Full wwPDB X-ray Structure Validation Report (i)

Aug 6, 2026 – 12:44 AM EDT

PDB ID	:	4V9R / pdb_00004v9r
Title	:	Crystal structure of antibiotic DITYROMYCIN bound to 70S ribosome
Authors	:	Bulkley, D.P.; Brandi, L.; Polikanov, Y.S.; Fabbretti, A.; O'Connor, M.; Gualerzi, C.O.; Steitz, T.A.
Deposited on	:	2013-12-05
Resolution	:	3.00 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 (i) 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 (i)) were used in the production of this report:

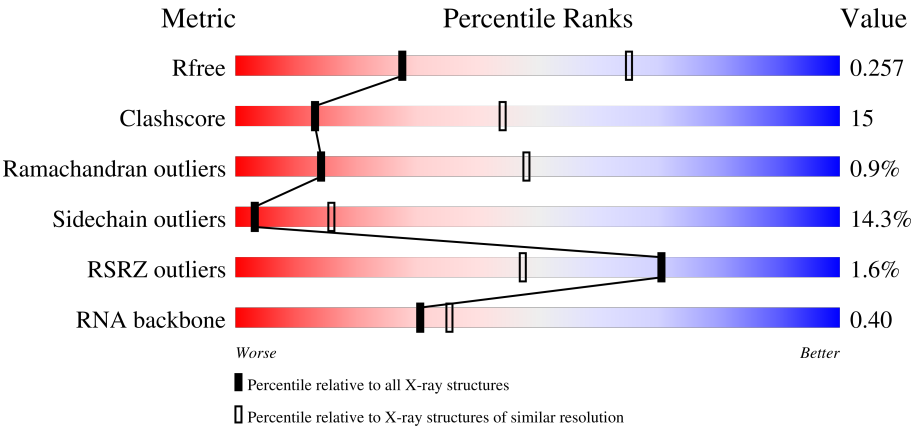
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.015 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry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

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.00 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	2672 (3.00-3.00)
Clashscore	190562	2977 (3.00-3.00)
Ramachandran outliers	187476	2877 (3.00-3.00)
Sidechain outliers	187428	2880 (3.00-3.00)
RSRZ outliers	180081	2671 (3.00-3.00)
RNA backbone	3983	1109 (3.20-2.80)

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	1522	2% 32% 48% 18%
1	CA	1522	% 34% 46% 18%
2	AB	256	2% 37% 35% 17% 10%
2	CB	256	4% 31% 45% 13% 10%

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Mol	Chain	Length	Quality of chain
3	AC	239	2% 56% 26% 5% 14%
3	CC	239	3% 46% 32% 8% 14%
4	AD	209	3% 47% 44% 8%
4	CD	209	% 50% 40% 10%
5	AE	162	49% 33% 8% 9%
5	CE	162	43% 41% 8% 9%
6	AF	101	% 54% 42%
6	CF	101	63% 32%
7	AG	156	3% 61% 32% 5%
7	CG	156	3% 51% 38% 10%
8	AH	138	54% 38% 8%
8	CH	138	2% 48% 44% 7%
9	AI	128	7% 50% 41% 8%
9	CI	128	21% 46% 48% 5%
10	AJ	105	13% 49% 35% 9% 8%
10	CJ	105	13% 35% 50% 5% 9%
11	AK	129	% 63% 19% 5% 12%
11	CK	129	50% 34% 12%
12	AL	132	3% 57% 32% 8%
12	CL	132	2% 56% 31% 5% 8%
13	AM	126	6% 58% 33% 7%
13	CM	126	6% 54% 34% 8%
14	AN	61	10% 57% 26% 15%
14	CN	61	23% 41% 54%
15	AO	89	% 60% 36%

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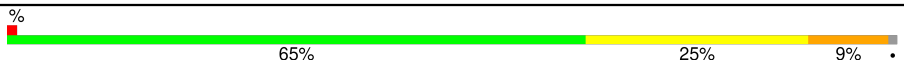
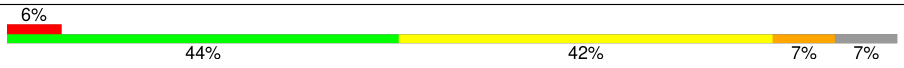
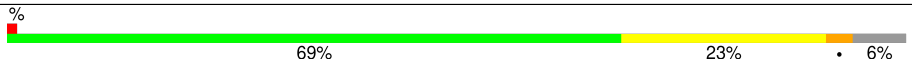
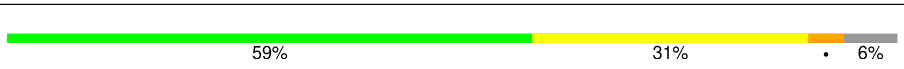
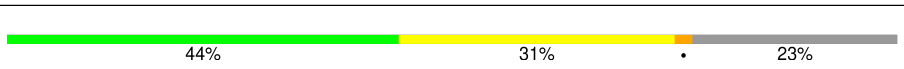
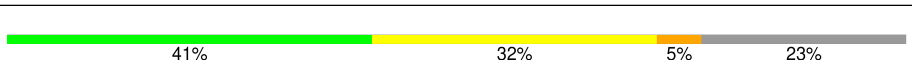
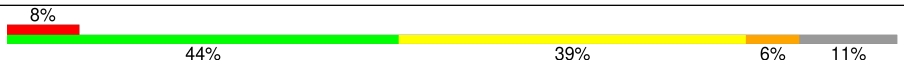
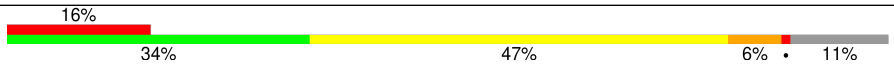
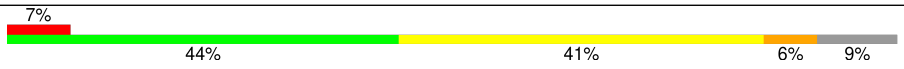
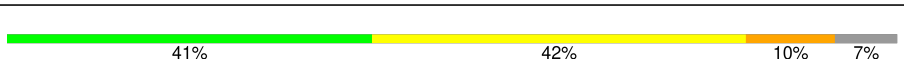
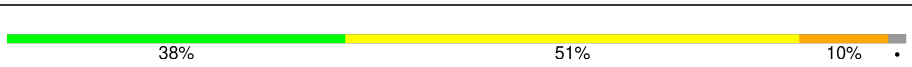
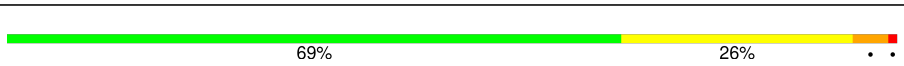
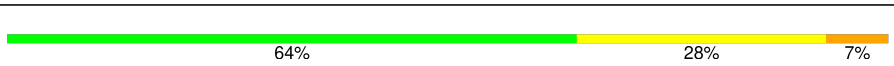
Mol	Chain	Length	Quality of chain
15	CO	89	
16	AP	88	
16	CP	88	
17	AQ	105	
17	CQ	105	
18	AR	88	
18	CR	88	
19	AS	93	
19	CS	93	
20	AT	106	
20	CT	106	
21	AU	27	
21	CU	27	
22	AV	24	
22	CV	24	
23	AX	77	
23	CX	77	
24	AW	10	
24	CW	10	
25	BA	2915	
25	DA	2915	
26	BB	122	
26	DB	122	
27	BD	276	
27	DD	276	

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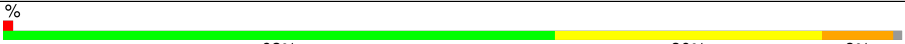
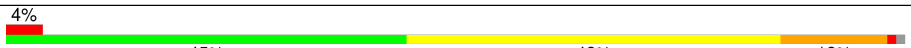
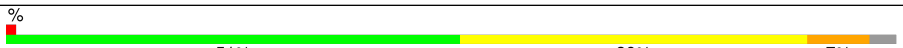
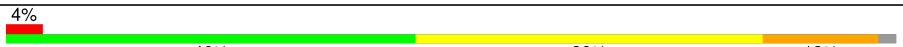
Mol	Chain	Length	Quality of chain
28	BE	206	
28	DE	206	
29	BF	210	
29	DF	210	
30	BG	182	
30	DG	182	
31	BH	180	
31	DH	180	
32	BI	148	
32	DI	148	
33	BN	140	
33	DN	140	
34	BO	122	
34	DO	122	
35	BP	150	
35	DP	150	
36	BQ	141	
36	DQ	141	
37	BR	118	
37	DR	118	
38	BS	112	
38	DS	112	
39	BT	146	
39	DT	146	
40	BU	118	

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Mol	Chain	Length	Quality of chain
40	DU	118	64% 28% 6%
41	BV	101	72% 21% 6%
41	DV	101	62% 30% 7%
42	BW	113	74% 19% 6%
42	DW	113	63% 31% 5%
43	BX	96	71% 26%
43	DX	96	69% 24% 6%
44	BY	110	3% 67% 26%
44	DY	110	3% 62% 33%
45	BZ	206	49% 29% 5% 17%
45	DZ	206	41% 38% 5% 16%
46	B0	85	7% 72% 20% 6%
46	D0	85	4% 60% 27% 11%
47	B1	98	67% 24% 7%
47	D1	98	63% 29% 7%
48	B2	72	62% 28% 7%
48	D2	72	58% 33% 6%
49	B3	60	63% 23% 10%
49	D3	60	65% 22% 12%
50	B4	71	41% 34% 20%
50	D4	71	6% 41% 37% 18%
51	B5	60	72% 23%
51	D5	60	70% 28%
52	B6	54	65% 30%
52	D6	54	63% 33%

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Mol	Chain	Length	Quality of chain
53	B7	49	73% 18% 6%
53	D7	49	2% 69% 24%
54	B8	65	52% 45%
54	D8	65	52% 46%
55	B9	37	3% 76% 22%
55	D9	37	3% 54% 41% 5%

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
56	MG	AA	3133	-	-	-	X
56	MG	CA	3028	-	-	-	X
56	MG	CA	3030	-	-	-	X
56	MG	CA	3053	-	-	-	X

2 Entry composition (i)

There are 61 unique types of molecules in this entry. The entry contains 286321 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 16S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1498	Total	C	N	O	P	0	0	0
			32196	14328	5966	10404	1498			
1	CA	1503	Total	C	N	O	P	0	0	0
			32312	14381	5990	10438	1503			

- Molecule 2 is a protein called 30S Ribosomal Protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	231	Total	C	N	O	S	0	0	0
			1846	1179	331	331	5			
2	CB	231	Total	C	N	O	S	0	0	0
			1825	1167	326	327	5			

- Molecule 3 is a protein called 30S Ribosomal Protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1552	976	302	273	1			
3	CC	206	Total	C	N	O	S	0	0	0
			1542	968	300	273	1			

- Molecule 4 is a protein called 30S Ribosomal Protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	208	Total	C	N	O	S	0	0	0
			1659	1040	326	286	7			
4	CD	208	Total	C	N	O	S	0	0	0
			1674	1050	333	284	7			

- Molecule 5 is a protein called 30S Ribosomal Protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	148	Total	C	N	O	S	0	0	0
			1129	714	213	198	4			
5	CE	148	Total	C	N	O	S	0	0	0
			1133	716	214	199	4			

- Molecule 6 is a protein called 30S Ribosomal Protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	100	Total	C	N	O	S	0	0	0
			806	511	143	149	3			
6	CF	100	Total	C	N	O	S	0	0	0
			816	516	146	151	3			

- Molecule 7 is a protein called 30S Ribosomal Protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	155	Total	C	N	O	S	0	0	0
			1231	766	243	216	6			
7	CG	155	Total	C	N	O	S	0	0	0
			1235	769	244	216	6			

- Molecule 8 is a protein called 30S Ribosomal Protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	137	Total	C	N	O	S	0	0	0
			1088	689	206	191	2			
8	CH	137	Total	C	N	O	S	0	0	0
			1088	689	206	191	2			

- Molecule 9 is a protein called 30S Ribosomal Protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O	0	0	0
			983	623	193	167			
9	CI	127	Total	C	N	O	0	0	0
			978	619	190	169			

- Molecule 10 is a protein called 30S Ribosomal Protein S10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
10	AJ	97	Total	C	N	O	0	0	0
			709	440	138	131			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
10	CJ	96	Total 714	C 445	N 138	O 131	0	0	0

- Molecule 11 is a protein called 30S Ribosomal Protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	114	Total 829	C 516	N 155	O 155	S 3	0	0	0
11	CK	114	Total 833	C 519	N 156	O 155	S 3	0	0	0

- Molecule 12 is a protein called 30S Ribosomal Protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	122	Total 930	C 585	N 185	O 159	S 1	0	0	0
12	CL	122	Total 930	C 585	N 185	O 159	S 1	0	0	0

- Molecule 13 is a protein called 30S Ribosomal Protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	123	Total 958	C 592	N 198	O 166	S 2	0	0	0
13	CM	122	Total 950	C 586	N 197	O 165	S 2	0	0	0

- Molecule 14 is a protein called 30S Ribosomal Protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	60	Total 492	C 312	N 104	O 72	S 4	0	0	0
14	CN	60	Total 492	C 312	N 104	O 72	S 4	0	0	0

- Molecule 15 is a protein called 30S Ribosomal Protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total 728	C 456	N 144	O 126	S 2	0	0	0
15	CO	88	Total 728	C 456	N 144	O 126	S 2	0	0	0

- Molecule 16 is a protein called 30S Ribosomal Protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	82	Total	C	N	O	S	0	0	0
			681	433	134	113	1			
16	CP	82	Total	C	N	O	S	0	0	0
			677	430	133	113	1			

- Molecule 17 is a protein called 30S Ribosomal Protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
17	CQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

- Molecule 18 is a protein called 30S Ribosomal Protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	68	Total	C	N	O	0	0	0
			555	355	108	92			
18	CR	68	Total	C	N	O	0	0	0
			555	355	108	92			

- Molecule 19 is a protein called 30S Ribosomal Protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	83	Total	C	N	O	S	0	0	0
			652	417	120	113	2			
19	CS	83	Total	C	N	O	S	0	0	0
			646	412	119	113	2			

- Molecule 20 is a protein called 30S Ribosomal Protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	96	Total	C	N	O	S	0	0	0
			728	446	156	124	2			
20	CT	96	Total	C	N	O	S	0	0	0
			727	446	155	124	2			

- Molecule 21 is a protein called 30S Ribosomal Protein THX.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AU	23	Total	C	N	O	0	0	0
			199	122	48	29			
21	CU	23	Total	C	N	O	0	0	0
			199	122	48	29			

- Molecule 22 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	7	Total	C	N	O	P	0	0	1
			114	49	22	37	6			
22	CV	6	Total	C	N	O	P	0	0	0
			113	49	22	36	6			

- Molecule 23 is a RNA chain called P-site tRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AX	76	Total	C	N	O	P	0	0	0
			1623	723	294	530	76			
23	CX	76	Total	C	N	O	P	0	0	0
			1623	723	294	530	76			

- Molecule 24 is a protein called Dityromycin.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
24	AW	10	Total	C	N	O	0	0	0
			93	67	10	16			
24	CW	10	Total	C	N	O	0	0	0
			93	67	10	16			

- Molecule 25 is a RNA chain called 23S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BA	2731	Total	C	N	O	P	0	0	0
			58834	26185	11020	18899	2730			
25	DA	2714	Total	C	N	O	P	0	0	0
			58458	26018	10942	18786	2712			

- Molecule 26 is a RNA chain called 5S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	DB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

- Molecule 27 is a protein called 50S Ribosomal Protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BD	275	Total	C	N	O	S	0	0	0
			2136	1349	423	361	3			
27	DD	275	Total	C	N	O	S	0	0	0
			2136	1349	423	361	3			

- Molecule 28 is a protein called 50S Ribosomal Protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BE	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			
28	DE	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			

- Molecule 29 is a protein called 50S Ribosomal Protein L4.

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

- Molecule 30 is a protein called 50S Ribosomal Protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BG	181	Total	C	N	O	S	0	0	0
			1425	914	256	251	4			
30	DG	181	Total	C	N	O	S	0	0	0
			1424	911	258	251	4			

- Molecule 31 is a protein called 50S Ribosomal Protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BH	174	Total	C	N	O	S	0	0	0
			1330	845	248	236	1			
31	DH	174	Total	C	N	O	S	0	0	0
			1330	845	248	236	1			

- Molecule 32 is a protein called 50S Ribosomal Protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BI	146	Total	C	N	O	S	0	0	0
			1085	693	189	202	1			
32	DI	146	Total	C	N	O	S	0	0	0
			1061	680	186	194	1			

- Molecule 33 is a protein called 50S Ribosomal Protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BN	140	Total	C	N	O	S	0	0	0
			1117	719	207	187	4			
33	DN	140	Total	C	N	O	S	0	0	0
			1117	719	207	187	4			

- Molecule 34 is a protein called 50S Ribosomal Protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			
34	DO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

- Molecule 35 is a protein called 50S Ribosomal Protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BP	149	Total	C	N	O	S	0	0	0
			1135	706	230	196	3			
35	DP	149	Total	C	N	O	S	0	0	0
			1135	706	230	196	3			

- Molecule 36 is a protein called 50S Ribosomal Protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
36	DQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

- Molecule 37 is a protein called 50S Ribosomal Protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
37	DR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

- Molecule 38 is a protein called 50S Ribosomal Protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
38	BS	110	Total	C	N	O	0	0	0
			877	553	175	149			
38	DS	110	Total	C	N	O	0	0	0
			870	549	173	148			

- Molecule 39 is a protein called 50S Ribosomal Protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BT	131	Total	C	N	O	S	0	0	0
			1091	680	225	185	1			
39	DT	131	Total	C	N	O	S	0	0	0
			1083	675	224	183	1			

- Molecule 40 is a protein called 50S Ribosomal Protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			
40	DU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			

- Molecule 41 is a protein called 50S Ribosomal Protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BV	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			
41	DV	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			

- Molecule 42 is a protein called 50S Ribosomal Protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BW	112	Total	C	N	O	S	0	0	0
			886	557	174	153	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	DW	112	Total	C	N	O	S	0	0	0
			886	557	174	153	2			

- Molecule 43 is a protein called 50S Ribosomal Protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BX	95	Total	C	N	O	S	0	0	0
			750	488	135	126	1			
43	DX	95	Total	C	N	O	S	0	0	0
			750	488	135	126	1			

- Molecule 44 is a protein called 50S Ribosomal Protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BY	107	Total	C	N	O	S	0	0	0
			806	517	152	131	6			
44	DY	107	Total	C	N	O	S	0	0	0
			806	517	152	131	6			

- Molecule 45 is a protein called 50S Ribosomal Protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BZ	171	Total	C	N	O	S	0	0	0
			1349	862	243	242	2			
45	DZ	174	Total	C	N	O	S	0	0	0
			1360	870	243	245	2			

- Molecule 46 is a protein called 50S Ribosomal Protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	B0	83	Total	C	N	O	S	0	0	0
			653	404	139	109	1			
46	D0	83	Total	C	N	O	S	0	0	0
			653	404	139	109	1			

- Molecule 47 is a protein called 50S Ribosomal Protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	B1	97	Total	C	N	O	S	0	0	0
			755	475	148	131	1			
47	D1	97	Total	C	N	O	S	0	0	0
			755	475	148	131	1			

- Molecule 48 is a protein called 50S Ribosomal Protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	B2	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			
48	D2	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			

- Molecule 49 is a protein called 50S Ribosomal Protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	B3	59	Total	C	N	O	0	0	0
			469	298	90	81			
49	D3	59	Total	C	N	O	0	0	0
			464	296	90	78			

- Molecule 50 is a protein called 50S Ribosomal Protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B4	69	Total	C	N	O	S	0	0	0
			551	348	99	99	5			
50	D4	69	Total	C	N	O	S	0	0	0
			531	338	97	91	5			

- Molecule 51 is a protein called 50S Ribosomal Protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B5	59	Total	C	N	O	S	0	0	0
			455	285	89	76	5			
51	D5	59	Total	C	N	O	S	0	0	0
			455	285	89	76	5			

- Molecule 52 is a protein called 50S Ribosomal Protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B6	53	Total	C	N	O	S	0	0	0
			453	281	91	77	4			
52	D6	53	Total	C	N	O	S	0	0	0
			449	279	91	75	4			

- Molecule 53 is a protein called 50S Ribosomal Protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			
53	D7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 54 is a protein called 50S Ribosomal Protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	B8	64	Total	C	N	O	S	0	0	0
			511	328	99	82	2			
54	D8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 55 is a protein called 50S Ribosomal Protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	B9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
55	D9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 56 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AA	222	Total	Mg	0	0
			222	222		
56	AD	1	Total	Mg	0	0
			1	1		
56	AF	1	Total	Mg	0	0
			1	1		
56	AK	1	Total	Mg	0	0
			1	1		
56	AL	1	Total	Mg	0	0
			1	1		
56	AM	2	Total	Mg	0	0
			2	2		
56	AN	1	Total	Mg	0	0
			1	1		
56	AS	1	Total	Mg	0	0
			1	1		
56	AV	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	AX	9	Total Mg 9 9	0	0
56	BA	739	Total Mg 739 739	0	0
56	BB	18	Total Mg 18 18	0	0
56	BD	12	Total Mg 12 12	0	0
56	BE	9	Total Mg 9 9	0	0
56	BF	6	Total Mg 6 6	0	0
56	BG	4	Total Mg 4 4	0	0
56	BN	6	Total Mg 6 6	0	0
56	BO	1	Total Mg 1 1	0	0
56	BP	4	Total Mg 4 4	0	0
56	BQ	4	Total Mg 4 4	0	0
56	BR	3	Total Mg 3 3	0	0
56	BU	9	Total Mg 9 9	0	0
56	BV	3	Total Mg 3 3	0	0
56	BW	5	Total Mg 5 5	0	0
56	BX	2	Total Mg 2 2	0	0
56	BZ	1	Total Mg 1 1	0	0
56	B0	6	Total Mg 6 6	0	0
56	B1	2	Total Mg 2 2	0	0
56	B2	1	Total Mg 1 1	0	0
56	B3	3	Total Mg 3 3	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	B5	1	Total Mg 1 1	0	0
56	B7	4	Total Mg 4 4	0	0
56	B8	2	Total Mg 2 2	0	0
56	B9	1	Total Mg 1 1	0	0
56	CA	172	Total Mg 172 172	0	0
56	CE	2	Total Mg 2 2	0	0
56	CF	1	Total Mg 1 1	0	0
56	CN	1	Total Mg 1 1	0	0
56	CT	1	Total Mg 1 1	0	0
56	CX	3	Total Mg 3 3	0	0
56	DA	657	Total Mg 657 657	0	0
56	DB	12	Total Mg 12 12	0	0
56	DD	5	Total Mg 5 5	0	0
56	DE	6	Total Mg 6 6	0	0
56	DF	5	Total Mg 5 5	0	0
56	DG	1	Total Mg 1 1	0	0
56	DN	1	Total Mg 1 1	0	0
56	DO	1	Total Mg 1 1	0	0
56	DP	2	Total Mg 2 2	0	0
56	DQ	4	Total Mg 4 4	0	0
56	DR	1	Total Mg 1 1	0	0

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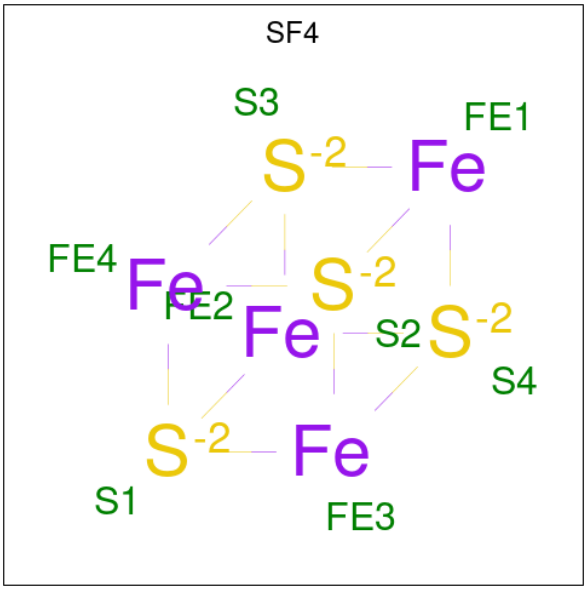
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	DU	2	Total Mg 2 2	0	0
56	DV	3	Total Mg 3 3	0	0
56	DW	2	Total Mg 2 2	0	0
56	DY	1	Total Mg 1 1	0	0
56	D3	1	Total Mg 1 1	0	0
56	D5	2	Total Mg 2 2	0	0
56	D8	1	Total Mg 1 1	0	0

- Molecule 57 is IRON/SULFUR CLUSTER (CCD ID: SF4) (formula: Fe_4S_4).

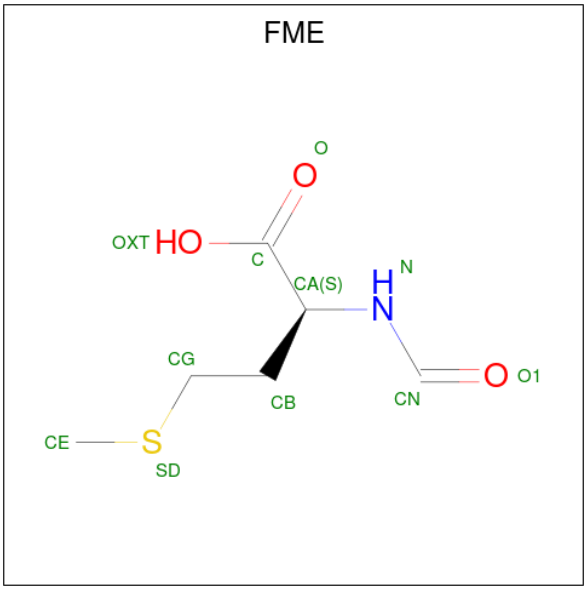


Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	AD	1	Total Fe S 8 4 4	0	0
57	CD	1	Total Fe S 8 4 4	0	0

- Molecule 58 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	AN	1	Total Zn 1 1	0	0
58	BY	1	Total Zn 1 1	0	0
58	B4	1	Total Zn 1 1	0	0
58	B5	1	Total Zn 1 1	0	0
58	B6	1	Total Zn 1 1	0	0
58	B9	1	Total Zn 1 1	0	0
58	CN	1	Total Zn 1 1	0	0
58	DY	1	Total Zn 1 1	0	0
58	D4	1	Total Zn 1 1	0	0
58	D5	1	Total Zn 1 1	0	0
58	D6	1	Total Zn 1 1	0	0
58	D9	1	Total Zn 1 1	0	0

- Molecule 59 is N-FORMYLMETHIONINE (CCD ID: FME) (formula: $C_6H_{11}NO_3S$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	AX	1	Total C N O S 10 6 1 2 1	0	0
59	CX	1	Total C N O S 10 6 1 2 1	0	0

- Molecule 60 is POTASSIUM ION (CCD ID: K) (formula: K).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	BA	1	Total K 1 1	0	0
60	DA	1	Total K 1 1	0	0

- Molecule 61 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	AA	147	Total O 147 147	0	0
61	AD	1	Total O 1 1	0	0
61	AE	2	Total O 2 2	0	0
61	AJ	1	Total O 1 1	0	0
61	AL	2	Total O 2 2	0	0
61	AO	2	Total O 2 2	0	0
61	AU	1	Total O 1 1	0	0
61	AV	2	Total O 2 2	0	0
61	AX	1	Total O 1 1	0	0
61	BA	1086	Total O 1086 1086	0	0
61	BB	26	Total O 26 26	0	0
61	BD	6	Total O 6 6	0	0
61	BE	13	Total O 13 13	0	0
61	BF	5	Total O 5 5	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	BG	1	Total O 1 1	0	0
61	BN	3	Total O 3 3	0	0
61	BO	2	Total O 2 2	0	0
61	BP	15	Total O 15 15	0	0
61	BQ	3	Total O 3 3	0	0
61	BR	1	Total O 1 1	0	0
61	BT	2	Total O 2 2	0	0
61	BU	5	Total O 5 5	0	0
61	BV	2	Total O 2 2	0	0
61	BW	4	Total O 4 4	0	0
61	BX	4	Total O 4 4	0	0
61	B0	4	Total O 4 4	0	0
61	B1	2	Total O 2 2	0	0
61	B5	2	Total O 2 2	0	0
61	B7	1	Total O 1 1	0	0
61	B8	7	Total O 7 7	0	0
61	CA	186	Total O 186 186	0	0
61	CE	2	Total O 2 2	0	0
61	CN	1	Total O 1 1	0	0
61	CT	1	Total O 1 1	0	0
61	CX	2	Total O 2 2	0	0

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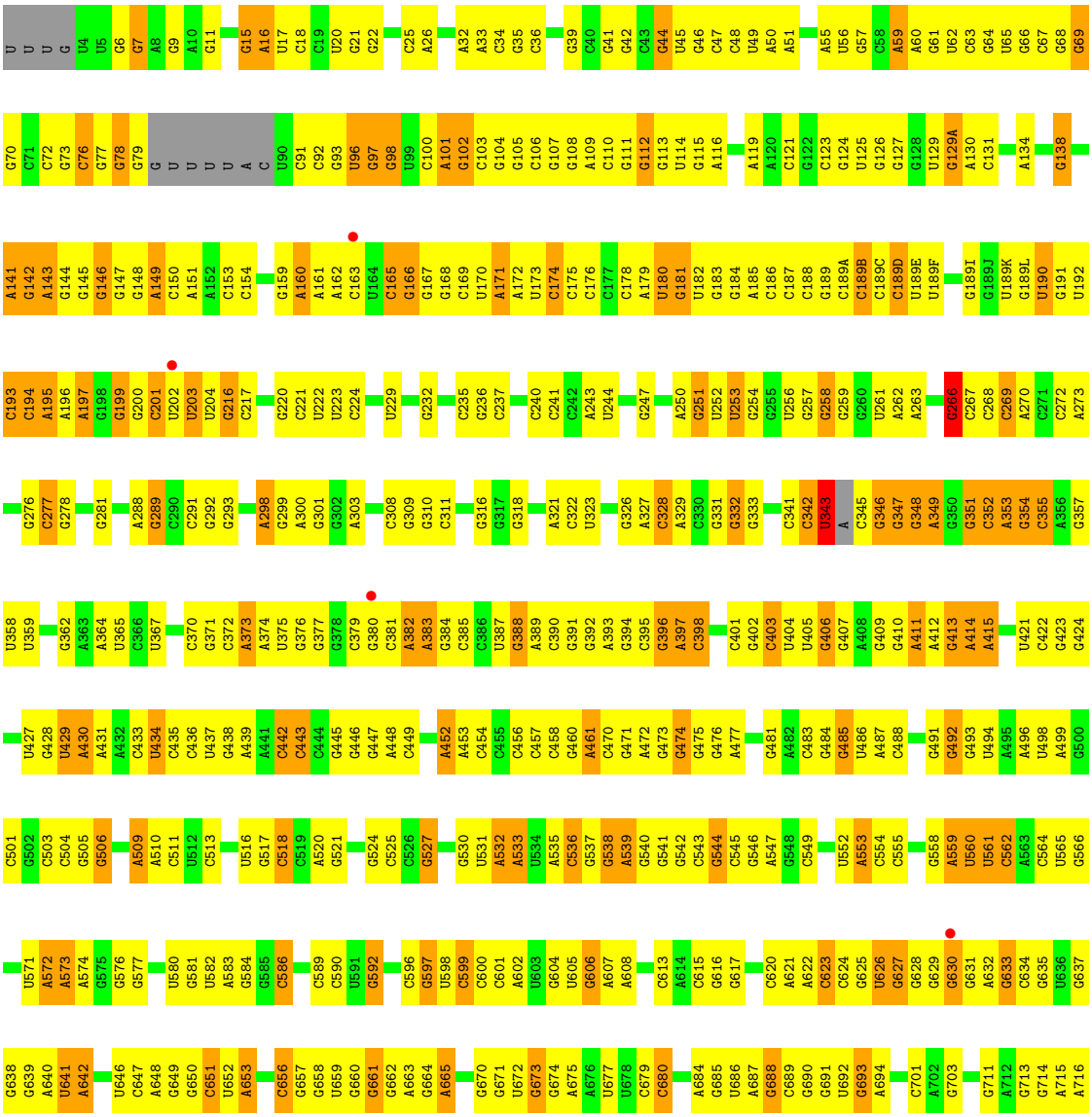
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	DA	906	Total O 906 906	0	0
61	DB	7	Total O 7 7	0	0
61	DD	10	Total O 10 10	0	0
61	DE	11	Total O 11 11	0	0
61	DF	4	Total O 4 4	0	0
61	DO	1	Total O 1 1	0	0
61	DP	14	Total O 14 14	0	0
61	DQ	3	Total O 3 3	0	0
61	DR	1	Total O 1 1	0	0
61	DU	4	Total O 4 4	0	0
61	DV	1	Total O 1 1	0	0
61	DX	2	Total O 2 2	0	0
61	DY	1	Total O 1 1	0	0
61	D0	3	Total O 3 3	0	0
61	D1	1	Total O 1 1	0	0
61	D3	1	Total O 1 1	0	0
61	D7	1	Total O 1 1	0	0
61	D8	4	Total O 4 4	0	0

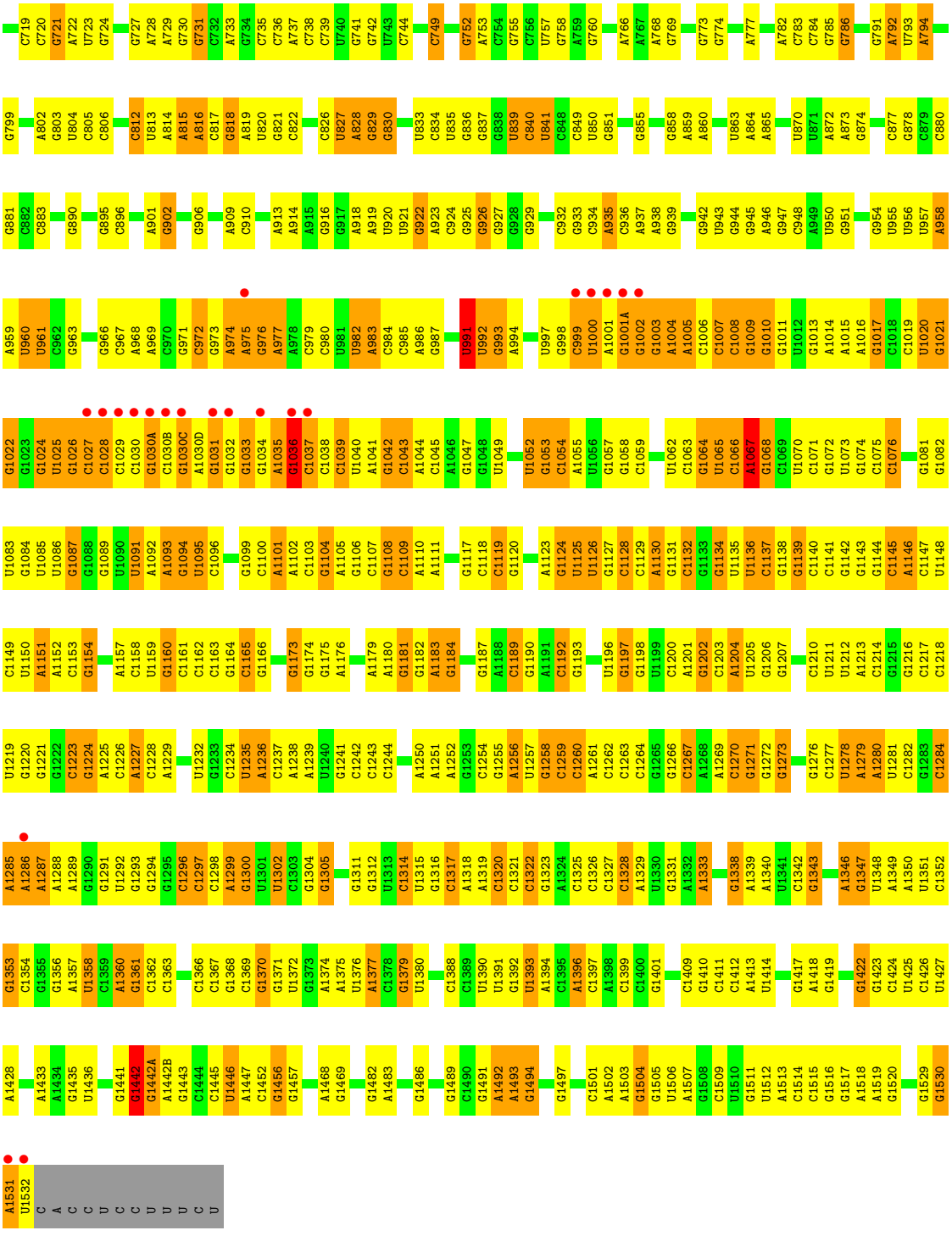
3 Residue-property plots (i)

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: 16S Ribosomal RNA

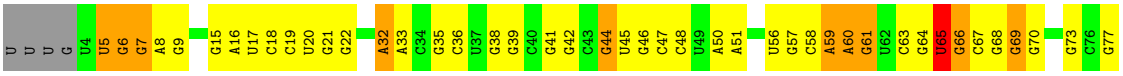
Chain AA:

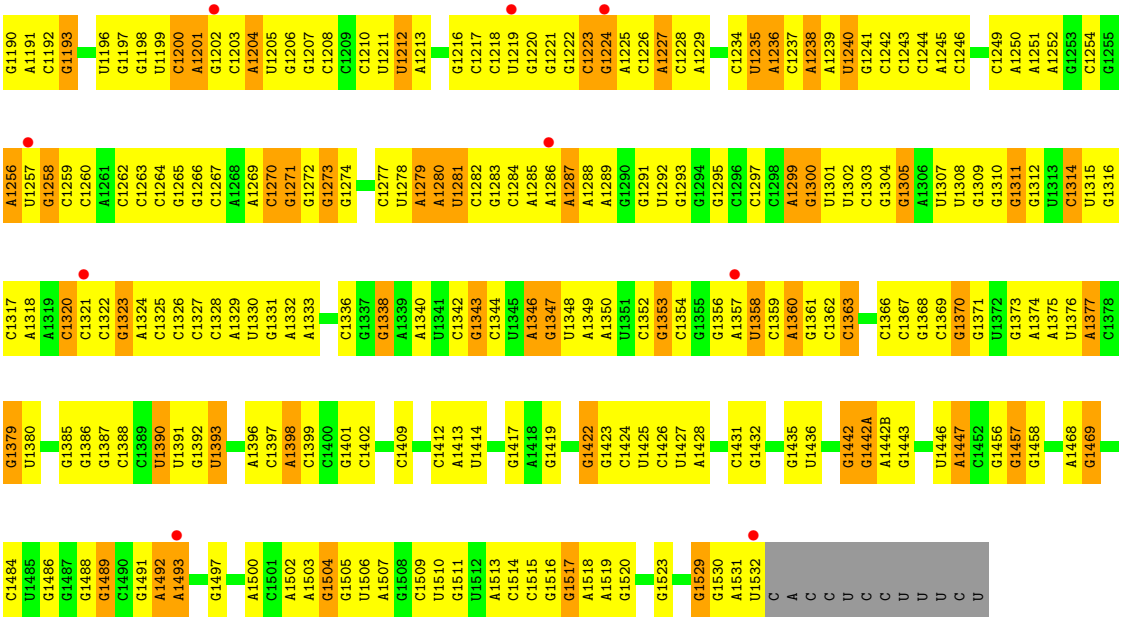




• Molecule 1: 16S Ribosomal RNA

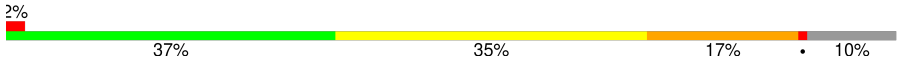
Chain CA:

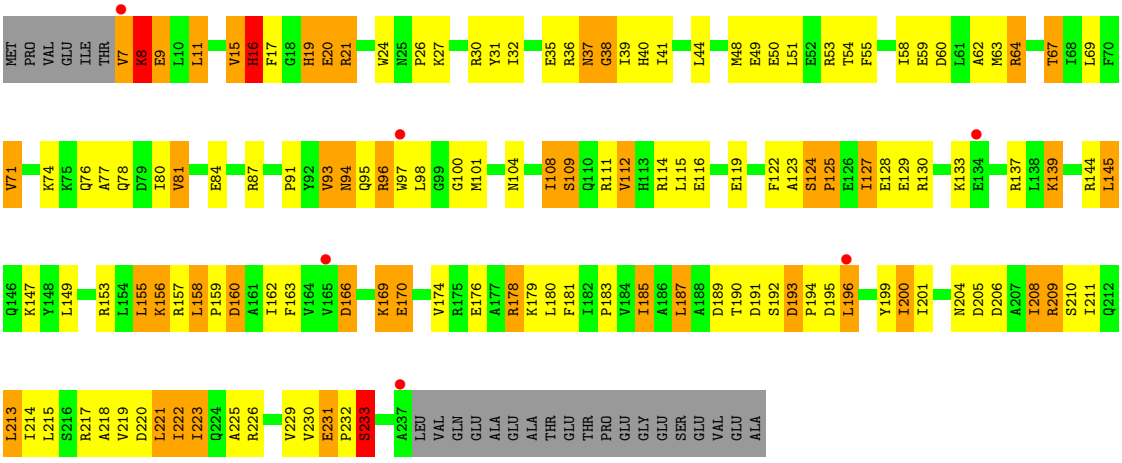




• Molecule 2: 30S Ribosomal Protein S2

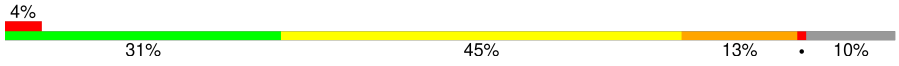
Chain AB:

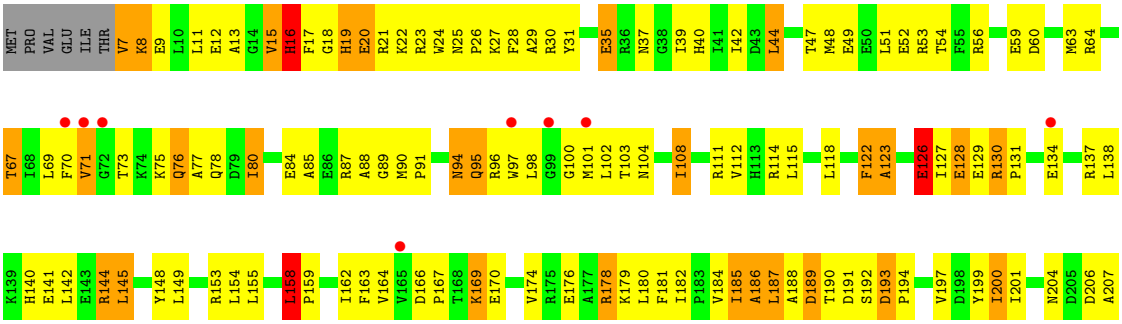




• Molecule 2: 30S Ribosomal Protein S2

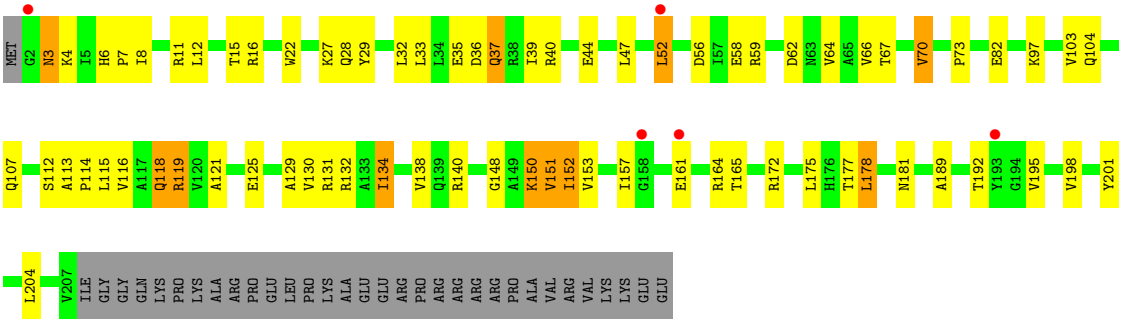
Chain CB:





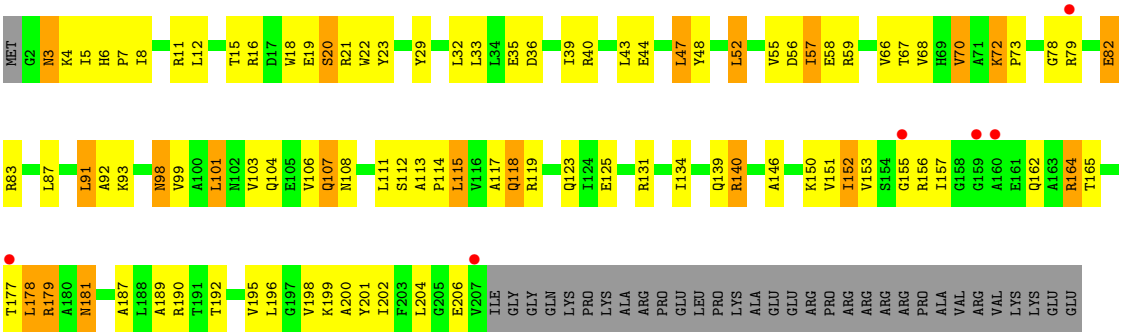
• Molecule 3: 30S Ribosomal Protein S3

Chain AC:



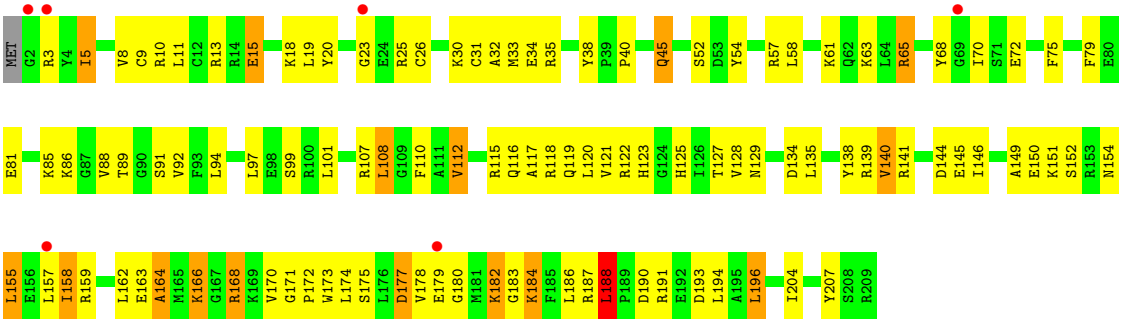
• Molecule 3: 30S Ribosomal Protein S3

Chain CC:



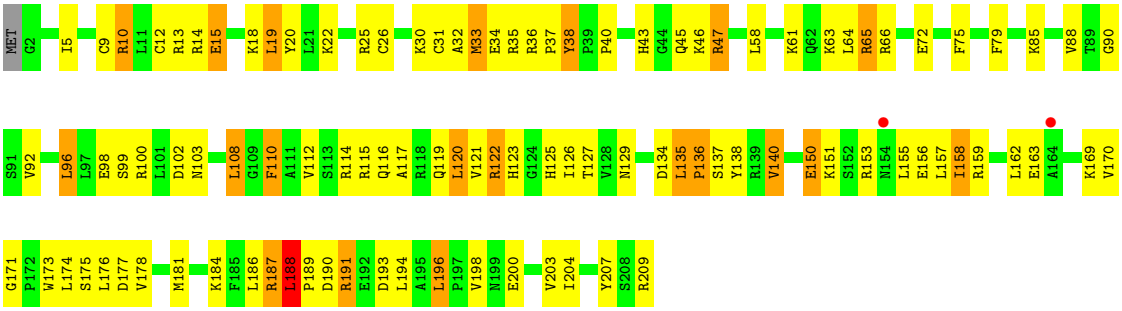
• Molecule 4: 30S Ribosomal Protein S4

Chain AD:



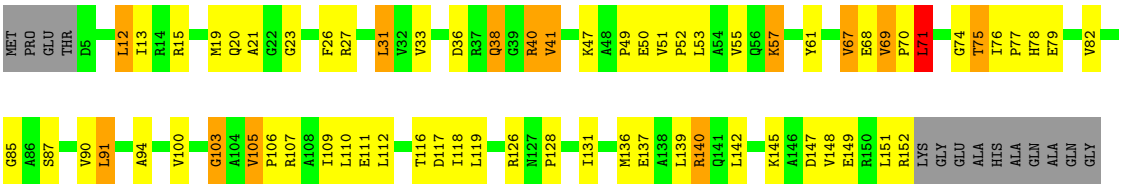
• Molecule 4: 30S Ribosomal Protein S4

Chain CD:



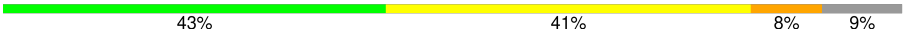
• Molecule 5: 30S Ribosomal Protein S5

Chain AE:



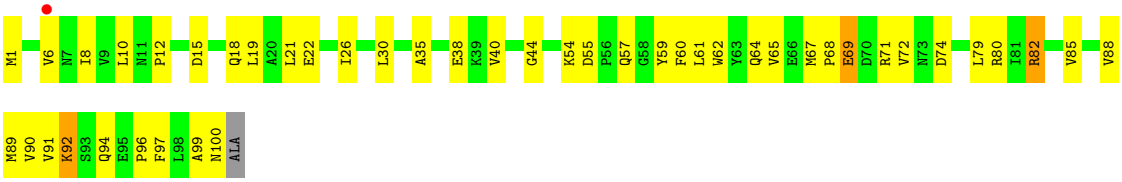
• Molecule 5: 30S Ribosomal Protein S5

Chain CE:



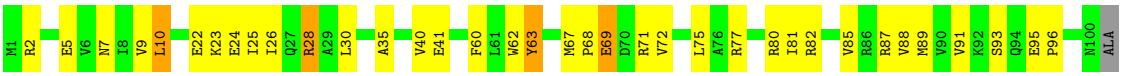
• Molecule 6: 30S Ribosomal Protein S6

Chain AF:



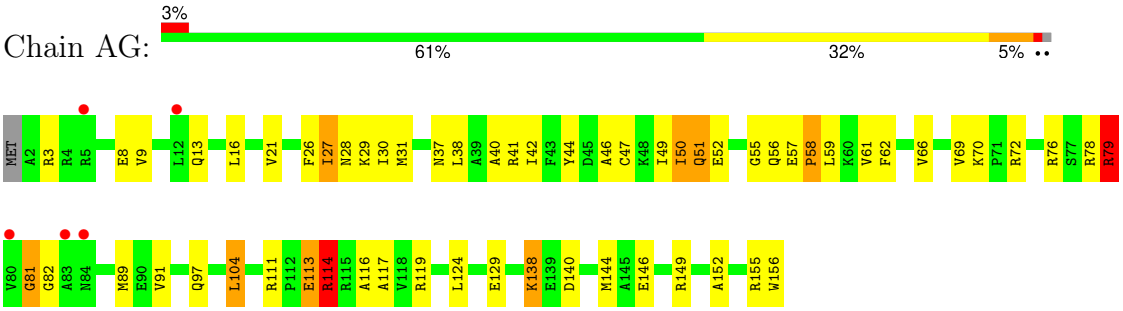
• Molecule 6: 30S Ribosomal Protein S6

Chain CF:



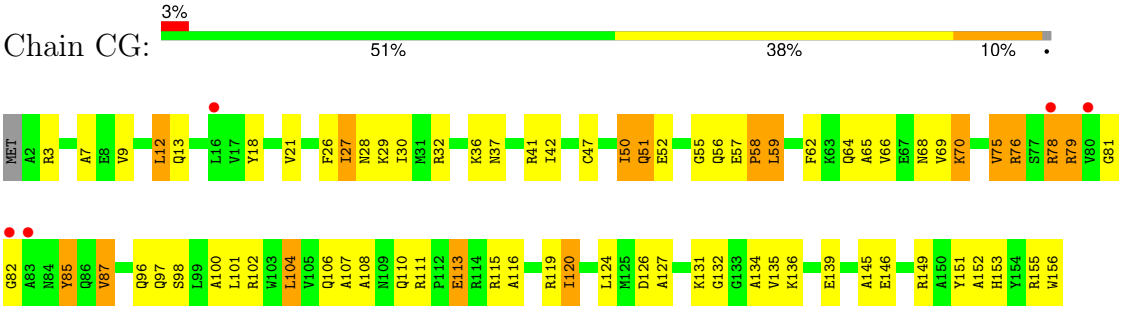
• Molecule 7: 30S Ribosomal Protein S7

Chain AG:



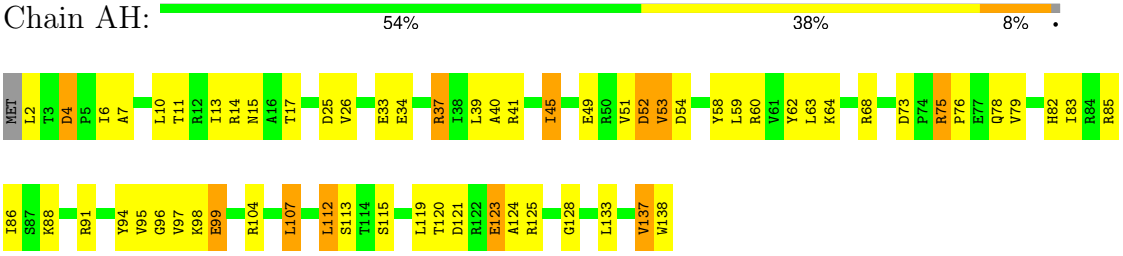
• Molecule 7: 30S Ribosomal Protein S7

Chain CG:



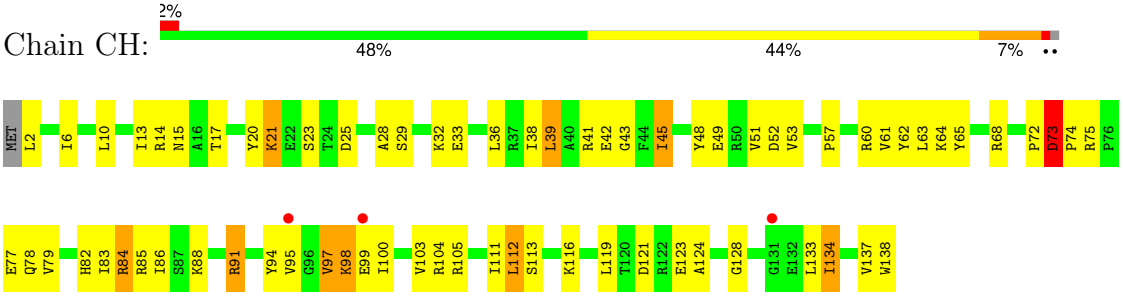
• Molecule 8: 30S Ribosomal Protein S8

Chain AH:



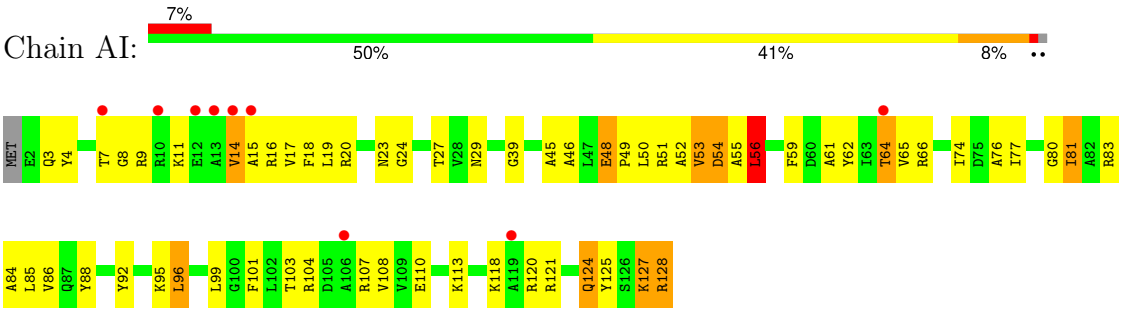
• Molecule 8: 30S Ribosomal Protein S8

Chain CH:



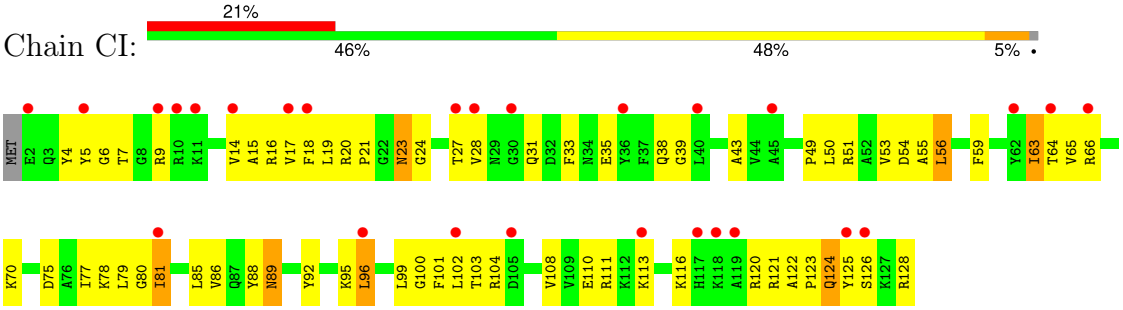
• Molecule 9: 30S Ribosomal Protein S9

Chain AI:



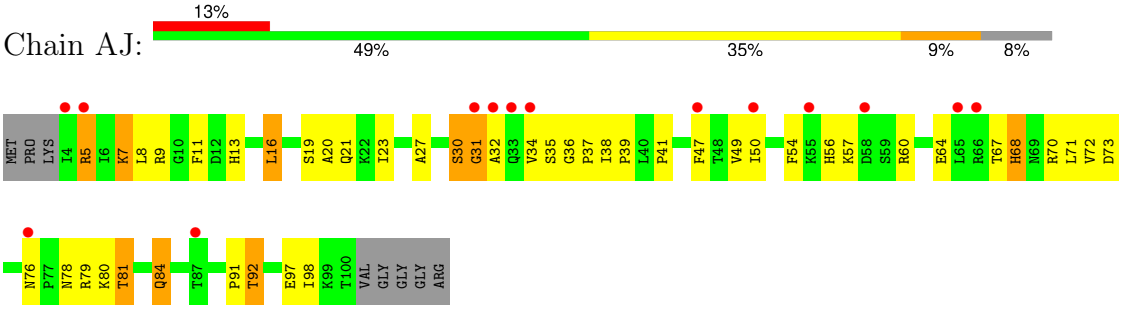
• Molecule 9: 30S Ribosomal Protein S9

Chain CI:



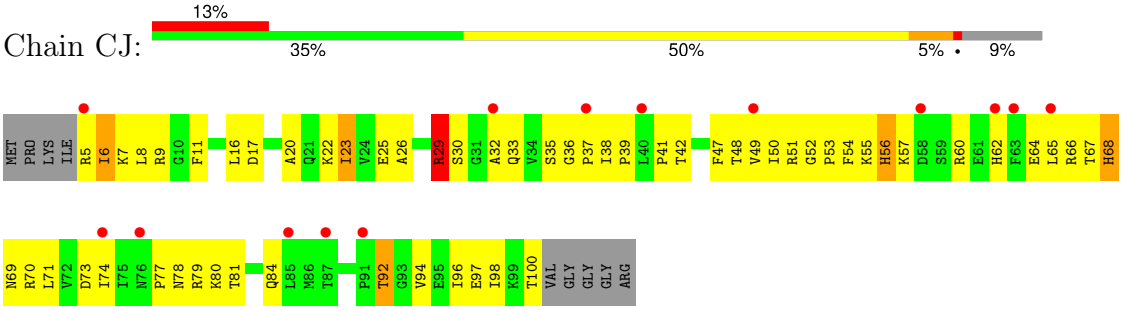
• Molecule 10: 30S Ribosomal Protein S10

Chain AJ:



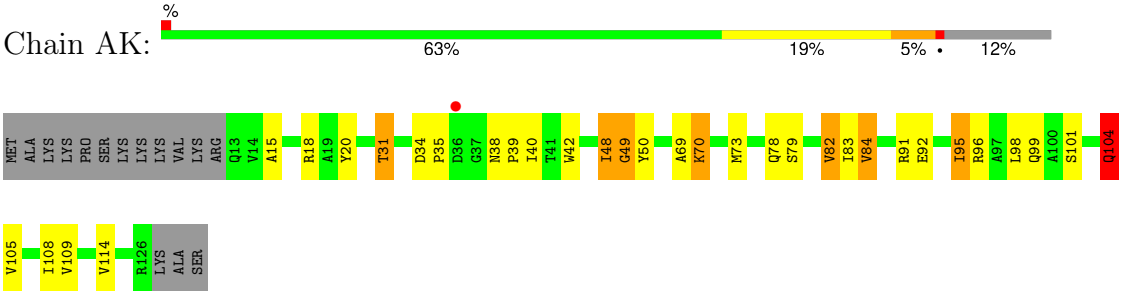
• Molecule 10: 30S Ribosomal Protein S10

Chain CJ:



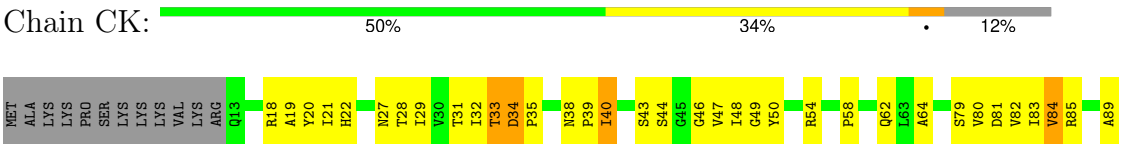
• Molecule 11: 30S Ribosomal Protein S11

Chain AK:



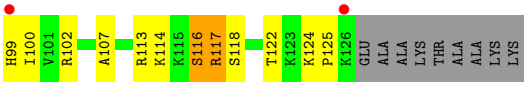
• Molecule 11: 30S Ribosomal Protein S11

Chain CK:



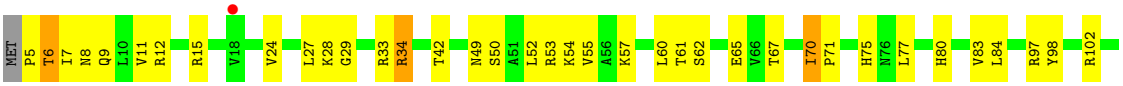
• Molecule 12: 30S Ribosomal Protein S12

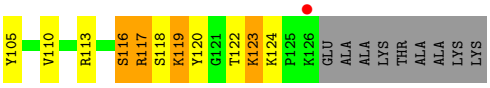
Chain AL:



• Molecule 12: 30S Ribosomal Protein S12

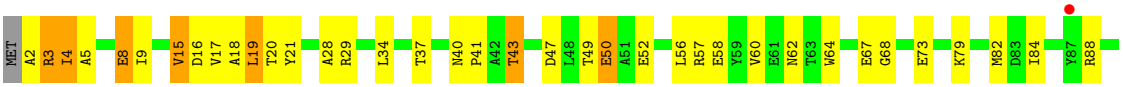
Chain CL:

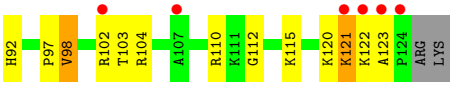




• Molecule 13: 30S Ribosomal Protein S13

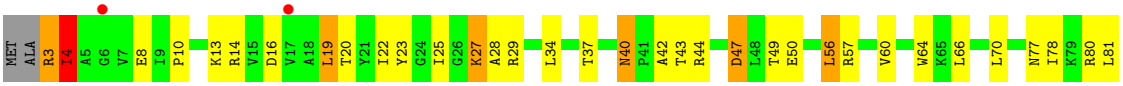
Chain AM:

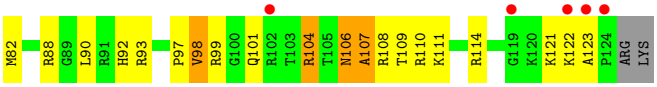




• Molecule 13: 30S Ribosomal Protein S13

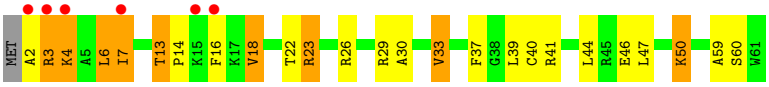
Chain CM:





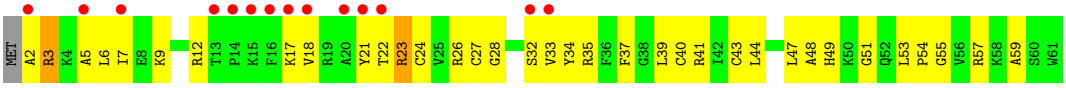
• Molecule 14: 30S Ribosomal Protein S14

Chain AN:



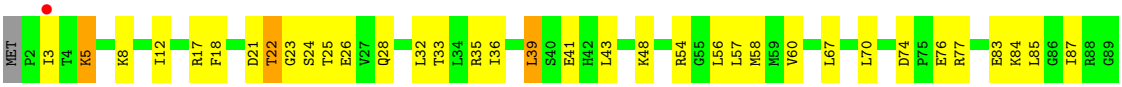
• Molecule 14: 30S Ribosomal Protein S14

Chain CN:



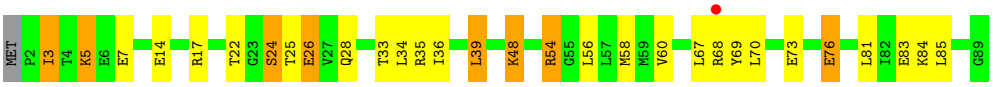
• Molecule 15: 30S Ribosomal Protein S15

Chain AO:



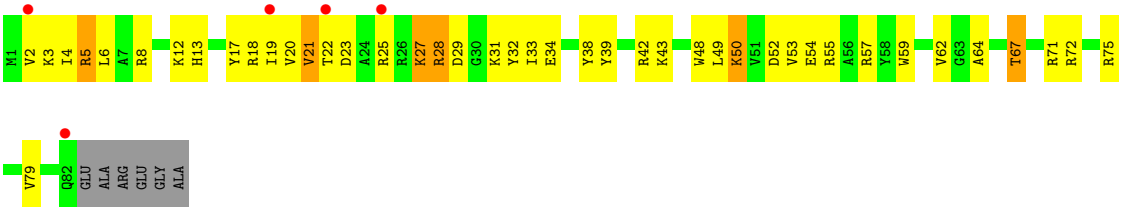
• Molecule 15: 30S Ribosomal Protein S15

Chain CO:



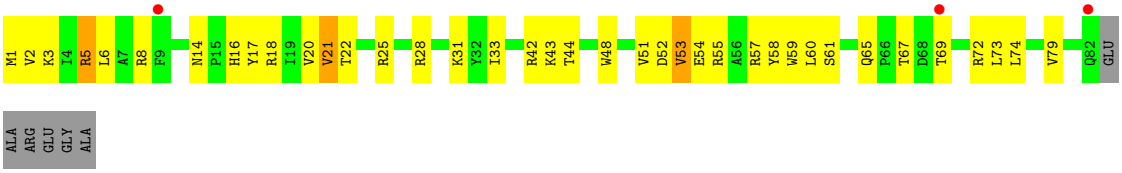
• Molecule 16: 30S Ribosomal Protein S16

Chain AP:



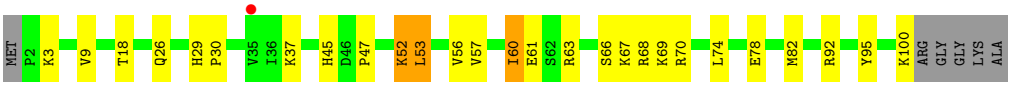
• Molecule 16: 30S Ribosomal Protein S16

Chain CP:



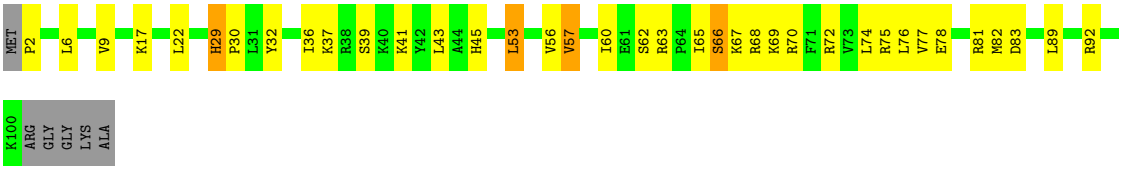
• Molecule 17: 30S Ribosomal Protein S17

Chain AQ:



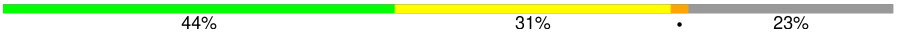
• Molecule 17: 30S Ribosomal Protein S17

Chain CQ:



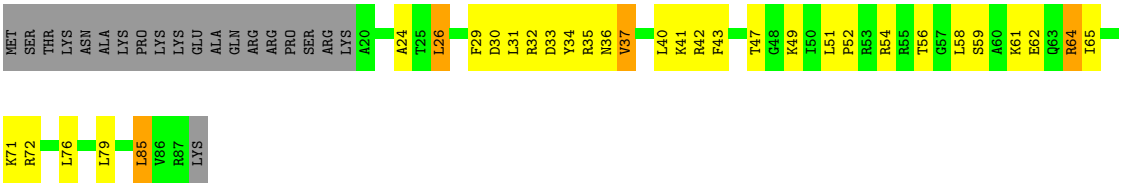
• Molecule 18: 30S Ribosomal Protein S18

Chain AR:



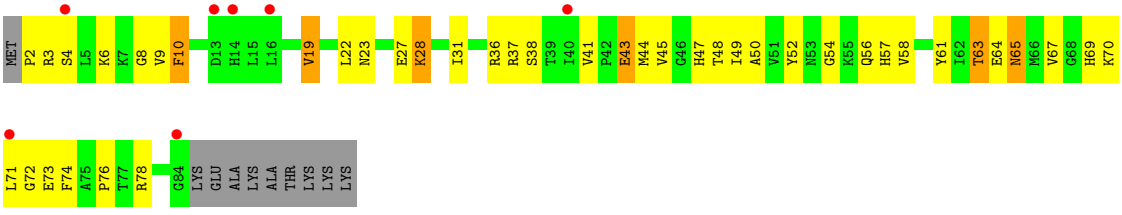
• Molecule 18: 30S Ribosomal Protein S18

Chain CR:



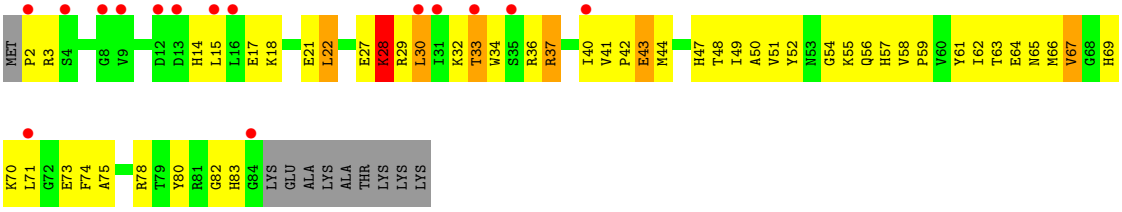
• Molecule 19: 30S Ribosomal Protein S19

Chain AS:



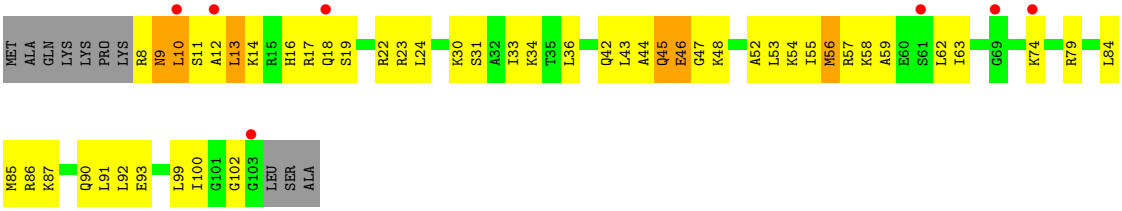
• Molecule 19: 30S Ribosomal Protein S19

Chain CS:



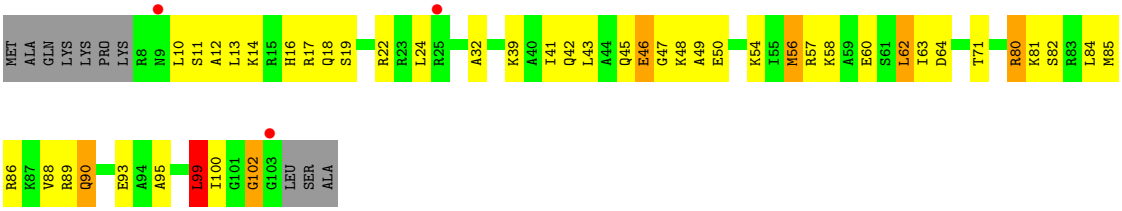
• Molecule 20: 30S Ribosomal Protein S20

Chain AT:



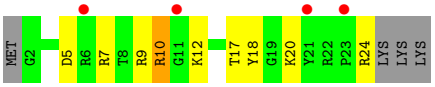
• Molecule 20: 30S Ribosomal Protein S20

Chain CT:



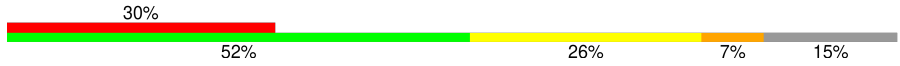
• Molecule 21: 30S Ribosomal Protein THX

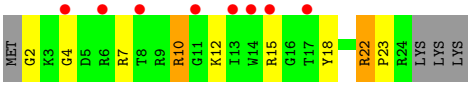
Chain AU:



• Molecule 21: 30S Ribosomal Protein THX

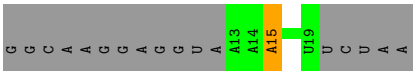
Chain CU:





• Molecule 22: mRNA

Chain AV:

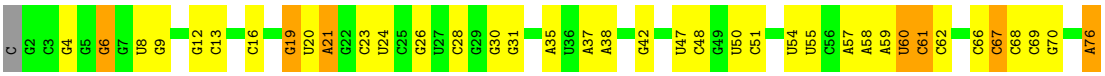


• Molecule 22: mRNA

Chain CV:

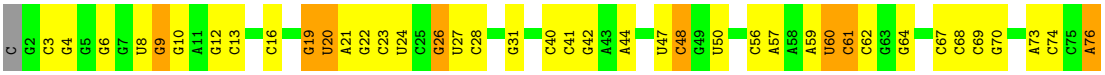
• Molecule 23: P-site tRNA

Chain AX:



• Molecule 23: P-site tRNA

Chain CX:

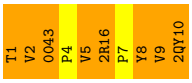


• Molecule 24: Dityromycin

Chain AW:

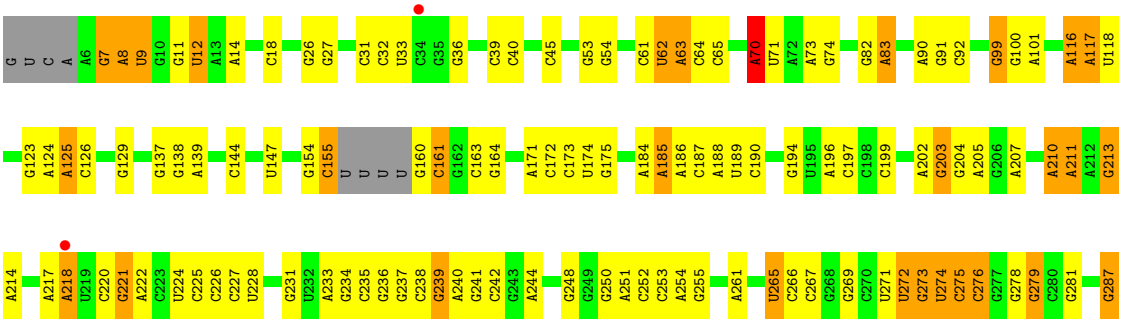
• Molecule 24: Dityromycin

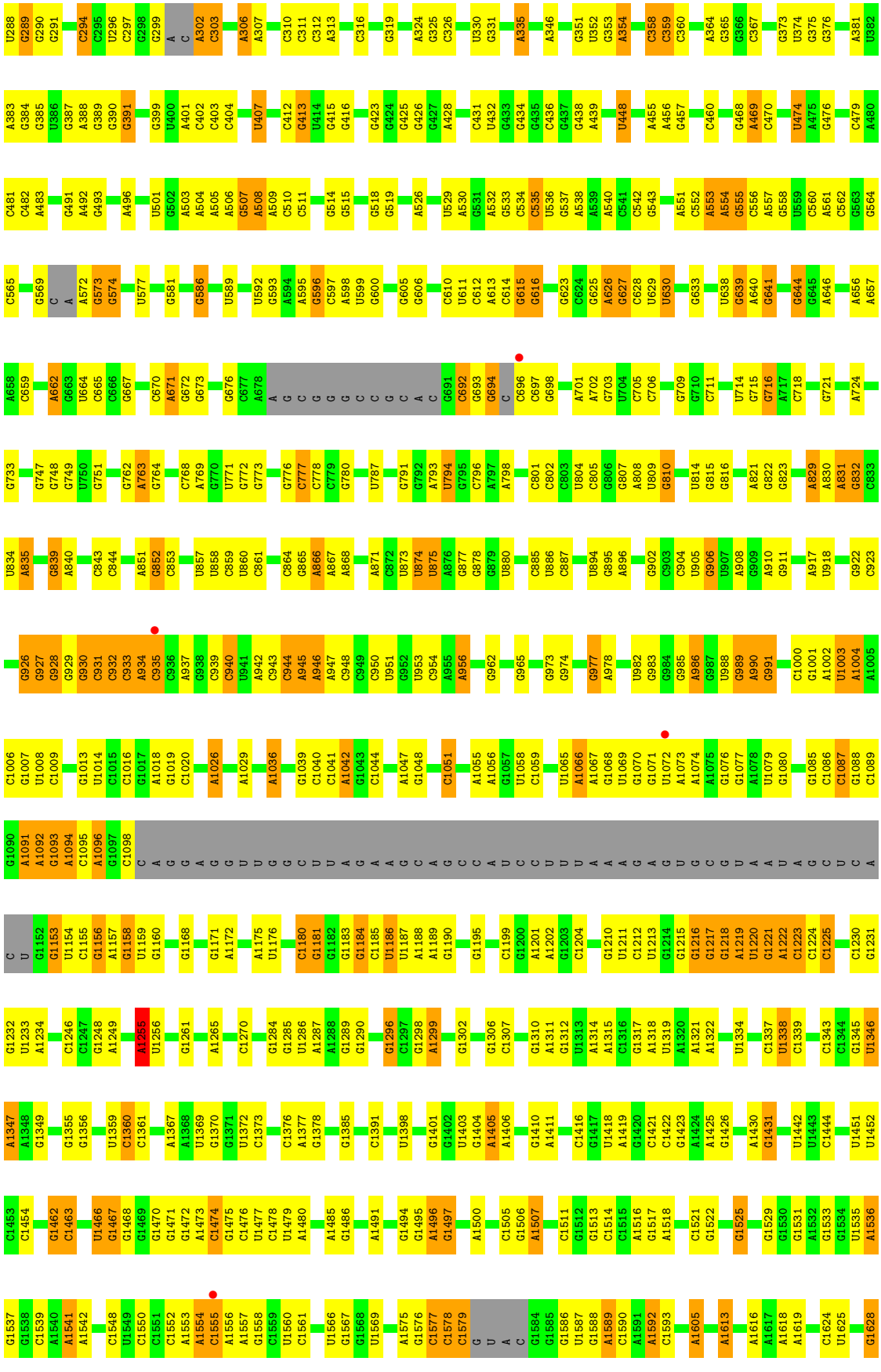
Chain CW:

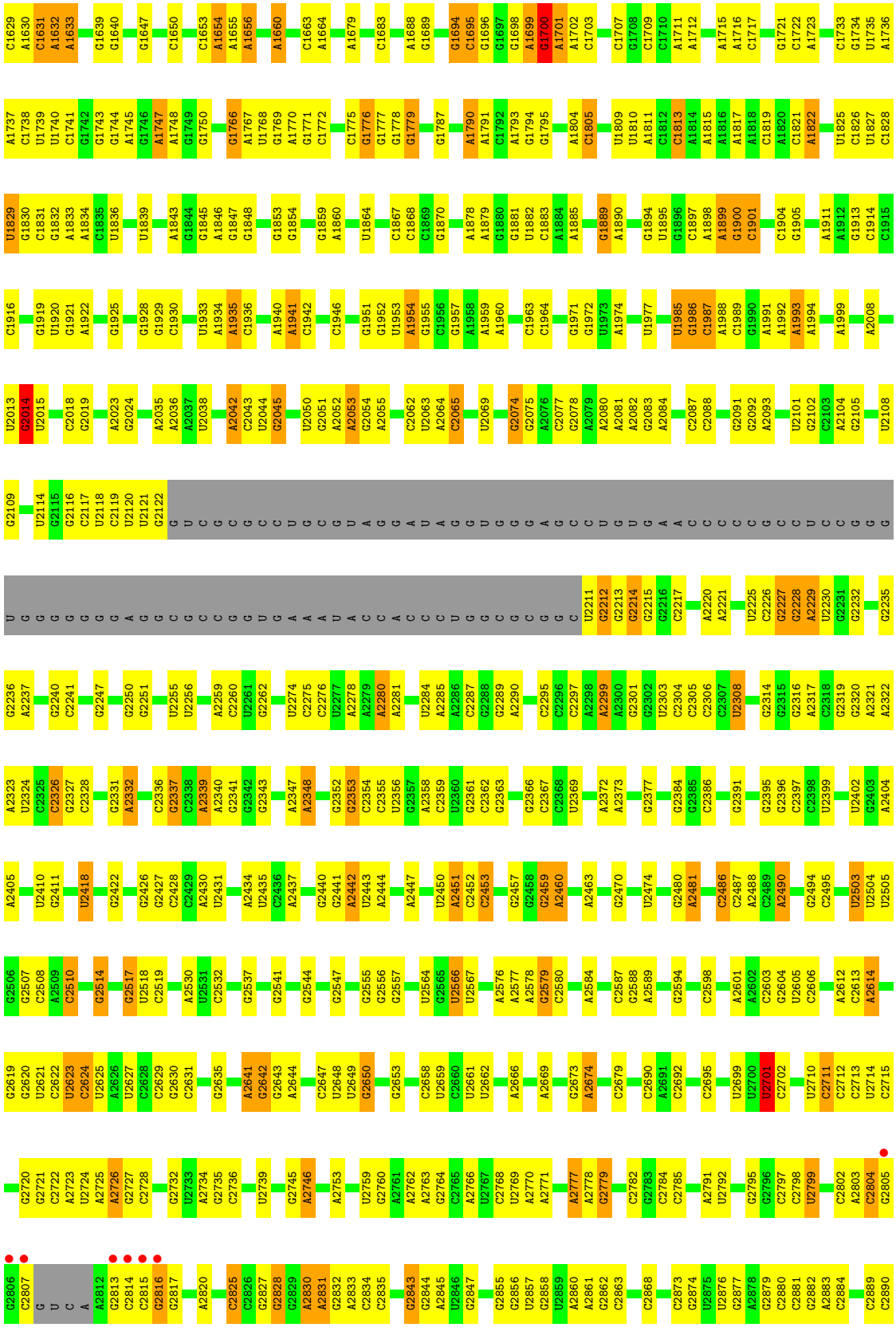


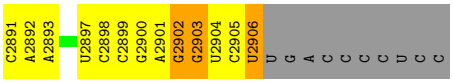
• Molecule 25: 23S Ribosomal RNA

Chain BA:



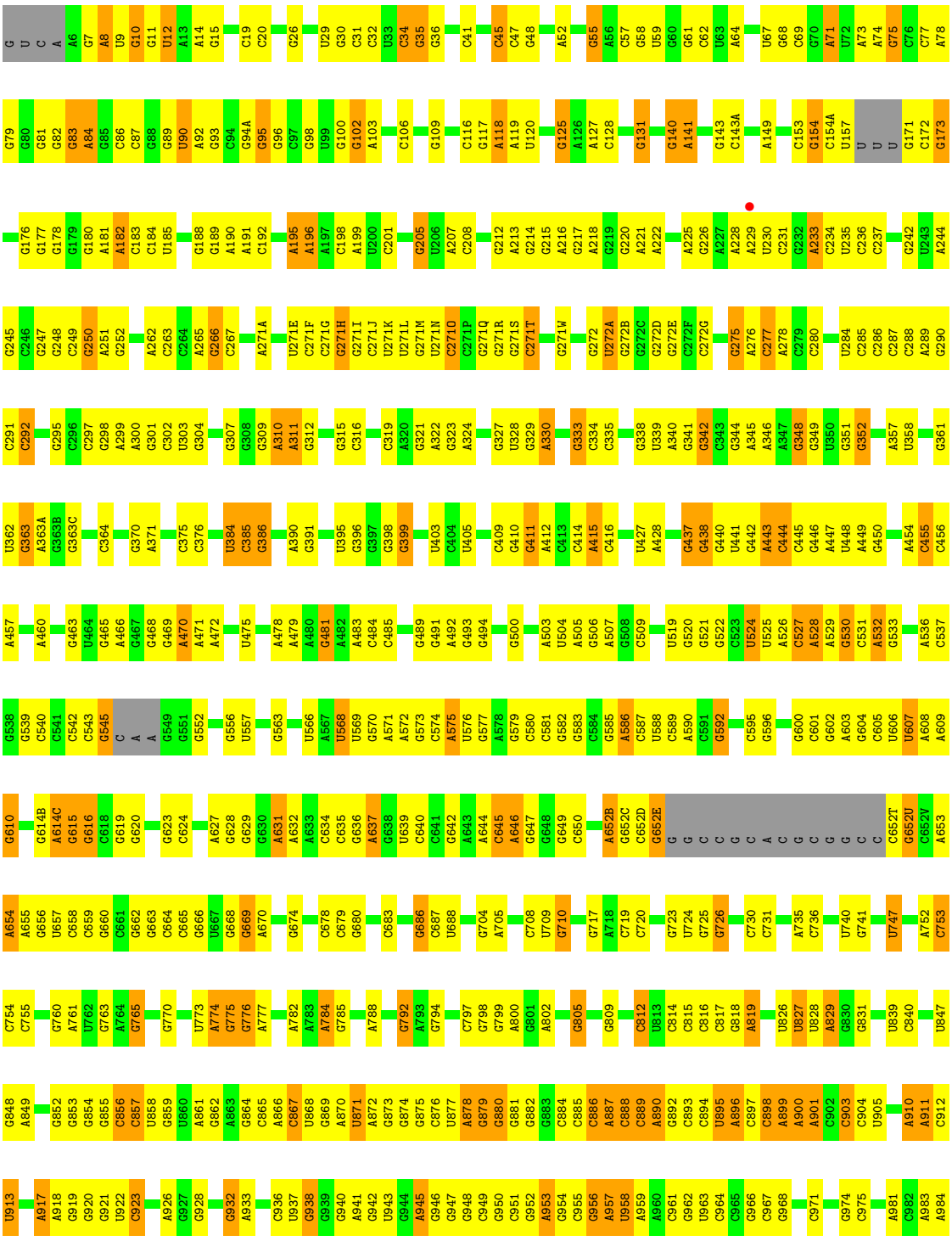


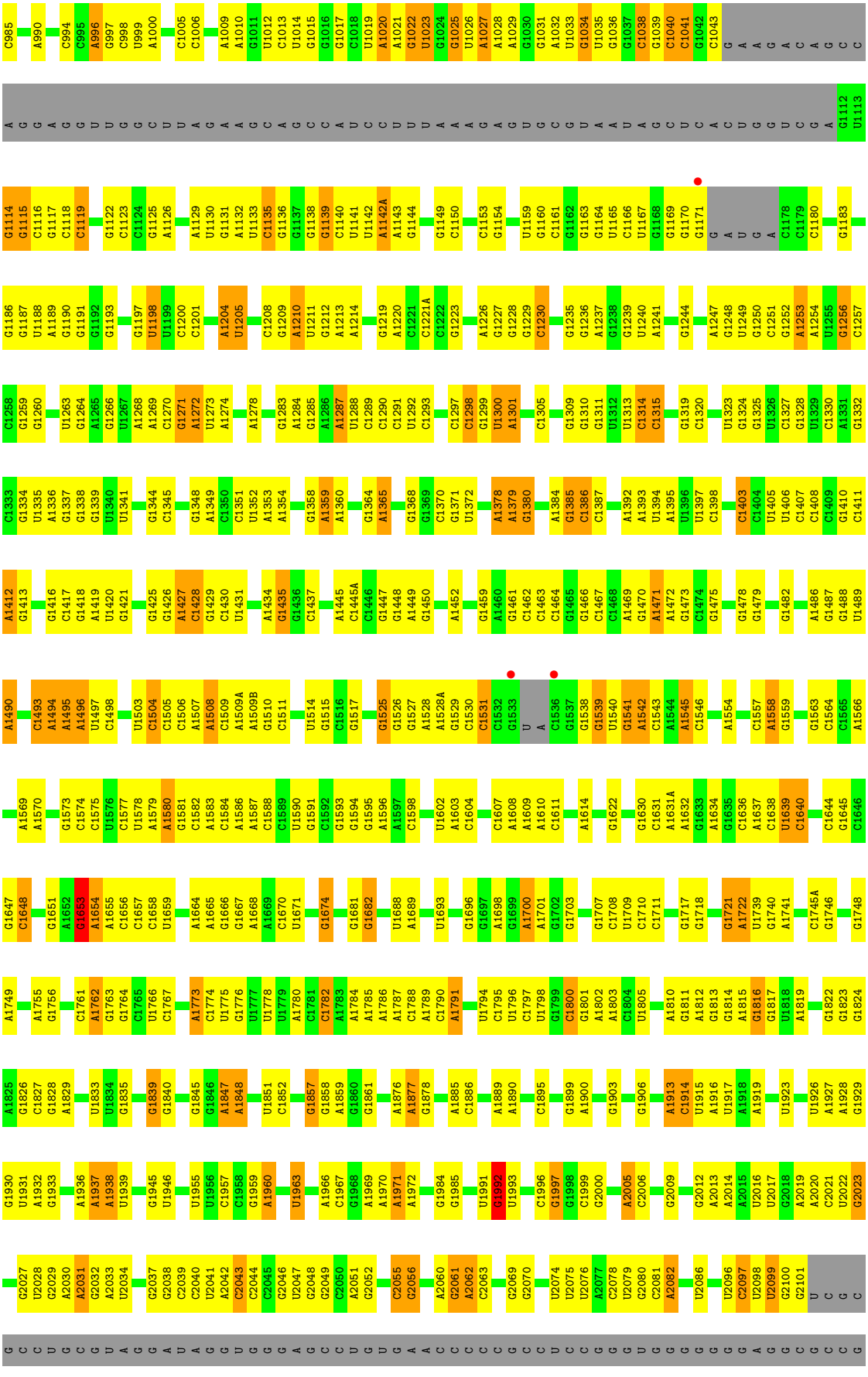


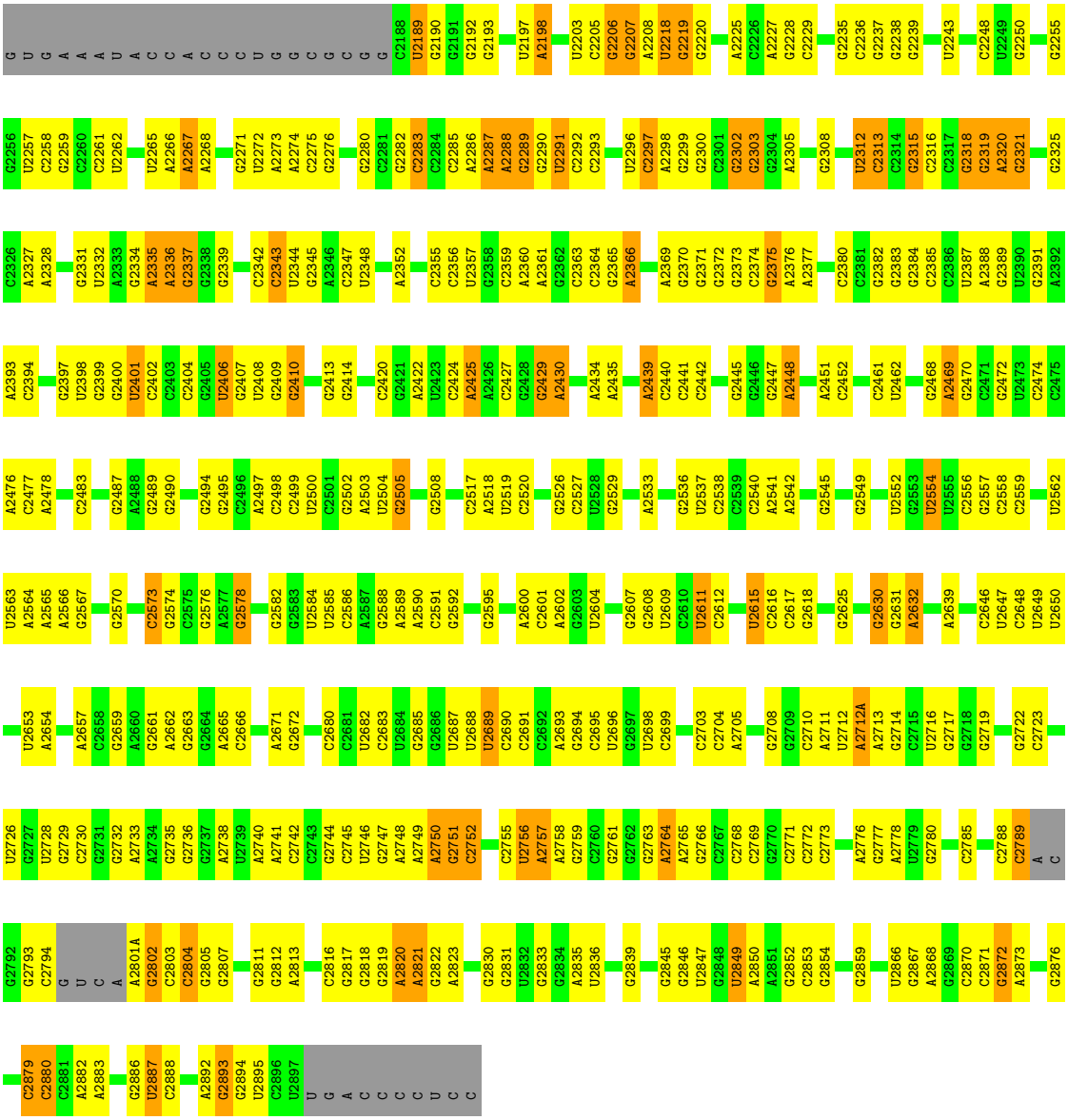


• Molecule 25: 23S Ribosomal RNA

Chain DA:

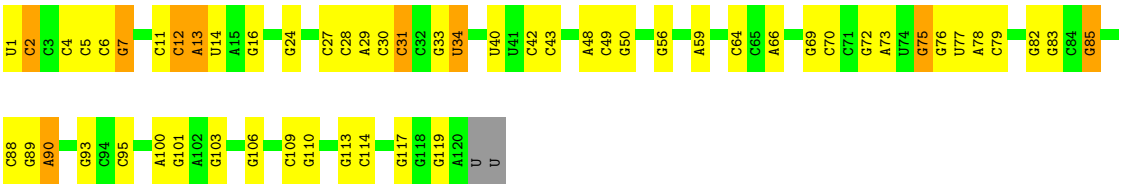






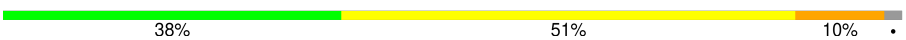
• Molecule 26: 5S Ribosomal RNA

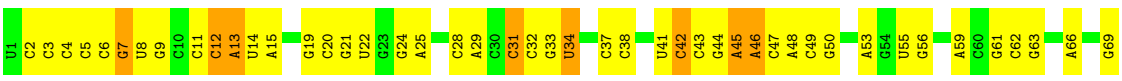
Chain BB:

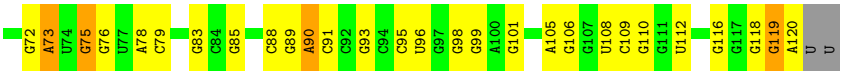


• Molecule 26: 5S Ribosomal RNA

Chain DB:

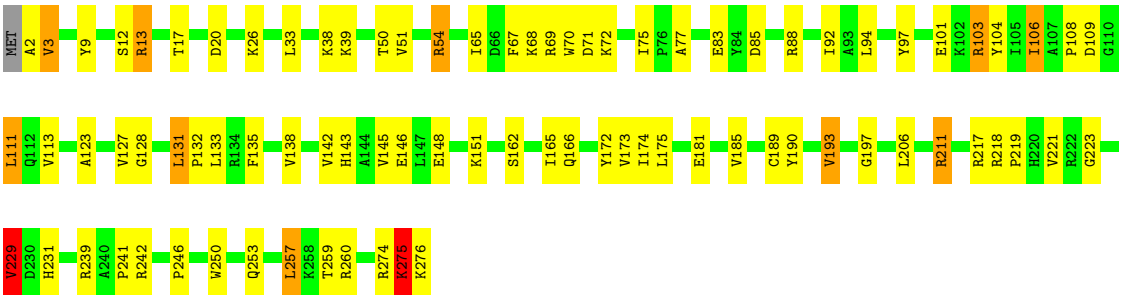






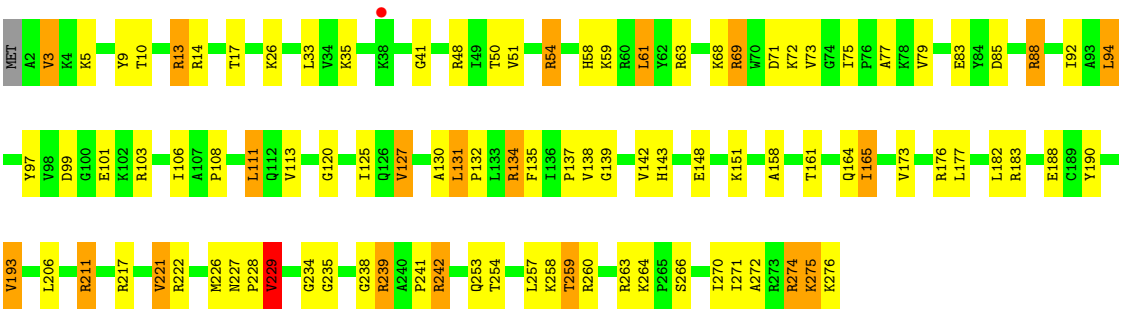
• Molecule 27: 50S Ribosomal Protein L2

Chain BD:



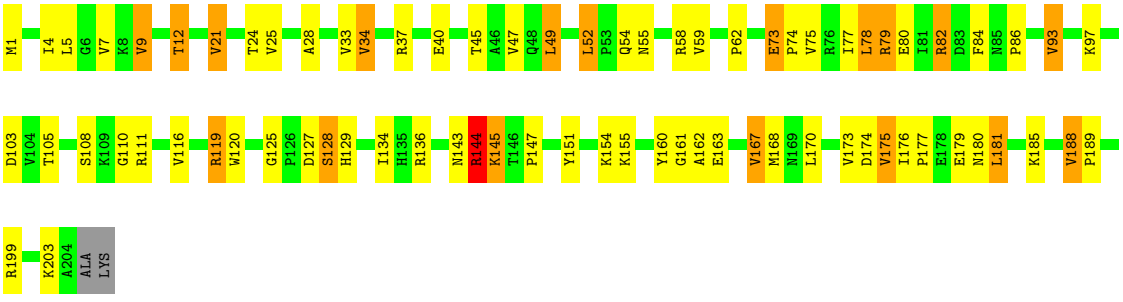
• Molecule 27: 50S Ribosomal Protein L2

Chain DD:



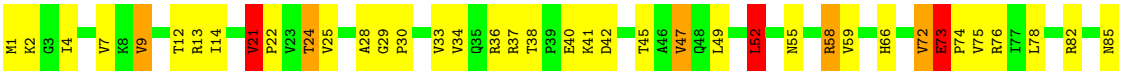
• Molecule 28: 50S Ribosomal Protein L3

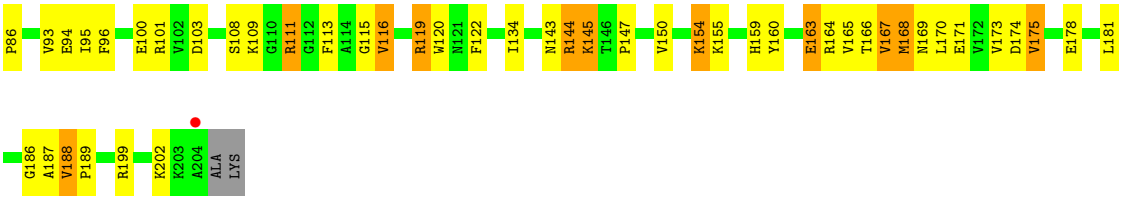
Chain BE:



• Molecule 28: 50S Ribosomal Protein L3

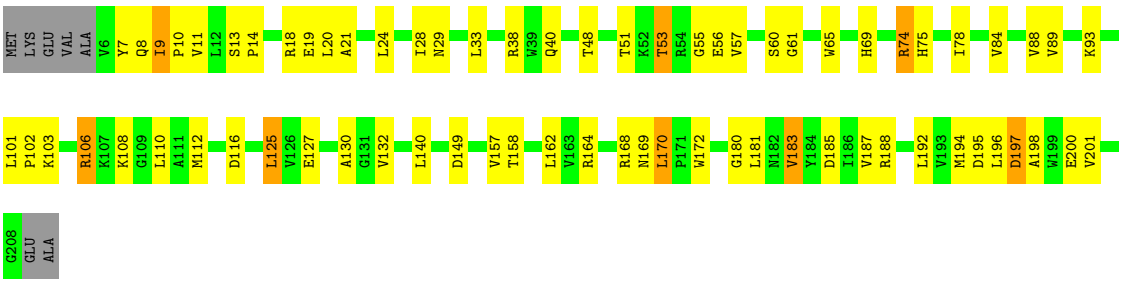
Chain DE:





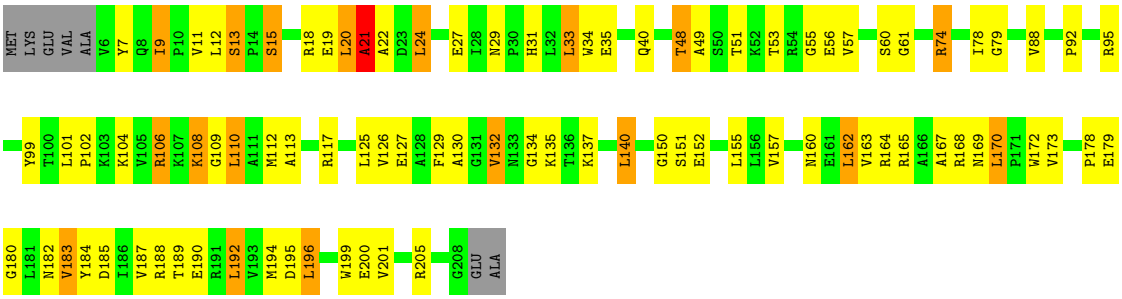
• Molecule 29: 50S Ribosomal Protein L4

Chain BF:



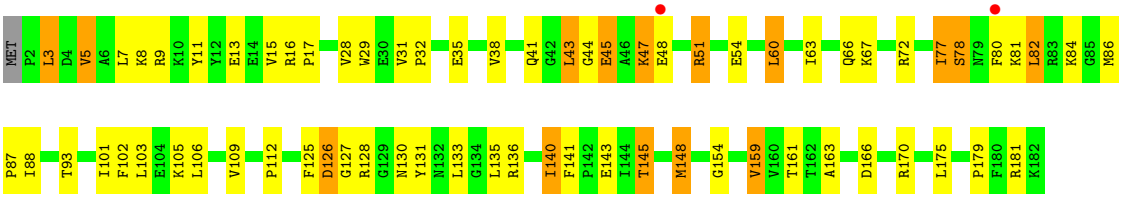
• Molecule 29: 50S Ribosomal Protein L4

Chain DF:



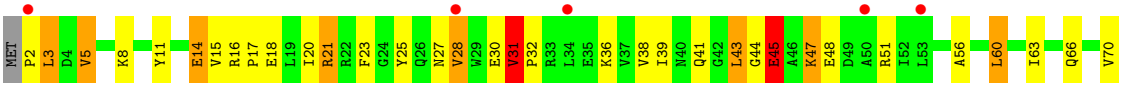
• Molecule 30: 50S Ribosomal Protein L5

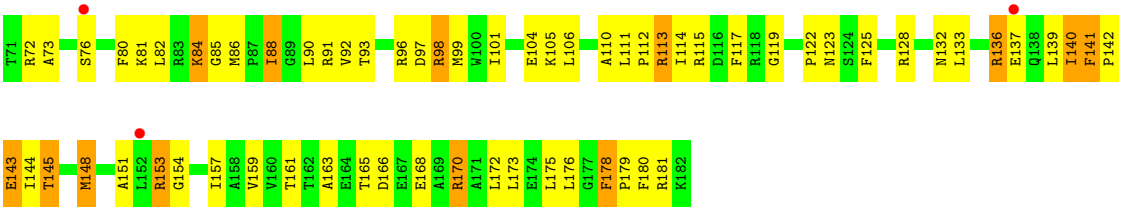
Chain BG:



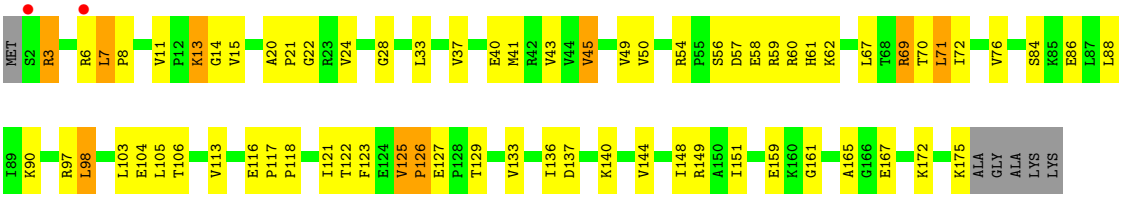
• Molecule 30: 50S Ribosomal Protein L5

Chain DG:

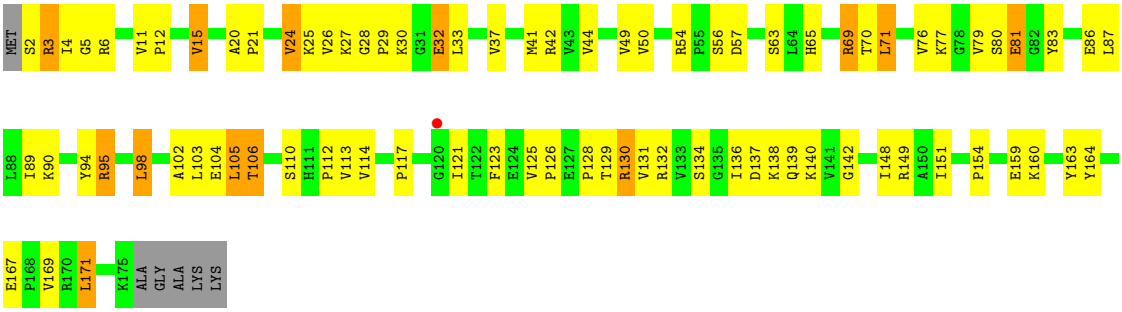




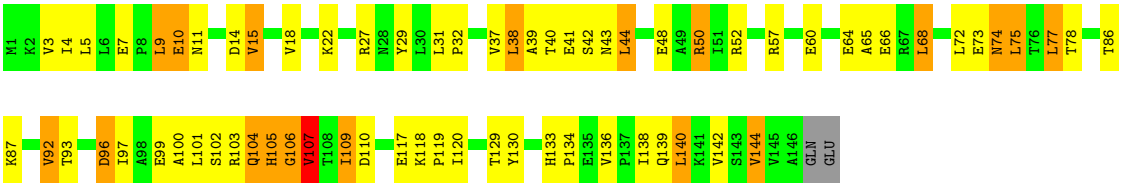
• Molecule 31: 50S Ribosomal Protein L6



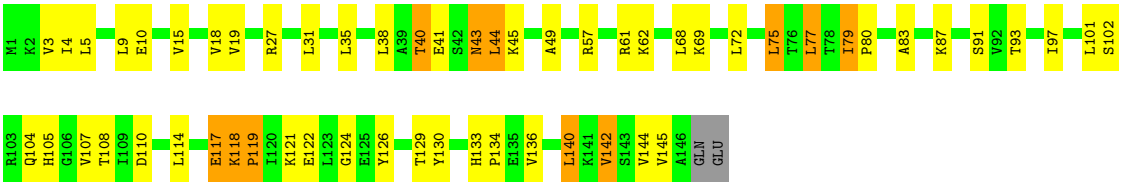
• Molecule 31: 50S Ribosomal Protein L6



• Molecule 32: 50S Ribosomal Protein L9

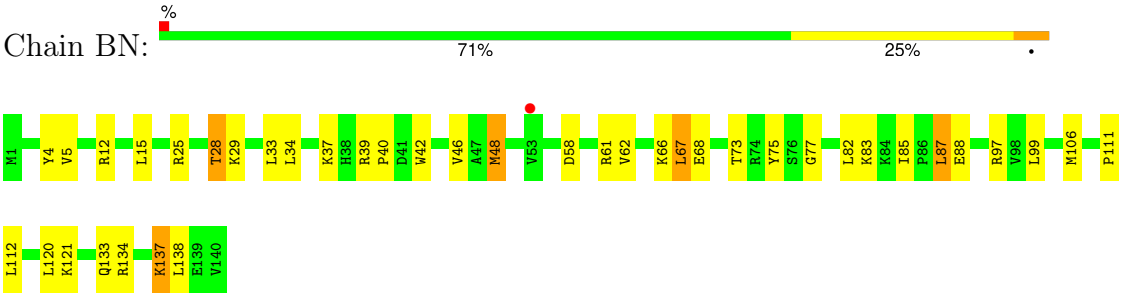


• Molecule 32: 50S Ribosomal Protein L9



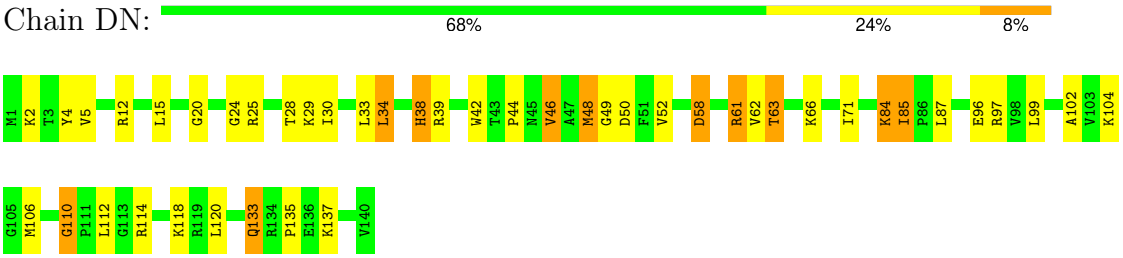
• Molecule 33: 50S Ribosomal Protein L13

Chain BN:



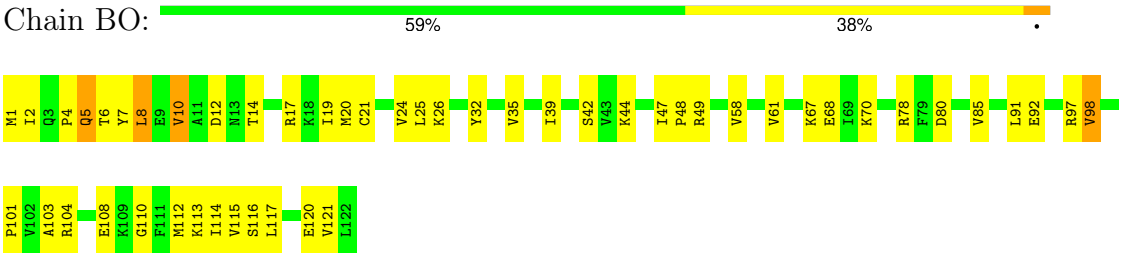
• Molecule 33: 50S Ribosomal Protein L13

Chain DN:



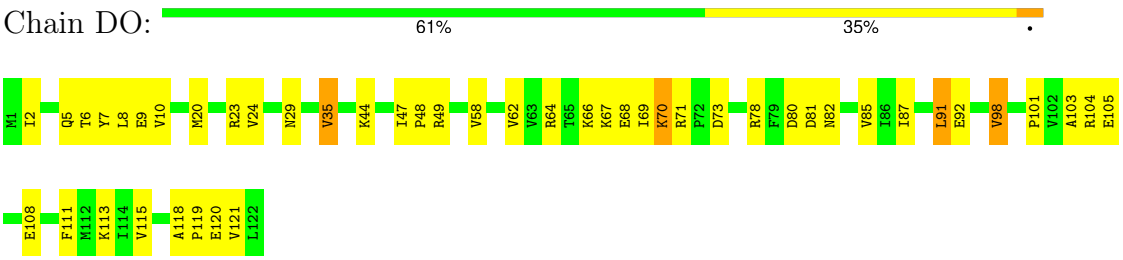
• Molecule 34: 50S Ribosomal Protein L14

Chain BO:



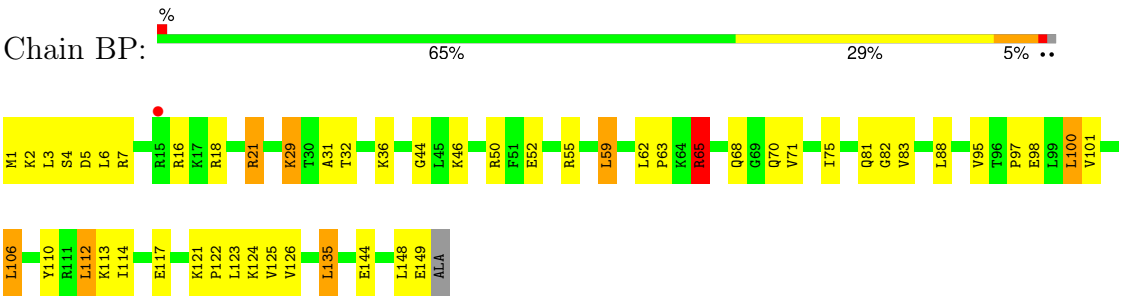
• Molecule 34: 50S Ribosomal Protein L14

Chain DO:



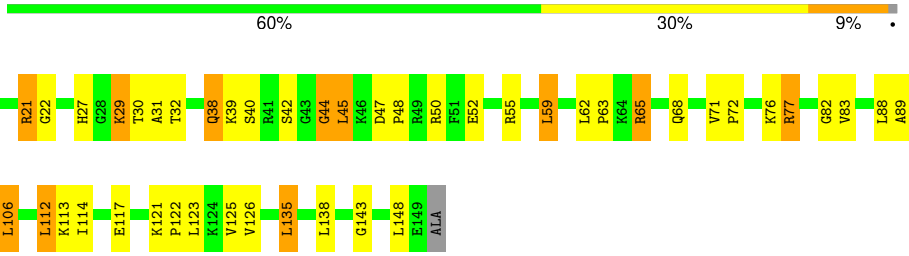
• Molecule 35: 50S Ribosomal Protein L15

Chain BP:



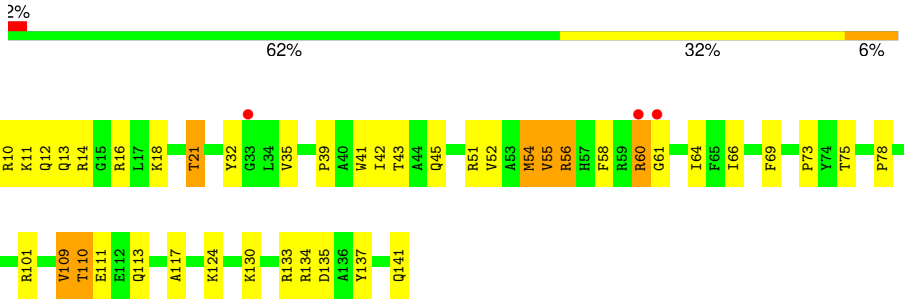
• Molecule 35: 50S Ribosomal Protein L15

Chain DP:



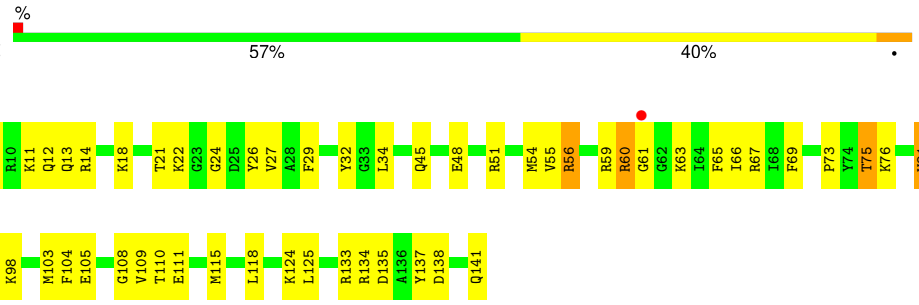
• Molecule 36: 50S Ribosomal Protein L16

Chain BQ:



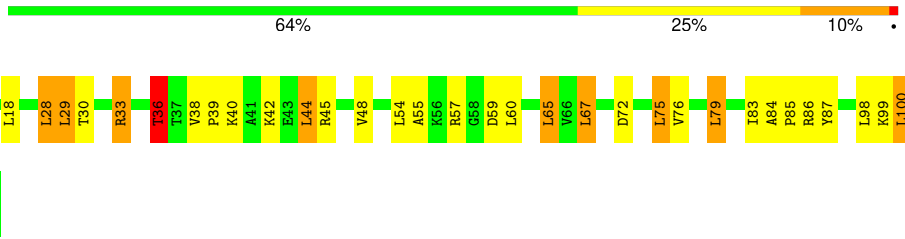
• Molecule 36: 50S Ribosomal Protein L16

Chain DQ:



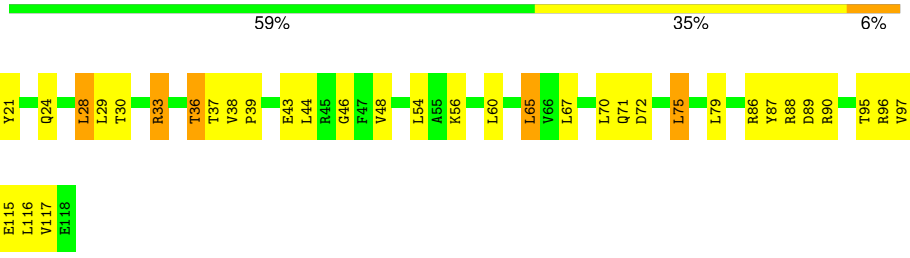
• Molecule 37: 50S Ribosomal Protein L17

Chain BR:



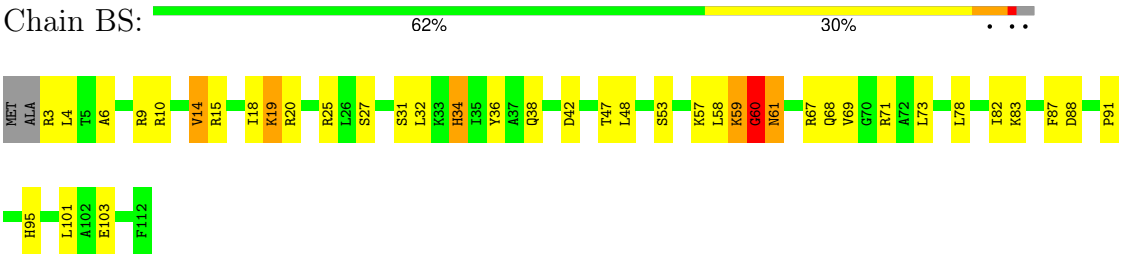
• Molecule 37: 50S Ribosomal Protein L17

Chain DR:



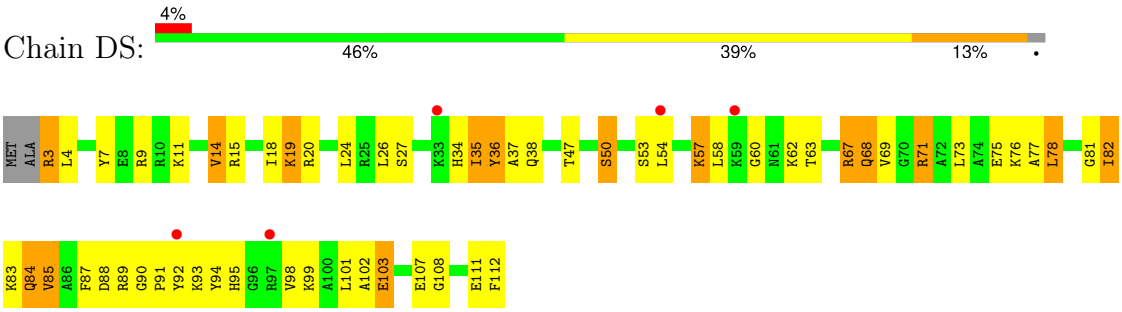
• Molecule 38: 50S Ribosomal Protein L18

Chain BS:



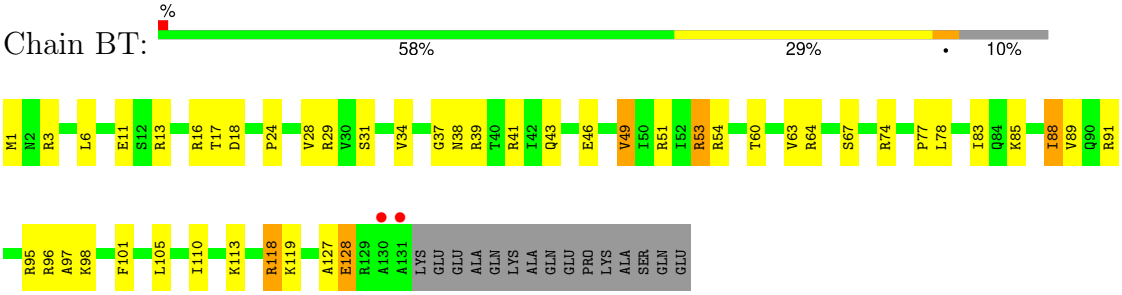
• Molecule 38: 50S Ribosomal Protein L18

Chain DS:



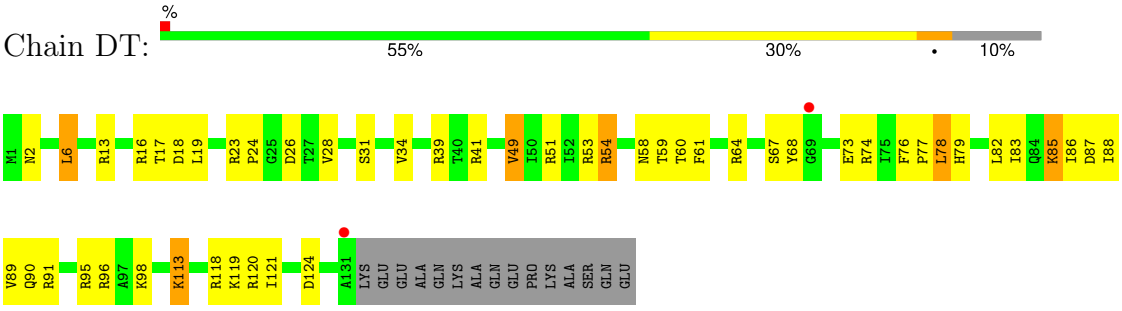
• Molecule 39: 50S Ribosomal Protein L19

Chain BT:



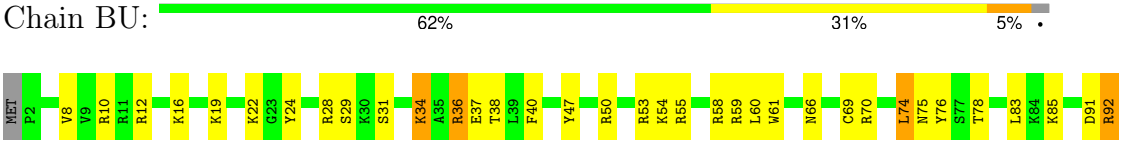
• Molecule 39: 50S Ribosomal Protein L19

Chain DT:



• Molecule 40: 50S Ribosomal Protein L20

Chain BU:



• Molecule 40: 50S Ribosomal Protein L20

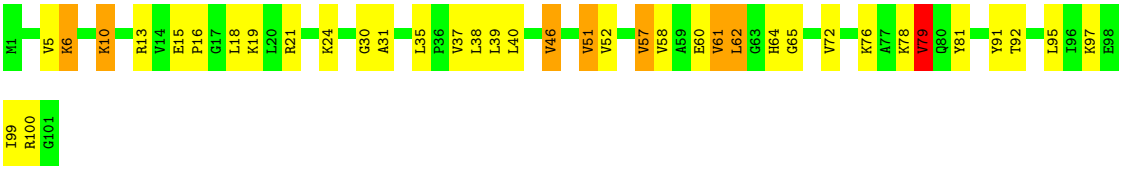
Chain DU:

• Molecule 41: 50S Ribosomal Protein L21

Chain BV:

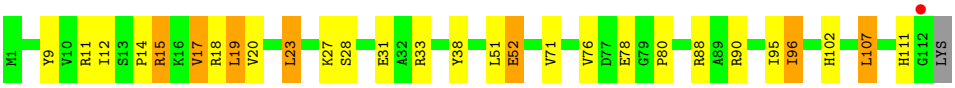
• Molecule 41: 50S Ribosomal Protein L21

Chain DV:



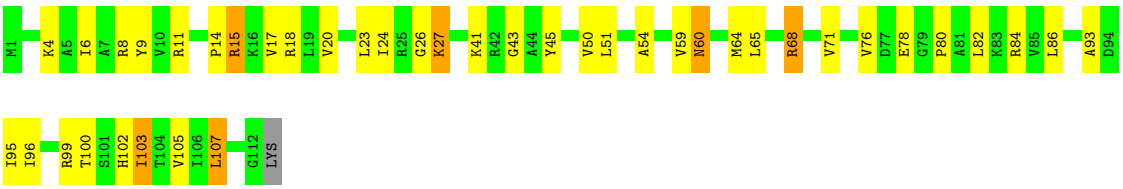
• Molecule 42: 50S Ribosomal Protein L22

Chain BW:



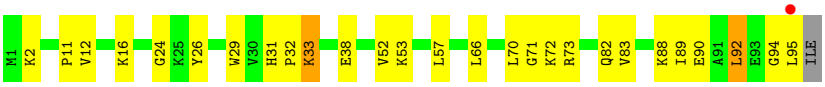
• Molecule 42: 50S Ribosomal Protein L22

Chain DW:



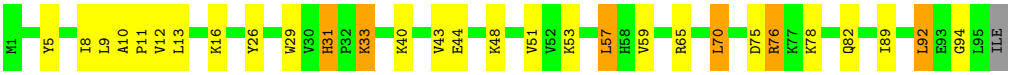
• Molecule 43: 50S Ribosomal Protein L23

Chain BX:



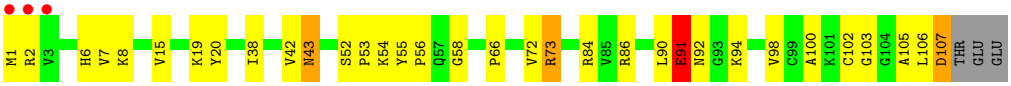
• Molecule 43: 50S Ribosomal Protein L23

Chain DX:



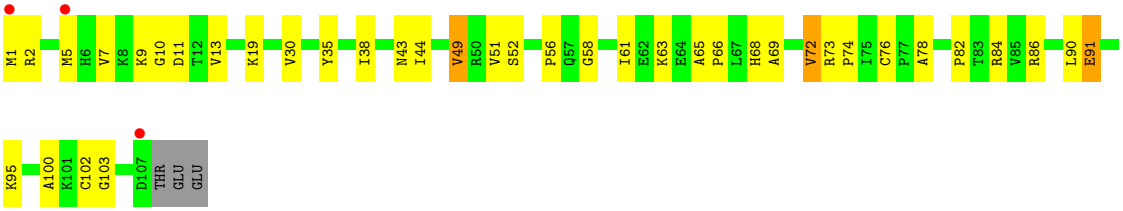
• Molecule 44: 50S Ribosomal Protein L24

Chain BY:



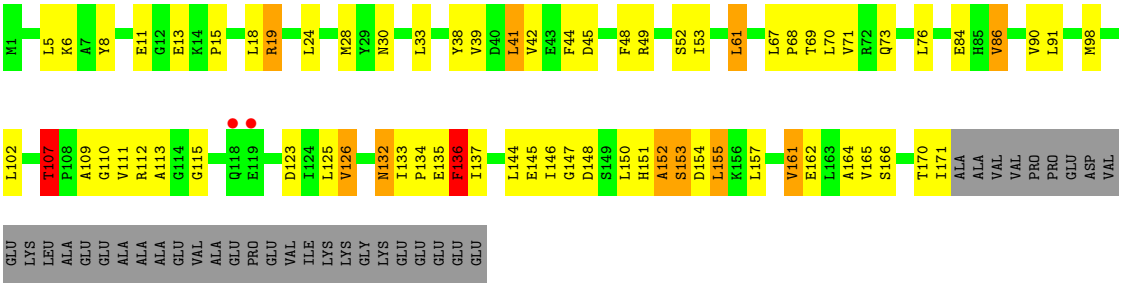
• Molecule 44: 50S Ribosomal Protein L24

Chain DY:



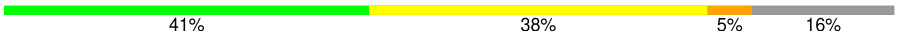
• Molecule 45: 50S Ribosomal Protein L25

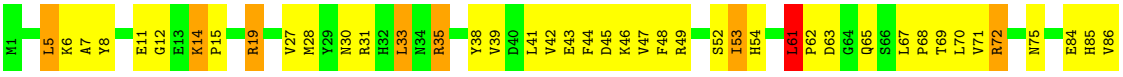
Chain BZ:

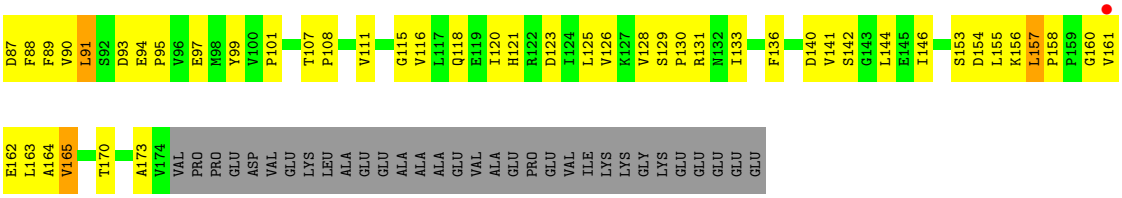


• Molecule 45: 50S Ribosomal Protein L25

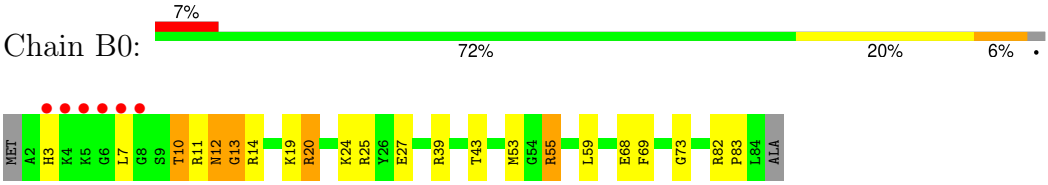
Chain DZ:



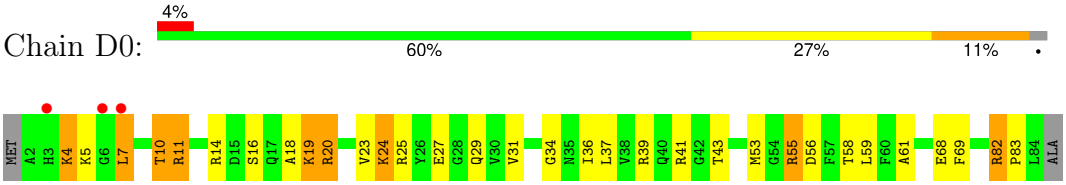




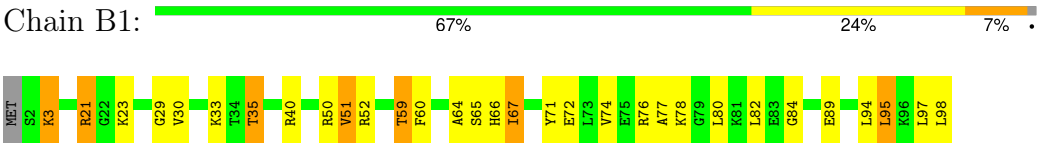
• Molecule 46: 50S Ribosomal Protein L27



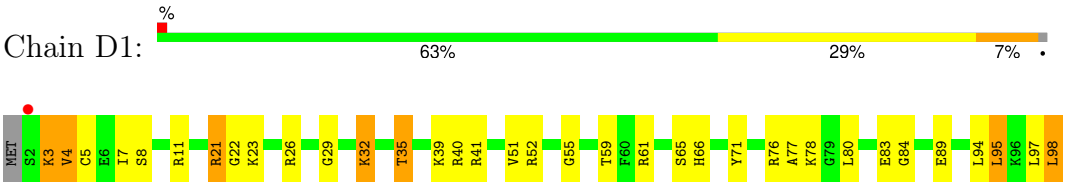
• Molecule 46: 50S Ribosomal Protein L27



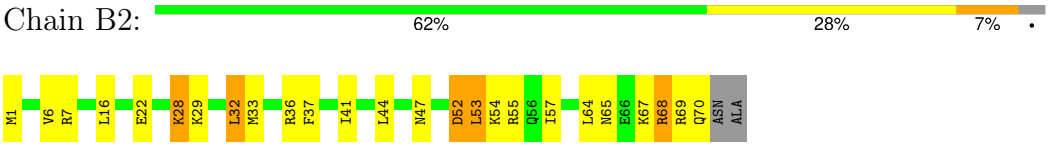
• Molecule 47: 50S Ribosomal Protein L28



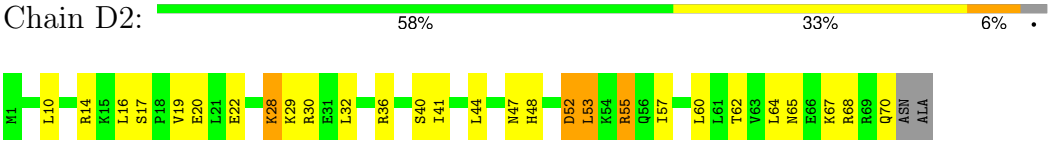
• Molecule 47: 50S Ribosomal Protein L28



• Molecule 48: 50S Ribosomal Protein L29

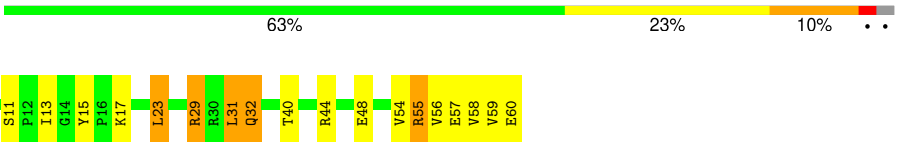


• Molecule 48: 50S Ribosomal Protein L29



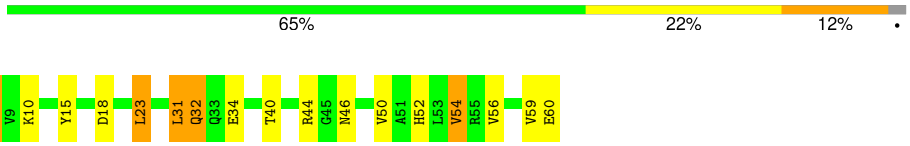
• Molecule 49: 50S Ribosomal Protein L30

Chain B3:



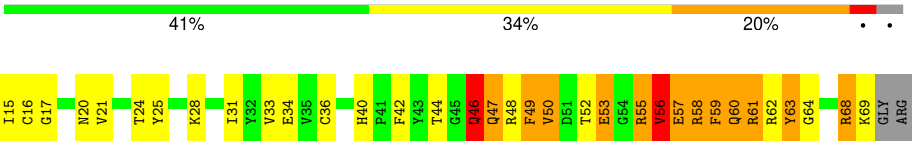
• Molecule 49: 50S Ribosomal Protein L30

Chain D3:



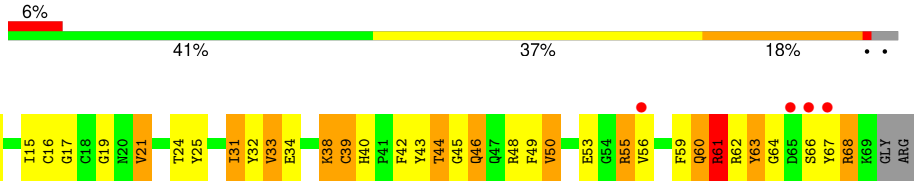
• Molecule 50: 50S Ribosomal Protein L31

Chain B4:



• Molecule 50: 50S Ribosomal Protein L31

Chain D4:

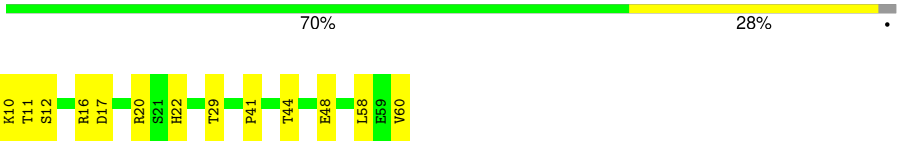


• Molecule 51: 50S Ribosomal Protein L32

Chain B5:

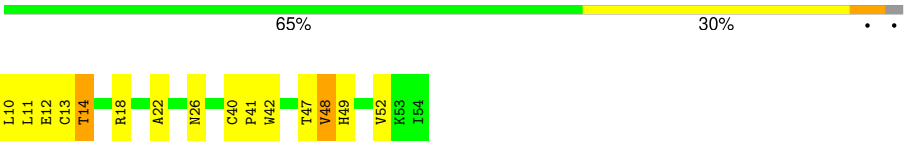
• Molecule 51: 50S Ribosomal Protein L32

Chain D5:



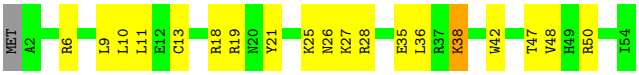
• Molecule 52: 50S Ribosomal Protein L33

Chain B6:



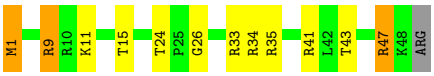
• Molecule 52: 50S Ribosomal Protein L33

Chain D6:



• Molecule 53: 50S Ribosomal Protein L34

Chain B7:



• Molecule 53: 50S Ribosomal Protein L34

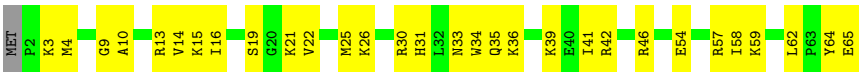
Chain D7:

• Molecule 54: 50S Ribosomal Protein L35

Chain B8:

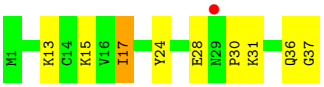
• Molecule 54: 50S Ribosomal Protein L35

Chain D8:



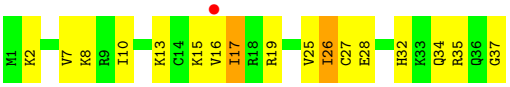
• Molecule 55: 50S Ribosomal Protein L36

Chain B9:



• Molecule 55: 50S Ribosomal Protein L36

Chain D9:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	210.08Å 449.83Å 619.65Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.74 – 3.00 49.74 – 3.00	Depositor EDS
% Data completeness (in resolution range)	98.8 (49.74-3.00) 98.8 (49.74-3.00)	Depositor EDS
R_{merge}	0.20	Depositor
R_{sym}	0.24	Depositor
$< I/\sigma(I) >$ [1]	1.26 (at 3.01Å)	Xtriage
Refinement program	PHENIX 1.8.2_1309	Depositor
R, R_{free}	0.203 , 0.259 0.203 , 0.257	Depositor DCC
R_{free} test set	57319 reflections (4.95%)	wwPDB-VP
Wilson B-factor (Å^2)	66.8	Xtriage
Anisotropy	0.228	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.28 , 55.4	EDS
L-test for twinning[2]	$< \|L\| > = 0.46$, $< L^2 > = 0.28$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	286321	wwPDB-VP
Average B, all atoms (Å^2)	62.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.70% 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 (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: FME, 2R1, MVA, ZN, 004, 2QY, SF4, K, 2R3, 2QZ, MG

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	0.42	1/36038 (0.0%)	0.66	6/56244 (0.0%)
1	CA	0.41	0/36170	0.65	12/56452 (0.0%)
2	AB	0.61	0/1881	1.21	23/2542 (0.9%)
2	CB	0.70	0/1860	1.20	17/2518 (0.7%)
3	AC	0.62	0/1576	1.02	1/2130 (0.0%)
3	CC	0.64	0/1566	1.10	6/2119 (0.3%)
4	AD	0.63	0/1689	1.13	5/2267 (0.2%)
4	CD	0.63	0/1704	1.07	8/2284 (0.4%)
5	AE	0.62	0/1145	1.11	9/1543 (0.6%)
5	CE	0.66	0/1149	1.21	9/1548 (0.6%)
6	AF	0.61	0/819	0.97	1/1111 (0.1%)
6	CF	0.68	0/829	1.03	1/1123 (0.1%)
7	AG	0.59	0/1250	1.02	4/1679 (0.2%)
7	CG	0.60	0/1254	1.16	7/1683 (0.4%)
8	AH	0.60	0/1108	1.06	2/1494 (0.1%)
8	CH	0.56	0/1108	1.11	3/1494 (0.2%)
9	AI	0.61	0/1002	1.06	2/1346 (0.1%)
9	CI	0.72	0/997	1.09	3/1343 (0.2%)
10	AJ	0.71	0/722	1.12	3/982 (0.3%)
10	CJ	0.72	0/727	1.10	3/988 (0.3%)
11	AK	0.57	0/844	1.05	7/1145 (0.6%)
11	CK	0.58	0/848	1.01	4/1149 (0.3%)
12	AL	0.63	0/946	1.13	2/1274 (0.2%)
12	CL	0.64	0/946	1.03	1/1274 (0.1%)
13	AM	0.61	0/969	1.08	3/1302 (0.2%)
13	CM	0.64	0/961	1.07	4/1291 (0.3%)
14	AN	0.54	0/501	1.05	2/664 (0.3%)
14	CN	0.62	0/501	1.06	1/664 (0.2%)
15	AO	0.63	0/739	1.07	3/985 (0.3%)
15	CO	0.59	0/739	1.03	0/985
16	AP	0.62	0/697	1.06	3/939 (0.3%)
16	CP	0.66	0/693	0.98	0/935

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.61	0/836	0.95	0/1117
17	CQ	0.59	0/836	1.02	2/1117 (0.2%)
18	AR	0.61	0/560	1.03	1/746 (0.1%)
18	CR	0.58	0/560	0.95	0/746
19	AS	0.62	0/667	1.05	2/900 (0.2%)
19	CS	0.70	0/661	1.15	2/893 (0.2%)
20	AT	0.59	0/730	1.21	2/965 (0.2%)
20	CT	0.57	0/729	1.02	1/965 (0.1%)
21	AU	0.53	0/203	0.98	0/266
21	CU	0.64	0/203	1.05	2/266 (0.8%)
22	AV	0.52	0/127	0.65	0/198
22	CV	0.51	0/126	0.65	0/195
23	AX	0.42	0/1813	0.64	1/2825 (0.0%)
23	CX	0.45	0/1813	0.75	1/2825 (0.0%)
24	AW	0.45	0/20	0.87	0/23
24	CW	0.32	0/20	0.55	0/23
25	BA	0.58	0/65892	0.69	5/102850 (0.0%)
25	DA	0.45	0/65466	0.67	2/102184 (0.0%)
26	BB	0.46	0/2878	0.62	0/4490
26	DB	0.48	0/2878	0.69	0/4490
27	BD	0.90	0/2186	1.14	6/2944 (0.2%)
27	DD	0.78	0/2186	1.11	7/2944 (0.2%)
28	BE	0.90	0/1592	1.16	7/2149 (0.3%)
28	DE	0.73	0/1592	1.20	7/2149 (0.3%)
29	BF	0.93	1/1619 (0.1%)	1.09	8/2193 (0.4%)
29	DF	0.65	0/1615	1.18	9/2188 (0.4%)
30	BG	0.61	0/1450	1.03	5/1959 (0.3%)
30	DG	0.65	0/1449	1.20	9/1958 (0.5%)
31	BH	0.81	0/1356	1.15	11/1834 (0.6%)
31	DH	0.66	0/1356	1.10	5/1834 (0.3%)
32	BI	0.65	0/1100	1.04	5/1501 (0.3%)
32	DI	0.66	0/1076	1.11	6/1471 (0.4%)
33	BN	0.88	0/1144	1.10	2/1543 (0.1%)
33	DN	0.68	0/1144	1.15	10/1543 (0.6%)
34	BO	0.85	0/943	1.08	0/1269
34	DO	0.73	0/943	1.08	0/1269
35	BP	0.83	0/1152	1.05	1/1533 (0.1%)
35	DP	0.67	0/1152	1.17	8/1533 (0.5%)
36	BQ	0.89	0/1143	1.12	2/1527 (0.1%)
36	DQ	0.72	0/1143	1.10	2/1527 (0.1%)
37	BR	0.87	1/982 (0.1%)	1.04	2/1312 (0.2%)
37	DR	0.69	0/982	0.94	0/1312
38	BS	0.69	0/887	1.05	3/1180 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DS	0.64	0/880	1.09	2/1172 (0.2%)
39	BT	0.78	0/1105	1.08	3/1477 (0.2%)
39	DT	0.68	0/1097	1.06	1/1468 (0.1%)
40	BU	0.89	0/977	1.07	2/1301 (0.2%)
40	DU	0.66	0/977	0.97	0/1301
41	BV	0.87	0/782	1.01	0/1049
41	DV	0.69	0/782	1.00	0/1049
42	BW	0.99	1/897 (0.1%)	1.06	1/1205 (0.1%)
42	DW	0.79	1/897 (0.1%)	1.09	0/1205
43	BX	0.89	0/764	0.98	0/1025
43	DX	0.66	0/764	1.12	5/1025 (0.5%)
44	BY	0.87	0/819	1.12	3/1095 (0.3%)
44	DY	0.68	0/819	1.12	3/1095 (0.3%)
45	BZ	0.72	0/1379	1.17	12/1873 (0.6%)
45	DZ	0.66	0/1390	1.10	11/1890 (0.6%)
46	B0	0.78	0/662	1.09	2/881 (0.2%)
46	D0	0.64	0/662	1.14	3/881 (0.3%)
47	B1	0.88	1/762 (0.1%)	1.11	4/1014 (0.4%)
47	D1	0.68	0/762	1.02	0/1014
48	B2	0.83	0/590	1.12	0/781
48	D2	0.57	0/590	0.95	0/781
49	B3	0.84	0/474	1.19	6/635 (0.9%)
49	D3	0.63	0/469	1.05	2/630 (0.3%)
50	B4	0.67	0/564	1.31	8/759 (1.1%)
50	D4	0.80	0/544	1.32	4/735 (0.5%)
51	B5	0.92	0/469	1.14	0/635
51	D5	0.75	0/469	1.07	2/635 (0.3%)
52	B6	0.78	0/460	0.89	0/613
52	D6	0.67	0/456	0.97	0/608
53	B7	0.97	0/426	1.02	1/561 (0.2%)
53	D7	0.76	0/426	1.01	0/561
54	B8	0.91	0/519	1.00	0/684
54	D8	0.69	0/525	1.01	0/691
55	B9	0.88	0/310	1.02	0/407
55	D9	0.67	0/310	1.12	0/407
All	All	0.56	6/305966 (0.0%)	0.81	366/457396 (0.1%)

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
2	AB	0	3
4	CD	0	1
7	AG	0	1
9	AI	0	1
19	CS	0	1
23	CX	1	0
24	AW	0	1
24	CW	0	1
27	DD	0	1
38	BS	0	1
44	BY	0	1
45	BZ	0	1
50	B4	0	1
50	D4	0	1
All	All	1	15

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	BR	38	VAL	CA-CB	-7.72	1.50	1.54
47	B1	67	ILE	CA-CB	-6.61	1.50	1.54
29	BF	84	VAL	CA-CB	-6.23	1.46	1.54
42	DW	103	ILE	CA-CB	-5.46	1.47	1.54
1	AA	343	U	C4-O4	5.11	1.33	1.23
42	BW	96	ILE	CA-CB	-5.08	1.48	1.54

All (366) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	CX	76	A	O4'-C1'-N9	17.86	135.29	108.50
8	CH	73	ASP	CA-C-N	11.99	132.99	120.04
8	CH	73	ASP	C-N-CA	11.99	132.99	120.04
50	B4	60	GLN	N-CA-C	-10.28	100.41	113.16
7	CG	79	ARG	N-CA-C	10.02	123.53	108.31
46	B0	12	ASN	N-CA-C	10.00	125.81	113.50
12	AL	30	ALA	CA-C-N	9.66	129.38	118.85
12	AL	30	ALA	C-N-CA	9.66	129.38	118.85
23	AX	76	A	O4'-C1'-N9	9.63	122.64	108.20
35	DP	44	GLY	N-CA-C	-9.36	98.05	112.84
7	CG	79	ARG	CB-CA-C	-9.18	105.98	116.54
2	AB	128	GLU	N-CA-C	-9.12	98.45	113.50
2	AB	9	GLU	N-CA-C	8.79	122.89	110.50
30	DG	178	PHE	CA-C-N	8.69	129.94	120.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	DG	178	PHE	C-N-CA	8.69	129.94	120.13
5	AE	69	VAL	CA-C-N	8.68	130.69	119.84
5	AE	69	VAL	C-N-CA	8.68	130.69	119.84
20	AT	9	ASN	N-CA-C	8.58	119.23	107.73
4	CD	178	VAL	N-CA-C	8.51	118.55	110.30
50	B4	52	THR	N-CA-C	-8.42	103.06	112.57
36	DQ	27	VAL	N-CA-C	8.39	118.44	110.30
4	AD	188	LEU	CA-C-N	8.35	130.27	119.84
4	AD	188	LEU	C-N-CA	8.35	130.27	119.84
29	DF	9	ILE	N-CA-C	8.28	116.92	107.89
46	D0	82	ARG	CA-C-N	8.17	128.20	119.78
46	D0	82	ARG	C-N-CA	8.17	128.20	119.78
32	DI	124	GLY	N-CA-C	8.13	121.92	110.38
1	CA	1154	G	N1-C2-N2	-8.11	91.87	116.20
45	BZ	133	ILE	CA-C-N	8.11	128.05	120.03
45	BZ	133	ILE	C-N-CA	8.11	128.05	120.03
30	BG	45	GLU	N-CA-C	-8.08	102.87	112.89
1	CA	1119	C	N1-C2-O2	8.08	143.13	118.90
29	DF	24	LEU	CA-C-N	7.97	128.03	119.90
29	DF	24	LEU	C-N-CA	7.97	128.03	119.90
25	BA	2014	G	C2'-C3'-O3'	7.96	121.44	109.50
28	DE	72	VAL	CA-C-N	7.87	135.86	121.70
28	DE	72	VAL	C-N-CA	7.87	135.86	121.70
25	DA	1992	G	C2'-C3'-O3'	7.82	121.23	109.50
31	BH	28	GLY	CA-C-N	7.80	127.08	118.97
31	BH	28	GLY	C-N-CA	7.80	127.08	118.97
5	CE	67	VAL	N-CA-C	7.79	118.63	107.88
45	BZ	157	LEU	CA-C-N	7.71	128.32	120.38
45	BZ	157	LEU	C-N-CA	7.71	128.32	120.38
30	DG	45	GLU	N-CA-C	-7.57	103.50	112.89
32	DI	118	LYS	CA-C-N	7.53	129.25	119.84
32	DI	118	LYS	C-N-CA	7.53	129.25	119.84
19	CS	67	VAL	N-CA-C	7.53	117.60	110.30
10	AJ	34	VAL	N-CA-C	7.52	118.94	108.12
5	CE	35	GLY	N-CA-C	7.51	121.50	110.38
5	CE	69	VAL	CA-C-N	7.50	129.22	119.84
5	CE	69	VAL	C-N-CA	7.50	129.22	119.84
27	BD	131	LEU	CA-C-N	-7.34	112.76	120.03
27	BD	131	LEU	C-N-CA	-7.34	112.76	120.03
3	CC	22	TRP	N-CA-C	7.29	117.50	107.73
29	BF	9	ILE	N-CA-C	7.20	115.94	107.73
33	DN	104	LYS	N-CA-C	-7.19	103.44	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	DF	79	GLY	N-CA-C	-7.15	104.51	115.66
42	BW	111	HIS	N-CA-C	7.05	120.03	109.25
50	D4	21	VAL	N-CA-C	7.03	118.93	108.46
35	DP	44	GLY	CA-C-N	7.00	134.31	121.70
35	DP	44	GLY	C-N-CA	7.00	134.31	121.70
33	BN	134	ARG	CA-C-N	6.97	126.73	119.76
33	BN	134	ARG	C-N-CA	6.97	126.73	119.76
9	CI	63	ILE	N-CA-C	6.94	118.12	107.78
7	CG	78	ARG	N-CA-C	6.93	120.05	108.13
40	BU	102	GLU	CA-C-N	6.92	127.21	119.32
40	BU	102	GLU	C-N-CA	6.92	127.21	119.32
35	DP	22	GLY	CA-C-N	6.92	126.39	118.85
35	DP	22	GLY	C-N-CA	6.92	126.39	118.85
35	DP	40	SER	N-CA-C	-6.92	104.84	113.28
1	CA	1154	G	C5-C6-O6	6.89	149.28	128.60
29	DF	170	LEU	CA-C-N	6.84	127.11	119.32
29	DF	170	LEU	C-N-CA	6.84	127.11	119.32
44	DY	91	GLU	N-CA-C	-6.81	103.92	111.82
14	AN	13	THR	CA-C-N	6.79	128.19	120.85
14	AN	13	THR	C-N-CA	6.79	128.19	120.85
1	CA	1154	G	N3-C2-N2	6.79	140.27	119.90
28	DE	188	VAL	CA-C-N	6.79	126.81	119.89
28	DE	188	VAL	C-N-CA	6.79	126.81	119.89
27	DD	131	LEU	CA-C-N	-6.76	113.34	120.03
27	DD	131	LEU	C-N-CA	-6.76	113.34	120.03
12	CL	119	LYS	N-CA-C	-6.75	100.05	110.10
28	DE	21	VAL	CA-C-N	6.71	128.49	120.23
28	DE	21	VAL	C-N-CA	6.71	128.49	120.23
5	CE	26	PHE	N-CA-C	6.69	119.97	110.14
45	BZ	107	THR	CA-C-N	6.68	126.70	119.89
45	BZ	107	THR	C-N-CA	6.68	126.70	119.89
19	AS	19	VAL	N-CA-C	6.63	116.76	110.53
10	CJ	52	GLY	CA-C-N	6.62	126.33	119.64
10	CJ	52	GLY	C-N-CA	6.62	126.33	119.64
2	AB	233	SER	CA-C-N	6.56	128.04	119.84
2	AB	233	SER	C-N-CA	6.56	128.04	119.84
5	CE	98	THR	N-CA-C	6.54	119.00	111.02
50	B4	40	HIS	CA-C-N	6.51	127.97	119.84
50	B4	40	HIS	C-N-CA	6.51	127.97	119.84
20	AT	11	SER	N-CA-C	-6.50	104.49	112.88
1	CA	1054	C	P-O3'-C3'	6.42	129.82	120.20
2	CB	186	ALA	N-CA-C	6.40	118.88	108.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	CB	67	THR	N-CA-C	6.40	118.98	110.53
2	AB	123	ALA	N-CA-C	-6.38	105.48	113.20
5	AE	67	VAL	N-CA-C	6.31	116.59	107.88
8	CH	134	ILE	N-CA-C	6.30	116.34	110.42
25	BA	1700	G	C2'-C3'-O3'	6.27	118.91	109.50
1	CA	1119	C	N3-C2-O2	-6.26	103.11	121.90
53	B7	47	ARG	N-CA-C	6.26	120.65	112.89
31	BH	7	LEU	CA-C-N	6.23	126.20	119.78
31	BH	7	LEU	C-N-CA	6.23	126.20	119.78
50	B4	53	GLU	N-CA-C	6.22	117.86	111.14
29	BF	9	ILE	CA-C-N	6.20	126.57	119.93
29	BF	9	ILE	C-N-CA	6.20	126.57	119.93
11	CK	34	ASP	N-CA-C	-6.19	103.01	110.13
2	AB	8	LYS	N-CA-C	6.18	120.91	112.68
50	B4	6	HIS	CA-C-N	6.18	126.39	119.90
50	B4	6	HIS	C-N-CA	6.18	126.39	119.90
2	CB	19	HIS	N-CA-C	6.17	116.15	108.19
47	B1	84	GLY	N-CA-C	-6.15	107.37	114.69
5	CE	92	LYS	CA-C-N	6.15	126.47	119.83
5	CE	92	LYS	C-N-CA	6.15	126.47	119.83
2	AB	11	LEU	N-CA-C	-6.12	105.86	113.15
2	AB	38	GLY	N-CA-C	-6.12	104.32	114.48
11	AK	104	GLN	N-CA-C	6.11	118.73	111.71
4	AD	191	ARG	N-CA-C	-6.11	104.62	111.28
28	BE	144	ARG	CB-CA-C	-6.09	107.65	116.54
2	AB	200	ILE	N-CA-C	6.08	116.68	108.17
11	AK	114	VAL	CA-C-N	6.08	126.56	119.99
11	AK	114	VAL	C-N-CA	6.08	126.56	119.99
35	DP	44	GLY	CA-C-O	-6.07	113.99	122.43
3	CC	72	LYS	CA-C-N	6.07	125.95	119.28
3	CC	72	LYS	C-N-CA	6.07	125.95	119.28
38	DS	82	ILE	N-CA-C	6.07	117.56	109.37
46	D0	11	ARG	N-CA-C	-6.06	105.47	112.92
20	CT	11	SER	N-CA-C	-6.05	105.07	112.88
2	AB	166	ASP	CA-C-N	6.04	125.76	119.05
2	AB	166	ASP	C-N-CA	6.04	125.76	119.05
31	DH	32	GLU	N-CA-C	6.03	119.03	109.50
27	BD	229	VAL	CB-CA-C	-6.02	103.26	112.05
2	CB	158	LEU	CA-C-N	6.02	127.36	119.84
2	CB	158	LEU	C-N-CA	6.02	127.36	119.84
4	AD	52	SER	N-CA-C	5.98	117.76	110.41
27	DD	275	LYS	N-CA-C	-5.97	101.63	110.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	DY	52	SER	CA-C-N	-5.95	113.51	120.12
44	DY	52	SER	C-N-CA	-5.95	113.51	120.12
11	CK	40	ILE	N-CA-C	-5.95	106.44	111.56
29	DF	151	SER	N-CA-C	-5.92	105.83	113.16
32	BI	7	GLU	CA-C-N	-5.91	113.88	119.85
32	BI	7	GLU	C-N-CA	-5.91	113.88	119.85
38	BS	60	GLY	N-CA-C	5.91	127.19	113.18
31	BH	45	VAL	N-CA-C	5.91	116.31	107.51
28	DE	168	MET	N-CA-C	5.90	119.34	109.95
45	DZ	14	LYS	CA-C-N	5.90	125.77	119.28
45	DZ	14	LYS	C-N-CA	5.90	125.77	119.28
4	CD	176	LEU	N-CA-C	5.89	118.26	108.13
4	AD	146	ILE	N-CA-C	5.89	116.08	106.72
27	DD	94	LEU	CA-C-N	-5.88	114.95	122.77
27	DD	94	LEU	C-N-CA	-5.88	114.95	122.77
36	BQ	11	LYS	CA-C-N	-5.88	113.36	122.59
36	BQ	11	LYS	C-N-CA	-5.88	113.36	122.59
27	DD	229	VAL	CB-CA-C	-5.87	103.48	112.05
38	DS	60	GLY	N-CA-C	5.86	119.29	110.97
44	BY	91	GLU	N-CA-C	-5.81	105.68	112.89
25	BA	70	A	C4'-C3'-O3'	5.81	118.12	109.40
6	AF	60	PHE	N-CA-C	5.81	118.20	108.73
1	CA	1154	G	C4-N9-C1'	5.81	143.92	126.50
28	BE	188	VAL	CA-C-N	5.80	125.75	119.78
28	BE	188	VAL	C-N-CA	5.80	125.75	119.78
10	AJ	76	ASN	CA-C-N	5.80	127.08	119.84
10	AJ	76	ASN	C-N-CA	5.80	127.08	119.84
2	AB	64	ARG	N-CA-C	-5.78	106.06	113.23
9	CI	89	ASN	CA-C-N	5.78	125.64	119.28
9	CI	89	ASN	C-N-CA	5.78	125.64	119.28
31	BH	161	GLY	N-CA-C	5.78	118.72	110.46
29	DF	21	ALA	CA-C-N	5.77	132.09	121.70
29	DF	21	ALA	C-N-CA	5.77	132.09	121.70
27	DD	41	GLY	N-CA-C	-5.77	107.00	115.30
5	AE	105	VAL	CA-C-N	-5.75	113.75	119.56
5	AE	105	VAL	C-N-CA	-5.75	113.75	119.56
16	AP	3	LYS	N-CA-C	5.73	118.12	109.41
2	CB	122	PHE	N-CA-C	-5.73	101.98	110.46
11	AK	40	ILE	N-CA-C	-5.72	107.26	111.90
31	DH	77	LYS	N-CA-C	-5.71	105.14	111.71
4	CD	171	GLY	CA-C-N	5.71	125.83	119.32
4	CD	171	GLY	C-N-CA	5.71	125.83	119.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	DN	52	VAL	N-CA-C	5.71	116.08	107.75
29	BF	89	VAL	CA-C-N	-5.70	113.61	123.25
29	BF	89	VAL	C-N-CA	-5.70	113.61	123.25
19	AS	10	PHE	N-CA-C	5.70	118.02	108.96
38	BS	34	HIS	N-CA-C	5.70	118.08	109.41
27	BD	275	LYS	N-CA-C	5.69	122.93	110.80
5	CE	6	PHE	N-CA-C	5.69	118.96	110.14
36	DQ	22	LYS	N-CA-C	-5.68	103.91	111.24
43	DX	10	ALA	N-CA-C	5.66	113.32	108.22
29	BF	170	LEU	CA-C-N	5.66	125.77	119.32
29	BF	170	LEU	C-N-CA	5.66	125.77	119.32
3	AC	152	ILE	N-CA-C	5.65	116.20	107.78
2	AB	193	ASP	CA-C-N	5.64	125.11	119.24
2	AB	193	ASP	C-N-CA	5.64	125.11	119.24
27	BD	274	ARG	N-CA-C	5.64	118.50	110.10
49	B3	40	THR	CA-C-N	-5.64	113.21	119.19
49	B3	40	THR	C-N-CA	-5.64	113.21	119.19
30	DG	31	VAL	CA-C-N	5.63	125.65	119.90
30	DG	31	VAL	C-N-CA	5.63	125.65	119.90
2	AB	127	ILE	N-CA-C	5.63	117.02	108.80
32	BI	110	ASP	CA-C-N	5.63	125.10	119.24
32	BI	110	ASP	C-N-CA	5.63	125.10	119.24
15	AO	22	THR	N-CA-C	-5.63	101.87	110.14
2	CB	130	ARG	CA-C-N	5.63	126.41	120.11
2	CB	130	ARG	C-N-CA	5.63	126.41	120.11
13	CM	107	ALA	N-CA-C	-5.62	105.10	112.41
45	DZ	115	GLY	N-CA-C	5.62	121.20	112.60
39	BT	128	GLU	N-CA-C	-5.62	105.05	112.24
47	B1	67	ILE	CA-C-N	-5.62	114.03	119.87
47	B1	67	ILE	C-N-CA	-5.62	114.03	119.87
28	BE	125	GLY	CA-C-N	5.62	125.53	119.85
28	BE	125	GLY	C-N-CA	5.62	125.53	119.85
30	DG	141	PHE	CA-C-N	5.62	124.97	118.85
30	DG	141	PHE	C-N-CA	5.62	124.97	118.85
2	AB	67	THR	N-CA-C	5.62	117.94	110.53
19	CS	82	GLY	N-CA-C	5.62	118.49	110.46
35	DP	71	VAL	N-CA-C	-5.59	102.82	108.96
44	BY	52	SER	CA-C-N	-5.58	113.82	120.13
44	BY	52	SER	C-N-CA	-5.58	113.82	120.13
43	DX	10	ALA	CA-C-N	-5.58	113.48	120.51
43	DX	10	ALA	C-N-CA	-5.58	113.48	120.51
35	BP	65	ARG	N-CA-C	5.58	117.59	108.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	DN	85	ILE	CA-C-N	5.57	126.05	120.14
33	DN	85	ILE	C-N-CA	5.57	126.05	120.14
11	AK	49	GLY	N-CA-C	5.54	126.31	113.18
2	CB	16	HIS	N-CA-C	5.54	122.60	110.80
27	BD	3	VAL	N-CA-C	-5.54	100.08	108.17
31	BH	54	ARG	CA-C-N	5.54	125.63	119.87
31	BH	54	ARG	C-N-CA	5.54	125.63	119.87
31	BH	125	VAL	CA-C-N	5.54	126.76	119.84
31	BH	125	VAL	C-N-CA	5.54	126.76	119.84
7	AG	116	ALA	N-CA-C	5.51	117.72	111.11
1	CA	1119	C	C2-N1-C1'	5.50	135.30	118.80
5	AE	103	GLY	N-CA-C	-5.49	105.51	112.54
37	BR	36	THR	N-CA-C	5.49	115.53	108.34
13	AM	112	GLY	CA-C-N	5.48	125.42	119.78
13	AM	112	GLY	C-N-CA	5.48	125.42	119.78
32	DI	79	ILE	CA-C-N	5.48	126.97	120.23
32	DI	79	ILE	C-N-CA	5.48	126.97	120.23
30	BG	127	GLY	N-CA-C	-5.47	107.14	114.25
11	CK	38	ASN	CA-C-N	5.47	125.48	119.90
11	CK	38	ASN	C-N-CA	5.47	125.48	119.90
1	AA	1067	A	P-O3'-C3'	5.46	128.39	120.20
7	AG	114	ARG	N-CA-C	5.46	117.23	111.28
3	CC	48	TYR	N-CA-C	-5.45	105.34	111.28
2	CB	129	GLU	N-CA-C	-5.45	105.90	112.54
1	AA	991	U	P-O3'-C3'	5.44	128.36	120.20
7	AG	81	GLY	N-CA-C	5.43	126.05	113.18
13	CM	4	ILE	N-CA-C	-5.43	108.55	113.71
1	AA	1442	G	P-O3'-C3'	5.41	126.19	119.70
45	DZ	46	LYS	N-CA-C	-5.40	105.39	111.28
2	AB	158	LEU	CA-C-N	5.40	126.59	119.84
2	AB	158	LEU	C-N-CA	5.40	126.59	119.84
2	AB	160	ASP	N-CA-C	-5.39	106.70	113.28
51	D5	4	HIS	CA-C-N	5.39	125.33	119.78
51	D5	4	HIS	C-N-CA	5.39	125.33	119.78
9	AI	48	GLU	CA-C-N	-5.39	113.48	119.19
9	AI	48	GLU	C-N-CA	-5.39	113.48	119.19
5	AE	148	VAL	N-CA-C	5.38	115.59	110.53
39	BT	63	VAL	N-CA-C	5.38	115.70	108.17
2	AB	16	HIS	CA-C-N	5.38	131.81	121.54
2	AB	16	HIS	C-N-CA	5.38	131.81	121.54
33	DN	84	LYS	CA-C-N	-5.36	118.67	123.33
33	DN	84	LYS	C-N-CA	-5.36	118.67	123.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	DZ	157	LEU	CA-C-N	-5.35	114.87	120.38
45	DZ	157	LEU	C-N-CA	-5.35	114.87	120.38
25	BA	2701	U	C4'-C3'-O3'	5.35	117.42	109.40
45	DZ	158	PRO	CA-C-N	5.34	125.32	120.03
45	DZ	158	PRO	C-N-CA	5.34	125.32	120.03
33	DN	46	VAL	N-CA-C	5.34	115.87	108.23
18	AR	22	VAL	N-CA-C	5.34	116.11	110.72
45	DZ	61	LEU	CA-C-N	5.34	125.15	119.28
45	DZ	61	LEU	C-N-CA	5.34	125.15	119.28
50	D4	39	CYS	N-CA-C	5.34	122.17	110.80
16	AP	27	LYS	N-CA-C	-5.32	103.37	110.55
39	BT	88	ILE	N-CA-C	-5.32	101.82	108.84
6	CF	60	PHE	N-CA-C	5.31	117.39	108.73
1	CA	65	U	C2'-C3'-O3'	5.31	117.47	109.50
17	CQ	29	HIS	CA-C-N	5.31	124.76	119.24
17	CQ	29	HIS	C-N-CA	5.31	124.76	119.24
2	CB	95	GLN	N-CA-C	5.30	117.23	108.48
3	CC	139	GLN	N-CA-C	5.30	117.75	111.33
50	B4	46	GLN	N-CA-C	-5.30	105.66	113.61
1	AA	1067	A	C2'-C3'-O3'	5.30	117.44	109.50
30	BG	54	GLU	N-CA-C	-5.29	106.67	113.02
5	AE	23	GLY	N-CA-C	5.29	116.97	111.95
46	B0	13	GLY	N-CA-C	5.28	125.68	113.18
1	AA	266	G	C2'-C3'-O3'	5.27	117.40	109.50
32	BI	104	GLN	N-CA-C	-5.26	102.73	110.52
45	DZ	35	ARG	N-CA-C	5.26	117.66	108.76
30	BG	63	ILE	N-CA-C	5.26	115.36	110.42
30	DG	48	GLU	N-CA-C	-5.25	106.55	113.12
30	DG	88	ILE	N-CA-C	5.25	119.16	113.43
10	CJ	29	ARG	N-CA-C	5.24	116.80	111.14
1	CA	1004	A	O4'-C1'-N9	5.23	116.35	108.50
49	B3	15	TYR	CA-C-N	5.23	125.22	119.89
49	B3	15	TYR	C-N-CA	5.23	125.22	119.89
31	DH	44	VAL	N-CA-C	5.23	116.25	108.46
21	CU	22	ARG	CA-C-N	5.23	126.37	119.84
21	CU	22	ARG	C-N-CA	5.23	126.37	119.84
2	AB	127	ILE	CA-C-N	5.22	128.21	120.17
2	AB	127	ILE	C-N-CA	5.22	128.21	120.17
29	BF	149	ASP	N-CA-C	-5.22	106.96	113.38
7	AG	82	GLY	N-CA-C	5.21	120.18	114.40
2	CB	112	VAL	N-CA-C	-5.21	105.46	110.72
49	D3	59	VAL	N-CA-C	5.21	116.20	108.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	BZ	153	SER	N-CA-C	-5.21	105.72	111.71
14	CN	12	ARG	N-CA-C	5.20	117.77	110.23
39	DT	54	ARG	N-CA-C	5.19	117.19	108.73
50	D4	61	ARG	N-CA-C	-5.19	105.27	111.03
32	DI	69	LYS	N-CA-C	5.19	117.02	111.36
50	D4	31	ILE	N-CA-C	5.19	115.74	108.17
47	B1	82	LEU	N-CA-C	5.18	121.33	114.12
3	CC	107	GLN	N-CA-C	-5.18	103.69	110.53
13	AM	50	GLU	N-CA-C	-5.16	105.65	111.28
49	B3	8	LEU	CA-C-N	-5.15	115.53	121.71
49	B3	8	LEU	C-N-CA	-5.15	115.53	121.71
7	CG	152	ALA	N-CA-C	5.15	116.58	110.97
45	BZ	166	SER	CA-C-N	5.15	126.27	119.84
45	BZ	166	SER	C-N-CA	5.15	126.27	119.84
8	AH	4	ASP	CA-C-N	5.14	124.45	118.85
8	AH	4	ASP	C-N-CA	5.14	124.45	118.85
11	AK	38	ASN	CA-C-N	5.13	125.14	119.90
11	AK	38	ASN	C-N-CA	5.13	125.14	119.90
7	CG	81	GLY	N-CA-C	5.13	120.40	112.45
31	BH	3	ARG	N-CA-C	5.13	117.15	108.02
13	CM	40	ASN	CA-C-N	5.13	124.79	119.56
13	CM	40	ASN	C-N-CA	5.13	124.79	119.56
33	DN	110	GLY	CA-C-N	5.13	124.74	119.05
33	DN	110	GLY	C-N-CA	5.13	124.74	119.05
4	CD	188	LEU	CA-C-N	5.12	126.25	119.84
4	CD	188	LEU	C-N-CA	5.12	126.25	119.84
15	AO	87	ILE	N-CA-C	5.12	120.00	109.34
49	D3	40	THR	N-CA-C	-5.12	103.69	110.40
25	BA	1255	A	C4'-C3'-O3'	5.11	117.07	109.40
28	BE	21	VAL	CA-C-N	5.11	125.35	119.83
28	BE	21	VAL	C-N-CA	5.11	125.35	119.83
5	AE	71	LEU	N-CA-C	5.11	117.01	108.23
4	CD	38	TYR	CA-C-N	5.10	125.64	120.38
4	CD	38	TYR	C-N-CA	5.10	125.64	120.38
2	CB	75	LYS	N-CA-C	5.10	117.23	111.11
37	BR	36	THR	CB-CA-C	-5.09	101.12	113.19
31	DH	121	ILE	N-CA-C	5.09	115.23	108.11
45	BZ	161	VAL	N-CA-C	5.08	115.97	107.18
15	AO	23	GLY	N-CA-C	5.08	125.21	113.18
2	CB	193	ASP	CA-C-N	5.08	124.52	119.24
2	CB	193	ASP	C-N-CA	5.08	124.52	119.24
38	BS	87	PHE	N-CA-C	5.07	116.52	108.67

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	BZ	157	LEU	N-CA-C	5.07	121.01	109.81
31	DH	130	ARG	N-CA-C	5.06	117.40	108.75
1	AA	1036	G	N9-C1'-C2'	5.06	119.59	112.00
2	CB	25	ASN	CA-C-N	5.05	125.13	119.87
2	CB	25	ASN	C-N-CA	5.05	125.13	119.87
43	DX	31	HIS	CA-C-N	5.05	124.84	119.28
43	DX	31	HIS	C-N-CA	5.05	124.84	119.28
33	DN	29	LYS	N-CA-C	-5.05	105.48	111.69
1	CA	1183	A	P-O3'-C3'	5.04	127.77	120.20
7	CG	70	LYS	CA-C-N	5.04	125.83	120.13
7	CG	70	LYS	C-N-CA	5.04	125.83	120.13
1	CA	138	G	O5'-C5'-C4'	5.04	119.07	111.50
30	BG	77	ILE	N-CA-C	5.03	115.27	107.78
25	DA	1653	G	C2'-C3'-O3'	5.03	117.04	109.50
45	BZ	115	GLY	N-CA-C	5.02	120.28	112.60
16	AP	5	ARG	N-CA-C	5.01	115.14	108.38

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
23	CX	76	A	C1'

All (15) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	AB	231	GLU	Peptide
2	AB	8	LYS	Peptide
2	AB	9	GLU	Peptide
7	AG	79	ARG	Peptide
9	AI	52	ALA	Peptide
24	AW	4	PRO	Peptide
50	B4	59	PHE	Peptide
38	BS	58	LEU	Peptide
44	BY	53	PRO	Peptide
45	BZ	136	PHE	Peptide
4	CD	45	GLN	Peptide
19	CS	28	LYS	Peptide
24	CW	9	MVA	Peptide
50	D4	67	TYR	Peptide
27	DD	274	ARG	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32196	0	16250	915	0
1	CA	32312	0	16307	1009	0
2	AB	1846	0	1867	109	0
2	CB	1825	0	1828	122	0
3	AC	1552	0	1546	52	0
3	CC	1542	0	1517	83	0
4	AD	1659	0	1676	90	0
4	CD	1674	0	1714	89	0
5	AE	1129	0	1185	44	0
5	CE	1133	0	1191	58	0
6	AF	806	0	793	36	0
6	CF	816	0	808	26	0
7	AG	1231	0	1238	33	0
7	CG	1235	0	1249	53	0
8	AH	1088	0	1126	45	0
8	CH	1088	0	1126	57	0
9	AI	983	0	986	47	0
9	CI	978	0	966	57	0
10	AJ	709	0	650	42	0
10	CJ	714	0	672	58	0
11	AK	829	0	825	17	0
11	CK	833	0	836	27	0
12	AL	930	0	980	35	0
12	CL	930	0	980	40	0
13	AM	958	0	1002	35	0
13	CM	950	0	988	54	0
14	AN	492	0	529	26	0
14	CN	492	0	529	32	0
15	AO	728	0	760	23	0
15	CO	728	0	760	26	0
16	AP	681	0	697	36	0
16	CP	677	0	686	31	0
17	AQ	823	0	891	21	0
17	CQ	823	0	891	27	0
18	AR	555	0	618	25	0
18	CR	555	0	618	22	0
19	AS	652	0	662	43	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	CS	646	0	644	52	0
20	AT	728	0	798	37	0
20	CT	727	0	796	29	0
21	AU	199	0	208	7	0
21	CU	199	0	208	8	0
22	AV	114	0	54	1	0
22	CV	113	0	54	1	0
23	AX	1623	0	823	23	0
23	CX	1623	0	823	22	0
24	AW	93	0	84	10	0
24	CW	93	0	84	10	0
25	BA	58834	0	29666	844	0
25	DA	58458	0	29481	1173	0
26	BB	2573	0	1306	36	0
26	DB	2573	0	1306	66	0
27	BD	2136	0	2218	62	0
27	DD	2136	0	2218	75	0
28	BE	1559	0	1618	57	0
28	DE	1559	0	1618	65	0
29	BF	1584	0	1625	39	0
29	DF	1580	0	1619	67	0
30	BG	1425	0	1443	42	0
30	DG	1424	0	1434	92	0
31	BH	1330	0	1407	37	0
31	DH	1330	0	1407	51	0
32	BI	1085	0	1114	45	0
32	DI	1061	0	1080	28	0
33	BN	1117	0	1183	20	0
33	DN	1117	0	1184	25	0
34	BO	933	0	996	31	0
34	DO	933	0	996	31	0
35	BP	1135	0	1212	43	0
35	DP	1135	0	1212	50	0
36	BQ	1122	0	1179	38	0
36	DQ	1122	0	1179	42	0
37	BR	968	0	1033	26	0
37	DR	968	0	1032	29	0
38	BS	877	0	938	30	0
38	DS	870	0	923	45	0
39	BT	1091	0	1151	36	0
39	DT	1083	0	1136	38	0
40	BU	959	0	1019	28	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	DU	959	0	1019	28	0
41	BV	771	0	830	16	0
41	DV	771	0	830	23	0
42	BW	886	0	940	15	0
42	DW	886	0	940	26	0
43	BX	750	0	814	20	0
43	DX	750	0	814	23	0
44	BY	806	0	881	25	0
44	DY	806	0	881	28	0
45	BZ	1349	0	1355	45	0
45	DZ	1360	0	1363	57	0
46	B0	653	0	674	19	0
46	D0	653	0	674	32	0
47	B1	755	0	826	19	0
47	D1	755	0	826	20	0
48	B2	588	0	643	15	0
48	D2	588	0	643	18	0
49	B3	469	0	518	12	0
49	D3	464	0	514	11	0
50	B4	551	0	532	42	0
50	D4	531	0	502	41	0
51	B5	455	0	465	13	0
51	D5	455	0	465	11	0
52	B6	453	0	473	10	0
52	D6	449	0	469	13	0
53	B7	418	0	467	10	0
53	D7	418	0	467	9	0
54	B8	511	0	571	33	0
54	D8	517	0	582	24	0
55	B9	307	0	335	7	0
55	D9	307	0	335	14	0
56	AA	222	0	0	0	0
56	AD	1	0	0	0	0
56	AF	1	0	0	0	0
56	AK	1	0	0	0	0
56	AL	1	0	0	0	0
56	AM	2	0	0	0	0
56	AN	1	0	0	0	0
56	AS	1	0	0	0	0
56	AV	1	0	0	0	0
56	AX	9	0	0	0	0
56	B0	6	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	B1	2	0	0	0	0
56	B2	1	0	0	0	0
56	B3	3	0	0	0	0
56	B5	1	0	0	0	0
56	B7	4	0	0	0	0
56	B8	2	0	0	0	0
56	B9	1	0	0	0	0
56	BA	739	0	0	0	0
56	BB	18	0	0	0	0
56	BD	12	0	0	0	0
56	BE	9	0	0	0	0
56	BF	6	0	0	0	0
56	BG	4	0	0	0	0
56	BN	6	0	0	0	0
56	BO	1	0	0	0	0
56	BP	4	0	0	0	0
56	BQ	4	0	0	0	0
56	BR	3	0	0	0	0
56	BU	9	0	0	0	0
56	BV	3	0	0	0	0
56	BW	5	0	0	0	0
56	BX	2	0	0	0	0
56	BZ	1	0	0	0	0
56	CA	172	0	0	0	0
56	CE	2	0	0	0	0
56	CF	1	0	0	0	0
56	CN	1	0	0	0	0
56	CT	1	0	0	0	0
56	CX	3	0	0	0	0
56	D3	1	0	0	0	0
56	D5	2	0	0	0	0
56	D8	1	0	0	0	0
56	DA	657	0	0	0	0
56	DB	12	0	0	0	0
56	DD	5	0	0	0	0
56	DE	6	0	0	0	0
56	DF	5	0	0	0	0
56	DG	1	0	0	0	0
56	DN	1	0	0	0	0
56	DO	1	0	0	0	0
56	DP	2	0	0	0	0
56	DQ	4	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	DR	1	0	0	0	0
56	DU	2	0	0	0	0
56	DV	3	0	0	0	0
56	DW	2	0	0	0	0
56	DY	1	0	0	0	0
57	AD	8	0	0	1	0
57	CD	8	0	0	1	0
58	AN	1	0	0	0	0
58	B4	1	0	0	0	0
58	B5	1	0	0	0	0
58	B6	1	0	0	0	0
58	B9	1	0	0	0	0
58	BY	1	0	0	0	0
58	CN	1	0	0	0	0
58	D4	1	0	0	0	0
58	D5	1	0	0	0	0
58	D6	1	0	0	0	0
58	D9	1	0	0	0	0
58	DY	1	0	0	0	0
59	AX	10	0	10	1	0
59	CX	10	0	10	3	0
60	BA	1	0	0	0	0
60	DA	1	0	0	0	0
61	AA	147	0	0	23	0
61	AD	1	0	0	0	0
61	AE	2	0	0	0	0
61	AJ	1	0	0	0	0
61	AL	2	0	0	0	0
61	AO	2	0	0	0	0
61	AU	1	0	0	1	0
61	AV	2	0	0	0	0
61	AX	1	0	0	0	0
61	B0	4	0	0	0	0
61	B1	2	0	0	0	0
61	B5	2	0	0	0	0
61	B7	1	0	0	1	0
61	B8	7	0	0	1	0
61	BA	1086	0	0	94	0
61	BB	26	0	0	2	0
61	BD	6	0	0	0	0
61	BE	13	0	0	3	0
61	BF	5	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
61	BG	1	0	0	0	0
61	BN	3	0	0	0	0
61	BO	2	0	0	0	0
61	BP	15	0	0	2	0
61	BQ	3	0	0	1	0
61	BR	1	0	0	0	0
61	BT	2	0	0	0	0
61	BU	5	0	0	0	0
61	BV	2	0	0	0	0
61	BW	4	0	0	0	0
61	BX	4	0	0	1	0
61	CA	186	0	0	24	0
61	CE	2	0	0	0	0
61	CN	1	0	0	0	0
61	CT	1	0	0	0	0
61	CX	2	0	0	0	0
61	D0	3	0	0	1	0
61	D1	1	0	0	0	0
61	D3	1	0	0	0	0
61	D7	1	0	0	0	0
61	D8	4	0	0	0	0
61	DA	906	0	0	117	0
61	DB	7	0	0	0	0
61	DD	10	0	0	0	0
61	DE	11	0	0	1	0
61	DF	4	0	0	0	0
61	DO	1	0	0	0	0
61	DP	14	0	0	2	0
61	DQ	3	0	0	1	0
61	DR	1	0	0	0	0
61	DU	4	0	0	0	0
61	DV	1	0	0	0	0
61	DX	2	0	0	1	0
61	DY	1	0	0	0	0
All	All	286321	0	191124	6816	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 15.

All (6816) 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:1129:C:N4	1:AA:1143:G:H1	1.46	1.12
1:CA:1002:G:H1	1:CA:1038:C:N4	1.48	1.09
1:AA:348:G:H2'	1:AA:349:A:H5'	1.30	1.06
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.39	1.04
2:CB:16:HIS:HB2	2:CB:204:ASN:HB3	1.36	1.03
25:DA:2206:G:H3'	25:DA:2207:G:C8	1.95	1.00
39:BT:16:ARG:NH2	39:BT:83:ILE:O	1.93	1.00
1:CA:1163:C:N4	1:CA:1173:G:H1	1.60	1.00
25:DA:1019:U:HO2'	25:DA:1021:A:H2	1.03	1.00
1:AA:1125:U:N3	1:AA:1127:G:N7	2.10	0.99
1:CA:1153:C:H42	1:CA:1154:G:H21	1.06	0.98
1:CA:1318:A:H5"	19:CS:3:ARG:HH22	1.26	0.98
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.44	0.98
1:AA:201:C:H42	1:AA:216:G:H1	0.99	0.96
1:CA:1492:A:N3	25:DA:1913:A:N6	2.14	0.96
13:CM:122:LYS:HD3	13:CM:123:ALA:H	1.29	0.96
1:CA:1163:C:H42	1:CA:1173:G:H1	1.06	0.95
1:CA:998:G:H1	1:CA:1043:C:N4	1.64	0.94
25:DA:1488:G:C6	25:DA:1489:U:H5	1.85	0.94
25:BA:9:U:H3	25:BA:2641:A:H2	1.02	0.93
1:CA:998:G:H1	1:CA:1043:C:H42	0.95	0.93
1:AA:167:G:H2'	1:AA:168:G:H8	1.32	0.93
25:BA:1036:A:OP2	61:BA:4501:HOH:O	1.87	0.93
1:CA:999:C:N4	1:CA:1042:G:C6	2.36	0.92
1:CA:837:G:H1	1:CA:849:C:H42	1.18	0.92
25:DA:1664:A:OP1	61:DA:4386:HOH:O	1.87	0.92
25:DA:740:U:OP2	61:DA:4119:HOH:O	1.87	0.92
4:CD:122:ARG:NH1	4:CD:134:ASP:O	2.03	0.92
25:BA:139:A:H8	25:BA:1454:C:HO2'	0.94	0.92
1:CA:999:C:C4	1:CA:1042:G:N1	2.38	0.91
44:BY:92:ASN:HB3	44:BY:94:LYS:H	1.35	0.91
26:DB:22:U:H3	26:DB:61:G:H1	1.18	0.91
25:DA:1798:U:H5'	27:DD:259:THR:HG22	1.52	0.91
1:CA:677:U:H3	1:CA:713:G:H22	1.19	0.91
2:AB:16:HIS:HB2	2:AB:204:ASN:HB3	1.50	0.91
2:AB:16:HIS:CD2	2:AB:17:PHE:H	1.89	0.90
1:CA:999:C:N4	1:CA:1042:G:N1	2.18	0.90
10:CJ:8:LEU:HB2	10:CJ:70:ARG:HB2	1.53	0.90
44:BY:54:LYS:HA	44:BY:56:PRO:HD3	1.52	0.90
1:AA:1075:C:OP1	2:AB:179:LYS:NZ	2.04	0.90
25:BA:2695:C:O2	34:BO:70:LYS:NZ	2.04	0.89
1:CA:1162:C:H42	1:CA:1174:G:H1	1.21	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2227:G:H5'	25:BA:2228:G:N7	1.88	0.89
34:BO:35:VAL:HG11	34:BO:103:ALA:HB3	1.54	0.89
30:DG:11:TYR:CZ	30:DG:16:ARG:HD3	2.08	0.88
1:AA:1028:C:H42	1:AA:1033:G:H1	1.21	0.88
50:D4:53:GLU:HG2	50:D4:55:ARG:H	1.38	0.88
1:CA:1007:C:N3	1:CA:1022:G:N2	2.20	0.88
11:AK:79:SER:HA	11:AK:104:GLN:HB2	1.56	0.87
1:CA:1002:G:N2	1:CA:1038:C:N3	2.23	0.87
25:DA:1689:A:H62	25:DA:1698:A:H2	1.20	0.87
2:CB:16:HIS:HB3	2:CB:210:SER:HB3	1.57	0.87
1:AA:1414:U:H3	1:AA:1486:G:H1	1.22	0.87
1:AA:406:G:H5'	4:AD:5:ILE:HD11	1.55	0.87
1:AA:836:G:OP2	18:AR:61:LYS:NZ	2.06	0.87
25:DA:1019:U:H3	25:DA:1142(A):A:H62	1.23	0.87
25:BA:1007:G:OP1	61:BA:4615:HOH:O	1.93	0.87
35:BP:126:VAL:HG12	35:BP:148:LEU:HD22	1.54	0.87
1:CA:1133:G:H2'	1:CA:1134:G:H8	1.39	0.87
25:DA:827:U:OP1	61:DA:4182:HOH:O	1.92	0.87
1:AA:1129:C:N3	1:AA:1143:G:N2	2.22	0.86
23:AX:6:G:H1	23:AX:67:C:H42	1.23	0.86
46:B0:11:ARG:O	46:B0:14:ARG:NH2	2.08	0.86
1:CA:1007:C:N4	1:CA:1022:G:N1	2.23	0.86
9:CI:9:ARG:HG2	9:CI:14:VAL:HG12	1.56	0.86
25:BA:1404:G:OP2	61:BA:4220:HOH:O	1.92	0.86
27:BD:71:ASP:HB3	27:BD:103:ARG:HH22	1.39	0.86
29:DF:53:THR:HG23	29:DF:55:GLY:H	1.40	0.86
25:BA:1361:C:OP2	61:BA:4469:HOH:O	1.94	0.86
1:CA:1262:C:H42	1:CA:1273:G:H1	1.21	0.86
1:AA:1025:U:O2	1:AA:1036:G:O6	1.93	0.86
25:DA:1648:C:OP1	61:DA:4113:HOH:O	1.93	0.86
1:CA:1502:A:H2	1:CA:1505:G:H1	1.23	0.86
8:AH:51:VAL:HG12	8:AH:52:ASP:H	1.41	0.85
25:BA:831:A:OP2	61:BA:4453:HOH:O	1.94	0.85
1:AA:574:A:OP2	61:AA:4004:HOH:O	1.93	0.85
1:AA:1036:G:H5'	1:AA:1037:C:H5	1.39	0.85
13:CM:82:MET:HE2	13:CM:92:HIS:HB3	1.58	0.85
1:AA:166:G:H2'	1:AA:167:G:C8	2.10	0.85
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.09	0.85
45:DZ:69:THR:HG22	45:DZ:90:VAL:HA	1.57	0.85
1:AA:1108:G:O6	61:AA:4120:HOH:O	1.94	0.84
29:BF:185:ASP:HA	29:BF:188:ARG:HD3	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1577:C:O2'	25:BA:1578:C:O5'	1.95	0.84
25:BA:656:A:OP1	35:BP:65:ARG:NH1	2.10	0.84
1:CA:1075:C:OP1	2:CB:179:LYS:NZ	2.09	0.84
25:BA:1717:C:OP1	61:BA:3894:HOH:O	1.95	0.84
25:DA:1602:U:O4	61:DA:4523:HOH:O	1.93	0.84
25:DA:2592:G:OP1	61:DA:4138:HOH:O	1.96	0.84
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	1.60	0.84
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.11	0.84
25:DA:2738:A:OP2	61:DA:4117:HOH:O	1.96	0.84
25:BA:1683:C:OP2	61:BA:4522:HOH:O	1.95	0.84
1:CA:565:U:OP2	61:CA:4054:HOH:O	1.96	0.84
1:CA:1125:U:O2'	1:CA:1126:U:H2'	1.76	0.84
25:BA:2459:G:OP2	61:BA:4395:HOH:O	1.96	0.84
25:DA:2452:C:OP1	61:DA:4409:HOH:O	1.95	0.83
1:AA:474:G:H2'	1:AA:475:G:H8	1.41	0.83
1:CA:582:U:OP1	15:CO:68:ARG:NH2	2.08	0.83
1:AA:1008:C:H42	1:AA:1021:G:H1	1.25	0.83
25:BA:551:A:OP1	61:BA:4497:HOH:O	1.97	0.83
25:BA:2604:G:O2'	61:BA:4655:HOH:O	1.96	0.83
5:CE:40:ARG:HH21	5:CE:68:GLU:HA	1.43	0.83
36:DQ:81:VAL:HB	46:D0:7:LEU:HD21	1.58	0.83
1:AA:443:C:N4	1:AA:491:G:O6	2.12	0.83
1:AA:1492:A:N3	25:BA:1935:A:N6	2.26	0.83
1:AA:1005:A:N7	1:AA:1024:G:N2	2.26	0.83
3:CC:73:PRO:HB3	3:CC:103:VAL:HG11	1.60	0.83
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.61	0.82
35:DP:100:LEU:HD12	35:DP:112:LEU:HD11	1.59	0.82
25:DA:1204:A:H2	25:DA:1241:A:H62	1.26	0.82
38:DS:93:LYS:HD3	38:DS:95:HIS:HB2	1.62	0.82
45:DZ:28:MET:HE1	45:DZ:61:LEU:HD21	1.59	0.82
25:BA:1391:C:OP2	61:BA:3932:HOH:O	1.97	0.82
46:D0:11:ARG:O	46:D0:14:ARG:NH2	2.12	0.82
1:AA:1492:A:O2'	25:BA:1935:A:N1	2.12	0.82
25:BA:1480:A:H61	25:BA:1605:A:H62	1.25	0.82
16:AP:53:VAL:HG13	16:AP:79:VAL:HG13	1.59	0.82
25:DA:1310:G:OP2	53:D7:9:ARG:NH1	2.13	0.82
2:AB:16:HIS:CG	2:AB:17:PHE:H	1.96	0.82
4:AD:108:LEU:HD13	4:AD:174:LEU:HD13	1.60	0.82
1:CA:838:G:H1	1:CA:848:C:H42	1.27	0.82
1:CA:21:G:OP1	61:CA:4062:HOH:O	1.97	0.82
25:DA:62:C:H42	25:DA:93:G:H1	1.28	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:110:GLY:O	61:BE:408:HOH:O	1.98	0.81
10:AJ:35:SER:HB3	10:AJ:73:ASP:HB2	1.61	0.81
30:BG:161:THR:HG22	30:BG:163:ALA:H	1.44	0.81
1:AA:656:C:O2'	15:AO:28:GLN:NE2	2.13	0.81
1:AA:1124:G:O2'	1:AA:1145:C:N4	2.13	0.81
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.45	0.81
25:DA:1840:G:OP2	61:DA:4308:HOH:O	1.97	0.81
1:AA:97:G:O2'	1:AA:98:G:O4'	1.99	0.81
25:BA:1736:A:H62	25:BA:1745:A:H2	1.27	0.81
2:CB:201:ILE:HG21	2:CB:214:ILE:HG21	1.62	0.81
25:DA:826:U:OP1	61:DA:4259:HOH:O	1.98	0.81
25:DA:1021:A:H62	25:DA:1141:U:H3	1.26	0.81
43:DX:53:LYS:HB3	43:DX:82:GLN:HB3	1.61	0.81
1:AA:21:G:OP1	61:AA:4080:HOH:O	1.98	0.81
32:BI:92:VAL:HG13	32:BI:120:ILE:HB	1.62	0.81
45:DZ:72:ARG:NH2	45:DZ:97:GLU:O	2.14	0.81
1:AA:167:G:H2'	1:AA:168:G:C8	2.16	0.81
1:AA:1026:G:H5'	1:AA:1027:C:H5"	1.61	0.81
1:CA:922:G:H4'	5:CE:20:GLN:HA	1.62	0.81
1:CA:975:A:H4'	1:CA:976:G:H5"	1.63	0.81
35:BP:36:LYS:O	61:BP:304:HOH:O	1.98	0.81
1:CA:1245:A:H61	1:CA:1292:U:H3	1.28	0.80
25:DA:2287:A:H62	25:DA:2344:U:H3	1.26	0.80
1:CA:1005:A:H1'	1:CA:1036:G:H1	1.43	0.80
39:DT:16:ARG:NH2	39:DT:83:ILE:O	2.13	0.80
1:AA:189(B):C:N4	1:AA:189(I):G:O6	2.11	0.80
1:AA:421:U:O2'	1:AA:423:G:N7	2.14	0.80
27:BD:69:ARG:NH2	27:BD:128:GLY:O	2.14	0.80
1:CA:148:G:H2'	1:CA:149:A:H8	1.44	0.80
1:CA:768:A:OP2	61:CA:4023:HOH:O	2.00	0.80
25:BA:1093:G:H2'	25:BA:1156:G:H22	1.44	0.80
25:DA:878:A:N6	25:DA:900:A:N7	2.30	0.80
33:DN:20:GLY:HA2	33:DN:61:ARG:HE	1.45	0.80
55:D9:25:VAL:HB	55:D9:34:GLN:HB2	1.62	0.80
1:AA:289:G:OP2	61:AA:4071:HOH:O	1.99	0.80
25:DA:271(A):A:N7	25:DA:271(W):G:N2	2.28	0.80
26:DB:11:C:OP2	26:DB:12:C:N4	2.15	0.80
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.14	0.80
25:DA:2683:C:OP1	39:DT:53:ARG:NH2	2.14	0.80
51:D5:16:ARG:NH1	51:D5:17:ASP:OD1	2.14	0.80
10:CJ:49:VAL:HG23	14:CN:41:ARG:HB2	1.62	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1816:G:O6	27:DD:35:LYS:NZ	2.11	0.80
25:BA:272:U:H4'	32:BI:50:ARG:HH12	1.45	0.80
25:DA:301:G:OP2	44:DY:84:ARG:NH2	2.14	0.80
1:AA:1030(C):G:N7	1:AA:1031:G:N2	2.30	0.80
1:AA:1126:U:H5	10:AJ:71:LEU:HD22	1.45	0.79
25:DA:2371:G:O6	61:DA:3977:HOH:O	2.00	0.79
25:DA:323:G:O2'	25:DA:1205:U:N3	2.15	0.79
25:DA:981:A:OP1	61:DA:4035:HOH:O	2.01	0.79
4:AD:155:LEU:HB3	4:AD:158:ILE:HD11	1.64	0.79
4:CD:103:ASN:OD1	4:CD:114:ARG:NH2	2.15	0.79
25:BA:1070:G:OP2	61:BA:4705:HOH:O	2.00	0.79
25:BA:2734:A:N7	61:BA:4015:HOH:O	2.16	0.79
1:CA:664:G:OP1	18:CR:64:ARG:NH2	2.15	0.79
1:CA:1142:G:H3'	1:CA:1143:G:H8	1.47	0.79
47:B1:50:ARG:HG2	47:B1:59:THR:HB	1.64	0.79
1:CA:117:G:OP2	61:CA:4053:HOH:O	2.01	0.79
2:CB:15:VAL:HG21	2:CB:213:LEU:HD12	1.63	0.79
25:DA:1250:G:OP1	61:DA:4457:HOH:O	1.99	0.79
25:DA:1971:A:OP1	61:DA:3912:HOH:O	2.01	0.79
1:AA:1314:C:OP2	19:AS:4:SER:OG	2.00	0.79
2:AB:16:HIS:HB3	2:AB:210:SER:HB2	1.65	0.79
25:BA:2795:G:OP2	61:BA:4646:HOH:O	2.01	0.79
2:CB:54:THR:HG23	2:CB:199:TYR:HB3	1.65	0.79
25:DA:172:C:H2'	25:DA:173:G:H8	1.49	0.79
26:DB:75:G:N2	45:DZ:87:ASP:OD1	2.16	0.79
25:BA:1815:A:OP2	61:BA:4517:HOH:O	1.99	0.78
1:CA:563:A:N6	61:CA:4065:HOH:O	2.16	0.78
8:CH:51:VAL:HG12	8:CH:52:ASP:H	1.47	0.78
25:BA:787:U:OP2	61:BA:4517:HOH:O	2.00	0.78
19:CS:30:LEU:HD11	19:CS:32:LYS:HG3	1.64	0.78
1:CA:656:C:O2'	15:CO:28:GLN:NE2	2.17	0.78
4:CD:100:ARG:NH1	4:CD:137:SER:OG	2.16	0.78
25:DA:1040:C:N3	25:DA:1115:G:N1	2.27	0.78
19:AS:41:VAL:HG12	19:AS:43:GLU:H	1.47	0.78
25:DA:125:G:H5"	53:D7:19:ARG:HD3	1.64	0.78
25:BA:1695:C:OP1	61:BA:4514:HOH:O	2.02	0.78
25:BA:1712:A:OP2	61:BA:4248:HOH:O	2.01	0.78
1:AA:642:A:N3	8:AH:113:SER:OG	2.16	0.78
25:BA:1431:G:O2'	25:BA:1442:U:O2	2.02	0.78
50:B4:57:GLU:HB3	50:B4:58:ARG:HA	1.66	0.78
1:CA:1047:G:H1	1:CA:1210:C:H42	1.30	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CX:50:U:H3	23:CX:64:G:H1	1.32	0.78
25:DA:1315:C:OP2	61:DA:4078:HOH:O	2.02	0.78
9:AI:50:LEU:HD13	9:AI:56:LEU:HA	1.64	0.78
25:BA:599:U:OP1	61:BA:4465:HOH:O	2.00	0.78
25:BA:2299:A:H62	25:BA:2356:U:H3	1.26	0.78
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.65	0.78
25:BA:1531:G:N2	25:BA:1550:C:O2	2.15	0.78
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.16	0.78
1:CA:619:U:N3	4:CD:134:ASP:OD1	2.14	0.78
28:BE:47:VAL:HG21	28:BE:86:PRO:HD2	1.64	0.78
49:B3:3:ARG:NH1	49:B3:60:GLU:OE2	2.17	0.78
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.66	0.78
1:CA:1166:G:H1'	1:CA:1171:G:H22	1.49	0.78
25:BA:2227:G:H3'	25:BA:2228:G:C8	2.19	0.77
25:BA:2601:A:N3	61:BA:3847:HOH:O	2.17	0.77
1:AA:266:G:H5"	1:AA:268:C:H41	1.48	0.77
1:CA:1133:G:H2'	1:CA:1134:G:C8	2.18	0.77
1:AA:1304:G:OP2	61:AA:4087:HOH:O	2.02	0.77
25:DA:1022:G:H22	25:DA:1142(A):A:H2	1.30	0.77
30:DG:80:PHE:O	30:DG:82:LEU:N	2.18	0.77
1:AA:195:A:N3	1:AA:222:U:O2'	2.15	0.77
1:CA:999:C:N3	1:CA:1042:G:N2	2.33	0.77
1:CA:1193:G:O2'	5:CE:25:ARG:NH2	2.18	0.77
2:CB:80:ILE:HD11	2:CB:212:GLN:HA	1.67	0.77
7:CG:75:VAL:HG13	7:CG:145:ALA:HA	1.66	0.77
25:DA:602:G:O2'	25:DA:655:A:N6	2.17	0.77
1:AA:1054:C:OP1	61:AA:4053:HOH:O	2.01	0.77
1:AA:1129:C:H42	1:AA:1143:G:H1	0.80	0.77
35:BP:50:ARG:HH21	54:B8:7:HIS:HD2	1.33	0.77
1:CA:427:U:H3'	1:CA:428:G:H2'	1.66	0.77
1:CA:998:G:N2	1:CA:1043:C:N3	2.32	0.77
49:B3:8:LEU:HD13	49:B3:31:LEU:HD23	1.67	0.77
1:CA:559:A:OP1	5:CE:126:ARG:NH2	2.17	0.77
1:AA:972:C:OP1	61:AA:4123:HOH:O	2.02	0.77
35:BP:59:LEU:HD21	54:B8:10:ALA:HA	1.67	0.77
10:CJ:29:ARG:HB2	10:CJ:84:GLN:HE22	1.49	0.77
25:DA:195:A:N7	61:DA:4177:HOH:O	2.18	0.77
41:DV:6:LYS:HB2	41:DV:38:LEU:HD21	1.67	0.77
1:AA:742:G:OP2	15:AO:35:ARG:NH2	2.17	0.76
25:DA:2494:G:OP2	61:DA:4410:HOH:O	2.02	0.76
2:CB:178:ARG:HH22	8:CH:68:ARG:HH12	1.30	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:126:VAL:HG12	35:DP:148:LEU:HD22	1.66	0.76
25:BA:2614:A:OP1	61:BA:4813:HOH:O	2.03	0.76
25:DA:2296:U:OP2	38:DS:9:ARG:NH2	2.18	0.76
1:CA:1223:C:H5"	1:CA:1224:G:H5'	1.67	0.76
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.66	0.76
10:AJ:27:ALA:HA	10:AJ:81:THR:HG21	1.66	0.76
13:AM:17:VAL:O	13:AM:20:THR:OG1	2.04	0.76
25:BA:2228:G:O2'	25:BA:2229:A:OP1	2.01	0.76
38:BS:25:ARG:NH1	38:BS:42:ASP:OD1	2.17	0.76
25:DA:1268:A:OP1	61:DA:3942:HOH:O	2.03	0.76
25:DA:1323:U:O4	61:DA:4525:HOH:O	2.03	0.76
2:AB:17:PHE:HB2	2:AB:44:LEU:HD21	1.66	0.76
10:AJ:7:LYS:HE2	10:AJ:9:ARG:HH12	1.50	0.76
25:BA:808:A:OP1	61:BA:4590:HOH:O	2.02	0.76
1:CA:1376:U:OP1	7:CG:98:SER:OG	2.03	0.76
1:AA:1162:C:H42	1:AA:1174:G:H1	1.32	0.76
20:AT:47:GLY:HA2	20:AT:48:LYS:HB2	1.67	0.76
25:BA:927:G:N2	25:BA:944:C:N3	2.34	0.76
1:AA:175:C:H2'	1:AA:176:C:H6	1.51	0.76
1:AA:881:G:P	12:AL:12:ARG:HH22	2.08	0.76
10:AJ:5:ARG:HD3	10:AJ:71:LEU:HD11	1.68	0.76
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.65	0.76
25:BA:894:U:O4	25:BA:978:A:N6	2.19	0.76
1:CA:138:G:H8	1:CA:138:G:H5'	1.48	0.76
25:DA:2227:A:OP2	61:DA:4568:HOH:O	2.02	0.76
25:BA:1248:G:O6	61:BA:4633:HOH:O	2.04	0.76
7:AG:50:ILE:HD11	7:AG:58:PRO:HA	1.68	0.76
37:BR:67:LEU:HD13	37:BR:76:VAL:HG21	1.66	0.76
1:CA:1003:G:N2	1:CA:1025:U:O4	2.19	0.76
1:AA:659:U:H2'	1:AA:660:G:C8	2.21	0.75
3:CC:35:GLU:OE2	3:CC:59:ARG:NH2	2.17	0.75
25:DA:1010:A:OP2	61:DA:4093:HOH:O	2.04	0.75
4:AD:13:ARG:NH1	4:AD:38:TYR:O	2.20	0.75
25:BA:2587:C:OP2	61:BA:4081:HOH:O	2.03	0.75
25:DA:2504:U:OP2	61:DA:4073:HOH:O	2.04	0.75
1:AA:661:G:H1	1:AA:744:C:H42	1.32	0.75
1:AA:1007:C:N3	1:AA:1022:G:O6	2.19	0.75
1:CA:1004:A:H8	1:CA:1005:A:H4'	1.51	0.75
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HD23	1.68	0.75
25:DA:2705:A:OP2	61:DA:4125:HOH:O	2.04	0.75
26:DB:48:A:H4'	38:DS:95:HIS:HD2	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1183:A:O2'	1:AA:1184:G:OP1	2.04	0.75
1:CA:64:G:H4'	1:CA:65:U:H3'	1.67	0.75
7:CG:113:GLU:HG2	7:CG:119:ARG:HG2	1.66	0.75
25:DA:89:G:H3'	25:DA:90:U:H5"	1.68	0.75
25:DA:1604:C:OP2	61:DA:4394:HOH:O	2.04	0.75
1:CA:1163:C:N3	1:CA:1173:G:N2	2.35	0.75
20:CT:57:ARG:HH22	20:CT:100:ILE:HD12	1.50	0.75
43:BX:31:HIS:HD2	43:BX:33:LYS:H	1.32	0.75
1:CA:608:A:OP2	61:CA:4181:HOH:O	2.03	0.75
36:DQ:48:GLU:OE1	36:DQ:51:ARG:NH2	2.19	0.75
1:AA:407:G:H5"	4:AD:115:ARG:HB3	1.68	0.75
61:BE:408:HOH:O	37:BR:3:HIS:NE2	2.19	0.75
1:CA:1273:G:H3'	1:CA:1274:G:H8	1.51	0.75
26:DB:50:G:OP1	38:DS:63:THR:OG1	2.04	0.75
1:AA:1182:G:H4'	1:AA:1183:A:H5'	1.67	0.75
1:CA:1123:A:H4'	10:CJ:37:PRO:HD2	1.69	0.75
25:DA:773:U:OP1	61:DA:4407:HOH:O	2.05	0.75
49:B3:55:ARG:NH1	49:B3:57:GLU:OE1	2.20	0.75
25:DA:649:G:H4'	54:D8:46:ARG:HH22	1.51	0.75
25:DA:1324:G:N7	61:DA:3853:HOH:O	2.20	0.75
25:DA:2074:U:OP1	61:DA:3914:HOH:O	2.05	0.75
30:DG:18:GLU:OE2	30:DG:21:ARG:NH1	2.17	0.75
1:AA:175:C:H2'	1:AA:176:C:C6	2.22	0.74
6:AF:18:GLN:HA	6:AF:21:LEU:HD12	1.68	0.74
25:DA:1671:U:OP2	61:DA:3754:HOH:O	2.04	0.74
1:AA:803:G:OP1	61:AA:4050:HOH:O	2.04	0.74
31:BH:98:LEU:HD22	31:BH:125:VAL:HG23	1.67	0.74
25:DA:948:G:OP1	61:DA:4175:HOH:O	2.04	0.74
1:AA:1028:C:N4	1:AA:1033:G:H1	1.84	0.74
25:BA:1284:G:OP2	61:BA:4765:HOH:O	2.05	0.74
25:DA:1670:C:OP1	61:DA:3754:HOH:O	2.05	0.74
7:AG:111:ARG:NH1	7:AG:113:GLU:OE2	2.20	0.74
47:B1:65:SER:HG	47:B1:66:HIS:HD1	1.34	0.74
25:DA:1876:A:H2'	25:DA:1877:A:C8	2.22	0.74
25:DA:2006:C:OP2	61:DA:4390:HOH:O	2.06	0.74
1:AA:348:G:H2'	1:AA:349:A:C5'	2.13	0.74
25:BA:175:G:N2	25:BA:199:C:O2	2.19	0.74
25:BA:535:C:OP1	61:BA:4620:HOH:O	2.05	0.74
25:DA:31:C:OP1	61:DA:4155:HOH:O	2.05	0.74
25:DA:286:C:H2'	25:DA:287:C:H6	1.53	0.74
25:DA:1153:C:OP2	61:DA:4082:HOH:O	2.05	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2552:U:H2'	25:DA:2554:U:OP2	1.86	0.74
44:DY:49:VAL:HG21	44:DY:61:ILE:HG23	1.69	0.74
39:BT:95:ARG:HG2	39:BT:95:ARG:HH11	1.53	0.74
1:CA:693:G:H1'	7:CG:82:GLY:HA3	1.68	0.74
25:DA:465:G:O6	61:DA:4428:HOH:O	2.04	0.74
25:DA:1332:G:OP1	61:DA:4079:HOH:O	2.05	0.74
25:DA:1693:U:O2'	27:DD:14:ARG:NH2	2.20	0.74
30:DG:113:ARG:NH1	30:DG:139:LEU:O	2.20	0.74
1:CA:289:G:OP2	61:CA:4053:HOH:O	2.06	0.74
4:CD:25:ARG:NH1	4:CD:30:LYS:O	2.21	0.74
25:DA:2206:G:H3'	25:DA:2207:G:H8	1.47	0.74
46:D0:53:MET:HG3	46:D0:59:LEU:HD23	1.69	0.74
28:BE:143:ASN:HD22	28:BE:147:PRO:HD3	1.51	0.74
39:DT:85:LYS:NZ	39:DT:87:ASP:OD2	2.21	0.74
1:AA:659:U:H2'	1:AA:660:G:H8	1.52	0.73
15:AO:56:LEU:O	15:AO:60:VAL:HG23	1.88	0.73
1:CA:1015:A:N3	1:CA:1218:C:O2'	2.20	0.73
25:DA:1803:A:O2'	27:DD:259:THR:HG21	1.86	0.73
30:DG:161:THR:HG22	30:DG:163:ALA:H	1.53	0.73
50:D4:24:THR:OG1	50:D4:25:TYR:N	2.21	0.73
1:AA:159:G:HO2'	1:AA:161:A:H62	1.36	0.73
1:AA:346:G:O6	1:AA:348:G:N2	2.17	0.73
8:AH:41:ARG:NH2	8:AH:123:GLU:OE2	2.21	0.73
25:DA:1593:G:H2'	25:DA:1594:G:H8	1.52	0.73
13:AM:34:LEU:HD13	13:AM:41:PRO:HA	1.70	0.73
7:CG:111:ARG:NH2	7:CG:126:ASP:OD2	2.21	0.73
25:DA:11:G:H2'	25:DA:12:U:H5'	1.68	0.73
25:BA:1359:U:OP1	61:BA:4316:HOH:O	2.05	0.73
1:CA:1189:C:O2	61:CA:4087:HOH:O	2.07	0.73
3:CC:40:ARG:NH2	3:CC:55:VAL:O	2.21	0.73
25:DA:1040:C:O2	25:DA:1115:G:N2	2.18	0.73
25:BA:2460:A:OP2	61:BA:4508:HOH:O	2.07	0.73
32:BI:129:THR:HG22	32:BI:139:GLN:HE22	1.54	0.73
25:BA:830:A:OP2	61:BA:4453:HOH:O	2.07	0.73
25:BA:1694:G:OP1	61:BA:4514:HOH:O	2.06	0.73
1:CA:673:G:H2'	1:CA:674:G:C8	2.23	0.73
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.70	0.73
13:CM:3:ARG:HA	50:D4:34:GLU:HG2	1.69	0.73
1:AA:445:G:H2'	1:AA:446:G:C8	2.23	0.73
25:DA:731:C:OP1	61:DA:4226:HOH:O	2.06	0.73
25:DA:1038:C:H42	25:DA:1117:G:H1	1.34	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1593:G:H2'	25:DA:1594:G:C8	2.23	0.73
25:BA:874:U:OP1	61:BA:4632:HOH:O	2.07	0.73
25:DA:2785:C:OP1	28:DE:41:LYS:NZ	2.18	0.73
25:DA:2867:G:OP2	39:DT:119:LYS:NZ	2.20	0.73
1:AA:154:C:N4	1:AA:168:G:O6	2.22	0.73
25:DA:526:A:OP1	61:DA:4574:HOH:O	2.07	0.73
25:DA:963:U:OP2	61:DA:4175:HOH:O	2.05	0.73
25:DA:2805:G:H2'	25:DA:2807:G:H8	1.53	0.73
31:DH:98:LEU:HD22	31:DH:125:VAL:HG23	1.70	0.73
1:CA:1457:G:OP1	20:CT:39:LYS:NZ	2.20	0.73
2:CB:87:ARG:NH2	2:CB:220:ASP:OD1	2.20	0.73
25:DA:1776:G:OP2	61:DA:3760:HOH:O	2.06	0.73
25:DA:2748:A:O2'	31:DH:63:SER:O	2.06	0.73
54:D8:33:ASN:HA	54:D8:36:LYS:HD2	1.70	0.73
1:AA:768:A:OP2	61:AA:4023:HOH:O	2.06	0.72
25:BA:537:G:N7	61:BA:4620:HOH:O	2.21	0.72
1:CA:316:G:OP2	1:CA:351:G:O2'	2.06	0.72
1:CA:671:G:H5'	6:CF:77:ARG:HH22	1.54	0.72
1:CA:1492:A:H2'	25:DA:1913:A:H62	1.54	0.72
25:DA:2052:G:O2'	61:DA:3731:HOH:O	2.07	0.72
25:BA:1405:A:H61	25:BA:1418:U:H3	1.37	0.72
4:CD:119:GLN:HG2	4:CD:123:HIS:CD2	2.24	0.72
25:DA:450:G:O6	61:DA:4448:HOH:O	2.07	0.72
2:AB:195:ASP:O	8:AH:68:ARG:NH2	2.21	0.72
25:BA:2331:G:N2	38:BS:3:ARG:HA	2.04	0.72
1:CA:749:C:OP2	61:CA:4141:HOH:O	2.07	0.72
24:CW:9:MVA:O	24:CW:10:2QY:H86	1.89	0.72
1:AA:383:A:H2	1:AA:384:G:H1'	1.54	0.72
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.90	0.72
6:AF:65:VAL:HG21	6:AF:67:MET:HE2	1.70	0.72
1:CA:299:G:O6	61:CA:4170:HOH:O	2.06	0.72
25:DA:390:A:H4'	25:DA:391:G:H5'	1.71	0.72
25:DA:2037:G:O6	61:DA:4105:HOH:O	2.06	0.72
1:AA:1158:C:H5	1:AA:1181:G:H1	1.36	0.72
25:BA:1055:A:OP2	33:BN:37:LYS:NZ	2.18	0.72
25:BA:1701:A:OP1	37:BR:1:MET:HA	1.90	0.72
1:CA:939:G:H1	1:CA:1344:C:H42	1.34	0.72
1:CA:1030(A):G:N1	1:CA:1030(D):A:OP2	2.22	0.72
3:CC:36:ASP:HA	3:CC:39:ILE:HD12	1.69	0.72
17:CQ:53:LEU:HD23	17:CQ:82:MET:HE1	1.70	0.72
1:CA:21:G:OP1	61:CA:4064:HOH:O	2.08	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2430:A:OP2	61:DA:4182:HOH:O	2.08	0.72
25:DA:2849:U:OP2	39:DT:95:ARG:NH1	2.22	0.72
31:DH:27:LYS:NZ	31:DH:32:GLU:OE2	2.22	0.72
50:D4:44:THR:O	50:D4:46:GLN:N	2.23	0.72
1:AA:1030(C):G:H2'	1:AA:1030(D):A:H8	1.55	0.72
1:AA:1145:C:H4'	1:AA:1146:A:H5'	1.72	0.72
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.25	0.72
43:BX:31:HIS:CD2	43:BX:33:LYS:H	2.08	0.72
1:CA:954:G:H21	1:CA:1227:A:H62	1.38	0.72
1:CA:972:C:OP1	61:CA:4183:HOH:O	2.06	0.72
25:DA:887:A:O2'	25:DA:889:C:OP2	2.08	0.72
1:AA:1198:G:OP2	61:AA:4053:HOH:O	2.06	0.72
12:AL:49:ASN:ND2	12:AL:92:ASP:OD2	2.22	0.72
1:CA:1279:A:OP2	10:CJ:9:ARG:NH1	2.22	0.72
2:CB:179:LYS:HA	8:CH:72:PRO:HG3	1.71	0.72
6:CF:89:MET:HE1	18:CR:72:ARG:HB3	1.72	0.72
10:CJ:16:LEU:HD13	10:CJ:70:ARG:HG2	1.71	0.72
25:BA:865:G:OP2	61:BA:4105:HOH:O	2.07	0.72
40:BU:76:TYR:OH	40:BU:92:ARG:NH1	2.23	0.72
25:DA:2248:C:OP2	61:DA:3947:HOH:O	2.08	0.71
40:DU:83:LEU:HD12	40:DU:88:ILE:HD12	1.70	0.71
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.72	0.71
25:BA:1494:G:N2	25:BA:1511:C:O2	2.20	0.71
1:CA:558:G:OP1	61:CA:4170:HOH:O	2.06	0.71
1:CA:1153:C:N4	1:CA:1154:G:H21	1.85	0.71
38:DS:50:SER:O	38:DS:76:LYS:NZ	2.22	0.71
43:DX:11:PRO:HB3	43:DX:92:LEU:HD11	1.72	0.71
4:AD:15:GLU:HG3	4:AD:63:LYS:HE2	1.70	0.71
13:AM:58:GLU:O	13:AM:62:ASN:ND2	2.16	0.71
25:BA:2014:G:OP2	61:BA:4282:HOH:O	2.08	0.71
35:DP:89:ALA:O	35:DP:121:LYS:NZ	2.21	0.71
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.26	0.71
9:AI:53:VAL:O	9:AI:55:ALA:N	2.18	0.71
25:BA:1289:G:O2'	35:BP:7:ARG:NH2	2.24	0.71
29:BF:13:SER:HA	29:BF:127:GLU:HG3	1.72	0.71
33:DN:34:LEU:O	33:DN:49:GLY:HA3	1.89	0.71
1:AA:922:G:H4'	5:AE:20:GLN:HA	1.71	0.71
29:BF:18:ARG:NH2	29:BF:127:GLU:OE1	2.23	0.71
38:BS:27:SER:HA	38:BS:88:ASP:HB3	1.72	0.71
18:CR:26:LEU:HD21	18:CR:42:ARG:HD3	1.72	0.71
25:DA:1036:G:H1	25:DA:1119:C:H42	1.35	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2427:C:OP1	61:DA:4259:HOH:O	2.08	0.71
1:AA:975:A:H4'	1:AA:976:G:H5"	1.71	0.71
26:DB:105:A:OP1	45:DZ:72:ARG:NH1	2.23	0.71
32:DI:72:LEU:HD21	32:DI:107:VAL:HG11	1.71	0.71
1:AA:56:U:H2'	1:AA:57:G:C8	2.26	0.71
1:CA:1108:G:O6	61:CA:4092:HOH:O	2.08	0.71
25:DA:1782:C:OP1	61:DA:4385:HOH:O	2.09	0.71
41:DV:35:LEU:HB2	41:DV:57:VAL:HG23	1.72	0.71
1:CA:599:C:H2'	1:CA:600:C:H5"	1.73	0.71
25:DA:566:U:H5"	35:DP:29:LYS:HE3	1.71	0.71
25:DA:1143:A:OP1	33:DN:25:ARG:NH2	2.23	0.71
25:DA:1488:G:C6	25:DA:1489:U:C5	2.75	0.71
25:DA:2805:G:H2'	25:DA:2807:G:C8	2.26	0.71
25:BA:991:G:OP1	61:BA:4609:HOH:O	2.09	0.71
28:BE:105:THR:OG1	28:BE:199:ARG:NH2	2.24	0.71
2:CB:91:PRO:HG2	2:CB:155:LEU:HD23	1.72	0.71
32:DI:91:SER:HB3	32:DI:121:LYS:HE3	1.72	0.71
1:AA:186:C:H2'	1:AA:187:C:C6	2.26	0.71
17:AQ:18:THR:OG1	17:AQ:69:LYS:NZ	2.15	0.71
10:CJ:77:PRO:O	10:CJ:81:THR:OG1	2.09	0.71
25:DA:885:C:H2'	25:DA:886:C:H4'	1.72	0.71
27:DD:108:PRO:HG2	27:DD:111:LEU:HB2	1.73	0.71
1:AA:881:G:OP2	12:AL:12:ARG:NH2	2.23	0.70
5:AE:77:PRO:HD2	5:AE:142:LEU:HD22	1.70	0.70
43:BX:11:PRO:HB3	43:BX:92:LEU:HD11	1.73	0.70
1:CA:1204:A:OP1	14:CN:3:ARG:NH1	2.23	0.70
25:DA:10:G:H2'	25:DA:11:G:H8	1.56	0.70
36:DQ:26:TYR:O	36:DQ:67:ARG:NH1	2.24	0.70
1:AA:262:A:H2'	1:AA:263:A:C8	2.25	0.70
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.22	0.70
25:BA:2361:G:OP1	61:BA:3948:HOH:O	2.09	0.70
5:CE:137:GLU:HG2	5:CE:140:ARG:HH11	1.54	0.70
1:AA:221:C:H2'	1:AA:222:U:H6	1.55	0.70
25:BA:303:C:H42	25:BA:385:G:H1	1.39	0.70
25:BA:932:C:H3'	25:BA:933:C:H5"	1.73	0.70
25:BA:2331:G:H22	38:BS:3:ARG:NE	1.90	0.70
1:CA:1007:C:C4	1:CA:1022:G:N1	2.59	0.70
27:DD:71:ASP:HB2	27:DD:103:ARG:HH22	1.55	0.70
47:D1:77:ALA:HA	47:D1:80:LEU:HD13	1.73	0.70
7:AG:62:PHE:HA	7:AG:124:LEU:HD22	1.72	0.70
12:AL:36:VAL:HG23	24:AW:10:2QY:H89	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.71	0.70
25:DA:1140:C:O3'	33:DN:25:ARG:NH1	2.24	0.70
25:DA:1189:A:OP2	61:DA:4088:HOH:O	2.08	0.70
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.73	0.70
25:BA:241:G:OP1	35:BP:50:ARG:NH1	2.23	0.70
25:DA:631:A:OP1	35:DP:65:ARG:NH1	2.24	0.70
32:DI:102:SER:HB2	32:DI:108:THR:HG22	1.73	0.70
1:AA:437:U:H5'	4:AD:155:LEU:HD11	1.74	0.70
25:BA:1003:U:OP2	36:BQ:14:ARG:NH1	2.23	0.70
35:BP:63:PRO:HD3	54:B8:27:THR:HG22	1.73	0.70
27:DD:148:GLU:HB2	27:DD:151:LYS:HD2	1.72	0.70
29:DF:185:ASP:HA	29:DF:188:ARG:HD3	1.74	0.70
45:DZ:53:ILE:HG22	45:DZ:71:VAL:O	1.91	0.70
1:AA:946:A:O2'	1:AA:1333:A:N3	2.24	0.70
1:AA:1346:A:OP1	9:AI:120:ARG:NH1	2.25	0.70
25:BA:1039:G:OP1	40:BU:50:ARG:NH2	2.24	0.70
25:BA:2339:A:H2'	25:BA:2340:A:C8	2.25	0.70
48:B2:29:LYS:HG2	48:B2:57:ILE:HD13	1.73	0.70
1:CA:1162:C:N4	1:CA:1174:G:H1	1.88	0.70
30:DG:5:VAL:HG22	30:DG:8:LYS:H	1.55	0.70
36:BQ:10:ARG:NH1	61:BQ:3102:HOH:O	2.23	0.70
1:CA:1318:A:OP1	19:CS:3:ARG:NH1	2.24	0.70
8:AH:51:VAL:HG11	8:AH:60:ARG:HH12	1.57	0.70
25:BA:542:C:OP1	51:B5:16:ARG:NH2	2.24	0.70
35:BP:100:LEU:HD12	35:BP:112:LEU:HD11	1.72	0.70
25:DA:2483:C:N3	36:DQ:124:LYS:NZ	2.37	0.70
1:AA:509:A:OP2	61:AA:4088:HOH:O	2.09	0.70
1:AA:1027:C:O2'	1:AA:1034:G:N2	2.23	0.70
1:AA:1530:G:H2'	1:AA:1531:A:O4'	1.91	0.70
25:BA:667:G:H21	25:BA:671:A:H2	1.40	0.70
25:BA:1001:G:O6	61:BA:3865:HOH:O	2.07	0.70
27:BD:17:THR:O	27:BD:211:ARG:NH2	2.24	0.70
1:AA:476:G:H2'	1:AA:477:A:O4'	1.92	0.69
1:AA:1125:U:O2'	1:AA:1126:U:OP2	2.10	0.69
8:AH:14:ARG:NH2	8:AH:83:ILE:O	2.25	0.69
36:BQ:54:MET:HB3	36:BQ:64:ILE:HD11	1.73	0.69
2:CB:18:GLY:HA2	2:CB:42:ILE:HG13	1.73	0.69
15:CO:54:ARG:HD3	15:CO:58:MET:HE2	1.72	0.69
25:DA:587:C:OP2	35:DP:21:ARG:NH2	2.25	0.69
25:DA:2005:A:OP1	61:DA:4388:HOH:O	2.10	0.69
50:D4:64:GLY:C	50:D4:66:SER:H	1.99	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BQ:32:TYR:OH	36:BQ:111:GLU:OE1	2.10	0.69
42:BW:12:ILE:HD13	42:BW:17:VAL:HG13	1.74	0.69
25:DA:2327:A:H2'	25:DA:2328:A:C8	2.27	0.69
1:AA:673:G:H2'	1:AA:674:G:C8	2.27	0.69
30:BG:48:GLU:HA	30:BG:51:ARG:HE	1.57	0.69
1:CA:961:U:OP2	1:CA:1223:C:O2'	2.06	0.69
11:CK:98:LEU:O	11:CK:101:SER:OG	2.06	0.69
25:DA:82:G:N1	25:DA:103:A:OP2	2.22	0.69
25:DA:2595:G:N7	61:DA:4196:HOH:O	2.24	0.69
2:AB:15:VAL:HB	2:AB:209:ARG:HG2	1.73	0.69
3:AC:35:GLU:OE2	3:AC:59:ARG:NH2	2.24	0.69
5:AE:137:GLU:HG2	5:AE:140:ARG:HH11	1.57	0.69
25:BA:2732:G:OP2	61:BA:4644:HOH:O	2.10	0.69
1:CA:890:G:O2'	1:CA:906:G:O6	2.05	0.69
25:DA:1153:C:OP1	40:DU:92:ARG:NH1	2.25	0.69
25:DA:2682:U:OP2	61:DA:3806:HOH:O	2.09	0.69
1:AA:166:G:H2'	1:AA:167:G:H8	1.53	0.69
1:CA:610:G:O6	61:CA:4179:HOH:O	2.10	0.69
19:CS:42:PRO:HG3	50:D4:61:ARG:HG2	1.73	0.69
43:DX:65:ARG:HB2	43:DX:70:LEU:HG	1.75	0.69
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.93	0.69
13:AM:49:THR:HB	13:AM:52:GLU:H	1.57	0.69
1:CA:412:A:H8	4:CD:35:ARG:HH21	1.37	0.69
1:CA:1189:C:OP1	10:CJ:51:ARG:NH2	2.24	0.69
1:AA:59:A:H3'	1:AA:331:G:H22	1.57	0.69
30:BG:145:THR:OG1	30:BG:148:MET:SD	2.51	0.69
44:BY:102:CYS:SG	44:BY:103:GLY:N	2.65	0.69
1:CA:1153:C:H42	1:CA:1154:G:N2	1.87	0.69
2:CB:8:LYS:HD2	2:CB:48:MET:HG2	1.75	0.69
1:AA:812:C:N3	61:AA:4027:HOH:O	2.24	0.69
19:AS:27:GLU:HB3	19:AS:28:LYS:HB3	1.73	0.69
25:BA:777:C:OP2	61:BA:4590:HOH:O	2.10	0.69
25:BA:989:G:O3'	61:BA:4610:HOH:O	2.09	0.69
25:BA:1683:C:OP2	61:BA:4523:HOH:O	2.09	0.69
1:CA:46:G:O6	61:CA:4103:HOH:O	2.11	0.69
1:CA:1226:C:N4	13:CM:104:ARG:HG2	2.08	0.69
1:CA:1287:A:N3	1:CA:1353:G:O2'	2.23	0.69
12:CL:24:VAL:HG13	12:CL:98:TYR:HE1	1.58	0.69
18:CR:47:THR:HG23	18:CR:49:LYS:HG3	1.74	0.69
25:DA:323:G:HO2'	25:DA:1205:U:H3	1.36	0.69
25:DA:818:G:OP2	61:DA:3841:HOH:O	2.10	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DX:8:ILE:O	48:D2:36:ARG:NH2	2.25	0.69
4:AD:173:TRP:CZ3	4:AD:174:LEU:HG	2.27	0.69
6:AF:38:GLU:HB2	6:AF:64:GLN:HG2	1.75	0.69
15:AO:5:LYS:H	15:AO:5:LYS:HD2	1.56	0.69
42:DW:14:PRO:HG2	42:DW:78:GLU:HG2	1.73	0.69
3:AC:11:ARG:NH2	3:AC:177:THR:O	2.25	0.69
25:BA:1047:A:OP2	61:BA:3918:HOH:O	2.09	0.69
32:BI:40:THR:O	32:BI:44:LEU:HB2	1.93	0.69
1:CA:353:A:H5'	1:CA:353:A:H8	1.58	0.69
7:CG:108:ALA:HA	7:CG:111:ARG:HD2	1.74	0.69
25:DA:77:C:O2'	48:D2:14:ARG:NH2	2.26	0.69
25:DA:1607:C:N4	25:DA:1622:G:OP2	2.26	0.69
25:DA:2291:U:H2'	25:DA:2292:C:C6	2.27	0.69
25:DA:2748:A:H5'	31:DH:4:ILE:HD12	1.75	0.69
25:DA:2831:G:OP1	28:DE:58:ARG:NH2	2.23	0.69
35:DP:88:LEU:HD11	35:DP:114:ILE:HD12	1.74	0.69
36:DQ:81:VAL:HG12	46:D0:5:LYS:HD3	1.73	0.69
16:AP:43:LYS:HG2	16:AP:48:TRP:CD2	2.27	0.68
23:AX:6:G:H1	23:AX:67:C:N4	1.91	0.68
24:AW:1:2QZ:H11	24:AW:9:MVA:HG23	1.73	0.68
25:BA:611:U:H2'	25:BA:612:C:C6	2.28	0.68
1:CA:1493:A:H1'	25:DA:1913:A:H62	1.57	0.68
9:CI:53:VAL:C	9:CI:55:ALA:H	2.01	0.68
32:DI:4:ILE:HG12	32:DI:18:VAL:HG22	1.75	0.68
29:BF:8:GLN:NE2	29:BF:21:ALA:HB2	2.08	0.68
1:CA:346:G:OP1	39:DT:41:ARG:NH2	2.22	0.68
1:CA:437:U:H5'	4:CD:155:LEU:HD21	1.75	0.68
10:CJ:17:ASP:OD1	10:CJ:70:ARG:NH1	2.27	0.68
30:DG:16:ARG:O	30:DG:20:ILE:HG13	1.93	0.68
1:AA:1241:G:H1	1:AA:1296:C:H42	1.38	0.68
25:BA:1215:G:H2'	25:BA:1216:G:H5"	1.75	0.68
4:CD:153:ARG:HB2	4:CD:181:MET:HE2	1.75	0.68
9:CI:53:VAL:O	9:CI:55:ALA:N	2.25	0.68
25:DA:2570:G:O6	61:DA:4419:HOH:O	2.08	0.68
1:AA:974:A:OP2	14:AN:29:ARG:NH2	2.25	0.68
1:AA:1370:G:O6	61:AA:4060:HOH:O	2.10	0.68
1:CA:693:G:H2'	1:CA:694:A:C8	2.28	0.68
46:D0:27:GLU:HG3	46:D0:68:GLU:HA	1.75	0.68
25:BA:388:A:H2'	25:BA:389:G:C8	2.29	0.68
25:BA:1218:G:O2'	25:BA:1219:A:O4'	2.11	0.68
1:CA:382:A:H2'	1:CA:383:A:C8	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:664:G:P	18:CR:64:ARG:HH22	2.16	0.68
32:DI:104:GLN:O	32:DI:105:HIS:ND1	2.26	0.68
1:AA:56:U:H2'	1:AA:57:G:H8	1.57	0.68
25:DA:994:C:O2'	25:DA:996:A:OP1	2.10	0.68
25:DA:1352:U:OP2	61:DA:3761:HOH:O	2.11	0.68
25:DA:2589:A:OP1	61:DA:4066:HOH:O	2.11	0.68
15:AO:33:THR:HG21	15:AO:85:LEU:HD22	1.76	0.68
25:BA:808:A:N7	61:BA:3904:HOH:O	2.26	0.68
16:CP:1:MET:SD	16:CP:3:LYS:NZ	2.65	0.68
16:CP:52:ASP:O	16:CP:54:GLU:N	2.26	0.68
20:CT:49:ALA:HB3	20:CT:99:LEU:HD22	1.76	0.68
1:AA:577:G:OP1	61:AA:4090:HOH:O	2.12	0.68
1:CA:877:C:H5"	8:CH:88:LYS:HD3	1.74	0.68
1:CA:1025:U:N3	1:CA:1036:G:C6	2.62	0.68
1:CA:1251:A:O2'	1:CA:1369:C:O2'	2.04	0.68
4:CD:187:ARG:NH2	4:CD:193:ASP:OD2	2.26	0.68
25:BA:2101:U:O3'	47:B1:35:THR:OG1	2.11	0.68
5:CE:136:MET:HA	5:CE:139:LEU:HD12	1.75	0.68
19:CS:37:ARG:O	19:CS:70:LYS:NZ	2.22	0.68
25:DA:2445:G:OP1	29:DF:74:ARG:NH2	2.27	0.68
25:DA:2749:A:H1'	31:DH:63:SER:HB3	1.76	0.68
25:BA:1249:A:H2	25:BA:1287:A:H62	1.42	0.68
25:BA:2720:G:O6	61:BA:4017:HOH:O	2.12	0.68
46:B0:27:GLU:HG3	46:B0:68:GLU:HA	1.76	0.68
25:DA:131:G:OP1	61:DA:3772:HOH:O	2.12	0.68
25:DA:271(I):G:O6	25:DA:271(O):C:N4	2.17	0.68
25:DA:2592:G:N7	61:DA:3925:HOH:O	2.27	0.68
1:AA:452:A:H4'	16:AP:72:ARG:NH1	2.08	0.67
13:AM:2:ALA:N	13:AM:8:GLU:OE1	2.27	0.67
25:BA:809:U:H4'	25:BA:810:G:O5'	1.93	0.67
25:BA:880:U:O2	35:BP:55:ARG:NH2	2.27	0.67
25:BA:1356:G:OP2	53:B7:9:ARG:NH1	2.27	0.67
42:BW:14:PRO:HG2	42:BW:78:GLU:HG2	1.77	0.67
52:B6:13:CYS:SG	52:B6:47:THR:HG21	2.35	0.67
25:DA:1637:A:OP2	61:DA:4414:HOH:O	2.11	0.67
1:AA:503:C:OP2	12:AL:116:SER:HB3	1.93	0.67
25:BA:2008:A:OP1	61:BA:4270:HOH:O	2.11	0.67
25:BA:2324:U:H5'	30:BG:88:ILE:HD11	1.76	0.67
1:CA:646:U:H2'	1:CA:647:C:C6	2.29	0.67
10:CJ:78:ASN:O	10:CJ:80:LYS:N	2.28	0.67
19:CS:28:LYS:HB2	19:CS:29:ARG:HA	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2562:U:H1'	34:DO:23:ARG:HH11	1.59	0.67
25:DA:2819:G:N7	61:DA:4008:HOH:O	2.26	0.67
37:DR:88:ARG:NH2	37:DR:89:ASP:OD2	2.27	0.67
1:AA:165:C:H2'	1:AA:166:G:C8	2.30	0.67
25:BA:1476:C:H2'	25:BA:1477:U:H6	1.60	0.67
25:BA:2316:G:H22	25:BA:2324:U:H3	1.42	0.67
25:DA:1278:A:OP1	37:DR:36:THR:HG23	1.94	0.67
50:D4:62:ARG:O	50:D4:64:GLY:N	2.28	0.67
20:AT:16:HIS:O	20:AT:19:SER:OG	2.12	0.67
25:BA:1476:C:H2'	25:BA:1477:U:C6	2.29	0.67
26:DB:44:G:OP1	30:DG:98:ARG:NH2	2.26	0.67
6:AF:97:PHE:N	18:AR:30:ASP:OD1	2.24	0.67
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	1.76	0.67
29:BF:53:THR:HG22	29:BF:55:GLY:H	1.60	0.67
30:BG:38:VAL:HG22	30:BG:93:THR:HG23	1.76	0.67
1:CA:1502:A:H2	1:CA:1505:G:N1	1.93	0.67
50:D4:46:GLN:C	50:D4:48:ARG:H	2.02	0.67
25:BA:1310:G:OP1	51:B5:19:ARG:NH2	2.20	0.67
1:CA:766:A:OP2	61:CA:4024:HOH:O	2.13	0.67
1:CA:1262:C:N4	1:CA:1273:G:H1	1.92	0.67
25:DA:1845:G:OP1	27:DD:258:LYS:NZ	2.24	0.67
20:CT:16:HIS:O	20:CT:19:SER:OG	2.09	0.67
25:DA:192:C:OP1	61:DA:4352:HOH:O	2.11	0.67
25:DA:226:G:H21	25:DA:228:A:H62	1.41	0.67
25:BA:1199:C:OP2	61:BA:4476:HOH:O	2.12	0.67
31:BH:56:SER:OG	31:BH:57:ASP:N	2.26	0.67
25:DA:411:G:OP1	61:DA:3860:HOH:O	2.12	0.67
1:AA:383:A:C2	1:AA:384:G:H1'	2.29	0.67
32:BI:100:ALA:HA	32:BI:103:ARG:HG2	1.75	0.67
1:CA:376:G:H5"	16:CP:5:ARG:HD3	1.75	0.67
1:CA:585:G:OP1	17:CQ:37:LYS:NZ	2.25	0.67
28:DE:72:VAL:HG13	28:DE:73:GLU:O	1.95	0.67
1:AA:454:C:P	16:AP:75:ARG:HH22	2.18	0.67
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.30	0.67
25:BA:426:G:OP2	61:BA:4762:HOH:O	2.12	0.67
25:BA:611:U:OP2	61:BA:4159:HOH:O	2.13	0.67
25:BA:791:G:OP1	61:BA:4513:HOH:O	2.13	0.67
25:BA:2658:C:OP2	25:BA:2745:G:O2'	2.10	0.67
1:CA:8:A:C6	4:CD:209:ARG:HB2	2.29	0.67
1:CA:144:G:H1	1:CA:178:C:H42	1.42	0.67
26:DB:66:A:H61	26:DB:109:C:H5'	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:538:G:H5"	12:AL:114:LYS:HB2	1.76	0.66
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.30	0.66
2:AB:229:VAL:HG12	2:AB:230:VAL:H	1.60	0.66
6:AF:15:ASP:OD1	6:AF:18:GLN:N	2.19	0.66
10:AJ:78:ASN:O	10:AJ:80:LYS:N	2.28	0.66
25:BA:1889:G:N2	25:BA:1905:G:H2'	2.10	0.66
30:BG:41:GLN:NE2	30:BG:154:GLY:O	2.28	0.66
1:CA:586:C:O2'	1:CA:878:G:H4'	1.95	0.66
4:CD:31:CYS:SG	4:CD:33:MET:N	2.69	0.66
1:AA:1042:G:O2'	1:AA:1043:C:O4'	2.12	0.66
1:AA:1320:C:H5'	19:AS:70:LYS:HG3	1.75	0.66
25:BA:1044:C:OP1	61:BA:4478:HOH:O	2.12	0.66
28:BE:179:GLU:HB3	28:BE:181:LEU:HD22	1.76	0.66
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.76	0.66
12:CL:24:VAL:HG12	12:CL:27:LEU:HB2	1.76	0.66
19:CS:52:TYR:HB2	19:CS:57:HIS:CE1	2.29	0.66
9:AI:64:THR:HG23	9:AI:66:ARG:HH21	1.59	0.66
25:DA:601:C:OP1	29:DF:108:LYS:NZ	2.28	0.66
25:BA:778:C:OP2	61:BA:4590:HOH:O	2.13	0.66
25:BA:1067:A:H3'	25:BA:1067:A:C8	2.31	0.66
32:BI:93:THR:H	32:BI:96:ASP:CG	2.04	0.66
1:CA:1005:A:H1'	1:CA:1036:G:N1	2.08	0.66
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.60	0.66
4:CD:92:VAL:O	4:CD:96:LEU:HD22	1.95	0.66
25:DA:2049:G:OP2	61:DA:3943:HOH:O	2.13	0.66
36:DQ:97:VAL:HG11	36:DQ:103:MET:HE3	1.77	0.66
1:AA:243:A:H4'	1:AA:244:U:H5"	1.76	0.66
1:AA:573:A:OP2	61:AA:4004:HOH:O	2.13	0.66
2:AB:155:LEU:HD11	2:AB:159:PRO:HD3	1.76	0.66
25:BA:479:C:OP1	61:BA:4178:HOH:O	2.12	0.66
25:BA:2297:C:OP2	52:B6:6:ARG:NH1	2.28	0.66
7:CG:68:ASN:ND2	7:CG:127:ALA:O	2.22	0.66
25:DA:1017:G:N7	61:DA:4210:HOH:O	2.29	0.66
10:AJ:7:LYS:HB3	10:AJ:97:GLU:HB2	1.77	0.66
34:DO:35:VAL:HG11	34:DO:103:ALA:HB3	1.76	0.66
1:CA:256:U:OP1	17:CQ:17:LYS:NZ	2.29	0.66
1:CA:503:C:OP2	12:CL:116:SER:HB3	1.96	0.66
1:CA:837:G:H1	1:CA:849:C:N4	1.90	0.66
16:AP:43:LYS:HG2	16:AP:48:TRP:CE2	2.31	0.66
6:CF:24:GLU:HG3	6:CF:28:ARG:HH11	1.60	0.66
25:DA:2062:A:OP1	61:DA:3802:HOH:O	2.13	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2576:G:OP1	61:DA:4108:HOH:O	2.13	0.66
1:AA:392:G:H2'	1:AA:393:A:H8	1.61	0.66
14:AN:3:ARG:HB3	14:AN:3:ARG:HH21	1.61	0.66
25:BA:839:G:H5"	25:BA:840:A:H5'	1.77	0.66
25:BA:946:A:H2'	25:BA:947:A:C8	2.31	0.66
25:BA:946:A:H2'	25:BA:947:A:H8	1.60	0.66
25:BA:1405:A:N6	25:BA:1418:U:H3	1.93	0.66
25:BA:2601:A:OP2	61:BA:4455:HOH:O	2.13	0.66
2:CB:59:GLU:HG2	2:CB:63:MET:HE3	1.77	0.66
31:DH:28:GLY:HA3	31:DH:79:VAL:HB	1.78	0.66
30:DG:18:GLU:HG2	30:DG:175:LEU:HD21	1.78	0.66
36:DQ:11:LYS:NZ	36:DQ:88:GLY:O	2.17	0.66
39:DT:19:LEU:HD22	39:DT:86:ILE:HG13	1.78	0.66
50:D4:38:LYS:O	50:D4:40:HIS:N	2.27	0.66
1:AA:1125:U:C2	1:AA:1127:G:N7	2.64	0.65
1:AA:1502:A:H2	1:AA:1505:G:H1	1.43	0.65
25:BA:1077:G:H21	55:B9:36:GLN:HE22	1.43	0.65
35:BP:52:GLU:OE1	35:BP:55:ARG:NH1	2.27	0.65
25:DA:922:U:H2'	25:DA:923:C:C6	2.30	0.65
25:DA:2299:G:H22	25:DA:2318:G:H8	1.42	0.65
34:DO:2:ILE:HD12	34:DO:6:THR:HG21	1.77	0.65
1:AA:558:G:OP1	61:AA:4042:HOH:O	2.14	0.65
1:AA:1221:G:OP1	1:AA:1320:C:N4	2.30	0.65
25:BA:2308:U:OP2	38:BS:9:ARG:NH2	2.29	0.65
47:B1:21:ARG:HG2	47:B1:21:ARG:HH11	1.61	0.65
2:CB:163:PHE:HD1	2:CB:185:ILE:HG13	1.61	0.65
7:CG:111:ARG:NH1	7:CG:113:GLU:OE2	2.30	0.65
25:DA:900:A:H2'	25:DA:901:A:C8	2.31	0.65
25:DA:1299:G:O6	61:DA:3930:HOH:O	2.11	0.65
25:DA:1301:A:OP1	61:DA:4413:HOH:O	2.13	0.65
25:DA:2588:G:OP2	61:DA:3902:HOH:O	2.14	0.65
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.78	0.65
1:CA:1166:G:H1'	1:CA:1171:G:N2	2.10	0.65
1:CA:1273:G:H3'	1:CA:1274:G:C8	2.31	0.65
25:DA:994:C:OP1	40:DU:53:ARG:NH2	2.29	0.65
25:DA:2287:A:N6	25:DA:2344:U:H3	1.94	0.65
1:AA:827:U:H5"	1:AA:828:A:OP2	1.97	0.65
2:AB:201:ILE:HG21	2:AB:214:ILE:HG21	1.76	0.65
38:DS:35:ILE:HD11	38:DS:101:LEU:HD12	1.77	0.65
46:D0:10:THR:O	61:D0:103:HOH:O	2.14	0.65
25:BA:1067:A:H62	25:BA:1186:U:H3	1.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:132:PRO:HG2	27:BD:135:PHE:HD2	1.62	0.65
44:BY:92:ASN:HB3	44:BY:94:LYS:N	2.09	0.65
1:CA:444:C:H2'	1:CA:445:G:H8	1.61	0.65
25:DA:69:C:O2	25:DA:73:A:O2'	2.14	0.65
25:DA:1300:U:H4'	25:DA:1301:A:H5"	1.78	0.65
40:DU:78:THR:O	40:DU:117:GLN:NE2	2.29	0.65
1:AA:201:C:N4	1:AA:216:G:H1	1.84	0.65
1:AA:623:C:H2'	1:AA:624:C:H6	1.59	0.65
4:AD:149:ALA:HB3	4:AD:152:SER:HB2	1.79	0.65
8:AH:4:ASP:OD2	8:AH:85:ARG:NH1	2.25	0.65
38:BS:15:ARG:O	38:BS:19:LYS:HG2	1.96	0.65
45:BZ:111:VAL:C	45:BZ:113:ALA:H	2.03	0.65
48:B2:1:MET:N	48:B2:52:ASP:OD2	2.30	0.65
6:CF:25:ILE:HD13	6:CF:82:ARG:HE	1.61	0.65
30:DG:136:ARG:HH11	30:DG:137:GLU:H	1.45	0.65
1:AA:937:A:OP2	61:AA:4095:HOH:O	2.14	0.65
1:AA:1125:U:N3	1:AA:1127:G:C5	2.65	0.65
7:AG:152:ALA:HB1	7:AG:155:ARG:HH21	1.61	0.65
30:BG:16:ARG:NE	30:BG:31:VAL:HG11	2.12	0.65
34:BO:8:LEU:HB2	34:BO:19:ILE:HG13	1.78	0.65
1:CA:56:U:H2'	1:CA:57:G:C8	2.32	0.65
2:CB:162:ILE:HD11	2:CB:184:VAL:HG22	1.78	0.65
25:DA:10:G:H2'	25:DA:11:G:C8	2.31	0.65
25:DA:2394:C:OP2	54:D8:30:ARG:NH1	2.30	0.65
26:DB:76:G:N2	26:DB:101:G:O6	2.27	0.65
1:AA:1025:U:O2'	1:AA:1026:G:O4'	2.15	0.65
1:AA:1027:C:C2	1:AA:1034:G:N1	2.62	0.65
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.78	0.65
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.78	0.65
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.29	0.65
4:AD:182:LYS:HG2	4:AD:183:GLY:N	2.11	0.65
36:BQ:135:ASP:OD2	45:BZ:49:ARG:NH2	2.30	0.65
45:BZ:69:THR:HG22	45:BZ:90:VAL:HA	1.77	0.65
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.97	0.65
3:CC:78:GLY:HA3	3:CC:83:ARG:H	1.62	0.65
25:DA:75:G:H4'	48:D2:55:ARG:NH1	2.11	0.65
26:BB:48:A:H4'	38:BS:95:HIS:HD2	1.60	0.65
25:DA:1815:A:OP2	27:DD:54:ARG:NH2	2.28	0.65
34:DO:115:VAL:HG13	34:DO:121:VAL:HG21	1.78	0.65
1:AA:864:A:OP1	61:AA:4127:HOH:O	2.15	0.64
1:AA:1003:G:N2	1:AA:1038:C:N3	2.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:219:VAL:HA	2:AB:222:ILE:HG13	1.78	0.64
3:AC:181:ASN:ND2	3:AC:204:LEU:HD12	2.12	0.64
17:AQ:53:LEU:HD23	17:AQ:82:MET:HE1	1.78	0.64
25:BA:2579:G:H2'	25:BA:2580:C:C6	2.31	0.64
28:BE:4:ILE:HD13	28:BE:28:ALA:HB1	1.78	0.64
1:CA:148:G:H2'	1:CA:149:A:C8	2.30	0.64
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.33	0.64
2:CB:47:THR:O	2:CB:51:LEU:N	2.17	0.64
25:DA:963:U:OP1	61:DA:3744:HOH:O	2.14	0.64
61:DA:4601:HOH:O	46:D0:4:LYS:NZ	2.30	0.64
37:DR:36:THR:HG22	37:DR:37:THR:H	1.62	0.64
1:AA:983:A:H1'	1:AA:1049:U:O2	1.98	0.64
1:AA:1127:G:H1'	1:AA:1280:A:C6	2.32	0.64
4:AD:166:LYS:NZ	4:AD:179:GLU:OE2	2.30	0.64
9:AI:3:GLN:HG2	9:AI:20:ARG:HE	1.63	0.64
25:BA:878:G:OP1	61:BA:4601:HOH:O	2.14	0.64
54:B8:42:ARG:NH1	61:B8:5103:HOH:O	2.04	0.64
1:CA:38:G:H22	1:CA:397:A:H5"	1.62	0.64
1:CA:60:A:H4'	1:CA:61:G:O5'	1.97	0.64
1:CA:345:C:OP2	39:DT:39:ARG:NH2	2.29	0.64
1:CA:1004:A:C6	1:CA:1037:C:C2	2.85	0.64
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.79	0.64
25:DA:171:G:H2'	25:DA:172:C:C6	2.31	0.64
25:DA:607:U:OP1	29:DF:102:PRO:HA	1.97	0.64
25:DA:2472:G:N1	25:DA:2477:C:OP1	2.24	0.64
1:AA:1009:G:O6	1:AA:1020:U:O2	2.15	0.64
2:CB:16:HIS:CB	2:CB:204:ASN:HB3	2.21	0.64
4:CD:10:ARG:HB2	4:CD:40:PRO:HG3	1.78	0.64
25:DA:2630:G:H2'	25:DA:2631:G:H8	1.62	0.64
28:DE:47:VAL:HG11	28:DE:86:PRO:HD2	1.79	0.64
32:DI:110:ASP:N	32:DI:130:TYR:OH	2.24	0.64
35:DP:50:ARG:HH21	35:DP:50:ARG:HG3	1.62	0.64
50:D4:15:ILE:HB	50:D4:32:TYR:CD1	2.32	0.64
25:BA:1091:A:OP1	25:BA:1091:A:H4'	1.96	0.64
25:BA:1890:A:N6	25:BA:1905:G:O2'	2.30	0.64
1:CA:1002:G:H2'	1:CA:1003:G:C8	2.33	0.64
5:CE:78:HIS:HE1	5:CE:143:ARG:H	1.45	0.64
1:AA:833:U:H2'	1:AA:834:C:C6	2.32	0.64
1:AA:1224:G:O2'	1:AA:1322:C:OP1	2.16	0.64
23:AX:4:G:H1	23:AX:69:C:H42	1.44	0.64
25:BA:1475:G:H2'	25:BA:1476:C:C6	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1647:G:N7	61:BA:4116:HOH:O	2.30	0.64
1:CA:1122:U:O4	1:CA:1151:A:N1	2.30	0.64
2:CB:16:HIS:CG	2:CB:17:PHE:H	2.16	0.64
3:CC:12:LEU:HD23	3:CC:16:ARG:HB3	1.78	0.64
9:CI:23:ASN:H	9:CI:23:ASN:HD22	1.45	0.64
35:DP:121:LYS:HG2	35:DP:122:PRO:HD2	1.77	0.64
43:DX:44:GLU:OE2	61:DX:102:HOH:O	2.15	0.64
1:CA:147:G:HO2'	1:CA:148:G:H8	1.45	0.64
1:CA:404:U:H5'	4:CD:122:ARG:HD3	1.78	0.64
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.33	0.64
5:CE:50:GLU:HB2	5:CE:53:LEU:HD13	1.79	0.64
25:DA:286:C:H2'	25:DA:287:C:C6	2.32	0.64
25:DA:910:A:H62	36:DQ:12:GLN:HA	1.63	0.64
25:DA:1784:A:OP2	61:DA:4119:HOH:O	2.15	0.64
25:DA:2839:G:H5'	37:DR:46:GLY:HA2	1.79	0.64
42:DW:60:ASN:HD22	42:DW:60:ASN:N	1.95	0.64
10:AJ:11:PHE:HE1	10:AJ:67:THR:HG22	1.63	0.64
28:BE:128:SER:OG	28:BE:129:HIS:N	2.25	0.64
38:BS:59:LYS:HE3	38:BS:60:GLY:H	1.63	0.64
48:B2:16:LEU:O	48:B2:67:LYS:NZ	2.30	0.64
1:CA:406:G:H5'	4:CD:5:ILE:HD11	1.80	0.64
1:CA:1036:G:H5'	1:CA:1037:C:C6	2.32	0.64
15:CO:14:GLU:OE2	15:CO:84:LYS:NZ	2.31	0.64
1:AA:409:G:N2	1:AA:433:C:O2	2.31	0.64
1:AA:1129:C:H5"	9:AI:16:ARG:HH12	1.63	0.64
20:AT:10:LEU:HB3	20:AT:12:ALA:H	1.63	0.64
25:BA:2584:A:N7	28:BE:144:ARG:HD2	2.13	0.64
25:BA:2766:A:O2'	55:B9:15:LYS:NZ	2.30	0.64
1:CA:831:U:H3	1:CA:855:G:H1	1.45	0.64
15:CO:54:ARG:NH1	15:CO:58:MET:SD	2.71	0.64
25:DA:2316:C:O2'	30:DG:128:ARG:NH1	2.30	0.64
1:AA:1223:C:H5"	1:AA:1224:G:H5'	1.80	0.64
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.33	0.64
2:AB:7:VAL:HG11	2:AB:221:LEU:HD23	1.80	0.64
2:AB:78:GLN:NE2	2:AB:94:ASN:O	2.30	0.64
25:BA:1185:C:O3'	33:BN:25:ARG:NH1	2.30	0.64
25:BA:2507:G:H5"	36:BQ:82:ARG:HG2	1.79	0.64
35:BP:50:ARG:HD3	54:B8:7:HIS:CD2	2.33	0.64
1:CA:586:C:HO2'	1:CA:878:G:H4'	1.63	0.64
14:CN:48:ALA:HB2	14:CN:53:LEU:HD12	1.79	0.64
1:AA:1162:C:N4	1:AA:1174:G:H1	1.95	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:53:VAL:HG22	16:AP:79:VAL:HG22	1.79	0.63
25:BA:1067:A:H3'	25:BA:1067:A:H8	1.63	0.63
1:CA:735:C:H2'	1:CA:736:C:C6	2.32	0.63
1:CA:1142:G:H3'	1:CA:1143:G:C8	2.31	0.63
1:CA:1145:C:H4'	1:CA:1146:A:H5'	1.80	0.63
25:DA:1041:C:H42	25:DA:1114:G:H1	1.46	0.63
25:BA:1410:G:P	47:B1:3:LYS:HG3	2.39	0.63
27:BD:85:ASP:OD2	27:BD:88:ARG:NH1	2.31	0.63
1:CA:59:A:H3'	1:CA:331:G:H22	1.62	0.63
1:CA:1245:A:N6	1:CA:1292:U:H3	1.96	0.63
3:CC:52:LEU:HD23	3:CC:68:VAL:HG13	1.79	0.63
25:DA:323:G:H5'	29:DF:169:ASN:HD21	1.62	0.63
25:DA:903:C:H2'	25:DA:904:C:H6	1.62	0.63
25:DA:1688:U:O2	25:DA:1700:A:H5'	1.98	0.63
27:DD:132:PRO:HD3	27:DD:190:TYR:CZ	2.34	0.63
1:AA:154:C:N3	1:AA:168:G:N1	2.46	0.63
1:CA:1023:G:H3'	1:CA:1024:G:H8	1.62	0.63
7:CG:76:ARG:O	7:CG:87:VAL:N	2.28	0.63
1:AA:189:G:H1	1:AA:189(K):U:H3	1.45	0.63
25:BA:2804:C:H2'	25:BA:2805:G:C8	2.34	0.63
43:BX:53:LYS:HB3	43:BX:82:GLN:HB3	1.79	0.63
50:B4:28:LYS:HD3	50:B4:31:ILE:HD11	1.80	0.63
1:CA:460:G:O6	1:CA:470:C:H5"	1.98	0.63
1:CA:735:C:H2'	1:CA:736:C:H6	1.62	0.63
1:CA:1312:G:N7	19:CS:2:PRO:HG2	2.14	0.63
4:CD:13:ARG:NH1	4:CD:38:TYR:O	2.31	0.63
28:DE:72:VAL:HA	28:DE:73:GLU:HB3	1.80	0.63
50:D4:46:GLN:HG3	50:D4:48:ARG:HH21	1.62	0.63
25:BA:1219:A:H4'	25:BA:1220:U:OP1	1.97	0.63
25:DA:586:A:N1	25:DA:809:G:O2'	2.30	0.63
25:BA:1000:C:OP1	36:BQ:87:LYS:HE3	1.98	0.63
25:BA:1091:A:H1'	25:BA:1093:G:N3	2.13	0.63
25:BA:1829:U:H5'	27:BD:259:THR:HG22	1.79	0.63
27:BD:38:LYS:HE3	27:BD:39:LYS:O	1.98	0.63
1:CA:1119:C:H2'	1:CA:1120:G:C8	2.33	0.63
25:DA:601:C:O2'	29:DF:104:LYS:NZ	2.32	0.63
25:DA:1427:A:H4'	25:DA:1428:C:O5'	1.99	0.63
29:DF:13:SER:HA	29:DF:127:GLU:HG3	1.80	0.63
30:DG:43:LEU:HD12	30:DG:45:GLU:HG3	1.81	0.63
30:DG:101:ILE:HG22	30:DG:105:LYS:HE2	1.81	0.63
33:DN:38:HIS:CE1	33:DN:39:ARG:HG3	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:997:U:H3	1:AA:1044:A:H61	1.47	0.63
1:AA:1008:C:N4	1:AA:1021:G:H1	1.96	0.63
1:CA:964:A:N3	1:CA:969:A:O2'	2.30	0.63
1:CA:1129:C:H2'	1:CA:1139:G:N7	2.13	0.63
29:DF:150:GLY:HA2	29:DF:172:TRP:CE3	2.34	0.63
1:AA:552:U:C2'	1:AA:553:A:H5'	2.29	0.63
2:AB:60:ASP:OD1	2:AB:64:ARG:NE	2.32	0.63
25:BA:1897:C:H2'	25:BA:1898:A:O4'	1.98	0.63
25:BA:2405:A:H5'	35:BP:63:PRO:HB3	1.80	0.63
50:B4:46:GLN:HG2	50:B4:48:ARG:HG2	1.79	0.63
1:CA:222:U:H2'	1:CA:223:U:C6	2.34	0.63
1:CA:452:A:O2'	1:CA:453:A:OP2	2.15	0.63
1:CA:1042:G:O2'	1:CA:1043:C:O4'	2.17	0.63
3:CC:6:HIS:HB3	14:CN:49:HIS:ND1	2.14	0.63
5:CE:78:HIS:CE1	5:CE:142:LEU:HA	2.33	0.63
13:CM:60:VAL:HG22	13:CM:66:LEU:HD11	1.80	0.63
31:DH:113:VAL:HG11	31:DH:151:ILE:HD13	1.81	0.63
36:DQ:85:LYS:HD3	46:D0:7:LEU:HG	1.79	0.63
1:AA:929:G:H1	1:AA:1388:C:H42	1.47	0.63
1:CA:192:U:H2'	1:CA:193:C:H6	1.63	0.63
1:CA:1151:A:C5'	10:CJ:41:PRO:HA	2.29	0.63
1:CA:1236:A:O2'	1:CA:1304:G:H4'	1.99	0.63
25:DA:7:G:H2'	25:DA:8:A:C8	2.33	0.63
25:DA:2023:G:H5'	25:DA:2617:C:H4'	1.81	0.63
25:BA:2212:G:H2'	25:BA:2213:G:O4'	1.99	0.62
38:DS:77:ALA:HB1	38:DS:82:ILE:HB	1.81	0.62
45:DZ:19:ARG:NH1	45:DZ:84:GLU:O	2.32	0.62
1:AA:165:C:H2'	1:AA:166:G:H8	1.63	0.62
5:AE:74:GLY:HA3	5:AE:116:THR:HG22	1.82	0.62
7:AG:70:LYS:O	7:AG:138:LYS:NZ	2.30	0.62
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.81	0.62
2:CB:210:SER:O	2:CB:214:ILE:HG12	1.99	0.62
13:CM:60:VAL:HG23	13:CM:64:TRP:CE3	2.34	0.62
25:DA:1341:U:OP2	25:DA:1394:U:O2'	2.13	0.62
25:DA:1810:A:H2'	25:DA:1811:G:O4'	1.99	0.62
25:DA:2070:G:OP2	61:DA:4341:HOH:O	2.16	0.62
25:DA:2478:A:OP2	55:D9:2:LYS:NZ	2.24	0.62
40:DU:92:ARG:HA	40:DU:95:LEU:HB2	1.80	0.62
1:AA:986:A:H1'	19:AS:54:GLY:O	1.99	0.62
2:AB:210:SER:O	2:AB:214:ILE:HG12	1.99	0.62
25:BA:9:U:N3	25:BA:2641:A:H2	1.86	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1576:G:C6	25:BA:1577:C:N4	2.67	0.62
2:CB:9:GLU:HA	2:CB:48:MET:SD	2.40	0.62
25:DA:2206:G:H3'	25:DA:2207:G:N7	2.15	0.62
1:AA:457:C:H2'	1:AA:458:C:C6	2.34	0.62
1:AA:1036:G:H5'	1:AA:1037:C:C5	2.29	0.62
19:AS:52:TYR:HA	19:AS:56:GLN:O	2.00	0.62
40:BU:28:ARG:NH1	40:BU:38:THR:OG1	2.33	0.62
59:CX:101:FME:HCN	25:DA:2451:A:H2	1.63	0.62
25:DA:2273:A:H2'	25:DA:2274:A:C8	2.34	0.62
25:DA:2685:G:O6	61:DA:3899:HOH:O	2.14	0.62
23:AX:59:A:H2'	23:AX:60:U:H5'	1.80	0.62
25:BA:1466:U:O2'	25:BA:1467:G:OP1	2.16	0.62
32:BI:72:LEU:HD21	32:BI:107:VAL:HG11	1.80	0.62
44:BY:15:VAL:HG21	44:BY:42:VAL:HG11	1.82	0.62
1:CA:137:C:H42	1:CA:226:G:H1	1.47	0.62
6:CF:80:ARG:NH1	6:CF:88:VAL:O	2.32	0.62
25:DA:1005:C:H2'	25:DA:1006:C:C6	2.34	0.62
25:DA:2712(A):A:OP2	61:DA:3974:HOH:O	2.16	0.62
29:DF:21:ALA:CB	29:DF:22:ALA:HA	2.29	0.62
2:AB:51:LEU:HD23	2:AB:201:ILE:HD12	1.82	0.62
4:AD:18:LYS:HD2	4:AD:31:CYS:SG	2.40	0.62
25:BA:239:G:OP2	54:B8:13:ARG:NH2	2.33	0.62
1:CA:147:G:O2'	1:CA:148:G:O5'	2.17	0.62
25:DA:1358:G:O2'	25:DA:1359:A:H5"	1.99	0.62
25:DA:2364:C:OP1	46:D0:55:ARG:NH1	2.32	0.62
2:AB:78:GLN:O	2:AB:81:VAL:HG23	2.00	0.62
1:CA:17:U:H2'	1:CA:18:C:C6	2.34	0.62
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.80	0.62
1:CA:999:C:C4	1:CA:1042:G:C2	2.87	0.62
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.00	0.62
3:CC:47:LEU:HD12	3:CC:68:VAL:HG11	1.82	0.62
25:DA:96:G:H4'	48:D2:48:HIS:CD2	2.35	0.62
31:DH:30:LYS:HG3	31:DH:80:SER:O	2.00	0.62
25:BA:1566:U:H2'	25:BA:1567:G:O4'	2.00	0.62
27:BD:148:GLU:HB2	27:BD:151:LYS:HD2	1.82	0.62
1:CA:424:G:H2'	1:CA:425:G:H8	1.64	0.62
1:CA:1305:G:N2	1:CA:1331:G:H1'	2.15	0.62
29:DF:18:ARG:NH2	29:DF:127:GLU:OE1	2.33	0.62
1:AA:828:A:H2'	1:AA:829:G:O4'	2.00	0.62
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.35	0.62
12:AL:24:VAL:HG11	12:AL:27:LEU:HD22	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:87:LYS:O	20:AT:91:LEU:HG	2.00	0.62
25:BA:2101:U:OP1	47:B1:21:ARG:NH2	2.33	0.62
1:CA:1047:G:H1	1:CA:1210:C:N4	1.98	0.62
25:DA:754:C:H2'	25:DA:755:C:H6	1.64	0.62
25:DA:1766:U:H2'	25:DA:1767:C:H6	1.65	0.62
25:DA:2298:A:C6	25:DA:2321:G:N1	2.68	0.62
25:DA:2649:U:H2'	25:DA:2650:U:C6	2.35	0.62
1:CA:446:G:H1	1:CA:488:C:H42	1.48	0.62
1:CA:758:G:N7	61:CA:4151:HOH:O	2.31	0.62
25:DA:298:G:H5"	25:DA:299:A:OP1	2.00	0.62
25:DA:2079:U:O3'	47:D1:35:THR:OG1	2.17	0.62
1:AA:96:U:O2'	1:AA:97:G:H5'	2.00	0.61
1:AA:200:G:H5'	1:AA:201:C:OP2	2.00	0.61
1:AA:346:G:C6	1:AA:348:G:N2	2.66	0.61
1:AA:993:G:H1	1:AA:1045:C:H42	1.47	0.61
35:BP:121:LYS:HG2	35:BP:122:PRO:HD2	1.82	0.61
1:CA:152:A:N6	1:CA:169:C:N3	2.46	0.61
1:CA:504:C:OP1	61:CA:4009:HOH:O	2.16	0.61
1:CA:827:U:H5"	1:CA:828:A:OP2	1.99	0.61
9:CI:99:LEU:HB3	9:CI:101:PHE:HE1	1.65	0.61
10:CJ:42:THR:HG21	10:CJ:68:HIS:HD2	1.63	0.61
25:DA:302:C:H42	25:DA:315:G:H1	1.46	0.61
25:DA:483:A:O2'	44:DY:49:VAL:O	2.14	0.61
25:DA:1223:G:N2	25:DA:1226:A:OP2	2.31	0.61
35:DP:65:ARG:HG3	54:D8:25:MET:HG3	1.81	0.61
25:BA:1466:U:HO2'	25:BA:1467:G:P	2.22	0.61
31:BH:33:LEU:HD21	31:BH:136:ILE:HG13	1.82	0.61
48:B2:65:ASN:OD1	48:B2:69:ARG:NH1	2.31	0.61
1:CA:567:G:O2'	61:CA:4063:HOH:O	2.16	0.61
25:DA:880:G:N1	25:DA:898:C:O2	2.33	0.61
28:DE:73:GLU:O	28:DE:73:GLU:HG3	1.99	0.61
1:AA:839:U:O2'	1:AA:840:C:OP1	2.13	0.61
5:AE:76:ILE:HD12	5:AE:142:LEU:HD21	1.81	0.61
18:AR:42:ARG:HH21	18:AR:42:ARG:HA	1.65	0.61
3:CC:39:ILE:O	3:CC:43:LEU:HG	2.00	0.61
3:CC:114:PRO:O	3:CC:118:GLN:HG2	2.00	0.61
7:CG:113:GLU:CG	7:CG:119:ARG:HG2	2.30	0.61
13:CM:16:ASP:HB3	13:CM:34:LEU:HD11	1.81	0.61
26:DB:48:A:H2'	26:DB:49:C:C6	2.35	0.61
1:AA:159:G:HO2'	1:AA:161:A:N6	1.98	0.61
1:AA:487:A:H2'	1:AA:488:C:O4'	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:961:U:OP2	1:AA:1223:C:O2'	2.09	0.61
6:AF:97:PHE:HD2	18:AR:31:LEU:HD23	1.66	0.61
8:AH:121:ASP:HB2	8:AH:125:ARG:NH1	2.15	0.61
25:BA:2343:G:O2'	25:BA:2348:A:N1	2.28	0.61
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.34	0.61
2:CB:15:VAL:HG13	2:CB:209:ARG:HB3	1.82	0.61
25:DA:2312:U:C5	25:DA:2313:C:H5	2.19	0.61
28:DE:4:ILE:HD13	28:DE:28:ALA:HB1	1.81	0.61
1:AA:45:U:H2'	1:AA:46:G:C8	2.36	0.61
1:AA:183:G:O2'	1:AA:224:C:O2'	2.10	0.61
1:AA:520:A:N1	1:AA:536:C:H1'	2.16	0.61
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.81	0.61
20:AT:14:LYS:HG3	20:AT:17:ARG:NH2	2.16	0.61
25:BA:1378:G:OP1	61:BA:4469:HOH:O	2.16	0.61
1:CA:337:C:H2'	1:CA:338:A:C8	2.36	0.61
1:CA:1154:G:N7	1:CA:1155:G:C4	2.68	0.61
7:CG:50:ILE:HD11	7:CG:58:PRO:HA	1.81	0.61
25:DA:2537:U:H2'	25:DA:2538:C:C6	2.35	0.61
31:DH:159:GLU:HG3	31:DH:169:VAL:HG11	1.82	0.61
8:AH:49:GLU:HG2	8:AH:62:TYR:HE2	1.64	0.61
25:BA:554:A:H62	25:BA:2063:U:H3	1.48	0.61
25:BA:2348:A:H61	46:B0:43:THR:CG2	2.13	0.61
25:BA:2889:C:OP2	61:BA:4426:HOH:O	2.16	0.61
1:CA:683:G:H2'	1:CA:684:A:C8	2.35	0.61
1:CA:1154:G:N7	1:CA:1155:G:N9	2.49	0.61
5:CE:143:ARG:NH1	8:CH:77:GLU:OE1	2.33	0.61
19:CS:48:THR:HG22	19:CS:61:TYR:HA	1.83	0.61
25:DA:2299:G:N2	25:DA:2318:G:H8	1.99	0.61
36:DQ:34:LEU:HB2	36:DQ:118:LEU:HD22	1.82	0.61
1:AA:628:G:H2'	1:AA:629:G:H8	1.65	0.61
1:AA:833:U:H2'	1:AA:834:C:H6	1.65	0.61
25:BA:798:A:H5'	42:BW:90:ARG:HA	1.82	0.61
28:BE:103:ASP:OD2	28:BE:168:MET:HE2	2.01	0.61
33:BN:67:LEU:HD12	33:BN:87:LEU:HD13	1.83	0.61
52:B6:14:THR:HB	52:B6:48:VAL:O	2.01	0.61
1:CA:192:U:H2'	1:CA:193:C:C6	2.35	0.61
1:CA:539:A:H2'	1:CA:540:G:C8	2.35	0.61
25:DA:1379:A:H4'	25:DA:1380:G:OP2	1.99	0.61
25:DA:1557:C:OP2	25:DA:1558:A:O2'	2.18	0.61
25:DA:2584:U:O4	61:DA:3961:HOH:O	2.13	0.61
30:DG:16:ARG:HE	30:DG:31:VAL:HG11	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:601:C:O2	1:AA:637:G:N2	2.28	0.61
1:AA:924:C:O2'	1:AA:1502:A:N6	2.32	0.61
25:BA:572:A:N6	41:BV:19:LYS:H	1.99	0.61
25:BA:2830:A:OP1	37:BR:2:ARG:NH2	2.33	0.61
29:BF:51:THR:O	29:BF:93:LYS:NZ	2.29	0.61
1:CA:683:G:H2'	1:CA:684:A:H8	1.66	0.61
1:CA:1223:C:H5"	1:CA:1224:G:C5'	2.30	0.61
11:CK:22:HIS:HB3	11:CK:29:ILE:HB	1.82	0.61
25:DA:83:G:O2'	25:DA:102:G:N2	2.34	0.61
25:DA:903:C:H2'	25:DA:904:C:C6	2.35	0.61
25:DA:1359:A:N1	25:DA:1372:U:C4	2.69	0.61
27:DD:73:VAL:HG13	27:DD:120:GLY:HA3	1.83	0.61
25:BA:2062:C:H2'	25:BA:2063:U:O4'	2.01	0.61
28:BE:93:VAL:HG21	28:BE:180:ASN:HA	1.83	0.61
4:CD:79:PHE:HE1	4:CD:204:ILE:HD13	1.65	0.61
13:CM:107:ALA:HB3	13:CM:111:LYS:HE3	1.83	0.61
19:CS:28:LYS:HB2	19:CS:29:ARG:CA	2.31	0.61
25:DA:1509(B):A:H2'	25:DA:1510:G:C8	2.36	0.61
28:DE:93:VAL:O	28:DE:95:ILE:N	2.33	0.61
29:DF:53:THR:HG22	29:DF:56:GLU:HG3	1.83	0.61
29:DF:183:VAL:O	29:DF:187:VAL:HG23	2.01	0.61
30:DG:41:GLN:NE2	30:DG:154:GLY:O	2.34	0.61
45:DZ:39:VAL:HG21	45:DZ:44:PHE:HB2	1.83	0.61
47:D1:23:LYS:HB3	47:D1:29:GLY:HA3	1.83	0.61
1:AA:333:G:H4'	20:AT:16:HIS:CE1	2.36	0.61
1:AA:946:A:H2'	1:AA:947:G:C8	2.34	0.61
17:AQ:56:VAL:HB	17:AQ:78:GLU:HB3	1.83	0.61
25:BA:7:G:H2'	25:BA:8:A:O4'	2.01	0.61
34:BO:110:GLY:HA2	34:BO:112:MET:HE2	1.82	0.61
46:B0:53:MET:HG3	46:B0:59:LEU:HD23	1.82	0.61
1:CA:195:A:N3	1:CA:222:U:O2'	2.32	0.61
1:CA:1002:G:N2	1:CA:1039:C:N3	2.49	0.61
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.33	0.61
1:CA:1286:A:C8	1:CA:1287:A:H4'	2.36	0.61
8:CH:51:VAL:HG11	8:CH:60:ARG:HH12	1.64	0.61
25:DA:2723:C:OP2	28:DE:109:LYS:NZ	2.32	0.61
47:D1:5:CYS:SG	47:D1:8:SER:HB3	2.41	0.61
1:AA:664:G:H22	1:AA:741:G:H1	1.47	0.60
9:AI:4:TYR:CE1	9:AI:88:TYR:HA	2.36	0.60
48:B2:32:LEU:HD12	48:B2:36:ARG:HH11	1.66	0.60
50:B4:20:ASN:ND2	50:B4:36:CYS:SG	2.74	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:143:A:H5"	1:CA:144:G:H5'	1.82	0.60
1:CA:1442:G:O2'	1:CA:1442(A):G:OP1	2.15	0.60
3:CC:18:TRP:CD1	14:CN:54:PRO:HA	2.36	0.60
25:DA:370:G:OP1	25:DA:403:U:N3	2.32	0.60
30:DG:145:THR:HG23	30:DG:148:MET:HE3	1.83	0.60
49:D3:8:LEU:HD13	49:D3:31:LEU:HD23	1.83	0.60
1:AA:499:A:N3	1:AA:546:G:N2	2.46	0.60
1:AA:1228:C:OP1	13:AM:115:LYS:N	2.22	0.60
3:AC:6:HIS:HD2	3:AC:8:ILE:H	1.50	0.60
25:BA:801:C:H2'	25:BA:802:C:C6	2.37	0.60
25:BA:1093:G:H2'	25:BA:1156:G:N2	2.16	0.60
1:CA:1263:C:H2'	1:CA:1264:C:C6	2.36	0.60
1:AA:959:A:HO2'	1:AA:984:C:HO2'	1.49	0.60
1:AA:1144:G:N2	1:AA:1146:A:H62	1.99	0.60
3:AC:58:GLU:HB3	10:AJ:92:THR:HG21	1.81	0.60
25:BA:1016:C:OP2	61:BA:4636:HOH:O	2.16	0.60
25:BA:1480:A:N6	25:BA:1605:A:H62	1.98	0.60
1:CA:826:C:H2'	1:CA:827:U:C6	2.35	0.60
1:CA:1095:U:H2'	1:CA:1096:C:O4'	2.01	0.60
9:CI:21:PRO:HA	9:CI:59:PHE:HA	1.83	0.60
10:CJ:32:ALA:HB1	10:CJ:33:GLN:HA	1.82	0.60
17:CQ:22:LEU:HD13	17:CQ:41:LYS:HG3	1.83	0.60
25:DA:11:G:C2'	25:DA:12:U:H5'	2.31	0.60
45:DZ:45:ASP:OD1	45:DZ:49:ARG:NH1	2.34	0.60
1:AA:991:U:H1'	1:AA:993:G:C8	2.37	0.60
7:AG:27:ILE:HD12	7:AG:40:ALA:HA	1.82	0.60
30:BG:41:GLN:HG3	30:BG:60:LEU:HD11	1.81	0.60
33:BN:15:LEU:HD12	33:BN:137:LYS:HG2	1.83	0.60
1:CA:532:A:N6	3:CC:156:ARG:HH12	1.99	0.60
10:CJ:47:PHE:CZ	14:CN:37:PHE:HE1	2.20	0.60
20:CT:86:ARG:O	20:CT:90:GLN:HB2	2.01	0.60
25:DA:479:A:N3	25:DA:481:G:H5"	2.16	0.60
25:DA:1709:U:H2'	25:DA:1710:C:C6	2.37	0.60
25:DA:2886:G:O2'	25:DA:2887:U:H5'	2.02	0.60
35:DP:96:THR:H	35:DP:99:LEU:HD21	1.66	0.60
1:AA:123:C:OP1	1:AA:311:C:O2'	2.16	0.60
12:AL:24:VAL:HG12	12:AL:27:LEU:HB2	1.82	0.60
25:BA:1542:A:N3	25:BA:1624:C:O2'	2.29	0.60
1:CA:250:A:H4'	1:CA:251:G:O5'	2.02	0.60
1:CA:1240:U:O2'	7:CG:32:ARG:HD3	2.02	0.60
25:DA:1488:G:C5	25:DA:1489:U:C5	2.89	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1531:C:H42	25:DA:1538:G:H1	1.49	0.60
25:DA:1914:C:H2'	25:DA:1915:U:O4'	2.01	0.60
34:DO:68:GLU:HB3	34:DO:78:ARG:HB2	1.84	0.60
39:DT:95:ARG:HG2	39:DT:95:ARG:HH11	1.65	0.60
1:AA:443:C:N3	1:AA:491:G:N1	2.39	0.60
1:AA:890:G:O2'	1:AA:906:G:O6	2.14	0.60
1:AA:1025:U:H3	1:AA:1036:G:H1	1.49	0.60
25:BA:11:G:H2'	25:BA:12:U:H5'	1.82	0.60
25:BA:927:G:H1	25:BA:944:C:H42	1.50	0.60
25:BA:2340:A:H2'	25:BA:2341:G:C8	2.36	0.60
1:CA:192:U:O2'	1:CA:193:C:H5'	2.02	0.60
1:CA:1288:A:H2'	1:CA:1289:A:C8	2.36	0.60
38:DS:14:VAL:O	38:DS:18:ILE:HG12	2.01	0.60
38:DS:35:ILE:CD1	38:DS:101:LEU:HD12	2.32	0.60
1:AA:258:G:H2'	1:AA:259:G:H8	1.66	0.60
1:AA:474:G:H2'	1:AA:475:G:C8	2.31	0.60
1:AA:701:C:O2	1:AA:703:G:N1	2.35	0.60
16:AP:50:LYS:HE2	16:AP:50:LYS:HA	1.84	0.60
17:AQ:3:LYS:HD2	17:AQ:60:ILE:HD11	1.83	0.60
25:BA:1846:A:OP2	27:BD:54:ARG:NH2	2.33	0.60
34:BO:21:CYS:HB2	34:BO:39:ILE:HD12	1.83	0.60
44:BY:38:ILE:HD11	44:BY:66:PRO:HG3	1.83	0.60
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.82	0.60
1:AA:67:C:H2'	1:AA:68:G:C8	2.36	0.60
1:AA:364:A:H2'	1:AA:365:U:H6	1.66	0.60
3:AC:56:ASP:HB2	3:AC:67:THR:HB	1.82	0.60
45:BZ:151:HIS:C	45:BZ:153:SER:H	2.09	0.60
1:CA:1104:G:H5'	2:CB:111:ARG:HD2	1.82	0.60
1:CA:1138:G:C6	1:CA:1140:C:H1'	2.37	0.60
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.17	0.60
3:CC:150:LYS:HD2	3:CC:201:TYR:HD2	1.67	0.60
3:CC:155:GLY:HA3	3:CC:196:LEU:HD13	1.84	0.60
1:AA:1126:U:C5	10:AJ:71:LEU:HD22	2.34	0.60
7:AG:78:ARG:HG2	7:AG:79:ARG:HB2	1.83	0.60
15:AO:54:ARG:O	15:AO:58:MET:HG3	2.02	0.60
25:BA:1825:U:H2'	25:BA:1826:C:C6	2.36	0.60
40:BU:58:ARG:HA	40:BU:61:TRP:CE3	2.37	0.60
44:BY:86:ARG:HH11	44:BY:100:ALA:HB1	1.67	0.60
1:CA:1237:C:HO2'	1:CA:1300:G:H1	1.47	0.60
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.37	0.60
12:CL:24:VAL:HG11	12:CL:27:LEU:HD22	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1721:G:H8	25:DA:1741:A:H62	1.50	0.60
25:DA:1740:G:H2'	25:DA:1741:A:H8	1.66	0.60
26:DB:43:C:H5"	50:D4:1:MET:HG2	1.83	0.60
30:DG:44:GLY:O	30:DG:47:LYS:HB2	2.00	0.60
30:DG:63:ILE:HA	30:DG:143:GLU:HG3	1.83	0.60
1:AA:735:C:H2'	1:AA:736:C:H6	1.67	0.60
1:AA:1286:A:C8	1:AA:1287:A:H4'	2.37	0.60
1:AA:1422:G:H5"	34:BO:48:PRO:HB3	1.84	0.60
4:AD:158:ILE:O	4:AD:162:LEU:N	2.35	0.60
25:BA:692:C:H2'	25:BA:693:G:O4'	2.02	0.60
29:BF:183:VAL:O	29:BF:187:VAL:HG23	2.01	0.60
32:BI:3:VAL:HG12	32:BI:38:LEU:HA	1.83	0.60
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.37	0.60
30:DG:122:PRO:HG3	30:DG:180:PHE:HB3	1.84	0.60
31:DH:80:SER:OG	31:DH:81:GLU:N	2.32	0.60
1:AA:193:C:H2'	1:AA:194:C:H6	1.66	0.59
1:AA:994:A:N1	1:AA:1047:G:H4'	2.17	0.59
1:AA:1351:U:O4	9:AI:118:LYS:NZ	2.34	0.59
5:AE:78:HIS:CD2	5:AE:142:LEU:HD23	2.37	0.59
13:AM:15:VAL:O	13:AM:19:LEU:HD22	2.01	0.59
20:AT:42:GLN:NE2	20:AT:46:GLU:OE2	2.35	0.59
1:CA:1266:G:N2	1:CA:1269:A:OP2	2.33	0.59
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.36	0.59
5:CE:78:HIS:HE1	5:CE:142:LEU:HA	1.67	0.59
25:DA:957:A:H5'	36:DQ:76:LYS:HG3	1.84	0.59
25:DA:1889:A:H2'	25:DA:1890:A:C8	2.36	0.59
43:DX:12:VAL:HG22	43:DX:29:TRP:CE2	2.37	0.59
1:AA:518:C:O2'	1:AA:530:G:N2	2.35	0.59
5:AE:94:ALA:HB2	5:AE:119:LEU:HG	1.82	0.59
25:BA:1631:C:O2'	25:BA:1632:A:H5'	2.02	0.59
1:CA:1119:C:N3	1:CA:1154:G:O6	2.35	0.59
25:DA:184:C:H2'	25:DA:185:U:H6	1.67	0.59
28:DE:24:THR:HG22	28:DE:186:GLY:O	2.02	0.59
50:D4:68:ARG:HG3	50:D4:68:ARG:HH21	1.67	0.59
1:AA:110:C:O2'	16:AP:25:ARG:O	2.20	0.59
1:AA:192:U:HO2'	1:AA:193:C:H6	1.50	0.59
3:AC:3:ASN:N	3:AC:3:ASN:OD1	2.35	0.59
25:BA:589:U:H5"	35:BP:29:LYS:HE3	1.84	0.59
25:BA:1232:G:H5"	41:BV:81:TYR:CE1	2.37	0.59
25:BA:1463:C:O2'	25:BA:1633:A:N3	2.30	0.59
41:BV:40:LEU:HB2	41:BV:46:VAL:HG13	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BX:31:HIS:CD2	43:BX:33:LYS:HB2	2.36	0.59
3:CC:58:GLU:HB3	10:CJ:92:THR:HG21	1.84	0.59
18:CR:33:ASP:OD2	18:CR:36:ASN:HB2	2.01	0.59
25:DA:1470:G:H5"	25:DA:1471:A:OP1	2.02	0.59
25:DA:2821:A:H2'	25:DA:2822:G:C8	2.37	0.59
31:DH:41:MET:HE1	31:DH:54:ARG:HB3	1.84	0.59
45:DZ:140:ASP:OD1	45:DZ:142:SER:OG	2.17	0.59
1:AA:1442:G:O2'	1:AA:1442(A):G:OP1	2.17	0.59
8:AH:7:ALA:HB2	8:AH:85:ARG:HD2	1.85	0.59
25:BA:310:C:H2'	25:BA:311:C:C6	2.37	0.59
7:CG:78:ARG:HH21	7:CG:156:TRP:HB3	1.65	0.59
23:CX:10:G:N2	23:CX:26:G:H1'	2.18	0.59
25:DA:1031:G:H5"	55:D9:8:LYS:HE3	1.84	0.59
1:AA:17:U:H2'	1:AA:18:C:C6	2.37	0.59
1:AA:1025:U:C2	1:AA:1036:G:O6	2.55	0.59
1:AA:1271:G:H5"	1:AA:1314:C:OP1	2.03	0.59
1:AA:1442(A):G:C8	39:BT:118:ARG:HG2	2.38	0.59
25:BA:1827:U:H2'	25:BA:1828:C:C6	2.38	0.59
29:BF:8:GLN:HE21	29:BF:21:ALA:HB2	1.68	0.59
19:CS:49:ILE:HD12	19:CS:62:ILE:HD13	1.83	0.59
25:DA:2298:A:N1	25:DA:2321:G:C6	2.70	0.59
1:AA:78:G:H1	1:AA:92:C:H42	1.50	0.59
1:AA:159:G:O2'	1:AA:161:A:N6	2.26	0.59
1:AA:1216:G:OP1	14:AN:2:ALA:HA	2.03	0.59
19:AS:38:SER:HB2	19:AS:71:LEU:HD12	1.84	0.59
25:BA:1496:A:H5'	25:BA:1497:G:OP2	2.03	0.59
36:BQ:43:THR:HG22	36:BQ:94:VAL:HG12	1.85	0.59
1:CA:738:C:OP1	6:CF:2:ARG:NH1	2.36	0.59
1:CA:742:G:OP2	15:CO:35:ARG:NH2	2.36	0.59
1:CA:1138:G:C5	1:CA:1140:C:H1'	2.38	0.59
25:DA:1200:C:H5'	61:DA:3774:HOH:O	2.01	0.59
1:AA:626:U:H2'	1:AA:627:G:H8	1.67	0.59
4:AD:154:ASN:HA	4:AD:159:ARG:HH21	1.68	0.59
25:BA:709:G:H5"	35:BP:16:ARG:HG2	1.85	0.59
25:BA:945:A:O2'	25:BA:946:A:H8	1.85	0.59
25:BA:2450:U:O2'	25:BA:2452:C:OP1	2.21	0.59
35:BP:59:LEU:HD11	54:B8:10:ALA:HB2	1.83	0.59
45:BZ:151:HIS:O	45:BZ:153:SER:N	2.35	0.59
1:CA:1004:A:N7	1:CA:1037:C:H2'	2.18	0.59
1:CA:1409:C:O2	1:CA:1491:G:N2	2.27	0.59
7:CG:26:PHE:O	7:CG:30:ILE:HG13	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1020:A:N1	25:DA:1141:U:O2'	2.35	0.59
26:DB:9:G:H1	26:DB:112:U:H3	1.51	0.59
27:DD:132:PRO:HG2	27:DD:135:PHE:HD2	1.67	0.59
29:DF:126:VAL:HG21	29:DF:129:PHE:CZ	2.36	0.59
1:AA:42:G:O2'	1:AA:622:A:N1	2.32	0.59
1:AA:1030(D):A:H2'	1:AA:1031:G:O4'	2.03	0.59
25:BA:1201:A:OP1	40:BU:55:ARG:HD3	2.03	0.59
27:BD:26:LYS:HB3	27:BD:83:GLU:HG2	1.84	0.59
43:BX:88:LYS:NZ	43:BX:90:GLU:OE1	2.31	0.59
1:CA:1048:G:OP1	14:CN:3:ARG:NH2	2.35	0.59
1:CA:1279:A:H5"	1:CA:1280:A:OP1	2.02	0.59
1:CA:1288:A:H2'	1:CA:1289:A:H8	1.68	0.59
1:CA:1368:G:OP1	9:CI:111:ARG:NH2	2.36	0.59
2:CB:76:GLN:HB2	2:CB:208:ILE:HG12	1.84	0.59
23:CX:4:G:H1	23:CX:69:C:H42	1.51	0.59
25:DA:184:C:H1'	25:DA:217:G:H1'	1.85	0.59
25:DA:1256:G:H5'	25:DA:1257:C:OP2	2.01	0.59
25:DA:2404:C:O3'	35:DP:77:ARG:NH2	2.36	0.59
38:DS:71:ARG:NH2	38:DS:107:GLU:OE1	2.36	0.59
29:BF:53:THR:CG2	29:BF:55:GLY:H	2.15	0.59
39:BT:29:ARG:HG3	39:BT:46:GLU:HB2	1.84	0.59
1:CA:664:G:H22	1:CA:741:G:H1	1.51	0.59
1:AA:583:A:N6	1:AA:758:G:O2'	2.35	0.59
1:AA:1259:C:H42	1:AA:1276:G:H1	1.50	0.59
1:AA:1272:G:H2'	1:AA:1273:G:O4'	2.03	0.59
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HD23	1.84	0.59
59:AX:101:FME:HCN	25:BA:2463:A:H2	1.68	0.59
25:BA:639:G:O2'	61:BA:3869:HOH:O	2.17	0.59
29:BF:185:ASP:OD1	29:BF:188:ARG:NH1	2.34	0.59
54:B8:6:THR:HG22	54:B8:63:PRO:HD2	1.83	0.59
3:CC:43:LEU:HD21	3:CC:91:LEU:HD13	1.84	0.59
6:CF:69:GLU:O	6:CF:72:VAL:HG12	2.03	0.59
25:DA:1405:U:H2'	25:DA:1406:U:C6	2.38	0.59
25:DA:2189:U:H2'	25:DA:2190:G:C8	2.38	0.59
30:DG:16:ARG:HB2	30:DG:17:PRO:HD3	1.85	0.59
39:DT:59:THR:HG23	39:DT:78:LEU:HB2	1.85	0.59
41:DV:62:LEU:HD11	41:DV:95:LEU:HB2	1.85	0.59
45:DZ:6:LYS:HE2	45:DZ:43:GLU:OE1	2.03	0.59
50:D4:59:PHE:HA	50:D4:61:ARG:N	2.17	0.59
1:AA:552:U:H2'	1:AA:553:A:H5'	1.84	0.58
2:AB:145:LEU:HD12	2:AB:149:LEU:HD12	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:112:SER:O	3:AC:116:VAL:HG23	2.03	0.58
25:BA:1094:A:OP2	25:BA:1155:C:N4	2.29	0.58
2:CB:102:LEU:HD23	2:CB:182:ILE:HD12	1.85	0.58
4:CD:31:CYS:SG	4:CD:32:ALA:N	2.76	0.58
17:CQ:66:SER:O	17:CQ:70:ARG:NH1	2.36	0.58
25:DA:300:A:H1'	25:DA:319:C:H1'	1.83	0.58
25:DA:311:A:OP2	61:DA:4575:HOH:O	2.17	0.58
25:DA:2363:C:O2	46:D0:39:ARG:NH2	2.31	0.58
28:DE:143:ASN:HD22	28:DE:147:PRO:HD3	1.67	0.58
32:DI:77:LEU:HB3	32:DI:142:VAL:HG12	1.84	0.58
38:DS:11:LYS:O	38:DS:15:ARG:HG3	2.02	0.58
1:AA:560:U:O2'	1:AA:561:U:OP2	2.20	0.58
1:AA:713:G:H2'	1:AA:714:G:C8	2.38	0.58
27:BD:242:ARG:HG2	27:BD:246:PRO:HG3	1.84	0.58
1:CA:392:G:H2'	1:CA:393:A:H8	1.68	0.58
1:CA:474:G:H2'	1:CA:475:G:H8	1.68	0.58
25:DA:1614:A:OP1	61:DA:3881:HOH:O	2.17	0.58
26:DB:5:C:H42	26:DB:116:G:H1	1.50	0.58
30:DG:39:ILE:HG23	30:DG:157:ILE:HG12	1.85	0.58
36:DQ:18:LYS:O	36:DQ:98:LYS:NZ	2.24	0.58
1:AA:501:C:H1'	1:AA:549:C:H1'	1.85	0.58
13:AM:122:LYS:HD3	13:AM:123:ALA:H	1.67	0.58
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.19	0.58
20:AT:30:LYS:HA	20:AT:33:ILE:HD12	1.86	0.58
25:BA:294:C:H42	25:BA:390:G:H1	1.50	0.58
25:BA:1221:G:H1'	25:BA:1222:A:O5'	2.03	0.58
26:BB:64:C:O2'	61:BB:4001:HOH:O	2.17	0.58
54:B8:62:LEU:HB3	54:B8:65:GLU:HG2	1.85	0.58
1:CA:79:G:H1	1:CA:90:U:H3	1.50	0.58
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.04	0.58
1:CA:1128:C:H1'	1:CA:1147:C:H42	1.67	0.58
1:CA:1376:U:H2'	1:CA:1377:A:H8	1.68	0.58
9:CI:6:GLY:HA3	9:CI:80:GLY:O	2.03	0.58
25:DA:236:C:H2'	25:DA:237:C:H6	1.66	0.58
25:DA:1014:U:H2'	25:DA:1015:G:H8	1.69	0.58
31:DH:169:VAL:HG12	31:DH:171:LEU:HD22	1.86	0.58
33:DN:102:ALA:O	33:DN:106:MET:HG3	2.03	0.58
1:AA:520:A:O2'	12:AL:73:GLU:OE1	2.15	0.58
2:AB:231:GLU:HB3	2:AB:232:PRO:CD	2.33	0.58
3:AC:130:VAL:HG21	3:AC:157:ILE:HG23	1.85	0.58
20:AT:86:ARG:O	20:AT:90:GLN:NE2	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2331:G:H22	38:BS:3:ARG:HE	1.50	0.58
27:BD:132:PRO:HG2	27:BD:135:PHE:CD2	2.39	0.58
1:CA:444:C:O2	1:CA:490:G:N2	2.17	0.58
1:CA:1491:G:H3'	1:CA:1492:A:C8	2.38	0.58
2:CB:48:MET:HA	2:CB:51:LEU:HB2	1.86	0.58
4:CD:15:GLU:OE2	4:CD:66:ARG:NH1	2.35	0.58
25:DA:662:G:OP1	61:DA:4092:HOH:O	2.16	0.58
26:DB:95:C:H2'	26:DB:96:U:C6	2.38	0.58
39:DT:26:ASP:OD1	39:DT:120:ARG:NH2	2.30	0.58
1:AA:396:G:O2'	1:AA:398:C:OP1	2.13	0.58
1:AA:737:A:H2'	1:AA:738:C:C6	2.38	0.58
1:AA:738:C:H2'	1:AA:739:C:H6	1.69	0.58
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.04	0.58
1:AA:1239:A:H62	1:AA:1299:A:N6	2.02	0.58
5:AE:12:LEU:HB3	5:AE:31:LEU:HB2	1.86	0.58
5:AE:110:LEU:HD13	5:AE:118:ILE:HG21	1.84	0.58
25:BA:536:U:OP2	61:BA:4619:HOH:O	2.17	0.58
25:BA:776:G:H4'	25:BA:810:G:H5'	1.85	0.58
48:B2:32:LEU:HD23	48:B2:53:LEU:HB3	1.85	0.58
1:CA:999:C:N4	1:CA:1043:C:N3	2.51	0.58
1:CA:999:C:N3	1:CA:1042:G:C2	2.72	0.58
1:CA:1002:G:H1	1:CA:1038:C:H42	0.72	0.58
1:CA:1223:C:P	19:CS:78:ARG:HH21	2.26	0.58
2:CB:16:HIS:HB2	2:CB:204:ASN:CB	2.24	0.58
11:CK:99:GLN:HG2	11:CK:105:VAL:HG21	1.85	0.58
25:DA:500:G:N1	25:DA:503:A:OP2	2.36	0.58
25:DA:571:A:N6	25:DA:2499:C:O3'	2.36	0.58
25:DA:2393:A:H5"	35:DP:63:PRO:HB3	1.85	0.58
35:DP:97:PRO:HD3	35:DP:126:VAL:O	2.04	0.58
25:BA:1199:C:OP1	40:BU:92:ARG:NH1	2.37	0.58
25:BA:2299:A:N6	25:BA:2356:U:H3	2.00	0.58
25:BA:2514:G:OP2	61:BA:4400:HOH:O	2.17	0.58
1:CA:664:G:H5"	18:CR:64:ARG:NH2	2.19	0.58
1:CA:959:A:HO2'	1:CA:984:C:HO2'	1.47	0.58
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.39	0.58
14:CN:6:LEU:HB3	14:CN:23:ARG:NH2	2.19	0.58
25:DA:784:A:C5	27:DD:229:VAL:HG21	2.38	0.58
25:DA:1025:G:O2'	61:DA:4221:HOH:O	1.99	0.58
25:DA:1359:A:N6	25:DA:1372:U:H3	2.01	0.58
25:DA:2772:C:H2'	25:DA:2773:C:H6	1.68	0.58
28:DE:167:VAL:HG11	28:DE:189:PRO:HD3	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DZ:108:PRO:HG3	45:DZ:141:VAL:HB	1.85	0.58
5:AE:145:LYS:O	5:AE:149:GLU:HG2	2.04	0.58
18:AR:40:LEU:HD22	18:AR:70:ILE:HG12	1.86	0.58
25:BA:325:G:OP2	44:BY:84:ARG:NH2	2.36	0.58
25:BA:346:A:OP1	29:BF:168:ARG:HD2	2.04	0.58
25:BA:1003:U:O2	26:BB:90:A:O2'	2.21	0.58
25:BA:1360:C:OP1	61:BA:4469:HOH:O	2.16	0.58
25:BA:1779:G:H8	25:BA:1779:G:H5"	1.68	0.58
1:CA:543:C:C2'	1:CA:544:G:H5'	2.33	0.58
25:DA:2693:A:H2'	25:DA:2694:G:H8	1.68	0.58
28:DE:103:ASP:OD2	28:DE:168:MET:HE2	2.04	0.58
32:DI:77:LEU:HD21	32:DI:101:LEU:HA	1.86	0.58
12:AL:59:ARG:HD3	24:AW:1:2QZ:OG1	2.04	0.58
25:BA:326:C:OP2	44:BY:73:ARG:NH2	2.36	0.58
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.03	0.58
2:CB:189:ASP:HB3	2:CB:204:ASN:HA	1.85	0.58
3:CC:152:ILE:HG23	3:CC:199:LYS:HB2	1.86	0.58
8:CH:49:GLU:HG2	8:CH:62:TYR:HE2	1.68	0.58
27:DD:71:ASP:CB	27:DD:103:ARG:HH22	2.17	0.58
41:DV:5:VAL:HG11	41:DV:57:VAL:HG21	1.86	0.58
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.38	0.58
25:BA:231:G:C8	54:B8:5:LYS:HG2	2.39	0.58
25:BA:1261:G:P	40:BU:12:ARG:HH21	2.27	0.58
38:BS:10:ARG:O	38:BS:14:VAL:HG13	2.04	0.58
25:DA:847:U:OP2	61:DA:3962:HOH:O	2.16	0.58
25:DA:900:A:H2'	25:DA:901:A:H8	1.68	0.58
25:DA:2630:G:H2'	25:DA:2631:G:C8	2.38	0.58
2:AB:16:HIS:CB	2:AB:204:ASN:HB3	2.31	0.58
25:BA:1086:C:H2'	25:BA:1087:C:O4'	2.04	0.58
25:BA:1985:U:H4'	25:BA:1986:G:OP1	2.03	0.58
31:BH:40:GLU:OE2	31:BH:60:ARG:NH1	2.37	0.58
35:BP:1:MET:HE3	35:BP:5:ASP:HB2	1.85	0.58
1:CA:147:G:O2'	1:CA:148:G:H8	1.87	0.58
1:CA:192:U:C2'	1:CA:193:C:H5'	2.34	0.58
1:CA:433:C:H2'	1:CA:434:U:H6	1.68	0.58
25:DA:839:U:H2'	25:DA:840:C:C6	2.39	0.58
25:DA:2802:G:H2'	25:DA:2803:C:O4'	2.04	0.58
33:DN:15:LEU:HB2	33:DN:135:PRO:HB2	1.85	0.58
40:DU:66:ASN:O	40:DU:70:ARG:HG3	2.04	0.58
1:AA:33:A:H2'	1:AA:34:C:C6	2.39	0.57
1:AA:991:U:O2'	1:AA:992:U:OP2	2.21	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:999:C:H2'	1:AA:1000:U:O4'	2.04	0.57
6:AF:89:MET:HE1	18:AR:72:ARG:HB3	1.86	0.57
10:AJ:8:LEU:HB2	10:AJ:70:ARG:HB2	1.86	0.57
25:BA:988:U:OP2	61:BA:4599:HOH:O	2.17	0.57
26:BB:76:G:N2	26:BB:101:G:O6	2.30	0.57
32:BI:4:ILE:HG12	32:BI:18:VAL:HG22	1.85	0.57
1:CA:662:G:O2'	1:CA:836:G:OP1	2.21	0.57
1:CA:953:G:H5'	1:CA:965:A:H61	1.69	0.57
2:CB:71:VAL:HG23	2:CB:164:VAL:HA	1.85	0.57
5:CE:137:GLU:HA	5:CE:140:ARG:HB3	1.85	0.57
23:CX:73:A:H5"	23:CX:74:C:H5'	1.86	0.57
25:DA:579:G:H2'	25:DA:580:C:C6	2.38	0.57
25:DA:854:G:H2'	25:DA:855:G:H8	1.69	0.57
25:DA:1796:U:H2'	25:DA:1797:C:C6	2.38	0.57
1:AA:44:G:C2	1:AA:45:U:H1'	2.39	0.57
1:AA:272:C:H2'	1:AA:273:A:H8	1.69	0.57
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.68	0.57
8:AH:40:ALA:HA	8:AH:45:ILE:HG13	1.87	0.57
25:BA:1525:G:O2'	25:BA:1605:A:N1	2.35	0.57
25:BA:1825:U:H2'	25:BA:1826:C:H6	1.69	0.57
25:BA:1864:U:O2'	25:BA:1991:A:N1	2.32	0.57
25:BA:1925:G:OP1	27:BD:241:PRO:HB2	2.04	0.57
25:BA:2457:G:OP1	29:BF:74:ARG:NH2	2.37	0.57
47:B1:21:ARG:HG2	47:B1:21:ARG:NH1	2.18	0.57
1:CA:45:U:H2'	1:CA:46:G:C8	2.39	0.57
1:CA:715:A:H2'	1:CA:716:A:C8	2.39	0.57
1:CA:1182:G:H4'	1:CA:1183:A:H3'	1.86	0.57
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.03	0.57
3:CC:98:ASN:N	3:CC:98:ASN:OD1	2.37	0.57
4:CD:18:LYS:NZ	4:CD:31:CYS:SG	2.77	0.57
8:CH:21:LYS:O	8:CH:65:TYR:OH	2.20	0.57
9:CI:121:ARG:NH1	9:CI:122:ALA:O	2.36	0.57
11:CK:34:ASP:HB3	11:CK:40:ILE:HD11	1.85	0.57
19:CS:64:GLU:HB2	50:D4:59:PHE:CE1	2.39	0.57
28:DE:119:ARG:HB3	28:DE:120:TRP:CD1	2.39	0.57
33:DN:4:TYR:CD2	40:DU:100:VAL:HG11	2.39	0.57
38:DS:99:LYS:HE2	38:DS:103:GLU:OE2	2.03	0.57
48:D2:10:LEU:HD22	48:D2:14:ARG:NH1	2.19	0.57
28:BE:111:ARG:HG3	28:BE:160:TYR:CD2	2.39	0.57
44:BY:6:HIS:H	44:BY:6:HIS:CD2	2.21	0.57
1:CA:900:A:H2'	1:CA:901:A:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1427:U:H2'	1:CA:1428:A:C8	2.39	0.57
7:CG:153:HIS:CE1	11:CK:58:PRO:HD2	2.39	0.57
25:DA:333:G:H5"	25:DA:334:C:OP2	2.04	0.57
25:DA:1032:A:H2	25:DA:1122:G:H22	1.51	0.57
25:DA:2336:A:H61	46:D0:43:THR:CG2	2.17	0.57
46:D0:24:LYS:HE2	46:D0:24:LYS:HA	1.87	0.57
1:AA:392:G:H2'	1:AA:393:A:C8	2.38	0.57
1:AA:954:G:H21	1:AA:1227:A:H62	1.53	0.57
25:BA:1211:U:H2'	25:BA:1212:C:C6	2.39	0.57
30:BG:102:PHE:HE1	30:BG:141:PHE:HE2	1.52	0.57
19:CS:41:VAL:HB	19:CS:44:MET:HG3	1.87	0.57
25:DA:2639:A:OP2	61:DA:3812:HOH:O	2.16	0.57
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.39	0.57
5:AE:50:GLU:HB2	5:AE:53:LEU:HD13	1.86	0.57
25:BA:606:G:OP2	40:BU:10:ARG:NH1	2.37	0.57
25:BA:1091:A:OP1	25:BA:1092:A:H3'	2.04	0.57
30:BG:131:TYR:HB3	30:BG:159:VAL:HG13	1.86	0.57
40:BU:105:VAL:HG11	41:BV:39:LEU:HD21	1.85	0.57
50:B4:62:ARG:C	50:B4:64:GLY:HA2	2.30	0.57
1:CA:59:A:H5"	1:CA:60:A:H5"	1.85	0.57
1:CA:487:A:H2'	1:CA:488:C:O4'	2.05	0.57
1:CA:623:C:H2'	1:CA:624:C:H6	1.69	0.57
1:CA:1305:G:H5'	21:CU:4:GLY:HA3	1.87	0.57
3:CC:140:ARG:NH1	3:CC:140:ARG:HB2	2.19	0.57
5:CE:10:MET:HG2	5:CE:13:ILE:HD11	1.86	0.57
8:CH:29:SER:HB3	8:CH:32:LYS:HG3	1.86	0.57
9:CI:116:LYS:HA	9:CI:123:PRO:HD3	1.86	0.57
20:CT:56:MET:HE2	20:CT:84:LEU:HD22	1.86	0.57
25:DA:898:C:H2'	25:DA:899:A:O4'	2.05	0.57
50:D4:68:ARG:HH21	50:D4:68:ARG:CG	2.16	0.57
1:AA:342:C:N3	1:AA:343:U:H5	2.03	0.57
10:AJ:20:ALA:HA	10:AJ:23:ILE:HG22	1.87	0.57
25:BA:296:U:H2'	25:BA:297:C:C6	2.39	0.57
25:BA:586:G:OP2	61:BA:4474:HOH:O	2.16	0.57
27:BD:108:PRO:HG3	27:BD:143:HIS:CE1	2.39	0.57
36:BQ:51:ARG:HD3	36:BQ:66:ILE:HD11	1.87	0.57
1:CA:1007:C:N4	1:CA:1022:G:C6	2.72	0.57
1:CA:1154:G:N7	1:CA:1155:G:C8	2.73	0.57
25:DA:867:C:O2	25:DA:913:U:H5'	2.05	0.57
25:DA:1038:C:N4	25:DA:1117:G:H1	2.01	0.57
25:DA:1292:U:H2'	25:DA:1293:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1430:C:H2'	25:DA:1431:U:C6	2.40	0.57
1:AA:877:C:H5"	8:AH:88:LYS:HD3	1.87	0.57
1:AA:1007:C:O2	1:AA:1022:G:N1	2.32	0.57
25:BA:1261:G:OP2	40:BU:12:ARG:NH2	2.37	0.57
25:BA:1660:A:OP1	25:BA:1663:C:N4	2.32	0.57
50:B4:63:TYR:N	50:B4:64:GLY:HA2	2.19	0.57
1:CA:947:G:O3'	13:CM:109:THR:OG1	2.22	0.57
1:CA:1217:C:H2'	1:CA:1218:C:O4'	2.05	0.57
1:CA:1269:A:N1	1:CA:1312:G:O2'	2.30	0.57
25:DA:83:G:OP2	44:DY:95:LYS:NZ	2.31	0.57
25:DA:601:C:O2	25:DA:605:C:H4'	2.04	0.57
25:DA:855:G:H2'	25:DA:856:C:C6	2.40	0.57
25:DA:2000:G:N7	61:DA:4010:HOH:O	2.33	0.57
25:DA:2680:C:H1'	28:DE:187:ALA:HB1	1.86	0.57
29:DF:129:PHE:CD2	29:DF:163:VAL:HG21	2.40	0.57
32:DI:40:THR:O	32:DI:44:LEU:HB2	2.04	0.57
1:AA:1241:G:H1	1:AA:1296:C:N4	2.00	0.57
1:AA:1270:C:C2'	1:AA:1271:G:H5'	2.35	0.57
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.86	0.57
7:AG:42:ILE:HG23	7:AG:117:ALA:HA	1.87	0.57
12:AL:117:ARG:HB3	12:AL:122:THR:HB	1.87	0.57
25:BA:8:A:H2'	25:BA:9:U:H6	1.70	0.57
25:BA:1778:G:H2'	25:BA:1779:G:H5"	1.86	0.57
36:BQ:16:ARG:HG2	36:BQ:18:LYS:HE2	1.87	0.57
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.19	0.57
25:DA:116:C:H2'	25:DA:117:G:O4'	2.04	0.57
25:DA:1291:C:H2'	25:DA:1292:U:C6	2.40	0.57
25:DA:1314:C:OP1	61:DA:4078:HOH:O	2.18	0.57
36:DQ:135:ASP:OD2	45:DZ:49:ARG:NH2	2.38	0.57
43:DX:44:GLU:O	43:DX:48:LYS:N	2.38	0.57
1:AA:102:G:H2'	1:AA:103:C:C6	2.40	0.57
1:AA:545:C:H5'	4:AD:72:GLU:HG2	1.87	0.57
1:AA:1369:C:H2'	1:AA:1370:G:H8	1.69	0.57
4:AD:172:PRO:HB2	4:AD:187:ARG:NH2	2.20	0.57
25:BA:721:G:H1'	29:BF:74:ARG:HD3	1.87	0.57
25:BA:1405:A:N1	25:BA:1418:U:O4	2.38	0.57
32:BI:48:GLU:HG2	32:BI:52:ARG:HH22	1.69	0.57
38:BS:3:ARG:HE	38:BS:4:LEU:H	1.52	0.57
1:CA:426:G:OP1	4:CD:36:ARG:NH1	2.36	0.57
3:CC:6:HIS:HD2	3:CC:8:ILE:H	1.51	0.57
20:CT:56:MET:HE1	20:CT:85:MET:HA	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DF:101:LEU:HD12	29:DF:102:PRO:HD2	1.86	0.57
19:AS:9:VAL:HG21	50:B4:61:ARG:HH22	1.70	0.57
25:BA:278:G:H2'	25:BA:279:G:H5"	1.87	0.57
27:BD:71:ASP:CB	27:BD:103:ARG:HH22	2.15	0.57
32:BI:72:LEU:C	32:BI:74:ASN:H	2.13	0.57
1:CA:1327:C:H2'	1:CA:1328:C:H6	1.70	0.57
2:CB:137:ARG:O	2:CB:141:GLU:N	2.33	0.57
12:CL:75:HIS:HA	12:CL:102:ARG:HH22	1.69	0.57
13:CM:108:ARG:CZ	13:CM:114:ARG:HG2	2.34	0.57
25:DA:491:G:H2'	25:DA:492:A:C8	2.40	0.57
25:DA:754:C:H2'	25:DA:755:C:C6	2.40	0.57
36:DQ:24:GLY:HA2	36:DQ:67:ARG:NH2	2.20	0.57
1:AA:458:C:H2'	1:AA:460:G:C8	2.40	0.56
1:AA:1138:G:C6	1:AA:1140:C:H1'	2.39	0.56
10:AJ:35:SER:CB	10:AJ:73:ASP:HB2	2.31	0.56
25:BA:801:C:H2'	25:BA:802:C:H6	1.69	0.56
25:BA:1940:A:O2'	25:BA:1942:C:N4	2.38	0.56
32:BI:65:ALA:HB1	32:BI:136:VAL:HG11	1.87	0.56
32:BI:72:LEU:O	32:BI:74:ASN:N	2.37	0.56
1:CA:5:U:H5'	1:CA:6:G:C5	2.40	0.56
1:CA:1003:G:C6	1:CA:1004:A:C2	2.93	0.56
1:CA:1023:G:H3'	1:CA:1024:G:C8	2.38	0.56
25:DA:600:G:N3	61:DA:3736:HOH:O	2.32	0.56
25:DA:1364:G:OP2	47:D1:3:LYS:HG3	2.05	0.56
30:DG:25:TYR:HB3	30:DG:30:GLU:HB2	1.87	0.56
31:DH:41:MET:HE2	31:DH:65:HIS:HA	1.86	0.56
1:AA:1327:C:OP2	21:AU:12:LYS:NZ	2.37	0.56
4:AD:119:GLN:HG2	4:AD:123:HIS:CD2	2.39	0.56
4:AD:173:TRP:CE3	4:AD:174:LEU:HG	2.39	0.56
24:AW:8:2R3:H65	24:AW:10:2QY:CE1	2.35	0.56
25:BA:2092:G:N3	61:BA:3833:HOH:O	2.32	0.56
25:BA:2510:C:OP2	61:BA:4508:HOH:O	2.18	0.56
46:B0:24:LYS:O	46:B0:25:ARG:NH1	2.33	0.56
50:B4:61:ARG:HG3	50:B4:62:ARG:N	2.21	0.56
1:CA:727:G:N2	1:CA:730:G:OP2	2.36	0.56
1:CA:1218:C:OP2	14:CN:9:LYS:NZ	2.34	0.56
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.30	0.56
31:DH:86:GLU:CD	31:DH:130:ARG:HD3	2.29	0.56
45:DZ:130:PRO:O	45:DZ:133:ILE:HG13	2.05	0.56
1:AA:146:G:N2	1:AA:176:C:O2	2.31	0.56
1:AA:161:A:H2'	1:AA:162:A:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:605:U:H2'	1:AA:606:G:C8	2.40	0.56
1:AA:1064:G:H4'	1:AA:1065:U:OP1	2.03	0.56
25:BA:407:U:OP1	61:BA:4096:HOH:O	2.17	0.56
25:BA:1830:G:O2'	27:BD:181:GLU:OE2	2.15	0.56
25:BA:2847:G:H21	37:BR:45:ARG:HH12	1.53	0.56
25:BA:2897:U:H2'	25:BA:2898:C:C6	2.40	0.56
31:BH:56:SER:HB3	31:BH:61:HIS:ND1	2.20	0.56
53:B7:33:ARG:NH2	61:B7:4001:HOH:O	2.38	0.56
1:CA:975:A:N1	10:CJ:48:THR:HB	2.20	0.56
9:CI:9:ARG:O	9:CI:104:ARG:HG3	2.06	0.56
10:CJ:6:ILE:O	10:CJ:71:LEU:HD12	2.04	0.56
25:DA:271(E):U:H2'	25:DA:271(F):C:C6	2.40	0.56
25:DA:1271:G:OP2	61:DA:4114:HOH:O	2.18	0.56
25:DA:1514:U:H2'	25:DA:1515:G:H8	1.70	0.56
25:DA:1636:C:H2'	25:DA:1637:A:C8	2.40	0.56
25:DA:2293:C:H42	25:DA:2339:G:H1	1.53	0.56
25:DA:2397:G:N2	25:DA:2420:C:H1'	2.20	0.56
25:DA:2887:U:H2'	25:DA:2888:C:C6	2.41	0.56
28:DE:52:LEU:O	28:DE:76:ARG:N	2.25	0.56
34:DO:71:ARG:NE	34:DO:105:GLU:OE2	2.36	0.56
51:D5:41:PRO:O	51:D5:44:THR:OG1	2.23	0.56
3:AC:181:ASN:HD21	3:AC:204:LEU:HD12	1.69	0.56
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.05	0.56
25:BA:2899:C:H2'	25:BA:2900:G:O4'	2.05	0.56
25:BA:2902:G:O2'	25:BA:2903:G:OP2	2.22	0.56
33:BN:58:ASP:OD1	33:BN:58:ASP:N	2.34	0.56
43:BX:92:LEU:C	43:BX:94:GLY:H	2.13	0.56
1:CA:78:G:H2'	1:CA:79:G:H5'	1.87	0.56
1:CA:410:G:H5"	1:CA:411:A:OP1	2.05	0.56
1:CA:920:U:H2'	1:CA:921:U:C6	2.41	0.56
1:CA:1179:A:H4'	9:CI:103:THR:HA	1.87	0.56
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.39	0.56
10:CJ:55:LYS:HG3	10:CJ:56:HIS:CD2	2.40	0.56
19:CS:41:VAL:HG12	19:CS:43:GLU:H	1.70	0.56
25:DA:184:C:H2'	25:DA:185:U:C6	2.40	0.56
25:DA:819:A:OP2	25:DA:1187:G:N2	2.30	0.56
25:DA:1656:C:H2'	25:DA:1657:C:H6	1.71	0.56
28:DE:13:ARG:HG2	39:DT:58:ASN:HD21	1.70	0.56
1:AA:1030:C:H3'	1:AA:1030(A):G:H4'	1.87	0.56
25:BA:469:A:H1'	25:BA:1246:C:O4'	2.04	0.56
51:B5:16:ARG:O	51:B5:20:ARG:HG3	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:509:A:C8	1:CA:509:A:H3'	2.40	0.56
1:CA:1179:A:C6	1:CA:1180:A:C8	2.94	0.56
1:CA:1179:A:N1	1:CA:1180:A:C8	2.74	0.56
1:CA:1327:C:H2'	1:CA:1328:C:C6	2.41	0.56
1:CA:1493:A:H1'	25:DA:1913:A:N6	2.21	0.56
2:CB:51:LEU:HD23	2:CB:201:ILE:HD12	1.87	0.56
7:CG:107:ALA:O	7:CG:111:ARG:HG3	2.05	0.56
25:DA:1028:A:H2'	25:DA:1029:A:C8	2.40	0.56
42:DW:78:GLU:OE1	42:DW:99:ARG:NH1	2.36	0.56
45:DZ:8:TYR:HB2	45:DZ:38:TYR:CE2	2.41	0.56
1:AA:600:C:H2'	1:AA:601:C:C6	2.41	0.56
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.70	0.56
4:AD:65:ARG:HG2	4:AD:75:PHE:CD1	2.40	0.56
25:BA:147:U:O4	61:BA:4548:HOH:O	2.16	0.56
25:BA:251:A:O2'	25:BA:457:G:O2'	2.23	0.56
25:BA:2332:A:N3	25:BA:2332:A:H2'	2.20	0.56
1:CA:859:A:OP2	1:CA:869:G:N2	2.39	0.56
1:CA:1226:C:H4'	19:CS:80:TYR:OH	2.06	0.56
8:CH:51:VAL:HG12	8:CH:52:ASP:N	2.19	0.56
8:CH:51:VAL:HG21	8:CH:60:ARG:HB2	1.88	0.56
25:DA:539:G:H2'	25:DA:540:C:C6	2.41	0.56
25:DA:2336:A:H61	46:D0:43:THR:HG21	1.69	0.56
25:DA:2590:A:OP2	27:DD:238:GLY:HA2	2.05	0.56
38:DS:37:ALA:HB2	38:DS:101:LEU:HD11	1.88	0.56
43:DX:59:VAL:N	43:DX:76:ARG:O	2.34	0.56
1:AA:187:C:H2'	1:AA:188:C:H6	1.70	0.56
1:AA:974:A:OP2	14:AN:41:ARG:NH1	2.39	0.56
1:AA:1010:G:N2	1:AA:1020:U:O2'	2.39	0.56
1:AA:1197:G:OP1	61:AA:4053:HOH:O	2.17	0.56
19:AS:23:ASN:HA	19:AS:27:GLU:CD	2.31	0.56
25:BA:144:C:H5'	43:BX:2:LYS:HE2	1.86	0.56
25:BA:1296:G:N7	35:BP:18:ARG:NH2	2.54	0.56
1:CA:826:C:H2'	1:CA:827:U:H6	1.71	0.56
1:CA:1036:G:N7	1:CA:1037:C:C2	2.74	0.56
1:CA:1154:G:C8	1:CA:1155:G:C8	2.93	0.56
3:CC:179:ARG:NH1	3:CC:206:GLU:OE1	2.39	0.56
23:CX:23:C:H2'	23:CX:24:U:C6	2.40	0.56
25:DA:443:A:H5"	25:DA:444:C:OP1	2.06	0.56
25:DA:455:C:N3	25:DA:472:A:H2'	2.20	0.56
25:DA:894:C:H2'	25:DA:895:U:C6	2.41	0.56
25:DA:1025:G:C4	25:DA:1135:C:H1'	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1755:A:OP2	39:DT:113:LYS:NZ	2.38	0.56
25:DA:1774:C:OP1	61:DA:3938:HOH:O	2.18	0.56
25:DA:2816:C:O3'	37:DR:99:LYS:NZ	2.37	0.56
1:AA:1002:G:H3'	1:AA:1003:G:H8	1.71	0.56
1:AA:1223:C:H5"	1:AA:1224:G:C5'	2.35	0.56
25:BA:843:C:H2'	25:BA:844:C:C6	2.41	0.56
25:BA:985:G:OP1	61:BA:4727:HOH:O	2.18	0.56
25:BA:2860:A:OP2	25:BA:2876:U:H5	1.88	0.56
1:CA:1004:A:H2'	1:CA:1005:A:H5'	1.88	0.56
1:CA:1422:G:H5"	34:DO:48:PRO:HB3	1.86	0.56
16:CP:6:LEU:HD23	16:CP:17:TYR:CG	2.40	0.56
30:DG:179:PRO:HB2	50:D4:42:PHE:HE1	1.70	0.56
35:DP:38:GLN:O	35:DP:39:LYS:HB3	2.05	0.56
50:D4:15:ILE:N	50:D4:31:ILE:O	2.28	0.56
52:D6:13:CYS:SG	52:D6:47:THR:HG21	2.45	0.56
1:AA:78:G:N2	1:AA:92:C:N3	2.54	0.56
1:AA:134:A:H61	16:AP:25:ARG:NH1	2.04	0.56
1:AA:1494:G:HO2'	25:BA:1934:A:HO2'	1.54	0.56
26:BB:50:G:H5"	38:BS:61:ASN:HD22	1.71	0.56
1:CA:560:U:O2'	1:CA:561:U:OP2	2.20	0.56
1:CA:1269:A:C8	1:CA:1270:C:H1'	2.41	0.56
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.06	0.56
9:CI:85:LEU:HB3	9:CI:92:TYR:CD2	2.41	0.56
10:CJ:57:LYS:HD2	10:CJ:60:ARG:HH21	1.69	0.56
25:DA:437:G:H2'	25:DA:438:G:H8	1.70	0.56
25:DA:887:A:H5'	25:DA:888:C:OP1	2.05	0.56
25:DA:2203:U:O4'	27:DD:151:LYS:HE2	2.06	0.56
28:DE:119:ARG:HD2	28:DE:120:TRP:CE2	2.41	0.56
28:DE:163:GLU:HG2	28:DE:164:ARG:N	2.20	0.56
1:AA:269:C:H2'	1:AA:270:A:C8	2.41	0.56
1:AA:447:G:H2'	1:AA:485:G:N2	2.21	0.56
1:AA:920:U:H2'	1:AA:921:U:C6	2.41	0.56
12:AL:70:ILE:HD13	12:AL:77:LEU:HD12	1.86	0.56
25:BA:436:C:OP1	61:BA:3960:HOH:O	2.18	0.56
25:BA:2877:G:OP2	39:BT:119:LYS:NZ	2.39	0.56
29:BF:101:LEU:HD12	29:BF:102:PRO:HD2	1.86	0.56
45:BZ:152:ALA:HA	45:BZ:155:LEU:HD22	1.87	0.56
52:B6:12:GLU:OE2	52:B6:52:VAL:HG21	2.06	0.56
1:CA:838:G:H1	1:CA:848:C:N4	2.01	0.56
1:CA:1119:C:H2'	1:CA:1120:G:H8	1.71	0.56
1:CA:1190:G:OP1	3:CC:5:ILE:N	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:271(H):G:H2'	25:DA:271(I):G:H8	1.71	0.56
25:DA:443:A:H1'	25:DA:1201:C:O4'	2.06	0.56
25:DA:1778:U:H2'	25:DA:1784:A:N6	2.21	0.56
25:DA:2708:G:H1'	37:DR:71:GLN:HE22	1.70	0.56
27:DD:3:VAL:HG13	27:DD:17:THR:HB	1.86	0.56
35:DP:59:LEU:O	54:D8:13:ARG:HD2	2.06	0.56
48:D2:32:LEU:HD23	48:D2:53:LEU:HB3	1.87	0.56
1:AA:376:G:O3'	16:AP:5:ARG:NH2	2.39	0.55
1:AA:691:G:H2'	1:AA:692:U:C6	2.41	0.55
4:AD:57:ARG:NH2	5:AE:107:ARG:HD3	2.21	0.55
19:AS:36:ARG:HB3	19:AS:72:GLY:HA3	1.86	0.55
1:CA:552:U:C2'	1:CA:553:A:H5'	2.37	0.55
1:CA:1492:A:H2'	1:CA:1493:A:H1'	1.87	0.55
2:CB:188:ALA:HB1	2:CB:192:SER:OG	2.05	0.55
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.88	0.55
7:CG:146:GLU:OE2	7:CG:149:ARG:NE	2.39	0.55
9:CI:33:PHE:HE1	9:CI:43:ALA:HB1	1.70	0.55
20:CT:10:LEU:HD23	20:CT:12:ALA:HB2	1.87	0.55
25:DA:247:G:H4'	25:DA:386:G:C5	2.41	0.55
25:DA:2079:U:OP1	47:D1:21:ARG:NH2	2.38	0.55
55:D9:13:LYS:HD3	55:D9:28:GLU:OE2	2.06	0.55
1:AA:342:C:C4	1:AA:343:U:H5	2.24	0.55
3:AC:36:ASP:HA	3:AC:39:ILE:HD12	1.89	0.55
20:AT:45:GLN:HA	20:AT:91:LEU:HB3	1.88	0.55
23:AX:59:A:C2'	23:AX:60:U:H5'	2.36	0.55
25:BA:2879:G:H2'	25:BA:2880:C:O4'	2.07	0.55
28:BE:59:VAL:HG21	28:BE:74:PRO:HB3	1.88	0.55
3:CC:140:ARG:HB2	3:CC:140:ARG:CZ	2.37	0.55
23:CX:40:C:H2'	23:CX:41:C:H6	1.71	0.55
25:DA:839:U:H2'	25:DA:840:C:H6	1.70	0.55
25:DA:1709:U:H2'	25:DA:1710:C:H6	1.71	0.55
25:DA:1833:U:O2'	25:DA:1969:A:N1	2.31	0.55
37:DR:97:VAL:HG22	37:DR:114:VAL:HG22	1.87	0.55
1:AA:232:G:H1'	1:AA:262:A:N1	2.22	0.55
2:AB:16:HIS:HB3	2:AB:210:SER:CB	2.35	0.55
5:AE:36:ASP:OD1	5:AE:38:GLN:N	2.29	0.55
7:AG:78:ARG:HH21	7:AG:156:TRP:HB3	1.70	0.55
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.88	0.55
9:AI:19:LEU:HB3	9:AI:59:PHE:HD2	1.70	0.55
13:AM:3:ARG:HG3	13:AM:4:ILE:H	1.71	0.55
25:BA:310:C:H2'	25:BA:311:C:H6	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1248:G:OP2	25:BA:1249:A:O2'	2.19	0.55
30:BG:66:GLN:HG2	50:B4:1:MET:HE3	1.88	0.55
47:B1:65:SER:OG	47:B1:66:HIS:ND1	2.27	0.55
1:CA:937:A:H1'	1:CA:1379:G:N2	2.21	0.55
5:CE:78:HIS:CE1	5:CE:143:ARG:H	2.23	0.55
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.89	0.55
25:DA:190:A:OP2	47:D1:39:LYS:HE3	2.06	0.55
25:DA:271(Q):G:H2'	25:DA:271(R):G:H8	1.71	0.55
1:AA:491:G:H2'	1:AA:492:G:O4'	2.06	0.55
1:AA:1346:A:N1	1:AA:1374:A:H5"	2.22	0.55
6:AF:69:GLU:OE1	6:AF:69:GLU:N	2.38	0.55
7:AG:113:GLU:HG2	7:AG:119:ARG:HG2	1.87	0.55
25:BA:2108:U:H2'	25:BA:2109:G:C8	2.42	0.55
25:BA:2116:G:OP1	32:BI:22:LYS:HD2	2.06	0.55
33:BN:67:LEU:O	33:BN:88:GLU:HG3	2.06	0.55
47:B1:51:VAL:HG11	47:B1:74:VAL:HG21	1.87	0.55
10:CJ:8:LEU:HD12	10:CJ:20:ALA:HB2	1.88	0.55
11:CK:18:ARG:NH2	11:CK:35:PRO:O	2.39	0.55
1:AA:102:G:O2'	1:AA:151:A:N3	2.38	0.55
1:AA:310:G:OP2	16:AP:27:LYS:NZ	2.40	0.55
1:AA:628:G:H2'	1:AA:629:G:C8	2.41	0.55
19:AS:9:VAL:HG21	50:B4:61:ARG:HH12	1.71	0.55
25:BA:868:A:O2'	25:BA:991:G:OP2	2.20	0.55
25:BA:2211:U:H2'	25:BA:2212:G:H5'	1.88	0.55
25:BA:2623:U:H5'	25:BA:2623:U:H6	1.71	0.55
1:CA:457:C:H2'	1:CA:458:C:H6	1.71	0.55
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.41	0.55
7:CG:106:GLN:O	7:CG:110:GLN:HG3	2.05	0.55
10:CJ:30:SER:O	10:CJ:81:THR:HG23	2.07	0.55
14:CN:26:ARG:HB3	14:CN:43:CYS:SG	2.46	0.55
19:CS:27:GLU:HG2	19:CS:47:HIS:NE2	2.21	0.55
25:DA:956:G:H5"	25:DA:956:G:H8	1.72	0.55
25:DA:984:A:H5"	25:DA:985:C:H5	1.70	0.55
31:DH:26:VAL:HG12	31:DH:79:VAL:HG11	1.89	0.55
1:AA:757:U:OP1	1:AA:822:C:O2'	2.22	0.55
25:BA:1541:A:H2'	25:BA:1542:A:C8	2.42	0.55
25:BA:1712:A:H4'	34:BO:67:LYS:HB2	1.87	0.55
38:BS:59:LYS:CE	38:BS:60:GLY:H	2.19	0.55
1:CA:537:G:H5"	12:CL:113:ARG:NH1	2.22	0.55
1:CA:1004:A:C8	1:CA:1005:A:H4'	2.38	0.55
1:CA:1005:A:O2'	1:CA:1006:C:OP1	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1653:G:H3'	37:DR:2:ARG:HD3	1.89	0.55
25:DA:2343:C:HO2'	25:DA:2373:G:HO2'	1.53	0.55
39:DT:24:PRO:HA	39:DT:49:VAL:HG22	1.89	0.55
1:AA:382:A:C2	1:AA:383:A:N7	2.75	0.55
1:AA:1110:A:OP2	61:AA:4115:HOH:O	2.18	0.55
1:AA:1182:G:C4'	1:AA:1183:A:H5'	2.37	0.55
10:AJ:5:ARG:NE	10:AJ:73:ASP:OD1	2.39	0.55
11:AK:20:TYR:CZ	11:AK:83:ILE:HD12	2.42	0.55
16:AP:28:ARG:HG2	16:AP:29:ASP:OD1	2.07	0.55
25:BA:139:A:C8	25:BA:1454:C:O2'	2.57	0.55
25:BA:599:U:H2'	25:BA:600:G:C8	2.42	0.55
25:BA:1220:U:OP1	25:BA:1222:A:N6	2.40	0.55
25:BA:1223:C:H2'	25:BA:1224:C:H6	1.72	0.55
25:BA:2299:A:H2	25:BA:2358:A:H62	1.53	0.55
25:BA:2348:A:H61	46:B0:43:THR:HG21	1.71	0.55
35:BP:82:GLY:HA2	35:BP:113:LYS:O	2.07	0.55
1:CA:418:C:H2'	1:CA:419:C:C6	2.41	0.55
1:CA:1133:G:H1	1:CA:1141:C:N4	2.05	0.55
1:CA:1245:A:H2'	1:CA:1246:C:O4'	2.06	0.55
16:CP:3:LYS:HZ2	16:CP:65:GLN:HB2	1.72	0.55
17:CQ:45:HIS:HA	17:CQ:69:LYS:HE3	1.87	0.55
41:DV:16:PRO:HD3	41:DV:99:ILE:HD11	1.89	0.55
1:AA:78:G:H1	1:AA:92:C:N4	2.05	0.55
1:AA:192:U:O2'	1:AA:193:C:H6	1.90	0.55
1:AA:1030(B):C:H2'	1:AA:1030(C):G:H5'	1.88	0.55
6:AF:22:GLU:OE2	6:AF:82:ARG:HG2	2.07	0.55
19:AS:38:SER:O	19:AS:70:LYS:HD3	2.06	0.55
25:BA:272:U:OP1	32:BI:50:ARG:NH2	2.38	0.55
25:BA:676:G:OP1	54:B8:19:SER:OG	2.23	0.55
25:BA:945:A:O2'	25:BA:946:A:O5'	2.17	0.55
25:BA:2820:A:N6	25:BA:2900:G:O2'	2.38	0.55
1:CA:392:G:H2'	1:CA:393:A:C8	2.41	0.55
1:CA:1160:G:H22	1:CA:1176:A:H2	1.55	0.55
5:CE:100:VAL:O	5:CE:107:ARG:NH2	2.40	0.55
18:CR:40:LEU:HB3	18:CR:79:LEU:HD11	1.89	0.55
25:DA:1469:A:H2'	25:DA:1470:G:O4'	2.07	0.55
25:DA:2286:A:H4'	25:DA:2287:A:O4'	2.06	0.55
37:DR:87:TYR:OH	37:DR:117:VAL:O	2.24	0.55
42:DW:65:LEU:HD12	42:DW:68:ARG:HE	1.71	0.55
44:DY:43:ASN:CG	44:DY:65:ALA:HB3	2.31	0.55
1:AA:129:U:H5'	17:AQ:3:LYS:HZ1	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.41	0.55
1:AA:1492:A:H5"	1:AA:1493:A:OP2	2.06	0.55
12:AL:70:ILE:HG12	12:AL:100:ILE:HD12	1.89	0.55
25:BA:354:A:H2	25:BA:1255:A:O2'	1.90	0.55
25:BA:1775:C:H6	25:BA:1775:C:H5"	1.72	0.55
25:BA:2396:G:OP2	46:B0:55:ARG:NH1	2.40	0.55
39:BT:16:ARG:NH1	39:BT:18:ASP:OD2	2.40	0.55
41:BV:98:GLU:OE2	41:BV:100:ARG:NH1	2.40	0.55
1:CA:839:U:O2'	1:CA:840:C:OP1	2.16	0.55
1:CA:986:A:O2'	19:CS:55:LYS:O	2.24	0.55
1:CA:1120:G:C6	1:CA:1121:U:C4	2.95	0.55
1:CA:1157:A:N6	1:CA:1180:A:C4	2.74	0.55
2:CB:52:GLU:HG2	2:CB:56:ARG:NH2	2.22	0.55
25:DA:637:A:H2'	35:DP:117:GLU:OE2	2.06	0.55
25:DA:2409:G:H2'	25:DA:2410:G:O4'	2.06	0.55
26:DB:90:A:N7	26:DB:91:C:H1'	2.21	0.55
30:DG:11:TYR:O	30:DG:16:ARG:HG2	2.07	0.55
45:DZ:131:ARG:H	45:DZ:131:ARG:HD2	1.72	0.55
46:D0:53:MET:HG3	46:D0:59:LEU:CD2	2.37	0.55
50:D4:1:MET:HE2	50:D4:6:HIS:CD2	2.42	0.55
1:AA:66:G:O3'	1:AA:199:G:H4'	2.07	0.55
1:AA:125:U:H3	1:AA:236:G:H1	1.55	0.55
1:AA:316:G:OP2	1:AA:351:G:O2'	2.18	0.55
1:AA:932:C:H2'	1:AA:933:G:H8	1.72	0.55
4:AD:79:PHE:HE1	4:AD:204:ILE:HD13	1.71	0.55
5:AE:103:GLY:O	5:AE:106:PRO:HD2	2.06	0.55
6:AF:22:GLU:O	6:AF:26:ILE:HG13	2.06	0.55
19:AS:64:GLU:HB2	50:B4:59:PHE:HE1	1.72	0.55
25:BA:1233:U:H4'	41:BV:79:VAL:HG22	1.88	0.55
25:BA:1553:A:O2'	25:BA:1554:A:O4'	2.26	0.55
32:BI:37:VAL:HG12	32:BI:38:LEU:HD12	1.89	0.55
45:BZ:145:GLU:O	45:BZ:148:ASP:N	2.39	0.55
25:DA:265:A:C8	25:DA:266:G:H1'	2.42	0.55
25:DA:2600:A:C6	25:DA:2601:C:N4	2.75	0.55
30:DG:136:ARG:HD2	30:DG:137:GLU:HG3	1.87	0.55
32:DI:117:GLU:HG3	32:DI:118:LYS:H	1.71	0.55
1:AA:190:U:H2'	1:AA:191:G:H8	1.71	0.54
1:AA:558:G:H5"	1:AA:559:A:OP2	2.07	0.54
1:AA:794:A:OP2	61:AA:4035:HOH:O	2.18	0.54
1:AA:1158:C:H5	1:AA:1181:G:N1	2.04	0.54
4:AD:65:ARG:NH1	4:AD:70:ILE:O	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:68:PRO:HB2	6:AF:71:ARG:HG3	1.89	0.54
25:BA:560:C:O3'	40:BU:53:ARG:NH1	2.38	0.54
25:BA:1451:U:H2'	25:BA:1452:U:C6	2.42	0.54
25:BA:1848:G:OP1	27:BD:88:ARG:NH2	2.40	0.54
31:BH:3:ARG:CG	31:BH:6:ARG:HG2	2.38	0.54
35:BP:62:LEU:O	54:B8:13:ARG:HD3	2.07	0.54
1:CA:1320:C:O4'	19:CS:73:GLU:HG3	2.07	0.54
25:DA:1141:U:OP2	33:DN:63:THR:OG1	2.21	0.54
25:DA:1803:A:H4'	27:DD:259:THR:HG23	1.90	0.54
25:DA:2061:G:H5"	25:DA:2503:A:C2	2.42	0.54
29:DF:53:THR:HG23	29:DF:55:GLY:N	2.17	0.54
1:AA:1129:C:N4	1:AA:1143:G:N1	2.30	0.54
1:AA:1234:C:C2'	1:AA:1235:U:H5'	2.38	0.54
9:AI:3:GLN:OE1	9:AI:20:ARG:NH2	2.33	0.54
20:AT:45:GLN:HB2	20:AT:91:LEU:HD13	1.89	0.54
25:BA:11:G:H2'	25:BA:12:U:C5'	2.38	0.54
25:BA:287:G:N7	25:BA:448:U:H2'	2.21	0.54
25:BA:934:A:H4'	25:BA:935:C:C5	2.42	0.54
1:CA:202:U:H3'	1:CA:203:U:C6	2.42	0.54
1:CA:1164:G:H1	1:CA:1172:C:H42	1.53	0.54
4:CD:43:HIS:HA	4:CD:46:LYS:HG3	1.88	0.54
25:DA:143:G:H2'	25:DA:143(A):C:C6	2.42	0.54
25:DA:272:G:H4'	25:DA:272(A):U:C5'	2.37	0.54
25:DA:615:G:OP1	29:DF:40:GLN:NE2	2.33	0.54
25:DA:1032:A:O2'	25:DA:1034:G:OP2	2.21	0.54
25:DA:1359:A:N1	25:DA:1372:U:O4	2.40	0.54
29:DF:11:VAL:HG22	29:DF:125:LEU:HB2	1.89	0.54
29:DF:167:ALA:HB1	29:DF:173:VAL:HG11	1.88	0.54
32:DI:3:VAL:HG12	32:DI:38:LEU:HA	1.88	0.54
35:DP:59:LEU:HD21	54:D8:10:ALA:HA	1.88	0.54
44:DY:7:VAL:HG21	44:DY:72:VAL:HG12	1.89	0.54
45:DZ:5:LEU:HG	45:DZ:47:VAL:HG21	1.89	0.54
1:AA:1063:C:OP2	1:AA:1064:G:O2'	2.25	0.54
1:AA:1256:A:N6	1:AA:1278:U:O4'	2.37	0.54
3:AC:150:LYS:HD3	3:AC:152:ILE:HD11	1.89	0.54
6:AF:19:LEU:HD11	6:AF:59:TYR:CE2	2.42	0.54
6:AF:35:ALA:HA	6:AF:67:MET:HB3	1.89	0.54
16:AP:34:GLU:OE2	16:AP:55:ARG:NH2	2.30	0.54
25:BA:2314:G:N2	25:BA:2327:G:C4	2.75	0.54
25:BA:2507:G:O6	61:BA:4440:HOH:O	2.19	0.54
1:CA:41:G:H2'	1:CA:42:G:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:30:G:H2'	25:DA:31:C:C6	2.43	0.54
25:DA:1766:U:H2'	25:DA:1767:C:C6	2.42	0.54
25:DA:2785:C:O2'	28:DE:66:HIS:ND1	2.38	0.54
27:DD:182:LEU:HB2	27:DD:272:ALA:HB3	1.89	0.54
36:DQ:125:LEU:O	61:DQ:3102:HOH:O	2.18	0.54
41:DV:40:LEU:HB2	41:DV:46:VAL:HG13	1.89	0.54
1:AA:601:C:H2'	1:AA:602:A:C8	2.43	0.54
1:AA:1239:A:H62	1:AA:1299:A:H62	1.53	0.54
3:AC:58:GLU:O	3:AC:59:ARG:HG3	2.07	0.54
8:AH:96:GLY:H	8:AH:99:GLU:CD	2.15	0.54
29:BF:164:ARG:O	29:BF:168:ARG:HB2	2.07	0.54
45:BZ:19:ARG:NH1	45:BZ:84:GLU:O	2.40	0.54
1:CA:376:G:H5"	16:CP:5:ARG:HB2	1.88	0.54
1:CA:616:G:N2	1:CA:624:C:O2	2.38	0.54
1:CA:1111:A:H2'	1:CA:1112:C:C6	2.42	0.54
4:CD:112:VAL:HG22	4:CD:116:GLN:OE1	2.08	0.54
11:CK:20:TYR:CZ	11:CK:83:ILE:HD12	2.42	0.54
25:DA:848:G:H2'	25:DA:849:A:C8	2.42	0.54
25:DA:981:A:N1	25:DA:2027:G:O2'	2.39	0.54
25:DA:1270:C:H5"	25:DA:1271:G:O5'	2.07	0.54
25:DA:2803:C:H2'	25:DA:2804:C:H6	1.73	0.54
26:DB:78:A:N6	26:DB:99:G:O2'	2.40	0.54
50:D4:15:ILE:HB	50:D4:32:TYR:HD1	1.69	0.54
1:AA:527:G:O2'	1:AA:535:A:N1	2.31	0.54
1:AA:1095:U:H5"	1:AA:1109:C:O2	2.07	0.54
2:AB:127:ILE:HD11	2:AB:130:ARG:HD3	1.90	0.54
9:AI:7:THR:O	9:AI:83:ARG:NH1	2.41	0.54
16:AP:52:ASP:OD1	16:AP:54:GLU:HG3	2.06	0.54
25:BA:1312:G:O5'	42:BW:15:ARG:NH2	2.41	0.54
27:BD:145:VAL:HG12	27:BD:146:GLU:O	2.08	0.54
41:BV:21:ARG:HG2	41:BV:91:TYR:CD1	2.43	0.54
1:CA:344:A:H4'	1:CA:345:C:OP2	2.07	0.54
1:CA:1373:G:H5"	7:CG:36:LYS:HB2	1.88	0.54
16:CP:74:LEU:O	16:CP:79:VAL:HG23	2.07	0.54
25:DA:857:C:H4'	46:D0:23:VAL:HG21	1.90	0.54
25:DA:2074:U:H2'	25:DA:2075:U:C6	2.42	0.54
41:DV:31:ALA:O	41:DV:61:VAL:HG12	2.07	0.54
1:AA:358:U:H2'	1:AA:359:U:H6	1.72	0.54
1:AA:1183:A:HO2'	1:AA:1184:G:P	2.29	0.54
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.42	0.54
6:AF:6:VAL:HG22	6:AF:90:VAL:HG22	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:8:GLY:HA3	9:AI:76:ALA:O	2.07	0.54
25:BA:574:G:O2'	25:BA:1265:A:N3	2.34	0.54
25:BA:1157:A:N3	25:BA:1158:G:H1'	2.23	0.54
25:BA:2225:U:O2'	25:BA:2226:C:H5'	2.08	0.54
32:BI:93:THR:OG1	32:BI:96:ASP:OD1	2.18	0.54
39:BT:53:ARG:NH1	39:BT:60:THR:OG1	2.41	0.54
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.43	0.54
1:CA:848:C:H2'	1:CA:849:C:O4'	2.08	0.54
2:CB:144:ARG:NH1	2:CB:148:TYR:OH	2.40	0.54
7:CG:69:VAL:HG22	7:CG:135:VAL:HG22	1.90	0.54
9:CI:79:LEU:HD22	9:CI:104:ARG:HB2	1.90	0.54
15:CO:24:SER:OG	15:CO:25:THR:N	2.41	0.54
25:DA:250:G:H2'	25:DA:251:A:C8	2.43	0.54
25:DA:660:G:H5'	29:DF:99:TYR:CE2	2.42	0.54
25:DA:1395:A:OP1	61:DA:4394:HOH:O	2.18	0.54
25:DA:1740:G:H2'	25:DA:1741:A:C8	2.42	0.54
1:AA:96:U:H2'	1:AA:97:G:C8	2.42	0.54
1:AA:1086:U:H3	1:AA:1099:G:H22	1.56	0.54
2:AB:20:GLU:O	2:AB:40:HIS:HB2	2.08	0.54
9:AI:48:GLU:OE2	9:AI:51:ARG:HD2	2.08	0.54
20:AT:90:GLN:O	20:AT:93:GLU:HB3	2.08	0.54
32:BI:72:LEU:HA	32:BI:75:LEU:HD11	1.90	0.54
50:B4:59:PHE:C	50:B4:61:ARG:H	2.16	0.54
1:CA:1025:U:H1'	1:CA:1026:G:C8	2.43	0.54
1:CA:1362:C:H2'	1:CA:1363:C:H5"	1.88	0.54
2:CB:178:ARG:HH22	8:CH:68:ARG:NH1	2.04	0.54
3:CC:29:TYR:HE1	3:CC:33:LEU:HD22	1.71	0.54
4:CD:33:MET:HB2	57:CD:501:SF4:S3	2.48	0.54
17:CQ:56:VAL:O	17:CQ:77:VAL:HB	2.08	0.54
25:DA:645:C:H3'	25:DA:645:C:OP2	2.08	0.54
25:DA:816:C:O2'	25:DA:932:G:O6	2.25	0.54
25:DA:1268:A:C2	25:DA:2013:A:C4	2.95	0.54
25:DA:2037:G:O2'	25:DA:2038:G:H5'	2.07	0.54
25:DA:2293:C:OP1	25:DA:2377:A:N6	2.41	0.54
1:AA:473:G:C2	1:AA:474:G:C5	2.96	0.54
25:BA:508:A:H5"	25:BA:509:A:OP1	2.08	0.54
25:BA:1495:G:O2'	25:BA:1575:A:N1	2.38	0.54
25:BA:2080:A:OP1	61:BA:4000:HOH:O	2.18	0.54
29:BF:103:LYS:HA	29:BF:106:ARG:HG3	1.90	0.54
1:CA:276:G:H2'	1:CA:277:C:H5'	1.89	0.54
1:CA:564:C:O2'	8:CH:91:ARG:NH2	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:758:G:H8	1:CA:758:G:H5"	1.72	0.54
1:CA:1220:G:O3'	19:CS:36:ARG:HD3	2.08	0.54
11:CK:48:ILE:HD11	11:CK:64:ALA:HA	1.89	0.54
25:DA:411:G:C5	35:DP:72:PRO:HB3	2.43	0.54
25:DA:585:G:H2'	25:DA:1251:C:H42	1.73	0.54
25:DA:656:G:H2'	25:DA:657:U:O4'	2.07	0.54
25:DA:873:G:N2	25:DA:905:U:C2	2.76	0.54
25:DA:1359:A:C2	25:DA:1372:U:O4	2.61	0.54
25:DA:2099:U:H5'	25:DA:2100:G:OP2	2.08	0.54
26:DB:33:G:C2'	26:DB:34:U:H5'	2.37	0.54
37:DR:103:ARG:NH1	37:DR:110:PRO:HD3	2.23	0.54
3:AC:157:ILE:HD12	3:AC:164:ARG:HB3	1.90	0.54
25:BA:1577:C:HO2'	25:BA:1578:C:P	2.31	0.54
43:BX:12:VAL:HG22	43:BX:29:TRP:CE2	2.43	0.54
54:B8:33:ASN:HA	54:B8:36:LYS:HD2	1.90	0.54
1:CA:199:G:O2'	1:CA:200:G:H5'	2.07	0.54
1:CA:791:G:C6	1:CA:792:A:N7	2.76	0.54
2:CB:163:PHE:HA	2:CB:185:ILE:HG12	1.89	0.54
25:DA:1514:U:H2'	25:DA:1515:G:C8	2.43	0.54
25:DA:2218:U:N3	47:D1:55:GLY:O	2.41	0.54
28:DE:101:ARG:NH2	28:DE:171:GLU:HB2	2.23	0.54
1:AA:76:C:H5"	1:AA:76:C:H6	1.73	0.54
10:AJ:5:ARG:O	10:AJ:98:ILE:HA	2.08	0.54
23:AX:23:C:H2'	23:AX:24:U:C6	2.43	0.54
25:BA:493:G:OP1	53:B7:33:ARG:NH1	2.41	0.54
25:BA:555:G:O4'	25:BA:555:G:N3	2.39	0.54
25:BA:715:G:H5'	25:BA:716:G:OP2	2.07	0.54
25:BA:821:A:N3	25:BA:821:A:H2'	2.22	0.54
37:BR:29:LEU:HD12	37:BR:116:LEU:HD11	1.89	0.54
38:BS:34:HIS:ND1	38:BS:53:SER:OG	2.37	0.54
39:BT:95:ARG:HG2	39:BT:95:ARG:NH1	2.22	0.54
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.90	0.54
1:CA:939:G:H1	1:CA:1344:C:N4	2.04	0.54
1:CA:1133:G:H1	1:CA:1141:C:H42	1.56	0.54
2:CB:7:VAL:HG12	2:CB:8:LYS:HG2	1.90	0.54
6:CF:81:ILE:HD11	27:DD:125:ILE:HB	1.90	0.54
10:CJ:11:PHE:CE1	10:CJ:67:THR:HG22	2.42	0.54
13:CM:80:ARG:HH22	19:CS:69:HIS:CE1	2.26	0.54
25:DA:1351:C:OP2	61:DA:4267:HOH:O	2.18	0.54
1:AA:345:C:H4'	1:AA:346:G:C4	2.43	0.53
1:AA:598:U:H2'	1:AA:599:C:H6	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:630:G:H2'	1:AA:631:G:H8	1.72	0.53
4:AD:89:THR:HG22	4:AD:204:ILE:HD12	1.90	0.53
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.08	0.53
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.72	0.53
11:AK:99:GLN:HG3	11:AK:105:VAL:HG11	1.90	0.53
25:BA:2075:G:OP1	28:BE:144:ARG:HG2	2.08	0.53
29:BF:172:TRP:H	29:BF:172:TRP:CD1	2.25	0.53
32:BI:77:LEU:HB3	32:BI:142:VAL:HG12	1.90	0.53
38:BS:6:ALA:O	38:BS:10:ARG:HB2	2.08	0.53
1:CA:101:A:C2'	1:CA:102:G:H5'	2.37	0.53
1:CA:254:G:OP1	17:CQ:66:SER:OG	2.26	0.53
1:CA:1014:A:H4'	19:CS:14:HIS:CE1	2.43	0.53
1:CA:1170:A:O2'	1:CA:1171:G:O4'	2.25	0.53
15:CO:26:GLU:HB3	15:CO:81:LEU:HD13	1.90	0.53
25:DA:1283:G:N2	25:DA:1285:G:H3'	2.24	0.53
25:DA:2299:G:N1	25:DA:2318:G:C8	2.76	0.53
29:DF:21:ALA:HB3	29:DF:22:ALA:HA	1.89	0.53
1:AA:189:G:H2'	1:AA:189(A):C:O4'	2.09	0.53
1:AA:346:G:OP1	39:BT:41:ARG:NH1	2.41	0.53
25:BA:1218:G:O2'	25:BA:1219:A:O5'	2.25	0.53
25:BA:1698:G:OP1	37:BR:40:LYS:HE3	2.07	0.53
25:BA:2759:U:OP2	61:BA:4008:HOH:O	2.18	0.53
27:BD:206:LEU:HD22	27:BD:211:ARG:HG2	1.89	0.53
31:BH:113:VAL:HG11	31:BH:151:ILE:HD13	1.90	0.53
36:BQ:84:GLY:O	36:BQ:85:LYS:HB2	2.07	0.53
38:BS:3:ARG:HE	38:BS:4:LEU:N	2.07	0.53
39:BT:60:THR:HG22	39:BT:77:PRO:HA	1.90	0.53
52:B6:10:LEU:HD23	52:B6:22:ALA:HB2	1.90	0.53
1:CA:500:G:N2	1:CA:546:G:H1'	2.23	0.53
1:CA:605:U:O2'	1:CA:606:G:H5'	2.07	0.53
1:CA:922:G:N3	1:CA:1398:A:H2	2.06	0.53
1:CA:944:G:N1	1:CA:1338:G:OP2	2.39	0.53
1:CA:999:C:N4	1:CA:1042:G:C2	2.76	0.53
3:CC:15:THR:HG21	3:CC:181:ASN:HA	1.90	0.53
5:CE:9:LYS:HB2	5:CE:112:LEU:HD11	1.89	0.53
5:CE:122:GLU:O	5:CE:126:ARG:NH1	2.42	0.53
12:CL:80:HIS:HD1	24:CW:6:2R1:CG2	2.20	0.53
25:DA:345:A:H1'	25:DA:346:A:N7	2.23	0.53
25:DA:856:C:H5"	61:DA:3739:HOH:O	2.08	0.53
25:DA:867:C:H2'	25:DA:868:U:C6	2.43	0.53
25:DA:2019:A:OP2	51:D5:9:LYS:NZ	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2293:C:H5'	38:DS:89:ARG:NH2	2.23	0.53
30:DG:17:PRO:HA	30:DG:20:ILE:HD12	1.89	0.53
45:DZ:108:PRO:HB2	45:DZ:111:VAL:HG23	1.89	0.53
1:AA:147:G:C6	1:AA:148:G:N7	2.76	0.53
1:AA:509:A:H5'	4:AD:54:TYR:HD2	1.72	0.53
3:AC:121:ALA:O	3:AC:125:GLU:HG3	2.08	0.53
3:AC:153:VAL:HG22	3:AC:198:VAL:HG22	1.91	0.53
6:AF:8:ILE:HD11	6:AF:79:LEU:HD13	1.89	0.53
25:BA:61:C:H5"	25:BA:62:U:OP2	2.08	0.53
25:BA:346:A:OP2	29:BF:169:ASN:HB2	2.08	0.53
25:BA:1577:C:H1'	25:BA:1578:C:OP1	2.08	0.53
61:BA:3851:HOH:O	33:BN:73:THR:HG21	2.09	0.53
1:CA:520:A:N1	1:CA:536:C:H1'	2.23	0.53
1:CA:1120:G:O6	1:CA:1154:G:N2	2.41	0.53
1:CA:1375:A:O2'	7:CG:29:LYS:NZ	2.39	0.53
3:CC:106:VAL:HG11	3:CC:115:LEU:HD21	1.90	0.53
13:CM:14:ARG:CZ	13:CM:42:ALA:HA	2.38	0.53
25:DA:191:A:N1	61:DA:4123:HOH:O	2.34	0.53
25:DA:747:U:O2	25:DA:2014:A:H1'	2.08	0.53
25:DA:1019:U:OP1	25:DA:1035:U:O2'	2.23	0.53
25:DA:1371:G:H2'	25:DA:1372:U:H5	1.73	0.53
25:DA:1495:A:H2'	25:DA:1496:A:C8	2.43	0.53
26:DB:90:A:C5	26:DB:91:C:H1'	2.44	0.53
36:DQ:56:ARG:HG3	36:DQ:56:ARG:HH11	1.73	0.53
1:AA:6:G:O2'	1:AA:7:G:H5'	2.08	0.53
1:AA:1005:A:O2'	1:AA:1037:C:O2'	2.11	0.53
7:AG:146:GLU:O	7:AG:149:ARG:HB2	2.08	0.53
25:BA:174:U:H4'	25:BA:207:A:H4'	1.91	0.53
25:BA:1067:A:H2'	25:BA:1069:U:H5'	1.90	0.53
27:BD:72:LYS:HB3	27:BD:75:ILE:HD12	1.90	0.53
31:BH:3:ARG:HG2	31:BH:6:ARG:HG2	1.89	0.53
50:B4:15:ILE:HD12	50:B4:21:VAL:HG22	1.91	0.53
50:B4:56:VAL:HB	50:B4:60:GLN:HG3	1.90	0.53
1:CA:429:U:H1'	1:CA:430:A:H5"	1.91	0.53
1:CA:430:A:H2'	1:CA:431:A:O4'	2.08	0.53
1:CA:444:C:H2'	1:CA:445:G:C8	2.41	0.53
1:CA:445:G:H2'	1:CA:446:G:C8	2.43	0.53
1:CA:1346:A:H5"	9:CI:120:ARG:HH12	1.73	0.53
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.43	0.53
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.44	0.53
2:CB:28:PHE:CD1	2:CB:31:TYR:HB2	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:66:MET:HE2	19:CS:74:PHE:CE2	2.43	0.53
25:DA:1313:U:OP1	61:DA:3983:HOH:O	2.18	0.53
25:DA:1805:U:O2	27:DD:50:THR:HB	2.08	0.53
1:AA:174:C:H2'	1:AA:175:C:C6	2.44	0.53
1:AA:448:A:H2'	1:AA:449:C:C6	2.43	0.53
1:AA:973:G:OP1	10:AJ:57:LYS:NZ	2.34	0.53
3:AC:8:ILE:HG23	3:AC:16:ARG:HG2	1.91	0.53
8:AH:119:LEU:HB3	8:AH:123:GLU:HB3	1.90	0.53
25:BA:2255:U:H2'	25:BA:2256:U:C6	2.44	0.53
26:BB:43:C:H5"	50:B4:1:MET:HG2	1.91	0.53
49:B3:3:ARG:HD3	49:B3:60:GLU:CD	2.34	0.53
1:CA:419:C:OP1	1:CA:513:C:O2'	2.25	0.53
1:CA:441:A:H3'	1:CA:442:C:C6	2.44	0.53
1:CA:542:G:P	4:CD:10:ARG:HH22	2.32	0.53
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.43	0.53
26:DB:41:U:H5	30:DG:70:VAL:H	1.57	0.53
38:DS:84:GLN:H	38:DS:111:GLU:HB2	1.73	0.53
47:D1:65:SER:OG	47:D1:66:HIS:ND1	2.30	0.53
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.90	0.53
1:AA:352:C:H4'	1:AA:354:G:OP1	2.08	0.53
1:AA:1243:C:H2'	1:AA:1244:C:C6	2.43	0.53
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.08	0.53
5:AE:20:GLN:NE2	5:AE:21:ALA:O	2.42	0.53
25:BA:236:G:H4'	25:BA:413:G:C5	2.43	0.53
25:BA:595:A:OP2	41:BV:78:LYS:NZ	2.40	0.53
25:BA:851:A:H5"	25:BA:852:G:OP1	2.09	0.53
32:BI:130:TYR:HB3	32:BI:138:ILE:HB	1.91	0.53
34:BO:120:GLU:OE1	39:BT:67:SER:OG	2.24	0.53
1:CA:129(A):G:C6	1:CA:189(E):U:H4'	2.44	0.53
1:CA:543:C:O2'	1:CA:544:G:H5'	2.08	0.53
1:CA:1162:C:H2'	1:CA:1163:C:H5"	1.91	0.53
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.44	0.53
3:CC:157:ILE:HD12	3:CC:164:ARG:HB3	1.91	0.53
6:CF:9:VAL:HB	6:CF:87:ARG:HB2	1.91	0.53
25:DA:639:U:H2'	25:DA:640:C:C6	2.43	0.53
25:DA:997:G:O2'	25:DA:998:C:H5'	2.09	0.53
25:DA:1247:A:OP1	29:DF:95:ARG:NH2	2.39	0.53
25:DA:2772:C:H2'	25:DA:2773:C:C6	2.44	0.53
28:DE:116:VAL:HG13	28:DE:122:PHE:HB2	1.91	0.53
31:DH:69:ARG:HG3	31:DH:70:THR:N	2.24	0.53
38:DS:15:ARG:O	38:DS:19:LYS:HG2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:452:A:OP1	16:AP:43:LYS:NZ	2.39	0.53
1:AA:1243:C:H2'	1:AA:1244:C:H6	1.74	0.53
1:AA:1292:U:OP2	7:AG:41:ARG:NH2	2.34	0.53
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.43	0.53
4:AD:116:GLN:NE2	4:AD:157:LEU:HD21	2.23	0.53
5:AE:41:VAL:O	5:AE:67:VAL:HG12	2.08	0.53
10:AJ:47:PHE:CZ	14:AN:37:PHE:HE1	2.26	0.53
17:AQ:52:LYS:HG3	17:AQ:53:LEU:N	2.22	0.53
25:BA:63:A:O3'	43:BX:71:GLY:HA3	2.09	0.53
25:BA:1223:C:H2'	25:BA:1224:C:C6	2.44	0.53
25:BA:1451:U:H2'	25:BA:1452:U:H6	1.73	0.53
25:BA:2053:A:C6	25:BA:2510:C:H1'	2.44	0.53
30:BG:47:LYS:HG3	30:BG:48:GLU:H	1.74	0.53
1:CA:138:G:H5'	1:CA:138:G:C8	2.36	0.53
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.44	0.53
1:CA:1320:C:H5'	19:CS:70:LYS:HG3	1.90	0.53
11:CK:58:PRO:HG3	11:CK:89:ALA:O	2.08	0.53
24:CW:1:2QZ:H5	24:CW:2:VAL:N	2.24	0.53
25:DA:154:G:O6	25:DA:172:C:N4	2.42	0.53
25:DA:220:G:O2'	25:DA:233:A:N3	2.37	0.53
25:DA:266:G:N2	25:DA:427:U:H1'	2.24	0.53
25:DA:867:C:H2'	25:DA:868:U:H6	1.74	0.53
25:DA:1237:A:OP1	61:DA:4360:HOH:O	2.19	0.53
29:DF:195:ASP:OD1	29:DF:196:LEU:N	2.42	0.53
3:AC:62:ASP:HA	3:AC:97:LYS:HD3	1.91	0.53
25:BA:211:A:H5"	25:BA:448:U:OP1	2.09	0.53
25:BA:644:G:O6	29:BF:103:LYS:HE3	2.08	0.53
25:BA:1628:G:H5"	25:BA:1628:G:H8	1.73	0.53
25:BA:2442:A:OP2	61:BA:4632:HOH:O	2.19	0.53
25:BA:2736:C:O3'	37:BR:1:MET:HE3	2.09	0.53
27:BD:132:PRO:HD3	27:BD:190:TYR:CZ	2.44	0.53
30:BG:16:ARG:CZ	30:BG:31:VAL:HG11	2.39	0.53
1:CA:977:A:H2'	1:CA:977:A:N3	2.22	0.53
1:CA:1151:A:H5"	10:CJ:41:PRO:HA	1.90	0.53
14:CN:24:CYS:SG	14:CN:40:CYS:N	2.76	0.53
25:DA:236:C:H2'	25:DA:237:C:C6	2.43	0.53
25:DA:272(D):G:O6	61:DA:4045:HOH:O	2.17	0.53
25:DA:646:A:H2'	25:DA:647:G:O4'	2.08	0.53
25:DA:773:U:O2'	27:DD:48:ARG:HD3	2.09	0.53
25:DA:1798:U:H5'	27:DD:259:THR:CG2	2.33	0.53
25:DA:2228:G:C6	25:DA:2229:C:C4	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2823:A:OP1	28:DE:159:HIS:NE2	2.36	0.53
27:DD:72:LYS:HB3	27:DD:75:ILE:HD12	1.90	0.53
1:AA:266:G:O3'	17:AQ:67:LYS:HB2	2.09	0.53
1:AA:837:G:H1	1:AA:849:C:H42	1.57	0.53
3:AC:121:ALA:HB1	3:AC:189:ALA:HB2	1.90	0.53
9:AI:64:THR:HG23	9:AI:66:ARG:HD2	1.90	0.53
25:BA:1087:C:H42	25:BA:1160:G:H1	1.55	0.53
45:BZ:111:VAL:HG12	45:BZ:112:ARG:H	1.74	0.53
50:B4:24:THR:OG1	50:B4:25:TYR:N	2.42	0.53
1:CA:278:G:OP2	17:CQ:41:LYS:NZ	2.37	0.53
1:CA:619:U:C4	4:CD:135:LEU:HD11	2.44	0.53
1:CA:1205:U:O2'	3:CC:195:VAL:HG23	2.09	0.53
3:CC:11:ARG:HB3	3:CC:15:THR:HB	1.90	0.53
11:CK:19:ALA:HA	11:CK:32:ILE:HD13	1.91	0.53
17:CQ:66:SER:OG	17:CQ:67:LYS:N	2.37	0.53
25:DA:62:C:N3	25:DA:93:G:N2	2.45	0.53
25:DA:962:G:OP1	61:DA:4175:HOH:O	2.19	0.53
26:DB:19:G:H2'	26:DB:20:C:O4'	2.09	0.53
31:DH:24:VAL:HG13	31:DH:37:VAL:HG21	1.90	0.53
39:DT:16:ARG:HD2	39:DT:18:ASP:OD1	2.09	0.53
55:D9:10:ILE:HD12	55:D9:32:HIS:HA	1.91	0.53
1:AA:138:G:H5'	1:AA:138:G:H8	1.74	0.53
1:AA:159:G:N2	1:AA:161:A:H3'	2.22	0.53
1:AA:364:A:H2'	1:AA:365:U:C6	2.44	0.53
1:AA:446:G:H1	1:AA:488:C:H42	1.56	0.53
1:AA:627:G:H2'	1:AA:628:G:C8	2.44	0.53
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.09	0.53
5:AE:33:VAL:HG21	5:AE:109:ILE:HA	1.90	0.53
12:AL:38:THR:HG22	24:AW:3:004:HD1	1.90	0.53
25:BA:533:G:N2	42:BW:80:PRO:HG2	2.24	0.53
25:BA:771:U:H2'	25:BA:772:G:O4'	2.09	0.53
25:BA:1815:A:OP1	61:BA:4185:HOH:O	2.19	0.53
25:BA:1833:A:N1	25:BA:1853:G:H1'	2.24	0.53
45:BZ:30:ASN:ND2	45:BZ:90:VAL:HB	2.24	0.53
45:BZ:150:LEU:HG	45:BZ:154:ASP:OD1	2.08	0.53
4:CD:150:GLU:OE2	4:CD:151:LYS:N	2.42	0.53
25:DA:297:C:H2'	25:DA:298:G:O4'	2.09	0.53
25:DA:463:G:O6	61:DA:3740:HOH:O	2.14	0.53
25:DA:588:U:H2'	25:DA:589:C:C6	2.44	0.53
25:DA:2303:G:O2'	30:DG:132:ASN:HB2	2.09	0.53
34:DO:7:TYR:HE1	34:DO:20:MET:HE3	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:47:ASP:OD2	35:DP:50:ARG:NH2	2.41	0.53
35:DP:101:VAL:HA	35:DP:106:LEU:O	2.09	0.53
36:DQ:54:MET:HE1	36:DQ:104:PHE:HB3	1.91	0.53
1:AA:414:A:H2'	1:AA:415:A:O4'	2.09	0.52
1:AA:1297:C:O2'	7:AG:114:ARG:NH2	2.43	0.52
20:AT:44:ALA:HB2	20:AT:52:ALA:HB1	1.89	0.52
25:BA:1506:G:H5"	25:BA:1507:A:OP2	2.08	0.52
29:BF:158:THR:OG1	29:BF:195:ASP:OD2	2.21	0.52
45:BZ:109:ALA:HB3	45:BZ:145:GLU:HG3	1.92	0.52
1:CA:73:G:C6	1:CA:97:G:C6	2.97	0.52
1:CA:598:U:H2'	1:CA:599:C:C6	2.44	0.52
1:CA:1392:G:C2'	1:CA:1393:U:H5'	2.39	0.52
9:CI:116:LYS:HD2	9:CI:122:ALA:HA	1.91	0.52
12:CL:57:LYS:NZ	12:CL:65:GLU:OE2	2.21	0.52
25:DA:770:G:OP2	61:DA:4150:HOH:O	2.19	0.52
30:DG:117:PHE:CE1	30:DG:119:GLY:HA2	2.44	0.52
35:DP:39:LYS:HB2	35:DP:45:LEU:HG	1.91	0.52
41:DV:30:GLY:H	41:DV:61:VAL:HG13	1.74	0.52
43:DX:11:PRO:HG2	43:DX:13:LEU:HD21	1.90	0.52
1:AA:404:U:H2'	1:AA:405:U:C6	2.45	0.52
1:AA:985:C:H2'	1:AA:986:A:H8	1.74	0.52
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.74	0.52
2:AB:19:HIS:HE1	2:AB:189:ASP:CB	2.22	0.52
3:AC:33:LEU:O	3:AC:37:GLN:HG2	2.09	0.52
25:BA:2044:U:O2'	25:BA:2629:C:H5'	2.09	0.52
1:CA:97:G:O2'	1:CA:98:G:H8	1.92	0.52
1:CA:433:C:H2'	1:CA:434:U:C6	2.44	0.52
1:CA:1014:A:H2'	1:CA:1015:A:C8	2.45	0.52
1:CA:1254:C:O4'	1:CA:1356:G:H5"	2.09	0.52
1:CA:1256:A:N6	1:CA:1278:U:H1'	2.24	0.52
1:CA:1272:G:H2'	1:CA:1273:G:O4'	2.09	0.52
2:CB:100:GLY:O	2:CB:104:ASN:N	2.39	0.52
8:CH:112:LEU:HA	8:CH:134:ILE:HG12	1.91	0.52
25:DA:362:U:O2'	25:DA:363:G:H5'	2.09	0.52
25:DA:958:U:OP2	36:DQ:14:ARG:NH1	2.41	0.52
25:DA:1328:G:H2'	25:DA:1330:C:C5	2.43	0.52
28:DE:55:ASN:O	28:DE:58:ARG:HG2	2.09	0.52
29:DF:20:LEU:HD22	29:DF:21:ALA:H	1.74	0.52
29:DF:157:VAL:HB	29:DF:194:MET:HG2	1.91	0.52
30:DG:97:ASP:O	30:DG:101:ILE:HG13	2.09	0.52
31:DH:56:SER:OG	31:DH:57:ASP:N	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:7:TYR:CZ	34:DO:44:LYS:HG3	2.45	0.52
36:DQ:108:GLY:HA3	45:DZ:116:VAL:HG13	1.91	0.52
1:AA:650:G:C2'	1:AA:651:C:H5'	2.40	0.52
1:AA:1192:C:OP2	3:AC:4:LYS:NZ	2.31	0.52
1:AA:1530:G:OP1	1:AA:1530:G:H4'	2.09	0.52
4:AD:128:VAL:HG12	4:AD:129:ASN:HD22	1.72	0.52
12:AL:38:THR:O	12:AL:79:GLU:HG3	2.09	0.52
25:BA:240:A:C5	25:BA:241:G:H1'	2.44	0.52
25:BA:265:U:H2'	25:BA:266:C:C6	2.44	0.52
25:BA:910:A:H2'	25:BA:911:G:H8	1.73	0.52
25:BA:2673:G:H2'	25:BA:2674:A:C8	2.43	0.52
28:BE:47:VAL:HG12	28:BE:49:LEU:HD13	1.91	0.52
30:BG:67:LYS:H	50:B4:6:HIS:CE1	2.27	0.52
31:BH:72:ILE:O	31:BH:76:VAL:HG23	2.09	0.52
37:BR:44:LEU:HD22	37:BR:48:VAL:HG23	1.90	0.52
1:CA:8:A:N6	4:CD:209:ARG:HB2	2.23	0.52
4:CD:64:LEU:HD22	4:CD:198:VAL:HG11	1.91	0.52
8:CH:68:ARG:NH1	8:CH:74:PRO:HB3	2.24	0.52
20:CT:64:ASP:CG	20:CT:81:LYS:HZ3	2.17	0.52
25:DA:234:C:H2'	25:DA:235:U:C6	2.44	0.52
25:DA:918:A:H5"	26:DB:98:G:O2'	2.09	0.52
25:DA:1190:G:O2'	25:DA:1191:G:H5'	2.10	0.52
25:DA:2821:A:H2'	25:DA:2822:G:H8	1.75	0.52
33:DN:30:ILE:HG22	33:DN:34:LEU:HD22	1.91	0.52
1:AA:129(A):G:C6	1:AA:189(E):U:H4'	2.44	0.52
1:AA:303:A:O2'	1:AA:555:C:O2'	2.25	0.52
1:AA:586:C:O2'	1:AA:878:G:H4'	2.10	0.52
1:AA:1270:C:H2'	1:AA:1271:G:H5'	1.91	0.52
2:AB:231:GLU:HB3	2:AB:232:PRO:HD3	1.91	0.52
8:AH:112:LEU:HB3	8:AH:133:LEU:HA	1.91	0.52
10:AJ:27:ALA:HA	10:AJ:81:THR:CG2	2.39	0.52
25:BA:572:A:O2'	25:BA:573:G:OP1	2.20	0.52
25:BA:2474:U:H1'	25:BA:2503:U:O4	2.10	0.52
31:BH:11:VAL:HG21	31:BH:50:VAL:HG23	1.90	0.52
1:CA:130:A:H5'	17:CQ:63:ARG:HE	1.74	0.52
1:CA:174:C:H2'	1:CA:175:C:H6	1.75	0.52
2:CB:73:THR:HB	2:CB:95:GLN:O	2.10	0.52
2:CB:84:GLU:OE1	2:CB:216:SER:HA	2.10	0.52
2:CB:127:ILE:O	2:CB:128:GLU:HB2	2.09	0.52
10:CJ:64:GLU:OE2	10:CJ:66:ARG:NH1	2.42	0.52
12:CL:7:ILE:O	12:CL:11:VAL:HG23	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DE:101:ARG:CZ	28:DE:171:GLU:HB2	2.39	0.52
32:DI:93:THR:O	32:DI:97:ILE:HG13	2.09	0.52
35:DP:27:HIS:O	35:DP:31:ALA:HA	2.10	0.52
42:DW:86:LEU:HD22	42:DW:96:ILE:HD11	1.91	0.52
49:D3:8:LEU:O	49:D3:32:GLN:N	2.34	0.52
50:D4:59:PHE:HA	50:D4:60:GLN:C	2.35	0.52
52:D6:36:LEU:HB3	52:D6:38:LYS:HZ1	1.74	0.52
1:AA:179:A:H2'	1:AA:180:U:C6	2.44	0.52
1:AA:613:C:H42	1:AA:627:G:H1	1.58	0.52
1:AA:688:G:H2'	1:AA:689:C:H6	1.74	0.52
1:AA:1164:G:H2'	1:AA:1165:C:C6	2.44	0.52
1:CA:160:A:H2'	1:CA:161:A:C8	2.44	0.52
1:CA:164:U:H2'	1:CA:165:C:C6	2.45	0.52
1:CA:918:A:H2'	1:CA:919:A:C8	2.44	0.52
1:CA:1492:A:H3'	1:CA:1493:A:H8	1.75	0.52
8:CH:10:LEU:HD22	8:CH:83:ILE:HD11	1.91	0.52
13:CM:92:HIS:CE1	13:CM:98:VAL:HG11	2.44	0.52
19:CS:22:LEU:HB3	19:CS:27:GLU:HG3	1.90	0.52
26:DB:11:C:H3'	26:DB:12:C:C6	2.45	0.52
1:AA:261:U:OP2	20:AT:79:ARG:NH2	2.42	0.52
8:AH:34:GLU:OE2	8:AH:37:ARG:NH1	2.40	0.52
8:AH:51:VAL:HG12	8:AH:52:ASP:N	2.17	0.52
17:AQ:66:SER:O	17:AQ:70:ARG:NH1	2.42	0.52
25:BA:1715:A:H4'	25:BA:1716:A:O5'	2.10	0.52
25:BA:2117:C:H2'	25:BA:2118:U:O4'	2.10	0.52
32:BI:93:THR:O	32:BI:97:ILE:HG13	2.09	0.52
41:BV:76:LYS:HB2	41:BV:81:TYR:HB3	1.92	0.52
1:CA:67:C:H2'	1:CA:68:G:C8	2.45	0.52
1:CA:1014:A:C2	1:CA:1219:U:H1'	2.45	0.52
1:CA:1015:A:H1'	1:CA:1219:U:H5'	1.92	0.52
1:CA:1116:C:H2'	1:CA:1117:G:H5"	1.90	0.52
2:CB:197:VAL:HB	2:CB:200:ILE:HG22	1.91	0.52
9:CI:125:TYR:HD1	9:CI:126:SER:N	2.06	0.52
12:CL:57:LYS:HG2	12:CL:67:THR:HG22	1.90	0.52
25:DA:873:G:H1	25:DA:904:C:H42	1.56	0.52
25:DA:1505:C:H2'	25:DA:1506:C:H6	1.75	0.52
25:DA:1574:C:H2'	25:DA:1575:C:C6	2.43	0.52
25:DA:2261:C:O2'	25:DA:2262:U:H5'	2.09	0.52
30:DG:28:VAL:O	30:DG:31:VAL:HG12	2.10	0.52
33:DN:38:HIS:ND1	33:DN:39:ARG:HG3	2.24	0.52
35:DP:42:SER:O	61:DP:303:HOH:O	2.18	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:921:U:O2	5:AE:19:MET:HB2	2.09	0.52
1:AA:1007:C:N3	1:AA:1022:G:C6	2.78	0.52
1:AA:1103:C:OP1	2:AB:96:ARG:NH2	2.41	0.52
2:AB:109:SER:O	2:AB:112:VAL:HG22	2.10	0.52
3:AC:134:ILE:HD11	3:AC:153:VAL:HG23	1.91	0.52
11:AK:20:TYR:HB2	11:AK:31:THR:HG23	1.91	0.52
25:BA:930:G:O6	25:BA:939:C:C2	2.62	0.52
1:CA:1316:G:O2'	1:CA:1318:A:N7	2.35	0.52
11:CK:21:ILE:HB	11:CK:84:VAL:HG22	1.92	0.52
25:DA:674:G:H1'	29:DF:74:ARG:HD3	1.91	0.52
25:DA:1219:G:H1	25:DA:1230:C:H42	1.56	0.52
25:DA:2680:C:H5'	28:DE:189:PRO:HA	1.92	0.52
30:DG:11:TYR:CE2	30:DG:16:ARG:HD3	2.44	0.52
43:DX:92:LEU:C	43:DX:94:GLY:H	2.17	0.52
1:AA:229:U:O2'	16:AP:23:ASP:OD2	2.27	0.52
1:AA:433:C:H2'	1:AA:434:U:H6	1.74	0.52
1:AA:532:A:O2'	1:AA:533:A:OP1	2.25	0.52
1:AA:840:C:H5"	1:AA:841:U:C5	2.44	0.52
19:AS:50:ALA:HA	19:AS:58:VAL:O	2.09	0.52
25:BA:1222:A:H3'	25:BA:1223:C:C6	2.44	0.52
25:BA:1425:A:H4'	25:BA:1426:G:OP2	2.09	0.52
25:BA:1500:A:OP2	61:BA:3908:HOH:O	2.19	0.52
30:BG:103:LEU:HD23	30:BG:106:LEU:HD23	1.90	0.52
1:CA:1121:U:C4	1:CA:1122:U:H5	2.28	0.52
1:CA:1169:A:N7	1:CA:1170:A:C5	2.78	0.52
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.44	0.52
2:CB:17:PHE:HB2	2:CB:44:LEU:HD12	1.92	0.52
8:CH:17:THR:HG22	8:CH:63:LEU:HD12	1.92	0.52
17:CQ:41:LYS:NZ	17:CQ:92:ARG:HH21	2.08	0.52
20:CT:56:MET:HE3	20:CT:88:VAL:HG11	1.91	0.52
25:DA:784:A:C8	25:DA:792:G:C5	2.98	0.52
25:DA:2345:G:OP2	52:D6:38:LYS:HG3	2.10	0.52
27:DD:132:PRO:HG2	27:DD:135:PHE:CD2	2.44	0.52
42:DW:9:TYR:H	42:DW:102:HIS:CE1	2.27	0.52
45:DZ:93:ASP:O	45:DZ:131:ARG:NH1	2.43	0.52
1:AA:20:U:H4'	1:AA:572:A:C6	2.44	0.52
1:AA:160:A:N1	1:AA:343:U:C2	2.78	0.52
1:AA:193:C:H2'	1:AA:194:C:C6	2.44	0.52
1:AA:987:G:H1	1:AA:1218:C:H42	1.58	0.52
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.40	0.52
6:AF:97:PHE:CD2	18:AR:31:LEU:HD23	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AW:6:2R1:C	24:AW:8:2R3:N	2.73	0.52
52:B6:6:ARG:NH1	52:B6:26:ASN:HB2	2.25	0.52
1:CA:202:U:H3'	1:CA:203:U:H6	1.75	0.52
1:CA:352:C:H4'	1:CA:354:G:OP1	2.10	0.52
1:CA:708:C:H2'	1:CA:709:G:H8	1.75	0.52
1:CA:793:U:O2	1:CA:1516:G:H4'	2.10	0.52
8:CH:33:GLU:HG2	8:CH:48:TYR:CE2	2.45	0.52
11:CK:62:GLN:HG3	11:CK:97:ALA:HB2	1.92	0.52
25:DA:303:U:H2'	25:DA:304:G:H8	1.75	0.52
25:DA:492:A:H2'	25:DA:493:G:O4'	2.10	0.52
25:DA:2887:U:H2'	25:DA:2888:C:H6	1.75	0.52
43:DX:9:LEU:HA	48:D2:36:ARG:HH21	1.75	0.52
2:AB:170:GLU:O	2:AB:174:VAL:HG23	2.09	0.52
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.09	0.52
25:BA:641:G:OP1	29:BF:40:GLN:NE2	2.33	0.52
25:BA:768:C:H2'	25:BA:769:A:H8	1.75	0.52
1:CA:174:C:H2'	1:CA:175:C:C6	2.45	0.52
1:CA:565:U:OP2	1:CA:566:G:O2'	2.18	0.52
1:CA:833:U:H2'	1:CA:834:C:H6	1.74	0.52
1:CA:1036:G:H3'	1:CA:1037:C:O4'	2.09	0.52
1:CA:1183:A:H5'	1:CA:1183:A:H8	1.75	0.52
1:CA:1446:U:O2'	1:CA:1447:A:O5'	2.28	0.52
3:CC:125:GLU:HG3	3:CC:190:ARG:O	2.10	0.52
4:CD:188:LEU:HD23	4:CD:188:LEU:H	1.75	0.52
23:CX:48:C:C2	23:CX:59:A:H1'	2.45	0.52
25:DA:2228:G:C5	25:DA:2229:C:C4	2.98	0.52
25:DA:2615:U:H2'	25:DA:2616:C:H6	1.74	0.52
31:DH:33:LEU:HD21	31:DH:136:ILE:HG13	1.91	0.52
37:DR:21:TYR:OH	37:DR:43:GLU:HG2	2.10	0.52
1:AA:562:C:H1'	12:AL:15:ARG:HB3	1.92	0.51
1:AA:977:A:O2'	1:AA:979:C:OP2	2.26	0.51
1:AA:1075:C:C2'	1:AA:1076:C:H5'	2.40	0.51
25:BA:276:C:O3'	32:BI:42:SER:OG	2.27	0.51
25:BA:762:G:H2'	25:BA:763:A:O4'	2.10	0.51
25:BA:1653:C:H4'	25:BA:1654:A:O5'	2.10	0.51
25:BA:2603:C:P	27:BD:239:ARG:HG3	2.50	0.51
25:BA:2799:U:O2'	28:BE:62:PRO:O	2.12	0.51
27:BD:9:TYR:CZ	27:BD:13:ARG:HG2	2.45	0.51
36:BQ:110:THR:HG23	36:BQ:113:GLN:OE1	2.10	0.51
40:BU:69:CYS:HB3	40:BU:74:LEU:HD13	1.91	0.51
9:CI:4:TYR:CE1	9:CI:88:TYR:HA	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:341:G:H2'	25:DA:342:G:O4'	2.10	0.51
25:DA:774:A:N3	25:DA:774:A:H2'	2.25	0.51
25:DA:1040:C:N4	25:DA:1115:G:O6	2.41	0.51
25:DA:1529:G:O2'	25:DA:1530:C:H5'	2.11	0.51
25:DA:2657:A:O3'	31:DH:160:LYS:NZ	2.43	0.51
27:DD:206:LEU:HD22	27:DD:211:ARG:HG2	1.92	0.51
29:DF:165:ARG:HG2	29:DF:168:ARG:NH2	2.25	0.51
1:AA:1131:G:O2'	1:AA:1132:C:H5'	2.09	0.51
1:AA:1183:A:H3'	1:AA:1184:G:H5"	1.92	0.51
9:AI:110:GLU:OE2	9:AI:113:LYS:NZ	2.43	0.51
25:BA:225:C:H2'	25:BA:226:C:C6	2.45	0.51
25:BA:1555:C:OP2	25:BA:1555:C:H4'	2.09	0.51
25:BA:2013:U:H2'	25:BA:2014:G:H5"	1.93	0.51
25:BA:2555:G:H2'	25:BA:2556:G:C8	2.44	0.51
25:BA:2855:G:H5"	39:BT:54:ARG:O	2.09	0.51
25:BA:2880:C:H2'	25:BA:2881:C:O4'	2.10	0.51
38:BS:48:LEU:HD23	38:BS:82:ILE:HD11	1.91	0.51
45:BZ:28:MET:HE1	45:BZ:61:LEU:HD21	1.91	0.51
1:CA:768:A:H4'	1:CA:1523:G:N2	2.25	0.51
1:CA:931:C:H42	1:CA:1386:G:H1	1.58	0.51
1:CA:1311:G:H1	1:CA:1326:C:H42	1.58	0.51
2:CB:78:GLN:O	2:CB:94:ASN:ND2	2.44	0.51
3:CC:119:ARG:HG2	3:CC:123:GLN:HE21	1.76	0.51
9:CI:51:ARG:HG2	9:CI:56:LEU:HD21	1.92	0.51
25:DA:528:A:H2	25:DA:2043:C:H5'	1.75	0.51
25:DA:1448:G:H1'	25:DA:1528:A:N1	2.26	0.51
26:DB:6:C:H2'	26:DB:7:G:H5"	1.91	0.51
1:AA:384:G:H2'	1:AA:385:C:C6	2.46	0.51
1:AA:679:C:C2'	1:AA:680:C:H5'	2.41	0.51
1:AA:1129:C:O2'	1:AA:1139:G:N7	2.26	0.51
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.90	0.51
7:AG:50:ILE:HD11	7:AG:58:PRO:CA	2.39	0.51
19:AS:19:VAL:O	19:AS:22:LEU:HB2	2.10	0.51
20:AT:10:LEU:HD22	20:AT:12:ALA:HB2	1.91	0.51
25:BA:926:G:H2'	25:BA:927:G:C1'	2.41	0.51
25:BA:1067:A:C8	25:BA:1067:A:C3'	2.94	0.51
25:BA:1071:G:C4	25:BA:1180:C:H1'	2.46	0.51
29:BF:157:VAL:HB	29:BF:194:MET:HG2	1.91	0.51
1:CA:532:A:H2	1:CA:1207:G:H4'	1.76	0.51
1:CA:814:A:H2'	1:CA:816:A:H5"	1.90	0.51
1:CA:1040:U:C4	1:CA:1041:A:C8	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1104:G:H4'	2:CB:111:ARG:NH1	2.26	0.51
1:CA:1220:G:H5'	19:CS:34:TRP:O	2.11	0.51
16:CP:51:VAL:HG12	16:CP:53:VAL:H	1.74	0.51
25:DA:1153:C:H2'	25:DA:1154:G:O4'	2.11	0.51
30:DG:56:ALA:O	30:DG:60:LEU:HB2	2.10	0.51
41:DV:37:VAL:O	41:DV:51:VAL:HG23	2.10	0.51
52:D6:18:ARG:HD2	52:D6:42:TRP:CE2	2.46	0.51
52:D6:35:GLU:HG2	52:D6:50:ARG:HD3	1.92	0.51
1:AA:671:G:H2'	1:AA:672:U:O4'	2.11	0.51
1:AA:731:G:OP1	1:AA:766:A:H1'	2.08	0.51
1:AA:929:G:H1	1:AA:1388:C:N4	2.06	0.51
1:AA:985:C:H2'	1:AA:986:A:C8	2.45	0.51
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.44	0.51
2:AB:59:GLU:HG2	2:AB:63:MET:HE2	1.91	0.51
2:AB:204:ASN:OD1	2:AB:206:ASP:N	2.37	0.51
5:AE:68:GLU:HG2	5:AE:70:PRO:HG3	1.93	0.51
25:BA:930:G:H2'	25:BA:931:C:C6	2.44	0.51
30:BG:5:VAL:HG22	30:BG:8:LYS:H	1.75	0.51
1:CA:428:G:OP2	4:CD:10:ARG:NH1	2.43	0.51
1:CA:975:A:H4'	1:CA:976:G:C5'	2.38	0.51
1:CA:1007:C:N4	1:CA:1022:G:H1	1.98	0.51
1:CA:1307:U:O5'	1:CA:1307:U:H6	1.93	0.51
23:CX:23:C:H2'	23:CX:24:U:H6	1.75	0.51
23:CX:27:U:O2	23:CX:44:A:H2	1.93	0.51
25:DA:1539:G:H2'	25:DA:1540:U:C6	2.45	0.51
25:DA:2285:C:OP2	52:D6:6:ARG:NH1	2.44	0.51
25:DA:2364:C:H2'	25:DA:2365:G:O4'	2.10	0.51
26:DB:31:C:C2'	26:DB:32:C:H5'	2.40	0.51
28:DE:174:ASP:OD1	28:DE:175:VAL:N	2.43	0.51
38:DS:34:HIS:HD1	38:DS:53:SER:HG	1.58	0.51
50:D4:16:CYS:SG	50:D4:17:GLY:N	2.83	0.51
1:AA:537:G:H5"	12:AL:113:ARG:NH1	2.24	0.51
1:AA:661:G:H1	1:AA:744:C:N4	2.05	0.51
1:AA:799:G:H5"	1:AA:799:G:H8	1.76	0.51
1:AA:918:A:H2'	1:AA:919:A:C8	2.45	0.51
1:AA:1125:U:H3'	10:AJ:5:ARG:HH22	1.75	0.51
3:AC:73:PRO:HB3	3:AC:103:VAL:HG11	1.93	0.51
4:AD:31:CYS:SG	4:AD:32:ALA:N	2.83	0.51
4:AD:196:LEU:H	4:AD:196:LEU:HD12	1.76	0.51
8:AH:121:ASP:HB2	8:AH:125:ARG:HH12	1.75	0.51
25:BA:2661:U:H2'	25:BA:2662:U:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BO:35:VAL:HG11	34:BO:103:ALA:CB	2.35	0.51
49:B3:11:SER:OG	49:B3:13:ILE:HG13	2.10	0.51
1:CA:1301:U:O2'	1:CA:1302:U:H5'	2.10	0.51
25:DA:829:A:N7	25:DA:2248:C:H5'	2.25	0.51
25:DA:1563:G:H2'	25:DA:1564:C:C6	2.45	0.51
26:DB:46:A:H2'	26:DB:47:C:C6	2.45	0.51
38:DS:87:PHE:CZ	38:DS:102:ALA:HB2	2.45	0.51
25:BA:1405:A:N3	25:BA:1405:A:H5'	2.26	0.51
28:BE:119:ARG:HG2	28:BE:160:TYR:CG	2.45	0.51
30:BG:16:ARG:HB2	30:BG:17:PRO:HD3	1.92	0.51
1:CA:552:U:H2'	1:CA:553:A:H5'	1.93	0.51
1:CA:1118:C:H1'	1:CA:1179:A:C5	2.46	0.51
1:CA:1279:A:O2'	1:CA:1281:U:OP2	2.14	0.51
1:CA:1492:A:H3'	1:CA:1493:A:C8	2.45	0.51
4:CD:191:ARG:HD2	4:CD:191:ARG:O	2.11	0.51
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	2.10	0.51
15:CO:33:THR:HG21	15:CO:85:LEU:HD22	1.93	0.51
25:DA:92:A:H2'	25:DA:93:G:H8	1.76	0.51
25:DA:704:G:H1'	25:DA:726:G:N2	2.26	0.51
25:DA:879:G:H3'	25:DA:880:G:H5"	1.93	0.51
25:DA:2823:A:OP1	28:DE:113:PHE:HB2	2.10	0.51
1:AA:62:U:OP1	1:AA:385:C:O2'	2.29	0.51
1:AA:221:C:H2'	1:AA:222:U:C6	2.42	0.51
1:AA:649:G:H2'	1:AA:650:G:H8	1.75	0.51
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.11	0.51
7:AG:28:ASN:HA	7:AG:31:MET:HE2	1.93	0.51
35:BP:121:LYS:O	35:BP:123:LEU:N	2.43	0.51
47:B1:23:LYS:HB3	47:B1:29:GLY:HA3	1.93	0.51
1:CA:44:G:H2'	1:CA:45:U:O4'	2.10	0.51
1:CA:999:C:N4	1:CA:1043:C:C4	2.79	0.51
1:CA:1004:A:H5"	1:CA:1025:U:C5	2.46	0.51
1:CA:1150:U:O4	1:CA:1151:A:N6	2.44	0.51
3:CC:18:TRP:O	3:CC:21:ARG:NH1	2.43	0.51
8:CH:6:ILE:O	8:CH:10:LEU:HG	2.10	0.51
14:CN:47:LEU:O	14:CN:51:GLY:N	2.43	0.51
25:DA:45:C:H2'	25:DA:47:C:C6	2.45	0.51
25:DA:375:C:H2'	25:DA:376:C:C6	2.46	0.51
25:DA:858:U:O2	25:DA:2268:A:H2'	2.11	0.51
25:DA:1341:U:OP1	25:DA:1397:U:N3	2.33	0.51
25:DA:2745:C:C4	25:DA:2746:U:C4	2.98	0.51
25:DA:2853:C:O2'	25:DA:2854:G:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D3:5:LYS:NZ	49:D3:34:GLU:OE2	2.40	0.51
1:AA:7:G:H5"	1:AA:298:A:O4'	2.11	0.51
1:AA:276:G:H2'	1:AA:277:C:H5'	1.92	0.51
1:AA:358:U:H2'	1:AA:359:U:C6	2.46	0.51
1:AA:625:G:O2'	1:AA:626:U:H5'	2.11	0.51
2:AB:50:GLU:OE1	2:AB:53:ARG:NH1	2.44	0.51
25:BA:906:G:O2'	25:BA:962:G:O6	2.22	0.51
25:BA:1576:G:O2'	25:BA:1577:C:H5'	2.11	0.51
25:BA:1775:C:H5'	25:BA:1776:G:OP2	2.11	0.51
35:BP:65:ARG:HG3	54:B8:25:MET:HG3	1.92	0.51
1:CA:256:U:P	17:CQ:17:LYS:HZ2	2.34	0.51
1:CA:429:U:H3'	4:CD:9:CYS:SG	2.50	0.51
1:CA:688:G:H5'	11:CK:46:GLY:C	2.36	0.51
1:CA:881:G:OP1	12:CL:12:ARG:NH2	2.42	0.51
1:CA:1120:G:C6	1:CA:1154:G:C2	2.99	0.51
1:CA:1323:G:H4'	1:CA:1363:C:C2	2.46	0.51
2:CB:192:SER:O	2:CB:194:PRO:HD3	2.11	0.51
25:DA:71:A:N7	43:DX:31:HIS:HE1	2.08	0.51
25:DA:668:G:H5'	25:DA:669:G:OP2	2.11	0.51
25:DA:814:C:O2'	25:DA:815:C:H5'	2.11	0.51
25:DA:1291:C:H2'	25:DA:1292:U:H6	1.75	0.51
25:DA:1472:A:H2'	25:DA:1473:G:O4'	2.11	0.51
25:DA:2526:G:H2'	25:DA:2527:C:H6	1.75	0.51
25:DA:2773:C:OP1	28:DE:166:THR:OG1	2.26	0.51
30:DG:114:ILE:HD12	30:DG:117:PHE:CD2	2.46	0.51
30:DG:179:PRO:HG3	50:D4:43:TYR:OH	2.11	0.51
32:DI:134:PRO:C	32:DI:136:VAL:H	2.19	0.51
34:DO:111:PHE:O	34:DO:115:VAL:HG23	2.10	0.51
1:AA:96:U:H2'	1:AA:97:G:H8	1.75	0.51
1:AA:159:G:H2'	1:AA:161:A:OP2	2.10	0.51
1:AA:933:G:O6	7:AG:3:ARG:NH2	2.44	0.51
1:AA:1328:C:H5'	13:AM:28:ALA:CB	2.41	0.51
2:AB:15:VAL:HG11	2:AB:213:LEU:HD12	1.91	0.51
4:AD:190:ASP:H	4:AD:193:ASP:HB2	1.75	0.51
25:BA:238:C:O2	54:B8:12:LYS:NZ	2.37	0.51
25:BA:289:G:H2'	25:BA:290:G:C8	2.46	0.51
25:BA:592:U:C4	25:BA:593:G:C6	2.99	0.51
25:BA:910:A:H2'	25:BA:911:G:C8	2.45	0.51
25:BA:1065:U:O2'	25:BA:1067:A:H2	1.93	0.51
35:BP:88:LEU:HD11	35:BP:114:ILE:HD12	1.93	0.51
36:BQ:12:GLN:HG2	36:BQ:73:PRO:HD2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BX:95:LEU:H	43:BX:95:LEU:HD12	1.76	0.51
45:BZ:111:VAL:C	45:BZ:113:ALA:N	2.69	0.51
1:CA:426:G:H2'	1:CA:427:U:C6	2.46	0.51
1:CA:790:A:H2'	1:CA:791:G:C8	2.46	0.51
1:CA:818:G:O2'	1:CA:819:A:H5'	2.11	0.51
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.11	0.51
6:CF:24:GLU:HG3	6:CF:28:ARG:NH1	2.26	0.51
25:DA:571:A:H5'	25:DA:2030:A:N7	2.26	0.51
25:DA:1963:U:O2'	61:DA:4443:HOH:O	2.16	0.51
25:DA:2424:C:O2	25:DA:2429:G:O2'	2.27	0.51
27:DD:127:VAL:HA	27:DD:193:VAL:HG22	1.92	0.51
27:DD:148:GLU:CB	27:DD:151:LYS:HD2	2.41	0.51
37:DR:28:LEU:HD12	37:DR:48:VAL:HG21	1.91	0.51
1:AA:78:G:C6	1:AA:91:C:N4	2.79	0.51
1:AA:1125:U:HO2'	1:AA:1126:U:P	2.34	0.51
4:AD:79:PHE:CE1	4:AD:204:ILE:HD13	2.46	0.51
10:AJ:49:VAL:HG23	14:AN:41:ARG:HD2	1.92	0.51
11:AK:31:THR:HA	11:AK:42:TRP:HA	1.93	0.51
25:BA:2504:U:H2'	25:BA:2505:U:H6	1.76	0.51
30:BG:66:GLN:HG2	50:B4:1:MET:CE	2.41	0.51
39:BT:127:ALA:O	39:BT:128:GLU:HB3	2.09	0.51
1:CA:438:G:N1	1:CA:495:A:OP2	2.33	0.51
1:CA:1191:A:OP2	3:CC:3:ASN:ND2	2.44	0.51
2:CB:52:GLU:HG2	2:CB:56:ARG:HH22	1.76	0.51
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.10	0.51
19:CS:36:ARG:HD2	19:CS:52:TYR:O	2.11	0.51
25:DA:271(Q):G:H2'	25:DA:271(R):G:C8	2.46	0.51
25:DA:1337:G:H2'	25:DA:1338:G:H8	1.76	0.51
25:DA:1710:C:H2'	25:DA:1711:C:C6	2.46	0.51
29:DF:110:LEU:HD12	29:DF:205:ARG:HG2	1.92	0.51
37:DR:75:LEU:O	37:DR:75:LEU:HD22	2.11	0.51
1:AA:216:G:H2'	1:AA:217:C:C6	2.46	0.50
1:AA:404:U:H2'	1:AA:405:U:H6	1.77	0.50
1:AA:606:G:H1'	1:AA:632:A:H61	1.76	0.50
1:AA:975:A:N6	1:AA:1367:C:O4'	2.43	0.50
1:AA:1164:G:H2'	1:AA:1165:C:H6	1.75	0.50
3:AC:175:LEU:HD21	3:AC:201:TYR:CE2	2.46	0.50
4:AD:3:ARG:HE	4:AD:118:ARG:CD	2.23	0.50
6:AF:80:ARG:NH1	6:AF:88:VAL:O	2.44	0.50
8:AH:86:ILE:HG13	8:AH:133:LEU:HD22	1.93	0.50
16:AP:39:TYR:HA	16:AP:48:TRP:O	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:780:G:N7	61:BA:3904:HOH:O	2.35	0.50
25:BA:2762:A:H3'	25:BA:2763:A:H2'	1.93	0.50
26:BB:28:C:OP1	38:BS:31:SER:OG	2.22	0.50
26:BB:77:U:OP1	45:BZ:19:ARG:NH2	2.43	0.50
30:BG:11:TYR:CZ	30:BG:16:ARG:HD3	2.46	0.50
36:BQ:54:MET:HG3	36:BQ:117:ALA:HB1	1.92	0.50
42:BW:71:VAL:HA	42:BW:107:LEU:HD12	1.94	0.50
50:B4:1:MET:HE2	50:B4:6:HIS:CD2	2.46	0.50
1:CA:1007:C:N3	1:CA:1022:G:C2	2.79	0.50
1:CA:1133:G:C2'	1:CA:1134:G:H8	2.19	0.50
1:CA:1256:A:H2	1:CA:1277:C:N4	2.08	0.50
1:CA:1360:A:OP2	14:CN:35:ARG:NH2	2.43	0.50
2:CB:16:HIS:CG	2:CB:17:PHE:N	2.79	0.50
9:CI:78:LYS:HD3	9:CI:101:PHE:HD2	1.76	0.50
25:DA:852:G:H2'	25:DA:853:G:C8	2.46	0.50
25:DA:2342:C:O2	25:DA:2374:C:H4'	2.12	0.50
34:DO:64:ARG:NH1	34:DO:81:ASP:OD1	2.44	0.50
45:DZ:7:ALA:O	45:DZ:62:PRO:HD3	2.12	0.50
1:AA:72:C:H2'	1:AA:73:G:O4'	2.11	0.50
1:AA:112:G:H4'	1:AA:389:A:H4'	1.92	0.50
1:AA:202:U:O2'	1:AA:203:U:O5'	2.17	0.50
25:BA:623:G:N2	25:BA:628:C:O3'	2.44	0.50
28:BE:47:VAL:HG21	28:BE:86:PRO:CD	2.36	0.50
29:BF:197:ASP:N	29:BF:197:ASP:OD1	2.44	0.50
36:BQ:137:TYR:O	36:BQ:141:GLN:HG2	2.10	0.50
40:BU:36:ARG:HD2	40:BU:40:PHE:CZ	2.46	0.50
48:B2:32:LEU:CD1	48:B2:36:ARG:HH11	2.23	0.50
1:CA:677:U:H3	1:CA:713:G:N2	1.99	0.50
1:CA:1061:G:H2'	1:CA:1062:U:H5'	1.93	0.50
1:CA:1262:C:N3	1:CA:1273:G:N2	2.56	0.50
1:CA:1346:A:N1	1:CA:1374:A:H5"	2.26	0.50
4:CD:22:LYS:HB2	4:CD:26:CYS:SG	2.52	0.50
4:CD:36:ARG:HG3	4:CD:38:TYR:CE2	2.46	0.50
4:CD:159:ARG:O	4:CD:163:GLU:N	2.42	0.50
10:CJ:48:THR:O	14:CN:34:TYR:OH	2.30	0.50
25:DA:275:G:H2'	25:DA:276:A:C8	2.46	0.50
25:DA:302:C:N4	25:DA:315:G:H1	2.09	0.50
25:DA:1022:G:C6	25:DA:1140:C:C4	3.00	0.50
25:DA:1239:G:H2'	25:DA:1240:U:O4'	2.11	0.50
31:DH:3:ARG:HD3	31:DH:6:ARG:HH12	1.77	0.50
48:D2:29:LYS:HG2	48:D2:57:ILE:HD13	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:370:C:H2'	1:AA:371:G:C8	2.46	0.50
1:AA:540:G:H2'	1:AA:541:G:O4'	2.11	0.50
1:AA:662:G:H2'	1:AA:663:A:C8	2.45	0.50
1:AA:1279:A:H5"	1:AA:1280:A:OP1	2.12	0.50
9:AI:24:GLY:HA2	9:AI:59:PHE:O	2.12	0.50
16:AP:21:VAL:HG11	16:AP:59:TRP:NE1	2.27	0.50
25:BA:296:U:H2'	25:BA:297:C:H6	1.75	0.50
25:BA:1002:A:N1	25:BA:2470:G:H4'	2.27	0.50
25:BA:2442:A:N3	25:BA:2442:A:H2'	2.25	0.50
30:BG:140:ILE:HG22	30:BG:141:PHE:CD1	2.46	0.50
55:B9:17:ILE:HG22	55:B9:24:TYR:HB2	1.93	0.50
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.58	0.50
1:CA:957:U:H2'	1:CA:959:A:OP2	2.11	0.50
1:CA:1002:G:N2	1:CA:1039:C:C4	2.80	0.50
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.94	0.50
1:CA:1028:C:O2	1:CA:1034:G:H1'	2.11	0.50
1:CA:1122:U:C4	1:CA:1123:A:N7	2.79	0.50
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.46	0.50
2:CB:230:VAL:HG22	2:CB:231:GLU:H	1.76	0.50
7:CG:69:VAL:HG11	7:CG:134:ALA:HB1	1.93	0.50
7:CG:101:LEU:O	7:CG:104:LEU:HB2	2.11	0.50
9:CI:99:LEU:HB3	9:CI:101:PHE:CE1	2.46	0.50
25:DA:322:A:OP2	29:DF:169:ASN:HB2	2.09	0.50
25:DA:471:A:H2'	25:DA:472:A:O4'	2.11	0.50
25:DA:614(C):A:C4	29:DF:180:GLY:HA2	2.46	0.50
25:DA:839:U:H1'	25:DA:1191:G:H1'	1.93	0.50
25:DA:1149:G:H2'	25:DA:1150:C:C6	2.46	0.50
25:DA:1489:U:O2	25:DA:1489:U:H2'	2.11	0.50
25:DA:1858:G:O6	61:DA:4294:HOH:O	2.16	0.50
25:DA:2646:C:OP2	25:DA:2732:G:O2'	2.27	0.50
28:DE:36:ARG:HD3	28:DE:85:ASN:HD21	1.76	0.50
48:D2:16:LEU:O	48:D2:67:LYS:NZ	2.43	0.50
1:AA:106:C:O2'	1:AA:379:C:H5"	2.10	0.50
1:AA:262:A:C6	1:AA:263:A:C6	2.99	0.50
1:AA:757:U:H2'	1:AA:758:G:O4'	2.10	0.50
1:AA:785:G:C2'	1:AA:786:G:H5'	2.42	0.50
1:AA:1038:C:C2'	1:AA:1039:C:H5'	2.42	0.50
6:AF:44:GLY:HA2	6:AF:59:TYR:CZ	2.46	0.50
14:AN:29:ARG:HD3	14:AN:40:CYS:SG	2.52	0.50
25:BA:768:C:H2'	25:BA:769:A:C8	2.46	0.50
25:BA:1219:A:H1'	25:BA:1220:U:H5"	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:6:G:O2'	1:CA:7:G:H5'	2.12	0.50
1:CA:153:C:H2'	1:CA:154:C:C6	2.47	0.50
1:CA:790:A:C6	1:CA:791:G:C6	3.00	0.50
1:CA:1164:G:H1	1:CA:1172:C:N4	2.08	0.50
1:CA:1318:A:O2'	19:CS:37:ARG:HB2	2.11	0.50
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.47	0.50
2:CB:87:ARG:NE	2:CB:233:SER:HB3	2.27	0.50
3:CC:134:ILE:HD11	3:CC:153:VAL:CG2	2.42	0.50
25:DA:1036:G:H1	25:DA:1119:C:N4	2.06	0.50
25:DA:1041:C:N4	25:DA:1114:G:H1	2.10	0.50
25:DA:1666:G:P	34:DO:66:LYS:HE3	2.52	0.50
27:DD:177:LEU:HD11	27:DD:183:ARG:HD2	1.92	0.50
27:DD:242:ARG:N	27:DD:242:ARG:HD3	2.25	0.50
48:D2:17:SER:N	48:D2:20:GLU:OE2	2.41	0.50
1:AA:69:G:H2'	1:AA:70:G:C8	2.46	0.50
1:AA:103:C:P	20:AT:17:ARG:HH21	2.35	0.50
1:AA:407:G:OP1	4:AD:115:ARG:HD3	2.12	0.50
1:AA:1005:A:H5'	1:AA:1038:C:H1'	1.93	0.50
1:AA:1142:G:H3'	1:AA:1143:G:C8	2.46	0.50
1:AA:1318:A:H4'	19:AS:10:PHE:CZ	2.46	0.50
2:AB:21:ARG:H	2:AB:21:ARG:HH21	1.58	0.50
2:AB:208:ILE:HA	2:AB:211:ILE:HD12	1.94	0.50
3:AC:22:TRP:CD1	3:AC:59:ARG:HD2	2.47	0.50
3:AC:35:GLU:CD	3:AC:59:ARG:HH22	2.19	0.50
3:AC:36:ASP:O	3:AC:40:ARG:HG3	2.12	0.50
25:BA:70:A:H3'	25:BA:70:A:OP2	2.11	0.50
25:BA:895:G:H2'	25:BA:896:A:C8	2.47	0.50
25:BA:1809:U:H2'	25:BA:1815:A:N6	2.27	0.50
25:BA:2784:C:H2'	25:BA:2785:C:C6	2.46	0.50
39:BT:53:ARG:HB3	39:BT:53:ARG:HH11	1.76	0.50
40:BU:102:GLU:HG3	41:BV:2:PHE:CE2	2.47	0.50
44:BY:98:VAL:HG12	44:BY:105:ALA:HA	1.93	0.50
45:BZ:44:PHE:CZ	45:BZ:86:VAL:HG11	2.46	0.50
45:BZ:136:PHE:O	45:BZ:137:ILE:HG13	2.12	0.50
1:CA:200:G:H2'	1:CA:201:C:C6	2.46	0.50
1:CA:473:G:O2'	1:CA:474:G:H5'	2.11	0.50
1:CA:641:U:O3'	1:CA:642:A:H8	1.94	0.50
1:CA:1226:C:C4	13:CM:104:ARG:HG2	2.46	0.50
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.92	0.50
5:CE:33:VAL:HG13	5:CE:112:LEU:HD12	1.92	0.50
25:DA:57:C:H2'	25:DA:58:G:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2447:G:OP2	61:DA:4551:HOH:O	2.20	0.50
29:DF:31:HIS:NE2	29:DF:35:GLU:OE2	2.44	0.50
30:DG:15:VAL:HG13	30:DG:175:LEU:HB3	1.93	0.50
54:D8:34:TRP:CG	54:D8:35:GLN:N	2.79	0.50
1:AA:410:G:OP1	4:AD:30:LYS:NZ	2.38	0.50
1:AA:646:U:H2'	1:AA:647:C:C6	2.45	0.50
1:AA:819:A:H4'	1:AA:820:U:OP2	2.12	0.50
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.47	0.50
25:BA:160:G:C2'	25:BA:161:C:H5'	2.42	0.50
25:BA:626:A:H4'	25:BA:627:G:H5'	1.94	0.50
25:BA:1385:G:H5"	43:BX:16:LYS:HD3	1.94	0.50
25:BA:1846:A:H8	25:BA:1846:A:OP1	1.95	0.50
50:B4:62:ARG:HB2	50:B4:63:TYR:CD1	2.46	0.50
1:CA:93:G:O2'	1:CA:96:U:H5'	2.11	0.50
2:CB:19:HIS:CE1	2:CB:206:ASP:HB2	2.46	0.50
7:CG:102:ARG:O	7:CG:106:GLN:HG3	2.12	0.50
20:CT:13:LEU:O	20:CT:17:ARG:HG3	2.11	0.50
25:DA:2272:U:H5"	25:DA:2273:A:OP1	2.11	0.50
25:DA:2320:A:H2'	25:DA:2320:A:N3	2.25	0.50
25:DA:2406:U:C4	35:DP:72:PRO:HD2	2.46	0.50
29:DF:60:SER:OG	29:DF:61:GLY:N	2.45	0.50
31:DH:106:THR:HG23	31:DH:112:PRO:HB3	1.94	0.50
34:DO:68:GLU:CB	34:DO:78:ARG:HB2	2.41	0.50
39:DT:51:ARG:HG3	39:DT:98:LYS:HD2	1.93	0.50
50:D4:2:LYS:HB2	50:D4:5:ILE:HD13	1.93	0.50
1:AA:445:G:H2'	1:AA:446:G:H8	1.74	0.50
1:AA:947:G:H2'	1:AA:948:C:C6	2.46	0.50
1:AA:1111:A:N1	3:AC:177:THR:OG1	2.34	0.50
1:AA:1232:U:OP1	9:AI:124:GLN:HG2	2.12	0.50
4:AD:3:ARG:HE	4:AD:118:ARG:HD3	1.76	0.50
14:AN:14:PRO:HG2	14:AN:16:PHE:O	2.12	0.50
15:AO:18:PHE:O	15:AO:21:ASP:HB3	2.12	0.50
19:AS:3:ARG:NH1	19:AS:8:GLY:O	2.44	0.50
25:BA:294:C:N3	25:BA:390:G:N2	2.40	0.50
25:BA:1578:C:H5"	25:BA:1579:C:OP2	2.11	0.50
25:BA:1629:C:H2'	25:BA:1630:A:H8	1.77	0.50
25:BA:2227:G:H3'	25:BA:2228:G:N7	2.26	0.50
29:BF:65:TRP:CZ2	29:BF:75:HIS:HD2	2.29	0.50
31:BH:20:ALA:HB1	31:BH:21:PRO:HD2	1.94	0.50
1:CA:540:G:H2'	1:CA:541:G:O4'	2.12	0.50
1:CA:833:U:H2'	1:CA:834:C:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:999:C:C2	1:CA:1042:G:N2	2.80	0.50
1:CA:1509:C:H2'	1:CA:1510:U:O4'	2.12	0.50
9:CI:49:PRO:HG2	9:CI:81:ILE:HG23	1.93	0.50
25:DA:118:A:N3	25:DA:178:G:H1'	2.27	0.50
25:DA:307:G:N1	25:DA:310:A:OP2	2.39	0.50
25:DA:889:C:HO2'	25:DA:890:A:H8	1.58	0.50
25:DA:1188:U:H4'	41:DV:79:VAL:HG22	1.94	0.50
25:DA:1313:U:H2'	25:DA:1610:A:C2	2.46	0.50
39:DT:2:ASN:O	39:DT:6:LEU:HD22	2.11	0.50
39:DT:60:THR:HG22	39:DT:77:PRO:HA	1.94	0.50
1:AA:626:U:H2'	1:AA:627:G:C8	2.47	0.50
1:AA:1059:C:H42	1:AA:1198:G:H1	1.60	0.50
1:AA:1237:C:O2'	1:AA:1300:G:N1	2.38	0.50
1:AA:1267:C:O2	21:AU:20:LYS:HD2	2.12	0.50
1:AA:1318:A:H4'	19:AS:10:PHE:CE2	2.47	0.50
3:AC:119:ARG:HH11	3:AC:140:ARG:NH2	2.10	0.50
4:AD:81:GLU:OE2	4:AD:139:ARG:NH2	2.44	0.50
13:AM:29:ARG:HH11	13:AM:64:TRP:CG	2.29	0.50
15:AO:43:LEU:HD12	15:AO:56:LEU:HD22	1.94	0.50
25:BA:672:G:H8	25:BA:672:G:O5'	1.95	0.50
25:BA:718:C:N4	61:BA:4670:HOH:O	2.44	0.50
25:BA:2122:G:C6	25:BA:2211:U:N3	2.80	0.50
25:BA:2211:U:C2'	25:BA:2212:G:H5'	2.42	0.50
25:BA:2418:U:OP1	61:BA:4136:HOH:O	2.20	0.50
27:BD:166:GLN:HB2	27:BD:174:ILE:HG22	1.94	0.50
45:BZ:110:GLY:O	45:BZ:113:ALA:HB3	2.12	0.50
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.12	0.50
1:CA:677:U:H1'	11:CK:119:CYS:SG	2.51	0.50
1:CA:866:C:C4	1:CA:867:G:H1'	2.46	0.50
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.11	0.50
3:CC:18:TRP:HB3	3:CC:20:SER:O	2.12	0.50
3:CC:56:ASP:O	3:CC:57:ILE:HD12	2.12	0.50
7:CG:65:ALA:HB3	7:CG:124:LEU:HD23	1.94	0.50
13:CM:37:THR:HG21	13:CM:56:LEU:HA	1.94	0.50
19:CS:22:LEU:HB3	19:CS:27:GLU:CG	2.41	0.50
19:CS:41:VAL:HG13	19:CS:42:PRO:HD2	1.92	0.50
25:DA:491:G:H2'	25:DA:492:A:H8	1.76	0.50
25:DA:2267:A:H5"	25:DA:2268:A:H5'	1.93	0.50
29:DF:7:TYR:O	29:DF:22:ALA:N	2.45	0.50
1:AA:406:G:N3	4:AD:119:GLN:NE2	2.58	0.50
1:AA:620:C:H2'	1:AA:621:A:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:657:G:C2	1:AA:658:G:C8	3.00	0.50
1:AA:836:G:P	18:AR:61:LYS:HZ1	2.33	0.50
25:BA:1359:U:H2'	25:BA:1656:A:C2	2.46	0.50
25:BA:1709:C:O2'	25:BA:2699:U:OP1	2.24	0.50
25:BA:2873:C:O2'	25:BA:2874:G:H5'	2.12	0.50
30:BG:179:PRO:HB2	50:B4:42:PHE:HE2	1.77	0.50
34:BO:68:GLU:OE2	34:BO:78:ARG:NH1	2.44	0.50
36:BQ:21:THR:HG21	36:BQ:101:ARG:HB2	1.93	0.50
37:BR:72:ASP:OD2	37:BR:75:LEU:HB2	2.11	0.50
1:CA:171:A:H2'	1:CA:172:A:C8	2.47	0.50
1:CA:192:U:O2'	20:CT:60:GLU:OE2	2.24	0.50
1:CA:364:A:H2'	1:CA:365:U:H6	1.77	0.50
1:CA:1038:C:O2'	1:CA:1039:C:H5'	2.12	0.50
3:CC:87:LEU:O	3:CC:91:LEU:N	2.34	0.50
3:CC:111:LEU:HD22	3:CC:146:ALA:HB2	1.93	0.50
4:CD:99:SER:O	4:CD:140:VAL:HG23	2.11	0.50
9:CI:85:LEU:HB3	9:CI:92:TYR:HD2	1.76	0.50
11:CK:99:GLN:C	11:CK:101:SER:H	2.20	0.50
13:CM:19:LEU:HD11	13:CM:56:LEU:HD11	1.93	0.50
13:CM:29:ARG:HH11	13:CM:64:TRP:CG	2.30	0.50
25:DA:709:U:H2'	25:DA:710:G:C8	2.47	0.50
25:DA:910:A:C5	36:DQ:13:GLN:HG3	2.47	0.50
25:DA:2319:G:C2	38:DS:3:ARG:HA	2.46	0.50
25:DA:2540:C:H2'	25:DA:2541:A:O4'	2.11	0.50
28:DE:143:ASN:HD22	28:DE:147:PRO:CD	2.25	0.50
30:DG:5:VAL:HG13	30:DG:8:LYS:HD3	1.94	0.50
44:DY:49:VAL:CG2	44:DY:61:ILE:HG23	2.40	0.50
54:D8:9:GLY:O	54:D8:13:ARG:HG2	2.11	0.50
1:AA:67:C:O2'	1:AA:171:A:N3	2.34	0.49
1:AA:250:A:H4'	1:AA:251:G:O5'	2.12	0.49
1:AA:452:A:O2'	1:AA:453:A:OP2	2.23	0.49
1:AA:623:C:H2'	1:AA:624:C:C6	2.44	0.49
1:AA:1073:U:O2'	2:AB:104:ASN:OD1	2.30	0.49
1:AA:1326:C:OP1	21:AU:17:THR:OG1	2.29	0.49
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.94	0.49
2:AB:62:ALA:HB3	2:AB:225:ALA:HB3	1.93	0.49
2:AB:100:GLY:N	2:AB:176:GLU:OE2	2.37	0.49
2:AB:174:VAL:O	2:AB:178:ARG:HB2	2.12	0.49
16:AP:18:ARG:NH1	16:AP:32:TYR:OH	2.45	0.49
20:AT:59:ALA:O	20:AT:63:ILE:HG13	2.12	0.49
25:BA:933:C:OP1	25:BA:933:C:H4'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2402:U:P	54:B8:35:GLN:HE22	2.34	0.49
1:CA:59:A:H5"	1:CA:60:A:C5'	2.42	0.49
1:CA:337:C:H2'	1:CA:338:A:H8	1.74	0.49
1:CA:457:C:H2'	1:CA:458:C:C6	2.47	0.49
1:CA:827:U:H2'	1:CA:859:A:H61	1.77	0.49
1:CA:875:C:H1'	8:CH:15:ASN:HD21	1.77	0.49
1:CA:921:U:O2	5:CE:19:MET:HB2	2.12	0.49
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.12	0.49
1:CA:1492:A:H5"	1:CA:1493:A:OP2	2.11	0.49
1:CA:1515:C:H2'	1:CA:1516:G:C8	2.47	0.49
2:CB:44:LEU:HD22	2:CB:44:LEU:H	1.77	0.49
25:DA:892:G:H2'	25:DA:893:C:O4'	2.12	0.49
25:DA:1138:G:N3	33:DN:106:MET:HE2	2.27	0.49
25:DA:1507:A:O2'	25:DA:1508:A:O5'	2.29	0.49
25:DA:2647:U:H2'	25:DA:2648:C:C6	2.47	0.49
29:DF:152:GLU:HA	29:DF:190:GLU:OE2	2.12	0.49
30:DG:23:PHE:HB2	30:DG:25:TYR:CZ	2.47	0.49
31:DH:20:ALA:HB1	31:DH:21:PRO:HD2	1.94	0.49
54:D8:54:GLU:O	54:D8:58:ILE:HG13	2.12	0.49
1:AA:460:G:O6	1:AA:470:C:H5"	2.12	0.49
17:AQ:26:GLN:HG2	17:AQ:37:LYS:HG2	1.93	0.49
19:AS:65:ASN:HD22	19:AS:65:ASN:N	2.08	0.49
20:AT:99:LEU:HA	20:AT:100:ILE:O	2.12	0.49
23:AX:54:U:H2'	23:AX:55:U:O4'	2.12	0.49
23:AX:61:C:H2'	23:AX:62:C:H6	1.75	0.49
25:BA:867:A:N3	25:BA:988:U:O2'	2.42	0.49
30:BG:15:VAL:HG13	30:BG:175:LEU:HB3	1.94	0.49
48:B2:44:LEU:HD23	48:B2:47:ASN:HA	1.94	0.49
1:CA:297:G:O2'	1:CA:299:G:N7	2.39	0.49
1:CA:1135:U:O2'	1:CA:1137:C:O2	2.18	0.49
1:CA:1417:G:O6	61:CA:4047:HOH:O	2.14	0.49
4:CD:98:GLU:HG2	4:CD:189:PRO:HG2	1.93	0.49
12:CL:11:VAL:HG11	17:CQ:36:ILE:HG21	1.94	0.49
16:CP:18:ARG:O	16:CP:20:VAL:HG23	2.12	0.49
19:CS:27:GLU:HG2	19:CS:47:HIS:HE2	1.77	0.49
25:DA:442:G:N2	29:DF:48:THR:HB	2.27	0.49
25:DA:2369:A:H2'	25:DA:2370:G:H8	1.76	0.49
31:DH:89:ILE:O	31:DH:129:THR:HG23	2.12	0.49
36:DQ:1:MET:N	36:DQ:1:MET:HE2	2.27	0.49
1:AA:20:U:H2'	1:AA:21:G:O4'	2.13	0.49
1:AA:950:U:OP2	13:AM:102:ARG:HD3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1260:C:O5'	1:AA:1284:C:H4'	2.13	0.49
2:AB:163:PHE:HA	2:AB:185:ILE:HG13	1.93	0.49
2:AB:213:LEU:HD22	2:AB:214:ILE:HD13	1.94	0.49
25:BA:32:C:O2'	25:BA:33:U:H5'	2.12	0.49
25:BA:1153:G:N3	25:BA:1153:G:H2'	2.27	0.49
1:CA:605:U:H2'	1:CA:606:G:C8	2.47	0.49
1:CA:628:G:H2'	1:CA:629:G:C8	2.48	0.49
1:CA:1129:C:H1'	1:CA:1130:A:N7	2.27	0.49
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.12	0.49
1:CA:1414:U:H3	1:CA:1486:G:H1	1.60	0.49
25:DA:440:G:H2'	25:DA:441:U:C6	2.47	0.49
25:DA:872:A:H2'	25:DA:873:G:O4'	2.11	0.49
25:DA:1221(A):C:C2	25:DA:1229:G:C2	3.00	0.49
25:DA:1857:G:O2'	25:DA:1885:A:N6	2.45	0.49
25:DA:1937:A:C8	25:DA:1939:U:H2'	2.46	0.49
25:DA:2723:C:H5"	37:DR:1:MET:HE2	1.93	0.49
1:AA:509:A:C8	1:AA:509:A:H3'	2.48	0.49
1:AA:991:U:H1'	1:AA:993:G:H8	1.78	0.49
1:AA:1127:G:H22	1:AA:1147:C:N4	2.10	0.49
2:AB:98:LEU:HB2	2:AB:101:MET:HE3	1.95	0.49
25:BA:564:G:H2'	25:BA:565:C:H6	1.76	0.49
25:BA:610:C:OP2	35:BP:21:ARG:NH2	2.45	0.49
25:BA:831:A:H5'	25:BA:832:G:OP1	2.12	0.49
25:BA:1688:A:H2'	25:BA:1689:G:O4'	2.12	0.49
1:CA:441:A:H3'	1:CA:442:C:H6	1.76	0.49
1:CA:460:G:H1'	1:CA:472:A:H61	1.76	0.49
1:CA:650:G:C2'	1:CA:651:C:H5'	2.43	0.49
1:CA:1068:G:H8	1:CA:1068:G:OP2	1.94	0.49
1:CA:1157:A:N7	1:CA:1180:A:C6	2.80	0.49
3:CC:56:ASP:HB2	3:CC:67:THR:HB	1.94	0.49
5:CE:76:ILE:HG12	5:CE:118:ILE:HD11	1.93	0.49
9:CI:77:ILE:O	9:CI:81:ILE:HG22	2.12	0.49
25:DA:450:G:OP1	25:DA:1248:G:N2	2.45	0.49
25:DA:705:A:H1'	27:DD:9:TYR:CE1	2.48	0.49
25:DA:861:A:C2	25:DA:917:A:C4	3.00	0.49
26:DB:53:A:H8	26:DB:53:A:O5'	1.96	0.49
37:DR:56:LYS:NZ	37:DR:90:ARG:O	2.45	0.49
39:DT:16:ARG:HG3	39:DT:79:HIS:HA	1.95	0.49
39:DT:61:PHE:CE1	39:DT:76:PHE:HB2	2.48	0.49
41:DV:62:LEU:CD1	41:DV:95:LEU:HB2	2.42	0.49
54:D8:3:LYS:HB2	54:D8:64:TYR:OH	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:517:G:N1	1:AA:533:A:OP2	2.41	0.49
1:AA:818:G:O2'	1:AA:819:A:H5'	2.12	0.49
1:AA:839:U:H3'	1:AA:840:C:H6	1.77	0.49
10:AJ:11:PHE:CE1	10:AJ:67:THR:HG22	2.44	0.49
18:AR:51:LEU:HD23	18:AR:52:PRO:HD2	1.94	0.49
20:AT:18:GLN:O	20:AT:22:ARG:HG3	2.12	0.49
25:BA:507:G:H1'	25:BA:532:A:N1	2.28	0.49
25:BA:581:G:OP1	33:BN:111:PRO:HD2	2.13	0.49
25:BA:1040:C:P	40:BU:54:LYS:HZ1	2.35	0.49
25:BA:1155:C:C5	25:BA:1156:G:C6	3.01	0.49
25:BA:1505:C:H4'	25:BA:1506:G:O5'	2.12	0.49
25:BA:2519:C:OP2	61:BA:4083:HOH:O	2.20	0.49
39:BT:105:LEU:HB2	39:BT:110:ILE:HG13	1.95	0.49
1:CA:41:G:H2'	1:CA:42:G:H8	1.76	0.49
1:CA:123:C:O2'	1:CA:290:C:O2	2.30	0.49
1:CA:187:C:H2'	1:CA:188:C:H6	1.76	0.49
1:CA:458:C:C2	1:CA:460:G:C8	3.01	0.49
1:CA:667:G:OP1	1:CA:732:C:O2'	2.26	0.49
1:CA:952:U:C4	13:CM:104:ARG:NH1	2.81	0.49
1:CA:1117:G:N2	1:CA:1180:A:O2'	2.43	0.49
2:CB:200:ILE:O	2:CB:200:ILE:HG12	2.11	0.49
3:CC:179:ARG:O	3:CC:206:GLU:HA	2.13	0.49
4:CD:65:ARG:HG2	4:CD:75:PHE:CD1	2.47	0.49
5:CE:12:LEU:HB3	5:CE:31:LEU:HB2	1.95	0.49
7:CG:135:VAL:O	7:CG:139:GLU:N	2.31	0.49
8:CH:41:ARG:HH22	8:CH:123:GLU:CD	2.20	0.49
9:CI:28:VAL:HA	9:CI:63:ILE:HB	1.93	0.49
25:DA:1339:G:N2	25:DA:1603:A:H1'	2.28	0.49
25:DA:1545:A:H2'	25:DA:1546:C:O4'	2.12	0.49
25:DA:1803:A:HO2'	27:DD:259:THR:HG21	1.77	0.49
29:DF:9:ILE:O	29:DF:11:VAL:HG23	2.12	0.49
1:AA:153:C:H42	1:AA:169:C:N4	2.09	0.49
1:AA:652:U:O4	1:AA:752:G:O2'	2.26	0.49
1:AA:1002:G:H3'	1:AA:1003:G:C8	2.48	0.49
1:AA:1052:U:H5"	1:AA:1053:G:OP2	2.11	0.49
1:AA:1392:G:H2'	1:AA:1393:U:H5'	1.95	0.49
2:AB:160:ASP:O	2:AB:183:PRO:HD2	2.13	0.49
25:BA:895:G:N9	25:BA:978:A:H8	2.11	0.49
25:BA:934:A:O2'	25:BA:935:C:OP2	2.29	0.49
25:BA:2303:U:H2'	25:BA:2304:C:C6	2.48	0.49
25:BA:2326:C:H2'	25:BA:2327:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:120:TRP:CE3	28:BE:155:LYS:HD3	2.46	0.49
36:BQ:56:ARG:HH11	36:BQ:56:ARG:HG3	1.78	0.49
39:BT:88:ILE:HG21	39:BT:91:ARG:NE	2.27	0.49
1:CA:689:C:OP1	11:CK:27:ASN:ND2	2.42	0.49
1:CA:953:G:C6	1:CA:1229:A:C6	3.01	0.49
1:CA:1001(A):G:N3	1:CA:1002:G:H1'	2.28	0.49
1:CA:1057:G:C4	1:CA:1204:A:C2	3.01	0.49
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.47	0.49
1:CA:1277:C:O2'	1:CA:1279:A:C8	2.66	0.49
6:CF:68:PRO:HB2	6:CF:71:ARG:HG3	1.95	0.49
8:CH:20:TYR:HA	8:CH:65:TYR:CZ	2.48	0.49
12:CL:54:LYS:O	12:CL:70:ILE:HG13	2.13	0.49
15:CO:17:ARG:HH11	15:CO:17:ARG:HG3	1.78	0.49
16:CP:14:ASN:OD1	16:CP:16:HIS:HE1	1.94	0.49
23:CX:19:G:H4'	23:CX:20:U:OP2	2.13	0.49
25:DA:1488:G:N1	25:DA:1489:U:H5	2.09	0.49
25:DA:2227:A:OP1	27:DD:263:ARG:HD2	2.13	0.49
25:DA:2348:U:OP2	54:D8:42:ARG:NH2	2.45	0.49
27:DD:164:GLN:NE2	27:DD:176:ARG:HH22	2.10	0.49
30:DG:110:ALA:HA	30:DG:140:ILE:O	2.12	0.49
44:DY:51:VAL:HG13	44:DY:56:PRO:HA	1.94	0.49
1:AA:102:G:H2'	1:AA:103:C:H6	1.77	0.49
1:AA:649:G:H2'	1:AA:650:G:C8	2.48	0.49
8:AH:33:GLU:O	8:AH:37:ARG:N	2.41	0.49
25:BA:510:C:H2'	25:BA:511:C:C6	2.48	0.49
25:BA:794:U:O2	25:BA:2036:A:H1'	2.13	0.49
25:BA:927:G:C2	25:BA:928:G:C8	3.01	0.49
25:BA:1001:G:OP2	36:BQ:87:LYS:HE2	2.13	0.49
25:BA:1699:A:O2'	25:BA:1700:G:H5'	2.13	0.49
25:BA:1829:U:H5'	27:BD:259:THR:CG2	2.41	0.49
30:BG:3:LEU:HD22	50:B4:25:TYR:CE1	2.48	0.49
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.47	0.49
1:CA:999:C:H4'	1:CA:999:C:OP1	2.11	0.49
1:CA:1038:C:C2'	1:CA:1039:C:H5'	2.42	0.49
1:CA:1243:C:H2'	1:CA:1244:C:H6	1.77	0.49
7:CG:111:ARG:HB3	7:CG:113:GLU:OE2	2.12	0.49
10:CJ:42:THR:CG2	10:CJ:68:HIS:HD2	2.26	0.49
14:CN:34:TYR:N	14:CN:39:LEU:O	2.40	0.49
21:CU:10:ARG:HG3	21:CU:10:ARG:HH11	1.77	0.49
25:DA:468:G:N7	53:D7:39:ARG:NH2	2.47	0.49
25:DA:568:U:H5'	25:DA:945:A:N1	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:585:G:O2'	25:DA:1254:A:N6	2.40	0.49
25:DA:740:U:H2'	25:DA:741:G:C8	2.47	0.49
25:DA:1418:G:H8	25:DA:1418:G:O5'	1.96	0.49
25:DA:1579:A:H2'	25:DA:1580:A:C8	2.47	0.49
25:DA:1927:A:H2'	25:DA:1928:A:C8	2.48	0.49
25:DA:2646:C:H2'	25:DA:2647:U:O4'	2.13	0.49
35:DP:83:VAL:HG12	35:DP:112:LEU:HD21	1.94	0.49
36:DQ:66:ILE:HG12	36:DQ:104:PHE:CE2	2.48	0.49
36:DQ:111:GLU:O	36:DQ:115:MET:HG2	2.12	0.49
48:D2:48:HIS:O	48:D2:52:ASP:HB2	2.12	0.49
1:AA:191:G:C6	1:AA:192:U:C4	3.00	0.49
1:AA:384:G:H2'	1:AA:385:C:H6	1.76	0.49
2:AB:36:ARG:C	2:AB:38:GLY:H	2.20	0.49
2:AB:74:LYS:NZ	2:AB:205:ASP:OD2	2.46	0.49
3:AC:44:GLU:HG2	3:AC:52:LEU:HD22	1.94	0.49
7:AG:51:GLN:O	7:AG:55:GLY:HA2	2.12	0.49
19:AS:64:GLU:O	19:AS:67:VAL:HG23	2.12	0.49
25:BA:64:C:H2'	25:BA:65:C:H6	1.77	0.49
25:BA:831:A:C5	27:BD:229:VAL:HG21	2.48	0.49
25:BA:926:G:H2'	25:BA:927:G:O4'	2.12	0.49
25:BA:1224:C:O2'	25:BA:1225:C:H5'	2.11	0.49
25:BA:2486:C:H5"	25:BA:2487:C:OP2	2.11	0.49
25:BA:2584:A:N7	28:BE:145:LYS:HB2	2.28	0.49
25:BA:2623:U:H2'	51:B5:2:ALA:O	2.12	0.49
45:BZ:161:VAL:HG13	45:BZ:161:VAL:O	2.12	0.49
53:B7:34:ARG:NH1	53:B7:41:ARG:O	2.46	0.49
1:CA:736:C:H2'	1:CA:737:A:C8	2.48	0.49
1:CA:804:U:H5"	1:CA:805:C:OP2	2.13	0.49
1:CA:1012:U:H2'	1:CA:1013:G:C8	2.47	0.49
1:CA:1329:A:P	13:CM:28:ALA:HB3	2.52	0.49
1:CA:1399:C:C2	1:CA:1502:A:N6	2.80	0.49
3:CC:58:GLU:O	3:CC:59:ARG:HG3	2.12	0.49
4:CD:100:ARG:NH2	4:CD:102:ASP:OD2	2.46	0.49
25:DA:84:A:N1	25:DA:98:G:O2'	2.43	0.49
25:DA:708:C:H42	25:DA:723:G:H1	1.61	0.49
25:DA:753:C:O5'	25:DA:753:C:H6	1.95	0.49
25:DA:784:A:O4'	27:DD:227:ASN:ND2	2.45	0.49
25:DA:1682:G:H1'	25:DA:1762:A:C6	2.47	0.49
28:DE:52:LEU:HB2	28:DE:76:ARG:HB2	1.93	0.49
1:AA:141:A:H2	1:AA:222:U:O2	1.96	0.49
1:AA:433:C:H2'	1:AA:434:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:783:C:OP1	1:AA:1515:C:O2'	2.27	0.49
1:AA:863:U:H2'	1:AA:865:A:OP2	2.12	0.49
1:AA:1030(C):G:H2'	1:AA:1030(D):A:C8	2.41	0.49
1:AA:1031:G:H2'	1:AA:1032:G:H8	1.78	0.49
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.95	0.49
9:AI:4:TYR:CZ	9:AI:88:TYR:HD1	2.31	0.49
11:AK:82:VAL:HB	11:AK:108:ILE:HG12	1.94	0.49
25:BA:155:C:OP2	25:BA:155:C:H6	1.96	0.49
25:BA:1821:C:H5"	25:BA:1822:A:OP1	2.13	0.49
25:BA:1900:G:H2'	25:BA:1901:C:C6	2.47	0.49
25:BA:2564:U:C2	25:BA:2566:U:H5'	2.48	0.49
47:B1:72:GLU:O	47:B1:76:ARG:HG3	2.13	0.49
1:CA:671:G:H2'	1:CA:672:U:O4'	2.13	0.49
1:CA:785:G:C2'	1:CA:786:G:H5'	2.42	0.49
1:CA:1121:U:C4	1:CA:1122:U:C5	3.01	0.49
1:CA:1170:A:O2'	1:CA:1171:G:C8	2.66	0.49
2:CB:53:ARG:O	2:CB:56:ARG:HG2	2.13	0.49
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.13	0.49
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.13	0.49
19:CS:28:LYS:CB	19:CS:29:ARG:HA	2.43	0.49
19:CS:64:GLU:O	19:CS:67:VAL:HG23	2.12	0.49
25:DA:947:G:N2	25:DA:971:C:C2	2.81	0.49
25:DA:953:A:C2	25:DA:954:G:C8	3.00	0.49
25:DA:2356:C:H2'	25:DA:2357:U:O4'	2.12	0.49
25:DA:2716:U:O2'	25:DA:2717:G:H5'	2.13	0.49
25:DA:2812:G:H2'	25:DA:2813:A:C8	2.48	0.49
27:DD:108:PRO:HB3	27:DD:143:HIS:CE1	2.47	0.49
31:DH:83:TYR:CE2	31:DH:138:LYS:HB2	2.48	0.49
33:DN:42:TRP:CH2	33:DN:44:PRO:HB3	2.48	0.49
37:DR:87:TYR:OH	37:DR:116:LEU:HB3	2.13	0.49
25:BA:359:C:O5'	25:BA:359:C:H6	1.96	0.49
25:BA:1003:U:HO2'	25:BA:1004:A:P	2.36	0.49
25:BA:2713:C:H2'	25:BA:2714:U:H2'	1.95	0.49
25:BA:2843:G:H4'	25:BA:2844:G:OP2	2.13	0.49
25:BA:2904:U:O5'	25:BA:2904:U:H6	1.96	0.49
31:BH:149:ARG:NH1	31:BH:167:GLU:OE2	2.46	0.49
32:BI:92:VAL:HG11	32:BI:144:VAL:HG11	1.94	0.49
50:B4:59:PHE:HA	50:B4:61:ARG:H	1.78	0.49
1:CA:625:G:H2'	1:CA:626:U:H6	1.77	0.49
1:CA:1142:G:C2	1:CA:1143:G:H1'	2.47	0.49
1:CA:1256:A:H2	1:CA:1277:C:H42	1.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1291:G:H4'	9:CI:39:GLY:HA3	1.94	0.49
1:CA:1318:A:H5"	19:CS:3:ARG:NH2	2.10	0.49
3:CC:29:TYR:OH	14:CN:54:PRO:O	2.22	0.49
13:CM:93:ARG:NH1	25:DA:888:C:OP1	2.46	0.49
15:CO:5:LYS:H	15:CO:5:LYS:CD	2.26	0.49
59:CX:101:FME:HCN	25:DA:2451:A:C2	2.45	0.49
25:DA:176:G:O2'	25:DA:177:G:H5'	2.12	0.49
25:DA:1041:C:N3	25:DA:1114:G:N2	2.57	0.49
25:DA:2659:G:N2	25:DA:2661:G:H3'	2.28	0.49
26:DB:24:G:H4'	26:DB:25:A:N7	2.28	0.49
26:DB:45:A:OP2	30:DG:96:ARG:NH2	2.46	0.49
30:DG:114:ILE:HD12	30:DG:117:PHE:HD2	1.78	0.49
45:DZ:28:MET:HB3	45:DZ:88:PHE:HB2	1.95	0.49
1:AA:145:G:H2'	1:AA:146:G:H5"	1.95	0.48
1:AA:410:G:H5"	1:AA:411:A:OP1	2.13	0.48
1:AA:737:A:H5"	6:AF:92:LYS:HD3	1.95	0.48
1:AA:1104:G:H4'	2:AB:111:ARG:NH1	2.28	0.48
1:AA:1118:C:OP1	9:AI:104:ARG:NH1	2.46	0.48
1:AA:1123:A:H4'	10:AJ:37:PRO:HD2	1.95	0.48
1:AA:1422:G:O3'	34:BO:49:ARG:NH1	2.37	0.48
5:AE:36:ASP:OD2	5:AE:40:ARG:HB2	2.13	0.48
9:AI:17:VAL:HG21	9:AI:81:ILE:HB	1.95	0.48
14:AN:23:ARG:HH11	14:AN:30:ALA:HB2	1.77	0.48
23:AX:4:G:H1	23:AX:69:C:N4	2.10	0.48
25:BA:672:G:H2'	25:BA:673:G:O4'	2.13	0.48
25:BA:1506:G:C3'	25:BA:1507:A:H5"	2.43	0.48
1:CA:540:G:H2'	1:CA:541:G:H8	1.78	0.48
3:CC:113:ALA:HB2	3:CC:202:ILE:HG13	1.95	0.48
5:CE:36:ASP:C	5:CE:38:GLN:H	2.20	0.48
6:CF:10:LEU:HD12	6:CF:85:VAL:HA	1.94	0.48
24:CW:9:MVA:HG13	24:CW:10:2QY:H82	1.95	0.48
25:DA:1022:G:C5	25:DA:1140:C:C4	3.01	0.48
28:DE:2:LYS:NZ	28:DE:95:ILE:O	2.44	0.48
34:DO:29:ASN:N	34:DO:29:ASN:OD1	2.46	0.48
42:DW:50:VAL:HG12	42:DW:105:VAL:HB	1.96	0.48
44:DY:44:ILE:HA	44:DY:63:LYS:O	2.13	0.48
1:AA:202:U:H3'	1:AA:203:U:H6	1.78	0.48
1:AA:457:C:H2'	1:AA:458:C:C5	2.48	0.48
1:AA:1288:A:H61	1:AA:1371:G:HO2'	1.61	0.48
8:AH:73:ASP:OD2	8:AH:75:ARG:NH1	2.46	0.48
11:AK:48:ILE:O	11:AK:50:TYR:N	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:65:ASN:C	50:B4:58:ARG:HG3	2.38	0.48
25:BA:374:U:H2'	25:BA:375:G:O4'	2.12	0.48
25:BA:1183:G:N3	33:BN:106:MET:HE2	2.29	0.48
25:BA:1790:A:H5"	25:BA:2728:C:H1'	1.95	0.48
25:BA:1834:A:O2'	27:BD:259:THR:HG21	2.13	0.48
25:BA:1941:A:H5"	25:BA:1942:C:OP2	2.13	0.48
25:BA:2481:A:C2	25:BA:2494:G:C8	3.01	0.48
1:CA:96:U:O2'	1:CA:97:G:H5'	2.13	0.48
1:CA:202:U:O2'	1:CA:203:U:O5'	2.17	0.48
1:CA:424:G:H2'	1:CA:425:G:C8	2.47	0.48
1:CA:625:G:H2'	1:CA:626:U:C6	2.48	0.48
1:CA:745:C:OP1	1:CA:851:G:O2'	2.20	0.48
1:CA:1058:G:N2	10:CJ:53:PRO:HG3	2.28	0.48
11:CK:110:ASP:HB3	18:CR:85:LEU:HB3	1.93	0.48
17:CQ:62:SER:OG	17:CQ:72:ARG:HD3	2.13	0.48
20:CT:50:GLU:HG3	20:CT:100:ILE:HD13	1.93	0.48
25:DA:952:G:C6	25:DA:966:G:C6	3.01	0.48
25:DA:997:G:OP2	40:DU:58:ARG:NH1	2.40	0.48
25:DA:1786:A:H1'	25:DA:1938:A:N6	2.28	0.48
25:DA:1819:A:H5"	27:DD:161:THR:HG21	1.93	0.48
25:DA:2257:U:O2'	25:DA:2258:C:H5'	2.12	0.48
28:DE:108:SER:HB3	28:DE:165:VAL:HG21	1.94	0.48
28:DE:120:TRP:CE3	28:DE:155:LYS:HD3	2.48	0.48
30:DG:16:ARG:NE	30:DG:31:VAL:HG11	2.26	0.48
31:DH:95:ARG:HB2	31:DH:128:PRO:CB	2.44	0.48
33:DN:38:HIS:NE2	33:DN:50:ASP:OD2	2.25	0.48
43:DX:31:HIS:CD2	43:DX:33:LYS:H	2.32	0.48
49:D3:10:LYS:NZ	49:D3:15:TYR:OH	2.41	0.48
2:AB:27:LYS:NZ	2:AB:193:ASP:OD2	2.45	0.48
2:AB:220:ASP:O	2:AB:223:ILE:HG12	2.13	0.48
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.40	0.48
4:AD:20:TYR:HA	4:AD:26:CYS:SG	2.53	0.48
14:AN:26:ARG:NH2	14:AN:47:LEU:HD21	2.28	0.48
19:AS:61:TYR:CE2	19:AS:63:THR:HG23	2.48	0.48
25:BA:53:G:O2'	53:B7:35:ARG:HD3	2.13	0.48
25:BA:1533:G:H1	25:BA:1548:C:H42	1.61	0.48
25:BA:1899:A:H5'	25:BA:1900:G:OP2	2.13	0.48
25:BA:1987:C:OP1	25:BA:1988:A:O2'	2.25	0.48
25:BA:2343:G:O2'	46:B0:43:THR:HG22	2.13	0.48
35:BP:148:LEU:H	35:BP:148:LEU:HD23	1.79	0.48
39:BT:31:SER:OG	39:BT:85:LYS:HE3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:557:G:C6	1:CA:558:G:C6	3.01	0.48
1:CA:991:U:H3'	1:CA:1212:U:H3	1.78	0.48
1:CA:1104:G:H4'	2:CB:111:ARG:HH11	1.77	0.48
1:CA:1118:C:H2'	1:CA:1119:C:H6	1.77	0.48
1:CA:1264:C:H2'	1:CA:1265:G:H8	1.78	0.48
4:CD:200:GLU:O	4:CD:204:ILE:HG12	2.13	0.48
5:CE:80:ILE:HG22	5:CE:91:LEU:HB2	1.94	0.48
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.95	0.48
13:CM:16:ASP:OD1	13:CM:16:ASP:N	2.46	0.48
13:CM:20:THR:C	13:CM:22:ILE:H	2.21	0.48
14:CN:6:LEU:HB3	14:CN:23:ARG:HH21	1.77	0.48
25:DA:291:C:H2'	25:DA:292:C:H5'	1.95	0.48
25:DA:815:C:H2'	25:DA:816:C:C6	2.48	0.48
25:DA:1027:A:C6	25:DA:1126:A:C4	3.01	0.48
26:DB:78:A:H2'	26:DB:79:C:O4'	2.13	0.48
31:DH:102:ALA:HA	31:DH:117:PRO:HD3	1.95	0.48
1:AA:113:G:H2'	1:AA:114:U:C6	2.48	0.48
1:AA:1030(A):G:H2'	1:AA:1030(C):G:OP2	2.13	0.48
1:AA:1106:G:C6	1:AA:1107:C:C4	3.00	0.48
4:AD:25:ARG:HG2	4:AD:25:ARG:O	2.12	0.48
13:AM:37:THR:HG21	13:AM:56:LEU:HA	1.95	0.48
23:AX:19:G:C5	23:AX:57:A:C2	3.02	0.48
25:BA:173:C:H2'	25:BA:174:U:C6	2.48	0.48
25:BA:279:G:H5"	25:BA:279:G:H8	1.78	0.48
25:BA:908:A:N3	26:BB:79:C:O2'	2.44	0.48
25:BA:922:G:H1	25:BA:948:C:H42	1.62	0.48
25:BA:1346:U:H4'	25:BA:1347:A:H5'	1.94	0.48
31:BH:67:LEU:O	31:BH:71:LEU:HB2	2.14	0.48
34:BO:80:ASP:OD1	39:BT:64:ARG:NH2	2.46	0.48
1:CA:460:G:C6	1:CA:470:C:H5"	2.47	0.48
1:CA:1093:A:H5"	1:CA:1094:G:OP2	2.13	0.48
5:CE:88:LYS:HB3	5:CE:123:LEU:HB2	1.96	0.48
14:CN:32:SER:O	14:CN:40:CYS:HA	2.13	0.48
25:DA:272:G:H4'	25:DA:272(A):U:H5"	1.94	0.48
25:DA:1197:G:H2'	25:DA:1198:U:C6	2.48	0.48
25:DA:1668:A:O2'	25:DA:1674:G:N7	2.34	0.48
25:DA:2740:A:C6	25:DA:2741:A:C6	3.01	0.48
26:DB:42:C:O2'	30:DG:66:GLN:HG2	2.13	0.48
26:DB:55:U:O3'	30:DG:27:ASN:ND2	2.46	0.48
27:DD:134:ARG:NH1	27:DD:188:GLU:OE2	2.45	0.48
32:DI:72:LEU:HA	32:DI:75:LEU:HD22	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DU:79:PHE:CZ	40:DU:83:LEU:HD21	2.48	0.48
41:DV:60:GLU:OE2	41:DV:97:LYS:NZ	2.30	0.48
47:D1:3:LYS:HB2	47:D1:61:ARG:HH11	1.77	0.48
1:AA:1134:G:H2'	1:AA:1134:G:N3	2.29	0.48
11:AK:92:GLU:O	11:AK:95:ILE:HG13	2.13	0.48
23:AX:19:G:H4'	23:AX:20:U:OP2	2.12	0.48
25:BA:1702:A:H3'	25:BA:1703:C:C6	2.48	0.48
25:BA:1913:G:H2'	25:BA:1914:C:C6	2.49	0.48
25:BA:2104:A:H2'	25:BA:2105:G:O4'	2.13	0.48
61:BA:3803:HOH:O	51:B5:15:ARG:HG2	2.13	0.48
27:BD:133:LEU:HG	27:BD:189:CYS:O	2.13	0.48
28:BE:47:VAL:HG23	28:BE:84:PHE:O	2.12	0.48
45:BZ:107:THR:HG21	45:BZ:112:ARG:HH21	1.78	0.48
1:CA:189:G:C5	1:CA:189(A):C:C4	3.00	0.48
1:CA:397:A:H3'	1:CA:397:A:N3	2.27	0.48
1:CA:617:G:H4'	16:CP:44:THR:O	2.12	0.48
1:CA:960:U:H2'	1:CA:960:U:O2	2.12	0.48
1:CA:1004:A:H62	1:CA:1037:C:H2'	1.79	0.48
1:CA:1041:A:N6	1:CA:1042:G:C6	2.81	0.48
1:CA:1075:C:C2'	1:CA:1076:C:H5'	2.43	0.48
1:CA:1169:A:H8	1:CA:1169:A:H3'	1.78	0.48
12:CL:110:VAL:CG2	12:CL:120:TYR:HB3	2.43	0.48
25:DA:94(A):G:N2	48:D2:47:ASN:OD1	2.45	0.48
25:DA:172:C:H2'	25:DA:173:G:C8	2.38	0.48
25:DA:244:A:H2'	25:DA:245:G:O4'	2.13	0.48
25:DA:489:G:H2'	25:DA:491:G:O4'	2.14	0.48
25:DA:2271:G:H2'	25:DA:2272:U:C6	2.48	0.48
25:DA:2632:A:O2'	25:DA:2811:G:O2'	2.20	0.48
25:DA:2722:G:H2'	25:DA:2723:C:C6	2.49	0.48
25:DA:2742:C:OP1	55:D9:35:ARG:HD3	2.14	0.48
26:DB:42:C:C4	26:DB:43:C:C4	3.01	0.48
39:DT:23:ARG:HG3	39:DT:120:ARG:NH1	2.29	0.48
1:AA:300:A:O2'	1:AA:564:C:N3	2.38	0.48
1:AA:391:G:C6	1:AA:392:G:C5	3.01	0.48
2:AB:24:TRP:CD1	2:AB:24:TRP:H	2.31	0.48
2:AB:32:ILE:HD13	2:AB:40:HIS:CD2	2.48	0.48
2:AB:95:GLN:HG3	2:AB:147:LYS:HD3	1.94	0.48
2:AB:180:LEU:O	2:AB:181:PHE:HB2	2.14	0.48
2:AB:192:SER:O	2:AB:194:PRO:HD3	2.14	0.48
5:AE:105:VAL:HG21	5:AE:128:PRO:HB3	1.96	0.48
15:AO:74:ASP:CG	15:AO:77:ARG:HG3	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:13:HIS:O	16:AP:42:ARG:NH2	2.47	0.48
25:BA:403:C:H2'	25:BA:404:C:C6	2.47	0.48
25:BA:2605:U:H2'	25:BA:2606:C:C6	2.49	0.48
28:BE:173:VAL:CG2	28:BE:185:LYS:HB2	2.44	0.48
28:BE:174:ASP:OD1	28:BE:175:VAL:N	2.46	0.48
31:BH:69:ARG:HG3	31:BH:70:THR:N	2.28	0.48
32:BI:104:GLN:O	32:BI:106:GLY:N	2.35	0.48
1:CA:504:C:H1'	1:CA:510:A:C4	2.49	0.48
1:CA:977:A:O2'	1:CA:979:C:OP2	2.20	0.48
1:CA:1458:G:H5'	20:CT:32:ALA:HB2	1.96	0.48
25:DA:67:U:H2'	25:DA:68:G:O4'	2.13	0.48
25:DA:370:G:OP2	61:DA:3768:HOH:O	2.20	0.48
25:DA:384:U:H2'	25:DA:385:C:H6	1.78	0.48
25:DA:528:A:C2	25:DA:2042:A:H2'	2.48	0.48
25:DA:1023:U:H4'	25:DA:1123:C:OP1	2.13	0.48
25:DA:1125:G:H5'	55:D9:37:GLY:HA2	1.96	0.48
30:DG:38:VAL:HG22	30:DG:93:THR:HG23	1.95	0.48
39:DT:88:ILE:HG13	39:DT:91:ARG:NH2	2.28	0.48
1:AA:35:G:O2'	12:AL:118:SER:O	2.23	0.48
1:AA:308:C:H2'	1:AA:309:G:H8	1.78	0.48
1:AA:438:G:O2'	1:AA:494:U:O4	2.19	0.48
1:AA:728:A:H2'	1:AA:729:A:C8	2.49	0.48
1:AA:738:C:H2'	1:AA:739:C:C6	2.47	0.48
1:AA:901:A:C5	1:AA:902:G:H1'	2.48	0.48
1:AA:1086:U:C2'	1:AA:1087:G:H5'	2.43	0.48
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.49	0.48
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG12	1.96	0.48
13:AM:56:LEU:O	13:AM:60:VAL:HG23	2.13	0.48
25:BA:8:A:H2'	25:BA:9:U:C6	2.48	0.48
32:BI:117:GLU:HG3	32:BI:118:LYS:H	1.77	0.48
35:BP:81:GLN:HB2	35:BP:110:TYR:CD2	2.49	0.48
45:BZ:150:LEU:HB3	45:BZ:171:ILE:HD11	1.96	0.48
49:B3:59:VAL:O	49:B3:60:GLU:HG2	2.13	0.48
55:B9:13:LYS:HD2	55:B9:28:GLU:OE2	2.14	0.48
1:CA:1239:A:H62	1:CA:1299:A:H62	1.60	0.48
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.96	0.48
9:CI:96:LEU:O	9:CI:100:GLY:N	2.47	0.48
12:CL:24:VAL:HG12	12:CL:24:VAL:O	2.14	0.48
15:CO:5:LYS:H	15:CO:5:LYS:HD2	1.78	0.48
25:DA:361:G:O2'	25:DA:362:U:H5'	2.13	0.48
25:DA:454:A:H4'	25:DA:455:C:OP2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1142(A):A:C8	25:DA:1144:G:N7	2.81	0.48
25:DA:1289:C:H2'	25:DA:1290:C:C6	2.47	0.48
25:DA:1839:G:C8	25:DA:1927:A:H1'	2.48	0.48
25:DA:2299:G:H2'	25:DA:2300:G:H8	1.79	0.48
26:DB:12:C:O5'	26:DB:12:C:H6	1.96	0.48
28:DE:28:ALA:HB3	28:DE:93:VAL:HG12	1.95	0.48
36:DQ:133:ARG:HG2	36:DQ:134:ARG:N	2.27	0.48
41:DV:65:GLY:HA3	41:DV:91:TYR:CZ	2.48	0.48
49:D3:46:ASN:O	49:D3:50:VAL:HG22	2.14	0.48
1:AA:346:G:N1	1:AA:347:G:H1'	2.28	0.48
1:AA:1020:U:H2'	1:AA:1021:G:C8	2.49	0.48
1:AA:1030(C):G:N7	1:AA:1031:G:C2	2.82	0.48
2:AB:20:GLU:HG2	2:AB:191:ASP:HB3	1.94	0.48
8:AH:104:ARG:HG3	8:AH:138:TRP:CD2	2.48	0.48
8:AH:124:ALA:O	8:AH:128:GLY:N	2.47	0.48
19:AS:65:ASN:HD22	19:AS:65:ASN:H	1.61	0.48
25:BA:125:A:H5'	25:BA:126:C:O4'	2.14	0.48
25:BA:160:G:O2'	25:BA:161:C:H5'	2.14	0.48
25:BA:553:A:N1	25:BA:2064:A:H2'	2.28	0.48
25:BA:927:G:C2'	25:BA:928:G:H5'	2.44	0.48
25:BA:2038:U:H1'	51:B5:6:VAL:HG13	1.96	0.48
25:BA:2352:G:H2'	25:BA:2353:G:H8	1.78	0.48
25:BA:2857:U:OP1	39:BT:98:LYS:NZ	2.41	0.48
32:BI:77:LEU:CB	32:BI:142:VAL:HG12	2.44	0.48
51:B5:11:THR:HG23	51:B5:15:ARG:HB3	1.95	0.48
51:B5:48:GLU:OE1	51:B5:48:GLU:HA	2.13	0.48
1:CA:364:A:H2'	1:CA:365:U:C6	2.49	0.48
1:CA:839:U:H5"	1:CA:840:C:C5	2.48	0.48
1:CA:840:C:H4'	1:CA:841:U:OP1	2.13	0.48
1:CA:1028:C:C2	1:CA:1033:G:N1	2.80	0.48
1:CA:1063:C:OP2	1:CA:1064:G:O2'	2.28	0.48
1:CA:1121:U:H2'	1:CA:1122:U:O4'	2.13	0.48
1:CA:1295:G:O2'	1:CA:1302:U:O4	2.24	0.48
2:CB:170:GLU:O	2:CB:174:VAL:HG23	2.13	0.48
3:CC:134:ILE:HD11	3:CC:153:VAL:HG23	1.94	0.48
8:CH:61:VAL:HG12	8:CH:63:LEU:HD22	1.95	0.48
25:DA:196:A:O2'	25:DA:805:G:O6	2.27	0.48
25:DA:574:C:OP1	61:DA:3792:HOH:O	2.20	0.48
25:DA:1452:A:OP2	61:DA:4348:HOH:O	2.20	0.48
25:DA:1932:A:H2'	25:DA:1933:G:O4'	2.13	0.48
25:DA:2735:G:H2'	25:DA:2736:G:H8	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DE:38:THR:O	28:DE:42:ASP:N	2.39	0.48
37:DR:38:VAL:HB	37:DR:39:PRO:HD3	1.96	0.48
44:DY:102:CYS:SG	44:DY:103:GLY:N	2.87	0.48
45:DZ:153:SER:OG	45:DZ:154:ASP:OD1	2.23	0.48
48:D2:29:LYS:HE2	48:D2:57:ILE:HG21	1.96	0.48
49:D3:23:LEU:HD13	49:D3:50:VAL:HG11	1.96	0.48
1:AA:836:G:H1	1:AA:850:U:H3	1.60	0.48
1:AA:991:U:O2'	1:AA:992:U:P	2.72	0.48
1:AA:1004:A:N7	1:AA:1036:G:N2	2.62	0.48
5:AE:152:ARG:HA	8:AH:64:LYS:NZ	2.29	0.48
12:AL:79:GLU:HB3	12:AL:80:HIS:HD2	1.78	0.48
13:AM:97:PRO:HG2	13:AM:103:THR:HG22	1.96	0.48
15:AO:48:LYS:HA	15:AO:48:LYS:HD2	1.75	0.48
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.94	0.48
25:BA:747:G:H2'	25:BA:748:G:O4'	2.14	0.48
25:BA:1537:G:O2'	27:BD:101:GLU:HB2	2.13	0.48
25:BA:2650:G:P	28:BE:82:ARG:HH22	2.37	0.48
25:BA:2798:C:H2'	25:BA:2799:U:O4'	2.14	0.48
26:BB:66:A:H61	26:BB:109:C:H5'	1.79	0.48
26:BB:75:G:H5"	26:BB:75:G:H8	1.79	0.48
54:B8:39:LYS:O	54:B8:43:GLN:HG3	2.14	0.48
1:CA:297:G:N2	1:CA:300:A:OP2	2.45	0.48
1:CA:625:G:O2'	1:CA:626:U:H5'	2.14	0.48
1:CA:1026:G:H3'	1:CA:1026:G:N3	2.29	0.48
1:CA:1027:C:C2	1:CA:1034:G:N2	2.68	0.48
1:CA:1119:C:C2	1:CA:1154:G:O6	2.66	0.48
10:CJ:65:LEU:HD12	14:CN:55:GLY:O	2.14	0.48
13:CM:3:ARG:HE	13:CM:4:ILE:HG22	1.79	0.48
13:CM:10:PRO:HB2	13:CM:13:LYS:HB2	1.94	0.48
21:CU:22:ARG:HA	21:CU:23:PRO:HD3	1.69	0.48
25:DA:1614:A:C2	42:DW:93:ALA:HB2	2.49	0.48
29:DF:51:THR:HG23	29:DF:92:PRO:HG2	1.96	0.48
31:DH:86:GLU:OE1	31:DH:130:ARG:HD3	2.13	0.48
38:DS:88:ASP:OD1	38:DS:90:GLY:N	2.42	0.48
1:AA:15:G:H5'	1:AA:1396:A:O2'	2.13	0.48
1:AA:598:U:H2'	1:AA:599:C:C6	2.48	0.48
2:AB:24:TRP:CE3	2:AB:26:PRO:HA	2.48	0.48
2:AB:71:VAL:HG13	2:AB:93:VAL:HG21	1.95	0.48
4:AD:188:LEU:HD23	4:AD:188:LEU:H	1.79	0.48
6:AF:100:ASN:H	18:AR:23:LYS:HZ1	1.60	0.48
10:AJ:30:SER:O	10:AJ:81:THR:HG23	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:70:LYS:NZ	11:AK:70:LYS:HB2	2.28	0.48
12:AL:34:ARG:HG2	12:AL:35:GLY:N	2.29	0.48
25:BA:202:A:H2'	25:BA:203:G:O4'	2.14	0.48
29:BF:60:SER:OG	29:BF:61:GLY:N	2.47	0.48
45:BZ:8:TYR:HB2	45:BZ:38:TYR:CE2	2.49	0.48
1:CA:714:G:H2'	1:CA:715:A:C8	2.49	0.48
1:CA:1067:A:N3	1:CA:1068:G:H1'	2.29	0.48
1:CA:1125:U:C2	10:CJ:38:ILE:HD13	2.49	0.48
1:CA:1304:G:C6	1:CA:1305:G:N1	2.81	0.48
4:CD:15:GLU:HG2	4:CD:63:LYS:HB3	1.96	0.48
4:CD:117:ALA:O	4:CD:121:VAL:HG23	2.13	0.48
7:CG:100:ALA:O	7:CG:104:LEU:HD13	2.13	0.48
25:DA:644:A:H4'	25:DA:645:C:N4	2.29	0.48
25:DA:937:U:H2'	25:DA:938:G:O4'	2.14	0.48
25:DA:1348:G:O6	25:DA:1349:A:N6	2.47	0.48
25:DA:1412:A:H2'	25:DA:1413:G:C8	2.49	0.48
25:DA:1488:G:C5	25:DA:1489:U:H5	2.22	0.48
25:DA:2461:C:H2'	25:DA:2462:U:C6	2.49	0.48
25:DA:2647:U:H2'	25:DA:2648:C:H6	1.79	0.48
26:DB:73:A:C4	26:DB:105:A:C2	3.01	0.48
33:DN:71:ILE:HG21	33:DN:84:LYS:HB3	1.95	0.48
35:DP:92:GLU:HA	35:DP:123:LEU:HD21	1.96	0.48
45:DZ:54:HIS:NE2	45:DZ:123:ASP:HB3	2.28	0.48
1:AA:472:A:N6	1:AA:473:G:C2	2.82	0.47
1:AA:880:C:OP1	12:AL:8:ASN:ND2	2.45	0.47
1:AA:1292:U:C2'	1:AA:1293:G:H5'	2.44	0.47
5:AE:12:LEU:HD22	5:AE:13:ILE:N	2.29	0.47
10:AJ:78:ASN:C	10:AJ:80:LYS:H	2.22	0.47
12:AL:25:PRO:HD2	12:AL:98:TYR:OH	2.14	0.47
25:BA:615:G:O2'	54:B8:4:MET:HG3	2.14	0.47
25:BA:2363:G:O6	54:B8:39:LYS:HG3	2.14	0.47
1:CA:1106:G:H2'	1:CA:1107:C:C6	2.49	0.47
1:CA:1223:C:OP2	19:CS:78:ARG:NH2	2.41	0.47
1:CA:1256:A:H61	1:CA:1278:U:C1'	2.27	0.47
1:CA:1326:C:H5"	21:CU:18:TYR:O	2.14	0.47
2:CB:19:HIS:CG	2:CB:20:GLU:H	2.31	0.47
25:DA:272(G):C:H42	25:DA:363(C):G:H1	1.62	0.47
25:DA:784:A:OP2	61:DA:4065:HOH:O	2.20	0.47
25:DA:1658:C:H2'	25:DA:1659:U:C6	2.49	0.47
25:DA:2331:G:O2'	46:D0:43:THR:HG22	2.14	0.47
25:DA:2359:C:H2'	25:DA:2360:A:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2556:C:H2'	25:DA:2557:G:O4'	2.14	0.47
26:DB:45:A:H2'	26:DB:46:A:H8	1.78	0.47
27:DD:17:THR:O	27:DD:211:ARG:NH2	2.47	0.47
28:DE:9:VAL:HG22	28:DE:25:VAL:HB	1.96	0.47
31:DH:94:TYR:CE2	31:DH:160:LYS:HG2	2.49	0.47
35:DP:62:LEU:O	54:D8:13:ARG:HD3	2.14	0.47
36:DQ:51:ARG:HD3	36:DQ:66:ILE:HD11	1.95	0.47
1:AA:36:C:O2'	1:AA:501:C:OP1	2.32	0.47
1:AA:430:A:OP1	4:AD:9:CYS:HB2	2.14	0.47
1:AA:1125:U:O2'	1:AA:1126:U:P	2.72	0.47
1:AA:1226:C:C5	13:AM:104:ARG:HA	2.49	0.47
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.50	0.47
2:AB:60:ASP:O	2:AB:64:ARG:HB2	2.14	0.47
11:AK:15:ALA:HB1	11:AK:78:GLN:HB2	1.95	0.47
14:AN:26:ARG:CZ	14:AN:47:LEU:HD21	2.43	0.47
19:AS:3:ARG:NH1	19:AS:10:PHE:HB2	2.29	0.47
25:BA:70:A:N7	43:BX:31:HIS:HE1	2.12	0.47
25:BA:1249:A:H61	25:BA:1286:U:H2'	1.78	0.47
25:BA:1957:G:H1'	25:BA:1986:G:N2	2.29	0.47
25:BA:2490:A:H5'	55:B9:31:LYS:HE2	1.96	0.47
26:BB:40:U:H2'	50:B4:2:LYS:HE3	1.95	0.47
31:BH:7:LEU:HD12	31:BH:8:PRO:HD2	1.96	0.47
34:BO:7:TYR:CZ	34:BO:44:LYS:HG3	2.49	0.47
45:BZ:70:LEU:HD23	45:BZ:70:LEU:HA	1.67	0.47
1:CA:589:C:O2'	1:CA:590:C:H5'	2.14	0.47
1:CA:663:A:C2'	1:CA:664:G:H5'	2.44	0.47
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.13	0.47
1:CA:1118:C:OP1	9:CI:104:ARG:NH1	2.46	0.47
1:CA:1207:G:H2'	1:CA:1208:C:H6	1.79	0.47
1:CA:1216:G:H5"	14:CN:5:ALA:CB	2.44	0.47
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.49	0.47
18:CR:61:LYS:O	18:CR:65:ILE:HG12	2.14	0.47
23:CX:9:G:O2'	23:CX:10:G:N7	2.33	0.47
25:DA:30:G:H2'	25:DA:31:C:H6	1.78	0.47
25:DA:994:C:OP2	40:DU:54:LYS:NZ	2.38	0.47
25:DA:1710:C:H2'	25:DA:1711:C:H6	1.78	0.47
30:DG:125:PHE:HB3	30:DG:166:ASP:OD1	2.14	0.47
30:DG:170:ARG:C	30:DG:170:ARG:HD3	2.39	0.47
41:DV:76:LYS:HD2	41:DV:81:TYR:CD2	2.49	0.47
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.14	0.47
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1315:U:O2'	1:AA:1360:A:N3	2.39	0.47
15:AO:8:LYS:O	15:AO:12:ILE:HG13	2.14	0.47
23:AX:66:C:H2'	23:AX:67:C:O4'	2.14	0.47
25:BA:1047:A:H2'	25:BA:1048:G:O4'	2.15	0.47
25:BA:1171:G:H5'	55:B9:37:GLY:HA2	1.97	0.47
25:BA:2481:A:O2'	36:BQ:56:ARG:HD2	2.14	0.47
26:BB:48:A:H2'	26:BB:49:C:C6	2.49	0.47
45:BZ:132:ASN:O	45:BZ:134:PRO:HD3	2.14	0.47
52:B6:18:ARG:HD2	52:B6:42:TRP:CG	2.49	0.47
1:CA:300:A:O2'	1:CA:564:C:N3	2.36	0.47
1:CA:650:G:H2'	1:CA:651:C:H5'	1.96	0.47
1:CA:1169:A:N7	1:CA:1170:A:N7	2.62	0.47
1:CA:1270:C:H2'	1:CA:1271:G:H5'	1.96	0.47
1:CA:1286:A:H2	21:CU:18:TYR:HH	1.61	0.47
1:CA:1442:G:H2'	1:CA:1442(A):G:H5'	1.95	0.47
9:CI:110:GLU:OE2	9:CI:113:LYS:HE2	2.14	0.47
18:CR:35:ARG:O	18:CR:37:VAL:N	2.46	0.47
25:DA:568:U:H5'	25:DA:945:A:C2	2.50	0.47
25:DA:592:G:O2'	54:D8:4:MET:HG3	2.14	0.47
25:DA:652(D):C:H42	25:DA:652(U):G:H1	1.62	0.47
25:DA:1639:U:H2'	25:DA:1640:C:H5"	1.95	0.47
45:DZ:53:ILE:CD1	45:DZ:99:TYR:HB2	2.44	0.47
46:D0:27:GLU:HB2	46:D0:69:PHE:HD1	1.78	0.47
1:AA:860:A:OP2	61:AA:4055:HOH:O	2.20	0.47
1:AA:865:A:C2	1:AA:918:A:H4'	2.49	0.47
1:AA:1162:C:C2	1:AA:1175:G:C2	3.02	0.47
1:AA:1187:G:N3	14:AN:60:SER:OG	2.48	0.47
1:AA:1316:G:H4'	14:AN:18:VAL:HG13	1.97	0.47
2:AB:16:HIS:CG	2:AB:17:PHE:N	2.71	0.47
4:AD:30:LYS:HA	4:AD:35:ARG:HH11	1.79	0.47
11:AK:69:ALA:O	11:AK:73:MET:HG3	2.14	0.47
13:AM:15:VAL:HG13	13:AM:43:THR:O	2.14	0.47
13:AM:120:LYS:HA	13:AM:121:LYS:HE3	1.95	0.47
19:AS:41:VAL:HG12	19:AS:43:GLU:N	2.23	0.47
25:BA:1074:A:N6	25:BA:1171:G:H2'	2.29	0.47
33:BN:138:LEU:HA	33:BN:138:LEU:HD23	1.52	0.47
44:BY:19:LYS:HE2	44:BY:20:TYR:CE1	2.49	0.47
48:B2:32:LEU:HD21	48:B2:54:LYS:HG3	1.97	0.47
1:CA:20:U:H2'	1:CA:21:G:O4'	2.14	0.47
1:CA:540:G:H2'	1:CA:541:G:C8	2.48	0.47
1:CA:1002:G:C2	1:CA:1003:G:N7	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1009:G:N2	1:CA:1021:G:H1'	2.29	0.47
1:CA:1025:U:O2'	1:CA:1026:G:H5"	2.15	0.47
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.96	0.47
1:CA:1237:C:O2'	1:CA:1300:G:N1	2.37	0.47
25:DA:242:G:H5"	54:D8:64:TYR:CE2	2.50	0.47
25:DA:530:G:C5	25:DA:2022:U:H5"	2.50	0.47
25:DA:954:G:C2	25:DA:964:C:O2	2.67	0.47
25:DA:1525:G:H2'	25:DA:1526:G:C8	2.50	0.47
25:DA:2439:A:H5'	25:DA:2439:A:C8	2.50	0.47
27:DD:58:HIS:ND1	27:DD:59:LYS:N	2.62	0.47
42:DW:82:LEU:HD22	42:DW:84:ARG:NH2	2.29	0.47
1:AA:1125:U:H1'	1:AA:1126:U:O5'	2.14	0.47
19:AS:69:HIS:HD2	19:AS:73:GLU:OE1	1.97	0.47
25:BA:705:C:H2'	25:BA:706:C:C6	2.49	0.47
25:BA:839:G:O2'	61:BA:4651:HOH:O	2.20	0.47
25:BA:1001:G:OP2	36:BQ:14:ARG:NH2	2.47	0.47
25:BA:2504:U:H2'	25:BA:2505:U:C6	2.49	0.47
27:BD:108:PRO:HD2	27:BD:111:LEU:HG	1.96	0.47
37:BR:57:ARG:HB3	37:BR:59:ASP:OD1	2.13	0.47
1:CA:160:A:H61	1:CA:347:G:H1'	1.80	0.47
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.50	0.47
1:CA:1077:G:N1	1:CA:1081:G:C6	2.83	0.47
1:CA:1134:G:H1	1:CA:1140:C:H42	1.62	0.47
1:CA:1492:A:H2'	1:CA:1493:A:C1'	2.43	0.47
2:CB:163:PHE:CD1	2:CB:185:ILE:HG13	2.47	0.47
3:CC:117:ALA:HB2	3:CC:200:ALA:HB2	1.97	0.47
25:DA:287:C:H2'	25:DA:288:C:H6	1.79	0.47
25:DA:307:G:H2'	25:DA:309:G:OP2	2.14	0.47
25:DA:1494:A:C6	25:DA:1495:A:C6	3.03	0.47
25:DA:2297:C:H3'	25:DA:2297:C:C6	2.49	0.47
25:DA:2741:A:H2'	25:DA:2742:C:O4'	2.13	0.47
29:DF:178:PRO:HG2	29:DF:179:GLU:OE1	2.15	0.47
29:DF:184:TYR:CE2	29:DF:188:ARG:HD2	2.50	0.47
45:DZ:31:ARG:HD2	45:DZ:94:GLU:OE2	2.15	0.47
1:AA:959:A:O2'	1:AA:984:C:O2'	2.22	0.47
25:BA:207:A:C2	25:BA:224:U:H4'	2.50	0.47
25:BA:248:G:O2'	25:BA:646:A:O2'	2.25	0.47
31:BH:22:GLY:HA2	31:BH:37:VAL:O	2.14	0.47
31:BH:40:GLU:OE1	31:BH:61:HIS:NE2	2.44	0.47
1:CA:954:G:H2'	1:CA:955:U:C6	2.49	0.47
1:CA:979:C:H2'	1:CA:980:C:H5'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:69:LEU:HD12	2:CB:70:PHE:H	1.80	0.47
10:CJ:42:THR:HG23	10:CJ:68:HIS:HA	1.97	0.47
20:CT:47:GLY:HA2	20:CT:48:LYS:CB	2.44	0.47
25:DA:574:C:H1'	25:DA:2055:C:C6	2.50	0.47
25:DA:1429:G:H2'	25:DA:1430:C:C6	2.49	0.47
25:DA:1463:C:H2'	25:DA:1464:C:H6	1.79	0.47
25:DA:1773:A:H5"	61:DA:4250:HOH:O	2.13	0.47
25:DA:1826:G:H4'	27:DD:242:ARG:CZ	2.45	0.47
25:DA:2332:U:H5'	25:DA:2336:A:N6	2.30	0.47
25:DA:2356:C:O3'	46:D0:20:ARG:HD2	2.14	0.47
25:DA:2771:C:H5"	28:DE:202:LYS:HD3	1.95	0.47
27:DD:139:GLY:N	27:DD:165:ILE:O	2.47	0.47
28:DE:93:VAL:C	28:DE:95:ILE:H	2.23	0.47
29:DF:192:LEU:HD13	29:DF:194:MET:HE2	1.95	0.47
30:DG:14:GLU:C	30:DG:17:PRO:HD2	2.39	0.47
38:DS:53:SER:OG	38:DS:54:LEU:N	2.47	0.47
44:DY:13:VAL:HG12	44:DY:74:PRO:HA	1.96	0.47
45:DZ:33:LEU:HD21	45:DZ:90:VAL:HG21	1.96	0.47
1:AA:49:U:H3	1:AA:362:G:H1'	1.78	0.47
1:AA:68:G:H22	1:AA:101:A:H2	1.63	0.47
1:AA:196:A:H8	1:AA:196:A:O5'	1.98	0.47
1:AA:323:U:H5'	20:AT:23:ARG:HB2	1.96	0.47
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.15	0.47
1:AA:532:A:O2'	1:AA:533:A:P	2.73	0.47
1:AA:631:G:H2'	1:AA:632:A:C8	2.50	0.47
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.30	0.47
1:AA:1125:U:H1'	1:AA:1126:U:H2'	1.97	0.47
3:AC:138:VAL:HG23	3:AC:151:VAL:HG23	1.96	0.47
4:AD:31:CYS:SG	4:AD:33:MET:N	2.83	0.47
4:AD:166:LYS:HB2	4:AD:168:ARG:NH2	2.30	0.47
5:AE:57:LYS:HD3	5:AE:61:TYR:HE2	1.80	0.47
7:AG:46:ALA:HA	7:AG:49:ILE:HD12	1.97	0.47
9:AI:86:VAL:HG13	9:AI:96:LEU:HD12	1.97	0.47
11:AK:84:VAL:HG11	11:AK:91:ARG:HD2	1.95	0.47
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.79	0.47
24:AW:9:MVA:O	24:AW:10:2QY:CD2	2.63	0.47
25:BA:82:G:N2	25:BA:101:A:OP2	2.47	0.47
25:BA:956:A:N1	25:BA:2289:G:H1'	2.30	0.47
25:BA:2114:U:OP1	25:BA:2221:A:O2'	2.25	0.47
25:BA:2724:U:O2'	25:BA:2726:A:H5'	2.15	0.47
25:BA:2891:C:H2'	25:BA:2892:A:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BB:31:C:H4'	30:BG:29:TRP:CH2	2.50	0.47
27:BD:106:ILE:O	27:BD:108:PRO:HD3	2.15	0.47
29:BF:14:PRO:HD2	29:BF:127:GLU:OE2	2.15	0.47
30:BG:109:VAL:C	30:BG:112:PRO:HD2	2.40	0.47
34:BO:10:VAL:HG13	34:BO:17:ARG:C	2.40	0.47
34:BO:113:LYS:O	34:BO:116:SER:OG	2.31	0.47
35:BP:63:PRO:HB2	54:B8:30:ARG:NH2	2.29	0.47
42:BW:28:SER:O	42:BW:31:GLU:N	2.47	0.47
1:CA:149:A:H2'	1:CA:150:C:C6	2.50	0.47
1:CA:502:G:C6	1:CA:503:C:N3	2.83	0.47
1:CA:576:G:N2	1:CA:760:G:OP2	2.48	0.47
1:CA:658:G:C6	1:CA:659:U:C4	3.02	0.47
1:CA:773:G:H1	1:CA:806:C:H42	1.61	0.47
1:CA:875:C:O2'	8:CH:14:ARG:HD2	2.15	0.47
1:CA:1051:C:H2'	1:CA:1052:U:H6	1.78	0.47
1:CA:1111:A:N1	3:CC:177:THR:OG1	2.37	0.47
1:CA:1122:U:H5'	1:CA:1123:A:OP2	2.14	0.47
1:CA:1130:A:H5'	9:CI:18:PHE:CE2	2.50	0.47
1:CA:1134:G:H2'	1:CA:1135:U:H5'	1.97	0.47
1:CA:1238:A:C2	1:CA:1303:C:H4'	2.50	0.47
1:CA:1277:C:O2'	1:CA:1279:A:H8	1.98	0.47
1:CA:1291:G:H2'	1:CA:1292:U:C6	2.50	0.47
2:CB:189:ASP:OD1	2:CB:189:ASP:N	2.46	0.47
4:CD:150:GLU:HA	4:CD:153:ARG:HE	1.79	0.47
8:CH:28:ALA:HB3	8:CH:57:PRO:HB2	1.96	0.47
10:CJ:8:LEU:HB3	10:CJ:16:LEU:HD22	1.96	0.47
12:CL:71:PRO:O	12:CL:102:ARG:HD2	2.15	0.47
19:CS:14:HIS:O	19:CS:18:LYS:HG3	2.14	0.47
25:DA:30:G:OP2	40:DU:5:LYS:HE2	2.15	0.47
25:DA:34:C:O2'	25:DA:35:G:OP1	2.26	0.47
25:DA:303:U:H2'	25:DA:304:G:C8	2.50	0.47
25:DA:652(B):A:N1	25:DA:655:A:H1'	2.30	0.47
25:DA:854:G:H2'	25:DA:855:G:C8	2.49	0.47
25:DA:1167:U:O2	25:DA:1183:G:N2	2.48	0.47
25:DA:1707:G:H2'	25:DA:1708:C:C6	2.49	0.47
25:DA:2291:U:H2'	25:DA:2292:C:H6	1.76	0.47
25:DA:2687:U:H2'	25:DA:2688:U:O4'	2.15	0.47
27:DD:63:ARG:HD3	27:DD:92:ILE:HD11	1.96	0.47
28:DE:37:ARG:O	28:DE:45:THR:HA	2.14	0.47
31:DH:11:VAL:HG21	31:DH:50:VAL:HG23	1.97	0.47
31:DH:104:GLU:HG3	31:DH:114:VAL:HG22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DI:77:LEU:HD13	32:DI:79:ILE:HD11	1.96	0.47
33:DN:96:GLU:H	33:DN:96:GLU:CD	2.22	0.47
34:DO:91:LEU:N	34:DO:91:LEU:HD23	2.30	0.47
34:DO:120:GLU:HB2	39:DT:68:TYR:HE2	1.79	0.47
36:DQ:63:LYS:HE2	36:DQ:65:PHE:CE2	2.49	0.47
38:DS:7:TYR:CZ	38:DS:91:PRO:HG3	2.49	0.47
49:D3:18:ASP:OD1	49:D3:18:ASP:N	2.48	0.47
1:AA:145:G:H2'	1:AA:146:G:C5'	2.45	0.47
1:AA:170:U:O2'	1:AA:171:A:H5'	2.15	0.47
1:AA:397:A:H3'	1:AA:397:A:N3	2.30	0.47
1:AA:543:C:C2'	1:AA:544:G:H5'	2.45	0.47
1:AA:652:U:O2'	1:AA:653:A:OP2	2.29	0.47
1:AA:1005:A:H1'	1:AA:1036:G:H22	1.79	0.47
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.50	0.47
24:AW:5:MVA:O	24:AW:6:2R1:H51	2.15	0.47
25:BA:895:G:O6	25:BA:974:G:H2'	2.15	0.47
25:BA:2649:U:O3'	28:BE:82:ARG:NH2	2.48	0.47
26:BB:1:U:H2'	26:BB:2:C:C6	2.50	0.47
28:BE:73:GLU:H	28:BE:73:GLU:HG3	1.54	0.47
33:BN:4:TYR:CD2	40:BU:100:VAL:HG11	2.50	0.47
39:BT:24:PRO:HA	39:BT:49:VAL:HG22	1.96	0.47
54:B8:61:LEU:O	54:B8:63:PRO:HD3	2.14	0.47
1:CA:590:C:H2'	1:CA:591:U:C6	2.49	0.47
1:CA:839:U:HO2'	1:CA:840:C:P	2.35	0.47
1:CA:923:A:OP1	5:CE:21:ALA:HB2	2.15	0.47
1:CA:1179:A:N6	1:CA:1180:A:N7	2.62	0.47
6:CF:10:LEU:HD11	6:CF:85:VAL:HG22	1.95	0.47
9:CI:38:GLN:HG2	9:CI:39:GLY:N	2.29	0.47
16:CP:58:TYR:O	16:CP:61:SER:OG	2.24	0.47
25:DA:185:U:H4'	25:DA:218:A:H4'	1.97	0.47
28:DE:72:VAL:HA	28:DE:73:GLU:CB	2.44	0.47
32:DI:38:LEU:C	32:DI:40:THR:H	2.22	0.47
37:DR:38:VAL:HG22	37:DR:112:ALA:HB2	1.97	0.47
1:AA:149:A:H2'	1:AA:150:C:C6	2.50	0.47
1:AA:180:U:O2'	1:AA:181:G:H5'	2.15	0.47
1:AA:403:C:H2'	1:AA:404:U:H6	1.80	0.47
1:AA:909:A:H2'	1:AA:910:C:O4'	2.14	0.47
1:AA:1189:C:H5"	1:AA:1190:G:OP2	2.15	0.47
1:AA:1236:A:O2'	1:AA:1304:G:H4'	2.15	0.47
1:AA:1314:C:H5	19:AS:4:SER:HB2	1.80	0.47
1:AA:1346:A:H5"	9:AI:120:ARG:NH1	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:54:THR:O	2:AB:58:ILE:HG13	2.15	0.47
25:BA:312:C:H2'	25:BA:313:A:H8	1.79	0.47
25:BA:1650:C:H5"	61:BA:4275:HOH:O	2.15	0.47
25:BA:1699:A:OP1	37:BR:8:ARG:NH1	2.48	0.47
25:BA:1810:U:H2'	61:BA:4798:HOH:O	2.15	0.47
25:BA:2692:C:H5'	28:BE:189:PRO:HA	1.96	0.47
35:BP:2:LYS:NZ	35:BP:4:SER:HB3	2.29	0.47
50:B4:6:HIS:HA	50:B4:7:PRO:HD3	1.77	0.47
53:B7:1:MET:HE2	53:B7:1:MET:HB3	1.62	0.47
1:CA:304:U:H2'	1:CA:305:G:C8	2.49	0.47
1:CA:410:G:OP1	4:CD:30:LYS:NZ	2.26	0.47
1:CA:771:G:N7	61:CA:4038:HOH:O	2.36	0.47
3:CC:92:ALA:HB2	3:CC:99:VAL:CB	2.45	0.47
7:CG:18:TYR:HB3	7:CG:59:LEU:HD13	1.97	0.47
9:CI:17:VAL:HG11	9:CI:80:GLY:C	2.39	0.47
11:CK:48:ILE:O	11:CK:50:TYR:N	2.47	0.47
23:CX:61:C:H2'	23:CX:62:C:H6	1.79	0.47
25:DA:923:C:H1'	46:D0:29:GLN:HG2	1.97	0.47
25:DA:2369:A:H2'	25:DA:2370:G:C8	2.50	0.47
50:D4:59:PHE:O	50:D4:62:ARG:NH2	2.48	0.47
1:AA:308:C:H2'	1:AA:309:G:C8	2.50	0.47
1:AA:486:U:H2'	1:AA:487:A:H8	1.80	0.47
1:AA:664:G:N2	1:AA:741:G:H1	2.12	0.47
1:AA:1030(B):C:C2'	1:AA:1030(C):G:H5'	2.45	0.47
1:AA:1149:C:H2'	1:AA:1150:U:H6	1.79	0.47
6:AF:99:ALA:O	18:AR:28:GLU:HG3	2.14	0.47
11:AK:34:ASP:HB2	11:AK:35:PRO:HD2	1.97	0.47
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.50	0.47
20:AT:31:SER:HA	20:AT:34:LYS:HE2	1.97	0.47
20:AT:56:MET:HE2	20:AT:85:MET:HA	1.97	0.47
25:BA:934:A:H4'	25:BA:935:C:H5	1.80	0.47
25:BA:1517:G:C6	25:BA:1567:G:N7	2.83	0.47
25:BA:1790:A:H1'	25:BA:2723:A:C2	2.50	0.47
25:BA:1921:G:H2'	25:BA:1921:G:N3	2.29	0.47
25:BA:2858:G:C8	39:BT:97:ALA:HB2	2.50	0.47
29:BF:116:ASP:OD2	35:BP:1:MET:HB2	2.15	0.47
33:BN:75:TYR:CE2	33:BN:77:GLY:HA2	2.50	0.47
45:BZ:24:LEU:HB2	45:BZ:41:LEU:HD23	1.96	0.47
50:B4:63:TYR:N	50:B4:63:TYR:CD1	2.83	0.47
1:CA:425:G:C2	1:CA:426:G:C8	3.02	0.47
1:CA:532:A:H62	3:CC:156:ARG:HH12	1.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:583:A:H2'	1:CA:584:G:O4'	2.15	0.47
1:CA:947:G:H2'	1:CA:948:C:O4'	2.15	0.47
1:CA:953:G:N7	13:CM:104:ARG:NH1	2.63	0.47
1:CA:1003:G:H1	1:CA:1035:A:N6	2.12	0.47
1:CA:1005:A:H1'	1:CA:1036:G:C6	2.49	0.47
1:CA:1032:G:H2'	1:CA:1033:G:C8	2.50	0.47
1:CA:1191:A:OP1	3:CC:4:LYS:HG3	2.15	0.47
1:CA:1376:U:C2	1:CA:1377:A:N7	2.83	0.47
3:CC:73:PRO:HB3	3:CC:103:VAL:CG1	2.40	0.47
7:CG:113:GLU:O	7:CG:119:ARG:HD3	2.15	0.47
9:CI:6:GLY:O	9:CI:17:VAL:HG12	2.15	0.47
25:DA:26:G:OP1	42:DW:80:PRO:HB3	2.14	0.47
25:DA:71:A:H5"	25:DA:73:A:C8	2.50	0.47
25:DA:143:G:H2'	25:DA:143(A):C:H6	1.76	0.47
25:DA:195:A:H5"	25:DA:196:A:O5'	2.15	0.47
25:DA:536:A:H2'	25:DA:537:C:C6	2.50	0.47
25:DA:848:G:N3	25:DA:933:A:H1'	2.30	0.47
25:DA:1142:U:O2	25:DA:1142:U:H2'	2.14	0.47
25:DA:1364:G:P	47:D1:3:LYS:HG3	2.54	0.47
29:DF:137:LYS:HA	29:DF:140:LEU:HD23	1.97	0.47
30:DG:32:PRO:HB2	30:DG:172:LEU:HD22	1.97	0.47
36:DQ:135:ASP:HB2	36:DQ:138:ASP:OD2	2.15	0.47
43:DX:59:VAL:HG21	43:DX:78:LYS:HE3	1.96	0.47
49:D3:3:ARG:HH11	49:D3:60:GLU:CB	2.28	0.47
50:D4:5:ILE:HG12	50:D4:6:HIS:CD2	2.50	0.47
54:D8:62:LEU:HB3	54:D8:65:GLU:HG2	1.97	0.47
1:AA:834:C:H2'	1:AA:835:U:C6	2.50	0.46
1:AA:997:U:H3	1:AA:1044:A:N6	2.13	0.46
1:AA:1217:C:H2'	1:AA:1218:C:O4'	2.15	0.46
6:AF:1:MET:HA	6:AF:67:MET:O	2.14	0.46
13:AM:16:ASP:N	13:AM:16:ASP:OD1	2.48	0.46
19:AS:52:TYR:HB2	19:AS:57:HIS:CE1	2.50	0.46
25:BA:1372:U:H2'	25:BA:1373:C:C6	2.50	0.46
28:BE:34:VAL:HG21	28:BE:78:LEU:HD11	1.97	0.46
32:BI:9:LEU:HD13	32:BI:10:GLU:HG2	1.97	0.46
44:BY:54:LYS:HA	44:BY:56:PRO:CD	2.36	0.46
1:CA:1220:G:N2	1:CA:1221:G:H1'	2.30	0.46
1:CA:1292:U:OP2	7:CG:41:ARG:NH2	2.49	0.46
3:CC:12:LEU:HA	3:CC:16:ARG:HB3	1.98	0.46
15:CO:3:ILE:HG21	15:CO:34:LEU:HD21	1.97	0.46
16:CP:57:ARG:HH21	16:CP:79:VAL:HA	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:984:A:H5"	25:DA:985:C:C5	2.49	0.46
25:DA:1028:A:N6	25:DA:1125:G:H2'	2.30	0.46
25:DA:1352:U:OP1	61:DA:3789:HOH:O	2.20	0.46
25:DA:1899:G:N3	25:DA:1899:G:H2'	2.30	0.46
26:DB:95:C:H2'	26:DB:96:U:H6	1.78	0.46
31:DH:137:ASP:HB3	31:DH:140:LYS:HB3	1.97	0.46
35:DP:99:LEU:HD23	35:DP:99:LEU:H	1.80	0.46
39:DT:121:ILE:O	39:DT:124:ASP:HB2	2.14	0.46
52:D6:25:LYS:HE3	52:D6:27:LYS:HA	1.96	0.46
1:AA:272:C:H2'	1:AA:273:A:C8	2.49	0.46
1:AA:300:A:H1'	1:AA:565:U:O2	2.15	0.46
1:AA:380:G:N1	1:AA:384:G:C6	2.83	0.46
1:AA:437:U:O3'	4:AD:125:HIS:HE1	1.98	0.46
1:AA:616:G:C2	1:AA:617:G:C8	3.03	0.46
1:AA:627:G:H2'	1:AA:628:G:H8	1.79	0.46
1:AA:791:G:C2'	1:AA:792:A:H5'	2.46	0.46
1:AA:839:U:H5"	1:AA:840:C:H5	1.81	0.46
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.16	0.46
1:AA:1305:G:N2	1:AA:1331:G:H1'	2.30	0.46
2:AB:115:LEU:O	2:AB:119:GLU:HG2	2.15	0.46
3:AC:12:LEU:HA	3:AC:16:ARG:HB3	1.97	0.46
4:AD:178:VAL:C	4:AD:180:GLY:H	2.24	0.46
12:AL:79:GLU:C	12:AL:80:HIS:CD2	2.93	0.46
25:BA:662:A:H8	35:BP:117:GLU:HG3	1.81	0.46
25:BA:1592:A:H2'	25:BA:1593:C:O4'	2.16	0.46
25:BA:1629:C:C2	25:BA:1630:A:C8	3.03	0.46
25:BA:2735:G:H2'	25:BA:2736:C:C6	2.50	0.46
38:BS:34:HIS:HD1	38:BS:53:SER:HG	1.62	0.46
42:BW:33:ARG:NE	42:BW:52:GLU:OE1	2.48	0.46
50:B4:68:ARG:O	50:B4:69:LYS:HB3	2.15	0.46
53:B7:11:LYS:HE3	53:B7:15:THR:OG1	2.15	0.46
1:CA:78:G:C2'	1:CA:79:G:H5'	2.45	0.46
1:CA:380:G:C2	1:CA:384:G:C6	3.04	0.46
1:CA:427:U:H2'	1:CA:428:G:C8	2.50	0.46
1:CA:629:G:H2'	1:CA:630:G:O4'	2.14	0.46
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.50	0.46
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.80	0.46
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.49	0.46
4:CD:64:LEU:HB2	4:CD:198:VAL:HG21	1.97	0.46
8:CH:86:ILE:HG13	8:CH:133:LEU:HD22	1.97	0.46
13:CM:60:VAL:HG23	13:CM:64:TRP:HE3	1.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:92:HIS:CE1	13:CM:98:VAL:HG21	2.50	0.46
25:DA:475:U:C4	25:DA:481:G:O6	2.69	0.46
25:DA:994:C:H1'	41:DV:10:LYS:HE3	1.98	0.46
25:DA:1397:U:OP2	25:DA:1398:C:N4	2.42	0.46
25:DA:1945:G:H2'	25:DA:1946:U:C6	2.50	0.46
25:DA:2291:U:O2'	25:DA:2374:C:O2	2.30	0.46
25:DA:2591:C:OP1	27:DD:239:ARG:HD2	2.15	0.46
25:DA:2807:G:N2	25:DA:2893:G:O6	2.48	0.46
26:DB:33:G:C6	26:DB:34:U:C4	3.03	0.46
27:DD:206:LEU:HA	27:DD:206:LEU:HD23	1.49	0.46
33:DN:58:ASP:OD1	33:DN:58:ASP:N	2.39	0.46
46:D0:56:ASP:OD1	46:D0:58:THR:OG1	2.31	0.46
1:AA:1025:U:O2	1:AA:1036:G:C6	2.67	0.46
1:AA:1305:G:H22	1:AA:1331:G:H1'	1.80	0.46
2:AB:178:ARG:HH22	8:AH:68:ARG:HH12	1.63	0.46
3:AC:11:ARG:HD3	3:AC:15:THR:HB	1.97	0.46
13:AM:79:LYS:HA	13:AM:82:MET:HE2	1.97	0.46
20:AT:14:LYS:O	20:AT:18:GLN:HG3	2.15	0.46
25:BA:1041:C:OP2	40:BU:54:LYS:NZ	2.45	0.46
25:BA:1444:C:OP1	43:BX:53:LYS:NZ	2.44	0.46
25:BA:1521:C:H2'	25:BA:1522:G:C8	2.49	0.46
31:BH:126:PRO:HB2	31:BH:127:GLU:H	1.41	0.46
45:BZ:69:THR:HG22	45:BZ:90:VAL:HG22	1.98	0.46
53:B7:24:THR:HG22	53:B7:26:GLY:N	2.29	0.46
53:B7:24:THR:HG22	53:B7:26:GLY:H	1.80	0.46
1:CA:662:G:H2'	1:CA:663:A:C8	2.51	0.46
1:CA:942:G:C2	1:CA:1342:C:C2	3.03	0.46
1:CA:1041:A:C6	1:CA:1042:G:C6	3.04	0.46
1:CA:1151:A:O4'	10:CJ:39:PRO:HB2	2.15	0.46
2:CB:98:LEU:HB2	2:CB:101:MET:HE3	1.96	0.46
6:CF:62:TRP:C	6:CF:63:TYR:HD1	2.23	0.46
7:CG:132:GLY:O	7:CG:136:LYS:HG2	2.15	0.46
20:CT:58:LYS:HE3	20:CT:62:LEU:HD12	1.97	0.46
25:DA:300:A:H3'	44:DY:84:ARG:NH2	2.31	0.46
25:DA:581:C:H2'	25:DA:582:G:C8	2.50	0.46
25:DA:583:G:OP2	40:DU:10:ARG:NH1	2.47	0.46
25:DA:627:A:H4'	25:DA:628:G:H5'	1.97	0.46
25:DA:1311:G:N7	53:D7:47:ARG:HD2	2.31	0.46
25:DA:1531:C:N4	25:DA:1538:G:H1	2.12	0.46
25:DA:2262:U:H4'	25:DA:2328:A:C2	2.49	0.46
25:DA:2563:U:O2	25:DA:2565:A:H8	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2880:C:O3'	37:DR:90:ARG:NH1	2.48	0.46
30:DG:106:LEU:HA	30:DG:110:ALA:HB3	1.96	0.46
35:DP:138:LEU:HD11	35:DP:143:GLY:HA3	1.97	0.46
36:DQ:18:LYS:HB2	36:DQ:18:LYS:HE3	1.71	0.46
42:DW:59:VAL:HA	42:DW:64:MET:O	2.16	0.46
1:AA:16:A:N1	1:AA:919:A:H2	2.13	0.46
1:AA:146:G:C4	1:AA:147:G:C8	3.03	0.46
1:AA:622:A:C8	1:AA:623:C:C5	3.03	0.46
1:AA:741:G:H2'	1:AA:742:G:O4'	2.15	0.46
1:AA:804:U:H5"	1:AA:805:C:OP2	2.15	0.46
1:AA:958:A:C6	1:AA:959:A:N1	2.83	0.46
1:AA:1124:G:O2'	1:AA:1145:C:C4	2.69	0.46
1:AA:1291:G:H4'	9:AI:39:GLY:HA3	1.97	0.46
1:AA:1302:U:OP2	13:AM:21:TYR:OH	2.26	0.46
1:AA:1433:A:C6	1:AA:1468:A:C4	3.03	0.46
4:AD:173:TRP:HZ3	4:AD:174:LEU:HG	1.74	0.46
25:BA:196:A:H2'	25:BA:197:C:O4'	2.14	0.46
25:BA:319:G:H1	25:BA:367:C:H42	1.63	0.46
25:BA:664:U:H2'	25:BA:665:C:C6	2.51	0.46
25:BA:1421:C:H2'	25:BA:1422:C:H6	1.79	0.46
25:BA:2262:G:C8	25:BA:2508:C:H5"	2.50	0.46
32:BI:27:ARG:HD2	47:B1:71:TYR:CE1	2.51	0.46
1:CA:67:C:H2'	1:CA:68:G:H8	1.80	0.46
1:CA:955:U:H2'	1:CA:956:U:O4'	2.15	0.46
1:CA:971:G:OP1	1:CA:971:G:H3'	2.16	0.46
1:CA:1003:G:C6	1:CA:1004:A:H2	2.32	0.46
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.51	0.46
2:CB:180:LEU:O	2:CB:181:PHE:HB2	2.15	0.46
5:CE:71:LEU:HD11	5:CE:115:VAL:HG22	1.96	0.46
8:CH:20:TYR:CE2	8:CH:75:ARG:HG2	2.51	0.46
8:CH:98:LYS:HE3	8:CH:98:LYS:HB2	1.73	0.46
12:CL:34:ARG:HG3	12:CL:105:TYR:CE2	2.50	0.46
24:CW:8:2R3:H62	24:CW:9:MVA:HN1	1.51	0.46
25:DA:370:G:H4'	25:DA:371:A:OP2	2.16	0.46
25:DA:649:G:C5	25:DA:650:C:C4	3.03	0.46
25:DA:687:C:H2'	25:DA:688:U:O4'	2.15	0.46
25:DA:1325:G:OP1	25:DA:1647:G:O2'	2.31	0.46
25:DA:1651:G:H5'	37:DR:39:PRO:HG2	1.97	0.46
25:DA:1800:C:OP2	27:DD:183:ARG:NH2	2.47	0.46
25:DA:2704:C:H2'	25:DA:2705:A:O4'	2.15	0.46
28:DE:72:VAL:HG22	28:DE:73:GLU:HG2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:52:GLU:OE2	54:D8:57:ARG:NH1	2.44	0.46
38:DS:38:GLN:HB2	38:DS:47:THR:HG23	1.98	0.46
40:DU:79:PHE:O	40:DU:83:LEU:HD22	2.15	0.46
45:DZ:30:ASN:ND2	45:DZ:90:VAL:HB	2.31	0.46
52:D6:19:ARG:N	52:D6:19:ARG:HD2	2.31	0.46
1:AA:55:A:C5	1:AA:56:U:C5	3.04	0.46
1:AA:376:G:P	16:AP:67:THR:HG21	2.56	0.46
1:AA:583:A:H2'	1:AA:584:G:O4'	2.16	0.46
1:AA:1136:U:H5"	1:AA:1137:C:N3	2.31	0.46
1:AA:1418:A:C2	1:AA:1483:A:C2	3.03	0.46
4:AD:138:TYR:HE1	4:AD:140:VAL:HA	1.80	0.46
7:AG:26:PHE:O	7:AG:30:ILE:HG13	2.15	0.46
25:BA:211:A:H3'	25:BA:448:U:H5'	1.97	0.46
25:BA:1462:G:O2'	25:BA:1463:C:OP2	2.32	0.46
25:BA:1974:A:OP1	34:BO:42:SER:OG	2.32	0.46
25:BA:2517:G:O6	25:BA:2588:G:H2'	2.15	0.46
34:BO:12:ASP:CG	34:BO:14:THR:HG23	2.41	0.46
38:BS:14:VAL:O	38:BS:18:ILE:HG12	2.15	0.46
1:CA:757:U:O2'	1:CA:879:C:O2	2.21	0.46
1:CA:799:G:H5"	1:CA:799:G:H8	1.80	0.46
1:CA:1061:G:C2'	1:CA:1062:U:H5'	2.46	0.46
1:CA:1124:G:C5'	10:CJ:36:GLY:H	2.29	0.46
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.15	0.46
2:CB:20:GLU:HG3	2:CB:191:ASP:HB3	1.97	0.46
2:CB:22:LYS:HB3	2:CB:22:LYS:HE2	1.60	0.46
8:CH:49:GLU:HG2	8:CH:62:TYR:CE2	2.48	0.46
10:CJ:9:ARG:HG2	10:CJ:69:ASN:OD1	2.14	0.46
20:CT:14:LYS:O	20:CT:18:GLN:HG3	2.15	0.46
25:DA:530:G:O4'	25:DA:530:G:N3	2.49	0.46
25:DA:848:G:C4	25:DA:933:A:H8	2.34	0.46
25:DA:1274:A:N1	25:DA:1644:C:O2'	2.40	0.46
25:DA:1319:G:C6	25:DA:1320:C:N4	2.84	0.46
28:DE:163:GLU:HG2	28:DE:164:ARG:H	1.80	0.46
30:DG:82:LEU:HA	30:DG:86:MET:SD	2.55	0.46
38:DS:78:LEU:HD11	38:DS:108:GLY:O	2.15	0.46
45:DZ:52:SER:OG	45:DZ:53:ILE:N	2.48	0.46
1:AA:826:C:H2'	1:AA:827:U:C6	2.51	0.46
1:AA:932:C:H2'	1:AA:933:G:C8	2.51	0.46
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.49	0.46
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HB3	1.97	0.46
25:BA:403:C:H2'	25:BA:404:C:H6	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1042:A:H4'	40:BU:91:ASP:OD2	2.16	0.46
25:BA:1471:G:H2'	25:BA:1472:G:C8	2.51	0.46
25:BA:1513:G:O2'	25:BA:1593:C:O2'	2.27	0.46
25:BA:1836:U:H5"	27:BD:250:TRP:CE2	2.50	0.46
32:BI:93:THR:HG22	32:BI:119:PRO:HB3	1.98	0.46
45:BZ:53:ILE:HG22	45:BZ:71:VAL:O	2.16	0.46
45:BZ:67:LEU:HA	45:BZ:68:PRO:HD3	1.86	0.46
50:B4:61:ARG:O	50:B4:62:ARG:C	2.58	0.46
1:CA:1036:G:N7	1:CA:1037:C:O2	2.48	0.46
1:CA:1131:G:OP1	9:CI:20:ARG:NH2	2.48	0.46
1:CA:1305:G:H22	1:CA:1331:G:H1'	1.80	0.46
1:CA:1308:U:OP2	13:CM:99:ARG:HD3	2.15	0.46
2:CB:207:ALA:O	2:CB:210:SER:OG	2.20	0.46
10:CJ:62:HIS:HB3	14:CN:59:ALA:HB3	1.96	0.46
18:CR:59:SER:H	18:CR:62:GLU:CG	2.29	0.46
20:CT:54:LYS:HA	20:CT:57:ARG:CZ	2.46	0.46
25:DA:300:A:H1'	25:DA:319:C:C1'	2.45	0.46
25:DA:315:G:H2'	25:DA:316:C:C6	2.51	0.46
25:DA:1264:G:H2'	25:DA:2014:A:N6	2.30	0.46
25:DA:1824:G:N3	27:DD:254:THR:OG1	2.48	0.46
26:DB:118:G:H2'	26:DB:119:G:O4'	2.16	0.46
27:DD:10:THR:OG1	27:DD:13:ARG:HG2	2.15	0.46
29:DF:164:ARG:O	29:DF:168:ARG:HB2	2.15	0.46
30:DG:173:LEU:HD22	30:DG:178:PHE:CE1	2.50	0.46
32:DI:27:ARG:HD2	47:D1:71:TYR:CE1	2.51	0.46
43:DX:44:GLU:HG3	43:DX:51:VAL:HG23	1.97	0.46
2:AB:115:LEU:O	2:AB:119:GLU:N	2.47	0.46
2:AB:124:SER:HB3	2:AB:125:PRO:HA	1.98	0.46
2:AB:229:VAL:HG12	2:AB:230:VAL:N	2.30	0.46
4:AD:163:GLU:O	4:AD:166:LYS:HG2	2.16	0.46
16:AP:57:ARG:HH21	16:AP:79:VAL:C	2.24	0.46
25:BA:330:U:H2'	25:BA:331:G:O4'	2.15	0.46
25:BA:640:A:C4	29:BF:180:GLY:HA2	2.51	0.46
25:BA:1709:C:H1'	25:BA:2699:U:H5"	1.97	0.46
30:BG:102:PHE:CE1	30:BG:141:PHE:HE2	2.32	0.46
32:BI:77:LEU:HD23	32:BI:77:LEU:HA	1.75	0.46
35:BP:135:LEU:HD23	35:BP:135:LEU:HA	1.81	0.46
1:CA:109:A:H2'	1:CA:326:G:N2	2.29	0.46
1:CA:458:C:H2'	1:CA:460:G:H8	1.81	0.46
1:CA:814:A:N7	1:CA:816:A:C4	2.84	0.46
1:CA:986:A:N3	19:CS:52:TYR:OH	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1484:C:O2'	25:DA:1960:A:O2'	2.30	0.46
4:CD:175:SER:HB3	4:CD:186:LEU:HD11	1.98	0.46
7:CG:69:VAL:HG21	7:CG:104:LEU:HD11	1.97	0.46
15:CO:54:ARG:HD3	15:CO:58:MET:CE	2.43	0.46
16:CP:55:ARG:O	16:CP:58:TYR:HB3	2.15	0.46
20:CT:18:GLN:O	20:CT:22:ARG:HG3	2.15	0.46
25:DA:212:G:H2'	25:DA:213:A:O4'	2.16	0.46
25:DA:2545:G:N3	25:DA:2565:A:H2	2.13	0.46
25:DA:2747:G:N2	25:DA:2757:A:H62	2.13	0.46
27:DD:221:VAL:HG22	27:DD:226:MET:CE	2.46	0.46
1:AA:184:G:N2	1:AA:194:C:C2	2.84	0.46
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.51	0.46
1:AA:276:G:C2'	1:AA:277:C:H5'	2.45	0.46
1:AA:376:G:H2'	1:AA:377:G:H8	1.81	0.46
1:AA:630:G:H2'	1:AA:631:G:C8	2.50	0.46
1:AA:688:G:H2'	1:AA:689:C:C6	2.51	0.46
1:AA:735:C:H2'	1:AA:736:C:C6	2.48	0.46
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.50	0.46
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.16	0.46
8:AH:39:LEU:HB3	8:AH:45:ILE:HD11	1.97	0.46
14:AN:46:GLU:O	14:AN:50:LYS:HG3	2.16	0.46
25:BA:904:C:N4	25:BA:905:U:O4	2.49	0.46
25:BA:1739:U:H2'	25:BA:1741:C:C5	2.50	0.46
25:BA:2326:C:H2'	25:BA:2327:G:H8	1.80	0.46
25:BA:2825:C:H5'	51:B5:29:THR:HG21	1.98	0.46
37:BR:65:LEU:HD13	37:BR:65:LEU:HA	1.72	0.46
52:B6:18:ARG:HD2	52:B6:42:TRP:CD1	2.51	0.46
1:CA:411:A:H1'	1:CA:413:G:O4'	2.16	0.46
1:CA:458:C:H2'	1:CA:460:G:C8	2.51	0.46
1:CA:568:G:N7	12:CL:5:PRO:HD3	2.31	0.46
1:CA:664:G:N2	1:CA:741:G:H1	2.12	0.46
1:CA:1120:G:N1	1:CA:1154:G:N3	2.64	0.46
1:CA:1515:C:H2'	1:CA:1516:G:H8	1.80	0.46
2:CB:17:PHE:HB2	2:CB:44:LEU:CD1	2.46	0.46
2:CB:40:HIS:HB3	2:CB:190:THR:HG21	1.97	0.46
2:CB:145:LEU:O	2:CB:149:LEU:HB2	2.15	0.46
2:CB:180:LEU:HD23	2:CB:180:LEU:HA	1.67	0.46
4:CD:98:GLU:OE1	4:CD:103:ASN:ND2	2.44	0.46
4:CD:191:ARG:HD2	4:CD:191:ARG:C	2.41	0.46
6:CF:10:LEU:HD12	6:CF:10:LEU:HA	1.78	0.46
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:23:ILE:HD13	10:CJ:26:ALA:HB3	1.96	0.46
12:CL:117:ARG:HB3	12:CL:122:THR:HB	1.98	0.46
15:CO:56:LEU:O	15:CO:60:VAL:HG23	2.15	0.46
25:DA:251:A:C5	25:DA:252:G:H1'	2.51	0.46
25:DA:409:C:O2'	25:DA:410:G:H5'	2.15	0.46
25:DA:437:G:H2'	25:DA:438:G:C8	2.49	0.46
25:DA:1197:G:H2'	25:DA:1198:U:H6	1.81	0.46
25:DA:1748:G:O2'	25:DA:1749:A:H5'	2.16	0.46
25:DA:2040:C:H2'	25:DA:2041:U:O4'	2.16	0.46
25:DA:2266:A:H4'	25:DA:2267:A:N3	2.31	0.46
25:DA:2318:G:N2	38:DS:3:ARG:HH11	2.13	0.46
25:DA:2693:A:H2'	25:DA:2694:G:C8	2.49	0.46
30:DG:25:TYR:CD2	30:DG:30:GLU:HB3	2.51	0.46
30:DG:141:PHE:HD1	30:DG:142:PRO:HD2	1.80	0.46
31:DH:149:ARG:NH1	31:DH:167:GLU:OE2	2.49	0.46
45:DZ:157:LEU:HB3	45:DZ:161:VAL:HG13	1.98	0.46
55:D9:15:LYS:HE2	55:D9:17:ILE:HD13	1.98	0.46
1:AA:604:G:C6	1:AA:605:U:C4	3.04	0.46
1:AA:1027:C:C4	1:AA:1034:G:O6	2.67	0.46
1:AA:1035:A:H2	1:AA:1036:G:N7	2.14	0.46
2:AB:101:MET:HA	2:AB:108:ILE:HD12	1.97	0.46
25:BA:696:C:P	25:BA:696:C:H6	2.39	0.46
25:BA:839:G:O2'	25:BA:2452:C:N3	2.46	0.46
25:BA:1859:G:OP1	61:BA:4531:HOH:O	2.20	0.46
25:BA:2299:A:C4	25:BA:2301:G:C8	3.04	0.46
25:BA:2630:G:C6	25:BA:2631:C:C4	3.03	0.46
28:BE:54:GLN:OE1	28:BE:55:ASN:N	2.46	0.46
28:BE:167:VAL:HG11	28:BE:189:PRO:HD3	1.96	0.46
38:BS:15:ARG:NE	38:BS:88:ASP:OD2	2.41	0.46
39:BT:16:ARG:HD2	39:BT:18:ASP:OD1	2.16	0.46
1:CA:671:G:N2	1:CA:735:C:O2	2.49	0.46
1:CA:685:G:C2	1:CA:686:U:C4	3.04	0.46
1:CA:991:U:H3'	1:CA:1212:U:N3	2.31	0.46
1:CA:1030:C:N4	1:CA:1032:G:O6	2.49	0.46
3:CC:43:LEU:N	3:CC:43:LEU:HD23	2.31	0.46
4:CD:25:ARG:O	4:CD:25:ARG:HG2	2.16	0.46
7:CG:51:GLN:O	7:CG:55:GLY:HA2	2.16	0.46
11:CK:33:THR:OG1	11:CK:34:ASP:O	2.29	0.46
14:CN:24:CYS:O	14:CN:28:GLY:N	2.43	0.46
25:DA:415:A:H2'	25:DA:416:C:O4'	2.16	0.46
25:DA:1427:A:H8	25:DA:1427:A:O5'	1.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1782:C:O2'	25:DA:2609:U:H5"	2.15	0.46
25:DA:1851:U:H2'	25:DA:1852:C:O4'	2.16	0.46
27:DD:227:ASN:C	27:DD:234:GLY:HA3	2.41	0.46
30:DG:14:GLU:O	30:DG:17:PRO:HD2	2.15	0.46
42:DW:54:ALA:HB1	42:DW:107:LEU:HD22	1.97	0.46
45:DZ:27:VAL:HG12	45:DZ:85:HIS:HE1	1.81	0.46
54:D8:19:SER:OG	54:D8:21:LYS:HE3	2.16	0.46
1:AA:473:G:O2'	1:AA:474:G:H5'	2.16	0.46
1:AA:637:G:C2	1:AA:638:G:C4	3.04	0.46
1:AA:693:G:H2'	1:AA:694:A:C8	2.51	0.46
1:AA:1068:G:OP2	1:AA:1068:G:H8	1.99	0.46
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.50	0.46
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.41	0.46
23:AX:48:C:C2	23:AX:59:A:H1'	2.51	0.46
25:BA:886:U:H2'	25:BA:887:C:C6	2.51	0.46
25:BA:1369:U:H2'	25:BA:1370:G:H5'	1.97	0.46
25:BA:1496:A:H5"	25:BA:1496:A:H8	1.80	0.46
25:BA:1854:G:OP1	27:BD:54:ARG:NH1	2.49	0.46
42:BW:18:ARG:NH1	42:BW:76:VAL:O	2.48	0.46
42:BW:19:LEU:HB3	51:B5:25:LEU:HD11	1.97	0.46
1:CA:1097:C:H4'	1:CA:1170:A:H5'	1.97	0.46
1:CA:1163:C:N4	1:CA:1173:G:N1	2.35	0.46
3:CC:23:TYR:HA	10:CJ:11:PHE:CE2	2.50	0.46
3:CC:70:VAL:HG22	3:CC:72:LYS:H	1.80	0.46
16:CP:21:VAL:HG22	16:CP:33:ILE:HD12	1.97	0.46
25:DA:62:C:N4	25:DA:93:G:H1	2.04	0.46
25:DA:812:C:H1'	25:DA:1250:G:C2	2.51	0.46
25:DA:996:A:C2	25:DA:997:G:C8	3.03	0.46
25:DA:1259:G:H2'	25:DA:1260:G:C8	2.51	0.46
25:DA:1528(A):A:C8	25:DA:1529:G:C8	3.03	0.46
25:DA:1999:C:OP1	25:DA:2723:C:O2'	2.28	0.46
26:DB:42:C:O2	30:DG:93:THR:N	2.37	0.46
35:DP:21:ARG:HD3	35:DP:21:ARG:HA	1.78	0.46
36:DQ:137:TYR:O	36:DQ:141:GLN:HG2	2.16	0.46
41:DV:64:HIS:CD2	41:DV:92:THR:HG1	2.33	0.46
45:DZ:128:VAL:HG23	45:DZ:160:GLY:O	2.15	0.46
52:D6:11:LEU:HA	52:D6:11:LEU:HD23	1.64	0.46
1:AA:166:G:H2'	1:AA:167:G:N7	2.30	0.45
1:AA:975:A:H5'	1:AA:975:A:H8	1.82	0.45
1:AA:1091:U:H2'	1:AA:1093:A:OP2	2.16	0.45
1:AA:1325:C:O2'	1:AA:1326:C:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1361:G:H2'	1:AA:1362:C:O4'	2.15	0.45
3:AC:129:ALA:HB3	3:AC:132:ARG:HB2	1.97	0.45
4:AD:30:LYS:HA	4:AD:35:ARG:NH1	2.30	0.45
9:AI:85:LEU:HB3	9:AI:92:TYR:HD2	1.80	0.45
18:AR:32:ARG:HH11	18:AR:65:ILE:HD12	1.82	0.45
25:BA:1188:A:C4	25:BA:1190:G:C8	3.04	0.45
25:BA:1919:G:H2'	25:BA:1920:U:O4'	2.16	0.45
26:BB:13:A:N1	26:BB:69:G:O2'	2.41	0.45
27:BD:127:VAL:HA	27:BD:193:VAL:HG22	1.98	0.45
28:BE:143:ASN:HD22	28:BE:147:PRO:CD	2.24	0.45
30:BG:72:ARG:NH1	30:BG:87:PRO:HG3	2.30	0.45
1:CA:540:G:C4	1:CA:541:G:C8	3.04	0.45
1:CA:600:C:C2	1:CA:639:G:C2	3.04	0.45
1:CA:1002:G:H5"	1:CA:1003:G:OP2	2.16	0.45
1:CA:1013:G:N2	1:CA:1016:A:OP2	2.35	0.45
1:CA:1041:A:N6	1:CA:1042:G:O6	2.48	0.45
4:CD:15:GLU:CG	4:CD:63:LYS:HB3	2.46	0.45
4:CD:33:MET:SD	4:CD:37:PRO:HA	2.56	0.45
5:CE:36:ASP:O	5:CE:38:GLN:N	2.47	0.45
5:CE:152:ARG:HG2	8:CH:42:GLU:O	2.16	0.45
12:CL:34:ARG:HE	12:CL:34:ARG:HB3	1.40	0.45
25:DA:230:U:H2'	25:DA:231:C:H6	1.81	0.45
25:DA:446:G:H8	61:DA:3775:HOH:O	1.98	0.45
25:DA:1014:U:H2'	25:DA:1015:G:C8	2.49	0.45
25:DA:1614:A:P	25:DA:1614:A:H8	2.39	0.45
25:DA:1739:U:O2'	25:DA:1740:G:H8	1.98	0.45
42:DW:18:ARG:NH1	42:DW:76:VAL:O	2.50	0.45
1:AA:222:U:H2'	1:AA:223:U:C6	2.51	0.45
1:AA:375:U:C4	1:AA:376:G:N7	2.84	0.45
1:AA:501:C:O2'	1:AA:549:C:O2	2.34	0.45
1:AA:1005:A:H1'	1:AA:1036:G:N2	2.31	0.45
1:AA:1039:C:N4	1:AA:1040:U:O4	2.49	0.45
5:AE:27:ARG:HE	5:AE:27:ARG:HB2	1.46	0.45
12:AL:77:LEU:HD21	12:AL:107:ALA:HA	1.98	0.45
18:AR:43:PHE:O	18:AR:51:LEU:HD12	2.17	0.45
25:BA:2760:G:O6	25:BA:2768:C:H5"	2.17	0.45
26:BB:6:C:H2'	26:BB:7:G:H5"	1.98	0.45
31:BH:71:LEU:HD12	31:BH:71:LEU:HA	1.79	0.45
35:BP:97:PRO:HD3	35:BP:126:VAL:O	2.17	0.45
45:BZ:98:MET:O	45:BZ:125:LEU:HD12	2.16	0.45
1:CA:113:G:H2'	1:CA:114:U:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:817:C:H42	1:CA:1529:G:H1	1.63	0.45
1:CA:991:U:N3	1:CA:1212:U:O2	2.49	0.45
1:CA:1189:C:H5"	1:CA:1190:G:OP2	2.16	0.45
1:CA:1256:A:H61	1:CA:1278:U:H1'	1.81	0.45
2:CB:85:ALA:O	2:CB:89:GLY:N	2.49	0.45
2:CB:122:PHE:HD1	2:CB:123:ALA:H	1.63	0.45
2:CB:178:ARG:CZ	8:CH:74:PRO:HG3	2.47	0.45
8:CH:51:VAL:CG1	8:CH:52:ASP:H	2.24	0.45
9:CI:31:GLN:HB2	9:CI:35:GLU:OE2	2.16	0.45
17:CQ:43:LEU:HG	17:CQ:68:ARG:HG2	1.97	0.45
18:CR:29:PHE:HE1	18:CR:31:LEU:HD13	1.81	0.45
24:CW:4:PRO:HA	24:CW:5:MVA:HN1	1.30	0.45
25:DA:265:A:H1'	25:DA:266:G:O4'	2.16	0.45
25:DA:295:G:H5'	44:DY:1:MET:HE1	1.97	0.45
25:DA:468:G:H2'	25:DA:469:G:O4'	2.15	0.45
25:DA:817:C:O2'	25:DA:839:U:H5"	2.16	0.45
25:DA:1339:G:H21	25:DA:1603:A:H1'	1.80	0.45
25:DA:1386:C:H2'	25:DA:1387:C:C6	2.51	0.45
25:DA:1593:G:C2	25:DA:1594:G:C4	3.04	0.45
25:DA:2070:G:C2	25:DA:2442:C:C2	3.04	0.45
25:DA:2578:G:H1'	61:DE:404:HOH:O	2.15	0.45
25:DA:2689:U:P	25:DA:2719:G:H22	2.39	0.45
29:DF:34:TRP:CZ3	35:DP:8:PRO:HB3	2.51	0.45
30:DG:76:SER:CB	30:DG:84:LYS:H	2.29	0.45
34:DO:87:ILE:HD12	34:DO:91:LEU:HA	1.98	0.45
35:DP:27:HIS:HB2	61:DP:313:HOH:O	2.16	0.45
51:D5:16:ARG:O	51:D5:20:ARG:HG3	2.16	0.45
1:AA:160:A:H2'	1:AA:161:A:C8	2.52	0.45
1:AA:193:C:C2	1:AA:194:C:C5	3.04	0.45
1:AA:690:G:C6	1:AA:691:G:C6	3.04	0.45
1:AA:938:A:C6	1:AA:939:G:C5	3.05	0.45
1:AA:994:A:N7	1:AA:1216:G:H4'	2.32	0.45
1:AA:1062:U:O2'	1:AA:1063:C:O4'	2.30	0.45
1:AA:1298:C:H2'	7:AG:114:ARG:NH1	2.32	0.45
2:AB:8:LYS:H	2:AB:8:LYS:HG2	1.59	0.45
2:AB:77:ALA:O	2:AB:81:VAL:HG22	2.16	0.45
5:AE:15:ARG:HD2	5:AE:26:PHE:CD2	2.51	0.45
5:AE:52:PRO:HG2	5:AE:53:LEU:HD12	1.98	0.45
8:AH:11:THR:HG22	8:AH:15:ASN:ND2	2.31	0.45
16:AP:71:ARG:O	16:AP:75:ARG:N	2.45	0.45
25:BA:581:G:P	33:BN:111:PRO:HD2	2.56	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:596:G:O2'	25:BA:597:C:H3'	2.17	0.45
25:BA:1091:A:O2'	25:BA:1093:G:C4	2.68	0.45
25:BA:1613:A:OP1	27:BD:211:ARG:NH1	2.50	0.45
25:BA:2304:C:H2'	25:BA:2305:C:C6	2.51	0.45
40:BU:16:LYS:HB3	40:BU:16:LYS:HE2	1.71	0.45
43:BX:92:LEU:HD12	43:BX:92:LEU:HA	1.79	0.45
1:CA:243:A:H4'	1:CA:244:U:H5"	1.97	0.45
1:CA:251:G:H4'	1:CA:252:U:O5'	2.16	0.45
1:CA:292:G:N2	1:CA:309:G:C4	2.85	0.45
1:CA:353:A:H5'	1:CA:353:A:C8	2.45	0.45
1:CA:411:A:OP1	4:CD:30:LYS:NZ	2.30	0.45
1:CA:461:A:C5	1:CA:471:G:C6	3.04	0.45
1:CA:555:C:H2'	1:CA:556:C:C6	2.51	0.45
1:CA:1145:C:H4'	1:CA:1146:A:C5'	2.44	0.45
1:CA:1309:G:H5'	13:CM:78:ILE:HD11	1.98	0.45
1:CA:1422:G:O3'	34:DO:49:ARG:NH1	2.48	0.45
2:CB:118:LEU:HB3	2:CB:142:LEU:HD12	1.97	0.45
5:CE:53:LEU:H	5:CE:53:LEU:HD12	1.80	0.45
14:CN:21:TYR:HE1	14:CN:23:ARG:NE	2.14	0.45
14:CN:37:PHE:HB3	14:CN:39:LEU:HD12	1.99	0.45
25:DA:623:G:C6	25:DA:624:C:C4	3.05	0.45
25:DA:1252:G:C2	25:DA:1253:A:C2	3.03	0.45
25:DA:2533:A:OP1	25:DA:2665:A:O2'	2.27	0.45
26:DB:31:C:O2'	26:DB:32:C:H5'	2.16	0.45
27:DD:33:LEU:HD23	27:DD:33:LEU:HA	1.74	0.45
35:DP:29:LYS:HG3	35:DP:30:THR:HG23	1.98	0.45
1:AA:251:G:N2	1:AA:253:U:C5	2.84	0.45
1:AA:278:G:OP2	17:AQ:92:ARG:NH2	2.50	0.45
1:AA:299:G:H2'	1:AA:300:A:C8	2.51	0.45
1:AA:658:G:H2'	1:AA:659:U:H6	1.81	0.45
1:AA:1118:C:H2'	1:AA:1119:C:C6	2.51	0.45
1:AA:1125:U:O4	1:AA:1128:C:C5	2.70	0.45
1:AA:1206:G:C6	1:AA:1207:G:C5	3.04	0.45
1:AA:1254:C:H2'	1:AA:1255:G:C8	2.52	0.45
4:AD:23:GLY:HA3	4:AD:112:VAL:HB	1.98	0.45
17:AQ:26:GLN:HE21	17:AQ:37:LYS:HG2	1.81	0.45
18:AR:52:PRO:O	18:AR:56:THR:HG23	2.16	0.45
25:BA:306:A:H2'	25:BA:306:A:N3	2.31	0.45
25:BA:860:U:H2'	25:BA:861:C:C6	2.52	0.45
25:BA:1285:G:H2'	25:BA:1286:U:O4'	2.16	0.45
25:BA:2354:C:O2'	25:BA:2386:C:H5"	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:605:U:C2'	1:CA:606:G:H5'	2.46	0.45
1:CA:731:G:H5'	1:CA:766:A:H4'	1.97	0.45
2:CB:47:THR:HG22	2:CB:51:LEU:HG	1.99	0.45
2:CB:127:ILE:HG12	2:CB:128:GLU:H	1.81	0.45
2:CB:211:ILE:O	2:CB:215:LEU:HB2	2.16	0.45
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	1.99	0.45
8:CH:17:THR:HA	8:CH:65:TYR:HE2	1.81	0.45
12:CL:24:VAL:CG1	12:CL:27:LEU:HD22	2.46	0.45
20:CT:46:GLU:O	20:CT:46:GLU:HG2	2.14	0.45
25:DA:528:A:H2	25:DA:2043:C:C5'	2.30	0.45
25:DA:888:C:H2'	25:DA:889:C:N3	2.31	0.45
25:DA:966:G:H2'	25:DA:967:C:C6	2.52	0.45
25:DA:1527:G:H2'	25:DA:1542:A:N1	2.31	0.45
25:DA:2219:G:H2'	25:DA:2220:G:H8	1.81	0.45
25:DA:2400:G:H2'	25:DA:2401:U:H6	1.81	0.45
27:DD:61:LEU:O	27:DD:63:ARG:NH1	2.50	0.45
35:DP:47:ASP:HA	35:DP:48:PRO:HD3	1.82	0.45
45:DZ:30:ASN:HA	45:DZ:89:PHE:HE1	1.80	0.45
1:AA:627:G:O2'	1:AA:628:G:H5'	2.17	0.45
1:AA:658:G:H2'	1:AA:659:U:C6	2.51	0.45
1:AA:977:A:H1'	1:AA:982:U:O4	2.16	0.45
1:AA:1202:G:N2	14:AN:46:GLU:OE1	2.48	0.45
1:AA:1316:G:N1	1:AA:1319:A:OP2	2.48	0.45
1:AA:1410:G:H2'	1:AA:1411:C:C6	2.51	0.45
2:AB:55:PHE:HE1	2:AB:218:ALA:HA	1.82	0.45
4:AD:8:VAL:O	4:AD:11:LEU:HB2	2.17	0.45
9:AI:99:LEU:HB3	9:AI:101:PHE:HE1	1.81	0.45
25:BA:1056:A:N3	25:BA:1199:C:H1'	2.32	0.45
25:BA:1230:C:H5"	25:BA:1231:G:OP1	2.17	0.45
25:BA:1839:U:O5'	25:BA:1839:U:H6	1.99	0.45
25:BA:2289:G:OP2	46:B0:10:THR:HG21	2.16	0.45
25:BA:2614:A:C8	46:B0:3:HIS:HE1	2.34	0.45
25:BA:2734:A:HO2'	25:BA:2884:C:H5'	1.82	0.45
35:BP:46:LYS:HB3	35:BP:46:LYS:HE3	1.74	0.45
41:BV:62:LEU:HD12	41:BV:62:LEU:HA	1.83	0.45
43:BX:38:GLU:HA	61:BX:201:HOH:O	2.16	0.45
44:BY:20:TYR:CE1	44:BY:43:ASN:HA	2.51	0.45
45:BZ:48:PHE:CE1	45:BZ:52:SER:HA	2.51	0.45
45:BZ:107:THR:HG21	45:BZ:112:ARG:NH2	2.30	0.45
1:CA:380:G:N2	1:CA:384:G:C5	2.85	0.45
1:CA:413:G:N2	1:CA:428:G:H1'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:737:A:H2'	1:CA:738:C:C6	2.52	0.45
1:CA:780:A:H1'	1:CA:803:G:N2	2.32	0.45
1:CA:1328:C:H2'	1:CA:1329:A:O4'	2.16	0.45
4:CD:122:ARG:HA	4:CD:122:ARG:HH11	1.82	0.45
9:CI:53:VAL:HG23	9:CI:55:ALA:HB3	1.98	0.45
10:CJ:22:LYS:HA	10:CJ:25:GLU:HB2	1.98	0.45
15:CO:69:TYR:O	15:CO:73:GLU:HG2	2.17	0.45
25:DA:276:A:H5"	25:DA:277:C:H5'	1.99	0.45
25:DA:644:A:H4'	25:DA:645:C:C4	2.50	0.45
25:DA:761:A:N7	61:DA:3757:HOH:O	2.36	0.45
25:DA:1138:G:H2'	25:DA:1139:G:O4'	2.16	0.45
25:DA:1223:G:N1	25:DA:1227:G:C6	2.85	0.45
25:DA:2097:C:H2'	25:DA:2098:U:H6	1.81	0.45
25:DA:2497:A:H5"	61:DA:3744:HOH:O	2.16	0.45
25:DA:2505:G:O6	51:D5:3:LYS:NZ	2.48	0.45
25:DA:2728:U:H2'	25:DA:2729:G:C8	2.52	0.45
25:DA:2751:G:H3'	25:DA:2752:C:C6	2.51	0.45
25:DA:2879:C:OP2	61:DA:4047:HOH:O	2.21	0.45
29:DF:137:LYS:HB3	29:DF:137:LYS:HE3	1.57	0.45
32:DI:126:TYR:HB2	32:DI:142:VAL:HG23	1.98	0.45
35:DP:82:GLY:HA2	35:DP:113:LYS:O	2.17	0.45
40:DU:49:HIS:HA	40:DU:52:ARG:HB3	1.98	0.45
42:DW:20:VAL:HG21	42:DW:43:GLY:HA3	1.99	0.45
44:DY:74:PRO:O	44:DY:82:PRO:HA	2.17	0.45
45:DZ:125:LEU:HG	45:DZ:164:ALA:HB3	1.99	0.45
1:AA:236:G:H2'	1:AA:237:C:C6	2.51	0.45
1:AA:589:C:O2'	1:AA:590:C:H5'	2.17	0.45
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.15	0.45
1:AA:1127:G:H21	1:AA:1128:C:H1'	1.80	0.45
1:AA:1220:G:H21	19:AS:54:GLY:C	2.23	0.45
1:AA:1353:G:OP1	21:AU:10:ARG:NH1	2.46	0.45
4:AD:129:ASN:N	4:AD:145:GLU:O	2.43	0.45
5:AE:87:SER:HB3	5:AE:131:ILE:HD13	1.97	0.45
9:AI:19:LEU:HB3	9:AI:59:PHE:CD2	2.50	0.45
9:AI:77:ILE:O	9:AI:81:ILE:HG22	2.17	0.45
16:AP:4:ILE:HG13	16:AP:64:ALA:HB1	1.99	0.45
19:AS:45:VAL:HG13	19:AS:63:THR:HA	1.98	0.45
25:BA:629:U:H4'	25:BA:705:C:H4'	1.99	0.45
25:BA:1185:C:OP2	33:BN:66:LYS:NZ	2.50	0.45
25:BA:1204:C:H4'	49:B3:32:GLN:HB2	1.97	0.45
25:BA:2323:A:OP1	25:BA:2323:A:H3'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:101:ILE:HG22	30:BG:105:LYS:HE2	1.98	0.45
34:BO:115:VAL:HG13	34:BO:121:VAL:HG21	1.98	0.45
44:BY:106:LEU:O	44:BY:107:ASP:HB2	2.17	0.45
1:CA:109:A:C6	1:CA:326:G:C6	3.05	0.45
1:CA:557:G:N1	1:CA:558:G:C2	2.84	0.45
1:CA:1074:G:C2	1:CA:1075:C:C2	3.05	0.45
1:CA:1346:A:H5"	9:CI:120:ARG:NH1	2.31	0.45
1:CA:1423:G:H2'	1:CA:1424:C:C6	2.51	0.45
10:CJ:23:ILE:HD13	10:CJ:23:ILE:HA	1.72	0.45
12:CL:34:ARG:O	12:CL:61:THR:HG23	2.17	0.45
19:CS:22:LEU:HD23	19:CS:27:GLU:HA	1.99	0.45
25:DA:196:A:H2'	25:DA:196:A:N3	2.32	0.45
25:DA:610:G:N2	25:DA:619:G:H1'	2.32	0.45
25:DA:870:A:C2'	25:DA:871:U:H5'	2.46	0.45
25:DA:1227:G:H2'	25:DA:1228:G:O4'	2.16	0.45
25:DA:1248:G:O2'	40:DU:3:ARG:HA	2.17	0.45
25:DA:1647:G:H3'	61:DA:4113:HOH:O	2.17	0.45
25:DA:1664:A:N7	61:DA:3965:HOH:O	2.36	0.45
25:DA:1789:A:H2'	25:DA:1790:C:C6	2.52	0.45
25:DA:2290:G:C6	25:DA:2291:U:C4	3.05	0.45
25:DA:2872:G:C2	25:DA:2873:A:N6	2.85	0.45
29:DF:29:ASN:H	29:DF:112:MET:CE	2.30	0.45
29:DF:132:VAL:HG21	29:DF:163:VAL:HG22	1.99	0.45
42:DW:4:LYS:HD3	42:DW:6:ILE:HD11	1.98	0.45
1:AA:124:G:H4'	1:AA:291:C:O2'	2.16	0.45
1:AA:389:A:C6	1:AA:390:C:H1'	2.51	0.45
1:AA:430:A:H2'	1:AA:431:A:O4'	2.17	0.45
1:AA:524:G:H2'	1:AA:525:C:C6	2.52	0.45
1:AA:580:U:H2'	1:AA:581:G:C8	2.51	0.45
1:AA:684:A:H2'	1:AA:685:G:C8	2.52	0.45
1:AA:721:G:H4'	1:AA:722:A:O4'	2.16	0.45
1:AA:736:C:H2'	1:AA:737:A:C8	2.51	0.45
1:AA:1504:G:H4'	1:AA:1505:G:C4	2.52	0.45
18:AR:33:ASP:OD2	18:AR:36:ASN:HB2	2.16	0.45
25:BA:605:G:H2'	25:BA:606:G:C8	2.52	0.45
25:BA:616:G:H4'	54:B8:4:MET:HE2	1.98	0.45
25:BA:2612:A:H2'	25:BA:2613:C:C6	2.52	0.45
25:BA:2661:U:H2'	25:BA:2662:U:H6	1.82	0.45
25:BA:2828:G:OP2	37:BR:42:LYS:NZ	2.42	0.45
31:BH:13:LYS:HA	31:BH:14:GLY:HA2	1.77	0.45
1:CA:690:G:H2'	1:CA:691:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1005:A:H5"	1:CA:1006:C:C5	2.52	0.45
1:CA:1249:C:O4'	9:CI:70:LYS:HE2	2.17	0.45
4:CD:110:PHE:N	4:CD:110:PHE:CD1	2.84	0.45
7:CG:42:ILE:HD13	7:CG:116:ALA:HB3	1.98	0.45
9:CI:15:ALA:HB2	9:CI:65:VAL:HG23	1.98	0.45
19:CS:40:ILE:HD12	19:CS:71:LEU:HD12	1.99	0.45
25:DA:493:G:H2'	25:DA:494:G:O4'	2.16	0.45
25:DA:528:A:OP2	33:DN:114:ARG:NH1	2.44	0.45
25:DA:1032:A:O3'	55:D9:16:VAL:HG11	2.16	0.45
25:DA:1159:U:O2'	25:DA:1160:G:H5'	2.17	0.45
25:DA:1165:U:H2'	25:DA:1166:C:C6	2.52	0.45
25:DA:1212:G:H1'	25:DA:1236:G:N2	2.31	0.45
25:DA:1525:G:H2'	25:DA:1526:G:H8	1.80	0.45
25:DA:2046:G:H2'	25:DA:2047:U:C6	2.52	0.45
30:DG:70:VAL:HA	30:DG:90:LEU:HD23	1.98	0.45
30:DG:143:GLU:H	30:DG:143:GLU:HG2	1.35	0.45
36:DQ:29:PHE:HB2	36:DQ:105:GLU:OE2	2.17	0.45
42:DW:60:ASN:N	42:DW:60:ASN:ND2	2.65	0.45
1:AA:127:G:OP1	1:AA:635:G:H1'	2.17	0.45
1:AA:148:G:O2'	1:AA:149:A:H8	2.00	0.45
1:AA:665:A:H1'	1:AA:733:A:O4'	2.17	0.45
1:AA:865:A:H2	1:AA:918:A:H4'	1.81	0.45
1:AA:1027:C:N3	1:AA:1034:G:O6	2.50	0.45
1:AA:1095:U:OP1	1:AA:1108:G:N2	2.45	0.45
1:AA:1223:C:P	19:AS:78:ARG:HH21	2.39	0.45
1:AA:1299:A:H5"	1:AA:1299:A:N3	2.32	0.45
1:AA:1417:G:N2	1:AA:1482:G:H2'	2.32	0.45
2:AB:19:HIS:HE1	2:AB:189:ASP:HB3	1.80	0.45
25:BA:83:A:H5'	44:BY:8:LYS:HG2	1.98	0.45
25:BA:476:G:O6	61:BA:4177:HOH:O	2.21	0.45
25:BA:1541:A:O2'	25:BA:1542:A:H5'	2.17	0.45
25:BA:2451:A:H5'	25:BA:2451:A:C8	2.52	0.45
25:BA:2619:G:O3'	61:BA:4187:HOH:O	2.21	0.45
25:BA:2658:C:H2'	25:BA:2659:U:O4'	2.17	0.45
37:BR:104:ARG:HG3	37:BR:111:LEU:HD21	1.99	0.45
39:BT:51:ARG:HG3	39:BT:98:LYS:HD2	1.99	0.45
39:BT:53:ARG:NH1	39:BT:53:ARG:HB3	2.32	0.45
40:BU:24:TYR:HB2	40:BU:29:SER:HB3	1.99	0.45
45:BZ:15:PRO:O	45:BZ:19:ARG:HB2	2.17	0.45
1:CA:443:C:C2	1:CA:444:C:C5	3.05	0.45
1:CA:580:U:H5"	15:CO:58:MET:HG2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:728:A:H2'	1:CA:729:A:C8	2.52	0.45
1:CA:1009:G:H2'	1:CA:1010:G:O4'	2.16	0.45
1:CA:1027:C:O2'	1:CA:1034:G:N2	2.49	0.45
1:CA:1342:C:H4'	9:CI:125:TYR:HB3	1.98	0.45
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.51	0.45
2:CB:12:GLU:HA	2:CB:15:VAL:HG23	1.98	0.45
2:CB:130:ARG:HA	2:CB:131:PRO:HD3	1.82	0.45
4:CD:196:LEU:O	4:CD:198:VAL:N	2.41	0.45
12:CL:27:LEU:HD13	12:CL:98:TYR:CE1	2.52	0.45
13:CM:81:LEU:HD22	13:CM:88:ARG:HB3	1.98	0.45
25:DA:7:G:O4'	33:DN:133:GLN:NE2	2.49	0.45
25:DA:55:G:O2'	25:DA:127:A:N1	2.43	0.45
25:DA:81:G:C2	25:DA:106:C:N3	2.85	0.45
25:DA:271(S):G:C2'	25:DA:271(T):C:H5'	2.46	0.45
25:DA:848:G:O6	25:DA:928:G:H2'	2.16	0.45
25:DA:940:G:H21	25:DA:1191:G:C4'	2.30	0.45
25:DA:1486:A:O2'	25:DA:1487:G:H5'	2.17	0.45
25:DA:2297:C:H3'	25:DA:2297:C:H6	1.81	0.45
25:DA:2882:A:OP1	37:DR:96:ARG:NE	2.49	0.45
28:DE:111:ARG:HG3	28:DE:160:TYR:CD2	2.52	0.45
45:DZ:121:HIS:HB3	45:DZ:123:ASP:O	2.17	0.45
46:D0:53:MET:HA	46:D0:58:THR:O	2.16	0.45
50:D4:61:ARG:NH1	50:D4:61:ARG:O	2.49	0.45
1:AA:1015:A:H8	1:AA:1015:A:O5'	2.00	0.45
1:AA:1041:A:C2'	1:AA:1042:G:H5'	2.46	0.45
1:AA:1205:U:O2'	3:AC:195:VAL:HG23	2.17	0.45
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.52	0.45
1:AA:1424:C:H2'	1:AA:1425:U:O4'	2.16	0.45
2:AB:63:MET:HB3	2:AB:225:ALA:O	2.16	0.45
24:AW:6:2R1:O	24:AW:8:2R3:N	2.50	0.45
25:BA:613:A:H2'	25:BA:614:C:O4'	2.17	0.45
25:BA:2399:U:OP1	46:B0:55:ARG:NH2	2.50	0.45
25:BA:2648:U:H4'	28:BE:80:GLU:CD	2.42	0.45
34:BO:97:ARG:HA	34:BO:117:LEU:HD22	1.99	0.45
35:BP:124:LYS:HG3	35:BP:144:GLU:HG2	1.99	0.45
36:BQ:133:ARG:HG2	36:BQ:134:ARG:N	2.31	0.45
44:BY:43:ASN:HA	44:BY:43:ASN:HD22	1.50	0.45
47:B1:94:LEU:O	47:B1:97:LEU:HB2	2.17	0.45
1:CA:420:U:H1'	1:CA:424:G:N2	2.32	0.45
1:CA:437:U:O2'	4:CD:125:HIS:HE1	2.00	0.45
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:6:PHE:HD2	5:CE:63:ARG:HD3	1.82	0.45
11:CK:44:SER:OG	11:CK:47:VAL:HG23	2.17	0.45
13:CM:22:ILE:HB	13:CM:25:ILE:HD13	1.99	0.45
25:DA:445:C:O2'	25:DA:446:G:H5'	2.17	0.45
25:DA:524:U:H2'	25:DA:525:U:C6	2.52	0.45
25:DA:921:G:C6	25:DA:922:U:C4	3.05	0.45
25:DA:1266:G:O5'	42:DW:15:ARG:NH2	2.50	0.45
25:DA:1637:A:H4'	25:DA:2711:A:O2'	2.17	0.45
25:DA:1790:C:H2'	25:DA:1791:A:C5	2.52	0.45
25:DA:1796:U:H2'	25:DA:1797:C:H6	1.81	0.45
25:DA:1903:G:OP1	27:DD:241:PRO:HB2	2.17	0.45
25:DA:2335:A:C8	25:DA:2337:G:C5	3.05	0.45
25:DA:2408:U:H2'	25:DA:2409:G:C8	2.52	0.45
25:DA:2698:U:H2'	25:DA:2699:C:C6	2.52	0.45
30:DG:151:ALA:O	30:DG:153:ARG:HD3	2.16	0.45
43:DX:40:LYS:HG3	43:DX:51:VAL:HB	1.99	0.45
1:AA:66:G:N2	1:AA:172:A:N3	2.65	0.45
1:AA:309:G:H1'	1:AA:608:A:C2	2.51	0.45
1:AA:384:G:C2	1:AA:385:C:C4	3.05	0.45
1:AA:486:U:H2'	1:AA:487:A:C8	2.52	0.45
1:AA:674:G:O2'	1:AA:675:A:H5'	2.17	0.45
1:AA:1127:G:H21	1:AA:1148:U:H3	1.64	0.45
1:AA:1203:C:H2'	1:AA:1204:A:C8	2.52	0.45
2:AB:196:LEU:HD12	2:AB:196:LEU:HA	1.78	0.45
7:AG:46:ALA:O	7:AG:50:ILE:HG23	2.17	0.45
7:AG:50:ILE:CD1	7:AG:58:PRO:HA	2.41	0.45
8:AH:121:ASP:N	8:AH:121:ASP:OD1	2.49	0.45
25:BA:154:G:C6	25:BA:155:C:N4	2.85	0.45
25:BA:335:A:C6	25:BA:352:U:C4	3.05	0.45
25:BA:804:U:H2'	25:BA:805:C:O4'	2.17	0.45
25:BA:927:G:OP2	25:BA:927:G:H8	2.01	0.45
25:BA:1828:C:H4'	27:BD:257:LEU:O	2.17	0.45
25:BA:1971:G:C6	25:BA:1972:G:C6	3.05	0.45
25:BA:2328:C:H1'	30:BG:128:ARG:HH21	1.81	0.45
25:BA:2444:A:C8	47:B1:33:LYS:HD2	2.52	0.45
25:BA:2695:C:OP1	39:BT:53:ARG:NH2	2.50	0.45
27:BD:146:GLU:HB2	27:BD:189:CYS:HB3	1.98	0.45
28:BE:55:ASN:HB3	28:BE:58:ARG:HG3	1.97	0.45
48:B2:1:MET:HE2	48:B2:6:VAL:HG22	1.99	0.45
50:B4:57:GLU:HB3	50:B4:58:ARG:CA	2.44	0.45
1:CA:649:G:H2'	1:CA:650:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1007:C:H2'	1:CA:1007:C:O2	2.16	0.45
1:CA:1216:G:OP1	14:CN:2:ALA:HA	2.17	0.45
2:CB:37:ASN:O	2:CB:39:ILE:HG12	2.17	0.45
3:CC:179:ARG:HD2	3:CC:206:GLU:HB2	1.98	0.45
10:CJ:11:PHE:CD1	10:CJ:67:THR:HG22	2.52	0.45
10:CJ:55:LYS:HE3	10:CJ:56:HIS:NE2	2.32	0.45
13:CM:57:ARG:NH1	50:D4:17:GLY:HA3	2.32	0.45
17:CQ:76:LEU:HD11	17:CQ:78:GLU:O	2.16	0.45
25:DA:271(S):G:C6	25:DA:271(T):C:C4	3.05	0.45
25:DA:335:C:H4'	44:DY:73:ARG:CD	2.47	0.45
25:DA:572:A:OP2	41:DV:78:LYS:NZ	2.50	0.45
25:DA:2315:G:H2'	25:DA:2316:C:C6	2.52	0.45
25:DA:2461:C:H2'	25:DA:2462:U:H6	1.82	0.45
27:DD:99:ASP:HB3	27:DD:101:GLU:H	1.82	0.45
28:DE:119:ARG:HD2	28:DE:120:TRP:NE1	2.32	0.45
28:DE:144:ARG:HB3	28:DE:145:LYS:H	1.52	0.45
29:DF:160:ASN:HB3	29:DF:163:VAL:HB	1.98	0.45
38:DS:85:VAL:O	38:DS:112:PHE:HB3	2.16	0.45
1:AA:146:G:C6	1:AA:147:G:N7	2.84	0.44
1:AA:542:G:OP1	4:AD:10:ARG:NH1	2.49	0.44
6:AF:44:GLY:HA2	6:AF:59:TYR:CE2	2.52	0.44
9:AI:3:GLN:CG	9:AI:20:ARG:HE	2.28	0.44
13:AM:121:LYS:HE3	13:AM:121:LYS:H	1.82	0.44
23:AX:12:G:H4'	25:BA:1930:C:O2	2.17	0.44
25:BA:834:U:H5"	25:BA:835:A:H5'	1.98	0.44
25:BA:1217:G:C5	25:BA:1218:G:C8	3.05	0.44
25:BA:1314:A:H2'	25:BA:1315:A:O4'	2.17	0.44
25:BA:1557:A:H2'	25:BA:1558:G:C8	2.52	0.44
25:BA:2087:C:H2'	25:BA:2088:C:C6	2.52	0.44
37:BR:98:LEU:HB2	37:BR:113:LEU:HD11	1.98	0.44
38:BS:67:ARG:HG2	38:BS:71:ARG:NH1	2.32	0.44
38:BS:67:ARG:HG2	38:BS:71:ARG:CZ	2.47	0.44
40:BU:34:LYS:NZ	40:BU:37:GLU:OE2	2.41	0.44
40:BU:98:LEU:HD23	40:BU:98:LEU:HA	1.75	0.44
1:CA:401:C:H1'	1:CA:622:A:H1'	1.98	0.44
1:CA:599:C:H5"	8:CH:95:VAL:O	2.17	0.44
1:CA:977:A:H2'	1:CA:978:A:H5"	1.98	0.44
1:CA:1026:G:N7	1:CA:1036:G:N2	2.66	0.44
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.82	0.44
1:CA:1149:C:O2'	1:CA:1280:A:N1	2.44	0.44
3:CC:68:VAL:HG12	3:CC:70:VAL:HG12	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:90:GLY:HA2	4:CD:204:ILE:HD11	1.97	0.44
10:CJ:81:THR:HA	10:CJ:84:GLN:HB2	1.99	0.44
16:CP:6:LEU:HD23	16:CP:17:TYR:CD1	2.50	0.44
16:CP:42:ARG:CB	16:CP:44:THR:HG23	2.48	0.44
25:DA:484:C:H2'	25:DA:485:C:H6	1.82	0.44
25:DA:668:G:H5"	25:DA:668:G:H8	1.82	0.44
25:DA:852:G:N2	25:DA:926:A:H1'	2.32	0.44
25:DA:1187:G:H5"	41:DV:81:TYR:CE1	2.51	0.44
25:DA:1710:C:H5'	25:DA:2859:G:H1'	1.99	0.44
25:DA:1847:A:H4'	25:DA:1848:A:OP2	2.15	0.44
25:DA:2293:C:H6	25:DA:2293:C:H5"	1.82	0.44
25:DA:2508:G:C2	25:DA:2582:G:C6	3.05	0.44
25:DA:2740:A:C6	25:DA:2764:A:C8	3.06	0.44
26:DB:66:A:N6	26:DB:109:C:H5'	2.28	0.44
26:DB:119:G:C6	26:DB:120:A:C6	3.05	0.44
28:DE:96:PHE:HA	28:DE:100:GLU:OE1	2.17	0.44
30:DG:96:ARG:O	30:DG:99:MET:HB3	2.17	0.44
34:DO:119:PRO:HB2	39:DT:68:TYR:CE2	2.52	0.44
37:DR:65:LEU:HD12	37:DR:65:LEU:HA	1.81	0.44
38:DS:27:SER:HA	38:DS:88:ASP:HB3	1.99	0.44
44:DY:35:TYR:CE2	44:DY:69:ALA:HB3	2.52	0.44
55:D9:17:ILE:HG21	55:D9:26:ILE:HD11	1.99	0.44
1:AA:1066:C:O2'	1:AA:1067:A:H5'	2.16	0.44
1:AA:1216:G:P	14:AN:2:ALA:HA	2.57	0.44
2:AB:30:ARG:HH21	2:AB:194:PRO:HB2	1.82	0.44
8:AH:51:VAL:HG11	8:AH:60:ARG:NH1	2.28	0.44
13:AM:40:ASN:O	13:AM:43:THR:OG1	2.30	0.44
19:AS:31:ILE:HB	19:AS:49:ILE:HG12	1.99	0.44
25:BA:401:A:C2	25:BA:428:A:C4	3.06	0.44
25:BA:1073:A:C6	25:BA:1172:A:C4	3.06	0.44
25:BA:1095:C:C4	25:BA:1096:A:N7	2.85	0.44
25:BA:1334:U:C4	25:BA:1373:C:H1'	2.52	0.44
26:BB:4:C:H42	26:BB:117:G:H1	1.65	0.44
28:BE:175:VAL:HG22	28:BE:177:PRO:HD3	1.99	0.44
32:BI:14:ASP:OD1	32:BI:15:VAL:N	2.51	0.44
35:BP:50:ARG:HG2	54:B8:61:LEU:HD11	1.99	0.44
1:CA:321:A:C2	1:CA:333:G:C2	3.06	0.44
1:CA:422:C:H4'	1:CA:423:G:C4	2.51	0.44
1:CA:1126:U:H4'	1:CA:1281:U:H1'	1.98	0.44
1:CA:1206:G:C6	1:CA:1207:G:C5	3.05	0.44
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:208:ILE:HA	2:CB:211:ILE:HD12	2.00	0.44
4:CD:134:ASP:O	4:CD:136:PRO:HD3	2.18	0.44
5:CE:27:ARG:HE	5:CE:27:ARG:HB2	1.62	0.44
7:CG:70:LYS:HG2	7:CG:96:GLN:O	2.18	0.44
13:CM:25:ILE:HD11	13:CM:66:LEU:HD13	1.98	0.44
14:CN:24:CYS:SG	14:CN:39:LEU:HA	2.58	0.44
18:CR:58:LEU:HD12	18:CR:62:GLU:HG3	1.99	0.44
25:DA:52:A:C5	25:DA:118:A:C2	3.05	0.44
25:DA:94(A):G:H2'	25:DA:95:G:O4'	2.16	0.44
25:DA:797:C:H2'	25:DA:798:G:C8	2.53	0.44
25:DA:1506:C:H2'	25:DA:1507:A:H5'	1.99	0.44
25:DA:1681:G:H8	25:DA:1681:G:O5'	2.01	0.44
25:DA:1802:A:N1	25:DA:1822:G:H1'	2.33	0.44
26:DB:33:G:O2'	26:DB:34:U:H5'	2.17	0.44
45:DZ:125:LEU:HB3	45:DZ:165:VAL:CG1	2.47	0.44
1:AA:373:A:C2	1:AA:374:A:C8	3.06	0.44
1:AA:435:C:H2'	1:AA:436:C:H6	1.83	0.44
1:AA:1123:A:O2'	10:AJ:37:PRO:O	2.36	0.44
1:AA:1124:G:P	10:AJ:36:GLY:H	2.40	0.44
1:AA:1291:G:H2'	1:AA:1292:U:C6	2.52	0.44
2:AB:71:VAL:HG12	2:AB:170:GLU:HG2	2.00	0.44
4:AD:101:LEU:HD23	4:AD:121:VAL:HG11	1.98	0.44
9:AI:49:PRO:HG2	9:AI:81:ILE:HG23	1.99	0.44
15:AO:25:THR:HG21	15:AO:70:LEU:HB2	2.00	0.44
23:AX:57:A:O4'	30:BG:78:SER:OG	2.31	0.44
25:BA:254:A:C8	25:BA:255:G:H1'	2.51	0.44
25:BA:917:A:C2	25:BA:954:C:C2	3.05	0.44
25:BA:1014:U:OP1	49:B3:17:LYS:N	2.50	0.44
25:BA:1904:C:H2'	25:BA:1905:G:O4'	2.18	0.44
25:BA:2856:G:H2'	25:BA:2857:U:O4'	2.17	0.44
29:BF:195:ASP:HB3	29:BF:198:ALA:H	1.82	0.44
36:BQ:109:VAL:HG22	36:BQ:113:GLN:OE1	2.17	0.44
41:BV:20:LEU:HD12	41:BV:20:LEU:HA	1.75	0.44
46:B0:27:GLU:HB2	46:B0:69:PHE:HD1	1.82	0.44
1:CA:35:G:H2'	1:CA:36:C:C6	2.53	0.44
1:CA:932:C:H2'	1:CA:933:G:C8	2.52	0.44
1:CA:1144:G:N2	1:CA:1146:A:H62	2.16	0.44
2:CB:77:ALA:HA	2:CB:80:ILE:HG22	1.99	0.44
2:CB:178:ARG:NH2	8:CH:68:ARG:HH12	2.06	0.44
3:CC:79:ARG:O	3:CC:82:GLU:HB2	2.17	0.44
4:CD:88:VAL:HG22	5:CE:96:PRO:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:48:LYS:N	15:CO:48:LYS:HD2	2.32	0.44
24:CW:1:2QZ:CG2	24:CW:10:2QY:H83	2.48	0.44
25:DA:828:U:H4'	25:DA:831:G:N1	2.31	0.44
25:DA:900:A:C2'	25:DA:901:A:H8	2.30	0.44
25:DA:910:A:C6	25:DA:911:A:C6	3.05	0.44
25:DA:997:G:H2'	25:DA:998:C:H6	1.83	0.44
25:DA:1266:G:O2'	25:DA:2012:G:O6	2.21	0.44
25:DA:1475:G:C2	25:DA:1517:G:C2	3.05	0.44
25:DA:1654:A:OP1	37:DR:1:MET:HA	2.18	0.44
25:DA:2022:U:O2'	25:DA:2617:C:H5'	2.17	0.44
26:DB:46:A:H2'	26:DB:47:C:H6	1.83	0.44
30:DG:15:VAL:HG13	30:DG:175:LEU:HD23	1.99	0.44
45:DZ:63:ASP:OD1	45:DZ:65:GLN:HG3	2.17	0.44
1:AA:64:G:H4'	1:AA:65:U:H3'	1.98	0.44
1:AA:257:G:N2	1:AA:269:C:O2	2.20	0.44
1:AA:457:C:H2'	1:AA:458:C:H6	1.82	0.44
1:AA:784:C:H4'	25:BA:1868:C:OP1	2.18	0.44
1:AA:1129:C:H1'	1:AA:1130:A:N7	2.33	0.44
4:AD:138:TYR:CE1	4:AD:140:VAL:HA	2.52	0.44
6:AF:62:TRP:CD1	18:AR:35:ARG:HD2	2.53	0.44
9:AI:53:VAL:HG11	9:AI:92:TYR:CE1	2.53	0.44
25:BA:412:C:O2	35:BP:71:VAL:HG21	2.17	0.44
25:BA:1993:A:OP2	27:BD:242:ARG:NH2	2.51	0.44
27:BD:33:LEU:HD23	27:BD:33:LEU:HA	1.75	0.44
28:BE:127:ASP:OD2	61:BE:410:HOH:O	2.21	0.44
32:BI:68:LEU:HD11	32:BI:109:ILE:HD11	2.00	0.44
37:BR:8:ARG:NH1	37:BR:39:PRO:HB3	2.32	0.44
43:BX:72:LYS:HG2	43:BX:73:ARG:O	2.18	0.44
45:BZ:150:LEU:HD12	45:BZ:150:LEU:HA	1.59	0.44
1:CA:38:G:N2	1:CA:397:A:H5"	2.31	0.44
1:CA:110:C:O2'	16:CP:25:ARG:O	2.33	0.44
1:CA:671:G:H5'	6:CF:77:ARG:NH2	2.27	0.44
1:CA:805:C:C2'	1:CA:806:C:H5'	2.48	0.44
1:CA:974:A:OP2	14:CN:41:ARG:NH1	2.50	0.44
1:CA:1028:C:N3	1:CA:1033:G:O6	2.50	0.44
1:CA:1030(C):G:H2'	1:CA:1030(D):A:C8	2.53	0.44
1:CA:1179:A:C6	1:CA:1180:A:N7	2.85	0.44
2:CB:126:GLU:H	2:CB:126:GLU:HG3	1.63	0.44
3:CC:19:GLU:HB3	3:CC:40:ARG:NH2	2.33	0.44
6:CF:7:ASN:ND2	18:CR:34:TYR:OH	2.46	0.44
8:CH:116:LYS:O	8:CH:119:LEU:HD21	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:20:THR:HG21	13:CM:27:LYS:HE2	1.99	0.44
19:CS:15:LEU:HD11	19:CS:33:THR:HB	1.99	0.44
25:DA:854:G:C2	25:DA:855:G:C5	3.06	0.44
25:DA:1493:C:N4	25:DA:2206:G:O2'	2.47	0.44
25:DA:2653:U:O2'	31:DH:110:SER:HB3	2.17	0.44
25:DA:2780:G:OP2	33:DN:118:LYS:HD3	2.18	0.44
25:DA:2819:G:H2'	25:DA:2821:A:N7	2.32	0.44
27:DD:61:LEU:HD12	27:DD:61:LEU:HA	1.57	0.44
29:DF:40:GLN:NE2	29:DF:182:ASN:HB2	2.32	0.44
29:DF:49:ALA:O	29:DF:92:PRO:HB2	2.17	0.44
31:DH:90:LYS:HD2	31:DH:163:TYR:CD1	2.52	0.44
31:DH:95:ARG:HB2	31:DH:128:PRO:HB2	1.99	0.44
31:DH:117:PRO:HG3	31:DH:123:PHE:CD2	2.52	0.44
32:DI:79:ILE:HA	32:DI:80:PRO:HD2	1.73	0.44
46:D0:82:ARG:HA	46:D0:83:PRO:HD3	1.73	0.44
1:AA:159:G:O2'	1:AA:161:A:N7	2.47	0.44
1:AA:184:G:H2'	1:AA:185:A:H8	1.82	0.44
1:AA:1034:G:H5"	1:AA:1035:A:OP2	2.17	0.44
1:AA:1082:G:H2'	1:AA:1083:U:O4'	2.18	0.44
1:AA:1084:G:C5	1:AA:1085:U:C4	3.06	0.44
2:AB:59:GLU:O	2:AB:63:MET:HG2	2.18	0.44
2:AB:95:GLN:HG3	2:AB:147:LYS:O	2.17	0.44
4:AD:187:ARG:HG2	4:AD:188:LEU:H	1.82	0.44
5:AE:75:THR:HG23	5:AE:76:ILE:O	2.18	0.44
7:AG:16:LEU:HD11	9:AI:45:ALA:HB2	1.99	0.44
22:AV:15:A:O5'	22:AV:15:A:H8	2.00	0.44
25:BA:210:A:N1	25:BA:254:A:O2'	2.48	0.44
25:BA:982:U:H2'	25:BA:983:G:O4'	2.18	0.44
25:BA:1184:G:O2'	25:BA:1189:A:N1	2.45	0.44
25:BA:2635:G:H4'	25:BA:2835:C:O2	2.16	0.44
25:BA:2827:G:OP1	37:BR:99:LYS:HE2	2.17	0.44
26:BB:24:G:N3	26:BB:27:C:N4	2.58	0.44
32:BI:29:TYR:C	32:BI:32:PRO:HD2	2.43	0.44
50:B4:61:ARG:HG3	50:B4:62:ARG:H	1.82	0.44
52:B6:11:LEU:HB3	52:B6:49:HIS:HB3	1.99	0.44
1:CA:35:G:O2'	12:CL:118:SER:O	2.36	0.44
1:CA:276:G:C2'	1:CA:277:C:H5'	2.48	0.44
1:CA:679:C:O2'	1:CA:680:C:H5'	2.18	0.44
1:CA:937:A:H1'	1:CA:1379:G:H22	1.83	0.44
1:CA:1007:C:C2	1:CA:1022:G:N2	2.75	0.44
1:CA:1118:C:H2'	1:CA:1119:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	2.00	0.44
9:CI:53:VAL:HG21	9:CI:92:TYR:OH	2.18	0.44
13:CM:13:LYS:HA	13:CM:44:ARG:HH11	1.81	0.44
13:CM:97:PRO:HB3	13:CM:101:GLN:OE1	2.17	0.44
19:CS:50:ALA:HA	19:CS:58:VAL:O	2.17	0.44
25:DA:719:C:H2'	25:DA:720:C:H6	1.82	0.44
25:DA:1359:A:N6	25:DA:1372:U:N3	2.61	0.44
25:DA:1574:C:H2'	25:DA:1575:C:H6	1.83	0.44
25:DA:2197:U:O3'	25:DA:2198:A:H8	2.01	0.44
25:DA:2261:C:C5	46:D0:16:SER:HB3	2.53	0.44
30:DG:111:LEU:HB2	30:DG:112:PRO:HD3	1.99	0.44
32:DI:80:PRO:HA	32:DI:145:VAL:HG23	1.99	0.44
41:DV:35:LEU:HB2	41:DV:57:VAL:CG2	2.46	0.44
42:DW:8:ARG:HA	42:DW:102:HIS:ND1	2.31	0.44
50:D4:64:GLY:C	50:D4:66:SER:N	2.70	0.44
1:AA:184:G:O4'	1:AA:224:C:H4'	2.18	0.44
1:AA:581:G:N2	1:AA:582:U:C4	2.85	0.44
1:AA:715:A:H2'	1:AA:716:A:C8	2.52	0.44
1:AA:1399:C:C2	1:AA:1401:G:C5	3.06	0.44
2:AB:69:LEU:HD13	2:AB:91:PRO:HB2	2.00	0.44
4:AD:174:LEU:HA	4:AD:184:LYS:O	2.18	0.44
10:AJ:57:LYS:HD2	10:AJ:60:ARG:HH21	1.81	0.44
27:BD:2:ALA:N	27:BD:20:ASP:OD2	2.50	0.44
31:BH:117:PRO:HG3	31:BH:123:PHE:CD2	2.52	0.44
35:BP:59:LEU:HG	54:B8:58:ILE:HD13	2.00	0.44
52:B6:40:CYS:HA	52:B6:41:PRO:HD3	1.80	0.44
1:CA:292:G:N7	1:CA:293:G:H1'	2.32	0.44
1:CA:564:C:H5'	17:CQ:32:TYR:CE1	2.52	0.44
1:CA:939:G:H2'	1:CA:940:C:C6	2.53	0.44
1:CA:1431:C:H2'	1:CA:1432:G:O4'	2.18	0.44
8:CH:82:HIS:NE2	8:CH:84:ARG:HG2	2.32	0.44
9:CI:24:GLY:HA2	9:CI:59:PHE:O	2.18	0.44
15:CO:54:ARG:O	15:CO:58:MET:HG3	2.17	0.44
25:DA:78:A:H2'	25:DA:79:G:C8	2.53	0.44
25:DA:154:G:C6	25:DA:173:G:C6	3.05	0.44
25:DA:542:C:C2	25:DA:552:G:N2	2.86	0.44
25:DA:652(D):C:H2'	25:DA:652(E):G:O4'	2.17	0.44
25:DA:652(E):G:OP2	25:DA:652(E):G:H8	2.00	0.44
25:DA:1169:G:H1	25:DA:1180:C:H42	1.65	0.44
25:DA:1365:A:O4'	47:D1:41:ARG:NH2	2.51	0.44
25:DA:1392:A:C6	25:DA:1393:A:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2262:U:OP2	46:D0:19:LYS:HD3	2.16	0.44
25:DA:2319:G:H4'	25:DA:2320:A:OP1	2.17	0.44
26:DB:62:C:H2'	26:DB:63:G:C8	2.53	0.44
27:DD:85:ASP:OD2	27:DD:88:ARG:HD2	2.18	0.44
34:DO:7:TYR:CE1	34:DO:44:LYS:HG3	2.53	0.44
38:DS:26:LEU:HD22	38:DS:87:PHE:CE1	2.52	0.44
38:DS:36:TYR:OH	38:DS:54:LEU:HD22	2.17	0.44
38:DS:67:ARG:O	38:DS:71:ARG:HG2	2.17	0.44
46:D0:34:GLY:N	46:D0:61:ALA:O	2.46	0.44
1:AA:1173:G:H2'	1:AA:1174:G:H8	1.83	0.44
1:AA:1285:A:O5'	1:AA:1285:A:H8	2.01	0.44
2:AB:51:LEU:O	2:AB:55:PHE:HD2	2.01	0.44
3:AC:175:LEU:HD21	3:AC:201:TYR:HE2	1.82	0.44
6:AF:10:LEU:HD23	6:AF:61:LEU:HD13	2.00	0.44
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.82	0.44
25:BA:171:A:H2'	25:BA:172:C:O4'	2.18	0.44
25:BA:555:G:C5	25:BA:2044:U:H5"	2.52	0.44
25:BA:1359:U:H2'	25:BA:1656:A:N1	2.33	0.44
25:BA:1588:G:H5"	25:BA:1589:A:OP2	2.17	0.44
25:BA:1702:A:H3'	25:BA:1703:C:H6	1.82	0.44
25:BA:2623:U:C4	51:B5:3:LYS:HG2	2.53	0.44
28:BE:78:LEU:O	28:BE:79:ARG:HG2	2.18	0.44
28:BE:188:VAL:HA	28:BE:189:PRO:HD3	1.80	0.44
29:BF:9:ILE:HA	29:BF:10:PRO:HD2	1.76	0.44
33:BN:67:LEU:HD12	33:BN:67:LEU:HA	1.71	0.44
43:BX:24:GLY:O	43:BX:83:VAL:HG22	2.18	0.44
50:B4:14:ILE:HG12	50:B4:31:ILE:HB	2.00	0.44
1:CA:399:G:H2'	1:CA:400:C:C6	2.53	0.44
1:CA:453:A:H4'	16:CP:72:ARG:HG3	2.00	0.44
1:CA:502:G:OP2	12:CL:116:SER:HA	2.17	0.44
1:CA:1349:A:H2'	1:CA:1350:A:H8	1.82	0.44
2:CB:76:GLN:NE2	2:CB:206:ASP:O	2.50	0.44
3:CC:33:LEU:HD21	14:CN:53:LEU:CD2	2.47	0.44
5:CE:152:ARG:HG3	8:CH:43:GLY:O	2.17	0.44
6:CF:89:MET:HG2	6:CF:91:VAL:HG23	2.00	0.44
8:CH:36:LEU:HD23	8:CH:36:LEU:HA	1.80	0.44
20:CT:60:GLU:HG3	20:CT:81:LYS:HD2	2.00	0.44
25:DA:71:A:N7	43:DX:31:HIS:CE1	2.86	0.44
25:DA:344:G:N2	25:DA:345:A:H62	2.15	0.44
25:DA:395:U:H1'	25:DA:396:G:N7	2.32	0.44
25:DA:447:A:H4'	25:DA:449:A:C8	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:595:C:H2'	25:DA:596:G:O4'	2.17	0.44
25:DA:954:G:C5	25:DA:955:C:C5	3.05	0.44
25:DA:1514:U:O2'	25:DA:1515:G:H5'	2.18	0.44
25:DA:1788:C:C2	25:DA:1789:A:C8	3.05	0.44
25:DA:2080:G:O2'	25:DA:2081:C:H5'	2.18	0.44
25:DA:2536:G:C5	25:DA:2537:U:C5	3.05	0.44
25:DA:2817:G:C5	25:DA:2830:G:C2	3.05	0.44
28:DE:101:ARG:HD2	28:DE:169:ASN:OD1	2.18	0.44
38:DS:15:ARG:HB3	38:DS:19:LYS:NZ	2.32	0.44
38:DS:34:HIS:ND1	38:DS:53:SER:OG	2.36	0.44
40:DU:76:TYR:CZ	40:DU:80:ILE:HG13	2.53	0.44
1:AA:59:A:H5"	1:AA:60:A:H5"	2.00	0.44
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.52	0.44
1:AA:1220:G:O3'	19:AS:36:ARG:HD3	2.18	0.44
1:AA:1375:A:H4'	7:AG:29:LYS:HD3	2.00	0.44
10:AJ:84:GLN:O	10:AJ:84:GLN:HG2	2.18	0.44
12:AL:88:GLY:O	12:AL:99:HIS:HD2	2.01	0.44
15:AO:67:LEU:HD23	15:AO:67:LEU:HA	1.74	0.44
25:BA:248:G:HO2'	25:BA:646:A:HO2'	1.54	0.44
25:BA:1722:C:H2'	25:BA:1723:A:O4'	2.18	0.44
25:BA:1766:G:H8	25:BA:1770:A:H62	1.66	0.44
25:BA:2369:U:OP1	46:B0:20:ARG:NH1	2.51	0.44
29:BF:53:THR:HB	29:BF:56:GLU:OE2	2.18	0.44
30:BG:16:ARG:HE	30:BG:31:VAL:HG21	1.82	0.44
31:BH:84:SER:HA	31:BH:133:VAL:O	2.18	0.44
44:BY:55:TYR:N	44:BY:55:TYR:CD2	2.85	0.44
45:BZ:146:ILE:HA	45:BZ:147:GLY:HA2	1.67	0.44
47:B1:77:ALA:HA	47:B1:80:LEU:HD13	1.99	0.44
54:B8:30:ARG:HA	54:B8:30:ARG:HD3	1.45	0.44
1:CA:189:G:H2'	1:CA:189(A):C:C6	2.53	0.44
1:CA:472:A:H2'	1:CA:473:G:O4'	2.18	0.44
1:CA:738:C:H2'	1:CA:739:C:H6	1.83	0.44
1:CA:1151:A:H5'	10:CJ:41:PRO:HA	1.97	0.44
1:CA:1154:G:H8	1:CA:1154:G:H2'	1.36	0.44
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	2.00	0.44
2:CB:100:GLY:HA2	2:CB:103:THR:OG1	2.18	0.44
4:CD:110:PHE:N	4:CD:110:PHE:HD1	2.16	0.44
12:CL:24:VAL:HG13	12:CL:98:TYR:CE1	2.46	0.44
19:CS:15:LEU:HD12	19:CS:18:LYS:HD2	1.99	0.44
24:CW:1:2QZ:CB	24:CW:10:2QY:H83	2.47	0.44
25:DA:519:U:H2'	25:DA:520:G:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:616:G:H5'	29:DF:205:ARG:HD2	2.00	0.44
25:DA:623:G:C2	25:DA:624:C:C2	3.06	0.44
25:DA:1656:C:H2'	25:DA:1657:C:C6	2.53	0.44
25:DA:2078:C:H2'	25:DA:2079:U:O4'	2.17	0.44
25:DA:2261:C:H1'	25:DA:2388:A:N3	2.33	0.44
25:DA:2298:A:N6	25:DA:2321:G:H1	2.15	0.44
26:DB:5:C:OP1	26:DB:61:G:O2'	2.29	0.44
37:DR:33:ARG:NH1	37:DR:115:GLU:OE2	2.49	0.44
40:DU:113:ALA:O	40:DU:117:GLN:HG2	2.18	0.44
1:AA:437:U:O3'	4:AD:125:HIS:CE1	2.71	0.44
1:AA:565:U:OP2	1:AA:566:G:O2'	2.31	0.44
1:AA:592:G:C2	1:AA:648:A:C2	3.06	0.44
1:AA:658:G:C2	1:AA:749:C:N3	2.86	0.44
1:AA:660:G:H2'	1:AA:661:G:H8	1.81	0.44
2:AB:35:GLU:HB2	2:AB:40:HIS:HA	2.00	0.44
2:AB:133:LYS:O	2:AB:137:ARG:HG3	2.18	0.44
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.17	0.44
4:AD:164:ALA:O	4:AD:168:ARG:NH1	2.48	0.44
8:AH:53:VAL:HG12	8:AH:54:ASP:OD1	2.17	0.44
20:AT:57:ARG:HH22	20:AT:100:ILE:HD12	1.83	0.44
25:BA:956:A:C5	36:BQ:13:GLN:HG3	2.53	0.44
25:BA:2303:U:O2'	25:BA:2386:C:O2	2.30	0.44
25:BA:2734:A:O2'	25:BA:2884:C:H5'	2.17	0.44
26:BB:1:U:O2'	26:BB:2:C:O5'	2.34	0.44
27:BD:77:ALA:HB2	27:BD:97:TYR:CG	2.52	0.44
30:BG:43:LEU:HB3	30:BG:44:GLY:H	1.53	0.44
41:BV:98:GLU:CD	41:BV:100:ARG:HH11	2.25	0.44
45:BZ:126:VAL:CG1	45:BZ:161:VAL:HG23	2.47	0.44
1:CA:1049:U:C5	1:CA:1201:A:H5'	2.52	0.44
1:CA:1168:A:H3'	1:CA:1168:A:N3	2.33	0.44
1:CA:1227:A:H8	1:CA:1227:A:H3'	1.83	0.44
1:CA:1342:C:H1'	9:CI:124:GLN:NE2	2.32	0.44
1:CA:1380:U:C4	7:CG:3:ARG:HG2	2.52	0.44
11:CK:20:TYR:CE1	11:CK:83:ILE:HD12	2.52	0.44
19:CS:30:LEU:CD1	19:CS:32:LYS:HG3	2.40	0.44
23:CX:8:U:O5'	23:CX:8:U:H6	2.01	0.44
25:DA:330:A:H2	25:DA:1210:A:H2'	1.82	0.44
25:DA:478:A:N1	25:DA:500:G:H4'	2.33	0.44
25:DA:1131:G:O6	25:DA:2040:C:H1'	2.18	0.44
25:DA:1857:G:C6	25:DA:1858:G:N1	2.86	0.44
25:DA:2342:C:O2'	25:DA:2374:C:OP1	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2387:U:H1'	46:D0:41:ARG:NE	2.32	0.44
25:DA:2750:A:H4'	25:DA:2751:G:OP2	2.13	0.44
27:DD:158:ALA:O	27:DD:161:THR:OG1	2.35	0.44
31:DH:5:GLY:HA3	31:DH:65:HIS:CG	2.52	0.44
34:DO:80:ASP:OD1	39:DT:64:ARG:NH2	2.49	0.44
38:DS:57:LYS:HB2	38:DS:57:LYS:HE2	1.61	0.44
47:D1:7:ILE:HG23	47:D1:98:LEU:HD11	1.99	0.44
48:D2:22:GLU:OE2	48:D2:68:ARG:NH2	2.51	0.44
1:AA:181:G:N1	1:AA:195:A:C8	2.85	0.43
1:AA:630:G:O2'	1:AA:631:G:H5'	2.19	0.43
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.17	0.43
9:AI:15:ALA:HB2	9:AI:65:VAL:HG23	2.00	0.43
13:AM:3:ARG:HG2	13:AM:8:GLU:HA	2.00	0.43
17:AQ:60:ILE:HG12	17:AQ:61:GLU:N	2.33	0.43
17:AQ:92:ARG:O	17:AQ:95:TYR:HB2	2.18	0.43
18:AR:59:SER:H	18:AR:62:GLU:CG	2.31	0.43
25:BA:26:G:C6	25:BA:27:G:C6	3.06	0.43
25:BA:31:C:C4	25:BA:32:C:C5	3.06	0.43
25:BA:233:A:C2	25:BA:244:A:C4	3.06	0.43
25:BA:671:A:H2'	25:BA:672:G:O4'	2.18	0.43
25:BA:927:G:H2'	25:BA:928:G:H5'	2.00	0.43
25:BA:1885:A:N1	25:BA:2109:G:O2'	2.44	0.43
25:BA:2023:A:H2'	25:BA:2024:G:C8	2.52	0.43
25:BA:2092:G:H2'	25:BA:2093:A:O4'	2.17	0.43
25:BA:2710:U:H2'	25:BA:2711:C:C6	2.53	0.43
27:BD:175:LEU:HD12	27:BD:185:VAL:HG21	2.00	0.43
28:BE:110:GLY:HA2	28:BE:161:GLY:HA3	2.00	0.43
29:BF:125:LEU:HD12	29:BF:194:MET:HB2	2.00	0.43
40:BU:75:ASN:OD1	40:BU:78:THR:OG1	2.19	0.43
44:BY:86:ARG:NH1	44:BY:100:ALA:HB1	2.31	0.43
50:B4:46:GLN:O	50:B4:47:GLN:C	2.61	0.43
1:CA:67:C:O2'	1:CA:171:A:H1'	2.18	0.43
1:CA:69:G:H2'	1:CA:70:G:H8	1.82	0.43
1:CA:957:U:O2'	1:CA:959:A:N7	2.45	0.43
1:CA:1003:G:H22	1:CA:1035:A:H61	1.66	0.43
1:CA:1178:G:H2'	1:CA:1180:A:OP2	2.17	0.43
1:CA:1203:C:H2'	1:CA:1204:A:C8	2.53	0.43
1:CA:1425:U:H2'	1:CA:1426:C:C6	2.53	0.43
2:CB:162:ILE:O	2:CB:162:ILE:HG13	2.17	0.43
2:CB:213:LEU:HD22	2:CB:214:ILE:HD13	1.99	0.43
3:CC:112:SER:HB3	3:CC:115:LEU:HD23	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:29:ARG:HH11	13:CM:64:TRP:HB3	1.83	0.43
16:CP:72:ARG:NH2	16:CP:73:LEU:HD21	2.33	0.43
25:DA:321:G:H4'	29:DF:165:ARG:O	2.18	0.43
25:DA:333:G:H2'	25:DA:333:G:N3	2.33	0.43
25:DA:775:G:C4	25:DA:794:G:C8	3.06	0.43
25:DA:876:C:H2'	25:DA:877:U:O4'	2.17	0.43
25:DA:1160:G:C6	25:DA:1161:C:C4	3.06	0.43
25:DA:1297:C:OP1	25:DA:2710:C:H4'	2.18	0.43
25:DA:1957:C:O2'	25:DA:1985:G:H1'	2.18	0.43
31:DH:86:GLU:OE2	31:DH:132:ARG:NH2	2.38	0.43
1:AA:454:C:OP1	16:AP:75:ARG:NH2	2.49	0.43
1:AA:472:A:H2'	1:AA:473:G:O4'	2.17	0.43
1:AA:1030:C:N4	1:AA:1030(A):G:N3	2.66	0.43
1:AA:1047:G:O3'	14:AN:4:LYS:HB2	2.17	0.43
1:AA:1277:C:H1'	1:AA:1282:C:C2	2.53	0.43
1:AA:1304:G:C6	1:AA:1305:G:N1	2.86	0.43
4:AD:177:ASP:OD2	4:AD:180:GLY:HA3	2.18	0.43
6:AF:30:LEU:O	6:AF:35:ALA:N	2.51	0.43
6:AF:38:GLU:OE1	6:AF:64:GLN:NE2	2.35	0.43
7:AG:78:ARG:NH2	7:AG:156:TRP:HB3	2.33	0.43
9:AI:18:PHE:HD2	9:AI:62:TYR:HD2	1.66	0.43
9:AI:29:ASN:ND2	9:AI:65:VAL:O	2.51	0.43
12:AL:71:PRO:O	12:AL:102:ARG:HD2	2.18	0.43
16:AP:6:LEU:HB3	16:AP:17:TYR:CD2	2.53	0.43
19:AS:41:VAL:HB	19:AS:44:MET:HG3	1.99	0.43
20:AT:92:LEU:HA	20:AT:92:LEU:HD23	1.72	0.43
23:AX:20:U:H5"	23:AX:21:A:OP2	2.17	0.43
25:BA:220:C:H2'	25:BA:221:G:O4'	2.18	0.43
25:BA:518:G:H2'	25:BA:519:G:O4'	2.18	0.43
26:BB:12:C:H2'	46:B0:73:GLY:HA3	1.99	0.43
27:BD:275:LYS:HB3	27:BD:276:LYS:H	1.40	0.43
28:BE:119:ARG:CG	28:BE:160:TYR:HB2	2.48	0.43
35:BP:31:ALA:C	35:BP:32:THR:HG23	2.43	0.43
37:BR:36:THR:O	37:BR:111:LEU:HD12	2.18	0.43
38:BS:32:LEU:HD23	38:BS:32:LEU:HA	1.81	0.43
40:BU:66:ASN:O	40:BU:70:ARG:HG3	2.17	0.43
41:BV:55:ALA:HB2	41:BV:101:GLY:HA2	1.99	0.43
45:BZ:39:VAL:HG21	45:BZ:44:PHE:HB2	1.99	0.43
1:CA:123:C:OP1	1:CA:312:C:H5'	2.18	0.43
1:CA:640:A:C2'	1:CA:641:U:H5'	2.48	0.43
1:CA:926:G:H22	22:CV:16:A:P	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1002:G:H2'	1:CA:1003:G:H8	1.83	0.43
1:CA:1072:G:C6	1:CA:1073:U:C4	3.07	0.43
1:CA:1157:A:N6	1:CA:1178:G:H21	2.15	0.43
1:CA:1243:C:H2'	1:CA:1244:C:C6	2.53	0.43
1:CA:1323:G:H4'	1:CA:1363:C:N3	2.32	0.43
1:CA:1427:U:H2'	1:CA:1428:A:H8	1.80	0.43
2:CB:24:TRP:CH2	2:CB:26:PRO:HA	2.53	0.43
5:CE:105:VAL:HG21	5:CE:128:PRO:HB3	2.00	0.43
9:CI:14:VAL:HG22	9:CI:66:ARG:O	2.18	0.43
25:DA:89:G:C3'	25:DA:90:U:H5"	2.44	0.43
25:DA:262:A:H2'	25:DA:263:C:O4'	2.19	0.43
25:DA:590:A:OP1	29:DF:95:ARG:NH1	2.51	0.43
25:DA:936:C:H2'	25:DA:937:U:C6	2.52	0.43
25:DA:1489:U:O2'	25:DA:1490:A:H5"	2.18	0.43
25:DA:2298:A:C8	25:DA:2299:G:C8	3.07	0.43
25:DA:2820:A:OP1	37:DR:2:ARG:NH2	2.51	0.43
25:DA:2849:U:H4'	25:DA:2868:A:C2	2.52	0.43
27:DD:77:ALA:HA	27:DD:97:TYR:HA	2.00	0.43
28:DE:166:THR:HG21	28:DE:199:ARG:HH22	1.83	0.43
30:DG:3:LEU:HD22	50:D4:25:TYR:CE2	2.53	0.43
43:DX:26:TYR:CE2	43:DX:89:ILE:HG13	2.53	0.43
44:DY:76:CYS:SG	44:DY:78:ALA:HB3	2.59	0.43
47:D1:76:ARG:HH11	47:D1:97:LEU:HD22	1.83	0.43
53:D7:22:MET:HA	53:D7:28:ARG:HG2	2.00	0.43
1:AA:195:A:H3'	1:AA:196:A:C8	2.52	0.43
1:AA:327:A:C4	1:AA:329:A:C8	3.06	0.43
1:AA:328:C:H4'	1:AA:329:A:H5'	2.00	0.43
1:AA:966:G:H21	9:AI:127:LYS:NZ	2.17	0.43
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.53	0.43
2:AB:127:ILE:CD1	2:AB:130:ARG:HD3	2.49	0.43
4:AD:107:ARG:NH2	4:AD:194:LEU:HD22	2.33	0.43
14:AN:13:THR:HA	14:AN:14:PRO:HD3	1.85	0.43
16:AP:57:ARG:NH2	16:AP:79:VAL:O	2.42	0.43
25:BA:905:U:O2	25:BA:2280:A:H2'	2.18	0.43
25:BA:1535:U:O2'	25:BA:1536:A:H8	2.01	0.43
25:BA:1894:G:H2'	25:BA:1895:U:C6	2.53	0.43
25:BA:2352:G:H2'	25:BA:2353:G:C8	2.53	0.43
25:BA:2453:C:OP2	25:BA:2598:C:O2'	2.35	0.43
30:BG:11:TYR:CE2	30:BG:16:ARG:HD3	2.53	0.43
30:BG:125:PHE:HB3	30:BG:166:ASP:OD1	2.19	0.43
35:BP:6:LEU:HA	35:BP:6:LEU:HD23	1.74	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BR:84:ALA:O	37:BR:85:PRO:C	2.61	0.43
40:BU:47:TYR:CD2	40:BU:47:TYR:C	2.96	0.43
48:B2:32:LEU:HD12	48:B2:36:ARG:NH1	2.33	0.43
1:CA:160:A:H2'	1:CA:161:A:H8	1.83	0.43
1:CA:509:A:C8	1:CA:509:A:C3'	3.01	0.43
1:CA:1137:C:H5"	1:CA:1138:G:OP1	2.18	0.43
1:CA:1169:A:H3'	1:CA:1169:A:C8	2.53	0.43
1:CA:1240:U:C2	7:CG:32:ARG:HD2	2.53	0.43
10:CJ:57:LYS:HD2	10:CJ:60:ARG:NH2	2.33	0.43
16:CP:72:ARG:HH21	16:CP:73:LEU:HD21	1.82	0.43
17:CQ:81:ARG:HA	17:CQ:81:ARG:HD2	1.76	0.43
23:CX:59:A:H2'	23:CX:60:U:H5'	2.00	0.43
25:DA:289:A:H2'	25:DA:290:G:O4'	2.19	0.43
25:DA:917:A:H5'	25:DA:918:A:OP2	2.17	0.43
25:DA:1916:A:H2'	25:DA:1917:U:O4'	2.18	0.43
25:DA:1996:C:H4'	25:DA:1997:G:OP1	2.18	0.43
25:DA:2031:A:C6	25:DA:2498:C:H1'	2.53	0.43
25:DA:2236:C:H2'	25:DA:2237:G:O4'	2.19	0.43
25:DA:2312:U:H5'	30:DG:88:ILE:HD11	2.01	0.43
25:DA:2852:G:H2'	25:DA:2853:C:C6	2.53	0.43
26:DB:3:C:H2'	26:DB:4:C:C6	2.53	0.43
30:DG:16:ARG:HA	30:DG:16:ARG:HD2	1.65	0.43
30:DG:73:ALA:HB3	30:DG:85:GLY:H	1.83	0.43
38:DS:19:LYS:HG2	38:DS:19:LYS:H	1.56	0.43
38:DS:94:TYR:CE1	38:DS:99:LYS:HG3	2.53	0.43
54:D8:3:LYS:HB2	54:D8:64:TYR:HH	1.83	0.43
1:AA:33:A:H2'	1:AA:34:C:H6	1.82	0.43
1:AA:413:G:N2	1:AA:428:G:H1'	2.34	0.43
1:AA:673:G:N2	1:AA:674:G:C2	2.86	0.43
1:AA:784:C:H2'	1:AA:785:G:O4'	2.18	0.43
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.17	0.43
1:AA:1394:A:C6	1:AA:1501:C:H4'	2.53	0.43
2:AB:71:VAL:HA	2:AB:93:VAL:HG23	2.01	0.43
4:AD:117:ALA:O	4:AD:121:VAL:HG23	2.18	0.43
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.53	0.43
20:AT:13:LEU:HD12	20:AT:14:LYS:N	2.33	0.43
25:BA:564:G:H2'	25:BA:565:C:C6	2.52	0.43
25:BA:711:C:H4'	25:BA:986:A:OP1	2.18	0.43
25:BA:814:U:O2'	25:BA:815:G:H5'	2.17	0.43
25:BA:977:G:OP2	49:B3:29:ARG:NH2	2.50	0.43
25:BA:1008:U:H2'	25:BA:1009:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2336:C:H5"	25:BA:2337:G:H5'	2.00	0.43
25:BA:2367:C:H1'	46:B0:39:ARG:HH21	1.82	0.43
36:BQ:2:LEU:HD23	36:BQ:69:PHE:CD2	2.53	0.43
36:BQ:35:VAL:HG13	36:BQ:130:LYS:HB3	1.99	0.43
40:BU:78:THR:HG22	40:BU:117:GLN:HE22	1.84	0.43
50:B4:16:CYS:SG	50:B4:17:GLY:N	2.90	0.43
54:B8:39:LYS:HA	54:B8:42:ARG:NH1	2.33	0.43
1:CA:642:A:C6	1:CA:643:C:C4	3.06	0.43
1:CA:646:U:H2'	1:CA:647:C:H6	1.77	0.43
1:CA:708:C:H2'	1:CA:709:G:C8	2.54	0.43
1:CA:832:C:N4	1:CA:833:U:C4	2.87	0.43
1:CA:1035:A:C2	1:CA:1036:G:C8	3.06	0.43
1:CA:1263:C:H2'	1:CA:1264:C:C5	2.54	0.43
1:CA:1270:C:C2'	1:CA:1271:G:H5'	2.47	0.43
1:CA:1517:G:H1'	25:DA:1919:A:O3'	2.18	0.43
4:CD:72:GLU:OE1	4:CD:207:TYR:OH	2.37	0.43
5:CE:110:LEU:HD21	5:CE:139:LEU:HD21	2.00	0.43
8:CH:39:LEU:HB3	8:CH:45:ILE:HG12	2.00	0.43
9:CI:116:LYS:NZ	9:CI:122:ALA:HB2	2.33	0.43
13:CM:29:ARG:HD3	13:CM:64:TRP:CD2	2.53	0.43
13:CM:29:ARG:NH1	13:CM:64:TRP:HB3	2.34	0.43
15:CO:33:THR:O	15:CO:36:ILE:HB	2.19	0.43
25:DA:140:G:N2	25:DA:1596:A:H4'	2.33	0.43
25:DA:608:A:H2'	25:DA:609:A:C8	2.53	0.43
25:DA:966:G:C6	25:DA:967:C:N4	2.86	0.43
25:DA:1939:U:OP1	25:DA:2604:U:O2'	2.36	0.43
25:DA:2243:U:OP1	61:DA:4352:HOH:O	2.21	0.43
25:DA:2751:G:OP2	31:DH:2:SER:HB3	2.18	0.43
25:DA:2831:G:P	28:DE:58:ARG:NH2	2.91	0.43
26:DB:45:A:H2'	26:DB:46:A:C8	2.53	0.43
27:DD:139:GLY:H	27:DD:165:ILE:HB	1.83	0.43
34:DO:73:ASP:HB2	39:DT:82:LEU:HD13	2.00	0.43
36:DQ:59:ARG:C	36:DQ:61:GLY:H	2.24	0.43
1:AA:276:G:O3'	17:AQ:68:ARG:NH1	2.52	0.43
1:AA:727:G:N2	1:AA:730:G:OP2	2.45	0.43
1:AA:1266:G:N2	1:AA:1270:C:C2	2.86	0.43
1:AA:1288:A:C6	1:AA:1289:A:C5	3.06	0.43
1:AA:1379:G:C5	1:AA:1380:U:C5	3.06	0.43
2:AB:156:LYS:HB3	2:AB:156:LYS:HE2	1.64	0.43
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	2.00	0.43
9:AI:128:ARG:NH1	23:AX:35:A:OP2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:84:ILE:HD12	19:AS:74:PHE:HZ	1.83	0.43
21:AU:18:TYR:CE2	21:AU:24:ARG:HD3	2.53	0.43
25:BA:302:A:H2'	25:BA:303:C:C6	2.54	0.43
25:BA:1003:U:H5"	36:BQ:14:ARG:HD3	2.01	0.43
25:BA:1618:A:H2'	25:BA:1619:A:C8	2.53	0.43
25:BA:1987:C:H3'	25:BA:1988:A:H2'	1.99	0.43
25:BA:2042:A:O2'	25:BA:2043:C:H5'	2.19	0.43
25:BA:2108:U:H2'	25:BA:2109:G:H8	1.83	0.43
25:BA:2122:G:H2'	25:BA:2122:G:N3	2.33	0.43
31:BH:88:LEU:HD23	31:BH:165:ALA:HA	2.01	0.43
31:BH:117:PRO:HA	31:BH:118:PRO:HD2	1.83	0.43
45:BZ:102:LEU:HD13	45:BZ:123:ASP:HA	2.00	0.43
45:BZ:111:VAL:HG12	45:BZ:112:ARG:N	2.33	0.43
48:B2:33:MET:HE3	48:B2:37:PHE:CZ	2.54	0.43
54:B8:34:TRP:CE2	54:B8:35:GLN:HB3	2.54	0.43
1:CA:554:C:H2'	1:CA:555:C:C6	2.53	0.43
1:CA:1017:G:H2'	1:CA:1018:C:O4'	2.18	0.43
1:CA:1271:G:H5"	1:CA:1314:C:OP1	2.18	0.43
2:CB:101:MET:HA	2:CB:108:ILE:HD13	2.01	0.43
3:CC:12:LEU:HD23	3:CC:12:LEU:HA	1.88	0.43
5:CE:52:PRO:HG2	5:CE:53:LEU:HD12	2.00	0.43
16:CP:21:VAL:HG11	16:CP:59:TRP:NE1	2.33	0.43
25:DA:275:G:C6	25:DA:276:A:C6	3.07	0.43
25:DA:450:G:P	25:DA:1248:G:H22	2.41	0.43
25:DA:912:C:OP1	36:DQ:9:TYR:OH	2.25	0.43
25:DA:1341:U:H3'	25:DA:1397:U:O2	2.18	0.43
25:DA:2259:G:H1'	25:DA:2427:C:C2	2.53	0.43
25:DA:2380:C:H6	25:DA:2380:C:O5'	2.01	0.43
25:DA:2573:C:H3'	61:DA:4461:HOH:O	2.18	0.43
25:DA:2845:G:H5"	39:DT:54:ARG:O	2.18	0.43
25:DA:2847:U:OP1	39:DT:98:LYS:NZ	2.40	0.43
25:DA:2870:C:H2'	25:DA:2871:C:O4'	2.17	0.43
26:DB:6:C:C2	26:DB:116:G:N2	2.87	0.43
26:DB:42:C:O2	30:DG:92:VAL:HA	2.18	0.43
30:DG:144:ILE:HA	30:DG:148:MET:HE1	2.00	0.43
31:DH:98:LEU:CD2	31:DH:125:VAL:HG23	2.46	0.43
37:DR:20:LEU:O	37:DR:24:GLN:HG3	2.19	0.43
39:DT:16:ARG:NH1	39:DT:18:ASP:OD2	2.51	0.43
43:DX:31:HIS:HD2	43:DX:33:LYS:H	1.67	0.43
45:DZ:11:GLU:HB3	45:DZ:12:GLY:H	1.70	0.43
45:DZ:14:LYS:HA	45:DZ:15:PRO:HD3	1.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DZ:45:ASP:CG	45:DZ:49:ARG:HH11	2.26	0.43
1:AA:353:A:H8	1:AA:353:A:H5'	1.84	0.43
1:AA:626:U:C2	1:AA:627:G:C8	3.06	0.43
1:AA:684:A:O2'	11:AK:39:PRO:O	2.37	0.43
1:AA:1030(A):G:N2	1:AA:1032:G:O6	2.51	0.43
1:AA:1075:C:H2'	1:AA:1076:C:H5'	2.01	0.43
1:AA:1145:C:H4'	1:AA:1146:A:C5'	2.47	0.43
4:AD:18:LYS:HG2	57:AD:501:SF4:S1	2.57	0.43
7:AG:89:MET:HE3	7:AG:89:MET:HB3	1.85	0.43
18:AR:59:SER:H	18:AR:62:GLU:HG3	1.84	0.43
20:AT:34:LYS:HE2	20:AT:34:LYS:HB2	1.85	0.43
25:BA:154:G:O6	25:BA:155:C:N4	2.52	0.43
25:BA:864:C:H4'	25:BA:977:G:C5	2.54	0.43
25:BA:1836:U:H5"	27:BD:250:TRP:CD2	2.54	0.43
27:BD:38:LYS:HD2	27:BD:38:LYS:HA	1.59	0.43
30:BG:11:TYR:OH	30:BG:32:PRO:O	2.31	0.43
34:BO:101:PRO:HG3	39:BT:67:SER:OG	2.18	0.43
50:B4:1:MET:HE2	50:B4:6:HIS:CG	2.53	0.43
1:CA:577:G:C8	1:CA:816:A:C6	3.07	0.43
1:CA:933:G:C6	1:CA:1385:G:C6	3.07	0.43
1:CA:1120:G:N2	1:CA:1154:G:H1'	2.34	0.43
1:CA:1178:G:N3	1:CA:1180:A:H2	2.16	0.43
1:CA:1269:A:H2	1:CA:1312:G:N3	2.16	0.43
1:CA:1374:A:O2'	7:CG:28:ASN:HB3	2.19	0.43
5:CE:110:LEU:HD23	5:CE:110:LEU:HA	1.68	0.43
8:CH:51:VAL:HG11	8:CH:60:ARG:NH1	2.30	0.43
10:CJ:5:ARG:O	10:CJ:98:ILE:HA	2.18	0.43
10:CJ:38:ILE:O	10:CJ:38:ILE:HG13	2.18	0.43
16:CP:22:THR:HA	16:CP:33:ILE:HG13	2.01	0.43
20:CT:10:LEU:HD12	20:CT:10:LEU:HA	1.61	0.43
25:DA:577:G:O2'	25:DA:1254:A:OP1	2.35	0.43
25:DA:1761:C:H3'	25:DA:1762:A:H5"	1.99	0.43
25:DA:1827:C:OP2	27:DD:222:ARG:NH1	2.52	0.43
25:DA:2607:G:H2'	25:DA:2608:G:O4'	2.19	0.43
25:DA:2845:G:H2'	25:DA:2846:G:C8	2.54	0.43
26:DB:43:C:C5	26:DB:45:A:N6	2.87	0.43
29:DF:106:ARG:H	29:DF:106:ARG:HG2	1.48	0.43
35:DP:45:LEU:HD23	35:DP:45:LEU:HA	1.43	0.43
44:DY:56:PRO:C	44:DY:58:GLY:H	2.26	0.43
44:DY:86:ARG:HH11	44:DY:100:ALA:HA	1.84	0.43
1:AA:178:C:H2'	1:AA:179:A:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:194:C:H5"	1:AA:195:A:OP2	2.18	0.43
1:AA:381:C:C5	1:AA:382:A:C5	3.06	0.43
1:AA:442:C:H5'	1:AA:443:C:OP2	2.19	0.43
1:AA:646:U:H2'	1:AA:647:C:H6	1.84	0.43
1:AA:815:A:N7	1:AA:1509:C:O2'	2.43	0.43
1:AA:957:U:H2'	1:AA:959:A:OP2	2.19	0.43
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.49	0.43
1:AA:1203:C:H2'	1:AA:1204:A:H8	1.84	0.43
1:AA:1263:C:H2'	1:AA:1264:C:C6	2.54	0.43
1:AA:1367:C:N3	1:AA:1368:G:C8	2.87	0.43
2:AB:122:PHE:CD2	2:AB:139:LYS:HE2	2.53	0.43
4:AD:57:ARG:HH22	5:AE:107:ARG:HD3	1.82	0.43
5:AE:69:VAL:HG22	5:AE:71:LEU:HD23	2.00	0.43
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.53	0.43
25:BA:99:G:O3'	48:B2:7:ARG:NH2	2.52	0.43
25:BA:1473:A:H4'	25:BA:1474:C:O4'	2.19	0.43
25:BA:1525:G:O2'	25:BA:1605:A:C2	2.70	0.43
25:BA:2348:A:H61	46:B0:43:THR:HG22	1.81	0.43
25:BA:2679:C:O5'	25:BA:2679:C:H6	2.02	0.43
27:BD:123:ALA:HB3	27:BD:131:LEU:HG	1.99	0.43
30:BG:77:ILE:HD12	30:BG:82:LEU:HD12	2.01	0.43
31:BH:7:LEU:O	31:BH:69:ARG:HD3	2.19	0.43
36:BQ:78:PRO:O	36:BQ:81:VAL:HG13	2.18	0.43
43:BX:31:HIS:HA	43:BX:32:PRO:HD3	1.86	0.43
1:CA:38:G:C2	1:CA:397:A:C2	3.07	0.43
1:CA:93:G:H2'	1:CA:96:U:O4'	2.19	0.43
1:CA:391:G:C6	1:CA:392:G:C5	3.06	0.43
1:CA:811:C:O2'	1:CA:901:A:N1	2.46	0.43
1:CA:909:A:H2'	1:CA:910:C:O4'	2.19	0.43
4:CD:158:ILE:HG22	4:CD:162:LEU:HD12	2.01	0.43
15:CO:76:GLU:OE1	15:CO:76:GLU:HA	2.19	0.43
17:CQ:57:VAL:HG12	17:CQ:75:ARG:O	2.18	0.43
25:DA:348:G:H2'	25:DA:349:G:H8	1.82	0.43
25:DA:362:U:H6	25:DA:362:U:H2'	1.68	0.43
25:DA:635:C:H2'	25:DA:636:G:O4'	2.19	0.43
25:DA:649:G:C4'	54:D8:46:ARG:HH22	2.28	0.43
25:DA:1503:U:O2'	25:DA:1504:C:H5'	2.18	0.43
25:DA:1654:A:O2'	28:DE:113:PHE:O	2.34	0.43
25:DA:1937:A:O2'	25:DA:1939:U:OP2	2.31	0.43
25:DA:2712:U:H1'	25:DA:2712(A):A:C8	2.53	0.43
25:DA:2776:A:H4'	25:DA:2777:G:H5"	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DB:28:C:H2'	26:DB:29:A:O4'	2.19	0.43
27:DD:13:ARG:HA	27:DD:13:ARG:HD2	1.67	0.43
27:DD:183:ARG:HG3	27:DD:270:ILE:HG12	2.01	0.43
35:DP:38:GLN:O	35:DP:39:LYS:CB	2.66	0.43
45:DZ:45:ASP:OD2	45:DZ:49:ARG:HD2	2.19	0.43
1:AA:97:G:O2'	1:AA:98:G:H8	2.02	0.43
1:AA:728:A:C6	15:AO:54:ARG:HD2	2.54	0.43
1:AA:773:G:H5"	1:AA:773:G:H8	1.84	0.43
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.34	0.43
1:AA:1127:G:N2	1:AA:1147:C:N4	2.67	0.43
1:AA:1442:G:H2'	1:AA:1442(A):G:H5'	1.99	0.43
3:AC:12:LEU:HD23	3:AC:16:ARG:HB3	2.01	0.43
4:AD:61:LYS:HD2	4:AD:207:TYR:CZ	2.54	0.43
5:AE:136:MET:O	5:AE:139:LEU:N	2.52	0.43
5:AE:152:ARG:NH2	8:AH:107:LEU:O	2.52	0.43
16:AP:27:LYS:HE3	16:AP:27:LYS:HB2	1.73	0.43
19:AS:48:THR:HG22	19:AS:61:TYR:HA	2.01	0.43
25:BA:64:C:H2'	25:BA:65:C:C6	2.54	0.43
25:BA:242:C:OP2	54:B8:5:LYS:NZ	2.43	0.43
25:BA:311:C:H2'	25:BA:312:C:O4'	2.18	0.43
25:BA:1345:G:O5'	25:BA:1345:G:H8	2.01	0.43
25:BA:2832:G:O2'	25:BA:2834:C:OP2	2.31	0.43
34:BO:1:MET:HE3	34:BO:32:TYR:CE2	2.53	0.43
36:BQ:54:MET:HB3	36:BQ:64:ILE:CD1	2.46	0.43
44:BY:56:PRO:C	44:BY:58:GLY:H	2.27	0.43
50:B4:59:PHE:CA	50:B4:61:ARG:H	2.31	0.43
1:CA:382:A:H2'	1:CA:383:A:H8	1.77	0.43
1:CA:414:A:H2'	1:CA:415:A:O4'	2.18	0.43
1:CA:642:A:N3	8:CH:113:SER:OG	2.40	0.43
1:CA:738:C:H2'	1:CA:739:C:C6	2.53	0.43
1:CA:1226:C:H4'	19:CS:80:TYR:CZ	2.53	0.43
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.54	0.43
2:CB:138:LEU:HA	2:CB:141:GLU:HB3	2.01	0.43
6:CF:89:MET:HE3	6:CF:91:VAL:HG21	2.01	0.43
25:DA:35:G:H1'	25:DA:454:A:C4	2.53	0.43
25:DA:301:G:C4	25:DA:302:C:C5	3.07	0.43
25:DA:1164:G:H2'	25:DA:1165:U:C6	2.54	0.43
25:DA:1338:G:O2'	25:DA:1339:G:H5'	2.19	0.43
25:DA:2048:G:C6	25:DA:2049:G:C5	3.07	0.43
25:DA:2469:A:H5"	25:DA:2470:G:OP2	2.19	0.43
25:DA:2526:G:H2'	25:DA:2527:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2821:A:C2	25:DA:2822:G:C4	3.06	0.43
28:DE:59:VAL:HG21	28:DE:74:PRO:HB3	2.00	0.43
30:DG:165:THR:OG1	30:DG:168:GLU:HG3	2.19	0.43
32:DI:62:LYS:HG2	32:DI:133:HIS:NE2	2.34	0.43
50:D4:60:GLN:N	50:D4:62:ARG:HE	2.17	0.43
1:AA:41:G:O2'	1:AA:42:G:H5'	2.19	0.43
1:AA:203:U:H2'	1:AA:203:U:OP2	2.19	0.43
1:AA:256:U:H2'	1:AA:257:G:C8	2.54	0.43
1:AA:355:C:O2'	1:AA:388:G:N3	2.47	0.43
1:AA:429:U:H4'	1:AA:430:A:O5'	2.19	0.43
1:AA:516:U:C4	1:AA:517:G:C6	3.06	0.43
1:AA:600:C:H2'	1:AA:601:C:H6	1.83	0.43
1:AA:625:G:C2'	1:AA:626:U:H5'	2.49	0.43
1:AA:742:G:P	15:AO:35:ARG:HH22	2.40	0.43
1:AA:1220:G:N2	19:AS:54:GLY:O	2.45	0.43
1:AA:1259:C:N4	1:AA:1276:G:H1	2.16	0.43
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.19	0.43
8:AH:39:LEU:HD12	8:AH:39:LEU:HA	1.80	0.43
10:AJ:68:HIS:H	10:AJ:68:HIS:CD2	2.35	0.43
11:AK:98:LEU:O	11:AK:101:SER:OG	2.21	0.43
16:AP:59:TRP:HA	16:AP:62:VAL:HG12	2.01	0.43
18:AR:56:THR:HB	18:AR:58:LEU:HD23	1.99	0.43
19:AS:22:LEU:HD13	19:AS:47:HIS:CD2	2.54	0.43
24:AW:8:2R3:H62	24:AW:9:MVA:HN1	1.67	0.43
25:BA:83:A:C5'	44:BY:8:LYS:HG2	2.49	0.43
25:BA:252:C:H2'	25:BA:253:C:O4'	2.19	0.43
25:BA:383:A:H2'	25:BA:384:G:O4'	2.19	0.43
25:BA:939:C:O2'	25:BA:940:C:H5'	2.19	0.43
25:BA:1805:C:O5'	25:BA:1805:C:H6	2.02	0.43
25:BA:2624:C:H2'	25:BA:2625:U:H5'	2.00	0.43
26:BB:75:G:H8	26:BB:75:G:C5'	2.32	0.43
29:BF:7:TYR:O	29:BF:21:ALA:HA	2.18	0.43
31:BH:103:LEU:HD23	31:BH:148:ILE:HD13	1.99	0.43
47:B1:64:ALA:HA	47:B1:67:ILE:HG13	2.00	0.43
1:CA:32:A:C2	1:CA:33:A:C4	3.07	0.43
1:CA:620:C:C2	4:CD:135:LEU:HG	2.52	0.43
1:CA:817:C:N4	1:CA:1529:G:H1	2.16	0.43
1:CA:860:A:H2'	1:CA:861:G:O4'	2.19	0.43
1:CA:1052:U:H5"	1:CA:1053:G:OP2	2.19	0.43
1:CA:1323:G:O2'	1:CA:1362:C:O2'	2.35	0.43
5:CE:11:ILE:HB	5:CE:31:LEU:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:148:VAL:HG13	5:CE:152:ARG:CZ	2.49	0.43
9:CI:9:ARG:H	9:CI:79:LEU:HD23	1.84	0.43
10:CJ:50:ILE:HD11	10:CJ:57:LYS:HD3	2.01	0.43
11:CK:43:SER:HA	11:CK:47:VAL:HG21	1.99	0.43
25:DA:218:A:N1	25:DA:235:U:O2'	2.48	0.43
25:DA:868:U:C4	25:DA:869:G:N7	2.87	0.43
25:DA:1009:A:O5'	25:DA:1009:A:H8	2.02	0.43
25:DA:1380:G:N2	25:DA:1570:A:N1	2.59	0.43
25:DA:1494:A:H2'	25:DA:1495:A:C8	2.53	0.43
25:DA:2298:A:N1	25:DA:2321:G:C2	2.86	0.43
25:DA:2489:G:C6	25:DA:2490:G:C6	3.07	0.43
25:DA:2617:C:H2'	25:DA:2618:G:O4'	2.19	0.43
26:DB:37:C:C5	26:DB:38:C:C5	3.07	0.43
34:DO:35:VAL:HA	34:DO:62:VAL:HG12	2.01	0.43
35:DP:50:ARG:O	35:DP:52:GLU:HG3	2.19	0.43
40:DU:36:ARG:HD2	40:DU:40:PHE:CZ	2.54	0.43
1:AA:148:G:N3	1:AA:149:A:C8	2.87	0.43
1:AA:292:G:N7	1:AA:293:G:H1'	2.34	0.43
1:AA:322:C:O2'	20:AT:23:ARG:HD2	2.19	0.43
1:AA:374:A:C6	1:AA:375:U:C4	3.07	0.43
1:AA:411:A:OP1	4:AD:30:LYS:NZ	2.29	0.43
1:AA:1003:G:H2'	1:AA:1004:A:H4'	2.01	0.43
1:AA:1150:U:O4	1:AA:1151:A:N6	2.52	0.43
1:AA:1151:A:C5'	10:AJ:41:PRO:HA	2.49	0.43
1:AA:1409:C:H2'	1:AA:1410:G:H8	1.84	0.43
1:AA:1423:G:OP1	34:BO:49:ARG:NH2	2.47	0.43
1:AA:1456:G:O6	20:AT:54:LYS:NZ	2.34	0.43
12:AL:102:ARG:HE	12:AL:102:ARG:HB3	1.58	0.43
13:AM:3:ARG:CG	13:AM:4:ILE:H	2.32	0.43
25:BA:273:G:H8	25:BA:273:G:H2'	1.64	0.43
25:BA:302:A:P	25:BA:302:A:H8	2.42	0.43
25:BA:956:A:H62	36:BQ:12:GLN:HA	1.83	0.43
25:BA:1337:C:H2'	25:BA:1338:U:C6	2.54	0.43
25:BA:1586:G:H2'	25:BA:1587:U:O4'	2.19	0.43
25:BA:1889:G:H22	25:BA:1905:G:H2'	1.83	0.43
28:BE:176:ILE:HB	28:BE:181:LEU:HB2	2.00	0.43
31:BH:103:LEU:CD2	31:BH:148:ILE:HD13	2.48	0.43
33:BN:42:TRP:HA	33:BN:48:MET:SD	2.58	0.43
38:BS:38:GLN:OE1	38:BS:47:THR:HG21	2.19	0.43
45:BZ:155:LEU:HD12	45:BZ:155:LEU:HA	1.73	0.43
49:B3:23:LEU:HD12	49:B3:23:LEU:HA	1.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:6:THR:HG23	54:B8:64:TYR:HD2	1.84	0.43
1:CA:113:G:H2'	1:CA:114:U:C6	2.53	0.43
1:CA:226:G:C2	1:CA:227:G:C8	3.07	0.43
1:CA:600:C:OP1	8:CH:97:VAL:N	2.38	0.43
1:CA:654:G:H2'	1:CA:655:A:O4'	2.19	0.43
1:CA:692:U:O2'	1:CA:694:A:N7	2.33	0.43
1:CA:1063:C:H5"	1:CA:1064:G:H2'	2.01	0.43
1:CA:1065:U:H6	1:CA:1190:G:H21	1.65	0.43
1:CA:1220:G:H2'	1:CA:1221:G:O4'	2.18	0.43
1:CA:1305:G:O2'	1:CA:1331:G:N2	2.52	0.43
2:CB:219:VAL:HA	2:CB:222:ILE:CD1	2.48	0.43
19:CS:42:PRO:CG	50:D4:61:ARG:HG2	2.44	0.43
25:DA:754:C:H4'	25:DA:1272:A:N6	2.34	0.43
25:DA:945:A:C4	25:DA:2448:A:C2	3.07	0.43
25:DA:1448:G:H4'	25:DA:1542:A:OP1	2.19	0.43
27:DD:164:GLN:HE22	27:DD:176:ARG:HH22	1.65	0.43
45:DZ:91:LEU:HD12	45:DZ:91:LEU:HA	1.77	0.43
45:DZ:161:VAL:HG13	45:DZ:161:VAL:O	2.19	0.43
48:D2:28:LYS:HD3	48:D2:60:LEU:HD11	2.00	0.43
1:AA:341:C:C2'	1:AA:342:C:H5'	2.49	0.42
1:AA:589:C:C2'	1:AA:590:C:H5'	2.48	0.42
1:AA:615:C:H2'	1:AA:616:G:O4'	2.19	0.42
1:AA:684:A:C6	1:AA:685:G:C6	3.07	0.42
1:AA:1312:G:N7	19:AS:2:PRO:HG3	2.33	0.42
6:AF:92:LYS:HE2	6:AF:92:LYS:HB2	1.85	0.42
13:AM:9:ILE:HB	13:AM:18:ALA:HB1	2.01	0.42
13:AM:88:ARG:HG3	13:AM:98:VAL:HG12	2.01	0.42
14:AN:6:LEU:HD12	14:AN:6:LEU:HA	1.87	0.42
25:BA:185:A:N3	25:BA:185:A:H2'	2.33	0.42
25:BA:1478:C:H2'	25:BA:1479:U:O4'	2.19	0.42
25:BA:1552:C:O2'	25:BA:1553:A:H5'	2.19	0.42
25:BA:2274:U:OP2	46:B0:19:LYS:NZ	2.50	0.42
25:BA:2331:G:N2	38:BS:3:ARG:NE	2.64	0.42
25:BA:2377:G:O6	54:B8:39:LYS:HE3	2.19	0.42
25:BA:2792:U:OP1	61:BA:4641:HOH:O	2.22	0.42
26:BB:14:U:OP2	26:BB:70:C:O2'	2.34	0.42
27:BD:65:ILE:HB	27:BD:67:PHE:CE2	2.54	0.42
35:BP:44:GLY:N	61:BP:302:HOH:O	2.52	0.42
50:B4:53:GLU:HG2	50:B4:55:ARG:H	1.84	0.42
1:CA:89:C:C4	1:CA:90:U:C5	3.07	0.42
1:CA:624:C:H2'	1:CA:625:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:936:C:H2'	1:CA:937:A:O4'	2.18	0.42
1:CA:991:U:HO2'	1:CA:992:U:P	2.42	0.42
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.49	0.42
1:CA:1119:C:C4	1:CA:1154:G:O6	2.71	0.42
1:CA:1159:U:C6	1:CA:1182:G:C4	3.07	0.42
1:CA:1206:G:H4'	3:CC:192:THR:O	2.19	0.42
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.54	0.42
10:CJ:7:LYS:HB2	10:CJ:97:GLU:HB2	2.00	0.42
12:CL:117:ARG:NH2	12:CL:124:LYS:HB2	2.34	0.42
15:CO:25:THR:HG21	15:CO:70:LEU:HB2	2.01	0.42
25:DA:357:A:H2'	25:DA:358:U:C6	2.54	0.42
25:DA:653:A:H2'	25:DA:654:A:O4'	2.19	0.42
25:DA:880:G:N2	25:DA:898:C:H1'	2.33	0.42
25:DA:881:G:H2'	25:DA:882:G:C8	2.54	0.42
25:DA:958:U:O2	26:DB:90:A:O2'	2.28	0.42
25:DA:999:U:O2'	25:DA:1000:A:H5'	2.19	0.42
25:DA:1297:C:H2'	25:DA:1298:C:H6	1.84	0.42
25:DA:1657:C:H2'	25:DA:1658:C:C6	2.54	0.42
25:DA:2695:C:H2'	25:DA:2696:U:C6	2.54	0.42
28:DE:9:VAL:HG22	28:DE:25:VAL:O	2.19	0.42
35:DP:6:LEU:HA	35:DP:6:LEU:HD23	1.79	0.42
36:DQ:32:TYR:OH	36:DQ:111:GLU:OE1	2.28	0.42
45:DZ:35:ARG:HD2	45:DZ:35:ARG:HA	1.82	0.42
51:D5:11:THR:HG22	51:D5:12:SER:O	2.19	0.42
52:D6:36:LEU:HB3	52:D6:38:LYS:NZ	2.34	0.42
53:D7:1:MET:HE2	53:D7:1:MET:HB2	1.85	0.42
1:AA:147:G:C6	1:AA:148:G:C5	3.07	0.42
1:AA:392:G:C4	1:AA:393:A:C8	3.06	0.42
1:AA:604:G:C2	1:AA:635:G:C5	3.08	0.42
1:AA:1210:C:C2'	1:AA:1211:U:H5'	2.49	0.42
1:AA:1314:C:N4	1:AA:1315:U:O4	2.52	0.42
2:AB:122:PHE:HD2	2:AB:139:LYS:HE2	1.84	0.42
2:AB:219:VAL:HA	2:AB:222:ILE:CG1	2.47	0.42
9:AI:80:GLY:O	9:AI:84:ALA:N	2.50	0.42
25:BA:124:A:H5"	25:BA:124:A:H8	1.83	0.42
25:BA:137:G:O2'	25:BA:138:G:H5'	2.19	0.42
25:BA:829:A:O2'	25:BA:1819:C:H4'	2.20	0.42
25:BA:1485:A:H2'	25:BA:1486:G:O4'	2.19	0.42
25:BA:1605:A:N3	25:BA:1605:A:O4'	2.51	0.42
25:BA:2284:U:H5"	25:BA:2285:A:OP1	2.19	0.42
25:BA:2584:A:C8	28:BE:144:ARG:HD2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BP:101:VAL:HG22	35:BP:106:LEU:O	2.18	0.42
39:BT:118:ARG:HH11	39:BT:118:ARG:HG3	1.84	0.42
1:CA:300:A:H1'	1:CA:565:U:O2	2.20	0.42
1:CA:491:G:H2'	1:CA:492:G:O4'	2.18	0.42
1:CA:1001(A):G:C4	1:CA:1002:G:H1'	2.53	0.42
1:CA:1030(A):G:HO2'	1:CA:1030(B):C:H5	1.62	0.42
1:CA:1115:C:H2'	1:CA:1116:C:C6	2.54	0.42
1:CA:1134:G:N1	1:CA:1135:U:H1'	2.34	0.42
1:CA:1292:U:C2	1:CA:1293:G:C8	3.07	0.42
1:CA:1347:G:O2'	1:CA:1373:G:O6	2.24	0.42
2:CB:60:ASP:O	2:CB:64:ARG:HG2	2.19	0.42
3:CC:119:ARG:HG2	3:CC:123:GLN:NE2	2.34	0.42
4:CD:190:ASP:O	4:CD:193:ASP:HB2	2.19	0.42
8:CH:84:ARG:NH1	8:CH:85:ARG:O	2.52	0.42
12:CL:28:LYS:NZ	12:CL:62:SER:HB2	2.34	0.42
17:CQ:22:LEU:HD11	17:CQ:39:SER:HB2	2.01	0.42
17:CQ:89:LEU:HD23	17:CQ:89:LEU:HA	1.63	0.42
19:CS:64:GLU:HB2	50:D4:59:PHE:HE1	1.82	0.42
23:CX:19:G:H1	23:CX:56:C:H42	1.67	0.42
25:DA:143:G:H5"	25:DA:1598:C:O2'	2.19	0.42
25:DA:763:G:H1'	25:DA:765:G:O4'	2.19	0.42
25:DA:815:C:C2	25:DA:1193:G:C2	3.06	0.42
25:DA:1289:C:H2'	25:DA:1290:C:H6	1.84	0.42
25:DA:1510:G:H2'	25:DA:1511:C:O4'	2.18	0.42
25:DA:1590:U:H2'	25:DA:1591:G:C8	2.54	0.42
25:DA:2287:A:O2'	25:DA:2288:A:H3'	2.19	0.42
25:DA:2313:C:O2	25:DA:2313:C:H2'	2.19	0.42
26:DB:50:G:OP2	38:DS:62:LYS:HD3	2.18	0.42
28:DE:178:GLU:OE2	28:DE:178:GLU:N	2.44	0.42
33:DN:110:GLY:O	33:DN:114:ARG:HG3	2.18	0.42
50:D4:15:ILE:C	50:D4:33:VAL:HG23	2.44	0.42
1:AA:44:G:H2'	1:AA:45:U:O4'	2.18	0.42
1:AA:126:G:OP1	1:AA:605:U:O2'	2.28	0.42
1:AA:652:U:C4	1:AA:752:G:N3	2.87	0.42
1:AA:872:A:C8	1:AA:874:G:C8	3.07	0.42
1:AA:1053:G:N2	61:AA:4013:HOH:O	2.46	0.42
1:AA:1220:G:N3	19:AS:54:GLY:HA2	2.34	0.42
1:AA:1343:G:O2'	9:AI:121:ARG:HD2	2.19	0.42
2:AB:127:ILE:HG13	2:AB:130:ARG:HG2	2.02	0.42
2:AB:145:LEU:O	2:AB:149:LEU:HB2	2.20	0.42
2:AB:214:ILE:O	2:AB:218:ALA:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:173:TRP:HA	4:AD:186:LEU:HB2	2.00	0.42
9:AI:16:ARG:HD3	9:AI:64:THR:HG21	2.01	0.42
21:AU:5:ASP:OD2	61:AU:101:HOH:O	2.20	0.42
25:BA:174:U:H2'	25:BA:175:G:H8	1.85	0.42
25:BA:503:A:C6	25:BA:504:A:C6	3.07	0.42
25:BA:1091:A:C8	25:BA:1093:G:N2	2.88	0.42
25:BA:1093:G:H2'	25:BA:1156:G:H1	1.84	0.42
25:BA:1376:C:O2'	25:BA:1377:A:H5'	2.19	0.42
25:BA:1639:G:H2'	25:BA:1640:G:C8	2.53	0.42
25:BA:2779:G:N3	25:BA:2779:G:H2'	2.34	0.42
31:BH:144:VAL:O	31:BH:148:ILE:HG13	2.19	0.42
39:BT:118:ARG:HG3	39:BT:118:ARG:NH1	2.35	0.42
1:CA:58:C:O2'	1:CA:388:G:N7	2.45	0.42
1:CA:130:A:O2'	1:CA:131:C:O5'	2.36	0.42
1:CA:328:C:H4'	1:CA:329:A:H5'	2.01	0.42
1:CA:419:C:N3	1:CA:425:G:C2	2.87	0.42
1:CA:999:C:H3'	1:CA:1000:U:H5	1.84	0.42
2:CB:71:VAL:CG2	2:CB:164:VAL:HG22	2.49	0.42
3:CC:32:LEU:HD12	3:CC:59:ARG:HH12	1.84	0.42
4:CD:120:LEU:HB3	4:CD:126:ILE:HD11	2.00	0.42
9:CI:50:LEU:CD1	9:CI:56:LEU:HD23	2.50	0.42
11:CK:81:ASP:OD1	11:CK:106:LYS:HB2	2.20	0.42
11:CK:85:ARG:HA	11:CK:112:THR:OG1	2.20	0.42
13:CM:88:ARG:HG3	13:CM:98:VAL:HG12	2.00	0.42
18:CR:24:ALA:C	18:CR:26:LEU:H	2.27	0.42
25:DA:195:A:H2'	25:DA:198:C:N4	2.34	0.42
25:DA:911:A:H2'	36:DQ:9:TYR:CZ	2.54	0.42
25:DA:949:C:H2'	25:DA:950:G:C8	2.55	0.42
25:DA:1005:C:C2	25:DA:1143:A:C5	3.08	0.42
25:DA:1221(A):C:C2	25:DA:1229:G:N2	2.87	0.42
25:DA:1227:G:C2	25:DA:1228:G:C4	3.08	0.42
25:DA:1580:A:OP2	25:DA:1580:A:H8	2.03	0.42
25:DA:2009:G:OP1	42:DW:41:LYS:HE2	2.19	0.42
25:DA:2019:A:H4'	40:DU:34:LYS:HD2	2.01	0.42
25:DA:2298:A:N7	25:DA:2299:G:C4	2.88	0.42
25:DA:2755:C:HO2'	25:DA:2756:U:H6	1.65	0.42
25:DA:2876:G:H4'	39:DT:2:ASN:ND2	2.34	0.42
27:DD:26:LYS:HB3	27:DD:83:GLU:HG2	2.01	0.42
30:DG:96:ARG:N	30:DG:99:MET:HE2	2.33	0.42
35:DP:29:LYS:HG3	35:DP:30:THR:N	2.35	0.42
38:DS:3:ARG:O	38:DS:4:LEU:HD23	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:11:G:O2'	1:AA:506:G:N2	2.52	0.42
1:AA:445:G:C2	1:AA:446:G:C4	3.07	0.42
1:AA:586:C:HO2'	1:AA:878:G:H4'	1.83	0.42
1:AA:839:U:H3'	1:AA:840:C:C6	2.53	0.42
1:AA:923:A:O2'	1:AA:1399:C:OP2	2.30	0.42
10:AJ:13:HIS:HA	10:AJ:16:LEU:HB3	2.02	0.42
15:AO:32:LEU:O	15:AO:36:ILE:HG13	2.20	0.42
25:BA:163:C:H2'	25:BA:164:G:O4'	2.19	0.42
25:BA:261:A:N1	25:BA:291:G:O2'	2.51	0.42
25:BA:476:G:OP2	61:BA:4507:HOH:O	2.22	0.42
25:BA:917:A:OP1	36:BQ:6:ARG:NE	2.50	0.42
25:BA:950:C:H2'	25:BA:951:U:C6	2.54	0.42
25:BA:1051:C:O2'	33:BN:28:THR:HG21	2.20	0.42
25:BA:2627:U:OP1	61:BA:4253:HOH:O	2.21	0.42
25:BA:2753:A:C6	25:BA:2777:A:C8	3.07	0.42
26:BB:113:G:H2'	26:BB:114:C:C6	2.54	0.42
34:BO:7:TYR:HE1	34:BO:20:MET:HE3	1.83	0.42
37:BR:28:LEU:HD12	37:BR:48:VAL:HG21	2.01	0.42
47:B1:95:LEU:O	47:B1:98:LEU:HB2	2.20	0.42
48:B2:22:GLU:OE2	48:B2:68:ARG:NH2	2.51	0.42
48:B2:28:LYS:HG3	48:B2:53:LEU:HD21	2.01	0.42
1:CA:130:A:H5'	17:CQ:63:ARG:NE	2.34	0.42
1:CA:332:G:C2	1:CA:333:G:C8	3.07	0.42
1:CA:505:G:H2'	1:CA:506:G:H8	1.84	0.42
1:CA:542:G:C2	1:CA:543:C:C4	3.07	0.42
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.48	0.42
1:CA:1126:U:H6	1:CA:1281:U:O2	2.02	0.42
1:CA:1129:C:H4'	9:CI:16:ARG:HH22	1.84	0.42
1:CA:1310:G:H5'	13:CM:77:ASN:ND2	2.34	0.42
3:CC:181:ASN:ND2	3:CC:204:LEU:HD12	2.34	0.42
5:CE:78:HIS:CE1	5:CE:142:LEU:HD23	2.54	0.42
23:CX:22:G:H2'	23:CX:23:C:C6	2.54	0.42
25:DA:19:C:H2'	25:DA:20:C:H6	1.84	0.42
25:DA:543:C:H2'	25:DA:545:G:O4'	2.19	0.42
25:DA:797:C:H2'	25:DA:798:G:H8	1.83	0.42
25:DA:878:A:C6	25:DA:900:A:N7	2.86	0.42
25:DA:1208:C:C4	25:DA:1209:G:N7	2.87	0.42
25:DA:1288:U:C2	25:DA:1327:C:O2	2.72	0.42
25:DA:1403:C:O5'	25:DA:1471:A:H1'	2.19	0.42
25:DA:1425:G:N2	25:DA:1573:G:N7	2.67	0.42
25:DA:1665:A:H4'	34:DO:67:LYS:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2051:A:H5'	25:DA:2578:G:O4'	2.20	0.42
25:DA:2365:G:O6	54:D8:39:LYS:HE3	2.19	0.42
27:DD:79:VAL:HG21	27:DD:111:LEU:HD11	2.02	0.42
30:DG:80:PHE:C	30:DG:82:LEU:H	2.17	0.42
30:DG:105:LYS:HB3	30:DG:142:PRO:HG3	2.01	0.42
31:DH:105:LEU:HD11	31:DH:148:ILE:HG23	2.01	0.42
40:DU:102:GLU:CG	41:DV:13:ARG:HH12	2.33	0.42
1:AA:342:C:C2'	1:AA:343:U:H5'	2.49	0.42
1:AA:926:G:C6	1:AA:1505:G:C6	3.08	0.42
1:AA:1007:C:C4	1:AA:1022:G:O6	2.72	0.42
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.20	0.42
1:AA:1399:C:C2	1:AA:1502:A:N6	2.87	0.42
1:AA:1442:G:HO2'	1:AA:1442(A):G:P	2.37	0.42
18:AR:66:LEU:O	18:AR:70:ILE:HG13	2.20	0.42
25:BA:694:G:N1	25:BA:696:C:O2	2.52	0.42
25:BA:1717:C:O2	28:BE:129:HIS:NE2	2.43	0.42
25:BA:1954:A:H2'	25:BA:1955:G:O4'	2.20	0.42
25:BA:2304:C:H2'	25:BA:2305:C:H6	1.83	0.42
25:BA:2372:A:H8	25:BA:2372:A:O5'	2.02	0.42
25:BA:2804:C:H2'	25:BA:2805:G:H8	1.81	0.42
26:BB:33:G:C2	26:BB:50:G:C2	3.07	0.42
36:BQ:39:PRO:HA	36:BQ:97:VAL:O	2.19	0.42
38:BS:4:LEU:HD23	38:BS:4:LEU:HA	1.64	0.42
39:BT:101:PHE:HD2	39:BT:105:LEU:HD11	1.83	0.42
1:CA:414:A:C5	1:CA:431:A:C2	3.07	0.42
1:CA:445:G:C6	1:CA:490:G:C6	3.08	0.42
1:CA:691:G:H2'	1:CA:692:U:C6	2.54	0.42
1:CA:922:G:C6	1:CA:923:A:C6	3.08	0.42
3:CC:3:ASN:OD1	3:CC:3:ASN:N	2.53	0.42
3:CC:19:GLU:O	3:CC:56:ASP:HA	2.19	0.42
3:CC:66:VAL:O	3:CC:101:LEU:HA	2.19	0.42
3:CC:118:GLN:HE21	3:CC:118:GLN:HB3	1.68	0.42
6:CF:35:ALA:HA	6:CF:67:MET:HB3	2.00	0.42
8:CH:111:ILE:C	8:CH:112:LEU:HD23	2.45	0.42
12:CL:77:LEU:HD23	12:CL:77:LEU:HA	1.84	0.42
15:CO:26:GLU:H	15:CO:26:GLU:HG2	1.53	0.42
18:CR:43:PHE:C	18:CR:51:LEU:HD12	2.45	0.42
25:DA:48:G:N2	25:DA:177:G:H21	2.18	0.42
25:DA:86:C:O2'	25:DA:87:C:H5'	2.20	0.42
25:DA:363:G:H2'	25:DA:363(A):A:H8	1.83	0.42
25:DA:861:A:H2'	25:DA:862:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1022:G:N7	33:DN:66:LYS:HE2	2.33	0.42
25:DA:1132:A:H2'	25:DA:1133:U:C6	2.55	0.42
25:DA:1287:A:H5"	25:DA:1288:U:OP2	2.20	0.42
25:DA:1540:U:C2'	25:DA:1541:G:H5'	2.49	0.42
25:DA:1794:U:H2'	25:DA:1795:C:C6	2.54	0.42
25:DA:1876:A:H2'	25:DA:1877:A:H8	1.81	0.42
25:DA:1991:U:H2'	25:DA:1992:G:H5"	2.01	0.42
25:DA:2262:U:H4'	25:DA:2328:A:H2	1.85	0.42
25:DA:2319:G:N2	38:DS:3:ARG:HA	2.34	0.42
25:DA:2355:C:H4'	46:D0:24:LYS:HG3	2.01	0.42
25:DA:2747:G:H21	25:DA:2757:A:H62	1.67	0.42
26:DB:83:G:H4'	49:D3:52:HIS:CG	2.55	0.42
27:DD:238:GLY:O	27:DD:239:ARG:O	2.37	0.42
30:DG:80:PHE:C	30:DG:82:LEU:N	2.77	0.42
36:DQ:56:ARG:HH11	36:DQ:56:ARG:CG	2.31	0.42
39:DT:16:ARG:HB2	39:DT:79:HIS:ND1	2.35	0.42
50:D4:19:GLY:O	50:D4:21:VAL:HG23	2.19	0.42
50:D4:61:ARG:HA	50:D4:61:ARG:HH11	1.84	0.42
1:AA:67:C:H4'	1:AA:172:A:O4'	2.20	0.42
1:AA:300:A:H2'	1:AA:301:G:O4'	2.19	0.42
1:AA:434:U:H2'	1:AA:435:C:C6	2.54	0.42
1:AA:445:G:C6	1:AA:446:G:C6	3.08	0.42
1:AA:538:G:O2'	1:AA:539:A:H5'	2.20	0.42
1:AA:541:G:O2'	1:AA:542:G:H5'	2.20	0.42
1:AA:769:G:H4'	1:AA:1513:A:H4'	2.01	0.42
1:AA:975:A:H4'	1:AA:976:G:C5'	2.44	0.42
1:AA:1137:C:H3'	1:AA:1137:C:H6	1.84	0.42
1:AA:1229:A:O2'	23:AX:30:G:OP1	2.35	0.42
15:AO:24:SER:OG	15:AO:25:THR:N	2.53	0.42
19:AS:65:ASN:HA	50:B4:58:ARG:HG3	2.00	0.42
20:AT:56:MET:HG3	20:AT:84:LEU:HD22	2.01	0.42
25:BA:1337:C:H2'	25:BA:1338:U:H6	1.85	0.42
25:BA:2802:C:O2	25:BA:2903:G:N1	2.49	0.42
31:BH:90:LYS:HD3	31:BH:159:GLU:HG2	2.01	0.42
31:BH:98:LEU:HD12	31:BH:98:LEU:HA	1.80	0.42
32:BI:38:LEU:HD12	32:BI:38:LEU:H	1.84	0.42
37:BR:33:ARG:HA	37:BR:114:VAL:O	2.19	0.42
39:BT:37:GLY:HA2	39:BT:38:ASN:HA	1.50	0.42
44:BY:86:ARG:HD2	44:BY:100:ALA:HA	2.02	0.42
1:CA:191:G:N2	20:CT:102:GLY:O	2.40	0.42
1:CA:532:A:H62	3:CC:156:ARG:NH1	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:688:G:C6	1:CA:700:G:C2	3.07	0.42
1:CA:841:U:OP1	1:CA:841:U:H6	2.01	0.42
1:CA:880:C:OP1	12:CL:8:ASN:ND2	2.49	0.42
1:CA:1006:C:C4	1:CA:1007:C:C5	3.08	0.42
1:CA:1227:A:H3'	1:CA:1227:A:C8	2.55	0.42
1:CA:1234:C:C2'	1:CA:1235:U:H5'	2.50	0.42
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.54	0.42
1:CA:1358:U:H2'	1:CA:1359:C:O4'	2.20	0.42
1:CA:1402:C:O2	1:CA:1500:A:N1	2.53	0.42
4:CD:12:CYS:SG	4:CD:19:LEU:HB2	2.59	0.42
7:CG:64:GLN:OE1	7:CG:64:GLN:HA	2.19	0.42
11:CK:80:VAL:HG22	11:CK:103:LEU:HB3	2.02	0.42
13:CM:40:ASN:HB3	13:CM:43:THR:HG23	2.01	0.42
13:CM:57:ARG:NH1	50:D4:34:GLU:HA	2.35	0.42
14:CN:27:CYS:HB3	14:CN:43:CYS:SG	2.59	0.42
19:CS:17:GLU:O	19:CS:21:GLU:N	2.43	0.42
25:DA:189:G:H2'	25:DA:205:G:N2	2.35	0.42
25:DA:484:C:H2'	25:DA:485:C:C6	2.54	0.42
25:DA:848:G:N9	25:DA:933:A:H8	2.18	0.42
25:DA:1378:A:OP1	53:D7:10:ARG:NH2	2.52	0.42
25:DA:1462:C:H4'	25:DA:2703:C:H5'	2.01	0.42
25:DA:2081:C:H2'	25:DA:2082:A:H8	1.85	0.42
25:DA:2360:A:H2'	25:DA:2361:A:O4'	2.20	0.42
27:DD:130:ALA:C	27:DD:131:LEU:HD12	2.44	0.42
30:DG:122:PRO:HB3	30:DG:170:ARG:NH2	2.34	0.42
32:DI:43:ASN:HD22	32:DI:43:ASN:C	2.28	0.42
32:DI:140:LEU:HD13	32:DI:142:VAL:HG13	2.01	0.42
38:DS:24:LEU:O	38:DS:85:VAL:HG23	2.19	0.42
44:DY:19:LYS:HB3	44:DY:19:LYS:HE2	1.91	0.42
50:D4:46:GLN:HB3	50:D4:48:ARG:HG2	2.01	0.42
1:AA:597:G:H5"	1:AA:598:U:OP2	2.19	0.42
1:AA:829:G:O2'	1:AA:830:G:H5'	2.19	0.42
1:AA:924:C:H2'	1:AA:925:G:H8	1.85	0.42
1:AA:993:G:N3	1:AA:993:G:H2'	2.34	0.42
1:AA:1104:G:C4	1:AA:1105:A:C8	3.08	0.42
1:AA:1261:A:H3'	1:AA:1262:C:C6	2.55	0.42
3:AC:32:LEU:HD13	3:AC:59:ARG:HD3	2.01	0.42
5:AE:33:VAL:HG13	5:AE:112:LEU:HD12	2.02	0.42
12:AL:33:ARG:HG2	12:AL:60:LEU:HD12	2.02	0.42
13:AM:4:ILE:HB	13:AM:57:ARG:HG3	2.02	0.42
16:AP:71:ARG:O	16:AP:75:ARG:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:415:G:O2'	25:BA:416:G:N7	2.48	0.42
25:BA:540:A:H2	25:BA:1306:G:N3	2.18	0.42
25:BA:1066:A:N1	25:BA:1186:U:O2'	2.51	0.42
25:BA:1183:G:H2'	25:BA:1184:G:O4'	2.20	0.42
25:BA:1212:C:H2'	25:BA:1213:U:H6	1.84	0.42
25:BA:1338:U:H2'	25:BA:1339:C:C6	2.55	0.42
25:BA:1740:U:H4'	25:BA:1741:C:OP2	2.19	0.42
25:BA:2081:A:O2'	29:BF:69:HIS:HD2	2.03	0.42
25:BA:2275:C:H2'	25:BA:2276:C:O4'	2.20	0.42
25:BA:2831:A:H2'	25:BA:2832:G:C8	2.55	0.42
26:BB:16:G:C6	26:BB:69:G:C2	3.07	0.42
28:BE:9:VAL:HB	39:BT:3:ARG:HG2	2.02	0.42
1:CA:407:G:H5"	4:CD:115:ARG:HB3	2.02	0.42
1:CA:885:G:O2'	1:CA:914:A:N1	2.39	0.42
1:CA:1086:U:C2'	1:CA:1087:G:H5'	2.49	0.42
1:CA:1325:C:O2'	1:CA:1326:C:H5'	2.20	0.42
2:CB:16:HIS:ND1	2:CB:17:PHE:N	2.66	0.42
4:CD:61:LYS:HA	4:CD:203:VAL:HG22	2.02	0.42
4:CD:156:GLU:O	4:CD:159:ARG:HB2	2.19	0.42
6:CF:30:LEU:H	6:CF:30:LEU:HG	1.57	0.42
8:CH:13:ILE:O	8:CH:17:THR:HG23	2.20	0.42
10:CJ:48:THR:HG1	10:CJ:62:HIS:CE1	2.37	0.42
13:CM:82:MET:O	13:CM:93:ARG:NH2	2.52	0.42
23:CX:27:U:O2	23:CX:44:A:C2	2.72	0.42
25:DA:20:C:OP1	40:DU:22:LYS:NZ	2.37	0.42
25:DA:284:U:H2'	25:DA:285:C:H6	1.83	0.42
25:DA:442:G:N2	29:DF:48:THR:O	2.52	0.42
25:DA:448:U:O4	25:DA:583:G:H1'	2.19	0.42
25:DA:539:G:H2'	25:DA:540:C:H6	1.81	0.42
25:DA:652(B):A:C2	25:DA:655:A:H1'	2.55	0.42
25:DA:784:A:P	61:DA:4065:HOH:O	2.78	0.42
25:DA:1140:C:H5'	33:DN:24:GLY:HA3	2.01	0.42
25:DA:1214:A:H61	25:DA:1235:G:H1'	1.85	0.42
25:DA:1299:G:C5	25:DA:1639:U:C5	3.07	0.42
25:DA:2203:U:O2'	25:DA:2205:C:H5'	2.20	0.42
25:DA:2265:U:C4	25:DA:2266:A:C5	3.08	0.42
25:DA:2291:U:H5"	25:DA:2380:C:H1'	2.01	0.42
25:DA:2519:U:C6	25:DA:2542:A:N6	2.88	0.42
25:DA:2788:C:H2'	25:DA:2789:C:C6	2.55	0.42
27:DD:264:LYS:HD3	27:DD:266:SER:OG	2.20	0.42
29:DF:29:ASN:O	29:DF:33:LEU:HD22	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DG:128:ARG:HE	30:DG:128:ARG:HB2	1.51	0.42
33:DN:42:TRP:HA	33:DN:48:MET:HE1	2.02	0.42
42:DW:14:PRO:HG2	42:DW:78:GLU:CG	2.45	0.42
46:D0:31:VAL:HG11	46:D0:37:LEU:HD21	2.01	0.42
1:AA:877:C:OP1	8:AH:88:LYS:NZ	2.45	0.42
1:AA:1034:G:H3'	1:AA:1035:A:H8	1.85	0.42
1:AA:1356:G:O2'	1:AA:1357:A:H5'	2.20	0.42
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.55	0.42
2:AB:93:VAL:HG21	2:AB:97:TRP:CD1	2.54	0.42
4:AD:155:LEU:HB3	4:AD:158:ILE:CD1	2.42	0.42
8:AH:40:ALA:CA	8:AH:45:ILE:HG13	2.49	0.42
10:AJ:50:ILE:HD11	10:AJ:57:LYS:HE3	2.02	0.42
15:AO:57:LEU:HD23	15:AO:57:LEU:HA	1.92	0.42
23:AX:8:U:H6	23:AX:8:U:O5'	2.03	0.42
25:BA:324:A:H2'	25:BA:358:C:H1'	2.01	0.42
25:BA:943:C:O5'	25:BA:943:C:H6	2.03	0.42
25:BA:1098:C:O5'	25:BA:1098:C:H6	2.03	0.42
25:BA:1506:G:H3'	25:BA:1507:A:H5"	2.02	0.42
25:BA:1541:A:C6	25:BA:1542:A:C6	3.08	0.42
25:BA:1737:A:H3'	25:BA:1738:C:H6	1.84	0.42
25:BA:2904:U:H2'	25:BA:2905:C:O4'	2.20	0.42
26:BB:33:G:N2	26:BB:50:G:C4	2.88	0.42
26:BB:82:G:C2'	26:BB:83:G:H5'	2.49	0.42
27:BD:223:GLY:HA3	27:BD:231:HIS:CE1	2.55	0.42
31:BH:56:SER:OG	31:BH:58:GLU:HG2	2.20	0.42
31:BH:125:VAL:HG12	31:BH:127:GLU:O	2.20	0.42
32:BI:87:LYS:HB2	32:BI:87:LYS:HE3	1.77	0.42
36:BQ:58:PHE:HB3	36:BQ:61:GLY:O	2.20	0.42
38:BS:10:ARG:HH21	38:BS:91:PRO:HB2	1.84	0.42
45:BZ:45:ASP:OD2	45:BZ:49:ARG:NH1	2.52	0.42
1:CA:147:G:N2	1:CA:148:G:C4	2.88	0.42
1:CA:407:G:O2'	4:CD:116:GLN:HG3	2.20	0.42
1:CA:453:A:C5	1:CA:454:C:C4	3.08	0.42
1:CA:622:A:H3'	1:CA:623:C:C6	2.54	0.42
1:CA:991:U:O4	1:CA:1212:U:H1'	2.20	0.42
1:CA:1053:G:N7	1:CA:1200:C:H5"	2.34	0.42
1:CA:1244:C:H42	1:CA:1293:G:H1	1.67	0.42
3:CC:23:TYR:HA	10:CJ:11:PHE:CD2	2.55	0.42
8:CH:124:ALA:O	8:CH:128:GLY:N	2.52	0.42
20:CT:63:ILE:HD13	20:CT:80:ARG:HB3	2.01	0.42
25:DA:29:U:H4'	40:DU:11:ARG:HH22	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:307:G:H21	25:DA:330:A:H62	1.68	0.42
25:DA:344:G:N2	25:DA:345:A:N6	2.68	0.42
25:DA:506:G:O3'	25:DA:507:A:H8	2.03	0.42
25:DA:852:G:H2'	25:DA:853:G:H8	1.83	0.42
25:DA:1394:U:C4	25:DA:1395:A:C5	3.07	0.42
25:DA:1593:G:C4	25:DA:1594:G:C8	3.07	0.42
25:DA:1857:G:C6	25:DA:1858:G:C6	3.08	0.42
25:DA:1885:A:H2'	25:DA:1886:C:O4'	2.20	0.42
25:DA:2097:C:H2'	25:DA:2098:U:C6	2.55	0.42
25:DA:2259:G:C2	25:DA:2282:G:C6	3.08	0.42
25:DA:2526:G:H5'	25:DA:2742:C:O2'	2.18	0.42
25:DA:2768:C:H2'	25:DA:2769:C:O4'	2.19	0.42
26:DB:46:A:C5	26:DB:47:C:C4	3.08	0.42
30:DG:114:ILE:HG23	30:DG:136:ARG:NH2	2.35	0.42
31:DH:12:PRO:O	31:DH:15:VAL:HG13	2.20	0.42
31:DH:123:PHE:CZ	31:DH:148:ILE:HD11	2.54	0.42
32:DI:83:ALA:HB1	32:DI:87:LYS:O	2.19	0.42
40:DU:59:ARG:HH11	40:DU:59:ARG:HB3	1.85	0.42
42:DW:50:VAL:HG21	42:DW:103:ILE:HB	2.01	0.42
43:DX:57:LEU:HD13	43:DX:78:LYS:HG3	2.02	0.42
45:DZ:67:LEU:HA	45:DZ:68:PRO:HD3	1.66	0.42
1:AA:105:G:H2'	1:AA:106:C:C6	2.55	0.42
1:AA:438:G:O2'	1:AA:493:G:C2	2.73	0.42
1:AA:1002:G:C6	1:AA:1003:G:C2	3.08	0.42
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.19	0.42
4:AD:91:SER:O	4:AD:94:LEU:HB2	2.20	0.42
10:AJ:19:SER:OG	10:AJ:91:PRO:HD2	2.19	0.42
12:AL:124:LYS:HA	12:AL:125:PRO:HD3	1.82	0.42
25:BA:918:U:OP1	36:BQ:5:ARG:HD3	2.20	0.42
25:BA:927:G:H1	25:BA:944:C:N4	2.16	0.42
25:BA:932:C:H3'	25:BA:933:C:C5'	2.46	0.42
25:BA:1093:G:O2'	25:BA:1094:A:H8	2.03	0.42
26:BB:103:G:O2'	45:BZ:73:GLN:NE2	2.52	0.42
31:BH:121:ILE:HD13	31:BH:121:ILE:HA	1.93	0.42
47:B1:60:PHE:HE2	47:B1:95:LEU:HD11	1.85	0.42
50:B4:63:TYR:HD1	50:B4:63:TYR:H	1.67	0.42
1:CA:834:C:H2'	1:CA:835:U:C6	2.55	0.42
1:CA:874:G:O2'	1:CA:875:C:H5'	2.20	0.42
1:CA:979:C:C2'	1:CA:980:C:H5'	2.50	0.42
1:CA:1066:C:H2'	1:CA:1067:A:C8	2.55	0.42
1:CA:1128:C:H1'	1:CA:1147:C:N4	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:114:ARG:NH1	2:CB:118:LEU:HD21	2.35	0.42
7:CG:85:TYR:HB3	7:CG:151:TYR:CE2	2.54	0.42
19:CS:58:VAL:HA	19:CS:59:PRO:HD2	1.82	0.42
23:CX:19:G:C4	23:CX:57:A:C2	3.08	0.42
25:DA:153:C:H2'	25:DA:154:G:O4'	2.19	0.42
25:DA:226:G:H21	25:DA:228:A:N6	2.13	0.42
25:DA:310:A:HO2'	25:DA:311:A:P	2.42	0.42
25:DA:521:G:O2'	25:DA:522:G:H5'	2.20	0.42
25:DA:600:G:N2	25:DA:605:C:O3'	2.52	0.42
25:DA:628:G:H2'	25:DA:629:G:C8	2.55	0.42
25:DA:776:G:H4'	25:DA:777:A:O5'	2.20	0.42
25:DA:1638:C:H4'	25:DA:2710:C:O2	2.19	0.42
25:DA:1698:A:C8	25:DA:1700:A:H5"	2.55	0.42
25:DA:2280:G:O2'	25:DA:2388:A:N1	2.46	0.42
25:DA:2391:G:O6	25:DA:2425:A:H8	2.02	0.42
25:DA:2500:U:H2'	25:DA:2504:U:C5	2.55	0.42
25:DA:2836:U:C4	25:DA:2883:A:N6	2.88	0.42
26:DB:15:A:OP2	26:DB:69:G:N2	2.52	0.42
28:DE:14:ILE:HG13	28:DE:21:VAL:HG13	2.01	0.42
36:DQ:75:THR:HA	36:DQ:89:ASN:O	2.19	0.42
39:DT:61:PHE:CZ	39:DT:76:PHE:HB2	2.55	0.42
47:D1:4:VAL:HG11	47:D1:11:ARG:NH1	2.34	0.42
1:AA:110:C:H2'	1:AA:111:G:O4'	2.20	0.42
1:AA:670:G:C2	1:AA:671:G:C4	3.07	0.42
1:AA:677:U:H3	1:AA:713:G:H22	1.68	0.42
1:AA:1117:G:H5"	9:AI:104:ARG:NH2	2.35	0.42
1:AA:1292:U:O2'	1:AA:1293:G:H5'	2.20	0.42
3:AC:112:SER:HB3	3:AC:115:LEU:HD22	2.01	0.42
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.19	0.42
20:AT:99:LEU:HA	20:AT:100:ILE:C	2.44	0.42
25:BA:26:G:C6	25:BA:27:G:N1	2.88	0.42
25:BA:552:C:C5	25:BA:2792:U:H2'	2.55	0.42
25:BA:815:G:C6	25:BA:816:G:C5	3.08	0.42
25:BA:1306:G:C6	25:BA:1307:C:C4	3.08	0.42
25:BA:2647:C:H2'	25:BA:2648:U:O4'	2.20	0.42
25:BA:2804:C:O2	25:BA:2816:G:N1	2.46	0.42
28:BE:167:VAL:CG1	28:BE:189:PRO:HD3	2.50	0.42
30:BG:43:LEU:HD12	30:BG:43:LEU:HA	1.89	0.42
32:BI:133:HIS:ND1	32:BI:134:PRO:O	2.52	0.42
45:BZ:126:VAL:HG13	45:BZ:161:VAL:HG23	2.02	0.42
1:CA:283:C:H2'	1:CA:284:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:402:G:C2'	1:CA:403:C:H5'	2.49	0.42
1:CA:434:U:H2'	1:CA:435:C:C6	2.55	0.42
1:CA:502:G:P	12:CL:116:SER:HA	2.60	0.42
1:CA:562:C:H1'	12:CL:15:ARG:HB3	2.02	0.42
1:CA:948:C:OP2	13:CM:108:ARG:HB2	2.20	0.42
1:CA:976:G:P	14:CN:32:SER:H	2.42	0.42
1:CA:1423:G:P	34:DO:49:ARG:HH12	2.43	0.42
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.20	0.42
3:CC:6:HIS:HA	3:CC:7:PRO:HD3	1.86	0.42
4:CD:112:VAL:HG22	4:CD:116:GLN:CD	2.45	0.42
4:CD:169:LYS:NZ	4:CD:169:LYS:HB3	2.35	0.42
6:CF:5:GLU:HG3	6:CF:93:SER:OG	2.20	0.42
15:CO:67:LEU:HD23	15:CO:67:LEU:HA	1.75	0.42
16:CP:5:ARG:CZ	16:CP:22:THR:HG21	2.50	0.42
25:DA:642:G:N2	25:DA:645:C:OP1	2.52	0.42
25:DA:735:A:C6	25:DA:736:C:C2	3.08	0.42
25:DA:1190:G:H5"	35:DP:32:THR:HA	2.01	0.42
25:DA:1447:G:N2	25:DA:1464:C:O2	2.30	0.42
25:DA:1639:U:C2'	25:DA:1640:C:H5"	2.50	0.42
25:DA:2283:C:C2	25:DA:2389:G:C2	3.08	0.42
25:DA:2615:U:OP1	61:DA:3945:HOH:O	2.20	0.42
25:DA:2761:G:H2'	25:DA:2761:G:N3	2.34	0.42
26:DB:75:G:N3	45:DZ:85:HIS:CE1	2.88	0.42
30:DG:114:ILE:HB	30:DG:117:PHE:HB2	2.01	0.42
31:DH:29:PRO:HG2	31:DH:80:SER:HA	2.02	0.42
51:D5:20:ARG:C	51:D5:22:HIS:H	2.27	0.42
1:AA:25:C:H2'	1:AA:26:A:C8	2.56	0.41
1:AA:41:G:C6	1:AA:402:G:C6	3.08	0.41
1:AA:393:A:OP2	16:AP:12:LYS:HD2	2.20	0.41
1:AA:428:G:O4'	1:AA:430:A:C8	2.74	0.41
1:AA:640:A:C2'	1:AA:641:U:H5'	2.49	0.41
1:AA:814:A:H2'	1:AA:816:A:H5"	2.02	0.41
1:AA:895:G:H2'	1:AA:896:C:C6	2.55	0.41
1:AA:935:A:C2	1:AA:936:C:C2	3.08	0.41
1:AA:1277:C:O2'	1:AA:1279:A:H1'	2.19	0.41
3:AC:114:PRO:O	3:AC:118:GLN:NE2	2.53	0.41
14:AN:37:PHE:HB3	14:AN:39:LEU:HD12	2.02	0.41
15:AO:74:ASP:OD2	15:AO:77:ARG:HG3	2.20	0.41
20:AT:53:LEU:HD13	20:AT:100:ILE:O	2.20	0.41
25:BA:234:G:H2'	25:BA:235:C:H6	1.84	0.41
25:BA:316:C:C2	25:BA:373:G:C2	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:491:G:H2'	25:BA:492:A:C8	2.55	0.41
25:BA:504:A:C6	25:BA:506:A:C6	3.08	0.41
25:BA:714:U:O2	54:B8:2:PRO:HD2	2.20	0.41
25:BA:1066:A:H4'	25:BA:1067:A:O5'	2.20	0.41
25:BA:2235:G:OP1	27:BD:172:TYR:OH	2.36	0.41
25:BA:2860:A:C2	25:BA:2861:A:C4	3.08	0.41
27:BD:218:ARG:HB3	27:BD:219:PRO:HD2	2.02	0.41
49:B3:44:ARG:O	49:B3:48:GLU:HG3	2.20	0.41
55:B9:28:GLU:O	55:B9:30:PRO:HD3	2.18	0.41
1:CA:66:G:C2	1:CA:67:C:C6	3.08	0.41
1:CA:310:G:C5'	16:CP:31:LYS:HB2	2.50	0.41
1:CA:872:A:C2	1:CA:874:G:C6	3.08	0.41
1:CA:1286:A:H2'	1:CA:1287:A:H4'	2.01	0.41
1:CA:1330:U:O3'	13:CM:23:TYR:HE1	2.03	0.41
2:CB:134:GLU:O	2:CB:138:LEU:HG	2.20	0.41
3:CC:8:ILE:HG22	14:CN:49:HIS:O	2.20	0.41
3:CC:107:GLN:O	3:CC:108:ASN:C	2.63	0.41
5:CE:31:LEU:HD23	5:CE:31:LEU:HA	1.73	0.41
5:CE:66:MET:HE3	5:CE:66:MET:HB3	1.95	0.41
5:CE:93:PRO:HG2	8:CH:105:ARG:NE	2.34	0.41
11:CK:33:THR:HA	11:CK:39:PRO:HA	2.02	0.41
12:CL:123:LYS:H	12:CL:123:LYS:HG2	1.52	0.41
25:DA:118:A:H1'	25:DA:178:G:O4'	2.19	0.41
25:DA:271(H):G:H2'	25:DA:271(I):G:C8	2.53	0.41
25:DA:328:U:H4'	44:DY:68:HIS:CD2	2.55	0.41
25:DA:665:C:H2'	25:DA:666:G:H8	1.84	0.41
25:DA:704:G:N3	25:DA:726:G:C2	2.87	0.41
25:DA:724:U:H2'	25:DA:725:G:O4'	2.20	0.41
25:DA:875:G:N2	25:DA:903:C:C2	2.88	0.41
25:DA:966:G:H2'	25:DA:967:C:H6	1.85	0.41
25:DA:1188:U:C4'	41:DV:79:VAL:HG22	2.50	0.41
25:DA:1266:G:C8	42:DW:15:ARG:NH2	2.87	0.41
25:DA:1298:C:H5"	25:DA:1299:G:OP2	2.20	0.41
25:DA:1434:A:H2'	25:DA:1435:G:O4'	2.20	0.41
25:DA:1708:C:O2'	25:DA:1709:U:H5'	2.20	0.41
25:DA:2292:C:H4'	25:DA:2375:G:H4'	2.01	0.41
25:DA:2335:A:C8	25:DA:2337:G:N7	2.88	0.41
25:DA:2671:A:H2'	25:DA:2672:G:O4'	2.20	0.41
25:DA:2685:G:H5'	34:DO:68:GLU:OE1	2.19	0.41
25:DA:2850:A:H5'	25:DA:2868:A:C2	2.55	0.41
26:DB:33:G:N3	26:DB:50:G:C2	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DH:169:VAL:HG12	31:DH:171:LEU:CD2	2.50	0.41
32:DI:45:LYS:O	32:DI:49:ALA:N	2.50	0.41
33:DN:38:HIS:O	40:DU:67:ALA:HB1	2.20	0.41
36:DQ:59:ARG:O	36:DQ:61:GLY:N	2.39	0.41
42:DW:82:LEU:HD22	42:DW:84:ARG:HH22	1.84	0.41
43:DX:5:TYR:CE1	48:D2:30:ARG:HB2	2.55	0.41
46:D0:24:LYS:O	46:D0:25:ARG:HD3	2.20	0.41
1:AA:677:U:H6	1:AA:677:U:O5'	2.03	0.41
1:AA:1125:U:N3	1:AA:1127:G:C6	2.89	0.41
1:AA:1131:G:H8	1:AA:1131:G:O5'	2.03	0.41
2:AB:187:LEU:HD23	2:AB:201:ILE:HB	2.02	0.41
4:AD:99:SER:O	4:AD:140:VAL:HG23	2.20	0.41
4:AD:110:PHE:N	4:AD:110:PHE:CD1	2.88	0.41
6:AF:12:PRO:HG3	6:AF:57:GLN:O	2.20	0.41
20:AT:43:LEU:HD12	20:AT:55:ILE:HG13	2.01	0.41
25:BA:18:C:O2'	25:BA:577:U:OP1	2.35	0.41
25:BA:875:U:C5	25:BA:2259:A:H4'	2.55	0.41
25:BA:1159:U:H2'	25:BA:1160:G:C8	2.55	0.41
25:BA:1577:C:O2'	25:BA:1578:C:P	2.76	0.41
27:BD:72:LYS:HD3	27:BD:97:TYR:CE2	2.55	0.41
28:BE:52:LEU:HD12	28:BE:77:ILE:HD13	2.01	0.41
29:BF:11:VAL:HB	29:BF:18:ARG:HB3	2.01	0.41
32:BI:104:GLN:HG3	32:BI:105:HIS:CD2	2.55	0.41
36:BQ:52:VAL:HA	36:BQ:55:VAL:HG13	2.02	0.41
44:BY:91:GLU:N	44:BY:91:GLU:CD	2.78	0.41
45:BZ:125:LEU:HG	45:BZ:164:ALA:HB3	2.01	0.41
49:B3:3:ARG:HD3	49:B3:60:GLU:OE2	2.20	0.41
54:B8:54:GLU:O	54:B8:58:ILE:HG13	2.20	0.41
1:CA:194:C:H5"	1:CA:195:A:OP2	2.20	0.41
1:CA:348:G:C2	1:CA:349:A:C5	3.08	0.41
1:CA:454:C:N4	1:CA:479:C:N3	2.68	0.41
1:CA:857:C:H2'	1:CA:858:G:O4'	2.20	0.41
1:CA:872:A:C4	1:CA:874:G:N7	2.88	0.41
1:CA:983:A:H3'	1:CA:983:A:N3	2.36	0.41
1:CA:991:U:H3'	1:CA:1212:U:C4	2.55	0.41
1:CA:999:C:H3'	1:CA:1000:U:C5	2.55	0.41
1:CA:1005:A:H8	1:CA:1005:A:O5'	2.03	0.41
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.54	0.41
1:CA:1054:C:H6	1:CA:1054:C:H2'	1.49	0.41
1:CA:1063:C:H3'	1:CA:1064:G:H2'	2.02	0.41
1:CA:1118:C:C2	1:CA:1119:C:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1228:C:OP2	13:CM:111:LYS:HD3	2.20	0.41
1:CA:1252:A:H61	1:CA:1285:A:H61	1.67	0.41
2:CB:229:VAL:HG12	2:CB:230:VAL:N	2.35	0.41
5:CE:28:PHE:O	5:CE:47:LYS:HA	2.20	0.41
8:CH:82:HIS:HB3	8:CH:138:TRP:NE1	2.35	0.41
15:CO:54:ARG:HH11	15:CO:58:MET:CE	2.33	0.41
25:DA:322:A:P	29:DF:169:ASN:HB2	2.60	0.41
25:DA:328:U:H4'	44:DY:68:HIS:CG	2.55	0.41
25:DA:556:G:C6	25:DA:557:U:C4	3.08	0.41
25:DA:576:U:H2'	25:DA:577:G:C8	2.54	0.41
25:DA:864:G:C6	25:DA:865:C:N4	2.88	0.41
25:DA:1163:G:C2	25:DA:1164:G:C8	3.08	0.41
25:DA:1774:C:H5"	25:DA:1775:U:OP2	2.20	0.41
25:DA:1815:A:C6	25:DA:1817:G:C6	3.08	0.41
25:DA:2271:G:OP1	46:D0:18:ALA:HB1	2.20	0.41
25:DA:2801(A):A:N3	25:DA:2895:U:H1'	2.35	0.41
29:DF:172:TRP:CD1	29:DF:172:TRP:H	2.38	0.41
30:DG:181:ARG:CZ	30:DG:181:ARG:HB3	2.49	0.41
32:DI:62:LYS:HG2	32:DI:133:HIS:CE1	2.54	0.41
41:DV:58:VAL:HG21	41:DV:100:ARG:NH1	2.35	0.41
47:D1:95:LEU:O	47:D1:98:LEU:HB2	2.20	0.41
50:D4:46:GLN:C	50:D4:48:ARG:N	2.72	0.41
1:AA:142:G:H2'	1:AA:143:A:H8	1.85	0.41
1:AA:481:G:H1'	1:AA:483:C:N4	2.36	0.41
1:AA:840:C:H4'	1:AA:841:U:OP1	2.20	0.41
1:AA:1071:C:H5"	5:AE:49:PRO:HG2	2.02	0.41
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.21	0.41
2:AB:24:TRP:H	2:AB:24:TRP:HD1	1.68	0.41
2:AB:211:ILE:H	2:AB:211:ILE:HG13	1.68	0.41
3:AC:11:ARG:HD3	3:AC:15:THR:CB	2.51	0.41
3:AC:32:LEU:HD13	3:AC:59:ARG:NH1	2.35	0.41
3:AC:52:LEU:HA	3:AC:70:VAL:HG22	2.01	0.41
4:AD:13:ARG:NH2	4:AD:40:PRO:HA	2.35	0.41
4:AD:13:ARG:HB2	4:AD:40:PRO:HD3	2.02	0.41
8:AH:58:TYR:O	8:AH:59:LEU:HD23	2.20	0.41
25:BA:266:C:H2'	25:BA:267:C:O4'	2.21	0.41
25:BA:922:G:H1	25:BA:948:C:N4	2.18	0.41
25:BA:1096:A:H2'	25:BA:1096:A:N3	2.35	0.41
25:BA:1470:G:H2'	25:BA:1471:G:O4'	2.20	0.41
25:BA:1744:G:OP2	25:BA:1745:A:O2'	2.32	0.41
25:BA:1836:U:O2	27:BD:50:THR:HB	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2045:G:H5'	25:BA:2629:C:H4'	2.03	0.41
25:BA:2589:A:O4'	51:B5:3:LYS:HB2	2.20	0.41
25:BA:2711:C:H2'	25:BA:2712:C:O4'	2.20	0.41
25:BA:2901:A:N6	25:BA:2902:G:N1	2.67	0.41
25:BA:2902:G:H4'	25:BA:2903:G:O5'	2.21	0.41
27:BD:68:LYS:HD2	27:BD:70:TRP:CH2	2.55	0.41
30:BG:9:ARG:O	30:BG:13:GLU:HG2	2.20	0.41
31:BH:6:ARG:HE	31:BH:6:ARG:HB3	1.57	0.41
39:BT:1:MET:HE3	39:BT:1:MET:HB2	1.87	0.41
42:BW:38:TYR:CE1	51:B5:41:PRO:HD3	2.56	0.41
46:B0:12:ASN:O	46:B0:14:ARG:N	2.52	0.41
50:B4:62:ARG:HB2	50:B4:63:TYR:HD1	1.82	0.41
1:CA:340:U:H2'	1:CA:341:C:C6	2.55	0.41
1:CA:489:C:H2'	1:CA:490:G:H8	1.85	0.41
1:CA:503:C:H2'	1:CA:504:C:H6	1.85	0.41
1:CA:1188:A:H2'	1:CA:1189:C:O4'	2.21	0.41
1:CA:1311:G:H1	1:CA:1326:C:N4	2.18	0.41
2:CB:215:LEU:HD23	2:CB:215:LEU:HA	1.67	0.41
4:CD:63:LYS:HG3	4:CD:198:VAL:CG2	2.50	0.41
7:CG:47:CYS:O	7:CG:50:ILE:HG12	2.20	0.41
7:CG:78:ARG:HG2	7:CG:79:ARG:HB2	2.03	0.41
8:CH:104:ARG:HG3	8:CH:138:TRP:CD2	2.55	0.41
10:CJ:8:LEU:HD23	10:CJ:96:ILE:HG23	2.03	0.41
10:CJ:49:VAL:HG23	14:CN:41:ARG:HD2	2.01	0.41
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.20	0.41
25:DA:662:G:H2'	25:DA:663:G:H8	1.85	0.41
25:DA:686:G:N2	25:DA:788:A:H61	2.18	0.41
25:DA:799:G:H3'	25:DA:800:A:H2'	2.03	0.41
25:DA:950:G:C6	25:DA:951:C:C4	3.08	0.41
25:DA:2055:C:H5'	25:DA:2056:G:O5'	2.20	0.41
25:DA:2274:A:C5	25:DA:2276:G:C8	3.08	0.41
25:DA:2285:C:C2	25:DA:2384:G:N2	2.88	0.41
25:DA:2744:G:C2	25:DA:2761:G:C4	3.08	0.41
26:DB:21:G:H2'	26:DB:22:U:O4'	2.20	0.41
26:DB:33:G:H1'	26:DB:50:G:H22	1.85	0.41
30:DG:31:VAL:HA	30:DG:32:PRO:HD2	1.87	0.41
37:DR:100:LEU:HD12	37:DR:100:LEU:HA	1.90	0.41
45:DZ:146:ILE:H	45:DZ:146:ILE:HG13	1.58	0.41
47:D1:83:GLU:HA	47:D1:84:GLY:HA2	1.58	0.41
1:AA:109:A:H2'	1:AA:326:G:H21	1.86	0.41
1:AA:113:G:H2'	1:AA:114:U:H6	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:119:A:C5	1:AA:240:C:C4	3.08	0.41
1:AA:347:G:H21	1:AA:348:G:H3'	1.85	0.41
1:AA:376:G:H2'	1:AA:377:G:C8	2.56	0.41
1:AA:401:C:H2'	1:AA:402:G:H8	1.86	0.41
1:AA:1286:A:H2	21:AU:18:TYR:HH	1.64	0.41
1:AA:1491:G:H5"	1:AA:1492:A:OP2	2.20	0.41
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.55	0.41
5:AE:57:LYS:HD3	5:AE:61:TYR:CE2	2.55	0.41
7:AG:69:VAL:O	7:AG:69:VAL:HG12	2.19	0.41
7:AG:104:LEU:HD13	7:AG:104:LEU:HA	1.84	0.41
8:AH:75:ARG:HA	8:AH:76:PRO:HD2	1.84	0.41
23:AX:50:U:H2'	23:AX:51:C:C6	2.55	0.41
23:AX:61:C:H2'	23:AX:62:C:C6	2.54	0.41
25:BA:213:G:H2'	25:BA:214:A:O4'	2.20	0.41
25:BA:289:G:H2'	25:BA:290:G:H8	1.83	0.41
25:BA:553:A:C2	25:BA:2065:C:H4'	2.55	0.41
25:BA:873:U:H2'	25:BA:875:U:O4'	2.20	0.41
25:BA:1314:A:C2	25:BA:2035:A:C4	3.08	0.41
25:BA:1343:C:OP1	25:BA:2722:C:H4'	2.20	0.41
25:BA:1882:U:C4	25:BA:1883:C:C4	3.09	0.41
26:BB:85:G:H5"	26:BB:85:G:H8	1.85	0.41
27:BD:71:ASP:HB3	27:BD:103:ARG:NH2	2.21	0.41
27:BD:253:GLN:HE21	27:BD:253:GLN:HB3	1.56	0.41
28:BE:4:ILE:HG12	28:BE:5:LEU:N	2.35	0.41
30:BG:126:ASP:HB3	30:BG:130:ASN:H	1.85	0.41
37:BR:55:ALA:HB2	37:BR:79:LEU:HD13	2.02	0.41
37:BR:100:LEU:HD12	37:BR:100:LEU:HA	1.93	0.41
50:B4:49:PHE:HB3	50:B4:50:VAL:H	1.37	0.41
1:CA:147:G:O2'	1:CA:148:G:P	2.79	0.41
1:CA:780:A:N3	1:CA:803:G:N1	2.67	0.41
1:CA:983:A:H2	1:CA:984:C:C6	2.38	0.41
1:CA:1157:A:N6	1:CA:1180:A:N3	2.67	0.41
2:CB:80:ILE:HD13	2:CB:80:ILE:O	2.20	0.41
5:CE:67:VAL:HG13	5:CE:69:VAL:HG12	2.03	0.41
8:CH:73:ASP:OD1	8:CH:75:ARG:HD3	2.20	0.41
9:CI:89:ASN:O	9:CI:92:TYR:HB2	2.19	0.41
9:CI:95:LYS:HA	9:CI:99:LEU:HD13	2.02	0.41
24:CW:3:004:HA	24:CW:4:PRO:HD3	1.73	0.41
24:CW:8:2R3:H67	24:CW:8:2R3:H69	1.81	0.41
25:DA:207:A:H2'	25:DA:208:C:O4'	2.21	0.41
25:DA:460:A:C2	25:DA:470:A:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:569:U:C4	25:DA:570:G:C6	3.08	0.41
25:DA:1478:G:C2	25:DA:1479:G:C8	3.09	0.41
25:DA:1587:A:H2'	25:DA:1588:C:C6	2.55	0.41
25:DA:1664:A:OP1	61:DA:4387:HOH:O	2.21	0.41
25:DA:1721:G:H5'	25:DA:1722:A:OP2	2.20	0.41
25:DA:1959:G:C6	25:DA:1960:A:C5	3.08	0.41
25:DA:2850:A:H5'	25:DA:2868:A:H2	1.85	0.41
29:DF:117:ARG:NH2	29:DF:187:VAL:HA	2.35	0.41
31:DH:87:LEU:HD23	31:DH:164:TYR:HA	2.02	0.41
34:DO:104:ARG:NH2	34:DO:121:VAL:O	2.54	0.41
39:DT:64:ARG:HB2	39:DT:73:GLU:HG2	2.02	0.41
40:DU:17:ILE:HD12	40:DU:17:ILE:HG23	1.73	0.41
45:DZ:75:ASN:O	45:DZ:84:GLU:N	2.35	0.41
46:D0:19:LYS:HE2	46:D0:19:LYS:HB2	1.46	0.41
48:D2:44:LEU:HD23	48:D2:47:ASN:HA	2.02	0.41
1:AA:112:G:H21	1:AA:354:G:C4'	2.34	0.41
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.38	0.41
1:AA:310:G:H5"	16:AP:31:LYS:HB2	2.03	0.41
1:AA:946:A:C6	1:AA:947:G:C6	3.09	0.41
1:AA:955:U:H2'	1:AA:956:U:O4'	2.20	0.41
1:AA:1153:C:H2'	1:AA:1154:G:H5"	2.03	0.41
2:AB:30:ARG:HG3	2:AB:31:TYR:CD1	2.55	0.41
4:AD:141:ARG:HG3	4:AD:144:ASP:OD2	2.20	0.41
6:AF:91:VAL:HG12	6:AF:92:LYS:O	2.20	0.41
10:AJ:57:LYS:HD2	10:AJ:60:ARG:NH2	2.36	0.41
23:AX:8:U:O2	23:AX:21:A:H2	2.03	0.41
25:BA:501:U:C4	25:BA:507:G:O6	2.74	0.41
25:BA:672:G:O2'	25:BA:2363:G:H4'	2.21	0.41
25:BA:865:G:H4'	25:BA:885:C:O3'	2.20	0.41
25:BA:922:G:H2'	25:BA:923:C:O4'	2.20	0.41
25:BA:1298:G:C2	25:BA:1299:A:C2	3.08	0.41
25:BA:1933:U:H2'	25:BA:1940:A:N1	2.35	0.41
25:BA:2745:G:OP1	28:BE:203:LYS:NZ	2.46	0.41
25:BA:2814:C:H2'	25:BA:2815:C:O4'	2.20	0.41
25:BA:2906:U:O2	25:BA:2906:U:H2'	2.21	0.41
27:BD:72:LYS:HB3	27:BD:72:LYS:HE3	1.85	0.41
28:BE:111:ARG:HA	37:BR:1:MET:SD	2.61	0.41
34:BO:98:VAL:HG11	34:BO:114:ILE:HG23	2.03	0.41
36:BQ:18:LYS:HB2	36:BQ:18:LYS:HE3	1.67	0.41
38:BS:19:LYS:HG2	38:BS:19:LYS:H	1.76	0.41
44:BY:1:MET:HE3	44:BY:1:MET:HB2	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:402:G:H2'	1:CA:403:C:H5'	2.01	0.41
1:CA:406:G:N2	4:CD:119:GLN:HE22	2.18	0.41
1:CA:544:G:C2	1:CA:545:C:C2	3.08	0.41
1:CA:1133:G:N2	1:CA:1141:C:N3	2.69	0.41
1:CA:1155:G:C6	1:CA:1156:G:C2	3.09	0.41
1:CA:1240:U:OP2	7:CG:115:ARG:HA	2.20	0.41
1:CA:1392:G:N2	1:CA:1502:A:H8	2.19	0.41
2:CB:30:ARG:HG3	2:CB:31:TYR:CD1	2.55	0.41
4:CD:138:TYR:CD1	4:CD:138:TYR:C	2.98	0.41
4:CD:173:TRP:CE2	4:CD:189:PRO:HG3	2.56	0.41
7:CG:12:LEU:O	7:CG:21:VAL:HG12	2.21	0.41
8:CH:97:VAL:HA	8:CH:100:ILE:HD11	2.01	0.41
9:CI:33:PHE:CD1	9:CI:33:PHE:C	2.98	0.41
12:CL:28:LYS:N	12:CL:29:GLY:HA2	2.35	0.41
12:CL:42:THR:HA	12:CL:53:ARG:O	2.21	0.41
20:CT:89:ARG:O	20:CT:93:GLU:HB2	2.19	0.41
25:DA:398:G:H2'	25:DA:399:G:O4'	2.20	0.41
25:DA:527:C:H4'	25:DA:528:A:O5'	2.20	0.41
25:DA:575:A:OP2	25:DA:2055:C:N4	2.36	0.41
25:DA:678:C:H2'	25:DA:679:C:C6	2.55	0.41
25:DA:1009:A:O4'	40:DU:59:ARG:HG2	2.20	0.41
25:DA:1344:G:O2'	25:DA:1385:G:H2'	2.20	0.41
25:DA:1380:G:N3	25:DA:1380:G:H2'	2.36	0.41
25:DA:1814:G:H4'	27:DD:51:VAL:HG21	2.02	0.41
25:DA:2558:C:H2'	25:DA:2559:C:O4'	2.20	0.41
25:DA:2756:U:H5"	55:D9:19:ARG:HB3	2.02	0.41
25:DA:2807:G:C2	25:DA:2893:G:O6	2.73	0.41
27:DD:68:LYS:O	27:DD:69:ARG:HB2	2.20	0.41
30:DG:176:LEU:HD23	30:DG:176:LEU:HA	1.77	0.41
34:DO:98:VAL:HG22	34:DO:118:ALA:HA	2.02	0.41
44:DY:5:MET:HG2	44:DY:30:VAL:HG11	2.03	0.41
45:DZ:163:LEU:HA	45:DZ:163:LEU:HD12	1.77	0.41
1:AA:92:C:H2'	1:AA:93:G:O4'	2.21	0.41
1:AA:145:G:C6	1:AA:146:G:N7	2.88	0.41
1:AA:401:C:H2'	1:AA:402:G:C8	2.56	0.41
1:AA:553:A:H2'	1:AA:554:C:C6	2.55	0.41
4:AD:108:LEU:HD12	4:AD:108:LEU:HA	1.90	0.41
4:AD:175:SER:OG	4:AD:184:LYS:HB2	2.20	0.41
6:AF:100:ASN:H	18:AR:23:LYS:NZ	2.17	0.41
8:AH:6:ILE:O	8:AH:10:LEU:HG	2.21	0.41
9:AI:18:PHE:O	9:AI:61:ALA:HA	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:7:ILE:O	12:AL:11:VAL:HG23	2.20	0.41
13:AM:3:ARG:CG	13:AM:8:GLU:HA	2.51	0.41
15:AO:18:PHE:CZ	15:AO:21:ASP:HB2	2.56	0.41
17:AQ:45:HIS:NE2	17:AQ:47:PRO:HG3	2.35	0.41
25:BA:402:C:H2'	25:BA:403:C:C6	2.56	0.41
25:BA:1074:A:H61	25:BA:1171:G:H2'	1.84	0.41
25:BA:1988:A:H1'	61:BA:4655:HOH:O	2.21	0.41
25:BA:2050:U:H2'	25:BA:2051:G:O4'	2.21	0.41
25:BA:2226:C:O2	25:BA:2232:G:C2	2.74	0.41
25:BA:2240:G:C5	25:BA:2241:C:C4	3.08	0.41
25:BA:2321:A:H2'	25:BA:2322:A:C8	2.56	0.41
25:BA:2544:G:O2'	25:BA:2669:A:N1	2.48	0.41
29:BF:29:ASN:H	29:BF:112:MET:CE	2.34	0.41
32:BI:37:VAL:CG1	32:BI:38:LEU:HD12	2.51	0.41
34:BO:4:PRO:O	34:BO:5:GLN:HB2	2.20	0.41
1:CA:97:G:O2'	1:CA:98:G:O4'	2.37	0.41
1:CA:245:C:O2	1:CA:283:C:N3	2.53	0.41
1:CA:300:A:H2'	1:CA:301:G:O4'	2.20	0.41
1:CA:471:G:H2'	1:CA:471:G:N3	2.36	0.41
1:CA:539:A:C6	1:CA:540:G:C6	3.08	0.41
1:CA:784:C:H2'	1:CA:785:G:O4'	2.21	0.41
1:CA:1084:G:C5	1:CA:1085:U:C4	3.09	0.41
1:CA:1168:A:N1	1:CA:1169:A:C6	2.89	0.41
1:CA:1385:G:C4	1:CA:1386:G:C8	3.09	0.41
4:CD:13:ARG:HB2	4:CD:40:PRO:HD3	2.02	0.41
5:CE:40:ARG:NH2	5:CE:68:GLU:HA	2.23	0.41
5:CE:41:VAL:O	5:CE:67:VAL:HG12	2.20	0.41
8:CH:64:LYS:HD2	8:CH:79:VAL:HG21	2.02	0.41
9:CI:5:TYR:OH	9:CI:16:ARG:HG2	2.20	0.41
13:CM:77:ASN:O	13:CM:81:LEU:HD12	2.21	0.41
23:CX:3:C:H5'	25:DA:2255:G:O2'	2.20	0.41
25:DA:322:A:C5	25:DA:340:A:C2	3.09	0.41
25:DA:471:A:H8	25:DA:471:A:O5'	2.02	0.41
25:DA:574:C:N3	28:DE:145:LYS:HE3	2.36	0.41
25:DA:872:A:P	36:DQ:5:ARG:HH12	2.44	0.41
25:DA:942:G:O2'	25:DA:943:U:H5'	2.21	0.41
25:DA:1337:G:H2'	25:DA:1338:G:C8	2.53	0.41
25:DA:1430:C:H2'	25:DA:1431:U:H6	1.81	0.41
25:DA:1785:A:C8	25:DA:1787:A:C5	3.08	0.41
25:DA:2298:A:H8	25:DA:2299:G:C8	2.37	0.41
27:DD:228:PRO:HD3	27:DD:235:GLY:CA	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DE:29:GLY:HA2	28:DE:30:PRO:HA	1.84	0.41
29:DF:155:LEU:HB2	29:DF:189:THR:HG21	2.03	0.41
35:DP:44:GLY:CA	35:DP:45:LEU:HB2	2.51	0.41
38:DS:68:GLN:O	38:DS:71:ARG:HG3	2.20	0.41
44:DY:9:LYS:HA	44:DY:10:GLY:HA2	1.51	0.41
55:D9:27:CYS:SG	55:D9:28:GLU:N	2.94	0.41
1:AA:197:A:N6	1:AA:221:C:H5'	2.35	0.41
1:AA:332:G:OP2	20:AT:10:LEU:HD13	2.20	0.41
1:AA:631:G:H2'	1:AA:632:A:H8	1.85	0.41
1:AA:633:G:H2'	1:AA:634:C:C6	2.56	0.41
1:AA:951:G:N7	13:AM:102:ARG:NH2	2.68	0.41
1:AA:1106:G:C5	1:AA:1107:C:C5	3.09	0.41
1:AA:1289:A:H2	1:AA:1372:U:O4'	2.04	0.41
1:AA:1380:U:C4	7:AG:3:ARG:HG2	2.56	0.41
4:AD:3:ARG:HH12	4:AD:5:ILE:HG13	1.85	0.41
10:AJ:64:GLU:HG2	14:AN:59:ALA:HB2	2.02	0.41
11:AK:18:ARG:NH2	11:AK:35:PRO:O	2.41	0.41
12:AL:24:VAL:HG12	12:AL:24:VAL:O	2.20	0.41
12:AL:79:GLU:HB3	12:AL:80:HIS:CD2	2.56	0.41
13:AM:67:GLU:HB3	13:AM:68:GLY:H	1.65	0.41
25:BA:116:A:H3'	25:BA:117:A:C5'	2.49	0.41
25:BA:364:A:H2'	25:BA:365:G:O4'	2.21	0.41
25:BA:702:A:H8	25:BA:703:G:O4'	2.04	0.41
25:BA:1018:A:H5'	25:BA:1233:U:H1'	2.03	0.41
25:BA:1733:C:H2'	25:BA:1734:G:O4'	2.21	0.41
25:BA:2631:C:H4'	28:BE:151:TYR:O	2.21	0.41
25:BA:2701:U:OP2	25:BA:2732:G:N2	2.43	0.41
30:BG:48:GLU:HA	30:BG:51:ARG:NE	2.31	0.41
31:BH:86:GLU:HB3	31:BH:165:ALA:HB2	2.02	0.41
34:BO:104:ARG:NH2	39:BT:43:GLN:OE1	2.54	0.41
36:BQ:7:MET:HE3	36:BQ:7:MET:HB2	1.57	0.41
42:BW:9:TYR:H	42:BW:102:HIS:CE1	2.38	0.41
42:BW:20:VAL:O	42:BW:23:LEU:HB2	2.20	0.41
45:BZ:13:GLU:HB3	45:BZ:18:LEU:HD21	2.02	0.41
1:CA:19:C:H5"	5:CE:86:ALA:HB3	2.02	0.41
1:CA:540:G:H8	1:CA:540:G:O5'	2.04	0.41
1:CA:652:U:O2'	1:CA:653:A:OP2	2.27	0.41
1:CA:853:G:C4	1:CA:854:G:C8	3.09	0.41
1:CA:1009:G:N2	1:CA:1010:G:H1'	2.36	0.41
1:CA:1039:C:N4	1:CA:1040:U:O4	2.54	0.41
4:CD:14:ARG:HB2	4:CD:40:PRO:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:16:ASP:HB3	13:CM:34:LEU:CD1	2.50	0.41
25:DA:127:A:H5"	25:DA:128:C:C6	2.55	0.41
25:DA:411:G:C4	35:DP:72:PRO:HB3	2.56	0.41
25:DA:647:G:H8	25:DA:647:G:O5'	2.04	0.41
25:DA:2398:U:H2'	25:DA:2399:G:C8	2.56	0.41
25:DA:2730:C:H4'	28:DE:168:MET:O	2.20	0.41
25:DA:2850:A:OP2	25:DA:2866:U:H5	2.03	0.41
29:DF:13:SER:HB2	29:DF:15:SER:H	1.84	0.41
30:DG:11:TYR:OH	30:DG:16:ARG:HD3	2.21	0.41
36:DQ:4:PRO:HG3	36:DQ:69:PHE:HE2	1.86	0.41
37:DR:113:LEU:HD12	37:DR:113:LEU:O	2.20	0.41
39:DT:26:ASP:OD1	39:DT:91:ARG:HA	2.21	0.41
45:DZ:95:PRO:HA	45:DZ:129:SER:HA	2.02	0.41
45:DZ:118:GLN:N	45:DZ:173:ALA:O	2.54	0.41
45:DZ:120:ILE:N	45:DZ:120:ILE:HD12	2.36	0.41
47:D1:22:GLY:O	47:D1:32:LYS:HE3	2.21	0.41
51:D5:20:ARG:C	51:D5:22:HIS:N	2.79	0.41
52:D6:11:LEU:HB2	52:D6:21:TYR:HB2	2.03	0.41
55:D9:17:ILE:HA	55:D9:17:ILE:HD12	1.70	0.41
1:AA:456:C:H2'	1:AA:457:C:C6	2.55	0.41
1:AA:605:U:O2'	1:AA:606:G:H5'	2.21	0.41
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.35	0.41
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.56	0.41
1:AA:1349:A:C2	1:AA:1374:A:C4	3.09	0.41
2:AB:162:ILE:O	2:AB:162:ILE:HG13	2.20	0.41
20:AT:33:ILE:HG23	20:AT:63:ILE:HG12	2.03	0.41
25:BA:346:A:C5	25:BA:364:A:C2	3.09	0.41
25:BA:1212:C:H2'	25:BA:1213:U:C6	2.55	0.41
25:BA:1553:A:O2'	25:BA:1554:A:O5'	2.31	0.41
25:BA:1560:U:H2'	25:BA:1561:C:C6	2.56	0.41
25:BA:1771:G:H8	25:BA:1771:G:O5'	2.04	0.41
25:BA:2119:C:H2'	25:BA:2120:U:O4'	2.21	0.41
26:BB:29:A:C2	26:BB:30:C:C2	3.08	0.41
27:BD:111:LEU:HD23	27:BD:127:VAL:HG12	2.03	0.41
28:BE:108:SER:O	28:BE:162:ALA:HA	2.21	0.41
29:BF:181:LEU:HA	29:BF:181:LEU:HD12	1.83	0.41
31:BH:137:ASP:HB3	31:BH:140:LYS:HB3	2.02	0.41
33:BN:28:THR:HG22	33:BN:29:LYS:N	2.33	0.41
34:BO:25:LEU:O	34:BO:26:LYS:HG3	2.21	0.41
40:BU:19:LYS:O	40:BU:22:LYS:HG3	2.21	0.41
1:CA:954:G:C5	1:CA:955:U:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.54	0.41
1:CA:1258:G:H21	1:CA:1279:A:H62	1.69	0.41
1:CA:1468:A:H2'	1:CA:1469:G:O4'	2.20	0.41
2:CB:27:LYS:HE3	2:CB:193:ASP:OD1	2.20	0.41
5:CE:139:LEU:HA	5:CE:142:LEU:HD12	2.02	0.41
8:CH:39:LEU:HD13	8:CH:39:LEU:HA	1.93	0.41
8:CH:68:ARG:HH11	8:CH:68:ARG:HG3	1.86	0.41
10:CJ:54:PHE:CD2	10:CJ:55:LYS:HG2	2.55	0.41
11:CK:27:ASN:OD1	11:CK:28:THR:N	2.49	0.41
21:CU:2:GLY:O	21:CU:4:GLY:N	2.54	0.41
25:DA:83:G:N2	25:DA:103:A:OP2	2.53	0.41
25:DA:141:A:C8	25:DA:1408:C:O2'	2.72	0.41
25:DA:280:C:C2	25:DA:361:G:C2	3.08	0.41
25:DA:465:G:C6	25:DA:466:A:N6	2.89	0.41
25:DA:1339:G:H5"	43:DX:16:LYS:HD3	2.03	0.41
25:DA:1425:G:H2'	25:DA:1426:G:O4'	2.21	0.41
26:DB:13:A:O2'	26:DB:14:U:H3'	2.20	0.41
27:DD:125:ILE:HG13	27:DD:137:PRO:HD3	2.01	0.41
29:DF:134:GLY:HA2	29:DF:162:LEU:O	2.21	0.41
29:DF:184:TYR:CE1	35:DP:3:LEU:HD21	2.56	0.41
38:DS:92:TYR:HB3	38:DS:98:VAL:HG21	2.02	0.41
44:DY:38:ILE:HD13	44:DY:66:PRO:HA	2.03	0.41
49:D3:6:VAL:HG12	49:D3:54:VAL:HG13	2.02	0.41
1:AA:6:G:C4	5:AE:119:LEU:HD11	2.56	0.41
1:AA:100:C:H2'	1:AA:101:A:C8	2.56	0.41
1:AA:357:G:C2	1:AA:358:U:C5	3.08	0.41
1:AA:375:U:C2	1:AA:376:G:C8	3.09	0.41
1:AA:382:A:H2	1:AA:383:A:N7	2.19	0.41
1:AA:394:G:H2'	1:AA:395:C:H6	1.86	0.41
1:AA:461:A:H8	1:AA:461:A:O5'	2.04	0.41
1:AA:599:C:H5"	8:AH:95:VAL:O	2.20	0.41
1:AA:998:G:H2'	1:AA:999:C:C6	2.56	0.41
1:AA:1220:G:H2'	1:AA:1221:G:O4'	2.20	0.41
1:AA:1235:U:H2'	1:AA:1236:A:O4'	2.20	0.41
1:AA:1304:G:C5	1:AA:1305:G:C6	3.09	0.41
1:AA:1329:A:OP1	13:AM:28:ALA:HB3	2.21	0.41
1:AA:1445:C:C4	1:AA:1446:U:C4	3.09	0.41
2:AB:87:ARG:NH1	2:AB:233:SER:HB3	2.36	0.41
2:AB:127:ILE:HB	2:AB:129:GLU:H	1.85	0.41
2:AB:211:ILE:O	2:AB:215:LEU:HB2	2.21	0.41
3:AC:6:HIS:HA	3:AC:7:PRO:HD3	1.96	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:35:GLU:HG2	3:AC:39:ILE:HD11	2.03	0.41
3:AC:178:LEU:HD13	3:AC:178:LEU:HA	1.80	0.41
5:AE:90:VAL:O	5:AE:91:LEU:HD13	2.21	0.41
8:AH:138:TRP:CD1	8:AH:138:TRP:C	2.98	0.41
12:AL:54:LYS:N	12:AL:54:LYS:HD3	2.36	0.41
13:AM:60:VAL:HG13	13:AM:64:TRP:CE3	2.55	0.41
19:AS:74:PHE:C	19:AS:76:PRO:HD3	2.46	0.41
20:AT:36:LEU:HA	20:AT:36:LEU:HD23	1.82	0.41
20:AT:56:MET:O	20:AT:56:MET:HG2	2.21	0.41
23:AX:37:A:H2'	23:AX:38:A:O4'	2.20	0.41
25:BA:273:G:O2'	25:BA:274:U:H5"	2.20	0.41
25:BA:656:A:OP2	54:B8:47:LYS:NZ	2.52	0.41
25:BA:866:A:C4	25:BA:1234:A:C2	3.08	0.41
25:BA:922:G:H4'	45:BZ:151:HIS:HE1	1.86	0.41
25:BA:989:G:H5'	25:BA:990:A:H5'	2.02	0.41
25:BA:1013:G:H2'	25:BA:1014:U:C6	2.56	0.41
25:BA:1355:G:P	53:B7:9:ARG:HD3	2.61	0.41
25:BA:1403:U:H2'	25:BA:1404:G:O4'	2.21	0.41
25:BA:1679:A:OP2	61:BA:4621:HOH:O	2.22	0.41
25:BA:1712:A:C4'	34:BO:67:LYS:HB2	2.51	0.41
25:BA:1845:G:H4'	27:BD:51:VAL:HG21	2.03	0.41
25:BA:2797:C:H1'	28:BE:37:ARG:NH1	2.36	0.41
25:BA:2856:G:OP2	39:BT:54:ARG:HB2	2.21	0.41
26:BB:78:A:H2'	26:BB:79:C:O4'	2.20	0.41
31:BH:97:ARG:NE	31:BH:104:GLU:OE1	2.53	0.41
32:BI:102:SER:HA	32:BI:106:GLY:HA3	2.03	0.41
32:BI:134:PRO:C	32:BI:136:VAL:H	2.28	0.41
33:BN:82:LEU:HA	33:BN:82:LEU:HD12	1.76	0.41
34:BO:47:ILE:HB	34:BO:48:PRO:HD2	2.03	0.41
40:BU:85:LYS:HE2	40:BU:85:LYS:HB3	1.88	0.41
42:BW:14:PRO:HG2	42:BW:78:GLU:CG	2.45	0.41
42:BW:88:ARG:HA	42:BW:88:ARG:HD2	1.94	0.41
1:CA:112:G:H21	1:CA:354:G:C4'	2.33	0.41
1:CA:114:U:H2'	1:CA:115:G:C8	2.56	0.41
1:CA:308:C:H2'	1:CA:309:G:H8	1.86	0.41
1:CA:341:C:C2'	1:CA:342:C:H5'	2.50	0.41
1:CA:358:U:H2'	1:CA:359:U:H6	1.86	0.41
1:CA:447:G:H2'	1:CA:485:G:N2	2.36	0.41
1:CA:451:A:N1	1:CA:480:U:H2'	2.36	0.41
1:CA:649:G:C5	1:CA:650:G:C8	3.09	0.41
1:CA:734:G:H2'	1:CA:735:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:735:C:H5'	18:CR:71:LYS:HD3	2.02	0.41
1:CA:757:U:H2'	1:CA:758:G:O4'	2.21	0.41
1:CA:780:A:C2	1:CA:803:G:C6	3.09	0.41
1:CA:853:G:C2	1:CA:854:G:C8	3.08	0.41
1:CA:868:C:H2'	1:CA:869:G:O4'	2.20	0.41
1:CA:932:C:H2'	1:CA:933:G:H8	1.86	0.41
1:CA:1075:C:H2'	1:CA:1076:C:H5'	2.02	0.41
1:CA:1093:A:N3	1:CA:1109:C:O2'	2.46	0.41
1:CA:1121:U:N3	1:CA:1122:U:C5	2.88	0.41
1:CA:1139:G:N2	1:CA:1143:G:C6	2.88	0.41
1:CA:1305:G:H5'	21:CU:4:GLY:CA	2.51	0.41
1:CA:1316:G:H2'	1:CA:1318:A:OP2	2.21	0.41
1:CA:1342:C:H1'	9:CI:124:GLN:CD	2.46	0.41
1:CA:1353:G:C2	1:CA:1370:G:C2	3.09	0.41
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.56	0.41
2:CB:158:LEU:HA	2:CB:159:PRO:HD3	1.74	0.41
3:CC:6:HIS:NE2	3:CC:8:ILE:HB	2.36	0.41
4:CD:20:TYR:CD1	4:CD:26:CYS:HB3	2.56	0.41
5:CE:18:ARG:HE	5:CE:25:ARG:HB2	1.86	0.41
5:CE:60:TYR:CZ	5:CE:64:ARG:HD3	2.56	0.41
7:CG:26:PHE:CD2	7:CG:30:ILE:HD11	2.56	0.41
7:CG:75:VAL:O	7:CG:76:ARG:HG3	2.21	0.41
9:CI:20:ARG:HA	9:CI:21:PRO:HD3	1.90	0.41
10:CJ:25:GLU:O	10:CJ:29:ARG:HD3	2.21	0.41
13:CM:47:ASP:OD1	13:CM:47:ASP:N	2.54	0.41
17:CQ:29:HIS:HA	17:CQ:30:PRO:HD2	1.88	0.41
17:CQ:57:VAL:HG12	17:CQ:76:LEU:HA	2.03	0.41
23:CX:59:A:C2'	23:CX:60:U:H5'	2.51	0.41
25:DA:77:C:H42	25:DA:109:G:H1	1.68	0.41
25:DA:90:U:O3'	25:DA:92:A:H8	2.04	0.41
25:DA:272(E):G:C2	25:DA:364:C:C2	3.09	0.41
25:DA:335:C:H4'	44:DY:73:ARG:NE	2.36	0.41
25:DA:352:G:OP1	25:DA:352:G:H8	2.04	0.41
25:DA:631:A:H2'	25:DA:632:A:O4'	2.19	0.41
25:DA:760:G:H2'	25:DA:761:A:O4'	2.19	0.41
25:DA:802:A:OP1	61:DA:4454:HOH:O	2.21	0.41
25:DA:1263:U:H1'	51:D5:10:LYS:HG3	2.03	0.41
25:DA:1353:A:H2'	25:DA:1354:A:C8	2.55	0.41
25:DA:1461:G:H2'	25:DA:1462:C:H6	1.85	0.41
25:DA:1539:G:H2'	25:DA:1540:U:H6	1.84	0.41
25:DA:1581:G:H2'	25:DA:1582:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1655:A:H4'	28:DE:115:GLY:N	2.36	0.41
25:DA:1717:G:C2	25:DA:1745(A):C:O2	2.74	0.41
25:DA:1782:C:O4'	25:DA:2609:U:C2	2.74	0.41
25:DA:2028:U:H2'	25:DA:2029:G:O4'	2.21	0.41
25:DA:2250:G:N3	25:DA:2250:G:H5"	2.36	0.41
25:DA:2302:G:C6	25:DA:2303:G:N7	2.89	0.41
25:DA:2683:C:O2	34:DO:70:LYS:HE3	2.20	0.41
25:DA:2758:A:H2'	25:DA:2759:G:O4'	2.20	0.41
28:DE:14:ILE:HD11	28:DE:173:VAL:HG11	2.03	0.41
29:DF:34:TRP:CH2	35:DP:8:PRO:HB3	2.56	0.41
30:DG:72:ARG:HA	30:DG:86:MET:O	2.21	0.41
31:DH:71:LEU:HD12	31:DH:71:LEU:HA	1.86	0.41
31:DH:154:PRO:HB3	31:DH:163:TYR:CZ	2.56	0.41
34:DO:2:ILE:HD11	34:DO:82:ASN:HB3	2.03	0.41
38:DS:24:LEU:HD23	38:DS:24:LEU:HA	1.89	0.41
41:DV:40:LEU:CB	41:DV:46:VAL:HG13	2.51	0.41
46:D0:36:ILE:HD12	46:D0:58:THR:CG2	2.51	0.41
47:D1:94:LEU:O	47:D1:97:LEU:HB2	2.20	0.41
53:D7:24:THR:O	53:D7:28:ARG:HG3	2.21	0.41
54:D8:31:HIS:O	54:D8:36:LYS:NZ	2.53	0.41
1:AA:91:C:H2'	1:AA:92:C:C6	2.56	0.41
1:AA:108:G:H5"	1:AA:109:A:H5"	2.03	0.41
1:AA:125:U:O2	1:AA:236:G:N2	2.46	0.41
1:AA:146:G:N1	1:AA:147:G:C5	2.89	0.41
1:AA:147:G:O2'	1:AA:148:G:H5'	2.20	0.41
1:AA:172:A:N7	1:AA:174:C:C4	2.89	0.41
1:AA:460:G:C6	1:AA:470:C:H5"	2.56	0.41
1:AA:685:G:C2	1:AA:686:U:C4	3.08	0.41
1:AA:1206:G:O6	1:AA:1207:G:C6	2.74	0.41
2:AB:71:VAL:HG13	2:AB:93:VAL:CG2	2.50	0.41
4:AD:150:GLU:HG3	4:AD:151:LYS:N	2.36	0.41
4:AD:178:VAL:HG12	4:AD:179:GLU:N	2.36	0.41
6:AF:82:ARG:HB3	6:AF:85:VAL:HG23	2.03	0.41
9:AI:9:ARG:HG2	9:AI:14:VAL:HG13	2.02	0.41
18:AR:58:LEU:HD13	18:AR:58:LEU:HA	1.79	0.41
25:BA:26:G:O3'	25:BA:1306:G:H4'	2.20	0.41
25:BA:275:C:H2'	25:BA:276:C:C6	2.56	0.41
25:BA:474:U:C4	25:BA:606:G:H1'	2.56	0.41
25:BA:751:G:O2'	25:BA:773:G:N2	2.40	0.41
25:BA:1629:C:H2'	25:BA:1630:A:C8	2.56	0.41
25:BA:1813:C:O2	25:BA:2620:G:O2'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2074:G:H4'	28:BE:143:ASN:O	2.21	0.41
25:BA:2214:G:H5'	25:BA:2215:G:OP2	2.21	0.41
25:BA:2430:A:H2'	25:BA:2431:U:C6	2.56	0.41
25:BA:2745:G:H3'	25:BA:2746:A:O4'	2.21	0.41
26:BB:4:C:H2'	26:BB:5:C:O4'	2.22	0.41
30:BG:77:ILE:HG22	30:BG:80:PHE:H	1.86	0.41
32:BI:10:GLU:O	32:BI:11:ASN:C	2.64	0.41
32:BI:99:GLU:O	32:BI:103:ARG:NH1	2.54	0.41
35:BP:81:GLN:HB2	35:BP:110:TYR:HD2	1.86	0.41
44:BY:38:ILE:HD13	44:BY:66:PRO:HA	2.03	0.41
47:B1:21:ARG:HH11	47:B1:21:ARG:CG	2.29	0.41
1:CA:78:G:N2	1:CA:92:C:C2	2.88	0.41
1:CA:216:G:H2'	1:CA:217:C:C6	2.56	0.41
1:CA:358:U:H2'	1:CA:359:U:C6	2.56	0.41
1:CA:456:C:N3	1:CA:476:G:C2	2.89	0.41
1:CA:484:G:C8	1:CA:486:U:C2	3.09	0.41
1:CA:783:C:N4	1:CA:784:C:H41	2.19	0.41
1:CA:1049:U:C6	1:CA:1201:A:H5'	2.56	0.41
1:CA:1153:C:H2'	1:CA:1154:G:H5"	2.02	0.41
1:CA:1227:A:C2	19:CS:83:HIS:HB3	2.56	0.41
1:CA:1272:G:C2	1:CA:1273:G:H1'	2.56	0.41
3:CC:6:HIS:CD2	3:CC:8:ILE:H	2.36	0.41
5:CE:41:VAL:HG23	5:CE:67:VAL:CG1	2.51	0.41
5:CE:127:ASN:HA	5:CE:128:PRO:HD3	1.83	0.41
6:CF:22:GLU:O	6:CF:26:ILE:HG13	2.21	0.41
8:CH:121:ASP:N	8:CH:121:ASP:OD1	2.53	0.41
13:CM:90:LEU:HD23	13:CM:93:ARG:NE	2.36	0.41
20:CT:42:GLN:O	20:CT:45:GLN:HB3	2.20	0.41
23:CX:12:G:H1'	25:DA:1923:U:O2'	2.21	0.41
25:DA:106:C:O4'	44:DY:1:MET:HG3	2.21	0.41
25:DA:271(G):C:H2'	25:DA:271(H):G:H8	1.86	0.41
25:DA:652(T):C:H2'	25:DA:652(U):G:C8	2.56	0.41
25:DA:658:C:H2'	25:DA:659:C:C6	2.55	0.41
25:DA:2318:G:H21	38:DS:3:ARG:CD	2.34	0.41
25:DA:2348:U:O4	25:DA:2382:G:N1	2.54	0.41
25:DA:2371:G:C2	25:DA:2372:G:C8	3.09	0.41
25:DA:2494:G:C4	25:DA:2495:G:C8	3.08	0.41
25:DA:2745:C:H4'	31:DH:142:GLY:O	2.21	0.41
25:DA:2755:C:C4	55:D9:19:ARG:NH1	2.89	0.41
26:DB:14:U:O3'	26:DB:108:U:O2'	2.38	0.41
30:DG:8:LYS:O	30:DG:11:TYR:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DG:11:TYR:HA	30:DG:176:LEU:HD21	2.03	0.41
30:DG:43:LEU:HB3	30:DG:44:GLY:H	1.51	0.41
30:DG:142:PRO:HG2	30:DG:143:GLU:OE1	2.21	0.41
32:DI:9:LEU:HD11	32:DI:35:LEU:HD13	2.03	0.41
35:DP:135:LEU:HD23	35:DP:135:LEU:HA	1.93	0.41
39:DT:90:GLN:HG3	39:DT:91:ARG:N	2.35	0.41
40:DU:16:LYS:HE2	40:DU:16:LYS:HB3	1.80	0.41
45:DZ:48:PHE:CE1	45:DZ:52:SER:HA	2.56	0.41
45:DZ:70:LEU:HD23	45:DZ:70:LEU:HA	1.79	0.41
54:D8:22:VAL:CG2	54:D8:59:LYS:HG3	2.51	0.41
1:AA:251:G:H4'	1:AA:252:U:O5'	2.21	0.40
1:AA:720:C:H6	1:AA:720:C:O5'	2.04	0.40
1:AA:1210:C:H2'	1:AA:1211:U:H5'	2.03	0.40
1:AA:1269:A:H2	1:AA:1312:G:N3	2.19	0.40
4:AD:45:GLN:HE21	4:AD:45:GLN:HB3	1.66	0.40
4:AD:68:TYR:CE2	4:AD:97:LEU:HB3	2.56	0.40
4:AD:81:GLU:CD	4:AD:139:ARG:HH22	2.29	0.40
4:AD:107:ARG:HA	4:AD:107:ARG:HD2	1.71	0.40
5:AE:116:THR:HG23	5:AE:117:ASP:OD2	2.21	0.40
7:AG:111:ARG:HB3	7:AG:113:GLU:OE2	2.21	0.40
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	2.02	0.40
16:AP:38:TYR:O	16:AP:49:LEU:HD12	2.21	0.40
25:BA:390:G:H2'	25:BA:391:G:O4'	2.21	0.40
25:BA:895:G:C4	25:BA:978:A:H8	2.39	0.40
25:BA:1347:A:C8	25:BA:1349:G:C8	3.09	0.40
25:BA:1735:U:O2	25:BA:1747:A:H5'	2.21	0.40
25:BA:2701:U:H5'	25:BA:2701:U:O2	2.21	0.40
28:BE:9:VAL:HG22	28:BE:25:VAL:HB	2.03	0.40
28:BE:144:ARG:HB3	28:BE:145:LYS:H	1.45	0.40
29:BF:74:ARG:H	29:BF:74:ARG:HG3	1.63	0.40
41:BV:65:GLY:HA3	41:BV:91:TYR:CZ	2.55	0.40
1:CA:127:G:O2'	17:CQ:2:PRO:O	2.40	0.40
1:CA:341:C:H6	1:CA:341:C:O5'	2.04	0.40
1:CA:559:A:H4'	1:CA:560:U:H5"	2.03	0.40
1:CA:674:G:H2'	1:CA:675:A:H8	1.84	0.40
1:CA:881:G:P	12:CL:12:ARG:NH2	2.94	0.40
1:CA:1005:A:H3'	1:CA:1006:C:O4'	2.20	0.40
1:CA:1073:U:C4	1:CA:1074:G:N7	2.90	0.40
1:CA:1128:C:H1'	1:CA:1147:C:N3	2.35	0.40
1:CA:1134:G:C2'	1:CA:1135:U:H5'	2.50	0.40
2:CB:13:ALA:C	2:CB:15:VAL:H	2.28	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:164:VAL:HB	2:CB:186:ALA:HB2	2.03	0.40
3:CC:112:SER:O	3:CC:115:LEU:HB2	2.22	0.40
4:CD:64:LEU:O	4:CD:64:LEU:HD12	2.21	0.40
4:CD:108:LEU:HD12	4:CD:108:LEU:HA	1.67	0.40
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.56	0.40
5:CE:84:PHE:CE2	5:CE:133:TYR:HD2	2.39	0.40
6:CF:95:GLU:HA	6:CF:96:PRO:HD3	1.90	0.40
7:CG:27:ILE:HA	7:CG:30:ILE:HD12	2.03	0.40
13:CM:29:ARG:HB3	13:CM:64:TRP:CZ3	2.55	0.40
16:CP:43:LYS:HG2	16:CP:48:TRP:CD2	2.56	0.40
21:CU:15:ARG:HH11	21:CU:15:ARG:HB2	1.86	0.40
25:DA:848:G:C2	25:DA:933:A:H1'	2.57	0.40
25:DA:1114:G:H2'	25:DA:1115:G:C8	2.55	0.40
25:DA:1309:G:O2'	25:DA:1611:C:O2'	2.26	0.40
25:DA:1334:G:H2'	25:DA:1335:U:C6	2.57	0.40
25:DA:1583:A:H5'	25:DA:1584:C:O5'	2.20	0.40
25:DA:2044:C:C2	25:DA:2625:G:C2	3.08	0.40
25:DA:2298:A:C6	25:DA:2321:G:C2	3.09	0.40
26:DB:83:G:H5"	49:D3:52:HIS:CE1	2.55	0.40
29:DF:125:LEU:HD21	29:DF:199:TRP:CD2	2.56	0.40
30:DG:136:ARG:NH1	30:DG:137:GLU:H	2.16	0.40
30:DG:179:PRO:HG3	50:D4:43:TYR:CZ	2.56	0.40
35:DP:88:LEU:O	35:DP:91:PHE:HD1	2.02	0.40
36:DQ:73:PRO:HA	36:DQ:93:TYR:CD1	2.55	0.40
37:DR:70:LEU:O	37:DR:72:ASP:N	2.54	0.40
38:DS:78:LEU:H	38:DS:78:LEU:HG	1.29	0.40
42:DW:24:ILE:HA	42:DW:27:LYS:HG3	2.02	0.40
45:DZ:144:LEU:HD23	45:DZ:144:LEU:HA	1.85	0.40
1:AA:129:U:H5'	17:AQ:3:LYS:NZ	2.35	0.40
1:AA:130:A:N7	17:AQ:63:ARG:HB2	2.35	0.40
1:AA:391:G:OP1	16:AP:28:ARG:NH1	2.41	0.40
1:AA:963:G:N3	10:AJ:54:PHE:HZ	2.19	0.40
1:AA:1347:G:H5"	9:AI:107:ARG:HB3	2.02	0.40
7:AG:44:TYR:O	7:AG:47:CYS:HB2	2.21	0.40
10:AJ:31:GLY:HA2	10:AJ:32:ALA:HA	1.49	0.40
10:AJ:38:ILE:HA	10:AJ:39:PRO:HD3	1.90	0.40
14:AN:33:VAL:HA	14:AN:40:CYS:HA	2.03	0.40
15:AO:39:LEU:HB3	15:AO:56:LEU:HD13	2.03	0.40
25:BA:218:A:H3'	25:BA:218:A:C8	2.57	0.40
25:BA:630:U:OP1	29:BF:102:PRO:HA	2.21	0.40
25:BA:1220:U:H1'	25:BA:1221:G:OP1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1629:C:O2'	25:BA:1632:A:N3	2.53	0.40
25:BA:1703:C:H5"	28:BE:136:ARG:HB2	2.02	0.40
25:BA:2410:U:H2'	25:BA:2411:G:C8	2.56	0.40
25:BA:2495:C:N3	36:BQ:124:LYS:NZ	2.67	0.40
25:BA:2557:G:O2'	25:BA:2577:A:N1	2.46	0.40
26:BB:33:G:C2'	26:BB:34:U:H5'	2.50	0.40
27:BD:109:ASP:HB2	27:BD:197:GLY:HA2	2.01	0.40
27:BD:206:LEU:HA	27:BD:206:LEU:HD23	1.79	0.40
28:BE:134:ILE:C	28:BE:134:ILE:HD12	2.47	0.40
34:BO:104:ARG:HH22	39:BT:43:GLN:NE2	2.19	0.40
43:BX:26:TYR:CE2	43:BX:89:ILE:HG13	2.55	0.40
50:B4:5:ILE:HG12	50:B4:6:HIS:CD2	2.56	0.40
1:CA:687:A:C2	1:CA:704:A:C5	3.09	0.40
1:CA:973:G:H3'	1:CA:974:A:H5"	2.03	0.40
1:CA:986:A:H1'	19:CS:54:GLY:O	2.21	0.40
1:CA:1021:G:N3	1:CA:1021:G:H2'	2.35	0.40
1:CA:1222:G:C6	1:CA:1223:C:C4	3.10	0.40
1:CA:1385:G:C6	1:CA:1386:G:C5	3.09	0.40
5:CE:34:VAL:N	5:CE:42:GLY:O	2.51	0.40
5:CE:144:THR:H	5:CE:147:ASP:HB2	1.86	0.40
10:CJ:35:SER:N	10:CJ:73:ASP:O	2.34	0.40
13:CM:3:ARG:HD2	13:CM:3:ARG:C	2.46	0.40
13:CM:20:THR:C	13:CM:22:ILE:N	2.79	0.40
25:DA:14:A:C6	25:DA:526:A:C2	3.09	0.40
25:DA:30:G:C5	25:DA:31:C:C4	3.10	0.40
25:DA:182:A:C6	25:DA:183:C:C4	3.09	0.40
25:DA:521:G:H2'	25:DA:522:G:H8	1.86	0.40
25:DA:919:G:C6	25:DA:920:G:C5	3.09	0.40
25:DA:1338:G:C4	25:DA:1339:G:C8	3.10	0.40
25:DA:1667:G:H1'	25:DA:1991:U:O4	2.21	0.40
25:DA:2016:U:H2'	25:DA:2017:U:C6	2.56	0.40
25:DA:2360:A:C2	25:DA:2361:A:H1'	2.57	0.40
25:DA:2756:U:H4'	25:DA:2757:A:OP1	2.21	0.40
27:DD:253:GLN:HE21	27:DD:253:GLN:HB3	1.53	0.40
28:DE:21:VAL:HA	28:DE:22:PRO:HD3	1.74	0.40
30:DG:101:ILE:O	30:DG:104:GLU:HB3	2.21	0.40
42:DW:26:GLY:HA2	42:DW:71:VAL:O	2.20	0.40
42:DW:45:TYR:CD2	42:DW:45:TYR:C	2.99	0.40
48:D2:62:THR:O	48:D2:65:ASN:HB3	2.21	0.40
1:AA:342:C:N3	1:AA:348:G:O6	2.55	0.40
1:AA:347:G:O2'	1:AA:348:G:N2	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:437:U:C5'	4:AD:155:LEU:HD11	2.47	0.40
1:AA:960:U:C2	1:AA:1225:A:N7	2.89	0.40
1:AA:1001(A):G:C5	1:AA:1002:G:C8	3.08	0.40
1:AA:1144:G:H21	1:AA:1146:A:H62	1.67	0.40
1:AA:1145:C:H5"	1:AA:1146:A:OP1	2.21	0.40
1:AA:1370:G:C2	1:AA:1371:G:C8	3.09	0.40
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.56	0.40
16:AP:59:TRP:HB3	16:AP:64:ALA:HB2	2.03	0.40
17:AQ:29:HIS:HA	17:AQ:30:PRO:HD2	1.88	0.40
25:BA:39:C:H2'	25:BA:40:C:C6	2.56	0.40
25:BA:227:C:H2'	25:BA:228:U:O4'	2.21	0.40
25:BA:403:C:H42	25:BA:425:G:H1	1.68	0.40
25:BA:561:A:H2'	25:BA:562:C:C6	2.56	0.40
25:BA:1026:A:C4	25:BA:1181:G:O4'	2.74	0.40
25:BA:1423:G:H2'	61:BA:3831:HOH:O	2.20	0.40
25:BA:2069:U:O2'	25:BA:2833:A:N1	2.47	0.40
25:BA:2087:C:H2'	25:BA:2088:C:H6	1.86	0.40
25:BA:2642:G:H2'	25:BA:2643:G:O4'	2.21	0.40
26:BB:100:A:O5'	61:BB:4021:HOH:O	2.22	0.40
32:BI:50:ARG:H	32:BI:50:ARG:HG2	1.59	0.40
36:BQ:14:ARG:HG2	36:BQ:41:TRP:HH2	1.87	0.40
38:BS:69:VAL:HG23	38:BS:101:LEU:HG	2.04	0.40
1:CA:601:C:H2'	1:CA:602:A:C8	2.55	0.40
1:CA:828:A:N6	1:CA:858:G:O2'	2.50	0.40
1:CA:840:C:H5"	1:CA:841:U:H5	1.86	0.40
1:CA:943:U:H2'	1:CA:944:G:H5'	2.02	0.40
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.56	0.40
1:CA:1169:A:C8	1:CA:1169:A:C3'	3.04	0.40
3:CC:91:LEU:C	3:CC:93:LYS:H	2.30	0.40
4:CD:43:HIS:CA	4:CD:46:LYS:HG3	2.51	0.40
7:CG:120:ILE:CG2	7:CG:124:LEU:HD12	2.52	0.40
20:CT:43:LEU:O	20:CT:47:GLY:N	2.54	0.40
59:CX:101:FME:HE2	25:DA:2585:U:H1'	2.03	0.40
25:DA:414:C:C2'	25:DA:415:A:H5'	2.51	0.40
25:DA:442:G:H21	29:DF:48:THR:HB	1.84	0.40
25:DA:466:A:H1'	25:DA:683:C:O4'	2.21	0.40
25:DA:532:A:OP1	40:DU:45:TYR:OH	2.35	0.40
25:DA:628:G:H2'	25:DA:629:G:H8	1.85	0.40
25:DA:921:G:C5	25:DA:922:U:C4	3.09	0.40
25:DA:952:G:C6	25:DA:953:A:N7	2.90	0.40
25:DA:1336:A:H2'	25:DA:1337:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1406:U:H2'	25:DA:1407:C:C6	2.56	0.40
25:DA:1813:G:H1'	27:DD:50:THR:OG1	2.22	0.40
25:DA:2287:A:C5	25:DA:2289:G:C5	3.10	0.40
25:DA:2564:A:OP1	25:DA:2648:C:H4'	2.20	0.40
27:DD:182:LEU:O	27:DD:271:ILE:N	2.45	0.40
38:DS:77:ALA:O	38:DS:81:GLY:N	2.54	0.40
39:DT:31:SER:OG	39:DT:85:LYS:HE3	2.21	0.40
43:DX:75:ASP:C	43:DX:76:ARG:HG3	2.45	0.40
45:DZ:30:ASN:OD1	45:DZ:33:LEU:HD23	2.22	0.40
52:D6:6:ARG:NH1	52:D6:26:ASN:HB2	2.36	0.40
1:AA:103:C:C4	1:AA:104:G:N7	2.89	0.40
1:AA:240:C:H2'	1:AA:241:C:C6	2.56	0.40
1:AA:573:A:N3	1:AA:883:C:O2'	2.43	0.40
1:AA:943:U:H2'	1:AA:944:G:H5'	2.04	0.40
1:AA:945:G:C2	1:AA:946:A:C8	3.10	0.40
1:AA:974:A:OP1	1:AA:974:A:H8	2.04	0.40
1:AA:1317:C:OP1	14:AN:18:VAL:HG22	2.22	0.40
1:AA:1321:C:H5"	1:AA:1322:C:H2'	2.03	0.40
1:AA:1492:A:H1'	25:BA:1935:A:H61	1.86	0.40
2:AB:48:MET:HA	2:AB:51:LEU:HD12	2.03	0.40
3:AC:115:LEU:HD12	3:AC:118:GLN:OE1	2.21	0.40
4:AD:170:VAL:O	4:AD:171:GLY:C	2.64	0.40
5:AE:147:ASP:O	5:AE:151:LEU:HG	2.21	0.40
6:AF:89:MET:SD	18:AR:76:LEU:HD21	2.61	0.40
13:AM:92:HIS:CE1	13:AM:98:VAL:HG11	2.56	0.40
14:AN:4:LYS:HD3	14:AN:7:ILE:CG2	2.51	0.40
25:BA:12:U:O2	25:BA:12:U:H2'	2.21	0.40
25:BA:254:A:H1'	25:BA:255:G:O4'	2.21	0.40
25:BA:807:G:H2'	25:BA:808:A:O4'	2.22	0.40
25:BA:868:A:H2'	25:BA:991:G:H5"	2.04	0.40
25:BA:1929:G:C2	25:BA:1946:C:C2	3.10	0.40
25:BA:2576:A:C2	25:BA:2659:U:H4'	2.56	0.40
26:BB:11:C:OP2	26:BB:12:C:H5	2.05	0.40
32:BI:65:ALA:CB	32:BI:136:VAL:HG11	2.50	0.40
32:BI:140:LEU:HD23	32:BI:140:LEU:HA	1.87	0.40
37:BR:87:TYR:OH	37:BR:116:LEU:HB3	2.21	0.40
1:CA:391:G:P	16:CP:28:ARG:HH22	2.44	0.40
1:CA:491:G:C2	1:CA:492:G:C4	3.10	0.40
1:CA:528:C:H41	12:CL:49:ASN:ND2	2.19	0.40
1:CA:811:C:N4	61:CA:4026:HOH:O	2.52	0.40
1:CA:1106:G:N2	1:CA:1107:C:C2	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1155:G:H2'	1:CA:1156:G:O4'	2.22	0.40
1:CA:1488:G:C2'	1:CA:1489:G:H5'	2.52	0.40
2:CB:219:VAL:HA	2:CB:222:ILE:HD11	2.02	0.40
2:CB:224:GLN:HG2	2:CB:225:ALA:N	2.36	0.40
2:CB:230:VAL:HG13	2:CB:231:GLU:O	2.22	0.40
7:CG:65:ALA:CB	7:CG:124:LEU:HD23	2.50	0.40
19:CS:51:VAL:HB	19:CS:75:ALA:HB2	2.03	0.40
20:CT:82:SER:O	20:CT:86:ARG:HG3	2.22	0.40
23:CX:4:G:H1	23:CX:69:C:N4	2.17	0.40
25:DA:663:G:C6	25:DA:664:C:C4	3.10	0.40
25:DA:875:G:C2	25:DA:903:C:C2	3.10	0.40
25:DA:895:U:O2'	25:DA:896:A:H2'	2.22	0.40
25:DA:912:C:C2	25:DA:913:U:C5	3.10	0.40
25:DA:955:C:OP1	36:DQ:87:LYS:HE3	2.22	0.40
25:DA:990:A:C6	25:DA:1186:G:H1'	2.57	0.40
25:DA:1292:U:H2'	25:DA:1293:C:H6	1.86	0.40
25:DA:2352:A:C4	25:DA:2366:A:C2	3.10	0.40
25:DA:2805:G:C6	25:DA:2807:G:C6	3.09	0.40
25:DA:2831:G:P	28:DE:58:ARG:HH22	2.38	0.40
26:DB:33:G:H5'	30:DG:2:PRO:HD3	2.03	0.40
28:DE:188:VAL:HA	28:DE:189:PRO:HD3	1.98	0.40
30:DG:123:ASN:C	30:DG:125:PHE:H	2.29	0.40
31:DH:103:LEU:HB3	31:DH:123:PHE:CD2	2.57	0.40
34:DO:101:PRO:HG3	39:DT:67:SER:OG	2.21	0.40
35:DP:90:ARG:HG2	35:DP:91:PHE:CD1	2.56	0.40
45:DZ:54:HIS:CG	45:DZ:101:PRO:HG3	2.56	0.40
50:D4:49:PHE:HB3	50:D4:50:VAL:HG12	2.04	0.40
51:D5:48:GLU:O	51:D5:60:VAL:HG11	2.22	0.40
52:D6:10:LEU:O	52:D6:11:LEU:HD23	2.21	0.40
53:D7:5:TRP:CD1	53:D7:7:PRO:HD3	2.56	0.40
1:AA:107:G:H2'	1:AA:108:G:O4'	2.22	0.40
1:AA:288:A:H2'	1:AA:289:G:H4'	2.04	0.40
1:AA:341:C:O2'	1:AA:342:C:H5'	2.21	0.40
1:AA:701:C:H1'	1:AA:703:G:C6	2.56	0.40
1:AA:920:U:H2'	1:AA:921:U:H6	1.84	0.40
1:AA:1072:G:C5	1:AA:1073:U:C4	3.10	0.40
1:AA:1160:G:H8	1:AA:1160:G:H5'	1.87	0.40
1:AA:1261:A:H3'	1:AA:1262:C:H6	1.86	0.40
2:AB:37:ASN:HB2	2:AB:41:ILE:HD11	2.03	0.40
3:AC:151:VAL:C	3:AC:152:ILE:HG13	2.47	0.40
4:AD:65:ARG:HG2	4:AD:75:PHE:CG	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:76:ILE:HB	5:AE:77:PRO:HD2	2.04	0.40
8:AH:82:HIS:O	8:AH:137:VAL:HA	2.21	0.40
25:BA:207:A:N1	25:BA:224:U:H4'	2.36	0.40
25:BA:390:G:H8	25:BA:390:G:O5'	2.04	0.40
25:BA:796:C:C5	25:BA:1664:A:C6	3.10	0.40
25:BA:1471:G:H2'	25:BA:1472:G:O4'	2.21	0.40
25:BA:1521:C:H2'	25:BA:1522:G:H8	1.87	0.40
25:BA:2225:U:O4'	27:BD:151:LYS:HE2	2.21	0.40
25:BA:2328:C:H1'	30:BG:128:ARG:NH2	2.36	0.40
25:BA:2427:G:C5	25:BA:2428:C:C4	3.10	0.40
25:BA:2862:G:H2'	25:BA:2863:C:O4'	2.22	0.40
27:BD:92:ILE:HD12	27:BD:104:TYR:CE1	2.57	0.40
28:BE:12:THR:HG21	39:BT:11:GLU:HG2	2.03	0.40
28:BE:49:LEU:HD12	28:BE:49:LEU:HA	1.85	0.40
33:BN:39:ARG:HA	33:BN:40:PRO:HD3	1.96	0.40
34:BO:2:ILE:HD12	34:BO:6:THR:HG21	2.02	0.40
41:BV:8:GLY:O	41:BV:10:LYS:HE2	2.22	0.40
46:B0:82:ARG:HA	46:B0:83:PRO:HD3	1.94	0.40
1:CA:101:A:H2'	1:CA:102:G:H5'	2.03	0.40
1:CA:310:G:H5"	16:CP:31:LYS:HB2	2.03	0.40
1:CA:567:G:N2	61:CA:4065:HOH:O	2.48	0.40
1:CA:922:G:H2'	1:CA:923:A:C8	2.56	0.40
1:CA:954:G:C6	1:CA:955:U:C4	3.10	0.40
1:CA:1122:U:C4	1:CA:1151:A:N1	2.89	0.40
1:CA:1126:U:C4	10:CJ:71:LEU:HD22	2.56	0.40
2:CB:27:LYS:C	2:CB:29:ALA:H	2.29	0.40
2:CB:97:TRP:HZ3	2:CB:176:GLU:OE2	2.04	0.40
2:CB:167:PRO:HD3	2:CB:187:LEU:O	2.21	0.40
2:CB:211:ILE:H	2:CB:211:ILE:HG13	1.71	0.40
3:CC:178:LEU:HD13	3:CC:178:LEU:HA	1.82	0.40
3:CC:187:ALA:HB3	3:CC:198:VAL:HB	2.04	0.40
10:CJ:16:LEU:HD23	10:CJ:94:VAL:HG22	2.04	0.40
18:CR:59:SER:H	18:CR:62:GLU:HG3	1.86	0.40
25:DA:657:U:H2'	25:DA:658:C:C6	2.56	0.40
25:DA:679:C:H2'	25:DA:680:G:H8	1.86	0.40
25:DA:858:U:H1'	25:DA:2268:A:H2'	2.04	0.40
25:DA:871:U:H5"	36:DQ:69:PHE:CE2	2.56	0.40
25:DA:949:C:H2'	25:DA:950:G:H8	1.86	0.40
25:DA:1268:A:H2'	25:DA:1269:A:O4'	2.22	0.40
25:DA:1472:A:C2	25:DA:1473:G:H1'	2.56	0.40
25:DA:1498:C:O4'	25:DA:1577:C:H4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1514:U:HO2'	25:DA:1515:G:H5'	1.86	0.40
25:DA:1630:G:H2'	25:DA:1631:C:C6	2.56	0.40
25:DA:2611:U:C4	51:D5:3:LYS:HG2	2.57	0.40
28:DE:150:VAL:HG13	28:DE:154:LYS:HG3	2.03	0.40
29:DF:109:GLY:O	29:DF:113:ALA:N	2.43	0.40
32:DI:133:HIS:CD2	32:DI:134:PRO:O	2.75	0.40
44:DY:86:ARG:HD2	44:DY:100:ALA:HA	2.04	0.40
54:D8:15:LYS:HG2	54:D8:16:ILE:N	2.35	0.40
54:D8:30:ARG:HD3	54:D8:30:ARG:HA	1.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	AB	229/256 (90%)	201 (88%)	23 (10%)	5 (2%)	5 26
2	CB	229/256 (90%)	201 (88%)	21 (9%)	7 (3%)	3 19
3	AC	204/239 (85%)	182 (89%)	20 (10%)	2 (1%)	12 45
3	CC	204/239 (85%)	181 (89%)	21 (10%)	2 (1%)	12 45
4	AD	206/209 (99%)	184 (89%)	20 (10%)	2 (1%)	12 45
4	CD	206/209 (99%)	185 (90%)	18 (9%)	3 (2%)	8 35
5	AE	146/162 (90%)	136 (93%)	8 (6%)	2 (1%)	9 36
5	CE	146/162 (90%)	134 (92%)	12 (8%)	0	100 100
6	AF	98/101 (97%)	94 (96%)	4 (4%)	0	100 100
6	CF	98/101 (97%)	94 (96%)	4 (4%)	0	100 100
7	AG	153/156 (98%)	137 (90%)	15 (10%)	1 (1%)	18 53
7	CG	153/156 (98%)	139 (91%)	13 (8%)	1 (1%)	18 53
8	AH	135/138 (98%)	131 (97%)	4 (3%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
8	CH	135/138 (98%)	131 (97%)	3 (2%)	1 (1%)	18 53
9	AI	125/128 (98%)	112 (90%)	10 (8%)	3 (2%)	4 24
9	CI	125/128 (98%)	115 (92%)	8 (6%)	2 (2%)	7 34
10	AJ	95/105 (90%)	84 (88%)	8 (8%)	3 (3%)	3 18
10	CJ	94/105 (90%)	84 (89%)	8 (8%)	2 (2%)	5 27
11	AK	112/129 (87%)	101 (90%)	10 (9%)	1 (1%)	14 48
11	CK	112/129 (87%)	101 (90%)	10 (9%)	1 (1%)	14 48
12	AL	120/132 (91%)	117 (98%)	3 (2%)	0	100 100
12	CL	120/132 (91%)	113 (94%)	7 (6%)	0	100 100
13	AM	121/126 (96%)	113 (93%)	7 (6%)	1 (1%)	16 50
13	CM	120/126 (95%)	113 (94%)	6 (5%)	1 (1%)	16 50
14	AN	58/61 (95%)	55 (95%)	3 (5%)	0	100 100
14	CN	58/61 (95%)	55 (95%)	3 (5%)	0	100 100
15	AO	86/89 (97%)	80 (93%)	6 (7%)	0	100 100
15	CO	86/89 (97%)	81 (94%)	5 (6%)	0	100 100
16	AP	80/88 (91%)	74 (92%)	6 (8%)	0	100 100
16	CP	80/88 (91%)	73 (91%)	6 (8%)	1 (1%)	9 38
17	AQ	97/105 (92%)	92 (95%)	5 (5%)	0	100 100
17	CQ	97/105 (92%)	93 (96%)	4 (4%)	0	100 100
18	AR	66/88 (75%)	60 (91%)	5 (8%)	1 (2%)	8 35
18	CR	66/88 (75%)	61 (92%)	5 (8%)	0	100 100
19	AS	81/93 (87%)	76 (94%)	5 (6%)	0	100 100
19	CS	81/93 (87%)	74 (91%)	7 (9%)	0	100 100
20	AT	94/106 (89%)	84 (89%)	9 (10%)	1 (1%)	11 43
20	CT	94/106 (89%)	86 (92%)	5 (5%)	3 (3%)	3 18
21	AU	21/27 (78%)	17 (81%)	4 (19%)	0	100 100
21	CU	21/27 (78%)	18 (86%)	3 (14%)	0	100 100
24	AW	3/10 (30%)	0	2 (67%)	1 (33%)	0 0
24	CW	3/10 (30%)	1 (33%)	1 (33%)	1 (33%)	0 0
27	BD	273/276 (99%)	260 (95%)	12 (4%)	1 (0%)	30 65
27	DD	273/276 (99%)	258 (94%)	13 (5%)	2 (1%)	18 53

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
28	BE	202/206 (98%)	194 (96%)	7 (4%)	1 (0%)	24	60
28	DE	202/206 (98%)	195 (96%)	4 (2%)	3 (2%)	8	35
29	BF	201/210 (96%)	195 (97%)	5 (2%)	1 (0%)	24	60
29	DF	201/210 (96%)	195 (97%)	4 (2%)	2 (1%)	12	45
30	BG	179/182 (98%)	167 (93%)	9 (5%)	3 (2%)	7	32
30	DG	179/182 (98%)	161 (90%)	14 (8%)	4 (2%)	5	26
31	BH	172/180 (96%)	165 (96%)	6 (4%)	1 (1%)	21	56
31	DH	172/180 (96%)	164 (95%)	7 (4%)	1 (1%)	21	56
32	BI	144/148 (97%)	124 (86%)	14 (10%)	6 (4%)	2	13
32	DI	144/148 (97%)	124 (86%)	17 (12%)	3 (2%)	5	27
33	BN	138/140 (99%)	133 (96%)	5 (4%)	0	100	100
33	DN	138/140 (99%)	132 (96%)	5 (4%)	1 (1%)	18	53
34	BO	120/122 (98%)	116 (97%)	3 (2%)	1 (1%)	16	50
34	DO	120/122 (98%)	117 (98%)	2 (2%)	1 (1%)	16	50
35	BP	147/150 (98%)	138 (94%)	8 (5%)	1 (1%)	18	53
35	DP	147/150 (98%)	135 (92%)	9 (6%)	3 (2%)	6	28
36	BQ	139/141 (99%)	131 (94%)	7 (5%)	1 (1%)	18	53
36	DQ	139/141 (99%)	129 (93%)	9 (6%)	1 (1%)	18	53
37	BR	116/118 (98%)	110 (95%)	5 (4%)	1 (1%)	14	48
37	DR	116/118 (98%)	111 (96%)	5 (4%)	0	100	100
38	BS	108/112 (96%)	103 (95%)	4 (4%)	1 (1%)	14	48
38	DS	108/112 (96%)	102 (94%)	5 (5%)	1 (1%)	14	48
39	BT	129/146 (88%)	123 (95%)	6 (5%)	0	100	100
39	DT	129/146 (88%)	127 (98%)	2 (2%)	0	100	100
40	BU	114/118 (97%)	113 (99%)	1 (1%)	0	100	100
40	DU	114/118 (97%)	113 (99%)	1 (1%)	0	100	100
41	BV	99/101 (98%)	93 (94%)	5 (5%)	1 (1%)	12	45
41	DV	99/101 (98%)	94 (95%)	4 (4%)	1 (1%)	12	45
42	BW	110/113 (97%)	108 (98%)	2 (2%)	0	100	100
42	DW	110/113 (97%)	108 (98%)	2 (2%)	0	100	100
43	BX	93/96 (97%)	91 (98%)	2 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
43	DX	93/96 (97%)	89 (96%)	4 (4%)	0	100	100
44	BY	105/110 (96%)	98 (93%)	7 (7%)	0	100	100
44	DY	105/110 (96%)	97 (92%)	8 (8%)	0	100	100
45	BZ	169/206 (82%)	150 (89%)	18 (11%)	1 (1%)	21	56
45	DZ	172/206 (84%)	162 (94%)	10 (6%)	0	100	100
46	B0	81/85 (95%)	76 (94%)	4 (5%)	1 (1%)	10	40
46	D0	81/85 (95%)	76 (94%)	4 (5%)	1 (1%)	10	40
47	B1	95/98 (97%)	93 (98%)	1 (1%)	1 (1%)	11	43
47	D1	95/98 (97%)	92 (97%)	2 (2%)	1 (1%)	11	43
48	B2	68/72 (94%)	68 (100%)	0	0	100	100
48	D2	68/72 (94%)	67 (98%)	1 (2%)	0	100	100
49	B3	57/60 (95%)	56 (98%)	1 (2%)	0	100	100
49	D3	57/60 (95%)	57 (100%)	0	0	100	100
50	B4	67/71 (94%)	53 (79%)	9 (13%)	5 (8%)	1	4
50	D4	67/71 (94%)	52 (78%)	8 (12%)	7 (10%)	0	2
51	B5	57/60 (95%)	53 (93%)	4 (7%)	0	100	100
51	D5	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
52	B6	51/54 (94%)	48 (94%)	3 (6%)	0	100	100
52	D6	51/54 (94%)	47 (92%)	4 (8%)	0	100	100
53	B7	46/49 (94%)	46 (100%)	0	0	100	100
53	D7	46/49 (94%)	44 (96%)	1 (2%)	1 (2%)	5	26
54	B8	62/65 (95%)	60 (97%)	2 (3%)	0	100	100
54	D8	62/65 (95%)	61 (98%)	1 (2%)	0	100	100
55	B9	35/37 (95%)	34 (97%)	1 (3%)	0	100	100
55	D9	35/37 (95%)	34 (97%)	1 (3%)	0	100	100
All	All	11415/12148 (94%)	10659 (93%)	648 (6%)	108 (1%)	14	48

All (108) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	125	PRO
3	AC	107	GLN
4	AD	166	LYS

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Mol	Chain	Res	Type
9	AI	54	ASP
10	AJ	31	GLY
10	AJ	79	ARG
11	AK	49	GLY
18	AR	60	ALA
27	BD	275	LYS
29	BF	130	ALA
31	BH	126	PRO
36	BQ	60	ARG
50	B4	55	ARG
50	B4	68	ARG
2	CB	16	HIS
2	CB	20	GLU
2	CB	21	ARG
2	CB	126	GLU
7	CG	7	ALA
9	CI	54	ASP
10	CJ	79	ARG
20	CT	95	ALA
20	CT	99	LEU
29	DF	21	ALA
29	DF	130	ALA
30	DG	14	GLU
30	DG	47	LYS
30	DG	81	LYS
31	DH	126	PRO
32	DI	10	GLU
36	DQ	60	ARG
47	D1	3	LYS
50	D4	38	LYS
50	D4	39	CYS
50	D4	45	GLY
50	D4	55	ARG
50	D4	60	GLN
50	D4	63	TYR
53	D7	46	VAL
2	AB	16	HIS
2	AB	19	HIS
5	AE	85	GLY
5	AE	140	ARG
7	AG	81	GLY
9	AI	56	LEU

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Mol	Chain	Res	Type
9	AI	95	LYS
10	AJ	56	HIS
24	AW	7	PRO
32	BI	73	GLU
34	BO	5	GLN
35	BP	29	LYS
38	BS	60	GLY
45	BZ	152	ALA
46	B0	13	GLY
47	B1	3	LYS
50	B4	47	GLN
50	B4	56	VAL
50	B4	57	GLU
2	CB	8	LYS
13	CM	106	ASN
27	DD	239	ARG
28	DE	73	GLU
28	DE	94	GLU
32	DI	117	GLU
33	DN	2	LYS
34	DO	5	GLN
30	BG	47	LYS
30	BG	51	ARG
2	CB	231	GLU
3	CC	181	ASN
11	CK	49	GLY
20	CT	102	GLY
28	DE	52	LEU
30	DG	51	ARG
38	DS	84	GLN
41	DV	79	VAL
4	AD	164	ALA
13	AM	5	ALA
28	BE	52	LEU
32	BI	39	ALA
2	CB	123	ALA
4	CD	47	ARG
4	CD	129	ASN
10	CJ	56	HIS
32	DI	119	PRO
35	DP	38	GLN
50	D4	46	GLN

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Mol	Chain	Res	Type
2	AB	37	ASN
30	BG	126	ASP
32	BI	105	HIS
32	BI	107	VAL
41	BV	79	VAL
3	CC	91	LEU
9	CI	56	LEU
27	DD	3	VAL
35	DP	29	LYS
35	DP	45	LEU
46	D0	4	LYS
3	AC	66	VAL
20	AT	102	GLY
32	BI	10	GLU
37	BR	83	ILE
8	CH	73	ASP
32	BI	106	GLY
16	CP	53	VAL
24	CW	7	PRO
2	AB	124	SER
4	CD	136	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
2	AB	192/220 (87%)	147 (77%)	45 (23%)	1 4
2	CB	187/220 (85%)	148 (79%)	39 (21%)	1 7
3	AC	143/188 (76%)	122 (85%)	21 (15%)	3 15
3	CC	140/188 (74%)	118 (84%)	22 (16%)	2 13
4	AD	170/181 (94%)	146 (86%)	24 (14%)	3 16
4	CD	173/181 (96%)	145 (84%)	28 (16%)	2 12
5	AE	113/123 (92%)	100 (88%)	13 (12%)	5 24
5	CE	114/123 (93%)	98 (86%)	16 (14%)	3 16

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
6	AF	83/90 (92%)	75 (90%)	8 (10%)	8 31
6	CF	85/90 (94%)	77 (91%)	8 (9%)	8 32
7	AG	119/127 (94%)	92 (77%)	27 (23%)	1 5
7	CG	120/127 (94%)	97 (81%)	23 (19%)	1 8
8	AH	114/119 (96%)	95 (83%)	19 (17%)	2 12
8	CH	114/119 (96%)	97 (85%)	17 (15%)	3 15
9	AI	90/99 (91%)	75 (83%)	15 (17%)	2 12
9	CI	89/99 (90%)	77 (86%)	12 (14%)	4 18
10	AJ	66/92 (72%)	57 (86%)	9 (14%)	3 17
10	CJ	69/92 (75%)	62 (90%)	7 (10%)	7 29
11	AK	82/99 (83%)	73 (89%)	9 (11%)	6 25
11	CK	83/99 (84%)	72 (87%)	11 (13%)	4 18
12	AL	97/109 (89%)	85 (88%)	12 (12%)	4 20
12	CL	97/109 (89%)	83 (86%)	14 (14%)	3 15
13	AM	93/101 (92%)	81 (87%)	12 (13%)	4 19
13	CM	92/101 (91%)	77 (84%)	15 (16%)	2 12
14	AN	49/50 (98%)	39 (80%)	10 (20%)	1 7
14	CN	49/50 (98%)	40 (82%)	9 (18%)	1 9
15	AO	78/80 (98%)	69 (88%)	9 (12%)	5 24
15	CO	78/80 (98%)	67 (86%)	11 (14%)	3 16
16	AP	69/74 (93%)	61 (88%)	8 (12%)	5 23
16	CP	68/74 (92%)	61 (90%)	7 (10%)	7 28
17	AQ	94/97 (97%)	87 (93%)	7 (7%)	13 42
17	CQ	94/97 (97%)	85 (90%)	9 (10%)	8 31
18	AR	59/77 (77%)	54 (92%)	5 (8%)	10 36
18	CR	59/77 (77%)	51 (86%)	8 (14%)	3 17
19	AS	69/80 (86%)	63 (91%)	6 (9%)	9 35
19	CS	67/80 (84%)	58 (87%)	9 (13%)	4 18
20	AT	70/82 (85%)	59 (84%)	11 (16%)	2 13
20	CT	70/82 (85%)	61 (87%)	9 (13%)	4 19
21	AU	18/22 (82%)	15 (83%)	3 (17%)	2 12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
21	CU	18/22 (82%)	15 (83%)	3 (17%)	2 12
24	AW	3/3 (100%)	2 (67%)	1 (33%)	0 1
24	CW	3/3 (100%)	2 (67%)	1 (33%)	0 1
27	BD	215/218 (99%)	194 (90%)	21 (10%)	7 30
27	DD	215/218 (99%)	187 (87%)	28 (13%)	4 19
28	BE	164/166 (99%)	135 (82%)	29 (18%)	2 10
28	DE	164/166 (99%)	135 (82%)	29 (18%)	2 10
29	BF	160/166 (96%)	134 (84%)	26 (16%)	2 12
29	DF	159/166 (96%)	133 (84%)	26 (16%)	2 12
30	BG	143/156 (92%)	120 (84%)	23 (16%)	2 12
30	DG	142/156 (91%)	119 (84%)	23 (16%)	2 12
31	BH	144/148 (97%)	125 (87%)	19 (13%)	4 18
31	DH	144/148 (97%)	126 (88%)	18 (12%)	4 20
32	BI	110/124 (89%)	84 (76%)	26 (24%)	1 4
32	DI	104/124 (84%)	84 (81%)	20 (19%)	1 8
33	BN	118/119 (99%)	97 (82%)	21 (18%)	2 10
33	DN	118/119 (99%)	98 (83%)	20 (17%)	2 11
34	BO	100/100 (100%)	90 (90%)	10 (10%)	7 29
34	DO	100/100 (100%)	85 (85%)	15 (15%)	3 14
35	BP	115/116 (99%)	99 (86%)	16 (14%)	3 17
35	DP	115/116 (99%)	98 (85%)	17 (15%)	3 15
36	BQ	111/111 (100%)	98 (88%)	13 (12%)	5 23
36	DQ	111/111 (100%)	99 (89%)	12 (11%)	6 26
37	BR	101/101 (100%)	82 (81%)	19 (19%)	1 9
37	DR	101/101 (100%)	82 (81%)	19 (19%)	1 9
38	BS	87/88 (99%)	75 (86%)	12 (14%)	3 17
38	DS	85/88 (97%)	66 (78%)	19 (22%)	1 5
39	BT	115/127 (91%)	101 (88%)	14 (12%)	5 21
39	DT	113/127 (89%)	100 (88%)	13 (12%)	5 24
40	BU	93/94 (99%)	80 (86%)	13 (14%)	3 16
40	DU	93/94 (99%)	78 (84%)	15 (16%)	2 12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
41	BV	80/82 (98%)	65 (81%)	15 (19%)	1 9
41	DV	80/82 (98%)	64 (80%)	16 (20%)	1 7
42	BW	90/92 (98%)	79 (88%)	11 (12%)	5 21
42	DW	90/92 (98%)	79 (88%)	11 (12%)	5 21
43	BX	77/78 (99%)	71 (92%)	6 (8%)	11 39
43	DX	77/78 (99%)	71 (92%)	6 (8%)	11 39
44	BY	85/91 (93%)	77 (91%)	8 (9%)	8 32
44	DY	85/91 (93%)	79 (93%)	6 (7%)	13 43
45	BZ	145/179 (81%)	124 (86%)	21 (14%)	3 15
45	DZ	145/179 (81%)	127 (88%)	18 (12%)	4 20
46	B0	65/67 (97%)	61 (94%)	4 (6%)	16 49
46	D0	65/67 (97%)	59 (91%)	6 (9%)	8 33
47	B1	80/83 (96%)	70 (88%)	10 (12%)	4 20
47	D1	80/83 (96%)	67 (84%)	13 (16%)	2 12
48	B2	65/67 (97%)	56 (86%)	9 (14%)	3 17
48	D2	65/67 (97%)	56 (86%)	9 (14%)	3 17
49	B3	51/52 (98%)	40 (78%)	11 (22%)	1 6
49	D3	50/52 (96%)	41 (82%)	9 (18%)	2 10
50	B4	59/63 (94%)	48 (81%)	11 (19%)	1 9
50	D4	53/63 (84%)	43 (81%)	10 (19%)	1 9
51	B5	50/52 (96%)	44 (88%)	6 (12%)	5 22
51	D5	50/52 (96%)	47 (94%)	3 (6%)	17 50
52	B6	51/52 (98%)	47 (92%)	4 (8%)	11 39
52	D6	50/52 (96%)	46 (92%)	4 (8%)	11 38
53	B7	41/42 (98%)	37 (90%)	4 (10%)	7 30
53	D7	41/42 (98%)	37 (90%)	4 (10%)	7 30
54	B8	53/55 (96%)	49 (92%)	4 (8%)	12 41
54	D8	54/55 (98%)	51 (94%)	3 (6%)	19 52
55	B9	34/34 (100%)	33 (97%)	1 (3%)	37 70
55	D9	34/34 (100%)	31 (91%)	3 (9%)	9 35
All	All	9325/10072 (93%)	7991 (86%)	1334 (14%)	3 16

All (1334) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	7	VAL
2	AB	8	LYS
2	AB	11	LEU
2	AB	15	VAL
2	AB	20	GLU
2	AB	21	ARG
2	AB	49	GLU
2	AB	67	THR
2	AB	71	VAL
2	AB	76	GLN
2	AB	80	ILE
2	AB	81	VAL
2	AB	93	VAL
2	AB	94	ASN
2	AB	96	ARG
2	AB	108	ILE
2	AB	109	SER
2	AB	112	VAL
2	AB	114	ARG
2	AB	116	GLU
2	AB	139	LYS
2	AB	144	ARG
2	AB	145	LEU
2	AB	153	ARG
2	AB	155	LEU
2	AB	156	LYS
2	AB	157	ARG
2	AB	158	LEU
2	AB	169	LYS
2	AB	170	GLU
2	AB	178	ARG
2	AB	185	ILE
2	AB	187	LEU
2	AB	190	THR
2	AB	196	LEU
2	AB	200	ILE
2	AB	208	ILE
2	AB	209	ARG
2	AB	213	LEU
2	AB	217	ARG
2	AB	221	LEU
2	AB	222	ILE

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Mol	Chain	Res	Type
2	AB	223	ILE
2	AB	226	ARG
2	AB	233	SER
3	AC	3	ASN
3	AC	27	LYS
3	AC	28	GLN
3	AC	29	TYR
3	AC	37	GLN
3	AC	47	LEU
3	AC	52	LEU
3	AC	64	VAL
3	AC	70	VAL
3	AC	82	GLU
3	AC	104	GLN
3	AC	118	GLN
3	AC	119	ARG
3	AC	131	ARG
3	AC	134	ILE
3	AC	150	LYS
3	AC	151	VAL
3	AC	161	GLU
3	AC	165	THR
3	AC	178	LEU
3	AC	192	THR
4	AD	5	ILE
4	AD	15	GLU
4	AD	19	LEU
4	AD	34	GLU
4	AD	45	GLN
4	AD	58	LEU
4	AD	65	ARG
4	AD	85	LYS
4	AD	86	LYS
4	AD	108	LEU
4	AD	112	VAL
4	AD	120	LEU
4	AD	122	ARG
4	AD	127	THR
4	AD	135	LEU
4	AD	140	VAL
4	AD	155	LEU
4	AD	158	ILE

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Mol	Chain	Res	Type
4	AD	168	ARG
4	AD	177	ASP
4	AD	182	LYS
4	AD	184	LYS
4	AD	188	LEU
4	AD	196	LEU
5	AE	12	LEU
5	AE	31	LEU
5	AE	38	GLN
5	AE	40	ARG
5	AE	41	VAL
5	AE	47	LYS
5	AE	57	LYS
5	AE	71	LEU
5	AE	75	THR
5	AE	79	GLU
5	AE	82	VAL
5	AE	91	LEU
5	AE	111	GLU
6	AF	40	VAL
6	AF	54	LYS
6	AF	55	ASP
6	AF	69	GLU
6	AF	74	ASP
6	AF	82	ARG
6	AF	92	LYS
6	AF	94	GLN
7	AG	8	GLU
7	AG	9	VAL
7	AG	13	GLN
7	AG	21	VAL
7	AG	27	ILE
7	AG	37	ASN
7	AG	50	ILE
7	AG	51	GLN
7	AG	52	GLU
7	AG	56	GLN
7	AG	57	GLU
7	AG	58	PRO
7	AG	59	LEU
7	AG	61	VAL
7	AG	66	VAL

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Mol	Chain	Res	Type
7	AG	72	ARG
7	AG	76	ARG
7	AG	79	ARG
7	AG	91	VAL
7	AG	97	GLN
7	AG	104	LEU
7	AG	113	GLU
7	AG	114	ARG
7	AG	129	GLU
7	AG	138	LYS
7	AG	140	ASP
7	AG	144	MET
8	AH	2	LEU
8	AH	25	ASP
8	AH	26	VAL
8	AH	37	ARG
8	AH	45	ILE
8	AH	52	ASP
8	AH	53	VAL
8	AH	63	LEU
8	AH	75	ARG
8	AH	78	GLN
8	AH	91	ARG
8	AH	97	VAL
8	AH	98	LYS
8	AH	99	GLU
8	AH	107	LEU
8	AH	112	LEU
8	AH	115	SER
8	AH	123	GLU
8	AH	137	VAL
9	AI	11	LYS
9	AI	14	VAL
9	AI	23	ASN
9	AI	27	THR
9	AI	53	VAL
9	AI	54	ASP
9	AI	56	LEU
9	AI	64	THR
9	AI	81	ILE
9	AI	96	LEU
9	AI	103	THR

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Mol	Chain	Res	Type
9	AI	108	VAL
9	AI	124	GLN
9	AI	127	LYS
9	AI	128	ARG
10	AJ	5	ARG
10	AJ	7	LYS
10	AJ	16	LEU
10	AJ	21	GLN
10	AJ	30	SER
10	AJ	68	HIS
10	AJ	81	THR
10	AJ	84	GLN
10	AJ	92	THR
11	AK	31	THR
11	AK	48	ILE
11	AK	70	LYS
11	AK	82	VAL
11	AK	84	VAL
11	AK	95	ILE
11	AK	96	ARG
11	AK	104	GLN
11	AK	109	VAL
12	AL	6	THR
12	AL	27	LEU
12	AL	33	ARG
12	AL	53	ARG
12	AL	55	VAL
12	AL	57	LYS
12	AL	67	THR
12	AL	70	ILE
12	AL	83	VAL
12	AL	84	LEU
12	AL	116	SER
12	AL	117	ARG
13	AM	3	ARG
13	AM	4	ILE
13	AM	8	GLU
13	AM	15	VAL
13	AM	19	LEU
13	AM	43	THR
13	AM	47	ASP
13	AM	50	GLU

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Mol	Chain	Res	Type
13	AM	73	GLU
13	AM	98	VAL
13	AM	110	ARG
13	AM	121	LYS
14	AN	3	ARG
14	AN	4	LYS
14	AN	6	LEU
14	AN	7	ILE
14	AN	18	VAL
14	AN	22	THR
14	AN	23	ARG
14	AN	33	VAL
14	AN	44	LEU
14	AN	50	LYS
15	AO	3	ILE
15	AO	5	LYS
15	AO	22	THR
15	AO	26	GLU
15	AO	39	LEU
15	AO	41	GLU
15	AO	76	GLU
15	AO	83	GLU
15	AO	84	LYS
16	AP	2	VAL
16	AP	8	ARG
16	AP	19	ILE
16	AP	20	VAL
16	AP	21	VAL
16	AP	28	ARG
16	AP	50	LYS
16	AP	67	THR
17	AQ	9	VAL
17	AQ	52	LYS
17	AQ	53	LEU
17	AQ	57	VAL
17	AQ	60	ILE
17	AQ	74	LEU
17	AQ	100	LYS
18	AR	26	LEU
18	AR	32	ARG
18	AR	54	ARG
18	AR	61	LYS

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Mol	Chain	Res	Type
18	AR	85	LEU
19	AS	6	LYS
19	AS	28	LYS
19	AS	37	ARG
19	AS	43	GLU
19	AS	63	THR
19	AS	65	ASN
20	AT	8	ARG
20	AT	9	ASN
20	AT	10	LEU
20	AT	13	LEU
20	AT	24	LEU
20	AT	45	GLN
20	AT	46	GLU
20	AT	56	MET
20	AT	58	LYS
20	AT	62	LEU
20	AT	74	LYS
21	AU	7	ARG
21	AU	9	ARG
21	AU	10	ARG
24	AW	2	VAL
27	BD	3	VAL
27	BD	12	SER
27	BD	13	ARG
27	BD	54	ARG
27	BD	94	LEU
27	BD	103	ARG
27	BD	106	ILE
27	BD	111	LEU
27	BD	113	VAL
27	BD	138	VAL
27	BD	142	VAL
27	BD	162	SER
27	BD	165	ILE
27	BD	173	VAL
27	BD	193	VAL
27	BD	211	ARG
27	BD	217	ARG
27	BD	221	VAL
27	BD	229	VAL
27	BD	257	LEU

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Mol	Chain	Res	Type
27	BD	260	ARG
28	BE	1	MET
28	BE	7	VAL
28	BE	9	VAL
28	BE	12	THR
28	BE	21	VAL
28	BE	24	THR
28	BE	33	VAL
28	BE	34	VAL
28	BE	40	GLU
28	BE	45	THR
28	BE	49	LEU
28	BE	73	GLU
28	BE	75	VAL
28	BE	78	LEU
28	BE	79	ARG
28	BE	82	ARG
28	BE	93	VAL
28	BE	97	LYS
28	BE	116	VAL
28	BE	119	ARG
28	BE	128	SER
28	BE	144	ARG
28	BE	145	LYS
28	BE	154	LYS
28	BE	163	GLU
28	BE	167	VAL
28	BE	170	LEU
28	BE	175	VAL
28	BE	181	LEU
29	BF	19	GLU
29	BF	20	LEU
29	BF	24	LEU
29	BF	28	ILE
29	BF	33	LEU
29	BF	38	ARG
29	BF	48	THR
29	BF	53	THR
29	BF	57	VAL
29	BF	74	ARG
29	BF	78	ILE
29	BF	88	VAL

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Mol	Chain	Res	Type
29	BF	106	ARG
29	BF	108	LYS
29	BF	110	LEU
29	BF	125	LEU
29	BF	132	VAL
29	BF	140	LEU
29	BF	162	LEU
29	BF	170	LEU
29	BF	183	VAL
29	BF	192	LEU
29	BF	196	LEU
29	BF	197	ASP
29	BF	200	GLU
29	BF	201	VAL
30	BG	3	LEU
30	BG	5	VAL
30	BG	7	LEU
30	BG	28	VAL
30	BG	35	GLU
30	BG	43	LEU
30	BG	45	GLU
30	BG	60	LEU
30	BG	78	SER
30	BG	81	LYS
30	BG	82	LEU
30	BG	84	LYS
30	BG	86	MET
30	BG	133	LEU
30	BG	135	LEU
30	BG	136	ARG
30	BG	140	ILE
30	BG	143	GLU
30	BG	145	THR
30	BG	148	MET
30	BG	159	VAL
30	BG	170	ARG
30	BG	181	ARG
31	BH	13	LYS
31	BH	15	VAL
31	BH	24	VAL
31	BH	41	MET
31	BH	43	VAL

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Mol	Chain	Res	Type
31	BH	45	VAL
31	BH	49	VAL
31	BH	59	ARG
31	BH	62	LYS
31	BH	69	ARG
31	BH	71	LEU
31	BH	98	LEU
31	BH	105	LEU
31	BH	106	THR
31	BH	116	GLU
31	BH	122	THR
31	BH	129	THR
31	BH	172	LYS
31	BH	175	LYS
32	BI	5	LEU
32	BI	9	LEU
32	BI	15	VAL
32	BI	31	LEU
32	BI	38	LEU
32	BI	41	GLU
32	BI	43	ASN
32	BI	44	LEU
32	BI	50	ARG
32	BI	57	ARG
32	BI	60	GLU
32	BI	64	GLU
32	BI	66	GLU
32	BI	68	LEU
32	BI	74	ASN
32	BI	75	LEU
32	BI	77	LEU
32	BI	78	THR
32	BI	86	THR
32	BI	92	VAL
32	BI	96	ASP
32	BI	101	LEU
32	BI	107	VAL
32	BI	109	ILE
32	BI	140	LEU
32	BI	144	VAL
33	BN	5	VAL
33	BN	12	ARG

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Mol	Chain	Res	Type
33	BN	28	THR
33	BN	33	LEU
33	BN	34	LEU
33	BN	46	VAL
33	BN	48	MET
33	BN	61	ARG
33	BN	62	VAL
33	BN	67	LEU
33	BN	68	GLU
33	BN	83	LYS
33	BN	85	ILE
33	BN	87	LEU
33	BN	97	ARG
33	BN	99	LEU
33	BN	112	LEU
33	BN	120	LEU
33	BN	121	LYS
33	BN	133	GLN
33	BN	137	LYS
34	BO	8	LEU
34	BO	10	VAL
34	BO	24	VAL
34	BO	58	VAL
34	BO	61	VAL
34	BO	85	VAL
34	BO	91	LEU
34	BO	92	GLU
34	BO	98	VAL
34	BO	108	GLU
35	BP	3	LEU
35	BP	21	ARG
35	BP	59	LEU
35	BP	65	ARG
35	BP	68	GLN
35	BP	70	GLN
35	BP	75	ILE
35	BP	83	VAL
35	BP	95	VAL
35	BP	98	GLU
35	BP	100	LEU
35	BP	106	LEU
35	BP	112	LEU

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Mol	Chain	Res	Type
35	BP	125	VAL
35	BP	135	LEU
35	BP	149	GLU
36	BQ	7	MET
36	BQ	8	LYS
36	BQ	21	THR
36	BQ	42	ILE
36	BQ	45	GLN
36	BQ	54	MET
36	BQ	55	VAL
36	BQ	56	ARG
36	BQ	60	ARG
36	BQ	75	THR
36	BQ	81	VAL
36	BQ	109	VAL
36	BQ	110	THR
37	BR	1	MET
37	BR	6	SER
37	BR	8	ARG
37	BR	18	LEU
37	BR	28	LEU
37	BR	29	LEU
37	BR	30	THR
37	BR	33	ARG
37	BR	36	THR
37	BR	44	LEU
37	BR	54	LEU
37	BR	60	LEU
37	BR	65	LEU
37	BR	67	LEU
37	BR	75	LEU
37	BR	79	LEU
37	BR	86	ARG
37	BR	100	LEU
37	BR	111	LEU
38	BS	14	VAL
38	BS	19	LYS
38	BS	20	ARG
38	BS	36	TYR
38	BS	57	LYS
38	BS	59	LYS
38	BS	61	ASN

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Mol	Chain	Res	Type
38	BS	68	GLN
38	BS	73	LEU
38	BS	78	LEU
38	BS	83	LYS
38	BS	103	GLU
39	BT	6	LEU
39	BT	13	ARG
39	BT	17	THR
39	BT	28	VAL
39	BT	34	VAL
39	BT	39	ARG
39	BT	49	VAL
39	BT	53	ARG
39	BT	74	ARG
39	BT	78	LEU
39	BT	89	VAL
39	BT	96	ARG
39	BT	113	LYS
39	BT	118	ARG
40	BU	8	VAL
40	BU	31	SER
40	BU	34	LYS
40	BU	36	ARG
40	BU	59	ARG
40	BU	60	LEU
40	BU	74	LEU
40	BU	83	LEU
40	BU	92	ARG
40	BU	95	LEU
40	BU	104	GLN
40	BU	108	GLU
40	BU	117	GLN
41	BV	6	LYS
41	BV	10	LYS
41	BV	18	LEU
41	BV	19	LYS
41	BV	21	ARG
41	BV	39	LEU
41	BV	43	GLU
41	BV	46	VAL
41	BV	51	VAL
41	BV	52	VAL

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Mol	Chain	Res	Type
41	BV	61	VAL
41	BV	62	LEU
41	BV	72	VAL
41	BV	79	VAL
41	BV	95	LEU
42	BW	11	ARG
42	BW	15	ARG
42	BW	17	VAL
42	BW	19	LEU
42	BW	23	LEU
42	BW	27	LYS
42	BW	51	LEU
42	BW	52	GLU
42	BW	95	ILE
42	BW	96	ILE
42	BW	107	LEU
43	BX	33	LYS
43	BX	52	VAL
43	BX	57	LEU
43	BX	66	LEU
43	BX	70	LEU
43	BX	92	LEU
44	BY	2	ARG
44	BY	7	VAL
44	BY	43	ASN
44	BY	72	VAL
44	BY	73	ARG
44	BY	90	LEU
44	BY	91	GLU
44	BY	107	ASP
45	BZ	5	LEU
45	BZ	6	LYS
45	BZ	11	GLU
45	BZ	19	ARG
45	BZ	33	LEU
45	BZ	41	LEU
45	BZ	42	VAL
45	BZ	61	LEU
45	BZ	76	LEU
45	BZ	86	VAL
45	BZ	91	LEU
45	BZ	107	THR

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Mol	Chain	Res	Type
45	BZ	126	VAL
45	BZ	132	ASN
45	BZ	135	GLU
45	BZ	136	PHE
45	BZ	144	LEU
45	BZ	155	LEU
45	BZ	162	GLU
45	BZ	165	VAL
45	BZ	170	THR
46	B0	7	LEU
46	B0	10	THR
46	B0	20	ARG
46	B0	55	ARG
47	B1	21	ARG
47	B1	30	VAL
47	B1	35	THR
47	B1	40	ARG
47	B1	51	VAL
47	B1	52	ARG
47	B1	59	THR
47	B1	78	LYS
47	B1	89	GLU
47	B1	95	LEU
48	B2	28	LYS
48	B2	32	LEU
48	B2	41	ILE
48	B2	52	ASP
48	B2	53	LEU
48	B2	55	ARG
48	B2	64	LEU
48	B2	68	ARG
48	B2	70	GLN
49	B3	3	ARG
49	B3	6	VAL
49	B3	8	LEU
49	B3	23	LEU
49	B3	29	ARG
49	B3	31	LEU
49	B3	32	GLN
49	B3	54	VAL
49	B3	55	ARG
49	B3	56	VAL

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Mol	Chain	Res	Type
49	B3	58	VAL
50	B4	5	ILE
50	B4	33	VAL
50	B4	34	GLU
50	B4	44	THR
50	B4	46	GLN
50	B4	49	PHE
50	B4	50	VAL
50	B4	56	VAL
50	B4	58	ARG
50	B4	61	ARG
50	B4	63	TYR
51	B5	6	VAL
51	B5	29	THR
51	B5	40	LYS
51	B5	58	LEU
51	B5	59	GLU
51	B5	60	VAL
52	B6	4	GLU
52	B6	9	LEU
52	B6	14	THR
52	B6	48	VAL
53	B7	1	MET
53	B7	9	ARG
53	B7	43	THR
53	B7	47	ARG
54	B8	13	ARG
54	B8	14	VAL
54	B8	32	LEU
54	B8	41	ILE
55	B9	17	ILE
2	CB	7	VAL
2	CB	11	LEU
2	CB	15	VAL
2	CB	23	ARG
2	CB	35	GLU
2	CB	44	LEU
2	CB	49	GLU
2	CB	67	THR
2	CB	71	VAL
2	CB	76	GLN
2	CB	80	ILE

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Mol	Chain	Res	Type
2	CB	90	MET
2	CB	94	ASN
2	CB	96	ARG
2	CB	108	ILE
2	CB	115	LEU
2	CB	126	GLU
2	CB	128	GLU
2	CB	140	HIS
2	CB	144	ARG
2	CB	145	LEU
2	CB	153	ARG
2	CB	154	LEU
2	CB	158	LEU
2	CB	169	LYS
2	CB	178	ARG
2	CB	185	ILE
2	CB	187	LEU
2	CB	189	ASP
2	CB	200	ILE
2	CB	211	ILE
2	CB	213	LEU
2	CB	221	LEU
2	CB	223	ILE
2	CB	224	GLN
2	CB	226	ARG
2	CB	232	PRO
2	CB	233	SER
2	CB	235	SER
3	CC	3	ASN
3	CC	20	SER
3	CC	44	GLU
3	CC	47	LEU
3	CC	52	LEU
3	CC	57	ILE
3	CC	70	VAL
3	CC	82	GLU
3	CC	98	ASN
3	CC	101	LEU
3	CC	104	GLN
3	CC	115	LEU
3	CC	118	GLN
3	CC	131	ARG

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Mol	Chain	Res	Type
3	CC	140	ARG
3	CC	151	VAL
3	CC	152	ILE
3	CC	162	GLN
3	CC	164	ARG
3	CC	165	THR
3	CC	178	LEU
3	CC	179	ARG
4	CD	10	ARG
4	CD	15	GLU
4	CD	19	LEU
4	CD	33	MET
4	CD	34	GLU
4	CD	47	ARG
4	CD	58	LEU
4	CD	65	ARG
4	CD	85	LYS
4	CD	96	LEU
4	CD	108	LEU
4	CD	110	PHE
4	CD	120	LEU
4	CD	122	ARG
4	CD	127	THR
4	CD	135	LEU
4	CD	140	VAL
4	CD	150	GLU
4	CD	157	LEU
4	CD	158	ILE
4	CD	170	VAL
4	CD	177	ASP
4	CD	184	LYS
4	CD	187	ARG
4	CD	188	LEU
4	CD	191	ARG
4	CD	194	LEU
4	CD	196	LEU
5	CE	10	MET
5	CE	12	LEU
5	CE	18	ARG
5	CE	31	LEU
5	CE	40	ARG
5	CE	41	VAL

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Mol	Chain	Res	Type
5	CE	47	LYS
5	CE	57	LYS
5	CE	71	LEU
5	CE	75	THR
5	CE	79	GLU
5	CE	82	VAL
5	CE	91	LEU
5	CE	111	GLU
5	CE	137	GLU
5	CE	150	ARG
6	CF	10	LEU
6	CF	23	LYS
6	CF	28	ARG
6	CF	40	VAL
6	CF	41	GLU
6	CF	63	TYR
6	CF	69	GLU
6	CF	75	LEU
7	CG	9	VAL
7	CG	12	LEU
7	CG	13	GLN
7	CG	27	ILE
7	CG	37	ASN
7	CG	50	ILE
7	CG	51	GLN
7	CG	52	GLU
7	CG	56	GLN
7	CG	57	GLU
7	CG	58	PRO
7	CG	59	LEU
7	CG	66	VAL
7	CG	75	VAL
7	CG	76	ARG
7	CG	85	TYR
7	CG	87	VAL
7	CG	97	GLN
7	CG	104	LEU
7	CG	113	GLU
7	CG	120	ILE
7	CG	131	LYS
7	CG	155	ARG
8	CH	2	LEU

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Mol	Chain	Res	Type
8	CH	21	LYS
8	CH	23	SER
8	CH	25	ASP
8	CH	38	ILE
8	CH	39	LEU
8	CH	45	ILE
8	CH	53	VAL
8	CH	78	GLN
8	CH	84	ARG
8	CH	91	ARG
8	CH	97	VAL
8	CH	98	LYS
8	CH	99	GLU
8	CH	103	VAL
8	CH	112	LEU
8	CH	137	VAL
9	CI	7	THR
9	CI	23	ASN
9	CI	27	THR
9	CI	64	THR
9	CI	75	ASP
9	CI	81	ILE
9	CI	86	VAL
9	CI	96	LEU
9	CI	102	LEU
9	CI	108	VAL
9	CI	124	GLN
9	CI	128	ARG
10	CJ	6	ILE
10	CJ	23	ILE
10	CJ	29	ARG
10	CJ	68	HIS
10	CJ	74	ILE
10	CJ	92	THR
10	CJ	100	THR
11	CK	31	THR
11	CK	33	THR
11	CK	54	ARG
11	CK	79	SER
11	CK	82	VAL
11	CK	84	VAL
11	CK	95	ILE

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Mol	Chain	Res	Type
11	CK	96	ARG
11	CK	98	LEU
11	CK	109	VAL
11	CK	126	ARG
12	CL	6	THR
12	CL	33	ARG
12	CL	34	ARG
12	CL	50	SER
12	CL	52	LEU
12	CL	55	VAL
12	CL	60	LEU
12	CL	70	ILE
12	CL	83	VAL
12	CL	84	LEU
12	CL	97	ARG
12	CL	116	SER
12	CL	117	ARG
12	CL	123	LYS
13	CM	3	ARG
13	CM	4	ILE
13	CM	8	GLU
13	CM	19	LEU
13	CM	27	LYS
13	CM	47	ASP
13	CM	49	THR
13	CM	50	GLU
13	CM	56	LEU
13	CM	70	LEU
13	CM	98	VAL
13	CM	104	ARG
13	CM	106	ASN
13	CM	110	ARG
13	CM	121	LYS
14	CN	3	ARG
14	CN	7	ILE
14	CN	17	LYS
14	CN	18	VAL
14	CN	22	THR
14	CN	23	ARG
14	CN	33	VAL
14	CN	44	LEU
14	CN	57	ARG

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Mol	Chain	Res	Type
15	CO	3	ILE
15	CO	5	LYS
15	CO	7	GLU
15	CO	22	THR
15	CO	24	SER
15	CO	26	GLU
15	CO	39	LEU
15	CO	48	LYS
15	CO	54	ARG
15	CO	76	GLU
15	CO	83	GLU
16	CP	2	VAL
16	CP	5	ARG
16	CP	8	ARG
16	CP	21	VAL
16	CP	60	LEU
16	CP	67	THR
16	CP	69	THR
17	CQ	6	LEU
17	CQ	9	VAL
17	CQ	53	LEU
17	CQ	57	VAL
17	CQ	60	ILE
17	CQ	65	ILE
17	CQ	66	SER
17	CQ	74	LEU
17	CQ	83	ASP
18	CR	26	LEU
18	CR	32	ARG
18	CR	37	VAL
18	CR	41	LYS
18	CR	54	ARG
18	CR	64	ARG
18	CR	76	LEU
18	CR	85	LEU
19	CS	22	LEU
19	CS	28	LYS
19	CS	30	LEU
19	CS	33	THR
19	CS	37	ARG
19	CS	43	GLU
19	CS	56	GLN

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Mol	Chain	Res	Type
19	CS	63	THR
19	CS	65	ASN
20	CT	24	LEU
20	CT	41	ILE
20	CT	46	GLU
20	CT	56	MET
20	CT	62	LEU
20	CT	71	THR
20	CT	80	ARG
20	CT	90	GLN
20	CT	99	LEU
21	CU	7	ARG
21	CU	10	ARG
21	CU	12	LYS
24	CW	2	VAL
27	DD	5	LYS
27	DD	13	ARG
27	DD	54	ARG
27	DD	61	LEU
27	DD	69	ARG
27	DD	88	ARG
27	DD	94	LEU
27	DD	106	ILE
27	DD	111	LEU
27	DD	113	VAL
27	DD	127	VAL
27	DD	134	ARG
27	DD	138	VAL
27	DD	142	VAL
27	DD	165	ILE
27	DD	173	VAL
27	DD	193	VAL
27	DD	211	ARG
27	DD	217	ARG
27	DD	221	VAL
27	DD	229	VAL
27	DD	242	ARG
27	DD	257	LEU
27	DD	259	THR
27	DD	260	ARG
27	DD	274	ARG
27	DD	275	LYS

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Mol	Chain	Res	Type
27	DD	276	LYS
28	DE	1	MET
28	DE	7	VAL
28	DE	9	VAL
28	DE	12	THR
28	DE	21	VAL
28	DE	24	THR
28	DE	33	VAL
28	DE	34	VAL
28	DE	40	GLU
28	DE	47	VAL
28	DE	49	LEU
28	DE	52	LEU
28	DE	58	ARG
28	DE	73	GLU
28	DE	75	VAL
28	DE	78	LEU
28	DE	82	ARG
28	DE	111	ARG
28	DE	116	VAL
28	DE	119	ARG
28	DE	134	ILE
28	DE	144	ARG
28	DE	145	LYS
28	DE	154	LYS
28	DE	163	GLU
28	DE	167	VAL
28	DE	170	LEU
28	DE	175	VAL
28	DE	181	LEU
29	DF	12	LEU
29	DF	13	SER
29	DF	15	SER
29	DF	19	GLU
29	DF	20	LEU
29	DF	24	LEU
29	DF	27	GLU
29	DF	33	LEU
29	DF	48	THR
29	DF	57	VAL
29	DF	74	ARG
29	DF	78	ILE

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Mol	Chain	Res	Type
29	DF	88	VAL
29	DF	106	ARG
29	DF	108	LYS
29	DF	110	LEU
29	DF	132	VAL
29	DF	135	LYS
29	DF	140	LEU
29	DF	162	LEU
29	DF	170	LEU
29	DF	183	VAL
29	DF	192	LEU
29	DF	196	LEU
29	DF	200	GLU
29	DF	201	VAL
30	DG	3	LEU
30	DG	5	VAL
30	DG	21	ARG
30	DG	28	VAL
30	DG	31	VAL
30	DG	36	LYS
30	DG	43	LEU
30	DG	45	GLU
30	DG	60	LEU
30	DG	84	LYS
30	DG	91	ARG
30	DG	98	ARG
30	DG	113	ARG
30	DG	115	ARG
30	DG	133	LEU
30	DG	136	ARG
30	DG	140	ILE
30	DG	143	GLU
30	DG	145	THR
30	DG	148	MET
30	DG	153	ARG
30	DG	159	VAL
30	DG	170	ARG
31	DH	3	ARG
31	DH	15	VAL
31	DH	24	VAL
31	DH	25	LYS
31	DH	42	ARG

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Mol	Chain	Res	Type
31	DH	49	VAL
31	DH	69	ARG
31	DH	71	LEU
31	DH	76	VAL
31	DH	81	GLU
31	DH	95	ARG
31	DH	98	LEU
31	DH	105	LEU
31	DH	106	THR
31	DH	131	VAL
31	DH	134	SER
31	DH	139	GLN
31	DH	171	LEU
32	DI	5	LEU
32	DI	15	VAL
32	DI	19	VAL
32	DI	31	LEU
32	DI	40	THR
32	DI	41	GLU
32	DI	43	ASN
32	DI	44	LEU
32	DI	57	ARG
32	DI	61	ARG
32	DI	68	LEU
32	DI	75	LEU
32	DI	77	LEU
32	DI	114	LEU
32	DI	119	PRO
32	DI	122	GLU
32	DI	129	THR
32	DI	140	LEU
32	DI	142	VAL
32	DI	144	VAL
33	DN	5	VAL
33	DN	12	ARG
33	DN	28	THR
33	DN	33	LEU
33	DN	34	LEU
33	DN	38	HIS
33	DN	46	VAL
33	DN	48	MET
33	DN	58	ASP

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Mol	Chain	Res	Type
33	DN	61	ARG
33	DN	62	VAL
33	DN	63	THR
33	DN	85	ILE
33	DN	87	LEU
33	DN	97	ARG
33	DN	99	LEU
33	DN	112	LEU
33	DN	120	LEU
33	DN	133	GLN
33	DN	137	LYS
34	DO	8	LEU
34	DO	9	GLU
34	DO	10	VAL
34	DO	24	VAL
34	DO	35	VAL
34	DO	47	ILE
34	DO	58	VAL
34	DO	69	ILE
34	DO	70	LYS
34	DO	85	VAL
34	DO	91	LEU
34	DO	92	GLU
34	DO	98	VAL
34	DO	108	GLU
34	DO	113	LYS
35	DP	1	MET
35	DP	2	LYS
35	DP	3	LEU
35	DP	5	ASP
35	DP	21	ARG
35	DP	55	ARG
35	DP	59	LEU
35	DP	65	ARG
35	DP	68	GLN
35	DP	76	LYS
35	DP	77	ARG
35	DP	96	THR
35	DP	100	LEU
35	DP	106	LEU
35	DP	112	LEU
35	DP	125	VAL

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Mol	Chain	Res	Type
35	DP	135	LEU
36	DQ	1	MET
36	DQ	7	MET
36	DQ	8	LYS
36	DQ	21	THR
36	DQ	45	GLN
36	DQ	55	VAL
36	DQ	56	ARG
36	DQ	60	ARG
36	DQ	75	THR
36	DQ	81	VAL
36	DQ	109	VAL
36	DQ	110	THR
37	DR	1	MET
37	DR	6	SER
37	DR	18	LEU
37	DR	28	LEU
37	DR	29	LEU
37	DR	30	THR
37	DR	33	ARG
37	DR	36	THR
37	DR	44	LEU
37	DR	54	LEU
37	DR	60	LEU
37	DR	65	LEU
37	DR	67	LEU
37	DR	75	LEU
37	DR	79	LEU
37	DR	86	ARG
37	DR	95	THR
37	DR	100	LEU
37	DR	111	LEU
38	DS	3	ARG
38	DS	14	VAL
38	DS	19	LYS
38	DS	20	ARG
38	DS	35	ILE
38	DS	36	TYR
38	DS	50	SER
38	DS	57	LYS
38	DS	58	LEU
38	DS	67	ARG

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Mol	Chain	Res	Type
38	DS	68	GLN
38	DS	69	VAL
38	DS	71	ARG
38	DS	73	LEU
38	DS	75	GLU
38	DS	78	LEU
38	DS	83	LYS
38	DS	85	VAL
38	DS	103	GLU
39	DT	6	LEU
39	DT	13	ARG
39	DT	17	THR
39	DT	28	VAL
39	DT	34	VAL
39	DT	49	VAL
39	DT	74	ARG
39	DT	78	LEU
39	DT	85	LYS
39	DT	89	VAL
39	DT	96	ARG
39	DT	113	LYS
39	DT	118	ARG
40	DU	5	LYS
40	DU	8	VAL
40	DU	17	ILE
40	DU	31	SER
40	DU	36	ARG
40	DU	59	ARG
40	DU	60	LEU
40	DU	74	LEU
40	DU	83	LEU
40	DU	89	GLU
40	DU	92	ARG
40	DU	95	LEU
40	DU	104	GLN
40	DU	108	GLU
40	DU	114	LYS
41	DV	6	LYS
41	DV	10	LYS
41	DV	15	GLU
41	DV	18	LEU
41	DV	19	LYS

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Mol	Chain	Res	Type
41	DV	21	ARG
41	DV	24	LYS
41	DV	39	LEU
41	DV	46	VAL
41	DV	51	VAL
41	DV	52	VAL
41	DV	57	VAL
41	DV	61	VAL
41	DV	62	LEU
41	DV	72	VAL
41	DV	79	VAL
42	DW	11	ARG
42	DW	15	ARG
42	DW	17	VAL
42	DW	23	LEU
42	DW	27	LYS
42	DW	51	LEU
42	DW	60	ASN
42	DW	68	ARG
42	DW	95	ILE
42	DW	100	THR
42	DW	107	LEU
43	DX	33	LYS
43	DX	43	VAL
43	DX	57	LEU
43	DX	70	LEU
43	DX	76	ARG
43	DX	92	LEU
44	DY	2	ARG
44	DY	11	ASP
44	DY	49	VAL
44	DY	72	VAL
44	DY	90	LEU
44	DY	91	GLU
45	DZ	5	LEU
45	DZ	19	ARG
45	DZ	33	LEU
45	DZ	41	LEU
45	DZ	42	VAL
45	DZ	53	ILE
45	DZ	61	LEU
45	DZ	72	ARG

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Mol	Chain	Res	Type
45	DZ	86	VAL
45	DZ	91	LEU
45	DZ	107	THR
45	DZ	126	VAL
45	DZ	136	PHE
45	DZ	155	LEU
45	DZ	156	LYS
45	DZ	162	GLU
45	DZ	165	VAL
45	DZ	170	THR
46	D0	7	LEU
46	D0	10	THR
46	D0	19	LYS
46	D0	20	ARG
46	D0	24	LYS
46	D0	55	ARG
47	D1	4	VAL
47	D1	21	ARG
47	D1	26	ARG
47	D1	32	LYS
47	D1	35	THR
47	D1	40	ARG
47	D1	51	VAL
47	D1	52	ARG
47	D1	59	THR
47	D1	78	LYS
47	D1	89	GLU
47	D1	95	LEU
47	D1	98	LEU
48	D2	19	VAL
48	D2	28	LYS
48	D2	40	SER
48	D2	41	ILE
48	D2	52	ASP
48	D2	53	LEU
48	D2	55	ARG
48	D2	64	LEU
48	D2	70	GLN
49	D3	3	ARG
49	D3	6	VAL
49	D3	8	LEU
49	D3	23	LEU

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Mol	Chain	Res	Type
49	D3	31	LEU
49	D3	32	GLN
49	D3	44	ARG
49	D3	54	VAL
49	D3	56	VAL
50	D4	3	GLU
50	D4	5	ILE
50	D4	8	LYS
50	D4	33	VAL
50	D4	44	THR
50	D4	50	VAL
50	D4	56	VAL
50	D4	61	ARG
50	D4	63	TYR
50	D4	68	ARG
51	D5	6	VAL
51	D5	29	THR
51	D5	58	LEU
52	D6	9	LEU
52	D6	28	ARG
52	D6	38	LYS
52	D6	48	VAL
53	D7	1	MET
53	D7	9	ARG
53	D7	41	ARG
53	D7	48	LYS
54	D8	14	VAL
54	D8	26	LYS
54	D8	41	ILE
55	D9	7	VAL
55	D9	17	ILE
55	D9	26	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (146) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	146	GLN
3	AC	6	HIS
3	AC	28	GLN
3	AC	37	GLN
3	AC	118	GLN
3	AC	170	GLN

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Mol	Chain	Res	Type
4	AD	45	GLN
4	AD	77	ASN
4	AD	123	HIS
5	AE	20	GLN
5	AE	38	GLN
5	AE	141	GLN
6	AF	94	GLN
6	AF	100	ASN
7	AG	28	ASN
7	AG	51	GLN
7	AG	56	GLN
7	AG	86	GLN
7	AG	148	ASN
9	AI	23	ASN
9	AI	31	GLN
9	AI	34	ASN
9	AI	73	GLN
10	AJ	13	HIS
10	AJ	21	GLN
10	AJ	68	HIS
10	AJ	84	GLN
11	AK	62	GLN
11	AK	93	GLN
11	AK	104	GLN
12	AL	99	HIS
15	AO	28	GLN
17	AQ	16	GLN
17	AQ	26	GLN
19	AS	47	HIS
19	AS	57	HIS
19	AS	65	ASN
19	AS	69	HIS
20	AT	9	ASN
20	AT	16	HIS
20	AT	45	GLN
27	BD	87	ASN
27	BD	253	GLN
28	BE	85	ASN
29	BF	8	GLN
29	BF	69	HIS
29	BF	169	ASN
29	BF	203	GLN

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Mol	Chain	Res	Type
30	BG	26	GLN
30	BG	40	ASN
32	BI	43	ASN
32	BI	104	GLN
32	BI	139	GLN
33	BN	94	HIS
35	BP	38	GLN
36	BQ	45	GLN
36	BQ	57	HIS
39	BT	84	GLN
39	BT	123	GLN
40	BU	117	GLN
42	BW	62	HIS
43	BX	31	HIS
43	BX	55	ASN
44	BY	6	HIS
44	BY	43	ASN
45	BZ	32	HIS
45	BZ	151	HIS
46	B0	3	HIS
48	B2	70	GLN
50	B4	46	GLN
54	B8	35	GLN
54	B8	43	GLN
55	B9	36	GLN
2	CB	19	HIS
2	CB	76	GLN
3	CC	6	HIS
3	CC	28	GLN
3	CC	63	ASN
3	CC	69	HIS
3	CC	104	GLN
3	CC	118	GLN
3	CC	123	GLN
3	CC	136	GLN
3	CC	181	ASN
4	CD	45	GLN
4	CD	77	ASN
4	CD	125	HIS
5	CE	20	GLN
5	CE	78	HIS
5	CE	141	GLN

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Mol	Chain	Res	Type
7	CG	28	ASN
7	CG	37	ASN
7	CG	51	GLN
7	CG	56	GLN
7	CG	86	GLN
7	CG	153	HIS
8	CH	78	GLN
9	CI	23	ASN
9	CI	31	GLN
9	CI	58	HIS
10	CJ	68	HIS
11	CK	93	GLN
12	CL	78	GLN
13	CM	77	ASN
13	CM	106	ASN
15	CO	28	GLN
15	CO	62	GLN
17	CQ	94	ASN
19	CS	56	GLN
19	CS	65	ASN
19	CS	69	HIS
20	CT	16	HIS
27	DD	112	GLN
27	DD	164	GLN
27	DD	253	GLN
28	DE	85	ASN
28	DE	143	ASN
28	DE	192	ASN
29	DF	69	HIS
29	DF	169	ASN
29	DF	203	GLN
30	DG	26	GLN
32	DI	43	ASN
32	DI	133	HIS
33	DN	101	HIS
34	DO	3	GLN
35	DP	38	GLN
36	DQ	45	GLN
37	DR	13	HIS
37	DR	71	GLN
38	DS	68	GLN
39	DT	58	ASN

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Mol	Chain	Res	Type
39	DT	84	GLN
39	DT	123	GLN
40	DU	72	HIS
40	DU	94	ASN
43	DX	31	HIS
43	DX	82	GLN
44	DY	43	ASN
45	DZ	50	GLN
45	DZ	55	HIS
46	D0	3	HIS
48	D2	38	GLN
52	D6	20	ASN
54	D8	43	GLN
55	D9	36	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1495/1522 (98%)	422 (28%)	24 (1%)
1	CA	1501/1522 (98%)	423 (28%)	30 (1%)
22	AV	4/24 (16%)	1 (25%)	0
22	CV	4/24 (16%)	1 (25%)	0
23	AX	75/77 (97%)	18 (24%)	0
23	CX	75/77 (97%)	19 (25%)	0
25	BA	2722/2915 (93%)	533 (19%)	41 (1%)
25	DA	2704/2915 (92%)	529 (19%)	35 (1%)
26	BB	119/122 (97%)	21 (17%)	0
26	DB	119/122 (97%)	23 (19%)	1 (0%)
All	All	8818/9320 (94%)	1990 (22%)	131 (1%)

All (1990) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	G
1	AA	9	G
1	AA	15	G
1	AA	16	A
1	AA	22	G
1	AA	32	A
1	AA	39	G
1	AA	44	G

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Mol	Chain	Res	Type
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	59	A
1	AA	61	G
1	AA	63	C
1	AA	69	G
1	AA	76	C
1	AA	77	G
1	AA	78	G
1	AA	79	G
1	AA	96	U
1	AA	97	G
1	AA	98	G
1	AA	101	A
1	AA	102	G
1	AA	112	G
1	AA	115	G
1	AA	116	A
1	AA	121	C
1	AA	129(A)	G
1	AA	131	C
1	AA	138	G
1	AA	141	A
1	AA	142	G
1	AA	143	A
1	AA	144	G
1	AA	146	G
1	AA	149	A
1	AA	160	A
1	AA	163	C
1	AA	165	C
1	AA	166	G
1	AA	171	A
1	AA	173	U
1	AA	174	C
1	AA	180	U
1	AA	181	G
1	AA	182	U
1	AA	189(B)	C
1	AA	189(D)	C

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Mol	Chain	Res	Type
1	AA	189(F)	U
1	AA	190	U
1	AA	193	C
1	AA	194	C
1	AA	195	A
1	AA	197	A
1	AA	199	G
1	AA	201	C
1	AA	203	U
1	AA	204	U
1	AA	216	G
1	AA	220	G
1	AA	247	G
1	AA	251	G
1	AA	253	U
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	269	C
1	AA	277	C
1	AA	281	G
1	AA	289	G
1	AA	298	A
1	AA	318	G
1	AA	321	A
1	AA	328	C
1	AA	332	G
1	AA	342	C
1	AA	343	U
1	AA	346	G
1	AA	347	G
1	AA	348	G
1	AA	349	A
1	AA	351	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	355	C
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	382	A

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Mol	Chain	Res	Type
1	AA	383	A
1	AA	387	U
1	AA	388	G
1	AA	396	G
1	AA	397	A
1	AA	398	C
1	AA	403	C
1	AA	406	G
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	422	C
1	AA	424	G
1	AA	429	U
1	AA	430	A
1	AA	434	U
1	AA	439	A
1	AA	442	C
1	AA	443	C
1	AA	452	A
1	AA	461	A
1	AA	471	G
1	AA	474	G
1	AA	484	G
1	AA	485	G
1	AA	492	G
1	AA	496	A
1	AA	498	U
1	AA	504	C
1	AA	505	G
1	AA	506	G
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	513	C
1	AA	518	C
1	AA	521	G
1	AA	527	G
1	AA	531	U
1	AA	532	A

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Mol	Chain	Res	Type
1	AA	533	A
1	AA	536	C
1	AA	538	G
1	AA	539	A
1	AA	544	G
1	AA	547	A
1	AA	553	A
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	571	U
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	586	C
1	AA	592	G
1	AA	596	C
1	AA	597	G
1	AA	599	C
1	AA	606	G
1	AA	607	A
1	AA	623	C
1	AA	626	U
1	AA	627	G
1	AA	630	G
1	AA	633	G
1	AA	639	G
1	AA	641	U
1	AA	642	A
1	AA	651	C
1	AA	653	A
1	AA	656	C
1	AA	661	G
1	AA	665	A
1	AA	673	G
1	AA	680	C
1	AA	687	A
1	AA	688	G
1	AA	693	G
1	AA	711	G
1	AA	721	G

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Mol	Chain	Res	Type
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	749	C
1	AA	752	G
1	AA	753	A
1	AA	755	G
1	AA	760	G
1	AA	774	G
1	AA	777	A
1	AA	786	G
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	802	A
1	AA	806	C
1	AA	812	C
1	AA	813	U
1	AA	815	A
1	AA	816	A
1	AA	817	C
1	AA	818	G
1	AA	821	G
1	AA	827	U
1	AA	828	A
1	AA	829	G
1	AA	830	G
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	851	G
1	AA	855	G
1	AA	858	G
1	AA	859	A
1	AA	870	U
1	AA	873	A
1	AA	902	G
1	AA	913	A
1	AA	914	A
1	AA	916	G
1	AA	922	G
1	AA	926	G

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Mol	Chain	Res	Type
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	942	G
1	AA	958	A
1	AA	960	U
1	AA	961	U
1	AA	967	C
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	980	C
1	AA	982	U
1	AA	983	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	999	C
1	AA	1000	U
1	AA	1001	A
1	AA	1001(A)	G
1	AA	1002	G
1	AA	1003	G
1	AA	1004	A
1	AA	1005	A
1	AA	1006	C
1	AA	1007	C
1	AA	1008	C
1	AA	1009	G
1	AA	1010	G
1	AA	1011	G
1	AA	1013	G
1	AA	1014	A
1	AA	1017	G
1	AA	1019	C
1	AA	1020	U
1	AA	1021	G

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Mol	Chain	Res	Type
1	AA	1022	G
1	AA	1024	G
1	AA	1025	U
1	AA	1026	G
1	AA	1027	C
1	AA	1028	C
1	AA	1029	C
1	AA	1030(A)	G
1	AA	1030(C)	G
1	AA	1031	G
1	AA	1033	G
1	AA	1035	A
1	AA	1036	G
1	AA	1037	C
1	AA	1039	C
1	AA	1042	G
1	AA	1043	C
1	AA	1052	U
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1065	U
1	AA	1066	C
1	AA	1068	G
1	AA	1076	C
1	AA	1081	G
1	AA	1087	G
1	AA	1089	G
1	AA	1091	U
1	AA	1092	A
1	AA	1093	A
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1104	G
1	AA	1108	G
1	AA	1109	C
1	AA	1119	C
1	AA	1120	G
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U

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Mol	Chain	Res	Type
1	AA	1128	C
1	AA	1130	A
1	AA	1132	C
1	AA	1134	G
1	AA	1135	U
1	AA	1136	U
1	AA	1137	C
1	AA	1139	G
1	AA	1141	C
1	AA	1145	C
1	AA	1146	A
1	AA	1151	A
1	AA	1152	A
1	AA	1154	G
1	AA	1157	A
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1166	G
1	AA	1173	G
1	AA	1176	A
1	AA	1181	G
1	AA	1183	A
1	AA	1184	G
1	AA	1189	C
1	AA	1192	C
1	AA	1193	G
1	AA	1196	U
1	AA	1197	G
1	AA	1200	C
1	AA	1202	G
1	AA	1204	A
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1223	C
1	AA	1224	G
1	AA	1227	A
1	AA	1235	U
1	AA	1236	A
1	AA	1238	A
1	AA	1250	A

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Mol	Chain	Res	Type
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1259	C
1	AA	1260	C
1	AA	1267	C
1	AA	1270	C
1	AA	1271	G
1	AA	1273	G
1	AA	1278	U
1	AA	1279	A
1	AA	1280	A
1	AA	1281	U
1	AA	1284	C
1	AA	1286	A
1	AA	1287	A
1	AA	1294	G
1	AA	1296	C
1	AA	1297	C
1	AA	1299	A
1	AA	1300	G
1	AA	1302	U
1	AA	1305	G
1	AA	1311	G
1	AA	1314	C
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1328	C
1	AA	1333	A
1	AA	1338	G
1	AA	1340	A
1	AA	1343	G
1	AA	1346	A
1	AA	1347	G
1	AA	1350	A
1	AA	1353	G
1	AA	1354	C
1	AA	1358	U
1	AA	1360	A
1	AA	1361	G

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Mol	Chain	Res	Type
1	AA	1363	C
1	AA	1370	G
1	AA	1377	A
1	AA	1379	G
1	AA	1390	U
1	AA	1393	U
1	AA	1396	A
1	AA	1397	C
1	AA	1419	G
1	AA	1422	G
1	AA	1441	G
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1443	G
1	AA	1446	U
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1457	G
1	AA	1469	G
1	AA	1489	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1497	G
1	AA	1503	A
1	AA	1504	G
1	AA	1506	U
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
1	AA	1532	U
22	AV	15	A
23	AX	6	G
23	AX	9	G
23	AX	13	C
23	AX	16	C
23	AX	19	G

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Mol	Chain	Res	Type
23	AX	21	A
23	AX	26	G
23	AX	28	C
23	AX	31	G
23	AX	42	G
23	AX	47	U
23	AX	58	A
23	AX	60	U
23	AX	61	C
23	AX	67	C
23	AX	68	C
23	AX	70	G
23	AX	76	A
25	BA	7	G
25	BA	8	A
25	BA	9	U
25	BA	12	U
25	BA	14	A
25	BA	36	G
25	BA	45	C
25	BA	54	G
25	BA	62	U
25	BA	63	A
25	BA	70	A
25	BA	71	U
25	BA	73	A
25	BA	74	G
25	BA	83	A
25	BA	90	A
25	BA	91	G
25	BA	92	C
25	BA	99	G
25	BA	100	G
25	BA	116	A
25	BA	117	A
25	BA	118	U
25	BA	123	G
25	BA	125	A
25	BA	129	G
25	BA	155	C
25	BA	161	C
25	BA	185	A

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Mol	Chain	Res	Type
25	BA	186	A
25	BA	187	C
25	BA	188	A
25	BA	189	U
25	BA	190	C
25	BA	194	G
25	BA	203	G
25	BA	204	G
25	BA	205	A
25	BA	210	A
25	BA	211	A
25	BA	213	G
25	BA	217	A
25	BA	218	A
25	BA	221	G
25	BA	222	A
25	BA	237	G
25	BA	239	G
25	BA	250	G
25	BA	265	U
25	BA	269	G
25	BA	271	U
25	BA	272	U
25	BA	273	G
25	BA	274	U
25	BA	275	C
25	BA	276	C
25	BA	279	G
25	BA	281	G
25	BA	287	G
25	BA	288	U
25	BA	289	G
25	BA	294	C
25	BA	299	G
25	BA	303	C
25	BA	306	A
25	BA	307	A
25	BA	335	A
25	BA	351	G
25	BA	353	G
25	BA	354	A
25	BA	358	C

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Mol	Chain	Res	Type
25	BA	359	C
25	BA	360	C
25	BA	376	G
25	BA	381	A
25	BA	387	G
25	BA	391	G
25	BA	399	G
25	BA	407	U
25	BA	413	G
25	BA	423	G
25	BA	431	C
25	BA	432	U
25	BA	434	G
25	BA	438	G
25	BA	439	A
25	BA	448	U
25	BA	455	A
25	BA	456	A
25	BA	460	C
25	BA	469	A
25	BA	470	C
25	BA	474	U
25	BA	481	C
25	BA	482	C
25	BA	483	A
25	BA	496	A
25	BA	505	A
25	BA	507	G
25	BA	508	A
25	BA	514	G
25	BA	515	G
25	BA	526	A
25	BA	529	U
25	BA	530	A
25	BA	534	C
25	BA	535	C
25	BA	538	A
25	BA	543	G
25	BA	554	A
25	BA	555	G
25	BA	556	C
25	BA	557	A

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Mol	Chain	Res	Type
25	BA	558	G
25	BA	569	G
25	BA	573	G
25	BA	574	G
25	BA	586	G
25	BA	596	G
25	BA	598	A
25	BA	615	G
25	BA	616	G
25	BA	625	G
25	BA	626	A
25	BA	627	G
25	BA	630	U
25	BA	633	G
25	BA	638	U
25	BA	639	G
25	BA	641	G
25	BA	644	G
25	BA	657	A
25	BA	659	C
25	BA	662	A
25	BA	670	C
25	BA	671	A
25	BA	692	C
25	BA	694	G
25	BA	697	C
25	BA	698	G
25	BA	701	A
25	BA	716	G
25	BA	724	A
25	BA	733	G
25	BA	749	G
25	BA	763	A
25	BA	764	G
25	BA	777	C
25	BA	793	A
25	BA	794	U
25	BA	810	G
25	BA	822	G
25	BA	823	G
25	BA	829	A
25	BA	831	A

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Mol	Chain	Res	Type
25	BA	832	G
25	BA	835	A
25	BA	839	G
25	BA	852	G
25	BA	853	C
25	BA	857	U
25	BA	858	U
25	BA	859	C
25	BA	866	A
25	BA	871	A
25	BA	874	U
25	BA	875	U
25	BA	877	G
25	BA	902	G
25	BA	906	G
25	BA	926	G
25	BA	927	G
25	BA	928	G
25	BA	929	G
25	BA	930	G
25	BA	931	C
25	BA	932	C
25	BA	933	C
25	BA	934	A
25	BA	935	C
25	BA	937	A
25	BA	940	C
25	BA	942	A
25	BA	944	C
25	BA	945	A
25	BA	946	A
25	BA	953	U
25	BA	956	A
25	BA	965	G
25	BA	973	G
25	BA	977	G
25	BA	986	A
25	BA	989	G
25	BA	990	A
25	BA	991	G
25	BA	1003	U
25	BA	1004	A

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Mol	Chain	Res	Type
25	BA	1006	C
25	BA	1019	G
25	BA	1020	C
25	BA	1026	A
25	BA	1029	A
25	BA	1036	A
25	BA	1042	A
25	BA	1051	C
25	BA	1058	U
25	BA	1059	C
25	BA	1066	A
25	BA	1068	G
25	BA	1072	U
25	BA	1076	G
25	BA	1079	U
25	BA	1080	G
25	BA	1085	G
25	BA	1087	C
25	BA	1088	G
25	BA	1089	C
25	BA	1091	A
25	BA	1092	A
25	BA	1093	G
25	BA	1094	A
25	BA	1096	A
25	BA	1153	G
25	BA	1154	U
25	BA	1156	G
25	BA	1158	G
25	BA	1168	G
25	BA	1175	A
25	BA	1176	U
25	BA	1180	C
25	BA	1181	G
25	BA	1184	G
25	BA	1186	U
25	BA	1187	U
25	BA	1195	G
25	BA	1202	A
25	BA	1210	G
25	BA	1216	G
25	BA	1217	G

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Mol	Chain	Res	Type
25	BA	1218	G
25	BA	1219	A
25	BA	1220	U
25	BA	1221	G
25	BA	1222	A
25	BA	1223	C
25	BA	1225	C
25	BA	1255	A
25	BA	1256	U
25	BA	1270	C
25	BA	1290	G
25	BA	1296	G
25	BA	1299	A
25	BA	1302	G
25	BA	1311	A
25	BA	1317	G
25	BA	1318	A
25	BA	1319	U
25	BA	1321	A
25	BA	1322	A
25	BA	1338	U
25	BA	1346	U
25	BA	1347	A
25	BA	1360	C
25	BA	1367	A
25	BA	1398	U
25	BA	1401	G
25	BA	1405	A
25	BA	1406	A
25	BA	1411	A
25	BA	1416	C
25	BA	1419	A
25	BA	1430	A
25	BA	1431	G
25	BA	1462	G
25	BA	1463	C
25	BA	1466	U
25	BA	1467	G
25	BA	1468	G
25	BA	1474	C
25	BA	1491	A
25	BA	1496	A

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Mol	Chain	Res	Type
25	BA	1497	G
25	BA	1507	A
25	BA	1514	C
25	BA	1516	A
25	BA	1518	A
25	BA	1525	G
25	BA	1529	G
25	BA	1536	A
25	BA	1539	C
25	BA	1541	A
25	BA	1554	A
25	BA	1555	C
25	BA	1556	A
25	BA	1569	U
25	BA	1578	C
25	BA	1579	C
25	BA	1589	A
25	BA	1590	C
25	BA	1592	A
25	BA	1605	A
25	BA	1613	A
25	BA	1616	A
25	BA	1625	U
25	BA	1628	G
25	BA	1631	C
25	BA	1632	A
25	BA	1633	A
25	BA	1654	A
25	BA	1655	A
25	BA	1656	A
25	BA	1660	A
25	BA	1694	G
25	BA	1695	C
25	BA	1696	G
25	BA	1699	A
25	BA	1700	G
25	BA	1701	A
25	BA	1707	C
25	BA	1711	A
25	BA	1721	G
25	BA	1743	G
25	BA	1747	A

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Mol	Chain	Res	Type
25	BA	1748	A
25	BA	1750	G
25	BA	1766	G
25	BA	1767	A
25	BA	1768	U
25	BA	1769	G
25	BA	1772	C
25	BA	1776	G
25	BA	1777	G
25	BA	1779	G
25	BA	1787	G
25	BA	1790	A
25	BA	1791	A
25	BA	1793	A
25	BA	1794	G
25	BA	1795	G
25	BA	1804	A
25	BA	1805	C
25	BA	1811	A
25	BA	1813	C
25	BA	1817	A
25	BA	1822	A
25	BA	1829	U
25	BA	1831	C
25	BA	1832	G
25	BA	1843	A
25	BA	1847	G
25	BA	1860	A
25	BA	1867	C
25	BA	1870	G
25	BA	1878	A
25	BA	1879	A
25	BA	1881	G
25	BA	1889	G
25	BA	1899	A
25	BA	1900	G
25	BA	1901	C
25	BA	1911	A
25	BA	1916	C
25	BA	1922	A
25	BA	1928	G
25	BA	1935	A

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Mol	Chain	Res	Type
25	BA	1936	C
25	BA	1941	A
25	BA	1951	G
25	BA	1952	G
25	BA	1953	U
25	BA	1954	A
25	BA	1959	A
25	BA	1960	A
25	BA	1963	C
25	BA	1964	C
25	BA	1977	U
25	BA	1985	U
25	BA	1986	G
25	BA	1987	C
25	BA	1989	C
25	BA	1992	A
25	BA	1993	A
25	BA	1994	A
25	BA	1999	A
25	BA	2014	G
25	BA	2015	U
25	BA	2018	C
25	BA	2019	G
25	BA	2042	A
25	BA	2045	G
25	BA	2052	A
25	BA	2053	A
25	BA	2054	G
25	BA	2055	A
25	BA	2065	C
25	BA	2074	G
25	BA	2077	C
25	BA	2078	G
25	BA	2082	A
25	BA	2083	G
25	BA	2084	A
25	BA	2091	G
25	BA	2102	G
25	BA	2121	U
25	BA	2212	G
25	BA	2214	G
25	BA	2217	C

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Mol	Chain	Res	Type
25	BA	2220	A
25	BA	2227	G
25	BA	2228	G
25	BA	2229	A
25	BA	2230	U
25	BA	2236	G
25	BA	2237	A
25	BA	2247	G
25	BA	2250	G
25	BA	2251	G
25	BA	2260	C
25	BA	2278	A
25	BA	2280	A
25	BA	2281	A
25	BA	2287	C
25	BA	2290	A
25	BA	2295	C
25	BA	2299	A
25	BA	2306	C
25	BA	2308	U
25	BA	2317	A
25	BA	2319	G
25	BA	2320	G
25	BA	2326	C
25	BA	2332	A
25	BA	2337	G
25	BA	2339	A
25	BA	2347	A
25	BA	2348	A
25	BA	2353	G
25	BA	2355	C
25	BA	2359	C
25	BA	2362	C
25	BA	2366	G
25	BA	2373	A
25	BA	2384	G
25	BA	2391	G
25	BA	2395	G
25	BA	2397	C
25	BA	2404	A
25	BA	2418	U
25	BA	2422	G

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Mol	Chain	Res	Type
25	BA	2426	G
25	BA	2434	A
25	BA	2435	U
25	BA	2437	A
25	BA	2440	G
25	BA	2441	G
25	BA	2442	A
25	BA	2443	U
25	BA	2447	A
25	BA	2451	A
25	BA	2453	C
25	BA	2459	G
25	BA	2460	A
25	BA	2480	G
25	BA	2481	A
25	BA	2486	C
25	BA	2488	A
25	BA	2490	A
25	BA	2503	U
25	BA	2510	C
25	BA	2514	G
25	BA	2517	G
25	BA	2518	U
25	BA	2530	A
25	BA	2532	C
25	BA	2537	G
25	BA	2541	G
25	BA	2547	G
25	BA	2566	U
25	BA	2567	U
25	BA	2578	A
25	BA	2579	G
25	BA	2594	G
25	BA	2614	A
25	BA	2621	U
25	BA	2622	C
25	BA	2623	U
25	BA	2624	C
25	BA	2641	A
25	BA	2642	G
25	BA	2644	A
25	BA	2650	G

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Mol	Chain	Res	Type
25	BA	2653	G
25	BA	2666	A
25	BA	2674	A
25	BA	2690	C
25	BA	2701	U
25	BA	2702	C
25	BA	2711	C
25	BA	2715	C
25	BA	2721	G
25	BA	2725	A
25	BA	2726	A
25	BA	2727	G
25	BA	2739	U
25	BA	2746	A
25	BA	2764	G
25	BA	2770	A
25	BA	2771	A
25	BA	2777	A
25	BA	2778	A
25	BA	2779	G
25	BA	2782	C
25	BA	2791	A
25	BA	2799	U
25	BA	2803	A
25	BA	2804	C
25	BA	2807	C
25	BA	2813	G
25	BA	2816	G
25	BA	2817	G
25	BA	2825	C
25	BA	2828	G
25	BA	2830	A
25	BA	2831	A
25	BA	2843	G
25	BA	2845	A
25	BA	2868	C
25	BA	2882	G
25	BA	2883	A
25	BA	2890	C
25	BA	2893	A
25	BA	2903	G
25	BA	2906	U

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Mol	Chain	Res	Type
26	BB	2	C
26	BB	7	G
26	BB	12	C
26	BB	13	A
26	BB	31	C
26	BB	34	U
26	BB	42	C
26	BB	56	G
26	BB	59	A
26	BB	72	G
26	BB	73	A
26	BB	75	G
26	BB	85	G
26	BB	88	C
26	BB	89	G
26	BB	90	A
26	BB	93	G
26	BB	95	C
26	BB	106	G
26	BB	110	G
26	BB	119	G
1	CA	6	G
1	CA	7	G
1	CA	9	G
1	CA	15	G
1	CA	16	A
1	CA	22	G
1	CA	32	A
1	CA	39	G
1	CA	44	G
1	CA	47	C
1	CA	48	C
1	CA	50	A
1	CA	51	A
1	CA	59	A
1	CA	61	G
1	CA	63	C
1	CA	65	U
1	CA	66	G
1	CA	69	G
1	CA	77	G
1	CA	78	G

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Mol	Chain	Res	Type
1	CA	79	G
1	CA	80	G
1	CA	88	A
1	CA	89	C
1	CA	96	U
1	CA	97	G
1	CA	101	A
1	CA	102	G
1	CA	112	G
1	CA	115	G
1	CA	116	A
1	CA	121	C
1	CA	129(A)	G
1	CA	131	C
1	CA	138	G
1	CA	142	G
1	CA	144	G
1	CA	147	G
1	CA	148	G
1	CA	160	A
1	CA	163	C
1	CA	165	C
1	CA	166	G
1	CA	171	A
1	CA	173	U
1	CA	174	C
1	CA	180	U
1	CA	181	G
1	CA	182	U
1	CA	189(D)	C
1	CA	189(F)	U
1	CA	189(J)	G
1	CA	190	U
1	CA	193	C
1	CA	194	C
1	CA	195	A
1	CA	197	A
1	CA	199	G
1	CA	203	U
1	CA	204	U
1	CA	216	G
1	CA	220	G

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Mol	Chain	Res	Type
1	CA	247	G
1	CA	251	G
1	CA	258	G
1	CA	265	G
1	CA	266	G
1	CA	267	C
1	CA	269	C
1	CA	277	C
1	CA	281	G
1	CA	289	G
1	CA	298	A
1	CA	301	G
1	CA	321	A
1	CA	328	C
1	CA	332	G
1	CA	342	C
1	CA	344	A
1	CA	346	G
1	CA	351	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	355	C
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	382	A
1	CA	383	A
1	CA	387	U
1	CA	388	G
1	CA	396	G
1	CA	397	A
1	CA	398	C
1	CA	403	C
1	CA	406	G
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	415	A
1	CA	422	C
1	CA	424	G

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Mol	Chain	Res	Type
1	CA	427	U
1	CA	429	U
1	CA	430	A
1	CA	434	U
1	CA	439	A
1	CA	442	C
1	CA	449	C
1	CA	452	A
1	CA	461	A
1	CA	471	G
1	CA	474	G
1	CA	484	G
1	CA	485	G
1	CA	492	G
1	CA	496	A
1	CA	498	U
1	CA	504	C
1	CA	505	G
1	CA	506	G
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	513	C
1	CA	518	C
1	CA	521	G
1	CA	527	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	536	C
1	CA	538	G
1	CA	544	G
1	CA	547	A
1	CA	553	A
1	CA	559	A
1	CA	560	U
1	CA	561	U
1	CA	562	C
1	CA	571	U
1	CA	572	A
1	CA	573	A
1	CA	576	G

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Mol	Chain	Res	Type
1	CA	586	C
1	CA	592	G
1	CA	596	C
1	CA	597	G
1	CA	600	C
1	CA	606	G
1	CA	607	A
1	CA	623	C
1	CA	626	U
1	CA	627	G
1	CA	630	G
1	CA	633	G
1	CA	639	G
1	CA	641	U
1	CA	642	A
1	CA	650	G
1	CA	651	C
1	CA	653	A
1	CA	656	C
1	CA	661	G
1	CA	665	A
1	CA	673	G
1	CA	680	C
1	CA	687	A
1	CA	688	G
1	CA	693	G
1	CA	711	G
1	CA	721	G
1	CA	723	U
1	CA	724	G
1	CA	731	G
1	CA	752	G
1	CA	753	A
1	CA	755	G
1	CA	758	G
1	CA	760	G
1	CA	774	G
1	CA	777	A
1	CA	786	G
1	CA	792	A
1	CA	793	U
1	CA	794	A

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Mol	Chain	Res	Type
1	CA	802	A
1	CA	806	C
1	CA	812	C
1	CA	813	U
1	CA	815	A
1	CA	816	A
1	CA	817	C
1	CA	818	G
1	CA	821	G
1	CA	827	U
1	CA	828	A
1	CA	829	G
1	CA	830	G
1	CA	836	G
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	851	G
1	CA	855	G
1	CA	858	G
1	CA	859	A
1	CA	870	U
1	CA	873	A
1	CA	902	G
1	CA	913	A
1	CA	914	A
1	CA	916	G
1	CA	922	G
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	942	G
1	CA	958	A
1	CA	960	U
1	CA	961	U
1	CA	967	C
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	972	C
1	CA	974	A

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Mol	Chain	Res	Type
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	980	C
1	CA	982	U
1	CA	983	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	995	C
1	CA	999	C
1	CA	1001	A
1	CA	1001(A)	G
1	CA	1002	G
1	CA	1004	A
1	CA	1005	A
1	CA	1006	C
1	CA	1007	C
1	CA	1010	G
1	CA	1011	G
1	CA	1013	G
1	CA	1014	A
1	CA	1019	C
1	CA	1020	U
1	CA	1022	G
1	CA	1025	U
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1030	C
1	CA	1030(A)	G
1	CA	1030(C)	G
1	CA	1031	G
1	CA	1033	G
1	CA	1034	G
1	CA	1035	A
1	CA	1036	G
1	CA	1037	C
1	CA	1039	C
1	CA	1041	A
1	CA	1042	G
1	CA	1043	C

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Mol	Chain	Res	Type
1	CA	1052	U
1	CA	1053	G
1	CA	1054	C
1	CA	1055	A
1	CA	1063	C
1	CA	1065	U
1	CA	1066	C
1	CA	1068	G
1	CA	1070	U
1	CA	1076	C
1	CA	1081	G
1	CA	1087	G
1	CA	1089	G
1	CA	1091	U
1	CA	1092	A
1	CA	1093	A
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1104	G
1	CA	1108	G
1	CA	1109	C
1	CA	1117	G
1	CA	1119	C
1	CA	1120	G
1	CA	1122	U
1	CA	1124	G
1	CA	1125	U
1	CA	1128	C
1	CA	1129	C
1	CA	1130	A
1	CA	1132	C
1	CA	1134	G
1	CA	1135	U
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1141	C
1	CA	1145	C
1	CA	1146	A
1	CA	1147	C

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Mol	Chain	Res	Type
1	CA	1151	A
1	CA	1152	A
1	CA	1154	G
1	CA	1157	A
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1163	C
1	CA	1165	C
1	CA	1169	A
1	CA	1171	G
1	CA	1173	G
1	CA	1174	G
1	CA	1176	A
1	CA	1181	G
1	CA	1183	A
1	CA	1184	G
1	CA	1187	G
1	CA	1189	C
1	CA	1192	C
1	CA	1193	G
1	CA	1196	U
1	CA	1197	G
1	CA	1200	C
1	CA	1202	G
1	CA	1204	A
1	CA	1211	U
1	CA	1212	U
1	CA	1213	A
1	CA	1223	C
1	CA	1224	G
1	CA	1227	A
1	CA	1235	U
1	CA	1236	A
1	CA	1238	A
1	CA	1240	U
1	CA	1250	A
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G
1	CA	1259	C
1	CA	1260	C

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Mol	Chain	Res	Type
1	CA	1267	C
1	CA	1270	C
1	CA	1271	G
1	CA	1273	G
1	CA	1279	A
1	CA	1280	A
1	CA	1281	U
1	CA	1282	C
1	CA	1283	G
1	CA	1284	C
1	CA	1287	A
1	CA	1297	C
1	CA	1299	A
1	CA	1300	G
1	CA	1305	G
1	CA	1311	G
1	CA	1314	C
1	CA	1317	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1332	A
1	CA	1333	A
1	CA	1338	G
1	CA	1340	A
1	CA	1343	G
1	CA	1346	A
1	CA	1347	G
1	CA	1353	G
1	CA	1354	C
1	CA	1358	U
1	CA	1360	A
1	CA	1361	G
1	CA	1363	C
1	CA	1370	G
1	CA	1377	A
1	CA	1379	G
1	CA	1390	U
1	CA	1393	U
1	CA	1396	A
1	CA	1397	C
1	CA	1398	A

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Mol	Chain	Res	Type
1	CA	1419	G
1	CA	1422	G
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1443	G
1	CA	1447	A
1	CA	1456	G
1	CA	1457	G
1	CA	1469	G
1	CA	1489	G
1	CA	1492	A
1	CA	1493	A
1	CA	1497	G
1	CA	1503	A
1	CA	1504	G
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
1	CA	1532	U
22	CV	15	A
23	CX	6	G
23	CX	9	G
23	CX	13	C
23	CX	16	C
23	CX	19	G
23	CX	20	U
23	CX	21	A
23	CX	26	G
23	CX	28	C
23	CX	31	G
23	CX	42	G
23	CX	47	U
23	CX	48	C
23	CX	60	U
23	CX	61	C
23	CX	67	C
23	CX	68	C

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Mol	Chain	Res	Type
23	CX	70	G
23	CX	76	A
25	DA	8	A
25	DA	9	U
25	DA	10	G
25	DA	12	U
25	DA	15	G
25	DA	32	C
25	DA	34	C
25	DA	35	G
25	DA	36	G
25	DA	41	C
25	DA	45	C
25	DA	55	G
25	DA	59	U
25	DA	61	G
25	DA	64	A
25	DA	71	A
25	DA	74	A
25	DA	75	G
25	DA	83	G
25	DA	84	A
25	DA	90	U
25	DA	95	G
25	DA	100	G
25	DA	102	G
25	DA	118	A
25	DA	119	A
25	DA	120	U
25	DA	125	G
25	DA	131	G
25	DA	140	G
25	DA	141	A
25	DA	149	A
25	DA	154	G
25	DA	154(A)	C
25	DA	157	U
25	DA	173	G
25	DA	180	G
25	DA	181	A
25	DA	182	A
25	DA	188	G

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Mol	Chain	Res	Type
25	DA	196	A
25	DA	199	A
25	DA	201	C
25	DA	205	G
25	DA	214	G
25	DA	215	G
25	DA	216	A
25	DA	221	A
25	DA	222	A
25	DA	225	A
25	DA	229	A
25	DA	233	A
25	DA	248	G
25	DA	249	C
25	DA	250	G
25	DA	266	G
25	DA	267	C
25	DA	271(H)	G
25	DA	271(J)	C
25	DA	271(K)	U
25	DA	271(L)	U
25	DA	271(M)	G
25	DA	271(N)	U
25	DA	271(O)	C
25	DA	271(T)	C
25	DA	272(A)	U
25	DA	272(B)	G
25	DA	275	G
25	DA	277	C
25	DA	278	A
25	DA	292	C
25	DA	311	A
25	DA	312	G
25	DA	324	A
25	DA	327	G
25	DA	329	G
25	DA	330	A
25	DA	333	G
25	DA	338	G
25	DA	339	U
25	DA	342	G
25	DA	348	G

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Mol	Chain	Res	Type
25	DA	351	G
25	DA	352	G
25	DA	363	G
25	DA	384	U
25	DA	385	C
25	DA	386	G
25	DA	399	G
25	DA	405	U
25	DA	411	G
25	DA	412	A
25	DA	415	A
25	DA	428	A
25	DA	437	G
25	DA	438	G
25	DA	443	A
25	DA	444	C
25	DA	455	C
25	DA	456	C
25	DA	457	A
25	DA	470	A
25	DA	481	G
25	DA	504	U
25	DA	505	A
25	DA	509	C
25	DA	524	U
25	DA	527	C
25	DA	528	A
25	DA	529	A
25	DA	530	G
25	DA	531	C
25	DA	532	A
25	DA	533	G
25	DA	545	G
25	DA	563	G
25	DA	568	U
25	DA	573	G
25	DA	575	A
25	DA	586	A
25	DA	592	G
25	DA	603	A
25	DA	604	G
25	DA	606	U

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Mol	Chain	Res	Type
25	DA	607	U
25	DA	610	G
25	DA	614(B)	G
25	DA	614(C)	A
25	DA	615	G
25	DA	616	G
25	DA	620	G
25	DA	631	A
25	DA	634	C
25	DA	637	A
25	DA	645	C
25	DA	646	A
25	DA	652(B)	A
25	DA	652(C)	G
25	DA	652(E)	G
25	DA	652(U)	G
25	DA	654	A
25	DA	669	G
25	DA	670	A
25	DA	686	G
25	DA	710	G
25	DA	717	G
25	DA	726	G
25	DA	730	C
25	DA	747	U
25	DA	752	A
25	DA	753	C
25	DA	765	G
25	DA	775	G
25	DA	776	G
25	DA	782	A
25	DA	784	A
25	DA	785	G
25	DA	792	G
25	DA	805	G
25	DA	812	C
25	DA	819	A
25	DA	827	U
25	DA	829	A
25	DA	857	C
25	DA	859	G
25	DA	866	A

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Mol	Chain	Res	Type
25	DA	867	C
25	DA	871	U
25	DA	874	G
25	DA	878	A
25	DA	879	G
25	DA	880	G
25	DA	884	C
25	DA	886	C
25	DA	887	A
25	DA	888	C
25	DA	889	C
25	DA	890	A
25	DA	895	U
25	DA	896	A
25	DA	897	C
25	DA	898	C
25	DA	899	A
25	DA	900	A
25	DA	901	A
25	DA	903	C
25	DA	910	A
25	DA	911	A
25	DA	913	U
25	DA	917	A
25	DA	923	C
25	DA	932	G
25	DA	938	G
25	DA	941	A
25	DA	945	A
25	DA	946	G
25	DA	953	A
25	DA	956	G
25	DA	957	A
25	DA	958	U
25	DA	959	A
25	DA	961	C
25	DA	968	G
25	DA	974	G
25	DA	975	C
25	DA	983	A
25	DA	996	A
25	DA	1012	U

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Mol	Chain	Res	Type
25	DA	1013	C
25	DA	1020	A
25	DA	1022	G
25	DA	1023	U
25	DA	1025	G
25	DA	1027	A
25	DA	1033	U
25	DA	1034	G
25	DA	1038	C
25	DA	1039	G
25	DA	1040	C
25	DA	1041	C
25	DA	1043	C
25	DA	1114	G
25	DA	1115	G
25	DA	1116	C
25	DA	1118	C
25	DA	1119	C
25	DA	1129	A
25	DA	1130	U
25	DA	1135	C
25	DA	1136	G
25	DA	1139	G
25	DA	1142(A)	A
25	DA	1170	G
25	DA	1171	G
25	DA	1198	U
25	DA	1204	A
25	DA	1205	U
25	DA	1210	A
25	DA	1211	U
25	DA	1213	A
25	DA	1220	A
25	DA	1230	C
25	DA	1244	G
25	DA	1249	U
25	DA	1253	A
25	DA	1256	G
25	DA	1271	G
25	DA	1272	A
25	DA	1273	U
25	DA	1284	A

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Mol	Chain	Res	Type
25	DA	1287	A
25	DA	1298	C
25	DA	1300	U
25	DA	1301	A
25	DA	1305	C
25	DA	1314	C
25	DA	1315	C
25	DA	1345	C
25	DA	1359	A
25	DA	1360	A
25	DA	1365	A
25	DA	1368	G
25	DA	1370	C
25	DA	1379	A
25	DA	1380	G
25	DA	1384	A
25	DA	1385	G
25	DA	1386	C
25	DA	1403	C
25	DA	1410	G
25	DA	1411	C
25	DA	1412	A
25	DA	1416	G
25	DA	1417	C
25	DA	1419	A
25	DA	1420	U
25	DA	1421	G
25	DA	1428	C
25	DA	1435	G
25	DA	1437	C
25	DA	1445	A
25	DA	1445(A)	C
25	DA	1449	A
25	DA	1450	G
25	DA	1459	G
25	DA	1466	G
25	DA	1467	C
25	DA	1471	A
25	DA	1482	G
25	DA	1490	A
25	DA	1493	C
25	DA	1494	A

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Mol	Chain	Res	Type
25	DA	1495	A
25	DA	1496	A
25	DA	1497	U
25	DA	1504	C
25	DA	1508	A
25	DA	1509	C
25	DA	1509(A)	A
25	DA	1525	G
25	DA	1531	C
25	DA	1539	G
25	DA	1541	G
25	DA	1542	A
25	DA	1543	C
25	DA	1545	A
25	DA	1554	A
25	DA	1558	A
25	DA	1559	G
25	DA	1566	A
25	DA	1569	A
25	DA	1578	U
25	DA	1580	A
25	DA	1586	A
25	DA	1595	G
25	DA	1608	A
25	DA	1609	A
25	DA	1631(A)	A
25	DA	1632	A
25	DA	1634	A
25	DA	1639	U
25	DA	1640	C
25	DA	1645	G
25	DA	1648	C
25	DA	1654	A
25	DA	1674	G
25	DA	1682	G
25	DA	1696	G
25	DA	1700	A
25	DA	1701	A
25	DA	1703	G
25	DA	1718	G
25	DA	1721	G
25	DA	1722	A

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Mol	Chain	Res	Type
25	DA	1746	G
25	DA	1756	G
25	DA	1762	A
25	DA	1763	G
25	DA	1764	G
25	DA	1773	A
25	DA	1780	A
25	DA	1782	C
25	DA	1791	A
25	DA	1800	C
25	DA	1801	G
25	DA	1812	A
25	DA	1816	G
25	DA	1823	G
25	DA	1828	G
25	DA	1829	A
25	DA	1835	G
25	DA	1839	G
25	DA	1847	A
25	DA	1848	A
25	DA	1857	G
25	DA	1859	A
25	DA	1861	G
25	DA	1877	A
25	DA	1878	G
25	DA	1895	C
25	DA	1900	A
25	DA	1906	G
25	DA	1913	A
25	DA	1914	C
25	DA	1926	U
25	DA	1929	G
25	DA	1930	G
25	DA	1931	U
25	DA	1936	A
25	DA	1937	A
25	DA	1938	A
25	DA	1955	U
25	DA	1960	A
25	DA	1963	U
25	DA	1966	A
25	DA	1967	C

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Mol	Chain	Res	Type
25	DA	1970	A
25	DA	1971	A
25	DA	1972	A
25	DA	1984	G
25	DA	1993	U
25	DA	1997	G
25	DA	2005	A
25	DA	2020	A
25	DA	2021	C
25	DA	2023	G
25	DA	2031	A
25	DA	2032	G
25	DA	2033	A
25	DA	2034	U
25	DA	2039	C
25	DA	2043	C
25	DA	2055	C
25	DA	2056	G
25	DA	2060	A
25	DA	2061	G
25	DA	2062	A
25	DA	2063	C
25	DA	2069	G
25	DA	2076	U
25	DA	2082	A
25	DA	2086	U
25	DA	2096	U
25	DA	2097	C
25	DA	2099	U
25	DA	2101	G
25	DA	2189	U
25	DA	2192	G
25	DA	2193	G
25	DA	2198	A
25	DA	2206	G
25	DA	2207	G
25	DA	2208	A
25	DA	2218	U
25	DA	2219	G
25	DA	2225	A
25	DA	2235	G
25	DA	2238	G

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Mol	Chain	Res	Type
25	DA	2239	G
25	DA	2267	A
25	DA	2275	C
25	DA	2283	C
25	DA	2287	A
25	DA	2289	G
25	DA	2291	U
25	DA	2297	C
25	DA	2302	G
25	DA	2303	G
25	DA	2305	A
25	DA	2308	G
25	DA	2312	U
25	DA	2313	C
25	DA	2315	G
25	DA	2318	G
25	DA	2319	G
25	DA	2320	A
25	DA	2321	G
25	DA	2325	G
25	DA	2334	G
25	DA	2335	A
25	DA	2336	A
25	DA	2337	G
25	DA	2343	C
25	DA	2347	C
25	DA	2366	A
25	DA	2375	G
25	DA	2376	A
25	DA	2383	G
25	DA	2385	C
25	DA	2401	U
25	DA	2402	C
25	DA	2406	U
25	DA	2407	G
25	DA	2410	G
25	DA	2413	G
25	DA	2414	G
25	DA	2422	A
25	DA	2425	A
25	DA	2429	G
25	DA	2430	A

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Mol	Chain	Res	Type
25	DA	2434	A
25	DA	2435	A
25	DA	2439	A
25	DA	2440	C
25	DA	2441	C
25	DA	2448	A
25	DA	2468	G
25	DA	2469	A
25	DA	2474	C
25	DA	2476	A
25	DA	2487	G
25	DA	2502	G
25	DA	2505	G
25	DA	2517	C
25	DA	2518	A
25	DA	2520	C
25	DA	2529	G
25	DA	2549	G
25	DA	2554	U
25	DA	2566	A
25	DA	2567	G
25	DA	2573	C
25	DA	2574	G
25	DA	2578	G
25	DA	2586	C
25	DA	2602	A
25	DA	2611	U
25	DA	2612	C
25	DA	2615	U
25	DA	2630	G
25	DA	2632	A
25	DA	2654	A
25	DA	2662	A
25	DA	2663	G
25	DA	2666	C
25	DA	2689	U
25	DA	2690	C
25	DA	2691	C
25	DA	2712(A)	A
25	DA	2713	A
25	DA	2714	G
25	DA	2726	U

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Mol	Chain	Res	Type
25	DA	2733	A
25	DA	2751	G
25	DA	2752	C
25	DA	2757	A
25	DA	2763	G
25	DA	2764	A
25	DA	2765	A
25	DA	2766	G
25	DA	2778	A
25	DA	2789	C
25	DA	2793	G
25	DA	2794	C
25	DA	2802	G
25	DA	2804	C
25	DA	2818	G
25	DA	2820	A
25	DA	2821	A
25	DA	2833	G
25	DA	2835	A
25	DA	2849	U
25	DA	2872	G
25	DA	2879	C
25	DA	2880	C
25	DA	2887	U
25	DA	2892	A
25	DA	2893	G
25	DA	2894	G
26	DB	2	C
26	DB	7	G
26	DB	8	U
26	DB	12	C
26	DB	13	A
26	DB	31	C
26	DB	34	U
26	DB	42	C
26	DB	45	A
26	DB	46	A
26	DB	56	G
26	DB	59	A
26	DB	72	G
26	DB	73	A
26	DB	75	G

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Mol	Chain	Res	Type
26	DB	85	G
26	DB	88	C
26	DB	89	G
26	DB	90	A
26	DB	93	G
26	DB	106	G
26	DB	110	G
26	DB	119	G

All (131) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	97	G
1	AA	115	G
1	AA	173	U
1	AA	266	G
1	AA	429	U
1	AA	509	A
1	AA	532	A
1	AA	560	U
1	AA	687	A
1	AA	793	U
1	AA	913	A
1	AA	991	U
1	AA	1027	C
1	AA	1042	G
1	AA	1054	C
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1125	U
1	AA	1165	C
1	AA	1201	A
1	AA	1256	A
1	AA	1285	A
1	AA	1442	G
25	BA	70	A
25	BA	99	G
25	BA	184	A
25	BA	185	A
25	BA	188	A
25	BA	271	U

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Mol	Chain	Res	Type
25	BA	273	G
25	BA	302	A
25	BA	468	G
25	BA	553	A
25	BA	716	G
25	BA	793	A
25	BA	823	G
25	BA	874	U
25	BA	945	A
25	BA	990	A
25	BA	1003	U
25	BA	1019	G
25	BA	1093	G
25	BA	1219	A
25	BA	1220	U
25	BA	1221	G
25	BA	1255	A
25	BA	1321	A
25	BA	1466	U
25	BA	1577	C
25	BA	1654	A
25	BA	1700	G
25	BA	1793	A
25	BA	2014	G
25	BA	2228	G
25	BA	2347	A
25	BA	2418	U
25	BA	2434	A
25	BA	2442	A
25	BA	2459	G
25	BA	2623	U
25	BA	2701	U
25	BA	2769	U
25	BA	2883	A
25	BA	2902	G
1	CA	5	U
1	CA	60	A
1	CA	65	U
1	CA	97	G
1	CA	115	G
1	CA	147	G
1	CA	204	U

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Mol	Chain	Res	Type
1	CA	266	G
1	CA	429	U
1	CA	509	A
1	CA	532	A
1	CA	560	U
1	CA	687	A
1	CA	793	U
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1005	A
1	CA	1054	C
1	CA	1064	G
1	CA	1065	U
1	CA	1067	A
1	CA	1128	C
1	CA	1183	A
1	CA	1201	A
1	CA	1212	U
1	CA	1256	A
1	CA	1299	A
1	CA	1442	G
1	CA	1531	A
25	DA	195	A
25	DA	196	A
25	DA	249	C
25	DA	271(M)	G
25	DA	277	C
25	DA	310	A
25	DA	528	A
25	DA	620	G
25	DA	669	G
25	DA	752	A
25	DA	774	A
25	DA	827	U
25	DA	856	C
25	DA	859	G
25	DA	900	A
25	DA	1026	U
25	DA	1210	A
25	DA	1378	A
25	DA	1379	A

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Mol	Chain	Res	Type
25	DA	1420	U
25	DA	1427	A
25	DA	1543	C
25	DA	1558	A
25	DA	1559	G
25	DA	1608	A
25	DA	1653	G
25	DA	1992	G
25	DA	2288	A
25	DA	2318	G
25	DA	2335	A
25	DA	2406	U
25	DA	2439	A
25	DA	2689	U
25	DA	2750	A
25	DA	2756	U
26	DB	45	A

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

14 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	$\#\|Z\| > 2$
24	MVA	CW	9	24	6,7,8	0.89	0	6,8,10	1.10	0
24	004	AW	3	24	9,10,11	1.20	1 (11%)	9,12,14	1.16	0
24	2QY	CW	10	24	12,13,14	2.04	2 (16%)	14,16,18	3.56	3 (21%)
24	004	CW	3	24	9,10,11	1.35	1 (11%)	9,12,14	0.68	0
24	2R3	CW	8	24	12,14,15	0.71	0	16,18,20	2.15	6 (37%)
24	2R1	CW	6	24	10,10,11	1.82	3 (30%)	8,13,15	3.68	3 (37%)
24	2QZ	CW	1	24	7,8,9	0.83	0	7,10,12	3.69	2 (28%)
24	2R3	AW	8	24	12,14,15	0.81	0	16,18,20	2.05	7 (43%)
24	MVA	AW	9	24	6,7,8	0.38	0	6,8,10	0.94	1 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
24	MVA	CW	5	24	6,7,8	0.81	0	6,8,10	1.51	2 (33%)
24	2R1	AW	6	24	10,10,11	2.43	4 (40%)	8,13,15	4.19	3 (37%)
24	2QY	AW	10	24	12,13,14	1.94	2 (16%)	14,16,18	3.62	6 (42%)
24	2QZ	AW	1	24	7,8,9	0.41	0	7,10,12	2.50	1 (14%)
24	MVA	AW	5	24	6,7,8	0.57	0	6,8,10	1.28	0

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
24	MVA	CW	9	24	-	5/6/8/10	-
24	004	AW	3	24	-	1/4/6/8	0/1/1/1
24	2QY	CW	10	24	-	1/5/8/10	0/1/1/1
24	004	CW	3	24	-	0/4/6/8	0/1/1/1
24	2R3	CW	8	24	-	6/11/12/14	0/1/1/1
24	2R1	CW	6	24	-	0/2/14/16	0/1/1/1
24	2QZ	CW	1	24	-	1/8/10/12	-
24	2R3	AW	8	24	-	6/11/12/14	0/1/1/1
24	MVA	AW	9	24	-	5/6/8/10	-
24	MVA	CW	5	24	-	5/6/8/10	-
24	2R1	AW	6	24	-	1/2/14/16	0/1/1/1
24	2QY	AW	10	24	-	3/5/8/10	0/1/1/1
24	2QZ	AW	1	24	-	3/8/10/12	-
24	MVA	AW	5	24	-	2/6/8/10	-

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	CW	10	2QY	C-CA	6.08	1.53	1.43
24	AW	10	2QY	C-CA	5.76	1.53	1.43
24	AW	6	2R1	OD1-CG1	4.61	1.56	1.42
24	AW	6	2R1	CA-N	4.13	1.46	1.36
24	CW	6	2R1	CA-N	3.84	1.45	1.36
24	CW	3	004	CB-CA	-3.38	1.49	1.52
24	CW	10	2QY	CG-CB	2.90	1.52	1.46
24	CW	6	2R1	C-CA	2.77	1.49	1.45
24	AW	3	004	CB-CA	-2.67	1.49	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	AW	10	2QY	CG-CB	2.50	1.51	1.46
24	AW	6	2R1	C-CA	2.42	1.49	1.45
24	CW	6	2R1	CG2-CB	-2.30	1.48	1.51
24	AW	6	2R1	CB-CA	2.27	1.36	1.34

All (34) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AW	6	2R1	OD2-CG2-CB	-10.70	92.15	111.99
24	CW	10	2QY	CN-N-CA	-9.76	109.17	123.98
24	AW	10	2QY	CN-N-CA	-9.66	109.33	123.98
24	CW	1	2QZ	OG1-CB-CG2	9.20	137.20	109.68
24	CW	6	2R1	OD2-CG2-CB	-8.95	95.40	111.99
24	AW	10	2QY	CB-CA-N	6.71	132.58	121.98
24	AW	1	2QZ	OG1-CB-CG2	6.00	127.64	109.68
24	CW	10	2QY	O-C-CA	-5.95	117.93	125.39
24	CW	10	2QY	CB-CA-N	5.83	131.19	121.98
24	CW	8	2R3	OB-CB-CA	5.04	118.56	107.49
24	AW	10	2QY	O-C-CA	-4.73	119.46	125.39
24	AW	8	2R3	OB-CB-CA	4.00	116.28	107.49
24	CW	6	2R1	C-CA-N	3.73	124.69	116.15
24	CW	6	2R1	O-C-CA	-3.50	118.97	125.53
24	CW	8	2R3	CO-OH-CZ	-3.31	110.40	117.50
24	AW	6	2R1	O-C-CA	-3.16	119.61	125.53
24	AW	8	2R3	CO-OH-CZ	-3.11	110.83	117.50
24	AW	8	2R3	CE2-CD2-CG	3.11	124.29	121.18
24	AW	6	2R1	CG1-CB-CA	2.81	126.77	119.74
24	CW	8	2R3	CE1-CD1-CG	-2.74	118.45	121.18
24	AW	10	2QY	CG-CB-CA	-2.72	126.71	130.72
24	CW	1	2QZ	CN2-N-CN1	-2.58	102.89	110.49
24	AW	8	2R3	CE1-CD1-CG	-2.43	118.75	121.18
24	CW	8	2R3	CD2-CG-CB	-2.41	117.08	120.71
24	AW	8	2R3	CD1-CE1-CZ	2.36	122.42	119.73
24	CW	5	MVA	CB-CA-C	2.35	115.98	112.96
24	CW	5	MVA	CB-CA-N	2.25	114.10	111.17
24	AW	8	2R3	CD1-CG-CB	2.21	124.04	120.71
24	AW	10	2QY	CD1-CG-CD2	2.21	120.93	117.65
24	CW	8	2R3	CE2-CD2-CG	2.20	123.38	121.18
24	AW	9	MVA	O-C-CA	-2.15	119.19	124.86
24	CW	8	2R3	CD2-CE2-CZ	-2.13	117.30	119.73
24	AW	8	2R3	CD2-CE2-CZ	-2.09	117.34	119.73
24	AW	10	2QY	CE1-CD1-CG	-2.02	118.61	121.22

There are no chirality outliers.

All (39) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	AW	1	2QZ	N-CA-CB-OG1
24	AW	5	MVA	CB-CA-N-CN
24	AW	8	2R3	N-CA-CB-OB
24	AW	8	2R3	N-CA-CB-CG
24	AW	8	2R3	C-CA-CB-OB
24	AW	8	2R3	C-CA-CB-CG
24	AW	9	MVA	CB-CA-N-CN
24	AW	9	MVA	N-CA-CB-CG1
24	AW	9	MVA	N-CA-CB-CG2
24	AW	9	MVA	C-CA-CB-CG1
24	AW	9	MVA	C-CA-CB-CG2
24	CW	1	2QZ	C-CA-CB-CG2
24	CW	5	MVA	CB-CA-N-CN
24	CW	5	MVA	N-CA-CB-CG1
24	CW	5	MVA	N-CA-CB-CG2
24	CW	5	MVA	C-CA-CB-CG1
24	CW	8	2R3	N-CA-CB-OB
24	CW	8	2R3	N-CA-CB-CG
24	CW	8	2R3	C-CA-CB-OB
24	CW	8	2R3	C-CA-CB-CG
24	CW	9	MVA	CB-CA-N-CN
24	CW	9	MVA	N-CA-CB-CG1
24	CW	9	MVA	N-CA-CB-CG2
24	CW	9	MVA	C-CA-CB-CG1
24	CW	9	MVA	C-CA-CB-CG2
24	AW	10	2QY	O-C-CA-CB
24	CW	10	2QY	O-C-CA-CB
24	CW	8	2R3	CE2-CZ-OH-CO
24	CW	8	2R3	CE1-CZ-OH-CO
24	AW	10	2QY	CA-CB-CG-CD2
24	AW	10	2QY	CA-CB-CG-CD1
24	AW	1	2QZ	N-CA-CB-CG2
24	AW	5	MVA	C-CA-CB-CG1
24	CW	5	MVA	C-CA-CB-CG2
24	AW	1	2QZ	C-CA-CB-OG1
24	AW	3	004	C-CA-CB-CG2
24	AW	8	2R3	CE1-CZ-OH-CO
24	AW	8	2R3	CE2-CZ-OH-CO
24	AW	6	2R1	CG1-CB-CG2-OD2

There are no ring outliers.

14 monomers are involved in 20 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	CW	9	MVA	3	0
24	AW	3	004	1	0
24	CW	10	2QY	4	0
24	CW	3	004	1	0
24	CW	8	2R3	2	0
24	CW	6	2R1	1	0
24	CW	1	2QZ	3	0
24	AW	8	2R3	4	0
24	AW	9	MVA	3	0
24	CW	5	MVA	1	0
24	AW	6	2R1	3	0
24	AW	10	2QY	3	0
24	AW	1	2QZ	2	0
24	AW	5	MVA	1	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 1991 ligands modelled in this entry, 1987 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	$\#\|Z\| > 2$
57	SF4	CD	501	4	0,12,12	-	-	-		
59	FME	CX	101	23	8,9,10	0.82	0	8,9,11	1.37	1 (12%)
57	SF4	AD	501	4	0,12,12	-	-	-		
59	FME	AX	101	23	8,9,10	0.94	0	8,9,11	1.49	2 (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
57	SF4	CD	501	4	-	-	0/6/5/5
59	FME	CX	101	23	-	1/7/9/11	-
57	SF4	AD	501	4	-	-	0/6/5/5
59	FME	AX	101	23	-	2/7/9/11	-

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
59	AX	101	FME	CA-N-CN	-2.47	119.03	122.82
59	CX	101	FME	CA-N-CN	-2.33	119.25	122.82
59	AX	101	FME	CB-CA-N	2.31	114.72	110.52

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
59	AX	101	FME	O1-CN-N-CA
59	CX	101	FME	O1-CN-N-CA
59	AX	101	FME	CB-CG-SD-CE

There are no ring outliers.

4 monomers are involved in 6 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
57	CD	501	SF4	1	0
59	CX	101	FME	3	0
57	AD	501	SF4	1	0
59	AX	101	FME	1	0

5.7 Other polymers

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	1498/1522 (98%)	0.01	25 (1%) 69 45	39, 80, 103, 118	0
1	CA	1503/1522 (98%)	0.01	22 (1%) 72 49	41, 80, 103, 119	0
2	AB	231/256 (90%)	0.47	6 (2%) 57 34	69, 86, 97, 105	0
2	CB	231/256 (90%)	0.54	11 (4%) 35 19	70, 88, 98, 107	0
3	AC	206/239 (86%)	0.44	5 (2%) 59 36	73, 87, 95, 104	0
3	CC	206/239 (86%)	0.62	6 (2%) 53 31	72, 89, 97, 104	0
4	AD	208/209 (99%)	0.55	6 (2%) 53 31	61, 80, 90, 97	0
4	CD	208/209 (99%)	0.43	2 (0%) 79 59	61, 79, 89, 97	0
5	AE	148/162 (91%)	-0.10	0 100 100	51, 73, 82, 93	0
5	CE	148/162 (91%)	0.18	0 100 100	53, 75, 84, 96	0
6	AF	100/101 (99%)	0.11	1 (1%) 79 59	63, 77, 87, 94	0
6	CF	100/101 (99%)	0.15	0 100 100	62, 78, 87, 95	0
7	AG	155/156 (99%)	0.29	5 (3%) 50 29	74, 86, 99, 106	0
7	CG	155/156 (99%)	0.43	5 (3%) 50 29	75, 86, 99, 105	0
8	AH	137/138 (99%)	0.17	0 100 100	60, 74, 82, 89	0
8	CH	137/138 (99%)	0.32	3 (2%) 62 39	62, 75, 83, 89	0
9	AI	127/128 (99%)	0.81	9 (7%) 22 11	73, 91, 99, 101	0
9	CI	127/128 (99%)	1.33	27 (21%) 2 1	72, 93, 100, 102	0
10	AJ	97/105 (92%)	1.05	14 (14%) 6 3	73, 91, 100, 105	0
10	CJ	96/105 (91%)	1.19	14 (14%) 6 3	77, 93, 100, 104	0
11	AK	114/129 (88%)	-0.00	1 (0%) 81 61	53, 74, 87, 91	0
11	CK	114/129 (88%)	0.02	0 100 100	55, 76, 87, 92	0
12	AL	122/132 (92%)	0.24	4 (3%) 49 28	53, 68, 80, 87	0
12	CL	122/132 (92%)	0.14	2 (1%) 70 47	53, 69, 80, 87	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	123/126 (97%)	0.40	7 (5%) 29 15	67, 85, 95, 105	0
13	CM	122/126 (96%)	0.75	7 (5%) 29 15	77, 92, 100, 109	0
14	AN	60/61 (98%)	0.85	6 (10%) 12 7	75, 87, 94, 103	0
14	CN	60/61 (98%)	1.32	14 (23%) 2 1	77, 89, 94, 100	0
15	AO	88/89 (98%)	0.17	1 (1%) 78 57	55, 72, 85, 90	0
15	CO	88/89 (98%)	0.09	1 (1%) 78 57	55, 72, 85, 91	0
16	AP	82/88 (93%)	0.66	5 (6%) 27 14	67, 78, 89, 94	0
16	CP	82/88 (93%)	0.58	3 (3%) 45 25	66, 76, 88, 94	0
17	AQ	99/105 (94%)	0.22	1 (1%) 79 59	59, 72, 83, 90	0
17	CQ	99/105 (94%)	0.18	0 100 100	58, 72, 83, 89	0
18	AR	68/88 (77%)	0.18	0 100 100	65, 73, 87, 91	0
18	CR	68/88 (77%)	0.08	0 100 100	64, 75, 87, 91	0
19	AS	83/93 (89%)	0.79	7 (8%) 17 9	77, 92, 99, 106	0
19	CS	83/93 (89%)	1.14	15 (18%) 3 2	79, 92, 101, 106	0
20	AT	96/106 (90%)	0.63	7 (7%) 21 11	62, 76, 86, 90	0
20	CT	96/106 (90%)	0.32	3 (3%) 51 30	62, 74, 86, 92	0
21	AU	23/27 (85%)	1.34	4 (17%) 4 3	73, 88, 93, 94	0
21	CU	23/27 (85%)	1.81	8 (34%) 1 1	73, 89, 92, 94	0
22	AV	7/24 (29%)	0.35	0 100 100	65, 77, 102, 104	0
22	CV	6/24 (25%)	0.46	1 (16%) 4 3	67, 78, 103, 103	0
23	AX	76/77 (98%)	-0.38	0 100 100	52, 80, 97, 105	0
23	CX	76/77 (98%)	-0.13	0 100 100	52, 82, 100, 106	0
24	AW	3/10 (30%)	0.50	0 100 100	67, 67, 82, 98	0
24	CW	3/10 (30%)	-0.32	0 100 100	67, 67, 78, 82	0
25	BA	2731/2915 (93%)	-0.69	13 (0%) 87 72	23, 44, 85, 111	0
25	DA	2714/2915 (93%)	-0.69	4 (0%) 92 86	26, 47, 85, 118	0
26	BB	120/122 (98%)	-0.27	0 100 100	42, 68, 80, 95	0
26	DB	120/122 (98%)	0.09	0 100 100	48, 74, 84, 97	0
27	BD	275/276 (99%)	-0.44	0 100 100	22, 42, 58, 77	0
27	DD	275/276 (99%)	-0.45	1 (0%) 88 76	23, 44, 60, 79	0
28	BE	204/206 (99%)	-0.42	0 100 100	23, 45, 67, 88	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DE	204/206 (99%)	-0.39	1 (0%) 87 72	24, 47, 70, 88	0
29	BF	203/210 (96%)	-0.23	0 100 100	20, 51, 77, 94	0
29	DF	203/210 (96%)	-0.26	0 100 100	22, 54, 78, 93	0
30	BG	181/182 (99%)	0.18	2 (1%) 78 57	59, 77, 90, 103	0
30	DG	181/182 (99%)	0.59	8 (4%) 39 21	63, 80, 92, 102	0
31	BH	174/180 (96%)	0.12	2 (1%) 78 57	50, 66, 78, 84	0
31	DH	174/180 (96%)	0.31	1 (0%) 85 69	54, 71, 82, 87	0
32	BI	146/148 (98%)	-0.08	0 100 100	45, 75, 87, 92	0
32	DI	146/148 (98%)	0.17	0 100 100	48, 76, 86, 91	0
33	BN	140/140 (100%)	-0.16	1 (0%) 84 66	32, 49, 68, 80	0
33	DN	140/140 (100%)	-0.23	0 100 100	34, 53, 72, 81	0
34	BO	122/122 (100%)	-0.57	0 100 100	25, 39, 60, 78	0
34	DO	122/122 (100%)	-0.39	0 100 100	34, 52, 68, 79	0
35	BP	149/150 (99%)	-0.19	1 (0%) 84 66	26, 54, 76, 84	0
35	DP	149/150 (99%)	-0.08	0 100 100	30, 57, 79, 86	0
36	BQ	141/141 (100%)	-0.05	3 (2%) 63 40	33, 51, 65, 79	0
36	DQ	141/141 (100%)	-0.15	1 (0%) 84 66	35, 54, 70, 80	0
37	BR	118/118 (100%)	-0.53	0 100 100	22, 35, 51, 64	0
37	DR	118/118 (100%)	-0.26	0 100 100	36, 50, 64, 81	0
38	BS	110/112 (98%)	-0.30	0 100 100	38, 55, 69, 81	0
38	DS	110/112 (98%)	0.57	5 (4%) 38 20	66, 78, 90, 100	0
39	BT	131/146 (89%)	-0.30	2 (1%) 72 49	33, 45, 75, 91	0
39	DT	131/146 (89%)	-0.21	2 (1%) 72 49	44, 56, 80, 86	0
40	BU	116/118 (98%)	-0.71	0 100 100	19, 30, 50, 63	0
40	DU	116/118 (98%)	-0.10	0 100 100	39, 61, 79, 88	0
41	BV	101/101 (100%)	-0.29	0 100 100	29, 52, 70, 77	0
41	DV	101/101 (100%)	-0.31	0 100 100	32, 58, 74, 79	0
42	BW	112/113 (99%)	-0.47	1 (0%) 81 61	27, 37, 61, 94	0
42	DW	112/113 (99%)	-0.42	0 100 100	31, 40, 63, 94	0
43	BX	95/96 (98%)	-0.16	1 (1%) 78 57	32, 46, 69, 82	0
43	DX	95/96 (98%)	-0.04	0 100 100	38, 50, 72, 83	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	BY	107/110 (97%)	0.11	3 (2%) 55 32	44, 59, 77, 82	0
44	DY	107/110 (97%)	0.30	3 (2%) 55 32	46, 63, 80, 85	0
45	BZ	171/206 (83%)	0.11	2 (1%) 76 55	52, 71, 85, 93	0
45	DZ	174/206 (84%)	0.33	1 (0%) 85 69	56, 74, 87, 95	0
46	B0	83/85 (97%)	-0.13	6 (7%) 21 11	22, 40, 75, 104	0
46	D0	83/85 (97%)	0.28	3 (3%) 46 26	45, 66, 87, 98	0
47	B1	97/98 (98%)	-0.41	0 100 100	25, 42, 71, 77	0
47	D1	97/98 (98%)	-0.17	1 (1%) 79 59	35, 56, 79, 85	0
48	B2	70/72 (97%)	-0.23	0 100 100	31, 48, 64, 77	0
48	D2	70/72 (97%)	0.09	0 100 100	56, 73, 84, 86	0
49	B3	59/60 (98%)	-0.44	0 100 100	26, 38, 63, 86	0
49	D3	59/60 (98%)	-0.14	0 100 100	49, 62, 80, 93	0
50	B4	69/71 (97%)	0.27	0 100 100	64, 87, 101, 104	0
50	D4	69/71 (97%)	0.72	4 (5%) 29 15	85, 95, 104, 107	0
51	B5	59/60 (98%)	-0.75	0 100 100	14, 35, 55, 71	0
51	D5	59/60 (98%)	-0.34	0 100 100	29, 51, 70, 77	0
52	B6	53/54 (98%)	-0.38	0 100 100	40, 54, 68, 74	0
52	D6	53/54 (98%)	-0.30	0 100 100	42, 58, 68, 74	0
53	B7	48/49 (97%)	-0.39	0 100 100	26, 32, 67, 78	0
53	D7	48/49 (97%)	-0.27	1 (2%) 63 40	27, 34, 66, 79	0
54	B8	64/65 (98%)	-0.33	0 100 100	33, 43, 51, 56	0
54	D8	64/65 (98%)	-0.14	0 100 100	34, 46, 56, 60	0
55	B9	37/37 (100%)	0.14	1 (2%) 56 33	43, 52, 68, 77	0
55	D9	37/37 (100%)	0.26	1 (2%) 56 33	48, 57, 72, 78	0
All	All	20462/21468 (95%)	-0.13	333 (1%) 70 47	14, 65, 95, 119	0

All (333) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
13	CM	124	PRO	6.6
13	AM	123	ALA	6.0
13	CM	123	ALA	5.9
9	CI	11	LYS	5.2
44	BY	1	MET	5.0

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Mol	Chain	Res	Type	RSRZ
14	AN	2	ALA	4.8
19	CS	9	VAL	4.8
20	CT	9	ASN	4.7
14	CN	2	ALA	4.6
19	AS	13	ASP	4.4
20	AT	69	GLY	4.4
9	AI	13	ALA	4.3
1	AA	1036	G	4.2
25	BA	935	C	4.1
25	BA	2814	C	4.0
1	CA	1030(B)	C	4.0
46	B0	7	LEU	3.9
7	AG	80	VAL	3.9
1	AA	1030	C	3.9
9	CI	126	SER	3.8
1	AA	1000	U	3.8
3	CC	160	ALA	3.7
21	CU	6	ARG	3.7
9	CI	105	ASP	3.7
21	CU	14	TRP	3.6
1	CA	1001(A)	G	3.6
25	BA	2815	C	3.6
1	CA	1002	G	3.5
44	DY	1	MET	3.5
46	D0	7	LEU	3.4
31	BH	2	SER	3.4
1	CA	80	G	3.4
1	CA	1036	G	3.4
2	CB	237	ALA	3.4
20	AT	18	GLN	3.4
2	AB	165	VAL	3.4
13	AM	122	LYS	3.3
19	CS	15	LEU	3.3
7	CG	16	LEU	3.3
30	DG	53	LEU	3.3
3	CC	155	GLY	3.3
1	CA	1030(A)	G	3.2
10	AJ	5	ARG	3.2
9	CI	118	LYS	3.2
50	D4	56	VAL	3.2
13	CM	102	ARG	3.2
25	BA	34	C	3.2

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Mol	Chain	Res	Type	RSRZ
25	BA	2806	G	3.1
16	CP	82	GLN	3.1
46	B0	4	LYS	3.1
9	CI	102	LEU	3.1
9	CI	2	GLU	3.1
1	AA	1028	C	3.1
19	AS	71	LEU	3.1
9	CI	36	TYR	3.1
12	AL	91	LYS	3.1
19	CS	35	SER	3.1
47	D1	2	SER	3.1
9	AI	14	VAL	3.1
25	BA	2816	G	3.1
16	AP	82	GLN	3.1
20	AT	10	LEU	3.1
2	CB	99	GLY	3.1
25	DA	229	A	3.1
1	AA	1030(C)	G	3.0
7	CG	78	ARG	3.0
9	AI	64	THR	3.0
13	CM	122	LYS	3.0
44	BY	3	VAL	3.0
16	CP	9	PHE	3.0
1	CA	1286	A	3.0
1	CA	1493	A	3.0
3	CC	177	THR	3.0
1	AA	1037	C	3.0
12	AL	63	GLY	3.0
2	AB	237	ALA	3.0
46	B0	3	HIS	3.0
1	AA	1286	A	2.9
1	CA	1001	A	2.9
1	AA	1030(B)	C	2.9
2	AB	196	LEU	2.9
10	CJ	40	LEU	2.9
21	CU	17	THR	2.9
2	CB	134	GLU	2.9
14	CN	33	VAL	2.9
20	CT	103	GLY	2.9
12	AL	126	LYS	2.9
2	CB	97	TRP	2.9
13	AM	87	TYR	2.9

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Mol	Chain	Res	Type	RSRZ
28	DE	204	ALA	2.9
1	AA	1029	C	2.9
36	BQ	61	GLY	2.9
46	D0	6	GLY	2.9
19	AS	84	GLY	2.9
21	AU	6	ARG	2.9
50	D4	66	SER	2.8
10	CJ	5	ARG	2.8
25	BA	1555	C	2.8
25	BA	2807	C	2.8
21	CU	11	GLY	2.8
10	CJ	65	LEU	2.8
4	AD	23	GLY	2.8
16	AP	19	ILE	2.8
9	AI	12	GLU	2.8
19	CS	13	ASP	2.8
10	AJ	76	ASN	2.8
19	CS	16	LEU	2.8
45	BZ	118	GLN	2.7
9	CI	30	GLY	2.7
9	CI	62	TYR	2.7
14	AN	15	LYS	2.7
14	CN	17	LYS	2.7
21	CU	13	ILE	2.7
25	DA	1536	C	2.7
4	CD	164	ALA	2.7
10	AJ	65	LEU	2.7
1	CA	1202	G	2.7
9	CI	10	ARG	2.7
50	D4	65	ASP	2.7
2	CB	71	VAL	2.7
19	CS	84	GLY	2.7
1	AA	1002	G	2.7
25	BA	2813	G	2.7
9	CI	117	HIS	2.7
11	AK	36	ASP	2.7
9	CI	81	ILE	2.6
9	CI	66	ARG	2.6
19	AS	4	SER	2.6
19	CS	71	LEU	2.6
46	D0	3	HIS	2.6
4	CD	154	ASN	2.6

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Mol	Chain	Res	Type	RSRZ
2	AB	134	GLU	2.6
44	DY	5	MET	2.6
9	CI	14	VAL	2.6
39	BT	130	ALA	2.6
3	CC	207	VAL	2.6
20	AT	74	LYS	2.6
14	AN	7	ILE	2.6
1	AA	1001(A)	G	2.6
10	AJ	47	PHE	2.6
13	AM	124	PRO	2.6
44	DY	107	ASP	2.6
1	CA	1149	C	2.6
1	AA	1532	U	2.5
36	BQ	60	ARG	2.5
10	CJ	32	ALA	2.5
19	AS	40	ILE	2.5
4	AD	2	GLY	2.5
10	AJ	31	GLY	2.5
19	CS	8	GLY	2.5
21	AU	11	GLY	2.5
43	BX	95	LEU	2.5
19	CS	31	ILE	2.5
1	AA	1001	A	2.5
20	CT	25	ARG	2.5
30	DG	76	SER	2.5
9	CI	119	ALA	2.5
9	CI	18	PHE	2.5
9	CI	64	THR	2.5
9	AI	10	ARG	2.5
14	CN	15	LYS	2.5
19	AS	14	HIS	2.5
7	CG	80	VAL	2.5
9	CI	28	VAL	2.5
20	AT	12	ALA	2.5
1	CA	979	C	2.5
21	CU	15	ARG	2.5
21	CU	4	GLY	2.5
46	B0	6	GLY	2.5
19	CS	12	ASP	2.4
1	AA	380	G	2.4
38	DS	54	LEU	2.4
50	D4	67	TYR	2.4

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Mol	Chain	Res	Type	RSRZ
14	CN	18	VAL	2.4
14	AN	3	ARG	2.4
10	CJ	76	ASN	2.4
9	CI	17	VAL	2.4
10	AJ	32	ALA	2.4
1	AA	1030(A)	G	2.4
1	AA	1031	G	2.4
1	AA	1034	G	2.4
1	CA	1532	U	2.4
14	CN	32	SER	2.4
8	CH	95	VAL	2.4
17	AQ	35	VAL	2.4
1	AA	999	C	2.4
14	CN	13	THR	2.4
8	CH	131	GLY	2.3
14	CN	7	ILE	2.3
19	CS	40	ILE	2.3
39	DT	131	ALA	2.3
55	B9	29	ASN	2.3
9	CI	5	TYR	2.3
3	AC	52	LEU	2.3
10	AJ	33	GLN	2.3
16	CP	69	THR	2.3
38	DS	33	LYS	2.3
38	DS	59	LYS	2.3
46	B0	5	LYS	2.3
46	B0	8	GLY	2.3
10	AJ	4	ILE	2.3
1	AA	163	C	2.3
30	DG	152	LEU	2.3
1	CA	1224	G	2.3
55	D9	16	VAL	2.3
9	AI	119	ALA	2.3
16	AP	22	THR	2.3
10	CJ	74	ILE	2.3
19	CS	2	PRO	2.3
31	DH	120	GLY	2.3
25	DA	1171	G	2.3
1	CA	1257	U	2.3
2	CB	225	ALA	2.3
3	CC	159	GLY	2.3
9	CI	45	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
3	AC	193	TYR	2.3
15	CO	68	ARG	2.3
1	CA	1030(C)	G	2.2
25	BA	2805	G	2.2
30	DG	2	PRO	2.2
1	CA	1126	U	2.2
1	CA	1219	U	2.2
9	CI	27	THR	2.2
12	CL	126	LYS	2.2
14	AN	4	LYS	2.2
1	AA	1027	C	2.2
2	CB	165	VAL	2.2
33	BN	53	VAL	2.2
8	CH	99	GLU	2.2
10	CJ	37	PRO	2.2
10	CJ	62	HIS	2.2
21	CU	8	THR	2.2
53	D7	48	LYS	2.2
2	CB	101	MET	2.2
10	CJ	58	ASP	2.2
3	AC	2	GLY	2.2
10	CJ	85	LEU	2.2
13	AM	107	ALA	2.2
39	DT	69	GLY	2.2
31	BH	6	ARG	2.2
12	AL	99	HIS	2.2
16	AP	2	VAL	2.2
1	AA	202	U	2.2
25	BA	1072	U	2.2
1	CA	1035	A	2.2
7	AG	83	ALA	2.2
13	CM	6	GLY	2.2
14	CN	5	ALA	2.2
39	BT	131	ALA	2.2
9	CI	113	LYS	2.2
9	CI	9	ARG	2.2
10	CJ	49	VAL	2.2
38	DS	92	TYR	2.2
4	AD	157	LEU	2.2
19	AS	16	LEU	2.2
30	DG	34	LEU	2.2
30	DG	50	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
30	DG	137	GLU	2.2
45	BZ	119	GLU	2.2
13	AM	121	LYS	2.2
4	AD	3	ARG	2.2
7	AG	5	ARG	2.2
10	AJ	66	ARG	2.2
14	AN	16	PHE	2.2
1	AA	1531	A	2.2
25	DA	1533	G	2.2
25	BA	696	C	2.1
19	CS	4	SER	2.1
20	AT	61	SER	2.1
3	CC	79	ARG	2.1
4	AD	179	GLU	2.1
38	DS	97	ARG	2.1
42	BW	112	GLY	2.1
30	BG	80	PHE	2.1
2	AB	7	VAL	2.1
1	AA	630	G	2.1
1	AA	1032	G	2.1
20	AT	103	GLY	2.1
2	AB	97	TRP	2.1
6	AF	6	VAL	2.1
12	CL	18	VAL	2.1
15	AO	3	ILE	2.1
19	CS	33	THR	2.1
9	AI	106	ALA	2.1
1	CA	1357	A	2.1
2	CB	72	GLY	2.1
7	CG	82	GLY	2.1
25	BA	218	A	2.1
10	AJ	34	VAL	2.1
13	CM	17	VAL	2.1
19	CS	30	LEU	2.1
10	CJ	87	THR	2.1
16	AP	25	ARG	2.1
14	CN	21	TYR	2.1
14	CN	22	THR	2.1
35	BP	15	ARG	2.1
21	AU	21	TYR	2.1
7	CG	83	ALA	2.1
9	AI	15	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
2	CB	70	PHE	2.1
3	AC	161	GLU	2.1
10	CJ	63	PHE	2.1
14	CN	14	PRO	2.1
30	BG	48	GLU	2.1
1	AA	975	A	2.1
7	AG	84	ASN	2.1
27	DD	38	LYS	2.1
13	AM	102	ARG	2.1
9	CI	125	TYR	2.1
14	CN	20	ALA	2.1
36	BQ	33	GLY	2.1
10	CJ	91	PRO	2.1
14	CN	16	PHE	2.1
10	AJ	55	LYS	2.0
10	AJ	87	THR	2.0
3	AC	158	GLY	2.0
13	CM	119	GLY	2.0
36	DQ	61	GLY	2.0
21	AU	23	PRO	2.0
1	CA	1321	C	2.0
7	AG	12	LEU	2.0
9	CI	40	LEU	2.0
10	AJ	50	ILE	2.0
9	AI	7	THR	2.0
10	AJ	58	ASP	2.0
4	AD	69	GLY	2.0
1	CA	978	A	2.0
22	CV	14	A	2.0
30	DG	28	VAL	2.0
44	BY	2	ARG	2.0
45	DZ	161	VAL	2.0
9	CI	96	LEU	2.0
2	CB	208	ILE	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
24	2R1	AW	6	10/11	0.76	0.14	66,72,84,91	0
24	MVA	AW	5	8/9	0.77	0.15	69,82,86,91	0
24	004	AW	3	10/11	0.81	0.12	67,87,95,97	0
24	2QY	CW	10	13/14	0.85	0.11	60,72,80,86	0
24	2R1	CW	6	10/11	0.86	0.12	68,82,90,91	0
24	2R3	AW	8	14/15	0.86	0.13	70,78,86,87	0
24	MVA	CW	5	8/9	0.87	0.12	76,88,91,99	0
24	MVA	CW	9	8/9	0.88	0.11	70,73,84,91	0
24	2QY	AW	10	13/14	0.90	0.10	49,70,87,100	0
24	MVA	AW	9	8/9	0.92	0.11	63,74,87,88	0
24	2QZ	AW	1	9/10	0.92	0.10	50,71,82,83	0
24	2R3	CW	8	14/15	0.93	0.08	62,69,77,78	0
24	2QZ	CW	1	9/10	0.94	0.10	63,71,80,101	0
24	004	CW	3	10/11	0.94	0.08	69,78,82,83	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
56	MG	CA	3147	1/1	0.28	0.30	77,77,77,77	0
56	MG	CA	3139	1/1	0.48	0.22	76,76,76,76	0
56	MG	CA	3114	1/1	0.55	0.18	67,67,67,67	0
56	MG	AA	3180	1/1	0.58	0.29	75,75,75,75	0
56	MG	BA	3661	1/1	0.61	0.19	69,69,69,69	0
56	MG	CA	3156	1/1	0.62	0.21	80,80,80,80	0
56	MG	AA	3093	1/1	0.63	0.25	90,90,90,90	0
56	MG	CA	3142	1/1	0.65	0.21	80,80,80,80	0
56	MG	CA	3164	1/1	0.65	0.16	43,43,43,43	0
56	MG	DA	3356	1/1	0.65	0.14	57,57,57,57	0
56	MG	CA	3030	1/1	0.66	0.44	74,74,74,74	0
56	MG	CA	3053	1/1	0.66	0.50	87,87,87,87	0
56	MG	AA	3164	1/1	0.66	0.28	61,61,61,61	0
56	MG	AA	3076	1/1	0.67	0.37	74,74,74,74	0
56	MG	AA	3129	1/1	0.68	0.25	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3103	1/1	0.68	0.28	58,58,58,58	0
56	MG	AA	3072	1/1	0.68	0.20	69,69,69,69	0
56	MG	DG	3001	1/1	0.68	0.16	68,68,68,68	0
56	MG	BB	3005	1/1	0.69	0.27	62,62,62,62	0
56	MG	BA	3625	1/1	0.69	0.17	80,80,80,80	0
56	MG	CA	3161	1/1	0.69	0.15	71,71,71,71	0
56	MG	AX	108	1/1	0.70	0.26	66,66,66,66	0
56	MG	BA	3203	1/1	0.70	0.17	45,45,45,45	0
56	MG	DA	3540	1/1	0.71	0.16	76,76,76,76	0
56	MG	AA	3200	1/1	0.71	0.24	79,79,79,79	0
56	MG	AA	3021	1/1	0.72	0.18	76,76,76,76	0
56	MG	BA	3704	1/1	0.72	0.20	58,58,58,58	0
56	MG	AA	3094	1/1	0.72	0.13	78,78,78,78	0
56	MG	DA	3568	1/1	0.73	0.18	58,58,58,58	0
56	MG	DA	3619	1/1	0.73	0.17	67,67,67,67	0
56	MG	AA	3133	1/1	0.73	0.41	71,71,71,71	0
56	MG	CA	3025	1/1	0.74	0.18	102,102,102,102	0
56	MG	AA	3087	1/1	0.74	0.21	87,87,87,87	0
56	MG	DA	3567	1/1	0.74	0.15	68,68,68,68	0
56	MG	AS	3001	1/1	0.74	0.16	79,79,79,79	0
56	MG	AX	104	1/1	0.74	0.11	62,62,62,62	0
56	MG	BA	3620	1/1	0.74	0.22	57,57,57,57	0
56	MG	CA	3129	1/1	0.75	0.21	54,54,54,54	0
56	MG	AA	3002	1/1	0.75	0.14	74,74,74,74	0
56	MG	DA	3464	1/1	0.75	0.11	51,51,51,51	0
56	MG	DA	3630	1/1	0.75	0.12	67,67,67,67	0
56	MG	DB	3003	1/1	0.75	0.21	70,70,70,70	0
56	MG	AA	3022	1/1	0.75	0.19	56,56,56,56	0
56	MG	DA	3001	1/1	0.76	0.37	76,76,76,76	0
56	MG	DA	3115	1/1	0.76	0.11	64,64,64,64	0
56	MG	CA	3073	1/1	0.76	0.22	74,74,74,74	0
56	MG	DA	3436	1/1	0.76	0.11	61,61,61,61	0
56	MG	DA	3456	1/1	0.76	0.20	58,58,58,58	0
56	MG	AA	3209	1/1	0.76	0.16	66,66,66,66	0
56	MG	DA	3500	1/1	0.76	0.30	66,66,66,66	0
56	MG	BF	306	1/1	0.76	0.13	52,52,52,52	0
56	MG	AA	3063	1/1	0.76	0.18	57,57,57,57	0
56	MG	CA	3027	1/1	0.76	0.14	64,64,64,64	0
56	MG	DA	3602	1/1	0.76	0.17	63,63,63,63	0
56	MG	AA	3131	1/1	0.76	0.25	65,65,65,65	0
56	MG	BA	3582	1/1	0.76	0.16	52,52,52,52	0
56	MG	DA	3639	1/1	0.76	0.22	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3061	1/1	0.76	0.36	68,68,68,68	0
56	MG	CA	3070	1/1	0.76	0.21	59,59,59,59	0
56	MG	CA	3119	1/1	0.77	0.29	73,73,73,73	0
56	MG	DA	3603	1/1	0.77	0.17	66,66,66,66	0
56	MG	BA	3711	1/1	0.77	0.28	64,64,64,64	0
56	MG	CA	3009	1/1	0.77	0.14	55,55,55,55	0
56	MG	BA	3708	1/1	0.77	0.16	38,38,38,38	0
56	MG	CA	3056	1/1	0.77	0.19	63,63,63,63	0
56	MG	CA	3117	1/1	0.77	0.11	58,58,58,58	0
56	MG	BA	3740	1/1	0.78	0.26	57,57,57,57	0
56	MG	CA	3172	1/1	0.78	0.19	65,65,65,65	0
56	MG	BA	3133	1/1	0.78	0.34	53,53,53,53	0
56	MG	DA	3462	1/1	0.78	0.19	71,71,71,71	0
56	MG	DA	3066	1/1	0.78	0.25	59,59,59,59	0
56	MG	CA	3144	1/1	0.78	0.26	84,84,84,84	0
56	MG	DA	3123	1/1	0.78	0.10	61,61,61,61	0
56	MG	DA	3220	1/1	0.78	0.06	61,61,61,61	0
56	MG	AA	3189	1/1	0.79	0.13	74,74,74,74	0
56	MG	CA	3152	1/1	0.79	0.21	45,45,45,45	0
56	MG	DA	3131	1/1	0.79	0.09	60,60,60,60	0
56	MG	DA	3141	1/1	0.79	0.22	63,63,63,63	0
56	MG	BA	3358	1/1	0.79	0.12	78,78,78,78	0
56	MG	DA	3296	1/1	0.79	0.19	65,65,65,65	0
56	MG	CA	3007	1/1	0.79	0.11	63,63,63,63	0
56	MG	AA	3115	1/1	0.79	0.27	67,67,67,67	0
56	MG	AA	3067	1/1	0.79	0.29	76,76,76,76	0
56	MG	DB	3001	1/1	0.79	0.17	80,80,80,80	0
56	MG	AA	3112	1/1	0.79	0.14	53,53,53,53	0
56	MG	CA	3091	1/1	0.79	0.11	95,95,95,95	0
56	MG	CA	3028	1/1	0.80	0.44	62,62,62,62	0
56	MG	DA	3241	1/1	0.80	0.08	74,74,74,74	0
56	MG	AA	3136	1/1	0.80	0.14	68,68,68,68	0
56	MG	AA	3117	1/1	0.80	0.18	64,64,64,64	0
56	MG	DA	3073	1/1	0.80	0.23	50,50,50,50	0
56	MG	DA	3441	1/1	0.80	0.11	46,46,46,46	0
56	MG	DA	3627	1/1	0.80	0.14	52,52,52,52	0
56	MG	AA	3030	1/1	0.80	0.39	66,66,66,66	0
56	MG	CA	3060	1/1	0.80	0.27	59,59,59,59	0
56	MG	BA	3247	1/1	0.80	0.26	58,58,58,58	0
56	MG	BA	3292	1/1	0.80	0.27	59,59,59,59	0
56	MG	DA	3506	1/1	0.80	0.11	61,61,61,61	0
56	MG	BA	3636	1/1	0.81	0.13	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3159	1/1	0.81	0.25	76,76,76,76	0
56	MG	DA	3113	1/1	0.81	0.45	61,61,61,61	0
56	MG	DA	3346	1/1	0.81	0.10	64,64,64,64	0
56	MG	BA	3510	1/1	0.81	0.24	66,66,66,66	0
56	MG	AA	3184	1/1	0.81	0.16	81,81,81,81	0
56	MG	AA	3217	1/1	0.81	0.30	64,64,64,64	0
56	MG	AD	502	1/1	0.81	0.30	56,56,56,56	0
56	MG	CA	3048	1/1	0.82	0.32	70,70,70,70	0
56	MG	DA	3414	1/1	0.82	0.18	59,59,59,59	0
56	MG	DA	3418	1/1	0.82	0.14	57,57,57,57	0
56	MG	BA	3338	1/1	0.82	0.18	62,62,62,62	0
56	MG	BA	3710	1/1	0.82	0.15	57,57,57,57	0
56	MG	AA	3127	1/1	0.82	0.20	50,50,50,50	0
56	MG	BA	3060	1/1	0.82	0.31	64,64,64,64	0
56	MG	AA	3114	1/1	0.82	0.18	73,73,73,73	0
56	MG	DA	3496	1/1	0.82	0.20	76,76,76,76	0
56	MG	BB	3014	1/1	0.82	0.17	68,68,68,68	0
56	MG	BB	3017	1/1	0.82	0.29	80,80,80,80	0
56	MG	DA	3537	1/1	0.82	0.15	74,74,74,74	0
56	MG	CA	3110	1/1	0.82	0.15	93,93,93,93	0
56	MG	DA	3554	1/1	0.82	0.06	62,62,62,62	0
56	MG	DA	3566	1/1	0.82	0.18	55,55,55,55	0
56	MG	AA	3171	1/1	0.82	0.15	77,77,77,77	0
56	MG	BA	3177	1/1	0.82	0.43	35,35,35,35	0
56	MG	AA	3023	1/1	0.82	0.13	56,56,56,56	0
56	MG	AA	3132	1/1	0.82	0.16	59,59,59,59	0
56	MG	DA	3606	1/1	0.82	0.14	58,58,58,58	0
56	MG	DA	3617	1/1	0.82	0.12	51,51,51,51	0
56	MG	BA	3693	1/1	0.82	0.22	57,57,57,57	0
56	MG	DA	3162	1/1	0.82	0.18	69,69,69,69	0
56	MG	DA	3169	1/1	0.82	0.24	58,58,58,58	0
56	MG	CA	3141	1/1	0.82	0.39	85,85,85,85	0
56	MG	DA	3642	1/1	0.82	0.21	67,67,67,67	0
56	MG	AA	3032	1/1	0.82	0.28	65,65,65,65	0
56	MG	BA	3705	1/1	0.82	0.14	64,64,64,64	0
56	MG	CA	3033	1/1	0.82	0.14	64,64,64,64	0
56	MG	AA	3039	1/1	0.83	0.10	62,62,62,62	0
56	MG	AA	3162	1/1	0.83	0.17	79,79,79,79	0
56	MG	AA	3126	1/1	0.83	0.21	54,54,54,54	0
56	MG	DA	3086	1/1	0.83	0.20	43,43,43,43	0
56	MG	DA	3108	1/1	0.83	0.11	50,50,50,50	0
56	MG	AA	3016	1/1	0.83	0.10	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3029	1/1	0.83	0.16	54,54,54,54	0
56	MG	DA	3122	1/1	0.83	0.12	60,60,60,60	0
56	MG	AA	3178	1/1	0.83	0.16	63,63,63,63	0
56	MG	CA	3136	1/1	0.83	0.25	70,70,70,70	0
56	MG	CA	3032	1/1	0.83	0.20	44,44,44,44	0
56	MG	AA	3098	1/1	0.83	0.37	76,76,76,76	0
56	MG	CA	3039	1/1	0.83	0.32	82,82,82,82	0
56	MG	DA	3171	1/1	0.83	0.26	58,58,58,58	0
56	MG	AA	3029	1/1	0.83	0.32	60,60,60,60	0
56	MG	BA	3601	1/1	0.83	0.16	61,61,61,61	0
56	MG	AA	3089	1/1	0.83	0.24	80,80,80,80	0
56	MG	AA	3196	1/1	0.83	0.33	78,78,78,78	0
56	MG	AA	3092	1/1	0.83	0.25	59,59,59,59	0
56	MG	DA	3393	1/1	0.83	0.17	35,35,35,35	0
56	MG	CA	3065	1/1	0.83	0.17	81,81,81,81	0
56	MG	BW	3001	1/1	0.83	0.13	55,55,55,55	0
56	MG	BA	3180	1/1	0.83	0.25	48,48,48,48	0
56	MG	CX	103	1/1	0.83	0.08	57,57,57,57	0
59	FME	CX	101	10/11	0.83	0.25	59,80,100,106	0
56	MG	CA	3081	1/1	0.84	0.14	72,72,72,72	0
56	MG	BA	3648	1/1	0.84	0.13	54,54,54,54	0
56	MG	AA	3106	1/1	0.84	0.29	68,68,68,68	0
56	MG	DA	3514	1/1	0.84	0.17	60,60,60,60	0
56	MG	DA	3531	1/1	0.84	0.08	44,44,44,44	0
56	MG	BA	3686	1/1	0.84	0.25	65,65,65,65	0
56	MG	BD	305	1/1	0.84	0.17	41,41,41,41	0
56	MG	DA	3549	1/1	0.84	0.19	73,73,73,73	0
56	MG	CA	3041	1/1	0.84	0.31	71,71,71,71	0
56	MG	AA	3017	1/1	0.84	0.25	57,57,57,57	0
56	MG	DA	3246	1/1	0.84	0.10	55,55,55,55	0
56	MG	CA	3135	1/1	0.84	0.20	61,61,61,61	0
56	MG	DA	3586	1/1	0.84	0.12	57,57,57,57	0
56	MG	DA	3314	1/1	0.84	0.14	56,56,56,56	0
56	MG	AA	3134	1/1	0.84	0.29	70,70,70,70	0
56	MG	AA	3045	1/1	0.84	0.26	71,71,71,71	0
56	MG	DA	3613	1/1	0.84	0.20	64,64,64,64	0
56	MG	DA	3096	1/1	0.84	0.14	68,68,68,68	0
56	MG	DA	3405	1/1	0.84	0.24	53,53,53,53	0
56	MG	DA	3098	1/1	0.84	0.35	45,45,45,45	0
56	MG	BA	3616	1/1	0.84	0.18	73,73,73,73	0
56	MG	DA	3424	1/1	0.84	0.13	58,58,58,58	0
56	MG	AA	3147	1/1	0.84	0.14	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3294	1/1	0.84	0.20	59,59,59,59	0
56	MG	BA	3716	1/1	0.84	0.20	77,77,77,77	0
56	MG	DB	3011	1/1	0.84	0.17	49,49,49,49	0
56	MG	AA	3148	1/1	0.84	0.14	72,72,72,72	0
56	MG	DA	3124	1/1	0.84	0.17	66,66,66,66	0
56	MG	CA	3122	1/1	0.85	0.18	70,70,70,70	0
56	MG	DA	3102	1/1	0.85	0.11	49,49,49,49	0
56	MG	CA	3125	1/1	0.85	0.17	64,64,64,64	0
56	MG	DA	3109	1/1	0.85	0.14	55,55,55,55	0
56	MG	CA	3127	1/1	0.85	0.12	72,72,72,72	0
56	MG	DA	3468	1/1	0.85	0.13	47,47,47,47	0
56	MG	DA	3491	1/1	0.85	0.23	55,55,55,55	0
56	MG	AA	3064	1/1	0.85	0.07	65,65,65,65	0
56	MG	BA	3465	1/1	0.85	0.12	51,51,51,51	0
56	MG	BA	3467	1/1	0.85	0.09	44,44,44,44	0
56	MG	BA	3473	1/1	0.85	0.13	55,55,55,55	0
56	MG	AA	3079	1/1	0.85	0.27	65,65,65,65	0
56	MG	BA	3538	1/1	0.85	0.13	29,29,29,29	0
56	MG	DA	3153	1/1	0.85	0.21	51,51,51,51	0
56	MG	DA	3155	1/1	0.85	0.15	50,50,50,50	0
56	MG	BA	3567	1/1	0.85	0.07	54,54,54,54	0
56	MG	DA	3557	1/1	0.85	0.13	74,74,74,74	0
56	MG	DA	3563	1/1	0.85	0.14	49,49,49,49	0
56	MG	AA	3053	1/1	0.85	0.20	56,56,56,56	0
56	MG	BA	3186	1/1	0.85	0.18	50,50,50,50	0
56	MG	DA	3212	1/1	0.85	0.17	48,48,48,48	0
56	MG	AA	3088	1/1	0.85	0.25	53,53,53,53	0
56	MG	DA	3591	1/1	0.85	0.13	67,67,67,67	0
56	MG	BA	3223	1/1	0.85	0.22	49,49,49,49	0
56	MG	AA	3025	1/1	0.85	0.11	78,78,78,78	0
56	MG	DA	3251	1/1	0.85	0.22	50,50,50,50	0
56	MG	DA	3607	1/1	0.85	0.21	68,68,68,68	0
56	MG	DA	3263	1/1	0.85	0.14	48,48,48,48	0
56	MG	BA	3248	1/1	0.85	0.33	68,68,68,68	0
56	MG	DA	3618	1/1	0.85	0.15	61,61,61,61	0
56	MG	DA	3306	1/1	0.85	0.11	51,51,51,51	0
56	MG	DA	3620	1/1	0.85	0.15	66,66,66,66	0
56	MG	BA	3022	1/1	0.85	0.23	66,66,66,66	0
56	MG	DA	3333	1/1	0.85	0.09	61,61,61,61	0
56	MG	BA	3293	1/1	0.85	0.29	69,69,69,69	0
56	MG	CA	3103	1/1	0.85	0.14	101,101,101,101	0
56	MG	DA	3005	1/1	0.85	0.09	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3667	1/1	0.85	0.18	72,72,72,72	0
56	MG	DB	3010	1/1	0.85	0.17	66,66,66,66	0
56	MG	AA	3090	1/1	0.85	0.23	64,64,64,64	0
56	MG	AA	3074	1/1	0.85	0.20	40,40,40,40	0
56	MG	DQ	3004	1/1	0.85	0.12	52,52,52,52	0
59	FME	AX	101	10/11	0.85	0.22	55,74,92,107	0
56	MG	BA	3694	1/1	0.85	0.15	48,48,48,48	0
56	MG	DA	3060	1/1	0.86	0.07	51,51,51,51	0
56	MG	BB	3001	1/1	0.86	0.17	56,56,56,56	0
56	MG	BA	3028	1/1	0.86	0.25	59,59,59,59	0
56	MG	DA	3074	1/1	0.86	0.24	60,60,60,60	0
56	MG	DA	3084	1/1	0.86	0.10	55,55,55,55	0
56	MG	BA	3597	1/1	0.86	0.14	46,46,46,46	0
56	MG	DA	3093	1/1	0.86	0.14	51,51,51,51	0
56	MG	AA	3061	1/1	0.86	0.10	57,57,57,57	0
56	MG	CA	3109	1/1	0.86	0.16	79,79,79,79	0
56	MG	BB	3018	1/1	0.86	0.15	54,54,54,54	0
56	MG	DA	3504	1/1	0.86	0.10	46,46,46,46	0
56	MG	BA	3257	1/1	0.86	0.21	56,56,56,56	0
56	MG	CA	3116	1/1	0.86	0.16	76,76,76,76	0
56	MG	BA	3289	1/1	0.86	0.17	53,53,53,53	0
56	MG	BA	3066	1/1	0.86	0.20	49,49,49,49	0
56	MG	B7	101	1/1	0.86	0.16	45,45,45,45	0
56	MG	BA	3068	1/1	0.86	0.26	43,43,43,43	0
56	MG	BA	3641	1/1	0.86	0.09	33,33,33,33	0
56	MG	AF	3001	1/1	0.86	0.16	62,62,62,62	0
56	MG	BA	3651	1/1	0.86	0.23	52,52,52,52	0
56	MG	BA	3301	1/1	0.86	0.18	44,44,44,44	0
56	MG	BA	3123	1/1	0.86	0.11	47,47,47,47	0
56	MG	AA	3020	1/1	0.86	0.09	80,80,80,80	0
56	MG	BA	3433	1/1	0.86	0.24	46,46,46,46	0
56	MG	DA	3589	1/1	0.86	0.14	65,65,65,65	0
56	MG	AA	3097	1/1	0.86	0.31	53,53,53,53	0
56	MG	DA	3596	1/1	0.86	0.22	68,68,68,68	0
56	MG	BA	3701	1/1	0.86	0.11	69,69,69,69	0
56	MG	BA	3702	1/1	0.86	0.11	56,56,56,56	0
56	MG	CA	3153	1/1	0.86	0.15	85,85,85,85	0
56	MG	DA	3243	1/1	0.86	0.22	49,49,49,49	0
56	MG	DA	3608	1/1	0.86	0.23	63,63,63,63	0
56	MG	AX	105	1/1	0.86	0.20	72,72,72,72	0
56	MG	CA	3158	1/1	0.86	0.12	64,64,64,64	0
56	MG	AA	3082	1/1	0.86	0.26	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3281	1/1	0.86	0.09	33,33,33,33	0
56	MG	DA	3289	1/1	0.86	0.21	64,64,64,64	0
56	MG	BA	3014	1/1	0.86	0.29	48,48,48,48	0
56	MG	CA	3162	1/1	0.86	0.16	60,60,60,60	0
56	MG	BA	3530	1/1	0.86	0.14	72,72,72,72	0
56	MG	CA	3168	1/1	0.86	0.28	79,79,79,79	0
56	MG	DA	3645	1/1	0.86	0.19	57,57,57,57	0
56	MG	AA	3028	1/1	0.86	0.24	72,72,72,72	0
56	MG	CE	3001	1/1	0.86	0.19	66,66,66,66	0
56	MG	DA	3361	1/1	0.86	0.18	58,58,58,58	0
56	MG	DA	3392	1/1	0.86	0.10	60,60,60,60	0
56	MG	BA	3565	1/1	0.86	0.14	75,75,75,75	0
56	MG	CA	3067	1/1	0.86	0.16	66,66,66,66	0
56	MG	D3	101	1/1	0.86	0.12	54,54,54,54	0
56	MG	BA	3224	1/1	0.86	0.15	48,48,48,48	0
56	MG	DA	3035	1/1	0.86	0.16	58,58,58,58	0
60	K	BA	3304	1/1	0.86	0.19	93,93,93,93	0
56	MG	BA	3143	1/1	0.87	0.39	41,41,41,41	0
56	MG	BA	3156	1/1	0.87	0.25	61,61,61,61	0
56	MG	BA	3173	1/1	0.87	0.17	41,41,41,41	0
56	MG	BA	3357	1/1	0.87	0.15	45,45,45,45	0
56	MG	BA	3027	1/1	0.87	0.13	53,53,53,53	0
56	MG	BA	3674	1/1	0.87	0.17	67,67,67,67	0
56	MG	BA	3369	1/1	0.87	0.14	49,49,49,49	0
56	MG	AA	3015	1/1	0.87	0.12	74,74,74,74	0
56	MG	BA	3184	1/1	0.87	0.23	51,51,51,51	0
56	MG	CA	3145	1/1	0.87	0.08	67,67,67,67	0
56	MG	DA	3534	1/1	0.87	0.12	62,62,62,62	0
56	MG	CA	3146	1/1	0.87	0.15	61,61,61,61	0
56	MG	CA	3038	1/1	0.87	0.09	54,54,54,54	0
56	MG	CA	3150	1/1	0.87	0.12	63,63,63,63	0
56	MG	AA	3078	1/1	0.87	0.31	55,55,55,55	0
56	MG	BA	3469	1/1	0.87	0.12	60,60,60,60	0
56	MG	DA	3189	1/1	0.87	0.19	55,55,55,55	0
56	MG	AA	3068	1/1	0.87	0.21	67,67,67,67	0
56	MG	CA	3157	1/1	0.87	0.11	56,56,56,56	0
56	MG	DA	3224	1/1	0.87	0.23	53,53,53,53	0
56	MG	DA	3585	1/1	0.87	0.25	62,62,62,62	0
56	MG	CA	3050	1/1	0.87	0.22	54,54,54,54	0
56	MG	BA	3212	1/1	0.87	0.20	47,47,47,47	0
56	MG	CA	3054	1/1	0.87	0.23	74,74,74,74	0
56	MG	AA	3141	1/1	0.87	0.18	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3071	1/1	0.87	0.19	55,55,55,55	0
56	MG	BA	3563	1/1	0.87	0.38	66,66,66,66	0
56	MG	DA	3287	1/1	0.87	0.08	53,53,53,53	0
56	MG	BA	3088	1/1	0.87	0.08	55,55,55,55	0
56	MG	BA	3739	1/1	0.87	0.10	50,50,50,50	0
56	MG	AA	3080	1/1	0.87	0.22	58,58,58,58	0
56	MG	BA	3119	1/1	0.87	0.12	56,56,56,56	0
56	MG	DA	3323	1/1	0.87	0.09	60,60,60,60	0
56	MG	CA	3074	1/1	0.87	0.15	56,56,56,56	0
56	MG	BA	3596	1/1	0.87	0.11	79,79,79,79	0
56	MG	DA	3621	1/1	0.87	0.16	46,46,46,46	0
56	MG	BA	3262	1/1	0.87	0.32	44,44,44,44	0
56	MG	DA	3628	1/1	0.87	0.10	38,38,38,38	0
56	MG	DA	3062	1/1	0.87	0.23	58,58,58,58	0
56	MG	DA	3367	1/1	0.87	0.19	55,55,55,55	0
56	MG	DA	3391	1/1	0.87	0.10	54,54,54,54	0
56	MG	BA	3267	1/1	0.87	0.19	56,56,56,56	0
56	MG	BA	3272	1/1	0.87	0.21	49,49,49,49	0
56	MG	AA	3219	1/1	0.87	0.16	54,54,54,54	0
56	MG	DB	3006	1/1	0.87	0.10	54,54,54,54	0
56	MG	AA	3081	1/1	0.87	0.25	46,46,46,46	0
56	MG	BA	3634	1/1	0.87	0.14	77,77,77,77	0
56	MG	BX	102	1/1	0.87	0.22	60,60,60,60	0
56	MG	DA	3095	1/1	0.87	0.22	53,53,53,53	0
56	MG	DY	502	1/1	0.87	0.13	66,66,66,66	0
56	MG	BA	3137	1/1	0.87	0.15	59,59,59,59	0
56	MG	DA	3448	1/1	0.87	0.21	67,67,67,67	0
56	MG	CA	3004	1/1	0.87	0.15	88,88,88,88	0
56	MG	DA	3460	1/1	0.87	0.13	47,47,47,47	0
56	MG	DA	3344	1/1	0.88	0.07	48,48,48,48	0
56	MG	AA	3047	1/1	0.88	0.22	59,59,59,59	0
56	MG	BA	3644	1/1	0.88	0.13	38,38,38,38	0
56	MG	CA	3160	1/1	0.88	0.14	49,49,49,49	0
56	MG	AA	3207	1/1	0.88	0.16	51,51,51,51	0
56	MG	BA	3328	1/1	0.88	0.15	41,41,41,41	0
56	MG	BA	3335	1/1	0.88	0.19	51,51,51,51	0
56	MG	CA	3034	1/1	0.88	0.26	66,66,66,66	0
56	MG	CA	3171	1/1	0.88	0.16	61,61,61,61	0
56	MG	BA	3172	1/1	0.88	0.13	54,54,54,54	0
56	MG	BA	3669	1/1	0.88	0.12	61,61,61,61	0
56	MG	CN	502	1/1	0.88	0.18	70,70,70,70	0
56	MG	AA	3100	1/1	0.88	0.18	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3675	1/1	0.88	0.28	68,68,68,68	0
56	MG	AA	3215	1/1	0.88	0.33	77,77,77,77	0
56	MG	DA	3008	1/1	0.88	0.12	56,56,56,56	0
56	MG	BA	3039	1/1	0.88	0.15	44,44,44,44	0
56	MG	DA	3039	1/1	0.88	0.25	46,46,46,46	0
56	MG	DA	3040	1/1	0.88	0.15	45,45,45,45	0
56	MG	DA	3055	1/1	0.88	0.20	55,55,55,55	0
56	MG	DA	3057	1/1	0.88	0.17	57,57,57,57	0
56	MG	BA	3373	1/1	0.88	0.07	48,48,48,48	0
56	MG	BA	3429	1/1	0.88	0.20	55,55,55,55	0
56	MG	AA	3102	1/1	0.88	0.20	68,68,68,68	0
56	MG	BA	3064	1/1	0.88	0.10	49,49,49,49	0
56	MG	CA	3064	1/1	0.88	0.11	74,74,74,74	0
56	MG	AA	3218	1/1	0.88	0.14	73,73,73,73	0
56	MG	DA	3532	1/1	0.88	0.14	60,60,60,60	0
56	MG	BA	3204	1/1	0.88	0.12	48,48,48,48	0
56	MG	DA	3536	1/1	0.88	0.09	57,57,57,57	0
56	MG	BA	3709	1/1	0.88	0.14	77,77,77,77	0
56	MG	CA	3071	1/1	0.88	0.25	64,64,64,64	0
56	MG	BA	3209	1/1	0.88	0.22	39,39,39,39	0
56	MG	BA	3499	1/1	0.88	0.22	50,50,50,50	0
56	MG	AA	3070	1/1	0.88	0.14	68,68,68,68	0
56	MG	CA	3086	1/1	0.88	0.19	70,70,70,70	0
56	MG	BA	3717	1/1	0.88	0.13	51,51,51,51	0
56	MG	DA	3112	1/1	0.88	0.21	49,49,49,49	0
56	MG	BA	3514	1/1	0.88	0.13	49,49,49,49	0
56	MG	BA	3213	1/1	0.88	0.14	63,63,63,63	0
56	MG	BA	3070	1/1	0.88	0.10	46,46,46,46	0
56	MG	CA	3111	1/1	0.88	0.16	69,69,69,69	0
56	MG	CA	3112	1/1	0.88	0.20	69,69,69,69	0
56	MG	AA	3176	1/1	0.88	0.16	60,60,60,60	0
56	MG	DA	3134	1/1	0.88	0.13	37,37,37,37	0
56	MG	BA	3238	1/1	0.88	0.15	48,48,48,48	0
56	MG	BA	3240	1/1	0.88	0.24	54,54,54,54	0
56	MG	BA	3571	1/1	0.88	0.11	48,48,48,48	0
56	MG	CA	3121	1/1	0.88	0.27	59,59,59,59	0
56	MG	BD	304	1/1	0.88	0.17	41,41,41,41	0
56	MG	DA	3170	1/1	0.88	0.09	45,45,45,45	0
56	MG	CA	3124	1/1	0.88	0.12	64,64,64,64	0
56	MG	AA	3071	1/1	0.88	0.23	60,60,60,60	0
56	MG	AA	3027	1/1	0.88	0.11	67,67,67,67	0
56	MG	BG	3003	1/1	0.88	0.14	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BN	3002	1/1	0.88	0.11	52,52,52,52	0
56	MG	DA	3230	1/1	0.88	0.19	61,61,61,61	0
56	MG	DA	3240	1/1	0.88	0.23	58,58,58,58	0
56	MG	BQ	3002	1/1	0.88	0.09	51,51,51,51	0
56	MG	BA	3107	1/1	0.88	0.23	60,60,60,60	0
56	MG	AX	103	1/1	0.88	0.06	57,57,57,57	0
56	MG	BA	3122	1/1	0.88	0.10	68,68,68,68	0
56	MG	DA	3255	1/1	0.88	0.17	46,46,46,46	0
56	MG	CA	3003	1/1	0.88	0.13	69,69,69,69	0
56	MG	AA	3065	1/1	0.88	0.25	50,50,50,50	0
56	MG	AA	3086	1/1	0.88	0.12	65,65,65,65	0
56	MG	CA	3008	1/1	0.88	0.35	59,59,59,59	0
56	MG	DQ	3003	1/1	0.88	0.18	58,58,58,58	0
56	MG	BA	3135	1/1	0.88	0.22	57,57,57,57	0
56	MG	CA	3021	1/1	0.88	0.16	54,54,54,54	0
56	MG	CA	3022	1/1	0.88	0.10	67,67,67,67	0
56	MG	AA	3033	1/1	0.88	0.23	68,68,68,68	0
56	MG	BA	3638	1/1	0.88	0.11	73,73,73,73	0
56	MG	DA	3336	1/1	0.88	0.12	36,36,36,36	0
56	MG	BA	3317	1/1	0.89	0.16	40,40,40,40	0
56	MG	CA	3042	1/1	0.89	0.27	69,69,69,69	0
56	MG	DA	3119	1/1	0.89	0.10	44,44,44,44	0
56	MG	DA	3121	1/1	0.89	0.10	46,46,46,46	0
56	MG	CA	3047	1/1	0.89	0.14	56,56,56,56	0
56	MG	DA	3465	1/1	0.89	0.08	41,41,41,41	0
56	MG	AA	3003	1/1	0.89	0.13	70,70,70,70	0
56	MG	BA	3604	1/1	0.89	0.20	64,64,64,64	0
56	MG	AA	3203	1/1	0.89	0.12	76,76,76,76	0
56	MG	BB	3003	1/1	0.89	0.14	40,40,40,40	0
56	MG	BA	3208	1/1	0.89	0.18	50,50,50,50	0
56	MG	BA	3621	1/1	0.89	0.11	57,57,57,57	0
56	MG	AA	3128	1/1	0.89	0.22	64,64,64,64	0
56	MG	DA	3524	1/1	0.89	0.09	51,51,51,51	0
56	MG	DA	3529	1/1	0.89	0.22	72,72,72,72	0
56	MG	DA	3157	1/1	0.89	0.29	56,56,56,56	0
56	MG	BA	3633	1/1	0.89	0.20	54,54,54,54	0
56	MG	BA	3021	1/1	0.89	0.15	62,62,62,62	0
56	MG	AA	3004	1/1	0.89	0.17	50,50,50,50	0
56	MG	BD	309	1/1	0.89	0.18	43,43,43,43	0
56	MG	BD	311	1/1	0.89	0.28	53,53,53,53	0
56	MG	CA	3072	1/1	0.89	0.19	57,57,57,57	0
56	MG	BF	303	1/1	0.89	0.18	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3222	1/1	0.89	0.08	45,45,45,45	0
56	MG	BA	3637	1/1	0.89	0.60	52,52,52,52	0
56	MG	AA	3085	1/1	0.89	0.23	57,57,57,57	0
56	MG	DA	3235	1/1	0.89	0.17	46,46,46,46	0
56	MG	AA	3013	1/1	0.89	0.07	75,75,75,75	0
56	MG	BA	3230	1/1	0.89	0.30	70,70,70,70	0
56	MG	BA	3447	1/1	0.89	0.09	76,76,76,76	0
56	MG	DA	3587	1/1	0.89	0.16	57,57,57,57	0
56	MG	CA	3107	1/1	0.89	0.23	71,71,71,71	0
56	MG	DA	3022	1/1	0.89	0.13	41,41,41,41	0
56	MG	DA	3595	1/1	0.89	0.11	53,53,53,53	0
56	MG	DA	3029	1/1	0.89	0.17	62,62,62,62	0
56	MG	DA	3598	1/1	0.89	0.07	45,45,45,45	0
56	MG	DA	3256	1/1	0.89	0.13	41,41,41,41	0
56	MG	BA	3460	1/1	0.89	0.17	66,66,66,66	0
56	MG	AA	3056	1/1	0.89	0.24	61,61,61,61	0
56	MG	DA	3282	1/1	0.89	0.14	58,58,58,58	0
56	MG	AA	3037	1/1	0.89	0.16	53,53,53,53	0
56	MG	DA	3043	1/1	0.89	0.27	56,56,56,56	0
56	MG	BA	3149	1/1	0.89	0.13	58,58,58,58	0
56	MG	AA	3120	1/1	0.89	0.22	53,53,53,53	0
56	MG	BA	3158	1/1	0.89	0.32	43,43,43,43	0
56	MG	BA	3681	1/1	0.89	0.24	54,54,54,54	0
56	MG	DA	3326	1/1	0.89	0.16	61,61,61,61	0
56	MG	CA	3015	1/1	0.89	0.14	53,53,53,53	0
56	MG	DA	3069	1/1	0.89	0.17	49,49,49,49	0
56	MG	BA	3164	1/1	0.89	0.17	57,57,57,57	0
56	MG	DA	3637	1/1	0.89	0.17	59,59,59,59	0
56	MG	AA	3140	1/1	0.89	0.10	65,65,65,65	0
56	MG	DA	3351	1/1	0.89	0.12	58,58,58,58	0
56	MG	DA	3078	1/1	0.89	0.15	49,49,49,49	0
56	MG	DA	3646	1/1	0.89	0.08	42,42,42,42	0
56	MG	BA	3520	1/1	0.89	0.12	69,69,69,69	0
56	MG	AM	3002	1/1	0.89	0.25	60,60,60,60	0
56	MG	AA	3019	1/1	0.89	0.17	64,64,64,64	0
56	MG	BA	3178	1/1	0.89	0.17	51,51,51,51	0
56	MG	AA	3194	1/1	0.89	0.16	50,50,50,50	0
56	MG	DB	3012	1/1	0.89	0.22	50,50,50,50	0
56	MG	DF	304	1/1	0.89	0.24	39,39,39,39	0
56	MG	AA	3143	1/1	0.89	0.15	67,67,67,67	0
56	MG	DA	3099	1/1	0.89	0.20	39,39,39,39	0
56	MG	BA	3299	1/1	0.89	0.24	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3300	1/1	0.89	0.18	48,48,48,48	0
56	MG	DA	3425	1/1	0.89	0.17	51,51,51,51	0
56	MG	D8	5001	1/1	0.89	0.21	53,53,53,53	0
56	MG	BA	3583	1/1	0.89	0.20	57,57,57,57	0
56	MG	BA	3094	1/1	0.89	0.19	62,62,62,62	0
56	MG	DA	3445	1/1	0.89	0.33	60,60,60,60	0
60	K	DA	3234	1/1	0.89	0.21	102,102,102,102	0
56	MG	BQ	3004	1/1	0.90	0.10	41,41,41,41	0
56	MG	DA	3079	1/1	0.90	0.09	44,44,44,44	0
56	MG	BR	203	1/1	0.90	0.14	48,48,48,48	0
56	MG	BV	3002	1/1	0.90	0.28	42,42,42,42	0
56	MG	DA	3087	1/1	0.90	0.15	43,43,43,43	0
56	MG	DA	3089	1/1	0.90	0.07	51,51,51,51	0
56	MG	DA	3431	1/1	0.90	0.15	56,56,56,56	0
56	MG	DA	3435	1/1	0.90	0.11	56,56,56,56	0
56	MG	CA	3113	1/1	0.90	0.23	84,84,84,84	0
56	MG	DA	3437	1/1	0.90	0.18	46,46,46,46	0
56	MG	BA	3477	1/1	0.90	0.17	52,52,52,52	0
56	MG	DA	3444	1/1	0.90	0.17	43,43,43,43	0
56	MG	BA	3663	1/1	0.90	0.23	73,73,73,73	0
56	MG	DA	3447	1/1	0.90	0.12	56,56,56,56	0
56	MG	B2	101	1/1	0.90	0.09	34,34,34,34	0
56	MG	DA	3452	1/1	0.90	0.23	64,64,64,64	0
56	MG	BA	3666	1/1	0.90	0.31	54,54,54,54	0
56	MG	DA	3458	1/1	0.90	0.11	47,47,47,47	0
56	MG	BA	3485	1/1	0.90	0.11	67,67,67,67	0
56	MG	DA	3106	1/1	0.90	0.29	45,45,45,45	0
56	MG	AX	106	1/1	0.90	0.10	64,64,64,64	0
56	MG	BA	3672	1/1	0.90	0.15	63,63,63,63	0
56	MG	DA	3110	1/1	0.90	0.13	46,46,46,46	0
56	MG	DA	3475	1/1	0.90	0.08	35,35,35,35	0
56	MG	DA	3477	1/1	0.90	0.28	35,35,35,35	0
56	MG	AA	3005	1/1	0.90	0.34	66,66,66,66	0
56	MG	DA	3495	1/1	0.90	0.08	53,53,53,53	0
56	MG	CA	3126	1/1	0.90	0.11	56,56,56,56	0
56	MG	DA	3498	1/1	0.90	0.15	75,75,75,75	0
56	MG	BA	3512	1/1	0.90	0.12	42,42,42,42	0
56	MG	DA	3116	1/1	0.90	0.12	43,43,43,43	0
56	MG	BA	3006	1/1	0.90	0.10	46,46,46,46	0
56	MG	BA	3284	1/1	0.90	0.45	76,76,76,76	0
56	MG	DA	3523	1/1	0.90	0.08	47,47,47,47	0
56	MG	BA	3007	1/1	0.90	0.13	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3528	1/1	0.90	0.10	33,33,33,33	0
56	MG	AA	3099	1/1	0.90	0.21	49,49,49,49	0
56	MG	BA	3696	1/1	0.90	0.13	36,36,36,36	0
56	MG	BA	3549	1/1	0.90	0.24	49,49,49,49	0
56	MG	BA	3561	1/1	0.90	0.15	39,39,39,39	0
56	MG	DA	3135	1/1	0.90	0.13	58,58,58,58	0
56	MG	AA	3182	1/1	0.90	0.09	48,48,48,48	0
56	MG	BA	3111	1/1	0.90	0.17	43,43,43,43	0
56	MG	BA	3187	1/1	0.90	0.10	53,53,53,53	0
56	MG	CA	3149	1/1	0.90	0.09	81,81,81,81	0
56	MG	BA	3196	1/1	0.90	0.17	45,45,45,45	0
56	MG	DA	3166	1/1	0.90	0.06	37,37,37,37	0
56	MG	CA	3037	1/1	0.90	0.13	45,45,45,45	0
56	MG	BA	3118	1/1	0.90	0.22	53,53,53,53	0
56	MG	AA	3009	1/1	0.90	0.27	71,71,71,71	0
56	MG	DA	3180	1/1	0.90	0.24	47,47,47,47	0
56	MG	BA	3714	1/1	0.90	0.12	72,72,72,72	0
56	MG	DA	3196	1/1	0.90	0.17	54,54,54,54	0
56	MG	DA	3200	1/1	0.90	0.22	48,48,48,48	0
56	MG	DA	3201	1/1	0.90	0.09	43,43,43,43	0
56	MG	DA	3594	1/1	0.90	0.13	63,63,63,63	0
56	MG	BA	3591	1/1	0.90	0.12	38,38,38,38	0
56	MG	CA	3043	1/1	0.90	0.14	62,62,62,62	0
56	MG	BA	3324	1/1	0.90	0.19	54,54,54,54	0
56	MG	BA	3722	1/1	0.90	0.09	49,49,49,49	0
56	MG	AA	3001	1/1	0.90	0.18	74,74,74,74	0
56	MG	AA	3150	1/1	0.90	0.27	67,67,67,67	0
56	MG	DA	3236	1/1	0.90	0.08	38,38,38,38	0
56	MG	BA	3131	1/1	0.90	0.08	31,31,31,31	0
56	MG	BA	3610	1/1	0.90	0.61	49,49,49,49	0
56	MG	BA	3038	1/1	0.90	0.19	51,51,51,51	0
56	MG	BB	3006	1/1	0.90	0.20	34,34,34,34	0
56	MG	CA	3063	1/1	0.90	0.08	57,57,57,57	0
56	MG	BA	3214	1/1	0.90	0.17	37,37,37,37	0
56	MG	AA	3095	1/1	0.90	0.23	54,54,54,54	0
56	MG	DA	3003	1/1	0.90	0.07	43,43,43,43	0
56	MG	DA	3278	1/1	0.90	0.08	39,39,39,39	0
56	MG	BA	3043	1/1	0.90	0.20	33,33,33,33	0
56	MG	CA	3069	1/1	0.90	0.22	63,63,63,63	0
56	MG	DA	3015	1/1	0.90	0.18	54,54,54,54	0
56	MG	BA	3044	1/1	0.90	0.19	32,32,32,32	0
56	MG	AA	3018	1/1	0.90	0.19	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	AA	3168	1/1	0.90	0.16	80,80,80,80	0
56	MG	DA	3655	1/1	0.90	0.18	62,62,62,62	0
56	MG	DA	3036	1/1	0.90	0.11	35,35,35,35	0
56	MG	DA	3318	1/1	0.90	0.13	47,47,47,47	0
56	MG	AA	3139	1/1	0.90	0.17	58,58,58,58	0
56	MG	BA	3163	1/1	0.90	0.13	50,50,50,50	0
56	MG	CA	3075	1/1	0.90	0.26	76,76,76,76	0
56	MG	BA	3255	1/1	0.90	0.18	53,53,53,53	0
56	MG	DE	303	1/1	0.90	0.14	36,36,36,36	0
56	MG	AA	3113	1/1	0.90	0.16	56,56,56,56	0
56	MG	BG	3004	1/1	0.90	0.14	53,53,53,53	0
56	MG	DA	3061	1/1	0.90	0.20	47,47,47,47	0
56	MG	DA	3353	1/1	0.90	0.16	54,54,54,54	0
56	MG	DV	202	1/1	0.90	0.19	45,45,45,45	0
56	MG	BA	3470	1/1	0.90	0.11	44,44,44,44	0
56	MG	CA	3106	1/1	0.90	0.22	72,72,72,72	0
56	MG	DA	3363	1/1	0.90	0.16	56,56,56,56	0
56	MG	BN	3005	1/1	0.90	0.33	63,63,63,63	0
56	MG	DA	3373	1/1	0.90	0.14	52,52,52,52	0
56	MG	CA	3108	1/1	0.90	0.11	45,45,45,45	0
56	MG	BA	3261	1/1	0.90	0.25	45,45,45,45	0
56	MG	BA	3263	1/1	0.91	0.33	35,35,35,35	0
56	MG	BA	3144	1/1	0.91	0.10	52,52,52,52	0
56	MG	AA	3026	1/1	0.91	0.15	52,52,52,52	0
56	MG	BU	202	1/1	0.91	0.47	41,41,41,41	0
56	MG	BA	3279	1/1	0.91	0.23	60,60,60,60	0
56	MG	BA	3600	1/1	0.91	0.12	54,54,54,54	0
56	MG	DA	3299	1/1	0.91	0.08	35,35,35,35	0
56	MG	BA	3150	1/1	0.91	0.18	42,42,42,42	0
56	MG	BZ	3001	1/1	0.91	0.11	47,47,47,47	0
56	MG	B1	3001	1/1	0.91	0.45	63,63,63,63	0
56	MG	AA	3084	1/1	0.91	0.21	71,71,71,71	0
56	MG	BA	3047	1/1	0.91	0.21	30,30,30,30	0
56	MG	DA	3331	1/1	0.91	0.11	27,27,27,27	0
56	MG	CA	3163	1/1	0.91	0.08	60,60,60,60	0
56	MG	B7	104	1/1	0.91	0.17	55,55,55,55	0
56	MG	B8	5001	1/1	0.91	0.10	62,62,62,62	0
56	MG	CA	3169	1/1	0.91	0.16	52,52,52,52	0
56	MG	BA	3612	1/1	0.91	0.13	41,41,41,41	0
56	MG	BA	3614	1/1	0.91	0.10	48,48,48,48	0
56	MG	AA	3075	1/1	0.91	0.11	50,50,50,50	0
56	MG	AA	3096	1/1	0.91	0.21	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3296	1/1	0.91	0.23	69,69,69,69	0
56	MG	BA	3624	1/1	0.91	0.10	73,73,73,73	0
56	MG	CA	3018	1/1	0.91	0.07	55,55,55,55	0
56	MG	CA	3019	1/1	0.91	0.09	62,62,62,62	0
56	MG	BA	3166	1/1	0.91	0.10	41,41,41,41	0
56	MG	DA	3012	1/1	0.91	0.18	52,52,52,52	0
56	MG	BA	3627	1/1	0.91	0.22	50,50,50,50	0
56	MG	DA	3018	1/1	0.91	0.17	41,41,41,41	0
56	MG	CA	3024	1/1	0.91	0.26	57,57,57,57	0
56	MG	DA	3023	1/1	0.91	0.34	64,64,64,64	0
56	MG	BA	3631	1/1	0.91	0.11	41,41,41,41	0
56	MG	DA	3031	1/1	0.91	0.15	60,60,60,60	0
56	MG	DA	3432	1/1	0.91	0.17	37,37,37,37	0
56	MG	BA	3632	1/1	0.91	0.11	55,55,55,55	0
56	MG	AA	3038	1/1	0.91	0.38	64,64,64,64	0
56	MG	AA	3187	1/1	0.91	0.08	72,72,72,72	0
56	MG	BA	3309	1/1	0.91	0.17	43,43,43,43	0
56	MG	CA	3031	1/1	0.91	0.32	55,55,55,55	0
56	MG	BA	3310	1/1	0.91	0.14	59,59,59,59	0
56	MG	AX	102	1/1	0.91	0.14	66,66,66,66	0
56	MG	BA	3318	1/1	0.91	0.11	30,30,30,30	0
56	MG	DA	3449	1/1	0.91	0.25	46,46,46,46	0
56	MG	CA	3036	1/1	0.91	0.11	56,56,56,56	0
56	MG	DA	3455	1/1	0.91	0.14	53,53,53,53	0
56	MG	BA	3643	1/1	0.91	0.10	59,59,59,59	0
56	MG	DA	3064	1/1	0.91	0.09	55,55,55,55	0
56	MG	AA	3188	1/1	0.91	0.18	52,52,52,52	0
56	MG	DA	3068	1/1	0.91	0.12	52,52,52,52	0
56	MG	BA	3647	1/1	0.91	0.08	40,40,40,40	0
56	MG	BA	3072	1/1	0.91	0.25	45,45,45,45	0
56	MG	BA	3331	1/1	0.91	0.11	61,61,61,61	0
56	MG	BA	3654	1/1	0.91	0.16	49,49,49,49	0
56	MG	CA	3044	1/1	0.91	0.14	52,52,52,52	0
56	MG	DA	3483	1/1	0.91	0.13	55,55,55,55	0
56	MG	DA	3485	1/1	0.91	0.08	44,44,44,44	0
56	MG	DA	3081	1/1	0.91	0.20	56,56,56,56	0
56	MG	BA	3656	1/1	0.91	0.12	70,70,70,70	0
56	MG	BA	3181	1/1	0.91	0.09	37,37,37,37	0
56	MG	CA	3049	1/1	0.91	0.18	51,51,51,51	0
56	MG	BA	3082	1/1	0.91	0.20	54,54,54,54	0
56	MG	DA	3090	1/1	0.91	0.20	59,59,59,59	0
56	MG	DA	3092	1/1	0.91	0.21	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3513	1/1	0.91	0.12	58,58,58,58	0
56	MG	BA	3342	1/1	0.91	0.18	46,46,46,46	0
56	MG	DA	3521	1/1	0.91	0.11	46,46,46,46	0
56	MG	BA	3185	1/1	0.91	0.16	40,40,40,40	0
56	MG	BA	3083	1/1	0.91	0.14	33,33,33,33	0
56	MG	DA	3525	1/1	0.91	0.11	56,56,56,56	0
56	MG	DA	3097	1/1	0.91	0.14	58,58,58,58	0
56	MG	CA	3058	1/1	0.91	0.08	36,36,36,36	0
56	MG	BA	3087	1/1	0.91	0.20	48,48,48,48	0
56	MG	DA	3100	1/1	0.91	0.14	55,55,55,55	0
56	MG	BA	3673	1/1	0.91	0.17	60,60,60,60	0
56	MG	BA	3371	1/1	0.91	0.13	38,38,38,38	0
56	MG	BA	3191	1/1	0.91	0.09	56,56,56,56	0
56	MG	BA	3676	1/1	0.91	0.08	63,63,63,63	0
56	MG	DA	3542	1/1	0.91	0.10	44,44,44,44	0
56	MG	DA	3543	1/1	0.91	0.11	52,52,52,52	0
56	MG	DA	3547	1/1	0.91	0.10	47,47,47,47	0
56	MG	BA	3376	1/1	0.91	0.21	35,35,35,35	0
56	MG	DA	3111	1/1	0.91	0.20	67,67,67,67	0
56	MG	BA	3394	1/1	0.91	0.20	45,45,45,45	0
56	MG	DA	3559	1/1	0.91	0.12	47,47,47,47	0
56	MG	BA	3395	1/1	0.91	0.22	56,56,56,56	0
56	MG	BA	3405	1/1	0.91	0.10	57,57,57,57	0
56	MG	BA	3195	1/1	0.91	0.16	37,37,37,37	0
56	MG	BA	3697	1/1	0.91	0.13	63,63,63,63	0
56	MG	DA	3569	1/1	0.91	0.07	54,54,54,54	0
56	MG	DA	3571	1/1	0.91	0.17	57,57,57,57	0
56	MG	AA	3118	1/1	0.91	0.27	39,39,39,39	0
56	MG	AA	3191	1/1	0.91	0.10	56,56,56,56	0
56	MG	BA	3455	1/1	0.91	0.17	47,47,47,47	0
56	MG	BA	3099	1/1	0.91	0.32	55,55,55,55	0
56	MG	DA	3128	1/1	0.91	0.16	54,54,54,54	0
56	MG	AA	3077	1/1	0.91	0.30	67,67,67,67	0
56	MG	CA	3099	1/1	0.91	0.21	64,64,64,64	0
56	MG	BA	3466	1/1	0.91	0.09	53,53,53,53	0
56	MG	CA	3104	1/1	0.91	0.16	60,60,60,60	0
56	MG	DA	3600	1/1	0.91	0.14	73,73,73,73	0
56	MG	DA	3152	1/1	0.91	0.15	43,43,43,43	0
56	MG	BA	3105	1/1	0.91	0.28	54,54,54,54	0
56	MG	AA	3124	1/1	0.91	0.15	61,61,61,61	0
56	MG	AA	3197	1/1	0.91	0.16	64,64,64,64	0
56	MG	DA	3161	1/1	0.91	0.16	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3611	1/1	0.91	0.14	51,51,51,51	0
56	MG	BA	3117	1/1	0.91	0.14	37,37,37,37	0
56	MG	AA	3048	1/1	0.91	0.11	52,52,52,52	0
56	MG	BA	3718	1/1	0.91	0.13	52,52,52,52	0
56	MG	BA	3478	1/1	0.91	0.20	36,36,36,36	0
56	MG	BA	3732	1/1	0.91	0.18	56,56,56,56	0
56	MG	DA	3172	1/1	0.91	0.20	46,46,46,46	0
56	MG	DA	3175	1/1	0.91	0.20	52,52,52,52	0
56	MG	AA	3036	1/1	0.91	0.14	69,69,69,69	0
56	MG	AA	3204	1/1	0.91	0.13	70,70,70,70	0
56	MG	DA	3636	1/1	0.91	0.18	64,64,64,64	0
56	MG	DA	3190	1/1	0.91	0.08	54,54,54,54	0
56	MG	DA	3194	1/1	0.91	0.34	65,65,65,65	0
56	MG	BA	3502	1/1	0.91	0.17	59,59,59,59	0
56	MG	DA	3198	1/1	0.91	0.18	34,34,34,34	0
56	MG	BA	3505	1/1	0.91	0.10	45,45,45,45	0
56	MG	BB	3004	1/1	0.91	0.22	57,57,57,57	0
56	MG	BA	3231	1/1	0.91	0.18	50,50,50,50	0
56	MG	DB	3002	1/1	0.91	0.23	72,72,72,72	0
56	MG	AA	3055	1/1	0.91	0.23	56,56,56,56	0
56	MG	DB	3004	1/1	0.91	0.14	56,56,56,56	0
56	MG	BA	3126	1/1	0.91	0.17	47,47,47,47	0
56	MG	BA	3242	1/1	0.91	0.23	45,45,45,45	0
56	MG	BA	3246	1/1	0.91	0.21	38,38,38,38	0
56	MG	BA	3535	1/1	0.91	0.16	42,42,42,42	0
56	MG	BA	3026	1/1	0.91	0.06	36,36,36,36	0
56	MG	AA	3073	1/1	0.91	0.11	63,63,63,63	0
56	MG	BA	3552	1/1	0.91	0.18	30,30,30,30	0
56	MG	DN	5001	1/1	0.91	0.07	71,71,71,71	0
56	MG	DQ	3002	1/1	0.91	0.16	51,51,51,51	0
56	MG	BA	3251	1/1	0.91	0.06	45,45,45,45	0
56	MG	BA	3252	1/1	0.91	0.28	65,65,65,65	0
56	MG	DA	3249	1/1	0.91	0.10	25,25,25,25	0
56	MG	AA	3107	1/1	0.91	0.21	44,44,44,44	0
56	MG	DA	3254	1/1	0.91	0.12	52,52,52,52	0
56	MG	AA	3216	1/1	0.91	0.20	60,60,60,60	0
56	MG	BA	3139	1/1	0.91	0.22	50,50,50,50	0
56	MG	AA	3108	1/1	0.91	0.15	72,72,72,72	0
56	MG	DA	3268	1/1	0.91	0.12	42,42,42,42	0
56	MG	DA	3273	1/1	0.91	0.13	32,32,32,32	0
56	MG	BA	3273	1/1	0.92	0.29	35,35,35,35	0
56	MG	BU	208	1/1	0.92	0.13	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	AA	3154	1/1	0.92	0.12	60,60,60,60	0
56	MG	BA	3280	1/1	0.92	0.26	44,44,44,44	0
56	MG	BA	3649	1/1	0.92	0.20	43,43,43,43	0
56	MG	BA	3061	1/1	0.92	0.21	44,44,44,44	0
56	MG	BA	3476	1/1	0.92	0.08	47,47,47,47	0
56	MG	BA	3004	1/1	0.92	0.18	45,45,45,45	0
56	MG	B3	3403	1/1	0.92	0.13	37,37,37,37	0
56	MG	BA	3657	1/1	0.92	0.11	29,29,29,29	0
56	MG	BA	3658	1/1	0.92	0.16	62,62,62,62	0
56	MG	BA	3291	1/1	0.92	0.16	44,44,44,44	0
56	MG	DA	3454	1/1	0.92	0.07	52,52,52,52	0
56	MG	CA	3131	1/1	0.92	0.07	48,48,48,48	0
56	MG	BA	3190	1/1	0.92	0.08	42,42,42,42	0
56	MG	DA	3457	1/1	0.92	0.08	44,44,44,44	0
56	MG	BA	3487	1/1	0.92	0.18	47,47,47,47	0
56	MG	AA	3135	1/1	0.92	0.17	49,49,49,49	0
56	MG	DA	3461	1/1	0.92	0.09	40,40,40,40	0
56	MG	AA	3083	1/1	0.92	0.15	56,56,56,56	0
56	MG	BA	3671	1/1	0.92	0.12	44,44,44,44	0
56	MG	DA	3126	1/1	0.92	0.14	61,61,61,61	0
56	MG	CA	3014	1/1	0.92	0.22	56,56,56,56	0
56	MG	BA	3295	1/1	0.92	0.07	30,30,30,30	0
56	MG	CA	3016	1/1	0.92	0.13	72,72,72,72	0
56	MG	DA	3478	1/1	0.92	0.06	58,58,58,58	0
56	MG	BA	3012	1/1	0.92	0.07	34,34,34,34	0
56	MG	DA	3484	1/1	0.92	0.10	47,47,47,47	0
56	MG	BA	3202	1/1	0.92	0.24	29,29,29,29	0
56	MG	DA	3487	1/1	0.92	0.06	44,44,44,44	0
56	MG	DA	3146	1/1	0.92	0.20	34,34,34,34	0
56	MG	DA	3149	1/1	0.92	0.08	47,47,47,47	0
56	MG	AA	3116	1/1	0.92	0.32	62,62,62,62	0
56	MG	AA	3111	1/1	0.92	0.08	70,70,70,70	0
56	MG	DA	3154	1/1	0.92	0.30	45,45,45,45	0
56	MG	DA	3502	1/1	0.92	0.16	48,48,48,48	0
56	MG	BA	3524	1/1	0.92	0.09	50,50,50,50	0
56	MG	CA	3155	1/1	0.92	0.07	71,71,71,71	0
56	MG	BA	3075	1/1	0.92	0.19	36,36,36,36	0
56	MG	BA	3081	1/1	0.92	0.21	44,44,44,44	0
56	MG	DA	3515	1/1	0.92	0.12	57,57,57,57	0
56	MG	DA	3163	1/1	0.92	0.14	52,52,52,52	0
56	MG	BA	3311	1/1	0.92	0.27	52,52,52,52	0
56	MG	BA	3540	1/1	0.92	0.18	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3316	1/1	0.92	0.14	51,51,51,51	0
56	MG	DA	3527	1/1	0.92	0.15	58,58,58,58	0
56	MG	AA	3173	1/1	0.92	0.06	37,37,37,37	0
56	MG	AA	3174	1/1	0.92	0.17	49,49,49,49	0
56	MG	DA	3530	1/1	0.92	0.12	57,57,57,57	0
56	MG	BA	3145	1/1	0.92	0.14	40,40,40,40	0
56	MG	AA	3198	1/1	0.92	0.08	73,73,73,73	0
56	MG	AA	3046	1/1	0.92	0.19	60,60,60,60	0
56	MG	BA	3155	1/1	0.92	0.07	56,56,56,56	0
56	MG	AA	3069	1/1	0.92	0.11	77,77,77,77	0
56	MG	DA	3195	1/1	0.92	0.13	51,51,51,51	0
56	MG	BA	3340	1/1	0.92	0.17	57,57,57,57	0
56	MG	BA	3235	1/1	0.92	0.25	44,44,44,44	0
56	MG	BA	3593	1/1	0.92	0.08	51,51,51,51	0
56	MG	CT	3001	1/1	0.92	0.19	57,57,57,57	0
56	MG	DA	3551	1/1	0.92	0.07	43,43,43,43	0
56	MG	DA	3203	1/1	0.92	0.06	48,48,48,48	0
56	MG	DA	3205	1/1	0.92	0.15	41,41,41,41	0
56	MG	DA	3558	1/1	0.92	0.15	77,77,77,77	0
56	MG	BA	3343	1/1	0.92	0.07	37,37,37,37	0
56	MG	BA	3356	1/1	0.92	0.09	33,33,33,33	0
56	MG	BA	3719	1/1	0.92	0.08	63,63,63,63	0
56	MG	DA	3223	1/1	0.92	0.09	41,41,41,41	0
56	MG	BA	3721	1/1	0.92	0.21	56,56,56,56	0
56	MG	DA	3225	1/1	0.92	0.17	64,64,64,64	0
56	MG	DA	3570	1/1	0.92	0.18	67,67,67,67	0
56	MG	BA	3599	1/1	0.92	0.09	56,56,56,56	0
56	MG	DA	3231	1/1	0.92	0.09	45,45,45,45	0
56	MG	BA	3098	1/1	0.92	0.24	42,42,42,42	0
56	MG	BA	3737	1/1	0.92	0.11	39,39,39,39	0
56	MG	AA	3121	1/1	0.92	0.21	52,52,52,52	0
56	MG	BA	3359	1/1	0.92	0.12	63,63,63,63	0
56	MG	CA	3057	1/1	0.92	0.14	40,40,40,40	0
56	MG	DA	3024	1/1	0.92	0.28	59,59,59,59	0
56	MG	BA	3607	1/1	0.92	0.15	74,74,74,74	0
56	MG	DA	3250	1/1	0.92	0.11	42,42,42,42	0
56	MG	BB	3002	1/1	0.92	0.16	49,49,49,49	0
56	MG	DA	3252	1/1	0.92	0.20	36,36,36,36	0
56	MG	BA	3368	1/1	0.92	0.12	22,22,22,22	0
56	MG	CA	3062	1/1	0.92	0.33	67,67,67,67	0
56	MG	BA	3042	1/1	0.92	0.21	50,50,50,50	0
56	MG	DA	3259	1/1	0.92	0.09	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	AA	3123	1/1	0.92	0.25	38,38,38,38	0
56	MG	DA	3612	1/1	0.92	0.17	46,46,46,46	0
56	MG	DA	3041	1/1	0.92	0.20	54,54,54,54	0
56	MG	DA	3615	1/1	0.92	0.09	57,57,57,57	0
56	MG	DA	3270	1/1	0.92	0.14	55,55,55,55	0
56	MG	BA	3167	1/1	0.92	0.40	50,50,50,50	0
56	MG	DA	3048	1/1	0.92	0.21	29,29,29,29	0
56	MG	DA	3049	1/1	0.92	0.13	56,56,56,56	0
56	MG	DA	3054	1/1	0.92	0.13	34,34,34,34	0
56	MG	DA	3622	1/1	0.92	0.10	40,40,40,40	0
56	MG	DA	3285	1/1	0.92	0.12	41,41,41,41	0
56	MG	AA	3052	1/1	0.92	0.18	58,58,58,58	0
56	MG	BB	3016	1/1	0.92	0.14	24,24,24,24	0
56	MG	DA	3631	1/1	0.92	0.15	49,49,49,49	0
56	MG	BA	3390	1/1	0.92	0.12	40,40,40,40	0
56	MG	BA	3109	1/1	0.92	0.34	62,62,62,62	0
56	MG	BA	3174	1/1	0.92	0.06	52,52,52,52	0
56	MG	BA	3253	1/1	0.92	0.29	63,63,63,63	0
56	MG	DA	3065	1/1	0.92	0.14	40,40,40,40	0
56	MG	BA	3629	1/1	0.92	0.07	51,51,51,51	0
56	MG	BA	3425	1/1	0.92	0.15	42,42,42,42	0
56	MG	CA	3079	1/1	0.92	0.07	37,37,37,37	0
56	MG	DA	3070	1/1	0.92	0.24	51,51,51,51	0
56	MG	DA	3071	1/1	0.92	0.28	46,46,46,46	0
56	MG	BD	312	1/1	0.92	0.33	72,72,72,72	0
56	MG	CA	3084	1/1	0.92	0.18	80,80,80,80	0
56	MG	DA	3075	1/1	0.92	0.16	45,45,45,45	0
56	MG	DA	3077	1/1	0.92	0.12	48,48,48,48	0
56	MG	BA	3046	1/1	0.92	0.13	52,52,52,52	0
56	MG	CA	3090	1/1	0.92	0.10	63,63,63,63	0
56	MG	DE	305	1/1	0.92	0.17	68,68,68,68	0
56	MG	BA	3112	1/1	0.92	0.20	46,46,46,46	0
56	MG	BG	3002	1/1	0.92	0.17	51,51,51,51	0
56	MG	BA	3179	1/1	0.92	0.30	53,53,53,53	0
56	MG	DP	201	1/1	0.92	0.09	52,52,52,52	0
56	MG	DP	202	1/1	0.92	0.19	54,54,54,54	0
56	MG	DA	3380	1/1	0.92	0.07	40,40,40,40	0
56	MG	BA	3453	1/1	0.92	0.20	54,54,54,54	0
56	MG	BA	3114	1/1	0.92	0.25	46,46,46,46	0
56	MG	DU	3001	1/1	0.92	0.19	61,61,61,61	0
56	MG	BA	3116	1/1	0.92	0.23	30,30,30,30	0
56	MG	DW	202	1/1	0.92	0.09	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BP	202	1/1	0.92	0.27	47,47,47,47	0
56	MG	BA	3640	1/1	0.92	0.13	31,31,31,31	0
56	MG	DA	3416	1/1	0.92	0.19	34,34,34,34	0
56	MG	BA	3182	1/1	0.92	0.17	43,43,43,43	0
56	MG	DA	3419	1/1	0.92	0.09	53,53,53,53	0
56	MG	BR	201	1/1	0.92	0.14	44,44,44,44	0
56	MG	AA	3211	1/1	0.92	0.09	58,58,58,58	0
56	MG	BA	3148	1/1	0.93	0.38	49,49,49,49	0
56	MG	BA	3544	1/1	0.93	0.12	35,35,35,35	0
56	MG	DA	3184	1/1	0.93	0.15	54,54,54,54	0
56	MG	DA	3030	1/1	0.93	0.14	49,49,49,49	0
56	MG	AA	3181	1/1	0.93	0.17	46,46,46,46	0
56	MG	DA	3032	1/1	0.93	0.06	36,36,36,36	0
56	MG	DA	3033	1/1	0.93	0.15	41,41,41,41	0
56	MG	BA	3193	1/1	0.93	0.16	53,53,53,53	0
56	MG	BA	3018	1/1	0.93	0.10	54,54,54,54	0
56	MG	BA	3152	1/1	0.93	0.11	52,52,52,52	0
56	MG	DA	3486	1/1	0.93	0.07	52,52,52,52	0
56	MG	BA	3198	1/1	0.93	0.20	29,29,29,29	0
56	MG	CA	3088	1/1	0.93	0.09	49,49,49,49	0
56	MG	BW	3004	1/1	0.93	0.27	46,46,46,46	0
56	MG	DA	3209	1/1	0.93	0.10	44,44,44,44	0
56	MG	BA	3199	1/1	0.93	0.15	31,31,31,31	0
56	MG	DA	3214	1/1	0.93	0.12	48,48,48,48	0
56	MG	BA	3375	1/1	0.93	0.08	44,44,44,44	0
56	MG	DA	3221	1/1	0.93	0.18	56,56,56,56	0
56	MG	DA	3053	1/1	0.93	0.14	47,47,47,47	0
56	MG	DA	3507	1/1	0.93	0.16	53,53,53,53	0
56	MG	DA	3509	1/1	0.93	0.06	57,57,57,57	0
56	MG	B0	101	1/1	0.93	0.13	57,57,57,57	0
56	MG	B0	106	1/1	0.93	0.05	43,43,43,43	0
56	MG	BA	3680	1/1	0.93	0.16	62,62,62,62	0
56	MG	DA	3517	1/1	0.93	0.09	47,47,47,47	0
56	MG	DA	3520	1/1	0.93	0.07	38,38,38,38	0
56	MG	DA	3058	1/1	0.93	0.15	56,56,56,56	0
56	MG	BA	3277	1/1	0.93	0.27	45,45,45,45	0
56	MG	BA	3682	1/1	0.93	0.27	50,50,50,50	0
56	MG	BA	3201	1/1	0.93	0.21	36,36,36,36	0
56	MG	B7	103	1/1	0.93	0.16	46,46,46,46	0
56	MG	BA	3687	1/1	0.93	0.13	59,59,59,59	0
56	MG	BA	3590	1/1	0.93	0.12	23,23,23,23	0
56	MG	B9	502	1/1	0.93	0.15	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3392	1/1	0.93	0.11	53,53,53,53	0
56	MG	BA	3154	1/1	0.93	0.14	55,55,55,55	0
56	MG	BA	3283	1/1	0.93	0.22	61,61,61,61	0
56	MG	BA	3019	1/1	0.93	0.17	42,42,42,42	0
56	MG	AA	3166	1/1	0.93	0.14	55,55,55,55	0
56	MG	CA	3010	1/1	0.93	0.11	34,34,34,34	0
56	MG	DA	3541	1/1	0.93	0.09	55,55,55,55	0
56	MG	CA	3123	1/1	0.93	0.14	75,75,75,75	0
56	MG	AN	101	1/1	0.93	0.07	64,64,64,64	0
56	MG	DA	3544	1/1	0.93	0.32	42,42,42,42	0
56	MG	AA	3007	1/1	0.93	0.08	68,68,68,68	0
56	MG	BA	3435	1/1	0.93	0.11	59,59,59,59	0
56	MG	BA	3605	1/1	0.93	0.08	35,35,35,35	0
56	MG	AA	3185	1/1	0.93	0.19	47,47,47,47	0
56	MG	DA	3555	1/1	0.93	0.11	43,43,43,43	0
56	MG	DA	3276	1/1	0.93	0.07	26,26,26,26	0
56	MG	CA	3130	1/1	0.93	0.11	59,59,59,59	0
56	MG	AA	3169	1/1	0.93	0.08	62,62,62,62	0
56	MG	AA	3101	1/1	0.93	0.20	61,61,61,61	0
56	MG	DA	3284	1/1	0.93	0.12	45,45,45,45	0
56	MG	DA	3091	1/1	0.93	0.41	50,50,50,50	0
56	MG	BA	3217	1/1	0.93	0.10	59,59,59,59	0
56	MG	DA	3288	1/1	0.93	0.10	68,68,68,68	0
56	MG	BA	3297	1/1	0.93	0.12	43,43,43,43	0
56	MG	DA	3094	1/1	0.93	0.16	26,26,26,26	0
56	MG	DA	3575	1/1	0.93	0.16	51,51,51,51	0
56	MG	BA	3618	1/1	0.93	0.18	37,37,37,37	0
56	MG	DA	3302	1/1	0.93	0.12	42,42,42,42	0
56	MG	BA	3120	1/1	0.93	0.19	56,56,56,56	0
56	MG	DA	3310	1/1	0.93	0.17	30,30,30,30	0
56	MG	AA	3043	1/1	0.93	0.28	63,63,63,63	0
56	MG	BA	3622	1/1	0.93	0.18	32,32,32,32	0
56	MG	BA	3468	1/1	0.93	0.19	45,45,45,45	0
56	MG	DA	3325	1/1	0.93	0.16	31,31,31,31	0
56	MG	BA	3734	1/1	0.93	0.15	42,42,42,42	0
56	MG	DA	3328	1/1	0.93	0.20	33,33,33,33	0
56	MG	DA	3601	1/1	0.93	0.10	50,50,50,50	0
56	MG	BA	3735	1/1	0.93	0.08	47,47,47,47	0
56	MG	DA	3104	1/1	0.93	0.12	46,46,46,46	0
56	MG	DA	3604	1/1	0.93	0.06	50,50,50,50	0
56	MG	DA	3105	1/1	0.93	0.11	56,56,56,56	0
56	MG	DA	3338	1/1	0.93	0.14	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3229	1/1	0.93	0.10	50,50,50,50	0
56	MG	CA	3151	1/1	0.93	0.10	80,80,80,80	0
56	MG	CA	3035	1/1	0.93	0.18	49,49,49,49	0
56	MG	BA	3305	1/1	0.93	0.10	48,48,48,48	0
56	MG	AA	3125	1/1	0.93	0.13	56,56,56,56	0
56	MG	AA	3175	1/1	0.93	0.12	70,70,70,70	0
56	MG	BA	3093	1/1	0.93	0.35	52,52,52,52	0
56	MG	BA	3313	1/1	0.93	0.12	56,56,56,56	0
56	MG	DA	3370	1/1	0.93	0.20	40,40,40,40	0
56	MG	BA	3479	1/1	0.93	0.12	44,44,44,44	0
56	MG	DA	3378	1/1	0.93	0.07	38,38,38,38	0
56	MG	DA	3117	1/1	0.93	0.08	46,46,46,46	0
56	MG	DA	3381	1/1	0.93	0.14	68,68,68,68	0
56	MG	DA	3387	1/1	0.93	0.09	50,50,50,50	0
56	MG	DA	3390	1/1	0.93	0.12	58,58,58,58	0
56	MG	BA	3481	1/1	0.93	0.14	41,41,41,41	0
56	MG	AA	3159	1/1	0.93	0.17	57,57,57,57	0
56	MG	DA	3638	1/1	0.93	0.08	53,53,53,53	0
56	MG	BB	3009	1/1	0.93	0.12	49,49,49,49	0
56	MG	DA	3640	1/1	0.93	0.10	53,53,53,53	0
56	MG	DA	3395	1/1	0.93	0.07	40,40,40,40	0
56	MG	DA	3399	1/1	0.93	0.23	39,39,39,39	0
56	MG	DA	3400	1/1	0.93	0.16	42,42,42,42	0
56	MG	DA	3651	1/1	0.93	0.08	48,48,48,48	0
56	MG	AA	3130	1/1	0.93	0.19	55,55,55,55	0
56	MG	DA	3406	1/1	0.93	0.09	48,48,48,48	0
56	MG	DA	3409	1/1	0.93	0.07	54,54,54,54	0
56	MG	AA	3222	1/1	0.93	0.20	64,64,64,64	0
56	MG	BA	3100	1/1	0.93	0.15	42,42,42,42	0
56	MG	BA	3503	1/1	0.93	0.12	56,56,56,56	0
56	MG	DB	3007	1/1	0.93	0.24	45,45,45,45	0
56	MG	BA	3504	1/1	0.93	0.18	54,54,54,54	0
56	MG	DA	3132	1/1	0.93	0.20	47,47,47,47	0
56	MG	BA	3183	1/1	0.93	0.11	40,40,40,40	0
56	MG	DD	303	1/1	0.93	0.54	48,48,48,48	0
56	MG	DE	302	1/1	0.93	0.14	46,46,46,46	0
56	MG	BA	3141	1/1	0.93	0.27	43,43,43,43	0
56	MG	CE	3002	1/1	0.93	0.08	69,69,69,69	0
56	MG	BA	3250	1/1	0.93	0.29	61,61,61,61	0
56	MG	BA	3336	1/1	0.93	0.14	46,46,46,46	0
56	MG	BE	307	1/1	0.93	0.20	51,51,51,51	0
56	MG	BA	3518	1/1	0.93	0.09	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3442	1/1	0.93	0.17	58,58,58,58	0
56	MG	DA	3002	1/1	0.93	0.19	47,47,47,47	0
56	MG	BA	3008	1/1	0.93	0.15	30,30,30,30	0
56	MG	DA	3156	1/1	0.93	0.32	38,38,38,38	0
56	MG	BA	3104	1/1	0.93	0.23	34,34,34,34	0
56	MG	AA	3146	1/1	0.93	0.08	55,55,55,55	0
56	MG	DV	203	1/1	0.93	0.18	41,41,41,41	0
56	MG	BA	3660	1/1	0.93	0.15	58,58,58,58	0
56	MG	DA	3014	1/1	0.93	0.08	38,38,38,38	0
56	MG	DA	3164	1/1	0.93	0.06	40,40,40,40	0
56	MG	BA	3254	1/1	0.93	0.10	40,40,40,40	0
58	ZN	B4	501	1/1	0.93	0.10	152,152,152,152	0
56	MG	BA	3189	1/1	0.93	0.05	39,39,39,39	0
56	MG	DA	3019	1/1	0.93	0.13	32,32,32,32	0
56	MG	BA	3664	1/1	0.93	0.17	63,63,63,63	0
56	MG	BA	3665	1/1	0.93	0.23	39,39,39,39	0
56	MG	BA	3268	1/1	0.94	0.19	29,29,29,29	0
56	MG	BW	3003	1/1	0.94	0.14	39,39,39,39	0
56	MG	DA	3434	1/1	0.94	0.10	51,51,51,51	0
56	MG	CA	3132	1/1	0.94	0.13	66,66,66,66	0
56	MG	CA	3134	1/1	0.94	0.11	92,92,92,92	0
56	MG	BA	3436	1/1	0.94	0.12	35,35,35,35	0
56	MG	DA	3438	1/1	0.94	0.19	50,50,50,50	0
56	MG	BW	3005	1/1	0.94	0.14	38,38,38,38	0
56	MG	BA	3444	1/1	0.94	0.14	29,29,29,29	0
56	MG	BA	3001	1/1	0.94	0.18	52,52,52,52	0
56	MG	DA	3129	1/1	0.94	0.08	45,45,45,45	0
56	MG	BA	3002	1/1	0.94	0.15	38,38,38,38	0
56	MG	B0	104	1/1	0.94	0.11	55,55,55,55	0
56	MG	BA	3274	1/1	0.94	0.21	54,54,54,54	0
56	MG	BA	3458	1/1	0.94	0.14	46,46,46,46	0
56	MG	DA	3137	1/1	0.94	0.27	62,62,62,62	0
56	MG	DA	3138	1/1	0.94	0.27	53,53,53,53	0
56	MG	DA	3140	1/1	0.94	0.26	55,55,55,55	0
56	MG	B1	3002	1/1	0.94	0.06	29,29,29,29	0
56	MG	CA	3148	1/1	0.94	0.12	65,65,65,65	0
56	MG	AA	3153	1/1	0.94	0.14	46,46,46,46	0
56	MG	AA	3011	1/1	0.94	0.34	44,44,44,44	0
56	MG	AA	3210	1/1	0.94	0.08	48,48,48,48	0
56	MG	BA	3138	1/1	0.94	0.23	54,54,54,54	0
56	MG	BA	3074	1/1	0.94	0.06	38,38,38,38	0
56	MG	BA	3286	1/1	0.94	0.18	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3473	1/1	0.94	0.14	50,50,50,50	0
56	MG	BA	3288	1/1	0.94	0.10	45,45,45,45	0
56	MG	AA	3155	1/1	0.94	0.13	54,54,54,54	0
56	MG	AA	3213	1/1	0.94	0.09	74,74,74,74	0
56	MG	DA	3482	1/1	0.94	0.06	45,45,45,45	0
56	MG	CA	3005	1/1	0.94	0.23	37,37,37,37	0
56	MG	AA	3122	1/1	0.94	0.34	40,40,40,40	0
56	MG	BA	3017	1/1	0.94	0.20	38,38,38,38	0
56	MG	DA	3167	1/1	0.94	0.19	46,46,46,46	0
56	MG	BA	3084	1/1	0.94	0.33	47,47,47,47	0
56	MG	BA	3205	1/1	0.94	0.19	38,38,38,38	0
56	MG	DA	3493	1/1	0.94	0.12	38,38,38,38	0
56	MG	BA	3482	1/1	0.94	0.11	59,59,59,59	0
56	MG	CA	3165	1/1	0.94	0.14	47,47,47,47	0
56	MG	DA	3173	1/1	0.94	0.12	50,50,50,50	0
56	MG	DA	3499	1/1	0.94	0.18	44,44,44,44	0
56	MG	CA	3167	1/1	0.94	0.06	68,68,68,68	0
56	MG	DA	3176	1/1	0.94	0.11	52,52,52,52	0
56	MG	DA	3503	1/1	0.94	0.07	41,41,41,41	0
56	MG	DA	3179	1/1	0.94	0.23	36,36,36,36	0
56	MG	BA	3207	1/1	0.94	0.20	44,44,44,44	0
56	MG	AA	3109	1/1	0.94	0.13	59,59,59,59	0
56	MG	DA	3187	1/1	0.94	0.18	52,52,52,52	0
56	MG	DA	3188	1/1	0.94	0.23	52,52,52,52	0
56	MG	BA	3498	1/1	0.94	0.07	81,81,81,81	0
56	MG	BA	3298	1/1	0.94	0.25	45,45,45,45	0
56	MG	DA	3516	1/1	0.94	0.21	54,54,54,54	0
56	MG	AA	3051	1/1	0.94	0.08	56,56,56,56	0
56	MG	DA	3518	1/1	0.94	0.07	40,40,40,40	0
56	MG	BA	3211	1/1	0.94	0.08	43,43,43,43	0
56	MG	AA	3041	1/1	0.94	0.08	41,41,41,41	0
56	MG	AA	3035	1/1	0.94	0.07	59,59,59,59	0
56	MG	CX	102	1/1	0.94	0.07	60,60,60,60	0
56	MG	BA	3677	1/1	0.94	0.13	47,47,47,47	0
56	MG	BA	3507	1/1	0.94	0.09	37,37,37,37	0
56	MG	BA	3509	1/1	0.94	0.13	29,29,29,29	0
56	MG	DA	3206	1/1	0.94	0.24	36,36,36,36	0
56	MG	BA	3307	1/1	0.94	0.08	35,35,35,35	0
56	MG	BA	3685	1/1	0.94	0.20	58,58,58,58	0
56	MG	BA	3097	1/1	0.94	0.17	30,30,30,30	0
56	MG	DA	3216	1/1	0.94	0.10	47,47,47,47	0
56	MG	DA	3535	1/1	0.94	0.08	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3513	1/1	0.94	0.20	51,51,51,51	0
56	MG	DA	3013	1/1	0.94	0.16	38,38,38,38	0
56	MG	BA	3215	1/1	0.94	0.08	32,32,32,32	0
56	MG	AA	3190	1/1	0.94	0.26	61,61,61,61	0
56	MG	DA	3017	1/1	0.94	0.07	51,51,51,51	0
56	MG	BA	3219	1/1	0.94	0.24	36,36,36,36	0
56	MG	DA	3227	1/1	0.94	0.08	40,40,40,40	0
56	MG	BA	3315	1/1	0.94	0.22	43,43,43,43	0
56	MG	BA	3221	1/1	0.94	0.27	55,55,55,55	0
56	MG	BA	3533	1/1	0.94	0.14	30,30,30,30	0
56	MG	CA	3040	1/1	0.94	0.21	47,47,47,47	0
56	MG	DA	3238	1/1	0.94	0.07	37,37,37,37	0
56	MG	DA	3027	1/1	0.94	0.21	49,49,49,49	0
56	MG	BA	3157	1/1	0.94	0.07	52,52,52,52	0
56	MG	AA	3054	1/1	0.94	0.13	46,46,46,46	0
56	MG	DA	3244	1/1	0.94	0.15	23,23,23,23	0
56	MG	DA	3565	1/1	0.94	0.13	48,48,48,48	0
56	MG	BA	3539	1/1	0.94	0.11	23,23,23,23	0
56	MG	DA	3248	1/1	0.94	0.15	30,30,30,30	0
56	MG	BA	3225	1/1	0.94	0.23	42,42,42,42	0
56	MG	CA	3045	1/1	0.94	0.22	60,60,60,60	0
56	MG	DA	3034	1/1	0.94	0.18	40,40,40,40	0
56	MG	BA	3325	1/1	0.94	0.10	39,39,39,39	0
56	MG	BA	3546	1/1	0.94	0.17	46,46,46,46	0
56	MG	DA	3578	1/1	0.94	0.21	68,68,68,68	0
56	MG	DA	3582	1/1	0.94	0.17	44,44,44,44	0
56	MG	DA	3038	1/1	0.94	0.06	37,37,37,37	0
56	MG	BA	3548	1/1	0.94	0.19	40,40,40,40	0
56	MG	BA	3227	1/1	0.94	0.14	67,67,67,67	0
56	MG	CA	3052	1/1	0.94	0.14	47,47,47,47	0
56	MG	BA	3550	1/1	0.94	0.11	32,32,32,32	0
56	MG	DA	3269	1/1	0.94	0.12	47,47,47,47	0
56	MG	DA	3044	1/1	0.94	0.23	45,45,45,45	0
56	MG	DA	3271	1/1	0.94	0.08	45,45,45,45	0
56	MG	DA	3597	1/1	0.94	0.11	66,66,66,66	0
56	MG	BA	3161	1/1	0.94	0.12	50,50,50,50	0
56	MG	BA	3557	1/1	0.94	0.18	35,35,35,35	0
56	MG	AA	3170	1/1	0.94	0.16	83,83,83,83	0
56	MG	BA	3101	1/1	0.94	0.30	47,47,47,47	0
56	MG	BA	3725	1/1	0.94	0.06	29,29,29,29	0
56	MG	DA	3056	1/1	0.94	0.15	37,37,37,37	0
56	MG	BA	3234	1/1	0.94	0.19	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3339	1/1	0.94	0.15	47,47,47,47	0
56	MG	BA	3030	1/1	0.94	0.27	26,26,26,26	0
56	MG	BA	3577	1/1	0.94	0.13	63,63,63,63	0
56	MG	DA	3290	1/1	0.94	0.13	59,59,59,59	0
56	MG	DA	3295	1/1	0.94	0.11	31,31,31,31	0
56	MG	DA	3614	1/1	0.94	0.10	46,46,46,46	0
56	MG	BA	3237	1/1	0.94	0.16	43,43,43,43	0
56	MG	DA	3298	1/1	0.94	0.20	45,45,45,45	0
56	MG	BA	3037	1/1	0.94	0.24	39,39,39,39	0
56	MG	CA	3068	1/1	0.94	0.15	47,47,47,47	0
56	MG	BA	3352	1/1	0.94	0.08	58,58,58,58	0
56	MG	DA	3067	1/1	0.94	0.19	35,35,35,35	0
56	MG	BA	3169	1/1	0.94	0.12	39,39,39,39	0
56	MG	DA	3623	1/1	0.94	0.08	63,63,63,63	0
56	MG	DA	3624	1/1	0.94	0.07	54,54,54,54	0
56	MG	DA	3626	1/1	0.94	0.08	63,63,63,63	0
56	MG	DA	3316	1/1	0.94	0.22	47,47,47,47	0
56	MG	DA	3317	1/1	0.94	0.13	34,34,34,34	0
56	MG	BA	3171	1/1	0.94	0.24	42,42,42,42	0
56	MG	DA	3320	1/1	0.94	0.17	50,50,50,50	0
56	MG	DA	3634	1/1	0.94	0.12	33,33,33,33	0
56	MG	BA	3595	1/1	0.94	0.10	37,37,37,37	0
56	MG	AM	3001	1/1	0.94	0.05	76,76,76,76	0
56	MG	AA	3012	1/1	0.94	0.13	58,58,58,58	0
56	MG	BA	3361	1/1	0.94	0.06	39,39,39,39	0
56	MG	BB	3011	1/1	0.94	0.12	45,45,45,45	0
56	MG	CA	3080	1/1	0.94	0.13	51,51,51,51	0
56	MG	DA	3644	1/1	0.94	0.19	50,50,50,50	0
56	MG	AA	3006	1/1	0.94	0.09	84,84,84,84	0
56	MG	AA	3059	1/1	0.94	0.17	49,49,49,49	0
56	MG	DA	3648	1/1	0.94	0.10	43,43,43,43	0
56	MG	BA	3602	1/1	0.94	0.08	44,44,44,44	0
56	MG	AA	3014	1/1	0.94	0.06	24,24,24,24	0
56	MG	BD	302	1/1	0.94	0.38	44,44,44,44	0
56	MG	BD	303	1/1	0.94	0.10	35,35,35,35	0
56	MG	BA	3113	1/1	0.94	0.20	48,48,48,48	0
56	MG	AA	3201	1/1	0.94	0.12	76,76,76,76	0
56	MG	AA	3202	1/1	0.94	0.14	72,72,72,72	0
56	MG	DA	3364	1/1	0.94	0.11	40,40,40,40	0
56	MG	BA	3383	1/1	0.94	0.16	51,51,51,51	0
56	MG	DA	3369	1/1	0.94	0.09	53,53,53,53	0
56	MG	BA	3613	1/1	0.94	0.15	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BE	306	1/1	0.94	0.24	38,38,38,38	0
56	MG	DD	304	1/1	0.94	0.22	40,40,40,40	0
56	MG	BA	3384	1/1	0.94	0.16	47,47,47,47	0
56	MG	BA	3385	1/1	0.94	0.07	56,56,56,56	0
56	MG	DE	304	1/1	0.94	0.09	30,30,30,30	0
56	MG	BA	3051	1/1	0.94	0.18	34,34,34,34	0
56	MG	DA	3385	1/1	0.94	0.21	58,58,58,58	0
56	MG	BA	3619	1/1	0.94	0.16	42,42,42,42	0
56	MG	BA	3391	1/1	0.94	0.12	39,39,39,39	0
56	MG	BA	3256	1/1	0.94	0.21	60,60,60,60	0
56	MG	BA	3052	1/1	0.94	0.14	29,29,29,29	0
56	MG	DA	3103	1/1	0.94	0.11	52,52,52,52	0
56	MG	BN	3003	1/1	0.94	0.14	67,67,67,67	0
56	MG	BA	3056	1/1	0.94	0.23	39,39,39,39	0
56	MG	DR	5001	1/1	0.94	0.13	39,39,39,39	0
56	MG	BA	3404	1/1	0.94	0.05	42,42,42,42	0
56	MG	AA	3062	1/1	0.94	0.09	30,30,30,30	0
56	MG	AA	3151	1/1	0.94	0.07	49,49,49,49	0
56	MG	DA	3407	1/1	0.94	0.10	35,35,35,35	0
56	MG	BA	3428	1/1	0.94	0.17	36,36,36,36	0
56	MG	BA	3265	1/1	0.94	0.21	39,39,39,39	0
56	MG	AA	3206	1/1	0.94	0.15	79,79,79,79	0
56	MG	BA	3434	1/1	0.94	0.16	22,22,22,22	0
58	ZN	D4	501	1/1	0.94	0.10	155,155,155,155	0
56	MG	DA	3114	1/1	0.94	0.09	47,47,47,47	0
56	MG	DA	3422	1/1	0.94	0.19	45,45,45,45	0
56	MG	CA	3128	1/1	0.94	0.14	55,55,55,55	0
56	MG	BA	3635	1/1	0.94	0.07	52,52,52,52	0
56	MG	BA	3558	1/1	0.95	0.12	47,47,47,47	0
56	MG	CA	3011	1/1	0.95	0.19	27,27,27,27	0
56	MG	DA	3446	1/1	0.95	0.14	46,46,46,46	0
56	MG	CA	3012	1/1	0.95	0.04	50,50,50,50	0
56	MG	BA	3559	1/1	0.95	0.16	29,29,29,29	0
56	MG	BA	3396	1/1	0.95	0.13	41,41,41,41	0
56	MG	BA	3401	1/1	0.95	0.11	49,49,49,49	0
56	MG	BA	3698	1/1	0.95	0.25	58,58,58,58	0
56	MG	CA	3166	1/1	0.95	0.09	71,71,71,71	0
56	MG	BA	3700	1/1	0.95	0.13	26,26,26,26	0
56	MG	BA	3165	1/1	0.95	0.29	44,44,44,44	0
56	MG	AA	3119	1/1	0.95	0.20	42,42,42,42	0
56	MG	DA	3459	1/1	0.95	0.09	43,43,43,43	0
56	MG	CA	3170	1/1	0.95	0.14	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3406	1/1	0.95	0.19	54,54,54,54	0
56	MG	BA	3423	1/1	0.95	0.15	45,45,45,45	0
56	MG	DA	3463	1/1	0.95	0.07	32,32,32,32	0
56	MG	BA	3424	1/1	0.95	0.11	44,44,44,44	0
56	MG	AA	3042	1/1	0.95	0.17	50,50,50,50	0
56	MG	DA	3466	1/1	0.95	0.07	43,43,43,43	0
56	MG	CF	3001	1/1	0.95	0.09	56,56,56,56	0
56	MG	DA	3472	1/1	0.95	0.07	38,38,38,38	0
56	MG	BA	3020	1/1	0.95	0.28	43,43,43,43	0
56	MG	DA	3182	1/1	0.95	0.15	29,29,29,29	0
56	MG	AA	3058	1/1	0.95	0.25	59,59,59,59	0
56	MG	DA	3186	1/1	0.95	0.09	38,38,38,38	0
56	MG	DA	3480	1/1	0.95	0.09	42,42,42,42	0
56	MG	DA	3481	1/1	0.95	0.09	59,59,59,59	0
56	MG	BA	3712	1/1	0.95	0.10	47,47,47,47	0
56	MG	BA	3713	1/1	0.95	0.07	49,49,49,49	0
56	MG	CX	104	1/1	0.95	0.08	52,52,52,52	0
56	MG	BA	3430	1/1	0.95	0.11	47,47,47,47	0
56	MG	DA	3193	1/1	0.95	0.15	42,42,42,42	0
56	MG	BA	3594	1/1	0.95	0.16	55,55,55,55	0
56	MG	DA	3488	1/1	0.95	0.08	48,48,48,48	0
56	MG	BA	3073	1/1	0.95	0.05	43,43,43,43	0
56	MG	AA	3186	1/1	0.95	0.11	51,51,51,51	0
56	MG	DA	3197	1/1	0.95	0.22	43,43,43,43	0
56	MG	DA	3007	1/1	0.95	0.15	43,43,43,43	0
56	MG	DA	3497	1/1	0.95	0.06	37,37,37,37	0
56	MG	AA	3008	1/1	0.95	0.11	61,61,61,61	0
56	MG	DA	3011	1/1	0.95	0.07	42,42,42,42	0
56	MG	BA	3720	1/1	0.95	0.06	51,51,51,51	0
56	MG	BA	3121	1/1	0.95	0.13	50,50,50,50	0
56	MG	BA	3438	1/1	0.95	0.13	30,30,30,30	0
56	MG	BA	3443	1/1	0.95	0.15	34,34,34,34	0
56	MG	DA	3210	1/1	0.95	0.14	46,46,46,46	0
56	MG	DA	3211	1/1	0.95	0.21	46,46,46,46	0
56	MG	BA	3726	1/1	0.95	0.10	29,29,29,29	0
56	MG	DA	3511	1/1	0.95	0.08	47,47,47,47	0
56	MG	BA	3729	1/1	0.95	0.07	54,54,54,54	0
56	MG	BA	3302	1/1	0.95	0.07	48,48,48,48	0
56	MG	DA	3217	1/1	0.95	0.17	33,33,33,33	0
56	MG	DA	3218	1/1	0.95	0.12	31,31,31,31	0
56	MG	DA	3021	1/1	0.95	0.18	43,43,43,43	0
56	MG	BA	3733	1/1	0.95	0.16	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3519	1/1	0.95	0.07	39,39,39,39	0
56	MG	CA	3046	1/1	0.95	0.22	52,52,52,52	0
56	MG	AA	3110	1/1	0.95	0.11	41,41,41,41	0
56	MG	BA	3451	1/1	0.95	0.09	31,31,31,31	0
56	MG	BA	3606	1/1	0.95	0.06	44,44,44,44	0
56	MG	AX	107	1/1	0.95	0.06	82,82,82,82	0
56	MG	DA	3228	1/1	0.95	0.19	49,49,49,49	0
56	MG	DA	3229	1/1	0.95	0.13	44,44,44,44	0
56	MG	CA	3051	1/1	0.95	0.11	77,77,77,77	0
56	MG	BA	3308	1/1	0.95	0.13	33,33,33,33	0
56	MG	BA	3239	1/1	0.95	0.06	33,33,33,33	0
56	MG	BA	3459	1/1	0.95	0.08	51,51,51,51	0
56	MG	BA	3124	1/1	0.95	0.10	46,46,46,46	0
56	MG	BA	3615	1/1	0.95	0.16	55,55,55,55	0
56	MG	BA	3125	1/1	0.95	0.16	26,26,26,26	0
56	MG	DA	3242	1/1	0.95	0.11	31,31,31,31	0
56	MG	BA	3243	1/1	0.95	0.10	43,43,43,43	0
56	MG	BB	3008	1/1	0.95	0.14	49,49,49,49	0
56	MG	DA	3245	1/1	0.95	0.16	43,43,43,43	0
56	MG	AA	3105	1/1	0.95	0.24	54,54,54,54	0
56	MG	BA	3128	1/1	0.95	0.11	28,28,28,28	0
56	MG	BA	3031	1/1	0.95	0.14	44,44,44,44	0
56	MG	DA	3548	1/1	0.95	0.13	60,60,60,60	0
56	MG	BA	3249	1/1	0.95	0.13	46,46,46,46	0
56	MG	BA	3132	1/1	0.95	0.11	28,28,28,28	0
56	MG	DA	3050	1/1	0.95	0.09	30,30,30,30	0
56	MG	BA	3085	1/1	0.95	0.19	35,35,35,35	0
56	MG	BA	3326	1/1	0.95	0.17	15,15,15,15	0
56	MG	BA	3134	1/1	0.95	0.13	34,34,34,34	0
56	MG	BA	3086	1/1	0.95	0.06	50,50,50,50	0
56	MG	DA	3561	1/1	0.95	0.11	40,40,40,40	0
56	MG	DA	3562	1/1	0.95	0.09	41,41,41,41	0
56	MG	AX	109	1/1	0.95	0.13	56,56,56,56	0
56	MG	DA	3267	1/1	0.95	0.11	40,40,40,40	0
56	MG	BD	306	1/1	0.95	0.07	47,47,47,47	0
56	MG	AX	110	1/1	0.95	0.10	45,45,45,45	0
56	MG	BD	310	1/1	0.95	0.12	48,48,48,48	0
56	MG	CA	3078	1/1	0.95	0.10	51,51,51,51	0
56	MG	BA	3089	1/1	0.95	0.13	50,50,50,50	0
56	MG	BA	3092	1/1	0.95	0.08	28,28,28,28	0
56	MG	BA	3259	1/1	0.95	0.14	59,59,59,59	0
56	MG	BA	3341	1/1	0.95	0.11	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3085	1/1	0.95	0.18	58,58,58,58	0
56	MG	DA	3583	1/1	0.95	0.12	35,35,35,35	0
56	MG	BF	302	1/1	0.95	0.18	49,49,49,49	0
56	MG	CA	3087	1/1	0.95	0.09	40,40,40,40	0
56	MG	BA	3501	1/1	0.95	0.10	35,35,35,35	0
56	MG	DA	3588	1/1	0.95	0.11	47,47,47,47	0
56	MG	CA	3089	1/1	0.95	0.11	54,54,54,54	0
56	MG	BF	304	1/1	0.95	0.21	30,30,30,30	0
56	MG	DA	3592	1/1	0.95	0.09	49,49,49,49	0
56	MG	DA	3593	1/1	0.95	0.13	62,62,62,62	0
56	MG	BA	3142	1/1	0.95	0.13	57,57,57,57	0
56	MG	DA	3294	1/1	0.95	0.15	30,30,30,30	0
56	MG	CA	3092	1/1	0.95	0.12	56,56,56,56	0
56	MG	CA	3093	1/1	0.95	0.11	65,65,65,65	0
56	MG	CA	3095	1/1	0.95	0.11	35,35,35,35	0
56	MG	DA	3599	1/1	0.95	0.16	69,69,69,69	0
56	MG	DA	3080	1/1	0.95	0.15	43,43,43,43	0
56	MG	AA	3221	1/1	0.95	0.21	52,52,52,52	0
56	MG	DA	3305	1/1	0.95	0.12	33,33,33,33	0
56	MG	CA	3100	1/1	0.95	0.13	72,72,72,72	0
56	MG	BA	3350	1/1	0.95	0.10	36,36,36,36	0
56	MG	DA	3313	1/1	0.95	0.10	30,30,30,30	0
56	MG	BA	3040	1/1	0.95	0.09	40,40,40,40	0
56	MG	CA	3105	1/1	0.95	0.09	59,59,59,59	0
56	MG	DA	3609	1/1	0.95	0.13	49,49,49,49	0
56	MG	DA	3610	1/1	0.95	0.06	49,49,49,49	0
56	MG	BN	3001	1/1	0.95	0.11	65,65,65,65	0
56	MG	BA	3264	1/1	0.95	0.10	29,29,29,29	0
56	MG	AA	3179	1/1	0.95	0.14	34,34,34,34	0
56	MG	BN	3004	1/1	0.95	0.20	69,69,69,69	0
56	MG	BA	3147	1/1	0.95	0.13	42,42,42,42	0
56	MG	BA	3650	1/1	0.95	0.09	44,44,44,44	0
56	MG	BP	204	1/1	0.95	0.08	53,53,53,53	0
56	MG	BQ	3001	1/1	0.95	0.21	38,38,38,38	0
56	MG	AA	3205	1/1	0.95	0.12	66,66,66,66	0
56	MG	BA	3653	1/1	0.95	0.20	46,46,46,46	0
56	MG	BA	3360	1/1	0.95	0.09	39,39,39,39	0
56	MG	DA	3339	1/1	0.95	0.15	35,35,35,35	0
56	MG	BA	3270	1/1	0.95	0.12	29,29,29,29	0
56	MG	DA	3625	1/1	0.95	0.07	48,48,48,48	0
56	MG	BU	201	1/1	0.95	0.34	33,33,33,33	0
56	MG	DA	3347	1/1	0.95	0.09	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3516	1/1	0.95	0.09	64,64,64,64	0
56	MG	BA	3367	1/1	0.95	0.11	29,29,29,29	0
56	MG	BU	209	1/1	0.95	0.40	36,36,36,36	0
56	MG	DA	3358	1/1	0.95	0.09	38,38,38,38	0
56	MG	DA	3635	1/1	0.95	0.07	39,39,39,39	0
56	MG	DA	3107	1/1	0.95	0.12	50,50,50,50	0
56	MG	BV	3001	1/1	0.95	0.10	42,42,42,42	0
56	MG	BA	3659	1/1	0.95	0.06	42,42,42,42	0
56	MG	DA	3365	1/1	0.95	0.06	52,52,52,52	0
56	MG	DA	3366	1/1	0.95	0.06	43,43,43,43	0
56	MG	BA	3005	1/1	0.95	0.11	43,43,43,43	0
56	MG	AA	3044	1/1	0.95	0.15	60,60,60,60	0
56	MG	BA	3527	1/1	0.95	0.17	45,45,45,45	0
56	MG	DA	3371	1/1	0.95	0.07	37,37,37,37	0
56	MG	BA	3529	1/1	0.95	0.10	22,22,22,22	0
56	MG	DA	3377	1/1	0.95	0.13	32,32,32,32	0
56	MG	DA	3652	1/1	0.95	0.15	26,26,26,26	0
56	MG	DA	3654	1/1	0.95	0.07	50,50,50,50	0
56	MG	BA	3151	1/1	0.95	0.16	40,40,40,40	0
56	MG	DA	3657	1/1	0.95	0.07	55,55,55,55	0
56	MG	DA	3379	1/1	0.95	0.08	63,63,63,63	0
56	MG	AK	3001	1/1	0.95	0.10	48,48,48,48	0
56	MG	BA	3102	1/1	0.95	0.18	45,45,45,45	0
56	MG	BA	3668	1/1	0.95	0.11	42,42,42,42	0
56	MG	B0	105	1/1	0.95	0.23	44,44,44,44	0
56	MG	CA	3137	1/1	0.95	0.13	59,59,59,59	0
56	MG	CA	3138	1/1	0.95	0.14	59,59,59,59	0
56	MG	AL	3001	1/1	0.95	0.10	50,50,50,50	0
56	MG	BA	3009	1/1	0.95	0.12	36,36,36,36	0
56	MG	DD	302	1/1	0.95	0.29	48,48,48,48	0
56	MG	DA	3394	1/1	0.95	0.07	46,46,46,46	0
56	MG	DA	3125	1/1	0.95	0.09	55,55,55,55	0
56	MG	DD	305	1/1	0.95	0.11	73,73,73,73	0
56	MG	DE	301	1/1	0.95	0.18	51,51,51,51	0
56	MG	BA	3011	1/1	0.95	0.11	39,39,39,39	0
56	MG	DA	3127	1/1	0.95	0.06	44,44,44,44	0
56	MG	BA	3543	1/1	0.95	0.11	24,24,24,24	0
56	MG	BA	3285	1/1	0.95	0.14	44,44,44,44	0
56	MG	DF	301	1/1	0.95	0.16	40,40,40,40	0
56	MG	DA	3130	1/1	0.95	0.06	34,34,34,34	0
56	MG	DF	305	1/1	0.95	0.22	55,55,55,55	0
56	MG	DA	3408	1/1	0.95	0.09	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3545	1/1	0.95	0.11	20,20,20,20	0
56	MG	DA	3413	1/1	0.95	0.10	44,44,44,44	0
56	MG	BA	3387	1/1	0.95	0.09	49,49,49,49	0
56	MG	DQ	3001	1/1	0.95	0.16	40,40,40,40	0
56	MG	AA	3193	1/1	0.95	0.15	65,65,65,65	0
56	MG	DA	3417	1/1	0.95	0.12	54,54,54,54	0
56	MG	AA	3142	1/1	0.95	0.16	60,60,60,60	0
56	MG	BA	3162	1/1	0.95	0.08	43,43,43,43	0
56	MG	CA	3002	1/1	0.95	0.05	74,74,74,74	0
56	MG	DA	3139	1/1	0.95	0.11	47,47,47,47	0
56	MG	BA	3016	1/1	0.95	0.12	50,50,50,50	0
56	MG	DA	3428	1/1	0.95	0.09	30,30,30,30	0
56	MG	BA	3683	1/1	0.95	0.19	37,37,37,37	0
56	MG	DA	3143	1/1	0.95	0.09	53,53,53,53	0
56	MG	D5	101	1/1	0.95	0.14	44,44,44,44	0
56	MG	DA	3144	1/1	0.95	0.21	37,37,37,37	0
56	MG	DA	3145	1/1	0.95	0.11	52,52,52,52	0
56	MG	CA	3154	1/1	0.95	0.16	54,54,54,54	0
56	MG	BA	3553	1/1	0.95	0.18	46,46,46,46	0
56	MG	BA	3554	1/1	0.95	0.16	25,25,25,25	0
56	MG	AA	3195	1/1	0.95	0.21	58,58,58,58	0
56	MG	BA	3690	1/1	0.95	0.16	55,55,55,55	0
56	MG	BA	3623	1/1	0.96	0.12	43,43,43,43	0
56	MG	BB	3015	1/1	0.96	0.08	35,35,35,35	0
56	MG	DA	3469	1/1	0.96	0.14	52,52,52,52	0
56	MG	DA	3470	1/1	0.96	0.15	45,45,45,45	0
56	MG	BA	3484	1/1	0.96	0.08	40,40,40,40	0
56	MG	BA	3269	1/1	0.96	0.15	32,32,32,32	0
56	MG	BA	3486	1/1	0.96	0.12	55,55,55,55	0
56	MG	CA	3066	1/1	0.96	0.06	47,47,47,47	0
56	MG	DA	3213	1/1	0.96	0.15	48,48,48,48	0
56	MG	BA	3628	1/1	0.96	0.09	39,39,39,39	0
56	MG	DA	3215	1/1	0.96	0.25	43,43,43,43	0
56	MG	DA	3037	1/1	0.96	0.19	37,37,37,37	0
56	MG	AA	3161	1/1	0.96	0.06	61,61,61,61	0
56	MG	BA	3630	1/1	0.96	0.12	48,48,48,48	0
56	MG	BA	3493	1/1	0.96	0.08	51,51,51,51	0
56	MG	BA	3496	1/1	0.96	0.20	21,21,21,21	0
56	MG	AA	3010	1/1	0.96	0.05	71,71,71,71	0
56	MG	AA	3050	1/1	0.96	0.08	50,50,50,50	0
56	MG	DA	3046	1/1	0.96	0.10	48,48,48,48	0
56	MG	DA	3047	1/1	0.96	0.09	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3226	1/1	0.96	0.21	47,47,47,47	0
56	MG	BA	3048	1/1	0.96	0.20	33,33,33,33	0
56	MG	BA	3050	1/1	0.96	0.12	33,33,33,33	0
56	MG	CA	3076	1/1	0.96	0.14	48,48,48,48	0
56	MG	DA	3051	1/1	0.96	0.08	39,39,39,39	0
56	MG	BE	302	1/1	0.96	0.12	29,29,29,29	0
56	MG	DA	3501	1/1	0.96	0.16	67,67,67,67	0
56	MG	DA	3232	1/1	0.96	0.05	39,39,39,39	0
56	MG	BE	305	1/1	0.96	0.21	44,44,44,44	0
56	MG	BA	3090	1/1	0.96	0.07	42,42,42,42	0
56	MG	BA	3218	1/1	0.96	0.09	58,58,58,58	0
56	MG	DA	3239	1/1	0.96	0.13	54,54,54,54	0
56	MG	BF	301	1/1	0.96	0.10	46,46,46,46	0
56	MG	BA	3281	1/1	0.96	0.07	45,45,45,45	0
56	MG	DA	3059	1/1	0.96	0.07	42,42,42,42	0
56	MG	BA	3506	1/1	0.96	0.10	33,33,33,33	0
56	MG	BA	3282	1/1	0.96	0.10	34,34,34,34	0
56	MG	BA	3372	1/1	0.96	0.08	42,42,42,42	0
56	MG	BA	3645	1/1	0.96	0.21	63,63,63,63	0
56	MG	DA	3247	1/1	0.96	0.17	34,34,34,34	0
56	MG	BA	3646	1/1	0.96	0.12	39,39,39,39	0
56	MG	BA	3170	1/1	0.96	0.21	34,34,34,34	0
56	MG	BA	3511	1/1	0.96	0.17	40,40,40,40	0
56	MG	AA	3104	1/1	0.96	0.10	35,35,35,35	0
56	MG	BA	3129	1/1	0.96	0.28	44,44,44,44	0
56	MG	BA	3130	1/1	0.96	0.38	51,51,51,51	0
56	MG	BA	3652	1/1	0.96	0.18	54,54,54,54	0
56	MG	DA	3072	1/1	0.96	0.14	40,40,40,40	0
56	MG	BO	201	1/1	0.96	0.07	63,63,63,63	0
56	MG	DA	3261	1/1	0.96	0.13	44,44,44,44	0
56	MG	DA	3262	1/1	0.96	0.18	60,60,60,60	0
56	MG	AA	3167	1/1	0.96	0.16	78,78,78,78	0
56	MG	DA	3533	1/1	0.96	0.12	59,59,59,59	0
56	MG	DA	3264	1/1	0.96	0.07	38,38,38,38	0
56	MG	BP	203	1/1	0.96	0.55	39,39,39,39	0
56	MG	DA	3076	1/1	0.96	0.24	38,38,38,38	0
56	MG	BA	3517	1/1	0.96	0.11	52,52,52,52	0
56	MG	DA	3538	1/1	0.96	0.13	37,37,37,37	0
56	MG	BA	3226	1/1	0.96	0.23	31,31,31,31	0
56	MG	BA	3290	1/1	0.96	0.07	35,35,35,35	0
56	MG	DA	3272	1/1	0.96	0.13	36,36,36,36	0
56	MG	BA	3388	1/1	0.96	0.07	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3274	1/1	0.96	0.22	49,49,49,49	0
56	MG	DA	3546	1/1	0.96	0.14	38,38,38,38	0
56	MG	BA	3525	1/1	0.96	0.09	31,31,31,31	0
56	MG	DA	3277	1/1	0.96	0.05	46,46,46,46	0
56	MG	DA	3083	1/1	0.96	0.05	44,44,44,44	0
56	MG	DA	3279	1/1	0.96	0.12	32,32,32,32	0
56	MG	DA	3280	1/1	0.96	0.11	46,46,46,46	0
56	MG	BA	3526	1/1	0.96	0.12	49,49,49,49	0
56	MG	BA	3175	1/1	0.96	0.17	40,40,40,40	0
56	MG	DA	3283	1/1	0.96	0.07	47,47,47,47	0
56	MG	BA	3055	1/1	0.96	0.21	44,44,44,44	0
56	MG	BU	207	1/1	0.96	0.13	38,38,38,38	0
56	MG	CA	3115	1/1	0.96	0.06	81,81,81,81	0
56	MG	BA	3095	1/1	0.96	0.21	55,55,55,55	0
56	MG	BA	3532	1/1	0.96	0.15	42,42,42,42	0
56	MG	CA	3118	1/1	0.96	0.08	39,39,39,39	0
56	MG	BA	3096	1/1	0.96	0.23	35,35,35,35	0
56	MG	BA	3232	1/1	0.96	0.15	32,32,32,32	0
56	MG	BA	3025	1/1	0.96	0.09	48,48,48,48	0
56	MG	BW	3002	1/1	0.96	0.16	34,34,34,34	0
56	MG	BA	3400	1/1	0.96	0.06	29,29,29,29	0
56	MG	BA	3136	1/1	0.96	0.09	47,47,47,47	0
56	MG	DA	3576	1/1	0.96	0.09	57,57,57,57	0
56	MG	BA	3402	1/1	0.96	0.13	23,23,23,23	0
56	MG	DA	3580	1/1	0.96	0.08	35,35,35,35	0
56	MG	DA	3581	1/1	0.96	0.10	41,41,41,41	0
56	MG	BA	3059	1/1	0.96	0.21	35,35,35,35	0
56	MG	AA	3138	1/1	0.96	0.21	38,38,38,38	0
56	MG	DA	3312	1/1	0.96	0.09	24,24,24,24	0
56	MG	AA	3212	1/1	0.96	0.10	36,36,36,36	0
56	MG	B0	103	1/1	0.96	0.07	46,46,46,46	0
56	MG	BA	3407	1/1	0.96	0.17	35,35,35,35	0
56	MG	BA	3408	1/1	0.96	0.08	28,28,28,28	0
56	MG	DA	3590	1/1	0.96	0.07	39,39,39,39	0
56	MG	BA	3678	1/1	0.96	0.14	47,47,47,47	0
56	MG	BA	3412	1/1	0.96	0.16	29,29,29,29	0
56	MG	BA	3551	1/1	0.96	0.13	31,31,31,31	0
56	MG	BA	3419	1/1	0.96	0.30	36,36,36,36	0
56	MG	BA	3140	1/1	0.96	0.18	50,50,50,50	0
56	MG	BA	3241	1/1	0.96	0.23	41,41,41,41	0
56	MG	DA	3329	1/1	0.96	0.07	40,40,40,40	0
56	MG	DA	3330	1/1	0.96	0.06	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3140	1/1	0.96	0.14	75,75,75,75	0
56	MG	BA	3556	1/1	0.96	0.07	25,25,25,25	0
56	MG	DA	3334	1/1	0.96	0.11	37,37,37,37	0
56	MG	AA	3183	1/1	0.96	0.12	56,56,56,56	0
56	MG	CA	3143	1/1	0.96	0.11	91,91,91,91	0
56	MG	DA	3118	1/1	0.96	0.07	44,44,44,44	0
56	MG	BA	3688	1/1	0.96	0.07	58,58,58,58	0
56	MG	DA	3345	1/1	0.96	0.06	16,16,16,16	0
56	MG	DA	3120	1/1	0.96	0.39	50,50,50,50	0
56	MG	BA	3689	1/1	0.96	0.09	25,25,25,25	0
56	MG	CA	3001	1/1	0.96	0.06	48,48,48,48	0
56	MG	BA	3029	1/1	0.96	0.29	53,53,53,53	0
56	MG	DA	3354	1/1	0.96	0.05	39,39,39,39	0
56	MG	DA	3355	1/1	0.96	0.17	39,39,39,39	0
56	MG	BA	3692	1/1	0.96	0.16	36,36,36,36	0
56	MG	BA	3244	1/1	0.96	0.22	46,46,46,46	0
56	MG	BA	3245	1/1	0.96	0.13	45,45,45,45	0
56	MG	BA	3695	1/1	0.96	0.23	34,34,34,34	0
56	MG	BA	3067	1/1	0.96	0.28	55,55,55,55	0
56	MG	AA	3060	1/1	0.96	0.28	52,52,52,52	0
56	MG	BA	3069	1/1	0.96	0.12	33,33,33,33	0
56	MG	BA	3568	1/1	0.96	0.07	68,68,68,68	0
56	MG	BA	3106	1/1	0.96	0.22	52,52,52,52	0
56	MG	CA	3013	1/1	0.96	0.05	46,46,46,46	0
56	MG	BA	3576	1/1	0.96	0.06	45,45,45,45	0
56	MG	BA	3703	1/1	0.96	0.09	44,44,44,44	0
56	MG	BA	3194	1/1	0.96	0.25	43,43,43,43	0
56	MG	CA	3017	1/1	0.96	0.17	54,54,54,54	0
56	MG	BA	3581	1/1	0.96	0.17	54,54,54,54	0
56	MG	AA	3199	1/1	0.96	0.08	62,62,62,62	0
56	MG	DA	3632	1/1	0.96	0.16	60,60,60,60	0
56	MG	BA	3033	1/1	0.96	0.24	54,54,54,54	0
56	MG	BA	3588	1/1	0.96	0.07	41,41,41,41	0
56	MG	BA	3446	1/1	0.96	0.11	25,25,25,25	0
56	MG	BA	3197	1/1	0.96	0.21	39,39,39,39	0
56	MG	DA	3147	1/1	0.96	0.15	46,46,46,46	0
56	MG	DA	3148	1/1	0.96	0.09	41,41,41,41	0
56	MG	BA	3450	1/1	0.96	0.07	40,40,40,40	0
56	MG	DA	3151	1/1	0.96	0.30	48,48,48,48	0
56	MG	BA	3110	1/1	0.96	0.10	43,43,43,43	0
56	MG	DA	3398	1/1	0.96	0.07	50,50,50,50	0
56	MG	BA	3715	1/1	0.96	0.13	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3647	1/1	0.96	0.13	45,45,45,45	0
56	MG	BA	3452	1/1	0.96	0.07	16,16,16,16	0
56	MG	DA	3402	1/1	0.96	0.14	33,33,33,33	0
56	MG	DA	3404	1/1	0.96	0.09	57,57,57,57	0
56	MG	BA	3036	1/1	0.96	0.13	25,25,25,25	0
56	MG	BA	3200	1/1	0.96	0.09	32,32,32,32	0
56	MG	DA	3656	1/1	0.96	0.08	62,62,62,62	0
56	MG	BA	3598	1/1	0.96	0.09	32,32,32,32	0
56	MG	DA	3658	1/1	0.96	0.26	50,50,50,50	0
56	MG	DA	3158	1/1	0.96	0.28	47,47,47,47	0
56	MG	BA	3010	1/1	0.96	0.05	35,35,35,35	0
56	MG	BA	3332	1/1	0.96	0.13	52,52,52,52	0
56	MG	BA	3258	1/1	0.96	0.05	35,35,35,35	0
56	MG	DB	3005	1/1	0.96	0.14	41,41,41,41	0
56	MG	BA	3723	1/1	0.96	0.08	25,25,25,25	0
56	MG	DA	3165	1/1	0.96	0.28	48,48,48,48	0
56	MG	BA	3461	1/1	0.96	0.07	33,33,33,33	0
56	MG	BA	3462	1/1	0.96	0.13	30,30,30,30	0
56	MG	DA	3168	1/1	0.96	0.34	46,46,46,46	0
56	MG	DA	3423	1/1	0.96	0.07	29,29,29,29	0
56	MG	BA	3728	1/1	0.96	0.10	56,56,56,56	0
56	MG	BA	3464	1/1	0.96	0.09	40,40,40,40	0
56	MG	AA	3066	1/1	0.96	0.17	41,41,41,41	0
56	MG	DA	3004	1/1	0.96	0.06	24,24,24,24	0
56	MG	BA	3260	1/1	0.96	0.11	47,47,47,47	0
56	MG	DA	3433	1/1	0.96	0.19	39,39,39,39	0
56	MG	DA	3174	1/1	0.96	0.22	26,26,26,26	0
56	MG	BA	3608	1/1	0.96	0.13	51,51,51,51	0
56	MG	BA	3609	1/1	0.96	0.16	29,29,29,29	0
56	MG	DF	303	1/1	0.96	0.10	42,42,42,42	0
56	MG	DA	3009	1/1	0.96	0.04	33,33,33,33	0
56	MG	DA	3010	1/1	0.96	0.07	42,42,42,42	0
56	MG	DA	3439	1/1	0.96	0.13	45,45,45,45	0
56	MG	DA	3181	1/1	0.96	0.30	55,55,55,55	0
56	MG	AA	3091	1/1	0.96	0.12	75,75,75,75	0
56	MG	DA	3443	1/1	0.96	0.13	30,30,30,30	0
56	MG	DA	3183	1/1	0.96	0.11	42,42,42,42	0
56	MG	BA	3738	1/1	0.96	0.17	58,58,58,58	0
56	MG	DA	3185	1/1	0.96	0.15	42,42,42,42	0
56	MG	BA	3611	1/1	0.96	0.07	61,61,61,61	0
56	MG	BA	3076	1/1	0.96	0.13	40,40,40,40	0
56	MG	AA	3024	1/1	0.96	0.12	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DU	3002	1/1	0.96	0.23	52,52,52,52	0
56	MG	DV	201	1/1	0.96	0.07	56,56,56,56	0
56	MG	DA	3016	1/1	0.96	0.10	33,33,33,33	0
56	MG	BA	3041	1/1	0.96	0.24	45,45,45,45	0
56	MG	DW	201	1/1	0.96	0.08	45,45,45,45	0
56	MG	DA	3192	1/1	0.96	0.15	48,48,48,48	0
56	MG	AA	3034	1/1	0.96	0.14	46,46,46,46	0
56	MG	BA	3344	1/1	0.96	0.06	65,65,65,65	0
56	MG	DA	3020	1/1	0.96	0.14	45,45,45,45	0
56	MG	D5	102	1/1	0.96	0.23	44,44,44,44	0
56	MG	BA	3346	1/1	0.96	0.07	33,33,33,33	0
56	MG	CA	3055	1/1	0.96	0.26	61,61,61,61	0
56	MG	BA	3349	1/1	0.96	0.07	31,31,31,31	0
56	MG	AA	3160	1/1	0.96	0.19	52,52,52,52	0
56	MG	BA	3210	1/1	0.96	0.20	39,39,39,39	0
56	MG	DA	3202	1/1	0.96	0.08	39,39,39,39	0
56	MG	BA	3355	1/1	0.96	0.07	39,39,39,39	0
56	MG	AA	3208	1/1	0.97	0.13	38,38,38,38	0
56	MG	DA	3311	1/1	0.97	0.06	33,33,33,33	0
56	MG	BA	3699	1/1	0.97	0.08	23,23,23,23	0
56	MG	AA	3144	1/1	0.97	0.08	56,56,56,56	0
56	MG	AA	3103	1/1	0.97	0.15	43,43,43,43	0
56	MG	DA	3522	1/1	0.97	0.07	46,46,46,46	0
56	MG	DA	3315	1/1	0.97	0.10	39,39,39,39	0
56	MG	BA	3023	1/1	0.97	0.18	34,34,34,34	0
56	MG	BV	3003	1/1	0.97	0.14	27,27,27,27	0
56	MG	DA	3159	1/1	0.97	0.06	50,50,50,50	0
56	MG	DA	3160	1/1	0.97	0.08	47,47,47,47	0
56	MG	BA	3508	1/1	0.97	0.08	46,46,46,46	0
56	MG	BA	3216	1/1	0.97	0.09	46,46,46,46	0
56	MG	BA	3024	1/1	0.97	0.06	31,31,31,31	0
56	MG	DA	3327	1/1	0.97	0.05	45,45,45,45	0
56	MG	BA	3706	1/1	0.97	0.11	38,38,38,38	0
56	MG	BA	3707	1/1	0.97	0.06	57,57,57,57	0
56	MG	BA	3426	1/1	0.97	0.07	34,34,34,34	0
56	MG	BA	3427	1/1	0.97	0.07	20,20,20,20	0
56	MG	CA	3096	1/1	0.97	0.06	54,54,54,54	0
56	MG	CA	3097	1/1	0.97	0.09	60,60,60,60	0
56	MG	DA	3539	1/1	0.97	0.09	35,35,35,35	0
56	MG	DA	3335	1/1	0.97	0.09	36,36,36,36	0
56	MG	AA	3049	1/1	0.97	0.18	46,46,46,46	0
56	MG	B0	102	1/1	0.97	0.06	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3042	1/1	0.97	0.14	38,38,38,38	0
56	MG	DA	3342	1/1	0.97	0.09	31,31,31,31	0
56	MG	DA	3545	1/1	0.97	0.14	35,35,35,35	0
56	MG	BA	3617	1/1	0.97	0.16	30,30,30,30	0
56	MG	BA	3347	1/1	0.97	0.10	44,44,44,44	0
56	MG	BA	3045	1/1	0.97	0.08	27,27,27,27	0
56	MG	BA	3220	1/1	0.97	0.18	27,27,27,27	0
56	MG	DA	3550	1/1	0.97	0.09	54,54,54,54	0
56	MG	DA	3350	1/1	0.97	0.11	21,21,21,21	0
56	MG	DA	3553	1/1	0.97	0.12	58,58,58,58	0
56	MG	DA	3177	1/1	0.97	0.13	30,30,30,30	0
56	MG	DA	3178	1/1	0.97	0.07	43,43,43,43	0
56	MG	DA	3556	1/1	0.97	0.07	35,35,35,35	0
56	MG	AA	3165	1/1	0.97	0.09	24,24,24,24	0
56	MG	BA	3354	1/1	0.97	0.05	45,45,45,45	0
56	MG	BA	3521	1/1	0.97	0.10	38,38,38,38	0
56	MG	DA	3357	1/1	0.97	0.06	50,50,50,50	0
56	MG	B3	3401	1/1	0.97	0.10	24,24,24,24	0
56	MG	DA	3052	1/1	0.97	0.05	20,20,20,20	0
56	MG	B3	3402	1/1	0.97	0.07	49,49,49,49	0
56	MG	BA	3522	1/1	0.97	0.12	42,42,42,42	0
56	MG	BA	3222	1/1	0.97	0.23	56,56,56,56	0
56	MG	B7	102	1/1	0.97	0.06	29,29,29,29	0
56	MG	AA	3031	1/1	0.97	0.19	41,41,41,41	0
56	MG	BA	3439	1/1	0.97	0.05	35,35,35,35	0
56	MG	AA	3214	1/1	0.97	0.17	42,42,42,42	0
56	MG	DA	3574	1/1	0.97	0.11	22,22,22,22	0
56	MG	B8	5002	1/1	0.97	0.10	48,48,48,48	0
56	MG	BA	3160	1/1	0.97	0.15	24,24,24,24	0
56	MG	DA	3577	1/1	0.97	0.09	44,44,44,44	0
56	MG	DA	3374	1/1	0.97	0.10	40,40,40,40	0
56	MG	DA	3579	1/1	0.97	0.11	38,38,38,38	0
56	MG	DA	3376	1/1	0.97	0.08	42,42,42,42	0
56	MG	CA	3120	1/1	0.97	0.12	59,59,59,59	0
56	MG	DA	3063	1/1	0.97	0.07	55,55,55,55	0
56	MG	AA	3158	1/1	0.97	0.12	47,47,47,47	0
56	MG	BA	3531	1/1	0.97	0.11	28,28,28,28	0
56	MG	BA	3078	1/1	0.97	0.10	44,44,44,44	0
56	MG	DA	3383	1/1	0.97	0.08	27,27,27,27	0
56	MG	DA	3199	1/1	0.97	0.15	46,46,46,46	0
56	MG	BA	3449	1/1	0.97	0.10	59,59,59,59	0
56	MG	BA	3730	1/1	0.97	0.06	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3006	1/1	0.97	0.07	72,72,72,72	0
56	MG	BA	3731	1/1	0.97	0.11	52,52,52,52	0
56	MG	DA	3204	1/1	0.97	0.23	44,44,44,44	0
56	MG	BA	3013	1/1	0.97	0.16	36,36,36,36	0
56	MG	BA	3364	1/1	0.97	0.08	30,30,30,30	0
56	MG	DA	3397	1/1	0.97	0.11	40,40,40,40	0
56	MG	DA	3207	1/1	0.97	0.12	41,41,41,41	0
56	MG	BA	3303	1/1	0.97	0.11	11,11,11,11	0
56	MG	AA	3177	1/1	0.97	0.05	58,58,58,58	0
56	MG	BA	3542	1/1	0.97	0.11	37,37,37,37	0
56	MG	DA	3403	1/1	0.97	0.06	42,42,42,42	0
56	MG	CA	3133	1/1	0.97	0.04	45,45,45,45	0
56	MG	BA	3108	1/1	0.97	0.09	32,32,32,32	0
56	MG	BA	3642	1/1	0.97	0.08	52,52,52,52	0
56	MG	BA	3456	1/1	0.97	0.08	24,24,24,24	0
56	MG	BA	3457	1/1	0.97	0.06	25,25,25,25	0
56	MG	BA	3266	1/1	0.97	0.21	47,47,47,47	0
56	MG	DA	3410	1/1	0.97	0.05	40,40,40,40	0
56	MG	BA	3053	1/1	0.97	0.11	52,52,52,52	0
56	MG	DA	3219	1/1	0.97	0.20	49,49,49,49	0
56	MG	BA	3233	1/1	0.97	0.12	49,49,49,49	0
56	MG	DA	3085	1/1	0.97	0.07	35,35,35,35	0
56	MG	CA	3020	1/1	0.97	0.12	45,45,45,45	0
56	MG	BA	3054	1/1	0.97	0.07	39,39,39,39	0
56	MG	DA	3421	1/1	0.97	0.11	43,43,43,43	0
56	MG	DA	3088	1/1	0.97	0.06	47,47,47,47	0
56	MG	BA	3168	1/1	0.97	0.28	52,52,52,52	0
56	MG	CA	3023	1/1	0.97	0.14	37,37,37,37	0
56	MG	BB	3007	1/1	0.97	0.04	49,49,49,49	0
56	MG	DA	3426	1/1	0.97	0.09	41,41,41,41	0
56	MG	BA	3377	1/1	0.97	0.04	27,27,27,27	0
56	MG	DA	3429	1/1	0.97	0.05	30,30,30,30	0
56	MG	CA	3026	1/1	0.97	0.04	52,52,52,52	0
56	MG	BA	3380	1/1	0.97	0.10	32,32,32,32	0
56	MG	BA	3381	1/1	0.97	0.04	25,25,25,25	0
56	MG	BA	3382	1/1	0.97	0.12	21,21,21,21	0
56	MG	DA	3629	1/1	0.97	0.09	30,30,30,30	0
56	MG	DA	3233	1/1	0.97	0.08	58,58,58,58	0
56	MG	BA	3271	1/1	0.97	0.16	40,40,40,40	0
56	MG	BA	3655	1/1	0.97	0.11	44,44,44,44	0
56	MG	DA	3237	1/1	0.97	0.15	37,37,37,37	0
56	MG	AA	3149	1/1	0.97	0.05	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3440	1/1	0.97	0.05	48,48,48,48	0
56	MG	BA	3034	1/1	0.97	0.05	37,37,37,37	0
56	MG	DA	3101	1/1	0.97	0.13	59,59,59,59	0
56	MG	BA	3560	1/1	0.97	0.14	24,24,24,24	0
56	MG	BA	3471	1/1	0.97	0.05	28,28,28,28	0
56	MG	DA	3641	1/1	0.97	0.12	47,47,47,47	0
56	MG	BA	3562	1/1	0.97	0.11	42,42,42,42	0
56	MG	BA	3472	1/1	0.97	0.07	53,53,53,53	0
56	MG	BA	3662	1/1	0.97	0.08	46,46,46,46	0
56	MG	BD	308	1/1	0.97	0.15	21,21,21,21	0
56	MG	BA	3386	1/1	0.97	0.07	29,29,29,29	0
56	MG	DA	3451	1/1	0.97	0.03	68,68,68,68	0
56	MG	DA	3649	1/1	0.97	0.05	39,39,39,39	0
56	MG	BA	3566	1/1	0.97	0.12	43,43,43,43	0
56	MG	DA	3453	1/1	0.97	0.09	44,44,44,44	0
56	MG	DA	3653	1/1	0.97	0.06	52,52,52,52	0
56	MG	BA	3474	1/1	0.97	0.09	43,43,43,43	0
56	MG	BA	3058	1/1	0.97	0.20	41,41,41,41	0
56	MG	BA	3569	1/1	0.97	0.09	55,55,55,55	0
56	MG	BE	304	1/1	0.97	0.15	45,45,45,45	0
56	MG	BA	3321	1/1	0.97	0.14	47,47,47,47	0
56	MG	BA	3573	1/1	0.97	0.06	53,53,53,53	0
56	MG	BA	3670	1/1	0.97	0.08	55,55,55,55	0
56	MG	DA	3258	1/1	0.97	0.14	39,39,39,39	0
56	MG	BE	308	1/1	0.97	0.14	27,27,27,27	0
56	MG	BE	309	1/1	0.97	0.06	37,37,37,37	0
56	MG	BA	3389	1/1	0.97	0.15	52,52,52,52	0
56	MG	BA	3276	1/1	0.97	0.15	9,9,9,9	0
56	MG	DB	3008	1/1	0.97	0.09	36,36,36,36	0
56	MG	DB	3009	1/1	0.97	0.27	41,41,41,41	0
56	MG	BA	3580	1/1	0.97	0.10	58,58,58,58	0
56	MG	DA	3467	1/1	0.97	0.12	48,48,48,48	0
56	MG	DA	3265	1/1	0.97	0.13	44,44,44,44	0
56	MG	DD	301	1/1	0.97	0.08	23,23,23,23	0
56	MG	BA	3035	1/1	0.97	0.06	32,32,32,32	0
56	MG	BF	305	1/1	0.97	0.15	38,38,38,38	0
56	MG	DA	3471	1/1	0.97	0.09	32,32,32,32	0
56	MG	BA	3278	1/1	0.97	0.19	53,53,53,53	0
56	MG	BA	3115	1/1	0.97	0.14	28,28,28,28	0
56	MG	BA	3587	1/1	0.97	0.12	23,23,23,23	0
56	MG	CA	3059	1/1	0.97	0.18	51,51,51,51	0
56	MG	BA	3329	1/1	0.97	0.07	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3479	1/1	0.97	0.11	35,35,35,35	0
56	MG	BA	3330	1/1	0.97	0.07	35,35,35,35	0
56	MG	DF	302	1/1	0.97	0.07	47,47,47,47	0
56	MG	AA	3057	1/1	0.97	0.05	45,45,45,45	0
56	MG	BA	3489	1/1	0.97	0.06	50,50,50,50	0
56	MG	BA	3490	1/1	0.97	0.07	40,40,40,40	0
56	MG	DA	3133	1/1	0.97	0.12	31,31,31,31	0
56	MG	DA	3006	1/1	0.97	0.10	41,41,41,41	0
56	MG	BA	3492	1/1	0.97	0.12	48,48,48,48	0
56	MG	BN	3006	1/1	0.97	0.04	33,33,33,33	0
56	MG	BA	3003	1/1	0.97	0.08	24,24,24,24	0
56	MG	BP	201	1/1	0.97	0.23	37,37,37,37	0
56	MG	DA	3492	1/1	0.97	0.05	44,44,44,44	0
56	MG	BA	3494	1/1	0.97	0.09	28,28,28,28	0
56	MG	DA	3494	1/1	0.97	0.07	50,50,50,50	0
56	MG	DA	3286	1/1	0.97	0.05	26,26,26,26	0
56	MG	BA	3334	1/1	0.97	0.08	41,41,41,41	0
56	MG	DA	3142	1/1	0.97	0.19	33,33,33,33	0
56	MG	BA	3497	1/1	0.97	0.21	28,28,28,28	0
56	MG	BA	3403	1/1	0.97	0.07	28,28,28,28	0
56	MG	DA	3292	1/1	0.97	0.06	34,34,34,34	0
56	MG	AV	101	1/1	0.97	0.15	51,51,51,51	0
56	MG	BA	3500	1/1	0.97	0.07	43,43,43,43	0
56	MG	BA	3603	1/1	0.97	0.11	40,40,40,40	0
56	MG	DA	3297	1/1	0.97	0.09	36,36,36,36	0
56	MG	BA	3146	1/1	0.97	0.23	56,56,56,56	0
56	MG	CA	3077	1/1	0.97	0.24	51,51,51,51	0
56	MG	DA	3300	1/1	0.97	0.07	47,47,47,47	0
56	MG	DA	3301	1/1	0.97	0.12	30,30,30,30	0
56	MG	DA	3150	1/1	0.97	0.05	57,57,57,57	0
56	MG	BA	3337	1/1	0.97	0.12	48,48,48,48	0
56	MG	BA	3065	1/1	0.97	0.15	31,31,31,31	0
56	MG	DA	3309	1/1	0.97	0.08	25,25,25,25	0
56	MG	DA	3308	1/1	0.98	0.05	32,32,32,32	0
56	MG	AA	3172	1/1	0.98	0.04	36,36,36,36	0
56	MG	BA	3312	1/1	0.98	0.05	43,43,43,43	0
56	MG	BA	3584	1/1	0.98	0.07	43,43,43,43	0
56	MG	BA	3585	1/1	0.98	0.10	25,25,25,25	0
56	MG	DA	3208	1/1	0.98	0.16	46,46,46,46	0
56	MG	DA	3025	1/1	0.98	0.21	38,38,38,38	0
56	MG	DA	3026	1/1	0.98	0.08	36,36,36,36	0
56	MG	DA	3584	1/1	0.98	0.07	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3409	1/1	0.98	0.07	40,40,40,40	0
56	MG	DA	3028	1/1	0.98	0.06	34,34,34,34	0
56	MG	DA	3450	1/1	0.98	0.06	47,47,47,47	0
56	MG	BA	3519	1/1	0.98	0.04	57,57,57,57	0
56	MG	DA	3319	1/1	0.98	0.05	31,31,31,31	0
56	MG	BA	3589	1/1	0.98	0.12	34,34,34,34	0
56	MG	DA	3322	1/1	0.98	0.09	41,41,41,41	0
56	MG	BA	3032	1/1	0.98	0.15	36,36,36,36	0
56	MG	DA	3324	1/1	0.98	0.09	24,24,24,24	0
56	MG	BA	3724	1/1	0.98	0.11	22,22,22,22	0
56	MG	BA	3413	1/1	0.98	0.05	19,19,19,19	0
56	MG	BQ	3003	1/1	0.98	0.07	15,15,15,15	0
56	MG	BA	3592	1/1	0.98	0.08	43,43,43,43	0
56	MG	BA	3727	1/1	0.98	0.10	27,27,27,27	0
56	MG	BR	202	1/1	0.98	0.09	25,25,25,25	0
56	MG	BA	3416	1/1	0.98	0.08	25,25,25,25	0
56	MG	DA	3332	1/1	0.98	0.06	29,29,29,29	0
56	MG	BA	3418	1/1	0.98	0.14	20,20,20,20	0
56	MG	BA	3077	1/1	0.98	0.03	20,20,20,20	0
56	MG	BU	203	1/1	0.98	0.10	26,26,26,26	0
56	MG	DA	3605	1/1	0.98	0.04	58,58,58,58	0
56	MG	BU	204	1/1	0.98	0.10	49,49,49,49	0
56	MG	BU	205	1/1	0.98	0.09	39,39,39,39	0
56	MG	BU	206	1/1	0.98	0.15	41,41,41,41	0
56	MG	DA	3341	1/1	0.98	0.03	40,40,40,40	0
56	MG	DA	3136	1/1	0.98	0.05	39,39,39,39	0
56	MG	DA	3343	1/1	0.98	0.07	37,37,37,37	0
56	MG	DA	3474	1/1	0.98	0.05	49,49,49,49	0
56	MG	BA	3422	1/1	0.98	0.08	23,23,23,23	0
56	MG	DA	3476	1/1	0.98	0.05	35,35,35,35	0
56	MG	BA	3236	1/1	0.98	0.11	37,37,37,37	0
56	MG	BA	3528	1/1	0.98	0.09	44,44,44,44	0
56	MG	AA	3137	1/1	0.98	0.14	40,40,40,40	0
56	MG	DA	3348	1/1	0.98	0.05	39,39,39,39	0
56	MG	BA	3475	1/1	0.98	0.05	42,42,42,42	0
56	MG	BA	3736	1/1	0.98	0.09	40,40,40,40	0
56	MG	DA	3352	1/1	0.98	0.06	24,24,24,24	0
56	MG	BA	3378	1/1	0.98	0.09	24,24,24,24	0
56	MG	BA	3379	1/1	0.98	0.07	43,43,43,43	0
56	MG	BA	3345	1/1	0.98	0.03	37,37,37,37	0
56	MG	BA	3534	1/1	0.98	0.11	36,36,36,36	0
56	MG	BA	3188	1/1	0.98	0.05	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3489	1/1	0.98	0.04	36,36,36,36	0
56	MG	DA	3490	1/1	0.98	0.04	46,46,46,46	0
56	MG	BA	3536	1/1	0.98	0.07	37,37,37,37	0
56	MG	BA	3320	1/1	0.98	0.07	41,41,41,41	0
56	MG	DA	3362	1/1	0.98	0.19	42,42,42,42	0
56	MG	BA	3275	1/1	0.98	0.20	28,28,28,28	0
56	MG	BA	3483	1/1	0.98	0.09	18,18,18,18	0
56	MG	BA	3541	1/1	0.98	0.07	37,37,37,37	0
56	MG	BA	3431	1/1	0.98	0.18	54,54,54,54	0
56	MG	BA	3432	1/1	0.98	0.05	27,27,27,27	0
56	MG	DA	3368	1/1	0.98	0.06	34,34,34,34	0
56	MG	BA	3323	1/1	0.98	0.06	25,25,25,25	0
56	MG	BB	3010	1/1	0.98	0.10	44,44,44,44	0
56	MG	BA	3679	1/1	0.98	0.05	39,39,39,39	0
56	MG	DA	3643	1/1	0.98	0.13	18,18,18,18	0
56	MG	BB	3012	1/1	0.98	0.08	42,42,42,42	0
56	MG	DA	3253	1/1	0.98	0.04	35,35,35,35	0
56	MG	DA	3375	1/1	0.98	0.07	40,40,40,40	0
56	MG	BA	3351	1/1	0.98	0.10	21,21,21,21	0
56	MG	BA	3079	1/1	0.98	0.10	50,50,50,50	0
56	MG	DA	3510	1/1	0.98	0.05	67,67,67,67	0
56	MG	BA	3353	1/1	0.98	0.11	31,31,31,31	0
56	MG	DA	3512	1/1	0.98	0.08	37,37,37,37	0
56	MG	B5	502	1/1	0.98	0.05	56,56,56,56	0
56	MG	BA	3491	1/1	0.98	0.08	38,38,38,38	0
56	MG	DA	3260	1/1	0.98	0.03	32,32,32,32	0
56	MG	DA	3382	1/1	0.98	0.07	44,44,44,44	0
56	MG	BA	3206	1/1	0.98	0.09	32,32,32,32	0
56	MG	DA	3384	1/1	0.98	0.05	24,24,24,24	0
56	MG	BD	301	1/1	0.98	0.14	35,35,35,35	0
56	MG	DA	3386	1/1	0.98	0.06	18,18,18,18	0
56	MG	BA	3091	1/1	0.98	0.15	55,55,55,55	0
56	MG	DA	3388	1/1	0.98	0.07	25,25,25,25	0
56	MG	BA	3440	1/1	0.98	0.05	40,40,40,40	0
56	MG	BA	3495	1/1	0.98	0.14	27,27,27,27	0
56	MG	DA	3266	1/1	0.98	0.08	32,32,32,32	0
56	MG	DA	3526	1/1	0.98	0.05	49,49,49,49	0
56	MG	BA	3442	1/1	0.98	0.12	33,33,33,33	0
56	MG	CA	3082	1/1	0.98	0.05	46,46,46,46	0
56	MG	BA	3555	1/1	0.98	0.17	31,31,31,31	0
56	MG	BD	307	1/1	0.98	0.05	36,36,36,36	0
56	MG	DA	3082	1/1	0.98	0.04	7,7,7,7	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3176	1/1	0.98	0.10	50,50,50,50	0
56	MG	BA	3062	1/1	0.98	0.28	46,46,46,46	0
56	MG	BA	3626	1/1	0.98	0.05	50,50,50,50	0
56	MG	DA	3275	1/1	0.98	0.12	34,34,34,34	0
56	MG	BA	3445	1/1	0.98	0.10	16,16,16,16	0
56	MG	BA	3063	1/1	0.98	0.08	34,34,34,34	0
56	MG	BA	3393	1/1	0.98	0.07	27,27,27,27	0
56	MG	BA	3127	1/1	0.98	0.12	42,42,42,42	0
56	MG	BA	3228	1/1	0.98	0.05	23,23,23,23	0
56	MG	DE	306	1/1	0.98	0.07	44,44,44,44	0
56	MG	CA	3094	1/1	0.98	0.19	37,37,37,37	0
56	MG	BA	3049	1/1	0.98	0.15	17,17,17,17	0
56	MG	DA	3411	1/1	0.98	0.10	33,33,33,33	0
56	MG	DA	3412	1/1	0.98	0.12	34,34,34,34	0
56	MG	BA	3564	1/1	0.98	0.09	26,26,26,26	0
56	MG	BA	3397	1/1	0.98	0.04	44,44,44,44	0
56	MG	DA	3415	1/1	0.98	0.04	22,22,22,22	0
56	MG	DO	5001	1/1	0.98	0.05	33,33,33,33	0
56	MG	CA	3098	1/1	0.98	0.12	37,37,37,37	0
56	MG	BA	3398	1/1	0.98	0.07	36,36,36,36	0
56	MG	BA	3399	1/1	0.98	0.09	22,22,22,22	0
56	MG	CA	3101	1/1	0.98	0.07	58,58,58,58	0
56	MG	DA	3420	1/1	0.98	0.04	43,43,43,43	0
56	MG	CA	3102	1/1	0.98	0.04	55,55,55,55	0
56	MG	DA	3191	1/1	0.98	0.07	31,31,31,31	0
56	MG	DA	3291	1/1	0.98	0.11	42,42,42,42	0
56	MG	BA	3363	1/1	0.98	0.06	29,29,29,29	0
56	MG	BA	3153	1/1	0.98	0.08	47,47,47,47	0
56	MG	BA	3639	1/1	0.98	0.05	35,35,35,35	0
56	MG	DA	3560	1/1	0.98	0.05	57,57,57,57	0
56	MG	DA	3427	1/1	0.98	0.04	29,29,29,29	0
56	MG	BA	3365	1/1	0.98	0.05	63,63,63,63	0
56	MG	AA	3156	1/1	0.98	0.07	31,31,31,31	0
56	MG	DA	3564	1/1	0.98	0.03	29,29,29,29	0
56	MG	BG	3001	1/1	0.98	0.07	65,65,65,65	0
56	MG	BA	3574	1/1	0.98	0.05	52,52,52,52	0
56	MG	BA	3287	1/1	0.98	0.07	11,11,11,11	0
57	SF4	CD	501	8/8	0.98	0.03	63,76,87,96	0
56	MG	AA	3040	1/1	0.98	0.05	46,46,46,46	0
58	ZN	CN	501	1/1	0.98	0.04	104,104,104,104	0
58	ZN	DY	501	1/1	0.98	0.04	90,90,90,90	0
56	MG	BA	3579	1/1	0.98	0.12	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3303	1/1	0.98	0.06	37,37,37,37	0
56	MG	BA	3370	1/1	0.98	0.03	39,39,39,39	0
56	MG	BA	3515	1/1	0.98	0.12	46,46,46,46	0
56	MG	DA	3307	1/1	0.98	0.08	40,40,40,40	0
56	MG	BA	3572	1/1	0.99	0.09	23,23,23,23	0
56	MG	DA	3650	1/1	0.99	0.04	35,35,35,35	0
56	MG	BA	3192	1/1	0.99	0.04	48,48,48,48	0
56	MG	BA	3333	1/1	0.99	0.10	27,27,27,27	0
56	MG	BA	3575	1/1	0.99	0.07	26,26,26,26	0
56	MG	DA	3337	1/1	0.99	0.08	50,50,50,50	0
56	MG	DA	3396	1/1	0.99	0.06	37,37,37,37	0
56	MG	BA	3537	1/1	0.99	0.07	45,45,45,45	0
56	MG	CA	3083	1/1	0.99	0.05	30,30,30,30	0
56	MG	DA	3340	1/1	0.99	0.04	29,29,29,29	0
56	MG	DA	3045	1/1	0.99	0.12	49,49,49,49	0
56	MG	DA	3401	1/1	0.99	0.11	41,41,41,41	0
56	MG	BA	3437	1/1	0.99	0.06	37,37,37,37	0
56	MG	BA	3578	1/1	0.99	0.09	47,47,47,47	0
56	MG	BA	3410	1/1	0.99	0.05	21,21,21,21	0
56	MG	BA	3411	1/1	0.99	0.09	21,21,21,21	0
56	MG	BA	3080	1/1	0.99	0.03	12,12,12,12	0
56	MG	DA	3293	1/1	0.99	0.04	34,34,34,34	0
56	MG	BA	3441	1/1	0.99	0.09	29,29,29,29	0
56	MG	DA	3349	1/1	0.99	0.04	27,27,27,27	0
56	MG	AA	3157	1/1	0.99	0.03	26,26,26,26	0
56	MG	BA	3414	1/1	0.99	0.12	51,51,51,51	0
56	MG	BB	3013	1/1	0.99	0.07	31,31,31,31	0
56	MG	BA	3415	1/1	0.99	0.06	28,28,28,28	0
56	MG	BA	3586	1/1	0.99	0.08	26,26,26,26	0
56	MG	BA	3319	1/1	0.99	0.09	34,34,34,34	0
56	MG	BA	3547	1/1	0.99	0.10	30,30,30,30	0
56	MG	BA	3417	1/1	0.99	0.07	21,21,21,21	0
56	MG	BA	3306	1/1	0.99	0.05	19,19,19,19	0
56	MG	DA	3359	1/1	0.99	0.07	21,21,21,21	0
56	MG	DA	3360	1/1	0.99	0.02	36,36,36,36	0
56	MG	DA	3304	1/1	0.99	0.04	44,44,44,44	0
56	MG	BA	3448	1/1	0.99	0.10	23,23,23,23	0
56	MG	BA	3374	1/1	0.99	0.11	26,26,26,26	0
56	MG	BA	3420	1/1	0.99	0.10	13,13,13,13	0
56	MG	DA	3257	1/1	0.99	0.08	25,25,25,25	0
56	MG	DA	3616	1/1	0.99	0.04	41,41,41,41	0
56	MG	BA	3421	1/1	0.99	0.07	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3057	1/1	0.99	0.16	36,36,36,36	0
56	MG	DA	3552	1/1	0.99	0.05	42,42,42,42	0
56	MG	BA	3322	1/1	0.99	0.05	46,46,46,46	0
56	MG	BA	3454	1/1	0.99	0.07	20,20,20,20	0
56	MG	DA	3430	1/1	0.99	0.11	75,75,75,75	0
56	MG	BA	3488	1/1	0.99	0.14	43,43,43,43	0
56	MG	BA	3015	1/1	0.99	0.12	30,30,30,30	0
56	MG	DA	3372	1/1	0.99	0.03	37,37,37,37	0
56	MG	BA	3523	1/1	0.99	0.09	32,32,32,32	0
56	MG	AA	3145	1/1	0.99	0.10	63,63,63,63	0
56	MG	BE	301	1/1	0.99	0.14	28,28,28,28	0
56	MG	BA	3684	1/1	0.99	0.12	44,44,44,44	0
56	MG	BE	303	1/1	0.99	0.04	39,39,39,39	0
56	MG	AA	3220	1/1	0.99	0.06	42,42,42,42	0
56	MG	AA	3152	1/1	0.99	0.07	29,29,29,29	0
56	MG	DA	3633	1/1	0.99	0.09	25,25,25,25	0
56	MG	BA	3159	1/1	0.99	0.10	47,47,47,47	0
56	MG	BA	3362	1/1	0.99	0.05	23,23,23,23	0
56	MG	AA	3163	1/1	0.99	0.10	23,23,23,23	0
56	MG	DA	3505	1/1	0.99	0.06	24,24,24,24	0
56	MG	BA	3314	1/1	0.99	0.06	22,22,22,22	0
56	MG	BA	3691	1/1	0.99	0.10	40,40,40,40	0
57	SF4	AD	501	8/8	0.99	0.04	62,75,82,88	0
56	MG	DA	3572	1/1	0.99	0.05	39,39,39,39	0
58	ZN	AN	102	1/1	0.99	0.02	88,88,88,88	0
58	ZN	BY	501	1/1	0.99	0.03	67,67,67,67	0
56	MG	DA	3573	1/1	0.99	0.10	32,32,32,32	0
58	ZN	B5	501	1/1	0.99	0.02	49,49,49,49	0
56	MG	DA	3508	1/1	0.99	0.05	30,30,30,30	0
56	MG	BA	3463	1/1	0.99	0.05	32,32,32,32	0
56	MG	AA	3192	1/1	0.99	0.08	73,73,73,73	0
58	ZN	D5	103	1/1	0.99	0.02	61,61,61,61	0
58	ZN	D6	501	1/1	0.99	0.03	65,65,65,65	0
58	ZN	D9	501	1/1	0.99	0.04	63,63,63,63	0
56	MG	BA	3366	1/1	0.99	0.06	30,30,30,30	0
56	MG	BA	3570	1/1	0.99	0.10	33,33,33,33	0
56	MG	DA	3389	1/1	0.99	0.07	32,32,32,32	0
56	MG	BA	3348	1/1	0.99	0.06	29,29,29,29	0
58	ZN	B6	501	1/1	1.00	0.03	51,51,51,51	0
58	ZN	B9	501	1/1	1.00	0.02	49,49,49,49	0
56	MG	BA	3327	1/1	1.00	0.05	21,21,21,21	0
56	MG	BA	3480	1/1	1.00	0.03	22,22,22,22	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3321	1/1	1.00	0.03	31,31,31,31	0
56	MG	BX	101	1/1	1.00	0.04	38,38,38,38	0

6.5 Other polymers (i)

There are no such residues in this entry.