Full wwPDB X-ray Structure Validation Report ⓘ

Aug 3, 2026 – 04:56 PM EDT

PDB ID	:	4WQU / pdb_00004wqu
Title	:	Crystal structure of the Thermus thermophilus 70S ribosome in complex with elongation factor G trapped by the antibiotic dityromycin
Authors	:	Lin, J.; Gagnon, M.G.; Steitz, T.A.
Deposited on	:	2014-10-22
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:

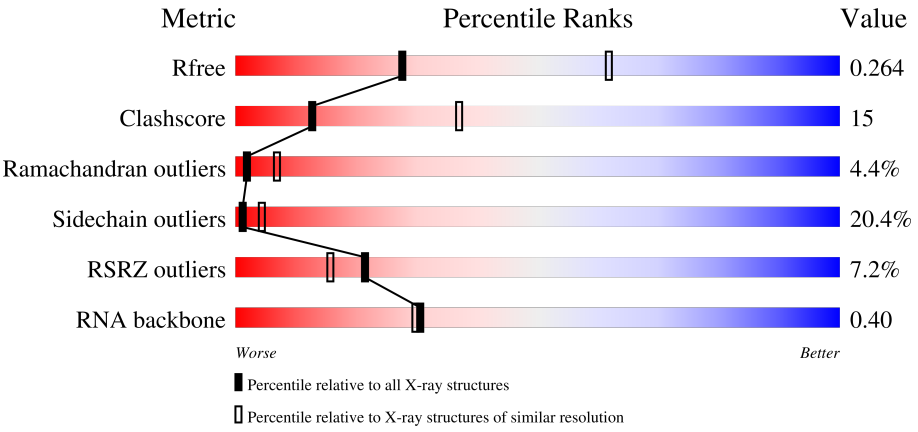
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.015 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.50

1 Overall quality at a glance

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	56% 34% 9%
1	CA	2915	2% 47% 42% 10%
2	AB	121	66% 31%
2	CB	121	4% 39% 50% 11%

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Mol	Chain	Length	Quality of chain
3	AC	228	41% 21% 28% 10% • 40%
3	CC	228	43% 19% 29% 10% • 40%
4	AD	276	% 55% 33% 10% •
4	CD	276	% 53% 33% 13% •
5	AE	206	53% 33% 13% •
5	CE	206	% 45% 40% 13% ••
6	AF	210	50% 36% 9% • •
6	CF	210	% 41% 44% 10% •
7	AG	182	% 49% 36% 12% • •
7	CG	182	15% 41% 48% 11% •
8	AH	180	% 43% 41% 12% • •
8	CH	180	8% 41% 45% 11% •
9	AK	173	20% 44% 25% 6% 25%
9	CK	173	31% 53% 17% 5% 25%
10	AL	147	15% 18% 22% • • 55%
10	CL	147	26% 18% 17% 10% 55%
11	AN	140	% 61% 27% 11% •
11	CN	140	% 45% 40% 14% •
12	AO	122	57% 33% 10%
12	CO	122	58% 36% 6%
13	AP	150	56% 31% 12% ••
13	CP	150	4% 55% 33% 11% ••
14	AQ	141	57% 35% 8%
14	CQ	141	2% 50% 37% 11% •
15	AR	118	54% 32% 13% •

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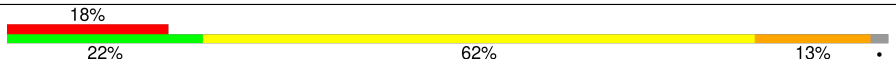
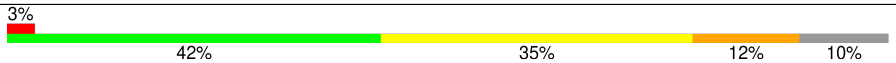
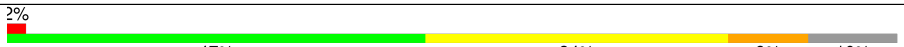
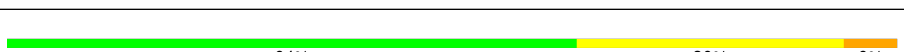
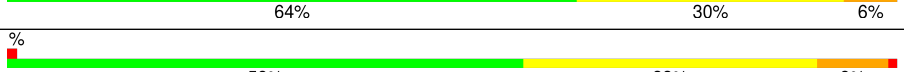
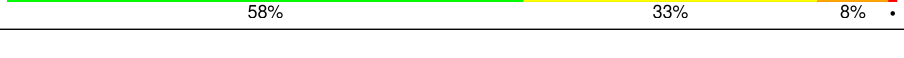
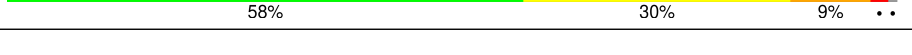
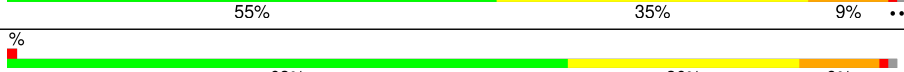
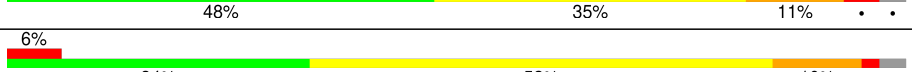
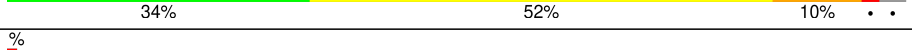
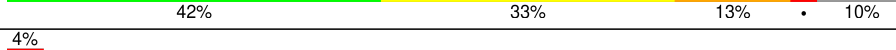
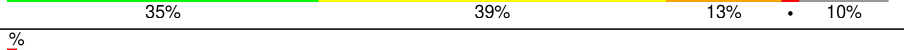
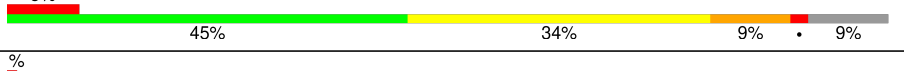
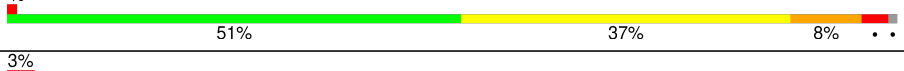
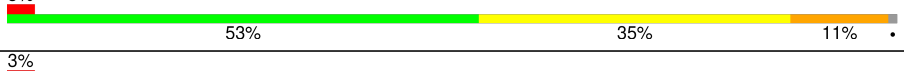
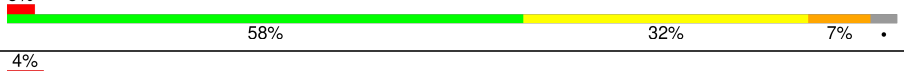
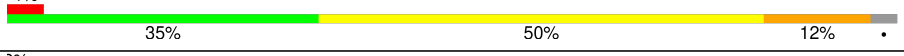
Mol	Chain	Length	Quality of chain
15	CR	118	
16	AS	112	
16	CS	112	
17	AT	146	
17	CT	146	
18	AU	118	
18	CU	118	
19	AV	101	
19	CV	101	
20	AW	113	
20	CW	113	
21	AX	96	
21	CX	96	
22	AY	110	
22	CY	110	
23	AZ	206	
23	CZ	206	
24	A0	85	
24	C0	85	
25	A1	98	
25	C1	98	
26	A2	72	
26	C2	72	
27	A3	60	
27	C3	60	

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Mol	Chain	Length	Quality of chain
28	A4	71	11% 34% 48% 15%
28	C4	71	15% 35% 46% 15%
29	A5	60	62% 28% 8%
29	C5	60	52% 40% 7%
30	A6	54	39% 52% 7%
30	C6	54	44% 39% 15%
31	A7	49	4% 51% 37% 8%
31	C7	49	8% 51% 39% 8%
32	A8	65	46% 40% 11%
32	C8	65	2% 46% 49%
33	A9	37	3% 46% 43% 11%
33	C9	37	3% 46% 49% 5%
34	BA	1521	2% 38% 49% 11%
34	DA	1521	4% 38% 48% 13%
35	BB	256	9% 42% 35% 12% 10%
35	DB	256	18% 39% 37% 13% 10%
36	BC	239	12% 47% 32% 6% 14%
36	DC	239	22% 42% 38% 7% 14%
37	BD	209	18% 52% 35% 11%
37	DD	209	14% 44% 42% 12%
38	BE	162	% 44% 35% 11% 9%
38	DE	162	8% 33% 41% 16% 9%
39	BF	101	% 48% 37% 15%
39	DF	101	3% 50% 42% 7%
40	BG	156	11% 51% 35% 10%

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Mol	Chain	Length	Quality of chain
40	DG	156	14% 51% 41% 8%
41	BH	138	5% 42% 43% 13%
41	DH	138	9% 38% 43% 14%
42	BI	128	30% 50% 41% 8%
42	DI	128	46% 49% 37% 12%
43	BJ	105	30% 44% 43% 5% 8%
43	DJ	105	43% 50% 35% 6% 9%
44	BK	129	% 49% 32% 6% 12%
44	DK	129	7% 49% 32% 7% 12%
45	BL	132	4% 54% 32% 7% 8%
45	DL	132	4% 48% 33% 11% 8%
46	BM	126	10% 52% 31% 10% 7%
46	DM	126	27% 44% 36% 13% 8%
47	BN	61	25% 36% 52% 10%
47	DN	61	57% 33% 57% 8%
48	BO	89	6% 45% 46% 8%
48	DO	89	3% 47% 42% 10%
49	BP	88	11% 33% 36% 23% 7%
49	DP	88	5% 36% 40% 16% 7%
50	BQ	105	5% 48% 34% 11% 6%
50	DQ	105	11% 45% 41% 9% 6%
51	BR	88	% 31% 39% 8% 23%
51	DR	88	% 39% 32% 6% 23%
52	BS	93	29% 43% 32% 15% 10%
52	DS	93	40% 47% 33% 9% 11%

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Mol	Chain	Length	Quality of chain
53	BT	106	9% 37% 43% 8% 9%
53	DT	106	8% 51% 30% 9% 9%
54	BU	27	41% 52% 33% 15%
54	DU	27	41% 37% 41% 7% 15%
55	BV	18	17% 22% 11% 6% 61%
55	DV	18	17% 22% 11% 67%
56	BW	76	4% 42% 42% 16%
56	BY	76	16% 39% 36% 22%
56	DW	76	39% 43% 12% 5%
56	DY	76	18% 33% 47% 13%
57	BZ	758	9% 42% 39% 14%
57	DZ	758	12% 45% 38% 12%
58	BX	10	20% 70% 10%
58	DX	10	10% 10% 10% 80%

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	2QY	DX	10	-	-	X	-
59	MG	AA	3056	-	-	-	X
59	MG	AA	3093	-	-	-	X
59	MG	AA	3108	-	-	-	X
59	MG	AA	3717	-	-	-	X
59	MG	AA	3773	-	-	-	X
59	MG	DA	1611	-	-	-	X
61	SF4	DD	501	-	-	X	-

2 Entry composition (i)

There are 63 unique types of molecules in this entry. The entry contains 310038 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	2872	Total	C	N	O	P	0	0	0
			61861	27532	11574	19884	2871			
1	CA	2868	Total	C	N	O	P	0	0	0
			61771	27492	11554	19858	2867			

- 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	66	Total	C	N	O	S	0	0	0
			498	310	93	92	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CL	66	Total	C	N	O	S	0	0	0
			498	310	93	92	3			

- 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	77	Total	C	N	O	S	0	0	0
			608	375	129	103	1			
24	C0	77	Total	C	N	O	S	0	0	0
			608	375	129	103	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	116	Total 907	C 558	N 188	O 159	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	728	Total	C	N	O	S	0	0	0
			5663	3599	973	1072	19			
57	DZ	730	Total	C	N	O	S	0	0	0
			5682	3611	978	1074	19			

- Molecule 58 is a protein called Dityromycin.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
58	BX	10	Total C N O 93 67 10 16	0	0	0
58	DX	10	Total C N O 93 67 10 16	0	0	0

- Molecule 59 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	AA	821	Total Mg 821 821	0	0
59	AB	23	Total Mg 23 23	0	0
59	AD	12	Total Mg 12 12	0	0
59	AE	5	Total Mg 5 5	0	0
59	AF	8	Total Mg 8 8	0	0
59	AG	2	Total Mg 2 2	0	0
59	AH	1	Total Mg 1 1	0	0
59	AN	3	Total Mg 3 3	0	0
59	AO	1	Total Mg 1 1	0	0
59	AP	4	Total Mg 4 4	0	0
59	AQ	3	Total Mg 3 3	0	0
59	AR	2	Total Mg 2 2	0	0
59	AU	3	Total Mg 3 3	0	0
59	AV	6	Total Mg 6 6	0	0
59	AW	3	Total Mg 3 3	0	0
59	AX	1	Total Mg 1 1	0	0
59	AY	1	Total Mg 1 1	0	0
59	AZ	2	Total Mg 2 2	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	A0	5	Total Mg 5 5	0	0
59	A2	1	Total Mg 1 1	0	0
59	A5	1	Total Mg 1 1	0	0
59	A6	2	Total Mg 2 2	0	0
59	A7	4	Total Mg 4 4	0	0
59	A8	1	Total Mg 1 1	0	0
59	A9	1	Total Mg 1 1	0	0
59	BA	215	Total Mg 215 215	0	0
59	BB	1	Total Mg 1 1	0	0
59	BD	1	Total Mg 1 1	0	0
59	BE	1	Total Mg 1 1	0	0
59	BF	1	Total Mg 1 1	0	0
59	BK	1	Total Mg 1 1	0	0
59	BL	2	Total Mg 2 2	0	0
59	BM	1	Total Mg 1 1	0	0
59	BN	2	Total Mg 2 2	0	0
59	BS	1	Total Mg 1 1	0	0
59	BT	1	Total Mg 1 1	0	0
59	BW	3	Total Mg 3 3	0	0
59	BZ	1	Total Mg 1 1	0	0
59	CA	664	Total Mg 664 664	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	CB	13	Total Mg 13 13	0	0
59	CD	4	Total Mg 4 4	0	0
59	CE	5	Total Mg 5 5	0	0
59	CF	4	Total Mg 4 4	0	0
59	CG	1	Total Mg 1 1	0	0
59	CN	1	Total Mg 1 1	0	0
59	CO	1	Total Mg 1 1	0	0
59	CP	1	Total Mg 1 1	0	0
59	CQ	4	Total Mg 4 4	0	0
59	CR	1	Total Mg 1 1	0	0
59	CU	1	Total Mg 1 1	0	0
59	CV	2	Total Mg 2 2	0	0
59	CW	1	Total Mg 1 1	0	0
59	CX	1	Total Mg 1 1	0	0
59	C0	1	Total Mg 1 1	0	0
59	C1	1	Total Mg 1 1	0	0
59	C3	1	Total Mg 1 1	0	0
59	C5	1	Total Mg 1 1	0	0
59	C7	1	Total Mg 1 1	0	0
59	C8	1	Total Mg 1 1	0	0
59	DA	171	Total Mg 171 171	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	DD	1	Total Mg 1 1	0	0
59	DE	2	Total Mg 2 2	0	0
59	DF	1	Total Mg 1 1	0	0
59	DJ	1	Total Mg 1 1	0	0
59	DK	1	Total Mg 1 1	0	0
59	DT	1	Total Mg 1 1	0	0
59	DW	3	Total Mg 3 3	0	0
59	DZ	2	Total Mg 2 2	0	0

- Molecule 60 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

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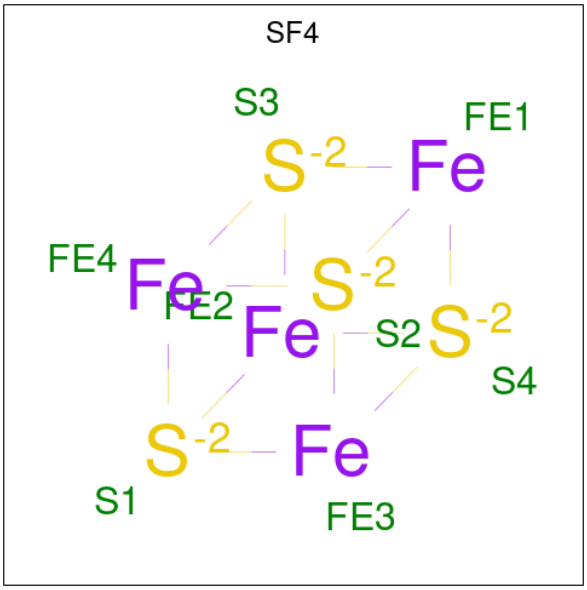
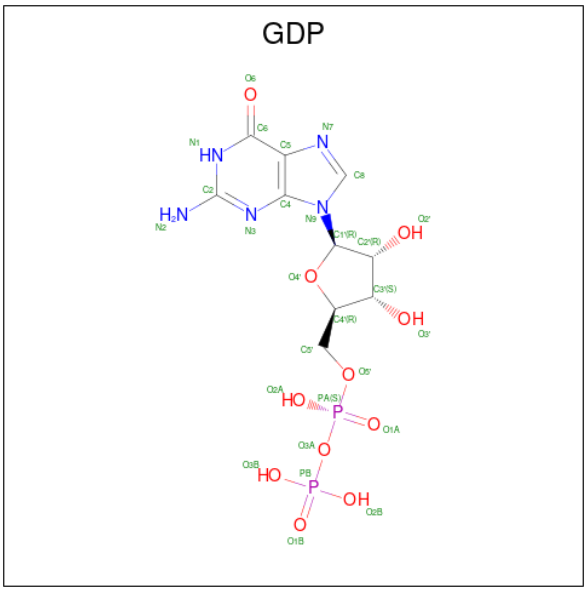
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	DN	1	Total Zn 1 1	0	0

- Molecule 61 is IRON/SULFUR CLUSTER (CCD ID: SF4) (formula: Fe_4S_4).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	BD	1	Total Fe S 8 4 4	0	0
61	DD	1	Total Fe S 8 4 4	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	0	0
			28	10	5	11	2		
62	DZ	1	Total	C	N	O	P	0	0
			28	10	5	11	2		

- Molecule 63 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
63	AA	1413	Total	O	0	0
			1413	1413		
63	AB	38	Total	O	0	0
			38	38		
63	AD	10	Total	O	0	0
			10	10		
63	AE	17	Total	O	0	0
			17	17		
63	AF	11	Total	O	0	0
			11	11		
63	AG	3	Total	O	0	0
			3	3		
63	AH	1	Total	O	0	0
			1	1		
63	AN	1	Total	O	0	0
			1	1		
63	AO	3	Total	O	0	0
			3	3		
63	AP	16	Total	O	0	0
			16	16		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
63	AQ	4	Total O 4 4	0	0
63	AR	2	Total O 2 2	0	0
63	AS	1	Total O 1 1	0	0
63	AT	1	Total O 1 1	0	0
63	AU	4	Total O 4 4	0	0
63	AV	1	Total O 1 1	0	0
63	AW	1	Total O 1 1	0	0
63	AX	3	Total O 3 3	0	0
63	AZ	1	Total O 1 1	0	0
63	A0	6	Total O 6 6	0	0
63	A1	2	Total O 2 2	0	0
63	A3	2	Total O 2 2	0	0
63	A5	3	Total O 3 3	0	0
63	A6	1	Total O 1 1	0	0
63	A7	2	Total O 2 2	0	0
63	A8	10	Total O 10 10	0	0
63	A9	1	Total O 1 1	0	0
63	BA	213	Total O 213 213	0	0
63	BD	1	Total O 1 1	0	0
63	BM	1	Total O 1 1	0	0
63	BO	1	Total O 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
63	BP	1	Total O 1 1	0	0
63	BV	1	Total O 1 1	0	0
63	BW	1	Total O 1 1	0	0
63	BZ	2	Total O 2 2	0	0
63	CA	983	Total O 983 983	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	CN	1	Total O 1 1	0	0
63	CO	1	Total O 1 1	0	0
63	CP	11	Total O 11 11	0	0
63	CQ	2	Total O 2 2	0	0
63	CT	3	Total O 3 3	0	0
63	CU	2	Total O 2 2	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	2	Total O 2 2	0	0
63	C0	4	Total O 4 4	0	0
63	C3	2	Total O 2 2	0	0

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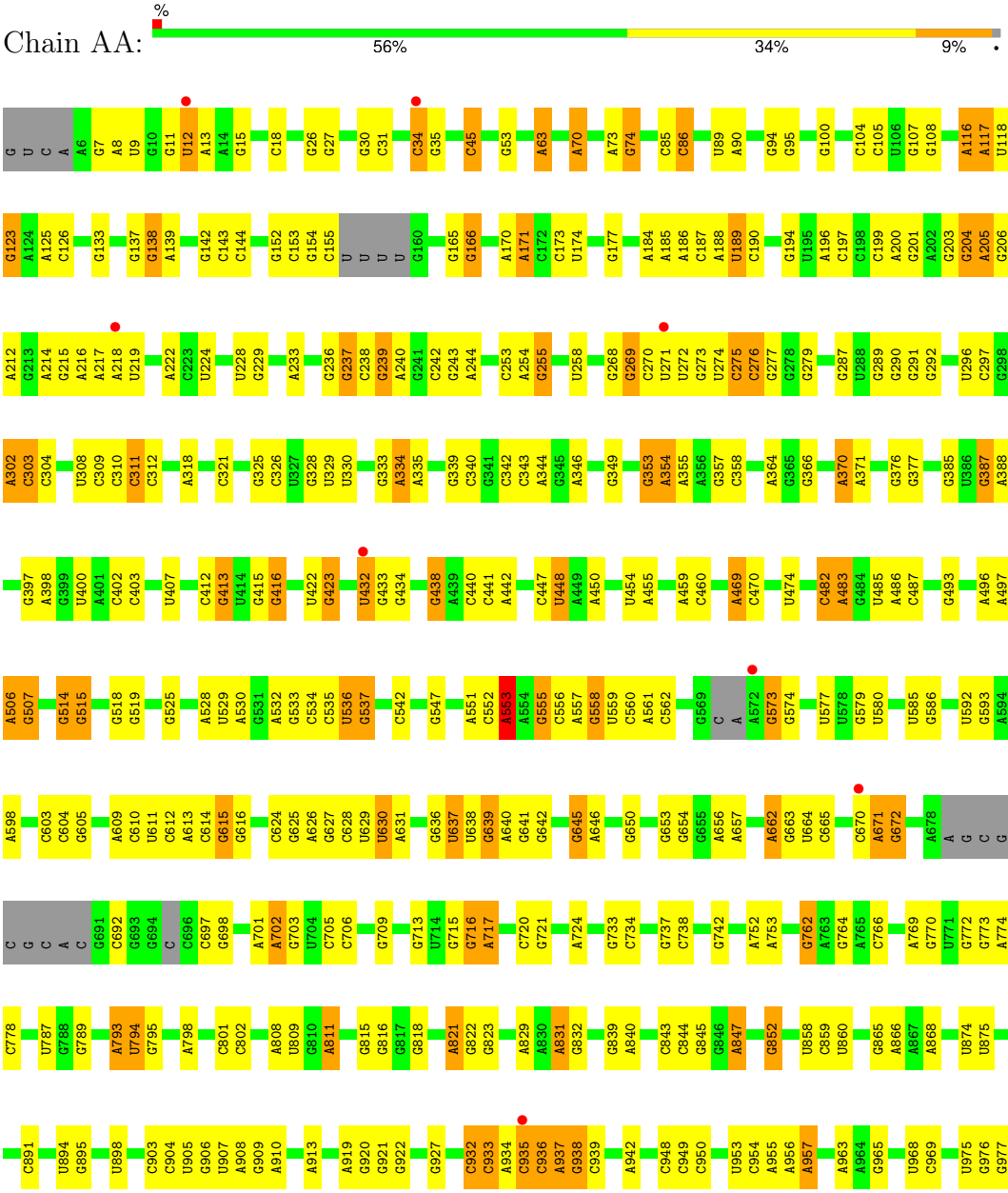
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
63	C5	1	Total O 1 1	0	0
63	C7	2	Total O 2 2	0	0
63	C8	4	Total O 4 4	0	0
63	DA	157	Total O 157 157	0	0
63	DD	1	Total O 1 1	0	0
63	DE	2	Total O 2 2	0	0
63	DH	1	Total O 1 1	0	0
63	DJ	1	Total O 1 1	0	0
63	DK	2	Total O 2 2	0	0
63	DL	1	Total O 1 1	0	0
63	DT	1	Total O 1 1	0	0

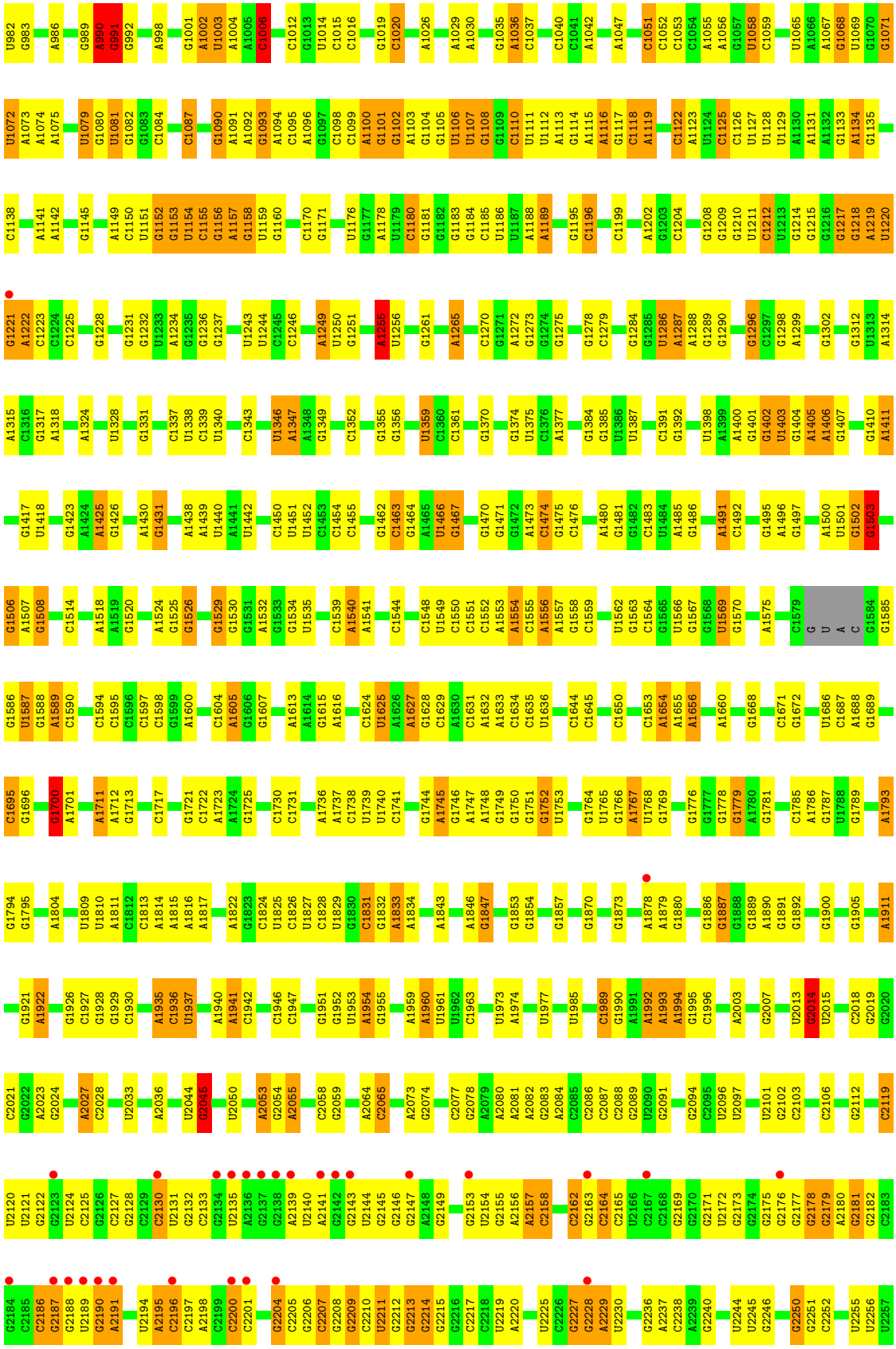
3 Residue-property plots (i)

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:

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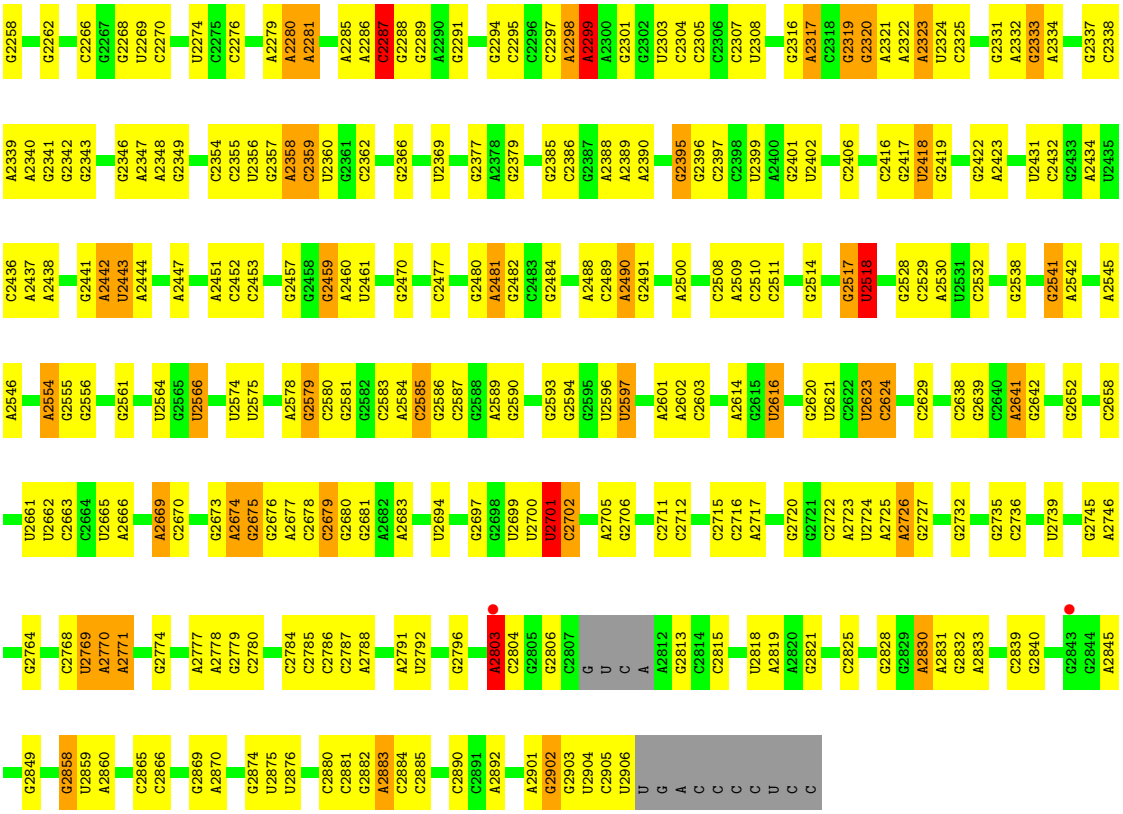

• Molecule 1: 23S Ribosomal RNA

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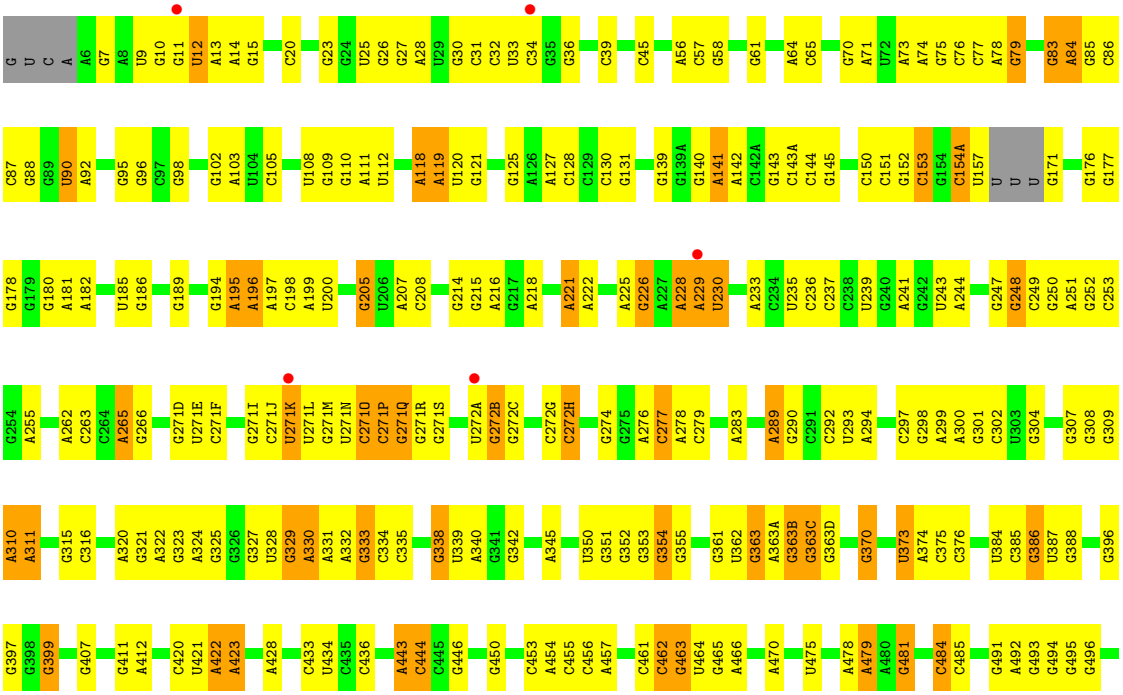

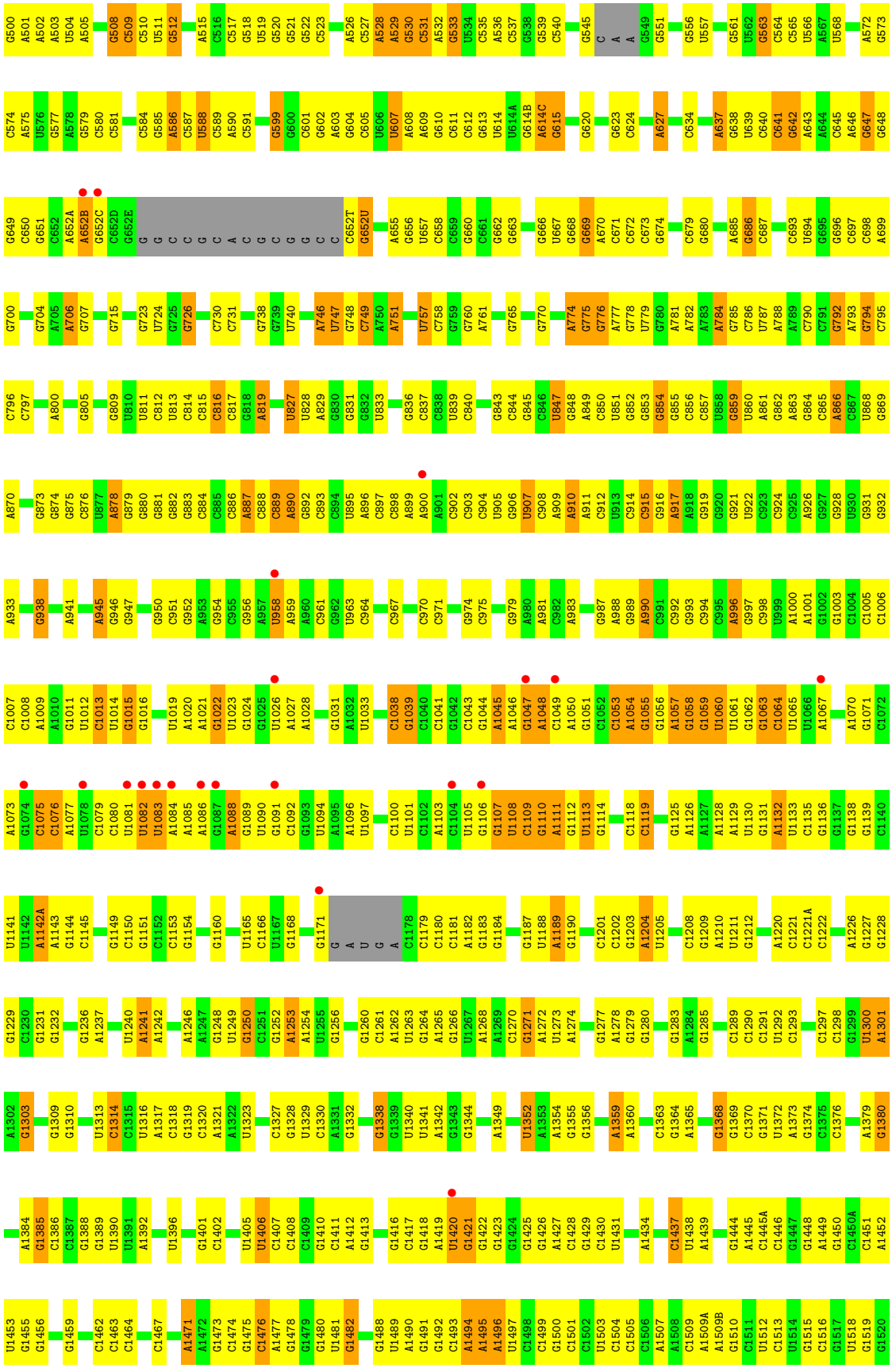

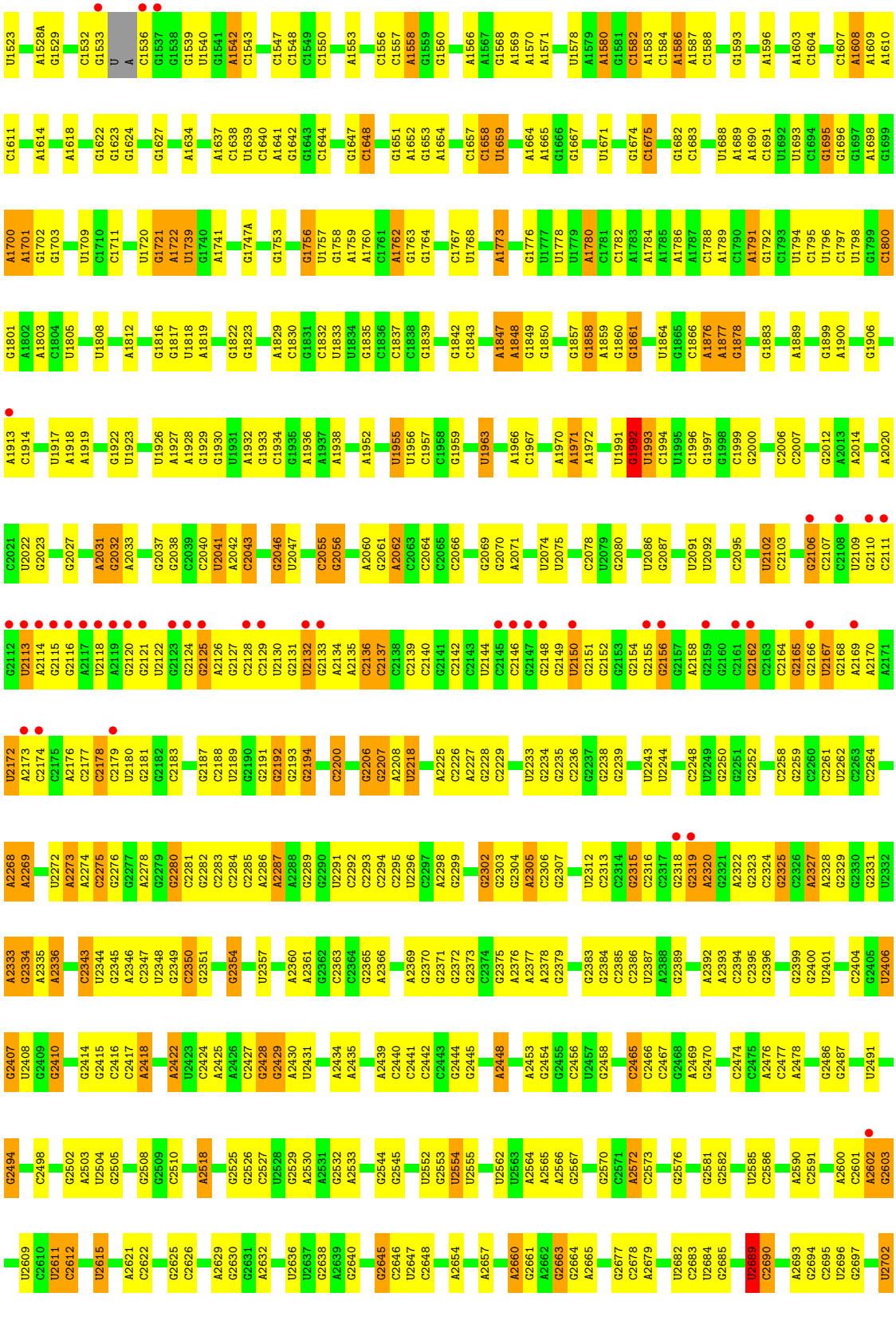
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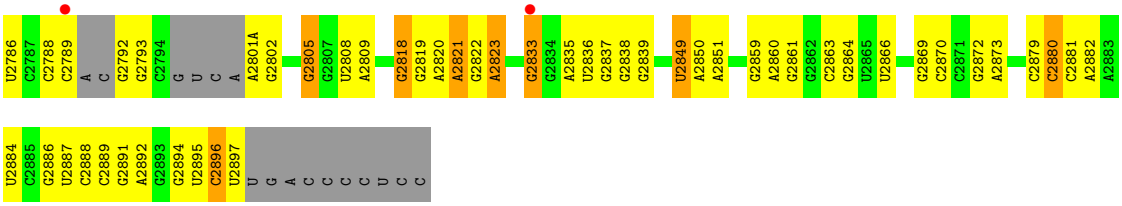

• Molecule 2: 5S Ribosomal RNA

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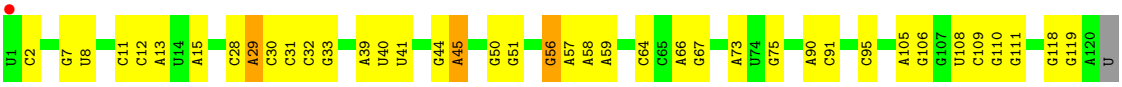

• Molecule 2: 5S Ribosomal RNA

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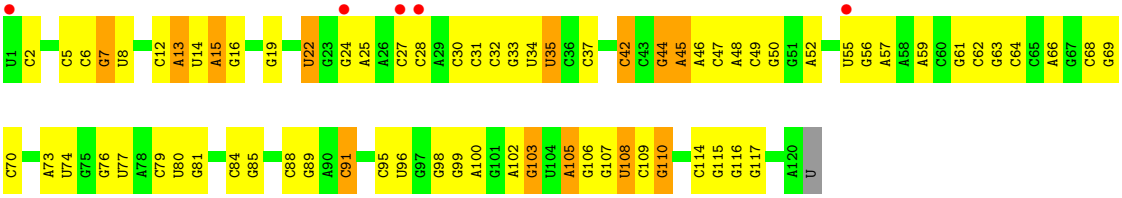

• Molecule 3: 50S ribosomal protein L1

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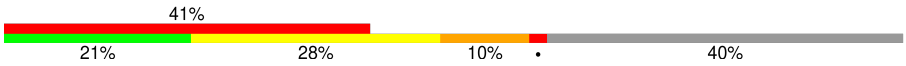

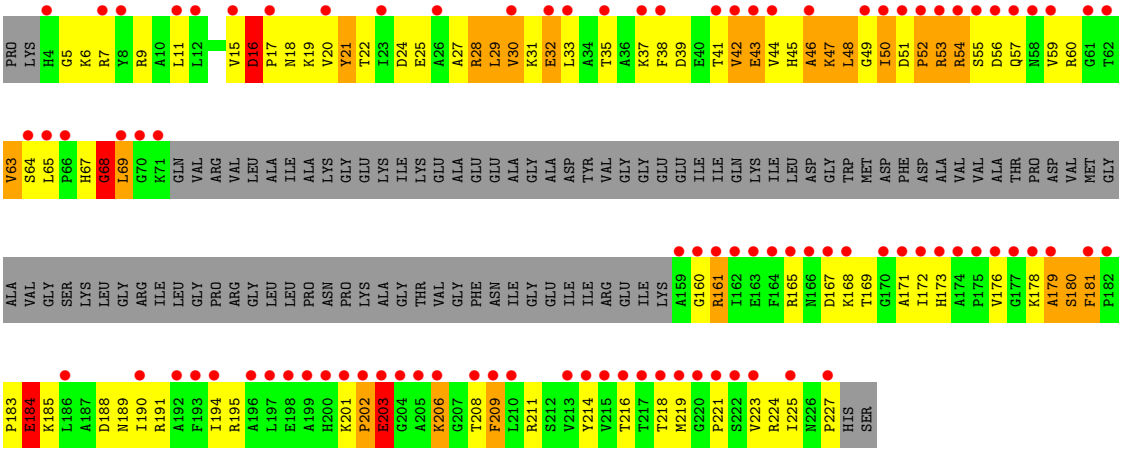

• Molecule 3: 50S ribosomal protein L1

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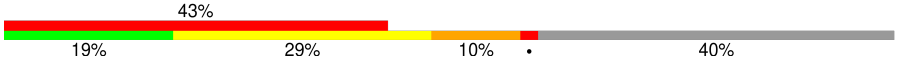

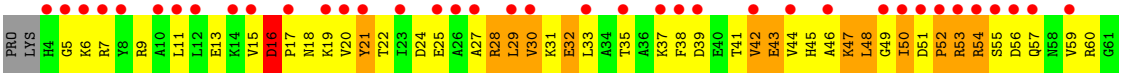

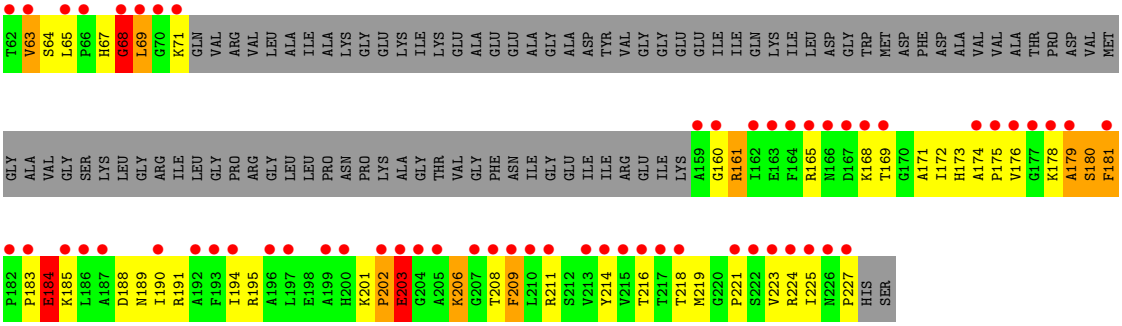

• Molecule 4: 50S ribosomal protein L2

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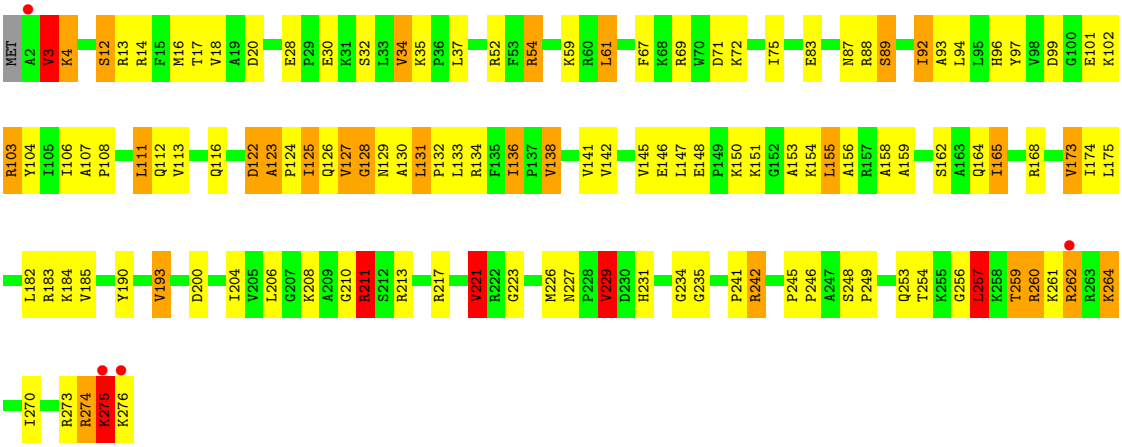

• Molecule 4: 50S ribosomal protein L2

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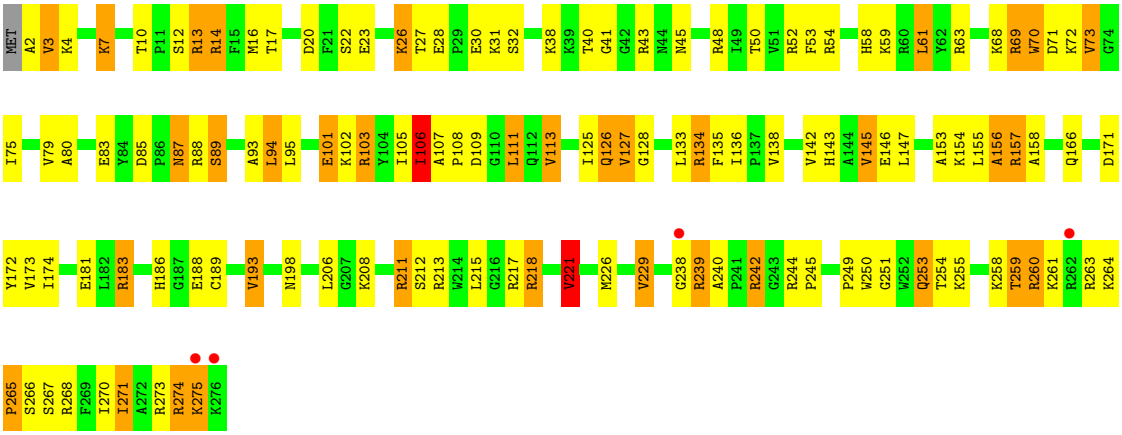

• Molecule 5: 50S ribosomal protein L3

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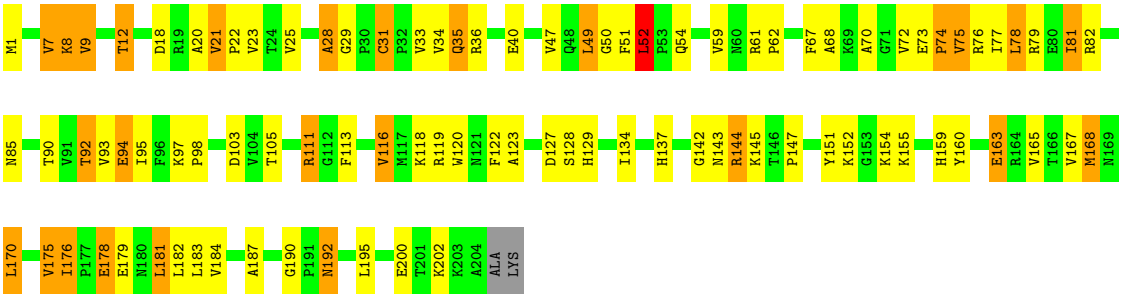

• Molecule 5: 50S ribosomal protein L3

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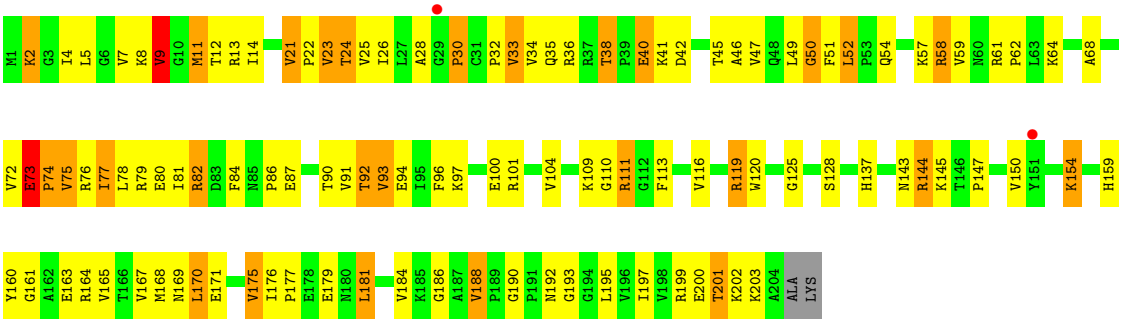

• Molecule 6: 50S ribosomal protein L4

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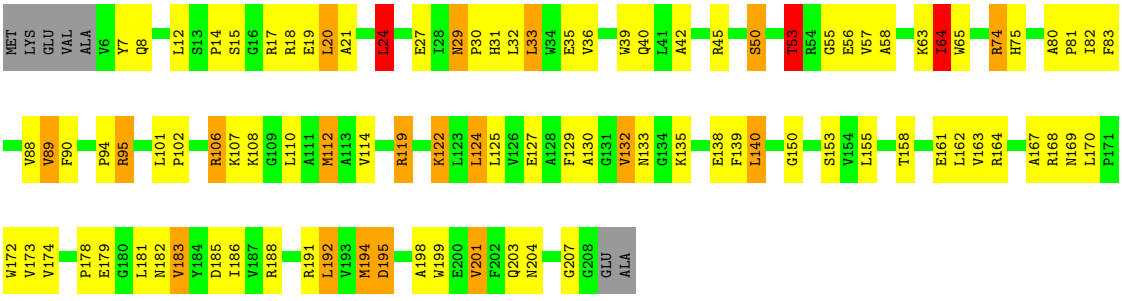

• Molecule 6: 50S ribosomal protein L4

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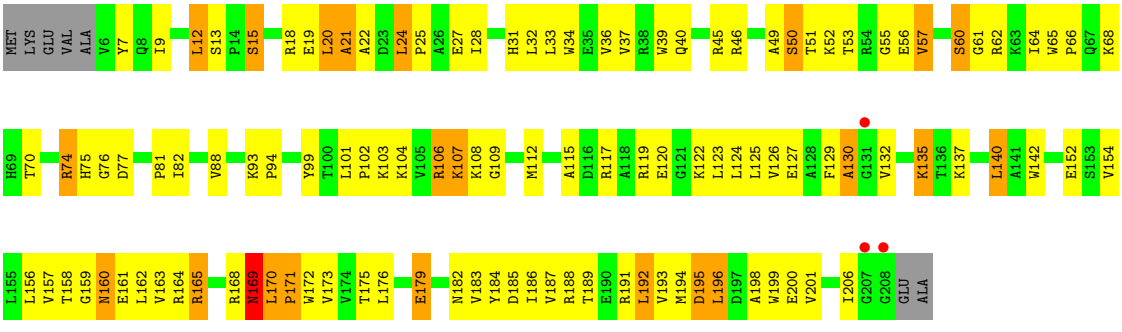

• Molecule 7: 50S ribosomal protein L5

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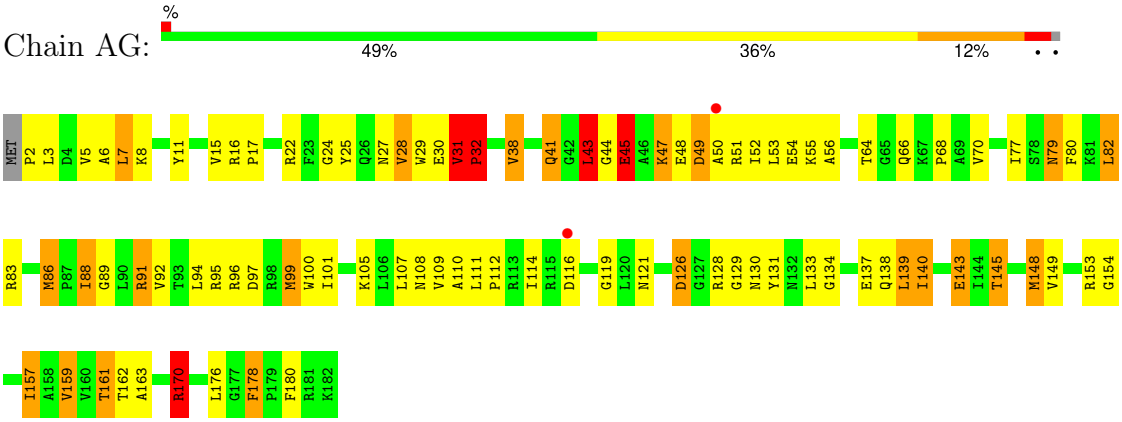

• Molecule 7: 50S ribosomal protein L5

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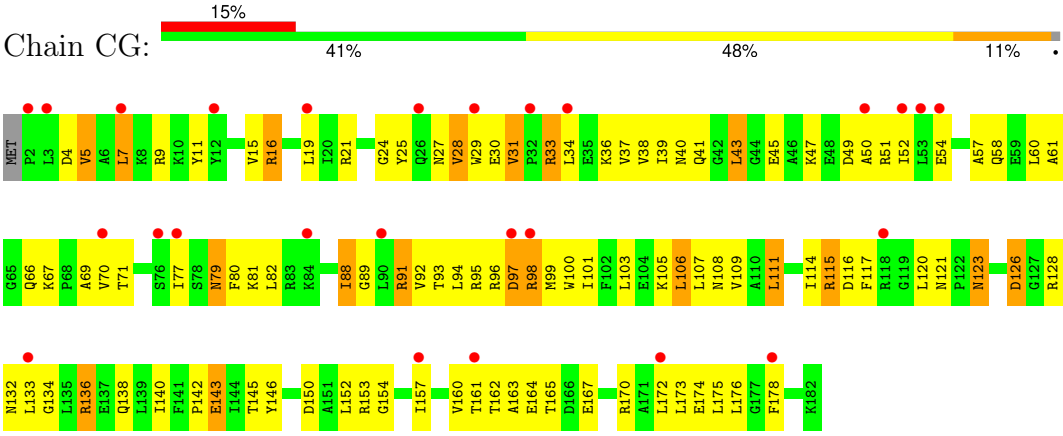

• Molecule 8: 50S ribosomal protein L6

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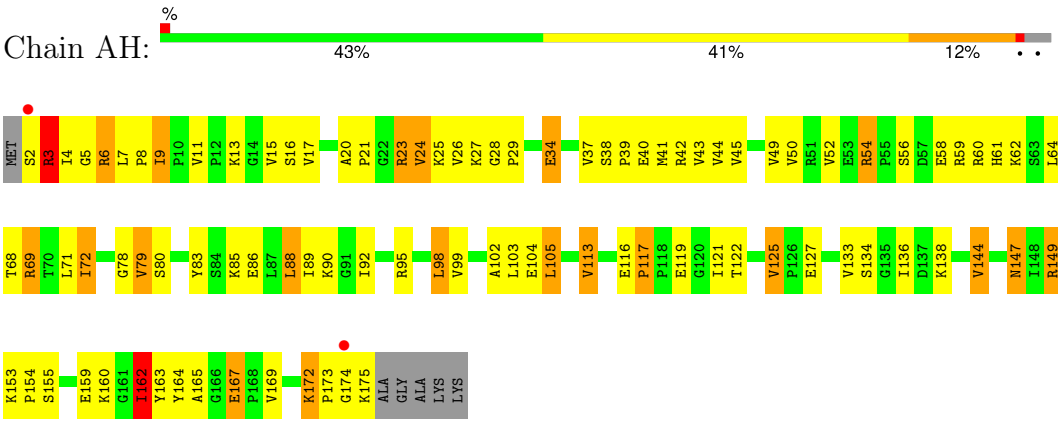

• Molecule 8: 50S ribosomal protein L6

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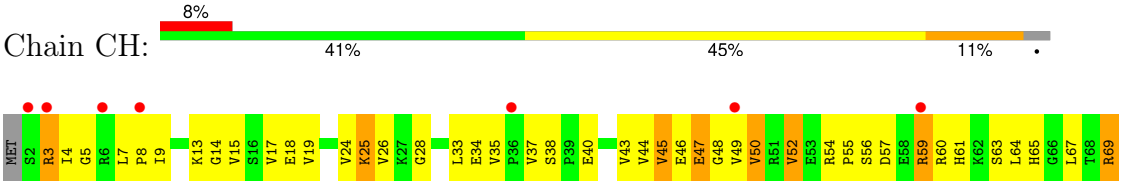
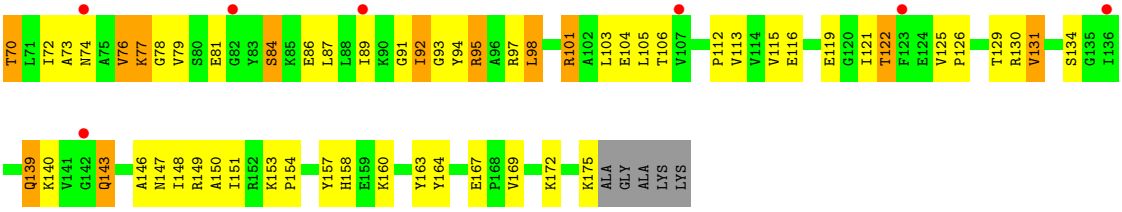
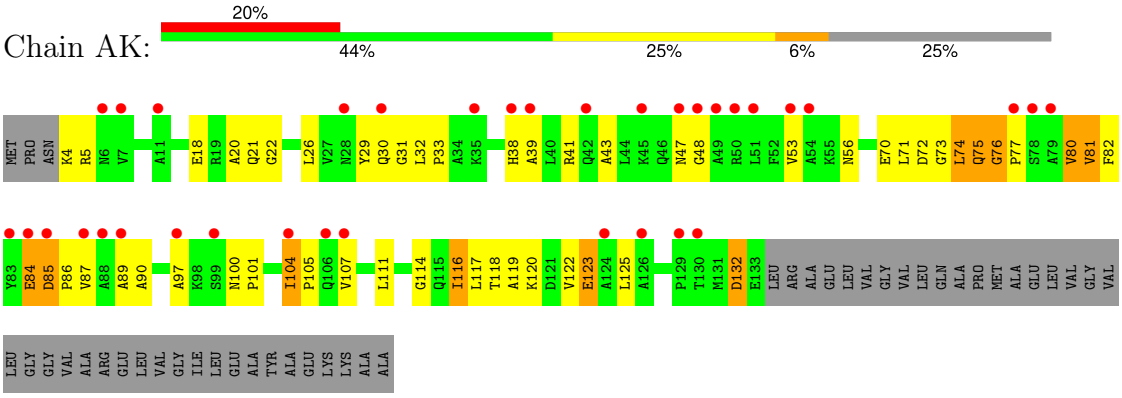




• Molecule 9: 50S ribosomal protein L10



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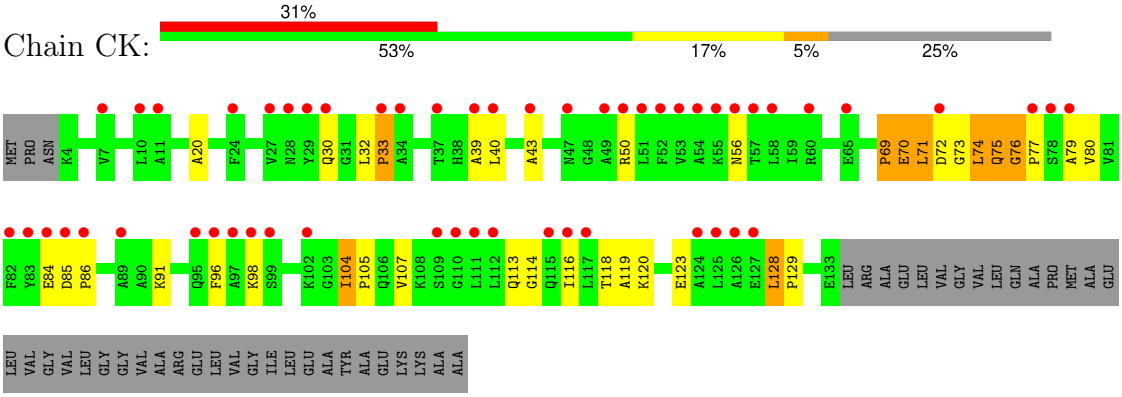
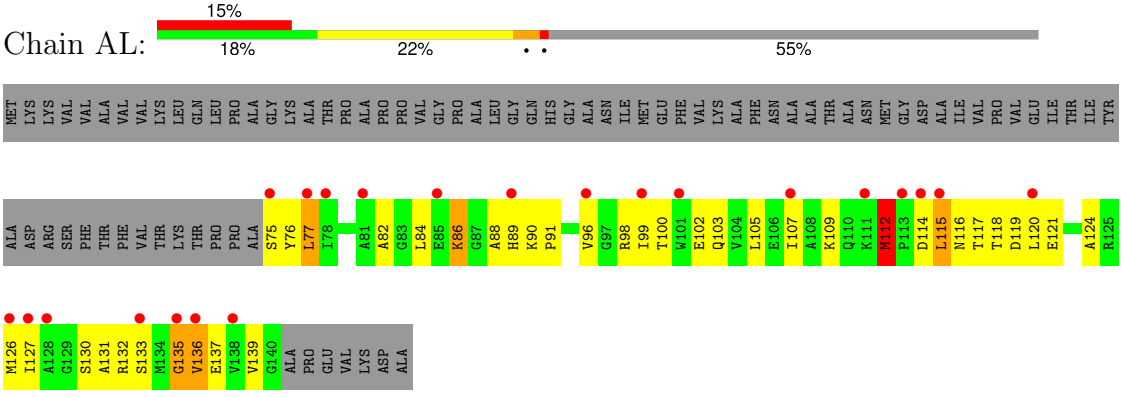
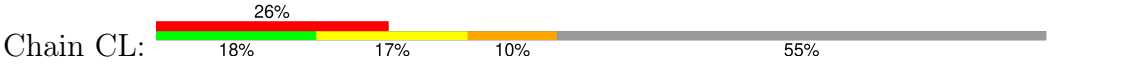
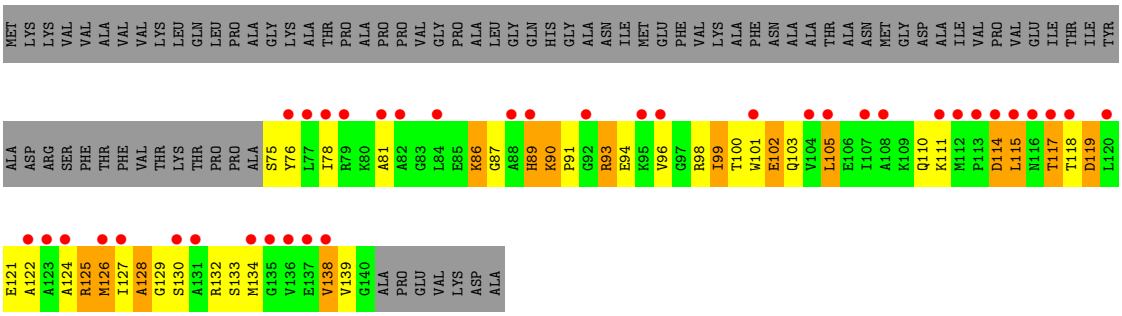


• Molecule 10: 50S ribosomal protein L11



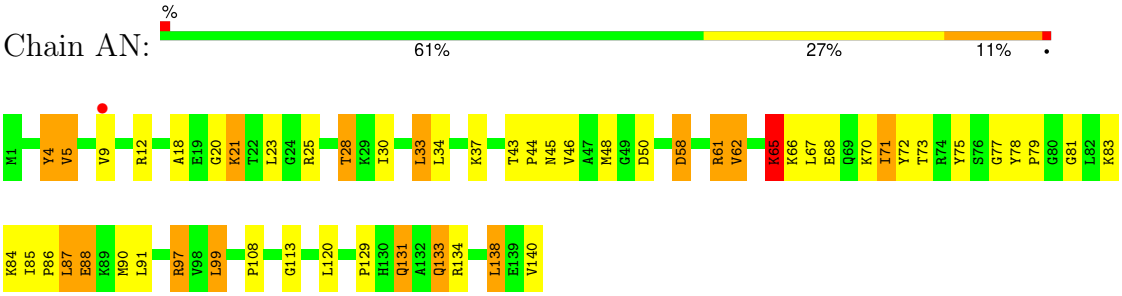
• Molecule 10: 50S ribosomal protein L11





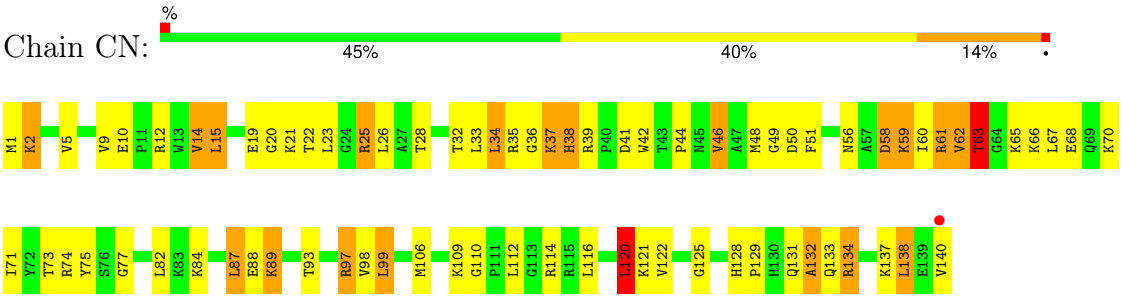
• Molecule 11: 50S ribosomal protein L13

Chain AN:



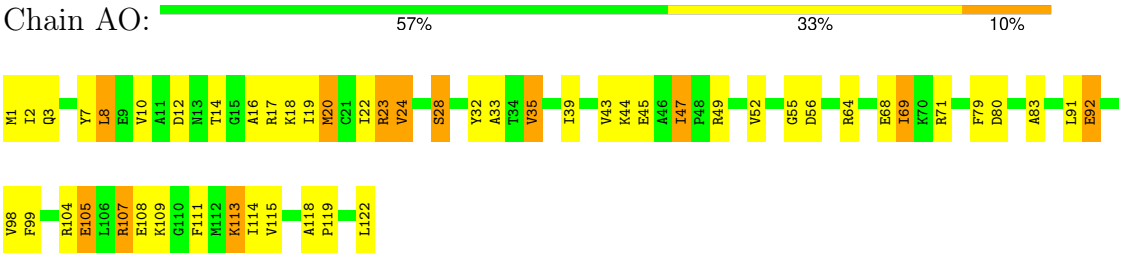
• Molecule 11: 50S ribosomal protein L13

Chain CN:



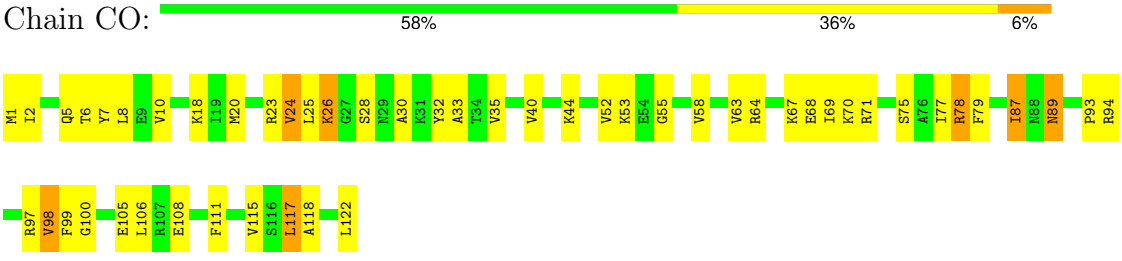
• Molecule 12: 50S ribosomal protein L14

Chain AO:



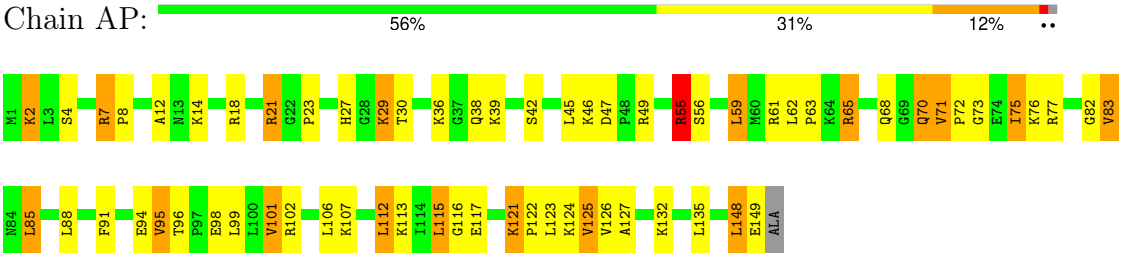
• Molecule 12: 50S ribosomal protein L14

Chain CO:



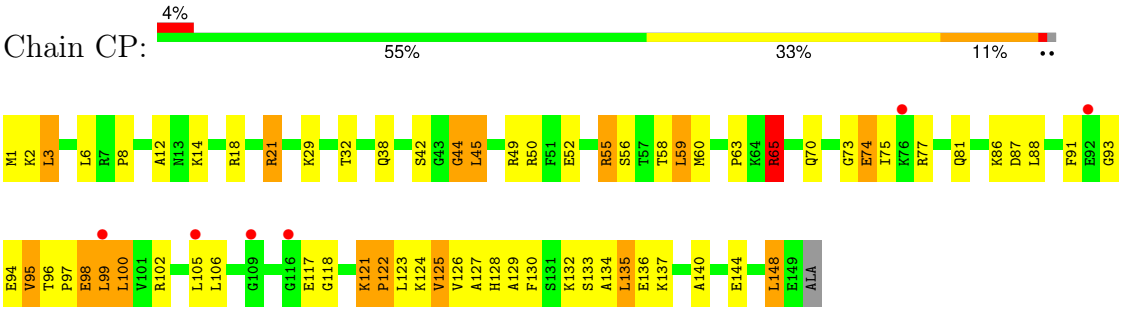
• Molecule 13: 50S ribosomal protein L15

Chain AP:



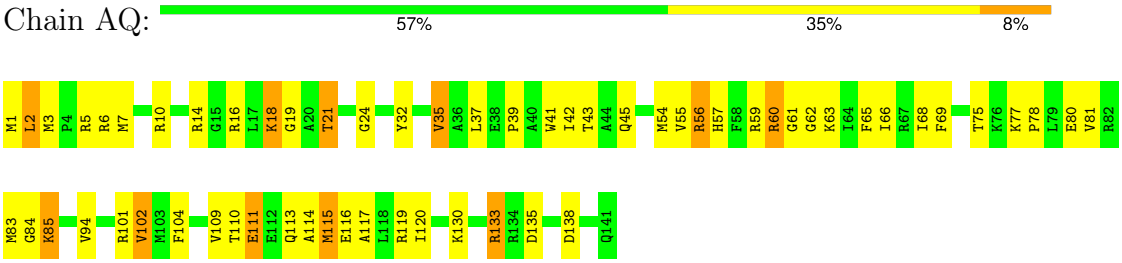
• Molecule 13: 50S ribosomal protein L15

Chain CP:



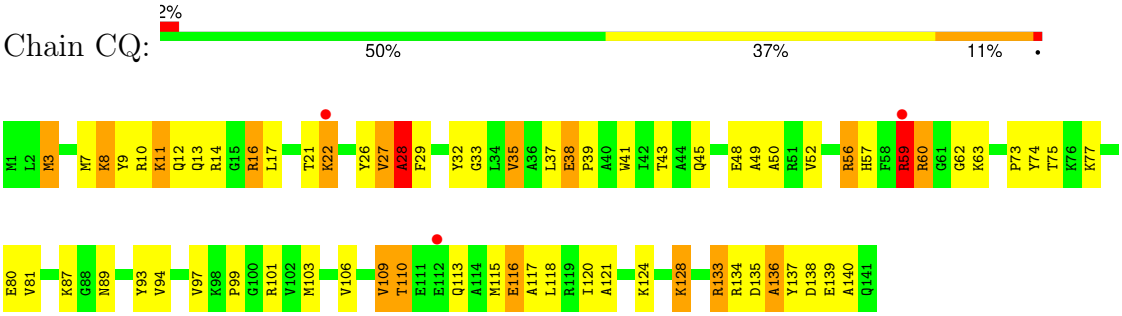
• Molecule 14: 50S ribosomal protein L16

Chain AQ:



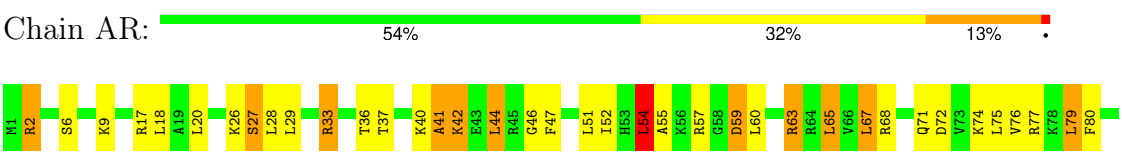
• Molecule 14: 50S ribosomal protein L16

Chain CQ:



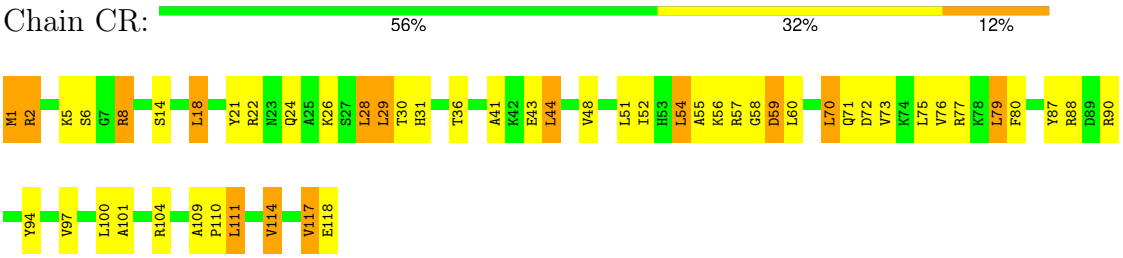
• Molecule 15: 50S ribosomal protein L17

Chain AR:



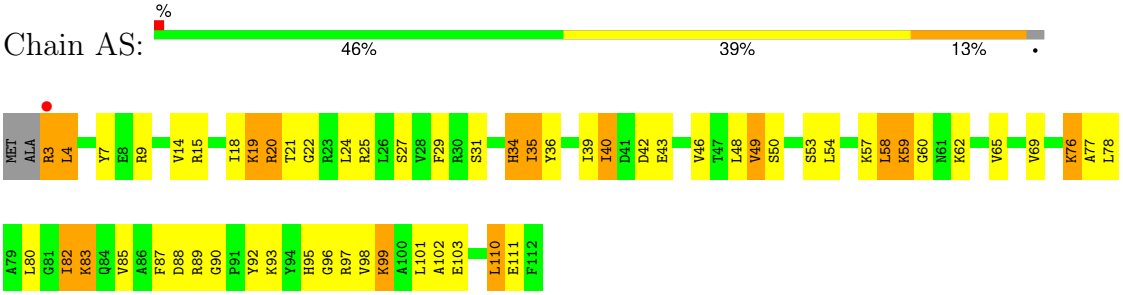
• Molecule 15: 50S ribosomal protein L17

Chain CR:



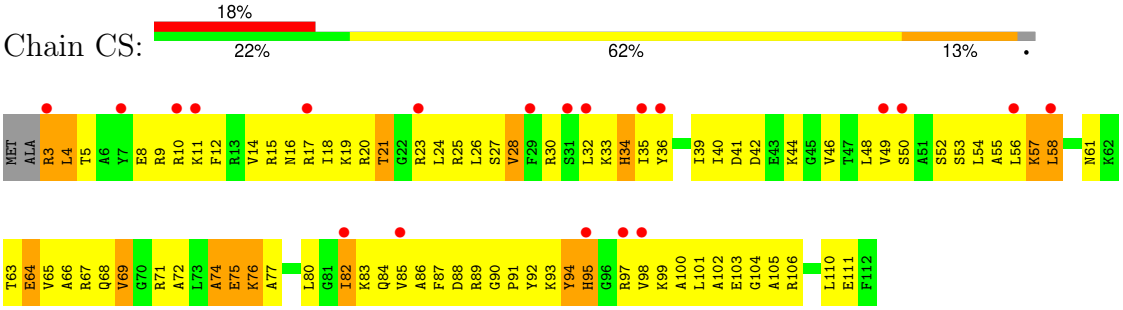
• Molecule 16: 50S ribosomal protein L18

Chain AS:



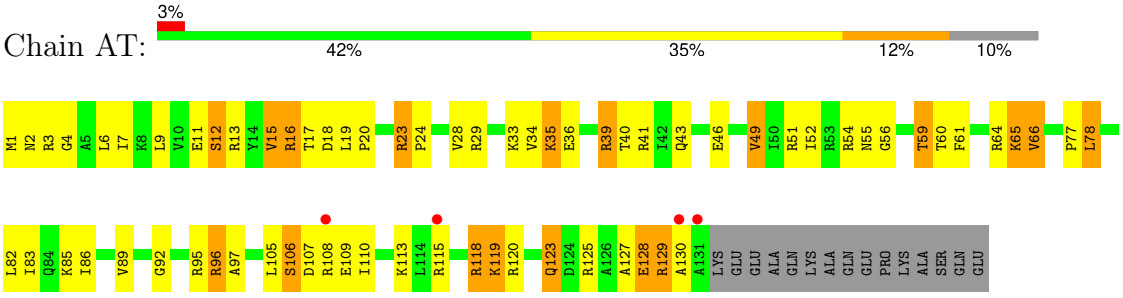
• Molecule 16: 50S ribosomal protein L18

Chain CS:



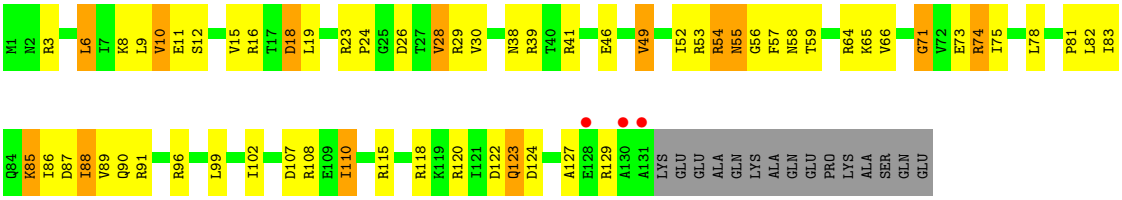
• Molecule 17: 50S ribosomal protein L19

Chain AT:



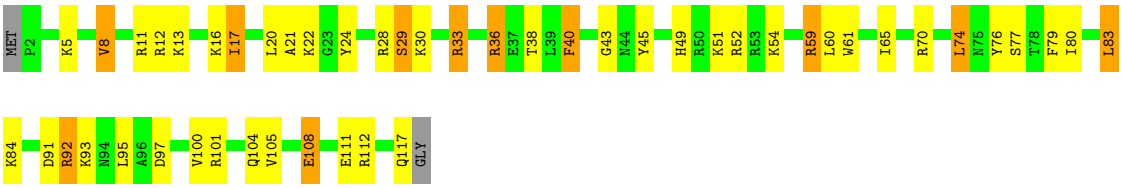
• Molecule 17: 50S ribosomal protein L19

Chain CT:



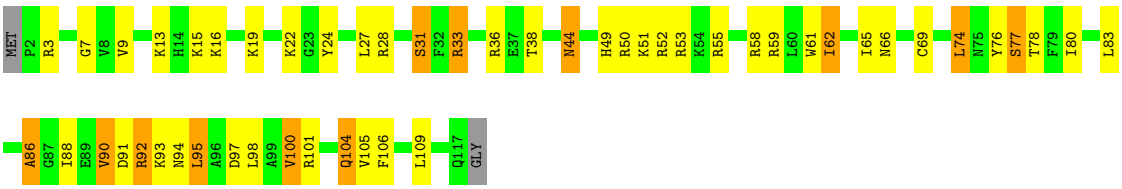
• Molecule 18: 50S ribosomal protein L20

Chain AU:



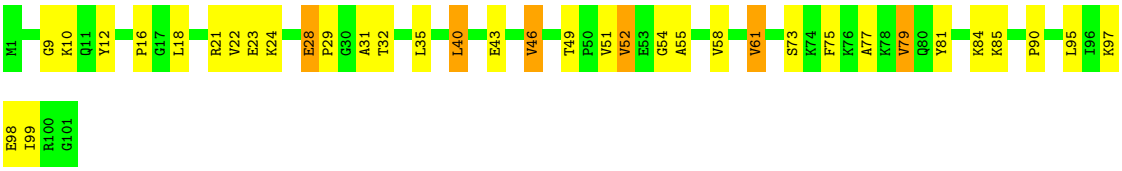
• Molecule 18: 50S ribosomal protein L20

Chain CU:



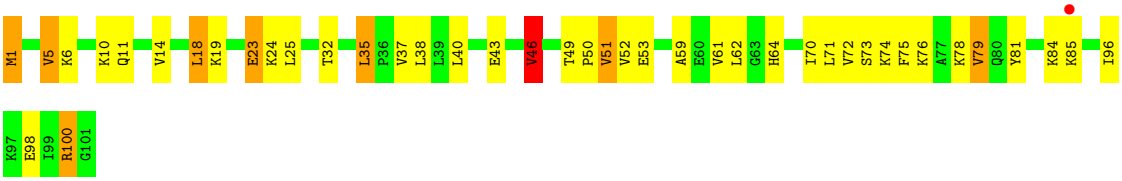
• Molecule 19: 50S ribosomal protein L21

Chain AV:



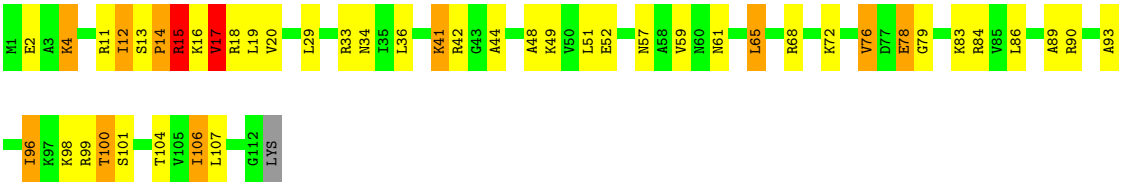
• Molecule 19: 50S ribosomal protein L21

Chain CV:



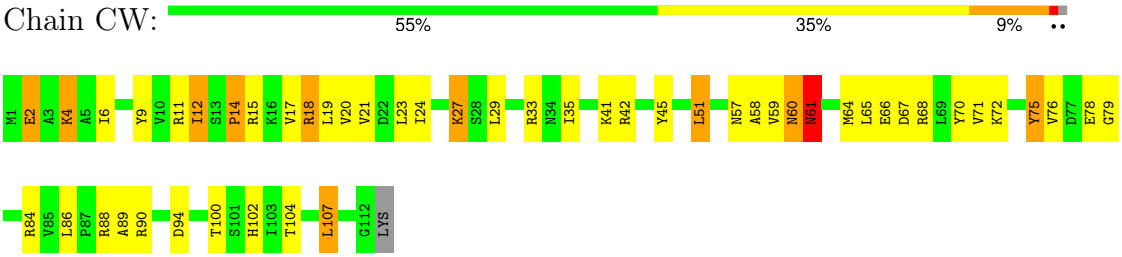
• Molecule 20: 50S ribosomal protein L22

Chain AW:



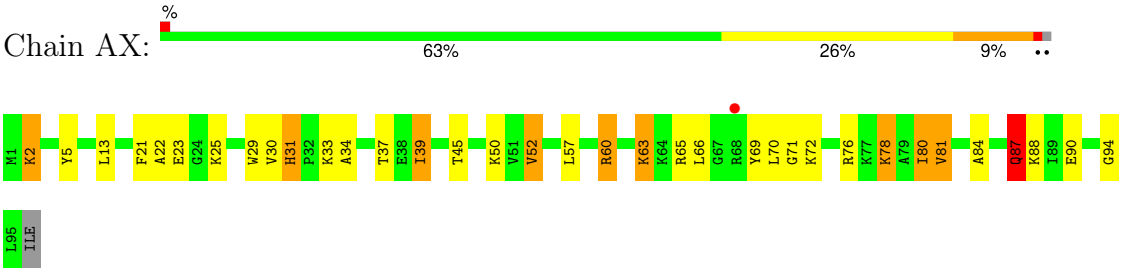
• Molecule 20: 50S ribosomal protein L22

Chain CW:



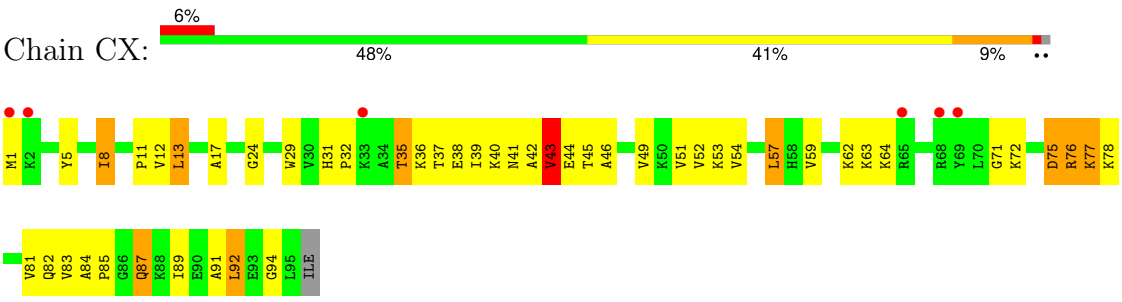
• Molecule 21: 50S ribosomal protein L23

Chain AX:



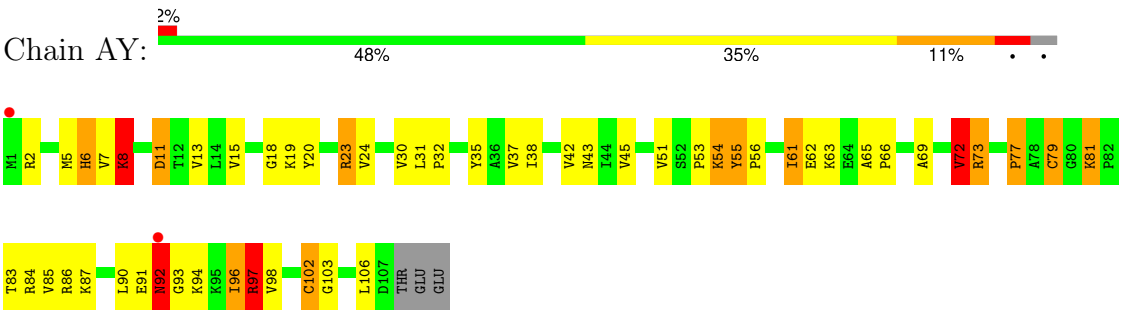
• Molecule 21: 50S ribosomal protein L23

Chain CX:



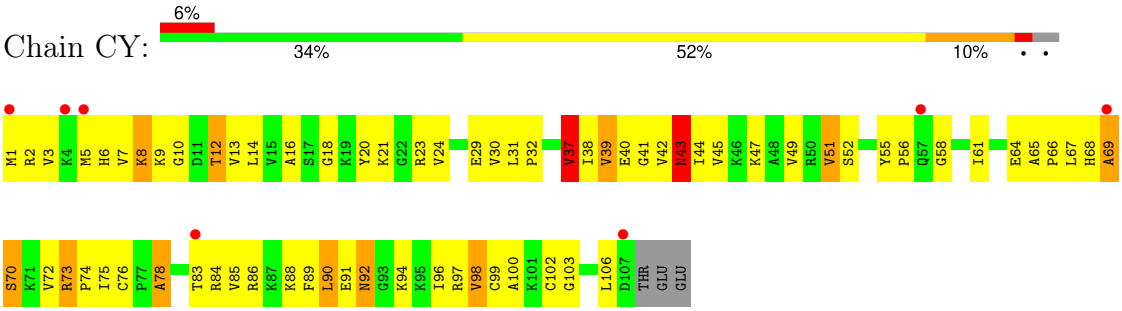
• Molecule 22: 50S ribosomal protein L24

Chain AY:



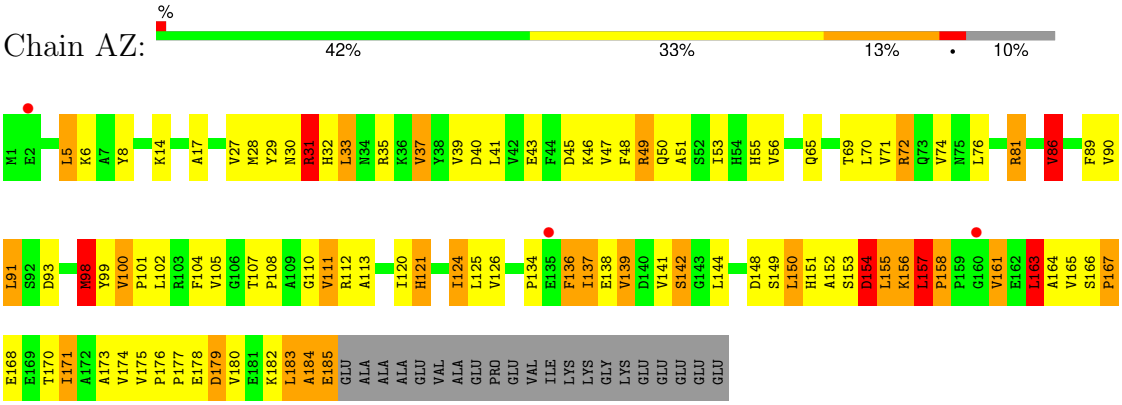
• Molecule 22: 50S ribosomal protein L24

Chain CY:



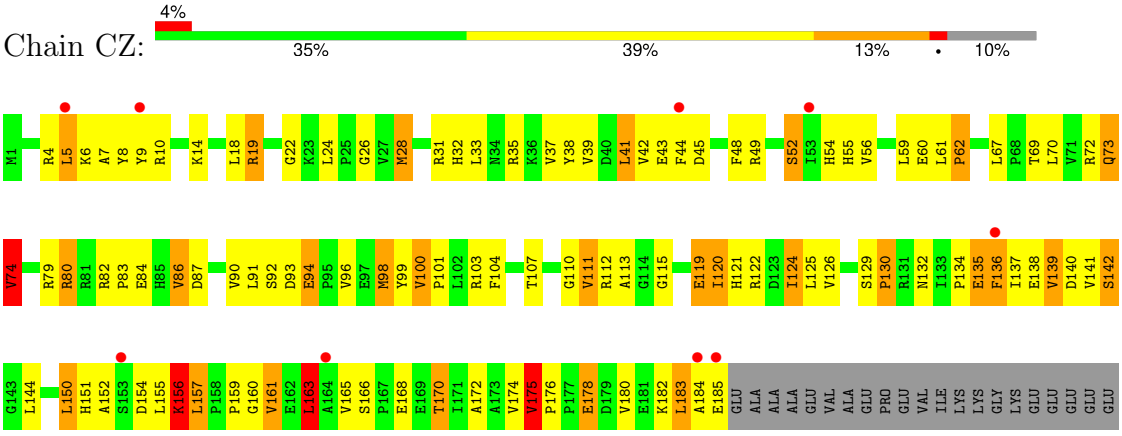
• Molecule 23: 50S ribosomal protein L25

Chain AZ:



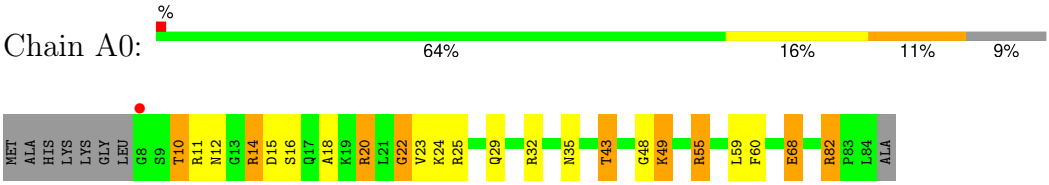
• Molecule 23: 50S ribosomal protein L25

Chain CZ:



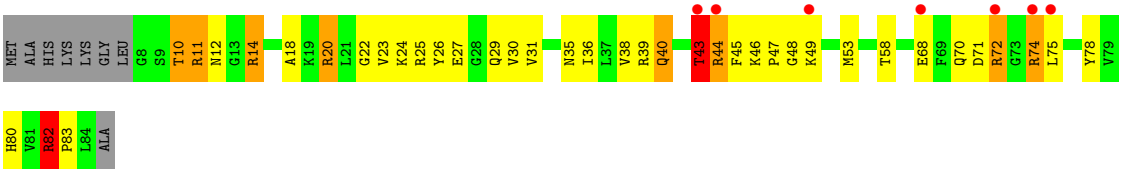
• Molecule 24: 50S ribosomal protein L27

Chain A0:



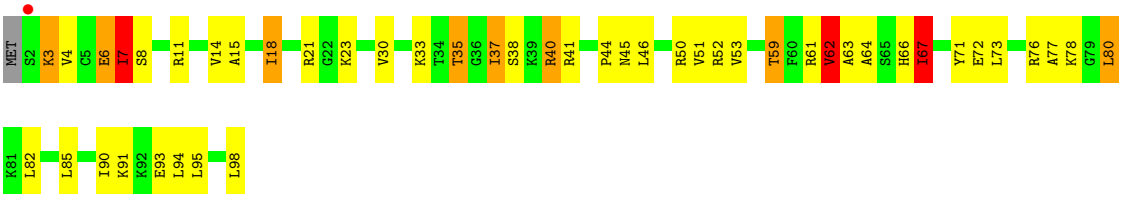
• Molecule 24: 50S ribosomal protein L27

Chain C0:



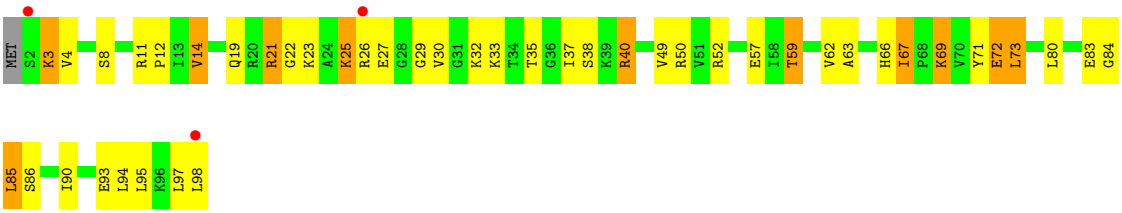
• Molecule 25: 50S ribosomal protein L28

Chain A1:



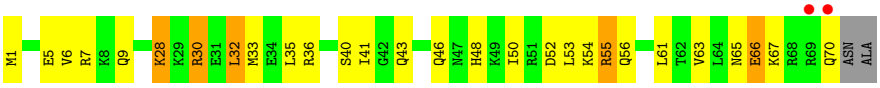
• Molecule 25: 50S ribosomal protein L28

Chain C1:



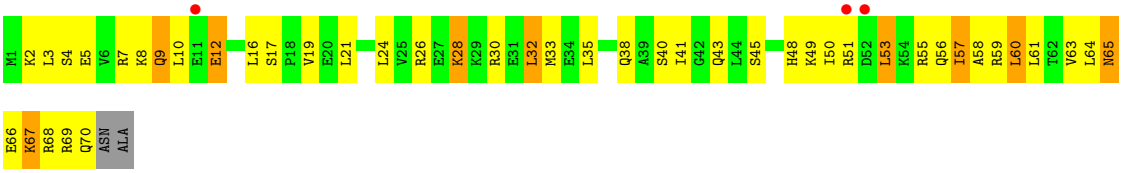
• Molecule 26: 50S ribosomal protein L29

Chain A2:



• Molecule 26: 50S ribosomal protein L29

Chain C2:



• Molecule 27: 50S ribosomal protein L30

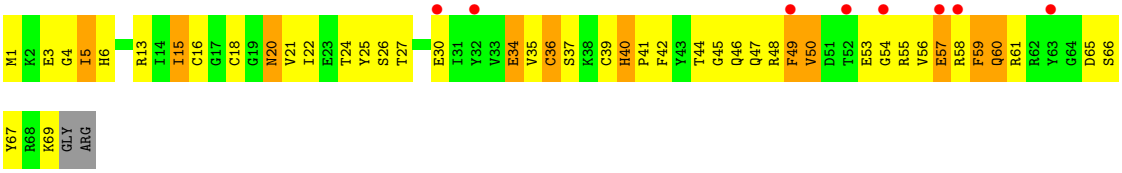
Chain A3:

• Molecule 27: 50S ribosomal protein L30

Chain C3:

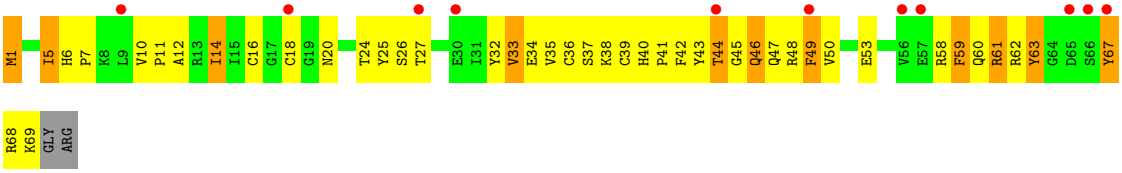
• Molecule 28: 50S ribosomal protein L31

Chain A4:



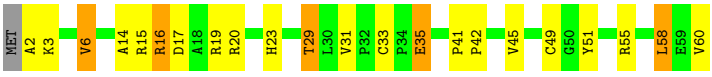
• Molecule 28: 50S ribosomal protein L31

Chain C4:



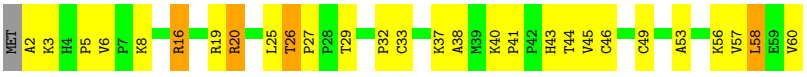
• Molecule 29: 50S ribosomal protein L32

Chain A5:



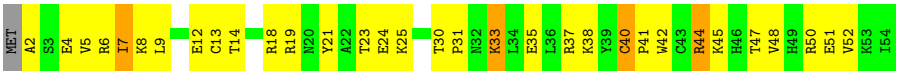
• Molecule 29: 50S ribosomal protein L32

Chain C5:

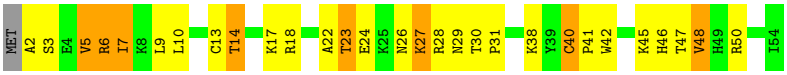


• Molecule 30: 50S ribosomal protein L33

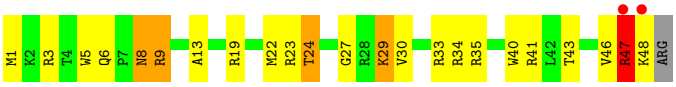
Chain A6:



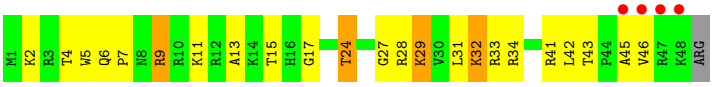
• Molecule 30: 50S ribosomal protein L33



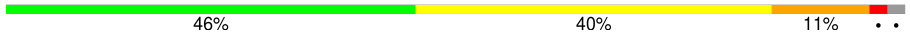
• Molecule 31: 50S ribosomal protein L34

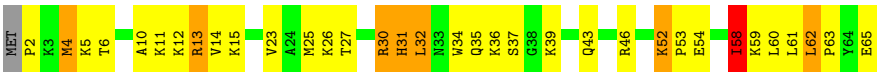


• Molecule 31: 50S ribosomal protein L34

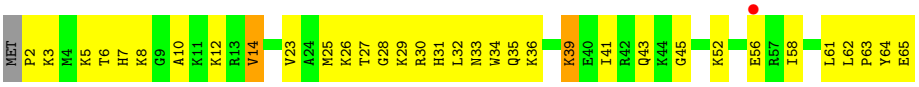


• Molecule 32: 50S ribosomal protein L35

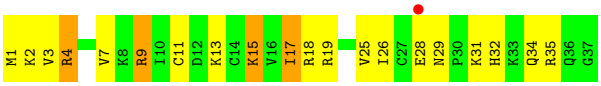




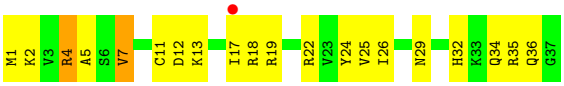
• Molecule 32: 50S ribosomal protein L35



• Molecule 33: 50S ribosomal protein L36

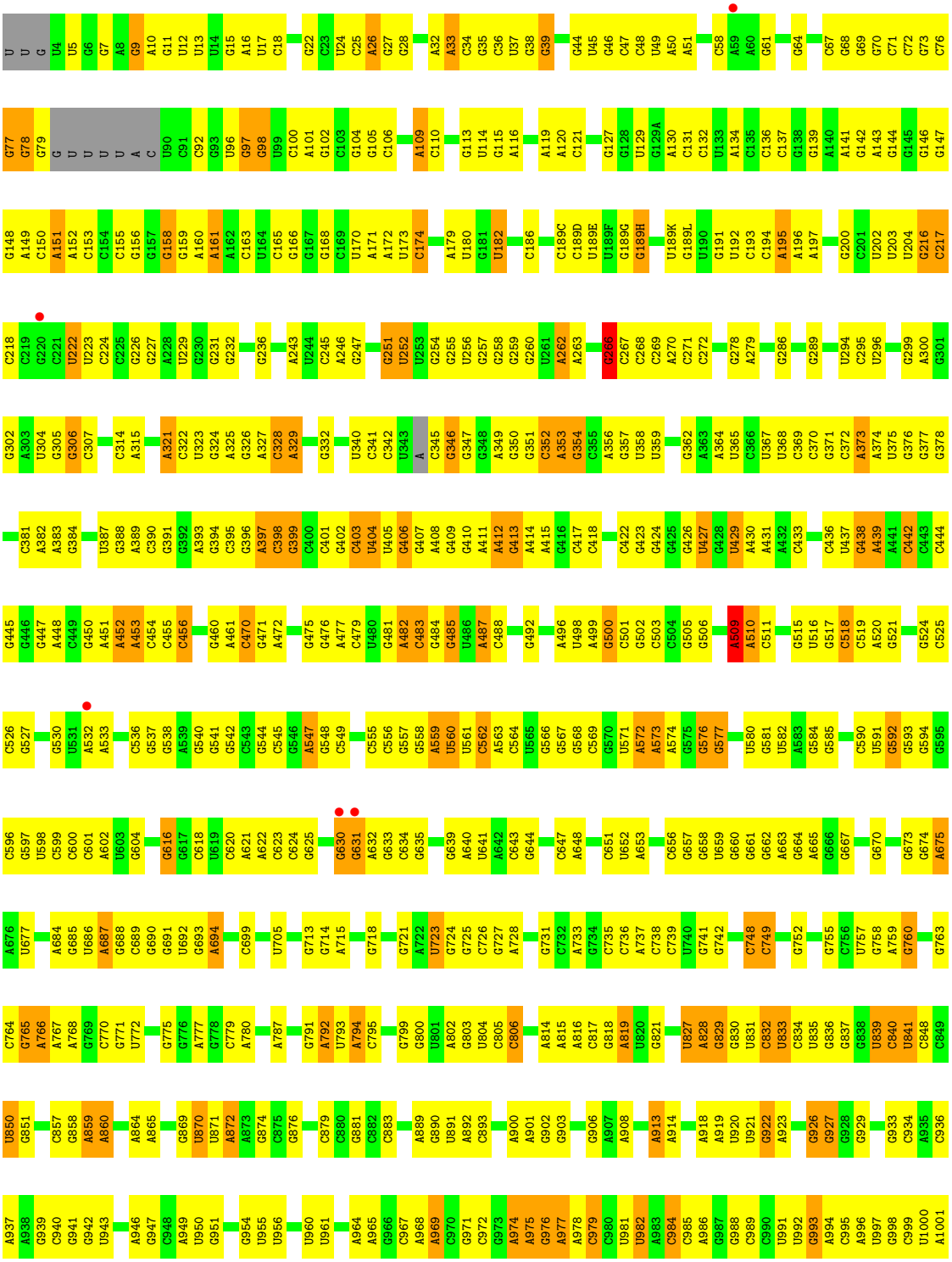


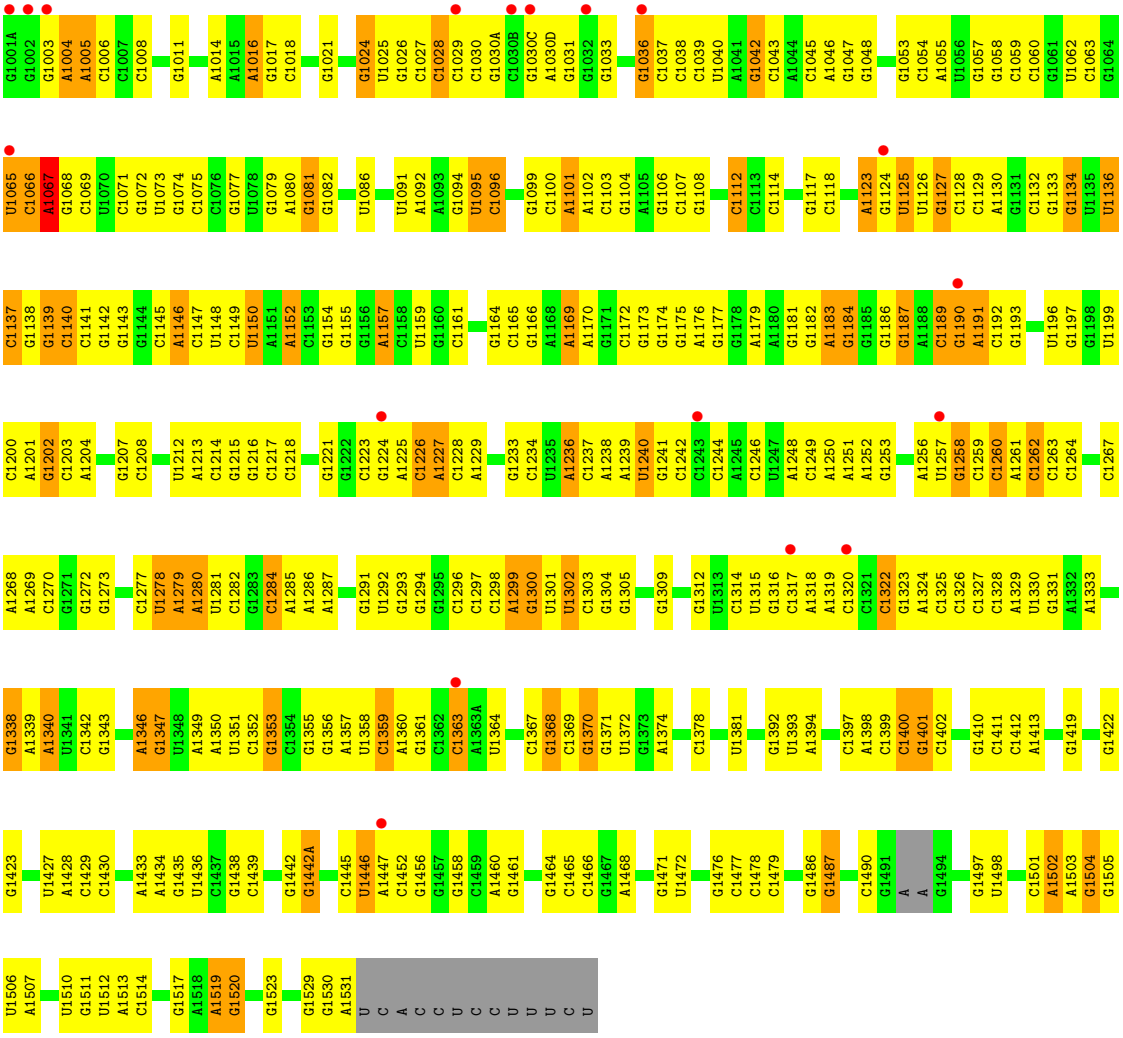
• Molecule 33: 50S ribosomal protein L36



• Molecule 34: 16S Ribosomal RNA

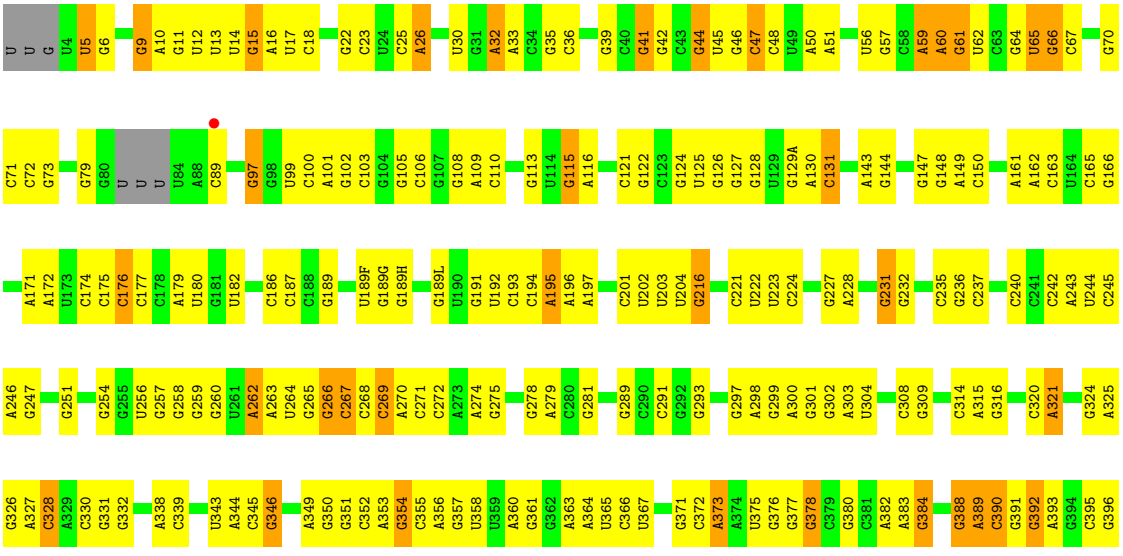
Chain BA:

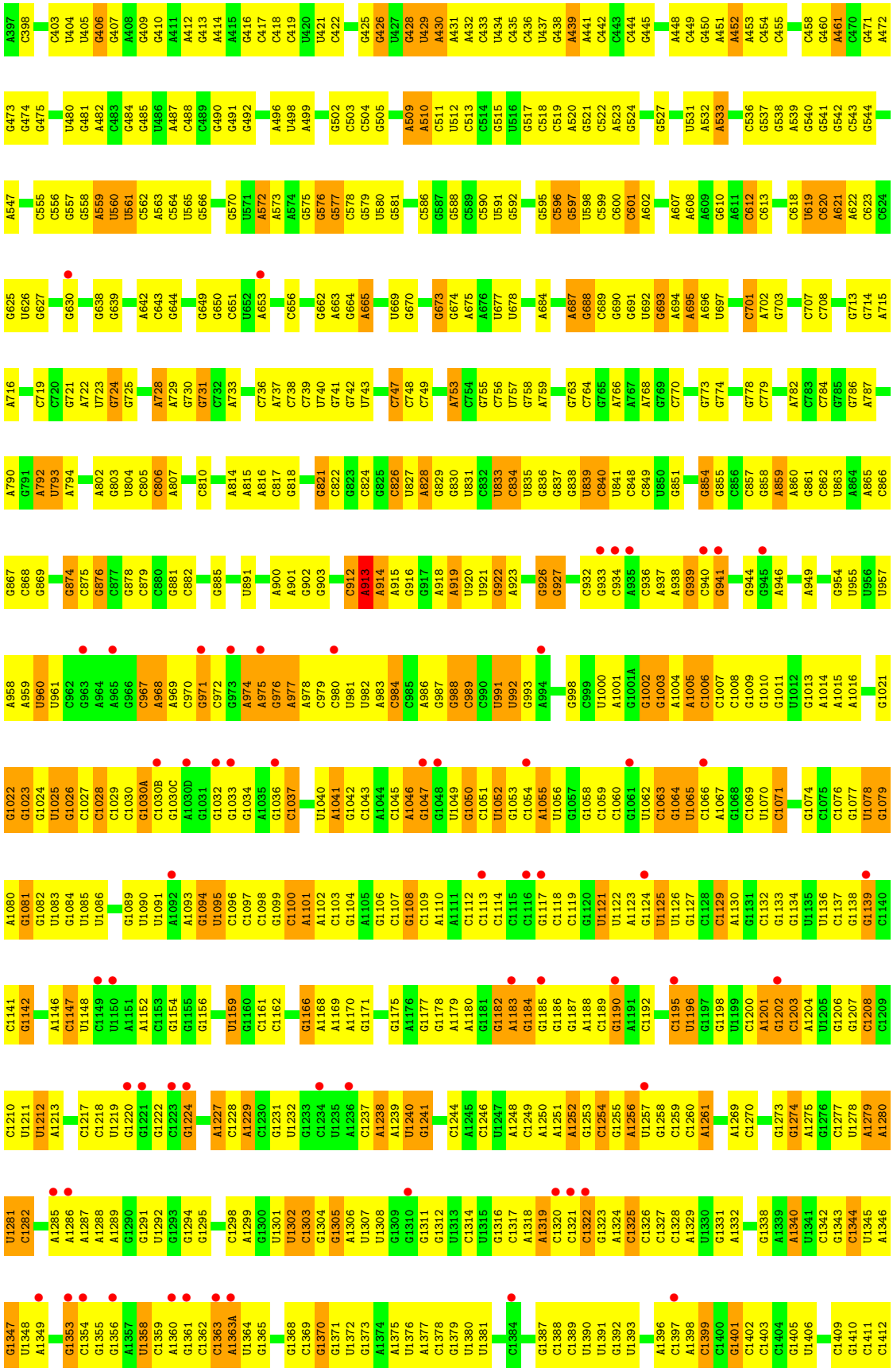


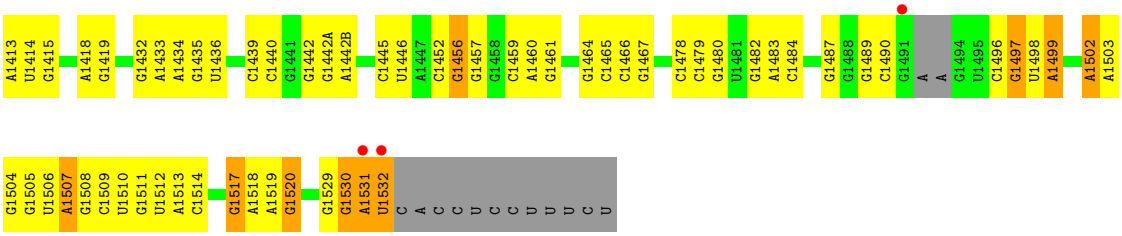


• Molecule 34: 16S Ribosomal RNA

Chain DA:

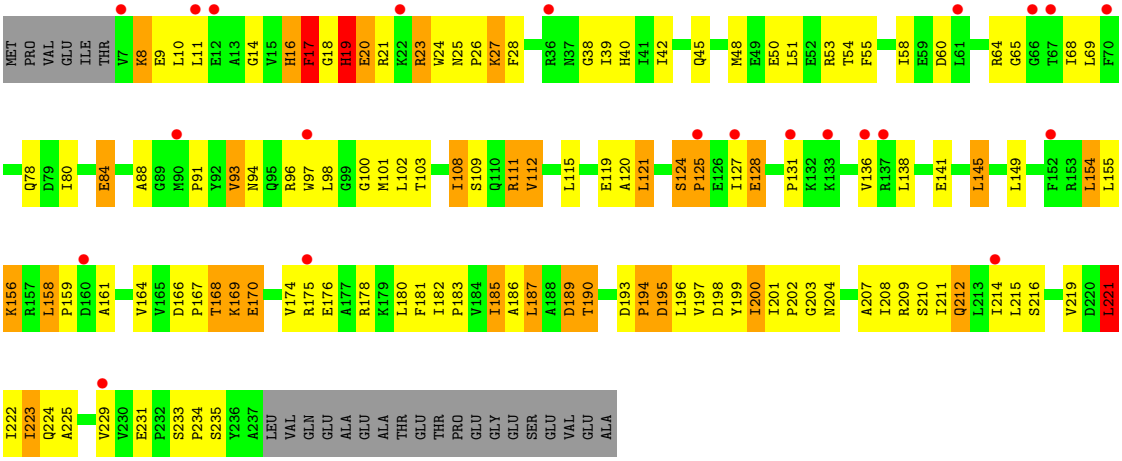






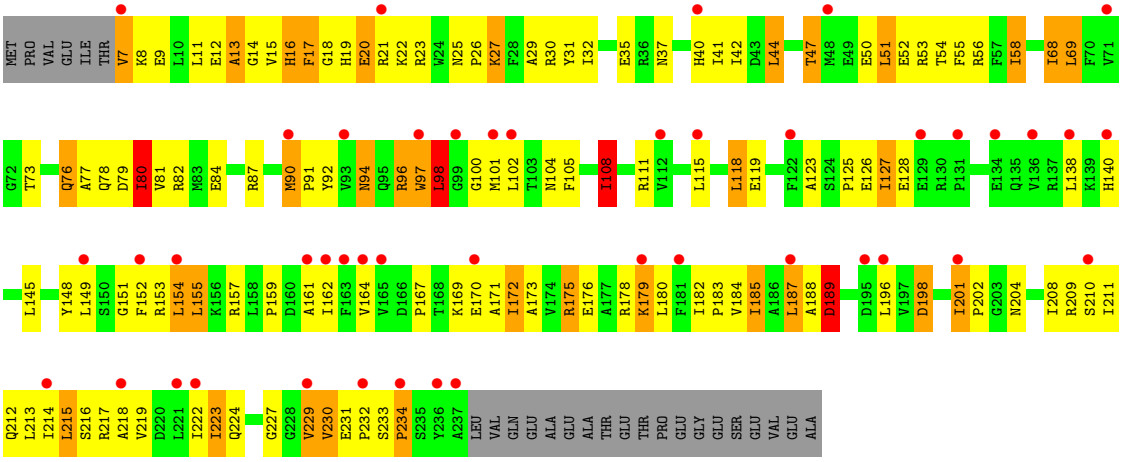
• Molecule 35: 30S ribosomal protein S2

Chain BB:



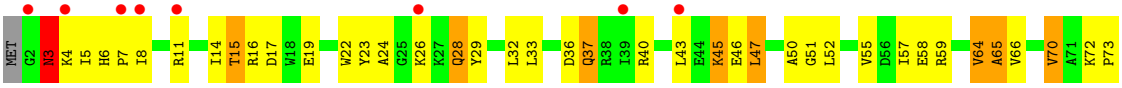
• Molecule 35: 30S ribosomal protein S2

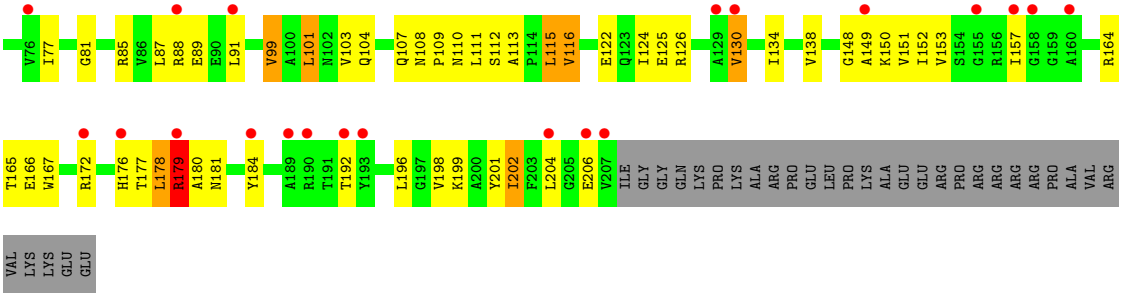
Chain DB:



• Molecule 36: 30S ribosomal protein S3

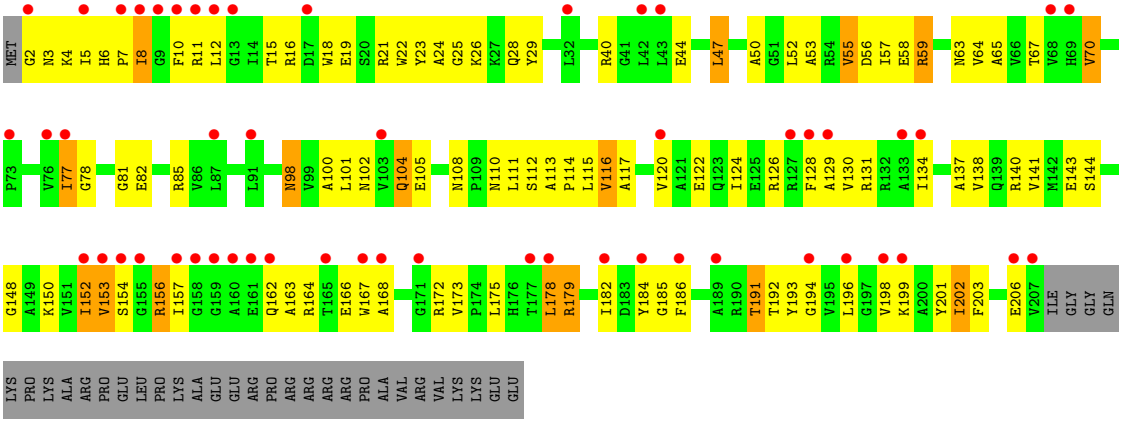
Chain BC:





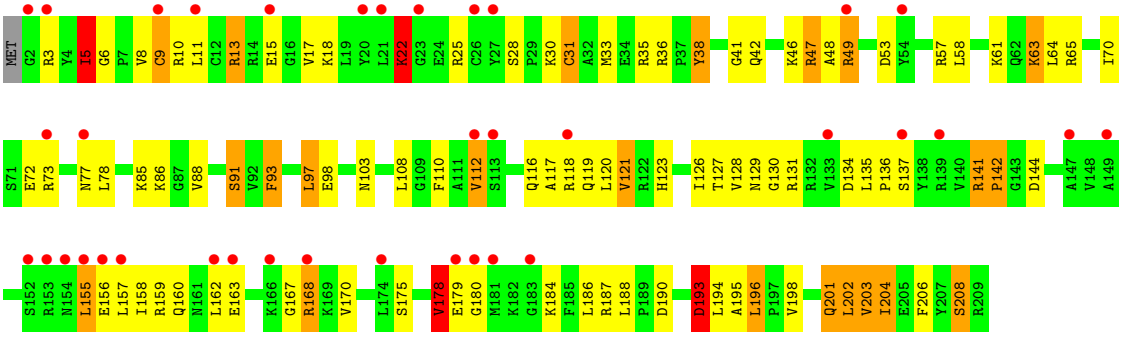
• Molecule 36: 30S ribosomal protein S3

Chain DC:



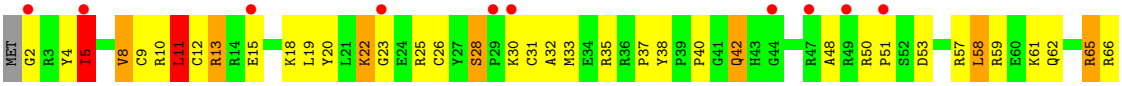
• Molecule 37: 30S ribosomal protein S4

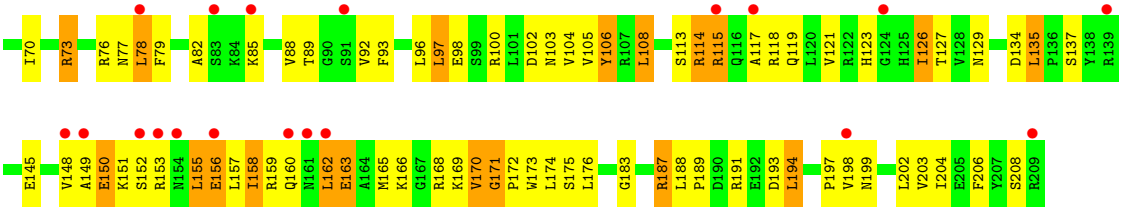
Chain BD:



• Molecule 37: 30S ribosomal protein S4

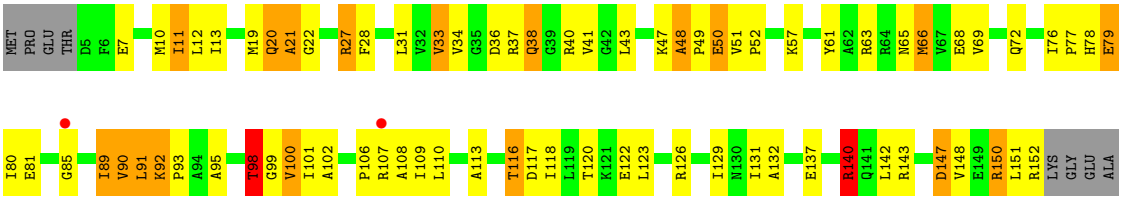
Chain DD:

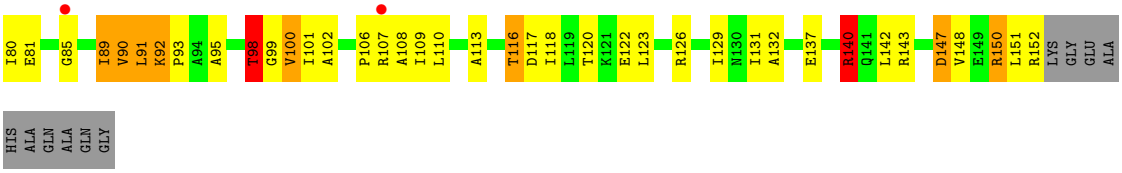




• Molecule 38: 30S ribosomal protein S5

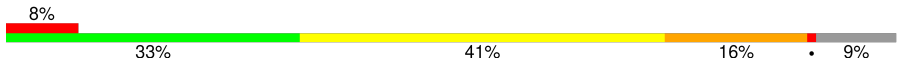
Chain BE:

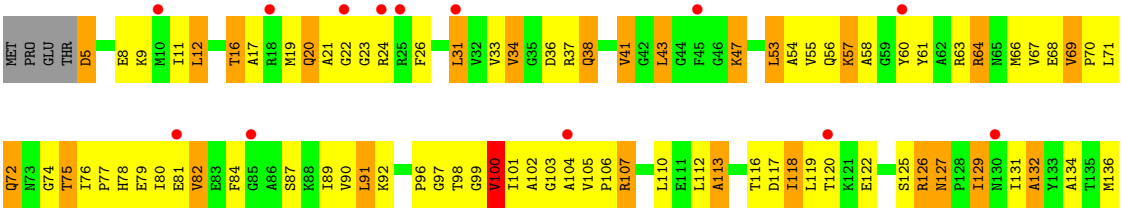


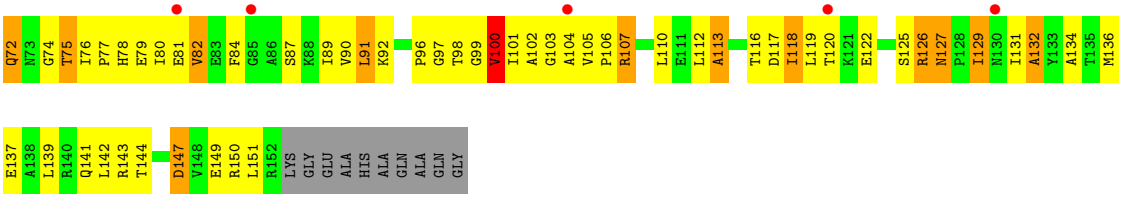


• Molecule 38: 30S ribosomal protein S5

Chain DE:

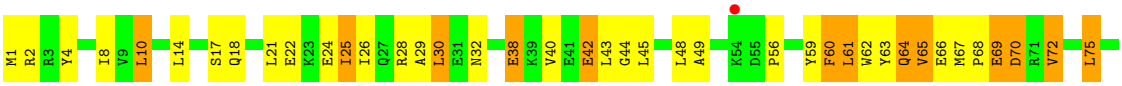


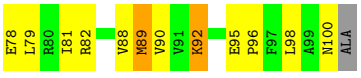




• Molecule 39: 30S ribosomal protein S6

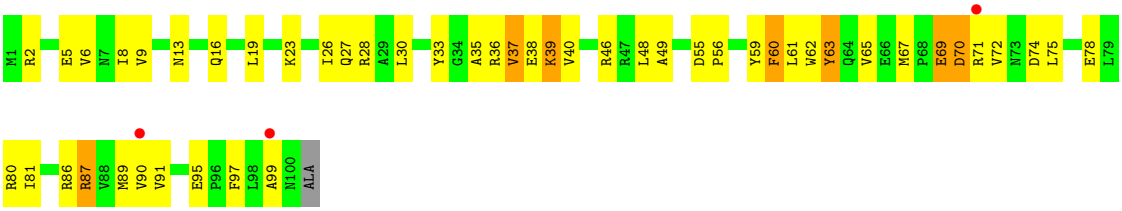
Chain BF:





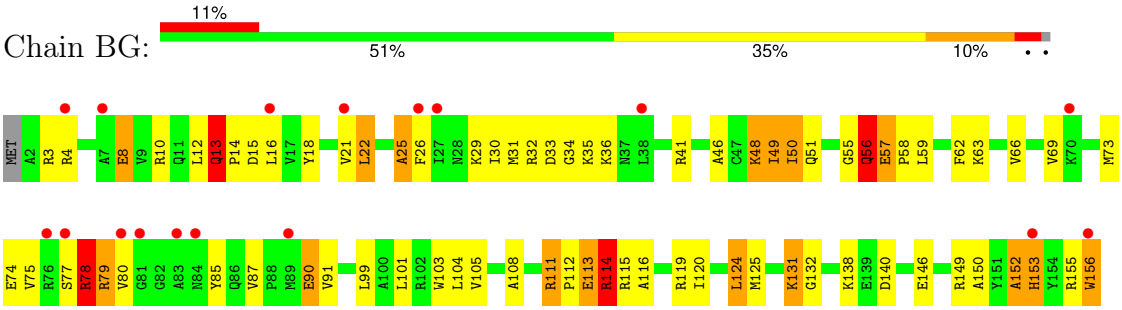
• Molecule 39: 30S ribosomal protein S6

Chain DF:



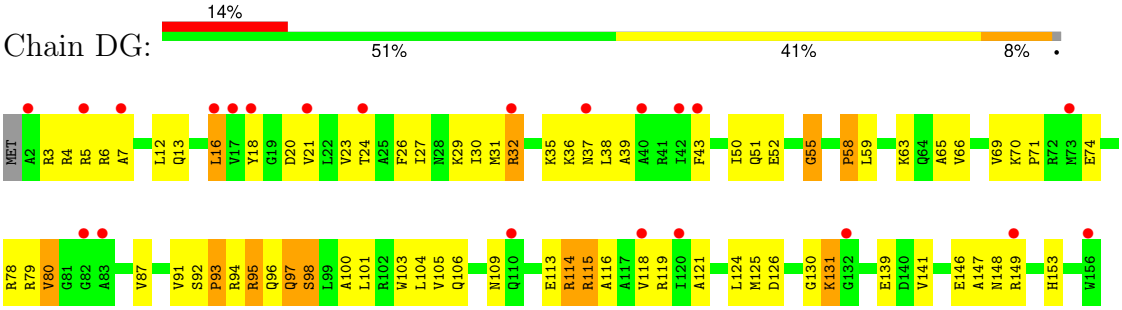
• Molecule 40: 30S ribosomal protein S7

Chain BG:



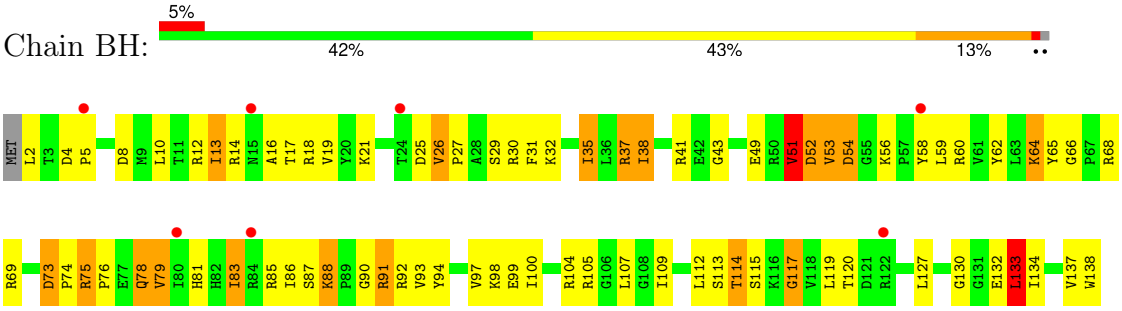
• Molecule 40: 30S ribosomal protein S7

Chain DG:



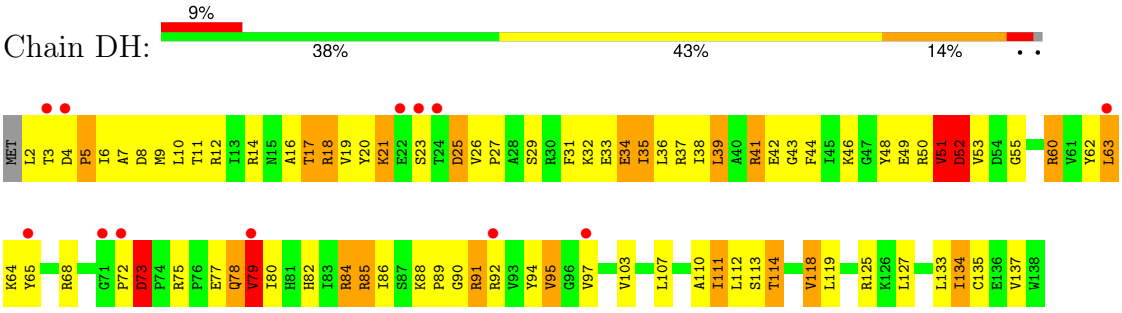
• Molecule 41: 30S ribosomal protein S8

Chain BH:



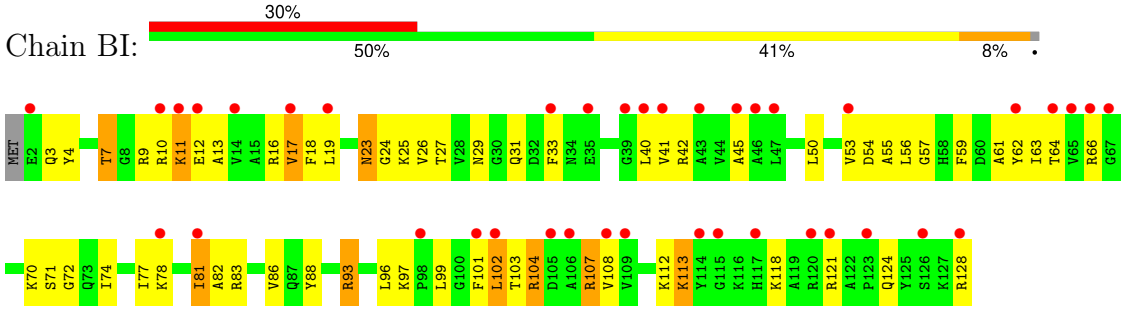
• Molecule 41: 30S ribosomal protein S8

Chain DH:



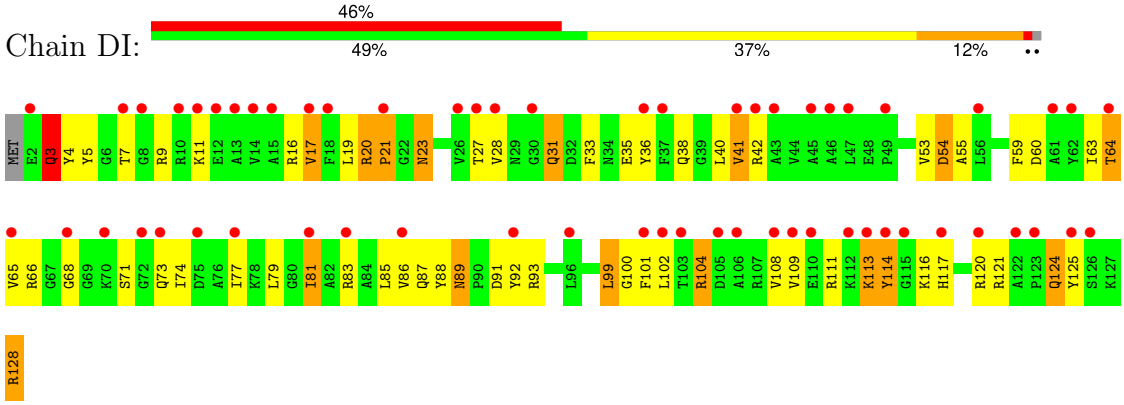
• Molecule 42: 30S ribosomal protein S9

Chain BI:



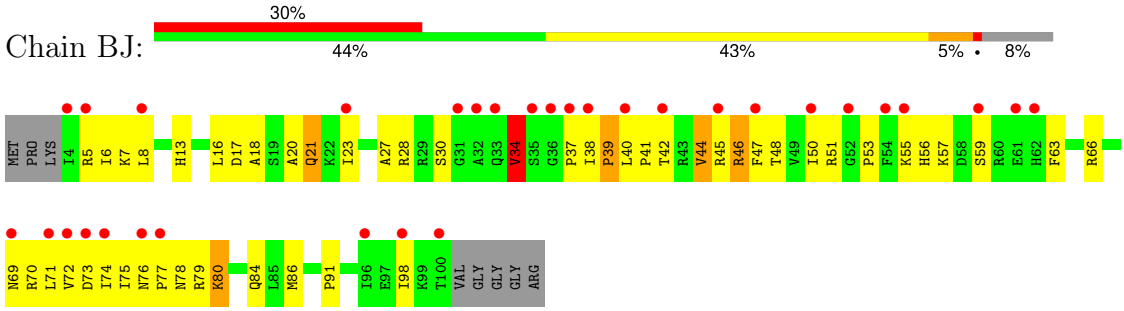
• Molecule 42: 30S ribosomal protein S9

Chain DI:



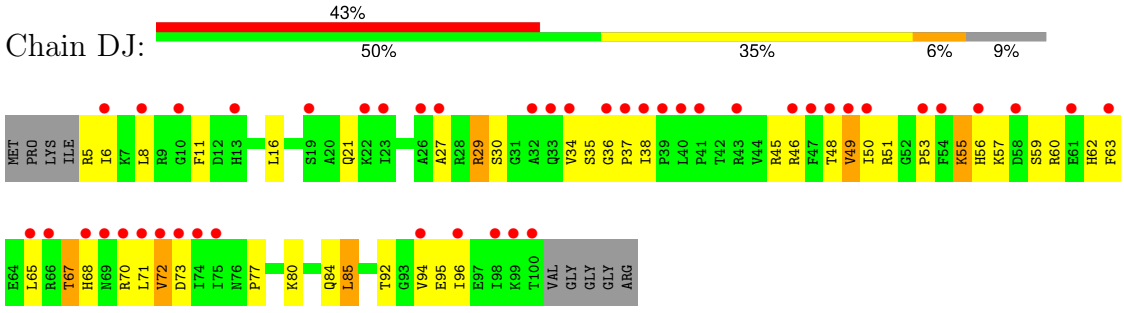
• Molecule 43: 30S ribosomal protein S10

Chain BJ:



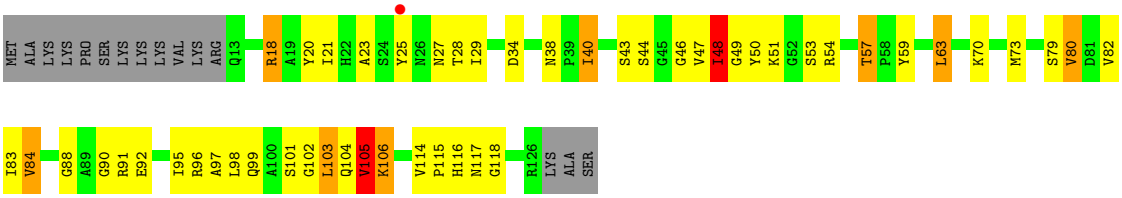
• Molecule 43: 30S ribosomal protein S10

Chain DJ:



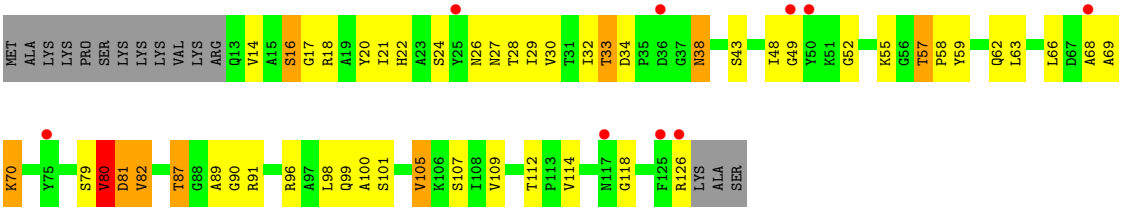
• Molecule 44: 30S ribosomal protein S11

Chain BK:



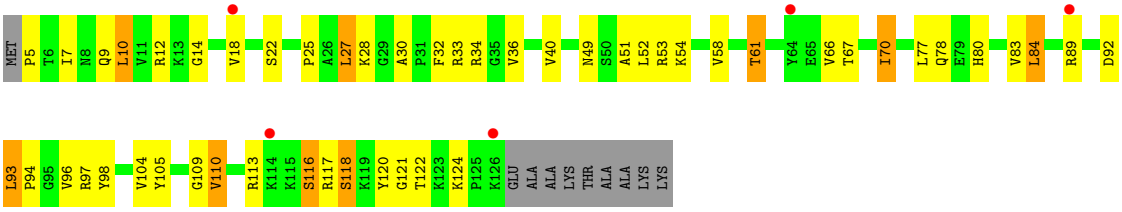
• Molecule 44: 30S ribosomal protein S11

Chain DK:



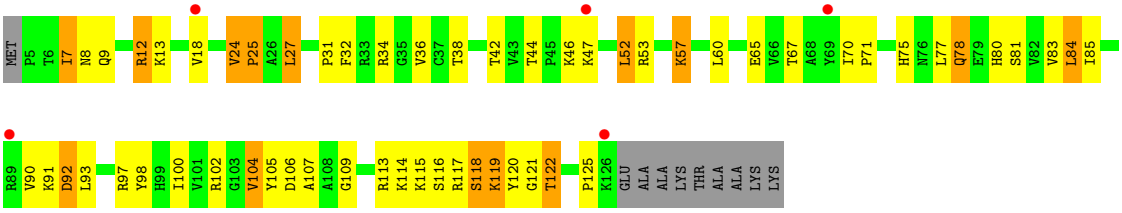
• Molecule 45: 30S ribosomal protein S12

Chain BL:



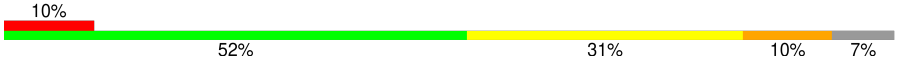
• Molecule 45: 30S ribosomal protein S12

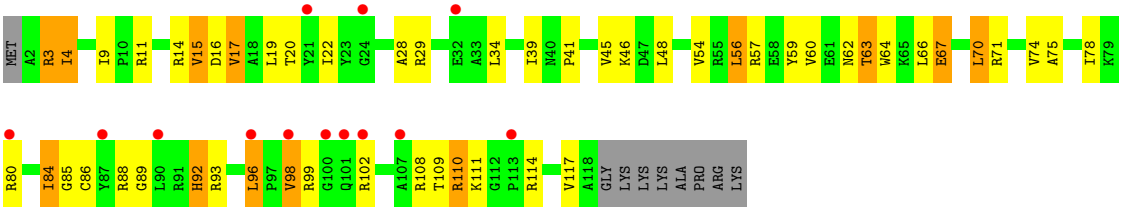
Chain DL:



• Molecule 46: 30S ribosomal protein S13

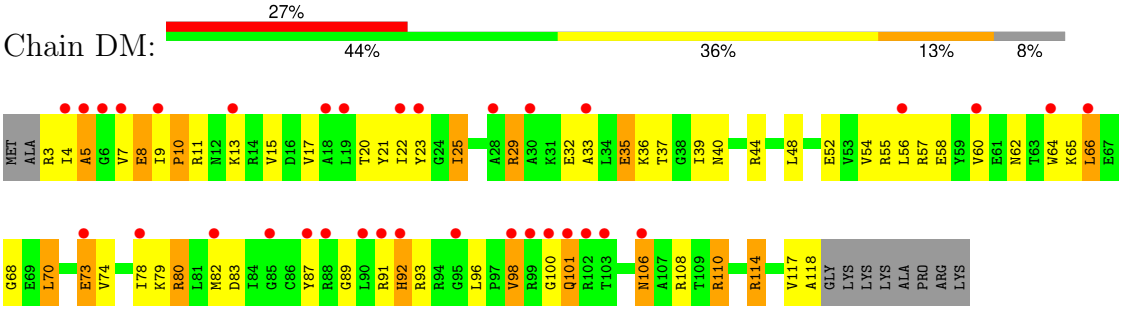
Chain BM:





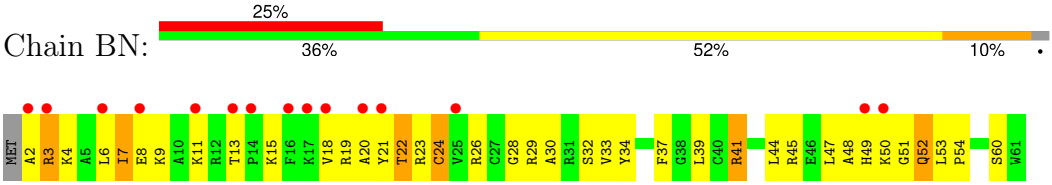
• Molecule 46: 30S ribosomal protein S13

Chain DM:



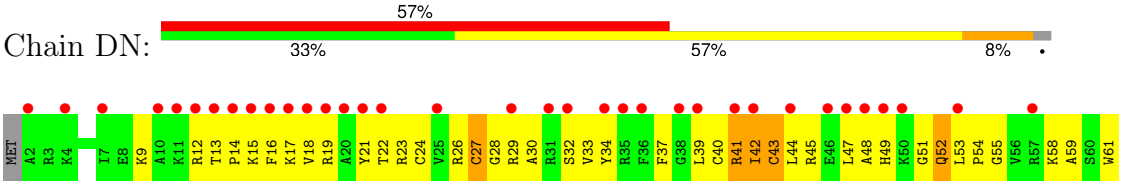
• Molecule 47: 30S ribosomal protein S14 type Z

Chain BN:



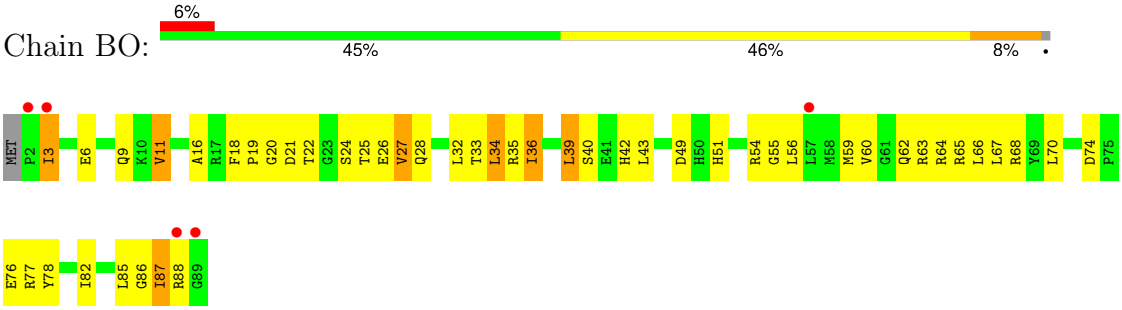
• Molecule 47: 30S ribosomal protein S14 type Z

Chain DN:



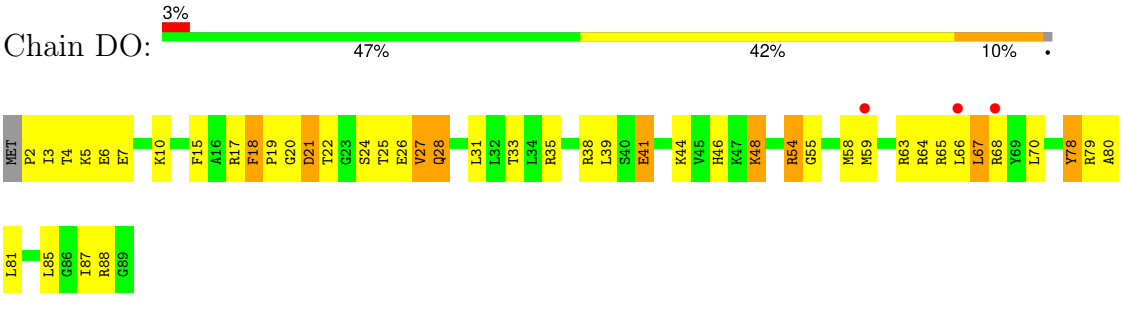
• Molecule 48: 30S ribosomal protein S15

Chain BO:



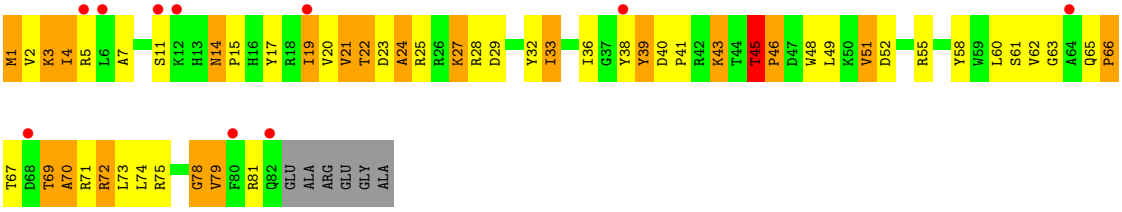
• Molecule 48: 30S ribosomal protein S15

Chain DO:

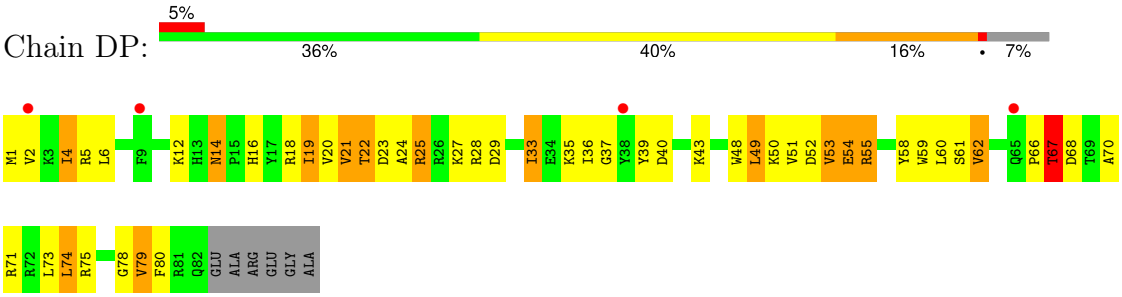


• Molecule 49: 30S ribosomal protein S16

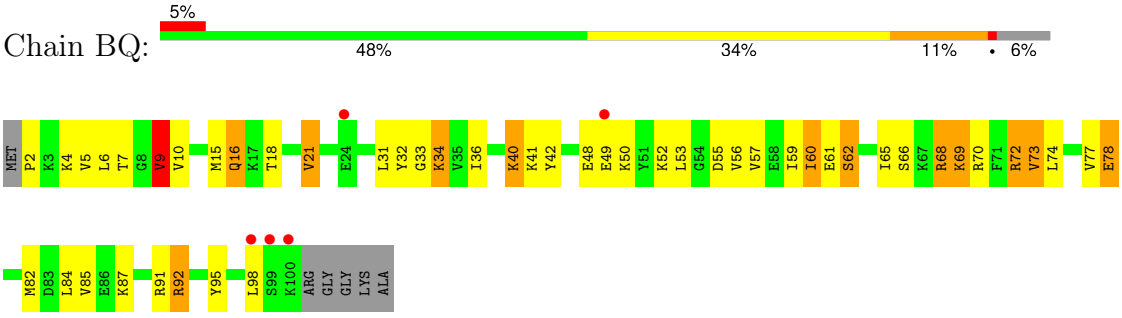
Chain BP:



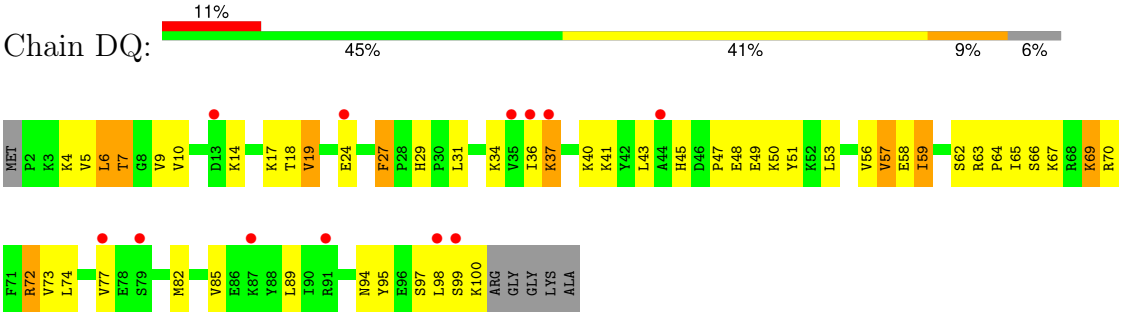
• Molecule 49: 30S ribosomal protein S16



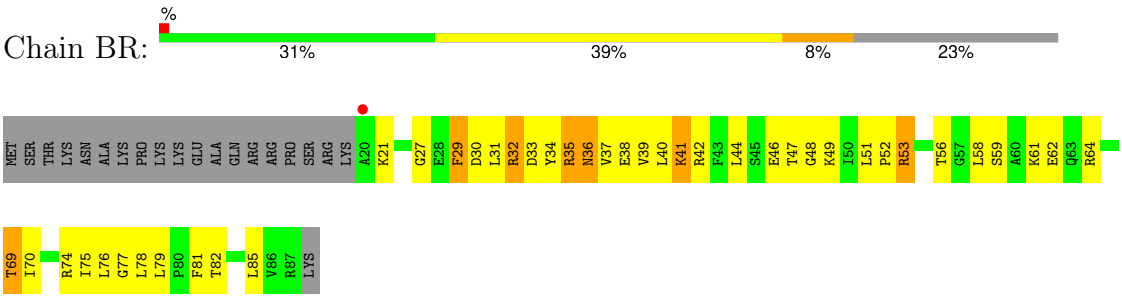
• Molecule 50: 30S ribosomal protein S17



• Molecule 50: 30S ribosomal protein S17

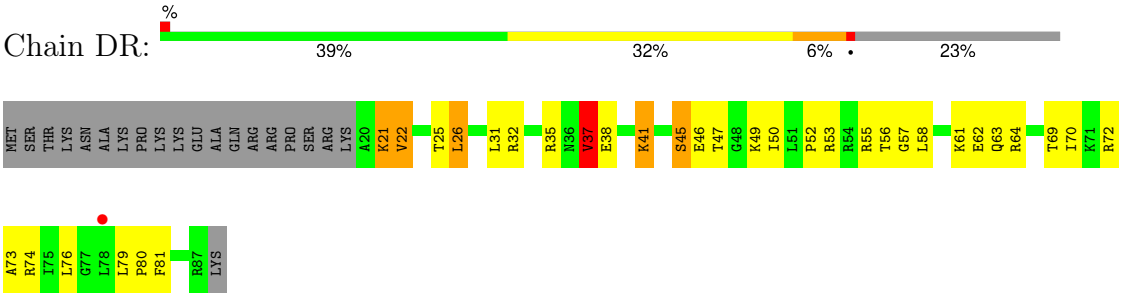


• Molecule 51: 30S ribosomal protein S18



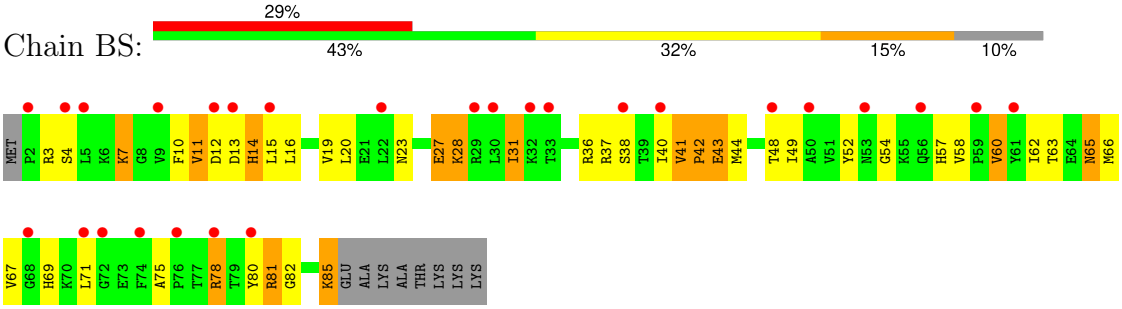
• Molecule 51: 30S ribosomal protein S18

Chain DR:



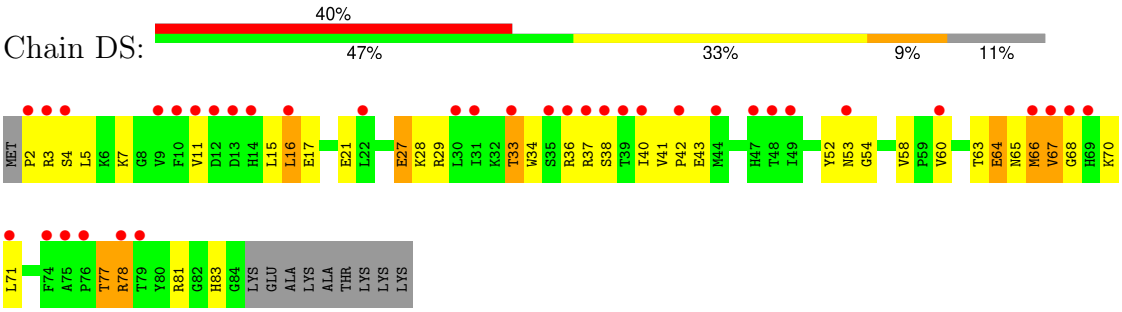
• Molecule 52: 30S ribosomal protein S19

Chain BS:



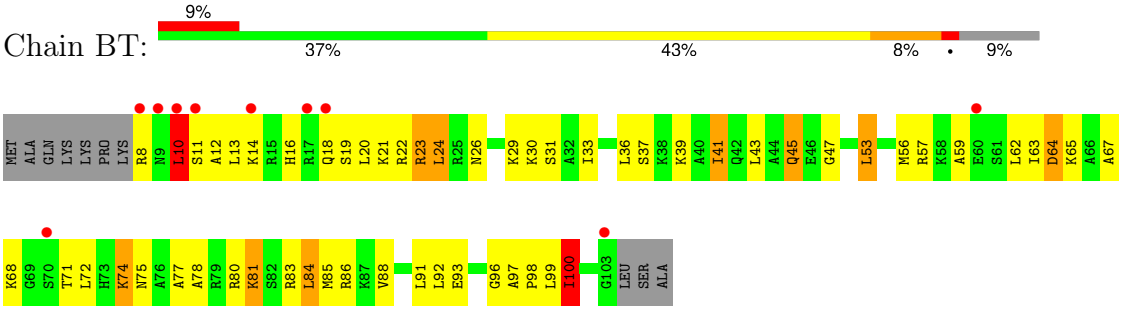
• Molecule 52: 30S ribosomal protein S19

Chain DS:



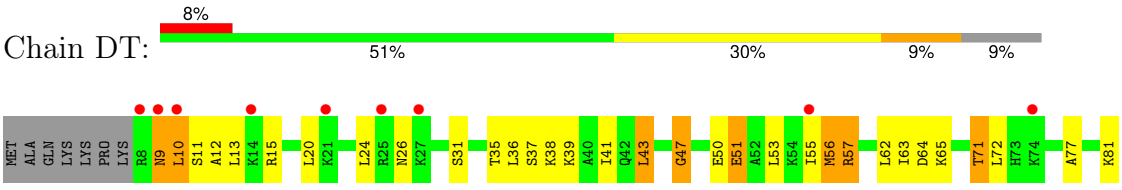
• Molecule 53: 30S ribosomal protein S20

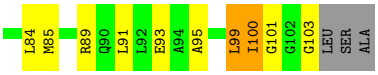
Chain BT:



• Molecule 53: 30S ribosomal protein S20

Chain DT:





• Molecule 54: 30S ribosomal protein Thx

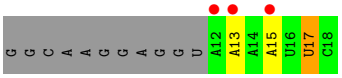
Chain BU:

• Molecule 54: 30S ribosomal protein Thx

Chain DU:

• Molecule 55: mRNA

Chain BV:

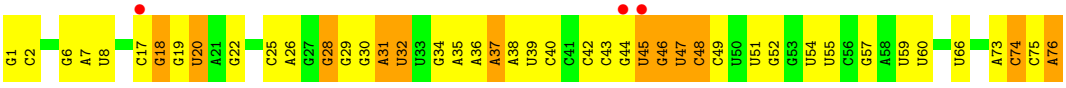


• Molecule 55: mRNA

Chain DV:

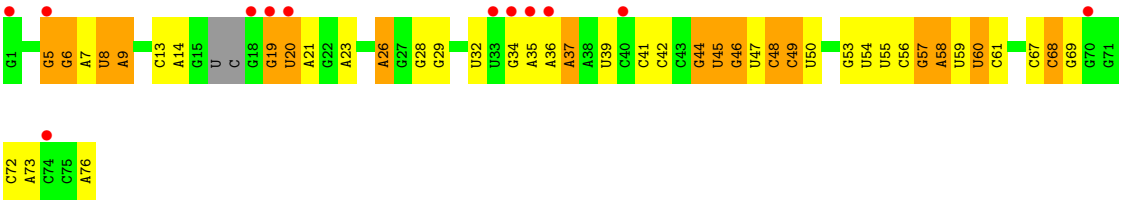
• Molecule 56: P-site tRNA

Chain BW:



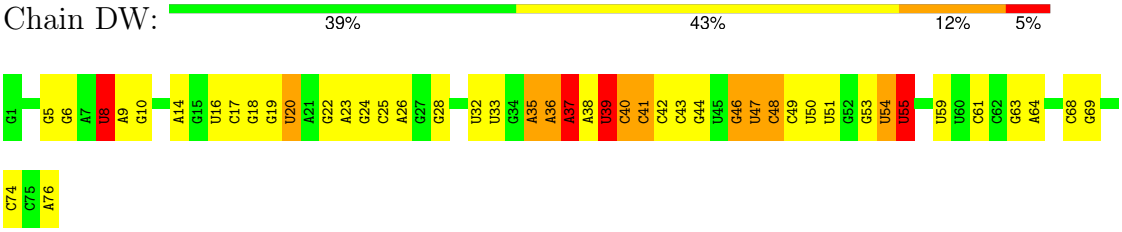
• Molecule 56: P-site tRNA

Chain BY:



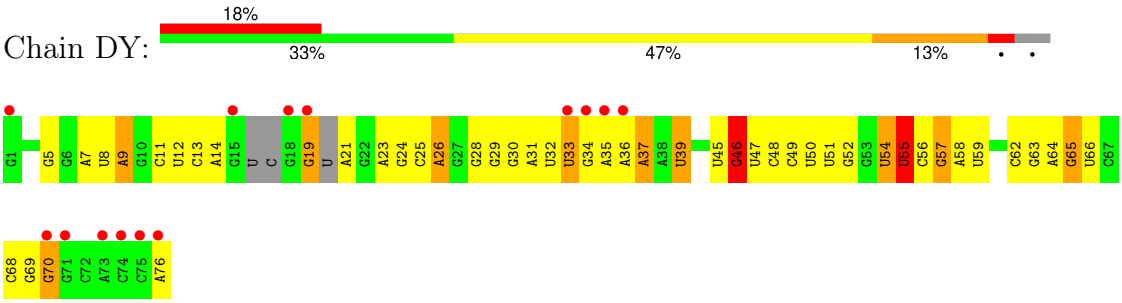
• Molecule 56: P-site tRNA

Chain DW:



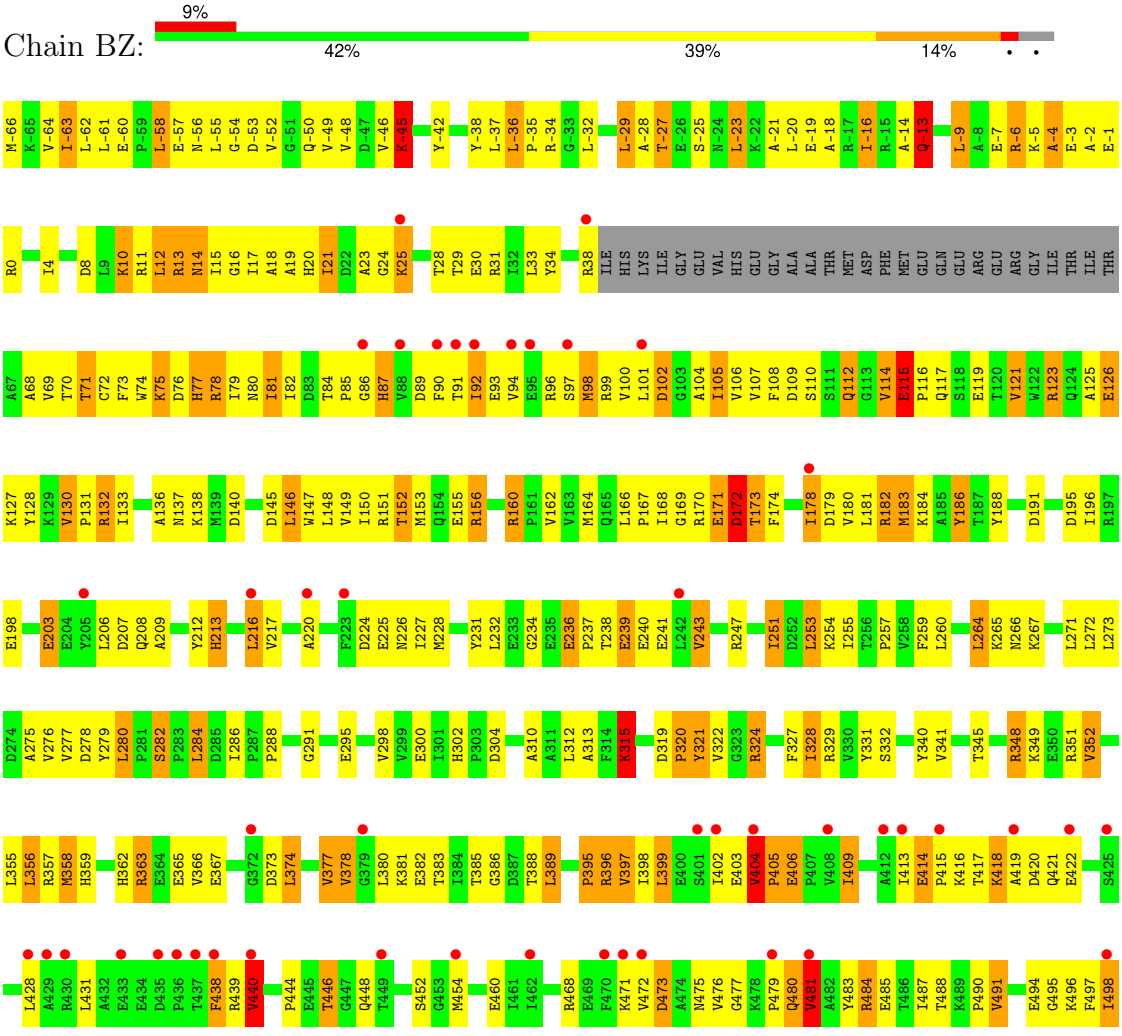
• Molecule 56: P-site tRNA

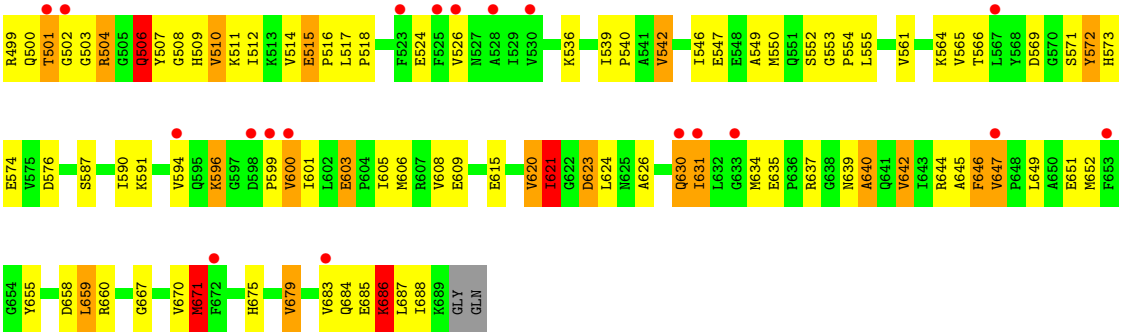
Chain DY:



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

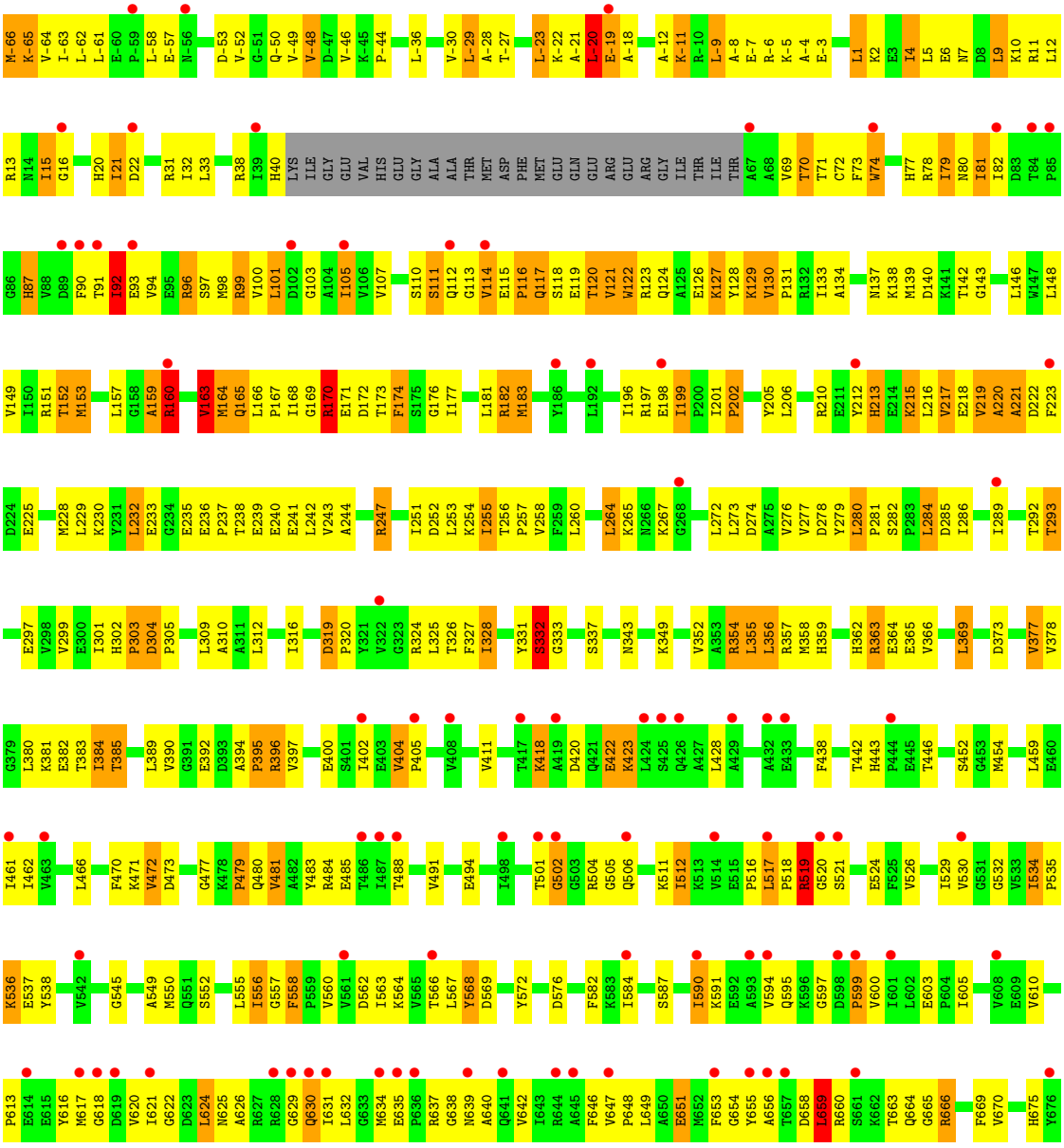
Chain BZ:

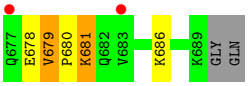




• Molecule 57: 50S ribosomal protein L9,Elongation factor G

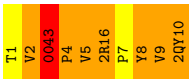
Chain DZ:





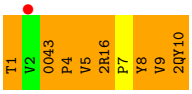
• Molecule 58: Dityromycin

Chain BX:



• Molecule 58: Dityromycin

Chain DX:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	209.84Å 450.58Å 623.43Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.81 – 2.80 49.81 – 2.80	Depositor EDS
% Data completeness (in resolution range)	94.5 (49.81-2.80) 94.5 (49.81-2.80)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.61 (at 2.81Å)	Xtriage
Refinement program	PHENIX (PHENIX.REFINE: 1.8.2_1309)	Depositor
R, R_{free}	0.209 , 0.264 0.210 , 0.264	Depositor DCC
R_{free} test set	67916 reflections (4.75%)	wwPDB-VP
Wilson B-factor (Å^2)	56.0	Xtriage
Anisotropy	0.111	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.28 , 73.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	310038	wwPDB-VP
Average B, all atoms (Å^2)	79.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.56% 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: MVA, PSU, 4SU, 5MU, SF4, GDP, 2R3, 7MG, MIA, 2QY, 004, 2R1, MG, 2QZ, ZN

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	0.75	0/69281	0.92	47/108144 (0.0%)
1	CA	0.54	0/69179	0.76	7/107984 (0.0%)
2	AB	0.63	0/2878	0.88	0/4490
2	CB	0.37	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	1.14	5/2186 (0.2%)	1.39	19/2944 (0.6%)
4	CD	0.95	2/2192 (0.1%)	1.30	12/2951 (0.4%)
5	AE	1.17	1/1592 (0.1%)	1.54	28/2149 (1.3%)
5	CE	0.91	1/1592 (0.1%)	1.34	20/2149 (0.9%)
6	AF	1.14	1/1619 (0.1%)	1.42	14/2193 (0.6%)
6	CF	0.77	0/1615	1.17	7/2188 (0.3%)
7	AG	0.75	0/1450	1.24	16/1959 (0.8%)
7	CG	0.49	0/1449	1.03	3/1958 (0.2%)
8	AH	1.06	3/1356 (0.2%)	1.40	16/1834 (0.9%)
8	CH	0.64	0/1356	1.05	8/1834 (0.4%)
9	AK	0.59	0/640	1.53	12/889 (1.3%)
9	CK	0.48	0/640	1.62	10/889 (1.1%)
10	AL	0.48	0/503	0.96	3/673 (0.4%)
10	CL	0.53	0/503	1.13	4/673 (0.6%)
11	AN	1.14	1/1144 (0.1%)	1.33	6/1543 (0.4%)
11	CN	0.78	0/1144	1.20	6/1543 (0.4%)
12	AO	1.14	2/943 (0.2%)	1.39	8/1269 (0.6%)
12	CO	0.94	0/943	1.27	5/1269 (0.4%)
13	AP	1.02	0/1156	1.37	10/1537 (0.7%)
13	CP	0.71	0/1152	1.25	12/1533 (0.8%)
14	AQ	1.14	0/1143	1.32	9/1527 (0.6%)
14	CQ	0.79	0/1143	1.23	8/1527 (0.5%)
15	AR	1.18	2/982 (0.2%)	1.35	7/1312 (0.5%)
15	CR	0.84	0/982	1.16	1/1312 (0.1%)
16	AS	0.90	0/887	1.22	9/1180 (0.8%)
16	CS	0.59	0/880	1.07	1/1172 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AT	1.08	1/1105 (0.1%)	1.30	6/1477 (0.4%)
17	CT	0.83	0/1097	1.15	5/1468 (0.3%)
18	AU	1.31	0/977	1.39	9/1301 (0.7%)
18	CU	0.85	0/977	1.09	3/1301 (0.2%)
19	AV	1.21	2/782 (0.3%)	1.54	9/1049 (0.9%)
19	CV	0.76	0/782	1.12	2/1049 (0.2%)
20	AW	1.30	3/897 (0.3%)	1.34	7/1205 (0.6%)
20	CW	0.99	0/897	1.29	6/1205 (0.5%)
21	AX	1.17	2/764 (0.3%)	1.34	7/1025 (0.7%)
21	CX	0.82	0/764	1.19	6/1025 (0.6%)
22	AY	1.06	1/819 (0.1%)	1.46	9/1095 (0.8%)
22	CY	0.66	0/819	1.10	5/1095 (0.5%)
23	AZ	0.87	0/1483	1.31	13/2017 (0.6%)
23	CZ	0.61	1/1483 (0.1%)	1.16	11/2017 (0.5%)
24	A0	1.12	1/616 (0.2%)	1.35	3/821 (0.4%)
24	C0	0.73	0/616	1.16	6/821 (0.7%)
25	A1	1.08	1/762 (0.1%)	1.32	6/1014 (0.6%)
25	C1	0.82	0/762	1.22	6/1014 (0.6%)
26	A2	0.97	0/590	1.21	1/781 (0.1%)
26	C2	0.72	0/590	1.10	2/781 (0.3%)
27	A3	1.28	3/474 (0.6%)	1.51	6/635 (0.9%)
27	C3	0.75	0/469	1.20	3/630 (0.5%)
28	A4	0.58	0/571	1.21	7/768 (0.9%)
28	C4	0.50	0/545	1.08	4/737 (0.5%)
29	A5	1.29	2/469 (0.4%)	1.48	6/635 (0.9%)
29	C5	0.96	0/469	1.30	5/635 (0.8%)
30	A6	1.13	2/460 (0.4%)	1.32	1/613 (0.2%)
30	C6	0.79	0/456	1.04	0/608
31	A7	1.22	1/426 (0.2%)	1.27	3/561 (0.5%)
31	C7	0.96	1/426 (0.2%)	1.32	4/561 (0.7%)
32	A8	1.15	0/525	1.35	6/691 (0.9%)
32	C8	0.78	0/525	1.19	1/691 (0.1%)
33	A9	1.18	1/310 (0.3%)	1.43	4/407 (1.0%)
33	C9	0.78	0/310	1.17	1/407 (0.2%)
34	BA	0.43	0/35976	0.67	5/56145 (0.0%)
34	DA	0.38	0/36119	0.60	2/56370 (0.0%)
35	BB	0.55	0/1881	1.13	15/2542 (0.6%)
35	DB	0.51	0/1860	1.04	8/2518 (0.3%)
36	BC	0.54	0/1576	0.94	2/2130 (0.1%)
36	DC	0.51	0/1568	0.93	4/2122 (0.2%)
37	BD	0.64	1/1689 (0.1%)	1.09	9/2267 (0.4%)
37	DD	0.61	0/1708	1.12	9/2289 (0.4%)
38	BE	0.75	0/1145	1.11	4/1543 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DE	0.66	0/1149	1.19	9/1548 (0.6%)
39	BF	0.65	0/825	1.12	5/1118 (0.4%)
39	DF	0.63	0/833	1.05	3/1128 (0.3%)
40	BG	0.54	0/1250	0.99	9/1679 (0.5%)
40	DG	0.45	0/1254	0.98	3/1683 (0.2%)
41	BH	0.69	0/1108	1.19	9/1494 (0.6%)
41	DH	0.58	0/1108	1.10	5/1494 (0.3%)
42	BI	0.58	0/1005	0.99	1/1350 (0.1%)
42	DI	0.49	0/997	0.95	4/1343 (0.3%)
43	BJ	0.53	0/722	1.08	7/982 (0.7%)
43	DJ	0.49	0/727	0.96	1/988 (0.1%)
44	BK	0.73	0/848	1.18	7/1149 (0.6%)
44	DK	0.59	0/848	1.08	4/1149 (0.3%)
45	BL	0.78	0/946	1.16	6/1274 (0.5%)
45	DL	0.76	0/946	1.14	2/1274 (0.2%)
46	BM	0.52	0/933	1.03	1/1253 (0.1%)
46	DM	0.41	0/917	0.86	2/1234 (0.2%)
47	BN	0.55	0/501	1.05	2/664 (0.3%)
47	DN	0.43	0/501	0.91	0/664
48	BO	0.76	0/739	1.14	4/985 (0.4%)
48	DO	0.61	0/739	1.02	3/985 (0.3%)
49	BP	0.70	0/697	1.15	6/939 (0.6%)
49	DP	0.66	0/693	1.10	6/935 (0.6%)
50	BQ	0.69	0/836	1.12	5/1117 (0.4%)
50	DQ	0.61	0/836	1.05	3/1117 (0.3%)
51	BR	0.70	0/560	1.17	4/746 (0.5%)
51	DR	0.62	0/560	1.03	2/746 (0.3%)
52	BS	0.48	0/676	1.03	4/911 (0.4%)
52	DS	0.46	0/661	1.02	1/893 (0.1%)
53	BT	0.66	0/730	1.19	2/965 (0.2%)
53	DT	0.61	0/733	1.07	1/969 (0.1%)
54	BU	0.48	0/203	0.93	0/266
54	DU	0.48	0/203	0.95	1/266 (0.4%)
55	BV	0.36	0/165	0.61	0/254
55	DV	0.32	0/137	0.64	0/211
56	BW	0.48	0/1650	0.74	0/2569
56	BY	0.27	1/1602 (0.1%)	0.43	0/2493
56	DW	0.38	0/1650	0.59	0/2569
56	DY	0.23	0/1579	0.34	0/2455
57	BZ	0.64	0/5763	1.10	29/7804 (0.4%)
57	DZ	0.61	0/5784	1.11	41/7835 (0.5%)
58	BX	0.65	0/20	0.73	0/23
58	DX	0.72	0/20	1.46	0/23

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
All	All	0.65	42/329767 (0.0%)	0.91	742/491645 (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
5	AE	0	1
6	AF	0	1
19	AV	0	1
35	BB	0	1
57	DZ	0	1
58	BX	0	1
All	All	0	6

All (42) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	AO	24	VAL	CA-CB	12.14	1.68	1.54
8	AH	11	VAL	CA-CB	-7.32	1.47	1.54
15	AR	52	ILE	CA-CB	-7.18	1.46	1.54
29	A5	35	GLU	CA-C	-7.03	1.46	1.53
5	AE	12	THR	CA-C	-6.95	1.47	1.53
31	A7	13	ALA	CA-CB	-6.90	1.42	1.53
17	AT	97	ALA	CA-CB	-6.79	1.42	1.53
22	AY	24	VAL	CA-CB	-6.78	1.46	1.54
25	A1	18	ILE	C-O	-6.76	1.16	1.24
29	A5	14	ALA	CA-CB	-6.48	1.43	1.53
4	CD	240	ALA	CA-CB	-6.40	1.46	1.53
4	AD	28	GLU	CG-CD	6.27	1.67	1.52
21	AX	80	ILE	CA-CB	-6.26	1.46	1.54
5	CE	9	VAL	CA-CB	6.08	1.62	1.54
27	A3	22	ALA	CA-CB	-6.07	1.43	1.53
20	AW	76	VAL	CA-CB	-6.04	1.46	1.54
21	AX	34	ALA	CA-C	-6.02	1.45	1.52
31	C7	13	ALA	CA-CB	-5.90	1.43	1.53
4	AD	92	ILE	CA-CB	-5.89	1.45	1.55
37	BD	5	ILE	CA-CB	5.86	1.62	1.54
33	A9	25	VAL	CA-CB	-5.68	1.47	1.54
11	AN	5	VAL	CA-CB	5.62	1.58	1.54
30	A6	23	THR	CA-CB	5.60	1.61	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	AH	89	ILE	CA-CB	-5.57	1.47	1.54
30	A6	7	ILE	CA-C	-5.53	1.46	1.52
24	A0	82	ARG	CA-C	-5.48	1.46	1.52
27	A3	43	ILE	CA-CB	-5.48	1.47	1.54
15	AR	41	ALA	CA-CB	-5.46	1.44	1.53
20	AW	41	LYS	CE-NZ	5.45	1.65	1.49
8	AH	144	VAL	CA-CB	-5.45	1.47	1.54
4	AD	28	GLU	CB-CG	5.31	1.68	1.52
4	AD	93	ALA	CA-CB	-5.30	1.45	1.53
12	AO	99	PHE	CA-C	-5.24	1.46	1.52
6	AF	42	ALA	CA-C	-5.19	1.46	1.52
19	AV	75	PHE	CA-C	-5.18	1.46	1.52
20	AW	48	ALA	CA-CB	-5.17	1.45	1.53
23	CZ	176	PRO	CA-C	5.16	1.54	1.51
4	CD	106	ILE	CA-CB	5.14	1.60	1.54
4	AD	245	PRO	CA-C	-5.13	1.47	1.52
27	A3	29	ARG	C-O	-5.10	1.17	1.24
56	BY	8	4SU	O3'-P	5.08	1.61	1.56
19	AV	12	TYR	CA-C	-5.06	1.46	1.52

All (742) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	CK	76	GLY	CA-C-N	15.68	139.44	119.84
9	CK	76	GLY	C-N-CA	15.68	139.44	119.84
9	AK	76	GLY	CA-C-N	13.99	137.33	119.84
9	AK	76	GLY	C-N-CA	13.99	137.33	119.84
9	CK	128	LEU	CA-C-N	11.91	134.73	119.84
9	CK	128	LEU	C-N-CA	11.91	134.73	119.84
6	AF	89	VAL	CA-C-N	-11.89	105.75	122.87
6	AF	89	VAL	C-N-CA	-11.89	105.75	122.87
57	DZ	394	ALA	N-CA-C	11.60	118.39	108.07
57	BZ	114	VAL	N-CA-C	11.51	121.22	110.74
7	AG	45	GLU	N-CA-C	-10.85	98.56	112.23
9	AK	32	LEU	CA-C-N	10.30	132.72	119.84
9	AK	32	LEU	C-N-CA	10.30	132.72	119.84
9	CK	104	ILE	CA-C-N	10.29	132.71	119.84
9	CK	104	ILE	C-N-CA	10.29	132.71	119.84
46	BM	84	ILE	N-CA-C	10.05	119.87	110.42
22	AY	65	ALA	CA-C-N	10.05	130.68	119.93
22	AY	65	ALA	C-N-CA	10.05	130.68	119.93
8	AH	3	ARG	N-CA-C	9.96	125.78	108.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	CK	32	LEU	CA-C-N	9.65	131.90	119.84
9	CK	32	LEU	C-N-CA	9.65	131.90	119.84
37	DD	188	LEU	CA-C-N	9.45	131.66	119.84
37	DD	188	LEU	C-N-CA	9.45	131.66	119.84
39	DF	60	PHE	N-CA-C	9.34	121.71	108.54
21	CX	43	VAL	N-CA-C	-9.18	101.85	111.58
42	BI	88	TYR	N-CA-C	-9.12	102.28	113.41
4	AD	35	LYS	CA-C-N	-9.02	110.25	119.99
4	AD	35	LYS	C-N-CA	-9.02	110.25	119.99
44	DK	38	ASN	CA-C-N	8.98	129.06	119.90
44	DK	38	ASN	C-N-CA	8.98	129.06	119.90
57	DZ	319	ASP	CA-C-N	8.92	129.10	119.28
57	DZ	319	ASP	C-N-CA	8.92	129.10	119.28
38	DE	113	ALA	N-CA-C	-8.90	101.39	112.88
57	DZ	-22	LYS	N-CA-C	-8.90	102.43	113.38
14	CQ	136	ALA	N-CA-C	-8.88	102.03	113.12
29	A5	6	VAL	CB-CA-C	8.82	119.42	109.89
7	AG	55	LYS	N-CA-C	-8.79	100.23	112.45
28	A4	40	HIS	CA-C-N	8.65	129.50	119.47
28	A4	40	HIS	C-N-CA	8.65	129.50	119.47
5	AE	12	THR	CB-CA-C	-8.63	101.84	114.87
17	AT	97	ALA	N-CA-C	8.58	120.63	111.28
1	AA	2014	G	C2'-C3'-O3'	8.56	122.33	109.50
41	BH	66	GLY	CA-C-N	8.55	128.50	120.03
41	BH	66	GLY	C-N-CA	8.55	128.50	120.03
10	CL	90	LYS	CA-C-N	8.52	128.28	119.76
10	CL	90	LYS	C-N-CA	8.52	128.28	119.76
14	AQ	19	GLY	N-CA-C	8.51	121.82	112.29
9	AK	104	ILE	CA-C-N	8.51	130.47	119.84
9	AK	104	ILE	C-N-CA	8.51	130.47	119.84
35	BB	9	GLU	N-CA-C	8.48	120.44	108.74
49	BP	79	VAL	N-CA-C	-8.42	105.27	113.53
27	A3	40	THR	CA-C-N	-8.42	110.26	119.19
27	A3	40	THR	C-N-CA	-8.42	110.26	119.19
4	AD	229	VAL	CB-CA-C	-8.30	98.81	112.26
1	CA	1992	G	C2'-C3'-O3'	8.28	121.92	109.50
7	AG	121	ASN	CA-C-N	8.27	127.96	119.19
7	AG	121	ASN	C-N-CA	8.27	127.96	119.19
49	DP	19	ILE	N-CA-C	-8.26	98.97	109.30
57	DZ	517	LEU	CA-C-N	8.21	130.10	119.84
57	DZ	517	LEU	C-N-CA	8.21	130.10	119.84
49	DP	79	VAL	N-CA-C	-8.13	104.78	112.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	AE	151	TYR	CB-CA-C	-8.11	96.26	109.72
35	DB	172	ILE	N-CA-C	-8.11	102.35	110.62
1	AA	1150	C	OP1-P-O3'	-8.08	83.77	108.00
24	A0	22	GLY	N-CA-C	8.06	120.26	112.04
23	CZ	82	ARG	CA-C-N	8.02	129.86	119.84
23	CZ	82	ARG	C-N-CA	8.02	129.86	119.84
12	CO	100	GLY	CA-C-N	7.93	127.69	119.76
12	CO	100	GLY	C-N-CA	7.93	127.69	119.76
19	AV	9	GLY	N-CA-C	-7.91	104.30	115.30
41	BH	79	VAL	N-CA-C	-7.89	104.11	111.45
17	CT	28	VAL	N-CA-C	7.80	118.96	108.27
20	AW	17	VAL	CB-CA-C	-7.80	99.63	112.26
57	DZ	-3	GLU	N-CA-C	-7.79	103.91	113.41
29	A5	6	VAL	CA-C-N	-7.78	111.99	119.85
29	A5	6	VAL	C-N-CA	-7.78	111.99	119.85
5	AE	59	VAL	N-CA-C	7.71	119.00	107.51
5	AE	137	HIS	CA-C-N	-7.70	110.22	119.84
5	AE	137	HIS	C-N-CA	-7.70	110.22	119.84
57	DZ	624	LEU	N-CA-C	-7.67	104.45	113.88
45	DL	119	LYS	N-CA-C	-7.63	101.03	110.41
32	C8	39	LYS	N-CA-C	-7.61	102.92	111.14
4	CD	107	ALA	CA-C-N	7.60	127.55	120.03
4	CD	107	ALA	C-N-CA	7.60	127.55	120.03
23	AZ	176	PRO	CA-C-N	-7.60	110.34	119.84
23	AZ	176	PRO	C-N-CA	-7.60	110.34	119.84
23	AZ	157	LEU	CA-C-N	7.60	128.20	120.38
23	AZ	157	LEU	C-N-CA	7.60	128.20	120.38
18	AU	40	PHE	N-CA-C	-7.58	103.10	111.36
45	BL	30	ALA	CA-C-N	7.56	126.83	118.97
45	BL	30	ALA	C-N-CA	7.56	126.83	118.97
26	A2	50	ILE	N-CA-C	7.56	117.67	110.42
1	AA	1150	C	OP2-P-O3'	-7.53	85.40	108.00
6	CF	24	LEU	CA-C-N	-7.52	112.25	119.85
6	CF	24	LEU	C-N-CA	-7.52	112.25	119.85
57	DZ	113	GLY	N-CA-C	7.52	118.59	111.67
13	CP	44	GLY	N-CA-C	-7.50	102.09	111.70
6	CF	9	ILE	N-CA-C	7.46	116.86	108.05
31	C7	45	ALA	N-CA-C	7.45	119.09	110.97
49	DP	70	ALA	N-CA-C	-7.37	104.81	113.88
20	AW	106	ILE	CB-CA-C	-7.34	102.04	110.41
48	BO	27	VAL	N-CA-C	-7.34	105.62	112.96
6	CF	196	LEU	N-CA-C	-7.32	103.45	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	CW	79	GLY	CA-C-N	7.32	127.76	119.93
20	CW	79	GLY	C-N-CA	7.32	127.76	119.93
18	AU	8	VAL	N-CA-C	-7.31	105.59	112.83
13	CP	121	LYS	CA-C-N	7.25	128.91	119.84
13	CP	121	LYS	C-N-CA	7.25	128.91	119.84
22	AY	92	ASN	N-CA-C	7.25	119.81	111.11
28	A4	5	ILE	N-CA-C	7.24	121.13	112.80
35	BB	233	SER	CA-C-N	7.24	128.89	119.84
35	BB	233	SER	C-N-CA	7.24	128.89	119.84
4	CD	229	VAL	CB-CA-C	-7.22	100.56	112.26
40	BG	78	ARG	N-CA-C	7.22	118.70	108.74
29	C5	26	THR	CA-C-N	7.19	124.91	119.66
29	C5	26	THR	C-N-CA	7.19	124.91	119.66
5	CE	81	ILE	CB-CA-C	-7.18	103.12	111.09
57	DZ	222	ASP	N-CA-C	-7.18	104.51	113.20
57	BZ	-23	LEU	N-CA-C	-7.16	103.52	112.90
57	DZ	-36	LEU	CA-C-N	-7.16	112.70	121.00
57	DZ	-36	LEU	C-N-CA	-7.16	112.70	121.00
24	A0	11	ARG	N-CA-C	-7.16	104.48	112.57
57	DZ	443	HIS	CA-C-N	7.15	126.67	119.24
57	DZ	443	HIS	C-N-CA	7.15	126.67	119.24
16	AS	110	LEU	N-CA-C	-7.14	98.96	110.32
40	DG	78	ARG	N-CA-C	7.13	119.33	107.20
12	AO	24	VAL	N-CA-CB	7.11	119.10	111.00
1	AA	1700	G	C2'-C3'-O3'	7.04	120.06	109.50
25	C1	67	ILE	N-CA-CB	7.03	114.93	110.50
38	BE	48	ALA	N-CA-C	7.02	114.32	108.07
5	AE	52	LEU	CA-C-N	7.01	127.56	119.99
5	AE	52	LEU	C-N-CA	7.01	127.56	119.99
42	DI	87	GLN	N-CA-C	-7.00	105.01	113.97
23	CZ	156	LYS	N-CA-C	6.99	118.98	111.36
4	AD	245	PRO	CB-CA-C	-6.99	102.40	110.92
5	AE	28	ALA	CA-C-N	-6.98	112.43	121.36
5	AE	28	ALA	C-N-CA	-6.98	112.43	121.36
10	AL	112	MET	CA-C-N	-6.98	112.44	119.56
10	AL	112	MET	C-N-CA	-6.98	112.44	119.56
37	BD	6	GLY	CA-C-N	6.97	128.56	119.84
37	BD	6	GLY	C-N-CA	6.97	128.56	119.84
23	CZ	175	VAL	CA-C-N	6.95	124.74	119.66
23	CZ	175	VAL	C-N-CA	6.95	124.74	119.66
49	BP	70	ALA	N-CA-C	-6.95	104.79	113.55
19	AV	58	VAL	CB-CA-C	-6.94	101.40	110.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	A4	60	GLN	N-CA-C	-6.94	104.81	113.28
57	BZ	-3	GLU	N-CA-C	-6.94	103.20	113.61
23	AZ	33	LEU	N-CA-C	6.93	118.30	108.74
9	CK	85	ASP	CA-C-N	6.89	128.45	119.84
9	CK	85	ASP	C-N-CA	6.89	128.45	119.84
5	CE	38	THR	CA-C-N	-6.88	111.90	119.19
5	CE	38	THR	C-N-CA	-6.88	111.90	119.19
1	AA	1255	A	C4'-C3'-O3'	6.86	119.70	109.40
15	AR	9	LYS	N-CA-C	-6.85	104.79	113.43
51	BR	81	PHE	N-CA-C	-6.80	103.98	112.90
13	CP	65	ARG	N-CA-C	6.80	120.71	108.48
5	AE	21	VAL	CA-C-N	6.79	127.85	119.98
5	AE	21	VAL	C-N-CA	6.79	127.85	119.98
16	AS	34	HIS	N-CA-C	6.79	119.46	109.69
5	AE	31	CYS	CA-C-N	6.77	127.15	119.83
5	AE	31	CYS	C-N-CA	6.77	127.15	119.83
44	BK	38	ASN	CA-C-N	6.77	126.74	119.76
44	BK	38	ASN	C-N-CA	6.77	126.74	119.76
6	CF	170	LEU	CA-C-N	6.77	128.30	119.84
6	CF	170	LEU	C-N-CA	6.77	128.30	119.84
53	BT	74	LYS	N-CA-C	-6.75	103.38	111.69
57	DZ	686	LYS	N-CA-C	-6.75	106.92	114.62
35	BB	128	GLU	N-CA-C	-6.74	104.63	112.92
18	CU	97	ASP	N-CA-C	-6.73	104.33	112.54
1	AA	1503	G	O5'-P-OP2	-6.73	87.82	108.00
3	AC	203	GLU	N-CA-C	-6.73	104.63	114.39
1	AA	2701	U	C4'-C3'-O3'	6.72	119.49	109.40
50	BQ	65	ILE	N-CA-C	-6.72	106.24	112.96
6	AF	89	VAL	N-CA-C	6.70	116.72	110.42
44	BK	57	THR	CA-C-N	6.70	128.21	119.84
44	BK	57	THR	C-N-CA	6.70	128.21	119.84
6	AF	40	GLN	N-CA-C	-6.69	104.07	111.36
3	CC	203	GLU	N-CA-C	-6.68	104.70	114.39
57	DZ	304	ASP	CA-C-N	6.68	128.19	119.84
57	DZ	304	ASP	C-N-CA	6.68	128.19	119.84
19	CV	70	ILE	CB-CA-C	-6.67	102.07	111.21
5	AE	163	GLU	N-CA-C	-6.66	99.19	109.24
15	AR	27	SER	N-CA-C	-6.65	103.85	112.23
1	AA	2902	G	C4'-C3'-O3'	6.64	119.36	109.40
5	AE	12	THR	N-CA-CB	6.63	116.27	109.51
5	CE	73	GLU	CA-C-N	6.63	128.13	119.84
5	CE	73	GLU	C-N-CA	6.63	128.13	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	AG	170	ARG	N-CA-C	-6.63	103.16	111.11
14	CQ	28	ALA	N-CA-C	6.63	124.91	110.80
7	AG	31	VAL	CA-C-N	6.62	128.12	119.84
7	AG	31	VAL	C-N-CA	6.62	128.12	119.84
8	AH	92	ILE	N-CA-C	6.61	116.77	110.42
1	AA	2518	U	OP1-P-O3'	-6.61	88.18	108.00
57	BZ	646	PHE	CA-C-N	-6.60	116.97	123.04
57	BZ	646	PHE	C-N-CA	-6.60	116.97	123.04
49	DP	68	ASP	N-CA-C	-6.60	104.28	112.72
57	BZ	115	GLU	CA-C-N	6.60	128.09	119.84
57	BZ	115	GLU	C-N-CA	6.60	128.09	119.84
57	BZ	8	ASP	N-CA-C	-6.59	105.28	113.38
44	BK	40	ILE	N-CA-C	-6.58	106.38	112.96
5	CE	104	VAL	N-CA-C	6.58	117.38	108.17
52	BS	31	ILE	N-CA-C	6.58	116.19	106.85
38	DE	69	VAL	CA-C-N	6.57	132.18	120.88
38	DE	69	VAL	C-N-CA	6.57	132.18	120.88
21	CX	75	ASP	N-CA-C	-6.56	101.87	110.53
1	AA	537	G	O4'-C1'-N9	6.53	118.00	108.20
50	BQ	9	VAL	CB-CA-C	-6.53	102.47	111.49
41	DH	73	ASP	CA-C-N	6.53	128.39	120.94
41	DH	73	ASP	C-N-CA	6.53	128.39	120.94
1	CA	512	G	O4'-C1'-N9	6.50	117.96	108.20
1	AA	553	A	O4'-C1'-N9	-6.50	98.75	108.50
8	AH	172	LYS	CA-C-N	6.49	127.96	119.84
8	AH	172	LYS	C-N-CA	6.49	127.96	119.84
57	BZ	319	ASP	CA-C-N	6.49	127.95	119.84
57	BZ	319	ASP	C-N-CA	6.49	127.95	119.84
8	AH	54	ARG	CA-C-N	6.49	126.62	119.87
8	AH	54	ARG	C-N-CA	6.49	126.62	119.87
20	AW	15	ARG	N-CA-C	-6.49	104.21	111.28
57	DZ	10	LYS	N-CA-C	-6.46	105.36	113.18
3	AC	16	ASP	CA-C-N	6.45	125.67	118.97
3	AC	16	ASP	C-N-CA	6.45	125.67	118.97
36	DC	77	ILE	N-CA-C	6.44	116.58	110.53
17	CT	54	ARG	N-CA-C	6.44	120.56	110.32
16	AS	7	TYR	N-CA-C	-6.43	103.89	111.03
41	BH	117	GLY	N-CA-C	6.43	121.01	112.65
5	CE	188	VAL	CA-C-N	6.43	127.87	119.84
5	CE	188	VAL	C-N-CA	6.43	127.87	119.84
4	AD	123	ALA	N-CA-C	-6.42	102.04	110.39
1	AA	2518	U	OP2-P-O3'	6.41	127.22	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
39	DF	95	GLU	CA-C-N	6.40	127.84	119.84
39	DF	95	GLU	C-N-CA	6.40	127.84	119.84
57	DZ	302	HIS	CA-C-N	6.39	127.83	119.84
57	DZ	302	HIS	C-N-CA	6.39	127.83	119.84
11	AN	33	LEU	N-CA-C	-6.38	104.41	111.36
57	BZ	553	GLY	CA-C-N	6.38	127.30	120.47
57	BZ	553	GLY	C-N-CA	6.38	127.30	120.47
14	AQ	65	PHE	CA-C-N	-6.37	114.44	123.11
14	AQ	65	PHE	C-N-CA	-6.37	114.44	123.11
5	CE	32	PRO	CA-C-O	-6.37	114.41	121.23
3	CC	16	ASP	CA-C-N	6.37	125.59	118.97
3	CC	16	ASP	C-N-CA	6.37	125.59	118.97
14	CQ	35	VAL	N-CA-C	6.37	118.66	108.85
35	BB	168	THR	N-CA-C	-6.36	106.05	113.88
27	A3	24	LYS	N-CA-C	-6.36	105.17	113.12
42	DI	3	GLN	N-CA-C	6.36	118.43	108.96
57	DZ	201	ILE	CA-C-N	6.34	127.77	119.84
57	DZ	201	ILE	C-N-CA	6.34	127.77	119.84
1	AA	1157	A	O4'-C1'-N9	6.34	118.02	108.50
53	BT	11	SER	N-CA-C	-6.33	105.50	112.72
57	BZ	213	HIS	N-CA-C	-6.33	104.07	110.97
31	A7	30	VAL	CB-CA-C	-6.32	103.79	111.88
1	AA	1700	G	O3'-P-O5'	6.32	113.48	104.00
13	AP	55	ARG	N-CA-C	-6.32	102.64	110.41
12	CO	55	GLY	N-CA-C	-6.31	106.42	114.37
36	DC	194	GLY	N-CA-C	6.31	118.47	112.04
57	DZ	675	HIS	N-CA-C	6.29	116.76	108.07
12	AO	3	GLN	CA-C-N	-6.29	113.28	119.76
12	AO	3	GLN	C-N-CA	-6.29	113.28	119.76
38	BE	113	ALA	N-CA-C	-6.29	105.71	113.19
14	AQ	135	ASP	N-CA-C	-6.29	100.00	108.86
41	BH	73	ASP	CA-C-N	6.28	125.77	119.24
41	BH	73	ASP	C-N-CA	6.28	125.77	119.24
23	CZ	86	VAL	CB-CA-C	-6.28	102.32	111.68
38	DE	127	ASN	N-CA-C	-6.27	102.15	109.93
1	AA	2106	C	OP1-P-O3'	-6.26	89.22	108.00
21	AX	31	HIS	CA-C-N	6.24	126.70	119.47
21	AX	31	HIS	C-N-CA	6.24	126.70	119.47
4	CD	218	ARG	CA-C-N	6.23	127.63	119.84
4	CD	218	ARG	C-N-CA	6.23	127.63	119.84
38	DE	99	GLY	CA-C-O	-6.23	118.17	122.22
17	AT	106	SER	N-CA-C	-6.23	102.50	110.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	A3	22	ALA	N-CA-C	-6.22	104.58	111.36
57	DZ	159	ALA	N-CA-C	6.22	118.31	107.49
37	BD	141	ARG	CA-C-N	6.21	127.61	119.84
37	BD	141	ARG	C-N-CA	6.21	127.61	119.84
19	AV	28	GLU	CA-C-N	-6.20	113.29	119.99
19	AV	28	GLU	C-N-CA	-6.20	113.29	119.99
7	CG	54	GLU	N-CA-C	-6.20	105.99	112.93
1	AA	2641	A	N9-C1'-C2'	6.20	123.29	114.00
11	AN	5	VAL	CA-C-O	6.20	123.35	119.51
11	CN	98	VAL	N-CA-C	6.19	116.30	110.30
51	DR	37	VAL	N-CA-C	6.17	117.66	110.62
30	A6	37	ARG	N-CA-C	-6.17	101.80	110.50
48	BO	22	THR	N-CA-C	-6.16	101.65	110.59
49	BP	3	LYS	N-CA-C	6.16	118.54	109.24
6	AF	24	LEU	CA-C-N	6.15	127.53	119.84
6	AF	24	LEU	C-N-CA	6.15	127.53	119.84
5	AE	190	GLY	N-CA-C	6.14	124.86	112.34
24	C0	40	GLN	N-CA-C	6.14	117.56	108.60
1	AA	2518	U	P-O3'-C3'	6.13	129.40	120.20
10	CL	125	ARG	N-CA-C	-6.12	106.42	114.31
16	CS	34	HIS	N-CA-C	6.12	117.48	108.86
5	AE	123	ALA	N-CA-C	6.11	120.20	112.87
35	BB	169	LYS	N-CA-C	-6.10	104.54	112.23
52	DS	58	VAL	N-CA-C	6.07	113.89	107.76
4	AD	128	GLY	N-CA-C	-6.07	107.03	114.92
40	BG	87	VAL	N-CA-C	6.07	115.57	108.96
43	BJ	86	MET	N-CA-C	-6.06	105.65	113.16
7	AG	54	GLU	N-CA-C	-6.05	103.34	111.87
57	BZ	-14	ALA	N-CA-C	-6.05	105.82	112.72
11	CN	46	VAL	N-CA-C	6.05	117.47	108.46
27	C3	40	THR	CA-C-N	6.05	126.21	119.32
27	C3	40	THR	C-N-CA	6.05	126.21	119.32
45	BL	58	VAL	N-CA-C	6.04	116.71	107.77
24	C0	24	LYS	N-CA-C	-6.04	105.57	113.12
14	AQ	81	VAL	N-CA-C	6.03	118.32	108.97
57	DZ	280	LEU	CA-C-N	6.03	127.37	119.84
57	DZ	280	LEU	C-N-CA	6.03	127.37	119.84
1	AA	990	A	N9-C1'-C2'	6.02	123.03	114.00
35	DB	108	ILE	N-CA-C	-6.02	104.44	111.00
4	AD	257	LEU	N-CA-C	-6.00	101.16	110.10
57	DZ	101	LEU	N-CA-C	-6.00	100.42	109.95
1	AA	2287	C	C5'-C4'-O4'	-5.99	100.11	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	AH	11	VAL	CB-CA-C	-5.99	105.39	111.08
22	AY	77	PRO	N-CA-C	-5.97	106.39	113.86
5	CE	125	GLY	CA-C-N	5.97	125.94	120.03
5	CE	125	GLY	C-N-CA	5.97	125.94	120.03
29	C5	46	CYS	CA-C-N	5.97	125.59	119.56
29	C5	46	CYS	C-N-CA	5.97	125.59	119.56
40	BG	57	GLU	CA-C-N	5.96	127.29	119.84
40	BG	57	GLU	C-N-CA	5.96	127.29	119.84
40	DG	87	VAL	N-CA-C	5.96	115.08	108.05
51	BR	29	PHE	N-CA-C	5.96	119.18	109.59
57	DZ	199	ILE	N-CA-C	5.96	121.75	108.88
27	C3	56	VAL	N-CA-C	5.96	116.65	107.78
25	A1	67	ILE	CA-C-N	-5.95	112.88	119.19
25	A1	67	ILE	C-N-CA	-5.95	112.88	119.19
4	CD	147	LEU	N-CA-C	-5.95	106.05	113.55
1	AA	2045	G	O5'-P-OP1	-5.94	90.17	108.00
14	CQ	116	GLU	N-CA-C	-5.93	103.50	112.04
20	AW	59	VAL	N-CA-C	5.93	115.99	110.42
9	AK	100	ASN	CA-C-N	5.93	127.25	119.84
9	AK	100	ASN	C-N-CA	5.93	127.25	119.84
4	AD	174	ILE	N-CA-C	5.91	117.28	108.23
8	AH	162	ILE	CB-CA-C	-5.91	102.80	110.84
6	AF	53	THR	N-CA-C	-5.91	101.26	110.42
7	AG	89	GLY	N-CA-C	5.91	118.99	111.37
4	CD	40	THR	CB-CA-C	-5.90	99.47	109.03
21	AX	69	TYR	N-CA-C	5.90	118.29	108.20
1	AA	2902	G	P-O3'-C3'	5.90	129.05	120.20
37	BD	38	TYR	CA-C-N	5.89	126.45	120.38
37	BD	38	TYR	C-N-CA	5.89	126.45	120.38
8	CH	38	SER	CA-C-N	5.89	125.59	119.82
8	CH	38	SER	C-N-CA	5.89	125.59	119.82
4	AD	221	VAL	CB-CA-C	5.87	118.19	110.91
35	BB	38	GLY	N-CA-C	-5.87	107.55	115.36
1	AA	1455	C	OP1-P-O3'	-5.87	90.40	108.00
21	AX	52	VAL	N-CA-C	-5.86	106.57	113.42
57	BZ	542	VAL	N-CA-C	-5.86	106.57	113.42
35	BB	14	GLY	N-CA-C	-5.85	108.23	114.67
23	CZ	100	VAL	CA-C-N	5.85	125.86	119.89
23	CZ	100	VAL	C-N-CA	5.85	125.86	119.89
57	BZ	173	THR	N-CA-C	-5.85	106.00	113.02
1	AA	1440	U	O5'-P-OP2	5.84	125.53	108.00
38	DE	56	GLN	N-CA-C	-5.84	104.60	110.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	DC	59	ARG	N-CA-C	5.82	118.96	109.06
50	BQ	7	THR	N-CA-C	5.82	118.01	108.52
6	AF	29	ASN	CA-C-N	5.82	125.95	119.32
6	AF	29	ASN	C-N-CA	5.82	125.95	119.32
1	AA	1695	C	O5'-P-OP2	5.81	125.44	108.00
40	BG	111	ARG	N-CA-C	5.81	118.56	110.07
36	DC	202	ILE	N-CA-C	5.81	116.37	107.77
37	BD	121	VAL	CB-CA-C	-5.80	104.54	111.97
19	AV	77	ALA	N-CA-C	5.80	118.02	110.43
21	AX	65	ARG	N-CA-C	5.80	118.09	108.99
13	AP	49	ARG	N-CA-C	-5.79	106.21	113.28
37	DD	114	ARG	N-CA-C	-5.79	105.10	111.82
49	BP	51	VAL	N-CA-C	5.79	121.39	109.34
18	AU	97	ASP	N-CA-C	-5.79	104.97	111.28
20	AW	34	ASN	N-CA-C	-5.78	104.58	111.69
17	CT	88	ILE	CB-CA-C	-5.78	106.75	113.22
24	C0	43	THR	CB-CA-C	5.78	119.17	111.14
15	CR	70	LEU	N-CA-C	5.78	117.58	111.28
18	AU	83	LEU	N-CA-C	-5.77	104.95	112.23
16	AS	40	ILE	N-CA-C	5.77	117.31	108.71
13	CP	44	GLY	CA-C-O	-5.77	116.55	122.26
7	AG	3	LEU	N-CA-C	5.77	117.88	108.76
19	AV	99	ILE	CB-CA-C	-5.76	104.44	111.88
45	BL	7	ILE	N-CA-C	-5.76	103.72	111.44
23	AZ	158	PRO	CA-C-N	-5.76	113.77	119.99
23	AZ	158	PRO	C-N-CA	-5.76	113.77	119.99
35	DB	13	ALA	N-CA-C	5.75	118.25	110.88
39	BF	38	GLU	N-CA-C	-5.75	105.65	114.16
5	CE	197	ILE	CB-CA-C	-5.74	102.06	110.62
8	CH	101	ARG	N-CA-C	-5.74	105.60	113.30
39	BF	88	VAL	N-CA-C	-5.73	100.04	108.99
41	BH	4	ASP	CA-C-N	5.73	125.86	119.32
41	BH	4	ASP	C-N-CA	5.73	125.86	119.32
54	DU	17	THR	N-CA-C	5.73	117.32	109.18
8	AH	39	PRO	N-CA-C	-5.73	108.72	114.68
9	AK	89	ALA	N-CA-C	-5.72	106.06	113.16
28	C4	6	HIS	CA-C-N	5.72	125.70	120.03
28	C4	6	HIS	C-N-CA	5.72	125.70	120.03
38	DE	26	PHE	N-CA-C	5.72	118.81	110.17
1	AA	551	A	C4'-C3'-O3'	-5.71	104.43	113.00
1	CA	1992	G	O3'-P-O5'	5.71	112.57	104.00
25	C1	22	GLY	N-CA-C	5.71	119.01	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	BZ	251	ILE	N-CA-C	5.70	115.89	110.53
5	AE	176	ILE	CA-C-N	-5.70	113.80	119.56
5	AE	176	ILE	C-N-CA	-5.70	113.80	119.56
43	BJ	28	ARG	N-CA-C	-5.70	106.37	113.38
34	BA	509	A	C2'-C3'-O3'	5.69	122.24	113.70
48	DO	18	PHE	CA-C-N	5.69	126.95	119.84
48	DO	18	PHE	C-N-CA	5.69	126.95	119.84
1	AA	847	A	O5'-P-OP1	-5.68	90.96	108.00
48	DO	21	ASP	N-CA-C	5.68	117.47	108.67
40	BG	13	GLN	CA-C-N	5.67	125.68	119.89
40	BG	13	GLN	C-N-CA	5.67	125.68	119.89
12	AO	55	GLY	N-CA-C	-5.67	107.73	114.48
48	BO	42	HIS	N-CA-C	-5.67	105.18	111.36
7	AG	119	GLY	N-CA-C	5.67	117.81	112.08
23	AZ	98	MET	N-CA-C	5.66	116.75	108.14
33	A9	29	ASN	N-CA-C	5.66	118.60	108.47
7	AG	178	PHE	CA-C-N	5.65	126.91	119.84
7	AG	178	PHE	C-N-CA	5.65	126.91	119.84
49	DP	5	ARG	N-CA-C	5.65	116.01	108.38
23	AZ	167	PRO	N-CA-C	-5.65	108.81	114.68
32	A8	54	GLU	N-CA-C	5.65	117.11	111.07
17	AT	52	ILE	CB-CA-C	-5.64	102.04	111.29
1	AA	412	C	N1-C1'-C2'	5.64	120.46	112.00
25	A1	7	ILE	CB-CA-C	-5.63	104.54	111.92
35	BB	25	ASN	N-CA-C	-5.63	101.37	109.48
24	C0	22	GLY	N-CA-C	5.63	118.11	111.63
25	C1	25	LYS	N-CA-C	-5.63	105.06	111.14
29	A5	33	CYS	N-CA-C	-5.63	102.69	109.72
1	AA	353	G	O5'-P-OP2	-5.62	91.13	108.00
1	AA	2299	A	N9-C1'-C2'	-5.62	105.56	114.00
40	DG	38	LEU	N-CA-C	-5.62	106.77	113.97
14	CQ	80	GLU	N-CA-C	5.61	119.95	113.38
57	DZ	122	TRP	N-CA-C	-5.61	105.24	111.36
19	CV	46	VAL	N-CA-C	5.61	115.94	107.75
38	DE	100	VAL	N-CA-C	5.61	116.82	108.23
20	AW	104	THR	N-CA-C	5.60	118.03	108.90
7	CG	57	ALA	N-CA-C	-5.60	107.09	114.04
5	CE	50	GLY	N-CA-C	-5.60	104.12	113.02
11	CN	77	GLY	N-CA-C	-5.60	107.64	114.92
21	CX	8	ILE	CB-CA-C	-5.60	104.14	111.25
43	BJ	80	LYS	N-CA-C	-5.60	104.80	111.69
22	CY	73	ARG	CA-C-N	-5.59	114.21	120.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	CY	73	ARG	C-N-CA	-5.59	114.21	120.14
41	DH	134	ILE	N-CA-C	5.59	117.51	111.58
25	C1	93	GLU	N-CA-C	-5.58	104.69	112.45
41	DH	19	VAL	N-CA-C	-5.58	106.38	112.80
44	BK	21	ILE	N-CA-C	5.58	115.63	107.37
28	C4	42	PHE	N-CA-C	-5.57	106.53	113.55
52	BS	60	VAL	N-CA-C	5.57	114.83	106.42
21	CX	44	GLU	CA-C-N	-5.57	113.20	120.44
21	CX	44	GLU	C-N-CA	-5.57	113.20	120.44
22	AY	6	HIS	N-CA-C	-5.57	105.70	112.88
17	AT	66	VAL	N-CA-C	-5.56	101.72	109.45
29	A5	19	ARG	N-CA-C	-5.56	105.22	112.23
57	BZ	406	GLU	CA-C-N	5.56	125.53	120.03
57	BZ	406	GLU	C-N-CA	5.56	125.53	120.03
19	AV	31	ALA	CA-C-N	-5.56	114.08	122.81
19	AV	31	ALA	C-N-CA	-5.56	114.08	122.81
19	AV	40	LEU	N-CA-C	-5.56	100.72	109.50
23	AZ	86	VAL	CB-CA-C	-5.55	102.35	110.62
39	BF	72	VAL	N-CA-C	5.54	116.32	110.72
50	BQ	85	VAL	CB-CA-C	-5.54	104.76	112.02
57	DZ	99	ARG	N-CA-C	-5.54	107.16	114.31
14	AQ	78	PRO	CA-C-O	-5.54	115.02	121.34
12	AO	16	ALA	N-CA-C	-5.54	102.08	110.28
37	DD	198	VAL	N-CA-C	5.53	116.09	108.12
15	AR	116	LEU	N-CA-C	-5.53	102.30	110.48
33	A9	15	LYS	N-CA-C	5.53	117.41	108.34
21	AX	63	LYS	N-CA-C	-5.53	103.09	110.55
1	AA	2298	A	N9-C1'-C2'	5.52	122.29	114.00
50	BQ	21	VAL	N-CA-C	5.52	116.06	107.28
13	CP	132	LYS	N-CA-C	-5.52	105.34	111.36
38	DE	99	GLY	N-CA-C	-5.52	106.70	111.95
35	BB	197	VAL	N-CA-C	5.52	116.25	108.36
13	AP	70	GLN	N-CA-C	5.51	116.52	108.14
11	CN	75	TYR	N-CA-C	5.51	117.39	108.41
57	BZ	-45	LYS	CA-C-N	5.51	126.73	119.84
57	BZ	-45	LYS	C-N-CA	5.51	126.73	119.84
23	CZ	129	SER	CA-C-N	5.51	126.72	119.84
23	CZ	129	SER	C-N-CA	5.51	126.72	119.84
34	BA	266	G	C2'-C3'-O3'	5.50	117.75	109.50
5	CE	193	GLY	N-CA-C	-5.50	107.93	114.48
39	BF	65	VAL	CB-CA-C	-5.50	102.28	111.29
35	DB	172	ILE	CB-CA-C	-5.49	104.72	112.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	DQ	27	PHE	N-CA-C	5.49	113.08	108.13
29	A5	23	HIS	N-CA-C	5.49	120.09	112.90
31	A7	8	ASN	CB-CA-C	5.49	118.41	110.79
8	AH	117	PRO	CA-C-N	5.48	125.46	120.03
8	AH	117	PRO	C-N-CA	5.48	125.46	120.03
23	AZ	164	ALA	N-CA-C	-5.48	105.54	113.21
5	CE	137	HIS	N-CA-C	5.48	118.07	110.07
38	BE	92	LYS	CA-C-N	-5.47	113.61	120.51
38	BE	92	LYS	C-N-CA	-5.47	113.61	120.51
37	DD	170	VAL	N-CA-C	5.47	116.16	108.17
25	A1	62	VAL	N-CA-C	5.47	117.77	108.86
11	CN	120	LEU	N-CA-C	-5.47	102.19	110.28
5	AE	168	MET	N-CA-C	5.46	118.64	109.95
4	CD	271	ILE	CB-CA-C	-5.46	104.89	112.04
57	DZ	659	LEU	N-CA-C	-5.46	104.87	112.45
44	BK	48	ILE	N-CA-C	-5.46	100.77	109.17
7	CG	58	GLN	N-CA-C	-5.46	106.47	113.02
57	DZ	213	HIS	N-CA-C	-5.45	105.42	111.36
22	CY	37	VAL	N-CA-C	5.44	116.20	108.42
8	AH	147	ASN	CB-CA-C	-5.44	101.71	110.74
14	AQ	39	PRO	CA-C-O	-5.44	115.23	121.86
21	AX	87	GLN	N-CA-C	-5.43	100.81	109.07
1	AA	215	G	O4'-C1'-N9	5.43	116.35	108.20
18	CU	15	LYS	N-CA-C	5.43	117.90	111.33
4	CD	145	VAL	N-CA-C	5.42	116.05	108.89
5	CE	190	GLY	CA-C-N	5.42	125.40	120.03
5	CE	190	GLY	C-N-CA	5.42	125.40	120.03
8	CH	115	VAL	N-CA-C	5.42	116.29	108.48
13	AP	7	ARG	CA-C-N	-5.42	114.37	119.85
13	AP	7	ARG	C-N-CA	-5.42	114.37	119.85
57	BZ	94	VAL	N-CA-C	-5.41	107.20	112.29
7	AG	38	VAL	CB-CA-C	-5.41	104.49	111.53
11	AN	71	ILE	N-CA-C	5.41	115.38	107.37
6	CF	57	VAL	N-CA-C	-5.41	104.10	110.21
15	AR	54	LEU	N-CA-C	-5.40	105.56	111.82
46	DM	9	ILE	CA-C-N	5.40	126.59	119.84
46	DM	9	ILE	C-N-CA	5.40	126.59	119.84
16	AS	99	LYS	N-CA-C	-5.40	105.56	111.82
21	CX	63	LYS	N-CA-C	-5.40	102.89	110.50
13	AP	75	ILE	CB-CA-C	-5.39	104.14	111.15
33	A9	18	ARG	N-CA-C	-5.39	100.11	108.90
8	CH	28	GLY	CA-C-N	5.39	124.91	119.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	CH	28	GLY	C-N-CA	5.39	124.91	119.19
12	CO	118	ALA	CA-C-N	5.39	126.58	119.84
12	CO	118	ALA	C-N-CA	5.39	126.58	119.84
15	AR	47	PHE	N-CA-C	-5.39	105.05	111.03
28	C4	18	CYS	N-CA-C	-5.39	106.71	113.28
9	AK	29	TYR	N-CA-C	5.38	117.43	110.65
11	AN	65	LYS	N-CA-C	-5.38	106.59	112.72
18	AU	11	ARG	N-CA-C	-5.38	105.42	111.28
11	AN	5	VAL	N-CA-C	5.38	114.01	107.61
49	DP	33	ILE	CB-CA-C	-5.38	104.80	112.22
1	AA	1212	C	OP1-P-O3'	-5.37	91.89	108.00
1	AA	553	A	N1-C6-N6	5.37	134.71	118.60
31	A7	47	ARG	N-CA-C	5.37	120.48	113.88
51	BR	21	LYS	N-CA-C	5.37	118.35	110.30
40	BG	66	VAL	N-CA-C	-5.36	107.20	111.81
20	CW	35	ILE	CB-CA-C	-5.36	105.02	111.88
8	AH	167	GLU	CA-C-N	5.36	127.75	120.79
8	AH	167	GLU	C-N-CA	5.36	127.75	120.79
57	DZ	165	GLN	N-CA-C	5.35	115.61	108.38
5	AE	22	PRO	CA-C-N	-5.35	114.19	122.69
5	AE	22	PRO	C-N-CA	-5.35	114.19	122.69
35	DB	201	ILE	CA-C-N	5.35	126.53	119.84
35	DB	201	ILE	C-N-CA	5.35	126.53	119.84
13	CP	12	ALA	N-CA-C	-5.34	106.02	112.54
17	CT	110	ILE	CB-CA-C	-5.33	105.05	111.88
18	AU	17	ILE	N-CA-C	-5.33	105.52	110.53
37	DD	148	VAL	N-CA-C	-5.33	100.67	108.99
17	AT	16	ARG	N-CA-C	-5.33	102.57	110.46
42	DI	20	ARG	CA-C-N	5.33	126.50	119.84
42	DI	20	ARG	C-N-CA	5.33	126.50	119.84
1	AA	2641	A	O4'-C1'-N9	5.33	116.19	108.20
20	CW	51	LEU	N-CA-C	-5.33	105.37	111.07
37	DD	38	TYR	CA-C-N	5.32	125.86	120.38
37	DD	38	TYR	C-N-CA	5.32	125.86	120.38
37	BD	202	LEU	N-CA-C	5.32	116.89	111.14
20	CW	61	ASN	N-CA-C	5.32	120.57	112.54
6	AF	58	ALA	N-CA-C	5.32	119.64	113.20
28	A4	57	GLU	N-CA-C	5.32	117.06	108.34
31	C7	6	GLN	CA-C-N	5.31	126.48	119.84
31	C7	6	GLN	C-N-CA	5.31	126.48	119.84
4	AD	75	ILE	CB-CA-C	-5.31	104.79	110.95
43	BJ	76	ASN	CA-C-N	5.31	126.48	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
43	BJ	76	ASN	C-N-CA	5.31	126.48	119.84
4	AD	28	GLU	CB-CG-CD	5.31	121.63	112.60
27	A3	11	SER	N-CA-C	5.31	116.38	109.64
1	AA	1377	A	OP1-P-O3'	-5.30	92.10	108.00
1	AA	2045	G	O5'-P-OP2	5.30	123.89	108.00
10	CL	128	ALA	N-CA-C	-5.29	106.59	113.16
25	A1	90	ILE	CB-CA-C	-5.29	105.19	111.97
57	BZ	-54	GLY	N-CA-C	5.29	118.20	110.63
7	AG	6	ALA	N-CA-C	5.29	116.74	110.97
57	DZ	653	PHE	N-CA-C	-5.29	107.48	114.04
47	BN	13	THR	CA-C-N	5.28	125.26	120.03
47	BN	13	THR	C-N-CA	5.28	125.26	120.03
5	AE	20	ALA	CA-C-N	-5.28	115.84	123.28
5	AE	20	ALA	C-N-CA	-5.28	115.84	123.28
32	A8	58	ILE	N-CA-CB	5.26	116.35	110.51
35	BB	25	ASN	CA-C-N	-5.26	114.90	121.00
35	BB	25	ASN	C-N-CA	-5.26	114.90	121.00
34	DA	913	A	P-O3'-C3'	5.26	128.09	120.20
1	AA	1700	G	P-O3'-C3'	5.26	128.09	120.20
39	BF	60	PHE	CB-CA-C	-5.26	104.56	111.82
6	AF	179	GLU	N-CA-C	-5.26	106.82	113.18
1	CA	2689	U	C4'-C3'-O3'	5.26	117.28	109.40
13	AP	115	LEU	N-CA-C	5.25	117.39	109.41
14	AQ	114	ALA	N-CA-C	-5.25	104.99	111.40
49	BP	45	THR	CA-C-N	5.25	126.41	119.84
49	BP	45	THR	C-N-CA	5.25	126.41	119.84
1	AA	1249	A	O4'-C1'-N9	5.25	116.08	108.20
28	A4	6	HIS	CA-C-N	5.25	126.40	119.84
28	A4	6	HIS	C-N-CA	5.25	126.40	119.84
8	CH	84	SER	N-CA-C	5.25	117.05	108.55
3	CC	201	LYS	N-CA-C	-5.25	102.84	110.08
26	C2	17	SER	CA-C-N	5.25	126.40	119.84
26	C2	17	SER	C-N-CA	5.25	126.40	119.84
13	CP	74	GLU	N-CA-C	-5.24	102.29	110.10
1	CA	757	U	O5'-P-OP2	-5.24	92.28	108.00
57	BZ	-13	GLN	N-CA-C	-5.24	105.72	112.68
14	AQ	35	VAL	N-CA-C	5.23	116.11	108.53
5	AE	21	VAL	CB-CA-C	5.22	116.32	110.52
51	DR	45	SER	N-CA-C	5.22	118.06	110.17
57	BZ	315	LYS	N-CA-C	5.22	116.58	107.49
32	A8	13	ARG	CA-C-N	-5.22	114.97	121.96
32	A8	13	ARG	C-N-CA	-5.22	114.97	121.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AC	201	LYS	N-CA-C	-5.21	102.88	110.08
5	AE	187	ALA	N-CA-C	5.21	118.56	110.17
7	AG	38	VAL	N-CA-C	5.21	114.25	106.85
37	BD	9	CYS	N-CA-C	-5.21	105.60	111.28
3	AC	68	GLY	N-CA-C	5.21	125.53	113.18
16	AS	59	LYS	N-CA-C	5.21	121.89	110.80
13	CP	44	GLY	CA-C-N	5.21	131.07	121.70
13	CP	44	GLY	C-N-CA	5.21	131.07	121.70
1	AA	2554	A	O5'-P-OP2	-5.20	92.39	108.00
6	AF	114	VAL	N-CA-C	-5.20	105.32	110.62
31	C7	17	GLY	N-CA-C	5.20	118.84	112.14
3	CC	68	GLY	N-CA-C	5.20	125.49	113.18
12	AO	71	ARG	CA-C-N	-5.19	114.73	119.82
12	AO	71	ARG	C-N-CA	-5.19	114.73	119.82
27	A3	59	VAL	N-CA-C	5.19	117.52	108.90
9	AK	38	HIS	N-CA-C	-5.19	106.04	114.09
12	AO	91	LEU	N-CA-C	5.19	118.75	111.90
1	CA	2712	U	P-O3'-C3'	5.19	125.93	119.70
8	CH	131	VAL	N-CA-C	5.19	116.13	108.45
9	AK	30	GLN	N-CA-C	-5.19	108.71	114.62
10	AL	98	ARG	N-CA-C	5.19	116.96	109.07
35	DB	171	ALA	N-CA-C	-5.19	106.26	112.59
23	AZ	29	TYR	N-CA-C	5.19	116.17	108.60
35	DB	41	ILE	N-CA-C	5.18	115.32	107.80
6	AF	64	ILE	N-CA-C	5.18	115.95	110.72
15	AR	91	GLN	N-CA-C	5.18	117.11	107.99
57	BZ	-63	ILE	CB-CA-C	-5.18	104.67	111.25
18	AU	43	GLY	N-CA-C	-5.17	106.52	112.73
4	CD	7	LYS	N-CA-C	-5.17	102.63	110.39
43	DJ	21	GLN	N-CA-C	-5.17	107.35	113.97
20	AW	78	GLU	N-CA-CB	5.17	118.83	110.41
57	DZ	423	LYS	N-CA-C	-5.17	107.36	113.97
20	CW	75	TYR	N-CA-C	5.17	116.69	108.79
1	AA	2803	A	C3'-C2'-C1'	-5.16	96.14	101.30
18	AU	70	ARG	N-CA-C	-5.16	106.49	112.89
22	AY	97	ARG	N-CA-C	-5.16	102.64	110.28
34	BA	1067	A	P-O3'-C3'	5.16	127.93	120.20
13	AP	85	LEU	N-CA-C	-5.15	105.74	111.36
4	AD	131	LEU	CA-C-N	-5.15	114.47	119.78
4	AD	131	LEU	C-N-CA	-5.15	114.47	119.78
4	AD	211	ARG	N-CA-C	-5.15	105.58	111.14
8	AH	9	ILE	CA-C-N	-5.15	114.43	119.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	AH	9	ILE	C-N-CA	-5.15	114.43	119.99
16	AS	87	PHE	N-CA-C	5.15	117.13	109.25
57	DZ	160	ARG	N-CA-C	5.15	121.19	109.81
23	AZ	179	ASP	N-CA-C	5.15	121.76	110.80
5	AE	118	LYS	N-CA-C	5.14	117.67	111.40
22	AY	72	VAL	N-CA-CB	-5.14	103.22	110.26
52	BS	41	VAL	CA-C-N	5.13	126.26	119.84
52	BS	41	VAL	C-N-CA	5.13	126.26	119.84
34	BA	913	A	P-O3'-C3'	5.13	127.90	120.20
18	AU	105	VAL	CB-CA-C	-5.13	105.14	112.22
48	BO	11	VAL	N-CA-C	-5.13	107.81	112.12
29	C5	27	PRO	O-C-N	5.13	123.67	121.31
15	AR	2	ARG	N-CA-CB	-5.12	103.67	111.66
5	CE	72	VAL	N-CA-C	5.12	115.86	108.48
14	CQ	49	ALA	N-CA-C	-5.12	104.66	112.04
57	DZ	286	ILE	CA-C-N	5.12	123.40	119.66
57	DZ	286	ILE	C-N-CA	5.12	123.40	119.66
22	AY	8	LYS	N-CA-C	5.12	117.19	109.41
50	DQ	29	HIS	CA-C-N	5.12	125.41	119.47
50	DQ	29	HIS	C-N-CA	5.12	125.41	119.47
1	AA	1006	C	O5'-P-OP2	-5.12	92.64	108.00
14	CQ	27	VAL	N-CA-C	5.12	117.45	111.05
1	AA	2858	G	O4'-C1'-N9	5.12	115.87	108.20
4	AD	83	GLU	N-CA-C	5.11	117.18	109.41
1	AA	2883	A	O4'-C1'-N9	5.11	115.86	108.20
44	DK	57	THR	N-CA-C	5.11	115.47	109.60
24	C0	82	ARG	CA-C-N	5.11	125.38	119.92
24	C0	82	ARG	C-N-CA	5.11	125.38	119.92
33	C9	4	ARG	N-CA-C	5.11	116.06	108.60
35	BB	23	ARG	N-CA-C	-5.10	104.68	111.87
57	BZ	86	GLY	N-CA-C	5.10	118.00	112.29
41	DH	79	VAL	N-CA-C	-5.10	105.57	110.72
16	AS	76	LYS	N-CA-C	-5.09	105.62	111.07
25	A1	44	PRO	CA-C-O	-5.09	115.46	121.67
22	CY	83	THR	N-CA-C	5.09	115.77	108.74
24	A0	14	ARG	N-CA-C	5.09	117.62	110.14
35	BB	17	PHE	N-CA-C	5.09	121.64	110.80
57	BZ	646	PHE	N-CA-C	5.09	116.77	108.63
11	CN	63	THR	N-CA-C	5.09	116.67	110.41
44	DK	80	VAL	N-CA-C	5.09	115.98	107.18
22	AY	83	THR	N-CA-C	5.08	116.97	108.99
35	BB	221	LEU	N-CA-C	-5.08	107.25	113.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	CP	144	GLU	CA-C-N	5.08	126.19	119.84
13	CP	144	GLU	C-N-CA	5.08	126.19	119.84
1	CA	1314	C	O5'-P-OP2	-5.08	92.76	108.00
34	DA	687	A	P-O3'-C3'	5.08	127.82	120.20
16	AS	22	GLY	N-CA-C	5.08	121.12	115.08
5	CE	11	MET	N-CA-C	5.08	118.03	109.95
34	BA	687	A	P-O3'-C3'	5.08	127.82	120.20
45	BL	124	LYS	CA-C-N	5.08	126.18	119.84
45	BL	124	LYS	C-N-CA	5.08	126.18	119.84
1	AA	2678	C	OP2-P-O3'	5.07	123.22	108.00
51	BR	32	ARG	N-CA-C	-5.07	106.33	112.88
1	AA	1196	C	OP2-P-O3'	5.07	123.21	108.00
5	CE	199	ARG	N-CA-C	5.07	117.38	109.52
18	CU	44	ASN	N-CA-C	-5.07	105.94	111.82
6	AF	114	VAL	CB-CA-C	-5.07	105.30	112.14
17	CT	71	GLY	N-CA-C	-5.07	105.61	112.14
25	C1	67	ILE	CB-CA-C	-5.07	108.98	114.35
45	DL	104	VAL	N-CA-C	5.07	116.10	109.21
43	BJ	34	VAL	N-CA-C	5.06	115.32	107.78
3	AC	46	ALA	CA-C-O	5.06	120.88	117.94
14	CQ	33	GLY	N-CA-C	5.06	118.53	111.14
57	DZ	-11	LYS	N-CA-C	-5.06	100.75	110.56
5	AE	12	THR	N-CA-C	-5.05	102.68	108.49
22	CY	39	VAL	N-CA-C	5.05	114.03	106.85
33	A9	9	ARG	N-CA-C	-5.05	101.73	109.76
17	AT	12	SER	N-CA-C	5.05	117.44	111.33
37	DD	203	VAL	N-CA-C	-5.05	106.23	111.58
11	AN	45	ASN	N-CA-C	5.04	118.75	112.59
4	AD	164	GLN	N-CA-C	5.04	116.63	108.26
43	BJ	73	ASP	N-CA-C	5.04	117.12	108.90
36	BC	202	ILE	N-CA-C	5.04	115.11	107.80
57	BZ	378	VAL	CB-CA-C	-5.04	106.05	111.59
53	DT	11	SER	N-CA-C	-5.04	106.98	112.72
13	AP	47	ASP	CA-C-N	-5.03	115.69	120.83
13	AP	47	ASP	C-N-CA	-5.03	115.69	120.83
4	CD	183	ARG	N-CA-C	5.03	117.77	109.72
57	DZ	639	ASN	CA-C-N	5.03	130.76	121.70
57	DZ	639	ASN	C-N-CA	5.03	130.76	121.70
1	AA	1847	G	O5'-P-OP1	-5.03	92.91	108.00
4	AD	235	GLY	N-CA-C	5.03	120.95	111.80
32	A8	62	LEU	CA-C-N	5.03	124.69	119.56
32	A8	62	LEU	C-N-CA	5.03	124.69	119.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	BH	30	ARG	N-CA-C	-5.03	105.25	111.33
1	AA	991	G	O5'-P-OP1	-5.02	92.93	108.00
4	CD	221	VAL	N-CA-C	5.02	115.20	108.17
25	C1	14	VAL	CB-CA-C	-5.02	104.01	110.84
36	BC	99	VAL	N-CA-C	5.01	114.79	107.37
4	AD	75	ILE	CA-C-N	5.01	124.99	120.03
4	AD	75	ILE	C-N-CA	5.01	124.99	120.03
23	CZ	74	VAL	CB-CA-C	-5.01	103.07	111.29
40	BG	74	GLU	N-CA-C	5.00	115.64	108.74

There are no chirality outliers.

All (6) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
5	AE	74	PRO	Peptide
6	AF	194	MET	Peptide
19	AV	54	GLY	Peptide
35	BB	93	VAL	Peptide
58	BX	3	004	Peptide
57	DZ	159	ALA	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	61861	0	31172	862	0
1	CA	61771	0	31146	1176	0
2	AB	2573	0	1306	27	0
2	CB	2573	0	1306	57	0
3	AC	1063	0	1091	157	4
3	CC	1063	0	1090	183	17
4	AD	2136	0	2218	88	0
4	CD	2142	0	2229	89	0
5	AE	1559	0	1618	64	0
5	CE	1559	0	1618	78	0
6	AF	1584	0	1625	67	0
6	CF	1580	0	1619	79	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	AG	1425	0	1443	68	0
7	CG	1424	0	1434	85	0
8	AH	1330	0	1407	56	0
8	CH	1330	0	1407	54	0
9	AK	641	0	309	16	0
9	CK	641	0	309	10	0
10	AL	498	0	521	23	0
10	CL	498	0	521	29	0
11	AN	1117	0	1184	35	0
11	CN	1117	0	1184	40	0
12	AO	933	0	996	32	0
12	CO	933	0	996	28	0
13	AP	1139	0	1223	44	0
13	CP	1135	0	1212	58	0
14	AQ	1122	0	1179	39	0
14	CQ	1122	0	1179	56	0
15	AR	968	0	1033	34	0
15	CR	968	0	1033	40	0
16	AS	877	0	938	43	0
16	CS	870	0	923	68	0
17	AT	1091	0	1151	51	0
17	CT	1083	0	1136	43	0
18	AU	959	0	1019	30	0
18	CU	959	0	1018	41	0
19	AV	771	0	830	12	0
19	CV	771	0	830	25	0
20	AW	886	0	940	24	0
20	CW	886	0	940	41	0
21	AX	750	0	814	24	0
21	CX	750	0	814	28	0
22	AY	806	0	881	37	0
22	CY	806	0	882	45	0
23	AZ	1451	0	1457	64	0
23	CZ	1451	0	1457	74	0
24	A0	608	0	622	20	0
24	C0	608	0	622	27	0
25	A1	755	0	826	30	0
25	C1	755	0	826	24	0
26	A2	588	0	643	18	0
26	C2	588	0	643	31	0
27	A3	469	0	518	12	0
27	C3	464	0	514	25	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
28	A4	558	0	545	31	0
28	C4	532	0	507	30	0
29	A5	455	0	465	15	0
29	C5	455	0	465	17	0
30	A6	453	0	473	17	0
30	C6	449	0	469	21	0
31	A7	418	0	467	17	0
31	C7	418	0	467	12	0
32	A8	517	0	582	28	0
32	C8	517	0	582	25	0
33	A9	307	0	335	11	0
33	C9	307	0	335	14	0
34	BA	32141	0	16224	691	0
34	DA	32268	0	16287	744	0
35	BB	1846	0	1867	83	0
35	DB	1825	0	1828	102	0
36	BC	1552	0	1546	66	0
36	DC	1544	0	1524	65	0
37	BD	1659	0	1679	68	0
37	DD	1678	0	1719	86	0
38	BE	1129	0	1185	54	0
38	DE	1133	0	1191	69	0
39	BF	812	0	804	32	0
39	DF	820	0	814	38	0
40	BG	1231	0	1238	49	0
40	DG	1235	0	1249	54	0
41	BH	1088	0	1126	54	0
41	DH	1088	0	1126	77	0
42	BI	986	0	995	54	0
42	DI	978	0	966	55	0
43	BJ	709	0	650	32	0
43	DJ	714	0	672	32	0
44	BK	833	0	836	35	0
44	DK	833	0	836	27	0
45	BL	930	0	980	39	0
45	DL	930	0	980	47	0
46	BM	923	0	970	39	0
46	DM	907	0	934	42	0
47	BN	492	0	529	31	0
47	DN	492	0	531	46	0
48	BO	728	0	760	33	0
48	DO	728	0	760	31	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
49	BP	681	0	697	52	0
49	DP	677	0	686	37	0
50	BQ	823	0	891	35	0
50	DQ	823	0	891	35	0
51	BR	555	0	618	27	0
51	DR	555	0	618	30	0
52	BS	661	0	675	38	0
52	DS	646	0	644	34	0
53	BT	728	0	798	39	0
53	DT	731	0	807	28	0
54	BU	199	0	208	7	0
54	DU	199	0	208	9	0
55	BV	148	0	76	3	0
55	DV	123	0	66	1	0
56	BW	1631	0	839	25	0
56	BY	1581	0	805	25	0
56	DW	1631	0	839	33	0
56	DY	1561	0	796	33	0
57	BZ	5663	0	5747	286	17
57	DZ	5682	0	5766	243	4
58	BX	93	0	85	14	0
58	DX	93	0	85	15	0
59	A0	5	0	0	0	0
59	A2	1	0	0	0	0
59	A5	1	0	0	0	0
59	A6	2	0	0	0	0
59	A7	4	0	0	0	0
59	A8	1	0	0	0	0
59	A9	1	0	0	0	0
59	AA	821	0	0	0	0
59	AB	23	0	0	0	0
59	AD	12	0	0	0	0
59	AE	5	0	0	0	0
59	AF	8	0	0	0	0
59	AG	2	0	0	0	0
59	AH	1	0	0	0	0
59	AN	3	0	0	0	0
59	AO	1	0	0	0	0
59	AP	4	0	0	0	0
59	AQ	3	0	0	0	0
59	AR	2	0	0	0	0
59	AU	3	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	AV	6	0	0	0	0
59	AW	3	0	0	0	0
59	AX	1	0	0	0	0
59	AY	1	0	0	0	0
59	AZ	2	0	0	0	0
59	BA	215	0	0	0	0
59	BB	1	0	0	0	0
59	BD	1	0	0	0	0
59	BE	1	0	0	0	0
59	BF	1	0	0	0	0
59	BK	1	0	0	0	0
59	BL	2	0	0	0	0
59	BM	1	0	0	0	0
59	BN	2	0	0	0	0
59	BS	1	0	0	0	0
59	BT	1	0	0	0	0
59	BW	3	0	0	0	0
59	BZ	1	0	0	0	0
59	C0	1	0	0	0	0
59	C1	1	0	0	0	0
59	C3	1	0	0	0	0
59	C5	1	0	0	0	0
59	C7	1	0	0	0	0
59	C8	1	0	0	0	0
59	CA	664	0	0	0	0
59	CB	13	0	0	0	0
59	CD	4	0	0	0	0
59	CE	5	0	0	0	0
59	CF	4	0	0	0	0
59	CG	1	0	0	0	0
59	CN	1	0	0	0	0
59	CO	1	0	0	0	0
59	CP	1	0	0	0	0
59	CQ	4	0	0	0	0
59	CR	1	0	0	0	0
59	CU	1	0	0	0	0
59	CV	2	0	0	0	0
59	CW	1	0	0	0	0
59	CX	1	0	0	0	0
59	DA	171	0	0	0	0
59	DD	1	0	0	0	0
59	DE	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	DF	1	0	0	0	0
59	DJ	1	0	0	0	0
59	DK	1	0	0	0	0
59	DT	1	0	0	0	0
59	DW	3	0	0	0	0
59	DZ	2	0	0	0	0
60	A4	1	0	0	0	0
60	A5	1	0	0	0	0
60	A6	1	0	0	0	0
60	A9	1	0	0	0	0
60	AY	1	0	0	0	0
60	BN	1	0	0	0	0
60	C4	1	0	0	0	0
60	C5	1	0	0	0	0
60	C6	1	0	0	0	0
60	C9	1	0	0	0	0
60	CY	1	0	0	0	0
60	DN	1	0	0	0	0
61	BD	8	0	0	1	0
61	DD	8	0	0	2	0
62	BZ	28	0	12	5	0
62	DZ	28	0	12	7	0
63	A0	6	0	0	0	0
63	A1	2	0	0	0	0
63	A3	2	0	0	0	0
63	A5	3	0	0	0	0
63	A6	1	0	0	0	0
63	A7	2	0	0	1	0
63	A8	10	0	0	1	0
63	A9	1	0	0	0	0
63	AA	1413	0	0	66	0
63	AB	38	0	0	3	0
63	AD	10	0	0	2	0
63	AE	17	0	0	4	0
63	AF	11	0	0	1	0
63	AG	3	0	0	1	0
63	AH	1	0	0	0	0
63	AN	1	0	0	0	0
63	AO	3	0	0	0	0
63	AP	16	0	0	1	0
63	AQ	4	0	0	1	0
63	AR	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
63	AS	1	0	0	1	0
63	AT	1	0	0	0	0
63	AU	4	0	0	0	0
63	AV	1	0	0	0	0
63	AW	1	0	0	0	0
63	AX	3	0	0	0	0
63	AZ	1	0	0	0	0
63	BA	213	0	0	19	0
63	BD	1	0	0	0	0
63	BM	1	0	0	0	0
63	BO	1	0	0	0	0
63	BP	1	0	0	0	0
63	BV	1	0	0	0	0
63	BW	1	0	0	0	0
63	BZ	2	0	0	0	0
63	C0	4	0	0	0	0
63	C3	2	0	0	0	0
63	C5	1	0	0	0	0
63	C7	2	0	0	0	0
63	C8	4	0	0	0	0
63	CA	983	0	0	79	0
63	CB	9	0	0	1	0
63	CD	15	0	0	1	0
63	CE	9	0	0	1	0
63	CF	6	0	0	0	0
63	CN	1	0	0	0	0
63	CO	1	0	0	0	0
63	CP	11	0	0	2	0
63	CQ	2	0	0	1	0
63	CT	3	0	0	0	0
63	CU	2	0	0	0	0
63	CV	1	0	0	1	0
63	CW	1	0	0	0	0
63	CX	1	0	0	0	0
63	CY	2	0	0	1	0
63	DA	157	0	0	13	0
63	DD	1	0	0	0	0
63	DE	2	0	0	2	0
63	DH	1	0	0	0	0
63	DJ	1	0	0	0	0
63	DK	2	0	0	0	0
63	DL	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
63	DT	1	0	0	0	0
All	All	310038	0	209219	7561	21

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 (7561) 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:H5"	3:AC:206:LYS:CG	1.32	1.59
1:AA:1891:G:C5'	3:AC:206:LYS:HD2	1.36	1.52
1:CA:2128:C:H5"	3:CC:219:MET:CE	1.36	1.51
1:CA:2132:U:C4	3:CC:6:LYS:HE3	1.51	1.41
1:CA:2128:C:C5'	3:CC:219:MET:HE1	1.50	1.38
1:AA:1891:G:C5'	3:AC:206:LYS:CD	2.01	1.37
1:CA:2121:G:C1'	3:CC:168:LYS:CD	1.99	1.33
1:CA:2121:G:C1'	3:CC:168:LYS:HD3	1.51	1.32
1:CA:2121:G:O2'	3:CC:168:LYS:HB3	1.17	1.32
1:CA:2121:G:C2'	3:CC:168:LYS:HD3	1.61	1.30
1:AA:1891:G:C5'	3:AC:206:LYS:CG	2.12	1.27
1:CA:2178:C:OP1	3:CC:47:LYS:HG2	1.28	1.24
1:CA:2128:C:OP1	3:CC:219:MET:HE2	1.07	1.24
1:CA:2128:C:C5'	3:CC:219:MET:CE	2.08	1.23
1:CA:2121:G:O2'	3:CC:168:LYS:CB	1.88	1.21
1:AA:1891:G:H5'	3:AC:206:LYS:CD	1.68	1.14
1:CA:1053:C:C4	1:CA:1054:A:H8	1.68	1.11
1:CA:1054:A:C2	1:CA:1055:G:C8	2.38	1.10
1:CA:1053:C:N3	1:CA:1054:A:C8	2.20	1.10
1:CA:2121:G:O2'	3:CC:168:LYS:HD3	1.50	1.10
1:AA:1891:G:H5"	3:AC:206:LYS:HG2	1.18	1.09
1:CA:2128:C:H5"	3:CC:219:MET:HE3	1.17	1.09
1:CA:1053:C:C4	1:CA:1054:A:C8	2.40	1.09
1:CA:2121:G:H1'	3:CC:168:LYS:CD	1.60	1.09
1:CA:2128:C:H5'	3:CC:219:MET:HE1	1.22	1.07
1:CA:2128:C:OP1	3:CC:219:MET:CE	2.01	1.06
1:AA:1891:G:H5"	3:AC:206:LYS:HG3	1.36	1.03
1:AA:2154:U:O2	3:AC:6:LYS:HB3	1.58	1.03
1:CA:1107:G:C8	1:CA:1107:G:H5"	1.96	1.00
1:CA:1798:U:OP2	4:CD:274:ARG:NH2	1.94	0.99
1:CA:2178:C:OP1	3:CC:47:LYS:CG	2.11	0.99
1:CA:2121:G:O2'	3:CC:168:LYS:CD	2.10	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2176:A:H4'	3:CC:45:HIS:CD2	1.98	0.98
20:CW:14:PRO:HG2	20:CW:78:GLU:HG2	1.47	0.97
1:CA:1689:A:H62	1:CA:1698:A:H2	1.08	0.97
1:CA:2120:G:H21	3:CC:168:LYS:CE	1.78	0.97
1:AA:9:U:H3	1:AA:2641:A:H2	1.10	0.97
1:CA:2132:U:C4	3:CC:6:LYS:CE	2.46	0.96
1:CA:2121:G:N2	3:CC:169:THR:OG1	1.99	0.96
1:CA:2120:G:N2	3:CC:168:LYS:HE2	1.79	0.96
1:AA:1405:A:H61	1:AA:1418:U:H3	1.13	0.96
1:AA:831:A:OP2	63:AA:3901:HOH:O	1.83	0.95
1:AA:1090:G:O2'	1:AA:1157:A:N6	1.99	0.95
1:CA:2121:G:H1'	3:CC:168:LYS:CG	1.97	0.94
45:DL:32:PHE:HB3	45:DL:84:LEU:HD11	1.50	0.93
1:CA:2132:U:C5	3:CC:6:LYS:HE3	2.04	0.93
1:CA:2176:A:O2'	3:CC:45:HIS:CG	2.21	0.93
7:AG:110:ALA:HB1	7:AG:140:ILE:HG23	1.51	0.93
33:C9:25:VAL:HB	33:C9:34:GLN:HB2	1.50	0.93
45:DL:36:VAL:HG23	58:DX:10:2QY:H89	1.51	0.92
1:CA:1332:G:OP1	63:CA:3701:HOH:O	1.86	0.92
1:CA:2206:G:H3'	1:CA:2207:G:C8	2.04	0.92
1:AA:2198:A:O2'	3:AC:45:HIS:CD2	2.23	0.92
1:AA:1891:G:C4'	3:AC:206:LYS:HD2	1.98	0.92
38:DE:100:VAL:O	38:DE:107:ARG:NH2	2.03	0.92
31:A7:24:THR:HG22	31:A7:27:GLY:H	1.35	0.92
34:DA:358:U:OP1	57:DZ:381:LYS:NZ	2.01	0.91
1:AA:1829:U:H5'	4:AD:259:THR:HG22	1.52	0.91
1:CA:993:G:OP1	18:CU:50:ARG:NH2	2.03	0.91
12:CO:25:LEU:HD11	12:CO:40:VAL:HG23	1.53	0.91
1:AA:1717:C:OP1	63:AA:3902:HOH:O	1.89	0.91
1:CA:1053:C:N3	1:CA:1054:A:H8	1.60	0.90
34:BA:368:U:OP1	57:BZ:351:ARG:NH1	2.04	0.90
1:AA:1087:C:H42	1:AA:1160:G:H1	1.17	0.90
1:CA:2120:G:H21	3:CC:168:LYS:HE3	1.37	0.89
1:AA:1891:G:H4'	3:AC:206:LYS:CD	2.01	0.89
34:BA:134:A:H61	49:BP:25:ARG:HH12	1.16	0.89
1:AA:1891:G:H5"	3:AC:206:LYS:CD	1.81	0.89
1:AA:2459:G:OP2	63:AA:3903:HOH:O	1.91	0.89
57:BZ:373:ASP:OD2	57:BZ:374:LEU:N	2.06	0.89
1:CA:2128:C:P	3:CC:219:MET:HE2	2.13	0.89
1:AA:1249:A:H2	1:AA:1287:A:H62	1.19	0.89
8:AH:86:GLU:HB2	8:AH:165:ALA:HB2	1.55	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:13:ARG:NH1	57:BZ:277:VAL:O	2.05	0.88
1:AA:2143:G:O4'	3:AC:168:LYS:NZ	2.06	0.88
4:AD:69:ARG:NH2	4:AD:128:GLY:O	2.06	0.88
1:CA:1054:A:C2	1:CA:1055:G:C5	2.62	0.88
34:BA:69:G:H1	34:BA:100:C:H42	1.18	0.88
6:CF:101:LEU:HD12	6:CF:102:PRO:HD2	1.54	0.88
1:AA:1736:A:H62	1:AA:1745:A:H2	1.22	0.88
3:AC:31:LYS:NZ	3:AC:181:PHE:O	2.06	0.88
15:AR:67:LEU:HD13	15:AR:76:VAL:HG21	1.54	0.88
1:CA:2121:G:O2'	3:CC:168:LYS:CG	2.21	0.87
1:CA:2287:A:H62	1:CA:2344:U:H3	1.20	0.87
3:CC:31:LYS:NZ	3:CC:181:PHE:O	2.06	0.87
1:CA:601:C:OP1	6:CF:108:LYS:NZ	2.08	0.87
1:AA:1118:C:N4	1:AA:1145:G:O6	2.08	0.87
1:CA:1153:C:OP1	18:CU:92:ARG:NH1	2.06	0.87
1:AA:1891:G:C4'	3:AC:206:LYS:CD	2.51	0.87
4:CD:238:GLY:O	63:CD:401:HOH:O	1.92	0.87
1:AA:2143:G:N2	3:AC:169:THR:OG1	2.09	0.86
36:BC:70:VAL:HG22	36:BC:72:LYS:H	1.39	0.86
45:BL:49:ASN:ND2	45:BL:92:ASP:OD2	2.08	0.86
1:CA:2227:A:OP2	63:CA:3703:HOH:O	1.93	0.86
51:DR:53:ARG:HG3	51:DR:63:GLN:HE21	1.39	0.86
3:AC:52:PRO:HG2	3:AC:53:ARG:HD3	1.57	0.86
6:CF:185:ASP:OD1	6:CF:188:ARG:NH1	2.08	0.86
34:BA:864:A:OP1	63:BA:1901:HOH:O	1.94	0.86
34:BA:1221:G:OP1	34:BA:1320:C:N4	2.07	0.86
47:BN:51:GLY:O	47:BN:53:LEU:N	2.08	0.86
1:CA:2121:G:C4'	3:CC:168:LYS:HD3	1.98	0.86
34:BA:358:U:OP1	57:BZ:381:LYS:NZ	2.09	0.86
34:BA:559:A:OP1	38:BE:126:ARG:NH2	2.08	0.86
3:CC:52:PRO:HG2	3:CC:53:ARG:HD3	1.57	0.86
34:DA:1004:A:H62	34:DA:1037:C:H2'	1.39	0.86
1:CA:2788:C:OP1	5:CE:61:ARG:NH2	2.08	0.85
1:AA:1105:G:H1	1:AA:1125:C:H42	1.20	0.85
1:AA:1891:G:C4'	3:AC:206:LYS:HG3	2.07	0.85
1:CA:1054:A:H2'	1:CA:1054:A:N3	1.90	0.85
1:CA:1456:G:OP2	63:CA:3702:HOH:O	1.92	0.85
1:AA:1094:A:OP2	1:AA:1155:C:N4	2.10	0.85
56:DY:7:A:H61	56:DY:66:U:H3	1.23	0.85
34:DA:677:U:H3	34:DA:713:G:H22	1.22	0.85
1:AA:2601:A:OP1	63:AA:3901:HOH:O	1.94	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2365:G:N7	32:C8:39:LYS:NZ	2.25	0.85
36:DC:7:PRO:HG3	36:DC:201:TYR:HE2	1.42	0.84
1:AA:2297:C:OP2	30:A6:6:ARG:NH1	2.10	0.84
1:CA:1106:G:C2	1:CA:1107:G:C8	2.64	0.84
1:AA:1151:U:H2'	1:AA:1152:G:H8	1.39	0.84
1:AA:656:A:OP1	13:AP:65:ARG:NH1	2.11	0.84
1:AA:1405:A:N6	1:AA:1418:U:H3	1.75	0.84
1:AA:989:G:O6	63:AA:3905:HOH:O	1.95	0.84
34:BA:501:C:OP1	45:BL:117:ARG:NH2	2.10	0.84
1:CA:1054:A:C2	1:CA:1055:G:N7	2.46	0.84
1:AA:1151:U:H2'	1:AA:1152:G:C8	2.12	0.84
15:AR:36:THR:HG22	15:AR:37:THR:H	1.41	0.84
35:DB:104:ASN:HB3	35:DB:108:ILE:HD11	1.60	0.84
57:BZ:115:GLU:H	57:BZ:156:ARG:HH12	1.24	0.84
1:CA:1268:A:OP1	63:CA:3704:HOH:O	1.95	0.84
1:AA:1108:G:H1	1:AA:1122:C:H42	1.25	0.84
22:AY:54:LYS:HA	22:AY:56:PRO:HD3	1.60	0.84
41:BH:86:ILE:HG21	41:BH:133:LEU:HD13	1.58	0.84
1:AA:11:G:H2'	1:AA:12:U:H5"	1.58	0.83
1:CA:1798:U:H5'	4:CD:259:THR:HG22	1.58	0.83
1:AA:778:C:OP1	63:AA:3904:HOH:O	1.94	0.83
34:DA:1132:C:H42	34:DA:1142:G:H1	1.21	0.83
1:AA:1891:G:C5'	3:AC:206:LYS:HG3	1.98	0.82
1:AA:2825:C:H5'	29:A5:29:THR:HG21	1.61	0.82
1:CA:289:A:N6	1:CA:351:G:O2'	2.11	0.82
34:BA:148:G:H1	34:BA:174:C:H42	1.27	0.82
1:CA:2823:A:OP1	5:CE:159:HIS:NE2	2.11	0.82
2:CB:22:U:H3	2:CB:61:G:H1	1.26	0.82
22:AY:15:VAL:HG21	22:AY:42:VAL:HG11	1.61	0.82
34:BA:12:U:O4	63:BA:1902:HOH:O	1.97	0.82
1:CA:847:U:O4	1:CA:933:A:N6	2.12	0.82
1:CA:1603:A:OP1	63:CA:3705:HOH:O	1.97	0.82
1:CA:300:A:OP1	22:CY:86:ARG:NH2	2.13	0.82
1:AA:422:U:O2'	1:AA:423:G:N7	2.13	0.82
3:AC:54:ARG:NH2	3:AC:56:ASP:HB3	1.95	0.82
22:AY:92:ASN:H	22:AY:92:ASN:HD22	1.27	0.82
1:CA:652(B):A:H61	1:CA:655:A:H1'	1.42	0.82
1:AA:1055:A:OP2	11:AN:37:LYS:NZ	2.13	0.82
34:DA:922:G:H4'	38:DE:20:GLN:HA	1.62	0.82
37:DD:100:ARG:HH11	37:DD:137:SER:HB3	1.45	0.82
35:BB:16:HIS:HB2	35:BB:204:ASN:HB3	1.62	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DE:43:LEU:HD22	38:DE:136:MET:HG3	1.62	0.82
57:BZ:-66:MET:N	57:BZ:-46:VAL:O	2.13	0.81
1:CA:1376:C:OP2	63:CA:3706:HOH:O	1.97	0.81
3:CC:54:ARG:NH2	3:CC:56:ASP:HB3	1.95	0.81
1:AA:1111:U:O2	1:AA:1119:A:N6	2.12	0.81
1:AA:1935:A:H4'	1:AA:1936:C:H5"	1.62	0.81
11:AN:12:ARG:NH1	11:AN:50:ASP:OD2	2.13	0.81
57:BZ:380:LEU:HD21	57:BZ:389:LEU:HD21	1.62	0.81
11:CN:20:GLY:HA2	11:CN:61:ARG:HE	1.45	0.81
34:DA:656:C:O2'	48:DO:28:GLN:NE2	2.12	0.81
57:BZ:358:MET:HE1	57:BZ:363:ARG:NH1	1.96	0.81
35:DB:69:LEU:HB3	35:DB:162:ILE:HG22	1.60	0.81
1:AA:1891:G:H5'	3:AC:206:LYS:HD2	0.81	0.81
34:BA:977:A:HO2'	34:BA:981:U:H3	1.26	0.81
1:CA:1076:C:H2'	1:CA:1077:A:H8	1.46	0.81
1:AA:1036:A:OP2	63:AA:3906:HOH:O	1.97	0.81
13:AP:38:GLN:HG2	13:AP:45:LEU:HD23	1.61	0.81
45:BL:80:HIS:CE1	58:BX:6:2R1:H53	1.99	0.81
1:CA:1053:C:H6	1:CA:1053:C:C5'	1.94	0.81
1:AA:95:G:OP1	26:A2:46:GLN:NE2	2.13	0.81
1:CA:1019:U:H3	1:CA:1142(A):A:H62	1.28	0.81
22:CY:94:LYS:NZ	63:CY:601:HOH:O	2.13	0.81
57:BZ:169:GLY:O	57:BZ:173:THR:OG1	1.99	0.80
1:CA:2110:G:H1	1:CA:2179:C:H42	1.29	0.80
49:BP:55:ARG:HH11	49:BP:55:ARG:HA	1.47	0.80
47:BN:48:ALA:HB2	47:BN:53:LEU:HD12	1.61	0.80
1:CA:1053:C:H6	1:CA:1053:C:H5'	1.45	0.80
1:CA:2296:U:OP2	16:CS:9:ARG:NH2	2.15	0.80
20:CW:29:LEU:HD21	20:CW:33:ARG:HH21	1.46	0.80
34:DA:1119:C:OP1	42:DI:83:ARG:NH2	2.14	0.80
53:DT:10:LEU:HB3	53:DT:12:ALA:H	1.46	0.80
1:AA:354:A:H2	1:AA:1255:A:H2'	1.47	0.80
1:AA:1001:G:OP2	14:AQ:14:ARG:NH2	2.13	0.80
34:BA:1352:C:OP1	54:BU:3:LYS:NZ	2.13	0.80
57:DZ:21:ILE:HD11	57:DZ:117:GLN:HE22	1.46	0.80
12:AO:49:ARG:NH2	34:BA:1423:G:OP1	2.15	0.80
57:BZ:499:ARG:HB2	57:BZ:506:GLN:HB3	1.61	0.80
35:BB:88:ALA:HB2	35:BB:219:VAL:HG13	1.64	0.80
57:BZ:13:ARG:HE	57:BZ:277:VAL:HA	1.47	0.80
1:CA:2120:G:N2	3:CC:168:LYS:CE	2.41	0.80
34:DA:1238:A:OP2	63:DA:1801:HOH:O	2.00	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DF:67:MET:HE1	39:DF:75:LEU:HG	1.63	0.79
34:BA:395:C:O3'	57:BZ:349:LYS:NZ	2.14	0.79
1:CA:1648:C:OP1	63:CA:3707:HOH:O	2.00	0.79
5:CE:119:ARG:HD3	5:CE:120:TRP:NE1	1.97	0.79
34:BA:656:C:O2'	48:BO:28:GLN:NE2	2.15	0.79
36:BC:179:ARG:NH1	36:BC:206:GLU:OE2	2.16	0.79
50:DQ:59:ILE:HG22	50:DQ:73:VAL:HA	1.62	0.79
57:DZ:13:ARG:HH12	57:DZ:282:SER:HB3	1.47	0.79
23:AZ:157:LEU:HD11	23:AZ:163:LEU:HD13	1.63	0.79
34:BA:673:G:H2'	34:BA:674:G:C8	2.17	0.79
34:BA:1118:C:OP1	42:BI:9:ARG:NH1	2.15	0.79
4:AD:101:GLU:OE1	4:AD:103:ARG:NH1	2.15	0.79
32:A8:62:LEU:HB3	32:A8:65:GLU:HG2	1.63	0.79
57:DZ:165:GLN:HE21	57:DZ:260:LEU:H	1.30	0.79
1:AA:1873:G:O2'	4:AD:253:GLN:NE2	2.15	0.79
15:AR:33:ARG:NH1	15:AR:115:GLU:OE2	2.16	0.79
57:BZ:495:GLY:HA3	57:BZ:510:VAL:HG12	1.64	0.79
8:AH:7:LEU:HD12	8:AH:8:PRO:HD2	1.65	0.79
34:BA:689:C:HO2'	34:BA:705:U:HO2'	1.30	0.79
34:BA:1502:A:H2	34:BA:1505:G:H1	1.30	0.79
1:AA:709:G:OP1	63:AA:3907:HOH:O	2.01	0.79
1:AA:2101:U:OP1	25:A1:21:ARG:NH2	2.16	0.79
1:AA:2399:U:OP1	24:A0:55:ARG:NH2	2.16	0.79
1:CA:1022:G:H22	1:CA:1142(A):A:H2	1.26	0.79
1:CA:1053:C:H2'	1:CA:1054:A:C4'	2.13	0.79
1:CA:2177:C:H4'	3:CC:46:ALA:O	1.82	0.79
45:DL:57:LYS:HG3	45:DL:67:THR:HG22	1.64	0.79
46:DM:25:ILE:HG23	46:DM:29:ARG:HB3	1.65	0.79
23:CZ:110:GLY:HA3	23:CZ:174:VAL:HG11	1.65	0.78
34:BA:1369:C:H2'	34:BA:1370:G:C8	2.18	0.78
1:CA:1300:U:H4'	1:CA:1301:A:H5'	1.64	0.78
14:CQ:38:GLU:OE2	14:CQ:128:LYS:N	2.15	0.78
3:CC:20:VAL:O	3:CC:21:TYR:HB2	1.83	0.78
12:AO:35:VAL:HG21	12:AO:69:ILE:HD12	1.65	0.78
27:A3:8:LEU:HD13	27:A3:31:LEU:HD23	1.66	0.78
41:BH:114:THR:OG1	41:BH:117:GLY:O	2.00	0.78
1:CA:1053:C:N4	1:CA:1107:G:C6	2.51	0.78
30:C6:10:LEU:HD23	30:C6:22:ALA:HB2	1.64	0.78
1:AA:237:G:OP1	63:AA:3908:HOH:O	2.01	0.78
57:BZ:126:GLU:OE2	57:BZ:132:ARG:NH2	2.16	0.78
17:CT:56:GLY:O	17:CT:59:THR:HG22	1.84	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:613:C:N4	34:DA:627:G:O6	2.13	0.78
34:DA:878:G:H5'	41:DH:89:PRO:HG2	1.65	0.78
1:CA:2285:C:OP2	30:C6:6:ARG:NH1	2.17	0.78
34:DA:728:A:H2'	34:DA:729:A:H8	1.48	0.78
39:DF:91:VAL:HG11	51:DR:72:ARG:HH12	1.49	0.78
14:CQ:140:ALA:HB1	23:CZ:74:VAL:HG21	1.66	0.78
57:BZ:546:ILE:HG23	57:BZ:590:ILE:HG13	1.63	0.78
1:AA:1356:G:OP2	31:A7:9:ARG:NH1	2.17	0.78
13:AP:63:PRO:HD3	32:A8:27:THR:HG22	1.66	0.78
1:CA:1310:G:OP2	31:C7:9:ARG:NH1	2.16	0.78
53:DT:43:LEU:O	53:DT:47:GLY:N	2.16	0.78
20:AW:14:PRO:HG2	20:AW:78:GLU:HG2	1.67	0.77
1:CA:1054:A:C2	1:CA:1055:G:C4	2.72	0.77
34:BA:964:A:OP1	63:BA:1903:HOH:O	2.03	0.77
56:DW:9:A:O2'	56:DW:10:G:N7	2.18	0.77
14:AQ:111:GLU:OE1	14:AQ:133:ARG:NH2	2.16	0.77
15:AR:59:ASP:OD1	15:AR:59:ASP:N	2.14	0.77
17:AT:127:ALA:O	17:AT:129:ARG:N	2.18	0.77
36:BC:116:VAL:HG21	36:BC:202:ILE:HD11	1.66	0.77
1:CA:2121:G:H1'	3:CC:168:LYS:HG2	1.67	0.77
19:CV:59:ALA:HB2	19:CV:96:ILE:HD13	1.67	0.77
48:BO:3:ILE:HG21	48:BO:34:LEU:HD21	1.65	0.77
13:CP:38:GLN:HG2	13:CP:45:LEU:H	1.47	0.77
20:CW:12:ILE:HD12	20:CW:42:ARG:HH11	1.48	0.77
35:DB:77:ALA:HB2	35:DB:211:ILE:HD13	1.65	0.77
1:AA:1231:G:OP2	63:AA:3906:HOH:O	2.01	0.77
12:AO:18:LYS:HB2	12:AO:45:GLU:HB2	1.64	0.77
1:CA:833:U:O2	13:CP:55:ARG:NH2	2.18	0.77
34:DA:522:C:H41	45:DL:53:ARG:HH22	1.29	0.77
35:BB:111:ARG:HG2	35:BB:111:ARG:HH11	1.49	0.77
38:BE:102:ALA:HB1	38:BE:106:PRO:HB2	1.66	0.77
56:BW:73:A:H5'	56:BW:74:C:H5'	1.67	0.77
57:BZ:78:ARG:HH11	57:BZ:78:ARG:CG	1.97	0.77
5:AE:179:GLU:HB3	5:AE:181:LEU:HD22	1.65	0.77
1:CA:370:G:N7	63:CA:3744:HOH:O	2.18	0.77
1:CA:1053:C:H2'	1:CA:1054:A:C5'	2.15	0.77
13:AP:126:VAL:HG12	13:AP:148:LEU:HD22	1.65	0.77
27:C3:6:VAL:HG12	27:C3:56:VAL:HG22	1.67	0.77
3:AC:24:ASP:O	3:AC:28:ARG:HG3	1.85	0.76
1:AA:1846:A:O3'	63:AA:3909:HOH:O	2.01	0.76
1:AA:2564:U:OP2	63:AA:3910:HOH:O	2.02	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:644:G:H4'	41:DH:92:ARG:HH21	1.49	0.76
38:DE:100:VAL:HG22	38:DE:118:ILE:HG22	1.68	0.76
57:DZ:117:GLN:O	57:DZ:121:VAL:N	2.18	0.76
3:AC:27:ALA:O	3:AC:30:VAL:HG22	1.85	0.76
35:BB:27:LYS:NZ	35:BB:193:ASP:OD1	2.17	0.76
3:CC:27:ALA:O	3:CC:30:VAL:HG22	1.85	0.76
34:DA:664:G:H22	34:DA:741:G:H1	1.34	0.76
3:AC:20:VAL:O	3:AC:21:TYR:HB2	1.83	0.76
38:BE:33:VAL:HG21	38:BE:109:ILE:HA	1.68	0.76
34:DA:1251:A:O2'	34:DA:1369:C:O2'	2.00	0.76
57:DZ:148:LEU:O	57:DZ:152:THR:OG1	2.04	0.76
1:CA:397:G:N7	63:CA:3743:HOH:O	2.17	0.76
1:CA:1780:A:OP1	63:CA:3708:HOH:O	2.02	0.76
1:CA:1054:A:N1	1:CA:1055:G:C5	2.54	0.76
17:AT:56:GLY:O	17:AT:59:THR:HG22	1.86	0.76
1:CA:1059:G:H5'	1:CA:1060:U:H2'	1.67	0.76
1:CA:1107:G:C2	1:CA:1108:U:C2	2.73	0.76
1:CA:2494:G:N7	63:CA:3750:HOH:O	2.19	0.76
2:CB:16:G:H1	2:CB:68:C:H42	1.33	0.76
34:DA:1133:G:H2'	34:DA:1134:G:H8	1.49	0.76
34:DA:1069:C:O2'	34:DA:1192:C:O2	2.03	0.76
34:BA:977:A:O2'	34:BA:981:U:N3	2.15	0.76
7:CG:31:VAL:O	7:CG:33:ARG:NH1	2.19	0.76
7:AG:105:LYS:NZ	28:A4:25:TYR:O	2.19	0.76
1:CA:875:G:H1	1:CA:902:C:H42	1.31	0.76
1:CA:1313:U:OP1	63:CA:3711:HOH:O	2.04	0.76
28:C4:40:HIS:HB3	28:C4:43:TYR:HB2	1.66	0.76
43:DJ:62:HIS:HB3	47:DN:59:ALA:HB3	1.69	0.76
34:BA:984:C:N4	34:BA:1221:G:O6	2.20	0.75
3:CC:24:ASP:O	3:CC:28:ARG:HG3	1.85	0.75
57:DZ:129:LYS:NZ	57:DZ:129:LYS:HB3	2.00	0.75
22:AY:23:ARG:HG2	22:AY:42:VAL:HG22	1.67	0.75
57:BZ:169:GLY:HA3	57:BZ:174:PHE:HA	1.66	0.75
1:CA:491:G:H2'	1:CA:492:A:C8	2.21	0.75
1:AA:206:G:OP2	63:AA:3911:HOH:O	2.03	0.75
1:CA:526:A:OP1	63:CA:3709:HOH:O	2.03	0.75
5:CE:47:VAL:HG11	5:CE:86:PRO:HD2	1.68	0.75
34:BA:36:C:O2'	45:BL:117:ARG:NH2	2.18	0.75
50:BQ:59:ILE:HG22	50:BQ:73:VAL:HA	1.69	0.75
7:CG:161:THR:HG22	7:CG:163:ALA:H	1.49	0.75
38:DE:74:GLY:HA3	38:DE:116:THR:HG22	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DI:128:ARG:NH2	56:DW:33:U:OP2	2.18	0.75
52:BS:11:VAL:HG11	52:BS:16:LEU:HB2	1.67	0.75
57:BZ:-55:LEU:HD22	57:BZ:-48:VAL:HG21	1.67	0.75
6:CF:101:LEU:O	6:CF:106:ARG:NH1	2.17	0.75
7:AG:161:THR:HG23	7:AG:163:ALA:H	1.50	0.75
41:BH:43:GLY:O	41:BH:64:LYS:NZ	2.18	0.75
57:BZ:10:LYS:O	57:BZ:12:LEU:N	2.19	0.75
1:CA:674:G:O2'	6:CF:74:ARG:HD3	1.87	0.75
6:CF:154:VAL:HB	6:CF:173:VAL:HG22	1.68	0.75
23:CZ:104:PHE:HB3	23:CZ:141:VAL:HG11	1.68	0.75
1:AA:2840:G:N7	63:AA:3941:HOH:O	2.20	0.75
1:CA:2177:C:O2	3:CC:171:ALA:CB	2.35	0.75
1:CA:2498:C:OP2	63:CA:3710:HOH:O	2.04	0.75
28:C4:36:CYS:SG	28:C4:37:SER:N	2.60	0.75
36:DC:150:LYS:HB3	36:DC:201:TYR:HB2	1.67	0.75
8:CH:106:THR:HG22	8:CH:112:PRO:HB3	1.67	0.75
1:AA:894:U:OP2	63:AA:3912:HOH:O	2.03	0.75
57:DZ:129:LYS:HE3	57:DZ:517:LEU:HG	1.69	0.75
1:CA:2121:G:HO2'	3:CC:168:LYS:HB3	1.49	0.74
2:CB:27:C:H5"	16:CS:54:LEU:HD11	1.69	0.74
8:AH:98:LEU:HD22	8:AH:125:VAL:HG23	1.68	0.74
34:BA:160:A:N6	34:BA:345:C:OP2	2.18	0.74
1:CA:2313:C:H4'	7:CG:91:ARG:HG3	1.69	0.74
35:DB:187:LEU:HA	35:DB:201:ILE:HB	1.70	0.74
1:AA:1891:G:C4'	3:AC:206:LYS:CG	2.65	0.74
22:AY:92:ASN:HB2	22:AY:94:LYS:H	1.51	0.74
1:CA:309:G:N3	1:CA:329:G:O2'	2.21	0.74
34:DA:115:G:OP1	63:DA:1803:HOH:O	2.05	0.74
34:DA:581:G:OP2	63:DA:1802:HOH:O	2.05	0.74
34:BA:766:A:OP2	63:BA:1906:HOH:O	2.06	0.74
36:BC:19:GLU:O	36:BC:40:ARG:NH2	2.20	0.74
1:CA:1054:A:N3	1:CA:1055:G:C8	2.55	0.74
1:CA:2319:G:H22	16:CS:3:ARG:HH21	1.35	0.74
16:CS:100:ALA:HA	16:CS:103:GLU:HB2	1.68	0.74
34:DA:1303:C:OP1	63:DA:1804:HOH:O	2.06	0.74
56:DW:23:A:H2'	56:DW:24:G:C8	2.23	0.74
34:BA:1069:C:OP2	63:BA:1905:HOH:O	2.06	0.74
37:BD:25:ARG:NH1	37:BD:30:LYS:O	2.20	0.74
51:BR:47:THR:O	51:BR:49:LYS:N	2.18	0.74
1:AA:2055:A:OP1	63:AA:3914:HOH:O	2.05	0.74
3:CC:48:LEU:HB3	3:CC:50:ILE:HD12	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DC:50:ALA:HB1	36:DC:70:VAL:HG21	1.68	0.74
1:AA:1549:U:H2'	1:AA:1550:C:C6	2.23	0.74
23:CZ:69:THR:HG22	23:CZ:90:VAL:HG22	1.70	0.74
1:AA:542:C:OP1	29:A5:16:ARG:NH2	2.21	0.74
1:AA:2266:C:OP2	63:AA:3913:HOH:O	2.04	0.74
4:AD:122:ASP:OD1	4:AD:122:ASP:N	2.19	0.74
23:AZ:45:ASP:OD1	23:AZ:49:ARG:NH1	2.20	0.74
1:AA:1553:A:O2'	1:AA:1554:A:O4'	2.06	0.74
34:BA:134:A:N6	49:BP:25:ARG:HH12	1.84	0.74
1:CA:10:G:O2'	1:CA:2801(A):A:N7	2.21	0.74
1:CA:2150:U:H2'	1:CA:2151:G:H8	1.52	0.74
30:C6:26:ASN:O	30:C6:28:ARG:N	2.20	0.74
34:BA:1303:C:OP1	63:BA:1904:HOH:O	2.05	0.73
1:CA:2137:C:H42	1:CA:2154:G:H1	1.36	0.73
34:DA:396:G:OP1	57:DZ:349:LYS:NZ	2.19	0.73
5:AE:29:GLY:HA3	63:AE:402:HOH:O	1.87	0.73
1:CA:2121:G:C4'	3:CC:168:LYS:CD	2.66	0.73
14:AQ:14:ARG:HG2	14:AQ:41:TRP:HH2	1.52	0.73
20:AW:18:ARG:NH1	20:AW:76:VAL:O	2.21	0.73
57:DZ:-63:ILE:HG12	57:DZ:-49:VAL:HG22	1.70	0.73
57:DZ:549:ALA:O	57:DZ:591:LYS:NZ	2.20	0.73
7:AG:131:TYR:HB3	7:AG:159:VAL:HG13	1.71	0.73
34:BA:975:A:H4'	34:BA:976:G:H5"	1.70	0.73
34:DA:1373:G:H5"	40:DG:36:LYS:HD2	1.70	0.73
18:CU:76:TYR:OH	18:CU:92:ARG:NH1	2.20	0.73
40:DG:113:GLU:HB2	40:DG:119:ARG:HG2	1.71	0.73
16:AS:31:SER:O	16:AS:97:ARG:NH2	2.20	0.73
34:BA:1399:C:H4'	34:BA:1400:C:H5"	1.69	0.73
16:CS:94:TYR:OH	16:CS:106:ARG:NH1	2.22	0.73
57:BZ:78:ARG:HH11	57:BZ:78:ARG:HG3	1.54	0.73
34:DA:736:C:H2'	34:DA:737:A:C8	2.24	0.73
37:BD:178:VAL:O	37:BD:180:GLY:N	2.22	0.73
34:DA:35:G:O2'	45:DL:118:SER:O	2.06	0.73
4:AD:221:VAL:HG22	4:AD:226:MET:HE2	1.70	0.73
34:BA:1318:A:H1'	52:BS:37:ARG:HH21	1.53	0.73
34:BA:1353:G:OP1	54:BU:10:ARG:NH1	2.21	0.73
1:CA:648:G:O2'	1:CA:2351:G:OP1	2.04	0.73
3:CC:55:SER:O	3:CC:57:GLN:N	2.22	0.73
7:CG:103:LEU:HD23	7:CG:106:LEU:HD22	1.70	0.73
34:DA:324:G:N7	63:DA:1813:HOH:O	2.22	0.73
47:DN:48:ALA:HB2	47:DN:53:LEU:HD12	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2443:U:OP2	63:AA:3916:HOH:O	2.07	0.72
28:A4:59:PHE:HB3	52:BS:67:VAL:HG21	1.69	0.72
1:CA:1430:C:H2'	1:CA:1431:U:C6	2.24	0.72
57:DZ:92:ILE:O	57:DZ:96:ARG:NH1	2.19	0.72
1:CA:1054:A:C2	1:CA:1055:G:N9	2.57	0.72
1:CA:2178:C:H4'	3:CC:47:LYS:NZ	2.04	0.72
1:CA:2287:A:N6	1:CA:2344:U:H3	1.87	0.72
42:BI:40:LEU:O	42:BI:42:ARG:N	2.22	0.72
1:AA:1020:C:O2	63:AA:3915:HOH:O	2.07	0.72
1:AA:1829:U:OP2	4:AD:274:ARG:NH2	2.22	0.72
57:BZ:125:ALA:HB1	57:BZ:132:ARG:NH1	2.04	0.72
4:CD:69:ARG:NH2	4:CD:128:GLY:O	2.23	0.72
42:DI:7:THR:OG1	42:DI:83:ARG:NH1	2.21	0.72
57:DZ:170:ARG:N	57:DZ:170:ARG:HH11	1.87	0.72
57:DZ:217:VAL:HG13	57:DZ:242:LEU:HD21	1.72	0.72
1:AA:2154:U:C2	3:AC:6:LYS:HB3	2.24	0.72
57:BZ:21:ILE:HD11	57:BZ:117:GLN:HE22	1.53	0.72
1:CA:2683:C:OP1	17:CT:53:ARG:NH2	2.22	0.72
44:DK:99:GLN:HE21	44:DK:105:VAL:HG21	1.55	0.72
1:AA:1809:U:H2'	1:AA:1815:A:N6	2.04	0.72
23:AZ:28:MET:HE3	23:AZ:37:VAL:HG11	1.72	0.72
35:BB:55:PHE:HA	35:BB:58:ILE:HG13	1.70	0.72
1:CA:1419:A:OP2	63:CA:3712:HOH:O	2.06	0.72
1:CA:1932:A:OP2	63:CA:3713:HOH:O	2.07	0.72
57:BZ:388:THR:HG23	57:BZ:399:LEU:HD22	1.71	0.72
34:DA:674:G:H2'	34:DA:675:A:H8	1.53	0.72
57:BZ:417:THR:HA	57:BZ:418:LYS:HG2	1.72	0.72
23:CZ:24:LEU:HB2	23:CZ:41:LEU:HD22	1.72	0.72
36:DC:152:ILE:HB	36:DC:167:TRP:HB3	1.70	0.72
36:BC:172:ARG:NH2	36:BC:206:GLU:OE1	2.19	0.72
32:C8:33:ASN:HA	32:C8:36:LYS:HG3	1.71	0.72
35:DB:100:GLY:O	35:DB:104:ASN:N	2.21	0.72
57:DZ:181:LEU:HD23	57:DZ:182:ARG:HG2	1.71	0.72
48:BO:33:THR:HG21	48:BO:85:LEU:HD22	1.70	0.72
1:CA:491:G:H2'	1:CA:492:A:H8	1.54	0.72
8:CH:24:VAL:HG13	8:CH:37:VAL:HG21	1.72	0.72
56:DY:19:G:N2	56:DY:56:C:N3	2.37	0.72
34:DA:460:G:N2	34:DA:471:G:OP2	2.22	0.71
34:DA:1244:C:O2	34:DA:1294:G:N2	2.22	0.71
46:DM:82:MET:HE2	46:DM:92:HIS:HB3	1.72	0.71
48:DO:54:ARG:HG3	48:DO:58:MET:HE2	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1485:A:OP1	63:AA:3917:HOH:O	2.07	0.71
10:AL:75:SER:HB2	10:AL:127:ILE:HD12	1.69	0.71
27:A3:3:ARG:NH1	27:A3:60:GLU:OE1	2.24	0.71
34:BA:560:U:H5'	34:BA:566:G:N2	2.05	0.71
57:BZ:171:GLU:O	57:BZ:173:THR:N	2.20	0.71
1:CA:2859:G:OP1	63:CA:3714:HOH:O	2.08	0.71
34:DA:1316:G:N2	34:DA:1319:A:OP2	2.23	0.71
27:A3:7:LYS:HG3	27:A3:34:GLU:HG2	1.72	0.71
1:CA:1107:G:N2	1:CA:1108:U:O2	2.23	0.71
24:C0:70:GLN:HE21	24:C0:72:ARG:HG3	1.54	0.71
49:DP:25:ARG:HH11	49:DP:25:ARG:HB2	1.53	0.71
1:AA:1100:A:N6	1:AA:1151:U:H3	1.88	0.71
1:AA:2299:A:H62	1:AA:2356:U:H3	1.38	0.71
57:BZ:69:VAL:HG12	57:BZ:327:PHE:HD1	1.56	0.71
34:DA:707:C:H2'	34:DA:708:C:C6	2.25	0.71
3:CC:51:ASP:HB3	3:CC:57:GLN:OE1	1.91	0.71
3:AC:48:LEU:HB3	3:AC:50:ILE:HD12	1.70	0.71
1:CA:848:G:H2'	1:CA:849:A:C8	2.26	0.71
1:CA:1271:G:OP2	63:CA:3707:HOH:O	2.08	0.71
57:DZ:358:MET:HE1	57:DZ:363:ARG:HD3	1.72	0.71
1:AA:1221:G:H1'	1:AA:1222:A:H5'	1.73	0.71
35:BB:170:GLU:O	35:BB:174:VAL:HG23	1.90	0.71
1:CA:96:G:H4'	26:C2:48:HIS:CD2	2.25	0.71
1:CA:279:C:N3	1:CA:361:G:N2	2.38	0.71
1:CA:1054:A:H2	1:CA:1055:G:N9	1.88	0.71
1:CA:1277:G:N3	63:CA:3766:HOH:O	2.23	0.71
1:CA:2615:U:OP1	63:CA:3716:HOH:O	2.08	0.71
37:BD:98:GLU:OE1	37:BD:103:ASN:ND2	2.22	0.71
49:DP:18:ARG:HD3	49:DP:35:LYS:HD2	1.72	0.71
1:AA:1891:G:O3'	3:AC:206:LYS:HG3	1.90	0.71
34:BA:352:C:OP2	63:BA:1907:HOH:O	2.08	0.71
48:BO:18:PHE:O	48:BO:20:GLY:N	2.23	0.71
1:CA:890:A:H2'	1:CA:892:G:H8	1.54	0.71
14:CQ:14:ARG:HG2	14:CQ:41:TRP:HH2	1.55	0.71
34:DA:803:G:OP1	63:DA:1805:HOH:O	2.09	0.71
34:DA:1456:G:N1	53:DT:51:GLU:OE2	2.21	0.71
34:DA:1459:C:OP1	53:DT:31:SER:OG	2.09	0.71
1:AA:173:C:H2'	1:AA:174:U:H6	1.56	0.70
34:BA:1239:A:H4'	34:BA:1240:U:H5"	1.73	0.70
35:BB:48:MET:HA	35:BB:51:LEU:HD12	1.73	0.70
1:CA:2444:G:OP2	6:CF:68:LYS:HE2	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CK:73:GLY:O	9:CK:75:GLN:N	2.23	0.70
34:DA:393:A:OP2	49:DP:12:LYS:NZ	2.23	0.70
1:AA:2143:G:H1'	3:AC:168:LYS:HE2	1.72	0.70
1:AA:2154:U:H3	3:AC:6:LYS:HB2	1.56	0.70
17:AT:16:ARG:NH2	17:AT:83:ILE:O	2.24	0.70
1:CA:1604:C:OP1	63:CA:3715:HOH:O	2.08	0.70
28:C4:16:CYS:HB3	28:C4:20:ASN:H	1.56	0.70
35:DB:189:ASP:OD1	35:DB:189:ASP:N	2.21	0.70
1:AA:1189:A:OP1	11:AN:25:ARG:NH2	2.25	0.70
1:CA:2357:U:OP1	24:C0:20:ARG:NH1	2.25	0.70
34:DA:742:G:OP2	48:DO:35:ARG:NH2	2.24	0.70
3:AC:51:ASP:HB3	3:AC:57:GLN:OE1	1.91	0.70
4:AD:148:GLU:HB2	4:AD:151:LYS:HD2	1.73	0.70
57:BZ:495:GLY:N	57:BZ:510:VAL:O	2.21	0.70
1:CA:588:U:OP2	63:CA:3718:HOH:O	2.09	0.70
1:CA:1405:U:H2'	1:CA:1406:U:C6	2.26	0.70
20:CW:88:ARG:NH1	20:CW:94:ASP:OD2	2.23	0.70
21:CX:35:THR:HG22	21:CX:38:GLU:H	1.56	0.70
34:DA:1103:C:OP1	35:DB:96:ARG:NH2	2.25	0.70
38:DE:102:ALA:HB1	38:DE:106:PRO:HG2	1.71	0.70
57:DZ:-53:ASP:H	57:DZ:-50:GLN:NE2	1.89	0.70
1:AA:1090:G:HO2'	1:AA:1157:A:N6	1.88	0.70
34:BA:881:G:P	45:BL:12:ARG:HH22	2.14	0.70
34:DA:673:G:H2'	34:DA:674:G:C8	2.26	0.70
47:DN:21:TYR:OH	47:DN:23:ARG:NH2	2.25	0.70
1:AA:2803:A:H5"	1:AA:2804:C:H5'	1.73	0.70
12:AO:2:ILE:HB	12:AO:33:ALA:HB3	1.73	0.70
34:BA:572:A:OP1	63:BA:1908:HOH:O	2.10	0.70
56:BY:60:U:H5"	56:BY:61:C:H5	1.56	0.70
1:CA:229:A:H5"	1:CA:230:U:H5'	1.73	0.70
6:CF:53:THR:HG22	6:CF:56:GLU:HG3	1.72	0.70
24:C0:27:GLU:HG3	24:C0:68:GLU:HA	1.73	0.70
1:AA:1222:A:O2'	1:AA:1223:C:O4'	2.09	0.70
8:AH:113:VAL:HG11	8:AH:151:ILE:HD13	1.72	0.70
34:DA:407:G:H5"	37:DD:115:ARG:HD2	1.74	0.70
39:BF:1:MET:HE3	39:BF:66:GLU:HG2	1.73	0.70
40:BG:156:TRP:HE3	40:BG:156:TRP:H	1.40	0.70
53:BT:26:ASN:ND2	53:BT:71:THR:OG1	2.25	0.70
6:CF:50:SER:HB2	6:CF:94:PRO:HD3	1.74	0.70
5:AE:76:ARG:HB2	5:AE:77:ILE:HD12	1.72	0.70
34:BA:976:G:N2	34:BA:1363:C:OP2	2.20	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BC:11:ARG:NH2	36:BC:177:THR:O	2.25	0.70
37:BD:167:GLY:H	37:BD:168:ARG:HH12	1.38	0.70
57:BZ:73:PHE:CZ	57:BZ:78:ARG:NH1	2.60	0.70
1:CA:1141:U:H2'	11:CN:63:THR:HG21	1.74	0.70
2:CB:76:G:N7	63:CB:3101:HOH:O	2.23	0.70
17:CT:85:LYS:NZ	17:CT:87:ASP:OD2	2.24	0.70
41:DH:21:LYS:O	41:DH:65:TYR:OH	2.07	0.70
34:BA:560:U:H5'	34:BA:566:G:H22	1.56	0.69
34:BA:591:U:H2'	34:BA:592:G:H8	1.57	0.69
58:BX:2:VAL:HG22	58:BX:3:004:HN	1.56	0.69
1:CA:643:A:N1	1:CA:2369:A:O2'	2.23	0.69
2:CB:66:A:H61	2:CB:109:C:H5'	1.55	0.69
6:CF:157:VAL:HB	6:CF:194:MET:HG2	1.73	0.69
34:DA:1307:U:OP1	46:DM:101:GLN:NE2	2.25	0.69
1:AA:1040:C:OP2	18:AU:54:LYS:NZ	2.25	0.69
1:AA:2764:G:H4'	8:AH:4:ILE:HD11	1.72	0.69
3:AC:55:SER:O	3:AC:57:GLN:N	2.22	0.69
57:BZ:125:ALA:HB1	57:BZ:132:ARG:HH11	1.57	0.69
1:CA:1024:G:OP2	63:CA:3717:HOH:O	2.08	0.69
5:CE:59:VAL:HG21	5:CE:74:PRO:HB3	1.74	0.69
34:DA:266:G:H5"	34:DA:268:C:H41	1.57	0.69
34:DA:1326:C:OP1	54:DU:12:LYS:NZ	2.24	0.69
1:CA:2238:G:N7	63:CA:3767:HOH:O	2.24	0.69
34:DA:17:U:H2'	34:DA:18:C:C6	2.27	0.69
36:DC:7:PRO:O	36:DC:11:ARG:NH1	2.25	0.69
9:AK:70:GLU:O	9:AK:72:ASP:N	2.25	0.69
1:CA:20:C:OP1	18:CU:22:LYS:NZ	2.23	0.69
1:CA:1053:C:H2'	1:CA:1054:A:O4'	1.90	0.69
1:CA:2611:U:C4	29:C5:3:LYS:HG2	2.28	0.69
34:DA:1346:A:H5"	42:DI:120:ARG:HH22	1.57	0.69
17:AT:29:ARG:NH2	17:AT:46:GLU:OE1	2.25	0.69
1:CA:528:A:O2'	1:CA:529:A:H5"	1.92	0.69
1:CA:2312:U:H5'	7:CG:88:ILE:HD11	1.73	0.69
1:AA:1834:A:O2'	4:AD:259:THR:HG21	1.93	0.69
3:AC:57:GLN:HG3	3:AC:57:GLN:O	1.93	0.69
34:BA:1338:G:H2'	34:BA:1339:A:C8	2.27	0.69
57:BZ:227:ILE:HG23	57:BZ:237:PRO:HG2	1.74	0.69
1:AA:483:A:OP1	63:AA:3918:HOH:O	2.10	0.69
3:AC:183:PRO:HG2	3:AC:184:GLU:OE2	1.93	0.69
38:DE:147:ASP:HA	38:DE:150:ARG:HD3	1.74	0.69
1:AA:1219:A:H1'	1:AA:1220:U:H5"	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:193:C:O2'	53:BT:64:ASP:OD2	2.11	0.69
34:BA:835:U:OP1	51:BR:64:ARG:NH2	2.24	0.69
34:BA:995:C:N3	34:BA:1046:A:O2'	2.24	0.69
35:BB:200:ILE:HB	35:BB:202:PRO:HD3	1.74	0.69
36:BC:58:GLU:H	36:BC:65:ALA:HB3	1.58	0.69
1:CA:2305:A:H61	7:CG:43:LEU:HD13	1.57	0.69
3:CC:46:ALA:HB3	3:CC:172:ILE:HG22	1.75	0.69
26:C2:64:LEU:HD11	26:C2:68:ARG:HH21	1.57	0.69
27:C3:8:LEU:HD13	27:C3:31:LEU:HD22	1.74	0.69
34:DA:404:U:H2'	34:DA:405:U:H6	1.58	0.69
34:DA:1203:C:H2'	34:DA:1204:A:H8	1.57	0.69
35:DB:178:ARG:NH1	35:DB:196:LEU:O	2.25	0.69
36:DC:65:ALA:HA	36:DC:100:ALA:HB3	1.72	0.69
44:DK:81:ASP:OD1	44:DK:81:ASP:N	2.24	0.69
48:DO:55:GLY:HA2	48:DO:58:MET:HE3	1.74	0.69
13:AP:83:VAL:HG13	13:AP:112:LEU:HD21	1.74	0.69
1:AA:173:C:H2'	1:AA:174:U:C6	2.27	0.69
1:AA:535:C:OP1	63:AA:3919:HOH:O	2.10	0.69
1:AA:1261:G:OP2	18:AU:12:ARG:NH2	2.26	0.69
1:AA:1324:A:OP1	15:AR:36:THR:HG23	1.93	0.69
3:AC:46:ALA:HB3	3:AC:172:ILE:HG22	1.75	0.69
46:BM:84:ILE:HG13	46:BM:86:CYS:H	1.56	0.69
57:BZ:363:ARG:HG2	57:BZ:363:ARG:HH11	1.58	0.69
3:CC:30:VAL:HG23	3:CC:31:LYS:H	1.58	0.69
40:DG:59:LEU:HG	40:DG:63:LYS:HE3	1.75	0.69
1:AA:630:U:OP1	6:AF:102:PRO:HA	1.92	0.68
5:AE:127:ASP:OD2	63:AE:401:HOH:O	2.10	0.68
57:BZ:78:ARG:HE	57:BZ:357:ARG:CZ	2.06	0.68
1:AA:483:A:H5"	63:AA:3918:HOH:O	1.92	0.68
36:BC:52:LEU:HD21	36:BC:55:VAL:HG23	1.75	0.68
3:CC:46:ALA:HB3	3:CC:172:ILE:CG2	2.23	0.68
8:CH:119:GLU:O	8:CH:140:LYS:NZ	2.26	0.68
34:DA:977:A:N6	34:DA:1224:G:OP1	2.27	0.68
1:AA:2227:G:H5'	1:AA:2228:G:N7	2.08	0.68
3:AC:25:GLU:HA	3:AC:28:ARG:HD2	1.74	0.68
34:BA:27:G:H2'	34:BA:28:G:C8	2.28	0.68
1:CA:244:A:C2	1:CA:255:A:C4	2.82	0.68
1:CA:1611:C:OP1	63:CA:3721:HOH:O	2.11	0.68
3:CC:183:PRO:HG2	3:CC:184:GLU:OE2	1.92	0.68
1:AA:1249:A:H2	1:AA:1287:A:N6	1.91	0.68
1:AA:2291:G:N7	24:A0:14:ARG:NH1	2.42	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1095:U:OP1	34:DA:1108:G:N2	2.24	0.68
1:AA:2122:G:H1	1:AA:2211:U:H3	1.40	0.68
3:AC:15:VAL:O	3:AC:16:ASP:HB3	1.92	0.68
6:AF:89:VAL:O	63:AF:401:HOH:O	2.11	0.68
28:A4:69:LYS:HE2	52:BS:20:LEU:HD13	1.75	0.68
34:BA:409:G:H1	34:BA:433:C:H42	1.42	0.68
34:BA:577:G:N7	63:BA:1918:HOH:O	2.26	0.68
42:BI:16:ARG:HB2	42:BI:64:THR:HB	1.75	0.68
57:BZ:-7:GLU:HG3	57:BZ:-6:ARG:HH12	1.59	0.68
1:CA:796:C:H2'	1:CA:797:C:C6	2.29	0.68
6:CF:184:TYR:O	6:CF:188:ARG:HB2	1.93	0.68
34:DA:1070:U:H2'	34:DA:1071:C:H6	1.59	0.68
35:DB:77:ALA:HA	35:DB:80:ILE:HG22	1.74	0.68
48:DO:63:ARG:HG2	48:DO:67:LEU:HD11	1.75	0.68
1:AA:1016:C:OP2	63:AA:3921:HOH:O	2.11	0.68
3:AC:30:VAL:HG23	3:AC:31:LYS:H	1.58	0.68
3:CC:15:VAL:O	3:CC:16:ASP:HB3	1.92	0.68
6:CF:53:THR:HG23	6:CF:55:GLY:H	1.58	0.68
7:CG:16:ARG:HH22	7:CG:28:VAL:HG12	1.59	0.68
39:DF:89:MET:HE2	51:DR:76:LEU:HD13	1.76	0.68
45:DL:24:VAL:HG13	45:DL:98:TYR:HE1	1.58	0.68
53:DT:50:GLU:HB2	53:DT:99:LEU:HD12	1.75	0.68
57:DZ:264:LEU:HB2	62:DZ:703:GDP:C6	2.28	0.68
1:AA:2511:C:OP2	63:AA:3920:HOH:O	2.10	0.68
34:BA:1278:U:H5'	34:BA:1279:A:O4'	1.93	0.68
35:BB:115:LEU:HD13	35:BB:145:LEU:HB3	1.74	0.68
49:BP:67:THR:HG22	49:BP:69:THR:H	1.57	0.68
57:BZ:148:LEU:O	57:BZ:152:THR:OG1	2.11	0.68
1:CA:1309:G:H4'	31:C7:7:PRO:HB2	1.74	0.68
1:CA:1711:C:H42	1:CA:1747(A):G:H1	1.42	0.68
1:CA:1784:A:OP1	63:CA:3723:HOH:O	2.11	0.68
34:DA:382:A:H2'	34:DA:383:A:C8	2.29	0.68
35:DB:201:ILE:HG21	35:DB:214:ILE:HG21	1.76	0.68
17:AT:12:SER:HA	17:AT:15:VAL:CG2	2.24	0.68
34:BA:165:C:H2'	34:BA:166:G:C8	2.29	0.68
39:BF:42:GLU:OE1	39:BF:59:TYR:OH	2.09	0.68
3:CC:57:GLN:O	3:CC:57:GLN:HG3	1.93	0.68
19:CV:78:LYS:O	63:CV:301:HOH:O	2.11	0.68
1:AA:1100:A:H62	1:AA:1151:U:H3	1.42	0.68
1:AA:1232:G:H5"	19:AV:81:TYR:CE1	2.28	0.68
6:AF:185:ASP:HA	6:AF:188:ARG:HD3	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:27:G:H2'	34:BA:28:G:H8	1.58	0.68
34:BA:409:G:H2'	34:BA:410:G:C8	2.29	0.68
34:BA:1189:C:H5'	36:BC:5:ILE:HD12	1.75	0.68
3:CC:30:VAL:HG23	3:CC:31:LYS:N	2.09	0.68
11:CN:22:THR:HB	11:CN:25:ARG:HG3	1.73	0.68
12:CO:7:TYR:CZ	12:CO:44:LYS:HG3	2.28	0.68
1:AA:2050:U:O4	63:AA:3914:HOH:O	2.10	0.68
3:AC:30:VAL:HG23	3:AC:31:LYS:N	2.09	0.68
57:BZ:168:ILE:HD11	57:BZ:178:ILE:HG13	1.76	0.68
57:BZ:405:PRO:HB2	57:BZ:406:GLU:HA	1.76	0.68
1:CA:131:G:OP1	63:CA:3722:HOH:O	2.11	0.68
1:CA:1518:U:H2'	1:CA:1519:G:O4'	1.94	0.68
34:DA:1148:U:O2'	42:DI:66:ARG:NH2	2.27	0.68
1:AA:2143:G:O4'	3:AC:168:LYS:CE	2.42	0.67
31:A7:34:ARG:NH1	31:A7:41:ARG:O	2.26	0.67
42:BI:11:LYS:O	42:BI:13:ALA:N	2.26	0.67
1:CA:1316:U:H2'	1:CA:1317:A:C8	2.30	0.67
34:DA:557:G:H2'	34:DA:558:G:C8	2.29	0.67
51:DR:38:GLU:HA	51:DR:41:LYS:HE3	1.76	0.67
57:DZ:357:ARG:NH1	57:DZ:373:ASP:OD1	2.27	0.67
3:AC:46:ALA:HB3	3:AC:172:ILE:CG2	2.23	0.67
34:BA:692:U:O2'	34:BA:694:A:N7	2.22	0.67
57:BZ:74:TRP:CD1	57:BZ:273:LEU:HB3	2.30	0.67
1:CA:399:G:OP2	63:CA:3725:HOH:O	2.12	0.67
1:CA:784:A:OP2	63:CA:3728:HOH:O	2.13	0.67
57:DZ:276:VAL:HG13	57:DZ:280:LEU:HD12	1.74	0.67
1:AA:1846:A:OP2	4:AD:54:ARG:NH2	2.28	0.67
34:BA:976:G:OP1	47:BN:32:SER:N	2.27	0.67
1:CA:1060:U:OP2	10:CL:75:SER:N	2.27	0.67
41:DH:5:PRO:O	41:DH:8:ASP:N	2.27	0.67
1:AA:1106:U:H4'	1:AA:1107:U:H5'	1.75	0.67
17:AT:118:ARG:HG3	17:AT:118:ARG:HH11	1.59	0.67
23:AZ:144:LEU:HD11	23:AZ:150:LEU:HD23	1.76	0.67
34:BA:881:G:OP2	45:BL:12:ARG:NH2	2.26	0.67
47:BN:6:LEU:HG	47:BN:23:ARG:HH22	1.59	0.67
48:BO:16:ALA:HB1	48:BO:21:ASP:HB3	1.77	0.67
34:DA:824:C:HO2'	41:DH:2:LEU:N	1.91	0.67
35:DB:68:ILE:H	35:DB:90:MET:HG2	1.59	0.67
1:AA:2143:G:C1'	3:AC:168:LYS:HE2	2.24	0.67
7:AG:41:GLN:NE2	7:AG:154:GLY:O	2.27	0.67
34:BA:890:G:O2'	34:BA:906:G:O6	2.06	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:25:GLU:HA	3:CC:28:ARG:HD2	1.74	0.67
41:DH:37:ARG:HH21	41:DH:38:ILE:HD11	1.60	0.67
46:DM:54:VAL:HA	46:DM:57:ARG:HB3	1.77	0.67
6:AF:101:LEU:HD12	6:AF:102:PRO:HD2	1.75	0.67
34:BA:1279:A:H4'	34:BA:1281:U:H5	1.59	0.67
34:BA:1305:G:H22	34:BA:1331:G:H1'	1.59	0.67
1:CA:1109:C:H2'	1:CA:1110:G:C8	2.29	0.67
3:CC:41:THR:O	3:CC:42:VAL:HB	1.94	0.67
4:CD:58:HIS:HD1	4:CD:59:LYS:N	1.93	0.67
34:DA:975:A:H4'	34:DA:976:G:H5"	1.75	0.67
34:DA:1187:G:H2'	34:DA:1188:A:C8	2.28	0.67
35:DB:96:ARG:HD2	35:DB:98:LEU:HD22	1.76	0.67
41:DH:51:VAL:HG21	41:DH:60:ARG:HD2	1.77	0.67
1:AA:2658:C:OP2	1:AA:2745:G:O2'	2.12	0.67
23:AZ:152:ALA:HB3	23:AZ:167:PRO:HA	1.75	0.67
1:CA:839:U:H2'	1:CA:840:C:C6	2.29	0.67
1:CA:1047:G:O2'	1:CA:1109:C:N4	2.27	0.67
26:C2:16:LEU:O	26:C2:67:LYS:NZ	2.28	0.67
30:C6:23:THR:OG1	30:C6:24:GLU:N	2.14	0.67
34:DA:355:C:O4'	34:DA:388:G:O2'	2.12	0.67
34:DA:1053:G:H4'	34:DA:1054:C:H5'	1.75	0.67
34:DA:1249:C:O2'	42:DI:73:GLN:NE2	2.27	0.67
37:DD:18:LYS:HB3	37:DD:20:TYR:HE2	1.60	0.67
1:AA:2735:G:H2'	1:AA:2736:C:C6	2.30	0.67
5:AE:93:VAL:HG13	63:AE:402:HOH:O	1.95	0.67
34:BA:1000:U:H2'	34:BA:1001:A:H8	1.59	0.67
1:CA:1503:U:H2'	1:CA:1504:C:C6	2.28	0.67
1:CA:1634:A:OP2	63:CA:3726:HOH:O	2.12	0.67
49:DP:52:ASP:O	49:DP:54:GLU:N	2.26	0.67
57:DZ:11:ARG:HB2	57:DZ:11:ARG:HH11	1.59	0.67
1:AA:2869:G:OP1	63:AA:3922:HOH:O	2.12	0.67
20:AW:13:SER:HB3	20:AW:16:LYS:HD2	1.76	0.67
1:CA:1057:A:H62	1:CA:1086:A:H2'	1.59	0.67
8:CH:143:GLN:NE2	8:CH:147:ASN:OD1	2.28	0.67
34:DA:1279:A:O2'	34:DA:1282:C:N4	2.27	0.67
57:DZ:202:PRO:HG2	57:DZ:205:TYR:HB2	1.76	0.67
1:AA:553:A:C8	1:AA:553:A:H3'	2.30	0.67
25:A1:18:ILE:HG12	25:A1:37:ILE:HD13	1.75	0.67
34:BA:598:U:H4'	41:BH:94:TYR:CD2	2.30	0.67
53:BT:10:LEU:HB3	53:BT:12:ALA:H	1.59	0.67
53:BT:53:LEU:HA	53:BT:56:MET:HG2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:363:ARG:HH11	57:BZ:363:ARG:CG	2.08	0.67
1:CA:987:G:O2'	1:CA:1000:A:N3	2.28	0.67
1:CA:1058:G:H2'	1:CA:1059:G:H5"	1.77	0.67
1:CA:1423:G:O6	63:CA:3719:HOH:O	2.10	0.67
1:CA:1762:A:N1	63:CA:3782:HOH:O	2.28	0.67
40:BG:48:LYS:O	40:BG:51:GLN:N	2.23	0.66
49:BP:5:ARG:NH2	49:BP:28:ARG:HA	2.10	0.66
1:CA:2178:C:O2	3:CC:169:THR:HG21	1.95	0.66
22:CY:90:LEU:HD22	22:CY:92:ASN:HD22	1.58	0.66
57:DZ:605:ILE:HA	57:DZ:648:PRO:HA	1.76	0.66
1:AA:720:C:H5"	6:AF:81:PRO:HD2	1.77	0.66
7:AG:11:TYR:HB2	7:AG:176:LEU:HD21	1.75	0.66
34:BA:1016:A:O2'	34:BA:1217:C:O2'	2.13	0.66
3:CC:31:LYS:NZ	3:CC:180:SER:O	2.28	0.66
4:CD:146:GLU:HB2	4:CD:189:CYS:HB3	1.77	0.66
8:CH:3:ARG:CZ	8:CH:4:ILE:H	2.08	0.66
34:DA:113:G:OP1	63:DA:1806:HOH:O	2.12	0.66
34:DA:278:G:OP2	50:DQ:41:LYS:NZ	2.28	0.66
50:DQ:62:SER:OG	50:DQ:72:ARG:NH1	2.26	0.66
57:DZ:584:ILE:HA	57:DZ:587:SER:HB3	1.77	0.66
1:AA:1524:A:N6	1:AA:1562:U:O4	2.20	0.66
3:AC:31:LYS:NZ	3:AC:180:SER:O	2.28	0.66
15:AR:20:LEU:HD21	15:AR:40:LYS:HD3	1.75	0.66
1:CA:2453:A:N7	63:CA:3788:HOH:O	2.29	0.66
1:CA:2611:U:H6	1:CA:2611:U:H5'	1.60	0.66
15:CR:56:LYS:NZ	15:CR:90:ARG:O	2.28	0.66
23:CZ:183:LEU:O	23:CZ:185:GLU:N	2.29	0.66
34:DA:110:C:O2'	49:DP:25:ARG:O	2.14	0.66
1:CA:827:U:OP1	63:CA:3730:HOH:O	2.13	0.66
34:DA:596:C:O2	34:DA:644:G:N2	2.19	0.66
34:DA:692:U:O2'	34:DA:694:A:N7	2.29	0.66
42:DI:9:ARG:H	42:DI:79:LEU:HD23	1.61	0.66
1:AA:1405:A:N1	1:AA:1418:U:O4	2.29	0.66
3:AC:41:THR:O	3:AC:42:VAL:HB	1.94	0.66
37:BD:65:ARG:HG3	37:BD:70:ILE:HG22	1.77	0.66
57:BZ:28:THR:O	57:BZ:31:ARG:N	2.28	0.66
34:DA:1114:C:H42	34:DA:1186:G:H1	1.41	0.66
35:DB:22:LYS:HG2	35:DB:40:HIS:CE1	2.31	0.66
36:DC:122:GLU:O	36:DC:126:ARG:NH1	2.28	0.66
41:DH:79:VAL:HG12	41:DH:80:ILE:HG13	1.77	0.66
1:AA:1114:G:N2	1:AA:1141:A:O2'	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:42:VAL:HG13	3:AC:43:GLU:N	2.10	0.66
34:BA:382:A:H2'	34:BA:383:A:C8	2.30	0.66
34:BA:933:G:O6	40:BG:3:ARG:NH2	2.29	0.66
34:BA:1381:U:H5'	40:BG:79:ARG:HH11	1.60	0.66
57:BZ:160:ARG:HD3	57:BZ:254:LYS:O	1.96	0.66
1:CA:881:G:H1	1:CA:895:U:H3	1.44	0.66
3:CC:42:VAL:HG13	3:CC:43:GLU:N	2.10	0.66
3:CC:176:VAL:HG11	3:CC:190:ILE:HD13	1.76	0.66
13:CP:118:GLY:O	13:CP:137:LYS:NZ	2.28	0.66
49:DP:43:LYS:HG2	49:DP:48:TRP:CD2	2.30	0.66
1:AA:611:U:H2'	1:AA:612:C:C6	2.31	0.66
34:BA:903:G:OP1	63:BA:1910:HOH:O	2.13	0.66
39:BF:18:GLN:HA	39:BF:21:LEU:HD12	1.76	0.66
3:CC:65:LEU:HB3	3:CC:189:ASN:ND2	2.11	0.66
12:CO:64:ARG:HG2	12:CO:79:PHE:CG	2.31	0.66
15:CR:97:VAL:HG22	15:CR:114:VAL:HG22	1.77	0.66
37:DD:22:LYS:O	37:DD:113:SER:HB3	1.96	0.66
1:AA:1785:C:OP1	17:AT:96:ARG:NH1	2.27	0.66
1:AA:2143:G:O2'	3:AC:168:LYS:HD3	1.96	0.66
53:BT:56:MET:HA	53:BT:59:ALA:HB3	1.77	0.66
57:BZ:603:GLU:HB3	57:BZ:679:VAL:HG12	1.78	0.66
1:CA:1106:G:C6	1:CA:1107:G:N7	2.63	0.66
16:CS:88:ASP:OD1	16:CS:90:GLY:N	2.28	0.66
34:DA:1050:G:N2	34:DA:1208:C:O2	2.18	0.66
1:AA:1087:C:N4	1:AA:1160:G:H1	1.91	0.66
1:AA:2007:G:OP2	63:AA:3924:HOH:O	2.13	0.66
17:AT:12:SER:HA	17:AT:15:VAL:HG23	1.77	0.66
43:BJ:17:ASP:OD1	43:BJ:70:ARG:NH1	2.28	0.66
56:BY:53:G:H1	56:BY:61:C:H42	1.42	0.66
1:CA:854:G:H2'	1:CA:855:G:H8	1.61	0.66
1:CA:1604:C:OP2	63:CA:3727:HOH:O	2.13	0.66
1:CA:1667:G:O2'	1:CA:1991:U:O4	2.14	0.66
14:CQ:57:HIS:HD2	14:CQ:117:ALA:HB2	1.60	0.66
30:C6:14:THR:OG1	30:C6:48:VAL:O	2.13	0.66
34:DA:649:G:H2'	34:DA:650:G:H8	1.60	0.66
34:DA:932:C:H2'	34:DA:933:G:H8	1.60	0.66
34:DA:1314:C:OP2	52:DS:4:SER:OG	2.12	0.66
57:DZ:357:ARG:HB2	57:DZ:364:GLU:HB3	1.78	0.66
1:AA:616:G:H4'	32:A8:4:MET:HE2	1.77	0.66
34:BA:193:C:H2'	34:BA:194:C:C6	2.30	0.66
34:BA:193:C:H2'	34:BA:194:C:H6	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:989:C:H1'	34:BA:1016:A:H2	1.60	0.66
1:CA:11:G:H2'	1:CA:12:U:H5"	1.77	0.66
1:CA:2165:G:H22	1:CA:2172:U:H5	1.44	0.66
7:AG:137:GLU:HB3	7:AG:139:LEU:HD12	1.78	0.65
34:BA:572:A:OP2	63:BA:1911:HOH:O	2.13	0.65
1:CA:1023:U:OP2	63:CA:3717:HOH:O	2.14	0.65
3:AC:176:VAL:HG11	3:AC:190:ILE:HD13	1.76	0.65
34:BA:259:G:H2'	34:BA:260:G:C8	2.31	0.65
36:BC:134:ILE:HG23	36:BC:151:VAL:HB	1.78	0.65
3:CC:63:VAL:O	3:CC:161:ARG:HA	1.96	0.65
12:CO:71:ARG:NE	12:CO:105:GLU:OE2	2.30	0.65
13:CP:44:GLY:O	63:CP:301:HOH:O	2.14	0.65
17:CT:120:ARG:HA	17:CT:123:GLN:HE21	1.61	0.65
1:AA:1219:A:H4'	1:AA:1220:U:OP1	1.97	0.65
1:AA:2207:C:H2'	1:AA:2208:G:C8	2.30	0.65
18:AU:108:GLU:OE2	18:AU:112:ARG:NH1	2.29	0.65
19:AV:29:PRO:HA	19:AV:61:VAL:HG22	1.77	0.65
34:BA:742:G:OP2	48:BO:35:ARG:NH2	2.29	0.65
34:BA:1226:C:O2'	46:BM:111:LYS:NZ	2.28	0.65
1:CA:2113:U:H3	1:CA:2170:A:H61	1.42	0.65
1:CA:2371:G:O6	63:CA:3720:HOH:O	2.11	0.65
17:CT:18:ASP:OD1	17:CT:18:ASP:N	2.30	0.65
56:DW:39:PSU:O3'	56:DY:35:A:O2'	2.14	0.65
11:AN:75:TYR:CZ	11:AN:77:GLY:HA2	2.31	0.65
49:BP:75:ARG:O	49:BP:78:GLY:N	2.25	0.65
57:BZ:313:ALA:O	57:BZ:386:GLY:N	2.29	0.65
34:DA:395:C:O3'	57:DZ:349:LYS:NZ	2.26	0.65
45:DL:75:HIS:HD2	45:DL:77:LEU:H	1.44	0.65
56:DY:50:U:H3	56:DY:64:A:H61	1.44	0.65
57:DZ:-65:LYS:HB3	57:DZ:-28:ALA:HB3	1.78	0.65
58:DX:6:2R1:OD2	58:DX:6:2R1:N	2.29	0.65
1:AA:965:G:N2	1:AA:2281:A:OP2	2.27	0.65
3:AC:65:LEU:HB3	3:AC:189:ASN:ND2	2.11	0.65
11:AN:67:LEU:O	11:AN:88:GLU:HB2	1.97	0.65
34:BA:442:C:H42	34:BA:492:G:H1	1.44	0.65
57:BZ:-36:LEU:HD21	57:BZ:-29:LEU:HD22	1.78	0.65
57:BZ:97:SER:O	57:BZ:99:ARG:N	2.29	0.65
1:CA:851:U:H5'	27:C3:49:LYS:HD2	1.78	0.65
1:CA:1371:G:H2'	1:CA:1372:U:H5	1.61	0.65
1:CA:1423:G:OP1	1:CA:1492:G:O2'	2.13	0.65
1:CA:2177:C:H1'	3:CC:171:ALA:CB	2.25	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CY:39:VAL:HB	22:CY:42:VAL:HB	1.79	0.65
1:AA:2720:G:H1'	15:AR:71:GLN:HE22	1.60	0.65
2:AB:58:A:OP2	63:AB:3102:HOH:O	2.15	0.65
48:BO:74:ASP:HB3	48:BO:77:ARG:HB2	1.78	0.65
1:CA:731:C:OP1	63:CA:3729:HOH:O	2.13	0.65
5:CE:11:MET:HG2	5:CE:24:THR:HB	1.77	0.65
34:DA:186:C:H2'	34:DA:187:C:H6	1.61	0.65
1:AA:1072:U:O2	1:AA:1072:U:H2'	1.97	0.65
3:AC:63:VAL:O	3:AC:161:ARG:HA	1.96	0.65
5:AE:23:VAL:HG21	5:AE:183:LEU:HD23	1.77	0.65
34:BA:573:A:OP2	63:BA:1911:HOH:O	2.13	0.65
34:BA:667:G:H4'	48:BO:51:HIS:ND1	2.12	0.65
41:BH:49:GLU:HG3	41:BH:62:TYR:HE1	1.61	0.65
43:BJ:34:VAL:HG12	43:BJ:74:ILE:HA	1.79	0.65
49:BP:71:ARG:HA	49:BP:74:LEU:HB2	1.78	0.65
1:CA:1188:U:H4'	19:CV:79:VAL:HG22	1.77	0.65
3:CC:206:LYS:NZ	3:CC:206:LYS:HB3	2.12	0.65
27:C3:22:ALA:HB2	27:C3:49:LYS:HD3	1.78	0.65
36:DC:179:ARG:NH1	36:DC:206:GLU:OE1	2.29	0.65
20:AW:79:GLY:HA3	20:AW:100:THR:HG22	1.79	0.65
34:DA:590:C:H2'	34:DA:591:U:H6	1.62	0.65
57:DZ:170:ARG:HH11	57:DZ:170:ARG:H	1.43	0.65
57:DZ:494:GLU:HG2	57:DZ:511:LYS:HG2	1.79	0.65
1:AA:1650:C:OP2	63:AA:3928:HOH:O	2.15	0.65
1:AA:1749:G:N7	63:AA:3973:HOH:O	2.29	0.65
1:AA:1891:G:C3'	3:AC:206:LYS:HG3	2.27	0.65
52:BS:3:ARG:HH21	52:BS:7:LYS:HE3	1.62	0.65
57:BZ:509:HIS:CD2	57:BZ:571:SER:H	2.15	0.65
1:CA:641:C:O2'	1:CA:2350:C:OP1	2.08	0.65
50:DQ:53:LEU:HD23	50:DQ:82:MET:HE1	1.78	0.65
57:DZ:82:ILE:HD13	57:DZ:101:LEU:HB3	1.79	0.65
1:AA:2333:G:H5"	1:AA:2334:A:OP2	1.97	0.65
40:BG:25:ALA:HB1	40:BG:101:LEU:HD13	1.79	0.65
3:CC:69:LEU:O	3:CC:178:LYS:HG3	1.97	0.65
23:CZ:120:ILE:HG13	23:CZ:172:ALA:HA	1.79	0.65
40:DG:32:ARG:HH22	40:DG:109:ASN:ND2	1.95	0.65
45:DL:75:HIS:CD2	45:DL:77:LEU:H	2.14	0.65
50:DQ:62:SER:HB3	50:DQ:72:ARG:HD3	1.79	0.65
1:AA:1391:C:OP2	63:AA:3929:HOH:O	2.15	0.64
3:AC:206:LYS:HB3	3:AC:206:LYS:NZ	2.12	0.64
9:AK:74:LEU:O	9:AK:76:GLY:N	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:A4:18:CYS:SG	28:A4:20:ASN:ND2	2.61	0.64
34:BA:1074:G:O2'	34:BA:1101:A:N1	2.28	0.64
34:BA:1323:G:H2'	34:BA:1324:A:C8	2.31	0.64
1:CA:2132:U:N3	3:CC:6:LYS:HE3	2.08	0.64
5:CE:110:GLY:HA2	5:CE:161:GLY:HA3	1.79	0.64
34:DA:559:A:H4'	34:DA:560:U:H5"	1.80	0.64
34:DA:1342:C:H4'	42:DI:125:TYR:HB3	1.79	0.64
46:DM:58:GLU:O	46:DM:62:ASN:ND2	2.30	0.64
1:AA:311:C:H2'	1:AA:312:C:H6	1.62	0.64
16:AS:89:ARG:HD2	16:AS:92:TYR:O	1.97	0.64
34:BA:1347:G:H5"	42:BI:107:ARG:HB3	1.78	0.64
1:CA:492:A:H2'	1:CA:493:G:O4'	1.97	0.64
1:CA:989:G:OP2	27:C3:11:SER:OG	2.15	0.64
10:CL:130:SER:HA	10:CL:133:SER:HB2	1.79	0.64
17:CT:24:PRO:HA	17:CT:49:VAL:HG22	1.79	0.64
1:AA:1740:U:O2'	4:AD:14:ARG:NH2	2.30	0.64
22:AY:92:ASN:HB2	22:AY:94:LYS:N	2.12	0.64
34:BA:827:U:H5"	34:BA:828:A:OP2	1.97	0.64
1:CA:2121:G:C3'	3:CC:168:LYS:HD3	2.25	0.64
1:AA:1102:G:H5"	1:AA:1103:A:O4'	1.98	0.64
1:AA:1827:U:H2'	1:AA:1828:C:C6	2.32	0.64
17:AT:108:ARG:HH11	17:AT:109:GLU:HG2	1.62	0.64
34:BA:179:A:H2'	34:BA:180:U:C6	2.32	0.64
35:BB:16:HIS:O	35:BB:18:GLY:N	2.31	0.64
1:CA:279:C:H42	1:CA:361:G:H1	1.44	0.64
7:CG:71:THR:OG1	7:CG:89:GLY:O	2.15	0.64
29:C5:41:PRO:O	29:C5:44:THR:OG1	2.13	0.64
34:DA:523:A:H61	45:DL:92:ASP:HB2	1.62	0.64
35:DB:212:GLN:O	35:DB:216:SER:OG	2.15	0.64
1:AA:1525:G:O2'	1:AA:1605:A:H2	1.80	0.64
1:AA:2385:G:N7	63:AA:3977:HOH:O	2.30	0.64
3:AC:69:LEU:O	3:AC:178:LYS:HG3	1.98	0.64
28:A4:57:GLU:HB2	28:A4:58:ARG:HG2	1.79	0.64
57:BZ:18:ALA:HB1	57:BZ:121:VAL:HG21	1.79	0.64
1:CA:817:C:O2'	1:CA:839:U:OP1	2.15	0.64
34:DA:41:G:H2'	34:DA:42:G:C8	2.33	0.64
34:DA:254:G:O3'	50:DQ:69:LYS:NZ	2.30	0.64
38:DE:110:LEU:HD13	38:DE:118:ILE:HG21	1.79	0.64
49:DP:21:VAL:HG22	49:DP:33:ILE:HB	1.80	0.64
53:DT:9:ASN:O	53:DT:10:LEU:HB2	1.97	0.64
1:AA:2255:U:H2'	1:AA:2256:U:C6	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1241:G:H2'	34:BA:1242:C:C6	2.32	0.64
1:CA:1212:G:N2	1:CA:1236:G:O2'	2.30	0.64
14:CQ:110:THR:HG23	14:CQ:113:GLN:OE1	1.98	0.64
18:CU:104:GLN:HE21	18:CU:105:VAL:H	1.46	0.64
27:C3:8:LEU:HB2	27:C3:28:LEU:HD22	1.80	0.64
1:AA:2289:G:OP2	24:A0:10:THR:HG21	1.98	0.64
4:AD:242:ARG:N	4:AD:242:ARG:HD3	2.12	0.64
19:AV:40:LEU:HB2	19:AV:46:VAL:HG13	1.80	0.64
22:AY:5:MET:HG2	22:AY:30:VAL:HG11	1.80	0.64
34:BA:664:G:H22	34:BA:741:G:H1	1.44	0.64
1:CA:882:G:H2'	1:CA:883:G:H8	1.63	0.64
1:CA:1059:G:H1	1:CA:1079:C:H42	1.45	0.64
20:CW:29:LEU:HD21	20:CW:33:ARG:NH2	2.13	0.64
34:DA:1353:G:OP1	54:DU:10:ARG:NH1	2.29	0.64
36:DC:182:ILE:HG12	36:DC:203:PHE:HA	1.80	0.64
57:BZ:14:ASN:OD1	57:BZ:80:ASN:ND2	2.28	0.64
1:CA:1021:A:H62	1:CA:1141:U:H3	1.45	0.64
3:CC:44:VAL:CG2	3:CC:176:VAL:HG21	2.28	0.64
34:DA:564:C:O2'	41:DH:91:ARG:NH2	2.30	0.64
35:DB:18:GLY:HA2	35:DB:42:ILE:HG13	1.79	0.64
35:DB:73:THR:OG1	35:DB:170:GLU:OE2	2.16	0.64
1:AA:1065:U:HO2'	1:AA:1067:A:H2	1.44	0.64
3:AC:68:GLY:N	3:AC:189:ASN:HD21	1.96	0.64
16:CS:15:ARG:HB3	16:CS:19:LYS:HZ3	1.63	0.64
30:C6:26:ASN:HB3	30:C6:29:ASN:HB2	1.79	0.64
36:DC:110:ASN:ND2	36:DC:144:SER:OG	2.29	0.64
38:DE:69:VAL:HG11	38:DE:113:ALA:HB1	1.80	0.64
1:AA:1284:G:OP2	63:AA:3925:HOH:O	2.14	0.64
7:AG:68:PRO:HB3	7:AG:92:VAL:HB	1.80	0.64
34:BA:368:U:P	57:BZ:351:ARG:HH11	2.20	0.64
36:BC:50:ALA:HB1	36:BC:72:LYS:HD2	1.80	0.64
34:DA:9:G:H2'	34:DA:10:A:C8	2.33	0.64
1:AA:9:U:N3	1:AA:2641:A:H2	1.89	0.63
1:AA:1093:G:H21	1:AA:1157:A:H2	1.46	0.63
1:AA:1101:G:O2'	1:AA:1131:A:N1	2.28	0.63
22:AY:92:ASN:H	22:AY:92:ASN:ND2	1.96	0.63
57:BZ:555:LEU:HD11	57:BZ:599:PRO:HB2	1.79	0.63
2:CB:46:A:H2'	2:CB:47:C:C6	2.34	0.63
23:CZ:140:ASP:OD2	23:CZ:142:SER:OG	2.16	0.63
3:AC:29:LEU:O	3:AC:32:GLU:N	2.32	0.63
3:AC:44:VAL:CG2	3:AC:176:VAL:HG21	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:125:LEU:HD21	6:AF:199:TRP:CD2	2.33	0.63
34:BA:574:A:OP2	63:BA:1911:HOH:O	2.15	0.63
34:BA:1028:C:H42	34:BA:1033:G:H1	1.46	0.63
57:BZ:78:ARG:HG3	57:BZ:78:ARG:NH1	2.13	0.63
57:BZ:679:VAL:HG22	57:BZ:684:GLN:HB2	1.80	0.63
1:CA:1604:C:OP2	63:CA:3705:HOH:O	2.15	0.63
1:CA:2349:G:OP1	63:CA:3731:HOH:O	2.15	0.63
34:DA:1133:G:H2'	34:DA:1134:G:C8	2.33	0.63
41:DH:91:ARG:HB2	45:DL:7:ILE:HG13	1.80	0.63
56:DW:39:PSU:O2'	56:DY:35:A:H1'	1.97	0.63
1:AA:1157:A:H8	1:AA:1158:G:H1'	1.63	0.63
35:BB:50:GLU:O	35:BB:54:THR:N	2.27	0.63
35:BB:124:SER:HB3	35:BB:125:PRO:HA	1.79	0.63
35:BB:201:ILE:HG21	35:BB:214:ILE:HG21	1.79	0.63
1:CA:1557:C:OP2	1:CA:1558:A:O2'	2.17	0.63
8:CH:76:VAL:O	8:CH:78:GLY:N	2.29	0.63
11:CN:14:VAL:HG12	11:CN:138:LEU:HB2	1.80	0.63
21:CX:11:PRO:HG2	21:CX:13:LEU:HD21	1.79	0.63
23:CZ:134:PRO:O	23:CZ:136:PHE:N	2.26	0.63
34:DA:254:G:OP1	50:DQ:66:SER:OG	2.08	0.63
35:DB:96:ARG:O	35:DB:98:LEU:N	2.32	0.63
1:AA:311:C:H2'	1:AA:312:C:C6	2.33	0.63
3:AC:7:ARG:O	3:AC:11:LEU:HD23	1.99	0.63
10:AL:99:ILE:HG23	10:AL:103:GLN:HB2	1.79	0.63
34:BA:353:A:H5'	34:BA:353:A:H8	1.63	0.63
34:BA:1314:C:OP2	52:BS:4:SER:OG	2.15	0.63
37:BD:167:GLY:H	37:BD:168:ARG:NH1	1.96	0.63
43:BJ:6:ILE:HA	43:BJ:98:ILE:HG13	1.79	0.63
6:CF:34:TRP:CE2	13:CP:8:PRO:HG3	2.33	0.63
21:CX:46:ALA:HB1	26:C2:33:MET:HE1	1.80	0.63
37:DD:129:ASN:HD21	37:DD:145:GLU:H	1.46	0.63
40:DG:147:ALA:O	40:DG:149:ARG:N	2.27	0.63
1:AA:1525:G:H2'	1:AA:1526:G:H8	1.63	0.63
14:AQ:14:ARG:HG2	14:AQ:41:TRP:CH2	2.33	0.63
34:BA:179:A:H2'	34:BA:180:U:H6	1.62	0.63
34:BA:1118:C:OP1	42:BI:104:ARG:NH1	2.31	0.63
34:BA:1412:C:H2'	34:BA:1413:A:C8	2.33	0.63
40:BG:32:ARG:O	40:BG:34:GLY:N	2.32	0.63
53:BT:65:LYS:HA	53:BT:68:LYS:HD3	1.79	0.63
57:BZ:341:VAL:HG22	57:BZ:352:VAL:HG12	1.81	0.63
1:CA:2886:G:H2'	1:CA:2887:U:H6	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:7:ARG:O	3:CC:11:LEU:HD23	1.99	0.63
3:CC:29:LEU:O	3:CC:32:GLU:N	2.32	0.63
25:C1:50:ARG:HG2	25:C1:59:THR:HB	1.80	0.63
57:DZ:182:ARG:HD3	57:DZ:239:GLU:OE2	1.98	0.63
56:BY:8:4SU:H4'	56:BY:48:C:H4'	1.79	0.63
57:BZ:-64:VAL:HG12	57:BZ:-29:LEU:HA	1.79	0.63
3:CC:68:GLY:N	3:CC:189:ASN:HD21	1.96	0.63
20:CW:18:ARG:NH1	20:CW:76:VAL:O	2.32	0.63
34:DA:419:C:OP1	34:DA:513:C:O2'	2.14	0.63
1:AA:615:G:O6	63:AA:3923:HOH:O	2.12	0.63
1:AA:921:G:O6	1:AA:949:C:N4	2.14	0.63
45:BL:36:VAL:HG23	58:BX:10:2QY:H89	1.80	0.63
1:CA:1053:C:H5'	1:CA:1053:C:C6	2.31	0.63
1:CA:2284:C:OP2	30:C6:2:ALA:N	2.32	0.63
34:DA:826:C:H4'	41:DH:12:ARG:HG2	1.80	0.63
34:DA:1254:C:OP1	43:DJ:45:ARG:HA	1.99	0.63
1:AA:553:A:C2	1:AA:2064:A:H2'	2.34	0.63
5:AE:36:ARG:HH11	5:AE:85:ASN:HD21	1.47	0.63
45:BL:80:HIS:CG	58:BX:6:2R1:H53	2.15	0.63
1:CA:1011:G:OP1	18:CU:77:SER:HB3	1.99	0.63
1:CA:1665:A:OP2	63:CA:3736:HOH:O	2.16	0.63
3:CC:6:LYS:HG3	3:CC:7:ARG:N	2.14	0.63
8:CH:76:VAL:C	8:CH:78:GLY:H	2.06	0.63
34:DA:1055:A:N3	36:DC:156:ARG:NH1	2.46	0.63
35:DB:16:HIS:CD2	35:DB:204:ASN:HB3	2.32	0.63
42:DI:128:ARG:NH1	56:DW:35:A:OP2	2.32	0.63
43:DJ:55:LYS:O	43:DJ:57:LYS:N	2.32	0.63
44:DK:22:HIS:HB3	44:DK:29:ILE:HB	1.81	0.63
44:DK:66:LEU:O	44:DK:69:ALA:N	2.28	0.63
48:DO:78:TYR:O	48:DO:80:ALA:N	2.32	0.63
34:BA:736:C:H2'	34:BA:737:A:C8	2.33	0.63
57:BZ:-9:LEU:O	57:BZ:-6:ARG:N	2.21	0.63
1:CA:1412:A:H2'	1:CA:1413:G:C8	2.34	0.63
1:CA:2064:C:OP2	63:CA:3734:HOH:O	2.15	0.63
34:DA:1348:U:H2'	34:DA:1349:A:H8	1.63	0.63
41:DH:12:ARG:NH1	41:DH:27:PRO:HD2	2.14	0.63
25:A1:4:VAL:HG22	25:A1:11:ARG:HB3	1.80	0.62
32:A8:6:THR:HG22	32:A8:63:PRO:HD2	1.80	0.62
34:BA:1182:G:H5'	34:BA:1184:G:H5'	1.79	0.62
1:CA:1041:C:H42	1:CA:1114:G:H1	1.47	0.62
7:CG:67:LYS:HD2	28:C4:5:ILE:HG13	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CW:59:VAL:HG12	20:CW:60:ASN:HD22	1.64	0.62
22:CY:102:CYS:SG	22:CY:103:GLY:N	2.72	0.62
34:DA:1305:G:N2	34:DA:1331:G:H1'	2.14	0.62
44:DK:87:THR:O	44:DK:87:THR:OG1	2.12	0.62
57:DZ:555:LEU:HD11	57:DZ:599:PRO:HB2	1.81	0.62
1:AA:1615:G:H4'	4:AD:59:LYS:HB3	1.81	0.62
1:AA:2859:U:O4	17:AT:23:ARG:NH2	2.28	0.62
3:AC:6:LYS:HG3	3:AC:7:ARG:N	2.14	0.62
6:AF:204:ASN:O	6:AF:207:GLY:N	2.26	0.62
26:A2:9:GLN:HE22	26:A2:56:GLN:HB3	1.64	0.62
41:BH:56:LYS:HB2	41:BH:58:TYR:HE1	1.64	0.62
45:BL:51:ALA:O	45:BL:52:LEU:HD23	1.99	0.62
1:CA:1107:G:N1	1:CA:1108:U:C2	2.67	0.62
1:CA:1864:U:OP1	1:CA:2410:G:O2'	2.16	0.62
1:CA:2046:G:H5'	29:C5:19:ARG:HA	1.81	0.62
16:CS:15:ARG:HB3	16:CS:19:LYS:NZ	2.14	0.62
8:AH:98:LEU:HD12	8:AH:102:ALA:O	1.99	0.62
35:BB:155:LEU:HD21	35:BB:159:PRO:HD3	1.80	0.62
57:BZ:497:PHE:HB3	57:BZ:508:GLY:H	1.64	0.62
7:CG:41:GLN:NE2	7:CG:154:GLY:O	2.28	0.62
22:CY:43:ASN:HB3	22:CY:65:ALA:HB3	1.81	0.62
34:DA:1410:G:H2'	34:DA:1411:C:C6	2.34	0.62
1:AA:1199:C:OP1	18:AU:92:ARG:NH1	2.32	0.62
1:AA:2143:G:C1'	3:AC:168:LYS:CE	2.78	0.62
23:AZ:104:PHE:HA	23:AZ:139:VAL:HG23	1.82	0.62
34:BA:1060:C:H4'	43:BJ:51:ARG:HB3	1.80	0.62
34:BA:1149:C:H2'	34:BA:1150:U:H6	1.65	0.62
34:BA:1172:C:H2'	34:BA:1173:G:H8	1.62	0.62
43:BJ:47:PHE:HB2	43:BJ:63:PHE:HB2	1.82	0.62
1:CA:479:A:N3	1:CA:481:G:H5"	2.14	0.62
34:DA:572:A:OP1	63:DA:1807:HOH:O	2.15	0.62
36:DC:59:ARG:HG2	36:DC:64:VAL:HG13	1.82	0.62
46:DM:118:ALA:HB1	56:DW:28:G:H4'	1.81	0.62
57:DZ:-20:LEU:O	57:DZ:-18:ALA:N	2.30	0.62
11:AN:75:TYR:CE2	11:AN:77:GLY:HA2	2.34	0.62
18:AU:36:ARG:HD2	18:AU:40:PHE:CZ	2.35	0.62
34:BA:1066:C:O2'	34:BA:1067:A:H5'	2.00	0.62
40:BG:111:ARG:NH1	40:BG:113:GLU:OE2	2.32	0.62
49:BP:69:THR:O	49:BP:69:THR:OG1	2.15	0.62
1:CA:9:U:H3	1:CA:2629:A:H2	1.45	0.62
1:CA:919:G:N2	1:CA:2269:A:OP2	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1430:C:H2'	1:CA:1431:U:H6	1.64	0.62
16:CS:52:SER:HB2	16:CS:55:ALA:HB3	1.81	0.62
1:AA:553:A:H3'	1:AA:553:A:H8	1.63	0.62
34:BA:134:A:H61	49:BP:25:ARG:NH1	1.94	0.62
45:BL:53:ARG:HG3	45:BL:93:LEU:HD21	1.82	0.62
1:CA:792:G:H5"	1:CA:793:A:H5'	1.80	0.62
1:CA:908:C:OP2	14:CQ:22:LYS:NZ	2.32	0.62
2:CB:95:C:H2'	2:CB:96:U:C6	2.35	0.62
35:DB:198:ASP:OD2	35:DB:198:ASP:N	2.28	0.62
52:DS:41:VAL:HG12	52:DS:43:GLU:H	1.65	0.62
57:DZ:169:GLY:O	57:DZ:173:THR:OG1	2.16	0.62
3:CC:53:ARG:HD3	3:CC:53:ARG:H	1.65	0.62
7:CG:16:ARG:CZ	7:CG:31:VAL:HG11	2.30	0.62
10:CL:111:LYS:NZ	10:CL:114:ASP:OD2	2.33	0.62
21:CX:31:HIS:ND1	21:CX:32:PRO:HD2	2.14	0.62
34:DA:1318:A:H5"	52:DS:3:ARG:HH22	1.63	0.62
40:DG:94:ARG:O	40:DG:98:SER:OG	2.17	0.62
57:DZ:71:THR:HG22	57:DZ:80:ASN:OD1	2.00	0.62
3:AC:68:GLY:H	3:AC:189:ASN:HD21	1.47	0.62
28:A4:24:THR:OG1	28:A4:25:TYR:N	2.32	0.62
35:BB:101:MET:HA	35:BB:108:ILE:HG13	1.81	0.62
52:BS:27:GLU:HB3	52:BS:28:LYS:HB3	1.82	0.62
1:CA:195:A:N7	63:CA:3799:HOH:O	2.31	0.62
4:CD:134:ARG:HD2	4:CD:135:PHE:CZ	2.35	0.62
7:CG:43:LEU:HG	7:CG:45:GLU:H	1.63	0.62
34:DA:921:U:O4	34:DA:1396:A:N6	2.20	0.62
34:DA:958:A:H61	52:DS:77:THR:HG23	1.64	0.62
37:DD:57:ARG:HG2	37:DD:202:LEU:HD22	1.81	0.62
3:AC:53:ARG:HD3	3:AC:53:ARG:H	1.65	0.62
8:AH:40:GLU:OE1	8:AH:60:ARG:NH1	2.31	0.62
22:AY:77:PRO:HD3	22:AY:106:LEU:HD23	1.82	0.62
34:BA:321:A:N7	34:BA:328:C:O2'	2.30	0.62
34:BA:1319:A:H61	34:BA:1361:G:H21	1.47	0.62
41:BH:91:ARG:HG2	50:BQ:34:LYS:H	1.64	0.62
1:CA:196:A:H62	13:CP:38:GLN:HE22	1.46	0.62
1:CA:1963:U:H2'	1:CA:1963:U:O2	1.99	0.62
3:CC:11:LEU:HD12	3:CC:33:LEU:HA	1.82	0.62
7:CG:11:TYR:HA	7:CG:15:VAL:HB	1.82	0.62
7:CG:15:VAL:HA	7:CG:175:LEU:HD23	1.82	0.62
12:CO:98:VAL:HG13	12:CO:117:LEU:HB3	1.82	0.62
13:CP:99:LEU:HA	13:CP:102:ARG:HB2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1123:A:H4'	43:DJ:37:PRO:HD2	1.82	0.62
39:DF:36:ARG:NH1	39:DF:38:GLU:OE2	2.31	0.62
1:AA:1995:G:H2'	1:AA:1996:C:C6	2.34	0.62
1:AA:2287:C:O2	14:AQ:85:LYS:HG3	2.00	0.62
1:AA:2343:G:O3'	24:A0:43:THR:HG22	2.00	0.62
1:AA:2379:G:N7	63:AA:3982:HOH:O	2.31	0.62
2:AB:45:A:O4'	7:AG:95:ARG:NH1	2.33	0.62
34:BA:1330:U:H2'	34:BA:1331:G:H5'	1.81	0.62
34:BA:1456:G:O3'	53:BT:39:LYS:NZ	2.33	0.62
44:BK:54:ARG:O	44:BK:57:THR:OG1	2.13	0.62
3:CC:68:GLY:H	3:CC:189:ASN:HD21	1.47	0.62
5:CE:54:GLN:HB2	5:CE:76:ARG:HG2	1.81	0.62
45:DL:24:VAL:HG11	45:DL:27:LEU:HD22	1.81	0.62
57:DZ:103:GLY:H	57:DZ:130:VAL:HG23	1.63	0.62
1:AA:302:A:O2'	1:AA:303:C:OP1	2.16	0.61
1:AA:354:A:H2	1:AA:1255:A:C2'	2.11	0.61
16:AS:15:ARG:O	16:AS:19:LYS:HG2	1.99	0.61
45:BL:80:HIS:ND1	58:BX:6:2R1:OD2	2.26	0.61
1:CA:297:C:H2'	1:CA:298:G:O4'	2.00	0.61
6:CF:20:LEU:HD13	6:CF:21:ALA:H	1.64	0.61
15:CR:21:TYR:OH	15:CR:43:GLU:HG2	2.00	0.61
34:DA:1060:C:H5	36:DC:2:GLY:HA3	1.64	0.61
52:DS:11:VAL:HB	52:DS:16:LEU:HD12	1.82	0.61
53:DT:64:ASP:OD2	53:DT:81:LYS:NZ	2.27	0.61
1:AA:2227:G:O2'	1:AA:2228:G:OP1	2.18	0.61
1:AA:2359:C:H2'	1:AA:2360:U:C6	2.34	0.61
1:AA:2434:A:O4'	56:BY:76:A:N6	2.32	0.61
34:BA:417:C:N4	34:BA:426:G:H1	1.98	0.61
1:CA:1434:A:H61	1:CA:1558:A:H62	1.48	0.61
4:CD:80:ALA:HB3	4:CD:94:LEU:HB3	1.82	0.61
34:DA:1312:G:H5'	52:DS:5:LEU:HD11	1.81	0.61
36:DC:162:GLN:O	36:DC:164:ARG:N	2.30	0.61
57:DZ:358:MET:HE1	57:DZ:363:ARG:HH11	1.64	0.61
1:AA:2013:U:H2'	1:AA:2014:G:H5"	1.83	0.61
34:BA:1100:C:O2'	34:BA:1102:A:OP1	2.17	0.61
41:BH:91:ARG:CG	50:BQ:34:LYS:H	2.12	0.61
41:BH:91:ARG:HD3	50:BQ:33:GLY:HA3	1.81	0.61
16:CS:27:SER:HA	16:CS:88:ASP:HB3	1.82	0.61
23:CZ:28:MET:HE3	23:CZ:59:LEU:HD12	1.81	0.61
57:DZ:264:LEU:HD12	62:DZ:703:GDP:N3	2.15	0.61
1:AA:216:A:H5"	13:AP:76:LYS:HE2	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1123:A:O2'	10:AL:132:ARG:O	2.17	0.61
5:AE:116:VAL:HG13	5:AE:122:PHE:HB2	1.82	0.61
34:BA:266:G:H5"	34:BA:268:C:H41	1.65	0.61
1:CA:1053:C:O2	1:CA:1054:A:H1'	1.99	0.61
1:CA:1141:U:OP2	11:CN:63:THR:OG1	2.18	0.61
28:C4:24:THR:OG1	28:C4:25:TYR:N	2.30	0.61
34:DA:517:G:N1	34:DA:533:A:OP2	2.32	0.61
34:DA:707:C:H2'	34:DA:708:C:H6	1.64	0.61
46:DM:15:VAL:HG11	46:DM:48:LEU:HD11	1.82	0.61
45:BL:53:ARG:HB2	45:BL:93:LEU:HD11	1.83	0.61
57:BZ:357:ARG:NH1	57:BZ:373:ASP:OD1	2.32	0.61
20:CW:18:ARG:HG2	20:CW:76:VAL:HB	1.82	0.61
34:DA:410:G:OP1	37:DD:30:LYS:NZ	2.33	0.61
34:DA:920:U:H2'	34:DA:921:U:C6	2.35	0.61
34:DA:1059:C:O2'	47:DN:45:ARG:NH1	2.33	0.61
1:AA:1891:G:H4'	3:AC:206:LYS:HD3	1.83	0.61
1:CA:271(R):G:H5"	25:C1:97:LEU:HD21	1.82	0.61
7:CG:101:ILE:HG21	28:C4:25:TYR:HB2	1.82	0.61
34:DA:918:A:H2'	34:DA:919:A:C8	2.34	0.61
44:DK:21:ILE:HD13	44:DK:82:VAL:HG13	1.81	0.61
58:DX:9:MVA:HB	58:DX:10:2QY:H82	1.83	0.61
1:AA:1228:G:O6	63:AA:3927:HOH:O	2.15	0.61
1:AA:1995:G:H2'	1:AA:1996:C:H6	1.66	0.61
1:AA:2059:G:O6	63:AA:3926:HOH:O	2.15	0.61
1:AA:2172:U:H2'	1:AA:2173:G:C8	2.35	0.61
1:AA:2339:A:H2'	1:AA:2340:A:C8	2.35	0.61
34:BA:1183:A:H3'	34:BA:1184:G:H5"	1.82	0.61
36:BC:150:LYS:HB3	36:BC:201:TYR:HB2	1.83	0.61
52:BS:12:ASP:O	52:BS:14:HIS:N	2.33	0.61
57:BZ:573:HIS:HD2	57:BZ:576:ASP:H	1.48	0.61
1:CA:1818:U:H2'	4:CD:157:ARG:HG3	1.83	0.61
1:CA:2150:U:H2'	1:CA:2151:G:C8	2.35	0.61
38:DE:81:GLU:HG2	38:DE:90:VAL:HG22	1.81	0.61
1:AA:2489:C:O2	33:A9:4:ARG:NH2	2.34	0.61
1:AA:2860:A:OP2	1:AA:2876:U:H5	1.83	0.61
5:AE:128:SER:OG	5:AE:129:HIS:N	2.30	0.61
11:AN:65:LYS:HB2	11:AN:65:LYS:NZ	2.15	0.61
41:BH:64:LYS:HB3	41:BH:79:VAL:HG21	1.83	0.61
57:BZ:102:ASP:HB3	57:BZ:286:ILE:HD13	1.81	0.61
57:BZ:416:LYS:HG2	57:BZ:417:THR:HG23	1.83	0.61
1:CA:517:C:OP1	29:C5:16:ARG:NH2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2120:G:C2	3:CC:168:LYS:HE2	2.35	0.61
1:CA:2849:U:O4	17:CT:23:ARG:NH2	2.34	0.61
2:CB:15:A:H1'	2:CB:110:G:C5	2.36	0.61
34:DA:503:C:OP2	45:DL:116:SER:HB3	1.99	0.61
34:DA:1010:G:H2'	34:DA:1011:G:C8	2.35	0.61
42:DI:28:VAL:HG22	42:DI:63:ILE:HB	1.82	0.61
57:DZ:22:ASP:HA	62:DZ:703:GDP:H5'	1.83	0.61
57:DZ:116:PRO:HA	57:DZ:119:GLU:HG3	1.83	0.61
10:AL:91:PRO:HB3	10:AL:135:GLY:HA2	1.83	0.61
23:AZ:183:LEU:O	23:AZ:185:GLU:N	2.34	0.61
57:BZ:182:ARG:NH2	57:BZ:278:ASP:OD2	2.34	0.61
57:BZ:358:MET:HE1	57:BZ:363:ARG:HH12	1.66	0.61
1:CA:2518:A:OP2	63:CA:3737:HOH:O	2.16	0.61
2:CB:103:G:H21	23:CZ:73:GLN:CD	2.09	0.61
34:DA:691:G:H2'	34:DA:692:U:C6	2.36	0.61
56:DY:5:G:H1	56:DY:68:C:H42	1.48	0.61
57:DZ:139:MET:HG3	57:DZ:260:LEU:HB2	1.82	0.61
1:AA:1426:G:OP2	63:AA:3931:HOH:O	2.16	0.61
34:BA:1182:G:H4'	34:BA:1183:A:H5'	1.81	0.61
1:CA:875:G:H1	1:CA:902:C:N4	1.99	0.61
1:CA:1800:C:OP2	4:CD:183:ARG:NH2	2.33	0.61
1:CA:2328:A:H2'	1:CA:2329:G:C8	2.35	0.61
7:CG:130:ASN:HB3	7:CG:160:VAL:HA	1.82	0.61
34:DA:56:U:H2'	34:DA:57:G:C8	2.36	0.61
34:DA:539:A:OP2	45:DL:115:LYS:NZ	2.33	0.61
34:DA:1123:A:H4'	43:DJ:36:GLY:HA3	1.83	0.61
41:DH:44:PHE:HD1	41:DH:79:VAL:HG13	1.66	0.61
1:AA:1312:G:O5'	20:AW:15:ARG:NH2	2.34	0.60
1:AA:1549:U:H2'	1:AA:1550:C:H6	1.64	0.60
4:AD:145:VAL:HG12	4:AD:146:GLU:O	2.01	0.60
13:AP:55:ARG:HG2	13:AP:56:SER:N	2.16	0.60
1:CA:1055:G:H5'	9:CK:33:PRO:HA	1.82	0.60
1:CA:1837:C:O2'	1:CA:1927:A:N3	2.30	0.60
1:CA:2319:G:H4'	1:CA:2320:A:O5'	2.01	0.60
34:DA:512:U:H2'	34:DA:513:C:H6	1.65	0.60
34:DA:701:C:OP1	34:DA:702:A:O2'	2.16	0.60
41:DH:17:THR:HG22	41:DH:63:LEU:HG	1.83	0.60
16:AS:27:SER:HA	16:AS:88:ASP:HB3	1.83	0.60
34:BA:1108:G:H5'	36:BC:176:HIS:CD2	2.35	0.60
49:BP:43:LYS:HG2	49:BP:48:TRP:CE2	2.35	0.60
57:BZ:494:GLU:OE1	57:BZ:511:LYS:NZ	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1782:C:OP1	63:CA:3708:HOH:O	2.16	0.60
34:DA:404:U:H2'	34:DA:405:U:C6	2.36	0.60
34:DA:537:G:OP1	45:DL:113:ARG:NH1	2.21	0.60
34:DA:987:G:N2	34:DA:1219:U:O2	2.34	0.60
51:DR:53:ARG:HG3	51:DR:63:GLN:NE2	2.12	0.60
57:DZ:660:ARG:NH1	57:DZ:665:GLY:O	2.33	0.60
1:AA:1154:U:O2'	1:AA:1155:C:H5"	2.02	0.60
34:BA:456:C:N3	34:BA:476:G:N2	2.50	0.60
34:BA:1224:G:O2'	34:BA:1322:C:OP1	2.19	0.60
41:BH:10:LEU:HD22	41:BH:83:ILE:HD11	1.83	0.60
44:BK:29:ILE:HG12	44:BK:44:SER:HB2	1.81	0.60
57:BZ:264:LEU:HD23	57:BZ:265:LYS:HD3	1.83	0.60
1:CA:2781:A:H5"	1:CA:2782:G:H5'	1.82	0.60
24:C0:18:ALA:HB3	24:C0:20:ARG:HH21	1.66	0.60
25:C1:8:SER:HB3	25:C1:66:HIS:CD2	2.36	0.60
34:DA:130:A:O2'	34:DA:131:C:O5'	2.15	0.60
34:DA:193:C:H2'	34:DA:194:C:C6	2.37	0.60
48:DO:24:SER:O	48:DO:28:GLN:HG3	2.01	0.60
1:AA:1793:A:H2'	63:AA:5094:HOH:O	2.01	0.60
1:AA:1890:A:N6	1:AA:1905:G:O2'	2.34	0.60
3:AC:194:ILE:HD11	3:AC:227:PRO:CB	2.32	0.60
10:AL:112:MET:HE3	10:AL:115:LEU:HD12	1.84	0.60
12:AO:92:GLU:HG3	12:AO:113:LYS:HE2	1.83	0.60
22:AY:97:ARG:HB3	22:AY:106:LEU:HD12	1.82	0.60
40:BG:48:LYS:O	40:BG:50:ILE:N	2.34	0.60
40:BG:108:ALA:HA	40:BG:111:ARG:HD2	1.83	0.60
1:CA:1007:C:OP1	11:CN:35:ARG:NH1	2.33	0.60
5:CE:8:LYS:HG2	5:CE:192:ASN:HA	1.83	0.60
8:CH:113:VAL:HG11	8:CH:151:ILE:HG21	1.83	0.60
34:DA:601:C:H2'	34:DA:602:A:C8	2.36	0.60
38:DE:122:GLU:HB3	38:DE:126:ARG:HD3	1.82	0.60
38:DE:127:ASN:O	38:DE:131:ILE:HG12	2.01	0.60
56:DY:33:U:H2'	56:DY:35:A:OP2	2.02	0.60
1:AA:2316:G:H22	1:AA:2324:U:H3	1.50	0.60
22:AY:54:LYS:H	22:AY:56:PRO:HG3	1.65	0.60
34:BA:33:A:H8	34:BA:33:A:OP2	1.85	0.60
1:CA:888:C:OP1	46:DM:93:ARG:NH1	2.30	0.60
3:CC:194:ILE:HD11	3:CC:227:PRO:CB	2.32	0.60
13:CP:130:PHE:HB3	13:CP:134:ALA:HB3	1.84	0.60
34:DA:1358:U:H5"	47:DN:34:TYR:HA	1.82	0.60
37:DD:18:LYS:HB3	37:DD:20:TYR:CE2	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DE:57:LYS:HD3	38:DE:61:TYR:HE2	1.66	0.60
42:DI:16:ARG:HB2	42:DI:64:THR:HG23	1.83	0.60
45:DL:80:HIS:HB3	58:DX:6:2R1:H49	1.84	0.60
57:DZ:663:THR:O	57:DZ:665:GLY:N	2.34	0.60
3:AC:11:LEU:HD12	3:AC:33:LEU:HA	1.82	0.60
42:BI:128:ARG:HH12	56:BW:35:A:P	2.24	0.60
57:BZ:554:PRO:HG3	57:BZ:594:VAL:HG12	1.83	0.60
1:CA:143:G:H4'	21:CX:35:THR:HG21	1.83	0.60
1:CA:300:A:H3'	22:CY:84:ARG:NH2	2.17	0.60
1:CA:608:A:H2'	1:CA:609:A:C8	2.36	0.60
1:CA:1053:C:C2	1:CA:1054:A:C8	2.90	0.60
1:CA:1081:U:H2'	1:CA:1082:U:C5	2.36	0.60
1:CA:1859:A:N6	1:CA:1883:G:O2'	2.35	0.60
1:CA:2000:G:N7	63:CA:3802:HOH:O	2.32	0.60
18:CU:9:VAL:O	18:CU:13:LYS:HG3	2.02	0.60
21:CX:53:LYS:HB3	21:CX:82:GLN:HB3	1.83	0.60
34:DA:1095:U:H5'	34:DA:1109:C:O2	2.01	0.60
34:DA:1354:C:H2'	34:DA:1355:G:H8	1.67	0.60
57:DZ:13:ARG:NH2	57:DZ:247:ARG:HH12	2.00	0.60
1:AA:721:G:H1'	6:AF:74:ARG:HD3	1.84	0.60
1:AA:1961:U:OP1	1:AA:2616:U:O2'	2.18	0.60
5:AE:120:TRP:CD2	5:AE:155:LYS:HG2	2.37	0.60
7:AG:79:ASN:OD1	7:AG:79:ASN:N	2.33	0.60
22:AY:20:TYR:CE1	22:AY:43:ASN:HA	2.35	0.60
34:BA:105:G:H2'	34:BA:106:C:C6	2.37	0.60
34:BA:1125:U:H4'	43:BJ:5:ARG:NH2	2.16	0.60
36:BC:122:GLU:O	36:BC:126:ARG:NH1	2.34	0.60
37:BD:8:VAL:HA	37:BD:11:LEU:HD13	1.82	0.60
57:BZ:509:HIS:HD2	57:BZ:571:SER:H	1.46	0.60
1:CA:189:G:H2'	1:CA:205:G:N2	2.17	0.60
1:CA:271(E):U:H2'	1:CA:271(F):C:C6	2.37	0.60
1:CA:1064:C:H4'	10:CL:89:HIS:HA	1.84	0.60
1:CA:2469:A:H2'	1:CA:2470:G:O4'	2.01	0.60
8:CH:103:LEU:HD21	8:CH:131:VAL:HG21	1.83	0.60
22:CY:85:VAL:HG13	22:CY:97:ARG:HB3	1.84	0.60
28:C4:44:THR:OG1	28:C4:45:GLY:N	2.33	0.60
34:DA:148:G:H2'	34:DA:149:A:C8	2.37	0.60
37:DD:102:ASP:OD2	37:DD:118:ARG:NH1	2.35	0.60
1:AA:441:C:H2'	1:AA:442:A:C8	2.36	0.60
23:AZ:98:MET:O	23:AZ:125:LEU:HD12	2.01	0.60
34:BA:11:G:C6	34:BA:12:U:N3	2.70	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1264:C:O2	34:BA:1272:G:N2	2.34	0.60
36:BC:181:ASN:HB3	36:BC:204:LEU:HB2	1.83	0.60
1:CA:86:C:OP1	22:CY:32:PRO:HG2	2.01	0.60
1:CA:662:G:OP1	63:CA:3740:HOH:O	2.17	0.60
1:CA:2879:C:OP2	63:CA:3735:HOH:O	2.15	0.60
4:CD:127:VAL:HA	4:CD:193:VAL:HG22	1.84	0.60
23:CZ:92:SER:OG	23:CZ:93:ASP:N	2.35	0.60
34:DA:728:A:H2'	34:DA:729:A:C8	2.33	0.60
34:DA:1119:C:OP2	42:DI:9:ARG:NH1	2.34	0.60
34:DA:1412:C:H2'	34:DA:1413:A:C8	2.36	0.60
38:DE:76:ILE:HD12	38:DE:142:LEU:HD21	1.83	0.60
7:AG:126:ASP:HB3	7:AG:128:ARG:H	1.65	0.60
34:BA:299:G:O6	63:BA:1909:HOH:O	2.11	0.60
34:BA:630:G:H2'	34:BA:631:G:H8	1.66	0.60
34:BA:939:G:H2'	34:BA:940:C:C6	2.36	0.60
34:BA:1374:A:OP1	40:BG:36:LYS:NZ	2.32	0.60
37:BD:64:LEU:HD22	37:BD:198:VAL:HG11	1.83	0.60
37:BD:127:THR:OG1	37:BD:128:VAL:N	2.33	0.60
1:CA:910:A:H62	14:CQ:12:GLN:HA	1.67	0.60
1:CA:2106:G:H2'	1:CA:2107:C:O4'	2.01	0.60
1:CA:2136:C:N4	1:CA:2155:G:H1	1.99	0.60
1:CA:2303:G:O2'	7:CG:132:ASN:ND2	2.34	0.60
5:CE:176:ILE:HB	5:CE:181:LEU:HB2	1.83	0.60
34:DA:590:C:H2'	34:DA:591:U:C6	2.37	0.60
39:DF:87:ARG:HH11	39:DF:87:ARG:HG3	1.65	0.60
57:DZ:552:SER:O	57:DZ:591:LYS:NZ	2.27	0.60
1:AA:432:U:H4'	1:AA:433:G:OP2	2.02	0.60
1:AA:2021:C:H4'	1:AA:2736:C:O2	2.00	0.60
7:AG:27:ASN:HB3	7:AG:30:GLU:HG3	1.82	0.60
34:BA:229:U:H5"	49:BP:33:ILE:HD12	1.84	0.60
34:BA:869:G:H8	34:BA:869:G:O5'	1.84	0.60
57:BZ:213:HIS:O	57:BZ:217:VAL:HG23	2.02	0.60
57:BZ:515:GLU:HG2	57:BZ:564:LYS:HB3	1.82	0.60
1:CA:1798:U:H5'	4:CD:259:THR:CG2	2.30	0.60
23:CZ:160:GLY:HA2	23:CZ:161:VAL:HB	1.84	0.60
34:DA:921:U:O2	38:DE:19:MET:HB2	2.00	0.60
36:DC:152:ILE:HG23	36:DC:199:LYS:HB2	1.83	0.60
58:DX:1:2QZ:O	58:DX:10:2QY:H83	2.01	0.60
1:AA:2143:G:H1'	3:AC:168:LYS:CE	2.31	0.59
34:BA:105:G:H2'	34:BA:106:C:H6	1.66	0.59
34:BA:564:C:O2'	41:BH:91:ARG:NH2	2.25	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1325:C:H2'	34:BA:1326:C:H6	1.67	0.59
36:BC:26:LYS:HG2	43:BJ:45:ARG:HH22	1.66	0.59
57:BZ:-53:ASP:H	57:BZ:-50:GLN:NE2	1.99	0.59
1:CA:938:G:OP2	32:C8:52:LYS:NZ	2.31	0.59
5:CE:36:ARG:HG3	5:CE:47:VAL:HG12	1.82	0.59
34:DA:1241:G:OP1	40:DG:35:LYS:NZ	2.35	0.59
42:DI:42:ARG:NH2	42:DI:71:SER:OG	2.31	0.59
1:AA:2389:A:H2'	1:AA:2390:A:C8	2.36	0.59
4:AD:153:ALA:O	4:AD:154:LYS:HD3	2.02	0.59
5:AE:28:ALA:HB3	5:AE:93:VAL:HG12	1.83	0.59
50:BQ:41:LYS:HZ3	50:BQ:92:ARG:HH21	1.48	0.59
1:CA:2498:C:OP1	63:CA:3738:HOH:O	2.16	0.59
13:CP:99:LEU:HD12	13:CP:100:LEU:HD23	1.84	0.59
17:CT:41:ARG:NH1	34:DA:346:G:OP1	2.33	0.59
17:CT:88:ILE:HG13	17:CT:91:ARG:NH2	2.18	0.59
34:DA:596:C:N3	34:DA:644:G:N1	2.36	0.59
34:DA:1192:C:OP1	36:DC:4:LYS:NZ	2.32	0.59
2:AB:105:A:OP1	23:AZ:72:ARG:NH1	2.36	0.59
28:A4:36:CYS:SG	28:A4:37:SER:N	2.75	0.59
34:BA:456:C:N4	34:BA:475:G:H1	2.00	0.59
34:BA:542:G:OP1	37:BD:10:ARG:NH1	2.34	0.59
35:BB:16:HIS:CG	35:BB:17:PHE:N	2.69	0.59
1:CA:250:G:H2'	1:CA:251:A:C8	2.36	0.59
4:CD:73:VAL:O	4:CD:75:ILE:HD12	2.02	0.59
34:DA:826:C:H2'	34:DA:827:U:C6	2.38	0.59
3:AC:214:TYR:CE2	3:AC:224:ARG:HG2	2.36	0.59
17:AT:60:THR:HG22	17:AT:77:PRO:HA	1.83	0.59
34:BA:17:U:H2'	34:BA:18:C:C6	2.38	0.59
57:BZ:-29:LEU:O	57:BZ:-27:THR:HG23	2.03	0.59
57:BZ:151:ARG:O	57:BZ:155:GLU:HG3	2.03	0.59
57:BZ:310:ALA:O	57:BZ:331:TYR:N	2.33	0.59
1:CA:154(A):C:H42	1:CA:171:G:H1	1.50	0.59
1:CA:2375:G:O2'	1:CA:2377:A:N7	2.31	0.59
1:CA:2377:A:H2'	1:CA:2378:A:C8	2.36	0.59
3:CC:214:TYR:CE2	3:CC:224:ARG:HG2	2.37	0.59
6:CF:21:ALA:HB3	6:CF:22:ALA:HA	1.85	0.59
7:CG:97:ASP:HA	7:CG:100:TRP:HD1	1.66	0.59
1:AA:100:G:OP1	26:A2:7:ARG:NH2	2.35	0.59
5:AE:143:ASN:HD22	5:AE:147:PRO:HD3	1.67	0.59
7:AG:170:ARG:HH21	7:AG:180:PHE:HB3	1.66	0.59
8:AH:164:TYR:HB2	8:AH:167:GLU:HB2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AO:104:ARG:HH22	17:AT:43:GLN:NE2	2.00	0.59
22:AY:35:TYR:CE2	22:AY:69:ALA:HB3	2.37	0.59
34:BA:675:A:H1'	44:BK:116:HIS:CD2	2.38	0.59
1:CA:1773:A:H5"	63:CA:4294:HOH:O	2.03	0.59
17:CT:91:ARG:HH11	17:CT:120:ARG:NH1	2.01	0.59
34:DA:946:A:OP1	46:DM:114:ARG:NH1	2.35	0.59
1:AA:310:C:H2'	1:AA:311:C:H6	1.68	0.59
21:AX:31:HIS:CD2	21:AX:33:LYS:H	2.20	0.59
34:BA:737:A:H2'	34:BA:738:C:C6	2.37	0.59
56:BY:6:G:O6	56:BY:7:A:N6	2.36	0.59
1:CA:854:G:O6	63:CA:3732:HOH:O	2.15	0.59
1:CA:1899:G:H2'	1:CA:1899:G:N3	2.16	0.59
3:CC:41:THR:HG22	3:CC:42:VAL:N	2.17	0.59
15:CR:29:LEU:HB3	15:CR:75:LEU:HD21	1.83	0.59
20:CW:12:ILE:HD12	20:CW:42:ARG:HD3	1.84	0.59
21:CX:57:LEU:HD21	21:CX:78:LYS:HE2	1.84	0.59
23:CZ:111:VAL:C	23:CZ:113:ALA:H	2.10	0.59
57:DZ:252:ASP:O	57:DZ:254:LYS:NZ	2.30	0.59
1:AA:387:G:H2'	1:AA:388:A:H8	1.67	0.59
1:AA:528:A:O2'	63:AA:3932:HOH:O	2.17	0.59
1:AA:532:A:H5"	1:AA:533:G:H3'	1.85	0.59
1:AA:2833:A:OP1	5:AE:159:HIS:NE2	2.31	0.59
5:AE:9:VAL:HB	17:AT:3:ARG:HG2	1.84	0.59
8:AH:41:MET:CE	8:AH:65:HIS:HA	2.33	0.59
34:BA:757:U:H2'	34:BA:758:G:O4'	2.01	0.59
34:BA:1233:G:H2'	34:BA:1234:C:C6	2.38	0.59
1:CA:247:G:H4'	1:CA:386:G:C5	2.38	0.59
3:CC:214:TYR:CZ	3:CC:224:ARG:HG2	2.37	0.59
34:DA:1318:A:H2'	34:DA:1319:A:H5"	1.83	0.59
40:DG:16:LEU:HG	42:DI:41:VAL:O	2.02	0.59
43:DJ:5:ARG:N	43:DJ:73:ASP:OD1	2.35	0.59
3:AC:41:THR:HG22	3:AC:42:VAL:N	2.17	0.59
14:AQ:54:MET:HG2	14:AQ:117:ALA:HB1	1.84	0.59
34:BA:537:G:H2'	34:BA:538:G:H8	1.66	0.59
34:BA:598:U:H2'	34:BA:599:C:H6	1.67	0.59
35:BB:42:ILE:HD12	35:BB:203:GLY:HA2	1.84	0.59
36:BC:87:LEU:O	36:BC:89:GLU:N	2.36	0.59
57:BZ:490:PRO:HG3	57:BZ:516:PRO:HD2	1.84	0.59
5:CE:9:VAL:HG23	17:CT:3:ARG:HG2	1.83	0.59
57:DZ:96:ARG:HH11	57:DZ:96:ARG:HB2	1.68	0.59
1:AA:1337:C:H2'	1:AA:1338:U:H6	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:50:SER:HB2	6:AF:94:PRO:HD3	1.83	0.59
6:AF:129:PHE:HB3	6:AF:132:VAL:HG13	1.85	0.59
34:BA:524:G:H2'	34:BA:525:C:C6	2.37	0.59
38:BE:57:LYS:HG2	38:BE:61:TYR:HE2	1.66	0.59
49:BP:11:SER:H	49:BP:14:ASN:HB3	1.68	0.59
56:BY:67:C:H2'	56:BY:68:C:C6	2.38	0.59
57:BZ:73:PHE:CE2	57:BZ:78:ARG:NH1	2.71	0.59
1:CA:1688:U:O2	1:CA:1700:A:H5'	2.03	0.59
1:CA:2302:G:O2'	7:CG:126:ASP:O	2.19	0.59
25:C1:71:TYR:C	25:C1:73:LEU:H	2.11	0.59
34:DA:881:G:OP2	45:DL:12:ARG:NH2	2.35	0.59
37:DD:187:ARG:NH2	37:DD:193:ASP:OD2	2.35	0.59
45:DL:70:ILE:HG12	45:DL:100:ILE:HD12	1.85	0.59
54:DU:5:ASP:O	54:DU:11:GLY:HA3	2.03	0.59
1:AA:34:C:H5"	1:AA:35:G:OP2	2.03	0.59
1:AA:1154:U:HO2'	1:AA:1155:C:H6	1.50	0.59
4:AD:52:ARG:NH2	63:AD:403:HOH:O	2.36	0.59
6:AF:133:ASN:N	6:AF:138:GLU:OE1	2.29	0.59
34:BA:409:G:H2'	34:BA:410:G:H8	1.65	0.59
34:BA:1108:G:H5'	36:BC:176:HIS:HD2	1.68	0.59
34:BA:1498:U:O2'	55:BV:17:U:OP1	2.15	0.59
56:BW:18:G:O2'	56:BW:57:G:N2	2.30	0.59
1:CA:1138:G:H21	11:CN:106:MET:HG2	1.66	0.59
23:CZ:67:LEU:HD22	23:CZ:90:VAL:HG11	1.83	0.59
34:DA:149:A:H2'	34:DA:150:C:C6	2.38	0.59
40:DG:20:ASP:HB3	40:DG:23:VAL:HG23	1.83	0.59
9:AK:26:LEU:HA	9:AK:84:GLU:HA	1.85	0.58
34:BA:946:A:H2'	34:BA:947:G:C8	2.38	0.58
34:BA:1305:G:N2	34:BA:1331:G:H1'	2.17	0.58
39:BF:26:ILE:O	39:BF:30:LEU:HB2	2.03	0.58
1:CA:747:U:O2	1:CA:2014:A:H1'	2.02	0.58
1:CA:1923:U:OP1	56:DW:24:G:O2'	2.20	0.58
4:CD:261:LYS:HZ1	4:CD:263:ARG:NH2	2.01	0.58
34:DA:862:C:H1'	34:DA:874:G:H5"	1.85	0.58
34:DA:1456:G:O3'	53:DT:39:LYS:NZ	2.36	0.58
46:DM:37:THR:O	46:DM:55:ARG:NH1	2.36	0.58
57:DZ:272:LEU:O	57:DZ:276:VAL:HG23	2.02	0.58
1:AA:1337:C:H2'	1:AA:1338:U:C6	2.38	0.58
1:AA:2121:U:H3	1:AA:2212:G:H1	1.52	0.58
3:AC:214:TYR:CZ	3:AC:224:ARG:HG2	2.37	0.58
4:AD:124:PRO:O	4:AD:126:GLN:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AZ:138:GLU:H	23:AZ:156:LYS:NZ	2.01	0.58
28:A4:3:GLU:O	28:A4:5:ILE:N	2.36	0.58
1:CA:981:A:N1	1:CA:2027:G:O2'	2.35	0.58
1:CA:1080:C:O2'	10:CL:125:ARG:O	2.19	0.58
1:CA:1876:A:H2'	1:CA:1877:A:C8	2.38	0.58
1:CA:2504:U:OP2	63:CA:3741:HOH:O	2.17	0.58
13:CP:70:GLN:O	13:CP:73:GLY:N	2.36	0.58
34:DA:237:C:OP2	50:DQ:40:LYS:NZ	2.36	0.58
34:DA:642:A:N3	41:DH:113:SER:OG	2.36	0.58
57:DZ:568:TYR:HD1	57:DZ:568:TYR:H	1.50	0.58
2:AB:8:U:O3'	16:AS:25:ARG:NH2	2.36	0.58
35:BB:60:ASP:OD1	35:BB:64:ARG:NH2	2.29	0.58
45:BL:70:ILE:HD13	45:BL:77:LEU:HD12	1.84	0.58
52:BS:63:THR:OG1	52:BS:65:ASN:ND2	2.36	0.58
57:BZ:98:MET:HA	57:BZ:101:LEU:HB2	1.85	0.58
57:BZ:609:GLU:HG2	57:BZ:644:ARG:HG2	1.85	0.58
1:CA:531:C:OP1	1:CA:561:G:N1	2.33	0.58
1:CA:1190:G:H5"	13:CP:32:THR:O	2.02	0.58
20:CW:24:ILE:HA	20:CW:27:LYS:HG3	1.86	0.58
22:CY:6:HIS:O	22:CY:97:ARG:NH2	2.37	0.58
23:CZ:79:ARG:HD2	23:CZ:80:ARG:NH2	2.18	0.58
34:DA:148:G:H2'	34:DA:149:A:H8	1.66	0.58
35:DB:219:VAL:O	35:DB:222:ILE:HG12	2.02	0.58
6:AF:125:LEU:HD21	6:AF:199:TRP:CG	2.38	0.58
34:BA:28:G:O2'	34:BA:296:U:OP1	2.17	0.58
35:BB:98:LEU:HB2	35:BB:101:MET:HE3	1.85	0.58
35:BB:111:ARG:HG2	35:BB:111:ARG:NH1	2.15	0.58
37:BD:18:LYS:HG3	37:BD:33:MET:HG2	1.84	0.58
57:BZ:247:ARG:HE	57:BZ:251:ILE:HD11	1.69	0.58
1:CA:1637:A:H4'	1:CA:2711:A:O2'	2.04	0.58
11:CN:58:ASP:OD2	11:CN:59:LYS:N	2.37	0.58
15:CR:24:GLN:OE1	15:CR:36:THR:HG21	2.03	0.58
49:DP:19:ILE:HG22	49:DP:36:ILE:HG13	1.86	0.58
1:AA:2175:G:H2'	1:AA:2176:G:H8	1.68	0.58
47:BN:6:LEU:HG	47:BN:23:ARG:NH2	2.17	0.58
56:BW:34:G:H8	56:BW:34:G:OP1	1.86	0.58
57:BZ:655:TYR:HA	57:BZ:658:ASP:HB2	1.85	0.58
1:CA:898:C:H2'	1:CA:899:A:O4'	2.03	0.58
1:CA:2646:C:OP2	1:CA:2732:G:O2'	2.22	0.58
2:CB:62:C:H2'	2:CB:63:G:H8	1.68	0.58
16:CS:16:ASN:HA	16:CS:19:LYS:HG3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:C7:29:LYS:NZ	31:C7:33:ARG:HE	2.01	0.58
34:DA:437:U:H5'	37:DD:155:LEU:HD21	1.85	0.58
46:DM:17:VAL:O	46:DM:20:THR:OG1	2.18	0.58
57:DZ:629:GLY:HA3	57:DZ:647:VAL:HG12	1.85	0.58
2:AB:33:G:H5'	7:AG:2:PRO:HD3	1.86	0.58
34:BA:110:C:O2'	49:BP:25:ARG:HB3	2.03	0.58
34:BA:403:C:OP1	37:BD:137:SER:OG	2.22	0.58
38:BE:7:GLU:OE1	38:BE:37:ARG:NH2	2.30	0.58
40:BG:46:ALA:O	40:BG:50:ILE:HG23	2.03	0.58
1:CA:7:G:H1	1:CA:2896:C:H42	1.51	0.58
1:CA:2572:A:N7	5:CE:145:LYS:HB2	2.19	0.58
10:CL:99:ILE:O	10:CL:138:VAL:HA	2.03	0.58
14:CQ:27:VAL:O	14:CQ:29:PHE:N	2.37	0.58
34:DA:9:G:H2'	34:DA:10:A:H8	1.67	0.58
34:DA:738:C:H2'	34:DA:739:C:H6	1.68	0.58
34:DA:979:C:H42	47:DN:18:VAL:HB	1.69	0.58
34:DA:1399:C:C2	34:DA:1502:A:N6	2.72	0.58
35:DB:172:ILE:HG22	35:DB:176:GLU:HG3	1.85	0.58
37:DD:191:ARG:O	37:DD:191:ARG:NH1	2.36	0.58
49:DP:28:ARG:HG3	49:DP:29:ASP:OD1	2.04	0.58
5:AE:36:ARG:HH11	5:AE:85:ASN:ND2	2.01	0.58
34:BA:1504:G:OP1	34:BA:1507:A:H4'	2.04	0.58
57:BZ:224:ASP:OD2	57:BZ:227:ILE:HG13	2.03	0.58
1:CA:1274:A:N3	1:CA:1297:C:H1'	2.18	0.58
1:CA:2728:U:H5'	12:CO:70:LYS:HZ3	1.69	0.58
50:DQ:45:HIS:HB2	50:DQ:65:ILE:HD13	1.86	0.58
1:AA:2417:G:O2'	1:AA:2423:A:N6	2.36	0.58
1:AA:2771:A:OP2	63:AA:3933:HOH:O	2.17	0.58
7:AG:126:ASP:HB2	7:AG:130:ASN:H	1.67	0.58
23:AZ:150:LEU:O	23:AZ:171:ILE:HG13	2.04	0.58
34:BA:114:U:H2'	34:BA:115:G:C8	2.38	0.58
34:BA:1329:A:H5'	46:BM:29:ARG:HE	1.69	0.58
1:CA:907:U:O2'	14:CQ:101:ARG:NH2	2.36	0.58
1:CA:2572:A:C8	5:CE:144:ARG:HD2	2.38	0.58
6:CF:168:ARG:O	6:CF:170:LEU:N	2.36	0.58
34:DA:620:C:H2'	34:DA:621:A:O4'	2.04	0.58
35:DB:52:GLU:O	35:DB:56:ARG:HG2	2.04	0.58
35:DB:98:LEU:HB2	35:DB:101:MET:SD	2.44	0.58
36:DC:40:ARG:HH21	36:DC:55:VAL:HB	1.68	0.58
50:DQ:66:SER:O	50:DQ:70:ARG:NH1	2.36	0.58
57:DZ:-53:ASP:H	57:DZ:-50:GLN:HE22	1.49	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1491:A:H4'	1:AA:1492:C:OP2	2.03	0.58
8:AH:17:VAL:HG11	8:AH:50:VAL:HG21	1.85	0.58
15:AR:36:THR:HG22	15:AR:37:THR:N	2.15	0.58
27:A3:6:VAL:HG13	27:A3:56:VAL:HG22	1.84	0.58
34:BA:222:U:H2'	34:BA:223:U:C6	2.39	0.58
57:BZ:428:LEU:HD22	57:BZ:440:VAL:HG11	1.85	0.58
1:CA:751:A:H5'	20:CW:90:ARG:HA	1.85	0.58
1:CA:1064:C:OP1	10:CL:89:HIS:N	2.37	0.58
1:CA:1971:A:OP2	4:CD:242:ARG:NH2	2.35	0.58
34:DA:972:C:O3'	43:DJ:57:LYS:HD3	2.04	0.58
57:DZ:169:GLY:N	57:DZ:205:TYR:OH	2.35	0.58
57:DZ:225:GLU:HA	57:DZ:228:MET:HB3	1.86	0.58
1:AA:1653:C:H4'	1:AA:1654:A:O5'	2.04	0.58
1:AA:1688:A:H2'	1:AA:1689:G:O4'	2.04	0.58
5:AE:1:MET:HE2	5:AE:202:LYS:NZ	2.18	0.58
6:AF:18:ARG:NH2	6:AF:127:GLU:OE1	2.36	0.58
22:AY:8:LYS:HG2	22:AY:11:ASP:OD2	2.03	0.58
23:AZ:154:ASP:OD2	23:AZ:154:ASP:N	2.37	0.58
34:BA:33:A:H5"	34:BA:364:A:H1'	1.86	0.58
34:BA:236:G:OP1	50:BQ:40:LYS:NZ	2.37	0.58
34:BA:1191:A:H5"	36:BC:4:LYS:HZ2	1.69	0.58
1:CA:1107:G:N2	1:CA:1108:U:C2	2.72	0.58
6:CF:117:ARG:NH2	6:CF:189:THR:O	2.34	0.58
20:CW:86:LEU:O	20:CW:94:ASP:N	2.37	0.58
22:CY:52:SER:HB3	22:CY:55:TYR:H	1.67	0.58
41:DH:51:VAL:HG12	41:DH:52:ASP:H	1.68	0.58
57:DZ:72:CYS:SG	57:DZ:79:ILE:HB	2.44	0.58
13:AP:70:GLN:O	13:AP:73:GLY:N	2.31	0.57
36:BC:43:LEU:HD22	36:BC:47:LEU:HD11	1.86	0.57
37:BD:127:THR:OG1	37:BD:131:ARG:O	2.21	0.57
49:BP:67:THR:HB	49:BP:70:ALA:HB2	1.86	0.57
6:CF:51:THR:O	6:CF:93:LYS:HE2	2.04	0.57
23:CZ:54:HIS:ND1	23:CZ:101:PRO:HG3	2.19	0.57
34:DA:1354:C:H2'	34:DA:1355:G:C8	2.39	0.57
35:DB:212:GLN:NE2	35:DB:234:PRO:O	2.37	0.57
46:DM:8:GLU:HG2	46:DM:11:ARG:HH12	1.69	0.57
48:DO:41:GLU:HA	48:DO:44:LYS:HD2	1.86	0.57
56:DW:38:A:H2'	56:DW:39:PSU:O4'	2.04	0.57
57:DZ:-29:LEU:HB3	57:DZ:-27:THR:HG23	1.85	0.57
1:AA:325:G:OP2	22:AY:84:ARG:NH2	2.36	0.57
1:AA:1211:U:H2'	1:AA:1212:C:C6	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1540:A:H2'	1:AA:1541:A:C8	2.39	0.57
5:AE:93:VAL:N	63:AE:402:HOH:O	2.25	0.57
12:AO:64:ARG:HG2	12:AO:79:PHE:CG	2.38	0.57
23:AZ:156:LYS:HG2	23:AZ:157:LEU:N	2.19	0.57
34:BA:159:G:H2'	34:BA:161:A:OP2	2.04	0.57
34:BA:1057:G:H2'	34:BA:1058:G:O4'	2.04	0.57
34:BA:1130:A:O2'	42:BI:3:GLN:OE1	2.22	0.57
1:CA:1817:G:OP1	4:CD:88:ARG:NH2	2.35	0.57
1:CA:1849:G:H2'	1:CA:1850:G:H8	1.69	0.57
1:CA:2304:G:H22	1:CA:2312:U:H3	1.51	0.57
1:CA:2732:G:OP1	5:CE:203:LYS:NZ	2.33	0.57
15:CR:104:ARG:HD2	15:CR:109:ALA:HB3	1.85	0.57
20:CW:9:TYR:CD1	20:CW:102:HIS:HE1	2.22	0.57
34:DA:1255:G:OP1	43:DJ:45:ARG:NH2	2.29	0.57
36:DC:22:TRP:HZ3	36:DC:24:ALA:HB2	1.68	0.57
37:DD:88:VAL:HG12	37:DD:89:THR:H	1.68	0.57
46:DM:29:ARG:HD3	46:DM:64:TRP:CE2	2.38	0.57
57:DZ:11:ARG:HB2	57:DZ:11:ARG:NH1	2.20	0.57
1:AA:1854:G:OP1	4:AD:54:ARG:NH1	2.38	0.57
8:AH:149:ARG:HH21	8:AH:153:LYS:HE2	1.68	0.57
19:AV:16:PRO:HB3	19:AV:97:LYS:O	2.04	0.57
34:BA:148:G:H1	34:BA:174:C:N4	1.98	0.57
34:BA:149:A:H2'	34:BA:150:C:H6	1.70	0.57
34:BA:923:A:OP1	38:BE:21:ALA:HB2	2.04	0.57
34:BA:1268:A:H2'	34:BA:1269:A:C8	2.39	0.57
36:BC:3:ASN:OD1	36:BC:3:ASN:N	2.36	0.57
40:BG:8:GLU:H	40:BG:8:GLU:CD	2.11	0.57
57:BZ:146:LEU:HD22	57:BZ:150:ILE:HD11	1.85	0.57
1:CA:27:G:O2'	1:CA:28:A:OP2	2.17	0.57
1:CA:882:G:H2'	1:CA:883:G:C8	2.40	0.57
1:CA:994:C:O2	19:CV:10:LYS:NZ	2.38	0.57
1:CA:1759:A:N3	63:CA:3803:HOH:O	2.32	0.57
1:CA:2320:A:H2'	1:CA:2320:A:N3	2.17	0.57
7:CG:101:ILE:HD12	7:CG:101:ILE:H	1.68	0.57
41:DH:14:ARG:HG2	41:DH:18:ARG:NH1	2.20	0.57
56:DW:5:G:H1	56:DW:68:C:H42	1.51	0.57
5:AE:54:GLN:HE21	5:AE:76:ARG:HG2	1.70	0.57
17:AT:118:ARG:HG2	34:BA:1442(A):G:C8	2.39	0.57
34:BA:15:G:C4	34:BA:16:A:C8	2.93	0.57
34:BA:502:G:C2	34:BA:503:C:C2	2.93	0.57
34:BA:1258:G:H2'	34:BA:1259:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1367:C:H4'	43:BJ:48:THR:HG21	1.86	0.57
53:BT:33:ILE:O	53:BT:37:SER:OG	2.17	0.57
57:BZ:115:GLU:N	57:BZ:156:ARG:HH12	1.98	0.57
57:BZ:146:LEU:HD12	57:BZ:167:PRO:HD3	1.87	0.57
1:CA:118:A:H1'	1:CA:178:G:O4'	2.04	0.57
1:CA:461:C:C2'	1:CA:462:C:H5'	2.33	0.57
1:CA:528:A:N1	1:CA:2042:A:H2'	2.19	0.57
1:CA:602:G:O2'	1:CA:655:A:N6	2.36	0.57
1:CA:1054:A:O2'	9:CK:30:GLN:O	2.20	0.57
1:CA:1187:G:H5'	19:CV:81:TYR:CE1	2.40	0.57
1:CA:2723:C:OP1	5:CE:109:LYS:HD3	2.04	0.57
12:CO:111:PHE:O	12:CO:115:VAL:HG23	2.03	0.57
1:AA:139:A:H8	1:AA:1454:C:HO2'	1.48	0.57
21:AX:21:PHE:O	21:AX:23:GLU:N	2.38	0.57
28:A4:15:ILE:HG23	28:A4:21:VAL:HG22	1.86	0.57
33:A9:15:LYS:HD3	33:A9:26:ILE:HD11	1.87	0.57
34:BA:232:G:H1'	34:BA:262:A:N1	2.19	0.57
34:BA:437:U:C2'	34:BA:438:G:H5'	2.35	0.57
43:BJ:8:LEU:HD12	43:BJ:20:ALA:HB2	1.85	0.57
45:BL:97:ARG:HB2	45:BL:98:TYR:CE1	2.40	0.57
49:BP:39:TYR:CZ	49:BP:41:PRO:HB3	2.40	0.57
1:CA:143(A):C:H2'	1:CA:144:C:H6	1.68	0.57
1:CA:501:A:O5'	1:CA:501:A:H8	1.86	0.57
1:CA:921:G:H2'	1:CA:922:U:C6	2.40	0.57
1:CA:2294:C:OP2	16:CS:89:ARG:NH2	2.37	0.57
34:DA:839:U:H5"	34:DA:840:C:H5	1.68	0.57
34:DA:1106:G:H5"	36:DC:172:ARG:HG2	1.87	0.57
38:DE:60:TYR:HE1	38:DE:64:ARG:CZ	2.17	0.57
39:DF:69:GLU:O	39:DF:72:VAL:HG12	2.04	0.57
41:DH:7:ALA:O	41:DH:11:THR:OG1	2.21	0.57
45:DL:34:ARG:NH1	58:DX:10:2QY:OH	2.37	0.57
1:AA:207:A:C2	1:AA:224:U:H4'	2.40	0.57
1:AA:344:A:HO2'	1:AA:346:A:H8	1.51	0.57
1:AA:1556:A:H3'	1:AA:1557:A:H8	1.68	0.57
21:AX:84:ALA:HB3	21:AX:87:GLN:HE22	1.68	0.57
23:AZ:138:GLU:O	23:AZ:156:LYS:HE3	2.05	0.57
34:BA:1014:A:H4'	52:BS:14:HIS:NE2	2.20	0.57
35:BB:207:ALA:HB3	35:BB:210:SER:HB3	1.87	0.57
36:BC:113:ALA:HB2	36:BC:202:ILE:HG13	1.87	0.57
38:BE:147:ASP:HA	38:BE:150:ARG:HB3	1.87	0.57
53:BT:57:ARG:NH2	53:BT:100:ILE:HD12	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2121:G:H21	3:CC:169:THR:CB	2.17	0.57
1:CA:2708:G:H1'	15:CR:71:GLN:HE22	1.70	0.57
2:CB:49:C:H2'	2:CB:50:G:C8	2.40	0.57
7:CG:25:TYR:CD2	7:CG:30:GLU:HB3	2.40	0.57
13:CP:93:GLY:H	13:CP:123:LEU:HD21	1.70	0.57
15:CR:26:LYS:HG2	15:CR:70:LEU:HD23	1.86	0.57
20:CW:29:LEU:O	20:CW:33:ARG:HG3	2.05	0.57
34:DA:958:A:N6	52:DS:77:THR:HG23	2.20	0.57
49:DP:51:VAL:HG12	49:DP:53:VAL:H	1.69	0.57
3:AC:6:LYS:HG3	3:AC:7:ARG:H	1.69	0.57
4:AD:132:PRO:HD3	4:AD:190:TYR:CZ	2.39	0.57
32:A8:61:LEU:C	32:A8:63:PRO:HD3	2.29	0.57
34:BA:518:C:O2'	34:BA:530:G:N2	2.38	0.57
38:BE:27:ARG:HG3	38:BE:28:PHE:N	2.19	0.57
47:BN:19:ARG:O	47:BN:21:TYR:N	2.38	0.57
1:CA:2125:G:OP1	3:CC:71:LYS:NZ	2.37	0.57
11:CN:39:ARG:HB3	11:CN:41:ASP:OD1	2.05	0.57
16:CS:66:ALA:O	16:CS:69:VAL:HG13	2.04	0.57
34:DA:559:A:OP1	38:DE:126:ARG:NH2	2.38	0.57
34:DA:714:G:H2'	34:DA:715:A:C8	2.40	0.57
34:DA:1079:G:H2'	34:DA:1080:A:C8	2.39	0.57
49:DP:52:ASP:HB3	49:DP:55:ARG:HB2	1.86	0.57
57:DZ:172:ASP:N	57:DZ:172:ASP:OD2	2.38	0.57
1:AA:2442:A:OP1	63:AA:3936:HOH:O	2.18	0.57
1:AA:2697:G:H5'	12:AO:68:GLU:OE1	2.04	0.57
45:BL:40:VAL:HG21	45:BL:78:GLN:HA	1.85	0.57
49:BP:23:ASP:O	49:BP:25:ARG:N	2.37	0.57
57:BZ:75:LYS:O	57:BZ:77:HIS:HD2	1.87	0.57
1:CA:647:G:O5'	1:CA:647:G:H8	1.87	0.57
1:CA:1011:G:OP2	18:CU:66:ASN:ND2	2.36	0.57
1:CA:2080:G:OP1	25:C1:35:THR:HG21	2.03	0.57
2:CB:19:G:H1	2:CB:64:C:H42	1.50	0.57
7:CG:126:ASP:N	7:CG:126:ASP:OD1	2.34	0.57
16:CS:84:GLN:H	16:CS:111:GLU:HB2	1.70	0.57
17:CT:26:ASP:OD1	17:CT:120:ARG:NH2	2.35	0.57
18:CU:58:ARG:HA	18:CU:61:TRP:CE3	2.40	0.57
34:DA:1090:U:H2'	34:DA:1091:U:C6	2.40	0.57
35:DB:155:LEU:HD11	35:DB:159:PRO:HD3	1.86	0.57
36:DC:110:ASN:HB3	36:DC:141:VAL:HA	1.86	0.57
40:DG:74:GLU:OE1	40:DG:95:ARG:NH2	2.38	0.57
1:AA:624:C:OP1	6:AF:108:LYS:HE3	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:662:A:H4'	1:AA:663:G:O5'	2.05	0.57
1:AA:2787:C:H2'	1:AA:2788:A:O4'	2.05	0.57
9:AK:117:LEU:HA	9:AK:122:VAL:HA	1.86	0.57
22:AY:30:VAL:O	22:AY:32:PRO:HD3	2.05	0.57
26:A2:63:VAL:HA	26:A2:66:GLU:HG3	1.86	0.57
34:BA:186:C:O4'	53:BT:81:LYS:NZ	2.38	0.57
34:BA:946:A:O2'	34:BA:1333:A:N3	2.34	0.57
42:BI:70:LYS:O	42:BI:74:ILE:HG13	2.04	0.57
47:BN:24:CYS:HB3	47:BN:28:GLY:H	1.69	0.57
1:CA:2294:C:P	16:CS:89:ARG:HH22	2.28	0.57
2:CB:13:A:N1	2:CB:69:G:O2'	2.30	0.57
3:CC:29:LEU:O	3:CC:30:VAL:C	2.48	0.57
4:CD:242:ARG:HD3	4:CD:242:ARG:N	2.20	0.57
11:CN:19:GLU:HG2	11:CN:59:LYS:HB3	1.86	0.57
34:DA:509:A:C8	34:DA:509:A:H3'	2.40	0.57
34:DA:1065:U:H5"	34:DA:1190:G:N2	2.18	0.57
34:DA:1103:C:H2'	34:DA:1104:G:O4'	2.04	0.57
34:DA:1239:A:H4'	34:DA:1240:U:C5'	2.35	0.57
1:AA:932:C:H3'	1:AA:933:C:H5"	1.86	0.57
1:AA:1221:G:H1'	1:AA:1222:A:C5'	2.35	0.57
1:AA:1551:C:H2'	1:AA:1552:C:H6	1.69	0.57
1:AA:2045:G:H5'	1:AA:2629:C:H4'	1.87	0.57
3:AC:29:LEU:O	3:AC:30:VAL:C	2.48	0.57
34:BA:765:G:H5"	34:BA:766:A:OP1	2.04	0.57
34:BA:1309:G:N2	34:BA:1329:A:H1'	2.20	0.57
57:BZ:257:PRO:HB2	57:BZ:259:PHE:HE1	1.69	0.57
1:CA:265:A:C8	1:CA:266:G:H1'	2.39	0.57
1:CA:373:U:H2'	1:CA:374:A:H8	1.69	0.57
1:CA:2424:C:O2	1:CA:2429:G:O2'	2.19	0.57
8:CH:91:GLY:O	8:CH:93:GLY:N	2.38	0.57
16:CS:12:PHE:O	16:CS:16:ASN:ND2	2.35	0.57
39:DF:35:ALA:HB2	39:DF:67:MET:HE2	1.87	0.57
57:DZ:206:LEU:HD11	57:DZ:210:ARG:NH1	2.20	0.57
57:DZ:326:THR:HB	57:DZ:377:VAL:HG13	1.87	0.57
1:AA:1154:U:H6	1:AA:1155:C:C6	2.23	0.56
1:AA:2127:C:H2'	1:AA:2128:G:C8	2.40	0.56
13:AP:101:VAL:HG23	13:AP:106:LEU:HB3	1.87	0.56
14:AQ:66:ILE:HG12	14:AQ:104:PHE:HD1	1.70	0.56
17:AT:54:ARG:HA	17:AT:59:THR:HB	1.87	0.56
23:AZ:134:PRO:C	23:AZ:136:PHE:H	2.13	0.56
32:A8:26:LYS:HD2	63:A8:5108:HOH:O	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BI:42:ARG:NH1	42:BI:71:SER:OG	2.38	0.56
57:BZ:549:ALA:HB2	57:BZ:587:SER:HA	1.85	0.56
1:CA:324:A:N6	1:CA:338:G:O2'	2.38	0.56
1:CA:1418:G:O2'	1:CA:1580:A:N6	2.37	0.56
14:CQ:50:ALA:HB1	14:CQ:121:ALA:HB1	1.87	0.56
56:DW:47:U:O2'	56:DW:48:C:OP1	2.23	0.56
1:AA:346:A:H5'	1:AA:364:A:H1'	1.87	0.56
1:AA:1104:G:N2	1:AA:1127:U:H1'	2.20	0.56
4:AD:72:LYS:HD3	4:AD:97:TYR:CE2	2.40	0.56
40:BG:73:MET:HE2	40:BG:90:GLU:HB3	1.87	0.56
40:BG:78:ARG:HD3	40:BG:79:ARG:H	1.70	0.56
48:BO:25:THR:HG21	48:BO:70:LEU:HB2	1.87	0.56
53:BT:37:SER:O	53:BT:41:ILE:HG13	2.05	0.56
1:CA:310:A:OP1	22:CY:18:GLY:N	2.21	0.56
1:CA:1153:C:OP1	18:CU:76:TYR:OH	2.21	0.56
1:CA:1823:G:OP1	4:CD:54:ARG:NH1	2.38	0.56
2:CB:91:C:OP1	14:CQ:16:ARG:HG3	2.05	0.56
7:CG:129:GLY:HA3	7:CG:163:ALA:O	2.05	0.56
24:C0:26:TYR:O	24:C0:29:GLN:HB2	2.05	0.56
34:DA:1085:U:H5'	34:DA:1094:G:N2	2.20	0.56
34:DA:1159:U:O4'	34:DA:1182:G:N2	2.38	0.56
35:DB:16:HIS:CD2	35:DB:17:PHE:H	2.23	0.56
38:DE:147:ASP:O	38:DE:151:LEU:HG	2.05	0.56
46:DM:39:ILE:HG12	46:DM:52:GLU:HB3	1.86	0.56
58:DX:9:MVA:CB	58:DX:10:2QY:H82	2.35	0.56
1:AA:254:A:H1'	1:AA:255:G:O4'	2.06	0.56
1:AA:555:G:N3	1:AA:555:G:O4'	2.37	0.56
1:AA:886:U:H1'	1:AA:1236:G:H1'	1.87	0.56
1:AA:990:A:H2	63:AA:4224:HOH:O	1.88	0.56
13:AP:62:LEU:O	32:A8:13:ARG:HD3	2.06	0.56
16:AS:20:ARG:NH2	24:A0:48:GLY:O	2.38	0.56
25:A1:64:ALA:O	25:A1:67:ILE:HG13	2.05	0.56
34:BA:836:G:OP1	51:BR:61:LYS:HE2	2.05	0.56
34:BA:920:U:H2'	34:BA:921:U:C6	2.40	0.56
34:BA:1133:G:H2'	34:BA:1134:G:H8	1.70	0.56
35:BB:103:THR:HG23	35:BB:176:GLU:HB3	1.86	0.56
35:BB:145:LEU:O	35:BB:149:LEU:HB2	2.05	0.56
35:BB:158:LEU:HG	35:BB:182:ILE:HD11	1.86	0.56
57:BZ:13:ARG:NH2	57:BZ:280:LEU:O	2.38	0.56
57:BZ:69:VAL:HG21	57:BZ:374:LEU:HD13	1.87	0.56
1:CA:1491:G:O2'	4:CD:101:GLU:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CW:12:ILE:HD12	20:CW:42:ARG:NH1	2.19	0.56
34:DA:64:G:H4'	34:DA:65:U:H3'	1.88	0.56
34:DA:108:G:C2	53:DT:15:ARG:HG3	2.40	0.56
34:DA:649:G:H2'	34:DA:650:G:C8	2.41	0.56
34:DA:1052:U:H5"	34:DA:1053:G:OP2	2.06	0.56
35:DB:13:ALA:N	35:DB:14:GLY:HA3	2.20	0.56
43:DJ:8:LEU:HB2	43:DJ:70:ARG:HB2	1.88	0.56
56:DW:40:C:O2'	56:DW:41:C:O5'	2.23	0.56
57:DZ:21:ILE:HD11	57:DZ:117:GLN:NE2	2.19	0.56
1:AA:2014:G:OP2	63:AA:3935:HOH:O	2.18	0.56
4:AD:20:ASP:N	4:AD:20:ASP:OD1	2.35	0.56
8:AH:149:ARG:NH1	8:AH:167:GLU:OE2	2.34	0.56
34:BA:600:C:H2'	34:BA:601:C:C6	2.41	0.56
56:BW:47:U:O2'	56:BW:48:C:OP1	2.16	0.56
57:BZ:181:LEU:C	57:BZ:183:MET:H	2.13	0.56
1:CA:770:G:N3	1:CA:1354:A:H2	2.03	0.56
1:CA:1110:G:H2'	1:CA:1110:G:N3	2.21	0.56
1:CA:2193:G:H2'	1:CA:2194:G:O4'	2.05	0.56
4:CD:108:PRO:HG3	4:CD:143:HIS:CE1	2.41	0.56
7:CG:80:PHE:O	7:CG:82:LEU:N	2.39	0.56
34:DA:429:U:H2'	37:DD:25:ARG:NH1	2.19	0.56
34:DA:721:G:H4'	34:DA:722:A:O4'	2.05	0.56
34:DA:1375:A:O2'	40:DG:29:LYS:NZ	2.26	0.56
1:AA:1067:A:C8	1:AA:1067:A:H3'	2.40	0.56
21:AX:84:ALA:O	21:AX:87:GLN:HB2	2.06	0.56
34:BA:1244:C:O2	34:BA:1294:G:N2	2.38	0.56
35:BB:212:GLN:NE2	35:BB:235:SER:HA	2.20	0.56
1:CA:2394:C:N3	56:DY:76:A:O3'	2.36	0.56
1:CA:2693:A:H2'	1:CA:2694:G:H8	1.70	0.56
7:CG:50:ALA:O	7:CG:52:ILE:N	2.39	0.56
10:CL:129:GLY:HA2	10:CL:132:ARG:NH2	2.21	0.56
16:CS:95:HIS:HA	16:CS:99:LYS:HD2	1.87	0.56
34:DA:983:A:H1'	34:DA:1049:U:O2	2.04	0.56
34:DA:1318:A:OP1	52:DS:3:ARG:NH1	2.39	0.56
41:DH:16:ALA:O	41:DH:18:ARG:N	2.38	0.56
44:DK:59:TYR:CE2	44:DK:63:LEU:HD11	2.41	0.56
48:DO:17:ARG:HH11	48:DO:17:ARG:HG3	1.70	0.56
1:AA:613:A:OP1	6:AF:95:ARG:NH1	2.39	0.56
1:AA:616:G:C4'	32:A8:4:MET:HE2	2.34	0.56
8:AH:41:MET:HE2	8:AH:65:HIS:HA	1.88	0.56
33:A9:2:LYS:HE2	33:A9:31:LYS:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1250:A:H2	34:BA:1370:G:H1'	1.69	0.56
53:BT:81:LYS:O	53:BT:85:MET:HG3	2.05	0.56
1:CA:90:U:H1'	1:CA:92:A:C8	2.40	0.56
1:CA:2102:U:H2'	1:CA:2103:C:C6	2.40	0.56
1:CA:2758:A:C2	1:CA:2759:G:H1'	2.39	0.56
7:CG:64:THR:HB	7:CG:94:LEU:HD21	1.88	0.56
35:DB:211:ILE:HG22	35:DB:215:LEU:HG	1.88	0.56
38:DE:100:VAL:HG12	38:DE:107:ARG:HH21	1.70	0.56
54:DU:2:GLY:O	54:DU:4:GLY:N	2.38	0.56
1:AA:2154:U:N3	3:AC:6:LYS:HB2	2.20	0.56
2:AB:28:C:OP1	16:AS:36:TYR:OH	2.21	0.56
4:AD:127:VAL:HA	4:AD:193:VAL:HG22	1.87	0.56
6:AF:53:THR:HB	6:AF:56:GLU:OE2	2.06	0.56
16:AS:34:HIS:ND1	16:AS:53:SER:OG	2.31	0.56
22:AY:19:LYS:HE3	22:AY:20:TYR:CE1	2.40	0.56
38:BE:100:VAL:O	38:BE:107:ARG:NH2	2.39	0.56
39:BF:96:PRO:HB3	51:BR:30:ASP:CG	2.30	0.56
1:CA:1429:G:H2'	1:CA:1430:C:C6	2.41	0.56
1:CA:2783:G:H2'	1:CA:2784:C:C6	2.41	0.56
17:CT:55:ASN:H	17:CT:59:THR:HB	1.70	0.56
21:CX:59:VAL:N	21:CX:76:ARG:O	2.32	0.56
4:AD:67:PHE:HE1	4:AD:106:ILE:HD11	1.69	0.56
32:A8:32:LEU:O	32:A8:36:LYS:HE3	2.06	0.56
34:BA:1239:A:H62	34:BA:1299:A:N6	2.03	0.56
34:BA:1412:C:H2'	34:BA:1413:A:H8	1.71	0.56
35:BB:109:SER:HA	35:BB:112:VAL:HG13	1.88	0.56
42:BI:26:VAL:HG22	42:BI:61:ALA:HB3	1.88	0.56
57:BZ:138:LYS:HE2	62:BZ:702:GDP:C4	2.41	0.56
1:CA:668:G:H5'	1:CA:669:G:OP2	2.06	0.56
1:CA:1076:C:H2'	1:CA:1077:A:C8	2.35	0.56
1:CA:1081:U:H2'	1:CA:1082:U:H5	1.71	0.56
1:CA:1556:C:H2'	1:CA:1557:C:C6	2.40	0.56
1:CA:2695:C:H2'	1:CA:2696:U:H6	1.69	0.56
1:CA:2760:C:H2'	1:CA:2761:G:H5"	1.88	0.56
3:CC:42:VAL:O	3:CC:216:THR:O	2.24	0.56
15:CR:72:ASP:OD2	15:CR:75:LEU:HB2	2.05	0.56
24:C0:46:LYS:HG2	24:C0:47:PRO:HD2	1.87	0.56
34:DA:47:C:H5"	34:DA:365:U:O2	2.05	0.56
34:DA:371:G:H21	34:DA:373:A:N6	2.04	0.56
34:DA:564:C:C6	50:DQ:31:LEU:HD11	2.41	0.56
34:DA:978:A:H4'	34:DA:1322:C:N3	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1347:G:HO2'	34:DA:1373:G:H1	1.53	0.56
36:DC:137:ALA:HA	36:DC:140:ARG:HH11	1.71	0.56
38:DE:147:ASP:OD1	63:DE:301:HOH:O	2.18	0.56
1:AA:242:C:OP2	32:A8:5:LYS:NZ	2.34	0.56
1:AA:1111:U:H3'	1:AA:1112:U:C6	2.41	0.56
1:AA:1941:A:H5"	1:AA:1942:C:OP2	2.05	0.56
4:AD:206:LEU:HD22	4:AD:211:ARG:HG2	1.86	0.56
6:AF:12:LEU:HG	6:AF:124:LEU:HD11	1.88	0.56
6:AF:65:TRP:CZ2	6:AF:75:HIS:HD2	2.23	0.56
28:A4:48:ARG:O	28:A4:50:VAL:N	2.39	0.56
48:BO:6:GLU:N	48:BO:6:GLU:OE2	2.38	0.56
52:BS:19:VAL:HG11	52:BS:43:GLU:HB3	1.87	0.56
1:CA:535:C:O3'	18:CU:53:ARG:NH1	2.38	0.56
1:CA:1932:A:H2'	1:CA:1933:G:O4'	2.06	0.56
1:CA:2177:C:H1'	3:CC:171:ALA:HB2	1.88	0.56
1:CA:2178:C:OP1	3:CC:47:LYS:CD	2.53	0.56
1:CA:2533:A:OP1	1:CA:2665:A:O2'	2.19	0.56
2:CB:15:A:H5'	2:CB:16:G:C8	2.41	0.56
34:DA:125:U:H2'	34:DA:126:G:C8	2.41	0.56
34:DA:878:G:C5'	41:DH:89:PRO:HG2	2.34	0.56
34:DA:1060:C:H5'	47:DN:45:ARG:HH22	1.69	0.56
35:DB:102:LEU:HB3	35:DB:180:LEU:HD12	1.87	0.56
35:DB:153:ARG:C	35:DB:155:LEU:H	2.14	0.56
36:DC:77:ILE:HG13	36:DC:78:GLY:N	2.21	0.56
49:DP:14:ASN:OD1	49:DP:16:HIS:HE1	1.89	0.56
1:AA:125:A:H5"	1:AA:126:C:C6	2.41	0.56
1:AA:553:A:C8	1:AA:553:A:C3'	2.88	0.56
1:AA:905:U:O2	1:AA:2280:A:H2'	2.06	0.56
1:AA:1935:A:H4'	1:AA:1936:C:C5'	2.34	0.56
7:AG:16:ARG:HB2	7:AG:17:PRO:HD3	1.86	0.56
34:BA:1433:A:C4	34:BA:1468:A:C2	2.93	0.56
35:BB:97:TRP:HZ2	35:BB:102:LEU:HD13	1.70	0.56
41:BH:54:ASP:N	41:BH:54:ASP:OD1	2.38	0.56
44:BK:115:PRO:C	44:BK:117:ASN:H	2.13	0.56
51:BR:33:ASP:OD2	51:BR:36:ASN:HB3	2.06	0.56
1:CA:2273:A:H2'	1:CA:2274:A:C8	2.41	0.56
2:CB:34:U:O4	2:CB:44:G:O2'	2.19	0.56
2:CB:57:A:H1'	7:CG:29:TRP:HB2	1.88	0.56
3:CC:49:GLY:N	3:CC:209:PHE:O	2.39	0.56
34:DA:1133:G:H1	34:DA:1141:C:H42	1.53	0.56
35:DB:233:SER:HB2	35:DB:234:PRO:HD2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1781:G:O2'	1:AA:2870:A:N1	2.39	0.55
8:AH:20:ALA:HB1	8:AH:21:PRO:HD2	1.88	0.55
34:BA:1229:A:OP2	46:BM:114:ARG:HD3	2.06	0.55
49:BP:58:TYR:O	49:BP:61:SER:OG	2.17	0.55
57:BZ:96:ARG:NH2	57:BZ:315:LYS:NZ	2.54	0.55
1:CA:241:A:H8	1:CA:241:A:OP1	1.89	0.55
1:CA:1053:C:N4	1:CA:1054:A:C8	2.74	0.55
1:CA:1843:C:H5'	4:CD:253:GLN:NE2	2.21	0.55
13:CP:38:GLN:HG2	13:CP:45:LEU:N	2.20	0.55
16:CS:89:ARG:HD2	16:CS:92:TYR:O	2.06	0.55
34:DA:418:C:H2'	34:DA:419:C:C6	2.42	0.55
34:DA:1323:G:H2'	34:DA:1324:A:C8	2.41	0.55
46:DM:20:THR:HA	46:DM:25:ILE:HG22	1.87	0.55
1:AA:2143:G:H1'	3:AC:168:LYS:CD	2.35	0.55
9:AK:80:VAL:O	9:AK:82:PHE:N	2.39	0.55
13:AP:82:GLY:HA2	13:AP:113:LYS:O	2.07	0.55
16:AS:83:LYS:O	16:AS:111:GLU:N	2.32	0.55
34:BA:1062:U:H2'	34:BA:1063:C:C6	2.41	0.55
41:BH:114:THR:HG22	41:BH:130:GLY:O	2.05	0.55
1:CA:1107:G:N1	1:CA:1108:U:N3	2.54	0.55
1:CA:1338:G:N7	21:CX:62:LYS:NZ	2.49	0.55
1:CA:2124:G:N2	3:CC:218:THR:HG23	2.21	0.55
1:CA:2178:C:P	3:CC:47:LYS:HG2	2.43	0.55
1:CA:2850:A:H2'	1:CA:2851:A:C8	2.40	0.55
3:CC:6:LYS:HG3	3:CC:7:ARG:H	1.69	0.55
14:CQ:43:THR:HG22	14:CQ:94:VAL:HG12	1.88	0.55
34:DA:60:A:H4'	34:DA:61:G:O5'	2.06	0.55
34:DA:70:G:H1	34:DA:99:U:H3	1.54	0.55
35:DB:80:ILE:HD11	35:DB:212:GLN:HA	1.87	0.55
51:DR:69:THR:HA	51:DR:72:ARG:HB2	1.87	0.55
57:DZ:122:TRP:NE1	57:DZ:157:LEU:HD13	2.21	0.55
34:BA:600:C:H2'	34:BA:601:C:H6	1.71	0.55
34:BA:652:U:O4	34:BA:752:G:O2'	2.17	0.55
34:BA:1017:G:H2'	34:BA:1018:C:C6	2.41	0.55
35:BB:211:ILE:O	35:BB:215:LEU:HB2	2.07	0.55
41:BH:81:HIS:N	41:BH:138:TRP:O	2.38	0.55
43:BJ:46:ARG:CB	43:BJ:46:ARG:HH11	2.18	0.55
53:BT:30:LYS:HA	53:BT:33:ILE:HD12	1.89	0.55
57:BZ:-53:ASP:H	57:BZ:-50:GLN:HE21	1.55	0.55
1:CA:853:G:O2'	1:CA:854:G:H5'	2.07	0.55
1:CA:931:G:O2'	27:C3:24:LYS:HE2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2360:A:O5'	1:CA:2360:A:H8	1.90	0.55
23:CZ:73:GLN:HB3	23:CZ:87:ASP:HB2	1.87	0.55
34:DA:814:A:H2'	34:DA:816:A:H5"	1.88	0.55
35:DB:149:LEU:HD23	35:DB:152:PHE:HD2	1.71	0.55
56:DW:23:A:H2'	56:DW:24:G:H8	1.71	0.55
57:DZ:491:VAL:HG21	57:DZ:597:GLY:HA3	1.89	0.55
1:AA:868:A:H2'	1:AA:991:G:H5"	1.89	0.55
1:AA:1551:C:H2'	1:AA:1552:C:C6	2.41	0.55
2:AB:41:U:H5	7:AG:70:VAL:O	1.90	0.55
4:AD:67:PHE:HB3	4:AD:153:ALA:HB3	1.88	0.55
27:A3:3:ARG:CZ	27:A3:36:VAL:HG11	2.37	0.55
1:CA:463:G:H5"	1:CA:464:U:OP2	2.07	0.55
1:CA:663:G:O6	63:CA:3733:HOH:O	2.15	0.55
1:CA:687:C:N3	1:CA:788:A:H5'	2.21	0.55
1:CA:1753:G:N1	1:CA:1756:G:OP2	2.40	0.55
1:CA:2679:A:H4'	5:CE:165:VAL:HG11	1.87	0.55
7:CG:94:LEU:HD22	7:CG:98:ARG:HB2	1.89	0.55
17:CT:99:LEU:O	17:CT:102:ILE:HG12	2.06	0.55
24:C0:10:THR:HG22	24:C0:12:ASN:H	1.72	0.55
37:DD:73:ARG:HG3	37:DD:77:ASN:ND2	2.22	0.55
37:DD:194:LEU:H	37:DD:194:LEU:HD12	1.72	0.55
43:DJ:30:SER:OG	43:DJ:80:LYS:O	2.21	0.55
57:DZ:355:LEU:HG	57:DZ:369:LEU:HD22	1.89	0.55
1:AA:2369:U:OP1	24:A0:20:ARG:HD3	2.06	0.55
3:AC:49:GLY:N	3:AC:209:PHE:O	2.39	0.55
7:AG:145:THR:O	7:AG:148:MET:HG3	2.07	0.55
34:BA:278:G:OP2	50:BQ:92:ARG:NH2	2.40	0.55
34:BA:951:G:N7	46:BM:102:ARG:NH2	2.54	0.55
34:BA:1316:G:H4'	47:BN:18:VAL:HG11	1.89	0.55
39:BF:44:GLY:HA2	39:BF:59:TYR:CZ	2.42	0.55
1:CA:1031:G:H21	33:C9:36:GLN:HE22	1.54	0.55
1:CA:1550:C:OP1	1:CA:1720:U:O2'	2.19	0.55
2:CB:42:C:O2'	7:CG:67:LYS:O	2.19	0.55
16:CS:14:VAL:O	16:CS:18:ILE:HG12	2.06	0.55
31:C7:5:TRP:NE1	31:C7:7:PRO:HG3	2.21	0.55
34:DA:1502:A:H2	34:DA:1505:G:H1	1.53	0.55
36:DC:112:SER:HB3	36:DC:115:LEU:HD22	1.87	0.55
37:DD:15:GLU:OE2	37:DD:66:ARG:NH1	2.38	0.55
41:DH:78:GLN:N	41:DH:78:GLN:HE21	2.03	0.55
41:DH:103:VAL:HG21	41:DH:110:ALA:HB2	1.88	0.55
50:DQ:7:THR:HG23	50:DQ:58:GLU:HG3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DT:63:ILE:HD12	53:DT:81:LYS:HG2	1.88	0.55
1:AA:2832:G:H2'	1:AA:2833:A:H5"	1.87	0.55
3:AC:42:VAL:O	3:AC:216:THR:O	2.24	0.55
4:AD:242:ARG:O	63:AD:401:HOH:O	2.18	0.55
7:AG:49:ASP:O	7:AG:51:ARG:N	2.40	0.55
8:AH:4:ILE:O	8:AH:69:ARG:HD3	2.06	0.55
12:AO:12:ASP:OD1	12:AO:14:THR:OG1	2.10	0.55
20:AW:2:GLU:OE2	20:AW:72:LYS:NZ	2.29	0.55
22:AY:37:VAL:HG21	22:AY:72:VAL:HG21	1.89	0.55
23:AZ:43:GLU:O	23:AZ:47:VAL:HG23	2.07	0.55
34:BA:159:G:O2'	34:BA:161:A:N6	2.35	0.55
34:BA:520:A:N1	34:BA:536:C:H1'	2.22	0.55
34:BA:1251:A:H2'	34:BA:1252:A:C8	2.41	0.55
34:BA:1372:U:OP1	42:BI:72:GLY:N	2.39	0.55
37:BD:31:CYS:SG	37:BD:33:MET:HB3	2.47	0.55
50:BQ:18:THR:HG21	50:BQ:69:LYS:HD2	1.89	0.55
51:BR:47:THR:O	51:BR:47:THR:OG1	2.22	0.55
57:BZ:239:GLU:O	57:BZ:243:VAL:HG23	2.07	0.55
57:BZ:683:VAL:HA	57:BZ:686:LYS:HG2	1.89	0.55
1:CA:971:C:OP2	63:CA:3742:HOH:O	2.17	0.55
1:CA:1053:C:N4	1:CA:1107:G:N1	2.54	0.55
1:CA:1053:C:C2'	1:CA:1054:A:C5'	2.85	0.55
1:CA:1512:U:H2'	1:CA:1513:C:H6	1.71	0.55
1:CA:2177:C:O2	3:CC:171:ALA:HB3	2.05	0.55
1:CA:2678:C:H2'	1:CA:2679:A:O4'	2.06	0.55
4:CD:87:ASN:OD1	4:CD:87:ASN:N	2.39	0.55
4:CD:93:ALA:HB3	4:CD:105:ILE:HG13	1.88	0.55
12:CO:2:ILE:HD12	12:CO:6:THR:HG21	1.87	0.55
12:CO:20:MET:HE3	12:CO:44:LYS:HE3	1.89	0.55
23:CZ:157:LEU:HD11	23:CZ:163:LEU:HB2	1.88	0.55
40:DG:31:MET:HG3	40:DG:35:LYS:O	2.06	0.55
41:DH:78:GLN:HE21	41:DH:78:GLN:H	1.55	0.55
47:DN:12:ARG:HG2	47:DN:13:THR:H	1.70	0.55
57:DZ:610:VAL:HG13	57:DZ:659:LEU:HD11	1.88	0.55
1:AA:275:C:H2'	1:AA:276:C:C6	2.42	0.55
1:AA:2665:U:OP2	1:AA:2666:A:O2'	2.24	0.55
4:AD:124:PRO:HG2	4:AD:129:ASN:HD21	1.70	0.55
34:BA:537:G:H5"	45:BL:113:ARG:HH12	1.71	0.55
34:BA:768:A:H4'	34:BA:1523:G:N2	2.22	0.55
34:BA:1189:C:H5"	34:BA:1190:G:OP2	2.07	0.55
34:BA:1401:G:C2	34:BA:1402:C:H1'	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BG:113:GLU:HG2	40:BG:119:ARG:HG2	1.89	0.55
42:BI:16:ARG:N	42:BI:64:THR:O	2.38	0.55
53:BT:45:GLN:HA	53:BT:91:LEU:HD22	1.89	0.55
1:CA:1278:A:OP1	15:CR:36:THR:HG22	2.05	0.55
1:CA:2132:U:O4	3:CC:6:LYS:HE3	1.96	0.55
1:CA:2177:C:H1'	3:CC:171:ALA:HB1	1.87	0.55
34:DA:693:G:H2'	34:DA:694:A:C8	2.42	0.55
34:DA:814:A:N7	34:DA:816:A:C4	2.75	0.55
34:DA:876:G:O5'	41:DH:14:ARG:NH1	2.40	0.55
35:DB:178:ARG:HD3	41:DH:72:PRO:HA	1.89	0.55
36:DC:58:GLU:HB3	43:DJ:92:THR:HG21	1.88	0.55
43:DJ:6:ILE:HB	43:DJ:72:VAL:HG23	1.89	0.55
56:DW:40:C:O5'	56:DY:36:A:H5'	2.06	0.55
1:AA:1159:U:H2'	1:AA:1160:G:C8	2.42	0.55
1:AA:2102:G:OP1	25:A1:35:THR:HG21	2.06	0.55
1:AA:2268:G:O2'	1:AA:2269:U:H5'	2.06	0.55
8:AH:56:SER:OG	8:AH:58:GLU:HG2	2.06	0.55
34:BA:1399:C:C2	34:BA:1502:A:N6	2.75	0.55
49:BP:19:ILE:HD13	49:BP:36:ILE:HG13	1.87	0.55
1:CA:142:A:HO2'	1:CA:1407:C:HO2'	1.55	0.55
1:CA:859:G:N2	1:CA:917:A:OP2	2.37	0.55
17:CT:16:ARG:NH2	17:CT:83:ILE:O	2.38	0.55
19:CV:50:PRO:HG2	19:CV:51:VAL:HG12	1.88	0.55
34:DA:1326:C:H2'	34:DA:1327:C:C6	2.42	0.55
41:DH:16:ALA:C	41:DH:18:ARG:H	2.14	0.55
57:DZ:164:MET:HG3	57:DZ:257:PRO:HB3	1.88	0.55
1:AA:1221:G:N2	1:AA:1223:C:OP2	2.40	0.55
1:AA:2228:G:O2'	1:AA:2229:A:OP1	2.22	0.55
3:AC:52:PRO:HB2	3:AC:168:LYS:O	2.07	0.55
34:BA:142:G:H2'	34:BA:143:A:C8	2.42	0.55
34:BA:1217:C:H2'	34:BA:1218:C:H6	1.71	0.55
35:BB:185:ILE:HG23	35:BB:199:TYR:HB2	1.88	0.55
45:BL:92:ASP:O	45:BL:94:PRO:HD3	2.07	0.55
46:BM:4:ILE:HB	46:BM:57:ARG:HG3	1.87	0.55
50:BQ:62:SER:OG	50:BQ:72:ARG:HD2	2.06	0.55
57:BZ:-38:TYR:C	57:BZ:-35:PRO:HD2	2.32	0.55
1:CA:866:A:C6	1:CA:914:C:C5	2.94	0.55
1:CA:2822:G:H2'	1:CA:2823:A:H5"	1.89	0.55
5:CE:84:PHE:CZ	5:CE:86:PRO:HB3	2.41	0.55
37:DD:108:LEU:HD21	37:DD:183:GLY:HA3	1.89	0.55
57:DZ:517:LEU:HD13	57:DZ:564:LYS:HD2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2624:C:OP2	29:A5:2:ALA:N	2.40	0.55
15:AR:94:TYR:O	15:AR:117:VAL:HB	2.07	0.55
23:AZ:5:LEU:HD11	23:AZ:39:VAL:HG11	1.89	0.55
34:BA:262:A:H2'	34:BA:263:A:C8	2.41	0.55
34:BA:390:C:H2'	34:BA:391:G:C8	2.42	0.55
35:BB:223:ILE:O	35:BB:225:ALA:N	2.34	0.55
49:BP:3:LYS:O	49:BP:21:VAL:HA	2.07	0.55
57:BZ:78:ARG:HH11	57:BZ:78:ARG:CB	2.19	0.55
1:CA:78:A:H2'	1:CA:79:G:C8	2.42	0.55
1:CA:536:A:H2'	1:CA:537:C:C6	2.42	0.55
1:CA:850:C:O3'	27:C3:49:LYS:HE2	2.06	0.55
1:CA:1927:A:H2'	1:CA:1928:A:C8	2.42	0.55
1:CA:2176:A:O2'	3:CC:45:HIS:ND1	2.40	0.55
8:CH:18:GLU:HB3	8:CH:25:LYS:HB2	1.89	0.55
34:DA:316:G:OP2	34:DA:351:G:O2'	2.24	0.55
34:DA:859:A:H2'	34:DA:860:A:O4'	2.06	0.55
37:DD:58:LEU:HD22	37:DD:62:GLN:HG2	1.89	0.55
42:DI:20:ARG:O	42:DI:60:ASP:HB2	2.07	0.55
42:DI:53:VAL:O	42:DI:55:ALA:N	2.39	0.55
42:DI:85:LEU:HB3	42:DI:92:TYR:HD2	1.72	0.55
1:AA:553:A:H2	1:AA:2065:C:H5'	1.72	0.54
1:AA:1218:G:O2'	1:AA:1219:A:O4'	2.25	0.54
1:AA:1834:A:H4'	4:AD:259:THR:HG23	1.89	0.54
3:AC:54:ARG:CZ	3:AC:56:ASP:HB3	2.37	0.54
3:AC:183:PRO:C	3:AC:185:LYS:H	2.16	0.54
21:AX:29:TRP:CZ3	21:AX:78:LYS:HG2	2.42	0.54
22:AY:92:ASN:N	22:AY:93:GLY:HA2	2.21	0.54
29:A5:16:ARG:HD2	29:A5:20:ARG:NH1	2.21	0.54
34:BA:236:G:H5"	50:BQ:42:TYR:OH	2.07	0.54
40:BG:152:ALA:O	40:BG:155:ARG:N	2.38	0.54
48:BO:24:SER:HB3	48:BO:27:VAL:HG23	1.90	0.54
57:BZ:34:TYR:OH	57:BZ:38:ARG:NH2	2.40	0.54
57:BZ:257:PRO:HB2	57:BZ:259:PHE:CE1	2.42	0.54
5:CE:181:LEU:HD21	17:CT:6:LEU:HD12	1.89	0.54
8:CH:101:ARG:NH2	8:CH:121:ILE:O	2.40	0.54
14:CQ:41:TRP:HB3	14:CQ:94:VAL:HB	1.89	0.54
23:CZ:93:ASP:HA	23:CZ:130:PRO:HG2	1.88	0.54
24:C0:38:VAL:HG12	24:C0:40:GLN:HG2	1.88	0.54
25:C1:21:ARG:CB	25:C1:21:ARG:HH11	2.20	0.54
34:DA:509:A:H3'	34:DA:509:A:H8	1.72	0.54
34:DA:728:A:N7	48:DO:54:ARG:HD3	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:922:G:H1'	38:DE:19:MET:HB3	1.88	0.54
41:DH:41:ARG:O	41:DH:43:GLY:N	2.40	0.54
51:DR:45:SER:HB3	51:DR:47:THR:HG22	1.90	0.54
57:DZ:357:ARG:HH21	57:DZ:366:VAL:HG11	1.71	0.54
7:AG:129:GLY:O	7:AG:161:THR:HG22	2.08	0.54
21:AX:31:HIS:HD2	21:AX:33:LYS:H	1.55	0.54
28:A4:18:CYS:HB3	28:A4:39:CYS:SG	2.47	0.54
34:BA:448:A:OP2	34:BA:485:G:N1	2.35	0.54
38:BE:36:ASP:OD1	38:BE:38:GLN:N	2.31	0.54
53:BT:16:HIS:O	53:BT:19:SER:OG	2.25	0.54
1:CA:988:A:N7	63:CA:3811:HOH:O	2.33	0.54
1:CA:2456:C:N4	63:CA:3846:HOH:O	2.40	0.54
1:CA:2572:A:N7	5:CE:144:ARG:HD2	2.23	0.54
17:CT:108:ARG:NH2	34:DA:1465:C:OP2	2.40	0.54
34:DA:293:G:H1	34:DA:304:U:H3	1.55	0.54
34:DA:693:G:H2'	34:DA:694:A:H8	1.72	0.54
3:AC:194:ILE:HD11	3:AC:227:PRO:HB3	1.89	0.54
7:AG:28:VAL:O	7:AG:31:VAL:HG13	2.06	0.54
7:AG:97:ASP:O	7:AG:101:ILE:HG13	2.07	0.54
34:BA:622:A:OP2	34:BA:623:C:N4	2.40	0.54
34:BA:1030(D):A:N7	34:BA:1031:G:N2	2.55	0.54
35:BB:223:ILE:C	35:BB:225:ALA:H	2.15	0.54
39:BF:25:ILE:O	39:BF:29:ALA:N	2.39	0.54
40:BG:120:ILE:O	40:BG:124:LEU:HB2	2.07	0.54
44:BK:92:GLU:HB3	44:BK:96:ARG:NH2	2.22	0.54
44:BK:98:LEU:O	44:BK:101:SER:OG	2.11	0.54
1:CA:500:G:N2	1:CA:502:A:H3'	2.21	0.54
1:CA:910:A:N3	1:CA:2264:C:O2'	2.38	0.54
1:CA:2745:C:O2	8:CH:139:GLN:NE2	2.40	0.54
3:CC:6:LYS:HA	3:CC:9:ARG:HH11	1.73	0.54
6:CF:126:VAL:HG21	6:CF:129:PHE:CE1	2.42	0.54
7:CG:15:VAL:HG13	7:CG:175:LEU:HB3	1.89	0.54
20:CW:60:ASN:HD22	20:CW:60:ASN:N	2.05	0.54
25:C1:19:GLN:O	25:C1:35:THR:HG22	2.08	0.54
34:DA:503:C:H2'	34:DA:504:C:H6	1.72	0.54
35:DB:19:HIS:CG	35:DB:20:GLU:H	2.25	0.54
38:DE:68:GLU:OE1	63:DE:302:HOH:O	2.18	0.54
57:DZ:149:VAL:O	57:DZ:153:MET:HB2	2.07	0.54
57:DZ:524:GLU:HB3	57:DZ:564:LYS:HG3	1.90	0.54
57:DZ:603:GLU:HG2	57:DZ:679:VAL:HG12	1.88	0.54
1:AA:1003:U:OP2	14:AQ:14:ARG:HD3	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2200:C:O2'	3:AC:169:THR:HB	2.07	0.54
17:AT:65:LYS:HG3	17:AT:66:VAL:O	2.07	0.54
18:AU:61:TRP:CH2	18:AU:93:LYS:HB2	2.42	0.54
37:BD:201:GLN:NE2	38:BE:99:GLY:HA2	2.23	0.54
1:CA:363(A):A:H2'	1:CA:363(B):G:C8	2.42	0.54
3:CC:183:PRO:C	3:CC:185:LYS:H	2.16	0.54
6:CF:37:VAL:HG13	6:CF:184:TYR:HD1	1.71	0.54
13:CP:63:PRO:HD3	32:C8:27:THR:HG22	1.90	0.54
34:DA:428:G:C6	34:DA:430:A:C6	2.95	0.54
35:DB:47:THR:HG23	35:DB:202:PRO:HG2	1.88	0.54
37:DD:117:ALA:O	37:DD:121:VAL:HG23	2.07	0.54
38:DE:33:VAL:HG13	38:DE:112:LEU:HD12	1.90	0.54
41:DH:51:VAL:HG21	41:DH:60:ARG:HB2	1.90	0.54
41:DH:112:LEU:HD12	41:DH:114:THR:HG22	1.90	0.54
57:DZ:94:VAL:HG11	57:DZ:124:GLN:HE22	1.73	0.54
1:AA:1387:U:O2	21:AX:80:ILE:HD12	2.06	0.54
1:AA:1466:U:O2'	1:AA:1467:G:OP1	2.23	0.54
1:AA:1485:A:H2'	1:AA:1486:G:O4'	2.06	0.54
2:AB:59:A:N6	63:AB:3103:HOH:O	2.27	0.54
13:AP:94:GLU:HG3	13:AP:124:LYS:HB3	1.89	0.54
17:AT:2:ASN:O	17:AT:6:LEU:HD23	2.07	0.54
28:A4:56:VAL:HA	28:A4:60:GLN:HE21	1.72	0.54
34:BA:1217:C:H2'	34:BA:1218:C:C6	2.42	0.54
39:BF:14:LEU:HD13	39:BF:18:GLN:HB3	1.90	0.54
44:BK:59:TYR:HE2	44:BK:63:LEU:HD12	1.73	0.54
56:BW:44:G:O2'	56:BW:45:U:H5'	2.07	0.54
1:CA:1208:C:H2'	1:CA:1209:G:H5'	1.89	0.54
1:CA:1363:C:H2'	1:CA:1364:G:H8	1.73	0.54
1:CA:2343:C:HO2'	1:CA:2373:G:HO2'	1.54	0.54
3:CC:52:PRO:HB2	3:CC:168:LYS:O	2.07	0.54
6:CF:164:ARG:HD2	6:CF:175:THR:HG23	1.88	0.54
37:DD:100:ARG:NH1	37:DD:137:SER:HB3	2.21	0.54
42:DI:77:ILE:O	42:DI:81:ILE:HB	2.08	0.54
49:DP:58:TYR:O	49:DP:61:SER:OG	2.22	0.54
57:DZ:206:LEU:HD11	57:DZ:210:ARG:HH12	1.73	0.54
57:DZ:466:LEU:HG	57:DZ:472:VAL:HG21	1.90	0.54
1:AA:579:G:H2'	1:AA:580:U:C6	2.43	0.54
1:AA:2357:G:H4'	1:AA:2358:A:O5'	2.08	0.54
1:AA:2509:A:H5"	63:AA:4188:HOH:O	2.08	0.54
1:AA:2699:U:H2'	1:AA:2700:U:O4'	2.08	0.54
21:AX:60:ARG:HH22	31:A7:47:ARG:HH12	1.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AY:11:ASP:OD1	22:AY:97:ARG:NH2	2.40	0.54
34:BA:555:C:H2'	34:BA:556:C:C6	2.42	0.54
34:BA:582:U:OP1	48:BO:64:ARG:NH1	2.41	0.54
44:BK:27:ASN:OD1	44:BK:28:THR:N	2.36	0.54
1:CA:130:C:H4'	1:CA:1349:A:H4'	1.90	0.54
1:CA:870:A:C2	1:CA:908:C:C2	2.96	0.54
1:CA:2396:G:OP1	25:C1:25:LYS:NZ	2.26	0.54
8:CH:113:VAL:HG11	8:CH:151:ILE:HD13	1.89	0.54
26:C2:8:LYS:O	26:C2:12:GLU:HB2	2.08	0.54
34:DA:176:C:H2'	34:DA:177:C:C6	2.43	0.54
34:DA:396:G:P	57:DZ:349:LYS:NZ	2.81	0.54
34:DA:857:C:H2'	34:DA:858:G:O4'	2.08	0.54
34:DA:959:A:H3'	34:DA:960:U:H5"	1.90	0.54
34:DA:1302:U:OP2	46:DM:21:TYR:OH	2.14	0.54
34:DA:1314:C:N4	52:DS:2:PRO:O	2.41	0.54
34:DA:1406:U:O2	34:DA:1517:G:N2	2.37	0.54
35:DB:54:THR:HG21	35:DB:201:ILE:HD11	1.89	0.54
37:DD:15:GLU:OE2	37:DD:59:ARG:NH2	2.38	0.54
46:DM:65:LYS:NZ	46:DM:73:GLU:OE2	2.40	0.54
57:DZ:517:LEU:O	57:DZ:519:ARG:N	2.41	0.54
1:AA:70:A:N7	21:AX:31:HIS:HE1	2.06	0.54
1:AA:354:A:HO2'	1:AA:355:A:H8	1.52	0.54
1:AA:713:G:N2	32:A8:2:PRO:O	2.41	0.54
1:AA:844:C:H2'	1:AA:845:G:O4'	2.07	0.54
3:AC:52:PRO:HG2	3:AC:53:ARG:H	1.73	0.54
21:AX:84:ALA:HB3	21:AX:87:GLN:NE2	2.23	0.54
34:BA:254:G:H21	50:BQ:16:GLN:NE2	2.05	0.54
34:BA:1172:C:H2'	34:BA:1173:G:C8	2.42	0.54
37:BD:204:ILE:O	37:BD:208:SER:OG	2.24	0.54
39:BF:44:GLY:O	39:BF:60:PHE:N	2.41	0.54
44:BK:48:ILE:O	44:BK:50:TYR:N	2.38	0.54
57:BZ:396:ARG:HG3	57:BZ:396:ARG:HH21	1.72	0.54
1:CA:300:A:P	22:CY:86:ARG:HH21	2.30	0.54
1:CA:385:C:O2'	1:CA:388:G:N2	2.40	0.54
3:CC:30:VAL:HG23	3:CC:31:LYS:HG2	1.89	0.54
4:CD:221:VAL:HG22	4:CD:226:MET:HE3	1.90	0.54
14:CQ:26:TYR:CD1	14:CQ:28:ALA:HB2	2.43	0.54
17:CT:19:LEU:HD13	17:CT:86:ILE:HD12	1.90	0.54
34:DA:1074:G:O2'	34:DA:1101:A:N1	2.39	0.54
34:DA:1273:G:H3'	34:DA:1274:G:C8	2.43	0.54
34:DA:1457:G:H5"	53:DT:35:THR:HG21	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DF:2:ARG:CZ	39:DF:69:GLU:HG2	2.38	0.54
40:DG:13:GLN:O	40:DG:24:THR:HG21	2.07	0.54
44:DK:24:SER:OG	44:DK:27:ASN:N	2.41	0.54
1:AA:1338:U:H2'	1:AA:1339:C:C6	2.42	0.54
1:AA:1340:U:O2'	15:AR:26:LYS:NZ	2.41	0.54
1:AA:2143:G:C1'	3:AC:168:LYS:HD3	2.38	0.54
1:AA:2204:G:H2'	1:AA:2205:C:C6	2.42	0.54
2:AB:91:C:OP2	14:AQ:16:ARG:NH1	2.41	0.54
56:BY:53:G:H1	56:BY:61:C:N4	2.06	0.54
57:BZ:247:ARG:O	57:BZ:251:ILE:HG13	2.07	0.54
1:CA:1053:C:C5'	1:CA:1053:C:C6	2.85	0.54
1:CA:1359:A:N1	1:CA:1372:U:C4	2.76	0.54
2:CB:55:U:O3'	7:CG:27:ASN:ND2	2.36	0.54
3:CC:194:ILE:HD11	3:CC:227:PRO:HB3	1.89	0.54
5:CE:119:ARG:HG3	5:CE:160:TYR:HB2	1.90	0.54
18:CU:106:PHE:HA	18:CU:109:LEU:HD12	1.90	0.54
34:DA:565:U:OP2	34:DA:566:G:O2'	2.19	0.54
35:DB:162:ILE:O	35:DB:185:ILE:HG12	2.07	0.54
37:DD:150:GLU:C	37:DD:152:SER:H	2.16	0.54
40:DG:50:ILE:HG13	40:DG:58:PRO:HG3	1.88	0.54
1:AA:1767:A:O2'	1:AA:1768:U:H2'	2.08	0.54
16:AS:34:HIS:HD1	16:AS:53:SER:HG	1.52	0.54
16:AS:49:VAL:HG11	16:AS:77:ALA:HB2	1.90	0.54
34:BA:1326:C:OP1	54:BU:12:LYS:NZ	2.26	0.54
38:BE:77:PRO:HG2	38:BE:78:HIS:HD2	1.73	0.54
44:BK:46:GLY:HA2	44:BK:50:TYR:O	2.08	0.54
1:CA:796:C:H2'	1:CA:797:C:H6	1.73	0.54
1:CA:1053:C:C2	1:CA:1054:A:H8	2.22	0.54
1:CA:1627:G:OP2	63:CA:3745:HOH:O	2.18	0.54
1:CA:2590:A:OP2	4:CD:238:GLY:HA2	2.08	0.54
1:CA:2788:C:P	5:CE:61:ARG:HH21	2.30	0.54
7:CG:39:ILE:N	7:CG:92:VAL:O	2.37	0.54
8:CH:92:ILE:H	8:CH:92:ILE:HD12	1.73	0.54
8:CH:164:TYR:HB2	8:CH:167:GLU:HB2	1.89	0.54
25:C1:62:VAL:HG22	25:C1:63:ALA:O	2.08	0.54
39:DF:97:PHE:HB2	51:DR:32:ARG:HH21	1.73	0.54
41:DH:49:GLU:OE2	41:DH:62:TYR:OH	2.16	0.54
1:AA:515:G:N7	20:AW:49:LYS:NZ	2.56	0.54
1:AA:1218:G:O2'	1:AA:1219:A:O5'	2.26	0.54
1:AA:1501:U:O2'	1:AA:1502:G:N7	2.34	0.54
1:AA:1736:A:N6	1:AA:1745:A:H2	2.00	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AO:111:PHE:O	12:AO:115:VAL:HG23	2.07	0.54
34:BA:482:A:H2'	34:BA:483:C:C6	2.43	0.54
34:BA:974:A:H8	34:BA:974:A:OP1	1.91	0.54
36:BC:178:LEU:O	36:BC:180:ALA:N	2.41	0.54
37:BD:155:LEU:HD23	37:BD:156:GLU:H	1.72	0.54
53:BT:29:LYS:O	53:BT:33:ILE:HG13	2.08	0.54
1:CA:657:U:O4	63:CA:3739:HOH:O	2.16	0.54
7:CG:114:ILE:HA	7:CG:136:ARG:HH22	1.73	0.54
8:CH:3:ARG:NH2	8:CH:5:GLY:H	2.06	0.54
13:CP:59:LEU:HD23	32:C8:58:ILE:HD13	1.90	0.54
34:DA:433:C:H2'	34:DA:434:U:H6	1.73	0.54
34:DA:1212:U:H4'	34:DA:1213:A:H5'	1.89	0.54
34:DA:1435:G:H2'	34:DA:1436:U:C6	2.43	0.54
37:DD:100:ARG:CG	37:DD:137:SER:HA	2.38	0.54
42:DI:17:VAL:HG21	42:DI:81:ILE:HG13	1.90	0.54
1:AA:2542:A:N7	8:AH:172:LYS:NZ	2.56	0.53
1:AA:2674:A:H5"	1:AA:2675:G:OP2	2.08	0.53
7:AG:43:LEU:HD12	7:AG:45:GLU:HG2	1.90	0.53
9:AK:73:GLY:O	9:AK:75:GLN:N	2.33	0.53
34:BA:45:U:H2'	34:BA:46:G:C8	2.43	0.53
34:BA:805:C:C2'	34:BA:806:C:H5'	2.38	0.53
34:BA:870:U:H4'	34:BA:871:U:H5"	1.90	0.53
34:BA:1112:C:N4	36:BC:176:HIS:O	2.41	0.53
44:BK:29:ILE:HG12	44:BK:44:SER:CB	2.38	0.53
45:BL:84:LEU:HD23	45:BL:105:TYR:CE2	2.43	0.53
57:BZ:125:ALA:CB	57:BZ:132:ARG:NH1	2.71	0.53
1:CA:30:G:H2'	1:CA:31:C:C6	2.43	0.53
1:CA:143(A):C:H2'	1:CA:144:C:C6	2.43	0.53
1:CA:1204:A:H2	1:CA:1241:A:H62	1.55	0.53
1:CA:2719:G:OP2	63:CA:3747:HOH:O	2.18	0.53
3:CC:44:VAL:HG23	3:CC:176:VAL:HG21	1.89	0.53
3:CC:54:ARG:CZ	3:CC:56:ASP:HB3	2.37	0.53
4:CD:102:LYS:O	4:CD:103:ARG:HG2	2.08	0.53
5:CE:12:THR:HG22	5:CE:13:ARG:H	1.72	0.53
9:CK:69:PRO:O	9:CK:71:LEU:N	2.38	0.53
11:CN:12:ARG:HB3	11:CN:50:ASP:OD1	2.08	0.53
16:CS:92:TYR:HB3	16:CS:98:VAL:HG21	1.89	0.53
21:CX:29:TRP:CZ3	21:CX:78:LYS:HB2	2.43	0.53
35:DB:127:ILE:HG12	35:DB:128:GLU:H	1.74	0.53
48:DO:54:ARG:HG3	48:DO:58:MET:CE	2.39	0.53
57:DZ:219:VAL:O	57:DZ:221:ALA:N	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:370:A:H5"	1:AA:371:A:OP2	2.09	0.53
1:AA:1660:A:C2	20:AW:93:ALA:HB2	2.43	0.53
3:AC:42:VAL:HG13	3:AC:43:GLU:H	1.73	0.53
34:BA:13:U:OP1	63:BA:1913:HOH:O	2.18	0.53
34:BA:1207:G:H2'	34:BA:1208:C:C6	2.43	0.53
35:BB:58:ILE:HB	35:BB:221:LEU:HD12	1.90	0.53
48:BO:78:TYR:OH	48:BO:88:ARG:NH2	2.41	0.53
57:BZ:572:TYR:OH	57:BZ:574:GLU:OE1	2.24	0.53
1:CA:853:G:C2'	1:CA:854:G:H5'	2.38	0.53
1:CA:1434:A:H61	1:CA:1558:A:N6	2.05	0.53
8:CH:26:VAL:HG12	8:CH:79:VAL:HG21	1.89	0.53
38:DE:147:ASP:OD2	38:DE:147:ASP:N	2.38	0.53
57:DZ:181:LEU:HD12	57:DZ:216:LEU:HD21	1.91	0.53
1:AA:552:C:C5	1:AA:2792:U:H2'	2.43	0.53
1:AA:1071:G:C4	1:AA:1180:C:H1'	2.43	0.53
16:AS:93:LYS:HD3	16:AS:95:HIS:HB2	1.89	0.53
34:BA:76:C:N4	34:BA:78:G:H1	2.06	0.53
47:BN:23:ARG:NH1	47:BN:30:ALA:HB2	2.24	0.53
57:BZ:310:ALA:HB3	57:BZ:332:SER:HB3	1.89	0.53
57:BZ:428:LEU:HD13	57:BZ:440:VAL:HG21	1.90	0.53
1:CA:289:A:H2'	1:CA:290:G:O4'	2.08	0.53
1:CA:819:A:C4	1:CA:1189:A:C2	2.96	0.53
1:CA:862:G:H2'	1:CA:863:A:O4'	2.08	0.53
1:CA:2243:U:H2'	1:CA:2244:U:C6	2.43	0.53
6:CF:34:TRP:CZ2	13:CP:8:PRO:HG3	2.44	0.53
34:DA:410:G:H21	34:DA:432:A:H62	1.56	0.53
50:DQ:64:PRO:HB3	50:DQ:70:ARG:NH1	2.24	0.53
57:DZ:13:ARG:NH1	57:DZ:282:SER:HB3	2.19	0.53
1:AA:296:U:H2'	1:AA:297:C:O4'	2.09	0.53
1:AA:310:C:O2'	1:AA:311:C:H5'	2.08	0.53
1:AA:1480:A:H61	1:AA:1605:A:H62	1.56	0.53
1:AA:1834:A:HO2'	4:AD:259:THR:HG21	1.73	0.53
1:AA:1940:A:O2'	1:AA:1942:C:N4	2.41	0.53
1:AA:2457:G:OP1	6:AF:74:ARG:NH2	2.40	0.53
1:AA:2490:A:OP2	33:A9:2:LYS:NZ	2.26	0.53
4:AD:136:ILE:O	4:AD:168:ARG:NH2	2.42	0.53
29:A5:49:CYS:SG	29:A5:51:TYR:HB2	2.49	0.53
34:BA:374:A:C6	34:BA:375:U:C4	2.97	0.53
34:BA:430:A:OP2	37:BD:8:VAL:HG12	2.08	0.53
34:BA:450:G:OP2	34:BA:451:A:O2'	2.27	0.53
34:BA:631:G:H2'	34:BA:632:A:H8	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BO:63:ARG:O	48:BO:67:LEU:HG	2.09	0.53
1:CA:800:A:H8	1:CA:800:A:OP1	1.92	0.53
1:CA:1237:A:OP1	63:CA:3749:HOH:O	2.19	0.53
1:CA:1250:G:OP2	13:CP:21:ARG:NH1	2.41	0.53
8:CH:56:SER:HB3	8:CH:61:HIS:ND1	2.23	0.53
16:CS:77:ALA:HA	16:CS:80:LEU:HD13	1.91	0.53
23:CZ:100:VAL:N	23:CZ:124:ILE:O	2.40	0.53
34:DA:222:U:H2'	34:DA:223:U:C6	2.43	0.53
34:DA:586:C:O2'	34:DA:878:G:H4'	2.08	0.53
38:DE:9:LYS:HB2	38:DE:112:LEU:HD11	1.91	0.53
38:DE:77:PRO:HD2	38:DE:142:LEU:HD22	1.91	0.53
1:AA:482:C:H4'	63:AA:3918:HOH:O	2.09	0.53
3:AC:171:ALA:HB1	3:AC:173:HIS:CE1	2.44	0.53
5:AE:92:THR:O	5:AE:95:ILE:HG23	2.08	0.53
8:AH:3:ARG:HH12	8:AH:54:ARG:HH12	1.55	0.53
13:AP:27:HIS:HB2	63:AP:304:HOH:O	2.09	0.53
21:AX:13:LEU:HD11	26:A2:41:ILE:HG22	1.90	0.53
34:BA:1246:C:H42	34:BA:1291:G:H1	1.57	0.53
35:BB:166:ASP:OD1	35:BB:167:PRO:HD2	2.07	0.53
57:BZ:69:VAL:HG12	57:BZ:327:PHE:CD1	2.41	0.53
57:BZ:483:TYR:C	57:BZ:484:ARG:HE	2.16	0.53
1:CA:723:G:H2'	1:CA:724:U:O4'	2.08	0.53
1:CA:786:C:O2'	1:CA:787:U:H5'	2.08	0.53
1:CA:950:G:H2'	1:CA:951:C:C6	2.43	0.53
1:CA:2166:G:H3'	1:CA:2167:U:C5'	2.39	0.53
1:CA:2685:G:H5'	12:CO:68:GLU:OE1	2.08	0.53
7:CG:115:ARG:HH11	7:CG:115:ARG:H	1.57	0.53
13:CP:94:GLU:HG3	13:CP:124:LYS:HD3	1.91	0.53
32:C8:28:GLY:O	32:C8:36:LYS:NZ	2.40	0.53
34:DA:179:A:H2'	34:DA:180:U:C6	2.42	0.53
34:DA:223:U:H2'	34:DA:224:C:H6	1.74	0.53
34:DA:246:A:N1	34:DA:278:G:O2'	2.41	0.53
34:DA:409:G:H1	34:DA:433:C:H42	1.55	0.53
34:DA:977:A:H1'	34:DA:981:U:H3	1.72	0.53
35:DB:12:GLU:HA	35:DB:213:LEU:HD11	1.91	0.53
40:DG:126:ASP:O	40:DG:130:GLY:N	2.42	0.53
50:DQ:53:LEU:HG	50:DQ:85:VAL:HG21	1.90	0.53
1:AA:561:A:H2'	1:AA:562:C:C6	2.44	0.53
1:AA:1451:U:H2'	1:AA:1452:U:C6	2.42	0.53
1:AA:2769:U:H1'	1:AA:2770:A:H5"	1.91	0.53
4:AD:101:GLU:OE1	4:AD:103:ARG:HD3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AU:28:ARG:NH1	18:AU:38:THR:OG1	2.33	0.53
37:BD:159:ARG:HA	37:BD:162:LEU:HD12	1.90	0.53
39:BF:10:LEU:HD21	39:BF:61:LEU:HD22	1.89	0.53
1:CA:2176:A:O2'	3:CC:45:HIS:CD2	2.61	0.53
1:CA:2895:U:H2'	1:CA:2896:C:O4'	2.09	0.53
2:CB:12:C:O5'	2:CB:12:C:H6	1.91	0.53
4:CD:134:ARG:HD2	4:CD:135:PHE:CE2	2.44	0.53
10:CL:86:LYS:H	10:CL:86:LYS:HD2	1.74	0.53
22:CY:49:VAL:HG21	22:CY:61:ILE:HG23	1.90	0.53
25:C1:21:ARG:HH11	25:C1:21:ARG:HB3	1.73	0.53
34:DA:404:U:C2	34:DA:405:U:C5	2.97	0.53
34:DA:1317:C:O2	52:DS:37:ARG:NH1	2.42	0.53
34:DA:1402:C:H2'	34:DA:1403:C:O4'	2.09	0.53
37:DD:150:GLU:O	37:DD:153:ARG:HG2	2.08	0.53
38:DE:16:THR:OG1	38:DE:17:ALA:N	2.41	0.53
41:DH:86:ILE:HG21	41:DH:133:LEU:HD22	1.90	0.53
50:DQ:45:HIS:CD2	50:DQ:47:PRO:HD3	2.43	0.53
57:DZ:309:LEU:HA	57:DZ:333:GLY:HA3	1.91	0.53
1:AA:308:U:H2'	1:AA:309:C:C6	2.44	0.53
1:AA:2331:G:H22	16:AS:3:ARG:CG	2.22	0.53
12:AO:19:ILE:HG22	12:AO:43:VAL:HA	1.91	0.53
14:AQ:138:ASP:OD2	23:AZ:81:ARG:NH1	2.42	0.53
34:BA:631:G:H2'	34:BA:632:A:C8	2.44	0.53
37:BD:121:VAL:O	37:BD:134:ASP:HA	2.08	0.53
48:BO:43:LEU:HD12	48:BO:56:LEU:HD22	1.90	0.53
1:CA:84:A:H5"	22:CY:8:LYS:HE3	1.90	0.53
1:CA:620:G:H5'	1:CA:620:G:N3	2.23	0.53
1:CA:2132:U:O2	3:CC:9:ARG:NH1	2.42	0.53
6:CF:25:PRO:HD2	6:CF:115:ALA:HB2	1.91	0.53
34:DA:979:C:H2'	34:DA:980:C:H5'	1.89	0.53
34:DA:1076:C:C2	34:DA:1082:G:N2	2.77	0.53
34:DA:1126:U:H4'	34:DA:1281:U:H1'	1.90	0.53
34:DA:1187:G:H2'	34:DA:1188:A:H8	1.71	0.53
41:DH:33:GLU:O	41:DH:36:LEU:N	2.41	0.53
1:AA:2154:U:O2	3:AC:6:LYS:CB	2.45	0.53
3:AC:30:VAL:HG23	3:AC:31:LYS:HG2	1.89	0.53
3:AC:64:SER:HA	3:AC:161:ARG:H	1.74	0.53
20:AW:14:PRO:HG2	20:AW:78:GLU:CG	2.37	0.53
24:A0:32:ARG:H	24:A0:35:ASN:ND2	2.06	0.53
34:BA:1081:G:H2'	34:BA:1082:G:H8	1.74	0.53
34:BA:1510:U:H2'	34:BA:1511:G:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:69:LEU:HD13	35:BB:91:PRO:HB2	1.91	0.53
57:BZ:547:GLU:HA	57:BZ:550:MET:HE2	1.91	0.53
1:CA:649:G:H2'	1:CA:650:C:C6	2.43	0.53
3:CC:52:PRO:HG2	3:CC:53:ARG:H	1.73	0.53
8:CH:52:VAL:HG21	8:CH:69:ARG:HB2	1.90	0.53
9:CK:39:ALA:O	9:CK:43:ALA:N	2.42	0.53
15:CR:26:LYS:HE2	15:CR:70:LEU:O	2.08	0.53
19:CV:35:LEU:H	19:CV:35:LEU:HD12	1.71	0.53
34:DA:1478:C:H2'	34:DA:1479:C:H6	1.73	0.53
37:DD:129:ASN:ND2	37:DD:145:GLU:H	2.07	0.53
39:DF:5:GLU:HG2	39:DF:62:TRP:CZ2	2.43	0.53
39:DF:39:LYS:O	39:DF:62:TRP:HZ3	1.92	0.53
57:DZ:278:ASP:HB3	57:DZ:279:TYR:CD1	2.44	0.53
57:DZ:637:ARG:HG3	57:DZ:642:VAL:HB	1.89	0.53
1:AA:45:C:OP2	1:AA:204:G:H5'	2.08	0.53
1:AA:650:G:N7	13:AP:107:LYS:NZ	2.57	0.53
1:AA:1410:G:P	25:A1:3:LYS:HG3	2.49	0.53
3:AC:6:LYS:HA	3:AC:9:ARG:HH11	1.72	0.53
3:AC:44:VAL:HG23	3:AC:176:VAL:HG21	1.89	0.53
6:AF:132:VAL:HG22	6:AF:163:VAL:HG22	1.91	0.53
17:AT:41:ARG:NH1	34:BA:346:G:OP1	2.19	0.53
35:BB:78:GLN:O	35:BB:94:ASN:ND2	2.41	0.53
37:BD:93:PHE:O	37:BD:97:LEU:HD23	2.09	0.53
1:CA:530:G:C5	1:CA:2022:U:H5"	2.43	0.53
1:CA:910:A:C5	14:CQ:13:GLN:HG3	2.43	0.53
1:CA:1183:G:O2'	27:C3:29:ARG:NH1	2.41	0.53
1:CA:1297:C:H2'	1:CA:1298:C:H6	1.74	0.53
1:CA:2110:G:H1	1:CA:2179:C:N4	2.02	0.53
2:CB:105:A:OP1	23:CZ:72:ARG:NH2	2.42	0.53
6:CF:107:LYS:HG3	6:CF:206:ILE:HA	1.91	0.53
6:CF:117:ARG:NH2	6:CF:187:VAL:O	2.42	0.53
34:DA:406:G:H4'	37:DD:5:ILE:HD11	1.90	0.53
34:DA:409:G:H1	34:DA:433:C:N4	2.07	0.53
34:DA:707:C:H4'	44:DK:20:TYR:CD2	2.43	0.53
34:DA:882:C:OP2	45:DL:13:LYS:NZ	2.41	0.53
35:DB:101:MET:HA	35:DB:108:ILE:HG13	1.91	0.53
35:DB:222:ILE:HG13	35:DB:223:ILE:N	2.24	0.53
37:DD:78:LEU:HB3	37:DD:93:PHE:HE1	1.74	0.53
38:DE:84:PHE:HB2	38:DE:134:ALA:HB2	1.90	0.53
41:DH:4:ASP:OD2	41:DH:85:ARG:NH1	2.42	0.53
41:DH:20:TYR:HD2	41:DH:65:TYR:CD2	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:105:ILE:HG22	57:DZ:133:ILE:CG1	2.39	0.53
57:DZ:165:GLN:NE2	57:DZ:260:LEU:H	2.02	0.53
1:AA:1404:G:O2'	1:AA:1405:A:H5"	2.09	0.53
1:AA:1431:G:O2'	1:AA:1442:U:O2	2.23	0.53
1:AA:1501:U:OP1	15:AR:77:ARG:NH1	2.38	0.53
1:AA:2583:C:H5"	1:AA:2584:A:H5"	1.92	0.53
3:AC:65:LEU:HD22	3:AC:189:ASN:HB3	1.91	0.53
7:AG:126:ASP:CG	7:AG:130:ASN:HD22	2.17	0.53
34:BA:502:G:H2'	34:BA:503:C:O4'	2.09	0.53
34:BA:1298:C:H4'	34:BA:1299:A:C4	2.44	0.53
37:BD:61:LYS:HA	37:BD:203:VAL:HG23	1.90	0.53
38:BE:11:ILE:HD11	38:BE:108:ALA:HB3	1.90	0.53
57:BZ:496:LYS:HG3	57:BZ:509:HIS:HD1	1.73	0.53
1:CA:328:U:H4'	22:CY:68:HIS:CE1	2.44	0.53
5:CE:73:GLU:H	5:CE:73:GLU:CD	2.12	0.53
7:CG:96:ARG:O	7:CG:99:MET:HG2	2.08	0.53
17:CT:9:LEU:O	17:CT:12:SER:OG	2.25	0.53
22:CY:97:ARG:HB2	22:CY:106:LEU:HB2	1.91	0.53
23:CZ:6:LYS:HD2	23:CZ:43:GLU:OE2	2.08	0.53
34:DA:109:A:C6	34:DA:326:G:C6	2.97	0.53
36:DC:25:GLY:O	36:DC:29:TYR:HB2	2.09	0.53
1:AA:200:A:O2'	1:AA:201:G:H5'	2.09	0.52
1:AA:469:A:N7	6:AF:45:ARG:HG2	2.24	0.52
1:AA:1553:A:O2'	1:AA:1554:A:O5'	2.24	0.52
1:AA:1712:A:H2'	1:AA:1713:G:O4'	2.09	0.52
1:AA:1817:A:H8	63:AA:4215:HOH:O	1.91	0.52
5:AE:49:LEU:HD22	5:AE:81:ILE:HG13	1.90	0.52
7:AG:170:ARG:HH21	7:AG:180:PHE:CB	2.21	0.52
27:A3:39:ASP:OD2	27:A3:44:ARG:NH1	2.43	0.52
30:A6:30:THR:N	30:A6:31:PRO:HD3	2.24	0.52
34:BA:692:U:H2'	34:BA:694:A:OP2	2.09	0.52
35:BB:189:ASP:OD1	35:BB:189:ASP:N	2.42	0.52
41:BH:51:VAL:HG12	41:BH:52:ASP:H	1.74	0.52
1:CA:699:A:H2'	1:CA:700:G:O4'	2.08	0.52
1:CA:1418:G:H8	1:CA:1418:G:O5'	1.92	0.52
1:CA:1693:U:O2'	4:CD:14:ARG:NH2	2.42	0.52
3:CC:51:ASP:OD2	3:CC:54:ARG:HB2	2.09	0.52
3:CC:64:SER:HA	3:CC:161:ARG:H	1.74	0.52
3:CC:171:ALA:HB1	3:CC:173:HIS:CE1	2.43	0.52
30:C6:6:ARG:NH1	30:C6:26:ASN:HB2	2.24	0.52
34:DA:503:C:H2'	34:DA:504:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:724:G:C2	34:DA:725:G:C8	2.97	0.52
34:DA:913:A:H4'	34:DA:914:A:O5'	2.09	0.52
34:DA:1256:A:H61	34:DA:1278:U:H1'	1.74	0.52
44:DK:52:GLY:O	44:DK:55:LYS:HE2	2.08	0.52
56:DW:51:U:H3	56:DW:63:G:H1	1.57	0.52
57:DZ:15:ILE:HA	57:DZ:103:GLY:O	2.09	0.52
57:DZ:638:GLY:C	57:DZ:640:ALA:HB3	2.34	0.52
1:AA:116:A:H3'	1:AA:117:A:C5'	2.39	0.52
1:AA:1261:G:P	18:AU:12:ARG:HH21	2.31	0.52
7:AG:109:VAL:C	7:AG:112:PRO:HD2	2.34	0.52
25:A1:7:ILE:HG12	25:A1:62:VAL:HG21	1.91	0.52
28:A4:44:THR:O	28:A4:46:GLN:N	2.42	0.52
34:BA:1101:A:H4'	34:BA:1102:A:O5'	2.09	0.52
35:BB:178:ARG:NH1	35:BB:196:LEU:O	2.39	0.52
42:BI:128:ARG:HD2	56:BW:32:PSU:OP2	2.09	0.52
49:BP:20:VAL:HG21	49:BP:32:TYR:CG	2.45	0.52
1:CA:1422:G:H1'	1:CA:1496:A:N1	2.24	0.52
4:CD:68:LYS:O	4:CD:70:TRP:N	2.38	0.52
4:CD:244:ARG:HB2	4:CD:245:PRO:HD2	1.91	0.52
5:CE:9:VAL:HG13	5:CE:25:VAL:O	2.09	0.52
21:CX:36:LYS:O	21:CX:39:ILE:N	2.41	0.52
34:DA:405:U:O4	37:DD:2:GLY:N	2.43	0.52
38:DE:70:PRO:O	38:DE:72:GLN:NE2	2.42	0.52
47:DN:23:ARG:HD3	47:DN:30:ALA:HB2	1.91	0.52
57:DZ:244:ALA:HA	57:DZ:247:ARG:HB3	1.90	0.52
1:AA:1296:G:OP2	13:AP:21:ARG:NH1	2.42	0.52
1:AA:1410:G:OP2	25:A1:3:LYS:HG3	2.09	0.52
1:AA:1411:A:O5'	25:A1:41:ARG:NH2	2.36	0.52
1:AA:1778:G:H2'	1:AA:1779:G:H5"	1.90	0.52
15:AR:118:GLU:H	15:AR:118:GLU:CD	2.17	0.52
34:BA:1356:G:H2'	34:BA:1357:A:C8	2.45	0.52
35:BB:60:ASP:CG	35:BB:64:ARG:HH21	2.17	0.52
37:BD:119:GLN:HG3	37:BD:123:HIS:CD2	2.44	0.52
42:BI:9:ARG:HB3	42:BI:104:ARG:NH1	2.23	0.52
49:BP:39:TYR:CE2	49:BP:41:PRO:HB3	2.44	0.52
1:CA:272(H):C:OP2	1:CA:272(H):C:H6	1.93	0.52
1:CA:990:A:OP2	63:CA:3751:HOH:O	2.19	0.52
2:CB:84:C:OP1	27:C3:15:TYR:OH	2.21	0.52
11:CN:67:LEU:HD13	11:CN:87:LEU:HD13	1.91	0.52
15:CR:44:LEU:HD22	15:CR:48:VAL:HG23	1.91	0.52
18:CU:65:ILE:HD11	18:CU:95:LEU:HB3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:382:A:H2'	34:DA:383:A:H8	1.73	0.52
34:DA:429:U:H3'	37:DD:9:CYS:SG	2.49	0.52
34:DA:826:C:H2'	34:DA:827:U:H6	1.74	0.52
50:DQ:94:ASN:O	50:DQ:97:SER:OG	2.26	0.52
57:DZ:142:THR:HA	57:DZ:171:GLU:HG2	1.90	0.52
57:DZ:613:PRO:HD2	57:DZ:616:TYR:HD1	1.74	0.52
3:AC:51:ASP:OD2	3:AC:54:ARG:HB2	2.09	0.52
4:AD:124:PRO:HG2	4:AD:129:ASN:ND2	2.23	0.52
5:AE:7:VAL:CG2	17:AT:1:MET:HE1	2.39	0.52
8:AH:29:PRO:HD2	8:AH:79:VAL:O	2.10	0.52
23:AZ:51:ALA:HA	23:AZ:55:HIS:HD2	1.74	0.52
34:BA:382:A:H2'	34:BA:383:A:H8	1.74	0.52
34:BA:647:C:H2'	34:BA:648:A:H8	1.73	0.52
36:BC:112:SER:HB3	36:BC:115:LEU:HD22	1.91	0.52
38:BE:48:ALA:C	38:BE:50:GLU:H	2.17	0.52
50:BQ:9:VAL:O	50:BQ:21:VAL:HA	2.09	0.52
57:BZ:115:GLU:C	57:BZ:156:ARG:HH22	2.17	0.52
1:CA:83:G:HO2'	1:CA:102:G:N2	2.07	0.52
1:CA:954:G:H5"	14:CQ:13:GLN:HB3	1.91	0.52
1:CA:2682:U:O2'	17:CT:58:ASN:ND2	2.43	0.52
11:CN:42:TRP:CZ3	11:CN:44:PRO:HG3	2.44	0.52
28:C4:45:GLY:O	28:C4:47:GLN:N	2.40	0.52
28:C4:59:PHE:HA	28:C4:61:ARG:N	2.24	0.52
34:DA:974:A:OP2	47:DN:41:ARG:NH1	2.43	0.52
35:DB:42:ILE:HG21	35:DB:202:PRO:O	2.09	0.52
37:DD:10:ARG:HB2	37:DD:40:PRO:HG3	1.91	0.52
57:DZ:1:LEU:O	57:DZ:4:ILE:N	2.42	0.52
57:DZ:114:VAL:O	57:DZ:118:SER:OG	2.22	0.52
1:AA:152:G:H2'	1:AA:153:C:C6	2.45	0.52
1:AA:794:U:O2	1:AA:2036:A:H1'	2.08	0.52
1:AA:847:A:H8	1:AA:847:A:OP1	1.91	0.52
1:AA:1466:U:HO2'	1:AA:1467:G:P	2.32	0.52
1:AA:1627:A:OP2	1:AA:1627:A:H8	1.93	0.52
1:AA:1929:G:H2'	1:AA:1930:C:C6	2.45	0.52
1:AA:2154:U:C2	3:AC:6:LYS:CB	2.92	0.52
4:AD:261:LYS:HG2	4:AD:264:LYS:HB2	1.91	0.52
10:AL:117:THR:OG1	10:AL:118:THR:N	2.41	0.52
28:A4:58:ARG:HD2	46:BM:80:ARG:NH2	2.24	0.52
30:A6:44:ARG:HB3	30:A6:44:ARG:HH11	1.75	0.52
34:BA:171:A:H2'	34:BA:172:A:C8	2.45	0.52
34:BA:216:G:H2'	34:BA:217:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:436:C:H2'	34:BA:437:U:C6	2.45	0.52
37:BD:15:GLU:HG3	37:BD:63:LYS:NZ	2.25	0.52
37:BD:31:CYS:SG	37:BD:33:MET:N	2.83	0.52
42:BI:23:ASN:HD22	42:BI:25:LYS:HG2	1.73	0.52
44:BK:79:SER:HB2	44:BK:106:LYS:HD2	1.90	0.52
53:BT:75:ASN:O	53:BT:78:ALA:HB3	2.09	0.52
57:BZ:186:TYR:CE2	57:BZ:271:LEU:HD21	2.45	0.52
1:CA:2116:G:N2	1:CA:2162:G:OP2	2.43	0.52
5:CE:33:VAL:HG21	5:CE:36:ARG:HH21	1.75	0.52
9:CK:40:LEU:HA	9:CK:43:ALA:HB3	1.92	0.52
34:DA:1340:A:OP1	56:DY:35:A:OP1	2.28	0.52
37:DD:25:ARG:HA	37:DD:28:SER:HB3	1.91	0.52
37:DD:98:GLU:C	37:DD:100:ARG:H	2.17	0.52
45:DL:71:PRO:O	45:DL:102:ARG:HD2	2.09	0.52
46:DM:22:ILE:HG21	46:DM:66:LEU:HD22	1.90	0.52
57:DZ:165:GLN:HE21	57:DZ:260:LEU:N	2.04	0.52
1:AA:574:G:O2'	1:AA:1265:A:N3	2.39	0.52
1:AA:663:G:H2'	1:AA:664:U:C6	2.44	0.52
1:AA:2299:A:C4	1:AA:2301:G:C8	2.98	0.52
12:AO:80:ASP:OD2	17:AT:64:ARG:NH2	2.43	0.52
34:BA:36:C:HO2'	45:BL:117:ARG:NH2	2.07	0.52
34:BA:411:A:C8	34:BA:413:G:C8	2.97	0.52
35:BB:115:LEU:HB2	35:BB:145:LEU:HD12	1.92	0.52
46:BM:84:ILE:HG13	46:BM:86:CYS:N	2.23	0.52
57:BZ:546:ILE:HD13	57:BZ:565:VAL:HG11	1.92	0.52
1:CA:1842:G:O2'	4:CD:253:GLN:NE2	2.43	0.52
1:CA:2177:C:O3'	3:CC:47:LYS:HB2	2.10	0.52
1:CA:2178:C:H4'	3:CC:47:LYS:HZ1	1.72	0.52
1:CA:2331:G:O2'	1:CA:2336:A:N1	2.39	0.52
11:CN:112:LEU:O	11:CN:116:LEU:HG	2.09	0.52
19:CV:6:LYS:HG2	19:CV:11:GLN:HG2	1.91	0.52
21:CX:5:TYR:CE2	26:C2:30:ARG:HB3	2.44	0.52
23:CZ:151:HIS:HA	23:CZ:170:THR:HA	1.91	0.52
34:DA:271:C:H2'	34:DA:272:C:H6	1.74	0.52
34:DA:418:C:H2'	34:DA:419:C:H6	1.75	0.52
34:DA:433:C:H2'	34:DA:434:U:C6	2.45	0.52
38:DE:57:LYS:O	38:DE:61:TYR:HD2	1.93	0.52
46:DM:13:LYS:HA	46:DM:44:ARG:HH21	1.74	0.52
52:DS:63:THR:OG1	52:DS:64:GLU:N	2.39	0.52
56:DW:40:C:H4'	56:DY:36:A:OP1	2.09	0.52
1:AA:133:G:N7	63:AA:4004:HOH:O	2.34	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:48:LEU:CB	3:AC:50:ILE:HD12	2.38	0.52
34:BA:189(C):C:H2'	34:BA:189(D):C:O4'	2.10	0.52
34:BA:226:G:N2	34:BA:227:G:H1'	2.25	0.52
34:BA:714:G:H2'	34:BA:715:A:C8	2.45	0.52
34:BA:1239:A:H62	34:BA:1299:A:H61	1.58	0.52
36:BC:29:TYR:OH	47:BN:54:PRO:O	2.25	0.52
36:BC:138:VAL:HG13	36:BC:149:ALA:HB3	1.90	0.52
43:BJ:44:VAL:HG13	43:BJ:66:ARG:HG2	1.90	0.52
47:BN:21:TYR:OH	47:BN:23:ARG:NH2	2.43	0.52
53:BT:26:ASN:HD22	53:BT:71:THR:HG1	1.58	0.52
54:BU:14:TRP:HE3	54:BU:15:ARG:HD2	1.74	0.52
57:BZ:517:LEU:HD13	57:BZ:564:LYS:HB2	1.92	0.52
58:BX:6:2R1:H48	58:BX:8:2R3:OB	2.09	0.52
1:CA:2124:G:H4'	3:CC:175:PRO:HG3	1.91	0.52
8:CH:149:ARG:HD2	8:CH:164:TYR:CE2	2.45	0.52
34:DA:562:C:H4'	34:DA:563:A:O5'	2.09	0.52
34:DA:741:G:H5"	48:DO:59:MET:HE1	1.92	0.52
35:DB:91:PRO:HG3	35:DB:155:LEU:HG	1.91	0.52
38:DE:143:ARG:NH1	41:DH:77:GLU:OE2	2.41	0.52
46:DM:5:ALA:HB1	46:DM:66:LEU:HD13	1.91	0.52
57:DZ:225:GLU:HA	57:DZ:228:MET:HE2	1.91	0.52
1:AA:1314:A:H2'	1:AA:1315:A:O4'	2.10	0.52
5:AE:7:VAL:HG22	17:AT:1:MET:HE1	1.92	0.52
7:AG:114:ILE:HG12	7:AG:140:ILE:HG12	1.92	0.52
8:AH:2:SER:O	8:AH:3:ARG:HD2	2.08	0.52
17:AT:92:GLY:O	17:AT:120:ARG:NH2	2.42	0.52
28:A4:57:GLU:CB	28:A4:58:ARG:HG2	2.40	0.52
34:BA:537:G:H5"	45:BL:113:ARG:NH1	2.24	0.52
34:BA:571:U:OP1	34:BA:819:A:O2'	2.25	0.52
34:BA:919:A:O2'	34:BA:920:U:H5'	2.10	0.52
35:BB:161:ALA:HA	35:BB:183:PRO:HD2	1.91	0.52
49:BP:67:THR:HG22	49:BP:69:THR:N	2.24	0.52
52:BS:15:LEU:O	52:BS:19:VAL:HG23	2.10	0.52
57:BZ:483:TYR:O	57:BZ:484:ARG:NE	2.37	0.52
1:CA:363(A):A:H2'	1:CA:363(B):G:H8	1.73	0.52
1:CA:564:C:O2'	1:CA:565:C:H5'	2.09	0.52
1:CA:1695:G:H3'	1:CA:1695:G:N3	2.24	0.52
3:CC:65:LEU:HD22	3:CC:189:ASN:HB3	1.91	0.52
16:CS:85:VAL:HG22	16:CS:86:ALA:H	1.75	0.52
34:DA:5:U:H5"	34:DA:6:G:C5	2.45	0.52
34:DA:231:G:H5"	34:DA:231:G:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:577:G:C8	34:DA:816:A:C6	2.98	0.52
34:DA:756:C:H2'	34:DA:757:U:O4'	2.09	0.52
36:DC:100:ALA:O	36:DC:102:ASN:N	2.43	0.52
42:DI:23:ASN:HD22	42:DI:23:ASN:H	1.57	0.52
57:DZ:-66:MET:O	57:DZ:-65:LYS:HB2	2.08	0.52
1:AA:1296:G:N7	13:AP:18:ARG:NH2	2.58	0.52
10:AL:100:THR:HG22	10:AL:139:VAL:HB	1.91	0.52
13:AP:68:GLN:HG3	32:A8:12:LYS:HD3	1.92	0.52
17:AT:118:ARG:HG3	17:AT:118:ARG:NH1	2.25	0.52
32:A8:39:LYS:O	32:A8:43:GLN:HG3	2.10	0.52
40:BG:22:LEU:HD22	40:BG:63:LYS:HE3	1.92	0.52
53:BT:53:LEU:O	53:BT:57:ARG:HG3	2.10	0.52
55:BV:17:U:C2	56:BW:36:A:C2	2.98	0.52
1:CA:301:G:OP2	22:CY:84:ARG:NH2	2.43	0.52
1:CA:443:A:H5"	1:CA:444:C:OP1	2.10	0.52
1:CA:993:G:N2	19:CV:23:GLU:OE2	2.43	0.52
4:CD:181:GLU:OE1	4:CD:270:ILE:HD12	2.10	0.52
7:CG:114:ILE:HB	7:CG:117:PHE:HD2	1.75	0.52
13:CP:59:LEU:HD12	13:CP:60:MET:HE2	1.92	0.52
15:CR:57:ARG:HB3	15:CR:59:ASP:OD1	2.09	0.52
34:DA:297:G:N2	34:DA:300:A:OP2	2.41	0.52
34:DA:452:A:O2'	34:DA:453:A:OP2	2.23	0.52
34:DA:669:U:H2'	34:DA:670:G:C8	2.45	0.52
34:DA:1095:U:H2'	34:DA:1096:C:O4'	2.09	0.52
34:DA:1510:U:H2'	34:DA:1511:G:C8	2.45	0.52
35:DB:16:HIS:CG	35:DB:17:PHE:H	2.28	0.52
51:DR:74:ARG:HB3	51:DR:81:PHE:CE1	2.45	0.52
57:DZ:247:ARG:NH2	57:DZ:285:ASP:OD1	2.43	0.52
57:DZ:264:LEU:HD12	62:DZ:703:GDP:C2	2.44	0.52
57:DZ:524:GLU:HG2	57:DZ:564:LYS:HE3	1.91	0.52
1:AA:233:A:C2	1:AA:244:A:C4	2.98	0.52
1:AA:843:C:H2'	1:AA:844:C:C6	2.44	0.52
1:AA:2697:G:OP2	17:AT:51:ARG:NH2	2.39	0.52
4:AD:125:ILE:HB	39:BF:81:ILE:HD11	1.92	0.52
6:AF:63:LYS:NZ	6:AF:75:HIS:O	2.43	0.52
23:AZ:30:ASN:OD1	23:AZ:33:LEU:HD23	2.10	0.52
23:AZ:108:PRO:HG3	23:AZ:141:VAL:HG23	1.92	0.52
28:A4:40:HIS:CE1	28:A4:42:PHE:HB3	2.45	0.52
37:BD:9:CYS:O	37:BD:13:ARG:HG2	2.10	0.52
39:BF:67:MET:HG3	39:BF:68:PRO:HD2	1.92	0.52
57:BZ:82:ILE:HD12	57:BZ:101:LEU:HD23	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:552:SER:O	57:BZ:591:LYS:NZ	2.43	0.52
1:CA:888:C:P	46:DM:93:ARG:HD3	2.50	0.52
1:CA:1011:G:H1	1:CA:1150:C:H42	1.56	0.52
1:CA:1019:U:H3	1:CA:1142(A):A:N6	2.02	0.52
1:CA:2233:U:H2'	1:CA:2234:G:C8	2.45	0.52
1:CA:2850:A:H2'	1:CA:2851:A:H8	1.75	0.52
3:CC:42:VAL:CG1	3:CC:43:GLU:N	2.73	0.52
3:CC:48:LEU:CB	3:CC:50:ILE:HD12	2.38	0.52
3:CC:67:HIS:CG	3:CC:185:LYS:HD2	2.45	0.52
6:CF:187:VAL:HG11	13:CP:3:LEU:HD13	1.91	0.52
7:CG:170:ARG:O	7:CG:174:GLU:HB2	2.10	0.52
14:CQ:26:TYR:CE1	14:CQ:28:ALA:HB2	2.45	0.52
14:CQ:77:LYS:HE2	63:CQ:3102:HOH:O	2.10	0.52
23:CZ:19:ARG:NH1	23:CZ:84:GLU:O	2.43	0.52
23:CZ:73:GLN:HB3	23:CZ:87:ASP:CG	2.35	0.52
34:DA:1070:U:H2'	34:DA:1071:C:C6	2.44	0.52
45:DL:109:GLY:HA3	45:DL:121:GLY:O	2.10	0.52
1:AA:346:A:OP1	6:AF:168:ARG:HD2	2.10	0.51
1:AA:968:U:H2'	1:AA:969:C:C6	2.45	0.51
1:AA:1725:G:N3	1:AA:1725:G:H5"	2.25	0.51
1:AA:2200:C:OP1	3:AC:47:LYS:HG2	2.10	0.51
1:AA:2585:C:OP1	63:AA:3934:HOH:O	2.17	0.51
3:AC:218:THR:HG22	3:AC:219:MET:SD	2.50	0.51
34:BA:189(K):U:H2'	34:BA:189(L):G:C8	2.45	0.51
34:BA:1511:G:H2'	34:BA:1512:U:O4'	2.10	0.51
36:BC:87:LEU:C	36:BC:89:GLU:H	2.17	0.51
1:CA:1131:G:N2	1:CA:1132:A:C4	2.78	0.51
1:CA:1289:C:H2'	1:CA:1290:C:C6	2.45	0.51
1:CA:1359:A:C2	1:CA:1372:U:O4	2.63	0.51
1:CA:1959:G:H1'	34:DA:1418:A:N3	2.24	0.51
1:CA:2712(A):A:H5"	1:CA:2713:A:OP2	2.10	0.51
1:CA:2833:G:H21	5:CE:57:LYS:CB	2.23	0.51
4:CD:63:ARG:HH11	4:CD:63:ARG:HG3	1.75	0.51
5:CE:75:VAL:HG13	5:CE:77:ILE:H	1.74	0.51
6:CF:179:GLU:H	6:CF:179:GLU:CD	2.16	0.51
15:CR:41:ALA:HB1	15:CR:114:VAL:HG23	1.92	0.51
18:CU:100:VAL:HG12	18:CU:101:ARG:HG3	1.92	0.51
34:DA:1051:C:H2'	34:DA:1052:U:C6	2.45	0.51
39:DF:33:TYR:CD1	39:DF:75:LEU:HD23	2.44	0.51
45:DL:24:VAL:HG13	45:DL:98:TYR:CE1	2.42	0.51
1:AA:18:C:O2'	1:AA:577:U:OP1	2.21	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:610:C:OP2	13:AP:21:ARG:NH2	2.43	0.51
2:AB:29:A:O2'	2:AB:58:A:N1	2.38	0.51
2:AB:105:A:H4'	23:AZ:89:PHE:CE2	2.45	0.51
17:AT:20:PRO:HD2	17:AT:86:ILE:HB	1.92	0.51
20:AW:29:LEU:O	20:AW:33:ARG:HG3	2.09	0.51
37:BD:120:LEU:HB3	37:BD:126:ILE:HD11	1.91	0.51
43:BJ:55:LYS:O	43:BJ:57:LYS:N	2.43	0.51
45:BL:34:ARG:O	45:BL:61:THR:OG1	2.29	0.51
1:CA:1211:U:H4'	1:CA:1212:G:OP2	2.11	0.51
1:CA:1638:C:H2'	1:CA:1639:U:O4'	2.09	0.51
1:CA:2109:U:H5"	1:CA:2149:G:H21	1.75	0.51
1:CA:2445:G:OP1	6:CF:74:ARG:NH2	2.43	0.51
3:CC:42:VAL:HG13	3:CC:43:GLU:H	1.73	0.51
3:CC:68:GLY:H	3:CC:189:ASN:ND2	2.09	0.51
5:CE:119:ARG:HD3	5:CE:120:TRP:CD1	2.44	0.51
34:DA:227:G:H2'	34:DA:228:A:O4'	2.10	0.51
40:DG:93:PRO:HA	40:DG:96:GLN:HB2	1.92	0.51
46:DM:20:THR:C	46:DM:22:ILE:H	2.18	0.51
56:DW:19:G:H4'	56:DW:20:U:OP2	2.09	0.51
57:DZ:529:ILE:HD12	57:DZ:534:ILE:HB	1.92	0.51
1:AA:919:A:H2'	1:AA:920:G:O4'	2.11	0.51
1:AA:1065:U:O2'	1:AA:1067:A:H2	1.93	0.51
34:BA:262:A:C6	34:BA:263:A:C6	2.98	0.51
34:BA:438:G:H4'	34:BA:439:A:OP1	2.11	0.51
34:BA:643:C:H5'	41:BH:31:PHE:CE1	2.46	0.51
34:BA:1000:U:H2'	34:BA:1001:A:C8	2.43	0.51
34:BA:1149:C:H2'	34:BA:1150:U:C6	2.45	0.51
34:BA:1355:G:H2'	34:BA:1356:G:C8	2.45	0.51
37:BD:156:GLU:O	37:BD:160:GLN:HB2	2.11	0.51
50:BQ:18:THR:CG2	50:BQ:69:LYS:HD2	2.40	0.51
51:BR:32:ARG:HA	51:BR:69:THR:HG21	1.93	0.51
56:BW:47:U:O2	56:BW:47:U:H2'	2.10	0.51
57:BZ:328:ILE:HD12	57:BZ:377:VAL:HG12	1.93	0.51
1:CA:1861:G:OP2	3:CC:206:LYS:HG3	2.10	0.51
1:CA:2886:G:H2'	1:CA:2887:U:C6	2.43	0.51
1:CA:2887:U:H2'	1:CA:2888:C:C6	2.45	0.51
5:CE:101:ARG:CZ	5:CE:171:GLU:HB2	2.41	0.51
11:CN:37:LYS:HG3	11:CN:42:TRP:CE2	2.45	0.51
37:DD:100:ARG:HG3	37:DD:137:SER:HA	1.91	0.51
40:DG:69:VAL:HG21	40:DG:104:LEU:HD13	1.93	0.51
51:DR:73:ALA:HB3	51:DR:79:LEU:HD12	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:65:LEU:HB3	3:AC:189:ASN:HD22	1.75	0.51
15:AR:55:ALA:HB2	15:AR:79:LEU:HD13	1.93	0.51
21:AX:30:VAL:HG11	21:AX:39:ILE:HG12	1.92	0.51
34:BA:834:C:H2'	34:BA:835:U:C6	2.45	0.51
35:BB:109:SER:O	35:BB:112:VAL:HG22	2.10	0.51
36:BC:58:GLU:HB2	36:BC:65:ALA:HB2	1.92	0.51
42:BI:82:ALA:HB1	42:BI:102:LEU:HD22	1.92	0.51
44:BK:18:ARG:HD3	44:BK:20:TYR:CE2	2.45	0.51
46:BM:80:ARG:HH12	52:BS:69:HIS:HE1	1.57	0.51
52:BS:36:ARG:HH12	52:BS:75:ALA:HB3	1.76	0.51
57:BZ:416:LYS:HB3	57:BZ:473:ASP:O	2.10	0.51
1:CA:998:C:P	18:CU:92:ARG:NH2	2.83	0.51
1:CA:1044:G:H4'	1:CA:1048:A:H1'	1.92	0.51
1:CA:1794:U:H2'	1:CA:1795:C:C6	2.46	0.51
1:CA:2166:G:H3'	1:CA:2167:U:H5"	1.92	0.51
1:CA:2206:G:H3'	1:CA:2207:G:N7	2.25	0.51
1:CA:2552:U:H2'	1:CA:2554:U:H5"	1.92	0.51
3:CC:6:LYS:N	3:CC:9:ARG:NH1	2.58	0.51
4:CD:145:VAL:HG12	4:CD:146:GLU:O	2.09	0.51
34:DA:576:G:N1	34:DA:759:A:OP1	2.42	0.51
34:DA:919:A:O5'	34:DA:919:A:H8	1.94	0.51
37:DD:79:PHE:HE1	37:DD:204:ILE:HD13	1.74	0.51
38:DE:102:ALA:O	38:DE:107:ARG:NH1	2.43	0.51
57:DZ:5:LEU:HD13	57:DZ:305:PRO:HG2	1.92	0.51
1:AA:1154:U:O2'	1:AA:1155:C:H6	1.93	0.51
1:AA:1473:A:H4'	1:AA:1474:C:O5'	2.10	0.51
1:AA:1566:U:H2'	1:AA:1567:G:O4'	2.11	0.51
1:AA:1810:U:OP2	63:AA:3939:HOH:O	2.19	0.51
3:AC:50:ILE:H	3:AC:50:ILE:HD13	1.75	0.51
3:AC:67:HIS:CG	3:AC:185:LYS:HD2	2.45	0.51
3:AC:68:GLY:H	3:AC:189:ASN:ND2	2.09	0.51
18:AU:65:ILE:HD11	18:AU:95:LEU:HB3	1.93	0.51
22:AY:54:LYS:CA	22:AY:56:PRO:HD3	2.38	0.51
23:AZ:152:ALA:HB1	23:AZ:163:LEU:HD21	1.93	0.51
34:BA:965:A:C2	34:BA:969:A:C2	2.98	0.51
35:BB:19:HIS:HE1	35:BB:189:ASP:HB2	1.75	0.51
41:BH:132:GLU:O	41:BH:134:ILE:N	2.44	0.51
43:BJ:78:ASN:O	43:BJ:80:LYS:N	2.42	0.51
50:BQ:66:SER:O	50:BQ:70:ARG:NH1	2.44	0.51
56:BY:19:G:H4'	56:BY:20:U:OP2	2.09	0.51
1:CA:521:G:H2'	1:CA:522:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:687:C:C2	1:CA:788:A:H5'	2.45	0.51
1:CA:1340:U:H4'	1:CA:1341:U:OP2	2.10	0.51
1:CA:2454:G:H1'	63:CA:3853:HOH:O	2.10	0.51
22:CY:38:ILE:HD11	22:CY:66:PRO:HG3	1.93	0.51
34:DA:598:U:H2'	34:DA:599:C:C6	2.46	0.51
34:DA:1118:C:H1'	34:DA:1179:A:C4	2.46	0.51
39:DF:99:ALA:HB2	51:DR:31:LEU:HD21	1.92	0.51
1:AA:514:G:H5"	1:AA:515:G:OP2	2.10	0.51
1:AA:776:G:C6	4:AD:208:LYS:HB2	2.46	0.51
1:AA:2163:G:N7	1:AA:2173:G:N2	2.58	0.51
1:AA:2517:G:O2'	1:AA:2518:U:H5'	2.10	0.51
34:BA:833:U:H2'	34:BA:834:C:C6	2.45	0.51
1:CA:385:C:HO2'	1:CA:388:G:N2	2.09	0.51
1:CA:749:C:O2	1:CA:1618:A:H2'	2.10	0.51
1:CA:1330:C:OP1	63:CA:3753:HOH:O	2.19	0.51
1:CA:1701:A:H5"	1:CA:1702:G:OP2	2.10	0.51
1:CA:2334:G:H8	1:CA:2334:G:OP1	1.94	0.51
1:CA:2729:G:H2'	1:CA:2730:C:C6	2.45	0.51
34:DA:308:C:H2'	34:DA:309:G:H8	1.74	0.51
34:DA:1306:A:H1'	34:DA:1332:A:N1	2.26	0.51
34:DA:1342:C:O2'	42:DI:124:GLN:HG2	2.11	0.51
37:DD:189:PRO:CB	37:DD:194:LEU:HD11	2.41	0.51
57:DZ:-66:MET:HE1	57:DZ:-29:LEU:HD11	1.92	0.51
1:AA:189:U:O2	1:AA:413:G:N2	2.44	0.51
1:AA:469:A:C5	6:AF:45:ARG:HD2	2.46	0.51
1:AA:2279:A:H5"	1:AA:2280:A:H5"	1.92	0.51
2:AB:7:G:H5'	16:AS:29:PHE:CE2	2.46	0.51
52:BS:27:GLU:HB3	52:BS:28:LYS:HD2	1.92	0.51
53:BT:57:ARG:HH22	53:BT:100:ILE:HD12	1.73	0.51
1:CA:528:A:C2	1:CA:2043:C:H4'	2.44	0.51
1:CA:1316:U:H2'	1:CA:1317:A:H8	1.76	0.51
1:CA:2113:U:H2'	1:CA:2114:A:C8	2.45	0.51
1:CA:2250:G:H5"	1:CA:2250:G:N3	2.25	0.51
2:CB:49:C:H2'	2:CB:50:G:H8	1.74	0.51
5:CE:24:THR:HG22	5:CE:186:GLY:O	2.10	0.51
5:CE:73:GLU:OE2	5:CE:73:GLU:N	2.22	0.51
7:CG:79:ASN:OD1	7:CG:79:ASN:N	2.34	0.51
12:CO:75:SER:HB2	17:CT:75:ILE:O	2.10	0.51
13:CP:88:LEU:HD21	13:CP:100:LEU:HD11	1.92	0.51
34:DA:72:C:H2'	34:DA:73:G:O4'	2.11	0.51
34:DA:1010:G:H2'	34:DA:1011:G:H8	1.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1101:A:H4'	34:DA:1102:A:O5'	2.10	0.51
34:DA:1190:G:OP2	36:DC:5:ILE:HB	2.11	0.51
35:DB:161:ALA:HB1	35:DB:185:ILE:HD11	1.93	0.51
40:DG:147:ALA:C	40:DG:149:ARG:H	2.18	0.51
57:DZ:217:VAL:HA	57:DZ:220:ALA:HB3	1.92	0.51
58:DX:8:2R3:H65	58:DX:10:2QY:CE1	2.40	0.51
1:AA:1105:G:H1	1:AA:1125:C:N4	1.98	0.51
3:AC:57:GLN:HB2	3:AC:202:PRO:HG2	1.93	0.51
9:AK:116:ILE:O	9:AK:123:GLU:N	2.43	0.51
16:AS:25:ARG:O	16:AS:40:ILE:N	2.34	0.51
18:AU:108:GLU:O	18:AU:112:ARG:HG2	2.11	0.51
26:A2:28:LYS:HE3	26:A2:56:GLN:OE1	2.09	0.51
30:A6:13:CYS:SG	30:A6:47:THR:HG21	2.51	0.51
34:BA:67:C:H2'	34:BA:68:G:C8	2.46	0.51
34:BA:558:G:OP1	63:BA:1909:HOH:O	2.19	0.51
34:BA:1486:G:H2'	34:BA:1487:G:O4'	2.11	0.51
34:BA:1519:A:C8	34:BA:1520:G:H1'	2.46	0.51
35:BB:97:TRP:CZ2	35:BB:102:LEU:HD13	2.46	0.51
46:BM:96:LEU:C	46:BM:110:ARG:HG2	2.35	0.51
56:BY:5:G:H1	56:BY:68:C:H42	1.59	0.51
57:BZ:19:ALA:HB3	57:BZ:25:LYS:HB3	1.93	0.51
1:CA:98:G:H5"	26:C2:3:LEU:HG	1.93	0.51
1:CA:271(D):G:C6	1:CA:271(E):U:C4	2.99	0.51
1:CA:1212:G:O2'	1:CA:1236:G:N2	2.37	0.51
1:CA:1327:C:H2'	1:CA:1328:G:O4'	2.11	0.51
1:CA:2120:G:H2'	3:CC:168:LYS:NZ	2.26	0.51
1:CA:2286:A:OP1	30:C6:29:ASN:ND2	2.44	0.51
1:CA:2640:G:OP1	11:CN:97:ARG:NH2	2.44	0.51
1:CA:2657:A:O3'	8:CH:160:LYS:NZ	2.44	0.51
3:CC:54:ARG:HD2	3:CC:55:SER:H	1.76	0.51
4:CD:20:ASP:OD2	4:CD:22:SER:OG	2.23	0.51
6:CF:122:LYS:NZ	6:CF:152:GLU:OE2	2.39	0.51
24:C0:82:ARG:HH11	24:C0:82:ARG:HB2	1.74	0.51
30:C6:30:THR:O	30:C6:30:THR:HG22	2.11	0.51
34:DA:674:G:H2'	34:DA:675:A:C8	2.41	0.51
34:DA:740:U:H2'	34:DA:741:G:H8	1.75	0.51
34:DA:1083:U:H3'	34:DA:1084:G:C8	2.45	0.51
36:DC:63:ASN:HB2	36:DC:98:ASN:HB2	1.93	0.51
37:DD:156:GLU:HA	37:DD:159:ARG:HB2	1.92	0.51
41:DH:33:GLU:HA	41:DH:36:LEU:HD12	1.93	0.51
46:DM:54:VAL:HG12	46:DM:57:ARG:HD2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:116:PRO:O	57:DZ:118:SER:N	2.43	0.51
1:AA:354:A:C2	1:AA:1255:A:H2'	2.37	0.51
1:AA:505:A:H4'	1:AA:506:A:OP1	2.11	0.51
1:AA:1400:A:H2'	1:AA:1401:G:O4'	2.10	0.51
1:AA:1766:G:H5'	1:AA:1767:A:OP2	2.10	0.51
1:AA:1891:G:H4'	3:AC:206:LYS:CG	2.37	0.51
3:AC:6:LYS:N	3:AC:9:ARG:NH1	2.58	0.51
15:AR:72:ASP:O	15:AR:76:VAL:HG23	2.11	0.51
34:BA:127:G:HO2'	50:BQ:2:PRO:N	2.09	0.51
34:BA:352:C:O2'	34:BA:354:G:OP1	2.24	0.51
48:BO:87:ILE:HG22	48:BO:88:ARG:N	2.26	0.51
51:BR:38:GLU:OE2	51:BR:41:LYS:NZ	2.29	0.51
51:BR:51:LEU:HD23	51:BR:52:PRO:HD2	1.92	0.51
1:CA:102:G:OP1	26:C2:7:ARG:NH2	2.42	0.51
1:CA:615:G:OP1	6:CF:40:GLN:NE2	2.38	0.51
1:CA:1071:G:H1'	1:CA:1089:G:C8	2.46	0.51
3:CC:50:ILE:H	3:CC:50:ILE:HD13	1.76	0.51
6:CF:109:GLY:HA2	6:CF:112:MET:HE3	1.93	0.51
16:CS:61:ASN:O	16:CS:65:VAL:HG23	2.10	0.51
34:DA:684:A:H1'	44:DK:38:ASN:HB3	1.92	0.51
34:DA:858:G:O6	34:DA:869:G:H3'	2.10	0.51
34:DA:903:G:OP1	63:DA:1810:HOH:O	2.19	0.51
35:DB:179:LYS:HA	41:DH:72:PRO:HG3	1.93	0.51
36:DC:7:PRO:HG3	36:DC:201:TYR:CE2	2.33	0.51
36:DC:19:GLU:O	36:DC:56:ASP:HA	2.11	0.51
36:DC:172:ARG:O	36:DC:173:VAL:HG23	2.11	0.51
37:DD:189:PRO:HB2	37:DD:194:LEU:HD11	1.92	0.51
45:DL:36:VAL:HG23	58:DX:10:2QY:CE1	2.35	0.51
57:DZ:138:LYS:HG2	62:DZ:703:GDP:C5	2.45	0.51
1:AA:2354:C:O2'	1:AA:2386:C:H5"	2.10	0.51
3:AC:54:ARG:HD2	3:AC:55:SER:H	1.76	0.51
23:AZ:74:VAL:HG22	23:AZ:86:VAL:HG12	1.92	0.51
28:A4:16:CYS:SG	28:A4:36:CYS:HB3	2.50	0.51
34:BA:728:A:C5	48:BO:54:ARG:HD2	2.46	0.51
34:BA:1355:G:H2'	34:BA:1356:G:H8	1.75	0.51
34:BA:1434:A:H2'	34:BA:1435:G:O4'	2.10	0.51
40:BG:51:GLN:HA	40:BG:55:GLY:HA2	1.93	0.51
43:BJ:50:ILE:HD11	43:BJ:57:LYS:HD2	1.91	0.51
45:BL:89:ARG:HB3	45:BL:97:ARG:HA	1.93	0.51
57:BZ:72:CYS:SG	57:BZ:79:ILE:HB	2.51	0.51
57:BZ:491:VAL:HG21	57:BZ:596:LYS:HB3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BX:4:PRO:CB	58:BX:5:MVA:HN1	2.41	0.51
1:CA:236:C:H2'	1:CA:237:C:C6	2.46	0.51
1:CA:1160:G:H22	19:CV:10:LYS:HZ1	1.59	0.51
1:CA:1653:G:H3'	15:CR:2:ARG:HG3	1.93	0.51
1:CA:2322:A:H2'	1:CA:2323:G:O4'	2.11	0.51
1:CA:2683:C:O2	12:CO:70:LYS:NZ	2.33	0.51
1:CA:2695:C:H2'	1:CA:2696:U:C6	2.46	0.51
1:CA:2758:A:H2'	1:CA:2759:G:O4'	2.10	0.51
2:CB:66:A:N6	2:CB:109:C:H5'	2.24	0.51
3:CC:218:THR:HG22	3:CC:219:MET:SD	2.50	0.51
8:CH:101:ARG:HH12	8:CH:122:THR:HG22	1.76	0.51
15:CR:18:LEU:HD13	15:CR:22:ARG:NH1	2.26	0.51
27:C3:26:LEU:HD21	27:C3:46:ASN:HB3	1.92	0.51
32:C8:10:ALA:HB3	32:C8:62:LEU:HD21	1.92	0.51
35:DB:32:ILE:HD13	35:DB:40:HIS:HB3	1.92	0.51
37:DD:150:GLU:O	37:DD:152:SER:N	2.44	0.51
44:DK:27:ASN:CG	44:DK:28:THR:H	2.19	0.51
46:DM:79:LYS:HG2	46:DM:83:ASP:OD1	2.11	0.51
56:DW:39:PSU:HO2'	56:DY:35:A:H1'	1.76	0.51
56:DY:51:U:H3	56:DY:63:G:H1	1.58	0.51
57:DZ:-23:LEU:H	57:DZ:-21:ALA:H	1.58	0.51
57:DZ:293:THR:HA	57:DZ:397:VAL:HG12	1.92	0.51
1:AA:2127:C:H2'	1:AA:2128:G:H8	1.76	0.50
6:AF:182:ASN:ND2	6:AF:185:ASP:OD2	2.37	0.50
7:AG:8:LYS:HD3	7:AG:100:TRP:CD1	2.46	0.50
23:AZ:104:PHE:HD1	23:AZ:141:VAL:HG11	1.77	0.50
23:AZ:111:VAL:O	23:AZ:112:ARG:C	2.51	0.50
34:BA:584:G:H5'	50:BQ:91:ARG:HH22	1.76	0.50
34:BA:1458:G:H5"	53:BT:31:SER:HB3	1.92	0.50
42:BI:24:GLY:HA3	42:BI:57:GLY:HA2	1.92	0.50
1:CA:1049:C:H1'	1:CA:1113:U:O2'	2.11	0.50
1:CA:1075:C:OP1	14:CQ:59:ARG:NH1	2.44	0.50
1:CA:1368:G:C2	1:CA:1369:G:C8	2.99	0.50
1:CA:1860:G:O5'	1:CA:1860:G:H8	1.94	0.50
1:CA:2638:G:P	5:CE:82:ARG:HH21	2.34	0.50
6:CF:159:GLY:HA2	6:CF:164:ARG:HH12	1.75	0.50
6:CF:184:TYR:CE2	6:CF:188:ARG:HD2	2.46	0.50
7:CG:173:LEU:HB3	7:CG:178:PHE:CG	2.46	0.50
12:CO:77:ILE:HD11	12:CO:122:LEU:HB3	1.93	0.50
14:CQ:57:HIS:NE2	14:CQ:116:GLU:HB3	2.27	0.50
24:C0:70:GLN:NE2	24:C0:72:ARG:HG3	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:C8:34:TRP:CG	32:C8:35:GLN:N	2.79	0.50
34:DA:324:G:O2'	34:DA:326:G:N7	2.44	0.50
34:DA:559:A:P	38:DE:126:ARG:HH22	2.34	0.50
38:DE:36:ASP:C	38:DE:38:GLN:H	2.18	0.50
38:DE:82:VAL:O	38:DE:89:ILE:N	2.38	0.50
57:DZ:16:GLY:HA3	57:DZ:101:LEU:HD22	1.91	0.50
1:AA:1475:G:H2'	1:AA:1476:C:C6	2.46	0.50
1:AA:1634:C:H2'	1:AA:1635:C:C6	2.46	0.50
1:AA:2874:G:OP1	17:AT:119:LYS:NZ	2.43	0.50
3:AC:42:VAL:CG1	3:AC:43:GLU:N	2.73	0.50
6:AF:64:ILE:HD12	6:AF:65:TRP:CE3	2.46	0.50
15:AR:67:LEU:CD1	15:AR:76:VAL:HG21	2.36	0.50
34:BA:9:G:O2'	34:BA:10:A:H5'	2.11	0.50
34:BA:37:U:H2'	34:BA:38:G:H8	1.75	0.50
34:BA:738:C:H2'	34:BA:739:C:H6	1.77	0.50
34:BA:1071:C:H2'	34:BA:1072:G:H8	1.75	0.50
34:BA:1103:C:H2'	34:BA:1104:G:O4'	2.11	0.50
34:BA:1349:A:OP2	42:BI:118:LYS:HE3	2.11	0.50
42:BI:7:THR:HG22	42:BI:83:ARG:NH1	2.26	0.50
43:BJ:7:LYS:HD2	43:BJ:71:LEU:HD13	1.93	0.50
44:BK:99:GLN:HE21	44:BK:105:VAL:HG21	1.76	0.50
45:BL:109:GLY:HA3	45:BL:121:GLY:O	2.11	0.50
52:BS:20:LEU:HA	52:BS:23:ASN:HB2	1.93	0.50
57:BZ:497:PHE:N	57:BZ:508:GLY:O	2.45	0.50
57:BZ:524:GLU:HG2	57:BZ:564:LYS:HD2	1.92	0.50
1:CA:563:G:OP2	63:CA:3748:HOH:O	2.18	0.50
2:CB:116:G:O5'	2:CB:116:G:H8	1.94	0.50
3:CC:57:GLN:HB2	3:CC:202:PRO:HG2	1.93	0.50
4:CD:58:HIS:ND1	4:CD:59:LYS:N	2.58	0.50
7:CG:36:LYS:HB2	7:CG:95:ARG:HG2	1.91	0.50
17:CT:11:GLU:HG2	17:CT:57:PHE:CD2	2.47	0.50
21:CX:1:MET:HE2	26:C2:26:ARG:HH22	1.76	0.50
28:C4:58:ARG:NH1	52:DS:68:GLY:H	2.09	0.50
34:DA:41:G:H2'	34:DA:42:G:H8	1.76	0.50
34:DA:716:A:N3	44:DK:118:GLY:HA2	2.25	0.50
34:DA:1222:G:H5"	52:DS:78:ARG:NH2	2.25	0.50
35:DB:162:ILE:HD11	35:DB:184:VAL:HG22	1.93	0.50
37:DD:8:VAL:O	37:DD:11:LEU:HB2	2.12	0.50
37:DD:18:LYS:HG3	37:DD:33:MET:HG3	1.94	0.50
38:DE:100:VAL:CG2	38:DE:118:ILE:HG22	2.40	0.50
43:DJ:35:SER:HB3	43:DJ:73:ASP:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:237:PRO:HB2	57:DZ:242:LEU:HG	1.92	0.50
58:DX:9:MVA:O	58:DX:10:2QY:CD2	2.60	0.50
1:AA:303:C:H42	1:AA:385:G:H1	1.58	0.50
4:AD:145:VAL:HG11	4:AD:175:LEU:HD11	1.94	0.50
12:AO:104:ARG:HH22	17:AT:43:GLN:HE22	1.57	0.50
13:AP:82:GLY:HA3	13:AP:115:LEU:HD11	1.94	0.50
21:AX:5:TYR:CE1	26:A2:30:ARG:HB2	2.46	0.50
57:BZ:114:VAL:HB	57:BZ:152:THR:HB	1.94	0.50
57:BZ:119:GLU:HG3	57:BZ:156:ARG:HH21	1.75	0.50
57:BZ:140:ASP:HA	57:BZ:172:ASP:H	1.76	0.50
57:BZ:509:HIS:HD2	57:BZ:571:SER:N	2.09	0.50
1:CA:1463:C:H2'	1:CA:1464:C:H6	1.76	0.50
1:CA:2121:G:C2'	3:CC:168:LYS:CD	2.49	0.50
1:CA:2690:C:OP2	15:CR:14:SER:HB2	2.12	0.50
4:CD:258:LYS:HE3	4:CD:273:ARG:NH2	2.26	0.50
6:CF:159:GLY:HA2	6:CF:164:ARG:NH1	2.26	0.50
7:CG:7:LEU:HD23	7:CG:100:TRP:HE3	1.76	0.50
24:C0:53:MET:HA	24:C0:58:THR:O	2.12	0.50
27:C3:18:ASP:OD1	27:C3:18:ASP:N	2.43	0.50
34:DA:914:A:OP1	63:DA:1809:HOH:O	2.18	0.50
34:DA:1004:A:H5'	34:DA:1024:G:N2	2.27	0.50
34:DA:1099:G:C2	34:DA:1100:C:C2	2.99	0.50
34:DA:1316:G:N7	52:DS:7:LYS:NZ	2.59	0.50
56:DY:25:C:H2'	56:DY:26:A:H8	1.77	0.50
57:DZ:-66:MET:HG2	57:DZ:-44:PRO:HG3	1.92	0.50
57:DZ:32:ILE:HG23	57:DZ:273:LEU:HD21	1.94	0.50
1:AA:625:G:O2'	1:AA:702:A:N6	2.44	0.50
1:AA:1480:A:H61	1:AA:1605:A:N6	2.09	0.50
1:AA:1563:G:H2'	1:AA:1564:C:C6	2.47	0.50
1:AA:1594:C:H2'	1:AA:1595:C:C6	2.46	0.50
1:AA:1993:A:C4	4:AD:241:PRO:HD3	2.46	0.50
3:AC:44:VAL:HG21	3:AC:176:VAL:HG21	1.92	0.50
4:AD:108:PRO:HD2	4:AD:111:LEU:HG	1.92	0.50
34:BA:116:A:H8	34:BA:116:A:O5'	1.95	0.50
34:BA:155:C:H2'	34:BA:156:G:H8	1.76	0.50
34:BA:515:G:H2'	34:BA:516:U:O4'	2.12	0.50
36:BC:14:ILE:HG22	36:BC:15:THR:OG1	2.11	0.50
38:BE:57:LYS:HG2	38:BE:61:TYR:CE2	2.45	0.50
45:BL:25:PRO:HD2	45:BL:97:ARG:NH2	2.26	0.50
45:BL:27:LEU:HD22	45:BL:98:TYR:HE2	1.76	0.50
1:CA:2176:A:C4'	3:CC:45:HIS:CD2	2.82	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:2:LYS:HG3	5:CE:200:GLU:HB2	1.92	0.50
5:CE:30:PRO:HB3	5:CE:92:THR:HG23	1.92	0.50
7:CG:145:THR:OG1	7:CG:146:TYR:N	2.45	0.50
22:CY:56:PRO:C	22:CY:58:GLY:H	2.19	0.50
34:DA:124:G:H4'	34:DA:291:C:O2'	2.11	0.50
34:DA:243:A:H4'	34:DA:244:U:H5"	1.93	0.50
34:DA:543:C:C2	34:DA:544:G:C8	2.99	0.50
34:DA:1177:G:H2'	34:DA:1178:G:O4'	2.11	0.50
40:DG:113:GLU:O	40:DG:119:ARG:HD3	2.11	0.50
40:DG:115:ARG:CZ	40:DG:115:ARG:HB2	2.41	0.50
41:DH:34:GLU:HB3	41:DH:118:VAL:HG21	1.93	0.50
41:DH:134:ILE:HG22	41:DH:135:CYS:SG	2.51	0.50
43:DJ:65:LEU:HD12	47:DN:55:GLY:O	2.11	0.50
46:DM:96:LEU:C	46:DM:110:ARG:HG2	2.35	0.50
57:DZ:87:HIS:HB3	57:DZ:90:PHE:H	1.77	0.50
1:AA:604:C:H2'	1:AA:605:G:C8	2.46	0.50
1:AA:957:A:OP1	63:AA:3940:HOH:O	2.19	0.50
20:AW:57:ASN:O	20:AW:61:ASN:HB2	2.11	0.50
34:BA:436:C:H2'	34:BA:437:U:H6	1.75	0.50
34:BA:1427:U:H2'	34:BA:1428:A:C8	2.46	0.50
36:BC:148:GLY:HA3	36:BC:172:ARG:O	2.11	0.50
41:BH:117:GLY:O	41:BH:119:LEU:HG	2.11	0.50
56:BY:58:A:C2	56:BY:60:U:H2'	2.46	0.50
57:BZ:96:ARG:NH2	57:BZ:315:LYS:HZ1	2.08	0.50
1:CA:236:C:H2'	1:CA:237:C:H6	1.77	0.50
1:CA:1184:G:OP1	27:C3:30:ARG:NH1	2.45	0.50
3:CC:44:VAL:HG21	3:CC:176:VAL:HG21	1.92	0.50
21:CX:12:VAL:HG22	21:CX:29:TRP:CE2	2.47	0.50
34:DA:998:G:H22	34:DA:1043:C:H42	1.58	0.50
41:DH:51:VAL:CG2	41:DH:60:ARG:HB2	2.42	0.50
57:DZ:174:PHE:CE2	57:DZ:267:LYS:HD3	2.47	0.50
1:AA:504:A:N1	1:AA:525:G:H4'	2.26	0.50
1:AA:1558:G:H2'	1:AA:1559:C:C6	2.46	0.50
1:AA:1921:G:H2'	1:AA:1921:G:N3	2.25	0.50
1:AA:2579:G:H2'	1:AA:2580:C:C6	2.47	0.50
8:AH:103:LEU:HG	8:AH:105:LEU:HD13	1.93	0.50
16:AS:99:LYS:HE3	16:AS:103:GLU:OE2	2.12	0.50
33:A9:7:VAL:HG12	33:A9:34:GLN:HB3	1.93	0.50
43:BJ:46:ARG:HH11	43:BJ:46:ARG:HB3	1.77	0.50
53:BT:83:ARG:HG2	53:BT:86:ARG:HH12	1.77	0.50
56:BW:19:G:H4'	56:BW:20:U:OP2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:549:ALA:HB1	57:BZ:591:LYS:HG3	1.92	0.50
1:CA:673:C:H5"	6:CF:81:PRO:HD2	1.94	0.50
2:CB:48:A:OP2	16:CS:30:ARG:NH2	2.39	0.50
8:CH:25:LYS:HE2	8:CH:34:GLU:HB3	1.93	0.50
28:C4:46:GLN:O	28:C4:48:ARG:N	2.37	0.50
34:DA:600:C:C2	34:DA:639:G:C2	3.00	0.50
34:DA:763:G:H2'	34:DA:764:C:H6	1.76	0.50
34:DA:827:U:H5"	34:DA:828:A:OP2	2.12	0.50
37:DD:105:VAL:HB	37:DD:117:ALA:HB1	1.94	0.50
48:DO:33:THR:OG1	48:DO:87:ILE:HD11	2.12	0.50
50:DQ:6:LEU:O	50:DQ:58:GLU:HA	2.11	0.50
56:DW:24:G:C6	56:DW:25:C:C4	3.00	0.50
57:DZ:278:ASP:HB3	57:DZ:279:TYR:CE1	2.47	0.50
1:AA:139:A:H8	1:AA:1454:C:O2'	1.95	0.50
1:AA:486:A:H2'	1:AA:487:C:O4'	2.12	0.50
1:AA:776:G:C5	4:AD:208:LYS:HB2	2.46	0.50
1:AA:1481:G:H21	1:AA:1525:G:H5'	1.76	0.50
7:AG:126:ASP:CB	7:AG:130:ASN:H	2.23	0.50
9:AK:118:THR:O	9:AK:120:LYS:N	2.45	0.50
34:BA:323:U:H5'	53:BT:23:ARG:HB2	1.93	0.50
34:BA:460:G:C6	34:BA:470:C:H5'	2.46	0.50
34:BA:591:U:H2'	34:BA:592:G:C8	2.42	0.50
57:BZ:28:THR:O	57:BZ:29:THR:C	2.55	0.50
57:BZ:105:ILE:HG21	57:BZ:272:LEU:HD11	1.92	0.50
1:CA:1131:G:C2	1:CA:1132:A:C4	2.99	0.50
1:CA:1665:A:H4'	12:CO:67:LYS:HB2	1.94	0.50
4:CD:53:PHE:HB3	4:CD:218:ARG:O	2.12	0.50
9:CK:74:LEU:O	9:CK:76:GLY:N	2.42	0.50
24:C0:11:ARG:O	24:C0:14:ARG:NH2	2.45	0.50
34:DA:130:A:N3	34:DA:263:A:O2'	2.42	0.50
50:DQ:62:SER:CB	50:DQ:72:ARG:HD3	2.40	0.50
1:AA:1209:G:O2'	1:AA:1210:G:H5'	2.11	0.50
1:AA:1423:G:H2'	63:AA:4750:HOH:O	2.12	0.50
1:AA:1764:G:C6	1:AA:1765:U:C4	3.00	0.50
4:AD:130:ALA:C	4:AD:131:LEU:HD12	2.37	0.50
5:AE:18:ASP:HB3	17:AT:82:LEU:HD11	1.94	0.50
16:AS:62:LYS:HB3	16:AS:97:ARG:HD2	1.93	0.50
34:BA:191:G:N2	53:BT:85:MET:HE1	2.27	0.50
34:BA:542:G:OP1	37:BD:10:ARG:NH2	2.44	0.50
34:BA:1192:C:H2'	34:BA:1193:G:O4'	2.11	0.50
35:BB:180:LEU:O	35:BB:181:PHE:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BI:53:VAL:O	42:BI:55:ALA:N	2.42	0.50
57:BZ:356:LEU:HD12	57:BZ:365:GLU:HA	1.93	0.50
58:BX:4:PRO:HB3	58:BX:5:MVA:HN1	1.93	0.50
1:CA:568:U:H5'	1:CA:945:A:N1	2.26	0.50
1:CA:574:C:N3	5:CE:145:LYS:NZ	2.58	0.50
1:CA:956:G:OP2	14:CQ:14:ARG:NH2	2.45	0.50
1:CA:1188:U:C2'	1:CA:1189:A:H5'	2.42	0.50
1:CA:1260:G:H2'	1:CA:1261:C:O4'	2.12	0.50
1:CA:2371:G:C6	1:CA:2372:G:N7	2.79	0.50
2:CB:76:G:H2'	2:CB:77:U:O4'	2.11	0.50
7:CG:33:ARG:HB2	7:CG:33:ARG:CZ	2.42	0.50
10:CL:128:ALA:O	10:CL:132:ARG:NH2	2.44	0.50
11:CN:120:LEU:HD22	11:CN:122:VAL:HG23	1.94	0.50
34:DA:1317:C:N3	52:DS:37:ARG:NH2	2.59	0.50
36:DC:148:GLY:N	36:DC:203:PHE:HB3	2.27	0.50
40:DG:26:PHE:CE1	40:DG:30:ILE:HD11	2.47	0.50
40:DG:27:ILE:HG23	40:DG:39:ALA:HB1	1.94	0.50
40:DG:65:ALA:O	40:DG:69:VAL:HG23	2.11	0.50
41:DH:51:VAL:HG11	41:DH:60:ARG:NH1	2.27	0.50
57:DZ:247:ARG:HD2	57:DZ:278:ASP:O	2.11	0.50
1:AA:63:A:C5	21:AX:66:LEU:HD12	2.47	0.50
1:AA:692:C:O2	1:AA:698:G:N2	2.39	0.50
1:AA:1110:C:H5'	10:AL:86:LYS:HA	1.93	0.50
1:AA:2240:G:OP1	4:AD:261:LYS:NZ	2.44	0.50
1:AA:2538:G:O2'	33:A9:1:MET:N	2.35	0.50
1:AA:2724:U:O2'	1:AA:2726:A:H5'	2.11	0.50
3:AC:191:ARG:O	3:AC:195:ARG:HG2	2.11	0.50
8:AH:3:ARG:HH22	8:AH:65:HIS:HB3	1.76	0.50
34:BA:499:A:H4'	34:BA:500:G:H5'	1.94	0.50
34:BA:662:G:H2'	34:BA:663:A:C8	2.46	0.50
34:BA:1325:C:H2'	34:BA:1326:C:C6	2.47	0.50
40:BG:18:TYR:CD2	40:BG:59:LEU:HD13	2.47	0.50
46:BM:70:LEU:O	46:BM:74:VAL:HG23	2.12	0.50
57:BZ:21:ILE:C	57:BZ:23:ALA:H	2.20	0.50
1:CA:32:C:O2'	1:CA:33:U:H5'	2.12	0.50
1:CA:298:G:H5"	1:CA:299:A:OP1	2.12	0.50
1:CA:387:U:H4'	1:CA:388:G:O5'	2.12	0.50
1:CA:539:G:H2'	1:CA:540:C:H6	1.77	0.50
1:CA:1209:G:O2'	1:CA:1237:A:N1	2.38	0.50
4:CD:30:GLU:HG3	4:CD:94:LEU:HD11	1.94	0.50
4:CD:258:LYS:HE3	4:CD:273:ARG:HH21	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:32:LEU:HB3	6:CF:112:MET:HE1	1.93	0.50
11:CN:62:VAL:HG13	11:CN:66:LYS:HB2	1.92	0.50
23:CZ:7:ALA:HB3	23:CZ:61:LEU:HD13	1.94	0.50
34:DA:1117:G:O3'	42:DI:104:ARG:HD2	2.12	0.50
42:DI:89:ASN:HD22	42:DI:91:ASP:H	1.60	0.50
47:DN:29:ARG:HH12	47:DN:42:ILE:HD11	1.77	0.50
56:DY:12:U:H3	56:DY:23:A:H61	1.59	0.50
57:DZ:-12:ALA:HA	57:DZ:-9:LEU:HB3	1.93	0.50
3:AC:203:GLU:CD	3:AC:203:GLU:N	2.70	0.49
11:AN:18:ALA:O	11:AN:21:LYS:HG3	2.12	0.49
16:AS:93:LYS:HG2	16:AS:95:HIS:HB2	1.93	0.49
30:A6:25:LYS:NZ	30:A6:51:GLU:OE2	2.35	0.49
34:BA:357:G:C2	34:BA:358:U:C5	3.00	0.49
34:BA:444:C:H2'	34:BA:445:G:H8	1.76	0.49
34:BA:737:A:OP1	39:BF:92:LYS:HB2	2.12	0.49
36:BC:6:HIS:HD2	36:BC:8:ILE:H	1.59	0.49
56:BY:7:A:O2'	56:BY:49:C:H5'	2.13	0.49
57:BZ:-13:GLN:HE21	57:BZ:-13:GLN:HA	1.77	0.49
1:CA:515:A:H1'	1:CA:581:C:H1'	1.94	0.49
1:CA:963:U:H2'	1:CA:964:C:C6	2.46	0.49
1:CA:1405:U:H2'	1:CA:1406:U:H6	1.76	0.49
1:CA:1463:C:H2'	1:CA:1464:C:C6	2.47	0.49
1:CA:2884:U:H1'	29:C5:53:ALA:HB2	1.94	0.49
3:CC:191:ARG:O	3:CC:195:ARG:HG2	2.11	0.49
7:CG:64:THR:HG21	7:CG:92:VAL:HG11	1.94	0.49
13:CP:52:GLU:HB2	13:CP:55:ARG:HD2	1.94	0.49
34:DA:325:A:H2'	34:DA:326:G:O4'	2.12	0.49
34:DA:881:G:H2'	34:DA:882:C:O4'	2.12	0.49
34:DA:1479:C:H2'	34:DA:1480:G:H8	1.77	0.49
39:DF:87:ARG:HG3	39:DF:87:ARG:NH1	2.27	0.49
57:DZ:15:ILE:HD11	57:DZ:81:ILE:HG23	1.94	0.49
1:AA:715:G:H5'	1:AA:716:G:OP2	2.12	0.49
1:AA:1250:U:H4'	1:AA:1251:G:OP2	2.11	0.49
1:AA:1929:G:H2'	1:AA:1930:C:H6	1.77	0.49
1:AA:2785:C:H2'	1:AA:2786:C:C6	2.47	0.49
1:AA:2785:C:H2'	1:AA:2786:C:H6	1.77	0.49
3:AC:191:ARG:O	3:AC:194:ILE:HG22	2.12	0.49
14:AQ:32:TYR:OH	14:AQ:111:GLU:HB2	2.10	0.49
16:AS:43:GLU:OE1	24:A0:49:LYS:HE3	2.13	0.49
34:BA:538:G:OP1	45:BL:113:ARG:HD2	2.11	0.49
34:BA:1326:C:H2'	34:BA:1327:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:97:TRP:HZ3	35:BB:100:GLY:H	1.60	0.49
37:BD:129:ASN:ND2	37:BD:144:ASP:OD1	2.45	0.49
38:BE:89:ILE:HG13	38:BE:90:VAL:N	2.27	0.49
38:BE:122:GLU:O	38:BE:126:ARG:NH1	2.45	0.49
42:BI:18:PHE:HB2	42:BI:62:TYR:HB3	1.94	0.49
50:BQ:62:SER:CB	50:BQ:72:ARG:HD2	2.42	0.49
57:BZ:138:LYS:HG2	62:BZ:702:GDP:C6	2.48	0.49
1:CA:647:G:H2'	1:CA:648:G:O4'	2.13	0.49
1:CA:686:G:N2	1:CA:788:A:H61	2.10	0.49
1:CA:697:C:H2'	1:CA:698:C:H6	1.76	0.49
1:CA:1401:G:H2'	1:CA:1402:C:O4'	2.13	0.49
3:CC:203:GLU:CD	3:CC:203:GLU:N	2.70	0.49
7:CG:41:GLN:C	7:CG:43:LEU:H	2.20	0.49
13:CP:93:GLY:H	13:CP:123:LEU:CD2	2.25	0.49
16:CS:36:TYR:OH	16:CS:54:LEU:HD13	2.12	0.49
34:DA:437:U:O2	37:DD:119:GLN:NE2	2.45	0.49
34:DA:451:A:H61	34:DA:480:U:H2'	1.76	0.49
34:DA:454:C:H5"	34:DA:455:C:OP2	2.12	0.49
34:DA:926:G:O2'	55:DV:13:A:N1	2.45	0.49
34:DA:1022:G:H2'	34:DA:1023:G:C8	2.47	0.49
34:DA:1261:A:C6	34:DA:1275:A:H1'	2.47	0.49
37:DD:65:ARG:HD2	37:DD:70:ILE:O	2.12	0.49
43:DJ:29:ARG:HB2	43:DJ:84:GLN:HE22	1.77	0.49
57:DZ:225:GLU:CD	57:DZ:225:GLU:H	2.20	0.49
1:AA:595:A:H5"	1:AA:596:G:OP2	2.12	0.49
1:AA:664:U:H2'	1:AA:665:C:C6	2.47	0.49
1:AA:2146:G:H2'	1:AA:2147:G:O4'	2.12	0.49
6:AF:119:ARG:NH1	6:AF:119:ARG:HB3	2.27	0.49
14:AQ:16:ARG:HG2	14:AQ:18:LYS:HE3	1.93	0.49
23:AZ:154:ASP:O	23:AZ:155:LEU:HB3	2.11	0.49
25:A1:80:LEU:HB3	25:A1:82:LEU:HG	1.92	0.49
34:BA:152:A:N6	34:BA:170:U:O2	2.45	0.49
34:BA:584:G:O6	63:BA:1914:HOH:O	2.20	0.49
34:BA:1136:U:H5"	34:BA:1137:C:C2	2.47	0.49
53:BT:14:LYS:O	53:BT:18:GLN:HG3	2.12	0.49
1:CA:864:G:H8	1:CA:864:G:O5'	1.95	0.49
1:CA:1063:G:H1'	10:CL:91:PRO:HG2	1.95	0.49
1:CA:1084:A:O2'	1:CA:1105:U:O2'	2.30	0.49
1:CA:1664:A:H61	1:CA:1996:C:H42	1.59	0.49
1:CA:2113:U:H3	1:CA:2170:A:N6	2.08	0.49
1:CA:2331:G:H5'	24:C0:44:ARG:HG3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:24:ASP:C	3:CC:24:ASP:OD1	2.55	0.49
5:CE:38:THR:HB	5:CE:40:GLU:HG2	1.92	0.49
14:CQ:97:VAL:HG11	14:CQ:103:MET:HE3	1.93	0.49
22:CY:37:VAL:HG22	22:CY:69:ALA:HA	1.94	0.49
26:C2:61:LEU:O	26:C2:65:ASN:HB2	2.12	0.49
38:DE:75:THR:OG1	38:DE:117:ASP:O	2.20	0.49
50:DQ:56:VAL:HG12	50:DQ:77:VAL:HB	1.94	0.49
51:DR:25:THR:HG23	51:DR:26:LEU:HD22	1.94	0.49
53:DT:12:ALA:HA	53:DT:15:ARG:HB2	1.94	0.49
53:DT:56:MET:HE1	53:DT:85:MET:HG2	1.94	0.49
57:DZ:303:PRO:O	57:DZ:305:PRO:HD3	2.12	0.49
57:DZ:535:PRO:HG2	57:DZ:538:TYR:HD2	1.76	0.49
1:AA:1058:U:C5	11:AN:28:THR:HG21	2.47	0.49
1:AA:1911:A:N1	1:AA:2246:G:H1'	2.28	0.49
1:AA:2144:U:H2'	1:AA:2145:G:C8	2.47	0.49
1:AA:2285:A:H2'	1:AA:2286:A:C8	2.46	0.49
11:AN:65:LYS:HB2	11:AN:65:LYS:HZ2	1.77	0.49
34:BA:516:U:C4	34:BA:517:G:C6	3.00	0.49
34:BA:576:G:N1	34:BA:759:A:OP1	2.42	0.49
34:BA:828:A:H2'	34:BA:829:G:O4'	2.12	0.49
34:BA:977:A:C8	34:BA:1223:C:C4	3.01	0.49
34:BA:1118:C:H1'	34:BA:1179:A:C4	2.48	0.49
44:BK:80:VAL:O	44:BK:105:VAL:HA	2.12	0.49
46:BM:84:ILE:HG13	46:BM:85:GLY:HA2	1.95	0.49
53:BT:97:ALA:N	53:BT:98:PRO:HD3	2.27	0.49
1:CA:96:G:H4'	26:C2:48:HIS:NE2	2.27	0.49
1:CA:670:A:H4'	1:CA:671:C:O5'	2.12	0.49
1:CA:1452:A:O2'	1:CA:1453:U:H2'	2.11	0.49
1:CA:2178:C:H4'	3:CC:47:LYS:CE	2.42	0.49
1:CA:2726:U:O2'	1:CA:2727:G:H5'	2.12	0.49
4:CD:2:ALA:O	4:CD:3:VAL:HB	2.12	0.49
8:CH:130:ARG:HG2	8:CH:131:VAL:N	2.27	0.49
8:CH:150:ALA:HA	8:CH:153:LYS:HG3	1.94	0.49
11:CN:89:LYS:O	11:CN:93:THR:HG23	2.12	0.49
23:CZ:4:ARG:NE	23:CZ:60:GLU:OE2	2.43	0.49
33:C9:22:ARG:HB3	33:C9:24:TYR:CE1	2.47	0.49
34:DA:174:C:H2'	34:DA:175:C:H6	1.77	0.49
34:DA:1029:C:H1'	34:DA:1033:G:H22	1.77	0.49
34:DA:1376:U:H2'	34:DA:1377:A:C8	2.48	0.49
34:DA:1410:G:H2'	34:DA:1411:C:H6	1.77	0.49
35:DB:17:PHE:CD2	35:DB:44:LEU:HD11	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DB:182:ILE:HG22	35:DB:183:PRO:O	2.13	0.49
36:DC:182:ILE:HG23	36:DC:202:ILE:C	2.37	0.49
38:DE:139:LEU:HA	38:DE:142:LEU:HD12	1.94	0.49
43:DJ:27:ALA:C	43:DJ:29:ARG:H	2.21	0.49
1:AA:1219:A:H1'	1:AA:1220:U:C5'	2.42	0.49
1:AA:1298:G:N3	18:AU:33:ARG:HG2	2.27	0.49
1:AA:2157:A:H5'	1:AA:2182:G:H4'	1.95	0.49
1:AA:2874:G:H2'	1:AA:2875:U:O4'	2.12	0.49
5:AE:178:GLU:H	5:AE:178:GLU:CD	2.21	0.49
16:AS:97:ARG:NE	63:AS:4001:HOH:O	2.39	0.49
34:BA:200:G:H1	34:BA:217:C:N4	2.10	0.49
34:BA:690:G:C6	34:BA:691:G:C6	3.00	0.49
34:BA:859:A:H2'	34:BA:860:A:C8	2.47	0.49
34:BA:988:G:N2	34:BA:1016:A:N3	2.55	0.49
34:BA:1329:A:P	46:BM:28:ALA:HB3	2.53	0.49
36:BC:153:VAL:HG22	36:BC:198:VAL:HG22	1.94	0.49
37:BD:46:LYS:O	37:BD:48:ALA:N	2.45	0.49
38:BE:40:ARG:NH2	38:BE:68:GLU:HA	2.26	0.49
57:BZ:621:ILE:O	57:BZ:624:LEU:N	2.43	0.49
1:CA:108:U:C2	1:CA:109:G:C8	3.00	0.49
1:CA:888:C:P	46:DM:93:ARG:HH11	2.35	0.49
1:CA:1008:C:H6	1:CA:1008:C:OP1	1.96	0.49
1:CA:1054:A:H2	1:CA:1055:G:C4	2.21	0.49
1:CA:1285:G:N2	1:CA:1328:G:H5"	2.27	0.49
1:CA:1689:A:N6	1:CA:1698:A:H2	1.92	0.49
1:CA:2602:A:H4'	1:CA:2603:G:O5'	2.13	0.49
1:CA:2645:G:N2	1:CA:2767:C:OP2	2.46	0.49
1:CA:2693:A:H2'	1:CA:2694:G:C8	2.47	0.49
1:CA:2766:G:H5"	1:CA:2767:C:OP2	2.12	0.49
3:CC:191:ARG:O	3:CC:194:ILE:HG22	2.12	0.49
8:CH:98:LEU:HD22	8:CH:125:VAL:HG23	1.94	0.49
16:CS:93:LYS:O	16:CS:95:HIS:N	2.45	0.49
34:DA:1305:G:H22	34:DA:1331:G:H1'	1.77	0.49
34:DA:1323:G:H4'	34:DA:1363:C:N3	2.28	0.49
35:DB:17:PHE:HB2	35:DB:44:LEU:HD12	1.94	0.49
40:DG:59:LEU:O	40:DG:63:LYS:HG3	2.12	0.49
44:DK:22:HIS:O	44:DK:28:THR:HA	2.13	0.49
57:DZ:-66:MET:H2	57:DZ:-46:VAL:H	1.60	0.49
1:AA:95:G:H4'	26:A2:48:HIS:CD2	2.47	0.49
1:AA:645:G:H5'	1:AA:645:G:N3	2.28	0.49
1:AA:1002:A:N1	1:AA:2470:G:H4'	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1370:G:C4	1:AA:1374:G:O6	2.66	0.49
1:AA:1392:G:OP2	63:AA:3929:HOH:O	2.20	0.49
1:AA:1502:G:C2'	1:AA:1503:G:H5'	2.41	0.49
1:AA:2074:G:H4'	5:AE:143:ASN:O	2.13	0.49
4:AD:12:SER:HB3	4:AD:208:LYS:HB3	1.93	0.49
6:AF:185:ASP:OD1	6:AF:188:ARG:NH1	2.37	0.49
11:AN:20:GLY:HA2	11:AN:61:ARG:HD2	1.95	0.49
16:AS:82:ILE:HG22	16:AS:110:LEU:HD11	1.95	0.49
17:AT:16:ARG:NH1	17:AT:18:ASP:OD1	2.45	0.49
34:BA:599:C:H4'	41:BH:130:GLY:C	2.37	0.49
34:BA:949:A:H2'	34:BA:950:U:O4'	2.12	0.49
35:BB:16:HIS:CG	35:BB:17:PHE:H	2.31	0.49
35:BB:54:THR:HG21	35:BB:201:ILE:HD11	1.93	0.49
40:BG:73:MET:HG3	40:BG:90:GLU:HA	1.94	0.49
42:BI:77:ILE:O	42:BI:81:ILE:HG23	2.13	0.49
50:BQ:41:LYS:NZ	50:BQ:92:ARG:HH21	2.11	0.49
56:BY:26:A:H61	56:BY:44:G:H1	1.59	0.49
57:BZ:87:HIS:HB3	57:BZ:90:PHE:HB3	1.95	0.49
57:BZ:147:TRP:CE3	57:BZ:150:ILE:HD12	2.47	0.49
57:BZ:438:PHE:HB2	57:BZ:452:SER:O	2.11	0.49
1:CA:144:C:H2'	1:CA:145:G:H8	1.77	0.49
1:CA:539:G:H2'	1:CA:540:C:C6	2.48	0.49
1:CA:1022:G:N7	11:CN:66:LYS:HE2	2.28	0.49
1:CA:1568:G:H5"	4:CD:61:LEU:HD22	1.95	0.49
1:CA:2305:A:H5"	7:CG:134:GLY:HA3	1.95	0.49
3:CC:65:LEU:HB3	3:CC:189:ASN:HD22	1.75	0.49
33:C9:7:VAL:HG12	33:C9:34:GLN:HB3	1.93	0.49
34:DA:179:A:H2'	34:DA:180:U:H6	1.78	0.49
43:DJ:53:PRO:HA	47:DN:42:ILE:HD13	1.95	0.49
47:DN:32:SER:OG	47:DN:41:ARG:HG2	2.13	0.49
53:DT:37:SER:O	53:DT:41:ILE:HG13	2.13	0.49
1:AA:1108:G:H1	1:AA:1122:C:N4	2.04	0.49
1:AA:2053:A:C6	1:AA:2510:C:H1'	2.48	0.49
1:AA:2885:C:O2'	17:AT:4:GLY:HA3	2.12	0.49
1:AA:2890:C:O2'	15:AR:90:ARG:NH1	2.36	0.49
3:AC:55:SER:C	3:AC:57:GLN:N	2.71	0.49
5:AE:54:GLN:NE2	5:AE:76:ARG:HG2	2.26	0.49
14:AQ:111:GLU:O	14:AQ:115:MET:HB2	2.12	0.49
25:A1:3:LYS:HB2	25:A1:61:ARG:NH1	2.28	0.49
34:BA:601:C:H2'	34:BA:602:A:C8	2.48	0.49
34:BA:763:G:H2'	34:BA:764:C:H6	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:27:LYS:O	35:BB:194:PRO:HG2	2.12	0.49
35:BB:185:ILE:HA	35:BB:199:TYR:O	2.13	0.49
38:BE:20:GLN:O	38:BE:22:GLY:N	2.45	0.49
39:BF:75:LEU:O	39:BF:79:LEU:HG	2.12	0.49
57:BZ:145:ASP:O	57:BZ:148:LEU:HB3	2.12	0.49
57:BZ:631:ILE:HA	57:BZ:645:ALA:HB2	1.93	0.49
1:CA:110:G:C2	1:CA:111:A:C8	3.00	0.49
1:CA:226:G:H21	1:CA:228:A:H62	1.60	0.49
1:CA:465:G:H2'	1:CA:466:A:C8	2.47	0.49
1:CA:1057:A:O2'	1:CA:1058:G:OP1	2.27	0.49
1:CA:1448:G:H4'	1:CA:1542:A:OP1	2.13	0.49
1:CA:1792:G:O2'	1:CA:1830:C:OP1	2.28	0.49
1:CA:2274:A:C5	1:CA:2276:G:C8	3.00	0.49
6:CF:125:LEU:HD11	6:CF:199:TRP:CD2	2.48	0.49
11:CN:36:GLY:HA3	11:CN:49:GLY:HA2	1.94	0.49
14:CQ:116:GLU:O	14:CQ:120:ILE:HG13	2.12	0.49
24:C0:46:LYS:HD2	24:C0:78:TYR:CZ	2.48	0.49
27:C3:3:ARG:HB3	27:C3:59:VAL:HG23	1.95	0.49
35:DB:19:HIS:CG	35:DB:20:GLU:N	2.81	0.49
36:DC:40:ARG:NH2	36:DC:55:VAL:O	2.45	0.49
1:AA:74:G:H4'	26:A2:55:ARG:NH1	2.28	0.49
1:AA:1751:G:O2'	1:AA:1752:G:H5'	2.12	0.49
1:AA:2806:G:N2	1:AA:2815:C:H1'	2.28	0.49
2:AB:57:A:N3	7:AG:29:TRP:HB3	2.28	0.49
6:AF:178:PRO:HB3	6:AF:198:ALA:HB1	1.94	0.49
10:AL:105:LEU:HD23	10:AL:124:ALA:HB2	1.95	0.49
34:BA:158:G:H2'	34:BA:159:G:C8	2.48	0.49
34:BA:195:A:C6	34:BA:196:A:N1	2.81	0.49
34:BA:427:U:OP2	37:BD:36:ARG:NH1	2.46	0.49
34:BA:986:A:H1'	52:BS:54:GLY:O	2.12	0.49
34:BA:1154:G:H2'	34:BA:1155:G:H8	1.76	0.49
39:BF:100:ASN:HB2	51:BR:27:GLY:O	2.13	0.49
52:BS:65:ASN:HD22	52:BS:66:MET:N	2.10	0.49
57:BZ:188:TYR:CB	57:BZ:267:LYS:HE3	2.43	0.49
57:BZ:481:VAL:HG23	57:BZ:483:TYR:CE2	2.48	0.49
57:BZ:609:GLU:OE1	57:BZ:637:ARG:NH2	2.46	0.49
57:BZ:671:MET:HE2	57:BZ:671:MET:HB3	1.65	0.49
1:CA:207:A:H2'	1:CA:208:C:O4'	2.12	0.49
1:CA:335:C:H4'	22:CY:73:ARG:CZ	2.43	0.49
1:CA:1019:U:O2'	1:CA:1021:A:H2	1.94	0.49
1:CA:1536:C:P	1:CA:1536:C:H6	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:154:VAL:HG22	6:CF:191:ARG:HB2	1.95	0.49
14:CQ:52:VAL:HG22	23:CZ:183:LEU:HD11	1.95	0.49
23:CZ:45:ASP:O	23:CZ:49:ARG:HG3	2.13	0.49
34:DA:719:C:O2'	51:DR:49:LYS:HB3	2.12	0.49
34:DA:1067:A:O2'	34:DA:1093:A:O2'	2.24	0.49
35:DB:30:ARG:HG3	35:DB:31:TYR:CD1	2.47	0.49
38:DE:122:GLU:O	38:DE:126:ARG:NH1	2.46	0.49
48:DO:33:THR:HA	48:DO:63:ARG:HH11	1.77	0.49
49:DP:39:TYR:CD1	49:DP:73:LEU:HD13	2.48	0.49
1:AA:697:C:N4	1:AA:698:G:O6	2.46	0.49
1:AA:793:A:H2'	1:AA:2624:C:H5"	1.95	0.49
1:AA:1857:G:H4'	4:AD:242:ARG:CZ	2.43	0.49
1:AA:2143:G:C1'	3:AC:168:LYS:CD	2.91	0.49
27:A3:18:ASP:HB2	27:A3:49:LYS:HE3	1.95	0.49
34:BA:509:A:H3'	34:BA:509:A:C8	2.48	0.49
37:BD:64:LEU:HD13	37:BD:198:VAL:HG21	1.94	0.49
41:BH:87:SER:HA	41:BH:93:VAL:HG23	1.94	0.49
46:BM:89:GLY:O	46:BM:93:ARG:HG3	2.11	0.49
48:BO:9:GLN:C	48:BO:11:VAL:H	2.21	0.49
58:BX:3:004:CG1	58:BX:4:PRO:HD2	2.42	0.49
1:CA:1471:A:H5"	1:CA:1471:A:C8	2.48	0.49
1:CA:1848:A:H2'	1:CA:1849:G:O4'	2.12	0.49
1:CA:2176:A:H4'	3:CC:45:HIS:HD2	1.68	0.49
1:CA:2334:G:O6	24:C0:74:ARG:NH2	2.46	0.49
1:CA:2576:G:H1'	63:CA:3867:HOH:O	2.13	0.49
6:CF:161:GLU:O	6:CF:165:ARG:HB2	2.13	0.49
7:CG:37:VAL:O	7:CG:94:LEU:N	2.46	0.49
7:CG:38:VAL:HA	7:CG:93:THR:HA	1.95	0.49
13:CP:42:SER:O	63:CP:302:HOH:O	2.20	0.49
23:CZ:5:LEU:HD22	23:CZ:6:LYS:O	2.13	0.49
23:CZ:99:TYR:HA	23:CZ:124:ILE:O	2.13	0.49
27:C3:8:LEU:HD13	27:C3:31:LEU:HA	1.95	0.49
34:DA:46:G:H2'	34:DA:366:C:C5	2.47	0.49
34:DA:435:C:H2'	34:DA:436:C:H6	1.77	0.49
34:DA:692:U:H1'	34:DA:695:A:N7	2.28	0.49
34:DA:1063:C:OP2	34:DA:1064:G:O2'	2.23	0.49
34:DA:1298:C:P	40:DG:114:ARG:HH22	2.36	0.49
35:DB:19:HIS:HB2	35:DB:204:ASN:ND2	2.28	0.49
57:DZ:395:PRO:O	57:DZ:397:VAL:N	2.45	0.49
1:AA:144:C:H5'	21:AX:2:LYS:HE2	1.95	0.49
1:AA:1563:G:H2'	1:AA:1564:C:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:24:ASP:C	3:AC:24:ASP:OD1	2.55	0.49
5:AE:70:ALA:O	5:AE:72:VAL:HG23	2.13	0.49
17:AT:39:ARG:HH21	34:BA:345:C:H5	1.61	0.49
34:BA:159:G:N2	34:BA:161:A:O5'	2.46	0.49
34:BA:340:U:H3	34:BA:349:A:H61	1.60	0.49
34:BA:381:C:H2'	34:BA:382:A:O4'	2.13	0.49
34:BA:417:C:H42	34:BA:426:G:H1	1.61	0.49
34:BA:840:C:H4'	34:BA:841:U:OP1	2.12	0.49
34:BA:1008:C:H42	34:BA:1021:G:H1	1.61	0.49
45:BL:52:LEU:O	45:BL:54:LYS:HD2	2.12	0.49
54:BU:3:LYS:HB3	54:BU:14:TRP:CD1	2.48	0.49
1:CA:76:C:O3'	26:C2:59:ARG:HG3	2.13	0.49
1:CA:110:G:H2'	1:CA:111:A:H8	1.77	0.49
1:CA:533:G:H5'	18:CU:24:TYR:CD1	2.47	0.49
1:CA:952:G:OP1	14:CQ:16:ARG:NH2	2.40	0.49
1:CA:1922:G:H2'	1:CA:1923:U:O4'	2.12	0.49
3:CC:55:SER:C	3:CC:57:GLN:N	2.71	0.49
10:CL:89:HIS:HB2	10:CL:94:GLU:OE1	2.13	0.49
16:CS:35:ILE:HB	16:CS:53:SER:HB3	1.95	0.49
18:CU:49:HIS:HA	18:CU:52:ARG:HG2	1.95	0.49
34:DA:523:A:C2	45:DL:91:LYS:HB3	2.48	0.49
34:DA:1189:C:H5"	34:DA:1190:G:OP2	2.13	0.49
36:DC:113:ALA:O	36:DC:116:VAL:N	2.36	0.49
49:DP:1:MET:O	49:DP:24:ALA:HB2	2.12	0.49
49:DP:23:ASP:OD1	49:DP:25:ARG:NH1	2.45	0.49
57:DZ:168:ILE:HG23	57:DZ:205:TYR:HE2	1.77	0.49
1:AA:553:A:H2	1:AA:2065:C:C5'	2.26	0.48
1:AA:922:G:H1	1:AA:948:C:H42	1.61	0.48
1:AA:1015:C:O2	1:AA:1030:A:O2'	2.29	0.48
1:AA:1671:C:H2'	1:AA:1672:G:O4'	2.13	0.48
1:AA:1737:A:H3'	1:AA:1738:C:H6	1.78	0.48
1:AA:2331:G:H22	16:AS:3:ARG:HG2	1.77	0.48
3:AC:42:VAL:HA	3:AC:216:THR:O	2.13	0.48
22:AY:11:ASP:OD2	22:AY:11:ASP:N	2.43	0.48
25:A1:82:LEU:HA	25:A1:85:LEU:HD12	1.94	0.48
34:BA:1138:G:C6	34:BA:1140:C:H1'	2.47	0.48
37:BD:65:ARG:HG3	37:BD:70:ILE:CG2	2.43	0.48
1:CA:111:A:C2	1:CA:112:U:C2	3.01	0.48
1:CA:180:G:OP1	31:C7:32:LYS:HE3	2.12	0.48
1:CA:813:U:H2'	1:CA:814:C:C6	2.48	0.48
1:CA:2393:A:H5"	13:CP:63:PRO:HB3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:35:GLN:HG2	5:CE:36:ARG:H	1.78	0.48
5:CE:101:ARG:NH1	5:CE:169:ASN:O	2.44	0.48
7:CG:98:ARG:HH21	28:C4:1:MET:HE2	1.77	0.48
8:CH:40:GLU:OE1	8:CH:60:ARG:NH1	2.46	0.48
10:CL:81:ALA:HB3	10:CL:99:ILE:HD11	1.96	0.48
21:CX:84:ALA:O	21:CX:87:GLN:HB2	2.12	0.48
34:DA:1259:C:N4	34:DA:1260:C:O2	2.46	0.48
34:DA:1298:C:OP2	40:DG:114:ARG:NH2	2.37	0.48
42:DI:4:TYR:HB2	42:DI:19:LEU:HD12	1.95	0.48
42:DI:114:TYR:H	42:DI:114:TYR:HD2	1.60	0.48
44:DK:17:GLY:O	44:DK:80:VAL:HA	2.13	0.48
57:DZ:78:ARG:NH1	57:DZ:357:ARG:CZ	2.76	0.48
57:DZ:138:LYS:HG2	62:DZ:703:GDP:C6	2.48	0.48
57:DZ:219:VAL:C	57:DZ:221:ALA:H	2.21	0.48
57:DZ:255:ILE:HG12	57:DZ:256:THR:N	2.27	0.48
1:AA:104:C:H2'	1:AA:105:C:H6	1.79	0.48
1:AA:196:A:H2'	1:AA:197:C:O4'	2.12	0.48
1:AA:1073:A:C2	1:AA:2500:A:H5'	2.48	0.48
1:AA:1217:G:H3'	1:AA:1218:G:H5'	1.95	0.48
1:AA:2096:U:H2'	1:AA:2097:U:C6	2.48	0.48
1:AA:2325:C:H4'	7:AG:91:ARG:HG3	1.93	0.48
29:A5:16:ARG:HG2	29:A5:16:ARG:HH11	1.77	0.48
34:BA:148:G:H2'	34:BA:149:A:C8	2.48	0.48
34:BA:601:C:H2'	34:BA:602:A:H8	1.77	0.48
40:BG:13:GLN:HE21	40:BG:13:GLN:HA	1.78	0.48
57:BZ:302:HIS:O	57:BZ:304:ASP:N	2.43	0.48
57:BZ:363:ARG:NH1	57:BZ:363:ARG:HB3	2.28	0.48
57:BZ:601:ILE:HB	57:BZ:684:GLN:HG3	1.95	0.48
1:CA:271(P):C:H2'	1:CA:271(Q):G:O4'	2.13	0.48
1:CA:693:C:H2'	1:CA:694:U:H6	1.77	0.48
1:CA:903:C:H2'	1:CA:904:C:C6	2.47	0.48
1:CA:2239:G:H5'	4:CD:251:GLY:HA3	1.94	0.48
5:CE:2:LYS:HA	5:CE:84:PHE:CD1	2.48	0.48
11:CN:71:ILE:HG21	11:CN:84:LYS:HB3	1.96	0.48
18:CU:28:ARG:HD3	18:CU:38:THR:OG1	2.13	0.48
26:C2:9:GLN:OE1	26:C2:56:GLN:HG2	2.12	0.48
26:C2:64:LEU:HD11	26:C2:68:ARG:NH2	2.26	0.48
28:C4:58:ARG:HH12	52:DS:68:GLY:H	1.61	0.48
30:C6:7:ILE:HD13	30:C6:27:LYS:HB3	1.95	0.48
31:C7:29:LYS:HZ1	31:C7:33:ARG:HE	1.61	0.48
34:DA:451:A:N6	34:DA:480:U:H2'	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:954:G:H21	34:DA:1227:A:H62	1.59	0.48
34:DA:1022:G:H2'	34:DA:1023:G:H8	1.77	0.48
34:DA:1097:C:H2'	34:DA:1098:C:C6	2.48	0.48
34:DA:1178:G:OP1	42:DI:93:ARG:HD3	2.14	0.48
34:DA:1294:G:H2'	34:DA:1295:G:H8	1.78	0.48
34:DA:1318:A:H5"	52:DS:3:ARG:NH2	2.28	0.48
34:DA:1432:G:O6	63:DA:1808:HOH:O	2.17	0.48
37:DD:23:GLY:N	37:DD:26:CYS:SG	2.85	0.48
38:DE:54:ALA:O	38:DE:58:ALA:N	2.45	0.48
39:DF:2:ARG:NH2	48:DO:2:PRO:HD2	2.28	0.48
41:DH:111:ILE:HG23	41:DH:135:CYS:SG	2.53	0.48
1:AA:604:C:H2'	1:AA:605:G:H8	1.78	0.48
1:AA:811:A:OP1	4:AD:208:LYS:HE3	2.13	0.48
1:AA:2262:G:C6	14:AQ:83:MET:HB3	2.48	0.48
10:AL:127:ILE:HA	10:AL:130:SER:HB3	1.94	0.48
23:AZ:105:VAL:O	23:AZ:141:VAL:HG22	2.13	0.48
34:BA:461:A:C5	34:BA:471:G:C6	3.02	0.48
34:BA:604:G:N2	34:BA:635:G:C4	2.82	0.48
34:BA:833:U:H2'	34:BA:834:C:H6	1.78	0.48
34:BA:1513:A:H2'	34:BA:1514:C:C6	2.48	0.48
37:BD:190:ASP:O	37:BD:193:ASP:HB2	2.13	0.48
38:BE:92:LYS:O	38:BE:118:ILE:HG13	2.12	0.48
44:BK:59:TYR:CE2	44:BK:63:LEU:HD12	2.49	0.48
46:BM:75:ALA:HA	46:BM:78:ILE:HD12	1.95	0.48
49:BP:22:THR:OG1	49:BP:23:ASP:N	2.46	0.48
58:BX:9:MVA:HN2	58:BX:9:MVA:HG13	1.95	0.48
1:CA:601:C:O2'	6:CF:104:LYS:NZ	2.46	0.48
1:CA:1053:C:O2'	1:CA:1054:A:H5'	2.13	0.48
1:CA:1221(A):C:H42	1:CA:1228:G:H1	1.60	0.48
1:CA:2887:U:H2'	1:CA:2888:C:H6	1.78	0.48
2:CB:114:C:H2'	2:CB:115:G:C8	2.49	0.48
12:CO:1:MET:HE2	12:CO:32:TYR:CD1	2.49	0.48
16:CS:64:GLU:H	16:CS:64:GLU:HG3	1.27	0.48
18:CU:62:ILE:HG23	18:CU:76:TYR:CE2	2.48	0.48
27:C3:52:HIS:CD2	27:C3:53:LEU:HG	2.48	0.48
34:DA:520:A:C2	34:DA:536:C:H1'	2.48	0.48
34:DA:665:A:H1'	34:DA:733:A:O4'	2.13	0.48
34:DA:866:C:C4'	34:DA:919:A:H5'	2.43	0.48
34:DA:867:G:OP2	34:DA:867:G:H8	1.95	0.48
46:DM:33:ALA:O	46:DM:37:THR:OG1	2.19	0.48
57:DZ:111:SER:OG	57:DZ:112:GLN:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:139:A:C8	1:AA:1454:C:O2'	2.67	0.48
1:AA:1067:A:H3'	1:AA:1067:A:H8	1.77	0.48
1:AA:1525:G:O2'	1:AA:1605:A:C2	2.64	0.48
1:AA:1588:G:H3'	1:AA:1589:A:H2'	1.95	0.48
1:AA:1817:A:H1'	1:AA:1960:A:N6	2.28	0.48
1:AA:2858:G:H3'	17:AT:95:ARG:O	2.12	0.48
6:AF:124:LEU:HD12	6:AF:125:LEU:N	2.27	0.48
10:AL:88:ALA:O	10:AL:90:LYS:N	2.41	0.48
16:AS:25:ARG:NH1	16:AS:42:ASP:OD1	2.45	0.48
17:AT:35:LYS:HG3	17:AT:40:THR:HG22	1.96	0.48
35:BB:8:LYS:HD3	35:BB:8:LYS:N	2.28	0.48
35:BB:60:ASP:O	35:BB:64:ARG:HB2	2.13	0.48
38:BE:122:GLU:OE1	38:BE:131:ILE:HG13	2.14	0.48
39:BF:24:GLU:O	39:BF:28:ARG:N	2.37	0.48
46:BM:14:ARG:NH2	46:BM:16:ASP:OD1	2.40	0.48
57:BZ:16:GLY:O	57:BZ:104:ALA:HA	2.13	0.48
57:BZ:395:PRO:O	57:BZ:397:VAL:N	2.42	0.48
57:BZ:517:LEU:HG	57:BZ:518:PRO:HD2	1.95	0.48
1:CA:528:A:OP2	11:CN:114:ARG:NH1	2.47	0.48
1:CA:904:C:H2'	1:CA:905:U:C6	2.49	0.48
1:CA:1803:A:O2'	4:CD:259:THR:HG21	2.13	0.48
1:CA:2135:A:N1	1:CA:2156:G:O2'	2.37	0.48
3:CC:42:VAL:HA	3:CC:216:THR:O	2.13	0.48
7:CG:39:ILE:HG23	7:CG:157:ILE:HG12	1.96	0.48
7:CG:109:VAL:HG21	28:C4:14:ILE:HD13	1.94	0.48
10:CL:101:TRP:HD1	10:CL:138:VAL:HG12	1.77	0.48
34:DA:23:C:H5	34:DA:561:U:O4	1.96	0.48
34:DA:1030(A):G:H21	34:DA:1030(C):G:H3'	1.78	0.48
34:DA:1496:C:H2'	34:DA:1497:G:O4'	2.13	0.48
47:DN:37:PHE:HB3	47:DN:39:LEU:HD12	1.95	0.48
56:DY:62:C:H2'	56:DY:63:G:C8	2.48	0.48
57:DZ:354:ARG:NH2	57:DZ:378:VAL:HG11	2.28	0.48
57:DZ:622:GLY:HA2	57:DZ:625:ASN:HB2	1.94	0.48
1:AA:123:G:H5"	31:A7:19:ARG:HD3	1.96	0.48
1:AA:174:U:H4'	1:AA:207:A:H4'	1.96	0.48
1:AA:1604:C:H5"	1:AA:1605:A:OP2	2.12	0.48
1:AA:1886:G:C2'	1:AA:1887:G:H5'	2.43	0.48
1:AA:2555:G:H2'	1:AA:2556:G:C8	2.49	0.48
18:AU:28:ARG:HD3	18:AU:38:THR:OG1	2.13	0.48
22:AY:102:CYS:SG	22:AY:103:GLY:N	2.86	0.48
24:A0:24:LYS:O	24:A0:25:ARG:HD3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:A6:30:THR:HG22	30:A6:30:THR:O	2.12	0.48
34:BA:9:G:N2	34:BA:10:A:C4	2.82	0.48
34:BA:892:A:H2'	34:BA:893:C:C6	2.47	0.48
37:BD:194:LEU:HD12	37:BD:195:ALA:H	1.79	0.48
38:BE:93:PRO:HG2	41:BH:105:ARG:HG3	1.95	0.48
57:BZ:630:GLN:HG2	57:BZ:646:PHE:HB2	1.94	0.48
1:CA:322:A:OP2	6:CF:169:ASN:HB2	2.13	0.48
1:CA:815:C:H2'	1:CA:816:C:H6	1.78	0.48
3:CC:184:GLU:O	3:CC:188:ASP:OD2	2.31	0.48
4:CD:133:LEU:HA	4:CD:136:ILE:HD12	1.95	0.48
5:CE:28:ALA:HB3	5:CE:93:VAL:HG13	1.96	0.48
6:CF:21:ALA:CB	6:CF:22:ALA:HA	2.43	0.48
6:CF:37:VAL:HG13	6:CF:184:TYR:CD1	2.48	0.48
10:CL:119:ASP:HB3	10:CL:122:ALA:HB3	1.95	0.48
18:CU:19:LYS:O	18:CU:22:LYS:HG3	2.13	0.48
21:CX:40:LYS:HG3	21:CX:51:VAL:HB	1.95	0.48
34:DA:349:A:O2'	34:DA:350:G:H5'	2.13	0.48
34:DA:954:G:H2'	34:DA:955:U:O4'	2.14	0.48
34:DA:957:U:H2'	34:DA:959:A:OP2	2.14	0.48
36:DC:6:HIS:CD2	36:DC:7:PRO:HD2	2.48	0.48
40:DG:18:TYR:OH	40:DG:58:PRO:HB2	2.13	0.48
43:DJ:51:ARG:HD2	43:DJ:60:ARG:O	2.13	0.48
50:DQ:95:TYR:HA	50:DQ:98:LEU:HD12	1.95	0.48
51:DR:47:THR:HG23	51:DR:49:LYS:HG3	1.95	0.48
1:AA:239:G:OP2	32:A8:13:ARG:NH2	2.47	0.48
1:AA:1272:A:OP1	19:AV:84:LYS:HE2	2.13	0.48
1:AA:1828:C:H4'	4:AD:257:LEU:O	2.13	0.48
1:AA:2131:U:OP1	1:AA:2171:G:O2'	2.31	0.48
1:AA:2395:G:O2'	1:AA:2396:G:H5'	2.13	0.48
7:AG:110:ALA:HB1	7:AG:140:ILE:CG2	2.34	0.48
12:AO:1:MET:HE3	12:AO:32:TYR:CE1	2.49	0.48
22:AY:5:MET:HG2	22:AY:30:VAL:CG1	2.43	0.48
23:AZ:134:PRO:O	23:AZ:136:PHE:N	2.46	0.48
24:A0:68:GLU:OE1	24:A0:82:ARG:HD3	2.14	0.48
25:A1:71:TYR:O	25:A1:72:GLU:C	2.56	0.48
34:BA:67:C:O2'	34:BA:171:A:H1'	2.13	0.48
39:BF:62:TRP:CD1	51:BR:35:ARG:NH1	2.82	0.48
41:BH:78:GLN:HE21	41:BH:78:GLN:HB2	1.40	0.48
1:CA:330:A:HO2'	1:CA:331:A:H8	1.59	0.48
1:CA:373:U:H1'	1:CA:423:A:C2	2.49	0.48
1:CA:746:A:H2'	1:CA:2612:C:H5"	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1154:G:H8	1:CA:1154:G:O5'	1.96	0.48
1:CA:1778:U:H2'	1:CA:1784:A:N6	2.28	0.48
1:CA:1857:G:C6	1:CA:1858:G:N1	2.82	0.48
1:CA:2703:C:H2'	1:CA:2704:C:H6	1.79	0.48
12:CO:63:VAL:HG12	12:CO:106:LEU:HD11	1.96	0.48
14:CQ:14:ARG:HG2	14:CQ:41:TRP:CH2	2.44	0.48
14:CQ:59:ARG:O	14:CQ:59:ARG:HG2	2.11	0.48
30:C6:6:ARG:NE	30:C6:24:GLU:OE1	2.43	0.48
34:DA:32:A:C2	34:DA:33:A:C4	3.01	0.48
34:DA:269:C:H2'	34:DA:270:A:C8	2.48	0.48
34:DA:949:A:H61	34:DA:1232:U:H3	1.62	0.48
38:DE:5:ASP:OD1	38:DE:5:ASP:N	2.47	0.48
48:DO:78:TYR:C	48:DO:80:ALA:H	2.21	0.48
51:DR:45:SER:OG	51:DR:46:GLU:N	2.46	0.48
1:AA:762:G:C2	48:BO:56:LEU:HD21	2.49	0.48
1:AA:1346:U:H4'	1:AA:1347:A:H5'	1.95	0.48
1:AA:1525:G:HO2'	1:AA:1605:A:H2	1.61	0.48
1:AA:2349:G:OP1	63:AA:3945:HOH:O	2.20	0.48
24:A0:25:ARG:HD2	24:A0:29:GLN:NE2	2.28	0.48
25:A1:77:ALA:HB2	25:A1:94:LEU:HD21	1.96	0.48
34:BA:158:G:H2'	34:BA:159:G:H8	1.79	0.48
36:BC:23:TYR:C	36:BC:23:TYR:CD2	2.92	0.48
45:BL:32:PHE:HB3	45:BL:84:LEU:HD11	1.96	0.48
56:BW:44:G:C2'	56:BW:45:U:H5'	2.44	0.48
1:CA:2120:G:H22	3:CC:169:THR:HG23	1.79	0.48
3:CC:17:PRO:HG2	3:CC:18:ASN:H	1.79	0.48
20:CW:4:LYS:O	20:CW:57:ASN:ND2	2.45	0.48
20:CW:29:LEU:HD11	20:CW:33:ARG:HE	1.79	0.48
34:DA:73:G:C6	34:DA:97:G:C6	3.02	0.48
34:DA:490:G:H2'	34:DA:491:G:H8	1.77	0.48
34:DA:1129:C:H2'	34:DA:1139:G:N7	2.28	0.48
34:DA:1466:C:H2'	34:DA:1467:G:O4'	2.13	0.48
34:DA:1508:G:H2'	34:DA:1509:C:H6	1.78	0.48
37:DD:163:GLU:HG3	37:DD:166:LYS:HE3	1.96	0.48
39:DF:91:VAL:HG13	51:DR:72:ARG:HH22	1.77	0.48
41:DH:82:HIS:NE2	41:DH:84:ARG:HG2	2.29	0.48
47:DN:29:ARG:NH1	47:DN:42:ILE:HD11	2.28	0.48
56:DY:69:G:H2'	56:DY:70:G:O4'	2.14	0.48
57:DZ:120:THR:HG22	57:DZ:123:ARG:HH22	1.77	0.48
57:DZ:505:GLY:HA2	57:DZ:576:ASP:HA	1.96	0.48
1:AA:199:C:OP2	31:A7:29:LYS:NZ	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1973:U:O4	63:AA:3937:HOH:O	2.18	0.48
1:AA:2299:A:N1	1:AA:2358:A:N7	2.62	0.48
1:AA:2388:A:H2'	1:AA:2389:A:O4'	2.14	0.48
9:AK:43:ALA:O	9:AK:47:ASN:N	2.28	0.48
16:AS:3:ARG:HD3	16:AS:4:LEU:N	2.29	0.48
19:AV:52:VAL:HG22	19:AV:55:ALA:HB3	1.96	0.48
24:A0:43:THR:O	24:A0:43:THR:HG23	2.13	0.48
34:BA:370:C:H2'	34:BA:371:G:O4'	2.14	0.48
34:BA:569:C:H42	34:BA:881:G:H1	1.62	0.48
34:BA:941:G:C2	34:BA:942:G:H1'	2.49	0.48
34:BA:1343:G:O2'	42:BI:121:ARG:HD3	2.14	0.48
35:BB:24:TRP:CD1	35:BB:24:TRP:H	2.32	0.48
35:BB:194:PRO:O	35:BB:196:LEU:N	2.47	0.48
41:BH:112:LEU:CD1	41:BH:114:THR:HG23	2.44	0.48
46:BM:34:LEU:HD13	46:BM:41:PRO:HA	1.96	0.48
48:BO:62:GLN:O	48:BO:65:ARG:N	2.47	0.48
51:BR:59:SER:H	51:BR:62:GLU:HB2	1.79	0.48
57:BZ:191:ASP:OD1	57:BZ:267:LYS:NZ	2.47	0.48
1:CA:656:G:H2'	1:CA:657:U:C6	2.49	0.48
1:CA:906:G:OP1	14:CQ:26:TYR:OH	2.31	0.48
1:CA:1053:C:C6	1:CA:1053:C:C4'	2.96	0.48
1:CA:1106:G:N1	1:CA:1107:G:N7	2.61	0.48
1:CA:2103:C:H1'	1:CA:2187:G:N2	2.29	0.48
1:CA:2324:C:H5"	1:CA:2325:G:H5'	1.96	0.48
7:CG:7:LEU:HD23	7:CG:100:TRP:CE3	2.49	0.48
7:CG:19:LEU:HG	7:CG:175:LEU:HD22	1.96	0.48
11:CN:23:LEU:HD12	11:CN:99:LEU:HD23	1.94	0.48
12:CO:78:ARG:HG2	17:CT:73:GLU:HB2	1.95	0.48
15:CR:30:THR:HG22	15:CR:31:HIS:CD2	2.49	0.48
20:CW:59:VAL:HG12	20:CW:60:ASN:ND2	2.29	0.48
23:CZ:22:GLY:O	23:CZ:41:LEU:HB2	2.14	0.48
34:DA:833:U:H2'	34:DA:834:C:H6	1.79	0.48
37:DD:5:ILE:HG23	37:DD:5:ILE:O	2.14	0.48
39:DF:72:VAL:HG23	39:DF:90:VAL:HG11	1.96	0.48
40:DG:71:PRO:HG3	40:DG:103:TRP:HH2	1.79	0.48
41:DH:12:ARG:HH12	41:DH:27:PRO:HD2	1.78	0.48
1:AA:1243:U:H2'	1:AA:1244:U:C6	2.49	0.48
6:AF:181:LEU:HD11	6:AF:186:ILE:HD11	1.96	0.48
34:BA:104:G:C2	34:BA:105:G:C8	3.02	0.48
34:BA:200:G:H1	34:BA:217:C:H42	1.62	0.48
34:BA:502:G:C6	34:BA:503:C:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:831:U:O2'	34:BA:832:C:H5'	2.14	0.48
34:BA:1095:U:H2'	34:BA:1096:C:O4'	2.13	0.48
35:BB:19:HIS:NE2	35:BB:20:GLU:OE1	2.47	0.48
40:BG:78:ARG:NH1	40:BG:80:VAL:HG23	2.29	0.48
41:BH:56:LYS:HB2	41:BH:58:TYR:CE1	2.48	0.48
56:BY:57:G:H2'	56:BY:58:A:H5'	1.95	0.48
57:BZ:324:ARG:HG3	57:BZ:324:ARG:HH11	1.79	0.48
57:BZ:511:LYS:HD2	57:BZ:569:ASP:HB3	1.96	0.48
1:CA:118:A:C8	1:CA:119:A:C8	3.02	0.48
1:CA:453:C:OP1	63:CA:3754:HOH:O	2.19	0.48
1:CA:533:G:H5'	18:CU:24:TYR:CE1	2.49	0.48
1:CA:2663:G:C6	1:CA:2664:G:C4	3.02	0.48
7:CG:16:ARG:NH2	7:CG:28:VAL:HG12	2.28	0.48
7:CG:101:ILE:HG22	7:CG:105:LYS:HE2	1.96	0.48
14:CQ:32:TYR:HE1	14:CQ:133:ARG:HB2	1.79	0.48
15:CR:28:LEU:O	15:CR:28:LEU:HD22	2.13	0.48
30:C6:13:CYS:SG	30:C6:47:THR:HG21	2.54	0.48
34:DA:186:C:H2'	34:DA:187:C:C6	2.46	0.48
34:DA:191:G:N3	53:DT:103:GLY:HA2	2.29	0.48
34:DA:620:C:C2	37:DD:135:LEU:HG	2.49	0.48
34:DA:1065:U:H5"	34:DA:1190:G:H22	1.78	0.48
34:DA:1117:G:H21	34:DA:1180:A:H1'	1.79	0.48
34:DA:1201:A:H4'	34:DA:1202:G:O5'	2.14	0.48
34:DA:1513:A:H2'	34:DA:1514:C:C6	2.49	0.48
40:DG:18:TYR:CE2	40:DG:59:LEU:HB2	2.48	0.48
57:DZ:163:VAL:HG11	57:DZ:212:TYR:CD1	2.48	0.48
1:AA:269:G:N7	1:AA:270:C:N4	2.61	0.48
1:AA:1026:A:N3	1:AA:2059:G:O2'	2.42	0.48
1:AA:1273:G:OP1	18:AU:13:LYS:NZ	2.41	0.48
1:AA:2662:U:H2'	1:AA:2663:C:C6	2.49	0.48
3:AC:184:GLU:O	3:AC:188:ASP:OD2	2.31	0.48
12:AO:64:ARG:HB2	12:AO:83:ALA:HB3	1.96	0.48
13:AP:113:LYS:HD3	13:AP:115:LEU:HD21	1.96	0.48
15:AR:96:ARG:NH1	15:AR:115:GLU:OE1	2.46	0.48
17:AT:7:ILE:O	17:AT:11:GLU:HG3	2.14	0.48
23:AZ:30:ASN:O	23:AZ:32:HIS:N	2.47	0.48
23:AZ:70:LEU:HG	23:AZ:91:LEU:HD21	1.96	0.48
34:BA:200:G:N2	34:BA:218:C:C2	2.81	0.48
34:BA:200:G:N2	34:BA:218:C:O2	2.47	0.48
34:BA:620:C:H2'	34:BA:621:A:O4'	2.13	0.48
34:BA:1340:A:O2'	56:BW:31:A:O3'	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BC:46:GLU:C	36:BC:47:LEU:HD23	2.39	0.48
37:BD:57:ARG:HB3	37:BD:206:PHE:HB2	1.96	0.48
40:BG:16:LEU:HD11	42:BI:45:ALA:HB2	1.95	0.48
57:BZ:-23:LEU:C	57:BZ:-21:ALA:H	2.22	0.48
57:BZ:340:TYR:CE2	57:BZ:351:ARG:HD3	2.49	0.48
1:CA:323:G:HO2'	1:CA:1205:U:H3	1.60	0.48
1:CA:461:C:O2'	1:CA:462:C:H5'	2.14	0.48
1:CA:704:G:H1'	1:CA:726:G:N2	2.29	0.48
1:CA:848:G:N3	1:CA:933:A:H1'	2.29	0.48
1:CA:1803:A:H4'	4:CD:259:THR:HG23	1.95	0.48
1:CA:2360:A:H2'	1:CA:2361:A:O4'	2.12	0.48
1:CA:2363:C:O2	24:C0:39:ARG:NH2	2.45	0.48
1:CA:2590:A:H2'	1:CA:2591:C:H6	1.78	0.48
11:CN:33:LEU:HD13	11:CN:38:HIS:HE2	1.79	0.48
12:CO:24:VAL:HB	12:CO:33:ALA:HB2	1.95	0.48
13:CP:87:ASP:HB3	13:CP:105:LEU:HD13	1.96	0.48
34:DA:865:A:H5'	34:DA:1078:U:O4	2.13	0.48
34:DA:1107:C:C4	34:DA:1108:G:C8	3.02	0.48
35:DB:118:LEU:HD21	35:DB:138:LEU:HD13	1.95	0.48
35:DB:167:PRO:HD3	35:DB:187:LEU:O	2.13	0.48
49:DP:52:ASP:OD1	49:DP:55:ARG:HG2	2.14	0.48
52:DS:63:THR:HG22	52:DS:66:MET:SD	2.54	0.48
56:DW:5:G:H1	56:DW:68:C:N4	2.12	0.48
57:DZ:519:ARG:HA	57:DZ:562:ASP:HB3	1.96	0.48
1:AA:469:A:H1'	1:AA:1246:C:O4'	2.14	0.47
1:AA:773:G:O2'	1:AA:774:A:OP2	2.28	0.47
1:AA:1185:C:O3'	11:AN:25:ARG:NH1	2.47	0.47
11:AN:129:PRO:C	11:AN:131:GLN:HE21	2.21	0.47
14:AQ:43:THR:HG22	14:AQ:94:VAL:HG12	1.95	0.47
20:AW:79:GLY:CA	20:AW:100:THR:HG22	2.44	0.47
34:BA:396:G:O2'	34:BA:398:C:OP1	2.28	0.47
34:BA:472:A:OP1	49:BP:75:ARG:NH1	2.47	0.47
34:BA:677:U:H3	34:BA:713:G:H22	1.61	0.47
34:BA:1349:A:H2'	34:BA:1350:A:C8	2.49	0.47
38:BE:50:GLU:OE1	38:BE:50:GLU:HA	2.13	0.47
42:BI:4:TYR:HB2	42:BI:19:LEU:HB2	1.95	0.47
53:BT:92:LEU:HD23	53:BT:92:LEU:HA	1.59	0.47
57:BZ:606:MET:HG2	57:BZ:649:LEU:HB2	1.96	0.47
58:BX:8:2R3:H62	58:BX:9:MVA:HN1	1.55	0.47
1:CA:271(J):C:O2'	1:CA:271(K):U:OP2	2.24	0.47
1:CA:527:C:H3'	63:CA:3960:HOH:O	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:864:G:H2'	1:CA:865:C:C6	2.49	0.47
1:CA:2282:G:H4'	1:CA:2389:G:O2'	2.14	0.47
17:CT:107:ASP:HA	17:CT:110:ILE:HD12	1.96	0.47
34:DA:102:G:H2'	34:DA:103:C:H6	1.78	0.47
34:DA:195:A:C6	34:DA:196:A:N1	2.82	0.47
34:DA:390:C:H2'	34:DA:391:G:C8	2.49	0.47
34:DA:1014:A:H1'	52:DS:34:TRP:HB2	1.96	0.47
34:DA:1062:U:H2'	34:DA:1063:C:C6	2.49	0.47
34:DA:1095:U:P	34:DA:1108:G:H1	2.36	0.47
34:DA:1318:A:O2'	52:DS:37:ARG:HB3	2.14	0.47
49:DP:25:ARG:HB2	49:DP:25:ARG:NH1	2.26	0.47
49:DP:49:LEU:HD12	49:DP:50:LYS:N	2.29	0.47
49:DP:55:ARG:HA	49:DP:55:ARG:HD2	1.49	0.47
52:DS:53:ASN:O	52:DS:77:THR:OG1	2.31	0.47
57:DZ:97:SER:HA	57:DZ:100:VAL:HG12	1.95	0.47
1:AA:354:A:H2	1:AA:1255:A:HO2'	1.57	0.47
1:AA:1053:C:OP2	63:AA:3943:HOH:O	2.20	0.47
1:AA:1696:G:O2'	15:AR:107:ASP:OD2	2.28	0.47
1:AA:1764:G:C5	1:AA:1765:U:C5	3.02	0.47
1:AA:2701:U:H4'	1:AA:2702:C:OP2	2.14	0.47
8:AH:78:GLY:O	8:AH:136:ILE:HG22	2.14	0.47
14:AQ:2:LEU:HG	14:AQ:69:PHE:CE2	2.48	0.47
16:AS:39:ILE:HD11	16:AS:110:LEU:HD21	1.96	0.47
21:AX:60:ARG:NH2	31:A7:47:ARG:HH22	2.12	0.47
25:A1:72:GLU:OE1	25:A1:76:ARG:NH2	2.48	0.47
34:BA:136:C:H42	34:BA:227:G:H1	1.62	0.47
34:BA:186:C:O2'	53:BT:85:MET:SD	2.68	0.47
34:BA:519:C:H2'	34:BA:520:A:O4'	2.14	0.47
34:BA:1142:G:H2'	34:BA:1143:G:O4'	2.14	0.47
36:BC:157:ILE:HD13	36:BC:164:ARG:HB3	1.96	0.47
39:BF:2:ARG:CZ	39:BF:69:GLU:HG2	2.44	0.47
45:BL:5:PRO:HG2	45:BL:10:LEU:HD21	1.96	0.47
50:BQ:55:ASP:O	50:BQ:57:VAL:HG13	2.13	0.47
56:BW:1:G:H2'	56:BW:2:C:H6	1.79	0.47
56:BY:58:A:O2'	56:BY:60:U:H5	1.98	0.47
57:BZ:487:ILE:HD11	57:BZ:515:GLU:C	2.39	0.47
1:CA:1107:G:H5"	1:CA:1107:G:H8	1.69	0.47
1:CA:1252:G:N3	18:CU:33:ARG:HG2	2.29	0.47
1:CA:2530:A:O2'	1:CA:2532:G:OP2	2.27	0.47
7:CG:61:ALA:HB1	28:C4:7:PRO:HG2	1.96	0.47
14:CQ:32:TYR:CE1	14:CQ:133:ARG:HB2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CR:104:ARG:HG3	15:CR:111:LEU:HD21	1.97	0.47
20:CW:12:ILE:CD1	20:CW:42:ARG:HD3	2.43	0.47
34:DA:380:G:C2	34:DA:384:G:C6	3.02	0.47
34:DA:487:A:H2'	34:DA:488:C:O4'	2.14	0.47
34:DA:491:G:H2'	34:DA:492:G:O4'	2.14	0.47
39:DF:37:VAL:HA	39:DF:65:VAL:HG12	1.95	0.47
52:DS:33:THR:HG21	52:DS:71:LEU:HD21	1.96	0.47
56:DW:50:U:H2'	56:DW:51:U:C6	2.49	0.47
56:DY:30:G:H2'	56:DY:31:A:H8	1.79	0.47
57:DZ:355:LEU:HG	57:DZ:369:LEU:CD2	2.44	0.47
57:DZ:519:ARG:HH21	57:DZ:519:ARG:HB2	1.79	0.47
57:DZ:617:MET:O	57:DZ:621:ILE:HG13	2.14	0.47
1:AA:638:U:H4'	1:AA:639:G:H5'	1.96	0.47
1:AA:1102:G:H21	1:AA:1149:A:H62	1.61	0.47
1:AA:2308:U:OP2	16:AS:9:ARG:NH2	2.43	0.47
3:AC:30:VAL:CG2	3:AC:31:LYS:H	2.27	0.47
16:AS:95:HIS:C	16:AS:99:LYS:HB3	2.39	0.47
28:A4:13:ARG:HB2	28:A4:30:GLU:HG2	1.96	0.47
34:BA:803:G:H2'	34:BA:804:U:O4'	2.14	0.47
34:BA:936:C:H2'	34:BA:937:A:O4'	2.14	0.47
34:BA:1191:A:H5"	36:BC:4:LYS:NZ	2.28	0.47
34:BA:1250:A:C2	34:BA:1370:G:H1'	2.48	0.47
35:BB:156:LYS:HE2	35:BB:156:LYS:O	2.14	0.47
37:BD:108:LEU:HB3	37:BD:110:PHE:CE1	2.49	0.47
40:BG:62:PHE:HA	40:BG:124:LEU:HD22	1.95	0.47
42:BI:18:PHE:O	42:BI:61:ALA:HA	2.14	0.47
48:BO:32:LEU:O	48:BO:35:ARG:N	2.47	0.47
51:BR:51:LEU:CD2	51:BR:52:PRO:HD2	2.44	0.47
57:BZ:87:HIS:O	57:BZ:89:ASP:N	2.46	0.47
57:BZ:357:ARG:HD2	57:BZ:366:VAL:HG11	1.96	0.47
1:CA:144:C:H2'	1:CA:145:G:C8	2.49	0.47
1:CA:2136:C:H1'	1:CA:2137:C:H5'	1.96	0.47
2:CB:16:G:H1	2:CB:68:C:N4	2.07	0.47
3:CC:68:GLY:N	3:CC:189:ASN:ND2	2.62	0.47
5:CE:175:VAL:O	5:CE:177:PRO:HD3	2.15	0.47
13:CP:122:PRO:O	13:CP:123:LEU:HD23	2.15	0.47
22:CY:68:HIS:CE1	22:CY:70:SER:HB3	2.50	0.47
27:C3:7:LYS:HB3	27:C3:55:ARG:HB3	1.96	0.47
29:C5:16:ARG:O	29:C5:20:ARG:HD2	2.13	0.47
31:C7:24:THR:O	31:C7:28:ARG:HG3	2.14	0.47
34:DA:1117:G:H5'	34:DA:1118:C:OP2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DD:165:MET:SD	37:DD:168:ARG:NH1	2.81	0.47
49:DP:19:ILE:N	49:DP:37:GLY:O	2.46	0.47
56:DW:37:MIA:H132	56:DW:38:A:C2	2.49	0.47
57:DZ:304:ASP:HA	57:DZ:305:PRO:HD2	1.75	0.47
1:AA:671:A:H2'	1:AA:672:G:O4'	2.13	0.47
1:AA:1154:U:H1'	1:AA:1155:C:OP1	2.14	0.47
1:AA:2317:A:H5"	7:AG:134:GLY:HA3	1.94	0.47
20:AW:86:LEU:HB2	20:AW:96:ILE:HD12	1.97	0.47
26:A2:41:ILE:HG13	26:A2:43:GLN:HG3	1.96	0.47
34:BA:257:G:H2'	34:BA:258:G:O4'	2.14	0.47
34:BA:946:A:C2	34:BA:1236:A:C2	3.02	0.47
34:BA:1014:A:H4'	52:BS:14:HIS:CE1	2.49	0.47
34:BA:1519:A:N7	34:BA:1520:G:H1'	2.30	0.47
35:BB:28:PHE:CD1	35:BB:190:THR:HA	2.49	0.47
47:BN:37:PHE:CE1	47:BN:53:LEU:HD13	2.49	0.47
50:BQ:60:ILE:HG12	50:BQ:61:GLU:N	2.28	0.47
58:BX:3:004:HG1	58:BX:4:PRO:HD2	1.95	0.47
1:CA:1149:G:H2'	1:CA:1150:C:C6	2.48	0.47
1:CA:1179:C:H2'	1:CA:1180:C:C6	2.48	0.47
1:CA:1539:G:H2'	1:CA:1540:U:O4'	2.15	0.47
4:CD:71:ASP:HB2	4:CD:103:ARG:NH2	2.29	0.47
4:CD:172:TYR:CD1	4:CD:186:HIS:HA	2.50	0.47
6:CF:64:ILE:HG23	6:CF:76:GLY:O	2.15	0.47
34:DA:921:U:H2'	34:DA:922:G:O4'	2.14	0.47
34:DA:1000:U:O4	34:DA:1001:A:N6	2.46	0.47
34:DA:1187:G:H4'	42:DI:111:ARG:NH1	2.29	0.47
34:DA:1344:C:H5"	42:DI:120:ARG:HB3	1.96	0.47
36:DC:18:TRP:CD1	47:DN:54:PRO:HA	2.50	0.47
38:DE:36:ASP:O	38:DE:38:GLN:N	2.46	0.47
39:DF:61:LEU:HB3	39:DF:63:TYR:HE1	1.79	0.47
1:AA:416:G:N1	13:AP:70:GLN:HG3	2.29	0.47
1:AA:1079:U:OP1	33:A9:9:ARG:NH2	2.48	0.47
6:AF:167:ALA:HB1	6:AF:173:VAL:HG11	1.97	0.47
21:AX:60:ARG:HH22	31:A7:47:ARG:HH22	1.63	0.47
30:A6:40:CYS:SG	30:A6:42:TRP:HB2	2.55	0.47
34:BA:1112:C:C2	36:BC:178:LEU:HB2	2.50	0.47
34:BA:1260:C:O5'	34:BA:1284:C:H4'	2.14	0.47
34:BA:1328:C:O2'	46:BM:29:ARG:NH2	2.47	0.47
34:BA:1329:A:H5'	46:BM:29:ARG:NE	2.29	0.47
35:BB:183:PRO:HA	35:BB:198:ASP:OD2	2.13	0.47
38:BE:137:GLU:HA	38:BE:140:ARG:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BJ:17:ASP:CG	43:BJ:70:ARG:HH12	2.22	0.47
46:BM:17:VAL:O	46:BM:20:THR:OG1	2.27	0.47
49:BP:27:LYS:H	49:BP:27:LYS:HG2	1.37	0.47
1:CA:272(B):G:H2'	1:CA:272(C):G:C8	2.48	0.47
1:CA:523:C:H4'	1:CA:540:C:O2	2.14	0.47
1:CA:589:C:H2'	1:CA:590:A:C8	2.49	0.47
1:CA:1106:G:N1	1:CA:1107:G:C8	2.81	0.47
1:CA:1462:C:H4'	1:CA:2703:C:H5'	1.97	0.47
1:CA:1652:A:OP1	15:CR:8:ARG:NH1	2.35	0.47
1:CA:2299:G:N1	1:CA:2318:G:N7	2.62	0.47
1:CA:2590:A:H2'	1:CA:2591:C:C6	2.50	0.47
1:CA:2836:U:H2'	1:CA:2837:G:C8	2.49	0.47
5:CE:13:ARG:O	17:CT:57:PHE:HE2	1.96	0.47
6:CF:140:LEU:HD13	6:CF:140:LEU:HA	1.74	0.47
15:CR:72:ASP:O	15:CR:76:VAL:HG23	2.14	0.47
16:CS:3:ARG:HA	16:CS:3:ARG:HE	1.79	0.47
19:CV:76:LYS:HB2	19:CV:81:TYR:HB3	1.96	0.47
30:C6:26:ASN:O	30:C6:29:ASN:N	2.47	0.47
34:DA:242:C:H2'	34:DA:243:A:H5'	1.96	0.47
34:DA:256:U:P	50:DQ:17:LYS:HZ2	2.37	0.47
34:DA:259:G:H2'	34:DA:260:G:O4'	2.15	0.47
34:DA:298:A:H2'	34:DA:299:G:O4'	2.15	0.47
39:DF:87:ARG:HH11	39:DF:87:ARG:CG	2.28	0.47
46:DM:91:ARG:HH21	46:DM:100:GLY:HA2	1.78	0.47
56:DW:40:C:O2'	56:DY:36:A:OP1	2.18	0.47
1:AA:344:A:O2'	1:AA:346:A:H8	1.97	0.47
1:AA:1074:A:N6	1:AA:1171:G:H2'	2.29	0.47
1:AA:2623:U:H6	1:AA:2623:U:H5'	1.80	0.47
3:AC:68:GLY:N	3:AC:189:ASN:ND2	2.62	0.47
5:AE:116:VAL:HG13	5:AE:122:PHE:CG	2.49	0.47
6:AF:31:HIS:NE2	6:AF:35:GLU:OE2	2.47	0.47
13:AP:121:LYS:O	13:AP:123:LEU:N	2.47	0.47
14:AQ:1:MET:HE2	14:AQ:1:MET:HB3	1.78	0.47
23:AZ:150:LEU:HD13	23:AZ:154:ASP:OD1	2.14	0.47
34:BA:325:A:H2'	34:BA:326:G:O4'	2.14	0.47
34:BA:585:G:O2'	34:BA:879:C:H5"	2.15	0.47
34:BA:1114:C:H42	34:BA:1186:G:H1	1.61	0.47
35:BB:16:HIS:C	35:BB:17:PHE:HD1	2.23	0.47
49:BP:14:ASN:N	49:BP:15:PRO:HD3	2.29	0.47
56:BW:75:C:H2'	56:BW:76:A:C2	2.50	0.47
57:BZ:481:VAL:HG23	57:BZ:483:TYR:CD2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:127:A:H5"	1:CA:128:C:C6	2.50	0.47
1:CA:518:G:H2'	1:CA:519:U:C6	2.49	0.47
1:CA:1794:U:H2'	1:CA:1795:C:H6	1.79	0.47
1:CA:2128:C:H5'	1:CA:2173:A:C2	2.50	0.47
2:CB:66:A:N6	2:CB:108:U:H3'	2.29	0.47
2:CB:80:U:H2'	2:CB:81:G:C8	2.50	0.47
3:CC:6:LYS:HA	3:CC:9:ARG:NH1	2.30	0.47
6:CF:12:LEU:HB2	6:CF:124:LEU:HD11	1.95	0.47
7:CG:103:LEU:HD23	7:CG:106:LEU:CD2	2.43	0.47
16:CS:10:ARG:HG2	16:CS:91:PRO:HA	1.96	0.47
18:CU:27:LEU:HB3	18:CU:31:SER:HB3	1.97	0.47
21:CX:29:TRP:CZ3	21:CX:78:LYS:HD3	2.50	0.47
23:CZ:150:LEU:HD22	23:CZ:150:LEU:HA	1.75	0.47
33:C9:29:ASN:HD22	33:C9:32:HIS:CE1	2.32	0.47
34:DA:618:C:C2	34:DA:622:A:N6	2.82	0.47
34:DA:738:C:H6	34:DA:738:C:O5'	1.97	0.47
34:DA:815:A:N7	34:DA:1509:C:O2'	2.37	0.47
34:DA:1312:G:N7	52:DS:2:PRO:HD3	2.29	0.47
35:DB:145:LEU:O	35:DB:149:LEU:HB2	2.15	0.47
36:DC:8:ILE:HD13	36:DC:184:TYR:HB3	1.97	0.47
38:DE:122:GLU:CB	38:DE:126:ARG:HD3	2.44	0.47
39:DF:8:ILE:HD12	39:DF:26:ILE:HD13	1.96	0.47
40:DG:91:VAL:HB	40:DG:96:GLN:HG2	1.95	0.47
41:DH:20:TYR:HA	41:DH:65:TYR:CE2	2.49	0.47
54:DU:12:LYS:HB3	54:DU:17:THR:O	2.15	0.47
1:AA:631:A:C4	1:AA:646:A:C6	3.02	0.47
1:AA:808:A:P	63:AA:3991:HOH:O	2.72	0.47
1:AA:1633:A:H2'	1:AA:1634:C:C6	2.49	0.47
1:AA:2230:U:O4'	25:A1:52:ARG:NH2	2.48	0.47
1:AA:2303:U:H2'	1:AA:2304:C:C6	2.50	0.47
7:AG:83:ARG:O	7:AG:86:MET:HB2	2.15	0.47
9:AK:48:GLY:HA3	9:AK:90:ALA:HB1	1.96	0.47
12:AO:107:ARG:CZ	17:AT:36:GLU:HG2	2.44	0.47
18:AU:108:GLU:CD	18:AU:112:ARG:HH11	2.22	0.47
23:AZ:35:ARG:HD2	23:AZ:35:ARG:HA	1.61	0.47
25:A1:15:ALA:HB3	25:A1:40:ARG:HD3	1.95	0.47
28:A4:59:PHE:HA	28:A4:61:ARG:HG3	1.95	0.47
34:BA:100:C:H2'	34:BA:101:A:O4'	2.15	0.47
34:BA:390:C:H2'	34:BA:391:G:H8	1.79	0.47
34:BA:576:G:N2	34:BA:760:G:OP2	2.48	0.47
34:BA:684:A:C6	34:BA:685:G:C6	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:771:G:H2'	34:BA:772:U:C6	2.49	0.47
34:BA:1048:G:OP1	47:BN:3:ARG:HB3	2.15	0.47
34:BA:1456:G:H22	53:BT:43:LEU:HD11	1.80	0.47
34:BA:1476:G:H2'	34:BA:1477:C:C6	2.50	0.47
39:BF:22:GLU:OE2	39:BF:82:ARG:HG2	2.15	0.47
39:BF:61:LEU:HG	39:BF:63:TYR:OH	2.14	0.47
40:BG:125:MET:HE2	40:BG:125:MET:HB3	1.77	0.47
46:BM:20:THR:C	46:BM:22:ILE:H	2.22	0.47
50:BQ:31:LEU:HG	50:BQ:31:LEU:O	2.14	0.47
50:BQ:60:ILE:HG22	50:BQ:74:LEU:HB2	1.95	0.47
51:BR:44:LEU:HD21	51:BR:70:ILE:HD13	1.95	0.47
51:BR:74:ARG:HG3	51:BR:79:LEU:HB2	1.97	0.47
52:BS:3:ARG:HH11	52:BS:10:PHE:HB2	1.79	0.47
52:BS:78:ARG:HE	52:BS:78:ARG:HB3	1.57	0.47
57:BZ:-29:LEU:H	57:BZ:-29:LEU:CD2	2.27	0.47
57:BZ:-23:LEU:HD12	57:BZ:-23:LEU:HA	1.59	0.47
57:BZ:414:GLU:HG2	57:BZ:415:PRO:HD2	1.97	0.47
1:CA:84:A:H2	1:CA:98:G:N3	2.12	0.47
1:CA:947:G:N2	1:CA:971:C:C2	2.82	0.47
1:CA:1038:C:H5'	1:CA:1039:G:OP2	2.15	0.47
1:CA:1179:C:H2'	1:CA:1180:C:H6	1.79	0.47
1:CA:1226:A:OP1	18:CU:16:LYS:NZ	2.41	0.47
1:CA:1263:U:C4	1:CA:1264:G:C6	3.03	0.47
1:CA:2331:G:O3'	24:C0:43:THR:HG22	2.14	0.47
1:CA:2354:G:O2'	24:C0:36:ILE:HG12	2.14	0.47
1:CA:2786:U:O2'	5:CE:62:PRO:O	2.26	0.47
1:CA:2869:G:H2'	1:CA:2870:C:O4'	2.14	0.47
3:CC:223:VAL:HG23	3:CC:223:VAL:O	2.15	0.47
4:CD:20:ASP:OD1	4:CD:20:ASP:N	2.41	0.47
4:CD:89:SER:O	4:CD:198:ASN:ND2	2.46	0.47
6:CF:135:LYS:N	6:CF:135:LYS:HE2	2.30	0.47
14:CQ:133:ARG:HG3	14:CQ:134:ARG:N	2.29	0.47
14:CQ:137:TYR:CZ	23:CZ:83:PRO:HG3	2.50	0.47
16:CS:100:ALA:O	16:CS:104:GLY:N	2.32	0.47
17:CT:16:ARG:HD3	17:CT:18:ASP:OD1	2.14	0.47
20:CW:2:GLU:OE2	20:CW:72:LYS:HD3	2.14	0.47
22:CY:86:ARG:HG3	22:CY:100:ALA:HB2	1.97	0.47
23:CZ:55:HIS:NE2	23:CZ:135:GLU:HB3	2.30	0.47
26:C2:61:LEU:HD23	26:C2:61:LEU:HA	1.72	0.47
29:C5:32:PRO:HA	29:C5:38:ALA:O	2.14	0.47
34:DA:308:C:H2'	34:DA:309:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:439:A:C5	34:DA:441:A:H1'	2.50	0.47
34:DA:938:A:H2'	34:DA:939:G:O4'	2.15	0.47
34:DA:1003:G:H2'	34:DA:1004:A:O4'	2.14	0.47
34:DA:1185:G:H2'	34:DA:1186:G:O4'	2.15	0.47
37:DD:32:ALA:HB3	61:DD:501:SF4:S2	2.55	0.47
39:DF:19:LEU:HD11	39:DF:59:TYR:CE2	2.50	0.47
41:DH:25:ASP:OD1	41:DH:25:ASP:N	2.48	0.47
41:DH:34:GLU:HG3	41:DH:37:ARG:NH2	2.30	0.47
41:DH:89:PRO:HA	41:DH:92:ARG:NH1	2.29	0.47
43:DJ:63:PHE:HE2	47:DN:45:ARG:HA	1.78	0.47
57:DZ:466:LEU:O	57:DZ:472:VAL:HG22	2.15	0.47
58:DX:8:2R3:H62	58:DX:9:MVA:HN1	1.45	0.47
1:AA:137:G:C2'	1:AA:138:G:H5'	2.45	0.47
1:AA:165:G:C2'	1:AA:166:G:H5'	2.44	0.47
5:AE:8:LYS:HG2	5:AE:192:ASN:HA	1.97	0.47
12:AO:43:VAL:HG23	12:AO:56:ASP:O	2.15	0.47
13:AP:2:LYS:HZ2	13:AP:4:SER:H	1.63	0.47
13:AP:82:GLY:HA3	13:AP:115:LEU:CD1	2.45	0.47
28:A4:61:ARG:HH21	52:BS:42:PRO:HD2	1.79	0.47
34:BA:279:A:OP2	50:BQ:95:TYR:OH	2.20	0.47
34:BA:1086:U:H3	34:BA:1099:G:H22	1.62	0.47
36:BC:164:ARG:HD2	36:BC:166:GLU:HG2	1.96	0.47
38:BE:148:VAL:HG21	41:BH:107:LEU:HD13	1.96	0.47
1:CA:39:C:O2	6:CF:46:ARG:NH2	2.44	0.47
1:CA:2258:C:O2'	1:CA:2427:C:OP2	2.31	0.47
1:CA:2291:U:H2'	1:CA:2292:C:C6	2.50	0.47
3:CC:180:SER:O	3:CC:181:PHE:O	2.33	0.47
6:CF:101:LEU:HD12	6:CF:102:PRO:CD	2.34	0.47
33:C9:1:MET:HE2	33:C9:1:MET:HB2	1.63	0.47
34:DA:36:C:O2'	45:DL:117:ARG:NH2	2.47	0.47
34:DA:729:A:H2'	34:DA:730:G:H8	1.78	0.47
34:DA:1003:G:N2	34:DA:1025:U:O4	2.48	0.47
34:DA:1206:G:C6	34:DA:1207:G:C6	3.02	0.47
34:DA:1401:G:C2	34:DA:1402:C:H1'	2.50	0.47
37:DD:13:ARG:HB2	37:DD:40:PRO:HD3	1.96	0.47
40:DG:20:ASP:HB3	40:DG:23:VAL:CG2	2.44	0.47
57:DZ:105:ILE:HG22	57:DZ:133:ILE:HG13	1.96	0.47
57:DZ:247:ARG:O	57:DZ:251:ILE:HG13	2.15	0.47
57:DZ:358:MET:SD	57:DZ:363:ARG:HB3	2.54	0.47
57:DZ:666:ARG:H	57:DZ:666:ARG:HG3	1.41	0.47
1:AA:1115:A:H4'	1:AA:1116:A:H5"	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:AC:180:SER:O	3:AC:181:PHE:O	2.33	0.47
3:AC:223:VAL:HG23	3:AC:223:VAL:O	2.15	0.47
11:AN:58:ASP:OD1	11:AN:58:ASP:N	2.36	0.47
20:AW:65:LEU:HD23	20:AW:68:ARG:NH2	2.30	0.47
26:A2:1:MET:HE3	26:A2:5:GLU:HB3	1.97	0.47
34:BA:994:A:N1	34:BA:1047:G:H4'	2.30	0.47
34:BA:1203:C:H2'	34:BA:1204:A:H8	1.79	0.47
34:BA:1411:C:O2'	34:BA:1412:C:H5'	2.15	0.47
42:BI:19:LEU:HB3	42:BI:59:PHE:HD1	1.80	0.47
49:BP:52:ASP:CG	49:BP:55:ARG:HG2	2.39	0.47
57:BZ:188:TYR:HB2	57:BZ:267:LYS:HE3	1.96	0.47
1:CA:443:A:C5	6:CF:45:ARG:HD2	2.49	0.47
1:CA:1053:C:N4	1:CA:1054:A:N7	2.63	0.47
1:CA:1504:C:H2'	1:CA:1505:C:C6	2.49	0.47
2:CB:102:A:H2'	2:CB:103:G:O4'	2.15	0.47
3:CC:46:ALA:O	3:CC:47:LYS:HB2	2.15	0.47
13:CP:99:LEU:H	13:CP:99:LEU:HG	1.54	0.47
19:CV:1:MET:HG3	19:CV:43:GLU:OE2	2.15	0.47
23:CZ:45:ASP:OD2	23:CZ:49:ARG:NH1	2.48	0.47
34:DA:512:U:H2'	34:DA:513:C:C6	2.48	0.47
34:DA:673:G:N2	34:DA:674:G:C2	2.83	0.47
34:DA:806:C:O2'	34:DA:807:A:H5'	2.15	0.47
34:DA:977:A:O2'	34:DA:979:C:OP2	2.27	0.47
34:DA:1084:G:H5'	34:DA:1102:A:OP2	2.14	0.47
34:DA:1508:G:H2'	34:DA:1509:C:C6	2.50	0.47
36:DC:53:ALA:HB2	36:DC:115:LEU:HD11	1.96	0.47
37:DD:25:ARG:HH21	37:DD:30:LYS:HB3	1.80	0.47
37:DD:160:GLN:HE21	37:DD:160:GLN:HB3	1.56	0.47
38:DE:72:GLN:HE22	38:DE:77:PRO:HG3	1.79	0.47
50:DQ:48:GLU:OE2	50:DQ:50:LYS:HE2	2.15	0.47
1:AA:142:G:H1'	21:AX:37:THR:HG21	1.96	0.47
1:AA:737:G:O6	63:AA:3938:HOH:O	2.18	0.47
1:AA:1105:G:H1'	10:AL:126:MET:HE3	1.97	0.47
4:AD:102:LYS:C	4:AD:103:ARG:HG2	2.37	0.47
14:AQ:66:ILE:HG12	14:AQ:104:PHE:CD1	2.49	0.47
16:AS:39:ILE:HB	16:AS:49:VAL:HG12	1.97	0.47
22:AY:55:TYR:N	22:AY:55:TYR:CD1	2.82	0.47
34:BA:872:A:C4	34:BA:874:G:N7	2.83	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)
44:BK:18:ARG:HD3	44:BK:20:TYR:HE2	1.80	0.47
56:BY:28:G:H2'	56:BY:29:G:H8	1.80	0.47
57:BZ:138:LYS:HG2	62:BZ:702:GDP:C5	2.50	0.47
1:CA:56:A:H2'	1:CA:57:C:O4'	2.14	0.47
5:CE:12:THR:HG22	5:CE:13:ARG:N	2.30	0.47
6:CF:156:LEU:HD12	6:CF:193:VAL:O	2.14	0.47
23:CZ:31:ARG:HH11	23:CZ:32:HIS:CE1	2.33	0.47
23:CZ:45:ASP:OD1	23:CZ:49:ARG:HD2	2.15	0.47
28:C4:67:TYR:O	28:C4:69:LYS:N	2.41	0.47
34:DA:737:A:H2'	34:DA:738:C:C6	2.50	0.47
34:DA:1028:C:H2'	34:DA:1029:C:C6	2.49	0.47
35:DB:230:VAL:HG22	35:DB:231:GLU:H	1.79	0.47
40:DG:79:ARG:HG2	40:DG:80:VAL:H	1.80	0.47
40:DG:92:SER:O	40:DG:95:ARG:N	2.48	0.47
42:DI:21:PRO:HA	42:DI:59:PHE:HA	1.97	0.47
48:DO:15:PHE:O	48:DO:27:VAL:HG23	2.14	0.47
53:DT:77:ALA:O	53:DT:81:LYS:HG3	2.15	0.47
1:AA:339:G:H2'	1:AA:340:C:C6	2.50	0.46
1:AA:597:C:N3	5:AE:145:LYS:NZ	2.62	0.46
1:AA:2088:C:O2'	1:AA:2089:G:H5'	2.14	0.46
2:AB:64:C:O2'	63:AB:3101:HOH:O	1.96	0.46
3:AC:17:PRO:HG2	3:AC:18:ASN:H	1.79	0.46
7:AG:96:ARG:N	7:AG:99:MET:HE2	2.30	0.46
8:AH:67:LEU:O	8:AH:71:LEU:HG	2.15	0.46
9:AK:97:ALA:HB2	9:AK:132:ASP:O	2.15	0.46
34:BA:255:G:H1'	50:BQ:16:GLN:NE2	2.31	0.46
34:BA:294:U:N3	34:BA:295:C:C5	2.83	0.46
34:BA:1471:G:C6	34:BA:1472:U:C4	3.03	0.46
44:BK:115:PRO:HB2	44:BK:118:GLY:H	1.79	0.46
45:BL:84:LEU:HD23	45:BL:105:TYR:HE2	1.78	0.46
57:BZ:78:ARG:HE	57:BZ:357:ARG:NH2	2.13	0.46
57:BZ:115:GLU:HA	57:BZ:116:PRO:HD3	1.85	0.46
1:CA:304:G:O6	63:CA:3746:HOH:O	2.18	0.46
1:CA:339:U:H6	1:CA:339:U:O5'	1.98	0.46
1:CA:774:A:HO2'	1:CA:775:G:H8	1.63	0.46
1:CA:836:G:C5	1:CA:837:C:C4	3.03	0.46
1:CA:1053:C:C2	1:CA:1054:A:C1'	2.98	0.46
1:CA:1291:C:H2'	1:CA:1292:U:C6	2.50	0.46
1:CA:1675:C:O2	5:CE:128:SER:HB2	2.15	0.46
1:CA:2427:C:H5"	1:CA:2428:G:OP1	2.15	0.46
3:CC:42:VAL:O	3:CC:216:THR:C	2.59	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:15:VAL:HG21	7:CG:176:LEU:HD23	1.97	0.46
7:CG:123:ASN:ND2	7:CG:123:ASN:H	2.14	0.46
14:CQ:39:PRO:HB3	14:CQ:99:PRO:HD3	1.95	0.46
23:CZ:39:VAL:HG21	23:CZ:44:PHE:CD2	2.50	0.46
23:CZ:45:ASP:CG	23:CZ:49:ARG:HH11	2.23	0.46
30:C6:18:ARG:HE	30:C6:42:TRP:CG	2.32	0.46
34:DA:314:C:O2'	34:DA:315:A:H5'	2.15	0.46
34:DA:833:U:H2'	34:DA:834:C:C6	2.50	0.46
34:DA:838:G:N2	34:DA:849:C:C2	2.83	0.46
34:DA:881:G:P	45:DL:12:ARG:HH22	2.37	0.46
34:DA:939:G:N3	34:DA:1375:A:H2	2.13	0.46
39:DF:9:VAL:HG22	39:DF:60:PHE:CE2	2.50	0.46
40:DG:74:GLU:HB2	40:DG:141:VAL:HG12	1.97	0.46
43:DJ:48:THR:O	47:DN:34:TYR:OH	2.34	0.46
52:DS:40:ILE:HB	52:DS:67:VAL:O	2.15	0.46
1:AA:310:C:H2'	1:AA:311:C:C6	2.48	0.46
1:AA:1425:A:H4'	1:AA:1426:G:OP2	2.15	0.46
1:AA:2529:C:C6	1:AA:2554:A:N7	2.83	0.46
3:AC:176:VAL:O	3:AC:176:VAL:HG12	2.15	0.46
11:AN:91:LEU:HA	11:AN:91:LEU:HD23	1.69	0.46
14:AQ:37:LEU:HD21	14:AQ:130:LYS:HG2	1.96	0.46
34:BA:251:G:H4'	34:BA:252:U:OP1	2.15	0.46
35:BB:145:LEU:HD13	35:BB:149:LEU:HD12	1.96	0.46
36:BC:40:ARG:NH2	36:BC:55:VAL:O	2.48	0.46
49:BP:66:PRO:HG2	49:BP:71:ARG:HH21	1.79	0.46
57:BZ:348:ARG:NH1	57:BZ:382:GLU:CD	2.73	0.46
1:CA:1006:C:H1'	11:CN:106:MET:HG2	1.97	0.46
1:CA:1056:G:H21	1:CA:1103:A:H62	1.63	0.46
1:CA:2155:G:C6	1:CA:2156:G:H1'	2.49	0.46
1:CA:2281:C:C2'	1:CA:2282:G:H5'	2.45	0.46
1:CA:2749:A:H1'	8:CH:63:SER:OG	2.15	0.46
7:CG:61:ALA:HA	7:CG:66:GLN:O	2.15	0.46
17:CT:122:ASP:O	17:CT:124:ASP:N	2.48	0.46
23:CZ:37:VAL:HG22	23:CZ:38:TYR:H	1.80	0.46
23:CZ:39:VAL:HG21	23:CZ:44:PHE:HB2	1.98	0.46
34:DA:303:A:H2'	34:DA:304:U:O4'	2.15	0.46
34:DA:591:U:H2'	34:DA:592:G:C8	2.51	0.46
34:DA:869:G:H8	34:DA:869:G:O5'	1.98	0.46
36:DC:114:PRO:HB3	36:DC:185:GLY:HA3	1.98	0.46
52:DS:27:GLU:HB2	52:DS:28:LYS:HZ2	1.80	0.46
1:AA:908:A:C2	1:AA:963:A:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1889:G:N2	1:AA:1905:G:H2'	2.31	0.46
1:AA:2402:U:P	32:A8:35:GLN:HE22	2.39	0.46
1:AA:2545:A:H2'	1:AA:2546:A:O4'	2.16	0.46
6:AF:140:LEU:HD12	6:AF:140:LEU:HA	1.79	0.46
7:AG:8:LYS:O	7:AG:11:TYR:N	2.49	0.46
8:AH:90:LYS:HD3	8:AH:159:GLU:HG2	1.96	0.46
31:A7:33:ARG:NH2	63:A7:201:HOH:O	2.45	0.46
32:A8:4:MET:HE3	32:A8:63:PRO:CG	2.46	0.46
34:BA:302:G:N3	34:BA:556:C:H4'	2.30	0.46
34:BA:373:A:O2'	34:BA:374:A:H5'	2.16	0.46
34:BA:407:G:H2'	34:BA:408:A:H8	1.80	0.46
34:BA:1039:C:H2'	34:BA:1040:U:C6	2.50	0.46
41:BH:75:ARG:HB2	41:BH:75:ARG:HH11	1.81	0.46
43:BJ:47:PHE:CZ	47:BN:37:PHE:HE2	2.33	0.46
57:BZ:13:ARG:CZ	57:BZ:280:LEU:O	2.63	0.46
1:CA:118:A:N3	1:CA:178:G:H1'	2.30	0.46
1:CA:271(E):U:H3	1:CA:271(S):G:H1	1.63	0.46
1:CA:1283:G:N2	1:CA:1285:G:H3'	2.30	0.46
1:CA:1425:G:H2'	1:CA:1426:G:C8	2.51	0.46
1:CA:1791:A:OP2	1:CA:1791:A:H8	1.99	0.46
1:CA:2370:G:C6	1:CA:2371:G:C6	3.04	0.46
1:CA:2712:U:H2'	1:CA:2714:G:H5"	1.97	0.46
11:CN:37:LYS:HA	11:CN:42:TRP:CD1	2.50	0.46
24:C0:48:GLY:HA3	24:C0:80:HIS:ND1	2.31	0.46
27:C3:15:TYR:CE2	27:C3:53:LEU:HD21	2.51	0.46
34:DA:192:U:H5'	53:DT:101:GLY:HA3	1.97	0.46
34:DA:749:C:H3'	34:DA:749:C:OP2	2.16	0.46
34:DA:782:A:OP1	63:DA:1811:HOH:O	2.21	0.46
34:DA:1104:G:H4'	35:DB:111:ARG:NH1	2.31	0.46
34:DA:1118:C:P	42:DI:104:ARG:HH11	2.38	0.46
34:DA:1251:A:H2'	34:DA:1252:A:C8	2.51	0.46
36:DC:134:ILE:HG22	36:DC:168:ALA:HB3	1.96	0.46
37:DD:32:ALA:N	61:DD:501:SF4:S2	2.88	0.46
50:DQ:7:THR:HA	50:DQ:57:VAL:O	2.16	0.46
56:DY:19:G:H1	56:DY:56:C:H42	1.62	0.46
57:DZ:134:ALA:HB2	57:DZ:153:MET:HE1	1.96	0.46
1:AA:536:U:H5"	1:AA:537:G:OP2	2.16	0.46
1:AA:558:G:H5'	18:AU:24:TYR:CD1	2.51	0.46
1:AA:1068:G:N2	1:AA:1069:U:O4	2.44	0.46
1:AA:2146:G:H1	1:AA:2196:C:H42	1.62	0.46
1:AA:2190:G:H3'	1:AA:2191:A:H5"	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:42:VAL:O	3:AC:216:THR:C	2.59	0.46
7:AG:43:LEU:HD12	7:AG:43:LEU:HA	1.65	0.46
14:AQ:109:VAL:HG22	14:AQ:110:THR:N	2.31	0.46
15:AR:57:ARG:HB3	15:AR:59:ASP:OD1	2.15	0.46
34:BA:44:G:N2	34:BA:399:G:C4	2.84	0.46
34:BA:97:G:O2'	34:BA:98:G:H5"	2.15	0.46
34:BA:259:G:H2'	34:BA:260:G:H8	1.77	0.46
34:BA:982:U:H5"	47:BN:6:LEU:HD21	1.98	0.46
34:BA:984:C:N3	34:BA:1221:G:N1	2.51	0.46
34:BA:1127:G:H5'	34:BA:1280:A:O2'	2.16	0.46
34:BA:1392:G:O2'	34:BA:1393:U:H5'	2.16	0.46
34:BA:1478:C:H2'	34:BA:1479:C:C6	2.50	0.46
37:BD:108:LEU:HB3	37:BD:110:PHE:CD1	2.50	0.46
40:BG:69:VAL:HG12	40:BG:69:VAL:O	2.15	0.46
40:BG:150:ALA:HB2	44:BK:50:TYR:OH	2.16	0.46
45:BL:53:ARG:CB	45:BL:93:LEU:HD11	2.44	0.46
58:BX:3:004:C	58:BX:4:PRO:O	2.61	0.46
1:CA:27:G:C4	1:CA:512:G:N2	2.83	0.46
1:CA:584:C:N4	1:CA:585:G:C6	2.83	0.46
1:CA:704:G:H1'	1:CA:726:G:H22	1.81	0.46
1:CA:1149:G:H2'	1:CA:1150:C:H6	1.79	0.46
1:CA:1767:C:H2'	1:CA:1768:U:O4'	2.15	0.46
2:CB:117:G:H8	2:CB:117:G:O5'	1.98	0.46
13:CP:96:THR:H	13:CP:99:LEU:HD11	1.80	0.46
34:DA:621:A:OP2	34:DA:621:A:H8	1.97	0.46
34:DA:988:G:C2	34:DA:989:C:H1'	2.50	0.46
34:DA:1112:C:O2	36:DC:179:ARG:HG2	2.15	0.46
34:DA:1171:G:H8	34:DA:1171:G:OP2	1.97	0.46
34:DA:1195:C:H5"	34:DA:1196:U:O5'	2.16	0.46
34:DA:1439:C:OP1	53:DT:38:LYS:NZ	2.32	0.46
37:DD:149:ALA:HB3	37:DD:152:SER:OG	2.15	0.46
40:DG:97:GLN:HG3	40:DG:98:SER:N	2.29	0.46
41:DH:73:ASP:OD1	41:DH:75:ARG:HD3	2.14	0.46
49:DP:40:ASP:HB3	49:DP:48:TRP:HB2	1.97	0.46
49:DP:74:LEU:O	49:DP:79:VAL:HG23	2.16	0.46
57:DZ:4:ILE:O	57:DZ:7:ASN:N	2.44	0.46
1:AA:1752:G:C5	1:AA:1753:U:C4	3.04	0.46
1:AA:2418:U:C2	13:AP:75:ILE:HD13	2.51	0.46
1:AA:2819:A:C6	1:AA:2901:A:C8	3.03	0.46
3:AC:6:LYS:HA	3:AC:9:ARG:NH1	2.30	0.46
7:AG:133:LEU:HA	63:AG:302:HOH:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AQ:61:GLY:O	23:AZ:178:GLU:HB2	2.15	0.46
17:AT:24:PRO:HA	17:AT:49:VAL:HG22	1.96	0.46
20:AW:65:LEU:HD13	20:AW:65:LEU:HA	1.75	0.46
29:A5:45:VAL:HG11	29:A5:58:LEU:HD12	1.96	0.46
34:BA:437:U:H2'	34:BA:438:G:H5'	1.97	0.46
34:BA:735:C:H2'	34:BA:736:C:C6	2.51	0.46
39:BF:78:GLU:O	39:BF:81:ILE:HG22	2.15	0.46
44:BK:115:PRO:C	44:BK:117:ASN:N	2.74	0.46
53:BT:63:ILE:HD13	53:BT:80:ARG:HB3	1.98	0.46
57:BZ:278:ASP:HB2	57:BZ:279:TYR:CD2	2.51	0.46
57:BZ:608:VAL:HG21	57:BZ:652:MET:HE2	1.97	0.46
1:CA:9:U:N3	1:CA:2629:A:H2	2.11	0.46
1:CA:495:G:O2'	20:CW:61:ASN:ND2	2.48	0.46
1:CA:958:U:OP2	14:CQ:14:ARG:NH1	2.48	0.46
1:CA:1480:G:C6	1:CA:1481:U:N3	2.83	0.46
1:CA:1614:A:P	1:CA:1614:A:H8	2.38	0.46
1:CA:2286:A:H4'	1:CA:2287:A:O4'	2.15	0.46
4:CD:206:LEU:HD23	4:CD:206:LEU:HA	1.70	0.46
7:CG:115:ARG:H	7:CG:115:ARG:NH1	2.12	0.46
8:CH:3:ARG:CZ	8:CH:5:GLY:H	2.28	0.46
16:CS:35:ILE:HG12	16:CS:97:ARG:HH21	1.80	0.46
19:CV:40:LEU:HB2	19:CV:46:VAL:HG13	1.97	0.46
34:DA:778:G:C6	34:DA:779:C:C4	3.03	0.46
34:DA:932:C:H2'	34:DA:933:G:C8	2.46	0.46
35:DB:51:LEU:O	35:DB:55:PHE:HD2	1.99	0.46
35:DB:79:ASP:C	35:DB:81:VAL:H	2.24	0.46
37:DD:89:THR:O	37:DD:93:PHE:N	2.37	0.46
38:DE:43:LEU:CD1	38:DE:132:ALA:HB1	2.46	0.46
40:DG:100:ALA:O	40:DG:104:LEU:HB2	2.16	0.46
45:DL:119:LYS:HB2	45:DL:120:TYR:HD2	1.80	0.46
47:DN:51:GLY:C	47:DN:53:LEU:H	2.23	0.46
51:DR:58:LEU:HD12	51:DR:62:GLU:HB3	1.98	0.46
56:DY:9:A:H8	56:DY:11:C:H41	1.64	0.46
1:AA:187:C:H5'	1:AA:2256:U:OP1	2.16	0.46
1:AA:211:A:H5"	1:AA:448:U:OP1	2.16	0.46
1:AA:1529:G:C2	1:AA:1530:G:C8	3.04	0.46
1:AA:1954:A:H2'	1:AA:1955:G:O4'	2.15	0.46
1:AA:2250:G:N3	1:AA:2250:G:H2'	2.30	0.46
6:AF:172:TRP:CE3	6:AF:173:VAL:HG23	2.51	0.46
14:AQ:59:ARG:HA	23:AZ:180:VAL:HG23	1.97	0.46
19:AV:10:LYS:NZ	19:AV:23:GLU:OE2	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:A2:1:MET:HE2	26:A2:6:VAL:HG22	1.97	0.46
34:BA:918:A:C6	34:BA:919:A:C6	3.04	0.46
34:BA:1413:A:H2	34:BA:1487:G:H22	1.64	0.46
35:BB:102:LEU:HB3	35:BB:180:LEU:HD11	1.97	0.46
44:BK:23:ALA:HB1	44:BK:88:GLY:HA3	1.97	0.46
57:BZ:247:ARG:NE	57:BZ:251:ILE:HD11	2.30	0.46
1:CA:78:A:OP1	26:C2:10:LEU:HD13	2.15	0.46
1:CA:255:A:O2'	1:CA:384:U:OP1	2.34	0.46
1:CA:587:C:OP2	13:CP:21:ARG:NH2	2.48	0.46
1:CA:781:A:H2	1:CA:1776:G:N3	2.13	0.46
1:CA:853:G:H1	1:CA:924:C:N4	2.13	0.46
1:CA:1319:G:C6	1:CA:1320:C:N4	2.84	0.46
1:CA:1371:G:H2'	1:CA:1372:U:C5	2.45	0.46
1:CA:2140:C:O2	1:CA:2152:G:N1	2.48	0.46
1:CA:2723:C:H5"	15:CR:1:MET:HE2	1.97	0.46
1:CA:2788:C:O2'	1:CA:2809:A:N3	2.41	0.46
2:CB:98:G:H3'	2:CB:99:G:H8	1.80	0.46
4:CD:17:THR:O	4:CD:211:ARG:NH2	2.49	0.46
34:DA:473:G:C2	34:DA:474:G:N7	2.84	0.46
34:DA:540:G:H2'	34:DA:541:G:O4'	2.16	0.46
34:DA:975:A:H5"	34:DA:1363(A):A:N6	2.30	0.46
39:DF:2:ARG:HH22	48:DO:2:PRO:HD2	1.80	0.46
41:DH:14:ARG:HG2	41:DH:18:ARG:HH12	1.81	0.46
42:DI:31:GLN:HE21	42:DI:31:GLN:HB3	1.57	0.46
47:DN:14:PRO:HB2	47:DN:16:PHE:O	2.14	0.46
56:DW:39:PSU:O2'	56:DY:35:A:O2'	2.34	0.46
57:DZ:221:ALA:C	57:DZ:223:PHE:H	2.24	0.46
57:DZ:466:LEU:HA	57:DZ:470:PHE:HD2	1.80	0.46
57:DZ:630:GLN:O	57:DZ:646:PHE:N	2.46	0.46
57:DZ:654:GLY:O	57:DZ:658:ASP:HB2	2.15	0.46
1:AA:1081:U:H2'	1:AA:1082:G:C8	2.51	0.46
1:AA:1091:A:P	1:AA:1093:G:H5"	2.55	0.46
1:AA:1134:A:N1	10:AL:133:SER:OG	2.46	0.46
1:AA:2701:U:C4'	1:AA:2702:C:OP2	2.64	0.46
6:AF:7:TYR:O	6:AF:21:ALA:HA	2.15	0.46
11:AN:85:ILE:HA	11:AN:86:PRO:HD3	1.84	0.46
21:AX:21:PHE:C	21:AX:23:GLU:N	2.73	0.46
23:AZ:157:LEU:HA	23:AZ:158:PRO:HD2	1.73	0.46
34:BA:33:A:H2'	34:BA:34:C:C6	2.51	0.46
34:BA:659:U:H2'	34:BA:660:G:C8	2.50	0.46
34:BA:857:C:H2'	34:BA:858:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1476:G:H2'	34:BA:1477:C:H6	1.81	0.46
38:BE:40:ARG:HB3	38:BE:66:MET:HE2	1.97	0.46
57:BZ:10:LYS:HG3	57:BZ:284:LEU:HD23	1.96	0.46
57:BZ:216:LEU:O	57:BZ:220:ALA:N	2.45	0.46
57:BZ:414:GLU:C	57:BZ:416:LYS:H	2.24	0.46
1:CA:194:G:H2'	1:CA:195:A:O4'	2.16	0.46
1:CA:811:U:H2'	13:CP:21:ARG:HA	1.98	0.46
1:CA:1379:A:H4'	1:CA:1380:G:OP2	2.16	0.46
1:CA:1607:C:H4'	1:CA:1608:A:O5'	2.16	0.46
1:CA:2821:A:H2'	1:CA:2822:G:C8	2.51	0.46
2:CB:14:U:OP2	2:CB:70:C:O2'	2.29	0.46
2:CB:61:G:C6	2:CB:62:C:C4	3.04	0.46
34:DA:171:A:H2'	34:DA:172:A:C8	2.50	0.46
34:DA:757:U:O2'	34:DA:879:C:O2	2.34	0.46
34:DA:1080:A:H5"	34:DA:1081:G:OP2	2.16	0.46
34:DA:1405:G:N3	34:DA:1518:A:O2'	2.45	0.46
35:DB:167:PRO:HD2	35:DB:189:ASP:OD1	2.16	0.46
52:DS:28:LYS:HB3	52:DS:29:ARG:HA	1.98	0.46
56:DY:65:G:H2'	56:DY:66:U:C6	2.51	0.46
57:DZ:356:LEU:HD12	57:DZ:365:GLU:HA	1.98	0.46
1:AA:798:A:H5'	20:AW:90:ARG:HA	1.98	0.46
3:AC:211:ARG:HG2	3:AC:211:ARG:HH11	1.81	0.46
5:AE:176:ILE:HB	5:AE:181:LEU:HB2	1.97	0.46
12:AO:17:ARG:NH1	12:AO:47:ILE:HG21	2.31	0.46
14:AQ:18:LYS:HB2	14:AQ:18:LYS:NZ	2.31	0.46
26:A2:52:ASP:O	26:A2:56:GLN:HG3	2.16	0.46
34:BA:104:G:N1	34:BA:105:G:N7	2.63	0.46
34:BA:269:C:H2'	34:BA:270:A:C8	2.51	0.46
34:BA:542:G:H5"	37:BD:10:ARG:HH22	1.79	0.46
34:BA:1081:G:H2'	34:BA:1082:G:C8	2.51	0.46
35:BB:187:LEU:HA	35:BB:201:ILE:HB	1.97	0.46
36:BC:112:SER:O	36:BC:115:LEU:HB2	2.16	0.46
46:BM:45:VAL:O	46:BM:48:LEU:HG	2.15	0.46
49:BP:23:ASP:OD1	49:BP:24:ALA:N	2.49	0.46
49:BP:55:ARG:HH12	49:BP:58:TYR:HD1	1.62	0.46
50:BQ:87:LYS:HE2	50:BQ:87:LYS:HA	1.97	0.46
57:BZ:68:ALA:HB3	57:BZ:327:PHE:CD1	2.51	0.46
57:BZ:605:ILE:HB	57:BZ:675:HIS:O	2.16	0.46
1:CA:786:C:C2'	1:CA:787:U:H5'	2.46	0.46
1:CA:1064:C:C5	1:CA:1065:U:C4	3.04	0.46
1:CA:1270:C:H5"	1:CA:1271:G:O5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2407:G:C4	1:CA:2408:U:C5	3.04	0.46
2:CB:37:C:H2'	16:CS:95:HIS:HE1	1.81	0.46
3:CC:20:VAL:O	3:CC:224:ARG:O	2.33	0.46
5:CE:9:VAL:HA	17:CT:3:ARG:HD3	1.97	0.46
14:CQ:60:ARG:HE	14:CQ:60:ARG:HB2	1.56	0.46
28:C4:69:LYS:HE3	28:C4:69:LYS:HB2	1.82	0.46
34:DA:375:U:C2	34:DA:376:G:C8	3.03	0.46
34:DA:792:A:H4'	34:DA:793:U:O5'	2.15	0.46
34:DA:1007:C:H2'	34:DA:1008:C:C6	2.51	0.46
34:DA:1009:G:N2	34:DA:1021:G:H1'	2.31	0.46
34:DA:1343:G:N2	34:DA:1349:A:O2'	2.49	0.46
34:DA:1387:G:H2'	34:DA:1388:C:C6	2.51	0.46
43:DJ:85:LEU:HD23	43:DJ:85:LEU:HA	1.83	0.46
56:DY:9:A:H5'	56:DY:46:7MG:H1'	1.98	0.46
57:DZ:483:TYR:HD1	57:DZ:603:GLU:HA	1.81	0.46
1:AA:2023:A:H2'	1:AA:2024:G:C8	2.51	0.46
1:AA:2201:C:O4'	3:AC:169:THR:HG22	2.16	0.46
3:AC:20:VAL:O	3:AC:224:ARG:O	2.34	0.46
8:AH:17:VAL:HG22	8:AH:26:VAL:HG22	1.97	0.46
16:AS:24:LEU:HA	16:AS:24:LEU:HD23	1.69	0.46
23:AZ:48:PHE:HE2	23:AZ:71:VAL:HG11	1.80	0.46
32:A8:52:LYS:N	32:A8:53:PRO:HD2	2.31	0.46
34:BA:314:C:O2'	34:BA:315:A:H5'	2.16	0.46
34:BA:353:A:H5'	34:BA:353:A:C8	2.49	0.46
34:BA:735:C:H2'	34:BA:736:C:H6	1.80	0.46
34:BA:1202:G:H2'	34:BA:1203:C:O4'	2.16	0.46
34:BA:1292:U:H2'	34:BA:1293:G:C8	2.51	0.46
34:BA:1445:C:H2'	34:BA:1446:U:O4'	2.15	0.46
38:BE:43:LEU:HD21	38:BE:132:ALA:HB1	1.98	0.46
40:BG:56:GLN:HB3	40:BG:57:GLU:H	1.47	0.46
45:BL:97:ARG:HB2	45:BL:98:TYR:CD1	2.51	0.46
56:BW:29:G:H2'	56:BW:30:G:O4'	2.16	0.46
56:BW:40:C:H5'	56:BY:35:A:O2'	2.15	0.46
57:BZ:329:ARG:HG3	57:BZ:374:LEU:HD23	1.98	0.46
57:BZ:608:VAL:HG21	57:BZ:647:VAL:HG23	1.97	0.46
1:CA:860:U:H1'	1:CA:2268:A:H5'	1.97	0.46
1:CA:905:U:O5'	1:CA:905:U:H6	1.99	0.46
1:CA:2689:U:P	1:CA:2719:G:H22	2.39	0.46
1:CA:2881:C:H2'	1:CA:2882:A:O4'	2.16	0.46
6:CF:60:SER:OG	6:CF:61:GLY:N	2.46	0.46
19:CV:37:VAL:O	19:CV:51:VAL:HG23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1147:C:H4'	42:DI:5:TYR:CZ	2.51	0.46
34:DA:1319:A:N6	34:DA:1361:G:H21	2.13	0.46
34:DA:1346:A:H5"	42:DI:120:ARG:NH2	2.28	0.46
38:DE:129:ILE:H	38:DE:129:ILE:HG12	1.53	0.46
42:DI:116:LYS:O	42:DI:117:HIS:HD2	1.99	0.46
57:DZ:120:THR:HG22	57:DZ:123:ARG:NH2	2.31	0.46
1:AA:1597:C:O2'	1:AA:1598:C:H5'	2.15	0.46
1:AA:1922:A:N1	1:AA:1992:A:C6	2.84	0.46
1:AA:2418:U:H5'	1:AA:2418:U:C6	2.51	0.46
3:AC:48:LEU:HD23	3:AC:59:VAL:HG21	1.98	0.46
7:AG:7:LEU:HD13	7:AG:100:TRP:CE3	2.51	0.46
11:AN:133:GLN:O	11:AN:134:ARG:C	2.59	0.46
26:A2:33:MET:O	26:A2:36:ARG:HB2	2.16	0.46
26:A2:61:LEU:HD23	26:A2:61:LEU:HA	1.61	0.46
34:BA:597:G:C4	34:BA:644:G:C2	3.04	0.46
34:BA:685:G:C2	34:BA:686:U:C4	3.03	0.46
34:BA:726:C:H2'	34:BA:727:G:H8	1.81	0.46
34:BA:767:A:H2'	34:BA:768:A:O4'	2.16	0.46
34:BA:982:U:H5"	47:BN:6:LEU:CD2	2.46	0.46
34:BA:1346:A:N1	34:BA:1374:A:H5"	2.31	0.46
34:BA:1460:A:H2'	34:BA:1461:G:O4'	2.16	0.46
36:BC:22:TRP:CH2	36:BC:32:LEU:HB2	2.51	0.46
37:BD:110:PHE:HD1	37:BD:110:PHE:H	1.63	0.46
38:BE:77:PRO:HG2	38:BE:78:HIS:CD2	2.51	0.46
40:BG:26:PHE:CD2	40:BG:30:ILE:HD11	2.51	0.46
41:BH:26:VAL:HG22	41:BH:27:PRO:O	2.16	0.46
44:BK:34:ASP:HB3	44:BK:40:ILE:HD11	1.97	0.46
44:BK:48:ILE:HD12	44:BK:63:LEU:HB3	1.97	0.46
45:BL:27:LEU:HD22	45:BL:98:TYR:CE2	2.51	0.46
46:BM:67:GLU:OE2	46:BM:71:ARG:NH2	2.48	0.46
47:BN:7:ILE:C	47:BN:9:LYS:H	2.22	0.46
1:CA:323:G:O2'	1:CA:1205:U:N3	2.35	0.46
1:CA:478:A:N1	1:CA:500:G:H4'	2.31	0.46
1:CA:852:G:H2'	1:CA:853:G:H8	1.81	0.46
1:CA:2176:A:H2'	1:CA:2177:C:C6	2.50	0.46
1:CA:2371:G:N3	30:C6:46:HIS:HE1	2.14	0.46
3:CC:42:VAL:CG1	3:CC:43:GLU:H	2.28	0.46
3:CC:54:ARG:HH22	3:CC:56:ASP:HB3	1.75	0.46
16:CS:105:ALA:HB1	16:CS:110:LEU:HD23	1.98	0.46
17:CT:39:ARG:NH2	34:DA:345:C:OP2	2.48	0.46
34:DA:16:A:O2'	34:DA:17:U:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:519:C:H2'	34:DA:520:A:O4'	2.16	0.46
34:DA:601:C:H2'	34:DA:602:A:H8	1.78	0.46
34:DA:1345:U:O2	34:DA:1375:A:N6	2.49	0.46
38:DE:41:VAL:O	38:DE:66:MET:HA	2.16	0.46
41:DH:9:MET:HE1	41:DH:32:LYS:O	2.16	0.46
42:DI:9:ARG:O	42:DI:104:ARG:HG2	2.16	0.46
56:DW:8:4SU:H1'	56:DW:48:C:O2	2.16	0.46
57:DZ:377:VAL:HG21	57:DZ:380:LEU:HD13	1.98	0.46
57:DZ:484:ARG:HH11	57:DZ:558:PHE:HE1	1.64	0.46
1:AA:290:G:H2'	1:AA:291:G:O4'	2.16	0.45
6:AF:29:ASN:HA	6:AF:30:PRO:HD3	1.73	0.45
6:AF:135:LYS:HB2	6:AF:138:GLU:HG3	1.97	0.45
8:AH:43:VAL:HG22	8:AH:52:VAL:HG22	1.98	0.45
8:AH:144:VAL:O	8:AH:147:ASN:HB2	2.16	0.45
14:AQ:109:VAL:HG22	14:AQ:113:GLN:HB3	1.98	0.45
29:A5:16:ARG:O	29:A5:20:ARG:HG3	2.16	0.45
30:A6:12:GLU:HG3	30:A6:19:ARG:HG3	1.98	0.45
32:A8:60:LEU:HD23	32:A8:60:LEU:HA	1.71	0.45
34:BA:130:A:N3	34:BA:263:A:O2'	2.46	0.45
34:BA:585:G:N3	34:BA:879:C:H4'	2.31	0.45
34:BA:742:G:P	48:BO:35:ARG:HH22	2.39	0.45
34:BA:977:A:H1'	34:BA:982:U:O4	2.15	0.45
34:BA:1137:C:H4'	34:BA:1138:G:C2	2.50	0.45
34:BA:1146:A:H2'	34:BA:1147:C:O4'	2.15	0.45
34:BA:1438:G:H2'	34:BA:1439:C:H6	1.81	0.45
36:BC:37:GLN:NE2	47:BN:52:GLN:OE1	2.48	0.45
41:BH:27:PRO:HA	41:BH:58:TYR:HA	1.97	0.45
46:BM:74:VAL:O	46:BM:78:ILE:HG13	2.16	0.45
57:BZ:-7:GLU:HG3	57:BZ:-6:ARG:NH1	2.29	0.45
1:CA:27:G:HO2'	1:CA:28:A:P	2.37	0.45
1:CA:844:C:C2'	1:CA:845:G:H5'	2.46	0.45
1:CA:1721:G:C6	1:CA:1739:U:H5'	2.51	0.45
1:CA:1847:A:H3'	1:CA:1848:A:H5'	1.98	0.45
1:CA:2287:A:H2	1:CA:2346:A:H62	1.59	0.45
1:CA:2294:C:H2'	1:CA:2295:C:H6	1.80	0.45
1:CA:2722:G:H2'	1:CA:2723:C:C6	2.51	0.45
11:CN:74:ARG:O	11:CN:82:LEU:HD12	2.16	0.45
15:CR:55:ALA:HB2	15:CR:79:LEU:HD13	1.98	0.45
19:CV:18:LEU:HD22	19:CV:19:LYS:O	2.15	0.45
21:CX:35:THR:HG22	21:CX:37:THR:N	2.31	0.45
22:CY:5:MET:HG2	22:CY:30:VAL:HG11	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:C0:40:GLN:NE2	24:C0:45:PHE:HB2	2.30	0.45
34:DA:105:G:H2'	34:DA:106:C:C6	2.51	0.45
34:DA:390:C:O3'	49:DP:28:ARG:NH2	2.48	0.45
34:DA:1303:C:N4	34:DA:1304:G:C6	2.84	0.45
35:DB:27:LYS:C	35:DB:29:ALA:H	2.23	0.45
57:DZ:168:ILE:O	57:DZ:174:PHE:HA	2.15	0.45
57:DZ:681:LYS:HE2	57:DZ:681:LYS:HB3	1.74	0.45
1:AA:171:A:N3	1:AA:460:C:O2'	2.40	0.45
1:AA:895:G:N9	1:AA:978:A:H8	2.14	0.45
1:AA:1355:G:P	31:A7:9:ARG:HD3	2.56	0.45
1:AA:2140:U:C4	1:AA:2171:G:H1'	2.52	0.45
1:AA:2178:G:H2'	1:AA:2179:G:C2	2.50	0.45
1:AA:2255:U:H2'	1:AA:2256:U:H6	1.80	0.45
1:AA:2528:G:O2'	1:AA:2529:C:H5'	2.16	0.45
1:AA:2658:C:O5'	1:AA:2658:C:H6	1.99	0.45
4:AD:4:LYS:HB3	4:AD:4:LYS:HE3	1.74	0.45
5:AE:78:LEU:O	5:AE:79:ARG:HD2	2.17	0.45
8:AH:3:ARG:HH12	8:AH:54:ARG:NH1	2.14	0.45
16:AS:19:LYS:C	16:AS:21:THR:H	2.23	0.45
21:AX:21:PHE:C	21:AX:23:GLU:H	2.24	0.45
22:AY:6:HIS:H	22:AY:6:HIS:CD2	2.34	0.45
34:BA:72:C:O2	34:BA:98:G:N2	2.50	0.45
34:BA:109:A:N3	34:BA:109:A:H5"	2.30	0.45
34:BA:430:A:OP1	37:BD:9:CYS:N	2.32	0.45
34:BA:502:G:OP1	45:BL:118:SER:HB2	2.16	0.45
34:BA:943:U:H1'	42:BI:124:GLN:HE22	1.82	0.45
34:BA:1228:C:OP1	46:BM:108:ARG:NH1	2.47	0.45
34:BA:1371:G:OP2	42:BI:11:LYS:HD2	2.15	0.45
36:BC:6:HIS:CD2	36:BC:8:ILE:H	2.34	0.45
37:BD:15:GLU:HG3	37:BD:63:LYS:HZ2	1.81	0.45
53:BT:56:MET:HE1	53:BT:85:MET:HA	1.97	0.45
53:BT:84:LEU:O	53:BT:88:VAL:HG23	2.15	0.45
57:BZ:329:ARG:HA	57:BZ:374:LEU:HB3	1.97	0.45
57:BZ:659:LEU:HD13	57:BZ:667:GLY:HA3	1.98	0.45
1:CA:315:G:H2'	1:CA:316:C:C6	2.50	0.45
1:CA:881:G:H2'	1:CA:882:G:O4'	2.16	0.45
1:CA:950:G:H2'	1:CA:951:C:H6	1.80	0.45
1:CA:1292:U:H2'	1:CA:1293:C:C6	2.51	0.45
1:CA:1570:A:H2'	1:CA:1571:A:C8	2.52	0.45
3:CC:37:LYS:O	3:CC:38:PHE:HB3	2.17	0.45
3:CC:48:LEU:HD23	3:CC:59:VAL:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CO:87:ILE:HG22	12:CO:93:PRO:HA	1.97	0.45
14:CQ:3:MET:HE2	14:CQ:3:MET:HB3	1.75	0.45
18:CU:58:ARG:O	18:CU:62:ILE:HG13	2.16	0.45
20:CW:86:LEU:HD23	20:CW:88:ARG:HD3	1.98	0.45
23:CZ:103:ARG:O	23:CZ:139:VAL:HG23	2.16	0.45
33:C9:11:CYS:SG	33:C9:12:ASP:N	2.89	0.45
34:DA:302:G:N3	34:DA:556:C:H4'	2.32	0.45
34:DA:1203:C:H2'	34:DA:1204:A:C8	2.44	0.45
34:DA:1380:U:C4	40:DG:3:ARG:HG2	2.50	0.45
36:DC:6:HIS:HB3	47:DN:49:HIS:ND1	2.30	0.45
37:DD:88:VAL:HG13	38:DE:97:GLY:HA2	1.98	0.45
46:DM:10:PRO:HG2	46:DM:21:TYR:CD1	2.51	0.45
48:DO:85:LEU:HA	48:DO:85:LEU:HD23	1.62	0.45
57:DZ:328:ILE:HD12	57:DZ:377:VAL:HG12	1.99	0.45
1:AA:30:G:H2'	1:AA:31:C:C6	2.51	0.45
1:AA:752:A:C2	1:AA:753:A:C4	3.05	0.45
1:AA:935:C:H2'	1:AA:936:C:C4	2.52	0.45
1:AA:1831:C:OP1	4:AD:260:ARG:NH2	2.49	0.45
1:AA:2162:C:O2	1:AA:2162:C:H2'	2.15	0.45
6:AF:8:GLN:HE22	6:AF:21:ALA:HB2	1.81	0.45
6:AF:164:ARG:O	6:AF:168:ARG:HB2	2.16	0.45
7:AG:7:LEU:HD13	7:AG:100:TRP:HE3	1.81	0.45
11:AN:4:TYR:CD2	18:AU:100:VAL:HG11	2.51	0.45
14:AQ:62:GLY:O	23:AZ:178:GLU:HG2	2.16	0.45
22:AY:92:ASN:ND2	22:AY:92:ASN:N	2.63	0.45
34:BA:294:U:C2	34:BA:295:C:C5	3.04	0.45
34:BA:865:A:O5'	34:BA:865:A:H8	1.98	0.45
46:BM:88:ARG:HG3	46:BM:98:VAL:HG13	1.99	0.45
51:BR:75:ILE:H	51:BR:75:ILE:HG13	1.58	0.45
52:BS:31:ILE:HB	52:BS:49:ILE:HG23	1.99	0.45
57:BZ:356:LEU:HD12	57:BZ:356:LEU:HA	1.80	0.45
57:BZ:409:ILE:HG13	57:BZ:480:GLN:CB	2.47	0.45
57:BZ:606:MET:HB3	57:BZ:671:MET:HG2	1.98	0.45
1:CA:443:A:H1'	1:CA:1201:C:O4'	2.16	0.45
1:CA:475:U:H4'	1:CA:510:C:H5'	1.98	0.45
1:CA:697:C:H2'	1:CA:698:C:C6	2.51	0.45
1:CA:1043:C:H2'	1:CA:1044:G:H5'	1.98	0.45
1:CA:1453:U:P	15:CR:77:ARG:HH11	2.40	0.45
1:CA:2113:U:C2	1:CA:2114:A:N7	2.84	0.45
1:CA:2118:U:N3	1:CA:2149:G:H1'	2.31	0.45
8:CH:70:THR:HG22	8:CH:74:ASN:ND2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CL:115:LEU:HD12	10:CL:117:THR:OG1	2.16	0.45
13:CP:93:GLY:O	13:CP:123:LEU:HD22	2.15	0.45
26:C2:32:LEU:HD21	26:C2:50:ILE:HG23	1.98	0.45
34:DA:161:A:H2'	34:DA:162:A:O4'	2.16	0.45
34:DA:376:G:OP2	49:DP:67:THR:HG21	2.17	0.45
34:DA:428:G:C5	34:DA:430:A:C6	3.05	0.45
34:DA:663:A:H2'	34:DA:664:G:O4'	2.16	0.45
34:DA:747:C:H5"	34:DA:748:C:OP2	2.16	0.45
34:DA:834:C:H2'	34:DA:835:U:H6	1.81	0.45
34:DA:967:C:H2'	34:DA:968:A:C8	2.51	0.45
40:DG:121:ALA:HA	40:DG:124:LEU:HD12	1.98	0.45
45:DL:90:VAL:O	45:DL:91:LYS:C	2.59	0.45
47:DN:47:LEU:HB3	47:DN:53:LEU:HG	1.98	0.45
48:DO:7:GLU:OE2	48:DO:38:ARG:NH2	2.47	0.45
57:DZ:74:TRP:HE1	57:DZ:274:ASP:N	2.13	0.45
57:DZ:325:LEU:HD23	57:DZ:327:PHE:CE2	2.52	0.45
1:AA:983:G:P	32:A8:52:LYS:HZ2	2.39	0.45
1:AA:1100:A:N6	1:AA:1151:U:N3	2.61	0.45
1:AA:1331:G:C5	1:AA:1375:U:C4	3.04	0.45
1:AA:1405:A:N1	1:AA:1418:U:C4	2.84	0.45
1:AA:2158:C:H42	1:AA:2177:G:H1	1.63	0.45
4:AD:168:ARG:HA	4:AD:173:VAL:HA	1.99	0.45
8:AH:154:PRO:HB3	8:AH:163:TYR:CE2	2.51	0.45
9:AK:4:LYS:HA	9:AK:5:ARG:HA	1.79	0.45
14:AQ:57:HIS:CE1	14:AQ:116:GLU:HG2	2.50	0.45
17:AT:120:ARG:HA	17:AT:123:GLN:HG3	1.98	0.45
34:BA:7:G:O2'	38:BE:120:THR:O	2.34	0.45
34:BA:402:G:O2'	34:BA:620:C:N3	2.45	0.45
34:BA:1004:A:H5'	34:BA:1024:G:H1	1.81	0.45
37:BD:88:VAL:HG12	37:BD:91:SER:H	1.82	0.45
47:BN:4:LYS:HA	47:BN:7:ILE:HG23	1.97	0.45
52:BS:82:GLY:O	52:BS:85:LYS:HE2	2.16	0.45
56:BY:7:A:O2'	56:BY:49:C:OP2	2.33	0.45
57:BZ:21:ILE:O	57:BZ:23:ALA:N	2.50	0.45
1:CA:781:A:C2	1:CA:1776:G:N3	2.85	0.45
1:CA:912:C:OP1	14:CQ:8:LYS:HE2	2.16	0.45
1:CA:2315:G:H5"	1:CA:2316:C:OP2	2.15	0.45
5:CE:4:ILE:HD13	5:CE:28:ALA:HB1	1.97	0.45
9:CK:118:THR:O	9:CK:120:LYS:N	2.49	0.45
13:CP:50:ARG:HD3	32:C8:7:HIS:CD2	2.51	0.45
16:CS:39:ILE:HG21	16:CS:82:ILE:HD13	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CS:63:THR:HG23	16:CS:64:GLU:N	2.31	0.45
16:CS:69:VAL:O	16:CS:72:ALA:HB3	2.17	0.45
18:CU:74:LEU:HD23	18:CU:78:THR:HG22	1.98	0.45
23:CZ:9:TYR:HE1	23:CZ:61:LEU:HB3	1.81	0.45
30:C6:28:ARG:O	30:C6:31:PRO:HD3	2.16	0.45
32:C8:43:GLN:C	32:C8:45:GLY:H	2.25	0.45
34:DA:201:C:H42	34:DA:216:G:H1	1.65	0.45
34:DA:360:A:H2'	34:DA:361:G:O4'	2.17	0.45
34:DA:429:U:H1'	34:DA:430:A:H5"	1.98	0.45
34:DA:448:A:C4	34:DA:487:A:C2	3.05	0.45
34:DA:724:G:N3	34:DA:725:G:C8	2.84	0.45
34:DA:936:C:H2'	34:DA:937:A:O4'	2.16	0.45
34:DA:983:A:H2	34:DA:984:C:C6	2.35	0.45
34:DA:1168:A:C6	34:DA:1169:A:C6	3.04	0.45
35:DB:84:GLU:HG3	35:DB:215:LEU:HB3	1.96	0.45
35:DB:125:PRO:O	35:DB:127:ILE:N	2.43	0.45
38:DE:92:LYS:HB3	38:DE:119:LEU:HB2	1.98	0.45
45:DL:7:ILE:HG22	50:DQ:34:LYS:HZ2	1.81	0.45
1:AA:346:A:OP2	6:AF:169:ASN:HB2	2.17	0.45
1:AA:1221:G:N3	1:AA:1222:A:H5'	2.31	0.45
1:AA:2652:G:OP1	11:AN:97:ARG:NH2	2.47	0.45
2:AB:29:A:H2'	2:AB:30:C:O4'	2.16	0.45
6:AF:101:LEU:O	6:AF:106:ARG:NH1	2.41	0.45
7:AG:11:TYR:HA	7:AG:15:VAL:HB	1.98	0.45
7:AG:108:ASN:HB3	28:A4:22:ILE:HD13	1.97	0.45
7:AG:145:THR:HG23	7:AG:148:MET:SD	2.57	0.45
13:AP:39:LYS:HG3	13:AP:45:LEU:HD11	1.97	0.45
18:AU:29:SER:O	18:AU:30:LYS:HD3	2.16	0.45
20:AW:78:GLU:OE2	20:AW:99:ARG:HD3	2.16	0.45
34:BA:35:G:O2'	45:BL:118:SER:O	2.25	0.45
34:BA:369:C:O2'	34:BA:370:C:H5'	2.17	0.45
34:BA:976:G:H5'	34:BA:1358:U:O2'	2.16	0.45
34:BA:1263:C:H2'	34:BA:1264:C:C6	2.51	0.45
34:BA:1297:C:H4'	34:BA:1298:C:H5'	1.99	0.45
36:BC:45:LYS:HE3	36:BC:45:LYS:HB2	1.70	0.45
39:BF:28:ARG:O	39:BF:32:ASN:ND2	2.49	0.45
43:BJ:70:ARG:HD3	43:BJ:70:ARG:HA	1.67	0.45
51:BR:53:ARG:HE	51:BR:59:SER:C	2.21	0.45
58:BX:6:2R1:OD1	58:BX:7:PRO:HD2	2.16	0.45
1:CA:321:G:O4'	6:CF:165:ARG:HG2	2.17	0.45
1:CA:666:G:H4'	13:CP:49:ARG:HH21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1047:G:O2'	1:CA:1110:G:O6	2.25	0.45
1:CA:1142(A):A:C4	1:CA:1144:G:C8	3.04	0.45
5:CE:50:GLY:HA2	5:CE:75:VAL:HG11	1.99	0.45
6:CF:192:LEU:HD22	6:CF:194:MET:HG3	1.97	0.45
8:CH:9:ILE:HD13	8:CH:72:ILE:HG22	1.99	0.45
15:CR:55:ALA:HB2	15:CR:79:LEU:CD1	2.46	0.45
25:C1:94:LEU:O	25:C1:97:LEU:HB2	2.17	0.45
34:DA:256:U:H2'	34:DA:257:G:C8	2.51	0.45
34:DA:392:G:H2'	34:DA:393:A:H8	1.80	0.45
34:DA:536:C:H2'	34:DA:537:G:C8	2.52	0.45
34:DA:543:C:O2'	34:DA:544:G:H5'	2.16	0.45
34:DA:664:G:P	51:DR:64:ARG:HH21	2.39	0.45
34:DA:967:C:H2'	34:DA:968:A:N7	2.31	0.45
34:DA:1040:U:H2'	34:DA:1041:A:C8	2.51	0.45
34:DA:1329:A:OP1	46:DM:29:ARG:HB2	2.16	0.45
37:DD:106:TYR:CD2	37:DD:106:TYR:C	2.94	0.45
40:DG:26:PHE:CZ	40:DG:30:ILE:HD11	2.52	0.45
42:DI:85:LEU:HB3	42:DI:92:TYR:CD2	2.51	0.45
56:DY:23:A:N6	56:DY:24:G:O6	2.50	0.45
1:AA:518:G:O6	63:AA:3944:HOH:O	2.20	0.45
1:AA:2080:A:H5"	1:AA:2081:A:OP2	2.16	0.45
2:AB:32:C:C2	2:AB:51:G:N2	2.84	0.45
4:AD:275:LYS:HB3	4:AD:276:LYS:H	1.39	0.45
7:AG:43:LEU:HB3	7:AG:44:GLY:H	1.50	0.45
15:AR:97:VAL:HG22	15:AR:114:VAL:HG13	1.99	0.45
20:AW:12:ILE:HD13	20:AW:17:VAL:HG22	1.99	0.45
32:A8:58:ILE:O	32:A8:59:LYS:C	2.59	0.45
34:BA:659:U:H2'	34:BA:660:G:H8	1.81	0.45
34:BA:721:G:C6	34:BA:733:A:C2	3.04	0.45
34:BA:864:A:H2'	34:BA:865:A:C8	2.51	0.45
34:BA:942:G:H21	42:BI:124:GLN:NE2	2.14	0.45
34:BA:1024:G:OP2	34:BA:1024:G:H8	1.99	0.45
34:BA:1173:G:H2'	34:BA:1174:G:C8	2.51	0.45
34:BA:1203:C:H2'	34:BA:1204:A:C8	2.51	0.45
37:BD:13:ARG:NH1	37:BD:38:TYR:O	2.49	0.45
37:BD:22:LYS:HB2	61:BD:501:SF4:S3	2.57	0.45
40:BG:29:LYS:HD3	40:BG:29:LYS:HA	1.73	0.45
41:BH:112:LEU:HD12	41:BH:113:SER:N	2.31	0.45
48:BO:32:LEU:O	48:BO:33:THR:C	2.60	0.45
56:BW:59:U:C4	56:BW:60:U:C4	3.05	0.45
57:BZ:179:ASP:N	57:BZ:184:LYS:O	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:321:TYR:H	57:BZ:321:TYR:HD2	1.65	0.45
57:BZ:536:LYS:H	57:BZ:536:LYS:HD2	1.82	0.45
1:CA:139:G:H21	21:CX:41:ASN:HD21	1.64	0.45
1:CA:866:A:C6	1:CA:914:C:C6	3.04	0.45
1:CA:1439:A:C2	1:CA:1553:A:C5	3.05	0.45
1:CA:2466:C:H5'	33:C9:5:ALA:HB3	1.98	0.45
4:CD:166:GLN:HB2	4:CD:174:ILE:HG22	1.97	0.45
5:CE:144:ARG:HB3	5:CE:145:LYS:H	1.29	0.45
8:CH:105:LEU:HD11	8:CH:148:ILE:HG23	1.98	0.45
13:CP:136:GLU:O	13:CP:140:ALA:HB3	2.17	0.45
23:CZ:73:GLN:O	23:CZ:87:ASP:N	2.34	0.45
34:DA:125:U:H2'	34:DA:126:G:H8	1.81	0.45
34:DA:1327:C:H2'	34:DA:1328:C:C6	2.51	0.45
35:DB:7:VAL:HG12	35:DB:8:LYS:HG2	1.99	0.45
35:DB:73:THR:HG22	35:DB:94:ASN:C	2.41	0.45
35:DB:80:ILE:HG12	35:DB:80:ILE:O	2.16	0.45
36:DC:8:ILE:HG22	47:DN:49:HIS:O	2.16	0.45
37:DD:89:THR:O	37:DD:92:VAL:N	2.50	0.45
38:DE:78:HIS:CD2	38:DE:142:LEU:HD23	2.52	0.45
44:DK:43:SER:HB3	44:DK:68:ALA:HB2	1.97	0.45
45:DL:38:THR:OG1	45:DL:57:LYS:HB3	2.16	0.45
57:DZ:438:PHE:HB2	57:DZ:452:SER:O	2.16	0.45
1:AA:116:A:H3'	1:AA:117:A:H5"	1.97	0.45
1:AA:1946:C:H2'	1:AA:1947:C:O4'	2.17	0.45
1:AA:2157:A:N6	1:AA:2178:G:O2'	2.48	0.45
1:AA:2377:G:H4'	24:A0:60:PHE:CZ	2.52	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
4:AD:96:HIS:HD2	4:AD:102:LYS:HG2	1.81	0.45
4:AD:175:LEU:HD12	4:AD:185:VAL:HG21	1.97	0.45
11:AN:4:TYR:CE2	18:AU:100:VAL:HG11	2.52	0.45
23:AZ:183:LEU:HB3	23:AZ:184:ALA:H	1.52	0.45
29:A5:35:GLU:HG3	29:A5:51:TYR:CD2	2.51	0.45
31:A7:24:THR:HG22	31:A7:27:GLY:N	2.17	0.45
34:BA:155:C:H2'	34:BA:156:G:C8	2.51	0.45
34:BA:396:G:P	57:BZ:349:LYS:HZ1	2.35	0.45
34:BA:411:A:C5	34:BA:429:U:C5	3.05	0.45
35:BB:91:PRO:HG3	35:BB:154:LEU:HB3	1.99	0.45
36:BC:152:ILE:HB	36:BC:199:LYS:HB2	1.98	0.45
1:CA:485:C:C2	1:CA:496:G:N2	2.85	0.45
1:CA:889:C:O2'	1:CA:890:A:O4'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1015:G:H2'	1:CA:1016:G:H8	1.82	0.45
1:CA:1041:C:N3	1:CA:1114:G:N2	2.42	0.45
1:CA:1160:G:H22	19:CV:10:LYS:NZ	2.14	0.45
1:CA:1671:U:OP2	63:CA:3758:HOH:O	2.21	0.45
1:CA:1955:U:O2'	1:CA:1956:U:H5'	2.17	0.45
1:CA:1991:U:H2'	1:CA:1992:G:H5"	1.98	0.45
1:CA:2345:G:H4'	1:CA:2346:A:O5'	2.16	0.45
1:CA:2422:A:C5'	56:DY:76:A:N6	2.80	0.45
1:CA:2552:U:H6	1:CA:2552:U:O5'	1.99	0.45
2:CB:31:C:H2'	2:CB:32:C:H5'	1.99	0.45
7:CG:11:TYR:O	7:CG:16:ARG:N	2.50	0.45
8:CH:64:LEU:HD23	8:CH:67:LEU:HD23	1.98	0.45
8:CH:76:VAL:C	8:CH:78:GLY:N	2.71	0.45
11:CN:110:GLY:O	11:CN:114:ARG:HG3	2.16	0.45
13:CP:63:PRO:HG2	32:C8:25:MET:HB2	1.98	0.45
14:CQ:11:LYS:HE3	14:CQ:87:LYS:HG2	1.98	0.45
15:CR:2:ARG:C	15:CR:5:LYS:HG3	2.42	0.45
16:CS:63:THR:HG23	16:CS:64:GLU:H	1.81	0.45
18:CU:44:ASN:ND2	19:CV:75:PHE:HB3	2.32	0.45
20:CW:107:LEU:HD12	20:CW:107:LEU:HA	1.65	0.45
28:C4:58:ARG:NE	46:DM:80:ARG:HH12	2.15	0.45
34:DA:266:G:O2'	50:DQ:67:LYS:HB2	2.17	0.45
34:DA:429:U:H5'	37:DD:9:CYS:SG	2.56	0.45
34:DA:921:U:O2'	38:DE:19:MET:O	2.22	0.45
34:DA:1342:C:H1'	42:DI:124:GLN:HG2	1.99	0.45
37:DD:199:ASN:O	37:DD:202:LEU:HB2	2.17	0.45
47:DN:26:ARG:HD3	47:DN:43:CYS:SG	2.56	0.45
49:DP:39:TYR:HD1	49:DP:49:LEU:HD22	1.81	0.45
50:DQ:51:TYR:CZ	50:DQ:73:VAL:HG11	2.51	0.45
57:DZ:73:PHE:HA	57:DZ:77:HIS:O	2.17	0.45
57:DZ:331:TYR:O	57:DZ:332:SER:HB3	2.16	0.45
57:DZ:536:LYS:H	57:DZ:536:LYS:HD2	1.81	0.45
1:AA:239:G:H2'	1:AA:240:A:C8	2.51	0.45
1:AA:949:C:H2'	1:AA:950:C:C6	2.52	0.45
1:AA:1074:A:H61	1:AA:1171:G:H2'	1.82	0.45
1:AA:1105:G:OP2	1:AA:1106:U:H3'	2.17	0.45
1:AA:2228:G:H2'	1:AA:2229:A:C2	2.52	0.45
1:AA:2321:A:N6	1:AA:2322:A:N1	2.64	0.45
1:AA:2702:C:N4	1:AA:2726:A:H1'	2.31	0.45
1:AA:2705:A:H2'	1:AA:2706:G:C8	2.51	0.45
6:AF:53:THR:HG22	6:AF:56:GLU:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AK:18:GLU:C	9:AK:20:ALA:H	2.25	0.45
9:AK:39:ALA:C	9:AK:41:ARG:H	2.25	0.45
15:AR:41:ALA:HB1	15:AR:114:VAL:HG22	1.99	0.45
19:AV:24:LYS:HE2	19:AV:24:LYS:HB3	1.71	0.45
23:AZ:69:THR:HG22	23:AZ:90:VAL:HA	1.98	0.45
26:A2:35:LEU:HD23	26:A2:35:LEU:HA	1.69	0.45
28:A4:59:PHE:HB2	52:BS:42:PRO:HG3	1.99	0.45
31:A7:3:ARG:O	31:A7:6:GLN:NE2	2.43	0.45
34:BA:452:A:O2'	34:BA:453:A:OP2	2.32	0.45
34:BA:517:G:H5'	34:BA:519:C:C2	2.52	0.45
34:BA:667:G:O2'	48:BO:49:ASP:OD1	2.23	0.45
34:BA:766:A:C8	34:BA:814:A:C6	3.05	0.45
34:BA:1036:G:H2'	34:BA:1036:G:N3	2.31	0.45
35:BB:166:ASP:O	35:BB:170:GLU:HB2	2.16	0.45
42:BI:78:LYS:HD3	42:BI:101:PHE:HD2	1.82	0.45
42:BI:113:LYS:HB2	42:BI:113:LYS:HE3	1.63	0.45
49:BP:17:TYR:HE2	49:BP:41:PRO:HG3	1.81	0.45
51:BR:53:ARG:NE	51:BR:59:SER:O	2.37	0.45
57:BZ:93:GLU:HB3	57:BZ:96:ARG:CZ	2.47	0.45
1:CA:330:A:H2	1:CA:1210:A:H2'	1.81	0.45
1:CA:363(C):G:H2'	1:CA:363(D):G:H8	1.82	0.45
1:CA:776:G:H4'	1:CA:777:A:O5'	2.17	0.45
1:CA:829:A:N7	1:CA:2248:C:H5'	2.31	0.45
1:CA:849:A:H2	27:C3:24:LYS:HG2	1.82	0.45
1:CA:1006:C:C2	1:CA:1138:G:N2	2.84	0.45
1:CA:1050:A:H2'	1:CA:1051:G:C8	2.52	0.45
1:CA:1063:G:O2'	10:CL:91:PRO:HG3	2.16	0.45
1:CA:1082:U:H5'	10:CL:117:THR:HB	1.98	0.45
1:CA:1568:G:H4'	4:CD:59:LYS:HG2	1.98	0.45
1:CA:1819:A:H5"	4:CD:158:ALA:HB3	1.99	0.45
1:CA:2091:U:OP2	1:CA:2092:U:O2'	2.26	0.45
1:CA:2272:U:H5"	1:CA:2273:A:OP1	2.16	0.45
1:CA:2351:G:H8	1:CA:2351:G:O5'	1.99	0.45
14:CQ:8:LYS:HG2	14:CQ:9:TYR:CZ	2.52	0.45
15:CR:94:TYR:CD1	15:CR:94:TYR:N	2.83	0.45
20:CW:41:LYS:HE3	29:C5:25:LEU:HD11	1.98	0.45
26:C2:4:SER:HA	26:C2:7:ARG:NH1	2.31	0.45
34:DA:515:G:N2	34:DA:537:G:C4	2.85	0.45
34:DA:1064:G:H21	34:DA:1190:G:H2'	1.82	0.45
34:DA:1147:C:N4	34:DA:1148:U:O4	2.50	0.45
34:DA:1289:A:N1	34:DA:1371:G:O2'	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1328:C:OP1	54:DU:21:TYR:OH	2.28	0.45
34:DA:1530:G:H2'	34:DA:1531:A:O4'	2.17	0.45
35:DB:218:ALA:O	35:DB:222:ILE:HG23	2.17	0.45
57:DZ:164:MET:HB2	57:DZ:258:VAL:O	2.17	0.45
1:AA:1006:C:OP2	63:AA:3942:HOH:O	2.20	0.45
1:AA:1014:U:H2'	1:AA:1015:C:C6	2.51	0.45
1:AA:1485:A:C2	1:AA:1600:A:C5	3.05	0.45
1:AA:1534:G:N2	1:AA:1548:C:C2	2.85	0.45
1:AA:2112:G:N2	25:A1:45:ASN:OD1	2.37	0.45
1:AA:2331:G:N1	16:AS:3:ARG:HA	2.31	0.45
3:AC:7:ARG:HH22	3:AC:219:MET:HB2	1.82	0.45
5:AE:120:TRP:CE2	5:AE:155:LYS:HG2	2.52	0.45
6:AF:29:ASN:H	6:AF:112:MET:HE3	1.82	0.45
6:AF:155:LEU:HD12	6:AF:174:VAL:O	2.17	0.45
8:AH:56:SER:HG	8:AH:61:HIS:HD1	0.56	0.45
14:AQ:21:THR:HG21	14:AQ:101:ARG:HB2	1.98	0.45
34:BA:24:U:O2'	34:BA:25:C:H5'	2.17	0.45
34:BA:405:U:H3'	34:BA:406:G:H5'	1.99	0.45
34:BA:616:G:N2	34:BA:625:G:C4	2.85	0.45
34:BA:1126:U:O4	43:BJ:7:LYS:HE3	2.16	0.45
34:BA:1394:A:C5	34:BA:1501:C:H4'	2.51	0.45
37:BD:61:LYS:HD3	37:BD:206:PHE:CE1	2.52	0.45
37:BD:65:ARG:HD2	37:BD:70:ILE:O	2.16	0.45
44:BK:97:ALA:O	44:BK:101:SER:HB3	2.17	0.45
57:BZ:446:THR:HG23	57:BZ:448:GLN:HG2	1.98	0.45
57:BZ:526:VAL:HG23	57:BZ:566:THR:HG23	1.98	0.45
1:CA:1249:U:H2'	13:CP:18:ARG:HH22	1.82	0.45
1:CA:1352:U:P	63:CA:3759:HOH:O	2.73	0.45
1:CA:1690:A:H2'	1:CA:1691:C:O4'	2.17	0.45
1:CA:1709:U:O4'	1:CA:2860:A:H1'	2.17	0.45
1:CA:1805:U:O2	4:CD:50:THR:HB	2.17	0.45
1:CA:2070:G:H2'	1:CA:2071:A:C8	2.52	0.45
1:CA:2660:A:N6	57:DZ:634:MET:H	2.15	0.45
1:CA:2869:G:H2'	1:CA:2870:C:C6	2.52	0.45
3:CC:16:ASP:OD2	3:CC:19:LYS:HB2	2.17	0.45
3:CC:176:VAL:O	3:CC:176:VAL:HG12	2.15	0.45
4:CD:126:GLN:HA	4:CD:126:GLN:NE2	2.32	0.45
7:CG:142:PRO:HB3	28:C4:14:ILE:HD11	1.99	0.45
12:CO:44:LYS:HA	12:CO:44:LYS:HD3	1.70	0.45
17:CT:28:VAL:O	17:CT:46:GLU:HA	2.17	0.45
34:DA:11:G:C5	34:DA:12:U:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:355:C:H2'	34:DA:356:A:O4'	2.17	0.45
34:DA:414:A:N6	34:DA:431:A:N3	2.65	0.45
34:DA:542:G:OP1	37:DD:10:ARG:NH2	2.50	0.45
34:DA:618:C:N3	34:DA:622:A:N6	2.63	0.45
34:DA:663:A:O3'	51:DR:64:ARG:NH2	2.50	0.45
34:DA:1387:G:H2'	34:DA:1388:C:H6	1.81	0.45
35:DB:172:ILE:O	35:DB:176:GLU:N	2.32	0.45
42:DI:17:VAL:HG22	42:DI:63:ILE:HG12	1.98	0.45
57:DZ:-20:LEU:HD23	57:DZ:-20:LEU:HA	1.76	0.45
57:DZ:284:LEU:HD22	57:DZ:284:LEU:H	1.82	0.45
1:AA:954:C:C2'	1:AA:955:A:H5'	2.47	0.45
1:AA:1506:G:H5"	1:AA:1507:A:OP2	2.17	0.45
1:AA:1544:C:O4'	1:AA:1624:C:H4'	2.17	0.45
1:AA:1936:C:O2'	1:AA:1937:U:OP1	2.33	0.45
3:AC:16:ASP:OD2	3:AC:19:LYS:HB2	2.17	0.45
3:AC:22:THR:HG23	3:AC:25:GLU:OE1	2.17	0.45
3:AC:179:ALA:O	3:AC:180:SER:O	2.35	0.45
6:AF:20:LEU:HD22	6:AF:21:ALA:N	2.32	0.45
7:AG:80:PHE:HB2	7:AG:82:LEU:HB2	1.98	0.45
7:AG:114:ILE:HA	7:AG:140:ILE:HD11	1.98	0.45
19:AV:22:VAL:HG23	19:AV:23:GLU:O	2.16	0.45
32:A8:4:MET:HE3	32:A8:63:PRO:HG3	1.99	0.45
34:BA:39:G:N7	34:BA:547:A:H8	2.15	0.45
34:BA:537:G:H2'	34:BA:538:G:C8	2.49	0.45
34:BA:748:C:O2'	34:BA:749:C:OP2	2.30	0.45
34:BA:1216:G:OP1	47:BN:2:ALA:HB3	2.17	0.45
36:BC:85:ARG:O	36:BC:89:GLU:HG2	2.17	0.45
42:BI:83:ARG:O	42:BI:86:VAL:HG22	2.17	0.45
44:BK:105:VAL:HG23	44:BK:105:VAL:O	2.17	0.45
49:BP:7:ALA:HB2	49:BP:20:VAL:HG11	1.98	0.45
57:BZ:-16:ILE:O	57:BZ:-13:GLN:HB3	2.16	0.45
57:BZ:70:THR:O	57:BZ:81:ILE:N	2.45	0.45
1:CA:862:G:H5'	2:CB:79:C:H4'	1.99	0.45
1:CA:945:A:C4	1:CA:2448:A:C2	3.05	0.45
1:CA:1682:G:H2'	1:CA:1683:C:C6	2.52	0.45
1:CA:1721:G:H8	1:CA:1741:A:H62	1.65	0.45
1:CA:2136:C:HO2'	1:CA:2137:C:C5'	2.30	0.45
1:CA:2336:A:H61	24:C0:43:THR:CG2	2.30	0.45
1:CA:2646:C:H2'	1:CA:2647:U:O4'	2.16	0.45
5:CE:143:ASN:HD22	5:CE:147:PRO:HD3	1.81	0.45
16:CS:63:THR:HG23	16:CS:64:GLU:HG3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CU:76:TYR:CZ	18:CU:80:ILE:HG13	2.52	0.45
25:C1:23:LYS:HB3	25:C1:29:GLY:HA3	1.98	0.45
26:C2:21:LEU:HA	26:C2:21:LEU:HD23	1.72	0.45
34:DA:265:G:H2'	34:DA:267:C:H5	1.82	0.45
34:DA:577:G:O2'	34:DA:578:C:H5'	2.17	0.45
34:DA:834:C:H2'	34:DA:835:U:C6	2.52	0.45
38:DE:103:GLY:H	38:DE:106:PRO:HG2	1.81	0.45
44:DK:89:ALA:C	44:DK:91:ARG:H	2.25	0.45
48:DO:78:TYR:C	48:DO:80:ALA:N	2.73	0.45
50:DQ:10:VAL:HG13	50:DQ:19:VAL:HB	1.99	0.45
57:DZ:168:ILE:HG23	57:DZ:205:TYR:CE2	2.52	0.45
1:AA:63:A:O3'	21:AX:71:GLY:HA3	2.17	0.44
1:AA:493:G:OP1	31:A7:33:ARG:HD2	2.17	0.44
1:AA:789:G:H4'	1:AA:1723:A:H5'	1.98	0.44
1:AA:1047:A:OP2	63:AA:3947:HOH:O	2.21	0.44
1:AA:2143:G:O2'	3:AC:168:LYS:HB3	2.17	0.44
18:AU:59:ARG:NH1	18:AU:59:ARG:HG2	2.32	0.44
34:BA:255:G:H2'	34:BA:256:U:C6	2.52	0.44
34:BA:584:G:OP2	50:BQ:87:LYS:NZ	2.46	0.44
34:BA:814:A:H2'	34:BA:816:A:H5"	1.98	0.44
34:BA:999:C:H42	34:BA:1042:G:H1	1.65	0.44
34:BA:1236:A:H2'	34:BA:1237:C:C6	2.52	0.44
50:BQ:41:LYS:HZ3	50:BQ:92:ARG:NH2	2.14	0.44
56:BY:28:G:H2'	56:BY:29:G:C8	2.52	0.44
1:CA:253:C:OP2	32:C8:5:LYS:NZ	2.42	0.44
1:CA:696:G:O2'	1:CA:697:C:H5'	2.16	0.44
1:CA:996:A:N6	1:CA:1160:G:C6	2.85	0.44
1:CA:997:G:OP1	18:CU:92:ARG:HG2	2.17	0.44
1:CA:1053:C:H2'	1:CA:1054:A:O5'	2.17	0.44
1:CA:2465:C:O2	1:CA:2486:G:C2	2.70	0.44
6:CF:170:LEU:O	6:CF:173:VAL:N	2.39	0.44
7:CG:5:VAL:HG12	28:C4:25:TYR:CE1	2.51	0.44
10:CL:100:THR:C	10:CL:102:GLU:H	2.25	0.44
20:CW:70:TYR:O	20:CW:107:LEU:HD12	2.17	0.44
21:CX:32:PRO:O	21:CX:77:LYS:HD3	2.16	0.44
22:CY:88:LYS:HB3	22:CY:88:LYS:HE2	1.79	0.44
23:CZ:9:TYR:CE1	23:CZ:61:LEU:HD12	2.53	0.44
23:CZ:73:GLN:HB3	23:CZ:87:ASP:CB	2.47	0.44
25:C1:21:ARG:HH11	25:C1:21:ARG:CG	2.29	0.44
28:C4:59:PHE:N	28:C4:60:GLN:HB2	2.32	0.44
34:DA:416:G:C5	34:DA:417:C:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:601:C:C2	34:DA:638:G:N2	2.85	0.44
34:DA:612:C:H2'	34:DA:613:C:H6	1.81	0.44
34:DA:980:C:H1'	47:DN:19:ARG:HA	1.99	0.44
34:DA:1162:C:C2	34:DA:1175:G:C2	3.05	0.44
34:DA:1255:G:P	43:DJ:45:ARG:HH22	2.39	0.44
35:DB:22:LYS:HD2	35:DB:35:GLU:OE2	2.17	0.44
40:DG:101:LEU:O	40:DG:105:VAL:HG23	2.16	0.44
41:DH:51:VAL:HG12	41:DH:52:ASP:N	2.31	0.44
57:DZ:229:LEU:HA	57:DZ:232:LEU:HD23	1.97	0.44
57:DZ:319:ASP:HA	57:DZ:320:PRO:HD3	1.82	0.44
57:DZ:343:ASN:HD21	57:DZ:383:THR:HG23	1.81	0.44
58:DX:4:PRO:HA	58:DX:5:MVA:HN1	1.55	0.44
1:AA:1154:U:O2'	1:AA:1155:C:C6	2.70	0.44
1:AA:2027:A:H5"	1:AA:2028:C:OP2	2.17	0.44
1:AA:2589:A:O4'	29:A5:3:LYS:HB2	2.17	0.44
4:AD:89:SER:HB2	4:AD:159:ALA:CB	2.47	0.44
12:AO:105:GLU:O	12:AO:109:LYS:HG3	2.17	0.44
13:AP:95:VAL:HG13	13:AP:125:VAL:HB	1.99	0.44
15:AR:104:ARG:NH1	15:AR:107:ASP:OD2	2.51	0.44
17:AT:106:SER:OG	17:AT:109:GLU:HG3	2.17	0.44
18:AU:59:ARG:HG2	18:AU:59:ARG:HH11	1.81	0.44
34:BA:323:U:H2'	34:BA:324:G:O4'	2.18	0.44
34:BA:394:G:H2'	34:BA:395:C:H6	1.83	0.44
34:BA:921:U:O2	38:BE:19:MET:HB2	2.18	0.44
56:BY:48:C:OP1	56:BY:48:C:H2'	2.17	0.44
1:CA:83:G:O2'	1:CA:102:G:N2	2.44	0.44
1:CA:139:G:H21	21:CX:41:ASN:ND2	2.15	0.44
1:CA:639:U:H2'	1:CA:640:C:C6	2.51	0.44
1:CA:1094:U:N3	1:CA:1097:U:OP2	2.49	0.44
1:CA:1131:G:O6	1:CA:2040:C:H1'	2.17	0.44
1:CA:2128:C:P	3:CC:219:MET:CE	2.89	0.44
3:CC:30:VAL:CG2	3:CC:31:LYS:N	2.78	0.44
3:CC:39:ASP:O	3:CC:178:LYS:HE3	2.17	0.44
12:CO:89:ASN:ND2	12:CO:89:ASN:H	2.15	0.44
14:CQ:59:ARG:HB2	23:CZ:180:VAL:H	1.82	0.44
22:CY:98:VAL:HG23	22:CY:99:CYS:O	2.17	0.44
34:DA:474:G:H2'	34:DA:475:G:H8	1.83	0.44
34:DA:481:G:H21	34:DA:482:A:N6	2.16	0.44
34:DA:688:G:H2'	34:DA:689:C:H6	1.82	0.44
34:DA:1321:C:H4'	46:DM:87:TYR:CE2	2.53	0.44
35:DB:50:GLU:O	35:DB:54:THR:OG1	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DC:10:PHE:HD1	47:DN:58:LYS:NZ	2.15	0.44
37:DD:42:GLN:O	37:DD:42:GLN:HG2	2.17	0.44
41:DH:64:LYS:HB2	41:DH:64:LYS:HE3	1.83	0.44
49:DP:39:TYR:CE1	49:DP:73:LEU:HD22	2.52	0.44
53:DT:26:ASN:OD1	53:DT:71:THR:HG23	2.17	0.44
56:DW:39:PSU:OP2	56:DW:39:PSU:H6	2.00	0.44
1:AA:904:C:H4'	24:A0:23:VAL:HG21	1.98	0.44
1:AA:2143:G:C4'	3:AC:168:LYS:NZ	2.81	0.44
1:AA:2416:C:O3'	13:AP:77:ARG:NH2	2.50	0.44
1:AA:2418:U:H6	1:AA:2418:U:H2'	1.61	0.44
4:AD:61:LEU:HD13	4:AD:61:LEU:HA	1.71	0.44
8:AH:3:ARG:NH1	8:AH:54:ARG:HH12	2.15	0.44
15:AR:65:LEU:O	15:AR:68:ARG:HB2	2.17	0.44
17:AT:33:LYS:O	17:AT:82:LEU:HD23	2.17	0.44
34:BA:134:A:N6	49:BP:25:ARG:NH1	2.58	0.44
34:BA:397:A:N6	34:BA:548:G:C5	2.85	0.44
34:BA:453:A:C5	34:BA:454:C:C4	3.05	0.44
34:BA:540:G:H2'	34:BA:541:G:O4'	2.18	0.44
34:BA:827:U:H2'	34:BA:859:A:H61	1.83	0.44
34:BA:954:G:H2'	34:BA:955:U:O4'	2.17	0.44
34:BA:1128:C:H1'	34:BA:1147:C:H42	1.83	0.44
34:BA:1347:G:C8	42:BI:107:ARG:HB2	2.53	0.44
36:BC:91:LEU:HD22	36:BC:101:LEU:HD22	1.99	0.44
38:BE:110:LEU:HD13	38:BE:118:ILE:HD13	2.00	0.44
40:BG:29:LYS:HB3	40:BG:105:VAL:HG21	1.99	0.44
41:BH:5:PRO:O	41:BH:8:ASP:HB3	2.16	0.44
42:BI:18:PHE:HD2	42:BI:62:TYR:HB3	1.82	0.44
42:BI:93:ARG:NH1	42:BI:93:ARG:HB2	2.32	0.44
50:BQ:53:LEU:HD23	50:BQ:82:MET:HE1	1.98	0.44
51:BR:34:TYR:CE1	51:BR:35:ARG:HD3	2.52	0.44
57:BZ:600:VAL:HA	57:BZ:684:GLN:NE2	2.32	0.44
1:CA:265:A:H8	1:CA:266:G:H1'	1.80	0.44
1:CA:433:C:H2'	1:CA:434:U:C6	2.52	0.44
1:CA:1013:C:H2'	1:CA:1014:U:C6	2.53	0.44
1:CA:2191:G:H2'	1:CA:2192:G:O4'	2.17	0.44
4:CD:156:ALA:C	4:CD:157:ARG:HG2	2.41	0.44
16:CS:34:HIS:ND1	16:CS:54:LEU:HB2	2.32	0.44
22:CY:68:HIS:O	22:CY:70:SER:N	2.51	0.44
23:CZ:111:VAL:O	23:CZ:112:ARG:HB3	2.17	0.44
34:DA:56:U:H2'	34:DA:57:G:H8	1.81	0.44
34:DA:66:G:C2	34:DA:67:C:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:113:G:O4'	34:DA:354:G:H4'	2.16	0.44
34:DA:1121:U:O5'	34:DA:1121:U:H6	2.00	0.44
34:DA:1183:A:H4'	34:DA:1184:G:OP2	2.17	0.44
34:DA:1324:A:H4'	34:DA:1362:C:O3'	2.17	0.44
36:DC:26:LYS:HE3	36:DC:26:LYS:HB3	1.64	0.44
37:DD:98:GLU:O	37:DD:100:ARG:N	2.51	0.44
41:DH:92:ARG:HB3	41:DH:94:TYR:CE2	2.52	0.44
47:DN:37:PHE:HE2	47:DN:53:LEU:HD22	1.83	0.44
57:DZ:74:TRP:HA	57:DZ:74:TRP:CE3	2.52	0.44
57:DZ:343:ASN:ND2	57:DZ:383:THR:HG23	2.33	0.44
57:DZ:356:LEU:HD12	57:DZ:356:LEU:HA	1.74	0.44
1:AA:116:A:O5'	1:AA:117:A:H5"	2.17	0.44
1:AA:387:G:H2'	1:AA:388:A:C8	2.49	0.44
1:AA:701:A:O2'	1:AA:702:A:H5'	2.17	0.44
1:AA:1117:G:H1'	1:AA:1135:G:C8	2.53	0.44
1:AA:1278:G:C6	1:AA:1279:C:C4	3.06	0.44
1:AA:1402:G:O6	63:AA:3946:HOH:O	2.21	0.44
1:AA:1529:G:N2	1:AA:1530:G:C4	2.86	0.44
1:AA:2274:U:OP2	24:A0:16:SER:OG	2.23	0.44
1:AA:2602:A:H2'	1:AA:2603:C:C6	2.52	0.44
6:AF:122:LYS:HB3	6:AF:191:ARG:HG2	1.99	0.44
8:AH:154:PRO:HB3	8:AH:163:TYR:CZ	2.52	0.44
13:AP:112:LEU:HD13	13:AP:127:ALA:HB2	1.99	0.44
17:AT:128:GLU:O	17:AT:130:ALA:N	2.51	0.44
23:AZ:157:LEU:HD22	23:AZ:161:VAL:HG12	1.99	0.44
34:BA:472:A:O2'	49:BP:81:ARG:HA	2.18	0.44
34:BA:837:G:C2	34:BA:850:U:O2	2.70	0.44
34:BA:1129:C:C2	34:BA:1139:G:C6	3.06	0.44
34:BA:1237:C:O2'	34:BA:1300:G:N2	2.45	0.44
34:BA:1248:A:N3	42:BI:70:LYS:HE3	2.33	0.44
34:BA:1429:C:H2'	34:BA:1430:C:C6	2.52	0.44
35:BB:138:LEU:HA	35:BB:141:GLU:HB3	1.99	0.44
39:BF:62:TRP:CH2	39:BF:64:GLN:HB2	2.52	0.44
41:BH:58:TYR:O	41:BH:59:LEU:HD23	2.18	0.44
43:BJ:7:LYS:O	43:BJ:8:LEU:HD23	2.17	0.44
44:BK:102:GLY:O	44:BK:103:LEU:HD23	2.16	0.44
57:BZ:21:ILE:H	57:BZ:21:ILE:HG12	1.48	0.44
57:BZ:251:ILE:C	57:BZ:253:LEU:H	2.25	0.44
57:BZ:403:GLU:HG2	57:BZ:404:VAL:HG22	1.99	0.44
1:CA:308:G:H2'	1:CA:309:G:O4'	2.17	0.44
1:CA:704:G:N3	1:CA:726:G:C2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:915:C:H2'	1:CA:916:G:H5'	1.99	0.44
1:CA:1231:G:H2'	1:CA:1232:G:C8	2.52	0.44
1:CA:2055:C:OP1	29:C5:8:LYS:NZ	2.39	0.44
1:CA:2729:G:H2'	1:CA:2730:C:H6	1.82	0.44
3:CC:179:ALA:O	3:CC:180:SER:O	2.35	0.44
7:CG:97:ASP:O	7:CG:100:TRP:N	2.50	0.44
8:CH:17:VAL:O	8:CH:45:VAL:HG21	2.18	0.44
10:CL:117:THR:HG21	10:CL:126:MET:SD	2.58	0.44
13:CP:95:VAL:HG22	13:CP:125:VAL:HB	1.98	0.44
14:CQ:56:ARG:HE	14:CQ:56:ARG:HB3	1.36	0.44
15:CR:57:ARG:NE	15:CR:59:ASP:OD1	2.42	0.44
17:CT:90:GLN:OE1	17:CT:91:ARG:N	2.38	0.44
20:CW:60:ASN:N	20:CW:60:ASN:ND2	2.65	0.44
34:DA:102:G:H2'	34:DA:103:C:C6	2.53	0.44
34:DA:448:A:C2	34:DA:449:C:C2	3.05	0.44
34:DA:522:C:H41	45:DL:53:ARG:NH2	2.06	0.44
34:DA:838:G:N2	34:DA:849:C:O2	2.51	0.44
39:DF:19:LEU:O	39:DF:19:LEU:HD23	2.17	0.44
40:DG:125:MET:HE2	40:DG:125:MET:HB3	1.80	0.44
42:DI:17:VAL:HG11	42:DI:81:ILE:HA	1.99	0.44
48:DO:63:ARG:O	48:DO:67:LEU:HD12	2.17	0.44
1:AA:334:A:C2	1:AA:354:A:C4	3.05	0.44
1:AA:907:U:H1'	1:AA:2280:A:H5'	1.99	0.44
1:AA:1417:G:C2'	1:AA:1418:U:H5	2.30	0.44
1:AA:1833:A:N1	1:AA:1853:G:H1'	2.32	0.44
2:AB:30:C:H2'	2:AB:31:C:H5'	1.98	0.44
6:AF:198:ALA:HA	6:AF:201:VAL:HG13	2.00	0.44
7:AG:126:ASP:CG	7:AG:130:ASN:HB2	2.42	0.44
8:AH:83:TYR:CE1	8:AH:138:LYS:HD2	2.53	0.44
8:AH:121:ILE:HD13	8:AH:121:ILE:HA	1.75	0.44
17:AT:24:PRO:HA	17:AT:49:VAL:O	2.18	0.44
23:AZ:183:LEU:HA	23:AZ:183:LEU:HD12	1.42	0.44
28:A4:35:VAL:HG22	28:A4:36:CYS:N	2.31	0.44
28:A4:53:GLU:HB2	28:A4:54:GLY:O	2.17	0.44
34:BA:401:C:H1'	34:BA:622:A:H1'	2.00	0.44
34:BA:559:A:P	38:BE:126:ARG:HH22	2.41	0.44
34:BA:1464:G:H2'	34:BA:1465:C:H6	1.83	0.44
35:BB:178:ARG:HH12	41:BH:68:ARG:HH22	1.65	0.44
37:BD:202:LEU:HD23	37:BD:202:LEU:HA	1.68	0.44
43:BJ:18:ALA:HA	43:BJ:21:GLN:HB2	1.98	0.44
49:BP:4:ILE:N	49:BP:65:GLN:O	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BS:40:ILE:HG12	52:BS:71:LEU:HD12	1.97	0.44
57:BZ:130:VAL:HA	57:BZ:131:PRO:HD3	1.78	0.44
57:BZ:160:ARG:HD3	57:BZ:254:LYS:C	2.43	0.44
57:BZ:600:VAL:HG23	57:BZ:684:GLN:OE1	2.17	0.44
1:CA:332:A:C2	1:CA:335:C:C5	3.05	0.44
1:CA:887:A:OP1	1:CA:888:C:N4	2.50	0.44
1:CA:1221(A):C:N3	1:CA:1229:G:C2	2.85	0.44
1:CA:1420:U:O2'	1:CA:1421:G:OP1	2.33	0.44
1:CA:1448:G:H21	1:CA:1528(A):A:H2	1.63	0.44
1:CA:1796:U:H2'	1:CA:1797:C:C6	2.53	0.44
1:CA:2070:G:C2	1:CA:2442:C:C2	3.06	0.44
6:CF:120:GLU:OE1	6:CF:122:LYS:HG3	2.18	0.44
7:CG:19:LEU:HD11	7:CG:172:LEU:HB2	2.00	0.44
13:CP:44:GLY:HA2	13:CP:45:LEU:HB2	1.99	0.44
13:CP:65:ARG:HG3	32:C8:25:MET:CG	2.48	0.44
13:CP:81:GLN:NE2	13:CP:105:LEU:O	2.51	0.44
14:CQ:8:LYS:HG2	14:CQ:9:TYR:CE2	2.52	0.44
19:CV:98:GLU:OE1	19:CV:100:ARG:HD3	2.16	0.44
20:CW:65:LEU:HD12	20:CW:68:ARG:HE	1.81	0.44
23:CZ:119:GLU:OE2	23:CZ:122:ARG:NH1	2.50	0.44
24:C0:82:ARG:HB2	24:C0:82:ARG:NH1	2.32	0.44
34:DA:377:G:C2'	34:DA:378:G:H5'	2.47	0.44
34:DA:598:U:H4'	41:DH:94:TYR:CD1	2.52	0.44
34:DA:1085:U:O4'	34:DA:1094:G:N1	2.50	0.44
34:DA:1147:C:H4'	42:DI:5:TYR:CE2	2.53	0.44
34:DA:1228:C:H2'	34:DA:1229:A:C8	2.52	0.44
35:DB:15:VAL:HB	35:DB:209:ARG:HB3	1.98	0.44
35:DB:162:ILE:HG13	35:DB:184:VAL:HG13	1.99	0.44
36:DC:157:ILE:HG21	36:DC:164:ARG:HH21	1.83	0.44
39:DF:62:TRP:CD1	51:DR:35:ARG:CZ	3.00	0.44
49:DP:75:ARG:HG3	49:DP:80:PHE:CD2	2.52	0.44
1:AA:469:A:C6	6:AF:45:ARG:HD2	2.52	0.44
1:AA:937:A:C5	1:AA:938:G:C8	3.06	0.44
1:AA:1075:A:N1	1:AA:2477:C:O2'	2.48	0.44
1:AA:2442:A:H2'	1:AA:2442:A:N3	2.32	0.44
1:AA:2564:U:H2'	1:AA:2566:U:OP2	2.18	0.44
1:AA:2722:C:H2'	1:AA:2723:A:C8	2.52	0.44
5:AE:1:MET:HE1	5:AE:200:GLU:O	2.16	0.44
5:AE:51:PHE:CE2	5:AE:52:LEU:HG	2.53	0.44
5:AE:73:GLU:HA	5:AE:74:PRO:HD3	1.86	0.44
12:AO:49:ARG:HH22	34:BA:1423:G:P	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AT:107:ASP:HA	17:AT:110:ILE:HD12	1.99	0.44
22:AY:97:ARG:HB2	22:AY:97:ARG:HH11	1.82	0.44
23:AZ:110:GLY:HA3	23:AZ:174:VAL:HG11	2.00	0.44
25:A1:78:LYS:C	25:A1:80:LEU:H	2.26	0.44
28:A4:55:ARG:HA	28:A4:55:ARG:HD3	1.72	0.44
34:BA:450:G:C8	34:BA:481:G:C6	3.05	0.44
34:BA:805:C:H2'	34:BA:806:C:H5'	2.00	0.44
34:BA:1059:C:OP2	36:BC:199:LYS:NZ	2.33	0.44
41:BH:25:ASP:OD1	41:BH:60:ARG:HG3	2.17	0.44
46:BM:29:ARG:HH11	46:BM:64:TRP:CG	2.35	0.44
46:BM:59:TYR:O	46:BM:63:THR:OG1	2.34	0.44
52:BS:41:VAL:HG13	52:BS:42:PRO:HD2	2.00	0.44
52:BS:48:THR:O	52:BS:48:THR:OG1	2.24	0.44
1:CA:262:A:H2'	1:CA:263:C:O4'	2.18	0.44
1:CA:530:G:C6	1:CA:2022:U:H5"	2.53	0.44
1:CA:836:G:C6	1:CA:837:C:C4	3.06	0.44
1:CA:848:G:N9	1:CA:933:A:H8	2.16	0.44
1:CA:851:U:C5'	27:C3:49:LYS:HD2	2.47	0.44
1:CA:861:A:C2	1:CA:917:A:C4	3.05	0.44
1:CA:1488:G:C6	1:CA:1489:U:N3	2.86	0.44
1:CA:1500:G:C6	1:CA:1501:C:C4	3.05	0.44
1:CA:1641:A:H2'	1:CA:1642:G:O4'	2.18	0.44
1:CA:2274:A:O2'	1:CA:2276:G:OP1	2.34	0.44
1:CA:2721:A:H2'	1:CA:2722:G:O4'	2.18	0.44
3:CC:22:THR:HG23	3:CC:25:GLU:OE1	2.17	0.44
4:CD:153:ALA:O	4:CD:157:ARG:NH1	2.51	0.44
4:CD:265:PRO:O	4:CD:267:SER:N	2.51	0.44
5:CE:163:GLU:HG2	5:CE:164:ARG:N	2.33	0.44
7:CG:142:PRO:HG2	7:CG:143:GLU:OE1	2.18	0.44
11:CN:34:LEU:HD12	11:CN:34:LEU:HA	1.48	0.44
16:CS:4:LEU:HD22	16:CS:8:GLU:OE2	2.16	0.44
28:C4:33:VAL:HG12	28:C4:34:GLU:H	1.81	0.44
34:DA:235:C:H2'	34:DA:236:G:H8	1.83	0.44
34:DA:421:U:OP2	34:DA:422:C:H5	2.00	0.44
34:DA:438:G:H4'	37:DD:123:HIS:ND1	2.33	0.44
34:DA:579:G:H2'	34:DA:580:U:C6	2.53	0.44
34:DA:599:C:H5"	41:DH:95:VAL:O	2.17	0.44
37:DD:105:VAL:HG21	37:DD:126:ILE:HD12	2.00	0.44
54:DU:9:ARG:O	54:DU:13:ILE:HG13	2.17	0.44
56:DY:55:PSU:HN1	56:DY:57:G:H5'	1.82	0.44
57:DZ:170:ARG:HA	57:DZ:170:ARG:HD3	1.77	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:610:VAL:HG11	57:DZ:655:TYR:OH	2.17	0.44
1:AA:154:G:C6	1:AA:155:C:N4	2.86	0.44
1:AA:438:G:C5	13:AP:72:PRO:HB3	2.53	0.44
1:AA:990:A:C2	63:AA:4224:HOH:O	2.56	0.44
1:AA:1093:G:HO2'	1:AA:1156:G:H1	1.66	0.44
1:AA:1730:C:H2'	1:AA:1731:C:C6	2.52	0.44
1:AA:1752:G:C6	1:AA:1753:U:C4	3.05	0.44
1:AA:1765:U:H2'	1:AA:1766:G:O4'	2.18	0.44
3:AC:5:GLY:O	3:AC:6:LYS:C	2.61	0.44
8:AH:41:MET:HB3	8:AH:41:MET:HE3	1.80	0.44
10:AL:105:LEU:HD22	10:AL:120:LEU:HD22	1.99	0.44
13:AP:71:VAL:HA	13:AP:72:PRO:HA	1.64	0.44
20:AW:20:VAL:HG11	20:AW:44:ALA:HA	2.00	0.44
34:BA:1179:A:O3'	42:BI:103:THR:OG1	2.34	0.44
34:BA:1183:A:H3'	34:BA:1184:G:C5'	2.46	0.44
46:BM:15:VAL:HG12	46:BM:19:LEU:CD1	2.47	0.44
49:BP:17:TYR:CE2	49:BP:41:PRO:HG3	2.52	0.44
49:BP:20:VAL:HG22	49:BP:21:VAL:N	2.31	0.44
50:BQ:84:LEU:O	50:BQ:87:LYS:HB2	2.18	0.44
57:BZ:123:ARG:CZ	57:BZ:123:ARG:HB2	2.46	0.44
57:BZ:405:PRO:HG2	57:BZ:439:ARG:NH2	2.33	0.44
1:CA:110:G:N3	1:CA:111:A:C8	2.86	0.44
1:CA:243:U:OP1	32:C8:6:THR:OG1	2.33	0.44
1:CA:657:U:H2'	1:CA:658:C:C6	2.53	0.44
1:CA:853:G:H1	1:CA:924:C:H42	1.66	0.44
1:CA:992:C:OP1	19:CV:74:LYS:NZ	2.29	0.44
1:CA:1241:A:C2	1:CA:1242:A:C5	3.05	0.44
1:CA:1641:A:N6	1:CA:1642:G:C2	2.86	0.44
1:CA:2136:C:O2'	1:CA:2137:C:O5'	2.31	0.44
1:CA:2392:A:OP2	32:C8:31:HIS:NE2	2.47	0.44
1:CA:2544:G:H1'	1:CA:2646:C:H4'	1.99	0.44
1:CA:2743:C:H2'	1:CA:2744:G:O4'	2.18	0.44
1:CA:2785:C:OP1	5:CE:41:LYS:NZ	2.38	0.44
3:CC:30:VAL:CG2	3:CC:31:LYS:H	2.27	0.44
3:CC:194:ILE:HD11	3:CC:227:PRO:HB2	1.99	0.44
5:CE:111:ARG:HD2	5:CE:160:TYR:CE2	2.51	0.44
7:CG:96:ARG:H	7:CG:99:MET:HE2	1.82	0.44
7:CG:138:GLN:OE1	7:CG:153:ARG:N	2.51	0.44
10:CL:90:LYS:HA	10:CL:91:PRO:HD3	1.70	0.44
12:CO:77:ILE:HG13	17:CT:74:ARG:HG2	1.99	0.44
12:CO:97:ARG:CZ	12:CO:99:PHE:HE2	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CZ:98:MET:HE2	23:CZ:98:MET:HB2	1.83	0.44
23:CZ:99:TYR:CE2	23:CZ:125:LEU:HD13	2.53	0.44
23:CZ:132:ASN:O	23:CZ:134:PRO:HD3	2.18	0.44
34:DA:46:G:H2'	34:DA:366:C:H5	1.82	0.44
34:DA:444:C:H2'	34:DA:445:G:C8	2.53	0.44
34:DA:690:G:H2'	34:DA:691:G:O4'	2.17	0.44
34:DA:1375:A:H2'	34:DA:1376:U:O4'	2.17	0.44
49:DP:22:THR:HG23	49:DP:23:ASP:O	2.18	0.44
57:DZ:74:TRP:CD1	57:DZ:273:LEU:HB3	2.53	0.44
57:DZ:129:LYS:HA	57:DZ:253:LEU:HD21	1.99	0.44
57:DZ:325:LEU:HD23	57:DZ:327:PHE:CZ	2.53	0.44
57:DZ:630:GLN:HG2	57:DZ:646:PHE:O	2.18	0.44
1:AA:975:U:H4'	1:AA:976:G:O5'	2.18	0.44
1:AA:1686:U:O2'	1:AA:1687:C:H5'	2.18	0.44
1:AA:2768:C:C4	33:A9:19:ARG:NH1	2.86	0.44
4:AD:242:ARG:HG2	4:AD:246:PRO:HG3	1.99	0.44
8:AH:88:LEU:HA	8:AH:88:LEU:HD13	1.68	0.44
18:AU:76:TYR:CZ	18:AU:80:ILE:HG13	2.53	0.44
34:BA:1233:G:H2'	34:BA:1234:C:H6	1.79	0.44
35:BB:209:ARG:O	35:BB:212:GLN:HB2	2.18	0.44
39:BF:49:ALA:N	51:BR:77:GLY:O	2.28	0.44
40:BG:57:GLU:HA	40:BG:58:PRO:HD2	1.89	0.44
41:BH:37:ARG:HE	41:BH:37:ARG:HB3	1.34	0.44
57:BZ:-2:ALA:O	57:BZ:0:ARG:N	2.51	0.44
57:BZ:110:SER:HB2	57:BZ:137:ASN:O	2.16	0.44
57:BZ:363:ARG:HH11	57:BZ:363:ARG:CB	2.31	0.44
1:CA:328:U:H4'	22:CY:68:HIS:CG	2.53	0.44
1:CA:873:G:N2	1:CA:905:U:O2	2.51	0.44
1:CA:1045:A:O4'	1:CA:1047:G:H8	2.01	0.44
1:CA:1297:C:OP1	1:CA:2710:C:H4'	2.18	0.44
1:CA:1363:C:H2'	1:CA:1364:G:C8	2.52	0.44
1:CA:1512:U:H2'	1:CA:1513:C:C6	2.50	0.44
1:CA:2415:G:C6	1:CA:2416:C:C4	3.06	0.44
1:CA:2660:A:H2'	1:CA:2661:G:O4'	2.18	0.44
1:CA:2869:G:H8	1:CA:2869:G:O5'	2.00	0.44
14:CQ:139:GLU:OE1	14:CQ:139:GLU:N	2.50	0.44
19:CV:76:LYS:HB2	19:CV:81:TYR:HD2	1.82	0.44
20:CW:75:TYR:CE1	20:CW:104:THR:HB	2.53	0.44
22:CY:29:GLU:HB3	22:CY:38:ILE:HG13	1.99	0.44
24:C0:23:VAL:HG22	24:C0:38:VAL:HG22	2.00	0.44
25:C1:83:GLU:HA	25:C1:84:GLY:HA2	1.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:C7:11:LYS:O	31:C7:15:THR:HB	2.18	0.44
34:DA:1479:C:H2'	34:DA:1480:G:C8	2.52	0.44
34:DA:1483:A:H2'	34:DA:1484:C:O4'	2.18	0.44
35:DB:175:ARG:O	35:DB:179:LYS:HB2	2.17	0.44
37:DD:158:ILE:O	37:DD:162:LEU:HB2	2.18	0.44
38:DE:75:THR:HG23	38:DE:76:ILE:O	2.18	0.44
43:DJ:37:PRO:HA	43:DJ:72:VAL:HG13	1.99	0.44
51:DR:52:PRO:O	51:DR:56:THR:HG23	2.17	0.44
56:DY:51:U:O2	56:DY:63:G:N2	2.33	0.44
57:DZ:6:GLU:HA	57:DZ:9:LEU:CD2	2.48	0.44
1:AA:85:C:O2'	1:AA:86:C:H5'	2.18	0.44
1:AA:310:C:C2'	1:AA:311:C:H5'	2.48	0.44
1:AA:415:G:O2'	1:AA:416:G:N7	2.38	0.44
1:AA:1410:G:C8	25:A1:3:LYS:HE2	2.52	0.44
1:AA:1550:C:H2'	1:AA:1551:C:C6	2.52	0.44
1:AA:1553:A:HO2'	1:AA:1554:A:P	2.41	0.44
1:AA:1781:G:N3	1:AA:2870:A:H2	2.15	0.44
1:AA:2181:G:H2'	1:AA:2182:G:H8	1.83	0.44
1:AA:2213:G:H5'	1:AA:2214:G:OP2	2.18	0.44
1:AA:2584:A:N7	5:AE:144:ARG:HD2	2.32	0.44
2:AB:66:A:C6	2:AB:109:C:C6	3.06	0.44
3:AC:39:ASP:O	3:AC:178:LYS:HE3	2.17	0.44
4:AD:223:GLY:HA3	4:AD:231:HIS:CE1	2.53	0.44
4:AD:227:ASN:C	4:AD:234:GLY:HA3	2.43	0.44
5:AE:68:ALA:C	5:AE:70:ALA:N	2.76	0.44
22:AY:96:ILE:HD12	22:AY:98:VAL:CG1	2.48	0.44
24:A0:10:THR:CG2	24:A0:12:ASN:HB2	2.48	0.44
34:BA:149:A:H2'	34:BA:150:C:C6	2.52	0.44
34:BA:192:U:H2'	34:BA:193:C:C6	2.53	0.44
34:BA:322:C:O3'	53:BT:23:ARG:HB2	2.17	0.44
34:BA:502:G:OP1	45:BL:116:SER:HA	2.18	0.44
34:BA:1112:C:H1'	36:BC:179:ARG:HG2	2.00	0.44
34:BA:1112:C:N3	36:BC:178:LEU:N	2.52	0.44
34:BA:1227:A:OP2	46:BM:96:LEU:HD21	2.18	0.44
34:BA:1502:A:H2	34:BA:1505:G:H22	1.66	0.44
41:BH:97:VAL:O	41:BH:100:ILE:HG13	2.18	0.44
42:BI:17:VAL:HG21	42:BI:81:ILE:HG22	1.99	0.44
48:BO:55:GLY:O	48:BO:56:LEU:C	2.58	0.44
52:BS:81:ARG:HE	52:BS:81:ARG:HB2	1.63	0.44
53:BT:97:ALA:O	53:BT:99:LEU:N	2.46	0.44
1:CA:333:G:H5"	1:CA:334:C:OP2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1837:C:OP1	34:DA:784:C:H4'	2.17	0.44
1:CA:2275:C:H5'	1:CA:2275:C:H6	1.83	0.44
1:CA:2404:C:O3'	13:CP:77:ARG:NH2	2.50	0.44
2:CB:48:A:P	16:CS:30:ARG:HH12	2.41	0.44
2:CB:107:G:OP1	23:CZ:31:ARG:NH2	2.48	0.44
3:CC:5:GLY:O	3:CC:6:LYS:C	2.61	0.44
3:CC:211:ARG:HG2	3:CC:211:ARG:HH11	1.81	0.44
14:CQ:118:LEU:HD23	14:CQ:118:LEU:HA	1.80	0.44
16:CS:68:GLN:HA	16:CS:71:ARG:HG3	1.99	0.44
17:CT:66:VAL:HA	17:CT:71:GLY:HA2	2.00	0.44
18:CU:65:ILE:O	18:CU:69:CYS:HB2	2.17	0.44
30:C6:3:SER:OG	30:C6:5:VAL:HG13	2.17	0.44
34:DA:302:G:O2'	34:DA:556:C:H5"	2.18	0.44
34:DA:757:U:H2'	34:DA:758:G:O4'	2.18	0.44
35:DB:25:ASN:HA	35:DB:26:PRO:HD3	1.76	0.44
35:DB:175:ARG:HB3	35:DB:175:ARG:CZ	2.48	0.44
37:DD:171:GLY:HA2	37:DD:172:PRO:HD2	1.76	0.44
40:DG:51:GLN:O	40:DG:55:GLY:HA2	2.18	0.44
43:DJ:38:ILE:CG1	43:DJ:71:LEU:HB3	2.47	0.44
46:DM:35:GLU:C	46:DM:37:THR:H	2.26	0.44
1:AA:239:G:C6	1:AA:240:A:C6	3.05	0.43
3:AC:54:ARG:HH22	3:AC:56:ASP:HB3	1.76	0.43
3:AC:194:ILE:HD11	3:AC:227:PRO:HB2	1.99	0.43
4:AD:17:THR:O	4:AD:204:ILE:HG23	2.18	0.43
4:AD:158:ALA:O	4:AD:159:ALA:C	2.60	0.43
8:AH:3:ARG:HD2	8:AH:3:ARG:HA	1.71	0.43
18:AU:74:LEU:HD12	18:AU:74:LEU:H	1.83	0.43
23:AZ:48:PHE:CE2	23:AZ:71:VAL:HG11	2.53	0.43
23:AZ:98:MET:C	23:AZ:125:LEU:HD12	2.43	0.43
23:AZ:100:VAL:HA	23:AZ:101:PRO:HD3	1.83	0.43
25:A1:91:LYS:O	25:A1:95:LEU:HD22	2.18	0.43
28:A4:35:VAL:HG22	28:A4:36:CYS:H	1.81	0.43
31:A7:5:TRP:HA	31:A7:5:TRP:CE3	2.52	0.43
33:A9:11:CYS:HB3	33:A9:32:HIS:HE1	1.82	0.43
34:BA:401:C:OP2	37:BD:73:ARG:NH1	2.51	0.43
34:BA:454:C:H5"	34:BA:455:C:OP2	2.18	0.43
34:BA:1072:G:C2	34:BA:1073:U:C2	3.05	0.43
36:BC:184:TYR:HE1	36:BC:199:LYS:HB3	1.83	0.43
57:BZ:284:LEU:HD12	57:BZ:284:LEU:HA	1.76	0.43
57:BZ:487:ILE:O	57:BZ:516:PRO:HB3	2.18	0.43
1:CA:586:A:N1	1:CA:809:G:O2'	2.38	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:624:C:O2'	1:CA:657:U:OP1	2.33	0.43
1:CA:1266:G:O2'	1:CA:2012:G:O6	2.30	0.43
1:CA:2331:G:H4'	24:C0:43:THR:H	1.83	0.43
1:CA:2689:U:OP2	1:CA:2719:G:N2	2.45	0.43
3:CC:7:ARG:HH22	3:CC:219:MET:HB2	1.82	0.43
4:CD:41:GLY:O	4:CD:43:ARG:HD2	2.18	0.43
7:CG:96:ARG:N	7:CG:99:MET:HE2	2.33	0.43
8:CH:8:PRO:HA	8:CH:50:VAL:O	2.18	0.43
16:CS:5:THR:OG1	16:CS:8:GLU:OE2	2.35	0.43
17:CT:54:ARG:HA	17:CT:59:THR:HB	2.00	0.43
18:CU:90:VAL:O	18:CU:95:LEU:HD22	2.17	0.43
34:DA:1307:U:H5"	46:DM:101:GLN:HE22	1.82	0.43
35:DB:179:LYS:HG3	41:DH:72:PRO:HG3	2.00	0.43
38:DE:11:ILE:HB	38:DE:31:LEU:HD12	1.99	0.43
48:DO:5:LYS:H	48:DO:5:LYS:HD3	1.82	0.43
48:DO:24:SER:OG	48:DO:25:THR:N	2.51	0.43
48:DO:28:GLN:HE21	48:DO:28:GLN:HB3	1.66	0.43
57:DZ:-9:LEU:O	57:DZ:-7:GLU:N	2.51	0.43
57:DZ:243:VAL:HG13	57:DZ:279:TYR:HE1	1.82	0.43
1:AA:152:G:H2'	1:AA:153:C:H6	1.82	0.43
1:AA:1204:C:H4'	27:A3:32:GLN:HB2	2.01	0.43
1:AA:1298:G:C2	18:AU:33:ARG:HG2	2.53	0.43
1:AA:1739:U:H2'	1:AA:1741:C:C5	2.54	0.43
1:AA:1993:A:H5'	1:AA:1994:A:H5"	2.00	0.43
1:AA:2227:G:H5'	1:AA:2228:G:C5	2.52	0.43
63:AA:4809:HOH:O	5:AE:159:HIS:HB3	2.17	0.43
6:AF:53:THR:CG2	6:AF:55:GLY:H	2.31	0.43
7:AG:8:LYS:HD3	7:AG:100:TRP:NE1	2.33	0.43
8:AH:3:ARG:HG3	8:AH:5:GLY:H	1.81	0.43
29:A5:16:ARG:NH1	29:A5:17:ASP:OD1	2.50	0.43
34:BA:377:G:OP1	49:BP:5:ARG:HD2	2.18	0.43
34:BA:1435:G:O5'	34:BA:1435:G:H8	2.02	0.43
38:BE:27:ARG:HE	38:BE:27:ARG:HB2	1.38	0.43
39:BF:49:ALA:HB2	51:BR:78:LEU:O	2.17	0.43
41:BH:51:VAL:HG21	41:BH:60:ARG:HB2	1.99	0.43
41:BH:53:VAL:O	41:BH:56:LYS:HG2	2.18	0.43
49:BP:23:ASP:C	49:BP:25:ARG:N	2.75	0.43
57:BZ:119:GLU:HB3	57:BZ:123:ARG:NH2	2.33	0.43
1:CA:302:C:H42	1:CA:315:G:H1	1.65	0.43
1:CA:309:G:O3'	22:CY:18:GLY:HA2	2.18	0.43
1:CA:530:G:N3	1:CA:530:G:O4'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:774:A:H2'	1:CA:774:A:N3	2.32	0.43
1:CA:1279:G:H2'	1:CA:1280:G:O4'	2.17	0.43
1:CA:1355:G:OP1	4:CD:38:LYS:HE2	2.18	0.43
1:CA:1657:C:O2'	1:CA:1658:C:H5'	2.19	0.43
1:CA:1798:U:H5"	4:CD:260:ARG:HB3	2.00	0.43
1:CA:2729:G:H1'	63:CE:402:HOH:O	2.18	0.43
4:CD:102:LYS:C	4:CD:103:ARG:HG2	2.43	0.43
4:CD:166:GLN:OE1	4:CD:166:GLN:HA	2.18	0.43
5:CE:97:LYS:N	5:CE:100:GLU:OE1	2.48	0.43
6:CF:130:ALA:H	6:CF:142:TRP:CD1	2.36	0.43
7:CG:120:LEU:HB3	7:CG:121:ASN:H	1.66	0.43
13:CP:97:PRO:HB2	13:CP:98:GLU:OE2	2.19	0.43
14:CQ:135:ASP:HB3	14:CQ:136:ALA:H	1.57	0.43
26:C2:59:ARG:O	26:C2:63:VAL:HG23	2.18	0.43
30:C6:13:CYS:O	30:C6:17:LYS:HA	2.18	0.43
34:DA:391:G:C6	34:DA:392:G:C5	3.06	0.43
34:DA:757:U:OP1	34:DA:822:C:O2'	2.26	0.43
34:DA:1239:A:O2'	40:DG:114:ARG:O	2.36	0.43
36:DC:22:TRP:HB2	36:DC:23:TYR:H	1.67	0.43
37:DD:79:PHE:O	37:DD:82:ALA:HB3	2.18	0.43
37:DD:103:ASN:OD1	37:DD:114:ARG:NE	2.38	0.43
40:DG:121:ALA:O	40:DG:124:LEU:HB2	2.18	0.43
53:DT:56:MET:HB2	53:DT:84:LEU:HD11	2.00	0.43
57:DZ:111:SER:HA	57:DZ:143:GLY:O	2.17	0.43
57:DZ:170:ARG:H	57:DZ:170:ARG:NH1	2.13	0.43
1:AA:333:G:H4'	22:AY:18:GLY:HA2	2.00	0.43
1:AA:2331:G:H1	16:AS:3:ARG:HA	1.83	0.43
1:AA:2545:A:OP1	1:AA:2677:A:O2'	2.33	0.43
3:AC:60:ARG:HG3	3:AC:165:ARG:HB2	2.01	0.43
4:AD:37:LEU:HA	4:AD:37:LEU:HD12	1.72	0.43
4:AD:108:PRO:HD2	4:AD:111:LEU:CB	2.48	0.43
7:AG:143:GLU:OE2	28:A4:26:SER:OG	2.28	0.43
10:AL:115:LEU:HD22	10:AL:126:MET:HE1	2.00	0.43
17:AT:96:ARG:CZ	17:AT:96:ARG:HB3	2.42	0.43
20:AW:83:LYS:C	20:AW:84:ARG:HG2	2.44	0.43
23:AZ:156:LYS:CG	23:AZ:157:LEU:N	2.81	0.43
29:A5:41:PRO:HA	29:A5:42:PRO:HD2	1.82	0.43
34:BA:49:U:H3	34:BA:362:G:H1'	1.84	0.43
34:BA:271:C:H2'	34:BA:272:C:C6	2.54	0.43
34:BA:481:G:O2'	34:BA:483:C:N4	2.51	0.43
34:BA:515:G:N3	34:BA:537:G:C2	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:763:G:H2'	34:BA:764:C:C6	2.53	0.43
34:BA:892:A:H2'	34:BA:893:C:H6	1.83	0.43
34:BA:1077:G:N1	34:BA:1081:G:C6	2.86	0.43
34:BA:1296:C:H4'	34:BA:1302:U:C5	2.53	0.43
37:BD:53:ASP:OD1	37:BD:53:ASP:N	2.50	0.43
40:BG:146:GLU:OE2	40:BG:149:ARG:HD2	2.18	0.43
57:BZ:149:VAL:O	57:BZ:153:MET:HG3	2.18	0.43
1:CA:375:C:H2'	1:CA:376:C:C6	2.53	0.43
1:CA:868:U:C4	1:CA:869:G:N7	2.87	0.43
1:CA:1049:C:H2'	1:CA:1050:A:H8	1.84	0.43
1:CA:1143:A:OP1	11:CN:25:ARG:NH2	2.38	0.43
1:CA:1509(B):A:H2'	1:CA:1510:G:O4'	2.17	0.43
1:CA:2177:C:O2	3:CC:171:ALA:HB2	2.18	0.43
1:CA:2320:A:C2	1:CA:2333:A:C8	3.07	0.43
7:CG:103:LEU:HA	7:CG:106:LEU:HB3	2.00	0.43
16:CS:35:ILE:HG23	16:CS:101:LEU:HD12	1.99	0.43
16:CS:41:ASP:OD1	16:CS:44:LYS:NZ	2.43	0.43
23:CZ:156:LYS:HD2	23:CZ:157:LEU:N	2.32	0.43
34:DA:165:C:H2'	34:DA:166:G:C8	2.53	0.43
34:DA:833:U:O2'	34:DA:834:C:H5'	2.17	0.43
34:DA:976:G:P	47:DN:32:SER:H	2.40	0.43
35:DB:16:HIS:HB2	35:DB:204:ASN:HB3	2.00	0.43
35:DB:44:LEU:HD22	35:DB:44:LEU:H	1.82	0.43
35:DB:76:GLN:HE21	35:DB:76:GLN:HB3	1.60	0.43
38:DE:53:LEU:O	38:DE:57:LYS:HB2	2.17	0.43
40:DG:26:PHE:O	40:DG:30:ILE:HG13	2.18	0.43
40:DG:131:LYS:HB3	40:DG:131:LYS:HE2	1.79	0.43
42:DI:99:LEU:HB3	42:DI:101:PHE:CE1	2.52	0.43
44:DK:33:THR:OG1	44:DK:34:ASP:N	2.50	0.43
56:DW:33:U:H5	56:DW:36:A:OP2	2.01	0.43
57:DZ:420:ASP:HB3	57:DZ:473:ASP:OD1	2.17	0.43
1:AA:11:G:H2'	1:AA:12:U:C5'	2.40	0.43
1:AA:243:G:N7	32:A8:5:LYS:HE2	2.33	0.43
1:AA:400:U:H1'	1:AA:450:A:N3	2.33	0.43
1:AA:1036:A:H5"	1:AA:1037:C:OP1	2.18	0.43
1:AA:1359:U:H2'	1:AA:1656:A:C2	2.54	0.43
1:AA:1450:C:O2'	1:AA:1451:U:H5'	2.19	0.43
1:AA:1464:G:O5'	1:AA:1464:G:H8	2.01	0.43
1:AA:2298:A:H4'	1:AA:2299:A:O4'	2.19	0.43
1:AA:2340:A:H2'	1:AA:2341:G:O4'	2.18	0.43
3:AC:31:LYS:H	3:AC:31:LYS:HG2	1.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:160:GLY:O	3:AC:161:ARG:C	2.61	0.43
4:AD:71:ASP:CG	4:AD:103:ARG:HH22	2.26	0.43
6:AF:7:TYR:CD1	6:AF:24:LEU:HB2	2.53	0.43
15:AR:109:ALA:HA	15:AR:110:PRO:HD2	1.77	0.43
34:BA:376:G:H2'	34:BA:377:G:H8	1.83	0.43
34:BA:541:G:N2	34:BA:542:G:H1'	2.34	0.43
34:BA:567:G:H1'	63:BA:1954:HOH:O	2.18	0.43
34:BA:667:G:H4'	48:BO:51:HIS:CE1	2.54	0.43
34:BA:1079:G:C6	34:BA:1080:A:N6	2.87	0.43
55:BV:15:A:H2	56:BW:37:MIA:H131	1.84	0.43
57:BZ:12:LEU:HD12	57:BZ:78:ARG:HB3	1.99	0.43
57:BZ:21:ILE:C	57:BZ:23:ALA:N	2.76	0.43
57:BZ:114:VAL:HG12	57:BZ:156:ARG:NH2	2.33	0.43
1:CA:566:U:OP1	13:CP:29:LYS:NZ	2.40	0.43
1:CA:623:G:H2'	1:CA:624:C:C6	2.54	0.43
1:CA:686:G:C4	31:C7:11:LYS:HG2	2.54	0.43
1:CA:1252:G:O2'	1:CA:1253:A:C8	2.71	0.43
1:CA:2228:G:C6	1:CA:2229:C:C4	3.06	0.43
2:CB:6:C:H2'	2:CB:7:G:O4'	2.19	0.43
3:CC:60:ARG:HG3	3:CC:165:ARG:HB2	2.01	0.43
5:CE:58:ARG:HA	5:CE:58:ARG:HD3	1.72	0.43
5:CE:177:PRO:C	5:CE:179:GLU:N	2.77	0.43
6:CF:159:GLY:O	6:CF:160:ASN:HB2	2.18	0.43
7:CG:34:LEU:HD13	7:CG:103:LEU:HD13	2.00	0.43
7:CG:167:GLU:N	7:CG:167:GLU:OE2	2.50	0.43
12:CO:26:LYS:O	12:CO:30:ALA:HB2	2.18	0.43
13:CP:65:ARG:HG3	32:C8:25:MET:HG3	2.00	0.43
15:CR:110:PRO:C	15:CR:111:LEU:HD13	2.44	0.43
16:CS:68:GLN:O	16:CS:71:ARG:HB2	2.18	0.43
30:C6:45:LYS:HE2	30:C6:46:HIS:O	2.19	0.43
34:DA:108:G:N1	53:DT:15:ARG:HG3	2.34	0.43
34:DA:392:G:H2'	34:DA:393:A:C8	2.54	0.43
34:DA:1316:G:H1	52:DS:3:ARG:HG3	1.83	0.43
38:DE:41:VAL:O	38:DE:67:VAL:N	2.49	0.43
39:DF:49:ALA:HB1	51:DR:80:PRO:HB3	2.00	0.43
40:DG:32:ARG:HH22	40:DG:109:ASN:HD21	1.66	0.43
41:DH:44:PHE:CD1	41:DH:79:VAL:HG13	2.51	0.43
42:DI:33:PHE:C	42:DI:35:GLU:H	2.26	0.43
57:DZ:126:GLU:O	57:DZ:128:TYR:N	2.52	0.43
57:DZ:656:ALA:HA	57:DZ:669:PHE:CZ	2.53	0.43
1:AA:504:A:C6	1:AA:506:A:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:603:C:H2'	1:AA:604:C:C6	2.53	0.43
1:AA:637:U:H5'	1:AA:640:A:N6	2.34	0.43
1:AA:1123:A:H4'	10:AL:91:PRO:HG2	2.01	0.43
1:AA:1153:G:H4'	9:AK:81:VAL:HA	2.00	0.43
1:AA:1249:A:N1	1:AA:1287:A:N7	2.67	0.43
1:AA:1417:G:HO2'	1:AA:1418:U:H5	1.63	0.43
1:AA:2431:U:H2'	1:AA:2432:C:C6	2.53	0.43
1:AA:2673:G:C6	1:AA:2674:A:C2	3.06	0.43
5:AE:170:LEU:HD23	5:AE:184:VAL:HG11	2.01	0.43
6:AF:32:LEU:HD23	6:AF:32:LEU:C	2.43	0.43
7:AG:99:MET:HE2	7:AG:99:MET:HB3	1.74	0.43
28:A4:58:ARG:HD2	46:BM:80:ARG:HH21	1.82	0.43
34:BA:414:A:C4	34:BA:415:A:C8	3.07	0.43
34:BA:596:C:OP2	63:BA:1915:HOH:O	2.21	0.43
34:BA:859:A:H2'	34:BA:860:A:H8	1.82	0.43
34:BA:1277:C:H1'	34:BA:1282:C:O2	2.17	0.43
35:BB:19:HIS:HE1	35:BB:189:ASP:CB	2.30	0.43
35:BB:200:ILE:H	35:BB:200:ILE:HG12	1.64	0.43
36:BC:58:GLU:O	36:BC:59:ARG:HG3	2.18	0.43
36:BC:110:ASN:C	36:BC:111:LEU:HD23	2.44	0.43
38:BE:123:LEU:HA	38:BE:123:LEU:HD23	1.64	0.43
40:BG:48:LYS:O	40:BG:49:ILE:C	2.62	0.43
40:BG:153:HIS:HE1	44:BK:57:THR:HG22	1.82	0.43
41:BH:35:ILE:HD11	41:BH:134:ILE:HG21	2.00	0.43
57:BZ:487:ILE:HD13	57:BZ:514:VAL:HG12	2.00	0.43
57:BZ:631:ILE:HA	57:BZ:645:ALA:CB	2.48	0.43
1:CA:292:C:H2'	1:CA:293:U:H6	1.83	0.43
1:CA:2137:C:N4	1:CA:2154:G:H1	2.11	0.43
1:CA:2328:A:H2'	1:CA:2329:G:O4'	2.18	0.43
8:CH:3:ARG:NH1	8:CH:5:GLY:H	2.16	0.43
11:CN:131:GLN:O	11:CN:132:ALA:C	2.61	0.43
16:CS:35:ILE:HG13	16:CS:66:ALA:HB2	2.00	0.43
19:CV:25:LEU:O	19:CV:64:HIS:NE2	2.52	0.43
21:CX:12:VAL:HG12	21:CX:17:ALA:HB2	1.99	0.43
24:C0:25:ARG:HD3	24:C0:25:ARG:HA	1.80	0.43
25:C1:95:LEU:HA	25:C1:98:LEU:HD12	1.99	0.43
26:C2:3:LEU:O	26:C2:7:ARG:HG3	2.18	0.43
34:DA:264:U:H2'	34:DA:265:G:O4'	2.19	0.43
34:DA:449:C:H2'	34:DA:450:G:O4'	2.19	0.43
34:DA:490:G:H2'	34:DA:491:G:C8	2.53	0.43
34:DA:854:G:C6	34:DA:855:G:N7	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:983:A:H3'	34:DA:983:A:N3	2.34	0.43
34:DA:998:G:H22	34:DA:1043:C:N4	2.17	0.43
34:DA:1045:C:C4	34:DA:1046:A:C8	3.07	0.43
35:DB:16:HIS:HD2	35:DB:204:ASN:HB3	1.78	0.43
43:DJ:11:PHE:CE1	43:DJ:67:THR:HB	2.54	0.43
45:DL:24:VAL:CG1	45:DL:27:LEU:HD22	2.46	0.43
47:DN:24:CYS:HB3	47:DN:27:CYS:SG	2.58	0.43
51:DR:22:VAL:HG23	51:DR:55:ARG:O	2.18	0.43
57:DZ:20:HIS:O	57:DZ:21:ILE:HD13	2.18	0.43
57:DZ:177:ILE:HG23	57:DZ:260:LEU:HD11	2.01	0.43
57:DZ:552:SER:HB3	57:DZ:591:LYS:HZ1	1.83	0.43
1:AA:1202:A:C8	18:AU:51:LYS:HD2	2.53	0.43
1:AA:2865:C:O2'	1:AA:2866:C:H5'	2.19	0.43
7:AG:96:ARG:H	7:AG:99:MET:HE2	1.83	0.43
8:AH:149:ARG:HH11	8:AH:149:ARG:HD2	1.59	0.43
13:AP:56:SER:O	13:AP:61:ARG:HD2	2.19	0.43
16:AS:58:LEU:HD23	16:AS:58:LEU:HA	1.74	0.43
23:AZ:121:HIS:HB2	23:AZ:171:ILE:HG22	2.00	0.43
30:A6:40:CYS:HA	30:A6:41:PRO:HD3	1.81	0.43
32:A8:31:HIS:CE1	32:A8:32:LEU:HD22	2.54	0.43
34:BA:46:G:O2'	34:BA:365:U:O2	2.33	0.43
34:BA:49:U:O4	34:BA:365:U:H5	2.01	0.43
34:BA:300:A:O2'	34:BA:564:C:N3	2.42	0.43
34:BA:1148:U:OP1	42:BI:7:THR:OG1	2.25	0.43
36:BC:29:TYR:O	36:BC:33:LEU:HB2	2.18	0.43
37:BD:127:THR:OG1	37:BD:130:GLY:O	2.37	0.43
38:BE:116:THR:HG22	38:BE:117:ASP:OD2	2.18	0.43
40:BG:18:TYR:CE2	40:BG:59:LEU:HB2	2.53	0.43
41:BH:112:LEU:HD11	41:BH:114:THR:HG23	2.01	0.43
57:BZ:183:MET:HE1	57:BZ:209:ALA:HB1	1.99	0.43
57:BZ:497:PHE:HB3	57:BZ:508:GLY:N	2.33	0.43
1:CA:311:A:O2'	1:CA:331:A:O2'	2.34	0.43
1:CA:608:A:C6	1:CA:609:A:C6	3.07	0.43
1:CA:979:G:O6	63:CA:3755:HOH:O	2.20	0.43
1:CA:2218:U:O4'	25:C1:52:ARG:NH2	2.52	0.43
1:CA:2378:A:H2	16:CS:18:ILE:HD13	1.84	0.43
1:CA:2677:G:H2'	1:CA:2678:C:C6	2.54	0.43
3:CC:11:LEU:HD11	3:CC:35:THR:HG23	2.01	0.43
3:CC:54:ARG:HE	3:CC:57:GLN:HG2	1.83	0.43
3:CC:160:GLY:O	3:CC:161:ARG:C	2.61	0.43
3:CC:206:LYS:HB3	3:CC:206:LYS:HZ3	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CS:87:PHE:CZ	16:CS:102:ALA:HB2	2.53	0.43
20:CW:65:LEU:HB2	20:CW:68:ARG:CG	2.49	0.43
21:CX:72:LYS:NZ	21:CX:75:ASP:OD1	2.50	0.43
22:CY:88:LYS:HG2	22:CY:89:PHE:H	1.83	0.43
25:C1:95:LEU:C	25:C1:97:LEU:N	2.75	0.43
27:C3:10:LYS:HB3	27:C3:53:LEU:HA	2.01	0.43
31:C7:34:ARG:HB2	31:C7:42:LEU:HD22	2.01	0.43
34:DA:9:G:C2	34:DA:10:A:C4	3.07	0.43
34:DA:363:A:C5	45:DL:31:PRO:HD2	2.54	0.43
34:DA:451:A:C6	34:DA:481:G:N7	2.87	0.43
34:DA:458:C:N4	34:DA:474:G:O6	2.51	0.43
34:DA:460:G:H2'	34:DA:461:A:H2'	1.99	0.43
34:DA:622:A:C8	34:DA:623:C:C6	3.06	0.43
34:DA:939:G:C6	34:DA:940:C:N4	2.87	0.43
35:DB:153:ARG:O	35:DB:155:LEU:N	2.42	0.43
36:DC:130:VAL:O	36:DC:134:ILE:HG12	2.19	0.43
37:DD:93:PHE:O	37:DD:97:LEU:HB2	2.18	0.43
41:DH:48:TYR:HB2	41:DH:60:ARG:O	2.19	0.43
41:DH:51:VAL:CG1	41:DH:52:ASP:H	2.28	0.43
43:DJ:50:ILE:HB	47:DN:41:ARG:NE	2.34	0.43
45:DL:75:HIS:CD2	45:DL:75:HIS:C	2.97	0.43
53:DT:57:ARG:HH12	53:DT:100:ILE:CD1	2.32	0.43
54:DU:11:GLY:O	54:DU:15:ARG:HB2	2.19	0.43
57:DZ:552:SER:HB3	57:DZ:591:LYS:NZ	2.33	0.43
1:AA:907:U:C6	1:AA:2280:A:O4'	2.71	0.43
1:AA:2342:G:H2'	1:AA:2343:G:O4'	2.18	0.43
1:AA:2661:U:H2'	1:AA:2662:U:C6	2.54	0.43
4:AD:16:MET:HG3	4:AD:206:LEU:O	2.19	0.43
5:AE:85:ASN:HD22	5:AE:85:ASN:HA	1.57	0.43
8:AH:41:MET:HE1	8:AH:65:HIS:HA	2.01	0.43
8:AH:154:PRO:HD3	8:AH:162:ILE:O	2.19	0.43
14:AQ:84:GLY:O	14:AQ:85:LYS:HB2	2.18	0.43
15:AR:100:LEU:HD11	29:A5:58:LEU:HD11	1.99	0.43
23:AZ:134:PRO:C	23:AZ:136:PHE:N	2.77	0.43
34:BA:592:G:C6	34:BA:648:A:C6	3.06	0.43
34:BA:1304:G:C6	34:BA:1305:G:N1	2.87	0.43
38:BE:7:GLU:CD	38:BE:37:ARG:HH21	2.23	0.43
39:BF:49:ALA:HB2	51:BR:78:LEU:C	2.44	0.43
45:BL:117:ARG:HB3	45:BL:122:THR:O	2.18	0.43
50:BQ:31:LEU:HD23	50:BQ:32:TYR:CZ	2.54	0.43
57:BZ:162:VAL:HG21	57:BZ:255:ILE:HD12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:58:G:O2'	1:CA:73:A:N1	2.47	0.43
1:CA:794:G:H2'	1:CA:795:C:C6	2.54	0.43
1:CA:1110:G:N3	1:CA:1110:G:C2'	2.81	0.43
1:CA:1355:G:H2'	1:CA:1356:G:O4'	2.18	0.43
1:CA:1437:C:H6	1:CA:1437:C:H5"	1.83	0.43
1:CA:2298:A:N6	1:CA:2318:G:C8	2.87	0.43
1:CA:2808:U:O2'	1:CA:2809:A:H5'	2.19	0.43
5:CE:90:THR:HG22	5:CE:91:VAL:N	2.34	0.43
8:CH:87:LEU:O	8:CH:131:VAL:N	2.47	0.43
8:CH:95:ARG:NH1	8:CH:97:ARG:HD3	2.33	0.43
8:CH:154:PRO:HB3	8:CH:163:TYR:CE2	2.54	0.43
10:CL:105:LEU:HG	10:CL:124:ALA:HB2	2.01	0.43
14:CQ:41:TRP:HB3	14:CQ:94:VAL:CB	2.48	0.43
21:CX:24:GLY:O	21:CX:83:VAL:HG22	2.19	0.43
28:C4:26:SER:OG	28:C4:27:THR:N	2.51	0.43
34:DA:343:U:O2'	34:DA:346:G:O6	2.28	0.43
34:DA:975:A:N6	43:DJ:48:THR:HB	2.34	0.43
34:DA:1015:A:H2'	34:DA:1016:A:C8	2.54	0.43
34:DA:1112:C:N3	36:DC:178:LEU:HB2	2.34	0.43
34:DA:1177:G:H8	34:DA:1177:G:O5'	2.01	0.43
34:DA:1414:U:H2'	34:DA:1415:G:H8	1.83	0.43
34:DA:1499:A:H1'	34:DA:1520:G:H5'	2.01	0.43
36:DC:134:ILE:HD11	36:DC:153:VAL:HG22	2.01	0.43
57:DZ:82:ILE:HD13	57:DZ:101:LEU:CB	2.48	0.43
1:AA:1635:C:H2'	1:AA:1636:U:C6	2.54	0.43
1:AA:2304:C:H2'	1:AA:2305:C:C6	2.53	0.43
1:AA:2331:G:H22	16:AS:3:ARG:CD	2.32	0.43
1:AA:2584:A:N7	5:AE:145:LYS:HB2	2.33	0.43
1:AA:2596:U:H2'	1:AA:2597:U:C6	2.54	0.43
1:AA:2705:A:H2'	1:AA:2706:G:H8	1.83	0.43
5:AE:68:ALA:O	5:AE:70:ALA:N	2.52	0.43
5:AE:111:ARG:HG3	5:AE:160:TYR:CD2	2.54	0.43
6:AF:150:GLY:HA2	6:AF:172:TRP:CD2	2.54	0.43
7:AG:138:GLN:HE22	7:AG:153:ARG:NH2	2.17	0.43
10:AL:131:ALA:O	10:AL:136:VAL:HG13	2.19	0.43
13:AP:65:ARG:HD2	32:A8:25:MET:SD	2.59	0.43
17:AT:127:ALA:O	17:AT:128:GLU:HG2	2.18	0.43
23:AZ:14:LYS:O	23:AZ:17:ALA:HB3	2.18	0.43
36:BC:11:ARG:HD3	36:BC:15:THR:HB	2.01	0.43
36:BC:73:PRO:HB3	36:BC:103:VAL:HG12	2.00	0.43
44:BK:98:LEU:HD23	44:BK:98:LEU:HA	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BT:24:LEU:HD13	53:BT:24:LEU:HA	1.87	0.43
57:BZ:138:LYS:HA	62:BZ:702:GDP:N1	2.33	0.43
57:BZ:191:ASP:O	57:BZ:266:ASN:ND2	2.52	0.43
57:BZ:416:LYS:HD2	57:BZ:473:ASP:HB2	1.99	0.43
57:BZ:501:THR:C	57:BZ:503:GLY:H	2.26	0.43
1:CA:1094:U:O2'	1:CA:1096:A:N7	2.44	0.43
1:CA:1107:G:C2	1:CA:1108:U:O2	2.70	0.43
1:CA:2742:C:H5"	33:C9:1:MET:HE3	2.00	0.43
1:CA:2863:C:O2'	1:CA:2864:G:H5'	2.18	0.43
3:CC:31:LYS:H	3:CC:31:LYS:HG2	1.57	0.43
3:CC:195:ARG:HH11	3:CC:195:ARG:HG3	1.83	0.43
4:CD:10:THR:OG1	4:CD:13:ARG:HB2	2.19	0.43
7:CG:107:LEU:HA	7:CG:111:LEU:HD22	2.01	0.43
8:CH:9:ILE:HD12	8:CH:50:VAL:HB	2.01	0.43
8:CH:54:ARG:HB2	8:CH:61:HIS:HB3	2.00	0.43
13:CP:44:GLY:CA	13:CP:45:LEU:HB2	2.49	0.43
16:CS:3:ARG:HG3	16:CS:4:LEU:N	2.33	0.43
19:CV:98:GLU:OE1	19:CV:100:ARG:NH1	2.44	0.43
25:C1:49:VAL:HG21	25:C1:67:ILE:HG23	2.01	0.43
32:C8:52:LYS:O	32:C8:56:GLU:HG3	2.19	0.43
34:DA:425:G:C2'	34:DA:426:G:H5'	2.49	0.43
34:DA:536:C:H6	34:DA:536:C:O5'	2.02	0.43
34:DA:625:G:H4'	49:DP:16:HIS:CD2	2.53	0.43
34:DA:1047:G:H1	34:DA:1210:C:H42	1.66	0.43
34:DA:1228:C:H2'	34:DA:1229:A:H8	1.84	0.43
34:DA:1291:G:H2'	34:DA:1292:U:C6	2.53	0.43
34:DA:1308:U:H5"	46:DM:98:VAL:HG23	2.00	0.43
34:DA:1460:A:H2'	34:DA:1461:G:O4'	2.19	0.43
35:DB:58:ILE:H	35:DB:58:ILE:HG13	1.53	0.43
36:DC:29:TYR:OH	47:DN:54:PRO:HG2	2.19	0.43
36:DC:114:PRO:HA	36:DC:117:ALA:HB3	2.01	0.43
36:DC:137:ALA:HA	36:DC:140:ARG:NH1	2.34	0.43
39:DF:89:MET:HE1	51:DR:76:LEU:HD22	2.00	0.43
40:DG:16:LEU:H	40:DG:16:LEU:HD22	1.83	0.43
42:DI:3:GLN:OE1	42:DI:20:ARG:NH2	2.47	0.43
44:DK:70:LYS:HE2	44:DK:70:LYS:HB2	1.76	0.43
45:DL:42:THR:HA	45:DL:53:ARG:O	2.19	0.43
1:AA:1722:C:H2'	1:AA:1723:A:O4'	2.19	0.43
1:AA:2833:A:OP1	5:AE:113:PHE:HB2	2.19	0.43
3:AC:195:ARG:HG3	3:AC:195:ARG:HH11	1.83	0.43
4:AD:89:SER:HB2	4:AD:159:ALA:HB2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:31:CYS:HB3	5:AE:50:GLY:O	2.18	0.43
7:AG:107:LEU:HD11	7:AG:178:PHE:CE1	2.53	0.43
8:AH:28:GLY:HA3	8:AH:79:VAL:CG2	2.49	0.43
23:AZ:102:LEU:HD11	23:AZ:124:ILE:HB	1.99	0.43
23:AZ:148:ASP:O	23:AZ:173:ALA:HA	2.19	0.43
25:A1:6:GLU:HB2	25:A1:61:ARG:O	2.19	0.43
34:BA:15:G:H2'	34:BA:16:A:H8	1.82	0.43
34:BA:142:G:H2'	34:BA:143:A:H8	1.84	0.43
34:BA:153:C:H42	34:BA:168:G:H1	1.67	0.43
34:BA:223:U:H2'	34:BA:224:C:O4'	2.18	0.43
34:BA:410:G:OP1	37:BD:30:LYS:NZ	2.32	0.43
34:BA:501:C:O2'	34:BA:502:G:H5'	2.18	0.43
34:BA:509:A:C6	34:BA:510:A:N1	2.87	0.43
34:BA:1202:G:O4'	47:BN:29:ARG:NH1	2.43	0.43
34:BA:1316:G:H1	52:BS:3:ARG:HG3	1.84	0.43
35:BB:223:ILE:C	35:BB:225:ALA:N	2.76	0.43
37:BD:160:GLN:O	37:BD:163:GLU:HB3	2.18	0.43
38:BE:48:ALA:O	38:BE:50:GLU:N	2.52	0.43
42:BI:99:LEU:HB3	42:BI:101:PHE:CE1	2.54	0.43
46:BM:56:LEU:O	46:BM:60:VAL:HG23	2.18	0.43
48:BO:35:ARG:CZ	48:BO:59:MET:HE2	2.49	0.43
57:BZ:-20:LEU:O	57:BZ:-18:ALA:N	2.52	0.43
57:BZ:24:GLY:N	62:BZ:702:GDP:O2B	2.43	0.43
57:BZ:77:HIS:CE1	57:BZ:277:VAL:HG13	2.54	0.43
1:CA:247:G:H4'	1:CA:386:G:C6	2.54	0.43
1:CA:484:C:OP1	22:CY:51:VAL:HG23	2.18	0.43
1:CA:873:G:N2	1:CA:905:U:C2	2.87	0.43
1:CA:921:G:H4'	1:CA:2269:A:C5	2.54	0.43
1:CA:1352:U:OP2	63:CA:3759:HOH:O	2.21	0.43
1:CA:2132:U:C2'	3:CC:6:LYS:HB3	2.36	0.43
3:CC:41:THR:O	3:CC:42:VAL:CB	2.64	0.43
5:CE:201:THR:HG23	5:CE:203:LYS:H	1.82	0.43
8:CH:54:ARG:O	8:CH:56:SER:N	2.52	0.43
13:CP:21:ARG:HH11	13:CP:21:ARG:HD2	1.68	0.43
28:C4:38:LYS:O	28:C4:40:HIS:N	2.44	0.43
34:DA:61:G:C6	34:DA:62:U:C4	3.07	0.43
34:DA:731:G:H5'	34:DA:766:A:H4'	2.00	0.43
34:DA:927:G:H1	34:DA:1390:U:H3	1.65	0.43
34:DA:1027:C:O2	34:DA:1034:G:N2	2.46	0.43
34:DA:1055:A:C6	34:DA:1206:G:C5	3.07	0.43
34:DA:1170:A:N6	34:DA:1171:G:N3	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DE:129:ILE:O	38:DE:132:ALA:HB3	2.18	0.43
41:DH:34:GLU:OE1	41:DH:37:ARG:NH1	2.51	0.43
44:DK:16:SER:OG	44:DK:79:SER:OG	2.19	0.43
49:DP:43:LYS:HG2	49:DP:48:TRP:CE2	2.54	0.43
57:DZ:70:THR:HA	57:DZ:358:MET:O	2.19	0.43
57:DZ:411:VAL:HB	57:DZ:459:LEU:HD13	2.01	0.43
57:DZ:550:MET:SD	57:DZ:563:ILE:HD11	2.59	0.43
57:DZ:572:TYR:HB2	57:DZ:582:PHE:HZ	1.84	0.43
1:AA:737:G:H2'	1:AA:738:C:C6	2.54	0.43
1:AA:898:U:O2'	27:A3:45:GLY:HA3	2.18	0.43
1:AA:1406:A:H5"	1:AA:1407:G:OP2	2.19	0.43
1:AA:1814:A:H5'	1:AA:2620:G:H4'	2.01	0.43
1:AA:2323:A:C8	7:AG:80:PHE:CE2	3.07	0.43
1:AA:2359:C:HO2'	30:A6:21:TYR:HH	1.66	0.43
3:AC:6:LYS:N	3:AC:9:ARG:HH12	2.17	0.43
5:AE:92:THR:OG1	5:AE:94:GLU:HG2	2.19	0.43
5:AE:182:LEU:HD12	5:AE:182:LEU:HA	1.75	0.43
13:AP:135:LEU:HD23	13:AP:135:LEU:HA	1.83	0.43
17:AT:3:ARG:HH21	17:AT:3:ARG:HD2	1.70	0.43
17:AT:105:LEU:HD23	17:AT:105:LEU:HA	1.60	0.43
34:BA:359:U:OP2	57:BZ:381:LYS:HE3	2.18	0.43
34:BA:562:C:H4'	34:BA:563:A:O5'	2.19	0.43
34:BA:718:G:C8	44:BK:116:HIS:HB3	2.54	0.43
34:BA:1225:A:H2'	34:BA:1226:C:C5	2.53	0.43
45:BL:5:PRO:HA	45:BL:9:GLN:OE1	2.19	0.43
52:BS:48:THR:HA	52:BS:60:VAL:O	2.19	0.43
57:BZ:-20:LEU:HD23	57:BZ:-20:LEU:HA	1.80	0.43
57:BZ:226:ASN:HB3	57:BZ:241:GLU:OE2	2.19	0.43
57:BZ:419:ALA:C	57:BZ:421:GLN:H	2.27	0.43
1:CA:185:U:H4'	1:CA:218:A:H4'	2.00	0.43
1:CA:2074:U:H2'	1:CA:2075:U:C6	2.54	0.43
1:CA:2748:A:H2'	1:CA:2749:A:O4'	2.17	0.43
1:CA:2889:C:H3'	1:CA:2891:G:C8	2.53	0.43
2:CB:27:C:H5"	16:CS:54:LEU:CD1	2.46	0.43
4:CD:13:ARG:NH1	4:CD:16:MET:SD	2.92	0.43
4:CD:106:ILE:O	4:CD:108:PRO:HD3	2.19	0.43
4:CD:108:PRO:HD2	4:CD:111:LEU:HG	2.01	0.43
8:CH:13:LYS:HA	8:CH:14:GLY:HA2	1.74	0.43
11:CN:68:GLU:HG2	11:CN:88:GLU:OE2	2.19	0.43
14:CQ:109:VAL:HG22	14:CQ:113:GLN:OE1	2.18	0.43
17:CT:120:ARG:HG2	17:CT:123:GLN:HE22	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CU:76:TYR:CD1	18:CU:76:TYR:C	2.96	0.43
22:CY:12:THR:HG22	22:CY:75:ILE:HB	2.01	0.43
23:CZ:125:LEU:HA	23:CZ:125:LEU:HD12	1.73	0.43
25:C1:69:LYS:HA	25:C1:72:GLU:HG3	2.01	0.43
32:C8:39:LYS:O	32:C8:43:GLN:HG3	2.18	0.43
34:DA:32:A:H2'	34:DA:33:A:C8	2.54	0.43
34:DA:232:G:H1'	34:DA:262:A:N1	2.34	0.43
34:DA:565:U:H3'	34:DA:566:G:H2'	2.01	0.43
34:DA:974:A:OP2	47:DN:29:ARG:NH2	2.48	0.43
34:DA:1218:C:OP2	47:DN:9:LYS:NZ	2.34	0.43
34:DA:1250:A:H2	34:DA:1370:G:H1'	1.84	0.43
37:DD:175:SER:OG	37:DD:176:LEU:N	2.51	0.43
41:DH:20:TYR:HD2	41:DH:65:TYR:CE2	2.37	0.43
42:DI:16:ARG:HD3	42:DI:64:THR:OG1	2.19	0.43
42:DI:85:LEU:HA	42:DI:88:TYR:HB3	2.01	0.43
52:DS:27:GLU:HB2	52:DS:28:LYS:NZ	2.34	0.43
57:DZ:183:MET:HB3	57:DZ:183:MET:HE3	1.72	0.43
57:DZ:422:GLU:H	57:DZ:422:GLU:HG3	1.66	0.43
58:DX:5:MVA:O	58:DX:7:PRO:HD3	2.19	0.43
1:AA:212:A:O2'	1:AA:447:C:O2	2.35	0.42
1:AA:579:G:H2'	1:AA:580:U:H6	1.84	0.42
1:AA:1036:A:H5"	1:AA:1037:C:P	2.59	0.42
1:AA:1506:G:C6	1:AA:1508:G:C5	3.07	0.42
1:AA:1711:A:C6	1:AA:1712:A:C6	3.06	0.42
1:AA:2074:G:O4'	5:AE:142:GLY:HA3	2.19	0.42
1:AA:2214:G:H5'	1:AA:2215:G:OP2	2.19	0.42
3:AC:195:ARG:HG3	3:AC:195:ARG:NH1	2.35	0.42
4:AD:147:LEU:HD22	4:AD:155:LEU:HD11	2.00	0.42
8:AH:173:PRO:O	8:AH:175:LYS:N	2.48	0.42
10:AL:77:LEU:H	10:AL:77:LEU:HG	1.37	0.42
14:AQ:60:ARG:HA	23:AZ:179:ASP:HA	2.01	0.42
16:AS:99:LYS:O	16:AS:102:ALA:HB3	2.19	0.42
21:AX:25:LYS:HA	21:AX:81:VAL:O	2.19	0.42
34:BA:557:G:N1	34:BA:558:G:C2	2.87	0.42
34:BA:942:G:C2	34:BA:1342:C:C2	3.07	0.42
34:BA:985:C:C2	34:BA:1221:G:N2	2.86	0.42
35:BB:164:VAL:HB	35:BB:186:ALA:HB2	2.00	0.42
39:BF:89:MET:HE3	51:BR:76:LEU:HG	2.00	0.42
41:BH:69:ARG:NH2	41:BH:73:ASP:O	2.52	0.42
47:BN:34:TYR:N	47:BN:39:LEU:O	2.51	0.42
48:BO:56:LEU:O	48:BO:60:VAL:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BO:74:ASP:CG	48:BO:77:ARG:HG3	2.44	0.42
51:BR:39:VAL:O	51:BR:42:ARG:HB2	2.19	0.42
56:BY:72:C:H2'	56:BY:73:A:O4'	2.18	0.42
57:BZ:-58:LEU:HD21	57:BZ:-32:LEU:HB3	2.01	0.42
57:BZ:288:PRO:HG3	57:BZ:300:GLU:OE1	2.19	0.42
57:BZ:388:THR:HG21	57:BZ:398:ILE:HA	2.01	0.42
57:BZ:413:ILE:HB	57:BZ:476:VAL:HG12	2.01	0.42
57:BZ:635:GLU:HB2	57:BZ:642:VAL:HG12	2.01	0.42
1:CA:556:G:H2'	1:CA:557:U:C6	2.54	0.42
1:CA:652(T):C:H5'	1:CA:652(U):G:OP1	2.19	0.42
1:CA:790:C:H6	1:CA:790:C:H2'	1.55	0.42
1:CA:869:G:C2	1:CA:909:A:C2	3.07	0.42
1:CA:1067:A:C2	57:DZ:626:ALA:HB1	2.53	0.42
1:CA:1082:U:N3	1:CA:1083:U:H1'	2.34	0.42
1:CA:1407:C:C2	1:CA:1596:A:C2	3.07	0.42
1:CA:1475:G:H2'	1:CA:1476:C:H6	1.84	0.42
1:CA:1477:A:H2'	1:CA:1478:G:O4'	2.18	0.42
1:CA:1478:G:O2'	1:CA:1558:A:C2	2.72	0.42
1:CA:1515:G:C2	1:CA:1516:C:C2	3.07	0.42
1:CA:2399:G:H2'	1:CA:2400:G:O4'	2.19	0.42
7:CG:173:LEU:HD13	7:CG:178:PHE:CE2	2.54	0.42
14:CQ:59:ARG:HA	14:CQ:60:ARG:HA	1.56	0.42
18:CU:55:ARG:H	18:CU:55:ARG:HG3	1.68	0.42
34:DA:355:C:C2	34:DA:356:A:C8	3.07	0.42
34:DA:885:G:O2'	34:DA:914:A:N1	2.48	0.42
34:DA:1217:C:H2'	34:DA:1218:C:H6	1.84	0.42
34:DA:1355:G:H2'	34:DA:1356:G:C8	2.54	0.42
34:DA:1396:A:H2	38:DE:19:MET:HG3	1.83	0.42
35:DB:51:LEU:HD12	35:DB:51:LEU:HA	1.84	0.42
37:DD:33:MET:SD	37:DD:37:PRO:HA	2.59	0.42
46:DM:23:TYR:O	46:DM:70:LEU:HD12	2.19	0.42
47:DN:52:GLN:O	47:DN:53:LEU:HD23	2.19	0.42
56:DY:7:A:N6	56:DY:66:U:H3	2.02	0.42
57:DZ:167:PRO:HG2	57:DZ:170:ARG:NH2	2.33	0.42
57:DZ:247:ARG:HE	57:DZ:251:ILE:HD11	1.83	0.42
1:AA:636:G:N2	1:AA:640:A:O2'	2.52	0.42
1:AA:742:G:OP1	1:AA:1426:G:O2'	2.31	0.42
1:AA:1700:G:H3'	15:AR:2:ARG:HD3	2.01	0.42
1:AA:2154:U:H3	3:AC:6:LYS:CB	2.29	0.42
1:AA:2262:G:C8	1:AA:2508:C:H5"	2.55	0.42
1:AA:2830:A:OP1	15:AR:2:ARG:NH2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:54:ARG:HE	3:AC:57:GLN:HG2	1.83	0.42
4:AD:182:LEU:HD23	4:AD:182:LEU:HA	1.87	0.42
5:AE:103:ASP:CG	5:AE:168:MET:HG2	2.44	0.42
12:AO:69:ILE:HD11	12:AO:105:GLU:CD	2.43	0.42
31:A7:22:MET:HE3	31:A7:22:MET:HB3	1.87	0.42
34:BA:417:C:H2'	34:BA:418:C:C6	2.54	0.42
34:BA:509:A:C5	34:BA:510:A:C6	3.07	0.42
34:BA:1350:A:H8	34:BA:1350:A:O5'	2.03	0.42
34:BA:1502:A:H2	34:BA:1505:G:N1	2.06	0.42
57:BZ:-38:TYR:CE1	57:BZ:-34:ARG:HD2	2.54	0.42
1:CA:338:G:H2'	1:CA:339:U:C6	2.55	0.42
1:CA:446:G:OP1	18:CU:3:ARG:NH1	2.48	0.42
1:CA:511:U:H5"	1:CA:512:G:OP2	2.19	0.42
1:CA:602:G:C2	1:CA:656:G:C6	3.07	0.42
1:CA:921:G:C6	1:CA:922:U:C4	3.07	0.42
1:CA:1056:G:H5"	1:CA:1057:A:H5'	2.01	0.42
1:CA:1557:C:H5"	1:CA:1558:A:OP2	2.19	0.42
1:CA:2625:G:H2'	1:CA:2626:C:O4'	2.18	0.42
1:CA:2690:C:N4	1:CA:2713:A:H1'	2.34	0.42
2:CB:31:C:C2'	2:CB:32:C:H5'	2.49	0.42
2:CB:44:G:C2	2:CB:48:A:C2	3.07	0.42
4:CD:26:LYS:HE3	4:CD:28:GLU:O	2.19	0.42
6:CF:103:LYS:HA	6:CF:106:ARG:HG3	2.00	0.42
10:CL:75:SER:OG	10:CL:134:MET:SD	2.77	0.42
13:CP:6:LEU:HD23	13:CP:6:LEU:HA	1.75	0.42
13:CP:88:LEU:HA	13:CP:91:PHE:CE1	2.54	0.42
23:CZ:107:THR:OG1	23:CZ:112:ARG:NH2	2.52	0.42
34:DA:406:G:N2	34:DA:437:U:O2	2.52	0.42
34:DA:669:U:H2'	34:DA:670:G:H8	1.82	0.42
34:DA:922:G:H4'	38:DE:20:GLN:CA	2.42	0.42
34:DA:940:C:H2'	34:DA:941:G:C8	2.54	0.42
34:DA:1413:A:H2'	34:DA:1414:U:O4'	2.19	0.42
35:DB:188:ALA:N	35:DB:201:ILE:O	2.45	0.42
37:DD:50:ARG:HG2	37:DD:51:PRO:HD2	1.99	0.42
38:DE:80:ILE:CG2	38:DE:91:LEU:HB2	2.50	0.42
39:DF:55:ASP:HA	39:DF:56:PRO:HD3	1.87	0.42
41:DH:53:VAL:C	41:DH:55:GLY:H	2.27	0.42
45:DL:24:VAL:O	45:DL:24:VAL:HG12	2.18	0.42
47:DN:59:ALA:O	47:DN:61:TRP:HE3	2.01	0.42
50:DQ:18:THR:OG1	50:DQ:69:LYS:NZ	2.52	0.42
57:DZ:-66:MET:HE3	57:DZ:-66:MET:HB2	1.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:26:G:C6	1:AA:27:G:N1	2.87	0.42
1:AA:276:C:H2'	1:AA:277:G:O4'	2.19	0.42
1:AA:795:G:C8	20:AW:89:ALA:HB1	2.54	0.42
1:AA:1157:A:O2'	1:AA:1158:G:H4'	2.18	0.42
1:AA:1286:U:O2'	1:AA:1287:A:O5'	2.33	0.42
1:AA:1384:G:O2'	1:AA:1439:A:N1	2.41	0.42
3:AC:11:LEU:HD11	3:AC:35:THR:HG23	2.01	0.42
5:AE:97:LYS:HE2	5:AE:97:LYS:HB3	1.67	0.42
14:AQ:24:GLY:O	14:AQ:102:VAL:HG23	2.19	0.42
20:AW:4:LYS:HB2	20:AW:106:ILE:HG12	2.00	0.42
30:A6:2:ALA:HB1	30:A6:6:ARG:O	2.18	0.42
33:A9:35:ARG:HH11	33:A9:35:ARG:HD3	1.66	0.42
34:BA:447:G:H2'	34:BA:485:G:N2	2.34	0.42
34:BA:542:G:H5'	37:BD:41:GLY:HA3	2.01	0.42
34:BA:738:C:H2'	34:BA:739:C:C6	2.54	0.42
34:BA:1132:C:H2'	34:BA:1133:G:H8	1.83	0.42
36:BC:32:LEU:HD22	36:BC:59:ARG:NH1	2.35	0.42
38:BE:51:VAL:HB	38:BE:52:PRO:HD3	2.01	0.42
38:BE:137:GLU:HG2	38:BE:140:ARG:NH1	2.33	0.42
41:BH:51:VAL:HG12	41:BH:52:ASP:N	2.34	0.42
41:BH:88:LYS:O	41:BH:92:ARG:HD3	2.19	0.42
46:BM:3:ARG:HG3	46:BM:4:ILE:H	1.84	0.42
49:BP:23:ASP:O	49:BP:24:ALA:C	2.62	0.42
57:BZ:-45:LYS:H	57:BZ:-45:LYS:HG2	1.55	0.42
57:BZ:510:VAL:HG21	57:BZ:542:VAL:HG21	2.01	0.42
1:CA:221:A:N1	1:CA:265:A:O2'	2.49	0.42
1:CA:1658:C:H2'	1:CA:1659:U:C6	2.55	0.42
1:CA:1926:U:H2'	1:CA:1928:A:OP2	2.19	0.42
1:CA:1999:C:H5"	1:CA:2723:C:O2'	2.19	0.42
5:CE:46:ALA:HB2	5:CE:82:ARG:HA	2.01	0.42
5:CE:47:VAL:O	5:CE:80:GLU:HA	2.19	0.42
7:CG:107:LEU:HD21	7:CG:178:PHE:CE1	2.54	0.42
16:CS:23:ARG:HB2	16:CS:86:ALA:HB2	2.02	0.42
17:CT:81:PRO:HG2	17:CT:82:LEU:HD12	2.00	0.42
31:C7:24:THR:OG1	31:C7:27:GLY:N	2.38	0.42
32:C8:10:ALA:O	32:C8:14:VAL:N	2.52	0.42
33:C9:17:ILE:HG13	33:C9:18:ARG:H	1.83	0.42
34:DA:271:C:H2'	34:DA:272:C:C6	2.54	0.42
34:DA:425:G:H2'	34:DA:426:G:H5'	2.00	0.42
34:DA:435:C:H2'	34:DA:436:C:C6	2.54	0.42
34:DA:509:A:C8	34:DA:509:A:C3'	3.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:979:C:O2	47:DN:19:ARG:NE	2.50	0.42
34:DA:991:U:H4'	34:DA:992:U:O5'	2.18	0.42
34:DA:1076:C:C2	34:DA:1082:G:C2	3.07	0.42
34:DA:1464:G:H2'	34:DA:1465:C:H6	1.84	0.42
35:DB:12:GLU:HG3	35:DB:13:ALA:N	2.33	0.42
35:DB:92:TYR:N	35:DB:151:GLY:O	2.37	0.42
35:DB:153:ARG:C	35:DB:155:LEU:N	2.77	0.42
38:DE:41:VAL:O	38:DE:67:VAL:HG12	2.19	0.42
48:DO:18:PHE:O	48:DO:21:ASP:HB2	2.19	0.42
56:DY:46:7MG:H81	56:DY:46:7MG:H2'	1.69	0.42
57:DZ:-66:MET:N	57:DZ:-46:VAL:H	2.16	0.42
1:AA:628:C:H2'	1:AA:629:U:O4'	2.19	0.42
1:AA:1737:A:H3'	1:AA:1738:C:C6	2.55	0.42
1:AA:2033:U:OP1	20:AW:42:ARG:NH1	2.49	0.42
1:AA:2125:C:N3	1:AA:2209:G:N1	2.68	0.42
1:AA:2444:A:C8	25:A1:33:LYS:HD3	2.54	0.42
1:AA:2602:A:H2'	1:AA:2603:C:H6	1.83	0.42
1:AA:2904:U:H2'	1:AA:2905:C:H6	1.84	0.42
7:AG:126:ASP:HB2	7:AG:130:ASN:N	2.34	0.42
8:AH:6:ARG:H	8:AH:6:ARG:HG2	1.61	0.42
14:AQ:1:MET:HB2	63:AQ:301:HOH:O	2.19	0.42
15:AR:63:ARG:HA	15:AR:80:PHE:CZ	2.54	0.42
19:AV:49:THR:HG22	19:AV:49:THR:O	2.18	0.42
22:AY:61:ILE:O	22:AY:61:ILE:HG12	2.12	0.42
23:AZ:99:TYR:CE2	23:AZ:125:LEU:HD13	2.55	0.42
34:BA:381:C:C4	34:BA:382:A:C5	3.06	0.42
34:BA:593:G:H2'	34:BA:594:G:O4'	2.20	0.42
34:BA:724:G:C2	34:BA:725:G:C8	3.08	0.42
34:BA:926:G:H5"	34:BA:927:G:O5'	2.19	0.42
34:BA:1368:G:OP2	42:BI:112:LYS:HG3	2.19	0.42
37:BD:117:ALA:O	37:BD:120:LEU:HB2	2.19	0.42
38:BE:78:HIS:HE2	38:BE:142:LEU:HA	1.84	0.42
39:BF:4:TYR:O	39:BF:65:VAL:HG22	2.20	0.42
40:BG:26:PHE:O	40:BG:30:ILE:HG13	2.20	0.42
40:BG:101:LEU:O	40:BG:105:VAL:HG23	2.19	0.42
57:BZ:-6:ARG:C	57:BZ:-4:ALA:N	2.77	0.42
57:BZ:101:LEU:HD23	57:BZ:101:LEU:HA	1.72	0.42
57:BZ:498:ILE:HG22	57:BZ:507:TYR:CE2	2.53	0.42
1:CA:198:C:H4'	1:CA:2243:U:O2'	2.19	0.42
1:CA:666:G:H4'	13:CP:49:ARG:NH2	2.34	0.42
1:CA:1722:A:O2'	1:CA:1739:U:H5"	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2086:U:H2'	1:CA:2087:G:C8	2.53	0.42
1:CA:2228:G:C5	1:CA:2229:C:C4	3.08	0.42
1:CA:2591:C:OP2	4:CD:239:ARG:HB3	2.20	0.42
1:CA:2600:A:C6	1:CA:2601:C:N4	2.87	0.42
1:CA:2730:C:H4'	5:CE:168:MET:O	2.19	0.42
1:CA:2784:C:H2'	1:CA:2785:C:H6	1.85	0.42
2:CB:42:C:O4'	7:CG:69:ALA:HB2	2.20	0.42
3:CC:6:LYS:N	3:CC:9:ARG:HH12	2.17	0.42
5:CE:96:PHE:O	5:CE:175:VAL:HG11	2.20	0.42
18:CU:83:LEU:HA	18:CU:86:ALA:HB3	2.01	0.42
22:CY:23:ARG:HG2	22:CY:42:VAL:HG22	2.00	0.42
23:CZ:6:LYS:HD3	23:CZ:8:TYR:OH	2.19	0.42
27:C3:17:LYS:H	27:C3:17:LYS:HG2	1.52	0.42
31:C7:31:LEU:O	31:C7:32:LYS:C	2.62	0.42
34:DA:236:G:H2'	34:DA:237:C:O4'	2.18	0.42
34:DA:502:G:P	45:DL:116:SER:HA	2.59	0.42
34:DA:1237:C:OP1	34:DA:1238:A:H1'	2.18	0.42
39:DF:23:LYS:O	39:DF:27:GLN:HG2	2.19	0.42
42:DI:16:ARG:O	42:DI:63:ILE:HG23	2.19	0.42
42:DI:59:PHE:HZ	42:DI:88:TYR:CE1	2.37	0.42
48:DO:6:GLU:OE2	48:DO:6:GLU:N	2.50	0.42
50:DQ:4:LYS:HD2	50:DQ:5:VAL:H	1.85	0.42
51:DR:22:VAL:HA	51:DR:25:THR:HG22	2.01	0.42
57:DZ:160:ARG:HE	57:DZ:160:ARG:HB2	1.65	0.42
58:DX:1:2QZ:C	58:DX:10:2QY:H83	2.49	0.42
1:AA:53:G:O2'	31:A7:35:ARG:HD3	2.20	0.42
1:AA:840:A:OP2	1:AA:2094:G:H5'	2.19	0.42
1:AA:1118:C:H42	1:AA:1138:C:H42	1.66	0.42
1:AA:1586:G:C6	1:AA:1587:U:C4	3.08	0.42
1:AA:1815:A:H4'	1:AA:1816:A:O5'	2.20	0.42
1:AA:1825:U:H2'	1:AA:1826:C:C6	2.54	0.42
1:AA:2147:G:O2'	1:AA:2195:A:N6	2.50	0.42
1:AA:2219:U:C6	1:AA:2236:G:C6	3.08	0.42
1:AA:2274:U:H4'	1:AA:2340:A:C2	2.55	0.42
1:AA:2303:U:O2'	1:AA:2304:C:H5'	2.20	0.42
1:AA:2716:C:H2'	1:AA:2717:A:O4'	2.20	0.42
2:AB:8:U:O2'	16:AS:40:ILE:HD13	2.20	0.42
2:AB:11:C:O5'	2:AB:12:C:H5	2.02	0.42
2:AB:29:A:C2	2:AB:56:G:C2	3.07	0.42
5:AE:98:PRO:HD3	5:AE:175:VAL:CG1	2.50	0.42
7:AG:25:TYR:CE2	7:AG:32:PRO:HD2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:56:ALA:HA	7:AG:153:ARG:NH2	2.35	0.42
8:AH:38:SER:C	8:AH:40:GLU:H	2.27	0.42
13:AP:8:PRO:HB2	13:AP:12:ALA:HB3	2.02	0.42
16:AS:83:LYS:HE2	16:AS:83:LYS:HB2	1.58	0.42
23:AZ:108:PRO:HA	23:AZ:142:SER:HA	2.02	0.42
30:A6:8:LYS:HE2	32:A8:34:TRP:CH2	2.55	0.42
34:BA:191:G:C6	34:BA:192:U:C4	3.07	0.42
34:BA:900:A:H2'	34:BA:901:A:C8	2.54	0.42
34:BA:922:G:N3	34:BA:1398:A:H2	2.17	0.42
34:BA:1410:G:H1	34:BA:1490:C:H42	1.66	0.42
34:BA:1410:G:H2'	34:BA:1411:C:H6	1.85	0.42
34:BA:1436:U:OP1	53:BT:23:ARG:NH2	2.52	0.42
37:BD:120:LEU:HD13	37:BD:126:ILE:HD11	2.02	0.42
38:BE:91:LEU:HD12	38:BE:120:THR:HG22	2.01	0.42
42:BI:16:ARG:HD3	42:BI:64:THR:HG21	2.02	0.42
46:BM:15:VAL:HG12	46:BM:19:LEU:HD13	2.00	0.42
57:BZ:20:HIS:ND1	57:BZ:115:GLU:HB3	2.35	0.42
1:CA:611:C:H2'	1:CA:612:C:C6	2.55	0.42
1:CA:852:G:C6	1:CA:926:A:C6	3.08	0.42
1:CA:1301:A:C8	1:CA:1303:G:C8	3.08	0.42
1:CA:1482:G:N2	1:CA:1507:A:H1'	2.34	0.42
1:CA:1603:A:C6	1:CA:1604:C:C2	3.08	0.42
1:CA:2056:G:N2	29:C5:5:PRO:HA	2.34	0.42
8:CH:157:TYR:O	8:CH:158:HIS:ND1	2.50	0.42
19:CV:6:LYS:HB2	19:CV:38:LEU:CD2	2.50	0.42
20:CW:18:ARG:HH11	20:CW:76:VAL:HB	1.84	0.42
23:CZ:48:PHE:CE2	23:CZ:52:SER:HA	2.54	0.42
25:C1:3:LYS:O	25:C1:12:PRO:HD3	2.19	0.42
26:C2:57:ILE:HA	26:C2:60:LEU:HB2	2.00	0.42
34:DA:33:A:N3	45:DL:32:PHE:HE2	2.18	0.42
34:DA:509:A:C5	34:DA:510:A:C6	3.07	0.42
34:DA:837:G:H1	34:DA:849:C:H42	1.65	0.42
34:DA:923:A:OP1	38:DE:21:ALA:HB2	2.19	0.42
34:DA:983:A:O2'	34:DA:1049:U:O2'	2.28	0.42
34:DA:1239:A:H4'	34:DA:1240:U:H5'	2.01	0.42
34:DA:1316:G:H1	52:DS:3:ARG:CG	2.32	0.42
38:DE:43:LEU:HB3	38:DE:136:MET:SD	2.59	0.42
47:DN:23:ARG:HD2	47:DN:28:GLY:O	2.20	0.42
57:DZ:134:ALA:CB	57:DZ:153:MET:HE1	2.49	0.42
57:DZ:140:ASP:OD2	57:DZ:265:LYS:HD2	2.19	0.42
57:DZ:221:ALA:HB1	57:DZ:228:MET:HB2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:479:PRO:HB2	57:DZ:480:GLN:H	1.59	0.42
1:AA:205:A:C4	1:AA:459:A:C2	3.08	0.42
1:AA:228:U:H2'	1:AA:229:G:O4'	2.19	0.42
1:AA:287:G:C2	1:AA:448:U:C4	3.08	0.42
1:AA:325:G:C4	1:AA:326:C:C5	3.08	0.42
1:AA:1052:C:C2	1:AA:1183:G:N2	2.87	0.42
1:AA:1155:C:C5	1:AA:1156:G:C6	3.08	0.42
1:AA:1215:G:H1	1:AA:1225:C:H42	1.68	0.42
1:AA:2186:C:H5	1:AA:2187:G:N3	2.17	0.42
1:AA:2258:G:H1'	1:AA:2438:A:C2	2.55	0.42
1:AA:2319:G:H4'	1:AA:2320:G:O5'	2.19	0.42
1:AA:2669:A:H5"	1:AA:2670:C:OP2	2.20	0.42
1:AA:2881:C:H6	1:AA:2881:C:O5'	2.02	0.42
2:AB:66:A:N6	2:AB:108:U:H2'	2.34	0.42
3:AC:225:ILE:O	3:AC:227:PRO:HD3	2.19	0.42
4:AD:37:LEU:HD22	4:AD:87:ASN:ND2	2.35	0.42
4:AD:92:ILE:HD12	4:AD:104:TYR:CD1	2.55	0.42
4:AD:131:LEU:HB2	4:AD:136:ILE:HD11	2.01	0.42
6:AF:14:PRO:HD2	6:AF:127:GLU:OE2	2.20	0.42
10:AL:82:ALA:HB2	10:AL:99:ILE:HD11	2.02	0.42
11:AN:78:TYR:O	11:AN:79:PRO:C	2.62	0.42
12:AO:118:ALA:HA	12:AO:119:PRO:HD2	1.85	0.42
23:AZ:70:LEU:HD12	23:AZ:91:LEU:HD11	2.02	0.42
23:AZ:166:SER:C	23:AZ:168:GLU:H	2.27	0.42
34:BA:430:A:P	37:BD:8:VAL:H	2.42	0.42
34:BA:1106:G:H2'	34:BA:1107:C:C6	2.54	0.42
34:BA:1240:U:OP2	40:BG:116:ALA:N	2.43	0.42
38:BE:34:VAL:HG11	38:BE:63:ARG:HG3	2.00	0.42
39:BF:95:GLU:HA	39:BF:96:PRO:HD3	1.84	0.42
41:BH:75:ARG:HA	41:BH:76:PRO:HD2	1.66	0.42
44:BK:84:VAL:HG21	44:BK:95:ILE:HD11	2.00	0.42
56:BY:60:U:H5"	56:BY:61:C:C5	2.45	0.42
57:BZ:-29:LEU:H	57:BZ:-29:LEU:HD23	1.84	0.42
57:BZ:-9:LEU:O	57:BZ:-7:GLU:N	2.53	0.42
1:CA:422:A:H2'	1:CA:423:A:C8	2.54	0.42
1:CA:875:G:H2'	1:CA:876:C:C6	2.55	0.42
1:CA:1475:G:H2'	1:CA:1476:C:C6	2.55	0.42
1:CA:1877:A:H5'	1:CA:1878:G:OP2	2.19	0.42
1:CA:2395:C:H2'	1:CA:2396:G:O4'	2.20	0.42
1:CA:2591:C:OP1	4:CD:239:ARG:HD2	2.19	0.42
3:CC:48:LEU:CD2	3:CC:59:VAL:HG21	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:195:ARG:HG3	3:CC:195:ARG:NH1	2.35	0.42
8:CH:64:LEU:HD23	8:CH:64:LEU:HA	1.65	0.42
10:CL:100:THR:HG22	10:CL:139:VAL:HG23	2.01	0.42
12:CO:2:ILE:HB	12:CO:33:ALA:HB3	2.01	0.42
13:CP:126:VAL:HG12	13:CP:148:LEU:HD22	2.01	0.42
15:CR:72:ASP:O	15:CR:73:VAL:C	2.62	0.42
15:CR:118:GLU:CD	15:CR:118:GLU:H	2.27	0.42
16:CS:11:LYS:HG2	16:CS:15:ARG:NH1	2.34	0.42
16:CS:83:LYS:O	16:CS:84:GLN:HB2	2.19	0.42
18:CU:91:ASP:O	18:CU:95:LEU:HB2	2.19	0.42
26:C2:35:LEU:HD23	26:C2:35:LEU:HA	1.83	0.42
26:C2:51:ARG:O	26:C2:55:ARG:HG3	2.20	0.42
29:C5:45:VAL:HG11	29:C5:58:LEU:HD22	2.02	0.42
32:C8:8:LYS:O	32:C8:12:LYS:HG3	2.18	0.42
34:DA:338:A:C5	34:DA:339:C:C4	3.08	0.42
34:DA:502:G:H2'	34:DA:503:C:O4'	2.19	0.42
34:DA:737:A:H8	34:DA:737:A:O5'	2.02	0.42
34:DA:826:C:C2	34:DA:827:U:C5	3.08	0.42
34:DA:936:C:H42	34:DA:1379:G:H1	1.65	0.42
34:DA:1531:A:N7	34:DA:1532:U:C4	2.87	0.42
35:DB:8:LYS:HG3	35:DB:9:GLU:H	1.85	0.42
35:DB:82:ARG:HG3	35:DB:92:TYR:OH	2.19	0.42
36:DC:148:GLY:HA3	36:DC:172:ARG:O	2.20	0.42
36:DC:156:ARG:HE	36:DC:156:ARG:HB3	1.50	0.42
41:DH:88:LYS:HB3	41:DH:89:PRO:HD2	2.01	0.42
51:DR:50:ILE:HG12	51:DR:70:ILE:HG21	2.01	0.42
57:DZ:130:VAL:HA	57:DZ:131:PRO:HD3	1.84	0.42
1:AA:268:G:O2'	1:AA:269:G:H8	2.02	0.42
1:AA:555:G:C5	1:AA:2044:U:H5"	2.54	0.42
1:AA:909:G:H2'	1:AA:910:A:O4'	2.20	0.42
1:AA:1644:C:H2'	1:AA:1645:C:H6	1.85	0.42
1:AA:2480:G:OP1	14:AQ:119:ARG:NH2	2.44	0.42
1:AA:2679:C:H2'	1:AA:2680:G:O4'	2.19	0.42
4:AD:138:VAL:HA	4:AD:165:ILE:HB	2.01	0.42
5:AE:51:PHE:CD2	5:AE:52:LEU:HG	2.55	0.42
5:AE:105:THR:HA	5:AE:165:VAL:O	2.19	0.42
8:AH:7:LEU:O	8:AH:69:ARG:HD2	2.19	0.42
8:AH:68:THR:O	8:AH:72:ILE:HG13	2.19	0.42
11:AN:87:LEU:HD22	11:AN:91:LEU:HG	2.02	0.42
12:AO:64:ARG:HG2	12:AO:79:PHE:CD2	2.54	0.42
13:AP:88:LEU:O	13:AP:91:PHE:HD2	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AU:79:PHE:CE1	18:AU:83:LEU:HD13	2.55	0.42
22:AY:38:ILE:HD11	22:AY:66:PRO:HG3	2.01	0.42
23:AZ:8:TYR:CD1	23:AZ:8:TYR:N	2.88	0.42
34:BA:192:U:H2'	34:BA:193:C:H6	1.85	0.42
34:BA:574:A:N3	34:BA:883:C:H1'	2.34	0.42
34:BA:1152:A:H5'	43:BJ:13:HIS:ND1	2.34	0.42
34:BA:1438:G:H2'	34:BA:1439:C:C6	2.55	0.42
35:BB:195:ASP:O	41:BH:74:PRO:HG2	2.20	0.42
38:BE:79:GLU:OE1	41:BH:104:ARG:HA	2.18	0.42
42:BI:71:SER:HA	42:BI:74:ILE:HD12	2.01	0.42
56:BY:9:A:H1'	56:BY:45:U:H2'	2.00	0.42
57:BZ:99:ARG:HB3	57:BZ:99:ARG:NH1	2.35	0.42
1:CA:110:G:C4	1:CA:111:A:C8	3.08	0.42
1:CA:508:G:H4'	1:CA:509:C:OP2	2.20	0.42
1:CA:666:G:O2'	1:CA:667:U:H5'	2.20	0.42
1:CA:1043:C:C2'	1:CA:1044:G:H5'	2.50	0.42
1:CA:1058:G:C2'	1:CA:1059:G:H5"	2.49	0.42
1:CA:1153:C:H5'	18:CU:76:TYR:CE1	2.55	0.42
1:CA:1168:G:H1	1:CA:1181:C:H42	1.66	0.42
1:CA:2128:C:H5'	1:CA:2173:A:H2	1.85	0.42
1:CA:2200:C:O2	1:CA:2226:C:N4	2.52	0.42
1:CA:2379:G:C2'	16:CS:17:ARG:HH21	2.31	0.42
1:CA:2747:G:O6	1:CA:2755:C:H5"	2.20	0.42
3:CC:225:ILE:O	3:CC:227:PRO:HD3	2.19	0.42
4:CD:48:ARG:O	4:CD:50:THR:HG23	2.20	0.42
7:CG:19:LEU:HD23	7:CG:19:LEU:HA	1.87	0.42
7:CG:64:THR:OG1	7:CG:66:GLN:O	2.33	0.42
8:CH:46:GLU:O	8:CH:48:GLY:N	2.52	0.42
10:CL:89:HIS:O	10:CL:91:PRO:HD3	2.19	0.42
14:CQ:3:MET:HB2	14:CQ:93:TYR:CD2	2.55	0.42
20:CW:27:LYS:O	20:CW:71:VAL:HG23	2.20	0.42
28:C4:10:VAL:O	28:C4:12:ALA:N	2.53	0.42
32:C8:62:LEU:HB3	32:C8:65:GLU:HB2	2.01	0.42
34:DA:165:C:H2'	34:DA:166:G:H8	1.83	0.42
34:DA:321:A:N7	34:DA:328:C:O2'	2.40	0.42
34:DA:453:A:C5	34:DA:454:C:C4	3.08	0.42
34:DA:580:U:H2'	34:DA:581:G:O4'	2.20	0.42
34:DA:650:G:C2'	34:DA:651:C:H5'	2.50	0.42
34:DA:862:C:O2'	34:DA:863:U:H5'	2.19	0.42
34:DA:1005:A:OP2	34:DA:1006:C:N4	2.53	0.42
37:DD:25:ARG:O	37:DD:28:SER:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DF:33:TYR:HD1	39:DF:75:LEU:HD23	1.85	0.42
40:DG:27:ILE:HD11	40:DG:43:PHE:CD2	2.55	0.42
49:DP:43:LYS:HA	49:DP:48:TRP:CG	2.55	0.42
57:DZ:20:HIS:CE1	57:DZ:115:GLU:HB3	2.55	0.42
1:AA:860:U:OP2	13:AP:23:PRO:HD2	2.20	0.42
1:AA:1170:C:H2'	1:AA:1171:G:O4'	2.19	0.42
1:AA:2144:U:O2'	3:AC:167:ASP:HB3	2.20	0.42
1:AA:2154:U:N3	3:AC:6:LYS:CB	2.83	0.42
1:AA:2432:C:O5'	1:AA:2432:C:H6	2.03	0.42
1:AA:2484:G:H2'	1:AA:2541:G:N2	2.35	0.42
2:AB:106:G:OP1	23:AZ:31:ARG:HG2	2.19	0.42
3:AC:48:LEU:CD2	3:AC:59:VAL:HG21	2.50	0.42
4:AD:133:LEU:HA	4:AD:136:ILE:HG13	2.01	0.42
4:AD:165:ILE:H	4:AD:165:ILE:HG12	1.58	0.42
4:AD:213:ARG:HA	4:AD:213:ARG:HD2	1.81	0.42
5:AE:61:ARG:N	5:AE:62:PRO:HD2	2.33	0.42
7:AG:133:LEU:HG	7:AG:157:ILE:HG13	2.01	0.42
11:AN:70:LYS:HE2	11:AN:72:TYR:CZ	2.55	0.42
11:AN:87:LEU:O	11:AN:88:GLU:C	2.62	0.42
12:AO:1:MET:HB3	12:AO:1:MET:HE2	1.71	0.42
12:AO:7:TYR:CE1	12:AO:20:MET:HG3	2.55	0.42
19:AV:97:LYS:HD2	19:AV:97:LYS:HA	1.81	0.42
25:A1:23:LYS:HB2	25:A1:23:LYS:HE3	1.92	0.42
27:A3:43:ILE:O	27:A3:47:VAL:HG23	2.20	0.42
34:BA:26:A:H5"	34:BA:27:G:OP2	2.20	0.42
34:BA:393:A:C2	34:BA:394:G:C8	3.07	0.42
34:BA:404:U:H2'	34:BA:405:U:H6	1.85	0.42
34:BA:657:G:C2	34:BA:658:G:C8	3.08	0.42
34:BA:967:C:O5'	34:BA:967:C:H6	2.03	0.42
34:BA:1074:G:C6	34:BA:1075:C:C4	3.08	0.42
44:BK:43:SER:OG	44:BK:44:SER:N	2.53	0.42
44:BK:99:GLN:HG2	44:BK:105:VAL:HG21	2.02	0.42
47:BN:23:ARG:HD2	47:BN:28:GLY:O	2.19	0.42
51:BR:40:LEU:O	51:BR:41:LYS:C	2.63	0.42
57:BZ:-42:TYR:CE2	57:BZ:-38:TYR:CD2	3.07	0.42
1:CA:274:G:N2	1:CA:363:G:N7	2.67	0.42
1:CA:444:C:H4'	6:CF:49:ALA:HB2	2.01	0.42
1:CA:577:G:O2'	1:CA:1254:A:OP1	2.33	0.42
1:CA:928:G:H8	1:CA:928:G:O5'	2.03	0.42
1:CA:1323:U:OP1	20:CW:84:ARG:NE	2.40	0.42
1:CA:1439:A:C2	1:CA:1553:A:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1637:A:H2'	1:CA:1638:C:O4'	2.20	0.42
1:CA:1788:C:H2'	1:CA:1789:A:O4'	2.20	0.42
1:CA:2078:C:H1'	1:CA:2434:A:H1'	2.02	0.42
1:CA:2154:G:C2	1:CA:2155:G:C8	3.08	0.42
1:CA:2343:C:H4'	1:CA:2373:G:O3'	2.19	0.42
1:CA:2510:C:H4'	63:CA:4271:HOH:O	2.19	0.42
1:CA:2703:C:H2'	1:CA:2704:C:C6	2.54	0.42
1:CA:2774:C:H2'	1:CA:2775:A:O4'	2.19	0.42
4:CD:71:ASP:CB	4:CD:103:ARG:NH2	2.83	0.42
6:CF:32:LEU:O	6:CF:36:VAL:HG23	2.19	0.42
6:CF:65:TRP:CZ2	6:CF:75:HIS:HD2	2.37	0.42
9:CK:70:GLU:O	9:CK:72:ASP:N	2.52	0.42
11:CN:70:LYS:HB3	11:CN:87:LEU:HB2	2.01	0.42
16:CS:10:ARG:O	16:CS:14:VAL:HG22	2.19	0.42
34:DA:189(F):U:O2	50:DQ:63:ARG:NH2	2.53	0.42
34:DA:944:G:N1	34:DA:1338:G:OP2	2.53	0.42
34:DA:1026:G:O6	34:DA:1036:G:N2	2.52	0.42
34:DA:1058:G:H2'	34:DA:1059:C:C6	2.55	0.42
34:DA:1083:U:C5	34:DA:1084:G:C6	3.07	0.42
34:DA:1347:G:O2'	34:DA:1373:G:N1	2.45	0.42
43:DJ:49:VAL:HG23	47:DN:41:ARG:HB2	2.02	0.42
46:DM:74:VAL:O	46:DM:78:ILE:HG12	2.19	0.42
47:DN:40:CYS:SG	47:DN:43:CYS:HB2	2.60	0.42
52:DS:4:SER:HB3	52:DS:7:LYS:HD3	2.02	0.42
57:DZ:512:ILE:HD13	57:DZ:512:ILE:H	1.84	0.42
1:AA:107:G:H2'	1:AA:108:G:O4'	2.18	0.42
1:AA:559:U:H2'	1:AA:560:C:C6	2.55	0.42
1:AA:766:C:O5'	1:AA:766:C:H6	2.03	0.42
1:AA:2164:C:H2'	1:AA:2165:C:C6	2.55	0.42
1:AA:2225:U:H4'	4:AD:151:LYS:HG2	2.02	0.42
1:AA:2784:C:H2'	1:AA:2785:C:C6	2.54	0.42
3:AC:206:LYS:HB3	3:AC:206:LYS:HZ2	1.84	0.42
11:AN:23:LEU:HD11	11:AN:99:LEU:HA	2.01	0.42
12:AO:8:LEU:N	12:AO:8:LEU:HD23	2.34	0.42
13:AP:101:VAL:HG12	13:AP:102:ARG:N	2.35	0.42
27:A3:31:LEU:HD23	27:A3:31:LEU:HA	1.48	0.42
34:BA:258:G:H2'	34:BA:259:G:H8	1.84	0.42
34:BA:1175:G:H2'	34:BA:1176:A:C8	2.55	0.42
35:BB:24:TRP:CE3	35:BB:26:PRO:HA	2.55	0.42
35:BB:55:PHE:CD1	35:BB:221:LEU:HG	2.54	0.42
35:BB:219:VAL:HA	35:BB:222:ILE:HD12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BI:9:ARG:HB2	42:BI:104:ARG:HG3	2.02	0.42
45:BL:110:VAL:CG2	45:BL:120:TYR:HB3	2.50	0.42
49:BP:66:PRO:HD2	49:BP:71:ARG:HH21	1.85	0.42
50:BQ:56:VAL:HB	50:BQ:78:GLU:HB3	2.02	0.42
57:BZ:272:LEU:O	57:BZ:275:ALA:HB3	2.20	0.42
57:BZ:639:ASN:N	57:BZ:640:ALA:HB3	2.34	0.42
1:CA:176:G:O2'	1:CA:177:G:H5'	2.19	0.42
1:CA:697:C:C2	1:CA:698:C:C5	3.08	0.42
1:CA:2406:U:H2'	1:CA:2406:U:OP2	2.19	0.42
1:CA:2838:G:C2	1:CA:2881:C:C2	3.08	0.42
2:CB:103:G:N2	23:CZ:73:GLN:OE1	2.53	0.42
6:CF:170:LEU:HG	6:CF:172:TRP:NE1	2.34	0.42
16:CS:25:ARG:NH1	16:CS:42:ASP:OD2	2.53	0.42
23:CZ:94:GLU:H	23:CZ:94:GLU:HG3	1.42	0.42
34:DA:357:G:O2'	34:DA:358:U:H5'	2.20	0.42
34:DA:556:C:C4	34:DA:557:G:N7	2.88	0.42
34:DA:1008:C:H2'	34:DA:1009:G:O4'	2.19	0.42
34:DA:1077:G:C2	34:DA:1081:G:C6	3.08	0.42
34:DA:1317:C:OP1	47:DN:17:LYS:HG2	2.20	0.42
38:DE:8:GLU:HG3	38:DE:34:VAL:HG23	2.01	0.42
42:DI:19:LEU:HD13	42:DI:59:PHE:CE1	2.55	0.42
42:DI:42:ARG:NH2	42:DI:71:SER:HG	2.18	0.42
44:DK:89:ALA:O	44:DK:91:ARG:N	2.51	0.42
53:DT:53:LEU:HA	53:DT:56:MET:HG2	2.01	0.42
56:DW:10:G:N2	56:DW:26:A:H1'	2.34	0.42
56:DW:41:C:H2'	56:DW:42:C:C6	2.55	0.42
56:DY:35:A:N6	56:DY:36:A:N1	2.68	0.42
57:DZ:359:HIS:HB2	57:DZ:362:HIS:O	2.20	0.42
57:DZ:512:ILE:HG22	57:DZ:567:LEU:HD13	2.01	0.42
1:AA:12:U:O2	1:AA:12:U:H2'	2.20	0.42
1:AA:302:A:HO2'	1:AA:303:C:P	2.41	0.42
1:AA:440:C:O5'	1:AA:440:C:H6	2.02	0.42
1:AA:769:A:H2'	1:AA:770:G:O4'	2.20	0.42
1:AA:904:C:H2'	1:AA:905:U:C6	2.55	0.42
1:AA:1470:G:H2'	1:AA:1471:G:O4'	2.20	0.42
1:AA:1744:G:OP2	1:AA:1745:A:O2'	2.33	0.42
1:AA:2331:G:N2	16:AS:3:ARG:HA	2.34	0.42
1:AA:2406:C:P	32:A8:30:ARG:HH11	2.42	0.42
4:AD:261:LYS:HG3	4:AD:262:ARG:N	2.32	0.42
5:AE:9:VAL:HG13	5:AE:25:VAL:O	2.20	0.42
5:AE:116:VAL:HG13	5:AE:122:PHE:CB	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:101:LEU:O	6:AF:102:PRO:C	2.61	0.42
6:AF:182:ASN:HD21	6:AF:185:ASP:CG	2.25	0.42
7:AG:44:GLY:HA3	7:AG:88:ILE:HG22	2.01	0.42
8:AH:28:GLY:HA3	8:AH:79:VAL:HG23	2.02	0.42
16:AS:88:ASP:C	16:AS:90:GLY:H	2.27	0.42
22:AY:79:CYS:SG	22:AY:81:LYS:HG3	2.59	0.42
23:AZ:156:LYS:HG2	23:AZ:157:LEU:H	1.85	0.42
26:A2:32:LEU:HD11	26:A2:54:LYS:HG2	2.01	0.42
28:A4:50:VAL:HB	46:BM:62:ASN:O	2.19	0.42
30:A6:33:LYS:HG3	30:A6:51:GLU:HG2	2.02	0.42
34:BA:11:G:C2	34:BA:12:U:O2	2.73	0.42
34:BA:327:A:H1'	34:BA:329:A:O4'	2.20	0.42
34:BA:426:G:H2'	34:BA:427:U:C6	2.54	0.42
34:BA:590:C:O2'	34:BA:591:U:H5'	2.20	0.42
37:BD:78:LEU:HD23	37:BD:78:LEU:HA	1.87	0.42
39:BF:48:LEU:HB2	39:BF:56:PRO:O	2.20	0.42
43:BJ:37:PRO:HA	43:BJ:72:VAL:HG12	2.01	0.42
56:BY:56:C:H2'	56:BY:57:G:O4'	2.19	0.42
57:BZ:136:ALA:HB3	57:BZ:260:LEU:CB	2.50	0.42
57:BZ:225:GLU:HA	57:BZ:228:MET:HB3	2.01	0.42
1:CA:272(B):G:H2'	1:CA:272(C):G:H8	1.83	0.42
1:CA:607:U:OP1	6:CF:103:LYS:N	2.45	0.42
1:CA:660:G:H5'	6:CF:99:TYR:CD2	2.55	0.42
1:CA:831:G:O2'	13:CP:38:GLN:NE2	2.52	0.42
1:CA:1084:A:H2'	1:CA:1085:A:C8	2.54	0.42
1:CA:1088:A:N6	10:CL:133:SER:OG	2.51	0.42
1:CA:1241:A:C2	1:CA:1242:A:C4	3.07	0.42
1:CA:1586:A:H2'	1:CA:1587:A:O4'	2.20	0.42
1:CA:2176:A:H4'	3:CC:45:HIS:NE2	2.34	0.42
1:CA:2177:C:O2'	3:CC:47:LYS:HD3	2.20	0.42
1:CA:2293:C:OP1	1:CA:2377:A:N6	2.49	0.42
1:CA:2467:C:O2	14:CQ:124:LYS:NZ	2.51	0.42
1:CA:2526:G:O2'	33:C9:1:MET:N	2.41	0.42
1:CA:2749:A:N1	1:CA:2750:A:N6	2.67	0.42
1:CA:2880:C:O3'	15:CR:90:ARG:NH1	2.52	0.42
4:CD:206:LEU:HD22	4:CD:211:ARG:HG2	2.01	0.42
5:CE:73:GLU:HA	5:CE:74:PRO:HD2	1.76	0.42
5:CE:179:GLU:HG2	17:CT:9:LEU:HD22	2.02	0.42
19:CV:71:LEU:HD22	19:CV:84:LYS:HE3	2.02	0.42
20:CW:71:VAL:HA	20:CW:107:LEU:HD12	2.01	0.42
22:CY:9:LYS:HA	22:CY:10:GLY:HA2	1.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:C5:49:CYS:O	29:C5:56:LYS:NZ	2.53	0.42
34:DA:324:G:N2	34:DA:327:A:C8	2.88	0.42
34:DA:376:G:C4	34:DA:389:A:N1	2.88	0.42
34:DA:623:C:O5'	34:DA:623:C:H6	2.02	0.42
34:DA:830:G:C6	34:DA:831:U:C4	3.07	0.42
34:DA:975:A:H61	43:DJ:48:THR:HB	1.85	0.42
34:DA:1009:G:H3'	34:DA:1010:G:C8	2.55	0.42
34:DA:1041:A:N6	34:DA:1042:G:O6	2.53	0.42
34:DA:1273:G:H5'	34:DA:1274:G:OP2	2.19	0.42
34:DA:1355:G:H2'	34:DA:1356:G:H8	1.84	0.42
35:DB:76:GLN:HB2	35:DB:208:ILE:HG12	2.01	0.42
36:DC:157:ILE:HG21	36:DC:164:ARG:NH2	2.35	0.42
37:DD:173:TRP:HB2	37:DD:187:ARG:O	2.20	0.42
40:DG:115:ARG:HB3	40:DG:118:VAL:HG23	2.01	0.42
53:DT:72:LEU:HD23	53:DT:72:LEU:HA	1.84	0.42
57:DZ:38:ARG:HG2	57:DZ:40:HIS:HB2	2.01	0.42
57:DZ:219:VAL:C	57:DZ:221:ALA:N	2.78	0.42
1:AA:811:A:H5"	4:AD:210:GLY:HA3	2.02	0.41
1:AA:1091:A:C8	1:AA:1093:G:C2	3.07	0.41
1:AA:1214:G:H2'	1:AA:1215:G:O4'	2.20	0.41
1:AA:1343:C:OP1	1:AA:2722:C:H4'	2.20	0.41
1:AA:1411:A:P	25:A1:41:ARG:HH22	2.43	0.41
1:AA:2119:C:H2'	1:AA:2120:U:C6	2.55	0.41
1:AA:2294:G:H4'	1:AA:2401:G:O2'	2.19	0.41
1:AA:2529:C:C5	1:AA:2554:A:C5	3.09	0.41
4:AD:132:PRO:HG3	4:AD:190:TYR:CE1	2.55	0.41
6:AF:138:GLU:O	6:AF:139:PHE:C	2.63	0.41
11:AN:108:PRO:O	11:AN:113:GLY:HA3	2.19	0.41
24:A0:59:LEU:HA	24:A0:59:LEU:HD23	1.81	0.41
25:A1:7:ILE:HD12	25:A1:98:LEU:HD11	2.01	0.41
28:A4:41:PRO:O	28:A4:48:ARG:NH2	2.53	0.41
28:A4:46:GLN:O	28:A4:48:ARG:HG2	2.20	0.41
34:BA:622:A:C8	34:BA:623:C:C6	3.08	0.41
34:BA:1017:G:H2'	34:BA:1018:C:H6	1.82	0.41
34:BA:1065:U:H4'	34:BA:1066:C:O5'	2.20	0.41
34:BA:1240:U:C2	40:BG:32:ARG:HD2	2.55	0.41
34:BA:1298:C:H2'	40:BG:114:ARG:NH1	2.35	0.41
34:BA:1350:A:C6	34:BA:1351:U:N3	2.88	0.41
35:BB:120:ALA:O	35:BB:121:LEU:HD22	2.20	0.41
38:BE:140:ARG:HE	38:BE:140:ARG:HB2	1.73	0.41
39:BF:45:LEU:HD12	39:BF:59:TYR:CD2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BJ:8:LEU:HB2	43:BJ:70:ARG:HB2	2.02	0.41
44:BK:95:ILE:O	44:BK:99:GLN:HG3	2.20	0.41
56:BW:37:MIA:C5	56:BW:38:A:C5	3.03	0.41
57:BZ:109:ASP:HB3	57:BZ:112:GLN:HB2	2.02	0.41
57:BZ:133:ILE:HG22	57:BZ:257:PRO:HD2	2.01	0.41
57:BZ:320:PRO:HB2	57:BZ:321:TYR:HD2	1.83	0.41
1:CA:1053:C:C6	1:CA:1053:C:C3'	3.03	0.41
1:CA:1053:C:C2	1:CA:1054:A:H1'	2.54	0.41
1:CA:1231:G:H2'	1:CA:1232:G:H8	1.85	0.41
1:CA:1344:G:C2	1:CA:1385:G:C8	3.07	0.41
1:CA:1528(A):A:H2'	1:CA:1529:G:O4'	2.19	0.41
6:CF:123:LEU:HD12	6:CF:124:LEU:N	2.35	0.41
6:CF:172:TRP:CD1	6:CF:172:TRP:H	2.38	0.41
7:CG:115:ARG:CZ	7:CG:115:ARG:HB3	2.50	0.41
7:CG:116:ASP:OD1	46:DM:68:GLY:HA3	2.20	0.41
8:CH:91:GLY:O	8:CH:94:TYR:N	2.53	0.41
14:CQ:73:PRO:HB3	14:CQ:93:TYR:CE1	2.55	0.41
15:CR:101:ALA:HA	29:C5:44:THR:HG21	2.01	0.41
18:CU:98:LEU:HD23	18:CU:98:LEU:HA	1.85	0.41
20:CW:20:VAL:O	20:CW:21:VAL:C	2.62	0.41
24:C0:72:ARG:HB3	24:C0:75:LEU:HB2	2.01	0.41
26:C2:2:LYS:HG2	26:C2:5:GLU:OE1	2.20	0.41
27:C3:28:LEU:HA	27:C3:33:GLN:OE1	2.20	0.41
34:DA:437:U:H5"	37:DD:155:LEU:HD11	2.01	0.41
34:DA:662:G:H2'	34:DA:663:A:C8	2.55	0.41
34:DA:694:A:C2	34:DA:695:A:H1'	2.54	0.41
35:DB:169:LYS:O	35:DB:169:LYS:HD3	2.19	0.41
37:DD:57:ARG:HB3	37:DD:206:PHE:HB2	2.01	0.41
39:DF:78:GLU:O	39:DF:81:ILE:HG22	2.19	0.41
44:DK:63:LEU:H	44:DK:63:LEU:HG	1.63	0.41
46:DM:3:ARG:HE	46:DM:11:ARG:HH21	1.68	0.41
48:DO:70:LEU:O	48:DO:70:LEU:HG	2.20	0.41
57:DZ:137:ASN:ND2	62:DZ:703:GDP:N7	2.68	0.41
57:DZ:215:LYS:O	57:DZ:218:GLU:HB3	2.20	0.41
57:DZ:511:LYS:HB2	57:DZ:569:ASP:HB3	2.03	0.41
1:AA:894:U:H5'	63:AA:3912:HOH:O	2.19	0.41
1:AA:1058:U:H5	11:AN:28:THR:HG21	1.85	0.41
1:AA:1116:A:H5'	1:AA:1118:C:OP2	2.20	0.41
1:AA:1287:A:O2'	1:AA:1288:A:H5'	2.19	0.41
1:AA:1644:C:H2'	1:AA:1645:C:C6	2.56	0.41
1:AA:1766:G:H3'	1:AA:1767:A:H5"	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1989:C:H2'	1:AA:1990:G:H5'	2.02	0.41
1:AA:2297:C:H2'	1:AA:2298:A:H5'	2.03	0.41
4:AD:96:HIS:CD2	4:AD:102:LYS:HG2	2.55	0.41
4:AD:107:ALA:HA	4:AD:108:PRO:HD3	1.77	0.41
5:AE:52:LEU:O	5:AE:76:ARG:N	2.49	0.41
5:AE:67:PHE:CZ	5:AE:75:VAL:HG12	2.55	0.41
7:AG:66:GLN:NE2	7:AG:94:LEU:HD23	2.35	0.41
23:AZ:156:LYS:O	23:AZ:157:LEU:HB2	2.20	0.41
30:A6:50:ARG:HG3	30:A6:51:GLU:O	2.20	0.41
34:BA:255:G:H1'	50:BQ:16:GLN:HE21	1.85	0.41
34:BA:356:A:N3	34:BA:368:U:O2'	2.51	0.41
34:BA:407:G:H2'	34:BA:408:A:C8	2.55	0.41
34:BA:791:G:C2'	34:BA:792:A:H5'	2.50	0.41
34:BA:1118:C:C2	34:BA:1179:A:C2	3.08	0.41
34:BA:1280:A:C8	43:BJ:41:PRO:HD3	2.55	0.41
35:BB:24:TRP:H	35:BB:24:TRP:HD1	1.67	0.41
39:BF:38:GLU:OE1	39:BF:64:GLN:NE2	2.53	0.41
41:BH:14:ARG:O	41:BH:18:ARG:HD3	2.20	0.41
43:BJ:63:PHE:HE2	47:BN:45:ARG:HA	1.85	0.41
52:BS:80:TYR:CZ	52:BS:82:GLY:HA2	2.55	0.41
53:BT:71:THR:O	53:BT:72:LEU:HD23	2.20	0.41
57:BZ:417:THR:HA	57:BZ:418:LYS:CG	2.46	0.41
1:CA:25:U:H2'	1:CA:26:G:O4'	2.20	0.41
1:CA:64:A:H2'	1:CA:65:C:O4'	2.20	0.41
1:CA:420:C:H2'	1:CA:421:U:C6	2.56	0.41
1:CA:494:G:H4'	20:CW:6:ILE:HB	2.02	0.41
1:CA:679:C:H2'	1:CA:680:G:H8	1.84	0.41
1:CA:844:C:H2'	1:CA:845:G:H5'	2.01	0.41
1:CA:1265:A:H5'	63:CA:3880:HOH:O	2.20	0.41
1:CA:1791:A:OP2	1:CA:1791:A:C8	2.72	0.41
1:CA:2136:C:O2'	1:CA:2137:C:H6	2.03	0.41
1:CA:2727:G:O2'	12:CO:70:LYS:NZ	2.52	0.41
1:CA:2742:C:OP1	33:C9:35:ARG:HD3	2.19	0.41
1:CA:2792:G:C6	1:CA:2805:G:C6	3.08	0.41
1:CA:2823:A:OP1	5:CE:113:PHE:HB2	2.20	0.41
1:CA:2850:A:OP2	1:CA:2866:U:H5	2.02	0.41
4:CD:72:LYS:HG3	4:CD:103:ARG:NH2	2.35	0.41
5:CE:64:LYS:O	5:CE:68:ALA:N	2.50	0.41
5:CE:101:ARG:HD3	5:CE:101:ARG:HA	1.82	0.41
6:CF:123:LEU:HD13	6:CF:192:LEU:HB3	2.01	0.41
16:CS:28:VAL:HG11	16:CS:98:VAL:HG13	2.00	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CY:20:TYR:CZ	22:CY:43:ASN:HA	2.55	0.41
23:CZ:7:ALA:O	23:CZ:62:PRO:HD3	2.20	0.41
26:C2:53:LEU:HD23	26:C2:53:LEU:HA	1.76	0.41
30:C6:40:CYS:HA	30:C6:41:PRO:HD3	1.90	0.41
34:DA:227:G:O2'	49:DP:62:VAL:HG22	2.20	0.41
34:DA:643:C:H5'	41:DH:31:PHE:CD1	2.55	0.41
34:DA:861:G:P	41:DH:75:ARG:HH22	2.43	0.41
34:DA:971:G:OP2	34:DA:1231:G:N2	2.42	0.41
34:DA:1125:U:O2'	34:DA:1126:U:H2'	2.20	0.41
35:DB:96:ARG:HD3	35:DB:98:LEU:HA	2.02	0.41
36:DC:191:THR:C	36:DC:193:TYR:H	2.28	0.41
38:DE:21:ALA:O	38:DE:23:GLY:N	2.52	0.41
39:DF:35:ALA:HA	39:DF:67:MET:HB3	2.02	0.41
40:DG:66:VAL:O	40:DG:70:LYS:HG3	2.20	0.41
44:DK:59:TYR:O	44:DK:62:GLN:HB3	2.20	0.41
45:DL:105:TYR:C	45:DL:107:ALA:H	2.28	0.41
1:AA:653:G:H2'	1:AA:654:G:C8	2.55	0.41
1:AA:1122:C:O2'	10:AL:90:LYS:HA	2.19	0.41
1:AA:1739:U:O2'	1:AA:1740:U:H2'	2.19	0.41
1:AA:2191:A:N3	1:AA:2191:A:H2'	2.35	0.41
1:AA:2244:U:O2'	1:AA:2245:U:H5'	2.20	0.41
1:AA:2589:A:H5'	29:A5:3:LYS:HD2	2.00	0.41
1:AA:2638:C:H2'	1:AA:2639:G:O4'	2.19	0.41
4:AD:248:SER:HB2	4:AD:249:PRO:HD2	2.02	0.41
6:AF:89:VAL:HG12	6:AF:90:PHE:CD2	2.55	0.41
16:AS:93:LYS:CD	16:AS:95:HIS:HB2	2.50	0.41
21:AX:66:LEU:HD23	21:AX:66:LEU:HA	1.88	0.41
34:BA:1117:G:H5"	42:BI:104:ARG:NH2	2.36	0.41
36:BC:24:ALA:HB1	36:BC:28:GLN:HB2	2.03	0.41
36:BC:64:VAL:HG13	36:BC:99:VAL:HA	2.03	0.41
38:BE:57:LYS:O	38:BE:61:TYR:HD2	2.03	0.41
40:BG:114:ARG:O	40:BG:119:ARG:NH1	2.54	0.41
47:BN:23:ARG:HH11	47:BN:30:ALA:HB2	1.84	0.41
49:BP:43:LYS:HG2	49:BP:48:TRP:CD2	2.55	0.41
49:BP:55:ARG:HA	49:BP:55:ARG:NH1	2.26	0.41
57:BZ:238:THR:O	57:BZ:239:GLU:C	2.63	0.41
1:CA:152:G:C6	1:CA:153:C:C4	3.08	0.41
1:CA:591:C:H1'	32:C8:2:PRO:HA	2.02	0.41
1:CA:599:G:H4'	6:CF:31:HIS:HD2	1.83	0.41
1:CA:1028:A:N6	1:CA:1125:G:H2'	2.36	0.41
1:CA:1803:A:H2	1:CA:1822:G:N3	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2379:G:O2'	16:CS:17:ARG:NH2	2.35	0.41
1:CA:2869:G:H2'	1:CA:2870:C:H6	1.86	0.41
6:CF:39:TRP:CB	6:CF:101:LEU:HD22	2.50	0.41
10:CL:93:ARG:HE	10:CL:93:ARG:HB3	1.65	0.41
10:CL:99:ILE:HG23	10:CL:103:GLN:HB2	2.02	0.41
13:CP:55:ARG:HG2	13:CP:56:SER:N	2.35	0.41
15:CR:54:LEU:O	15:CR:57:ARG:HB2	2.20	0.41
20:CW:65:LEU:O	20:CW:67:ASP:N	2.53	0.41
24:C0:82:ARG:HA	24:C0:83:PRO:HD3	1.67	0.41
34:DA:473:G:H2'	34:DA:474:G:H8	1.85	0.41
34:DA:1106:G:C6	34:DA:1107:C:N4	2.88	0.41
34:DA:1279:A:H4'	34:DA:1280:A:OP1	2.21	0.41
35:DB:100:GLY:HA3	35:DB:104:ASN:HB3	2.02	0.41
36:DC:47:LEU:HD22	36:DC:47:LEU:HA	1.88	0.41
41:DH:16:ALA:C	41:DH:18:ARG:N	2.78	0.41
41:DH:51:VAL:HG11	41:DH:60:ARG:HH11	1.86	0.41
57:DZ:293:THR:OG1	57:DZ:297:GLU:HG2	2.20	0.41
57:DZ:526:VAL:HG23	57:DZ:566:THR:HA	2.01	0.41
1:AA:585:U:C4	1:AA:2058:C:O4'	2.73	0.41
1:AA:815:G:H2'	1:AA:816:G:H8	1.86	0.41
1:AA:868:A:C2'	1:AA:991:G:H5"	2.50	0.41
1:AA:1090:G:HO2'	1:AA:1157:A:H61	1.65	0.41
1:AA:1289:G:H4'	13:AP:7:ARG:HH22	1.85	0.41
1:AA:1786:A:OP2	17:AT:113:LYS:NZ	2.50	0.41
1:AA:1810:U:H2'	63:AA:4426:HOH:O	2.19	0.41
1:AA:2711:C:H2'	1:AA:2712:C:O4'	2.20	0.41
4:AD:30:GLU:O	4:AD:34:VAL:HG22	2.21	0.41
6:AF:192:LEU:HD22	6:AF:194:MET:HG3	2.03	0.41
7:AG:31:VAL:HA	7:AG:32:PRO:HD2	1.85	0.41
10:AL:107:ILE:C	10:AL:109:LYS:H	2.28	0.41
14:AQ:109:VAL:HG22	14:AQ:110:THR:H	1.85	0.41
18:AU:91:ASP:O	18:AU:95:LEU:HB2	2.20	0.41
25:A1:62:VAL:HG13	25:A1:63:ALA:O	2.21	0.41
34:BA:102:G:O2'	34:BA:151:A:N3	2.45	0.41
34:BA:109:A:H2'	34:BA:326:G:N2	2.35	0.41
34:BA:113:G:H2'	34:BA:114:U:C6	2.56	0.41
34:BA:387:U:H5"	34:BA:388:G:OP1	2.20	0.41
34:BA:408:A:O4'	37:BD:116:GLN:NE2	2.53	0.41
34:BA:414:A:N6	34:BA:431:A:N3	2.68	0.41
34:BA:771:G:H2'	34:BA:772:U:H6	1.85	0.41
35:BB:176:GLU:O	35:BB:180:LEU:HG	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BC:36:ASP:OD1	36:BC:57:ILE:HG21	2.20	0.41
36:BC:108:ASN:HA	36:BC:109:PRO:HD2	1.84	0.41
36:BC:108:ASN:HB3	36:BC:111:LEU:HG	2.02	0.41
41:BH:13:ILE:O	41:BH:17:THR:HG23	2.19	0.41
47:BN:47:LEU:HD23	47:BN:50:LYS:NZ	2.35	0.41
49:BP:65:GLN:HA	49:BP:66:PRO:HD3	1.79	0.41
54:BU:5:ASP:O	54:BU:11:GLY:HA3	2.21	0.41
56:BW:25:C:H2'	56:BW:26:A:O4'	2.20	0.41
57:BZ:16:GLY:HA3	57:BZ:101:LEU:HD11	2.03	0.41
57:BZ:71:THR:HB	57:BZ:80:ASN:OD1	2.21	0.41
57:BZ:74:TRP:NE1	57:BZ:273:LEU:HB3	2.35	0.41
57:BZ:380:LEU:HD23	57:BZ:383:THR:HB	2.02	0.41
1:CA:26:G:C6	1:CA:27:G:N1	2.88	0.41
1:CA:64:A:O3'	21:CX:71:GLY:HA3	2.21	0.41
1:CA:143:G:C6	1:CA:143(A):C:C4	3.09	0.41
1:CA:320:A:H4'	1:CA:322:A:N7	2.36	0.41
1:CA:847:U:H2'	1:CA:848:G:H5'	2.01	0.41
1:CA:1144:G:C6	1:CA:1145:C:C4	3.08	0.41
1:CA:1359:A:N6	1:CA:1372:U:H3	2.17	0.41
1:CA:1410:G:H2'	1:CA:1411:C:H6	1.85	0.41
4:CD:94:LEU:HD23	4:CD:94:LEU:HA	1.74	0.41
5:CE:21:VAL:HA	5:CE:22:PRO:HD3	1.80	0.41
5:CE:150:VAL:HG13	5:CE:154:LYS:HG3	2.03	0.41
6:CF:119:ARG:HE	6:CF:119:ARG:HB3	1.62	0.41
6:CF:123:LEU:HD11	6:CF:194:MET:HE2	2.02	0.41
6:CF:195:ASP:HB3	6:CF:198:ALA:H	1.84	0.41
14:CQ:16:ARG:HG3	14:CQ:17:LEU:H	1.86	0.41
14:CQ:137:TYR:CE1	23:CZ:83:PRO:HG3	2.55	0.41
19:CV:37:VAL:HG11	19:CV:40:LEU:HG	2.01	0.41
22:CY:20:TYR:O	22:CY:21:LYS:C	2.63	0.41
23:CZ:156:LYS:HE2	23:CZ:156:LYS:HB3	1.90	0.41
28:C4:61:ARG:HA	28:C4:61:ARG:HD2	1.85	0.41
34:DA:560:U:H5'	34:DA:566:G:H22	1.84	0.41
34:DA:597:G:N3	34:DA:597:G:H2'	2.35	0.41
34:DA:677:U:C4	34:DA:678:U:C4	3.08	0.41
35:DB:16:HIS:CE1	35:DB:210:SER:HA	2.54	0.41
44:DK:55:LYS:HB2	44:DK:55:LYS:HE3	1.69	0.41
44:DK:57:THR:HA	44:DK:58:PRO:HD3	1.83	0.41
45:DL:25:PRO:C	45:DL:27:LEU:H	2.27	0.41
46:DM:89:GLY:HA2	46:DM:92:HIS:HB2	2.02	0.41
48:DO:46:HIS:C	48:DO:48:LYS:H	2.29	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DQ:27:PHE:CE2	50:DQ:36:ILE:HD11	2.55	0.41
51:DR:73:ALA:CB	51:DR:79:LEU:HD12	2.51	0.41
57:DZ:590:ILE:HD13	57:DZ:590:ILE:HA	1.92	0.41
1:AA:7:G:H2'	1:AA:8:A:C8	2.55	0.41
1:AA:89:U:H1'	1:AA:90:A:N7	2.35	0.41
1:AA:142:G:H2'	1:AA:143:C:C6	2.55	0.41
1:AA:236:G:H4'	1:AA:413:G:C5	2.55	0.41
1:AA:485:U:H4'	31:A7:40:TRP:CZ3	2.55	0.41
1:AA:573:G:H8	1:AA:573:G:O5'	2.04	0.41
1:AA:705:C:H2'	1:AA:706:C:C6	2.55	0.41
1:AA:1113:A:H4'	57:BZ:683:VAL:HG22	2.03	0.41
1:AA:1491:A:C8	1:AA:1507:A:C5	3.08	0.41
1:AA:1495:G:O2'	1:AA:1575:A:N1	2.49	0.41
1:AA:1540:A:H2'	1:AA:1541:A:H8	1.81	0.41
2:AB:41:U:C5	7:AG:70:VAL:HB	2.55	0.41
13:AP:85:LEU:HD12	13:AP:116:GLY:O	2.21	0.41
16:AS:35:ILE:HG12	16:AS:101:LEU:HD12	2.02	0.41
25:A1:8:SER:HB3	25:A1:66:HIS:CD2	2.55	0.41
34:BA:545:C:H5'	37:BD:72:GLU:HG2	2.02	0.41
34:BA:557:G:C2	34:BA:558:G:C2	3.08	0.41
34:BA:1080:A:H5"	34:BA:1081:G:OP2	2.20	0.41
34:BA:1123:A:O2'	43:BJ:37:PRO:O	2.33	0.41
34:BA:1187:G:H5'	42:BI:113:LYS:HD3	2.03	0.41
34:BA:1303:C:H2'	34:BA:1304:G:H5'	2.03	0.41
35:BB:84:GLU:HG2	35:BB:216:SER:HA	2.01	0.41
40:BG:99:LEU:HD22	40:BG:103:TRP:CZ2	2.55	0.41
43:BJ:53:PRO:O	47:BN:41:ARG:NH2	2.52	0.41
47:BN:11:LYS:H	47:BN:11:LYS:HG3	1.70	0.41
47:BN:51:GLY:C	47:BN:53:LEU:H	2.15	0.41
51:BR:53:ARG:HA	51:BR:56:THR:OG1	2.20	0.41
52:BS:3:ARG:NH1	52:BS:10:PHE:HB2	2.36	0.41
53:BT:67:ALA:HB2	53:BT:77:ALA:HB2	2.02	0.41
56:BW:26:A:H61	56:BW:44:G:H1	1.68	0.41
57:BZ:590:ILE:HD13	57:BZ:590:ILE:HA	1.85	0.41
1:CA:141:A:C2'	1:CA:1408:C:O2'	2.68	0.41
1:CA:354:G:H2'	1:CA:355:G:O4'	2.21	0.41
1:CA:2417:C:C2	1:CA:2418:A:C8	3.09	0.41
1:CA:2755:C:C4	33:C9:19:ARG:NH1	2.89	0.41
2:CB:5:C:H42	2:CB:116:G:H1	1.69	0.41
2:CB:14:U:H1'	2:CB:108:U:O2'	2.21	0.41
4:CD:134:ARG:NH1	4:CD:188:GLU:OE2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:16:ARG:HH22	7:CG:28:VAL:CG1	2.29	0.41
12:CO:122:LEU:HD23	12:CO:122:LEU:HA	1.70	0.41
13:CP:121:LYS:HA	13:CP:122:PRO:HD2	1.65	0.41
14:CQ:41:TRP:HZ3	14:CQ:74:TYR:HE1	1.68	0.41
16:CS:18:ILE:O	16:CS:21:THR:HG23	2.21	0.41
17:CT:127:ALA:C	17:CT:129:ARG:N	2.78	0.41
23:CZ:103:ARG:N	23:CZ:137:ILE:O	2.53	0.41
26:C2:24:LEU:O	26:C2:28:LYS:HB2	2.20	0.41
29:C5:25:LEU:HA	29:C5:25:LEU:HD23	1.84	0.41
34:DA:25:C:O2'	34:DA:26:A:H5'	2.20	0.41
34:DA:127:G:C2	34:DA:128:G:C8	3.08	0.41
34:DA:575:G:C6	34:DA:821:G:N7	2.89	0.41
35:DB:80:ILE:HD13	35:DB:211:ILE:HB	2.02	0.41
36:DC:6:HIS:HD2	36:DC:7:PRO:HD2	1.85	0.41
39:DF:35:ALA:HB2	39:DF:67:MET:CE	2.50	0.41
41:DH:46:LYS:HG3	41:DH:63:LEU:O	2.21	0.41
51:DR:37:VAL:O	51:DR:41:LYS:HB3	2.20	0.41
57:DZ:238:THR:HG22	57:DZ:241:GLU:OE1	2.20	0.41
1:AA:292:G:C2	1:AA:394:C:N3	2.88	0.41
1:AA:1065:U:O2'	1:AA:1067:A:C2	2.70	0.41
1:AA:1068:G:N7	11:AN:66:LYS:HE2	2.35	0.41
1:AA:1110:C:O2'	10:AL:89:HIS:NE2	2.54	0.41
1:AA:1385:G:O4'	1:AA:1439:A:C2	2.74	0.41
1:AA:2044:U:O2'	1:AA:2629:C:H5'	2.20	0.41
1:AA:2481:A:O2'	14:AQ:56:ARG:NE	2.52	0.41
1:AA:2675:G:C6	1:AA:2676:G:C4	3.08	0.41
3:AC:11:LEU:H	3:AC:11:LEU:HD22	1.86	0.41
4:AD:3:VAL:CG1	4:AD:17:THR:HB	2.51	0.41
5:AE:49:LEU:CD2	5:AE:81:ILE:HG13	2.51	0.41
18:AU:76:TYR:OH	18:AU:92:ARG:NH1	2.47	0.41
33:A9:17:ILE:HA	33:A9:17:ILE:HD12	1.71	0.41
34:BA:146:G:N2	34:BA:147:G:C4	2.89	0.41
34:BA:389:A:C6	34:BA:390:C:H1'	2.56	0.41
34:BA:487:A:H2'	34:BA:488:C:O4'	2.21	0.41
34:BA:580:U:H2'	34:BA:581:G:O4'	2.21	0.41
34:BA:639:G:O2'	34:BA:640:A:H5'	2.21	0.41
34:BA:839:U:O2'	34:BA:840:C:OP1	2.35	0.41
34:BA:1177:G:P	42:BI:97:LYS:HE3	2.61	0.41
56:BW:6:G:C6	56:BW:7:A:C6	3.09	0.41
56:BW:28:G:H5"	56:BW:28:G:H8	1.86	0.41
57:BZ:-62:LEU:HD11	57:BZ:-48:VAL:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:236:GLU:HA	57:BZ:237:PRO:HD3	1.92	0.41
1:CA:218:A:C2	1:CA:235:U:H4'	2.56	0.41
1:CA:251:A:C4	1:CA:252:G:H1'	2.55	0.41
1:CA:373:U:H2'	1:CA:374:A:C8	2.53	0.41
1:CA:641:C:H5"	1:CA:642:G:OP2	2.21	0.41
1:CA:748:G:C8	20:CW:89:ALA:HB1	2.56	0.41
1:CA:757:U:H2'	1:CA:758:C:O4'	2.19	0.41
1:CA:1053:C:N4	1:CA:1107:G:O6	2.51	0.41
1:CA:1208:C:C4	1:CA:1209:G:N7	2.89	0.41
1:CA:1437:C:C2	1:CA:1438:U:C5	3.09	0.41
1:CA:1812:A:O2'	4:CD:45:ASN:N	2.54	0.41
1:CA:2612:C:OP2	29:C5:2:ALA:HB3	2.21	0.41
1:CA:2784:C:O2'	1:CA:2785:C:H5'	2.21	0.41
2:CB:46:A:C5	2:CB:47:C:C4	3.09	0.41
4:CD:254:THR:HG23	4:CD:255:LYS:HG2	2.02	0.41
10:CL:115:LEU:HB2	10:CL:117:THR:HG23	2.02	0.41
13:CP:21:ARG:HA	13:CP:21:ARG:HD3	1.73	0.41
13:CP:50:ARG:HG2	32:C8:61:LEU:HD11	2.02	0.41
23:CZ:35:ARG:HD2	23:CZ:35:ARG:HA	1.80	0.41
23:CZ:144:LEU:HD21	23:CZ:150:LEU:HD23	2.01	0.41
28:C4:46:GLN:HG2	28:C4:48:ARG:NH2	2.36	0.41
34:DA:15:G:C4'	38:DE:24:ARG:HH21	2.32	0.41
34:DA:473:G:O5'	34:DA:473:G:H8	2.04	0.41
34:DA:543:C:N3	34:DA:544:G:C8	2.88	0.41
34:DA:768:A:OP2	63:DA:1812:HOH:O	2.21	0.41
34:DA:804:U:H5"	34:DA:805:C:OP2	2.21	0.41
34:DA:1074:G:N2	34:DA:1102:A:C4	2.88	0.41
34:DA:1077:G:C2	34:DA:1081:G:C5	3.09	0.41
34:DA:1288:A:N1	34:DA:1371:G:H1'	2.35	0.41
34:DA:1325:C:H4'	54:DU:17:THR:HG21	2.03	0.41
34:DA:1489:G:C5	34:DA:1490:C:C5	3.09	0.41
57:DZ:-62:LEU:HD13	57:DZ:-48:VAL:HG23	2.03	0.41
57:DZ:560:VAL:HG21	57:DZ:594:VAL:HG11	2.03	0.41
1:AA:203:G:H2'	1:AA:204:G:O4'	2.21	0.41
1:AA:328:G:H2'	1:AA:329:U:C6	2.56	0.41
1:AA:831:A:C5	4:AD:229:VAL:HG21	2.56	0.41
1:AA:933:C:OP1	1:AA:933:C:H4'	2.20	0.41
1:AA:1154:U:C6	1:AA:1155:C:C6	3.07	0.41
1:AA:1402:G:H2'	1:AA:1403:U:O4'	2.20	0.41
1:AA:1974:A:N3	12:AO:22:ILE:HD12	2.35	0.41
1:AA:2849:G:H5'	15:AR:46:GLY:HA2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:57:A:C4	7:AG:29:TRP:HB3	2.56	0.41
3:AC:60:ARG:NH2	3:AC:165:ARG:HH21	2.18	0.41
5:AE:134:ILE:C	5:AE:134:ILE:HD12	2.45	0.41
7:AG:52:ILE:C	7:AG:53:LEU:HD23	2.46	0.41
11:AN:43:THR:HA	11:AN:44:PRO:HD3	1.91	0.41
25:A1:82:LEU:O	25:A1:85:LEU:HD12	2.20	0.41
34:BA:137:C:O4'	49:BP:63:GLY:HA2	2.21	0.41
34:BA:243:A:C2	34:BA:245:C:C2	3.09	0.41
34:BA:453:A:C6	34:BA:454:C:C4	3.08	0.41
34:BA:623:C:H2'	34:BA:624:C:H6	1.85	0.41
34:BA:791:G:H2'	34:BA:792:A:H5'	2.02	0.41
48:BO:36:ILE:O	48:BO:39:LEU:N	2.54	0.41
49:BP:23:ASP:C	49:BP:25:ARG:H	2.27	0.41
57:BZ:100:VAL:O	57:BZ:100:VAL:HG12	2.19	0.41
57:BZ:126:GLU:O	57:BZ:128:TYR:N	2.53	0.41
57:BZ:282:SER:O	57:BZ:284:LEU:N	2.53	0.41
57:BZ:420:ASP:HB3	57:BZ:473:ASP:OD2	2.20	0.41
1:CA:130:C:H4'	1:CA:1349:A:C4'	2.50	0.41
1:CA:248:G:C2	1:CA:2431:U:H4'	2.55	0.41
1:CA:566:U:P	13:CP:29:LYS:HZ2	2.41	0.41
1:CA:601:C:O2'	1:CA:605:C:H5"	2.20	0.41
1:CA:613:G:C6	1:CA:614:U:C5	3.08	0.41
1:CA:815:C:H2'	1:CA:816:C:C6	2.55	0.41
1:CA:874:G:H5"	23:CZ:175:VAL:HG11	2.02	0.41
1:CA:1082:U:C2	1:CA:1083:U:H1'	2.55	0.41
1:CA:1088:A:H2'	1:CA:1088:A:N3	2.35	0.41
1:CA:1444:G:N2	1:CA:1548:C:C2	2.89	0.41
1:CA:1474:C:H2'	1:CA:1475:G:C8	2.56	0.41
1:CA:2031:A:C6	1:CA:2498:C:H1'	2.55	0.41
1:CA:2235:G:H2'	1:CA:2236:C:C6	2.56	0.41
1:CA:2280:G:H8	1:CA:2280:G:H5"	1.86	0.41
1:CA:2281:C:O2'	1:CA:2282:G:H5'	2.21	0.41
1:CA:2299:G:C6	1:CA:2318:G:N7	2.89	0.41
1:CA:2327:A:H2'	1:CA:2328:A:C8	2.56	0.41
1:CA:2712:U:OP1	1:CA:2714:G:H4'	2.21	0.41
3:CC:60:ARG:NH2	3:CC:165:ARG:HH21	2.18	0.41
4:CD:16:MET:HE3	4:CD:16:MET:HB2	1.86	0.41
5:CE:23:VAL:HA	5:CE:184:VAL:O	2.21	0.41
5:CE:179:GLU:HG2	17:CT:9:LEU:CD2	2.50	0.41
11:CN:14:VAL:HG23	11:CN:51:PHE:O	2.21	0.41
15:CR:87:TYR:OH	15:CR:117:VAL:O	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CS:74:ALA:O	16:CS:76:LYS:N	2.53	0.41
20:CW:14:PRO:CG	20:CW:78:GLU:HG2	2.34	0.41
21:CX:84:ALA:HB3	21:CX:87:GLN:NE2	2.35	0.41
26:C2:66:GLU:HA	26:C2:69:ARG:HD3	2.02	0.41
28:C4:47:GLN:C	28:C4:49:PHE:H	2.28	0.41
33:C9:2:LYS:HD3	33:C9:4:ARG:CZ	2.51	0.41
34:DA:189:G:C2	34:DA:189(L):G:C2	3.08	0.41
34:DA:382:A:C2	34:DA:383:A:C4	3.09	0.41
34:DA:512:U:C2	34:DA:513:C:C5	3.09	0.41
34:DA:885:G:H1	34:DA:912:C:H42	1.69	0.41
34:DA:920:U:O4'	34:DA:1080:A:C2	2.74	0.41
34:DA:1240:U:OP2	40:DG:116:ALA:N	2.52	0.41
35:DB:178:ARG:NH2	41:DH:68:ARG:HH22	2.18	0.41
37:DD:73:ARG:HG3	37:DD:77:ASN:HD22	1.84	0.41
38:DE:12:LEU:HD23	38:DE:12:LEU:HA	1.87	0.41
40:DG:5:ARG:O	40:DG:7:ALA:N	2.54	0.41
53:DT:15:ARG:HD3	53:DT:15:ARG:HA	1.92	0.41
57:DZ:74:TRP:HA	57:DZ:74:TRP:HE3	1.85	0.41
1:AA:321:C:OP1	22:AY:87:LYS:HG3	2.21	0.41
1:AA:981:C:H2'	1:AA:982:U:C6	2.56	0.41
1:AA:1534:G:H2'	1:AA:1535:U:O4'	2.21	0.41
1:AA:1776:G:N3	1:AA:1776:G:H2'	2.35	0.41
1:AA:2720:G:H1'	15:AR:71:GLN:NE2	2.30	0.41
4:AD:89:SER:HB2	4:AD:159:ALA:H	1.86	0.41
6:AF:33:LEU:HD12	6:AF:33:LEU:HA	1.84	0.41
6:AF:36:VAL:HG11	6:AF:183:VAL:HG13	2.03	0.41
6:AF:39:TRP:HB2	6:AF:101:LEU:HD22	2.03	0.41
6:AF:195:ASP:HB3	6:AF:198:ALA:H	1.85	0.41
7:AG:64:THR:HB	7:AG:94:LEU:HD21	2.03	0.41
8:AH:90:LYS:O	8:AH:160:LYS:HA	2.21	0.41
12:AO:7:TYR:CZ	12:AO:44:LYS:HG3	2.55	0.41
12:AO:107:ARG:HG2	12:AO:108:GLU:N	2.35	0.41
13:AP:46:LYS:HE2	13:AP:46:LYS:HB3	1.55	0.41
13:AP:59:LEU:HD11	32:A8:10:ALA:HB2	2.02	0.41
15:AR:51:LEU:HD23	15:AR:51:LEU:HA	1.81	0.41
16:AS:77:ALA:O	16:AS:80:LEU:HB2	2.20	0.41
17:AT:55:ASN:H	17:AT:59:THR:HB	1.86	0.41
20:AW:36:LEU:HD23	20:AW:36:LEU:HA	1.77	0.41
30:A6:50:ARG:HE	30:A6:50:ARG:HB2	1.65	0.41
34:BA:44:G:C2	34:BA:399:G:C2	3.09	0.41
34:BA:72:C:C2	34:BA:98:G:N2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:76:C:H2'	34:BA:77:G:C8	2.56	0.41
34:BA:423:G:N3	34:BA:423:G:H3'	2.35	0.41
34:BA:448:A:P	34:BA:485:G:H22	2.44	0.41
34:BA:477:A:C6	34:BA:479:C:N4	2.89	0.41
34:BA:647:C:H2'	34:BA:648:A:C8	2.54	0.41
34:BA:685:G:N2	34:BA:686:U:C4	2.89	0.41
34:BA:829:G:C2	34:BA:830:G:C5	3.08	0.41
34:BA:1030(D):A:H62	34:BA:1031:G:H21	1.69	0.41
34:BA:1199:U:H6	34:BA:1199:U:O5'	2.04	0.41
41:BH:21:LYS:O	41:BH:65:TYR:OH	2.37	0.41
42:BI:96:LEU:HA	42:BI:96:LEU:HD23	1.76	0.41
56:BW:51:U:O2'	56:BW:52:G:H5'	2.20	0.41
57:BZ:208:GLN:O	57:BZ:212:TYR:N	2.51	0.41
57:BZ:365:GLU:HG3	57:BZ:366:VAL:N	2.36	0.41
1:CA:251:A:C5	1:CA:252:G:H1'	2.56	0.41
1:CA:610:G:H2'	1:CA:611:C:C6	2.55	0.41
1:CA:1009:A:H8	1:CA:1009:A:O5'	2.03	0.41
1:CA:1182:A:H2'	1:CA:1183:G:O4'	2.21	0.41
1:CA:2037:G:O6	63:CA:3756:HOH:O	2.20	0.41
1:CA:2109:U:H5"	1:CA:2149:G:N2	2.35	0.41
1:CA:2121:G:H1'	3:CC:168:LYS:HE2	1.33	0.41
1:CA:2378:A:H4'	16:CS:23:ARG:NH1	2.36	0.41
1:CA:2661:G:O6	8:CH:175:LYS:NZ	2.54	0.41
1:CA:2702:U:H4'	1:CA:2703:C:OP1	2.20	0.41
4:CD:52:ARG:HH11	4:CD:52:ARG:HD3	1.66	0.41
5:CE:7:VAL:O	5:CE:26:ILE:HA	2.21	0.41
6:CF:39:TRP:HB3	6:CF:101:LEU:HD22	2.02	0.41
7:CG:101:ILE:CG2	28:C4:25:TYR:HB2	2.49	0.41
8:CH:69:ARG:HE	8:CH:73:ALA:HB2	1.84	0.41
11:CN:1:MET:HE1	18:CU:94:ASN:ND2	2.36	0.41
14:CQ:110:THR:O	14:CQ:113:GLN:HB2	2.21	0.41
17:CT:10:VAL:H	17:CT:10:VAL:HG23	1.56	0.41
20:CW:65:LEU:CD1	20:CW:68:ARG:HE	2.34	0.41
26:C2:26:ARG:CZ	26:C2:26:ARG:HB2	2.51	0.41
34:DA:303:A:O2'	34:DA:555:C:O2'	2.34	0.41
34:DA:430:A:C2	34:DA:431:A:H1'	2.56	0.41
34:DA:538:G:H5"	45:DL:114:LYS:HB2	2.02	0.41
34:DA:626:U:C2	34:DA:627:G:C8	3.09	0.41
34:DA:983:A:N1	34:DA:1222:G:N2	2.69	0.41
34:DA:1317:C:P	47:DN:17:LYS:HG2	2.61	0.41
36:DC:113:ALA:C	36:DC:115:LEU:H	2.29	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DD:129:ASN:HD21	37:DD:145:GLU:N	2.14	0.41
38:DE:71:LEU:HD21	38:DE:113:ALA:O	2.20	0.41
42:DI:11:LYS:H	42:DI:104:ARG:HH21	1.69	0.41
45:DL:78:GLN:H	45:DL:78:GLN:HG3	1.68	0.41
49:DP:22:THR:HA	49:DP:33:ILE:HG13	2.03	0.41
50:DQ:24:GLU:OE2	50:DQ:37:LYS:HD2	2.20	0.41
52:DS:17:GLU:O	52:DS:21:GLU:HG3	2.20	0.41
52:DS:36:ARG:HB3	52:DS:71:LEU:HB3	2.02	0.41
53:DT:20:LEU:HA	53:DT:20:LEU:HD23	1.73	0.41
57:DZ:-11:LYS:C	57:DZ:-9:LEU:N	2.78	0.41
57:DZ:126:GLU:C	57:DZ:128:TYR:H	2.29	0.41
57:DZ:384:ILE:HG13	57:DZ:385:THR:N	2.35	0.41
57:DZ:488:THR:O	57:DZ:516:PRO:HG3	2.20	0.41
1:AA:154:G:O6	1:AA:155:C:N4	2.54	0.41
1:AA:507:G:C4	1:AA:532:A:C2	3.09	0.41
1:AA:592:U:C4	1:AA:593:G:C6	3.09	0.41
1:AA:613:A:H2'	1:AA:614:C:O4'	2.20	0.41
1:AA:852:G:O4'	13:AP:38:GLN:HB2	2.20	0.41
1:AA:866:A:C4	1:AA:1234:A:C2	3.09	0.41
1:AA:1056:A:N3	1:AA:1199:C:H1'	2.35	0.41
1:AA:1534:G:C6	1:AA:1535:U:N3	2.89	0.41
1:AA:2086:C:H2'	1:AA:2087:C:C6	2.56	0.41
1:AA:2102:G:H2'	1:AA:2103:C:C6	2.56	0.41
1:AA:2575:U:H4'	12:AO:28:SER:HA	2.02	0.41
1:AA:2880:C:H2'	1:AA:2881:C:O4'	2.21	0.41
2:AB:39:A:C2	2:AB:40:U:C4	3.09	0.41
3:AC:194:ILE:CD1	3:AC:227:PRO:CB	2.99	0.41
6:AF:50:SER:CB	6:AF:94:PRO:HD3	2.48	0.41
6:AF:125:LEU:HD11	6:AF:199:TRP:CE3	2.56	0.41
8:AH:64:LEU:HD23	8:AH:64:LEU:HA	1.79	0.41
11:AN:75:TYR:HA	11:AN:81:GLY:O	2.21	0.41
11:AN:138:LEU:HD22	11:AN:138:LEU:HA	1.69	0.41
13:AP:29:LYS:HB3	13:AP:30:THR:H	1.27	0.41
14:AQ:10:ARG:HH11	14:AQ:10:ARG:HG3	1.86	0.41
14:AQ:63:LYS:HA	14:AQ:63:LYS:HD2	1.72	0.41
15:AR:41:ALA:O	15:AR:42:LYS:C	2.64	0.41
17:AT:19:LEU:HD13	17:AT:86:ILE:HD12	2.03	0.41
18:AU:21:ALA:O	18:AU:22:LYS:C	2.62	0.41
18:AU:45:TYR:O	18:AU:49:HIS:N	2.47	0.41
23:AZ:153:SER:HB3	23:AZ:167:PRO:O	2.21	0.41
23:AZ:163:LEU:HD12	23:AZ:163:LEU:HA	1.80	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:A2:41:ILE:HG13	26:A2:41:ILE:O	2.20	0.41
34:BA:9:G:C2	34:BA:26:A:N1	2.88	0.41
34:BA:189(D):C:H1'	34:BA:189(H):G:C2	2.56	0.41
34:BA:257:G:C2	34:BA:258:G:C4	3.09	0.41
34:BA:270:A:H2'	34:BA:271:C:C6	2.55	0.41
34:BA:412:A:N6	37:BD:35:ARG:HB3	2.36	0.41
34:BA:437:U:H5'	37:BD:155:LEU:HD21	2.03	0.41
34:BA:501:C:H1'	34:BA:549:C:H1'	2.02	0.41
34:BA:600:C:OP1	41:BH:97:VAL:HG12	2.21	0.41
34:BA:799:G:O6	34:BA:800:G:C2	2.74	0.41
34:BA:955:U:H2'	34:BA:956:U:H6	1.86	0.41
34:BA:979:C:O2	47:BN:19:ARG:NE	2.54	0.41
34:BA:993:G:O2'	34:BA:994:A:N7	2.51	0.41
34:BA:1005:A:H5"	34:BA:1006:C:OP2	2.21	0.41
34:BA:1261:A:H5"	34:BA:1262:C:OP2	2.21	0.41
34:BA:1314:C:H2'	34:BA:1315:U:C6	2.56	0.41
34:BA:1359:C:OP1	47:BN:22:THR:OG1	2.28	0.41
34:BA:1435:G:H1	34:BA:1466:C:H42	1.69	0.41
35:BB:20:GLU:HB3	35:BB:190:THR:OG1	2.21	0.41
35:BB:194:PRO:C	35:BB:196:LEU:N	2.79	0.41
35:BB:196:LEU:HD12	35:BB:196:LEU:HA	1.95	0.41
36:BC:6:HIS:CD2	36:BC:7:PRO:HD2	2.56	0.41
36:BC:130:VAL:HG21	36:BC:157:ILE:HG23	2.02	0.41
37:BD:49:ARG:H	37:BD:49:ARG:HG2	1.67	0.41
37:BD:112:VAL:HG23	37:BD:116:GLN:OE1	2.21	0.41
38:BE:78:HIS:ND1	41:BH:104:ARG:HD2	2.35	0.41
38:BE:91:LEU:HD12	38:BE:91:LEU:HA	1.85	0.41
40:BG:13:GLN:HA	40:BG:14:PRO:HD3	1.91	0.41
40:BG:77:SER:HA	40:BG:85:TYR:O	2.20	0.41
41:BH:12:ARG:O	41:BH:16:ALA:N	2.54	0.41
42:BI:93:ARG:HB2	42:BI:93:ARG:HH11	1.86	0.41
44:BK:88:GLY:C	44:BK:90:GLY:H	2.28	0.41
48:BO:18:PHE:O	48:BO:18:PHE:CD1	2.73	0.41
48:BO:78:TYR:O	48:BO:82:ILE:HG12	2.21	0.41
49:BP:1:MET:O	49:BP:24:ALA:HB2	2.20	0.41
49:BP:71:ARG:O	49:BP:75:ARG:HB2	2.20	0.41
52:BS:63:THR:OG1	52:BS:66:MET:HE3	2.20	0.41
54:BU:12:LYS:HG2	54:BU:17:THR:OG1	2.21	0.41
56:BY:49:C:H2'	56:BY:50:U:H6	1.86	0.41
57:BZ:-63:ILE:HD11	57:BZ:-23:LEU:CD1	2.50	0.41
1:CA:77:C:H42	1:CA:109:G:H1	1.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:85:G:O2'	1:CA:103:A:N1	2.47	0.41
1:CA:150:C:H2'	1:CA:151:C:C6	2.56	0.41
1:CA:300:A:H3'	22:CY:84:ARG:HH22	1.85	0.41
1:CA:363(B):G:O2'	1:CA:363(C):G:H5'	2.21	0.41
1:CA:493:G:H2'	1:CA:494:G:O4'	2.20	0.41
1:CA:510:C:OP1	1:CA:510:C:H3'	2.21	0.41
1:CA:638:G:C6	1:CA:639:U:C4	3.09	0.41
1:CA:706:A:H2'	1:CA:707:G:O4'	2.21	0.41
1:CA:878:A:C2	1:CA:900:A:N7	2.89	0.41
1:CA:903:C:H2'	1:CA:904:C:H6	1.85	0.41
1:CA:1053:C:H6	1:CA:1053:C:C4'	2.33	0.41
1:CA:1131:G:N2	1:CA:1132:A:N3	2.69	0.41
1:CA:1494:A:H2'	1:CA:1495:A:C8	2.56	0.41
1:CA:2274:A:C6	1:CA:2276:G:C8	3.08	0.41
1:CA:2306:C:H3'	1:CA:2307:G:C8	2.55	0.41
1:CA:2386:C:H2'	1:CA:2387:U:C6	2.56	0.41
1:CA:2526:G:H2'	1:CA:2527:C:C6	2.56	0.41
1:CA:2545:G:O2'	1:CA:2565:A:N1	2.51	0.41
1:CA:2784:C:O3'	5:CE:41:LYS:NZ	2.53	0.41
1:CA:2818:G:O2'	1:CA:2819:G:H5'	2.21	0.41
2:CB:8:U:O2'	16:CS:25:ARG:NH2	2.54	0.41
4:CD:79:VAL:O	4:CD:113:VAL:HG23	2.20	0.41
5:CE:179:GLU:HB3	5:CE:181:LEU:CD2	2.51	0.41
6:CF:129:PHE:HB2	6:CF:132:VAL:HG21	2.02	0.41
8:CH:87:LEU:HD23	8:CH:164:TYR:HA	2.03	0.41
9:CK:96:PHE:C	9:CK:98:LYS:H	2.29	0.41
11:CN:15:LEU:HD23	11:CN:15:LEU:HA	1.90	0.41
11:CN:56:ASN:N	11:CN:125:GLY:O	2.45	0.41
13:CP:127:ALA:O	13:CP:129:ALA:N	2.54	0.41
14:CQ:62:GLY:O	23:CZ:178:GLU:HG2	2.20	0.41
15:CR:52:ILE:HB	15:CR:94:TYR:HD2	1.86	0.41
16:CS:26:LEU:O	16:CS:88:ASP:HB3	2.21	0.41
16:CS:93:LYS:O	16:CS:93:LYS:HG2	2.21	0.41
20:CW:58:ALA:HB1	20:CW:64:MET:HB2	2.02	0.41
25:C1:19:GLN:C	25:C1:35:THR:HG22	2.46	0.41
25:C1:40:ARG:HE	25:C1:40:ARG:HB2	1.76	0.41
29:C5:33:CYS:O	29:C5:37:LYS:N	2.54	0.41
32:C8:63:PRO:HG2	32:C8:64:TYR:CD2	2.55	0.41
34:DA:25:C:C5'	34:DA:524:G:H1'	2.50	0.41
34:DA:35:G:H2'	34:DA:36:C:C6	2.56	0.41
34:DA:36:C:H4'	45:DL:122:THR:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:47:C:H5”	34:DA:365:U:C2	2.56	0.41
34:DA:262:A:H2’	34:DA:263:A:C8	2.56	0.41
34:DA:267:C:OP1	50:DQ:67:LYS:HG3	2.20	0.41
34:DA:338:A:H2’	34:DA:339:C:C6	2.56	0.41
34:DA:588:G:C6	34:DA:753:A:C8	3.09	0.41
34:DA:597:G:N2	41:DH:94:TYR:OH	2.54	0.41
34:DA:828:A:H5”	34:DA:859:A:C2	2.55	0.41
34:DA:882:C:H41	45:DL:9:GLN:HE22	1.68	0.41
34:DA:900:A:H2’	34:DA:901:A:C8	2.56	0.41
34:DA:1060:C:H5’	47:DN:45:ARG:NH2	2.35	0.41
34:DA:1109:C:H2’	34:DA:1110:A:O4’	2.21	0.41
34:DA:1166:G:H5’	34:DA:1168:A:OP2	2.21	0.41
34:DA:1464:G:H2’	34:DA:1465:C:C6	2.56	0.41
34:DA:1511:G:H2’	34:DA:1512:U:O4’	2.21	0.41
36:DC:104:GLN:HE21	36:DC:105:GLU:H	1.69	0.41
36:DC:152:ILE:HG12	36:DC:153:VAL:N	2.34	0.41
41:DH:21:LYS:HG2	41:DH:23:SER:O	2.21	0.41
41:DH:49:GLU:HG2	41:DH:62:TYR:HE2	1.84	0.41
43:DJ:16:LEU:HG	43:DJ:94:VAL:HG22	2.02	0.41
43:DJ:50:ILE:HB	47:DN:41:ARG:NH2	2.36	0.41
44:DK:99:GLN:O	44:DK:101:SER:N	2.51	0.41
47:DN:9:LYS:HA	47:DN:12:ARG:HB2	2.02	0.41
49:DP:58:TYR:O	49:DP:59:TRP:C	2.63	0.41
51:DR:21:LYS:HD2	51:DR:57:GLY:HA3	2.03	0.41
56:DY:28:G:H2’	56:DY:29:G:H8	1.85	0.41
56:DY:55:PSU:HN1	56:DY:57:G:C5’	2.33	0.41
57:DZ:129:LYS:HD3	57:DZ:521:SER:H	1.85	0.41
57:DZ:168:ILE:HD12	57:DZ:176:GLY:HA3	2.02	0.41
57:DZ:324:ARG:HH21	57:DZ:383:THR:H	1.68	0.41
1:AA:402:C:H2’	1:AA:403:C:C6	2.55	0.41
1:AA:1051:C:H2’	1:AA:1052:C:C6	2.56	0.41
1:AA:1624:C:H2’	1:AA:1625:U:C1’	2.51	0.41
1:AA:2574:U:H1’	12:AO:23:ARG:HD3	2.02	0.41
1:AA:2587:C:O2’	1:AA:2590:G:N7	2.49	0.41
4:AD:108:PRO:HD2	4:AD:111:LEU:CG	2.51	0.41
7:AG:47:LYS:HG3	7:AG:48:GLU:H	1.86	0.41
8:AH:9:ILE:HD11	8:AH:69:ARG:HG3	2.03	0.41
14:AQ:21:THR:CG2	14:AQ:101:ARG:HB2	2.50	0.41
14:AQ:120:ILE:HG21	14:AQ:120:ILE:HD13	1.83	0.41
15:AR:44:LEU:O	15:AR:44:LEU:HD22	2.21	0.41
15:AR:54:LEU:HA	15:AR:54:LEU:HD12	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:141:GLU:O	35:BB:145:LEU:HB2	2.20	0.41
36:BC:22:TRP:HB2	36:BC:23:TYR:H	1.72	0.41
37:BD:196:LEU:H	37:BD:196:LEU:HD12	1.86	0.41
40:BG:62:PHE:HA	40:BG:124:LEU:CD2	2.51	0.41
40:BG:73:MET:HE2	40:BG:90:GLU:CB	2.51	0.41
44:BK:73:MET:HG2	44:BK:103:LEU:HD21	2.03	0.41
46:BM:29:ARG:HH11	46:BM:64:TRP:HB3	1.85	0.41
50:BQ:4:LYS:O	50:BQ:60:ILE:HA	2.21	0.41
50:BQ:10:VAL:HG12	50:BQ:53:LEU:HA	2.02	0.41
51:BR:44:LEU:HD21	51:BR:70:ILE:HG21	2.02	0.41
57:BZ:-58:LEU:HD13	57:BZ:-58:LEU:HA	1.75	0.41
57:BZ:-9:LEU:C	57:BZ:-7:GLU:N	2.79	0.41
57:BZ:108:PHE:HE2	57:BZ:153:MET:HE3	1.85	0.41
57:BZ:324:ARG:HG3	57:BZ:324:ARG:NH1	2.36	0.41
1:CA:520:G:H2'	1:CA:521:G:H8	1.85	0.41
1:CA:793:A:O2'	63:CA:3724:HOH:O	2.12	0.41
1:CA:861:A:C2	1:CA:917:A:N3	2.89	0.41
1:CA:1227:G:OP1	18:CU:13:LYS:HE3	2.20	0.41
1:CA:1583:A:H5"	1:CA:1584:C:H5"	2.03	0.41
1:CA:1651:G:N2	1:CA:2007:C:C2	2.89	0.41
1:CA:1917:U:H2'	1:CA:1918:A:O4'	2.21	0.41
1:CA:2062:A:C2	1:CA:2503:A:N6	2.89	0.41
1:CA:2491:U:H4'	1:CA:2570:G:OP1	2.21	0.41
4:CD:26:LYS:HE2	4:CD:83:GLU:OE2	2.21	0.41
4:CD:95:LEU:HD23	4:CD:95:LEU:HA	1.84	0.41
4:CD:249:PRO:HD2	4:CD:250:TRP:CZ3	2.56	0.41
5:CE:170:LEU:HB3	5:CE:184:VAL:CG2	2.51	0.41
6:CF:36:VAL:O	6:CF:40:GLN:HG3	2.20	0.41
6:CF:126:VAL:HG21	6:CF:129:PHE:CZ	2.55	0.41
6:CF:127:GLU:HA	6:CF:196:LEU:HD12	2.02	0.41
8:CH:143:GLN:O	8:CH:146:ALA:N	2.54	0.41
15:CR:54:LEU:HD12	15:CR:54:LEU:HA	1.87	0.41
15:CR:55:ALA:HA	15:CR:80:PHE:CE1	2.56	0.41
26:C2:63:VAL:C	26:C2:65:ASN:N	2.78	0.41
34:DA:70:G:H2'	34:DA:71:C:C6	2.54	0.41
34:DA:364:A:H2'	34:DA:365:U:H6	1.86	0.41
34:DA:414:A:N7	34:DA:431:A:C2	2.89	0.41
34:DA:868:C:H2'	34:DA:869:G:O4'	2.20	0.41
34:DA:986:A:N3	52:DS:52:TYR:OH	2.47	0.41
34:DA:1024:G:H2'	34:DA:1025:U:H5"	2.02	0.41
34:DA:1186:G:O3'	42:DI:113:LYS:NZ	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1250:A:H4'	42:DI:68:GLY:H	1.85	0.41
34:DA:1277:C:O2'	34:DA:1279:A:H1'	2.21	0.41
43:DJ:50:ILE:HB	47:DN:41:ARG:CZ	2.51	0.41
46:DM:56:LEU:O	46:DM:60:VAL:HG12	2.21	0.41
49:DP:4:ILE:O	49:DP:66:PRO:HA	2.21	0.41
53:DT:39:LYS:HD3	53:DT:55:ILE:HD12	2.03	0.41
56:DW:14:A:C4	56:DW:22:G:C2	3.09	0.41
56:DW:54:5MU:H2'	56:DW:55:PSU:O4'	2.21	0.41
57:DZ:12:LEU:O	57:DZ:282:SER:HA	2.21	0.41
57:DZ:230:LYS:HD3	57:DZ:237:PRO:HG3	2.03	0.41
57:DZ:309:LEU:HD12	57:DZ:310:ALA:N	2.36	0.41
57:DZ:618:GLY:C	57:DZ:620:VAL:H	2.29	0.41
1:AA:1717:C:O2	5:AE:129:HIS:NE2	2.52	0.40
1:AA:2124:U:H2'	1:AA:2125:C:C6	2.56	0.40
4:AD:256:GLY:O	4:AD:257:LEU:C	2.61	0.40
5:AE:68:ALA:C	5:AE:70:ALA:H	2.28	0.40
8:AH:23:ARG:HD2	8:AH:34:GLU:OE2	2.21	0.40
8:AH:116:GLU:HA	8:AH:117:PRO:HD3	1.89	0.40
8:AH:172:LYS:HB2	8:AH:173:PRO:HD2	2.03	0.40
10:AL:88:ALA:CB	10:AL:135:GLY:HA3	2.51	0.40
11:AN:62:VAL:HG13	11:AN:66:LYS:HB2	2.02	0.40
23:AZ:110:GLY:C	23:AZ:111:VAL:O	2.64	0.40
24:A0:18:ALA:HB3	24:A0:20:ARG:HH21	1.85	0.40
34:BA:182:U:O4	34:BA:223:U:H1'	2.21	0.40
34:BA:623:C:O5'	34:BA:623:C:H6	2.03	0.40
35:BB:55:PHE:CD1	35:BB:58:ILE:HD12	2.56	0.40
38:BE:129:ILE:O	38:BE:132:ALA:HB3	2.20	0.40
46:BM:66:LEU:C	46:BM:70:LEU:HB2	2.46	0.40
49:BP:52:ASP:OD2	49:BP:55:ARG:HG2	2.20	0.40
49:BP:72:ARG:HD2	49:BP:73:LEU:HD23	2.02	0.40
52:BS:40:ILE:HA	52:BS:44:MET:SD	2.61	0.40
53:BT:53:LEU:HB2	53:BT:57:ARG:NH1	2.36	0.40
57:BZ:132:ARG:N	57:BZ:132:ARG:HD3	2.36	0.40
57:BZ:359:HIS:HD1	57:BZ:362:HIS:CD2	2.39	0.40
57:BZ:623:ASP:O	57:BZ:626:ALA:HB3	2.21	0.40
1:CA:322:A:H5'	1:CA:340:A:H1'	2.03	0.40
1:CA:1118:C:H2'	1:CA:1119:C:O4'	2.21	0.40
1:CA:2041:U:H2'	1:CA:2042:A:O4'	2.21	0.40
2:CB:14:U:H5'	2:CB:70:C:O2	2.21	0.40
2:CB:100:A:H2'	2:CB:100:A:N3	2.37	0.40
3:CC:194:ILE:CD1	3:CC:227:PRO:CB	2.99	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:213:ARG:HA	4:CD:213:ARG:HD2	1.81	0.40
23:CZ:10:ARG:NH2	23:CZ:26:GLY:O	2.49	0.40
26:C2:41:ILE:C	26:C2:43:GLN:H	2.29	0.40
27:C3:31:LEU:HD22	27:C3:31:LEU:HA	1.86	0.40
28:C4:61:ARG:HG3	52:DS:42:PRO:HG3	2.02	0.40
29:C5:2:ALA:O	29:C5:3:LYS:HG3	2.21	0.40
34:DA:44:G:H2'	34:DA:45:U:O4'	2.21	0.40
34:DA:403:C:O2'	34:DA:404:U:H5'	2.21	0.40
34:DA:472:A:H5"	49:DP:80:PHE:HB3	2.03	0.40
34:DA:619:U:N3	37:DD:134:ASP:OD1	2.46	0.40
34:DA:696:A:H2'	34:DA:697:U:O4'	2.21	0.40
34:DA:742:G:C2	34:DA:743:U:H1'	2.57	0.40
34:DA:1004:A:H8	34:DA:1005:A:H4'	1.86	0.40
34:DA:1433:A:H2'	34:DA:1434:A:O4'	2.21	0.40
39:DF:16:GLN:CD	39:DF:16:GLN:H	2.29	0.40
40:DG:37:ASN:OD1	42:DI:40:LEU:HA	2.21	0.40
41:DH:36:LEU:HA	41:DH:39:LEU:HB2	2.02	0.40
41:DH:90:GLY:O	50:DQ:34:LYS:HE3	2.21	0.40
46:DM:10:PRO:O	46:DM:13:LYS:HB2	2.21	0.40
50:DQ:99:SER:OG	50:DQ:100:LYS:N	2.55	0.40
57:DZ:632:LEU:HA	57:DZ:632:LEU:HD23	1.83	0.40
1:AA:342:C:O2'	1:AA:343:C:H5'	2.21	0.40
1:AA:821:A:H2'	1:AA:821:A:N3	2.37	0.40
1:AA:1926:G:O2'	1:AA:1927:C:H5'	2.20	0.40
1:AA:1989:C:C2'	1:AA:1990:G:H5'	2.51	0.40
1:AA:2130:C:H2'	1:AA:2131:U:C6	2.57	0.40
1:AA:2276:C:N4	24:A0:15:ASP:OD2	2.48	0.40
1:AA:2555:G:H21	1:AA:2658:C:H5"	1.86	0.40
3:AC:189:ASN:O	3:AC:190:ILE:C	2.64	0.40
8:AH:24:VAL:HG13	8:AH:37:VAL:HG21	2.03	0.40
17:AT:127:ALA:C	17:AT:129:ARG:N	2.78	0.40
22:AY:86:ARG:HB2	22:AY:98:VAL:CG2	2.51	0.40
34:BA:132:C:C2	34:BA:231:G:C2	3.10	0.40
34:BA:1139:G:H4'	34:BA:1140:C:H5'	2.04	0.40
34:BA:1157:A:H1'	34:BA:1181:G:N2	2.36	0.40
34:BA:1164:G:N1	34:BA:1173:G:C6	2.90	0.40
34:BA:1226:C:H4'	52:BS:80:TYR:OH	2.20	0.40
37:BD:144:ASP:O	37:BD:184:LYS:HA	2.20	0.40
38:BE:76:ILE:HB	38:BE:77:PRO:HD2	2.04	0.40
38:BE:147:ASP:OD1	38:BE:147:ASP:N	2.48	0.40
41:BH:38:ILE:HD13	41:BH:41:ARG:HH21	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BI:42:ARG:NH1	42:BI:71:SER:HG	2.19	0.40
48:BO:18:PHE:C	48:BO:20:GLY:H	2.26	0.40
52:BS:36:ARG:HD2	52:BS:52:TYR:O	2.20	0.40
56:BW:44:G:H8	56:BW:44:G:P	2.45	0.40
57:BZ:-2:ALA:C	57:BZ:0:ARG:N	2.79	0.40
57:BZ:282:SER:C	57:BZ:284:LEU:N	2.79	0.40
57:BZ:620:VAL:O	57:BZ:621:ILE:C	2.65	0.40
1:CA:57:C:H2'	1:CA:58:G:O4'	2.21	0.40
1:CA:563:G:H5'	1:CA:572:A:H4'	2.02	0.40
1:CA:579:G:H2'	1:CA:580:C:C6	2.57	0.40
1:CA:614(C):A:N3	1:CA:615:G:H1'	2.36	0.40
1:CA:1165:U:H2'	1:CA:1166:C:C6	2.55	0.40
1:CA:1494:A:C6	1:CA:1495:A:C6	3.09	0.40
1:CA:2046:G:H2'	1:CA:2047:U:C6	2.56	0.40
1:CA:2261:C:O2'	1:CA:2262:U:H5'	2.21	0.40
1:CA:2647:U:H2'	1:CA:2648:C:C6	2.57	0.40
1:CA:2697:G:C2	1:CA:2711:A:C2	3.09	0.40
3:CC:174:ALA:HA	3:CC:175:PRO:HD3	1.82	0.40
6:CF:13:SER:C	6:CF:15:SER:N	2.79	0.40
8:CH:101:ARG:HH22	8:CH:122:THR:HG23	1.86	0.40
11:CN:62:VAL:CG1	11:CN:66:LYS:HB2	2.51	0.40
11:CN:128:HIS:HA	11:CN:129:PRO:HD3	1.85	0.40
17:CT:16:ARG:NH1	17:CT:19:LEU:HD21	2.37	0.40
22:CY:13:VAL:HG12	22:CY:74:PRO:HA	2.03	0.40
22:CY:88:LYS:HE3	22:CY:89:PHE:O	2.21	0.40
32:C8:61:LEU:O	32:C8:63:PRO:HD3	2.21	0.40
34:DA:59:A:H5"	34:DA:60:A:H5"	2.03	0.40
34:DA:690:G:C6	34:DA:691:G:C6	3.10	0.40
34:DA:786:G:H2'	34:DA:787:A:O4'	2.22	0.40
34:DA:1250:A:H2'	34:DA:1251:A:O4'	2.20	0.40
34:DA:1363(A):A:C8	34:DA:1365:G:C4	3.10	0.40
35:DB:16:HIS:CG	35:DB:17:PHE:N	2.89	0.40
37:DD:4:TYR:O	37:DD:5:ILE:HG22	2.21	0.40
38:DE:47:LYS:HB2	38:DE:47:LYS:HE2	1.85	0.40
41:DH:35:ILE:HG22	41:DH:39:LEU:HD22	2.02	0.40
44:DK:59:TYR:O	44:DK:63:LEU:HG	2.21	0.40
57:DZ:97:SER:C	57:DZ:99:ARG:H	2.28	0.40
1:AA:357:G:H5"	1:AA:358:C:OP2	2.21	0.40
1:AA:552:C:H4'	1:AA:553:A:O5'	2.21	0.40
1:AA:801:C:H2'	1:AA:802:C:C6	2.57	0.40
1:AA:865:G:H5'	1:AA:886:U:OP1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:921:G:N1	1:AA:949:C:N3	2.48	0.40
1:AA:1208:G:O2'	19:AV:90:PRO:HG2	2.21	0.40
1:AA:1370:G:C5	1:AA:1374:G:O6	2.75	0.40
1:AA:1569:U:H2'	1:AA:1570:G:O4'	2.21	0.40
1:AA:2701:U:P	1:AA:2732:G:H22	2.43	0.40
3:AC:165:ARG:C	3:AC:172:ILE:HD12	2.47	0.40
4:AD:123:ALA:HA	4:AD:124:PRO:HD2	1.80	0.40
6:AF:39:TRP:CB	6:AF:101:LEU:HD22	2.51	0.40
7:AG:11:TYR:OH	7:AG:32:PRO:O	2.33	0.40
9:AK:85:ASP:O	9:AK:87:VAL:N	2.54	0.40
11:AN:90:MET:HE2	11:AN:90:MET:HB2	1.78	0.40
12:AO:122:LEU:HA	12:AO:122:LEU:HD23	1.82	0.40
14:AQ:7:MET:HE3	14:AQ:7:MET:HB2	1.88	0.40
16:AS:19:LYS:HG2	16:AS:19:LYS:H	1.76	0.40
17:AT:61:PHE:CD1	17:AT:78:LEU:HD23	2.55	0.40
25:A1:50:ARG:HG2	25:A1:59:THR:CG2	2.52	0.40
29:A5:31:VAL:HG22	29:A5:42:PRO:HD3	2.03	0.40
30:A6:8:LYS:HE2	32:A8:34:TRP:CZ3	2.56	0.40
34:BA:377:G:O2'	34:BA:378:G:H5'	2.21	0.40
34:BA:403:C:C2'	34:BA:404:U:H5'	2.51	0.40
34:BA:442:C:N4	34:BA:492:G:H1	2.16	0.40
34:BA:544:G:C5	34:BA:545:C:C5	3.09	0.40
34:BA:567:G:H2'	34:BA:568:G:O4'	2.20	0.40
34:BA:651:C:O2'	34:BA:652:U:H5'	2.20	0.40
34:BA:921:U:O2'	38:BE:19:MET:O	2.36	0.40
34:BA:1169:A:N6	34:BA:1170:A:N1	2.69	0.40
34:BA:1248:A:C6	34:BA:1249:C:C4	3.09	0.40
34:BA:1279:A:H5"	34:BA:1280:A:OP1	2.21	0.40
34:BA:1342:C:O2'	42:BI:124:GLN:HG2	2.20	0.40
38:BE:95:ALA:O	38:BE:117:ASP:HB3	2.21	0.40
38:BE:151:LEU:HD23	38:BE:151:LEU:HA	1.78	0.40
41:BH:29:SER:OG	41:BH:32:LYS:HG3	2.21	0.40
1:CA:30:G:C5	1:CA:31:C:C4	3.10	0.40
1:CA:271(O):C:H2'	1:CA:271(P):C:C6	2.56	0.40
1:CA:574:C:OP2	63:CA:3760:HOH:O	2.22	0.40
1:CA:760:G:H2'	1:CA:761:A:O4'	2.22	0.40
1:CA:1110:G:O2'	1:CA:1111:A:OP2	2.34	0.40
1:CA:1204:A:H2	1:CA:1241:A:N6	2.18	0.40
1:CA:1221(A):C:O2'	1:CA:1222:C:H5'	2.20	0.40
1:CA:1993:U:H2'	1:CA:1994:C:O4'	2.22	0.40
1:CA:2032:G:H1'	5:CE:145:LYS:HD3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2124:G:H4'	3:CC:175:PRO:CG	2.51	0.40
1:CA:2238:G:H2'	1:CA:2238:G:N3	2.36	0.40
1:CA:2684:U:C4	1:CA:2685:G:N7	2.90	0.40
2:CB:89:G:H8	2:CB:89:G:OP2	2.04	0.40
3:CC:54:ARG:CZ	3:CC:55:SER:O	2.69	0.40
7:CG:91:ARG:HE	7:CG:91:ARG:HB3	1.46	0.40
12:CO:53:LYS:HE3	12:CO:53:LYS:HB3	1.98	0.40
21:CX:8:ILE:HD11	21:CX:43:VAL:HG23	2.02	0.40
22:CY:39:VAL:O	22:CY:41:GLY:N	2.55	0.40
22:CY:76:CYS:SG	22:CY:78:ALA:HB3	2.61	0.40
25:C1:50:ARG:NH1	25:C1:57:GLU:OE1	2.55	0.40
34:DA:122:G:H8	34:DA:122:G:O5'	2.04	0.40
34:DA:520:A:N1	34:DA:536:C:H1'	2.36	0.40
34:DA:939:G:O2'	34:DA:1375:A:N3	2.44	0.40
34:DA:1002:G:C2	34:DA:1004:A:H2	2.39	0.40
34:DA:1004:A:H62	34:DA:1037:C:C2'	2.23	0.40
34:DA:1055:A:H62	34:DA:1200:C:N4	2.19	0.40
34:DA:1217:C:H2'	34:DA:1218:C:O4'	2.21	0.40
34:DA:1507:A:C5	34:DA:1530:G:C2	3.09	0.40
35:DB:164:VAL:HG23	35:DB:185:ILE:O	2.21	0.40
37:DD:98:GLU:C	37:DD:100:ARG:N	2.79	0.40
45:DL:32:PHE:HB3	45:DL:84:LEU:CD1	2.36	0.40
48:DO:18:PHE:O	48:DO:20:GLY:N	2.55	0.40
57:DZ:174:PHE:HE2	57:DZ:267:LYS:HD3	1.86	0.40
57:DZ:610:VAL:HG22	57:DZ:669:PHE:HB3	2.03	0.40
1:AA:611:U:O4	1:AA:717:A:H1'	2.21	0.40
1:AA:1361:C:O2'	1:AA:1438:A:N3	2.52	0.40
1:AA:1463:C:N4	1:AA:1464:G:C6	2.89	0.40
1:AA:1634:C:H2'	1:AA:1635:C:H6	1.85	0.40
1:AA:2097:U:C4	1:AA:2250:G:C6	3.09	0.40
1:AA:2556:G:H1'	1:AA:2658:C:H4'	2.04	0.40
2:AB:118:G:H2'	2:AB:119:G:O4'	2.21	0.40
5:AE:35:GLN:HG3	5:AE:36:ARG:N	2.35	0.40
7:AG:53:LEU:HD23	7:AG:53:LEU:N	2.36	0.40
11:AN:66:LYS:O	11:AN:67:LEU:C	2.62	0.40
11:AN:71:ILE:HG22	11:AN:72:TYR:O	2.20	0.40
21:AX:88:LYS:HE3	21:AX:90:GLU:OE1	2.22	0.40
22:AY:13:VAL:HA	22:AY:73:ARG:O	2.21	0.40
30:A6:18:ARG:HD3	30:A6:42:TRP:NE1	2.36	0.40
34:BA:141:A:H1'	34:BA:182:U:C2	2.57	0.40
34:BA:304:U:H2'	34:BA:305:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:349:A:O2'	34:BA:350:G:H5'	2.20	0.40
34:BA:779:C:H2'	34:BA:780:A:O4'	2.21	0.40
34:BA:1036:G:H5"	34:BA:1037:C:C5	2.56	0.40
37:BD:13:ARG:HG2	37:BD:13:ARG:H	1.63	0.40
38:BE:98:THR:HB	38:BE:99:GLY:H	1.49	0.40
42:BI:50:LEU:HB2	42:BI:81:ILE:HD11	2.03	0.40
46:BM:29:ARG:HD3	46:BM:64:TRP:CD1	2.56	0.40
49:BP:45:THR:HA	49:BP:46:PRO:HD2	1.81	0.40
50:BQ:15:MET:HE3	50:BQ:15:MET:HB2	1.95	0.40
52:BS:23:ASN:HA	52:BS:27:GLU:CD	2.46	0.40
56:BY:5:G:H1'	56:BY:69:G:N2	2.37	0.40
57:BZ:291:GLY:O	57:BZ:298:VAL:HA	2.21	0.40
57:BZ:539:ILE:HB	57:BZ:540:PRO:HD3	2.04	0.40
1:CA:276:A:H5"	1:CA:277:C:H5'	2.03	0.40
1:CA:627:A:C6	1:CA:637:A:C8	3.10	0.40
1:CA:672:C:O2'	1:CA:673:C:H5'	2.20	0.40
1:CA:778:G:C5	1:CA:779:U:C4	3.10	0.40
1:CA:1202:C:H2'	1:CA:1203:G:O4'	2.21	0.40
1:CA:1623:G:C2	1:CA:1624:G:C8	3.10	0.40
1:CA:2121:G:C1'	3:CC:168:LYS:CG	2.75	0.40
1:CA:2252:G:H1	56:DW:74:C:H42	1.67	0.40
1:CA:2400:G:H1	1:CA:2416:C:H42	1.70	0.40
1:CA:2400:G:H2'	1:CA:2401:U:H6	1.86	0.40
1:CA:2586:C:H6	1:CA:2586:C:O5'	2.04	0.40
2:CB:5:C:OP1	2:CB:62:C:H5'	2.22	0.40
2:CB:35:U:H6	2:CB:35:U:O5'	2.03	0.40
2:CB:45:A:C4	2:CB:46:A:C8	3.10	0.40
4:CD:85:ASP:OD2	4:CD:88:ARG:HD2	2.22	0.40
4:CD:215:LEU:HD23	4:CD:215:LEU:HA	1.83	0.40
5:CE:5:LEU:HD12	5:CE:51:PHE:HB3	2.02	0.40
15:CR:51:LEU:HD23	15:CR:51:LEU:HA	1.69	0.40
16:CS:57:LYS:O	16:CS:58:LEU:HD23	2.20	0.40
22:CY:85:VAL:CG1	22:CY:97:ARG:HB3	2.51	0.40
23:CZ:166:SER:C	23:CZ:168:GLU:H	2.29	0.40
25:C1:85:LEU:HB3	25:C1:86:SER:H	1.60	0.40
27:C3:35:ARG:HB3	27:C3:37:LEU:HD21	2.04	0.40
34:DA:522:C:H2'	34:DA:523:A:O4'	2.22	0.40
34:DA:882:C:H41	45:DL:9:GLN:NE2	2.19	0.40
34:DA:1004:A:N6	34:DA:1037:C:C2	2.90	0.40
34:DA:1249:C:H4'	42:DI:36:TYR:OH	2.20	0.40
34:DA:1391:U:H2'	34:DA:1392:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DB:216:SER:C	35:DB:218:ALA:H	2.30	0.40
36:DC:28:GLN:HE21	36:DC:28:GLN:HB3	1.65	0.40
37:DD:171:GLY:HA3	37:DD:174:LEU:HB2	2.04	0.40
37:DD:173:TRP:HA	37:DD:187:ARG:HE	1.85	0.40
39:DF:74:ASP:OD2	39:DF:74:ASP:N	2.54	0.40
48:DO:78:TYR:O	48:DO:81:LEU:N	2.54	0.40
56:DW:37:MIA:HN6	56:DW:37:MIA:H163	1.86	0.40
57:DZ:316:ILE:CD1	57:DZ:326:THR:HG23	2.52	0.40
57:DZ:466:LEU:HA	57:DZ:470:PHE:CD2	2.57	0.40
1:AA:1347:A:N3	1:AA:1347:A:H2'	2.37	0.40
3:AC:54:ARG:CZ	3:AC:55:SER:O	2.69	0.40
4:AD:183:ARG:HG2	4:AD:184:LYS:N	2.37	0.40
6:AF:80:ALA:HB3	6:AF:83:PHE:HD2	1.87	0.40
18:AU:20:LEU:HD23	18:AU:20:LEU:HA	1.91	0.40
22:AY:45:VAL:O	22:AY:62:GLU:HA	2.22	0.40
24:A0:22:GLY:O	24:A0:24:LYS:HG2	2.22	0.40
27:A3:7:LYS:HD3	27:A3:9:VAL:HG12	2.04	0.40
34:BA:33:A:H5"	34:BA:364:A:C1'	2.50	0.40
34:BA:306:G:C5	34:BA:307:C:C5	3.10	0.40
34:BA:396:G:P	57:BZ:349:LYS:NZ	2.94	0.40
34:BA:477:A:H2'	34:BA:479:C:C6	2.56	0.40
34:BA:723:U:O2'	34:BA:724:G:H5'	2.22	0.40
34:BA:794:A:H2'	34:BA:795:C:O4'	2.22	0.40
40:BG:18:TYR:HD2	40:BG:59:LEU:HD22	1.86	0.40
43:BJ:38:ILE:HA	43:BJ:39:PRO:HD3	1.83	0.40
43:BJ:40:LEU:HB2	43:BJ:69:ASN:HB2	2.04	0.40
43:BJ:46:ARG:HH11	43:BJ:46:ARG:CG	2.34	0.40
46:BM:11:ARG:HB3	46:BM:46:LYS:HB3	2.03	0.40
49:BP:74:LEU:O	49:BP:79:VAL:HG23	2.22	0.40
57:BZ:-6:ARG:HA	57:BZ:-6:ARG:CZ	2.52	0.40
57:BZ:181:LEU:C	57:BZ:183:MET:N	2.79	0.40
57:BZ:549:ALA:O	57:BZ:591:LYS:NZ	2.42	0.40
1:CA:36:G:O2'	1:CA:450:G:H2'	2.21	0.40
1:CA:143:G:H2'	1:CA:143(A):C:C6	2.56	0.40
1:CA:679:C:H2'	1:CA:680:G:C8	2.56	0.40
1:CA:1000:A:C6	1:CA:1001:A:N1	2.90	0.40
1:CA:1053:C:C2'	1:CA:1054:A:O5'	2.70	0.40
1:CA:1079:C:N3	1:CA:1088:A:C6	2.90	0.40
1:CA:1091:G:H2'	1:CA:1092:C:C6	2.56	0.40
1:CA:1107:G:C2'	1:CA:1108:U:O5'	2.70	0.40
1:CA:1389:G:H2'	1:CA:1390:U:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1582:C:O2'	1:CA:1586:A:H1'	2.22	0.40
1:CA:2070:G:OP2	63:CA:3761:HOH:O	2.22	0.40
1:CA:2756:U:H4'	1:CA:2757:A:OP1	2.22	0.40
16:CS:52:SER:HB2	16:CS:55:ALA:CB	2.50	0.40
17:CT:29:ARG:HH11	17:CT:29:ARG:HD2	1.78	0.40
17:CT:78:LEU:HD13	17:CT:78:LEU:O	2.22	0.40
18:CU:74:LEU:HD23	18:CU:78:THR:CG2	2.51	0.40
21:CX:32:PRO:HA	21:CX:77:LYS:HB2	2.03	0.40
22:CY:16:ALA:HB2	22:CY:73:ARG:HG3	2.03	0.40
23:CZ:152:ALA:O	23:CZ:163:LEU:HD21	2.22	0.40
23:CZ:156:LYS:HD2	23:CZ:157:LEU:H	1.87	0.40
34:DA:523:A:N1	45:DL:92:ASP:HB2	2.37	0.40
34:DA:607:A:C4	34:DA:608:A:C8	3.09	0.40
34:DA:926:G:C6	34:DA:1505:G:C5	3.09	0.40
34:DA:1126:U:C4'	34:DA:1281:U:H1'	2.51	0.40
34:DA:1372:U:H5"	42:DI:71:SER:HB3	2.03	0.40
34:DA:1409:C:H2'	34:DA:1410:G:C8	2.57	0.40
36:DC:113:ALA:HA	36:DC:202:ILE:HD12	2.03	0.40
37:DD:25:ARG:NH2	37:DD:30:LYS:HB3	2.36	0.40
39:DF:70:ASP:OD1	39:DF:70:ASP:N	2.34	0.40
39:DF:89:MET:CE	51:DR:76:LEU:HD22	2.51	0.40
41:DH:29:SER:HB3	41:DH:32:LYS:HG3	2.03	0.40
53:DT:91:LEU:HD23	53:DT:91:LEU:HA	1.93	0.40
57:DZ:127:LYS:O	57:DZ:520:GLY:HA3	2.21	0.40
57:DZ:354:ARG:HH22	57:DZ:378:VAL:HG11	1.87	0.40
58:DX:3:004:HA	58:DX:4:PRO:HD2	1.26	0.40

All (21) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:502:GLY:CA	3:CC:9:ARG:CD[2_655]	1.16	1.04
3:AC:9:ARG:NH2	57:DZ:504:ARG:NH1[3_654]	1.36	0.84
57:BZ:502:GLY:N	3:CC:9:ARG:CB[2_655]	1.54	0.66
57:BZ:502:GLY:N	3:CC:9:ARG:CD[2_655]	1.69	0.51
57:BZ:573:HIS:CE1	3:CC:13:GLU:OE1[2_655]	1.71	0.49
57:BZ:502:GLY:N	3:CC:9:ARG:CG[2_655]	1.79	0.41
57:BZ:504:ARG:NH1	3:CC:9:ARG:NH2[2_655]	1.79	0.41
57:BZ:573:HIS:NE2	3:CC:13:GLU:OE1[2_655]	1.79	0.41
3:AC:9:ARG:CB	57:DZ:502:GLY:O[3_654]	1.81	0.39

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:500:GLN:O	3:CC:9:ARG:O[2_655]	1.82	0.38
3:AC:6:LYS:O	57:DZ:502:GLY:CA[3_654]	2.01	0.19
57:BZ:500:GLN:OE1	3:CC:13:GLU:CG[2_655]	2.02	0.18
57:BZ:500:GLN:CD	3:CC:13:GLU:CG[2_655]	2.02	0.18
57:BZ:573:HIS:CE1	3:CC:13:GLU:CD[2_655]	2.05	0.15
57:BZ:504:ARG:NH1	3:CC:9:ARG:NE[2_655]	2.06	0.14
3:AC:6:LYS:NZ	57:DZ:501:THR:OG1[3_654]	2.07	0.13
57:BZ:501:THR:OG1	3:CC:9:ARG:CB[2_655]	2.11	0.09
57:BZ:504:ARG:NH1	3:CC:9:ARG:CZ[2_655]	2.14	0.06
57:BZ:501:THR:C	3:CC:9:ARG:CB[2_655]	2.16	0.04
57:BZ:501:THR:CA	3:CC:9:ARG:C[2_655]	2.16	0.04
57:BZ:573:HIS:CE1	3:CC:13:GLU:OE2[2_655]	2.16	0.04

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%)	19 (7%)	5 (2%)	6 23
4	CD	273/276 (99%)	234 (86%)	26 (10%)	13 (5%)	2 6
5	AE	202/206 (98%)	186 (92%)	14 (7%)	2 (1%)	12 38
5	CE	202/206 (98%)	179 (89%)	20 (10%)	3 (2%)	8 28
6	AF	201/210 (96%)	182 (90%)	18 (9%)	1 (0%)	24 55
6	CF	201/210 (96%)	177 (88%)	17 (8%)	7 (4%)	3 10
7	AG	179/182 (98%)	154 (86%)	19 (11%)	6 (3%)	3 11
7	CG	179/182 (98%)	141 (79%)	31 (17%)	7 (4%)	2 8
8	AH	172/180 (96%)	154 (90%)	15 (9%)	3 (2%)	7 25
8	CH	172/180 (96%)	144 (84%)	17 (10%)	11 (6%)	1 3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
9	AK	128/173 (74%)	66 (52%)	36 (28%)	26 (20%)	0 0
9	CK	128/173 (74%)	76 (59%)	27 (21%)	25 (20%)	0 0
10	AL	64/147 (44%)	43 (67%)	17 (27%)	4 (6%)	1 3
10	CL	64/147 (44%)	42 (66%)	19 (30%)	3 (5%)	2 6
11	AN	138/140 (99%)	129 (94%)	8 (6%)	1 (1%)	18 47
11	CN	138/140 (99%)	120 (87%)	15 (11%)	3 (2%)	5 19
12	AO	120/122 (98%)	113 (94%)	7 (6%)	0	100 100
12	CO	120/122 (98%)	107 (89%)	10 (8%)	3 (2%)	4 16
13	AP	147/150 (98%)	130 (88%)	15 (10%)	2 (1%)	9 30
13	CP	147/150 (98%)	119 (81%)	25 (17%)	3 (2%)	6 21
14	AQ	139/141 (99%)	126 (91%)	12 (9%)	1 (1%)	18 47
14	CQ	139/141 (99%)	123 (88%)	14 (10%)	2 (1%)	9 30
15	AR	116/118 (98%)	106 (91%)	10 (9%)	0	100 100
15	CR	116/118 (98%)	102 (88%)	11 (10%)	3 (3%)	4 15
16	AS	108/112 (96%)	88 (82%)	16 (15%)	4 (4%)	2 9
16	CS	108/112 (96%)	83 (77%)	20 (18%)	5 (5%)	2 6
17	AT	129/146 (88%)	114 (88%)	13 (10%)	2 (2%)	7 27
17	CT	129/146 (88%)	116 (90%)	11 (8%)	2 (2%)	7 27
18	AU	114/118 (97%)	111 (97%)	3 (3%)	0	100 100
18	CU	114/118 (97%)	100 (88%)	11 (10%)	3 (3%)	4 15
19	AV	99/101 (98%)	95 (96%)	3 (3%)	1 (1%)	12 38
19	CV	99/101 (98%)	86 (87%)	10 (10%)	3 (3%)	3 12
20	AW	110/113 (97%)	104 (94%)	6 (6%)	0	100 100
20	CW	110/113 (97%)	105 (96%)	5 (4%)	0	100 100
21	AX	93/96 (97%)	85 (91%)	6 (6%)	2 (2%)	5 19
21	CX	93/96 (97%)	77 (83%)	11 (12%)	5 (5%)	1 4
22	AY	105/110 (96%)	93 (89%)	9 (9%)	3 (3%)	3 13
22	CY	105/110 (96%)	86 (82%)	14 (13%)	5 (5%)	2 6
23	AZ	183/206 (89%)	147 (80%)	24 (13%)	12 (7%)	1 3
23	CZ	183/206 (89%)	134 (73%)	33 (18%)	16 (9%)	0 1
24	A0	75/85 (88%)	70 (93%)	5 (7%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
24	C0	75/85 (88%)	67 (89%)	7 (9%)	1 (1%)	9 31
25	A1	95/98 (97%)	90 (95%)	5 (5%)	0	100 100
25	C1	95/98 (97%)	85 (90%)	7 (7%)	3 (3%)	3 11
26	A2	68/72 (94%)	62 (91%)	6 (9%)	0	100 100
26	C2	68/72 (94%)	60 (88%)	7 (10%)	1 (2%)	8 28
27	A3	57/60 (95%)	51 (90%)	6 (10%)	0	100 100
27	C3	57/60 (95%)	50 (88%)	5 (9%)	2 (4%)	3 10
28	A4	67/71 (94%)	46 (69%)	12 (18%)	9 (13%)	0 0
28	C4	67/71 (94%)	43 (64%)	15 (22%)	9 (13%)	0 0
29	A5	57/60 (95%)	51 (90%)	6 (10%)	0	100 100
29	C5	57/60 (95%)	53 (93%)	3 (5%)	1 (2%)	6 23
30	A6	51/54 (94%)	49 (96%)	2 (4%)	0	100 100
30	C6	51/54 (94%)	42 (82%)	8 (16%)	1 (2%)	6 21
31	A7	46/49 (94%)	45 (98%)	1 (2%)	0	100 100
31	C7	46/49 (94%)	41 (89%)	4 (9%)	1 (2%)	5 19
32	A8	62/65 (95%)	60 (97%)	1 (2%)	1 (2%)	7 27
32	C8	62/65 (95%)	54 (87%)	7 (11%)	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%)	182 (80%)	33 (14%)	14 (6%)	1 3
35	DB	229/256 (90%)	170 (74%)	41 (18%)	18 (8%)	1 1
36	BC	204/239 (85%)	155 (76%)	38 (19%)	11 (5%)	1 4
36	DC	204/239 (85%)	169 (83%)	29 (14%)	6 (3%)	3 13
37	BD	206/209 (99%)	166 (81%)	28 (14%)	12 (6%)	1 4
37	DD	206/209 (99%)	171 (83%)	27 (13%)	8 (4%)	2 8
38	BE	146/162 (90%)	114 (78%)	24 (16%)	8 (6%)	1 4
38	DE	146/162 (90%)	117 (80%)	22 (15%)	7 (5%)	2 6
39	BF	98/101 (97%)	84 (86%)	11 (11%)	3 (3%)	3 12
39	DF	98/101 (97%)	90 (92%)	5 (5%)	3 (3%)	3 12
40	BG	153/156 (98%)	128 (84%)	13 (8%)	12 (8%)	1 2
40	DG	153/156 (98%)	126 (82%)	22 (14%)	5 (3%)	3 11

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
41	BH	135/138 (98%)	110 (82%)	22 (16%)	3 (2%)	5 19
41	DH	135/138 (98%)	114 (84%)	14 (10%)	7 (5%)	1 5
42	BI	125/128 (98%)	103 (82%)	15 (12%)	7 (6%)	1 4
42	DI	125/128 (98%)	100 (80%)	21 (17%)	4 (3%)	3 11
43	BJ	95/105 (90%)	76 (80%)	12 (13%)	7 (7%)	1 2
43	DJ	94/105 (90%)	75 (80%)	16 (17%)	3 (3%)	3 11
44	BK	112/129 (87%)	96 (86%)	14 (12%)	2 (2%)	6 23
44	DK	112/129 (87%)	92 (82%)	16 (14%)	4 (4%)	2 10
45	BL	120/132 (91%)	108 (90%)	11 (9%)	1 (1%)	16 44
45	DL	120/132 (91%)	100 (83%)	16 (13%)	4 (3%)	3 11
46	BM	115/126 (91%)	93 (81%)	18 (16%)	4 (4%)	3 10
46	DM	114/126 (90%)	88 (77%)	17 (15%)	9 (8%)	1 1
47	BN	58/61 (95%)	46 (79%)	9 (16%)	3 (5%)	1 5
47	DN	58/61 (95%)	49 (84%)	7 (12%)	2 (3%)	3 11
48	BO	86/89 (97%)	67 (78%)	16 (19%)	3 (4%)	3 10
48	DO	86/89 (97%)	72 (84%)	10 (12%)	4 (5%)	2 6
49	BP	80/88 (91%)	54 (68%)	17 (21%)	9 (11%)	0 1
49	DP	80/88 (91%)	58 (72%)	18 (22%)	4 (5%)	1 5
50	BQ	97/105 (92%)	87 (90%)	7 (7%)	3 (3%)	3 12
50	DQ	97/105 (92%)	87 (90%)	10 (10%)	0	100 100
51	BR	66/88 (75%)	57 (86%)	7 (11%)	2 (3%)	3 12
51	DR	66/88 (75%)	60 (91%)	6 (9%)	0	100 100
52	BS	82/93 (88%)	64 (78%)	14 (17%)	4 (5%)	1 6
52	DS	81/93 (87%)	63 (78%)	15 (18%)	3 (4%)	2 9
53	BT	94/106 (89%)	78 (83%)	12 (13%)	4 (4%)	2 7
53	DT	94/106 (89%)	75 (80%)	13 (14%)	6 (6%)	1 3
54	BU	21/27 (78%)	20 (95%)	1 (5%)	0	100 100
54	DU	21/27 (78%)	17 (81%)	2 (10%)	2 (10%)	0 1
57	BZ	722/758 (95%)	563 (78%)	107 (15%)	52 (7%)	1 2
57	DZ	726/758 (96%)	537 (74%)	132 (18%)	57 (8%)	1 1
58	BX	3/10 (30%)	1 (33%)	0	2 (67%)	0 0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
58	DX	3/10 (30%)	0	2 (67%)	1 (33%)	0 0
All	All	13227/14464 (91%)	10975 (83%)	1666 (13%)	586 (4%)	2 7

All (586) 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	3	VAL
6	AF	130	ALA
7	AG	50	ALA
7	AG	126	ASP
8	AH	155	SER
9	AK	71	LEU
9	AK	75	GLN
9	AK	77	PRO
9	AK	80	VAL
9	AK	81	VAL
9	AK	105	PRO
9	AK	123	GLU
9	AK	132	ASP
16	AS	59	LYS
17	AT	128	GLU
17	AT	129	ARG
23	AZ	177	PRO
23	AZ	184	ALA
28	A4	49	PHE
28	A4	59	PHE
35	BB	17	PHE
35	BB	125	PRO
35	BB	224	GLN
36	BC	88	ARG
37	BD	5	ILE
37	BD	47	ARG
38	BE	140	ARG
39	BF	70	ASP
39	BF	90	VAL
40	BG	33	ASP
40	BG	48	LYS

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Mol	Chain	Res	Type
40	BG	49	ILE
40	BG	131	LYS
42	BI	54	ASP
43	BJ	56	HIS
43	BJ	77	PRO
43	BJ	79	ARG
47	BN	20	ALA
47	BN	52	GLN
48	BO	19	PRO
49	BP	46	PRO
49	BP	51	VAL
49	BP	78	GLY
50	BQ	34	LYS
50	BQ	68	ARG
51	BR	48	GLY
52	BS	13	ASP
53	BT	100	ILE
57	BZ	-57	GLU
57	BZ	11	ARG
57	BZ	87	HIS
57	BZ	127	LYS
57	BZ	172	ASP
57	BZ	183	MET
57	BZ	195	ASP
57	BZ	243	VAL
57	BZ	396	ARG
57	BZ	404	VAL
57	BZ	472	VAL
57	BZ	480	GLN
58	BX	4	PRO
3	CC	42	VAL
3	CC	47	LYS
3	CC	68	GLY
3	CC	180	SER
3	CC	181	PHE
6	CF	130	ALA
6	CF	160	ASN
6	CF	195	ASP
7	CG	43	LEU
7	CG	51	ARG
7	CG	81	LYS
8	CH	77	LYS

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Mol	Chain	Res	Type
8	CH	92	ILE
8	CH	126	PRO
9	CK	71	LEU
9	CK	74	LEU
9	CK	77	PRO
9	CK	105	PRO
9	CK	107	VAL
9	CK	116	ILE
9	CK	123	GLU
9	CK	128	LEU
13	CP	128	HIS
14	CQ	28	ALA
15	CR	2	ARG
16	CS	57	LYS
16	CS	82	ILE
16	CS	94	TYR
17	CT	123	GLN
22	CY	40	GLU
23	CZ	135	GLU
23	CZ	183	LEU
23	CZ	184	ALA
27	C3	38	GLU
28	C4	62	ARG
28	C4	63	TYR
30	C6	27	LYS
31	C7	46	VAL
35	DB	17	PHE
35	DB	97	TRP
35	DB	105	PHE
36	DC	101	LEU
36	DC	163	ALA
37	DD	48	ALA
39	DF	39	LYS
40	DG	148	ASN
42	DI	54	ASP
43	DJ	56	HIS
43	DJ	77	PRO
48	DO	19	PRO
52	DS	67	VAL
53	DT	10	LEU
53	DT	100	ILE
57	DZ	-65	LYS

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Mol	Chain	Res	Type
57	DZ	-23	LEU
57	DZ	-4	ALA
57	DZ	199	ILE
57	DZ	400	GLU
57	DZ	402	ILE
57	DZ	472	VAL
57	DZ	479	PRO
57	DZ	481	VAL
57	DZ	518	PRO
57	DZ	664	GLN
58	DX	4	PRO
3	AC	53	ARG
3	AC	161	ARG
3	AC	179	ALA
4	AD	125	ILE
4	AD	275	LYS
9	AK	74	LEU
9	AK	84	GLU
9	AK	116	ILE
9	AK	119	ALA
9	AK	125	LEU
11	AN	88	GLU
14	AQ	60	ARG
16	AS	96	GLY
19	AV	79	VAL
21	AX	94	GLY
22	AY	54	LYS
23	AZ	120	ILE
23	AZ	137	ILE
23	AZ	154	ASP
28	A4	45	GLY
28	A4	47	GLN
28	A4	66	SER
35	BB	10	LEU
35	BB	195	ASP
36	BC	51	GLY
36	BC	65	ALA
36	BC	107	GLN
36	BC	179	ARG
37	BD	170	VAL
38	BE	72	GLN
40	BG	56	GLN

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Mol	Chain	Res	Type
41	BH	133	LEU
42	BI	12	GLU
42	BI	29	ASN
43	BJ	75	ILE
43	BJ	91	PRO
46	BM	67	GLU
49	BP	66	PRO
50	BQ	49	GLU
52	BS	27	GLU
53	BT	47	GLY
57	BZ	-4	ALA
57	BZ	-1	GLU
57	BZ	85	PRO
57	BZ	92	ILE
57	BZ	98	MET
57	BZ	126	GLU
57	BZ	171	GLU
57	BZ	320	PRO
57	BZ	322	VAL
57	BZ	402	ILE
57	BZ	446	THR
57	BZ	471	LYS
57	BZ	479	PRO
57	BZ	481	VAL
57	BZ	498	ILE
57	BZ	506	GLN
57	BZ	621	ILE
3	CC	53	ARG
3	CC	161	ARG
3	CC	179	ALA
4	CD	3	VAL
4	CD	31	LYS
4	CD	268	ARG
6	CF	15	SER
6	CF	21	ALA
6	CF	169	ASN
7	CG	24	GLY
7	CG	47	LYS
8	CH	89	ILE
8	CH	169	VAL
9	CK	20	ALA
9	CK	56	ASN

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Mol	Chain	Res	Type
9	CK	75	GLN
9	CK	79	ALA
9	CK	113	GLN
10	CL	89	HIS
12	CO	5	GLN
12	CO	94	ARG
13	CP	122	PRO
13	CP	135	LEU
14	CQ	59	ARG
15	CR	59	ASP
19	CV	24	LYS
21	CX	42	ALA
21	CX	94	GLY
22	CY	43	ASN
22	CY	51	VAL
22	CY	69	ALA
22	CY	78	ALA
23	CZ	115	GLY
23	CZ	163	LEU
24	C0	35	ASN
25	C1	3	LYS
25	C1	85	LEU
27	C3	13	ILE
28	C4	39	CYS
28	C4	49	PHE
28	C4	68	ARG
29	C5	43	HIS
32	C8	3	LYS
35	DB	37	ASN
35	DB	80	ILE
35	DB	126	GLU
35	DB	154	LEU
35	DB	189	ASP
35	DB	229	VAL
35	DB	232	PRO
36	DC	129	ALA
37	DD	42	GLN
37	DD	151	LYS
37	DD	171	GLY
38	DE	104	ALA
38	DE	107	ARG
40	DG	6	ARG

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Mol	Chain	Res	Type
40	DG	55	GLY
41	DH	6	ILE
41	DH	17	THR
42	DI	121	ARG
43	DJ	55	LYS
44	DK	49	GLY
45	DL	12	ARG
46	DM	5	ALA
46	DM	108	ARG
46	DM	114	ARG
49	DP	67	THR
53	DT	95	ALA
54	DU	3	LYS
57	DZ	-57	GLU
57	DZ	-20	LEU
57	DZ	-19	GLU
57	DZ	-9	LEU
57	DZ	87	HIS
57	DZ	127	LYS
57	DZ	163	VAL
57	DZ	164	MET
57	DZ	220	ALA
57	DZ	233	GLU
57	DZ	235	GLU
57	DZ	332	SER
57	DZ	396	ARG
57	DZ	446	THR
57	DZ	556	ILE
57	DZ	595	GLN
57	DZ	599	PRO
57	DZ	600	VAL
57	DZ	651	GLU
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
4	AD	262	ARG
7	AG	47	LYS

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Mol	Chain	Res	Type
9	AK	21	GLN
9	AK	22	GLY
9	AK	86	PRO
9	AK	101	PRO
9	AK	111	LEU
10	AL	135	GLY
13	AP	122	PRO
16	AS	60	GLY
21	AX	22	ALA
23	AZ	31	ARG
23	AZ	113	ALA
23	AZ	182	LYS
28	A4	4	GLY
28	A4	34	GLU
28	A4	50	VAL
28	A4	65	ASP
32	A8	31	HIS
35	BB	19	HIS
36	BC	16	ARG
37	BD	22	LYS
37	BD	42	GLN
37	BD	136	PRO
37	BD	178	VAL
38	BE	21	ALA
40	BG	153	HIS
42	BI	10	ARG
42	BI	56	LEU
43	BJ	27	ALA
52	BS	14	HIS
57	BZ	-25	SER
57	BZ	203	GLU
57	BZ	239	GLU
57	BZ	405	PRO
57	BZ	418	LYS
57	BZ	596	LYS
57	BZ	671	MET
3	CC	30	VAL
3	CC	43	GLU
3	CC	52	PRO
3	CC	69	LEU
3	CC	184	GLU
3	CC	202	PRO

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Mol	Chain	Res	Type
3	CC	209	PHE
4	CD	23	GLU
4	CD	266	SER
4	CD	275	LYS
5	CE	52	LEU
5	CE	74	PRO
7	CG	108	ASN
8	CH	47	GLU
8	CH	55	PRO
8	CH	59	ARG
9	CK	50	ARG
9	CK	84	GLU
9	CK	86	PRO
9	CK	119	ALA
9	CK	129	PRO
10	CL	87	GLY
10	CL	119	ASP
11	CN	132	ALA
16	CS	74	ALA
18	CU	86	ALA
19	CV	23	GLU
23	CZ	136	PHE
23	CZ	154	ASP
28	C4	11	PRO
28	C4	46	GLN
35	DB	16	HIS
35	DB	20	GLU
35	DB	21	ARG
36	DC	81	GLY
36	DC	98	ASN
38	DE	37	ARG
40	DG	80	VAL
41	DH	5	PRO
41	DH	42	GLU
45	DL	52	LEU
46	DM	36	LYS
48	DO	79	ARG
48	DO	88	ARG
49	DP	53	VAL
53	DT	47	GLY
53	DT	99	LEU
57	DZ	-8	ALA

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Mol	Chain	Res	Type
57	DZ	174	PHE
57	DZ	202	PRO
57	DZ	281	PRO
57	DZ	395	PRO
57	DZ	418	LYS
57	DZ	532	GLY
3	AC	16	ASP
5	AE	52	LEU
7	AG	32	PRO
7	AG	43	LEU
9	AK	31	GLY
9	AK	104	ILE
9	AK	107	VAL
10	AL	84	LEU
10	AL	114	ASP
10	AL	116	ASN
16	AS	54	LEU
23	AZ	157	LEU
35	BB	16	HIS
35	BB	131	PRO
35	BB	231	GLU
35	BB	234	PRO
36	BC	3	ASN
36	BC	66	VAL
37	BD	3	ARG
37	BD	93	PHE
37	BD	142	PRO
37	BD	179	GLU
37	BD	193	ASP
38	BE	98	THR
39	BF	42	GLU
40	BG	25	ALA
40	BG	114	ARG
44	BK	49	GLY
46	BM	92	HIS
47	BN	60	SER
48	BO	86	GLY
49	BP	24	ALA
49	BP	43	LYS
51	BR	41	LYS
53	BT	96	GLY
57	BZ	-37	LEU

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Mol	Chain	Res	Type
57	BZ	-5	LYS
57	BZ	115	GLU
57	BZ	170	ARG
57	BZ	182	ARG
57	BZ	620	VAL
57	BZ	640	ALA
58	BX	2	VAL
3	CC	16	ASP
4	CD	14	ARG
4	CD	69	ARG
4	CD	239	ARG
6	CF	171	PRO
7	CG	97	ASP
9	CK	33	PRO
9	CK	69	PRO
9	CK	70	GLU
9	CK	80	VAL
9	CK	104	ILE
12	CO	26	LYS
17	CT	55	ASN
18	CU	51	LYS
23	CZ	155	LEU
23	CZ	157	LEU
23	CZ	178	GLU
23	CZ	182	LYS
25	C1	26	ARG
35	DB	123	ALA
36	DC	179	ARG
39	DF	46	ARG
42	DI	100	GLY
44	DK	100	ALA
46	DM	4	ILE
46	DM	7	VAL
46	DM	35	GLU
52	DS	70	LYS
54	DU	7	ARG
57	DZ	2	LYS
57	DZ	92	ILE
57	DZ	98	MET
57	DZ	170	ARG
57	DZ	183	MET
57	DZ	519	ARG

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Mol	Chain	Res	Type
57	DZ	545	GLY
3	AC	21	TYR
9	AK	33	PRO
9	AK	85	ASP
13	AP	36	LYS
23	AZ	163	LEU
35	BB	124	SER
35	BB	212	GLN
36	BC	81	GLY
36	BC	101	LEU
38	BE	49	PRO
38	BE	101	ILE
40	BG	35	LYS
40	BG	152	ALA
42	BI	11	LYS
43	BJ	39	PRO
49	BP	14	ASN
49	BP	39	TYR
52	BS	42	PRO
53	BT	10	LEU
57	BZ	-28	ALA
57	BZ	-19	GLU
57	BZ	686	LYS
3	CC	21	TYR
4	CD	156	ALA
11	CN	2	LYS
21	CX	92	LEU
23	CZ	52	SER
28	C4	44	THR
35	DB	98	LEU
37	DD	5	ILE
38	DE	98	THR
38	DE	105	VAL
38	DE	132	ALA
41	DH	52	ASP
44	DK	105	VAL
45	DL	25	PRO
46	DM	10	PRO
46	DM	106	ASN
47	DN	27	CYS
47	DN	52	GLN
48	DO	78	TYR

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Mol	Chain	Res	Type
49	DP	78	GLY
52	DS	54	GLY
57	DZ	-52	VAL
57	DZ	117	GLN
57	DZ	477	GLY
57	DZ	502	GLY
3	AC	221	PRO
5	AE	192	ASN
9	AK	53	VAL
9	AK	56	ASN
9	AK	114	GLY
22	AY	102	CYS
23	AZ	111	VAL
23	AZ	161	VAL
40	BG	112	PRO
41	BH	90	GLY
46	BM	99	ARG
48	BO	36	ILE
3	CC	221	PRO
4	CD	70	TRP
8	CH	65	HIS
8	CH	143	GLN
9	CK	91	LYS
11	CN	134	ARG
15	CR	58	GLY
16	CS	75	GLU
21	CX	91	ALA
26	C2	58	ALA
35	DB	173	ALA
37	DD	11	LEU
37	DD	28	SER
39	DF	6	VAL
41	DH	73	ASP
45	DL	125	PRO
53	DT	89	ARG
57	DZ	74	TRP
57	DZ	221	ALA
57	DZ	404	VAL
57	DZ	405	PRO
8	AH	169	VAL
22	AY	53	PRO
36	BC	70	VAL

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Mol	Chain	Res	Type
40	BG	132	GLY
41	BH	51	VAL
42	BI	41	VAL
57	BZ	444	PRO
4	CD	125	ILE
8	CH	76	VAL
49	DP	14	ASN
57	DZ	303	PRO
8	AH	174	GLY
35	BB	65	GLY
38	BE	85	GLY
23	CZ	130	PRO
23	CZ	161	VAL
35	DB	234	PRO
38	DE	22	GLY
41	DH	51	VAL
57	DZ	557	GLY
57	DZ	680	PRO
7	AG	24	GLY
38	BE	69	VAL
45	BL	14	GLY
49	BP	40	ASP
57	BZ	-36	LEU
57	BZ	440	VAL
19	CV	5	VAL
23	CZ	62	PRO
23	CZ	159	PRO
37	DD	197	PRO
42	DI	21	PRO
44	BK	105	VAL
46	BM	98	VAL
57	BZ	234	GLY
57	BZ	395	PRO
57	BZ	477	GLY
18	CU	7	GLY
21	CX	85	PRO
28	C4	41	PRO
35	DB	227	GLY
40	DG	58	PRO
57	DZ	116	PRO
35	BB	194	PRO
4	CD	127	VAL

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Mol	Chain	Res	Type
9	CK	114	GLY
44	DK	90	GLY
57	DZ	530	VAL
5	CE	30	PRO

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%)	169 (79%)	46 (21%)	1 4
4	CD	216/218 (99%)	173 (80%)	43 (20%)	1 5
5	AE	164/166 (99%)	133 (81%)	31 (19%)	1 5
5	CE	164/166 (99%)	127 (77%)	37 (23%)	1 3
6	AF	160/166 (96%)	126 (79%)	34 (21%)	1 4
6	CF	159/166 (96%)	120 (76%)	39 (24%)	1 2
7	AG	143/156 (92%)	112 (78%)	31 (22%)	1 3
7	CG	142/156 (91%)	108 (76%)	34 (24%)	1 3
8	AH	144/148 (97%)	107 (74%)	37 (26%)	0 2
8	CH	144/148 (97%)	113 (78%)	31 (22%)	1 4
10	AL	50/111 (45%)	39 (78%)	11 (22%)	1 3
10	CL	50/111 (45%)	32 (64%)	18 (36%)	0 0
11	AN	118/119 (99%)	92 (78%)	26 (22%)	1 3
11	CN	118/119 (99%)	82 (70%)	36 (30%)	0 1
12	AO	100/100 (100%)	83 (83%)	17 (17%)	2 7
12	CO	100/100 (100%)	84 (84%)	16 (16%)	2 9
13	AP	116/116 (100%)	94 (81%)	22 (19%)	1 5
13	CP	115/116 (99%)	92 (80%)	23 (20%)	1 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
14	AQ	111/111 (100%)	91 (82%)	20 (18%)	2 6
14	CQ	111/111 (100%)	84 (76%)	27 (24%)	1 2
15	AR	101/101 (100%)	78 (77%)	23 (23%)	1 3
15	CR	101/101 (100%)	86 (85%)	15 (15%)	3 10
16	AS	87/88 (99%)	66 (76%)	21 (24%)	1 2
16	CS	85/88 (97%)	64 (75%)	21 (25%)	1 2
17	AT	115/127 (91%)	94 (82%)	21 (18%)	2 6
17	CT	113/127 (89%)	96 (85%)	17 (15%)	3 10
18	AU	93/94 (99%)	74 (80%)	19 (20%)	1 4
18	CU	93/94 (99%)	79 (85%)	14 (15%)	3 10
19	AV	80/82 (98%)	65 (81%)	15 (19%)	1 5
19	CV	80/82 (98%)	62 (78%)	18 (22%)	1 3
20	AW	90/92 (98%)	74 (82%)	16 (18%)	2 6
20	CW	90/92 (98%)	72 (80%)	18 (20%)	1 4
21	AX	77/78 (99%)	63 (82%)	14 (18%)	2 6
21	CX	77/78 (99%)	62 (80%)	15 (20%)	1 5
22	AY	85/91 (93%)	65 (76%)	20 (24%)	1 3
22	CY	85/91 (93%)	62 (73%)	23 (27%)	0 1
23	AZ	156/179 (87%)	114 (73%)	42 (27%)	0 1
23	CZ	156/179 (87%)	123 (79%)	33 (21%)	1 4
24	A0	61/67 (91%)	55 (90%)	6 (10%)	7 25
24	C0	61/67 (91%)	48 (79%)	13 (21%)	1 4
25	A1	80/83 (96%)	62 (78%)	18 (22%)	1 3
25	C1	80/83 (96%)	63 (79%)	17 (21%)	1 4
26	A2	65/67 (97%)	55 (85%)	10 (15%)	2 10
26	C2	65/67 (97%)	50 (77%)	15 (23%)	1 3
27	A3	51/52 (98%)	42 (82%)	9 (18%)	2 7
27	C3	50/52 (96%)	38 (76%)	12 (24%)	1 2
28	A4	60/63 (95%)	52 (87%)	8 (13%)	4 14
28	C4	53/63 (84%)	41 (77%)	12 (23%)	1 3
29	A5	50/52 (96%)	43 (86%)	7 (14%)	3 12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
29	C5	50/52 (96%)	41 (82%)	9 (18%)	2 6
30	A6	51/52 (98%)	37 (72%)	14 (28%)	0 1
30	C6	50/52 (96%)	40 (80%)	10 (20%)	1 4
31	A7	41/42 (98%)	31 (76%)	10 (24%)	1 2
31	C7	41/42 (98%)	33 (80%)	8 (20%)	1 5
32	A8	54/55 (98%)	43 (80%)	11 (20%)	1 4
32	C8	54/55 (98%)	47 (87%)	7 (13%)	4 14
33	A9	34/34 (100%)	29 (85%)	5 (15%)	3 10
33	C9	34/34 (100%)	31 (91%)	3 (9%)	9 29
35	BB	192/220 (87%)	150 (78%)	42 (22%)	1 3
35	DB	187/220 (85%)	145 (78%)	42 (22%)	1 3
36	BC	143/188 (76%)	122 (85%)	21 (15%)	3 10
36	DC	141/188 (75%)	104 (74%)	37 (26%)	0 2
37	BD	170/181 (94%)	135 (79%)	35 (21%)	1 4
37	DD	174/181 (96%)	136 (78%)	38 (22%)	1 3
38	BE	113/123 (92%)	85 (75%)	28 (25%)	1 2
38	DE	114/123 (93%)	80 (70%)	34 (30%)	0 1
39	BF	84/90 (93%)	68 (81%)	16 (19%)	1 5
39	DF	86/90 (96%)	73 (85%)	13 (15%)	3 10
40	BG	119/127 (94%)	93 (78%)	26 (22%)	1 3
40	DG	120/127 (94%)	103 (86%)	17 (14%)	3 12
41	BH	114/119 (96%)	87 (76%)	27 (24%)	1 3
41	DH	114/119 (96%)	84 (74%)	30 (26%)	0 2
42	BI	91/99 (92%)	76 (84%)	15 (16%)	2 8
42	DI	89/99 (90%)	66 (74%)	23 (26%)	0 2
43	BJ	66/92 (72%)	56 (85%)	10 (15%)	3 10
43	DJ	69/92 (75%)	58 (84%)	11 (16%)	2 9
44	BK	83/99 (84%)	65 (78%)	18 (22%)	1 3
44	DK	83/99 (84%)	63 (76%)	20 (24%)	1 2
45	BL	97/109 (89%)	79 (81%)	18 (19%)	1 5
45	DL	97/109 (89%)	73 (75%)	24 (25%)	1 2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
46	BM	91/101 (90%)	76 (84%)	15 (16%)	2 8
46	DM	88/101 (87%)	73 (83%)	15 (17%)	2 7
47	BN	49/50 (98%)	38 (78%)	11 (22%)	1 3
47	DN	49/50 (98%)	42 (86%)	7 (14%)	3 11
48	BO	78/80 (98%)	69 (88%)	9 (12%)	5 18
48	DO	78/80 (98%)	61 (78%)	17 (22%)	1 3
49	BP	69/74 (93%)	53 (77%)	16 (23%)	1 3
49	DP	68/74 (92%)	52 (76%)	16 (24%)	1 3
50	BQ	94/97 (97%)	75 (80%)	19 (20%)	1 4
50	DQ	94/97 (97%)	80 (85%)	14 (15%)	3 10
51	BR	59/77 (77%)	48 (81%)	11 (19%)	1 5
51	DR	59/77 (77%)	53 (90%)	6 (10%)	7 23
52	BS	70/80 (88%)	58 (83%)	12 (17%)	2 7
52	DS	67/80 (84%)	54 (81%)	13 (19%)	1 5
53	BT	70/82 (85%)	51 (73%)	19 (27%)	0 1
53	DT	71/82 (87%)	59 (83%)	12 (17%)	2 7
54	BU	18/22 (82%)	17 (94%)	1 (6%)	19 50
54	DU	18/22 (82%)	17 (94%)	1 (6%)	19 50
57	BZ	604/636 (95%)	470 (78%)	134 (22%)	1 3
57	DZ	607/636 (95%)	491 (81%)	116 (19%)	1 5
58	BX	3/3 (100%)	3 (100%)	0	100 100
58	DX	3/3 (100%)	3 (100%)	0	100 100
All	All	10664/11678 (91%)	8485 (80%)	2179 (20%)	1 4

All (2179) 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

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Mol	Chain	Res	Type
3	AC	184	GLU
3	AC	203	GLU
3	AC	206	LYS
3	AC	208	THR
4	AD	3	VAL
4	AD	4	LYS
4	AD	12	SER
4	AD	13	ARG
4	AD	18	VAL
4	AD	32	SER
4	AD	34	VAL
4	AD	54	ARG
4	AD	61	LEU
4	AD	88	ARG
4	AD	89	SER
4	AD	94	LEU
4	AD	99	ASP
4	AD	103	ARG
4	AD	111	LEU
4	AD	112	GLN
4	AD	113	VAL
4	AD	116	GLN
4	AD	122	ASP
4	AD	127	VAL
4	AD	134	ARG
4	AD	136	ILE
4	AD	138	VAL
4	AD	141	VAL
4	AD	142	VAL
4	AD	150	LYS
4	AD	155	LEU
4	AD	162	SER
4	AD	165	ILE
4	AD	173	VAL
4	AD	193	VAL
4	AD	200	ASP
4	AD	211	ARG
4	AD	217	ARG
4	AD	221	VAL
4	AD	229	VAL
4	AD	242	ARG
4	AD	254	THR

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Mol	Chain	Res	Type
4	AD	257	LEU
4	AD	259	THR
4	AD	260	ARG
4	AD	264	LYS
4	AD	270	ILE
4	AD	273	ARG
4	AD	274	ARG
4	AD	275	LYS
5	AE	7	VAL
5	AE	8	LYS
5	AE	9	VAL
5	AE	12	THR
5	AE	21	VAL
5	AE	33	VAL
5	AE	34	VAL
5	AE	35	GLN
5	AE	40	GLU
5	AE	47	VAL
5	AE	49	LEU
5	AE	75	VAL
5	AE	78	LEU
5	AE	81	ILE
5	AE	82	ARG
5	AE	90	THR
5	AE	92	THR
5	AE	94	GLU
5	AE	111	ARG
5	AE	116	VAL
5	AE	119	ARG
5	AE	144	ARG
5	AE	152	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	195	LEU
6	AF	15	SER
6	AF	17	ARG
6	AF	19	GLU

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Mol	Chain	Res	Type
6	AF	20	LEU
6	AF	24	LEU
6	AF	27	GLU
6	AF	33	LEU
6	AF	50	SER
6	AF	53	THR
6	AF	57	VAL
6	AF	64	ILE
6	AF	74	ARG
6	AF	82	ILE
6	AF	88	VAL
6	AF	95	ARG
6	AF	106	ARG
6	AF	107	LYS
6	AF	110	LEU
6	AF	112	MET
6	AF	119	ARG
6	AF	122	LYS
6	AF	124	LEU
6	AF	132	VAL
6	AF	140	LEU
6	AF	153	SER
6	AF	158	THR
6	AF	161	GLU
6	AF	162	LEU
6	AF	170	LEU
6	AF	183	VAL
6	AF	192	LEU
6	AF	195	ASP
6	AF	201	VAL
6	AF	203	GLN
7	AG	5	VAL
7	AG	7	LEU
7	AG	22	ARG
7	AG	28	VAL
7	AG	31	VAL
7	AG	32	PRO
7	AG	38	VAL
7	AG	41	GLN
7	AG	43	LEU
7	AG	45	GLU
7	AG	49	ASP

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Mol	Chain	Res	Type
7	AG	77	ILE
7	AG	79	ASN
7	AG	82	LEU
7	AG	86	MET
7	AG	88	ILE
7	AG	91	ARG
7	AG	99	MET
7	AG	111	LEU
7	AG	116	ASP
7	AG	139	LEU
7	AG	140	ILE
7	AG	143	GLU
7	AG	145	THR
7	AG	148	MET
7	AG	149	VAL
7	AG	157	ILE
7	AG	159	VAL
7	AG	161	THR
7	AG	162	THR
7	AG	170	ARG
8	AH	3	ARG
8	AH	6	ARG
8	AH	13	LYS
8	AH	15	VAL
8	AH	16	SER
8	AH	23	ARG
8	AH	24	VAL
8	AH	25	LYS
8	AH	27	LYS
8	AH	34	GLU
8	AH	42	ARG
8	AH	44	VAL
8	AH	45	VAL
8	AH	49	VAL
8	AH	59	ARG
8	AH	62	LYS
8	AH	67	LEU
8	AH	69	ARG
8	AH	72	ILE
8	AH	79	VAL
8	AH	80	SER
8	AH	85	LYS

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Mol	Chain	Res	Type
8	AH	88	LEU
8	AH	95	ARG
8	AH	98	LEU
8	AH	99	VAL
8	AH	104	GLU
8	AH	105	LEU
8	AH	113	VAL
8	AH	119	GLU
8	AH	122	THR
8	AH	125	VAL
8	AH	127	GLU
8	AH	133	VAL
8	AH	134	SER
8	AH	149	ARG
8	AH	162	ILE
10	AL	76	TYR
10	AL	77	LEU
10	AL	86	LYS
10	AL	96	VAL
10	AL	102	GLU
10	AL	112	MET
10	AL	115	LEU
10	AL	119	ASP
10	AL	121	GLU
10	AL	136	VAL
10	AL	137	GLU
11	AN	4	TYR
11	AN	5	VAL
11	AN	9	VAL
11	AN	21	LYS
11	AN	28	THR
11	AN	30	ILE
11	AN	33	LEU
11	AN	34	LEU
11	AN	46	VAL
11	AN	48	MET
11	AN	58	ASP
11	AN	61	ARG
11	AN	62	VAL
11	AN	65	LYS
11	AN	68	GLU
11	AN	73	THR

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Mol	Chain	Res	Type
11	AN	83	LYS
11	AN	84	LYS
11	AN	87	LEU
11	AN	97	ARG
11	AN	99	LEU
11	AN	120	LEU
11	AN	131	GLN
11	AN	133	GLN
11	AN	138	LEU
11	AN	140	VAL
12	AO	8	LEU
12	AO	10	VAL
12	AO	20	MET
12	AO	23	ARG
12	AO	24	VAL
12	AO	28	SER
12	AO	35	VAL
12	AO	39	ILE
12	AO	47	ILE
12	AO	52	VAL
12	AO	69	ILE
12	AO	92	GLU
12	AO	98	VAL
12	AO	105	GLU
12	AO	107	ARG
12	AO	113	LYS
12	AO	114	ILE
13	AP	2	LYS
13	AP	14	LYS
13	AP	21	ARG
13	AP	29	LYS
13	AP	42	SER
13	AP	55	ARG
13	AP	59	LEU
13	AP	65	ARG
13	AP	71	VAL
13	AP	83	VAL
13	AP	95	VAL
13	AP	96	THR
13	AP	98	GLU
13	AP	99	LEU
13	AP	101	VAL

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Mol	Chain	Res	Type
13	AP	112	LEU
13	AP	117	GLU
13	AP	121	LYS
13	AP	125	VAL
13	AP	132	LYS
13	AP	148	LEU
13	AP	149	GLU
14	AQ	2	LEU
14	AQ	3	MET
14	AQ	5	ARG
14	AQ	6	ARG
14	AQ	18	LYS
14	AQ	21	THR
14	AQ	35	VAL
14	AQ	42	ILE
14	AQ	45	GLN
14	AQ	55	VAL
14	AQ	56	ARG
14	AQ	68	ILE
14	AQ	75	THR
14	AQ	77	LYS
14	AQ	80	GLU
14	AQ	85	LYS
14	AQ	102	VAL
14	AQ	111	GLU
14	AQ	115	MET
14	AQ	133	ARG
15	AR	6	SER
15	AR	17	ARG
15	AR	18	LEU
15	AR	27	SER
15	AR	28	LEU
15	AR	29	LEU
15	AR	33	ARG
15	AR	42	LYS
15	AR	44	LEU
15	AR	54	LEU
15	AR	59	ASP
15	AR	60	LEU
15	AR	63	ARG
15	AR	65	LEU
15	AR	67	LEU

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Mol	Chain	Res	Type
15	AR	74	LYS
15	AR	75	LEU
15	AR	79	LEU
15	AR	91	GLN
15	AR	100	LEU
15	AR	111	LEU
15	AR	114	VAL
15	AR	117	VAL
16	AS	3	ARG
16	AS	4	LEU
16	AS	14	VAL
16	AS	18	ILE
16	AS	19	LYS
16	AS	20	ARG
16	AS	35	ILE
16	AS	46	VAL
16	AS	48	LEU
16	AS	49	VAL
16	AS	50	SER
16	AS	57	LYS
16	AS	58	LEU
16	AS	65	VAL
16	AS	69	VAL
16	AS	76	LYS
16	AS	78	LEU
16	AS	82	ILE
16	AS	83	LYS
16	AS	85	VAL
16	AS	98	VAL
17	AT	9	LEU
17	AT	13	ARG
17	AT	15	VAL
17	AT	17	THR
17	AT	23	ARG
17	AT	28	VAL
17	AT	34	VAL
17	AT	35	LYS
17	AT	39	ARG
17	AT	49	VAL
17	AT	59	THR
17	AT	65	LYS
17	AT	78	LEU

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Mol	Chain	Res	Type
17	AT	85	LYS
17	AT	89	VAL
17	AT	96	ARG
17	AT	115	ARG
17	AT	118	ARG
17	AT	119	LYS
17	AT	123	GLN
17	AT	125	ARG
18	AU	5	LYS
18	AU	8	VAL
18	AU	16	LYS
18	AU	17	ILE
18	AU	29	SER
18	AU	33	ARG
18	AU	36	ARG
18	AU	52	ARG
18	AU	59	ARG
18	AU	60	LEU
18	AU	74	LEU
18	AU	77	SER
18	AU	84	LYS
18	AU	92	ARG
18	AU	101	ARG
18	AU	104	GLN
18	AU	108	GLU
18	AU	111	GLU
18	AU	117	GLN
19	AV	18	LEU
19	AV	21	ARG
19	AV	28	GLU
19	AV	32	THR
19	AV	35	LEU
19	AV	43	GLU
19	AV	46	VAL
19	AV	51	VAL
19	AV	52	VAL
19	AV	61	VAL
19	AV	73	SER
19	AV	79	VAL
19	AV	85	LYS
19	AV	95	LEU
19	AV	98	GLU

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Mol	Chain	Res	Type
20	AW	4	LYS
20	AW	11	ARG
20	AW	12	ILE
20	AW	14	PRO
20	AW	15	ARG
20	AW	17	VAL
20	AW	19	LEU
20	AW	41	LYS
20	AW	51	LEU
20	AW	52	GLU
20	AW	65	LEU
20	AW	96	ILE
20	AW	98	LYS
20	AW	100	THR
20	AW	101	SER
20	AW	107	LEU
21	AX	2	LYS
21	AX	39	ILE
21	AX	45	THR
21	AX	50	LYS
21	AX	52	VAL
21	AX	57	LEU
21	AX	60	ARG
21	AX	63	LYS
21	AX	70	LEU
21	AX	72	LYS
21	AX	76	ARG
21	AX	78	LYS
21	AX	81	VAL
21	AX	87	GLN
22	AY	2	ARG
22	AY	7	VAL
22	AY	8	LYS
22	AY	11	ASP
22	AY	23	ARG
22	AY	31	LEU
22	AY	51	VAL
22	AY	55	TYR
22	AY	61	ILE
22	AY	63	LYS
22	AY	72	VAL
22	AY	73	ARG

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Mol	Chain	Res	Type
22	AY	79	CYS
22	AY	81	LYS
22	AY	85	VAL
22	AY	90	LEU
22	AY	91	GLU
22	AY	92	ASN
22	AY	96	ILE
22	AY	97	ARG
23	AZ	5	LEU
23	AZ	6	LYS
23	AZ	27	VAL
23	AZ	31	ARG
23	AZ	37	VAL
23	AZ	40	ASP
23	AZ	41	LEU
23	AZ	46	LYS
23	AZ	49	ARG
23	AZ	50	GLN
23	AZ	53	ILE
23	AZ	56	VAL
23	AZ	65	GLN
23	AZ	72	ARG
23	AZ	76	LEU
23	AZ	81	ARG
23	AZ	86	VAL
23	AZ	91	LEU
23	AZ	93	ASP
23	AZ	98	MET
23	AZ	100	VAL
23	AZ	107	THR
23	AZ	121	HIS
23	AZ	124	ILE
23	AZ	126	VAL
23	AZ	136	PHE
23	AZ	137	ILE
23	AZ	139	VAL
23	AZ	142	SER
23	AZ	149	SER
23	AZ	150	LEU
23	AZ	151	HIS
23	AZ	154	ASP
23	AZ	155	LEU

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Mol	Chain	Res	Type
23	AZ	156	LYS
23	AZ	163	LEU
23	AZ	165	VAL
23	AZ	170	THR
23	AZ	171	ILE
23	AZ	175	VAL
23	AZ	183	LEU
23	AZ	185	GLU
24	A0	10	THR
24	A0	20	ARG
24	A0	43	THR
24	A0	49	LYS
24	A0	55	ARG
24	A0	68	GLU
25	A1	3	LYS
25	A1	6	GLU
25	A1	7	ILE
25	A1	14	VAL
25	A1	30	VAL
25	A1	35	THR
25	A1	37	ILE
25	A1	38	SER
25	A1	40	ARG
25	A1	46	LEU
25	A1	51	VAL
25	A1	53	VAL
25	A1	59	THR
25	A1	62	VAL
25	A1	67	ILE
25	A1	73	LEU
25	A1	80	LEU
25	A1	93	GLU
26	A2	28	LYS
26	A2	30	ARG
26	A2	32	LEU
26	A2	40	SER
26	A2	53	LEU
26	A2	55	ARG
26	A2	65	ASN
26	A2	66	GLU
26	A2	67	LYS
26	A2	70	GLN

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Mol	Chain	Res	Type
27	A3	3	ARG
27	A3	6	VAL
27	A3	8	LEU
27	A3	9	VAL
27	A3	18	ASP
27	A3	23	LEU
27	A3	29	ARG
27	A3	54	VAL
27	A3	58	VAL
28	A4	1	MET
28	A4	15	ILE
28	A4	20	ASN
28	A4	27	THR
28	A4	34	GLU
28	A4	36	CYS
28	A4	49	PHE
28	A4	67	TYR
29	A5	6	VAL
29	A5	15	ARG
29	A5	16	ARG
29	A5	29	THR
29	A5	55	ARG
29	A5	58	LEU
29	A5	60	VAL
30	A6	4	GLU
30	A6	5	VAL
30	A6	7	ILE
30	A6	9	LEU
30	A6	14	THR
30	A6	24	GLU
30	A6	33	LYS
30	A6	35	GLU
30	A6	38	LYS
30	A6	40	CYS
30	A6	44	ARG
30	A6	45	LYS
30	A6	48	VAL
30	A6	52	VAL
31	A7	1	MET
31	A7	8	ASN
31	A7	9	ARG
31	A7	23	ARG

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Mol	Chain	Res	Type
31	A7	24	THR
31	A7	29	LYS
31	A7	43	THR
31	A7	46	VAL
31	A7	47	ARG
31	A7	48	LYS
32	A8	4	MET
32	A8	11	LYS
32	A8	14	VAL
32	A8	15	LYS
32	A8	23	VAL
32	A8	30	ARG
32	A8	32	LEU
32	A8	37	SER
32	A8	46	ARG
32	A8	52	LYS
32	A8	58	ILE
33	A9	3	VAL
33	A9	4	ARG
33	A9	13	LYS
33	A9	17	ILE
33	A9	28	GLU
35	BB	8	LYS
35	BB	11	LEU
35	BB	17	PHE
35	BB	19	HIS
35	BB	20	GLU
35	BB	21	ARG
35	BB	23	ARG
35	BB	27	LYS
35	BB	39	ILE
35	BB	40	HIS
35	BB	45	GLN
35	BB	53	ARG
35	BB	68	ILE
35	BB	80	ILE
35	BB	84	GLU
35	BB	93	VAL
35	BB	96	ARG
35	BB	108	ILE
35	BB	111	ARG
35	BB	112	VAL

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Mol	Chain	Res	Type
35	BB	119	GLU
35	BB	121	LEU
35	BB	127	ILE
35	BB	128	GLU
35	BB	136	VAL
35	BB	145	LEU
35	BB	154	LEU
35	BB	156	LYS
35	BB	158	LEU
35	BB	168	THR
35	BB	169	LYS
35	BB	170	GLU
35	BB	175	ARG
35	BB	185	ILE
35	BB	187	LEU
35	BB	189	ASP
35	BB	190	THR
35	BB	200	ILE
35	BB	208	ILE
35	BB	221	LEU
35	BB	223	ILE
35	BB	229	VAL
36	BC	3	ASN
36	BC	15	THR
36	BC	17	ASP
36	BC	28	GLN
36	BC	37	GLN
36	BC	45	LYS
36	BC	47	LEU
36	BC	64	VAL
36	BC	77	ILE
36	BC	104	GLN
36	BC	115	LEU
36	BC	116	VAL
36	BC	124	ILE
36	BC	125	GLU
36	BC	130	VAL
36	BC	165	THR
36	BC	167	TRP
36	BC	178	LEU
36	BC	179	ARG
36	BC	192	THR

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Mol	Chain	Res	Type
36	BC	196	LEU
37	BD	5	ILE
37	BD	13	ARG
37	BD	17	VAL
37	BD	22	LYS
37	BD	28	SER
37	BD	31	CYS
37	BD	47	ARG
37	BD	49	ARG
37	BD	58	LEU
37	BD	63	LYS
37	BD	77	ASN
37	BD	85	LYS
37	BD	86	LYS
37	BD	91	SER
37	BD	97	LEU
37	BD	112	VAL
37	BD	118	ARG
37	BD	135	LEU
37	BD	141	ARG
37	BD	142	PRO
37	BD	155	LEU
37	BD	157	LEU
37	BD	158	ILE
37	BD	168	ARG
37	BD	175	SER
37	BD	178	VAL
37	BD	186	LEU
37	BD	187	ARG
37	BD	188	LEU
37	BD	193	ASP
37	BD	196	LEU
37	BD	201	GLN
37	BD	203	VAL
37	BD	204	ILE
37	BD	208	SER
38	BE	10	MET
38	BE	11	ILE
38	BE	12	LEU
38	BE	13	ILE
38	BE	20	GLN
38	BE	27	ARG

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Mol	Chain	Res	Type
38	BE	31	LEU
38	BE	33	VAL
38	BE	38	GLN
38	BE	41	VAL
38	BE	47	LYS
38	BE	50	GLU
38	BE	65	ASN
38	BE	66	MET
38	BE	79	GLU
38	BE	80	ILE
38	BE	81	GLU
38	BE	89	ILE
38	BE	90	VAL
38	BE	91	LEU
38	BE	98	THR
38	BE	100	VAL
38	BE	116	THR
38	BE	140	ARG
38	BE	143	ARG
38	BE	147	ASP
38	BE	150	ARG
38	BE	152	ARG
39	BF	8	ILE
39	BF	10	LEU
39	BF	17	SER
39	BF	25	ILE
39	BF	30	LEU
39	BF	40	VAL
39	BF	43	LEU
39	BF	61	LEU
39	BF	64	GLN
39	BF	69	GLU
39	BF	70	ASP
39	BF	72	VAL
39	BF	75	LEU
39	BF	89	MET
39	BF	92	LYS
39	BF	98	LEU
40	BG	4	ARG
40	BG	8	GLU
40	BG	10	ARG
40	BG	12	LEU

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Mol	Chain	Res	Type
40	BG	13	GLN
40	BG	15	ASP
40	BG	21	VAL
40	BG	22	LEU
40	BG	31	MET
40	BG	41	ARG
40	BG	50	ILE
40	BG	56	GLN
40	BG	75	VAL
40	BG	78	ARG
40	BG	79	ARG
40	BG	90	GLU
40	BG	91	VAL
40	BG	104	LEU
40	BG	113	GLU
40	BG	114	ARG
40	BG	115	ARG
40	BG	124	LEU
40	BG	131	LYS
40	BG	138	LYS
40	BG	140	ASP
40	BG	156	TRP
41	BH	2	LEU
41	BH	13	ILE
41	BH	19	VAL
41	BH	26	VAL
41	BH	35	ILE
41	BH	37	ARG
41	BH	38	ILE
41	BH	51	VAL
41	BH	52	ASP
41	BH	53	VAL
41	BH	54	ASP
41	BH	64	LYS
41	BH	75	ARG
41	BH	78	GLN
41	BH	83	ILE
41	BH	85	ARG
41	BH	88	LYS
41	BH	91	ARG
41	BH	98	LYS
41	BH	99	GLU

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Mol	Chain	Res	Type
41	BH	109	ILE
41	BH	114	THR
41	BH	115	SER
41	BH	120	THR
41	BH	127	LEU
41	BH	133	LEU
41	BH	137	VAL
42	BI	7	THR
42	BI	17	VAL
42	BI	23	ASN
42	BI	27	THR
42	BI	31	GLN
42	BI	33	PHE
42	BI	63	ILE
42	BI	66	ARG
42	BI	81	ILE
42	BI	93	ARG
42	BI	102	LEU
42	BI	104	ARG
42	BI	107	ARG
42	BI	108	VAL
42	BI	113	LYS
43	BJ	16	LEU
43	BJ	21	GLN
43	BJ	23	ILE
43	BJ	30	SER
43	BJ	34	VAL
43	BJ	42	THR
43	BJ	44	VAL
43	BJ	46	ARG
43	BJ	59	SER
43	BJ	84	GLN
44	BK	18	ARG
44	BK	25	TYR
44	BK	47	VAL
44	BK	48	ILE
44	BK	51	LYS
44	BK	53	SER
44	BK	63	LEU
44	BK	70	LYS
44	BK	80	VAL
44	BK	82	VAL

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Mol	Chain	Res	Type
44	BK	83	ILE
44	BK	84	VAL
44	BK	91	ARG
44	BK	103	LEU
44	BK	104	GLN
44	BK	105	VAL
44	BK	106	LYS
44	BK	114	VAL
45	BL	10	LEU
45	BL	18	VAL
45	BL	22	SER
45	BL	27	LEU
45	BL	28	LYS
45	BL	33	ARG
45	BL	61	THR
45	BL	66	VAL
45	BL	67	THR
45	BL	70	ILE
45	BL	83	VAL
45	BL	84	LEU
45	BL	93	LEU
45	BL	96	VAL
45	BL	104	VAL
45	BL	110	VAL
45	BL	116	SER
45	BL	118	SER
46	BM	3	ARG
46	BM	4	ILE
46	BM	9	ILE
46	BM	15	VAL
46	BM	17	VAL
46	BM	39	ILE
46	BM	54	VAL
46	BM	56	LEU
46	BM	63	THR
46	BM	70	LEU
46	BM	92	HIS
46	BM	96	LEU
46	BM	109	THR
46	BM	110	ARG
46	BM	117	VAL
47	BN	3	ARG

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Mol	Chain	Res	Type
47	BN	7	ILE
47	BN	8	GLU
47	BN	15	LYS
47	BN	22	THR
47	BN	24	CYS
47	BN	26	ARG
47	BN	33	VAL
47	BN	41	ARG
47	BN	44	LEU
47	BN	49	HIS
48	BO	3	ILE
48	BO	26	GLU
48	BO	34	LEU
48	BO	39	LEU
48	BO	40	SER
48	BO	66	LEU
48	BO	68	ARG
48	BO	76	GLU
48	BO	87	ILE
49	BP	1	MET
49	BP	2	VAL
49	BP	4	ILE
49	BP	19	ILE
49	BP	21	VAL
49	BP	22	THR
49	BP	27	LYS
49	BP	29	ASP
49	BP	33	ILE
49	BP	38	TYR
49	BP	45	THR
49	BP	49	LEU
49	BP	60	LEU
49	BP	62	VAL
49	BP	69	THR
49	BP	72	ARG
50	BQ	5	VAL
50	BQ	6	LEU
50	BQ	9	VAL
50	BQ	16	GLN
50	BQ	36	ILE
50	BQ	40	LYS
50	BQ	48	GLU

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Mol	Chain	Res	Type
50	BQ	50	LYS
50	BQ	52	LYS
50	BQ	60	ILE
50	BQ	62	SER
50	BQ	68	ARG
50	BQ	69	LYS
50	BQ	72	ARG
50	BQ	73	VAL
50	BQ	77	VAL
50	BQ	78	GLU
50	BQ	92	ARG
50	BQ	98	LEU
51	BR	29	PHE
51	BR	31	LEU
51	BR	35	ARG
51	BR	36	ASN
51	BR	37	VAL
51	BR	46	GLU
51	BR	53	ARG
51	BR	58	LEU
51	BR	69	THR
51	BR	82	THR
51	BR	85	LEU
52	BS	7	LYS
52	BS	11	VAL
52	BS	28	LYS
52	BS	38	SER
52	BS	43	GLU
52	BS	57	HIS
52	BS	58	VAL
52	BS	62	ILE
52	BS	65	ASN
52	BS	78	ARG
52	BS	81	ARG
52	BS	85	LYS
53	BT	8	ARG
53	BT	10	LEU
53	BT	13	LEU
53	BT	20	LEU
53	BT	21	LYS
53	BT	22	ARG
53	BT	23	ARG

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Mol	Chain	Res	Type
53	BT	24	LEU
53	BT	36	LEU
53	BT	41	ILE
53	BT	45	GLN
53	BT	53	LEU
53	BT	62	LEU
53	BT	64	ASP
53	BT	74	LYS
53	BT	81	LYS
53	BT	84	LEU
53	BT	93	GLU
53	BT	100	ILE
54	BU	7	ARG
57	BZ	-61	LEU
57	BZ	-60	GLU
57	BZ	-58	LEU
57	BZ	-56	ASN
57	BZ	-52	VAL
57	BZ	-49	VAL
57	BZ	-45	LYS
57	BZ	-29	LEU
57	BZ	-27	THR
57	BZ	-16	ILE
57	BZ	-13	GLN
57	BZ	-9	LEU
57	BZ	-6	ARG
57	BZ	4	ILE
57	BZ	10	LYS
57	BZ	12	LEU
57	BZ	13	ARG
57	BZ	14	ASN
57	BZ	15	ILE
57	BZ	17	ILE
57	BZ	21	ILE
57	BZ	25	LYS
57	BZ	30	GLU
57	BZ	33	LEU
57	BZ	71	THR
57	BZ	75	LYS
57	BZ	76	ASP
57	BZ	77	HIS
57	BZ	78	ARG

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Mol	Chain	Res	Type
57	BZ	81	ILE
57	BZ	84	THR
57	BZ	91	THR
57	BZ	92	ILE
57	BZ	102	ASP
57	BZ	105	ILE
57	BZ	106	VAL
57	BZ	107	VAL
57	BZ	112	GLN
57	BZ	121	VAL
57	BZ	123	ARG
57	BZ	130	VAL
57	BZ	132	ARG
57	BZ	146	LEU
57	BZ	152	THR
57	BZ	156	ARG
57	BZ	160	ARG
57	BZ	164	MET
57	BZ	166	LEU
57	BZ	172	ASP
57	BZ	178	ILE
57	BZ	180	VAL
57	BZ	186	TYR
57	BZ	196	ILE
57	BZ	198	GLU
57	BZ	203	GLU
57	BZ	206	LEU
57	BZ	207	ASP
57	BZ	216	LEU
57	BZ	231	TYR
57	BZ	232	LEU
57	BZ	236	GLU
57	BZ	240	GLU
57	BZ	253	LEU
57	BZ	264	LEU
57	BZ	276	VAL
57	BZ	280	LEU
57	BZ	282	SER
57	BZ	284	LEU
57	BZ	295	GLU
57	BZ	312	LEU
57	BZ	315	LYS

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Mol	Chain	Res	Type
57	BZ	321	TYR
57	BZ	324	ARG
57	BZ	328	ILE
57	BZ	345	THR
57	BZ	348	ARG
57	BZ	352	VAL
57	BZ	355	LEU
57	BZ	356	LEU
57	BZ	358	MET
57	BZ	363	ARG
57	BZ	367	GLU
57	BZ	374	LEU
57	BZ	377	VAL
57	BZ	378	VAL
57	BZ	385	THR
57	BZ	389	LEU
57	BZ	397	VAL
57	BZ	399	LEU
57	BZ	404	VAL
57	BZ	409	ILE
57	BZ	414	GLU
57	BZ	422	GLU
57	BZ	431	LEU
57	BZ	438	PHE
57	BZ	440	VAL
57	BZ	454	MET
57	BZ	460	GLU
57	BZ	468	ARG
57	BZ	473	ASP
57	BZ	475	ASN
57	BZ	481	VAL
57	BZ	484	ARG
57	BZ	485	GLU
57	BZ	488	THR
57	BZ	491	VAL
57	BZ	501	THR
57	BZ	504	ARG
57	BZ	506	GLN
57	BZ	510	VAL
57	BZ	512	ILE
57	BZ	515	GLU
57	BZ	561	VAL

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Mol	Chain	Res	Type
57	BZ	572	TYR
57	BZ	600	VAL
57	BZ	603	GLU
57	BZ	615	GLU
57	BZ	621	ILE
57	BZ	623	ASP
57	BZ	630	GLN
57	BZ	631	ILE
57	BZ	634	MET
57	BZ	642	VAL
57	BZ	647	VAL
57	BZ	651	GLU
57	BZ	659	LEU
57	BZ	660	ARG
57	BZ	670	VAL
57	BZ	671	MET
57	BZ	679	VAL
57	BZ	685	GLU
57	BZ	686	LYS
57	BZ	687	LEU
57	BZ	688	ILE
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	4	LYS
4	CD	7	LYS
4	CD	12	SER
4	CD	13	ARG
4	CD	26	LYS
4	CD	27	THR
4	CD	32	SER
4	CD	61	LEU
4	CD	73	VAL
4	CD	87	ASN

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Mol	Chain	Res	Type
4	CD	89	SER
4	CD	94	LEU
4	CD	101	GLU
4	CD	103	ARG
4	CD	106	ILE
4	CD	109	ASP
4	CD	111	LEU
4	CD	113	VAL
4	CD	126	GLN
4	CD	134	ARG
4	CD	138	VAL
4	CD	142	VAL
4	CD	154	LYS
4	CD	155	LEU
4	CD	157	ARG
4	CD	171	ASP
4	CD	173	VAL
4	CD	193	VAL
4	CD	208	LYS
4	CD	211	ARG
4	CD	212	SER
4	CD	217	ARG
4	CD	221	VAL
4	CD	229	VAL
4	CD	242	ARG
4	CD	253	GLN
4	CD	259	THR
4	CD	260	ARG
4	CD	264	LYS
4	CD	265	PRO
4	CD	271	ILE
4	CD	274	ARG
4	CD	275	LYS
5	CE	2	LYS
5	CE	9	VAL
5	CE	14	ILE
5	CE	21	VAL
5	CE	23	VAL
5	CE	24	THR
5	CE	33	VAL
5	CE	34	VAL
5	CE	40	GLU

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Mol	Chain	Res	Type
5	CE	42	ASP
5	CE	45	THR
5	CE	49	LEU
5	CE	52	LEU
5	CE	58	ARG
5	CE	73	GLU
5	CE	75	VAL
5	CE	77	ILE
5	CE	78	LEU
5	CE	79	ARG
5	CE	82	ARG
5	CE	87	GLU
5	CE	92	THR
5	CE	93	VAL
5	CE	94	GLU
5	CE	111	ARG
5	CE	116	VAL
5	CE	119	ARG
5	CE	144	ARG
5	CE	154	LYS
5	CE	167	VAL
5	CE	170	LEU
5	CE	175	VAL
5	CE	181	LEU
5	CE	188	VAL
5	CE	195	LEU
5	CE	201	THR
5	CE	202	LYS
6	CF	7	TYR
6	CF	12	LEU
6	CF	18	ARG
6	CF	19	GLU
6	CF	20	LEU
6	CF	24	LEU
6	CF	27	GLU
6	CF	28	ILE
6	CF	33	LEU
6	CF	50	SER
6	CF	52	LYS
6	CF	57	VAL
6	CF	60	SER
6	CF	62	ARG

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Mol	Chain	Res	Type
6	CF	66	PRO
6	CF	70	THR
6	CF	74	ARG
6	CF	77	ASP
6	CF	82	ILE
6	CF	88	VAL
6	CF	106	ARG
6	CF	107	LYS
6	CF	135	LYS
6	CF	137	LYS
6	CF	140	LEU
6	CF	158	THR
6	CF	162	LEU
6	CF	163	VAL
6	CF	165	ARG
6	CF	169	ASN
6	CF	171	PRO
6	CF	176	LEU
6	CF	179	GLU
6	CF	182	ASN
6	CF	183	VAL
6	CF	186	ILE
6	CF	192	LEU
6	CF	200	GLU
6	CF	201	VAL
7	CG	4	ASP
7	CG	5	VAL
7	CG	7	LEU
7	CG	9	ARG
7	CG	16	ARG
7	CG	21	ARG
7	CG	28	VAL
7	CG	31	VAL
7	CG	33	ARG
7	CG	40	ASN
7	CG	49	ASP
7	CG	60	LEU
7	CG	70	VAL
7	CG	77	ILE
7	CG	79	ASN
7	CG	88	ILE
7	CG	91	ARG

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Mol	Chain	Res	Type
7	CG	98	ARG
7	CG	106	LEU
7	CG	111	LEU
7	CG	115	ARG
7	CG	123	ASN
7	CG	126	ASP
7	CG	128	ARG
7	CG	130	ASN
7	CG	133	LEU
7	CG	136	ARG
7	CG	140	ILE
7	CG	143	GLU
7	CG	150	ASP
7	CG	152	LEU
7	CG	162	THR
7	CG	164	GLU
7	CG	165	THR
8	CH	3	ARG
8	CH	7	LEU
8	CH	15	VAL
8	CH	19	VAL
8	CH	25	LYS
8	CH	33	LEU
8	CH	35	VAL
8	CH	43	VAL
8	CH	44	VAL
8	CH	45	VAL
8	CH	47	GLU
8	CH	49	VAL
8	CH	50	VAL
8	CH	52	VAL
8	CH	57	ASP
8	CH	59	ARG
8	CH	69	ARG
8	CH	70	THR
8	CH	77	LYS
8	CH	81	GLU
8	CH	84	SER
8	CH	86	GLU
8	CH	95	ARG
8	CH	98	LEU
8	CH	104	GLU

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Mol	Chain	Res	Type
8	CH	116	GLU
8	CH	122	THR
8	CH	129	THR
8	CH	134	SER
8	CH	139	GLN
8	CH	172	LYS
10	CL	76	TYR
10	CL	78	ILE
10	CL	86	LYS
10	CL	93	ARG
10	CL	96	VAL
10	CL	98	ARG
10	CL	99	ILE
10	CL	102	GLU
10	CL	105	LEU
10	CL	110	GLN
10	CL	114	ASP
10	CL	115	LEU
10	CL	117	THR
10	CL	118	THR
10	CL	121	GLU
10	CL	126	MET
10	CL	127	ILE
10	CL	138	VAL
11	CN	2	LYS
11	CN	5	VAL
11	CN	9	VAL
11	CN	10	GLU
11	CN	14	VAL
11	CN	15	LEU
11	CN	21	LYS
11	CN	25	ARG
11	CN	26	LEU
11	CN	28	THR
11	CN	32	THR
11	CN	34	LEU
11	CN	37	LYS
11	CN	38	HIS
11	CN	46	VAL
11	CN	48	MET
11	CN	58	ASP
11	CN	59	LYS

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Mol	Chain	Res	Type
11	CN	60	ILE
11	CN	61	ARG
11	CN	62	VAL
11	CN	63	THR
11	CN	65	LYS
11	CN	73	THR
11	CN	87	LEU
11	CN	89	LYS
11	CN	97	ARG
11	CN	99	LEU
11	CN	109	LYS
11	CN	120	LEU
11	CN	121	LYS
11	CN	133	GLN
11	CN	134	ARG
11	CN	137	LYS
11	CN	138	LEU
11	CN	140	VAL
12	CO	8	LEU
12	CO	10	VAL
12	CO	18	LYS
12	CO	23	ARG
12	CO	24	VAL
12	CO	28	SER
12	CO	35	VAL
12	CO	52	VAL
12	CO	58	VAL
12	CO	69	ILE
12	CO	78	ARG
12	CO	87	ILE
12	CO	89	ASN
12	CO	98	VAL
12	CO	108	GLU
12	CO	117	LEU
13	CP	1	MET
13	CP	2	LYS
13	CP	3	LEU
13	CP	14	LYS
13	CP	21	ARG
13	CP	45	LEU
13	CP	55	ARG
13	CP	58	THR

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Mol	Chain	Res	Type
13	CP	59	LEU
13	CP	65	ARG
13	CP	74	GLU
13	CP	75	ILE
13	CP	86	LYS
13	CP	95	VAL
13	CP	98	GLU
13	CP	99	LEU
13	CP	100	LEU
13	CP	106	LEU
13	CP	117	GLU
13	CP	125	VAL
13	CP	133	SER
13	CP	135	LEU
13	CP	148	LEU
14	CQ	3	MET
14	CQ	7	MET
14	CQ	8	LYS
14	CQ	10	ARG
14	CQ	11	LYS
14	CQ	16	ARG
14	CQ	21	THR
14	CQ	22	LYS
14	CQ	35	VAL
14	CQ	37	LEU
14	CQ	38	GLU
14	CQ	45	GLN
14	CQ	48	GLU
14	CQ	56	ARG
14	CQ	59	ARG
14	CQ	60	ARG
14	CQ	63	LYS
14	CQ	75	THR
14	CQ	81	VAL
14	CQ	89	ASN
14	CQ	106	VAL
14	CQ	109	VAL
14	CQ	110	THR
14	CQ	115	MET
14	CQ	128	LYS
14	CQ	133	ARG
14	CQ	138	ASP

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Mol	Chain	Res	Type
15	CR	1	MET
15	CR	6	SER
15	CR	8	ARG
15	CR	18	LEU
15	CR	28	LEU
15	CR	29	LEU
15	CR	44	LEU
15	CR	54	LEU
15	CR	60	LEU
15	CR	79	LEU
15	CR	88	ARG
15	CR	100	LEU
15	CR	111	LEU
15	CR	114	VAL
15	CR	117	VAL
16	CS	3	ARG
16	CS	4	LEU
16	CS	20	ARG
16	CS	21	THR
16	CS	24	LEU
16	CS	28	VAL
16	CS	32	LEU
16	CS	33	LYS
16	CS	40	ILE
16	CS	46	VAL
16	CS	48	LEU
16	CS	49	VAL
16	CS	50	SER
16	CS	56	LEU
16	CS	58	LEU
16	CS	64	GLU
16	CS	67	ARG
16	CS	69	VAL
16	CS	75	GLU
16	CS	76	LYS
16	CS	95	HIS
17	CT	6	LEU
17	CT	8	LYS
17	CT	10	VAL
17	CT	15	VAL
17	CT	18	ASP
17	CT	30	VAL

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Mol	Chain	Res	Type
17	CT	38	ASN
17	CT	49	VAL
17	CT	52	ILE
17	CT	64	ARG
17	CT	65	LYS
17	CT	74	ARG
17	CT	85	LYS
17	CT	89	VAL
17	CT	96	ARG
17	CT	115	ARG
17	CT	118	ARG
18	CU	31	SER
18	CU	33	ARG
18	CU	36	ARG
18	CU	59	ARG
18	CU	62	ILE
18	CU	74	LEU
18	CU	77	SER
18	CU	88	ILE
18	CU	90	VAL
18	CU	92	ARG
18	CU	93	LYS
18	CU	95	LEU
18	CU	100	VAL
18	CU	104	GLN
19	CV	1	MET
19	CV	5	VAL
19	CV	14	VAL
19	CV	18	LEU
19	CV	32	THR
19	CV	35	LEU
19	CV	46	VAL
19	CV	49	THR
19	CV	51	VAL
19	CV	52	VAL
19	CV	53	GLU
19	CV	61	VAL
19	CV	62	LEU
19	CV	72	VAL
19	CV	73	SER
19	CV	79	VAL
19	CV	85	LYS

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Mol	Chain	Res	Type
19	CV	100	ARG
20	CW	2	GLU
20	CW	4	LYS
20	CW	11	ARG
20	CW	12	ILE
20	CW	14	PRO
20	CW	15	ARG
20	CW	17	VAL
20	CW	18	ARG
20	CW	19	LEU
20	CW	23	LEU
20	CW	27	LYS
20	CW	45	TYR
20	CW	51	LEU
20	CW	60	ASN
20	CW	61	ASN
20	CW	66	GLU
20	CW	100	THR
20	CW	107	LEU
21	CX	13	LEU
21	CX	35	THR
21	CX	43	VAL
21	CX	45	THR
21	CX	49	VAL
21	CX	52	VAL
21	CX	54	VAL
21	CX	57	LEU
21	CX	64	LYS
21	CX	76	ARG
21	CX	77	LYS
21	CX	81	VAL
21	CX	87	GLN
21	CX	89	ILE
21	CX	92	LEU
22	CY	1	MET
22	CY	2	ARG
22	CY	3	VAL
22	CY	7	VAL
22	CY	8	LYS
22	CY	12	THR
22	CY	14	LEU
22	CY	24	VAL

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Mol	Chain	Res	Type
22	CY	31	LEU
22	CY	37	VAL
22	CY	43	ASN
22	CY	44	ILE
22	CY	45	VAL
22	CY	47	LYS
22	CY	64	GLU
22	CY	67	LEU
22	CY	70	SER
22	CY	72	VAL
22	CY	90	LEU
22	CY	91	GLU
22	CY	92	ASN
22	CY	96	ILE
22	CY	98	VAL
23	CZ	5	LEU
23	CZ	14	LYS
23	CZ	18	LEU
23	CZ	19	ARG
23	CZ	28	MET
23	CZ	33	LEU
23	CZ	41	LEU
23	CZ	42	VAL
23	CZ	56	VAL
23	CZ	70	LEU
23	CZ	73	GLN
23	CZ	74	VAL
23	CZ	80	ARG
23	CZ	86	VAL
23	CZ	91	LEU
23	CZ	94	GLU
23	CZ	96	VAL
23	CZ	98	MET
23	CZ	111	VAL
23	CZ	119	GLU
23	CZ	120	ILE
23	CZ	121	HIS
23	CZ	124	ILE
23	CZ	126	VAL
23	CZ	138	GLU
23	CZ	139	VAL
23	CZ	142	SER

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Mol	Chain	Res	Type
23	CZ	150	LEU
23	CZ	156	LYS
23	CZ	163	LEU
23	CZ	165	VAL
23	CZ	170	THR
23	CZ	175	VAL
24	C0	10	THR
24	C0	11	ARG
24	C0	14	ARG
24	C0	20	ARG
24	C0	30	VAL
24	C0	31	VAL
24	C0	43	THR
24	C0	44	ARG
24	C0	49	LYS
24	C0	71	ASP
24	C0	72	ARG
24	C0	74	ARG
24	C0	82	ARG
25	C1	4	VAL
25	C1	11	ARG
25	C1	14	VAL
25	C1	21	ARG
25	C1	27	GLU
25	C1	30	VAL
25	C1	32	LYS
25	C1	33	LYS
25	C1	37	ILE
25	C1	38	SER
25	C1	40	ARG
25	C1	59	THR
25	C1	69	LYS
25	C1	72	GLU
25	C1	73	LEU
25	C1	80	LEU
25	C1	90	ILE
26	C2	9	GLN
26	C2	12	GLU
26	C2	19	VAL
26	C2	28	LYS
26	C2	32	LEU
26	C2	38	GLN

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Mol	Chain	Res	Type
26	C2	40	SER
26	C2	45	SER
26	C2	49	LYS
26	C2	53	LEU
26	C2	57	ILE
26	C2	60	LEU
26	C2	65	ASN
26	C2	67	LYS
26	C2	70	GLN
27	C3	3	ARG
27	C3	5	LYS
27	C3	6	VAL
27	C3	8	LEU
27	C3	11	SER
27	C3	18	ASP
27	C3	24	LYS
27	C3	31	LEU
27	C3	33	GLN
27	C3	34	GLU
27	C3	36	VAL
27	C3	40	THR
28	C4	1	MET
28	C4	5	ILE
28	C4	14	ILE
28	C4	32	TYR
28	C4	33	VAL
28	C4	35	VAL
28	C4	50	VAL
28	C4	53	GLU
28	C4	59	PHE
28	C4	61	ARG
28	C4	63	TYR
28	C4	67	TYR
29	C5	6	VAL
29	C5	16	ARG
29	C5	20	ARG
29	C5	26	THR
29	C5	29	THR
29	C5	40	LYS
29	C5	57	VAL
29	C5	58	LEU
29	C5	60	VAL

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Mol	Chain	Res	Type
30	C6	5	VAL
30	C6	6	ARG
30	C6	7	ILE
30	C6	9	LEU
30	C6	14	THR
30	C6	23	THR
30	C6	38	LYS
30	C6	40	CYS
30	C6	48	VAL
30	C6	50	ARG
31	C7	2	LYS
31	C7	4	THR
31	C7	9	ARG
31	C7	24	THR
31	C7	29	LYS
31	C7	32	LYS
31	C7	41	ARG
31	C7	43	THR
32	C8	14	VAL
32	C8	23	VAL
32	C8	26	LYS
32	C8	29	LYS
32	C8	30	ARG
32	C8	32	LEU
32	C8	41	ILE
33	C9	7	VAL
33	C9	13	LYS
33	C9	26	ILE
35	DB	7	VAL
35	DB	11	LEU
35	DB	23	ARG
35	DB	27	LYS
35	DB	44	LEU
35	DB	47	THR
35	DB	51	LEU
35	DB	53	ARG
35	DB	58	ILE
35	DB	68	ILE
35	DB	69	LEU
35	DB	76	GLN
35	DB	78	GLN
35	DB	80	ILE

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Mol	Chain	Res	Type
35	DB	87	ARG
35	DB	90	MET
35	DB	94	ASN
35	DB	96	ARG
35	DB	97	TRP
35	DB	98	LEU
35	DB	108	ILE
35	DB	115	LEU
35	DB	118	LEU
35	DB	119	GLU
35	DB	127	ILE
35	DB	140	HIS
35	DB	148	TYR
35	DB	154	LEU
35	DB	155	LEU
35	DB	157	ARG
35	DB	175	ARG
35	DB	179	LYS
35	DB	185	ILE
35	DB	187	LEU
35	DB	189	ASP
35	DB	198	ASP
35	DB	215	LEU
35	DB	217	ARG
35	DB	223	ILE
35	DB	224	GLN
35	DB	229	VAL
35	DB	230	VAL
36	DC	3	ASN
36	DC	8	ILE
36	DC	12	LEU
36	DC	15	THR
36	DC	16	ARG
36	DC	21	ARG
36	DC	44	GLU
36	DC	47	LEU
36	DC	52	LEU
36	DC	55	VAL
36	DC	57	ILE
36	DC	67	THR
36	DC	70	VAL
36	DC	82	GLU

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Mol	Chain	Res	Type
36	DC	85	ARG
36	DC	104	GLN
36	DC	108	ASN
36	DC	111	LEU
36	DC	116	VAL
36	DC	120	VAL
36	DC	124	ILE
36	DC	128	PHE
36	DC	131	ARG
36	DC	138	VAL
36	DC	143	GLU
36	DC	152	ILE
36	DC	153	VAL
36	DC	154	SER
36	DC	156	ARG
36	DC	166	GLU
36	DC	175	LEU
36	DC	178	LEU
36	DC	186	PHE
36	DC	191	THR
36	DC	192	THR
36	DC	196	LEU
36	DC	198	VAL
37	DD	5	ILE
37	DD	8	VAL
37	DD	11	LEU
37	DD	12	CYS
37	DD	13	ARG
37	DD	19	LEU
37	DD	22	LYS
37	DD	31	CYS
37	DD	35	ARG
37	DD	53	ASP
37	DD	58	LEU
37	DD	61	LYS
37	DD	65	ARG
37	DD	73	ARG
37	DD	76	ARG
37	DD	78	LEU
37	DD	85	LYS
37	DD	96	LEU
37	DD	97	LEU

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Mol	Chain	Res	Type
37	DD	104	VAL
37	DD	106	TYR
37	DD	108	LEU
37	DD	115	ARG
37	DD	126	ILE
37	DD	127	THR
37	DD	135	LEU
37	DD	150	GLU
37	DD	155	LEU
37	DD	156	GLU
37	DD	157	LEU
37	DD	158	ILE
37	DD	162	LEU
37	DD	163	GLU
37	DD	169	LYS
37	DD	170	VAL
37	DD	187	ARG
37	DD	194	LEU
37	DD	208	SER
38	DE	5	ASP
38	DE	12	LEU
38	DE	16	THR
38	DE	20	GLN
38	DE	31	LEU
38	DE	34	VAL
38	DE	38	GLN
38	DE	41	VAL
38	DE	43	LEU
38	DE	47	LYS
38	DE	53	LEU
38	DE	55	VAL
38	DE	57	LYS
38	DE	63	ARG
38	DE	64	ARG
38	DE	72	GLN
38	DE	75	THR
38	DE	79	GLU
38	DE	82	VAL
38	DE	87	SER
38	DE	91	LEU
38	DE	96	PRO
38	DE	100	VAL

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Mol	Chain	Res	Type
38	DE	101	ILE
38	DE	118	ILE
38	DE	120	THR
38	DE	125	SER
38	DE	126	ARG
38	DE	129	ILE
38	DE	137	GLU
38	DE	141	GLN
38	DE	144	THR
38	DE	147	ASP
38	DE	149	GLU
39	DF	13	ASN
39	DF	28	ARG
39	DF	30	LEU
39	DF	37	VAL
39	DF	40	VAL
39	DF	48	LEU
39	DF	63	TYR
39	DF	69	GLU
39	DF	70	ASP
39	DF	71	ARG
39	DF	80	ARG
39	DF	86	ARG
39	DF	87	ARG
40	DG	4	ARG
40	DG	12	LEU
40	DG	16	LEU
40	DG	21	VAL
40	DG	32	ARG
40	DG	52	GLU
40	DG	93	PRO
40	DG	95	ARG
40	DG	97	GLN
40	DG	98	SER
40	DG	106	GLN
40	DG	114	ARG
40	DG	115	ARG
40	DG	131	LYS
40	DG	139	GLU
40	DG	146	GLU
40	DG	153	HIS
41	DH	3	THR

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Mol	Chain	Res	Type
41	DH	10	LEU
41	DH	18	ARG
41	DH	21	LYS
41	DH	25	ASP
41	DH	26	VAL
41	DH	34	GLU
41	DH	35	ILE
41	DH	39	LEU
41	DH	41	ARG
41	DH	50	ARG
41	DH	51	VAL
41	DH	52	ASP
41	DH	60	ARG
41	DH	63	LEU
41	DH	78	GLN
41	DH	79	VAL
41	DH	84	ARG
41	DH	85	ARG
41	DH	91	ARG
41	DH	95	VAL
41	DH	97	VAL
41	DH	107	LEU
41	DH	111	ILE
41	DH	114	THR
41	DH	118	VAL
41	DH	119	LEU
41	DH	125	ARG
41	DH	127	LEU
41	DH	137	VAL
42	DI	3	GLN
42	DI	17	VAL
42	DI	23	ASN
42	DI	27	THR
42	DI	31	GLN
42	DI	38	GLN
42	DI	41	VAL
42	DI	54	ASP
42	DI	64	THR
42	DI	65	VAL
42	DI	74	ILE
42	DI	81	ILE
42	DI	86	VAL

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Mol	Chain	Res	Type
42	DI	89	ASN
42	DI	99	LEU
42	DI	102	LEU
42	DI	104	ARG
42	DI	108	VAL
42	DI	109	VAL
42	DI	113	LYS
42	DI	114	TYR
42	DI	124	GLN
42	DI	128	ARG
43	DJ	29	ARG
43	DJ	34	VAL
43	DJ	46	ARG
43	DJ	49	VAL
43	DJ	59	SER
43	DJ	67	THR
43	DJ	68	HIS
43	DJ	72	VAL
43	DJ	85	LEU
43	DJ	95	GLU
43	DJ	96	ILE
44	DK	14	VAL
44	DK	16	SER
44	DK	18	ARG
44	DK	26	ASN
44	DK	30	VAL
44	DK	32	ILE
44	DK	33	THR
44	DK	48	ILE
44	DK	70	LYS
44	DK	80	VAL
44	DK	81	ASP
44	DK	82	VAL
44	DK	87	THR
44	DK	96	ARG
44	DK	98	LEU
44	DK	107	SER
44	DK	109	VAL
44	DK	112	THR
44	DK	114	VAL
44	DK	126	ARG
45	DL	7	ILE

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Mol	Chain	Res	Type
45	DL	8	ASN
45	DL	18	VAL
45	DL	24	VAL
45	DL	27	LEU
45	DL	44	THR
45	DL	46	LYS
45	DL	47	LYS
45	DL	52	LEU
45	DL	57	LYS
45	DL	60	LEU
45	DL	65	GLU
45	DL	78	GLN
45	DL	81	SER
45	DL	83	VAL
45	DL	84	LEU
45	DL	85	ILE
45	DL	92	ASP
45	DL	93	LEU
45	DL	97	ARG
45	DL	104	VAL
45	DL	106	ASP
45	DL	118	SER
45	DL	122	THR
46	DM	8	GLU
46	DM	25	ILE
46	DM	29	ARG
46	DM	32	GLU
46	DM	40	ASN
46	DM	66	LEU
46	DM	70	LEU
46	DM	73	GLU
46	DM	80	ARG
46	DM	92	HIS
46	DM	98	VAL
46	DM	101	GLN
46	DM	106	ASN
46	DM	110	ARG
46	DM	117	VAL
47	DN	15	LYS
47	DN	22	THR
47	DN	33	VAL
47	DN	41	ARG

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Mol	Chain	Res	Type
47	DN	42	ILE
47	DN	43	CYS
47	DN	44	LEU
48	DO	3	ILE
48	DO	4	THR
48	DO	10	LYS
48	DO	22	THR
48	DO	26	GLU
48	DO	27	VAL
48	DO	28	GLN
48	DO	31	LEU
48	DO	39	LEU
48	DO	41	GLU
48	DO	48	LYS
48	DO	54	ARG
48	DO	64	ARG
48	DO	65	ARG
48	DO	66	LEU
48	DO	67	LEU
48	DO	68	ARG
49	DP	2	VAL
49	DP	4	ILE
49	DP	6	LEU
49	DP	20	VAL
49	DP	21	VAL
49	DP	22	THR
49	DP	25	ARG
49	DP	27	LYS
49	DP	49	LEU
49	DP	54	GLU
49	DP	55	ARG
49	DP	60	LEU
49	DP	62	VAL
49	DP	67	THR
49	DP	71	ARG
49	DP	74	LEU
50	DQ	6	LEU
50	DQ	7	THR
50	DQ	9	VAL
50	DQ	14	LYS
50	DQ	19	VAL
50	DQ	37	LYS

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Mol	Chain	Res	Type
50	DQ	43	LEU
50	DQ	49	GLU
50	DQ	57	VAL
50	DQ	59	ILE
50	DQ	69	LYS
50	DQ	72	ARG
50	DQ	74	LEU
50	DQ	89	LEU
51	DR	21	LYS
51	DR	22	VAL
51	DR	26	LEU
51	DR	37	VAL
51	DR	41	LYS
51	DR	61	LYS
52	DS	15	LEU
52	DS	16	LEU
52	DS	27	GLU
52	DS	33	THR
52	DS	38	SER
52	DS	60	VAL
52	DS	64	GLU
52	DS	65	ASN
52	DS	66	MET
52	DS	77	THR
52	DS	78	ARG
52	DS	81	ARG
52	DS	83	HIS
53	DT	9	ASN
53	DT	13	LEU
53	DT	24	LEU
53	DT	36	LEU
53	DT	43	LEU
53	DT	51	GLU
53	DT	56	MET
53	DT	57	ARG
53	DT	62	LEU
53	DT	65	LYS
53	DT	71	THR
53	DT	93	GLU
54	DU	10	ARG
57	DZ	-66	MET
57	DZ	-64	VAL

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Mol	Chain	Res	Type
57	DZ	-61	LEU
57	DZ	-58	LEU
57	DZ	-48	VAL
57	DZ	-30	VAL
57	DZ	-29	LEU
57	DZ	-20	LEU
57	DZ	-19	GLU
57	DZ	-6	ARG
57	DZ	-5	LYS
57	DZ	1	LEU
57	DZ	4	ILE
57	DZ	9	LEU
57	DZ	15	ILE
57	DZ	21	ILE
57	DZ	31	ARG
57	DZ	33	LEU
57	DZ	69	VAL
57	DZ	70	THR
57	DZ	79	ILE
57	DZ	81	ILE
57	DZ	91	THR
57	DZ	92	ILE
57	DZ	93	GLU
57	DZ	96	ARG
57	DZ	105	ILE
57	DZ	107	VAL
57	DZ	110	SER
57	DZ	111	SER
57	DZ	114	VAL
57	DZ	120	THR
57	DZ	121	VAL
57	DZ	129	LYS
57	DZ	130	VAL
57	DZ	146	LEU
57	DZ	151	ARG
57	DZ	152	THR
57	DZ	153	MET
57	DZ	160	ARG
57	DZ	163	VAL
57	DZ	166	LEU
57	DZ	170	ARG
57	DZ	182	ARG

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Mol	Chain	Res	Type
57	DZ	196	ILE
57	DZ	197	ARG
57	DZ	198	GLU
57	DZ	213	HIS
57	DZ	215	LYS
57	DZ	217	VAL
57	DZ	219	VAL
57	DZ	232	LEU
57	DZ	236	GLU
57	DZ	240	GLU
57	DZ	247	ARG
57	DZ	255	ILE
57	DZ	264	LEU
57	DZ	277	VAL
57	DZ	284	LEU
57	DZ	289	ILE
57	DZ	292	THR
57	DZ	293	THR
57	DZ	299	VAL
57	DZ	301	ILE
57	DZ	312	LEU
57	DZ	328	ILE
57	DZ	332	SER
57	DZ	337	SER
57	DZ	352	VAL
57	DZ	354	ARG
57	DZ	355	LEU
57	DZ	356	LEU
57	DZ	363	ARG
57	DZ	369	LEU
57	DZ	377	VAL
57	DZ	382	GLU
57	DZ	384	ILE
57	DZ	385	THR
57	DZ	389	LEU
57	DZ	390	VAL
57	DZ	392	GLU
57	DZ	396	ARG
57	DZ	404	VAL
57	DZ	418	LYS
57	DZ	422	GLU
57	DZ	423	LYS

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Mol	Chain	Res	Type
57	DZ	428	LEU
57	DZ	442	THR
57	DZ	454	MET
57	DZ	461	ILE
57	DZ	462	ILE
57	DZ	471	LYS
57	DZ	481	VAL
57	DZ	485	GLU
57	DZ	506	GLN
57	DZ	512	ILE
57	DZ	519	ARG
57	DZ	534	ILE
57	DZ	536	LYS
57	DZ	537	GLU
57	DZ	556	ILE
57	DZ	558	PHE
57	DZ	568	TYR
57	DZ	590	ILE
57	DZ	624	LEU
57	DZ	630	GLN
57	DZ	631	ILE
57	DZ	635	GLU
57	DZ	649	LEU
57	DZ	651	GLU
57	DZ	659	LEU
57	DZ	666	ARG
57	DZ	670	VAL
57	DZ	678	GLU
57	DZ	679	VAL
57	DZ	681	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (211) such sidechains are listed below:

Mol	Chain	Res	Type
3	AC	18	ASN
3	AC	67	HIS
3	AC	189	ASN
3	AC	200	HIS
4	AD	87	ASN
4	AD	116	GLN
4	AD	164	GLN
4	AD	253	GLN

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Mol	Chain	Res	Type
5	AE	85	ASN
6	AF	160	ASN
6	AF	169	ASN
6	AF	203	GLN
10	AL	116	ASN
11	AN	94	HIS
11	AN	131	GLN
13	AP	27	HIS
14	AQ	12	GLN
14	AQ	57	HIS
15	AR	31	HIS
15	AR	71	GLN
17	AT	43	GLN
18	AU	94	ASN
19	AV	80	GLN
20	AW	60	ASN
21	AX	31	HIS
21	AX	82	GLN
22	AY	6	HIS
22	AY	92	ASN
23	AZ	55	HIS
23	AZ	73	GLN
24	A0	29	GLN
24	A0	35	ASN
26	A2	9	GLN
28	A4	46	GLN
28	A4	60	GLN
33	A9	36	GLN
35	BB	40	HIS
35	BB	45	GLN
35	BB	76	GLN
36	BC	37	GLN
36	BC	118	GLN
36	BC	136	GLN
37	BD	45	GLN
37	BD	201	GLN
38	BE	56	GLN
38	BE	141	GLN
39	BF	7	ASN
39	BF	32	ASN
39	BF	73	ASN
40	BG	13	GLN

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Mol	Chain	Res	Type
40	BG	28	ASN
40	BG	37	ASN
40	BG	51	GLN
40	BG	64	GLN
40	BG	96	GLN
40	BG	148	ASN
40	BG	153	HIS
42	BI	23	ASN
42	BI	34	ASN
42	BI	73	GLN
42	BI	124	GLN
43	BJ	21	GLN
43	BJ	62	HIS
44	BK	99	GLN
44	BK	104	GLN
44	BK	116	HIS
45	BL	78	GLN
47	BN	49	HIS
48	BO	28	GLN
48	BO	62	GLN
49	BP	14	ASN
49	BP	16	HIS
49	BP	76	GLN
50	BQ	16	GLN
50	BQ	26	GLN
52	BS	65	ASN
52	BS	69	HIS
52	BS	83	HIS
53	BT	26	ASN
53	BT	45	GLN
53	BT	75	ASN
53	BT	90	GLN
57	BZ	-50	GLN
57	BZ	-13	GLN
57	BZ	77	HIS
57	BZ	154	GLN
57	BZ	165	GLN
57	BZ	213	HIS
57	BZ	266	ASN
57	BZ	361	ASN
57	BZ	421	GLN
57	BZ	475	ASN

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Mol	Chain	Res	Type
57	BZ	527	ASN
57	BZ	573	HIS
57	BZ	641	GLN
57	BZ	677	GLN
3	CC	4	HIS
3	CC	18	ASN
3	CC	67	HIS
3	CC	189	ASN
3	CC	200	HIS
4	CD	96	HIS
4	CD	253	GLN
5	CE	54	GLN
5	CE	143	ASN
6	CF	69	HIS
6	CF	75	HIS
6	CF	169	ASN
6	CF	182	ASN
6	CF	203	GLN
7	CG	108	ASN
7	CG	123	ASN
7	CG	132	ASN
8	CH	74	ASN
8	CH	143	GLN
8	CH	147	ASN
10	CL	110	GLN
11	CN	133	GLN
12	CO	3	GLN
12	CO	89	ASN
13	CP	38	GLN
13	CP	128	HIS
14	CQ	12	GLN
14	CQ	13	GLN
14	CQ	123	HIS
15	CR	3	HIS
15	CR	13	HIS
15	CR	31	HIS
15	CR	71	GLN
16	CS	95	HIS
17	CT	58	ASN
17	CT	123	GLN
18	CU	94	ASN
18	CU	104	GLN

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Mol	Chain	Res	Type
20	CW	60	ASN
20	CW	61	ASN
21	CX	41	ASN
22	CY	6	HIS
22	CY	43	ASN
22	CY	92	ASN
23	CZ	32	HIS
23	CZ	34	ASN
23	CZ	50	GLN
23	CZ	65	GLN
24	C0	12	ASN
24	C0	35	ASN
24	C0	70	GLN
25	C1	16	ASN
26	C2	38	GLN
32	C8	35	GLN
32	C8	43	GLN
33	C9	36	GLN
35	DB	40	HIS
35	DB	45	GLN
35	DB	76	GLN
35	DB	224	GLN
36	DC	28	GLN
36	DC	104	GLN
36	DC	110	ASN
37	DD	45	GLN
37	DD	77	ASN
37	DD	129	ASN
37	DD	160	GLN
38	DE	72	GLN
39	DF	27	GLN
39	DF	100	ASN
40	DG	28	ASN
40	DG	97	GLN
40	DG	106	GLN
40	DG	109	ASN
40	DG	110	GLN
41	DH	78	GLN
42	DI	23	ASN
42	DI	31	GLN
42	DI	73	GLN
42	DI	89	ASN

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Mol	Chain	Res	Type
42	DI	117	HIS
42	DI	124	GLN
43	DJ	13	HIS
43	DJ	21	GLN
43	DJ	62	HIS
43	DJ	84	GLN
44	DK	22	HIS
44	DK	99	GLN
45	DL	49	ASN
45	DL	75	HIS
46	DM	62	ASN
46	DM	77	ASN
46	DM	101	GLN
48	DO	28	GLN
49	DP	13	HIS
49	DP	16	HIS
50	DQ	45	HIS
51	DR	63	GLN
52	DS	23	ASN
52	DS	47	HIS
53	DT	16	HIS
53	DT	18	GLN
57	DZ	-56	ASN
57	DZ	-50	GLN
57	DZ	-24	ASN
57	DZ	77	HIS
57	DZ	165	GLN
57	DZ	266	ASN
57	DZ	359	HIS
57	DZ	362	HIS
57	DZ	421	GLN
57	DZ	500	GLN
57	DZ	595	GLN
57	DZ	630	GLN
57	DZ	641	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	2865/2915 (98%)	536 (18%)	51 (1%)
1	CA	2860/2915 (98%)	615 (21%)	39 (1%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	AB	119/121 (98%)	15 (12%)	0
2	CB	119/121 (98%)	27 (22%)	0
34	BA	1491/1521 (98%)	331 (22%)	20 (1%)
34	DA	1498/1521 (98%)	352 (23%)	22 (1%)
55	BV	6/18 (33%)	2 (33%)	0
55	DV	5/18 (27%)	1 (20%)	0
56	BW	75/76 (98%)	16 (21%)	1 (1%)
56	BY	72/76 (94%)	24 (33%)	2 (2%)
56	DW	75/76 (98%)	24 (32%)	2 (2%)
56	DY	71/76 (93%)	23 (32%)	1 (1%)
All	All	9256/9454 (97%)	1966 (21%)	138 (1%)

All (1966) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	12	U
1	AA	13	A
1	AA	15	G
1	AA	34	C
1	AA	45	C
1	AA	63	A
1	AA	70	A
1	AA	73	A
1	AA	74	G
1	AA	86	C
1	AA	94	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	138	G
1	AA	166	G
1	AA	170	A
1	AA	171	A
1	AA	177	G
1	AA	185	A
1	AA	186	A
1	AA	188	A
1	AA	189	U
1	AA	190	C

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Mol	Chain	Res	Type
1	AA	194	G
1	AA	204	G
1	AA	205	A
1	AA	211	A
1	AA	214	A
1	AA	217	A
1	AA	218	A
1	AA	219	U
1	AA	222	A
1	AA	237	G
1	AA	239	G
1	AA	253	C
1	AA	255	G
1	AA	258	U
1	AA	269	G
1	AA	271	U
1	AA	272	U
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	299	G
1	AA	303	C
1	AA	304	C
1	AA	311	C
1	AA	318	A
1	AA	330	U
1	AA	334	A
1	AA	335	A
1	AA	349	G
1	AA	353	G
1	AA	354	A
1	AA	366	G
1	AA	370	A
1	AA	376	G
1	AA	377	G
1	AA	387	G
1	AA	389	G
1	AA	397	G
1	AA	398	A

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Mol	Chain	Res	Type
1	AA	407	U
1	AA	413	G
1	AA	416	G
1	AA	423	G
1	AA	432	U
1	AA	434	G
1	AA	438	G
1	AA	448	U
1	AA	454	U
1	AA	455	A
1	AA	469	A
1	AA	470	C
1	AA	474	U
1	AA	482	C
1	AA	483	A
1	AA	496	A
1	AA	497	A
1	AA	506	A
1	AA	507	G
1	AA	514	G
1	AA	515	G
1	AA	519	G
1	AA	529	U
1	AA	530	A
1	AA	534	C
1	AA	536	U
1	AA	547	G
1	AA	553	A
1	AA	555	G
1	AA	556	C
1	AA	557	A
1	AA	558	G
1	AA	573	G
1	AA	586	G
1	AA	596	G
1	AA	598	A
1	AA	609	A
1	AA	615	G
1	AA	626	A
1	AA	627	G
1	AA	630	U
1	AA	637	U

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Mol	Chain	Res	Type
1	AA	639	G
1	AA	641	G
1	AA	642	G
1	AA	657	A
1	AA	662	A
1	AA	670	C
1	AA	671	A
1	AA	672	G
1	AA	702	A
1	AA	703	G
1	AA	716	G
1	AA	717	A
1	AA	724	A
1	AA	733	G
1	AA	734	C
1	AA	762	G
1	AA	764	G
1	AA	772	G
1	AA	777	C
1	AA	787	U
1	AA	793	A
1	AA	794	U
1	AA	809	U
1	AA	811	A
1	AA	818	G
1	AA	821	A
1	AA	822	G
1	AA	823	G
1	AA	829	A
1	AA	831	A
1	AA	832	G
1	AA	839	G
1	AA	852	G
1	AA	858	U
1	AA	859	C
1	AA	874	U
1	AA	875	U
1	AA	883	G
1	AA	891	C
1	AA	903	C
1	AA	906	G
1	AA	913	A

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Mol	Chain	Res	Type
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	942	A
1	AA	953	U
1	AA	956	A
1	AA	957	A
1	AA	977	G
1	AA	986	A
1	AA	990	A
1	AA	991	G
1	AA	992	G
1	AA	998	A
1	AA	1002	A
1	AA	1003	U
1	AA	1004	A
1	AA	1006	C
1	AA	1012	C
1	AA	1019	G
1	AA	1020	C
1	AA	1029	A
1	AA	1036	A
1	AA	1042	A
1	AA	1051	C
1	AA	1058	U
1	AA	1059	C
1	AA	1068	G
1	AA	1071	G
1	AA	1072	U
1	AA	1079	U
1	AA	1080	G
1	AA	1081	U
1	AA	1084	C
1	AA	1087	C
1	AA	1090	G
1	AA	1092	A

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Mol	Chain	Res	Type
1	AA	1093	G
1	AA	1095	C
1	AA	1096	A
1	AA	1099	C
1	AA	1100	A
1	AA	1101	G
1	AA	1102	G
1	AA	1106	U
1	AA	1107	U
1	AA	1108	G
1	AA	1110	C
1	AA	1116	A
1	AA	1118	C
1	AA	1119	A
1	AA	1122	C
1	AA	1125	C
1	AA	1126	C
1	AA	1128	U
1	AA	1129	U
1	AA	1133	G
1	AA	1134	A
1	AA	1142	A
1	AA	1152	G
1	AA	1153	G
1	AA	1154	U
1	AA	1155	C
1	AA	1156	G
1	AA	1158	G
1	AA	1176	U
1	AA	1178	A
1	AA	1180	C
1	AA	1181	G
1	AA	1184	G
1	AA	1186	U
1	AA	1188	A
1	AA	1189	A
1	AA	1195	G
1	AA	1196	C
1	AA	1217	G
1	AA	1218	G
1	AA	1219	A
1	AA	1220	U

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Mol	Chain	Res	Type
1	AA	1221	G
1	AA	1222	A
1	AA	1237	G
1	AA	1255	A
1	AA	1256	U
1	AA	1265	A
1	AA	1270	C
1	AA	1275	G
1	AA	1287	A
1	AA	1290	G
1	AA	1296	G
1	AA	1299	A
1	AA	1302	G
1	AA	1317	G
1	AA	1318	A
1	AA	1328	U
1	AA	1346	U
1	AA	1347	A
1	AA	1349	G
1	AA	1352	C
1	AA	1359	U
1	AA	1398	U
1	AA	1402	G
1	AA	1403	U
1	AA	1405	A
1	AA	1406	A
1	AA	1411	A
1	AA	1430	A
1	AA	1431	G
1	AA	1462	G
1	AA	1463	C
1	AA	1467	G
1	AA	1474	C
1	AA	1483	C
1	AA	1491	A
1	AA	1496	A
1	AA	1497	G
1	AA	1500	A
1	AA	1502	G
1	AA	1503	G
1	AA	1506	G
1	AA	1508	G

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Mol	Chain	Res	Type
1	AA	1514	C
1	AA	1518	A
1	AA	1520	G
1	AA	1526	G
1	AA	1529	G
1	AA	1532	A
1	AA	1539	C
1	AA	1540	A
1	AA	1554	A
1	AA	1555	C
1	AA	1556	A
1	AA	1569	U
1	AA	1585	G
1	AA	1587	U
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	1627	A
1	AA	1628	G
1	AA	1629	C
1	AA	1631	C
1	AA	1632	A
1	AA	1654	A
1	AA	1655	A
1	AA	1656	A
1	AA	1668	G
1	AA	1695	C
1	AA	1700	G
1	AA	1701	A
1	AA	1711	A
1	AA	1721	G
1	AA	1746	G
1	AA	1747	A
1	AA	1748	A
1	AA	1750	G
1	AA	1752	G
1	AA	1767	A
1	AA	1769	G

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Mol	Chain	Res	Type
1	AA	1779	G
1	AA	1787	G
1	AA	1789	G
1	AA	1793	A
1	AA	1794	G
1	AA	1795	G
1	AA	1804	A
1	AA	1811	A
1	AA	1813	C
1	AA	1822	A
1	AA	1824	C
1	AA	1831	C
1	AA	1832	G
1	AA	1833	A
1	AA	1843	A
1	AA	1847	G
1	AA	1870	G
1	AA	1878	A
1	AA	1879	A
1	AA	1880	G
1	AA	1887	G
1	AA	1892	G
1	AA	1900	G
1	AA	1911	A
1	AA	1922	A
1	AA	1928	G
1	AA	1935	A
1	AA	1936	C
1	AA	1937	U
1	AA	1941	A
1	AA	1951	G
1	AA	1952	G
1	AA	1953	U
1	AA	1954	A
1	AA	1959	A
1	AA	1960	A
1	AA	1963	C
1	AA	1977	U
1	AA	1985	U
1	AA	1989	C
1	AA	1992	A
1	AA	1993	A

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Mol	Chain	Res	Type
1	AA	1994	A
1	AA	2003	A
1	AA	2014	G
1	AA	2015	U
1	AA	2018	C
1	AA	2019	G
1	AA	2027	A
1	AA	2045	G
1	AA	2053	A
1	AA	2054	G
1	AA	2055	A
1	AA	2065	C
1	AA	2073	A
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	2119	C
1	AA	2130	C
1	AA	2132	G
1	AA	2133	C
1	AA	2135	U
1	AA	2139	A
1	AA	2141	A
1	AA	2149	G
1	AA	2153	G
1	AA	2155	G
1	AA	2156	A
1	AA	2157	A
1	AA	2158	C
1	AA	2162	C
1	AA	2164	C
1	AA	2169	G
1	AA	2178	G
1	AA	2179	G
1	AA	2180	A
1	AA	2181	G
1	AA	2186	C
1	AA	2187	G
1	AA	2188	G

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Mol	Chain	Res	Type
1	AA	2189	U
1	AA	2190	G
1	AA	2191	A
1	AA	2194	U
1	AA	2195	A
1	AA	2196	C
1	AA	2197	C
1	AA	2200	C
1	AA	2204	G
1	AA	2206	G
1	AA	2207	C
1	AA	2210	C
1	AA	2211	U
1	AA	2213	G
1	AA	2214	G
1	AA	2217	C
1	AA	2220	A
1	AA	2227	G
1	AA	2228	G
1	AA	2229	A
1	AA	2237	A
1	AA	2238	C
1	AA	2250	G
1	AA	2251	G
1	AA	2252	C
1	AA	2270	C
1	AA	2280	A
1	AA	2281	A
1	AA	2287	C
1	AA	2288	G
1	AA	2295	C
1	AA	2299	A
1	AA	2307	C
1	AA	2317	A
1	AA	2319	G
1	AA	2320	G
1	AA	2332	A
1	AA	2333	G
1	AA	2337	G
1	AA	2338	C
1	AA	2346	G
1	AA	2347	A

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Mol	Chain	Res	Type
1	AA	2348	A
1	AA	2355	C
1	AA	2358	A
1	AA	2359	C
1	AA	2362	C
1	AA	2366	G
1	AA	2395	G
1	AA	2397	C
1	AA	2418	U
1	AA	2419	G
1	AA	2422	G
1	AA	2436	C
1	AA	2437	A
1	AA	2441	G
1	AA	2442	A
1	AA	2443	U
1	AA	2447	A
1	AA	2451	A
1	AA	2452	C
1	AA	2453	C
1	AA	2460	A
1	AA	2461	U
1	AA	2481	A
1	AA	2482	G
1	AA	2488	A
1	AA	2490	A
1	AA	2491	G
1	AA	2514	G
1	AA	2517	G
1	AA	2518	U
1	AA	2530	A
1	AA	2532	C
1	AA	2541	G
1	AA	2561	G
1	AA	2566	U
1	AA	2578	A
1	AA	2579	G
1	AA	2581	G
1	AA	2585	C
1	AA	2586	G
1	AA	2593	G
1	AA	2594	G

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Mol	Chain	Res	Type
1	AA	2597	U
1	AA	2614	A
1	AA	2616	U
1	AA	2621	U
1	AA	2623	U
1	AA	2624	C
1	AA	2642	G
1	AA	2669	A
1	AA	2674	A
1	AA	2675	G
1	AA	2679	C
1	AA	2681	G
1	AA	2683	A
1	AA	2694	U
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	2739	U
1	AA	2746	A
1	AA	2770	A
1	AA	2771	A
1	AA	2774	G
1	AA	2777	A
1	AA	2778	A
1	AA	2779	G
1	AA	2780	C
1	AA	2791	A
1	AA	2796	G
1	AA	2803	A
1	AA	2813	G
1	AA	2818	U
1	AA	2821	G
1	AA	2828	G
1	AA	2830	A
1	AA	2831	A
1	AA	2839	C
1	AA	2845	A
1	AA	2882	G
1	AA	2883	A

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Mol	Chain	Res	Type
1	AA	2884	C
1	AA	2892	A
1	AA	2902	G
1	AA	2903	G
1	AA	2906	U
2	AB	2	C
2	AB	13	A
2	AB	15	A
2	AB	29	A
2	AB	44	G
2	AB	45	A
2	AB	50	G
2	AB	56	G
2	AB	67	G
2	AB	73	A
2	AB	75	G
2	AB	90	A
2	AB	95	C
2	AB	110	G
2	AB	111	G
34	BA	5	U
34	BA	9	G
34	BA	22	G
34	BA	26	A
34	BA	32	A
34	BA	33	A
34	BA	39	G
34	BA	47	C
34	BA	48	C
34	BA	50	A
34	BA	51	A
34	BA	58	C
34	BA	61	G
34	BA	64	G
34	BA	70	G
34	BA	71	C
34	BA	73	G
34	BA	77	G
34	BA	78	G
34	BA	79	G
34	BA	92	C
34	BA	96	U

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Mol	Chain	Res	Type
34	BA	97	G
34	BA	98	G
34	BA	120	A
34	BA	121	C
34	BA	129	U
34	BA	131	C
34	BA	139	G
34	BA	144	G
34	BA	151	A
34	BA	158	G
34	BA	161	A
34	BA	163	C
34	BA	173	U
34	BA	174	C
34	BA	182	U
34	BA	189(E)	U
34	BA	189(G)	G
34	BA	189(H)	G
34	BA	195	A
34	BA	197	A
34	BA	202	U
34	BA	203	U
34	BA	204	U
34	BA	216	G
34	BA	217	C
34	BA	222	U
34	BA	246	A
34	BA	247	G
34	BA	251	G
34	BA	252	U
34	BA	262	A
34	BA	266	G
34	BA	267	C
34	BA	286	G
34	BA	289	G
34	BA	306	G
34	BA	321	A
34	BA	328	C
34	BA	329	A
34	BA	332	G
34	BA	341	C
34	BA	342	C

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Mol	Chain	Res	Type
34	BA	346	G
34	BA	347	G
34	BA	351	G
34	BA	352	C
34	BA	353	A
34	BA	354	G
34	BA	367	U
34	BA	372	C
34	BA	373	A
34	BA	384	G
34	BA	397	A
34	BA	398	C
34	BA	399	G
34	BA	403	C
34	BA	404	U
34	BA	406	G
34	BA	412	A
34	BA	413	G
34	BA	422	C
34	BA	424	G
34	BA	427	U
34	BA	429	U
34	BA	438	G
34	BA	439	A
34	BA	442	C
34	BA	452	A
34	BA	453	A
34	BA	456	C
34	BA	470	C
34	BA	482	A
34	BA	483	C
34	BA	484	G
34	BA	485	G
34	BA	487	A
34	BA	496	A
34	BA	498	U
34	BA	500	G
34	BA	505	G
34	BA	506	G
34	BA	509	A
34	BA	510	A
34	BA	511	C

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Mol	Chain	Res	Type
34	BA	518	C
34	BA	521	G
34	BA	526	C
34	BA	527	G
34	BA	532	A
34	BA	533	A
34	BA	547	A
34	BA	559	A
34	BA	561	U
34	BA	562	C
34	BA	572	A
34	BA	573	A
34	BA	576	G
34	BA	577	G
34	BA	592	G
34	BA	616	G
34	BA	618	C
34	BA	630	G
34	BA	631	G
34	BA	633	G
34	BA	634	C
34	BA	641	U
34	BA	653	A
34	BA	661	G
34	BA	665	A
34	BA	670	G
34	BA	675	A
34	BA	687	A
34	BA	688	G
34	BA	693	G
34	BA	694	A
34	BA	699	C
34	BA	723	U
34	BA	731	G
34	BA	748	C
34	BA	749	C
34	BA	755	G
34	BA	760	G
34	BA	765	G
34	BA	766	A
34	BA	770	C
34	BA	775	G

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Mol	Chain	Res	Type
34	BA	777	A
34	BA	787	A
34	BA	792	A
34	BA	793	U
34	BA	794	A
34	BA	802	A
34	BA	806	C
34	BA	815	A
34	BA	817	C
34	BA	818	G
34	BA	819	A
34	BA	821	G
34	BA	827	U
34	BA	828	A
34	BA	829	G
34	BA	832	C
34	BA	833	U
34	BA	840	C
34	BA	841	U
34	BA	848	C
34	BA	850	U
34	BA	851	G
34	BA	859	A
34	BA	860	A
34	BA	870	U
34	BA	872	A
34	BA	876	G
34	BA	889	A
34	BA	891	U
34	BA	902	G
34	BA	908	A
34	BA	914	A
34	BA	922	G
34	BA	926	G
34	BA	927	G
34	BA	929	G
34	BA	934	C
34	BA	960	U
34	BA	961	U
34	BA	968	A
34	BA	969	A
34	BA	971	G

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Mol	Chain	Res	Type
34	BA	972	C
34	BA	974	A
34	BA	975	A
34	BA	976	G
34	BA	977	A
34	BA	978	A
34	BA	979	C
34	BA	982	U
34	BA	984	C
34	BA	992	U
34	BA	993	G
34	BA	996	A
34	BA	997	U
34	BA	998	G
34	BA	1003	G
34	BA	1004	A
34	BA	1005	A
34	BA	1011	G
34	BA	1016	A
34	BA	1024	G
34	BA	1025	U
34	BA	1026	G
34	BA	1027	C
34	BA	1028	C
34	BA	1029	C
34	BA	1030	C
34	BA	1030(A)	G
34	BA	1030(C)	G
34	BA	1036	G
34	BA	1042	G
34	BA	1043	C
34	BA	1045	C
34	BA	1053	G
34	BA	1054	C
34	BA	1055	A
34	BA	1065	U
34	BA	1066	C
34	BA	1068	G
34	BA	1081	G
34	BA	1091	U
34	BA	1092	A
34	BA	1094	G

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Mol	Chain	Res	Type
34	BA	1095	U
34	BA	1096	C
34	BA	1101	A
34	BA	1112	C
34	BA	1123	A
34	BA	1124	G
34	BA	1125	U
34	BA	1127	G
34	BA	1134	G
34	BA	1136	U
34	BA	1137	C
34	BA	1139	G
34	BA	1140	C
34	BA	1141	C
34	BA	1145	C
34	BA	1146	A
34	BA	1150	U
34	BA	1152	A
34	BA	1157	A
34	BA	1159	U
34	BA	1161	C
34	BA	1166	G
34	BA	1169	A
34	BA	1183	A
34	BA	1184	G
34	BA	1187	G
34	BA	1189	C
34	BA	1190	G
34	BA	1191	A
34	BA	1196	U
34	BA	1197	G
34	BA	1200	C
34	BA	1201	A
34	BA	1202	G
34	BA	1212	U
34	BA	1213	A
34	BA	1214	C
34	BA	1215	G
34	BA	1226	C
34	BA	1227	A
34	BA	1236	A
34	BA	1238	A

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Mol	Chain	Res	Type
34	BA	1240	U
34	BA	1253	G
34	BA	1256	A
34	BA	1257	U
34	BA	1258	G
34	BA	1260	C
34	BA	1262	C
34	BA	1267	C
34	BA	1270	C
34	BA	1273	G
34	BA	1278	U
34	BA	1279	A
34	BA	1280	A
34	BA	1284	C
34	BA	1286	A
34	BA	1287	A
34	BA	1299	A
34	BA	1300	G
34	BA	1301	U
34	BA	1302	U
34	BA	1312	G
34	BA	1317	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	1364	U
34	BA	1368	G
34	BA	1370	G
34	BA	1378	C
34	BA	1397	C
34	BA	1400	C
34	BA	1401	G
34	BA	1419	G
34	BA	1422	G
34	BA	1442	G
34	BA	1442(A)	G

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Mol	Chain	Res	Type
34	BA	1446	U
34	BA	1447	A
34	BA	1452	C
34	BA	1487	G
34	BA	1497	G
34	BA	1502	A
34	BA	1503	A
34	BA	1504	G
34	BA	1506	U
34	BA	1517	G
34	BA	1519	A
34	BA	1520	G
34	BA	1529	G
34	BA	1530	G
34	BA	1531	A
55	BV	13	A
55	BV	17	U
56	BW	17	C
56	BW	18	G
56	BW	20	U
56	BW	22	G
56	BW	28	G
56	BW	31	A
56	BW	42	C
56	BW	43	C
56	BW	45	U
56	BW	46	7MG
56	BW	47	U
56	BW	48	C
56	BW	49	C
56	BW	66	U
56	BW	74	C
56	BW	76	A
56	BY	5	G
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

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Mol	Chain	Res	Type
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	12	U
1	CA	13	A
1	CA	14	A
1	CA	15	G
1	CA	23	G
1	CA	34	C
1	CA	45	C
1	CA	61	G
1	CA	70	G
1	CA	71	A
1	CA	74	A
1	CA	75	G
1	CA	79	G
1	CA	83	G
1	CA	84	A
1	CA	87	C
1	CA	88	G
1	CA	90	U
1	CA	95	G
1	CA	105	C
1	CA	118	A
1	CA	119	A
1	CA	120	U
1	CA	121	G
1	CA	125	G
1	CA	140	G
1	CA	141	A

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Mol	Chain	Res	Type
1	CA	153	C
1	CA	154(A)	C
1	CA	157	U
1	CA	181	A
1	CA	182	A
1	CA	186	G
1	CA	196	A
1	CA	197	A
1	CA	199	A
1	CA	200	U
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	230	U
1	CA	233	A
1	CA	239	U
1	CA	248	G
1	CA	265	A
1	CA	271(I)	G
1	CA	271(K)	U
1	CA	271(L)	U
1	CA	271(M)	G
1	CA	271(N)	U
1	CA	271(O)	C
1	CA	271(P)	C
1	CA	271(Q)	G
1	CA	272(A)	U
1	CA	272(B)	G
1	CA	272(G)	C
1	CA	272(H)	C
1	CA	277	C
1	CA	278	A
1	CA	283	A
1	CA	289	A
1	CA	294	A

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Mol	Chain	Res	Type
1	CA	307	G
1	CA	310	A
1	CA	311	A
1	CA	325	G
1	CA	327	G
1	CA	329	G
1	CA	330	A
1	CA	333	G
1	CA	338	G
1	CA	342	G
1	CA	345	A
1	CA	350	U
1	CA	352	G
1	CA	353	G
1	CA	354	G
1	CA	362	U
1	CA	363	G
1	CA	363(B)	G
1	CA	363(C)	G
1	CA	370	G
1	CA	373	U
1	CA	386	G
1	CA	396	G
1	CA	399	G
1	CA	407	G
1	CA	411	G
1	CA	412	A
1	CA	422	A
1	CA	423	A
1	CA	428	A
1	CA	436	C
1	CA	443	A
1	CA	444	C
1	CA	454	A
1	CA	455	C
1	CA	456	C
1	CA	457	A
1	CA	462	C
1	CA	463	G
1	CA	470	A
1	CA	479	A
1	CA	481	G

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Mol	Chain	Res	Type
1	CA	484	C
1	CA	503	A
1	CA	504	U
1	CA	505	A
1	CA	508	G
1	CA	509	C
1	CA	528	A
1	CA	529	A
1	CA	530	G
1	CA	531	C
1	CA	532	A
1	CA	533	G
1	CA	545	G
1	CA	551	G
1	CA	563	G
1	CA	573	G
1	CA	575	A
1	CA	586	A
1	CA	588	U
1	CA	599	G
1	CA	603	A
1	CA	604	G
1	CA	607	U
1	CA	614(B)	G
1	CA	614(C)	A
1	CA	615	G
1	CA	627	A
1	CA	634	C
1	CA	637	A
1	CA	641	C
1	CA	642	G
1	CA	645	C
1	CA	646	A
1	CA	647	G
1	CA	651	G
1	CA	652(A)	A
1	CA	652(B)	A
1	CA	652(C)	G
1	CA	652(U)	G
1	CA	669	G
1	CA	686	G
1	CA	706	A

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Mol	Chain	Res	Type
1	CA	715	G
1	CA	726	G
1	CA	730	C
1	CA	738	G
1	CA	740	U
1	CA	746	A
1	CA	747	U
1	CA	749	C
1	CA	751	A
1	CA	765	G
1	CA	774	A
1	CA	775	G
1	CA	776	G
1	CA	782	A
1	CA	784	A
1	CA	785	G
1	CA	792	G
1	CA	794	G
1	CA	805	G
1	CA	812	C
1	CA	816	C
1	CA	819	A
1	CA	827	U
1	CA	828	U
1	CA	843	G
1	CA	847	U
1	CA	854	G
1	CA	857	C
1	CA	859	G
1	CA	866	A
1	CA	878	A
1	CA	879	G
1	CA	880	G
1	CA	884	C
1	CA	886	C
1	CA	887	A
1	CA	889	C
1	CA	890	A
1	CA	893	C
1	CA	896	A
1	CA	897	C
1	CA	907	U

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Mol	Chain	Res	Type
1	CA	910	A
1	CA	911	A
1	CA	915	C
1	CA	917	A
1	CA	932	G
1	CA	938	G
1	CA	941	A
1	CA	945	A
1	CA	946	G
1	CA	958	U
1	CA	959	A
1	CA	961	C
1	CA	967	C
1	CA	970	C
1	CA	974	G
1	CA	975	C
1	CA	983	A
1	CA	990	A
1	CA	996	A
1	CA	1003	G
1	CA	1005	C
1	CA	1012	U
1	CA	1013	C
1	CA	1015	G
1	CA	1020	A
1	CA	1022	G
1	CA	1026	U
1	CA	1027	A
1	CA	1033	U
1	CA	1038	C
1	CA	1039	G
1	CA	1045	A
1	CA	1046	A
1	CA	1047	G
1	CA	1048	A
1	CA	1053	C
1	CA	1054	A
1	CA	1055	G
1	CA	1058	G
1	CA	1059	G
1	CA	1060	U
1	CA	1061	U

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Mol	Chain	Res	Type
1	CA	1062	G
1	CA	1063	G
1	CA	1064	C
1	CA	1070	A
1	CA	1073	A
1	CA	1075	C
1	CA	1076	C
1	CA	1082	U
1	CA	1083	U
1	CA	1088	A
1	CA	1090	U
1	CA	1100	C
1	CA	1101	U
1	CA	1107	G
1	CA	1108	U
1	CA	1109	C
1	CA	1110	G
1	CA	1111	A
1	CA	1112	G
1	CA	1113	U
1	CA	1119	C
1	CA	1126	A
1	CA	1128	A
1	CA	1129	A
1	CA	1130	U
1	CA	1132	A
1	CA	1133	U
1	CA	1135	C
1	CA	1136	G
1	CA	1139	G
1	CA	1151	G
1	CA	1171	G
1	CA	1189	A
1	CA	1204	A
1	CA	1220	A
1	CA	1221	C
1	CA	1241	A
1	CA	1246	A
1	CA	1248	G
1	CA	1250	G
1	CA	1253	A
1	CA	1256	G

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Mol	Chain	Res	Type
1	CA	1262	A
1	CA	1271	G
1	CA	1272	A
1	CA	1273	U
1	CA	1300	U
1	CA	1301	A
1	CA	1303	G
1	CA	1314	C
1	CA	1318	C
1	CA	1321	A
1	CA	1329	U
1	CA	1338	G
1	CA	1342	A
1	CA	1352	U
1	CA	1359	A
1	CA	1360	A
1	CA	1365	A
1	CA	1368	G
1	CA	1370	C
1	CA	1373	A
1	CA	1374	G
1	CA	1380	G
1	CA	1384	A
1	CA	1385	G
1	CA	1386	C
1	CA	1388	G
1	CA	1392	A
1	CA	1406	U
1	CA	1416	G
1	CA	1417	C
1	CA	1421	G
1	CA	1427	A
1	CA	1428	C
1	CA	1437	C
1	CA	1445	A
1	CA	1445(A)	C
1	CA	1446	C
1	CA	1449	A
1	CA	1450	G
1	CA	1455	G
1	CA	1459	G
1	CA	1467	C

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Mol	Chain	Res	Type
1	CA	1471	A
1	CA	1473	G
1	CA	1476	C
1	CA	1482	G
1	CA	1490	A
1	CA	1493	C
1	CA	1494	A
1	CA	1495	A
1	CA	1496	A
1	CA	1497	U
1	CA	1499	C
1	CA	1509	C
1	CA	1509(A)	A
1	CA	1523	U
1	CA	1532	C
1	CA	1533	G
1	CA	1542	A
1	CA	1543	C
1	CA	1547	C
1	CA	1558	A
1	CA	1560	G
1	CA	1566	A
1	CA	1569	A
1	CA	1578	U
1	CA	1580	A
1	CA	1582	C
1	CA	1586	A
1	CA	1588	C
1	CA	1593	G
1	CA	1608	A
1	CA	1609	A
1	CA	1610	A
1	CA	1622	G
1	CA	1640	C
1	CA	1644	C
1	CA	1647	G
1	CA	1648	C
1	CA	1654	A
1	CA	1658	C
1	CA	1659	U
1	CA	1674	G
1	CA	1675	C

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Mol	Chain	Res	Type
1	CA	1696	G
1	CA	1700	A
1	CA	1701	A
1	CA	1703	G
1	CA	1721	G
1	CA	1722	A
1	CA	1739	U
1	CA	1756	G
1	CA	1757	U
1	CA	1758	G
1	CA	1760	A
1	CA	1762	A
1	CA	1763	G
1	CA	1764	G
1	CA	1773	A
1	CA	1780	A
1	CA	1786	A
1	CA	1791	A
1	CA	1800	C
1	CA	1801	G
1	CA	1808	U
1	CA	1816	G
1	CA	1829	A
1	CA	1832	C
1	CA	1833	U
1	CA	1835	G
1	CA	1839	G
1	CA	1847	A
1	CA	1848	A
1	CA	1858	G
1	CA	1861	G
1	CA	1866	C
1	CA	1876	A
1	CA	1877	A
1	CA	1878	G
1	CA	1889	A
1	CA	1900	A
1	CA	1906	G
1	CA	1913	A
1	CA	1914	C
1	CA	1919	A
1	CA	1929	G

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Mol	Chain	Res	Type
1	CA	1930	G
1	CA	1934	C
1	CA	1936	A
1	CA	1938	A
1	CA	1952	A
1	CA	1955	U
1	CA	1957	C
1	CA	1963	U
1	CA	1966	A
1	CA	1967	C
1	CA	1970	A
1	CA	1971	A
1	CA	1972	A
1	CA	1992	G
1	CA	1993	U
1	CA	1997	G
1	CA	2006	C
1	CA	2020	A
1	CA	2023	G
1	CA	2031	A
1	CA	2032	G
1	CA	2033	A
1	CA	2038	G
1	CA	2041	U
1	CA	2043	C
1	CA	2046	G
1	CA	2055	C
1	CA	2056	G
1	CA	2060	A
1	CA	2061	G
1	CA	2062	A
1	CA	2066	C
1	CA	2069	G
1	CA	2095	C
1	CA	2102	U
1	CA	2106	G
1	CA	2111	C
1	CA	2113	U
1	CA	2115	G
1	CA	2122	U
1	CA	2125	G
1	CA	2126	A

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Mol	Chain	Res	Type
1	CA	2127	G
1	CA	2129	C
1	CA	2130	U
1	CA	2131	G
1	CA	2132	U
1	CA	2133	G
1	CA	2134	A
1	CA	2136	C
1	CA	2137	C
1	CA	2139	C
1	CA	2142	C
1	CA	2144	U
1	CA	2146	C
1	CA	2148	G
1	CA	2150	U
1	CA	2156	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	2174	C
1	CA	2178	C
1	CA	2180	U
1	CA	2181	G
1	CA	2183	C
1	CA	2188	C
1	CA	2189	U
1	CA	2192	G
1	CA	2194	G
1	CA	2200	C
1	CA	2206	G
1	CA	2207	G
1	CA	2208	A
1	CA	2218	U
1	CA	2225	A
1	CA	2259	G
1	CA	2268	A
1	CA	2269	A

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Mol	Chain	Res	Type
1	CA	2273	A
1	CA	2275	C
1	CA	2278	A
1	CA	2280	G
1	CA	2283	C
1	CA	2287	A
1	CA	2289	G
1	CA	2302	G
1	CA	2305	A
1	CA	2315	G
1	CA	2319	G
1	CA	2320	A
1	CA	2325	G
1	CA	2327	A
1	CA	2333	A
1	CA	2334	G
1	CA	2335	A
1	CA	2336	A
1	CA	2343	C
1	CA	2347	C
1	CA	2348	U
1	CA	2350	C
1	CA	2354	G
1	CA	2366	A
1	CA	2376	A
1	CA	2383	G
1	CA	2384	G
1	CA	2385	C
1	CA	2406	U
1	CA	2407	G
1	CA	2410	G
1	CA	2414	G
1	CA	2418	A
1	CA	2422	A
1	CA	2425	A
1	CA	2428	G
1	CA	2429	G
1	CA	2430	A
1	CA	2435	A
1	CA	2439	A
1	CA	2440	C
1	CA	2441	C

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Mol	Chain	Res	Type
1	CA	2448	A
1	CA	2458	G
1	CA	2465	C
1	CA	2474	C
1	CA	2476	A
1	CA	2477	C
1	CA	2478	A
1	CA	2487	G
1	CA	2494	G
1	CA	2502	G
1	CA	2505	G
1	CA	2508	G
1	CA	2518	A
1	CA	2525	G
1	CA	2529	G
1	CA	2553	G
1	CA	2554	U
1	CA	2555	U
1	CA	2562	U
1	CA	2564	A
1	CA	2566	A
1	CA	2567	G
1	CA	2572	A
1	CA	2573	C
1	CA	2581	G
1	CA	2582	G
1	CA	2585	U
1	CA	2602	A
1	CA	2603	G
1	CA	2609	U
1	CA	2611	U
1	CA	2612	C
1	CA	2615	U
1	CA	2621	A
1	CA	2622	C
1	CA	2630	G
1	CA	2632	A
1	CA	2636	U
1	CA	2645	G
1	CA	2654	A
1	CA	2660	A
1	CA	2663	G

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Mol	Chain	Res	Type
1	CA	2689	U
1	CA	2690	C
1	CA	2702	U
1	CA	2703	C
1	CA	2712	U
1	CA	2712(A)	A
1	CA	2713	A
1	CA	2714	G
1	CA	2721	A
1	CA	2726	U
1	CA	2727	G
1	CA	2733	A
1	CA	2744	G
1	CA	2748	A
1	CA	2757	A
1	CA	2758	A
1	CA	2761	G
1	CA	2765	A
1	CA	2766	G
1	CA	2767	C
1	CA	2778	A
1	CA	2780	G
1	CA	2789	C
1	CA	2793	G
1	CA	2802	G
1	CA	2805	G
1	CA	2818	G
1	CA	2820	A
1	CA	2821	A
1	CA	2823	A
1	CA	2833	G
1	CA	2835	A
1	CA	2839	G
1	CA	2849	U
1	CA	2861	G
1	CA	2872	G
1	CA	2873	A
1	CA	2880	C
1	CA	2892	A
1	CA	2894	G
1	CA	2896	C
1	CA	2897	U

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Mol	Chain	Res	Type
2	CB	2	C
2	CB	7	G
2	CB	13	A
2	CB	15	A
2	CB	22	U
2	CB	24	G
2	CB	25	A
2	CB	28	C
2	CB	30	C
2	CB	33	G
2	CB	35	U
2	CB	42	C
2	CB	44	G
2	CB	45	A
2	CB	52	A
2	CB	56	G
2	CB	59	A
2	CB	73	A
2	CB	74	U
2	CB	85	G
2	CB	88	C
2	CB	91	C
2	CB	103	G
2	CB	105	A
2	CB	106	G
2	CB	108	U
2	CB	110	G
34	DA	5	U
34	DA	9	G
34	DA	13	U
34	DA	14	U
34	DA	15	G
34	DA	22	G
34	DA	26	A
34	DA	30	U
34	DA	32	A
34	DA	39	G
34	DA	41	G
34	DA	44	G
34	DA	47	C
34	DA	48	C
34	DA	50	A

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Mol	Chain	Res	Type
34	DA	51	A
34	DA	59	A
34	DA	60	A
34	DA	61	G
34	DA	65	U
34	DA	66	G
34	DA	79	G
34	DA	89	C
34	DA	97	G
34	DA	100	C
34	DA	101	A
34	DA	115	G
34	DA	116	A
34	DA	121	C
34	DA	129(A)	G
34	DA	131	C
34	DA	143	A
34	DA	144	G
34	DA	147	G
34	DA	163	C
34	DA	176	C
34	DA	182	U
34	DA	189(G)	G
34	DA	189(H)	G
34	DA	195	A
34	DA	197	A
34	DA	202	U
34	DA	203	U
34	DA	204	U
34	DA	216	G
34	DA	221	C
34	DA	231	G
34	DA	240	C
34	DA	245	C
34	DA	247	G
34	DA	251	G
34	DA	258	G
34	DA	262	A
34	DA	266	G
34	DA	267	C
34	DA	269	C
34	DA	275	G

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Mol	Chain	Res	Type
34	DA	279	A
34	DA	281	G
34	DA	289	G
34	DA	301	G
34	DA	320	C
34	DA	321	A
34	DA	328	C
34	DA	330	C
34	DA	331	G
34	DA	332	G
34	DA	344	A
34	DA	346	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	378	G
34	DA	384	G
34	DA	388	G
34	DA	389	A
34	DA	390	C
34	DA	392	G
34	DA	398	C
34	DA	406	G
34	DA	412	A
34	DA	413	G
34	DA	426	G
34	DA	429	U
34	DA	430	A
34	DA	439	A
34	DA	442	C
34	DA	452	A
34	DA	461	A
34	DA	484	G
34	DA	485	G
34	DA	496	A
34	DA	498	U
34	DA	499	A
34	DA	505	G
34	DA	509	A

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Mol	Chain	Res	Type
34	DA	510	A
34	DA	511	C
34	DA	518	C
34	DA	521	G
34	DA	527	G
34	DA	531	U
34	DA	532	A
34	DA	533	A
34	DA	547	A
34	DA	559	A
34	DA	561	U
34	DA	570	G
34	DA	572	A
34	DA	573	A
34	DA	576	G
34	DA	577	G
34	DA	595	G
34	DA	596	C
34	DA	597	G
34	DA	601	C
34	DA	610	G
34	DA	612	C
34	DA	619	U
34	DA	620	C
34	DA	621	A
34	DA	630	G
34	DA	653	A
34	DA	665	A
34	DA	673	G
34	DA	687	A
34	DA	688	G
34	DA	693	G
34	DA	695	A
34	DA	701	C
34	DA	703	G
34	DA	723	U
34	DA	724	G
34	DA	728	A
34	DA	731	G
34	DA	747	C
34	DA	753	A
34	DA	755	G

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Mol	Chain	Res	Type
34	DA	770	C
34	DA	773	G
34	DA	774	G
34	DA	790	A
34	DA	792	A
34	DA	793	U
34	DA	794	A
34	DA	802	A
34	DA	806	C
34	DA	810	C
34	DA	817	C
34	DA	818	G
34	DA	821	G
34	DA	826	C
34	DA	828	A
34	DA	829	G
34	DA	833	U
34	DA	834	C
34	DA	836	G
34	DA	839	U
34	DA	840	C
34	DA	841	U
34	DA	848	C
34	DA	851	G
34	DA	854	G
34	DA	859	A
34	DA	874	G
34	DA	875	C
34	DA	876	G
34	DA	891	U
34	DA	902	G
34	DA	912	C
34	DA	913	A
34	DA	914	A
34	DA	915	A
34	DA	916	G
34	DA	919	A
34	DA	922	G
34	DA	926	G
34	DA	927	G
34	DA	934	C
34	DA	939	G

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Mol	Chain	Res	Type
34	DA	941	G
34	DA	960	U
34	DA	961	U
34	DA	967	C
34	DA	968	A
34	DA	969	A
34	DA	970	C
34	DA	971	G
34	DA	974	A
34	DA	975	A
34	DA	976	G
34	DA	977	A
34	DA	982	U
34	DA	984	C
34	DA	988	G
34	DA	989	C
34	DA	992	U
34	DA	993	G
34	DA	1002	G
34	DA	1003	G
34	DA	1005	A
34	DA	1006	C
34	DA	1013	G
34	DA	1022	G
34	DA	1023	G
34	DA	1025	U
34	DA	1026	G
34	DA	1028	C
34	DA	1030	C
34	DA	1030(A)	G
34	DA	1030(B)	C
34	DA	1032	G
34	DA	1037	C
34	DA	1041	A
34	DA	1046	A
34	DA	1047	G
34	DA	1050	G
34	DA	1052	U
34	DA	1055	A
34	DA	1056	U
34	DA	1063	C
34	DA	1065	U

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Mol	Chain	Res	Type
34	DA	1066	C
34	DA	1071	C
34	DA	1078	U
34	DA	1079	G
34	DA	1081	G
34	DA	1086	U
34	DA	1089	G
34	DA	1094	G
34	DA	1095	U
34	DA	1100	C
34	DA	1101	A
34	DA	1108	G
34	DA	1113	C
34	DA	1121	U
34	DA	1122	U
34	DA	1124	G
34	DA	1125	U
34	DA	1127	G
34	DA	1129	C
34	DA	1130	A
34	DA	1136	U
34	DA	1137	C
34	DA	1138	G
34	DA	1139	G
34	DA	1142	G
34	DA	1146	A
34	DA	1147	C
34	DA	1152	A
34	DA	1154	G
34	DA	1156	G
34	DA	1159	U
34	DA	1161	C
34	DA	1166	G
34	DA	1182	G
34	DA	1183	A
34	DA	1184	G
34	DA	1190	G
34	DA	1195	C
34	DA	1196	U
34	DA	1198	G
34	DA	1202	G
34	DA	1203	C

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Mol	Chain	Res	Type
34	DA	1208	C
34	DA	1211	U
34	DA	1212	U
34	DA	1220	G
34	DA	1224	G
34	DA	1227	A
34	DA	1229	A
34	DA	1238	A
34	DA	1240	U
34	DA	1241	G
34	DA	1246	C
34	DA	1248	A
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
34	DA	1269	A
34	DA	1270	C
34	DA	1274	G
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	1299	A
34	DA	1301	U
34	DA	1302	U
34	DA	1303	C
34	DA	1305	G
34	DA	1311	G
34	DA	1319	A
34	DA	1320	C
34	DA	1322	C
34	DA	1325	C
34	DA	1340	A
34	DA	1344	C
34	DA	1347	G

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Mol	Chain	Res	Type
34	DA	1353	G
34	DA	1358	U
34	DA	1359	C
34	DA	1360	A
34	DA	1363	C
34	DA	1363(A)	A
34	DA	1364	U
34	DA	1368	G
34	DA	1370	G
34	DA	1378	C
34	DA	1381	U
34	DA	1389	C
34	DA	1393	U
34	DA	1397	C
34	DA	1398	A
34	DA	1399	C
34	DA	1401	G
34	DA	1419	G
34	DA	1440	C
34	DA	1442	G
34	DA	1442(A)	G
34	DA	1442(B)	A
34	DA	1445	C
34	DA	1446	U
34	DA	1452	C
34	DA	1456	G
34	DA	1482	G
34	DA	1487	G
34	DA	1497	G
34	DA	1498	U
34	DA	1499	A
34	DA	1502	A
34	DA	1503	A
34	DA	1504	G
34	DA	1506	U
34	DA	1507	A
34	DA	1517	G
34	DA	1519	A
34	DA	1520	G
34	DA	1529	G
34	DA	1530	G
34	DA	1531	A

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Mol	Chain	Res	Type
34	DA	1532	U
55	DV	14	A
56	DW	6	G
56	DW	8	4SU
56	DW	16	U
56	DW	17	C
56	DW	18	G
56	DW	20	U
56	DW	35	A
56	DW	36	A
56	DW	37	MIA
56	DW	39	PSU
56	DW	41	C
56	DW	43	C
56	DW	44	G
56	DW	46	7MG
56	DW	47	U
56	DW	48	C
56	DW	49	C
56	DW	53	G
56	DW	55	PSU
56	DW	59	U
56	DW	61	C
56	DW	64	A
56	DW	69	G
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
56	DY	52	G

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Mol	Chain	Res	Type
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 (138) 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	238	C
1	AA	271	U
1	AA	302	A
1	AA	334	A
1	AA	376	G
1	AA	645	G
1	AA	716	G
1	AA	793	A
1	AA	821	A
1	AA	1019	G
1	AA	1035	G
1	AA	1098	C
1	AA	1154	U
1	AA	1188	A
1	AA	1219	A
1	AA	1220	U
1	AA	1221	G
1	AA	1255	A
1	AA	1286	U
1	AA	1425	A
1	AA	1466	U
1	AA	1654	A
1	AA	1655	A
1	AA	1700	G
1	AA	1745	A
1	AA	1793	A
1	AA	1936	C

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Mol	Chain	Res	Type
1	AA	2014	G
1	AA	2084	A
1	AA	2209	G
1	AA	2227	G
1	AA	2287	C
1	AA	2323	A
1	AA	2347	A
1	AA	2358	A
1	AA	2418	U
1	AA	2442	A
1	AA	2451	A
1	AA	2459	G
1	AA	2460	A
1	AA	2593	G
1	AA	2623	U
1	AA	2701	U
1	AA	2739	U
1	AA	2769	U
1	AA	2883	A
1	AA	2902	G
34	BA	109	A
34	BA	119	A
34	BA	266	G
34	BA	328	C
34	BA	509	A
34	BA	560	U
34	BA	687	A
34	BA	748	C
34	BA	793	U
34	BA	839	U
34	BA	913	A
34	BA	991	U
34	BA	1065	U
34	BA	1067	A
34	BA	1165	C
34	BA	1190	G
34	BA	1201	A
34	BA	1285	A
34	BA	1442	G
34	BA	1530	G
56	BW	45	U
56	BY	19	G

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Mol	Chain	Res	Type
56	BY	58	A
1	CA	195	A
1	CA	196	A
1	CA	199	A
1	CA	249	C
1	CA	277	C
1	CA	310	A
1	CA	503	A
1	CA	573	G
1	CA	645	C
1	CA	669	G
1	CA	685	A
1	CA	746	A
1	CA	774	A
1	CA	856	C
1	CA	945	A
1	CA	974	G
1	CA	1026	U
1	CA	1057	A
1	CA	1107	G
1	CA	1142(A)	A
1	CA	1240	U
1	CA	1300	U
1	CA	1396	U
1	CA	1420	U
1	CA	1427	A
1	CA	1451	C
1	CA	1608	A
1	CA	1695	G
1	CA	1913	A
1	CA	1992	G
1	CA	1997	G
1	CA	2406	U
1	CA	2422	A
1	CA	2439	A
1	CA	2611	U
1	CA	2689	U
1	CA	2726	U
1	CA	2756	U
1	CA	2873	A
34	DA	60	A
34	DA	65	U

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Mol	Chain	Res	Type
34	DA	115	G
34	DA	204	U
34	DA	266	G
34	DA	274	A
34	DA	428	G
34	DA	429	U
34	DA	509	A
34	DA	560	U
34	DA	687	A
34	DA	793	U
34	DA	840	C
34	DA	913	A
34	DA	991	U
34	DA	992	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	40	C
56	DW	46	7MG
56	DY	46	7MG

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

42 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	MIA	BY	37	56	21,24,32	1.68	3 (14%)	30,35,47	2.03	8 (26%)
56	PSU	DW	55	56	18,21,22	1.40	2 (11%)	21,30,33	2.01	5 (23%)
56	PSU	BW	32	56	18,21,22	1.34	3 (16%)	21,30,33	1.83	5 (23%)
58	2QZ	BX	1	58	7,8,9	0.67	0	7,10,12	4.73	4 (57%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
58	MVA	DX	9	58	6,7,8	1.14	1 (16%)	6,8,10	1.58	1 (16%)
56	MIA	DY	37	56	21,24,32	1.60	4 (19%)	30,35,47	2.07	7 (23%)
58	2R1	DX	6	58	10,10,11	1.65	2 (20%)	8,13,15	2.10	3 (37%)
56	PSU	BW	55	56	18,21,22	1.37	1 (5%)	21,30,33	1.95	3 (14%)
56	7MG	BY	46	56	23,26,27	1.30	3 (13%)	27,39,42	2.71	7 (25%)
56	4SU	BY	8	56	18,21,22	1.75	4 (22%)	25,30,33	2.14	6 (24%)
56	4SU	DW	8	56	18,21,22	1.83	5 (27%)	25,30,33	2.31	4 (16%)
58	MVA	DX	5	58	6,7,8	1.06	0	6,8,10	1.57	1 (16%)
56	PSU	BY	55	56	18,21,22	1.39	2 (11%)	21,30,33	1.98	3 (14%)
56	7MG	BW	46	56	23,26,27	1.29	4 (17%)	27,39,42	2.77	7 (25%)
56	PSU	DY	39	56	18,21,22	1.43	2 (11%)	21,30,33	1.97	3 (14%)
56	PSU	DY	55	56	18,21,22	1.42	2 (11%)	21,30,33	2.01	3 (14%)
58	2QY	DX	10	58	12,13,14	1.66	1 (8%)	14,16,18	3.67	6 (42%)
56	MIA	DW	37	56	28,31,32	2.31	6 (21%)	38,44,47	2.62	13 (34%)
58	2R3	BX	8	58	12,14,15	0.70	0	16,18,20	2.13	9 (56%)
56	PSU	BY	39	56	18,21,22	1.39	2 (11%)	21,30,33	1.93	3 (14%)
58	2R1	BX	6	58	10,10,11	2.35	3 (30%)	8,13,15	3.80	3 (37%)
56	7MG	DY	46	56	23,26,27	1.24	3 (13%)	27,39,42	2.76	7 (25%)
56	PSU	DW	32	56	18,21,22	1.43	3 (16%)	21,30,33	2.14	4 (19%)
56	5MU	BW	54	56	19,22,23	1.44	4 (21%)	27,32,35	1.98	7 (25%)
56	4SU	BW	8	56	18,21,22	1.49	3 (16%)	25,30,33	2.18	5 (20%)
56	PSU	BY	32	56	18,21,22	1.40	2 (11%)	21,30,33	1.94	3 (14%)
56	PSU	BW	39	56	18,21,22	1.37	2 (11%)	21,30,33	2.02	5 (23%)
58	2QZ	DX	1	58	7,8,9	0.55	0	7,10,12	4.52	3 (42%)
58	2R3	DX	8	58	12,14,15	0.60	0	16,18,20	1.77	5 (31%)
56	4SU	DY	8	56	18,21,22	1.84	4 (22%)	25,30,33	2.35	6 (24%)
56	PSU	DY	32	56	18,21,22	1.36	2 (11%)	21,30,33	1.95	4 (19%)
58	MVA	BX	5	58	6,7,8	0.52	0	6,8,10	1.39	1 (16%)
56	5MU	DY	54	56	19,22,23	1.44	6 (31%)	27,32,35	2.07	5 (18%)
58	004	BX	3	58	9,10,11	1.39	1 (11%)	9,12,14	1.32	1 (11%)
58	2QY	BX	10	58	12,13,14	1.73	2 (16%)	14,16,18	4.12	6 (42%)
56	PSU	DW	39	56	18,21,22	1.35	2 (11%)	21,30,33	2.08	4 (19%)
56	MIA	BW	37	56	28,31,32	2.41	8 (28%)	38,44,47	2.62	14 (36%)
56	5MU	BY	54	56	19,22,23	1.53	5 (26%)	27,32,35	2.21	8 (29%)
56	5MU	DW	54	56	19,22,23	1.49	4 (21%)	27,32,35	2.07	7 (25%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
58	004	DX	3	58	9,10,11	1.53	1 (11%)	9,12,14	1.28	1 (11%)
58	MVA	BX	9	58	6,7,8	0.77	0	6,8,10	1.50	1 (16%)
56	7MG	DW	46	56	23,26,27	1.30	3 (13%)	27,39,42	2.71	7 (25%)

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	MIA	BY	37	56	-	2/7/25/34	0/3/3/3
56	PSU	DW	55	56	-	2/7/25/26	0/2/2/2
56	PSU	BW	32	56	-	4/7/25/26	0/2/2/2
58	2QZ	BX	1	58	-	1/8/10/12	-
58	MVA	DX	9	58	-	4/6/8/10	-
56	MIA	DY	37	56	-	3/7/25/34	0/3/3/3
58	2R1	DX	6	58	-	2/2/14/16	0/1/1/1
56	PSU	BW	55	56	-	2/7/25/26	0/2/2/2
56	7MG	BY	46	56	-	4/7/37/38	0/3/3/3
56	4SU	BY	8	56	-	1/7/25/26	0/2/2/2
56	4SU	DW	8	56	-	0/7/25/26	0/2/2/2
58	MVA	DX	5	58	-	4/6/8/10	-
56	PSU	BY	55	56	-	2/7/25/26	0/2/2/2
56	7MG	BW	46	56	-	1/7/37/38	0/3/3/3
56	PSU	DY	39	56	-	2/7/25/26	0/2/2/2
56	PSU	DY	55	56	-	3/7/25/26	0/2/2/2
58	2QY	DX	10	58	-	3/5/8/10	0/1/1/1
56	MIA	DW	37	56	-	7/15/33/34	0/3/3/3
58	2R3	BX	8	58	-	6/11/12/14	0/1/1/1
56	PSU	BY	39	56	-	0/7/25/26	0/2/2/2
58	2R1	BX	6	58	-	0/2/14/16	0/1/1/1
56	7MG	DY	46	56	-	3/7/37/38	0/3/3/3
56	PSU	DW	32	56	-	2/7/25/26	0/2/2/2
56	5MU	BW	54	56	-	1/7/25/26	0/2/2/2
56	4SU	BW	8	56	-	0/7/25/26	0/2/2/2
56	PSU	BY	32	56	-	0/7/25/26	0/2/2/2
56	PSU	BW	39	56	-	0/7/25/26	0/2/2/2
58	2QZ	DX	1	58	-	1/8/10/12	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
58	2R3	DX	8	58	-	6/11/12/14	0/1/1/1
56	4SU	DY	8	56	-	1/7/25/26	0/2/2/2
56	PSU	DY	32	56	-	0/7/25/26	0/2/2/2
58	MVA	BX	5	58	-	4/6/8/10	-
56	5MU	DY	54	56	-	2/7/25/26	0/2/2/2
58	004	BX	3	58	-	0/4/6/8	0/1/1/1
58	2QY	BX	10	58	-	3/5/8/10	0/1/1/1
56	PSU	DW	39	56	-	1/7/25/26	0/2/2/2
56	MIA	BW	37	56	-	5/15/33/34	0/3/3/3
56	5MU	BY	54	56	-	2/7/25/26	0/2/2/2
56	5MU	DW	54	56	-	0/7/25/26	0/2/2/2
58	004	DX	3	58	-	0/4/6/8	0/1/1/1
58	MVA	BX	9	58	-	2/6/8/10	-
56	7MG	DW	46	56	-	4/7/37/38	0/3/3/3

All (105) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	BW	37	MIA	C13-C14	7.51	1.54	1.32
56	DW	37	MIA	C13-C14	7.11	1.53	1.32
56	BW	37	MIA	C2-S10	-7.10	1.69	1.75
56	DW	37	MIA	C2-S10	-5.65	1.71	1.75
56	BY	37	MIA	C5-C4	5.34	1.48	1.39
58	DX	10	2QY	C-CA	5.23	1.52	1.43
56	DW	8	4SU	C4-S4	-5.09	1.59	1.68
56	DY	37	MIA	C5-C4	5.07	1.48	1.39
56	DW	37	MIA	C5-C4	4.95	1.47	1.39
58	BX	10	2QY	C-CA	4.91	1.51	1.43
56	DY	8	4SU	C4-S4	-4.84	1.60	1.68
56	BY	8	4SU	C4-S4	-4.51	1.60	1.68
58	BX	6	2R1	OD1-CG1	4.39	1.55	1.42
56	DW	32	PSU	C6-C5	4.30	1.40	1.35
56	BW	37	MIA	C5-C4	4.28	1.46	1.39
56	BW	8	4SU	C4-S4	-4.13	1.61	1.68
56	BW	55	PSU	C6-C5	4.01	1.39	1.35
56	DY	32	PSU	C6-C5	4.00	1.39	1.35
56	DW	55	PSU	C6-C5	3.97	1.39	1.35
56	DY	39	PSU	C6-C5	3.91	1.39	1.35
56	BY	32	PSU	C6-C5	3.89	1.39	1.35
56	BY	39	PSU	C6-C5	3.88	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	BW	39	PSU	C6-C5	3.86	1.39	1.35
58	DX	3	004	CA-C	3.84	1.57	1.51
58	BX	6	2R1	CA-N	3.80	1.45	1.36
58	DX	6	2R1	CA-N	3.76	1.45	1.36
56	BY	55	PSU	C6-C5	3.73	1.39	1.35
58	BX	3	004	CB-CA	-3.52	1.49	1.52
56	DW	46	7MG	C4-N9	-3.39	1.33	1.37
56	BY	54	5MU	C2-N1	3.32	1.43	1.38
56	BY	46	7MG	C5-C4	3.29	1.47	1.37
56	DW	39	PSU	C6-C5	3.28	1.38	1.35
56	DY	46	7MG	C5-C4	3.28	1.47	1.37
56	DY	55	PSU	C6-C5	3.26	1.38	1.35
56	DW	37	MIA	C5-C6	3.18	1.49	1.41
56	DY	8	4SU	C4-N3	-3.17	1.34	1.37
56	DW	46	7MG	C5-C4	3.12	1.47	1.37
56	BW	32	PSU	C6-C5	3.10	1.38	1.35
58	BX	6	2R1	C-CA	3.10	1.50	1.45
56	DW	8	4SU	C4-N3	-3.05	1.34	1.37
56	BW	8	4SU	C5-C4	-3.05	1.38	1.42
56	BY	37	MIA	C5-C6	3.02	1.49	1.41
56	BW	46	7MG	C5-C4	3.01	1.46	1.37
56	BY	54	5MU	C6-C5	2.99	1.39	1.34
56	DW	54	5MU	C2-N1	2.98	1.43	1.38
56	DW	54	5MU	C4-C5	2.96	1.49	1.44
56	BY	8	4SU	C4-N3	-2.94	1.34	1.37
56	BW	54	5MU	C4-C5	2.92	1.49	1.44
56	DY	37	MIA	C5-C6	2.90	1.49	1.41
56	BW	37	MIA	C5-C6	2.87	1.48	1.41
56	BW	32	PSU	C4-N3	-2.83	1.33	1.38
56	BW	54	5MU	C6-C5	2.82	1.39	1.34
56	DY	8	4SU	C2-N1	2.81	1.42	1.38
56	BW	46	7MG	C4-N9	-2.79	1.34	1.37
56	DW	54	5MU	C6-C5	2.75	1.39	1.34
56	BY	8	4SU	C5-C4	-2.74	1.39	1.42
56	BY	46	7MG	C4-N9	-2.73	1.34	1.37
56	DY	55	PSU	C4-N3	-2.72	1.33	1.38
56	BY	54	5MU	C4-N3	-2.71	1.33	1.38
56	DY	54	5MU	C2-N1	2.68	1.42	1.38
56	DY	8	4SU	C5-C4	-2.68	1.39	1.42
58	DX	6	2R1	C-CA	2.68	1.49	1.45
56	DW	8	4SU	C5-C4	-2.65	1.39	1.42
56	DY	54	5MU	C6-C5	2.65	1.38	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	BY	37	MIA	C8-N7	2.64	1.36	1.31
58	DX	9	MVA	CB-CA	2.63	1.58	1.54
56	DW	37	MIA	C8-N7	2.61	1.36	1.31
56	BW	39	PSU	C4-N3	-2.61	1.34	1.38
56	DY	54	5MU	C4-N3	-2.60	1.34	1.38
56	BY	8	4SU	C2-N1	2.56	1.42	1.38
56	BW	32	PSU	C2-N3	-2.54	1.33	1.37
56	DW	46	7MG	C6-N1	-2.50	1.34	1.38
56	DY	37	MIA	C8-N7	2.48	1.36	1.31
56	BY	32	PSU	C4-N3	-2.47	1.34	1.38
56	BY	55	PSU	C4-N3	-2.42	1.34	1.38
56	DW	39	PSU	C4-N3	-2.40	1.34	1.38
56	DW	8	4SU	C2-N1	2.37	1.42	1.38
56	BW	54	5MU	C4-N3	-2.34	1.34	1.38
56	BY	54	5MU	C4-C5	2.33	1.48	1.44
56	BY	39	PSU	C4-N3	-2.33	1.34	1.38
56	DY	54	5MU	C6-N1	-2.31	1.34	1.38
56	DW	54	5MU	C4-N3	-2.31	1.34	1.38
56	DY	54	5MU	C4-C5	2.30	1.48	1.44
56	BW	54	5MU	C6-N1	-2.27	1.34	1.38
56	DW	55	PSU	C4-N3	-2.26	1.34	1.38
56	BW	37	MIA	C8-N7	2.23	1.36	1.31
56	BW	46	7MG	C5-N7	-2.23	1.32	1.35
56	DW	32	PSU	C4-N3	-2.23	1.34	1.38
56	DY	46	7MG	C6-N1	-2.21	1.34	1.38
56	DW	32	PSU	C4-C5	2.20	1.50	1.44
56	BW	46	7MG	C6-N1	-2.16	1.34	1.38
56	BY	46	7MG	C6-N1	-2.16	1.34	1.38
56	DY	37	MIA	C5-N7	-2.15	1.35	1.39
56	DY	32	PSU	C4-N3	-2.14	1.34	1.38
56	DY	46	7MG	C4-N9	-2.14	1.35	1.37
56	DW	8	4SU	C2-N3	-2.13	1.34	1.38
56	DY	54	5MU	C2-N3	-2.11	1.34	1.38
56	BW	37	MIA	C2-N1	2.10	1.37	1.34
56	BW	37	MIA	C5-N7	-2.08	1.35	1.39
56	DY	39	PSU	C4-N3	-2.08	1.35	1.38
56	BY	54	5MU	C6-N1	-2.08	1.34	1.38
56	BW	37	MIA	C4-N9	-2.05	1.33	1.37
56	DW	37	MIA	C4-N3	2.03	1.36	1.34
56	BW	8	4SU	C2-N3	-2.03	1.34	1.38
58	BX	10	2QY	CE1-CD1	-2.00	1.35	1.38

All (208) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
58	BX	1	2QZ	OG1-CB-CG2	11.46	143.95	109.68
58	DX	1	2QZ	OG1-CB-CG2	11.15	143.03	109.68
58	BX	10	2QY	CN-N-CA	-11.03	107.25	123.98
56	BW	46	7MG	N9-C4-N3	9.66	139.62	125.46
56	DY	46	7MG	N9-C4-N3	9.62	139.55	125.46
58	BX	6	2R1	OD2-CG2-CB	-9.56	94.26	111.99
56	BY	46	7MG	N9-C4-N3	9.20	138.95	125.46
56	DW	46	7MG	N9-C4-N3	9.08	138.76	125.46
56	DW	37	MIA	C5-C4-N3	-8.27	118.47	127.18
58	DX	10	2QY	O-C-CA	-8.01	115.35	125.39
56	BW	37	MIA	C5-C4-N3	-7.43	119.35	127.18
58	BX	10	2QY	CB-CA-N	7.27	133.46	121.98
58	DX	10	2QY	CB-CA-N	6.69	132.54	121.98
56	DW	8	4SU	C4-N3-C2	-6.53	121.05	127.31
56	DY	8	4SU	C4-N3-C2	-6.39	121.19	127.31
56	BW	37	MIA	C12-C13-C14	-6.39	115.54	127.01
56	DW	37	MIA	C12-C13-C14	-6.33	115.65	127.01
56	DW	32	PSU	N1-C2-N3	6.29	121.80	115.17
56	DW	8	4SU	C5-C4-N3	6.28	120.59	114.75
56	BW	39	PSU	N1-C2-N3	6.25	121.76	115.17
56	BY	55	PSU	N1-C2-N3	6.16	121.67	115.17
56	DY	37	MIA	C5-C4-N3	-6.16	118.24	126.72
56	DW	37	MIA	N3-C4-N9	6.14	134.78	126.99
56	DW	55	PSU	N1-C2-N3	6.11	121.61	115.17
56	DY	39	PSU	N1-C2-N3	6.09	121.59	115.17
56	DY	55	PSU	N1-C2-N3	6.04	121.54	115.17
56	BY	32	PSU	N1-C2-N3	6.01	121.51	115.17
58	DX	10	2QY	CG-CB-CA	-5.93	121.97	130.72
56	DW	46	7MG	N9-C8-N7	-5.90	95.02	103.37
56	BY	39	PSU	N1-C2-N3	5.89	121.38	115.17
56	DW	39	PSU	N1-C2-N3	5.87	121.36	115.17
56	BW	46	7MG	N9-C8-N7	-5.87	95.06	103.37
56	BY	8	4SU	C4-N3-C2	-5.85	121.71	127.31
56	BY	37	MIA	C5-C4-N3	-5.82	118.70	126.72
56	DY	32	PSU	N1-C2-N3	5.78	121.26	115.17
56	BW	55	PSU	N1-C2-N3	5.75	121.23	115.17
56	BW	8	4SU	C4-N3-C2	-5.74	121.82	127.31
56	BW	37	MIA	C11-S10-C2	-5.73	97.95	102.25
56	DY	46	7MG	C5-C4-N3	-5.70	117.43	128.13
58	DX	10	2QY	CN-N-CA	-5.60	115.49	123.98
56	BY	46	7MG	C5-C4-N3	-5.58	117.66	128.13
56	BW	37	MIA	N3-C4-N9	5.55	134.03	126.99
56	BW	46	7MG	C5-C4-N3	-5.51	117.78	128.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	BW	8	4SU	C5-C4-N3	5.46	119.83	114.75
56	BY	54	5MU	N3-C2-N1	5.43	121.95	114.89
56	BW	8	4SU	C5-C4-S4	-5.35	118.20	124.31
56	DY	8	4SU	C5-C4-N3	5.35	119.72	114.75
56	BY	46	7MG	N9-C8-N7	-5.33	95.83	103.37
56	DW	46	7MG	C5-C4-N3	-5.15	118.47	128.13
56	DW	54	5MU	C4-N3-C2	-5.01	120.77	127.34
56	BY	54	5MU	C4-N3-C2	-4.99	120.80	127.34
56	DY	54	5MU	C4-N3-C2	-4.95	120.85	127.34
56	BW	54	5MU	N3-C2-N1	4.93	121.31	114.89
56	DY	46	7MG	N9-C8-N7	-4.91	96.42	103.37
56	DY	54	5MU	N3-C2-N1	4.80	121.14	114.89
56	DY	37	MIA	N3-C4-N9	4.79	135.31	127.17
56	DW	54	5MU	N3-C2-N1	4.76	121.08	114.89
56	DY	8	4SU	C5-C4-S4	-4.72	118.92	124.31
56	DW	39	PSU	O2-C2-N1	-4.67	117.97	122.79
56	BY	46	7MG	C2-N3-C4	4.63	120.28	112.30
56	BW	32	PSU	N1-C2-N3	4.63	120.05	115.17
56	DY	46	7MG	C2-N3-C4	4.54	120.11	112.30
56	BY	37	MIA	N3-C4-N9	4.51	134.84	127.17
56	BY	8	4SU	C5-C4-N3	4.44	118.88	114.75
56	DW	8	4SU	C5-C4-S4	-4.42	119.25	124.31
56	BY	8	4SU	N3-C2-N1	4.38	120.59	114.89
56	DW	54	5MU	C5-C4-N3	4.35	119.10	115.32
56	DY	39	PSU	O2-C2-N1	-4.32	118.33	122.79
56	DW	46	7MG	C2-N3-C4	4.26	119.64	112.30
56	BW	54	5MU	C5M-C5-C4	4.25	123.32	118.78
56	DW	32	PSU	O2-C2-N1	-4.25	118.40	122.79
56	DY	54	5MU	C5-C4-N3	4.25	119.01	115.32
56	DW	55	PSU	C4-N3-C2	-4.23	120.55	126.37
56	BY	54	5MU	O4-C4-C5	-4.21	120.10	124.92
58	BX	10	2QY	O-C-CA	-4.19	120.13	125.39
56	DY	8	4SU	N3-C2-N1	4.15	120.29	114.89
56	BW	46	7MG	C2-N3-C4	4.13	119.42	112.30
56	DY	55	PSU	C4-N3-C2	-4.11	120.70	126.37
56	BW	55	PSU	O2-C2-N1	-4.10	118.56	122.79
56	BW	32	PSU	C4-N3-C2	-4.04	120.81	126.37
56	BY	54	5MU	C5-C4-N3	4.02	118.82	115.32
58	DX	6	2R1	OD2-CG2-CB	-4.00	104.56	111.99
56	DY	54	5MU	O4-C4-C5	-3.96	120.38	124.92
56	DW	32	PSU	C4-N3-C2	-3.96	120.91	126.37
56	BW	54	5MU	C4-N3-C2	-3.93	122.19	127.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	BY	32	PSU	C4-N3-C2	-3.90	121.00	126.37
56	DW	8	4SU	N3-C2-N1	3.88	119.94	114.89
56	DW	37	MIA	C4-C5-N7	-3.87	106.15	110.58
56	DW	37	MIA	C6-C5-N7	3.86	136.64	132.43
56	BW	39	PSU	C4-N3-C2	-3.83	121.09	126.37
56	BY	55	PSU	C4-N3-C2	-3.81	121.12	126.37
56	DY	32	PSU	C4-N3-C2	-3.78	121.16	126.37
56	DY	55	PSU	O2-C2-N1	-3.78	118.89	122.79
56	DY	37	MIA	C2-N3-C4	3.77	121.05	111.83
56	BY	37	MIA	C4-C5-N7	-3.77	106.28	110.58
56	BY	39	PSU	C4-N3-C2	-3.72	121.25	126.37
58	BX	10	2QY	CD1-CG-CD2	3.71	123.15	117.65
56	DW	39	PSU	C4-N3-C2	-3.69	121.29	126.37
56	BW	55	PSU	C4-N3-C2	-3.69	121.29	126.37
56	BW	37	MIA	N6-C6-N1	3.68	123.26	118.33
56	BY	8	4SU	C5-C4-S4	-3.66	120.12	124.31
58	BX	10	2QY	CG-CB-CA	-3.66	125.32	130.72
56	DW	37	MIA	C2-N3-C4	3.65	121.86	112.29
56	BY	37	MIA	C2-N3-C4	3.64	120.72	111.83
56	BY	55	PSU	O2-C2-N1	-3.64	119.04	122.79
56	BW	54	5MU	O2-C2-N1	-3.63	118.08	122.80
56	DY	37	MIA	C4-C5-N7	-3.62	106.44	110.58
56	DW	37	MIA	C15-C14-C13	-3.62	111.80	122.66
58	BX	8	2R3	CO-OH-CZ	-3.59	109.79	117.50
56	DY	32	PSU	O2-C2-N1	-3.59	119.09	122.79
56	BY	39	PSU	O2-C2-N1	-3.55	119.13	122.79
56	DY	54	5MU	C5-C6-N1	-3.54	119.47	123.31
56	BY	37	MIA	N3-C2-N1	-3.52	123.25	128.58
56	DY	8	4SU	C1'-N1-C2	3.51	123.90	117.59
58	BX	6	2R1	O-C-CA	-3.50	118.97	125.53
56	BY	8	4SU	C1'-N1-C2	3.49	123.85	117.59
58	DX	5	MVA	CB-CA-N	3.48	115.70	111.17
56	BW	37	MIA	C4-C5-N7	-3.45	106.63	110.58
56	DY	37	MIA	N3-C2-N1	-3.44	123.38	128.58
56	DW	37	MIA	C16-C14-C13	-3.41	112.42	122.66
56	DW	54	5MU	O4-C4-C5	-3.39	121.04	124.92
56	DW	54	5MU	C5-C6-N1	-3.38	119.64	123.31
56	DY	39	PSU	C4-N3-C2	-3.38	121.72	126.37
56	BW	37	MIA	C2-N3-C4	3.37	121.11	112.29
56	BW	37	MIA	C16-C14-C13	-3.26	112.87	122.66
56	BW	54	5MU	C5M-C5-C6	-3.26	118.44	122.85
56	DW	32	PSU	C6-C5-C4	-3.21	116.01	118.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	BW	39	PSU	O2-C2-N1	-3.20	119.48	122.79
58	BX	1	2QZ	OG1-CB-CA	-3.19	98.29	109.32
58	BX	8	2R3	CD1-CG-CB	3.18	125.50	120.71
56	BW	37	MIA	C6-C5-N7	3.17	135.89	132.43
58	BX	10	2QY	CE2-CD2-CG	-3.13	117.18	121.22
56	BW	37	MIA	C15-C14-C13	-3.10	113.35	122.66
56	BY	32	PSU	O2-C2-N1	-2.98	119.71	122.79
58	DX	8	2R3	CG-CB-CA	-2.97	107.68	111.58
56	BY	46	7MG	C5-C6-N1	2.95	116.13	110.94
56	DW	46	7MG	C5-C6-N1	2.95	116.12	110.94
58	BX	8	2R3	OB-CB-CG	2.94	117.59	111.20
58	DX	8	2R3	CO-OH-CZ	-2.93	111.22	117.50
56	BY	54	5MU	C1'-N1-C2	2.92	122.84	117.59
56	BW	46	7MG	C5-C4-N9	-2.92	102.59	106.33
58	BX	8	2R3	CE2-CD2-CG	2.92	124.09	121.18
56	BY	54	5MU	C5-C6-N1	-2.90	120.16	123.31
56	DW	37	MIA	C5-N7-C8	2.88	107.98	103.45
56	DW	55	PSU	C5-C6-N1	-2.88	118.14	122.14
58	BX	8	2R3	CD2-CG-CB	-2.88	116.37	120.71
58	DX	6	2R1	O-C-CA	-2.84	120.21	125.53
56	BW	8	4SU	N3-C2-N1	2.82	118.56	114.89
56	DY	46	7MG	C5-C6-N1	2.80	115.87	110.94
56	DW	46	7MG	C5-C4-N9	-2.78	102.77	106.33
56	DW	37	MIA	N3-C2-N1	-2.76	121.96	127.00
58	DX	9	MVA	CB-CA-C	2.75	116.50	112.96
58	BX	5	MVA	CB-CA-C	2.74	116.48	112.96
56	BY	37	MIA	C5-N7-C8	2.73	107.75	103.45
58	BX	1	2QZ	CN1-N-CA	-2.72	107.54	114.25
56	BW	32	PSU	C5-C6-N1	-2.71	118.37	122.14
56	DW	55	PSU	O2-C2-N1	-2.71	120.00	122.79
56	BY	54	5MU	O2-C2-N3	-2.68	116.54	121.49
56	DW	54	5MU	C5M-C5-C4	2.67	121.64	118.78
56	DY	37	MIA	C5-N7-C8	2.61	107.55	103.45
56	DY	46	7MG	C5-C4-N9	-2.59	103.02	106.33
56	BW	8	4SU	O2-C2-N1	-2.56	119.46	122.80
58	DX	8	2R3	OB-CB-CA	2.55	113.08	107.49
56	BY	8	4SU	C6-N1-C2	-2.54	117.91	121.00
58	DX	1	2QZ	CN2-N-CN1	-2.54	103.03	110.49
56	BW	46	7MG	C5-C6-N1	2.51	115.36	110.94
56	BW	37	MIA	C4-N9-C8	2.50	108.37	105.74
56	DW	37	MIA	C2-N1-C6	2.50	122.28	117.54
56	DW	39	PSU	O2'-C2'-C1'	-2.48	105.32	111.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
58	BX	8	2R3	CE1-CD1-CG	-2.47	118.72	121.18
56	BW	54	5MU	C5-C4-N3	2.46	117.46	115.32
56	BW	32	PSU	C6-C5-C4	-2.46	116.52	118.17
56	DY	32	PSU	C6-C5-C4	-2.45	116.52	118.17
56	BW	39	PSU	C6-C5-C4	-2.41	116.55	118.17
56	BW	46	7MG	O6-C6-C5	-2.40	121.74	127.62
56	BW	32	PSU	O2-C2-N3	-2.39	117.62	121.86
56	BW	37	MIA	C5-N7-C8	2.36	107.16	103.45
58	BX	8	2R3	OB-CB-CA	2.34	112.63	107.49
58	DX	3	004	CD2-CE-CD1	-2.34	116.67	119.87
58	BX	1	2QZ	CN2-N-CA	-2.33	108.52	114.25
56	BW	54	5MU	O4-C4-C5	-2.33	122.26	124.92
56	BY	46	7MG	O6-C6-C5	-2.31	121.95	127.62
56	BY	46	7MG	C5-C4-N9	-2.30	103.38	106.33
56	DW	54	5MU	C5M-C5-C6	-2.29	119.75	122.85
58	DX	1	2QZ	OG1-CB-CA	-2.28	101.44	109.32
56	DW	46	7MG	O6-C6-C5	-2.27	122.04	127.62
58	DX	10	2QY	CD1-CE1-CZ	2.27	122.28	119.88
56	BY	37	MIA	C4-N9-C8	2.25	108.10	105.74
56	DY	37	MIA	C4-N9-C8	2.19	108.04	105.74
56	BY	37	MIA	C2-N1-C6	2.18	122.31	118.73
56	DW	37	MIA	C4-N9-C8	2.18	108.02	105.74
56	BW	39	PSU	C6-N1-C2	-2.17	120.68	122.69
58	BX	6	2R1	CG1-CB-CA	2.16	125.14	119.74
58	DX	8	2R3	CD2-CG-CB	-2.14	117.49	120.71
56	BW	37	MIA	N3-C2-N1	-2.12	123.13	127.00
56	DY	46	7MG	O6-C6-C5	-2.11	122.44	127.62
58	DX	8	2R3	CD1-CG-CB	2.09	123.86	120.71
58	BX	3	004	CD2-CG2-CB	-2.08	118.16	120.65
58	DX	10	2QY	CE1-CD1-CG	-2.07	118.55	121.22
58	BX	8	2R3	CD1-CE1-CZ	2.07	122.09	119.73
56	BY	54	5MU	C6-N1-C2	-2.06	119.25	121.30
56	DW	55	PSU	O4'-C1'-C2'	2.03	107.96	105.15
58	BX	9	MVA	CG1-CB-CA	2.02	114.26	111.18
56	DY	8	4SU	C6-N1-C2	-2.02	118.54	121.00
58	BX	8	2R3	CD2-CE2-CZ	-2.01	117.43	119.73
58	DX	6	2R1	C-CA-N	2.01	120.75	116.15
56	DW	37	MIA	N9-C8-N7	-2.01	111.09	113.94
56	BW	37	MIA	C2-N1-C6	2.00	121.34	117.54

There are no chirality outliers.

All (90) 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	O4'-C1'-C5-C4
56	DW	32	PSU	O4'-C1'-C5-C6
56	DW	37	MIA	N1-C2-S10-C11
56	DW	37	MIA	N3-C2-S10-C11
56	DW	37	MIA	N6-C12-C13-C14
56	DW	37	MIA	C12-C13-C14-C15
56	DW	37	MIA	C12-C13-C14-C16
56	DY	39	PSU	O4'-C4'-C5'-O5'
56	DY	46	7MG	O4'-C4'-C5'-O5'
56	DY	54	5MU	O4'-C4'-C5'-O5'
58	BX	1	2QZ	N-CA-CB-OG1
58	DX	1	2QZ	N-CA-CB-OG1
58	BX	5	MVA	CB-CA-N-CN
58	BX	5	MVA	C-CA-CB-CG1
58	BX	5	MVA	C-CA-CB-CG2
58	DX	5	MVA	N-CA-CB-CG1
58	DX	5	MVA	N-CA-CB-CG2
58	DX	5	MVA	C-CA-CB-CG1
58	DX	5	MVA	C-CA-CB-CG2
58	DX	6	2R1	CA-CB-CG2-OD2
58	BX	8	2R3	N-CA-CB-OB
58	BX	8	2R3	N-CA-CB-CG
58	BX	8	2R3	C-CA-CB-OB
58	BX	8	2R3	C-CA-CB-CG
58	DX	8	2R3	N-CA-CB-OB
58	DX	8	2R3	N-CA-CB-CG
58	DX	8	2R3	C-CA-CB-OB
58	DX	8	2R3	C-CA-CB-CG
58	BX	9	MVA	CB-CA-N-CN
58	DX	9	MVA	N-CA-CB-CG1
58	DX	9	MVA	N-CA-CB-CG2
58	DX	9	MVA	C-CA-CB-CG2
58	BX	10	2QY	O-C-CA-CB
58	DX	10	2QY	O-C-CA-CB
58	BX	8	2R3	CE2-CZ-OH-CO
58	BX	8	2R3	CE1-CZ-OH-CO

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Mol	Chain	Res	Type	Atoms
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	37	MIA	O4'-C4'-C5'-O5'
56	DY	37	MIA	O4'-C4'-C5'-O5'
56	DY	46	7MG	C3'-C4'-C5'-O5'
58	DX	10	2QY	CA-CB-CG-CD1
58	DX	10	2QY	CA-CB-CG-CD2
56	BY	46	7MG	C3'-C4'-C5'-O5'
56	BY	54	5MU	O4'-C4'-C5'-O5'
56	DW	46	7MG	O4'-C4'-C5'-O5'
56	BY	37	MIA	O4'-C4'-C5'-O5'
56	DW	46	7MG	C3'-C4'-C5'-O5'
56	DY	55	PSU	O4'-C4'-C5'-O5'
56	BY	46	7MG	C2'-C1'-N9-C8
58	BX	10	2QY	CA-CB-CG-CD1
58	BX	10	2QY	CA-CB-CG-CD2
56	DW	46	7MG	C2'-C1'-N9-C8
58	DX	6	2R1	CG1-CB-CG2-OD2
58	DX	8	2R3	CE2-CZ-OH-CO
58	DX	8	2R3	CE1-CZ-OH-CO
56	DW	39	PSU	C4'-C5'-O5'-P
56	BW	55	PSU	O4'-C1'-C5-C4
56	BY	55	PSU	O4'-C1'-C5-C4
56	DW	55	PSU	O4'-C1'-C5-C4
58	BX	9	MVA	O-C-CA-CB
58	DX	9	MVA	CB-CA-N-CN
56	BW	37	MIA	N1-C2-S10-C11
56	BW	37	MIA	N3-C2-S10-C11
56	DY	37	MIA	C4'-C5'-O5'-P
56	BY	46	7MG	O4'-C1'-N9-C8
56	BW	55	PSU	O4'-C1'-C5-C6
56	BY	55	PSU	O4'-C1'-C5-C6
56	DW	55	PSU	O4'-C1'-C5-C6
56	DY	55	PSU	O4'-C1'-C5-C6
56	DW	46	7MG	O4'-C1'-N9-C8
56	DY	55	PSU	C2'-C1'-C5-C6
58	BX	5	MVA	N-CA-CB-CG1
56	BW	32	PSU	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
56	BW	54	5MU	C3'-C4'-C5'-O5'
56	BY	8	4SU	C2'-C1'-N1-C2
56	DY	8	4SU	C2'-C1'-N1-C2
56	BW	46	7MG	C2'-C1'-N9-C8
56	DY	46	7MG	C2'-C1'-N9-C8

There are no ring outliers.

23 monomers are involved in 47 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	DW	55	PSU	1	0
56	BW	32	PSU	1	0
58	DX	9	MVA	4	0
58	DX	6	2R1	2	0
56	BY	8	4SU	1	0
56	DW	8	4SU	1	0
58	DX	5	MVA	2	0
56	DY	55	PSU	2	0
58	DX	10	2QY	9	0
56	DW	37	MIA	2	0
58	BX	8	2R3	2	0
58	BX	6	2R1	5	0
56	DY	46	7MG	2	0
58	DX	1	2QZ	2	0
58	DX	8	2R3	2	0
58	BX	5	MVA	2	0
58	BX	3	004	4	0
58	BX	10	2QY	1	0
56	DW	39	PSU	6	0
56	BW	37	MIA	2	0
56	DW	54	5MU	1	0
58	DX	3	004	1	0
58	BX	9	MVA	2	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 2056 ligands modelled in this entry, 2052 are monoatomic - leaving 4 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	$\#\|Z\| > 2$
62	GDP	DZ	703	59	29,30,30	1.25	3 (10%)	45,47,47	1.68	6 (13%)
62	GDP	BZ	702	59	29,30,30	1.18	2 (6%)	45,47,47	1.66	8 (17%)
61	SF4	DD	501	37	0,12,12	-	-	-		
61	SF4	BD	501	-	0,12,12	-	-	-		

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
61	SF4	BD	501	-	-	-	0/6/5/5
62	GDP	BZ	702	59	-	3/16/32/32	0/3/3/3
61	SF4	DD	501	37	-	-	0/6/5/5
62	GDP	DZ	703	59	-	1/16/32/32	0/3/3/3

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
62	BZ	702	GDP	C5-C4	3.41	1.48	1.38
62	DZ	703	GDP	C5-C4	3.29	1.47	1.38
62	BZ	702	GDP	C5-N7	-2.38	1.34	1.39
62	DZ	703	GDP	C4-N9	-2.25	1.32	1.38
62	DZ	703	GDP	C6-N1	-2.13	1.34	1.38

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
62	DZ	703	GDP	C5-C4-N3	-5.05	120.35	128.39
62	BZ	702	GDP	C5-C4-N3	-5.03	120.38	128.39
62	DZ	703	GDP	C2-N3-C4	4.36	119.80	112.30
62	BZ	702	GDP	N9-C4-N3	4.16	134.27	125.95
62	DZ	703	GDP	N9-C4-N3	4.09	134.13	125.95
62	DZ	703	GDP	C2'-C1'-N9	-3.95	102.27	113.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
62	BZ	702	GDP	C2-N3-C4	3.75	118.75	112.30
62	BZ	702	GDP	C6-C5-N7	2.98	135.71	130.29
62	DZ	703	GDP	C6-C5-N7	2.97	135.70	130.29
62	BZ	702	GDP	C4-C5-N7	-2.61	106.53	110.67
62	BZ	702	GDP	O3B-PB-O2B	2.24	116.22	107.80
62	BZ	702	GDP	C8-N7-C5	2.23	108.23	104.26
62	BZ	702	GDP	O3'-C3'-C2'	-2.07	105.17	111.82
62	DZ	703	GDP	O6-C6-C5	-2.02	121.21	126.53

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
62	BZ	702	GDP	C5'-O5'-PA-O3A
62	BZ	702	GDP	C5'-O5'-PA-O1A
62	BZ	702	GDP	C5'-O5'-PA-O2A
62	DZ	703	GDP	C5'-O5'-PA-O1A

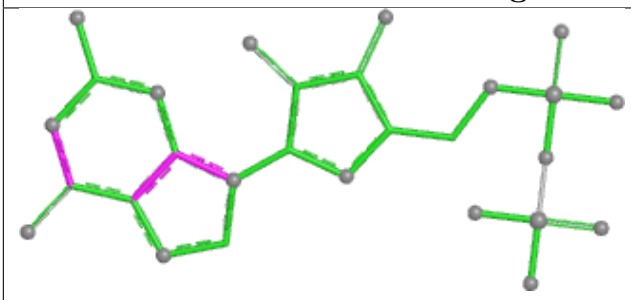
There are no ring outliers.

4 monomers are involved in 15 short contacts:

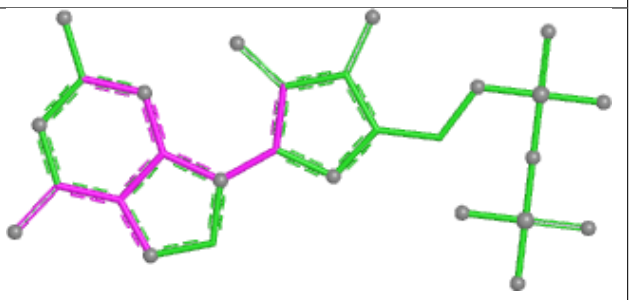
Mol	Chain	Res	Type	Clashes	Symm-Clashes
62	DZ	703	GDP	7	0
62	BZ	702	GDP	5	0
61	DD	501	SF4	2	0
61	BD	501	SF4	1	0

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.

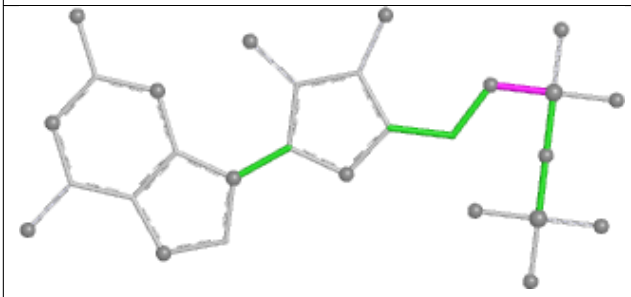
Ligand GDP DZ 703



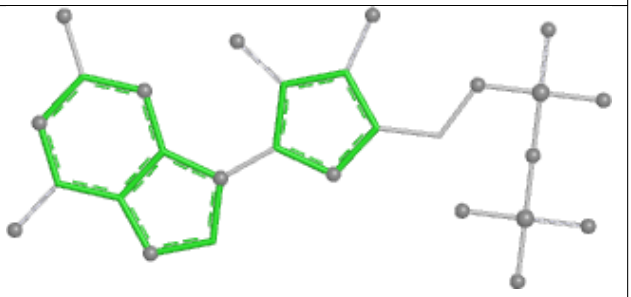
Bond lengths



Bond angles

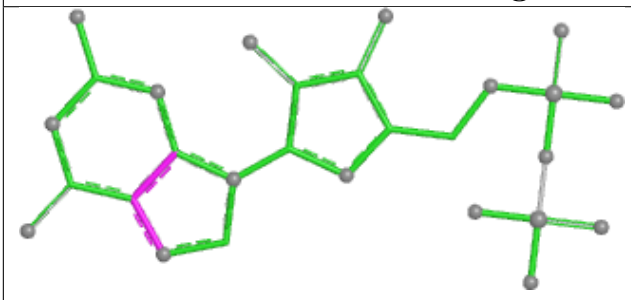


Torsions

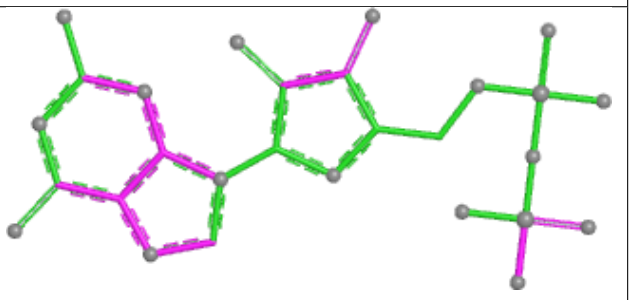


Rings

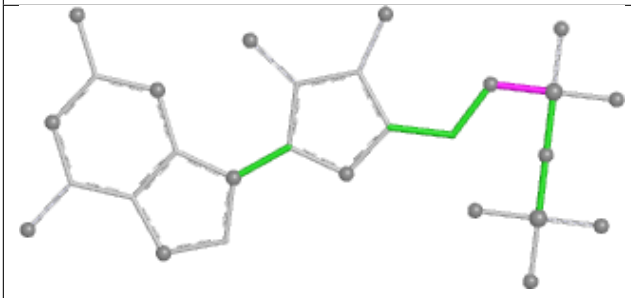
Ligand GDP BZ 702



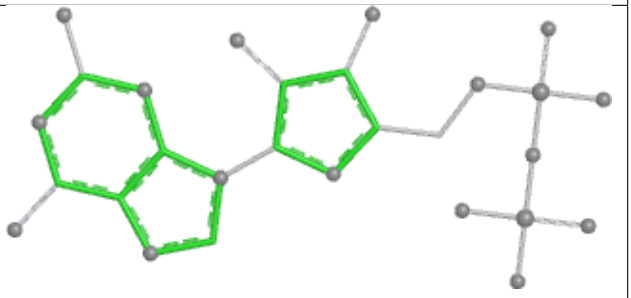
Bond lengths



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	2872/2915 (98%)	-0.84	40 (1%) 73 64	13, 31, 166, 310	0
1	CA	2868/2915 (98%)	-0.32	71 (2%) 58 48	23, 54, 175, 327	0
2	AB	120/121 (99%)	-0.71	1 (0%) 82 75	23, 46, 65, 111	0
2	CB	120/121 (99%)	0.58	5 (4%) 40 32	54, 103, 145, 177	0
3	AC	137/228 (60%)	2.68	94 (68%) 0 0	89, 187, 231, 259	0
3	CC	137/228 (60%)	2.84	98 (71%) 0 0	142, 205, 249, 270	0
4	AD	275/276 (99%)	-0.59	4 (1%) 72 63	8, 30, 56, 122	0
4	CD	275/276 (99%)	-0.25	4 (1%) 72 63	13, 43, 76, 133	0
5	AE	204/206 (99%)	-0.65	0 100 100	7, 30, 60, 99	0
5	CE	204/206 (99%)	-0.23	2 (0%) 79 72	15, 51, 85, 143	0
6	AF	203/210 (96%)	-0.60	0 100 100	5, 31, 75, 140	0
6	CF	203/210 (96%)	0.13	3 (1%) 72 63	20, 66, 122, 158	0
7	AG	181/182 (99%)	0.14	2 (1%) 78 70	33, 66, 114, 178	0
7	CG	181/182 (99%)	1.20	27 (14%) 5 4	73, 124, 181, 208	0
8	AH	174/180 (96%)	-0.31	2 (1%) 78 70	21, 45, 72, 198	0
8	CH	174/180 (96%)	0.72	14 (8%) 18 13	51, 90, 139, 171	0
9	AK	130/173 (75%)	1.59	35 (26%) 1 1	65, 130, 195, 217	0
9	CK	130/173 (75%)	1.99	54 (41%) 0 0	84, 161, 205, 230	0
10	AL	66/147 (44%)	1.91	22 (33%) 1 1	109, 180, 227, 243	0
10	CL	66/147 (44%)	2.51	38 (57%) 0 0	104, 180, 226, 260	0
11	AN	140/140 (100%)	-0.68	1 (0%) 84 77	11, 27, 54, 96	0
11	CN	140/140 (100%)	0.03	1 (0%) 84 77	35, 58, 92, 142	0
12	AO	122/122 (100%)	-0.66	0 100 100	16, 35, 64, 91	0
12	CO	122/122 (100%)	-0.28	0 100 100	28, 48, 80, 94	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AP	149/150 (99%)	-0.49	0 100 100	8, 37, 77, 126	0
13	CP	149/150 (99%)	0.37	6 (4%) 42 33	26, 73, 123, 155	0
14	AQ	141/141 (100%)	-0.59	0 100 100	9, 31, 53, 97	0
14	CQ	141/141 (100%)	0.23	3 (2%) 63 54	18, 62, 94, 145	0
15	AR	118/118 (100%)	-0.77	0 100 100	13, 27, 51, 75	0
15	CR	118/118 (100%)	-0.23	0 100 100	25, 49, 73, 106	0
16	AS	110/112 (98%)	-0.25	1 (0%) 81 74	24, 46, 74, 86	0
16	CS	110/112 (98%)	1.38	20 (18%) 3 2	59, 95, 139, 166	0
17	AT	131/146 (89%)	-0.25	4 (3%) 51 41	20, 39, 93, 218	0
17	CT	131/146 (89%)	0.06	3 (2%) 61 51	35, 56, 103, 151	0
18	AU	116/118 (98%)	-0.88	0 100 100	7, 22, 38, 87	0
18	CU	116/118 (98%)	0.09	0 100 100	31, 55, 88, 107	0
19	AV	101/101 (100%)	-0.88	0 100 100	10, 27, 56, 76	0
19	CV	101/101 (100%)	0.05	1 (0%) 79 72	28, 68, 101, 162	0
20	AW	112/113 (99%)	-0.77	0 100 100	10, 23, 47, 145	0
20	CW	112/113 (99%)	-0.19	0 100 100	26, 44, 74, 159	0
21	AX	95/96 (98%)	-0.45	1 (1%) 78 70	12, 33, 63, 107	0
21	CX	95/96 (98%)	0.37	6 (6%) 26 19	36, 62, 97, 173	0
22	AY	107/110 (97%)	-0.29	2 (1%) 66 57	18, 42, 88, 117	0
22	CY	107/110 (97%)	0.63	7 (6%) 25 18	48, 80, 124, 170	0
23	AZ	185/206 (89%)	-0.06	3 (1%) 70 61	27, 55, 94, 136	0
23	CZ	185/206 (89%)	0.81	9 (4%) 35 27	52, 97, 144, 173	0
24	A0	77/85 (90%)	-0.58	1 (1%) 75 66	9, 31, 53, 82	0
24	C0	77/85 (90%)	0.65	7 (9%) 15 11	27, 67, 104, 127	0
25	A1	97/98 (98%)	-0.40	1 (1%) 79 72	15, 38, 79, 97	0
25	C1	97/98 (98%)	0.17	3 (3%) 51 41	30, 55, 94, 139	0
26	A2	70/72 (97%)	-0.16	2 (2%) 53 43	14, 43, 63, 135	0
26	C2	70/72 (97%)	0.64	3 (4%) 40 31	47, 78, 109, 151	0
27	A3	59/60 (98%)	-0.62	1 (1%) 69 60	10, 26, 50, 110	0
27	C3	59/60 (98%)	0.30	2 (3%) 48 39	31, 62, 102, 162	0
28	A4	69/71 (97%)	0.77	8 (11%) 9 7	47, 101, 187, 216	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	C4	69/71 (97%)	1.26	11 (15%) 5 4	86, 158, 194, 226	0
29	A5	59/60 (98%)	-0.79	0 100 100	11, 22, 48, 66	0
29	C5	59/60 (98%)	-0.29	0 100 100	16, 46, 81, 120	0
30	A6	53/54 (98%)	-0.48	0 100 100	17, 35, 61, 75	0
30	C6	53/54 (98%)	0.21	0 100 100	40, 62, 85, 101	0
31	A7	48/49 (97%)	-0.53	2 (4%) 40 32	11, 20, 52, 99	0
31	C7	48/49 (97%)	-0.03	4 (8%) 17 12	23, 35, 95, 120	0
32	A8	64/65 (98%)	-0.72	0 100 100	13, 26, 39, 61	0
32	C8	64/65 (98%)	0.05	1 (1%) 70 61	26, 53, 71, 93	0
33	A9	37/37 (100%)	-0.42	1 (2%) 56 46	19, 32, 61, 65	0
33	C9	37/37 (100%)	0.39	1 (2%) 56 46	43, 61, 90, 101	0
34	BA	1495/1521 (98%)	0.22	23 (1%) 72 63	23, 81, 179, 326	0
34	DA	1501/1521 (98%)	0.46	65 (4%) 40 31	39, 93, 206, 304	0
35	BB	231/256 (90%)	0.89	22 (9%) 14 10	52, 103, 165, 193	0
35	DB	231/256 (90%)	1.34	45 (19%) 3 2	66, 134, 196, 226	0
36	BC	206/239 (86%)	1.03	29 (14%) 6 5	72, 113, 168, 187	0
36	DC	206/239 (86%)	1.48	53 (25%) 1 1	88, 150, 194, 221	0
37	BD	208/209 (99%)	1.13	37 (17%) 4 3	53, 90, 140, 180	0
37	DD	208/209 (99%)	0.95	29 (13%) 6 5	52, 87, 132, 197	0
38	BE	148/162 (91%)	0.33	2 (1%) 73 64	36, 71, 108, 150	0
38	DE	148/162 (91%)	0.80	13 (8%) 15 11	42, 88, 131, 177	0
39	BF	100/101 (99%)	0.44	1 (1%) 79 72	42, 80, 123, 144	0
39	DF	100/101 (99%)	0.56	3 (3%) 52 42	48, 90, 133, 146	0
40	BG	155/156 (99%)	0.80	17 (10%) 10 8	65, 100, 155, 193	0
40	DG	155/156 (99%)	1.10	22 (14%) 6 5	79, 130, 177, 212	0
41	BH	137/138 (99%)	0.57	7 (5%) 33 25	44, 72, 105, 119	0
41	DH	137/138 (99%)	0.84	12 (8%) 15 11	51, 90, 124, 159	0
42	BI	127/128 (99%)	1.58	39 (30%) 1 1	58, 114, 168, 190	0
42	DI	127/128 (99%)	2.03	59 (46%) 0 0	78, 153, 189, 243	0
43	BJ	97/105 (92%)	1.67	32 (32%) 1 1	74, 121, 172, 194	0
43	DJ	96/105 (91%)	1.96	45 (46%) 0 0	75, 158, 198, 215	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	BK	114/129 (88%)	0.25	1 (0%) 81 74	29, 73, 115, 125	0
44	DK	114/129 (88%)	0.66	9 (7%) 18 13	59, 92, 138, 168	0
45	BL	122/132 (92%)	0.24	5 (4%) 41 33	26, 60, 88, 110	0
45	DL	122/132 (92%)	0.55	5 (4%) 41 33	40, 70, 99, 142	0
46	BM	117/126 (92%)	0.92	13 (11%) 10 7	62, 107, 151, 187	0
46	DM	116/126 (92%)	1.63	34 (29%) 1 1	64, 154, 201, 235	0
47	BN	60/61 (98%)	1.55	15 (25%) 2 1	59, 109, 151, 171	0
47	DN	60/61 (98%)	2.27	35 (58%) 0 0	94, 141, 190, 208	0
48	BO	88/89 (98%)	0.35	5 (5%) 29 22	34, 68, 106, 139	0
48	DO	88/89 (98%)	0.58	3 (3%) 48 39	49, 81, 115, 139	0
49	BP	82/88 (93%)	0.94	10 (12%) 8 6	45, 80, 125, 150	0
49	DP	82/88 (93%)	0.74	4 (4%) 35 27	48, 76, 108, 120	0
50	BQ	99/105 (94%)	0.34	5 (5%) 33 25	43, 71, 103, 118	0
50	DQ	99/105 (94%)	0.79	12 (12%) 8 6	46, 79, 116, 148	0
51	BR	68/88 (77%)	0.27	1 (1%) 72 63	44, 71, 115, 135	0
51	DR	68/88 (77%)	0.54	1 (1%) 72 63	57, 89, 127, 146	0
52	BS	84/93 (90%)	1.63	27 (32%) 1 1	64, 126, 168, 222	0
52	DS	83/93 (89%)	2.01	37 (44%) 0 0	98, 162, 210, 220	0
53	BT	96/106 (90%)	0.82	10 (10%) 11 8	49, 84, 117, 159	0
53	DT	96/106 (90%)	0.76	9 (9%) 14 10	47, 81, 126, 145	0
54	BU	23/27 (85%)	1.93	11 (47%) 0 0	59, 99, 112, 154	0
54	DU	23/27 (85%)	2.42	11 (47%) 0 0	78, 132, 157, 179	0
55	BV	7/18 (38%)	1.50	3 (42%) 0 0	60, 68, 174, 188	0
55	DV	6/18 (33%)	1.98	3 (50%) 0 0	87, 94, 180, 202	0
56	BW	69/76 (90%)	-0.15	3 (4%) 40 31	37, 69, 117, 208	0
56	BY	67/76 (88%)	1.14	12 (17%) 3 3	74, 230, 278, 300	0
56	DW	69/76 (90%)	0.29	0 100 100	46, 106, 150, 254	0
56	DY	66/76 (86%)	1.36	14 (21%) 2 2	141, 280, 312, 332	0
57	BZ	728/758 (96%)	0.70	66 (9%) 15 11	37, 96, 187, 244	0
57	DZ	730/758 (96%)	0.89	90 (12%) 8 6	27, 112, 210, 259	0
58	BX	3/10 (30%)	0.69	0 100 100	81, 81, 81, 82	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
58	DX	3/10 (30%)	1.10	1 (33%) 1 1	78, 78, 80, 81	0
All	All	22705/23918 (94%)	0.20	1642 (7%) 21 16	5, 69, 187, 332	0

All (1642) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
42	DI	106	ALA	11.1
25	C1	2	SER	10.3
3	CC	213	VAL	7.5
36	BC	2	GLY	7.4
10	CL	127	ILE	7.3
9	AK	50	ARG	6.6
3	AC	190	ILE	6.5
8	AH	174	GLY	6.4
46	DM	100	GLY	6.4
52	DS	71	LEU	6.4
31	C7	48	LYS	6.4
45	DL	18	VAL	6.4
3	CC	194	ILE	6.3
37	DD	2	GLY	6.2
10	CL	123	ALA	6.1
10	CL	136	VAL	6.1
37	BD	153	ARG	6.1
49	BP	68	ASP	6.0
3	AC	210	LEU	5.9
9	CK	54	ALA	5.9
3	CC	197	LEU	5.9
43	DJ	47	PHE	5.9
3	CC	12	LEU	5.8
3	CC	215	VAL	5.8
47	DN	22	THR	5.8
3	CC	15	VAL	5.7
38	BE	85	GLY	5.7
46	DM	101	GLN	5.7
3	CC	190	ILE	5.6
46	DM	98	VAL	5.6
56	DY	76	A	5.6
42	DI	105	ASP	5.6
3	AC	12	LEU	5.5
42	BI	106	ALA	5.5
10	CL	115	LEU	5.5
47	BN	20	ALA	5.5

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Mol	Chain	Res	Type	RSRZ
3	CC	186	LEU	5.4
3	AC	164	PHE	5.3
54	DU	15	ARG	5.3
10	CL	138	VAL	5.2
3	AC	69	LEU	5.2
3	AC	175	PRO	5.2
3	AC	215	VAL	5.2
3	CC	30	VAL	5.2
36	DC	160	ALA	5.2
38	DE	22	GLY	5.2
9	AK	54	ALA	5.2
10	CL	78	ILE	5.1
35	DB	165	VAL	5.1
3	AC	52	PRO	5.1
3	AC	57	GLN	5.0
10	AL	78	ILE	5.0
3	CC	221	PRO	5.0
3	AC	200	HIS	5.0
17	AT	131	ALA	5.0
52	BS	78	ARG	5.0
52	DS	12	ASP	5.0
3	AC	162	ILE	4.9
35	DB	97	TRP	4.9
9	CK	96	PHE	4.9
26	A2	70	GLN	4.9
37	DD	23	GLY	4.9
38	DE	85	GLY	4.9
9	CK	86	PRO	4.9
3	CC	26	ALA	4.8
9	CK	53	VAL	4.8
57	BZ	502	GLY	4.8
36	DC	162	GLN	4.8
3	CC	179	ALA	4.8
37	BD	156	GLU	4.8
3	CC	210	LEU	4.8
42	DI	27	THR	4.8
43	BJ	72	VAL	4.8
46	BM	102	ARG	4.8
1	AA	2139	A	4.7
54	DU	14	TRP	4.7
16	CS	7	TYR	4.7
3	AC	194	ILE	4.7

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Mol	Chain	Res	Type	RSRZ
47	BN	17	LYS	4.7
57	BZ	428	LEU	4.7
56	DY	34	G	4.7
3	CC	20	VAL	4.7
47	DN	17	LYS	4.6
3	AC	171	ALA	4.6
3	AC	179	ALA	4.6
54	BU	16	GLY	4.6
1	CA	1087	G	4.5
9	AK	47	ASN	4.5
52	BS	71	LEU	4.5
3	CC	223	VAL	4.5
55	DV	13	A	4.5
46	DM	90	LEU	4.5
47	DN	13	THR	4.5
52	BS	2	PRO	4.5
57	BZ	419	ALA	4.5
40	DG	37	ASN	4.5
1	CA	1536	C	4.5
52	DS	40	ILE	4.5
43	DJ	53	PRO	4.5
3	CC	44	VAL	4.5
16	CS	32	LEU	4.5
52	DS	76	PRO	4.4
54	DU	16	GLY	4.4
4	CD	262	ARG	4.4
35	DB	187	LEU	4.4
1	AA	2137	G	4.4
38	DE	104	ALA	4.4
42	BI	14	VAL	4.4
42	BI	10	ARG	4.4
9	AK	130	THR	4.4
36	BC	158	GLY	4.4
42	DI	115	GLY	4.4
47	BN	13	THR	4.3
3	CC	14	LYS	4.3
3	AC	197	LEU	4.3
3	CC	29	LEU	4.3
9	AK	99	SER	4.3
10	AL	107	ILE	4.3
3	CC	175	PRO	4.3
36	DC	76	VAL	4.3

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Mol	Chain	Res	Type	RSRZ
9	AK	51	LEU	4.3
3	AC	30	VAL	4.3
9	CK	24	PHE	4.2
57	DZ	498	ILE	4.2
42	BI	109	VAL	4.2
3	CC	8	TYR	4.2
3	CC	227	PRO	4.2
10	AL	138	VAL	4.2
36	DC	168	ALA	4.2
7	CG	76	SER	4.2
43	DJ	39	PRO	4.2
3	AC	49	GLY	4.2
1	CA	1533	G	4.2
42	BI	126	SER	4.2
42	DI	110	GLU	4.2
3	CC	23	ILE	4.2
9	AK	85	ASP	4.2
52	BS	13	ASP	4.2
3	CC	42	VAL	4.1
42	BI	12	GLU	4.1
43	DJ	54	PHE	4.1
3	CC	11	LEU	4.1
57	DZ	655	TYR	4.1
57	BZ	498	ILE	4.1
16	CS	98	VAL	4.1
3	AC	159	ALA	4.1
47	DN	21	TYR	4.1
16	CS	31	SER	4.1
54	DU	6	ARG	4.1
52	BS	56	GLN	4.1
37	BD	162	LEU	4.0
36	BC	160	ALA	4.0
3	CC	50	ILE	4.0
47	DN	34	TYR	4.0
9	CK	78	SER	4.0
3	AC	209	PHE	4.0
40	BG	16	LEU	4.0
42	DI	103	THR	4.0
42	DI	117	HIS	4.0
42	BI	35	GLU	4.0
3	AC	186	LEU	4.0
43	BJ	40	LEU	4.0

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Mol	Chain	Res	Type	RSRZ
57	DZ	683	VAL	4.0
42	DI	15	ALA	4.0
57	DZ	429	ALA	4.0
36	DC	152	ILE	4.0
54	DU	4	GLY	4.0
34	DA	1117	G	4.0
3	AC	55	SER	4.0
4	CD	275	LYS	4.0
43	DJ	37	PRO	4.0
37	DD	149	ALA	4.0
47	BN	2	ALA	4.0
3	CC	193	PHE	4.0
37	BD	157	LEU	4.0
25	A1	2	SER	4.0
57	BZ	404	VAL	4.0
3	AC	174	ALA	3.9
17	AT	130	ALA	3.9
37	BD	149	ALA	3.9
42	BI	67	GLY	3.9
34	DA	1363	C	3.9
52	BS	74	PHE	3.9
3	CC	33	LEU	3.9
10	CL	84	LEU	3.9
10	CL	111	LYS	3.9
57	BZ	472	VAL	3.9
3	CC	225	ILE	3.9
40	DG	7	ALA	3.9
3	AC	176	VAL	3.9
36	DC	120	VAL	3.9
43	BJ	62	HIS	3.9
57	DZ	487	ILE	3.9
46	DM	99	ARG	3.9
52	BS	12	ASP	3.9
34	DA	1202	G	3.9
3	CC	52	PRO	3.9
47	DN	2	ALA	3.9
57	DZ	593	ALA	3.9
35	DB	163	PHE	3.9
45	DL	126	LYS	3.9
52	DS	9	VAL	3.9
1	AA	2188	G	3.9
53	DT	74	LYS	3.8

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Mol	Chain	Res	Type	RSRZ
3	AC	33	LEU	3.8
52	DS	13	ASP	3.8
37	DD	154	ASN	3.8
1	CA	272(A)	U	3.8
36	DC	182	ILE	3.8
57	BZ	415	PRO	3.8
9	AK	79	ALA	3.8
10	AL	135	GLY	3.8
10	CL	118	THR	3.8
52	DS	38	SER	3.8
1	AA	2143	G	3.8
43	DJ	72	VAL	3.8
1	CA	2117	A	3.8
4	CD	276	LYS	3.8
44	DK	117	ASN	3.8
3	CC	196	ALA	3.8
57	DZ	656	ALA	3.8
7	CG	34	LEU	3.8
37	BD	21	LEU	3.8
8	AH	2	SER	3.8
47	DN	25	VAL	3.8
54	BU	15	ARG	3.8
43	BJ	37	PRO	3.8
47	BN	14	PRO	3.8
46	DM	64	TRP	3.8
53	BT	11	SER	3.7
1	AA	2135	U	3.7
9	CK	56	ASN	3.7
37	DD	161	ASN	3.7
53	BT	9	ASN	3.7
37	BD	49	ARG	3.7
35	DB	131	PRO	3.7
57	DZ	517	LEU	3.7
35	DB	101	MET	3.7
52	BS	80	TYR	3.7
3	CC	204	GLY	3.7
1	CA	2174	C	3.7
43	DJ	61	GLU	3.7
57	DZ	614	GLU	3.7
53	DT	25	ARG	3.7
3	CC	37	LYS	3.7
35	DB	136	VAL	3.7

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Mol	Chain	Res	Type	RSRZ
45	BL	126	LYS	3.7
42	DI	49	PRO	3.7
22	AY	1	MET	3.7
3	AC	208	THR	3.7
10	AL	111	LYS	3.7
37	DD	30	LYS	3.7
57	DZ	417	THR	3.7
9	AK	53	VAL	3.7
34	DA	1224	G	3.7
22	CY	1	MET	3.7
3	AC	37	LYS	3.7
41	DH	3	THR	3.7
57	DZ	85	PRO	3.6
36	DC	87	LEU	3.6
49	BP	82	GLN	3.6
36	DC	189	ALA	3.6
37	BD	166	LYS	3.6
57	DZ	488	THR	3.6
34	DA	1532	U	3.6
43	DJ	65	LEU	3.6
46	DM	88	ARG	3.6
3	CC	164	PHE	3.6
36	DC	158	GLY	3.6
57	DZ	22	ASP	3.6
37	DD	5	ILE	3.6
3	AC	59	VAL	3.6
40	DG	17	VAL	3.6
46	BM	87	TYR	3.6
34	BA	630	G	3.6
57	BZ	501	THR	3.6
3	AC	17	PRO	3.6
10	CL	77	LEU	3.6
42	DI	123	PRO	3.6
9	AK	42	GLN	3.6
57	BZ	653	PHE	3.6
10	CL	92	GLY	3.6
10	CL	114	ASP	3.6
52	DS	11	VAL	3.6
16	CS	36	TYR	3.6
37	BD	154	ASN	3.6
34	DA	1257	U	3.6
3	CC	27	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
21	CX	68	ARG	3.6
36	DC	154	SER	3.6
49	BP	19	ILE	3.6
3	AC	167	ASP	3.6
3	CC	59	VAL	3.6
57	BZ	481	VAL	3.6
3	AC	166	ASN	3.6
4	AD	276	LYS	3.5
42	DI	112	LYS	3.5
9	CK	30	GLN	3.5
1	CA	1171	G	3.5
43	BJ	38	ILE	3.5
3	AC	178	LYS	3.5
3	AC	206	LYS	3.5
42	DI	11	LYS	3.5
52	BS	76	PRO	3.5
56	DY	74	C	3.5
3	CC	205	ALA	3.5
10	CL	108	ALA	3.5
16	CS	3	ARG	3.5
47	DN	38	GLY	3.5
52	DS	49	ILE	3.5
16	CS	49	VAL	3.5
1	AA	2138	G	3.5
34	DA	1320	C	3.5
3	AC	172	ILE	3.5
7	CG	53	LEU	3.5
35	DB	196	LEU	3.5
42	DI	126	SER	3.5
31	A7	48	LYS	3.5
46	DM	102	ARG	3.5
52	DS	37	ARG	3.5
57	BZ	430	ARG	3.5
3	AC	23	ILE	3.5
43	DJ	6	ILE	3.5
10	CL	126	MET	3.5
40	BG	21	VAL	3.5
57	BZ	422	GLU	3.5
3	CC	35	THR	3.5
9	AK	126	ALA	3.5
9	AK	30	GLN	3.4
7	CG	157	ILE	3.4

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Mol	Chain	Res	Type	RSRZ
10	AL	136	VAL	3.4
36	DC	12	LEU	3.4
37	BD	179	GLU	3.4
3	AC	53	ARG	3.4
47	DN	31	ARG	3.4
57	BZ	437	THR	3.4
57	BZ	630	GLN	3.4
3	CC	162	ILE	3.4
10	AL	99	ILE	3.4
3	AC	71	LYS	3.4
34	DA	1190	G	3.4
35	DB	21	ARG	3.4
52	BS	29	ARG	3.4
36	DC	133	ALA	3.4
52	DS	69	HIS	3.4
41	DH	4	ASP	3.4
9	CK	95	GLN	3.4
40	BG	26	PHE	3.4
43	BJ	69	ASN	3.4
53	DT	9	ASN	3.4
52	BS	15	LEU	3.4
1	CA	2118	U	3.4
1	CA	2115	G	3.4
9	CK	89	ALA	3.4
56	BY	34	G	3.4
57	DZ	402	ILE	3.4
22	CY	4	LYS	3.4
9	CK	82	PHE	3.4
52	DS	10	PHE	3.4
9	CK	112	LEU	3.4
10	CL	96	VAL	3.4
35	DB	7	VAL	3.4
9	AK	49	ALA	3.4
10	CL	81	ALA	3.4
17	CT	130	ALA	3.4
22	CY	107	ASP	3.4
43	DJ	8	LEU	3.3
1	CA	2147	G	3.3
40	BG	80	VAL	3.3
35	DB	99	GLY	3.3
46	BM	100	GLY	3.3
56	DY	1	G	3.3

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Mol	Chain	Res	Type	RSRZ
9	CK	50	ARG	3.3
24	C0	44	ARG	3.3
40	BG	4	ARG	3.3
42	BI	66	ARG	3.3
36	DC	199	LYS	3.3
43	BJ	4	ILE	3.3
52	DS	75	ALA	3.3
57	DZ	621	ILE	3.3
43	DJ	63	PHE	3.3
46	BM	98	VAL	3.3
36	DC	155	GLY	3.3
3	CC	203	GLU	3.3
4	AD	275	LYS	3.3
9	CK	43	ALA	3.3
46	DM	5	ALA	3.3
57	DZ	223	PHE	3.3
1	CA	1083	U	3.3
3	CC	7	ARG	3.3
36	DC	68	VAL	3.3
3	CC	21	TYR	3.3
42	DI	36	TYR	3.3
45	DL	69	TYR	3.3
46	DM	87	TYR	3.3
52	BS	68	GLY	3.3
10	AL	127	ILE	3.3
34	DA	1116	C	3.3
3	AC	205	ALA	3.3
9	AK	124	ALA	3.3
1	CA	2125	G	3.3
46	BM	90	LEU	3.3
3	AC	44	VAL	3.3
3	AC	217	THR	3.3
36	DC	198	VAL	3.3
47	DN	29	ARG	3.3
52	DS	78	ARG	3.3
9	CK	85	ASP	3.3
44	DK	75	TYR	3.3
46	DM	78	ILE	3.3
57	DZ	601	ILE	3.3
3	AC	11	LEU	3.3
42	BI	47	LEU	3.3
52	DS	67	VAL	3.3

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Mol	Chain	Res	Type	RSRZ
41	BH	24	THR	3.3
1	AA	2134	G	3.3
3	AC	204	GLY	3.3
37	BD	23	GLY	3.3
42	BI	2	GLU	3.2
57	BZ	436	PRO	3.2
57	DZ	617	MET	3.2
9	CK	34	ALA	3.2
35	DB	161	ALA	3.2
3	AC	193	PHE	3.2
3	CC	54	ARG	3.2
34	DA	1092	A	3.2
57	DZ	641	GLN	3.2
34	BA	1363	C	3.2
43	DJ	10	GLY	3.2
3	AC	225	ILE	3.2
43	DJ	23	ILE	3.2
40	BG	83	ALA	3.2
43	DJ	99	LYS	3.2
52	BS	33	THR	3.2
3	CC	163	GLU	3.2
3	AC	227	PRO	3.2
3	CC	199	ALA	3.2
9	CK	40	LEU	3.2
16	CS	17	ARG	3.2
17	CT	131	ALA	3.2
42	BI	53	VAL	3.2
46	DM	60	VAL	3.2
3	CC	57	GLN	3.2
6	CF	208	GLY	3.2
9	AK	83	TYR	3.2
35	DB	201	ILE	3.2
43	DJ	19	SER	3.2
54	DU	18	TYR	3.2
1	AA	2167	C	3.2
1	AA	2201	C	3.2
9	CK	51	LEU	3.2
16	CS	97	ARG	3.2
36	DC	10	PHE	3.2
9	CK	55	LYS	3.2
47	BN	11	LYS	3.2
1	CA	2319	G	3.2

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Mol	Chain	Res	Type	RSRZ
3	CC	218	THR	3.2
42	BI	64	THR	3.2
3	AC	221	PRO	3.2
34	DA	1236	A	3.1
42	DI	114	TYR	3.1
8	CH	2	SER	3.1
42	DI	10	ARG	3.1
3	AC	192	ALA	3.1
42	DI	43	ALA	3.1
43	BJ	73	ASP	3.1
36	BC	4	LYS	3.1
43	BJ	54	PHE	3.1
36	DC	207	VAL	3.1
46	DM	103	THR	3.1
52	DS	33	THR	3.1
46	DM	19	LEU	3.1
47	DN	10	ALA	3.1
53	DT	14	LYS	3.1
16	CS	29	PHE	3.1
43	BJ	47	PHE	3.1
46	DM	106	ASN	3.1
45	BL	18	VAL	3.1
9	AK	106	GLN	3.1
35	BB	66	GLY	3.1
36	DC	8	ILE	3.1
57	DZ	584	ILE	3.1
10	CL	76	TYR	3.1
42	DI	125	TYR	3.1
46	DM	92	HIS	3.1
52	DS	14	HIS	3.1
3	CC	38	PHE	3.1
1	CA	2112	G	3.1
55	DV	14	A	3.1
47	DN	7	ILE	3.1
3	CC	211	ARG	3.1
7	CG	32	PRO	3.1
34	BA	1320	C	3.1
43	BJ	45	ARG	3.1
45	BL	89	ARG	3.1
37	BD	147	ALA	3.1
35	DB	40	HIS	3.1
36	BC	184	TYR	3.1

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Mol	Chain	Res	Type	RSRZ
54	BU	18	TYR	3.1
3	AC	20	VAL	3.1
28	C4	56	VAL	3.1
42	BI	17	VAL	3.1
10	AL	114	ASP	3.1
52	DS	31	ILE	3.1
17	AT	108	ARG	3.1
10	CL	113	PRO	3.1
42	DI	2	GLU	3.1
42	DI	64	THR	3.1
1	CA	2128	C	3.1
1	CA	2129	C	3.1
34	DA	1030(B)	C	3.1
34	DA	1149	C	3.1
38	DE	45	PHE	3.0
47	DN	49	HIS	3.0
44	DK	36	ASP	3.0
43	DJ	46	ARG	3.0
57	DZ	631	ILE	3.0
10	CL	105	LEU	3.0
9	CK	57	THR	3.0
9	CK	52	PHE	3.0
36	DC	153	VAL	3.0
58	DX	2	VAL	3.0
34	DA	1322	C	3.0
10	AL	75	SER	3.0
42	BI	81	ILE	3.0
53	BT	18	GLN	3.0
3	AC	202	PRO	3.0
3	CC	182	PRO	3.0
17	CT	128	GLU	3.0
23	AZ	135	GLU	3.0
52	DS	39	THR	3.0
1	AA	572	A	3.0
9	CK	49	ALA	3.0
42	BI	46	ALA	3.0
42	DI	46	ALA	3.0
42	DI	61	ALA	3.0
56	DY	73	A	3.0
3	CC	209	PHE	3.0
35	DB	164	VAL	3.0
42	DI	37	PHE	3.0

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Mol	Chain	Res	Type	RSRZ
36	BC	193	TYR	3.0
3	AC	54	ARG	3.0
3	CC	53	ARG	3.0
34	DA	1066	C	3.0
35	BB	133	LYS	3.0
43	DJ	98	ILE	3.0
52	DS	36	ARG	3.0
57	DZ	39	ILE	3.0
7	CG	172	LEU	3.0
43	BJ	71	LEU	3.0
52	BS	4	SER	3.0
47	DN	14	PRO	3.0
1	CA	2113	U	3.0
3	AC	199	ALA	3.0
9	CK	39	ALA	3.0
57	BZ	412	ALA	3.0
57	BZ	429	ALA	3.0
3	AC	38	PHE	3.0
3	CC	63	VAL	3.0
35	BB	70	PHE	3.0
42	DI	17	VAL	3.0
42	DI	108	VAL	3.0
1	CA	1086	A	3.0
34	DA	1286	A	3.0
55	BV	13	A	3.0
21	CX	33	LYS	3.0
45	BL	114	LYS	3.0
47	BN	50	LYS	3.0
43	DJ	71	LEU	3.0
9	CK	99	SER	3.0
34	BA	1030(B)	C	3.0
3	CC	217	THR	3.0
57	BZ	91	THR	3.0
57	DZ	432	ALA	3.0
35	DB	112	VAL	3.0
1	CA	1026	U	3.0
9	AK	35	LYS	2.9
43	BJ	55	LYS	2.9
47	DN	41	ARG	2.9
35	DB	214	ILE	2.9
36	DC	157	ILE	2.9
3	AC	214	TYR	2.9

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Mol	Chain	Res	Type	RSRZ
10	AL	120	LEU	2.9
21	CX	69	TYR	2.9
36	DC	43	LEU	2.9
47	DN	47	LEU	2.9
50	DQ	98	LEU	2.9
3	CC	166	ASN	2.9
35	DB	134	GLU	2.9
37	DD	51	PRO	2.9
57	DZ	635	GLU	2.9
1	CA	34	C	2.9
3	CC	46	ALA	2.9
46	BM	107	ALA	2.9
10	CL	117	THR	2.9
45	DL	47	LYS	2.9
43	BJ	5	ARG	2.9
57	BZ	402	ILE	2.9
36	DC	159	GLY	2.9
46	DM	95	GLY	2.9
57	DZ	89	ASP	2.9
57	DZ	425	SER	2.9
10	AL	96	VAL	2.9
36	DC	103	VAL	2.9
43	DJ	32	ALA	2.9
57	BZ	223	PHE	2.9
37	DD	139	ARG	2.9
1	AA	2187	G	2.9
56	DY	19	G	2.9
57	DZ	82	ILE	2.9
1	AA	271	U	2.9
9	CK	58	LEU	2.9
35	DB	115	LEU	2.9
47	BN	6	LEU	2.9
52	DS	30	LEU	2.9
37	DD	124	GLY	2.9
57	DZ	268	GLY	2.9
3	CC	17	PRO	2.9
48	BO	2	PRO	2.9
28	A4	30	GLU	2.9
57	DZ	634	MET	2.9
3	CC	51	ASP	2.9
3	CC	167	ASP	2.9
9	CK	28	ASN	2.9

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Mol	Chain	Res	Type	RSRZ
57	BZ	435	ASP	2.9
9	AK	87	VAL	2.9
43	DJ	34	VAL	2.9
50	DQ	35	VAL	2.9
57	DZ	114	VAL	2.9
3	CC	69	LEU	2.9
9	AK	48	GLY	2.9
34	DA	980	C	2.9
44	DK	49	GLY	2.9
46	BM	24	GLY	2.9
1	AA	299	G	2.9
42	BI	62	TYR	2.9
44	DK	25	TYR	2.9
3	AC	201	LYS	2.9
16	CS	11	LYS	2.9
9	CK	7	VAL	2.9
23	CZ	164	ALA	2.9
36	DC	129	ALA	2.9
40	DG	2	ALA	2.9
50	DQ	77	VAL	2.9
52	DS	60	VAL	2.9
57	DZ	608	VAL	2.9
9	CK	109	SER	2.9
1	CA	229	A	2.9
34	DA	965	A	2.9
40	DG	5	ARG	2.9
35	BB	127	ILE	2.9
35	DB	221	LEU	2.9
3	CC	207	GLY	2.8
36	DC	13	GLY	2.8
1	AA	34	C	2.8
1	CA	2146	C	2.8
9	CK	84	GLU	2.8
34	DA	1195	C	2.8
42	DI	113	LYS	2.8
34	DA	630	G	2.8
42	DI	109	VAL	2.8
42	DI	122	ALA	2.8
43	DJ	66	ARG	2.8
50	DQ	91	ARG	2.8
51	BR	20	ALA	2.8
3	CC	56	ASP	2.8

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Mol	Chain	Res	Type	RSRZ
3	AC	173	HIS	2.8
9	CK	116	ILE	2.8
35	BB	67	THR	2.8
35	DB	102	LEU	2.8
38	DE	31	LEU	2.8
34	DA	1363(A)	A	2.8
38	DE	10	MET	2.8
57	DZ	502	GLY	2.8
35	BB	131	PRO	2.8
52	DS	2	PRO	2.8
35	BB	97	TRP	2.8
43	DJ	22	LYS	2.8
37	BD	163	GLU	2.8
10	CL	124	ALA	2.8
25	C1	26	ARG	2.8
42	DI	26	VAL	2.8
47	DN	19	ARG	2.8
57	DZ	628	ARG	2.8
36	DC	128	PHE	2.8
16	CS	58	LEU	2.8
35	DB	222	ILE	2.8
42	DI	102	LEU	2.8
3	AC	218	THR	2.8
3	CC	62	THR	2.8
9	AK	78	SER	2.8
42	DI	7	THR	2.8
37	BD	180	GLY	2.8
55	DV	15	A	2.8
56	BY	35	A	2.8
35	BB	22	LYS	2.8
41	BH	5	PRO	2.8
7	CG	54	GLU	2.8
40	DG	156	TRP	2.8
54	BU	14	TRP	2.8
3	AC	165	ARG	2.8
37	BD	3	ARG	2.8
1	CA	271(K)	U	2.8
7	CG	178	PHE	2.8
37	DD	117	ALA	2.8
36	DC	5	ILE	2.8
40	BG	27	ILE	2.8
9	AK	6	ASN	2.8

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Mol	Chain	Res	Type	RSRZ
53	BT	10	LEU	2.8
1	CA	2108	C	2.8
1	CA	2111	C	2.8
10	AL	133	SER	2.8
37	BD	152	SER	2.8
28	A4	57	GLU	2.8
36	BC	11	ARG	2.8
3	AC	196	ALA	2.8
9	CK	97	ALA	2.8
35	BB	214	ILE	2.8
37	BD	155	LEU	2.8
40	DG	16	LEU	2.8
47	DN	39	LEU	2.8
10	CL	112	MET	2.8
28	C4	65	ASP	2.8
3	CC	55	SER	2.8
3	AC	61	GLY	2.8
37	BD	2	GLY	2.8
3	AC	198	GLU	2.7
4	AD	262	ARG	2.7
35	DB	170	GLU	2.7
37	BD	73	ARG	2.7
41	BH	122	ARG	2.7
57	BZ	433	GLU	2.7
1	CA	652(B)	A	2.7
9	AK	39	ALA	2.7
7	CG	19	LEU	2.7
34	DA	933	G	2.7
57	DZ	653	PHE	2.7
49	BP	6	LEU	2.7
43	DJ	68	HIS	2.7
34	DA	1150	U	2.7
50	BQ	100	LYS	2.7
43	BJ	42	THR	2.7
57	DZ	84	THR	2.7
37	DD	152	SER	2.7
41	DH	23	SER	2.7
54	BU	11	GLY	2.7
57	DZ	16	GLY	2.7
54	DU	23	PRO	2.7
37	BD	118	ARG	2.7
42	DI	73	GLN	2.7

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Mol	Chain	Res	Type	RSRZ
43	DJ	43	ARG	2.7
36	BC	207	VAL	2.7
39	DF	90	VAL	2.7
46	DM	7	VAL	2.7
57	DZ	514	VAL	2.7
3	CC	159	ALA	2.7
9	AK	88	ALA	2.7
3	AC	50	ILE	2.7
28	C4	49	PHE	2.7
47	BN	16	PHE	2.7
57	BZ	90	PHE	2.7
28	C4	67	TYR	2.7
40	DG	18	TYR	2.7
49	BP	38	TYR	2.7
1	AA	2141	A	2.7
56	DY	36	A	2.7
56	BW	44	G	2.7
9	CK	47	ASN	2.7
9	CK	37	THR	2.7
46	DM	85	GLY	2.7
14	CQ	59	ARG	2.7
38	DE	81	GLU	2.7
3	AC	223	VAL	2.7
40	DG	118	VAL	2.7
42	BI	65	VAL	2.7
57	BZ	647	VAL	2.7
3	CC	174	ALA	2.7
36	DC	77	ILE	2.7
46	DM	33	ALA	2.7
52	BS	32	LYS	2.7
3	AC	219	MET	2.7
1	AA	218	A	2.7
1	AA	12	U	2.7
3	AC	62	THR	2.7
6	CF	207	GLY	2.7
9	AK	129	PRO	2.7
16	AS	3	ARG	2.7
43	DJ	100	THR	2.7
42	BI	105	ASP	2.7
40	BG	77	SER	2.7
50	BQ	99	SER	2.7
42	BI	41	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
57	BZ	88	VAL	2.7
28	C4	9	LEU	2.7
40	BG	38	LEU	2.7
57	BZ	567	LEU	2.7
7	CG	12	TYR	2.7
3	CC	208	THR	2.7
22	CY	83	THR	2.7
28	A4	52	THR	2.7
54	BU	23	PRO	2.7
57	BZ	379	GLY	2.7
1	CA	2169	A	2.7
34	DA	1531	A	2.7
9	CK	65	GLU	2.7
28	C4	66	SER	2.7
36	DC	134	ILE	2.6
57	BZ	425	SER	2.7
3	CC	6	LYS	2.6
57	BZ	471	LYS	2.6
10	CL	122	ALA	2.6
40	BG	7	ALA	2.6
42	BI	43	ALA	2.6
1	CA	2148	G	2.6
56	BY	18	G	2.6
3	CC	224	ARG	2.6
36	BC	190	ARG	2.6
48	DO	68	ARG	2.6
57	DZ	599	PRO	2.6
38	DE	120	THR	2.6
10	AL	77	LEU	2.6
35	BB	12	GLU	2.6
43	DJ	49	VAL	2.6
47	DN	44	LEU	2.6
47	DN	46	GLU	2.6
50	DQ	13	ASP	2.6
50	DQ	87	LYS	2.6
51	DR	78	LEU	2.6
56	DY	33	U	2.6
57	BZ	94	VAL	2.6
57	DZ	647	VAL	2.6
16	CS	35	ILE	2.6
43	DJ	96	ILE	2.6
57	BZ	413	ILE	2.6

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Mol	Chain	Res	Type	RSRZ
3	CC	4	HIS	2.6
1	AA	2153	G	2.6
1	CA	1074	G	2.6
1	CA	2116	G	2.6
34	BA	1036	G	2.6
34	DA	1185	G	2.6
10	CL	135	GLY	2.6
27	C3	2	PRO	2.6
37	DD	29	PRO	2.6
7	CG	133	LEU	2.6
10	CL	116	ASN	2.6
52	DS	53	ASN	2.6
53	BT	14	LYS	2.6
42	DI	96	LEU	2.6
57	DZ	424	LEU	2.6
33	A9	28	GLU	2.6
43	DJ	50	ILE	2.6
57	BZ	178	ILE	2.6
4	AD	2	ALA	2.6
40	DG	32	ARG	2.6
54	DU	24	ARG	2.6
3	AC	182	PRO	2.6
8	CH	142	GLY	2.6
9	CK	110	GLY	2.6
40	DG	82	GLY	2.6
46	BM	113	PRO	2.6
35	DB	179	LYS	2.6
3	CC	65	LEU	2.6
9	CK	125	LEU	2.6
10	AL	115	LEU	2.6
35	DB	93	VAL	2.6
42	BI	19	LEU	2.6
43	BJ	100	THR	2.6
47	DN	18	VAL	2.6
10	AL	85	GLU	2.6
35	DB	48	MET	2.6
50	DQ	24	GLU	2.6
3	CC	10	ALA	2.6
3	CC	192	ALA	2.6
40	DG	40	ALA	2.6
44	DK	125	PHE	2.6
47	DN	20	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
57	BZ	528	ALA	2.6
1	AA	2189	U	2.6
53	BT	70	SER	2.6
7	CG	118	ARG	2.6
42	DI	42	ARG	2.6
47	DN	57	ARG	2.6
3	CC	19	LYS	2.6
3	CC	183	PRO	2.6
9	CK	33	PRO	2.6
9	CK	98	LYS	2.6
36	DC	73	PRO	2.6
54	BU	21	TYR	2.6
57	DZ	618	GLY	2.6
13	CP	99	LEU	2.6
42	DI	56	LEU	2.6
3	CC	176	VAL	2.6
47	BN	25	VAL	2.6
57	BZ	449	THR	2.6
57	DZ	657	THR	2.6
46	BM	101	GLN	2.6
40	DG	43	PHE	2.6
49	DP	9	PHE	2.6
50	DQ	44	ALA	2.6
3	AC	56	ASP	2.6
34	DA	1036	G	2.5
43	DJ	73	ASP	2.6
3	CC	165	ARG	2.5
26	C2	51	ARG	2.5
10	CL	130	SER	2.5
52	DS	4	SER	2.5
3	CC	168	LYS	2.5
54	DU	3	LYS	2.5
1	AA	1878	A	2.5
3	CC	66	PRO	2.5
7	CG	2	PRO	2.5
8	CH	36	PRO	2.5
36	DC	167	TRP	2.5
55	BV	12	A	2.5
16	CS	56	LEU	2.5
46	BM	96	LEU	2.5
46	DM	56	LEU	2.5
48	BO	57	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
57	BZ	205	TYR	2.5
57	DZ	212	TYR	2.5
35	DB	229	VAL	2.5
3	CC	216	THR	2.5
23	AZ	2	GLU	2.5
27	A3	60	GLU	2.5
47	BN	8	GLU	2.5
40	DG	83	ALA	2.5
47	DN	36	PHE	2.5
57	BZ	470	PHE	2.5
57	BZ	523	PHE	2.5
21	AX	68	ARG	2.5
9	CK	102	LYS	2.5
57	BZ	25	LYS	2.5
34	BA	1190	G	2.5
36	DC	7	PRO	2.5
3	AC	170	GLY	2.5
36	DC	42	LEU	2.5
37	BD	11	LEU	2.5
46	DM	66	LEU	2.5
3	AC	42	VAL	2.5
3	AC	213	VAL	2.5
9	AK	7	VAL	2.5
1	AA	2136	A	2.5
3	AC	41	THR	2.5
3	CC	25	GLU	2.5
23	CZ	136	PHE	2.5
28	C4	27	THR	2.5
35	DB	152	PHE	2.5
40	DG	24	THR	2.5
54	BU	8	THR	2.5
57	DZ	486	THR	2.5
42	BI	45	ALA	2.5
57	BZ	220	ALA	2.5
9	CK	60	ARG	2.5
1	CA	1082	U	2.5
21	CX	1	MET	2.5
36	DC	196	LEU	2.5
43	BJ	77	PRO	2.5
43	DJ	41	PRO	2.5
43	BJ	52	GLY	2.5
2	CB	28	C	2.5

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Mol	Chain	Res	Type	RSRZ
34	DA	1234	C	2.5
37	DD	156	GLU	2.5
57	DZ	501	THR	2.5
1	CA	2173	A	2.5
34	DA	1183	A	2.5
44	DK	126	ARG	2.5
40	BG	70	LYS	2.5
46	DM	13	LYS	2.5
47	DN	15	LYS	2.5
53	DT	27	LYS	2.5
3	AC	4	HIS	2.5
57	DZ	639	ASN	2.5
54	DU	5	ASP	2.5
10	CL	134	MET	2.5
3	CC	222	SER	2.5
7	CG	52	ILE	2.5
37	BD	113	SER	2.5
37	BD	183	GLY	2.5
50	DQ	99	SER	2.5
57	BZ	594	VAL	2.5
35	DB	122	PHE	2.5
44	BK	25	TYR	2.5
53	BT	60	GLU	2.5
57	DZ	198	GLU	2.5
9	AK	11	ALA	2.5
9	CK	115	GLN	2.5
37	DD	47	ARG	2.5
38	DE	24	ARG	2.5
42	DI	120	ARG	2.5
46	DM	30	ALA	2.5
53	BT	8	ARG	2.5
1	CA	1104	C	2.5
14	CQ	22	LYS	2.5
34	DA	1397	C	2.5
52	DS	79	THR	2.5
54	BU	3	LYS	2.5
1	CA	2124	G	2.5
1	CA	2833	G	2.5
34	BA	631	G	2.5
56	BY	1	G	2.5
1	CA	900	A	2.5
9	AK	28	ASN	2.5

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Mol	Chain	Res	Type	RSRZ
36	BC	43	LEU	2.4
47	DN	42	ILE	2.4
11	AN	9	VAL	2.4
36	DC	171	GLY	2.4
37	DD	83	SER	2.4
57	DZ	594	VAL	2.4
2	AB	1	U	2.4
31	A7	47	ARG	2.4
57	BZ	438	PHE	2.4
10	CL	131	ALA	2.4
43	BJ	32	ALA	2.4
43	DJ	26	ALA	2.4
47	BN	21	TYR	2.4
34	DA	1113	C	2.4
56	DY	75	C	2.4
10	AL	126	MET	2.4
22	AY	92	ASN	2.4
57	DZ	-56	ASN	2.4
13	CP	105	LEU	2.4
41	DH	63	LEU	2.4
1	AA	2190	G	2.4
9	CK	77	PRO	2.4
34	DA	971	G	2.4
34	DA	1033	G	2.4
43	BJ	74	ILE	2.4
3	AC	15	VAL	2.4
9	CK	27	VAL	2.4
11	CN	140	VAL	2.4
42	BI	115	GLY	2.4
26	A2	69	ARG	2.4
48	BO	88	ARG	2.4
36	DC	206	GLU	2.4
42	DI	18	PHE	2.4
46	BM	32	GLU	2.4
47	DN	11	LYS	2.4
47	DN	16	PHE	2.4
9	AK	97	ALA	2.4
35	DB	218	ALA	2.4
3	AC	8	TYR	2.4
43	BJ	33	GLN	2.4
52	BS	48	THR	2.4
10	AL	89	HIS	2.4

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Mol	Chain	Res	Type	RSRZ
1	AA	2196	C	2.4
3	CC	202	PRO	2.4
9	AK	77	PRO	2.4
42	DI	21	PRO	2.4
43	BJ	98	ILE	2.4
4	CD	238	GLY	2.4
36	BC	76	VAL	2.4
47	BN	18	VAL	2.4
49	DP	2	VAL	2.4
52	BS	72	GLY	2.4
52	DS	68	GLY	2.4
57	BZ	86	GLY	2.4
1	CA	2114	A	2.4
50	DQ	37	LYS	2.4
1	CA	2166	G	2.4
24	C0	68	GLU	2.4
27	C3	60	GLU	2.4
34	DA	973	G	2.4
34	DA	1032	G	2.4
9	CK	11	ALA	2.4
10	CL	88	ALA	2.4
57	DZ	677	GLN	2.4
1	CA	2150	U	2.4
56	BY	33	U	2.4
45	BL	64	TYR	2.4
57	DZ	91	THR	2.4
36	DC	69	HIS	2.4
42	BI	117	HIS	2.4
36	DC	178	LEU	2.4
43	BJ	50	ILE	2.4
43	BJ	96	ILE	2.4
43	BJ	76	ASN	2.4
57	DZ	444	PRO	2.4
35	DB	71	VAL	2.4
37	DD	148	VAL	2.4
3	AC	168	LYS	2.4
3	CC	71	LYS	2.4
7	CG	84	LYS	2.4
8	CH	6	ARG	2.4
13	CP	76	LYS	2.4
42	BI	39	GLY	2.4
16	CS	10	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
35	DB	195	ASP	2.4
36	DC	11	ARG	2.4
43	DJ	58	ASP	2.4
53	DT	8	ARG	2.4
1	CA	2789	C	2.4
34	DA	1384	C	2.4
1	AA	2803	A	2.4
1	CA	1067	A	2.4
49	BP	80	PHE	2.4
9	AK	84	GLU	2.4
57	DZ	93	GLU	2.4
43	BJ	35	SER	2.4
40	BG	156	TRP	2.4
1	AA	2228	G	2.4
34	DA	1491	G	2.4
36	BC	192	THR	2.4
41	DH	24	THR	2.4
10	CL	89	HIS	2.4
24	C0	75	LEU	2.4
35	DB	140	HIS	2.4
37	BD	174	LEU	2.4
57	BZ	216	LEU	2.4
46	DM	4	ILE	2.4
50	DQ	36	ILE	2.4
52	DS	42	PRO	2.4
57	DZ	636	PRO	2.4
8	CH	107	VAL	2.3
16	CS	23	ARG	2.3
16	CS	85	VAL	2.3
37	DD	198	VAL	2.3
40	BG	81	GLY	2.3
42	BI	121	ARG	2.3
57	DZ	530	VAL	2.3
35	BB	152	PHE	2.3
57	BZ	598	ASP	2.3
22	CY	69	ALA	2.3
35	DB	129	GLU	2.3
57	DZ	433	GLU	2.3
57	DZ	645	ALA	2.3
40	DG	110	GLN	2.3
56	BY	74	C	2.3
1	CA	2119	A	2.3

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Mol	Chain	Res	Type	RSRZ
3	AC	222	SER	2.3
34	DA	653	A	2.3
34	DA	975	A	2.3
34	DA	994	A	2.3
40	DG	73	MET	2.3
10	CL	120	LEU	2.3
23	CZ	9	TYR	2.3
35	DB	138	LEU	2.3
42	DI	62	TYR	2.3
1	CA	2132	U	2.3
2	CB	1	U	2.3
36	BC	8	ILE	2.3
43	DJ	74	ILE	2.3
42	BI	123	PRO	2.3
1	AA	2163	G	2.3
1	CA	1106	G	2.3
1	CA	2110	G	2.3
1	CA	2120	G	2.3
2	CB	24	G	2.3
37	DD	153	ARG	2.3
39	DF	71	ARG	2.3
53	BT	17	ARG	2.3
57	DZ	644	ARG	2.3
37	BD	77	ASN	2.3
42	DI	30	GLY	2.3
42	DI	68	GLY	2.3
57	BZ	372	GLY	2.3
35	BB	160	ASP	2.3
9	CK	79	ALA	2.3
57	DZ	-19	GLU	2.3
49	DP	65	GLN	2.3
57	DZ	426	GLN	2.3
25	C1	98	LEU	2.3
10	AL	101	TRP	2.3
10	CL	101	TRP	2.3
37	DD	91	SER	2.3
1	CA	2602	A	2.3
3	CC	214	TYR	2.3
34	BA	532	A	2.3
35	DB	162	ILE	2.3
42	BI	114	TYR	2.3
43	DJ	38	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
44	DK	50	TYR	2.3
46	DM	22	ILE	2.3
52	BS	61	TYR	2.3
55	BV	15	A	2.3
31	C7	47	ARG	2.3
36	BC	7	PRO	2.3
42	BI	120	ARG	2.3
43	DJ	70	ARG	2.3
47	DN	12	ARG	2.3
57	DZ	408	VAL	2.3
3	CC	5	GLY	2.3
3	CC	160	GLY	2.3
23	AZ	160	GLY	2.3
41	DH	71	GLY	2.3
3	AC	58	ASN	2.3
38	DE	130	ASN	2.3
36	DC	186	PHE	2.3
1	CA	2106	G	2.3
1	CA	2133	G	2.3
10	CL	82	ALA	2.3
34	BA	1002	G	2.3
34	DA	1356	G	2.3
26	C2	52	ASP	2.3
36	DC	17	ASP	2.3
37	BD	181	MET	2.3
3	AC	65	LEU	2.3
36	BC	204	LEU	2.3
37	DD	78	LEU	2.3
3	AC	64	SER	2.3
33	C9	17	ILE	2.3
28	C4	44	THR	2.3
8	CH	59	ARG	2.3
24	C0	74	ARG	2.3
46	DM	91	ARG	2.3
47	BN	3	ARG	2.3
1	CA	1913	A	2.3
8	CH	49	VAL	2.3
9	AK	107	VAL	2.3
31	C7	46	VAL	2.3
57	BZ	599	PRO	2.3
56	DY	35	A	2.3
3	AC	160	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
3	AC	220	GLY	2.3
43	BJ	36	GLY	2.3
42	BI	101	PHE	2.3
9	AK	89	ALA	2.3
9	CK	127	GLU	2.3
10	CL	137	GLU	2.3
28	C4	57	GLU	2.3
42	DI	12	GLU	2.3
7	CG	90	LEU	2.3
23	CZ	5	LEU	2.3
48	DO	66	LEU	2.3
52	DS	22	LEU	2.3
28	C4	18	CYS	2.3
34	DA	1220	G	2.3
48	BO	3	ILE	2.3
8	CH	3	ARG	2.3
47	DN	35	ARG	2.3
52	DS	3	ARG	2.3
9	CK	29	TYR	2.3
36	DC	184	TYR	2.3
40	DG	21	VAL	2.3
42	DI	86	VAL	2.3
57	DZ	561	VAL	2.3
36	DC	194	GLY	2.3
46	DM	6	GLY	2.3
1	CA	1420	U	2.3
1	CA	1049	C	2.2
34	DA	1321	C	2.2
52	DS	74	PHE	2.2
56	BW	17	C	2.2
3	AC	163	GLU	2.2
28	C4	30	GLU	2.2
31	C7	45	ALA	2.2
50	BQ	24	GLU	2.2
43	BJ	8	LEU	2.2
52	BS	30	LEU	2.2
7	CG	26	GLN	2.2
9	AK	45	LYS	2.2
57	DZ	619	ASP	2.2
40	DG	42	ILE	2.2
36	BC	172	ARG	2.2
38	BE	107	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
40	BG	153	HIS	2.2
42	BI	128	ARG	2.2
43	DJ	56	HIS	2.2
45	DL	89	ARG	2.2
49	BP	5	ARG	2.2
3	AC	216	THR	2.2
10	AL	113	PRO	2.2
43	DJ	48	THR	2.2
23	CZ	153	SER	2.2
35	BB	7	VAL	2.2
41	DH	79	VAL	2.2
42	DI	65	VAL	2.2
43	DJ	94	VAL	2.2
52	BS	38	SER	2.2
57	BZ	530	VAL	2.2
37	BD	20	TYR	2.2
1	CA	11	G	2.2
1	CA	2121	G	2.2
1	CA	2156	G	2.2
1	CA	2318	G	2.2
34	DA	1047	G	2.2
56	BY	70	G	2.2
56	DY	71	G	2.2
6	CF	131	GLY	2.2
48	BO	89	GLY	2.2
23	CZ	44	PHE	2.2
52	DS	44	MET	2.2
1	CA	1078	U	2.2
3	AC	43	GLU	2.2
3	CC	187	ALA	2.2
7	AG	50	ALA	2.2
9	CK	126	ALA	2.2
23	CZ	184	ALA	2.2
36	BC	189	ALA	2.2
57	DZ	419	ALA	2.2
34	DA	935	A	2.2
35	DB	149	LEU	2.2
53	DT	10	LEU	2.2
34	DA	1054	C	2.2
42	DI	77	ILE	2.2
9	CK	72	ASP	2.2
28	A4	58	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
37	DD	115	ARG	2.2
38	DE	18	ARG	2.2
3	AC	66	PRO	2.2
7	CG	161	THR	2.2
37	BD	9	CYS	2.2
52	BS	9	VAL	2.2
3	CC	177	GLY	2.2
13	CP	116	GLY	2.2
43	BJ	31	GLY	2.2
22	CY	5	MET	2.2
3	AC	181	PHE	2.2
57	BZ	672	PHE	2.2
1	CA	2123	G	2.2
1	CA	2162	G	2.2
7	CG	50	ALA	2.2
34	BA	1003	G	2.2
34	DA	941	G	2.2
34	DA	963	G	2.2
35	BB	11	LEU	2.2
35	BB	61	LEU	2.2
37	DD	15	GLU	2.2
42	BI	40	LEU	2.2
43	DJ	40	LEU	2.2
49	BP	12	LYS	2.2
49	BP	64	ALA	2.2
50	BQ	98	LEU	2.2
53	DT	21	LYS	2.2
46	DM	73	GLU	2.2
57	BZ	95	GLU	2.2
57	DZ	192	LEU	2.2
56	BW	45	U	2.2
56	BY	20	U	2.2
3	CC	226	ASN	2.2
10	CL	79	ARG	2.2
57	DZ	590	ILE	2.2
34	BA	1447	A	2.2
56	BY	36	A	2.2
35	DB	234	PRO	2.2
41	DH	97	VAL	2.2
42	BI	98	PRO	2.2
57	BZ	440	VAL	2.2
57	DZ	542	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
7	CG	29	TRP	2.2
57	DZ	74	TRP	2.2
40	BG	89	MET	2.2
42	DI	72	GLY	2.2
54	DU	11	GLY	2.2
19	CV	85	LYS	2.2
39	BF	54	LYS	2.2
42	BI	33	PHE	2.2
57	BZ	525	PHE	2.2
32	C8	56	GLU	2.2
50	BQ	49	GLU	2.2
1	CA	1081	U	2.2
17	AT	115	ARG	2.2
43	DJ	75	ILE	2.2
41	BH	15	ASN	2.2
1	AA	2184	G	2.2
1	AA	2204	G	2.2
3	CC	200	HIS	2.2
34	BA	1124	G	2.2
34	BA	1224	G	2.2
34	DA	1124	G	2.2
56	BY	19	G	2.2
56	DY	70	G	2.2
35	BB	136	VAL	2.2
57	DZ	405	PRO	2.2
1	AA	2130	C	2.2
1	CA	2145	C	2.2
35	BB	90	MET	2.2
36	DC	177	THR	2.2
52	DS	48	THR	2.2
57	DZ	566	THR	2.2
21	CX	2	LYS	2.2
36	BC	155	GLY	2.2
42	BI	78	LYS	2.2
43	DJ	36	GLY	2.2
57	DZ	629	GLY	2.2
28	A4	49	PHE	2.2
35	DB	210	SER	2.2
47	DN	53	LEU	2.2
57	BZ	242	LEU	2.2
37	BD	15	GLU	2.2
42	DI	45	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
8	CH	89	ILE	2.1
24	C0	72	ARG	2.1
35	BB	36	ARG	2.1
36	BC	39	ILE	2.1
57	BZ	92	ILE	2.1
22	CY	57	GLN	2.1
34	BA	1257	U	2.1
36	BC	176	HIS	2.1
52	BS	53	ASN	2.1
36	BC	130	VAL	2.1
57	DZ	322	VAL	2.1
3	AC	51	ASP	2.1
3	AC	177	GLY	2.1
3	CC	70	GLY	2.1
24	C0	43	THR	2.1
34	BA	220	G	2.1
34	DA	1285	A	2.1
56	DY	18	G	2.1
1	AA	2200	C	2.1
1	CA	2161	C	2.1
1	CA	2179	C	2.1
2	CB	27	C	2.1
7	CG	62	LEU	2.1
8	CH	123	PHE	2.1
34	BA	1243	C	2.1
34	BA	1317	C	2.1
42	BI	102	LEU	2.1
52	BS	22	LEU	2.1
46	DM	23	TYR	2.1
49	DP	38	TYR	2.1
3	AC	46	ALA	2.1
47	DN	32	SER	2.1
23	CZ	185	GLU	2.1
35	BB	137	ARG	2.1
36	BC	88	ARG	2.1
36	DC	161	GLU	2.1
38	DE	25	ARG	2.1
40	DG	149	ARG	2.1
46	BM	80	ARG	2.1
54	BU	22	ARG	2.1
57	DZ	160	ARG	2.1
46	DM	9	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
57	BZ	631	ILE	2.1
57	DZ	105	ILE	2.1
57	DZ	461	ILE	2.1
57	DZ	630	GLN	2.1
16	CS	95	HIS	2.1
8	CH	74	ASN	2.1
10	CL	104	VAL	2.1
37	BD	112	VAL	2.1
41	DH	72	PRO	2.1
42	DI	28	VAL	2.1
46	DM	82	MET	2.1
52	BS	59	PRO	2.1
24	C0	49	LYS	2.1
47	DN	4	LYS	2.1
28	A4	54	GLY	2.1
9	CK	10	LEU	2.1
35	DB	154	LEU	2.1
5	CE	151	TYR	2.1
9	CK	83	TYR	2.1
10	AL	81	ALA	2.1
21	CX	65	ARG	2.1
28	A4	63	TYR	2.1
34	BA	59	A	2.1
34	DA	1360	A	2.1
35	DB	237	ALA	2.1
37	BD	27	TYR	2.1
38	DE	60	TYR	2.1
42	DI	83	ARG	2.1
46	BM	21	TYR	2.1
57	DZ	186	TYR	2.1
1	AA	2843	G	2.1
1	CA	2159	G	2.1
16	CS	50	SER	2.1
16	CS	82	ILE	2.1
26	C2	11	GLU	2.1
34	DA	1310	G	2.1
34	DA	1361	G	2.1
42	DI	81	ILE	2.1
43	BJ	59	SER	2.1
52	BS	40	ILE	2.1
56	BY	5	G	2.1
34	BA	1029	C	2.1

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Mol	Chain	Res	Type	RSRZ
57	DZ	112	GLN	2.1
57	DZ	506	GLN	2.1
47	BN	49	HIS	2.1
40	BG	84	ASN	2.1
42	BI	108	VAL	2.1
1	AA	432	U	2.1
3	CC	68	GLY	2.1
7	CG	3	LEU	2.1
7	CG	7	LEU	2.1
13	CP	109	GLY	2.1
36	DC	2	GLY	2.1
36	DC	32	LEU	2.1
37	DD	44	GLY	2.1
37	DD	162	LEU	2.1
40	DG	132	GLY	2.1
3	AC	35	THR	2.1
42	DI	101	PHE	2.1
3	AC	161	ARG	2.1
37	DD	209	ARG	2.1
10	CL	107	ILE	2.1
13	CP	92	GLU	2.1
23	CZ	53	ILE	2.1
36	BC	129	ALA	2.1
39	DF	99	ALA	2.1
42	DI	13	ALA	2.1
43	DJ	27	ALA	2.1
46	DM	28	ALA	2.1
35	DB	236	TYR	2.1
41	DH	22	GLU	2.1
57	BZ	462	ILE	2.1
1	AA	2191	A	2.1
1	CA	1084	A	2.1
37	BD	26	CYS	2.1
37	BD	137	SER	2.1
52	DS	35	SER	2.1
57	BZ	97	SER	2.1
57	DZ	521	SER	2.1
37	DD	160	GLN	2.1
9	AK	38	HIS	2.1
1	AA	2147	G	2.1
1	CA	2155	G	2.1
34	BA	1030(C)	G	2.1

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Mol	Chain	Res	Type	RSRZ
34	DA	940	C	2.1
34	DA	1221	G	2.1
34	DA	1223	C	2.1
36	BC	26	LYS	2.1
42	BI	11	LYS	2.1
42	DI	70	LYS	2.1
47	DN	50	LYS	2.1
52	DS	47	HIS	2.1
56	DY	15	G	2.1
43	DJ	69	ASN	2.1
52	BS	5	LEU	2.1
52	DS	16	LEU	2.1
1	CA	958	U	2.1
2	CB	55	U	2.1
3	CC	49	GLY	2.1
34	BA	1065	U	2.1
57	BZ	633	GLY	2.1
57	DZ	520	GLY	2.1
3	AC	7	ARG	2.1
3	CC	39	ASP	2.1
7	AG	116	ASP	2.1
7	CG	98	ARG	2.1
35	BB	175	ARG	2.1
37	DD	49	ARG	2.1
57	BZ	38	ARG	2.1
57	DZ	598	ASP	2.1
36	BC	149	ALA	2.1
44	DK	68	ALA	2.1
47	DN	48	ALA	2.1
3	AC	203	GLU	2.1
36	BC	206	GLU	2.1
28	A4	32	TYR	2.1
3	CC	185	LYS	2.0
57	DZ	661	SER	2.0
43	DJ	13	HIS	2.0
42	DI	14	VAL	2.0
42	DI	41	VAL	2.0
57	BZ	526	VAL	2.0
57	BZ	600	VAL	2.0
57	BZ	479	PRO	2.0
57	DZ	-59	PRO	2.0
1	AA	670	C	2.0

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Mol	Chain	Res	Type	RSRZ
9	CK	111	LEU	2.0
34	DA	89	C	2.0
34	DA	934	C	2.0
34	DA	1354	C	2.0
1	CA	1047	G	2.0
1	CA	1537	G	2.0
3	AC	70	GLY	2.0
3	CC	181	PHE	2.0
5	CE	29	GLY	2.0
8	CH	82	GLY	2.0
34	DA	945	G	2.0
34	DA	1048	G	2.0
34	DA	1061	G	2.0
34	DA	1139	G	2.0
34	DA	1353	G	2.0
35	DB	181	PHE	2.0
36	DC	9	GLY	2.0
37	BD	168	ARG	2.0
40	BG	76	ARG	2.0
41	BH	84	ARG	2.0
41	DH	92	ARG	2.0
42	DI	8	GLY	2.0
53	BT	103	GLY	2.0
57	DZ	90	PHE	2.0
3	CC	169	THR	2.0
8	CH	136	ILE	2.0
9	AK	104	ILE	2.0
36	DC	165	THR	2.0
41	BH	80	ILE	2.0
42	DI	75	ASP	2.0
53	DT	55	ILE	2.0
3	AC	26	ALA	2.0
57	DZ	67	ALA	2.0
57	DZ	102	ASP	2.0
43	BJ	61	GLU	2.0
3	CC	178	LYS	2.0
10	CL	95	LYS	2.0
37	BD	54	TYR	2.0
41	BH	58	TYR	2.0
42	DI	92	TYR	2.0
57	BZ	454	MET	2.0
37	BD	133	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
43	DJ	33	GLN	2.0
49	BP	11	SER	2.0
50	DQ	79	SER	2.0
57	BZ	401	SER	2.0
57	BZ	408	VAL	2.0
57	BZ	683	VAL	2.0
57	DZ	463	VAL	2.0
8	CH	8	PRO	2.0
35	BB	125	PRO	2.0
35	DB	232	PRO	2.0
9	CK	117	LEU	2.0
34	DA	1030(D)	A	2.0
34	DA	1349	A	2.0
36	BC	91	LEU	2.0
36	DC	91	LEU	2.0
42	DI	47	LEU	2.0
57	BZ	101	LEU	2.0
36	BC	179	ARG	2.0
36	DC	127	ARG	2.0
37	BD	139	ARG	2.0
54	BU	9	ARG	2.0
24	A0	8	GLY	2.0
1	AA	935	C	2.0
7	CG	77	ILE	2.0
36	BC	157	ILE	2.0
40	DG	120	ILE	2.0
43	BJ	23	ILE	2.0
56	BY	40	C	2.0
57	DZ	289	ILE	2.0
9	CK	124	ALA	2.0
10	AL	128	ALA	2.0
46	DM	18	ALA	2.0
52	BS	50	ALA	2.0
1	AA	1221	G	2.0
1	AA	2123	G	2.0
1	AA	2142	G	2.0
1	AA	2176	G	2.0
1	CA	652(C)	G	2.0
1	CA	1091	G	2.0
3	AC	32	GLU	2.0
7	CG	97	ASP	2.0
14	CQ	112	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
34	BA	1001(A)	G	2.0
34	BA	1032	G	2.0
37	DD	85	LYS	2.0
35	DB	90	MET	2.0
48	DO	59	MET	2.0
52	DS	66	MET	2.0
41	DH	65	TYR	2.0
57	DZ	676	TYR	2.0
7	CG	70	VAL	2.0
35	BB	229	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	39	20/21	0.37	0.15	291,291,291,291	0
56	5MU	DY	54	21/22	0.38	0.15	303,303,303,303	0
56	PSU	BY	32	20/21	0.45	0.14	226,226,226,226	0
56	PSU	DY	32	20/21	0.51	0.19	275,275,275,275	0
56	7MG	BY	46	24/25	0.55	0.13	276,276,276,276	0
56	PSU	BY	55	20/21	0.57	0.13	243,243,243,243	0
56	PSU	BY	39	20/21	0.61	0.15	197,197,197,197	0
56	PSU	DY	55	20/21	0.61	0.16	252,252,252,252	0
56	MIA	DY	37	22/30	0.62	0.19	271,271,271,271	0
56	5MU	BY	54	21/22	0.64	0.14	246,246,246,246	0
56	MIA	BY	37	22/30	0.70	0.15	186,186,186,186	0
58	MVA	BX	5	8/9	0.72	0.17	82,82,82,82	0
56	4SU	BY	8	20/21	0.74	0.09	239,239,239,239	0
58	2R1	DX	6	10/11	0.76	0.12	81,81,81,81	0
56	4SU	DY	8	20/21	0.78	0.09	277,277,277,277	0
56	7MG	DW	46	24/25	0.78	0.13	124,124,124,124	0
58	2R1	BX	6	10/11	0.79	0.14	82,82,82,82	1
56	7MG	DY	46	24/25	0.79	0.12	266,266,266,266	0
56	5MU	DW	54	21/22	0.81	0.11	95,95,95,95	1
58	004	DX	3	10/11	0.82	0.13	81,81,81,81	0
56	PSU	DW	32	20/21	0.82	0.15	126,126,126,126	0
56	PSU	DW	55	20/21	0.84	0.09	92,92,92,92	0
56	PSU	DW	39	20/21	0.84	0.15	112,112,112,112	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MVA	BX	9	8/9	0.85	0.16	82,82,82,82	0
56	7MG	BW	46	24/25	0.86	0.12	76,76,76,76	3
58	004	BX	3	10/11	0.87	0.12	82,82,82,82	0
56	PSU	BW	55	20/21	0.88	0.08	79,79,79,79	0
56	4SU	DW	8	20/21	0.88	0.09	103,103,103,103	0
58	2QY	BX	10	13/14	0.88	0.12	82,82,82,82	0
58	2QY	DX	10	13/14	0.88	0.10	81,81,81,81	0
58	2R3	BX	8	14/15	0.89	0.10	82,82,82,82	0
58	MVA	DX	5	8/9	0.89	0.11	81,81,81,81	0
56	5MU	BW	54	21/22	0.89	0.09	80,80,80,80	0
56	MIA	DW	37	29/30	0.89	0.14	109,109,109,109	0
56	MIA	BW	37	29/30	0.91	0.11	79,79,79,79	0
58	MVA	DX	9	8/9	0.91	0.10	81,81,81,81	0
58	2QZ	BX	1	9/10	0.91	0.12	82,82,82,82	0
56	PSU	BW	32	20/21	0.91	0.10	73,73,73,73	1
58	2QZ	DX	1	9/10	0.93	0.13	81,81,81,81	0
56	4SU	BW	8	20/21	0.94	0.07	60,60,60,60	1
58	2R3	DX	8	14/15	0.94	0.09	81,81,81,81	0
56	PSU	BW	39	20/21	0.95	0.09	65,65,65,65	0

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
59	MG	DA	1718	1/1	0.23	0.19	101,101,101,101	0
59	MG	BA	1776	1/1	0.27	0.18	97,97,97,97	0
59	MG	CB	3013	1/1	0.33	0.16	100,100,100,100	0
59	MG	BA	1790	1/1	0.39	0.17	96,96,96,96	0
59	MG	DA	1757	1/1	0.43	0.27	111,111,111,111	0
59	MG	CA	3624	1/1	0.51	0.22	118,118,118,118	0
59	MG	BA	1691	1/1	0.55	0.22	86,86,86,86	0
59	MG	AA	3773	1/1	0.55	0.63	35,35,35,35	1
59	MG	BA	1616	1/1	0.55	0.22	122,122,122,122	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	1754	1/1	0.55	0.28	120,120,120,120	0
59	MG	BB	3001	1/1	0.55	0.27	91,91,91,91	0
59	MG	CA	3363	1/1	0.58	0.13	88,88,88,88	0
59	MG	AA	3056	1/1	0.58	0.45	96,96,96,96	0
59	MG	DA	1609	1/1	0.59	0.13	89,89,89,89	0
59	MG	AA	3277	1/1	0.59	0.24	99,99,99,99	0
59	MG	CA	3488	1/1	0.60	0.25	88,88,88,88	0
59	MG	CA	3620	1/1	0.60	0.24	96,96,96,96	0
59	MG	BA	1660	1/1	0.61	0.24	82,82,82,82	0
59	MG	CA	3289	1/1	0.62	0.14	65,65,65,65	0
59	MG	AA	3418	1/1	0.62	0.12	74,74,74,74	0
59	MG	CA	3566	1/1	0.64	0.17	30,30,30,30	1
59	MG	DA	1710	1/1	0.65	0.10	104,104,104,104	0
59	MG	BL	201	1/1	0.65	0.12	84,84,84,84	0
59	MG	CA	3579	1/1	0.65	0.14	65,65,65,65	0
59	MG	AA	3643	1/1	0.65	0.23	84,84,84,84	0
59	MG	CA	3545	1/1	0.66	0.20	86,86,86,86	0
59	MG	DA	1738	1/1	0.66	0.14	95,95,95,95	0
59	MG	CA	3304	1/1	0.67	0.14	67,67,67,67	0
59	MG	CA	3546	1/1	0.67	0.14	88,88,88,88	0
59	MG	AA	3717	1/1	0.67	0.50	68,68,68,68	0
59	MG	CQ	202	1/1	0.67	0.27	74,74,74,74	0
59	MG	BA	1673	1/1	0.67	0.14	80,80,80,80	0
59	MG	AA	3747	1/1	0.68	0.16	85,85,85,85	0
59	MG	AA	3347	1/1	0.68	0.13	88,88,88,88	0
59	MG	DA	1611	1/1	0.68	0.41	89,89,89,89	0
59	MG	AA	3296	1/1	0.68	0.18	67,67,67,67	0
59	MG	AA	3617	1/1	0.69	0.10	77,77,77,77	0
59	MG	AA	3780	1/1	0.69	0.11	72,72,72,72	0
59	MG	DA	1749	1/1	0.69	0.12	77,77,77,77	0
59	MG	CA	3089	1/1	0.69	0.25	87,87,87,87	0
59	MG	CA	3444	1/1	0.69	0.09	67,67,67,67	0
59	MG	DA	1631	1/1	0.70	0.10	74,74,74,74	0
59	MG	BA	1741	1/1	0.70	0.10	88,88,88,88	0
59	MG	AA	3242	1/1	0.70	0.21	85,85,85,85	0
59	MG	CA	3557	1/1	0.70	0.21	76,76,76,76	0
59	MG	CA	3560	1/1	0.70	0.23	79,79,79,79	0
59	MG	CA	3485	1/1	0.70	0.10	85,85,85,85	0
59	MG	BA	1786	1/1	0.70	0.15	82,82,82,82	0
59	MG	AA	3629	1/1	0.71	0.18	77,77,77,77	0
59	MG	CA	3096	1/1	0.71	0.37	125,125,125,125	0
59	MG	BA	1707	1/1	0.71	0.13	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3464	1/1	0.72	0.17	66,66,66,66	0
59	MG	AA	3040	1/1	0.72	0.24	113,113,113,113	0
59	MG	AA	3678	1/1	0.72	0.17	77,77,77,77	0
59	MG	AA	3619	1/1	0.72	0.12	47,47,47,47	0
59	MG	CA	3125	1/1	0.72	0.38	78,78,78,78	0
59	MG	BA	1812	1/1	0.72	0.19	79,79,79,79	0
59	MG	CA	3535	1/1	0.73	0.22	77,77,77,77	0
59	MG	CA	3172	1/1	0.73	0.25	81,81,81,81	0
59	MG	CA	3055	1/1	0.73	0.16	77,77,77,77	0
59	MG	BA	1675	1/1	0.73	0.20	100,100,100,100	0
59	MG	CA	3350	1/1	0.73	0.13	82,82,82,82	0
59	MG	AA	3781	1/1	0.73	0.17	72,72,72,72	0
59	MG	BA	1775	1/1	0.73	0.17	90,90,90,90	0
59	MG	CA	3460	1/1	0.73	0.33	104,104,104,104	0
59	MG	CA	3127	1/1	0.73	0.22	94,94,94,94	0
59	MG	DA	1756	1/1	0.73	0.23	86,86,86,86	0
59	MG	CA	3139	1/1	0.73	0.22	126,126,126,126	0
59	MG	DA	1769	1/1	0.73	0.21	74,74,74,74	0
59	MG	BA	1657	1/1	0.74	0.26	78,78,78,78	0
59	MG	AA	3232	1/1	0.74	0.18	58,58,58,58	0
59	MG	BA	1719	1/1	0.74	0.14	62,62,62,62	0
59	MG	A0	101	1/1	0.74	0.12	69,69,69,69	0
59	MG	AA	3122	1/1	0.74	0.33	99,99,99,99	0
59	MG	BA	1679	1/1	0.74	0.21	59,59,59,59	0
59	MG	CA	3587	1/1	0.75	0.10	70,70,70,70	0
59	MG	AA	3625	1/1	0.75	0.18	51,51,51,51	0
59	MG	BA	1694	1/1	0.75	0.28	83,83,83,83	0
59	MG	AA	3480	1/1	0.75	0.23	88,88,88,88	0
59	MG	CA	3149	1/1	0.75	0.24	100,100,100,100	0
59	MG	CA	3100	1/1	0.75	0.29	81,81,81,81	0
59	MG	CA	3583	1/1	0.75	0.13	80,80,80,80	0
59	MG	CA	3586	1/1	0.75	0.31	93,93,93,93	0
59	MG	DT	3001	1/1	0.75	0.23	60,60,60,60	0
59	MG	DA	1727	1/1	0.76	0.08	61,61,61,61	0
59	MG	CQ	204	1/1	0.76	0.15	74,74,74,74	0
59	MG	CA	3376	1/1	0.76	0.12	78,78,78,78	0
59	MG	AA	3275	1/1	0.76	0.39	89,89,89,89	0
59	MG	CA	3646	1/1	0.76	0.14	91,91,91,91	0
59	MG	DA	1663	1/1	0.76	0.22	91,91,91,91	0
59	MG	AA	3269	1/1	0.76	0.23	63,63,63,63	0
59	MG	CA	3467	1/1	0.76	0.32	77,77,77,77	0
59	MG	BA	1758	1/1	0.77	0.26	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	1715	1/1	0.77	0.18	79,79,79,79	0
59	MG	CA	3235	1/1	0.77	0.16	78,78,78,78	0
59	MG	CQ	201	1/1	0.77	0.18	72,72,72,72	0
59	MG	DA	1732	1/1	0.77	0.11	85,85,85,85	0
59	MG	AA	3016	1/1	0.77	0.20	64,64,64,64	0
59	MG	DA	1740	1/1	0.77	0.17	68,68,68,68	0
59	MG	CA	3108	1/1	0.77	0.22	78,78,78,78	0
59	MG	AA	3219	1/1	0.77	0.18	61,61,61,61	0
59	MG	AA	3481	1/1	0.77	0.19	78,78,78,78	0
59	MG	CA	3066	1/1	0.77	0.15	69,69,69,69	0
59	MG	DA	1762	1/1	0.77	0.18	61,61,61,61	0
59	MG	BA	1670	1/1	0.77	0.13	69,69,69,69	0
59	MG	DA	1668	1/1	0.77	0.31	65,65,65,65	0
59	MG	DW	503	1/1	0.77	0.19	85,85,85,85	0
59	MG	CA	3619	1/1	0.78	0.14	40,40,40,40	0
59	MG	CA	3240	1/1	0.78	0.24	71,71,71,71	0
59	MG	CA	3244	1/1	0.78	0.25	89,89,89,89	0
59	MG	CA	3246	1/1	0.78	0.26	57,57,57,57	0
59	MG	AA	3708	1/1	0.78	0.26	61,61,61,61	0
59	MG	AA	3093	1/1	0.78	0.68	92,92,92,92	0
59	MG	CA	3093	1/1	0.78	0.39	75,75,75,75	0
59	MG	CA	3357	1/1	0.78	0.13	66,66,66,66	0
59	MG	AA	3622	1/1	0.78	0.17	60,60,60,60	0
59	MG	CA	3007	1/1	0.78	0.25	92,92,92,92	0
59	MG	AA	3700	1/1	0.78	0.12	70,70,70,70	0
59	MG	DA	1635	1/1	0.78	0.21	75,75,75,75	0
59	MG	DA	1655	1/1	0.78	0.24	83,83,83,83	0
59	MG	CA	3236	1/1	0.78	0.36	81,81,81,81	0
59	MG	CA	3237	1/1	0.78	0.15	94,94,94,94	0
59	MG	AA	3583	1/1	0.79	0.13	63,63,63,63	0
59	MG	BA	1628	1/1	0.79	0.20	87,87,87,87	0
59	MG	DA	1724	1/1	0.79	0.15	70,70,70,70	0
59	MG	CA	3032	1/1	0.79	0.28	100,100,100,100	0
59	MG	CA	3050	1/1	0.79	0.21	75,75,75,75	0
59	MG	CA	3395	1/1	0.79	0.25	50,50,50,50	0
59	MG	CA	3408	1/1	0.79	0.11	58,58,58,58	0
59	MG	DA	1746	1/1	0.79	0.12	81,81,81,81	0
59	MG	BA	1671	1/1	0.79	0.36	101,101,101,101	0
59	MG	BA	1748	1/1	0.79	0.10	63,63,63,63	0
59	MG	CA	3465	1/1	0.79	0.25	70,70,70,70	0
59	MG	BA	1755	1/1	0.79	0.10	86,86,86,86	0
59	MG	CA	3295	1/1	0.79	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
59	MG	AA	3108	1/1	0.79	0.45	101,101,101,101	0
59	MG	DA	1708	1/1	0.79	0.20	77,77,77,77	0
59	MG	CA	3516	1/1	0.79	0.16	79,79,79,79	0
59	MG	AA	3571	1/1	0.80	0.19	94,94,94,94	0
59	MG	CA	3323	1/1	0.80	0.21	87,87,87,87	0
59	MG	AA	3642	1/1	0.80	0.17	71,71,71,71	0
59	MG	BA	1733	1/1	0.80	0.20	78,78,78,78	0
59	MG	AA	3776	1/1	0.80	0.10	69,69,69,69	0
59	MG	CA	3146	1/1	0.80	0.33	82,82,82,82	0
59	MG	AA	3246	1/1	0.80	0.10	52,52,52,52	0
59	MG	AA	3202	1/1	0.80	0.17	61,61,61,61	0
59	MG	CA	3186	1/1	0.80	0.20	77,77,77,77	0
59	MG	AA	3323	1/1	0.80	0.09	64,64,64,64	0
59	MG	CA	3065	1/1	0.80	0.23	56,56,56,56	0
59	MG	DA	1733	1/1	0.80	0.20	92,92,92,92	0
59	MG	DA	1737	1/1	0.80	0.15	69,69,69,69	0
59	MG	CA	3644	1/1	0.80	0.20	66,66,66,66	0
59	MG	BA	1612	1/1	0.80	0.17	92,92,92,92	0
59	MG	CB	3001	1/1	0.80	0.16	72,72,72,72	0
59	MG	CA	3078	1/1	0.80	0.21	57,57,57,57	0
59	MG	AA	3198	1/1	0.80	0.19	63,63,63,63	0
59	MG	CA	3492	1/1	0.80	0.15	59,59,59,59	0
59	MG	CA	3507	1/1	0.80	0.18	83,83,83,83	0
59	MG	DA	1604	1/1	0.80	0.18	80,80,80,80	0
59	MG	AA	3536	1/1	0.80	0.17	66,66,66,66	0
59	MG	BA	1697	1/1	0.80	0.32	99,99,99,99	0
59	MG	BA	1800	1/1	0.80	0.18	77,77,77,77	0
59	MG	AA	3660	1/1	0.81	0.16	61,61,61,61	0
59	MG	CA	3539	1/1	0.81	0.15	90,90,90,90	0
59	MG	BA	1603	1/1	0.81	0.17	61,61,61,61	0
59	MG	AA	3266	1/1	0.81	0.50	90,90,90,90	0
59	MG	CF	301	1/1	0.81	0.17	61,61,61,61	0
59	MG	BA	1721	1/1	0.81	0.09	66,66,66,66	0
59	MG	AA	3274	1/1	0.81	0.15	75,75,75,75	0
59	MG	BA	1625	1/1	0.81	0.20	86,86,86,86	0
59	MG	AA	3267	1/1	0.81	0.11	53,53,53,53	0
59	MG	CA	3223	1/1	0.81	0.09	59,59,59,59	0
59	MG	BA	1648	1/1	0.81	0.08	74,74,74,74	0
59	MG	DA	1748	1/1	0.81	0.11	70,70,70,70	0
59	MG	DA	1623	1/1	0.81	0.13	72,72,72,72	0
59	MG	DA	1753	1/1	0.81	0.30	79,79,79,79	0
59	MG	CA	3494	1/1	0.81	0.14	97,97,97,97	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3594	1/1	0.81	0.08	73,73,73,73	0
59	MG	CA	3506	1/1	0.81	0.12	63,63,63,63	0
59	MG	AA	3644	1/1	0.81	0.21	56,56,56,56	0
59	MG	BA	1767	1/1	0.81	0.11	96,96,96,96	0
59	MG	DA	1674	1/1	0.81	0.20	77,77,77,77	0
59	MG	CA	3638	1/1	0.81	0.24	76,76,76,76	0
59	MG	CA	3428	1/1	0.82	0.14	58,58,58,58	0
59	MG	CA	3069	1/1	0.82	0.43	81,81,81,81	0
59	MG	AA	3542	1/1	0.82	0.13	58,58,58,58	0
59	MG	DA	1704	1/1	0.82	0.11	49,49,49,49	0
59	MG	BA	1792	1/1	0.82	0.17	80,80,80,80	0
59	MG	CA	3605	1/1	0.82	0.19	70,70,70,70	0
59	MG	AA	3719	1/1	0.82	0.15	59,59,59,59	0
59	MG	BA	1619	1/1	0.82	0.11	59,59,59,59	0
59	MG	AA	3737	1/1	0.82	0.10	54,54,54,54	0
59	MG	AB	3017	1/1	0.82	0.10	59,59,59,59	0
59	MG	CA	3111	1/1	0.82	0.23	79,79,79,79	0
59	MG	BA	1634	1/1	0.82	0.26	64,64,64,64	0
59	MG	AD	301	1/1	0.82	0.18	57,57,57,57	0
59	MG	CA	3035	1/1	0.82	0.38	69,69,69,69	0
59	MG	CA	3530	1/1	0.82	0.23	71,71,71,71	0
59	MG	AA	3063	1/1	0.82	0.15	54,54,54,54	0
59	MG	BA	1659	1/1	0.82	0.21	67,67,67,67	0
59	MG	CA	3542	1/1	0.82	0.14	87,87,87,87	0
59	MG	CA	3155	1/1	0.82	0.29	112,112,112,112	0
59	MG	BA	1782	1/1	0.82	0.11	47,47,47,47	0
59	MG	DA	1755	1/1	0.82	0.32	88,88,88,88	0
59	MG	AA	3441	1/1	0.82	0.18	58,58,58,58	0
59	MG	CA	3202	1/1	0.82	0.23	73,73,73,73	0
59	MG	CA	3411	1/1	0.82	0.13	57,57,57,57	0
59	MG	CA	3420	1/1	0.82	0.19	69,69,69,69	0
59	MG	DA	1638	1/1	0.82	0.15	80,80,80,80	0
59	MG	CA	3581	1/1	0.82	0.12	38,38,38,38	0
59	MG	BA	1601	1/1	0.83	0.13	95,95,95,95	0
59	MG	CA	3591	1/1	0.83	0.10	60,60,60,60	0
59	MG	BA	1693	1/1	0.83	0.17	76,76,76,76	0
59	MG	BA	1764	1/1	0.83	0.10	71,71,71,71	0
59	MG	DA	1676	1/1	0.83	0.16	74,74,74,74	0
59	MG	DA	1677	1/1	0.83	0.15	78,78,78,78	0
59	MG	DA	1678	1/1	0.83	0.20	66,66,66,66	0
59	MG	AA	3706	1/1	0.83	0.24	41,41,41,41	1
59	MG	CA	3117	1/1	0.83	0.20	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3622	1/1	0.83	0.13	50,50,50,50	0
59	MG	CA	3502	1/1	0.83	0.27	90,90,90,90	0
59	MG	CA	3124	1/1	0.83	0.23	65,65,65,65	0
59	MG	BA	1610	1/1	0.83	0.15	78,78,78,78	0
59	MG	CA	3126	1/1	0.83	0.15	62,62,62,62	0
59	MG	AA	3235	1/1	0.83	0.25	93,93,93,93	0
59	MG	CA	3044	1/1	0.83	0.19	89,89,89,89	0
59	MG	BA	1778	1/1	0.83	0.10	54,54,54,54	0
59	MG	AA	3018	1/1	0.83	0.60	67,67,67,67	0
59	MG	AA	3582	1/1	0.83	0.23	76,76,76,76	0
59	MG	CA	3164	1/1	0.83	0.23	64,64,64,64	0
59	MG	AA	3495	1/1	0.83	0.15	35,35,35,35	0
59	MG	CA	3184	1/1	0.83	0.26	77,77,77,77	0
59	MG	AA	3133	1/1	0.83	0.21	50,50,50,50	0
59	MG	DA	1618	1/1	0.83	0.29	91,91,91,91	0
59	MG	BA	1797	1/1	0.83	0.14	59,59,59,59	0
59	MG	DA	1629	1/1	0.83	0.17	59,59,59,59	0
59	MG	CA	3203	1/1	0.83	0.10	73,73,73,73	0
59	MG	AA	3756	1/1	0.83	0.09	49,49,49,49	0
59	MG	BA	1811	1/1	0.83	0.13	77,77,77,77	0
59	MG	DA	1639	1/1	0.83	0.14	69,69,69,69	0
59	MG	DA	1643	1/1	0.83	0.17	79,79,79,79	0
59	MG	DA	1634	1/1	0.84	0.23	66,66,66,66	0
59	MG	BA	1704	1/1	0.84	0.20	71,71,71,71	0
59	MG	CA	3565	1/1	0.84	0.11	95,95,95,95	0
59	MG	CA	3398	1/1	0.84	0.14	67,67,67,67	0
59	MG	CA	3070	1/1	0.84	0.13	60,60,60,60	0
59	MG	AA	3212	1/1	0.84	0.24	81,81,81,81	0
59	MG	AA	3758	1/1	0.84	0.23	43,43,43,43	1
59	MG	AA	3425	1/1	0.84	0.16	77,77,77,77	0
59	MG	CA	3204	1/1	0.84	0.10	54,54,54,54	0
59	MG	DA	1675	1/1	0.84	0.48	70,70,70,70	0
59	MG	CA	3216	1/1	0.84	0.21	79,79,79,79	0
59	MG	BA	1662	1/1	0.84	0.24	70,70,70,70	0
59	MG	BA	1669	1/1	0.84	0.20	66,66,66,66	0
59	MG	CA	3470	1/1	0.84	0.17	74,74,74,74	0
59	MG	BA	1744	1/1	0.84	0.12	57,57,57,57	0
59	MG	AA	3141	1/1	0.84	0.09	68,68,68,68	0
59	MG	BA	1614	1/1	0.84	0.17	72,72,72,72	0
59	MG	CA	3634	1/1	0.84	0.12	82,82,82,82	0
59	MG	BS	101	1/1	0.84	0.09	79,79,79,79	0
59	MG	CA	3643	1/1	0.84	0.09	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	1730	1/1	0.84	0.17	71,71,71,71	0
59	MG	CA	3501	1/1	0.84	0.17	74,74,74,74	0
59	MG	AA	3653	1/1	0.84	0.10	60,60,60,60	0
59	MG	CA	3649	1/1	0.84	0.18	51,51,51,51	0
59	MG	AA	3157	1/1	0.84	0.22	91,91,91,91	0
59	MG	AA	3677	1/1	0.84	0.20	69,69,69,69	0
59	MG	DA	1742	1/1	0.84	0.11	72,72,72,72	0
59	MG	CE	301	1/1	0.84	0.16	53,53,53,53	0
59	MG	CA	3508	1/1	0.84	0.09	52,52,52,52	0
59	MG	CA	3129	1/1	0.84	0.14	64,64,64,64	0
59	MG	DA	1750	1/1	0.84	0.14	67,67,67,67	0
59	MG	CA	3518	1/1	0.84	0.11	65,65,65,65	0
59	MG	CA	3314	1/1	0.84	0.12	57,57,57,57	0
59	MG	AA	3607	1/1	0.84	0.14	60,60,60,60	1
59	MG	CA	3538	1/1	0.84	0.14	72,72,72,72	0
59	MG	AD	308	1/1	0.84	0.14	65,65,65,65	0
59	MG	BA	1644	1/1	0.84	0.15	74,74,74,74	0
59	MG	BA	1780	1/1	0.84	0.12	60,60,60,60	0
59	MG	CA	3367	1/1	0.84	0.14	63,63,63,63	0
59	MG	AA	3754	1/1	0.84	0.16	64,64,64,64	0
59	MG	CA	3294	1/1	0.85	0.06	72,72,72,72	0
59	MG	BA	1646	1/1	0.85	0.24	66,66,66,66	0
59	MG	AA	3651	1/1	0.85	0.17	77,77,77,77	0
59	MG	AA	3206	1/1	0.85	0.25	106,106,106,106	0
59	MG	AA	3068	1/1	0.85	0.32	73,73,73,73	0
59	MG	CA	3333	1/1	0.85	0.17	68,68,68,68	0
59	MG	CA	3340	1/1	0.85	0.16	66,66,66,66	0
59	MG	CA	3341	1/1	0.85	0.12	73,73,73,73	0
59	MG	CA	3555	1/1	0.85	0.07	71,71,71,71	0
59	MG	AE	305	1/1	0.85	0.18	48,48,48,48	0
59	MG	AA	3675	1/1	0.85	0.12	64,64,64,64	0
59	MG	CA	3134	1/1	0.85	0.17	71,71,71,71	0
59	MG	CA	3135	1/1	0.85	0.23	59,59,59,59	0
59	MG	A7	104	1/1	0.85	0.09	55,55,55,55	0
59	MG	CA	3379	1/1	0.85	0.10	83,83,83,83	0
59	MG	CA	3389	1/1	0.85	0.17	59,59,59,59	0
59	MG	CA	3392	1/1	0.85	0.11	43,43,43,43	0
59	MG	DA	1692	1/1	0.85	0.12	53,53,53,53	0
59	MG	DA	1694	1/1	0.85	0.12	106,106,106,106	0
59	MG	AA	3676	1/1	0.85	0.10	26,26,26,26	0
59	MG	CA	3148	1/1	0.85	0.26	62,62,62,62	0
59	MG	DA	1709	1/1	0.85	0.13	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3038	1/1	0.85	0.31	97,97,97,97	0
59	MG	DA	1713	1/1	0.85	0.08	49,49,49,49	0
59	MG	CA	3042	1/1	0.85	0.27	65,65,65,65	0
59	MG	CA	3612	1/1	0.85	0.28	83,83,83,83	0
59	MG	DA	1722	1/1	0.85	0.10	77,77,77,77	0
59	MG	AA	3755	1/1	0.85	0.29	78,78,78,78	0
59	MG	AA	3453	1/1	0.85	0.14	39,39,39,39	0
59	MG	CA	3432	1/1	0.85	0.16	32,32,32,32	0
59	MG	AA	3213	1/1	0.85	0.33	76,76,76,76	0
59	MG	BA	1676	1/1	0.85	0.24	61,61,61,61	0
59	MG	DA	1736	1/1	0.85	0.10	78,78,78,78	0
59	MG	AA	3769	1/1	0.85	0.15	63,63,63,63	0
59	MG	AA	3680	1/1	0.85	0.20	79,79,79,79	0
59	MG	BA	1781	1/1	0.85	0.09	63,63,63,63	0
59	MG	CA	3076	1/1	0.85	0.24	64,64,64,64	0
59	MG	AA	3189	1/1	0.85	0.20	62,62,62,62	0
59	MG	CA	3226	1/1	0.85	0.24	52,52,52,52	0
59	MG	AA	3138	1/1	0.85	0.09	38,38,38,38	0
59	MG	BA	1788	1/1	0.85	0.35	79,79,79,79	0
59	MG	AA	3096	1/1	0.85	0.17	59,59,59,59	0
59	MG	BA	1699	1/1	0.85	0.07	72,72,72,72	0
59	MG	CA	3107	1/1	0.85	0.20	77,77,77,77	0
59	MG	AA	3787	1/1	0.85	0.13	82,82,82,82	0
59	MG	CA	3510	1/1	0.85	0.17	95,95,95,95	0
59	MG	DA	1605	1/1	0.85	0.14	105,105,105,105	0
59	MG	CA	3511	1/1	0.85	0.10	81,81,81,81	0
59	MG	AA	3796	1/1	0.85	0.19	78,78,78,78	0
59	MG	DA	1614	1/1	0.85	0.09	65,65,65,65	0
59	MG	DA	1610	1/1	0.86	0.21	71,71,71,71	0
59	MG	CA	3524	1/1	0.86	0.10	52,52,52,52	0
59	MG	BA	1783	1/1	0.86	0.15	57,57,57,57	0
59	MG	AA	3715	1/1	0.86	0.23	33,33,33,33	1
59	MG	AA	3344	1/1	0.86	0.11	22,22,22,22	0
59	MG	A2	3001	1/1	0.86	0.11	53,53,53,53	0
59	MG	AA	3775	1/1	0.86	0.27	25,25,25,25	1
59	MG	DA	1632	1/1	0.86	0.21	57,57,57,57	0
59	MG	CA	3194	1/1	0.86	0.10	52,52,52,52	0
59	MG	CA	3378	1/1	0.86	0.16	97,97,97,97	0
59	MG	BA	1795	1/1	0.86	0.07	59,59,59,59	0
59	MG	AA	3614	1/1	0.86	0.14	50,50,50,50	1
59	MG	DA	1641	1/1	0.86	0.10	74,74,74,74	0
59	MG	AA	3273	1/1	0.86	0.09	90,90,90,90	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	1652	1/1	0.86	0.14	80,80,80,80	0
59	MG	CA	3205	1/1	0.86	0.11	81,81,81,81	0
59	MG	DA	1659	1/1	0.86	0.26	78,78,78,78	0
59	MG	DA	1662	1/1	0.86	0.23	75,75,75,75	0
59	MG	BA	1664	1/1	0.86	0.10	56,56,56,56	0
59	MG	CA	3573	1/1	0.86	0.11	65,65,65,65	0
59	MG	CA	3222	1/1	0.86	0.15	57,57,57,57	0
59	MG	CA	3104	1/1	0.86	0.17	80,80,80,80	0
59	MG	CA	3414	1/1	0.86	0.14	34,34,34,34	1
59	MG	BA	1668	1/1	0.86	0.09	69,69,69,69	0
59	MG	CA	3230	1/1	0.86	0.24	49,49,49,49	0
59	MG	DA	1690	1/1	0.86	0.19	73,73,73,73	0
59	MG	CA	3233	1/1	0.86	0.12	59,59,59,59	0
59	MG	CA	3433	1/1	0.86	0.10	82,82,82,82	0
59	MG	DA	1698	1/1	0.86	0.20	97,97,97,97	0
59	MG	CA	3603	1/1	0.86	0.16	49,49,49,49	0
59	MG	AA	3740	1/1	0.86	0.17	61,61,61,61	0
59	MG	CA	3606	1/1	0.86	0.29	73,73,73,73	0
59	MG	CA	3610	1/1	0.86	0.11	69,69,69,69	0
59	MG	CA	3456	1/1	0.86	0.11	54,54,54,54	0
59	MG	CA	3614	1/1	0.86	0.11	62,62,62,62	0
59	MG	DA	1717	1/1	0.86	0.19	95,95,95,95	0
59	MG	CA	3615	1/1	0.86	0.12	28,28,28,28	0
59	MG	AA	3098	1/1	0.86	0.26	51,51,51,51	0
59	MG	AA	3792	1/1	0.86	0.08	48,48,48,48	0
59	MG	CA	3238	1/1	0.86	0.18	69,69,69,69	0
59	MG	AA	3315	1/1	0.86	0.23	65,65,65,65	0
59	MG	CA	3626	1/1	0.86	0.16	61,61,61,61	0
59	MG	CA	3474	1/1	0.86	0.14	59,59,59,59	0
59	MG	AA	3814	1/1	0.86	0.26	72,72,72,72	0
59	MG	AA	3181	1/1	0.86	0.23	79,79,79,79	0
59	MG	CA	3249	1/1	0.86	0.10	61,61,61,61	0
59	MG	DA	1739	1/1	0.86	0.14	73,73,73,73	0
59	MG	CA	3256	1/1	0.86	0.19	65,65,65,65	0
59	MG	CA	3647	1/1	0.86	0.10	85,85,85,85	0
59	MG	DA	1743	1/1	0.86	0.11	59,59,59,59	0
59	MG	AB	3021	1/1	0.86	0.21	65,65,65,65	0
59	MG	CA	3041	1/1	0.86	0.24	61,61,61,61	0
59	MG	CA	3504	1/1	0.86	0.12	79,79,79,79	0
59	MG	BA	1687	1/1	0.86	0.23	52,52,52,52	0
59	MG	CE	305	1/1	0.86	0.06	58,58,58,58	0
59	MG	AA	3586	1/1	0.86	0.20	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CP	201	1/1	0.86	0.08	62,62,62,62	1
59	MG	CA	3307	1/1	0.86	0.11	60,60,60,60	0
59	MG	CA	3509	1/1	0.86	0.08	83,83,83,83	0
59	MG	CA	3047	1/1	0.86	0.19	84,84,84,84	0
59	MG	BA	1638	1/1	0.86	0.17	66,66,66,66	0
59	MG	DE	201	1/1	0.86	0.15	84,84,84,84	0
59	MG	AA	3711	1/1	0.86	0.29	43,43,43,43	1
59	MG	BA	1695	1/1	0.86	0.10	83,83,83,83	0
59	MG	BA	1724	1/1	0.87	0.11	67,67,67,67	0
59	MG	AA	3786	1/1	0.87	0.09	53,53,53,53	0
59	MG	CA	3057	1/1	0.87	0.19	60,60,60,60	0
59	MG	AA	3186	1/1	0.87	0.12	48,48,48,48	0
59	MG	BA	1645	1/1	0.87	0.12	74,74,74,74	0
59	MG	CA	3067	1/1	0.87	0.13	63,63,63,63	0
59	MG	AA	3705	1/1	0.87	0.23	53,53,53,53	1
59	MG	AA	3150	1/1	0.87	0.14	45,45,45,45	0
59	MG	DA	1622	1/1	0.87	0.14	60,60,60,60	0
59	MG	AA	3194	1/1	0.87	0.21	82,82,82,82	0
59	MG	BA	1658	1/1	0.87	0.31	66,66,66,66	0
59	MG	CA	3254	1/1	0.87	0.15	85,85,85,85	0
59	MG	AA	3337	1/1	0.87	0.12	75,75,75,75	0
59	MG	CA	3273	1/1	0.87	0.11	58,58,58,58	0
59	MG	CA	3532	1/1	0.87	0.13	49,49,49,49	0
59	MG	CA	3288	1/1	0.87	0.14	49,49,49,49	0
59	MG	CA	3537	1/1	0.87	0.16	59,59,59,59	0
59	MG	DA	1640	1/1	0.87	0.27	77,77,77,77	0
59	MG	BA	1772	1/1	0.87	0.10	66,66,66,66	0
59	MG	BA	1774	1/1	0.87	0.13	50,50,50,50	0
59	MG	DA	1644	1/1	0.87	0.15	94,94,94,94	0
59	MG	DA	1649	1/1	0.87	0.27	69,69,69,69	0
59	MG	AB	3020	1/1	0.87	0.15	62,62,62,62	0
59	MG	DA	1654	1/1	0.87	0.26	63,63,63,63	0
59	MG	AA	3712	1/1	0.87	0.29	70,70,70,70	0
59	MG	AA	3486	1/1	0.87	0.13	67,67,67,67	0
59	MG	BA	1779	1/1	0.87	0.13	85,85,85,85	0
59	MG	BA	1665	1/1	0.87	0.20	73,73,73,73	0
59	MG	CA	3112	1/1	0.87	0.21	69,69,69,69	0
59	MG	CA	3563	1/1	0.87	0.11	75,75,75,75	0
59	MG	CA	3116	1/1	0.87	0.21	52,52,52,52	0
59	MG	AA	3626	1/1	0.87	0.12	35,35,35,35	0
59	MG	AA	3493	1/1	0.87	0.09	77,77,77,77	0
59	MG	AG	202	1/1	0.87	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
59	MG	AA	3195	1/1	0.87	0.26	69,69,69,69	0
59	MG	AA	3516	1/1	0.87	0.15	65,65,65,65	0
59	MG	AA	3128	1/1	0.87	0.31	89,89,89,89	0
59	MG	DA	1695	1/1	0.87	0.14	63,63,63,63	0
59	MG	AA	3367	1/1	0.87	0.13	60,60,60,60	0
59	MG	BA	1602	1/1	0.87	0.19	79,79,79,79	0
59	MG	BA	1682	1/1	0.87	0.29	70,70,70,70	0
59	MG	CA	3596	1/1	0.87	0.10	51,51,51,51	0
59	MG	CA	3598	1/1	0.87	0.07	65,65,65,65	0
59	MG	BA	1683	1/1	0.87	0.22	71,71,71,71	0
59	MG	BA	1810	1/1	0.87	0.09	82,82,82,82	0
59	MG	AA	3409	1/1	0.87	0.14	60,60,60,60	0
59	MG	AA	3169	1/1	0.87	0.19	35,35,35,35	0
59	MG	CA	3157	1/1	0.87	0.19	81,81,81,81	0
59	MG	AA	3664	1/1	0.87	0.14	62,62,62,62	0
59	MG	CA	3165	1/1	0.87	0.19	57,57,57,57	0
59	MG	BE	3001	1/1	0.87	0.08	78,78,78,78	0
59	MG	AA	3055	1/1	0.87	0.26	65,65,65,65	0
59	MG	CA	3621	1/1	0.87	0.11	61,61,61,61	0
59	MG	AA	3435	1/1	0.87	0.11	52,52,52,52	0
59	MG	CA	3442	1/1	0.87	0.30	74,74,74,74	0
59	MG	AA	3288	1/1	0.87	0.13	39,39,39,39	0
59	MG	CA	3633	1/1	0.87	0.12	68,68,68,68	0
59	MG	BA	1623	1/1	0.87	0.15	67,67,67,67	0
59	MG	CA	3034	1/1	0.87	0.24	77,77,77,77	0
59	MG	AA	3608	1/1	0.87	0.13	60,60,60,60	0
59	MG	AA	3611	1/1	0.87	0.14	47,47,47,47	0
59	MG	CA	3212	1/1	0.87	0.28	84,84,84,84	0
59	MG	BA	1714	1/1	0.87	0.21	74,74,74,74	0
59	MG	CA	3478	1/1	0.87	0.12	65,65,65,65	0
59	MG	CA	3656	1/1	0.87	0.23	63,63,63,63	0
59	MG	CA	3480	1/1	0.87	0.11	50,50,50,50	0
59	MG	CB	3005	1/1	0.87	0.18	63,63,63,63	0
59	MG	CA	3481	1/1	0.87	0.11	64,64,64,64	0
59	MG	CA	3217	1/1	0.87	0.17	62,62,62,62	0
59	MG	BA	1716	1/1	0.87	0.14	86,86,86,86	0
59	MG	CA	3490	1/1	0.87	0.09	50,50,50,50	0
59	MG	BA	1631	1/1	0.87	0.11	71,71,71,71	0
59	MG	DJ	5001	1/1	0.87	0.09	82,82,82,82	0
59	MG	DK	5001	1/1	0.87	0.10	76,76,76,76	0
59	MG	AA	3698	1/1	0.87	0.07	41,41,41,41	0
59	MG	CA	3499	1/1	0.87	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
59	MG	DZ	701	1/1	0.87	0.10	72,72,72,72	0
59	MG	CA	3072	1/1	0.88	0.12	66,66,66,66	0
59	MG	CA	3075	1/1	0.88	0.16	90,90,90,90	0
59	MG	BA	1713	1/1	0.88	0.23	68,68,68,68	0
59	MG	AA	3771	1/1	0.88	0.16	60,60,60,60	0
59	MG	CA	3577	1/1	0.88	0.10	51,51,51,51	1
59	MG	CA	3080	1/1	0.88	0.15	75,75,75,75	0
59	MG	CA	3081	1/1	0.88	0.15	63,63,63,63	0
59	MG	AA	3051	1/1	0.88	0.30	48,48,48,48	0
59	MG	DA	1646	1/1	0.88	0.08	57,57,57,57	0
59	MG	CA	3221	1/1	0.88	0.19	65,65,65,65	0
59	MG	AA	3066	1/1	0.88	0.14	51,51,51,51	0
59	MG	BA	1803	1/1	0.88	0.12	64,64,64,64	0
59	MG	CA	3224	1/1	0.88	0.22	59,59,59,59	0
59	MG	CA	3098	1/1	0.88	0.10	70,70,70,70	0
59	MG	BA	1805	1/1	0.88	0.12	71,71,71,71	0
59	MG	AA	3415	1/1	0.88	0.18	62,62,62,62	0
59	MG	DA	1665	1/1	0.88	0.11	63,63,63,63	0
59	MG	BA	1609	1/1	0.88	0.08	62,62,62,62	0
59	MG	DA	1669	1/1	0.88	0.12	65,65,65,65	0
59	MG	BA	1727	1/1	0.88	0.11	77,77,77,77	0
59	MG	CA	3608	1/1	0.88	0.21	50,50,50,50	1
59	MG	AA	3027	1/1	0.88	0.37	75,75,75,75	0
59	MG	CA	3477	1/1	0.88	0.14	69,69,69,69	0
59	MG	AA	3627	1/1	0.88	0.10	76,76,76,76	0
59	MG	DA	1679	1/1	0.88	0.12	70,70,70,70	0
59	MG	DA	1683	1/1	0.88	0.13	58,58,58,58	0
59	MG	CA	3239	1/1	0.88	0.10	69,69,69,69	0
59	MG	CA	3114	1/1	0.88	0.24	66,66,66,66	0
59	MG	CA	3241	1/1	0.88	0.18	72,72,72,72	0
59	MG	CA	3486	1/1	0.88	0.13	81,81,81,81	0
59	MG	AA	3314	1/1	0.88	0.13	57,57,57,57	0
59	MG	AA	3630	1/1	0.88	0.34	72,72,72,72	0
59	MG	CA	3001	1/1	0.88	0.16	64,64,64,64	0
59	MG	CA	3628	1/1	0.88	0.10	54,54,54,54	0
59	MG	CA	3003	1/1	0.88	0.21	62,62,62,62	0
59	MG	AA	3640	1/1	0.88	0.10	68,68,68,68	0
59	MG	AA	3551	1/1	0.88	0.08	39,39,39,39	0
59	MG	CA	3284	1/1	0.88	0.18	75,75,75,75	0
59	MG	AA	3427	1/1	0.88	0.06	61,61,61,61	0
59	MG	AA	3215	1/1	0.88	0.19	59,59,59,59	0
59	MG	AA	3124	1/1	0.88	0.30	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	1633	1/1	0.88	0.25	63,63,63,63	0
59	MG	DA	1728	1/1	0.88	0.09	71,71,71,71	0
59	MG	CA	3296	1/1	0.88	0.09	79,79,79,79	0
59	MG	CA	3298	1/1	0.88	0.21	57,57,57,57	0
59	MG	CA	3140	1/1	0.88	0.25	63,63,63,63	0
59	MG	CB	3011	1/1	0.88	0.20	56,56,56,56	0
59	MG	CB	3012	1/1	0.88	0.14	62,62,62,62	0
59	MG	CA	3514	1/1	0.88	0.22	64,64,64,64	0
59	MG	CA	3515	1/1	0.88	0.07	54,54,54,54	0
59	MG	AA	3450	1/1	0.88	0.08	58,58,58,58	0
59	MG	AA	3601	1/1	0.88	0.10	61,61,61,61	0
59	MG	AA	3010	1/1	0.88	0.18	46,46,46,46	0
59	MG	AA	3061	1/1	0.88	0.17	59,59,59,59	0
59	MG	AF	307	1/1	0.88	0.18	76,76,76,76	0
59	MG	CA	3534	1/1	0.88	0.07	73,73,73,73	0
59	MG	AA	3241	1/1	0.88	0.17	65,65,65,65	0
59	MG	CA	3536	1/1	0.88	0.13	84,84,84,84	0
59	MG	BA	1698	1/1	0.88	0.18	63,63,63,63	0
59	MG	CA	3171	1/1	0.88	0.16	56,56,56,56	0
59	MG	BA	1654	1/1	0.88	0.14	76,76,76,76	0
59	MG	CA	3180	1/1	0.88	0.19	62,62,62,62	0
59	MG	DA	1761	1/1	0.88	0.12	72,72,72,72	0
59	MG	AA	3357	1/1	0.88	0.13	55,55,55,55	0
59	MG	AA	3365	1/1	0.88	0.20	77,77,77,77	0
59	MG	DA	1770	1/1	0.88	0.09	63,63,63,63	0
59	MG	CA	3553	1/1	0.88	0.12	90,90,90,90	0
59	MG	DA	1624	1/1	0.88	0.07	82,82,82,82	0
59	MG	DA	1626	1/1	0.88	0.14	71,71,71,71	0
59	MG	CA	3190	1/1	0.88	0.16	66,66,66,66	0
59	MG	CA	3193	1/1	0.88	0.15	89,89,89,89	0
59	MG	BA	1711	1/1	0.88	0.10	61,61,61,61	0
59	MG	CA	3219	1/1	0.89	0.14	42,42,42,42	0
59	MG	BA	1808	1/1	0.89	0.10	54,54,54,54	0
59	MG	CA	3576	1/1	0.89	0.08	71,71,71,71	0
59	MG	AA	3603	1/1	0.89	0.24	76,76,76,76	0
59	MG	BA	1717	1/1	0.89	0.13	78,78,78,78	0
59	MG	BA	1718	1/1	0.89	0.06	63,63,63,63	0
59	MG	CA	3441	1/1	0.89	0.16	56,56,56,56	0
59	MG	BA	1663	1/1	0.89	0.13	43,43,43,43	0
59	MG	CA	3229	1/1	0.89	0.12	53,53,53,53	0
59	MG	CA	3589	1/1	0.89	0.14	71,71,71,71	0
59	MG	CA	3454	1/1	0.89	0.08	81,81,81,81	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3593	1/1	0.89	0.18	61,61,61,61	0
59	MG	AA	3604	1/1	0.89	0.17	81,81,81,81	0
59	MG	CA	3113	1/1	0.89	0.15	38,38,38,38	0
59	MG	AA	3180	1/1	0.89	0.22	69,69,69,69	0
59	MG	BA	1666	1/1	0.89	0.18	61,61,61,61	0
59	MG	CA	3604	1/1	0.89	0.07	62,62,62,62	0
59	MG	BA	1667	1/1	0.89	0.16	74,74,74,74	0
59	MG	CA	3120	1/1	0.89	0.17	42,42,42,42	0
59	MG	DA	1672	1/1	0.89	0.09	77,77,77,77	0
59	MG	AA	3251	1/1	0.89	0.21	56,56,56,56	0
59	MG	AA	3530	1/1	0.89	0.14	20,20,20,20	1
59	MG	AA	3240	1/1	0.89	0.15	69,69,69,69	0
59	MG	BA	1754	1/1	0.89	0.12	49,49,49,49	0
59	MG	AA	3615	1/1	0.89	0.17	43,43,43,43	0
59	MG	BA	1672	1/1	0.89	0.24	65,65,65,65	0
59	MG	CA	3040	1/1	0.89	0.29	79,79,79,79	0
59	MG	AA	3736	1/1	0.89	0.11	59,59,59,59	0
59	MG	CA	3264	1/1	0.89	0.16	60,60,60,60	0
59	MG	CA	3268	1/1	0.89	0.20	52,52,52,52	0
59	MG	CA	3495	1/1	0.89	0.13	70,70,70,70	0
59	MG	AA	3800	1/1	0.89	0.10	35,35,35,35	0
59	MG	CA	3043	1/1	0.89	0.17	61,61,61,61	0
59	MG	AA	3375	1/1	0.89	0.14	48,48,48,48	0
59	MG	CA	3636	1/1	0.89	0.10	64,64,64,64	0
59	MG	CA	3046	1/1	0.89	0.14	68,68,68,68	0
59	MG	CA	3639	1/1	0.89	0.22	61,61,61,61	0
59	MG	CA	3291	1/1	0.89	0.17	48,48,48,48	0
59	MG	AA	3739	1/1	0.89	0.09	38,38,38,38	0
59	MG	CA	3645	1/1	0.89	0.10	69,69,69,69	0
59	MG	BA	1630	1/1	0.89	0.17	61,61,61,61	0
59	MG	AA	3140	1/1	0.89	0.23	62,62,62,62	0
59	MG	AA	3565	1/1	0.89	0.13	44,44,44,44	0
59	MG	BA	1689	1/1	0.89	0.36	71,71,71,71	0
59	MG	AA	3466	1/1	0.89	0.19	76,76,76,76	0
59	MG	CB	3003	1/1	0.89	0.09	65,65,65,65	0
59	MG	AD	307	1/1	0.89	0.21	86,86,86,86	0
59	MG	AA	3278	1/1	0.89	0.17	60,60,60,60	0
59	MG	CA	3517	1/1	0.89	0.11	62,62,62,62	0
59	MG	AA	3339	1/1	0.89	0.12	49,49,49,49	0
59	MG	CA	3521	1/1	0.89	0.17	74,74,74,74	0
59	MG	CA	3335	1/1	0.89	0.17	66,66,66,66	0
59	MG	CA	3529	1/1	0.89	0.09	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3189	1/1	0.89	0.14	50,50,50,50	0
59	MG	AA	3692	1/1	0.89	0.10	36,36,36,36	1
59	MG	CA	3343	1/1	0.89	0.09	32,32,32,32	0
59	MG	CQ	203	1/1	0.89	0.15	54,54,54,54	0
59	MG	AA	3761	1/1	0.89	0.40	92,92,92,92	0
59	MG	DA	1752	1/1	0.89	0.20	52,52,52,52	0
59	MG	BA	1789	1/1	0.89	0.14	72,72,72,72	0
59	MG	CA	3199	1/1	0.89	0.17	55,55,55,55	0
59	MG	CA	3200	1/1	0.89	0.12	51,51,51,51	0
59	MG	BA	1652	1/1	0.89	0.09	59,59,59,59	0
59	MG	CA	3540	1/1	0.89	0.08	54,54,54,54	0
59	MG	AZ	302	1/1	0.89	0.10	55,55,55,55	0
59	MG	BA	1706	1/1	0.89	0.10	63,63,63,63	0
59	MG	AA	3767	1/1	0.89	0.19	67,67,67,67	0
59	MG	CA	3207	1/1	0.89	0.19	75,75,75,75	0
59	MG	DA	1771	1/1	0.89	0.09	60,60,60,60	0
59	MG	CA	3210	1/1	0.89	0.18	62,62,62,62	0
59	MG	AA	3628	1/1	0.89	0.12	70,70,70,70	0
59	MG	CA	3406	1/1	0.89	0.09	77,77,77,77	0
59	MG	AA	3281	1/1	0.89	0.24	75,75,75,75	0
59	MG	AA	3203	1/1	0.89	0.07	59,59,59,59	0
59	MG	DA	1633	1/1	0.89	0.21	55,55,55,55	0
59	MG	CA	3368	1/1	0.90	0.10	44,44,44,44	0
59	MG	AE	302	1/1	0.90	0.11	57,57,57,57	0
59	MG	BA	1739	1/1	0.90	0.11	62,62,62,62	0
59	MG	AA	3057	1/1	0.90	0.11	46,46,46,46	0
59	MG	BA	1661	1/1	0.90	0.24	63,63,63,63	0
59	MG	CA	3571	1/1	0.90	0.07	45,45,45,45	0
59	MG	DA	1637	1/1	0.90	0.17	68,68,68,68	0
59	MG	CA	3572	1/1	0.90	0.17	70,70,70,70	0
59	MG	AA	3541	1/1	0.90	0.10	74,74,74,74	0
59	MG	BA	1749	1/1	0.90	0.11	61,61,61,61	0
59	MG	AA	3170	1/1	0.90	0.14	54,54,54,54	0
59	MG	AR	202	1/1	0.90	0.08	28,28,28,28	0
59	MG	BA	1756	1/1	0.90	0.07	85,85,85,85	0
59	MG	AA	3101	1/1	0.90	0.39	68,68,68,68	0
59	MG	CA	3585	1/1	0.90	0.12	36,36,36,36	1
59	MG	CA	3412	1/1	0.90	0.13	59,59,59,59	0
59	MG	BA	1763	1/1	0.90	0.12	76,76,76,76	0
59	MG	AA	3556	1/1	0.90	0.13	66,66,66,66	0
59	MG	A0	105	1/1	0.90	0.05	30,30,30,30	0
59	MG	DA	1660	1/1	0.90	0.07	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	1661	1/1	0.90	0.13	66,66,66,66	0
59	MG	AA	3106	1/1	0.90	0.09	33,33,33,33	0
59	MG	A6	101	1/1	0.90	0.16	60,60,60,60	0
59	MG	A6	103	1/1	0.90	0.26	72,72,72,72	0
59	MG	A7	103	1/1	0.90	0.17	55,55,55,55	0
59	MG	AA	3683	1/1	0.90	0.12	62,62,62,62	0
59	MG	AA	3688	1/1	0.90	0.09	25,25,25,25	0
59	MG	CA	3455	1/1	0.90	0.22	49,49,49,49	0
59	MG	AA	3772	1/1	0.90	0.26	61,61,61,61	1
59	MG	AA	3184	1/1	0.90	0.16	75,75,75,75	0
59	MG	BA	1605	1/1	0.90	0.13	73,73,73,73	0
59	MG	CA	3092	1/1	0.90	0.36	79,79,79,79	0
59	MG	AA	3139	1/1	0.90	0.16	60,60,60,60	0
59	MG	CA	3228	1/1	0.90	0.27	59,59,59,59	0
59	MG	AA	3699	1/1	0.90	0.15	71,71,71,71	0
59	MG	AA	3070	1/1	0.90	0.36	81,81,81,81	0
59	MG	AA	3467	1/1	0.90	0.14	49,49,49,49	0
59	MG	CA	3101	1/1	0.90	0.20	84,84,84,84	0
59	MG	AA	3782	1/1	0.90	0.09	44,44,44,44	0
59	MG	AA	3783	1/1	0.90	0.25	53,53,53,53	1
59	MG	BA	1620	1/1	0.90	0.09	52,52,52,52	0
59	MG	AA	3633	1/1	0.90	0.12	48,48,48,48	0
59	MG	BA	1696	1/1	0.90	0.10	98,98,98,98	0
59	MG	CA	3635	1/1	0.90	0.10	48,48,48,48	0
59	MG	AA	3635	1/1	0.90	0.07	49,49,49,49	0
59	MG	CA	3242	1/1	0.90	0.22	82,82,82,82	0
59	MG	AA	3109	1/1	0.90	0.12	56,56,56,56	0
59	MG	DA	1721	1/1	0.90	0.07	80,80,80,80	0
59	MG	CA	3500	1/1	0.90	0.13	75,75,75,75	0
59	MG	CA	3115	1/1	0.90	0.28	67,67,67,67	0
59	MG	AA	3065	1/1	0.90	0.21	62,62,62,62	0
59	MG	AA	3153	1/1	0.90	0.16	59,59,59,59	0
59	MG	CA	3118	1/1	0.90	0.14	65,65,65,65	0
59	MG	AA	3414	1/1	0.90	0.06	37,37,37,37	0
59	MG	CA	3654	1/1	0.90	0.20	90,90,90,90	0
59	MG	AA	3816	1/1	0.90	0.25	66,66,66,66	0
59	MG	CA	3270	1/1	0.90	0.18	76,76,76,76	0
59	MG	AA	3817	1/1	0.90	0.09	75,75,75,75	0
59	MG	CA	3278	1/1	0.90	0.08	58,58,58,58	0
59	MG	BD	502	1/1	0.90	0.23	64,64,64,64	0
59	MG	BA	1640	1/1	0.90	0.17	52,52,52,52	0
59	MG	CA	3128	1/1	0.90	0.17	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3819	1/1	0.90	0.14	35,35,35,35	1
59	MG	CA	3133	1/1	0.90	0.13	85,85,85,85	0
59	MG	BN	503	1/1	0.90	0.07	62,62,62,62	0
59	MG	AB	3004	1/1	0.90	0.25	69,69,69,69	0
59	MG	DA	1751	1/1	0.90	0.12	64,64,64,64	0
59	MG	AA	3041	1/1	0.90	0.12	37,37,37,37	0
59	MG	AA	3652	1/1	0.90	0.10	53,53,53,53	0
59	MG	CA	3141	1/1	0.90	0.22	68,68,68,68	0
59	MG	AA	3158	1/1	0.90	0.22	68,68,68,68	0
59	MG	DA	1601	1/1	0.90	0.15	74,74,74,74	0
59	MG	CA	3020	1/1	0.90	0.10	47,47,47,47	0
59	MG	DA	1758	1/1	0.90	0.15	75,75,75,75	0
59	MG	CA	3022	1/1	0.90	0.28	69,69,69,69	0
59	MG	DA	1608	1/1	0.90	0.09	57,57,57,57	0
59	MG	DA	1767	1/1	0.90	0.08	74,74,74,74	0
59	MG	CA	3154	1/1	0.90	0.19	64,64,64,64	0
59	MG	CA	3023	1/1	0.90	0.13	68,68,68,68	0
59	MG	CA	3030	1/1	0.90	0.20	59,59,59,59	0
59	MG	CA	3159	1/1	0.90	0.15	69,69,69,69	0
59	MG	AA	3657	1/1	0.90	0.09	63,63,63,63	0
59	MG	CA	3354	1/1	0.90	0.12	49,49,49,49	0
59	MG	AA	3659	1/1	0.90	0.15	73,73,73,73	0
59	MG	BA	1726	1/1	0.90	0.10	46,46,46,46	0
59	MG	AA	3253	1/1	0.90	0.12	64,64,64,64	0
60	ZN	C4	501	1/1	0.90	0.07	194,194,194,194	0
59	MG	AA	3165	1/1	0.91	0.14	52,52,52,52	0
59	MG	CA	3348	1/1	0.91	0.14	44,44,44,44	0
59	MG	BA	1752	1/1	0.91	0.15	59,59,59,59	0
59	MG	CA	3352	1/1	0.91	0.09	79,79,79,79	0
59	MG	AA	3035	1/1	0.91	0.09	48,48,48,48	0
59	MG	DA	1619	1/1	0.91	0.17	59,59,59,59	0
59	MG	AA	3086	1/1	0.91	0.12	55,55,55,55	0
59	MG	CA	3548	1/1	0.91	0.08	90,90,90,90	0
59	MG	CA	3551	1/1	0.91	0.09	63,63,63,63	0
59	MG	AA	3174	1/1	0.91	0.21	59,59,59,59	0
59	MG	CA	3366	1/1	0.91	0.14	49,49,49,49	0
59	MG	AA	3356	1/1	0.91	0.13	80,80,80,80	0
59	MG	CA	3558	1/1	0.91	0.08	64,64,64,64	0
59	MG	CA	3559	1/1	0.91	0.09	75,75,75,75	0
59	MG	BA	1759	1/1	0.91	0.17	63,63,63,63	0
59	MG	CA	3373	1/1	0.91	0.17	58,58,58,58	0
59	MG	AA	3649	1/1	0.91	0.13	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3143	1/1	0.91	0.09	48,48,48,48	0
59	MG	CA	3059	1/1	0.91	0.13	58,58,58,58	0
59	MG	BA	1604	1/1	0.91	0.15	63,63,63,63	0
59	MG	AA	3718	1/1	0.91	0.14	42,42,42,42	0
59	MG	CA	3575	1/1	0.91	0.09	71,71,71,71	0
59	MG	BA	1606	1/1	0.91	0.22	126,126,126,126	0
59	MG	AA	3468	1/1	0.91	0.07	55,55,55,55	0
59	MG	AA	3722	1/1	0.91	0.12	37,37,37,37	0
59	MG	BA	1611	1/1	0.91	0.07	31,31,31,31	0
59	MG	BA	1678	1/1	0.91	0.13	54,54,54,54	0
59	MG	CA	3208	1/1	0.91	0.17	74,74,74,74	0
59	MG	DA	1656	1/1	0.91	0.13	63,63,63,63	0
59	MG	DA	1658	1/1	0.91	0.23	51,51,51,51	0
59	MG	AA	3724	1/1	0.91	0.11	47,47,47,47	0
59	MG	CA	3077	1/1	0.91	0.11	42,42,42,42	0
59	MG	AA	3474	1/1	0.91	0.06	18,18,18,18	1
59	MG	BA	1615	1/1	0.91	0.07	62,62,62,62	0
59	MG	AA	3363	1/1	0.91	0.10	82,82,82,82	0
59	MG	CA	3435	1/1	0.91	0.07	55,55,55,55	0
59	MG	CA	3595	1/1	0.91	0.12	70,70,70,70	0
59	MG	AB	3003	1/1	0.91	0.15	60,60,60,60	0
59	MG	DA	1670	1/1	0.91	0.10	49,49,49,49	0
59	MG	AA	3012	1/1	0.91	0.14	49,49,49,49	0
59	MG	CA	3600	1/1	0.91	0.13	86,86,86,86	0
59	MG	AB	3006	1/1	0.91	0.11	57,57,57,57	0
59	MG	CA	3094	1/1	0.91	0.13	59,59,59,59	0
59	MG	BA	1624	1/1	0.91	0.10	58,58,58,58	0
59	MG	AA	3209	1/1	0.91	0.13	62,62,62,62	0
59	MG	AA	3285	1/1	0.91	0.19	51,51,51,51	0
59	MG	AA	3378	1/1	0.91	0.19	56,56,56,56	0
59	MG	AA	3135	1/1	0.91	0.14	55,55,55,55	0
59	MG	CA	3106	1/1	0.91	0.18	66,66,66,66	0
59	MG	BA	1801	1/1	0.91	0.07	65,65,65,65	0
59	MG	CA	3616	1/1	0.91	0.22	74,74,74,74	0
59	MG	BA	1802	1/1	0.91	0.17	76,76,76,76	0
59	MG	DA	1700	1/1	0.91	0.13	61,61,61,61	0
59	MG	DA	1703	1/1	0.91	0.10	89,89,89,89	0
59	MG	AD	302	1/1	0.91	0.27	85,85,85,85	0
59	MG	BA	1700	1/1	0.91	0.22	52,52,52,52	0
59	MG	BA	1703	1/1	0.91	0.18	51,51,51,51	0
59	MG	CA	3483	1/1	0.91	0.13	64,64,64,64	0
59	MG	CA	3484	1/1	0.91	0.10	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3290	1/1	0.91	0.09	64,64,64,64	0
59	MG	CA	3630	1/1	0.91	0.10	65,65,65,65	0
59	MG	CA	3631	1/1	0.91	0.10	65,65,65,65	0
59	MG	BA	1635	1/1	0.91	0.31	65,65,65,65	0
59	MG	AA	3293	1/1	0.91	0.07	27,27,27,27	0
59	MG	BA	1814	1/1	0.91	0.09	69,69,69,69	0
59	MG	DA	1725	1/1	0.91	0.11	58,58,58,58	0
59	MG	CA	3247	1/1	0.91	0.16	39,39,39,39	0
59	MG	BA	1708	1/1	0.91	0.07	64,64,64,64	0
59	MG	AA	3252	1/1	0.91	0.08	44,44,44,44	0
59	MG	BA	1643	1/1	0.91	0.17	66,66,66,66	0
59	MG	CA	3257	1/1	0.91	0.10	35,35,35,35	0
59	MG	AA	3765	1/1	0.91	0.15	60,60,60,60	0
59	MG	BL	202	1/1	0.91	0.10	54,54,54,54	0
59	MG	AA	3118	1/1	0.91	0.22	76,76,76,76	0
59	MG	AF	308	1/1	0.91	0.12	57,57,57,57	0
59	MG	BW	502	1/1	0.91	0.12	59,59,59,59	0
59	MG	CA	3130	1/1	0.91	0.07	55,55,55,55	0
59	MG	CA	3660	1/1	0.91	0.20	60,60,60,60	0
59	MG	BW	503	1/1	0.91	0.20	60,60,60,60	0
59	MG	CB	3002	1/1	0.91	0.07	63,63,63,63	0
59	MG	BA	1647	1/1	0.91	0.25	57,57,57,57	0
59	MG	AA	3550	1/1	0.91	0.09	38,38,38,38	0
59	MG	CB	3007	1/1	0.91	0.16	52,52,52,52	0
59	MG	CB	3008	1/1	0.91	0.14	66,66,66,66	0
59	MG	CA	3293	1/1	0.91	0.12	60,60,60,60	0
59	MG	AN	3001	1/1	0.91	0.12	58,58,58,58	0
59	MG	AP	204	1/1	0.91	0.08	59,59,59,59	0
59	MG	CD	302	1/1	0.91	0.21	56,56,56,56	0
59	MG	BA	1655	1/1	0.91	0.06	59,59,59,59	0
59	MG	AQ	203	1/1	0.91	0.10	32,32,32,32	0
59	MG	DA	1759	1/1	0.91	0.08	53,53,53,53	0
59	MG	BA	1729	1/1	0.91	0.12	53,53,53,53	0
59	MG	CG	3001	1/1	0.91	0.08	65,65,65,65	0
59	MG	DA	1763	1/1	0.91	0.10	76,76,76,76	0
59	MG	CN	5001	1/1	0.91	0.08	65,65,65,65	0
59	MG	CA	3031	1/1	0.91	0.20	68,68,68,68	0
59	MG	CA	3526	1/1	0.91	0.14	58,58,58,58	0
59	MG	CA	3150	1/1	0.91	0.15	57,57,57,57	0
59	MG	AA	3102	1/1	0.91	0.23	47,47,47,47	0
59	MG	DE	202	1/1	0.91	0.08	100,100,100,100	0
59	MG	CA	3325	1/1	0.91	0.08	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3694	1/1	0.91	0.07	53,53,53,53	0
59	MG	AA	3218	1/1	0.91	0.17	67,67,67,67	0
59	MG	DW	502	1/1	0.91	0.08	58,58,58,58	0
59	MG	AA	3632	1/1	0.91	0.12	54,54,54,54	0
59	MG	DA	1606	1/1	0.91	0.06	85,85,85,85	0
59	MG	AA	3440	1/1	0.91	0.09	63,63,63,63	0
59	MG	AA	3229	1/1	0.92	0.27	67,67,67,67	0
59	MG	BA	1771	1/1	0.92	0.11	65,65,65,65	0
59	MG	AF	302	1/1	0.92	0.14	47,47,47,47	0
59	MG	CV	201	1/1	0.92	0.17	117,117,117,117	0
59	MG	CX	5001	1/1	0.92	0.11	65,65,65,65	0
59	MG	AA	3646	1/1	0.92	0.12	53,53,53,53	0
59	MG	CA	3087	1/1	0.92	0.33	68,68,68,68	0
59	MG	CA	3243	1/1	0.92	0.12	58,58,58,58	0
59	MG	CA	3088	1/1	0.92	0.18	67,67,67,67	0
59	MG	AA	3558	1/1	0.92	0.07	48,48,48,48	0
59	MG	AA	3448	1/1	0.92	0.07	62,62,62,62	0
59	MG	AA	3752	1/1	0.92	0.10	42,42,42,42	0
59	MG	AA	3134	1/1	0.92	0.12	62,62,62,62	0
59	MG	CA	3520	1/1	0.92	0.10	73,73,73,73	0
59	MG	AA	3451	1/1	0.92	0.12	57,57,57,57	0
59	MG	AR	201	1/1	0.92	0.12	63,63,63,63	0
59	MG	AA	3655	1/1	0.92	0.11	55,55,55,55	0
59	MG	AX	3001	1/1	0.92	0.10	52,52,52,52	0
59	MG	AA	3160	1/1	0.92	0.07	30,30,30,30	0
59	MG	AA	3455	1/1	0.92	0.13	32,32,32,32	1
59	MG	DA	1627	1/1	0.92	0.05	77,77,77,77	0
59	MG	CA	3274	1/1	0.92	0.13	52,52,52,52	0
59	MG	A0	102	1/1	0.92	0.07	56,56,56,56	0
59	MG	CA	3280	1/1	0.92	0.07	48,48,48,48	0
59	MG	AA	3763	1/1	0.92	0.10	47,47,47,47	0
59	MG	CA	3285	1/1	0.92	0.09	63,63,63,63	0
59	MG	CA	3287	1/1	0.92	0.13	45,45,45,45	0
59	MG	DA	1636	1/1	0.92	0.24	62,62,62,62	0
59	MG	BA	1791	1/1	0.92	0.11	72,72,72,72	0
59	MG	AA	3596	1/1	0.92	0.12	65,65,65,65	0
59	MG	AA	3346	1/1	0.92	0.19	59,59,59,59	0
59	MG	BA	1796	1/1	0.92	0.16	57,57,57,57	0
59	MG	CA	3547	1/1	0.92	0.12	69,69,69,69	0
59	MG	DA	1642	1/1	0.92	0.10	62,62,62,62	0
59	MG	AA	3768	1/1	0.92	0.07	58,58,58,58	0
59	MG	BA	1798	1/1	0.92	0.11	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	1645	1/1	0.92	0.07	58,58,58,58	0
59	MG	AA	3670	1/1	0.92	0.07	54,54,54,54	0
59	MG	AA	3238	1/1	0.92	0.16	76,76,76,76	0
59	MG	CA	3119	1/1	0.92	0.32	55,55,55,55	0
59	MG	AA	3019	1/1	0.92	0.16	70,70,70,70	0
59	MG	AA	3606	1/1	0.92	0.09	34,34,34,34	0
59	MG	CA	3319	1/1	0.92	0.08	65,65,65,65	0
59	MG	AA	3208	1/1	0.92	0.27	54,54,54,54	0
59	MG	AA	3280	1/1	0.92	0.12	53,53,53,53	0
59	MG	AA	3682	1/1	0.92	0.09	31,31,31,31	0
59	MG	AA	3166	1/1	0.92	0.17	40,40,40,40	0
59	MG	BA	1608	1/1	0.92	0.22	57,57,57,57	0
59	MG	AA	3687	1/1	0.92	0.20	52,52,52,52	0
59	MG	AA	3283	1/1	0.92	0.24	43,43,43,43	0
59	MG	AA	3127	1/1	0.92	0.16	57,57,57,57	0
59	MG	AA	3693	1/1	0.92	0.16	69,69,69,69	0
59	MG	CA	3137	1/1	0.92	0.14	69,69,69,69	0
59	MG	AA	3490	1/1	0.92	0.12	27,27,27,27	0
59	MG	AA	3794	1/1	0.92	0.18	60,60,60,60	0
59	MG	AA	3695	1/1	0.92	0.10	67,67,67,67	0
59	MG	BA	1617	1/1	0.92	0.11	118,118,118,118	0
59	MG	CA	3147	1/1	0.92	0.13	55,55,55,55	0
59	MG	BA	1618	1/1	0.92	0.14	52,52,52,52	0
59	MG	CA	3590	1/1	0.92	0.11	59,59,59,59	0
59	MG	AA	3286	1/1	0.92	0.29	40,40,40,40	0
59	MG	DA	1684	1/1	0.92	0.12	69,69,69,69	0
59	MG	AA	3802	1/1	0.92	0.13	86,86,86,86	0
59	MG	AA	3803	1/1	0.92	0.14	45,45,45,45	0
59	MG	CA	3005	1/1	0.92	0.11	48,48,48,48	0
59	MG	CA	3380	1/1	0.92	0.16	59,59,59,59	0
59	MG	CA	3388	1/1	0.92	0.10	90,90,90,90	0
59	MG	AA	3249	1/1	0.92	0.16	59,59,59,59	0
59	MG	CA	3015	1/1	0.92	0.14	51,51,51,51	0
59	MG	AA	3496	1/1	0.92	0.19	31,31,31,31	0
59	MG	DA	1705	1/1	0.92	0.09	68,68,68,68	0
59	MG	DA	1706	1/1	0.92	0.13	66,66,66,66	0
59	MG	BA	1627	1/1	0.92	0.07	51,51,51,51	0
59	MG	AA	3499	1/1	0.92	0.06	48,48,48,48	0
59	MG	CA	3024	1/1	0.92	0.18	100,100,100,100	0
59	MG	CA	3409	1/1	0.92	0.13	42,42,42,42	0
59	MG	CA	3176	1/1	0.92	0.23	60,60,60,60	0
59	MG	AA	3818	1/1	0.92	0.12	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3413	1/1	0.92	0.09	39,39,39,39	0
59	MG	CA	3182	1/1	0.92	0.16	38,38,38,38	0
59	MG	CA	3419	1/1	0.92	0.08	59,59,59,59	0
59	MG	BA	1720	1/1	0.92	0.09	61,61,61,61	0
59	MG	AA	3508	1/1	0.92	0.15	43,43,43,43	0
59	MG	CA	3431	1/1	0.92	0.13	75,75,75,75	0
59	MG	CA	3033	1/1	0.92	0.20	55,55,55,55	0
59	MG	AB	3002	1/1	0.92	0.13	52,52,52,52	0
59	MG	AA	3193	1/1	0.92	0.21	40,40,40,40	0
59	MG	CA	3436	1/1	0.92	0.13	64,64,64,64	0
59	MG	CA	3037	1/1	0.92	0.31	57,57,57,57	0
59	MG	AA	3710	1/1	0.92	0.20	29,29,29,29	1
59	MG	AA	3099	1/1	0.92	0.15	53,53,53,53	0
59	MG	CA	3447	1/1	0.92	0.12	73,73,73,73	0
59	MG	CA	3451	1/1	0.92	0.14	62,62,62,62	0
59	MG	DA	1741	1/1	0.92	0.20	67,67,67,67	0
59	MG	CA	3637	1/1	0.92	0.34	61,61,61,61	0
59	MG	BA	1732	1/1	0.92	0.07	70,70,70,70	0
59	MG	BA	1639	1/1	0.92	0.23	61,61,61,61	0
59	MG	BA	1737	1/1	0.92	0.23	79,79,79,79	0
59	MG	AB	3009	1/1	0.92	0.07	50,50,50,50	0
59	MG	AA	3028	1/1	0.92	0.10	39,39,39,39	0
59	MG	BA	1742	1/1	0.92	0.09	48,48,48,48	0
59	MG	CA	3209	1/1	0.92	0.13	73,73,73,73	0
59	MG	CA	3048	1/1	0.92	0.05	47,47,47,47	0
59	MG	AB	3018	1/1	0.92	0.09	69,69,69,69	0
59	MG	CA	3213	1/1	0.92	0.18	51,51,51,51	0
59	MG	CA	3051	1/1	0.92	0.22	57,57,57,57	0
59	MG	CA	3662	1/1	0.92	0.14	33,33,33,33	0
59	MG	CA	3663	1/1	0.92	0.11	64,64,64,64	0
59	MG	CA	3054	1/1	0.92	0.14	36,36,36,36	0
59	MG	AA	3300	1/1	0.92	0.09	22,22,22,22	0
59	MG	AA	3264	1/1	0.92	0.22	51,51,51,51	0
59	MG	AA	3544	1/1	0.92	0.09	26,26,26,26	0
59	MG	CA	3061	1/1	0.92	0.14	68,68,68,68	0
59	MG	AA	3177	1/1	0.92	0.12	59,59,59,59	0
59	MG	CA	3225	1/1	0.92	0.15	64,64,64,64	0
59	MG	AD	303	1/1	0.92	0.24	58,58,58,58	0
59	MG	CA	3493	1/1	0.92	0.15	65,65,65,65	0
59	MG	AA	3641	1/1	0.92	0.09	51,51,51,51	0
59	MG	AA	3224	1/1	0.92	0.19	56,56,56,56	0
59	MG	BA	1656	1/1	0.92	0.20	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	1762	1/1	0.92	0.08	74,74,74,74	0
59	MG	CA	3073	1/1	0.92	0.09	49,49,49,49	0
59	MG	AE	301	1/1	0.92	0.11	69,69,69,69	0
59	MG	CA	3503	1/1	0.92	0.18	52,52,52,52	0
59	MG	DZ	702	1/1	0.92	0.13	57,57,57,57	0
59	MG	AA	3555	1/1	0.92	0.07	45,45,45,45	0
59	MG	DA	1603	1/1	0.93	0.08	72,72,72,72	0
59	MG	AA	3237	1/1	0.93	0.17	76,76,76,76	0
59	MG	AA	3080	1/1	0.93	0.29	61,61,61,61	0
59	MG	BA	1681	1/1	0.93	0.06	53,53,53,53	0
59	MG	DA	1607	1/1	0.93	0.07	86,86,86,86	0
59	MG	AA	3187	1/1	0.93	0.28	56,56,56,56	0
59	MG	A7	102	1/1	0.93	0.11	37,37,37,37	0
59	MG	BA	1807	1/1	0.93	0.11	61,61,61,61	0
59	MG	BA	1684	1/1	0.93	0.17	61,61,61,61	0
59	MG	CA	3122	1/1	0.93	0.13	58,58,58,58	0
59	MG	DA	1616	1/1	0.93	0.19	51,51,51,51	0
59	MG	AA	3210	1/1	0.93	0.17	59,59,59,59	1
59	MG	AA	3684	1/1	0.93	0.11	51,51,51,51	0
59	MG	DA	1620	1/1	0.93	0.16	57,57,57,57	0
59	MG	AA	3017	1/1	0.93	0.09	61,61,61,61	0
59	MG	AA	3471	1/1	0.93	0.08	56,56,56,56	0
59	MG	AA	3610	1/1	0.93	0.15	59,59,59,59	0
59	MG	DA	1625	1/1	0.93	0.08	50,50,50,50	0
59	MG	CA	3313	1/1	0.93	0.16	38,38,38,38	0
59	MG	AA	3473	1/1	0.93	0.07	53,53,53,53	0
59	MG	CA	3543	1/1	0.93	0.09	71,71,71,71	0
59	MG	AA	3791	1/1	0.93	0.14	51,51,51,51	0
59	MG	BK	201	1/1	0.93	0.09	44,44,44,44	0
59	MG	AA	3244	1/1	0.93	0.19	52,52,52,52	0
59	MG	BA	1607	1/1	0.93	0.08	64,64,64,64	0
59	MG	AA	3025	1/1	0.93	0.12	68,68,68,68	0
59	MG	CA	3336	1/1	0.93	0.10	64,64,64,64	0
59	MG	AA	3361	1/1	0.93	0.16	53,53,53,53	0
59	MG	CA	3556	1/1	0.93	0.12	62,62,62,62	0
59	MG	AA	3798	1/1	0.93	0.09	25,25,25,25	0
59	MG	AA	3618	1/1	0.93	0.10	72,72,72,72	0
59	MG	CA	3344	1/1	0.93	0.05	68,68,68,68	0
59	MG	CA	3145	1/1	0.93	0.08	76,76,76,76	0
59	MG	BZ	701	1/1	0.93	0.11	49,49,49,49	0
59	MG	BA	1705	1/1	0.93	0.14	53,53,53,53	0
59	MG	AA	3282	1/1	0.93	0.13	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3703	1/1	0.93	0.15	56,56,56,56	0
59	MG	AA	3804	1/1	0.93	0.06	50,50,50,50	0
59	MG	DA	1650	1/1	0.93	0.15	50,50,50,50	0
59	MG	CA	3365	1/1	0.93	0.07	55,55,55,55	0
59	MG	CA	3011	1/1	0.93	0.15	63,63,63,63	0
59	MG	AA	3805	1/1	0.93	0.12	58,58,58,58	0
59	MG	CA	3016	1/1	0.93	0.16	52,52,52,52	0
59	MG	BA	1712	1/1	0.93	0.33	57,57,57,57	0
59	MG	AA	3810	1/1	0.93	0.20	67,67,67,67	0
59	MG	AA	3026	1/1	0.93	0.06	47,47,47,47	0
59	MG	AA	3492	1/1	0.93	0.08	26,26,26,26	0
59	MG	CA	3026	1/1	0.93	0.12	32,32,32,32	1
59	MG	CA	3384	1/1	0.93	0.10	55,55,55,55	0
59	MG	CA	3028	1/1	0.93	0.21	51,51,51,51	0
59	MG	DA	1666	1/1	0.93	0.19	53,53,53,53	0
59	MG	DA	1667	1/1	0.93	0.07	66,66,66,66	0
59	MG	CA	3177	1/1	0.93	0.12	29,29,29,29	0
59	MG	CA	3390	1/1	0.93	0.05	80,80,80,80	0
59	MG	CA	3178	1/1	0.93	0.09	54,54,54,54	0
59	MG	CA	3394	1/1	0.93	0.15	69,69,69,69	0
59	MG	AA	3179	1/1	0.93	0.14	45,45,45,45	1
59	MG	BA	1622	1/1	0.93	0.16	65,65,65,65	0
59	MG	CA	3402	1/1	0.93	0.10	66,66,66,66	0
59	MG	AA	3371	1/1	0.93	0.09	53,53,53,53	0
59	MG	AA	3374	1/1	0.93	0.14	49,49,49,49	0
59	MG	CA	3188	1/1	0.93	0.14	94,94,94,94	0
59	MG	AB	3001	1/1	0.93	0.15	74,74,74,74	0
59	MG	AA	3001	1/1	0.93	0.08	25,25,25,25	0
59	MG	DA	1685	1/1	0.93	0.07	46,46,46,46	0
59	MG	DA	1689	1/1	0.93	0.08	56,56,56,56	0
59	MG	AA	3714	1/1	0.93	0.14	70,70,70,70	0
59	MG	BA	1629	1/1	0.93	0.12	61,61,61,61	0
59	MG	AA	3501	1/1	0.93	0.07	49,49,49,49	0
59	MG	BA	1730	1/1	0.93	0.11	53,53,53,53	0
59	MG	CA	3421	1/1	0.93	0.15	57,57,57,57	0
59	MG	CA	3201	1/1	0.93	0.21	45,45,45,45	0
59	MG	DA	1701	1/1	0.93	0.13	68,68,68,68	0
59	MG	AA	3716	1/1	0.93	0.15	66,66,66,66	0
59	MG	BA	1632	1/1	0.93	0.09	48,48,48,48	0
59	MG	AB	3008	1/1	0.93	0.17	52,52,52,52	0
59	MG	AA	3287	1/1	0.93	0.21	43,43,43,43	0
59	MG	AA	3142	1/1	0.93	0.14	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3625	1/1	0.93	0.11	64,64,64,64	0
59	MG	BA	1637	1/1	0.93	0.22	72,72,72,72	0
59	MG	AA	3520	1/1	0.93	0.07	17,17,17,17	0
59	MG	DA	1714	1/1	0.93	0.08	68,68,68,68	0
59	MG	BA	1747	1/1	0.93	0.09	65,65,65,65	0
59	MG	AA	3636	1/1	0.93	0.12	86,86,86,86	0
59	MG	AA	3289	1/1	0.93	0.10	53,53,53,53	0
59	MG	BA	1641	1/1	0.93	0.11	54,54,54,54	0
59	MG	BA	1642	1/1	0.93	0.11	60,60,60,60	0
59	MG	AA	3732	1/1	0.93	0.15	70,70,70,70	0
59	MG	AA	3258	1/1	0.93	0.15	68,68,68,68	0
59	MG	DA	1726	1/1	0.93	0.13	60,60,60,60	0
59	MG	AA	3263	1/1	0.93	0.16	24,24,24,24	1
59	MG	AA	3420	1/1	0.93	0.07	25,25,25,25	1
59	MG	AA	3050	1/1	0.93	0.13	28,28,28,28	0
59	MG	CA	3472	1/1	0.93	0.22	62,62,62,62	0
59	MG	AD	309	1/1	0.93	0.09	56,56,56,56	0
59	MG	DA	1734	1/1	0.93	0.05	65,65,65,65	0
59	MG	DA	1735	1/1	0.93	0.07	73,73,73,73	0
59	MG	AA	3742	1/1	0.93	0.14	68,68,68,68	0
59	MG	AA	3746	1/1	0.93	0.13	73,73,73,73	0
59	MG	AA	3298	1/1	0.93	0.09	58,58,58,58	0
59	MG	CA	3652	1/1	0.93	0.07	23,23,23,23	0
59	MG	AA	3751	1/1	0.93	0.23	61,61,61,61	0
59	MG	AA	3231	1/1	0.93	0.13	64,64,64,64	0
59	MG	CA	3658	1/1	0.93	0.17	64,64,64,64	0
59	MG	CA	3659	1/1	0.93	0.07	55,55,55,55	0
59	MG	AA	3313	1/1	0.93	0.13	39,39,39,39	0
59	MG	AA	3204	1/1	0.93	0.13	54,54,54,54	0
59	MG	AA	3446	1/1	0.93	0.17	59,59,59,59	0
59	MG	CA	3083	1/1	0.93	0.16	61,61,61,61	0
59	MG	CA	3086	1/1	0.93	0.36	85,85,85,85	0
59	MG	AN	3003	1/1	0.93	0.07	55,55,55,55	0
59	MG	CB	3004	1/1	0.93	0.09	55,55,55,55	0
59	MG	AP	203	1/1	0.93	0.08	44,44,44,44	0
59	MG	AA	3563	1/1	0.93	0.12	34,34,34,34	0
59	MG	AA	3447	1/1	0.93	0.10	56,56,56,56	0
59	MG	AA	3185	1/1	0.93	0.14	76,76,76,76	0
59	MG	CA	3245	1/1	0.93	0.24	62,62,62,62	0
59	MG	AA	3575	1/1	0.93	0.09	35,35,35,35	0
59	MG	CD	301	1/1	0.93	0.12	43,43,43,43	0
59	MG	CA	3095	1/1	0.93	0.12	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AV	201	1/1	0.93	0.11	38,38,38,38	0
59	MG	DA	1765	1/1	0.93	0.07	64,64,64,64	0
59	MG	DA	1766	1/1	0.93	0.07	74,74,74,74	0
59	MG	CA	3253	1/1	0.93	0.10	70,70,70,70	0
59	MG	AW	3002	1/1	0.93	0.11	47,47,47,47	0
59	MG	AA	3449	1/1	0.93	0.10	50,50,50,50	0
59	MG	AY	502	1/1	0.93	0.17	60,60,60,60	0
59	MG	AZ	301	1/1	0.93	0.13	86,86,86,86	0
59	MG	BA	1793	1/1	0.93	0.07	65,65,65,65	0
59	MG	CA	3269	1/1	0.93	0.18	81,81,81,81	0
59	MG	BA	1794	1/1	0.93	0.06	38,38,38,38	0
59	MG	AA	3322	1/1	0.93	0.13	61,61,61,61	0
59	MG	CU	201	1/1	0.93	0.15	74,74,74,74	0
59	MG	AA	3270	1/1	0.93	0.22	55,55,55,55	0
59	MG	AA	3593	1/1	0.93	0.19	15,15,15,15	1
59	MG	C5	101	1/1	0.93	0.20	66,66,66,66	0
59	MG	AA	3329	1/1	0.93	0.07	40,40,40,40	1
62	GDP	DZ	703	28/28	0.93	0.08	66,66,66,66	1
59	MG	AA	3325	1/1	0.94	0.11	70,70,70,70	0
59	MG	AA	3808	1/1	0.94	0.13	72,72,72,72	0
59	MG	CB	3010	1/1	0.94	0.08	51,51,51,51	0
59	MG	AA	3148	1/1	0.94	0.22	29,29,29,29	1
59	MG	BA	1731	1/1	0.94	0.10	45,45,45,45	0
59	MG	CA	3464	1/1	0.94	0.08	36,36,36,36	0
59	MG	AA	3813	1/1	0.94	0.07	29,29,29,29	1
59	MG	AA	3599	1/1	0.94	0.07	59,59,59,59	0
59	MG	CA	3469	1/1	0.94	0.14	61,61,61,61	0
59	MG	CE	302	1/1	0.94	0.06	64,64,64,64	0
59	MG	CE	304	1/1	0.94	0.15	75,75,75,75	0
59	MG	BA	1734	1/1	0.94	0.09	61,61,61,61	0
59	MG	AA	3014	1/1	0.94	0.11	31,31,31,31	0
59	MG	BA	1738	1/1	0.94	0.05	66,66,66,66	0
59	MG	AA	3602	1/1	0.94	0.10	51,51,51,51	0
59	MG	AA	3454	1/1	0.94	0.11	61,61,61,61	0
59	MG	AA	3182	1/1	0.94	0.15	46,46,46,46	0
59	MG	CA	3056	1/1	0.94	0.07	63,63,63,63	0
59	MG	AA	3701	1/1	0.94	0.12	81,81,81,81	0
59	MG	AA	3456	1/1	0.94	0.08	56,56,56,56	0
59	MG	CA	3060	1/1	0.94	0.28	72,72,72,72	0
59	MG	AA	3704	1/1	0.94	0.09	49,49,49,49	0
59	MG	AA	3073	1/1	0.94	0.05	31,31,31,31	0
59	MG	C3	3001	1/1	0.94	0.09	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3489	1/1	0.94	0.08	39,39,39,39	0
59	MG	AA	3220	1/1	0.94	0.08	62,62,62,62	0
59	MG	DA	1602	1/1	0.94	0.06	45,45,45,45	0
59	MG	AA	3609	1/1	0.94	0.07	58,58,58,58	0
59	MG	CA	3231	1/1	0.94	0.23	60,60,60,60	0
59	MG	CA	3232	1/1	0.94	0.21	54,54,54,54	0
59	MG	CA	3068	1/1	0.94	0.31	66,66,66,66	0
59	MG	CA	3498	1/1	0.94	0.06	49,49,49,49	0
59	MG	AA	3709	1/1	0.94	0.21	23,23,23,23	1
59	MG	AB	3014	1/1	0.94	0.09	56,56,56,56	0
59	MG	AB	3015	1/1	0.94	0.06	28,28,28,28	0
59	MG	AA	3002	1/1	0.94	0.12	57,57,57,57	0
59	MG	AA	3349	1/1	0.94	0.08	47,47,47,47	0
59	MG	DA	1615	1/1	0.94	0.06	58,58,58,58	0
59	MG	AA	3355	1/1	0.94	0.12	57,57,57,57	0
59	MG	AA	3226	1/1	0.94	0.10	46,46,46,46	0
59	MG	BA	1766	1/1	0.94	0.07	62,62,62,62	0
59	MG	CA	3079	1/1	0.94	0.07	41,41,41,41	0
59	MG	AB	3023	1/1	0.94	0.19	54,54,54,54	0
59	MG	BA	1770	1/1	0.94	0.06	54,54,54,54	0
59	MG	AA	3616	1/1	0.94	0.09	57,57,57,57	0
59	MG	CA	3513	1/1	0.94	0.10	70,70,70,70	0
59	MG	CA	3084	1/1	0.94	0.10	56,56,56,56	0
59	MG	AA	3228	1/1	0.94	0.07	32,32,32,32	0
59	MG	CA	3251	1/1	0.94	0.13	82,82,82,82	0
59	MG	DA	1630	1/1	0.94	0.27	62,62,62,62	0
59	MG	AA	3479	1/1	0.94	0.07	55,55,55,55	0
59	MG	BA	1651	1/1	0.94	0.16	55,55,55,55	0
59	MG	CA	3519	1/1	0.94	0.13	48,48,48,48	0
59	MG	AD	305	1/1	0.94	0.09	50,50,50,50	0
59	MG	AA	3046	1/1	0.94	0.12	35,35,35,35	0
59	MG	CA	3259	1/1	0.94	0.11	80,80,80,80	0
59	MG	AA	3362	1/1	0.94	0.07	46,46,46,46	0
59	MG	CA	3527	1/1	0.94	0.15	76,76,76,76	0
59	MG	CA	3528	1/1	0.94	0.08	38,38,38,38	0
59	MG	AA	3485	1/1	0.94	0.06	48,48,48,48	0
59	MG	AD	311	1/1	0.94	0.13	37,37,37,37	0
59	MG	AA	3088	1/1	0.94	0.15	39,39,39,39	0
59	MG	AA	3730	1/1	0.94	0.09	75,75,75,75	0
59	MG	CA	3099	1/1	0.94	0.20	58,58,58,58	0
59	MG	BA	1784	1/1	0.94	0.08	68,68,68,68	0
59	MG	AA	3731	1/1	0.94	0.10	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3281	1/1	0.94	0.07	21,21,21,21	0
59	MG	BA	1787	1/1	0.94	0.12	55,55,55,55	0
59	MG	DA	1651	1/1	0.94	0.10	63,63,63,63	0
59	MG	AA	3161	1/1	0.94	0.06	43,43,43,43	0
59	MG	AA	3733	1/1	0.94	0.08	49,49,49,49	0
59	MG	AA	3162	1/1	0.94	0.22	67,67,67,67	0
59	MG	CA	3544	1/1	0.94	0.10	60,60,60,60	0
59	MG	CA	3109	1/1	0.94	0.06	35,35,35,35	0
59	MG	CA	3110	1/1	0.94	0.11	56,56,56,56	0
59	MG	AA	3370	1/1	0.94	0.08	47,47,47,47	0
59	MG	AA	3164	1/1	0.94	0.21	71,71,71,71	0
59	MG	CA	3549	1/1	0.94	0.11	70,70,70,70	0
59	MG	CA	3550	1/1	0.94	0.07	62,62,62,62	1
59	MG	DA	1664	1/1	0.94	0.05	66,66,66,66	0
59	MG	AA	3090	1/1	0.94	0.12	53,53,53,53	0
59	MG	AA	3497	1/1	0.94	0.08	44,44,44,44	0
59	MG	CA	3554	1/1	0.94	0.08	66,66,66,66	0
59	MG	AA	3743	1/1	0.94	0.15	67,67,67,67	0
59	MG	CA	3299	1/1	0.94	0.07	64,64,64,64	0
59	MG	AQ	201	1/1	0.94	0.11	48,48,48,48	0
59	MG	DA	1671	1/1	0.94	0.21	56,56,56,56	0
59	MG	AQ	202	1/1	0.94	0.14	35,35,35,35	0
59	MG	CA	3310	1/1	0.94	0.08	47,47,47,47	0
59	MG	AA	3196	1/1	0.94	0.16	55,55,55,55	0
59	MG	CA	3561	1/1	0.94	0.08	41,41,41,41	1
59	MG	AA	3114	1/1	0.94	0.09	26,26,26,26	0
59	MG	AA	3381	1/1	0.94	0.07	16,16,16,16	0
59	MG	CA	3121	1/1	0.94	0.06	49,49,49,49	0
59	MG	CA	3569	1/1	0.94	0.08	41,41,41,41	0
59	MG	AA	3385	1/1	0.94	0.10	49,49,49,49	0
59	MG	CA	3331	1/1	0.94	0.12	52,52,52,52	0
59	MG	DA	1688	1/1	0.94	0.12	51,51,51,51	0
59	MG	AV	206	1/1	0.94	0.09	33,33,33,33	0
59	MG	CA	3334	1/1	0.94	0.12	47,47,47,47	0
59	MG	AA	3753	1/1	0.94	0.08	30,30,30,30	0
59	MG	AA	3400	1/1	0.94	0.07	13,13,13,13	0
59	MG	AA	3521	1/1	0.94	0.08	19,19,19,19	0
59	MG	AA	3529	1/1	0.94	0.12	30,30,30,30	0
59	MG	DA	1699	1/1	0.94	0.10	74,74,74,74	0
59	MG	CA	3582	1/1	0.94	0.08	99,99,99,99	0
59	MG	AA	3645	1/1	0.94	0.11	58,58,58,58	0
59	MG	AA	3403	1/1	0.94	0.08	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3347	1/1	0.94	0.07	45,45,45,45	0
59	MG	BA	1813	1/1	0.94	0.10	55,55,55,55	0
59	MG	BA	1685	1/1	0.94	0.09	50,50,50,50	0
59	MG	DA	1707	1/1	0.94	0.12	61,61,61,61	0
59	MG	BA	1815	1/1	0.94	0.18	53,53,53,53	0
59	MG	AA	3199	1/1	0.94	0.14	41,41,41,41	0
59	MG	A0	103	1/1	0.94	0.07	70,70,70,70	0
59	MG	CA	3360	1/1	0.94	0.09	38,38,38,38	0
59	MG	AA	3650	1/1	0.94	0.08	49,49,49,49	0
59	MG	BA	1692	1/1	0.94	0.18	55,55,55,55	0
59	MG	DA	1716	1/1	0.94	0.05	57,57,57,57	0
59	MG	CA	3142	1/1	0.94	0.17	61,61,61,61	0
59	MG	CA	3599	1/1	0.94	0.07	70,70,70,70	0
59	MG	DA	1719	1/1	0.94	0.17	61,61,61,61	0
59	MG	AA	3039	1/1	0.94	0.20	34,34,34,34	1
59	MG	CA	3602	1/1	0.94	0.09	84,84,84,84	0
59	MG	A5	502	1/1	0.94	0.11	51,51,51,51	0
59	MG	CA	3371	1/1	0.94	0.11	52,52,52,52	0
59	MG	BN	502	1/1	0.94	0.09	87,87,87,87	0
59	MG	CA	3375	1/1	0.94	0.16	68,68,68,68	0
59	MG	AA	3120	1/1	0.94	0.10	33,33,33,33	0
59	MG	DA	1729	1/1	0.94	0.14	49,49,49,49	0
59	MG	CA	3609	1/1	0.94	0.09	52,52,52,52	0
59	MG	AA	3172	1/1	0.94	0.13	47,47,47,47	0
59	MG	CA	3611	1/1	0.94	0.10	59,59,59,59	0
59	MG	AA	3250	1/1	0.94	0.13	123,123,123,123	0
59	MG	CA	3153	1/1	0.94	0.18	73,73,73,73	0
59	MG	CA	3381	1/1	0.94	0.07	50,50,50,50	0
59	MG	AA	3067	1/1	0.94	0.21	61,61,61,61	0
59	MG	AA	3175	1/1	0.94	0.25	63,63,63,63	0
59	MG	AA	3307	1/1	0.94	0.17	61,61,61,61	0
59	MG	AA	3176	1/1	0.94	0.16	70,70,70,70	0
59	MG	CA	3391	1/1	0.94	0.11	51,51,51,51	0
59	MG	CA	3623	1/1	0.94	0.08	64,64,64,64	0
59	MG	CA	3161	1/1	0.94	0.16	57,57,57,57	0
59	MG	AA	3667	1/1	0.94	0.12	41,41,41,41	0
59	MG	AA	3669	1/1	0.94	0.09	81,81,81,81	0
59	MG	CA	3396	1/1	0.94	0.06	39,39,39,39	0
59	MG	CA	3166	1/1	0.94	0.14	27,27,27,27	0
59	MG	CA	3399	1/1	0.94	0.06	57,57,57,57	0
59	MG	AA	3559	1/1	0.94	0.09	46,46,46,46	0
59	MG	CA	3012	1/1	0.94	0.10	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3562	1/1	0.94	0.06	56,56,56,56	0
59	MG	AA	3785	1/1	0.94	0.10	61,61,61,61	0
59	MG	AA	3256	1/1	0.94	0.09	49,49,49,49	0
59	MG	AA	3444	1/1	0.94	0.12	66,66,66,66	0
59	MG	AA	3445	1/1	0.94	0.07	23,23,23,23	0
59	MG	CA	3642	1/1	0.94	0.20	52,52,52,52	0
59	MG	CA	3183	1/1	0.94	0.08	49,49,49,49	0
59	MG	CA	3417	1/1	0.94	0.10	56,56,56,56	0
59	MG	AA	3059	1/1	0.94	0.19	40,40,40,40	0
59	MG	AA	3321	1/1	0.94	0.11	61,61,61,61	0
59	MG	BA	1613	1/1	0.94	0.06	76,76,76,76	0
59	MG	CA	3426	1/1	0.94	0.14	38,38,38,38	0
59	MG	AA	3211	1/1	0.94	0.11	56,56,56,56	0
59	MG	CA	3430	1/1	0.94	0.17	41,41,41,41	0
59	MG	CA	3655	1/1	0.94	0.22	52,52,52,52	0
59	MG	AA	3584	1/1	0.94	0.07	17,17,17,17	0
59	MG	AA	3686	1/1	0.94	0.12	61,61,61,61	0
59	MG	AA	3145	1/1	0.94	0.11	44,44,44,44	0
59	MG	CA	3434	1/1	0.94	0.09	32,32,32,32	0
59	MG	CA	3196	1/1	0.94	0.32	68,68,68,68	0
59	MG	CA	3198	1/1	0.94	0.11	34,34,34,34	0
59	MG	BA	1722	1/1	0.94	0.14	51,51,51,51	0
59	MG	AA	3590	1/1	0.94	0.08	60,60,60,60	0
59	MG	CA	3036	1/1	0.94	0.16	32,32,32,32	0
59	MG	BA	1725	1/1	0.94	0.07	54,54,54,54	0
59	MG	AA	3690	1/1	0.94	0.10	50,50,50,50	0
59	MG	AA	3078	1/1	0.95	0.24	70,70,70,70	0
59	MG	AA	3060	1/1	0.95	0.12	20,20,20,20	0
59	MG	BW	501	1/1	0.95	0.21	47,47,47,47	0
59	MG	AA	3230	1/1	0.95	0.16	69,69,69,69	0
59	MG	AA	3405	1/1	0.95	0.15	44,44,44,44	0
59	MG	AA	3131	1/1	0.95	0.10	63,63,63,63	0
59	MG	CA	3531	1/1	0.95	0.06	47,47,47,47	0
59	MG	BA	1710	1/1	0.95	0.08	81,81,81,81	0
59	MG	DA	1612	1/1	0.95	0.10	57,57,57,57	0
59	MG	CA	3138	1/1	0.95	0.08	86,86,86,86	0
59	MG	CA	3002	1/1	0.95	0.14	28,28,28,28	0
59	MG	CA	3322	1/1	0.95	0.15	40,40,40,40	0
59	MG	AA	3613	1/1	0.95	0.07	48,48,48,48	0
59	MG	AA	3807	1/1	0.95	0.15	77,77,77,77	0
59	MG	AA	3319	1/1	0.95	0.11	58,58,58,58	0
59	MG	CA	3008	1/1	0.95	0.11	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3541	1/1	0.95	0.12	63,63,63,63	0
59	MG	CA	3010	1/1	0.95	0.07	43,43,43,43	0
59	MG	AA	3809	1/1	0.95	0.17	57,57,57,57	0
59	MG	AA	3500	1/1	0.95	0.11	59,59,59,59	0
59	MG	CA	3338	1/1	0.95	0.09	64,64,64,64	0
59	MG	CA	3013	1/1	0.95	0.09	42,42,42,42	0
59	MG	AA	3271	1/1	0.95	0.14	34,34,34,34	0
59	MG	CA	3152	1/1	0.95	0.13	64,64,64,64	0
59	MG	AA	3081	1/1	0.95	0.12	56,56,56,56	0
59	MG	CA	3018	1/1	0.95	0.06	41,41,41,41	0
59	MG	AA	3234	1/1	0.95	0.18	36,36,36,36	0
59	MG	AA	3112	1/1	0.95	0.17	61,61,61,61	0
59	MG	CA	3351	1/1	0.95	0.08	46,46,46,46	0
59	MG	CA	3158	1/1	0.95	0.16	54,54,54,54	0
59	MG	AA	3178	1/1	0.95	0.17	48,48,48,48	0
59	MG	CA	3160	1/1	0.95	0.17	57,57,57,57	0
59	MG	CA	3358	1/1	0.95	0.14	36,36,36,36	0
59	MG	AA	3623	1/1	0.95	0.05	28,28,28,28	0
59	MG	CA	3362	1/1	0.95	0.08	43,43,43,43	0
59	MG	CA	3162	1/1	0.95	0.23	31,31,31,31	0
59	MG	AA	3431	1/1	0.95	0.10	25,25,25,25	0
59	MG	BA	1621	1/1	0.95	0.05	51,51,51,51	0
59	MG	AA	3331	1/1	0.95	0.07	15,15,15,15	0
59	MG	AA	3532	1/1	0.95	0.11	20,20,20,20	0
59	MG	AA	3535	1/1	0.95	0.06	48,48,48,48	0
59	MG	AB	3005	1/1	0.95	0.16	44,44,44,44	0
59	MG	CA	3374	1/1	0.95	0.08	60,60,60,60	0
59	MG	AA	3044	1/1	0.95	0.18	52,52,52,52	0
59	MG	AA	3136	1/1	0.95	0.15	63,63,63,63	0
59	MG	CA	3179	1/1	0.95	0.14	60,60,60,60	0
59	MG	AA	3443	1/1	0.95	0.09	33,33,33,33	0
59	MG	AA	3342	1/1	0.95	0.13	51,51,51,51	0
59	MG	BA	1736	1/1	0.95	0.10	67,67,67,67	0
59	MG	AA	3546	1/1	0.95	0.07	60,60,60,60	0
59	MG	AA	3723	1/1	0.95	0.07	49,49,49,49	0
59	MG	CA	3187	1/1	0.95	0.11	37,37,37,37	0
59	MG	AA	3547	1/1	0.95	0.13	60,60,60,60	0
59	MG	AA	3637	1/1	0.95	0.18	17,17,17,17	1
59	MG	AA	3638	1/1	0.95	0.11	71,71,71,71	0
59	MG	BA	1636	1/1	0.95	0.20	57,57,57,57	0
59	MG	AB	3022	1/1	0.95	0.11	61,61,61,61	0
59	MG	AA	3549	1/1	0.95	0.05	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3197	1/1	0.95	0.12	45,45,45,45	0
59	MG	CA	3049	1/1	0.95	0.18	46,46,46,46	0
59	MG	CA	3597	1/1	0.95	0.10	58,58,58,58	0
59	MG	CA	3400	1/1	0.95	0.10	57,57,57,57	0
59	MG	AA	3116	1/1	0.95	0.24	35,35,35,35	0
59	MG	AA	3049	1/1	0.95	0.10	35,35,35,35	0
59	MG	AA	3183	1/1	0.95	0.10	58,58,58,58	0
59	MG	AA	3284	1/1	0.95	0.20	60,60,60,60	0
59	MG	AD	306	1/1	0.95	0.21	41,41,41,41	0
59	MG	DA	1681	1/1	0.95	0.20	70,70,70,70	0
59	MG	AA	3350	1/1	0.95	0.06	36,36,36,36	0
59	MG	CA	3058	1/1	0.95	0.17	67,67,67,67	0
59	MG	CA	3607	1/1	0.95	0.07	64,64,64,64	0
59	MG	DA	1687	1/1	0.95	0.25	56,56,56,56	0
59	MG	AA	3352	1/1	0.95	0.16	47,47,47,47	0
59	MG	AA	3119	1/1	0.95	0.09	47,47,47,47	0
59	MG	CA	3418	1/1	0.95	0.12	34,34,34,34	0
59	MG	AA	3744	1/1	0.95	0.07	34,34,34,34	0
59	MG	CA	3062	1/1	0.95	0.12	38,38,38,38	0
59	MG	CA	3063	1/1	0.95	0.08	34,34,34,34	0
59	MG	AA	3077	1/1	0.95	0.19	43,43,43,43	0
59	MG	CA	3215	1/1	0.95	0.12	54,54,54,54	0
59	MG	CA	3429	1/1	0.95	0.07	59,59,59,59	0
59	MG	AA	3104	1/1	0.95	0.11	54,54,54,54	0
59	MG	AE	304	1/1	0.95	0.07	52,52,52,52	0
59	MG	BA	1653	1/1	0.95	0.13	56,56,56,56	0
59	MG	AA	3748	1/1	0.95	0.07	45,45,45,45	0
59	MG	AA	3570	1/1	0.95	0.06	14,14,14,14	0
59	MG	CA	3071	1/1	0.95	0.07	45,45,45,45	0
59	MG	AF	303	1/1	0.95	0.15	39,39,39,39	0
59	MG	CA	3440	1/1	0.95	0.16	49,49,49,49	0
59	MG	AF	304	1/1	0.95	0.18	41,41,41,41	0
59	MG	AA	3217	1/1	0.95	0.17	29,29,29,29	1
59	MG	CA	3632	1/1	0.95	0.09	74,74,74,74	0
59	MG	AA	3167	1/1	0.95	0.07	45,45,45,45	0
59	MG	CA	3446	1/1	0.95	0.05	33,33,33,33	0
59	MG	AG	201	1/1	0.95	0.07	38,38,38,38	0
59	MG	AA	3656	1/1	0.95	0.18	80,80,80,80	0
59	MG	AA	3576	1/1	0.95	0.08	52,52,52,52	0
59	MG	AA	3658	1/1	0.95	0.08	42,42,42,42	0
59	MG	AO	5001	1/1	0.95	0.06	34,34,34,34	0
59	MG	CA	3234	1/1	0.95	0.17	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3461	1/1	0.95	0.09	34,34,34,34	0
59	MG	CA	3462	1/1	0.95	0.10	63,63,63,63	0
59	MG	AA	3577	1/1	0.95	0.06	42,42,42,42	0
59	MG	BA	1785	1/1	0.95	0.07	62,62,62,62	0
59	MG	AA	3579	1/1	0.95	0.11	54,54,54,54	0
59	MG	CA	3648	1/1	0.95	0.16	52,52,52,52	0
59	MG	CA	3468	1/1	0.95	0.05	53,53,53,53	0
59	MG	AA	3762	1/1	0.95	0.07	23,23,23,23	0
59	MG	AA	3580	1/1	0.95	0.15	54,54,54,54	0
59	MG	AA	3168	1/1	0.95	0.07	47,47,47,47	0
59	MG	CA	3090	1/1	0.95	0.16	77,77,77,77	0
59	MG	AA	3291	1/1	0.95	0.07	45,45,45,45	0
59	MG	AA	3366	1/1	0.95	0.06	35,35,35,35	1
59	MG	AU	201	1/1	0.95	0.10	46,46,46,46	0
59	MG	AA	3673	1/1	0.95	0.07	38,38,38,38	0
59	MG	BA	1674	1/1	0.95	0.19	48,48,48,48	0
59	MG	AV	203	1/1	0.95	0.08	47,47,47,47	0
59	MG	AA	3674	1/1	0.95	0.10	30,30,30,30	0
59	MG	DA	1745	1/1	0.95	0.20	50,50,50,50	0
59	MG	AW	3001	1/1	0.95	0.21	54,54,54,54	0
59	MG	CA	3487	1/1	0.95	0.16	60,60,60,60	0
59	MG	CA	3252	1/1	0.95	0.16	62,62,62,62	0
59	MG	CB	3006	1/1	0.95	0.08	71,71,71,71	0
59	MG	AA	3105	1/1	0.95	0.14	52,52,52,52	0
59	MG	BA	1799	1/1	0.95	0.10	64,64,64,64	0
59	MG	AA	3588	1/1	0.95	0.09	47,47,47,47	0
59	MG	AA	3368	1/1	0.95	0.14	49,49,49,49	0
59	MG	CA	3258	1/1	0.95	0.24	51,51,51,51	0
59	MG	AA	3294	1/1	0.95	0.10	37,37,37,37	0
59	MG	AA	3594	1/1	0.95	0.09	56,56,56,56	0
59	MG	CA	3265	1/1	0.95	0.14	61,61,61,61	0
59	MG	AA	3144	1/1	0.95	0.14	50,50,50,50	0
59	MG	BA	1806	1/1	0.95	0.11	55,55,55,55	0
59	MG	AA	3373	1/1	0.95	0.10	48,48,48,48	0
59	MG	BA	1688	1/1	0.95	0.19	61,61,61,61	0
59	MG	AA	3225	1/1	0.95	0.16	73,73,73,73	0
59	MG	CA	3277	1/1	0.95	0.15	55,55,55,55	0
59	MG	AA	3685	1/1	0.95	0.07	72,72,72,72	0
59	MG	DA	1768	1/1	0.95	0.06	59,59,59,59	0
59	MG	CA	3279	1/1	0.95	0.07	26,26,26,26	0
59	MG	AA	3171	1/1	0.95	0.14	54,54,54,54	0
59	MG	AA	3377	1/1	0.95	0.06	20,20,20,20	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3788	1/1	0.95	0.14	61,61,61,61	0
59	MG	AA	3789	1/1	0.95	0.10	44,44,44,44	0
59	MG	CR	201	1/1	0.95	0.06	34,34,34,34	0
59	MG	AA	3790	1/1	0.95	0.23	57,57,57,57	0
59	MG	AA	3302	1/1	0.95	0.09	51,51,51,51	0
59	MG	AA	3689	1/1	0.95	0.05	35,35,35,35	0
59	MG	CA	3290	1/1	0.95	0.15	34,34,34,34	0
59	MG	AA	3605	1/1	0.95	0.17	45,45,45,45	0
59	MG	AA	3306	1/1	0.95	0.12	52,52,52,52	0
59	MG	BA	1701	1/1	0.95	0.07	54,54,54,54	0
62	GDP	BZ	702	28/28	0.95	0.07	57,57,57,57	0
59	MG	AA	3797	1/1	0.95	0.08	52,52,52,52	0
59	MG	CA	3286	1/1	0.96	0.09	58,58,58,58	0
59	MG	BM	201	1/1	0.96	0.04	62,62,62,62	0
59	MG	BA	1702	1/1	0.96	0.15	46,46,46,46	0
59	MG	CA	3505	1/1	0.96	0.05	67,67,67,67	0
59	MG	AA	3197	1/1	0.96	0.08	45,45,45,45	0
59	MG	AA	3472	1/1	0.96	0.08	42,42,42,42	0
59	MG	AA	3799	1/1	0.96	0.10	42,42,42,42	0
59	MG	CW	201	1/1	0.96	0.13	46,46,46,46	0
59	MG	CA	3131	1/1	0.96	0.09	26,26,26,26	0
59	MG	C1	101	1/1	0.96	0.10	57,57,57,57	0
59	MG	AA	3600	1/1	0.96	0.07	25,25,25,25	0
59	MG	AA	3033	1/1	0.96	0.11	55,55,55,55	0
59	MG	C7	101	1/1	0.96	0.10	56,56,56,56	0
59	MG	C8	5001	1/1	0.96	0.11	37,37,37,37	0
59	MG	AA	3079	1/1	0.96	0.07	27,27,27,27	0
59	MG	AA	3201	1/1	0.96	0.11	53,53,53,53	0
59	MG	AA	3047	1/1	0.96	0.04	29,29,29,29	0
59	MG	AA	3034	1/1	0.96	0.12	49,49,49,49	0
59	MG	CA	3004	1/1	0.96	0.15	49,49,49,49	0
59	MG	AA	3483	1/1	0.96	0.07	46,46,46,46	0
59	MG	CA	3312	1/1	0.96	0.09	38,38,38,38	0
59	MG	AA	3696	1/1	0.96	0.08	66,66,66,66	0
59	MG	CA	3144	1/1	0.96	0.13	40,40,40,40	0
59	MG	CA	3522	1/1	0.96	0.10	54,54,54,54	0
59	MG	CA	3315	1/1	0.96	0.09	47,47,47,47	0
59	MG	CA	3316	1/1	0.96	0.09	43,43,43,43	0
59	MG	BA	1715	1/1	0.96	0.07	60,60,60,60	0
59	MG	AA	3372	1/1	0.96	0.12	37,37,37,37	0
59	MG	AA	3082	1/1	0.96	0.15	60,60,60,60	0
59	MG	DA	1617	1/1	0.96	0.13	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3488	1/1	0.96	0.07	36,36,36,36	0
59	MG	CA	3326	1/1	0.96	0.08	28,28,28,28	0
59	MG	AA	3205	1/1	0.96	0.09	42,42,42,42	0
59	MG	CA	3332	1/1	0.96	0.09	29,29,29,29	0
59	MG	AA	3083	1/1	0.96	0.14	61,61,61,61	0
59	MG	AA	3299	1/1	0.96	0.19	47,47,47,47	0
59	MG	CA	3017	1/1	0.96	0.05	30,30,30,30	0
59	MG	AA	3207	1/1	0.96	0.11	60,60,60,60	0
59	MG	BA	1723	1/1	0.96	0.06	70,70,70,70	0
59	MG	CA	3156	1/1	0.96	0.14	52,52,52,52	0
59	MG	AA	3064	1/1	0.96	0.05	32,32,32,32	0
59	MG	AA	3113	1/1	0.96	0.11	45,45,45,45	0
59	MG	AA	3386	1/1	0.96	0.08	45,45,45,45	0
59	MG	CA	3025	1/1	0.96	0.16	59,59,59,59	0
59	MG	AA	3389	1/1	0.96	0.07	25,25,25,25	0
59	MG	AA	3390	1/1	0.96	0.06	23,23,23,23	0
59	MG	AA	3620	1/1	0.96	0.05	22,22,22,22	0
59	MG	AA	3621	1/1	0.96	0.04	17,17,17,17	0
59	MG	AA	3503	1/1	0.96	0.05	54,54,54,54	0
59	MG	CA	3167	1/1	0.96	0.07	50,50,50,50	0
59	MG	CA	3168	1/1	0.96	0.20	58,58,58,58	0
59	MG	AB	3012	1/1	0.96	0.06	23,23,23,23	1
59	MG	AB	3013	1/1	0.96	0.07	53,53,53,53	0
59	MG	CA	3173	1/1	0.96	0.19	61,61,61,61	0
59	MG	AA	3395	1/1	0.96	0.07	54,54,54,54	0
59	MG	AA	3624	1/1	0.96	0.07	42,42,42,42	0
59	MG	AA	3398	1/1	0.96	0.13	31,31,31,31	0
59	MG	DA	1647	1/1	0.96	0.14	51,51,51,51	0
59	MG	AA	3254	1/1	0.96	0.13	52,52,52,52	0
59	MG	AB	3019	1/1	0.96	0.11	70,70,70,70	0
59	MG	AA	3309	1/1	0.96	0.14	46,46,46,46	0
59	MG	BA	1743	1/1	0.96	0.04	41,41,41,41	0
59	MG	CA	3564	1/1	0.96	0.14	80,80,80,80	0
59	MG	AA	3255	1/1	0.96	0.08	38,38,38,38	0
59	MG	AA	3015	1/1	0.96	0.26	57,57,57,57	0
59	MG	CA	3567	1/1	0.96	0.05	26,26,26,26	0
59	MG	CA	3377	1/1	0.96	0.07	52,52,52,52	0
59	MG	CA	3045	1/1	0.96	0.21	60,60,60,60	0
59	MG	AA	3729	1/1	0.96	0.10	41,41,41,41	0
59	MG	AA	3257	1/1	0.96	0.18	54,54,54,54	0
59	MG	AA	3533	1/1	0.96	0.09	22,22,22,22	0
59	MG	AA	3036	1/1	0.96	0.08	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3385	1/1	0.96	0.27	61,61,61,61	0
59	MG	CA	3387	1/1	0.96	0.06	50,50,50,50	0
59	MG	AA	3634	1/1	0.96	0.17	76,76,76,76	0
59	MG	AA	3417	1/1	0.96	0.06	25,25,25,25	0
59	MG	CA	3053	1/1	0.96	0.13	32,32,32,32	0
59	MG	BA	1757	1/1	0.96	0.11	43,43,43,43	0
59	MG	AA	3261	1/1	0.96	0.10	25,25,25,25	0
59	MG	AA	3091	1/1	0.96	0.32	47,47,47,47	1
59	MG	DA	1673	1/1	0.96	0.06	82,82,82,82	0
59	MG	BA	1761	1/1	0.96	0.09	62,62,62,62	0
59	MG	AA	3092	1/1	0.96	0.18	39,39,39,39	0
59	MG	AA	3149	1/1	0.96	0.08	51,51,51,51	0
59	MG	CA	3592	1/1	0.96	0.08	64,64,64,64	0
59	MG	BA	1649	1/1	0.96	0.11	35,35,35,35	0
59	MG	BA	1765	1/1	0.96	0.13	54,54,54,54	0
59	MG	CA	3206	1/1	0.96	0.16	44,44,44,44	0
59	MG	DA	1682	1/1	0.96	0.16	52,52,52,52	0
59	MG	CA	3403	1/1	0.96	0.06	70,70,70,70	0
59	MG	CA	3404	1/1	0.96	0.08	65,65,65,65	0
59	MG	CA	3405	1/1	0.96	0.08	55,55,55,55	0
59	MG	DA	1686	1/1	0.96	0.16	56,56,56,56	0
59	MG	BA	1650	1/1	0.96	0.10	55,55,55,55	0
59	MG	AD	312	1/1	0.96	0.18	78,78,78,78	0
59	MG	CA	3601	1/1	0.96	0.05	57,57,57,57	0
59	MG	BA	1768	1/1	0.96	0.08	64,64,64,64	0
59	MG	CA	3410	1/1	0.96	0.08	25,25,25,25	0
59	MG	AA	3023	1/1	0.96	0.17	53,53,53,53	0
59	MG	AA	3094	1/1	0.96	0.26	80,80,80,80	0
59	MG	DA	1696	1/1	0.96	0.12	53,53,53,53	0
59	MG	AA	3334	1/1	0.96	0.08	63,63,63,63	0
59	MG	BA	1773	1/1	0.96	0.07	40,40,40,40	0
59	MG	CA	3416	1/1	0.96	0.07	44,44,44,44	0
59	MG	AA	3154	1/1	0.96	0.08	57,57,57,57	0
59	MG	AA	3442	1/1	0.96	0.09	23,23,23,23	0
59	MG	AA	3750	1/1	0.96	0.15	51,51,51,51	0
59	MG	AA	3338	1/1	0.96	0.06	28,28,28,28	0
59	MG	CA	3613	1/1	0.96	0.10	57,57,57,57	0
59	MG	AA	3648	1/1	0.96	0.07	41,41,41,41	0
59	MG	CA	3422	1/1	0.96	0.10	43,43,43,43	0
59	MG	AA	3155	1/1	0.96	0.18	93,93,93,93	0
59	MG	AA	3221	1/1	0.96	0.05	30,30,30,30	0
59	MG	DA	1711	1/1	0.96	0.12	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3156	1/1	0.96	0.17	49,49,49,49	0
59	MG	AA	3123	1/1	0.96	0.12	54,54,54,54	0
59	MG	CA	3227	1/1	0.96	0.15	41,41,41,41	0
59	MG	AA	3564	1/1	0.96	0.06	44,44,44,44	0
59	MG	AA	3760	1/1	0.96	0.14	55,55,55,55	0
59	MG	CA	3082	1/1	0.96	0.15	76,76,76,76	0
59	MG	AP	201	1/1	0.96	0.20	72,72,72,72	0
59	MG	DA	1720	1/1	0.96	0.09	60,60,60,60	0
59	MG	AA	3654	1/1	0.96	0.05	67,67,67,67	0
59	MG	CA	3437	1/1	0.96	0.08	64,64,64,64	0
59	MG	DA	1723	1/1	0.96	0.06	53,53,53,53	0
59	MG	AA	3276	1/1	0.96	0.10	67,67,67,67	0
59	MG	AA	3566	1/1	0.96	0.06	56,56,56,56	0
59	MG	AA	3764	1/1	0.96	0.07	73,73,73,73	0
59	MG	AA	3567	1/1	0.96	0.07	26,26,26,26	0
59	MG	CA	3445	1/1	0.96	0.07	22,22,22,22	0
59	MG	AA	3348	1/1	0.96	0.05	53,53,53,53	0
59	MG	AA	3095	1/1	0.96	0.12	75,75,75,75	0
59	MG	CA	3448	1/1	0.96	0.09	37,37,37,37	0
59	MG	AA	3573	1/1	0.96	0.07	12,12,12,12	0
59	MG	CA	3640	1/1	0.96	0.10	43,43,43,43	0
59	MG	AA	3662	1/1	0.96	0.05	60,60,60,60	0
59	MG	AA	3006	1/1	0.96	0.08	52,52,52,52	0
59	MG	BA	1677	1/1	0.96	0.08	28,28,28,28	0
59	MG	CA	3097	1/1	0.96	0.16	66,66,66,66	0
59	MG	AA	3452	1/1	0.96	0.04	14,14,14,14	0
59	MG	AA	3668	1/1	0.96	0.10	54,54,54,54	0
59	MG	CA	3463	1/1	0.96	0.10	56,56,56,56	0
59	MG	AA	3188	1/1	0.96	0.14	31,31,31,31	0
59	MG	CA	3651	1/1	0.96	0.27	76,76,76,76	0
59	MG	AA	3777	1/1	0.96	0.06	41,41,41,41	0
59	MG	CA	3102	1/1	0.96	0.13	62,62,62,62	0
59	MG	DA	1747	1/1	0.96	0.07	48,48,48,48	0
59	MG	CA	3250	1/1	0.96	0.06	38,38,38,38	0
59	MG	CA	3103	1/1	0.96	0.16	53,53,53,53	0
59	MG	CA	3657	1/1	0.96	0.15	41,41,41,41	0
59	MG	AA	3779	1/1	0.96	0.05	22,22,22,22	0
59	MG	CA	3105	1/1	0.96	0.06	39,39,39,39	0
59	MG	CA	3473	1/1	0.96	0.08	51,51,51,51	0
59	MG	AA	3578	1/1	0.96	0.06	28,28,28,28	0
59	MG	AA	3671	1/1	0.96	0.11	19,19,19,19	0
59	MG	CA	3664	1/1	0.96	0.10	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3672	1/1	0.96	0.06	48,48,48,48	0
59	MG	CA	3479	1/1	0.96	0.08	50,50,50,50	0
59	MG	AA	3030	1/1	0.96	0.20	24,24,24,24	1
59	MG	DA	1760	1/1	0.96	0.07	61,61,61,61	0
59	MG	AA	3129	1/1	0.96	0.07	34,34,34,34	1
59	MG	CA	3260	1/1	0.96	0.07	35,35,35,35	0
59	MG	BA	1809	1/1	0.96	0.08	61,61,61,61	0
59	MG	BA	1690	1/1	0.96	0.16	71,71,71,71	0
59	MG	A0	104	1/1	0.96	0.13	51,51,51,51	0
59	MG	AA	3163	1/1	0.96	0.14	72,72,72,72	0
59	MG	AA	3458	1/1	0.96	0.08	40,40,40,40	0
59	MG	AA	3460	1/1	0.96	0.07	27,27,27,27	0
59	MG	AA	3461	1/1	0.96	0.10	62,62,62,62	0
59	MG	CA	3491	1/1	0.96	0.04	44,44,44,44	0
59	MG	DD	502	1/1	0.96	0.18	50,50,50,50	0
59	MG	CA	3275	1/1	0.96	0.07	61,61,61,61	0
59	MG	CD	303	1/1	0.96	0.08	70,70,70,70	0
59	MG	DF	3001	1/1	0.96	0.10	54,54,54,54	0
59	MG	AA	3359	1/1	0.96	0.06	31,31,31,31	0
59	MG	AA	3233	1/1	0.96	0.14	46,46,46,46	0
59	MG	AA	3058	1/1	0.96	0.03	22,22,22,22	0
59	MG	CA	3496	1/1	0.96	0.10	56,56,56,56	0
59	MG	BF	3001	1/1	0.96	0.06	49,49,49,49	0
59	MG	CF	302	1/1	0.96	0.20	69,69,69,69	0
59	MG	CF	304	1/1	0.96	0.07	65,65,65,65	0
60	ZN	A4	501	1/1	0.96	0.04	117,117,117,117	0
59	MG	AA	3031	1/1	0.96	0.14	63,63,63,63	0
59	MG	A8	5001	1/1	0.96	0.06	30,30,30,30	0
59	MG	AA	3595	1/1	0.96	0.07	42,42,42,42	0
59	MG	AA	3612	1/1	0.97	0.05	68,68,68,68	0
59	MG	CO	5001	1/1	0.97	0.08	50,50,50,50	0
59	MG	CA	3497	1/1	0.97	0.07	45,45,45,45	0
59	MG	AA	3806	1/1	0.97	0.12	42,42,42,42	0
59	MG	CA	3297	1/1	0.97	0.10	36,36,36,36	0
59	MG	CA	3143	1/1	0.97	0.19	41,41,41,41	0
59	MG	AA	3413	1/1	0.97	0.07	25,25,25,25	0
59	MG	CA	3300	1/1	0.97	0.05	47,47,47,47	0
59	MG	CA	3301	1/1	0.97	0.07	60,60,60,60	0
59	MG	CA	3014	1/1	0.97	0.08	50,50,50,50	0
59	MG	CA	3305	1/1	0.97	0.11	48,48,48,48	0
59	MG	AA	3115	1/1	0.97	0.09	44,44,44,44	0
59	MG	C0	101	1/1	0.97	0.11	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3308	1/1	0.97	0.04	39,39,39,39	0
59	MG	AA	3507	1/1	0.97	0.06	50,50,50,50	0
59	MG	AA	3005	1/1	0.97	0.11	64,64,64,64	0
59	MG	AA	3811	1/1	0.97	0.08	56,56,56,56	0
59	MG	AA	3812	1/1	0.97	0.06	41,41,41,41	0
59	MG	CA	3021	1/1	0.97	0.13	69,69,69,69	0
59	MG	AA	3509	1/1	0.97	0.07	40,40,40,40	0
59	MG	CA	3317	1/1	0.97	0.06	49,49,49,49	0
59	MG	CA	3318	1/1	0.97	0.05	24,24,24,24	0
59	MG	AA	3511	1/1	0.97	0.06	14,14,14,14	0
59	MG	BA	1728	1/1	0.97	0.12	47,47,47,47	0
59	MG	AA	3815	1/1	0.97	0.08	30,30,30,30	0
59	MG	AA	3514	1/1	0.97	0.06	42,42,42,42	0
59	MG	CA	3027	1/1	0.97	0.04	31,31,31,31	0
59	MG	CA	3328	1/1	0.97	0.06	35,35,35,35	0
59	MG	CA	3523	1/1	0.97	0.10	37,37,37,37	0
59	MG	CA	3330	1/1	0.97	0.08	36,36,36,36	0
59	MG	DA	1613	1/1	0.97	0.21	48,48,48,48	0
59	MG	CA	3525	1/1	0.97	0.10	23,23,23,23	0
59	MG	AA	3245	1/1	0.97	0.06	11,11,11,11	0
59	MG	CA	3029	1/1	0.97	0.10	56,56,56,56	0
59	MG	AA	3341	1/1	0.97	0.06	25,25,25,25	0
59	MG	AA	3008	1/1	0.97	0.06	26,26,26,26	0
59	MG	AA	3820	1/1	0.97	0.05	25,25,25,25	0
59	MG	BA	1735	1/1	0.97	0.13	41,41,41,41	0
59	MG	DA	1621	1/1	0.97	0.06	42,42,42,42	0
59	MG	CA	3337	1/1	0.97	0.05	20,20,20,20	0
59	MG	CA	3533	1/1	0.97	0.07	45,45,45,45	0
59	MG	AA	3524	1/1	0.97	0.07	41,41,41,41	0
59	MG	AA	3713	1/1	0.97	0.18	27,27,27,27	0
59	MG	BA	1626	1/1	0.97	0.11	41,41,41,41	0
59	MG	AA	3424	1/1	0.97	0.08	14,14,14,14	0
59	MG	DA	1628	1/1	0.97	0.04	39,39,39,39	0
59	MG	AA	3247	1/1	0.97	0.19	55,55,55,55	0
59	MG	CA	3345	1/1	0.97	0.06	46,46,46,46	0
59	MG	CA	3039	1/1	0.97	0.21	37,37,37,37	0
59	MG	CA	3174	1/1	0.97	0.26	50,50,50,50	0
59	MG	CA	3175	1/1	0.97	0.10	31,31,31,31	0
59	MG	AA	3216	1/1	0.97	0.27	38,38,38,38	0
59	MG	AA	3429	1/1	0.97	0.08	31,31,31,31	0
59	MG	CA	3353	1/1	0.97	0.06	45,45,45,45	0
59	MG	AB	3007	1/1	0.97	0.04	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3355	1/1	0.97	0.08	35,35,35,35	0
59	MG	BA	1745	1/1	0.97	0.04	46,46,46,46	0
59	MG	AA	3430	1/1	0.97	0.05	39,39,39,39	0
59	MG	CA	3359	1/1	0.97	0.04	33,33,33,33	0
59	MG	CA	3181	1/1	0.97	0.13	40,40,40,40	0
59	MG	CA	3552	1/1	0.97	0.09	30,30,30,30	0
59	MG	CA	3361	1/1	0.97	0.14	43,43,43,43	0
59	MG	AA	3100	1/1	0.97	0.10	29,29,29,29	0
59	MG	AB	3010	1/1	0.97	0.04	62,62,62,62	0
59	MG	CA	3364	1/1	0.97	0.04	22,22,22,22	0
59	MG	BA	1751	1/1	0.97	0.06	48,48,48,48	0
59	MG	CA	3185	1/1	0.97	0.09	48,48,48,48	0
59	MG	AA	3720	1/1	0.97	0.08	55,55,55,55	0
59	MG	AA	3721	1/1	0.97	0.12	40,40,40,40	0
59	MG	CA	3370	1/1	0.97	0.06	41,41,41,41	0
59	MG	AA	3432	1/1	0.97	0.13	42,42,42,42	0
59	MG	AA	3631	1/1	0.97	0.13	46,46,46,46	0
59	MG	AB	3016	1/1	0.97	0.06	34,34,34,34	0
59	MG	CA	3191	1/1	0.97	0.16	46,46,46,46	0
59	MG	CA	3192	1/1	0.97	0.03	45,45,45,45	0
59	MG	AA	3433	1/1	0.97	0.10	37,37,37,37	0
59	MG	CA	3570	1/1	0.97	0.04	36,36,36,36	0
59	MG	AA	3725	1/1	0.97	0.05	13,13,13,13	0
59	MG	CA	3195	1/1	0.97	0.18	47,47,47,47	0
59	MG	AA	3728	1/1	0.97	0.11	29,29,29,29	0
59	MG	AA	3434	1/1	0.97	0.06	17,17,17,17	0
59	MG	AA	3545	1/1	0.97	0.09	43,43,43,43	0
59	MG	AA	3191	1/1	0.97	0.03	16,16,16,16	0
59	MG	CA	3386	1/1	0.97	0.09	50,50,50,50	0
59	MG	CA	3580	1/1	0.97	0.09	76,76,76,76	0
59	MG	AA	3069	1/1	0.97	0.03	28,28,28,28	0
59	MG	AA	3121	1/1	0.97	0.08	53,53,53,53	0
59	MG	AA	3735	1/1	0.97	0.04	25,25,25,25	0
59	MG	CA	3584	1/1	0.97	0.05	32,32,32,32	0
59	MG	AA	3351	1/1	0.97	0.08	29,29,29,29	0
59	MG	CA	3064	1/1	0.97	0.07	48,48,48,48	0
59	MG	AA	3087	1/1	0.97	0.17	55,55,55,55	0
59	MG	AA	3552	1/1	0.97	0.09	63,63,63,63	0
59	MG	AA	3222	1/1	0.97	0.06	4,4,4,4	0
59	MG	DA	1680	1/1	0.97	0.09	56,56,56,56	0
59	MG	AA	3741	1/1	0.97	0.05	21,21,21,21	0
59	MG	AA	3146	1/1	0.97	0.05	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3557	1/1	0.97	0.08	37,37,37,37	0
59	MG	AA	3021	1/1	0.97	0.07	33,33,33,33	0
59	MG	AA	3745	1/1	0.97	0.09	68,68,68,68	0
59	MG	AA	3358	1/1	0.97	0.04	45,45,45,45	0
59	MG	CA	3074	1/1	0.97	0.05	49,49,49,49	0
59	MG	AA	3009	1/1	0.97	0.04	22,22,22,22	0
59	MG	CA	3218	1/1	0.97	0.27	40,40,40,40	0
59	MG	AA	3360	1/1	0.97	0.09	22,22,22,22	0
59	MG	CA	3220	1/1	0.97	0.05	59,59,59,59	0
59	MG	DA	1693	1/1	0.97	0.06	67,67,67,67	0
59	MG	AF	301	1/1	0.97	0.10	38,38,38,38	0
59	MG	AA	3749	1/1	0.97	0.08	73,73,73,73	0
59	MG	AA	3297	1/1	0.97	0.09	27,27,27,27	0
59	MG	DA	1697	1/1	0.97	0.03	48,48,48,48	0
59	MG	AA	3259	1/1	0.97	0.12	41,41,41,41	1
59	MG	AA	3227	1/1	0.97	0.04	22,22,22,22	0
59	MG	CA	3415	1/1	0.97	0.09	34,34,34,34	0
59	MG	AA	3126	1/1	0.97	0.14	79,79,79,79	0
59	MG	DA	1702	1/1	0.97	0.08	63,63,63,63	0
59	MG	AA	3152	1/1	0.97	0.12	10,10,10,10	0
59	MG	AA	3305	1/1	0.97	0.06	25,25,25,25	0
59	MG	AH	201	1/1	0.97	0.19	64,64,64,64	0
59	MG	AA	3572	1/1	0.97	0.10	17,17,17,17	0
59	MG	AN	3002	1/1	0.97	0.08	69,69,69,69	0
59	MG	AA	3265	1/1	0.97	0.12	43,43,43,43	0
59	MG	CA	3424	1/1	0.97	0.09	66,66,66,66	0
59	MG	CA	3425	1/1	0.97	0.06	50,50,50,50	0
59	MG	AA	3075	1/1	0.97	0.10	49,49,49,49	0
59	MG	DA	1712	1/1	0.97	0.12	53,53,53,53	0
59	MG	CA	3427	1/1	0.97	0.11	37,37,37,37	0
59	MG	CA	3091	1/1	0.97	0.14	69,69,69,69	0
59	MG	AA	3459	1/1	0.97	0.11	53,53,53,53	0
59	MG	AA	3107	1/1	0.97	0.06	49,49,49,49	0
59	MG	AA	3661	1/1	0.97	0.09	41,41,41,41	1
59	MG	AA	3310	1/1	0.97	0.08	56,56,56,56	0
59	MG	AA	3462	1/1	0.97	0.04	54,54,54,54	0
59	MG	CA	3627	1/1	0.97	0.09	60,60,60,60	0
59	MG	AA	3766	1/1	0.97	0.10	54,54,54,54	0
59	MG	CA	3629	1/1	0.97	0.05	55,55,55,55	0
59	MG	AA	3665	1/1	0.97	0.15	40,40,40,40	0
59	MG	AA	3666	1/1	0.97	0.14	41,41,41,41	0
59	MG	AA	3268	1/1	0.97	0.10	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	1804	1/1	0.97	0.06	45,45,45,45	0
59	MG	AA	3062	1/1	0.97	0.10	47,47,47,47	0
59	MG	AA	3042	1/1	0.97	0.09	32,32,32,32	0
59	MG	BA	1686	1/1	0.97	0.12	36,36,36,36	0
59	MG	CA	3248	1/1	0.97	0.10	53,53,53,53	0
59	MG	DA	1731	1/1	0.97	0.07	49,49,49,49	0
59	MG	AV	204	1/1	0.97	0.09	45,45,45,45	0
59	MG	AA	3376	1/1	0.97	0.11	35,35,35,35	0
59	MG	AA	3774	1/1	0.97	0.21	25,25,25,25	1
59	MG	CA	3641	1/1	0.97	0.04	46,46,46,46	0
59	MG	CA	3449	1/1	0.97	0.04	55,55,55,55	0
59	MG	CA	3450	1/1	0.97	0.05	54,54,54,54	0
59	MG	AA	3585	1/1	0.97	0.07	35,35,35,35	0
59	MG	CA	3453	1/1	0.97	0.06	35,35,35,35	0
59	MG	AW	3003	1/1	0.97	0.06	28,28,28,28	0
59	MG	AA	3470	1/1	0.97	0.05	39,39,39,39	0
59	MG	AA	3587	1/1	0.97	0.12	28,28,28,28	0
59	MG	CA	3457	1/1	0.97	0.09	43,43,43,43	0
59	MG	DA	1744	1/1	0.97	0.07	66,66,66,66	0
59	MG	CA	3458	1/1	0.97	0.05	54,54,54,54	0
59	MG	AA	3316	1/1	0.97	0.10	36,36,36,36	0
59	MG	CA	3653	1/1	0.97	0.05	32,32,32,32	0
59	MG	AA	3318	1/1	0.97	0.09	23,23,23,23	0
59	MG	AA	3592	1/1	0.97	0.05	26,26,26,26	0
59	MG	AA	3110	1/1	0.97	0.15	52,52,52,52	0
59	MG	CA	3261	1/1	0.97	0.07	47,47,47,47	0
59	MG	CA	3263	1/1	0.97	0.07	64,64,64,64	0
59	MG	CA	3466	1/1	0.97	0.20	56,56,56,56	0
59	MG	AA	3384	1/1	0.97	0.06	22,22,22,22	0
59	MG	CA	3661	1/1	0.97	0.09	27,27,27,27	0
59	MG	AA	3272	1/1	0.97	0.05	55,55,55,55	0
59	MG	AA	3111	1/1	0.97	0.06	24,24,24,24	0
59	MG	AA	3598	1/1	0.97	0.12	51,51,51,51	0
59	MG	AA	3387	1/1	0.97	0.05	29,29,29,29	0
59	MG	CA	3272	1/1	0.97	0.14	49,49,49,49	0
59	MG	AA	3236	1/1	0.97	0.10	57,57,57,57	0
59	MG	CA	3475	1/1	0.97	0.17	50,50,50,50	0
59	MG	CA	3476	1/1	0.97	0.04	38,38,38,38	0
59	MG	DA	1764	1/1	0.97	0.05	71,71,71,71	0
59	MG	AA	3159	1/1	0.97	0.15	55,55,55,55	0
59	MG	AA	3391	1/1	0.97	0.07	19,19,19,19	0
59	MG	CA	3276	1/1	0.97	0.07	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CB	3009	1/1	0.97	0.12	67,67,67,67	0
59	MG	BT	3001	1/1	0.97	0.05	46,46,46,46	0
59	MG	AA	3394	1/1	0.97	0.07	39,39,39,39	0
59	MG	AA	3326	1/1	0.97	0.05	36,36,36,36	1
59	MG	AA	3327	1/1	0.97	0.04	31,31,31,31	0
59	MG	BA	1709	1/1	0.97	0.15	50,50,50,50	0
59	MG	A9	502	1/1	0.97	0.12	41,41,41,41	0
59	MG	AA	3043	1/1	0.97	0.15	45,45,45,45	0
59	MG	CD	304	1/1	0.97	0.10	28,28,28,28	0
59	MG	CA	3132	1/1	0.97	0.06	48,48,48,48	0
59	MG	AA	3029	1/1	0.97	0.10	28,28,28,28	0
59	MG	DW	501	1/1	0.97	0.14	44,44,44,44	0
59	MG	CE	303	1/1	0.97	0.17	51,51,51,51	0
59	MG	AA	3045	1/1	0.97	0.11	55,55,55,55	0
59	MG	AA	3408	1/1	0.97	0.11	41,41,41,41	0
59	MG	AA	3336	1/1	0.97	0.08	51,51,51,51	0
59	MG	AA	3697	1/1	0.97	0.07	40,40,40,40	0
60	ZN	BN	501	1/1	0.97	0.04	132,132,132,132	0
59	MG	CF	303	1/1	0.97	0.10	51,51,51,51	0
61	SF4	DD	501	8/8	0.97	0.05	82,82,82,82	1
59	MG	CA	3009	1/1	0.97	0.05	27,27,27,27	0
59	MG	AA	3411	1/1	0.97	0.04	12,12,12,12	0
59	MG	CA	3019	1/1	0.98	0.03	22,22,22,22	0
59	MG	AA	3054	1/1	0.98	0.06	21,21,21,21	0
59	MG	AA	3301	1/1	0.98	0.05	39,39,39,39	0
59	MG	AA	3498	1/1	0.98	0.12	47,47,47,47	0
59	MG	CA	3439	1/1	0.98	0.08	32,32,32,32	0
59	MG	CA	3283	1/1	0.98	0.03	31,31,31,31	0
59	MG	AA	3097	1/1	0.98	0.09	22,22,22,22	0
59	MG	AA	3353	1/1	0.98	0.07	39,39,39,39	0
59	MG	AA	3354	1/1	0.98	0.04	27,27,27,27	0
59	MG	AA	3502	1/1	0.98	0.04	29,29,29,29	1
59	MG	AA	3421	1/1	0.98	0.07	28,28,28,28	0
59	MG	AA	3504	1/1	0.98	0.03	29,29,29,29	0
59	MG	AA	3422	1/1	0.98	0.09	23,23,23,23	0
59	MG	AA	3423	1/1	0.98	0.10	16,16,16,16	0
59	MG	CA	3292	1/1	0.98	0.03	12,12,12,12	0
59	MG	DA	1648	1/1	0.98	0.10	40,40,40,40	0
59	MG	BA	1740	1/1	0.98	0.10	50,50,50,50	0
59	MG	CA	3452	1/1	0.98	0.05	36,36,36,36	0
59	MG	AA	3303	1/1	0.98	0.06	24,24,24,24	0
59	MG	AA	3510	1/1	0.98	0.05	17,17,17,17	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	1653	1/1	0.98	0.18	55,55,55,55	0
59	MG	AA	3304	1/1	0.98	0.06	47,47,47,47	0
59	MG	AA	3512	1/1	0.98	0.05	38,38,38,38	0
59	MG	AA	3426	1/1	0.98	0.07	20,20,20,20	0
59	MG	DA	1657	1/1	0.98	0.04	23,23,23,23	0
59	MG	AB	3011	1/1	0.98	0.05	29,29,29,29	0
59	MG	CA	3459	1/1	0.98	0.04	28,28,28,28	0
59	MG	AA	3515	1/1	0.98	0.07	12,12,12,12	0
59	MG	AA	3137	1/1	0.98	0.25	53,53,53,53	0
59	MG	CA	3302	1/1	0.98	0.06	37,37,37,37	0
59	MG	CA	3303	1/1	0.98	0.09	43,43,43,43	0
59	MG	CA	3617	1/1	0.98	0.07	41,41,41,41	0
59	MG	CA	3618	1/1	0.98	0.14	40,40,40,40	0
59	MG	BA	1750	1/1	0.98	0.05	55,55,55,55	0
59	MG	AA	3428	1/1	0.98	0.04	18,18,18,18	0
59	MG	CA	3306	1/1	0.98	0.04	24,24,24,24	0
59	MG	AA	3013	1/1	0.98	0.05	28,28,28,28	0
59	MG	CA	3169	1/1	0.98	0.10	34,34,34,34	0
59	MG	CA	3309	1/1	0.98	0.10	22,22,22,22	0
59	MG	CA	3170	1/1	0.98	0.04	32,32,32,32	0
59	MG	CA	3471	1/1	0.98	0.10	33,33,33,33	0
59	MG	BA	1753	1/1	0.98	0.06	48,48,48,48	0
59	MG	AA	3522	1/1	0.98	0.06	30,30,30,30	0
59	MG	AA	3523	1/1	0.98	0.03	13,13,13,13	0
59	MG	AA	3117	1/1	0.98	0.20	25,25,25,25	1
59	MG	AA	3525	1/1	0.98	0.07	35,35,35,35	0
59	MG	AA	3527	1/1	0.98	0.06	27,27,27,27	0
59	MG	AA	3528	1/1	0.98	0.06	19,19,19,19	0
59	MG	BA	1760	1/1	0.98	0.07	53,53,53,53	0
59	MG	CA	3320	1/1	0.98	0.06	36,36,36,36	0
59	MG	AA	3308	1/1	0.98	0.09	18,18,18,18	0
59	MG	CA	3482	1/1	0.98	0.09	61,61,61,61	0
59	MG	CA	3052	1/1	0.98	0.09	44,44,44,44	0
59	MG	CA	3324	1/1	0.98	0.05	26,26,26,26	0
59	MG	AA	3037	1/1	0.98	0.04	4,4,4,4	0
59	MG	AA	3734	1/1	0.98	0.09	26,26,26,26	0
59	MG	CA	3327	1/1	0.98	0.05	38,38,38,38	0
59	MG	AA	3531	1/1	0.98	0.06	24,24,24,24	0
59	MG	AA	3020	1/1	0.98	0.04	11,11,11,11	0
59	MG	AD	304	1/1	0.98	0.05	17,17,17,17	0
59	MG	AA	3311	1/1	0.98	0.06	2,2,2,2	0
59	MG	AA	3534	1/1	0.98	0.10	14,14,14,14	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3364	1/1	0.98	0.08	23,23,23,23	0
59	MG	AA	3437	1/1	0.98	0.05	17,17,17,17	0
59	MG	AA	3537	1/1	0.98	0.10	20,20,20,20	0
59	MG	AD	310	1/1	0.98	0.08	46,46,46,46	0
59	MG	AA	3539	1/1	0.98	0.10	34,34,34,34	0
59	MG	AA	3439	1/1	0.98	0.08	37,37,37,37	0
59	MG	AA	3243	1/1	0.98	0.10	43,43,43,43	0
59	MG	BA	1777	1/1	0.98	0.12	71,71,71,71	0
59	MG	AA	3639	1/1	0.98	0.07	18,18,18,18	0
59	MG	AA	3543	1/1	0.98	0.06	32,32,32,32	0
59	MG	AA	3084	1/1	0.98	0.07	23,23,23,23	0
59	MG	AA	3085	1/1	0.98	0.11	46,46,46,46	0
59	MG	CA	3349	1/1	0.98	0.07	23,23,23,23	0
59	MG	AA	3190	1/1	0.98	0.03	24,24,24,24	0
59	MG	AA	3369	1/1	0.98	0.04	47,47,47,47	0
59	MG	AA	3548	1/1	0.98	0.04	7,7,7,7	0
59	MG	AA	3317	1/1	0.98	0.07	24,24,24,24	0
59	MG	AA	3647	1/1	0.98	0.04	43,43,43,43	0
59	MG	AA	3032	1/1	0.98	0.11	59,59,59,59	0
59	MG	CA	3512	1/1	0.98	0.07	53,53,53,53	0
59	MG	AA	3279	1/1	0.98	0.09	34,34,34,34	0
59	MG	AA	3757	1/1	0.98	0.03	14,14,14,14	0
59	MG	AA	3192	1/1	0.98	0.05	30,30,30,30	0
59	MG	AA	3759	1/1	0.98	0.05	57,57,57,57	0
59	MG	AA	3553	1/1	0.98	0.04	43,43,43,43	0
59	MG	AA	3554	1/1	0.98	0.08	40,40,40,40	0
59	MG	AA	3048	1/1	0.98	0.04	28,28,28,28	0
59	MG	CA	3085	1/1	0.98	0.07	25,25,25,25	0
59	MG	AP	202	1/1	0.98	0.21	21,21,21,21	1
59	MG	AA	3071	1/1	0.98	0.13	40,40,40,40	0
59	MG	AA	3147	1/1	0.98	0.21	40,40,40,40	1
59	MG	AA	3223	1/1	0.98	0.04	15,15,15,15	0
59	MG	CA	3369	1/1	0.98	0.07	48,48,48,48	0
59	MG	AA	3089	1/1	0.98	0.10	49,49,49,49	0
59	MG	BA	1680	1/1	0.98	0.09	40,40,40,40	0
59	MG	AA	3560	1/1	0.98	0.05	29,29,29,29	0
59	MG	AA	3561	1/1	0.98	0.06	21,21,21,21	0
59	MG	AA	3379	1/1	0.98	0.11	23,23,23,23	0
59	MG	AA	3770	1/1	0.98	0.07	43,43,43,43	0
59	MG	AU	202	1/1	0.98	0.06	31,31,31,31	0
59	MG	AU	203	1/1	0.98	0.12	25,25,25,25	0
59	MG	AA	3380	1/1	0.98	0.04	18,18,18,18	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AV	202	1/1	0.98	0.07	38,38,38,38	0
59	MG	AA	3072	1/1	0.98	0.03	19,19,19,19	0
59	MG	AA	3382	1/1	0.98	0.05	37,37,37,37	0
59	MG	AA	3383	1/1	0.98	0.05	20,20,20,20	0
59	MG	AA	3330	1/1	0.98	0.05	66,66,66,66	0
59	MG	AA	3568	1/1	0.98	0.04	15,15,15,15	0
59	MG	AA	3173	1/1	0.98	0.08	46,46,46,46	0
59	MG	AA	3333	1/1	0.98	0.06	11,11,11,11	0
59	MG	AA	3004	1/1	0.98	0.09	21,21,21,21	0
59	MG	AA	3200	1/1	0.98	0.14	30,30,30,30	0
59	MG	AA	3574	1/1	0.98	0.05	12,12,12,12	0
59	MG	CV	202	1/1	0.98	0.08	38,38,38,38	0
59	MG	AA	3007	1/1	0.98	0.03	12,12,12,12	0
59	MG	AA	3260	1/1	0.98	0.07	21,21,21,21	0
59	MG	AA	3469	1/1	0.98	0.03	32,32,32,32	0
59	MG	CA	3397	1/1	0.98	0.08	57,57,57,57	0
59	MG	AA	3392	1/1	0.98	0.07	17,17,17,17	0
59	MG	AA	3292	1/1	0.98	0.07	24,24,24,24	0
59	MG	AA	3340	1/1	0.98	0.04	3,3,3,3	0
59	MG	AA	3581	1/1	0.98	0.07	52,52,52,52	0
59	MG	AA	3681	1/1	0.98	0.04	42,42,42,42	0
59	MG	AA	3130	1/1	0.98	0.07	34,34,34,34	0
59	MG	A7	101	1/1	0.98	0.08	47,47,47,47	0
59	MG	AA	3399	1/1	0.98	0.03	16,16,16,16	0
59	MG	CA	3407	1/1	0.98	0.07	36,36,36,36	0
59	MG	AA	3795	1/1	0.98	0.12	22,22,22,22	0
59	MG	AA	3262	1/1	0.98	0.03	15,15,15,15	0
59	MG	CA	3123	1/1	0.98	0.04	29,29,29,29	0
59	MG	AA	3295	1/1	0.98	0.07	57,57,57,57	0
59	MG	CA	3255	1/1	0.98	0.08	28,28,28,28	0
59	MG	AA	3345	1/1	0.98	0.06	6,6,6,6	0
59	MG	AA	3406	1/1	0.98	0.04	20,20,20,20	0
59	MG	AA	3484	1/1	0.98	0.07	53,53,53,53	0
59	MG	CA	3568	1/1	0.98	0.04	39,39,39,39	0
59	MG	AA	3589	1/1	0.98	0.04	55,55,55,55	0
59	MG	CA	3006	1/1	0.98	0.03	22,22,22,22	0
59	MG	AA	3407	1/1	0.98	0.05	10,10,10,10	0
59	MG	AA	3691	1/1	0.98	0.05	62,62,62,62	0
59	MG	AA	3591	1/1	0.98	0.11	52,52,52,52	0
59	MG	AA	3024	1/1	0.98	0.13	48,48,48,48	0
59	MG	CA	3267	1/1	0.98	0.04	38,38,38,38	0
59	MG	AA	3132	1/1	0.98	0.07	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3410	1/1	0.98	0.10	57,57,57,57	0
59	MG	CA	3136	1/1	0.98	0.03	63,63,63,63	0
59	MG	CA	3271	1/1	0.98	0.07	48,48,48,48	0
59	MG	AA	3491	1/1	0.98	0.04	46,46,46,46	0
59	MG	AA	3052	1/1	0.98	0.07	11,11,11,11	0
59	MG	AA	3597	1/1	0.98	0.04	33,33,33,33	0
59	MG	AA	3412	1/1	0.98	0.10	39,39,39,39	0
60	ZN	DN	501	1/1	0.98	0.04	117,117,117,117	0
61	SF4	BD	501	8/8	0.98	0.04	78,78,78,78	0
59	MG	AA	3494	1/1	0.98	0.06	34,34,34,34	0
59	MG	AA	3053	1/1	0.98	0.11	19,19,19,19	0
59	MG	CA	3588	1/1	0.98	0.04	32,32,32,32	0
59	MG	CA	3321	1/1	0.99	0.06	28,28,28,28	0
59	MG	CA	3562	1/1	0.99	0.03	29,29,29,29	0
59	MG	AA	3519	1/1	0.99	0.12	27,27,27,27	0
59	MG	CA	3401	1/1	0.99	0.04	28,28,28,28	0
59	MG	AA	3343	1/1	0.99	0.06	46,46,46,46	0
59	MG	CA	3650	1/1	0.99	0.07	14,14,14,14	0
59	MG	AA	3312	1/1	0.99	0.02	23,23,23,23	0
59	MG	AA	3074	1/1	0.99	0.06	14,14,14,14	0
59	MG	AA	3702	1/1	0.99	0.10	14,14,14,14	0
59	MG	AA	3482	1/1	0.99	0.03	41,41,41,41	0
59	MG	AF	305	1/1	0.99	0.07	19,19,19,19	0
59	MG	CA	3329	1/1	0.99	0.04	21,21,21,21	0
59	MG	AF	306	1/1	0.99	0.06	36,36,36,36	0
59	MG	AA	3401	1/1	0.99	0.04	21,21,21,21	0
59	MG	CA	3574	1/1	0.99	0.04	37,37,37,37	0
59	MG	CA	3262	1/1	0.99	0.03	11,11,11,11	0
59	MG	AA	3402	1/1	0.99	0.04	27,27,27,27	0
59	MG	AA	3526	1/1	0.99	0.11	19,19,19,19	0
59	MG	CA	3578	1/1	0.99	0.05	38,38,38,38	0
59	MG	AA	3707	1/1	0.99	0.03	59,59,59,59	0
59	MG	CA	3266	1/1	0.99	0.07	36,36,36,36	0
59	MG	AA	3328	1/1	0.99	0.05	42,42,42,42	0
59	MG	AA	3404	1/1	0.99	0.08	27,27,27,27	0
59	MG	AA	3487	1/1	0.99	0.03	49,49,49,49	0
59	MG	AA	3663	1/1	0.99	0.05	11,11,11,11	0
59	MG	CA	3342	1/1	0.99	0.03	33,33,33,33	0
59	MG	AA	3125	1/1	0.99	0.06	22,22,22,22	1
59	MG	AA	3489	1/1	0.99	0.04	15,15,15,15	0
59	MG	CA	3423	1/1	0.99	0.10	46,46,46,46	0
59	MG	AA	3248	1/1	0.99	0.07	22,22,22,22	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	3346	1/1	0.99	0.06	30,30,30,30	0
59	MG	AA	3821	1/1	0.99	0.09	82,82,82,82	0
59	MG	AA	3038	1/1	0.99	0.15	29,29,29,29	1
59	MG	AA	3457	1/1	0.99	0.04	30,30,30,30	0
59	MG	CA	3211	1/1	0.99	0.04	29,29,29,29	0
59	MG	AA	3332	1/1	0.99	0.04	17,17,17,17	0
59	MG	AA	3239	1/1	0.99	0.13	25,25,25,25	1
59	MG	CA	3214	1/1	0.99	0.07	22,22,22,22	0
59	MG	CA	3151	1/1	0.99	0.03	38,38,38,38	0
59	MG	CA	3282	1/1	0.99	0.05	36,36,36,36	0
59	MG	CA	3356	1/1	0.99	0.07	44,44,44,44	0
59	MG	AA	3003	1/1	0.99	0.02	8,8,8,8	0
59	MG	AA	3538	1/1	0.99	0.05	15,15,15,15	0
59	MG	CA	3438	1/1	0.99	0.04	24,24,24,24	0
59	MG	AA	3103	1/1	0.99	0.02	5,5,5,5	0
59	MG	AA	3540	1/1	0.99	0.03	36,36,36,36	0
59	MG	BA	1746	1/1	0.99	0.04	33,33,33,33	0
59	MG	AA	3436	1/1	0.99	0.03	12,12,12,12	0
59	MG	CA	3443	1/1	0.99	0.04	28,28,28,28	0
59	MG	AA	3463	1/1	0.99	0.03	15,15,15,15	0
59	MG	AA	3388	1/1	0.99	0.02	28,28,28,28	0
59	MG	AA	3726	1/1	0.99	0.06	12,12,12,12	0
59	MG	AA	3778	1/1	0.99	0.04	43,43,43,43	0
59	MG	AV	205	1/1	0.99	0.04	42,42,42,42	0
59	MG	CA	3163	1/1	0.99	0.13	30,30,30,30	0
59	MG	AA	3727	1/1	0.99	0.03	23,23,23,23	0
59	MG	AA	3465	1/1	0.99	0.06	42,42,42,42	0
59	MG	AA	3679	1/1	0.99	0.04	36,36,36,36	0
59	MG	CA	3372	1/1	0.99	0.08	35,35,35,35	0
59	MG	AA	3438	1/1	0.99	0.06	17,17,17,17	0
59	MG	AA	3320	1/1	0.99	0.08	37,37,37,37	0
59	MG	AA	3784	1/1	0.99	0.07	59,59,59,59	0
59	MG	AA	3214	1/1	0.99	0.22	58,58,58,58	1
59	MG	AA	3011	1/1	0.99	0.04	16,16,16,16	0
59	MG	AA	3505	1/1	0.99	0.04	30,30,30,30	0
59	MG	AA	3506	1/1	0.99	0.03	48,48,48,48	0
59	MG	AA	3151	1/1	0.99	0.07	62,62,62,62	0
59	MG	AA	3393	1/1	0.99	0.07	23,23,23,23	0
59	MG	CA	3382	1/1	0.99	0.07	38,38,38,38	0
59	MG	CA	3383	1/1	0.99	0.05	30,30,30,30	0
59	MG	AA	3738	1/1	0.99	0.07	24,24,24,24	0
59	MG	DA	1691	1/1	0.99	0.06	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	3419	1/1	0.99	0.06	20,20,20,20	0
59	MG	AA	3793	1/1	0.99	0.07	7,7,7,7	0
59	MG	AA	3324	1/1	0.99	0.02	15,15,15,15	0
59	MG	CA	3311	1/1	0.99	0.05	50,50,50,50	0
59	MG	BA	1769	1/1	0.99	0.05	58,58,58,58	0
59	MG	AA	3022	1/1	0.99	0.02	5,5,5,5	0
59	MG	AA	3475	1/1	0.99	0.08	45,45,45,45	0
59	MG	AA	3513	1/1	0.99	0.03	41,41,41,41	0
60	ZN	CY	501	1/1	0.99	0.03	101,101,101,101	0
59	MG	CA	3393	1/1	0.99	0.05	68,68,68,68	0
60	ZN	C5	102	1/1	0.99	0.04	66,66,66,66	0
60	ZN	C6	501	1/1	0.99	0.03	66,66,66,66	0
60	ZN	C9	501	1/1	0.99	0.03	75,75,75,75	0
59	MG	AA	3476	1/1	0.99	0.03	28,28,28,28	0
59	MG	AA	3477	1/1	0.99	0.03	14,14,14,14	0
59	MG	AA	3478	1/1	0.99	0.04	33,33,33,33	0
59	MG	AA	3517	1/1	0.99	0.03	23,23,23,23	0
59	MG	AA	3518	1/1	0.99	0.04	14,14,14,14	0
60	ZN	A6	102	1/1	1.00	0.03	40,40,40,40	0
60	ZN	A9	501	1/1	1.00	0.02	42,42,42,42	0
59	MG	AA	3397	1/1	1.00	0.05	13,13,13,13	0
59	MG	AA	3569	1/1	1.00	0.04	17,17,17,17	0
59	MG	CA	3339	1/1	1.00	0.03	24,24,24,24	0
59	MG	AA	3076	1/1	1.00	0.03	0,0,0,0	0
59	MG	AA	3335	1/1	1.00	0.08	15,15,15,15	0
59	MG	AA	3416	1/1	1.00	0.03	14,14,14,14	0
59	MG	AA	3801	1/1	1.00	0.05	27,27,27,27	0
59	MG	AA	3396	1/1	1.00	0.06	16,16,16,16	0
60	ZN	AY	501	1/1	1.00	0.01	61,61,61,61	0
59	MG	AE	303	1/1	1.00	0.09	19,19,19,19	0
60	ZN	A5	501	1/1	1.00	0.01	30,30,30,30	0

6.5 Other polymers (i)

There are no such residues in this entry.