZ	11:AN:119:ARG:HG2	2.45	0.51
34:BA:15:G:C4	34:BA:16:A:C8	2.98	0.51
34:BA:1191:A:H5"	36:BC:4:LYS:NZ	2.25	0.51
35:BB:145:LEU:O	35:BB:149:LEU:HB2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BC:186:PHE:CG	36:BC:187:ALA:N	2.78	0.51
40:BG:27:ILE:HD12	40:BG:40:ALA:HA	1.92	0.51
49:BP:71:ARG:HA	49:BP:74:LEU:HB2	1.90	0.51
53:BT:56:MET:O	53:BT:60:GLU:HB2	2.10	0.51
57:BZ:424:LEU:O	57:BZ:428:LEU:HG	2.10	0.51
1:CA:330:A:H2	1:CA:1210:A:HO2'	1.55	0.51
1:CA:1032:A:H1'	33:C9:23:VAL:HG21	1.92	0.51
2:CB:15:A:H5'	2:CB:16:G:C8	2.45	0.51
3:CC:6:LYS:N	3:CC:9:ARG:NH1	2.58	0.51
4:CD:132:PRO:HD3	4:CD:190:TYR:CZ	2.45	0.51
37:DD:158:ILE:HG22	37:DD:162:LEU:HD12	1.91	0.51
53:DT:9:ASN:O	53:DT:10:LEU:HB2	2.08	0.51
1:AA:1066:A:N1	1:AA:1186:U:O2'	2.35	0.51
1:AA:2803:A:H5"	1:AA:2804:C:H5"	1.92	0.51
3:AC:218:THR:HG22	3:AC:219:MET:SD	2.50	0.51
5:AE:93:VAL:N	63:AE:402:HOH:O	2.35	0.51
13:AP:52:GLU:OE1	13:AP:55:ARG:NH1	2.33	0.51
17:AT:116:ALA:HB1	17:AT:121:ILE:HD11	1.92	0.51
26:A2:35:LEU:HD12	26:A2:53:LEU:HD12	1.91	0.51
34:BA:316:G:OP2	34:BA:351:G:O2'	2.28	0.51
34:BA:1286:A:H2'	34:BA:1287:A:H4'	1.92	0.51
40:BG:103:TRP:HA	40:BG:106:GLN:HB2	1.92	0.51
1:CA:1046:A:H3'	1:CA:1047:G:C5'	2.39	0.51
2:CB:106:G:H5'	23:CZ:31:ARG:HG2	1.93	0.51
3:CC:44:VAL:HG21	3:CC:176:VAL:HG21	1.92	0.51
3:CC:50:ILE:H	3:CC:50:ILE:HD13	1.76	0.51
3:CC:64:SER:HA	3:CC:161:ARG:H	1.74	0.51
21:CX:47:PHE:O	21:CX:49:VAL:HG13	2.10	0.51
23:CZ:100:VAL:O	23:CZ:124:ILE:N	2.43	0.51
24:C0:40:GLN:HE21	24:C0:59:LEU:HG	1.76	0.51
34:DA:992:U:H3	34:DA:1044:A:H62	1.58	0.51
34:DA:1402:C:H2'	34:DA:1403:C:O4'	2.10	0.51
44:DK:59:TYR:CZ	44:DK:63:LEU:HD21	2.46	0.51
57:DZ:276:VAL:O	57:DZ:280:LEU:HB2	2.09	0.51
1:AA:905:U:O2	1:AA:2280:A:H2'	2.09	0.51
1:AA:1386:U:H4'	1:AA:1387:U:OP2	2.10	0.51
1:AA:2146:G:H1	1:AA:2196:C:H42	1.58	0.51
3:AC:68:GLY:H	3:AC:189:ASN:ND2	2.09	0.51
11:AN:74:ARG:HH11	11:AN:74:ARG:HG3	1.74	0.51
34:BA:406:G:H21	37:BD:119:GLN:NE2	2.02	0.51
53:BT:56:MET:HE2	53:BT:85:MET:HA	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:72:CYS:SG	57:BZ:79:ILE:HB	2.51	0.51
57:BZ:88:VAL:HG13	57:BZ:117:GLN:NE2	2.25	0.51
57:BZ:181:LEU:HD23	57:BZ:182:ARG:HG3	1.93	0.51
1:CA:68:G:N2	1:CA:74:A:OP2	2.43	0.51
1:CA:196:A:H62	13:CP:38:GLN:HE22	1.56	0.51
1:CA:918:A:C5	1:CA:919:G:H1'	2.45	0.51
1:CA:2336:A:H61	24:C0:43:THR:HG22	1.75	0.51
6:CF:126:VAL:HG21	6:CF:129:PHE:CE1	2.45	0.51
28:C4:8:LYS:O	28:C4:27:THR:HA	2.10	0.51
34:DA:401:C:OP2	37:DD:73:ARG:NH2	2.42	0.51
34:DA:406:G:H1	34:DA:436:C:H42	1.58	0.51
34:DA:837:G:H1	34:DA:849:C:H42	1.58	0.51
34:DA:1148:U:H2'	34:DA:1149:C:O4'	2.10	0.51
34:DA:1281:U:OP2	34:DA:1282:C:N4	2.38	0.51
46:DM:33:ALA:HA	46:DM:59:TYR:CE2	2.45	0.51
56:DW:40:C:H2'	56:DW:41:C:C6	2.45	0.51
57:DZ:150:ILE:HA	57:DZ:153:MET:HB3	1.92	0.51
1:AA:1940:A:O2'	1:AA:1942:C:N4	2.43	0.51
1:AA:2802:C:O2'	1:AA:2803:A:O4'	2.28	0.51
13:AP:8:PRO:HB2	13:AP:12:ALA:HB3	1.92	0.51
34:BA:277:C:P	50:BQ:41:LYS:HZ1	2.33	0.51
35:BB:54:THR:HG23	35:BB:199:TYR:HB3	1.91	0.51
35:BB:201:ILE:HG21	35:BB:214:ILE:HG21	1.93	0.51
37:BD:79:PHE:HB2	37:BD:93:PHE:CZ	2.45	0.51
57:BZ:-63:ILE:HG12	57:BZ:-49:VAL:HG23	1.93	0.51
57:BZ:180:VAL:O	57:BZ:213:HIS:HD2	1.93	0.51
1:CA:794:G:H2'	1:CA:795:C:C6	2.46	0.51
1:CA:2016:U:H2'	1:CA:2017:U:H6	1.76	0.51
8:CH:15:VAL:HG23	8:CH:28:GLY:HA3	1.93	0.51
17:CT:27:THR:HB	17:CT:90:GLN:HB3	1.91	0.51
34:DA:289:G:OP2	63:DA:1808:HOH:O	2.19	0.51
34:DA:391:G:C6	34:DA:392:G:C5	2.99	0.51
34:DA:539:A:OP2	45:DL:115:LYS:NZ	2.42	0.51
34:DA:1112:C:O2	36:DC:179:ARG:HG2	2.10	0.51
39:DF:62:TRP:CD1	51:DR:35:ARG:HD3	2.45	0.51
45:DL:119:LYS:O	45:DL:121:GLY:N	2.44	0.51
57:DZ:201:ILE:HG21	57:DZ:206:LEU:HD13	1.93	0.51
1:AA:397:G:OP2	1:AA:397:G:H8	1.94	0.51
1:AA:861:C:O2'	1:AA:862:C:H5'	2.11	0.51
1:AA:2473:C:H2'	1:AA:2474:U:H6	1.75	0.51
10:AL:125:ARG:O	10:AL:129:GLY:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:131:C:H2'	34:BA:132:C:C6	2.45	0.51
34:BA:232:G:H2'	34:BA:233:C:H6	1.76	0.51
34:BA:975:A:N6	34:BA:1367:C:O4'	2.44	0.51
34:BA:1251:A:H2'	34:BA:1252:A:C8	2.45	0.51
46:BM:79:LYS:HA	46:BM:82:MET:HE3	1.92	0.51
47:BN:51:GLY:O	47:BN:53:LEU:N	2.43	0.51
53:BT:97:ALA:N	53:BT:98:PRO:HD3	2.26	0.51
1:CA:20:C:OP1	18:CU:22:LYS:NZ	2.30	0.51
1:CA:804:A:H5"	1:CA:805:G:OP1	2.11	0.51
1:CA:1866:C:H2'	1:CA:1876:A:O4'	2.11	0.51
1:CA:2335:A:O2'	1:CA:2336:A:OP2	2.20	0.51
2:CB:73:A:C4	2:CB:105:A:C2	2.99	0.51
3:CC:42:VAL:CG1	3:CC:43:GLU:N	2.73	0.51
11:CN:14:VAL:HG12	11:CN:15:LEU:N	2.25	0.51
12:CO:31:LYS:HB3	12:CO:32:TYR:CE2	2.46	0.51
34:DA:1014:A:H4'	52:DS:14:HIS:CE1	2.46	0.51
34:DA:1144:G:N2	34:DA:1146:A:H62	2.08	0.51
34:DA:1513:A:H2'	34:DA:1514:C:C6	2.45	0.51
35:DB:88:ALA:HB2	35:DB:219:VAL:HG13	1.93	0.51
35:DB:192:SER:O	35:DB:194:PRO:HD3	2.11	0.51
48:DO:24:SER:O	48:DO:28:GLN:HG3	2.10	0.51
56:DY:51:U:H3	56:DY:63:G:H1	1.58	0.51
57:DZ:103:GLY:N	57:DZ:130:VAL:HG23	2.24	0.51
1:AA:142:G:H2'	1:AA:143:C:C6	2.46	0.51
1:AA:1104:G:N2	1:AA:1127:U:H1'	2.26	0.51
1:AA:2769:U:H1'	1:AA:2770:A:H5"	1.91	0.51
3:AC:44:VAL:HG21	3:AC:176:VAL:HG21	1.92	0.51
3:AC:54:ARG:HD2	3:AC:55:SER:H	1.76	0.51
3:AC:54:ARG:HH22	3:AC:56:ASP:HB3	1.76	0.51
8:AH:41:MET:CE	8:AH:65:HIS:HA	2.40	0.51
28:A4:59:PHE:CD2	52:BS:42:PRO:HB3	2.45	0.51
34:BA:243:A:C2	34:BA:246:A:C8	2.99	0.51
34:BA:401:C:O2'	34:BA:621:A:N3	2.39	0.51
34:BA:1072:G:C5	34:BA:1073:U:C4	2.98	0.51
51:BR:58:LEU:HB3	51:BR:62:GLU:HG3	1.91	0.51
52:BS:44:MET:O	52:BS:47:HIS:HB2	2.11	0.51
1:CA:556:G:H2'	1:CA:557:U:C6	2.46	0.51
1:CA:673:C:H5"	6:CF:81:PRO:HD2	1.93	0.51
1:CA:846:C:H4'	1:CA:847:U:O5'	2.10	0.51
1:CA:1093:G:H21	1:CA:1098:A:H62	1.58	0.51
1:CA:1110:G:H2'	1:CA:1110:G:N3	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2175:C:H2'	1:CA:2176:A:O4'	2.11	0.51
1:CA:2543:G:H2'	1:CA:2544:G:C8	2.46	0.51
3:CC:57:GLN:HB2	3:CC:202:PRO:HG2	1.93	0.51
8:CH:87:LEU:HD11	8:CH:148:ILE:HB	1.92	0.51
13:CP:54:GLY:O	63:CP:302:HOH:O	2.19	0.51
21:CX:57:LEU:CD1	21:CX:78:LYS:HB3	2.40	0.51
34:DA:565:U:OP2	34:DA:566:G:O2'	2.13	0.51
34:DA:1145:C:H4'	34:DA:1146:A:H5'	1.93	0.51
43:DJ:11:PHE:CE1	43:DJ:67:THR:HB	2.46	0.51
51:DR:33:ASP:CG	51:DR:36:ASN:HB2	2.34	0.51
53:DT:57:ARG:HH12	53:DT:101:GLY:H	1.58	0.51
1:AA:85:C:H4'	1:AA:102:U:H1'	1.93	0.51
1:AA:417:A:H4'	1:AA:418:G:H5'	1.92	0.51
1:AA:956:A:N1	1:AA:2289:G:H1'	2.25	0.51
1:AA:1321:A:N3	1:AA:1322:A:H1'	2.25	0.51
1:AA:2901:A:N7	1:AA:2902:G:C6	2.79	0.51
3:AC:57:GLN:HB2	3:AC:202:PRO:HG2	1.93	0.51
6:AF:7:TYR:O	6:AF:21:ALA:HA	2.10	0.51
8:AH:7:LEU:HD23	8:AH:69:ARG:NH1	2.26	0.51
34:BA:1307:U:H2'	34:BA:1308:U:C6	2.45	0.51
42:BI:121:ARG:NH1	42:BI:122:ALA:O	2.40	0.51
56:BY:19:G:H4'	56:BY:20:U:OP2	2.09	0.51
57:BZ:289:ILE:HD11	57:BZ:331:TYR:CD1	2.46	0.51
57:BZ:490:PRO:HG3	57:BZ:516:PRO:HD2	1.92	0.51
1:CA:144:C:H5'	21:CX:2:LYS:HE2	1.92	0.51
1:CA:271(O):C:H2'	1:CA:271(P):C:C6	2.46	0.51
1:CA:2025:C:H2'	1:CA:2026:C:H6	1.71	0.51
1:CA:2124:G:C4'	3:CC:175:PRO:CG	2.82	0.51
1:CA:2537:U:H2'	1:CA:2538:C:C6	2.46	0.51
3:CC:65:LEU:HB3	3:CC:189:ASN:HD22	1.75	0.51
5:CE:12:THR:HG21	17:CT:11:GLU:OE2	2.11	0.51
5:CE:169:ASN:HD22	5:CE:203:LYS:HB2	1.76	0.51
6:CF:184:TYR:CE2	6:CF:188:ARG:HD2	2.45	0.51
22:CY:11:ASP:OD2	22:CY:97:ARG:NH2	2.43	0.51
34:DA:436:C:H2'	34:DA:437:U:H6	1.75	0.51
35:DB:127:ILE:C	35:DB:129:GLU:H	2.18	0.51
36:DC:54:ARG:HB3	36:DC:54:ARG:HH11	1.76	0.51
44:DK:79:SER:HB2	44:DK:106:LYS:HE3	1.92	0.51
1:AA:552:C:O2	1:AA:552:C:O4'	2.27	0.51
1:AA:864:C:H4'	1:AA:977:G:C5	2.46	0.51
1:AA:956:A:H62	14:AQ:12:GLN:HA	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2556:G:H1'	1:AA:2658:C:H4'	1.93	0.51
1:AA:2559:U:H2'	1:AA:2560:G:H8	1.76	0.51
3:AC:65:LEU:HB3	3:AC:189:ASN:HD22	1.75	0.51
8:AH:98:LEU:HD12	8:AH:102:ALA:O	2.11	0.51
34:BA:153:C:H42	34:BA:169:C:H42	1.58	0.51
34:BA:441:A:H8	34:BA:441:A:OP2	1.94	0.51
34:BA:771:G:H2'	34:BA:772:U:C6	2.46	0.51
34:BA:928:G:N1	34:BA:1390:U:O2	2.44	0.51
38:BE:78:HIS:NE2	38:BE:142:LEU:HA	2.26	0.51
1:CA:2469:A:O3'	14:CQ:56:ARG:NH2	2.43	0.51
3:CC:218:THR:HG22	3:CC:219:MET:SD	2.50	0.51
6:CF:108:LYS:O	6:CF:112:MET:HG3	2.11	0.51
13:CP:97:PRO:HD3	13:CP:126:VAL:O	2.10	0.51
17:CT:115:ARG:H	17:CT:115:ARG:HD2	1.75	0.51
23:CZ:29:TYR:HB3	23:CZ:34:ASN:ND2	2.25	0.51
23:CZ:39:VAL:HG21	23:CZ:44:PHE:HB2	1.92	0.51
34:DA:1029:C:H2'	34:DA:1030:C:H5"	1.92	0.51
34:DA:1372:U:H5"	42:DI:71:SER:HB3	1.93	0.51
37:DD:196:LEU:O	37:DD:198:VAL:N	2.41	0.51
57:DZ:12:LEU:O	57:DZ:283:PRO:HD3	2.10	0.51
57:DZ:20:HIS:O	57:DZ:25:LYS:NZ	2.29	0.51
57:DZ:138:LYS:HA	62:DZ:704:GDP:N1	2.25	0.51
1:AA:7:G:H2'	1:AA:8:A:C8	2.45	0.51
1:AA:1704:C:H4'	5:AE:133:LYS:HB3	1.92	0.51
1:AA:2304:C:P	16:AS:17:ARG:HH12	2.34	0.51
4:AD:221:VAL:HG22	4:AD:226:MET:CE	2.41	0.51
6:AF:172:TRP:CD1	6:AF:172:TRP:H	2.28	0.51
18:AU:104:GLN:CD	18:AU:104:GLN:H	2.17	0.51
23:AZ:48:PHE:CE2	23:AZ:52:SER:HA	2.46	0.51
34:BA:551:U:H2'	34:BA:552:U:C6	2.46	0.51
36:BC:134:ILE:O	36:BC:138:VAL:HG23	2.11	0.51
37:BD:13:ARG:HB3	37:BD:13:ARG:HH11	1.76	0.51
38:BE:88:LYS:HE2	38:BE:123:LEU:HD12	1.92	0.51
46:BM:15:VAL:HA	46:BM:18:ALA:HB3	1.92	0.51
52:BS:16:LEU:HD12	52:BS:19:VAL:HB	1.92	0.51
57:BZ:639:ASN:N	57:BZ:640:ALA:HB3	2.26	0.51
57:BZ:647:VAL:HG21	57:BZ:652:MET:SD	2.51	0.51
1:CA:1049:C:H3'	1:CA:1050:A:C8	2.46	0.51
1:CA:2112:G:N7	1:CA:2113:U:H1'	2.26	0.51
1:CA:2854:G:H2'	1:CA:2855:C:C6	2.45	0.51
15:CR:37:THR:OG1	15:CR:40:LYS:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CU:65:ILE:HD11	18:CU:95:LEU:HB3	1.92	0.51
26:C2:28:LYS:HE3	26:C2:56:GLN:OE1	2.11	0.51
34:DA:428:G:C5	34:DA:430:A:C6	2.99	0.51
34:DA:460:G:O6	34:DA:470:C:H5"	2.11	0.51
34:DA:503:C:OP2	45:DL:116:SER:HB3	2.10	0.51
34:DA:1003:G:N2	34:DA:1025:U:O4	2.43	0.51
34:DA:1003:G:H2'	34:DA:1004:A:O4'	2.11	0.51
57:DZ:409:ILE:HD11	57:DZ:654:GLY:HA2	1.92	0.51
57:DZ:548:GLU:O	57:DZ:551:GLN:HG2	2.09	0.51
57:DZ:556:ILE:HG13	57:DZ:558:PHE:HD2	1.75	0.51
1:AA:843:C:H2'	1:AA:844:C:C6	2.45	0.51
1:AA:990:A:C4	1:AA:2460:A:C2	2.99	0.51
1:AA:2343:G:H4'	24:A0:43:THR:H	1.76	0.51
10:AL:30:HIS:CG	10:AL:59:ILE:HB	2.46	0.51
18:AU:90:VAL:HB	18:AU:95:LEU:HD13	1.92	0.51
40:BG:111:ARG:NH1	40:BG:113:GLU:OE2	2.43	0.51
56:BY:58:A:C2	56:BY:60:U:H2'	2.46	0.51
57:BZ:114:VAL:CG2	57:BZ:152:THR:HB	2.36	0.51
1:CA:580:C:H2'	1:CA:581:C:C6	2.46	0.51
1:CA:994:C:H1'	19:CV:10:LYS:HE3	1.92	0.51
1:CA:1041:C:H42	1:CA:1114:G:H1	1.57	0.51
1:CA:2349:G:H3'	1:CA:2350:C:H5"	1.93	0.51
1:CA:2395:C:O2'	25:C1:30:VAL:HG22	2.11	0.51
1:CA:2850:A:H2'	1:CA:2851:A:H8	1.76	0.51
3:CC:68:GLY:H	3:CC:189:ASN:ND2	2.09	0.51
7:CG:37:VAL:O	7:CG:94:LEU:N	2.35	0.51
11:CN:102:ALA:O	11:CN:106:MET:HG3	2.11	0.51
12:CO:18:LYS:HB2	12:CO:45:GLU:HB3	1.92	0.51
34:DA:502:G:C6	34:DA:503:C:N3	2.79	0.51
34:DA:1016:A:O2'	34:DA:1217:C:O2'	2.18	0.51
34:DA:1040:U:N3	34:DA:1041:A:N7	2.58	0.51
34:DA:1118:C:H1'	34:DA:1179:A:C4	2.46	0.51
35:DB:163:PHE:CD1	35:DB:185:ILE:HG13	2.41	0.51
41:DH:11:THR:O	41:DH:15:ASN:ND2	2.39	0.51
57:DZ:415:PRO:HB3	57:DZ:424:LEU:HD23	1.92	0.51
16:AS:10:ARG:HG2	16:AS:91:PRO:HA	1.93	0.50
24:A0:70:GLN:OE1	24:A0:80:HIS:NE2	2.37	0.50
25:A1:53:VAL:HG21	25:A1:94:LEU:HD11	1.93	0.50
34:BA:345:C:H4'	34:BA:346:G:C4	2.47	0.50
34:BA:390:C:H2'	34:BA:391:G:C8	2.44	0.50
34:BA:448:A:C4	34:BA:487:A:C2	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:626:U:C2	34:BA:627:G:C8	2.99	0.50
34:BA:1183:A:O2'	34:BA:1184:G:OP1	2.29	0.50
35:BB:105:PHE:O	35:BB:107:THR:N	2.45	0.50
38:BE:42:GLY:HA2	38:BE:136:MET:HE1	1.92	0.50
41:BH:10:LEU:HD11	41:BH:85:ARG:HG2	1.93	0.50
1:CA:247:G:H4'	1:CA:386:G:C5	2.46	0.50
1:CA:2788:C:N4	1:CA:2789:C:H41	2.09	0.50
1:CA:2823:A:OP1	5:CE:159:HIS:NE2	2.32	0.50
34:DA:137:C:H2'	34:DA:138:G:H8	1.76	0.50
34:DA:475:G:H2'	34:DA:476:G:H8	1.76	0.50
34:DA:987:G:N2	34:DA:1219:U:O2	2.44	0.50
34:DA:1103:C:H2'	34:DA:1104:G:O4'	2.11	0.50
40:DG:118:VAL:HG13	40:DG:122:HIS:NE2	2.26	0.50
41:DH:6:ILE:O	41:DH:10:LEU:HG	2.11	0.50
1:AA:552:C:H4'	1:AA:553:A:O5'	2.11	0.50
1:AA:1128:U:H5"	1:AA:1129:U:OP2	2.12	0.50
1:AA:1757:C:O2'	1:AA:2868:C:N3	2.44	0.50
3:AC:6:LYS:N	3:AC:9:ARG:NH1	2.58	0.50
34:BA:376:G:O3'	49:BP:5:ARG:HD2	2.10	0.50
34:BA:1234:C:H1'	34:BA:1364:U:O2	2.11	0.50
34:BA:1381:U:O4'	40:BG:79:ARG:NE	2.43	0.50
38:BE:40:ARG:NH2	38:BE:68:GLU:HA	2.26	0.50
43:BJ:47:PHE:HB2	43:BJ:63:PHE:HB2	1.93	0.50
56:BY:5:G:H1	56:BY:68:C:H42	1.59	0.50
1:CA:2207:G:H3'	1:CA:2208:A:H5"	1.93	0.50
1:CA:2420:C:P	32:C8:33:ASN:H	2.34	0.50
5:CE:49:LEU:HD22	5:CE:81:ILE:HG13	1.93	0.50
13:CP:86:LYS:HD3	13:CP:117:GLU:HB3	1.93	0.50
38:DE:90:VAL:HG23	38:DE:121:LYS:HB3	1.92	0.50
39:DF:36:ARG:NH1	39:DF:38:GLU:OE2	2.44	0.50
46:DM:78:ILE:HG22	46:DM:82:MET:HE3	1.93	0.50
52:DS:27:GLU:HG2	52:DS:47:HIS:CD2	2.46	0.50
57:DZ:486:THR:OG1	57:DZ:487:ILE:N	2.42	0.50
1:AA:1160:G:H2'	1:AA:1161:G:C8	2.46	0.50
1:AA:1993:A:OP2	4:AD:242:ARG:NH2	2.44	0.50
9:AK:4:LYS:N	9:AK:5:ARG:HA	2.27	0.50
9:AK:26:LEU:HA	9:AK:84:GLU:HA	1.94	0.50
13:AP:113:LYS:HG3	13:AP:129:ALA:HB3	1.93	0.50
22:AY:86:ARG:HB2	22:AY:98:VAL:HG23	1.93	0.50
34:BA:27:G:H2'	34:BA:28:G:C8	2.46	0.50
34:BA:302:G:N3	34:BA:556:C:H4'	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1525:G:OP1	44:BK:120:ARG:NH2	2.44	0.50
41:BH:39:LEU:HB3	41:BH:45:ILE:HG12	1.93	0.50
57:BZ:616:TYR:HE2	57:BZ:664:GLN:HG3	1.75	0.50
1:CA:1274:A:N3	1:CA:1297:C:H1'	2.26	0.50
1:CA:1359:A:C2	1:CA:1372:U:O4	2.65	0.50
1:CA:1745(A):C:H5'	1:CA:1746:G:OP2	2.11	0.50
1:CA:1971:A:C4	4:CD:241:PRO:HD3	2.46	0.50
1:CA:2112:G:C5	1:CA:2113:U:H1'	2.47	0.50
3:CC:42:VAL:HG13	3:CC:43:GLU:H	1.73	0.50
6:CF:132:VAL:HG21	6:CF:163:VAL:HG22	1.92	0.50
7:CG:46:ALA:O	7:CG:51:ARG:HA	2.10	0.50
8:CH:90:LYS:HD3	8:CH:159:GLU:HG2	1.94	0.50
11:CN:84:LYS:C	11:CN:85:ILE:HG13	2.35	0.50
16:CS:15:ARG:O	16:CS:19:LYS:HG2	2.12	0.50
34:DA:792:A:H4'	34:DA:793:U:O5'	2.12	0.50
34:DA:1256:A:H61	34:DA:1278:U:H1'	1.76	0.50
34:DA:1320:C:C2	52:DS:72:GLY:HA3	2.46	0.50
46:DM:124:PRO:HD2	57:DZ:507:TYR:HB2	1.92	0.50
1:AA:441:C:H2'	1:AA:442:A:C8	2.47	0.50
1:AA:1221:G:H1'	1:AA:1222:A:H5'	1.94	0.50
1:AA:1537:G:C5	1:AA:1546:G:N2	2.80	0.50
1:AA:1636:U:O2'	1:AA:1637:G:H5'	2.12	0.50
1:AA:2221:A:H3'	1:AA:2222:C:H6	1.77	0.50
1:AA:2896:G:O2'	29:A5:32:PRO:HD2	2.11	0.50
3:AC:50:ILE:H	3:AC:50:ILE:HD13	1.76	0.50
14:AQ:10:ARG:CZ	14:AQ:10:ARG:HB2	2.41	0.50
26:A2:46:GLN:HB2	26:A2:49:LYS:HD2	1.94	0.50
34:BA:1148:U:H2'	34:BA:1149:C:O4'	2.11	0.50
44:BK:99:GLN:HG2	44:BK:105:VAL:HG21	1.92	0.50
45:BL:32:PHE:HB3	45:BL:84:LEU:HD11	1.92	0.50
45:BL:84:LEU:HD23	45:BL:105:TYR:HE2	1.76	0.50
55:BV:15:A:C2'	55:BV:16:U:H5	2.24	0.50
1:CA:754:C:H2'	1:CA:755:C:H6	1.76	0.50
1:CA:1472:A:N6	1:CA:1519:G:H1'	2.27	0.50
11:CN:24:GLY:O	11:CN:28:THR:HG23	2.12	0.50
25:C1:95:LEU:O	25:C1:98:LEU:HB2	2.12	0.50
31:C7:24:THR:O	31:C7:28:ARG:HG3	2.11	0.50
34:DA:90:U:H2'	34:DA:91:C:C6	2.46	0.50
34:DA:447:G:H2'	34:DA:485:G:N2	2.25	0.50
34:DA:665:A:H2'	34:DA:732:C:O2	2.11	0.50
34:DA:707:C:H2'	34:DA:708:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:836:G:OP1	51:DR:61:LYS:NZ	2.43	0.50
34:DA:986:A:O2'	52:DS:55:LYS:O	2.30	0.50
34:DA:1316:G:N7	52:DS:7:LYS:NZ	2.60	0.50
57:DZ:221:ALA:HB1	57:DZ:228:MET:HB2	1.93	0.50
1:AA:1106:U:H4'	1:AA:1107:U:H5'	1.93	0.50
1:AA:1834:A:O2'	4:AD:259:THR:HG21	2.11	0.50
1:AA:2150:C:H4'	3:AC:219:MET:HE3	1.93	0.50
1:AA:2155:G:O2'	1:AA:2178:G:N2	2.44	0.50
7:AG:126:ASP:CG	7:AG:130:ASN:HD22	2.19	0.50
7:AG:137:GLU:C	7:AG:140:ILE:HD13	2.36	0.50
10:AL:55:VAL:HG13	10:AL:57:ILE:HD11	1.93	0.50
11:AN:5:VAL:HG23	11:AN:6:PRO:HD2	1.94	0.50
25:A1:34:THR:HG22	25:A1:36:GLY:H	1.75	0.50
30:A6:50:ARG:HG3	30:A6:51:GLU:N	2.26	0.50
34:BA:389:A:N6	34:BA:390:C:O2	2.44	0.50
34:BA:1466:C:H2'	34:BA:1467:G:O4'	2.11	0.50
35:BB:88:ALA:HB2	35:BB:219:VAL:HG13	1.93	0.50
37:BD:42:GLN:HG3	37:BD:42:GLN:O	2.11	0.50
40:BG:26:PHE:O	40:BG:30:ILE:HG13	2.11	0.50
45:BL:88:GLY:O	45:BL:99:HIS:CD2	2.64	0.50
1:CA:487:C:H1'	20:CW:53:SER:HA	1.93	0.50
1:CA:503:A:H4'	1:CA:504:U:H5"	1.93	0.50
1:CA:614(B):G:H2'	6:CF:44:ARG:NH1	2.26	0.50
1:CA:1059:G:OP2	1:CA:1060:U:H3'	2.11	0.50
1:CA:1364:G:C8	25:C1:3:LYS:HE2	2.47	0.50
1:CA:2177:C:O3'	3:CC:47:LYS:HB2	2.10	0.50
1:CA:2394:C:P	32:C8:30:ARG:HH11	2.34	0.50
1:CA:2636:U:H1'	1:CA:2783:G:N2	2.26	0.50
26:C2:16:LEU:HD13	26:C2:20:GLU:HB3	1.92	0.50
34:DA:144:G:H2'	34:DA:145:G:H8	1.76	0.50
34:DA:189(B):C:H2'	34:DA:189(C):C:C6	2.47	0.50
34:DA:685:G:N1	34:DA:686:U:O4	2.44	0.50
34:DA:976:G:N2	34:DA:1362:C:H2'	2.27	0.50
35:DB:150:SER:O	35:DB:153:ARG:HG2	2.11	0.50
38:DE:101:ILE:HG13	38:DE:119:LEU:HD23	1.93	0.50
39:DF:65:VAL:HG21	39:DF:67:MET:HE2	1.93	0.50
56:DY:25:C:H2'	56:DY:26:A:H8	1.77	0.50
1:AA:641:G:OP2	6:AF:43:LYS:NZ	2.44	0.50
1:AA:997:G:OP1	14:AQ:16:ARG:NH2	2.45	0.50
1:AA:1410:G:OP2	25:A1:3:LYS:HD2	2.12	0.50
1:AA:1739:U:O2'	1:AA:1740:U:H2'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1827:U:H2'	1:AA:1828:C:C6	2.46	0.50
4:AD:89:SER:HB2	4:AD:159:ALA:H	1.76	0.50
4:AD:112:GLN:O	4:AD:115:GLN:HB3	2.11	0.50
10:AL:88:ALA:O	10:AL:90:LYS:N	2.45	0.50
12:AO:16:ALA:HB2	12:AO:52:VAL:HG21	1.94	0.50
18:AU:102:GLU:HA	18:AU:104:GLN:HE22	1.76	0.50
28:A4:47:GLN:HG2	28:A4:49:PHE:H	1.76	0.50
34:BA:142:G:H2'	34:BA:143:A:H8	1.77	0.50
34:BA:1030(D):A:H62	34:BA:1031:G:H21	1.58	0.50
38:BE:6:PHE:CE2	38:BE:36:ASP:HB3	2.47	0.50
38:BE:41:VAL:O	38:BE:67:VAL:N	2.44	0.50
39:BF:96:PRO:HB3	51:BR:30:ASP:OD2	2.12	0.50
40:BG:93:PRO:HA	40:BG:96:GLN:HB2	1.94	0.50
41:BH:40:ALA:O	41:BH:42:GLU:N	2.45	0.50
41:BH:40:ALA:C	41:BH:42:GLU:H	2.19	0.50
57:BZ:225:GLU:HA	57:BZ:228:MET:CB	2.38	0.50
1:CA:265:A:C8	1:CA:266:G:H1'	2.47	0.50
1:CA:912:C:H2'	1:CA:913:U:C6	2.46	0.50
3:CC:191:ARG:O	3:CC:195:ARG:HG2	2.11	0.50
5:CE:96:PHE:O	5:CE:175:VAL:HG11	2.11	0.50
34:DA:377:G:OP1	49:DP:3:LYS:HD2	2.12	0.50
45:DL:69:TYR:HB3	45:DL:99:HIS:ND1	2.27	0.50
47:DN:40:CYS:O	47:DN:43:CYS:N	2.45	0.50
49:DP:6:LEU:HD23	49:DP:17:TYR:CD1	2.46	0.50
56:DY:12:U:H3	56:DY:23:A:H61	1.59	0.50
57:DZ:35:TYR:OH	57:DZ:266:ASN:HB3	2.11	0.50
57:DZ:169:GLY:C	57:DZ:170:ARG:HH11	2.19	0.50
1:AA:1772:C:H6	1:AA:1772:C:O5'	1.94	0.50
1:AA:2119:C:H2'	1:AA:2120:U:O4'	2.11	0.50
3:AC:42:VAL:CG1	3:AC:43:GLU:N	2.73	0.50
3:AC:191:ARG:O	3:AC:194:ILE:HG22	2.12	0.50
7:AG:61:ALA:O	28:A4:7:PRO:HG2	2.12	0.50
35:BB:12:GLU:C	35:BB:14:GLY:H	2.20	0.50
43:BJ:13:HIS:HA	43:BJ:16:LEU:HB3	1.92	0.50
43:BJ:16:LEU:HD21	43:BJ:70:ARG:HG2	1.94	0.50
49:BP:43:LYS:HG2	49:BP:48:TRP:CE2	2.47	0.50
57:BZ:-38:TYR:O	57:BZ:-35:PRO:HD2	2.12	0.50
1:CA:469:G:C2'	1:CA:470:A:H5"	2.42	0.50
1:CA:2360:A:H2'	1:CA:2361:A:O4'	2.11	0.50
2:CB:78:A:C2	2:CB:100:A:C4	3.00	0.50
4:CD:89:SER:HB2	4:CD:159:ALA:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:228:PRO:HD3	4:CD:235:GLY:HA3	1.93	0.50
7:CG:137:GLU:HB3	7:CG:140:ILE:HD13	1.94	0.50
9:CK:74:LEU:O	9:CK:76:GLY:N	2.45	0.50
12:CO:26:LYS:O	12:CO:30:ALA:HB2	2.11	0.50
20:CW:60:ASN:N	20:CW:60:ASN:HD22	2.09	0.50
34:DA:509:A:H3'	34:DA:509:A:H8	1.77	0.50
34:DA:520:A:N1	34:DA:536:C:H1'	2.27	0.50
34:DA:1240:U:H5'	34:DA:1241:G:C8	2.47	0.50
34:DA:1268:A:O2'	54:DU:19:GLY:HA2	2.12	0.50
41:DH:44:PHE:HB3	41:DH:80:ILE:CD1	2.41	0.50
46:DM:96:LEU:C	46:DM:110:ARG:HG2	2.37	0.50
57:DZ:132:ARG:HD3	57:DZ:160:ARG:NH1	2.27	0.50
57:DZ:498:ILE:HG22	57:DZ:507:TYR:CE2	2.47	0.50
1:AA:1157:A:H8	1:AA:1158:G:H1'	1.75	0.50
1:AA:2221:A:H5"	1:AA:2222:C:OP2	2.12	0.50
1:AA:2317:A:N1	7:AG:154:GLY:N	2.54	0.50
1:AA:2737:C:OP1	5:AE:118:LYS:NZ	2.45	0.50
17:AT:16:ARG:HH12	17:AT:19:LEU:HD21	1.76	0.50
29:A5:35:GLU:HG3	29:A5:51:TYR:CD2	2.46	0.50
34:BA:437:U:H2'	34:BA:438:G:H5'	1.92	0.50
34:BA:937:A:OP2	63:BA:1909:HOH:O	2.18	0.50
34:BA:1320:C:H2'	34:BA:1321:C:O4'	2.12	0.50
37:BD:64:LEU:HD11	37:BD:97:LEU:HD13	1.92	0.50
40:BG:14:PRO:HB3	40:BG:19:GLY:C	2.37	0.50
46:BM:24:GLY:O	46:BM:29:ARG:NH1	2.43	0.50
56:BY:26:A:H61	56:BY:44:G:H1	1.59	0.50
57:BZ:112:GLN:HG2	57:BZ:115:GLU:CD	2.37	0.50
1:CA:34:C:O2	1:CA:34:C:H2'	2.12	0.50
1:CA:1680:U:O2	1:CA:1763:G:H3'	2.11	0.50
1:CA:1860:G:OP1	3:CC:207:GLY:CA	2.60	0.50
1:CA:2203:U:H2'	1:CA:2205:C:H6	1.77	0.50
1:CA:2729:G:C6	1:CA:2730:C:C4	3.00	0.50
3:CC:20:VAL:O	3:CC:21:TYR:CB	2.58	0.50
11:CN:38:HIS:NE2	11:CN:50:ASP:OD2	2.38	0.50
30:C6:10:LEU:HD23	30:C6:22:ALA:HB2	1.94	0.50
34:DA:418:C:H2'	34:DA:419:C:C6	2.47	0.50
34:DA:1123:A:H4'	43:DJ:36:GLY:HA3	1.94	0.50
57:DZ:412:ALA:HB2	57:DZ:479:PRO:HB3	1.92	0.50
1:AA:326:C:H2'	1:AA:327:U:H6	1.77	0.50
1:AA:779:C:H2'	1:AA:780:G:O4'	2.12	0.50
1:AA:860:U:H2'	1:AA:861:C:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1232:G:H5”	19:AV:81:TYR:CE1	2.47	0.50
1:AA:2144:U:H1’	3:AC:167:ASP:HB2	1.92	0.50
34:BA:1106:G:C6	34:BA:1107:C:C4	2.99	0.50
38:BE:146:ALA:O	38:BE:149:GLU:N	2.45	0.50
44:BK:84:VAL:HG11	44:BK:91:ARG:HH11	1.77	0.50
48:BO:3:ILE:HG21	48:BO:34:LEU:HD21	1.93	0.50
57:BZ:247:ARG:O	57:BZ:251:ILE:HG13	2.12	0.50
1:CA:1268:A:C2	1:CA:2013:A:C4	3.00	0.50
23:CZ:139:VAL:HG23	23:CZ:141:VAL:HG13	1.94	0.50
34:DA:1132:C:H2’	34:DA:1133:G:C8	2.46	0.50
1:AA:642:G:OP2	6:AF:106:ARG:NH2	2.45	0.49
1:AA:2219:U:C6	1:AA:2236:G:C6	2.99	0.49
1:AA:2287:C:H6	1:AA:2287:C:H5’	1.77	0.49
2:AB:48:A:H4’	16:AS:95:HIS:HD2	1.77	0.49
4:AD:181:GLU:OE2	4:AD:270:ILE:HG12	2.11	0.49
12:AO:71:ARG:NH2	12:AO:105:GLU:OE1	2.44	0.49
29:A5:48:GLU:O	29:A5:60:VAL:HG11	2.12	0.49
32:A8:34:TRP:CG	32:A8:35:GLN:N	2.80	0.49
34:BA:107:G:H2’	34:BA:108:G:O4’	2.12	0.49
34:BA:520:A:N1	34:BA:536:C:H1’	2.26	0.49
34:BA:622:A:N7	34:BA:623:C:C2	2.80	0.49
41:BH:20:TYR:HA	41:BH:65:TYR:OH	2.11	0.49
57:BZ:180:VAL:O	57:BZ:213:HIS:CD2	2.65	0.49
57:BZ:612:THR:OG1	57:BZ:616:TYR:HB2	2.12	0.49
1:CA:272(C):G:H2’	1:CA:272(D):G:O4’	2.12	0.49
1:CA:489:G:N7	20:CW:49:LYS:NZ	2.60	0.49
1:CA:860:U:C2	1:CA:2268:A:C8	3.00	0.49
1:CA:1340:U:OP1	21:CX:16:LYS:NZ	2.43	0.49
1:CA:2772:C:H5’	5:CE:168:MET:HE3	1.94	0.49
16:CS:48:LEU:HD23	16:CS:82:ILE:HD11	1.93	0.49
34:DA:474:G:H2’	34:DA:475:G:H8	1.76	0.49
34:DA:561:U:O2’	34:DA:562:C:OP2	2.29	0.49
34:DA:1325:C:H4’	54:DU:17:THR:HG21	1.93	0.49
36:DC:179:ARG:NH1	36:DC:206:GLU:OE1	2.44	0.49
38:DE:92:LYS:HB3	38:DE:119:LEU:HB2	1.94	0.49
39:DF:87:ARG:HG3	39:DF:87:ARG:NH1	2.13	0.49
44:DK:65:ALA:HB1	44:DK:98:LEU:HD23	1.94	0.49
1:AA:26:G:OP1	20:AW:80:PRO:HB3	2.12	0.49
1:AA:142:G:H1’	21:AX:37:THR:CG2	2.42	0.49
1:AA:612:C:P	13:AP:16:ARG:HH22	2.34	0.49
1:AA:2398:C:H2’	1:AA:2399:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:68:PRO:HG2	7:AG:90:LEU:HD22	1.93	0.49
34:BA:7:G:H5'	34:BA:298:A:O4'	2.11	0.49
34:BA:453:A:O2'	49:BP:68:ASP:O	2.31	0.49
34:BA:461:A:O2'	34:BA:471:G:N7	2.39	0.49
37:BD:196:LEU:O	37:BD:198:VAL:N	2.39	0.49
38:BE:28:PHE:CD1	38:BE:28:PHE:N	2.80	0.49
48:BO:88:ARG:CZ	48:BO:88:ARG:HB3	2.41	0.49
53:BT:16:HIS:O	53:BT:19:SER:OG	2.27	0.49
57:BZ:674:ASP:HB3	57:BZ:675:HIS:HD2	1.77	0.49
1:CA:58:G:O2'	1:CA:73:A:N1	2.43	0.49
1:CA:236:C:H2'	1:CA:237:C:C6	2.47	0.49
1:CA:1721:G:H8	1:CA:1741:A:H62	1.59	0.49
1:CA:2823:A:P	5:CE:159:HIS:HE2	2.35	0.49
3:CC:54:ARG:HD2	3:CC:55:SER:H	1.76	0.49
34:DA:509:A:H3'	34:DA:509:A:C8	2.48	0.49
34:DA:1244:C:O2	34:DA:1294:G:N2	2.44	0.49
34:DA:1273:G:H3'	34:DA:1274:G:C8	2.47	0.49
34:DA:1374:A:H4'	40:DG:28:ASN:ND2	2.27	0.49
34:DA:1399:C:C2	34:DA:1502:A:N6	2.80	0.49
34:DA:1443:G:N2	34:DA:1460:A:H1'	2.26	0.49
35:DB:174:VAL:O	35:DB:178:ARG:HB2	2.12	0.49
37:DD:72:GLU:O	37:DD:76:ARG:HB3	2.12	0.49
38:DE:93:PRO:O	41:DH:105:ARG:NH2	2.45	0.49
41:DH:36:LEU:HA	41:DH:39:LEU:HD23	1.95	0.49
57:DZ:357:ARG:HH12	57:DZ:373:ASP:CG	2.20	0.49
1:AA:553:A:OP2	11:AN:114:ARG:NH1	2.45	0.49
1:AA:801:C:H2'	1:AA:802:C:H6	1.77	0.49
13:AP:63:PRO:HD3	32:A8:27:THR:HG22	1.93	0.49
14:AQ:11:LYS:HE2	14:AQ:88:GLY:O	2.12	0.49
17:AT:41:ARG:NH2	34:BA:346:G:OP1	2.43	0.49
18:AU:81:HIS:CE1	18:AU:85:LYS:HD2	2.47	0.49
23:AZ:156:LYS:O	23:AZ:157:LEU:HB2	2.10	0.49
34:BA:1318:A:O2'	52:BS:37:ARG:HB3	2.13	0.49
35:BB:170:GLU:O	35:BB:174:VAL:HG23	2.12	0.49
36:BC:43:LEU:HB3	36:BC:47:LEU:HD12	1.93	0.49
38:BE:40:ARG:HB3	38:BE:66:MET:CE	2.42	0.49
38:BE:121:LYS:HG3	38:BE:122:GLU:N	2.26	0.49
38:BE:139:LEU:O	38:BE:141:GLN:N	2.46	0.49
56:BY:7:A:O2'	56:BY:49:C:H5'	2.13	0.49
1:CA:300:A:H2'	1:CA:334:C:H1'	1.95	0.49
1:CA:866:A:C6	1:CA:914:C:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1533:G:H2'	1:CA:1536:C:H42	1.76	0.49
1:CA:1956:U:C2'	1:CA:1957:C:H5'	2.41	0.49
1:CA:2128:C:H5'	3:CC:219:MET:HE1	1.82	0.49
6:CF:57:VAL:HG13	6:CF:59:TYR:CD2	2.47	0.49
8:CH:163:TYR:CE2	8:CH:169:VAL:HG22	2.47	0.49
9:CK:49:ALA:N	9:CK:90:ALA:HB1	2.26	0.49
18:CU:28:ARG:HD3	18:CU:38:THR:OG1	2.11	0.49
21:CX:11:PRO:HB3	21:CX:92:LEU:HD21	1.93	0.49
34:DA:130:A:C8	50:DQ:63:ARG:HG3	2.46	0.49
34:DA:201:C:H42	34:DA:216:G:H1	1.60	0.49
34:DA:536:C:H6	34:DA:536:C:O5'	1.96	0.49
34:DA:620:C:H2'	34:DA:621:A:O4'	2.13	0.49
34:DA:866:C:C4	34:DA:867:G:H1'	2.47	0.49
34:DA:982:U:O2	34:DA:1222:G:N1	2.37	0.49
34:DA:1015:A:N3	34:DA:1218:C:O2'	2.44	0.49
37:DD:19:LEU:O	37:DD:21:LEU:N	2.45	0.49
37:DD:38:TYR:CE1	37:DD:45:GLN:HG3	2.47	0.49
38:DE:43:LEU:HD12	38:DE:44:GLY:N	2.28	0.49
40:DG:32:ARG:O	40:DG:34:GLY:N	2.45	0.49
43:DJ:50:ILE:HA	43:DJ:60:ARG:HD3	1.95	0.49
45:DL:6:THR:HG23	45:DL:9:GLN:CD	2.36	0.49
57:DZ:170:ARG:NH1	57:DZ:170:ARG:N	2.57	0.49
61:DZ:703:FUA:O1	61:DZ:703:FUA:C1	2.60	0.49
1:AA:116:A:H3'	1:AA:117:A:H5"	1.95	0.49
1:AA:1402:G:H2'	1:AA:1403:U:C6	2.48	0.49
1:AA:1785:C:N3	1:AA:2729:U:O2'	2.44	0.49
2:AB:73:A:C4	2:AB:105:A:C2	3.01	0.49
3:AC:203:GLU:CD	3:AC:203:GLU:N	2.70	0.49
23:AZ:30:ASN:HD22	23:AZ:90:VAL:HB	1.77	0.49
23:AZ:184:ALA:O	23:AZ:185:GLU:HB3	2.13	0.49
28:A4:24:THR:OG1	28:A4:25:TYR:N	2.46	0.49
34:BA:192:U:H2'	34:BA:193:C:H6	1.77	0.49
34:BA:931:C:H42	34:BA:1386:G:H1	1.61	0.49
36:BC:43:LEU:HD22	36:BC:47:LEU:HD11	1.93	0.49
36:BC:195:VAL:O	36:BC:196:LEU:HD13	2.12	0.49
39:BF:67:MET:HE1	39:BF:75:LEU:HD12	1.93	0.49
40:BG:61:VAL:O	40:BG:65:ALA:N	2.45	0.49
51:BR:44:LEU:HD21	51:BR:70:ILE:HG21	1.94	0.49
57:BZ:166:LEU:HD21	57:BZ:208:GLN:HG2	1.95	0.49
1:CA:828:U:H4'	1:CA:831:G:N1	2.27	0.49
1:CA:1652:A:OP1	15:CR:8:ARG:NH1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1688:U:H1'	1:CA:1701:A:C6	2.48	0.49
1:CA:2512:C:H2'	1:CA:2513:G:O4'	2.12	0.49
1:CA:2557:G:H2'	1:CA:2558:C:C6	2.48	0.49
1:CA:2577:A:O4'	29:C5:3:LYS:HB2	2.13	0.49
7:CG:124:SER:HB2	7:CG:131:TYR:CE1	2.46	0.49
12:CO:23:ARG:HG3	12:CO:24:VAL:N	2.27	0.49
34:DA:188:C:H2'	34:DA:189:G:C8	2.44	0.49
34:DA:538:G:H5"	45:DL:114:LYS:HB2	1.93	0.49
34:DA:1063:C:OP2	34:DA:1064:G:O2'	2.15	0.49
34:DA:1347:G:H8	42:DI:107:ARG:HB3	1.77	0.49
35:DB:51:LEU:O	35:DB:55:PHE:N	2.35	0.49
36:DC:186:PHE:CE2	36:DC:188:LEU:HB2	2.47	0.49
38:DE:43:LEU:HD21	38:DE:132:ALA:HB1	1.94	0.49
1:AA:868:A:C2'	1:AA:991:G:H5"	2.42	0.49
1:AA:2697:G:H5'	12:AO:68:GLU:OE1	2.12	0.49
3:AC:191:ARG:O	3:AC:195:ARG:HG2	2.11	0.49
4:AD:20:ASP:N	4:AD:20:ASP:OD1	2.45	0.49
37:BD:188:LEU:HD23	37:BD:188:LEU:H	1.77	0.49
40:BG:38:LEU:HA	40:BG:41:ARG:HB2	1.92	0.49
45:BL:27:LEU:HD13	45:BL:98:TYR:CE2	2.47	0.49
57:BZ:264:LEU:HD12	62:BZ:704:GDP:N3	2.27	0.49
57:BZ:467:LYS:O	57:BZ:469:GLU:N	2.38	0.49
1:CA:1063:G:H4'	10:CL:134:MET:HB3	1.94	0.49
1:CA:1607:C:H4'	1:CA:1608:A:O5'	2.12	0.49
1:CA:1805:U:O2	4:CD:50:THR:HB	2.11	0.49
1:CA:2123:G:H21	3:CC:45:HIS:HE1	1.60	0.49
1:CA:2646:C:H6	1:CA:2646:C:O5'	1.95	0.49
1:CA:2661:G:H2'	1:CA:2662:A:O4'	2.12	0.49
10:CL:22:PRO:HA	10:CL:25:PRO:HD2	1.95	0.49
15:CR:96:ARG:HD2	15:CR:115:GLU:OE1	2.13	0.49
17:CT:62:THR:OG1	17:CT:75:ILE:HG12	2.12	0.49
22:CY:74:PRO:O	22:CY:82:PRO:HA	2.12	0.49
22:CY:90:LEU:HB2	22:CY:92:ASN:HB3	1.94	0.49
34:DA:859:A:H2'	34:DA:860:A:O4'	2.12	0.49
34:DA:1114:C:H42	34:DA:1186:G:H1	1.60	0.49
34:DA:1235:U:H5"	54:DU:3:LYS:HB2	1.94	0.49
34:DA:1376:U:H2'	34:DA:1377:A:C8	2.47	0.49
36:DC:43:LEU:O	36:DC:47:LEU:N	2.24	0.49
38:DE:72:GLN:C	38:DE:73:ASN:HD22	2.20	0.49
57:DZ:127:LYS:NZ	57:DZ:404:VAL:HG21	2.28	0.49
1:AA:842:C:H2'	1:AA:843:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1891:G:C3'	3:AC:206:LYS:HG3	2.43	0.49
1:AA:2149:G:H21	1:AA:2195:A:H1'	1.77	0.49
13:AP:89:ALA:HA	13:AP:121:LYS:HE2	1.94	0.49
14:AQ:38:GLU:HB2	14:AQ:39:PRO:HD2	1.95	0.49
34:BA:794:A:OP2	63:BA:1903:HOH:O	2.20	0.49
35:BB:19:HIS:HE1	35:BB:189:ASP:CB	2.26	0.49
35:BB:178:ARG:NH2	41:BH:74:PRO:HB3	2.28	0.49
37:BD:50:ARG:NE	38:BE:10:MET:HE3	2.26	0.49
47:BN:32:SER:HB3	47:BN:41:ARG:HG2	1.95	0.49
56:BW:45:U:H2'	56:BW:45:U:OP2	2.13	0.49
1:CA:1922:G:H2'	1:CA:1923:U:O4'	2.13	0.49
1:CA:2840:C:H5"	15:CR:53:HIS:ND1	2.28	0.49
5:CE:52:LEU:O	5:CE:75:VAL:HA	2.11	0.49
5:CE:68:ALA:C	5:CE:70:ALA:H	2.20	0.49
9:CK:26:LEU:O	9:CK:114:GLY:N	2.43	0.49
10:CL:112:MET:HG3	10:CL:113:PRO:HD3	1.94	0.49
22:CY:38:ILE:HD11	22:CY:66:PRO:HG3	1.93	0.49
22:CY:49:VAL:HG21	22:CY:61:ILE:HG23	1.93	0.49
34:DA:430:A:OP1	37:DD:9:CYS:HB2	2.12	0.49
34:DA:491:G:H2'	34:DA:492:G:H8	1.78	0.49
34:DA:623:C:C4	34:DA:624:C:C5	3.01	0.49
34:DA:1058:G:H2'	34:DA:1059:C:C6	2.47	0.49
34:DA:1202:G:O4'	47:DN:29:ARG:NH1	2.46	0.49
34:DA:1286:A:C8	34:DA:1287:A:H4'	2.47	0.49
42:DI:75:ASP:HA	42:DI:78:LYS:HE3	1.94	0.49
56:DW:37:MIA:H3'	56:DW:38:A:H8	1.77	0.49
57:DZ:133:ILE:HA	57:DZ:257:PRO:HD2	1.94	0.49
57:DZ:247:ARG:NH2	57:DZ:285:ASP:OD1	2.46	0.49
57:DZ:590:ILE:O	57:DZ:594:VAL:HG23	2.12	0.49
57:DZ:639:ASN:N	57:DZ:640:ALA:HB3	2.27	0.49
1:AA:894:U:H5	1:AA:978:A:H62	1.60	0.49
1:AA:1112:U:H2'	1:AA:1113:A:C8	2.47	0.49
1:AA:2207:C:H2'	1:AA:2208:G:H8	1.77	0.49
8:AH:125:VAL:HG12	8:AH:127:GLU:O	2.13	0.49
21:AX:35:THR:HG22	21:AX:38:GLU:CB	2.42	0.49
34:BA:232:G:H2'	34:BA:233:C:C6	2.48	0.49
34:BA:264:U:O2'	50:BQ:64:PRO:O	2.30	0.49
34:BA:652:U:O4	34:BA:752:G:O2'	2.26	0.49
40:BG:16:LEU:HD12	42:BI:45:ALA:HB2	1.94	0.49
2:CB:61:G:C6	2:CB:62:C:C4	3.00	0.49
3:CC:55:SER:C	3:CC:57:GLN:N	2.71	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:191:ARG:O	3:CC:194:ILE:HG22	2.12	0.49
3:CC:203:GLU:CD	3:CC:203:GLU:N	2.70	0.49
5:CE:167:VAL:HG21	63:CE:402:HOH:O	2.12	0.49
34:DA:757:U:H2'	34:DA:758:G:O4'	2.12	0.49
34:DA:1258:G:H2'	34:DA:1259:C:C6	2.47	0.49
34:DA:1392:G:O2'	34:DA:1393:U:H5'	2.13	0.49
34:DA:1460:A:H2'	34:DA:1461:G:O4'	2.13	0.49
35:DB:162:ILE:O	35:DB:185:ILE:HG12	2.12	0.49
37:DD:59:ARG:O	37:DD:61:LYS:N	2.45	0.49
37:DD:112:VAL:HG22	37:DD:116:GLN:OE1	2.12	0.49
42:DI:7:THR:O	42:DI:83:ARG:NH1	2.43	0.49
43:DJ:78:ASN:C	43:DJ:80:LYS:H	2.19	0.49
1:AA:672:G:H2'	1:AA:673:G:O4'	2.13	0.49
1:AA:1097:G:C6	1:AA:1098:C:C4	3.00	0.49
3:AC:24:ASP:C	3:AC:24:ASP:OD1	2.55	0.49
14:AQ:109:VAL:HG13	14:AQ:113:GLN:CB	2.39	0.49
33:A9:3:VAL:C	33:A9:4:ARG:HG3	2.37	0.49
34:BA:924:C:O2'	34:BA:1502:A:N6	2.46	0.49
34:BA:975:A:C8	34:BA:1357:A:H2	2.31	0.49
34:BA:1152:A:H4'	43:BJ:13:HIS:ND1	2.27	0.49
35:BB:42:ILE:HD12	35:BB:203:GLY:HA2	1.94	0.49
40:BG:23:VAL:O	40:BG:27:ILE:HG12	2.12	0.49
56:BW:36:A:H1'	57:BZ:503:GLY:H	1.78	0.49
57:BZ:401:SER:OG	57:BZ:402:ILE:N	2.46	0.49
1:CA:244:A:C2	1:CA:255:A:C4	3.01	0.49
1:CA:1021:A:H8	1:CA:1022:G:H5"	1.78	0.49
1:CA:1472:A:H2'	1:CA:1473:G:O4'	2.12	0.49
2:CB:14:U:O3'	2:CB:108:U:O2'	2.30	0.49
27:C3:8:LEU:HD12	27:C3:30:ARG:O	2.13	0.49
32:C8:63:PRO:HG2	32:C8:64:TYR:CE2	2.47	0.49
35:DB:78:GLN:HA	35:DB:94:ASN:ND2	2.27	0.49
44:DK:15:ALA:HB1	44:DK:78:GLN:HG3	1.95	0.49
52:DS:63:THR:HG22	52:DS:66:MET:HE3	1.94	0.49
1:AA:1134:A:N6	10:AL:133:SER:OG	2.46	0.49
1:AA:2286:A:O2'	1:AA:2288:G:OP1	2.22	0.49
1:AA:2377:G:O6	32:A8:39:LYS:HE3	2.12	0.49
34:BA:748:C:H4'	34:BA:749:C:O5'	2.13	0.49
34:BA:791:G:C6	34:BA:792:A:N7	2.81	0.49
34:BA:1279:A:H5"	34:BA:1280:A:OP1	2.13	0.49
35:BB:16:HIS:CG	35:BB:17:PHE:N	2.80	0.49
50:BQ:32:TYR:O	50:BQ:34:LYS:N	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:132:ARG:N	57:BZ:132:ARG:HD2	2.27	0.49
1:CA:657:U:H2'	1:CA:658:C:C6	2.47	0.49
1:CA:2177:C:H5'	3:CC:45:HIS:HB2	1.95	0.49
7:CG:64:THR:HG21	7:CG:92:VAL:HG11	1.94	0.49
15:CR:61:HIS:O	15:CR:65:LEU:HD22	2.13	0.49
32:C8:63:PRO:HG2	32:C8:64:TYR:CD2	2.48	0.49
34:DA:1072:G:H21	35:DB:107:THR:HG21	1.77	0.49
34:DA:1367:C:H4'	43:DJ:48:THR:HG21	1.94	0.49
49:DP:23:ASP:CG	49:DP:25:ARG:HH11	2.21	0.49
3:AC:55:SER:C	3:AC:57:GLN:N	2.71	0.49
19:AV:39:LEU:HD23	19:AV:39:LEU:C	2.38	0.49
20:AW:83:LYS:O	20:AW:84:ARG:HD3	2.13	0.49
34:BA:1346:A:N6	34:BA:1375:A:OP2	2.44	0.49
34:BA:1478:C:H2'	34:BA:1479:C:C6	2.48	0.49
38:BE:72:GLN:O	38:BE:75:THR:HG22	2.13	0.49
49:BP:67:THR:HG22	49:BP:69:THR:HG23	1.95	0.49
49:BP:67:THR:C	49:BP:69:THR:H	2.21	0.49
57:BZ:15:ILE:HA	57:BZ:103:GLY:O	2.13	0.49
57:BZ:600:VAL:HG21	57:BZ:678:GLU:HG3	1.94	0.49
1:CA:141:A:H8	1:CA:1408:C:HO2'	1.60	0.49
1:CA:253:C:OP2	32:C8:5:LYS:NZ	2.41	0.49
1:CA:729:G:OP2	4:CD:13:ARG:HD3	2.13	0.49
1:CA:1061:U:H4'	1:CA:1070:A:H1'	1.94	0.49
1:CA:1109:C:H5'	1:CA:1110:G:OP2	2.13	0.49
1:CA:1420:U:HO2'	1:CA:1421:G:P	2.35	0.49
1:CA:2420:C:OP2	32:C8:33:ASN:HB2	2.13	0.49
5:CE:108:SER:O	5:CE:162:ALA:HA	2.13	0.49
17:CT:93:ARG:HG2	17:CT:93:ARG:HH11	1.78	0.49
17:CT:99:LEU:HD22	17:CT:101:PHE:CE1	2.47	0.49
34:DA:1494:G:O3'	57:DZ:499:ARG:NH1	2.46	0.49
35:DB:178:ARG:HH22	41:DH:68:ARG:HH22	1.61	0.49
46:DM:10:PRO:HG2	46:DM:21:TYR:CD1	2.48	0.49
1:AA:139:A:H8	1:AA:1454:C:O2'	1.96	0.48
1:AA:520:G:N3	20:AW:61:ASN:ND2	2.61	0.48
1:AA:1532:A:H2'	1:AA:1533:G:C8	2.46	0.48
1:AA:2701:U:P	1:AA:2732:G:H22	2.35	0.48
7:AG:126:ASP:HB3	7:AG:128:ARG:H	1.78	0.48
8:AH:41:MET:HE1	8:AH:65:HIS:HA	1.95	0.48
24:A0:24:LYS:O	24:A0:25:ARG:HD3	2.12	0.48
24:A0:73:GLY:O	24:A0:75:LEU:N	2.46	0.48
28:A4:59:PHE:CE1	52:BS:45:VAL:HG21	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:516:U:C4	34:BA:517:G:C6	3.01	0.48
34:BA:939:G:OP1	40:BG:95:ARG:NH2	2.41	0.48
34:BA:1123:A:O2'	43:BJ:37:PRO:O	2.28	0.48
34:BA:1310:G:H5'	46:BM:77:ASN:ND2	2.28	0.48
35:BB:32:ILE:HD13	35:BB:40:HIS:CG	2.48	0.48
39:BF:99:ALA:HB1	51:BR:23:LYS:HE3	1.95	0.48
41:BH:73:ASP:OD1	41:BH:75:ARG:HD3	2.13	0.48
48:BO:56:LEU:O	48:BO:60:VAL:HG23	2.12	0.48
53:BT:63:ILE:HD12	53:BT:81:LYS:HG2	1.95	0.48
57:BZ:554:PRO:HG3	57:BZ:594:VAL:O	2.12	0.48
1:CA:1812:A:O2'	4:CD:45:ASN:N	2.45	0.48
1:CA:2630:G:H2'	1:CA:2631:G:C8	2.48	0.48
1:CA:2632:A:O2'	1:CA:2811:G:O2'	2.05	0.48
1:CA:2695:C:H2'	1:CA:2696:U:C6	2.46	0.48
1:CA:2748:A:C2	8:CH:63:SER:HB2	2.48	0.48
1:CA:2787:C:H1'	5:CE:62:PRO:HG3	1.95	0.48
6:CF:129:PHE:HB2	6:CF:132:VAL:CG2	2.41	0.48
7:CG:136:ARG:HD2	7:CG:137:GLU:N	2.28	0.48
18:CU:79:PHE:HE1	18:CU:83:LEU:HD13	1.77	0.48
23:CZ:154:ASP:OD2	23:CZ:154:ASP:N	2.46	0.48
29:C5:33:CYS:O	29:C5:37:LYS:N	2.46	0.48
45:DL:34:ARG:O	45:DL:61:THR:HG23	2.13	0.48
50:DQ:12:SER:HB3	50:DQ:20:THR:OG1	2.13	0.48
57:DZ:-55:LEU:HD22	57:DZ:-48:VAL:HG21	1.95	0.48
57:DZ:-6:ARG:O	57:DZ:-2:ALA:HB3	2.13	0.48
1:AA:1204:C:H4'	27:A3:32:GLN:HB2	1.95	0.48
1:AA:1216:G:N2	1:AA:1225:C:C2	2.81	0.48
1:AA:2517:G:H2'	1:AA:2588:G:O6	2.12	0.48
1:AA:2846:U:H2'	1:AA:2847:G:C8	2.48	0.48
10:AL:112:MET:HG2	10:AL:113:PRO:HD3	1.95	0.48
35:BB:56:ARG:HE	35:BB:56:ARG:HB2	1.37	0.48
36:BC:138:VAL:HG22	36:BC:151:VAL:HG23	1.95	0.48
37:BD:206:PHE:C	37:BD:208:SER:H	2.21	0.48
44:BK:70:LYS:HA	44:BK:73:MET:HE3	1.94	0.48
46:BM:87:TYR:O	46:BM:91:ARG:HG2	2.13	0.48
57:BZ:-38:TYR:O	57:BZ:-34:ARG:HG2	2.13	0.48
57:BZ:461:ILE:HD12	57:BZ:462:ILE:H	1.78	0.48
57:BZ:534:ILE:HD11	57:BZ:570:GLY:HA3	1.96	0.48
1:CA:7:G:H4'	11:CN:13:TRP:CH2	2.48	0.48
1:CA:1005:C:H2'	1:CA:1006:C:C6	2.48	0.48
1:CA:1773:A:H2'	1:CA:1774:C:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2303:G:O2'	7:CG:132:ASN:HB2	2.13	0.48
3:CC:24:ASP:C	3:CC:24:ASP:OD1	2.55	0.48
3:CC:42:VAL:HA	3:CC:216:THR:O	2.13	0.48
5:CE:167:VAL:HG22	5:CE:170:LEU:HD11	1.94	0.48
6:CF:132:VAL:HG23	6:CF:132:VAL:O	2.13	0.48
11:CN:38:HIS:O	18:CU:67:ALA:HB1	2.13	0.48
16:CS:66:ALA:HA	16:CS:69:VAL:HG12	1.94	0.48
17:CT:53:ARG:NH1	17:CT:58:ASN:O	2.45	0.48
22:CY:16:ALA:HB2	22:CY:73:ARG:HG3	1.96	0.48
22:CY:46:LYS:HG2	22:CY:60:PHE:CD2	2.48	0.48
34:DA:266:G:O2'	34:DA:267:C:OP2	2.31	0.48
34:DA:513:C:H2'	34:DA:514:C:H6	1.78	0.48
34:DA:913:A:OP2	45:DL:91:LYS:NZ	2.45	0.48
34:DA:942:G:C2	34:DA:1342:C:C2	3.01	0.48
34:DA:1087:G:N2	34:DA:1099:G:H1'	2.28	0.48
34:DA:1531:A:N7	34:DA:1532:U:C4	2.81	0.48
35:DB:91:PRO:HG3	35:DB:155:LEU:HG	1.96	0.48
38:DE:76:ILE:HB	38:DE:77:PRO:HD2	1.93	0.48
43:DJ:38:ILE:HG12	43:DJ:71:LEU:O	2.13	0.48
48:DO:33:THR:HG21	48:DO:85:LEU:HD22	1.94	0.48
56:DY:62:C:H2'	56:DY:63:G:C8	2.48	0.48
1:AA:628:C:H2'	1:AA:629:U:O4'	2.13	0.48
5:AE:143:ASN:HD22	5:AE:147:PRO:CD	2.25	0.48
6:AF:157:VAL:HB	6:AF:194:MET:HG2	1.95	0.48
12:AO:100:GLY:H	12:AO:119:PRO:HG2	1.78	0.48
18:AU:69:CYS:HB3	18:AU:74:LEU:HD13	1.94	0.48
23:AZ:74:VAL:HG13	23:AZ:86:VAL:HG13	1.95	0.48
34:BA:48:C:H5"	34:BA:365:U:O4	2.13	0.48
34:BA:475:G:H2'	34:BA:476:G:C8	2.48	0.48
34:BA:580:U:H5"	48:BO:58:MET:HG2	1.95	0.48
34:BA:1260:C:O5'	34:BA:1284:C:H4'	2.13	0.48
34:BA:1277:C:O2'	34:BA:1279:A:H1'	2.13	0.48
39:BF:60:PHE:CE2	51:BR:78:LEU:HD21	2.48	0.48
40:BG:107:ALA:HB3	40:BG:134:ALA:HB2	1.94	0.48
57:BZ:116:PRO:O	57:BZ:118:SER:N	2.43	0.48
57:BZ:406:GLU:HG2	57:BZ:439:ARG:NH2	2.28	0.48
1:CA:55:G:N3	1:CA:127:A:H2	2.11	0.48
1:CA:197:A:N6	1:CA:2430:A:H2'	2.27	0.48
1:CA:468:G:N7	31:C7:39:ARG:NH2	2.50	0.48
1:CA:741:G:O2'	1:CA:742:G:H5'	2.14	0.48
1:CA:1614:A:P	1:CA:1614:A:H8	2.35	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2097:C:H2'	1:CA:2098:U:C6	2.48	0.48
1:CA:2113:U:H2'	1:CA:2114:A:C8	2.47	0.48
1:CA:2267:A:H5"	1:CA:2268:A:C5'	2.43	0.48
1:CA:2661:G:O6	8:CH:175:LYS:NZ	2.37	0.48
3:CC:184:GLU:O	3:CC:188:ASP:OD2	2.31	0.48
7:CG:41:GLN:HB3	7:CG:43:LEU:HD22	1.95	0.48
8:CH:140:LYS:O	8:CH:144:VAL:HG23	2.13	0.48
10:CL:77:LEU:HD11	10:CL:111:LYS:HD2	1.96	0.48
34:DA:309:G:H1'	34:DA:608:A:C2	2.47	0.48
57:DZ:74:TRP:NE1	57:DZ:273:LEU:C	2.72	0.48
57:DZ:638:GLY:C	57:DZ:640:ALA:HB3	2.38	0.48
1:AA:2141:A:O2'	1:AA:2142:G:H5'	2.13	0.48
1:AA:2518:U:O2'	1:AA:2519:C:O5'	2.30	0.48
10:AL:115:LEU:HD13	10:AL:126:MET:HE1	1.95	0.48
23:AZ:111:VAL:HG12	23:AZ:112:ARG:H	1.79	0.48
28:A4:14:ILE:HG23	28:A4:31:ILE:HG22	1.94	0.48
34:BA:27:G:H2'	34:BA:28:G:H8	1.78	0.48
34:BA:1202:G:O4'	47:BN:29:ARG:NH1	2.45	0.48
34:BA:1274:G:N2	34:BA:1275:A:H62	2.11	0.48
42:BI:83:ARG:HA	42:BI:86:VAL:HG22	1.95	0.48
42:BI:111:ARG:NH2	43:BJ:62:HIS:HD2	2.11	0.48
44:BK:31:THR:HA	44:BK:42:TRP:HA	1.94	0.48
44:BK:44:SER:HG	44:BK:47:VAL:HG23	1.79	0.48
51:BR:59:SER:OG	51:BR:62:GLU:HG2	2.13	0.48
53:BT:99:LEU:HA	53:BT:100:ILE:O	2.12	0.48
57:BZ:127:LYS:NZ	57:BZ:404:VAL:HG11	2.29	0.48
57:BZ:132:ARG:HD2	57:BZ:132:ARG:H	1.78	0.48
57:BZ:493:VAL:HG23	57:BZ:512:ILE:HD11	1.95	0.48
57:BZ:637:ARG:C	57:BZ:639:ASN:N	2.70	0.48
1:CA:271(A):A:N7	1:CA:271(W):G:N2	2.58	0.48
1:CA:969:U:H2'	1:CA:970:C:C6	2.49	0.48
1:CA:1540:U:O2'	1:CA:1541:G:H5'	2.14	0.48
1:CA:1589:C:H2'	1:CA:1590:U:C6	2.48	0.48
1:CA:2306:C:H3'	1:CA:2307:G:H8	1.79	0.48
1:CA:2529:G:H5"	1:CA:2530:A:H5"	1.95	0.48
1:CA:2814:C:O2'	29:C5:29:THR:HG21	2.13	0.48
25:C1:25:LYS:C	25:C1:27:GLU:N	2.70	0.48
34:DA:33:A:N3	45:DL:32:PHE:HE2	2.12	0.48
34:DA:401:C:P	37:DD:73:ARG:HE	2.35	0.48
35:DB:44:LEU:HD22	35:DB:44:LEU:H	1.78	0.48
37:DD:76:ARG:O	37:DD:80:GLU:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DD:119:GLN:HG3	37:DD:123:HIS:HD2	1.78	0.48
38:DE:68:GLU:HG2	38:DE:69:VAL:N	2.28	0.48
38:DE:110:LEU:HD13	38:DE:118:ILE:HD13	1.95	0.48
40:DG:44:TYR:HA	40:DG:47:CYS:SG	2.53	0.48
57:DZ:495:GLY:HA3	57:DZ:589:ALA:HB2	1.95	0.48
1:AA:929:G:H1	1:AA:940:C:H42	1.61	0.48
1:AA:2118:U:H2'	1:AA:2119:C:H6	1.77	0.48
1:AA:2200:C:H4'	3:AC:47:LYS:CE	2.43	0.48
1:AA:2504:U:H2'	1:AA:2505:U:C6	2.49	0.48
1:AA:2627:U:H2'	1:AA:2628:C:H6	1.78	0.48
5:AE:59:VAL:O	5:AE:64:LYS:HE2	2.13	0.48
21:AX:84:ALA:HB3	21:AX:87:GLN:NE2	2.29	0.48
28:A4:36:CYS:SG	28:A4:37:SER:N	2.86	0.48
34:BA:659:U:N3	34:BA:660:G:N7	2.61	0.48
38:BE:6:PHE:HE2	38:BE:36:ASP:HB3	1.79	0.48
38:BE:19:MET:HE2	38:BE:24:ARG:HE	1.77	0.48
40:BG:45:ASP:O	40:BG:49:ILE:HG13	2.12	0.48
41:BH:121:ASP:OD1	41:BH:125:ARG:NH2	2.47	0.48
44:BK:87:THR:O	44:BK:87:THR:OG1	2.28	0.48
1:CA:235:U:C4	1:CA:236:C:N4	2.81	0.48
1:CA:897:C:H3'	1:CA:898:C:C6	2.49	0.48
1:CA:1063:G:H21	10:CL:91:PRO:HG2	1.78	0.48
1:CA:2686:G:C2	1:CA:2724:C:O2	2.66	0.48
1:CA:2704:C:H2'	1:CA:2705:A:O4'	2.13	0.48
4:CD:221:VAL:HG22	4:CD:226:MET:CE	2.44	0.48
14:CQ:54:MET:HG2	14:CQ:117:ALA:O	2.14	0.48
19:CV:32:THR:HG22	19:CV:60:GLU:HB2	1.95	0.48
22:CY:45:VAL:HG23	22:CY:63:LYS:HB3	1.95	0.48
26:C2:22:GLU:OE2	26:C2:68:ARG:NH2	2.45	0.48
35:DB:42:ILE:HG21	35:DB:202:PRO:O	2.13	0.48
37:DD:149:ALA:O	37:DD:152:SER:N	2.45	0.48
37:DD:156:GLU:O	37:DD:160:GLN:HG3	2.13	0.48
41:DH:29:SER:HB3	41:DH:32:LYS:HB2	1.96	0.48
57:DZ:119:GLU:O	57:DZ:122:TRP:N	2.46	0.48
57:DZ:187:THR:HB	57:DZ:199:ILE:HD11	1.96	0.48
1:AA:1684:A:H5'	1:AA:1791:A:O2'	2.13	0.48
1:AA:2705:A:H2'	1:AA:2706:G:C8	2.49	0.48
1:AA:2857:U:OP1	17:AT:98:LYS:HD3	2.13	0.48
2:AB:1:U:O2	2:AB:1:U:H2'	2.13	0.48
4:AD:245:PRO:HB3	4:AD:253:GLN:NE2	2.29	0.48
9:AK:88:ALA:C	9:AK:90:ALA:H	2.20	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AO:1:MET:HE3	12:AO:32:TYR:CZ	2.48	0.48
17:AT:16:ARG:NH1	17:AT:19:LEU:HD21	2.29	0.48
23:AZ:128:VAL:HG22	23:AZ:129:SER:O	2.14	0.48
29:A5:48:GLU:C	29:A5:60:VAL:HG11	2.39	0.48
34:BA:186:C:H2'	34:BA:187:C:C6	2.46	0.48
34:BA:603:U:H2'	34:BA:604:G:C8	2.48	0.48
34:BA:1236:A:H2'	34:BA:1237:C:C6	2.48	0.48
34:BA:1511:G:H2'	34:BA:1512:U:O4'	2.14	0.48
37:BD:63:LYS:HE3	37:BD:197:PRO:O	2.13	0.48
57:BZ:248:LYS:O	57:BZ:252:ASP:N	2.42	0.48
1:CA:1165:U:H2'	1:CA:1166:C:C6	2.48	0.48
1:CA:1316:U:H2'	1:CA:1317:A:H8	1.74	0.48
1:CA:1683:C:H2'	1:CA:1684:C:H6	1.77	0.48
1:CA:2279:G:N7	24:C0:14:ARG:NH1	2.62	0.48
1:CA:2622:C:H5'	5:CE:159:HIS:ND1	2.28	0.48
2:CB:19:G:H2'	2:CB:20:C:O4'	2.14	0.48
6:CF:187:VAL:HG13	13:CP:1:MET:O	2.13	0.48
23:CZ:108:PRO:HB3	23:CZ:144:LEU:HB2	1.96	0.48
23:CZ:111:VAL:O	23:CZ:112:ARG:HB2	2.13	0.48
34:DA:7:G:O2'	38:DE:120:THR:O	2.32	0.48
34:DA:426:G:C6	34:DA:427:U:C4	3.01	0.48
34:DA:1161:C:H2'	34:DA:1162:C:C6	2.47	0.48
36:DC:113:ALA:HB2	36:DC:183:ASP:HB3	1.96	0.48
36:DC:149:ALA:HA	36:DC:201:TYR:O	2.13	0.48
49:DP:29:ASP:OD1	49:DP:29:ASP:N	2.44	0.48
57:DZ:635:GLU:HG3	57:DZ:636:PRO:HD2	1.96	0.48
57:DZ:655:TYR:C	57:DZ:657:THR:H	2.22	0.48
1:AA:768:C:H2'	1:AA:769:A:C8	2.49	0.48
1:AA:1359:U:H2'	1:AA:1656:A:C2	2.49	0.48
1:AA:1402:G:H2'	1:AA:1403:U:H6	1.78	0.48
1:AA:2679:C:H1'	8:AH:109:PHE:CD1	2.49	0.48
1:AA:2735:G:H2'	1:AA:2736:C:C6	2.49	0.48
1:AA:2798:C:H2'	1:AA:2799:U:O4'	2.13	0.48
4:AD:67:PHE:HB3	4:AD:153:ALA:H	1.77	0.48
8:AH:3:ARG:HG2	8:AH:6:ARG:HD2	1.94	0.48
34:BA:6:G:C4	38:BE:119:LEU:HD11	2.48	0.48
34:BA:1092:A:C6	34:BA:1093:A:C6	3.02	0.48
37:BD:101:LEU:HD12	37:BD:101:LEU:C	2.38	0.48
42:BI:17:VAL:HG23	42:BI:63:ILE:HG12	1.96	0.48
43:BJ:11:PHE:HE1	43:BJ:67:THR:HG22	1.78	0.48
51:BR:40:LEU:HD22	51:BR:70:ILE:HG12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:138:LYS:HA	62:BZ:704:GDP:N1	2.28	0.48
1:CA:910:A:N1	1:CA:2277:G:H1'	2.28	0.48
1:CA:955:C:OP1	14:CQ:87:LYS:HE2	2.13	0.48
1:CA:1810:A:H2'	1:CA:1811:G:O4'	2.13	0.48
1:CA:1861:G:P	3:CC:206:LYS:CA	2.86	0.48
1:CA:2250:G:H5"	1:CA:2250:G:N3	2.28	0.48
3:CC:17:PRO:HG2	3:CC:18:ASN:H	1.79	0.48
5:CE:4:ILE:HD11	5:CE:29:GLY:HA2	1.96	0.48
5:CE:98:PRO:HD3	5:CE:175:VAL:HG13	1.96	0.48
10:CL:13:PRO:HA	10:CL:52:ILE:HG23	1.95	0.48
34:DA:107:G:C2	34:DA:108:G:H1'	2.49	0.48
34:DA:243:A:C2	34:DA:245:C:C2	3.02	0.48
34:DA:707:C:H4'	44:DK:20:TYR:CD2	2.49	0.48
35:DB:174:VAL:HG13	35:DB:184:VAL:HG11	1.93	0.48
42:DI:114:TYR:HE1	43:DJ:60:ARG:H	1.59	0.48
46:DM:19:LEU:O	46:DM:22:ILE:HG12	2.13	0.48
46:DM:66:LEU:O	46:DM:68:GLY:N	2.47	0.48
56:DW:45:U:O2'	56:DW:46:7MG:H82	2.14	0.48
57:DZ:9:LEU:O	57:DZ:283:PRO:HD2	2.14	0.48
1:AA:118:U:H5'	1:AA:118:U:H6	1.78	0.48
3:AC:42:VAL:HA	3:AC:216:THR:O	2.13	0.48
13:AP:94:GLU:OE2	13:AP:124:LYS:HD3	2.14	0.48
25:A1:8:SER:HB3	25:A1:66:HIS:CD2	2.49	0.48
34:BA:375:U:H4'	49:BP:17:TYR:CE1	2.48	0.48
35:BB:192:SER:O	35:BB:194:PRO:HD3	2.14	0.48
43:BJ:11:PHE:CE1	43:BJ:67:THR:HG22	2.49	0.48
43:BJ:44:VAL:HG22	43:BJ:66:ARG:HE	1.78	0.48
56:BW:19:G:H4'	56:BW:20:U:OP2	2.14	0.48
56:BY:57:G:H2'	56:BY:58:A:H5'	1.95	0.48
57:BZ:13:ARG:HH21	57:BZ:77:HIS:CE1	2.32	0.48
57:BZ:89:ASP:CG	57:BZ:457:LEU:HB2	2.39	0.48
57:BZ:238:THR:HG23	57:BZ:241:GLU:HG2	1.94	0.48
1:CA:118:A:H1'	1:CA:178:G:O4'	2.13	0.48
1:CA:899:A:O2'	1:CA:900:A:H5'	2.13	0.48
1:CA:1809:A:H2'	1:CA:1810:A:C8	2.48	0.48
19:CV:76:LYS:O	19:CV:79:VAL:HG12	2.13	0.48
22:CY:102:CYS:SG	22:CY:104:GLY:N	2.80	0.48
23:CZ:73:GLN:H	23:CZ:87:ASP:HB2	1.79	0.48
34:DA:535:A:H4'	34:DA:536:C:OP2	2.14	0.48
34:DA:1024:G:H2'	34:DA:1025:U:H5"	1.95	0.48
34:DA:1179:A:H2'	34:DA:1180:A:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1317:C:O2	52:DS:37:ARG:NH1	2.46	0.48
37:DD:59:ARG:NE	37:DD:59:ARG:HA	2.29	0.48
43:DJ:11:PHE:HE1	43:DJ:67:THR:HB	1.78	0.48
46:DM:124:PRO:HB3	56:DW:36:A:H4'	1.96	0.48
50:DQ:62:SER:HB3	50:DQ:72:ARG:HD3	1.94	0.48
56:DY:69:G:H2'	56:DY:70:G:O4'	2.14	0.48
57:DZ:-66:MET:HB2	57:DZ:-65:LYS:H	1.47	0.48
57:DZ:8:ASP:C	57:DZ:10:LYS:H	2.21	0.48
1:AA:185:A:H2'	1:AA:185:A:N3	2.29	0.48
1:AA:217:A:H3'	1:AA:218:A:C5'	2.44	0.48
1:AA:733:G:H4'	1:AA:734:C:OP2	2.12	0.48
1:AA:1248:G:OP2	1:AA:1249:A:O2'	2.28	0.48
1:AA:1293:A:OP1	6:AF:95:ARG:NH2	2.47	0.48
1:AA:1495:G:H1'	1:AA:1574:A:N1	2.27	0.48
1:AA:2122:G:C2	1:AA:2212:G:C2	3.02	0.48
1:AA:2144:U:H1'	3:AC:167:ASP:CB	2.44	0.48
1:AA:2673:G:H5"	57:BZ:21:ILE:HG13	1.95	0.48
5:AE:52:LEU:O	5:AE:75:VAL:HA	2.14	0.48
10:AL:12:LEU:HD11	10:AL:23:VAL:HG22	1.96	0.48
14:AQ:14:ARG:HG2	14:AQ:41:TRP:CH2	2.35	0.48
15:AR:44:LEU:HD22	15:AR:48:VAL:HG23	1.95	0.48
16:AS:89:ARG:HD2	16:AS:92:TYR:O	2.13	0.48
18:AU:74:LEU:HD12	18:AU:74:LEU:H	1.78	0.48
21:AX:60:ARG:NH2	31:A7:47:ARG:HH21	2.12	0.48
24:A0:18:ALA:HB3	24:A0:20:ARG:HH21	1.78	0.48
25:A1:63:ALA:O	25:A1:64:ALA:C	2.56	0.48
34:BA:557:G:C6	34:BA:558:G:C6	3.01	0.48
34:BA:1323:G:H2'	34:BA:1324:A:C8	2.48	0.48
1:CA:103:A:H5'	26:C2:3:LEU:HD11	1.96	0.48
1:CA:862:G:H2'	1:CA:863:A:O4'	2.14	0.48
1:CA:1268:A:H2'	1:CA:1269:A:O5'	2.13	0.48
1:CA:1452:A:O2'	1:CA:1453:U:H2'	2.14	0.48
1:CA:2271:G:C6	1:CA:2272:U:C4	3.01	0.48
1:CA:2852:G:C2	1:CA:2853:C:O2	2.67	0.48
4:CD:68:LYS:C	4:CD:70:TRP:H	2.22	0.48
6:CF:21:ALA:HB3	6:CF:22:ALA:HA	1.96	0.48
9:CK:40:LEU:HA	9:CK:43:ALA:HB3	1.96	0.48
22:CY:83:THR:HG21	22:CY:99:CYS:HA	1.96	0.48
27:C3:30:ARG:NH2	27:C3:33:GLN:HE21	2.12	0.48
34:DA:151:A:N6	34:DA:171:A:N7	2.62	0.48
34:DA:382:A:H2'	34:DA:383:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:544:G:C2	34:DA:545:C:C2	3.01	0.48
34:DA:741:G:H2'	34:DA:742:G:O4'	2.13	0.48
34:DA:1060:C:C4	36:DC:2:GLY:HA3	2.49	0.48
36:DC:57:ILE:HG13	36:DC:66:VAL:HG22	1.96	0.48
39:DF:87:ARG:HH11	39:DF:87:ARG:CG	2.17	0.48
42:DI:28:VAL:HG22	42:DI:63:ILE:HB	1.96	0.48
43:DJ:47:PHE:N	43:DJ:63:PHE:O	2.41	0.48
44:DK:95:ILE:O	44:DK:98:LEU:N	2.47	0.48
52:DS:3:ARG:HH11	52:DS:7:LYS:HE2	1.79	0.48
57:DZ:15:ILE:HG21	57:DZ:280:LEU:HD13	1.94	0.48
1:AA:941:U:H5'	1:AA:942:A:P	2.54	0.48
1:AA:2509:A:H5"	63:AA:4108:HOH:O	2.13	0.48
3:AC:55:SER:C	3:AC:57:GLN:H	2.19	0.48
5:AE:29:GLY:O	5:AE:51:PHE:HE1	1.97	0.48
6:AF:39:TRP:O	6:AF:40:GLN:C	2.57	0.48
13:AP:59:LEU:HD11	32:A8:10:ALA:HB2	1.96	0.48
22:AY:92:ASN:HB2	22:AY:94:LYS:N	2.25	0.48
27:A3:8:LEU:HD13	27:A3:31:LEU:HD23	1.95	0.48
33:A9:7:VAL:HG12	33:A9:34:GLN:HB3	1.94	0.48
34:BA:9:G:C2	34:BA:26:A:N1	2.82	0.48
34:BA:343:U:H3	34:BA:347:G:N2	2.01	0.48
34:BA:520:A:C2	34:BA:536:C:H1'	2.49	0.48
34:BA:662:G:H2'	34:BA:663:A:C8	2.49	0.48
41:BH:82:HIS:O	41:BH:137:VAL:HA	2.14	0.48
49:BP:69:THR:O	49:BP:69:THR:OG1	2.32	0.48
57:BZ:183:MET:HE1	57:BZ:209:ALA:HB1	1.96	0.48
57:BZ:485:GLU:O	57:BZ:486:THR:HB	2.14	0.48
1:CA:480:A:OP2	22:CY:47:LYS:HE2	2.13	0.48
1:CA:1651:G:C2	1:CA:2007:C:C2	3.02	0.48
1:CA:1899:G:H2'	1:CA:1899:G:N3	2.29	0.48
1:CA:2839:G:H5'	15:CR:46:GLY:CA	2.44	0.48
6:CF:53:THR:HG23	6:CF:55:GLY:H	1.79	0.48
7:CG:112:PRO:HG3	28:C4:43:TYR:CE2	2.49	0.48
21:CX:9:LEU:HB2	21:CX:29:TRP:O	2.14	0.48
29:C5:36:CYS:O	29:C5:38:ALA:N	2.47	0.48
32:C8:30:ARG:O	63:C8:6001:HOH:O	2.19	0.48
34:DA:57:G:C2	34:DA:58:C:C2	3.02	0.48
43:DJ:13:HIS:HB3	43:DJ:68:HIS:HE1	1.77	0.48
47:DN:22:THR:HB	47:DN:33:VAL:HB	1.95	0.48
49:DP:5:ARG:NH1	49:DP:28:ARG:HA	2.28	0.48
51:DR:38:GLU:HA	51:DR:41:LYS:NZ	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DS:41:VAL:O	52:DS:43:GLU:N	2.47	0.48
57:DZ:20:HIS:CG	57:DZ:21:ILE:N	2.82	0.48
1:AA:215:G:N2	1:AA:217:A:H62	2.12	0.47
1:AA:555:G:C5	1:AA:2044:U:H5"	2.49	0.47
1:AA:645:G:H2'	1:AA:645:G:N3	2.28	0.47
1:AA:821:A:HO2'	1:AA:822:G:H8	1.61	0.47
1:AA:1540:A:OP2	63:AA:3936:HOH:O	2.20	0.47
1:AA:1834:A:H4'	4:AD:259:THR:HG23	1.95	0.47
1:AA:2283:G:OP1	24:A0:18:ALA:HB1	2.13	0.47
1:AA:2289:G:OP2	24:A0:10:THR:HG21	2.14	0.47
3:AC:68:GLY:N	3:AC:189:ASN:ND2	2.62	0.47
3:AC:184:GLU:O	3:AC:188:ASP:OD2	2.31	0.47
10:AL:56:GLU:O	10:AL:67:PHE:HA	2.14	0.47
11:AN:58:ASP:OD1	11:AN:58:ASP:N	2.36	0.47
34:BA:67:C:O2'	34:BA:171:A:H1'	2.14	0.47
34:BA:177:C:H2'	34:BA:178:C:H6	1.79	0.47
34:BA:604:G:C2	34:BA:635:G:C5	3.02	0.47
34:BA:1034:G:H3'	34:BA:1035:A:C8	2.48	0.47
34:BA:1155:G:H2'	34:BA:1156:G:O4'	2.13	0.47
34:BA:1311:G:H2'	34:BA:1312:G:O4'	2.13	0.47
38:BE:39:GLY:O	38:BE:69:VAL:HG13	2.14	0.47
53:BT:63:ILE:HD13	53:BT:80:ARG:HB2	1.96	0.47
53:BT:71:THR:O	53:BT:72:LEU:HD23	2.14	0.47
57:BZ:420:ASP:CG	57:BZ:423:LYS:HE3	2.39	0.47
57:BZ:655:TYR:O	57:BZ:657:THR:N	2.47	0.47
1:CA:1469:A:H2'	1:CA:1470:G:C8	2.49	0.47
1:CA:1488:G:H5'	1:CA:1489:U:OP2	2.13	0.47
1:CA:2124:G:H4'	3:CC:175:PRO:HD3	1.96	0.47
1:CA:2309:A:N6	1:CA:2310:A:N1	2.62	0.47
1:CA:2611:U:C4	29:C5:3:LYS:HG2	2.49	0.47
1:CA:2626:C:H2'	1:CA:2627:G:O4'	2.14	0.47
1:CA:2845:G:H2'	1:CA:2846:G:C8	2.49	0.47
1:CA:2861:G:H2'	1:CA:2862:G:C8	2.49	0.47
14:CQ:75:THR:HA	14:CQ:89:ASN:O	2.14	0.47
14:CQ:81:VAL:HB	24:C0:7:LEU:HD11	1.95	0.47
16:CS:67:ARG:HG2	16:CS:67:ARG:HH11	1.79	0.47
17:CT:14:TYR:CD2	17:CT:14:TYR:N	2.82	0.47
30:C6:3:SER:OG	30:C6:5:VAL:HG13	2.14	0.47
34:DA:171:A:H2'	34:DA:172:A:C8	2.49	0.47
34:DA:502:G:N2	34:DA:544:G:C4	2.82	0.47
34:DA:1096:C:H2'	34:DA:1097:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DB:69:LEU:HD12	35:DB:70:PHE:N	2.28	0.47
36:DC:32:LEU:HD12	36:DC:59:ARG:NH1	2.30	0.47
45:DL:34:ARG:HG2	45:DL:35:GLY:N	2.29	0.47
51:DR:40:LEU:HD22	51:DR:70:ILE:HG12	1.96	0.47
56:DW:51:U:H3	56:DW:63:G:H1	1.60	0.47
1:AA:27:G:C4	1:AA:537:G:N2	2.82	0.47
3:AC:30:VAL:CG2	3:AC:31:LYS:H	2.27	0.47
8:AH:174:GLY:O	8:AH:175:LYS:HB2	2.15	0.47
14:AQ:138:ASP:OD2	23:AZ:81:ARG:NH1	2.46	0.47
25:A1:3:LYS:HG2	25:A1:4:VAL:N	2.29	0.47
34:BA:269:C:H2'	34:BA:270:A:C8	2.49	0.47
34:BA:445:G:C6	34:BA:446:G:C5	3.03	0.47
37:BD:101:LEU:O	37:BD:102:ASP:C	2.57	0.47
38:BE:74:GLY:HA3	38:BE:116:THR:HG22	1.95	0.47
38:BE:132:ALA:O	38:BE:134:ALA:N	2.47	0.47
1:CA:25:U:H5'	20:CW:79:GLY:HA2	1.95	0.47
1:CA:1434:A:H61	1:CA:1558:A:N6	2.10	0.47
1:CA:1577:C:H2'	1:CA:1578:U:C1'	2.43	0.47
1:CA:1932:A:H2'	1:CA:1933:G:O4'	2.14	0.47
1:CA:2531:A:H5"	8:CH:157:TYR:CZ	2.49	0.47
11:CN:14:VAL:CG1	11:CN:138:LEU:HB2	2.43	0.47
11:CN:56:ASN:N	11:CN:125:GLY:O	2.37	0.47
13:CP:27:HIS:NE2	63:CP:303:HOH:O	2.35	0.47
15:CR:13:HIS:O	15:CR:14:SER:C	2.57	0.47
15:CR:33:ARG:NH2	29:C5:57:VAL:HG12	2.29	0.47
16:CS:67:ARG:HH11	16:CS:67:ARG:CG	2.27	0.47
18:CU:79:PHE:CZ	18:CU:83:LEU:HD22	2.49	0.47
34:DA:266:G:H5'	34:DA:266:G:C8	2.49	0.47
34:DA:922:G:C2	34:DA:923:A:C4	3.01	0.47
34:DA:1217:C:H2'	34:DA:1218:C:C6	2.48	0.47
34:DA:1304:G:C5	34:DA:1305:G:C6	3.02	0.47
56:DW:23:A:H2'	56:DW:24:G:C8	2.49	0.47
1:AA:210:A:N1	1:AA:254:A:O2'	2.45	0.47
1:AA:217:A:H8	1:AA:218:A:H5'	1.78	0.47
1:AA:1220:U:O3'	1:AA:1221:G:H4'	2.14	0.47
7:AG:77:ILE:HB	7:AG:82:LEU:HD12	1.96	0.47
7:AG:126:ASP:HB2	7:AG:130:ASN:O	2.13	0.47
19:AV:72:VAL:HG11	19:AV:85:LYS:HD2	1.96	0.47
22:AY:20:TYR:CE1	22:AY:43:ASN:HA	2.50	0.47
34:BA:391:G:C6	34:BA:392:G:C5	3.02	0.47
34:BA:785:G:N2	34:BA:798:G:C4	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1142:G:H2'	34:BA:1143:G:O4'	2.14	0.47
39:BF:44:GLY:O	39:BF:60:PHE:N	2.42	0.47
41:BH:6:ILE:O	41:BH:7:ALA:C	2.57	0.47
53:BT:44:ALA:HB1	53:BT:91:LEU:HB2	1.95	0.47
56:BW:19:G:C4	56:BW:57:G:N2	2.82	0.47
56:BY:58:A:O2'	56:BY:60:U:H5	1.98	0.47
57:BZ:445:GLU:O	57:BZ:447:GLY:N	2.42	0.47
1:CA:706:A:H2'	1:CA:707:G:O4'	2.14	0.47
1:CA:892:G:H2'	1:CA:893:C:O4'	2.14	0.47
1:CA:1204:A:H2	1:CA:1241:A:N6	2.04	0.47
1:CA:1469:A:H2'	1:CA:1470:G:H8	1.79	0.47
1:CA:1685:C:H2'	1:CA:1686:C:C6	2.49	0.47
1:CA:1912:A:O2'	34:DA:1494:G:O2'	2.32	0.47
1:CA:2334:G:H5'	16:CS:9:ARG:HG2	1.95	0.47
1:CA:2611:U:H6	1:CA:2611:U:H5'	1.79	0.47
8:CH:157:TYR:CE1	8:CH:172:LYS:HG2	2.49	0.47
18:CU:79:PHE:CE1	18:CU:83:LEU:HD13	2.49	0.47
23:CZ:101:PRO:O	23:CZ:102:LEU:HD12	2.14	0.47
34:DA:434:U:H2'	34:DA:435:C:C6	2.49	0.47
34:DA:1070:U:H2'	34:DA:1071:C:H6	1.79	0.47
37:DD:59:ARG:O	37:DD:62:GLN:N	2.47	0.47
37:DD:108:LEU:HD21	37:DD:183:GLY:HA3	1.96	0.47
57:DZ:-9:LEU:O	57:DZ:-7:GLU:N	2.47	0.47
61:DZ:703:FUA:C20	61:DZ:703:FUA:O1	2.62	0.47
1:AA:265:U:H2'	1:AA:266:C:C6	2.50	0.47
1:AA:310:C:H2'	1:AA:311:C:H6	1.79	0.47
1:AA:1447:G:H2'	1:AA:1448:C:O4'	2.14	0.47
1:AA:1451:U:H2'	1:AA:1452:U:H6	1.79	0.47
1:AA:2053:A:C6	1:AA:2510:C:H1'	2.49	0.47
1:AA:2059:G:O6	63:AA:3933:HOH:O	2.18	0.47
1:AA:2586:G:H2'	1:AA:2587:C:C6	2.50	0.47
4:AD:69:ARG:C	4:AD:71:ASP:N	2.72	0.47
4:AD:261:LYS:HZ1	4:AD:263:ARG:NH2	2.12	0.47
7:AG:33:ARG:O	7:AG:162:THR:HG23	2.14	0.47
20:AW:9:TYR:HA	20:AW:100:THR:HG23	1.95	0.47
23:AZ:110:GLY:C	23:AZ:111:VAL:O	2.56	0.47
30:A6:8:LYS:HD3	32:A8:34:TRP:CD2	2.49	0.47
34:BA:33:A:H2'	34:BA:34:C:C6	2.49	0.47
34:BA:707:C:H2'	34:BA:708:C:C6	2.48	0.47
34:BA:899:C:H2'	34:BA:900:A:C8	2.49	0.47
34:BA:1037:C:H2'	34:BA:1038:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1053:G:C4	34:BA:1199:U:C5	3.03	0.47
34:BA:1187:G:H2'	34:BA:1188:A:C8	2.49	0.47
37:BD:111:ALA:HB2	37:BD:120:LEU:HD12	1.95	0.47
38:BE:139:LEU:HA	38:BE:142:LEU:HD12	1.96	0.47
48:BO:62:GLN:O	48:BO:65:ARG:N	2.47	0.47
53:BT:44:ALA:HB3	53:BT:91:LEU:HD12	1.95	0.47
57:BZ:417:THR:HA	57:BZ:418:LYS:CB	2.45	0.47
1:CA:237:C:H2'	1:CA:238:C:H6	1.79	0.47
1:CA:495:G:O2'	20:CW:61:ASN:ND2	2.47	0.47
1:CA:1075:C:H5'	1:CA:1076:C:OP2	2.14	0.47
1:CA:2103:C:H1'	1:CA:2187:G:N2	2.29	0.47
5:CE:68:ALA:C	5:CE:70:ALA:N	2.70	0.47
5:CE:163:GLU:HG2	5:CE:164:ARG:N	2.30	0.47
8:CH:118:PRO:HG2	8:CH:121:ILE:HB	1.96	0.47
14:CQ:63:LYS:HA	23:CZ:178:GLU:CG	2.41	0.47
16:CS:66:ALA:O	16:CS:69:VAL:HG12	2.14	0.47
17:CT:99:LEU:O	17:CT:101:PHE:N	2.47	0.47
18:CU:66:ASN:HD21	18:CU:70:ARG:NH2	2.12	0.47
34:DA:303:A:H2'	34:DA:304:U:O4'	2.14	0.47
38:DE:139:LEU:C	38:DE:141:GLN:H	2.21	0.47
45:DL:24:VAL:HG12	45:DL:98:TYR:HE1	1.79	0.47
45:DL:84:LEU:HB2	45:DL:105:TYR:CE2	2.50	0.47
57:DZ:26:THR:O	57:DZ:30:GLU:HB2	2.14	0.47
1:AA:311:C:H2'	1:AA:312:C:C6	2.50	0.47
1:AA:509:A:H2'	1:AA:510:C:H5'	1.95	0.47
1:AA:1099:C:C2	1:AA:1153:G:C2	3.02	0.47
1:AA:2653:G:H5"	1:AA:2653:G:H8	1.80	0.47
1:AA:2864:G:H2'	1:AA:2865:C:C6	2.49	0.47
7:AG:125:PHE:CE1	7:AG:131:TYR:HB2	2.49	0.47
34:BA:503:C:H2'	34:BA:504:C:H6	1.78	0.47
34:BA:1295:G:O2'	46:BM:14:ARG:NH1	2.47	0.47
35:BB:141:GLU:O	35:BB:145:LEU:HB2	2.13	0.47
37:BD:53:ASP:O	37:BD:57:ARG:HG3	2.15	0.47
38:BE:77:PRO:HD2	38:BE:142:LEU:HD22	1.96	0.47
49:BP:34:GLU:OE2	49:BP:59:TRP:NE1	2.36	0.47
53:BT:56:MET:HE2	53:BT:85:MET:HG2	1.97	0.47
57:BZ:128:TYR:CD2	57:BZ:128:TYR:N	2.81	0.47
57:BZ:494:GLU:CD	57:BZ:511:LYS:HE2	2.39	0.47
1:CA:1115:G:H2'	1:CA:1116:C:C6	2.50	0.47
1:CA:1813:G:H2'	1:CA:1814:G:H5'	1.97	0.47
1:CA:2497:A:H5"	63:CA:4068:HOH:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2725:A:O2'	1:CA:2726:U:OP2	2.30	0.47
3:CC:68:GLY:N	3:CC:189:ASN:ND2	2.62	0.47
11:CN:53:VAL:HA	11:CN:121:LYS:O	2.13	0.47
18:CU:83:LEU:HG	18:CU:88:ILE:HB	1.96	0.47
20:CW:16:LYS:O	20:CW:19:LEU:HB2	2.14	0.47
27:C3:8:LEU:HD23	27:C3:54:VAL:HG23	1.97	0.47
34:DA:256:U:OP1	50:DQ:17:LYS:NZ	2.39	0.47
34:DA:380:G:C2	34:DA:384:G:C6	3.02	0.47
34:DA:599:C:H5"	41:DH:95:VAL:O	2.14	0.47
34:DA:883:C:C2'	34:DA:884:U:H5'	2.44	0.47
36:DC:78:GLY:O	36:DC:80:GLY:N	2.45	0.47
37:DD:59:ARG:O	37:DD:60:GLU:C	2.57	0.47
44:DK:104:GLN:HG2	44:DK:106:LYS:HG2	1.95	0.47
48:DO:46:HIS:O	48:DO:48:LYS:N	2.48	0.47
57:DZ:272:LEU:HD12	57:DZ:272:LEU:HA	1.46	0.47
57:DZ:606:MET:HE3	57:DZ:671:MET:HG2	1.95	0.47
1:AA:455:A:OP2	1:AA:455:A:C8	2.62	0.47
1:AA:2207:C:H2'	1:AA:2208:G:C8	2.50	0.47
1:AA:2796:G:H2'	1:AA:2797:C:C6	2.49	0.47
5:AE:9:VAL:HB	17:AT:3:ARG:HG2	1.95	0.47
7:AG:131:TYR:HB3	7:AG:159:VAL:HG13	1.97	0.47
12:AO:48:PRO:HB3	34:BA:1422:G:H5'	1.97	0.47
13:AP:128:HIS:CE1	13:AP:148:LEU:HD21	2.49	0.47
14:AQ:21:THR:CG2	14:AQ:101:ARG:HB2	2.44	0.47
14:AQ:61:GLY:HA3	23:AZ:178:GLU:O	2.15	0.47
16:AS:66:ALA:O	16:AS:69:VAL:HG13	2.14	0.47
34:BA:284:G:H2'	34:BA:285:G:C8	2.50	0.47
34:BA:923:A:OP1	38:BE:21:ALA:HB2	2.14	0.47
34:BA:1392:G:H21	34:BA:1502:A:H8	1.61	0.47
35:BB:200:ILE:HB	35:BB:202:PRO:HD3	1.96	0.47
35:BB:229:VAL:HG12	35:BB:230:VAL:H	1.79	0.47
36:BC:12:LEU:HD23	36:BC:16:ARG:HB3	1.97	0.47
37:BD:121:VAL:O	37:BD:134:ASP:HA	2.15	0.47
41:BH:6:ILE:O	41:BH:9:MET:N	2.48	0.47
45:BL:111:LYS:O	45:BL:112:ASP:HB2	2.15	0.47
48:BO:62:GLN:NE2	48:BO:65:ARG:HH12	2.13	0.47
49:BP:57:ARG:NE	49:BP:79:VAL:O	2.35	0.47
57:BZ:587:SER:OG	57:BZ:588:MET:N	2.48	0.47
1:CA:330:A:H2	1:CA:1210:A:H2'	1.79	0.47
1:CA:2097:C:H2'	1:CA:2098:U:H6	1.78	0.47
1:CA:2203:U:H2'	1:CA:2205:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2306:C:H3'	1:CA:2307:G:H2'	1.96	0.47
1:CA:2328:A:H2'	1:CA:2329:G:C8	2.50	0.47
1:CA:2542:A:H4'	1:CA:2543:G:C8	2.49	0.47
3:CC:6:LYS:HA	3:CC:9:ARG:NH1	2.30	0.47
8:CH:17:VAL:HG11	8:CH:50:VAL:HG21	1.95	0.47
34:DA:503:C:H2'	34:DA:504:C:H6	1.79	0.47
34:DA:693:G:H2'	34:DA:694:A:C8	2.50	0.47
34:DA:1286:A:H8	34:DA:1287:A:H4'	1.79	0.47
34:DA:1307:U:OP1	46:DM:101:GLN:NE2	2.47	0.47
35:DB:200:ILE:O	35:DB:202:PRO:HD3	2.14	0.47
46:DM:3:ARG:N	46:DM:7:VAL:O	2.48	0.47
57:DZ:505:GLY:HA2	57:DZ:576:ASP:CB	2.45	0.47
57:DZ:527:ASN:O	57:DZ:529:ILE:N	2.48	0.47
1:AA:417:A:C6	13:AP:71:VAL:HG11	2.50	0.47
1:AA:871:A:O2'	1:AA:2370:G:O6	2.31	0.47
1:AA:895:G:N9	1:AA:978:A:H8	2.13	0.47
1:AA:919:A:H2'	1:AA:920:G:O4'	2.14	0.47
1:AA:1310:G:OP1	29:A5:19:ARG:NH2	2.35	0.47
1:AA:1692:G:H5"	1:AA:1693:C:H5'	1.96	0.47
1:AA:1888:G:C2'	1:AA:1889:G:H5'	2.44	0.47
1:AA:2105:G:O5'	1:AA:2105:G:H8	1.98	0.47
1:AA:2760:G:OP1	8:AH:138:LYS:NZ	2.39	0.47
1:AA:2859:U:N3	1:AA:2877:G:O4'	2.48	0.47
1:AA:2859:U:O4	17:AT:23:ARG:NH2	2.33	0.47
2:AB:17:C:H2'	2:AB:18:G:O4'	2.15	0.47
2:AB:32:C:C2	2:AB:51:G:N2	2.83	0.47
3:AC:180:SER:O	3:AC:181:PHE:O	2.33	0.47
7:AG:77:ILE:N	7:AG:82:LEU:O	2.32	0.47
7:AG:112:PRO:C	7:AG:114:ILE:H	2.23	0.47
16:AS:93:LYS:HG2	16:AS:95:HIS:HB2	1.97	0.47
22:AY:55:TYR:CD1	22:AY:55:TYR:N	2.82	0.47
23:AZ:70:LEU:HD11	23:AZ:98:MET:CE	2.42	0.47
34:BA:255:G:H2'	34:BA:256:U:C6	2.50	0.47
34:BA:376:G:C2	34:BA:389:A:C2	3.03	0.47
34:BA:475:G:H2'	34:BA:476:G:H8	1.79	0.47
34:BA:567:G:O6	45:BL:15:ARG:NH1	2.40	0.47
34:BA:653:A:OP1	41:BH:56:LYS:NZ	2.48	0.47
34:BA:741:G:H2'	34:BA:742:G:O4'	2.15	0.47
34:BA:1151:A:O2'	34:BA:1152:A:H8	1.98	0.47
34:BA:1318:A:OP1	52:BS:3:ARG:NH2	2.43	0.47
34:BA:1318:A:H5"	52:BS:3:ARG:NH2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BE:102:ALA:H	38:BE:107:ARG:HH21	1.62	0.47
41:BH:116:LYS:O	41:BH:119:LEU:HD21	2.15	0.47
43:BJ:64:GLU:HB3	47:BN:59:ALA:HB2	1.95	0.47
45:BL:75:HIS:ND1	45:BL:77:LEU:HB2	2.30	0.47
51:BR:31:LEU:HD23	51:BR:31:LEU:H	1.78	0.47
56:BW:17:C:H5'	56:BW:18:G:OP1	2.14	0.47
57:BZ:138:LYS:HG2	62:BZ:704:GDP:C2	2.49	0.47
57:BZ:249:GLY:HA2	57:BZ:252:ASP:HB2	1.97	0.47
57:BZ:590:ILE:HD13	57:BZ:590:ILE:HA	1.76	0.47
1:CA:580:C:H2'	1:CA:581:C:H6	1.78	0.47
1:CA:652(E):G:H8	1:CA:652(E):G:O5'	1.98	0.47
1:CA:687:C:H2'	1:CA:688:U:O4'	2.14	0.47
1:CA:794:G:H2'	1:CA:795:C:H6	1.80	0.47
1:CA:952:G:C6	1:CA:966:G:C6	3.03	0.47
1:CA:1366:A:H2'	1:CA:1367:A:O4'	2.15	0.47
1:CA:1832:C:H2'	1:CA:1833:U:O4'	2.14	0.47
1:CA:1860:G:H5"	3:CC:207:GLY:N	2.27	0.47
1:CA:2006:C:OP2	63:CA:3749:HOH:O	2.20	0.47
1:CA:2093:G:H1	1:CA:2196:C:H42	1.63	0.47
1:CA:2684:U:C4	1:CA:2685:G:N7	2.82	0.47
4:CD:126:GLN:O	4:CD:193:VAL:HG22	2.15	0.47
5:CE:12:THR:HG22	17:CT:58:ASN:HD21	1.79	0.47
5:CE:15:PHE:CD2	17:CT:81:PRO:HD2	2.50	0.47
10:CL:93:ARG:HE	10:CL:93:ARG:HB3	1.34	0.47
15:CR:9:LYS:HA	15:CR:17:ARG:HE	1.80	0.47
20:CW:70:TYR:O	20:CW:107:LEU:HA	2.15	0.47
21:CX:84:ALA:HB3	21:CX:87:GLN:OE1	2.14	0.47
23:CZ:157:LEU:HD11	23:CZ:163:LEU:HB2	1.97	0.47
29:C5:16:ARG:HG2	29:C5:16:ARG:NH1	2.22	0.47
34:DA:177:C:H2'	34:DA:178:C:C6	2.50	0.47
34:DA:324:G:N2	34:DA:327:A:C8	2.82	0.47
35:DB:63:MET:HG2	35:DB:225:ALA:HB1	1.97	0.47
37:DD:31:CYS:SG	37:DD:33:MET:N	2.87	0.47
38:DE:40:ARG:HB3	38:DE:66:MET:CE	2.45	0.47
39:DF:33:TYR:HD1	39:DF:75:LEU:HD23	1.79	0.47
39:DF:78:GLU:O	39:DF:80:ARG:N	2.48	0.47
40:DG:111:ARG:HD2	40:DG:123:GLU:HB2	1.95	0.47
40:DG:147:ALA:C	40:DG:149:ARG:H	2.23	0.47
44:DK:14:VAL:HG12	44:DK:15:ALA:H	1.80	0.47
45:DL:110:VAL:HG23	45:DL:120:TYR:O	2.15	0.47
50:DQ:62:SER:CB	50:DQ:72:ARG:HD3	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DW:44:G:O2'	56:DW:45:U:H5'	2.14	0.47
56:DY:7:A:N6	56:DY:66:U:H3	2.02	0.47
57:DZ:-58:LEU:HD13	57:DZ:-58:LEU:HA	1.65	0.47
57:DZ:79:ILE:HD13	57:DZ:276:VAL:HG11	1.95	0.47
57:DZ:97:SER:HA	57:DZ:100:VAL:HG12	1.96	0.47
57:DZ:168:ILE:HG23	57:DZ:205:TYR:CE2	2.48	0.47
57:DZ:213:HIS:O	57:DZ:213:HIS:ND1	2.39	0.47
1:AA:1158:G:H2'	1:AA:1159:U:O4'	2.14	0.47
1:AA:1314:A:C2	1:AA:2035:A:C4	3.03	0.47
1:AA:1825:U:O2'	1:AA:1826:C:H5'	2.14	0.47
1:AA:2583:C:H5"	1:AA:2584:A:H5"	1.96	0.47
3:AC:223:VAL:HG23	3:AC:223:VAL:O	2.15	0.47
11:AN:14:VAL:HG12	11:AN:52:VAL:HA	1.96	0.47
21:AX:2:LYS:NZ	21:AX:38:GLU:OE2	2.44	0.47
29:A5:35:GLU:HG3	29:A5:51:TYR:CG	2.50	0.47
30:A6:25:LYS:NZ	30:A6:51:GLU:OE1	2.46	0.47
34:BA:8:A:N7	37:BD:208:SER:OG	2.44	0.47
34:BA:111:G:H8	34:BA:111:G:O5'	1.97	0.47
34:BA:437:U:O2'	37:BD:125:HIS:CE1	2.67	0.47
36:BC:66:VAL:HG12	36:BC:68:VAL:HG23	1.97	0.47
39:BF:10:LEU:HD21	39:BF:26:ILE:HD11	1.97	0.47
41:BH:56:LYS:HB2	41:BH:58:TYR:HE1	1.78	0.47
49:BP:74:LEU:HG	49:BP:79:VAL:HG21	1.97	0.47
57:BZ:177:ILE:HD12	57:BZ:188:TYR:HE2	1.79	0.47
1:CA:300:A:P	22:CY:86:ARG:NH2	2.88	0.47
1:CA:453:C:OP1	63:CA:3747:HOH:O	2.20	0.47
1:CA:729:G:OP2	4:CD:13:ARG:NH1	2.32	0.47
1:CA:774:A:O2'	1:CA:775:G:H8	1.97	0.47
1:CA:819:A:C4	1:CA:1189:A:C2	3.03	0.47
1:CA:1843:C:H5'	4:CD:253:GLN:HE21	1.79	0.47
2:CB:20:C:H42	2:CB:63:G:H1	1.63	0.47
3:CC:15:VAL:O	3:CC:21:TYR:OH	2.29	0.47
4:CD:13:ARG:HD2	4:CD:16:MET:HE3	1.96	0.47
16:CS:53:SER:O	16:CS:57:LYS:N	2.48	0.47
26:C2:10:LEU:O	26:C2:14:ARG:HB2	2.15	0.47
32:C8:20:GLY:O	32:C8:59:LYS:HE2	2.15	0.47
34:DA:232:G:H1'	34:DA:262:A:N1	2.30	0.47
34:DA:1052:U:O2'	34:DA:1055:A:OP2	2.33	0.47
38:DE:152:ARG:HG2	41:DH:43:GLY:HA3	1.96	0.47
42:DI:8:GLY:HA3	42:DI:76:ALA:O	2.15	0.47
46:DM:82:MET:HE2	46:DM:92:HIS:HB3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DO:41:GLU:O	48:DO:44:LYS:HB2	2.15	0.47
57:DZ:162:VAL:H	57:DZ:258:VAL:HG23	1.78	0.47
61:DZ:703:FUA:H322	61:DZ:703:FUA:H16	1.74	0.47
1:AA:821:A:H2'	1:AA:821:A:N3	2.30	0.47
1:AA:1026:A:N3	1:AA:2059:G:O2'	2.39	0.47
1:AA:2137:G:H21	1:AA:2193:A:H61	1.62	0.47
1:AA:2184:G:H4'	1:AA:2194:U:H2'	1.96	0.47
1:AA:2650:G:P	5:AE:82:ARG:NH2	2.88	0.47
1:AA:2679:C:H1'	8:AH:109:PHE:HD1	1.79	0.47
3:AC:42:VAL:CG1	3:AC:43:GLU:H	2.27	0.47
3:AC:46:ALA:O	3:AC:47:LYS:HB2	2.15	0.47
5:AE:56:PRO:C	5:AE:58:ARG:H	2.23	0.47
22:AY:1:MET:HB2	22:AY:2:ARG:H	1.59	0.47
22:AY:56:PRO:C	22:AY:58:GLY:H	2.23	0.47
23:AZ:180:VAL:O	23:AZ:183:LEU:HB2	2.15	0.47
34:BA:363:A:N7	45:BL:30:ALA:HB1	2.29	0.47
34:BA:977:A:H1'	34:BA:982:U:O4	2.15	0.47
34:BA:1157:A:C6	34:BA:1180:A:C6	3.03	0.47
36:BC:22:TRP:CE2	47:BN:54:PRO:HG3	2.49	0.47
37:BD:114:ARG:HA	37:BD:117:ALA:HB3	1.96	0.47
38:BE:7:GLU:CD	38:BE:37:ARG:HH21	2.23	0.47
45:BL:26:ALA:HB3	45:BL:98:TYR:OH	2.14	0.47
51:BR:73:ALA:HB3	51:BR:79:LEU:HD12	1.96	0.47
57:BZ:120:THR:HG22	57:BZ:123:ARG:HH12	1.78	0.47
57:BZ:389:LEU:HA	57:BZ:389:LEU:HD12	1.61	0.47
1:CA:211:A:H2'	1:CA:212:G:O4'	2.14	0.47
1:CA:325:G:O2'	1:CA:326:G:H5'	2.14	0.47
1:CA:995:C:O2	11:CN:3:THR:OG1	2.28	0.47
1:CA:2711:A:H1'	63:CA:3891:HOH:O	2.14	0.47
3:CC:42:VAL:CG1	3:CC:43:GLU:H	2.28	0.47
3:CC:180:SER:O	3:CC:181:PHE:O	2.33	0.47
4:CD:85:ASP:OD2	4:CD:88:ARG:NH1	2.46	0.47
4:CD:137:PRO:O	4:CD:140:THR:OG1	2.29	0.47
5:CE:181:LEU:HD12	5:CE:181:LEU:HA	1.67	0.47
6:CF:21:ALA:CB	6:CF:22:ALA:HA	2.45	0.47
9:CK:70:GLU:O	9:CK:72:ASP:N	2.48	0.47
19:CV:55:ALA:HA	19:CV:100:ARG:O	2.15	0.47
23:CZ:8:TYR:HB2	23:CZ:38:TYR:CE2	2.49	0.47
23:CZ:28:MET:HA	23:CZ:88:PHE:O	2.15	0.47
34:DA:181:G:N1	34:DA:195:A:C8	2.83	0.47
34:DA:457:C:H2'	34:DA:458:C:C6	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:814:A:H2'	34:DA:816:A:H5"	1.97	0.47
43:DJ:78:ASN:O	43:DJ:80:LYS:N	2.47	0.47
45:DL:105:TYR:C	45:DL:107:ALA:H	2.23	0.47
50:DQ:74:LEU:HA	50:DQ:74:LEU:HD23	1.72	0.47
56:DW:41:C:H2'	56:DW:42:C:O4'	2.15	0.47
57:DZ:21:ILE:CD1	57:DZ:87:HIS:HA	2.44	0.47
1:AA:1073:A:C2	1:AA:2500:A:H5'	2.50	0.47
1:AA:1841:A:C2'	1:AA:1842:G:H5'	2.45	0.47
1:AA:1911:A:N1	1:AA:2246:G:H1'	2.29	0.47
1:AA:2021:C:H4'	1:AA:2736:C:O2	2.14	0.47
1:AA:2175:G:H2'	1:AA:2176:G:C8	2.48	0.47
1:AA:2199:C:O2'	3:AC:46:ALA:O	2.31	0.47
1:AA:2439:C:H5"	1:AA:2440:G:OP1	2.14	0.47
5:AE:47:VAL:HG22	5:AE:84:PHE:O	2.15	0.47
6:AF:18:ARG:NH2	6:AF:127:GLU:OE1	2.48	0.47
10:AL:73:PRO:O	10:AL:77:LEU:HG	2.15	0.47
11:AN:134:ARG:N	11:AN:135:PRO:HD3	2.30	0.47
19:AV:81:TYR:C	19:AV:82:ARG:HD2	2.40	0.47
23:AZ:150:LEU:HD12	23:AZ:150:LEU:HA	1.75	0.47
30:A6:40:CYS:SG	30:A6:42:TRP:HB2	2.54	0.47
34:BA:216:G:H2'	34:BA:217:C:C6	2.50	0.47
34:BA:826:C:H5'	41:BH:12:ARG:NH1	2.30	0.47
34:BA:1112:C:N3	36:BC:178:LEU:N	2.51	0.47
34:BA:1119:C:OP1	42:BI:83:ARG:NH1	2.42	0.47
35:BB:83:MET:HB2	35:BB:84:GLU:OE2	2.14	0.47
41:BH:4:ASP:OD1	41:BH:7:ALA:N	2.48	0.47
56:BW:61:C:H2'	56:BW:62:C:H6	1.79	0.47
57:BZ:300:GLU:C	57:BZ:301:ILE:HG12	2.39	0.47
1:CA:530:G:C5	1:CA:2022:U:H5"	2.50	0.47
1:CA:868:U:C4	1:CA:869:G:N7	2.83	0.47
1:CA:1496:A:N3	1:CA:1577:C:O2'	2.46	0.47
1:CA:2112:G:H2'	1:CA:2113:U:H4'	1.97	0.47
1:CA:2340:G:H2'	1:CA:2341:G:H8	1.80	0.47
1:CA:2849:U:H4'	1:CA:2868:A:C2	2.49	0.47
2:CB:22:U:H3	2:CB:61:G:H1	1.61	0.47
7:CG:164:GLU:CD	7:CG:164:GLU:H	2.20	0.47
10:CL:21:PRO:HD2	57:DZ:641:GLN:HE22	1.79	0.47
14:CQ:76:LYS:HG2	14:CQ:77:LYS:O	2.15	0.47
23:CZ:101:PRO:HA	23:CZ:123:ASP:HA	1.96	0.47
28:C4:59:PHE:HA	28:C4:60:GLN:C	2.40	0.47
34:DA:60:A:H4'	34:DA:61:G:O5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:300:A:H1'	34:DA:565:U:O2	2.15	0.47
34:DA:1312:G:N7	52:DS:2:PRO:HD2	2.30	0.47
34:DA:1442(A):G:H3'	34:DA:1442(B):A:H8	1.80	0.47
38:DE:82:VAL:HG11	38:DE:137:GLU:HB3	1.97	0.47
41:DH:63:LEU:HD23	41:DH:65:TYR:OH	2.14	0.47
42:DI:71:SER:HA	42:DI:74:ILE:HD12	1.95	0.47
48:DO:26:GLU:H	48:DO:26:GLU:HG2	1.43	0.47
52:DS:33:THR:HG21	52:DS:71:LEU:HD21	1.97	0.47
52:DS:40:ILE:HB	52:DS:67:VAL:O	2.15	0.47
56:DY:19:G:H1	56:DY:56:C:H42	1.62	0.47
57:DZ:-3:GLU:HG3	57:DZ:0:ARG:HH11	1.80	0.47
57:DZ:630:GLN:O	57:DZ:645:ALA:HB1	2.15	0.47
1:AA:616:G:O4'	32:A8:4:MET:HE2	2.14	0.46
1:AA:1038:C:O2'	1:AA:1039:G:H5'	2.14	0.46
1:AA:2871:G:O2'	1:AA:2872:G:H5'	2.15	0.46
2:AB:94:C:H2'	2:AB:95:C:H6	1.79	0.46
3:AC:6:LYS:HA	3:AC:9:ARG:NH1	2.30	0.46
3:AC:17:PRO:HG2	3:AC:18:ASN:H	1.79	0.46
3:AC:42:VAL:O	3:AC:216:THR:C	2.58	0.46
8:AH:3:ARG:HG2	8:AH:6:ARG:CG	2.45	0.46
9:AK:53:VAL:O	9:AK:85:ASP:HA	2.15	0.46
13:AP:39:LYS:HG3	13:AP:45:LEU:CD1	2.44	0.46
19:AV:21:ARG:HG3	19:AV:91:TYR:CD1	2.50	0.46
24:A0:32:ARG:O	24:A0:33:ALA:C	2.58	0.46
31:A7:38:GLY:O	31:A7:39:ARG:C	2.59	0.46
34:BA:406:G:N3	37:BD:119:GLN:NE2	2.63	0.46
34:BA:913:A:H4'	34:BA:914:A:O5'	2.15	0.46
34:BA:1411:C:H2'	34:BA:1412:C:C6	2.50	0.46
35:BB:36:ARG:O	35:BB:38:GLY:N	2.38	0.46
48:BO:18:PHE:HD1	48:BO:20:GLY:H	1.62	0.46
52:BS:40:ILE:O	52:BS:67:VAL:HG13	2.15	0.46
1:CA:284:U:H2'	1:CA:285:C:H6	1.79	0.46
1:CA:442:G:H21	6:CF:48:THR:HB	1.79	0.46
1:CA:684:G:OP1	31:C7:16:HIS:ND1	2.46	0.46
4:CD:68:LYS:HD2	4:CD:70:TRP:CH2	2.49	0.46
7:CG:43:LEU:HB3	7:CG:44:GLY:H	1.58	0.46
7:CG:76:SER:CB	7:CG:84:LYS:H	2.28	0.46
7:CG:173:LEU:HD22	7:CG:178:PHE:CE1	2.50	0.46
16:CS:29:PHE:HD1	16:CS:30:ARG:N	2.13	0.46
34:DA:17:U:H5"	38:DE:14:ARG:NH1	2.30	0.46
34:DA:20:U:H2'	34:DA:21:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:622:A:H2'	34:DA:623:C:H5'	1.96	0.46
34:DA:767:A:H2'	34:DA:768:A:O4'	2.15	0.46
34:DA:983:A:N1	34:DA:1222:G:N2	2.64	0.46
34:DA:986:A:N3	52:DS:52:TYR:OH	2.40	0.46
34:DA:1107:C:C4	34:DA:1108:G:C8	3.04	0.46
34:DA:1409:C:H2'	34:DA:1410:G:C8	2.50	0.46
34:DA:1478:C:H2'	34:DA:1479:C:H6	1.80	0.46
35:DB:71:VAL:HG23	35:DB:164:VAL:HG13	1.98	0.46
36:DC:54:ARG:HB3	36:DC:54:ARG:NH1	2.30	0.46
37:DD:22:LYS:O	37:DD:113:SER:HB3	2.15	0.46
38:DE:18:ARG:HH21	38:DE:25:ARG:CG	2.27	0.46
38:DE:78:HIS:HA	41:DH:105:ARG:HG3	1.97	0.46
52:DS:41:VAL:O	52:DS:44:MET:N	2.42	0.46
53:DT:79:ARG:HD2	53:DT:83:ARG:NH1	2.30	0.46
56:DW:19:G:N2	56:DW:57:G:H1'	2.31	0.46
56:DY:9:A:H5'	56:DY:46:7MG:H1'	1.98	0.46
56:DY:30:G:H2'	56:DY:31:A:H8	1.79	0.46
57:DZ:92:ILE:HG21	57:DZ:437:THR:HG21	1.97	0.46
57:DZ:181:LEU:HD12	57:DZ:216:LEU:HD11	1.95	0.46
57:DZ:539:ILE:HA	57:DZ:542:VAL:HG12	1.98	0.46
1:AA:495:G:O6	31:A7:37:LYS:HE2	2.16	0.46
1:AA:1033:G:O2'	1:AA:1046:A:N3	2.41	0.46
1:AA:1470:G:H2'	1:AA:1471:G:O4'	2.15	0.46
1:AA:1938:A:H2'	1:AA:1939:U:O4'	2.16	0.46
1:AA:2399:U:OP1	24:A0:55:ARG:NH2	2.48	0.46
1:AA:2760:G:C2	1:AA:2769:U:C5	3.03	0.46
7:AG:60:LEU:HA	7:AG:63:ILE:HD12	1.97	0.46
21:AX:53:LYS:HB3	21:AX:82:GLN:HB3	1.97	0.46
22:AY:9:LYS:HE3	22:AY:28:LYS:O	2.15	0.46
34:BA:414:A:C5	34:BA:431:A:C2	3.04	0.46
34:BA:753:A:H4'	34:BA:754:C:H5"	1.97	0.46
34:BA:944:G:O2'	34:BA:1339:A:N6	2.44	0.46
34:BA:1456:G:H1'	53:BT:39:LYS:NZ	2.30	0.46
53:BT:57:ARG:HH12	53:BT:100:ILE:HG13	1.80	0.46
56:BW:7:A:H5"	56:BW:7:A:C8	2.50	0.46
1:CA:225:A:N6	1:CA:226:G:C2	2.84	0.46
1:CA:729:G:C4	1:CA:1775:U:O2	2.68	0.46
1:CA:736:C:H2'	1:CA:737:C:C6	2.50	0.46
1:CA:912:C:H2'	1:CA:913:U:H6	1.79	0.46
1:CA:1021:A:C8	1:CA:1021:A:H3'	2.50	0.46
1:CA:1220:A:OP2	18:CU:19:LYS:NZ	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2103:C:H1'	1:CA:2187:G:H22	1.79	0.46
1:CA:2277:G:H5"	14:CQ:87:LYS:HB3	1.97	0.46
34:DA:1126:U:H3	43:DJ:40:LEU:HD11	1.81	0.46
34:DA:1241:G:H2'	34:DA:1242:C:C6	2.50	0.46
34:DA:1326:C:H5"	54:DU:18:TYR:O	2.15	0.46
35:DB:121:LEU:O	35:DB:127:ILE:HB	2.16	0.46
35:DB:145:LEU:O	35:DB:149:LEU:HB2	2.14	0.46
40:DG:78:ARG:HG2	40:DG:79:ARG:H	1.80	0.46
46:DM:60:VAL:HG23	46:DM:64:TRP:CE3	2.50	0.46
50:DQ:24:GLU:HB3	50:DQ:39:SER:HB3	1.97	0.46
52:DS:15:LEU:HG	52:DS:18:LYS:HD3	1.96	0.46
55:DV:17:U:C2	56:DW:36:A:C2	3.03	0.46
57:DZ:2:LYS:O	57:DZ:6:GLU:HB2	2.15	0.46
57:DZ:637:ARG:O	57:DZ:639:ASN:N	2.47	0.46
1:AA:941:U:H5'	1:AA:942:A:OP2	2.16	0.46
1:AA:1480:A:N6	1:AA:1605:A:N6	2.61	0.46
1:AA:1501:U:O2'	1:AA:1502:G:N7	2.48	0.46
1:AA:2074:G:H4'	5:AE:143:ASN:O	2.15	0.46
1:AA:2149:G:H2'	1:AA:2150:C:C6	2.51	0.46
1:AA:2178:G:H2'	1:AA:2179:G:C4	2.51	0.46
1:AA:2729:U:O2'	1:AA:2730:G:H5'	2.15	0.46
2:AB:43:C:OP1	28:A4:6:HIS:NE2	2.42	0.46
4:AD:70:TRP:HB3	4:AD:190:TYR:CZ	2.50	0.46
18:AU:65:ILE:HD11	18:AU:95:LEU:HB3	1.97	0.46
34:BA:354:G:H2'	34:BA:355:C:H5'	1.98	0.46
34:BA:431:A:H2'	34:BA:432:A:O4'	2.15	0.46
34:BA:684:A:O2'	44:BK:39:PRO:O	2.33	0.46
34:BA:763:G:H2'	34:BA:764:C:H6	1.79	0.46
34:BA:1427:U:H2'	34:BA:1428:A:C8	2.50	0.46
34:BA:1429:C:H2'	34:BA:1430:C:C6	2.50	0.46
37:BD:8:VAL:HG22	37:BD:21:LEU:HD13	1.98	0.46
37:BD:101:LEU:O	37:BD:104:VAL:N	2.48	0.46
38:BE:28:PHE:CD2	38:BE:51:VAL:HG22	2.51	0.46
44:BK:43:SER:OG	44:BK:44:SER:N	2.49	0.46
46:BM:80:ARG:NH2	52:BS:69:HIS:HE1	2.13	0.46
56:BY:28:G:H2'	56:BY:29:G:H8	1.80	0.46
1:CA:1225:G:C2	1:CA:1226:A:C2	3.03	0.46
1:CA:1762:A:N1	63:CA:3803:HOH:O	2.36	0.46
1:CA:1842:G:O3'	4:CD:253:GLN:NE2	2.43	0.46
1:CA:2577:A:O2'	29:C5:2:ALA:HB1	2.15	0.46
4:CD:89:SER:HB2	4:CD:159:ALA:CB	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:13:ARG:O	17:CT:57:PHE:HE2	1.98	0.46
34:DA:920:U:H2'	34:DA:921:U:H6	1.79	0.46
36:DC:186:PHE:HE2	36:DC:188:LEU:HB2	1.80	0.46
37:DD:83:SER:HA	37:DD:89:THR:OG1	2.15	0.46
42:DI:47:LEU:HB3	42:DI:50:LEU:HD12	1.96	0.46
45:DL:78:GLN:HG3	45:DL:79:GLU:O	2.16	0.46
57:DZ:-9:LEU:O	57:DZ:-6:ARG:HB2	2.16	0.46
57:DZ:94:VAL:HG21	57:DZ:121:VAL:HG23	1.96	0.46
57:DZ:329:ARG:HD3	57:DZ:331:TYR:CZ	2.50	0.46
57:DZ:499:ARG:HB2	57:DZ:506:GLN:HB3	1.97	0.46
57:DZ:639:ASN:HA	57:DZ:640:ALA:O	2.15	0.46
1:AA:1764:G:C2'	1:AA:1765:U:H5'	2.45	0.46
1:AA:2149:G:N2	1:AA:2195:A:H1'	2.30	0.46
1:AA:2198:A:O2'	3:AC:45:HIS:CG	2.68	0.46
1:AA:2594:G:C2	1:AA:2595:G:C8	3.04	0.46
11:AN:91:LEU:HD23	11:AN:91:LEU:HA	1.81	0.46
20:AW:71:VAL:HA	20:AW:107:LEU:HD12	1.97	0.46
25:A1:64:ALA:HA	25:A1:67:ILE:HG13	1.97	0.46
34:BA:453:A:C6	34:BA:454:C:C4	3.04	0.46
34:BA:590:C:H2'	34:BA:591:U:H6	1.79	0.46
34:BA:1226:C:O2'	46:BM:111:LYS:NZ	2.48	0.46
34:BA:1346:A:N1	34:BA:1374:A:H5"	2.30	0.46
34:BA:1412:C:H2'	34:BA:1413:A:C8	2.51	0.46
35:BB:60:ASP:OD2	35:BB:64:ARG:NH2	2.48	0.46
38:BE:91:LEU:HD12	38:BE:120:THR:HG22	1.97	0.46
42:BI:100:GLY:O	42:BI:103:THR:HG22	2.15	0.46
44:BK:20:TYR:O	44:BK:30:VAL:HA	2.15	0.46
57:BZ:169:GLY:HA3	57:BZ:174:PHE:HA	1.97	0.46
1:CA:99:U:O4	22:CY:8:LYS:NZ	2.28	0.46
1:CA:336:C:OP1	22:CY:84:ARG:HG2	2.15	0.46
3:CC:30:VAL:CG2	3:CC:31:LYS:N	2.78	0.46
4:CD:124:PRO:HD2	4:CD:129:ASN:ND2	2.30	0.46
5:CE:46:ALA:HB2	5:CE:82:ARG:HA	1.97	0.46
8:CH:35:VAL:HA	8:CH:36:PRO:HD2	1.60	0.46
8:CH:124:GLU:HB2	8:CH:132:ARG:HB3	1.97	0.46
10:CL:10:LEU:N	10:CL:55:VAL:O	2.48	0.46
13:CP:96:THR:OG1	13:CP:98:GLU:HG2	2.15	0.46
14:CQ:103:MET:HE1	14:CQ:125:LEU:HD13	1.98	0.46
14:CQ:104:PHE:O	14:CQ:105:GLU:HG3	2.14	0.46
34:DA:396:G:H2'	34:DA:397:A:H5"	1.97	0.46
34:DA:743:U:H2'	34:DA:744:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:782:A:O3'	34:DA:1515:C:H4'	2.16	0.46
34:DA:834:C:H2'	34:DA:835:U:H6	1.80	0.46
35:DB:29:ALA:HA	35:DB:32:ILE:HD12	1.97	0.46
46:DM:3:ARG:NH1	46:DM:4:ILE:HB	2.31	0.46
50:DQ:66:SER:OG	50:DQ:69:LYS:HB2	2.15	0.46
52:DS:3:ARG:NH2	52:DS:10:PHE:HB2	2.30	0.46
57:DZ:435:ASP:O	57:DZ:438:PHE:HD1	1.98	0.46
1:AA:1120:G:H2'	1:AA:1121:C:C6	2.51	0.46
1:AA:1153:G:H2'	1:AA:1154:U:O2	2.15	0.46
1:AA:1387:U:O2	21:AX:80:ILE:HD12	2.15	0.46
1:AA:1466:U:HO2'	1:AA:1467:G:P	2.36	0.46
1:AA:1817:A:H8	63:AA:4419:HOH:O	1.98	0.46
1:AA:1934:A:N1	34:BA:1407:C:O2'	2.40	0.46
7:AG:105:LYS:HG2	28:A4:24:THR:HG21	1.96	0.46
8:AH:3:ARG:HG2	8:AH:6:ARG:CD	2.45	0.46
10:AL:95:LYS:HG2	10:AL:137:GLU:HB3	1.97	0.46
18:AU:24:TYR:HB3	18:AU:28:ARG:HB3	1.97	0.46
18:AU:108:GLU:OE2	18:AU:112:ARG:NH1	2.44	0.46
27:A3:32:GLN:HA	27:A3:32:GLN:NE2	2.29	0.46
34:BA:669:U:C2	34:BA:670:G:C8	3.03	0.46
35:BB:64:ARG:HE	35:BB:64:ARG:HB2	1.29	0.46
38:BE:37:ARG:HH12	38:BE:111:GLU:HG2	1.81	0.46
42:BI:9:ARG:HG2	42:BI:14:VAL:HG22	1.97	0.46
1:CA:20:C:H2'	1:CA:21:A:H8	1.81	0.46
1:CA:910:A:C5	14:CQ:13:GLN:HG3	2.50	0.46
1:CA:1633:G:C5	1:CA:1635:G:C5	3.03	0.46
1:CA:2024:G:O2'	1:CA:2025:C:H5'	2.16	0.46
2:CB:114:C:H4'	16:CS:46:VAL:HG22	1.97	0.46
3:CC:20:VAL:O	3:CC:224:ARG:O	2.33	0.46
12:CO:97:ARG:NH1	34:DA:339:C:OP2	2.44	0.46
12:CO:111:PHE:O	12:CO:115:VAL:HG23	2.16	0.46
33:C9:22:ARG:HB2	33:C9:24:TYR:CE1	2.50	0.46
34:DA:954:G:H21	34:DA:1227:A:H62	1.63	0.46
34:DA:1039:C:H2'	34:DA:1040:U:O4'	2.15	0.46
34:DA:1239:A:H62	34:DA:1299:A:N6	2.13	0.46
37:DD:117:ALA:HA	37:DD:120:LEU:HB2	1.97	0.46
50:DQ:85:VAL:O	50:DQ:89:LEU:HB2	2.16	0.46
57:DZ:36:THR:HG22	57:DZ:74:TRP:HA	1.97	0.46
57:DZ:106:VAL:HG23	57:DZ:132:ARG:HB2	1.97	0.46
1:AA:606:G:OP2	18:AU:10:ARG:HD2	2.15	0.46
1:AA:1068:G:C5	1:AA:1185:C:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1324:A:OP1	15:AR:36:THR:CG2	2.63	0.46
1:AA:1370:G:C4	1:AA:1374:G:O6	2.68	0.46
1:AA:1884:A:O2'	1:AA:1885:A:H5'	2.15	0.46
1:AA:1932:G:C2	1:AA:1943:G:C4	3.04	0.46
21:AX:10:ALA:HA	26:A2:37:PHE:CE1	2.51	0.46
23:AZ:111:VAL:C	23:AZ:113:ALA:N	2.73	0.46
26:A2:22:GLU:OE2	26:A2:68:ARG:NH2	2.49	0.46
29:A5:16:ARG:HG2	29:A5:17:ASP:OD1	2.15	0.46
34:BA:965:A:C2	34:BA:969:A:C2	3.04	0.46
34:BA:1323:G:H4'	34:BA:1363:C:N3	2.30	0.46
35:BB:37:ASN:OD1	35:BB:37:ASN:N	2.48	0.46
35:BB:78:GLN:O	35:BB:94:ASN:ND2	2.37	0.46
49:BP:71:ARG:O	49:BP:75:ARG:N	2.35	0.46
1:CA:1432:C:H2'	1:CA:1433:U:O4'	2.16	0.46
1:CA:2887:U:H2'	1:CA:2888:C:C6	2.50	0.46
3:CC:223:VAL:HG23	3:CC:223:VAL:O	2.15	0.46
7:CG:107:LEU:HD11	7:CG:178:PHE:CE1	2.51	0.46
8:CH:13:LYS:HA	8:CH:14:GLY:HA2	1.61	0.46
14:CQ:29:PHE:HB3	14:CQ:65:PHE:CD2	2.50	0.46
14:CQ:72:LYS:HA	14:CQ:73:PRO:HD3	1.84	0.46
17:CT:41:ARG:CZ	34:DA:345:C:H3'	2.45	0.46
22:CY:31:LEU:HD23	22:CY:31:LEU:HA	1.79	0.46
34:DA:530:G:O2'	34:DA:531:U:OP1	2.27	0.46
34:DA:1078:U:H1'	38:DE:130:ASN:HD21	1.81	0.46
34:DA:1086:U:H3	34:DA:1099:G:N2	2.06	0.46
34:DA:1307:U:H2'	34:DA:1308:U:C6	2.51	0.46
45:DL:35:GLY:HA2	45:DL:60:LEU:HA	1.97	0.46
50:DQ:6:LEU:HB3	50:DQ:23:VAL:HG21	1.97	0.46
57:DZ:619:ASP:HB3	57:DZ:662:LYS:CD	2.44	0.46
1:AA:733:G:H1	31:A7:16:HIS:CD2	2.34	0.46
1:AA:753:A:H2'	1:AA:754:G:O4'	2.16	0.46
1:AA:2078:G:C2	1:AA:2079:A:C8	3.04	0.46
1:AA:2087:C:H2'	1:AA:2088:C:C6	2.51	0.46
1:AA:2326:C:C2	1:AA:2327:G:C8	3.03	0.46
5:AE:120:TRP:CE2	5:AE:155:LYS:HG2	2.51	0.46
7:AG:18:GLU:O	7:AG:21:ARG:HB2	2.16	0.46
9:AK:74:LEU:O	9:AK:76:GLY:N	2.39	0.46
17:AT:105:LEU:HD23	17:AT:105:LEU:HA	1.62	0.46
34:BA:502:G:C6	34:BA:503:C:C4	3.03	0.46
34:BA:812:C:OP1	34:BA:903:G:H1'	2.15	0.46
34:BA:1191:A:H5"	36:BC:4:LYS:HZ2	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1437:C:H2'	34:BA:1438:G:C8	2.50	0.46
46:BM:20:THR:C	46:BM:22:ILE:H	2.24	0.46
57:BZ:75:LYS:HD2	57:BZ:75:LYS:HA	1.64	0.46
57:BZ:166:LEU:HA	57:BZ:166:LEU:HD12	1.71	0.46
57:BZ:309:LEU:CA	57:BZ:333:GLY:HA3	2.45	0.46
61:BZ:703:FUA:C20	61:BZ:703:FUA:O1	2.62	0.46
1:CA:55:G:N3	1:CA:127:A:C2	2.84	0.46
1:CA:909:A:C6	1:CA:912:C:C2	3.03	0.46
1:CA:1097:U:O2	10:CL:22:PRO:HG3	2.16	0.46
1:CA:2094:G:C2	1:CA:2196:C:C2	3.03	0.46
1:CA:2272:U:H5"	1:CA:2273:A:OP1	2.16	0.46
1:CA:2563:U:O2	1:CA:2565:A:H8	1.98	0.46
1:CA:2690:C:OP2	15:CR:14:SER:HB2	2.15	0.46
3:CC:42:VAL:O	3:CC:216:THR:C	2.58	0.46
6:CF:123:LEU:HD12	6:CF:124:LEU:N	2.31	0.46
14:CQ:32:TYR:OH	14:CQ:111:GLU:OE1	2.22	0.46
33:C9:17:ILE:HG23	33:C9:24:TYR:HB2	1.98	0.46
34:DA:109:A:H2'	34:DA:326:G:N2	2.31	0.46
34:DA:935:A:H61	40:DG:3:ARG:HG3	1.80	0.46
34:DA:986:A:H1'	52:DS:55:LYS:HA	1.97	0.46
37:DD:5:ILE:HG23	37:DD:5:ILE:O	2.15	0.46
38:DE:151:LEU:HD11	41:DH:77:GLU:OE1	2.16	0.46
43:DJ:35:SER:HB3	43:DJ:73:ASP:HB2	1.96	0.46
57:DZ:199:ILE:HB	57:DZ:200:PRO:HD2	1.97	0.46
1:AA:311:C:H2'	1:AA:312:C:H6	1.81	0.46
1:AA:509:A:C2'	1:AA:510:C:H5'	2.46	0.46
1:AA:624:C:OP1	6:AF:108:LYS:HE3	2.15	0.46
1:AA:750:U:H2'	1:AA:751:G:O4'	2.15	0.46
1:AA:1160:G:H2'	1:AA:1161:G:H8	1.81	0.46
1:AA:1321:A:H4'	1:AA:1322:A:OP1	2.15	0.46
1:AA:1487:G:H2'	1:AA:1488:G:C8	2.50	0.46
1:AA:1566:U:H2'	1:AA:1567:G:O4'	2.16	0.46
1:AA:2116:G:C2	1:AA:2218:C:C2	3.04	0.46
1:AA:2162:C:O2	1:AA:2162:C:H2'	2.15	0.46
1:AA:2183:C:O2'	1:AA:2195:A:H4'	2.15	0.46
1:AA:2319:G:H4'	1:AA:2320:G:O5'	2.16	0.46
2:AB:111:G:H2'	2:AB:112:U:H6	1.81	0.46
3:AC:176:VAL:O	3:AC:176:VAL:HG12	2.15	0.46
4:AD:3:VAL:HG13	4:AD:17:THR:HB	1.98	0.46
6:AF:192:LEU:CD2	6:AF:194:MET:HE2	2.45	0.46
7:AG:44:GLY:C	7:AG:46:ALA:H	2.22	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AK:48:GLY:C	9:AK:90:ALA:HB1	2.40	0.46
27:A3:26:LEU:O	27:A3:35:ARG:NE	2.45	0.46
34:BA:976:G:C8	34:BA:1362:C:N4	2.84	0.46
34:BA:1001:A:H2'	34:BA:1001(A):G:C8	2.51	0.46
37:BD:22:LYS:HG3	60:BD:501:SF4:S4	2.56	0.46
42:BI:9:ARG:HD2	42:BI:104:ARG:NH1	2.31	0.46
46:BM:8:GLU:OE2	46:BM:11:ARG:NH2	2.48	0.46
1:CA:1265:A:O4'	1:CA:1267:U:C6	2.69	0.46
1:CA:1449:A:H5'	1:CA:1450:G:OP2	2.16	0.46
1:CA:1682:G:H2'	1:CA:1683:C:C6	2.51	0.46
1:CA:2439:A:H5"	1:CA:2439:A:H8	1.75	0.46
3:CC:30:VAL:CG2	3:CC:31:LYS:H	2.27	0.46
7:CG:135:LEU:HD23	7:CG:155:MET:SD	2.56	0.46
7:CG:143:GLU:HA	28:C4:31:ILE:HD13	1.98	0.46
15:CR:67:LEU:HD13	15:CR:76:VAL:HG21	1.98	0.46
16:CS:103:GLU:O	16:CS:107:GLU:HG3	2.15	0.46
20:CW:54:ALA:HB1	20:CW:107:LEU:HD22	1.96	0.46
23:CZ:134:PRO:C	23:CZ:136:PHE:H	2.23	0.46
29:C5:35:GLU:HG2	29:C5:51:TYR:CD2	2.51	0.46
34:DA:345:C:H4'	34:DA:346:G:O4'	2.15	0.46
34:DA:416:G:C6	34:DA:417:C:C4	3.03	0.46
34:DA:622:A:C8	34:DA:623:C:C5	3.04	0.46
34:DA:730:G:C5	34:DA:731:G:H1'	2.50	0.46
40:DG:46:ALA:HB1	40:DG:121:ALA:HB2	1.98	0.46
1:AA:343:C:H2'	1:AA:344:A:O4'	2.15	0.46
1:AA:2356:U:OP1	30:A6:37:ARG:HD3	2.15	0.46
1:AA:2843:G:H4'	1:AA:2844:G:OP2	2.15	0.46
7:AG:79:ASN:OD1	7:AG:79:ASN:N	2.32	0.46
13:AP:29:LYS:HG2	13:AP:30:THR:HG23	1.98	0.46
17:AT:37:GLY:C	17:AT:39:ARG:H	2.23	0.46
34:BA:43:C:N4	34:BA:399:G:H1	2.14	0.46
34:BA:572:A:H5'	34:BA:573:A:OP2	2.15	0.46
34:BA:865:A:N3	34:BA:918:A:O2'	2.35	0.46
34:BA:1036:G:H2'	34:BA:1036:G:N3	2.31	0.46
34:BA:1298:C:C5	40:BG:114:ARG:HD2	2.50	0.46
48:BO:61:GLY:O	48:BO:64:ARG:HB3	2.16	0.46
50:BQ:45:HIS:O	50:BQ:73:VAL:HG23	2.16	0.46
57:BZ:97:SER:O	57:BZ:101:LEU:HD12	2.16	0.46
57:BZ:141:LYS:O	57:BZ:171:GLU:HB3	2.16	0.46
57:BZ:203:GLU:CD	57:BZ:203:GLU:H	2.24	0.46
1:CA:288:C:O2'	1:CA:289:A:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:637:A:H4'	1:CA:638:G:O5'	2.16	0.46
1:CA:2625:G:H2'	1:CA:2626:C:O4'	2.16	0.46
1:CA:2784:C:H1'	5:CE:37:ARG:NH1	2.30	0.46
5:CE:182:LEU:C	5:CE:182:LEU:HD12	2.41	0.46
13:CP:135:LEU:HD23	13:CP:135:LEU:HA	1.86	0.46
14:CQ:81:VAL:HB	24:C0:7:LEU:HD21	1.98	0.46
16:CS:5:THR:OG1	16:CS:8:GLU:OE2	2.22	0.46
23:CZ:7:ALA:HB2	23:CZ:59:LEU:HD22	1.97	0.46
23:CZ:59:LEU:O	23:CZ:61:LEU:HD22	2.16	0.46
25:C1:21:ARG:HD3	25:C1:35:THR:HG21	1.96	0.46
34:DA:73:G:C6	34:DA:97:G:C6	3.03	0.46
34:DA:113:G:N3	34:DA:353:A:O2'	2.44	0.46
34:DA:279:A:OP2	50:DQ:95:TYR:OH	2.32	0.46
34:DA:298:A:H8	34:DA:298:A:O5'	1.98	0.46
34:DA:687:A:H4'	34:DA:688:G:O5'	2.16	0.46
34:DA:717:C:H4'	44:DK:117:ASN:HD22	1.81	0.46
35:DB:7:VAL:HG12	35:DB:8:LYS:HG2	1.98	0.46
39:DF:2:ARG:CZ	39:DF:69:GLU:HG2	2.46	0.46
56:DY:65:G:H2'	56:DY:66:U:C6	2.51	0.46
57:DZ:74:TRP:HE1	57:DZ:273:LEU:C	2.24	0.46
57:DZ:151:ARG:O	57:DZ:154:GLN:HG2	2.15	0.46
1:AA:553:A:H2	1:AA:2065:C:C5'	2.28	0.46
1:AA:596:G:O2'	1:AA:597:C:H3'	2.15	0.46
1:AA:645:G:N3	1:AA:645:G:H5'	2.30	0.46
1:AA:732:A:H1'	1:AA:735:U:O4	2.16	0.46
1:AA:2047:C:H2'	1:AA:2048:C:C6	2.51	0.46
5:AE:18:ASP:HB3	17:AT:82:LEU:HD11	1.97	0.46
7:AG:75:LYS:HE3	7:AG:77:ILE:HD11	1.98	0.46
20:AW:2:GLU:OE2	20:AW:72:LYS:NZ	2.31	0.46
20:AW:83:LYS:C	20:AW:84:ARG:HD3	2.41	0.46
26:A2:51:ARG:HD3	26:A2:55:ARG:NH1	2.30	0.46
34:BA:27:G:C5	34:BA:557:G:C2	3.04	0.46
34:BA:403:C:H2'	34:BA:404:U:C6	2.47	0.46
34:BA:581:G:O2'	34:BA:582:U:H5'	2.15	0.46
34:BA:1203:C:H2'	34:BA:1204:A:H8	1.81	0.46
34:BA:1401:G:N2	34:BA:1402:C:H1'	2.31	0.46
35:BB:69:LEU:HD12	35:BB:70:PHE:N	2.31	0.46
36:BC:181:ASN:HB3	36:BC:204:LEU:HB2	1.97	0.46
37:BD:101:LEU:HG	37:BD:121:VAL:HG11	1.98	0.46
48:BO:9:GLN:HA	48:BO:12:ILE:HD12	1.98	0.46
54:BU:8:THR:O	54:BU:12:LYS:HB2	2.17	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:271(S):G:C6	1:CA:271(T):C:C4	3.03	0.46
1:CA:1711:C:H2'	1:CA:1712:C:H6	1.80	0.46
1:CA:1882:C:H2'	1:CA:1883:G:O4'	2.16	0.46
1:CA:2169:A:H2'	1:CA:2170:A:C8	2.51	0.46
1:CA:2176:A:C3'	3:CC:45:HIS:CD2	3.00	0.46
2:CB:59:A:H2'	2:CB:60:C:O4'	2.16	0.46
3:CC:46:ALA:O	3:CC:47:LYS:HB2	2.15	0.46
10:CL:44:ALA:O	10:CL:47:ASN:HB3	2.16	0.46
23:CZ:19:ARG:HA	23:CZ:23:LYS:O	2.16	0.46
23:CZ:53:ILE:HD12	23:CZ:99:TYR:HB2	1.98	0.46
32:C8:34:TRP:CE2	32:C8:35:GLN:HG2	2.50	0.46
34:DA:302:G:N3	34:DA:556:C:H4'	2.30	0.46
35:DB:116:GLU:HA	35:DB:119:GLU:HB2	1.98	0.46
39:DF:33:TYR:CD1	39:DF:75:LEU:HD23	2.51	0.46
50:DQ:52:LYS:HE3	50:DQ:52:LYS:HB2	1.74	0.46
57:DZ:188:TYR:CD1	57:DZ:196:ILE:HD13	2.51	0.46
57:DZ:488:THR:O	57:DZ:516:PRO:HG3	2.15	0.46
1:AA:464:G:H8	1:AA:464:G:O5'	1.98	0.45
2:AB:27:C:H5"	16:AS:54:LEU:HD13	1.98	0.45
3:AC:20:VAL:O	3:AC:224:ARG:O	2.34	0.45
3:AC:211:ARG:HG2	3:AC:211:ARG:HH11	1.81	0.45
13:AP:81:GLN:OE1	13:AP:106:LEU:HA	2.16	0.45
17:AT:61:PHE:CE1	17:AT:78:LEU:HD23	2.51	0.45
28:A4:16:CYS:HA	28:A4:33:VAL:HB	1.98	0.45
34:BA:232:G:H1'	34:BA:262:A:N1	2.30	0.45
35:BB:213:LEU:O	35:BB:213:LEU:HD23	2.15	0.45
37:BD:107:ARG:HH22	37:BD:194:LEU:HD11	1.81	0.45
42:BI:118:LYS:HG3	42:BI:121:ARG:HB3	1.98	0.45
56:BW:14:A:C2	56:BW:15:G:H1'	2.51	0.45
57:BZ:162:VAL:O	57:BZ:164:MET:HG2	2.16	0.45
1:CA:1562:A:H2'	1:CA:1563:G:C8	2.51	0.45
7:CG:96:ARG:N	7:CG:99:MET:HE2	2.31	0.45
34:DA:201:C:H42	34:DA:216:G:H22	1.63	0.45
34:DA:350:G:O2'	34:DA:351:G:H5'	2.16	0.45
34:DA:407:G:C6	34:DA:408:A:C6	3.04	0.45
34:DA:926:G:H5"	34:DA:927:G:O5'	2.16	0.45
34:DA:1124:G:O2'	34:DA:1145:C:C4	2.69	0.45
35:DB:28:PHE:CD1	35:DB:190:THR:HG22	2.51	0.45
35:DB:101:MET:HA	35:DB:108:ILE:HG13	1.98	0.45
40:DG:59:LEU:HG	40:DG:63:LYS:HE2	1.97	0.45
44:DK:22:HIS:HB3	44:DK:29:ILE:HB	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DR:56:THR:HB	51:DR:58:LEU:HD23	1.96	0.45
56:DW:65:G:H2'	56:DW:66:U:C6	2.51	0.45
56:DY:9:A:H8	56:DY:11:C:H41	1.64	0.45
1:AA:26:G:C6	1:AA:27:G:N1	2.85	0.45
1:AA:886:U:H1'	1:AA:1236:G:H1'	1.98	0.45
1:AA:950:C:H2'	1:AA:951:U:C6	2.51	0.45
1:AA:1157:A:H2'	1:AA:1158:G:O4'	2.16	0.45
1:AA:1773:C:H2'	1:AA:1774:C:C6	2.51	0.45
1:AA:2500:A:H2'	1:AA:2501:G:O4'	2.16	0.45
2:AB:63:G:H2'	2:AB:64:C:C6	2.52	0.45
3:AC:48:LEU:HD23	3:AC:59:VAL:HG21	1.98	0.45
14:AQ:2:LEU:HG	14:AQ:69:PHE:CD2	2.51	0.45
15:AR:65:LEU:HD12	15:AR:65:LEU:HA	1.73	0.45
16:AS:39:ILE:HB	16:AS:49:VAL:CG1	2.46	0.45
22:AY:99:CYS:SG	22:AY:101:LYS:HB2	2.56	0.45
24:A0:73:GLY:O	24:A0:74:ARG:C	2.60	0.45
34:BA:642:A:H2'	34:BA:643:C:C6	2.51	0.45
34:BA:781:A:C5	34:BA:802:A:C2	3.04	0.45
34:BA:1241:G:H1	34:BA:1296:C:H42	1.63	0.45
37:BD:178:VAL:HG12	37:BD:179:GLU:H	1.81	0.45
38:BE:37:ARG:NH1	38:BE:111:GLU:HG2	2.31	0.45
42:BI:23:ASN:N	42:BI:60:ASP:OD1	2.49	0.45
45:BL:88:GLY:O	45:BL:99:HIS:HD2	1.99	0.45
1:CA:271(H):G:O2'	1:CA:271(I):G:H8	1.99	0.45
1:CA:1054:A:O2'	9:CK:30:GLN:O	2.35	0.45
1:CA:2177:C:O2'	3:CC:171:ALA:HB2	2.16	0.45
1:CA:2478:A:OP2	33:C9:2:LYS:NZ	2.46	0.45
2:CB:94:C:H2'	2:CB:95:C:H6	1.81	0.45
6:CF:53:THR:CG2	6:CF:55:GLY:H	2.28	0.45
7:CG:106:LEU:O	7:CG:110:ALA:HB3	2.16	0.45
10:CL:134:MET:HG3	10:CL:136:VAL:HG12	1.98	0.45
14:CQ:7:MET:HE2	14:CQ:7:MET:HB3	1.79	0.45
17:CT:23:ARG:HG3	17:CT:120:ARG:CZ	2.46	0.45
18:CU:17:ILE:HD13	18:CU:17:ILE:HA	1.87	0.45
31:C7:19:ARG:HG2	31:C7:19:ARG:NH1	2.31	0.45
34:DA:45:U:H2'	34:DA:46:G:C8	2.51	0.45
34:DA:688:G:H2'	34:DA:689:C:H6	1.81	0.45
34:DA:718:G:H5'	44:DK:117:ASN:HB2	1.98	0.45
34:DA:1410:G:H2'	34:DA:1411:C:C6	2.51	0.45
35:DB:16:HIS:CG	35:DB:17:PHE:N	2.84	0.45
37:DD:79:PHE:CE1	37:DD:204:ILE:HD13	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DM:20:THR:C	46:DM:22:ILE:H	2.25	0.45
50:DQ:65:ILE:HD11	50:DQ:72:ARG:HD2	1.98	0.45
57:DZ:7:ASN:O	57:DZ:11:ARG:NH2	2.45	0.45
57:DZ:21:ILE:HD12	57:DZ:87:HIS:HA	1.98	0.45
57:DZ:182:ARG:NH2	57:DZ:278:ASP:OD2	2.49	0.45
57:DZ:184:LYS:HB2	57:DZ:184:LYS:NZ	2.32	0.45
57:DZ:411:VAL:HB	57:DZ:459:LEU:HD13	1.99	0.45
1:AA:180:A:H2'	1:AA:181:C:C6	2.51	0.45
1:AA:1114:G:N2	1:AA:1142:A:H5'	2.31	0.45
1:AA:1136:U:C2	1:AA:1148:C:H1'	2.51	0.45
1:AA:1632:A:O5'	1:AA:1632:A:H8	1.99	0.45
1:AA:2343:G:O2'	1:AA:2348:A:N1	2.41	0.45
6:AF:184:TYR:CE2	6:AF:188:ARG:HD2	2.50	0.45
10:AL:20:ALA:HB1	57:BZ:636:PRO:HG2	1.97	0.45
34:BA:419:C:O2	34:BA:424:G:N2	2.43	0.45
34:BA:510:A:N3	34:BA:543:C:H1'	2.31	0.45
34:BA:938:A:C6	34:BA:939:G:C5	3.05	0.45
34:BA:958:A:N6	52:BS:77:THR:O	2.48	0.45
34:BA:1064:G:H4'	34:BA:1065:U:OP1	2.14	0.45
34:BA:1437:C:H2'	34:BA:1438:G:H8	1.82	0.45
36:BC:26:LYS:H	36:BC:26:LYS:HG3	1.59	0.45
41:BH:41:ARG:HH22	41:BH:123:GLU:CD	2.24	0.45
46:BM:40:ASN:HA	46:BM:41:PRO:HD3	1.81	0.45
48:BO:15:PHE:CZ	48:BO:84:LYS:HD2	2.51	0.45
57:BZ:39:ILE:HD12	57:BZ:40:HIS:H	1.81	0.45
57:BZ:388:THR:OG1	57:BZ:399:LEU:HB2	2.16	0.45
57:BZ:505:GLY:HA2	57:BZ:576:ASP:OD2	2.16	0.45
1:CA:188:G:H2'	1:CA:189:G:H5'	1.98	0.45
1:CA:901:A:H5"	1:CA:902:C:OP2	2.17	0.45
1:CA:942:G:O2'	1:CA:943:U:H5'	2.16	0.45
1:CA:1068:G:O2'	1:CA:1096:A:O2'	2.26	0.45
1:CA:1996:C:H4'	1:CA:1997:G:OP1	2.17	0.45
3:CC:37:LYS:O	3:CC:38:PHE:HB3	2.17	0.45
4:CD:101:GLU:HG3	4:CD:102:LYS:N	2.31	0.45
5:CE:120:TRP:CE3	5:CE:155:LYS:HD3	2.52	0.45
6:CF:137:LYS:HB3	6:CF:137:LYS:HE2	1.55	0.45
8:CH:3:ARG:CZ	8:CH:5:GLY:H	2.30	0.45
10:CL:59:ILE:HG12	10:CL:60:TYR:N	2.31	0.45
10:CL:107:ILE:HG21	10:CL:127:ILE:HG21	1.98	0.45
14:CQ:135:ASP:HB2	14:CQ:137:TYR:HB2	1.98	0.45
22:CY:2:ARG:CZ	22:CY:4:LYS:HD2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:49:U:H3	34:DA:362:G:H1'	1.80	0.45
34:DA:245:C:O2	34:DA:283:C:N3	2.48	0.45
34:DA:617:G:C6	34:DA:618:C:C5	3.04	0.45
34:DA:1074:G:O2'	34:DA:1101:A:N1	2.44	0.45
34:DA:1353:G:H2'	34:DA:1354:C:H6	1.82	0.45
34:DA:1428:A:H2'	34:DA:1429:C:O4'	2.15	0.45
36:DC:18:TRP:HE3	36:DC:18:TRP:H	1.63	0.45
36:DC:179:ARG:HD2	36:DC:206:GLU:HB2	1.97	0.45
45:DL:75:HIS:CD2	45:DL:77:LEU:N	2.82	0.45
53:DT:55:ILE:O	53:DT:58:LYS:N	2.49	0.45
57:DZ:309:LEU:HD12	57:DZ:310:ALA:H	1.82	0.45
1:AA:354:A:O2'	1:AA:355:A:H8	1.99	0.45
1:AA:372:G:H2'	1:AA:373:G:O4'	2.17	0.45
1:AA:1096:A:H2'	1:AA:1097:G:C8	2.51	0.45
1:AA:1102:G:H5"	1:AA:1103:A:O4'	2.16	0.45
1:AA:1699:A:C2'	1:AA:1700:G:H5'	2.47	0.45
3:AC:7:ARG:HH22	3:AC:219:MET:HB2	1.82	0.45
3:AC:30:VAL:CG2	3:AC:31:LYS:N	2.78	0.45
3:AC:37:LYS:O	3:AC:38:PHE:HB3	2.17	0.45
6:AF:110:LEU:HD23	6:AF:110:LEU:HA	1.80	0.45
12:AO:68:GLU:HB3	12:AO:78:ARG:HB2	1.99	0.45
12:AO:70:LYS:C	12:AO:71:ARG:HG3	2.41	0.45
19:AV:91:TYR:CD1	19:AV:91:TYR:C	2.94	0.45
23:AZ:163:LEU:HA	23:AZ:163:LEU:HD12	1.57	0.45
34:BA:165:C:H2'	34:BA:166:G:C8	2.52	0.45
34:BA:509:A:C8	34:BA:509:A:C3'	2.99	0.45
34:BA:540:G:H2'	34:BA:541:G:O4'	2.16	0.45
34:BA:948:C:O2'	34:BA:949:A:H5'	2.16	0.45
34:BA:1311:G:N2	34:BA:1327:C:O2	2.49	0.45
35:BB:42:ILE:HG21	35:BB:202:PRO:O	2.16	0.45
38:BE:51:VAL:O	38:BE:55:VAL:HG23	2.17	0.45
39:BF:4:TYR:CD1	39:BF:92:LYS:HA	2.52	0.45
44:BK:21:ILE:HD13	44:BK:94:ALA:HB3	1.98	0.45
49:BP:29:ASP:OD1	49:BP:29:ASP:N	2.49	0.45
50:BQ:31:LEU:HD23	50:BQ:32:TYR:CZ	2.52	0.45
57:BZ:507:TYR:HB3	57:BZ:577:SER:HB2	1.98	0.45
1:CA:154(A):C:H42	1:CA:171:G:H1	1.65	0.45
1:CA:694:U:OP1	4:CD:59:LYS:NZ	2.50	0.45
1:CA:1203:G:OP2	1:CA:1204:A:O2'	2.28	0.45
1:CA:1478:G:O2'	1:CA:1558:A:N1	2.50	0.45
1:CA:1668:A:C8	1:CA:1674:G:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2250:G:C8	1:CA:2496:C:H5”	2.51	0.45
1:CA:2276:G:H5’	14:CQ:86:GLY:HA2	1.97	0.45
1:CA:2353:G:H2’	1:CA:2354:G:O4’	2.15	0.45
1:CA:2478:A:H1’	1:CA:2528:U:O2’	2.16	0.45
1:CA:2853:C:H2’	1:CA:2854:G:H8	1.81	0.45
1:CA:2880:C:O2’	15:CR:90:ARG:NH1	2.50	0.45
3:CC:54:ARG:HH22	3:CC:56:ASP:HB3	1.75	0.45
10:CL:90:LYS:HE3	10:CL:90:LYS:HB3	1.83	0.45
21:CX:26:TYR:HD1	21:CX:92:LEU:HD12	1.80	0.45
23:CZ:117:LEU:HD12	23:CZ:174:VAL:HG22	1.98	0.45
24:C0:27:GLU:HG3	24:C0:68:GLU:HA	1.98	0.45
34:DA:401:C:H1’	34:DA:622:A:H1’	1.98	0.45
34:DA:1075:C:H5”	35:DB:179:LYS:HZ1	1.81	0.45
34:DA:1141:C:H2’	34:DA:1142:G:C8	2.51	0.45
40:DG:92:SER:O	40:DG:95:ARG:N	2.48	0.45
42:DI:8:GLY:O	42:DI:15:ALA:N	2.39	0.45
48:DO:74:ASP:OD2	48:DO:77:ARG:HG3	2.16	0.45
54:DU:10:ARG:HA	54:DU:13:ILE:HD12	1.99	0.45
57:DZ:314:PHE:CE2	57:DZ:327:PHE:HB3	2.50	0.45
1:AA:37:C:H2’	1:AA:38:A:C8	2.51	0.45
1:AA:626:A:O4’	1:AA:702:A:N6	2.50	0.45
1:AA:820:U:H2’	1:AA:821:A:H5’	1.98	0.45
1:AA:1529:G:C6	1:AA:1553:A:C6	3.04	0.45
1:AA:2045:G:H5’	1:AA:2629:C:H4’	1.98	0.45
5:AE:29:GLY:HA3	63:AE:402:HOH:O	2.16	0.45
7:AG:161:THR:HG23	7:AG:163:ALA:H	1.81	0.45
8:AH:41:MET:HE3	8:AH:41:MET:HB3	1.58	0.45
11:AN:68:GLU:HG2	11:AN:88:GLU:OE2	2.16	0.45
12:AO:117:LEU:HA	12:AO:117:LEU:HD23	1.52	0.45
22:AY:79:CYS:SG	22:AY:81:LYS:HG3	2.57	0.45
24:A0:72:ARG:HB2	24:A0:75:LEU:HB2	1.97	0.45
34:BA:597:G:C4	34:BA:644:G:C2	3.04	0.45
40:BG:21:VAL:HG23	40:BG:22:LEU:N	2.31	0.45
43:BJ:30:SER:HB2	43:BJ:81:THR:HG21	1.98	0.45
57:BZ:-23:LEU:HA	57:BZ:-20:LEU:HB2	1.99	0.45
57:BZ:-7:GLU:C	57:BZ:-6:ARG:HH11	2.25	0.45
1:CA:271(D):G:H2’	1:CA:271(E):U:C6	2.51	0.45
1:CA:957:A:C2	1:CA:2459:A:H5’	2.50	0.45
1:CA:1069:A:N7	1:CA:1073:A:N6	2.64	0.45
1:CA:1141:U:OP2	11:CN:63:THR:OG1	2.23	0.45
1:CA:1206:G:C2	1:CA:1207:C:C2	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1378:A:O2'	1:CA:1380:G:N7	2.35	0.45
1:CA:1537:G:H2'	1:CA:1538:G:H8	1.80	0.45
1:CA:2128:C:H5'	1:CA:2173:A:N3	2.32	0.45
1:CA:2687:U:H2'	1:CA:2688:U:O4'	2.16	0.45
5:CE:4:ILE:HD13	5:CE:28:ALA:HB1	1.97	0.45
5:CE:77:ILE:HD11	5:CE:79:ARG:HH12	1.81	0.45
7:CG:180:PHE:O	7:CG:182:LYS:N	2.49	0.45
10:CL:72:PRO:HA	10:CL:73:PRO:HD3	1.83	0.45
13:CP:59:LEU:HD11	32:C8:10:ALA:HA	1.99	0.45
14:CQ:84:GLY:O	14:CQ:85:LYS:HB2	2.15	0.45
15:CR:62:ALA:HA	15:CR:65:LEU:HD23	1.98	0.45
16:CS:3:ARG:HE	16:CS:4:LEU:H	1.64	0.45
22:CY:49:VAL:HG11	22:CY:55:TYR:CD2	2.51	0.45
23:CZ:144:LEU:HD22	23:CZ:148:ASP:HB3	1.98	0.45
28:C4:61:ARG:HE	52:DS:42:PRO:HG3	1.81	0.45
31:C7:5:TRP:CD1	31:C7:7:PRO:HD3	2.51	0.45
34:DA:9:G:H2'	34:DA:10:A:C8	2.52	0.45
34:DA:9:G:H2'	34:DA:10:A:H8	1.80	0.45
34:DA:376:G:H5"	49:DP:5:ARG:HB2	1.99	0.45
34:DA:489:C:N4	34:DA:490:G:O6	2.50	0.45
34:DA:589:C:H2'	34:DA:590:C:H6	1.82	0.45
34:DA:893:C:C4	34:DA:894:G:N7	2.84	0.45
34:DA:1060:C:H4'	43:DJ:51:ARG:HB3	1.97	0.45
34:DA:1292:U:H2'	34:DA:1293:G:H8	1.82	0.45
42:DI:36:TYR:HD2	42:DI:37:PHE:CE2	2.35	0.45
43:DJ:44:VAL:HG13	43:DJ:66:ARG:HG2	1.98	0.45
45:DL:69:TYR:CD2	45:DL:99:HIS:HE1	2.35	0.45
49:DP:23:ASP:OD2	49:DP:25:ARG:NH1	2.49	0.45
57:DZ:606:MET:N	57:DZ:647:VAL:O	2.46	0.45
1:AA:11:G:C2'	1:AA:12:U:H5"	2.42	0.45
1:AA:329:U:H2'	1:AA:330:U:C6	2.51	0.45
1:AA:1186:U:OP1	11:AN:25:ARG:NH1	2.45	0.45
1:AA:1480:A:C2	1:AA:1481:G:C4	3.04	0.45
1:AA:1857:G:H2'	1:AA:1858:C:H6	1.82	0.45
1:AA:1911:A:H1'	1:AA:2109:G:O4'	2.16	0.45
1:AA:2190:G:O6	1:AA:2193:A:H2'	2.16	0.45
4:AD:146:GLU:HG2	4:AD:152:GLY:C	2.42	0.45
12:AO:47:ILE:HB	12:AO:48:PRO:HD2	1.98	0.45
17:AT:23:ARG:HG3	17:AT:120:ARG:NH1	2.31	0.45
19:AV:43:GLU:H	19:AV:43:GLU:HG2	1.45	0.45
34:BA:294:U:OP1	34:BA:610:G:O2'	2.27	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:528:C:H41	45:BL:49:ASN:HD21	1.62	0.45
35:BB:69:LEU:HD12	35:BB:70:PHE:H	1.81	0.45
36:BC:125:GLU:HA	36:BC:191:THR:HG22	1.98	0.45
46:BM:4:ILE:HA	46:BM:5:ALA:HA	1.72	0.45
54:BU:5:ASP:O	54:BU:11:GLY:HA3	2.17	0.45
57:BZ:-27:THR:O	57:BZ:-26:GLU:C	2.60	0.45
57:BZ:287:PRO:HA	57:BZ:288:PRO:HD3	1.76	0.45
57:BZ:432:ALA:HA	57:BZ:438:PHE:CE1	2.49	0.45
61:BZ:703:FUA:O1	61:BZ:703:FUA:C1	2.60	0.45
1:CA:478:A:N1	1:CA:500:G:H4'	2.31	0.45
1:CA:587:C:OP2	13:CP:21:ARG:NH2	2.49	0.45
1:CA:632:A:H2'	1:CA:633:A:C8	2.51	0.45
1:CA:1666:G:O2'	1:CA:1667:G:H5'	2.16	0.45
1:CA:2582:G:H3'	1:CA:2582:G:OP2	2.16	0.45
3:CC:22:THR:HG23	3:CC:25:GLU:OE1	2.17	0.45
6:CF:36:VAL:HG11	6:CF:183:VAL:CG1	2.46	0.45
12:CO:68:GLU:O	12:CO:68:GLU:HG2	2.17	0.45
19:CV:16:PRO:HD3	19:CV:99:ILE:HD11	1.98	0.45
22:CY:31:LEU:HA	22:CY:32:PRO:HD3	1.71	0.45
22:CY:76:CYS:SG	22:CY:99:CYS:HB2	2.56	0.45
34:DA:25:C:C5	34:DA:558:G:N2	2.84	0.45
34:DA:1064:G:H21	34:DA:1190:G:H2'	1.81	0.45
37:DD:99:SER:O	37:DD:140:VAL:HG23	2.16	0.45
38:DE:72:GLN:O	38:DE:75:THR:HG22	2.17	0.45
56:DY:23:A:N6	56:DY:24:G:O6	2.50	0.45
57:DZ:-27:THR:O	57:DZ:-26:GLU:C	2.59	0.45
57:DZ:435:ASP:C	57:DZ:437:THR:H	2.25	0.45
57:DZ:637:ARG:C	57:DZ:639:ASN:N	2.74	0.45
1:AA:1775:C:H5'	1:AA:1776:G:OP2	2.17	0.45
1:AA:2221:A:OP2	1:AA:2222:C:H5	1.99	0.45
3:AC:31:LYS:H	3:AC:31:LYS:HG2	1.57	0.45
21:AX:12:VAL:HG22	21:AX:29:TRP:CE2	2.52	0.45
22:AY:76:CYS:SG	22:AY:78:ALA:HB3	2.56	0.45
32:A8:62:LEU:HB3	32:A8:65:GLU:HG2	1.98	0.45
34:BA:456:C:N4	34:BA:475:G:H1	2.03	0.45
34:BA:839:U:H4'	34:BA:840:C:OP2	2.16	0.45
34:BA:1295:G:H8	34:BA:1295:G:O5'	1.98	0.45
34:BA:1376:U:H2'	34:BA:1377:A:C8	2.52	0.45
35:BB:91:PRO:HG2	35:BB:155:LEU:HD13	1.97	0.45
35:BB:166:ASP:HA	35:BB:167:PRO:HD3	1.64	0.45
37:BD:61:LYS:HG3	37:BD:203:VAL:HG22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BF:44:GLY:HA2	39:BF:59:TYR:CE1	2.51	0.45
41:BH:31:PHE:CE2	41:BH:35:ILE:HD11	2.51	0.45
57:BZ:-32:LEU:HD23	57:BZ:-32:LEU:HA	1.71	0.45
1:CA:212:G:H2'	1:CA:213:A:O4'	2.17	0.45
1:CA:359:A:H2'	1:CA:360:G:O4'	2.16	0.45
1:CA:518:G:H2'	1:CA:519:U:C6	2.52	0.45
1:CA:840:C:H2'	1:CA:841:A:C8	2.52	0.45
1:CA:1557:C:H5"	1:CA:1558:A:OP2	2.17	0.45
1:CA:1651:G:C2	1:CA:2007:C:N3	2.85	0.45
1:CA:1796:U:H2'	1:CA:1797:C:H6	1.80	0.45
1:CA:2460:U:H2'	1:CA:2461:C:O4'	2.17	0.45
2:CB:27:C:H5"	16:CS:54:LEU:HD11	1.98	0.45
7:CG:2:PRO:HB2	7:CG:3:LEU:H	1.57	0.45
9:CK:49:ALA:H	9:CK:90:ALA:HB1	1.82	0.45
11:CN:4:TYR:O	18:CU:64:ARG:NH2	2.39	0.45
22:CY:41:GLY:N	22:CY:64:GLU:OE2	2.40	0.45
24:C0:68:GLU:OE2	24:C0:82:ARG:NH1	2.49	0.45
32:C8:6:THR:CG2	32:C8:64:TYR:HD2	2.29	0.45
34:DA:933:G:C2	34:DA:1385:G:C2	3.04	0.45
34:DA:1292:U:H2'	34:DA:1293:G:C8	2.52	0.45
34:DA:1340:A:P	56:DY:35:A:OP1	2.75	0.45
37:DD:59:ARG:HA	37:DD:59:ARG:HE	1.80	0.45
56:DW:23:A:H2'	56:DW:24:G:H8	1.81	0.45
57:DZ:608:VAL:O	57:DZ:644:ARG:HA	2.17	0.45
1:AA:197:C:H2'	1:AA:198:C:C6	2.52	0.45
1:AA:233:A:C2	1:AA:244:A:C4	3.05	0.45
1:AA:346:A:H5'	1:AA:364:A:H1'	1.98	0.45
1:AA:1097:G:H5"	1:AA:1098:C:OP2	2.16	0.45
1:AA:1112:U:O2	1:AA:1114:G:C8	2.70	0.45
1:AA:1193:C:O2'	1:AA:1194:A:H5'	2.16	0.45
1:AA:1481:G:H21	1:AA:1525:G:H5'	1.82	0.45
1:AA:1895:U:OP1	1:AA:2422:G:O2'	2.28	0.45
1:AA:2036:A:H2'	1:AA:2037:A:C8	2.52	0.45
2:AB:57:A:H1'	7:AG:29:TRP:HB2	1.98	0.45
7:AG:43:LEU:HB2	7:AG:89:GLY:HA2	1.99	0.45
7:AG:125:PHE:HB3	7:AG:166:ASP:OD1	2.16	0.45
8:AH:71:LEU:HD12	8:AH:71:LEU:HA	1.82	0.45
34:BA:110:C:H2'	34:BA:111:G:O4'	2.17	0.45
34:BA:1101:A:H4'	34:BA:1102:A:O5'	2.17	0.45
34:BA:1361:G:H2'	34:BA:1362:C:O4'	2.17	0.45
34:BA:1418:A:C2	34:BA:1483:A:C2	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BC:44:GLU:HA	36:BC:52:LEU:HD12	1.99	0.45
37:BD:61:LYS:HD3	37:BD:206:PHE:CE1	2.52	0.45
41:BH:12:ARG:NH2	41:BH:27:PRO:HD3	2.31	0.45
41:BH:51:VAL:HG21	41:BH:60:ARG:CD	2.47	0.45
56:BY:48:C:OP1	56:BY:48:C:H2'	2.17	0.45
57:BZ:160:ARG:HB2	57:BZ:255:ILE:HA	1.99	0.45
1:CA:185:U:H4'	1:CA:218:A:H4'	1.99	0.45
1:CA:768:G:O2'	1:CA:1379:A:N1	2.45	0.45
1:CA:874:G:N2	1:CA:904:C:C2	2.85	0.45
1:CA:1912:A:N1	34:DA:1407:C:O2'	2.46	0.45
1:CA:2582:G:C2	1:CA:2583:G:C8	3.05	0.45
1:CA:2702:U:H4'	1:CA:2703:C:OP1	2.17	0.45
1:CA:2761:G:C2	1:CA:2762:G:C8	3.05	0.45
1:CA:2841:C:C2	1:CA:2877:G:N2	2.84	0.45
2:CB:22:U:O2	2:CB:61:G:N2	2.35	0.45
2:CB:79:C:H2'	2:CB:80:U:O4'	2.17	0.45
4:CD:5:LYS:HG2	4:CD:17:THR:HG22	1.98	0.45
4:CD:10:THR:HG23	4:CD:13:ARG:HG2	1.99	0.45
4:CD:228:PRO:HD3	4:CD:235:GLY:CA	2.47	0.45
12:CO:118:ALA:HA	12:CO:119:PRO:HD3	1.71	0.45
14:CQ:32:TYR:HE2	14:CQ:111:GLU:HA	1.82	0.45
34:DA:403:C:H2'	34:DA:404:U:C6	2.49	0.45
34:DA:834:C:H2'	34:DA:835:U:C6	2.51	0.45
34:DA:1006:C:H2'	34:DA:1007:C:O4'	2.16	0.45
35:DB:108:ILE:H	35:DB:108:ILE:HG12	1.54	0.45
36:DC:136:GLN:O	36:DC:140:ARG:N	2.43	0.45
40:DG:38:LEU:O	40:DG:42:ILE:HG13	2.16	0.45
44:DK:102:GLY:O	44:DK:103:LEU:HD22	2.17	0.45
46:DM:123:ALA:HB2	57:DZ:507:TYR:CD1	2.51	0.45
49:DP:5:ARG:CZ	49:DP:22:THR:HG21	2.47	0.45
57:DZ:236:GLU:HA	57:DZ:237:PRO:HD3	1.79	0.45
57:DZ:390:VAL:HG23	57:DZ:391:GLY:O	2.17	0.45
1:AA:809:U:H4'	1:AA:810:G:O5'	2.17	0.45
1:AA:1116:A:O2'	1:AA:1117:G:OP1	2.32	0.45
1:AA:1401:G:C6	1:AA:1402:G:C5	3.05	0.45
1:AA:1556:A:H3'	1:AA:1557:A:H8	1.82	0.45
1:AA:1935:A:H5'	1:AA:1935:A:C8	2.48	0.45
1:AA:2287:C:O2	14:AQ:85:LYS:HG3	2.17	0.45
1:AA:2589:A:O4'	29:A5:3:LYS:HB2	2.17	0.45
1:AA:2874:G:OP1	17:AT:119:LYS:HD2	2.17	0.45
3:AC:16:ASP:OD2	3:AC:19:LYS:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AL:6:ALA:H	10:AL:59:ILE:HG22	1.82	0.45
10:AL:17:ALA:HB1	10:AL:38:VAL:HG22	1.99	0.45
19:AV:39:LEU:HD23	19:AV:40:LEU:N	2.32	0.45
21:AX:41:ASN:O	21:AX:45:THR:HG23	2.17	0.45
23:AZ:150:LEU:HB3	23:AZ:171:ILE:HD11	1.99	0.45
34:BA:189(F):U:C4	50:BQ:72:ARG:NH1	2.85	0.45
34:BA:340:U:H2'	34:BA:341:C:C6	2.52	0.45
34:BA:512:U:H2'	34:BA:513:C:C6	2.52	0.45
34:BA:514:C:O2	34:BA:538:G:C2	2.69	0.45
34:BA:545:C:OP2	37:BD:65:ARG:NH2	2.50	0.45
34:BA:559:A:H2'	34:BA:559:A:N3	2.31	0.45
34:BA:738:C:C2	34:BA:739:C:C5	3.04	0.45
34:BA:781:A:H5'	34:BA:782:A:OP2	2.17	0.45
35:BB:28:PHE:CD1	35:BB:190:THR:HA	2.52	0.45
39:BF:41:GLU:O	39:BF:43:LEU:N	2.50	0.45
42:BI:99:LEU:HB3	42:BI:101:PHE:CE1	2.52	0.45
47:BN:34:TYR:N	47:BN:39:LEU:O	2.48	0.45
49:BP:58:TYR:O	49:BP:62:VAL:HG22	2.16	0.45
52:BS:31:ILE:HB	52:BS:49:ILE:HG23	1.97	0.45
1:CA:667:U:O2	32:C8:2:PRO:HD2	2.17	0.45
1:CA:687:C:C2	1:CA:788:A:H5'	2.52	0.45
1:CA:904:C:H2'	1:CA:905:U:C6	2.52	0.45
3:CC:48:LEU:HD23	3:CC:59:VAL:HG21	1.98	0.45
5:CE:201:THR:HG23	5:CE:203:LYS:H	1.81	0.45
6:CF:27:GLU:O	6:CF:112:MET:HE3	2.17	0.45
6:CF:178:PRO:HB3	6:CF:198:ALA:HB1	1.98	0.45
7:CG:114:ILE:HB	7:CG:117:PHE:HD2	1.82	0.45
17:CT:24:PRO:HA	17:CT:49:VAL:HG13	1.98	0.45
22:CY:29:GLU:HB3	22:CY:38:ILE:HG13	1.99	0.45
29:C5:20:ARG:HA	29:C5:23:HIS:ND1	2.32	0.45
34:DA:437:U:H5'	37:DD:155:LEU:HD21	1.98	0.45
34:DA:475:G:H2'	34:DA:476:G:C8	2.52	0.45
34:DA:707:C:H2'	34:DA:708:C:C6	2.51	0.45
34:DA:778:G:C6	34:DA:779:C:C4	3.05	0.45
34:DA:921:U:O2	38:DE:19:MET:HB2	2.17	0.45
36:DC:58:GLU:HB3	43:DJ:92:THR:HG21	1.99	0.45
37:DD:79:PHE:HE1	37:DD:204:ILE:HD13	1.81	0.45
37:DD:127:THR:HG23	37:DD:147:ALA:HB3	1.99	0.45
44:DK:34:ASP:HB2	44:DK:35:PRO:HD2	1.98	0.45
46:DM:123:ALA:HB1	57:DZ:507:TYR:HB3	1.98	0.45
57:DZ:-62:LEU:N	57:DZ:-62:LEU:HD12	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:116:A:H3'	1:AA:117:A:C5'	2.45	0.45
1:AA:1250:U:H4'	1:AA:1251:G:OP2	2.17	0.45
1:AA:1921:G:H2'	1:AA:1921:G:N3	2.32	0.45
2:AB:46:A:C5	2:AB:47:C:C5	3.05	0.45
3:AC:179:ALA:O	3:AC:180:SER:O	2.35	0.45
6:AF:135:LYS:HB2	6:AF:138:GLU:CG	2.43	0.45
7:AG:67:LYS:NZ	7:AG:68:PRO:O	2.50	0.45
7:AG:76:SER:N	7:AG:84:LYS:HB2	2.32	0.45
8:AH:56:SER:OG	8:AH:57:ASP:N	2.45	0.45
13:AP:138:LEU:HD12	13:AP:138:LEU:HA	1.77	0.45
15:AR:36:THR:HB	15:AR:37:THR:H	1.51	0.45
34:BA:375:U:C4	34:BA:376:G:N7	2.85	0.45
34:BA:986:A:H1'	52:BS:54:GLY:O	2.17	0.45
34:BA:1157:A:C5	34:BA:1181:G:C6	3.05	0.45
34:BA:1343:G:H2'	34:BA:1344:C:C6	2.51	0.45
35:BB:187:LEU:HD11	35:BB:204:ASN:O	2.17	0.45
36:BC:22:TRP:CH2	36:BC:32:LEU:HB2	2.52	0.45
37:BD:105:VAL:HG21	37:BD:126:ILE:HD12	1.98	0.45
39:BF:19:LEU:HD11	39:BF:59:TYR:CD2	2.52	0.45
40:BG:92:SER:HA	40:BG:93:PRO:HD2	1.66	0.45
41:BH:10:LEU:HD23	41:BH:10:LEU:H	1.81	0.45
57:BZ:312:LEU:O	57:BZ:328:ILE:HA	2.17	0.45
57:BZ:624:LEU:HA	57:BZ:624:LEU:HD12	1.69	0.45
1:CA:96:G:OP1	26:C2:46:GLN:NE2	2.50	0.45
1:CA:184:C:H2'	1:CA:185:U:H6	1.81	0.45
1:CA:422:A:H2'	1:CA:423:A:C8	2.51	0.45
1:CA:671:C:H2'	1:CA:672:C:C6	2.52	0.45
1:CA:1512:U:H2'	1:CA:1513:C:C6	2.52	0.45
1:CA:1911:U:H2'	1:CA:1918:A:N1	2.31	0.45
1:CA:2439:A:C8	1:CA:2439:A:C5'	2.97	0.45
2:CB:72:G:O2'	2:CB:105:A:N6	2.45	0.45
14:CQ:109:VAL:HG22	14:CQ:113:GLN:OE1	2.16	0.45
22:CY:86:ARG:HG3	22:CY:100:ALA:HB2	1.99	0.45
25:C1:94:LEU:O	25:C1:97:LEU:HB2	2.16	0.45
34:DA:57:G:N2	34:DA:58:C:O2	2.49	0.45
34:DA:61:G:H2'	34:DA:62:U:O4'	2.17	0.45
34:DA:293:G:C5	34:DA:294:U:C5	3.05	0.45
34:DA:596:C:H2'	34:DA:597:G:H8	1.82	0.45
34:DA:931:C:H1'	34:DA:1387:G:N2	2.32	0.45
34:DA:967:C:H2'	34:DA:968:A:N7	2.31	0.45
34:DA:1327:C:H2'	34:DA:1328:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1466:C:H2'	34:DA:1467:G:O4'	2.17	0.45
46:DM:65:LYS:NZ	46:DM:73:GLU:OE2	2.50	0.45
50:DQ:81:ARG:HH21	50:DQ:84:LEU:HD21	1.82	0.45
53:DT:43:LEU:HD13	53:DT:51:GLU:HB3	1.99	0.45
57:DZ:20:HIS:HB2	57:DZ:118:SER:CB	2.47	0.45
57:DZ:138:LYS:HA	62:DZ:704:GDP:C6	2.51	0.45
57:DZ:223:PHE:HD2	57:DZ:245:ALA:O	2.00	0.45
1:AA:2154:U:C6	3:AC:6:LYS:CB	3.00	0.44
1:AA:2339:A:H2'	1:AA:2340:A:C8	2.53	0.44
7:AG:7:LEU:HD12	7:AG:104:GLU:HA	2.00	0.44
10:AL:74:ALA:O	10:AL:78:ILE:HG22	2.17	0.44
26:A2:8:LYS:HD3	26:A2:8:LYS:HA	1.48	0.44
27:A3:31:LEU:HD23	27:A3:31:LEU:HA	1.44	0.44
34:BA:42:G:H5"	63:BA:1908:HOH:O	2.16	0.44
34:BA:300:A:H2'	34:BA:301:G:O4'	2.16	0.44
34:BA:345:C:H4'	34:BA:346:G:C6	2.52	0.44
34:BA:738:C:H2'	34:BA:739:C:C6	2.44	0.44
35:BB:12:GLU:O	35:BB:14:GLY:N	2.50	0.44
35:BB:189:ASP:OD1	35:BB:189:ASP:N	2.46	0.44
45:BL:45:PRO:HB3	45:BL:92:ASP:HB3	1.99	0.44
47:BN:44:LEU:C	47:BN:44:LEU:HD12	2.42	0.44
50:BQ:45:HIS:CE1	50:BQ:47:PRO:HG3	2.51	0.44
55:BV:16:U:O5'	55:BV:16:U:C6	2.70	0.44
56:BW:75:C:H2'	56:BW:76:A:C2	2.53	0.44
57:BZ:114:VAL:O	57:BZ:118:SER:HB2	2.16	0.44
57:BZ:485:GLU:HG3	57:BZ:555:LEU:HD12	1.98	0.44
1:CA:300:A:P	22:CY:86:ARG:HH21	2.40	0.44
1:CA:465:G:OP1	31:C7:12:ARG:NH2	2.46	0.44
1:CA:814:C:H2'	1:CA:815:C:H6	1.83	0.44
1:CA:1096:A:H2	10:CL:22:PRO:HD3	1.82	0.44
1:CA:1378:A:OP1	31:C7:10:ARG:NH2	2.50	0.44
1:CA:2557:G:H2'	1:CA:2558:C:H6	1.82	0.44
1:CA:2721:A:H2'	1:CA:2722:G:O4'	2.16	0.44
3:CC:211:ARG:HG2	3:CC:211:ARG:HH11	1.81	0.44
6:CF:185:ASP:HA	6:CF:188:ARG:HD3	1.98	0.44
8:CH:98:LEU:HD22	8:CH:125:VAL:HG23	1.99	0.44
10:CL:16:LYS:HB2	10:CL:16:LYS:HE3	1.71	0.44
11:CN:38:HIS:CE1	11:CN:39:ARG:HG3	2.52	0.44
22:CY:95:LYS:HE3	22:CY:95:LYS:HB3	1.69	0.44
34:DA:114:U:O2'	34:DA:115:G:H5'	2.17	0.44
34:DA:646:U:H2'	34:DA:647:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:736:C:H2'	34:DA:737:A:H8	1.78	0.44
34:DA:885:G:O2'	34:DA:914:A:N1	2.48	0.44
34:DA:1258:G:O2'	34:DA:1259:C:H5'	2.16	0.44
37:DD:63:LYS:NZ	37:DD:197:PRO:O	2.41	0.44
57:DZ:18:ALA:HB1	57:DZ:121:VAL:HG21	1.99	0.44
57:DZ:232:LEU:HD13	57:DZ:232:LEU:HA	1.86	0.44
57:DZ:327:PHE:CE1	57:DZ:376:ALA:HB2	2.52	0.44
1:AA:1347:A:C8	1:AA:1349:G:C8	3.05	0.44
1:AA:1434:G:O2'	1:AA:1571:G:O2'	2.33	0.44
1:AA:1636:U:H2'	1:AA:1637:G:H8	1.82	0.44
1:AA:2417:G:OP1	13:AP:77:ARG:NH2	2.50	0.44
7:AG:140:ILE:H	7:AG:140:ILE:CD1	2.30	0.44
16:AS:24:LEU:HD23	16:AS:24:LEU:HA	1.79	0.44
18:AU:108:GLU:O	18:AU:112:ARG:HG2	2.17	0.44
34:BA:15:G:H2'	34:BA:16:A:H8	1.82	0.44
34:BA:256:U:H2'	34:BA:257:G:C8	2.53	0.44
34:BA:262:A:C6	34:BA:263:A:C6	3.05	0.44
34:BA:541:G:C6	34:BA:542:G:C5	3.05	0.44
38:BE:144:THR:OG1	38:BE:146:ALA:HB3	2.18	0.44
41:BH:5:PRO:O	41:BH:8:ASP:HB3	2.17	0.44
43:BJ:70:ARG:HD3	43:BJ:70:ARG:HA	1.80	0.44
57:BZ:-7:GLU:O	57:BZ:-6:ARG:NH1	2.49	0.44
1:CA:793:A:OP2	1:CA:2071:A:O2'	2.32	0.44
1:CA:1365:A:OP1	25:C1:41:ARG:NH1	2.50	0.44
1:CA:1480:G:C6	1:CA:1481:U:C4	3.05	0.44
1:CA:1489:U:H5'	1:CA:1490:A:OP1	2.18	0.44
1:CA:2075:U:OP2	1:CA:2238:G:O2'	2.29	0.44
1:CA:2846:G:H2'	1:CA:2847:U:O4'	2.17	0.44
1:CA:2850:A:C6	1:CA:2851:A:C6	3.06	0.44
3:CC:7:ARG:HH22	3:CC:219:MET:HB2	1.81	0.44
3:CC:31:LYS:H	3:CC:31:LYS:HG2	1.57	0.44
7:CG:168:GLU:O	7:CG:171:ALA:HB3	2.17	0.44
8:CH:56:SER:HB3	8:CH:58:GLU:HG2	2.00	0.44
28:C4:59:PHE:HA	28:C4:61:ARG:HB2	1.99	0.44
34:DA:130:A:N6	34:DA:234:C:O4'	2.51	0.44
34:DA:432:A:N7	34:DA:433:C:C4	2.85	0.44
34:DA:977:A:O2'	34:DA:979:C:OP2	2.26	0.44
34:DA:1040:U:C2	34:DA:1041:A:C8	3.05	0.44
34:DA:1203:C:OP1	47:DN:3:ARG:HG3	2.17	0.44
38:DE:18:ARG:HH21	38:DE:25:ARG:HG2	1.80	0.44
46:DM:124:PRO:O	57:DZ:576:ASP:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DP:9:PHE:N	49:DP:16:HIS:O	2.50	0.44
52:DS:12:ASP:C	52:DS:14:HIS:H	2.25	0.44
53:DT:56:MET:HE3	53:DT:56:MET:HB2	1.68	0.44
57:DZ:78:ARG:NH1	57:DZ:357:ARG:NH2	2.66	0.44
57:DZ:607:ARG:HH22	57:DZ:672:PHE:HD2	1.65	0.44
1:AA:895:G:C4	1:AA:978:A:H8	2.35	0.44
1:AA:2146:G:H2'	1:AA:2147:G:O4'	2.18	0.44
1:AA:2240:G:OP1	4:AD:261:LYS:HE2	2.16	0.44
1:AA:2430:A:H2'	1:AA:2431:U:C6	2.52	0.44
2:AB:63:G:H2'	2:AB:64:C:H6	1.81	0.44
3:AC:39:ASP:O	3:AC:178:LYS:HE3	2.17	0.44
3:AC:206:LYS:HB3	3:AC:206:LYS:HZ3	1.81	0.44
5:AE:9:VAL:HG23	17:AT:3:ARG:HG2	1.98	0.44
5:AE:51:PHE:O	5:AE:75:VAL:HG13	2.18	0.44
10:AL:22:PRO:O	10:AL:27:LEU:HD13	2.17	0.44
12:AO:118:ALA:HA	12:AO:119:PRO:HD3	1.87	0.44
14:AQ:62:GLY:H	23:AZ:178:GLU:HB2	1.83	0.44
19:AV:69:LYS:HG3	19:AV:70:ILE:N	2.32	0.44
21:AX:57:LEU:HD13	21:AX:78:LYS:HB2	2.00	0.44
25:A1:50:ARG:HG2	25:A1:59:THR:HB	1.99	0.44
28:A4:40:HIS:HA	28:A4:41:PRO:HD2	1.52	0.44
31:A7:24:THR:HG23	63:A7:202:HOH:O	2.17	0.44
34:BA:38:G:C2	34:BA:397:A:C2	3.06	0.44
34:BA:49:U:O4	34:BA:365:U:H5	2.01	0.44
34:BA:115:G:H4'	34:BA:116:A:O5'	2.17	0.44
34:BA:625:G:H2'	34:BA:626:U:H6	1.83	0.44
36:BC:6:HIS:ND1	47:BN:49:HIS:HB3	2.33	0.44
37:BD:13:ARG:NH1	37:BD:13:ARG:HB3	2.32	0.44
38:BE:110:LEU:HD13	38:BE:118:ILE:HG21	1.99	0.44
48:BO:8:LYS:O	48:BO:12:ILE:HG13	2.17	0.44
53:BT:29:LYS:O	53:BT:33:ILE:HG13	2.17	0.44
56:BY:7:A:O2'	56:BY:49:C:OP2	2.33	0.44
57:BZ:125:ALA:HB1	57:BZ:132:ARG:HH21	1.83	0.44
1:CA:1045:A:O4'	1:CA:1047:G:H8	2.00	0.44
1:CA:1912:A:C8	1:CA:1918:A:C2	3.05	0.44
1:CA:2218:U:O2	25:C1:52:ARG:NE	2.48	0.44
1:CA:2306:C:H3'	1:CA:2307:G:C8	2.51	0.44
1:CA:2432:A:N1	25:C1:35:THR:HG22	2.32	0.44
1:CA:2857:G:C2	1:CA:2861:G:C6	3.05	0.44
3:CC:176:VAL:O	3:CC:176:VAL:HG12	2.15	0.44
5:CE:55:ASN:HA	5:CE:56:PRO:HD3	1.88	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:119:ARG:CZ	6:CF:119:ARG:HB3	2.45	0.44
9:CK:4:LYS:HA	9:CK:5:ARG:HA	1.78	0.44
12:CO:10:VAL:HG12	12:CO:17:ARG:C	2.42	0.44
33:C9:2:LYS:HD3	33:C9:4:ARG:NH2	2.32	0.44
34:DA:124:G:H4'	34:DA:291:C:O2'	2.17	0.44
34:DA:587:G:C2	34:DA:755:G:C5	3.06	0.44
34:DA:654:G:H2'	34:DA:655:A:O4'	2.17	0.44
35:DB:135:GLN:O	35:DB:139:LYS:HB2	2.17	0.44
45:DL:45:PRO:HB2	45:DL:92:ASP:HB3	1.98	0.44
49:DP:60:LEU:HD13	49:DP:60:LEU:HA	1.80	0.44
53:DT:36:LEU:HD13	53:DT:36:LEU:HA	1.78	0.44
57:DZ:90:PHE:CD1	61:DZ:703:FUA:H121	2.53	0.44
57:DZ:223:PHE:CE2	57:DZ:249:GLY:HA3	2.52	0.44
1:AA:861:C:H4'	1:AA:1270:C:O2	2.18	0.44
1:AA:1512:G:O2'	1:AA:1592:A:N1	2.50	0.44
1:AA:2747:A:H2'	1:AA:2748:G:O4'	2.17	0.44
3:AC:22:THR:HG23	3:AC:25:GLU:OE1	2.17	0.44
8:AH:88:LEU:HD22	8:AH:165:ALA:HA	1.98	0.44
9:AK:103:GLY:HA2	9:AK:110:GLY:HA3	1.98	0.44
10:AL:108:ALA:O	10:AL:111:LYS:N	2.47	0.44
16:AS:25:ARG:HD3	16:AS:42:ASP:OD2	2.18	0.44
17:AT:14:TYR:HB2	17:AT:57:PHE:CE1	2.53	0.44
19:AV:72:VAL:HG13	19:AV:85:LYS:HB3	2.00	0.44
21:AX:47:PHE:O	21:AX:48:LYS:C	2.60	0.44
21:AX:60:ARG:HH22	31:A7:47:ARG:HH21	1.65	0.44
30:A6:26:ASN:C	30:A6:26:ASN:OD1	2.60	0.44
34:BA:1066:C:C2'	34:BA:1067:A:H5'	2.47	0.44
34:BA:1101:A:OP2	35:BB:96:ARG:HD3	2.17	0.44
34:BA:1280:A:H5'	43:BJ:40:LEU:HD22	1.99	0.44
34:BA:1468:A:H5"	34:BA:1469:G:OP2	2.17	0.44
37:BD:166:LYS:N	37:BD:168:ARG:HH12	2.16	0.44
38:BE:89:ILE:HD12	38:BE:90:VAL:H	1.82	0.44
44:BK:48:ILE:O	44:BK:50:TYR:N	2.41	0.44
50:BQ:81:ARG:HA	50:BQ:81:ARG:HD2	1.60	0.44
52:BS:15:LEU:O	52:BS:19:VAL:HG23	2.17	0.44
53:BT:63:ILE:HG22	53:BT:77:ALA:HB1	1.99	0.44
57:BZ:340:TYR:CD1	57:BZ:349:LYS:HD3	2.52	0.44
1:CA:191:A:C2	1:CA:192:C:C2	3.06	0.44
1:CA:469:G:H2'	1:CA:470:A:H5"	2.00	0.44
1:CA:638:G:H2'	1:CA:639:U:O4'	2.17	0.44
1:CA:921:G:C5	1:CA:922:U:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2166:G:H3'	1:CA:2167:U:C5'	2.47	0.44
1:CA:2415:G:C6	1:CA:2416:C:C4	3.05	0.44
1:CA:2418:A:OP2	32:C8:29:LYS:NZ	2.30	0.44
1:CA:2493:U:O2'	14:CQ:80:GLU:OE1	2.20	0.44
1:CA:2749:A:H1'	8:CH:63:SER:HB3	1.99	0.44
11:CN:23:LEU:HA	11:CN:60:ILE:HD11	2.00	0.44
12:CO:87:ILE:HD12	12:CO:91:LEU:HA	1.99	0.44
17:CT:26:ASP:OD1	17:CT:120:ARG:NH2	2.45	0.44
20:CW:12:ILE:HG13	20:CW:42:ARG:HH11	1.82	0.44
32:C8:33:ASN:HA	32:C8:36:LYS:HG3	2.00	0.44
34:DA:426:G:OP1	37:DD:36:ARG:HD2	2.17	0.44
34:DA:952:U:O4	46:DM:104:ARG:HD3	2.17	0.44
34:DA:965:A:H5'	34:DA:969:A:O4'	2.16	0.44
34:DA:1118:C:H1'	34:DA:1179:A:C5	2.52	0.44
34:DA:1165:C:H2'	34:DA:1166:G:O4'	2.16	0.44
38:DE:33:VAL:HG13	38:DE:112:LEU:HD12	1.98	0.44
40:DG:50:ILE:HG22	40:DG:125:MET:HG3	1.99	0.44
57:DZ:183:MET:HE1	57:DZ:209:ALA:HB1	1.99	0.44
57:DZ:515:GLU:HG3	57:DZ:564:LYS:HB3	2.00	0.44
1:AA:596:G:N1	1:AA:2053:A:OP2	2.35	0.44
1:AA:704:U:H2'	1:AA:705:C:C6	2.52	0.44
1:AA:1400:A:H2'	1:AA:1401:G:O4'	2.17	0.44
1:AA:1617:A:H2'	1:AA:1618:A:C8	2.53	0.44
1:AA:2856:G:OP2	17:AT:54:ARG:HB2	2.18	0.44
3:AC:15:VAL:O	3:AC:21:TYR:OH	2.29	0.44
6:AF:41:LEU:HD23	6:AF:41:LEU:HA	1.78	0.44
11:AN:63:THR:O	11:AN:66:LYS:HG3	2.18	0.44
22:AY:20:TYR:O	22:AY:21:LYS:C	2.60	0.44
23:AZ:156:LYS:HG2	23:AZ:157:LEU:N	2.33	0.44
24:A0:48:GLY:HA3	24:A0:80:HIS:ND1	2.33	0.44
34:BA:108:G:O6	53:BT:15:ARG:HD2	2.17	0.44
34:BA:606:G:N2	34:BA:631:G:N7	2.65	0.44
34:BA:1165:C:H2'	34:BA:1166:G:O4'	2.17	0.44
35:BB:164:VAL:HB	35:BB:186:ALA:HB2	1.99	0.44
44:BK:95:ILE:O	44:BK:99:GLN:HG3	2.18	0.44
56:BY:28:G:H2'	56:BY:29:G:C8	2.52	0.44
57:BZ:100:VAL:O	57:BZ:100:VAL:HG12	2.17	0.44
57:BZ:573:HIS:HB3	57:BZ:577:SER:H	1.82	0.44
1:CA:65:C:H2'	1:CA:66:C:C6	2.52	0.44
1:CA:65:C:O2'	1:CA:456:C:N3	2.50	0.44
1:CA:652(C):G:H5"	1:CA:652(D):C:OP2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:864:G:N2	1:CA:913:U:C2	2.86	0.44
1:CA:1239:G:H2'	1:CA:1240:U:O4'	2.17	0.44
1:CA:2056:G:N2	29:C5:5:PRO:HA	2.33	0.44
1:CA:2658:C:O3'	8:CH:158:HIS:HE1	2.00	0.44
1:CA:2830:G:O2'	1:CA:2883:A:N1	2.43	0.44
2:CB:100:A:H3'	2:CB:101:G:C8	2.52	0.44
3:CC:179:ALA:O	3:CC:180:SER:O	2.35	0.44
10:CL:12:LEU:HD11	10:CL:23:VAL:HG21	1.98	0.44
12:CO:92:GLU:HA	12:CO:93:PRO:HD2	1.79	0.44
15:CR:85:PRO:C	15:CR:87:TYR:N	2.72	0.44
19:CV:81:TYR:C	19:CV:82:ARG:HD2	2.43	0.44
22:CY:9:LYS:HA	22:CY:10:GLY:HA2	1.57	0.44
32:C8:8:LYS:HB3	32:C8:12:LYS:HE3	2.00	0.44
34:DA:839:U:H5"	34:DA:840:C:H5	1.82	0.44
37:DD:117:ALA:O	37:DD:121:VAL:HG23	2.18	0.44
39:DF:78:GLU:C	39:DF:80:ARG:N	2.72	0.44
42:DI:18:PHE:O	42:DI:61:ALA:HA	2.17	0.44
56:DY:55:PSU:HN1	56:DY:57:G:H5'	1.82	0.44
57:DZ:-55:LEU:HD23	57:DZ:-55:LEU:HA	1.82	0.44
57:DZ:8:ASP:O	57:DZ:10:LYS:N	2.50	0.44
57:DZ:137:ASN:OD1	57:DZ:263:ALA:N	2.38	0.44
57:DZ:217:VAL:C	57:DZ:219:VAL:H	2.25	0.44
1:AA:354:A:H2	1:AA:1255:A:C2'	2.31	0.44
1:AA:1135:G:OP2	1:AA:1135:G:H2'	2.17	0.44
1:AA:1358:U:C2	1:AA:1649:A:C2	3.05	0.44
1:AA:1405:A:H2	1:AA:1418:U:O4	2.01	0.44
1:AA:2357:G:N3	1:AA:2393:C:H2'	2.33	0.44
2:AB:15:A:OP2	2:AB:69:G:N2	2.45	0.44
2:AB:32:C:C2	2:AB:51:G:C2	3.05	0.44
2:AB:111:G:H2'	2:AB:112:U:C6	2.53	0.44
4:AD:20:ASP:OD1	4:AD:21:PHE:N	2.51	0.44
14:AQ:109:VAL:CG1	14:AQ:113:GLN:HB3	2.43	0.44
34:BA:47:C:C6	34:BA:365:U:H2'	2.53	0.44
34:BA:654:G:C4	34:BA:753:A:C6	3.04	0.44
34:BA:909:A:H2'	34:BA:910:C:O4'	2.16	0.44
34:BA:1388:C:H2'	34:BA:1389:C:H6	1.82	0.44
35:BB:122:PHE:C	35:BB:124:SER:H	2.25	0.44
37:BD:194:LEU:HD12	37:BD:195:ALA:N	2.33	0.44
38:BE:139:LEU:C	38:BE:141:GLN:N	2.76	0.44
40:BG:137:LYS:HG3	40:BG:137:LYS:O	2.17	0.44
41:BH:51:VAL:HG11	41:BH:60:ARG:HH11	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BH:100:ILE:HA	41:BH:101:PRO:HD2	1.77	0.44
45:BL:28:LYS:HG3	45:BL:62:SER:HB2	2.00	0.44
50:BQ:29:HIS:HA	50:BQ:30:PRO:HD2	1.74	0.44
57:BZ:-9:LEU:O	57:BZ:-6:ARG:HB2	2.17	0.44
57:BZ:556:ILE:HG13	57:BZ:558:PHE:HD2	1.82	0.44
1:CA:1031:G:H21	33:C9:36:GLN:HE22	1.65	0.44
1:CA:2056:G:N3	1:CA:2056:G:H2'	2.33	0.44
1:CA:2318:G:N3	1:CA:2318:G:O2'	2.40	0.44
1:CA:2591:C:OP1	4:CD:239:ARG:HD2	2.18	0.44
3:CC:16:ASP:OD2	3:CC:19:LYS:HB2	2.17	0.44
4:CD:77:ALA:HA	4:CD:97:TYR:HA	1.99	0.44
5:CE:22:PRO:O	5:CE:185:LYS:HA	2.17	0.44
8:CH:7:LEU:HA	8:CH:8:PRO:HD3	1.82	0.44
17:CT:11:GLU:O	17:CT:15:VAL:HG23	2.18	0.44
22:CY:68:HIS:HB3	22:CY:71:LYS:HG3	1.99	0.44
34:DA:409:G:H1	34:DA:433:C:N4	2.15	0.44
34:DA:566:G:H4'	34:DA:567:G:OP1	2.18	0.44
34:DA:1079:G:C6	34:DA:1080:A:N6	2.85	0.44
34:DA:1104:G:H4'	35:DB:111:ARG:NH1	2.32	0.44
34:DA:1226:C:OP2	46:DM:91:ARG:NH1	2.36	0.44
36:DC:130:VAL:HG11	36:DC:153:VAL:HG11	2.00	0.44
43:DJ:40:LEU:HB2	43:DJ:69:ASN:HB3	2.00	0.44
57:DZ:515:GLU:OE2	57:DZ:564:LYS:HD3	2.18	0.44
1:AA:174:U:H4'	1:AA:207:A:H4'	2.00	0.44
1:AA:644:G:O6	6:AF:103:LYS:HE3	2.17	0.44
1:AA:1828:C:H4'	4:AD:257:LEU:O	2.18	0.44
6:AF:106:ARG:H	6:AF:106:ARG:HG2	1.60	0.44
8:AH:167:GLU:HA	8:AH:168:PRO:HD3	1.74	0.44
10:AL:29:GLN:O	10:AL:59:ILE:HD12	2.17	0.44
12:AO:111:PHE:O	12:AO:115:VAL:HG23	2.18	0.44
17:AT:41:ARG:NH1	34:BA:346:G:OP1	2.47	0.44
34:BA:1189:C:H5"	34:BA:1190:G:OP2	2.18	0.44
34:BA:1494:G:O3'	57:BZ:499:ARG:NH1	2.50	0.44
37:BD:4:TYR:O	37:BD:5:ILE:HG22	2.17	0.44
37:BD:78:LEU:HD23	37:BD:78:LEU:HA	1.77	0.44
40:BG:113:GLU:H	40:BG:113:GLU:HG2	1.39	0.44
53:BT:60:GLU:O	53:BT:63:ILE:HB	2.17	0.44
56:BW:18:G:H4'	56:BW:60:U:C6	2.53	0.44
57:BZ:11:ARG:O	57:BZ:77:HIS:HA	2.17	0.44
57:BZ:292:THR:HA	57:BZ:298:VAL:HA	2.00	0.44
57:BZ:349:LYS:HG2	57:BZ:350:GLU:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:588:MET:HE2	57:BZ:588:MET:HB3	1.83	0.44
1:CA:487:C:C2'	1:CA:488:G:H5'	2.48	0.44
1:CA:1063:G:N3	10:CL:91:PRO:HG2	2.33	0.44
1:CA:1071:G:H1'	1:CA:1089:G:C8	2.53	0.44
1:CA:1300:U:C2	1:CA:1626:G:C6	3.06	0.44
1:CA:1443:G:N2	1:CA:1549:C:C2	2.86	0.44
1:CA:1820:U:H4'	1:CA:1821:A:OP2	2.17	0.44
1:CA:1860:G:P	3:CC:206:LYS:HE2	2.52	0.44
1:CA:2318:G:N2	16:CS:3:ARG:HH12	2.15	0.44
1:CA:2723:C:H4'	15:CR:1:MET:HG3	2.00	0.44
2:CB:7:G:H4'	16:CS:29:PHE:CD2	2.53	0.44
5:CE:102:VAL:HB	5:CE:103:ASP:H	1.58	0.44
7:CG:36:LYS:HD3	7:CG:95:ARG:CZ	2.47	0.44
10:CL:21:PRO:CG	57:DZ:614:GLU:HB2	2.48	0.44
14:CQ:58:PHE:O	14:CQ:59:ARG:HB2	2.18	0.44
17:CT:109:GLU:HG2	17:CT:112:ARG:HH22	1.81	0.44
21:CX:26:TYR:HB3	21:CX:92:LEU:HD12	1.98	0.44
21:CX:61:GLY:HA3	21:CX:73:ARG:O	2.18	0.44
22:CY:77:PRO:CD	22:CY:106:LEU:HD23	2.47	0.44
23:CZ:89:PHE:CE1	23:CZ:96:VAL:HG21	2.52	0.44
23:CZ:166:SER:HA	23:CZ:167:PRO:HD3	1.81	0.44
24:C0:82:ARG:HH11	24:C0:82:ARG:HB2	1.83	0.44
33:C9:17:ILE:HG21	33:C9:19:ARG:HH21	1.83	0.44
34:DA:32:A:C2	34:DA:33:A:C4	3.05	0.44
34:DA:546:G:P	37:DD:72:GLU:HB3	2.57	0.44
34:DA:1091:U:C2	34:DA:1095:U:C4	3.06	0.44
34:DA:1128:C:H1'	34:DA:1148:U:H3	1.83	0.44
34:DA:1153:C:H2'	34:DA:1154:G:H5"	1.99	0.44
34:DA:1355:G:H2'	34:DA:1356:G:O4'	2.18	0.44
35:DB:104:ASN:O	35:DB:108:ILE:HG12	2.18	0.44
38:DE:30:ALA:O	38:DE:45:PHE:HD1	2.01	0.44
40:DG:105:VAL:O	40:DG:108:ALA:HB3	2.17	0.44
41:DH:20:TYR:HD2	41:DH:65:TYR:CD2	2.35	0.44
45:DL:105:TYR:O	45:DL:107:ALA:N	2.51	0.44
57:DZ:453:GLY:HA3	57:DZ:459:LEU:HG	2.00	0.44
57:DZ:540:PRO:O	57:DZ:543:GLN:HB3	2.18	0.44
1:AA:237:G:OP1	63:AA:3938:HOH:O	2.21	0.44
1:AA:282:G:H2'	1:AA:283:G:O4'	2.18	0.44
1:AA:1036:A:H5"	1:AA:1037:C:P	2.58	0.44
1:AA:1157:A:O2'	1:AA:1158:G:H4'	2.18	0.44
1:AA:1496:A:H5'	1:AA:1497:G:OP2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2282:G:H2'	1:AA:2283:G:O4'	2.17	0.44
1:AA:2784:C:H2'	1:AA:2785:C:C6	2.53	0.44
3:AC:5:GLY:O	3:AC:6:LYS:C	2.61	0.44
4:AD:16:MET:HG3	4:AD:206:LEU:O	2.18	0.44
9:AK:25:PHE:O	9:AK:84:GLU:HA	2.17	0.44
10:AL:103:GLN:O	10:AL:106:GLU:HG3	2.18	0.44
15:AR:70:LEU:HA	15:AR:70:LEU:HD23	1.66	0.44
21:AX:5:TYR:CZ	26:A2:30:ARG:HB2	2.53	0.44
23:AZ:31:ARG:H	23:AZ:31:ARG:HG3	1.28	0.44
29:A5:16:ARG:HD2	29:A5:20:ARG:NH1	2.33	0.44
34:BA:299:G:C6	34:BA:300:A:C6	3.06	0.44
34:BA:453:A:H62	34:BA:479:C:H42	1.66	0.44
34:BA:612:C:O2	34:BA:629:G:N2	2.51	0.44
34:BA:673:G:H2'	34:BA:674:G:C8	2.53	0.44
34:BA:960:U:H1'	34:BA:1223:C:H5'	1.99	0.44
34:BA:1027:C:H5"	34:BA:1028:C:OP2	2.18	0.44
36:BC:122:GLU:O	36:BC:126:ARG:NH1	2.44	0.44
36:BC:174:PRO:HD2	36:BC:182:ILE:HD11	2.00	0.44
37:BD:59:ARG:HA	37:BD:59:ARG:NE	2.33	0.44
53:BT:14:LYS:O	53:BT:18:GLN:HG3	2.18	0.44
56:BW:17:C:O2	56:BW:17:C:H2'	2.17	0.44
57:BZ:88:VAL:HG13	57:BZ:117:GLN:HE22	1.83	0.44
57:BZ:191:ASP:HA	57:BZ:265:LYS:O	2.17	0.44
57:BZ:273:LEU:O	57:BZ:274:ASP:C	2.60	0.44
1:CA:889:C:O2'	1:CA:890:A:O5'	2.34	0.44
1:CA:1035:U:H2'	1:CA:1036:G:C8	2.53	0.44
1:CA:1355:G:P	4:CD:38:LYS:HE2	2.58	0.44
1:CA:2016:U:H2'	1:CA:2017:U:C6	2.52	0.44
1:CA:2643:G:N2	1:CA:2772:C:C2	2.86	0.44
1:CA:2886:G:H2'	1:CA:2887:U:H6	1.83	0.44
7:CG:36:LYS:HD3	7:CG:95:ARG:NH1	2.33	0.44
16:CS:63:THR:HG23	16:CS:64:GLU:N	2.30	0.44
23:CZ:136:PHE:HD2	23:CZ:136:PHE:HA	1.78	0.44
34:DA:196:A:N3	34:DA:222:U:H1'	2.33	0.44
34:DA:402:G:O2'	34:DA:620:C:N3	2.49	0.44
34:DA:904:C:H2'	34:DA:905:U:O4'	2.17	0.44
35:DB:15:VAL:HG23	35:DB:16:HIS:ND1	2.33	0.44
36:DC:22:TRP:HZ3	36:DC:24:ALA:HB2	1.83	0.44
37:DD:110:PHE:N	37:DD:110:PHE:CD1	2.86	0.44
40:DG:47:CYS:HB3	40:DG:58:PRO:HB3	2.00	0.44
45:DL:59:ARG:NH1	45:DL:65:GLU:OE1	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:74:TRP:HE1	57:DZ:274:ASP:N	2.15	0.44
57:DZ:149:VAL:O	57:DZ:153:MET:HB2	2.18	0.44
1:AA:263:C:H6	1:AA:263:C:H5"	1.83	0.44
1:AA:1140:U:H2'	1:AA:1141:A:H3'	2.00	0.44
1:AA:1740:U:H1'	4:AD:14:ARG:NH2	2.33	0.44
1:AA:2225:U:O2'	1:AA:2226:C:H5'	2.17	0.44
4:AD:71:ASP:OD2	4:AD:103:ARG:NH2	2.47	0.44
4:AD:108:PRO:HG3	4:AD:143:HIS:CE1	2.53	0.44
4:AD:253:GLN:HE21	4:AD:253:GLN:HB3	1.63	0.44
6:AF:32:LEU:HD23	6:AF:32:LEU:C	2.42	0.44
6:AF:120:GLU:HG3	6:AF:122:LYS:HG2	2.00	0.44
7:AG:44:GLY:C	7:AG:46:ALA:N	2.76	0.44
14:AQ:45:GLN:OE1	14:AQ:45:GLN:N	2.46	0.44
18:AU:74:LEU:HD12	18:AU:74:LEU:N	2.33	0.44
23:AZ:102:LEU:HD11	23:AZ:124:ILE:HB	2.00	0.44
27:A3:18:ASP:OD1	27:A3:18:ASP:N	2.42	0.44
31:A7:31:LEU:HD22	31:A7:42:LEU:HB3	1.99	0.44
34:BA:662:G:O2'	34:BA:836:G:H5'	2.17	0.44
34:BA:967:C:O5'	34:BA:967:C:H6	2.01	0.44
34:BA:1234:C:H2'	34:BA:1235:U:C6	2.53	0.44
34:BA:1340:A:H2'	34:BA:1341:U:O4'	2.18	0.44
36:BC:178:LEU:HD13	36:BC:178:LEU:HA	1.83	0.44
38:BE:69:VAL:HA	38:BE:70:PRO:HD2	1.83	0.44
38:BE:132:ALA:C	38:BE:134:ALA:N	2.75	0.44
38:BE:144:THR:OG1	38:BE:147:ASP:OD1	2.27	0.44
49:BP:40:ASP:HA	49:BP:41:PRO:HD2	1.66	0.44
52:BS:32:LYS:HA	52:BS:50:ALA:HB3	1.99	0.44
57:BZ:350:GLU:HG2	57:BZ:380:LEU:HA	2.00	0.44
57:BZ:435:ASP:OD2	57:BZ:437:THR:OG1	2.34	0.44
1:CA:908:C:OP2	14:CQ:22:LYS:HD3	2.18	0.44
1:CA:2063:C:O2	1:CA:2450:A:N1	2.50	0.44
3:CC:194:ILE:HD11	3:CC:227:PRO:HB2	1.99	0.44
4:CD:61:LEU:O	4:CD:63:ARG:NH1	2.51	0.44
5:CE:11:MET:HG2	5:CE:24:THR:HG22	1.99	0.44
5:CE:116:VAL:HG13	5:CE:122:PHE:HB2	2.00	0.44
11:CN:34:LEU:HD21	11:CN:120:LEU:HG	2.00	0.44
15:CR:55:ALA:HA	15:CR:80:PHE:CZ	2.53	0.44
15:CR:88:ARG:HD2	15:CR:88:ARG:C	2.42	0.44
18:CU:97:ASP:OD1	18:CU:101:ARG:NH1	2.51	0.44
22:CY:87:LYS:HD2	22:CY:95:LYS:HD2	1.99	0.44
33:C9:23:VAL:HB	33:C9:36:GLN:NE2	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1089:G:C6	34:DA:1090:U:C4	3.06	0.44
34:DA:1142:G:H3'	34:DA:1143:G:C8	2.52	0.44
36:DC:104:GLN:HE21	36:DC:104:GLN:HB3	1.62	0.44
38:DE:51:VAL:O	38:DE:55:VAL:HG23	2.18	0.44
38:DE:139:LEU:C	38:DE:141:GLN:N	2.76	0.44
44:DK:20:TYR:CD1	44:DK:83:ILE:HB	2.53	0.44
44:DK:72:ALA:HB1	44:DK:77:MET:HB2	1.98	0.44
45:DL:69:TYR:CD2	45:DL:99:HIS:CE1	3.06	0.44
46:DM:3:ARG:O	46:DM:57:ARG:NH2	2.47	0.44
47:DN:2:ALA:O	47:DN:6:LEU:HD22	2.18	0.44
51:DR:26:LEU:HD23	51:DR:29:PHE:CE1	2.52	0.44
57:DZ:159:ALA:C	57:DZ:161:PRO:HD3	2.43	0.44
57:DZ:363:ARG:CG	57:DZ:363:ARG:NH1	2.78	0.44
1:AA:734:C:H2'	1:AA:735:U:O4'	2.18	0.43
1:AA:967:G:H4'	1:AA:2281:A:C5	2.53	0.43
1:AA:989:G:H5"	1:AA:990:A:H5'	2.00	0.43
1:AA:1067:A:C8	1:AA:1067:A:C3'	2.98	0.43
1:AA:1154:U:H1'	1:AA:1155:C:OP1	2.18	0.43
1:AA:2191:A:N3	1:AA:2191:A:H2'	2.33	0.43
3:AC:194:ILE:HD11	3:AC:227:PRO:HB2	1.99	0.43
4:AD:13:ARG:HA	4:AD:13:ARG:HD2	1.69	0.43
4:AD:72:LYS:HD3	4:AD:97:TYR:CE2	2.53	0.43
7:AG:103:LEU:HD23	7:AG:103:LEU:HA	1.78	0.43
8:AH:92:ILE:HD13	8:AH:92:ILE:HA	1.74	0.43
10:AL:23:VAL:HG13	10:AL:27:LEU:HD22	2.00	0.43
10:AL:40:ALA:HB3	10:AL:67:PHE:HZ	1.82	0.43
10:AL:41:PHE:C	10:AL:43:ALA:H	2.26	0.43
12:AO:90:GLN:CD	12:AO:90:GLN:N	2.77	0.43
32:A8:62:LEU:HB3	32:A8:65:GLU:CG	2.48	0.43
34:BA:408:A:H2'	34:BA:409:G:H8	1.82	0.43
34:BA:413:G:H1'	34:BA:428:G:N2	2.32	0.43
34:BA:604:G:N2	34:BA:635:G:C4	2.86	0.43
34:BA:689:C:OP2	44:BK:55:LYS:NZ	2.51	0.43
34:BA:696:A:O2'	34:BA:697:U:H5'	2.18	0.43
34:BA:735:C:H2'	34:BA:736:C:C6	2.53	0.43
34:BA:1133:G:H2'	34:BA:1134:G:H8	1.82	0.43
34:BA:1229:A:H8	34:BA:1229:A:O5'	2.01	0.43
34:BA:1429:C:H2'	34:BA:1430:C:H6	1.81	0.43
37:BD:57:ARG:HE	37:BD:205:GLU:HB2	1.83	0.43
45:BL:26:ALA:HB3	45:BL:98:TYR:CZ	2.53	0.43
46:BM:17:VAL:O	46:BM:20:THR:OG1	2.28	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BP:2:VAL:O	49:BP:64:ALA:HA	2.17	0.43
49:BP:36:ILE:HD12	49:BP:56:ALA:HB2	1.99	0.43
57:BZ:225:GLU:H	57:BZ:225:GLU:HG2	1.63	0.43
57:BZ:413:ILE:HA	57:BZ:476:VAL:HG12	1.99	0.43
57:BZ:673:PHE:HZ	57:BZ:676:TYR:CD2	2.35	0.43
1:CA:76:C:O3'	26:C2:59:ARG:HG3	2.17	0.43
1:CA:590:A:H2'	1:CA:591:C:C6	2.53	0.43
1:CA:1290:C:H2'	1:CA:1291:C:C6	2.54	0.43
1:CA:2360:A:O5'	1:CA:2360:A:H8	2.01	0.43
1:CA:2784:C:H1'	5:CE:37:ARG:HH12	1.82	0.43
3:CC:39:ASP:O	3:CC:178:LYS:HE3	2.17	0.43
14:CQ:29:PHE:HB2	14:CQ:105:GLU:OE2	2.18	0.43
17:CT:99:LEU:HD23	17:CT:99:LEU:HA	1.79	0.43
34:DA:130:A:H1'	34:DA:263:A:O2'	2.18	0.43
34:DA:195:A:OP2	63:DA:1809:HOH:O	2.21	0.43
34:DA:960:U:O2	34:DA:960:U:H2'	2.18	0.43
34:DA:1348:U:H2'	34:DA:1349:A:H8	1.83	0.43
36:DC:54:ARG:NH1	36:DC:56:ASP:OD2	2.51	0.43
40:DG:71:PRO:HG3	40:DG:103:TRP:CH2	2.53	0.43
51:DR:22:VAL:HG23	51:DR:55:ARG:O	2.18	0.43
52:DS:15:LEU:HD21	52:DS:32:LYS:O	2.17	0.43
57:DZ:170:ARG:HA	57:DZ:170:ARG:HD3	1.68	0.43
57:DZ:238:THR:HG22	57:DZ:241:GLU:OE2	2.17	0.43
57:DZ:316:ILE:CD1	57:DZ:326:THR:HG23	2.48	0.43
57:DZ:629:GLY:HA2	57:DZ:648:PRO:HD3	2.00	0.43
1:AA:424:G:H1'	1:AA:2243:C:O2'	2.19	0.43
1:AA:601:A:OP1	1:AA:1301:U:H4'	2.18	0.43
1:AA:2101:U:O3'	25:A1:35:THR:OG1	2.34	0.43
1:AA:2327:G:C6	1:AA:2328:C:N4	2.86	0.43
1:AA:2444:A:H2'	1:AA:2445:A:C8	2.53	0.43
10:AL:21:PRO:HG3	10:AL:25:PRO:HD3	2.00	0.43
15:AR:8:ARG:NH1	15:AR:39:PRO:HB3	2.33	0.43
21:AX:31:HIS:HD2	21:AX:33:LYS:N	1.94	0.43
25:A1:54:ALA:O	25:A1:56:GLN:N	2.50	0.43
34:BA:189(F):U:C2	50:BQ:72:ARG:NH2	2.86	0.43
34:BA:411:A:OP1	37:BD:30:LYS:NZ	2.46	0.43
34:BA:1299:A:O2'	34:BA:1301:U:H5'	2.18	0.43
37:BD:13:ARG:HB2	37:BD:40:PRO:HD3	2.01	0.43
41:BH:35:ILE:O	41:BH:38:ILE:HB	2.17	0.43
42:BI:53:VAL:O	42:BI:55:ALA:N	2.51	0.43
45:BL:44:THR:HA	45:BL:45:PRO:HD3	1.79	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BR:70:ILE:HG23	51:BR:79:LEU:HD13	1.99	0.43
56:BW:28:G:H1	56:BW:42:C:N4	2.08	0.43
57:BZ:-34:ARG:O	57:BZ:-32:LEU:N	2.51	0.43
57:BZ:187:THR:HG22	57:BZ:199:ILE:HG12	2.00	0.43
1:CA:322:A:H5'	1:CA:340:A:H1'	1.99	0.43
1:CA:748:G:C8	20:CW:89:ALA:HB1	2.53	0.43
1:CA:921:G:H4'	1:CA:2269:A:C5	2.53	0.43
1:CA:981:A:OP2	1:CA:982:C:N4	2.48	0.43
1:CA:1056:G:H4'	1:CA:1086:A:C8	2.53	0.43
1:CA:2652:C:H2'	1:CA:2653:U:O4'	2.18	0.43
1:CA:2717:G:C6	1:CA:2718:G:C5	3.06	0.43
1:CA:2854:G:C2	1:CA:2864:G:C2	3.05	0.43
2:CB:24:G:N3	2:CB:27:C:N4	2.55	0.43
3:CC:54:ARG:HE	3:CC:57:GLN:HG2	1.83	0.43
6:CF:148:LEU:HD11	6:CF:193:VAL:HG21	2.00	0.43
10:CL:10:LEU:HB2	10:CL:55:VAL:HG13	2.00	0.43
16:CS:14:VAL:HG23	16:CS:15:ARG:N	2.33	0.43
16:CS:41:ASP:OD2	16:CS:44:LYS:HE2	2.18	0.43
34:DA:630:G:H2'	34:DA:631:G:H8	1.84	0.43
34:DA:890:G:O2'	34:DA:906:G:O6	2.29	0.43
34:DA:941:G:C2	34:DA:1343:G:C2	3.06	0.43
34:DA:1095:U:H2'	34:DA:1096:C:O4'	2.18	0.43
34:DA:1374:A:C4	34:DA:1375:A:C8	3.06	0.43
45:DL:119:LYS:HB2	45:DL:120:TYR:HD2	1.83	0.43
50:DQ:45:HIS:HB3	50:DQ:72:ARG:HG3	1.99	0.43
51:DR:33:ASP:OD2	51:DR:36:ASN:HB2	2.18	0.43
57:DZ:38:ARG:NH1	57:DZ:270:GLN:HE21	2.16	0.43
57:DZ:272:LEU:HD12	57:DZ:275:ALA:HB3	2.00	0.43
1:AA:253:C:O2'	1:AA:254:A:H2'	2.18	0.43
1:AA:966:G:C2'	1:AA:967:G:H5'	2.49	0.43
1:AA:1099:C:C2	1:AA:1153:G:N2	2.86	0.43
1:AA:1414:G:C2	1:AA:1415:G:C8	3.06	0.43
1:AA:1821:C:H2'	1:AA:1822:A:C5	2.54	0.43
1:AA:2579:G:H2'	1:AA:2580:C:C6	2.53	0.43
3:AC:60:ARG:HG3	3:AC:165:ARG:HB2	2.01	0.43
4:AD:172:TYR:CD2	4:AD:185:VAL:C	2.96	0.43
12:AO:35:VAL:HA	12:AO:62:VAL:HG12	2.00	0.43
13:AP:19:VAL:HB	13:AP:31:ALA:HB1	2.01	0.43
25:A1:85:LEU:HA	25:A1:85:LEU:HD23	1.66	0.43
34:BA:313:A:C6	34:BA:314:C:C4	3.07	0.43
34:BA:345:C:H4'	34:BA:346:G:C5	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:866:C:C4	34:BA:867:G:H1'	2.54	0.43
34:BA:872:A:C2	34:BA:874:G:C6	3.06	0.43
34:BA:1273:G:H3'	34:BA:1274:G:H8	1.83	0.43
35:BB:81:VAL:HG12	35:BB:215:LEU:HD11	1.98	0.43
36:BC:148:GLY:HA3	36:BC:172:ARG:O	2.18	0.43
49:BP:6:LEU:HD12	49:BP:19:ILE:HB	1.99	0.43
57:BZ:5:LEU:HA	57:BZ:5:LEU:HD23	1.67	0.43
1:CA:9:U:N3	1:CA:2629:A:H2	2.11	0.43
1:CA:71:A:H5"	1:CA:73:A:C8	2.54	0.43
1:CA:209:C:H2'	1:CA:210:C:O4'	2.18	0.43
1:CA:277:C:O2	1:CA:277:C:H2'	2.18	0.43
1:CA:797:C:O5'	1:CA:797:C:H6	2.01	0.43
1:CA:1540:U:C2'	1:CA:1541:G:H5'	2.48	0.43
1:CA:2351:G:H8	1:CA:2351:G:O5'	2.02	0.43
1:CA:2391:G:O2'	1:CA:2424:C:N4	2.41	0.43
1:CA:2679:A:O2'	1:CA:2680:C:H5'	2.18	0.43
1:CA:2728:U:OP1	12:CO:70:LYS:NZ	2.51	0.43
2:CB:29:A:C2	2:CB:30:C:C2	3.06	0.43
3:CC:5:GLY:O	3:CC:6:LYS:C	2.61	0.43
3:CC:160:GLY:O	3:CC:161:ARG:C	2.61	0.43
5:CE:14:ILE:HB	17:CT:14:TYR:CZ	2.54	0.43
6:CF:13:SER:OG	6:CF:15:SER:HB2	2.18	0.43
6:CF:102:PRO:HB2	6:CF:105:VAL:HB	2.01	0.43
14:CQ:1:MET:HE3	14:CQ:45:GLN:NE2	2.34	0.43
17:CT:18:ASP:OD1	17:CT:18:ASP:N	2.41	0.43
34:DA:195:A:OP1	53:DT:68:LYS:NZ	2.50	0.43
34:DA:509:A:C6	34:DA:510:A:N1	2.86	0.43
34:DA:517:G:N1	34:DA:533:A:OP2	2.50	0.43
34:DA:543:C:H2'	34:DA:544:G:O4'	2.19	0.43
34:DA:577:G:C4	34:DA:816:A:C2	3.06	0.43
34:DA:826:C:H2'	34:DA:827:U:C6	2.53	0.43
34:DA:1171:G:H8	34:DA:1171:G:OP2	2.01	0.43
35:DB:218:ALA:O	35:DB:222:ILE:HG23	2.18	0.43
41:DH:13:ILE:O	41:DH:17:THR:HG23	2.17	0.43
48:DO:5:LYS:O	48:DO:9:GLN:HG2	2.18	0.43
48:DO:56:LEU:O	48:DO:60:VAL:HG23	2.18	0.43
56:DW:18:G:H4'	56:DW:60:U:C5	2.53	0.43
56:DW:44:G:C5	56:DW:45:U:C4	3.06	0.43
57:DZ:530:VAL:HG13	57:DZ:533:VAL:HG21	2.00	0.43
1:AA:289:G:H2'	1:AA:290:G:C8	2.53	0.43
1:AA:310:C:H2'	1:AA:311:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:956:A:H2'	1:AA:957:A:C8	2.53	0.43
1:AA:1478:C:H2'	1:AA:1479:U:O4'	2.18	0.43
1:AA:2564:U:H2'	1:AA:2566:U:H5"	2.01	0.43
4:AD:35:LYS:HB2	4:AD:36:PRO:HD2	2.00	0.43
7:AG:26:GLN:HA	7:AG:26:GLN:HE21	1.82	0.43
32:A8:26:LYS:HB3	63:A8:5107:HOH:O	2.19	0.43
33:A9:27:CYS:HB3	33:A9:32:HIS:HB2	1.99	0.43
34:BA:625:G:H2'	34:BA:626:U:C6	2.53	0.43
34:BA:837:G:N2	34:BA:850:U:H1'	2.32	0.43
34:BA:1079:G:H2'	34:BA:1080:A:C8	2.54	0.43
34:BA:1225:A:OP1	46:BM:102:ARG:HA	2.19	0.43
37:BD:173:TRP:CZ3	37:BD:174:LEU:HD11	2.53	0.43
38:BE:41:VAL:HG22	38:BE:69:VAL:HG11	2.00	0.43
41:BH:51:VAL:HG12	41:BH:52:ASP:N	2.28	0.43
53:BT:40:ALA:HB2	53:BT:55:ILE:HG22	2.01	0.43
57:BZ:590:ILE:HD13	57:BZ:593:ALA:HB3	2.00	0.43
1:CA:637:A:H2'	13:CP:117:GLU:OE2	2.19	0.43
1:CA:857:C:O2'	1:CA:858:U:H5'	2.18	0.43
1:CA:875:G:H5"	23:CZ:149:SER:OG	2.18	0.43
1:CA:956:G:OP2	14:CQ:14:ARG:NH2	2.50	0.43
1:CA:1268:A:C2'	1:CA:1269:A:O5'	2.66	0.43
1:CA:1530:C:N4	1:CA:1539:G:H1	2.17	0.43
1:CA:1860:G:OP2	1:CA:1860:G:C8	2.72	0.43
1:CA:2053:G:OP1	5:CE:144:ARG:HG2	2.18	0.43
1:CA:2275:C:O2	14:CQ:85:LYS:HD2	2.18	0.43
1:CA:2747:G:O6	1:CA:2755:C:H5"	2.19	0.43
1:CA:2758:A:C2	1:CA:2759:G:H1'	2.52	0.43
4:CD:94:LEU:HD23	4:CD:94:LEU:HA	1.83	0.43
5:CE:128:SER:OG	5:CE:129:HIS:N	2.48	0.43
5:CE:169:ASN:HD22	5:CE:203:LYS:CB	2.31	0.43
7:CG:37:VAL:HB	7:CG:94:LEU:HB2	2.00	0.43
7:CG:136:ARG:HD2	7:CG:137:GLU:H	1.84	0.43
34:DA:533:A:N6	34:DA:536:C:O2	2.51	0.43
34:DA:547:A:H4'	34:DA:548:G:O5'	2.18	0.43
34:DA:841:U:H6	34:DA:841:U:P	2.42	0.43
34:DA:919:A:O2'	34:DA:920:U:H5'	2.19	0.43
34:DA:1154:G:C6	34:DA:1155:G:C6	3.06	0.43
34:DA:1256:A:OP2	36:DC:26:LYS:NZ	2.46	0.43
35:DB:24:TRP:CG	35:DB:25:ASN:H	2.37	0.43
35:DB:98:LEU:HD23	35:DB:101:MET:HE3	2.00	0.43
36:DC:134:ILE:HD11	36:DC:153:VAL:HG23	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DD:32:ALA:HB3	60:DD:501:SF4:S2	2.58	0.43
40:DG:78:ARG:HH21	40:DG:79:ARG:HH22	1.66	0.43
43:DJ:63:PHE:HZ	47:DN:49:HIS:CD2	2.36	0.43
50:DQ:13:ASP:C	50:DQ:15:MET:H	2.27	0.43
1:AA:309:C:H2'	1:AA:310:C:C6	2.52	0.43
1:AA:887:C:H2'	1:AA:888:A:H8	1.83	0.43
1:AA:990:A:OP2	63:AA:3943:HOH:O	2.21	0.43
1:AA:1147:U:H2'	1:AA:1148:C:C6	2.53	0.43
1:AA:1464:G:O5'	1:AA:1464:G:H8	2.01	0.43
1:AA:1935:A:C6	34:BA:1494:G:H5'	2.53	0.43
1:AA:2904:U:H2'	1:AA:2905:C:C6	2.54	0.43
3:AC:160:GLY:O	3:AC:161:ARG:C	2.61	0.43
10:AL:51:ALA:HB2	10:AL:76:TYR:CE2	2.54	0.43
11:AN:67:LEU:HB3	11:AN:88:GLU:HG3	2.01	0.43
13:AP:105:LEU:H	13:AP:105:LEU:HD12	1.84	0.43
20:AW:54:ALA:CB	20:AW:107:LEU:HD22	2.49	0.43
23:AZ:157:LEU:HD11	23:AZ:163:LEU:HD13	1.99	0.43
26:A2:51:ARG:O	26:A2:55:ARG:HG3	2.19	0.43
28:A4:57:GLU:HA	28:A4:58:ARG:HA	1.43	0.43
34:BA:162:A:C8	34:BA:163:C:H1'	2.53	0.43
34:BA:457:C:N3	34:BA:475:G:C2	2.87	0.43
34:BA:583:A:H2'	34:BA:584:G:O4'	2.19	0.43
34:BA:941:G:C2	34:BA:942:G:H1'	2.53	0.43
34:BA:1075:C:OP1	35:BB:179:LYS:HE3	2.18	0.43
35:BB:10:LEU:H	35:BB:48:MET:HE1	1.83	0.43
40:BG:91:VAL:HG12	40:BG:95:ARG:HB3	1.99	0.43
42:BI:4:TYR:CE2	42:BI:88:TYR:HD1	2.36	0.43
48:BO:9:GLN:O	48:BO:10:LYS:C	2.61	0.43
1:CA:226:G:C2	1:CA:227:A:C6	3.06	0.43
1:CA:411:G:C5	13:CP:72:PRO:HB3	2.54	0.43
1:CA:471:A:H8	1:CA:471:A:O5'	2.01	0.43
1:CA:827:U:H5'	1:CA:828:U:O5'	2.19	0.43
1:CA:857:C:H4'	24:C0:23:VAL:HG21	1.99	0.43
1:CA:1099:G:C2	1:CA:1100:C:H1'	2.53	0.43
1:CA:2835:A:N6	1:CA:2878:U:H3'	2.33	0.43
1:CA:2842:G:C2	1:CA:2876:G:C2	3.06	0.43
4:CD:157:ARG:O	4:CD:196:VAL:HG11	2.19	0.43
5:CE:52:LEU:HD12	5:CE:52:LEU:HA	1.68	0.43
6:CF:152:GLU:HA	6:CF:190:GLU:OE2	2.19	0.43
13:CP:38:GLN:HG2	13:CP:45:LEU:N	2.29	0.43
16:CS:24:LEU:HD23	16:CS:24:LEU:HA	1.73	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CZ:59:LEU:HD11	23:CZ:88:PHE:CD1	2.54	0.43
27:C3:7:LYS:O	27:C3:54:VAL:HG22	2.18	0.43
32:C8:50:LEU:HD23	32:C8:50:LEU:HA	1.63	0.43
34:DA:193:C:H2'	34:DA:194:C:C6	2.53	0.43
34:DA:396:G:P	57:DZ:349:LYS:HZ2	2.42	0.43
34:DA:410:G:C2	34:DA:429:U:C2	3.06	0.43
34:DA:448:A:P	34:DA:485:G:H22	2.40	0.43
34:DA:563:A:H2'	34:DA:567:G:C8	2.53	0.43
34:DA:1008:C:H2'	34:DA:1009:G:O4'	2.19	0.43
34:DA:1064:G:N2	34:DA:1190:G:H2'	2.33	0.43
34:DA:1171:G:H2'	34:DA:1172:C:C6	2.54	0.43
34:DA:1226:C:H4'	34:DA:1227:A:OP1	2.17	0.43
43:DJ:63:PHE:CE1	47:DN:58:LYS:HG2	2.53	0.43
46:DM:5:ALA:HB1	46:DM:66:LEU:HD22	1.99	0.43
49:DP:19:ILE:N	49:DP:37:GLY:O	2.50	0.43
49:DP:48:TRP:CD1	49:DP:48:TRP:H	2.37	0.43
55:DV:17:U:C2	56:DW:36:A:H2	2.36	0.43
57:DZ:550:MET:HB3	57:DZ:560:VAL:HB	2.00	0.43
57:DZ:655:TYR:CE2	57:DZ:659:LEU:HG	2.54	0.43
1:AA:139:A:C8	1:AA:1454:C:O2'	2.69	0.43
1:AA:174:U:H2'	1:AA:175:G:H8	1.83	0.43
1:AA:668:A:O2'	1:AA:669:A:H5'	2.19	0.43
1:AA:702:A:H8	1:AA:703:G:C1'	2.32	0.43
1:AA:1002:A:P	14:AQ:77:LYS:HG3	2.59	0.43
1:AA:1007:G:C5	1:AA:1008:U:C5	3.06	0.43
1:AA:1016:C:H2'	1:AA:1017:G:H5'	2.00	0.43
1:AA:1099:C:C4	1:AA:1100:A:C2	3.06	0.43
1:AA:1210:G:H2'	1:AA:1211:U:C6	2.54	0.43
1:AA:1480:A:H61	1:AA:1605:A:H61	1.61	0.43
1:AA:1657:C:OP1	63:AA:3940:HOH:O	2.21	0.43
1:AA:2274:U:OP1	1:AA:2399:U:O2'	2.24	0.43
1:AA:2299:A:C4	1:AA:2301:G:C8	3.06	0.43
2:AB:11:C:H3'	2:AB:12:C:H6	1.84	0.43
11:AN:73:THR:HG21	63:AN:3102:HOH:O	2.18	0.43
16:AS:36:TYR:N	16:AS:36:TYR:CD1	2.86	0.43
19:AV:4:ILE:HD12	19:AV:39:LEU:HB3	2.01	0.43
34:BA:136:C:O3'	49:BP:65:GLN:NE2	2.52	0.43
34:BA:258:G:H2'	34:BA:259:G:H8	1.83	0.43
34:BA:259:G:O2'	34:BA:260:G:H5'	2.18	0.43
34:BA:949:A:C6	34:BA:950:U:C4	3.06	0.43
34:BA:1048:G:OP1	47:BN:4:LYS:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1508:G:H2'	34:BA:1509:C:O4'	2.19	0.43
34:BA:1525:G:P	44:BK:120:ARG:NH2	2.91	0.43
36:BC:108:ASN:HB3	36:BC:111:LEU:HG	1.99	0.43
37:BD:102:ASP:HA	37:BD:121:VAL:HG21	2.01	0.43
49:BP:49:LEU:HD23	49:BP:76:GLN:HG2	2.00	0.43
51:BR:56:THR:HB	51:BR:58:LEU:HD22	2.00	0.43
1:CA:874:G:O2'	23:CZ:120:ILE:HD11	2.19	0.43
1:CA:1091:G:H2'	1:CA:1092:C:O4'	2.19	0.43
1:CA:1167:U:H2'	1:CA:1168:G:C8	2.52	0.43
1:CA:1388:G:H2'	1:CA:1389:G:H8	1.84	0.43
1:CA:1448:G:N2	1:CA:1449:A:N6	2.67	0.43
1:CA:1932:A:N6	1:CA:1968:G:H1'	2.33	0.43
1:CA:2397:G:N2	1:CA:2420:C:H1'	2.34	0.43
1:CA:2718:G:C6	1:CA:2719:G:C5	3.06	0.43
2:CB:99:G:O5'	2:CB:99:G:H8	2.01	0.43
3:CC:11:LEU:HD11	3:CC:35:THR:HG23	2.01	0.43
6:CF:124:LEU:HB3	6:CF:193:VAL:HG22	1.99	0.43
15:CR:56:LYS:C	15:CR:58:GLY:H	2.27	0.43
15:CR:87:TYR:OH	15:CR:116:LEU:HB3	2.18	0.43
24:C0:21:LEU:HD11	24:C0:41:ARG:HG2	1.99	0.43
34:DA:409:G:OP1	37:DD:25:ARG:N	2.47	0.43
34:DA:750:G:O2'	48:DO:21:ASP:OD1	2.37	0.43
34:DA:872:A:C8	34:DA:874:G:C8	3.07	0.43
34:DA:1001:A:H2'	34:DA:1001(A):G:H8	1.83	0.43
34:DA:1040:U:O5'	34:DA:1040:U:H6	2.02	0.43
34:DA:1062:U:H2'	34:DA:1063:C:C6	2.53	0.43
34:DA:1183:A:H1'	34:DA:1184:G:OP1	2.19	0.43
34:DA:1401:G:C2	34:DA:1402:C:H1'	2.54	0.43
40:DG:75:VAL:HA	40:DG:87:VAL:O	2.18	0.43
42:DI:26:VAL:HG22	42:DI:61:ALA:HB3	2.00	0.43
46:DM:29:ARG:HG3	46:DM:64:TRP:CZ2	2.54	0.43
57:DZ:20:HIS:CG	57:DZ:21:ILE:H	2.37	0.43
57:DZ:91:THR:O	57:DZ:92:ILE:HG22	2.18	0.43
57:DZ:417:THR:HA	57:DZ:418:LYS:HG2	2.00	0.43
57:DZ:423:LYS:NZ	57:DZ:471:LYS:HD3	2.33	0.43
57:DZ:487:ILE:HB	57:DZ:597:GLY:O	2.19	0.43
1:AA:239:G:H2'	1:AA:240:A:C8	2.54	0.43
1:AA:649:C:O5'	1:AA:649:C:H6	2.02	0.43
1:AA:1885:A:C2	1:AA:2109:G:N3	2.87	0.43
1:AA:1885:A:C8	1:AA:1886:G:C8	3.06	0.43
1:AA:2529:C:C6	1:AA:2554:A:N7	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:202:LYS:NZ	34:BA:774:G:OP1	2.49	0.43
4:AD:266:SER:O	4:AD:270:ILE:HD12	2.19	0.43
6:AF:34:TRP:CZ3	13:AP:8:PRO:HB3	2.53	0.43
12:AO:69:ILE:HD11	12:AO:105:GLU:CD	2.43	0.43
13:AP:70:GLN:CD	13:AP:70:GLN:N	2.77	0.43
20:AW:37:ARG:HD2	20:AW:38:TYR:CE2	2.53	0.43
23:AZ:146:ILE:HA	23:AZ:174:VAL:HG12	2.00	0.43
27:A3:9:VAL:HG12	27:A3:32:GLN:HE22	1.84	0.43
34:BA:872:A:C4	34:BA:874:G:N7	2.87	0.43
34:BA:1434:A:H2'	34:BA:1435:G:O4'	2.19	0.43
35:BB:97:TRP:CZ2	35:BB:102:LEU:HD13	2.54	0.43
35:BB:97:TRP:HZ3	35:BB:176:GLU:OE2	2.02	0.43
35:BB:120:ALA:C	35:BB:121:LEU:HD22	2.44	0.43
45:BL:122:THR:HG22	45:BL:123:LYS:O	2.19	0.43
52:BS:45:VAL:HG11	52:BS:64:GLU:HG2	1.99	0.43
57:BZ:153:MET:O	57:BZ:157:LEU:HD12	2.17	0.43
1:CA:339:U:H6	1:CA:339:U:O5'	2.01	0.43
1:CA:391:G:C6	1:CA:411:G:C2	3.07	0.43
1:CA:1266:G:C5	20:CW:15:ARG:NH1	2.86	0.43
1:CA:1478:G:O2'	1:CA:1558:A:C2	2.70	0.43
1:CA:2359:C:O2'	32:C8:54:GLU:HG3	2.19	0.43
1:CA:2774:C:H2'	1:CA:2775:A:O4'	2.18	0.43
2:CB:28:C:OP1	16:CS:36:TYR:OH	2.33	0.43
3:CC:60:ARG:HG3	3:CC:165:ARG:HB2	2.01	0.43
5:CE:116:VAL:O	5:CE:122:PHE:HB2	2.18	0.43
6:CF:178:PRO:HB2	6:CF:201:VAL:HG21	2.01	0.43
13:CP:19:VAL:CG2	13:CP:31:ALA:HB1	2.49	0.43
23:CZ:61:LEU:HD12	23:CZ:62:PRO:HD2	2.00	0.43
34:DA:396:G:H5"	57:DZ:349:LYS:NZ	2.34	0.43
34:DA:403:C:O2'	37:DD:122:ARG:NH2	2.50	0.43
34:DA:435:C:H2'	34:DA:436:C:H6	1.80	0.43
34:DA:796:C:O5'	34:DA:796:C:H6	2.02	0.43
34:DA:1001(A):G:C4	34:DA:1002:G:H1'	2.54	0.43
34:DA:1122:U:O4	34:DA:1123:A:N6	2.51	0.43
34:DA:1139:G:N2	34:DA:1142:G:O6	2.44	0.43
34:DA:1291:G:O2'	42:DI:38:GLN:HG3	2.18	0.43
36:DC:12:LEU:HD23	36:DC:16:ARG:HB3	2.00	0.43
36:DC:113:ALA:O	36:DC:116:VAL:N	2.50	0.43
37:DD:104:VAL:HG21	37:DD:140:VAL:HG21	1.99	0.43
46:DM:52:GLU:HG2	46:DM:55:ARG:NH2	2.33	0.43
56:DW:38:A:H2'	56:DW:39:PSU:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:402:C:H2'	1:AA:403:C:C6	2.54	0.43
1:AA:1101:G:H5'	1:AA:1102:G:OP2	2.18	0.43
1:AA:1110:C:H4'	10:AL:89:HIS:HA	1.99	0.43
1:AA:1233:U:C4'	19:AV:79:VAL:HG22	2.48	0.43
1:AA:1405:A:H61	1:AA:1418:U:H3	1.67	0.43
1:AA:1462:G:HO2'	1:AA:1463:C:H5	1.66	0.43
1:AA:1541:A:O2'	1:AA:1542:A:H5'	2.19	0.43
1:AA:2219:U:C5	1:AA:2236:G:C6	3.07	0.43
1:AA:2359:C:H2'	1:AA:2360:U:C6	2.54	0.43
7:AG:121:ASN:HA	7:AG:122:PRO:HD3	1.81	0.43
8:AH:6:ARG:HE	8:AH:6:ARG:HB3	1.39	0.43
20:AW:75:TYR:CZ	20:AW:104:THR:HG21	2.54	0.43
30:A6:18:ARG:HD3	30:A6:42:TRP:CD1	2.53	0.43
34:BA:13:U:OP1	63:BA:1910:HOH:O	2.22	0.43
34:BA:284:G:H2'	34:BA:285:G:H8	1.82	0.43
34:BA:358:U:H2'	34:BA:359:U:H6	1.83	0.43
34:BA:939:G:H2'	34:BA:940:C:C6	2.54	0.43
34:BA:957:U:H4'	52:BS:79:THR:O	2.18	0.43
36:BC:56:ASP:O	36:BC:66:VAL:HA	2.19	0.43
37:BD:206:PHE:O	37:BD:208:SER:N	2.52	0.43
38:BE:127:ASN:OD1	38:BE:127:ASN:C	2.61	0.43
41:BH:83:ILE:HA	41:BH:136:GLU:O	2.19	0.43
53:BT:57:ARG:HH22	53:BT:100:ILE:HG13	1.84	0.43
57:BZ:-36:LEU:HD21	57:BZ:-29:LEU:HD22	2.00	0.43
57:BZ:182:ARG:O	57:BZ:184:LYS:HG3	2.19	0.43
1:CA:333:G:H5"	1:CA:334:C:OP2	2.18	0.43
1:CA:672:C:H2'	1:CA:673:C:C6	2.54	0.43
1:CA:1957:C:H2'	1:CA:1958:C:C6	2.54	0.43
1:CA:2243:U:H2'	1:CA:2244:U:C6	2.54	0.43
1:CA:2274:A:C2	1:CA:2276:G:H1'	2.54	0.43
4:CD:73:VAL:HG13	4:CD:120:GLY:HA2	2.00	0.43
5:CE:47:VAL:HG23	5:CE:49:LEU:HD13	2.00	0.43
5:CE:58:ARG:HA	5:CE:58:ARG:HD3	1.62	0.43
7:CG:171:ALA:O	7:CG:175:LEU:HB2	2.19	0.43
12:CO:10:VAL:HG21	12:CO:86:ILE:HD11	2.00	0.43
23:CZ:160:GLY:N	23:CZ:161:VAL:HB	2.34	0.43
34:DA:44:G:C2	34:DA:45:U:H1'	2.53	0.43
34:DA:179:A:H2'	34:DA:180:U:H6	1.80	0.43
34:DA:355:C:C2	34:DA:356:A:C8	3.07	0.43
34:DA:393:A:C2	34:DA:394:G:C8	3.07	0.43
34:DA:601:C:H2'	34:DA:602:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:680:C:H6	34:DA:680:C:O5'	2.02	0.43
34:DA:1251:A:H2'	34:DA:1252:A:O4'	2.19	0.43
35:DB:155:LEU:HD23	35:DB:155:LEU:HA	1.82	0.43
37:DD:59:ARG:C	37:DD:61:LYS:N	2.75	0.43
38:DE:102:ALA:HB1	38:DE:106:PRO:HG2	2.01	0.43
42:DI:63:ILE:HG21	42:DI:77:ILE:HG12	2.01	0.43
57:DZ:38:ARG:HH12	57:DZ:270:GLN:NE2	2.17	0.43
57:DZ:174:PHE:O	57:DZ:267:LYS:HE2	2.18	0.43
57:DZ:355:LEU:HB3	57:DZ:366:VAL:HG23	2.01	0.43
57:DZ:507:TYR:O	57:DZ:577:SER:OG	2.26	0.43
1:AA:12:U:O2	1:AA:12:U:H2'	2.19	0.43
1:AA:602:G:H2'	1:AA:603:C:C6	2.54	0.43
1:AA:1147:U:H2'	1:AA:1148:C:H6	1.84	0.43
1:AA:1596:C:H2'	1:AA:1597:C:O4'	2.18	0.43
1:AA:1888:G:C6	1:AA:1889:G:C6	3.05	0.43
1:AA:2154:U:C6	3:AC:6:LYS:HB2	2.52	0.43
1:AA:2308:U:H4'	1:AA:2309:C:OP1	2.19	0.43
4:AD:52:ARG:NH2	63:AD:406:HOH:O	2.50	0.43
5:AE:181:LEU:HD12	5:AE:181:LEU:HA	1.68	0.43
23:AZ:183:LEU:HA	23:AZ:183:LEU:HD12	1.68	0.43
34:BA:152:A:N6	34:BA:170:U:C2	2.87	0.43
34:BA:319:G:H2'	34:BA:320:C:O4'	2.19	0.43
34:BA:502:G:N1	34:BA:503:C:N3	2.67	0.43
34:BA:567:G:H2'	34:BA:568:G:O4'	2.19	0.43
34:BA:636:U:H2'	34:BA:637:G:C8	2.54	0.43
34:BA:767:A:H2'	34:BA:768:A:O4'	2.19	0.43
34:BA:1203:C:H2'	34:BA:1204:A:C8	2.53	0.43
34:BA:1285:A:H4'	34:BA:1286:A:O5'	2.19	0.43
34:BA:1315:U:H2'	34:BA:1316:G:O4'	2.19	0.43
35:BB:87:ARG:NH1	35:BB:220:ASP:OD1	2.49	0.43
36:BC:29:TYR:OH	47:BN:54:PRO:O	2.35	0.43
37:BD:68:TYR:CD1	37:BD:97:LEU:HD22	2.53	0.43
40:BG:73:MET:HE2	40:BG:90:GLU:HA	2.01	0.43
41:BH:10:LEU:HD23	41:BH:10:LEU:N	2.34	0.43
41:BH:103:VAL:HG21	41:BH:109:ILE:C	2.44	0.43
42:BI:7:THR:O	42:BI:83:ARG:HD2	2.19	0.43
48:BO:26:GLU:H	48:BO:26:GLU:HG2	1.31	0.43
51:BR:61:LYS:HE3	51:BR:61:LYS:HB2	1.76	0.43
56:BW:44:G:H8	56:BW:44:G:OP2	2.02	0.43
57:BZ:6:GLU:C	57:BZ:8:ASP:H	2.27	0.43
57:BZ:210:ARG:O	57:BZ:213:HIS:HB3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:210:C:OP2	31:C7:29:LYS:HE3	2.19	0.43
1:CA:493:G:H2'	1:CA:494:G:O4'	2.19	0.43
1:CA:602:G:O2'	1:CA:655:A:N6	2.51	0.43
3:CC:6:LYS:N	3:CC:9:ARG:HH12	2.17	0.43
3:CC:206:LYS:HB3	3:CC:206:LYS:HZ3	1.82	0.43
4:CD:209:ALA:O	4:CD:210:GLY:C	2.60	0.43
5:CE:18:ASP:HB3	17:CT:82:LEU:HD21	2.00	0.43
5:CE:116:VAL:HG13	5:CE:122:PHE:CD2	2.53	0.43
7:CG:47:LYS:C	7:CG:86:MET:HE3	2.43	0.43
8:CH:12:PRO:O	8:CH:15:VAL:HG12	2.19	0.43
12:CO:31:LYS:HB3	12:CO:32:TYR:CD2	2.53	0.43
34:DA:169:C:H2'	34:DA:170:U:C6	2.54	0.43
34:DA:473:G:C2	34:DA:474:G:N7	2.87	0.43
34:DA:938:A:C6	34:DA:939:G:C5	3.06	0.43
34:DA:1133:G:N2	34:DA:1141:C:O2	2.51	0.43
36:DC:6:HIS:NE2	36:DC:184:TYR:HE2	2.17	0.43
36:DC:123:GLN:O	36:DC:128:PHE:HB2	2.19	0.43
36:DC:155:GLY:O	36:DC:157:ILE:HG13	2.18	0.43
51:DR:59:SER:H	51:DR:62:GLU:HB2	1.83	0.43
52:DS:50:ALA:HB1	52:DS:57:HIS:HB3	2.01	0.43
55:DV:16:U:O5'	55:DV:16:U:H6	2.01	0.43
57:DZ:182:ARG:H	57:DZ:182:ARG:HG3	1.63	0.43
57:DZ:529:ILE:HD13	57:DZ:529:ILE:HA	1.75	0.43
1:AA:174:U:H2'	1:AA:175:G:C8	2.54	0.43
1:AA:261:A:N7	1:AA:283:G:N2	2.62	0.43
1:AA:609:A:N1	1:AA:856:G:O2'	2.43	0.43
1:AA:1216:G:N2	1:AA:1225:C:O2	2.52	0.43
1:AA:1221:G:H1'	1:AA:1222:A:C5'	2.49	0.43
1:AA:1314:A:H2'	1:AA:1315:A:O4'	2.18	0.43
1:AA:1374:G:O6	63:AA:3941:HOH:O	2.21	0.43
1:AA:1539:C:H5	1:AA:2227:G:O2'	2.02	0.43
1:AA:1550:C:H2'	1:AA:1551:C:C6	2.52	0.43
1:AA:1688:A:H2'	1:AA:1689:G:O4'	2.18	0.43
1:AA:1790:A:C8	1:AA:2708:U:H1'	2.54	0.43
1:AA:1857:G:H2'	1:AA:1858:C:C6	2.54	0.43
1:AA:2564:U:C2	1:AA:2566:U:H5'	2.54	0.43
4:AD:26:LYS:HD3	4:AD:83:GLU:OE2	2.19	0.43
8:AH:25:LYS:HE3	8:AH:27:LYS:HE2	2.00	0.43
8:AH:105:LEU:HD12	8:AH:105:LEU:HA	1.79	0.43
15:AR:38:VAL:HG23	15:AR:110:PRO:O	2.19	0.43
18:AU:36:ARG:HD2	18:AU:40:PHE:CZ	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AZ:111:VAL:HG12	23:AZ:112:ARG:N	2.34	0.43
34:BA:818:G:HO2'	34:BA:820:U:H6	1.62	0.43
34:BA:977:A:C8	34:BA:1223:C:C4	3.07	0.43
39:BF:11:ASN:O	39:BF:14:LEU:HG	2.19	0.43
40:BG:113:GLU:HG3	40:BG:119:ARG:HG2	2.01	0.43
51:BR:59:SER:N	51:BR:62:GLU:HG3	2.31	0.43
53:BT:14:LYS:O	53:BT:17:ARG:HB2	2.18	0.43
57:BZ:182:ARG:O	57:BZ:183:MET:C	2.62	0.43
61:BZ:703:FUA:H322	61:BZ:703:FUA:H16	1.74	0.43
1:CA:10:G:H2'	1:CA:11:G:C8	2.54	0.43
1:CA:727:A:O2'	1:CA:728:G:H5'	2.19	0.43
1:CA:1047:G:O2'	1:CA:1110:G:O6	2.31	0.43
1:CA:1090:U:O2	1:CA:1102:C:H1'	2.19	0.43
1:CA:1338:G:C6	1:CA:1339:G:C5	3.06	0.43
1:CA:2052:G:N3	5:CE:149:ARG:HA	2.34	0.43
1:CA:2515:C:O2'	1:CA:2516:G:H5'	2.18	0.43
1:CA:2574:G:H2'	1:CA:2575:C:C6	2.53	0.43
1:CA:2776:A:C6	1:CA:2778:A:C6	3.07	0.43
8:CH:117:PRO:HA	8:CH:118:PRO:HD2	1.90	0.43
12:CO:1:MET:HE2	12:CO:32:TYR:CG	2.54	0.43
13:CP:136:GLU:O	13:CP:140:ALA:HB3	2.19	0.43
34:DA:283:C:H2'	34:DA:284:G:O4'	2.18	0.43
34:DA:580:U:H2'	34:DA:581:G:O4'	2.19	0.43
34:DA:1004:A:H5'	34:DA:1024:G:H22	1.83	0.43
34:DA:1357:A:N6	34:DA:1358:U:O4	2.52	0.43
36:DC:148:GLY:HA3	36:DC:203:PHE:HB3	2.01	0.43
38:DE:40:ARG:HB3	38:DE:66:MET:HE1	2.00	0.43
43:DJ:16:LEU:HD23	43:DJ:94:VAL:HG22	2.01	0.43
43:DJ:42:THR:HG21	43:DJ:66:ARG:HB3	2.00	0.43
54:DU:15:ARG:HB2	54:DU:15:ARG:HH11	1.84	0.43
56:DW:40:C:O2'	56:DY:36:A:P	2.77	0.43
57:DZ:6:GLU:HA	57:DZ:9:LEU:CD2	2.49	0.43
1:AA:153:C:OP2	25:A1:92:LYS:NZ	2.47	0.42
1:AA:181:C:C2'	1:AA:182:U:H5'	2.46	0.42
1:AA:223:C:H2'	1:AA:224:U:C6	2.54	0.42
1:AA:526:A:C6	1:AA:527:A:C6	3.07	0.42
1:AA:1088:G:C6	1:AA:1089:C:C4	3.07	0.42
1:AA:1417:G:H2'	1:AA:1418:U:C5	2.53	0.42
1:AA:1434:G:HO2'	1:AA:1571:G:HO2'	1.66	0.42
1:AA:1568:G:H2'	1:AA:1569:U:O4'	2.19	0.42
2:AB:73:A:N1	23:AZ:34:ASN:ND2	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AO:64:ARG:HG2	12:AO:79:PHE:CB	2.49	0.42
17:AT:117:ASP:O	17:AT:121:ILE:HG13	2.19	0.42
23:AZ:136:PHE:O	23:AZ:137:ILE:HG13	2.19	0.42
30:A6:50:ARG:HE	30:A6:50:ARG:HB2	1.61	0.42
31:A7:34:ARG:NH1	31:A7:41:ARG:O	2.52	0.42
34:BA:16:A:N1	34:BA:919:A:H2	2.17	0.42
34:BA:66:G:O4'	34:BA:173:U:C4	2.72	0.42
34:BA:176:C:H2'	34:BA:177:C:C6	2.54	0.42
34:BA:1072:G:H2'	34:BA:1073:U:C6	2.54	0.42
34:BA:1104:G:C2	34:BA:1105:A:C4	3.07	0.42
34:BA:1291:G:H5'	40:BG:37:ASN:HD21	1.84	0.42
36:BC:50:ALA:HB1	36:BC:70:VAL:HG21	2.00	0.42
37:BD:30:LYS:HA	37:BD:35:ARG:HH11	1.83	0.42
38:BE:66:MET:HE3	38:BE:66:MET:HB3	1.78	0.42
40:BG:79:ARG:HB3	40:BG:80:VAL:H	1.56	0.42
42:BI:48:GLU:OE1	42:BI:51:ARG:NH1	2.52	0.42
44:BK:48:ILE:HD12	44:BK:63:LEU:CB	2.49	0.42
47:BN:3:ARG:HB3	47:BN:4:LYS:H	1.69	0.42
57:BZ:116:PRO:C	57:BZ:118:SER:H	2.27	0.42
57:BZ:368:GLU:OE2	57:BZ:370:LYS:NZ	2.51	0.42
1:CA:489:G:H2'	1:CA:491:G:O4'	2.19	0.42
1:CA:528:A:C2	1:CA:2042:A:H2'	2.53	0.42
1:CA:1195:G:O2'	1:CA:1196:C:H5'	2.19	0.42
1:CA:1225:G:H4'	19:CV:84:LYS:HG2	2.01	0.42
1:CA:1340:U:H4'	1:CA:1341:U:OP2	2.18	0.42
1:CA:1364:G:OP2	25:C1:3:LYS:HG3	2.19	0.42
1:CA:1666:G:C2'	1:CA:1667:G:H5'	2.48	0.42
1:CA:1750:G:N3	1:CA:2860:A:H2	2.17	0.42
1:CA:2046:G:H2'	1:CA:2047:U:C6	2.53	0.42
1:CA:2122:U:O2	3:CC:167:ASP:HB3	2.19	0.42
1:CA:2318:G:H21	16:CS:3:ARG:HH12	1.67	0.42
1:CA:2469:A:C2	1:CA:2470:G:H1'	2.54	0.42
1:CA:2786:U:H4'	5:CE:65:GLY:C	2.44	0.42
4:CD:238:GLY:O	4:CD:239:ARG:CB	2.63	0.42
8:CH:140:LYS:HB2	8:CH:140:LYS:HE3	1.74	0.42
11:CN:42:TRP:CE3	18:CU:63:VAL:HG11	2.54	0.42
13:CP:39:LYS:HA	13:CP:45:LEU:HG	2.00	0.42
28:C4:40:HIS:O	28:C4:44:THR:N	2.30	0.42
34:DA:157:G:H2'	34:DA:158:G:C8	2.50	0.42
34:DA:355:C:C4	34:DA:356:A:N7	2.87	0.42
34:DA:790:A:H5'	56:DW:39:PSU:OP1	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:987:G:O5'	34:DA:987:G:H8	2.01	0.42
34:DA:1085:U:H3'	34:DA:1086:U:H5	1.84	0.42
34:DA:1254:C:OP1	43:DJ:45:ARG:HA	2.19	0.42
38:DE:47:LYS:HE2	38:DE:47:LYS:HB2	1.64	0.42
40:DG:26:PHE:HB2	40:DG:62:PHE:HZ	1.84	0.42
42:DI:45:ALA:O	42:DI:48:GLU:HB2	2.19	0.42
42:DI:106:ALA:O	42:DI:108:VAL:N	2.52	0.42
42:DI:110:GLU:OE2	42:DI:113:LYS:NZ	2.52	0.42
45:DL:31:PRO:HB2	45:DL:32:PHE:CD2	2.53	0.42
51:DR:31:LEU:HD13	51:DR:31:LEU:HA	1.80	0.42
57:DZ:431:LEU:HA	57:DZ:434:GLU:HB3	2.00	0.42
1:AA:510:C:H2'	1:AA:511:C:C6	2.54	0.42
1:AA:556:C:H4'	1:AA:557:A:H5"	2.01	0.42
1:AA:1098:C:O2'	1:AA:1099:C:H5'	2.19	0.42
1:AA:1185:C:O3'	11:AN:25:ARG:NH1	2.52	0.42
1:AA:1815:A:H4'	1:AA:1816:A:C5'	2.50	0.42
1:AA:2050:U:O4	63:AA:3934:HOH:O	2.19	0.42
1:AA:2216:G:H2'	1:AA:2217:C:O4'	2.19	0.42
1:AA:2274:U:P	24:A0:19:LYS:HZ3	2.42	0.42
4:AD:158:ALA:O	4:AD:159:ALA:C	2.63	0.42
4:AD:159:ALA:HB1	4:AD:198:ASN:O	2.18	0.42
4:AD:261:LYS:NZ	4:AD:263:ARG:NH2	2.67	0.42
5:AE:150:VAL:CG1	5:AE:154:LYS:HG3	2.49	0.42
6:AF:13:SER:N	6:AF:16:GLY:O	2.45	0.42
6:AF:103:LYS:O	6:AF:106:ARG:HG2	2.19	0.42
8:AH:109:PHE:C	8:AH:111:HIS:H	2.27	0.42
10:AL:72:PRO:HA	10:AL:73:PRO:HD3	1.86	0.42
17:AT:39:ARG:NH2	34:BA:345:C:C5	2.87	0.42
21:AX:29:TRP:CZ3	21:AX:78:LYS:HG2	2.53	0.42
23:AZ:99:TYR:CZ	23:AZ:125:LEU:HD13	2.54	0.42
28:A4:63:TYR:N	28:A4:64:GLY:HA2	2.33	0.42
34:BA:57:G:H2'	34:BA:58:C:O4'	2.19	0.42
34:BA:445:G:C4	34:BA:446:G:C8	3.07	0.42
34:BA:1041:A:H2'	34:BA:1042:G:O4'	2.19	0.42
34:BA:1112:C:O2	36:BC:179:ARG:HG2	2.19	0.42
34:BA:1274:G:H22	34:BA:1275:A:H62	1.66	0.42
36:BC:6:HIS:CD2	36:BC:7:PRO:HD2	2.54	0.42
36:BC:45:LYS:HD3	36:BC:46:GLU:HG2	2.01	0.42
57:BZ:544:LYS:O	57:BZ:548:GLU:HB2	2.19	0.42
1:CA:18:C:H2'	1:CA:19:C:H6	1.84	0.42
1:CA:311:A:C6	1:CA:328:U:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:993:G:OP2	18:CU:51:LYS:NZ	2.52	0.42
1:CA:1287:A:OP1	15:CR:105:ARG:HB3	2.18	0.42
1:CA:1668:A:H5"	12:CO:5:GLN:HG2	2.01	0.42
1:CA:2393:A:H2'	1:CA:2394:C:H6	1.84	0.42
1:CA:2853:C:H2'	1:CA:2854:G:C8	2.53	0.42
4:CD:96:HIS:CD2	4:CD:102:LYS:HG2	2.55	0.42
15:CR:18:LEU:HD23	15:CR:18:LEU:HA	1.86	0.42
17:CT:15:VAL:HG12	17:CT:16:ARG:N	2.34	0.42
20:CW:35:ILE:HG22	20:CW:36:LEU:N	2.34	0.42
22:CY:52:SER:HB2	22:CY:53:PRO:HD2	2.01	0.42
26:C2:1:MET:HE3	26:C2:5:GLU:HB3	2.01	0.42
34:DA:56:U:H2'	34:DA:57:G:C8	2.54	0.42
34:DA:1074:G:C6	34:DA:1075:C:C4	3.07	0.42
35:DB:133:LYS:O	35:DB:137:ARG:HG3	2.19	0.42
38:DE:81:GLU:HB3	38:DE:90:VAL:HG13	2.00	0.42
41:DH:94:TYR:CE1	41:DH:132:GLU:HB2	2.54	0.42
51:DR:65:ILE:O	51:DR:69:THR:HG23	2.19	0.42
57:DZ:6:GLU:C	57:DZ:8:ASP:H	2.27	0.42
57:DZ:189:GLY:HA3	57:DZ:195:ASP:CG	2.44	0.42
57:DZ:605:ILE:HD13	57:DZ:675:HIS:CE1	2.55	0.42
1:AA:424:G:O2'	1:AA:2243:C:H1'	2.19	0.42
1:AA:553:A:C2	1:AA:2065:C:H4'	2.54	0.42
1:AA:702:A:H2'	1:AA:703:G:O4'	2.19	0.42
1:AA:1220:U:O2'	1:AA:1221:G:O5'	2.35	0.42
1:AA:1258:A:N3	1:AA:1284:G:O2'	2.45	0.42
1:AA:1968:U:H2'	1:AA:1969:C:C6	2.54	0.42
1:AA:2007:G:OP2	63:AA:3944:HOH:O	2.22	0.42
1:AA:2331:G:H1	16:AS:3:ARG:HD3	1.83	0.42
8:AH:154:PRO:HD3	8:AH:162:ILE:O	2.19	0.42
19:AV:89:GLN:OE1	19:AV:89:GLN:HA	2.19	0.42
34:BA:342:C:C2	34:BA:348:G:N2	2.87	0.42
34:BA:358:U:H2'	34:BA:359:U:C6	2.54	0.42
34:BA:444:C:C2	34:BA:445:G:C8	3.08	0.42
34:BA:522:C:C2'	34:BA:523:A:H5'	2.49	0.42
34:BA:558:G:C5	34:BA:559:A:C2	3.07	0.42
34:BA:1000:U:H2'	34:BA:1001:A:C8	2.53	0.42
34:BA:1026:G:H2'	34:BA:1026:G:N3	2.33	0.42
34:BA:1095:U:P	34:BA:1108:G:H1	2.41	0.42
41:BH:56:LYS:O	41:BH:58:TYR:HD1	2.01	0.42
49:BP:57:ARG:HG2	49:BP:79:VAL:HG12	2.00	0.42
52:BS:41:VAL:N	52:BS:44:MET:SD	2.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BW:33:U:O2'	56:BW:35:A:N7	2.48	0.42
56:BY:9:A:H1'	56:BY:45:U:H2'	2.00	0.42
57:BZ:151:ARG:O	57:BZ:155:GLU:HB2	2.19	0.42
1:CA:530:G:N3	1:CA:530:G:O4'	2.52	0.42
1:CA:553:G:C5	1:CA:554:U:C5	3.07	0.42
1:CA:565:C:H2'	1:CA:566:U:O4'	2.18	0.42
1:CA:1076:C:H2'	1:CA:1077:A:O4'	2.20	0.42
1:CA:1141:U:H2'	11:CN:63:THR:HG21	2.00	0.42
1:CA:1257:C:H5'	6:CF:75:HIS:CE1	2.55	0.42
2:CB:117:G:H5'	16:CS:55:ALA:HB2	2.01	0.42
3:CC:195:ARG:HH11	3:CC:195:ARG:HG3	1.83	0.42
6:CF:169:ASN:HD22	6:CF:169:ASN:HA	1.51	0.42
7:CG:117:PHE:HE1	7:CG:119:GLY:HA2	1.80	0.42
9:CK:23:SER:HA	9:CK:117:LEU:O	2.18	0.42
11:CN:33:LEU:HD13	11:CN:33:LEU:HA	1.80	0.42
16:CS:15:ARG:HB3	16:CS:19:LYS:NZ	2.34	0.42
18:CU:36:ARG:HD2	18:CU:40:PHE:CZ	2.55	0.42
20:CW:78:GLU:OE1	20:CW:99:ARG:NH1	2.49	0.42
23:CZ:130:PRO:O	23:CZ:133:ILE:HG12	2.20	0.42
34:DA:298:A:H5"	34:DA:299:G:OP2	2.19	0.42
34:DA:481:G:H21	34:DA:482:A:H62	1.67	0.42
34:DA:797:C:O2'	34:DA:798:G:H5'	2.19	0.42
34:DA:955:U:H2'	34:DA:956:U:O4'	2.19	0.42
34:DA:1072:G:H2'	34:DA:1073:U:O4'	2.19	0.42
34:DA:1222:G:C2	34:DA:1223:C:C2	3.07	0.42
34:DA:1269:A:HO2'	34:DA:1325:C:HO2'	1.64	0.42
36:DC:131:ARG:HH12	36:DC:135:LYS:HZ3	1.67	0.42
37:DD:209:ARG:OXT	37:DD:209:ARG:HG2	2.18	0.42
38:DE:91:LEU:HD12	38:DE:91:LEU:HA	1.79	0.42
38:DE:99:GLY:O	38:DE:117:ASP:HA	2.19	0.42
56:DW:61:C:H2'	56:DW:62:C:C6	2.54	0.42
56:DY:35:A:N6	56:DY:36:A:N1	2.68	0.42
56:DY:51:U:O2	56:DY:63:G:N2	2.33	0.42
57:DZ:169:GLY:C	57:DZ:170:ARG:NH1	2.77	0.42
1:AA:308:U:H2'	1:AA:309:C:C6	2.53	0.42
1:AA:974:G:O5'	1:AA:974:G:H8	2.02	0.42
1:AA:1064:C:C2'	1:AA:1065:U:H5'	2.49	0.42
1:AA:1476:C:H2'	1:AA:1477:U:H6	1.83	0.42
1:AA:1549:U:H2'	1:AA:1550:C:C6	2.55	0.42
1:AA:1913:G:C6	1:AA:1914:C:C4	3.08	0.42
1:AA:2019:G:O2'	1:AA:2020:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2305:C:H2'	1:AA:2306:C:C6	2.54	0.42
3:AC:6:LYS:N	3:AC:9:ARG:HH12	2.17	0.42
3:AC:195:ARG:HG3	3:AC:195:ARG:NH1	2.34	0.42
5:AE:94:GLU:H	5:AE:94:GLU:HG2	1.59	0.42
6:AF:192:LEU:HD22	6:AF:194:MET:HG3	2.02	0.42
10:AL:30:HIS:HB2	10:AL:32:ALA:HB2	2.00	0.42
10:AL:41:PHE:HE1	10:AL:53:VAL:HB	1.83	0.42
11:AN:102:ALA:O	11:AN:106:MET:HG3	2.20	0.42
18:AU:113:ALA:O	18:AU:117:GLN:HG2	2.19	0.42
20:AW:29:LEU:O	20:AW:33:ARG:HG3	2.20	0.42
25:A1:91:LYS:HG2	25:A1:95:LEU:HD22	2.01	0.42
34:BA:308:C:H2'	34:BA:309:G:C8	2.51	0.42
34:BA:542:G:H2'	34:BA:543:C:H6	1.85	0.42
34:BA:654:G:C2	34:BA:753:A:C4	3.07	0.42
34:BA:987:G:H2'	34:BA:988:G:C8	2.55	0.42
34:BA:1118:C:C1'	34:BA:1179:A:C4	2.99	0.42
36:BC:152:ILE:HB	36:BC:199:LYS:HB2	2.02	0.42
42:BI:53:VAL:HG21	42:BI:92:TYR:CE1	2.54	0.42
52:BS:32:LYS:HE2	52:BS:57:HIS:CD2	2.54	0.42
56:BY:72:C:H2'	56:BY:73:A:O4'	2.18	0.42
57:BZ:-34:ARG:HE	57:BZ:-34:ARG:HB3	1.57	0.42
57:BZ:517:LEU:HD12	57:BZ:517:LEU:HA	1.72	0.42
57:BZ:621:ILE:HG13	57:BZ:643:ILE:HD13	2.01	0.42
1:CA:888:C:H5'	46:DM:93:ARG:HD3	2.02	0.42
1:CA:958:U:H5"	14:CQ:14:ARG:HD3	2.02	0.42
1:CA:1000:A:C6	1:CA:1001:A:C6	3.06	0.42
1:CA:1115:G:H2'	1:CA:1116:C:H6	1.82	0.42
1:CA:1162:G:O3'	19:CV:24:LYS:NZ	2.51	0.42
1:CA:1287:A:H5"	1:CA:1288:U:OP2	2.19	0.42
1:CA:1557:C:P	1:CA:1558:A:HO2'	2.39	0.42
1:CA:1782:C:O2	1:CA:2608:G:O2'	2.36	0.42
1:CA:2108:C:H2'	1:CA:2109:U:C6	2.53	0.42
1:CA:2861:G:C4	1:CA:2862:G:C8	3.07	0.42
3:CC:195:ARG:HG3	3:CC:195:ARG:NH1	2.35	0.42
3:CC:225:ILE:O	3:CC:227:PRO:HD3	2.19	0.42
4:CD:16:MET:HE3	4:CD:16:MET:HB2	1.73	0.42
5:CE:5:LEU:N	5:CE:5:LEU:HD23	2.34	0.42
5:CE:75:VAL:HG13	5:CE:77:ILE:H	1.84	0.42
6:CF:119:ARG:O	6:CF:119:ARG:HG2	2.18	0.42
6:CF:170:LEU:HG	6:CF:172:TRP:NE1	2.34	0.42
7:CG:49:ASP:C	7:CG:51:ARG:N	2.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CK:69:PRO:O	9:CK:71:LEU:N	2.52	0.42
10:CL:41:PHE:CZ	10:CL:45:THR:HG21	2.54	0.42
12:CO:66:LYS:HE2	12:CO:80:ASP:O	2.20	0.42
13:CP:95:VAL:HA	13:CP:99:LEU:HD21	2.02	0.42
14:CQ:54:MET:O	14:CQ:55:VAL:C	2.62	0.42
20:CW:80:PRO:O	20:CW:100:THR:HB	2.20	0.42
34:DA:117:G:OP2	63:DA:1808:HOH:O	2.21	0.42
34:DA:203:U:H2'	34:DA:203:U:OP2	2.18	0.42
34:DA:264:U:H4'	50:DQ:63:ARG:HD3	2.01	0.42
34:DA:705:U:C5	34:DA:706:A:C5	3.07	0.42
34:DA:1057:G:H1'	36:DC:195:VAL:HG12	2.02	0.42
34:DA:1291:G:C6	34:DA:1292:U:C4	3.07	0.42
35:DB:178:ARG:HH22	41:DH:68:ARG:HH12	1.66	0.42
43:DJ:7:LYS:HG2	43:DJ:71:LEU:HD13	2.01	0.42
56:DW:14:A:C4	56:DW:22:G:C2	3.07	0.42
57:DZ:164:MET:O	57:DZ:180:VAL:HG22	2.19	0.42
57:DZ:303:PRO:O	57:DZ:305:PRO:HD3	2.20	0.42
57:DZ:553:GLY:H	57:DZ:557:GLY:CA	2.24	0.42
1:AA:252:C:H2'	1:AA:253:C:O4'	2.19	0.42
1:AA:1888:G:O5'	1:AA:1888:G:H8	2.03	0.42
1:AA:2235:G:OP1	4:AD:172:TYR:OH	2.28	0.42
1:AA:2242:G:O3'	25:A1:43:TYR:HB2	2.19	0.42
1:AA:2638:C:H2'	1:AA:2639:G:C8	2.54	0.42
3:AC:54:ARG:HE	3:AC:57:GLN:HG2	1.83	0.42
3:AC:195:ARG:HG3	3:AC:195:ARG:HH11	1.83	0.42
3:AC:225:ILE:O	3:AC:227:PRO:HD3	2.19	0.42
4:AD:53:PHE:HB3	4:AD:218:ARG:O	2.20	0.42
7:AG:50:ALA:O	7:AG:52:ILE:N	2.53	0.42
10:AL:37:PHE:CE1	10:AL:41:PHE:HB2	2.55	0.42
11:AN:36:GLY:HA2	11:AN:38:HIS:CE1	2.54	0.42
14:AQ:2:LEU:HG	14:AQ:69:PHE:CE2	2.54	0.42
34:BA:325:A:H2'	34:BA:326:G:O4'	2.20	0.42
34:BA:430:A:OP1	37:BD:9:CYS:HB2	2.20	0.42
34:BA:895:G:H2'	34:BA:896:C:C6	2.55	0.42
34:BA:1033:G:H2'	34:BA:1034:G:H8	1.84	0.42
34:BA:1289:A:N1	34:BA:1371:G:O2'	2.30	0.42
35:BB:97:TRP:HZ2	35:BB:102:LEU:HD13	1.83	0.42
48:BO:18:PHE:HB2	48:BO:19:PRO:HD2	2.01	0.42
53:BT:49:ALA:O	53:BT:53:LEU:HG	2.20	0.42
57:BZ:100:VAL:H	57:BZ:100:VAL:HG23	1.63	0.42
57:BZ:168:ILE:N	57:BZ:176:GLY:O	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:277:VAL:HG12	57:BZ:278:ASP:N	2.34	0.42
1:CA:370:G:OP2	63:CA:3750:HOH:O	2.21	0.42
1:CA:1539:G:H2'	1:CA:1540:U:O4'	2.19	0.42
1:CA:1834:U:H4'	1:CA:1969:A:C6	2.54	0.42
1:CA:1893:C:C5	1:CA:1894:C:C5	3.07	0.42
1:CA:1916:A:H8	1:CA:1916:A:O5'	2.02	0.42
1:CA:2845:G:H2'	1:CA:2846:G:H8	1.83	0.42
4:CD:123:ALA:HA	4:CD:124:PRO:HD3	1.85	0.42
5:CE:119:ARG:HD2	5:CE:120:TRP:NE1	2.35	0.42
7:CG:103:LEU:HD22	7:CG:178:PHE:HZ	1.85	0.42
8:CH:71:LEU:HA	8:CH:71:LEU:HD12	1.82	0.42
12:CO:88:ASN:OD1	12:CO:92:GLU:HB2	2.19	0.42
18:CU:61:TRP:CZ3	18:CU:93:LYS:HB2	2.55	0.42
18:CU:104:GLN:CD	18:CU:104:GLN:H	2.27	0.42
27:C3:5:LYS:O	27:C3:56:VAL:HA	2.19	0.42
32:C8:34:TRP:CE3	32:C8:35:GLN:HG2	2.55	0.42
34:DA:144:G:H2'	34:DA:145:G:C8	2.53	0.42
34:DA:779:C:H2'	34:DA:780:A:O4'	2.19	0.42
34:DA:1090:U:H2'	34:DA:1091:U:C6	2.55	0.42
34:DA:1530:G:H2'	34:DA:1531:A:O4'	2.19	0.42
36:DC:175:LEU:HD12	36:DC:175:LEU:H	1.84	0.42
49:DP:49:LEU:HD12	49:DP:50:LYS:N	2.34	0.42
57:DZ:13:ARG:NH2	57:DZ:277:VAL:O	2.52	0.42
1:AA:64:C:H2'	1:AA:65:C:C6	2.54	0.42
1:AA:170:A:H2'	1:AA:171:A:C8	2.54	0.42
1:AA:493:G:OP1	31:A7:33:ARG:HD2	2.19	0.42
1:AA:572:A:H62	19:AV:19:LYS:NZ	2.16	0.42
1:AA:583:C:H2'	1:AA:584:G:O4'	2.20	0.42
1:AA:1202:A:C8	18:AU:51:LYS:HD2	2.54	0.42
1:AA:1849:U:H2'	4:AD:157:ARG:HG3	2.01	0.42
1:AA:2228:G:O2'	1:AA:2229:A:OP1	2.30	0.42
1:AA:2321:A:H8	1:AA:2321:A:O5'	2.02	0.42
2:AB:54:G:H2'	2:AB:55:U:H6	1.84	0.42
4:AD:215:LEU:HA	4:AD:215:LEU:HD23	1.81	0.42
16:AS:61:ASN:O	16:AS:65:VAL:HG23	2.20	0.42
19:AV:20:LEU:HD12	19:AV:21:ARG:H	1.84	0.42
20:AW:19:LEU:HB3	29:A5:25:LEU:CD1	2.50	0.42
32:A8:6:THR:HB	32:A8:8:LYS:HE2	2.00	0.42
34:BA:189(K):U:H2'	34:BA:189(L):G:C8	2.54	0.42
34:BA:266:G:H5'	34:BA:266:G:C8	2.54	0.42
34:BA:279:A:H5'	50:BQ:95:TYR:OH	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:410:G:C2	34:BA:429:U:C2	3.08	0.42
34:BA:578:C:O4'	34:BA:729:A:H1'	2.19	0.42
34:BA:750:G:H1'	48:BO:22:THR:O	2.20	0.42
34:BA:1270:C:H2'	34:BA:1271:G:H8	1.83	0.42
34:BA:1405:G:H1'	34:BA:1519:A:H4'	2.01	0.42
35:BB:83:MET:H	35:BB:83:MET:HG2	1.63	0.42
41:BH:119:LEU:HB3	41:BH:123:GLU:HB3	2.01	0.42
44:BK:45:GLY:O	44:BK:50:TYR:HB2	2.19	0.42
52:BS:3:ARG:HG2	52:BS:4:SER:H	1.85	0.42
57:BZ:538:TYR:HB3	57:BZ:582:PHE:CD1	2.54	0.42
1:CA:310:A:C4	1:CA:312:G:C8	3.07	0.42
1:CA:516:C:O5'	1:CA:516:C:H6	2.03	0.42
1:CA:569:U:C4	1:CA:570:G:C6	3.07	0.42
1:CA:833:U:O2	13:CP:55:ARG:NH2	2.53	0.42
1:CA:1005:C:OP2	1:CA:1011:G:O2'	2.21	0.42
1:CA:1189:A:OP2	63:CA:3751:HOH:O	2.21	0.42
1:CA:1545:A:H2'	1:CA:1546:C:O4'	2.19	0.42
1:CA:2258:C:H4'	1:CA:2259:G:OP2	2.20	0.42
1:CA:2488:A:H2'	1:CA:2489:G:C8	2.55	0.42
1:CA:2532:G:H2'	1:CA:2533:A:O4'	2.20	0.42
1:CA:2542:A:H4'	1:CA:2543:G:H8	1.84	0.42
1:CA:2572:A:C6	5:CE:144:ARG:NH1	2.87	0.42
4:CD:68:LYS:HB3	4:CD:70:TRP:CE2	2.54	0.42
8:CH:72:ILE:O	8:CH:75:ALA:HB3	2.19	0.42
18:CU:69:CYS:SG	18:CU:79:PHE:HB2	2.59	0.42
26:C2:49:LYS:NZ	26:C2:49:LYS:HB3	2.34	0.42
34:DA:374:A:C6	34:DA:375:U:C4	3.06	0.42
34:DA:533:A:C6	34:DA:536:C:C2	3.07	0.42
34:DA:1000:U:O2	34:DA:1042:G:N2	2.52	0.42
34:DA:1404:C:H2'	34:DA:1405:G:C8	2.55	0.42
37:DD:171:GLY:C	37:DD:173:TRP:N	2.77	0.42
39:DF:98:LEU:HD23	51:DR:30:ASP:HA	2.02	0.42
45:DL:69:TYR:HD2	45:DL:99:HIS:CE1	2.37	0.42
46:DM:5:ALA:HB1	46:DM:66:LEU:HD13	2.01	0.42
49:DP:28:ARG:HG3	49:DP:29:ASP:OD1	2.19	0.42
50:DQ:82:MET:HE3	50:DQ:82:MET:HB3	1.82	0.42
51:DR:76:LEU:HD12	51:DR:76:LEU:HA	1.80	0.42
53:DT:39:LYS:O	53:DT:43:LEU:HG	2.20	0.42
56:DY:46:7MG:H81	56:DY:46:7MG:H2'	1.69	0.42
1:AA:118:U:OP2	63:AA:3939:HOH:O	2.21	0.42
1:AA:701:A:O2'	1:AA:702:A:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1619:A:H5'	63:AA:4502:HOH:O	2.18	0.42
1:AA:1834:A:H4'	4:AD:259:THR:CG2	2.50	0.42
1:AA:1954:A:H2'	1:AA:1955:G:O4'	2.19	0.42
1:AA:2228:G:H2'	1:AA:2229:A:C2	2.54	0.42
2:AB:29:A:C2	2:AB:56:G:C2	3.08	0.42
2:AB:111:G:C6	2:AB:112:U:C4	3.08	0.42
5:AE:176:ILE:HA	5:AE:177:PRO:HD2	1.85	0.42
11:AN:62:VAL:CG1	11:AN:66:LYS:HB2	2.49	0.42
14:AQ:7:MET:HE3	14:AQ:7:MET:HB2	1.83	0.42
15:AR:96:ARG:O	15:AR:96:ARG:HG3	2.18	0.42
30:A6:11:LEU:HB2	30:A6:21:TYR:HB2	2.02	0.42
30:A6:40:CYS:HA	30:A6:41:PRO:HD3	1.85	0.42
34:BA:35:G:N2	45:BL:118:SER:OG	2.38	0.42
34:BA:189(B):C:N3	34:BA:189(J):G:C2	2.88	0.42
34:BA:923:A:H2'	34:BA:924:C:C6	2.55	0.42
34:BA:1103:C:H5"	35:BB:98:LEU:HD13	2.01	0.42
35:BB:36:ARG:C	35:BB:38:GLY:H	2.27	0.42
36:BC:143:GLU:C	36:BC:145:GLY:H	2.28	0.42
37:BD:204:ILE:HG21	38:BE:98:THR:O	2.19	0.42
40:BG:78:ARG:HG3	40:BG:156:TRP:CE3	2.54	0.42
41:BH:12:ARG:HH21	41:BH:27:PRO:HD3	1.84	0.42
43:BJ:31:GLY:HA2	43:BJ:32:ALA:HA	1.58	0.42
47:BN:6:LEU:HG	47:BN:23:ARG:NH2	2.34	0.42
57:BZ:182:ARG:HG3	57:BZ:182:ARG:H	1.62	0.42
1:CA:262:A:H2'	1:CA:263:C:O4'	2.20	0.42
1:CA:627:A:C6	1:CA:637:A:C8	3.08	0.42
1:CA:985:C:H2'	1:CA:986:C:H6	1.84	0.42
1:CA:1068:G:N2	1:CA:1096:A:H5'	2.33	0.42
1:CA:1314:C:C2	1:CA:1339:G:N2	2.87	0.42
1:CA:1408:C:C2	1:CA:1595:G:N2	2.88	0.42
1:CA:1805:U:H2'	1:CA:1806:C:C6	2.55	0.42
1:CA:2517:C:C2	1:CA:2542:A:N6	2.88	0.42
6:CF:183:VAL:O	6:CF:183:VAL:HG23	2.19	0.42
8:CH:75:ALA:O	8:CH:79:VAL:HG22	2.20	0.42
10:CL:99:ILE:HD12	10:CL:103:GLN:HB3	2.01	0.42
14:CQ:85:LYS:HG3	24:C0:8:GLY:O	2.20	0.42
14:CQ:135:ASP:CB	14:CQ:137:TYR:HB2	2.49	0.42
17:CT:102:ILE:HB	17:CT:110:ILE:HG12	2.01	0.42
26:C2:14:ARG:HA	26:C2:63:VAL:HG11	2.01	0.42
28:C4:16:CYS:SG	28:C4:17:GLY:N	2.93	0.42
30:C6:39:TYR:HA	30:C6:46:HIS:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:C6:40:CYS:HA	30:C6:41:PRO:HD3	1.80	0.42
34:DA:7:G:H5'	34:DA:298:A:O4'	2.19	0.42
34:DA:8:A:N6	37:DD:209:ARG:HB2	2.35	0.42
34:DA:339:C:H2'	34:DA:340:U:H6	1.84	0.42
34:DA:731:G:OP1	34:DA:766:A:H1'	2.20	0.42
34:DA:799:G:O6	34:DA:800:G:C2	2.73	0.42
34:DA:1256:A:N6	34:DA:1278:U:O2	2.52	0.42
36:DC:37:GLN:HA	36:DC:40:ARG:HG3	2.01	0.42
36:DC:150:LYS:HD2	36:DC:201:TYR:HD1	1.84	0.42
37:DD:150:GLU:HA	37:DD:153:ARG:NE	2.34	0.42
37:DD:169:LYS:HB3	37:DD:169:LYS:NZ	2.35	0.42
39:DF:15:ASP:OD1	39:DF:18:GLN:N	2.38	0.42
45:DL:6:THR:HG23	45:DL:9:GLN:OE1	2.20	0.42
57:DZ:20:HIS:CE1	57:DZ:21:ILE:HG12	2.55	0.42
57:DZ:265:LYS:O	57:DZ:267:LYS:HG3	2.19	0.42
57:DZ:290:LYS:HG2	57:DZ:400:GLU:OE1	2.18	0.42
57:DZ:309:LEU:HB3	57:DZ:391:GLY:N	2.35	0.42
1:AA:228:U:H2'	1:AA:229:G:O4'	2.18	0.42
1:AA:478:G:H2'	1:AA:479:C:H6	1.85	0.42
1:AA:1042:A:H4'	18:AU:91:ASP:OD2	2.18	0.42
1:AA:1236:G:H8	1:AA:1236:G:O5'	2.03	0.42
1:AA:1743:G:C6	1:AA:1744:G:C4	3.07	0.42
1:AA:2284:U:H5"	1:AA:2285:A:OP1	2.20	0.42
1:AA:2710:U:H2'	1:AA:2711:C:C6	2.54	0.42
7:AG:136:ARG:HG3	7:AG:137:GLU:HG3	2.01	0.42
11:AN:84:LYS:C	11:AN:85:ILE:HG13	2.43	0.42
15:AR:54:LEU:HD12	15:AR:54:LEU:HA	1.59	0.42
17:AT:118:ARG:HG2	34:BA:1442(A):G:C8	2.55	0.42
21:AX:61:GLY:HA3	21:AX:73:ARG:O	2.19	0.42
23:AZ:70:LEU:CD1	23:AZ:98:MET:HE2	2.45	0.42
29:A5:15:ARG:HH11	29:A5:15:ARG:HD3	1.64	0.42
30:A6:30:THR:O	30:A6:30:THR:HG22	2.18	0.42
34:BA:148:G:H2'	34:BA:149:A:H8	1.84	0.42
34:BA:681:C:O5'	34:BA:681:C:H6	2.02	0.42
34:BA:685:G:O2'	34:BA:686:U:H5'	2.20	0.42
37:BD:104:VAL:HG12	37:BD:105:VAL:N	2.35	0.42
43:BJ:48:THR:O	47:BN:34:TYR:OH	2.36	0.42
44:BK:97:ALA:O	44:BK:101:SER:HB3	2.20	0.42
51:BR:40:LEU:C	51:BR:42:ARG:H	2.28	0.42
53:BT:12:ALA:O	53:BT:15:ARG:HB2	2.20	0.42
57:BZ:201:ILE:HB	57:BZ:206:LEU:HD13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:549:ALA:HB2	57:BZ:587:SER:HB2	2.00	0.42
1:CA:878:A:C6	1:CA:900:A:C8	3.07	0.42
1:CA:897:C:OP2	1:CA:897:C:H6	2.03	0.42
1:CA:921:G:C6	1:CA:922:U:C4	3.08	0.42
1:CA:1063:G:H1'	10:CL:134:MET:HA	2.01	0.42
1:CA:1831:G:H2'	1:CA:1832:C:C6	2.55	0.42
1:CA:2167:U:OP1	1:CA:2167:U:H4'	2.20	0.42
1:CA:2697:G:C2	1:CA:2711:A:C2	3.08	0.42
1:CA:2784:C:O5'	1:CA:2784:C:H6	2.03	0.42
5:CE:171:GLU:O	5:CE:184:VAL:HG23	2.19	0.42
5:CE:176:ILE:HG22	5:CE:176:ILE:O	2.19	0.42
6:CF:158:THR:HG1	6:CF:160:ASN:H	1.60	0.42
7:CG:86:MET:HA	7:CG:87:PRO:HD2	1.95	0.42
11:CN:39:ARG:HB3	11:CN:41:ASP:OD1	2.19	0.42
12:CO:107:ARG:NH2	17:CT:36:GLU:OE2	2.53	0.42
17:CT:41:ARG:NH2	34:DA:345:C:H3'	2.34	0.42
17:CT:56:GLY:N	17:CT:59:THR:HG22	2.35	0.42
34:DA:304:U:H2'	34:DA:305:G:C8	2.54	0.42
34:DA:786:G:C2	34:DA:797:C:C2	3.08	0.42
34:DA:972:C:O2'	43:DJ:55:LYS:O	2.35	0.42
34:DA:1327:C:H2'	34:DA:1328:C:H6	1.85	0.42
34:DA:1512:U:O2'	34:DA:1513:A:H5'	2.19	0.42
35:DB:100:GLY:N	35:DB:176:GLU:OE2	2.51	0.42
37:DD:94:LEU:HA	37:DD:94:LEU:HD23	1.59	0.42
38:DE:8:GLU:OE2	38:DE:63:ARG:NH2	2.52	0.42
42:DI:127:LYS:O	42:DI:128:ARG:HB3	2.19	0.42
44:DK:48:ILE:HG21	44:DK:63:LEU:HD12	2.01	0.42
51:DR:74:ARG:HG3	51:DR:74:ARG:H	1.68	0.42
57:DZ:328:ILE:H	57:DZ:328:ILE:HD13	1.85	0.42
57:DZ:626:ALA:C	57:DZ:628:ARG:H	2.27	0.42
1:AA:239:G:C6	1:AA:240:A:C6	3.08	0.42
1:AA:464:G:H2'	1:AA:465:G:O4'	2.20	0.42
1:AA:746:A:H2'	1:AA:747:G:O4'	2.19	0.42
1:AA:1007:G:C6	1:AA:1008:U:C4	3.07	0.42
1:AA:1043:G:OP1	18:AU:92:ARG:HB2	2.19	0.42
1:AA:1756:U:H1'	1:AA:2870:A:N3	2.35	0.42
1:AA:1841:A:H2'	1:AA:1842:G:O4'	2.20	0.42
1:AA:2575:U:H4'	12:AO:28:SER:HA	2.02	0.42
2:AB:73:A:H5'	2:AB:74:U:OP2	2.19	0.42
3:AC:48:LEU:CD2	3:AC:59:VAL:HG21	2.50	0.42
4:AD:34:VAL:HA	4:AD:62:TYR:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:139:PHE:HB2	6:AF:166:ALA:HB1	2.01	0.42
12:AO:24:VAL:O	12:AO:24:VAL:HG22	2.20	0.42
14:AQ:59:ARG:O	23:AZ:180:VAL:HB	2.20	0.42
16:AS:111:GLU:O	16:AS:112:PHE:HB3	2.20	0.42
17:AT:15:VAL:HG13	17:AT:79:HIS:HE1	1.85	0.42
21:AX:44:GLU:HG2	21:AX:49:VAL:O	2.20	0.42
23:AZ:151:HIS:ND1	23:AZ:151:HIS:N	2.68	0.42
26:A2:53:LEU:HA	26:A2:53:LEU:HD23	1.71	0.42
34:BA:21:G:H2'	34:BA:22:G:C8	2.55	0.42
34:BA:271:C:H2'	34:BA:272:C:H6	1.85	0.42
34:BA:658:G:H2'	34:BA:659:U:C6	2.55	0.42
34:BA:715:A:H2'	34:BA:716:A:C8	2.55	0.42
34:BA:1182:G:C4'	34:BA:1183:A:H5'	2.44	0.42
34:BA:1513:A:H2'	34:BA:1514:C:C6	2.55	0.42
36:BC:19:GLU:O	36:BC:56:ASP:HA	2.20	0.42
37:BD:202:LEU:HD23	37:BD:202:LEU:HA	1.83	0.42
40:BG:73:MET:HG2	40:BG:145:ALA:HB1	2.02	0.42
41:BH:17:THR:HG22	41:BH:63:LEU:HG	2.02	0.42
42:BI:5:TYR:HA	42:BI:17:VAL:O	2.20	0.42
44:BK:48:ILE:O	44:BK:48:ILE:HG12	2.18	0.42
44:BK:92:GLU:O	44:BK:96:ARG:HB2	2.20	0.42
57:BZ:68:ALA:HB3	57:BZ:327:PHE:CD1	2.54	0.42
57:BZ:227:ILE:HD11	57:BZ:241:GLU:HG3	2.01	0.42
61:BZ:703:FUA:C15	61:BZ:703:FUA:H323	2.49	0.42
1:CA:64:A:H2'	1:CA:65:C:O4'	2.20	0.42
1:CA:449:A:O2'	18:CU:3:ARG:NH1	2.52	0.42
1:CA:585:G:H2'	1:CA:1251:C:H42	1.85	0.42
1:CA:856:C:H2'	1:CA:857:C:C6	2.55	0.42
1:CA:867:C:O2	1:CA:913:U:H5'	2.20	0.42
1:CA:949:C:H2'	1:CA:950:G:C8	2.55	0.42
1:CA:1197:G:O2'	1:CA:1198:U:H5'	2.20	0.42
1:CA:1221:C:N4	1:CA:1229:G:H1	2.18	0.42
1:CA:2815:C:H2'	1:CA:2816:C:O4'	2.20	0.42
2:CB:58:A:N7	2:CB:59:A:N7	2.67	0.42
5:CE:110:GLY:O	15:CR:3:HIS:HE1	2.03	0.42
10:CL:134:MET:H	10:CL:134:MET:HG2	1.61	0.42
11:CN:18:ALA:HB2	11:CN:54:VAL:CG1	2.49	0.42
13:CP:45:LEU:HD23	13:CP:45:LEU:HA	1.60	0.42
25:C1:91:LYS:HA	25:C1:94:LEU:HD12	2.02	0.42
31:C7:8:ASN:OD1	31:C7:8:ASN:C	2.62	0.42
34:DA:195:A:C6	34:DA:196:A:N1	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:377:G:O2'	34:DA:378:G:H5'	2.19	0.42
34:DA:438:G:O2'	34:DA:494:U:O4	2.33	0.42
34:DA:920:U:N3	34:DA:921:U:C4	2.88	0.42
34:DA:1239:A:H4'	34:DA:1240:U:H5"	2.00	0.42
34:DA:1244:C:C2	34:DA:1294:G:N2	2.87	0.42
38:DE:145:LYS:HE2	38:DE:145:LYS:HB3	1.77	0.42
46:DM:22:ILE:HB	46:DM:25:ILE:HB	2.01	0.42
56:DW:63:G:H2'	56:DW:64:A:C8	2.55	0.42
57:DZ:251:ILE:HD13	57:DZ:285:ASP:HB3	2.02	0.42
57:DZ:357:ARG:NH1	57:DZ:373:ASP:CG	2.78	0.42
1:AA:304:C:H2'	1:AA:305:G:O4'	2.20	0.42
1:AA:864:C:O2'	1:AA:886:U:H5"	2.20	0.42
1:AA:915:U:C4	1:AA:916:G:N7	2.88	0.42
1:AA:1605:A:H4'	1:AA:1606:G:H2'	2.00	0.42
1:AA:2753:A:C6	1:AA:2777:A:C8	3.08	0.42
2:AB:46:A:C5	2:AB:47:C:C4	3.07	0.42
3:AC:11:LEU:HD11	3:AC:35:THR:HG23	2.01	0.42
5:AE:84:PHE:CZ	5:AE:86:PRO:HB3	2.55	0.42
6:AF:178:PRO:C	6:AF:180:GLY:N	2.77	0.42
8:AH:11:VAL:HA	8:AH:12:PRO:HD3	1.88	0.42
12:AO:64:ARG:HD2	12:AO:81:ASP:HB3	2.02	0.42
12:AO:98:VAL:HG13	12:AO:117:LEU:HB3	2.01	0.42
16:AS:56:LEU:O	16:AS:57:LYS:C	2.62	0.42
23:AZ:61:LEU:HD22	23:AZ:61:LEU:H	1.85	0.42
25:A1:86:SER:OG	25:A1:89:GLU:HG2	2.20	0.42
26:A2:50:ILE:O	26:A2:51:ARG:C	2.63	0.42
27:A3:3:ARG:HD3	27:A3:60:GLU:CD	2.45	0.42
31:A7:5:TRP:CD1	31:A7:7:PRO:HD3	2.55	0.42
34:BA:741:G:C2	34:BA:742:G:C4	3.08	0.42
34:BA:921:U:H2'	34:BA:922:G:O4'	2.20	0.42
34:BA:988:G:C2	34:BA:1218:C:O2	2.73	0.42
34:BA:1452:C:O2'	34:BA:1457:G:C8	2.73	0.42
35:BB:19:HIS:HA	35:BB:39:ILE:HG21	2.02	0.42
40:BG:151:TYR:OH	44:BK:54:ARG:NH1	2.53	0.42
41:BH:65:TYR:HA	41:BH:79:VAL:HG23	2.02	0.42
44:BK:20:TYR:CD1	44:BK:83:ILE:HB	2.54	0.42
45:BL:27:LEU:HD13	45:BL:98:TYR:HE2	1.83	0.42
49:BP:23:ASP:OD1	49:BP:24:ALA:N	2.53	0.42
57:BZ:82:ILE:HD12	57:BZ:101:LEU:HD11	2.02	0.42
57:BZ:99:ARG:HB2	57:BZ:128:TYR:CD1	2.55	0.42
1:CA:129:C:H2'	1:CA:130:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:554:U:C4	1:CA:555:U:C4	3.08	0.42
1:CA:577:G:O2'	1:CA:1254:A:OP1	2.37	0.42
1:CA:876:C:H2'	1:CA:877:U:O4'	2.20	0.42
1:CA:909:A:O2'	1:CA:910:A:H5'	2.19	0.42
1:CA:948:G:C6	1:CA:949:C:C4	3.07	0.42
1:CA:2136:C:O2'	1:CA:2137:C:P	2.78	0.42
1:CA:2190:G:H2'	1:CA:2191:G:H8	1.85	0.42
4:CD:124:PRO:HD2	4:CD:129:ASN:HD22	1.85	0.42
13:CP:68:GLN:OE1	13:CP:68:GLN:HA	2.19	0.42
16:CS:101:LEU:O	16:CS:101:LEU:HD23	2.20	0.42
21:CX:44:GLU:C	21:CX:46:ALA:H	2.28	0.42
21:CX:44:GLU:HG2	21:CX:49:VAL:O	2.20	0.42
34:DA:114:U:H2'	34:DA:115:G:C8	2.54	0.42
34:DA:319:G:C2	34:DA:320:C:C2	3.08	0.42
34:DA:513:C:N3	34:DA:539:A:C2	2.88	0.42
34:DA:1298:C:N4	40:DG:114:ARG:HB3	2.35	0.42
34:DA:1400:C:C2	56:DW:34:G:C2	3.07	0.42
34:DA:1402:C:O2	34:DA:1500:A:N1	2.52	0.42
36:DC:181:ASN:OD1	36:DC:204:LEU:HD12	2.20	0.42
44:DK:67:ASP:O	44:DK:71:LYS:HG3	2.19	0.42
50:DQ:27:PHE:CE2	50:DQ:36:ILE:HD11	2.55	0.42
56:DW:41:C:O5'	56:DY:36:A:OP1	2.38	0.42
57:DZ:28:THR:O	57:DZ:32:ILE:HG13	2.19	0.42
57:DZ:80:ASN:HD22	57:DZ:374:LEU:HB2	1.84	0.42
57:DZ:330:VAL:HG21	57:DZ:369:LEU:HB3	2.02	0.42
1:AA:274:U:H6	1:AA:274:U:H2'	1.67	0.41
1:AA:1126:C:O2'	10:AL:126:MET:HG3	2.20	0.41
1:AA:2085:C:O2	1:AA:2462:A:N1	2.53	0.41
1:AA:2092:G:H2'	1:AA:2093:A:O4'	2.20	0.41
1:AA:2123:G:H1	1:AA:2210:C:H42	1.68	0.41
1:AA:2285:A:H2'	1:AA:2286:A:C8	2.54	0.41
1:AA:2371:C:O5'	1:AA:2371:C:H6	2.03	0.41
2:AB:12:C:H2'	24:A0:73:GLY:HA3	2.02	0.41
4:AD:221:VAL:HG22	4:AD:226:MET:HE3	2.02	0.41
8:AH:17:VAL:HG11	8:AH:50:VAL:HG21	2.02	0.41
10:AL:78:ILE:HD13	10:AL:134:MET:SD	2.60	0.41
10:AL:84:LEU:HD21	10:AL:96:VAL:HB	2.02	0.41
11:AN:40:PRO:O	18:AU:64:ARG:HD3	2.19	0.41
14:AQ:2:LEU:HD12	14:AQ:2:LEU:HA	1.74	0.41
15:AR:104:ARG:NH1	15:AR:107:ASP:OD2	2.53	0.41
17:AT:118:ARG:HG3	17:AT:118:ARG:HH11	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:A3:5:LYS:HZ1	27:A3:55:ARG:HH12	1.67	0.41
28:A4:68:ARG:H	28:A4:68:ARG:HG2	1.57	0.41
34:BA:142:G:H2'	34:BA:143:A:C8	2.55	0.41
34:BA:354:G:C2'	34:BA:355:C:H5'	2.49	0.41
34:BA:452:A:O2'	34:BA:453:A:OP2	2.29	0.41
34:BA:548:G:H2'	34:BA:549:C:C6	2.54	0.41
34:BA:565:U:C4	34:BA:566:G:C5	3.07	0.41
34:BA:657:G:O2'	34:BA:658:G:H5'	2.19	0.41
34:BA:900:A:O5'	34:BA:900:A:H8	2.03	0.41
34:BA:987:G:H2'	34:BA:988:G:H8	1.84	0.41
34:BA:1112:C:O2	36:BC:179:ARG:N	2.45	0.41
34:BA:1238:A:N3	34:BA:1241:G:O2'	2.40	0.41
39:BF:41:GLU:O	39:BF:43:LEU:HD12	2.19	0.41
41:BH:114:THR:C	41:BH:116:LYS:H	2.27	0.41
57:BZ:99:ARG:C	57:BZ:101:LEU:N	2.67	0.41
57:BZ:181:LEU:HD23	57:BZ:182:ARG:CG	2.50	0.41
57:BZ:541:ALA:HB3	57:BZ:579:GLU:HG2	2.01	0.41
1:CA:171:G:H2'	1:CA:172:C:C6	2.55	0.41
1:CA:252:G:P	13:CP:50:ARG:HH12	2.43	0.41
1:CA:384:U:H2'	1:CA:385:C:H6	1.85	0.41
1:CA:470:A:C5'	1:CA:470:A:H8	2.33	0.41
1:CA:844:C:C5	1:CA:845:G:C6	3.07	0.41
1:CA:1233:C:C2'	1:CA:1234:U:H5'	2.50	0.41
1:CA:1363:C:H2'	1:CA:1364:G:H8	1.84	0.41
1:CA:1469:A:H2'	1:CA:1470:G:O4'	2.19	0.41
1:CA:1794:U:H1'	1:CA:1900:A:N3	2.35	0.41
1:CA:1851:U:H2'	1:CA:1852:C:O4'	2.20	0.41
1:CA:1857:G:C6	1:CA:1858:G:N1	2.88	0.41
1:CA:1914:C:O2	1:CA:1914:C:H2'	2.20	0.41
1:CA:2689:U:O2	1:CA:2689:U:H2'	2.20	0.41
1:CA:2690:C:N4	1:CA:2713:A:H1'	2.35	0.41
4:CD:275:LYS:HA	4:CD:276:LYS:C	2.45	0.41
5:CE:25:VAL:HG21	17:CT:7:ILE:HD13	2.02	0.41
6:CF:178:PRO:HB2	6:CF:201:VAL:CG2	2.50	0.41
10:CL:119:ASP:HB3	10:CL:120:LEU:H	1.63	0.41
12:CO:98:VAL:HG13	12:CO:117:LEU:HB3	2.02	0.41
14:CQ:120:ILE:O	14:CQ:121:ALA:C	2.63	0.41
16:CS:15:ARG:HD3	16:CS:25:ARG:NH2	2.34	0.41
21:CX:12:VAL:HG22	21:CX:29:TRP:CD1	2.54	0.41
24:C0:23:VAL:HG22	24:C0:38:VAL:HG22	2.01	0.41
27:C3:4:LEU:HD23	27:C3:4:LEU:HA	1.77	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:300:A:H2'	34:DA:301:G:O4'	2.19	0.41
34:DA:451:A:N6	34:DA:480:U:H2'	2.35	0.41
35:DB:113:HIS:HA	35:DB:116:GLU:HG2	2.01	0.41
36:DC:87:LEU:O	36:DC:91:LEU:HB2	2.20	0.41
42:DI:6:GLY:O	42:DI:17:VAL:HG12	2.20	0.41
46:DM:121:LYS:HB2	57:DZ:507:TYR:OH	2.20	0.41
50:DQ:80:GLY:C	50:DQ:82:MET:H	2.26	0.41
57:DZ:90:PHE:O	57:DZ:93:GLU:HB2	2.20	0.41
1:AA:207:A:C2	1:AA:224:U:H4'	2.55	0.41
1:AA:507:G:C4	1:AA:532:A:C2	3.08	0.41
1:AA:520:G:C6	1:AA:521:G:C5	3.08	0.41
1:AA:646:A:OP2	13:AP:108:LYS:NZ	2.48	0.41
1:AA:648:G:H2'	1:AA:649:C:C6	2.55	0.41
1:AA:1220:U:H1'	1:AA:1221:G:OP1	2.19	0.41
1:AA:1463:C:H4'	1:AA:1633:A:H2	1.85	0.41
1:AA:1475:G:O2'	1:AA:1476:C:H5'	2.20	0.41
1:AA:2310:A:H2'	1:AA:2311:G:O4'	2.20	0.41
8:AH:103:LEU:HG	8:AH:105:LEU:HD13	2.02	0.41
12:AO:14:THR:HG21	12:AO:86:ILE:HB	2.03	0.41
12:AO:71:ARG:HA	12:AO:72:PRO:HD3	1.95	0.41
18:AU:20:LEU:HD23	18:AU:20:LEU:HA	1.79	0.41
22:AY:92:ASN:HB3	22:AY:94:LYS:HG3	2.02	0.41
34:BA:547:A:H4'	34:BA:548:G:O5'	2.20	0.41
34:BA:748:C:H6	34:BA:748:C:H2'	1.65	0.41
34:BA:838:G:N2	34:BA:849:C:C2	2.88	0.41
34:BA:1221:G:OP1	34:BA:1320:C:N4	2.40	0.41
35:BB:48:MET:HA	35:BB:51:LEU:HD12	2.02	0.41
36:BC:113:ALA:HB3	36:BC:114:PRO:HD3	2.02	0.41
37:BD:18:LYS:HG2	37:BD:33:MET:CG	2.48	0.41
37:BD:50:ARG:HA	37:BD:51:PRO:HD2	1.82	0.41
45:BL:55:VAL:HG12	45:BL:56:ALA:N	2.34	0.41
49:BP:21:VAL:CG1	49:BP:34:GLU:HB3	2.50	0.41
49:BP:59:TRP:O	49:BP:60:LEU:C	2.63	0.41
52:BS:58:VAL:HA	52:BS:59:PRO:HD2	1.78	0.41
57:BZ:-62:LEU:H	57:BZ:-62:LEU:HD12	1.85	0.41
57:BZ:89:ASP:O	57:BZ:454:MET:HB3	2.19	0.41
1:CA:448:U:C4	1:CA:583:G:H1'	2.55	0.41
1:CA:830:G:H5"	63:CA:4081:HOH:O	2.20	0.41
1:CA:897:C:H3'	1:CA:898:C:H6	1.85	0.41
1:CA:995:C:C2	18:CU:57:PHE:CE1	3.08	0.41
1:CA:1157:G:C2	1:CA:1158:C:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2690:C:OP2	1:CA:2690:C:H6	2.03	0.41
1:CA:2830:G:N3	1:CA:2883:A:H2	2.18	0.41
4:CD:70:TRP:CZ2	4:CD:150:LYS:HA	2.55	0.41
5:CE:8:LYS:HD2	5:CE:188:VAL:HG12	2.01	0.41
8:CH:94:TYR:HA	8:CH:106:THR:O	2.20	0.41
10:CL:99:ILE:HG23	10:CL:103:GLN:CB	2.51	0.41
13:CP:56:SER:OG	13:CP:61:ARG:HD2	2.20	0.41
13:CP:127:ALA:O	13:CP:148:LEU:HD23	2.19	0.41
14:CQ:1:MET:HB2	14:CQ:2:LEU:H	1.71	0.41
15:CR:61:HIS:CD2	15:CR:65:LEU:HD21	2.55	0.41
17:CT:99:LEU:O	17:CT:100:TYR:C	2.63	0.41
20:CW:23:LEU:HD12	20:CW:23:LEU:HA	1.81	0.41
26:C2:66:GLU:HA	26:C2:69:ARG:NH1	2.35	0.41
30:C6:11:LEU:HD23	30:C6:11:LEU:HA	1.83	0.41
34:DA:317:G:C6	34:DA:318:G:N7	2.88	0.41
34:DA:438:G:N1	34:DA:495:A:OP2	2.42	0.41
34:DA:515:G:C4	34:DA:537:G:N2	2.89	0.41
34:DA:681:C:C2	34:DA:710:G:C2	3.07	0.41
34:DA:976:G:H22	34:DA:1362:C:H2'	1.86	0.41
34:DA:1486:G:H2'	34:DA:1487:G:C8	2.55	0.41
37:DD:31:CYS:SG	37:DD:33:MET:HB2	2.60	0.41
48:DO:43:LEU:HA	48:DO:43:LEU:HD23	1.82	0.41
57:DZ:17:ILE:H	57:DZ:17:ILE:HD12	1.85	0.41
57:DZ:354:ARG:HB3	57:DZ:378:VAL:HB	2.02	0.41
57:DZ:403:GLU:O	57:DZ:404:VAL:HG23	2.20	0.41
57:DZ:546:ILE:HG13	57:DZ:590:ILE:HB	2.02	0.41
1:AA:842:C:H2'	1:AA:843:C:H6	1.83	0.41
1:AA:1356:G:C2'	1:AA:1357:G:H5'	2.50	0.41
1:AA:1544:C:O4'	1:AA:1624:C:H4'	2.20	0.41
1:AA:1841:A:H2'	1:AA:1842:G:H5'	2.02	0.41
1:AA:1944:G:H2'	1:AA:1945:U:O4'	2.21	0.41
1:AA:2803:A:H2'	1:AA:2803:A:N3	2.35	0.41
3:AC:60:ARG:NH2	3:AC:165:ARG:HH21	2.18	0.41
5:AE:101:ARG:HD2	5:AE:169:ASN:OD1	2.20	0.41
5:AE:176:ILE:HB	5:AE:181:LEU:HB2	2.03	0.41
7:AG:178:PHE:O	7:AG:180:PHE:CD2	2.73	0.41
10:AL:97:GLY:C	10:AL:136:VAL:HG23	2.45	0.41
12:AO:63:VAL:HG11	12:AO:85:VAL:HG23	2.01	0.41
13:AP:20:GLY:HA2	13:AP:28:GLY:HA2	2.01	0.41
16:AS:94:TYR:CE1	16:AS:99:LYS:HG3	2.55	0.41
22:AY:81:LYS:HE2	22:AY:81:LYS:HB3	1.97	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:A8:52:LYS:HE2	32:A8:52:LYS:HB3	1.81	0.41
34:BA:175:C:C2	34:BA:176:C:C5	3.08	0.41
34:BA:425:G:C2	34:BA:426:G:C8	3.09	0.41
34:BA:495:A:H4'	34:BA:496:A:OP1	2.21	0.41
34:BA:922:G:H3'	34:BA:923:A:C8	2.55	0.41
34:BA:955:U:H2'	34:BA:956:U:C6	2.52	0.41
34:BA:1104:G:OP1	35:BB:111:ARG:HD2	2.20	0.41
34:BA:1164:G:C2'	34:BA:1165:C:H5'	2.50	0.41
34:BA:1411:C:H2'	34:BA:1412:C:H6	1.84	0.41
37:BD:15:GLU:HG3	37:BD:63:LYS:HD3	2.02	0.41
37:BD:194:LEU:HD12	37:BD:195:ALA:H	1.84	0.41
48:BO:62:GLN:HA	48:BO:65:ARG:NH1	2.34	0.41
57:BZ:617:MET:HE2	57:BZ:617:MET:HB3	1.82	0.41
1:CA:224:G:H2'	1:CA:225:A:O4'	2.20	0.41
1:CA:710:G:H2'	1:CA:711:G:C8	2.55	0.41
1:CA:1154:G:OP2	18:CU:58:ARG:NH2	2.50	0.41
1:CA:1465:G:N1	1:CA:1466:G:C5	2.88	0.41
1:CA:1477:A:H2'	1:CA:1478:G:O4'	2.20	0.41
1:CA:2166:G:N2	1:CA:2167:U:O4	2.54	0.41
1:CA:2294:C:H2'	1:CA:2295:C:H6	1.85	0.41
1:CA:2854:G:C4	1:CA:2864:G:N2	2.88	0.41
4:CD:68:LYS:O	4:CD:70:TRP:N	2.53	0.41
5:CE:170:LEU:HB3	5:CE:184:VAL:CG2	2.50	0.41
11:CN:94:HIS:O	11:CN:97:ARG:HB2	2.20	0.41
12:CO:2:ILE:CD1	12:CO:6:THR:HG21	2.47	0.41
15:CR:50:HIS:CE1	15:CR:54:LEU:HD11	2.55	0.41
20:CW:79:GLY:CA	20:CW:100:THR:HG22	2.50	0.41
23:CZ:45:ASP:OD1	23:CZ:49:ARG:HG3	2.20	0.41
23:CZ:53:ILE:HG22	23:CZ:71:VAL:HB	2.01	0.41
34:DA:450:G:OP2	34:DA:451:A:O2'	2.35	0.41
35:DB:163:PHE:HA	35:DB:185:ILE:O	2.20	0.41
36:DC:110:ASN:ND2	36:DC:144:SER:OG	2.52	0.41
37:DD:171:GLY:HA2	37:DD:172:PRO:HD2	1.83	0.41
38:DE:71:LEU:O	38:DE:72:GLN:HG2	2.20	0.41
39:DF:61:LEU:HD23	39:DF:63:TYR:OH	2.21	0.41
42:DI:17:VAL:HG23	42:DI:63:ILE:HG12	2.02	0.41
45:DL:27:LEU:HD13	45:DL:98:TYR:CE1	2.55	0.41
49:DP:65:GLN:HA	49:DP:66:PRO:HD2	1.94	0.41
50:DQ:80:GLY:O	50:DQ:82:MET:HG2	2.19	0.41
51:DR:51:LEU:HA	51:DR:52:PRO:HD3	1.85	0.41
52:DS:27:GLU:HB3	52:DS:28:LYS:HG2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DW:46:7MG:H81	56:DW:46:7MG:H2'	1.85	0.41
56:DW:65:G:H2'	56:DW:66:U:H6	1.86	0.41
57:DZ:20:HIS:HB2	57:DZ:118:SER:HB2	2.03	0.41
57:DZ:110:SER:HB2	57:DZ:144:ALA:HB1	2.03	0.41
57:DZ:157:LEU:HD12	57:DZ:158:GLY:N	2.34	0.41
57:DZ:647:VAL:HG11	57:DZ:652:MET:SD	2.60	0.41
1:AA:291:G:N2	1:AA:395:C:C2	2.89	0.41
1:AA:470:C:H4'	6:AF:49:ALA:HB2	2.01	0.41
1:AA:1065:U:O2'	1:AA:1067:A:C2	2.62	0.41
1:AA:2099:A:O2'	1:AA:2100:C:H5'	2.20	0.41
1:AA:2315:G:O2'	7:AG:132:ASN:HB2	2.20	0.41
6:AF:72:ARG:HE	6:AF:72:ARG:HB3	1.52	0.41
6:AF:149:ASP:OD2	6:AF:151:SER:N	2.46	0.41
8:AH:164:TYR:O	8:AH:167:GLU:HB3	2.21	0.41
10:AL:95:LYS:HA	10:AL:135:GLY:O	2.20	0.41
11:AN:107:LEU:HA	11:AN:107:LEU:HD23	1.80	0.41
13:AP:127:ALA:C	13:AP:148:LEU:HD22	2.45	0.41
18:AU:52:ARG:HH11	18:AU:52:ARG:HG3	1.85	0.41
23:AZ:31:ARG:HH11	23:AZ:31:ARG:HD2	1.72	0.41
34:BA:69:G:C2	34:BA:70:G:C5	3.08	0.41
34:BA:291:C:O2'	34:BA:292:G:H5'	2.19	0.41
34:BA:345:C:H4'	34:BA:346:G:N1	2.35	0.41
34:BA:405:U:H3'	34:BA:406:G:H5'	2.02	0.41
34:BA:522:C:H2'	34:BA:523:A:H5'	2.01	0.41
34:BA:1112:C:H1'	36:BC:179:ARG:HE	1.84	0.41
34:BA:1423:G:C6	34:BA:1424:C:C4	3.09	0.41
34:BA:1516:G:H2'	34:BA:1518:A:OP2	2.20	0.41
35:BB:76:GLN:H	35:BB:76:GLN:HG2	1.51	0.41
37:BD:5:ILE:HD13	37:BD:5:ILE:O	2.21	0.41
37:BD:108:LEU:HD11	37:BD:174:LEU:HB3	2.02	0.41
41:BH:4:ASP:CG	41:BH:85:ARG:HH11	2.27	0.41
43:BJ:5:ARG:HE	43:BJ:5:ARG:HB3	1.51	0.41
47:BN:13:THR:HA	47:BN:14:PRO:HD3	1.80	0.41
53:BT:66:ALA:HB1	53:BT:71:THR:HG21	2.01	0.41
1:CA:242:G:C8	32:C8:5:LYS:HG2	2.56	0.41
1:CA:614(C):A:C4	6:CF:180:GLY:HA3	2.56	0.41
1:CA:1061:U:O4	10:CL:73:PRO:HG3	2.20	0.41
1:CA:1467:C:C2	1:CA:1526:G:N2	2.89	0.41
1:CA:1932:A:H61	1:CA:1968:G:H1'	1.84	0.41
1:CA:2273:A:H2'	1:CA:2274:A:C8	2.55	0.41
1:CA:2563:U:O2	1:CA:2565:A:C8	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:16:G:C6	2:CB:69:G:C2	3.08	0.41
7:CG:60:LEU:HD22	7:CG:63:ILE:HD11	2.01	0.41
8:CH:154:PRO:HB3	8:CH:163:TYR:CE2	2.55	0.41
11:CN:62:VAL:HG12	11:CN:67:LEU:HD22	2.03	0.41
13:CP:138:LEU:HD23	13:CP:145:PRO:HG3	2.03	0.41
21:CX:44:GLU:O	21:CX:46:ALA:N	2.53	0.41
23:CZ:14:LYS:HA	23:CZ:15:PRO:HD3	1.89	0.41
27:C3:23:LEU:HB3	27:C3:28:LEU:O	2.21	0.41
34:DA:334:C:H2'	34:DA:335:C:H6	1.85	0.41
34:DA:561:U:O2'	34:DA:562:C:P	2.79	0.41
34:DA:600:C:H42	34:DA:638:G:H1	1.68	0.41
34:DA:690:G:H2'	34:DA:691:G:C8	2.55	0.41
34:DA:1000:U:H2'	34:DA:1001:A:C8	2.55	0.41
34:DA:1077:G:N1	34:DA:1081:G:C6	2.88	0.41
34:DA:1154:G:C6	34:DA:1155:G:C5	3.08	0.41
34:DA:1366:C:O2'	43:DJ:60:ARG:NH2	2.54	0.41
34:DA:1394:A:C6	34:DA:1501:C:H4'	2.56	0.41
35:DB:41:ILE:HD13	35:DB:41:ILE:HA	1.86	0.41
46:DM:91:ARG:O	46:DM:110:ARG:NH1	2.52	0.41
50:DQ:81:ARG:HA	50:DQ:81:ARG:HD2	1.86	0.41
57:DZ:346:LYS:HE2	57:DZ:384:ILE:HG23	2.02	0.41
57:DZ:409:ILE:HG23	57:DZ:459:LEU:HD12	2.01	0.41
1:AA:449:A:C6	1:AA:450:A:C6	3.09	0.41
1:AA:604:C:H2'	1:AA:605:G:H8	1.84	0.41
1:AA:1281:G:C6	1:AA:1282:G:N1	2.89	0.41
1:AA:2418:U:C2	13:AP:72:PRO:HG2	2.56	0.41
1:AA:2679:C:O2	8:AH:109:PHE:HB3	2.19	0.41
1:AA:2825:C:O5'	1:AA:2825:C:H6	2.03	0.41
1:AA:2879:G:H2'	1:AA:2880:C:C6	2.56	0.41
2:AB:41:U:H5	7:AG:70:VAL:HB	1.86	0.41
3:AC:11:LEU:HD22	3:AC:11:LEU:H	1.86	0.41
4:AD:218:ARG:HB3	4:AD:219:PRO:HD2	2.02	0.41
7:AG:96:ARG:N	7:AG:99:MET:HE2	2.36	0.41
19:AV:19:LYS:HA	19:AV:94:LEU:O	2.19	0.41
19:AV:40:LEU:HD23	19:AV:40:LEU:HA	1.72	0.41
24:A0:65:GLY:HA3	24:A0:81:VAL:HG12	2.03	0.41
25:A1:64:ALA:O	25:A1:65:SER:C	2.64	0.41
29:A5:58:LEU:HD22	29:A5:60:VAL:HG23	2.03	0.41
34:BA:199:G:N2	34:BA:219:C:O2	2.53	0.41
34:BA:266:G:N2	63:BA:1942:HOH:O	2.53	0.41
34:BA:416:G:C6	34:BA:417:C:N3	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:604:G:C2	34:BA:635:G:C4	3.09	0.41
34:BA:627:G:O2'	34:BA:628:G:H5'	2.21	0.41
34:BA:960:U:H2'	34:BA:1225:A:H62	1.84	0.41
35:BB:223:ILE:H	35:BB:223:ILE:HG12	1.35	0.41
45:BL:84:LEU:HB2	45:BL:105:TYR:CD2	2.56	0.41
52:BS:70:LYS:HA	52:BS:70:LYS:HD3	1.95	0.41
57:BZ:123:ARG:O	57:BZ:126:GLU:HB2	2.20	0.41
57:BZ:443:HIS:HA	57:BZ:444:PRO:HD2	1.86	0.41
1:CA:54:G:O2'	31:C7:35:ARG:HD3	2.21	0.41
1:CA:189:G:H2'	1:CA:205:G:N2	2.36	0.41
1:CA:319:C:H2'	1:CA:320:A:O4'	2.20	0.41
1:CA:1271:G:N2	1:CA:1617:C:O4'	2.53	0.41
1:CA:1401:G:C5	1:CA:1402:C:C4	3.08	0.41
1:CA:1488:G:N2	1:CA:1502:C:C2	2.89	0.41
1:CA:1575:C:H2'	1:CA:1576:U:O4'	2.21	0.41
5:CE:163:GLU:HG2	5:CE:164:ARG:H	1.86	0.41
10:CL:73:PRO:HB2	10:CL:76:TYR:H	1.85	0.41
16:CS:61:ASN:O	16:CS:65:VAL:HG23	2.21	0.41
19:CV:98:GLU:OE1	19:CV:100:ARG:NH1	2.48	0.41
20:CW:59:VAL:HG22	20:CW:64:MET:O	2.20	0.41
21:CX:12:VAL:CG2	21:CX:27:THR:HG22	2.50	0.41
23:CZ:98:MET:HE2	23:CZ:98:MET:HB2	1.87	0.41
34:DA:348:G:O2'	34:DA:349:A:H5'	2.20	0.41
34:DA:358:U:H2'	34:DA:359:U:C6	2.55	0.41
34:DA:539:A:N6	34:DA:540:G:O6	2.53	0.41
34:DA:778:G:C6	34:DA:779:C:N3	2.89	0.41
34:DA:863:U:H2'	34:DA:865:A:OP2	2.21	0.41
34:DA:961:U:H2'	34:DA:962:C:O4'	2.21	0.41
34:DA:1012:U:H2'	34:DA:1013:G:C8	2.55	0.41
34:DA:1055:A:C6	34:DA:1206:G:C5	3.09	0.41
34:DA:1278:U:H5'	34:DA:1279:A:C5'	2.51	0.41
35:DB:95:GLN:HB2	35:DB:96:ARG:H	1.73	0.41
38:DE:11:ILE:HD13	38:DE:105:VAL:HG13	2.02	0.41
50:DQ:6:LEU:HD12	50:DQ:6:LEU:HA	1.86	0.41
57:DZ:19:ALA:HB3	57:DZ:25:LYS:HG3	2.02	0.41
57:DZ:631:ILE:HG13	57:DZ:632:LEU:N	2.36	0.41
61:DZ:703:FUA:H231	61:DZ:703:FUA:C12	2.45	0.41
1:AA:278:G:C2	1:AA:279:G:C8	3.08	0.41
1:AA:718:C:N4	63:AA:4126:HOH:O	2.53	0.41
1:AA:1355:G:P	31:A7:9:ARG:HD3	2.60	0.41
1:AA:1668:G:C2	1:AA:1669:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2102:G:OP1	25:A1:35:THR:HG21	2.20	0.41
1:AA:2169:G:H2'	1:AA:2170:G:O4'	2.20	0.41
1:AA:2211:U:H2'	1:AA:2212:G:H8	1.86	0.41
3:AC:44:VAL:HG23	3:AC:176:VAL:CG2	2.51	0.41
3:AC:167:ASP:OD1	3:AC:169:THR:OG1	2.38	0.41
4:AD:25:THR:HG21	4:AD:113:VAL:HG11	2.02	0.41
5:AE:98:PRO:HD3	5:AE:175:VAL:HG13	2.03	0.41
5:AE:134:ILE:C	5:AE:134:ILE:HD12	2.45	0.41
6:AF:164:ARG:O	6:AF:168:ARG:HB2	2.19	0.41
6:AF:185:ASP:OD1	6:AF:188:ARG:NH1	2.49	0.41
11:AN:112:LEU:HD12	11:AN:112:LEU:O	2.21	0.41
23:AZ:121:HIS:HE1	23:AZ:169:GLU:OE2	2.02	0.41
30:A6:8:LYS:HE2	32:A8:34:TRP:CZ3	2.55	0.41
34:BA:116:A:H61	34:BA:313:A:H1'	1.84	0.41
34:BA:389:A:C5	34:BA:390:C:H1'	2.56	0.41
34:BA:690:G:C6	34:BA:691:G:C6	3.09	0.41
34:BA:753:A:H4'	34:BA:754:C:C5'	2.49	0.41
34:BA:954:G:H2'	34:BA:955:U:C6	2.56	0.41
34:BA:1207:G:H2'	34:BA:1208:C:H6	1.86	0.41
34:BA:1428:A:H2'	34:BA:1429:C:O4'	2.19	0.41
35:BB:28:PHE:CD1	35:BB:190:THR:HG22	2.55	0.41
35:BB:71:VAL:HG13	35:BB:93:VAL:HG23	2.03	0.41
37:BD:107:ARG:HH22	37:BD:194:LEU:CD1	2.33	0.41
38:BE:108:ALA:O	38:BE:110:LEU:N	2.53	0.41
39:BF:69:GLU:CD	39:BF:69:GLU:H	2.28	0.41
45:BL:43:VAL:HG12	45:BL:44:THR:N	2.36	0.41
49:BP:4:ILE:HG21	49:BP:36:ILE:HD11	2.02	0.41
49:BP:73:LEU:HA	49:BP:76:GLN:HB3	2.02	0.41
56:BY:56:C:H2'	56:BY:57:G:O4'	2.20	0.41
57:BZ:339:SER:HB2	57:BZ:352:VAL:HG13	2.02	0.41
57:BZ:623:ASP:HB2	57:BZ:662:LYS:HD2	2.02	0.41
1:CA:357:A:H2'	1:CA:358:U:O4'	2.21	0.41
1:CA:464:U:H4'	31:C7:5:TRP:CZ3	2.56	0.41
1:CA:1168:G:C2	1:CA:1182:A:C2	3.08	0.41
1:CA:1773:A:C5	1:CA:1829:A:H1'	2.56	0.41
1:CA:2527:C:H2'	1:CA:2528:U:O4'	2.20	0.41
1:CA:2809:A:C2'	1:CA:2810:A:H5'	2.50	0.41
2:CB:28:C:H2'	2:CB:29:A:H8	1.85	0.41
4:CD:260:ARG:O	4:CD:260:ARG:HG3	2.17	0.41
14:CQ:29:PHE:HB3	14:CQ:65:PHE:CE2	2.54	0.41
15:CR:24:GLN:OE1	15:CR:36:THR:HG21	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CS:62:LYS:O	16:CS:65:VAL:HB	2.20	0.41
18:CU:79:PHE:CD1	18:CU:79:PHE:C	2.98	0.41
19:CV:7:THR:HB	19:CV:35:LEU:HD12	2.02	0.41
22:CY:15:VAL:HG21	22:CY:42:VAL:HG11	2.03	0.41
23:CZ:97:GLU:HA	23:CZ:126:VAL:O	2.20	0.41
34:DA:511:C:O3'	37:DD:43:HIS:CE1	2.74	0.41
34:DA:562:C:H4'	34:DA:563:A:O5'	2.20	0.41
35:DB:163:PHE:HA	35:DB:185:ILE:HG12	2.01	0.41
37:DD:23:GLY:HA3	37:DD:112:VAL:O	2.20	0.41
38:DE:105:VAL:HG21	38:DE:128:PRO:HB3	2.01	0.41
45:DL:125:PRO:HB2	45:DL:126:LYS:H	1.71	0.41
46:DM:10:PRO:HG2	46:DM:21:TYR:HD1	1.85	0.41
47:DN:41:ARG:HG3	47:DN:42:ILE:N	2.35	0.41
48:DO:74:ASP:CG	48:DO:77:ARG:HG3	2.45	0.41
51:DR:47:THR:O	51:DR:47:THR:OG1	2.34	0.41
57:DZ:20:HIS:HB2	57:DZ:118:SER:OG	2.21	0.41
57:DZ:343:ASN:ND2	57:DZ:383:THR:HG23	2.36	0.41
61:DZ:703:FUA:C15	61:DZ:703:FUA:H323	2.49	0.41
1:AA:27:G:C2	1:AA:537:G:N3	2.88	0.41
1:AA:616:G:N2	1:AA:712:C:C2	2.89	0.41
1:AA:1373:C:H2'	1:AA:1374:G:O4'	2.21	0.41
1:AA:1537:G:C4	1:AA:1546:G:N2	2.89	0.41
1:AA:1537:G:O2'	4:AD:101:GLU:HB2	2.21	0.41
1:AA:2022:G:C6	1:AA:2023:A:N7	2.89	0.41
1:AA:2047:C:H2'	1:AA:2048:C:H6	1.86	0.41
1:AA:2291:G:N7	24:A0:14:ARG:NH1	2.50	0.41
1:AA:2769:U:OP2	33:A9:19:ARG:NE	2.39	0.41
2:AB:41:U:C5	7:AG:70:VAL:HB	2.55	0.41
2:AB:73:A:H2'	2:AB:73:A:N3	2.36	0.41
5:AE:116:VAL:HG13	5:AE:122:PHE:CB	2.50	0.41
6:AF:93:LYS:HD3	6:AF:93:LYS:HA	1.77	0.41
7:AG:125:PHE:HB3	7:AG:166:ASP:CG	2.46	0.41
13:AP:97:PRO:HD3	13:AP:126:VAL:O	2.20	0.41
14:AQ:56:ARG:NH1	14:AQ:56:ARG:CG	2.82	0.41
14:AQ:62:GLY:O	23:AZ:178:GLU:HG2	2.20	0.41
25:A1:17:SER:HB2	25:A1:40:ARG:HG2	2.02	0.41
27:A3:26:LEU:HA	27:A3:26:LEU:HD23	1.80	0.41
33:A9:16:VAL:O	33:A9:17:ILE:HD12	2.21	0.41
34:BA:1024:G:H2'	34:BA:1025:U:H5"	2.03	0.41
34:BA:1127:G:H5'	34:BA:1280:A:O2'	2.21	0.41
34:BA:1299:A:N3	34:BA:1299:A:H5"	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1374:A:C4	34:BA:1375:A:C8	3.09	0.41
34:BA:1442:G:HO2'	34:BA:1442(A):G:P	2.38	0.41
37:BD:79:PHE:CZ	37:BD:207:TYR:HD2	2.37	0.41
39:BF:92:LYS:HB2	39:BF:92:LYS:HE3	1.59	0.41
41:BH:78:GLN:HE21	41:BH:78:GLN:HB2	1.59	0.41
42:BI:28:VAL:HA	42:BI:63:ILE:O	2.21	0.41
49:BP:7:ALA:HB2	49:BP:20:VAL:HG11	2.03	0.41
57:BZ:271:LEU:HD12	57:BZ:271:LEU:H	1.85	0.41
57:BZ:555:LEU:HD11	57:BZ:599:PRO:HB2	2.02	0.41
57:BZ:590:ILE:O	57:BZ:594:VAL:HG23	2.21	0.41
1:CA:777:A:C2	1:CA:778:G:C4	3.08	0.41
1:CA:1688:U:O2	1:CA:1700:A:H5'	2.19	0.41
1:CA:1823:G:OP1	4:CD:54:ARG:NH1	2.54	0.41
1:CA:2734:A:C8	1:CA:2735:G:C8	3.08	0.41
3:CC:48:LEU:CD2	3:CC:59:VAL:HG21	2.50	0.41
6:CF:162:LEU:HD12	6:CF:162:LEU:HA	1.79	0.41
6:CF:184:TYR:CE1	13:CP:3:LEU:HD21	2.56	0.41
17:CT:55:ASN:H	17:CT:59:THR:HG22	1.86	0.41
24:C0:46:LYS:O	24:C0:78:TYR:HA	2.20	0.41
34:DA:343:U:O3'	34:DA:344:A:H8	2.02	0.41
34:DA:411:A:C6	34:DA:429:U:C4	3.09	0.41
34:DA:981:U:H5'	47:DN:21:TYR:CZ	2.55	0.41
34:DA:1085:U:H3'	34:DA:1086:U:C5	2.56	0.41
35:DB:72:GLY:O	35:DB:94:ASN:ND2	2.48	0.41
36:DC:105:GLU:H	36:DC:105:GLU:HG3	1.72	0.41
43:DJ:6:ILE:O	43:DJ:71:LEU:HD12	2.20	0.41
1:AA:831:A:C8	1:AA:839:G:C5	3.09	0.41
1:AA:1525:G:H2'	1:AA:1526:G:C8	2.55	0.41
1:AA:1700:G:H3'	15:AR:2:ARG:CD	2.51	0.41
1:AA:1739:U:H2'	1:AA:1741:C:C5	2.56	0.41
1:AA:2097:U:H2'	1:AA:2250:G:N2	2.36	0.41
1:AA:2845:A:C6	1:AA:2889:C:C6	3.09	0.41
3:AC:194:ILE:CD1	3:AC:227:PRO:CB	2.99	0.41
4:AD:16:MET:HE2	4:AD:208:LYS:HD3	2.03	0.41
4:AD:172:TYR:HD2	4:AD:185:VAL:C	2.29	0.41
5:AE:2:LYS:HA	5:AE:84:PHE:CD1	2.56	0.41
5:AE:111:ARG:H	5:AE:111:ARG:HG2	1.43	0.41
8:AH:23:ARG:CZ	8:AH:23:ARG:HB2	2.50	0.41
10:AL:19:PRO:HD3	10:AL:35:MET:HE1	2.03	0.41
12:AO:9:GLU:O	12:AO:83:ALA:HA	2.20	0.41
24:A0:5:LYS:HB2	24:A0:5:LYS:HE3	1.80	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:40:C:C2	34:BA:41:G:C8	3.09	0.41
34:BA:337:C:H2'	34:BA:338:A:C8	2.55	0.41
34:BA:370:C:O2'	34:BA:371:G:H5'	2.20	0.41
34:BA:557:G:N1	34:BA:558:G:C2	2.89	0.41
34:BA:665:A:N3	34:BA:732:C:H2'	2.35	0.41
34:BA:685:G:N1	34:BA:686:U:O4	2.54	0.41
34:BA:827:U:C4	34:BA:870:U:N3	2.89	0.41
34:BA:872:A:C2	34:BA:874:G:C5	3.08	0.41
34:BA:1060:C:C5	36:BC:2:GLY:HA3	2.55	0.41
34:BA:1381:U:H1'	40:BG:79:ARG:HG3	2.02	0.41
40:BG:18:TYR:HD2	40:BG:59:LEU:HD22	1.86	0.41
42:BI:89:ASN:C	42:BI:91:ASP:H	2.29	0.41
46:BM:94:ARG:CZ	52:BS:80:TYR:HD2	2.34	0.41
49:BP:17:TYR:CE2	49:BP:41:PRO:HG3	2.55	0.41
57:BZ:-6:ARG:C	57:BZ:-4:ALA:N	2.79	0.41
57:BZ:443:HIS:CG	57:BZ:446:THR:HG22	2.55	0.41
1:CA:7:G:H2'	1:CA:8:A:O4'	2.20	0.41
1:CA:13:A:H2	1:CA:14:A:N6	2.19	0.41
1:CA:285:C:O2'	1:CA:286:C:H5'	2.21	0.41
1:CA:470:A:OP1	6:CF:59:TYR:HE1	2.03	0.41
1:CA:1149:G:H2'	1:CA:1150:C:C6	2.54	0.41
1:CA:1406:U:H2'	1:CA:1407:C:C6	2.56	0.41
1:CA:1507:A:O5'	1:CA:1507:A:H8	2.03	0.41
1:CA:1662:C:H2'	1:CA:1663:C:O4'	2.20	0.41
1:CA:2422:A:C6	56:DY:76:A:C2	3.09	0.41
1:CA:2856:C:N3	1:CA:2862:G:C2	2.89	0.41
12:CO:4:PRO:O	12:CO:5:GLN:CB	2.68	0.41
13:CP:49:ARG:NH1	32:C8:4:MET:HE1	2.36	0.41
15:CR:51:LEU:HD21	15:CR:69:ASP:HB2	2.02	0.41
15:CR:55:ALA:HA	15:CR:80:PHE:CE2	2.55	0.41
22:CY:42:VAL:HG12	22:CY:43:ASN:N	2.36	0.41
34:DA:232:G:H2'	34:DA:233:C:O4'	2.21	0.41
34:DA:438:G:O2'	34:DA:493:G:C2	2.74	0.41
34:DA:523:A:H61	45:DL:53:ARG:HH12	1.69	0.41
34:DA:678:U:H1'	34:DA:777:A:O3'	2.20	0.41
34:DA:785:G:N2	34:DA:798:G:C4	2.89	0.41
34:DA:857:C:H2'	34:DA:858:G:O4'	2.21	0.41
34:DA:1117:G:N2	34:DA:1180:A:O2'	2.54	0.41
34:DA:1418:A:H5"	34:DA:1419:G:OP2	2.20	0.41
35:DB:71:VAL:HG12	35:DB:93:VAL:HG22	2.01	0.41
36:DC:16:ARG:HD2	36:DC:16:ARG:HA	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DC:54:ARG:O	36:DC:69:HIS:ND1	2.39	0.41
45:DL:10:LEU:HD23	45:DL:10:LEU:HA	1.86	0.41
51:DR:44:LEU:HD21	51:DR:70:ILE:HD13	2.02	0.41
57:DZ:31:ARG:O	57:DZ:34:TYR:HB3	2.20	0.41
57:DZ:88:VAL:O	57:DZ:91:THR:N	2.53	0.41
57:DZ:159:ALA:O	57:DZ:161:PRO:HD3	2.21	0.41
57:DZ:237:PRO:HB3	57:DZ:241:GLU:OE1	2.21	0.41
57:DZ:503:GLY:C	57:DZ:505:GLY:N	2.79	0.41
57:DZ:669:PHE:HD1	57:DZ:669:PHE:H	1.69	0.41
1:AA:275:C:H2'	1:AA:276:C:C6	2.56	0.41
1:AA:280:C:H2'	1:AA:281:G:H8	1.84	0.41
1:AA:585:U:C4	1:AA:2058:C:O4'	2.74	0.41
1:AA:721:G:O2'	6:AF:74:ARG:HD3	2.21	0.41
1:AA:967:G:H2'	1:AA:968:U:C6	2.56	0.41
1:AA:1016:C:C2'	1:AA:1017:G:H5'	2.51	0.41
1:AA:1075:A:O5'	1:AA:1075:A:H8	2.04	0.41
1:AA:1289:G:H4'	13:AP:7:ARG:NH2	2.36	0.41
1:AA:1370:G:C5	1:AA:1374:G:O6	2.74	0.41
1:AA:1702:A:H4'	5:AE:115:GLY:N	2.36	0.41
1:AA:1851:U:O2	4:AD:201:HIS:HB3	2.19	0.41
1:AA:2294:G:OP1	1:AA:2295:C:H1'	2.21	0.41
1:AA:2303:U:OP1	1:AA:2393:C:H5'	2.21	0.41
1:AA:2342:G:H2'	1:AA:2343:G:O4'	2.21	0.41
1:AA:2343:G:O3'	24:A0:43:THR:HG22	2.21	0.41
1:AA:2385:G:H2'	1:AA:2386:C:C6	2.56	0.41
1:AA:2418:U:H6	1:AA:2418:U:H2'	1.66	0.41
1:AA:2550:C:H2'	1:AA:2551:C:C6	2.55	0.41
1:AA:2787:C:H2'	1:AA:2788:A:O4'	2.21	0.41
1:AA:2845:A:C5	1:AA:2889:C:C5	3.09	0.41
6:AF:53:THR:HB	6:AF:56:GLU:OE2	2.21	0.41
6:AF:180:GLY:O	6:AF:181:LEU:C	2.63	0.41
16:AS:58:LEU:HD23	16:AS:58:LEU:HA	1.71	0.41
17:AT:39:ARG:NH2	34:BA:345:C:H5	2.19	0.41
20:AW:51:LEU:HA	20:AW:51:LEU:HD23	1.86	0.41
21:AX:60:ARG:HH12	31:A7:47:ARG:NH2	2.19	0.41
22:AY:38:ILE:HD13	22:AY:66:PRO:HA	2.02	0.41
23:AZ:105:VAL:O	23:AZ:141:VAL:HG22	2.21	0.41
26:A2:9:GLN:OE1	26:A2:56:GLN:HG2	2.21	0.41
33:A9:10:ILE:HG21	33:A9:32:HIS:CD2	2.56	0.41
34:BA:186:C:C2	34:BA:187:C:C5	3.08	0.41
34:BA:599:C:H5"	41:BH:96:GLY:HA2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:620:C:C2	37:BD:135:LEU:HG	2.56	0.41
34:BA:658:G:H2'	34:BA:659:U:H6	1.85	0.41
34:BA:828:A:H2'	34:BA:829:G:O5'	2.21	0.41
34:BA:872:A:C5	34:BA:874:G:C8	3.09	0.41
34:BA:966:G:H21	42:BI:127:LYS:NZ	2.19	0.41
34:BA:1277:C:H1'	34:BA:1282:C:O2	2.21	0.41
35:BB:150:SER:OG	35:BB:151:GLY:N	2.53	0.41
35:BB:197:VAL:HG12	35:BB:199:TYR:H	1.86	0.41
35:BB:221:LEU:HD22	35:BB:221:LEU:HA	1.84	0.41
36:BC:120:VAL:HB	36:BC:198:VAL:HG11	2.03	0.41
36:BC:124:ILE:HG22	36:BC:130:VAL:HG22	2.02	0.41
36:BC:129:ALA:HB3	36:BC:132:ARG:HB2	2.03	0.41
38:BE:20:GLN:O	38:BE:21:ALA:C	2.64	0.41
41:BH:116:LYS:HD2	41:BH:129:VAL:HG11	2.03	0.41
42:BI:6:GLY:O	42:BI:17:VAL:HG12	2.21	0.41
42:BI:92:TYR:HD1	42:BI:92:TYR:HA	1.77	0.41
43:BJ:55:LYS:HE2	43:BJ:55:LYS:HB3	1.89	0.41
47:BN:23:ARG:HD2	47:BN:30:ALA:HB2	2.03	0.41
48:BO:82:ILE:H	48:BO:82:ILE:HG13	1.75	0.41
50:BQ:62:SER:OG	50:BQ:72:ARG:HD2	2.20	0.41
52:BS:11:VAL:HG11	52:BS:16:LEU:HB2	2.02	0.41
55:BV:16:U:C4	56:BW:37:MIA:H113	2.55	0.41
56:BY:60:U:H5"	56:BY:61:C:C5	2.45	0.41
57:BZ:96:ARG:O	57:BZ:100:VAL:HG23	2.20	0.41
57:BZ:183:MET:SD	57:BZ:213:HIS:CD2	3.14	0.41
1:CA:108:U:H2'	1:CA:109:G:C8	2.54	0.41
1:CA:140:G:O4'	1:CA:141:A:H2	2.04	0.41
1:CA:239:U:H2'	1:CA:240:G:O4'	2.21	0.41
1:CA:251:A:C5	1:CA:252:G:H1'	2.56	0.41
1:CA:264:C:O2'	1:CA:265:A:H2'	2.21	0.41
1:CA:453:C:OP1	63:CA:3752:HOH:O	2.22	0.41
1:CA:501:A:C6	1:CA:502:A:C6	3.08	0.41
1:CA:589:C:H2'	1:CA:590:A:C8	2.55	0.41
1:CA:705:A:H1'	4:CD:9:TYR:CE2	2.56	0.41
1:CA:818:G:H5'	1:CA:839:U:OP1	2.20	0.41
1:CA:918:A:N3	2:CB:80:U:O2'	2.52	0.41
1:CA:954:G:O2'	1:CA:2274:A:N1	2.45	0.41
1:CA:1041:C:H5'	1:CA:1042:G:OP2	2.21	0.41
1:CA:1155:A:C4	1:CA:1157:G:C8	3.09	0.41
1:CA:1292:U:H2'	1:CA:1293:C:H6	1.83	0.41
1:CA:1321:A:H2'	1:CA:1322:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1368:G:O2'	1:CA:1369:G:H5'	2.21	0.41
1:CA:1379:A:H4'	1:CA:1380:G:OP2	2.21	0.41
1:CA:2092:U:H4'	1:CA:2093:G:O5'	2.21	0.41
1:CA:2262:U:P	24:C0:19:LYS:HZ2	2.44	0.41
1:CA:2299:G:N2	1:CA:2318:G:N7	2.69	0.41
1:CA:2320:A:C2	1:CA:2333:A:C8	3.09	0.41
1:CA:2699:C:H2'	1:CA:2700:C:O4'	2.20	0.41
1:CA:2836:U:C4	1:CA:2883:A:N6	2.89	0.41
2:CB:6:C:C2	2:CB:116:G:N2	2.89	0.41
2:CB:28:C:H2'	2:CB:29:A:C8	2.56	0.41
4:CD:37:LEU:HD12	4:CD:62:TYR:HB2	2.03	0.41
4:CD:213:ARG:HD2	4:CD:213:ARG:HA	1.70	0.41
5:CE:13:ARG:HD2	5:CE:20:ALA:HB1	2.03	0.41
5:CE:144:ARG:HB3	5:CE:145:LYS:H	1.56	0.41
8:CH:69:ARG:HG3	8:CH:70:THR:N	2.34	0.41
11:CN:62:VAL:HG13	11:CN:66:LYS:HB2	2.02	0.41
12:CO:103:ALA:O	12:CO:106:LEU:HB2	2.21	0.41
13:CP:139:LYS:C	13:CP:141:ALA:N	2.79	0.41
14:CQ:26:TYR:CE1	14:CQ:28:ALA:HB2	2.56	0.41
14:CQ:68:ILE:HD13	14:CQ:103:MET:HB3	2.03	0.41
18:CU:79:PHE:CE1	18:CU:83:LEU:HD22	2.55	0.41
20:CW:29:LEU:O	20:CW:29:LEU:HD12	2.21	0.41
23:CZ:69:THR:HG22	23:CZ:90:VAL:HA	2.01	0.41
23:CZ:85:HIS:ND1	23:CZ:85:HIS:C	2.79	0.41
23:CZ:150:LEU:HD12	23:CZ:171:ILE:HD11	2.02	0.41
26:C2:3:LEU:HD23	26:C2:3:LEU:HA	1.79	0.41
34:DA:401:C:OP2	37:DD:73:ARG:NE	2.53	0.41
34:DA:473:G:O5'	34:DA:473:G:H8	2.04	0.41
34:DA:518:C:O2'	34:DA:530:G:N2	2.54	0.41
34:DA:541:G:N2	34:DA:542:G:H1'	2.36	0.41
34:DA:623:C:H2'	34:DA:624:C:H6	1.84	0.41
34:DA:687:A:O2'	34:DA:701:C:N4	2.53	0.41
34:DA:860:A:H2'	34:DA:861:G:O4'	2.20	0.41
34:DA:926:G:C6	34:DA:1505:G:C5	3.09	0.41
34:DA:953:G:H5'	34:DA:965:A:N6	2.35	0.41
34:DA:995:C:H2'	34:DA:996:A:H8	1.86	0.41
35:DB:84:GLU:OE1	35:DB:87:ARG:NH1	2.54	0.41
36:DC:52:LEU:HD13	36:DC:118:GLN:HE22	1.86	0.41
40:DG:29:LYS:HD3	40:DG:29:LYS:HA	1.90	0.41
41:DH:4:ASP:CG	41:DH:85:ARG:HH11	2.28	0.41
41:DH:113:SER:HB2	41:DH:134:ILE:HD11	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DJ:46:ARG:HG3	43:DJ:64:GLU:HB3	2.02	0.41
44:DK:18:ARG:O	44:DK:32:ILE:HA	2.21	0.41
45:DL:75:HIS:CD2	45:DL:77:LEU:HB2	2.56	0.41
48:DO:18:PHE:O	48:DO:19:PRO:C	2.64	0.41
48:DO:21:ASP:OD2	48:DO:24:SER:HB3	2.20	0.41
49:DP:73:LEU:HD23	49:DP:73:LEU:HA	1.93	0.41
52:DS:3:ARG:HG2	52:DS:4:SER:H	1.86	0.41
52:DS:36:ARG:HG2	52:DS:51:VAL:HG13	2.02	0.41
53:DT:31:SER:O	53:DT:34:LYS:HB2	2.21	0.41
56:DW:11:C:N4	56:DW:12:U:O4	2.54	0.41
56:DY:55:PSU:HN1	56:DY:57:G:C5'	2.33	0.41
57:DZ:29:THR:O	57:DZ:33:LEU:HD23	2.20	0.41
57:DZ:349:LYS:HB2	57:DZ:349:LYS:HE3	1.90	0.41
57:DZ:419:ALA:O	57:DZ:422:GLU:HB3	2.21	0.41
57:DZ:468:ARG:HE	57:DZ:468:ARG:HB3	1.59	0.41
57:DZ:610:VAL:HG23	57:DZ:612:THR:HG22	2.03	0.41
57:DZ:647:VAL:HA	57:DZ:648:PRO:HD3	1.96	0.41
1:AA:536:U:H5"	1:AA:537:G:OP2	2.21	0.41
1:AA:540:A:H2	1:AA:1306:G:N3	2.18	0.41
1:AA:955:A:C6	1:AA:958:C:C2	3.09	0.41
1:AA:1046:A:C6	1:AA:1201:A:C8	3.09	0.41
1:AA:1431:G:H4'	1:AA:1432:C:OP1	2.21	0.41
1:AA:2181:G:H2'	1:AA:2182:G:H8	1.86	0.41
1:AA:2556:G:H2'	1:AA:2557:G:O4'	2.21	0.41
2:AB:28:C:H2'	2:AB:29:A:O4'	2.21	0.41
4:AD:3:VAL:HG22	4:AD:18:VAL:O	2.21	0.41
4:AD:221:VAL:HG22	4:AD:226:MET:HE2	2.01	0.41
6:AF:132:VAL:HG22	6:AF:132:VAL:O	2.21	0.41
8:AH:158:HIS:O	8:AH:160:LYS:N	2.54	0.41
10:AL:95:LYS:HG3	10:AL:135:GLY:O	2.21	0.41
10:AL:119:ASP:HB3	10:AL:122:ALA:HB3	2.02	0.41
15:AR:24:GLN:OE1	15:AR:36:THR:HG21	2.21	0.41
22:AY:92:ASN:N	22:AY:93:GLY:HA2	2.36	0.41
24:A0:26:TYR:N	24:A0:29:GLN:OE1	2.40	0.41
34:BA:314:C:O2'	34:BA:315:A:H5'	2.21	0.41
34:BA:731:G:H2'	34:BA:732:C:H6	1.86	0.41
34:BA:935:A:C2	34:BA:936:C:C2	3.09	0.41
34:BA:953:G:H2'	34:BA:954:G:O4'	2.21	0.41
34:BA:965:A:H5'	34:BA:969:A:O4'	2.20	0.41
34:BA:1122:U:H2'	34:BA:1123:A:O4'	2.21	0.41
41:BH:17:THR:HB	41:BH:78:GLN:OE1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BM:92:HIS:CE1	46:BM:98:VAL:HG21	2.56	0.41
47:BN:26:ARG:HB2	47:BN:39:LEU:HD22	2.03	0.41
49:BP:8:ARG:HG2	49:BP:9:PHE:N	2.36	0.41
56:BW:63:G:H2'	56:BW:64:A:O4'	2.21	0.41
57:BZ:172:ASP:OD2	57:BZ:173:THR:N	2.54	0.41
57:BZ:268:GLY:C	57:BZ:269:VAL:HG23	2.46	0.41
1:CA:475:U:H1'	1:CA:509:C:C2	2.56	0.41
1:CA:539:G:C6	1:CA:540:C:C4	3.08	0.41
1:CA:606:U:O3'	1:CA:607:U:H4'	2.21	0.41
1:CA:780:G:C2	1:CA:782:A:C2	3.09	0.41
1:CA:1332:G:H2'	1:CA:1332:G:N3	2.36	0.41
1:CA:1394:U:H2'	1:CA:1395:A:O4'	2.20	0.41
1:CA:1526:G:C6	1:CA:1527:G:C2	3.09	0.41
1:CA:1802:A:N1	1:CA:1822:G:H1'	2.36	0.41
1:CA:1926:U:O2	1:CA:1928:A:C8	2.74	0.41
1:CA:2052:G:H21	5:CE:149:ARG:HA	1.85	0.41
3:CC:11:LEU:CD1	3:CC:33:LEU:HA	2.50	0.41
3:CC:60:ARG:NH2	3:CC:165:ARG:HH21	2.18	0.41
3:CC:183:PRO:C	3:CC:185:LYS:N	2.79	0.41
6:CF:30:PRO:O	6:CF:31:HIS:C	2.64	0.41
6:CF:110:LEU:HD12	6:CF:110:LEU:HA	1.85	0.41
7:CG:121:ASN:HA	7:CG:122:PRO:HD3	1.75	0.41
7:CG:138:GLN:HB3	7:CG:153:ARG:O	2.21	0.41
8:CH:136:ILE:H	8:CH:136:ILE:HG13	1.43	0.41
13:CP:21:ARG:HA	13:CP:21:ARG:HD3	1.47	0.41
15:CR:31:HIS:C	15:CR:33:ARG:H	2.28	0.41
16:CS:30:ARG:HB2	16:CS:35:ILE:HD11	2.03	0.41
17:CT:41:ARG:HH22	34:DA:346:G:P	2.44	0.41
18:CU:63:VAL:HG13	63:CU:301:HOH:O	2.20	0.41
19:CV:25:LEU:HD23	19:CV:25:LEU:HA	1.67	0.41
20:CW:82:LEU:HD23	20:CW:82:LEU:HA	1.93	0.41
21:CX:67:GLY:C	21:CX:69:TYR:H	2.29	0.41
23:CZ:156:LYS:HE2	23:CZ:156:LYS:HB3	1.83	0.41
25:C1:53:VAL:HG22	25:C1:74:VAL:HG13	2.03	0.41
34:DA:56:U:H2'	34:DA:57:G:H8	1.86	0.41
34:DA:378:G:C6	34:DA:379:C:C4	3.08	0.41
34:DA:942:G:H2'	34:DA:943:U:C6	2.55	0.41
34:DA:1401:G:H5"	34:DA:1402:C:OP2	2.21	0.41
46:DM:123:ALA:HB3	57:DZ:573:HIS:CG	2.56	0.41
57:DZ:293:THR:HA	57:DZ:397:VAL:HG12	2.02	0.41
1:AA:451:G:N7	63:AA:4002:HOH:O	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2063:U:H2'	1:AA:2064:A:O5'	2.21	0.40
2:AB:37:C:C5	2:AB:38:C:C5	3.08	0.40
2:AB:49:C:C2'	2:AB:50:G:H5'	2.50	0.40
3:AC:20:VAL:O	3:AC:21:TYR:CB	2.58	0.40
7:AG:131:TYR:HB3	7:AG:159:VAL:CG1	2.51	0.40
14:AQ:21:THR:HG21	14:AQ:101:ARG:CB	2.50	0.40
32:A8:23:VAL:HG13	32:A8:47:LYS:HB3	2.02	0.40
32:A8:31:HIS:O	32:A8:32:LEU:HB2	2.19	0.40
34:BA:105:G:C6	34:BA:106:C:C4	3.09	0.40
34:BA:374:A:C6	34:BA:375:U:C4	3.09	0.40
34:BA:422:C:H2'	34:BA:422:C:OP2	2.21	0.40
34:BA:693:G:C6	34:BA:694:A:C6	3.10	0.40
34:BA:865:A:H2'	34:BA:866:C:O4'	2.21	0.40
34:BA:1112:C:N3	36:BC:178:LEU:HB2	2.35	0.40
34:BA:1311:G:N2	34:BA:1327:C:C2	2.89	0.40
39:BF:53:ALA:O	39:BF:54:LYS:HB2	2.21	0.40
40:BG:40:ALA:O	40:BG:43:PHE:HB3	2.21	0.40
42:BI:112:LYS:HD2	42:BI:118:LYS:O	2.21	0.40
48:BO:84:LYS:HD3	48:BO:84:LYS:O	2.20	0.40
49:BP:38:TYR:HB2	49:BP:39:TYR:H	1.71	0.40
50:BQ:22:LEU:HD12	50:BQ:23:VAL:N	2.36	0.40
50:BQ:88:TYR:CD2	50:BQ:88:TYR:C	2.99	0.40
57:BZ:-10:ARG:HB2	57:BZ:-10:ARG:NH1	2.35	0.40
57:BZ:236:GLU:HA	57:BZ:237:PRO:HD3	1.89	0.40
1:CA:443:A:N7	6:CF:45:ARG:HG2	2.36	0.40
1:CA:458:G:C8	31:C7:37:LYS:HG2	2.56	0.40
1:CA:783:A:C5	1:CA:785:G:H1'	2.56	0.40
1:CA:848:G:C2	1:CA:849:A:C5	3.09	0.40
1:CA:1270:C:O2'	1:CA:1648:C:OP2	2.28	0.40
1:CA:2040:C:H2'	1:CA:2041:U:O4'	2.20	0.40
1:CA:2809:A:N1	1:CA:2892:A:C4	2.89	0.40
2:CB:31:C:H2'	2:CB:32:C:H5'	2.03	0.40
5:CE:126:PRO:HB2	5:CE:131:ALA:HB2	2.03	0.40
15:CR:70:LEU:C	15:CR:72:ASP:H	2.21	0.40
16:CS:66:ALA:O	16:CS:67:ARG:C	2.64	0.40
17:CT:80:SER:HA	17:CT:81:PRO:HD2	1.83	0.40
21:CX:31:HIS:HA	21:CX:32:PRO:HD3	1.76	0.40
28:C4:15:ILE:HD13	28:C4:21:VAL:HG22	2.02	0.40
34:DA:168:G:O2'	34:DA:169:C:H5'	2.20	0.40
34:DA:187:C:O2'	53:DT:89:ARG:NH2	2.54	0.40
34:DA:373:A:C2	34:DA:482:A:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:416:G:C6	34:DA:417:C:N3	2.89	0.40
34:DA:1004:A:N6	34:DA:1037:C:C2	2.89	0.40
34:DA:1315:U:H2'	34:DA:1316:G:O4'	2.21	0.40
34:DA:1321:C:H5"	34:DA:1322:C:H2'	2.02	0.40
35:DB:30:ARG:HG3	35:DB:31:TYR:CD1	2.56	0.40
36:DC:12:LEU:HD23	36:DC:12:LEU:HA	1.97	0.40
37:DD:155:LEU:HD23	37:DD:156:GLU:H	1.86	0.40
41:DH:81:HIS:HB2	41:DH:138:TRP:OXT	2.20	0.40
42:DI:127:LYS:HE3	56:DW:34:G:OP2	2.21	0.40
43:DJ:5:ARG:HA	43:DJ:73:ASP:OD1	2.21	0.40
43:DJ:76:ASN:HA	43:DJ:77:PRO:HD2	1.90	0.40
50:DQ:34:LYS:O	50:DQ:36:ILE:HG23	2.21	0.40
56:DW:66:U:C4	56:DW:67:C:C4	3.09	0.40
57:DZ:-29:LEU:HB3	57:DZ:-27:THR:HG23	2.04	0.40
57:DZ:350:GLU:OE2	57:DZ:383:THR:OG1	2.24	0.40
57:DZ:456:GLU:HB3	57:DZ:457:LEU:H	1.69	0.40
1:AA:1104:G:N2	10:AL:126:MET:SD	2.94	0.40
1:AA:1405:A:N3	1:AA:1405:A:O4'	2.53	0.40
1:AA:2145:G:O2'	3:AC:173:HIS:HB2	2.20	0.40
1:AA:2152:U:H1'	1:AA:2180:A:N1	2.37	0.40
1:AA:2154:U:C6	3:AC:6:LYS:HB3	2.56	0.40
1:AA:2299:A:N3	1:AA:2301:G:C8	2.89	0.40
1:AA:2444:A:OP1	63:AA:3937:HOH:O	2.21	0.40
1:AA:2701:U:OP2	1:AA:2732:G:N2	2.46	0.40
3:AC:165:ARG:C	3:AC:172:ILE:HD12	2.47	0.40
4:AD:44:ASN:OD1	4:AD:46:GLN:HB2	2.22	0.40
4:AD:218:ARG:HH11	4:AD:218:ARG:HD3	1.77	0.40
5:AE:85:ASN:HA	5:AE:86:PRO:HD2	1.88	0.40
6:AF:68:LYS:HE3	6:AF:68:LYS:HB3	1.87	0.40
14:AQ:114:ALA:O	14:AQ:118:LEU:HG	2.20	0.40
15:AR:46:GLY:HA2	15:AR:49:ASP:HB2	2.04	0.40
21:AX:35:THR:HG22	21:AX:38:GLU:HB3	2.03	0.40
21:AX:60:ARG:NH1	31:A7:47:ARG:NH2	2.69	0.40
34:BA:537:G:H2'	34:BA:538:G:H8	1.87	0.40
35:BB:25:ASN:HA	35:BB:26:PRO:HD3	1.87	0.40
36:BC:155:GLY:O	36:BC:157:ILE:N	2.54	0.40
38:BE:136:MET:O	38:BE:139:LEU:N	2.54	0.40
40:BG:78:ARG:HH21	40:BG:156:TRP:HB3	1.86	0.40
41:BH:114:THR:OG1	41:BH:117:GLY:O	2.32	0.40
43:BJ:30:SER:O	43:BJ:81:THR:HG21	2.21	0.40
45:BL:84:LEU:HD23	45:BL:105:TYR:CE2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BN:37:PHE:CE1	47:BN:53:LEU:HD13	2.56	0.40
50:BQ:76:LEU:HD11	50:BQ:78:GLU:O	2.21	0.40
53:BT:47:GLY:HA2	53:BT:48:LYS:C	2.46	0.40
57:BZ:-29:LEU:HB2	57:BZ:-27:THR:HG23	2.01	0.40
57:BZ:404:VAL:HG22	57:BZ:405:PRO:N	2.36	0.40
1:CA:56:A:H2'	1:CA:57:C:O4'	2.21	0.40
1:CA:607:U:OP1	6:CF:102:PRO:HA	2.22	0.40
1:CA:953:A:OP2	14:CQ:16:ARG:NE	2.54	0.40
1:CA:997:G:H2'	1:CA:998:C:H6	1.85	0.40
1:CA:1234:U:H2'	1:CA:1235:G:O4'	2.21	0.40
1:CA:2646:C:H2'	1:CA:2647:U:O4'	2.21	0.40
16:CS:34:HIS:HB3	16:CS:35:ILE:H	1.65	0.40
17:CT:105:LEU:HD23	17:CT:105:LEU:HA	1.66	0.40
22:CY:67:LEU:CD2	22:CY:71:LYS:HD3	2.51	0.40
34:DA:90:U:H2'	34:DA:91:C:H6	1.87	0.40
34:DA:641:U:H1'	34:DA:642:A:N7	2.36	0.40
34:DA:1198:G:O2'	43:DJ:55:LYS:HE2	2.21	0.40
34:DA:1323:G:H2'	34:DA:1324:A:C8	2.57	0.40
42:DI:65:VAL:HG21	42:DI:73:GLN:HB3	2.03	0.40
56:DY:28:G:H2'	56:DY:29:G:H8	1.85	0.40
57:DZ:637:ARG:HB3	57:DZ:638:GLY:H	1.71	0.40
1:AA:326:C:H2'	1:AA:327:U:C6	2.55	0.40
1:AA:509:A:C8	1:AA:510:C:C5	3.10	0.40
1:AA:592:U:C4	1:AA:593:G:C6	3.10	0.40
1:AA:605:G:H2'	1:AA:606:G:C8	2.56	0.40
1:AA:859:C:H1'	1:AA:1296:G:C2	2.56	0.40
1:AA:874:U:H6	63:AA:4370:HOH:O	2.02	0.40
1:AA:1485:A:C2	1:AA:1600:A:C5	3.09	0.40
1:AA:2418:U:H5'	1:AA:2418:U:C6	2.56	0.40
1:AA:2653:G:H5"	1:AA:2653:G:C8	2.56	0.40
3:AC:189:ASN:O	3:AC:190:ILE:C	2.64	0.40
5:AE:21:VAL:O	5:AE:23:VAL:HG13	2.21	0.40
10:AL:53:VAL:HA	10:AL:54:PRO:HD3	1.75	0.40
13:AP:112:LEU:HD23	13:AP:112:LEU:HA	1.87	0.40
17:AT:23:ARG:O	17:AT:24:PRO:C	2.65	0.40
18:AU:107:ALA:O	18:AU:108:GLU:C	2.63	0.40
19:AV:94:LEU:HA	19:AV:94:LEU:HD23	1.82	0.40
21:AX:35:THR:HG22	21:AX:38:GLU:HB2	2.02	0.40
23:AZ:98:MET:CE	23:AZ:133:ILE:HD12	2.51	0.40
24:A0:2:ALA:N	63:A0:203:HOH:O	2.55	0.40
24:A0:14:ARG:O	24:A0:15:ASP:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:A4:10:VAL:CG2	28:A4:29:PRO:HG3	2.48	0.40
34:BA:613:C:H42	34:BA:627:G:H1	1.69	0.40
34:BA:938:A:C5	34:BA:939:G:C8	3.10	0.40
34:BA:1299:A:HO2'	34:BA:1301:U:H5'	1.86	0.40
35:BB:111:ARG:O	35:BB:114:ARG:HB3	2.21	0.40
35:BB:121:LEU:HD13	35:BB:121:LEU:HA	1.90	0.40
37:BD:200:GLU:H	37:BD:200:GLU:HG2	1.73	0.40
43:BJ:75:ILE:O	43:BJ:77:PRO:HD3	2.21	0.40
45:BL:102:ARG:H	45:BL:102:ARG:HG2	1.65	0.40
46:BM:10:PRO:HG3	46:BM:21:TYR:CD1	2.57	0.40
48:BO:31:LEU:HD23	48:BO:31:LEU:HA	1.53	0.40
49:BP:40:ASP:OD2	49:BP:44:THR:OG1	2.25	0.40
53:BT:88:VAL:O	53:BT:92:LEU:HG	2.22	0.40
56:BY:49:C:H2'	56:BY:50:U:H6	1.86	0.40
57:BZ:239:GLU:O	57:BZ:242:LEU:N	2.48	0.40
57:BZ:399:LEU:HD12	57:BZ:399:LEU:HA	1.80	0.40
57:BZ:573:HIS:HD2	57:BZ:576:ASP:H	1.63	0.40
1:CA:11:G:C2'	1:CA:12:U:H5"	2.45	0.40
1:CA:467:G:OP1	31:C7:33:ARG:NH1	2.55	0.40
1:CA:986:C:H2'	1:CA:987:G:H5'	2.02	0.40
1:CA:1721:G:N3	1:CA:1721:G:H5"	2.36	0.40
1:CA:1833:U:O2'	1:CA:1969:A:N1	2.51	0.40
1:CA:2029:G:H2'	1:CA:2031:A:OP1	2.21	0.40
1:CA:2228:G:C5	1:CA:2229:C:C4	3.09	0.40
1:CA:2274:A:C5	1:CA:2276:G:C8	3.09	0.40
1:CA:2305:A:N3	7:CG:136:ARG:HA	2.37	0.40
1:CA:2719:G:O2'	1:CA:2720:U:H5'	2.22	0.40
1:CA:2884:U:C2	29:C5:52:TYR:CE1	3.08	0.40
2:CB:54:G:C4	2:CB:55:U:C5	3.10	0.40
3:CC:165:ARG:C	3:CC:172:ILE:HD12	2.47	0.40
7:CG:109:VAL:C	7:CG:112:PRO:HD2	2.45	0.40
11:CN:57:ALA:HB3	11:CN:124:ALA:HA	2.03	0.40
12:CO:25:LEU:O	12:CO:26:LYS:HB2	2.21	0.40
14:CQ:69:PHE:CD1	14:CQ:70:PRO:HD2	2.56	0.40
18:CU:29:SER:C	18:CU:30:LYS:HD3	2.47	0.40
18:CU:65:ILE:CD1	18:CU:95:LEU:HB3	2.51	0.40
18:CU:80:ILE:HD13	18:CU:80:ILE:HA	1.94	0.40
23:CZ:152:ALA:HB1	23:CZ:163:LEU:HD21	2.03	0.40
34:DA:101:A:C5	34:DA:102:G:N7	2.89	0.40
34:DA:460:G:C6	34:DA:470:C:H5"	2.57	0.40
34:DA:1248:A:H2'	34:DA:1249:C:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DB:77:ALA:HB2	35:DB:211:ILE:HD13	2.03	0.40
37:DD:58:LEU:O	37:DD:61:LYS:HB3	2.21	0.40
37:DD:171:GLY:O	37:DD:173:TRP:N	2.54	0.40
38:DE:33:VAL:HG22	38:DE:34:VAL:H	1.86	0.40
38:DE:80:ILE:HD12	38:DE:80:ILE:HA	1.93	0.40
38:DE:139:LEU:HA	38:DE:142:LEU:HD12	2.02	0.40
46:DM:70:LEU:HA	46:DM:70:LEU:HD23	1.89	0.40
50:DQ:37:LYS:O	50:DQ:38:ARG:HD3	2.21	0.40
51:DR:73:ALA:HB3	51:DR:79:LEU:HD12	2.03	0.40
1:AA:125:A:H5"	1:AA:126:C:C6	2.57	0.40
1:AA:348:A:H2'	1:AA:349:G:O5'	2.21	0.40
1:AA:504:A:C6	1:AA:506:A:C6	3.09	0.40
1:AA:593:G:H2'	1:AA:2052:A:N7	2.36	0.40
1:AA:709:G:H5"	13:AP:16:ARG:HG3	2.03	0.40
1:AA:804:U:H2'	1:AA:805:C:O4'	2.21	0.40
1:AA:1053:C:OP1	11:AN:35:ARG:NH1	2.53	0.40
1:AA:2227:G:O2'	1:AA:2228:G:OP1	2.35	0.40
6:AF:11:VAL:HB	6:AF:18:ARG:HB3	2.03	0.40
18:AU:3:ARG:HH11	18:AU:3:ARG:HD3	1.61	0.40
19:AV:2:PHE:CD1	19:AV:2:PHE:C	2.99	0.40
20:AW:65:LEU:O	20:AW:66:GLU:C	2.64	0.40
23:AZ:110:GLY:CA	23:AZ:145:GLU:HA	2.51	0.40
25:A1:19:GLN:O	25:A1:35:THR:HG22	2.21	0.40
26:A2:48:HIS:O	26:A2:52:ASP:HB2	2.21	0.40
29:A5:16:ARG:HG2	29:A5:16:ARG:NH1	2.29	0.40
34:BA:185:A:C2	34:BA:193:C:C2	3.09	0.40
34:BA:736:C:C2	34:BA:737:A:C8	3.10	0.40
34:BA:865:A:H2	34:BA:918:A:H4'	1.86	0.40
35:BB:15:VAL:O	35:BB:16:HIS:ND1	2.54	0.40
35:BB:155:LEU:HD11	35:BB:159:PRO:HG3	2.04	0.40
37:BD:121:VAL:HA	37:BD:126:ILE:HG13	2.02	0.40
37:BD:173:TRP:CD1	37:BD:173:TRP:N	2.89	0.40
38:BE:19:MET:HE2	38:BE:24:ARG:HB3	2.03	0.40
38:BE:122:GLU:HB2	38:BE:126:ARG:HD3	2.03	0.40
40:BG:28:ASN:HA	40:BG:31:MET:HE3	2.03	0.40
42:BI:95:LYS:O	42:BI:96:LEU:HD23	2.21	0.40
47:BN:23:ARG:NH1	47:BN:30:ALA:HB2	2.36	0.40
48:BO:5:LYS:H	48:BO:5:LYS:HD2	1.85	0.40
48:BO:41:GLU:HA	48:BO:44:LYS:HD2	2.03	0.40
50:BQ:60:ILE:HG12	50:BQ:61:GLU:N	2.36	0.40
52:BS:12:ASP:C	52:BS:14:HIS:H	2.30	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BW:37:MIA:H3'	56:BW:38:A:H8	1.86	0.40
56:BY:5:G:H1'	56:BY:69:G:N2	2.36	0.40
56:BY:44:G:H8	56:BY:44:G:OP2	2.04	0.40
57:BZ:577:SER:OG	57:BZ:578:SER:N	2.55	0.40
1:CA:303:U:H2'	1:CA:304:G:O4'	2.20	0.40
1:CA:701:G:N2	1:CA:732:C:C2	2.89	0.40
1:CA:886:C:H1'	1:CA:890:A:H61	1.85	0.40
1:CA:1171:G:N2	1:CA:1179:C:C2	2.84	0.40
1:CA:1653:G:OP1	1:CA:2822:G:N1	2.52	0.40
1:CA:2079:U:H2'	1:CA:2080:G:O4'	2.22	0.40
1:CA:2233:U:H2'	1:CA:2234:G:C8	2.57	0.40
1:CA:2311:A:H1'	7:CG:88:ILE:HD12	2.03	0.40
1:CA:2521:C:H2'	1:CA:2522:U:O4'	2.21	0.40
1:CA:2744:G:N2	8:CH:143:GLN:OE1	2.53	0.40
1:CA:2815:C:H2'	1:CA:2816:C:H6	1.87	0.40
2:CB:15:A:H1'	2:CB:110:G:N7	2.36	0.40
5:CE:112:GLY:O	5:CE:159:HIS:HA	2.21	0.40
5:CE:116:VAL:HG13	5:CE:122:PHE:CB	2.51	0.40
6:CF:170:LEU:HD12	6:CF:170:LEU:HA	1.87	0.40
11:CN:128:HIS:HA	11:CN:129:PRO:HD3	1.69	0.40
12:CO:20:MET:O	12:CO:21:CYS:C	2.64	0.40
18:CU:20:LEU:HD23	18:CU:20:LEU:HA	1.81	0.40
27:C3:6:VAL:HG13	27:C3:56:VAL:HG13	2.03	0.40
32:C8:60:LEU:HD23	32:C8:60:LEU:HA	1.92	0.40
34:DA:192:U:H4'	53:DT:57:ARG:HD3	2.04	0.40
34:DA:474:G:H2'	34:DA:475:G:C8	2.55	0.40
34:DA:491:G:C4	34:DA:492:G:C8	3.09	0.40
34:DA:502:G:N2	34:DA:544:G:N3	2.70	0.40
34:DA:543:C:C2	34:DA:544:G:C8	3.09	0.40
34:DA:543:C:O2'	34:DA:544:G:H5'	2.21	0.40
34:DA:1030:C:H42	34:DA:1031:G:H1	1.68	0.40
34:DA:1060:C:C5'	43:DJ:51:ARG:HB3	2.50	0.40
34:DA:1240:U:OP2	40:DG:115:ARG:HA	2.21	0.40
40:DG:20:ASP:OD2	40:DG:23:VAL:HG23	2.22	0.40
45:DL:75:HIS:HD2	45:DL:77:LEU:N	2.18	0.40
50:DQ:11:VAL:HB	50:DQ:88:TYR:CE2	2.57	0.40
50:DQ:13:ASP:OD1	50:DQ:13:ASP:N	2.54	0.40
51:DR:29:PHE:CD2	51:DR:39:VAL:HG11	2.57	0.40
56:DW:19:G:H5"	56:DW:60:U:O4	2.21	0.40
56:DW:63:G:H2'	56:DW:64:A:H8	1.86	0.40
57:DZ:25:LYS:HG3	57:DZ:25:LYS:HZ3	1.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:114:VAL:HB	57:DZ:152:THR:HB	2.04	0.40
57:DZ:174:PHE:HD2	57:DZ:267:LYS:HD3	1.86	0.40
57:DZ:511:LYS:HE3	57:DZ:511:LYS:HB2	1.85	0.40
1:AA:505:A:H4'	1:AA:506:A:OP1	2.22	0.40
1:AA:795:G:C8	20:AW:89:ALA:HB1	2.56	0.40
1:AA:1137:G:N2	1:AA:1147:U:H1'	2.37	0.40
1:AA:1266:C:H2'	1:AA:1267:C:H6	1.87	0.40
1:AA:1882:U:H2'	1:AA:1883:C:O4'	2.21	0.40
1:AA:2690:C:H2'	1:AA:2691:A:O4'	2.21	0.40
1:AA:2865:C:O2'	1:AA:2866:C:H5'	2.21	0.40
2:AB:33:G:N2	2:AB:50:G:C4	2.89	0.40
2:AB:78:A:C2	2:AB:100:A:C4	3.09	0.40
3:AC:6:LYS:CA	3:AC:9:ARG:NH1	2.85	0.40
3:AC:54:ARG:CZ	3:AC:55:SER:O	2.69	0.40
7:AG:133:LEU:HD12	7:AG:135:LEU:CD1	2.52	0.40
10:AL:38:VAL:O	10:AL:42:ASN:HB2	2.21	0.40
10:AL:78:ILE:HD11	10:AL:136:VAL:HG11	2.04	0.40
10:AL:117:THR:OG1	10:AL:118:THR:N	2.55	0.40
11:AN:46:VAL:CG2	11:AN:48:MET:HG2	2.51	0.40
19:AV:49:THR:O	19:AV:49:THR:HG22	2.20	0.40
25:A1:7:ILE:HD12	25:A1:98:LEU:HD11	2.03	0.40
26:A2:63:VAL:O	26:A2:66:GLU:HB3	2.22	0.40
33:A9:3:VAL:HA	33:A9:35:ARG:O	2.21	0.40
34:BA:143:A:H2	34:BA:220:G:H1	1.69	0.40
34:BA:416:G:H2'	34:BA:417:C:O4'	2.22	0.40
34:BA:697:U:C5	34:BA:698:G:C8	3.10	0.40
34:BA:814:A:H2'	34:BA:816:A:C5'	2.49	0.40
34:BA:1005:A:H5"	34:BA:1006:C:OP2	2.21	0.40
34:BA:1468:A:O5'	34:BA:1468:A:H8	2.04	0.40
35:BB:126:GLU:HB3	35:BB:127:ILE:H	1.65	0.40
35:BB:193:ASP:HB3	35:BB:196:LEU:HB2	2.02	0.40
36:BC:20:SER:O	47:BN:54:PRO:HB3	2.20	0.40
37:BD:70:ILE:HG13	37:BD:100:ARG:NH2	2.36	0.40
38:BE:82:VAL:HB	38:BE:138:ALA:HB2	2.04	0.40
38:BE:127:ASN:HA	38:BE:128:PRO:HD3	1.87	0.40
46:BM:79:LYS:NZ	46:BM:83:ASP:OD1	2.50	0.40
49:BP:8:ARG:HH11	49:BP:8:ARG:HD3	1.74	0.40
49:BP:39:TYR:CD2	49:BP:41:PRO:HD3	2.57	0.40
57:BZ:681:LYS:HE3	57:BZ:681:LYS:HB3	1.57	0.40
1:CA:89:G:H3'	1:CA:90:U:H5"	2.04	0.40
1:CA:143(A):C:H4'	21:CX:38:GLU:OE2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:927:G:H2'	1:CA:928:G:O4'	2.21	0.40
1:CA:1568:G:H5'	4:CD:59:LYS:O	2.22	0.40
1:CA:2046:G:H2'	1:CA:2047:U:H6	1.86	0.40
1:CA:2107:C:N4	1:CA:2182:G:H1	2.11	0.40
1:CA:2120:G:H22	3:CC:169:THR:CG2	2.35	0.40
1:CA:2556:C:H2'	1:CA:2557:G:O4'	2.21	0.40
1:CA:2725:A:C4	1:CA:2727:G:C8	3.10	0.40
1:CA:2862:G:O2'	1:CA:2863:C:H5'	2.22	0.40
2:CB:16:G:H2'	2:CB:17:C:C6	2.57	0.40
4:CD:68:LYS:O	4:CD:69:ARG:HB2	2.21	0.40
5:CE:24:THR:HG21	5:CE:187:ALA:HA	2.03	0.40
8:CH:158:HIS:O	8:CH:160:LYS:N	2.55	0.40
13:CP:52:GLU:OE1	13:CP:55:ARG:NH1	2.47	0.40
15:CR:9:LYS:HA	15:CR:17:ARG:NE	2.37	0.40
16:CS:3:ARG:CZ	16:CS:3:ARG:HB2	2.51	0.40
18:CU:14:HIS:O	18:CU:15:LYS:C	2.63	0.40
23:CZ:78:LYS:NZ	23:CZ:78:LYS:HB3	2.36	0.40
23:CZ:99:TYR:HB3	23:CZ:123:ASP:OD1	2.22	0.40
24:C0:48:GLY:N	24:C0:79:VAL:O	2.54	0.40
26:C2:9:GLN:OE1	26:C2:56:GLN:HG2	2.21	0.40
33:C9:9:ARG:NH1	33:C9:16:VAL:HG23	2.36	0.40
34:DA:552:U:O3'	45:DL:87:GLY:HA3	2.21	0.40
34:DA:575:G:H4'	34:DA:576:G:O5'	2.21	0.40
34:DA:694:A:H2'	34:DA:695:A:O4'	2.21	0.40
34:DA:1077:G:N2	34:DA:1081:G:C4	2.90	0.40
34:DA:1401:G:OP2	55:DV:18:C:C5	2.75	0.40
35:DB:166:ASP:C	35:DB:168:THR:H	2.29	0.40
38:DE:129:ILE:O	38:DE:132:ALA:HB3	2.21	0.40
42:DI:16:ARG:HB2	42:DI:64:THR:CG2	2.50	0.40
44:DK:38:ASN:HA	44:DK:39:PRO:HD2	1.88	0.40
46:DM:3:ARG:HG2	46:DM:8:GLU:OE1	2.21	0.40
46:DM:20:THR:HA	46:DM:25:ILE:O	2.22	0.40
56:DY:36:A:H2'	56:DY:37:MIA:O4'	2.22	0.40
57:DZ:126:GLU:OE2	57:DZ:132:ARG:NH2	2.54	0.40
57:DZ:455:GLY:O	57:DZ:458:HIS:HB3	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	AC	133/228 (58%)	90 (68%)	25 (19%)	18 (14%)	0	0
3	CC	133/228 (58%)	90 (68%)	25 (19%)	18 (14%)	0	0
4	AD	273/276 (99%)	249 (91%)	20 (7%)	4 (2%)	8	28
4	CD	273/276 (99%)	242 (89%)	26 (10%)	5 (2%)	6	23
5	AE	202/206 (98%)	191 (95%)	9 (4%)	2 (1%)	12	38
5	CE	202/206 (98%)	174 (86%)	19 (9%)	9 (4%)	2	7
6	AF	201/210 (96%)	187 (93%)	11 (6%)	3 (2%)	8	28
6	CF	201/210 (96%)	186 (92%)	12 (6%)	3 (2%)	8	28
7	AG	179/182 (98%)	143 (80%)	25 (14%)	11 (6%)	1	3
7	CG	179/182 (98%)	148 (83%)	20 (11%)	11 (6%)	1	3
8	AH	172/180 (96%)	150 (87%)	20 (12%)	2 (1%)	10	34
8	CH	172/180 (96%)	148 (86%)	19 (11%)	5 (3%)	3	13
9	AK	128/173 (74%)	68 (53%)	33 (26%)	27 (21%)	0	0
9	CK	128/173 (74%)	69 (54%)	24 (19%)	35 (27%)	0	0
10	AL	137/147 (93%)	105 (77%)	23 (17%)	9 (7%)	1	3
10	CL	137/147 (93%)	95 (69%)	33 (24%)	9 (7%)	1	3
11	AN	138/140 (99%)	133 (96%)	4 (3%)	1 (1%)	18	47
11	CN	138/140 (99%)	125 (91%)	11 (8%)	2 (1%)	9	30
12	AO	120/122 (98%)	114 (95%)	4 (3%)	2 (2%)	7	25
12	CO	120/122 (98%)	105 (88%)	12 (10%)	3 (2%)	4	16
13	AP	147/150 (98%)	132 (90%)	13 (9%)	2 (1%)	9	30
13	CP	147/150 (98%)	128 (87%)	16 (11%)	3 (2%)	6	21
14	AQ	139/141 (99%)	124 (89%)	13 (9%)	2 (1%)	9	30
14	CQ	139/141 (99%)	121 (87%)	15 (11%)	3 (2%)	5	19
15	AR	116/118 (98%)	100 (86%)	13 (11%)	3 (3%)	4	15

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
15	CR	116/118 (98%)	92 (79%)	16 (14%)	8 (7%)	1 2
16	AS	108/112 (96%)	92 (85%)	12 (11%)	4 (4%)	2 9
16	CS	108/112 (96%)	86 (80%)	17 (16%)	5 (5%)	2 6
17	AT	129/146 (88%)	118 (92%)	10 (8%)	1 (1%)	16 44
17	CT	129/146 (88%)	109 (84%)	15 (12%)	5 (4%)	2 8
18	AU	114/118 (97%)	111 (97%)	3 (3%)	0	100 100
18	CU	114/118 (97%)	103 (90%)	10 (9%)	1 (1%)	14 41
19	AV	99/101 (98%)	92 (93%)	5 (5%)	2 (2%)	6 21
19	CV	99/101 (98%)	87 (88%)	9 (9%)	3 (3%)	3 12
20	AW	110/113 (97%)	106 (96%)	4 (4%)	0	100 100
20	CW	110/113 (97%)	100 (91%)	10 (9%)	0	100 100
21	AX	93/96 (97%)	88 (95%)	5 (5%)	0	100 100
21	CX	93/96 (97%)	80 (86%)	11 (12%)	2 (2%)	5 19
22	AY	105/110 (96%)	91 (87%)	11 (10%)	3 (3%)	3 13
22	CY	105/110 (96%)	90 (86%)	13 (12%)	2 (2%)	6 22
23	AZ	183/206 (89%)	146 (80%)	24 (13%)	13 (7%)	1 2
23	CZ	183/206 (89%)	140 (76%)	31 (17%)	12 (7%)	1 3
24	A0	81/85 (95%)	72 (89%)	8 (10%)	1 (1%)	10 34
24	C0	81/85 (95%)	70 (86%)	11 (14%)	0	100 100
25	A1	95/98 (97%)	86 (90%)	7 (7%)	2 (2%)	5 20
25	C1	95/98 (97%)	87 (92%)	4 (4%)	4 (4%)	2 7
26	A2	68/72 (94%)	62 (91%)	5 (7%)	1 (2%)	8 28
26	C2	68/72 (94%)	63 (93%)	4 (6%)	1 (2%)	8 28
27	A3	57/60 (95%)	55 (96%)	2 (4%)	0	100 100
27	C3	57/60 (95%)	52 (91%)	5 (9%)	0	100 100
28	A4	67/71 (94%)	41 (61%)	19 (28%)	7 (10%)	0 1
28	C4	67/71 (94%)	53 (79%)	11 (16%)	3 (4%)	2 7
29	A5	57/60 (95%)	53 (93%)	4 (7%)	0	100 100
29	C5	57/60 (95%)	51 (90%)	5 (9%)	1 (2%)	6 23
30	A6	51/54 (94%)	48 (94%)	2 (4%)	1 (2%)	6 21
30	C6	51/54 (94%)	46 (90%)	4 (8%)	1 (2%)	6 21

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
31	A7	46/49 (94%)	44 (96%)	2 (4%)	0	100 100
31	C7	46/49 (94%)	43 (94%)	1 (2%)	2 (4%)	2 7
32	A8	62/65 (95%)	60 (97%)	2 (3%)	0	100 100
32	C8	62/65 (95%)	59 (95%)	2 (3%)	1 (2%)	7 27
33	A9	35/37 (95%)	35 (100%)	0	0	100 100
33	C9	35/37 (95%)	33 (94%)	2 (6%)	0	100 100
35	BB	229/256 (90%)	176 (77%)	42 (18%)	11 (5%)	2 6
35	DB	229/256 (90%)	177 (77%)	37 (16%)	15 (7%)	1 3
36	BC	204/239 (85%)	169 (83%)	28 (14%)	7 (3%)	3 11
36	DC	204/239 (85%)	175 (86%)	26 (13%)	3 (2%)	8 28
37	BD	206/209 (99%)	154 (75%)	34 (16%)	18 (9%)	0 1
37	DD	206/209 (99%)	161 (78%)	31 (15%)	14 (7%)	1 2
38	BE	146/162 (90%)	111 (76%)	26 (18%)	9 (6%)	1 3
38	DE	146/162 (90%)	122 (84%)	21 (14%)	3 (2%)	5 20
39	BF	98/101 (97%)	80 (82%)	15 (15%)	3 (3%)	3 12
39	DF	98/101 (97%)	82 (84%)	15 (15%)	1 (1%)	12 38
40	BG	153/156 (98%)	131 (86%)	17 (11%)	5 (3%)	3 11
40	DG	153/156 (98%)	133 (87%)	14 (9%)	6 (4%)	2 8
41	BH	135/138 (98%)	111 (82%)	18 (13%)	6 (4%)	2 7
41	DH	135/138 (98%)	122 (90%)	13 (10%)	0	100 100
42	BI	125/128 (98%)	104 (83%)	16 (13%)	5 (4%)	2 8
42	DI	125/128 (98%)	104 (83%)	18 (14%)	3 (2%)	4 17
43	BJ	95/105 (90%)	80 (84%)	12 (13%)	3 (3%)	3 11
43	DJ	94/105 (90%)	76 (81%)	9 (10%)	9 (10%)	0 1
44	BK	112/129 (87%)	96 (86%)	12 (11%)	4 (4%)	2 10
44	DK	112/129 (87%)	98 (88%)	11 (10%)	3 (3%)	4 15
45	BL	120/132 (91%)	111 (92%)	7 (6%)	2 (2%)	7 25
45	DL	120/132 (91%)	103 (86%)	13 (11%)	4 (3%)	3 11
46	BM	115/126 (91%)	89 (77%)	23 (20%)	3 (3%)	4 15
46	DM	120/126 (95%)	100 (83%)	12 (10%)	8 (7%)	1 3
47	BN	58/61 (95%)	47 (81%)	9 (16%)	2 (3%)	3 11

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
47	DN	58/61 (95%)	53 (91%)	5 (9%)	0	100 100
48	BO	86/89 (97%)	72 (84%)	8 (9%)	6 (7%)	1 2
48	DO	86/89 (97%)	75 (87%)	8 (9%)	3 (4%)	3 10
49	BP	80/88 (91%)	52 (65%)	19 (24%)	9 (11%)	0 1
49	DP	80/88 (91%)	65 (81%)	12 (15%)	3 (4%)	2 9
50	BQ	97/105 (92%)	82 (84%)	9 (9%)	6 (6%)	1 3
50	DQ	97/105 (92%)	87 (90%)	7 (7%)	3 (3%)	3 12
51	BR	66/88 (75%)	60 (91%)	6 (9%)	0	100 100
51	DR	66/88 (75%)	57 (86%)	7 (11%)	2 (3%)	3 12
52	BS	82/93 (88%)	66 (80%)	14 (17%)	2 (2%)	4 17
52	DS	81/93 (87%)	68 (84%)	8 (10%)	5 (6%)	1 3
53	BT	94/106 (89%)	77 (82%)	10 (11%)	7 (7%)	1 2
53	DT	94/106 (89%)	81 (86%)	10 (11%)	3 (3%)	3 11
54	BU	21/27 (78%)	20 (95%)	1 (5%)	0	100 100
54	DU	21/27 (78%)	19 (90%)	1 (5%)	1 (5%)	2 6
57	BZ	726/758 (96%)	569 (78%)	106 (15%)	51 (7%)	1 2
57	DZ	726/758 (96%)	554 (76%)	121 (17%)	51 (7%)	1 2
All	All	13389/14444 (93%)	11230 (84%)	1582 (12%)	577 (4%)	2 7

All (577) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	AC	42	VAL
3	AC	47	LYS
3	AC	68	GLY
3	AC	180	SER
3	AC	181	PHE
4	AD	275	LYS
7	AG	43	LEU
7	AG	47	LYS
7	AG	51	ARG
7	AG	181	ARG
9	AK	29	TYR
9	AK	47	ASN
9	AK	71	LEU
9	AK	74	LEU

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Mol	Chain	Res	Type
9	AK	77	PRO
9	AK	80	VAL
9	AK	91	LYS
9	AK	104	ILE
9	AK	105	PRO
9	AK	107	VAL
9	AK	125	LEU
9	AK	128	LEU
10	AL	16	LYS
16	AS	59	LYS
23	AZ	136	PHE
23	AZ	154	ASP
23	AZ	158	PRO
23	AZ	177	PRO
23	AZ	178	GLU
23	AZ	183	LEU
23	AZ	184	ALA
28	A4	4	GLY
28	A4	34	GLU
28	A4	59	PHE
28	A4	62	ARG
30	A6	29	ASN
35	BB	10	LEU
35	BB	13	ALA
35	BB	17	PHE
35	BB	125	PRO
36	BC	65	ALA
37	BD	5	ILE
37	BD	31	CYS
37	BD	42	GLN
37	BD	101	LEU
37	BD	102	ASP
37	BD	178	VAL
37	BD	179	GLU
37	BD	207	TYR
38	BE	98	THR
38	BE	140	ARG
39	BF	42	GLU
40	BG	79	ARG
40	BG	80	VAL
42	BI	41	VAL
42	BI	54	ASP

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Mol	Chain	Res	Type
43	BJ	31	GLY
44	BK	106	LYS
47	BN	4	LYS
48	BO	21	ASP
49	BP	66	PRO
53	BT	10	LEU
53	BT	100	ILE
57	BZ	-57	GLU
57	BZ	-25	SER
57	BZ	-23	LEU
57	BZ	39	ILE
57	BZ	87	HIS
57	BZ	88	VAL
57	BZ	100	VAL
57	BZ	183	MET
57	BZ	239	GLU
57	BZ	240	GLU
57	BZ	324	ARG
57	BZ	402	ILE
57	BZ	404	VAL
57	BZ	446	THR
57	BZ	469	GLU
57	BZ	504	ARG
3	CC	42	VAL
3	CC	47	LYS
3	CC	68	GLY
3	CC	180	SER
3	CC	181	PHE
4	CD	239	ARG
5	CE	17	ASP
5	CE	74	PRO
6	CF	130	ALA
7	CG	14	GLU
7	CG	47	LYS
7	CG	126	ASP
7	CG	181	ARG
8	CH	126	PRO
9	CK	68	LEU
9	CK	69	PRO
9	CK	71	LEU
9	CK	74	LEU
9	CK	75	GLN

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Mol	Chain	Res	Type
9	CK	77	PRO
9	CK	80	VAL
9	CK	85	ASP
9	CK	90	ALA
9	CK	93	LEU
9	CK	107	VAL
9	CK	128	LEU
10	CL	115	LEU
12	CO	26	LYS
14	CQ	28	ALA
15	CR	14	SER
15	CR	58	GLY
15	CR	86	ARG
16	CS	57	LYS
17	CT	100	TYR
19	CV	79	VAL
23	CZ	154	ASP
23	CZ	158	PRO
23	CZ	161	VAL
23	CZ	183	LEU
23	CZ	184	ALA
25	C1	3	LYS
25	C1	26	ARG
25	C1	85	LEU
30	C6	44	ARG
35	DB	10	LEU
35	DB	17	PHE
35	DB	21	ARG
35	DB	24	TRP
35	DB	74	LYS
37	DD	136	PRO
37	DD	154	ASN
38	DE	140	ARG
39	DF	79	LEU
40	DG	80	VAL
42	DI	54	ASP
42	DI	107	ARG
43	DJ	56	HIS
43	DJ	75	ILE
46	DM	106	ASN
48	DO	19	PRO
50	DQ	74	LEU

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Mol	Chain	Res	Type
51	DR	52	PRO
53	DT	100	ILE
57	DZ	-57	GLU
57	DZ	-25	SER
57	DZ	-12	ALA
57	DZ	89	ASP
57	DZ	92	ILE
57	DZ	160	ARG
57	DZ	183	MET
57	DZ	290	LYS
57	DZ	303	PRO
57	DZ	402	ILE
57	DZ	416	LYS
57	DZ	472	VAL
57	DZ	528	ALA
3	AC	53	ARG
3	AC	161	ARG
3	AC	179	ALA
6	AF	130	ALA
7	AG	21	ARG
7	AG	78	SER
7	AG	140	ILE
9	AK	49	ALA
9	AK	75	GLN
9	AK	119	ALA
9	AK	123	GLU
9	AK	132	ASP
10	AL	89	HIS
15	AR	42	LYS
17	AT	129	ARG
19	AV	79	VAL
22	AY	78	ALA
24	A0	74	ARG
35	BB	16	HIS
35	BB	37	ASN
35	BB	106	LYS
36	BC	66	VAL
36	BC	70	VAL
37	BD	172	PRO
38	BE	68	GLU
38	BE	85	GLY
38	BE	103	GLY

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Mol	Chain	Res	Type
38	BE	133	TYR
38	BE	146	ALA
41	BH	41	ARG
41	BH	51	VAL
41	BH	104	ARG
41	BH	133	LEU
42	BI	43	ALA
46	BM	101	GLN
47	BN	52	GLN
49	BP	78	GLY
50	BQ	34	LYS
50	BQ	49	GLU
50	BQ	87	LYS
53	BT	47	GLY
53	BT	96	GLY
57	BZ	-33	GLY
57	BZ	-8	ALA
57	BZ	-4	ALA
57	BZ	86	GLY
57	BZ	171	GLU
57	BZ	172	ASP
57	BZ	199	ILE
57	BZ	235	GLU
57	BZ	400	GLU
57	BZ	416	LYS
57	BZ	418	LYS
57	BZ	468	ARG
57	BZ	472	VAL
57	BZ	656	ALA
57	BZ	671	MET
3	CC	53	ARG
3	CC	161	ARG
3	CC	179	ALA
5	CE	69	LYS
6	CF	21	ALA
7	CG	51	ARG
7	CG	81	LYS
9	CK	33	PRO
9	CK	50	ARG
9	CK	53	VAL
9	CK	70	GLU
9	CK	73	GLY

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Mol	Chain	Res	Type
9	CK	100	ASN
9	CK	104	ILE
9	CK	110	GLY
10	CL	13	PRO
10	CL	89	HIS
11	CN	2	LYS
13	CP	140	ALA
14	CQ	3	MET
14	CQ	55	VAL
15	CR	4	LEU
15	CR	71	GLN
16	CS	82	ILE
17	CT	10	VAL
21	CX	94	GLY
23	CZ	60	GLU
23	CZ	64	GLY
23	CZ	182	LYS
28	C4	45	GLY
28	C4	46	GLN
29	C5	37	LYS
31	C7	46	VAL
35	DB	26	PRO
36	DC	26	LYS
37	DD	3	ARG
37	DD	56	VAL
37	DD	76	ARG
37	DD	110	PHE
37	DD	171	GLY
37	DD	182	LYS
38	DE	150	ARG
40	DG	79	ARG
40	DG	148	ASN
43	DJ	29	ARG
43	DJ	55	LYS
43	DJ	77	PRO
43	DJ	79	ARG
44	DK	49	GLY
46	DM	100	GLY
48	DO	88	ARG
49	DP	78	GLY
50	DQ	33	GLY
52	DS	25	LYS

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Mol	Chain	Res	Type
57	DZ	-1	GLU
57	DZ	39	ILE
57	DZ	85	PRO
57	DZ	182	ARG
57	DZ	403	GLU
57	DZ	446	THR
57	DZ	456	GLU
57	DZ	468	ARG
57	DZ	533	VAL
3	AC	30	VAL
3	AC	43	GLU
3	AC	52	PRO
3	AC	69	LEU
3	AC	184	GLU
3	AC	202	PRO
3	AC	209	PHE
4	AD	156	ALA
5	AE	52	LEU
6	AF	25	PRO
7	AG	74	LYS
7	AG	79	ASN
9	AK	30	GLN
9	AK	33	PRO
9	AK	93	LEU
9	AK	112	LEU
12	AO	5	GLN
19	AV	31	ALA
22	AY	54	LYS
23	AZ	159	PRO
23	AZ	161	VAL
25	A1	3	LYS
35	BB	19	HIS
37	BD	3	ARG
37	BD	109	GLY
37	BD	142	PRO
38	BE	132	ALA
41	BH	6	ILE
44	BK	49	GLY
44	BK	96	ARG
44	BK	100	ALA
45	BL	50	SER
49	BP	56	ALA

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Mol	Chain	Res	Type
50	BQ	82	MET
50	BQ	94	ASN
57	BZ	85	PRO
57	BZ	170	ARG
57	BZ	274	ASP
57	BZ	486	THR
57	BZ	521	SER
57	BZ	638	GLY
3	CC	30	VAL
3	CC	43	GLU
3	CC	52	PRO
3	CC	69	LEU
3	CC	184	GLU
3	CC	202	PRO
3	CC	209	PHE
4	CD	3	VAL
5	CE	103	ASP
8	CH	159	GLU
8	CH	169	VAL
9	CK	20	ALA
9	CK	30	GLN
9	CK	56	ASN
9	CK	62	ALA
9	CK	63	LEU
9	CK	114	GLY
9	CK	119	ALA
9	CK	132	ASP
18	CU	72	HIS
19	CV	29	PRO
22	CY	43	ASN
23	CZ	178	GLU
26	C2	22	GLU
28	C4	68	ARG
31	C7	45	ALA
35	DB	20	GLU
35	DB	77	ALA
35	DB	134	GLU
35	DB	232	PRO
37	DD	47	ARG
40	DG	33	ASP
40	DG	55	GLY
44	DK	106	LYS

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Mol	Chain	Res	Type
45	DL	106	ASP
45	DL	125	PRO
46	DM	67	GLU
46	DM	118	ALA
52	DS	30	LEU
52	DS	42	PRO
53	DT	102	GLY
54	DU	7	ARG
57	DZ	-65	LYS
57	DZ	-8	ALA
57	DZ	9	LEU
57	DZ	115	GLU
57	DZ	153	MET
57	DZ	235	GLU
57	DZ	404	VAL
57	DZ	444	PRO
57	DZ	457	LEU
57	DZ	636	PRO
57	DZ	671	MET
3	AC	16	ASP
4	AD	169	GLU
8	AH	159	GLU
9	AK	5	ARG
9	AK	110	GLY
10	AL	33	ASN
10	AL	42	ASN
13	AP	29	LYS
13	AP	122	PRO
15	AR	45	ARG
23	AZ	137	ILE
23	AZ	157	LEU
23	AZ	164	ALA
28	A4	41	PRO
36	BC	61	ALA
36	BC	81	GLY
36	BC	88	ARG
37	BD	105	VAL
37	BD	182	LYS
38	BE	77	PRO
39	BF	70	ASP
41	BH	7	ALA
42	BI	97	LYS

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Mol	Chain	Res	Type
46	BM	12	ASN
48	BO	44	LYS
48	BO	78	TYR
49	BP	18	ARG
49	BP	49	LEU
49	BP	64	ALA
52	BS	81	ARG
53	BT	102	GLY
57	BZ	-26	GLU
57	BZ	22	ASP
57	BZ	181	LEU
57	BZ	269	VAL
57	BZ	473	ASP
57	BZ	500	GLN
57	BZ	640	ALA
3	CC	16	ASP
5	CE	162	ALA
7	CG	32	PRO
7	CG	43	LEU
7	CG	50	ALA
8	CH	65	HIS
9	CK	47	ASN
9	CK	101	PRO
10	CL	72	PRO
12	CO	5	GLN
13	CP	29	LYS
13	CP	122	PRO
16	CS	84	GLN
17	CT	82	LEU
35	DB	123	ALA
35	DB	125	PRO
35	DB	131	PRO
36	DC	79	ARG
36	DC	156	ARG
37	DD	101	LEU
37	DD	172	PRO
38	DE	69	VAL
42	DI	118	LYS
43	DJ	78	ASN
45	DL	120	TYR
46	DM	5	ALA
46	DM	6	GLY

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Mol	Chain	Res	Type
50	DQ	81	ARG
51	DR	41	LYS
52	DS	12	ASP
52	DS	29	ARG
57	DZ	-24	ASN
57	DZ	88	VAL
57	DZ	170	ARG
57	DZ	199	ILE
57	DZ	247	ARG
57	DZ	640	ALA
57	DZ	656	ALA
3	AC	21	TYR
4	AD	146	GLU
5	AE	57	LYS
6	AF	207	GLY
7	AG	113	ARG
8	AH	127	GLU
9	AK	85	ASP
10	AL	13	PRO
10	AL	51	ALA
11	AN	14	VAL
12	AO	25	LEU
14	AQ	13	GLN
14	AQ	40	ALA
16	AS	82	ILE
26	A2	68	ARG
28	A4	49	PHE
35	BB	231	GLU
37	BD	199	ASN
40	BG	6	ARG
40	BG	93	PRO
42	BI	90	PRO
45	BL	88	GLY
49	BP	39	TYR
52	BS	67	VAL
53	BT	52	ALA
57	BZ	243	VAL
57	BZ	353	ALA
57	BZ	444	PRO
3	CC	21	TYR
4	CD	125	ILE
4	CD	275	LYS

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Mol	Chain	Res	Type
5	CE	182	LEU
9	CK	86	PRO
9	CK	120	LYS
10	CL	3	LYS
10	CL	50	ASP
10	CL	119	ASP
11	CN	87	LEU
12	CO	35	VAL
15	CR	45	ARG
15	CR	49	ASP
15	CR	107	ASP
16	CS	96	GLY
19	CV	43	GLU
21	CX	45	THR
22	CY	66	PRO
23	CZ	155	LEU
23	CZ	157	LEU
23	CZ	160	GLY
25	C1	45	ASN
35	DB	124	SER
37	DD	5	ILE
37	DD	59	ARG
43	DJ	36	GLY
46	DM	68	GLY
48	DO	47	LYS
57	DZ	380	LEU
57	DZ	532	GLY
3	AC	221	PRO
16	AS	72	ALA
23	AZ	156	LYS
25	A1	55	GLY
35	BB	78	GLN
35	BB	126	GLU
36	BC	101	LEU
37	BD	104	VAL
43	BJ	79	ARG
46	BM	67	GLU
48	BO	79	ARG
48	BO	86	GLY
53	BT	63	ILE
57	BZ	209	ALA
57	BZ	281	PRO

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Mol	Chain	Res	Type
3	CC	221	PRO
5	CE	52	LEU
6	CF	132	VAL
7	CG	52	ILE
8	CH	168	PRO
9	CK	84	GLU
16	CS	22	GLY
17	CT	20	PRO
17	CT	106	SER
32	C8	17	THR
35	DB	227	GLY
57	DZ	154	GLN
57	DZ	575	VAL
57	DZ	637	ARG
9	AK	22	GLY
9	AK	114	GLY
16	AS	60	GLY
28	A4	45	GLY
40	BG	55	GLY
5	CE	102	VAL
53	DT	63	ILE
57	DZ	502	GLY
7	AG	32	PRO
9	AK	86	PRO
10	AL	24	GLY
10	AL	113	PRO
57	BZ	307	GLY
9	CK	105	PRO
10	CL	21	PRO
37	DD	37	PRO
43	DJ	24	VAL
49	DP	51	VAL
10	AL	21	PRO
37	BD	37	PRO
39	BF	6	VAL
48	BO	36	ILE
49	BP	19	ILE
57	BZ	-16	ILE
4	CD	236	GLY
7	CG	63	ILE
9	CK	129	PRO
10	CL	24	GLY

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Mol	Chain	Res	Type
45	DL	88	GLY
57	DZ	237	PRO
22	AY	103	GLY
37	BD	136	PRO
43	BJ	77	PRO
49	BP	41	PRO
50	BQ	33	GLY
5	CE	71	GLY
40	DG	19	GLY
44	DK	39	PRO
46	DM	4	ILE
49	DP	53	VAL
57	DZ	86	GLY
57	DZ	163	VAL
57	DZ	638	GLY
15	AR	92	GLY
57	DZ	384	ILE

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
3	AC	111/180 (62%)	100 (90%)	11 (10%)	7 24
3	CC	111/180 (62%)	100 (90%)	11 (10%)	7 24
4	AD	215/218 (99%)	175 (81%)	40 (19%)	1 5
4	CD	216/218 (99%)	177 (82%)	39 (18%)	2 6
5	AE	164/166 (99%)	127 (77%)	37 (23%)	1 3
5	CE	164/166 (99%)	125 (76%)	39 (24%)	1 3
6	AF	160/166 (96%)	124 (78%)	36 (22%)	1 3
6	CF	159/166 (96%)	120 (76%)	39 (24%)	1 2
7	AG	143/156 (92%)	113 (79%)	30 (21%)	1 4
7	CG	142/156 (91%)	108 (76%)	34 (24%)	1 3
8	AH	144/148 (97%)	117 (81%)	27 (19%)	1 5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
8	CH	144/148 (97%)	119 (83%)	25 (17%)	2 7
10	AL	104/111 (94%)	82 (79%)	22 (21%)	1 4
10	CL	104/111 (94%)	84 (81%)	20 (19%)	1 5
11	AN	118/119 (99%)	95 (80%)	23 (20%)	1 5
11	CN	118/119 (99%)	88 (75%)	30 (25%)	0 2
12	AO	100/100 (100%)	85 (85%)	15 (15%)	3 10
12	CO	100/100 (100%)	80 (80%)	20 (20%)	1 4
13	AP	116/116 (100%)	87 (75%)	29 (25%)	0 2
13	CP	115/116 (99%)	90 (78%)	25 (22%)	1 3
14	AQ	111/111 (100%)	97 (87%)	14 (13%)	4 15
14	CQ	111/111 (100%)	88 (79%)	23 (21%)	1 4
15	AR	101/101 (100%)	79 (78%)	22 (22%)	1 3
15	CR	101/101 (100%)	74 (73%)	27 (27%)	0 1
16	AS	87/88 (99%)	67 (77%)	20 (23%)	1 3
16	CS	85/88 (97%)	67 (79%)	18 (21%)	1 4
17	AT	115/127 (91%)	95 (83%)	20 (17%)	2 7
17	CT	113/127 (89%)	87 (77%)	26 (23%)	1 3
18	AU	93/94 (99%)	74 (80%)	19 (20%)	1 4
18	CU	93/94 (99%)	77 (83%)	16 (17%)	2 7
19	AV	80/82 (98%)	58 (72%)	22 (28%)	0 1
19	CV	80/82 (98%)	63 (79%)	17 (21%)	1 4
20	AW	90/92 (98%)	74 (82%)	16 (18%)	2 6
20	CW	90/92 (98%)	79 (88%)	11 (12%)	5 16
21	AX	77/78 (99%)	65 (84%)	12 (16%)	2 9
21	CX	77/78 (99%)	65 (84%)	12 (16%)	2 9
22	AY	85/91 (93%)	70 (82%)	15 (18%)	2 7
22	CY	85/91 (93%)	69 (81%)	16 (19%)	1 5
23	AZ	156/179 (87%)	116 (74%)	40 (26%)	0 2
23	CZ	156/179 (87%)	124 (80%)	32 (20%)	1 4
24	A0	65/67 (97%)	59 (91%)	6 (9%)	8 27
24	C0	65/67 (97%)	59 (91%)	6 (9%)	8 27

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
25	A1	80/83 (96%)	66 (82%)	14 (18%)	2 7
25	C1	80/83 (96%)	64 (80%)	16 (20%)	1 4
26	A2	65/67 (97%)	52 (80%)	13 (20%)	1 4
26	C2	65/67 (97%)	50 (77%)	15 (23%)	1 3
27	A3	51/52 (98%)	39 (76%)	12 (24%)	1 3
27	C3	50/52 (96%)	41 (82%)	9 (18%)	2 6
28	A4	60/63 (95%)	44 (73%)	16 (27%)	0 1
28	C4	53/63 (84%)	40 (76%)	13 (24%)	1 2
29	A5	50/52 (96%)	43 (86%)	7 (14%)	3 12
29	C5	50/52 (96%)	42 (84%)	8 (16%)	2 9
30	A6	51/52 (98%)	36 (71%)	15 (29%)	0 1
30	C6	50/52 (96%)	37 (74%)	13 (26%)	0 2
31	A7	41/42 (98%)	34 (83%)	7 (17%)	2 7
31	C7	41/42 (98%)	32 (78%)	9 (22%)	1 3
32	A8	54/55 (98%)	46 (85%)	8 (15%)	3 10
32	C8	54/55 (98%)	44 (82%)	10 (18%)	1 6
33	A9	34/34 (100%)	31 (91%)	3 (9%)	9 29
33	C9	34/34 (100%)	30 (88%)	4 (12%)	5 17
35	BB	192/220 (87%)	153 (80%)	39 (20%)	1 4
35	DB	187/220 (85%)	150 (80%)	37 (20%)	1 5
36	BC	143/188 (76%)	129 (90%)	14 (10%)	7 25
36	DC	141/188 (75%)	115 (82%)	26 (18%)	1 6
37	BD	170/181 (94%)	138 (81%)	32 (19%)	1 5
37	DD	174/181 (96%)	136 (78%)	38 (22%)	1 3
38	BE	113/123 (92%)	87 (77%)	26 (23%)	1 3
38	DE	114/123 (93%)	87 (76%)	27 (24%)	1 3
39	BF	84/90 (93%)	65 (77%)	19 (23%)	1 3
39	DF	86/90 (96%)	73 (85%)	13 (15%)	3 10
40	BG	119/127 (94%)	99 (83%)	20 (17%)	2 8
40	DG	120/127 (94%)	100 (83%)	20 (17%)	2 8
41	BH	114/119 (96%)	89 (78%)	25 (22%)	1 3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
41	DH	114/119 (96%)	89 (78%)	25 (22%)	1 3
42	BI	91/99 (92%)	70 (77%)	21 (23%)	1 3
42	DI	89/99 (90%)	76 (85%)	13 (15%)	3 11
43	BJ	66/92 (72%)	59 (89%)	7 (11%)	6 22
43	DJ	69/92 (75%)	66 (96%)	3 (4%)	26 60
44	BK	83/99 (84%)	67 (81%)	16 (19%)	1 5
44	DK	83/99 (84%)	73 (88%)	10 (12%)	5 17
45	BL	97/109 (89%)	81 (84%)	16 (16%)	2 8
45	DL	97/109 (89%)	77 (79%)	20 (21%)	1 4
46	BM	91/101 (90%)	71 (78%)	20 (22%)	1 3
46	DM	92/101 (91%)	80 (87%)	12 (13%)	4 14
47	BN	49/50 (98%)	41 (84%)	8 (16%)	2 8
47	DN	49/50 (98%)	40 (82%)	9 (18%)	1 6
48	BO	78/80 (98%)	68 (87%)	10 (13%)	4 15
48	DO	78/80 (98%)	67 (86%)	11 (14%)	3 12
49	BP	69/74 (93%)	53 (77%)	16 (23%)	1 3
49	DP	68/74 (92%)	56 (82%)	12 (18%)	2 7
50	BQ	94/97 (97%)	75 (80%)	19 (20%)	1 4
50	DQ	94/97 (97%)	81 (86%)	13 (14%)	3 12
51	BR	59/77 (77%)	49 (83%)	10 (17%)	2 7
51	DR	59/77 (77%)	46 (78%)	13 (22%)	1 3
52	BS	70/80 (88%)	61 (87%)	9 (13%)	4 14
52	DS	67/80 (84%)	61 (91%)	6 (9%)	9 28
53	BT	70/82 (85%)	55 (79%)	15 (21%)	1 4
53	DT	71/82 (87%)	62 (87%)	9 (13%)	4 15
54	BU	18/22 (82%)	17 (94%)	1 (6%)	19 50
54	DU	18/22 (82%)	18 (100%)	0	100 100
57	BZ	609/636 (96%)	464 (76%)	145 (24%)	1 3
57	DZ	609/636 (96%)	457 (75%)	152 (25%)	0 2
All	All	10785/11672 (92%)	8674 (80%)	2111 (20%)	1 5

All (2111) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	AC	28	ARG
3	AC	29	LEU
3	AC	32	GLU
3	AC	48	LEU
3	AC	50	ILE
3	AC	54	ARG
3	AC	63	VAL
3	AC	184	GLU
3	AC	203	GLU
3	AC	206	LYS
3	AC	208	THR
4	AD	3	VAL
4	AD	12	SER
4	AD	13	ARG
4	AD	14	ARG
4	AD	25	THR
4	AD	38	LYS
4	AD	61	LEU
4	AD	78	LYS
4	AD	89	SER
4	AD	94	LEU
4	AD	99	ASP
4	AD	103	ARG
4	AD	105	ILE
4	AD	106	ILE
4	AD	111	LEU
4	AD	113	VAL
4	AD	115	GLN
4	AD	126	GLN
4	AD	138	VAL
4	AD	141	VAL
4	AD	142	VAL
4	AD	157	ARG
4	AD	173	VAL
4	AD	176	ARG
4	AD	193	VAL
4	AD	200	ASP
4	AD	202	LYS
4	AD	211	ARG
4	AD	218	ARG
4	AD	221	VAL
4	AD	229	VAL
4	AD	242	ARG

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Mol	Chain	Res	Type
4	AD	246	PRO
4	AD	253	GLN
4	AD	257	LEU
4	AD	259	THR
4	AD	265	PRO
4	AD	270	ILE
4	AD	273	ARG
4	AD	274	ARG
5	AE	1	MET
5	AE	7	VAL
5	AE	9	VAL
5	AE	12	THR
5	AE	21	VAL
5	AE	33	VAL
5	AE	34	VAL
5	AE	40	GLU
5	AE	41	LYS
5	AE	47	VAL
5	AE	49	LEU
5	AE	72	VAL
5	AE	75	VAL
5	AE	76	ARG
5	AE	77	ILE
5	AE	78	LEU
5	AE	81	ILE
5	AE	82	ARG
5	AE	93	VAL
5	AE	111	ARG
5	AE	116	VAL
5	AE	119	ARG
5	AE	128	SER
5	AE	144	ARG
5	AE	145	LYS
5	AE	154	LYS
5	AE	163	GLU
5	AE	167	VAL
5	AE	170	LEU
5	AE	175	VAL
5	AE	178	GLU
5	AE	181	LEU
5	AE	183	LEU
5	AE	184	VAL

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Mol	Chain	Res	Type
5	AE	185	LYS
5	AE	188	VAL
5	AE	197	ILE
6	AF	8	GLN
6	AF	12	LEU
6	AF	13	SER
6	AF	15	SER
6	AF	20	LEU
6	AF	24	LEU
6	AF	33	LEU
6	AF	38	ARG
6	AF	43	LYS
6	AF	50	SER
6	AF	53	THR
6	AF	57	VAL
6	AF	64	ILE
6	AF	72	ARG
6	AF	82	ILE
6	AF	88	VAL
6	AF	95	ARG
6	AF	106	ARG
6	AF	110	LEU
6	AF	112	MET
6	AF	116	ASP
6	AF	125	LEU
6	AF	127	GLU
6	AF	132	VAL
6	AF	133	ASN
6	AF	140	LEU
6	AF	157	VAL
6	AF	158	THR
6	AF	162	LEU
6	AF	165	ARG
6	AF	170	LEU
6	AF	183	VAL
6	AF	191	ARG
6	AF	192	LEU
6	AF	200	GLU
6	AF	201	VAL
7	AG	3	LEU
7	AG	5	VAL
7	AG	7	LEU

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Mol	Chain	Res	Type
7	AG	26	GLN
7	AG	31	VAL
7	AG	32	PRO
7	AG	37	VAL
7	AG	41	GLN
7	AG	43	LEU
7	AG	45	GLU
7	AG	71	THR
7	AG	77	ILE
7	AG	79	ASN
7	AG	82	LEU
7	AG	88	ILE
7	AG	103	LEU
7	AG	104	GLU
7	AG	116	ASP
7	AG	128	ARG
7	AG	130	ASN
7	AG	136	ARG
7	AG	137	GLU
7	AG	143	GLU
7	AG	153	ARG
7	AG	161	THR
7	AG	162	THR
7	AG	170	ARG
7	AG	174	GLU
7	AG	175	LEU
7	AG	181	ARG
8	AH	3	ARG
8	AH	6	ARG
8	AH	13	LYS
8	AH	15	VAL
8	AH	24	VAL
8	AH	27	LYS
8	AH	36	PRO
8	AH	44	VAL
8	AH	45	VAL
8	AH	56	SER
8	AH	60	ARG
8	AH	69	ARG
8	AH	71	LEU
8	AH	81	GLU
8	AH	84	SER

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Mol	Chain	Res	Type
8	AH	88	LEU
8	AH	89	ILE
8	AH	92	ILE
8	AH	95	ARG
8	AH	98	LEU
8	AH	105	LEU
8	AH	122	THR
8	AH	124	GLU
8	AH	136	ILE
8	AH	153	LYS
8	AH	159	GLU
8	AH	162	ILE
10	AL	2	LYS
10	AL	3	LYS
10	AL	4	VAL
10	AL	23	VAL
10	AL	34	ILE
10	AL	35	MET
10	AL	38	VAL
10	AL	45	THR
10	AL	50	ASP
10	AL	52	ILE
10	AL	58	THR
10	AL	59	ILE
10	AL	70	LYS
10	AL	85	GLU
10	AL	86	LYS
10	AL	93	ARG
10	AL	95	LYS
10	AL	96	VAL
10	AL	104	VAL
10	AL	117	THR
10	AL	118	THR
10	AL	136	VAL
11	AN	14	VAL
11	AN	28	THR
11	AN	33	LEU
11	AN	34	LEU
11	AN	38	HIS
11	AN	48	MET
11	AN	58	ASP
11	AN	59	LYS

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Mol	Chain	Res	Type
11	AN	61	ARG
11	AN	62	VAL
11	AN	65	LYS
11	AN	67	LEU
11	AN	71	ILE
11	AN	73	THR
11	AN	83	LYS
11	AN	87	LEU
11	AN	89	LYS
11	AN	97	ARG
11	AN	99	LEU
11	AN	120	LEU
11	AN	133	GLN
11	AN	137	LYS
11	AN	140	VAL
12	AO	8	LEU
12	AO	10	VAL
12	AO	17	ARG
12	AO	23	ARG
12	AO	24	VAL
12	AO	28	SER
12	AO	52	VAL
12	AO	61	VAL
12	AO	69	ILE
12	AO	86	ILE
12	AO	91	LEU
12	AO	94	ARG
12	AO	98	VAL
12	AO	105	GLU
12	AO	113	LYS
13	AP	2	LYS
13	AP	3	LEU
13	AP	7	ARG
13	AP	16	ARG
13	AP	21	ARG
13	AP	42	SER
13	AP	52	GLU
13	AP	55	ARG
13	AP	58	THR
13	AP	59	LEU
13	AP	64	LYS
13	AP	65	ARG

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Mol	Chain	Res	Type
13	AP	70	GLN
13	AP	76	LYS
13	AP	83	VAL
13	AP	95	VAL
13	AP	98	GLU
13	AP	101	VAL
13	AP	105	LEU
13	AP	106	LEU
13	AP	107	LYS
13	AP	112	LEU
13	AP	119	GLU
13	AP	125	VAL
13	AP	126	VAL
13	AP	139	LYS
13	AP	147	LEU
13	AP	148	LEU
13	AP	149	GLU
14	AQ	2	LEU
14	AQ	5	ARG
14	AQ	7	MET
14	AQ	8	LYS
14	AQ	10	ARG
14	AQ	35	VAL
14	AQ	42	ILE
14	AQ	45	GLN
14	AQ	55	VAL
14	AQ	56	ARG
14	AQ	66	ILE
14	AQ	75	THR
14	AQ	109	VAL
14	AQ	120	ILE
15	AR	15	SER
15	AR	18	LEU
15	AR	20	LEU
15	AR	27	SER
15	AR	28	LEU
15	AR	29	LEU
15	AR	33	ARG
15	AR	36	THR
15	AR	44	LEU
15	AR	54	LEU
15	AR	60	LEU

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Mol	Chain	Res	Type
15	AR	63	ARG
15	AR	64	ARG
15	AR	65	LEU
15	AR	67	LEU
15	AR	73	VAL
15	AR	75	LEU
15	AR	79	LEU
15	AR	91	GLN
15	AR	100	LEU
15	AR	111	LEU
15	AR	114	VAL
16	AS	3	ARG
16	AS	4	LEU
16	AS	11	LYS
16	AS	14	VAL
16	AS	20	ARG
16	AS	26	LEU
16	AS	36	TYR
16	AS	43	GLU
16	AS	44	LYS
16	AS	46	VAL
16	AS	48	LEU
16	AS	50	SER
16	AS	52	SER
16	AS	54	LEU
16	AS	69	VAL
16	AS	76	LYS
16	AS	78	LEU
16	AS	83	LYS
16	AS	106	ARG
16	AS	110	LEU
17	AT	6	LEU
17	AT	9	LEU
17	AT	11	GLU
17	AT	12	SER
17	AT	17	THR
17	AT	23	ARG
17	AT	28	VAL
17	AT	34	VAL
17	AT	35	LYS
17	AT	49	VAL
17	AT	59	THR

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Mol	Chain	Res	Type
17	AT	72	VAL
17	AT	78	LEU
17	AT	85	LYS
17	AT	89	VAL
17	AT	96	ARG
17	AT	109	GLU
17	AT	115	ARG
17	AT	118	ARG
17	AT	128	GLU
18	AU	5	LYS
18	AU	8	VAL
18	AU	15	LYS
18	AU	16	LYS
18	AU	19	LYS
18	AU	34	LYS
18	AU	36	ARG
18	AU	56	ASP
18	AU	59	ARG
18	AU	74	LEU
18	AU	83	LEU
18	AU	84	LYS
18	AU	92	ARG
18	AU	95	LEU
18	AU	101	ARG
18	AU	104	GLN
18	AU	108	GLU
18	AU	111	GLU
18	AU	112	ARG
19	AV	6	LYS
19	AV	10	LYS
19	AV	15	GLU
19	AV	18	LEU
19	AV	21	ARG
19	AV	28	GLU
19	AV	32	THR
19	AV	43	GLU
19	AV	46	VAL
19	AV	51	VAL
19	AV	52	VAL
19	AV	56	SER
19	AV	58	VAL
19	AV	61	VAL

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Mol	Chain	Res	Type
19	AV	62	LEU
19	AV	70	ILE
19	AV	72	VAL
19	AV	73	SER
19	AV	79	VAL
19	AV	95	LEU
19	AV	98	GLU
19	AV	100	ARG
20	AW	4	LYS
20	AW	11	ARG
20	AW	12	ILE
20	AW	14	PRO
20	AW	17	VAL
20	AW	19	LEU
20	AW	23	LEU
20	AW	30	GLU
20	AW	31	GLU
20	AW	35	ILE
20	AW	41	LYS
20	AW	51	LEU
20	AW	65	LEU
20	AW	67	ASP
20	AW	90	ARG
20	AW	107	LEU
21	AX	33	LYS
21	AX	35	THR
21	AX	40	LYS
21	AX	45	THR
21	AX	52	VAL
21	AX	57	LEU
21	AX	65	ARG
21	AX	66	LEU
21	AX	70	LEU
21	AX	72	LYS
21	AX	76	ARG
21	AX	81	VAL
22	AY	1	MET
22	AY	7	VAL
22	AY	8	LYS
22	AY	21	LYS
22	AY	23	ARG
22	AY	26	LYS

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Mol	Chain	Res	Type
22	AY	44	ILE
22	AY	47	LYS
22	AY	55	TYR
22	AY	72	VAL
22	AY	73	ARG
22	AY	81	LYS
22	AY	85	VAL
22	AY	90	LEU
22	AY	96	ILE
23	AZ	5	LEU
23	AZ	14	LYS
23	AZ	16	SER
23	AZ	18	LEU
23	AZ	19	ARG
23	AZ	28	MET
23	AZ	31	ARG
23	AZ	37	VAL
23	AZ	40	ASP
23	AZ	41	LEU
23	AZ	42	VAL
23	AZ	46	LYS
23	AZ	56	VAL
23	AZ	65	GLN
23	AZ	72	ARG
23	AZ	73	GLN
23	AZ	74	VAL
23	AZ	77	ASP
23	AZ	78	LYS
23	AZ	86	VAL
23	AZ	91	LEU
23	AZ	97	GLU
23	AZ	98	MET
23	AZ	121	HIS
23	AZ	124	ILE
23	AZ	126	VAL
23	AZ	129	SER
23	AZ	136	PHE
23	AZ	146	ILE
23	AZ	149	SER
23	AZ	150	LEU
23	AZ	156	LYS
23	AZ	157	LEU

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Mol	Chain	Res	Type
23	AZ	163	LEU
23	AZ	170	THR
23	AZ	171	ILE
23	AZ	180	VAL
23	AZ	182	LYS
23	AZ	183	LEU
23	AZ	185	GLU
24	A0	7	LEU
24	A0	20	ARG
24	A0	43	THR
24	A0	55	ARG
24	A0	63	VAL
24	A0	82	ARG
25	A1	6	GLU
25	A1	7	ILE
25	A1	21	ARG
25	A1	30	VAL
25	A1	32	LYS
25	A1	40	ARG
25	A1	51	VAL
25	A1	53	VAL
25	A1	59	THR
25	A1	75	GLU
25	A1	80	LEU
25	A1	92	LYS
25	A1	95	LEU
25	A1	97	LEU
26	A2	8	LYS
26	A2	18	PRO
26	A2	28	LYS
26	A2	32	LEU
26	A2	40	SER
26	A2	41	ILE
26	A2	50	ILE
26	A2	52	ASP
26	A2	53	LEU
26	A2	62	THR
26	A2	64	LEU
26	A2	67	LYS
26	A2	70	GLN
27	A3	3	ARG
27	A3	5	LYS

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Mol	Chain	Res	Type
27	A3	8	LEU
27	A3	18	ASP
27	A3	23	LEU
27	A3	29	ARG
27	A3	32	GLN
27	A3	34	GLU
27	A3	35	ARG
27	A3	43	ILE
27	A3	54	VAL
27	A3	58	VAL
28	A4	1	MET
28	A4	8	LYS
28	A4	22	ILE
28	A4	27	THR
28	A4	31	ILE
28	A4	34	GLU
28	A4	35	VAL
28	A4	46	GLN
28	A4	49	PHE
28	A4	50	VAL
28	A4	56	VAL
28	A4	57	GLU
28	A4	58	ARG
28	A4	61	ARG
28	A4	67	TYR
28	A4	68	ARG
29	A5	6	VAL
29	A5	11	THR
29	A5	16	ARG
29	A5	29	THR
29	A5	40	LYS
29	A5	55	ARG
29	A5	60	VAL
30	A6	3	SER
30	A6	4	GLU
30	A6	6	ARG
30	A6	7	ILE
30	A6	14	THR
30	A6	24	GLU
30	A6	25	LYS
30	A6	33	LYS
30	A6	35	GLU

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Mol	Chain	Res	Type
30	A6	44	ARG
30	A6	47	THR
30	A6	48	VAL
30	A6	50	ARG
30	A6	52	VAL
30	A6	54	ILE
31	A7	1	MET
31	A7	9	ARG
31	A7	14	LYS
31	A7	24	THR
31	A7	29	LYS
31	A7	43	THR
31	A7	46	VAL
32	A8	13	ARG
32	A8	14	VAL
32	A8	15	LYS
32	A8	30	ARG
32	A8	32	LEU
32	A8	41	ILE
32	A8	43	GLN
32	A8	52	LYS
33	A9	4	ARG
33	A9	17	ILE
33	A9	35	ARG
35	BB	8	LYS
35	BB	11	LEU
35	BB	15	VAL
35	BB	16	HIS
35	BB	17	PHE
35	BB	19	HIS
35	BB	20	GLU
35	BB	21	ARG
35	BB	37	ASN
35	BB	39	ILE
35	BB	41	ILE
35	BB	56	ARG
35	BB	64	ARG
35	BB	76	GLN
35	BB	78	GLN
35	BB	80	ILE
35	BB	83	MET
35	BB	98	LEU

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Mol	Chain	Res	Type
35	BB	101	MET
35	BB	107	THR
35	BB	110	GLN
35	BB	111	ARG
35	BB	112	VAL
35	BB	127	ILE
35	BB	142	LEU
35	BB	145	LEU
35	BB	160	ASP
35	BB	168	THR
35	BB	169	LYS
35	BB	172	ILE
35	BB	187	LEU
35	BB	195	ASP
35	BB	200	ILE
35	BB	208	ILE
35	BB	215	LEU
35	BB	217	ARG
35	BB	221	LEU
35	BB	223	ILE
35	BB	229	VAL
36	BC	3	ASN
36	BC	15	THR
36	BC	28	GLN
36	BC	45	LYS
36	BC	64	VAL
36	BC	67	THR
36	BC	115	LEU
36	BC	124	ILE
36	BC	151	VAL
36	BC	178	LEU
36	BC	188	LEU
36	BC	192	THR
36	BC	196	LEU
36	BC	207	VAL
37	BD	5	ILE
37	BD	13	ARG
37	BD	15	GLU
37	BD	19	LEU
37	BD	31	CYS
37	BD	46	LYS
37	BD	58	LEU

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Mol	Chain	Res	Type
37	BD	61	LYS
37	BD	70	ILE
37	BD	73	ARG
37	BD	101	LEU
37	BD	103	ASN
37	BD	107	ARG
37	BD	119	GLN
37	BD	122	ARG
37	BD	126	ILE
37	BD	127	THR
37	BD	134	ASP
37	BD	135	LEU
37	BD	139	ARG
37	BD	140	VAL
37	BD	142	PRO
37	BD	158	ILE
37	BD	168	ARG
37	BD	173	TRP
37	BD	182	LYS
37	BD	186	LEU
37	BD	193	ASP
37	BD	196	LEU
37	BD	200	GLU
37	BD	201	GLN
37	BD	203	VAL
38	BE	10	MET
38	BE	11	ILE
38	BE	18	ARG
38	BE	20	GLN
38	BE	25	ARG
38	BE	27	ARG
38	BE	31	LEU
38	BE	34	VAL
38	BE	38	GLN
38	BE	41	VAL
38	BE	47	LYS
38	BE	69	VAL
38	BE	76	ILE
38	BE	79	GLU
38	BE	91	LEU
38	BE	92	LYS
38	BE	109	ILE

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Mol	Chain	Res	Type
38	BE	121	LYS
38	BE	126	ARG
38	BE	131	ILE
38	BE	137	GLU
38	BE	140	ARG
38	BE	147	ASP
38	BE	148	VAL
38	BE	149	GLU
38	BE	150	ARG
39	BF	30	LEU
39	BF	37	VAL
39	BF	40	VAL
39	BF	43	LEU
39	BF	61	LEU
39	BF	64	GLN
39	BF	66	GLU
39	BF	69	GLU
39	BF	70	ASP
39	BF	71	ARG
39	BF	72	VAL
39	BF	73	ASN
39	BF	75	LEU
39	BF	82	ARG
39	BF	83	ASP
39	BF	86	ARG
39	BF	92	LYS
39	BF	94	GLN
39	BF	98	LEU
40	BG	8	GLU
40	BG	12	LEU
40	BG	15	ASP
40	BG	16	LEU
40	BG	29	LYS
40	BG	38	LEU
40	BG	41	ARG
40	BG	51	GLN
40	BG	61	VAL
40	BG	66	VAL
40	BG	73	MET
40	BG	75	VAL
40	BG	91	VAL
40	BG	98	SER

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Mol	Chain	Res	Type
40	BG	104	LEU
40	BG	111	ARG
40	BG	113	GLU
40	BG	114	ARG
40	BG	115	ARG
40	BG	141	VAL
41	BH	2	LEU
41	BH	3	THR
41	BH	10	LEU
41	BH	18	ARG
41	BH	21	LYS
41	BH	24	THR
41	BH	25	ASP
41	BH	26	VAL
41	BH	39	LEU
41	BH	51	VAL
41	BH	52	ASP
41	BH	53	VAL
41	BH	63	LEU
41	BH	75	ARG
41	BH	77	GLU
41	BH	78	GLN
41	BH	91	ARG
41	BH	98	LYS
41	BH	109	ILE
41	BH	112	LEU
41	BH	122	ARG
41	BH	123	GLU
41	BH	125	ARG
41	BH	133	LEU
41	BH	134	ILE
42	BI	3	GLN
42	BI	23	ASN
42	BI	25	LYS
42	BI	27	THR
42	BI	28	VAL
42	BI	29	ASN
42	BI	53	VAL
42	BI	64	THR
42	BI	65	VAL
42	BI	70	LYS
42	BI	74	ILE

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Mol	Chain	Res	Type
42	BI	75	ASP
42	BI	81	ILE
42	BI	92	TYR
42	BI	93	ARG
42	BI	102	LEU
42	BI	104	ARG
42	BI	108	VAL
42	BI	110	GLU
42	BI	113	LYS
42	BI	127	LYS
43	BJ	7	LYS
43	BJ	16	LEU
43	BJ	21	GLN
43	BJ	46	ARG
43	BJ	65	LEU
43	BJ	94	VAL
43	BJ	100	THR
44	BK	14	VAL
44	BK	16	SER
44	BK	18	ARG
44	BK	31	THR
44	BK	40	ILE
44	BK	48	ILE
44	BK	51	LYS
44	BK	83	ILE
44	BK	84	VAL
44	BK	87	THR
44	BK	96	ARG
44	BK	98	LEU
44	BK	104	GLN
44	BK	109	VAL
44	BK	112	THR
44	BK	123	LYS
45	BL	7	ILE
45	BL	18	VAL
45	BL	23	LYS
45	BL	27	LEU
45	BL	33	ARG
45	BL	36	VAL
45	BL	46	LYS
45	BL	53	ARG
45	BL	57	LYS

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Mol	Chain	Res	Type
45	BL	60	LEU
45	BL	67	THR
45	BL	79	GLU
45	BL	83	VAL
45	BL	97	ARG
45	BL	100	ILE
45	BL	116	SER
46	BM	3	ARG
46	BM	4	ILE
46	BM	15	VAL
46	BM	16	ASP
46	BM	17	VAL
46	BM	19	LEU
46	BM	32	GLU
46	BM	37	THR
46	BM	39	ILE
46	BM	50	GLU
46	BM	57	ARG
46	BM	63	THR
46	BM	66	LEU
46	BM	70	LEU
46	BM	82	MET
46	BM	84	ILE
46	BM	105	THR
46	BM	110	ARG
46	BM	116	THR
46	BM	117	VAL
47	BN	3	ARG
47	BN	7	ILE
47	BN	18	VAL
47	BN	23	ARG
47	BN	33	VAL
47	BN	41	ARG
47	BN	44	LEU
47	BN	57	ARG
48	BO	3	ILE
48	BO	5	LYS
48	BO	6	GLU
48	BO	14	GLU
48	BO	26	GLU
48	BO	35	ARG
48	BO	39	LEU

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Mol	Chain	Res	Type
48	BO	41	GLU
48	BO	42	HIS
48	BO	66	LEU
49	BP	2	VAL
49	BP	4	ILE
49	BP	5	ARG
49	BP	8	ARG
49	BP	11	SER
49	BP	16	HIS
49	BP	18	ARG
49	BP	19	ILE
49	BP	21	VAL
49	BP	29	ASP
49	BP	54	GLU
49	BP	60	LEU
49	BP	69	THR
49	BP	74	LEU
49	BP	76	GLN
49	BP	79	VAL
50	BQ	5	VAL
50	BQ	6	LEU
50	BQ	9	VAL
50	BQ	34	LYS
50	BQ	36	ILE
50	BQ	43	LEU
50	BQ	49	GLU
50	BQ	53	LEU
50	BQ	60	ILE
50	BQ	62	SER
50	BQ	72	ARG
50	BQ	73	VAL
50	BQ	74	LEU
50	BQ	77	VAL
50	BQ	78	GLU
50	BQ	86	GLU
50	BQ	90	ILE
50	BQ	91	ARG
50	BQ	92	ARG
51	BR	26	LEU
51	BR	29	PHE
51	BR	35	ARG
51	BR	37	VAL

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Mol	Chain	Res	Type
51	BR	51	LEU
51	BR	53	ARG
51	BR	55	ARG
51	BR	58	LEU
51	BR	76	LEU
51	BR	85	LEU
52	BS	4	SER
52	BS	9	VAL
52	BS	12	ASP
52	BS	28	LYS
52	BS	65	ASN
52	BS	66	MET
52	BS	67	VAL
52	BS	78	ARG
52	BS	83	HIS
53	BT	8	ARG
53	BT	13	LEU
53	BT	20	LEU
53	BT	30	LYS
53	BT	31	SER
53	BT	45	GLN
53	BT	58	LYS
53	BT	60	GLU
53	BT	61	SER
53	BT	62	LEU
53	BT	70	SER
53	BT	71	THR
53	BT	75	ASN
53	BT	84	LEU
53	BT	100	ILE
54	BU	9	ARG
57	BZ	-64	VAL
57	BZ	-58	LEU
57	BZ	-56	ASN
57	BZ	-52	VAL
57	BZ	-49	VAL
57	BZ	-45	LYS
57	BZ	-36	LEU
57	BZ	-32	LEU
57	BZ	-30	VAL
57	BZ	-29	LEU
57	BZ	-25	SER

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Mol	Chain	Res	Type
57	BZ	-22	LYS
57	BZ	-20	LEU
57	BZ	-10	ARG
57	BZ	-6	ARG
57	BZ	-3	GLU
57	BZ	1	LEU
57	BZ	2	LYS
57	BZ	8	ASP
57	BZ	12	LEU
57	BZ	13	ARG
57	BZ	21	ILE
57	BZ	30	GLU
57	BZ	33	LEU
57	BZ	39	ILE
57	BZ	70	THR
57	BZ	75	LYS
57	BZ	79	ILE
57	BZ	81	ILE
57	BZ	88	VAL
57	BZ	91	THR
57	BZ	92	ILE
57	BZ	97	SER
57	BZ	107	VAL
57	BZ	115	GLU
57	BZ	117	GLN
57	BZ	121	VAL
57	BZ	130	VAL
57	BZ	132	ARG
57	BZ	146	LEU
57	BZ	152	THR
57	BZ	154	GLN
57	BZ	156	ARG
57	BZ	157	LEU
57	BZ	160	ARG
57	BZ	163	VAL
57	BZ	166	LEU
57	BZ	171	GLU
57	BZ	172	ASP
57	BZ	180	VAL
57	BZ	182	ARG
57	BZ	186	TYR
57	BZ	196	ILE

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Mol	Chain	Res	Type
57	BZ	198	GLU
57	BZ	204	GLU
57	BZ	210	ARG
57	BZ	238	THR
57	BZ	240	GLU
57	BZ	247	ARG
57	BZ	252	ASP
57	BZ	255	ILE
57	BZ	256	THR
57	BZ	264	LEU
57	BZ	269	VAL
57	BZ	271	LEU
57	BZ	281	PRO
57	BZ	284	LEU
57	BZ	286	ILE
57	BZ	289	ILE
57	BZ	292	THR
57	BZ	297	GLU
57	BZ	298	VAL
57	BZ	301	ILE
57	BZ	312	LEU
57	BZ	315	LYS
57	BZ	324	ARG
57	BZ	328	ILE
57	BZ	329	ARG
57	BZ	335	LEU
57	BZ	352	VAL
57	BZ	354	ARG
57	BZ	355	LEU
57	BZ	356	LEU
57	BZ	361	ASN
57	BZ	363	ARG
57	BZ	367	GLU
57	BZ	368	GLU
57	BZ	369	LEU
57	BZ	377	VAL
57	BZ	385	THR
57	BZ	396	ARG
57	BZ	397	VAL
57	BZ	399	LEU
57	BZ	402	ILE
57	BZ	409	ILE

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Mol	Chain	Res	Type
57	BZ	418	LYS
57	BZ	420	ASP
57	BZ	421	GLN
57	BZ	422	GLU
57	BZ	424	LEU
57	BZ	425	SER
57	BZ	426	GLN
57	BZ	428	LEU
57	BZ	431	LEU
57	BZ	437	THR
57	BZ	438	PHE
57	BZ	442	THR
57	BZ	445	GLU
57	BZ	450	ILE
57	BZ	454	MET
57	BZ	457	LEU
57	BZ	461	ILE
57	BZ	464	ASP
57	BZ	468	ARG
57	BZ	473	ASP
57	BZ	481	VAL
57	BZ	484	ARG
57	BZ	488	THR
57	BZ	491	VAL
57	BZ	498	ILE
57	BZ	506	GLN
57	BZ	510	VAL
57	BZ	512	ILE
57	BZ	514	VAL
57	BZ	517	LEU
57	BZ	526	VAL
57	BZ	529	ILE
57	BZ	536	LYS
57	BZ	566	THR
57	BZ	575	VAL
57	BZ	587	SER
57	BZ	590	ILE
57	BZ	594	VAL
57	BZ	608	VAL
57	BZ	610	VAL
57	BZ	614	GLU
57	BZ	624	LEU

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Mol	Chain	Res	Type
57	BZ	631	ILE
57	BZ	634	MET
57	BZ	644	ARG
57	BZ	651	GLU
57	BZ	659	LEU
57	BZ	677	GLN
57	BZ	679	VAL
57	BZ	681	LYS
3	CC	28	ARG
3	CC	29	LEU
3	CC	32	GLU
3	CC	48	LEU
3	CC	50	ILE
3	CC	54	ARG
3	CC	63	VAL
3	CC	184	GLU
3	CC	203	GLU
3	CC	206	LYS
3	CC	208	THR
4	CD	3	VAL
4	CD	10	THR
4	CD	12	SER
4	CD	14	ARG
4	CD	27	THR
4	CD	39	LYS
4	CD	61	LEU
4	CD	89	SER
4	CD	94	LEU
4	CD	98	VAL
4	CD	101	GLU
4	CD	103	ARG
4	CD	105	ILE
4	CD	106	ILE
4	CD	111	LEU
4	CD	127	VAL
4	CD	134	ARG
4	CD	138	VAL
4	CD	140	THR
4	CD	141	VAL
4	CD	142	VAL
4	CD	145	VAL
4	CD	147	LEU

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Mol	Chain	Res	Type
4	CD	173	VAL
4	CD	193	VAL
4	CD	211	ARG
4	CD	217	ARG
4	CD	221	VAL
4	CD	229	VAL
4	CD	242	ARG
4	CD	253	GLN
4	CD	257	LEU
4	CD	259	THR
4	CD	260	ARG
4	CD	261	LYS
4	CD	262	ARG
4	CD	265	PRO
4	CD	274	ARG
4	CD	276	LYS
5	CE	2	LYS
5	CE	4	ILE
5	CE	9	VAL
5	CE	12	THR
5	CE	21	VAL
5	CE	24	THR
5	CE	27	LEU
5	CE	33	VAL
5	CE	34	VAL
5	CE	38	THR
5	CE	40	GLU
5	CE	52	LEU
5	CE	58	ARG
5	CE	63	LEU
5	CE	69	LYS
5	CE	72	VAL
5	CE	73	GLU
5	CE	74	PRO
5	CE	75	VAL
5	CE	82	ARG
5	CE	85	ASN
5	CE	92	THR
5	CE	93	VAL
5	CE	101	ARG
5	CE	116	VAL
5	CE	119	ARG

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Mol	Chain	Res	Type
5	CE	144	ARG
5	CE	145	LYS
5	CE	154	LYS
5	CE	165	VAL
5	CE	173	VAL
5	CE	179	GLU
5	CE	181	LEU
5	CE	182	LEU
5	CE	184	VAL
5	CE	188	VAL
5	CE	195	LEU
5	CE	196	VAL
5	CE	202	LYS
6	CF	19	GLU
6	CF	20	LEU
6	CF	23	ASP
6	CF	24	LEU
6	CF	27	GLU
6	CF	28	ILE
6	CF	33	LEU
6	CF	43	LYS
6	CF	48	THR
6	CF	50	SER
6	CF	53	THR
6	CF	57	VAL
6	CF	66	PRO
6	CF	70	THR
6	CF	74	ARG
6	CF	78	ILE
6	CF	82	ILE
6	CF	88	VAL
6	CF	101	LEU
6	CF	102	PRO
6	CF	104	LYS
6	CF	106	ARG
6	CF	119	ARG
6	CF	135	LYS
6	CF	137	LYS
6	CF	140	LEU
6	CF	157	VAL
6	CF	158	THR
6	CF	162	LEU

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Mol	Chain	Res	Type
6	CF	169	ASN
6	CF	170	LEU
6	CF	175	THR
6	CF	176	LEU
6	CF	181	LEU
6	CF	183	VAL
6	CF	192	LEU
6	CF	201	VAL
6	CF	203	GLN
6	CF	205	ARG
7	CG	3	LEU
7	CG	5	VAL
7	CG	7	LEU
7	CG	9	ARG
7	CG	16	ARG
7	CG	20	ILE
7	CG	32	PRO
7	CG	38	VAL
7	CG	43	LEU
7	CG	47	LYS
7	CG	60	LEU
7	CG	63	ILE
7	CG	70	VAL
7	CG	71	THR
7	CG	75	LYS
7	CG	90	LEU
7	CG	98	ARG
7	CG	108	ASN
7	CG	115	ARG
7	CG	126	ASP
7	CG	136	ARG
7	CG	138	GLN
7	CG	140	ILE
7	CG	143	GLU
7	CG	148	MET
7	CG	150	ASP
7	CG	159	VAL
7	CG	161	THR
7	CG	164	GLU
7	CG	165	THR
7	CG	170	ARG
7	CG	173	LEU

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Mol	Chain	Res	Type
7	CG	174	GLU
7	CG	175	LEU
8	CH	3	ARG
8	CH	4	ILE
8	CH	6	ARG
8	CH	7	LEU
8	CH	25	LYS
8	CH	33	LEU
8	CH	37	VAL
8	CH	47	GLU
8	CH	49	VAL
8	CH	52	VAL
8	CH	69	ARG
8	CH	71	LEU
8	CH	80	SER
8	CH	89	ILE
8	CH	105	LEU
8	CH	106	THR
8	CH	115	VAL
8	CH	121	ILE
8	CH	122	THR
8	CH	125	VAL
8	CH	133	VAL
8	CH	136	ILE
8	CH	139	GLN
8	CH	140	LYS
8	CH	171	LEU
10	CL	2	LYS
10	CL	4	VAL
10	CL	8	VAL
10	CL	11	GLN
10	CL	29	GLN
10	CL	38	VAL
10	CL	59	ILE
10	CL	75	SER
10	CL	77	LEU
10	CL	86	LYS
10	CL	93	ARG
10	CL	95	LYS
10	CL	96	VAL
10	CL	102	GLU
10	CL	105	LEU

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Mol	Chain	Res	Type
10	CL	112	MET
10	CL	117	THR
10	CL	118	THR
10	CL	134	MET
10	CL	136	VAL
11	CN	1	MET
11	CN	10	GLU
11	CN	16	ILE
11	CN	22	THR
11	CN	25	ARG
11	CN	26	LEU
11	CN	32	THR
11	CN	33	LEU
11	CN	34	LEU
11	CN	38	HIS
11	CN	46	VAL
11	CN	48	MET
11	CN	53	VAL
11	CN	58	ASP
11	CN	59	LYS
11	CN	61	ARG
11	CN	62	VAL
11	CN	63	THR
11	CN	67	LEU
11	CN	70	LYS
11	CN	76	SER
11	CN	87	LEU
11	CN	97	ARG
11	CN	99	LEU
11	CN	109	LYS
11	CN	120	LEU
11	CN	127	ASP
11	CN	133	GLN
11	CN	137	LYS
11	CN	138	LEU
12	CO	1	MET
12	CO	5	GLN
12	CO	18	LYS
12	CO	19	ILE
12	CO	22	ILE
12	CO	23	ARG
12	CO	24	VAL

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Mol	Chain	Res	Type
12	CO	35	VAL
12	CO	52	VAL
12	CO	63	VAL
12	CO	69	ILE
12	CO	70	LYS
12	CO	77	ILE
12	CO	78	ARG
12	CO	86	ILE
12	CO	91	LEU
12	CO	96	THR
12	CO	98	VAL
12	CO	113	LYS
12	CO	116	SER
13	CP	2	LYS
13	CP	3	LEU
13	CP	15	ARG
13	CP	19	VAL
13	CP	21	ARG
13	CP	42	SER
13	CP	45	LEU
13	CP	55	ARG
13	CP	57	THR
13	CP	59	LEU
13	CP	64	LYS
13	CP	65	ARG
13	CP	75	ILE
13	CP	83	VAL
13	CP	86	LYS
13	CP	92	GLU
13	CP	95	VAL
13	CP	98	GLU
13	CP	106	LEU
13	CP	112	LEU
13	CP	125	VAL
13	CP	126	VAL
13	CP	135	LEU
13	CP	147	LEU
13	CP	148	LEU
14	CQ	1	MET
14	CQ	3	MET
14	CQ	6	ARG
14	CQ	12	GLN

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Mol	Chain	Res	Type
14	CQ	16	ARG
14	CQ	21	THR
14	CQ	35	VAL
14	CQ	45	GLN
14	CQ	48	GLU
14	CQ	56	ARG
14	CQ	57	HIS
14	CQ	60	ARG
14	CQ	63	LYS
14	CQ	75	THR
14	CQ	94	VAL
14	CQ	109	VAL
14	CQ	110	THR
14	CQ	111	GLU
14	CQ	112	GLU
14	CQ	127	ILE
14	CQ	128	LYS
14	CQ	129	THR
14	CQ	133	ARG
15	CR	1	MET
15	CR	4	LEU
15	CR	9	LYS
15	CR	14	SER
15	CR	18	LEU
15	CR	22	ARG
15	CR	28	LEU
15	CR	29	LEU
15	CR	37	THR
15	CR	40	LYS
15	CR	43	GLU
15	CR	44	LEU
15	CR	51	LEU
15	CR	54	LEU
15	CR	60	LEU
15	CR	63	ARG
15	CR	65	LEU
15	CR	73	VAL
15	CR	75	LEU
15	CR	76	VAL
15	CR	79	LEU
15	CR	83	ILE
15	CR	86	ARG

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Mol	Chain	Res	Type
15	CR	90	ARG
15	CR	102	GLU
15	CR	111	LEU
15	CR	114	VAL
16	CS	3	ARG
16	CS	4	LEU
16	CS	19	LYS
16	CS	20	ARG
16	CS	26	LEU
16	CS	31	SER
16	CS	35	ILE
16	CS	36	TYR
16	CS	46	VAL
16	CS	49	VAL
16	CS	50	SER
16	CS	52	SER
16	CS	57	LYS
16	CS	62	LYS
16	CS	64	GLU
16	CS	67	ARG
16	CS	76	LYS
16	CS	110	LEU
17	CT	6	LEU
17	CT	7	ILE
17	CT	8	LYS
17	CT	13	ARG
17	CT	18	ASP
17	CT	19	LEU
17	CT	23	ARG
17	CT	39	ARG
17	CT	42	ILE
17	CT	49	VAL
17	CT	51	ARG
17	CT	53	ARG
17	CT	59	THR
17	CT	64	ARG
17	CT	65	LYS
17	CT	67	SER
17	CT	74	ARG
17	CT	78	LEU
17	CT	85	LYS
17	CT	87	ASP

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Mol	Chain	Res	Type
17	CT	89	VAL
17	CT	96	ARG
17	CT	98	LYS
17	CT	115	ARG
17	CT	118	ARG
17	CT	123	GLN
18	CU	5	LYS
18	CU	15	LYS
18	CU	31	SER
18	CU	36	ARG
18	CU	59	ARG
18	CU	60	LEU
18	CU	69	CYS
18	CU	74	LEU
18	CU	78	THR
18	CU	84	LYS
18	CU	85	LYS
18	CU	93	LYS
18	CU	95	LEU
18	CU	100	VAL
18	CU	104	GLN
18	CU	108	GLU
19	CV	13	ARG
19	CV	15	GLU
19	CV	18	LEU
19	CV	21	ARG
19	CV	24	LYS
19	CV	34	GLU
19	CV	38	LEU
19	CV	46	VAL
19	CV	51	VAL
19	CV	52	VAL
19	CV	61	VAL
19	CV	62	LEU
19	CV	69	LYS
19	CV	72	VAL
19	CV	73	SER
19	CV	95	LEU
19	CV	99	ILE
20	CW	6	ILE
20	CW	10	VAL
20	CW	11	ARG

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Mol	Chain	Res	Type
20	CW	19	LEU
20	CW	23	LEU
20	CW	24	ILE
20	CW	29	LEU
20	CW	60	ASN
20	CW	78	GLU
20	CW	100	THR
20	CW	107	LEU
21	CX	9	LEU
21	CX	35	THR
21	CX	45	THR
21	CX	52	VAL
21	CX	54	VAL
21	CX	57	LEU
21	CX	65	ARG
21	CX	76	ARG
21	CX	81	VAL
21	CX	82	GLN
21	CX	87	GLN
21	CX	92	LEU
22	CY	7	VAL
22	CY	8	LYS
22	CY	34	LYS
22	CY	38	ILE
22	CY	42	VAL
22	CY	43	ASN
22	CY	45	VAL
22	CY	49	VAL
22	CY	51	VAL
22	CY	64	GLU
22	CY	67	LEU
22	CY	72	VAL
22	CY	85	VAL
22	CY	88	LYS
22	CY	91	GLU
22	CY	95	LYS
23	CZ	6	LYS
23	CZ	16	SER
23	CZ	19	ARG
23	CZ	24	LEU
23	CZ	33	LEU
23	CZ	37	VAL

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Mol	Chain	Res	Type
23	CZ	39	VAL
23	CZ	41	LEU
23	CZ	42	VAL
23	CZ	61	LEU
23	CZ	72	ARG
23	CZ	76	LEU
23	CZ	78	LYS
23	CZ	80	ARG
23	CZ	86	VAL
23	CZ	87	ASP
23	CZ	91	LEU
23	CZ	98	MET
23	CZ	100	VAL
23	CZ	107	THR
23	CZ	111	VAL
23	CZ	124	ILE
23	CZ	126	VAL
23	CZ	136	PHE
23	CZ	137	ILE
23	CZ	149	SER
23	CZ	150	LEU
23	CZ	153	SER
23	CZ	156	LYS
23	CZ	161	VAL
23	CZ	170	THR
23	CZ	180	VAL
24	C0	3	HIS
24	C0	11	ARG
24	C0	20	ARG
24	C0	63	VAL
24	C0	74	ARG
24	C0	82	ARG
25	C1	4	VAL
25	C1	6	GLU
25	C1	18	ILE
25	C1	30	VAL
25	C1	37	ILE
25	C1	38	SER
25	C1	40	ARG
25	C1	41	ARG
25	C1	52	ARG
25	C1	59	THR

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Mol	Chain	Res	Type
25	C1	62	VAL
25	C1	69	LYS
25	C1	73	LEU
25	C1	78	LYS
25	C1	80	LEU
25	C1	95	LEU
26	C2	2	LYS
26	C2	9	GLN
26	C2	14	ARG
26	C2	28	LYS
26	C2	30	ARG
26	C2	32	LEU
26	C2	38	GLN
26	C2	41	ILE
26	C2	51	ARG
26	C2	52	ASP
26	C2	53	LEU
26	C2	59	ARG
26	C2	62	THR
26	C2	63	VAL
26	C2	70	GLN
27	C3	6	VAL
27	C3	8	LEU
27	C3	23	LEU
27	C3	24	LYS
27	C3	36	VAL
27	C3	50	VAL
27	C3	53	LEU
27	C3	54	VAL
27	C3	56	VAL
28	C4	5	ILE
28	C4	14	ILE
28	C4	33	VAL
28	C4	34	GLU
28	C4	35	VAL
28	C4	50	VAL
28	C4	56	VAL
28	C4	58	ARG
28	C4	59	PHE
28	C4	63	TYR
28	C4	67	TYR
28	C4	68	ARG

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Mol	Chain	Res	Type
28	C4	69	LYS
29	C5	6	VAL
29	C5	9	LYS
29	C5	12	SER
29	C5	16	ARG
29	C5	20	ARG
29	C5	40	LYS
29	C5	57	VAL
29	C5	60	VAL
30	C6	5	VAL
30	C6	7	ILE
30	C6	23	THR
30	C6	25	LYS
30	C6	32	ASN
30	C6	38	LYS
30	C6	40	CYS
30	C6	44	ARG
30	C6	48	VAL
30	C6	50	ARG
30	C6	51	GLU
30	C6	52	VAL
30	C6	53	LYS
31	C7	1	MET
31	C7	4	THR
31	C7	9	ARG
31	C7	14	LYS
31	C7	28	ARG
31	C7	29	LYS
31	C7	43	THR
31	C7	47	ARG
31	C7	48	LYS
32	C8	3	LYS
32	C8	4	MET
32	C8	6	THR
32	C8	14	VAL
32	C8	26	LYS
32	C8	29	LYS
32	C8	30	ARG
32	C8	32	LEU
32	C8	46	ARG
32	C8	59	LYS
33	C9	10	ILE

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Mol	Chain	Res	Type
33	C9	19	ARG
33	C9	26	ILE
33	C9	27	CYS
35	DB	7	VAL
35	DB	27	LYS
35	DB	44	LEU
35	DB	47	THR
35	DB	51	LEU
35	DB	53	ARG
35	DB	56	ARG
35	DB	58	ILE
35	DB	67	THR
35	DB	68	ILE
35	DB	80	ILE
35	DB	87	ARG
35	DB	93	VAL
35	DB	94	ASN
35	DB	95	GLN
35	DB	107	THR
35	DB	108	ILE
35	DB	113	HIS
35	DB	115	LEU
35	DB	117	GLU
35	DB	119	GLU
35	DB	127	ILE
35	DB	128	GLU
35	DB	154	LEU
35	DB	155	LEU
35	DB	157	ARG
35	DB	169	LYS
35	DB	170	GLU
35	DB	172	ILE
35	DB	179	LYS
35	DB	185	ILE
35	DB	187	LEU
35	DB	189	ASP
35	DB	210	SER
35	DB	217	ARG
35	DB	224	GLN
35	DB	229	VAL
36	DC	3	ASN
36	DC	5	ILE

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Mol	Chain	Res	Type
36	DC	6	HIS
36	DC	15	THR
36	DC	40	ARG
36	DC	43	LEU
36	DC	47	LEU
36	DC	52	LEU
36	DC	56	ASP
36	DC	57	ILE
36	DC	102	ASN
36	DC	104	GLN
36	DC	105	GLU
36	DC	108	ASN
36	DC	115	LEU
36	DC	120	VAL
36	DC	131	ARG
36	DC	134	ILE
36	DC	152	ILE
36	DC	178	LEU
36	DC	188	LEU
36	DC	191	THR
36	DC	195	VAL
36	DC	198	VAL
36	DC	202	ILE
36	DC	207	VAL
37	DD	5	ILE
37	DD	8	VAL
37	DD	12	CYS
37	DD	13	ARG
37	DD	19	LEU
37	DD	28	SER
37	DD	31	CYS
37	DD	34	GLU
37	DD	47	ARG
37	DD	57	ARG
37	DD	58	LEU
37	DD	61	LYS
37	DD	65	ARG
37	DD	73	ARG
37	DD	76	ARG
37	DD	83	SER
37	DD	85	LYS
37	DD	91	SER

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Mol	Chain	Res	Type
37	DD	103	ASN
37	DD	105	VAL
37	DD	115	ARG
37	DD	119	GLN
37	DD	120	LEU
37	DD	126	ILE
37	DD	127	THR
37	DD	132	ARG
37	DD	135	LEU
37	DD	140	VAL
37	DD	150	GLU
37	DD	153	ARG
37	DD	155	LEU
37	DD	162	LEU
37	DD	170	VAL
37	DD	187	ARG
37	DD	188	LEU
37	DD	194	LEU
37	DD	203	VAL
37	DD	208	SER
38	DE	11	ILE
38	DE	13	ILE
38	DE	25	ARG
38	DE	31	LEU
38	DE	41	VAL
38	DE	47	LYS
38	DE	51	VAL
38	DE	55	VAL
38	DE	57	LYS
38	DE	66	MET
38	DE	68	GLU
38	DE	69	VAL
38	DE	71	LEU
38	DE	73	ASN
38	DE	75	THR
38	DE	82	VAL
38	DE	87	SER
38	DE	89	ILE
38	DE	90	VAL
38	DE	91	LEU
38	DE	100	VAL
38	DE	107	ARG

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Mol	Chain	Res	Type
38	DE	116	THR
38	DE	120	THR
38	DE	135	THR
38	DE	137	GLU
38	DE	150	ARG
39	DF	9	VAL
39	DF	25	ILE
39	DF	27	GLN
39	DF	28	ARG
39	DF	48	LEU
39	DF	69	GLU
39	DF	72	VAL
39	DF	79	LEU
39	DF	82	ARG
39	DF	86	ARG
39	DF	87	ARG
39	DF	89	MET
39	DF	91	VAL
40	DG	4	ARG
40	DG	8	GLU
40	DG	10	ARG
40	DG	11	GLN
40	DG	16	LEU
40	DG	24	THR
40	DG	32	ARG
40	DG	47	CYS
40	DG	57	GLU
40	DG	66	VAL
40	DG	67	GLU
40	DG	73	MET
40	DG	76	ARG
40	DG	85	TYR
40	DG	87	VAL
40	DG	90	GLU
40	DG	104	LEU
40	DG	114	ARG
40	DG	140	ASP
40	DG	155	ARG
41	DH	2	LEU
41	DH	18	ARG
41	DH	21	LYS
41	DH	24	THR

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Mol	Chain	Res	Type
41	DH	25	ASP
41	DH	26	VAL
41	DH	34	GLU
41	DH	37	ARG
41	DH	51	VAL
41	DH	63	LEU
41	DH	68	ARG
41	DH	78	GLN
41	DH	80	ILE
41	DH	84	ARG
41	DH	85	ARG
41	DH	91	ARG
41	DH	95	VAL
41	DH	99	GLU
41	DH	104	ARG
41	DH	111	ILE
41	DH	112	LEU
41	DH	120	THR
41	DH	127	LEU
41	DH	133	LEU
41	DH	137	VAL
42	DI	3	GLN
42	DI	7	THR
42	DI	23	ASN
42	DI	27	THR
42	DI	41	VAL
42	DI	53	VAL
42	DI	81	ILE
42	DI	83	ARG
42	DI	92	TYR
42	DI	102	LEU
42	DI	103	THR
42	DI	104	ARG
42	DI	109	VAL
43	DJ	38	ILE
43	DJ	72	VAL
43	DJ	96	ILE
44	DK	14	VAL
44	DK	28	THR
44	DK	30	VAL
44	DK	33	THR
44	DK	48	ILE

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Mol	Chain	Res	Type
44	DK	54	ARG
44	DK	96	ARG
44	DK	98	LEU
44	DK	103	LEU
44	DK	114	VAL
45	DL	7	ILE
45	DL	8	ASN
45	DL	13	LYS
45	DL	24	VAL
45	DL	27	LEU
45	DL	33	ARG
45	DL	38	THR
45	DL	39	VAL
45	DL	47	LYS
45	DL	52	LEU
45	DL	55	VAL
45	DL	59	ARG
45	DL	66	VAL
45	DL	83	VAL
45	DL	100	ILE
45	DL	104	VAL
45	DL	106	ASP
45	DL	110	VAL
45	DL	114	LYS
45	DL	118	SER
46	DM	15	VAL
46	DM	29	ARG
46	DM	56	LEU
46	DM	66	LEU
46	DM	70	LEU
46	DM	73	GLU
46	DM	82	MET
46	DM	103	THR
46	DM	106	ASN
46	DM	110	ARG
46	DM	114	ARG
46	DM	115	LYS
47	DN	6	LEU
47	DN	12	ARG
47	DN	22	THR
47	DN	33	VAL
47	DN	35	ARG

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Mol	Chain	Res	Type
47	DN	41	ARG
47	DN	42	ILE
47	DN	44	LEU
47	DN	58	LYS
48	DO	3	ILE
48	DO	4	THR
48	DO	10	LYS
48	DO	22	THR
48	DO	26	GLU
48	DO	38	ARG
48	DO	39	LEU
48	DO	48	LYS
48	DO	58	MET
48	DO	66	LEU
48	DO	68	ARG
49	DP	2	VAL
49	DP	4	ILE
49	DP	5	ARG
49	DP	8	ARG
49	DP	11	SER
49	DP	20	VAL
49	DP	21	VAL
49	DP	25	ARG
49	DP	27	LYS
49	DP	60	LEU
49	DP	62	VAL
49	DP	69	THR
50	DQ	6	LEU
50	DQ	9	VAL
50	DQ	13	ASP
50	DQ	37	LYS
50	DQ	50	LYS
50	DQ	52	LYS
50	DQ	60	ILE
50	DQ	67	LYS
50	DQ	69	LYS
50	DQ	70	ARG
50	DQ	72	ARG
50	DQ	76	LEU
50	DQ	77	VAL
51	DR	25	THR
51	DR	26	LEU

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Mol	Chain	Res	Type
51	DR	31	LEU
51	DR	32	ARG
51	DR	37	VAL
51	DR	41	LYS
51	DR	47	THR
51	DR	53	ARG
51	DR	58	LEU
51	DR	69	THR
51	DR	76	LEU
51	DR	84	LYS
51	DR	85	LEU
52	DS	15	LEU
52	DS	16	LEU
52	DS	33	THR
52	DS	36	ARG
52	DS	38	SER
52	DS	43	GLU
53	DT	8	ARG
53	DT	23	ARG
53	DT	56	MET
53	DT	61	SER
53	DT	62	LEU
53	DT	72	LEU
53	DT	79	ARG
53	DT	80	ARG
53	DT	84	LEU
57	DZ	-65	LYS
57	DZ	-63	ILE
57	DZ	-58	LEU
57	DZ	-52	VAL
57	DZ	-44	PRO
57	DZ	-32	LEU
57	DZ	-30	VAL
57	DZ	-29	LEU
57	DZ	-23	LEU
57	DZ	-6	ARG
57	DZ	1	LEU
57	DZ	6	GLU
57	DZ	10	LYS
57	DZ	14	ASN
57	DZ	15	ILE
57	DZ	21	ILE

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Mol	Chain	Res	Type
57	DZ	22	ASP
57	DZ	28	THR
57	DZ	36	THR
57	DZ	75	LYS
57	DZ	76	ASP
57	DZ	79	ILE
57	DZ	81	ILE
57	DZ	87	HIS
57	DZ	88	VAL
57	DZ	92	ILE
57	DZ	100	VAL
57	DZ	101	LEU
57	DZ	105	ILE
57	DZ	110	SER
57	DZ	111	SER
57	DZ	112	GLN
57	DZ	114	VAL
57	DZ	117	GLN
57	DZ	118	SER
57	DZ	123	ARG
57	DZ	130	VAL
57	DZ	132	ARG
57	DZ	133	ILE
57	DZ	142	THR
57	DZ	146	LEU
57	DZ	157	LEU
57	DZ	165	GLN
57	DZ	170	ARG
57	DZ	181	LEU
57	DZ	182	ARG
57	DZ	184	LYS
57	DZ	187	THR
57	DZ	192	LEU
57	DZ	196	ILE
57	DZ	201	ILE
57	DZ	203	GLU
57	DZ	204	GLU
57	DZ	207	ASP
57	DZ	212	TYR
57	DZ	213	HIS
57	DZ	214	GLU
57	DZ	215	LYS

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Mol	Chain	Res	Type
57	DZ	216	LEU
57	DZ	217	VAL
57	DZ	219	VAL
57	DZ	222	ASP
57	DZ	225	GLU
57	DZ	227	ILE
57	DZ	228	MET
57	DZ	229	LEU
57	DZ	232	LEU
57	DZ	236	GLU
57	DZ	240	GLU
57	DZ	242	LEU
57	DZ	255	ILE
57	DZ	258	VAL
57	DZ	262	SER
57	DZ	277	VAL
57	DZ	284	LEU
57	DZ	285	ASP
57	DZ	292	THR
57	DZ	297	GLU
57	DZ	298	VAL
57	DZ	299	VAL
57	DZ	302	HIS
57	DZ	312	LEU
57	DZ	315	LYS
57	DZ	322	VAL
57	DZ	328	ILE
57	DZ	345	THR
57	DZ	352	VAL
57	DZ	355	LEU
57	DZ	356	LEU
57	DZ	357	ARG
57	DZ	361	ASN
57	DZ	363	ARG
57	DZ	364	GLU
57	DZ	368	GLU
57	DZ	369	LEU
57	DZ	377	VAL
57	DZ	380	LEU
57	DZ	382	GLU
57	DZ	385	THR
57	DZ	389	LEU

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Mol	Chain	Res	Type
57	DZ	392	GLU
57	DZ	399	LEU
57	DZ	402	ILE
57	DZ	403	GLU
57	DZ	408	VAL
57	DZ	411	VAL
57	DZ	417	THR
57	DZ	418	LYS
57	DZ	421	GLN
57	DZ	424	LEU
57	DZ	428	LEU
57	DZ	440	VAL
57	DZ	445	GLU
57	DZ	451	ILE
57	DZ	452	SER
57	DZ	457	LEU
57	DZ	461	ILE
57	DZ	463	VAL
57	DZ	466	LEU
57	DZ	468	ARG
57	DZ	480	GLN
57	DZ	485	GLU
57	DZ	487	ILE
57	DZ	494	GLU
57	DZ	506	GLN
57	DZ	512	ILE
57	DZ	517	LEU
57	DZ	529	ILE
57	DZ	542	VAL
57	DZ	561	VAL
57	DZ	571	SER
57	DZ	576	ASP
57	DZ	579	GLU
57	DZ	590	ILE
57	DZ	610	VAL
57	DZ	612	THR
57	DZ	614	GLU
57	DZ	615	GLU
57	DZ	621	ILE
57	DZ	623	ASP
57	DZ	625	ASN
57	DZ	634	MET

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Mol	Chain	Res	Type
57	DZ	639	ASN
57	DZ	643	ILE
57	DZ	649	LEU
57	DZ	651	GLU
57	DZ	657	THR
57	DZ	659	LEU
57	DZ	661	SER
57	DZ	669	PHE
57	DZ	670	VAL
57	DZ	674	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (207) such sidechains are listed below:

Mol	Chain	Res	Type
3	AC	18	ASN
3	AC	45	HIS
3	AC	67	HIS
3	AC	173	HIS
3	AC	189	ASN
3	AC	200	HIS
4	AD	164	GLN
4	AD	253	GLN
5	AE	54	GLN
5	AE	85	ASN
5	AE	121	ASN
6	AF	40	GLN
6	AF	69	HIS
6	AF	203	GLN
7	AG	26	GLN
10	AL	29	GLN
10	AL	47	ASN
10	AL	103	GLN
13	AP	38	GLN
15	AR	50	HIS
17	AT	43	GLN
17	AT	84	GLN
17	AT	90	GLN
17	AT	123	GLN
18	AU	81	HIS
18	AU	104	GLN
21	AX	31	HIS
21	AX	82	GLN

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Mol	Chain	Res	Type
22	AY	6	HIS
22	AY	43	ASN
22	AY	92	ASN
23	AZ	121	HIS
24	A0	35	ASN
26	A2	38	GLN
27	A3	32	GLN
28	A4	46	GLN
32	A8	35	GLN
32	A8	43	GLN
33	A9	36	GLN
35	BB	40	HIS
35	BB	76	GLN
35	BB	140	HIS
36	BC	28	GLN
36	BC	37	GLN
36	BC	69	HIS
36	BC	98	ASN
36	BC	136	GLN
36	BC	170	GLN
36	BC	181	ASN
37	BD	77	ASN
37	BD	119	GLN
37	BD	123	HIS
37	BD	125	HIS
37	BD	161	ASN
37	BD	199	ASN
38	BE	38	GLN
38	BE	56	GLN
38	BE	73	ASN
38	BE	141	GLN
39	BF	7	ASN
39	BF	73	ASN
40	BG	13	GLN
40	BG	28	ASN
40	BG	51	GLN
40	BG	86	GLN
40	BG	97	GLN
40	BG	110	GLN
40	BG	148	ASN
42	BI	3	GLN
42	BI	23	ASN

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Mol	Chain	Res	Type
42	BI	31	GLN
42	BI	73	GLN
42	BI	89	ASN
42	BI	124	GLN
43	BJ	21	GLN
43	BJ	56	HIS
43	BJ	62	HIS
44	BK	93	GLN
44	BK	99	GLN
45	BL	99	HIS
46	BM	77	ASN
47	BN	49	HIS
48	BO	13	GLN
48	BO	28	GLN
48	BO	37	ASN
48	BO	62	GLN
49	BP	76	GLN
52	BS	23	ASN
52	BS	47	HIS
52	BS	65	ASN
52	BS	69	HIS
52	BS	83	HIS
53	BT	26	ASN
53	BT	90	GLN
57	BZ	-50	GLN
57	BZ	-24	ASN
57	BZ	40	HIS
57	BZ	154	GLN
57	BZ	213	HIS
57	BZ	361	ASN
57	BZ	426	GLN
57	BZ	475	ASN
57	BZ	480	GLN
57	BZ	509	HIS
57	BZ	573	HIS
57	BZ	625	ASN
57	BZ	641	GLN
57	BZ	675	HIS
3	CC	18	ASN
3	CC	67	HIS
3	CC	189	ASN
3	CC	200	HIS

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Mol	Chain	Res	Type
4	CD	87	ASN
4	CD	126	GLN
4	CD	253	GLN
5	CE	143	ASN
5	CE	169	ASN
6	CF	29	ASN
6	CF	69	HIS
6	CF	75	HIS
6	CF	133	ASN
6	CF	169	ASN
6	CF	203	GLN
7	CG	40	ASN
7	CG	108	ASN
8	CH	158	HIS
10	CL	29	GLN
10	CL	30	HIS
10	CL	42	ASN
10	CL	103	GLN
11	CN	133	GLN
13	CP	38	GLN
14	CQ	57	HIS
14	CQ	89	ASN
15	CR	13	HIS
15	CR	50	HIS
15	CR	53	HIS
16	CS	68	GLN
17	CT	43	GLN
17	CT	123	GLN
18	CU	44	ASN
18	CU	72	HIS
19	CV	64	HIS
21	CX	31	HIS
21	CX	82	GLN
22	CY	43	ASN
23	CZ	34	ASN
23	CZ	55	HIS
23	CZ	65	GLN
24	C0	29	GLN
24	C0	50	ASN
26	C2	65	ASN
30	C6	32	ASN
33	C9	36	GLN

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Mol	Chain	Res	Type
35	DB	19	HIS
35	DB	45	GLN
35	DB	76	GLN
35	DB	94	ASN
35	DB	224	GLN
36	DC	104	GLN
36	DC	108	ASN
36	DC	110	ASN
36	DC	118	GLN
36	DC	123	GLN
37	DD	45	GLN
37	DD	77	ASN
37	DD	123	HIS
37	DD	125	HIS
37	DD	129	ASN
37	DD	160	GLN
38	DE	73	ASN
38	DE	130	ASN
39	DF	18	GLN
39	DF	100	ASN
40	DG	28	ASN
40	DG	51	GLN
40	DG	97	GLN
42	DI	31	GLN
43	DJ	13	HIS
43	DJ	68	HIS
44	DK	93	GLN
44	DK	117	ASN
45	DL	49	ASN
45	DL	75	HIS
45	DL	78	GLN
45	DL	99	HIS
46	DM	77	ASN
46	DM	106	ASN
48	DO	13	GLN
48	DO	28	GLN
48	DO	50	HIS
50	DQ	16	GLN
52	DS	83	HIS
53	DT	16	HIS
57	DZ	-50	GLN
57	DZ	77	HIS

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Mol	Chain	Res	Type
57	DZ	117	GLN
57	DZ	266	ASN
57	DZ	270	GLN
57	DZ	302	HIS
57	DZ	361	ASN
57	DZ	362	HIS
57	DZ	421	GLN
57	DZ	426	GLN
57	DZ	480	GLN
57	DZ	625	ASN
57	DZ	641	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	2845/2915 (97%)	540 (18%)	56 (1%)
1	CA	2839/2915 (97%)	582 (20%)	39 (1%)
2	AB	119/121 (98%)	23 (19%)	0
2	CB	119/121 (98%)	21 (17%)	0
34	BA	1491/1521 (98%)	311 (20%)	22 (1%)
34	DA	1498/1521 (98%)	304 (20%)	24 (1%)
55	BV	6/18 (33%)	1 (16%)	0
55	DV	5/18 (27%)	1 (20%)	0
56	BW	75/76 (98%)	15 (20%)	0
56	BY	72/76 (94%)	24 (33%)	2 (2%)
56	DW	75/76 (98%)	20 (26%)	2 (2%)
56	DY	71/76 (93%)	23 (32%)	1 (1%)
All	All	9215/9454 (97%)	1865 (20%)	146 (1%)

All (1865) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	U
1	AA	12	U
1	AA	13	A
1	AA	34	C
1	AA	45	C
1	AA	56	C
1	AA	62	U
1	AA	68	C
1	AA	70	A

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Mol	Chain	Res	Type
1	AA	73	A
1	AA	74	G
1	AA	77	A
1	AA	83	A
1	AA	95	G
1	AA	116	A
1	AA	117	A
1	AA	118	U
1	AA	119	G
1	AA	120	G
1	AA	123	G
1	AA	129	G
1	AA	131	C
1	AA	146	G
1	AA	149	A
1	AA	170	A
1	AA	171	A
1	AA	185	A
1	AA	186	A
1	AA	188	A
1	AA	189	U
1	AA	190	C
1	AA	194	G
1	AA	202	A
1	AA	203	G
1	AA	204	G
1	AA	205	A
1	AA	208	G
1	AA	210	A
1	AA	211	A
1	AA	214	A
1	AA	217	A
1	AA	218	A
1	AA	222	A
1	AA	237	G
1	AA	238	C
1	AA	239	G
1	AA	254	A
1	AA	265	U
1	AA	269	G
1	AA	271	U
1	AA	272	U

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Mol	Chain	Res	Type
1	AA	273	G
1	AA	274	U
1	AA	275	C
1	AA	276	C
1	AA	279	G
1	AA	289	G
1	AA	295	C
1	AA	296	U
1	AA	299	G
1	AA	303	C
1	AA	311	C
1	AA	334	A
1	AA	335	A
1	AA	348	A
1	AA	349	G
1	AA	353	G
1	AA	354	A
1	AA	358	C
1	AA	376	G
1	AA	387	G
1	AA	397	G
1	AA	407	U
1	AA	413	G
1	AA	423	G
1	AA	431	C
1	AA	434	G
1	AA	438	G
1	AA	439	A
1	AA	455	A
1	AA	464	G
1	AA	469	A
1	AA	470	C
1	AA	474	U
1	AA	477	C
1	AA	482	C
1	AA	483	A
1	AA	496	A
1	AA	501	U
1	AA	502	G
1	AA	507	G
1	AA	511	C
1	AA	512	C

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Mol	Chain	Res	Type
1	AA	519	G
1	AA	528	A
1	AA	529	U
1	AA	530	A
1	AA	534	C
1	AA	535	C
1	AA	543	G
1	AA	553	A
1	AA	554	A
1	AA	555	G
1	AA	556	C
1	AA	557	A
1	AA	558	G
1	AA	573	G
1	AA	574	G
1	AA	579	G
1	AA	586	G
1	AA	596	G
1	AA	597	C
1	AA	598	A
1	AA	609	A
1	AA	610	C
1	AA	626	A
1	AA	627	G
1	AA	630	U
1	AA	638	U
1	AA	639	G
1	AA	641	G
1	AA	659	C
1	AA	662	A
1	AA	671	A
1	AA	697	C
1	AA	698	G
1	AA	702	A
1	AA	703	G
1	AA	716	G
1	AA	724	A
1	AA	725	C
1	AA	732	A
1	AA	733	G
1	AA	777	C
1	AA	787	U

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Mol	Chain	Res	Type
1	AA	793	A
1	AA	794	U
1	AA	811	A
1	AA	812	G
1	AA	821	A
1	AA	822	G
1	AA	823	G
1	AA	824	A
1	AA	829	A
1	AA	831	A
1	AA	832	G
1	AA	837	C
1	AA	839	G
1	AA	852	G
1	AA	859	C
1	AA	874	U
1	AA	875	U
1	AA	906	G
1	AA	907	U
1	AA	913	A
1	AA	914	C
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	933	C
1	AA	934	A
1	AA	935	C
1	AA	936	C
1	AA	937	A
1	AA	938	G
1	AA	939	C
1	AA	940	C
1	AA	942	A
1	AA	943	C
1	AA	945	A
1	AA	953	U
1	AA	954	C
1	AA	956	A
1	AA	967	G
1	AA	968	U
1	AA	977	G
1	AA	986	A

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Mol	Chain	Res	Type
1	AA	990	A
1	AA	991	G
1	AA	992	G
1	AA	1004	A
1	AA	1006	C
1	AA	1019	G
1	AA	1020	C
1	AA	1029	A
1	AA	1036	A
1	AA	1040	C
1	AA	1042	A
1	AA	1048	G
1	AA	1051	C
1	AA	1058	U
1	AA	1059	C
1	AA	1068	G
1	AA	1072	U
1	AA	1073	A
1	AA	1079	U
1	AA	1084	C
1	AA	1087	C
1	AA	1093	G
1	AA	1097	G
1	AA	1099	C
1	AA	1100	A
1	AA	1105	G
1	AA	1107	U
1	AA	1108	G
1	AA	1112	U
1	AA	1116	A
1	AA	1119	A
1	AA	1120	G
1	AA	1121	C
1	AA	1122	C
1	AA	1128	U
1	AA	1129	U
1	AA	1132	A
1	AA	1134	A
1	AA	1135	G
1	AA	1141	A
1	AA	1147	U
1	AA	1155	C

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Mol	Chain	Res	Type
1	AA	1156	G
1	AA	1161	G
1	AA	1195	G
1	AA	1217	G
1	AA	1218	G
1	AA	1219	A
1	AA	1220	U
1	AA	1221	G
1	AA	1222	A
1	AA	1223	C
1	AA	1255	A
1	AA	1256	U
1	AA	1265	A
1	AA	1299	A
1	AA	1302	G
1	AA	1317	G
1	AA	1318	A
1	AA	1319	U
1	AA	1321	A
1	AA	1346	U
1	AA	1347	A
1	AA	1349	G
1	AA	1359	U
1	AA	1367	A
1	AA	1398	U
1	AA	1405	A
1	AA	1406	A
1	AA	1411	A
1	AA	1416	C
1	AA	1422	C
1	AA	1423	G
1	AA	1424	A
1	AA	1425	A
1	AA	1426	G
1	AA	1430	A
1	AA	1431	G
1	AA	1432	C
1	AA	1462	G
1	AA	1463	C
1	AA	1466	U
1	AA	1467	G
1	AA	1474	C

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Mol	Chain	Res	Type
1	AA	1477	U
1	AA	1491	A
1	AA	1493	C
1	AA	1496	A
1	AA	1497	G
1	AA	1503	G
1	AA	1506	G
1	AA	1514	C
1	AA	1518	A
1	AA	1529	G
1	AA	1539	C
1	AA	1554	A
1	AA	1555	C
1	AA	1556	A
1	AA	1569	U
1	AA	1578	C
1	AA	1589	A
1	AA	1590	C
1	AA	1605	A
1	AA	1607	G
1	AA	1613	A
1	AA	1616	A
1	AA	1625	U
1	AA	1628	G
1	AA	1629	C
1	AA	1631	C
1	AA	1632	A
1	AA	1652	G
1	AA	1653	C
1	AA	1654	A
1	AA	1655	A
1	AA	1656	A
1	AA	1663	C
1	AA	1671	C
1	AA	1688	A
1	AA	1694	G
1	AA	1695	C
1	AA	1700	G
1	AA	1701	A
1	AA	1721	G
1	AA	1743	G
1	AA	1746	G

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Mol	Chain	Res	Type
1	AA	1747	A
1	AA	1748	A
1	AA	1765	U
1	AA	1766	G
1	AA	1767	A
1	AA	1768	U
1	AA	1769	G
1	AA	1776	G
1	AA	1777	G
1	AA	1787	G
1	AA	1793	A
1	AA	1794	G
1	AA	1795	G
1	AA	1804	A
1	AA	1811	A
1	AA	1812	C
1	AA	1813	C
1	AA	1822	A
1	AA	1831	C
1	AA	1832	G
1	AA	1833	A
1	AA	1845	G
1	AA	1847	G
1	AA	1848	G
1	AA	1851	U
1	AA	1859	G
1	AA	1860	A
1	AA	1870	G
1	AA	1878	A
1	AA	1886	G
1	AA	1889	G
1	AA	1892	G
1	AA	1898	A
1	AA	1911	A
1	AA	1922	A
1	AA	1928	G
1	AA	1937	U
1	AA	1951	G
1	AA	1952	G
1	AA	1953	U
1	AA	1954	A
1	AA	1960	A

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Mol	Chain	Res	Type
1	AA	1966	U
1	AA	1977	U
1	AA	1985	U
1	AA	1986	G
1	AA	1987	C
1	AA	1989	C
1	AA	1992	A
1	AA	1993	A
1	AA	1994	A
1	AA	2010	C
1	AA	2014	G
1	AA	2015	U
1	AA	2018	C
1	AA	2019	G
1	AA	2045	G
1	AA	2052	A
1	AA	2053	A
1	AA	2055	A
1	AA	2061	C
1	AA	2064	A
1	AA	2065	C
1	AA	2071	G
1	AA	2077	C
1	AA	2078	G
1	AA	2082	A
1	AA	2083	G
1	AA	2084	A
1	AA	2091	G
1	AA	2102	G
1	AA	2104	A
1	AA	2122	G
1	AA	2133	C
1	AA	2134	G
1	AA	2135	U
1	AA	2139	A
1	AA	2141	A
1	AA	2149	G
1	AA	2151	C
1	AA	2154	U
1	AA	2155	G
1	AA	2156	A
1	AA	2157	A

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Mol	Chain	Res	Type
1	AA	2158	C
1	AA	2160	C
1	AA	2161	C
1	AA	2162	C
1	AA	2163	G
1	AA	2164	C
1	AA	2167	C
1	AA	2168	C
1	AA	2169	G
1	AA	2172	U
1	AA	2173	G
1	AA	2175	G
1	AA	2178	G
1	AA	2179	G
1	AA	2180	A
1	AA	2181	G
1	AA	2182	G
1	AA	2188	G
1	AA	2189	U
1	AA	2190	G
1	AA	2191	A
1	AA	2192	A
1	AA	2194	U
1	AA	2195	A
1	AA	2197	C
1	AA	2204	G
1	AA	2206	G
1	AA	2210	C
1	AA	2211	U
1	AA	2213	G
1	AA	2214	G
1	AA	2217	C
1	AA	2218	C
1	AA	2220	A
1	AA	2221	A
1	AA	2227	G
1	AA	2228	G
1	AA	2229	A
1	AA	2237	A
1	AA	2280	A
1	AA	2281	A
1	AA	2285	A

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Mol	Chain	Res	Type
1	AA	2287	C
1	AA	2288	G
1	AA	2291	G
1	AA	2295	C
1	AA	2298	A
1	AA	2299	A
1	AA	2301	G
1	AA	2307	C
1	AA	2317	A
1	AA	2320	G
1	AA	2324	U
1	AA	2327	G
1	AA	2332	A
1	AA	2337	G
1	AA	2346	G
1	AA	2347	A
1	AA	2348	A
1	AA	2352	G
1	AA	2355	C
1	AA	2356	U
1	AA	2358	A
1	AA	2359	C
1	AA	2361	G
1	AA	2362	C
1	AA	2369	U
1	AA	2376	C
1	AA	2377	G
1	AA	2395	G
1	AA	2397	C
1	AA	2418	U
1	AA	2419	G
1	AA	2426	G
1	AA	2434	A
1	AA	2435	U
1	AA	2437	A
1	AA	2440	G
1	AA	2441	G
1	AA	2442	A
1	AA	2445	A
1	AA	2446	A
1	AA	2451	A
1	AA	2452	C

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Mol	Chain	Res	Type
1	AA	2453	C
1	AA	2460	A
1	AA	2461	U
1	AA	2482	G
1	AA	2488	A
1	AA	2490	A
1	AA	2503	U
1	AA	2514	G
1	AA	2517	G
1	AA	2518	U
1	AA	2519	C
1	AA	2530	A
1	AA	2541	G
1	AA	2547	G
1	AA	2566	U
1	AA	2567	U
1	AA	2578	A
1	AA	2579	G
1	AA	2584	A
1	AA	2585	C
1	AA	2596	U
1	AA	2597	U
1	AA	2600	G
1	AA	2613	C
1	AA	2614	A
1	AA	2621	U
1	AA	2622	C
1	AA	2623	U
1	AA	2624	C
1	AA	2642	G
1	AA	2653	G
1	AA	2670	C
1	AA	2674	A
1	AA	2681	G
1	AA	2691	A
1	AA	2701	U
1	AA	2702	C
1	AA	2715	C
1	AA	2725	A
1	AA	2726	A
1	AA	2727	G
1	AA	2730	G

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Mol	Chain	Res	Type
1	AA	2738	A
1	AA	2739	U
1	AA	2746	A
1	AA	2757	G
1	AA	2770	A
1	AA	2771	A
1	AA	2778	A
1	AA	2779	G
1	AA	2782	C
1	AA	2791	A
1	AA	2803	A
1	AA	2804	C
1	AA	2807	C
1	AA	2813	G
1	AA	2814	C
1	AA	2818	U
1	AA	2830	A
1	AA	2831	A
1	AA	2843	G
1	AA	2845	A
1	AA	2876	U
1	AA	2882	G
1	AA	2883	A
1	AA	2892	A
1	AA	2902	G
1	AA	2903	G
1	AA	2906	U
2	AB	2	C
2	AB	5	C
2	AB	10	C
2	AB	12	C
2	AB	13	A
2	AB	15	A
2	AB	47	C
2	AB	50	G
2	AB	53	A
2	AB	54	G
2	AB	56	G
2	AB	57	A
2	AB	58	A
2	AB	59	A
2	AB	67	G

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Mol	Chain	Res	Type
2	AB	73	A
2	AB	76	G
2	AB	89	G
2	AB	90	A
2	AB	95	C
2	AB	110	G
2	AB	111	G
2	AB	113	G
34	BA	5	U
34	BA	7	G
34	BA	9	G
34	BA	10	A
34	BA	11	G
34	BA	32	A
34	BA	39	G
34	BA	43	C
34	BA	44	G
34	BA	47	C
34	BA	48	C
34	BA	50	A
34	BA	51	A
34	BA	61	G
34	BA	71	C
34	BA	77	G
34	BA	78	G
34	BA	79	G
34	BA	97	G
34	BA	101	A
34	BA	105	G
34	BA	115	G
34	BA	116	A
34	BA	121	C
34	BA	127	G
34	BA	131	C
34	BA	137	C
34	BA	163	C
34	BA	174	C
34	BA	182	U
34	BA	189(F)	U
34	BA	189(G)	G
34	BA	189(J)	G
34	BA	194	C

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Mol	Chain	Res	Type
34	BA	195	A
34	BA	197	A
34	BA	199	G
34	BA	202	U
34	BA	204	U
34	BA	216	G
34	BA	220	G
34	BA	231	G
34	BA	236	G
34	BA	240	C
34	BA	243	A
34	BA	244	U
34	BA	247	G
34	BA	251	G
34	BA	259	G
34	BA	261	U
34	BA	266	G
34	BA	267	C
34	BA	270	A
34	BA	289	G
34	BA	298	A
34	BA	318	G
34	BA	321	A
34	BA	328	C
34	BA	329	A
34	BA	331	G
34	BA	332	G
34	BA	347	G
34	BA	348	G
34	BA	350	G
34	BA	351	G
34	BA	352	C
34	BA	353	A
34	BA	354	G
34	BA	355	C
34	BA	359	U
34	BA	367	U
34	BA	372	C
34	BA	384	G
34	BA	397	A
34	BA	398	C
34	BA	411	A

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Mol	Chain	Res	Type
34	BA	412	A
34	BA	413	G
34	BA	422	C
34	BA	424	G
34	BA	429	U
34	BA	432	A
34	BA	439	A
34	BA	442	C
34	BA	443	C
34	BA	446	G
34	BA	452	A
34	BA	470	C
34	BA	484	G
34	BA	485	G
34	BA	496	A
34	BA	498	U
34	BA	499	A
34	BA	504	C
34	BA	505	G
34	BA	509	A
34	BA	510	A
34	BA	511	C
34	BA	514	C
34	BA	516	U
34	BA	518	C
34	BA	521	G
34	BA	527	G
34	BA	531	U
34	BA	532	A
34	BA	533	A
34	BA	536	C
34	BA	547	A
34	BA	558	G
34	BA	559	A
34	BA	560	U
34	BA	561	U
34	BA	564	C
34	BA	570	G
34	BA	572	A
34	BA	573	A
34	BA	576	G
34	BA	581	G

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Mol	Chain	Res	Type
34	BA	618	C
34	BA	630	G
34	BA	631	G
34	BA	633	G
34	BA	649	G
34	BA	653	A
34	BA	665	A
34	BA	687	A
34	BA	688	G
34	BA	693	G
34	BA	694	A
34	BA	697	U
34	BA	705	U
34	BA	714	G
34	BA	717	C
34	BA	723	U
34	BA	724	G
34	BA	728	A
34	BA	731	G
34	BA	734	G
34	BA	738	C
34	BA	747	C
34	BA	749	C
34	BA	752	G
34	BA	755	G
34	BA	774	G
34	BA	777	A
34	BA	792	A
34	BA	793	U
34	BA	794	A
34	BA	815	A
34	BA	816	A
34	BA	817	C
34	BA	828	A
34	BA	829	G
34	BA	840	C
34	BA	841	U
34	BA	848	C
34	BA	851	G
34	BA	859	A
34	BA	870	U
34	BA	872	A

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Mol	Chain	Res	Type
34	BA	874	G
34	BA	902	G
34	BA	905	U
34	BA	910	C
34	BA	913	A
34	BA	914	A
34	BA	922	G
34	BA	923	A
34	BA	926	G
34	BA	927	G
34	BA	934	C
34	BA	936	C
34	BA	941	G
34	BA	942	G
34	BA	960	U
34	BA	961	U
34	BA	964	A
34	BA	968	A
34	BA	969	A
34	BA	971	G
34	BA	973	G
34	BA	974	A
34	BA	975	A
34	BA	976	G
34	BA	977	A
34	BA	992	U
34	BA	993	G
34	BA	1003	G
34	BA	1004	A
34	BA	1005	A
34	BA	1009	G
34	BA	1016	A
34	BA	1019	C
34	BA	1021	G
34	BA	1022	G
34	BA	1023	G
34	BA	1025	U
34	BA	1026	G
34	BA	1028	C
34	BA	1029	C
34	BA	1030	C
34	BA	1030(A)	G

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Mol	Chain	Res	Type
34	BA	1030(C)	G
34	BA	1031	G
34	BA	1033	G
34	BA	1042	G
34	BA	1045	C
34	BA	1053	G
34	BA	1054	C
34	BA	1055	A
34	BA	1056	U
34	BA	1063	C
34	BA	1065	U
34	BA	1066	C
34	BA	1067	A
34	BA	1068	G
34	BA	1070	U
34	BA	1081	G
34	BA	1086	U
34	BA	1094	G
34	BA	1095	U
34	BA	1101	A
34	BA	1108	G
34	BA	1123	A
34	BA	1124	G
34	BA	1125	U
34	BA	1126	U
34	BA	1130	A
34	BA	1136	U
34	BA	1137	C
34	BA	1139	G
34	BA	1140	C
34	BA	1141	C
34	BA	1146	A
34	BA	1150	U
34	BA	1152	A
34	BA	1157	A
34	BA	1159	U
34	BA	1165	C
34	BA	1166	G
34	BA	1182	G
34	BA	1183	A
34	BA	1184	G
34	BA	1189	C

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Mol	Chain	Res	Type
34	BA	1190	G
34	BA	1196	U
34	BA	1197	G
34	BA	1200	C
34	BA	1201	A
34	BA	1202	G
34	BA	1213	A
34	BA	1214	C
34	BA	1227	A
34	BA	1228	C
34	BA	1236	A
34	BA	1238	A
34	BA	1240	U
34	BA	1241	G
34	BA	1253	G
34	BA	1256	A
34	BA	1257	U
34	BA	1258	G
34	BA	1260	C
34	BA	1278	U
34	BA	1279	A
34	BA	1280	A
34	BA	1286	A
34	BA	1287	A
34	BA	1299	A
34	BA	1300	G
34	BA	1305	G
34	BA	1320	C
34	BA	1322	C
34	BA	1338	G
34	BA	1340	A
34	BA	1346	A
34	BA	1347	G
34	BA	1353	G
34	BA	1359	C
34	BA	1360	A
34	BA	1363	C
34	BA	1363(A)	A
34	BA	1379	G
34	BA	1389	C
34	BA	1397	C
34	BA	1398	A

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Mol	Chain	Res	Type
34	BA	1400	C
34	BA	1402	C
34	BA	1419	G
34	BA	1442	G
34	BA	1442(A)	G
34	BA	1446	U
34	BA	1447	A
34	BA	1452	C
34	BA	1460	A
34	BA	1468	A
34	BA	1471	G
34	BA	1479	C
34	BA	1487	G
34	BA	1491	G
34	BA	1496	C
34	BA	1497	G
34	BA	1502	A
34	BA	1503	A
34	BA	1504	G
34	BA	1506	U
34	BA	1507	A
34	BA	1517	G
34	BA	1529	G
34	BA	1530	G
34	BA	1531	A
55	BV	13	A
56	BW	8	4SU
56	BW	13	C
56	BW	14	A
56	BW	17	C
56	BW	18	G
56	BW	20	U
56	BW	22	G
56	BW	31	A
56	BW	42	C
56	BW	43	C
56	BW	45	U
56	BW	47	U
56	BW	48	C
56	BW	72	C
56	BW	76	A
56	BY	5	G

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Mol	Chain	Res	Type
56	BY	6	G
56	BY	9	A
56	BY	13	C
56	BY	14	A
56	BY	20	U
56	BY	21	A
56	BY	23	A
56	BY	26	A
56	BY	34	G
56	BY	36	A
56	BY	37	MIA
56	BY	41	C
56	BY	42	C
56	BY	44	G
56	BY	45	U
56	BY	46	7MG
56	BY	47	U
56	BY	48	C
56	BY	49	C
56	BY	57	G
56	BY	59	U
56	BY	60	U
56	BY	68	C
1	CA	10	G
1	CA	12	U
1	CA	14	A
1	CA	15	G
1	CA	34	C
1	CA	35	G
1	CA	36	G
1	CA	45	C
1	CA	51	G
1	CA	54	G
1	CA	55	G
1	CA	71	A
1	CA	74	A
1	CA	75	G
1	CA	78	A
1	CA	84	A
1	CA	90	U
1	CA	95	G
1	CA	100	G

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Mol	Chain	Res	Type
1	CA	102	G
1	CA	118	A
1	CA	119	A
1	CA	120	U
1	CA	133	C
1	CA	139(A)	G
1	CA	141	A
1	CA	149	A
1	CA	154(A)	C
1	CA	157	U
1	CA	181	A
1	CA	196	A
1	CA	197	A
1	CA	199	A
1	CA	205	G
1	CA	214	G
1	CA	215	G
1	CA	216	A
1	CA	221	A
1	CA	222	A
1	CA	225	A
1	CA	226	G
1	CA	228	A
1	CA	229	A
1	CA	232	G
1	CA	248	G
1	CA	271(A)	A
1	CA	271(I)	G
1	CA	271(K)	U
1	CA	271(L)	U
1	CA	271(M)	G
1	CA	271(P)	C
1	CA	272(A)	U
1	CA	272(B)	G
1	CA	272(J)	C
1	CA	277	C
1	CA	278	A
1	CA	283	A
1	CA	286	C
1	CA	289	A
1	CA	298	G
1	CA	299	A

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Mol	Chain	Res	Type
1	CA	310	A
1	CA	311	A
1	CA	317	G
1	CA	324	A
1	CA	327	G
1	CA	329	G
1	CA	330	A
1	CA	333	G
1	CA	338	G
1	CA	339	U
1	CA	352	G
1	CA	362	U
1	CA	363	G
1	CA	363(C)	G
1	CA	363(E)	U
1	CA	386	G
1	CA	407	G
1	CA	411	G
1	CA	412	A
1	CA	416	C
1	CA	422	A
1	CA	428	A
1	CA	443	A
1	CA	444	C
1	CA	451	C
1	CA	455	C
1	CA	456	C
1	CA	457	A
1	CA	470	A
1	CA	471	A
1	CA	475	U
1	CA	477	A
1	CA	481	G
1	CA	503	A
1	CA	504	U
1	CA	505	A
1	CA	507	A
1	CA	508	G
1	CA	509	C
1	CA	521	G
1	CA	528	A
1	CA	529	A

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Mol	Chain	Res	Type
1	CA	530	G
1	CA	531	C
1	CA	532	A
1	CA	533	G
1	CA	545	G
1	CA	557	U
1	CA	563	G
1	CA	573	G
1	CA	575	A
1	CA	586	A
1	CA	588	U
1	CA	592	G
1	CA	603	A
1	CA	604	G
1	CA	606	U
1	CA	607	U
1	CA	614(A)	U
1	CA	614(B)	G
1	CA	614(C)	A
1	CA	615	G
1	CA	620	G
1	CA	623	G
1	CA	627	A
1	CA	631	A
1	CA	637	A
1	CA	645	C
1	CA	646	A
1	CA	652(B)	A
1	CA	652(C)	G
1	CA	652(U)	G
1	CA	653	A
1	CA	669	G
1	CA	686	G
1	CA	730	C
1	CA	732	C
1	CA	743	G
1	CA	762	U
1	CA	764	A
1	CA	765	G
1	CA	774	A
1	CA	775	G
1	CA	776	G

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Mol	Chain	Res	Type
1	CA	777	A
1	CA	782	A
1	CA	784	A
1	CA	785	G
1	CA	792	G
1	CA	794	G
1	CA	802	A
1	CA	805	G
1	CA	812	C
1	CA	819	A
1	CA	822	U
1	CA	827	U
1	CA	828	U
1	CA	831	G
1	CA	847	U
1	CA	857	C
1	CA	859	G
1	CA	866	A
1	CA	879	G
1	CA	880	G
1	CA	884	C
1	CA	886	C
1	CA	887	A
1	CA	888	C
1	CA	889	C
1	CA	890	A
1	CA	893	C
1	CA	896	A
1	CA	897	C
1	CA	898	C
1	CA	900	A
1	CA	901	A
1	CA	907	U
1	CA	910	A
1	CA	914	C
1	CA	915	C
1	CA	917	A
1	CA	926	A
1	CA	932	G
1	CA	938	G
1	CA	941	A
1	CA	944	G

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Mol	Chain	Res	Type
1	CA	945	A
1	CA	946	G
1	CA	958	U
1	CA	959	A
1	CA	961	C
1	CA	974	G
1	CA	975	C
1	CA	983	A
1	CA	996	A
1	CA	1005	C
1	CA	1009	A
1	CA	1012	U
1	CA	1013	C
1	CA	1018	C
1	CA	1020	A
1	CA	1022	G
1	CA	1025	G
1	CA	1027	A
1	CA	1033	U
1	CA	1038	C
1	CA	1039	G
1	CA	1041	C
1	CA	1042	G
1	CA	1046	A
1	CA	1047	G
1	CA	1048	A
1	CA	1049	C
1	CA	1050	A
1	CA	1055	G
1	CA	1057	A
1	CA	1058	G
1	CA	1060	U
1	CA	1061	U
1	CA	1062	G
1	CA	1070	A
1	CA	1073	A
1	CA	1075	C
1	CA	1076	C
1	CA	1079	C
1	CA	1083	U
1	CA	1088	A
1	CA	1090	U

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Mol	Chain	Res	Type
1	CA	1101	U
1	CA	1106	G
1	CA	1110	G
1	CA	1111	A
1	CA	1112	G
1	CA	1114	G
1	CA	1116	C
1	CA	1144	G
1	CA	1149	G
1	CA	1171	G
1	CA	1180	C
1	CA	1188	U
1	CA	1205	U
1	CA	1220	A
1	CA	1221	C
1	CA	1223	G
1	CA	1229	G
1	CA	1236	G
1	CA	1241	A
1	CA	1248	G
1	CA	1250	G
1	CA	1253	A
1	CA	1256	G
1	CA	1268	A
1	CA	1269	A
1	CA	1271	G
1	CA	1272	A
1	CA	1287	A
1	CA	1300	U
1	CA	1301	A
1	CA	1305	C
1	CA	1314	C
1	CA	1321	A
1	CA	1342	A
1	CA	1348	G
1	CA	1351	C
1	CA	1359	A
1	CA	1360	A
1	CA	1365	A
1	CA	1368	G
1	CA	1370	C
1	CA	1384	A

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Mol	Chain	Res	Type
1	CA	1385	G
1	CA	1388	G
1	CA	1390	U
1	CA	1416	G
1	CA	1417	C
1	CA	1419	A
1	CA	1420	U
1	CA	1421	G
1	CA	1422	G
1	CA	1426	G
1	CA	1427	A
1	CA	1428	C
1	CA	1437	C
1	CA	1445	A
1	CA	1449	A
1	CA	1450	G
1	CA	1452	A
1	CA	1455	G
1	CA	1459	G
1	CA	1460	A
1	CA	1461	G
1	CA	1467	C
1	CA	1471	A
1	CA	1473	G
1	CA	1482	G
1	CA	1489	U
1	CA	1490	A
1	CA	1493	C
1	CA	1496	A
1	CA	1497	U
1	CA	1509	C
1	CA	1509(A)	A
1	CA	1525	G
1	CA	1531	C
1	CA	1542	A
1	CA	1543	C
1	CA	1544	A
1	CA	1547	C
1	CA	1558	A
1	CA	1559	G
1	CA	1560	G
1	CA	1566	A

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Mol	Chain	Res	Type
1	CA	1569	A
1	CA	1578	U
1	CA	1580	A
1	CA	1583	A
1	CA	1584	C
1	CA	1586	A
1	CA	1608	A
1	CA	1609	A
1	CA	1612	C
1	CA	1640	C
1	CA	1647	G
1	CA	1648	C
1	CA	1653	G
1	CA	1654	A
1	CA	1670	C
1	CA	1674	G
1	CA	1675	C
1	CA	1682	G
1	CA	1696	G
1	CA	1700	A
1	CA	1701	A
1	CA	1703	G
1	CA	1722	A
1	CA	1742	G
1	CA	1746	G
1	CA	1756	G
1	CA	1758	G
1	CA	1762	A
1	CA	1763	G
1	CA	1764	G
1	CA	1769	G
1	CA	1773	A
1	CA	1774	C
1	CA	1780	A
1	CA	1782	C
1	CA	1791	A
1	CA	1800	C
1	CA	1801	G
1	CA	1816	G
1	CA	1829	A
1	CA	1835	G
1	CA	1847	A

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Mol	Chain	Res	Type
1	CA	1848	A
1	CA	1859	A
1	CA	1877	A
1	CA	1878	G
1	CA	1886	C
1	CA	1900	A
1	CA	1906	G
1	CA	1913	A
1	CA	1914	C
1	CA	1929	G
1	CA	1930	G
1	CA	1934	C
1	CA	1937	A
1	CA	1938	A
1	CA	1955	U
1	CA	1962	C
1	CA	1963	U
1	CA	1967	C
1	CA	1970	A
1	CA	1971	A
1	CA	1972	A
1	CA	1984	G
1	CA	1992	G
1	CA	1993	U
1	CA	1994	C
1	CA	1997	G
1	CA	2020	A
1	CA	2023	G
1	CA	2027	G
1	CA	2030	A
1	CA	2031	A
1	CA	2032	G
1	CA	2033	A
1	CA	2043	C
1	CA	2046	G
1	CA	2052	G
1	CA	2055	C
1	CA	2056	G
1	CA	2060	A
1	CA	2061	G
1	CA	2062	A
1	CA	2069	G

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Mol	Chain	Res	Type
1	CA	2082	A
1	CA	2099	U
1	CA	2102	U
1	CA	2105	C
1	CA	2106	G
1	CA	2110	G
1	CA	2111	C
1	CA	2113	U
1	CA	2115	G
1	CA	2116	G
1	CA	2117	A
1	CA	2119	A
1	CA	2122	U
1	CA	2125	G
1	CA	2126	A
1	CA	2127	G
1	CA	2129	C
1	CA	2131	G
1	CA	2132	U
1	CA	2133	G
1	CA	2134	A
1	CA	2135	A
1	CA	2136	C
1	CA	2137	C
1	CA	2142	C
1	CA	2144	U
1	CA	2146	C
1	CA	2150	U
1	CA	2153	G
1	CA	2154	G
1	CA	2157	G
1	CA	2158	A
1	CA	2162	G
1	CA	2164	C
1	CA	2165	G
1	CA	2167	U
1	CA	2168	G
1	CA	2169	A
1	CA	2172	U
1	CA	2175	C
1	CA	2178	C
1	CA	2181	G

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Mol	Chain	Res	Type
1	CA	2184	G
1	CA	2185	C
1	CA	2186	G
1	CA	2188	C
1	CA	2189	U
1	CA	2190	G
1	CA	2192	G
1	CA	2195	C
1	CA	2198	A
1	CA	2206	G
1	CA	2207	G
1	CA	2208	A
1	CA	2218	U
1	CA	2225	A
1	CA	2238	G
1	CA	2240	C
1	CA	2256	G
1	CA	2268	A
1	CA	2273	A
1	CA	2275	C
1	CA	2278	A
1	CA	2283	C
1	CA	2287	A
1	CA	2288	A
1	CA	2289	G
1	CA	2305	A
1	CA	2306	C
1	CA	2308	G
1	CA	2312	U
1	CA	2318	G
1	CA	2319	G
1	CA	2320	A
1	CA	2325	G
1	CA	2327	A
1	CA	2334	G
1	CA	2336	A
1	CA	2343	C
1	CA	2347	C
1	CA	2350	C
1	CA	2353	G
1	CA	2354	G
1	CA	2383	G

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Mol	Chain	Res	Type
1	CA	2385	C
1	CA	2406	U
1	CA	2407	G
1	CA	2410	G
1	CA	2422	A
1	CA	2423	U
1	CA	2425	A
1	CA	2428	G
1	CA	2429	G
1	CA	2430	A
1	CA	2432	A
1	CA	2434	A
1	CA	2435	A
1	CA	2439	A
1	CA	2440	C
1	CA	2441	C
1	CA	2448	A
1	CA	2459	A
1	CA	2460	U
1	CA	2465	C
1	CA	2468	G
1	CA	2474	C
1	CA	2476	A
1	CA	2502	G
1	CA	2505	G
1	CA	2506	U
1	CA	2507	C
1	CA	2518	A
1	CA	2520	C
1	CA	2525	G
1	CA	2529	G
1	CA	2531	A
1	CA	2533	A
1	CA	2554	U
1	CA	2556	C
1	CA	2562	U
1	CA	2564	A
1	CA	2566	A
1	CA	2567	G
1	CA	2573	C
1	CA	2579	C
1	CA	2582	G

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Mol	Chain	Res	Type
1	CA	2596	U
1	CA	2602	A
1	CA	2609	U
1	CA	2610	C
1	CA	2611	U
1	CA	2612	C
1	CA	2621	A
1	CA	2630	G
1	CA	2632	A
1	CA	2634	G
1	CA	2647	U
1	CA	2653	U
1	CA	2654	A
1	CA	2663	G
1	CA	2673	G
1	CA	2674	G
1	CA	2689	U
1	CA	2690	C
1	CA	2699	C
1	CA	2702	U
1	CA	2712(A)	A
1	CA	2713	A
1	CA	2720	U
1	CA	2721	A
1	CA	2726	U
1	CA	2727	G
1	CA	2733	A
1	CA	2745	C
1	CA	2748	A
1	CA	2751	G
1	CA	2757	A
1	CA	2758	A
1	CA	2760	C
1	CA	2765	A
1	CA	2766	G
1	CA	2767	C
1	CA	2775	A
1	CA	2778	A
1	CA	2802	G
1	CA	2803	C
1	CA	2807	G
1	CA	2809	A

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Mol	Chain	Res	Type
1	CA	2810	A
1	CA	2818	G
1	CA	2820	A
1	CA	2821	A
1	CA	2833	G
1	CA	2835	A
1	CA	2839	G
1	CA	2872	G
1	CA	2874	C
1	CA	2875	C
1	CA	2877	G
1	CA	2879	C
1	CA	2892	A
1	CA	2893	G
1	CA	2894	G
1	CA	2896	C
1	CA	2897	U
2	CB	2	C
2	CB	5	C
2	CB	7	G
2	CB	12	C
2	CB	13	A
2	CB	15	A
2	CB	20	C
2	CB	21	G
2	CB	32	C
2	CB	34	U
2	CB	42	C
2	CB	52	A
2	CB	53	A
2	CB	56	G
2	CB	67	G
2	CB	73	A
2	CB	85	G
2	CB	94	C
2	CB	110	G
2	CB	116	G
2	CB	118	G
34	DA	5	U
34	DA	9	G
34	DA	30	U
34	DA	32	A

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Mol	Chain	Res	Type
34	DA	39	G
34	DA	47	C
34	DA	48	C
34	DA	49	U
34	DA	51	A
34	DA	54	C
34	DA	62	U
34	DA	73	G
34	DA	80	G
34	DA	89	C
34	DA	97	G
34	DA	101	A
34	DA	115	G
34	DA	116	A
34	DA	121	C
34	DA	131	C
34	DA	143	A
34	DA	163	C
34	DA	174	C
34	DA	182	U
34	DA	189(E)	U
34	DA	195	A
34	DA	197	A
34	DA	201	C
34	DA	203	U
34	DA	204	U
34	DA	216	G
34	DA	231	G
34	DA	243	A
34	DA	245	C
34	DA	247	G
34	DA	251	G
34	DA	252	U
34	DA	258	G
34	DA	266	G
34	DA	267	C
34	DA	269	C
34	DA	281	G
34	DA	289	G
34	DA	290	C
34	DA	298	A
34	DA	301	G

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Mol	Chain	Res	Type
34	DA	306	G
34	DA	308	C
34	DA	318	G
34	DA	328	C
34	DA	329	A
34	DA	332	G
34	DA	341	C
34	DA	342	C
34	DA	343	U
34	DA	344	A
34	DA	346	G
34	DA	347	G
34	DA	351	G
34	DA	352	C
34	DA	353	A
34	DA	354	G
34	DA	367	U
34	DA	372	C
34	DA	373	A
34	DA	382	A
34	DA	384	G
34	DA	398	C
34	DA	406	G
34	DA	412	A
34	DA	413	G
34	DA	424	G
34	DA	429	U
34	DA	430	A
34	DA	439	A
34	DA	442	C
34	DA	443	C
34	DA	452	A
34	DA	485	G
34	DA	496	A
34	DA	498	U
34	DA	499	A
34	DA	500	G
34	DA	505	G
34	DA	509	A
34	DA	510	A
34	DA	511	C
34	DA	518	C

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Mol	Chain	Res	Type
34	DA	527	G
34	DA	531	U
34	DA	532	A
34	DA	533	A
34	DA	536	C
34	DA	545	C
34	DA	547	A
34	DA	559	A
34	DA	560	U
34	DA	561	U
34	DA	562	C
34	DA	564	C
34	DA	567	G
34	DA	572	A
34	DA	573	A
34	DA	576	G
34	DA	577	G
34	DA	581	G
34	DA	592	G
34	DA	596	C
34	DA	600	C
34	DA	601	C
34	DA	619	U
34	DA	630	G
34	DA	632	A
34	DA	651	C
34	DA	653	A
34	DA	665	A
34	DA	675	A
34	DA	687	A
34	DA	688	G
34	DA	693	G
34	DA	695	A
34	DA	698	G
34	DA	702	A
34	DA	717	C
34	DA	721	G
34	DA	723	U
34	DA	728	A
34	DA	731	G
34	DA	749	C
34	DA	755	G

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Mol	Chain	Res	Type
34	DA	766	A
34	DA	768	A
34	DA	774	G
34	DA	777	A
34	DA	788	U
34	DA	792	A
34	DA	793	U
34	DA	794	A
34	DA	816	A
34	DA	817	C
34	DA	821	G
34	DA	825	G
34	DA	827	U
34	DA	828	A
34	DA	829	G
34	DA	834	C
34	DA	840	C
34	DA	841	U
34	DA	848	C
34	DA	851	G
34	DA	859	A
34	DA	873	A
34	DA	874	G
34	DA	876	G
34	DA	880	C
34	DA	884	U
34	DA	887	G
34	DA	902	G
34	DA	913	A
34	DA	914	A
34	DA	916	G
34	DA	922	G
34	DA	926	G
34	DA	927	G
34	DA	934	C
34	DA	935	A
34	DA	936	C
34	DA	959	A
34	DA	961	U
34	DA	966	G
34	DA	968	A
34	DA	969	A

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Mol	Chain	Res	Type
34	DA	971	G
34	DA	974	A
34	DA	975	A
34	DA	976	G
34	DA	977	A
34	DA	981	U
34	DA	989	C
34	DA	992	U
34	DA	993	G
34	DA	999	C
34	DA	1003	G
34	DA	1005	A
34	DA	1006	C
34	DA	1007	C
34	DA	1016	A
34	DA	1017	G
34	DA	1022	G
34	DA	1025	U
34	DA	1026	G
34	DA	1027	C
34	DA	1028	C
34	DA	1030	C
34	DA	1030(A)	G
34	DA	1030(B)	C
34	DA	1033	G
34	DA	1064	G
34	DA	1065	U
34	DA	1066	C
34	DA	1067	A
34	DA	1081	G
34	DA	1094	G
34	DA	1095	U
34	DA	1097	C
34	DA	1101	A
34	DA	1105	A
34	DA	1117	G
34	DA	1121	U
34	DA	1122	U
34	DA	1125	U
34	DA	1127	G
34	DA	1130	A
34	DA	1136	U

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Mol	Chain	Res	Type
34	DA	1137	C
34	DA	1138	G
34	DA	1139	G
34	DA	1140	C
34	DA	1146	A
34	DA	1152	A
34	DA	1154	G
34	DA	1155	G
34	DA	1159	U
34	DA	1161	C
34	DA	1164	G
34	DA	1166	G
34	DA	1181	G
34	DA	1183	A
34	DA	1184	G
34	DA	1190	G
34	DA	1193	G
34	DA	1195	C
34	DA	1196	U
34	DA	1197	G
34	DA	1201	A
34	DA	1202	G
34	DA	1211	U
34	DA	1212	U
34	DA	1213	A
34	DA	1214	C
34	DA	1220	G
34	DA	1225	A
34	DA	1227	A
34	DA	1228	C
34	DA	1236	A
34	DA	1238	A
34	DA	1240	U
34	DA	1241	G
34	DA	1249	C
34	DA	1252	A
34	DA	1253	G
34	DA	1254	C
34	DA	1256	A
34	DA	1257	U
34	DA	1258	G
34	DA	1261	A

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Mol	Chain	Res	Type
34	DA	1279	A
34	DA	1280	A
34	DA	1281	U
34	DA	1282	C
34	DA	1285	A
34	DA	1286	A
34	DA	1287	A
34	DA	1297	C
34	DA	1298	C
34	DA	1301	U
34	DA	1305	G
34	DA	1320	C
34	DA	1322	C
34	DA	1326	C
34	DA	1340	A
34	DA	1346	A
34	DA	1347	G
34	DA	1355	G
34	DA	1360	A
34	DA	1363	C
34	DA	1363(A)	A
34	DA	1364	U
34	DA	1368	G
34	DA	1381	U
34	DA	1397	C
34	DA	1398	A
34	DA	1401	G
34	DA	1419	G
34	DA	1442	G
34	DA	1442(A)	G
34	DA	1442(B)	A
34	DA	1446	U
34	DA	1447	A
34	DA	1452	C
34	DA	1456	G
34	DA	1469	G
34	DA	1487	G
34	DA	1497	G
34	DA	1503	A
34	DA	1504	G
34	DA	1506	U
34	DA	1517	G

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Mol	Chain	Res	Type
34	DA	1520	G
34	DA	1525	G
34	DA	1529	G
34	DA	1530	G
34	DA	1531	A
34	DA	1532	U
55	DV	14	A
56	DW	8	4SU
56	DW	14	A
56	DW	16	U
56	DW	17	C
56	DW	18	G
56	DW	19	G
56	DW	20	U
56	DW	21	A
56	DW	37	MIA
56	DW	40	C
56	DW	41	C
56	DW	43	C
56	DW	45	U
56	DW	46	7MG
56	DW	47	U
56	DW	48	C
56	DW	49	C
56	DW	62	C
56	DW	73	A
56	DW	76	A
56	DY	9	A
56	DY	13	C
56	DY	14	A
56	DY	19	G
56	DY	21	A
56	DY	26	A
56	DY	33	U
56	DY	34	G
56	DY	37	MIA
56	DY	39	PSU
56	DY	45	U
56	DY	46	7MG
56	DY	47	U
56	DY	48	C
56	DY	49	C

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Mol	Chain	Res	Type
56	DY	52	G
56	DY	54	5MU
56	DY	55	PSU
56	DY	57	G
56	DY	58	A
56	DY	59	U
56	DY	65	G
56	DY	70	G

All (146) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	184	A
1	AA	185	A
1	AA	188	A
1	AA	204	G
1	AA	210	A
1	AA	238	C
1	AA	302	A
1	AA	334	A
1	AA	528	A
1	AA	572	A
1	AA	596	G
1	AA	645	G
1	AA	716	G
1	AA	732	A
1	AA	793	A
1	AA	811	A
1	AA	821	A
1	AA	823	G
1	AA	837	C
1	AA	906	G
1	AA	990	A
1	AA	1019	G
1	AA	1057	G
1	AA	1072	U
1	AA	1098	C
1	AA	1154	U
1	AA	1188	A
1	AA	1219	A
1	AA	1220	U
1	AA	1221	G

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Mol	Chain	Res	Type
1	AA	1255	A
1	AA	1425	A
1	AA	1442	U
1	AA	1466	U
1	AA	1654	A
1	AA	1655	A
1	AA	1700	G
1	AA	1793	A
1	AA	1811	A
1	AA	2014	G
1	AA	2019	G
1	AA	2203	G
1	AA	2209	G
1	AA	2227	G
1	AA	2287	C
1	AA	2347	A
1	AA	2358	A
1	AA	2418	U
1	AA	2434	A
1	AA	2451	A
1	AA	2459	G
1	AA	2518	U
1	AA	2623	U
1	AA	2701	U
1	AA	2769	U
1	AA	2902	G
34	BA	115	G
34	BA	243	A
34	BA	250	A
34	BA	266	G
34	BA	347	G
34	BA	509	A
34	BA	510	A
34	BA	530	G
34	BA	560	U
34	BA	687	A
34	BA	748	C
34	BA	793	U
34	BA	839	U
34	BA	884	U
34	BA	913	A
34	BA	991	U

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Mol	Chain	Res	Type
34	BA	1065	U
34	BA	1067	A
34	BA	1165	C
34	BA	1201	A
34	BA	1285	A
34	BA	1442	G
56	BY	19	G
56	BY	58	A
1	CA	27	G
1	CA	195	A
1	CA	196	A
1	CA	271(K)	U
1	CA	277	C
1	CA	310	A
1	CA	503	A
1	CA	645	C
1	CA	685	A
1	CA	746	A
1	CA	764	A
1	CA	774	A
1	CA	776	G
1	CA	830	G
1	CA	856	C
1	CA	900	A
1	CA	974	G
1	CA	1026	U
1	CA	1057	A
1	CA	1240	U
1	CA	1300	U
1	CA	1379	A
1	CA	1420	U
1	CA	1427	A
1	CA	1558	A
1	CA	1608	A
1	CA	1653	G
1	CA	1913	A
1	CA	1992	G
1	CA	1997	G
1	CA	2110	G
1	CA	2288	A
1	CA	2318	G
1	CA	2406	U

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Mol	Chain	Res	Type
1	CA	2439	A
1	CA	2566	A
1	CA	2689	U
1	CA	2726	U
1	CA	2756	U
34	DA	115	G
34	DA	119	A
34	DA	251	G
34	DA	266	G
34	DA	428	G
34	DA	429	U
34	DA	499	A
34	DA	509	A
34	DA	535	A
34	DA	560	U
34	DA	687	A
34	DA	748	C
34	DA	793	U
34	DA	840	C
34	DA	873	A
34	DA	884	U
34	DA	913	A
34	DA	991	U
34	DA	1064	G
34	DA	1065	U
34	DA	1183	A
34	DA	1201	A
34	DA	1279	A
34	DA	1442	G
56	DW	13	C
56	DW	45	U
56	DY	46	7MG

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

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

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

RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
56	PSU	DW	55	56	18,21,22	1.37	3 (16%)	21,30,33	1.87	3 (14%)
56	7MG	BY	46	56	23,26,27	1.28	3 (13%)	27,39,42	2.70	7 (25%)
56	PSU	DW	32	56	18,21,22	1.41	3 (16%)	21,30,33	1.88	4 (19%)
56	5MU	BW	54	56	19,22,23	1.52	6 (31%)	27,32,35	2.29	6 (22%)
56	4SU	DY	8	56	18,21,22	1.84	4 (22%)	25,30,33	2.34	5 (20%)
56	PSU	BY	39	56	18,21,22	1.38	2 (11%)	21,30,33	1.93	3 (14%)
56	PSU	BW	39	56	18,21,22	1.37	2 (11%)	21,30,33	1.95	5 (23%)
56	MIA	BY	37	56	21,24,32	1.67	3 (14%)	30,35,47	2.04	8 (26%)
56	4SU	BY	8	56	18,21,22	1.75	5 (27%)	25,30,33	2.12	6 (24%)
56	MIA	DY	37	56	21,24,32	1.59	4 (19%)	30,35,47	2.07	7 (23%)
56	7MG	DY	46	56	23,26,27	1.25	3 (13%)	27,39,42	2.76	7 (25%)
56	4SU	DW	8	56	18,21,22	1.73	3 (16%)	25,30,33	2.04	5 (20%)
56	7MG	DW	46	56	23,26,27	1.32	4 (17%)	27,39,42	2.64	7 (25%)
56	MIA	BW	37	56	28,31,32	2.46	6 (21%)	38,44,47	3.23	15 (39%)
56	PSU	DY	39	56	18,21,22	1.43	2 (11%)	21,30,33	1.96	3 (14%)
56	PSU	BW	55	56	18,21,22	1.28	2 (11%)	21,30,33	1.94	4 (19%)
56	5MU	DW	54	56	19,22,23	1.48	6 (31%)	27,32,35	2.21	8 (29%)
56	PSU	BW	32	56	18,21,22	1.40	3 (16%)	21,30,33	2.19	6 (28%)
56	PSU	BY	32	56	18,21,22	1.42	2 (11%)	21,30,33	1.93	4 (19%)
56	7MG	BW	46	56	23,26,27	1.31	3 (13%)	27,39,42	2.97	7 (25%)
56	PSU	DW	39	56	18,21,22	1.38	2 (11%)	21,30,33	2.17	5 (23%)
56	5MU	BY	54	56	19,22,23	1.53	5 (26%)	27,32,35	2.19	9 (33%)
56	MIA	DW	37	56	28,31,32	2.57	7 (25%)	38,44,47	2.51	11 (28%)
56	4SU	BW	8	56	18,21,22	1.56	3 (16%)	25,30,33	2.30	5 (20%)
56	5MU	DY	54	56	19,22,23	1.44	6 (31%)	27,32,35	2.09	5 (18%)
56	PSU	BY	55	56	18,21,22	1.38	2 (11%)	21,30,33	1.99	3 (14%)
56	PSU	DY	55	56	18,21,22	1.42	3 (16%)	21,30,33	2.02	3 (14%)
56	PSU	DY	32	56	18,21,22	1.37	2 (11%)	21,30,33	1.96	4 (19%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
56	PSU	DW	55	56	-	0/7/25/26	0/2/2/2
56	7MG	BY	46	56	-	4/7/37/38	0/3/3/3
56	PSU	DW	32	56	-	3/7/25/26	0/2/2/2
56	5MU	BW	54	56	-	0/7/25/26	0/2/2/2
56	4SU	DY	8	56	-	1/7/25/26	0/2/2/2
56	PSU	BY	39	56	-	0/7/25/26	0/2/2/2
56	PSU	BW	39	56	-	0/7/25/26	0/2/2/2
56	MIA	BY	37	56	-	2/7/25/34	0/3/3/3
56	4SU	BY	8	56	-	1/7/25/26	0/2/2/2
56	MIA	DY	37	56	-	3/7/25/34	0/3/3/3
56	7MG	DY	46	56	-	3/7/37/38	0/3/3/3
56	4SU	DW	8	56	-	0/7/25/26	0/2/2/2
56	7MG	DW	46	56	-	2/7/37/38	0/3/3/3
56	MIA	BW	37	56	-	5/15/33/34	0/3/3/3
56	PSU	DY	39	56	-	2/7/25/26	0/2/2/2
56	PSU	BW	55	56	-	0/7/25/26	0/2/2/2
56	5MU	DW	54	56	-	0/7/25/26	0/2/2/2
56	PSU	BW	32	56	-	4/7/25/26	0/2/2/2
56	PSU	BY	32	56	-	0/7/25/26	0/2/2/2
56	7MG	BW	46	56	-	0/7/37/38	0/3/3/3
56	PSU	DW	39	56	-	0/7/25/26	0/2/2/2
56	5MU	BY	54	56	-	2/7/25/26	0/2/2/2
56	MIA	DW	37	56	-	6/15/33/34	0/3/3/3
56	4SU	BW	8	56	-	0/7/25/26	0/2/2/2
56	5MU	DY	54	56	-	2/7/25/26	0/2/2/2
56	PSU	BY	55	56	-	2/7/25/26	0/2/2/2
56	PSU	DY	55	56	-	3/7/25/26	0/2/2/2
56	PSU	DY	32	56	-	0/7/25/26	0/2/2/2

All (99) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	DW	37	MIA	C2-S10	-8.05	1.69	1.75
56	BW	37	MIA	C13-C14	7.46	1.54	1.32
56	BW	37	MIA	C2-S10	-7.31	1.69	1.75
56	DW	37	MIA	C13-C14	7.29	1.54	1.32
56	BY	37	MIA	C5-C4	5.34	1.48	1.39
56	DY	37	MIA	C5-C4	5.02	1.48	1.39
56	DW	37	MIA	C5-C4	4.92	1.47	1.39
56	DY	8	4SU	C4-S4	-4.87	1.60	1.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	DW	8	4SU	C4-S4	-4.57	1.60	1.68
56	BY	8	4SU	C4-S4	-4.54	1.60	1.68
56	BW	8	4SU	C4-S4	-4.45	1.60	1.68
56	BW	37	MIA	C5-C4	4.17	1.46	1.39
56	DW	32	PSU	C6-C5	4.10	1.39	1.35
56	DY	32	PSU	C6-C5	4.07	1.39	1.35
56	BY	32	PSU	C6-C5	3.99	1.39	1.35
56	DY	39	PSU	C6-C5	3.96	1.39	1.35
56	BY	39	PSU	C6-C5	3.83	1.39	1.35
56	BY	55	PSU	C6-C5	3.70	1.39	1.35
56	DW	55	PSU	C6-C5	3.69	1.39	1.35
56	BW	39	PSU	C6-C5	3.54	1.39	1.35
56	BW	46	7MG	C4-N9	-3.47	1.33	1.37
56	BW	54	5MU	C2-N1	3.47	1.43	1.38
56	DW	46	7MG	C5-C4	3.35	1.47	1.37
56	BW	55	PSU	C6-C5	3.32	1.39	1.35
56	BW	32	PSU	C6-C5	3.31	1.39	1.35
56	DY	46	7MG	C5-C4	3.30	1.47	1.37
56	BY	54	5MU	C2-N1	3.29	1.43	1.38
56	DY	55	PSU	C6-C5	3.28	1.38	1.35
56	BY	46	7MG	C5-C4	3.26	1.47	1.37
56	DW	46	7MG	C4-N9	-3.16	1.34	1.37
56	DW	37	MIA	C5-C6	3.10	1.49	1.41
56	DW	39	PSU	C4-N3	-3.09	1.33	1.38
56	DW	8	4SU	C4-N3	-3.05	1.34	1.37
56	BY	37	MIA	C5-C6	3.02	1.49	1.41
56	BW	37	MIA	C5-C6	3.02	1.49	1.41
56	DY	8	4SU	C4-N3	-2.99	1.34	1.37
56	BY	54	5MU	C6-C5	2.97	1.39	1.34
56	BY	8	4SU	C4-N3	-2.93	1.34	1.37
56	BW	32	PSU	C2-N3	-2.91	1.32	1.37
56	DY	37	MIA	C5-C6	2.90	1.49	1.41
56	BW	46	7MG	C5-C4	2.87	1.46	1.37
56	DY	8	4SU	C2-N1	2.85	1.42	1.38
56	DW	39	PSU	C6-C5	2.81	1.38	1.35
56	BW	32	PSU	C4-N3	-2.80	1.33	1.38
56	DY	8	4SU	C5-C4	-2.75	1.39	1.42
56	BW	54	5MU	C6-C5	2.74	1.39	1.34
56	DY	54	5MU	C6-C5	2.68	1.39	1.34
56	BY	46	7MG	C4-N9	-2.68	1.34	1.37
56	DW	54	5MU	C6-N1	-2.67	1.33	1.38
56	DY	54	5MU	C4-N3	-2.67	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	BY	54	5MU	C4-N3	-2.66	1.33	1.38
56	DW	46	7MG	C6-N1	-2.65	1.33	1.38
56	DY	55	PSU	C4-N3	-2.65	1.33	1.38
56	BY	8	4SU	C5-C4	-2.63	1.39	1.42
56	DY	54	5MU	C2-N1	2.61	1.42	1.38
56	BW	39	PSU	C4-N3	-2.61	1.34	1.38
56	BY	37	MIA	C8-N7	2.59	1.36	1.31
56	BW	8	4SU	C2-N1	2.57	1.42	1.38
56	BY	8	4SU	C2-N1	2.54	1.42	1.38
56	DW	54	5MU	C4-N3	-2.54	1.34	1.38
56	DW	37	MIA	C5-N7	-2.53	1.34	1.39
56	DW	8	4SU	C5-C4	-2.50	1.39	1.42
56	BY	55	PSU	C4-N3	-2.49	1.34	1.38
56	DW	54	5MU	C4-C5	2.48	1.48	1.44
56	BW	54	5MU	C4-N3	-2.48	1.34	1.38
56	BW	55	PSU	C4-N3	-2.46	1.34	1.38
56	DY	37	MIA	C8-N7	2.45	1.36	1.31
56	BY	32	PSU	C4-N3	-2.42	1.34	1.38
56	DW	54	5MU	C2-N1	2.42	1.42	1.38
56	DW	54	5MU	C6-C5	2.40	1.38	1.34
56	BY	54	5MU	C4-C5	2.40	1.48	1.44
56	BW	46	7MG	C6-N1	-2.33	1.34	1.38
56	DW	55	PSU	C4-C5	2.32	1.50	1.44
56	BY	39	PSU	C4-N3	-2.30	1.34	1.38
56	DY	54	5MU	C4-C5	2.28	1.48	1.44
56	DY	54	5MU	C6-N1	-2.28	1.34	1.38
56	BW	37	MIA	C8-N7	2.27	1.36	1.31
56	DY	46	7MG	C6-N1	-2.23	1.34	1.38
56	BW	8	4SU	C5-C4	-2.22	1.39	1.42
56	DW	32	PSU	C4-C5	2.22	1.50	1.44
56	BY	46	7MG	C6-N1	-2.21	1.34	1.38
56	DY	32	PSU	C4-N3	-2.19	1.34	1.38
56	DY	46	7MG	C4-N9	-2.16	1.35	1.37
56	DW	37	MIA	C8-N7	2.15	1.35	1.31
56	DW	55	PSU	C4-N3	-2.15	1.34	1.38
56	DW	54	5MU	C2-N3	-2.14	1.34	1.38
56	BW	54	5MU	C6-N1	-2.13	1.34	1.38
56	DY	37	MIA	C5-N7	-2.13	1.35	1.39
56	BW	54	5MU	O2-C2	2.12	1.26	1.23
56	BW	37	MIA	C5-N7	-2.11	1.35	1.39
56	BY	54	5MU	C6-N1	-2.09	1.34	1.38
56	DW	46	7MG	C5-C6	2.07	1.48	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	DY	54	5MU	C2-N3	-2.06	1.34	1.38
56	BW	54	5MU	C4-C5	2.04	1.48	1.44
56	DW	37	MIA	C4-N9	-2.04	1.33	1.37
56	DY	39	PSU	C4-N3	-2.01	1.35	1.38
56	DY	55	PSU	C2-N1	-2.01	1.34	1.36
56	BY	8	4SU	C6-C5	2.00	1.39	1.35
56	DW	32	PSU	C4-N3	-2.00	1.35	1.38

All (165) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	BW	37	MIA	C11-S10-C2	-11.58	93.56	102.25
56	DY	46	7MG	N9-C4-N3	9.62	139.55	125.46
56	BW	46	7MG	N9-C4-N3	9.54	139.44	125.46
56	BY	46	7MG	N9-C4-N3	9.19	138.93	125.46
56	DW	46	7MG	N9-C4-N3	8.89	138.48	125.46
56	DW	37	MIA	C5-C4-N3	-8.39	118.34	127.18
56	BW	37	MIA	C5-C4-N3	-8.30	118.44	127.18
56	BW	8	4SU	C4-N3-C2	-6.80	120.79	127.31
56	BW	37	MIA	C12-C13-C14	-6.54	115.26	127.01
56	DW	37	MIA	N3-C4-N9	6.50	135.24	126.99
56	DY	8	4SU	C4-N3-C2	-6.45	121.13	127.31
56	DW	37	MIA	C12-C13-C14	-6.32	115.67	127.01
56	BW	39	PSU	N1-C2-N3	6.25	121.76	115.17
56	DW	8	4SU	C4-N3-C2	-6.18	121.39	127.31
56	DY	37	MIA	C5-C4-N3	-6.18	118.21	126.72
56	BY	55	PSU	N1-C2-N3	6.16	121.67	115.17
56	DW	39	PSU	N1-C2-N3	6.14	121.64	115.17
56	DY	55	PSU	N1-C2-N3	6.12	121.63	115.17
56	BW	46	7MG	C5-C4-N3	-6.11	116.67	128.13
56	DY	39	PSU	N1-C2-N3	6.08	121.58	115.17
56	BW	8	4SU	C5-C4-N3	5.96	120.29	114.75
56	BY	32	PSU	N1-C2-N3	5.94	121.44	115.17
56	BY	39	PSU	N1-C2-N3	5.92	121.41	115.17
56	BY	37	MIA	C5-C4-N3	-5.84	118.67	126.72
56	BW	46	7MG	N9-C8-N7	-5.82	95.13	103.37
56	BW	54	5MU	C5-C4-N3	5.81	120.37	115.32
56	BY	8	4SU	C4-N3-C2	-5.80	121.76	127.31
56	DY	32	PSU	N1-C2-N3	5.75	121.23	115.17
56	DY	46	7MG	C5-C4-N3	-5.73	117.37	128.13
56	BW	46	7MG	C2-N3-C4	5.65	122.04	112.30
56	DW	55	PSU	N1-C2-N3	5.63	121.10	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	BW	37	MIA	N3-C4-N9	5.59	134.09	126.99
56	BY	46	7MG	C5-C4-N3	-5.53	117.75	128.13
56	BW	55	PSU	N1-C2-N3	5.50	120.97	115.17
56	DW	46	7MG	C5-C4-N3	-5.45	117.91	128.13
56	BY	54	5MU	N3-C2-N1	5.44	121.97	114.89
56	BW	54	5MU	O4-C4-C5	-5.42	118.71	124.92
56	BW	54	5MU	C4-N3-C2	-5.41	120.24	127.34
56	DY	8	4SU	C5-C4-N3	5.36	119.73	114.75
56	BY	46	7MG	N9-C8-N7	-5.31	95.85	103.37
56	DW	46	7MG	N9-C8-N7	-5.31	95.86	103.37
56	DW	54	5MU	C4-N3-C2	-5.23	120.48	127.34
56	DY	54	5MU	C4-N3-C2	-4.99	120.80	127.34
56	DW	32	PSU	C6-C5-C4	-4.97	114.82	118.17
56	BY	54	5MU	C4-N3-C2	-4.94	120.86	127.34
56	DY	46	7MG	N9-C8-N7	-4.91	96.43	103.37
56	DY	54	5MU	N3-C2-N1	4.82	121.17	114.89
56	DY	37	MIA	N3-C4-N9	4.80	135.33	127.17
56	BW	32	PSU	C4-N3-C2	-4.72	119.88	126.37
56	BW	32	PSU	C6-C5-C4	-4.69	115.01	118.17
56	DY	8	4SU	C5-C4-S4	-4.67	118.97	124.31
56	BY	46	7MG	C2-N3-C4	4.61	120.25	112.30
56	DW	54	5MU	C5-C4-N3	4.59	119.31	115.32
56	BW	32	PSU	N1-C2-N3	4.56	119.97	115.17
56	DY	46	7MG	C2-N3-C4	4.54	120.12	112.30
56	BY	37	MIA	N3-C4-N9	4.51	134.84	127.17
56	DW	39	PSU	O2-C2-N1	-4.51	118.14	122.79
56	DW	32	PSU	N1-C2-N3	4.48	119.90	115.17
56	BW	54	5MU	N3-C2-N1	4.40	120.61	114.89
56	DW	8	4SU	C5-C4-N3	4.39	118.84	114.75
56	DW	54	5MU	N3-C2-N1	4.38	120.60	114.89
56	BY	8	4SU	C5-C4-N3	4.38	118.82	114.75
56	BW	37	MIA	C4-C5-N7	-4.37	105.58	110.58
56	BY	8	4SU	N3-C2-N1	4.35	120.55	114.89
56	DW	39	PSU	C4-N3-C2	-4.33	120.40	126.37
56	DY	54	5MU	C5-C4-N3	4.33	119.09	115.32
56	DY	39	PSU	O2-C2-N1	-4.32	118.33	122.79
56	DW	54	5MU	C5-C6-N1	-4.30	118.64	123.31
56	DW	46	7MG	C2-N3-C4	4.26	119.63	112.30
56	DW	54	5MU	O4-C4-C5	-4.24	120.07	124.92
56	BW	37	MIA	C6-C5-N7	4.20	137.01	132.43
56	BY	54	5MU	O4-C4-C5	-4.16	120.15	124.92
56	DW	37	MIA	C15-C14-C13	-4.12	110.28	122.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	DY	55	PSU	C4-N3-C2	-4.10	120.72	126.37
56	DY	8	4SU	N3-C2-N1	4.10	120.23	114.89
56	BW	55	PSU	C4-N3-C2	-4.05	120.80	126.37
56	BW	8	4SU	N3-C2-N1	4.02	120.12	114.89
56	DY	54	5MU	O4-C4-C5	-4.01	120.33	124.92
56	BW	8	4SU	C5-C4-S4	-4.01	119.73	124.31
56	BY	54	5MU	C5-C4-N3	3.92	118.73	115.32
56	DW	8	4SU	N3-C2-N1	3.91	119.98	114.89
56	BW	39	PSU	C4-N3-C2	-3.88	121.02	126.37
56	BY	32	PSU	C4-N3-C2	-3.87	121.04	126.37
56	DW	8	4SU	C5-C4-S4	-3.87	119.88	124.31
56	BW	37	MIA	C2-N3-C4	3.85	122.37	112.29
56	BY	55	PSU	C4-N3-C2	-3.83	121.09	126.37
56	DY	55	PSU	O2-C2-N1	-3.81	118.86	122.79
56	BY	37	MIA	C4-C5-N7	-3.80	106.24	110.58
56	DY	32	PSU	C4-N3-C2	-3.79	121.15	126.37
56	BW	46	7MG	C5-C6-N1	3.78	117.59	110.94
56	DY	37	MIA	C2-N3-C4	3.77	121.03	111.83
56	DW	55	PSU	C4-N3-C2	-3.73	121.23	126.37
56	BY	39	PSU	C4-N3-C2	-3.68	121.30	126.37
56	BY	55	PSU	O2-C2-N1	-3.67	119.00	122.79
56	BY	8	4SU	C5-C4-S4	-3.66	120.13	124.31
56	BY	37	MIA	C2-N3-C4	3.65	120.75	111.83
56	DY	37	MIA	C4-C5-N7	-3.63	106.43	110.58
56	BW	37	MIA	C15-C14-C13	-3.61	111.83	122.66
56	DY	32	PSU	O2-C2-N1	-3.59	119.08	122.79
56	BY	39	PSU	O2-C2-N1	-3.58	119.09	122.79
56	DY	54	5MU	C5-C6-N1	-3.57	119.43	123.31
56	BY	37	MIA	N3-C2-N1	-3.52	123.26	128.58
56	BY	8	4SU	C1'-N1-C2	3.48	123.84	117.59
56	DY	8	4SU	C1'-N1-C2	3.45	123.79	117.59
56	DW	32	PSU	C4-N3-C2	-3.45	121.62	126.37
56	DY	37	MIA	N3-C2-N1	-3.40	123.44	128.58
56	DW	37	MIA	C2-N3-C4	3.39	121.18	112.29
56	DY	39	PSU	C4-N3-C2	-3.39	121.70	126.37
56	DW	55	PSU	O2-C2-N1	-3.35	119.33	122.79
56	BW	54	5MU	C5-C6-N1	-3.29	119.74	123.31
56	DW	37	MIA	C4-C5-N7	-3.25	106.86	110.58
56	BW	37	MIA	C16-C14-C13	-3.20	113.06	122.66
56	DW	37	MIA	C6-C5-N7	3.04	135.74	132.43
56	BY	54	5MU	C1'-N1-C2	2.95	122.89	117.59
56	BY	46	7MG	C5-C6-N1	2.93	116.10	110.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	BW	37	MIA	C5-N7-C8	2.93	108.05	103.45
56	BY	32	PSU	O2-C2-N1	-2.92	119.78	122.79
56	BY	54	5MU	C5-C6-N1	-2.87	120.19	123.31
56	DY	46	7MG	C5-C6-N1	2.78	115.83	110.94
56	BY	37	MIA	C5-N7-C8	2.76	107.78	103.45
56	BW	32	PSU	O2-C2-N3	-2.75	116.98	121.86
56	BW	39	PSU	O2-C2-N1	-2.69	120.01	122.79
56	BY	54	5MU	O2-C2-N3	-2.68	116.55	121.49
56	BW	55	PSU	O2-C2-N1	-2.68	120.03	122.79
56	DW	46	7MG	C5-C6-N1	2.68	115.65	110.94
56	BW	46	7MG	O6-C6-C5	-2.63	121.16	127.62
56	BW	32	PSU	C5-C6-N1	-2.62	118.51	122.14
56	DY	37	MIA	C5-N7-C8	2.61	107.55	103.45
56	BW	37	MIA	N3-C2-N1	-2.56	122.32	127.00
56	DY	46	7MG	C5-C4-N9	-2.55	103.07	106.33
56	BW	32	PSU	C5-C4-N3	2.54	122.15	116.55
56	DY	32	PSU	C6-C5-C4	-2.54	116.46	118.17
56	BY	8	4SU	C6-N1-C2	-2.48	117.98	121.00
56	DW	39	PSU	C5-C6-N1	-2.46	118.72	122.14
56	BW	39	PSU	C5-C6-N1	-2.41	118.80	122.14
56	BW	37	MIA	N6-C6-N1	2.37	121.51	118.33
56	DW	39	PSU	O2'-C2'-C1'	-2.36	105.60	111.21
56	BY	46	7MG	C5-C4-N9	-2.35	103.32	106.33
56	DW	54	5MU	C5M-C5-C4	2.33	121.27	118.78
56	BY	46	7MG	O6-C6-C5	-2.32	121.93	127.62
56	DW	37	MIA	C16-C14-C13	-2.30	115.74	122.66
56	BW	37	MIA	C2-N1-C6	2.29	121.89	117.54
56	DW	46	7MG	O4'-C1'-N9	-2.22	106.28	109.30
56	DW	54	5MU	C5M-C5-C6	-2.22	119.85	122.85
56	DY	37	MIA	C4-N9-C8	2.21	108.06	105.74
56	BY	37	MIA	C4-N9-C8	2.20	108.05	105.74
56	BY	37	MIA	C2-N1-C6	2.19	122.32	118.73
56	DW	8	4SU	O2-C2-N1	-2.18	119.95	122.80
56	DW	37	MIA	C5-N7-C8	2.18	106.88	103.45
56	BW	55	PSU	C5-C6-N1	-2.18	119.12	122.14
56	DW	46	7MG	C5-C4-N9	-2.14	103.59	106.33
56	DW	32	PSU	O2-C2-N1	-2.12	120.60	122.79
56	BW	54	5MU	O2-C2-N3	-2.12	117.59	121.49
56	DW	37	MIA	C11-S10-C2	-2.11	100.67	102.25
56	BW	46	7MG	C2-N1-C6	-2.10	121.29	125.11
56	DY	46	7MG	O6-C6-C5	-2.10	122.46	127.62
56	BW	8	4SU	C1'-N1-C2	2.09	121.35	117.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	BY	32	PSU	C6-C5-C4	-2.08	116.77	118.17
56	BY	54	5MU	C6-N1-C2	-2.05	119.26	121.30
56	BW	39	PSU	O2-C2-N3	-2.04	118.23	121.86
56	BY	54	5MU	C1'-N1-C6	-2.03	117.81	121.15
56	DW	54	5MU	C1'-N1-C6	-2.03	117.81	121.15
56	BW	37	MIA	N9-C8-N7	-2.03	111.06	113.94
56	DW	37	MIA	C4-N9-C8	2.02	107.86	105.74
56	BW	37	MIA	C4-N9-C8	2.00	107.84	105.74

There are no chirality outliers.

All (45) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
56	BW	32	PSU	C2'-C1'-C5-C4
56	BW	32	PSU	O4'-C1'-C5-C4
56	BW	32	PSU	O4'-C1'-C5-C6
56	BW	37	MIA	N6-C12-C13-C14
56	BW	37	MIA	C12-C13-C14-C15
56	BW	37	MIA	C12-C13-C14-C16
56	BY	46	7MG	C4'-C5'-O5'-P
56	DW	32	PSU	C2'-C1'-C5-C4
56	DW	32	PSU	O4'-C1'-C5-C4
56	DW	32	PSU	O4'-C1'-C5-C6
56	DW	37	MIA	C12-C13-C14-C15
56	DY	39	PSU	O4'-C4'-C5'-O5'
56	DY	46	7MG	O4'-C4'-C5'-O5'
56	DY	54	5MU	O4'-C4'-C5'-O5'
56	DW	37	MIA	C3'-C4'-C5'-O5'
56	DY	37	MIA	C3'-C4'-C5'-O5'
56	DY	39	PSU	C3'-C4'-C5'-O5'
56	DY	54	5MU	C3'-C4'-C5'-O5'
56	BY	37	MIA	C3'-C4'-C5'-O5'
56	BY	54	5MU	C3'-C4'-C5'-O5'
56	DW	46	7MG	O4'-C4'-C5'-O5'
56	DW	46	7MG	C3'-C4'-C5'-O5'
56	DY	37	MIA	O4'-C4'-C5'-O5'
56	DY	46	7MG	C3'-C4'-C5'-O5'
56	BY	46	7MG	C3'-C4'-C5'-O5'
56	BY	54	5MU	O4'-C4'-C5'-O5'
56	DW	37	MIA	O4'-C4'-C5'-O5'
56	BY	37	MIA	O4'-C4'-C5'-O5'
56	BW	37	MIA	C5-C6-N6-C12

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Mol	Chain	Res	Type	Atoms
56	BW	37	MIA	N1-C6-N6-C12
56	DY	55	PSU	O4'-C4'-C5'-O5'
56	BY	46	7MG	C2'-C1'-N9-C8
56	BY	55	PSU	O4'-C1'-C5-C4
56	DW	37	MIA	N6-C12-C13-C14
56	DW	37	MIA	C5-C6-N6-C12
56	DY	37	MIA	C4'-C5'-O5'-P
56	BY	46	7MG	O4'-C1'-N9-C8
56	BW	32	PSU	O4'-C4'-C5'-O5'
56	BY	55	PSU	O4'-C1'-C5-C6
56	DY	55	PSU	O4'-C1'-C5-C6
56	DY	55	PSU	C2'-C1'-C5-C6
56	DW	37	MIA	N1-C6-N6-C12
56	BY	8	4SU	C2'-C1'-N1-C2
56	DY	8	4SU	C2'-C1'-N1-C2
56	DY	46	7MG	C2'-C1'-N9-C8

There are no ring outliers.

9 monomers are involved in 18 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	DW	55	PSU	1	0
56	BY	8	4SU	1	0
56	DY	37	MIA	1	0
56	DY	46	7MG	2	0
56	DW	46	7MG	2	0
56	BW	37	MIA	2	0
56	DW	39	PSU	4	0
56	DW	37	MIA	3	0
56	DY	55	PSU	2	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 2058 ligands modelled in this entry, 2052 are monoatomic - leaving 6 for Mogul analysis.

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
60	SF4	BD	501	37	0,12,12	-	-	-		
62	GDP	BZ	704	58	29,30,30	1.26	5 (17%)	45,47,47	1.89	11 (24%)
62	GDP	DZ	704	58	29,30,30	1.12	2 (6%)	45,47,47	1.82	6 (13%)
61	FUA	DZ	703	-	39,40,40	1.70	7 (17%)	50,64,64	1.70	8 (16%)
60	SF4	DD	501	37	0,12,12	-	-	-		
61	FUA	BZ	703	-	39,40,40	1.70	7 (17%)	50,64,64	1.70	8 (16%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
60	SF4	BD	501	37	-	-	0/6/5/5
62	GDP	DZ	704	58	-	2/16/32/32	0/3/3/3
62	GDP	BZ	704	58	-	4/16/32/32	0/3/3/3
61	FUA	DZ	703	-	-	7/16/92/92	0/4/4/4
60	SF4	DD	501	37	-	-	0/6/5/5
61	FUA	BZ	703	-	-	7/16/92/92	0/4/4/4

All (21) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	BZ	703	FUA	C23-C22	-4.44	1.39	1.51
61	DZ	703	FUA	C23-C22	-4.41	1.40	1.51
61	BZ	703	FUA	C23-C24	-4.35	1.39	1.53
61	DZ	703	FUA	C23-C24	-4.34	1.39	1.53
61	BZ	703	FUA	C29-C22	4.24	1.53	1.47
61	DZ	703	FUA	C29-C22	4.20	1.53	1.47
61	DZ	703	FUA	C24-C25	-3.54	1.39	1.50
61	BZ	703	FUA	C24-C25	-3.54	1.39	1.50
62	DZ	704	GDP	C5-C4	3.40	1.48	1.38
61	BZ	703	FUA	C14-C8	-3.25	1.53	1.59
61	DZ	703	FUA	C14-C8	-3.23	1.53	1.59
62	BZ	704	GDP	C5-C4	2.79	1.46	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
62	BZ	704	GDP	C5-N7	-2.78	1.33	1.39
62	BZ	704	GDP	PA-O3A	2.52	1.62	1.59
62	DZ	704	GDP	C6-N1	-2.39	1.34	1.38
62	BZ	704	GDP	C4-N9	-2.33	1.32	1.38
61	DZ	703	FUA	C25-C26	2.25	1.39	1.32
61	BZ	703	FUA	C25-C26	2.23	1.39	1.32
61	BZ	703	FUA	C10-C9	-2.19	1.53	1.57
61	DZ	703	FUA	C10-C9	-2.18	1.53	1.57
62	BZ	704	GDP	C6-N1	-2.16	1.34	1.38

All (33) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
62	BZ	704	GDP	C5-C4-N3	-5.90	119.00	128.39
62	DZ	704	GDP	C5-C4-N3	-5.86	119.06	128.39
61	BZ	703	FUA	C24-C23-C22	5.35	124.11	112.72
61	DZ	703	FUA	C24-C23-C22	5.34	124.09	112.72
62	BZ	704	GDP	C2-N3-C4	4.99	120.90	112.30
62	DZ	704	GDP	C2-N3-C4	4.81	120.58	112.30
62	DZ	704	GDP	N9-C4-N3	4.63	135.21	125.95
62	BZ	704	GDP	N9-C4-N3	4.41	134.76	125.95
61	BZ	703	FUA	C13-C12-C11	-4.20	105.80	111.90
61	DZ	703	FUA	C13-C12-C11	-4.16	105.85	111.90
61	DZ	703	FUA	C16-O2-C31	-3.97	111.10	117.00
61	BZ	703	FUA	C16-O2-C31	-3.96	111.12	117.00
61	BZ	703	FUA	C8-C9-C10	-3.41	112.76	116.42
61	DZ	703	FUA	C8-C9-C10	-3.36	112.81	116.42
62	DZ	704	GDP	C6-C5-N7	3.32	136.33	130.29
62	DZ	704	GDP	C2'-C1'-N9	-3.22	104.29	113.25
62	BZ	704	GDP	O6-C6-C5	-3.08	118.39	126.53
61	DZ	703	FUA	O2-C31-C32	3.06	116.54	111.09
61	BZ	703	FUA	O2-C31-C32	3.04	116.52	111.09
62	BZ	704	GDP	C6-C5-N7	2.60	135.02	130.29
62	DZ	704	GDP	C4-C5-N7	-2.49	106.72	110.67
62	BZ	704	GDP	C2'-C1'-N9	-2.39	106.59	113.25
62	BZ	704	GDP	C2-N1-C6	-2.32	120.91	125.11
61	DZ	703	FUA	C28-C26-C27	2.25	119.77	114.59
61	BZ	703	FUA	C28-C26-C27	2.24	119.75	114.59
62	BZ	704	GDP	O2A-PA-O3A	2.19	113.19	107.27
61	BZ	703	FUA	C21-C14-C8	-2.16	110.44	112.23
61	DZ	703	FUA	C21-C14-C8	-2.16	110.44	112.23
62	BZ	704	GDP	C5-C6-N1	2.14	118.71	113.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
62	BZ	704	GDP	C2'-C3'-C4'	2.12	106.70	102.61
61	DZ	703	FUA	C10-C5-C4	-2.04	110.72	113.20
62	BZ	704	GDP	C5'-C4'-C3'	-2.04	107.87	115.21
61	BZ	703	FUA	C10-C5-C4	-2.02	110.74	113.20

There are no chirality outliers.

All (20) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
61	BZ	703	FUA	C13-C17-C22-C23
61	BZ	703	FUA	C13-C17-C22-C29
61	DZ	703	FUA	C13-C17-C22-C23
61	DZ	703	FUA	C13-C17-C22-C29
62	BZ	704	GDP	PA-O3A-PB-O3B
62	BZ	704	GDP	C5'-O5'-PA-O1A
61	BZ	703	FUA	C32-C31-O2-C16
61	DZ	703	FUA	C32-C31-O2-C16
61	BZ	703	FUA	O3-C31-O2-C16
61	DZ	703	FUA	O3-C31-O2-C16
62	DZ	704	GDP	O4'-C4'-C5'-O5'
62	DZ	704	GDP	C3'-C4'-C5'-O5'
61	BZ	703	FUA	C29-C22-C23-C24
61	DZ	703	FUA	C29-C22-C23-C24
61	BZ	703	FUA	C17-C22-C23-C24
61	DZ	703	FUA	C17-C22-C23-C24
62	BZ	704	GDP	PA-O3A-PB-O1B
62	BZ	704	GDP	PA-O3A-PB-O2B
61	BZ	703	FUA	C23-C24-C25-C26
61	DZ	703	FUA	C23-C24-C25-C26

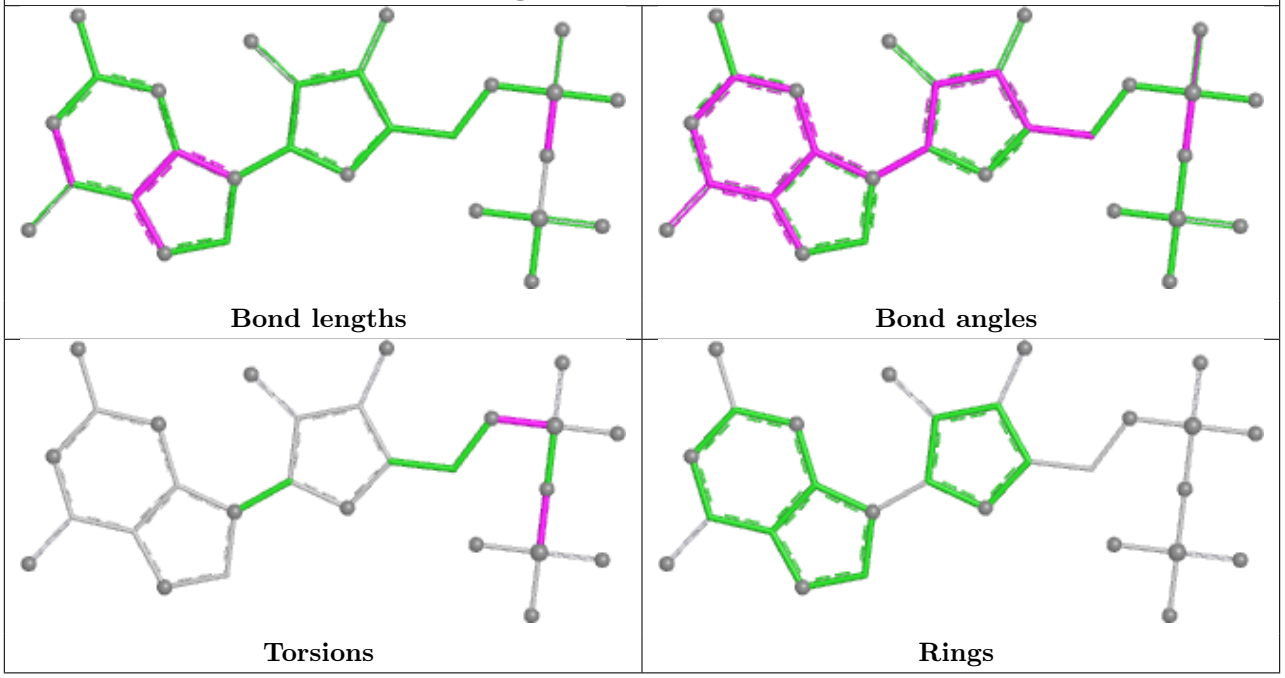
There are no ring outliers.

6 monomers are involved in 45 short contacts:

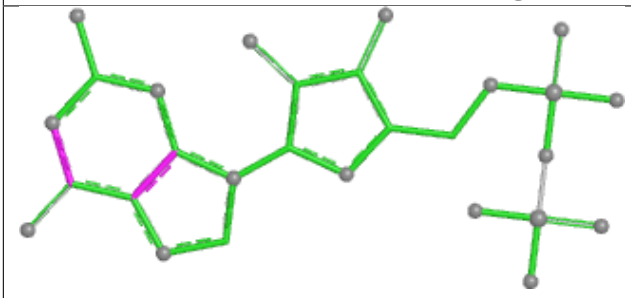
Mol	Chain	Res	Type	Clashes	Symm-Clashes
60	BD	501	SF4	1	0
62	BZ	704	GDP	5	0
62	DZ	704	GDP	9	0
61	DZ	703	FUA	17	0
60	DD	501	SF4	2	0
61	BZ	703	FUA	11	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

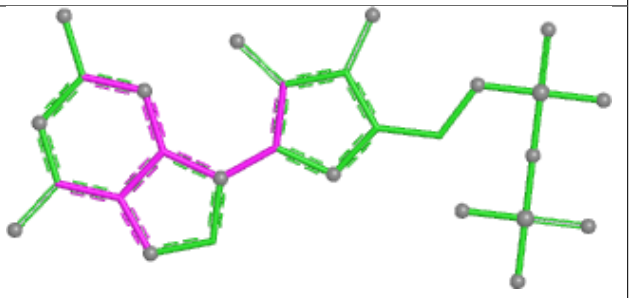
Ligand GDP BZ 704



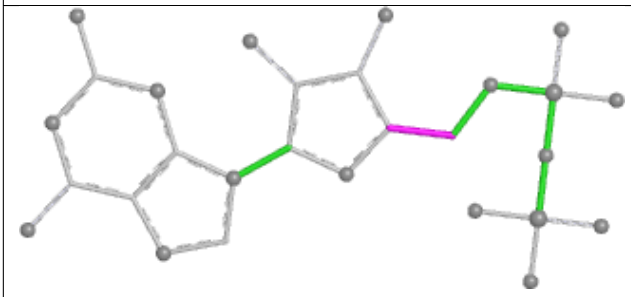
Ligand GDP DZ 704



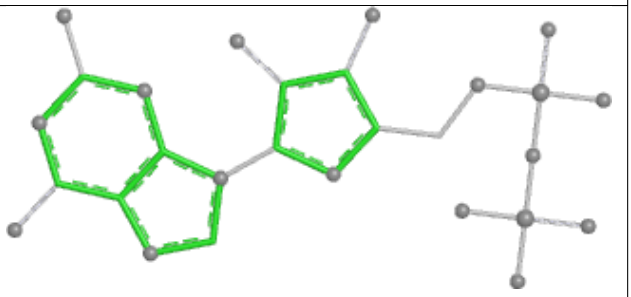
Bond lengths



Bond angles

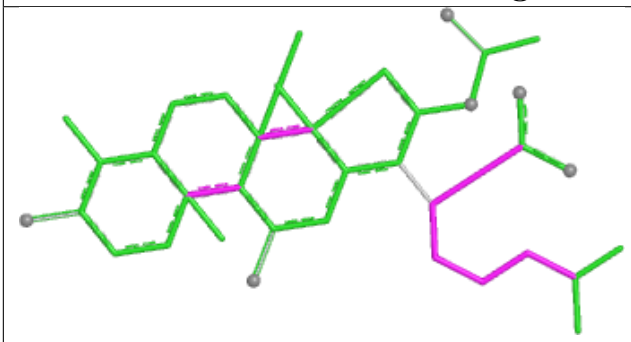


Torsions

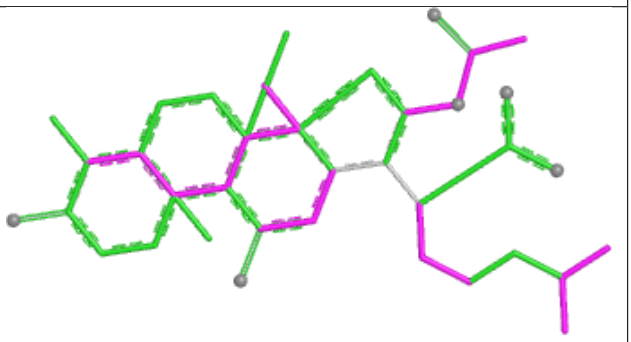


Rings

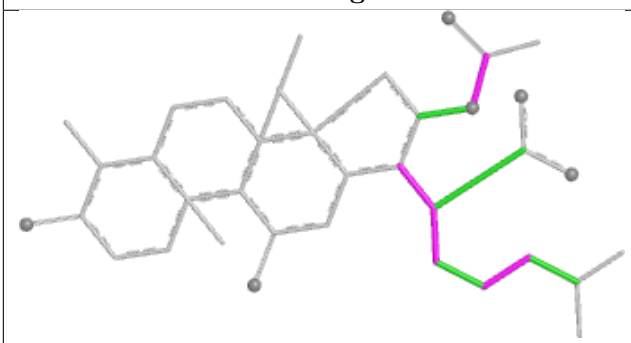
Ligand FUA DZ 703



Bond lengths



Bond angles



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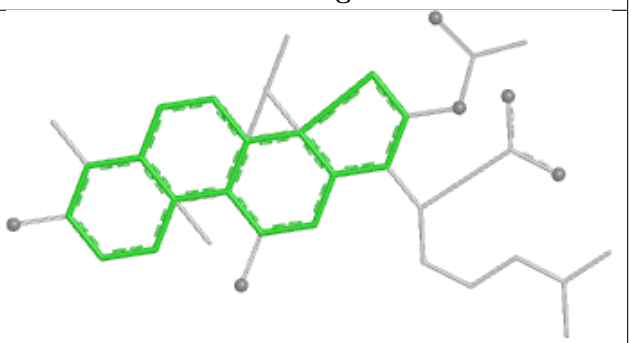
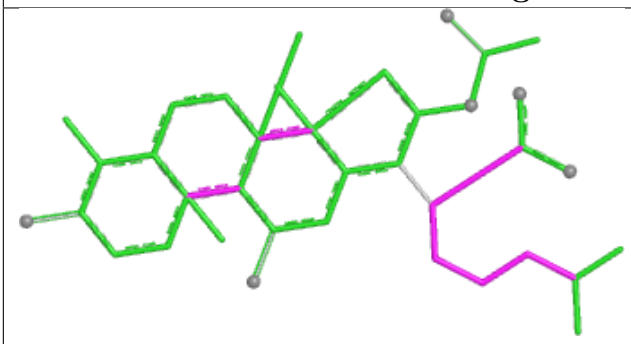
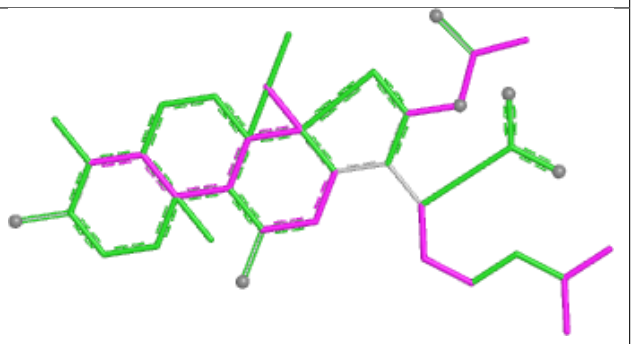


Rings

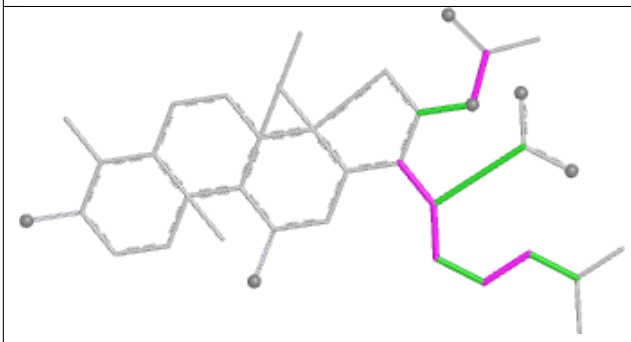
Ligand FUA BZ 703



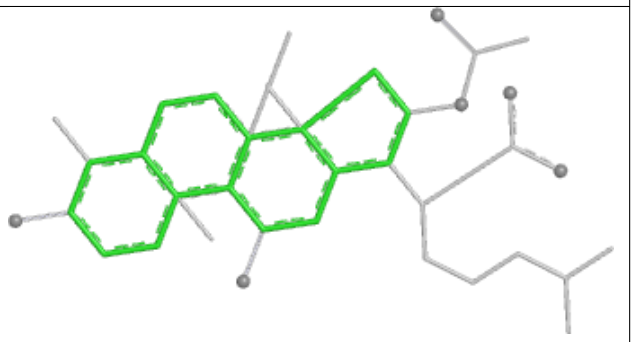
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	2852/2915 (97%)	-0.78	69 (2%) 59 49	14, 33, 136, 352	4 (0%)
1	CA	2848/2915 (97%)	-0.25	85 (2%) 52 42	26, 56, 178, 343	0
2	AB	120/121 (99%)	-0.55	1 (0%) 82 75	22, 48, 72, 108	0
2	CB	120/121 (99%)	0.36	1 (0%) 82 75	61, 90, 117, 168	0
3	AC	137/228 (60%)	2.97	109 (79%) 0 0	258, 289, 307, 313	0
3	CC	137/228 (60%)	2.93	104 (75%) 0 0	281, 312, 331, 336	0
4	AD	275/276 (99%)	-0.48	2 (0%) 84 77	12, 34, 57, 136	0
4	CD	275/276 (99%)	-0.27	4 (1%) 72 63	16, 47, 73, 129	2 (0%)
5	AE	204/206 (99%)	-0.71	0 100 100	5, 33, 55, 75	1 (0%)
5	CE	204/206 (99%)	0.33	7 (3%) 48 39	21, 61, 106, 132	0
6	AF	203/210 (96%)	-0.57	1 (0%) 87 82	10, 35, 76, 172	0
6	CF	203/210 (96%)	0.04	1 (0%) 87 82	21, 62, 106, 154	0
7	AG	181/182 (99%)	0.67	10 (5%) 30 23	31, 76, 134, 206	0
7	CG	181/182 (99%)	1.08	24 (13%) 7 5	72, 110, 174, 203	0
8	AH	174/180 (96%)	-0.32	1 (0%) 85 80	26, 45, 69, 111	0
8	CH	174/180 (96%)	1.22	33 (18%) 3 2	64, 111, 158, 195	0
9	AK	130/173 (75%)	1.59	39 (30%) 1 1	47, 105, 170, 221	0
9	CK	130/173 (75%)	2.14	65 (50%) 0 0	73, 159, 203, 217	0
10	AL	139/147 (94%)	1.79	46 (33%) 1 1	95, 170, 225, 245	0
10	CL	139/147 (94%)	2.30	76 (54%) 0 0	123, 192, 241, 279	1 (0%)
11	AN	140/140 (100%)	-0.72	0 100 100	13, 28, 60, 95	1 (0%)
11	CN	140/140 (100%)	0.37	5 (3%) 46 37	29, 71, 107, 150	0
12	AO	122/122 (100%)	-0.60	0 100 100	16, 37, 62, 76	0
12	CO	122/122 (100%)	0.01	0 100 100	36, 58, 82, 104	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AP	149/150 (99%)	-0.32	0 100 100	10, 42, 79, 102	1 (0%)
13	CP	149/150 (99%)	0.19	4 (2%) 56 46	29, 66, 115, 134	0
14	AQ	141/141 (100%)	-0.59	1 (0%) 84 77	11, 33, 52, 78	0
14	CQ	141/141 (100%)	0.40	7 (4%) 34 26	35, 69, 99, 118	0
15	AR	118/118 (100%)	-0.75	0 100 100	16, 28, 43, 54	0
15	CR	118/118 (100%)	0.15	2 (1%) 69 60	32, 55, 87, 105	0
16	AS	110/112 (98%)	-0.26	0 100 100	28, 49, 79, 91	0
16	CS	110/112 (98%)	0.92	11 (10%) 12 9	43, 83, 119, 152	0
17	AT	131/146 (89%)	-0.35	3 (2%) 61 51	23, 40, 91, 164	0
17	CT	131/146 (89%)	0.28	3 (2%) 61 51	41, 64, 102, 142	0
18	AU	116/118 (98%)	-0.83	0 100 100	8, 22, 36, 89	1 (0%)
18	CU	116/118 (98%)	0.28	0 100 100	26, 64, 91, 105	0
19	AV	101/101 (100%)	-0.90	0 100 100	9, 27, 48, 73	0
19	CV	101/101 (100%)	0.25	0 100 100	34, 79, 112, 171	0
20	AW	112/113 (99%)	-0.81	1 (0%) 81 74	13, 25, 43, 109	1 (0%)
20	CW	112/113 (99%)	-0.14	0 100 100	25, 48, 80, 118	0
21	AX	95/96 (98%)	-0.49	1 (1%) 78 70	16, 34, 66, 97	1 (1%)
21	CX	95/96 (98%)	0.20	5 (5%) 32 24	36, 60, 85, 106	0
22	AY	107/110 (97%)	-0.26	1 (0%) 81 74	24, 43, 86, 156	0
22	CY	107/110 (97%)	0.44	4 (3%) 45 36	45, 74, 115, 162	0
23	AZ	185/206 (89%)	-0.04	2 (1%) 78 70	28, 55, 91, 147	0
23	CZ	185/206 (89%)	0.92	12 (6%) 25 18	59, 105, 148, 213	0
24	A0	83/85 (97%)	-0.20	5 (6%) 27 21	11, 34, 77, 219	0
24	C0	83/85 (97%)	0.63	8 (9%) 13 10	39, 65, 120, 225	0
25	A1	97/98 (98%)	-0.18	2 (2%) 63 54	18, 43, 79, 99	1 (1%)
25	C1	97/98 (98%)	-0.05	3 (3%) 51 41	29, 51, 89, 125	0
26	A2	70/72 (97%)	-0.18	1 (1%) 73 64	25, 42, 67, 123	1 (1%)
26	C2	70/72 (97%)	0.42	3 (4%) 40 31	47, 70, 99, 117	0
27	A3	59/60 (98%)	-0.61	1 (1%) 69 60	13, 30, 55, 98	1 (1%)
27	C3	59/60 (98%)	0.47	2 (3%) 48 39	44, 73, 110, 150	0
28	A4	69/71 (97%)	1.10	13 (18%) 3 2	56, 116, 206, 235	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	C4	69/71 (97%)	1.31	12 (17%) 4 3	78, 159, 204, 220	0
29	A5	59/60 (98%)	-0.87	0 100 100	8, 25, 38, 50	0
29	C5	59/60 (98%)	-0.11	0 100 100	27, 50, 89, 102	0
30	A6	53/54 (98%)	-0.59	0 100 100	23, 40, 52, 71	0
30	C6	53/54 (98%)	-0.04	0 100 100	39, 60, 78, 103	0
31	A7	48/49 (97%)	-0.45	2 (4%) 40 32	13, 24, 69, 131	1 (2%)
31	C7	48/49 (97%)	-0.17	3 (6%) 26 19	24, 38, 95, 117	0
32	A8	64/65 (98%)	-0.64	0 100 100	16, 28, 43, 60	0
32	C8	64/65 (98%)	0.01	1 (1%) 70 61	36, 52, 72, 80	0
33	A9	37/37 (100%)	-0.50	0 100 100	22, 34, 56, 65	1 (2%)
33	C9	37/37 (100%)	0.92	5 (13%) 7 5	44, 77, 96, 126	0
34	BA	1495/1521 (98%)	0.35	42 (2%) 55 45	30, 82, 185, 333	0
34	DA	1501/1521 (98%)	0.41	80 (5%) 32 24	37, 88, 194, 340	0
35	BB	231/256 (90%)	1.09	37 (16%) 5 4	41, 104, 170, 215	0
35	DB	231/256 (90%)	1.26	51 (22%) 2 2	68, 123, 175, 213	0
36	BC	206/239 (86%)	1.07	30 (14%) 6 4	52, 117, 172, 191	0
36	DC	206/239 (86%)	1.22	37 (17%) 3 3	67, 135, 179, 211	0
37	BD	208/209 (99%)	1.19	44 (21%) 2 2	42, 85, 137, 190	0
37	DD	208/209 (99%)	1.15	33 (15%) 5 4	58, 85, 134, 195	0
38	BE	148/162 (91%)	0.42	3 (2%) 65 56	34, 70, 104, 128	0
38	DE	148/162 (91%)	0.50	5 (3%) 48 39	45, 79, 115, 180	0
39	BF	100/101 (99%)	0.58	2 (2%) 65 56	54, 85, 116, 137	0
39	DF	100/101 (99%)	0.56	2 (2%) 65 56	45, 86, 113, 133	0
40	BG	155/156 (99%)	1.07	25 (16%) 4 4	65, 110, 182, 221	0
40	DG	155/156 (99%)	1.41	41 (26%) 1 1	68, 129, 190, 217	0
41	BH	137/138 (99%)	0.33	2 (1%) 72 63	45, 71, 97, 116	0
41	DH	137/138 (99%)	0.60	3 (2%) 62 52	53, 80, 109, 140	0
42	BI	127/128 (99%)	1.70	46 (36%) 1 0	64, 123, 164, 190	0
42	DI	127/128 (99%)	2.26	64 (50%) 0 0	89, 143, 191, 213	0
43	BJ	97/105 (92%)	1.84	40 (41%) 0 0	80, 128, 182, 213	0
43	DJ	96/105 (91%)	1.90	42 (43%) 0 0	91, 149, 196, 225	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	BK	114/129 (88%)	0.51	9 (7%) 18 13	34, 78, 125, 151	0
44	DK	114/129 (88%)	0.54	5 (4%) 39 31	51, 90, 115, 173	0
45	BL	122/132 (92%)	0.18	4 (3%) 49 39	35, 58, 77, 112	0
45	DL	122/132 (92%)	0.52	7 (5%) 29 22	44, 71, 95, 116	0
46	BM	117/126 (92%)	1.61	32 (27%) 1 1	76, 132, 181, 208	0
46	DM	122/126 (96%)	1.85	37 (30%) 1 1	93, 149, 195, 250	0
47	BN	60/61 (98%)	1.82	24 (40%) 1 0	66, 111, 145, 164	0
47	DN	60/61 (98%)	2.81	41 (68%) 0 0	95, 135, 176, 196	0
48	BO	88/89 (98%)	0.36	3 (3%) 48 39	34, 71, 104, 119	0
48	DO	88/89 (98%)	0.37	3 (3%) 48 39	47, 70, 104, 152	0
49	BP	82/88 (93%)	1.07	11 (13%) 7 5	46, 79, 116, 170	0
49	DP	82/88 (93%)	0.93	9 (10%) 10 8	53, 77, 111, 151	0
50	BQ	99/105 (94%)	0.44	3 (3%) 52 42	41, 70, 98, 122	0
50	DQ	99/105 (94%)	0.51	3 (3%) 52 42	42, 77, 104, 118	0
51	BR	68/88 (77%)	0.34	2 (2%) 53 43	42, 79, 122, 135	0
51	DR	68/88 (77%)	0.52	1 (1%) 72 63	52, 82, 127, 143	0
52	BS	84/93 (90%)	2.22	47 (55%) 0 0	94, 143, 191, 207	0
52	DS	83/93 (89%)	2.22	47 (56%) 0 0	86, 163, 214, 226	0
53	BT	96/106 (90%)	1.01	13 (13%) 7 5	60, 84, 121, 158	0
53	DT	96/106 (90%)	0.84	7 (7%) 21 15	56, 85, 134, 157	0
54	BU	23/27 (85%)	3.08	16 (69%) 0 0	58, 118, 156, 174	0
54	DU	23/27 (85%)	2.87	18 (78%) 0 0	92, 132, 170, 187	0
55	BV	7/18 (38%)	2.44	5 (71%) 0 0	51, 85, 207, 222	0
55	DV	6/18 (33%)	2.65	4 (66%) 0 0	82, 102, 210, 222	0
56	BW	69/76 (90%)	-0.10	2 (2%) 53 43	36, 69, 104, 210	0
56	BY	67/76 (88%)	1.61	18 (26%) 1 1	75, 278, 314, 346	0
56	DW	69/76 (90%)	0.29	4 (5%) 29 22	51, 95, 137, 251	0
56	DY	66/76 (86%)	1.72	17 (25%) 1 1	208, 287, 320, 345	0
57	BZ	730/758 (96%)	0.41	28 (3%) 44 35	35, 77, 134, 188	0
57	DZ	730/758 (96%)	0.82	67 (9%) 14 10	35, 99, 164, 218	0
All	All	22825/23898 (95%)	0.27	1917 (8%) 17 12	5, 69, 186, 352	18 (0%)

All (1917) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
46	DM	123	ALA	10.9
46	DM	124	PRO	8.7
47	DN	25	VAL	8.6
24	C0	2	ALA	8.5
9	AK	51	LEU	7.9
47	DN	2	ALA	7.9
46	DM	122	LYS	7.7
24	C0	3	HIS	7.6
24	A0	3	HIS	7.5
42	DI	106	ALA	7.5
38	DE	22	GLY	7.4
8	AH	2	SER	7.3
10	CL	123	ALA	6.9
42	BI	106	ALA	6.9
9	AK	35	LYS	6.4
52	DS	71	LEU	6.4
1	CA	2123	G	6.4
54	BU	23	PRO	6.2
54	BU	18	TYR	6.2
57	DZ	530	VAL	6.1
52	DS	2	PRO	6.0
10	CL	10	LEU	5.9
56	DY	76	A	5.9
3	CC	33	LEU	5.9
40	DG	37	ASN	5.9
22	CY	1	MET	5.9
46	DM	87	TYR	5.9
25	C1	2	SER	5.9
46	DM	121	LYS	5.8
17	AT	131	ALA	5.8
52	BS	56	GLN	5.8
10	AL	116	ASN	5.8
22	AY	1	MET	5.8
42	DI	105	ASP	5.8
1	CA	2124	G	5.7
10	AL	7	VAL	5.7
10	AL	9	LYS	5.7
47	DN	7	ILE	5.7
3	CC	221	PRO	5.6
3	AC	58	ASN	5.6
26	A2	70	GLN	5.6
3	CC	68	GLY	5.6

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Mol	Chain	Res	Type	RSRZ
10	CL	12	LEU	5.6
38	BE	85	GLY	5.6
1	AA	2137	G	5.5
54	DU	14	TRP	5.5
3	AC	30	VAL	5.5
9	AK	53	VAL	5.5
45	DL	18	VAL	5.5
3	CC	190	ILE	5.5
46	BM	100	GLY	5.4
3	AC	44	VAL	5.4
54	BU	9	ARG	5.4
24	A0	7	LEU	5.4
10	CL	8	VAL	5.3
3	AC	174	ALA	5.3
3	AC	190	ILE	5.3
57	DZ	575	VAL	5.3
57	DZ	576	ASP	5.3
47	DN	15	LYS	5.3
42	DI	125	TYR	5.3
3	AC	215	VAL	5.3
43	DJ	73	ASP	5.2
1	CA	2146	C	5.2
3	CC	30	VAL	5.2
9	CK	78	SER	5.2
36	BC	2	GLY	5.2
52	DS	79	THR	5.2
42	DI	73	GLN	5.2
3	CC	27	ALA	5.2
10	CL	9	LYS	5.2
53	BT	9	ASN	5.2
54	BU	16	GLY	5.2
52	BS	2	PRO	5.1
3	AC	200	HIS	5.1
54	BU	17	THR	5.1
3	CC	12	LEU	5.1
3	AC	26	ALA	5.1
3	CC	44	VAL	5.1
42	DI	102	LEU	5.1
24	A0	2	ALA	5.1
57	BZ	530	VAL	5.0
40	BG	83	ALA	5.0
4	AD	275	LYS	5.0

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Mol	Chain	Res	Type	RSRZ
3	AC	164	PHE	5.0
1	CA	2116	G	5.0
37	BD	3	ARG	5.0
54	DU	17	THR	5.0
3	AC	27	ALA	5.0
3	CC	26	ALA	5.0
43	DJ	74	ILE	5.0
10	CL	127	ILE	4.9
42	DI	18	PHE	4.9
42	DI	42	ARG	4.9
52	BS	71	LEU	4.9
9	CK	96	PHE	4.9
3	CC	37	LYS	4.9
42	DI	66	ARG	4.9
9	CK	53	VAL	4.9
46	DM	117	VAL	4.9
40	DG	16	LEU	4.9
43	BJ	77	PRO	4.8
40	BG	80	VAL	4.8
1	AA	2139	A	4.8
57	DZ	507	TYR	4.8
10	CL	115	LEU	4.8
37	DD	154	ASN	4.8
34	DA	1320	C	4.8
40	DG	83	ALA	4.8
57	DZ	574	GLU	4.8
3	AC	33	LEU	4.8
10	CL	11	GLN	4.8
47	DN	22	THR	4.8
3	AC	221	PRO	4.8
36	BC	207	VAL	4.7
55	DV	13	A	4.7
3	AC	37	LYS	4.7
24	C0	7	LEU	4.7
57	BZ	268	GLY	4.7
46	DM	6	GLY	4.7
47	DN	10	ALA	4.7
3	CC	213	VAL	4.7
45	BL	18	VAL	4.7
13	CP	76	LYS	4.7
31	A7	47	ARG	4.7
47	BN	7	ILE	4.7

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Mol	Chain	Res	Type	RSRZ
28	C4	56	VAL	4.7
47	DN	6	LEU	4.6
10	AL	52	ILE	4.6
57	BZ	504	ARG	4.6
3	CC	223	VAL	4.6
9	CK	7	VAL	4.6
46	DM	98	VAL	4.6
54	DU	18	TYR	4.6
47	DN	39	LEU	4.6
54	DU	23	PRO	4.6
3	CC	194	ILE	4.6
35	DB	222	ILE	4.6
3	AC	166	ASN	4.6
10	AL	16	LYS	4.6
47	DN	13	THR	4.6
3	AC	69	LEU	4.6
9	CK	51	LEU	4.6
47	DN	31	ARG	4.6
54	DU	15	ARG	4.6
1	AA	2138	G	4.6
10	AL	13	PRO	4.6
3	AC	4	HIS	4.5
52	DS	76	PRO	4.5
3	CC	4	HIS	4.5
3	CC	164	PHE	4.5
9	AK	74	LEU	4.5
36	BC	152	ILE	4.5
56	DY	34	G	4.5
9	CK	6	ASN	4.5
3	AC	162	ILE	4.4
1	AA	2135	U	4.4
3	CC	222	SER	4.4
10	AL	22	PRO	4.4
10	CL	25	PRO	4.4
17	AT	130	ALA	4.4
48	BO	2	PRO	4.4
9	CK	89	ALA	4.4
35	DB	97	TRP	4.4
43	DJ	47	PHE	4.4
52	BS	74	PHE	4.4
1	CA	2147	G	4.4
54	DU	4	GLY	4.4

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Mol	Chain	Res	Type	RSRZ
3	AC	210	LEU	4.4
3	CC	29	LEU	4.4
52	BS	76	PRO	4.4
3	AC	198	GLU	4.3
3	CC	69	LEU	4.3
46	DM	88	ARG	4.3
40	DG	27	ILE	4.3
3	CC	35	THR	4.3
28	A4	57	GLU	4.3
10	AL	12	LEU	4.3
3	CC	15	VAL	4.3
43	DJ	72	VAL	4.3
44	DK	126	ARG	4.3
53	BT	11	SER	4.3
46	DM	113	PRO	4.3
35	DB	99	GLY	4.3
37	BD	153	ARG	4.3
36	BC	37	GLN	4.3
38	DE	10	MET	4.3
3	CC	215	VAL	4.3
9	CK	50	ARG	4.3
36	BC	200	ALA	4.3
46	DM	118	ALA	4.3
25	A1	2	SER	4.2
52	DS	69	HIS	4.2
9	AK	49	ALA	4.2
3	AC	197	LEU	4.2
43	BJ	76	ASN	4.2
10	CL	23	VAL	4.2
3	CC	65	LEU	4.2
40	BG	34	GLY	4.2
1	AA	2152	U	4.2
31	C7	48	LYS	4.2
57	BZ	572	TYR	4.2
9	AK	87	VAL	4.2
52	DS	9	VAL	4.2
35	BB	228	GLY	4.2
56	BY	34	G	4.2
16	CS	61	ASN	4.2
35	DB	136	VAL	4.2
40	DG	80	VAL	4.2
3	CC	189	ASN	4.1

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Mol	Chain	Res	Type	RSRZ
36	DC	152	ILE	4.1
10	CL	18	THR	4.1
52	BS	78	ARG	4.1
56	BY	74	C	4.1
3	CC	186	LEU	4.1
40	DG	38	LEU	4.1
3	AC	59	VAL	4.1
56	BW	44	G	4.1
3	CC	174	ALA	4.1
24	A0	6	GLY	4.1
57	DZ	379	GLY	4.1
56	BY	75	C	4.1
3	CC	210	LEU	4.1
3	CC	179	ALA	4.1
57	DZ	529	ILE	4.1
46	DM	80	ARG	4.1
1	AA	2163	G	4.1
40	DG	33	ASP	4.0
56	DY	36	A	4.0
37	BD	181	MET	4.0
3	AC	160	GLY	4.0
35	DB	137	ARG	4.0
3	AC	213	VAL	4.0
10	CL	7	VAL	4.0
3	CC	14	LYS	4.0
46	DM	107	ALA	4.0
47	BN	15	LYS	4.0
34	BA	1286	A	4.0
3	AC	65	LEU	4.0
57	DZ	573	HIS	4.0
57	DZ	536	LYS	4.0
43	DJ	6	ILE	4.0
36	DC	158	GLY	4.0
3	AC	71	LYS	4.0
46	BM	96	LEU	4.0
56	BY	35	A	4.0
56	DY	1	G	4.0
3	CC	197	LEU	3.9
46	BM	23	TYR	3.9
57	DZ	538	TYR	3.9
52	DS	35	SER	3.9
57	DZ	401	SER	3.9

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Mol	Chain	Res	Type	RSRZ
35	BB	131	PRO	3.9
9	CK	62	ALA	3.9
34	DA	1190	G	3.9
56	BY	1	G	3.9
56	BY	18	G	3.9
10	CL	120	LEU	3.9
40	BG	12	LEU	3.9
52	BS	15	LEU	3.9
4	CD	276	LYS	3.9
31	A7	48	LYS	3.9
43	BJ	50	ILE	3.9
47	DN	19	ARG	3.9
35	DB	187	LEU	3.9
41	DH	99	GLU	3.9
1	AA	2169	G	3.9
40	DG	84	ASN	3.9
53	DT	9	ASN	3.9
9	CK	83	TYR	3.9
3	CC	175	PRO	3.9
47	BN	3	ARG	3.9
42	DI	30	GLY	3.9
54	BU	4	GLY	3.9
3	AC	186	LEU	3.9
10	AL	10	LEU	3.9
3	AC	57	GLN	3.9
3	CC	20	VAL	3.9
56	DY	18	G	3.9
3	AC	175	PRO	3.9
9	CK	38	HIS	3.9
37	DD	5	ILE	3.9
3	AC	167	ASP	3.8
3	AC	194	ILE	3.8
3	CC	8	TYR	3.8
37	DD	73	ARG	3.8
52	BS	57	HIS	3.8
52	DS	49	ILE	3.8
34	DA	1202	G	3.8
3	CC	42	VAL	3.8
42	BI	41	VAL	3.8
55	DV	15	A	3.8
3	AC	17	PRO	3.8
3	AC	67	HIS	3.8

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Mol	Chain	Res	Type	RSRZ
46	BM	97	PRO	3.8
24	C0	4	LYS	3.8
3	AC	12	LEU	3.8
3	AC	208	THR	3.8
40	DG	77	SER	3.8
42	DI	109	VAL	3.8
10	CL	34	ILE	3.8
36	BC	39	ILE	3.8
10	CL	22	PRO	3.8
10	CL	17	ALA	3.8
10	CL	37	PHE	3.8
46	BM	4	ILE	3.8
57	DZ	255	ILE	3.8
10	CL	13	PRO	3.8
10	CL	19	PRO	3.8
1	CA	2122	U	3.8
3	AC	196	ALA	3.8
3	CC	159	ALA	3.8
10	CL	20	ALA	3.8
1	CA	2117	A	3.8
52	DS	16	LEU	3.8
9	CK	36	GLU	3.7
33	C9	6	SER	3.7
4	AD	276	LYS	3.7
3	CC	182	PRO	3.7
34	BA	1190	G	3.7
54	DU	16	GLY	3.7
9	CK	37	THR	3.7
13	CP	15	ARG	3.7
37	BD	100	ARG	3.7
54	BU	15	ARG	3.7
52	DS	51	VAL	3.7
3	CC	23	ILE	3.7
10	AL	26	ALA	3.7
37	BD	11	LEU	3.7
9	AK	24	PHE	3.7
9	CK	41	ARG	3.7
40	DG	32	ARG	3.7
40	DG	36	LYS	3.7
3	AC	55	SER	3.7
46	BM	34	LEU	3.7
52	DS	75	ALA	3.7

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Mol	Chain	Res	Type	RSRZ
1	CA	2105	C	3.7
55	BV	13	A	3.7
34	BA	1353	G	3.7
56	DY	15	G	3.7
3	AC	189	ASN	3.7
47	DN	34	TYR	3.7
49	BP	25	ARG	3.7
42	DI	64	THR	3.7
47	DN	32	SER	3.6
34	BA	1350	A	3.6
56	DY	35	A	3.6
42	BI	2	GLU	3.6
42	BI	35	GLU	3.6
42	DI	62	TYR	3.6
43	DJ	76	ASN	3.6
3	CC	41	THR	3.6
3	AC	64	SER	3.6
43	DJ	59	SER	3.6
42	DI	9	ARG	3.6
3	CC	193	PHE	3.6
42	DI	12	GLU	3.6
1	CA	1533	G	3.6
7	CG	159	VAL	3.6
42	DI	43	ALA	3.6
42	DI	45	ALA	3.6
52	BS	75	ALA	3.6
9	CK	55	LYS	3.6
54	DU	3	LYS	3.6
3	CC	160	GLY	3.6
57	BZ	570	GLY	3.6
1	CA	2129	C	3.6
1	AA	2141	A	3.6
34	DA	977	A	3.6
56	BY	36	A	3.6
42	DI	108	VAL	3.6
40	DG	99	LEU	3.6
40	DG	76	ARG	3.6
57	DZ	498	ILE	3.6
9	CK	115	GLN	3.5
31	C7	47	ARG	3.5
40	DG	11	GLN	3.5
1	AA	2182	G	3.5

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Mol	Chain	Res	Type	RSRZ
1	CA	2121	G	3.5
9	AK	25	PHE	3.5
57	DZ	16	GLY	3.5
42	BI	108	VAL	3.5
42	DI	14	VAL	3.5
9	CK	28	ASN	3.5
42	DI	103	THR	3.5
44	BK	51	LYS	3.5
52	BS	59	PRO	3.5
35	DB	175	ARG	3.5
10	AL	37	PHE	3.5
43	BJ	54	PHE	3.5
3	CC	172	ILE	3.5
43	DJ	50	ILE	3.5
8	CH	26	VAL	3.5
36	DC	207	VAL	3.5
1	CA	2112	G	3.5
45	DL	126	LYS	3.5
3	CC	183	PRO	3.5
57	BZ	538	TYR	3.5
37	BD	154	ASN	3.5
43	BJ	69	ASN	3.5
3	CC	173	HIS	3.5
10	AL	11	GLN	3.5
55	BV	12	A	3.5
43	BJ	4	ILE	3.5
37	DD	23	GLY	3.5
57	DZ	531	GLY	3.5
43	DJ	49	VAL	3.5
3	AC	25	GLU	3.5
3	CC	11	LEU	3.5
8	CH	88	LEU	3.5
43	BJ	85	LEU	3.5
3	CC	17	PRO	3.5
9	CK	85	ASP	3.5
42	DI	123	PRO	3.5
3	AC	165	ARG	3.5
3	CC	21	TYR	3.5
45	BL	89	ARG	3.5
57	BZ	499	ARG	3.5
3	CC	67	HIS	3.5
34	DA	1224	G	3.5

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Mol	Chain	Res	Type	RSRZ
46	BM	2	ALA	3.5
9	CK	24	PHE	3.5
9	CK	82	PHE	3.5
3	AC	70	GLY	3.5
7	CG	152	LEU	3.5
42	DI	118	LYS	3.5
52	BS	30	LEU	3.5
42	BI	126	SER	3.5
40	DG	5	ARG	3.5
35	BB	97	TRP	3.5
42	BI	114	TYR	3.5
3	AC	199	ALA	3.5
3	CC	181	PHE	3.4
46	DM	86	CYS	3.4
57	DZ	665	GLY	3.4
1	CA	1536	C	3.4
25	C1	26	ARG	3.4
3	AC	222	SER	3.4
52	BS	13	ASP	3.4
3	CC	208	THR	3.4
10	CL	128	ALA	3.4
42	BI	64	THR	3.4
47	BN	20	ALA	3.4
47	DN	20	ALA	3.4
3	CC	162	ILE	3.4
3	AC	63	VAL	3.4
37	BD	194	LEU	3.4
47	DN	46	GLU	3.4
43	BJ	46	ARG	3.4
54	BU	10	ARG	3.4
3	AC	52	PRO	3.4
10	CL	54	PRO	3.4
34	DA	1092	A	3.4
43	DJ	37	PRO	3.4
46	DM	97	PRO	3.4
52	BS	4	SER	3.4
43	BJ	62	HIS	3.4
47	BN	2	ALA	3.4
3	AC	23	ILE	3.4
35	DB	201	ILE	3.4
42	BI	127	LYS	3.4
47	DN	17	LYS	3.4

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Mol	Chain	Res	Type	RSRZ
8	CH	43	VAL	3.4
28	A4	56	VAL	3.4
36	BC	91	LEU	3.4
3	AC	173	HIS	3.4
9	CK	34	ALA	3.4
28	C4	66	SER	3.4
42	BI	46	ALA	3.4
42	BI	61	ALA	3.4
10	CL	114	ASP	3.4
24	C0	5	LYS	3.4
42	BI	11	LYS	3.4
46	BM	87	TYR	3.4
46	DM	120	LYS	3.4
9	CK	25	PHE	3.4
40	BG	101	LEU	3.4
43	DJ	65	LEU	3.4
46	BM	102	ARG	3.4
37	DD	37	PRO	3.4
10	CL	40	ALA	3.4
7	CG	76	SER	3.4
42	BI	95	LYS	3.4
42	DI	81	ILE	3.4
9	CK	57	THR	3.4
42	DI	27	THR	3.4
7	AG	53	LEU	3.3
8	CH	105	LEU	3.3
42	BI	102	LEU	3.3
3	AC	20	VAL	3.3
10	AL	8	VAL	3.3
34	DA	1033	G	3.3
42	DI	115	GLY	3.3
47	DN	38	GLY	3.3
5	CE	58	ARG	3.3
10	CL	21	PRO	3.3
45	DL	94	PRO	3.3
3	AC	206	LYS	3.3
42	DI	101	PHE	3.3
43	BJ	33	GLN	3.3
10	CL	96	VAL	3.3
37	BD	77	ASN	3.3
40	BG	82	GLY	3.3
43	BJ	43	ARG	3.3

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Mol	Chain	Res	Type	RSRZ
46	BM	80	ARG	3.3
47	BN	35	ARG	3.3
49	BP	81	ARG	3.3
34	BA	1030(B)	C	3.3
10	CL	41	PHE	3.3
36	DC	87	LEU	3.3
37	BD	21	LEU	3.3
3	CC	180	SER	3.3
10	CL	55	VAL	3.3
46	BM	94	ARG	3.3
43	DJ	36	GLY	3.3
10	AL	21	PRO	3.3
1	AA	2165	C	3.3
1	CA	2127	G	3.3
3	AC	193	PHE	3.3
46	BM	98	VAL	3.3
47	BN	13	THR	3.3
53	DT	25	ARG	3.3
57	BZ	533	VAL	3.3
37	BD	23	GLY	3.3
45	DL	116	SER	3.3
46	BM	95	GLY	3.3
28	C4	63	TYR	3.3
36	BC	206	GLU	3.3
42	DI	49	PRO	3.3
1	AA	2136	A	3.3
35	BB	127	ILE	3.3
3	AC	179	ALA	3.3
46	DM	5	ALA	3.3
57	DZ	504	ARG	3.3
3	AC	15	VAL	3.3
42	BI	17	VAL	3.3
7	CG	146	TYR	3.2
37	BD	179	GLU	3.2
35	BB	125	PRO	3.2
53	BT	73	HIS	3.2
23	CZ	80	ARG	3.2
37	BD	159	ARG	3.2
42	DI	33	PHE	3.2
56	BY	73	A	3.2
10	CL	68	VAL	3.2
42	BI	53	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
57	DZ	411	VAL	3.2
1	AA	2168	C	3.2
1	CA	34	C	3.2
1	CA	2111	C	3.2
3	AC	177	GLY	3.2
10	AL	15	GLY	3.2
37	DD	2	GLY	3.2
42	DI	7	THR	3.2
42	DI	68	GLY	3.2
52	DS	77	THR	3.2
54	BU	14	TRP	3.2
37	BD	163	GLU	3.2
52	BS	12	ASP	3.2
1	CA	2159	G	3.2
34	BA	1003	G	3.2
34	DA	630	G	3.2
52	BS	31	ILE	3.2
37	BD	120	LEU	3.2
54	BU	22	ARG	3.2
34	DA	1183	A	3.2
3	AC	68	GLY	3.2
52	BS	72	GLY	3.2
42	DI	2	GLU	3.2
36	DC	184	TYR	3.2
57	BZ	415	PRO	3.2
52	DS	31	ILE	3.2
9	AK	50	ARG	3.2
36	DC	129	ALA	3.2
35	BB	140	HIS	3.2
35	DB	7	VAL	3.2
52	DS	67	VAL	3.2
13	CP	109	GLY	3.2
42	BI	39	GLY	3.2
35	DB	170	GLU	3.2
49	DP	48	TRP	3.2
3	AC	66	PRO	3.2
37	DD	39	PRO	3.2
37	BD	113	SER	3.2
40	DG	85	TYR	3.2
42	BI	125	TYR	3.2
57	BZ	39	ILE	3.2
22	CY	107	ASP	3.2

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Mol	Chain	Res	Type	RSRZ
37	BD	144	ASP	3.2
3	AC	11	LEU	3.2
3	CC	166	ASN	3.2
10	AL	27	LEU	3.2
40	BG	84	ASN	3.2
9	CK	49	ALA	3.2
35	DB	177	ALA	3.2
42	DI	121	ARG	3.2
47	BN	25	VAL	3.2
1	CA	1171	G	3.2
47	DN	51	GLY	3.2
35	DB	231	GLU	3.2
46	BM	113	PRO	3.2
1	AA	2156	A	3.1
9	AK	40	LEU	3.1
28	C4	67	TYR	3.1
34	BA	1447	A	3.1
55	DV	14	A	3.1
40	BG	4	ARG	3.1
42	DI	104	ARG	3.1
57	DZ	567	LEU	3.1
3	CC	34	ALA	3.1
3	AC	209	PHE	3.1
28	C4	49	PHE	3.1
52	BS	85	LYS	3.1
42	DI	65	VAL	3.1
56	DY	75	C	3.1
3	AC	22	THR	3.1
27	C3	2	PRO	3.1
48	DO	3	ILE	3.1
57	DZ	402	ILE	3.1
3	CC	53	ARG	3.1
34	DA	1032	G	3.1
43	DJ	71	LEU	3.1
9	AK	56	ASN	3.1
43	BJ	47	PHE	3.1
10	CL	5	VAL	3.1
1	CA	2113	U	3.1
1	CA	2161	C	3.1
56	DW	40	C	3.1
54	BU	13	ILE	3.1
9	CK	33	PRO	3.1

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Mol	Chain	Res	Type	RSRZ
47	BN	41	ARG	3.1
36	BC	199	LYS	3.1
40	DG	156	TRP	3.1
17	CT	130	ALA	3.1
43	DJ	32	ALA	3.1
1	CA	2115	G	3.1
34	BA	630	G	3.1
34	BA	1360	A	3.1
1	CA	2144	U	3.1
7	CG	42	GLY	3.1
35	BB	12	GLU	3.1
36	BC	14	ILE	3.1
43	BJ	98	ILE	3.1
1	AA	2167	C	3.1
3	CC	52	PRO	3.1
28	A4	52	THR	3.1
56	DY	72	C	3.1
57	BZ	229	LEU	3.1
57	BZ	419	ALA	3.1
42	DI	86	VAL	3.1
37	DD	161	ASN	3.1
52	DS	13	ASP	3.1
52	DS	66	MET	3.1
36	DC	155	GLY	3.1
1	AA	572	A	3.1
1	AA	2134	G	3.1
1	CA	2104	G	3.1
56	BY	15	G	3.1
37	DD	118	ARG	3.1
53	BT	22	ARG	3.1
9	CK	86	PRO	3.1
35	DB	44	LEU	3.1
42	DI	21	PRO	3.1
57	DZ	422	GLU	3.1
43	BJ	81	THR	3.1
3	AC	171	ALA	3.0
40	BG	118	VAL	3.0
42	DI	37	PHE	3.0
9	CK	47	ASN	3.0
28	C4	51	ASP	3.0
3	CC	225	ILE	3.0
42	BI	66	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
52	DS	37	ARG	3.0
54	DU	9	ARG	3.0
8	CH	13	LYS	3.0
9	AK	102	LYS	3.0
1	CA	1026	U	3.0
34	BA	1183	A	3.0
10	CL	108	ALA	3.0
3	CC	59	VAL	3.0
1	AA	2210	C	3.0
9	AK	83	TYR	3.0
34	BA	1320	C	3.0
34	DA	1223	C	3.0
36	DC	29	TYR	3.0
3	AC	172	ILE	3.0
14	CQ	6	ARG	3.0
36	DC	171	GLY	3.0
37	DD	167	GLY	3.0
35	DB	133	LYS	3.0
43	BJ	60	ARG	3.0
43	BJ	74	ILE	3.0
46	DM	112	GLY	3.0
52	DS	82	GLY	3.0
9	AK	86	PRO	3.0
47	DN	8	GLU	3.0
52	DS	33	THR	3.0
42	DI	15	ALA	3.0
43	DJ	20	ALA	3.0
57	DZ	626	ALA	3.0
3	CC	209	PHE	3.0
42	BI	14	VAL	3.0
43	DJ	54	PHE	3.0
47	DN	49	HIS	3.0
57	DZ	174	PHE	3.0
1	AA	2188	G	3.0
1	CA	2133	G	3.0
1	CA	2160	G	3.0
10	CL	101	TRP	3.0
1	AA	2200	C	3.0
23	CZ	156	LYS	3.0
42	DI	11	LYS	3.0
52	BS	68	GLY	3.0
56	DY	74	C	3.0

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Mol	Chain	Res	Type	RSRZ
57	DZ	39	ILE	3.0
40	DG	101	LEU	3.0
52	BS	48	THR	3.0
43	BJ	32	ALA	3.0
46	BM	28	ALA	3.0
56	BY	20	U	3.0
35	BB	7	VAL	3.0
52	BS	10	PHE	3.0
10	AL	101	TRP	3.0
40	BG	156	TRP	3.0
3	CC	71	LYS	3.0
10	CL	2	LYS	3.0
40	DG	29	LYS	3.0
45	BL	126	LYS	3.0
10	CL	105	LEU	3.0
35	BB	10	LEU	3.0
57	DZ	86	GLY	3.0
1	CA	2318	G	3.0
34	BA	1224	G	3.0
3	CC	16	ASP	3.0
7	CG	147	ASP	3.0
1	AA	34	C	3.0
1	AA	2151	C	3.0
9	CK	77	PRO	3.0
10	AL	56	GLU	3.0
37	BD	24	GLU	3.0
3	CC	216	THR	3.0
28	C4	50	VAL	3.0
35	DB	163	PHE	3.0
47	DN	33	VAL	3.0
46	BM	92	HIS	3.0
47	BN	12	ARG	2.9
52	DS	40	ILE	2.9
46	BM	6	GLY	2.9
9	AK	6	ASN	2.9
9	CK	56	ASN	2.9
9	CK	84	GLU	2.9
10	CL	116	ASN	2.9
37	DD	152	SER	2.9
3	AC	201	LYS	2.9
42	DI	113	LYS	2.9
15	CR	68	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
16	CS	3	ARG	2.9
7	CG	77	ILE	2.9
8	CH	33	LEU	2.9
10	CL	27	LEU	2.9
35	DB	215	LEU	2.9
43	DJ	85	LEU	2.9
47	BN	6	LEU	2.9
9	CK	114	GLY	2.9
14	CQ	100	GLY	2.9
42	DI	67	GLY	2.9
48	BO	89	GLY	2.9
1	CA	2135	A	2.9
56	DY	38	A	2.9
3	CC	58	ASN	2.9
40	DG	28	ASN	2.9
9	AK	88	ALA	2.9
9	CK	79	ALA	2.9
10	CL	124	ALA	2.9
40	DG	9	VAL	2.9
52	DS	41	VAL	2.9
40	DG	35	LYS	2.9
1	CA	2789	C	2.9
34	DA	970	C	2.9
34	DA	1116	C	2.9
56	BW	17	C	2.9
1	AA	2181	G	2.9
49	DP	19	ILE	2.9
36	DC	34	LEU	2.9
3	CC	220	GLY	2.9
7	CG	65	GLY	2.9
10	CL	15	GLY	2.9
3	AC	8	TYR	2.9
40	BG	44	TYR	2.9
3	AC	183	PRO	2.9
43	BJ	61	GLU	2.9
1	CA	2169	A	2.9
3	CC	167	ASP	2.9
37	BD	102	ASP	2.9
3	AC	14	LYS	2.9
9	AK	89	ALA	2.9
44	BK	14	VAL	2.9
4	CD	262	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
22	CY	44	ILE	2.9
35	BB	201	ILE	2.9
36	DC	39	ILE	2.9
52	BS	49	ILE	2.9
9	CK	40	LEU	2.9
42	DI	79	LEU	2.9
43	BJ	40	LEU	2.9
1	AA	935	C	2.9
1	AA	2129	C	2.9
10	CL	24	GLY	2.9
34	DA	1234	C	2.9
34	DA	1364	U	2.9
36	DC	41	GLY	2.9
53	BT	69	GLY	2.9
56	DY	33	U	2.9
1	AA	2143	G	2.9
1	CA	2162	G	2.9
49	DP	82	GLN	2.9
10	AL	112	MET	2.9
40	BG	85	TYR	2.9
47	DN	50	LYS	2.9
9	AK	27	VAL	2.9
10	AL	23	VAL	2.9
10	CL	44	ALA	2.9
35	BB	136	VAL	2.9
57	BZ	420	ASP	2.9
3	AC	53	ARG	2.9
46	DM	99	ARG	2.9
53	DT	11	SER	2.9
3	AC	216	THR	2.9
36	DC	192	THR	2.9
36	BC	32	LEU	2.9
43	BJ	8	LEU	2.9
28	A4	17	GLY	2.8
37	DD	87	GLY	2.8
3	AC	182	PRO	2.8
26	C2	1	MET	2.8
49	BP	38	TYR	2.8
34	DA	1370	G	2.8
8	CH	97	ARG	2.8
33	C9	18	ARG	2.8
35	DB	161	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
36	DC	3	ASN	2.8
37	BD	118	ARG	2.8
43	DJ	46	ARG	2.8
47	DN	30	ALA	2.8
3	CC	55	SER	2.8
42	DI	126	SER	2.8
16	CS	58	LEU	2.8
43	BJ	100	THR	2.8
43	DJ	40	LEU	2.8
46	BM	63	THR	2.8
52	DS	30	LEU	2.8
1	CA	2134	A	2.8
34	DA	1286	A	2.8
55	BV	15	A	2.8
3	CC	177	GLY	2.8
3	CC	227	PRO	2.8
43	BJ	41	PRO	2.8
3	CC	163	GLU	2.8
32	C8	56	GLU	2.8
35	DB	134	GLU	2.8
40	DG	154	TYR	2.8
42	DI	5	TYR	2.8
1	CA	645	C	2.8
1	CA	2175	C	2.8
3	CC	192	ALA	2.8
9	AK	90	ALA	2.8
34	DA	1363	C	2.8
35	DB	21	ARG	2.8
36	DC	137	ALA	2.8
36	DC	160	ALA	2.8
42	DI	17	VAL	2.8
47	DN	26	ARG	2.8
5	CE	121	ASN	2.8
40	BG	37	ASN	2.8
9	CK	111	LEU	2.8
43	BJ	73	ASP	2.8
34	DA	1117	G	2.8
34	DA	1353	G	2.8
34	DA	1531	A	2.8
35	DB	144	ARG	2.8
42	DI	114	TYR	2.8
42	DI	128	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
47	DN	29	ARG	2.8
1	AA	271	U	2.8
36	DC	168	ALA	2.8
9	CK	32	LEU	2.8
37	BD	162	LEU	2.8
42	DI	77	ILE	2.8
34	BA	1317	C	2.8
34	BA	1352	C	2.8
3	CC	217	THR	2.8
52	DS	4	SER	2.8
53	BT	14	LYS	2.8
46	BM	85	GLY	2.8
47	DN	28	GLY	2.8
1	CA	2833	G	2.8
34	BA	383	A	2.8
35	BB	93	VAL	2.8
3	CC	46	ALA	2.8
9	AK	52	PHE	2.8
9	AK	54	ALA	2.8
42	BI	76	ALA	2.8
57	BZ	231	TYR	2.8
7	AG	144	ILE	2.8
35	DB	41	ILE	2.8
36	DC	157	ILE	2.8
46	BM	90	LEU	2.8
49	BP	6	LEU	2.8
3	AC	24	ASP	2.8
3	AC	6	LYS	2.8
4	CD	275	LYS	2.8
11	CN	1	MET	2.8
35	BB	189	ASP	2.8
49	BP	68	ASP	2.8
1	AA	2162	C	2.8
36	BC	154	SER	2.8
42	BI	68	GLY	2.8
3	CC	7	ARG	2.7
37	DD	163	GLU	2.7
42	DI	120	ARG	2.7
54	DU	24	ARG	2.7
35	BB	165	VAL	2.7
47	DN	56	VAL	2.7
49	BP	62	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
52	DS	60	VAL	2.7
3	CC	187	ALA	2.7
1	AA	2155	G	2.7
3	AC	214	TYR	2.7
3	CC	48	LEU	2.7
10	AL	60	TYR	2.7
35	DB	11	LEU	2.7
56	BY	19	G	2.7
1	AA	2172	U	2.7
3	CC	178	LYS	2.7
3	AC	218	THR	2.7
8	CH	63	SER	2.7
36	DC	13	GLY	2.7
46	BM	93	ARG	2.7
52	BS	37	ARG	2.7
1	CA	2174	C	2.7
10	CL	4	VAL	2.7
10	AL	44	ALA	2.7
35	BB	154	LEU	2.7
39	BF	21	LEU	2.7
43	BJ	65	LEU	2.7
46	DM	56	LEU	2.7
47	DN	53	LEU	2.7
37	DD	20	TYR	2.7
1	AA	2191	A	2.7
1	CA	652(B)	A	2.7
14	CQ	22	LYS	2.7
34	DA	975	A	2.7
43	BJ	55	LYS	2.7
44	DK	77	MET	2.7
34	DA	1310	G	2.7
10	CL	71	THR	2.7
46	BM	103	THR	2.7
3	AC	56	ASP	2.7
10	CL	72	PRO	2.7
47	DN	14	PRO	2.7
49	DP	81	ARG	2.7
52	BS	38	SER	2.7
37	DD	156	GLU	2.7
37	DD	148	VAL	2.7
43	BJ	34	VAL	2.7
52	BS	9	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
57	DZ	404	VAL	2.7
1	AA	2130	C	2.7
1	AA	2133	C	2.7
3	AC	48	LEU	2.7
7	AG	50	ALA	2.7
49	DP	9	PHE	2.7
8	CH	175	LYS	2.7
35	BB	132	LYS	2.7
1	AA	2131	U	2.7
21	CX	60	ARG	2.7
24	C0	43	THR	2.7
37	BD	2	GLY	2.7
37	BD	49	ARG	2.7
37	BD	180	GLY	2.7
42	DI	83	ARG	2.7
54	BU	24	ARG	2.7
3	CC	56	ASP	2.7
52	DS	12	ASP	2.7
1	CA	2120	G	2.7
1	CA	2319	G	2.7
34	DA	1002	G	2.7
57	DZ	614	GLU	2.7
7	AG	133	LEU	2.7
8	CH	9	ILE	2.7
9	CK	117	LEU	2.7
10	CL	52	ILE	2.7
35	DB	154	LEU	2.7
46	DM	90	LEU	2.7
52	DS	10	PHE	2.7
57	DZ	539	ILE	2.7
3	AC	178	LYS	2.7
3	AC	219	MET	2.7
52	BS	14	HIS	2.7
1	AA	2196	C	2.7
34	BA	1354	C	2.7
3	AC	220	GLY	2.7
10	AL	18	THR	2.7
10	CL	91	PRO	2.7
40	DG	82	GLY	2.7
40	DG	112	PRO	2.7
46	DM	85	GLY	2.7
52	DS	42	PRO	2.7

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Mol	Chain	Res	Type	RSRZ
1	CA	229	A	2.7
34	BA	532	A	2.7
34	DA	1110	A	2.7
9	CK	106	GLN	2.7
28	A4	35	VAL	2.7
9	AK	109	SER	2.7
46	BM	118	ALA	2.6
9	AK	131	MET	2.6
37	BD	165	MET	2.6
40	DG	44	TYR	2.6
54	DU	22	ARG	2.6
42	BI	72	GLY	2.6
52	DS	72	GLY	2.6
8	CH	7	LEU	2.6
9	CK	26	LEU	2.6
37	BD	140	VAL	2.6
34	DA	1188	A	2.6
37	BD	158	ILE	2.6
3	AC	159	ALA	2.6
37	BD	149	ALA	2.6
47	BN	61	TRP	2.6
3	AC	21	TYR	2.6
3	CC	165	ARG	2.6
3	CC	224	ARG	2.6
37	DD	132	ARG	2.6
47	DN	41	ARG	2.6
54	BU	21	TYR	2.6
54	DU	10	ARG	2.6
6	CF	207	GLY	2.6
8	CH	8	PRO	2.6
9	CK	110	GLY	2.6
28	C4	54	GLY	2.6
54	BU	2	GLY	2.6
3	AC	169	THR	2.6
1	CA	2178	C	2.6
1	CA	2179	C	2.6
9	CK	125	LEU	2.6
35	BB	138	LEU	2.6
43	BJ	78	ASN	2.6
49	DP	2	VAL	2.6
55	BV	18	C	2.6
56	DY	2	C	2.6

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Mol	Chain	Res	Type	RSRZ
3	AC	163	GLU	2.6
9	AK	104	ILE	2.6
3	AC	51	ASP	2.6
33	C9	12	ASP	2.6
35	BB	34	ALA	2.6
1	CA	1847	A	2.6
34	BA	1349	A	2.6
34	DA	974	A	2.6
3	AC	60	ARG	2.6
42	DI	107	ARG	2.6
47	BN	29	ARG	2.6
44	BK	25	TYR	2.6
3	AC	61	GLY	2.6
3	AC	227	PRO	2.6
43	DJ	77	PRO	2.6
9	AK	55	LYS	2.6
1	AA	299	G	2.6
1	AA	2203	G	2.6
5	CE	195	LEU	2.6
8	CH	19	VAL	2.6
9	CK	81	VAL	2.6
36	BC	34	LEU	2.6
40	BG	9	VAL	2.6
46	DM	63	THR	2.6
52	BS	41	VAL	2.6
52	BS	58	VAL	2.6
57	DZ	216	LEU	2.6
43	BJ	83	GLU	2.6
9	AK	126	ALA	2.6
9	CK	54	ALA	2.6
53	BT	95	ALA	2.6
1	CA	2108	C	2.6
1	CA	2164	C	2.6
57	DZ	179	ASP	2.6
2	CB	1	U	2.6
5	CE	19	ARG	2.6
16	CS	13	ARG	2.6
26	C2	7	ARG	2.6
37	DD	47	ARG	2.6
47	BN	19	ARG	2.6
47	DN	35	ARG	2.6
55	BV	14	A	2.6

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Mol	Chain	Res	Type	RSRZ
10	CL	28	GLY	2.6
35	DB	131	PRO	2.6
5	CE	78	LEU	2.6
14	CQ	2	LEU	2.6
3	AC	35	THR	2.6
16	CS	5	THR	2.6
35	DB	214	ILE	2.6
47	BN	42	ILE	2.6
52	BS	39	THR	2.6
3	CC	171	ALA	2.6
17	CT	131	ALA	2.6
35	BB	105	PHE	2.6
35	DB	70	PHE	2.6
40	DG	25	ALA	2.6
1	AA	2190	G	2.5
34	BA	933	G	2.5
34	DA	1185	G	2.5
37	DD	49	ARG	2.5
57	DZ	99	ARG	2.5
34	DA	1249	C	2.5
8	CH	174	GLY	2.5
27	A3	2	PRO	2.5
36	BC	94	LEU	2.5
36	BC	155	GLY	2.5
40	DG	12	LEU	2.5
42	BI	80	GLY	2.5
48	DO	2	PRO	2.5
57	BZ	540	PRO	2.5
7	AG	146	TYR	2.5
42	DI	36	TYR	2.5
8	CH	113	VAL	2.5
36	DC	76	VAL	2.5
40	BG	42	ILE	2.5
46	BM	117	VAL	2.5
47	DN	18	VAL	2.5
57	DZ	105	ILE	2.5
7	CG	23	PHE	2.5
10	CL	110	GLN	2.5
10	CL	121	GLU	2.5
35	DB	141	GLU	2.5
38	DE	20	GLN	2.5
57	DZ	91	THR	2.5

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Mol	Chain	Res	Type	RSRZ
35	BB	163	PHE	2.5
42	BI	13	ALA	2.5
9	AK	28	ASN	2.5
43	DJ	69	ASN	2.5
28	C4	65	ASP	2.5
37	BD	168	ARG	2.5
43	DJ	62	HIS	2.5
9	CK	109	SER	2.5
34	DA	1532	U	2.5
1	AA	2145	G	2.5
1	AA	2173	G	2.5
34	DA	1321	C	2.5
36	BC	145	GLY	2.5
37	BD	124	GLY	2.5
43	DJ	8	LEU	2.5
46	DM	119	GLY	2.5
52	BS	22	LEU	2.5
7	CG	144	ILE	2.5
52	BS	61	TYR	2.5
3	CC	32	GLU	2.5
9	AK	106	GLN	2.5
9	AK	115	GLN	2.5
10	CL	118	THR	2.5
23	CZ	73	GLN	2.5
40	DG	62	PHE	2.5
52	DS	39	THR	2.5
39	DF	99	ALA	2.5
44	BK	89	ALA	2.5
44	BK	54	ARG	2.5
52	DS	36	ARG	2.5
35	DB	132	LYS	2.5
47	DN	4	LYS	2.5
8	CH	29	PRO	2.5
10	CL	112	MET	2.5
24	C0	84	LEU	2.5
36	DC	47	LEU	2.5
36	DC	175	LEU	2.5
33	C9	17	ILE	2.5
40	DG	34	GLY	2.5
46	DM	95	GLY	2.5
1	AA	670	C	2.5
1	CA	2128	C	2.5

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Mol	Chain	Res	Type	RSRZ
34	BA	1452	C	2.5
1	AA	2132	G	2.5
47	DN	21	TYR	2.5
7	AG	59	GLU	2.5
3	AC	62	THR	2.5
10	CL	81	ALA	2.5
40	DG	40	ALA	2.5
52	DS	63	THR	2.5
53	DT	97	ALA	2.5
1	CA	901	A	2.5
42	DI	116	LYS	2.5
17	AT	107	ASP	2.5
10	AL	120	LEU	2.5
7	AG	76	SER	2.5
37	BD	37	PRO	2.5
1	CA	1033	U	2.5
1	CA	2150	U	2.5
10	CL	87	GLY	2.5
36	DC	77	ILE	2.5
46	BM	24	GLY	2.5
56	DW	45	U	2.5
10	CL	138	VAL	2.5
3	AC	181	PHE	2.5
21	CX	69	TYR	2.5
28	A4	59	PHE	2.5
37	BD	20	TYR	2.5
3	CC	9	ARG	2.5
35	DB	188	ALA	2.5
44	DK	13	GLN	2.5
47	BN	23	ARG	2.5
47	DN	5	ALA	2.5
34	DA	1030(B)	C	2.5
51	DR	68	LYS	2.5
1	AA	2147	G	2.5
1	CA	2101	G	2.5
1	CA	2166	G	2.5
3	AC	188	ASP	2.4
42	BI	47	LEU	2.4
43	BJ	71	LEU	2.4
53	BT	13	LEU	2.4
10	AL	25	PRO	2.4
10	CL	57	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
36	DC	182	ILE	2.4
41	DH	72	PRO	2.4
52	DS	59	PRO	2.4
35	DB	71	VAL	2.4
57	DZ	243	VAL	2.4
34	DA	1351	U	2.4
3	AC	224	ARG	2.4
3	CC	43	GLU	2.4
8	CH	86	GLU	2.4
9	CK	52	PHE	2.4
21	CX	68	ARG	2.4
40	DG	78	ARG	2.4
52	DS	34	TRP	2.4
57	DZ	30	GLU	2.4
3	AC	168	LYS	2.4
3	CC	214	TYR	2.4
10	AL	17	ALA	2.4
35	BB	236	TYR	2.4
36	BC	4	LYS	2.4
37	BD	22	LYS	2.4
38	BE	9	LYS	2.4
52	BS	80	TYR	2.4
57	BZ	-12	ALA	2.4
56	BY	2	C	2.4
1	AA	2803	A	2.4
1	AA	2142	G	2.4
1	AA	2187	G	2.4
7	CG	142	PRO	2.4
34	DA	544	G	2.4
34	DA	1182	G	2.4
42	BI	75	ASP	2.4
43	BJ	75	ILE	2.4
3	AC	223	VAL	2.4
8	CH	49	VAL	2.4
35	DB	197	VAL	2.4
35	DB	229	VAL	2.4
40	BG	81	GLY	2.4
57	DZ	386	GLY	2.4
42	BI	9	ARG	2.4
47	DN	57	ARG	2.4
2	AB	1	U	2.4
9	CK	18	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
34	BA	1065	U	2.4
40	BG	26	PHE	2.4
43	DJ	11	PHE	2.4
43	DJ	63	PHE	2.4
47	BN	16	PHE	2.4
35	DB	237	ALA	2.4
44	BK	74	ALA	2.4
57	DZ	136	ALA	2.4
9	CK	63	LEU	2.4
42	BI	40	LEU	2.4
7	CG	39	ILE	2.4
1	CA	2177	C	2.4
10	AL	91	PRO	2.4
43	BJ	38	ILE	2.4
34	BA	1359	C	2.4
6	AF	16	GLY	2.4
10	AL	5	VAL	2.4
15	CR	69	ASP	2.4
37	DD	183	GLY	2.4
42	BI	91	ASP	2.4
44	BK	36	ASP	2.4
54	DU	11	GLY	2.4
57	BZ	393	ASP	2.4
1	AA	302	A	2.4
34	BA	160	A	2.4
34	DA	1236	A	2.4
8	CH	27	LYS	2.4
37	DD	139	ARG	2.4
46	DM	94	ARG	2.4
1	AA	2171	G	2.4
1	CA	2100	G	2.4
1	CA	2110	G	2.4
1	CA	2125	G	2.4
1	CA	2181	G	2.4
34	DA	617	G	2.4
10	CL	61	ALA	2.4
40	DG	2	ALA	2.4
9	AK	92	THR	2.4
43	DJ	48	THR	2.4
36	BC	31	HIS	2.4
7	CG	139	LEU	2.4
9	CK	58	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
52	BS	62	ILE	2.4
42	DI	29	ASN	2.4
3	AC	176	VAL	2.4
10	AL	4	VAL	2.4
43	BJ	72	VAL	2.4
57	DZ	600	VAL	2.4
9	CK	19	ARG	2.4
28	A4	62	ARG	2.4
37	DD	122	ARG	2.4
47	BN	4	LYS	2.4
34	BA	1367	C	2.4
34	DA	1203	C	2.4
56	BY	61	C	2.4
35	BB	17	PHE	2.4
25	C1	75	GLU	2.4
57	DZ	-57	GLU	2.4
10	AL	124	ALA	2.4
37	DD	74	GLN	2.4
1	AA	2123	G	2.4
7	CG	155	MET	2.4
10	AL	66	THR	2.4
34	BA	1001(A)	G	2.4
34	BA	1002	G	2.4
34	DA	942	G	2.4
52	BS	79	THR	2.4
56	BY	33	U	2.4
35	BB	61	LEU	2.4
36	DC	31	HIS	2.4
37	DD	96	LEU	2.4
53	BT	62	LEU	2.4
10	CL	113	PRO	2.4
57	DZ	-59	PRO	2.4
3	CC	6	LYS	2.3
35	DB	165	VAL	2.3
35	DB	230	VAL	2.3
42	DI	70	LYS	2.3
42	DI	39	GLY	2.3
43	DJ	10	GLY	2.3
23	CZ	11	GLU	2.3
1	CA	1118	C	2.3
34	BA	1029	C	2.3
34	DA	150	C	2.3

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Mol	Chain	Res	Type	RSRZ
34	DA	1054	C	2.3
34	DA	1322	C	2.3
50	BQ	26	GLN	2.3
56	BY	3	C	2.3
56	BY	4	C	2.3
1	CA	6	A	2.3
10	CL	130	SER	2.3
10	CL	134	MET	2.3
16	CS	52	SER	2.3
53	BT	70	SER	2.3
57	DZ	122	TRP	2.3
28	A4	63	TYR	2.3
35	BB	11	LEU	2.3
36	BC	184	TYR	2.3
42	DI	4	TYR	2.3
44	DK	75	TYR	2.3
1	AA	2202	U	2.3
34	DA	1257	U	2.3
35	BB	214	ILE	2.3
42	BI	74	ILE	2.3
42	BI	81	ILE	2.3
42	DI	63	ILE	2.3
3	CC	66	PRO	2.3
3	CC	185	LYS	2.3
10	AL	19	PRO	2.3
35	BB	133	LYS	2.3
50	DQ	37	LYS	2.3
52	DS	70	LYS	2.3
1	AA	1584	G	2.3
1	AA	2843	G	2.3
7	CG	118	ARG	2.3
10	CL	136	VAL	2.3
41	DH	75	ARG	2.3
43	DJ	70	ARG	2.3
52	BS	11	VAL	2.3
56	DW	44	G	2.3
56	DY	19	G	2.3
7	CG	129	GLY	2.3
10	AL	28	GLY	2.3
10	AL	92	GLY	2.3
46	DM	106	ASN	2.3
54	DU	5	ASP	2.3

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Mol	Chain	Res	Type	RSRZ
40	BG	134	ALA	2.3
57	DZ	482	ALA	2.3
26	C2	70	GLN	2.3
9	CK	99	SER	2.3
1	AA	2199	C	2.3
1	CA	2143	C	2.3
3	AC	41	THR	2.3
10	AL	78	ILE	2.3
28	A4	67	TYR	2.3
52	BS	52	TYR	2.3
52	DS	7	LYS	2.3
54	BU	20	LYS	2.3
1	AA	2154	U	2.3
1	CA	2180	U	2.3
23	CZ	112	ARG	2.3
37	BD	65	ARG	2.3
40	BG	79	ARG	2.3
41	BH	5	PRO	2.3
42	BI	104	ARG	2.3
43	BJ	24	VAL	2.3
57	DZ	608	VAL	2.3
10	CL	92	GLY	2.3
52	BS	65	ASN	2.3
23	AZ	136	PHE	2.3
1	CA	2165	G	2.3
3	AC	46	ALA	2.3
34	DA	1337	G	2.3
42	BI	12	GLU	2.3
52	BS	50	ALA	2.3
57	BZ	204	GLU	2.3
57	BZ	574	GLU	2.3
10	CL	48	MET	2.3
7	CG	43	LEU	2.3
40	DG	59	LEU	2.3
42	BI	79	LEU	2.3
47	DN	27	CYS	2.3
51	BR	85	LEU	2.3
23	CZ	146	ILE	2.3
45	DL	115	LYS	2.3
49	DP	13	HIS	2.3
36	BC	177	THR	2.3
43	DJ	100	THR	2.3

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Mol	Chain	Res	Type	RSRZ
52	BS	33	THR	2.3
54	DU	8	THR	2.3
35	BB	33	TYR	2.3
1	AA	1138	C	2.3
1	AA	1878	A	2.3
1	CA	2119	A	2.3
1	CA	2145	C	2.3
1	CA	2602	A	2.3
23	CZ	74	VAL	2.3
34	BA	1363	C	2.3
35	BB	229	VAL	2.3
43	DJ	41	PRO	2.3
34	DA	1196	U	2.3
56	DY	26	A	2.3
3	CC	204	GLY	2.3
16	CS	60	GLY	2.3
24	C0	6	GLY	2.3
42	BI	67	GLY	2.3
57	DZ	103	GLY	2.3
57	DZ	532	GLY	2.3
3	AC	187	ALA	2.3
7	AG	48	GLU	2.3
9	CK	15	GLU	2.3
10	CL	14	ALA	2.3
35	DB	186	ALA	2.3
35	DB	218	ALA	2.3
42	DI	119	ALA	2.3
43	DJ	64	GLU	2.3
52	BS	73	GLU	2.3
53	DT	49	ALA	2.3
28	A4	60	GLN	2.3
57	DZ	146	LEU	2.3
10	CL	86	LYS	2.3
36	BC	45	LYS	2.3
53	DT	74	LYS	2.3
1	CA	2155	G	2.3
8	CH	4	ILE	2.3
34	DA	945	G	2.3
34	DA	1001(A)	G	2.3
43	DJ	56	HIS	2.3
3	CC	211	ARG	2.3
36	BC	192	THR	2.3

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Mol	Chain	Res	Type	RSRZ
37	DD	83	SER	2.3
40	BG	32	ARG	2.3
43	BJ	67	THR	2.3
46	DM	43	THR	2.3
47	BN	22	THR	2.3
49	BP	48	TRP	2.3
16	CS	31	SER	2.3
52	DS	78	ARG	2.3
3	CC	176	VAL	2.3
40	DG	17	VAL	2.3
57	DZ	180	VAL	2.3
7	CG	127	GLY	2.3
10	CL	129	GLY	2.3
37	DD	44	GLY	2.3
34	DA	723	U	2.3
1	CA	1913	A	2.2
8	CH	123	PHE	2.2
34	BA	1030	C	2.2
34	DA	509	A	2.2
34	DA	1118	C	2.2
56	DW	17	C	2.2
3	CC	36	ALA	2.2
23	AZ	2	GLU	2.2
35	BB	237	ALA	2.2
36	DC	32	LEU	2.2
10	CL	70	LYS	2.2
24	A0	4	LYS	2.2
36	BC	162	GLN	2.2
36	DC	162	GLN	2.2
42	BI	78	LYS	2.2
10	CL	132	ARG	2.2
35	BB	137	ARG	2.2
52	DS	14	HIS	2.2
8	CH	94	TYR	2.2
10	AL	64	SER	2.2
28	C4	29	PRO	2.2
40	DG	66	VAL	2.2
28	A4	43	TYR	2.2
54	DU	21	TYR	2.2
34	BA	1371	G	2.2
34	DA	1094	G	2.2
3	CC	70	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
40	DG	81	GLY	2.2
3	CC	38	PHE	2.2
1	CA	1420	U	2.2
34	BA	202	U	2.2
3	CC	205	ALA	2.2
7	AG	54	GLU	2.2
9	CK	11	ALA	2.2
23	CZ	21	ALA	2.2
36	BC	188	LEU	2.2
36	DC	43	LEU	2.2
37	BD	150	GLU	2.2
43	DJ	26	ALA	2.2
43	DJ	27	ALA	2.2
1	CA	1075	C	2.2
1	CA	2103	C	2.2
34	DA	940	C	2.2
42	DI	127	LYS	2.2
43	BJ	99	LYS	2.2
46	BM	62	ASN	2.2
52	BS	53	ASN	2.2
10	CL	99	ILE	2.2
11	CN	71	ILE	2.2
52	BS	40	ILE	2.2
57	DZ	178	ILE	2.2
57	DZ	500	GLN	2.2
3	AC	54	ARG	2.2
16	CS	20	ARG	2.2
25	A1	26	ARG	2.2
36	BC	131	ARG	2.2
37	BD	132	ARG	2.2
42	BI	120	ARG	2.2
42	DI	75	ASP	2.2
8	CH	45	VAL	2.2
8	CH	168	PRO	2.2
9	CK	101	PRO	2.2
36	DC	191	THR	2.2
35	DB	148	TYR	2.2
44	BK	16	SER	2.2
46	DM	23	TYR	2.2
57	DZ	572	TYR	2.2
3	AC	207	GLY	2.2
3	CC	49	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
10	CL	140	GLY	2.2
53	DT	47	GLY	2.2
57	BZ	338	GLY	2.2
47	DN	37	PHE	2.2
1	CA	100	G	2.2
10	AL	20	ALA	2.2
21	CX	33	LYS	2.2
22	CY	34	LYS	2.2
47	BN	17	LYS	2.2
43	BJ	97	GLU	2.2
47	DN	44	LEU	2.2
51	BR	20	ALA	2.2
52	DS	22	LEU	2.2
57	DZ	353	ALA	2.2
34	BA	343	U	2.2
10	CL	93	ARG	2.2
37	BD	5	ILE	2.2
41	BH	45	ILE	2.2
46	BM	84	ILE	2.2
1	AA	1115	A	2.2
34	BA	1531	A	2.2
34	DA	1363(A)	A	2.2
46	BM	16	ASP	2.2
46	DM	7	VAL	2.2
57	DZ	533	VAL	2.2
3	AC	204	GLY	2.2
3	CC	64	SER	2.2
7	CG	131	TYR	2.2
10	AL	49	GLY	2.2
36	BC	171	GLY	2.2
43	DJ	35	SER	2.2
47	BN	60	SER	2.2
3	CC	31	LYS	2.2
3	CC	168	LYS	2.2
9	CK	35	LYS	2.2
35	BB	179	LYS	2.2
42	BI	70	LYS	2.2
45	DL	47	LYS	2.2
9	CK	74	LEU	2.2
21	AX	95	LEU	2.2
35	BB	196	LEU	2.2
37	BD	78	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
42	DI	56	LEU	2.2
8	CH	20	ALA	2.2
9	AK	79	ALA	2.2
35	DB	12	GLU	2.2
57	BZ	203	GLU	2.2
57	BZ	456	GLU	2.2
57	DZ	220	ALA	2.2
9	CK	59	ILE	2.2
10	CL	78	ILE	2.2
14	CQ	59	ARG	2.2
35	DB	111	ARG	2.2
40	BG	115	ARG	2.2
49	BP	5	ARG	2.2
50	BQ	90	ILE	2.2
50	DQ	92	ARG	2.2
54	DU	6	ARG	2.2
52	DS	56	GLN	2.2
1	CA	545	G	2.2
1	CA	614(B)	G	2.2
1	CA	2168	G	2.2
34	DA	1290	G	2.2
34	DA	1365	G	2.2
52	BS	83	HIS	2.2
1	AA	2614	A	2.2
10	CL	119	ASP	2.2
34	DA	1503	A	2.2
36	DC	7	PRO	2.2
47	BN	33	VAL	2.2
52	DS	45	VAL	2.2
57	BZ	576	ASP	2.2
1	AA	155	C	2.2
34	BA	381	C	2.2
34	BA	979	C	2.2
34	DA	980	C	2.2
34	DA	1149	C	2.2
34	DA	1359	C	2.2
34	DA	1397	C	2.2
3	CC	62	THR	2.2
43	DJ	86	MET	2.2
33	C9	37	GLY	2.2
37	DD	30	LYS	2.2
43	BJ	57	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
57	BZ	532	GLY	2.2
57	BZ	536	LYS	2.2
35	BB	70	PHE	2.2
40	DG	43	PHE	2.2
44	BK	75	TYR	2.2
57	DZ	186	TYR	2.2
3	AC	29	LEU	2.2
9	AK	78	SER	2.2
42	DI	19	LEU	2.2
3	CC	50	ILE	2.1
10	AL	93	ARG	2.1
11	CN	115	ARG	2.1
37	DD	158	ILE	2.1
40	BG	102	ARG	2.1
53	BT	8	ARG	2.1
57	BZ	255	ILE	2.1
1	CA	272(A)	U	2.1
10	AL	33	ASN	2.1
36	DC	176	HIS	2.1
43	DJ	68	HIS	2.1
53	BT	75	ASN	2.1
4	CD	98	VAL	2.1
38	DE	51	VAL	2.1
3	CC	39	ASP	2.1
1	AA	218	A	2.1
1	AA	2126	G	2.1
1	CA	11	G	2.1
1	CA	1110	G	2.1
13	CP	118	GLY	2.1
34	BA	1036	G	2.1
34	DA	1138	G	2.1
36	BC	95	THR	2.1
50	BQ	87	LYS	2.1
34	DA	1324	A	2.1
34	DA	1349	A	2.1
42	BI	8	GLY	2.1
10	AL	67	PHE	2.1
28	A4	49	PHE	2.1
8	CH	83	TYR	2.1
28	C4	32	TYR	2.1
34	DA	1029	C	2.1
34	DA	1030	C	2.1

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Mol	Chain	Res	Type	RSRZ
34	DA	1267	C	2.1
39	DF	97	PHE	2.1
49	BP	60	LEU	2.1
37	BD	38	TYR	2.1
55	DV	18	C	2.1
56	DY	3	C	2.1
3	CC	212	SER	2.1
38	DE	21	ALA	2.1
42	DI	46	ALA	2.1
3	AC	161	ARG	2.1
40	BG	76	ARG	2.1
42	BI	110	GLU	2.1
45	DL	16	GLU	2.1
46	BM	91	ARG	2.1
50	DQ	91	ARG	2.1
57	DZ	-26	GLU	2.1
35	DB	108	ILE	2.1
9	CK	42	GLN	2.1
57	DZ	506	GLN	2.1
35	BB	19	HIS	2.1
35	DB	140	HIS	2.1
1	AA	1107	U	2.1
1	CA	2102	U	2.1
9	AK	7	VAL	2.1
9	CK	105	PRO	2.1
34	DA	1281	U	2.1
40	DG	14	PRO	2.1
52	DS	19	VAL	2.1
36	DC	4	LYS	2.1
45	BL	20	LYS	2.1
52	BS	6	LYS	2.1
54	BU	5	ASP	2.1
3	AC	217	THR	2.1
5	CE	161	GLY	2.1
43	BJ	36	GLY	2.1
43	DJ	31	GLY	2.1
52	BS	8	GLY	2.1
9	AK	96	PHE	2.1
35	DB	152	PHE	2.1
35	DB	155	LEU	2.1
37	BD	157	LEU	2.1
37	DD	19	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
42	DI	59	PHE	2.1
3	AC	10	ALA	2.1
10	AL	61	ALA	2.1
10	CL	125	ARG	2.1
27	C3	30	ARG	2.1
28	C4	48	ARG	2.1
36	DC	24	ALA	2.1
37	BD	139	ARG	2.1
42	BI	15	ALA	2.1
46	DM	3	ARG	2.1
1	AA	2204	G	2.1
1	CA	171	G	2.1
3	AC	225	ILE	2.1
1	AA	2164	C	2.1
10	AL	75	SER	2.1
34	BA	347	G	2.1
43	BJ	64	GLU	2.1
56	DY	61	C	2.1
9	CK	75	GLN	2.1
9	CK	100	ASN	2.1
35	BB	22	LYS	2.1
35	DB	112	VAL	2.1
42	BI	86	VAL	2.1
57	DZ	10	LYS	2.1
57	DZ	276	VAL	2.1
57	DZ	237	PRO	2.1
1	AA	386	U	2.1
14	CQ	23	GLY	2.1
39	BF	79	LEU	2.1
40	BG	38	LEU	2.1
57	DZ	113	GLY	2.1
3	AC	38	PHE	2.1
3	CC	22	THR	2.1
9	AK	118	THR	2.1
10	CL	65	PHE	2.1
49	DP	80	PHE	2.1
3	AC	7	ARG	2.1
28	A4	61	ARG	2.1
46	DM	64	TRP	2.1
46	DM	102	ARG	2.1
9	CK	43	ALA	2.1
35	BB	171	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
37	BD	4	TYR	2.1
44	DK	25	TYR	2.1
52	DS	73	GLU	2.1
52	DS	80	TYR	2.1
54	DU	13	ILE	2.1
1	CA	2170	A	2.1
34	DA	1289	A	2.1
1	AA	2183	C	2.1
3	CC	19	LYS	2.1
8	CH	35	VAL	2.1
10	CL	90	LYS	2.1
16	CS	93	LYS	2.1
34	DA	377	G	2.1
34	DA	947	G	2.1
34	DA	984	C	2.1
36	BC	26	LYS	2.1
46	DM	82	MET	2.1
52	DS	47	HIS	2.1
34	DA	1491	G	2.1
36	DC	130	VAL	2.1
49	DP	79	VAL	2.1
3	CC	226	ASN	2.1
9	AK	16	ASN	2.1
46	DM	77	ASN	2.1
7	CG	133	LEU	2.1
16	CS	56	LEU	2.1
35	DB	196	LEU	2.1
40	DG	22	LEU	2.1
52	BS	5	LEU	2.1
53	BT	20	LEU	2.1
57	DZ	229	LEU	2.1
1	CA	12	U	2.1
7	AG	119	GLY	2.1
38	BE	22	GLY	2.1
9	CK	130	THR	2.1
10	AL	58	THR	2.1
23	CZ	69	THR	2.1
42	BI	42	ARG	2.1
43	DJ	15	THR	2.1
9	CK	119	ALA	2.1
35	DB	171	ALA	2.1
36	BC	5	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
36	BC	129	ALA	2.1
36	DC	5	ILE	2.1
37	DD	164	ALA	2.1
42	BI	82	ALA	2.1
46	BM	25	ILE	2.1
47	DN	61	TRP	2.1
3	AC	32	GLU	2.1
7	CG	48	GLU	2.1
11	CN	75	TYR	2.1
21	CX	26	TYR	2.1
35	DB	19	HIS	2.0
37	BD	62	GLN	2.0
46	DM	65	LYS	2.0
8	CH	76	VAL	2.0
8	CH	107	VAL	2.0
8	CH	141	VAL	2.0
52	BS	60	VAL	2.0
52	DS	11	VAL	2.0
8	CH	21	PRO	2.0
57	DZ	131	PRO	2.0
35	DB	98	LEU	2.0
37	DD	11	LEU	2.0
40	BG	59	LEU	2.0
47	BN	39	LEU	2.0
48	BO	57	LEU	2.0
1	AA	2184	G	2.0
1	CA	1058	G	2.0
9	CK	103	GLY	2.0
10	AL	132	ARG	2.0
14	AQ	5	ARG	2.0
17	CT	112	ARG	2.0
20	AW	112	GLY	2.0
34	BA	306	G	2.0
34	BA	384	G	2.0
34	DA	181	G	2.0
34	DA	306	G	2.0
47	BN	38	GLY	2.0
49	BP	80	PHE	2.0
1	AA	12	U	2.0
34	BA	1257	U	2.0
34	DA	1065	U	2.0
34	DA	1205	U	2.0

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Mol	Chain	Res	Type	RSRZ
35	DB	67	THR	2.0
9	AK	97	ALA	2.0
10	AL	114	ASP	2.0
40	DG	145	ALA	2.0
42	BI	105	ASP	2.0
43	DJ	38	ILE	2.0
47	DN	48	ALA	2.0
57	DZ	102	ASP	2.0
57	DZ	432	ALA	2.0
3	AC	19	LYS	2.0
7	CG	75	LYS	2.0
9	CK	29	TYR	2.0
35	BB	27	LYS	2.0
57	BZ	507	TYR	2.0
57	DZ	231	TYR	2.0
3	CC	63	VAL	2.0
7	CG	160	VAL	2.0
10	CL	104	VAL	2.0
23	CZ	166	SER	2.0
36	DC	37	GLN	2.0
36	DC	154	SER	2.0
49	BP	82	GLN	2.0
57	BZ	404	VAL	2.0
9	AK	33	PRO	2.0
1	CA	1445	A	2.0
1	CA	2801(A)	A	2.0
34	BA	983	A	2.0
43	BJ	88	LEU	2.0
48	DO	81	LEU	2.0
52	DS	20	LEU	2.0
7	CG	83	ARG	2.0
14	CQ	10	ARG	2.0
37	DD	209	ARG	2.0
46	DM	110	ARG	2.0
52	BS	3	ARG	2.0
9	CK	67	GLY	2.0
37	BD	167	GLY	2.0
57	DZ	223	PHE	2.0
1	AA	1579	C	2.0
1	CA	2136	C	2.0
3	AC	50	ILE	2.0
8	CH	72	ILE	2.0

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Mol	Chain	Res	Type	RSRZ
34	DA	1195	C	2.0
34	DA	1352	C	2.0
37	BD	126	ILE	2.0
43	DJ	96	ILE	2.0
11	CN	43	THR	2.0
31	C7	45	ALA	2.0
37	DD	127	THR	2.0
3	AC	39	ASP	2.0
8	CH	137	ASP	2.0
1	AA	2153	G	2.0
1	CA	2156	G	2.0
10	CL	111	LYS	2.0
23	CZ	14	LYS	2.0
34	BA	1274	G	2.0
34	DA	1030(A)	G	2.0
34	DA	1057	G	2.0
52	DS	43	GLU	2.0
56	BY	63	G	2.0
56	BY	70	G	2.0
35	DB	48	MET	2.0
46	BM	82	MET	2.0
9	AK	29	TYR	2.0
23	CZ	9	TYR	2.0
5	CE	104	VAL	2.0
43	DJ	44	VAL	2.0
46	BM	74	VAL	2.0
57	DZ	647	VAL	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	PSU	DY	32	20/21	0.14	0.21	268,268,268,268	0
56	MIA	BY	37	22/30	0.15	0.19	284,284,284,284	0
56	5MU	DY	54	21/22	0.18	0.14	305,305,305,305	1
56	PSU	BY	32	20/21	0.22	0.18	254,254,254,254	1
56	PSU	BY	55	20/21	0.22	0.15	302,302,302,302	1
56	PSU	DY	39	20/21	0.24	0.15	284,284,284,284	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MIA	DY	37	22/30	0.24	0.25	319,319,319,319	1
56	PSU	DY	55	20/21	0.27	0.12	246,246,246,246	0
56	PSU	BY	39	20/21	0.29	0.14	316,316,316,316	0
56	7MG	BY	46	24/25	0.38	0.14	302,302,302,302	0
56	5MU	BY	54	21/22	0.41	0.15	315,315,315,315	0
56	4SU	BY	8	20/21	0.62	0.11	300,300,300,300	0
56	7MG	DY	46	24/25	0.69	0.13	302,302,302,302	0
56	4SU	DY	8	20/21	0.73	0.11	275,275,275,275	0
56	7MG	DW	46	24/25	0.77	0.12	114,114,114,114	2
56	PSU	DW	55	20/21	0.78	0.13	106,106,106,106	2
56	PSU	DW	32	20/21	0.85	0.12	106,106,106,106	1
56	5MU	DW	54	21/22	0.87	0.12	114,114,114,114	1
56	PSU	BW	32	20/21	0.88	0.12	81,81,81,81	1
56	7MG	BW	46	24/25	0.88	0.09	63,63,63,63	5
56	PSU	DW	39	20/21	0.89	0.17	93,93,93,93	3
56	MIA	BW	37	29/30	0.90	0.14	79,79,79,79	2
56	MIA	DW	37	29/30	0.92	0.14	94,94,94,94	0
56	4SU	DW	8	20/21	0.92	0.09	88,88,88,88	3
56	PSU	BW	55	20/21	0.93	0.08	74,74,74,74	5
56	4SU	BW	8	20/21	0.93	0.07	51,51,51,51	6
56	5MU	BW	54	21/22	0.94	0.08	74,74,74,74	1
56	PSU	BW	39	20/21	0.95	0.10	65,65,65,65	3

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3107	1/1	0.11	0.25	108,108,108,108	0
58	MG	DA	1700	1/1	0.35	0.18	124,124,124,124	0
58	MG	CA	3046	1/1	0.43	0.29	114,114,114,114	0
58	MG	DA	1660	1/1	0.46	0.32	90,90,90,90	0
58	MG	BA	1773	1/1	0.46	0.24	115,115,115,115	0
58	MG	CA	3253	1/1	0.47	0.22	95,95,95,95	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3209	1/1	0.50	0.18	93,93,93,93	0
58	MG	BA	1707	1/1	0.50	0.18	92,92,92,92	0
58	MG	CA	3624	1/1	0.53	0.20	104,104,104,104	0
58	MG	A4	502	1/1	0.54	0.13	123,123,123,123	0
58	MG	AA	3273	1/1	0.55	0.20	90,90,90,90	0
58	MG	BA	1711	1/1	0.55	0.19	104,104,104,104	0
58	MG	CA	3555	1/1	0.56	0.24	83,83,83,83	0
58	MG	DJ	5001	1/1	0.56	0.21	105,105,105,105	0
58	MG	DA	1606	1/1	0.57	0.28	84,84,84,84	0
58	MG	AA	3766	1/1	0.57	0.16	72,72,72,72	0
58	MG	AA	3610	1/1	0.58	0.10	51,51,51,51	1
58	MG	CA	3126	1/1	0.58	0.35	93,93,93,93	0
58	MG	BZ	701	1/1	0.59	0.18	137,137,137,137	0
58	MG	CA	3205	1/1	0.59	0.17	105,105,105,105	0
58	MG	CA	3481	1/1	0.59	0.21	91,91,91,91	0
58	MG	CA	3180	1/1	0.60	0.43	108,108,108,108	0
58	MG	CB	3013	1/1	0.60	0.20	98,98,98,98	0
58	MG	DA	1755	1/1	0.61	0.20	86,86,86,86	0
58	MG	AA	3200	1/1	0.61	0.25	91,91,91,91	0
58	MG	CA	3590	1/1	0.62	0.15	95,95,95,95	0
58	MG	BA	1787	1/1	0.62	0.21	87,87,87,87	0
58	MG	DZ	701	1/1	0.62	0.18	111,111,111,111	0
58	MG	CA	3618	1/1	0.63	0.19	65,65,65,65	0
58	MG	AA	3758	1/1	0.63	0.24	81,81,81,81	0
58	MG	CA	3513	1/1	0.63	0.14	75,75,75,75	0
58	MG	CA	3507	1/1	0.64	0.16	100,100,100,100	0
58	MG	DA	1657	1/1	0.64	0.13	93,93,93,93	0
58	MG	DA	1754	1/1	0.64	0.21	81,81,81,81	0
58	MG	BA	1697	1/1	0.65	0.21	98,98,98,98	0
58	MG	CA	3071	1/1	0.65	0.35	97,97,97,97	0
58	MG	AA	3265	1/1	0.66	0.36	77,77,77,77	0
58	MG	BA	1618	1/1	0.66	0.21	134,134,134,134	0
58	MG	CA	3314	1/1	0.67	0.22	77,77,77,77	0
58	MG	CA	3002	1/1	0.67	0.20	114,114,114,114	0
58	MG	BA	1807	1/1	0.67	0.13	83,83,83,83	0
58	MG	AA	3268	1/1	0.67	0.22	88,88,88,88	0
58	MG	DA	1677	1/1	0.67	0.14	74,74,74,74	0
58	MG	BA	1626	1/1	0.68	0.23	87,87,87,87	0
58	MG	CA	3544	1/1	0.68	0.12	81,81,81,81	0
58	MG	CA	3080	1/1	0.69	0.37	87,87,87,87	0
58	MG	AA	3613	1/1	0.69	0.15	104,104,104,104	0
58	MG	CA	3593	1/1	0.69	0.14	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	BA	1691	1/1	0.69	0.17	91,91,91,91	0
58	MG	CA	3620	1/1	0.69	0.15	69,69,69,69	0
58	MG	DA	1673	1/1	0.69	0.31	100,100,100,100	0
58	MG	CA	3056	1/1	0.70	0.24	85,85,85,85	0
58	MG	CA	3537	1/1	0.70	0.18	78,78,78,78	0
58	MG	CA	3295	1/1	0.70	0.11	84,84,84,84	0
58	MG	DA	1706	1/1	0.70	0.28	128,128,128,128	0
58	MG	BA	1617	1/1	0.70	0.12	74,74,74,74	0
58	MG	BA	1636	1/1	0.70	0.33	100,100,100,100	0
58	MG	AB	3018	1/1	0.70	0.14	84,84,84,84	0
58	MG	CA	3594	1/1	0.70	0.22	80,80,80,80	0
58	MG	BA	1661	1/1	0.71	0.28	84,84,84,84	0
58	MG	CA	3460	1/1	0.71	0.30	109,109,109,109	0
58	MG	BA	1713	1/1	0.71	0.33	71,71,71,71	0
58	MG	CG	3001	1/1	0.71	0.21	83,83,83,83	0
58	MG	CA	3610	1/1	0.71	0.21	98,98,98,98	0
58	MG	DA	1623	1/1	0.71	0.14	117,117,117,117	0
58	MG	CA	3616	1/1	0.71	0.20	79,79,79,79	0
58	MG	AA	3751	1/1	0.71	0.21	56,56,56,56	1
58	MG	CA	3300	1/1	0.72	0.19	86,86,86,86	0
58	MG	DA	1720	1/1	0.72	0.18	72,72,72,72	0
58	MG	CA	3066	1/1	0.72	0.29	84,84,84,84	0
58	MG	BA	1795	1/1	0.73	0.22	86,86,86,86	0
58	MG	DA	1614	1/1	0.73	0.33	87,87,87,87	0
58	MG	AA	3690	1/1	0.73	0.15	71,71,71,71	0
58	MG	DA	1649	1/1	0.73	0.26	93,93,93,93	0
58	MG	CA	3604	1/1	0.73	0.13	69,69,69,69	0
58	MG	CA	3561	1/1	0.73	0.21	95,95,95,95	0
58	MG	DA	1669	1/1	0.73	0.23	84,84,84,84	0
58	MG	CA	3076	1/1	0.73	0.15	84,84,84,84	0
58	MG	CA	3058	1/1	0.74	0.25	77,77,77,77	0
58	MG	CA	3467	1/1	0.74	0.29	80,80,80,80	0
58	MG	AA	3224	1/1	0.74	0.28	75,75,75,75	0
58	MG	AA	3744	1/1	0.74	0.15	86,86,86,86	0
58	MG	AB	3021	1/1	0.74	0.15	61,61,61,61	0
58	MG	AA	3192	1/1	0.74	0.27	76,76,76,76	0
58	MG	AA	3108	1/1	0.74	0.38	125,125,125,125	0
58	MG	BA	1692	1/1	0.74	0.21	89,89,89,89	0
58	MG	CA	3389	1/1	0.74	0.21	75,75,75,75	0
58	MG	CA	3553	1/1	0.75	0.11	81,81,81,81	0
58	MG	AA	3672	1/1	0.75	0.19	25,25,25,25	1
58	MG	CA	3621	1/1	0.75	0.19	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	BA	1768	1/1	0.75	0.15	86,86,86,86	0
58	MG	CA	3571	1/1	0.75	0.13	65,65,65,65	0
58	MG	CA	3220	1/1	0.75	0.22	78,78,78,78	0
58	MG	BA	1616	1/1	0.75	0.26	88,88,88,88	0
58	MG	CA	3286	1/1	0.75	0.15	64,64,64,64	0
58	MG	AA	3626	1/1	0.75	0.22	74,74,74,74	0
58	MG	CA	3008	1/1	0.75	0.36	100,100,100,100	0
58	MG	CA	3202	1/1	0.75	0.33	77,77,77,77	0
58	MG	BA	1683	1/1	0.76	0.32	84,84,84,84	0
58	MG	AA	3112	1/1	0.76	0.35	98,98,98,98	0
58	MG	BV	101	1/1	0.76	0.21	110,110,110,110	0
58	MG	BA	1721	1/1	0.76	0.18	80,80,80,80	0
58	MG	AQ	201	1/1	0.76	0.23	62,62,62,62	0
58	MG	AA	3621	1/1	0.76	0.15	46,46,46,46	0
58	MG	CA	3016	1/1	0.76	0.24	80,80,80,80	0
58	MG	CA	3290	1/1	0.76	0.31	75,75,75,75	0
58	MG	CA	3294	1/1	0.76	0.11	83,83,83,83	0
58	MG	CA	3644	1/1	0.76	0.32	84,84,84,84	0
58	MG	BA	1669	1/1	0.76	0.11	89,89,89,89	0
58	MG	CA	3139	1/1	0.76	0.22	123,123,123,123	0
58	MG	CA	3140	1/1	0.76	0.32	98,98,98,98	0
58	MG	CA	3388	1/1	0.76	0.15	83,83,83,83	0
58	MG	AA	3248	1/1	0.77	0.18	64,64,64,64	0
58	MG	CA	3596	1/1	0.77	0.17	72,72,72,72	0
58	MG	CA	3070	1/1	0.77	0.37	87,87,87,87	0
58	MG	CA	3212	1/1	0.77	0.17	69,69,69,69	0
58	MG	AA	3784	1/1	0.77	0.17	74,74,74,74	0
58	MG	AB	3017	1/1	0.77	0.11	77,77,77,77	0
58	MG	BA	1748	1/1	0.77	0.11	83,83,83,83	0
58	MG	DA	1678	1/1	0.77	0.22	82,82,82,82	0
58	MG	DA	1687	1/1	0.77	0.14	100,100,100,100	0
58	MG	A8	5001	1/1	0.77	0.17	59,59,59,59	0
58	MG	DA	1701	1/1	0.77	0.22	63,63,63,63	0
58	MG	CA	3125	1/1	0.77	0.29	73,73,73,73	0
58	MG	DA	1715	1/1	0.77	0.13	76,76,76,76	0
58	MG	BA	1653	1/1	0.77	0.18	102,102,102,102	0
58	MG	DA	1746	1/1	0.77	0.14	91,91,91,91	0
58	MG	CA	3042	1/1	0.77	0.26	95,95,95,95	0
58	MG	BA	1777	1/1	0.77	0.14	75,75,75,75	0
58	MG	BA	1704	1/1	0.77	0.29	89,89,89,89	0
58	MG	AA	3623	1/1	0.77	0.15	74,74,74,74	0
58	MG	AA	3771	1/1	0.78	0.21	31,31,31,31	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	BA	1736	1/1	0.78	0.14	81,81,81,81	0
58	MG	CA	3304	1/1	0.78	0.15	93,93,93,93	0
58	MG	BA	1802	1/1	0.78	0.12	84,84,84,84	0
58	MG	AA	3375	1/1	0.78	0.19	57,57,57,57	0
58	MG	CB	3006	1/1	0.78	0.12	83,83,83,83	0
58	MG	BA	1758	1/1	0.78	0.14	68,68,68,68	0
58	MG	CD	302	1/1	0.78	0.25	95,95,95,95	0
58	MG	CA	3131	1/1	0.78	0.19	62,62,62,62	0
58	MG	CA	3267	1/1	0.78	0.14	56,56,56,56	0
58	MG	AA	3028	1/1	0.78	0.27	51,51,51,51	1
58	MG	CA	3485	1/1	0.78	0.20	83,83,83,83	0
58	MG	CA	3500	1/1	0.78	0.18	64,64,64,64	0
58	MG	DA	1765	1/1	0.78	0.17	95,95,95,95	0
58	MG	AA	3640	1/1	0.78	0.34	77,77,77,77	0
58	MG	BA	1720	1/1	0.78	0.19	83,83,83,83	0
58	MG	CA	3155	1/1	0.79	0.10	86,86,86,86	0
58	MG	BA	1813	1/1	0.79	0.24	75,75,75,75	0
58	MG	AA	3321	1/1	0.79	0.20	70,70,70,70	0
58	MG	CA	3634	1/1	0.79	0.17	81,81,81,81	0
58	MG	AA	3094	1/1	0.79	0.70	111,111,111,111	0
58	MG	CA	3001	1/1	0.79	0.20	73,73,73,73	0
58	MG	CA	3583	1/1	0.79	0.13	78,78,78,78	1
58	MG	AA	3476	1/1	0.79	0.15	69,69,69,69	0
58	MG	CA	3093	1/1	0.79	0.22	84,84,84,84	0
58	MG	AA	3728	1/1	0.79	0.18	61,61,61,61	0
58	MG	BA	1658	1/1	0.79	0.23	90,90,90,90	0
58	MG	AA	3242	1/1	0.79	0.28	72,72,72,72	0
58	MG	DA	1639	1/1	0.79	0.28	75,75,75,75	0
58	MG	AA	3803	1/1	0.79	0.14	62,62,62,62	0
58	MG	AB	3004	1/1	0.79	0.28	89,89,89,89	0
58	MG	AB	3014	1/1	0.79	0.15	67,67,67,67	0
58	MG	CQ	205	1/1	0.80	0.21	81,81,81,81	0
58	MG	CA	3323	1/1	0.80	0.14	67,67,67,67	0
58	MG	CA	3357	1/1	0.80	0.11	80,80,80,80	0
58	MG	AA	3630	1/1	0.80	0.26	71,71,71,71	0
58	MG	BA	1665	1/1	0.80	0.13	79,79,79,79	0
58	MG	CA	3431	1/1	0.80	0.19	100,100,100,100	0
58	MG	CA	3031	1/1	0.80	0.13	76,76,76,76	0
58	MG	CA	3123	1/1	0.80	0.20	88,88,88,88	0
58	MG	CA	3246	1/1	0.80	0.22	59,59,59,59	0
58	MG	AD	311	1/1	0.80	0.19	57,57,57,57	0
58	MG	DA	1676	1/1	0.80	0.11	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	BA	1670	1/1	0.80	0.18	83,83,83,83	0
58	MG	CA	3272	1/1	0.80	0.23	75,75,75,75	0
58	MG	BA	1673	1/1	0.80	0.22	75,75,75,75	0
58	MG	AA	3697	1/1	0.80	0.15	63,63,63,63	0
58	MG	AA	3105	1/1	0.80	0.16	81,81,81,81	0
58	MG	CA	3646	1/1	0.80	0.12	95,95,95,95	0
58	MG	DA	1708	1/1	0.80	0.14	87,87,87,87	0
58	MG	CA	3656	1/1	0.80	0.18	61,61,61,61	0
58	MG	CB	3001	1/1	0.80	0.20	99,99,99,99	0
58	MG	DA	1730	1/1	0.80	0.15	88,88,88,88	0
58	MG	CB	3002	1/1	0.80	0.12	66,66,66,66	0
58	MG	DA	1753	1/1	0.80	0.15	70,70,70,70	0
58	MG	BA	1649	1/1	0.80	0.07	75,75,75,75	0
58	MG	AA	3732	1/1	0.80	0.12	68,68,68,68	0
58	MG	CA	3190	1/1	0.80	0.23	83,83,83,83	0
58	MG	AA	3464	1/1	0.80	0.13	63,63,63,63	0
58	MG	CQ	201	1/1	0.80	0.16	62,62,62,62	0
61	FUA	BZ	703	37/37	0.80	0.18	69,69,69,69	0
58	MG	CA	3631	1/1	0.81	0.14	77,77,77,77	0
58	MG	DA	1665	1/1	0.81	0.28	61,61,61,61	0
58	MG	AA	3597	1/1	0.81	0.13	63,63,63,63	0
58	MG	AA	3270	1/1	0.81	0.15	54,54,54,54	0
58	MG	CA	3034	1/1	0.81	0.26	101,101,101,101	0
58	MG	CA	3653	1/1	0.81	0.25	95,95,95,95	0
58	MG	CA	3097	1/1	0.81	0.14	80,80,80,80	0
58	MG	DA	1685	1/1	0.81	0.24	65,65,65,65	0
58	MG	CA	3661	1/1	0.81	0.20	74,74,74,74	0
58	MG	DA	1692	1/1	0.81	0.15	76,76,76,76	0
58	MG	CA	3105	1/1	0.81	0.12	80,80,80,80	0
58	MG	A7	106	1/1	0.81	0.28	38,38,38,38	1
58	MG	CA	3122	1/1	0.81	0.16	67,67,67,67	0
58	MG	CA	3045	1/1	0.81	0.21	67,67,67,67	0
58	MG	AA	3774	1/1	0.81	0.17	80,80,80,80	0
58	MG	DA	1716	1/1	0.81	0.18	78,78,78,78	0
58	MG	BA	1605	1/1	0.81	0.21	67,67,67,67	0
58	MG	CO	202	1/1	0.81	0.10	53,53,53,53	0
58	MG	DA	1731	1/1	0.81	0.21	82,82,82,82	0
58	MG	DA	1737	1/1	0.81	0.13	72,72,72,72	0
58	MG	AA	3164	1/1	0.81	0.12	58,58,58,58	0
58	MG	CA	3134	1/1	0.81	0.34	86,86,86,86	0
58	MG	CA	3493	1/1	0.81	0.18	88,88,88,88	0
58	MG	AA	3016	1/1	0.81	0.20	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3807	1/1	0.81	0.18	62,62,62,62	1
58	MG	BA	1625	1/1	0.81	0.12	65,65,65,65	0
58	MG	CA	3528	1/1	0.81	0.25	79,79,79,79	0
58	MG	CA	3533	1/1	0.81	0.11	81,81,81,81	0
58	MG	CA	3441	1/1	0.82	0.26	77,77,77,77	0
58	MG	DA	1641	1/1	0.82	0.09	77,77,77,77	0
58	MG	CA	3607	1/1	0.82	0.18	97,97,97,97	0
58	MG	CA	3444	1/1	0.82	0.17	91,91,91,91	0
58	MG	AB	3006	1/1	0.82	0.19	72,72,72,72	0
58	MG	CA	3090	1/1	0.82	0.29	65,65,65,65	0
58	MG	BA	1652	1/1	0.82	0.23	72,72,72,72	0
58	MG	CA	3094	1/1	0.82	0.23	87,87,87,87	0
58	MG	AA	3460	1/1	0.82	0.21	72,72,72,72	0
58	MG	BA	1694	1/1	0.82	0.22	86,86,86,86	0
58	MG	AA	3733	1/1	0.82	0.13	68,68,68,68	0
58	MG	CA	3641	1/1	0.82	0.21	67,67,67,67	0
58	MG	BA	1701	1/1	0.82	0.19	75,75,75,75	0
58	MG	DA	1691	1/1	0.82	0.09	85,85,85,85	0
58	MG	BA	1624	1/1	0.82	0.30	75,75,75,75	0
58	MG	AA	3221	1/1	0.82	0.16	56,56,56,56	0
58	MG	BA	1789	1/1	0.82	0.16	90,90,90,90	0
58	MG	CA	3543	1/1	0.82	0.13	63,63,63,63	0
58	MG	BA	1710	1/1	0.82	0.13	79,79,79,79	0
58	MG	AA	3026	1/1	0.82	0.19	86,86,86,86	0
58	MG	BA	1804	1/1	0.82	0.12	68,68,68,68	1
58	MG	AD	307	1/1	0.82	0.17	53,53,53,53	1
58	MG	DA	1722	1/1	0.82	0.13	65,65,65,65	0
58	MG	CA	3569	1/1	0.82	0.19	79,79,79,79	0
58	MG	CA	3145	1/1	0.82	0.14	79,79,79,79	0
58	MG	BA	1717	1/1	0.82	0.16	83,83,83,83	0
58	MG	CA	3585	1/1	0.82	0.16	78,78,78,78	0
58	MG	BD	502	1/1	0.82	0.26	82,82,82,82	0
58	MG	DA	1603	1/1	0.82	0.16	74,74,74,74	0
58	MG	BA	1640	1/1	0.82	0.36	78,78,78,78	0
58	MG	DA	1607	1/1	0.82	0.18	61,61,61,61	0
58	MG	CA	3421	1/1	0.82	0.21	76,76,76,76	0
58	MG	DW	503	1/1	0.82	0.19	84,84,84,84	0
58	MG	DA	1622	1/1	0.82	0.27	77,77,77,77	0
58	MG	CA	3077	1/1	0.82	0.20	66,66,66,66	0
58	MG	AA	3575	1/1	0.83	0.10	69,69,69,69	0
58	MG	AA	3283	1/1	0.83	0.30	62,62,62,62	0
58	MG	DA	1640	1/1	0.83	0.13	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3363	1/1	0.83	0.11	66,66,66,66	0
58	MG	CA	3059	1/1	0.83	0.19	60,60,60,60	0
58	MG	DA	1652	1/1	0.83	0.18	71,71,71,71	0
58	MG	AA	3696	1/1	0.83	0.14	69,69,69,69	0
58	MG	CA	3152	1/1	0.83	0.15	56,56,56,56	0
58	MG	DA	1663	1/1	0.83	0.13	72,72,72,72	0
58	MG	AA	3193	1/1	0.83	0.25	62,62,62,62	0
58	MG	BA	1629	1/1	0.83	0.22	87,87,87,87	0
58	MG	CA	3073	1/1	0.83	0.21	91,91,91,91	0
58	MG	BA	1632	1/1	0.83	0.11	63,63,63,63	0
58	MG	BL	201	1/1	0.83	0.09	80,80,80,80	0
58	MG	AA	3801	1/1	0.83	0.15	88,88,88,88	0
58	MG	AA	3645	1/1	0.83	0.23	79,79,79,79	0
58	MG	CA	3636	1/1	0.83	0.11	80,80,80,80	0
58	MG	DA	1690	1/1	0.83	0.23	82,82,82,82	0
58	MG	CA	3489	1/1	0.83	0.22	80,80,80,80	0
58	MG	BA	1646	1/1	0.83	0.19	75,75,75,75	0
58	MG	CA	3235	1/1	0.83	0.27	75,75,75,75	0
58	MG	CA	3649	1/1	0.83	0.24	85,85,85,85	0
58	MG	CA	3241	1/1	0.83	0.28	107,107,107,107	0
58	MG	CA	3243	1/1	0.83	0.12	78,78,78,78	0
58	MG	DA	1709	1/1	0.83	0.20	72,72,72,72	0
58	MG	CA	3525	1/1	0.83	0.18	83,83,83,83	0
58	MG	CA	3245	1/1	0.83	0.22	57,57,57,57	0
58	MG	BA	1759	1/1	0.83	0.23	65,65,65,65	0
58	MG	BA	1647	1/1	0.83	0.08	61,61,61,61	0
58	MG	CB	3010	1/1	0.83	0.13	55,55,55,55	0
58	MG	CA	3098	1/1	0.83	0.13	83,83,83,83	0
58	MG	BA	1612	1/1	0.83	0.08	79,79,79,79	0
58	MG	CA	3273	1/1	0.83	0.16	69,69,69,69	0
58	MG	CA	3024	1/1	0.83	0.36	88,88,88,88	0
58	MG	CA	3113	1/1	0.83	0.21	92,92,92,92	0
58	MG	BA	1774	1/1	0.83	0.11	70,70,70,70	0
58	MG	DA	1763	1/1	0.83	0.13	77,77,77,77	0
58	MG	AB	3023	1/1	0.83	0.33	76,76,76,76	0
58	MG	CA	3581	1/1	0.83	0.11	81,81,81,81	0
58	MG	BA	1785	1/1	0.83	0.24	69,69,69,69	0
58	MG	AA	3760	1/1	0.83	0.10	27,27,27,27	0
58	MG	BA	1655	1/1	0.83	0.26	78,78,78,78	0
61	FUA	DZ	703	37/37	0.83	0.18	85,85,85,85	0
58	MG	BA	1737	1/1	0.84	0.29	72,72,72,72	0
58	MG	BA	1747	1/1	0.84	0.17	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3619	1/1	0.84	0.20	47,47,47,47	1
58	MG	CA	3230	1/1	0.84	0.25	51,51,51,51	0
58	MG	CA	3095	1/1	0.84	0.18	64,64,64,64	0
58	MG	AA	3041	1/1	0.84	0.23	75,75,75,75	0
58	MG	DA	1672	1/1	0.84	0.31	73,73,73,73	0
58	MG	BA	1750	1/1	0.84	0.13	84,84,84,84	0
58	MG	AA	3362	1/1	0.84	0.19	69,69,69,69	0
58	MG	BA	1675	1/1	0.84	0.32	77,77,77,77	0
58	MG	AA	3599	1/1	0.84	0.16	58,58,58,58	0
58	MG	CA	3255	1/1	0.84	0.21	67,67,67,67	0
58	MG	CA	3645	1/1	0.84	0.14	82,82,82,82	0
58	MG	CA	3032	1/1	0.84	0.32	67,67,67,67	0
58	MG	AA	3227	1/1	0.84	0.14	55,55,55,55	0
58	MG	CA	3536	1/1	0.84	0.13	71,71,71,71	0
58	MG	AA	3611	1/1	0.84	0.16	51,51,51,51	0
58	MG	CA	3660	1/1	0.84	0.34	101,101,101,101	0
58	MG	CA	3538	1/1	0.84	0.09	71,71,71,71	0
58	MG	CA	3540	1/1	0.84	0.22	85,85,85,85	0
58	MG	AA	3775	1/1	0.84	0.09	45,45,45,45	0
58	MG	DA	1711	1/1	0.84	0.11	45,45,45,45	0
58	MG	AZ	301	1/1	0.84	0.15	98,98,98,98	0
58	MG	AA	3779	1/1	0.84	0.12	62,62,62,62	0
58	MG	BA	1648	1/1	0.84	0.33	75,75,75,75	0
58	MG	AA	3443	1/1	0.84	0.19	65,65,65,65	0
58	MG	AA	3710	1/1	0.84	0.20	75,75,75,75	0
58	MG	AA	3458	1/1	0.84	0.15	72,72,72,72	0
58	MG	CA	3574	1/1	0.84	0.08	72,72,72,72	0
58	MG	DA	1739	1/1	0.84	0.19	79,79,79,79	0
58	MG	AA	3204	1/1	0.84	0.20	57,57,57,57	0
58	MG	DA	1749	1/1	0.84	0.23	80,80,80,80	0
58	MG	DA	1751	1/1	0.84	0.19	81,81,81,81	0
58	MG	CA	3159	1/1	0.84	0.14	69,69,69,69	0
58	MG	CA	3178	1/1	0.84	0.17	57,57,57,57	0
58	MG	AA	3244	1/1	0.84	0.22	100,100,100,100	0
58	MG	AA	3739	1/1	0.84	0.27	94,94,94,94	0
58	MG	CA	3396	1/1	0.84	0.14	58,58,58,58	0
58	MG	CA	3199	1/1	0.84	0.25	74,74,74,74	0
58	MG	CA	3599	1/1	0.84	0.13	80,80,80,80	0
58	MG	AA	3096	1/1	0.84	0.19	63,63,63,63	0
58	MG	BM	202	1/1	0.84	0.10	65,65,65,65	0
58	MG	AA	3639	1/1	0.84	0.14	77,77,77,77	0
58	MG	CA	3049	1/1	0.85	0.20	81,81,81,81	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3052	1/1	0.85	0.23	69,69,69,69	0
58	MG	AA	3434	1/1	0.85	0.08	17,17,17,17	0
58	MG	AA	3814	1/1	0.85	0.11	93,93,93,93	0
58	MG	AA	3649	1/1	0.85	0.14	92,92,92,92	0
58	MG	CA	3133	1/1	0.85	0.16	69,69,69,69	0
58	MG	CA	3062	1/1	0.85	0.11	68,68,68,68	0
58	MG	BA	1662	1/1	0.85	0.15	70,70,70,70	0
58	MG	A5	105	1/1	0.85	0.14	60,60,60,60	0
58	MG	AA	3713	1/1	0.85	0.26	52,52,52,52	1
58	MG	AA	3720	1/1	0.85	0.23	77,77,77,77	0
58	MG	CA	3153	1/1	0.85	0.23	78,78,78,78	0
58	MG	AA	3652	1/1	0.85	0.12	77,77,77,77	0
58	MG	DA	1696	1/1	0.85	0.11	91,91,91,91	0
58	MG	CA	3158	1/1	0.85	0.21	70,70,70,70	0
58	MG	BA	1786	1/1	0.85	0.14	60,60,60,60	0
58	MG	AA	3656	1/1	0.85	0.13	56,56,56,56	0
58	MG	CA	3081	1/1	0.85	0.10	68,68,68,68	0
58	MG	CA	3563	1/1	0.85	0.12	91,91,91,91	0
58	MG	CA	3189	1/1	0.85	0.10	68,68,68,68	0
58	MG	CA	3373	1/1	0.85	0.26	58,58,58,58	0
58	MG	CE	306	1/1	0.85	0.09	67,67,67,67	0
58	MG	CA	3374	1/1	0.85	0.14	76,76,76,76	0
58	MG	CA	3579	1/1	0.85	0.11	51,51,51,51	0
58	MG	DA	1725	1/1	0.85	0.12	70,70,70,70	0
58	MG	CA	3378	1/1	0.85	0.14	84,84,84,84	0
58	MG	CA	3088	1/1	0.85	0.41	75,75,75,75	0
58	MG	DA	1733	1/1	0.85	0.15	83,83,83,83	0
58	MG	CA	3018	1/1	0.85	0.29	64,64,64,64	0
58	MG	DA	1604	1/1	0.85	0.29	76,76,76,76	0
58	MG	BA	1679	1/1	0.85	0.18	87,87,87,87	0
58	MG	DA	1748	1/1	0.85	0.13	78,78,78,78	0
58	MG	CA	3402	1/1	0.85	0.10	70,70,70,70	0
58	MG	CA	3407	1/1	0.85	0.12	55,55,55,55	0
58	MG	BA	1793	1/1	0.85	0.10	63,63,63,63	0
58	MG	AA	3017	1/1	0.85	0.19	78,78,78,78	0
58	MG	DA	1634	1/1	0.85	0.18	90,90,90,90	0
58	MG	CA	3033	1/1	0.85	0.30	89,89,89,89	0
58	MG	BA	1800	1/1	0.85	0.13	69,69,69,69	0
58	MG	CA	3223	1/1	0.85	0.32	65,65,65,65	0
58	MG	DK	5001	1/1	0.85	0.06	100,100,100,100	0
58	MG	AA	3689	1/1	0.85	0.11	55,55,55,55	1
58	MG	CA	3477	1/1	0.85	0.13	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3067	1/1	0.85	0.17	55,55,55,55	0
58	MG	AA	3547	1/1	0.85	0.11	31,31,31,31	0
58	MG	AA	3657	1/1	0.86	0.14	43,43,43,43	1
58	MG	AA	3665	1/1	0.86	0.21	85,85,85,85	0
58	MG	CA	3395	1/1	0.86	0.21	65,65,65,65	0
58	MG	BA	1663	1/1	0.86	0.18	82,82,82,82	0
58	MG	AA	3445	1/1	0.86	0.19	75,75,75,75	0
58	MG	CA	3406	1/1	0.86	0.10	70,70,70,70	0
58	MG	BA	1739	1/1	0.86	0.18	63,63,63,63	0
58	MG	AA	3590	1/1	0.86	0.13	69,69,69,69	0
58	MG	BA	1620	1/1	0.86	0.19	57,57,57,57	0
58	MG	CA	3440	1/1	0.86	0.16	57,57,57,57	0
58	MG	CA	3208	1/1	0.86	0.20	84,84,84,84	0
58	MG	CA	3085	1/1	0.86	0.17	66,66,66,66	0
58	MG	AA	3596	1/1	0.86	0.19	40,40,40,40	0
58	MG	AA	3636	1/1	0.86	0.15	65,65,65,65	0
58	MG	CA	3004	1/1	0.86	0.29	64,64,64,64	0
58	MG	DA	1684	1/1	0.86	0.33	72,72,72,72	0
58	MG	CA	3005	1/1	0.86	0.20	59,59,59,59	0
58	MG	DA	1686	1/1	0.86	0.11	53,53,53,53	0
58	MG	CA	3633	1/1	0.86	0.16	68,68,68,68	0
58	MG	AB	3019	1/1	0.86	0.10	65,65,65,65	0
58	MG	CA	3635	1/1	0.86	0.09	79,79,79,79	0
58	MG	CA	3010	1/1	0.86	0.08	41,41,41,41	0
58	MG	CA	3492	1/1	0.86	0.21	105,105,105,105	0
58	MG	CA	3642	1/1	0.86	0.45	80,80,80,80	0
58	MG	AA	3767	1/1	0.86	0.13	63,63,63,63	1
58	MG	CA	3499	1/1	0.86	0.20	83,83,83,83	0
58	MG	CA	3099	1/1	0.86	0.16	92,92,92,92	0
58	MG	AA	3638	1/1	0.86	0.21	72,72,72,72	0
58	MG	CA	3512	1/1	0.86	0.26	65,65,65,65	0
58	MG	AA	3448	1/1	0.86	0.18	78,78,78,78	0
58	MG	BA	1775	1/1	0.86	0.15	78,78,78,78	0
58	MG	CA	3115	1/1	0.86	0.22	76,76,76,76	0
58	MG	CA	3532	1/1	0.86	0.09	79,79,79,79	0
58	MG	AA	3360	1/1	0.86	0.16	114,114,114,114	0
58	MG	CB	3003	1/1	0.86	0.13	77,77,77,77	0
58	MG	CB	3005	1/1	0.86	0.14	62,62,62,62	0
58	MG	BA	1784	1/1	0.86	0.09	50,50,50,50	0
58	MG	CA	3285	1/1	0.86	0.19	57,57,57,57	0
58	MG	AA	3057	1/1	0.86	0.20	57,57,57,57	0
58	MG	DA	1740	1/1	0.86	0.12	81,81,81,81	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3037	1/1	0.86	0.12	58,58,58,58	0
58	MG	AA	3274	1/1	0.86	0.16	55,55,55,55	0
58	MG	CA	3043	1/1	0.86	0.37	102,102,102,102	0
58	MG	DA	1750	1/1	0.86	0.21	68,68,68,68	0
58	MG	AA	3788	1/1	0.86	0.16	58,58,58,58	1
58	MG	AA	3731	1/1	0.86	0.12	42,42,42,42	0
58	MG	CA	3557	1/1	0.86	0.09	76,76,76,76	0
58	MG	DA	1602	1/1	0.86	0.11	80,80,80,80	0
58	MG	BA	1791	1/1	0.86	0.15	68,68,68,68	0
58	MG	BA	1792	1/1	0.86	0.10	72,72,72,72	0
58	MG	DA	1768	1/1	0.86	0.19	73,73,73,73	0
58	MG	AA	3269	1/1	0.86	0.18	84,84,84,84	0
58	MG	AA	3806	1/1	0.86	0.14	61,61,61,61	0
58	MG	AA	3065	1/1	0.86	0.22	48,48,48,48	0
58	MG	BA	1607	1/1	0.86	0.07	67,67,67,67	0
58	MG	CA	3375	1/1	0.86	0.20	71,71,71,71	0
58	MG	BA	1718	1/1	0.86	0.11	67,67,67,67	0
58	MG	AN	3001	1/1	0.87	0.17	85,85,85,85	0
58	MG	AA	3018	1/1	0.87	0.70	78,78,78,78	0
58	MG	AB	3001	1/1	0.87	0.23	87,87,87,87	0
58	MG	AB	3002	1/1	0.87	0.18	59,59,59,59	0
58	MG	CA	3385	1/1	0.87	0.18	64,64,64,64	0
58	MG	CA	3067	1/1	0.87	0.21	72,72,72,72	0
58	MG	CA	3546	1/1	0.87	0.12	119,119,119,119	0
58	MG	CA	3221	1/1	0.87	0.15	54,54,54,54	0
58	MG	AA	3107	1/1	0.87	0.20	76,76,76,76	0
58	MG	AA	3438	1/1	0.87	0.15	57,57,57,57	0
58	MG	CA	3662	1/1	0.87	0.19	55,55,55,55	0
58	MG	CA	3132	1/1	0.87	0.07	30,30,30,30	0
58	MG	CA	3237	1/1	0.87	0.23	75,75,75,75	0
58	MG	CA	3568	1/1	0.87	0.13	41,41,41,41	0
58	MG	AA	3201	1/1	0.87	0.24	65,65,65,65	0
58	MG	CA	3412	1/1	0.87	0.17	81,81,81,81	0
58	MG	CB	3007	1/1	0.87	0.17	65,65,65,65	0
58	MG	AA	3781	1/1	0.87	0.19	44,44,44,44	1
58	MG	AA	3633	1/1	0.87	0.16	48,48,48,48	1
58	MG	BA	1732	1/1	0.87	0.10	78,78,78,78	0
58	MG	CA	3141	1/1	0.87	0.14	54,54,54,54	0
58	MG	BA	1680	1/1	0.87	0.22	69,69,69,69	0
58	MG	BA	1611	1/1	0.87	0.11	69,69,69,69	0
58	MG	BA	1684	1/1	0.87	0.12	69,69,69,69	0
58	MG	BA	1689	1/1	0.87	0.21	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3595	1/1	0.87	0.10	53,53,53,53	0
58	MG	CA	3283	1/1	0.87	0.14	60,60,60,60	0
58	MG	CA	3484	1/1	0.87	0.15	76,76,76,76	0
58	MG	BA	1803	1/1	0.87	0.19	69,69,69,69	0
58	MG	BA	1690	1/1	0.87	0.33	70,70,70,70	0
58	MG	CA	3172	1/1	0.87	0.24	83,83,83,83	0
58	MG	DA	1619	1/1	0.87	0.14	71,71,71,71	0
58	MG	AA	3755	1/1	0.87	0.09	63,63,63,63	0
58	MG	BA	1755	1/1	0.87	0.09	94,94,94,94	0
58	MG	DA	1630	1/1	0.87	0.16	61,61,61,61	0
58	MG	AA	3059	1/1	0.87	0.12	51,51,51,51	0
58	MG	DA	1636	1/1	0.87	0.29	70,70,70,70	0
58	MG	AA	3367	1/1	0.87	0.10	52,52,52,52	0
58	MG	CA	3508	1/1	0.87	0.13	96,96,96,96	0
58	MG	CA	3194	1/1	0.87	0.30	72,72,72,72	0
58	MG	DA	1647	1/1	0.87	0.21	58,58,58,58	0
58	MG	CA	3625	1/1	0.87	0.15	79,79,79,79	0
58	MG	AA	3578	1/1	0.87	0.10	55,55,55,55	0
58	MG	CA	3350	1/1	0.87	0.10	85,85,85,85	0
58	MG	DA	1658	1/1	0.87	0.20	72,72,72,72	0
58	MG	AA	3682	1/1	0.87	0.14	53,53,53,53	0
58	MG	CA	3360	1/1	0.87	0.09	49,49,49,49	0
58	MG	CA	3204	1/1	0.87	0.17	74,74,74,74	0
58	MG	AA	3049	1/1	0.88	0.13	52,52,52,52	0
58	MG	CA	3100	1/1	0.88	0.24	79,79,79,79	0
58	MG	AA	3573	1/1	0.88	0.09	50,50,50,50	0
58	MG	AD	308	1/1	0.88	0.17	73,73,73,73	0
58	MG	AA	3136	1/1	0.88	0.10	52,52,52,52	0
58	MG	AA	3029	1/1	0.88	0.13	53,53,53,53	0
58	MG	AA	3589	1/1	0.88	0.16	21,21,21,21	1
58	MG	CA	3292	1/1	0.88	0.10	73,73,73,73	0
58	MG	AA	3080	1/1	0.88	0.22	57,57,57,57	0
58	MG	DA	1628	1/1	0.88	0.29	74,74,74,74	0
58	MG	AZ	302	1/1	0.88	0.13	68,68,68,68	0
58	MG	AA	3230	1/1	0.88	0.38	80,80,80,80	0
58	MG	AA	3674	1/1	0.88	0.15	75,75,75,75	0
58	MG	DA	1637	1/1	0.88	0.11	76,76,76,76	0
58	MG	DA	1638	1/1	0.88	0.22	83,83,83,83	0
58	MG	BA	1756	1/1	0.88	0.08	98,98,98,98	0
58	MG	AA	3027	1/1	0.88	0.39	77,77,77,77	0
58	MG	AA	3109	1/1	0.88	0.10	50,50,50,50	0
58	MG	CA	3577	1/1	0.88	0.11	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	BA	1601	1/1	0.88	0.10	58,58,58,58	0
58	MG	CA	3035	1/1	0.88	0.28	60,60,60,60	0
58	MG	AA	3600	1/1	0.88	0.10	60,60,60,60	0
58	MG	AA	3794	1/1	0.88	0.13	58,58,58,58	1
58	MG	BA	1608	1/1	0.88	0.11	74,74,74,74	0
58	MG	AA	3795	1/1	0.88	0.20	68,68,68,68	1
58	MG	CA	3154	1/1	0.88	0.26	72,72,72,72	0
58	MG	BA	1781	1/1	0.88	0.10	46,46,46,46	1
58	MG	CA	3386	1/1	0.88	0.14	65,65,65,65	0
58	MG	AA	3605	1/1	0.88	0.13	68,68,68,68	0
58	MG	BA	1686	1/1	0.88	0.13	81,81,81,81	0
58	MG	CA	3165	1/1	0.88	0.12	62,62,62,62	0
58	MG	CA	3609	1/1	0.88	0.20	76,76,76,76	0
58	MG	AA	3455	1/1	0.88	0.17	58,58,58,58	0
58	MG	CA	3173	1/1	0.88	0.18	65,65,65,65	0
58	MG	AA	3704	1/1	0.88	0.14	59,59,59,59	0
58	MG	CA	3179	1/1	0.88	0.27	75,75,75,75	0
58	MG	AA	3245	1/1	0.88	0.21	69,69,69,69	0
58	MG	CA	3420	1/1	0.88	0.17	71,71,71,71	0
58	MG	CA	3060	1/1	0.88	0.23	77,77,77,77	0
58	MG	BA	1790	1/1	0.88	0.10	75,75,75,75	0
58	MG	DA	1698	1/1	0.88	0.25	68,68,68,68	0
58	MG	CA	3432	1/1	0.88	0.18	61,61,61,61	0
58	MG	CA	3436	1/1	0.88	0.09	75,75,75,75	0
58	MG	CA	3063	1/1	0.88	0.15	53,53,53,53	0
58	MG	DA	1707	1/1	0.88	0.11	87,87,87,87	0
58	MG	AA	3339	1/1	0.88	0.14	43,43,43,43	0
58	MG	AA	3461	1/1	0.88	0.16	66,66,66,66	0
58	MG	CA	3447	1/1	0.88	0.18	80,80,80,80	0
58	MG	CA	3454	1/1	0.88	0.12	81,81,81,81	0
58	MG	BA	1695	1/1	0.88	0.15	67,67,67,67	0
58	MG	AA	3246	1/1	0.88	0.19	72,72,72,72	0
58	MG	BA	1799	1/1	0.88	0.10	63,63,63,63	0
58	MG	CA	3075	1/1	0.88	0.19	71,71,71,71	0
58	MG	BA	1699	1/1	0.88	0.17	78,78,78,78	0
58	MG	BA	1700	1/1	0.88	0.30	74,74,74,74	0
58	MG	DA	1732	1/1	0.88	0.17	76,76,76,76	0
58	MG	AA	3111	1/1	0.88	0.17	48,48,48,48	0
58	MG	BA	1628	1/1	0.88	0.18	75,75,75,75	0
58	MG	CA	3226	1/1	0.88	0.21	69,69,69,69	0
58	MG	AA	3477	1/1	0.88	0.10	58,58,58,58	0
58	MG	CA	3233	1/1	0.88	0.26	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3506	1/1	0.88	0.10	58,58,58,58	0
58	MG	BA	1809	1/1	0.88	0.18	83,83,83,83	0
58	MG	CA	3236	1/1	0.88	0.12	87,87,87,87	0
58	MG	AA	3480	1/1	0.88	0.09	54,54,54,54	0
58	MG	CA	3091	1/1	0.88	0.26	111,111,111,111	0
58	MG	CA	3515	1/1	0.88	0.11	79,79,79,79	0
58	MG	AA	3489	1/1	0.88	0.11	64,64,64,64	0
58	MG	CE	303	1/1	0.88	0.15	54,54,54,54	0
58	MG	CE	304	1/1	0.88	0.24	68,68,68,68	0
58	MG	CA	3527	1/1	0.88	0.08	78,78,78,78	0
58	MG	AA	3510	1/1	0.88	0.19	58,58,58,58	0
58	MG	AA	3526	1/1	0.88	0.08	20,20,20,20	0
58	MG	CP	203	1/1	0.88	0.14	67,67,67,67	0
58	MG	BT	3001	1/1	0.88	0.17	62,62,62,62	0
58	MG	CQ	203	1/1	0.88	0.16	67,67,67,67	0
58	MG	AA	3538	1/1	0.88	0.19	61,61,61,61	1
58	MG	CA	3257	1/1	0.89	0.30	57,57,57,57	0
58	MG	C5	101	1/1	0.89	0.28	65,65,65,65	0
58	MG	CA	3263	1/1	0.89	0.12	57,57,57,57	0
58	MG	BA	1667	1/1	0.89	0.12	55,55,55,55	0
58	MG	CA	3116	1/1	0.89	0.18	75,75,75,75	0
58	MG	BA	1668	1/1	0.89	0.31	75,75,75,75	0
58	MG	AA	3263	1/1	0.89	0.17	80,80,80,80	0
58	MG	AA	3430	1/1	0.89	0.12	44,44,44,44	0
58	MG	BA	1672	1/1	0.89	0.22	92,92,92,92	0
58	MG	CA	3545	1/1	0.89	0.13	68,68,68,68	0
58	MG	AA	3282	1/1	0.89	0.25	40,40,40,40	0
58	MG	DA	1625	1/1	0.89	0.29	73,73,73,73	0
58	MG	AA	3264	1/1	0.89	0.11	62,62,62,62	0
58	MG	AA	3804	1/1	0.89	0.15	68,68,68,68	0
58	MG	AA	3442	1/1	0.89	0.12	49,49,49,49	0
58	MG	DA	1635	1/1	0.89	0.12	65,65,65,65	0
58	MG	AA	3319	1/1	0.89	0.09	69,69,69,69	0
58	MG	AA	3212	1/1	0.89	0.17	34,34,34,34	1
58	MG	BA	1685	1/1	0.89	0.20	69,69,69,69	0
58	MG	BA	1779	1/1	0.89	0.14	79,79,79,79	0
58	MG	AA	3580	1/1	0.89	0.08	23,23,23,23	0
58	MG	BA	1782	1/1	0.89	0.13	81,81,81,81	0
58	MG	AA	3736	1/1	0.89	0.12	78,78,78,78	0
58	MG	CA	3053	1/1	0.89	0.18	58,58,58,58	0
58	MG	AA	3586	1/1	0.89	0.11	62,62,62,62	0
58	MG	AB	3005	1/1	0.89	0.23	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3647	1/1	0.89	0.18	72,72,72,72	0
58	MG	CA	3586	1/1	0.89	0.08	69,69,69,69	0
58	MG	CA	3376	1/1	0.89	0.13	66,66,66,66	0
58	MG	DA	1664	1/1	0.89	0.15	64,64,64,64	0
58	MG	CA	3168	1/1	0.89	0.27	56,56,56,56	0
58	MG	BA	1693	1/1	0.89	0.34	74,74,74,74	0
58	MG	DA	1671	1/1	0.89	0.25	83,83,83,83	0
58	MG	AA	3336	1/1	0.89	0.11	54,54,54,54	0
58	MG	CA	3387	1/1	0.89	0.12	70,70,70,70	0
58	MG	CA	3174	1/1	0.89	0.30	61,61,61,61	0
58	MG	AB	3015	1/1	0.89	0.10	40,40,40,40	0
58	MG	AA	3199	1/1	0.89	0.19	54,54,54,54	0
58	MG	BA	1698	1/1	0.89	0.16	68,68,68,68	0
58	MG	CA	3401	1/1	0.89	0.11	69,69,69,69	0
58	MG	CA	3611	1/1	0.89	0.22	91,91,91,91	0
58	MG	CA	3614	1/1	0.89	0.09	52,52,52,52	0
58	MG	CA	3183	1/1	0.89	0.50	86,86,86,86	0
58	MG	AA	3354	1/1	0.89	0.16	60,60,60,60	0
58	MG	BA	1797	1/1	0.89	0.16	69,69,69,69	0
58	MG	BA	1635	1/1	0.89	0.22	62,62,62,62	0
58	MG	CA	3196	1/1	0.89	0.34	64,64,64,64	0
58	MG	CA	3074	1/1	0.89	0.16	53,53,53,53	0
58	MG	AA	3355	1/1	0.89	0.11	58,58,58,58	0
58	MG	DA	1703	1/1	0.89	0.16	74,74,74,74	0
58	MG	CA	3628	1/1	0.89	0.16	66,66,66,66	0
58	MG	AA	3765	1/1	0.89	0.13	63,63,63,63	0
58	MG	BA	1706	1/1	0.89	0.11	61,61,61,61	0
58	MG	AA	3356	1/1	0.89	0.10	35,35,35,35	0
58	MG	AA	3463	1/1	0.89	0.10	46,46,46,46	0
58	MG	CA	3210	1/1	0.89	0.24	75,75,75,75	0
58	MG	CA	3082	1/1	0.89	0.12	70,70,70,70	0
58	MG	DA	1718	1/1	0.89	0.09	77,77,77,77	0
58	MG	AA	3770	1/1	0.89	0.26	37,37,37,37	0
58	MG	BA	1811	1/1	0.89	0.09	68,68,68,68	0
58	MG	CA	3089	1/1	0.89	0.20	80,80,80,80	0
58	MG	DA	1726	1/1	0.89	0.13	77,77,77,77	0
58	MG	CA	3469	1/1	0.89	0.11	69,69,69,69	0
58	MG	CA	3470	1/1	0.89	0.15	72,72,72,72	0
58	MG	AA	3174	1/1	0.89	0.20	63,63,63,63	0
58	MG	CA	3228	1/1	0.89	0.15	63,63,63,63	0
58	MG	CA	3483	1/1	0.89	0.21	69,69,69,69	0
58	MG	BA	1716	1/1	0.89	0.14	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3231	1/1	0.89	0.29	57,57,57,57	0
58	MG	AA	3679	1/1	0.89	0.11	65,65,65,65	0
58	MG	AA	3606	1/1	0.89	0.21	61,61,61,61	0
58	MG	BA	1719	1/1	0.89	0.09	44,44,44,44	0
58	MG	AA	3778	1/1	0.89	0.10	54,54,54,54	0
58	MG	AA	3015	1/1	0.89	0.31	64,64,64,64	0
58	MG	CA	3505	1/1	0.89	0.14	73,73,73,73	0
58	MG	AA	3365	1/1	0.89	0.19	57,57,57,57	0
58	MG	CA	3244	1/1	0.89	0.27	78,78,78,78	0
58	MG	A5	102	1/1	0.89	0.30	88,88,88,88	0
58	MG	AA	3133	1/1	0.89	0.17	69,69,69,69	0
58	MG	CA	3248	1/1	0.89	0.24	77,77,77,77	0
58	MG	CA	3252	1/1	0.89	0.16	64,64,64,64	0
58	MG	CA	3516	1/1	0.89	0.11	62,62,62,62	0
58	MG	DW	502	1/1	0.89	0.13	84,84,84,84	0
58	MG	CA	3523	1/1	0.89	0.11	40,40,40,40	0
58	MG	AA	3370	1/1	0.89	0.22	58,58,58,58	0
58	MG	BA	1744	1/1	0.89	0.13	79,79,79,79	0
58	MG	CA	3256	1/1	0.89	0.13	40,40,40,40	0
58	MG	CA	3393	1/1	0.90	0.08	82,82,82,82	0
58	MG	DA	1626	1/1	0.90	0.22	49,49,49,49	0
58	MG	BA	1722	1/1	0.90	0.16	62,62,62,62	0
58	MG	BA	1727	1/1	0.90	0.11	59,59,59,59	0
58	MG	CA	3399	1/1	0.90	0.13	75,75,75,75	0
58	MG	AA	3309	1/1	0.90	0.18	44,44,44,44	0
58	MG	BA	1733	1/1	0.90	0.18	63,63,63,63	0
58	MG	CA	3405	1/1	0.90	0.17	91,91,91,91	0
58	MG	AA	3310	1/1	0.90	0.11	58,58,58,58	0
58	MG	AA	3462	1/1	0.90	0.27	71,71,71,71	0
58	MG	CA	3409	1/1	0.90	0.12	40,40,40,40	0
58	MG	AA	3232	1/1	0.90	0.18	79,79,79,79	0
58	MG	DA	1642	1/1	0.90	0.11	66,66,66,66	0
58	MG	CA	3413	1/1	0.90	0.10	39,39,39,39	0
58	MG	BA	1606	1/1	0.90	0.15	65,65,65,65	0
58	MG	BA	1671	1/1	0.90	0.22	73,73,73,73	0
58	MG	DA	1653	1/1	0.90	0.10	60,60,60,60	0
58	MG	CA	3424	1/1	0.90	0.10	55,55,55,55	0
58	MG	CA	3426	1/1	0.90	0.14	55,55,55,55	0
58	MG	DA	1659	1/1	0.90	0.12	64,64,64,64	0
58	MG	CA	3428	1/1	0.90	0.18	54,54,54,54	1
58	MG	CA	3429	1/1	0.90	0.17	74,74,74,74	0
58	MG	AA	3184	1/1	0.90	0.17	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3738	1/1	0.90	0.10	75,75,75,75	0
58	MG	CA	3433	1/1	0.90	0.15	71,71,71,71	0
58	MG	AA	3811	1/1	0.90	0.13	58,58,58,58	0
58	MG	AA	3415	1/1	0.90	0.06	56,56,56,56	0
58	MG	BA	1614	1/1	0.90	0.08	75,75,75,75	0
58	MG	DA	1674	1/1	0.90	0.11	62,62,62,62	0
58	MG	CA	3025	1/1	0.90	0.14	77,77,77,77	0
58	MG	AA	3743	1/1	0.90	0.14	80,80,80,80	0
58	MG	CA	3622	1/1	0.90	0.11	55,55,55,55	0
58	MG	CA	3239	1/1	0.90	0.24	75,75,75,75	0
58	MG	CA	3117	1/1	0.90	0.20	68,68,68,68	0
58	MG	AA	3139	1/1	0.90	0.07	58,58,58,58	0
58	MG	AA	3747	1/1	0.90	0.15	58,58,58,58	0
58	MG	AA	3750	1/1	0.90	0.08	24,24,24,24	0
58	MG	BA	1687	1/1	0.90	0.19	50,50,50,50	0
58	MG	CA	3478	1/1	0.90	0.10	58,58,58,58	0
58	MG	CA	3480	1/1	0.90	0.17	55,55,55,55	0
58	MG	CA	3127	1/1	0.90	0.12	63,63,63,63	0
58	MG	CA	3482	1/1	0.90	0.16	70,70,70,70	0
58	MG	CA	3128	1/1	0.90	0.23	71,71,71,71	0
58	MG	DA	1702	1/1	0.90	0.07	65,65,65,65	0
58	MG	BA	1688	1/1	0.90	0.20	52,52,52,52	0
58	MG	AA	3163	1/1	0.90	0.18	40,40,40,40	0
58	MG	AA	3660	1/1	0.90	0.14	70,70,70,70	0
58	MG	AA	3437	1/1	0.90	0.12	54,54,54,54	0
58	MG	CA	3137	1/1	0.90	0.32	73,73,73,73	0
58	MG	CA	3498	1/1	0.90	0.17	68,68,68,68	0
58	MG	AA	3491	1/1	0.90	0.14	35,35,35,35	0
58	MG	AA	3762	1/1	0.90	0.13	53,53,53,53	1
58	MG	CA	3663	1/1	0.90	0.21	91,91,91,91	0
58	MG	AA	3345	1/1	0.90	0.08	68,68,68,68	0
58	MG	BA	1633	1/1	0.90	0.09	48,48,48,48	0
58	MG	CA	3284	1/1	0.90	0.15	92,92,92,92	0
58	MG	CB	3004	1/1	0.90	0.13	68,68,68,68	0
58	MG	AA	3024	1/1	0.90	0.11	57,57,57,57	0
58	MG	CA	3057	1/1	0.90	0.12	49,49,49,49	0
58	MG	AA	3010	1/1	0.90	0.26	68,68,68,68	0
58	MG	BA	1638	1/1	0.90	0.14	64,64,64,64	0
58	MG	DA	1736	1/1	0.90	0.07	79,79,79,79	0
58	MG	CA	3157	1/1	0.90	0.11	55,55,55,55	0
58	MG	AD	305	1/1	0.90	0.20	63,63,63,63	0
58	MG	AA	3252	1/1	0.90	0.13	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	DA	1744	1/1	0.90	0.13	79,79,79,79	0
58	MG	AA	3625	1/1	0.90	0.10	60,60,60,60	0
58	MG	CA	3167	1/1	0.90	0.12	60,60,60,60	0
58	MG	AA	3695	1/1	0.90	0.17	78,78,78,78	0
58	MG	CA	3341	1/1	0.90	0.17	71,71,71,71	0
58	MG	AA	3563	1/1	0.90	0.10	49,49,49,49	1
58	MG	AA	3446	1/1	0.90	0.19	61,61,61,61	0
58	MG	AA	3632	1/1	0.90	0.11	76,76,76,76	0
58	MG	CA	3072	1/1	0.90	0.14	56,56,56,56	0
58	MG	DA	1757	1/1	0.90	0.15	75,75,75,75	0
58	MG	DA	1761	1/1	0.90	0.17	66,66,66,66	0
58	MG	BA	1654	1/1	0.90	0.07	69,69,69,69	0
58	MG	AA	3708	1/1	0.90	0.22	53,53,53,53	1
58	MG	DA	1766	1/1	0.90	0.09	58,58,58,58	0
58	MG	A0	103	1/1	0.90	0.07	37,37,37,37	0
58	MG	DF	3001	1/1	0.90	0.12	49,49,49,49	0
58	MG	BA	1660	1/1	0.90	0.29	76,76,76,76	0
58	MG	AA	3260	1/1	0.90	0.22	71,71,71,71	0
58	MG	CA	3079	1/1	0.90	0.16	57,57,57,57	0
58	MG	AA	3178	1/1	0.90	0.13	78,78,78,78	0
58	MG	BB	3001	1/1	0.90	0.10	75,75,75,75	0
58	MG	AA	3364	1/1	0.90	0.24	81,81,81,81	0
58	MG	BK	201	1/1	0.90	0.11	57,57,57,57	0
58	MG	BA	1619	1/1	0.91	0.08	73,73,73,73	0
58	MG	CA	3269	1/1	0.91	0.10	86,86,86,86	0
58	MG	CA	3514	1/1	0.91	0.22	105,105,105,105	0
58	MG	CA	3114	1/1	0.91	0.17	39,39,39,39	0
58	MG	AA	3802	1/1	0.91	0.15	55,55,55,55	0
58	MG	CA	3518	1/1	0.91	0.19	86,86,86,86	0
58	MG	AA	3698	1/1	0.91	0.18	32,32,32,32	1
58	MG	AA	3702	1/1	0.91	0.19	35,35,35,35	1
58	MG	BA	1702	1/1	0.91	0.17	61,61,61,61	0
58	MG	AA	3186	1/1	0.91	0.11	37,37,37,37	0
58	MG	DA	1613	1/1	0.91	0.19	72,72,72,72	0
58	MG	BA	1627	1/1	0.91	0.25	57,57,57,57	0
58	MG	AA	3358	1/1	0.91	0.16	63,63,63,63	0
58	MG	CA	3534	1/1	0.91	0.11	79,79,79,79	0
58	MG	AA	3062	1/1	0.91	0.23	67,67,67,67	0
58	MG	BA	1630	1/1	0.91	0.23	55,55,55,55	0
58	MG	AA	3095	1/1	0.91	0.21	82,82,82,82	0
58	MG	CA	3302	1/1	0.91	0.19	68,68,68,68	0
58	MG	CA	3541	1/1	0.91	0.10	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	DA	1632	1/1	0.91	0.20	61,61,61,61	0
58	MG	AA	3718	1/1	0.91	0.08	43,43,43,43	0
58	MG	AA	3194	1/1	0.91	0.16	44,44,44,44	0
58	MG	AA	3237	1/1	0.91	0.17	71,71,71,71	0
58	MG	BA	1637	1/1	0.91	0.22	72,72,72,72	0
58	MG	CA	3551	1/1	0.91	0.11	88,88,88,88	0
58	MG	AA	3729	1/1	0.91	0.07	38,38,38,38	0
58	MG	AA	3070	1/1	0.91	0.21	60,60,60,60	0
58	MG	BA	1644	1/1	0.91	0.23	69,69,69,69	0
58	MG	CA	3030	1/1	0.91	0.19	57,57,57,57	1
58	MG	DA	1643	1/1	0.91	0.09	55,55,55,55	0
58	MG	BA	1725	1/1	0.91	0.16	71,71,71,71	0
58	MG	BA	1726	1/1	0.91	0.08	64,64,64,64	0
58	MG	AA	3165	1/1	0.91	0.20	57,57,57,57	0
58	MG	AA	3493	1/1	0.91	0.08	30,30,30,30	1
58	MG	AA	3100	1/1	0.91	0.18	53,53,53,53	0
58	MG	CA	3379	1/1	0.91	0.09	65,65,65,65	0
58	MG	AA	3203	1/1	0.91	0.21	46,46,46,46	1
58	MG	CA	3039	1/1	0.91	0.40	71,71,71,71	0
58	MG	BA	1651	1/1	0.91	0.19	68,68,68,68	0
58	MG	CA	3166	1/1	0.91	0.19	44,44,44,44	0
58	MG	AA	3531	1/1	0.91	0.15	62,62,62,62	0
58	MG	DA	1668	1/1	0.91	0.28	62,62,62,62	0
58	MG	AA	3247	1/1	0.91	0.13	63,63,63,63	0
58	MG	CA	3591	1/1	0.91	0.10	83,83,83,83	0
58	MG	AA	3317	1/1	0.91	0.09	58,58,58,58	0
58	MG	AA	3642	1/1	0.91	0.07	49,49,49,49	0
58	MG	CA	3398	1/1	0.91	0.09	65,65,65,65	0
58	MG	DA	1675	1/1	0.91	0.17	74,74,74,74	0
58	MG	CA	3051	1/1	0.91	0.23	63,63,63,63	0
58	MG	CA	3598	1/1	0.91	0.08	73,73,73,73	0
58	MG	AA	3558	1/1	0.91	0.10	51,51,51,51	0
58	MG	DA	1679	1/1	0.91	0.22	58,58,58,58	0
58	MG	CA	3601	1/1	0.91	0.10	75,75,75,75	0
58	MG	CA	3603	1/1	0.91	0.09	51,51,51,51	0
58	MG	BA	1659	1/1	0.91	0.16	73,73,73,73	0
58	MG	AA	3561	1/1	0.91	0.13	58,58,58,58	0
58	MG	AA	3436	1/1	0.91	0.10	38,38,38,38	0
58	MG	CA	3185	1/1	0.91	0.24	59,59,59,59	0
58	MG	AE	302	1/1	0.91	0.17	69,69,69,69	0
58	MG	BA	1761	1/1	0.91	0.10	63,63,63,63	0
58	MG	DA	1697	1/1	0.91	0.19	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3192	1/1	0.91	0.12	58,58,58,58	0
58	MG	CA	3414	1/1	0.91	0.10	50,50,50,50	0
58	MG	CA	3418	1/1	0.91	0.11	41,41,41,41	0
58	MG	BA	1762	1/1	0.91	0.09	89,89,89,89	0
58	MG	BA	1767	1/1	0.91	0.08	61,61,61,61	0
58	MG	DA	1705	1/1	0.91	0.12	62,62,62,62	0
58	MG	CA	3197	1/1	0.91	0.23	64,64,64,64	0
58	MG	AH	3002	1/1	0.91	0.19	74,74,74,74	0
58	MG	AA	3756	1/1	0.91	0.15	40,40,40,40	1
58	MG	BA	1666	1/1	0.91	0.12	59,59,59,59	0
58	MG	CA	3069	1/1	0.91	0.20	81,81,81,81	0
58	MG	DA	1713	1/1	0.91	0.20	72,72,72,72	0
58	MG	AA	3177	1/1	0.91	0.24	61,61,61,61	0
58	MG	AW	3001	1/1	0.91	0.21	52,52,52,52	0
58	MG	AW	3004	1/1	0.91	0.18	65,65,65,65	0
58	MG	AY	502	1/1	0.91	0.14	58,58,58,58	0
58	MG	CA	3216	1/1	0.91	0.10	66,66,66,66	0
58	MG	AA	3249	1/1	0.91	0.09	24,24,24,24	1
58	MG	AA	3208	1/1	0.91	0.15	61,61,61,61	0
58	MG	AA	3338	1/1	0.91	0.06	30,30,30,30	0
58	MG	CA	3224	1/1	0.91	0.39	81,81,81,81	0
58	MG	AA	3661	1/1	0.91	0.17	43,43,43,43	0
58	MG	BA	1676	1/1	0.91	0.11	68,68,68,68	0
58	MG	DA	1735	1/1	0.91	0.19	83,83,83,83	0
58	MG	AA	3258	1/1	0.91	0.05	22,22,22,22	0
58	MG	CA	3657	1/1	0.91	0.14	67,67,67,67	0
58	MG	DA	1738	1/1	0.91	0.15	80,80,80,80	0
58	MG	AA	3343	1/1	0.91	0.13	65,65,65,65	0
58	MG	AA	3673	1/1	0.91	0.17	67,67,67,67	0
58	MG	AA	3344	1/1	0.91	0.09	84,84,84,84	0
58	MG	CA	3086	1/1	0.91	0.12	36,36,36,36	0
58	MG	CA	3087	1/1	0.91	0.12	67,67,67,67	0
58	MG	AA	3678	1/1	0.91	0.12	31,31,31,31	0
58	MG	AA	3450	1/1	0.91	0.14	53,53,53,53	0
58	MG	AA	3002	1/1	0.91	0.17	55,55,55,55	0
58	MG	CA	3488	1/1	0.91	0.09	51,51,51,51	0
58	MG	AA	3457	1/1	0.91	0.12	67,67,67,67	0
58	MG	AA	3349	1/1	0.91	0.09	40,40,40,40	0
58	MG	CB	3009	1/1	0.91	0.12	67,67,67,67	0
58	MG	DA	1759	1/1	0.91	0.12	76,76,76,76	0
58	MG	DA	1760	1/1	0.91	0.23	66,66,66,66	0
58	MG	BA	1610	1/1	0.91	0.14	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CB	3012	1/1	0.91	0.18	76,76,76,76	0
58	MG	AA	3785	1/1	0.91	0.11	72,72,72,72	0
58	MG	CD	301	1/1	0.91	0.27	81,81,81,81	0
58	MG	DA	1767	1/1	0.91	0.09	74,74,74,74	0
58	MG	AA	3694	1/1	0.91	0.09	45,45,45,45	0
58	MG	DD	502	1/1	0.91	0.29	62,62,62,62	0
58	MG	DE	202	1/1	0.91	0.08	94,94,94,94	0
58	MG	BA	1805	1/1	0.91	0.10	64,64,64,64	0
58	MG	AA	3604	1/1	0.91	0.11	38,38,38,38	1
58	MG	AA	3091	1/1	0.91	0.12	38,38,38,38	1
58	MG	CF	301	1/1	0.91	0.14	63,63,63,63	0
58	MG	CF	303	1/1	0.91	0.17	62,62,62,62	0
58	MG	AA	3797	1/1	0.91	0.13	15,15,15,15	1
58	MG	CO	201	1/1	0.91	0.11	64,64,64,64	0
58	MG	AA	3223	1/1	0.91	0.12	35,35,35,35	0
58	MG	AA	3019	1/1	0.92	0.10	58,58,58,58	0
58	MG	CA	3006	1/1	0.92	0.21	67,67,67,67	0
58	MG	AA	3271	1/1	0.92	0.24	69,69,69,69	0
58	MG	BA	1703	1/1	0.92	0.29	58,58,58,58	0
58	MG	CA	3013	1/1	0.92	0.08	63,63,63,63	0
58	MG	CA	3430	1/1	0.92	0.19	53,53,53,53	0
58	MG	AA	3772	1/1	0.92	0.23	17,17,17,17	1
58	MG	CA	3171	1/1	0.92	0.14	55,55,55,55	0
58	MG	CB	3008	1/1	0.92	0.10	59,59,59,59	0
58	MG	AA	3773	1/1	0.92	0.18	30,30,30,30	1
58	MG	CA	3020	1/1	0.92	0.08	63,63,63,63	0
58	MG	AA	3492	1/1	0.92	0.14	45,45,45,45	0
58	MG	BA	1708	1/1	0.92	0.18	62,62,62,62	0
58	MG	CA	3442	1/1	0.92	0.22	67,67,67,67	0
58	MG	CA	3027	1/1	0.92	0.13	44,44,44,44	0
58	MG	AA	3272	1/1	0.92	0.21	52,52,52,52	0
58	MG	CA	3181	1/1	0.92	0.20	47,47,47,47	0
58	MG	AA	3068	1/1	0.92	0.17	65,65,65,65	0
58	MG	CA	3465	1/1	0.92	0.21	66,66,66,66	0
58	MG	AA	3518	1/1	0.92	0.08	33,33,33,33	0
58	MG	CF	304	1/1	0.92	0.14	65,65,65,65	0
58	MG	CA	3468	1/1	0.92	0.11	61,61,61,61	0
58	MG	CN	5001	1/1	0.92	0.07	77,77,77,77	0
58	MG	AA	3122	1/1	0.92	0.12	54,54,54,54	0
58	MG	AA	3783	1/1	0.92	0.08	54,54,54,54	0
58	MG	CA	3472	1/1	0.92	0.33	72,72,72,72	0
58	MG	CA	3473	1/1	0.92	0.08	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3191	1/1	0.92	0.29	65,65,65,65	0
58	MG	AA	3658	1/1	0.92	0.17	62,62,62,62	0
58	MG	CV	201	1/1	0.92	0.29	100,100,100,100	0
58	MG	AA	3368	1/1	0.92	0.06	37,37,37,37	0
58	MG	C8	5001	1/1	0.92	0.12	51,51,51,51	0
58	MG	AA	3537	1/1	0.92	0.08	95,95,95,95	0
58	MG	CA	3040	1/1	0.92	0.15	66,66,66,66	0
58	MG	AA	3236	1/1	0.92	0.11	57,57,57,57	0
58	MG	CA	3200	1/1	0.92	0.16	54,54,54,54	0
58	MG	AA	3182	1/1	0.92	0.16	76,76,76,76	0
58	MG	DA	1609	1/1	0.92	0.18	46,46,46,46	0
58	MG	AA	3548	1/1	0.92	0.09	57,57,57,57	1
58	MG	AA	3799	1/1	0.92	0.12	47,47,47,47	0
58	MG	CA	3207	1/1	0.92	0.14	71,71,71,71	0
58	MG	AA	3382	1/1	0.92	0.07	36,36,36,36	1
58	MG	CA	3494	1/1	0.92	0.12	63,63,63,63	0
58	MG	CA	3495	1/1	0.92	0.12	65,65,65,65	0
58	MG	AA	3286	1/1	0.92	0.08	52,52,52,52	0
58	MG	AA	3426	1/1	0.92	0.09	50,50,50,50	0
58	MG	AA	3292	1/1	0.92	0.13	74,74,74,74	0
58	MG	DA	1631	1/1	0.92	0.18	70,70,70,70	0
58	MG	CA	3501	1/1	0.92	0.12	45,45,45,45	1
58	MG	DA	1633	1/1	0.92	0.27	73,73,73,73	0
58	MG	CA	3054	1/1	0.92	0.16	71,71,71,71	0
58	MG	CA	3217	1/1	0.92	0.16	52,52,52,52	0
58	MG	AA	3686	1/1	0.92	0.11	73,73,73,73	0
58	MG	BA	1643	1/1	0.92	0.24	71,71,71,71	0
58	MG	BA	1741	1/1	0.92	0.07	93,93,93,93	0
58	MG	AA	3294	1/1	0.92	0.13	66,66,66,66	0
58	MG	AA	3809	1/1	0.92	0.18	62,62,62,62	0
58	MG	CA	3227	1/1	0.92	0.14	53,53,53,53	0
58	MG	AA	3123	1/1	0.92	0.13	37,37,37,37	1
58	MG	AA	3579	1/1	0.92	0.07	38,38,38,38	0
58	MG	CA	3522	1/1	0.92	0.14	56,56,56,56	0
58	MG	DA	1648	1/1	0.92	0.14	50,50,50,50	0
58	MG	AA	3060	1/1	0.92	0.33	65,65,65,65	0
58	MG	DA	1650	1/1	0.92	0.22	61,61,61,61	0
58	MG	BA	1650	1/1	0.92	0.12	37,37,37,37	0
58	MG	AA	3312	1/1	0.92	0.09	55,55,55,55	0
58	MG	AA	3316	1/1	0.92	0.19	60,60,60,60	0
58	MG	CA	3531	1/1	0.92	0.10	51,51,51,51	0
58	MG	AA	3073	1/1	0.92	0.13	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3701	1/1	0.92	0.23	43,43,43,43	1
58	MG	DA	1662	1/1	0.92	0.15	64,64,64,64	0
58	MG	CA	3240	1/1	0.92	0.12	64,64,64,64	0
58	MG	BA	1766	1/1	0.92	0.22	63,63,63,63	0
58	MG	AB	3009	1/1	0.92	0.07	56,56,56,56	0
58	MG	AA	3591	1/1	0.92	0.14	65,65,65,65	0
58	MG	CA	3539	1/1	0.92	0.22	73,73,73,73	0
58	MG	AA	3592	1/1	0.92	0.15	52,52,52,52	0
58	MG	AA	3706	1/1	0.92	0.14	27,27,27,27	1
58	MG	CA	3542	1/1	0.92	0.22	68,68,68,68	0
58	MG	AA	3138	1/1	0.92	0.19	50,50,50,50	0
58	MG	AA	3052	1/1	0.92	0.34	65,65,65,65	0
58	MG	AA	3447	1/1	0.92	0.09	61,61,61,61	0
58	MG	CA	3254	1/1	0.92	0.09	42,42,42,42	0
58	MG	CA	3549	1/1	0.92	0.07	57,57,57,57	0
58	MG	BA	1664	1/1	0.92	0.13	53,53,53,53	0
58	MG	CA	3552	1/1	0.92	0.09	69,69,69,69	0
58	MG	CA	3084	1/1	0.92	0.19	59,59,59,59	1
58	MG	AA	3715	1/1	0.92	0.12	66,66,66,66	0
58	MG	CA	3556	1/1	0.92	0.09	48,48,48,48	0
58	MG	DA	1689	1/1	0.92	0.13	58,58,58,58	0
58	MG	AA	3143	1/1	0.92	0.13	47,47,47,47	0
58	MG	AA	3148	1/1	0.92	0.13	68,68,68,68	0
58	MG	CA	3562	1/1	0.92	0.14	76,76,76,76	0
58	MG	AA	3451	1/1	0.92	0.13	48,48,48,48	0
58	MG	CA	3567	1/1	0.92	0.12	56,56,56,56	0
58	MG	AA	3452	1/1	0.92	0.12	69,69,69,69	0
58	MG	AA	3151	1/1	0.92	0.14	50,50,50,50	0
58	MG	AF	307	1/1	0.92	0.11	62,62,62,62	0
58	MG	AA	3456	1/1	0.92	0.08	30,30,30,30	0
58	MG	AA	3256	1/1	0.92	0.09	21,21,21,21	1
58	MG	CA	3578	1/1	0.92	0.13	80,80,80,80	0
58	MG	BA	1674	1/1	0.92	0.14	61,61,61,61	0
58	MG	CA	3096	1/1	0.92	0.20	68,68,68,68	0
58	MG	BA	1794	1/1	0.92	0.19	75,75,75,75	0
58	MG	AA	3616	1/1	0.92	0.10	28,28,28,28	0
58	MG	DA	1710	1/1	0.92	0.12	70,70,70,70	0
58	MG	AA	3618	1/1	0.92	0.09	38,38,38,38	0
58	MG	BA	1677	1/1	0.92	0.12	57,57,57,57	0
58	MG	CA	3103	1/1	0.92	0.22	62,62,62,62	0
58	MG	CA	3592	1/1	0.92	0.21	76,76,76,76	0
58	MG	AA	3620	1/1	0.92	0.13	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3310	1/1	0.92	0.09	48,48,48,48	0
58	MG	BA	1801	1/1	0.92	0.10	65,65,65,65	0
58	MG	CA	3109	1/1	0.92	0.09	54,54,54,54	0
58	MG	CA	3327	1/1	0.92	0.14	53,53,53,53	0
58	MG	CA	3340	1/1	0.92	0.09	48,48,48,48	0
58	MG	CA	3111	1/1	0.92	0.05	71,71,71,71	0
58	MG	CA	3602	1/1	0.92	0.09	66,66,66,66	0
58	MG	CA	3343	1/1	0.92	0.07	36,36,36,36	0
58	MG	AA	3741	1/1	0.92	0.13	34,34,34,34	1
58	MG	AA	3155	1/1	0.92	0.10	64,64,64,64	0
58	MG	AA	3158	1/1	0.92	0.19	97,97,97,97	0
58	MG	AA	3624	1/1	0.92	0.08	65,65,65,65	0
58	MG	CA	3365	1/1	0.92	0.10	48,48,48,48	0
58	MG	A2	101	1/1	0.92	0.08	35,35,35,35	0
58	MG	DA	1742	1/1	0.92	0.15	79,79,79,79	0
58	MG	DA	1743	1/1	0.92	0.17	72,72,72,72	0
58	MG	CA	3118	1/1	0.92	0.12	57,57,57,57	0
58	MG	CA	3121	1/1	0.92	0.09	45,45,45,45	0
58	MG	BA	1808	1/1	0.92	0.13	81,81,81,81	0
58	MG	A2	102	1/1	0.92	0.10	54,54,54,54	0
58	MG	AA	3347	1/1	0.92	0.07	38,38,38,38	0
58	MG	BA	1812	1/1	0.92	0.11	66,66,66,66	0
58	MG	AA	3348	1/1	0.92	0.07	32,32,32,32	0
58	MG	AA	3752	1/1	0.92	0.14	72,72,72,72	0
58	MG	AA	3629	1/1	0.92	0.14	61,61,61,61	0
58	MG	AA	3159	1/1	0.92	0.24	46,46,46,46	1
58	MG	AA	3088	1/1	0.92	0.09	34,34,34,34	0
58	MG	BL	202	1/1	0.92	0.15	67,67,67,67	0
58	MG	CA	3135	1/1	0.92	0.17	66,66,66,66	0
58	MG	BA	1603	1/1	0.92	0.13	93,93,93,93	0
58	MG	BN	502	1/1	0.92	0.09	66,66,66,66	0
58	MG	AA	3468	1/1	0.92	0.18	52,52,52,52	0
58	MG	CA	3643	1/1	0.92	0.07	76,76,76,76	0
58	MG	BA	1696	1/1	0.92	0.08	80,80,80,80	0
58	MG	BW	501	1/1	0.92	0.22	48,48,48,48	0
58	MG	DE	201	1/1	0.92	0.16	84,84,84,84	0
58	MG	CA	3147	1/1	0.92	0.21	76,76,76,76	0
58	MG	CA	3148	1/1	0.92	0.18	65,65,65,65	0
58	MG	CA	3651	1/1	0.92	0.09	31,31,31,31	0
58	MG	CA	3150	1/1	0.92	0.07	54,54,54,54	0
58	MG	AA	3042	1/1	0.92	0.18	38,38,38,38	0
58	MG	BZ	702	1/1	0.92	0.18	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3092	1/1	0.92	0.11	53,53,53,53	0
58	MG	AA	3479	1/1	0.92	0.10	54,54,54,54	0
58	MG	AA	3171	1/1	0.92	0.16	25,25,25,25	1
62	GDP	DZ	704	28/28	0.92	0.10	80,80,80,80	3
58	MG	CA	3535	1/1	0.93	0.17	69,69,69,69	0
58	MG	AA	3352	1/1	0.93	0.10	51,51,51,51	0
58	MG	AA	3699	1/1	0.93	0.14	46,46,46,46	1
58	MG	CA	3347	1/1	0.93	0.13	59,59,59,59	0
58	MG	CA	3161	1/1	0.93	0.13	66,66,66,66	0
58	MG	AA	3622	1/1	0.93	0.07	45,45,45,45	0
58	MG	CA	3358	1/1	0.93	0.14	45,45,45,45	0
58	MG	DA	1612	1/1	0.93	0.32	72,72,72,72	0
58	MG	AA	3291	1/1	0.93	0.07	44,44,44,44	0
58	MG	CA	3361	1/1	0.93	0.18	58,58,58,58	0
58	MG	DA	1615	1/1	0.93	0.20	53,53,53,53	0
58	MG	DA	1618	1/1	0.93	0.26	65,65,65,65	0
58	MG	AA	3261	1/1	0.93	0.15	51,51,51,51	0
58	MG	DA	1620	1/1	0.93	0.05	58,58,58,58	0
58	MG	AA	3543	1/1	0.93	0.10	52,52,52,52	1
58	MG	CA	3366	1/1	0.93	0.16	61,61,61,61	0
58	MG	BA	1604	1/1	0.93	0.07	53,53,53,53	0
58	MG	BA	1678	1/1	0.93	0.17	44,44,44,44	0
58	MG	DA	1627	1/1	0.93	0.12	70,70,70,70	0
58	MG	AA	3118	1/1	0.93	0.16	64,64,64,64	0
58	MG	AA	3297	1/1	0.93	0.06	20,20,20,20	1
58	MG	CA	3177	1/1	0.93	0.07	36,36,36,36	0
58	MG	AA	3712	1/1	0.93	0.13	46,46,46,46	0
58	MG	AA	3551	1/1	0.93	0.10	52,52,52,52	0
58	MG	CA	3558	1/1	0.93	0.08	51,51,51,51	1
58	MG	AA	3714	1/1	0.93	0.17	56,56,56,56	0
58	MG	AA	3181	1/1	0.93	0.10	56,56,56,56	0
58	MG	AA	3137	1/1	0.93	0.11	56,56,56,56	0
58	MG	CA	3564	1/1	0.93	0.12	40,40,40,40	1
58	MG	CA	3565	1/1	0.93	0.13	51,51,51,51	0
58	MG	AA	3363	1/1	0.93	0.07	28,28,28,28	0
58	MG	CA	3186	1/1	0.93	0.10	69,69,69,69	0
58	MG	AA	3571	1/1	0.93	0.09	48,48,48,48	0
58	MG	CA	3570	1/1	0.93	0.18	77,77,77,77	0
58	MG	DA	1646	1/1	0.93	0.22	62,62,62,62	0
58	MG	AA	3106	1/1	0.93	0.18	52,52,52,52	0
58	MG	CA	3573	1/1	0.93	0.08	80,80,80,80	0
58	MG	AA	3313	1/1	0.93	0.06	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3576	1/1	0.93	0.09	38,38,38,38	0
58	MG	CA	3400	1/1	0.93	0.09	62,62,62,62	0
58	MG	AA	3078	1/1	0.93	0.24	66,66,66,66	0
58	MG	DA	1655	1/1	0.93	0.28	58,58,58,58	0
58	MG	DA	1656	1/1	0.93	0.16	75,75,75,75	0
58	MG	CA	3580	1/1	0.93	0.08	100,100,100,100	0
58	MG	BA	1621	1/1	0.93	0.07	52,52,52,52	0
58	MG	CA	3404	1/1	0.93	0.09	54,54,54,54	0
58	MG	AB	3003	1/1	0.93	0.12	51,51,51,51	0
58	MG	AA	3128	1/1	0.93	0.15	59,59,59,59	0
58	MG	CA	3589	1/1	0.93	0.12	79,79,79,79	0
58	MG	AA	3648	1/1	0.93	0.10	40,40,40,40	0
58	MG	CA	3201	1/1	0.93	0.27	59,59,59,59	0
58	MG	DA	1666	1/1	0.93	0.10	66,66,66,66	0
58	MG	AA	3147	1/1	0.93	0.18	69,69,69,69	0
58	MG	AA	3585	1/1	0.93	0.09	65,65,65,65	0
58	MG	AB	3010	1/1	0.93	0.06	47,47,47,47	1
58	MG	CA	3206	1/1	0.93	0.30	56,56,56,56	0
58	MG	AA	3132	1/1	0.93	0.13	27,27,27,27	1
58	MG	CA	3597	1/1	0.93	0.13	39,39,39,39	0
58	MG	BA	1631	1/1	0.93	0.24	64,64,64,64	0
58	MG	CA	3423	1/1	0.93	0.09	50,50,50,50	0
58	MG	AA	3250	1/1	0.93	0.13	46,46,46,46	0
58	MG	AB	3016	1/1	0.93	0.10	34,34,34,34	0
58	MG	BA	1634	1/1	0.93	0.22	54,54,54,54	0
58	MG	AA	3383	1/1	0.93	0.09	54,54,54,54	0
58	MG	CA	3605	1/1	0.93	0.15	73,73,73,73	0
58	MG	AA	3748	1/1	0.93	0.16	56,56,56,56	0
58	MG	BF	3001	1/1	0.93	0.15	74,74,74,74	0
58	MG	AA	3411	1/1	0.93	0.09	47,47,47,47	0
58	MG	CA	3222	1/1	0.93	0.14	75,75,75,75	0
58	MG	CA	3613	1/1	0.93	0.18	74,74,74,74	0
58	MG	AA	3172	1/1	0.93	0.32	71,71,71,71	0
58	MG	DA	1693	1/1	0.93	0.12	54,54,54,54	0
58	MG	BA	1639	1/1	0.93	0.08	66,66,66,66	0
58	MG	BM	201	1/1	0.93	0.07	57,57,57,57	0
58	MG	BA	1715	1/1	0.93	0.15	55,55,55,55	0
58	MG	AA	3664	1/1	0.93	0.12	57,57,57,57	0
58	MG	CA	3446	1/1	0.93	0.08	63,63,63,63	0
58	MG	CA	3101	1/1	0.93	0.11	78,78,78,78	0
58	MG	BA	1641	1/1	0.93	0.16	49,49,49,49	0
58	MG	DA	1704	1/1	0.93	0.10	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3456	1/1	0.93	0.13	60,60,60,60	0
58	MG	BA	1642	1/1	0.93	0.12	55,55,55,55	0
58	MG	AD	301	1/1	0.93	0.15	43,43,43,43	0
58	MG	AD	303	1/1	0.93	0.19	70,70,70,70	0
58	MG	AA	3424	1/1	0.93	0.09	65,65,65,65	0
58	MG	AA	3667	1/1	0.93	0.09	28,28,28,28	0
58	MG	AA	3671	1/1	0.93	0.15	58,58,58,58	0
58	MG	CA	3637	1/1	0.93	0.25	59,59,59,59	0
58	MG	CA	3638	1/1	0.93	0.11	55,55,55,55	0
58	MG	CA	3640	1/1	0.93	0.11	59,59,59,59	0
58	MG	AD	309	1/1	0.93	0.09	37,37,37,37	0
58	MG	AA	3277	1/1	0.93	0.27	79,79,79,79	0
58	MG	CA	3474	1/1	0.93	0.16	76,76,76,76	0
58	MG	AA	3761	1/1	0.93	0.12	50,50,50,50	0
58	MG	AA	3598	1/1	0.93	0.17	54,54,54,54	0
58	MG	DA	1727	1/1	0.93	0.14	66,66,66,66	0
58	MG	DA	1728	1/1	0.93	0.12	63,63,63,63	0
58	MG	CA	3120	1/1	0.93	0.27	62,62,62,62	0
58	MG	AA	3428	1/1	0.93	0.09	35,35,35,35	0
58	MG	CA	3012	1/1	0.93	0.11	59,59,59,59	0
58	MG	AA	3278	1/1	0.93	0.18	36,36,36,36	0
58	MG	DA	1734	1/1	0.93	0.14	83,83,83,83	0
58	MG	CA	3655	1/1	0.93	0.11	70,70,70,70	0
58	MG	CA	3014	1/1	0.93	0.14	62,62,62,62	0
58	MG	BA	1738	1/1	0.93	0.06	73,73,73,73	0
58	MG	AP	203	1/1	0.93	0.06	40,40,40,40	0
58	MG	BA	1740	1/1	0.93	0.19	56,56,56,56	0
58	MG	CA	3490	1/1	0.93	0.09	67,67,67,67	0
58	MG	CA	3130	1/1	0.93	0.30	73,73,73,73	0
58	MG	AA	3431	1/1	0.93	0.11	25,25,25,25	0
58	MG	BA	1743	1/1	0.93	0.06	46,46,46,46	0
58	MG	AU	201	1/1	0.93	0.18	45,45,45,45	0
58	MG	DA	1747	1/1	0.93	0.10	70,70,70,70	0
58	MG	AV	201	1/1	0.93	0.06	17,17,17,17	1
58	MG	AA	3279	1/1	0.93	0.22	53,53,53,53	0
58	MG	AA	3063	1/1	0.93	0.23	67,67,67,67	0
58	MG	CA	3138	1/1	0.93	0.07	63,63,63,63	0
58	MG	BA	1751	1/1	0.93	0.08	48,48,48,48	0
58	MG	BA	1752	1/1	0.93	0.10	65,65,65,65	0
58	MG	AX	101	1/1	0.93	0.16	75,75,75,75	0
58	MG	CA	3143	1/1	0.93	0.28	57,57,57,57	0
58	MG	AA	3235	1/1	0.93	0.16	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3496	1/1	0.93	0.13	52,52,52,52	0
58	MG	AA	3691	1/1	0.93	0.16	89,89,89,89	0
58	MG	AA	3152	1/1	0.93	0.18	71,71,71,71	0
58	MG	CA	3306	1/1	0.93	0.06	41,41,41,41	0
58	MG	AA	3512	1/1	0.93	0.15	60,60,60,60	0
58	MG	CA	3521	1/1	0.93	0.13	61,61,61,61	0
58	MG	CA	3313	1/1	0.93	0.13	50,50,50,50	0
58	MG	BA	1765	1/1	0.93	0.10	62,62,62,62	0
58	MG	CA	3524	1/1	0.93	0.06	77,77,77,77	0
58	MG	CA	3319	1/1	0.93	0.10	67,67,67,67	0
58	MG	CA	3526	1/1	0.93	0.06	40,40,40,40	0
58	MG	AA	3441	1/1	0.93	0.11	51,51,51,51	1
58	MG	CA	3324	1/1	0.93	0.13	40,40,40,40	0
58	MG	DT	3001	1/1	0.93	0.22	67,67,67,67	0
58	MG	DW	501	1/1	0.93	0.26	74,74,74,74	0
58	MG	CA	3530	1/1	0.93	0.13	59,59,59,59	0
58	MG	CA	3048	1/1	0.93	0.18	86,86,86,86	0
58	MG	CA	3332	1/1	0.93	0.08	42,42,42,42	0
58	MG	CA	3334	1/1	0.93	0.13	44,44,44,44	0
58	MG	CY	502	1/1	0.93	0.14	56,56,56,56	0
58	MG	AA	3290	1/1	0.93	0.12	63,63,63,63	0
58	MG	CV	202	1/1	0.94	0.21	85,85,85,85	0
58	MG	AD	302	1/1	0.94	0.14	61,61,61,61	0
58	MG	AA	3735	1/1	0.94	0.08	35,35,35,35	0
58	MG	CA	3316	1/1	0.94	0.11	50,50,50,50	0
58	MG	BA	1749	1/1	0.94	0.14	68,68,68,68	0
58	MG	AD	304	1/1	0.94	0.12	19,19,19,19	0
58	MG	AA	3058	1/1	0.94	0.13	35,35,35,35	0
58	MG	DA	1605	1/1	0.94	0.13	73,73,73,73	0
58	MG	AA	3503	1/1	0.94	0.08	64,64,64,64	0
58	MG	CA	3330	1/1	0.94	0.13	43,43,43,43	0
58	MG	CA	3331	1/1	0.94	0.11	52,52,52,52	0
58	MG	DA	1610	1/1	0.94	0.07	75,75,75,75	0
58	MG	AA	3390	1/1	0.94	0.11	35,35,35,35	0
58	MG	AA	3511	1/1	0.94	0.07	12,12,12,12	0
58	MG	CA	3335	1/1	0.94	0.12	62,62,62,62	0
58	MG	CA	3336	1/1	0.94	0.10	69,69,69,69	0
58	MG	DA	1616	1/1	0.94	0.17	64,64,64,64	0
58	MG	AA	3406	1/1	0.94	0.09	57,57,57,57	0
58	MG	CA	3162	1/1	0.94	0.20	46,46,46,46	0
58	MG	BA	1656	1/1	0.94	0.11	54,54,54,54	0
58	MG	CA	3344	1/1	0.94	0.14	87,87,87,87	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3346	1/1	0.94	0.07	31,31,31,31	0
58	MG	DA	1624	1/1	0.94	0.06	44,44,44,44	0
58	MG	AA	3516	1/1	0.94	0.08	18,18,18,18	0
58	MG	CA	3348	1/1	0.94	0.13	54,54,54,54	0
58	MG	AF	301	1/1	0.94	0.12	25,25,25,25	1
58	MG	CA	3547	1/1	0.94	0.09	61,61,61,61	0
58	MG	CA	3352	1/1	0.94	0.11	68,68,68,68	0
58	MG	CA	3353	1/1	0.94	0.08	48,48,48,48	0
58	MG	AF	304	1/1	0.94	0.17	43,43,43,43	0
58	MG	CA	3169	1/1	0.94	0.11	34,34,34,34	0
58	MG	AA	3517	1/1	0.94	0.09	19,19,19,19	0
58	MG	AG	201	1/1	0.94	0.10	52,52,52,52	0
58	MG	CA	3362	1/1	0.94	0.08	44,44,44,44	0
58	MG	AA	3135	1/1	0.94	0.32	62,62,62,62	1
58	MG	AA	3519	1/1	0.94	0.09	21,21,21,21	0
58	MG	AA	3414	1/1	0.94	0.09	36,36,36,36	0
58	MG	CA	3368	1/1	0.94	0.11	59,59,59,59	0
58	MG	AA	3644	1/1	0.94	0.09	56,56,56,56	0
58	MG	AA	3110	1/1	0.94	0.17	79,79,79,79	0
58	MG	BA	1778	1/1	0.94	0.10	64,64,64,64	0
58	MG	AA	3422	1/1	0.94	0.06	71,71,71,71	0
58	MG	AV	205	1/1	0.94	0.15	55,55,55,55	1
58	MG	AA	3166	1/1	0.94	0.17	31,31,31,31	0
58	MG	CA	3380	1/1	0.94	0.15	71,71,71,71	0
58	MG	AA	3206	1/1	0.94	0.10	39,39,39,39	0
58	MG	DA	1651	1/1	0.94	0.27	59,59,59,59	0
58	MG	CA	3187	1/1	0.94	0.08	37,37,37,37	0
58	MG	AA	3651	1/1	0.94	0.08	52,52,52,52	0
58	MG	AA	3546	1/1	0.94	0.09	32,32,32,32	0
58	MG	AA	3763	1/1	0.94	0.16	65,65,65,65	0
58	MG	AA	3653	1/1	0.94	0.09	68,68,68,68	0
58	MG	A0	102	1/1	0.94	0.08	40,40,40,40	0
58	MG	CA	3195	1/1	0.94	0.17	60,60,60,60	0
58	MG	AA	3259	1/1	0.94	0.19	20,20,20,20	1
58	MG	DA	1661	1/1	0.94	0.18	70,70,70,70	0
58	MG	AA	3099	1/1	0.94	0.07	62,62,62,62	0
58	MG	CA	3588	1/1	0.94	0.16	63,63,63,63	0
58	MG	CA	3198	1/1	0.94	0.06	37,37,37,37	0
58	MG	AA	3079	1/1	0.94	0.05	34,34,34,34	0
58	MG	AA	3324	1/1	0.94	0.07	33,33,33,33	0
58	MG	DA	1667	1/1	0.94	0.13	49,49,49,49	0
58	MG	A5	101	1/1	0.94	0.13	37,37,37,37	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	BA	1796	1/1	0.94	0.12	77,77,77,77	0
58	MG	CA	3203	1/1	0.94	0.06	60,60,60,60	0
58	MG	AA	3330	1/1	0.94	0.10	69,69,69,69	0
58	MG	AA	3663	1/1	0.94	0.16	62,62,62,62	0
58	MG	CA	3411	1/1	0.94	0.19	61,61,61,61	0
58	MG	A6	101	1/1	0.94	0.18	65,65,65,65	0
58	MG	AA	3262	1/1	0.94	0.32	70,70,70,70	0
58	MG	AA	3214	1/1	0.94	0.05	34,34,34,34	0
58	MG	CA	3416	1/1	0.94	0.10	48,48,48,48	0
58	MG	AA	3215	1/1	0.94	0.20	42,42,42,42	1
58	MG	CA	3419	1/1	0.94	0.07	60,60,60,60	0
58	MG	BA	1602	1/1	0.94	0.16	111,111,111,111	0
58	MG	CA	3606	1/1	0.94	0.17	65,65,65,65	0
58	MG	AA	3668	1/1	0.94	0.07	40,40,40,40	0
58	MG	CA	3608	1/1	0.94	0.09	56,56,56,56	0
58	MG	CA	3213	1/1	0.94	0.17	44,44,44,44	0
58	MG	CA	3215	1/1	0.94	0.16	73,73,73,73	0
58	MG	AA	3341	1/1	0.94	0.08	15,15,15,15	0
58	MG	AA	3220	1/1	0.94	0.21	62,62,62,62	0
58	MG	DA	1694	1/1	0.94	0.09	60,60,60,60	0
58	MG	AA	3266	1/1	0.94	0.20	50,50,50,50	0
58	MG	CA	3615	1/1	0.94	0.10	38,38,38,38	0
58	MG	AA	3102	1/1	0.94	0.17	49,49,49,49	0
58	MG	AA	3176	1/1	0.94	0.08	50,50,50,50	0
58	MG	BA	1609	1/1	0.94	0.09	62,62,62,62	0
58	MG	AA	3789	1/1	0.94	0.14	54,54,54,54	0
58	MG	CA	3434	1/1	0.94	0.07	28,28,28,28	0
58	MG	CA	3225	1/1	0.94	0.14	65,65,65,65	0
58	MG	AA	3581	1/1	0.94	0.10	40,40,40,40	0
58	MG	AA	3120	1/1	0.94	0.15	46,46,46,46	0
58	MG	AA	3146	1/1	0.94	0.13	33,33,33,33	1
58	MG	BA	1615	1/1	0.94	0.05	101,101,101,101	0
58	MG	CA	3106	1/1	0.94	0.21	55,55,55,55	0
58	MG	AA	3007	1/1	0.94	0.04	21,21,21,21	0
58	MG	AA	3353	1/1	0.94	0.09	76,76,76,76	0
58	MG	DA	1712	1/1	0.94	0.11	81,81,81,81	0
58	MG	AA	3093	1/1	0.94	0.07	27,27,27,27	1
58	MG	CA	3112	1/1	0.94	0.09	61,61,61,61	0
58	MG	CA	3464	1/1	0.94	0.06	46,46,46,46	0
58	MG	AA	3233	1/1	0.94	0.09	55,55,55,55	0
58	MG	AA	3124	1/1	0.94	0.15	63,63,63,63	0
58	MG	AA	3127	1/1	0.94	0.16	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	DA	1723	1/1	0.94	0.18	66,66,66,66	0
58	MG	DA	1724	1/1	0.94	0.14	61,61,61,61	0
58	MG	AA	3190	1/1	0.94	0.17	45,45,45,45	0
58	MG	BW	503	1/1	0.94	0.10	45,45,45,45	0
58	MG	AA	3280	1/1	0.94	0.14	47,47,47,47	0
58	MG	AA	3239	1/1	0.94	0.17	64,64,64,64	0
58	MG	DA	1729	1/1	0.94	0.07	57,57,57,57	0
58	MG	AA	3812	1/1	0.94	0.11	42,42,42,42	0
58	MG	AA	3603	1/1	0.94	0.11	63,63,63,63	0
58	MG	AA	3241	1/1	0.94	0.12	69,69,69,69	0
58	MG	AA	3703	1/1	0.94	0.06	76,76,76,76	0
58	MG	AA	3191	1/1	0.94	0.15	42,42,42,42	0
58	MG	AA	3466	1/1	0.94	0.06	63,63,63,63	0
58	MG	CA	3659	1/1	0.94	0.09	77,77,77,77	0
58	MG	AA	3607	1/1	0.94	0.08	30,30,30,30	0
58	MG	CA	3258	1/1	0.94	0.11	70,70,70,70	0
58	MG	CA	3261	1/1	0.94	0.11	29,29,29,29	0
58	MG	BA	1724	1/1	0.94	0.15	55,55,55,55	0
58	MG	CA	3664	1/1	0.94	0.10	54,54,54,54	0
58	MG	AA	3153	1/1	0.94	0.13	59,59,59,59	0
58	MG	CA	3268	1/1	0.94	0.15	69,69,69,69	0
58	MG	AB	3008	1/1	0.94	0.25	51,51,51,51	0
58	MG	AA	3081	1/1	0.94	0.06	40,40,40,40	0
58	MG	CA	3017	1/1	0.94	0.21	46,46,46,46	0
58	MG	CA	3280	1/1	0.94	0.06	30,30,30,30	0
58	MG	CA	3497	1/1	0.94	0.12	73,73,73,73	0
58	MG	AA	3129	1/1	0.94	0.18	66,66,66,66	1
58	MG	DA	1752	1/1	0.94	0.12	74,74,74,74	0
58	MG	CA	3136	1/1	0.94	0.19	53,53,53,53	0
58	MG	AA	3372	1/1	0.94	0.18	63,63,63,63	0
58	MG	CB	3011	1/1	0.94	0.15	53,53,53,53	0
58	MG	DA	1756	1/1	0.94	0.08	68,68,68,68	0
58	MG	AA	3617	1/1	0.94	0.12	49,49,49,49	0
58	MG	CA	3502	1/1	0.94	0.11	70,70,70,70	0
58	MG	AA	3373	1/1	0.94	0.18	59,59,59,59	0
58	MG	AA	3481	1/1	0.94	0.05	51,51,51,51	0
58	MG	AA	3487	1/1	0.94	0.09	39,39,39,39	0
58	MG	CA	3142	1/1	0.94	0.10	69,69,69,69	0
58	MG	CA	3509	1/1	0.94	0.10	76,76,76,76	0
58	MG	CA	3298	1/1	0.94	0.09	68,68,68,68	0
58	MG	CF	302	1/1	0.94	0.08	56,56,56,56	0
58	MG	CA	3299	1/1	0.94	0.08	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3197	1/1	0.94	0.11	37,37,37,37	0
58	MG	CF	305	1/1	0.94	0.12	51,51,51,51	0
58	MG	CA	3301	1/1	0.94	0.08	47,47,47,47	0
58	MG	AA	3378	1/1	0.94	0.07	19,19,19,19	0
58	MG	CA	3517	1/1	0.94	0.22	64,64,64,64	0
58	MG	CA	3303	1/1	0.94	0.13	54,54,54,54	0
58	MG	CP	201	1/1	0.94	0.35	65,65,65,65	0
58	MG	CA	3520	1/1	0.94	0.12	59,59,59,59	0
58	MG	AA	3381	1/1	0.94	0.10	27,27,27,27	0
58	MG	AA	3087	1/1	0.94	0.19	72,72,72,72	0
58	MG	CA	3309	1/1	0.94	0.08	29,29,29,29	0
58	MG	CR	201	1/1	0.94	0.13	51,51,51,51	0
58	MG	CA	3149	1/1	0.94	0.05	66,66,66,66	0
58	MG	CA	3175	1/1	0.95	0.16	42,42,42,42	0
58	MG	AA	3013	1/1	0.95	0.07	35,35,35,35	0
58	MG	CA	3355	1/1	0.95	0.07	41,41,41,41	0
58	MG	AA	3634	1/1	0.95	0.07	62,62,62,62	0
58	MG	CA	3047	1/1	0.95	0.14	61,61,61,61	0
58	MG	AD	306	1/1	0.95	0.16	38,38,38,38	1
58	MG	AA	3737	1/1	0.95	0.07	29,29,29,29	0
58	MG	AA	3183	1/1	0.95	0.10	35,35,35,35	1
58	MG	AA	3008	1/1	0.95	0.08	19,19,19,19	0
58	MG	AA	3061	1/1	0.95	0.11	27,27,27,27	0
58	MG	AE	301	1/1	0.95	0.07	19,19,19,19	0
58	MG	CA	3367	1/1	0.95	0.16	65,65,65,65	0
58	MG	AA	3050	1/1	0.95	0.08	53,53,53,53	0
58	MG	AE	304	1/1	0.95	0.05	41,41,41,41	0
58	MG	BA	1763	1/1	0.95	0.09	55,55,55,55	0
58	MG	AA	3051	1/1	0.95	0.14	36,36,36,36	0
58	MG	AA	3549	1/1	0.95	0.06	54,54,54,54	0
58	MG	DA	1629	1/1	0.95	0.17	58,58,58,58	0
58	MG	CA	3061	1/1	0.95	0.27	67,67,67,67	0
58	MG	AA	3157	1/1	0.95	0.07	34,34,34,34	0
58	MG	AF	308	1/1	0.95	0.09	55,55,55,55	0
58	MG	CA	3384	1/1	0.95	0.12	71,71,71,71	0
58	MG	CA	3065	1/1	0.95	0.09	52,52,52,52	0
58	MG	BA	1770	1/1	0.95	0.07	75,75,75,75	0
58	MG	AA	3646	1/1	0.95	0.08	58,58,58,58	0
58	MG	AG	202	1/1	0.95	0.06	73,73,73,73	0
58	MG	AH	3001	1/1	0.95	0.18	52,52,52,52	0
58	MG	CA	3392	1/1	0.95	0.06	35,35,35,35	0
58	MG	AA	3553	1/1	0.95	0.07	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3394	1/1	0.95	0.11	55,55,55,55	0
58	MG	AA	3556	1/1	0.95	0.07	39,39,39,39	0
58	MG	AO	5001	1/1	0.95	0.08	55,55,55,55	0
58	MG	DA	1644	1/1	0.95	0.17	57,57,57,57	0
58	MG	DA	1645	1/1	0.95	0.12	64,64,64,64	0
58	MG	BA	1780	1/1	0.95	0.06	42,42,42,42	0
58	MG	AA	3030	1/1	0.95	0.15	26,26,26,26	1
58	MG	AA	3560	1/1	0.95	0.09	58,58,58,58	0
58	MG	CA	3584	1/1	0.95	0.08	46,46,46,46	0
58	MG	BA	1783	1/1	0.95	0.09	62,62,62,62	0
58	MG	AA	3054	1/1	0.95	0.10	38,38,38,38	0
58	MG	AA	3759	1/1	0.95	0.12	65,65,65,65	0
58	MG	AV	202	1/1	0.95	0.10	20,20,20,20	0
58	MG	AA	3281	1/1	0.95	0.27	61,61,61,61	0
58	MG	AA	3655	1/1	0.95	0.10	61,61,61,61	0
58	MG	AW	3003	1/1	0.95	0.13	52,52,52,52	0
58	MG	AA	3566	1/1	0.95	0.08	27,27,27,27	0
58	MG	AA	3449	1/1	0.95	0.06	15,15,15,15	0
58	MG	AA	3161	1/1	0.95	0.18	60,60,60,60	0
58	MG	AA	3198	1/1	0.95	0.11	58,58,58,58	0
58	MG	AA	3284	1/1	0.95	0.21	44,44,44,44	0
58	MG	AA	3454	1/1	0.95	0.11	51,51,51,51	0
58	MG	AA	3361	1/1	0.95	0.07	29,29,29,29	0
58	MG	CA	3600	1/1	0.95	0.07	50,50,50,50	0
58	MG	AA	3055	1/1	0.95	0.11	35,35,35,35	0
58	MG	AA	3036	1/1	0.95	0.10	51,51,51,51	0
58	MG	CA	3229	1/1	0.95	0.14	51,51,51,51	0
58	MG	AA	3582	1/1	0.95	0.12	66,66,66,66	0
58	MG	CA	3425	1/1	0.95	0.07	53,53,53,53	0
58	MG	AA	3071	1/1	0.95	0.20	41,41,41,41	0
58	MG	CA	3232	1/1	0.95	0.05	60,60,60,60	0
58	MG	AA	3021	1/1	0.95	0.07	40,40,40,40	0
58	MG	AA	3366	1/1	0.95	0.08	53,53,53,53	0
58	MG	AA	3167	1/1	0.95	0.09	65,65,65,65	0
58	MG	BA	1806	1/1	0.95	0.13	67,67,67,67	0
58	MG	CA	3612	1/1	0.95	0.10	68,68,68,68	0
58	MG	A7	101	1/1	0.95	0.10	65,65,65,65	0
58	MG	DA	1681	1/1	0.95	0.11	55,55,55,55	0
58	MG	DA	1683	1/1	0.95	0.19	54,54,54,54	0
58	MG	A7	104	1/1	0.95	0.09	49,49,49,49	1
58	MG	CA	3435	1/1	0.95	0.07	52,52,52,52	0
58	MG	AA	3782	1/1	0.95	0.17	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	BA	1810	1/1	0.95	0.10	50,50,50,50	0
58	MG	AA	3676	1/1	0.95	0.07	66,66,66,66	0
58	MG	CA	3110	1/1	0.95	0.09	63,63,63,63	0
58	MG	AA	3677	1/1	0.95	0.05	41,41,41,41	0
58	MG	CA	3247	1/1	0.95	0.14	66,66,66,66	0
58	MG	AA	3295	1/1	0.95	0.16	47,47,47,47	0
58	MG	CA	3449	1/1	0.95	0.07	66,66,66,66	0
58	MG	DA	1695	1/1	0.95	0.13	66,66,66,66	0
58	MG	CA	3626	1/1	0.95	0.15	75,75,75,75	0
58	MG	CA	3452	1/1	0.95	0.15	61,61,61,61	0
58	MG	CA	3251	1/1	0.95	0.10	56,56,56,56	0
58	MG	AA	3205	1/1	0.95	0.27	64,64,64,64	0
58	MG	AA	3681	1/1	0.95	0.12	65,65,65,65	0
58	MG	CA	3463	1/1	0.95	0.08	49,49,49,49	0
58	MG	BE	3001	1/1	0.95	0.08	60,60,60,60	0
58	MG	AA	3371	1/1	0.95	0.12	62,62,62,62	0
58	MG	CA	3466	1/1	0.95	0.18	57,57,57,57	0
58	MG	AA	3683	1/1	0.95	0.22	67,67,67,67	0
58	MG	AA	3796	1/1	0.95	0.11	50,50,50,50	0
58	MG	AA	3685	1/1	0.95	0.10	47,47,47,47	0
58	MG	AA	3798	1/1	0.95	0.09	35,35,35,35	0
58	MG	AA	3299	1/1	0.95	0.07	20,20,20,20	0
58	MG	AA	3305	1/1	0.95	0.15	55,55,55,55	0
58	MG	BA	1705	1/1	0.95	0.16	78,78,78,78	0
58	MG	CA	3475	1/1	0.95	0.22	55,55,55,55	0
58	MG	CA	3476	1/1	0.95	0.07	55,55,55,55	0
58	MG	AA	3168	1/1	0.95	0.15	63,63,63,63	0
58	MG	CA	3654	1/1	0.95	0.17	51,51,51,51	0
58	MG	CA	3271	1/1	0.95	0.11	57,57,57,57	0
58	MG	DA	1721	1/1	0.95	0.12	67,67,67,67	0
58	MG	AA	3254	1/1	0.95	0.12	42,42,42,42	0
58	MG	BW	502	1/1	0.95	0.13	53,53,53,53	0
58	MG	CA	3275	1/1	0.95	0.08	42,42,42,42	0
58	MG	CA	3277	1/1	0.95	0.09	90,90,90,90	0
58	MG	CA	3278	1/1	0.95	0.08	37,37,37,37	0
58	MG	CA	3129	1/1	0.95	0.24	69,69,69,69	0
58	MG	AA	3601	1/1	0.95	0.18	47,47,47,47	0
58	MG	BA	1709	1/1	0.95	0.14	50,50,50,50	0
58	MG	AA	3311	1/1	0.95	0.11	33,33,33,33	0
58	MG	CA	3491	1/1	0.95	0.07	51,51,51,51	0
58	MG	AA	3113	1/1	0.95	0.14	64,64,64,64	0
58	MG	CA	3287	1/1	0.95	0.07	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	BA	1712	1/1	0.95	0.37	73,73,73,73	0
58	MG	CA	3003	1/1	0.95	0.13	45,45,45,45	0
58	MG	CA	3293	1/1	0.95	0.10	71,71,71,71	0
58	MG	AA	3484	1/1	0.95	0.08	35,35,35,35	0
58	MG	AA	3486	1/1	0.95	0.09	27,27,27,27	0
58	MG	AA	3209	1/1	0.95	0.08	63,63,63,63	0
58	MG	AA	3115	1/1	0.95	0.24	67,67,67,67	1
58	MG	CA	3009	1/1	0.95	0.17	67,67,67,67	0
58	MG	CA	3503	1/1	0.95	0.09	62,62,62,62	0
58	MG	BA	1623	1/1	0.95	0.11	49,49,49,49	0
58	MG	AA	3391	1/1	0.95	0.07	45,45,45,45	0
58	MG	CE	301	1/1	0.95	0.11	66,66,66,66	0
58	MG	CE	302	1/1	0.95	0.09	47,47,47,47	0
58	MG	AA	3612	1/1	0.95	0.13	56,56,56,56	0
58	MG	AA	3404	1/1	0.95	0.07	19,19,19,19	0
58	MG	CE	305	1/1	0.95	0.14	43,43,43,43	0
58	MG	CA	3015	1/1	0.95	0.16	85,85,85,85	0
58	MG	AA	3614	1/1	0.95	0.07	56,56,56,56	0
58	MG	AA	3173	1/1	0.95	0.11	60,60,60,60	0
58	MG	AA	3142	1/1	0.95	0.13	26,26,26,26	1
58	MG	AA	3711	1/1	0.95	0.14	34,34,34,34	1
58	MG	CA	3315	1/1	0.95	0.12	60,60,60,60	0
58	MG	AA	3216	1/1	0.95	0.13	51,51,51,51	0
58	MG	AA	3219	1/1	0.95	0.16	58,58,58,58	0
58	MG	CA	3026	1/1	0.95	0.15	81,81,81,81	0
58	MG	DA	1762	1/1	0.95	0.06	73,73,73,73	0
58	MG	CA	3156	1/1	0.95	0.14	68,68,68,68	0
58	MG	AA	3117	1/1	0.95	0.15	30,30,30,30	1
58	MG	CA	3328	1/1	0.95	0.07	55,55,55,55	0
58	MG	BA	1735	1/1	0.95	0.10	62,62,62,62	0
58	MG	CQ	202	1/1	0.95	0.23	64,64,64,64	0
58	MG	AA	3332	1/1	0.95	0.08	46,46,46,46	0
58	MG	AA	3335	1/1	0.95	0.09	41,41,41,41	0
58	MG	CA	3333	1/1	0.95	0.15	75,75,75,75	0
58	MG	AA	3144	1/1	0.95	0.09	40,40,40,40	0
58	MG	CA	3163	1/1	0.95	0.20	40,40,40,40	0
58	MG	AA	3725	1/1	0.95	0.08	39,39,39,39	0
58	MG	AA	3726	1/1	0.95	0.06	67,67,67,67	0
58	MG	AA	3222	1/1	0.95	0.12	28,28,28,28	0
58	MG	CA	3038	1/1	0.95	0.17	48,48,48,48	0
58	MG	AA	3076	1/1	0.95	0.16	92,92,92,92	0
58	MG	AA	3525	1/1	0.95	0.16	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	ZN	C4	501	1/1	0.95	0.06	189,189,189,189	0
58	MG	AA	3432	1/1	0.95	0.12	57,57,57,57	0
58	MG	AA	3098	1/1	0.95	0.23	58,58,58,58	0
58	MG	CA	3044	1/1	0.95	0.16	52,52,52,52	0
58	MG	AA	3255	1/1	0.96	0.11	53,53,53,53	0
58	MG	C7	101	1/1	0.96	0.21	42,42,42,42	1
58	MG	AA	3298	1/1	0.96	0.07	59,59,59,59	0
58	MG	CA	3325	1/1	0.96	0.06	38,38,38,38	0
58	MG	CA	3326	1/1	0.96	0.08	34,34,34,34	0
58	MG	AA	3654	1/1	0.96	0.14	66,66,66,66	0
58	MG	CA	3151	1/1	0.96	0.07	50,50,50,50	0
58	MG	AA	3564	1/1	0.96	0.08	19,19,19,19	0
58	MG	AA	3764	1/1	0.96	0.09	55,55,55,55	0
58	MG	DA	1608	1/1	0.96	0.07	47,47,47,47	0
58	MG	AA	3066	1/1	0.96	0.19	50,50,50,50	0
58	MG	AA	3569	1/1	0.96	0.08	19,19,19,19	0
58	MG	AA	3570	1/1	0.96	0.06	15,15,15,15	0
58	MG	AA	3769	1/1	0.96	0.14	57,57,57,57	0
58	MG	AA	3300	1/1	0.96	0.07	50,50,50,50	0
58	MG	AA	3301	1/1	0.96	0.07	23,23,23,23	0
58	MG	AA	3662	1/1	0.96	0.15	59,59,59,59	0
58	MG	AA	3302	1/1	0.96	0.06	56,56,56,56	0
58	MG	AA	3114	1/1	0.96	0.06	17,17,17,17	0
58	MG	CA	3164	1/1	0.96	0.12	41,41,41,41	0
58	MG	AA	3577	1/1	0.96	0.05	32,32,32,32	0
58	MG	AA	3777	1/1	0.96	0.05	19,19,19,19	0
58	MG	CA	3349	1/1	0.96	0.16	41,41,41,41	0
58	MG	BA	1714	1/1	0.96	0.10	61,61,61,61	0
58	MG	CA	3351	1/1	0.96	0.06	46,46,46,46	0
58	MG	AA	3307	1/1	0.96	0.06	6,6,6,6	0
58	MG	A9	502	1/1	0.96	0.16	60,60,60,60	0
58	MG	CA	3548	1/1	0.96	0.04	48,48,48,48	1
58	MG	AA	3185	1/1	0.96	0.17	41,41,41,41	0
58	MG	AA	3780	1/1	0.96	0.12	42,42,42,42	0
58	MG	AA	3669	1/1	0.96	0.05	33,33,33,33	0
58	MG	AA	3670	1/1	0.96	0.08	33,33,33,33	0
58	MG	AA	3032	1/1	0.96	0.09	36,36,36,36	0
58	MG	CA	3176	1/1	0.96	0.20	50,50,50,50	0
58	MG	AA	3162	1/1	0.96	0.08	47,47,47,47	0
58	MG	BA	1723	1/1	0.96	0.07	60,60,60,60	0
58	MG	AA	3116	1/1	0.96	0.10	51,51,51,51	0
58	MG	AA	3786	1/1	0.96	0.17	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3086	1/1	0.96	0.10	47,47,47,47	0
58	MG	CA	3371	1/1	0.96	0.11	55,55,55,55	0
58	MG	AA	3467	1/1	0.96	0.05	44,44,44,44	0
58	MG	CA	3184	1/1	0.96	0.12	66,66,66,66	0
58	MG	BA	1728	1/1	0.96	0.19	52,52,52,52	0
58	MG	BA	1731	1/1	0.96	0.08	49,49,49,49	0
58	MG	AA	3790	1/1	0.96	0.05	49,49,49,49	0
58	MG	CA	3188	1/1	0.96	0.14	58,58,58,58	0
58	MG	AA	3793	1/1	0.96	0.08	28,28,28,28	0
58	MG	AA	3014	1/1	0.96	0.19	45,45,45,45	0
58	MG	AA	3226	1/1	0.96	0.11	56,56,56,56	0
58	MG	AA	3103	1/1	0.96	0.07	15,15,15,15	0
58	MG	AA	3680	1/1	0.96	0.09	59,59,59,59	0
58	MG	AA	3386	1/1	0.96	0.09	29,29,29,29	0
58	MG	CA	3050	1/1	0.96	0.05	44,44,44,44	0
58	MG	CA	3582	1/1	0.96	0.07	44,44,44,44	0
58	MG	CA	3391	1/1	0.96	0.08	63,63,63,63	0
58	MG	AA	3594	1/1	0.96	0.09	43,43,43,43	0
58	MG	AA	3595	1/1	0.96	0.10	55,55,55,55	0
58	MG	BA	1742	1/1	0.96	0.09	50,50,50,50	0
58	MG	AA	3267	1/1	0.96	0.21	63,63,63,63	0
58	MG	BA	1622	1/1	0.96	0.05	37,37,37,37	0
58	MG	CA	3397	1/1	0.96	0.08	59,59,59,59	0
58	MG	AA	3229	1/1	0.96	0.15	43,43,43,43	0
58	MG	AA	3688	1/1	0.96	0.06	25,25,25,25	1
58	MG	AA	3805	1/1	0.96	0.10	35,35,35,35	1
58	MG	AA	3326	1/1	0.96	0.09	58,58,58,58	0
58	MG	AA	3405	1/1	0.96	0.15	46,46,46,46	0
58	MG	AA	3808	1/1	0.96	0.08	28,28,28,28	1
58	MG	BA	1754	1/1	0.96	0.12	48,48,48,48	0
58	MG	AA	3195	1/1	0.96	0.13	50,50,50,50	0
58	MG	AA	3692	1/1	0.96	0.09	53,53,53,53	0
58	MG	CA	3408	1/1	0.96	0.09	64,64,64,64	0
58	MG	BA	1757	1/1	0.96	0.12	38,38,38,38	0
58	MG	CA	3068	1/1	0.96	0.11	57,57,57,57	0
58	MG	CA	3214	1/1	0.96	0.14	40,40,40,40	0
58	MG	AA	3231	1/1	0.96	0.19	53,53,53,53	0
58	MG	AA	3813	1/1	0.96	0.25	54,54,54,54	0
58	MG	AA	3602	1/1	0.96	0.10	37,37,37,37	0
58	MG	CA	3218	1/1	0.96	0.33	54,54,54,54	0
58	MG	AA	3490	1/1	0.96	0.06	50,50,50,50	0
58	MG	AA	3412	1/1	0.96	0.10	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3333	1/1	0.96	0.07	66,66,66,66	0
58	MG	CA	3422	1/1	0.96	0.12	55,55,55,55	0
58	MG	AA	3334	1/1	0.96	0.09	57,57,57,57	0
58	MG	AA	3495	1/1	0.96	0.10	59,59,59,59	0
58	MG	AA	3609	1/1	0.96	0.09	53,53,53,53	0
58	MG	CA	3078	1/1	0.96	0.08	47,47,47,47	0
58	MG	CA	3427	1/1	0.96	0.09	55,55,55,55	0
58	MG	BA	1769	1/1	0.96	0.06	58,58,58,58	0
58	MG	AB	3007	1/1	0.96	0.04	45,45,45,45	0
58	MG	BA	1772	1/1	0.96	0.11	56,56,56,56	0
58	MG	AA	3419	1/1	0.96	0.08	31,31,31,31	0
58	MG	CA	3083	1/1	0.96	0.16	90,90,90,90	0
58	MG	CA	3623	1/1	0.96	0.06	64,64,64,64	0
58	MG	AA	3499	1/1	0.96	0.07	51,51,51,51	1
58	MG	AA	3705	1/1	0.96	0.17	24,24,24,24	1
58	MG	BA	1776	1/1	0.96	0.06	61,61,61,61	0
58	MG	AA	3196	1/1	0.96	0.17	52,52,52,52	0
58	MG	CA	3438	1/1	0.96	0.07	46,46,46,46	0
58	MG	CA	3439	1/1	0.96	0.06	38,38,38,38	0
58	MG	BA	1645	1/1	0.96	0.06	58,58,58,58	0
58	MG	AA	3504	1/1	0.96	0.09	58,58,58,58	0
58	MG	AA	3709	1/1	0.96	0.14	29,29,29,29	1
58	MG	AA	3505	1/1	0.96	0.05	31,31,31,31	0
58	MG	AA	3615	1/1	0.96	0.06	35,35,35,35	1
58	MG	AA	3423	1/1	0.96	0.06	22,22,22,22	0
58	MG	CA	3448	1/1	0.96	0.08	43,43,43,43	0
58	MG	DA	1714	1/1	0.96	0.06	51,51,51,51	0
58	MG	AA	3121	1/1	0.96	0.13	70,70,70,70	0
58	MG	CA	3451	1/1	0.96	0.10	63,63,63,63	0
58	MG	AA	3145	1/1	0.96	0.12	33,33,33,33	0
58	MG	AA	3619	1/1	0.96	0.06	42,42,42,42	0
58	MG	AA	3513	1/1	0.96	0.07	35,35,35,35	0
58	MG	CA	3647	1/1	0.96	0.05	66,66,66,66	0
58	MG	CA	3250	1/1	0.96	0.07	52,52,52,52	0
58	MG	AA	3004	1/1	0.96	0.07	25,25,25,25	0
58	MG	AA	3724	1/1	0.96	0.11	40,40,40,40	0
58	MG	BA	1657	1/1	0.96	0.15	69,69,69,69	0
58	MG	AA	3429	1/1	0.96	0.10	41,41,41,41	0
58	MG	CA	3104	1/1	0.96	0.07	48,48,48,48	0
58	MG	AA	3090	1/1	0.96	0.16	30,30,30,30	1
58	MG	AA	3025	1/1	0.96	0.07	35,35,35,35	1
58	MG	AA	3522	1/1	0.96	0.11	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3259	1/1	0.96	0.09	47,47,47,47	0
58	MG	AA	3240	1/1	0.96	0.16	30,30,30,30	0
58	MG	CA	3262	1/1	0.96	0.06	61,61,61,61	0
58	MG	AD	310	1/1	0.96	0.13	42,42,42,42	0
58	MG	BA	1798	1/1	0.96	0.07	70,70,70,70	0
58	MG	AA	3627	1/1	0.96	0.11	54,54,54,54	0
58	MG	AD	312	1/1	0.96	0.15	58,58,58,58	0
58	MG	CA	3479	1/1	0.96	0.12	46,46,46,46	0
58	MG	AA	3628	1/1	0.96	0.12	80,80,80,80	0
58	MG	DA	1741	1/1	0.96	0.08	78,78,78,78	0
58	MG	AA	3202	1/1	0.96	0.08	47,47,47,47	0
58	MG	AA	3149	1/1	0.96	0.12	62,62,62,62	0
58	MG	AA	3175	1/1	0.96	0.09	51,51,51,51	0
58	MG	CA	3276	1/1	0.96	0.16	50,50,50,50	0
58	MG	AF	302	1/1	0.96	0.14	40,40,40,40	0
58	MG	CA	3119	1/1	0.96	0.17	128,128,128,128	0
58	MG	AA	3048	1/1	0.96	0.06	34,34,34,34	0
58	MG	AF	306	1/1	0.96	0.12	50,50,50,50	0
58	MG	AA	3351	1/1	0.96	0.05	30,30,30,30	0
58	MG	AA	3740	1/1	0.96	0.07	45,45,45,45	0
58	MG	AA	3056	1/1	0.96	0.09	63,63,63,63	0
58	MG	AA	3077	1/1	0.96	0.17	50,50,50,50	0
58	MG	AA	3444	1/1	0.96	0.08	63,63,63,63	0
58	MG	AA	3745	1/1	0.96	0.06	29,29,29,29	0
58	MG	AA	3746	1/1	0.96	0.08	64,64,64,64	0
58	MG	AA	3288	1/1	0.96	0.06	24,24,24,24	0
58	MG	AA	3550	1/1	0.96	0.09	47,47,47,47	0
58	MG	CA	3297	1/1	0.96	0.18	56,56,56,56	0
58	MG	AA	3180	1/1	0.96	0.16	94,94,94,94	0
58	MG	AQ	203	1/1	0.96	0.17	41,41,41,41	0
58	MG	CA	3504	1/1	0.96	0.08	62,62,62,62	0
58	MG	AR	201	1/1	0.96	0.12	37,37,37,37	1
58	MG	AR	202	1/1	0.96	0.07	32,32,32,32	0
58	MG	AA	3211	1/1	0.96	0.23	42,42,42,42	1
58	MG	AU	203	1/1	0.96	0.13	29,29,29,29	1
58	MG	AA	3554	1/1	0.96	0.06	49,49,49,49	0
58	MG	CP	202	1/1	0.96	0.15	71,71,71,71	0
58	MG	AA	3753	1/1	0.96	0.10	41,41,41,41	0
58	MG	AA	3064	1/1	0.96	0.05	29,29,29,29	0
58	MG	AV	206	1/1	0.96	0.14	38,38,38,38	0
58	MG	AA	3213	1/1	0.96	0.05	58,58,58,58	0
58	MG	CQ	204	1/1	0.96	0.08	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AW	3002	1/1	0.96	0.12	55,55,55,55	0
58	MG	CA	3144	1/1	0.96	0.22	67,67,67,67	0
58	MG	AA	3559	1/1	0.96	0.12	39,39,39,39	0
58	MG	AA	3006	1/1	0.96	0.16	52,52,52,52	0
58	MG	CW	201	1/1	0.96	0.09	39,39,39,39	0
58	MG	CA	3322	1/1	0.96	0.13	45,45,45,45	0
58	MG	C3	3001	1/1	0.96	0.10	69,69,69,69	0
58	MG	AP	201	1/1	0.97	0.24	65,65,65,65	0
58	MG	CA	3260	1/1	0.97	0.11	65,65,65,65	0
58	MG	AA	3508	1/1	0.97	0.16	49,49,49,49	0
58	MG	CA	3036	1/1	0.97	0.07	44,44,44,44	0
58	MG	CA	3417	1/1	0.97	0.10	37,37,37,37	0
58	MG	AA	3433	1/1	0.97	0.06	28,28,28,28	0
58	MG	CA	3264	1/1	0.97	0.09	59,59,59,59	0
58	MG	CA	3575	1/1	0.97	0.05	43,43,43,43	1
58	MG	CA	3266	1/1	0.97	0.12	69,69,69,69	0
58	MG	AQ	202	1/1	0.97	0.10	31,31,31,31	0
58	MG	AA	3141	1/1	0.97	0.09	40,40,40,40	0
58	MG	AA	3684	1/1	0.97	0.05	29,29,29,29	0
58	MG	AA	3435	1/1	0.97	0.05	20,20,20,20	0
58	MG	BA	1764	1/1	0.97	0.05	52,52,52,52	1
58	MG	AA	3035	1/1	0.97	0.08	57,57,57,57	0
58	MG	CA	3274	1/1	0.97	0.05	50,50,50,50	1
58	MG	AU	202	1/1	0.97	0.08	44,44,44,44	0
58	MG	AA	3687	1/1	0.97	0.05	45,45,45,45	0
58	MG	AA	3234	1/1	0.97	0.07	30,30,30,30	1
58	MG	AA	3608	1/1	0.97	0.07	73,73,73,73	0
58	MG	AA	3169	1/1	0.97	0.08	39,39,39,39	0
58	MG	CA	3281	1/1	0.97	0.08	51,51,51,51	0
58	MG	CA	3282	1/1	0.97	0.05	50,50,50,50	0
58	MG	BA	1771	1/1	0.97	0.11	63,63,63,63	0
58	MG	CA	3160	1/1	0.97	0.07	42,42,42,42	0
58	MG	CA	3437	1/1	0.97	0.05	48,48,48,48	0
58	MG	AA	3005	1/1	0.97	0.06	62,62,62,62	0
58	MG	AA	3072	1/1	0.97	0.04	26,26,26,26	0
58	MG	AA	3787	1/1	0.97	0.08	53,53,53,53	0
58	MG	CA	3288	1/1	0.97	0.06	54,54,54,54	0
58	MG	AA	3039	1/1	0.97	0.07	39,39,39,39	1
58	MG	CA	3055	1/1	0.97	0.15	39,39,39,39	0
58	MG	CA	3445	1/1	0.97	0.12	40,40,40,40	0
58	MG	AA	3523	1/1	0.97	0.07	30,30,30,30	0
58	MG	AA	3318	1/1	0.97	0.10	51,51,51,51	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3792	1/1	0.97	0.12	45,45,45,45	0
58	MG	CA	3296	1/1	0.97	0.08	42,42,42,42	0
58	MG	AA	3119	1/1	0.97	0.08	40,40,40,40	1
58	MG	CA	3170	1/1	0.97	0.16	47,47,47,47	0
58	MG	AA	3020	1/1	0.97	0.05	25,25,25,25	0
58	MG	CA	3455	1/1	0.97	0.14	47,47,47,47	0
58	MG	AA	3532	1/1	0.97	0.11	25,25,25,25	0
58	MG	CA	3457	1/1	0.97	0.09	47,47,47,47	0
58	MG	CA	3458	1/1	0.97	0.06	49,49,49,49	0
58	MG	CA	3459	1/1	0.97	0.07	48,48,48,48	0
58	MG	AA	3533	1/1	0.97	0.07	22,22,22,22	0
58	MG	CA	3461	1/1	0.97	0.07	43,43,43,43	0
58	MG	CA	3462	1/1	0.97	0.08	49,49,49,49	0
58	MG	AA	3535	1/1	0.97	0.03	15,15,15,15	0
58	MG	AA	3322	1/1	0.97	0.04	32,32,32,32	1
58	MG	DA	1670	1/1	0.97	0.06	75,75,75,75	0
58	MG	AA	3011	1/1	0.97	0.04	40,40,40,40	0
58	MG	CA	3305	1/1	0.97	0.07	62,62,62,62	0
58	MG	AA	3800	1/1	0.97	0.04	30,30,30,30	0
58	MG	CA	3307	1/1	0.97	0.13	52,52,52,52	0
58	MG	AA	3541	1/1	0.97	0.08	43,43,43,43	0
58	MG	BA	1788	1/1	0.97	0.10	66,66,66,66	0
58	MG	CA	3627	1/1	0.97	0.08	63,63,63,63	0
58	MG	AA	3374	1/1	0.97	0.07	18,18,18,18	0
58	MG	CA	3630	1/1	0.97	0.09	63,63,63,63	0
58	MG	DA	1680	1/1	0.97	0.09	62,62,62,62	0
58	MG	AA	3325	1/1	0.97	0.06	66,66,66,66	0
58	MG	DA	1682	1/1	0.97	0.14	47,47,47,47	0
58	MG	CA	3632	1/1	0.97	0.06	79,79,79,79	0
58	MG	CA	3182	1/1	0.97	0.14	27,27,27,27	0
58	MG	AA	3377	1/1	0.97	0.05	20,20,20,20	0
58	MG	CA	3317	1/1	0.97	0.05	44,44,44,44	0
58	MG	A7	103	1/1	0.97	0.07	49,49,49,49	0
58	MG	CA	3321	1/1	0.97	0.05	31,31,31,31	0
58	MG	AA	3043	1/1	0.97	0.11	31,31,31,31	0
58	MG	CA	3639	1/1	0.97	0.12	55,55,55,55	0
58	MG	AA	3453	1/1	0.97	0.13	56,56,56,56	0
58	MG	AA	3150	1/1	0.97	0.10	15,15,15,15	0
58	MG	AA	3210	1/1	0.97	0.12	24,24,24,24	1
58	MG	AA	3552	1/1	0.97	0.07	63,63,63,63	0
58	MG	AA	3810	1/1	0.97	0.07	54,54,54,54	0
58	MG	AA	3631	1/1	0.97	0.07	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3486	1/1	0.97	0.15	69,69,69,69	0
58	MG	CA	3487	1/1	0.97	0.11	70,70,70,70	0
58	MG	CA	3648	1/1	0.97	0.13	53,53,53,53	0
58	MG	CA	3329	1/1	0.97	0.07	29,29,29,29	0
58	MG	AA	3717	1/1	0.97	0.12	47,47,47,47	0
58	MG	CA	3652	1/1	0.97	0.07	53,53,53,53	0
58	MG	CA	3193	1/1	0.97	0.07	64,64,64,64	0
58	MG	AA	3179	1/1	0.97	0.11	71,71,71,71	0
58	MG	AA	3719	1/1	0.97	0.06	58,58,58,58	0
58	MG	AA	3384	1/1	0.97	0.06	34,34,34,34	0
58	MG	AA	3044	1/1	0.97	0.10	34,34,34,34	0
58	MG	AA	3557	1/1	0.97	0.05	19,19,19,19	0
58	MG	CA	3496	1/1	0.97	0.09	63,63,63,63	0
58	MG	CA	3338	1/1	0.97	0.11	63,63,63,63	0
58	MG	AA	3637	1/1	0.97	0.05	45,45,45,45	0
58	MG	AA	3104	1/1	0.97	0.06	28,28,28,28	0
58	MG	AA	3285	1/1	0.97	0.06	45,45,45,45	0
58	MG	BA	1613	1/1	0.97	0.09	31,31,31,31	0
58	MG	AA	3395	1/1	0.97	0.08	18,18,18,18	0
58	MG	AA	3641	1/1	0.97	0.08	41,41,41,41	0
58	MG	AA	3397	1/1	0.97	0.05	15,15,15,15	0
58	MG	AA	3562	1/1	0.97	0.05	48,48,48,48	1
58	MG	AA	3401	1/1	0.97	0.06	33,33,33,33	0
58	MG	AA	3125	1/1	0.97	0.10	23,23,23,23	1
58	MG	AA	3287	1/1	0.97	0.13	47,47,47,47	0
58	MG	AA	3567	1/1	0.97	0.06	51,51,51,51	0
58	MG	CA	3510	1/1	0.97	0.06	65,65,65,65	0
58	MG	CA	3354	1/1	0.97	0.07	61,61,61,61	0
58	MG	AA	3154	1/1	0.97	0.13	46,46,46,46	0
58	MG	AA	3470	1/1	0.97	0.05	29,29,29,29	0
58	MG	CA	3102	1/1	0.97	0.06	56,56,56,56	0
58	MG	AA	3471	1/1	0.97	0.09	34,34,34,34	0
58	MG	AA	3408	1/1	0.97	0.04	20,20,20,20	0
58	MG	AA	3574	1/1	0.97	0.06	30,30,30,30	1
58	MG	CA	3519	1/1	0.97	0.10	79,79,79,79	0
58	MG	AA	3253	1/1	0.97	0.15	29,29,29,29	1
58	MG	AA	3046	1/1	0.97	0.07	34,34,34,34	0
58	MG	AA	3156	1/1	0.97	0.13	33,33,33,33	1
58	MG	AA	3047	1/1	0.97	0.12	34,34,34,34	0
58	MG	AA	3482	1/1	0.97	0.09	65,65,65,65	0
58	MG	CA	3369	1/1	0.97	0.06	59,59,59,59	0
58	MG	AA	3417	1/1	0.97	0.06	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3418	1/1	0.97	0.07	43,43,43,43	0
58	MG	AA	3189	1/1	0.97	0.08	40,40,40,40	0
58	MG	CA	3529	1/1	0.97	0.06	57,57,57,57	0
58	MG	BA	1729	1/1	0.97	0.05	45,45,45,45	0
58	MG	BA	1730	1/1	0.97	0.06	52,52,52,52	0
58	MG	AA	3488	1/1	0.97	0.05	20,20,20,20	0
58	MG	AA	3757	1/1	0.97	0.05	55,55,55,55	0
58	MG	AA	3420	1/1	0.97	0.12	26,26,26,26	0
58	MG	AA	3666	1/1	0.97	0.05	64,64,64,64	0
58	MG	AA	3084	1/1	0.97	0.08	32,32,32,32	0
58	MG	AA	3023	1/1	0.97	0.16	33,33,33,33	1
58	MG	AA	3001	1/1	0.97	0.06	37,37,37,37	0
58	MG	CA	3124	1/1	0.97	0.17	48,48,48,48	0
58	MG	CA	3238	1/1	0.97	0.09	59,59,59,59	0
58	MG	CU	201	1/1	0.97	0.18	64,64,64,64	0
58	MG	CA	3390	1/1	0.97	0.03	64,64,64,64	0
58	MG	CA	3011	1/1	0.97	0.07	47,47,47,47	0
58	MG	AA	3031	1/1	0.97	0.11	10,10,10,10	1
58	MG	AF	303	1/1	0.97	0.09	41,41,41,41	1
58	MG	CA	3242	1/1	0.97	0.04	41,41,41,41	0
58	MG	AA	3593	1/1	0.97	0.05	25,25,25,25	1
58	MG	AA	3427	1/1	0.97	0.04	33,33,33,33	0
58	MG	AA	3009	1/1	0.97	0.04	24,24,24,24	0
58	MG	DA	1601	1/1	0.97	0.09	61,61,61,61	0
58	MG	AA	3034	1/1	0.97	0.10	57,57,57,57	0
58	MG	BA	1746	1/1	0.97	0.04	37,37,37,37	0
58	MG	AA	3768	1/1	0.97	0.16	99,99,99,99	0
58	MG	CA	3022	1/1	0.97	0.12	38,38,38,38	0
58	MG	CA	3554	1/1	0.97	0.11	67,67,67,67	0
58	MG	AA	3502	1/1	0.97	0.06	51,51,51,51	1
58	MG	AA	3303	1/1	0.97	0.11	56,56,56,56	0
58	MG	AA	3053	1/1	0.97	0.07	14,14,14,14	0
58	MG	AA	3069	1/1	0.97	0.06	34,34,34,34	0
58	MG	AN	3002	1/1	0.97	0.09	27,27,27,27	0
58	MG	DZ	702	1/1	0.97	0.11	57,57,57,57	0
58	MG	BA	1753	1/1	0.97	0.07	58,58,58,58	0
60	SF4	BD	501	8/8	0.97	0.04	80,80,80,80	0
60	SF4	DD	501	8/8	0.97	0.05	90,90,90,90	1
58	MG	AN	3003	1/1	0.97	0.06	47,47,47,47	0
58	MG	CA	3410	1/1	0.97	0.06	31,31,31,31	0
62	GDP	BZ	704	28/28	0.97	0.06	53,53,53,53	1
58	MG	AA	3506	1/1	0.97	0.07	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3471	1/1	0.98	0.08	45,45,45,45	0
58	MG	AA	3101	1/1	0.98	0.17	52,52,52,52	0
58	MG	AA	3742	1/1	0.98	0.08	82,82,82,82	0
58	MG	CA	3211	1/1	0.98	0.10	40,40,40,40	0
58	MG	AA	3497	1/1	0.98	0.04	46,46,46,46	0
58	MG	CA	3337	1/1	0.98	0.06	41,41,41,41	0
58	MG	AA	3187	1/1	0.98	0.13	32,32,32,32	0
58	MG	AB	3020	1/1	0.98	0.10	55,55,55,55	0
58	MG	AA	3500	1/1	0.98	0.05	47,47,47,47	0
58	MG	AB	3022	1/1	0.98	0.03	58,58,58,58	0
58	MG	AA	3296	1/1	0.98	0.04	17,17,17,17	0
58	MG	CA	3345	1/1	0.98	0.07	38,38,38,38	0
58	MG	AA	3130	1/1	0.98	0.06	37,37,37,37	0
58	MG	CA	3219	1/1	0.98	0.10	31,31,31,31	0
58	MG	DA	1654	1/1	0.98	0.03	30,30,30,30	0
58	MG	CA	3108	1/1	0.98	0.13	60,60,60,60	0
58	MG	AA	3659	1/1	0.98	0.06	14,14,14,14	0
58	MG	AA	3225	1/1	0.98	0.06	27,27,27,27	1
58	MG	AA	3379	1/1	0.98	0.05	30,30,30,30	0
58	MG	AA	3584	1/1	0.98	0.06	65,65,65,65	0
58	MG	CA	3629	1/1	0.98	0.06	55,55,55,55	0
58	MG	AA	3380	1/1	0.98	0.04	15,15,15,15	0
58	MG	AA	3754	1/1	0.98	0.03	29,29,29,29	0
58	MG	AA	3507	1/1	0.98	0.06	14,14,14,14	0
58	MG	AA	3587	1/1	0.98	0.09	53,53,53,53	0
58	MG	AA	3588	1/1	0.98	0.08	38,38,38,38	0
58	MG	CA	3359	1/1	0.98	0.10	42,42,42,42	0
58	MG	CA	3007	1/1	0.98	0.04	28,28,28,28	0
58	MG	AA	3337	1/1	0.98	0.03	10,10,10,10	0
58	MG	AA	3131	1/1	0.98	0.13	55,55,55,55	0
58	MG	AA	3022	1/1	0.98	0.03	9,9,9,9	0
58	MG	CA	3364	1/1	0.98	0.09	29,29,29,29	0
58	MG	CA	3234	1/1	0.98	0.14	54,54,54,54	0
58	MG	AA	3160	1/1	0.98	0.07	57,57,57,57	0
58	MG	AA	3251	1/1	0.98	0.07	42,42,42,42	0
58	MG	AE	305	1/1	0.98	0.07	30,30,30,30	0
58	MG	AA	3387	1/1	0.98	0.03	17,17,17,17	0
58	MG	CA	3370	1/1	0.98	0.06	47,47,47,47	0
58	MG	AA	3389	1/1	0.98	0.06	17,17,17,17	0
58	MG	AA	3275	1/1	0.98	0.12	47,47,47,47	1
58	MG	AA	3304	1/1	0.98	0.10	30,30,30,30	0
58	MG	BA	1745	1/1	0.98	0.05	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3511	1/1	0.98	0.06	68,68,68,68	0
58	MG	CA	3019	1/1	0.98	0.05	28,28,28,28	0
58	MG	CA	3377	1/1	0.98	0.05	80,80,80,80	0
58	MG	AF	305	1/1	0.98	0.15	41,41,41,41	0
58	MG	CA	3021	1/1	0.98	0.04	29,29,29,29	0
58	MG	AA	3346	1/1	0.98	0.07	46,46,46,46	0
58	MG	DA	1688	1/1	0.98	0.08	66,66,66,66	0
58	MG	CA	3658	1/1	0.98	0.07	50,50,50,50	0
58	MG	CA	3381	1/1	0.98	0.05	38,38,38,38	0
58	MG	CA	3023	1/1	0.98	0.10	46,46,46,46	0
58	MG	AA	3396	1/1	0.98	0.03	22,22,22,22	0
58	MG	CA	3249	1/1	0.98	0.06	46,46,46,46	0
58	MG	AA	3276	1/1	0.98	0.14	47,47,47,47	1
58	MG	AA	3400	1/1	0.98	0.11	39,39,39,39	0
58	MG	AA	3527	1/1	0.98	0.07	26,26,26,26	0
58	MG	AA	3528	1/1	0.98	0.05	28,28,28,28	0
58	MG	AA	3529	1/1	0.98	0.07	16,16,16,16	0
58	MG	AA	3530	1/1	0.98	0.04	53,53,53,53	0
58	MG	AA	3306	1/1	0.98	0.09	47,47,47,47	0
58	MG	AA	3402	1/1	0.98	0.10	33,33,33,33	0
58	MG	AA	3033	1/1	0.98	0.16	29,29,29,29	1
58	MG	AA	3534	1/1	0.98	0.06	27,27,27,27	0
58	MG	CA	3146	1/1	0.98	0.06	60,60,60,60	0
58	MG	AP	202	1/1	0.98	0.10	28,28,28,28	1
58	MG	AA	3350	1/1	0.98	0.09	31,31,31,31	0
58	MG	AA	3536	1/1	0.98	0.03	35,35,35,35	0
58	MG	AA	3134	1/1	0.98	0.20	59,59,59,59	1
58	MG	CA	3041	1/1	0.98	0.17	31,31,31,31	0
58	MG	CA	3403	1/1	0.98	0.05	91,91,91,91	0
58	MG	CD	303	1/1	0.98	0.17	37,37,37,37	0
58	MG	AA	3082	1/1	0.98	0.15	23,23,23,23	1
58	MG	AA	3693	1/1	0.98	0.07	48,48,48,48	0
58	MG	AA	3539	1/1	0.98	0.03	28,28,28,28	0
58	MG	AA	3540	1/1	0.98	0.04	29,29,29,29	0
58	MG	DA	1717	1/1	0.98	0.08	52,52,52,52	0
58	MG	AA	3410	1/1	0.98	0.06	30,30,30,30	0
58	MG	DA	1719	1/1	0.98	0.06	74,74,74,74	0
58	MG	AA	3542	1/1	0.98	0.08	63,63,63,63	0
58	MG	AU	204	1/1	0.98	0.18	62,62,62,62	0
58	MG	AA	3089	1/1	0.98	0.11	47,47,47,47	1
58	MG	AA	3544	1/1	0.98	0.05	16,16,16,16	0
58	MG	AV	203	1/1	0.98	0.09	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AV	204	1/1	0.98	0.06	38,38,38,38	0
58	MG	CA	3279	1/1	0.98	0.03	34,34,34,34	0
58	MG	CA	3550	1/1	0.98	0.08	33,33,33,33	0
58	MG	AA	3545	1/1	0.98	0.05	51,51,51,51	1
58	MG	AA	3097	1/1	0.98	0.09	26,26,26,26	0
58	MG	AA	3257	1/1	0.98	0.03	14,14,14,14	0
58	MG	AA	3469	1/1	0.98	0.06	43,43,43,43	0
58	MG	AA	3315	1/1	0.98	0.10	34,34,34,34	0
58	MG	AA	3357	1/1	0.98	0.06	27,27,27,27	0
58	MG	AA	3707	1/1	0.98	0.16	29,29,29,29	1
58	MG	AA	3474	1/1	0.98	0.09	53,53,53,53	0
58	MG	CA	3559	1/1	0.98	0.08	52,52,52,52	1
58	MG	AA	3083	1/1	0.98	0.10	38,38,38,38	1
58	MG	CA	3289	1/1	0.98	0.10	42,42,42,42	0
58	MG	AA	3359	1/1	0.98	0.05	51,51,51,51	0
58	MG	CA	3291	1/1	0.98	0.05	27,27,27,27	0
58	MG	BA	1682	1/1	0.98	0.03	53,53,53,53	0
58	MG	CA	3566	1/1	0.98	0.04	41,41,41,41	0
58	MG	CA	3064	1/1	0.98	0.06	43,43,43,43	0
58	MG	AA	3478	1/1	0.98	0.05	40,40,40,40	0
58	MG	DA	1745	1/1	0.98	0.11	61,61,61,61	0
58	MG	AA	3555	1/1	0.98	0.06	38,38,38,38	0
58	MG	AA	3126	1/1	0.98	0.15	50,50,50,50	0
58	MG	AA	3421	1/1	0.98	0.10	12,12,12,12	0
58	MG	AA	3217	1/1	0.98	0.04	6,6,6,6	0
58	MG	AA	3716	1/1	0.98	0.04	57,57,57,57	0
58	MG	AA	3238	1/1	0.98	0.10	61,61,61,61	0
58	MG	CA	3576	1/1	0.98	0.04	36,36,36,36	0
58	MG	A5	103	1/1	0.98	0.07	45,45,45,45	0
58	MG	AA	3483	1/1	0.98	0.04	43,43,43,43	1
58	MG	AA	3218	1/1	0.98	0.11	38,38,38,38	0
58	MG	AA	3003	1/1	0.98	0.03	20,20,20,20	0
58	MG	A7	102	1/1	0.98	0.06	38,38,38,38	0
58	MG	AA	3721	1/1	0.98	0.05	10,10,10,10	0
58	MG	AA	3323	1/1	0.98	0.03	22,22,22,22	0
58	MG	CA	3308	1/1	0.98	0.04	41,41,41,41	0
58	MG	A7	105	1/1	0.98	0.06	43,43,43,43	0
58	MG	AA	3085	1/1	0.98	0.09	53,53,53,53	0
58	MG	DA	1764	1/1	0.98	0.04	55,55,55,55	0
58	MG	CA	3587	1/1	0.98	0.03	34,34,34,34	0
58	MG	DA	1617	1/1	0.98	0.10	48,48,48,48	0
58	MG	CA	3311	1/1	0.98	0.07	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3450	1/1	0.98	0.05	48,48,48,48	0
58	MG	AA	3815	1/1	0.98	0.05	29,29,29,29	1
58	MG	A8	5002	1/1	0.98	0.06	31,31,31,31	0
58	MG	AA	3565	1/1	0.98	0.07	29,29,29,29	0
58	MG	AA	3170	1/1	0.98	0.08	53,53,53,53	0
58	MG	AA	3643	1/1	0.98	0.08	49,49,49,49	0
58	MG	CA	3318	1/1	0.98	0.05	33,33,33,33	0
58	MG	AA	3243	1/1	0.98	0.10	24,24,24,24	1
58	MG	AA	3568	1/1	0.98	0.07	16,16,16,16	0
58	MG	AA	3369	1/1	0.98	0.08	27,27,27,27	0
58	MG	AA	3327	1/1	0.98	0.03	13,13,13,13	0
58	MG	AA	3293	1/1	0.98	0.11	32,32,32,32	0
58	MG	AA	3572	1/1	0.98	0.03	32,32,32,32	0
59	ZN	A4	501	1/1	0.98	0.04	137,137,137,137	0
59	ZN	BN	501	1/1	0.98	0.05	123,123,123,123	0
58	MG	CA	3092	1/1	0.98	0.07	70,70,70,70	0
59	ZN	DN	501	1/1	0.98	0.05	129,129,129,129	0
58	MG	AA	3650	1/1	0.98	0.04	60,60,60,60	0
58	MG	AB	3011	1/1	0.98	0.06	30,30,30,30	0
58	MG	AB	3012	1/1	0.98	0.08	29,29,29,29	1
58	MG	AB	3013	1/1	0.98	0.08	54,54,54,54	0
58	MG	AA	3494	1/1	0.98	0.09	50,50,50,50	0
58	MG	AA	3331	1/1	0.98	0.12	34,34,34,34	0
58	MG	AA	3521	1/1	0.99	0.05	29,29,29,29	0
58	MG	CA	3320	1/1	0.99	0.05	30,30,30,30	0
58	MG	AA	3038	1/1	0.99	0.05	11,11,11,11	0
58	MG	CA	3028	1/1	0.99	0.18	35,35,35,35	1
58	MG	CA	3029	1/1	0.99	0.06	33,33,33,33	0
58	MG	AA	3328	1/1	0.99	0.03	18,18,18,18	0
58	MG	AA	3524	1/1	0.99	0.05	28,28,28,28	0
58	MG	AA	3413	1/1	0.99	0.03	20,20,20,20	0
58	MG	CA	3265	1/1	0.99	0.04	40,40,40,40	0
58	MG	AA	3329	1/1	0.99	0.05	17,17,17,17	0
58	MG	AA	3012	1/1	0.99	0.06	34,34,34,34	0
58	MG	AA	3485	1/1	0.99	0.04	14,14,14,14	0
58	MG	AA	3749	1/1	0.99	0.03	14,14,14,14	0
58	MG	CA	3270	1/1	0.99	0.08	35,35,35,35	0
58	MG	AA	3416	1/1	0.99	0.04	30,30,30,30	0
58	MG	AA	3700	1/1	0.99	0.08	35,35,35,35	0
58	MG	AA	3314	1/1	0.99	0.11	28,28,28,28	0
58	MG	AA	3388	1/1	0.99	0.05	25,25,25,25	0
58	MG	CA	3617	1/1	0.99	0.04	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3289	1/1	0.99	0.03	27,27,27,27	0
58	MG	AA	3074	1/1	0.99	0.09	15,15,15,15	0
58	MG	CA	3339	1/1	0.99	0.03	34,34,34,34	0
58	MG	AA	3075	1/1	0.99	0.03	9,9,9,9	0
58	MG	BA	1760	1/1	0.99	0.02	57,57,57,57	0
58	MG	CA	3342	1/1	0.99	0.07	45,45,45,45	0
58	MG	AA	3392	1/1	0.99	0.04	42,42,42,42	0
58	MG	AA	3393	1/1	0.99	0.07	21,21,21,21	0
58	MG	AA	3394	1/1	0.99	0.07	27,27,27,27	0
58	MG	AA	3425	1/1	0.99	0.07	18,18,18,18	0
58	MG	CA	3415	1/1	0.99	0.03	31,31,31,31	1
58	MG	AA	3040	1/1	0.99	0.14	40,40,40,40	1
58	MG	AA	3459	1/1	0.99	0.04	18,18,18,18	0
58	MG	AA	3498	1/1	0.99	0.04	37,37,37,37	0
58	MG	AA	3583	1/1	0.99	0.02	13,13,13,13	0
58	MG	CA	3560	1/1	0.99	0.02	36,36,36,36	0
58	MG	AA	3188	1/1	0.99	0.06	13,13,13,13	0
58	MG	AA	3207	1/1	0.99	0.07	22,22,22,22	1
58	MG	AA	3399	1/1	0.99	0.02	18,18,18,18	0
58	MG	AA	3228	1/1	0.99	0.06	51,51,51,51	0
58	MG	AA	3308	1/1	0.99	0.03	30,30,30,30	0
58	MG	CA	3356	1/1	0.99	0.04	57,57,57,57	0
58	MG	AA	3376	1/1	0.99	0.05	19,19,19,19	0
58	MG	AA	3675	1/1	0.99	0.05	38,38,38,38	0
58	MG	AA	3403	1/1	0.99	0.04	28,28,28,28	0
58	MG	AA	3723	1/1	0.99	0.05	21,21,21,21	0
58	MG	DA	1758	1/1	0.99	0.12	71,71,71,71	0
58	MG	AA	3340	1/1	0.99	0.08	59,59,59,59	0
58	MG	CA	3572	1/1	0.99	0.05	54,54,54,54	0
58	MG	AA	3140	1/1	0.99	0.06	50,50,50,50	0
58	MG	AA	3776	1/1	0.99	0.02	40,40,40,40	0
58	MG	AA	3635	1/1	0.99	0.03	23,23,23,23	0
58	MG	AA	3727	1/1	0.99	0.04	49,49,49,49	0
58	MG	DA	1611	1/1	0.99	0.03	38,38,38,38	0
58	MG	CA	3650	1/1	0.99	0.14	27,27,27,27	0
58	MG	AA	3509	1/1	0.99	0.06	49,49,49,49	0
58	MG	AA	3342	1/1	0.99	0.06	5,5,5,5	0
58	MG	AA	3730	1/1	0.99	0.09	30,30,30,30	0
58	MG	AA	3407	1/1	0.99	0.04	49,49,49,49	0
58	MG	AA	3045	1/1	0.99	0.09	43,43,43,43	0
58	MG	AA	3475	1/1	0.99	0.04	62,62,62,62	0
58	MG	CA	3372	1/1	0.99	0.03	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	3734	1/1	0.99	0.05	22,22,22,22	0
58	MG	DA	1621	1/1	0.99	0.08	44,44,44,44	0
58	MG	CA	3443	1/1	0.99	0.02	36,36,36,36	0
58	MG	DA	1699	1/1	0.99	0.06	75,75,75,75	0
58	MG	BA	1734	1/1	0.99	0.03	71,71,71,71	0
58	MG	AA	3515	1/1	0.99	0.04	20,20,20,20	0
58	MG	BA	1681	1/1	0.99	0.07	36,36,36,36	0
58	MG	AA	3439	1/1	0.99	0.12	17,17,17,17	0
58	MG	CA	3312	1/1	0.99	0.04	51,51,51,51	0
58	MG	AA	3440	1/1	0.99	0.10	31,31,31,31	0
58	MG	AA	3409	1/1	0.99	0.08	45,45,45,45	0
58	MG	AA	3037	1/1	0.99	0.04	45,45,45,45	0
58	MG	CA	3382	1/1	0.99	0.04	40,40,40,40	0
58	MG	CA	3453	1/1	0.99	0.04	39,39,39,39	0
58	MG	AA	3791	1/1	0.99	0.08	16,16,16,16	0
58	MG	AA	3520	1/1	0.99	0.04	38,38,38,38	0
58	MG	A0	101	1/1	0.99	0.03	43,43,43,43	0
58	MG	AE	303	1/1	1.00	0.07	18,18,18,18	0
59	ZN	AY	501	1/1	1.00	0.01	65,65,65,65	0
58	MG	AA	3472	1/1	1.00	0.03	24,24,24,24	0
59	ZN	A5	104	1/1	1.00	0.01	36,36,36,36	0
59	ZN	A6	102	1/1	1.00	0.02	46,46,46,46	0
59	ZN	A9	501	1/1	1.00	0.01	42,42,42,42	0
58	MG	AA	3473	1/1	1.00	0.03	15,15,15,15	0
59	ZN	CY	501	1/1	1.00	0.02	93,93,93,93	0
58	MG	AA	3398	1/1	1.00	0.01	15,15,15,15	0
59	ZN	C5	102	1/1	1.00	0.03	68,68,68,68	0
59	ZN	C6	501	1/1	1.00	0.02	61,61,61,61	0
59	ZN	C9	501	1/1	1.00	0.03	94,94,94,94	0
58	MG	AA	3465	1/1	1.00	0.04	39,39,39,39	0
58	MG	AA	3722	1/1	1.00	0.02	18,18,18,18	0
58	MG	AA	3514	1/1	1.00	0.03	18,18,18,18	0
58	MG	CA	3383	1/1	1.00	0.07	44,44,44,44	0
58	MG	AA	3320	1/1	1.00	0.06	24,24,24,24	0
58	MG	AA	3501	1/1	1.00	0.02	24,24,24,24	0
58	MG	AA	3385	1/1	1.00	0.05	28,28,28,28	0

6.5 Other polymers (i)

There are no such residues in this entry.