



Full wwPDB X-ray Structure Validation Report ⓘ

Aug 5, 2026 – 04:57 PM EDT

PDB ID : 4V9S / pdb_00004v9s
Title : Crystal structure of antibiotic GE82832 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 : 3.10 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

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

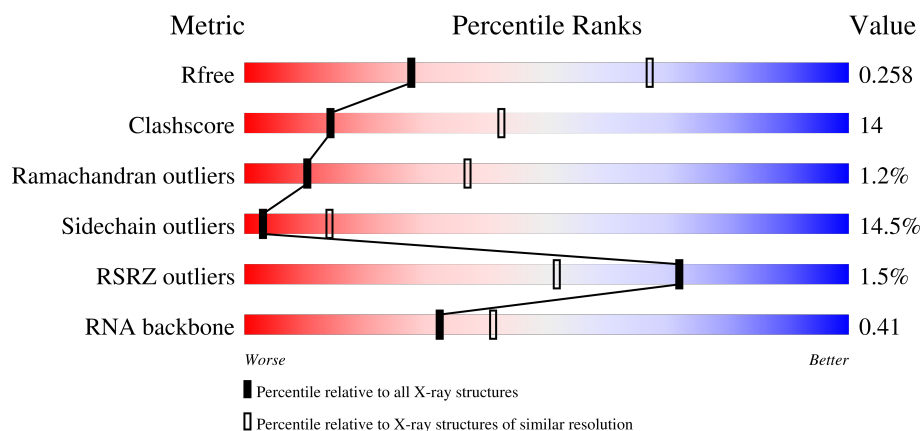
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 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	1456 (3.10-3.10)
Clashscore	190562	1539 (3.10-3.10)
Ramachandran outliers	187476	1467 (3.10-3.10)
Sidechain outliers	187428	1467 (3.10-3.10)
RSRZ outliers	180081	1456 (3.10-3.10)
RNA backbone	3983	1022 (3.32-2.88)

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 $\leq 5\%$. 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	3% 37% 45% 16%
1	CA	1522	3% 36% 46% 16%
2	AB	256	3% 36% 36% 15% 10%
2	CB	256	2% 34% 40% 14% 10%

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Mol	Chain	Length	Quality of chain
3	AC	239	
3	CC	239	
4	AD	209	
4	CD	209	
5	AE	162	
5	CE	162	
6	AF	101	
6	CF	101	
7	AG	156	
7	CG	156	
8	AH	138	
8	CH	138	
9	AI	128	
9	CI	128	
10	AJ	105	
10	CJ	105	
11	AK	129	
11	CK	129	
12	AL	132	
12	CL	132	
13	AM	126	
13	CM	126	
14	AN	61	
14	CN	61	
15	AO	89	

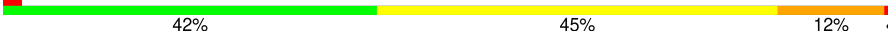
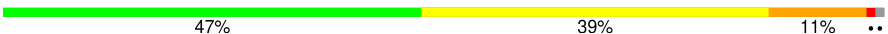
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Mol	Chain	Length	Quality of chain
15	CO	89	
16	AP	88	
16	CP	88	
17	AQ	105	
17	CQ	105	
18	AR	88	
18	CR	88	
19	AS	93	
19	CS	93	
20	AT	106	
20	CT	106	
21	AU	27	
21	CU	27	
22	AV	24	
22	CV	24	
23	AX	77	
23	CX	77	
24	AW	10	
24	CW	10	
25	BA	2915	
25	DA	2915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

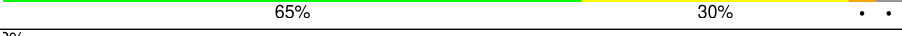
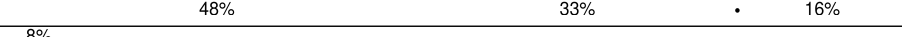
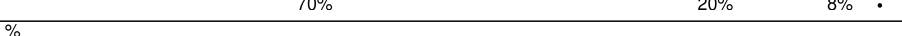
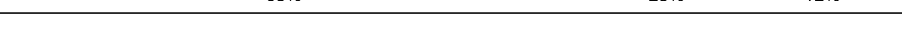
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Mol	Chain	Length	Quality of chain
28	BE	206	
28	DE	206	
29	BF	210	
29	DF	210	
30	BG	182	
30	DG	182	
31	BH	180	
31	DH	180	
32	BI	148	
32	DI	148	
33	BN	140	
33	DN	140	
34	BO	122	
34	DO	122	
35	BP	150	
35	DP	150	
36	BQ	141	
36	DQ	141	
37	BR	118	
37	DR	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	
41	BV	101	
41	DV	101	
42	BW	113	
42	DW	113	
43	BX	96	
43	DX	96	
44	BY	110	
44	DY	110	
45	BZ	206	
45	DZ	206	
46	B0	85	
46	D0	85	
47	B1	98	
47	D1	98	
48	B2	72	
48	D2	72	
49	B3	60	
49	D3	60	
50	B4	71	
50	D4	71	
51	B5	60	
51	D5	60	
52	B6	54	
52	D6	54	

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Mol	Chain	Length	Quality of chain
53	B7	49	
53	D7	49	
54	B8	65	
54	D8	65	
55	B9	37	
55	D9	37	

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
24	2QY	CW	10	-	-	X	-
24	MVA	CW	9	-	-	X	-
56	MG	AA	3030	-	-	-	X
56	MG	AA	3084	-	-	-	X
56	MG	BA	3180	-	-	-	X
56	MG	CA	3053	-	-	-	X

2 Entry composition

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	C	N	O			
			714	445	138	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	C	N	O	S		
			829	516	155	155	3	0	0
11	CK	114	Total	C	N	O	S		
			833	519	156	155	3	0	0

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S		
			728	456	144	126	2	0	0
15	CO	88	Total	C	N	O	S		
			728	456	144	126	2	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 GE82832.

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	S	0	0	0
			877	553	175	149				
38	DS	110	Total	C	N	O	S	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	221	Total	Mg	0	0
			221	221		
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	AM	1	Total	Mg	0	0
			1	1		
56	AN	2	Total	Mg	0	0
			2	2		
56	AV	1	Total	Mg	0	0
			1	1		
56	AX	9	Total	Mg	0	0
			9	9		
56	BA	738	Total	Mg	0	0
			738	738		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	BB	18	Total 18	Mg 18	0	0
56	BD	12	Total 12	Mg 12	0	0
56	BE	10	Total 10	Mg 10	0	0
56	BF	8	Total 8	Mg 8	0	0
56	BG	4	Total 4	Mg 4	0	0
56	BN	6	Total 6	Mg 6	0	0
56	BO	1	Total 1	Mg 1	0	0
56	BP	4	Total 4	Mg 4	0	0
56	BQ	5	Total 5	Mg 5	0	0
56	BR	4	Total 4	Mg 4	0	0
56	BU	8	Total 8	Mg 8	0	0
56	BV	4	Total 4	Mg 4	0	0
56	BW	5	Total 5	Mg 5	0	0
56	BX	1	Total 1	Mg 1	0	0
56	BY	1	Total 1	Mg 1	0	0
56	BZ	1	Total 1	Mg 1	0	0
56	B0	4	Total 4	Mg 4	0	0
56	B1	1	Total 1	Mg 1	0	0
56	B2	1	Total 1	Mg 1	0	0
56	B3	3	Total 3	Mg 3	0	0
56	B4	1	Total 1	Mg 1	0	0

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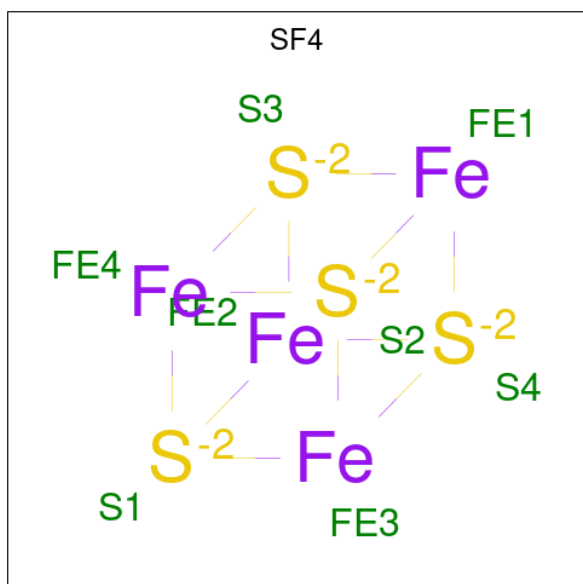
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	B5	1	Total 1	Mg 1	0	0
56	B7	4	Total 4	Mg 4	0	0
56	B8	3	Total 3	Mg 3	0	0
56	B9	1	Total 1	Mg 1	0	0
56	CA	172	Total 172	Mg 172	0	0
56	CE	2	Total 2	Mg 2	0	0
56	CF	1	Total 1	Mg 1	0	0
56	CQ	1	Total 1	Mg 1	0	0
56	CT	1	Total 1	Mg 1	0	0
56	CX	3	Total 3	Mg 3	0	0
56	DA	653	Total 653	Mg 653	0	0
56	DB	12	Total 12	Mg 12	0	0
56	DD	8	Total 8	Mg 8	0	0
56	DE	6	Total 6	Mg 6	0	0
56	DF	6	Total 6	Mg 6	0	0
56	DG	1	Total 1	Mg 1	0	0
56	DN	1	Total 1	Mg 1	0	0
56	DO	1	Total 1	Mg 1	0	0
56	DQ	5	Total 5	Mg 5	0	0
56	DR	2	Total 2	Mg 2	0	0
56	DV	4	Total 4	Mg 4	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	DW	2	Total	Mg	0	0
			2	2		
56	DY	1	Total	Mg	0	0
			1	1		
56	D0	1	Total	Mg	0	0
			1	1		
56	D3	1	Total	Mg	0	0
			1	1		
56	D5	2	Total	Mg	0	0
			2	2		
56	D8	1	Total	Mg	0	0
			1	1		

- 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	0	0
			8	4	4		
57	CD	1	Total	Fe	S	0	0
			8	4	4		

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

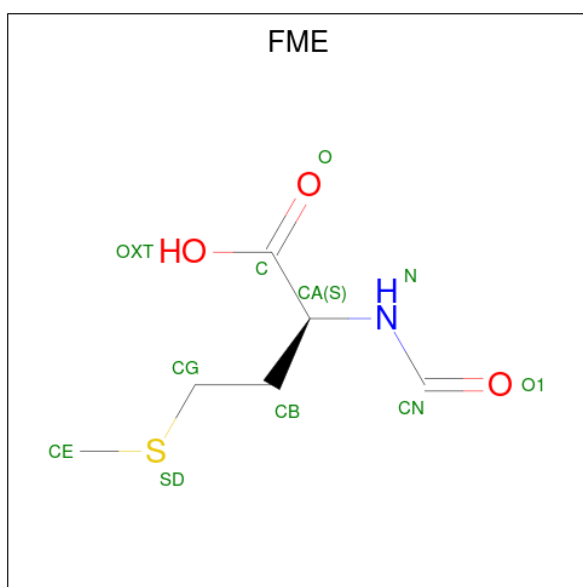
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	AN	1	Total	Zn	0	0
			1	1		

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

- 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	0	0
			10	6	1	2	1		
59	CX	1	Total	C	N	O	S	0	0
			10	6	1	2	1		

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

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

- Molecule 61 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
61	AA	148	Total	O	0	0
			148	148		
61	AD	1	Total	O	0	0
			1	1		
61	AE	3	Total	O	0	0
			3	3		
61	AJ	1	Total	O	0	0
			1	1		
61	AL	1	Total	O	0	0
			1	1		
61	AP	1	Total	O	0	0
			1	1		
61	AU	1	Total	O	0	0
			1	1		
61	AV	1	Total	O	0	0
			1	1		
61	AX	1	Total	O	0	0
			1	1		
61	BA	1092	Total	O	0	0
			1092	1092		
61	BB	26	Total	O	0	0
			26	26		
61	BD	8	Total	O	0	0
			8	8		
61	BE	9	Total	O	0	0
			9	9		
61	BF	4	Total	O	0	0
			4	4		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
61	BG	1	Total	O	0	0
			1	1		
61	BN	3	Total	O	0	0
			3	3		
61	BO	2	Total	O	0	0
			2	2		
61	BP	15	Total	O	0	0
			15	15		
61	BQ	3	Total	O	0	0
			3	3		
61	BR	1	Total	O	0	0
			1	1		
61	BT	1	Total	O	0	0
			1	1		
61	BU	4	Total	O	0	0
			4	4		
61	BV	2	Total	O	0	0
			2	2		
61	BW	2	Total	O	0	0
			2	2		
61	BX	4	Total	O	0	0
			4	4		
61	B0	4	Total	O	0	0
			4	4		
61	B1	2	Total	O	0	0
			2	2		
61	B5	3	Total	O	0	0
			3	3		
61	B7	1	Total	O	0	0
			1	1		
61	B8	8	Total	O	0	0
			8	8		
61	CA	187	Total	O	0	0
			187	187		
61	CE	2	Total	O	0	0
			2	2		
61	CN	1	Total	O	0	0
			1	1		
61	CT	1	Total	O	0	0
			1	1		
61	CX	2	Total	O	0	0
			2	2		

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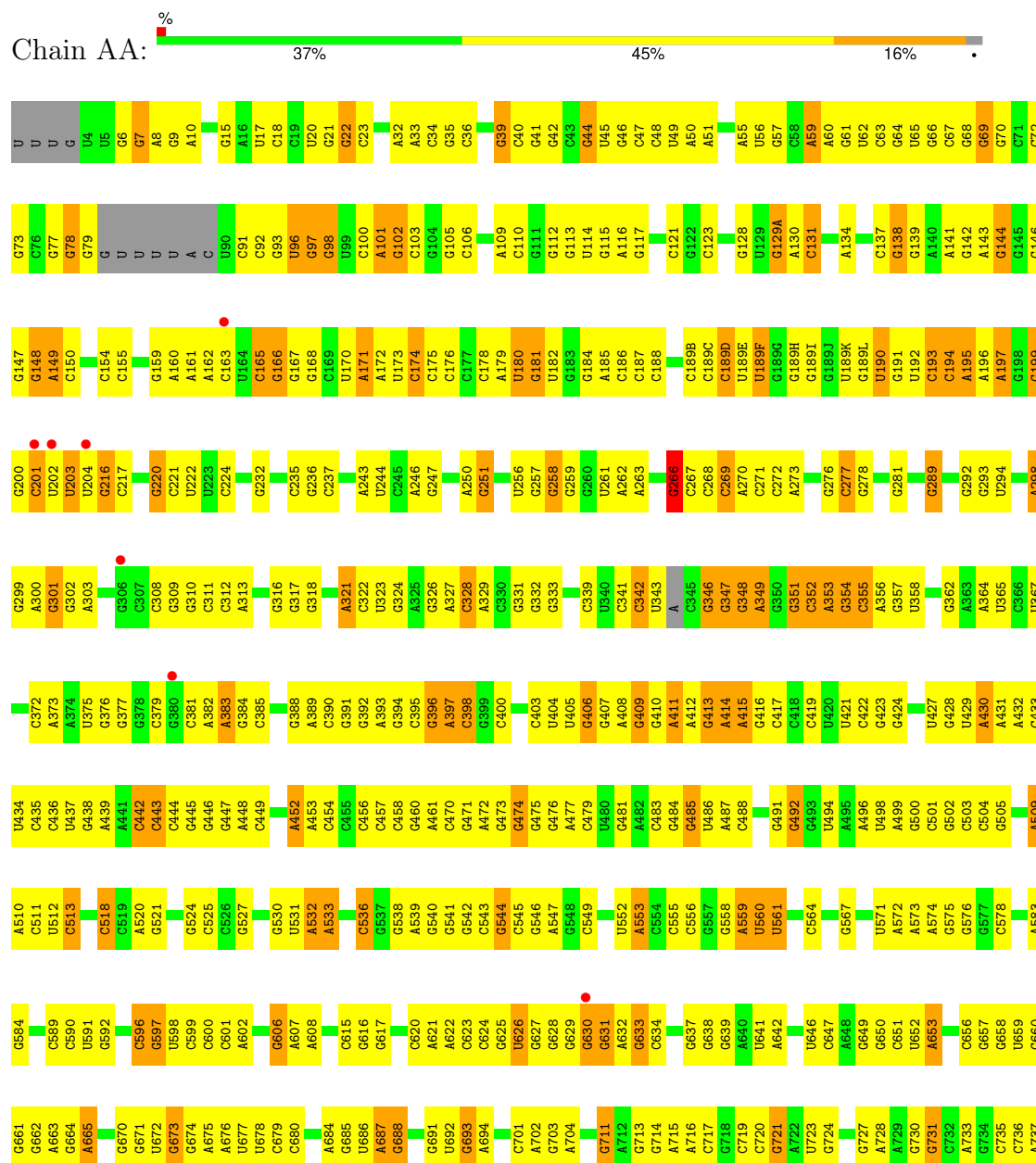
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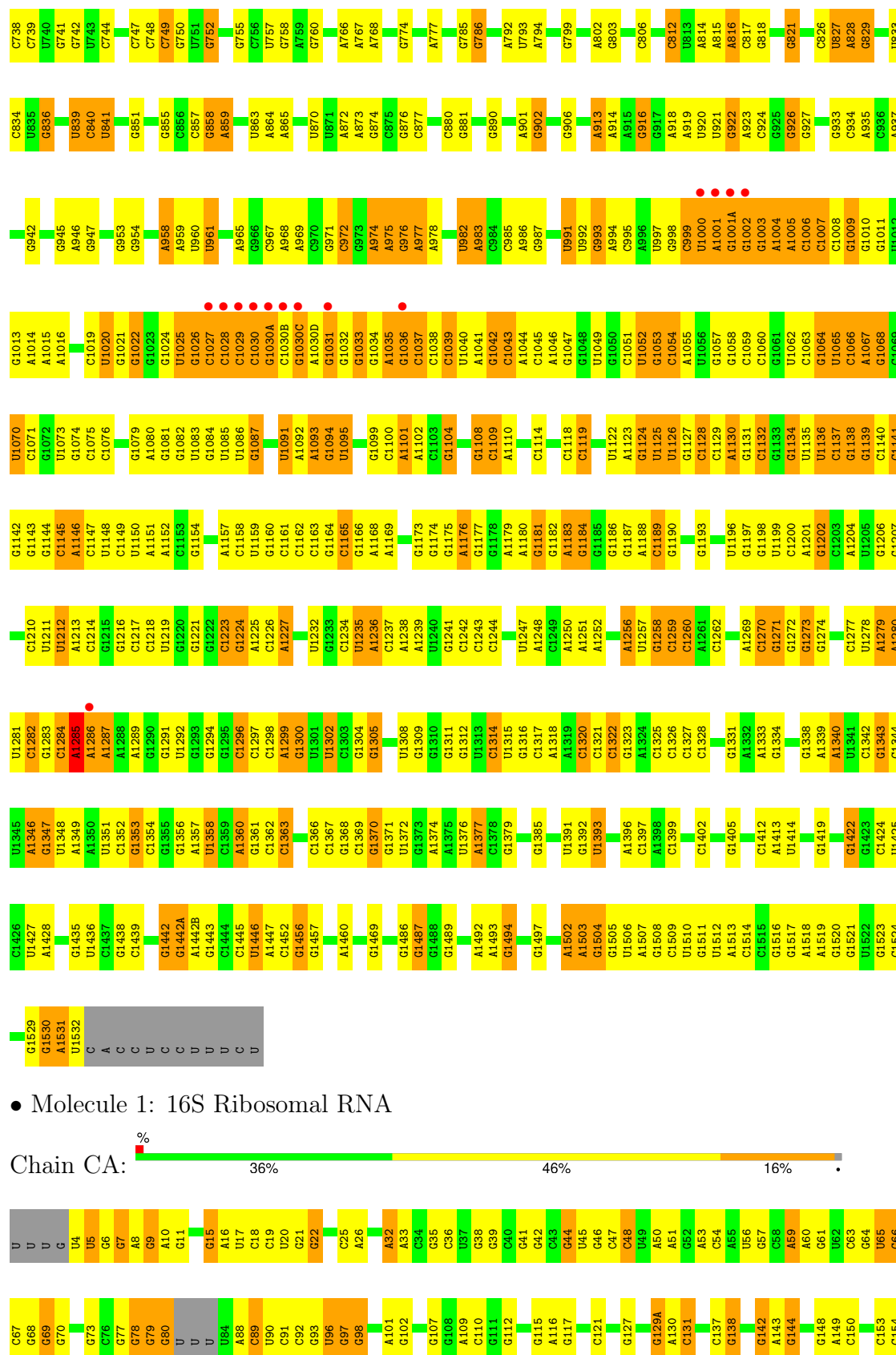
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
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61	DB	7	Total 7	O 7	0	0
61	DD	8	Total 8	O 8	0	0
61	DE	13	Total 13	O 13	0	0
61	DF	5	Total 5	O 5	0	0
61	DO	1	Total 1	O 1	0	0
61	DP	14	Total 14	O 14	0	0
61	DQ	3	Total 3	O 3	0	0
61	DU	4	Total 4	O 4	0	0
61	DV	1	Total 1	O 1	0	0
61	DX	2	Total 2	O 2	0	0
61	DY	2	Total 2	O 2	0	0
61	D0	5	Total 5	O 5	0	0
61	D1	1	Total 1	O 1	0	0
61	D7	2	Total 2	O 2	0	0
61	D8	4	Total 4	O 4	0	0

3 Residue-property plots

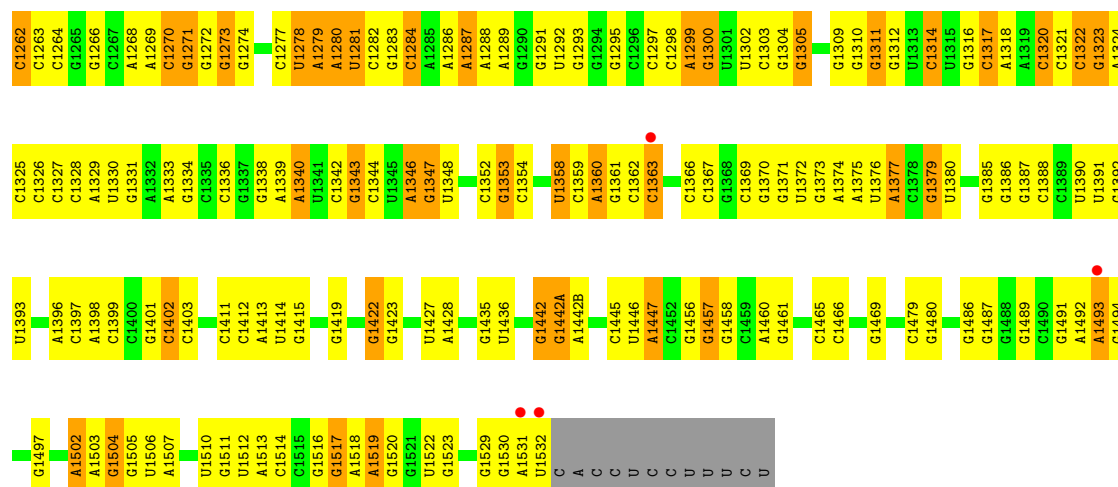
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

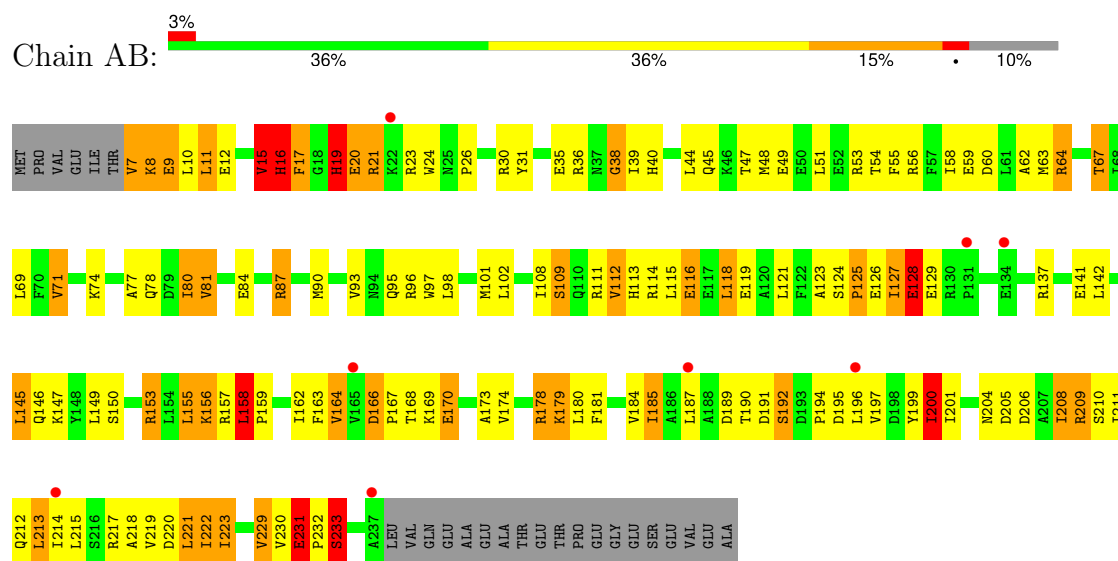




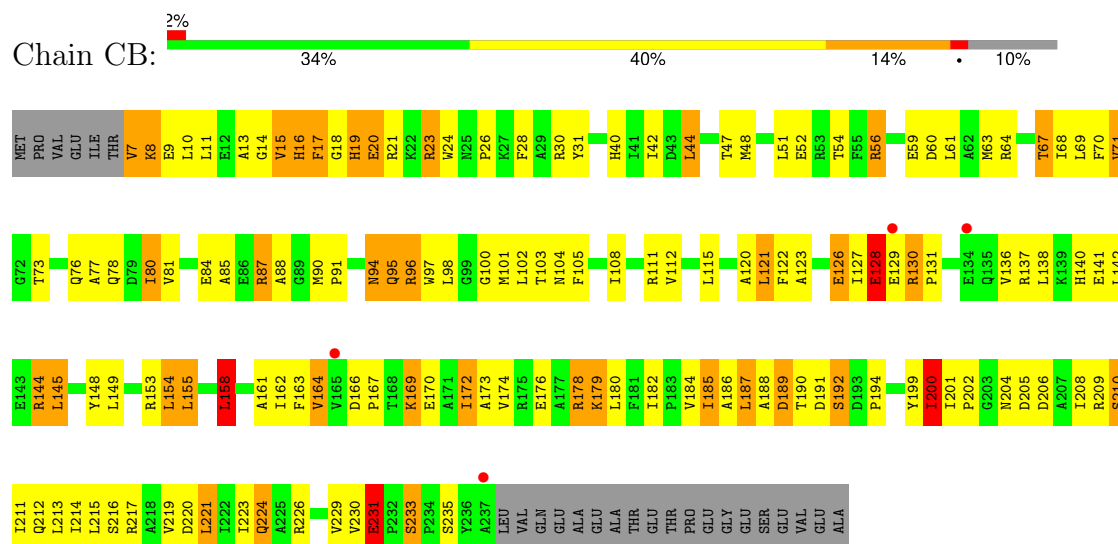
G1197	G1198	G1199	G1200	G1201	G1202	G1203	G1204	G1205	G1206	G1207	G1208	G1209	G1210	G1211	G1212	G1213	G1214	G1215	G1216	G1217	G1218	G1219	G1220	G1221	G1222	G1223	G1224	G1225	G1226	G1227	G1228	G1229	G1230	G1231	G1232	G1233	G1234	G1235	G1236	G1237	G1238	G1239	G1240	G1241	G1242	G1243	G1244	G1245	G1246	G1249	G1250	G1251	G1252	G1255	G1256	G1257	G1258	G1259	G1260	G1261																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
U135	U136	U137	U138	U139	U140	U141	U142	U143	U144	U145	U146	U147	U148	U149	U150	U151	U152	U153	U154	U155	U156	U157	U158	U159	U160	U161	U162	U163	U164	U165	U166	U167	U168	U169	U170	U171	U172	U173	U174	U175	U176	U177	U178	U179	U180	U181	U182	U183	U184	U185	U186	U187	U188	U189	U190	U191	U192	U193	U194	U195	U196																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
C1071	C1072	C1073	C1074	C1075	C1076	C1077	C1078	C1079	C1080	C1081	C1082	C1083	C1084	C1085	C1086	C1087	C1088	C1089	C1090	C1091	C1092	C1093	C1094	C1095	C1096	C1097	C1098	C1099	C1100	C1101	C1102	C1103	C1104	C1105	C1106	C1107	C1108	C1109	C1110	C1111	C1112	C1113	C1114	C1115	C1116	C1117	C1118	C1119	C1120	C1121	C1122	C1123	C1124	C1125	C1126	C1127	C1128	C1129	C1130	C1131	C1132	C1133	C1134																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
U1012	U1013	U1014	U1015	U1016	U1017	U1018	U1019	U1020	U1021	U1022	U1023	U1024	U1025	U1026	U1027	U1028	U1029	U1030	U1031	U1032	U1033	U1034	U1035	U1036	U1037	U1038	U1039	U1040	U1041	U1042	U1043	U1044	U1045	U1046	U1047	U1048	U1049	U1050	U1051	U1052	U1053	U1054	U1055	U1056	U1057	U1058	U1059	U1060	U1061	U1062	U1063	U1064	U1065	U1066	U1067	U1068	U1069	U1070																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
C948	C949	C950	C951	C952	C953	C954	C955	C956	C957	C958	C959	C960	C961	C962	C963	C964	C965	C966	C967	C968	C969	C970	C971	C972	C973	C974	C975	C976	C977	C978	C979	C980	C981	C982	C983	C984	C985	C986	C987	C988	C989	C990	C991	C992	C993	C994	C995	C996	C997	C998	C999	C1000	C1001	C1002	C1003	C1004	C1005	C1006	C1007	C1008	C1009	C1010	C1011																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
G865	G866	G867	G868	G869	G870	G871	G872	G873	G874	G875	G876	G877	G878	G879	G880	G881	G882	G883	G884	G885	G886	G887	G888	G889	G890	G891	G892	G893	G894	G895	G896	G897	G898	G899	G900	G901	G902	G903	G904	G905	G906	G907	G908	G909	G910	G911	G912	G913	G914	G915	G916	G917	G918	G919	G920	G921	G922	G923	G924	G925	G926	G927	G928	G929	G930	G931	G932	G933	G934	G935	G936	G937	G938	G939	G940	G941	G942	G943	G944	G945	G946	G947																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
G776	G777	G778	G779	G780	G781	G782	G783	G784	G785	G786	G787	G788	G789	G790	G791	G792	G793	G794	G795	G796	G797	G798	G799	G800	G801	G802	G803	G804	G805	G806	G807	G808	G809	G810	G811	G812	G813	G814	G815	G816	G817	G818	G819	G820	G821	G822	G823	G824	G825	G826	G827	G828	G829	G830	G831	G832	G833	G834	G835	G836	G837	G838	G839	G840	G841	G842	G843	G844	G845	G846	G847	G848	G849	G850	G851	G852	G853	G854	G855	G856	G857	G858	G859	G860	G861	G862	G863	G864	G865	G866	G867	G868	G869	G870	G871	G872	G873	G874	G875	G876	G877	G878	G879	G880	G881	G882	G883	G884	G885	G886	G887	G888	G889	G890	G891	G892	G893	G894	G895	G896	G897	G898	G899	G900	G901	G902	G903	G904	G905	G906	G907	G908	G909	G910	G911	G912	G913	G914	G915	G916	G917	G918	G919	G920	G921	G922	G923	G924	G925	G926	G927	G928	G929	G930	G931	G932	G933	G934	G935	G936	G937	G938	G939	G940	G941	G942	G943	G944	G945	G946	G947																																																																																																																																																																																																																																																																																																																																																																																																																			
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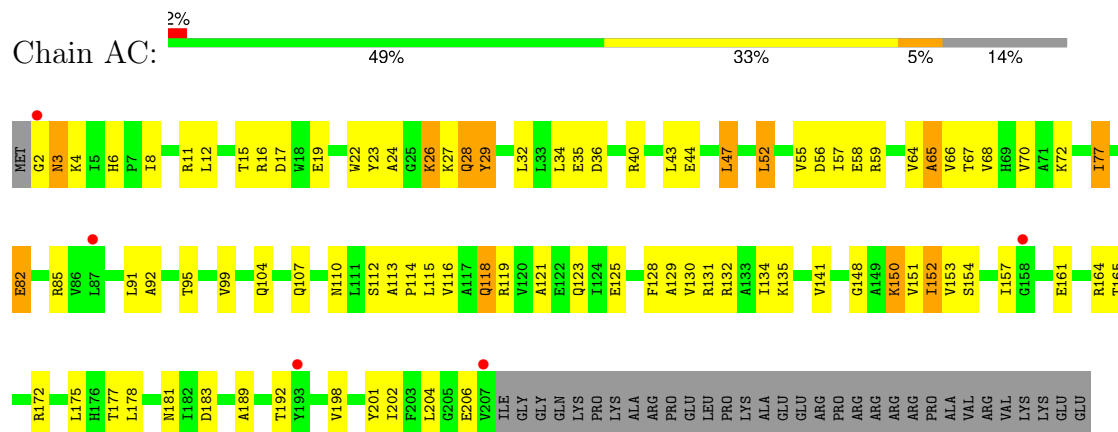
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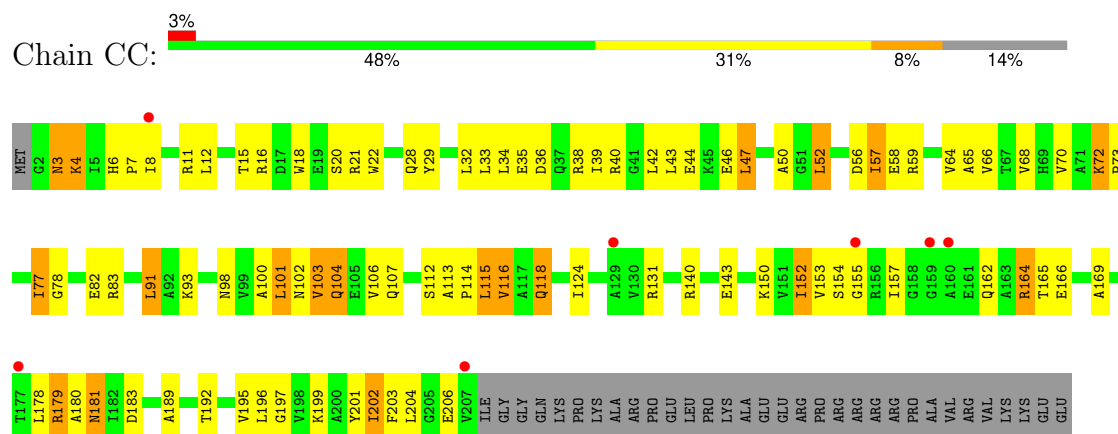
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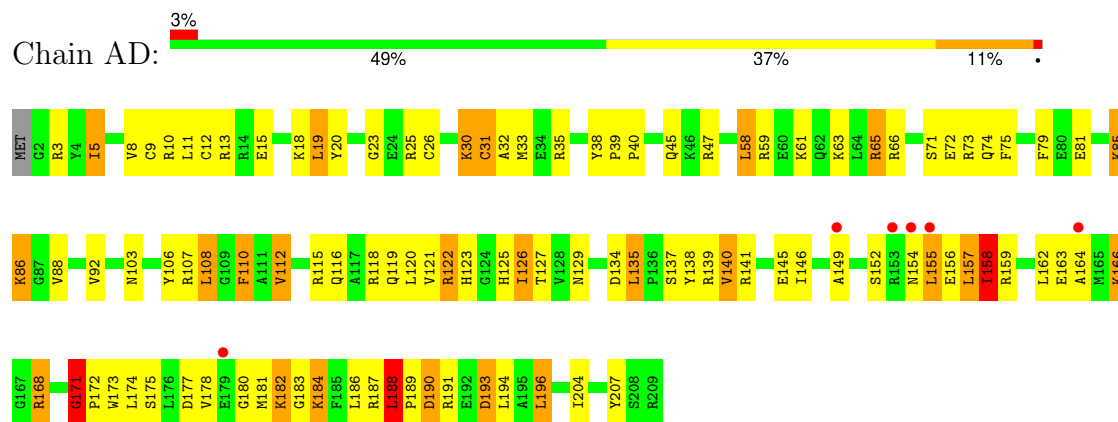
- Molecule 3: 30S Ribosomal Protein S3



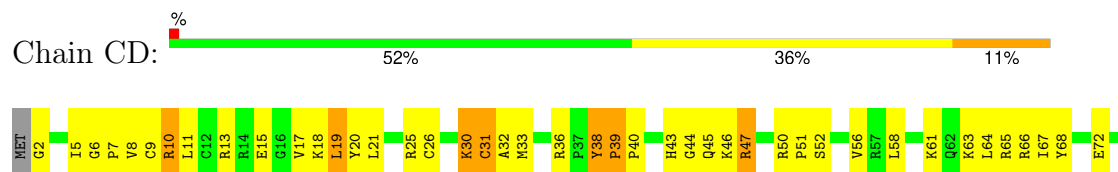
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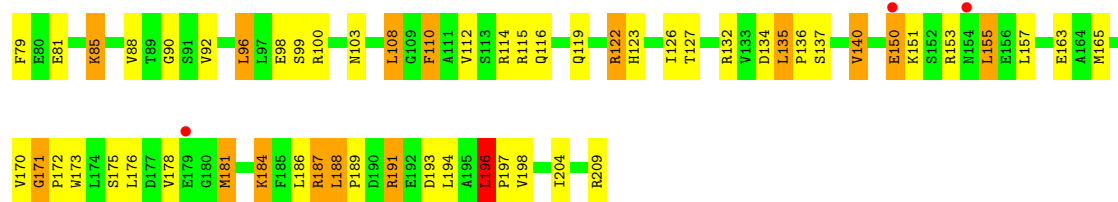


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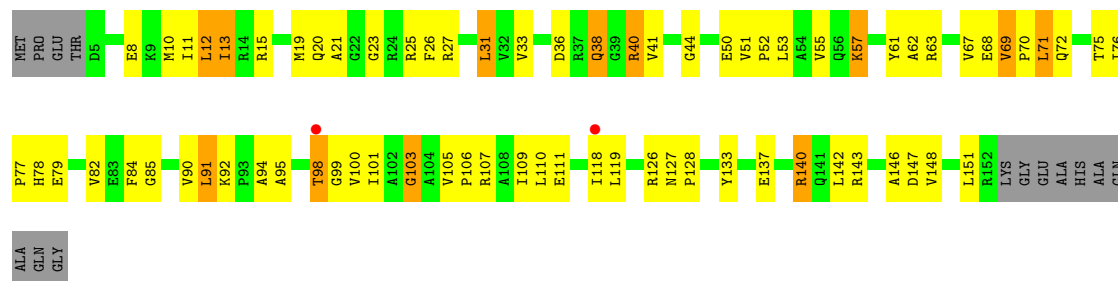


- Molecule 4: 30S Ribosomal Protein S4

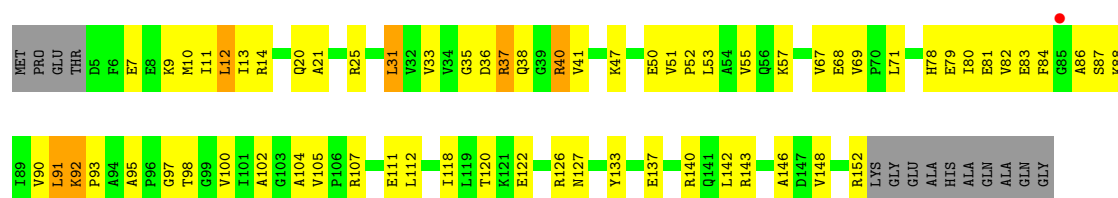




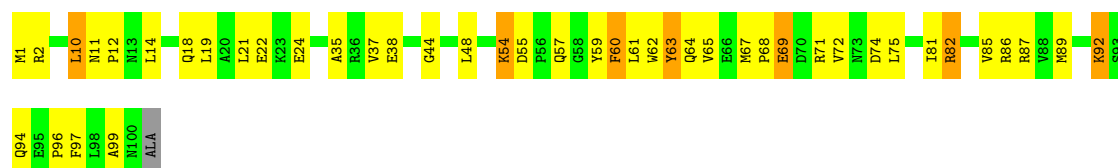
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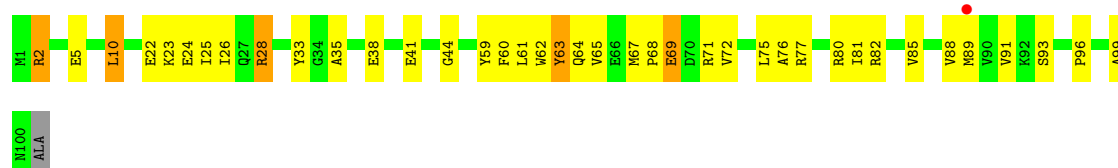
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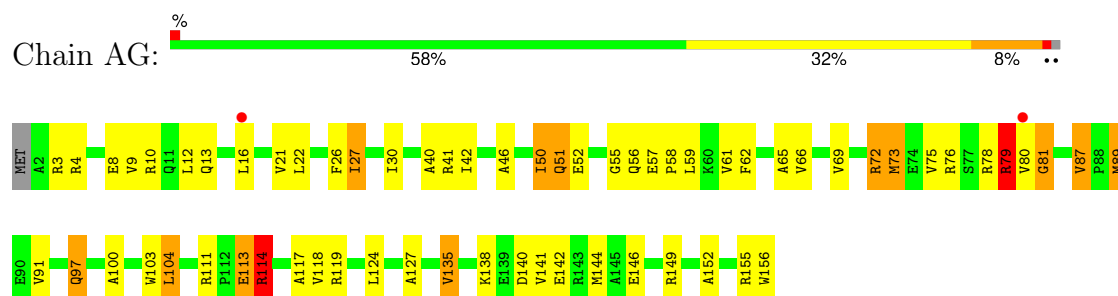
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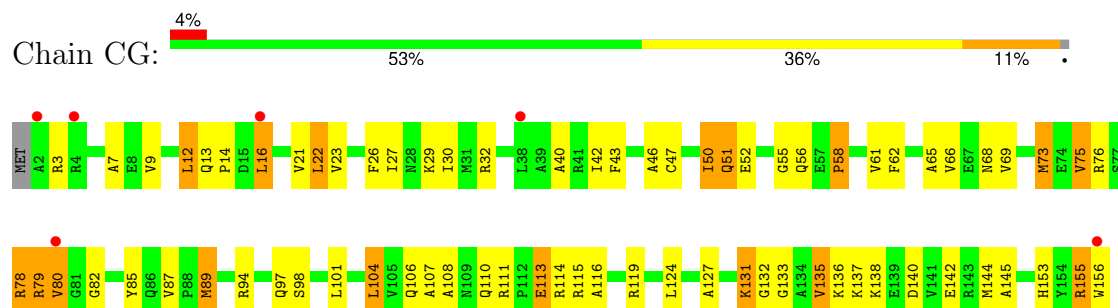
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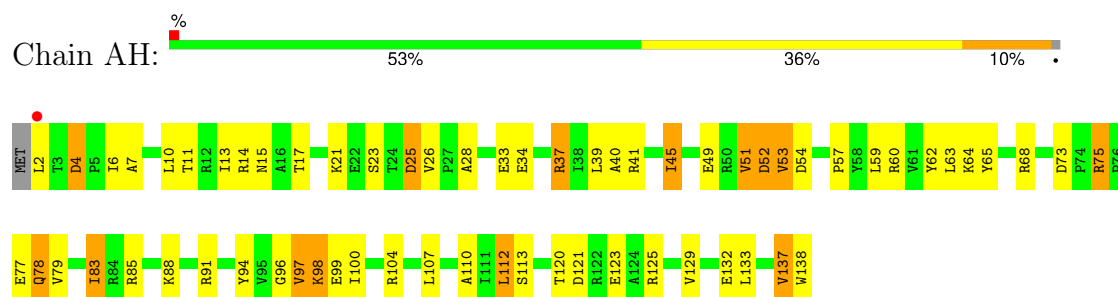
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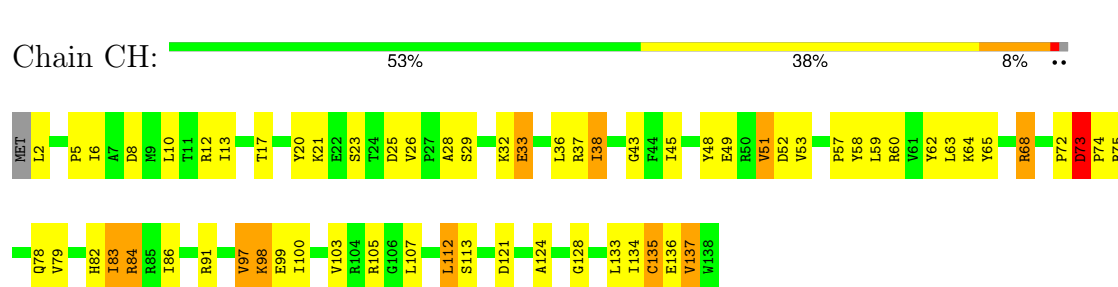
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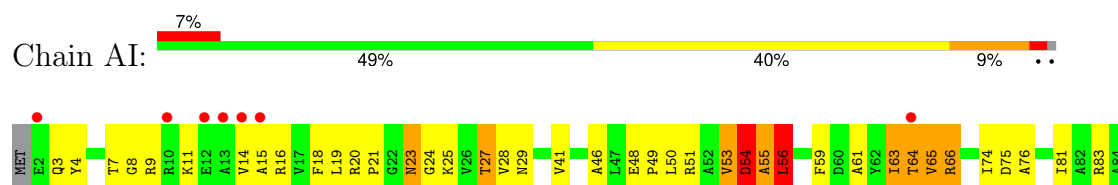
- Molecule 8: 30S Ribosomal Protein S8



- Molecule 8: 30S Ribosomal Protein S8

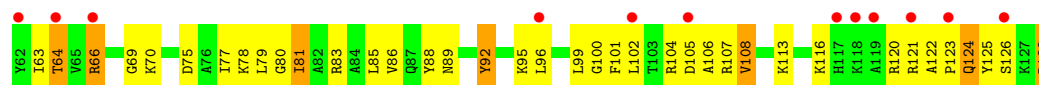
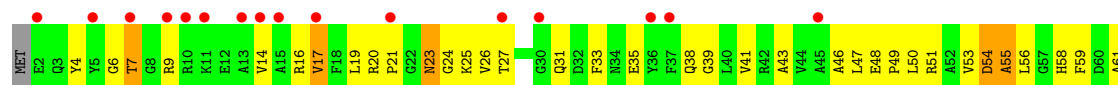


- Molecule 9: 30S Ribosomal Protein S9

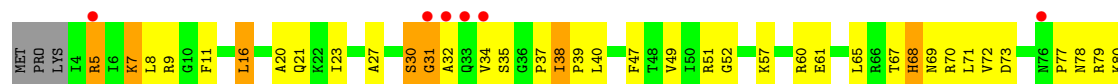




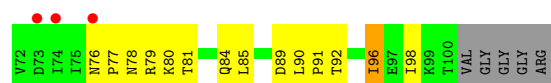
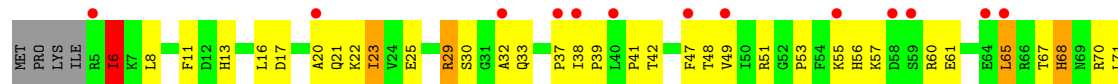
• Molecule 9: 30S Ribosomal Protein S9



• Molecule 10: 30S Ribosomal Protein S10



• Molecule 10: 30S Ribosomal Protein S10

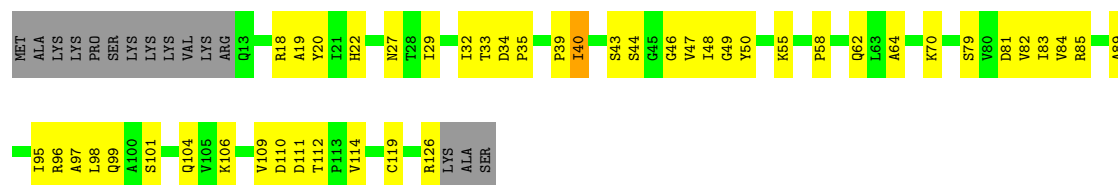


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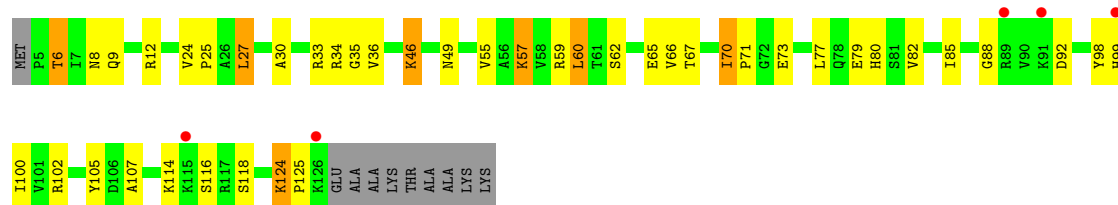


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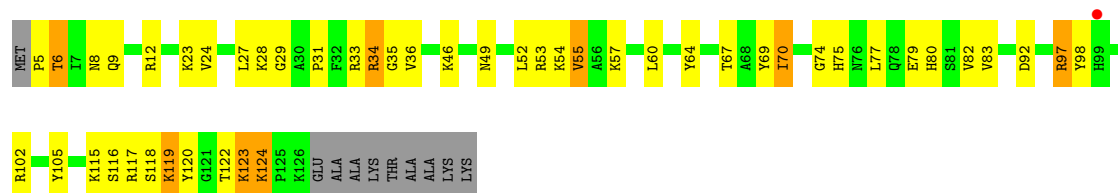




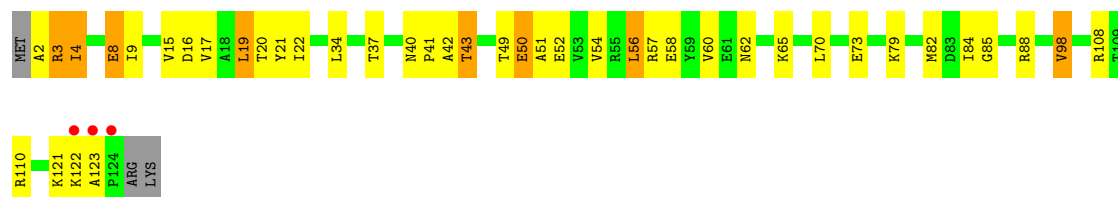
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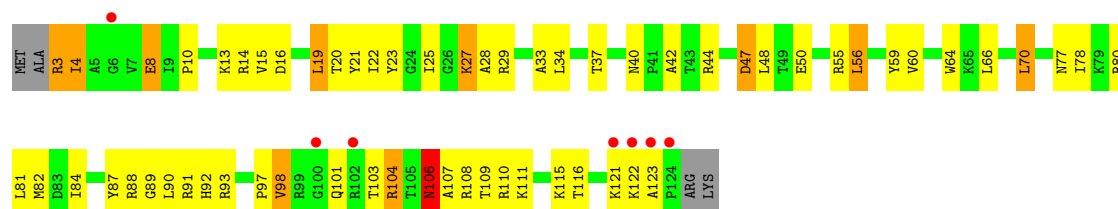
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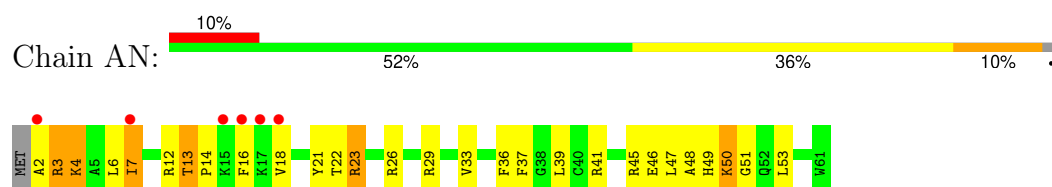
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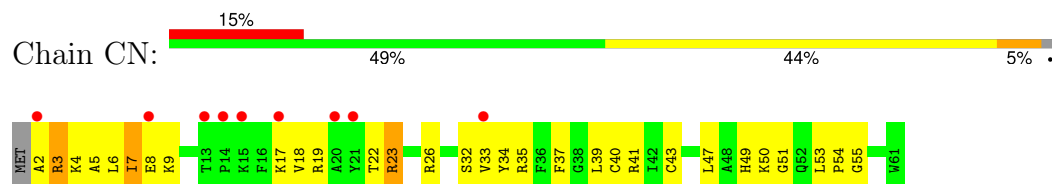
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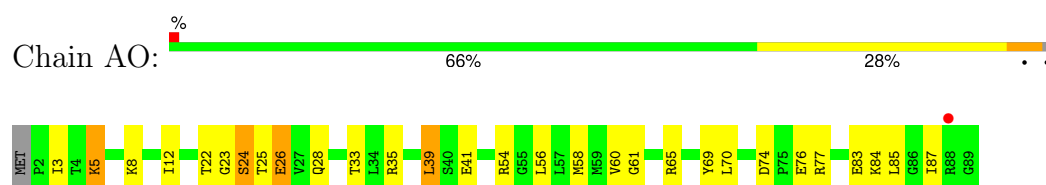
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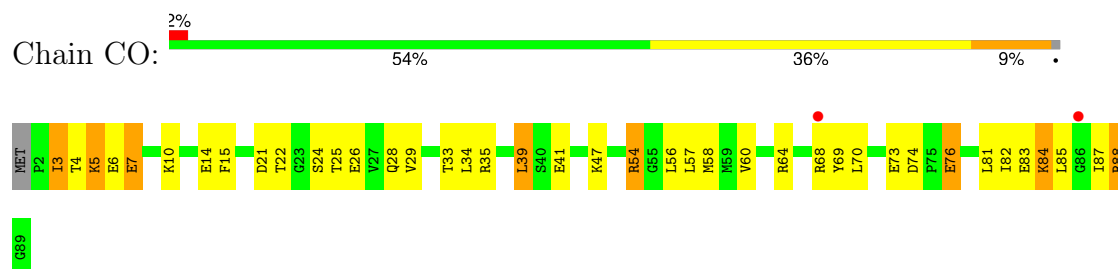
- Molecule 14: 30S Ribosomal Protein S14



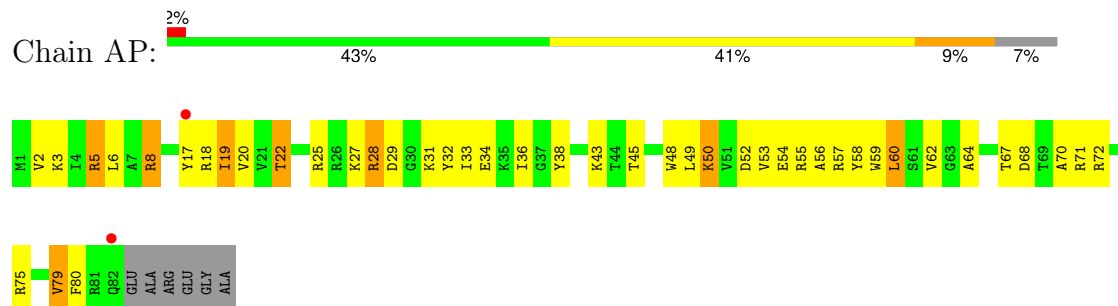
- Molecule 15: 30S Ribosomal Protein S15



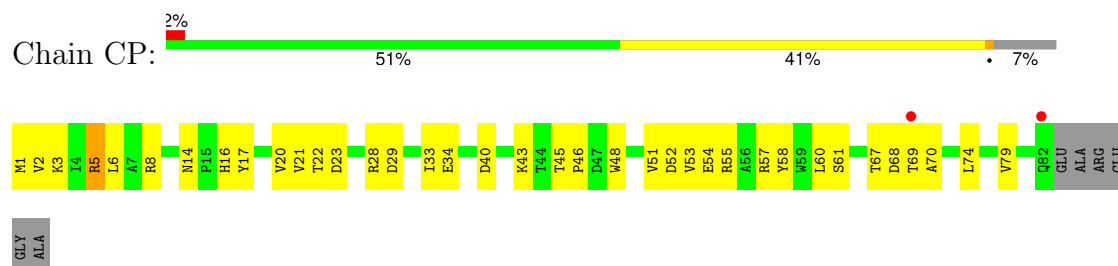
- Molecule 15: 30S Ribosomal Protein S15



- Molecule 16: 30S Ribosomal Protein S16



- Molecule 16: 30S Ribosomal Protein S16



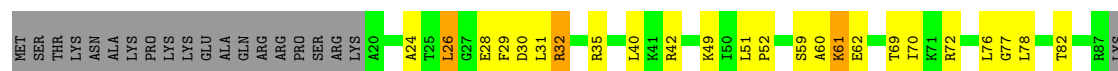
- Molecule 17: 30S Ribosomal Protein S17



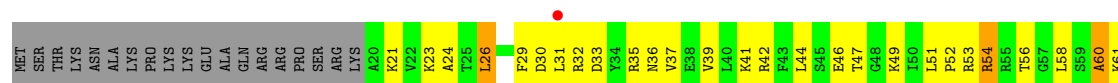
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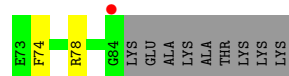
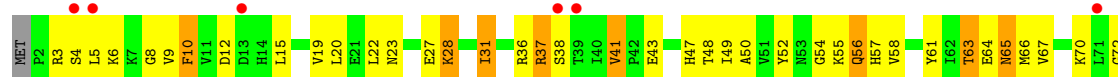
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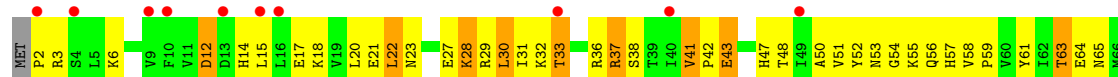
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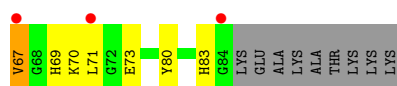


- Molecule 19: 30S Ribosomal Protein S19

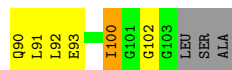
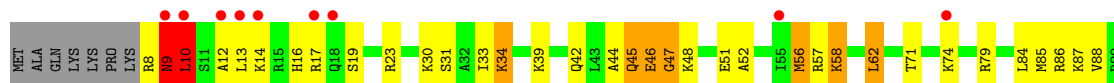


- Molecule 19: 30S Ribosomal Protein S19





• Molecule 20: 30S Ribosomal Protein S20



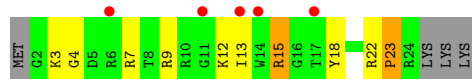
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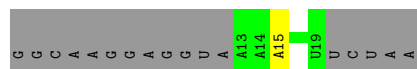
• Molecule 21: 30S Ribosomal Protein THX



• Molecule 21: 30S Ribosomal Protein THX



• Molecule 22: mRNA



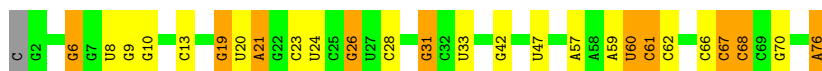
• Molecule 22: mRNA





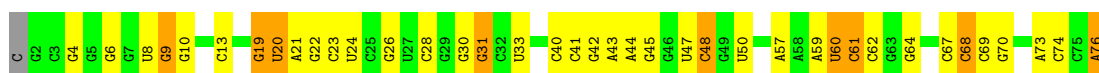
• Molecule 23: P-site tRNA

Chain AX: 65% 21% 13%



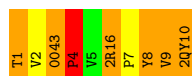
• Molecule 23: P-site tRNA

Chain CX: 48% 39% 12%



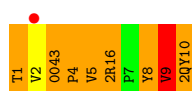
• Molecule 24: GE82832

Chain AW: 10% 20% 60% 10%



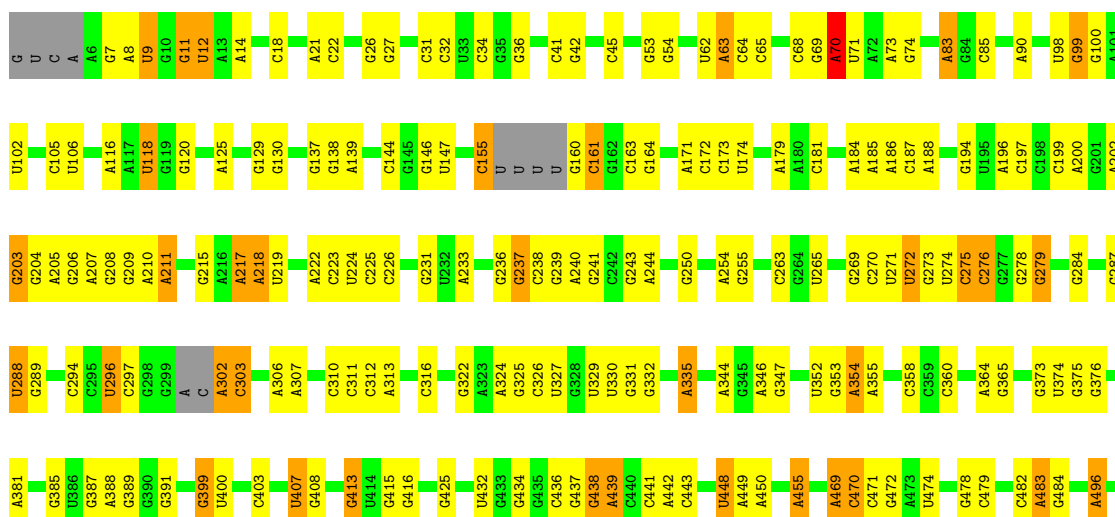
• Molecule 24: GE82832

Chain CW: 10% 10% 70% 10%



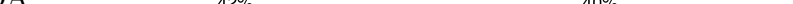
• Molecule 25: 23S Ribosomal RNA

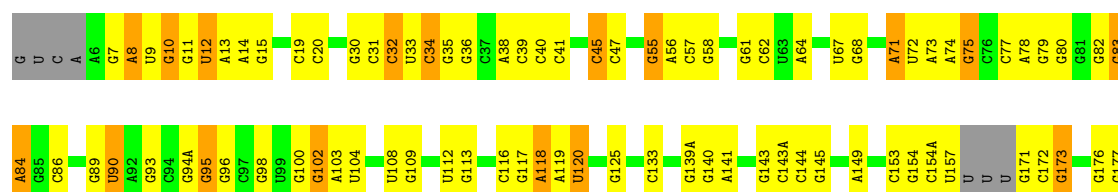
Chain BA: 54% 32% 8% 6%



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C1792	C1805	C1710	A1699	C1590	A1507	A1395	G1296	G1182	A1036	C943	U858	A752	G672	U592	A505
G1793	U1806	A1711	A1700	A1591	A1507	A1395	C1297	G1183	G1039	C944	U860	A753	G754	A594	A506
G1795	U1809	A1712	A1702	C1593	G1513	U1398	G1298	G1184	A1042	A945	C861	G762	C677	A595	A508
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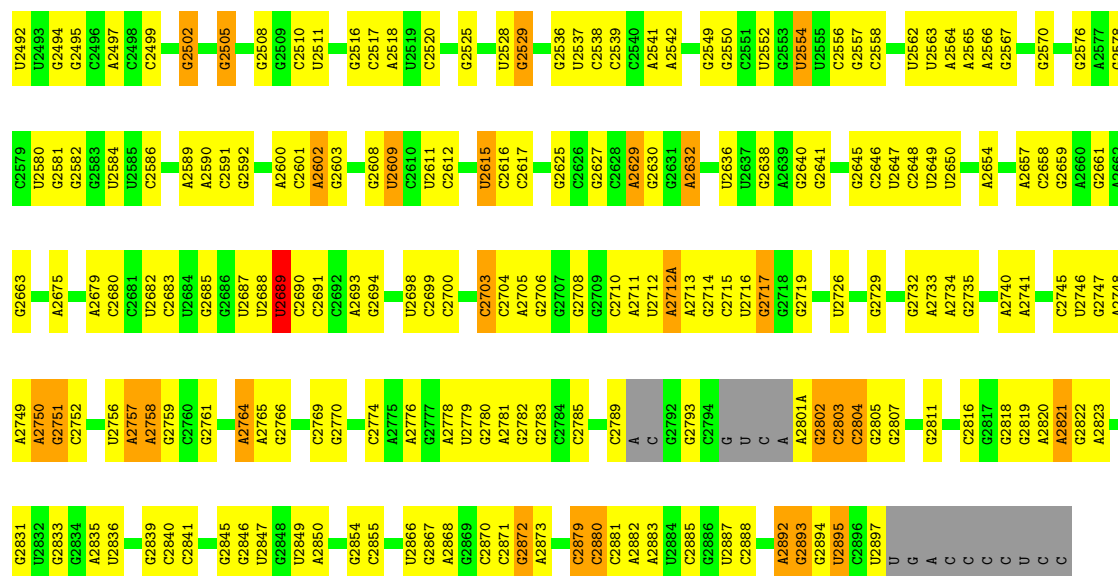
- Molecule 25: 23S Ribosomal RNA

Chain DA: 



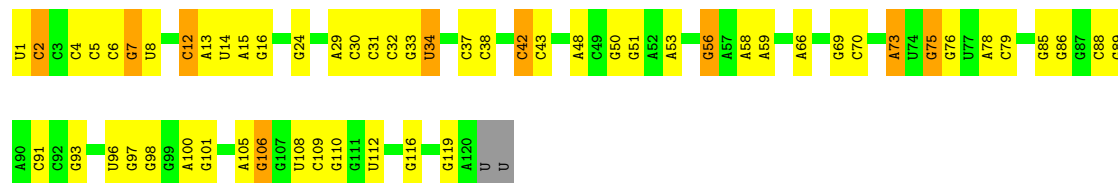


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G2489	G2415	A2271	C	C	U	C2044	A1966	G1878	C1791	U1693	A1596	G1518	A1448	A1448
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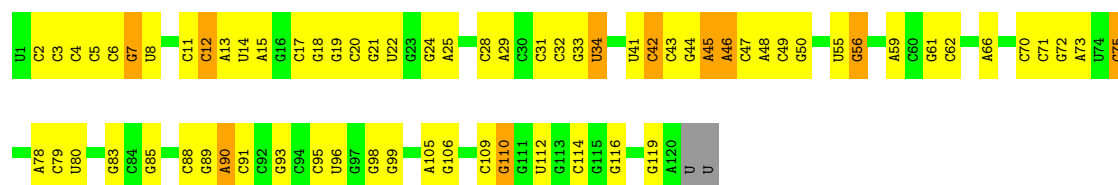
• Molecule 26: 5S Ribosomal RNA

Chain BB: 52% 39% 7% •



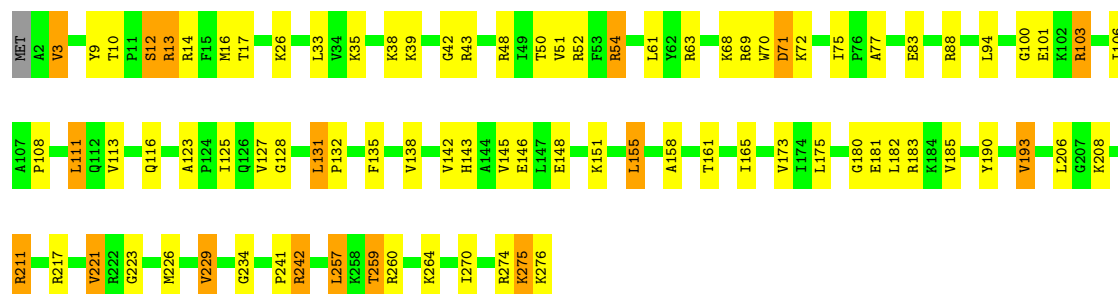
• Molecule 26: 5S Ribosomal RNA

Chain DB: 42% 48% 8% •

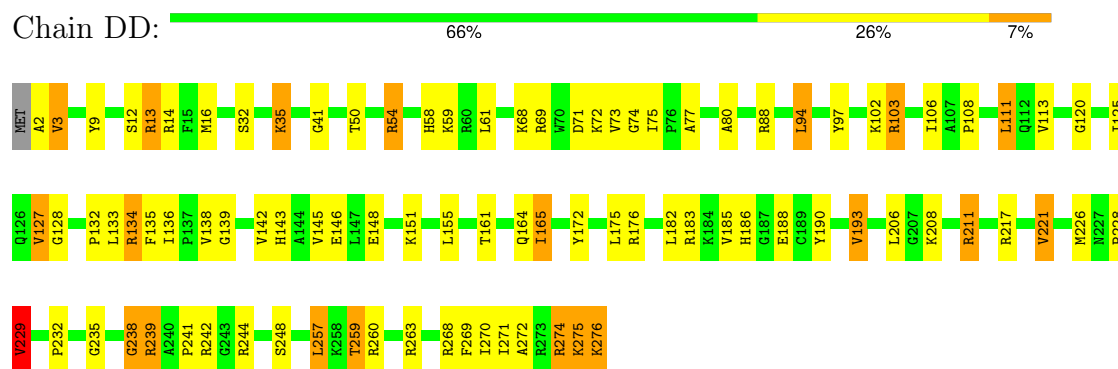


• Molecule 27: 50S Ribosomal Protein L2

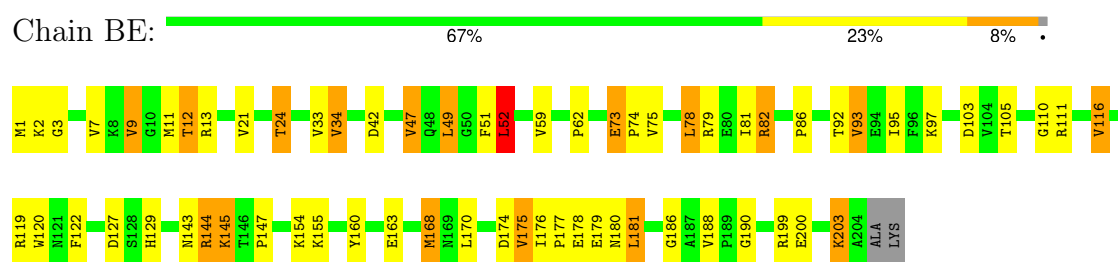
Chain BD: 68% 25% 6% •



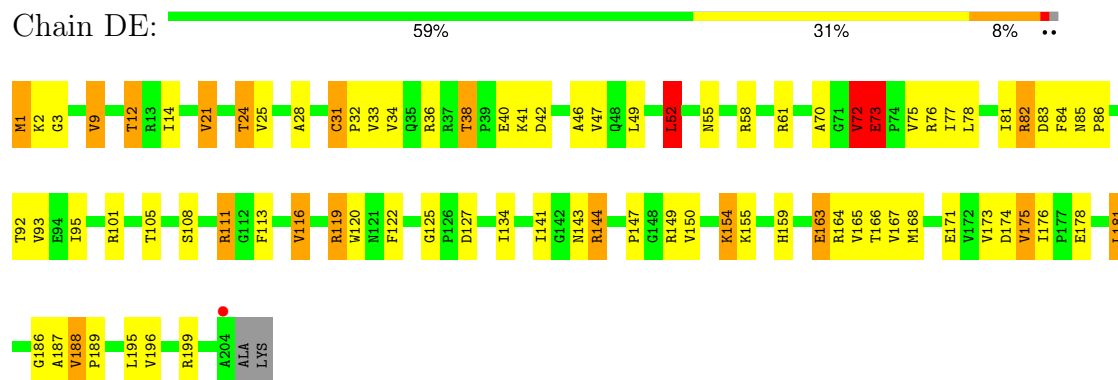
• Molecule 27: 50S Ribosomal Protein L2



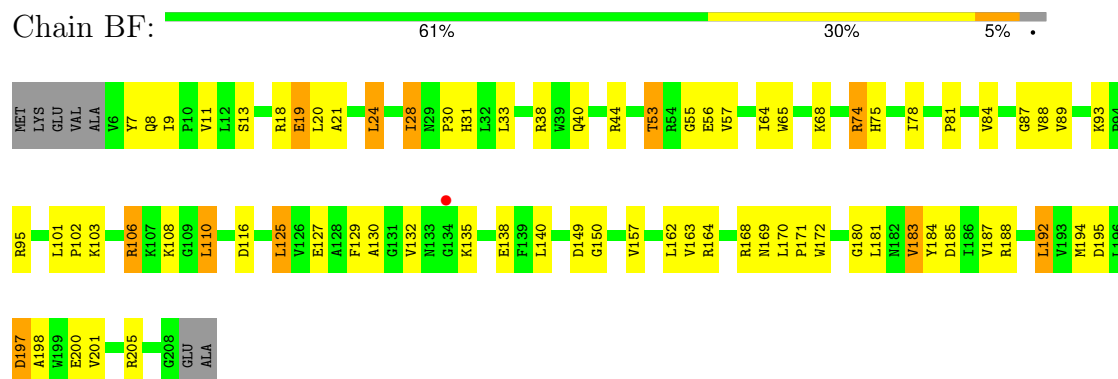
• Molecule 28: 50S Ribosomal Protein L3



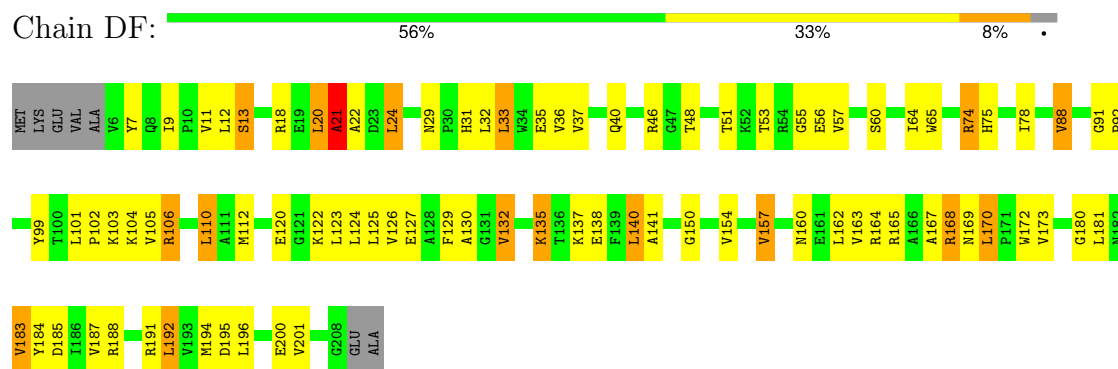
• Molecule 28: 50S Ribosomal Protein L3



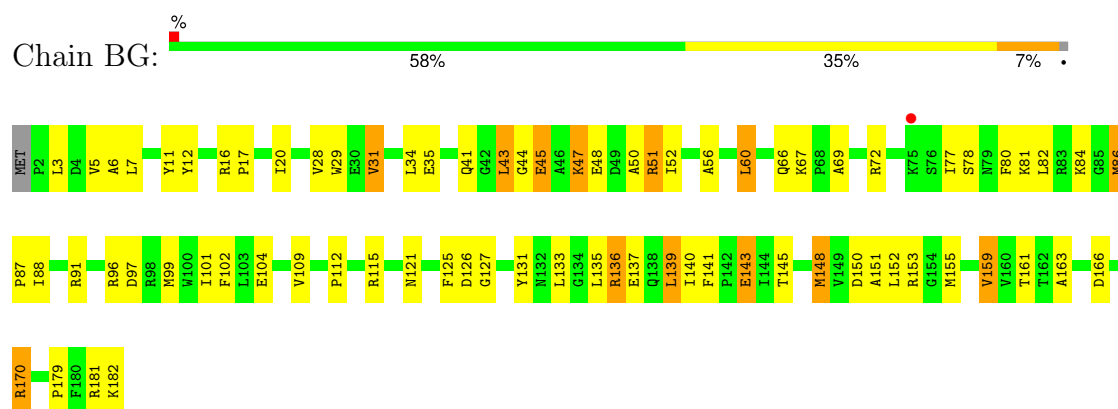
• Molecule 29: 50S Ribosomal Protein L4



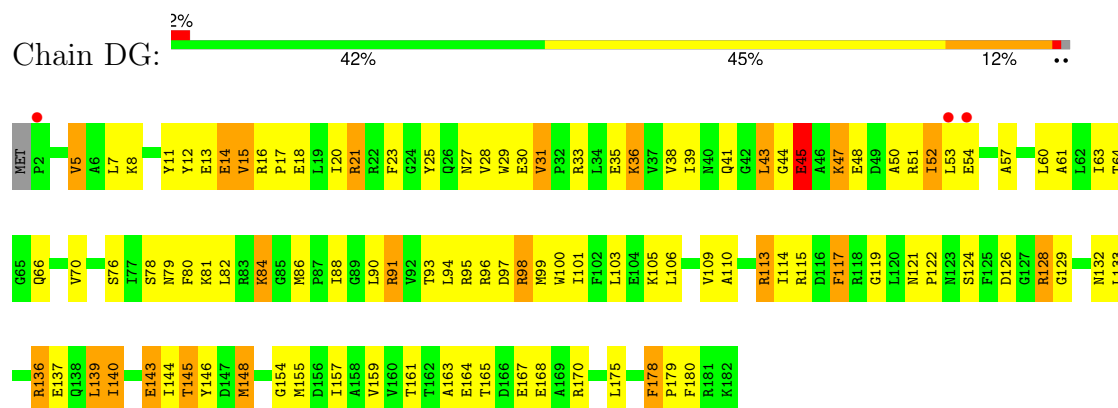
- Molecule 29: 50S Ribosomal Protein L4



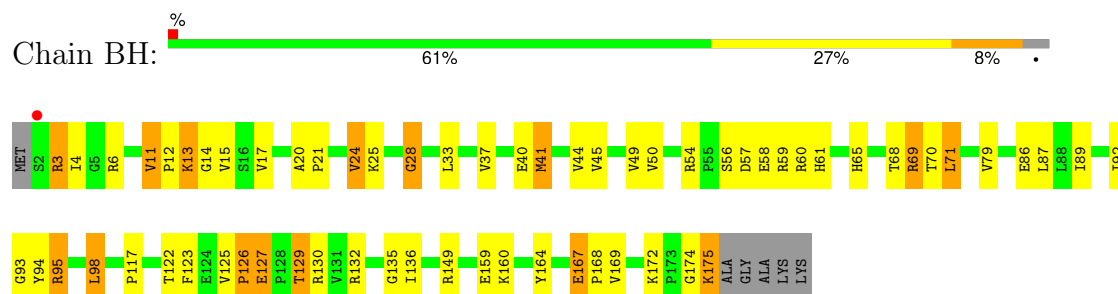
- Molecule 30: 50S Ribosomal Protein L5



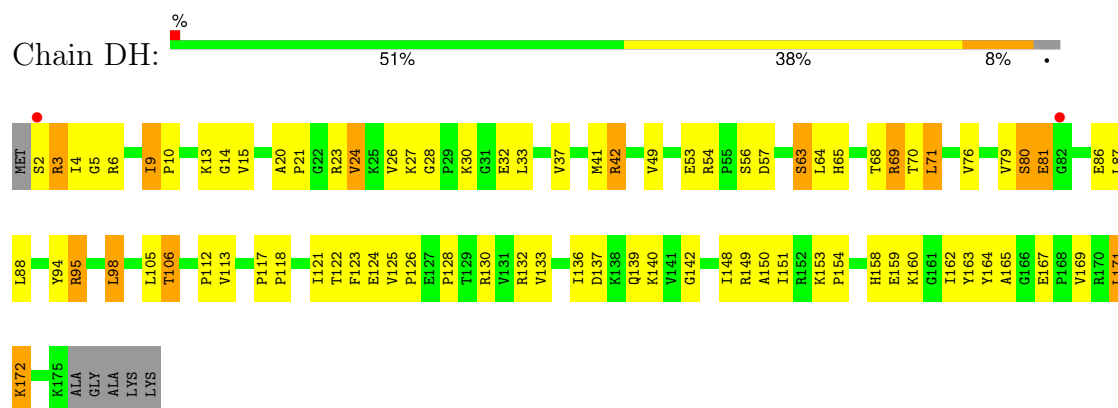
- Molecule 30: 50S Ribosomal Protein L5



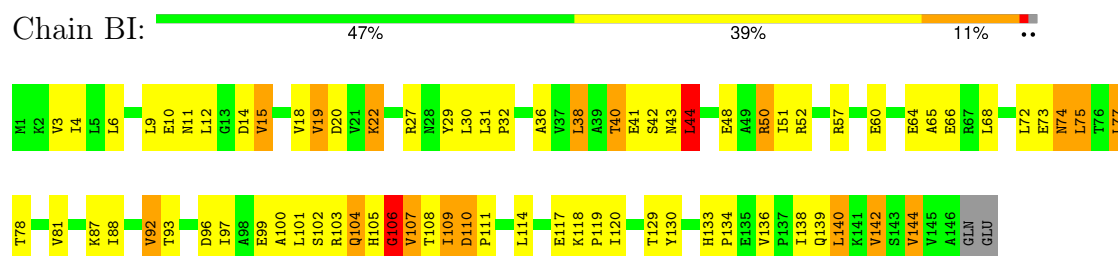
- Molecule 31: 50S Ribosomal Protein L6



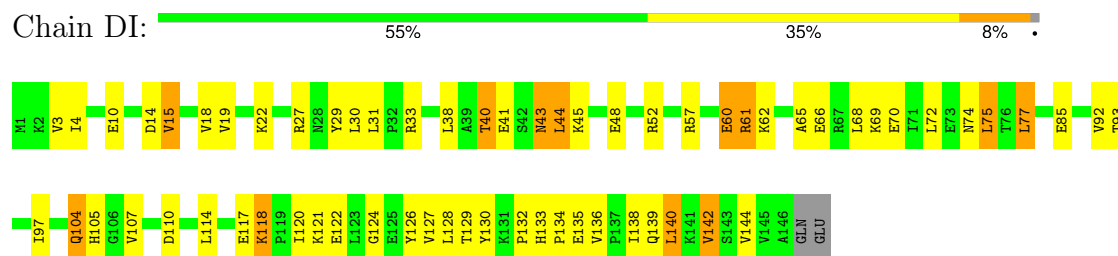
- Molecule 31: 50S Ribosomal Protein L6



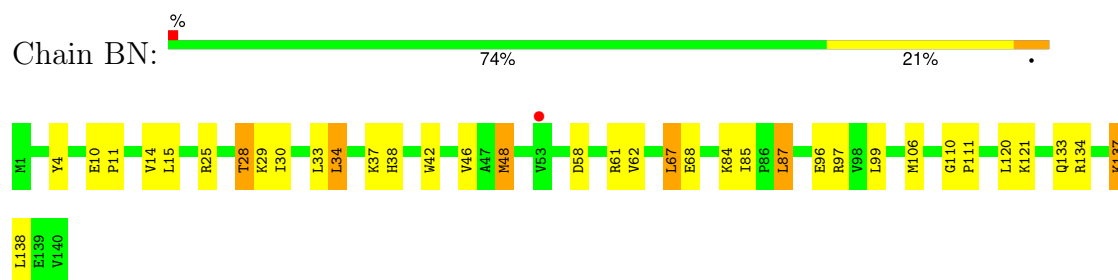
- Molecule 32: 50S Ribosomal Protein L9



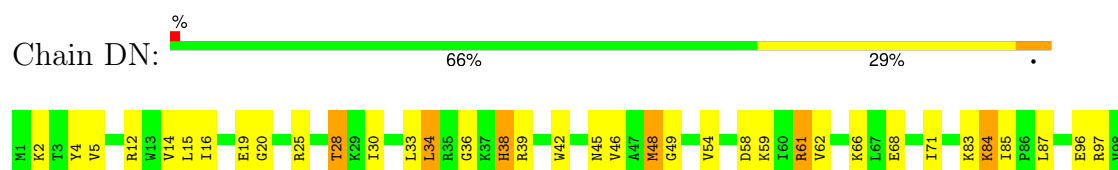
- Molecule 32: 50S Ribosomal Protein L9



- Molecule 33: 50S Ribosomal Protein L13



- Molecule 33: 50S Ribosomal Protein L13





• Molecule 34: 50S Ribosomal Protein L14

Chain BO: 68% 28% .



• Molecule 34: 50S Ribosomal Protein L14

Chain DO: 57% 39% .



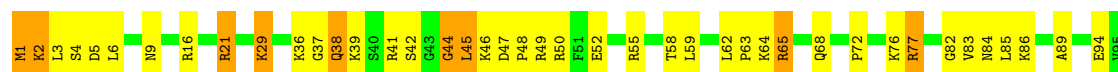
• Molecule 35: 50S Ribosomal Protein L15

Chain BP: 67% 27% 5% ..



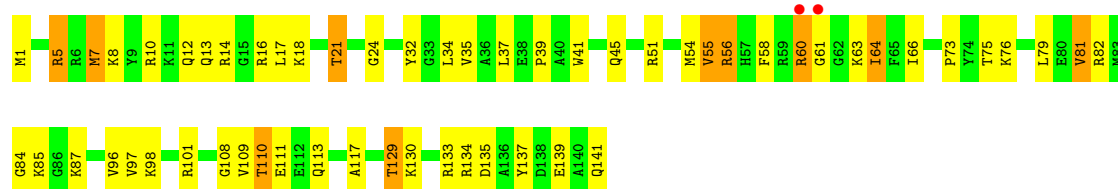
• Molecule 35: 50S Ribosomal Protein L15

Chain DP: 59% 32% 9% .

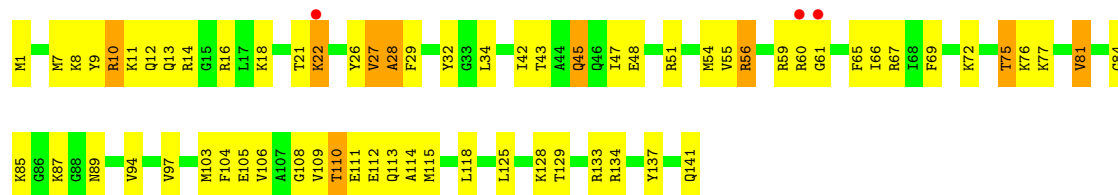


• Molecule 36: 50S Ribosomal Protein L16

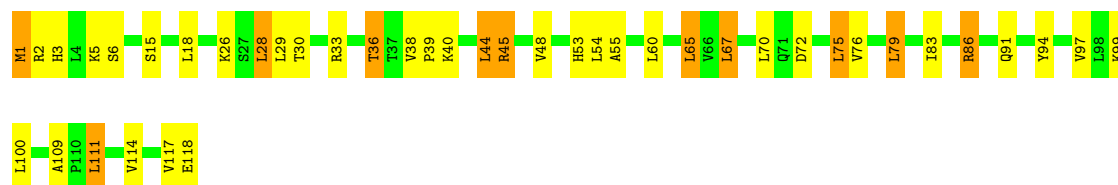
Chain BQ: 60% 33% 7%



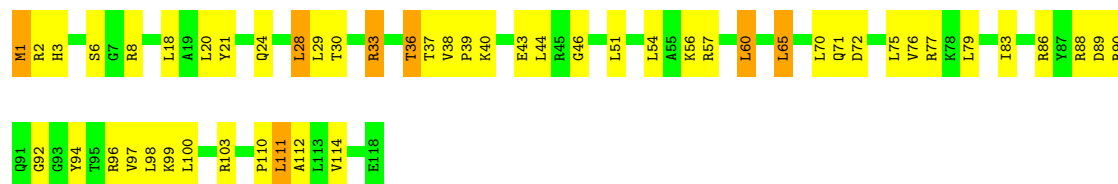
• Molecule 36: 50S Ribosomal Protein L16



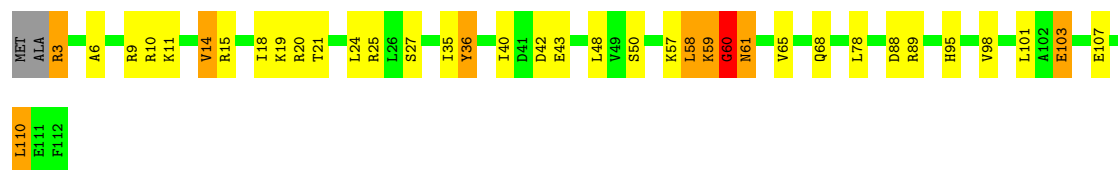
• Molecule 37: 50S Ribosomal Protein L17



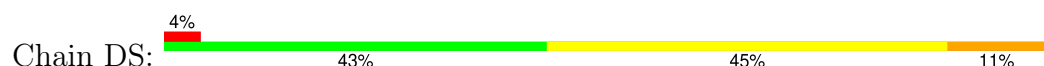
• Molecule 37: 50S Ribosomal Protein L17

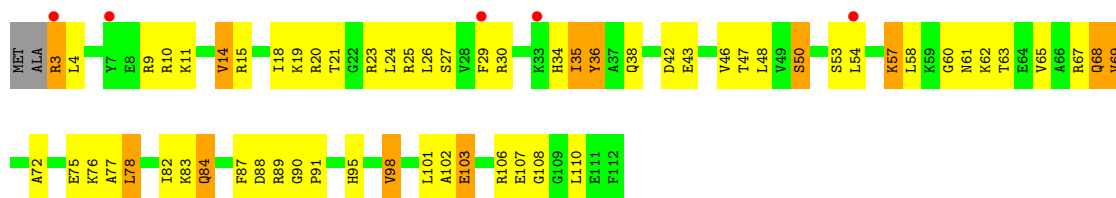


• Molecule 38: 50S Ribosomal Protein L18



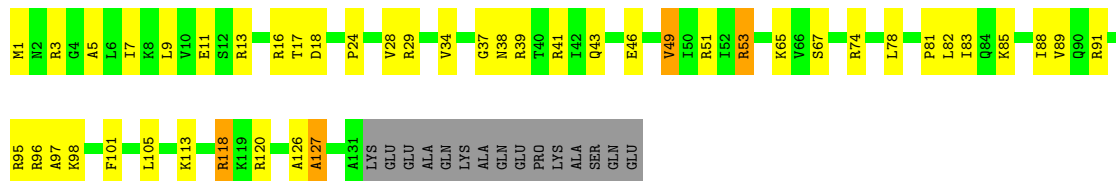
• Molecule 38: 50S Ribosomal Protein L18





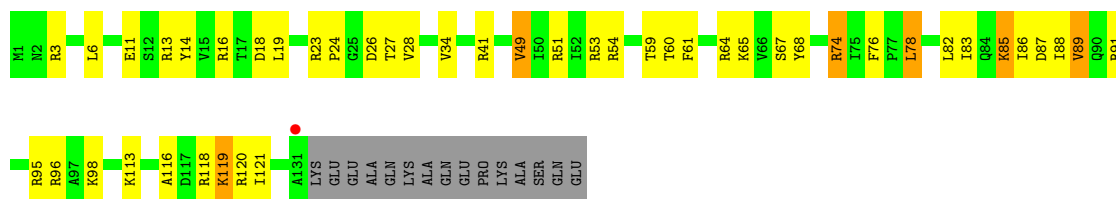
• Molecule 39: 50S Ribosomal Protein L19

Chain BT: 59% 28% 10%



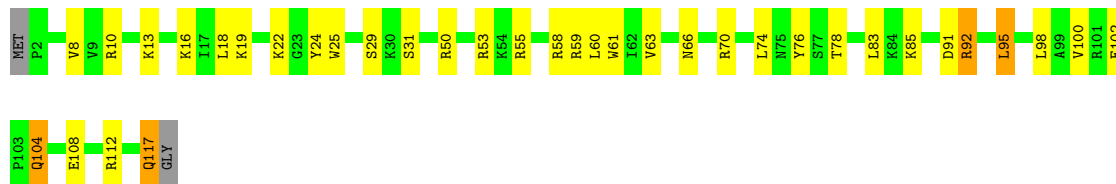
• Molecule 39: 50S Ribosomal Protein L19

Chain DT: 58% 27% 10%



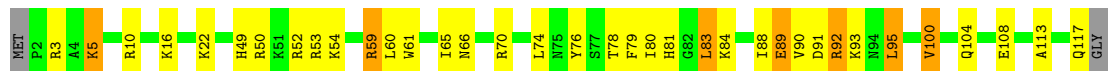
• Molecule 40: 50S Ribosomal Protein L20

Chain BU: 68% 27% 6%



• Molecule 40: 50S Ribosomal Protein L20

Chain DU: 68% 25% 6%

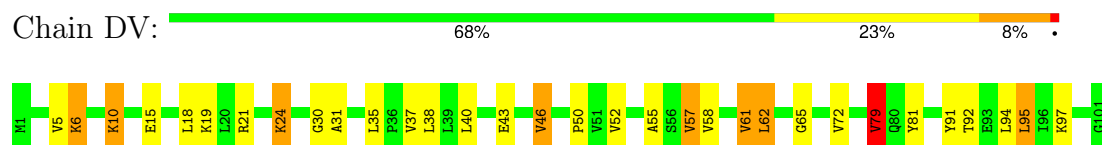


• Molecule 41: 50S Ribosomal Protein L21

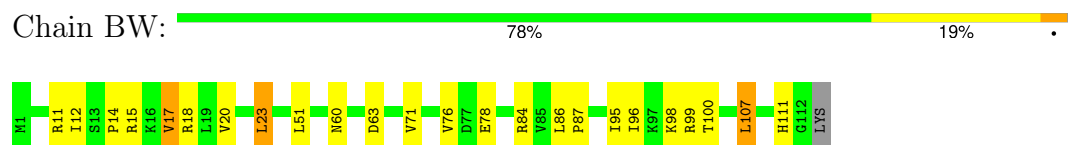
Chain BV: 77% 18% 5%



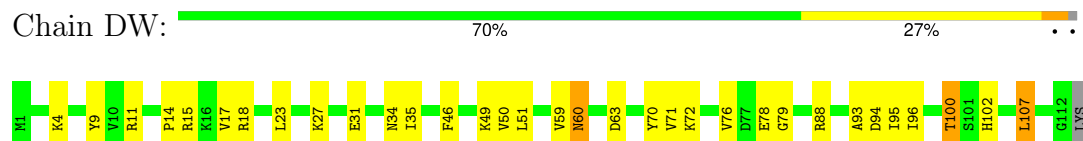
- Molecule 41: 50S Ribosomal Protein L21



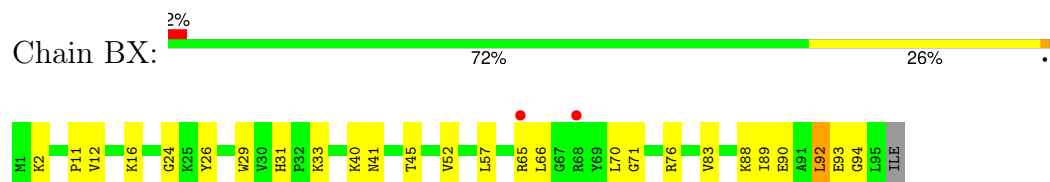
- Molecule 42: 50S Ribosomal Protein L22



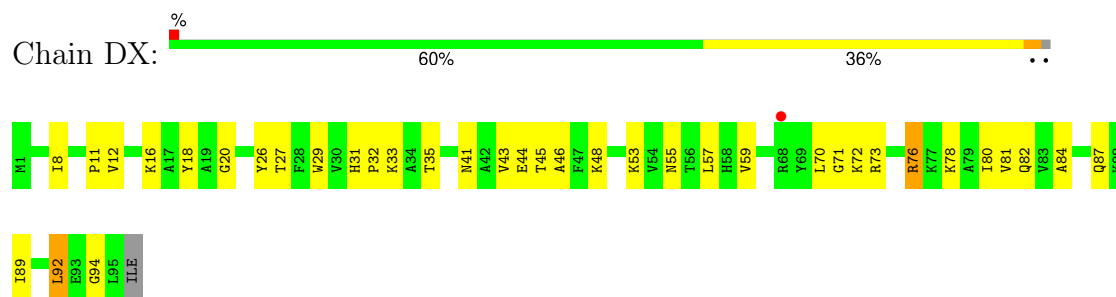
- Molecule 42: 50S Ribosomal Protein L22



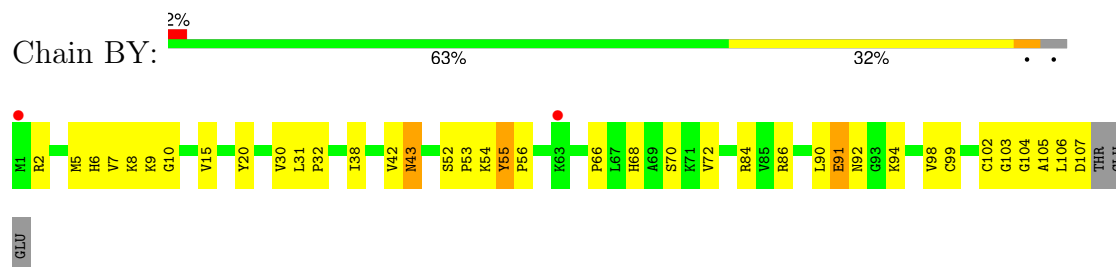
- Molecule 43: 50S Ribosomal Protein L23



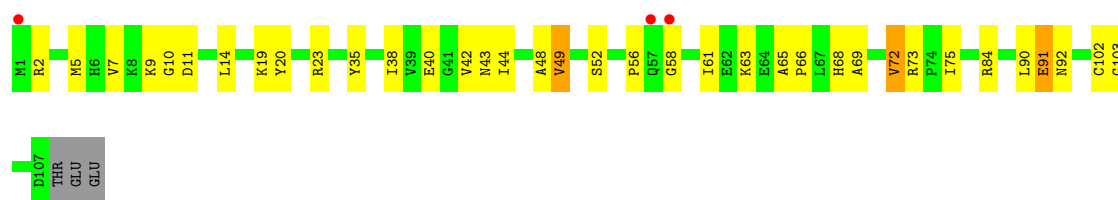
- Molecule 43: 50S Ribosomal Protein L23



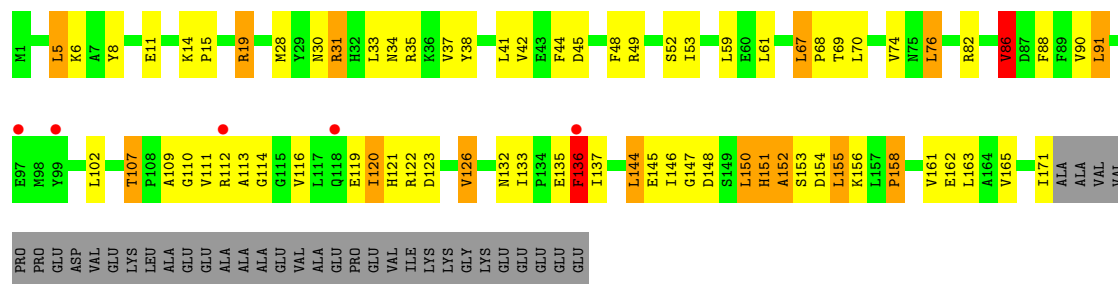
- Molecule 44: 50S Ribosomal Protein L24



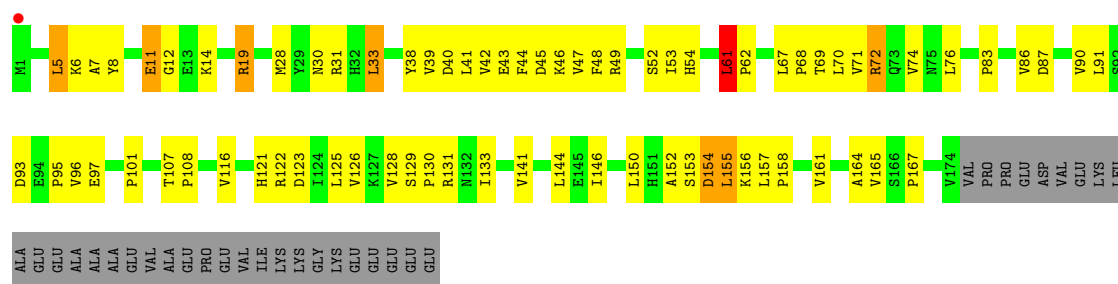
- Molecule 44: 50S Ribosomal Protein L24



• Molecule 45: 50S Ribosomal Protein L25



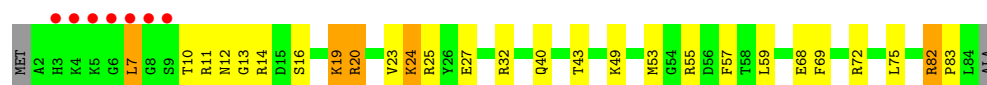
• Molecule 45: 50S Ribosomal Protein L25



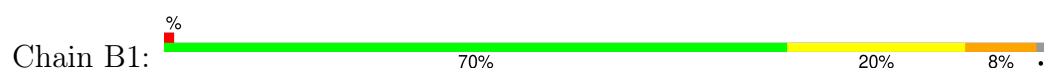
• Molecule 46: 50S Ribosomal Protein L27



• Molecule 46: 50S Ribosomal Protein L27



• Molecule 47: 50S Ribosomal Protein L28



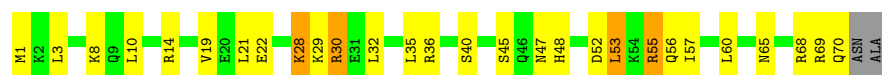
- Molecule 47: 50S Ribosomal Protein L28



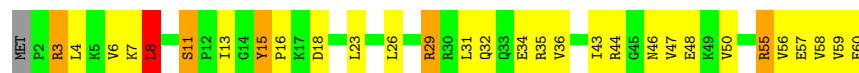
- Molecule 48: 50S Ribosomal Protein L29



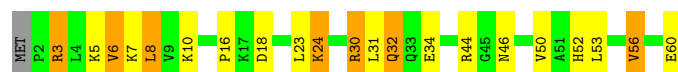
- Molecule 48: 50S Ribosomal Protein L29



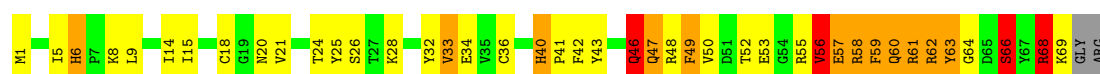
- Molecule 49: 50S Ribosomal Protein L30



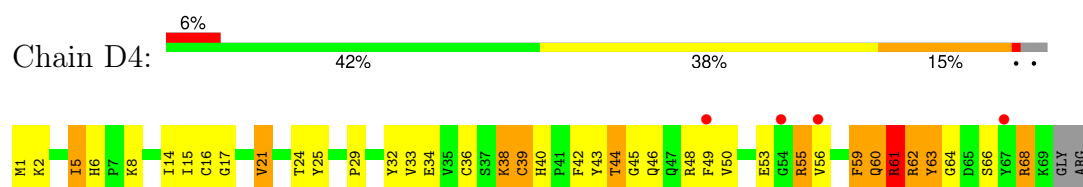
- Molecule 49: 50S Ribosomal Protein L30



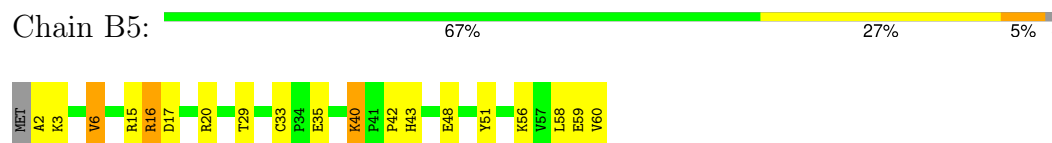
- Molecule 50: 50S Ribosomal Protein L31



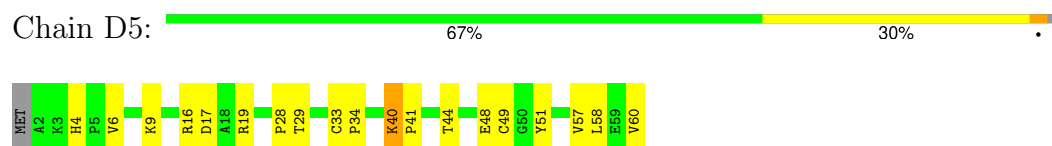
- Molecule 50: 50S Ribosomal Protein L31



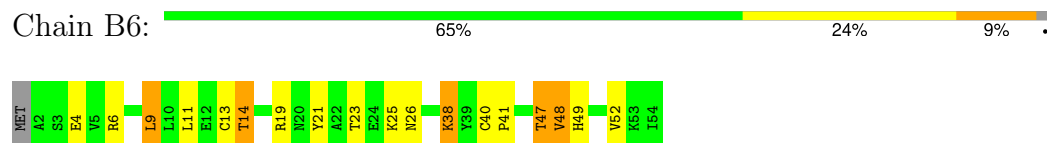
• Molecule 51: 50S Ribosomal Protein L32



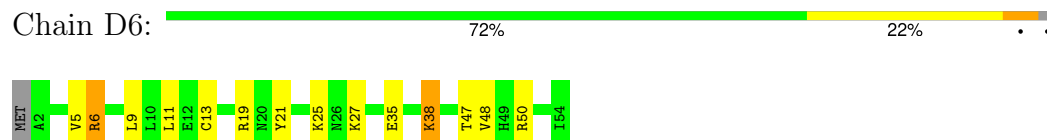
• Molecule 51: 50S Ribosomal Protein L32



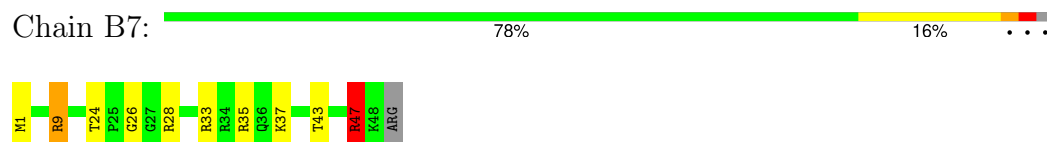
• Molecule 52: 50S Ribosomal Protein L33



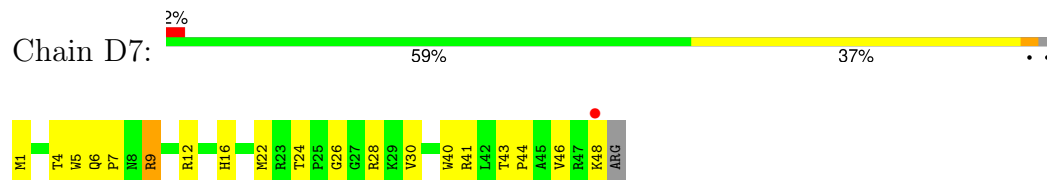
• Molecule 52: 50S Ribosomal Protein L33



• Molecule 53: 50S Ribosomal Protein L34



• Molecule 53: 50S Ribosomal Protein L34

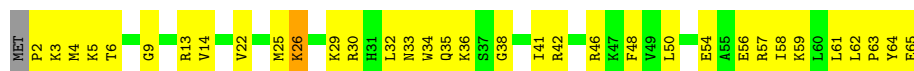


• Molecule 54: 50S Ribosomal Protein L35

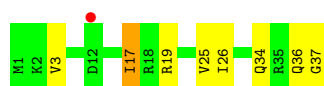
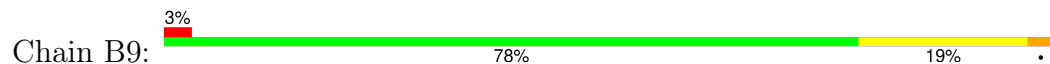




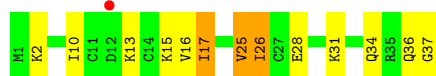
- Molecule 54: 50S Ribosomal Protein L35



- Molecule 55: 50S Ribosomal Protein L36



- Molecule 55: 50S Ribosomal Protein L36



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	209.68Å 450.64Å 622.54Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.68 – 3.10 49.68 – 3.10	Depositor EDS
% Data completeness (in resolution range)	98.2 (49.68-3.10) 98.1 (49.68-3.10)	Depositor EDS
R_{merge}	0.20	Depositor
R_{sym}	0.25	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.32 (at 3.12Å)	Xtriage
Refinement program	PHENIX 1.8.2_1309	Depositor
R, R_{free}	0.203 , 0.260 0.203 , 0.258	Depositor DCC
R_{free} test set	51894 reflections (4.92%)	wwPDB-VP
Wilson B-factor (Å ²)	71.0	Xtriage
Anisotropy	0.077	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 55.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.28$	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 1.83% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	0.41	0/36038	0.64	2/56244 (0.0%)
1	CA	0.41	0/36170	0.64	11/56452 (0.0%)
2	AB	0.62	1/1881 (0.1%)	1.19	19/2542 (0.7%)
2	CB	0.70	1/1860 (0.1%)	1.18	15/2518 (0.6%)
3	AC	0.62	0/1576	1.01	2/2130 (0.1%)
3	CC	0.65	0/1566	1.09	7/2119 (0.3%)
4	AD	0.64	0/1689	1.12	10/2267 (0.4%)
4	CD	0.61	0/1704	1.08	12/2284 (0.5%)
5	AE	0.63	0/1145	1.11	9/1543 (0.6%)
5	CE	0.62	0/1149	1.17	11/1548 (0.7%)
6	AF	0.58	0/819	0.99	1/1111 (0.1%)
6	CF	0.64	0/829	1.03	2/1123 (0.2%)
7	AG	0.62	0/1250	1.05	4/1679 (0.2%)
7	CG	0.61	0/1254	1.09	4/1683 (0.2%)
8	AH	0.58	0/1108	1.03	4/1494 (0.3%)
8	CH	0.57	0/1108	1.08	3/1494 (0.2%)
9	AI	0.59	0/1002	1.05	3/1346 (0.2%)
9	CI	0.72	0/997	1.09	5/1343 (0.4%)
10	AJ	0.69	0/722	1.15	4/982 (0.4%)
10	CJ	0.72	0/727	1.10	5/988 (0.5%)
11	AK	0.59	0/844	1.03	1/1145 (0.1%)
11	CK	0.58	0/848	0.99	1/1149 (0.1%)
12	AL	0.65	0/946	1.04	5/1274 (0.4%)
12	CL	0.63	0/946	1.02	3/1274 (0.2%)
13	AM	0.56	0/969	1.04	2/1302 (0.2%)
13	CM	0.64	0/961	1.05	4/1291 (0.3%)
14	AN	0.56	0/501	1.02	2/664 (0.3%)
14	CN	0.65	0/501	1.03	0/664
15	AO	0.61	0/739	1.03	1/985 (0.1%)
15	CO	0.57	0/739	1.06	3/985 (0.3%)
16	AP	0.62	0/697	1.08	4/939 (0.4%)
16	CP	0.61	0/693	1.01	2/935 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.57	0/836	0.93	0/1117
17	CQ	0.55	0/836	1.00	3/1117 (0.3%)
18	AR	0.63	0/560	0.96	1/746 (0.1%)
18	CR	0.61	0/560	0.96	0/746
19	AS	0.64	0/667	1.09	3/900 (0.3%)
19	CS	0.72	0/661	1.16	1/893 (0.1%)
20	AT	0.62	0/730	1.18	2/965 (0.2%)
20	CT	0.58	0/729	1.04	1/965 (0.1%)
21	AU	0.56	0/203	0.98	0/266
21	CU	0.63	0/203	1.07	0/266
22	AV	0.51	0/127	0.72	0/198
22	CV	0.53	0/126	0.68	0/195
23	AX	0.41	0/1813	0.63	1/2825 (0.0%)
23	CX	0.44	0/1813	0.76	1/2825 (0.0%)
24	AW	0.47	0/20	0.84	0/23
24	CW	0.39	0/20	0.67	0/23
25	BA	0.57	0/65892	0.68	10/102850 (0.0%)
25	DA	0.43	0/65466	0.65	2/102184 (0.0%)
26	BB	0.45	0/2878	0.60	0/4490
26	DB	0.47	0/2878	0.67	0/4490
27	BD	0.87	0/2186	1.12	7/2944 (0.2%)
27	DD	0.75	0/2186	1.11	9/2944 (0.3%)
28	BE	0.91	0/1592	1.14	7/2149 (0.3%)
28	DE	0.71	0/1592	1.22	17/2149 (0.8%)
29	BF	0.90	1/1619 (0.1%)	1.09	3/2193 (0.1%)
29	DF	0.63	0/1615	1.12	7/2188 (0.3%)
30	BG	0.62	0/1450	1.06	5/1959 (0.3%)
30	DG	0.68	0/1449	1.18	8/1958 (0.4%)
31	BH	0.80	0/1356	1.14	14/1834 (0.8%)
31	DH	0.69	0/1356	1.09	3/1834 (0.2%)
32	BI	0.67	0/1100	1.10	11/1501 (0.7%)
32	DI	0.63	0/1076	1.15	7/1471 (0.5%)
33	BN	0.87	1/1144 (0.1%)	1.06	4/1543 (0.3%)
33	DN	0.64	0/1144	1.11	4/1543 (0.3%)
34	BO	0.84	0/943	1.08	0/1269
34	DO	0.70	0/943	1.04	0/1269
35	BP	0.84	0/1152	1.07	5/1533 (0.3%)
35	DP	0.62	0/1152	1.11	4/1533 (0.3%)
36	BQ	0.85	0/1143	1.09	3/1527 (0.2%)
36	DQ	0.73	0/1143	1.11	3/1527 (0.2%)
37	BR	0.84	0/982	0.99	0/1312
37	DR	0.66	0/982	0.93	0/1312
38	BS	0.68	0/887	1.06	2/1180 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DS	0.59	0/880	1.06	1/1172 (0.1%)
39	BT	0.80	0/1105	1.07	0/1477
39	DT	0.62	0/1097	1.04	1/1468 (0.1%)
40	BU	0.91	0/977	1.02	3/1301 (0.2%)
40	DU	0.69	0/977	0.98	0/1301
41	BV	0.87	0/782	1.09	3/1049 (0.3%)
41	DV	0.66	0/782	1.00	1/1049 (0.1%)
42	BW	1.03	0/897	1.06	1/1205 (0.1%)
42	DW	0.72	0/897	1.08	0/1205
43	BX	0.85	0/764	1.06	2/1025 (0.2%)
43	DX	0.65	0/764	1.05	0/1025
44	BY	0.83	0/819	1.16	6/1095 (0.5%)
44	DY	0.63	0/819	1.11	3/1095 (0.3%)
45	BZ	0.71	0/1379	1.14	10/1873 (0.5%)
45	DZ	0.64	0/1390	1.10	5/1890 (0.3%)
46	B0	0.82	0/662	1.14	3/881 (0.3%)
46	D0	0.65	0/662	1.09	4/881 (0.5%)
47	B1	0.82	1/762 (0.1%)	1.05	2/1014 (0.2%)
47	D1	0.66	0/762	1.05	0/1014
48	B2	0.78	0/590	1.13	0/781
48	D2	0.56	0/590	0.97	0/781
49	B3	0.87	0/474	1.22	6/635 (0.9%)
49	D3	0.57	0/469	0.98	0/630
50	B4	0.67	0/564	1.22	8/759 (1.1%)
50	D4	0.79	0/544	1.27	6/735 (0.8%)
51	B5	0.88	0/469	1.16	2/635 (0.3%)
51	D5	0.72	0/469	1.14	3/635 (0.5%)
52	B6	0.81	1/460 (0.2%)	0.88	0/613
52	D6	0.67	0/456	0.96	0/608
53	B7	1.02	0/426	1.00	1/561 (0.2%)
53	D7	0.78	0/426	1.01	2/561 (0.4%)
54	B8	0.96	0/519	1.00	0/684
54	D8	0.69	0/525	1.04	0/691
55	B9	0.82	0/310	1.05	0/407
55	D9	0.74	0/310	1.12	0/407
All	All	0.55	6/305966 (0.0%)	0.80	382/457396 (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
23	CX	1	0
24	AW	0	1
24	CW	0	1
27	DD	0	1
38	BS	0	1
45	BZ	0	1
50	B4	0	1
All	All	1	11

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
47	B1	67	ILE	CA-CB	-6.43	1.50	1.54
33	BN	85	ILE	CA-CB	-6.22	1.49	1.54
29	BF	84	VAL	CA-CB	-5.75	1.47	1.54
2	CB	95	GLN	CA-C	5.53	1.55	1.52
52	B6	23	THR	CA-CB	5.41	1.61	1.53
2	AB	15	VAL	CA-C	5.01	1.58	1.52

All (382) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	CX	76	A	O4'-C1'-N9	20.44	139.17	108.50
8	CH	73	ASP	CA-C-N	11.19	132.88	120.45
8	CH	73	ASP	C-N-CA	11.19	132.88	120.45
36	DQ	27	VAL	N-CA-C	10.38	120.28	110.53
43	BX	65	ARG	NE-CZ-NH2	9.78	128.00	119.20
35	DP	44	GLY	N-CA-C	-9.77	97.31	112.45
46	B0	12	ASN	N-CA-C	9.73	126.37	113.72
2	AB	9	GLU	N-CA-C	9.71	123.16	110.43
27	DD	275	LYS	N-CA-C	-9.14	96.79	109.95
30	DG	178	PHE	CA-C-N	9.10	130.41	120.13
30	DG	178	PHE	C-N-CA	9.10	130.41	120.13
25	BA	2014	G	C2'-C3'-O3'	8.93	122.90	109.50
50	B4	60	GLN	N-CA-C	-8.78	102.70	113.15
30	BG	45	GLU	N-CA-C	-8.66	102.15	112.89
16	AP	79	VAL	N-CA-C	-8.65	104.59	112.90
46	D0	82	ARG	CA-C-N	8.29	128.32	119.78
46	D0	82	ARG	C-N-CA	8.29	128.32	119.78
32	DI	118	LYS	CA-C-N	8.20	130.09	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	DI	118	LYS	C-N-CA	8.20	130.09	119.84
23	AX	76	A	O4'-C1'-N9	8.19	120.48	108.20
25	DA	1992	G	C2'-C3'-O3'	8.04	121.56	109.50
4	CD	178	VAL	N-CA-C	8.04	118.09	110.30
4	CD	171	GLY	CA-C-N	7.88	128.30	119.32
4	CD	171	GLY	C-N-CA	7.88	128.30	119.32
4	CD	38	TYR	CA-C-N	7.84	125.38	119.66
4	CD	38	TYR	C-N-CA	7.84	125.38	119.66
45	DZ	61	LEU	CA-C-N	7.63	127.68	119.28
45	DZ	61	LEU	C-N-CA	7.63	127.68	119.28
28	DE	72	VAL	CA-C-N	7.62	135.41	121.70
28	DE	72	VAL	C-N-CA	7.62	135.41	121.70
2	AB	123	ALA	N-CA-C	-7.61	103.72	113.16
50	B4	52	THR	N-CA-C	-7.54	104.05	112.57
27	BD	274	ARG	N-CA-C	7.38	120.38	110.35
2	AB	166	ASP	CA-C-N	7.35	126.87	118.85
2	AB	166	ASP	C-N-CA	7.35	126.87	118.85
29	DF	9	ILE	N-CA-C	7.32	115.87	107.89
7	CG	78	ARG	N-CA-C	7.29	120.28	108.32
28	DE	31	CYS	CA-C-N	7.28	127.03	119.76
28	DE	31	CYS	C-N-CA	7.28	127.03	119.76
28	DE	188	VAL	CA-C-N	7.26	127.24	119.76
28	DE	188	VAL	C-N-CA	7.26	127.24	119.76
5	AE	23	GLY	N-CA-C	7.16	118.75	111.95
20	AT	9	ASN	N-CA-C	7.14	116.71	108.49
50	D4	61	ARG	N-CA-C	-7.11	102.73	111.40
29	BF	9	ILE	CA-C-N	7.08	127.05	119.76
29	BF	9	ILE	C-N-CA	7.08	127.05	119.76
30	DG	45	GLU	N-CA-C	-7.07	103.33	112.23
16	CP	45	THR	CA-C-N	7.05	128.66	119.84
16	CP	45	THR	C-N-CA	7.05	128.66	119.84
51	D5	33	CYS	CA-C-N	-7.03	112.46	119.56
51	D5	33	CYS	C-N-CA	-7.03	112.46	119.56
4	AD	188	LEU	CA-C-N	7.03	127.06	119.89
4	AD	188	LEU	C-N-CA	7.03	127.06	119.89
19	CS	67	VAL	N-CA-C	6.95	117.04	110.30
40	BU	102	GLU	CA-C-N	6.93	126.90	119.28
40	BU	102	GLU	C-N-CA	6.93	126.90	119.28
32	DI	124	GLY	N-CA-C	6.92	120.20	110.38
43	BX	65	ARG	NE-CZ-NH1	-6.91	114.59	121.50
50	B4	46	GLN	N-CA-C	-6.84	104.48	114.39
2	AB	233	SER	CA-C-N	6.83	128.37	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AB	233	SER	C-N-CA	6.83	128.37	119.84
25	BA	2701	U	C4'-C3'-O3'	6.82	119.64	109.40
27	BD	131	LEU	CA-C-N	-6.82	112.96	119.85
27	BD	131	LEU	C-N-CA	-6.82	112.96	119.85
1	CA	1154	G	N1-C2-N2	-6.81	95.76	116.20
49	B3	15	TYR	CA-C-N	6.76	126.75	119.78
49	B3	15	TYR	C-N-CA	6.76	126.75	119.78
45	BZ	107	THR	CA-C-N	6.74	128.26	119.84
45	BZ	107	THR	C-N-CA	6.74	128.26	119.84
5	CE	67	VAL	N-CA-C	6.74	116.69	108.06
25	BA	1700	G	C2'-C3'-O3'	6.73	119.60	109.50
31	BH	127	GLU	CA-C-N	-6.73	112.98	120.45
31	BH	127	GLU	C-N-CA	-6.73	112.98	120.45
3	CC	72	LYS	CA-C-N	6.70	126.33	119.56
3	CC	72	LYS	C-N-CA	6.70	126.33	119.56
5	AE	67	VAL	N-CA-C	6.69	116.62	108.06
7	AG	80	VAL	N-CA-C	6.68	118.06	109.30
27	BD	3	VAL	N-CA-C	-6.68	97.96	108.86
12	CL	119	LYS	N-CA-C	-6.67	100.55	110.23
38	DS	60	GLY	N-CA-C	6.67	120.34	110.60
2	CB	158	LEU	CA-C-N	6.66	128.17	119.84
2	CB	158	LEU	C-N-CA	6.66	128.17	119.84
11	AK	40	ILE	N-CA-C	-6.65	106.51	111.90
2	AB	38	GLY	N-CA-C	-6.64	104.67	114.90
5	CE	98	THR	N-CA-C	6.63	118.20	110.97
5	CE	35	GLY	N-CA-C	6.60	120.14	110.38
7	AG	114	ARG	N-CA-C	6.55	118.42	111.28
20	CT	11	SER	N-CA-C	-6.55	104.86	112.92
5	AE	105	VAL	CA-C-N	-6.55	112.94	119.56
5	AE	105	VAL	C-N-CA	-6.55	112.94	119.56
19	AS	10	PHE	N-CA-C	6.53	119.35	108.96
44	BY	55	TYR	CA-C-N	-6.52	113.58	120.03
44	BY	55	TYR	C-N-CA	-6.52	113.58	120.03
1	CA	1119	C	N1-C2-O2	6.51	138.44	118.90
27	DD	229	VAL	CB-CA-C	-6.50	103.52	112.04
2	AB	8	LYS	N-CA-C	6.50	121.04	112.72
10	AJ	38	ILE	N-CA-C	6.48	114.31	107.76
49	B3	11	SER	CA-C-N	6.47	127.03	120.04
49	B3	11	SER	C-N-CA	6.47	127.03	120.04
30	DG	48	GLU	N-CA-C	-6.46	105.53	113.41
17	CQ	29	HIS	CA-C-N	6.45	126.67	119.32
17	CQ	29	HIS	C-N-CA	6.45	126.67	119.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	AE	103	GLY	N-CA-C	-6.42	104.32	112.54
45	DZ	14	LYS	CA-C-N	6.36	126.85	119.47
45	DZ	14	LYS	C-N-CA	6.36	126.85	119.47
32	BI	118	LYS	CA-C-N	6.35	127.78	119.84
32	BI	118	LYS	C-N-CA	6.35	127.78	119.84
2	CB	67	THR	N-CA-C	6.34	118.89	110.53
49	B3	8	LEU	CA-C-N	-6.30	115.15	122.14
49	B3	8	LEU	C-N-CA	-6.30	115.15	122.14
32	BI	51	ILE	N-CA-C	-6.29	104.20	110.62
2	AB	128	GLU	N-CA-C	-6.28	97.43	110.80
3	AC	4	LYS	N-CA-C	6.28	119.14	110.35
28	BE	52	LEU	CA-C-N	6.26	126.02	119.76
28	BE	52	LEU	C-N-CA	6.26	126.02	119.76
25	BA	2701	U	P-O3'-C3'	6.25	129.58	120.20
28	DE	21	VAL	CA-C-N	6.22	127.20	119.98
28	DE	21	VAL	C-N-CA	6.22	127.20	119.98
41	BV	53	GLU	N-CA-C	6.21	117.85	111.14
9	AI	63	ILE	N-CA-C	6.20	117.05	108.12
27	BD	42	GLY	N-CA-C	-6.20	106.69	115.43
7	AG	81	GLY	N-CA-C	6.19	127.85	113.18
44	DY	91	GLU	N-CA-C	-6.19	104.43	112.23
31	BH	3	ARG	N-CA-C	6.18	118.50	107.80
4	AD	39	PRO	N-CA-C	6.18	116.40	110.47
28	DE	38	THR	CA-C-N	6.14	126.59	119.47
28	DE	38	THR	C-N-CA	6.14	126.59	119.47
45	BZ	151	HIS	N-CA-C	6.11	120.32	112.26
5	CE	105	VAL	CA-C-N	-6.11	113.52	119.87
5	CE	105	VAL	C-N-CA	-6.11	113.52	119.87
27	DD	244	ARG	CA-C-N	-6.10	114.09	120.38
27	DD	244	ARG	C-N-CA	-6.10	114.09	120.38
7	AG	87	VAL	N-CA-C	6.06	113.84	108.63
25	BA	1700	G	P-O3'-C3'	6.05	129.28	120.20
33	BN	134	ARG	CA-C-N	6.04	125.80	119.76
33	BN	134	ARG	C-N-CA	6.04	125.80	119.76
2	AB	127	ILE	N-CA-C	6.03	116.18	108.82
15	CO	47	LYS	N-CA-C	-6.02	105.89	113.18
25	BA	70	A	C4'-C3'-O3'	6.01	118.42	109.40
44	DY	52	SER	CA-C-N	-5.99	113.64	119.87
44	DY	52	SER	C-N-CA	-5.99	113.64	119.87
35	DP	44	GLY	CA-C-N	5.96	132.44	121.70
35	DP	44	GLY	C-N-CA	5.96	132.44	121.70
2	CB	130	ARG	CA-C-N	5.95	126.78	120.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	CB	130	ARG	C-N-CA	5.95	126.78	120.11
46	B0	82	ARG	CA-C-N	5.95	125.91	119.78
46	B0	82	ARG	C-N-CA	5.95	125.91	119.78
32	DI	60	GLU	N-CA-C	-5.93	105.30	112.54
47	B1	67	ILE	CA-C-N	-5.92	113.71	119.87
47	B1	67	ILE	C-N-CA	-5.92	113.71	119.87
2	CB	14	GLY	N-CA-C	-5.90	105.48	115.34
1	CA	1119	C	C2-N1-C1'	5.88	136.44	118.80
1	CA	1154	G	N3-C2-N2	5.84	137.43	119.90
9	CI	63	ILE	N-CA-C	5.84	116.70	108.17
7	CG	80	VAL	N-CA-C	5.84	116.95	109.30
1	CA	1183	A	P-O3'-C3'	5.83	128.95	120.20
5	AE	98	THR	N-CA-C	5.82	118.12	111.02
31	BH	54	ARG	CA-C-N	5.81	126.32	120.04
31	BH	54	ARG	C-N-CA	5.81	126.32	120.04
12	CL	64	TYR	N-CA-C	-5.81	101.60	110.14
32	DI	132	PRO	N-CA-C	-5.80	108.02	114.92
4	AD	171	GLY	CA-C-N	5.79	125.93	119.32
4	AD	171	GLY	C-N-CA	5.79	125.93	119.32
12	AL	62	SER	N-CA-C	-5.79	106.44	112.93
3	CC	4	LYS	N-CA-C	5.79	118.45	110.35
28	DE	46	ALA	N-CA-C	5.77	117.02	108.60
46	D0	13	GLY	N-CA-C	5.77	123.02	115.47
4	CD	39	PRO	N-CA-C	5.76	116.00	110.47
30	DG	15	VAL	N-CA-C	5.76	115.95	110.53
4	AD	190	ASP	N-CA-C	-5.75	102.25	110.59
27	DD	35	LYS	CA-C-N	-5.74	114.05	119.85
27	DD	35	LYS	C-N-CA	-5.74	114.05	119.85
27	DD	41	GLY	N-CA-C	-5.74	107.73	115.36
33	DN	84	LYS	CA-C-N	-5.74	118.34	123.33
33	DN	84	LYS	C-N-CA	-5.74	118.34	123.33
1	CA	1154	G	C5-C6-O6	5.73	145.78	128.60
35	DP	44	GLY	CA-C-O	-5.72	115.33	122.59
50	D4	21	VAL	N-CA-C	5.72	116.98	108.46
32	BI	110	ASP	CA-C-N	5.70	125.82	119.32
32	BI	110	ASP	C-N-CA	5.70	125.82	119.32
16	AP	3	LYS	N-CA-C	5.69	118.06	109.41
29	DF	21	ALA	CA-C-N	5.69	131.94	121.70
29	DF	21	ALA	C-N-CA	5.69	131.94	121.70
41	BV	35	LEU	CA-C-N	5.68	125.61	119.76
41	BV	35	LEU	C-N-CA	5.68	125.61	119.76
2	AB	200	ILE	N-CA-C	5.67	116.11	108.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	DE	125	GLY	CA-C-N	5.67	125.58	119.85
28	DE	125	GLY	C-N-CA	5.67	125.58	119.85
28	DE	168	MET	N-CA-C	5.66	118.78	109.72
30	DG	88	ILE	N-CA-C	5.66	119.19	113.47
50	D4	59	PHE	CA-C-N	5.66	131.88	121.70
50	D4	59	PHE	C-N-CA	5.66	131.88	121.70
16	AP	62	VAL	N-CA-C	-5.63	107.00	112.29
10	CJ	90	LEU	CA-C-N	5.62	125.63	119.89
10	CJ	90	LEU	C-N-CA	5.62	125.63	119.89
28	DE	61	ARG	CA-C-N	-5.62	112.82	119.84
28	DE	61	ARG	C-N-CA	-5.62	112.82	119.84
2	AB	23	ARG	N-CA-C	-5.62	106.22	112.57
50	D4	39	CYS	N-CA-C	5.61	122.75	110.80
29	DF	168	ARG	N-CA-C	5.61	117.86	111.02
12	AL	124	LYS	CA-C-N	5.61	126.85	119.84
12	AL	124	LYS	C-N-CA	5.61	126.85	119.84
12	CL	23	LYS	N-CA-C	-5.60	106.21	113.16
4	CD	188	LEU	CA-C-N	5.60	125.60	119.89
4	CD	188	LEU	C-N-CA	5.60	125.60	119.89
17	CQ	57	VAL	N-CA-C	5.58	116.95	108.80
3	CC	22	TRP	N-CA-C	5.58	115.60	108.24
35	BP	22	GLY	CA-C-N	5.58	124.93	118.85
35	BP	22	GLY	C-N-CA	5.58	124.93	118.85
45	BZ	133	ILE	CA-C-N	5.56	125.53	120.03
45	BZ	133	ILE	C-N-CA	5.56	125.53	120.03
30	BG	155	MET	N-CA-C	5.55	115.88	108.38
2	CB	186	ALA	N-CA-C	5.55	117.53	108.76
3	CC	202	ILE	N-CA-C	5.54	115.84	107.75
31	BH	28	GLY	CA-C-N	5.53	124.72	118.97
31	BH	28	GLY	C-N-CA	5.53	124.72	118.97
1	CA	1154	G	C4-N9-Cl'	5.53	143.07	126.50
15	CO	21	ASP	N-CA-C	5.53	117.71	109.59
44	BY	31	LEU	CA-C-N	5.52	124.72	118.97
44	BY	31	LEU	C-N-CA	5.52	124.72	118.97
4	AD	158	ILE	CB-CA-C	-5.52	104.84	112.24
3	CC	107	GLN	N-CA-C	-5.52	103.10	110.55
33	DN	110	GLY	CA-C-N	5.52	125.17	119.05
33	DN	110	GLY	C-N-CA	5.52	125.17	119.05
42	BW	111	HIS	N-CA-C	5.50	117.67	109.59
45	BZ	86	VAL	N-CA-C	5.49	115.80	108.11
11	CK	40	ILE	N-CA-C	-5.49	107.51	112.12
29	BF	9	ILE	N-CA-C	5.49	113.98	107.73

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	AC	152	ILE	N-CA-C	5.48	115.95	107.78
2	AB	16	HIS	N-CA-C	5.48	122.47	110.80
50	D4	36	CYS	N-CA-C	5.48	115.47	108.24
2	CB	128	GLU	N-CA-C	-5.47	105.40	113.72
5	CE	92	LYS	CA-C-N	5.47	125.74	119.83
5	CE	92	LYS	C-N-CA	5.47	125.74	119.83
51	D5	4	HIS	CB-CA-C	-5.47	106.24	111.00
36	BQ	64	ILE	N-CA-C	5.46	115.82	108.17
2	AB	158	LEU	CA-C-N	5.46	126.67	119.84
2	AB	158	LEU	C-N-CA	5.46	126.67	119.84
27	DD	74	GLY	CA-C-N	-5.45	118.89	122.60
27	DD	74	GLY	C-N-CA	-5.45	118.89	122.60
29	DF	157	VAL	N-CA-C	5.45	115.63	107.51
13	CM	40	ASN	CA-C-N	5.44	125.11	119.56
13	CM	40	ASN	C-N-CA	5.44	125.11	119.56
31	DH	9	ILE	N-CA-C	5.43	112.92	107.55
6	AF	60	PHE	N-CA-C	5.42	117.57	108.73
12	AL	30	ALA	CA-C-N	5.42	126.62	119.84
12	AL	30	ALA	C-N-CA	5.42	126.62	119.84
50	B4	6	HIS	CA-C-N	5.42	126.89	120.23
50	B4	6	HIS	C-N-CA	5.42	126.89	120.23
8	CH	135	CYS	N-CA-C	5.41	115.51	107.88
10	CJ	76	ASN	CA-C-N	5.41	126.61	119.84
10	CJ	76	ASN	C-N-CA	5.41	126.61	119.84
2	AB	67	THR	N-CA-C	5.41	117.67	110.53
31	BH	135	GLY	N-CA-C	5.41	118.61	110.18
31	BH	167	GLU	CA-C-N	5.40	125.57	119.90
31	BH	167	GLU	C-N-CA	5.40	125.57	119.90
5	AE	148	VAL	N-CA-C	5.40	115.61	110.53
28	DE	144	ARG	CB-CA-C	-5.40	108.66	116.54
6	CF	60	PHE	N-CA-C	5.39	117.52	108.73
28	BE	188	VAL	CA-C-N	5.39	125.33	119.78
28	BE	188	VAL	C-N-CA	5.39	125.33	119.78
29	DF	24	LEU	CA-C-N	5.39	126.58	119.84
29	DF	24	LEU	C-N-CA	5.39	126.58	119.84
15	CO	6	GLU	N-CA-C	5.38	116.83	111.07
44	BY	104	GLY	N-CA-C	5.38	118.12	111.93
9	AI	89	ASN	CA-C-N	5.38	125.71	119.47
9	AI	89	ASN	C-N-CA	5.38	125.71	119.47
32	DI	45	LYS	N-CA-C	-5.38	105.32	111.07
31	BH	25	LYS	CA-C-N	-5.36	116.31	123.17
31	BH	25	LYS	C-N-CA	-5.36	116.31	123.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AB	11	LEU	N-CA-C	-5.34	106.80	113.15
18	AR	29	PHE	N-CA-C	5.33	117.08	109.14
36	BQ	81	VAL	N-CA-C	-5.32	104.26	110.05
1	CA	1004	A	O4'-C1'-N9	5.31	116.47	108.50
4	AD	191	ARG	N-CA-C	-5.28	105.52	111.28
14	AN	13	THR	CA-C-N	5.28	126.43	119.84
14	AN	13	THR	C-N-CA	5.28	126.43	119.84
39	DT	54	ARG	N-CA-C	5.27	117.35	108.96
5	AE	95	ALA	CA-C-N	5.27	126.43	119.84
5	AE	95	ALA	C-N-CA	5.27	126.43	119.84
53	B7	47	ARG	N-CA-C	5.27	118.86	112.23
2	CB	112	VAL	N-CA-C	-5.26	105.41	110.72
9	CI	48	GLU	CA-C-N	-5.25	113.62	119.19
9	CI	48	GLU	C-N-CA	-5.25	113.62	119.19
1	AA	266	G	C2'-C3'-O3'	5.25	117.37	109.50
2	CB	19	HIS	N-CA-C	5.25	115.47	108.38
41	DV	37	VAL	N-CA-C	5.25	115.41	107.75
8	AH	4	ASP	CA-C-N	5.24	124.87	119.05
8	AH	4	ASP	C-N-CA	5.24	124.87	119.05
45	BZ	158	PRO	CA-C-N	-5.24	114.55	119.85
45	BZ	158	PRO	C-N-CA	-5.24	114.55	119.85
10	AJ	34	VAL	N-CA-C	5.24	115.53	107.77
4	CD	196	LEU	N-CA-C	-5.24	102.08	110.10
30	BG	127	GLY	N-CA-C	-5.24	107.66	113.79
45	DZ	146	ILE	N-CA-C	5.24	115.75	108.84
19	AS	31	ILE	N-CA-C	5.23	114.83	106.88
31	BH	11	VAL	N-CA-C	5.23	113.63	107.77
7	CG	22	LEU	CA-CB-CG	5.23	134.60	116.30
27	BD	35	LYS	CA-C-N	-5.22	114.54	119.76
27	BD	35	LYS	C-N-CA	-5.22	114.54	119.76
2	CB	200	ILE	N-CA-C	5.22	115.48	108.17
30	BG	121	ASN	CA-C-N	5.22	125.91	120.12
30	BG	121	ASN	C-N-CA	5.22	125.91	120.12
53	D7	6	GLN	CA-C-N	5.21	125.22	119.90
53	D7	6	GLN	C-N-CA	5.21	125.22	119.90
33	BN	110	GLY	CA-C-N	5.21	124.83	119.05
33	BN	110	GLY	C-N-CA	5.21	124.83	119.05
46	D0	12	ASN	CB-CA-C	-5.20	109.58	117.07
38	BS	40	ILE	N-CA-C	5.20	115.97	108.48
51	B5	56	LYS	CA-C-N	-5.20	117.62	122.66
51	B5	56	LYS	C-N-CA	-5.20	117.62	122.66
35	BP	124	LYS	CA-C-N	-5.20	116.75	123.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	BP	124	LYS	C-N-CA	-5.20	116.75	123.19
13	CM	108	ARG	N-CA-C	5.20	117.69	111.71
50	B4	40	HIS	CA-C-N	5.19	126.33	119.84
50	B4	40	HIS	C-N-CA	5.19	126.33	119.84
5	CE	127	ASN	CA-C-N	5.19	126.33	119.84
5	CE	127	ASN	C-N-CA	5.19	126.33	119.84
32	BI	106	GLY	N-CA-C	5.18	125.46	113.18
10	AJ	52	GLY	CA-C-N	5.17	124.68	119.19
10	AJ	52	GLY	C-N-CA	5.17	124.68	119.19
40	BU	25	TRP	N-CA-C	5.17	118.04	109.46
1	CA	1183	A	C2'-C3'-O3'	5.17	117.25	109.50
7	CG	79	ARG	N-CA-C	5.16	121.80	110.80
32	DI	104	GLN	N-CA-C	5.16	118.41	112.57
30	DG	155	MET	N-CA-C	5.16	115.35	108.38
36	DQ	28	ALA	N-CA-C	5.16	121.79	110.80
25	BA	1821	C	C2'-C3'-O3'	-5.15	105.97	113.70
30	DG	52	ILE	N-CA-C	5.15	114.16	106.85
32	BI	19	VAL	N-CA-C	5.15	116.31	108.80
25	DA	2689	U	P-O3'-C3'	5.15	127.92	120.20
28	BE	190	GLY	CA-C-N	5.14	125.14	120.21
28	BE	190	GLY	C-N-CA	5.14	125.14	120.21
38	BS	60	GLY	N-CA-C	5.14	125.36	113.18
13	CM	106	ASN	N-CA-C	5.14	121.75	110.80
32	BI	22	LYS	CA-C-N	5.13	124.58	119.24
32	BI	22	LYS	C-N-CA	5.13	124.58	119.24
2	AB	118	LEU	N-CA-C	-5.13	106.87	113.23
32	BI	104	GLN	N-CA-C	-5.13	102.47	110.42
2	CB	172	ILE	CB-CA-C	-5.13	105.32	111.88
1	CA	1119	C	N3-C2-O2	-5.12	106.53	121.90
31	BH	45	VAL	N-CA-C	5.12	114.95	107.37
4	CD	176	LEU	N-CA-C	5.12	116.93	108.13
8	AH	100	ILE	CA-C-N	5.11	125.11	120.21
8	AH	100	ILE	C-N-CA	5.11	125.11	120.21
20	AT	10	LEU	N-CA-C	5.11	121.68	110.80
44	BY	52	SER	N-CA-C	-5.11	103.53	108.13
9	CI	89	ASN	CA-C-N	5.11	124.90	119.28
9	CI	89	ASN	C-N-CA	5.11	124.90	119.28
1	CA	1054	C	P-O3'-C3'	5.10	127.86	120.20
50	B4	66	SER	N-CA-C	5.10	121.67	110.80
10	CJ	6	ILE	N-CA-C	5.10	115.31	108.17
25	BA	1343	C	OP2-P-O3'	-5.10	92.71	108.00
32	BI	44	LEU	N-CA-C	-5.09	105.81	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	BZ	67	LEU	CA-C-N	5.09	126.21	119.84
45	BZ	67	LEU	C-N-CA	5.09	126.21	119.84
15	AO	23	GLY	N-CA-C	5.09	125.25	113.18
2	CB	231	GLU	CA-C-N	-5.09	114.70	119.89
2	CB	231	GLU	C-N-CA	-5.09	114.70	119.89
2	CB	210	SER	N-CA-C	5.08	116.90	111.36
3	CC	103	VAL	N-CA-C	5.07	115.34	107.78
35	BP	65	ARG	N-CA-C	5.07	116.95	108.99
28	BE	168	MET	N-CA-C	5.07	117.86	109.85
31	DH	172	LYS	CA-C-N	5.07	125.34	119.92
31	DH	172	LYS	C-N-CA	5.07	125.34	119.92
6	CF	2	ARG	N-CA-C	5.07	116.69	109.14
1	AA	1285	A	P-O3'-C3'	5.06	127.79	120.20
25	BA	2014	G	P-O3'-C3'	5.06	127.79	120.20
19	AS	56	GLN	N-CA-C	5.05	116.67	109.14
36	BQ	24	GLY	N-CA-C	-5.04	107.85	115.32
36	DQ	22	LYS	N-CA-C	-5.04	105.69	111.14
16	AP	27	LYS	N-CA-C	-5.04	103.39	110.50
4	CD	6	GLY	CA-C-N	5.04	126.14	119.84
4	CD	6	GLY	C-N-CA	5.04	126.14	119.84
2	AB	64	ARG	N-CA-C	-5.04	106.99	113.23
4	AD	141	ARG	CA-C-N	5.03	125.02	119.89
4	AD	141	ARG	C-N-CA	5.03	125.02	119.89
5	CE	95	ALA	CA-C-N	5.02	126.12	119.84
5	CE	95	ALA	C-N-CA	5.02	126.12	119.84
25	BA	873	U	OP1-P-O3'	-5.00	92.99	108.00
13	AM	9	ILE	CA-C-N	5.00	126.09	119.84
13	AM	9	ILE	C-N-CA	5.00	126.09	119.84

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
23	CX	76	A	C1'

All (11) 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
24	AW	4	PRO	Peptide

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Mol	Chain	Res	Type	Group
50	B4	59	PHE	Peptide
38	BS	58	LEU	Peptide
45	BZ	136	PHE	Peptide
4	CD	45	GLN	Peptide
24	CW	9	MVA	Peptide
27	DD	274	ARG	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32196	0	16251	813	0
1	CA	32312	0	16307	923	0
2	AB	1846	0	1867	112	0
2	CB	1825	0	1828	120	0
3	AC	1552	0	1546	62	0
3	CC	1542	0	1517	67	0
4	AD	1659	0	1676	101	0
4	CD	1674	0	1714	80	0
5	AE	1129	0	1185	49	0
5	CE	1133	0	1191	46	0
6	AF	806	0	793	35	0
6	CF	816	0	808	31	0
7	AG	1231	0	1238	37	0
7	CG	1235	0	1249	58	0
8	AH	1088	0	1126	48	0
8	CH	1088	0	1126	47	0
9	AI	983	0	986	56	0
9	CI	978	0	966	60	0
10	AJ	709	0	650	35	0
10	CJ	714	0	672	47	0
11	AK	829	0	825	19	0
11	CK	833	0	836	29	0
12	AL	930	0	980	30	0
12	CL	930	0	980	34	0
13	AM	958	0	1002	28	0
13	CM	950	0	988	56	0
14	AN	492	0	529	27	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
14	CN	492	0	529	29	0
15	AO	728	0	760	16	0
15	CO	728	0	760	27	0
16	AP	681	0	697	32	0
16	CP	677	0	686	29	0
17	AQ	823	0	891	21	0
17	CQ	823	0	891	18	0
18	AR	555	0	618	19	0
18	CR	555	0	618	30	0
19	AS	652	0	662	37	0
19	CS	646	0	644	56	0
20	AT	728	0	798	32	0
20	CT	727	0	796	30	0
21	AU	199	0	208	5	0
21	CU	199	0	208	7	0
22	AV	114	0	54	0	0
22	CV	113	0	54	0	0
23	AX	1623	0	823	18	0
23	CX	1623	0	824	24	0
24	AW	93	0	84	9	0
24	CW	93	0	84	14	0
25	BA	58834	0	29667	792	0
25	DA	58458	0	29482	1101	0
26	BB	2573	0	1306	39	0
26	DB	2573	0	1306	54	0
27	BD	2136	0	2218	67	0
27	DD	2136	0	2218	74	0
28	BE	1559	0	1618	41	0
28	DE	1559	0	1618	61	0
29	BF	1584	0	1625	49	0
29	DF	1580	0	1619	71	0
30	BG	1425	0	1443	46	0
30	DG	1424	0	1434	87	0
31	BH	1330	0	1407	34	0
31	DH	1330	0	1407	54	0
32	BI	1085	0	1114	44	0
32	DI	1061	0	1080	31	0
33	BN	1117	0	1183	17	0
33	DN	1117	0	1184	26	0
34	BO	933	0	996	27	0
34	DO	933	0	996	37	0
35	BP	1135	0	1212	38	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	DP	1135	0	1211	50	0
36	BQ	1122	0	1179	41	0
36	DQ	1122	0	1179	50	0
37	BR	968	0	1033	25	0
37	DR	968	0	1032	32	0
38	BS	877	0	938	26	0
38	DS	870	0	923	47	0
39	BT	1091	0	1151	31	0
39	DT	1083	0	1136	36	0
40	BU	959	0	1019	26	0
40	DU	959	0	1019	35	0
41	BV	771	0	830	11	0
41	DV	771	0	830	23	0
42	BW	886	0	940	9	0
42	DW	886	0	940	17	0
43	BX	750	0	814	19	0
43	DX	750	0	814	25	0
44	BY	806	0	881	25	0
44	DY	806	0	881	22	0
45	BZ	1349	0	1355	45	0
45	DZ	1360	0	1363	50	0
46	B0	653	0	674	25	0
46	D0	653	0	674	22	0
47	B1	755	0	826	19	0
47	D1	755	0	826	27	0
48	B2	588	0	643	17	0
48	D2	588	0	643	20	0
49	B3	469	0	518	18	0
49	D3	464	0	514	13	0
50	B4	551	0	532	45	0
50	D4	531	0	502	34	0
51	B5	455	0	465	14	0
51	D5	455	0	465	12	0
52	B6	453	0	473	10	0
52	D6	449	0	469	10	0
53	B7	418	0	466	8	0
53	D7	418	0	467	9	0
54	B8	511	0	571	28	0
54	D8	517	0	582	26	0
55	B9	307	0	335	5	0
55	D9	307	0	335	11	0
56	AA	221	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	AD	1	0	0	0	0
56	AF	1	0	0	0	0
56	AK	1	0	0	0	0
56	AM	1	0	0	0	0
56	AN	2	0	0	0	0
56	AV	1	0	0	0	0
56	AX	9	0	0	0	0
56	B0	4	0	0	0	0
56	B1	1	0	0	0	0
56	B2	1	0	0	0	0
56	B3	3	0	0	0	0
56	B4	1	0	0	0	0
56	B5	1	0	0	0	0
56	B7	4	0	0	0	0
56	B8	3	0	0	0	0
56	B9	1	0	0	0	0
56	BA	738	0	0	0	0
56	BB	18	0	0	0	0
56	BD	12	0	0	0	0
56	BE	10	0	0	0	0
56	BF	8	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	5	0	0	0	0
56	BR	4	0	0	0	0
56	BU	8	0	0	0	0
56	BV	4	0	0	0	0
56	BW	5	0	0	0	0
56	BX	1	0	0	0	0
56	BY	1	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	CQ	1	0	0	0	0
56	CT	1	0	0	0	0
56	CX	3	0	0	0	0
56	D0	1	0	0	0	0
56	D3	1	0	0	0	0
56	D5	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	D8	1	0	0	0	0
56	DA	653	0	0	0	0
56	DB	12	0	0	0	0
56	DD	8	0	0	0	0
56	DE	6	0	0	0	0
56	DF	6	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	DQ	5	0	0	0	0
56	DR	2	0	0	0	0
56	DV	4	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	0	0
59	CX	10	0	10	2	0
60	BA	1	0	0	0	0
60	DA	1	0	0	0	0
61	AA	148	0	0	27	0
61	AD	1	0	0	0	0
61	AE	3	0	0	0	0
61	AJ	1	0	0	0	0
61	AL	1	0	0	0	0
61	AP	1	0	0	0	0
61	AU	1	0	0	0	0
61	AV	1	0	0	0	0
61	AX	1	0	0	0	0
61	B0	4	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
61	B1	2	0	0	0	0
61	B5	3	0	0	1	0
61	B7	1	0	0	1	0
61	B8	8	0	0	1	0
61	BA	1092	0	0	113	0
61	BB	26	0	0	0	0
61	BD	8	0	0	1	0
61	BE	9	0	0	4	0
61	BF	4	0	0	0	0
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	3	0
61	BQ	3	0	0	1	0
61	BR	1	0	0	0	0
61	BT	1	0	0	0	0
61	BU	4	0	0	0	0
61	BV	2	0	0	0	0
61	BW	2	0	0	0	0
61	BX	4	0	0	1	0
61	CA	187	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	5	0	0	1	0
61	D1	1	0	0	0	0
61	D7	2	0	0	0	0
61	D8	4	0	0	0	0
61	DA	902	0	0	119	0
61	DB	7	0	0	0	0
61	DD	8	0	0	0	0
61	DE	13	0	0	1	0
61	DF	5	0	0	0	0
61	DO	1	0	0	0	0
61	DP	14	0	0	0	0
61	DQ	3	0	0	1	0
61	DU	4	0	0	0	0
61	DV	1	0	0	0	0
61	DX	2	0	0	0	0
61	DY	2	0	0	0	0
All	All	286321	0	191126	6489	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 14.

All (6489) 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:CA:1002:G:H1	1:CA:1038:C:N4	1.42	1.16
1:AA:348:G:H2'	1:AA:349:A:H5'	1.36	1.04
1:AA:1125:U:N3	1:AA:1127:G:N7	2.06	1.03
39:BT:16:ARG:NH2	39:BT:83:ILE:O	1.92	1.02
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.40	1.02
2:CB:16:HIS:HB2	2:CB:204:ASN:HB3	1.41	1.01
1:CA:1162:C:H42	1:CA:1174:G:H1	1.02	1.00
25:DA:1019:U:HO2'	25:DA:1021:A:H2	1.01	1.00
1:AA:1129:C:N4	1:AA:1143:G:H1	1.59	0.99
2:AB:16:HIS:HB2	2:AB:204:ASN:HB3	1.43	0.98
25:DA:2206:G:H3'	25:DA:2207:G:C8	1.98	0.98
1:CA:1007:C:N3	1:CA:1022:G:N2	2.12	0.97
30:BG:41:GLN:HG3	30:BG:60:LEU:HD11	1.48	0.96
38:DS:35:ILE:HD11	38:DS:101:LEU:HD12	1.47	0.96
1:CA:998:G:H1	1:CA:1043:C:H42	1.14	0.95
25:BA:9:U:H3	25:BA:2641:A:H2	1.15	0.95
10:CJ:8:LEU:HB2	10:CJ:70:ARG:HB2	1.49	0.95
1:CA:1163:C:H42	1:CA:1173:G:H1	1.07	0.94
25:DA:1689:A:H62	25:DA:1698:A:H2	1.15	0.93
25:BA:1065:U:HO2'	25:BA:1067:A:H2	1.05	0.93
25:DA:1798:U:H5'	27:DD:259:THR:HG22	1.50	0.92
35:BP:126:VAL:HG12	35:BP:148:LEU:HD22	1.49	0.92
1:CA:1002:G:N2	1:CA:1038:C:N3	2.16	0.92
1:AA:1129:C:H42	1:AA:1143:G:H1	0.95	0.91
25:DA:1693:U:O2'	27:DD:14:ARG:NH2	2.02	0.91
25:DA:1648:C:OP1	61:DA:4111:HOH:O	1.88	0.91
1:CA:999:C:N4	1:CA:1042:G:N1	2.17	0.91
26:DB:22:U:H3	26:DB:61:G:H1	1.18	0.91
1:CA:1007:C:N4	1:CA:1022:G:N1	2.19	0.91
1:AA:201:C:H42	1:AA:216:G:H1	1.11	0.90
13:CM:82:MET:HE2	13:CM:92:HIS:HB3	1.50	0.90
25:DA:1204:A:H2	25:DA:1241:A:H62	1.19	0.90
39:DT:16:ARG:NH2	39:DT:83:ILE:O	2.02	0.90
25:BA:1829:U:H5'	27:BD:259:THR:HG22	1.52	0.90
28:BE:110:GLY:O	61:BE:406:HOH:O	1.89	0.90
50:D4:53:GLU:HG2	50:D4:55:ARG:H	1.34	0.90
1:CA:1153:C:H42	1:CA:1154:G:H21	1.17	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:526:A:OP1	61:DA:4572:HOH:O	1.89	0.90
25:DA:195:A:N7	61:DA:4175:HOH:O	2.04	0.89
10:AJ:35:SER:HB3	10:AJ:73:ASP:HB2	1.54	0.89
44:BY:54:LYS:HA	44:BY:56:PRO:HD3	1.52	0.89
25:DA:566:U:H5''	35:DP:29:LYS:HE3	1.55	0.88
25:DA:2615:U:OP1	61:DA:3943:HOH:O	1.91	0.88
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.53	0.88
25:DA:740:U:OP2	61:DA:4117:HOH:O	1.92	0.88
11:AK:79:SER:HA	11:AK:104:GLN:HB2	1.55	0.88
1:CA:1163:C:N4	1:CA:1173:G:H1	1.72	0.88
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.06	0.88
1:CA:999:C:N4	1:CA:1042:G:C6	2.42	0.88
46:D0:11:ARG:O	46:D0:14:ARG:NH2	2.05	0.87
1:CA:563:A:N6	61:CA:4065:HOH:O	2.06	0.87
9:CI:9:ARG:HG2	9:CI:14:VAL:HG12	1.56	0.87
1:CA:1318:A:H5''	19:CS:3:ARG:HH22	1.37	0.86
25:DA:981:A:OP1	61:DA:4033:HOH:O	1.92	0.86
16:AP:53:VAL:HG13	16:AP:79:VAL:HG13	1.57	0.86
25:BA:1395:A:OP1	61:BA:4761:HOH:O	1.93	0.86
25:BA:1686:U:OP1	61:BA:4272:HOH:O	1.93	0.86
25:BA:537:G:N7	61:BA:4621:HOH:O	2.07	0.86
25:DA:2592:G:OP1	61:DA:4137:HOH:O	1.93	0.86
25:DA:1153:C:OP1	40:DU:92:ARG:NH1	2.09	0.86
25:DA:1268:A:OP1	61:DA:3940:HOH:O	1.93	0.86
25:DA:2807:G:N1	25:DA:2893:G:O6	2.09	0.86
46:B0:11:ARG:O	46:B0:14:ARG:NH2	2.08	0.86
29:BF:185:ASP:HA	29:BF:188:ARG:HD3	1.54	0.85
49:B3:8:LEU:HD13	49:B3:31:LEU:HD23	1.58	0.85
12:AL:36:VAL:HG23	24:AW:10:2QY:H89	1.57	0.85
13:AM:2:ALA:N	13:AM:8:GLU:OE1	2.09	0.85
1:CA:1493:A:H1'	25:DA:1913:A:H62	1.39	0.85
25:DA:770:G:OP2	61:DA:4148:HOH:O	1.94	0.85
45:DZ:69:THR:HG22	45:DZ:90:VAL:HA	1.57	0.85
25:BA:656:A:OP1	35:BP:65:ARG:NH1	2.09	0.85
25:BA:303:C:H42	25:BA:385:G:H1	1.24	0.85
1:CA:1502:A:H2	1:CA:1505:G:H1	1.24	0.85
4:CD:122:ARG:NH1	4:CD:134:ASP:O	2.09	0.85
25:DA:2879:C:OP2	61:DA:4045:HOH:O	1.95	0.85
25:BA:2720:G:O6	61:BA:4017:HOH:O	1.93	0.85
25:BA:1500:A:OP2	61:BA:3907:HOH:O	1.95	0.85
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	1.57	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:122:LYS:HD3	13:CM:123:ALA:H	1.41	0.84
25:BA:894:U:O4	25:BA:978:A:N6	2.10	0.84
1:CA:656:C:O2'	15:CO:28:GLN:NE2	2.09	0.84
1:CA:1162:C:N4	1:CA:1174:G:H1	1.74	0.84
4:AD:155:LEU:HB3	4:AD:158:ILE:HD11	1.59	0.84
25:BA:1577:C:O2'	25:BA:1578:C:O5'	1.96	0.84
25:DA:1271:G:OP2	61:DA:4112:HOH:O	1.96	0.84
25:DA:1021:A:H62	25:DA:1141:U:H3	1.22	0.84
8:CH:51:VAL:HG11	8:CH:60:ARG:HH12	1.40	0.84
25:DA:301:G:OP2	44:DY:84:ARG:NH2	2.11	0.84
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.11	0.83
25:BA:1736:A:H62	25:BA:1745:A:H2	1.24	0.83
1:CA:1122:U:O4	1:CA:1151:A:N1	2.11	0.83
1:AA:1314:C:OP2	19:AS:4:SER:OG	1.94	0.83
4:AD:149:ALA:HB3	4:AD:152:SER:HB2	1.60	0.83
25:BA:2587:C:OP2	61:BA:4081:HOH:O	1.96	0.83
30:DG:113:ARG:NH1	30:DG:139:LEU:O	2.12	0.83
32:BI:129:THR:HG22	32:BI:139:GLN:HE22	1.42	0.83
1:CA:999:C:C4	1:CA:1042:G:N1	2.47	0.83
1:CA:599:C:H2'	1:CA:600:C:H5''	1.61	0.83
15:CO:54:ARG:NH1	15:CO:58:MET:SD	2.51	0.83
1:AA:166:G:H2'	1:AA:167:G:C8	2.14	0.83
30:DG:11:TYR:CZ	30:DG:16:ARG:HD3	2.14	0.83
25:BA:2585:C:OP1	61:BA:4081:HOH:O	1.97	0.82
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.61	0.82
25:DA:1030:G:OP2	36:DQ:128:LYS:NZ	2.11	0.82
35:DP:96:THR:H	35:DP:99:LEU:HD21	1.44	0.82
36:DQ:81:VAL:HB	46:D0:7:LEU:HD21	1.59	0.82
1:CA:64:G:H4'	1:CA:65:U:H3'	1.61	0.82
1:CA:972:C:OP1	61:CA:4184:HOH:O	1.95	0.82
25:DA:2748:A:H5'	31:DH:4:ILE:HD12	1.59	0.82
46:D0:53:MET:HG3	46:D0:59:LEU:HD23	1.61	0.82
1:CA:1492:A:N3	25:DA:1913:A:N6	2.28	0.82
16:CP:1:MET:SD	16:CP:3:LYS:NZ	2.51	0.82
31:DH:98:LEU:HD22	31:DH:125:VAL:HG23	1.62	0.82
2:CB:178:ARG:HH22	8:CH:68:ARG:HH12	1.25	0.82
1:AA:1158:C:H5	1:AA:1181:G:H1	1.26	0.82
1:CA:1125:U:O2'	1:CA:1126:U:H2'	1.79	0.82
32:DI:72:LEU:HD21	32:DI:107:VAL:HG11	1.60	0.82
3:AC:134:ILE:HD11	3:AC:153:VAL:HG23	1.62	0.82
1:CA:1003:G:N2	1:CA:1025:U:O4	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:237:G:OP1	61:BA:4880:HOH:O	1.96	0.81
1:CA:406:G:H5'	4:CD:5:ILE:HD11	1.59	0.81
1:AA:189(B):C:N4	1:AA:189(I):G:O6	2.11	0.81
1:CA:664:G:OP1	18:CR:64:ARG:NH2	2.13	0.81
23:CX:50:U:H3	23:CX:64:G:H1	1.28	0.81
27:DD:71:ASP:HB2	27:DD:103:ARG:HH22	1.45	0.81
51:D5:16:ARG:NH1	51:D5:17:ASP:OD1	2.12	0.81
25:DA:2243:U:OP1	61:DA:4350:HOH:O	1.98	0.81
25:BA:1503:G:OP2	61:BA:3908:HOH:O	1.99	0.81
38:BS:59:LYS:HE3	38:BS:60:GLY:H	1.44	0.81
1:CA:376:G:H5''	16:CP:5:ARG:HD3	1.63	0.81
1:CA:922:G:H4'	5:CE:20:GLN:HA	1.61	0.81
1:CA:1007:C:N4	1:CA:1022:G:H1	1.77	0.81
2:CB:15:VAL:HG21	2:CB:213:LEU:HD12	1.62	0.81
25:DA:20:C:OP1	40:DU:22:LYS:NZ	2.12	0.81
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.63	0.81
25:BA:1683:C:OP2	61:BA:4524:HOH:O	1.99	0.81
25:DA:1782:C:OP1	61:DA:4383:HOH:O	1.99	0.81
25:BA:1462:G:N2	25:BA:1629:C:O2	2.11	0.81
26:BB:42:C:OP1	30:BG:67:LYS:NZ	2.13	0.81
25:BA:1036:A:OP2	61:BA:4503:HOH:O	1.99	0.80
2:CB:16:HIS:HB3	2:CB:210:SER:HB3	1.62	0.80
1:AA:1124:G:O2'	1:AA:1145:C:N4	2.14	0.80
1:AA:1414:U:H3	1:AA:1486:G:H1	1.28	0.80
23:CX:4:G:H1	23:CX:69:C:H42	1.28	0.80
25:DA:570:G:O6	61:DA:4475:HOH:O	1.99	0.80
1:AA:1124:G:HO2'	1:AA:1145:C:N4	1.78	0.80
1:CA:608:A:OP2	61:CA:4182:HOH:O	1.99	0.80
1:CA:768:A:OP2	61:CA:4023:HOH:O	1.98	0.80
1:CA:953:G:H5'	1:CA:965:A:H61	1.47	0.80
1:CA:975:A:H4'	1:CA:976:G:H5''	1.63	0.80
25:DA:2022:U:OP1	61:DA:4084:HOH:O	1.99	0.80
1:AA:1304:G:OP2	61:AA:4087:HOH:O	1.97	0.80
1:CA:1318:A:OP1	19:CS:3:ARG:NH1	2.15	0.80
25:DA:198:C:OP2	61:DA:4175:HOH:O	1.99	0.80
1:AA:1183:A:O2'	1:AA:1184:G:OP1	2.00	0.80
2:CB:80:ILE:HD11	2:CB:212:GLN:HA	1.62	0.80
1:AA:421:U:O2'	1:AA:423:G:N7	2.14	0.80
25:BA:238:C:O2	54:B8:12:LYS:NZ	2.14	0.80
25:DA:1352:U:OP1	61:DA:3785:HOH:O	1.98	0.80
25:DA:2052:G:O2'	61:DA:3729:HOH:O	1.99	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:64:THR:HG23	9:AI:66:ARG:HH21	1.47	0.80
25:BA:1694:G:OP1	61:BA:4516:HOH:O	1.99	0.80
1:CA:444:C:H2'	1:CA:445:G:H8	1.48	0.80
1:CA:1030(A):G:N1	1:CA:1030(D):A:OP2	2.13	0.80
25:DA:2037:G:O6	61:DA:4103:HOH:O	2.00	0.80
1:AA:166:G:H2'	1:AA:167:G:H8	1.47	0.79
1:AA:1502:A:H2	1:AA:1505:G:H1	1.25	0.79
25:BA:2297:C:OP2	52:B6:6:ARG:NH1	2.16	0.79
29:BF:18:ARG:NH2	29:BF:127:GLU:OE1	2.14	0.79
2:AB:16:HIS:HB3	2:AB:210:SER:HB2	1.64	0.79
1:AA:509:A:OP2	61:AA:4088:HOH:O	2.01	0.79
35:BP:50:ARG:HH21	54:B8:7:HIS:HD2	1.28	0.79
1:CA:673:G:H2'	1:CA:674:G:C8	2.16	0.79
28:DE:47:VAL:HG11	28:DE:86:PRO:HD2	1.65	0.79
29:BF:53:THR:HG23	29:BF:55:GLY:H	1.48	0.79
20:CT:57:ARG:HH22	20:CT:100:ILE:HD12	1.46	0.79
1:AA:1145:C:H4'	1:AA:1146:A:H5'	1.65	0.79
25:BA:831:A:OP2	61:BA:4454:HOH:O	1.99	0.79
35:BP:36:LYS:O	61:BP:304:HOH:O	1.99	0.79
30:DG:161:THR:HG22	30:DG:163:ALA:H	1.45	0.79
1:AA:656:C:O2'	15:AO:28:GLN:NE2	2.15	0.79
1:AA:1492:A:N3	25:BA:1935:A:N6	2.31	0.79
2:AB:16:HIS:CG	2:AB:17:PHE:H	2.01	0.79
25:BA:2299:A:H62	25:BA:2356:U:H3	1.28	0.79
25:BA:2804:C:H2'	25:BA:2805:G:H8	1.47	0.79
1:AA:165:C:H2'	1:AA:166:G:C8	2.18	0.79
25:BA:241:G:OP1	35:BP:50:ARG:NH1	2.16	0.79
30:BG:161:THR:HG22	30:BG:163:ALA:H	1.48	0.79
1:CA:939:G:H1	1:CA:1344:C:H42	1.27	0.79
2:CB:15:VAL:HG13	2:CB:209:ARG:HB3	1.65	0.79
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.64	0.79
25:BA:1001:G:O6	61:BA:3865:HOH:O	2.00	0.78
28:BE:105:THR:OG1	28:BE:199:ARG:NH2	2.16	0.78
1:AA:97:G:O2'	1:AA:98:G:O4'	2.00	0.78
25:BA:2614:A:OP1	61:BA:4815:HOH:O	2.01	0.78
25:DA:1250:G:OP1	61:DA:4455:HOH:O	2.00	0.78
25:DA:1159:U:H2'	25:DA:1160:G:H8	1.48	0.78
25:BA:988:U:OP2	61:BA:4601:HOH:O	2.01	0.78
39:BT:95:ARG:HG2	39:BT:95:ARG:HH11	1.47	0.78
1:CA:289:G:OP2	61:CA:4053:HOH:O	2.01	0.78
1:CA:1005:A:H1'	1:CA:1036:G:H1	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2005:A:OP1	61:DA:4386:HOH:O	2.01	0.78
25:BA:455:A:OP1	61:BA:3961:HOH:O	2.00	0.78
1:CA:1142:G:H3'	1:CA:1143:G:H8	1.47	0.78
25:DA:1019:U:H3	25:DA:1142(A):A:H62	1.28	0.78
25:DA:1997:G:OP2	61:DA:4560:HOH:O	2.01	0.78
31:DH:41:MET:HE2	31:DH:65:HIS:HA	1.66	0.78
25:BA:611:U:OP2	61:BA:4160:HOH:O	2.01	0.78
25:BA:1018:A:OP2	61:BA:4046:HOH:O	2.01	0.78
25:BA:535:C:OP1	61:BA:4621:HOH:O	2.00	0.77
25:BA:1404:G:OP2	61:BA:4219:HOH:O	2.02	0.77
25:DA:271(A):A:N7	25:DA:271(W):G:N2	2.32	0.77
29:DF:53:THR:HG23	29:DF:55:GLY:H	1.50	0.77
1:AA:289:G:OP2	61:AA:4071:HOH:O	2.02	0.77
4:CD:13:ARG:HB2	4:CD:40:PRO:HD3	1.66	0.77
12:AL:49:ASN:ND2	12:AL:92:ASP:OD2	2.16	0.77
28:BE:93:VAL:HG21	28:BE:180:ASN:HA	1.67	0.77
39:BT:65:LYS:HE2	39:BT:67:SER:HB2	1.66	0.77
13:CM:3:ARG:HA	50:D4:34:GLU:HG2	1.66	0.77
34:BO:35:VAL:HG11	34:BO:103:ALA:HB3	1.66	0.77
25:DA:1604:C:OP1	61:DA:3956:HOH:O	2.03	0.77
25:DA:1800:C:OP2	27:DD:183:ARG:NH2	2.18	0.77
30:DG:5:VAL:HG22	30:DG:8:LYS:H	1.50	0.77
45:DZ:28:MET:HE1	45:DZ:61:LEU:HD21	1.65	0.77
25:BA:808:A:OP1	61:BA:4592:HOH:O	2.01	0.77
10:CJ:49:VAL:HG23	14:CN:41:ARG:HB2	1.67	0.77
17:CQ:53:LEU:HD23	17:CQ:82:MET:HE1	1.66	0.77
25:DA:2032:G:N7	61:DA:3886:HOH:O	2.16	0.77
32:DI:110:ASP:N	32:DI:130:TYR:OH	2.16	0.77
1:CA:1133:G:H1	1:CA:1141:C:H42	1.33	0.77
25:BA:1717:C:OP1	61:BA:3893:HOH:O	2.02	0.77
25:BA:2227:G:H3'	25:BA:2228:G:C8	2.19	0.77
1:CA:1048:G:OP1	14:CN:3:ARG:NH2	2.18	0.77
1:AA:1128:C:O2	1:AA:1147:C:N4	2.17	0.77
1:AA:1075:C:OP1	2:AB:179:LYS:NZ	2.18	0.77
25:BA:11:G:H2'	25:BA:12:U:H5'	1.65	0.77
25:DA:2296:U:OP2	38:DS:9:ARG:NH2	2.18	0.77
1:AA:1126:U:H5	10:AJ:71:LEU:HD22	1.49	0.76
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.67	0.76
25:BA:1016:C:OP2	61:BA:4637:HOH:O	2.04	0.76
1:CA:677:U:H3	1:CA:713:G:H22	1.33	0.76
25:DA:1488:G:C6	25:DA:1489:U:H5	2.03	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:642:A:N3	8:AH:113:SER:OG	2.17	0.76
1:AA:1492:A:O2'	25:BA:1935:A:N1	2.18	0.76
17:AQ:53:LEU:HD23	17:AQ:82:MET:HE1	1.67	0.76
1:CA:352:C:OP2	61:CA:4051:HOH:O	2.02	0.76
4:AD:13:ARG:NH1	4:AD:38:TYR:O	2.18	0.76
25:DA:120:U:OP2	61:DA:3744:HOH:O	2.03	0.76
4:AD:108:LEU:HD13	4:AD:174:LEU:HD13	1.65	0.76
4:CD:100:ARG:NH1	4:CD:137:SER:OG	2.19	0.76
26:DB:44:G:OP1	30:DG:98:ARG:NH2	2.19	0.76
1:AA:167:G:H2'	1:AA:168:G:H8	1.49	0.76
25:BA:2604:G:O2'	61:BA:4655:HOH:O	1.99	0.76
25:DA:2805:G:H2'	25:DA:2807:G:H8	1.51	0.76
25:BA:667:G:H21	25:BA:671:A:H2	1.34	0.76
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.49	0.76
19:CS:30:LEU:HD11	19:CS:32:LYS:HG3	1.67	0.76
25:DA:1253:A:N7	61:DA:3854:HOH:O	2.18	0.76
1:CA:610:G:O6	61:CA:4180:HOH:O	2.04	0.76
1:CA:1015:A:N3	1:CA:1218:C:O2'	2.18	0.76
25:DA:801:G:OP2	61:DA:3762:HOH:O	2.02	0.76
1:AA:803:G:OP1	61:AA:4050:HOH:O	2.03	0.76
25:BA:934:A:H4'	25:BA:935:C:H5	1.51	0.76
25:BA:1431:G:O2'	25:BA:1442:U:O2	2.03	0.76
25:DA:1022:G:H22	25:DA:1142(A):A:H2	1.32	0.76
27:BD:17:THR:O	27:BD:211:ARG:NH2	2.19	0.76
43:BX:31:HIS:HD2	43:BX:33:LYS:H	1.29	0.76
43:DX:11:PRO:HB3	43:DX:92:LEU:HD11	1.66	0.76
1:AA:975:A:H4'	1:AA:976:G:H5''	1.67	0.76
7:AG:50:ILE:HD11	7:AG:58:PRO:HA	1.66	0.76
26:BB:31:C:O2	26:BB:53:A:N6	2.19	0.76
25:BA:2331:G:H22	38:BS:3:ARG:HE	1.34	0.75
1:CA:323:U:OP1	20:CT:26:ASN:ND2	2.18	0.75
4:CD:25:ARG:NH1	4:CD:30:LYS:O	2.20	0.75
1:CA:999:C:N3	1:CA:1042:G:N2	2.34	0.75
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HD23	1.68	0.75
2:AB:87:ARG:HH21	2:AB:219:VAL:HG12	1.51	0.75
20:AT:9:ASN:HB3	20:AT:10:LEU:HD12	1.69	0.75
25:DA:2371:G:O6	61:DA:3975:HOH:O	2.03	0.75
1:AA:348:G:H2'	1:AA:349:A:C5'	2.16	0.75
13:AM:58:GLU:O	13:AM:62:ASN:ND2	2.19	0.75
25:BA:2331:G:H22	38:BS:3:ARG:NE	1.85	0.75
29:BF:13:SER:HA	29:BF:127:GLU:HG3	1.66	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:14:GLU:OE2	15:CO:84:LYS:NZ	2.20	0.75
5:AE:78:HIS:HE2	5:AE:142:LEU:HA	1.51	0.75
25:BA:2732:G:OP2	61:BA:4645:HOH:O	2.03	0.75
25:DA:1412:A:H2'	25:DA:1413:G:C8	2.21	0.75
25:DA:1762:A:N1	61:DA:4178:HOH:O	2.18	0.75
1:AA:954:G:H21	1:AA:1227:A:H62	1.30	0.75
1:AA:165:C:H2'	1:AA:166:G:H8	1.52	0.75
1:AA:180:U:O2	1:AA:196:A:N6	2.19	0.75
1:AA:474:G:H2'	1:AA:475:G:H8	1.51	0.75
25:BA:880:U:O2	35:BP:55:ARG:NH2	2.20	0.75
25:BA:2510:C:OP2	61:BA:4510:HOH:O	2.05	0.75
44:BY:92:ASN:HB3	44:BY:94:LYS:H	1.52	0.75
25:DA:1376:C:OP2	61:DA:3757:HOH:O	2.05	0.75
25:DA:2683:C:OP1	39:DT:53:ARG:NH2	2.20	0.75
1:AA:406:G:H5'	4:AD:5:ILE:HD11	1.67	0.74
25:BA:945:A:O2'	25:BA:946:A:O5'	2.05	0.74
3:CC:58:GLU:HB3	10:CJ:92:THR:HG21	1.67	0.74
25:BA:1065:U:H3	25:BA:1188:A:H62	1.36	0.74
25:BA:2059:G:N7	61:BA:4504:HOH:O	2.20	0.74
32:BI:77:LEU:HB3	32:BI:142:VAL:HG12	1.68	0.74
25:DA:452:G:OP2	61:DA:4105:HOH:O	2.04	0.74
25:DA:631:A:OP1	35:DP:65:ARG:NH1	2.19	0.74
25:DA:2049:G:OP2	61:DA:3941:HOH:O	2.05	0.74
7:AG:62:PHE:HA	7:AG:124:LEU:HD22	1.70	0.74
25:BA:139:A:H8	25:BA:1454:C:HO2'	1.35	0.74
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.32	0.74
25:DA:1315:C:OP2	61:DA:4076:HOH:O	2.05	0.74
25:BA:1356:G:OP2	53:B7:9:ARG:NH1	2.20	0.74
25:BA:2695:C:O2	34:BO:70:LYS:NZ	2.20	0.74
28:BE:47:VAL:HG21	28:BE:86:PRO:HD2	1.69	0.74
39:DT:26:ASP:OD1	39:DT:120:ARG:NH2	2.21	0.74
25:BA:1513:G:HO2'	25:BA:1593:C:HO2'	1.33	0.74
25:BA:2365:G:N7	61:BA:4327:HOH:O	2.19	0.74
1:CA:1223:C:H5''	1:CA:1224:G:H5'	1.68	0.74
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.68	0.74
26:DB:105:A:OP1	45:DZ:72:ARG:NH1	2.20	0.74
1:AA:574:A:OP2	61:AA:4004:HOH:O	2.04	0.74
25:BA:591:U:O4	61:BA:4046:HOH:O	2.05	0.74
3:CC:32:LEU:HD12	3:CC:59:ARG:HH12	1.53	0.74
7:CG:111:ARG:NH1	7:CG:113:GLU:OE2	2.21	0.74
25:DA:2287:A:H62	25:DA:2344:U:H3	1.31	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:130:G:O6	61:BA:4550:HOH:O	2.04	0.74
27:BD:221:VAL:HG22	27:BD:226:MET:HE2	1.70	0.74
8:AH:49:GLU:HG2	8:AH:62:TYR:HE2	1.53	0.74
1:CA:1153:C:H42	1:CA:1154:G:N2	1.86	0.74
25:DA:832:G:OP1	61:DA:4165:HOH:O	2.06	0.74
25:DA:848:G:H2'	25:DA:849:A:C8	2.22	0.74
1:AA:1054:C:OP1	61:AA:4053:HOH:O	2.04	0.73
1:AA:1162:C:H42	1:AA:1174:G:H1	1.35	0.73
25:BA:874:U:OP1	61:BA:4633:HOH:O	2.05	0.73
1:CA:504:C:OP1	61:CA:4009:HOH:O	2.05	0.73
1:CA:804:U:OP1	61:CA:4020:HOH:O	2.06	0.73
1:CA:998:G:H1	1:CA:1043:C:N4	1.83	0.73
4:CD:187:ARG:NH2	4:CD:193:ASP:OD2	2.21	0.73
25:BA:1809:U:O2	61:BA:4722:HOH:O	2.05	0.73
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.24	0.73
25:DA:2248:C:OP2	61:DA:3945:HOH:O	2.06	0.73
2:CB:163:PHE:HD1	2:CB:185:ILE:HG13	1.53	0.73
25:DA:919:G:N2	25:DA:2269:A:OP2	2.21	0.73
1:AA:184:G:H2'	1:AA:185:A:H8	1.54	0.73
1:CA:316:G:OP2	1:CA:351:G:O2'	2.06	0.73
8:CH:51:VAL:HG12	8:CH:52:ASP:H	1.53	0.73
25:DA:963:U:OP2	61:DA:4173:HOH:O	2.04	0.73
25:DA:1025:G:O2'	61:DA:4219:HOH:O	2.06	0.73
1:AA:812:C:N3	61:AA:4028:HOH:O	2.22	0.73
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.89	0.73
25:BA:2227:G:H5'	25:BA:2228:G:N7	2.03	0.73
37:BR:67:LEU:HD13	37:BR:76:VAL:HG21	1.71	0.73
43:BX:31:HIS:CD2	43:BX:33:LYS:H	2.07	0.73
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.02	0.73
3:AC:35:GLU:OE2	3:AC:59:ARG:NH2	2.21	0.73
25:BA:985:G:OP1	61:BA:4728:HOH:O	2.07	0.73
1:CA:959:A:HO2'	1:CA:984:C:HO2'	1.37	0.73
2:CB:91:PRO:HG2	2:CB:155:LEU:HD23	1.71	0.73
1:AA:262:A:H2'	1:AA:263:A:C8	2.24	0.73
1:CA:664:G:P	18:CR:64:ARG:HH22	2.10	0.73
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.87	0.73
13:CM:27:LYS:HE2	13:CM:27:LYS:HA	1.69	0.73
25:DA:900:A:H2'	25:DA:901:A:C8	2.24	0.73
25:DA:1817:G:OP1	27:DD:88:ARG:NH2	2.21	0.73
50:D4:38:LYS:O	50:D4:40:HIS:N	2.21	0.73
1:AA:742:G:OP2	15:AO:35:ARG:NH2	2.20	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:69:ARG:NH2	27:BD:128:GLY:O	2.20	0.73
6:AF:65:VAL:HG21	6:AF:67:MET:HE2	1.71	0.73
25:BA:1398:U:OP2	61:BA:3932:HOH:O	2.05	0.73
1:CA:989:C:N4	1:CA:1216:G:O6	2.17	0.73
25:DA:2445:G:OP1	29:DF:74:ARG:NH2	2.22	0.73
1:AA:266:G:H5''	1:AA:268:C:H41	1.53	0.73
1:AA:558:G:OP1	61:AA:4042:HOH:O	2.07	0.73
13:AM:34:LEU:HD13	13:AM:41:PRO:HA	1.70	0.73
30:DG:80:PHE:O	30:DG:82:LEU:N	2.20	0.73
30:BG:48:GLU:HA	30:BG:51:ARG:HE	1.53	0.72
40:DU:83:LEU:HD12	40:DU:88:ILE:HD12	1.70	0.72
1:AA:601:C:H2'	1:AA:602:A:C8	2.24	0.72
1:CA:1251:A:HO2'	1:CA:1369:C:HO2'	1.32	0.72
25:DA:2749:A:H1'	31:DH:63:SER:HB3	1.71	0.72
25:BA:2745:G:OP1	28:BE:203:LYS:NZ	2.17	0.72
2:CB:52:GLU:HG2	2:CB:56:ARG:HH22	1.54	0.72
46:D0:27:GLU:HG3	46:D0:68:GLU:HA	1.71	0.72
1:AA:1028:C:H42	1:AA:1033:G:H1	1.36	0.72
11:AK:15:ALA:HB1	11:AK:78:GLN:HB2	1.69	0.72
1:AA:864:A:OP1	61:AA:4127:HOH:O	2.08	0.72
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HD23	1.71	0.72
15:AO:56:LEU:O	15:AO:60:VAL:HG23	1.88	0.72
1:CA:1003:G:H1	1:CA:1035:A:H61	1.37	0.72
25:DA:963:U:OP1	61:DA:3740:HOH:O	2.08	0.72
1:AA:881:G:P	12:AL:12:ARG:HH22	2.12	0.72
1:AA:972:C:OP1	61:AA:4123:HOH:O	2.08	0.72
25:BA:2019:G:OP2	61:BA:4565:HOH:O	2.07	0.72
38:BS:15:ARG:O	38:BS:19:LYS:HG2	1.89	0.72
17:CQ:57:VAL:HG12	17:CQ:76:LEU:HA	1.72	0.72
25:DA:574:C:OP1	61:DA:3788:HOH:O	2.08	0.72
25:DA:1876:A:H2'	25:DA:1877:A:C8	2.24	0.72
1:AA:1494:G:HO2'	25:BA:1934:A:HO2'	1.35	0.72
25:BA:1695:C:OP1	61:BA:4516:HOH:O	2.07	0.72
4:CD:18:LYS:NZ	4:CD:31:CYS:SG	2.63	0.72
34:DO:115:VAL:HG13	34:DO:121:VAL:HG21	1.72	0.72
25:DA:400:G:O6	61:DA:4274:HOH:O	2.06	0.72
25:DA:1670:C:OP1	61:DA:3750:HOH:O	2.07	0.72
1:AA:346:G:O6	1:AA:348:G:N2	2.23	0.72
50:B4:57:GLU:HB3	50:B4:58:ARG:HA	1.71	0.72
1:CA:1135:U:O2'	1:CA:1137:C:O2	2.05	0.72
13:CM:16:ASP:HB3	13:CM:34:LEU:HD11	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DD:71:ASP:CB	27:DD:103:ARG:HH22	2.03	0.72
1:CA:559:A:OP1	5:CE:126:ARG:NH2	2.22	0.72
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.72	0.72
7:CG:68:ASN:ND2	7:CG:127:ALA:O	2.19	0.72
30:DG:136:ARG:HH11	30:DG:137:GLU:H	1.37	0.72
32:BI:48:GLU:HG2	32:BI:52:ARG:HH22	1.55	0.71
51:B5:17:ASP:OD2	61:B5:602:HOH:O	2.07	0.71
25:DA:731:C:OP1	61:DA:4224:HOH:O	2.08	0.71
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.22	0.71
30:BG:16:ARG:NE	30:BG:31:VAL:HG11	2.05	0.71
35:BP:100:LEU:HD12	35:BP:112:LEU:HD11	1.70	0.71
1:CA:693:G:H2'	1:CA:694:A:C8	2.25	0.71
1:AA:1027:C:O2'	1:AA:1034:G:N2	2.23	0.71
25:BA:1679:A:OP2	61:BA:4622:HOH:O	2.07	0.71
26:BB:48:A:H4'	38:BS:95:HIS:HD2	1.53	0.71
35:BP:50:ARG:HH21	54:B8:7:HIS:CD2	2.09	0.71
1:CA:1376:U:OP1	7:CG:98:SER:OG	2.08	0.71
25:DA:89:G:H3'	25:DA:90:U:H5''	1.71	0.71
1:AA:974:A:OP2	14:AN:41:ARG:NH1	2.24	0.71
10:AJ:7:LYS:HE2	10:AJ:9:ARG:HH12	1.55	0.71
25:BA:1379:C:OP2	61:BA:4121:HOH:O	2.07	0.71
25:BA:2804:C:H2'	25:BA:2805:G:C8	2.24	0.71
1:CA:1457:G:OP1	20:CT:39:LYS:NZ	2.22	0.71
2:CB:96:ARG:HD2	2:CB:98:LEU:HD22	1.72	0.71
25:DA:11:G:H2'	25:DA:12:U:H5'	1.71	0.71
25:DA:600:G:N3	61:DA:3733:HOH:O	2.23	0.71
1:AA:1036:G:H5'	1:AA:1037:C:H5	1.55	0.71
46:B0:40:GLN:HE21	46:B0:57:PHE:HB3	1.55	0.71
25:DA:819:A:OP2	25:DA:1187:G:N2	2.19	0.71
25:DA:1140:C:O3'	33:DN:25:ARG:NH1	2.23	0.71
25:DA:2267:A:H5''	25:DA:2268:A:H5'	1.71	0.71
1:CA:21:G:OP1	61:CA:4062:HOH:O	2.07	0.71
25:BA:1055:A:OP2	33:BN:37:LYS:NZ	2.19	0.71
1:CA:148:G:H2'	1:CA:149:A:H8	1.54	0.71
25:DA:1665:A:OP2	61:DA:4385:HOH:O	2.08	0.71
49:D3:8:LEU:HD13	49:D3:31:LEU:HD23	1.73	0.71
25:BA:1094:A:OP2	25:BA:1155:C:N4	2.23	0.71
49:B3:3:ARG:NH1	49:B3:60:GLU:OE2	2.19	0.71
1:AA:1223:C:H5''	1:AA:1224:G:H5'	1.72	0.71
4:AD:15:GLU:HG3	4:AD:63:LYS:HE2	1.72	0.71
25:BA:597:C:OP1	61:BA:3998:HOH:O	2.09	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2228:G:O2'	25:BA:2229:A:OP1	2.07	0.71
1:CA:585:G:OP1	17:CQ:37:LYS:NZ	2.24	0.71
1:CA:1189:C:O2	61:CA:4087:HOH:O	2.08	0.71
31:DH:159:GLU:HG3	31:DH:169:VAL:HG11	1.72	0.71
36:DQ:34:LEU:HD11	36:DQ:129:THR:HB	1.73	0.71
1:CA:954:G:H21	1:CA:1227:A:H62	1.39	0.70
3:CC:73:PRO:HB3	3:CC:103:VAL:HG11	1.70	0.70
4:CD:13:ARG:NH1	4:CD:38:TYR:O	2.23	0.70
25:DA:1593:G:H2'	25:DA:1594:G:C8	2.26	0.70
46:D0:14:ARG:NH1	61:D0:202:HOH:O	2.23	0.70
1:AA:17:U:H2'	1:AA:18:C:C6	2.26	0.70
1:AA:411:A:OP1	4:AD:30:LYS:NZ	2.19	0.70
25:BA:1039:G:OP1	40:BU:50:ARG:NH2	2.25	0.70
30:BG:102:PHE:HE1	30:BG:141:PHE:HE2	1.37	0.70
25:DA:287:C:H2'	25:DA:288:C:H6	1.56	0.70
25:DA:1488:G:C6	25:DA:1489:U:C5	2.78	0.70
25:DA:2819:G:N7	61:DA:4006:HOH:O	2.24	0.70
1:AA:167:G:H2'	1:AA:168:G:C8	2.26	0.70
9:AI:53:VAL:O	9:AI:55:ALA:N	2.21	0.70
25:BA:322:G:N7	61:BA:3883:HOH:O	2.23	0.70
25:BA:932:C:H3'	25:BA:933:C:H5''	1.73	0.70
25:BA:1189:A:OP1	33:BN:25:ARG:NH2	2.24	0.70
1:CA:1142:G:H3'	1:CA:1143:G:C8	2.26	0.70
2:CB:54:THR:HG23	2:CB:199:TYR:HB3	1.72	0.70
25:DA:1310:G:OP2	53:D7:9:ARG:NH1	2.21	0.70
2:AB:16:HIS:CD2	2:AB:17:PHE:H	2.09	0.70
8:AH:51:VAL:HG12	8:AH:52:ASP:H	1.56	0.70
10:AJ:78:ASN:O	10:AJ:80:LYS:N	2.25	0.70
25:BA:2862:G:OP1	61:BA:4875:HOH:O	2.10	0.70
35:BP:33:ARG:O	61:BP:301:HOH:O	2.07	0.70
1:CA:572:A:OP1	61:CA:4046:HOH:O	2.10	0.70
25:DA:2805:G:H2'	25:DA:2807:G:C8	2.25	0.70
1:AA:221:C:H2'	1:AA:222:U:H6	1.54	0.70
10:CJ:17:ASP:OD1	10:CJ:70:ARG:NH1	2.24	0.70
25:DA:827:U:OP1	61:DA:4180:HOH:O	2.08	0.70
25:DA:1235:G:OP1	61:DA:4361:HOH:O	2.08	0.70
25:DA:2849:U:OP2	39:DT:95:ARG:NH1	2.24	0.70
27:DD:148:GLU:HB2	27:DD:151:LYS:HD2	1.73	0.70
1:AA:1129:C:N3	1:AA:1143:G:N2	2.37	0.70
4:AD:173:TRP:CZ3	4:AD:174:LEU:HG	2.27	0.70
1:CA:811:C:N4	61:CA:4026:HOH:O	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:147:U:O4	61:BA:4550:HOH:O	2.06	0.70
25:BA:2101:U:O4	61:BA:4300:HOH:O	2.09	0.70
42:DW:14:PRO:HG2	42:DW:78:GLU:HG2	1.73	0.70
50:D4:68:ARG:HG3	50:D4:68:ARG:HH21	1.54	0.70
36:DQ:97:VAL:HG11	36:DQ:103:MET:HE3	1.73	0.70
45:DZ:93:ASP:O	45:DZ:131:ARG:NH1	2.23	0.70
25:DA:2705:A:OP2	61:DA:4123:HOH:O	2.08	0.70
36:DQ:85:LYS:HG2	46:D0:7:LEU:HB3	1.74	0.70
1:AA:148:G:HO2'	1:AA:149:A:H8	1.40	0.70
36:BQ:10:ARG:NH1	61:BQ:302:HOH:O	2.25	0.70
2:CB:178:ARG:NH2	8:CH:68:ARG:HH12	1.90	0.70
24:CW:9:MVA:O	24:CW:10:2QY:H86	1.91	0.70
25:DA:2206:G:H3'	25:DA:2207:G:H8	1.56	0.70
36:DQ:48:GLU:OE1	36:DQ:51:ARG:NH2	2.24	0.70
25:BA:70:A:N7	43:BX:31:HIS:HE1	1.90	0.69
1:CA:1269:A:N1	1:CA:1312:G:O2'	2.24	0.69
25:BA:284:G:O6	61:BA:4714:HOH:O	2.09	0.69
25:BA:1249:A:H2	25:BA:1287:A:H62	1.40	0.69
2:CB:18:GLY:HA2	2:CB:42:ILE:HG13	1.73	0.69
12:CL:24:VAL:HG11	12:CL:27:LEU:HD22	1.74	0.69
1:AA:1292:U:OP2	7:AG:41:ARG:NH2	2.24	0.69
25:BA:9:U:N3	25:BA:2641:A:H2	1.89	0.69
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.73	0.69
4:CD:119:GLN:HG2	4:CD:123:HIS:CD2	2.27	0.69
20:CT:49:ALA:HB3	20:CT:99:LEU:HD22	1.74	0.69
25:BA:388:A:H2'	25:BA:389:G:C8	2.27	0.69
25:BA:2339:A:H2'	25:BA:2340:A:C8	2.27	0.69
1:CA:1002:G:H2'	1:CA:1003:G:C8	2.27	0.69
1:CA:1125:U:HO2'	1:CA:1126:U:H2'	1.57	0.69
25:DA:993:G:OP1	40:DU:50:ARG:NH2	2.25	0.69
5:AE:100:VAL:HG22	5:AE:118:ILE:HG22	1.74	0.69
43:BX:92:LEU:C	43:BX:94:GLY:H	2.00	0.69
25:DA:1803:A:O2'	27:DD:259:THR:HG21	1.92	0.69
52:D6:13:CYS:SG	52:D6:47:THR:HG21	2.33	0.69
13:AM:122:LYS:HD3	13:AM:123:ALA:H	1.58	0.69
31:BH:56:SER:OG	31:BH:57:ASP:N	2.26	0.69
2:CB:178:ARG:HH22	8:CH:68:ARG:NH1	1.91	0.69
25:DA:1017:G:N7	61:DA:4208:HOH:O	2.25	0.69
25:BA:1480:A:H61	25:BA:1605:A:H62	1.40	0.69
25:BA:1831:C:OP1	27:BD:264:LYS:NZ	2.24	0.69
25:BA:2457:G:OP1	29:BF:74:ARG:NH2	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:503:C:OP2	12:CL:116:SER:HB3	1.93	0.69
25:DA:1637:A:OP2	61:DA:4412:HOH:O	2.10	0.69
1:AA:1025:U:O2	1:AA:1036:G:O6	2.11	0.69
12:AL:24:VAL:HG11	12:AL:27:LEU:HD22	1.74	0.69
19:AS:3:ARG:NH1	19:AS:8:GLY:O	2.25	0.69
25:BA:956:A:H62	36:BQ:12:GLN:HA	1.58	0.69
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.26	0.69
1:CA:652:U:O4	1:CA:752:G:O2'	2.10	0.69
4:CD:15:GLU:HG2	4:CD:63:LYS:HB3	1.75	0.69
25:DA:1430:C:H2'	25:DA:1431:U:H6	1.57	0.69
25:DA:1509(B):A:H2'	25:DA:1510:G:C8	2.28	0.69
25:DA:2682:U:OP2	61:DA:3802:HOH:O	2.09	0.69
19:AS:9:VAL:HG21	50:B4:61:ARG:HH22	1.57	0.69
25:BA:1648:U:O4	61:BA:4117:HOH:O	2.08	0.69
25:BA:2101:U:O3'	47:B1:35:THR:OG1	2.11	0.69
44:BY:102:CYS:SG	44:BY:103:GLY:N	2.66	0.69
1:CA:532:A:O2'	1:CA:533:A:OP1	2.11	0.69
25:DA:649:G:H4'	54:D8:46:ARG:HH22	1.57	0.69
25:DA:1143:A:OP1	33:DN:25:ARG:NH2	2.26	0.69
29:DF:185:ASP:HA	29:DF:188:ARG:HD3	1.75	0.69
1:AA:596:C:OP2	61:AA:4043:HOH:O	2.11	0.69
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	1.73	0.69
25:BA:551:A:OP1	61:BA:4499:HOH:O	2.11	0.69
25:BA:1613:A:OP1	27:BD:211:ARG:NH1	2.26	0.69
25:BA:2619:G:O3'	61:BA:4188:HOH:O	2.11	0.69
1:CA:837:G:H1	1:CA:849:C:H42	1.41	0.69
18:CR:54:ARG:HB2	18:CR:54:ARG:HH11	1.58	0.69
20:CT:60:GLU:HG3	20:CT:81:LYS:HD2	1.75	0.69
28:DE:72:VAL:HG22	28:DE:73:GLU:HG2	1.75	0.69
1:AA:1003:G:N2	1:AA:1038:C:N3	2.41	0.68
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.93	0.68
27:BD:71:ASP:HB3	27:BD:103:ARG:HH22	1.58	0.68
1:CA:891:U:OP2	61:CA:4083:HOH:O	2.11	0.68
5:CE:12:LEU:HB3	5:CE:31:LEU:HB2	1.74	0.68
9:CI:24:GLY:HA2	9:CI:59:PHE:O	1.93	0.68
25:DA:1963:U:O2'	61:DA:4441:HOH:O	2.11	0.68
25:DA:2016:U:H2'	25:DA:2017:U:C6	2.29	0.68
28:DE:72:VAL:HG13	28:DE:73:GLU:O	1.93	0.68
29:DF:195:ASP:OD1	29:DF:196:LEU:N	2.26	0.68
50:D4:64:GLY:C	50:D4:66:SER:H	2.01	0.68
1:AA:21:G:OP1	61:AA:4080:HOH:O	2.10	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:35:G:O2'	12:AL:118:SER:O	2.12	0.68
1:AA:839:U:O2'	1:AA:840:C:OP1	2.11	0.68
25:BA:272:U:H4'	32:BI:50:ARG:HH12	1.58	0.68
25:BA:1315:A:N7	61:BA:4265:HOH:O	2.25	0.68
32:BI:92:VAL:HG13	32:BI:120:ILE:HB	1.75	0.68
7:CG:108:ALA:HA	7:CG:111:ARG:HD2	1.73	0.68
25:DA:1593:G:H2'	25:DA:1594:G:H8	1.56	0.68
1:AA:1025:U:O2'	1:AA:1026:G:O4'	2.12	0.68
1:AA:1125:U:O2'	1:AA:1126:U:OP2	2.10	0.68
10:AJ:5:ARG:NE	10:AJ:73:ASP:OD1	2.25	0.68
25:BA:2460:A:OP2	61:BA:4510:HOH:O	2.11	0.68
42:BW:14:PRO:HG2	42:BW:78:GLU:HG2	1.76	0.68
25:DA:2552:U:H2'	25:DA:2554:U:OP2	1.93	0.68
6:AF:18:GLN:HA	6:AF:21:LEU:HD12	1.76	0.68
25:BA:1576:G:C6	25:BA:1577:C:N4	2.61	0.68
25:BA:1815:A:OP2	61:BA:4519:HOH:O	2.10	0.68
1:CA:1003:G:H1	1:CA:1035:A:N6	1.91	0.68
44:DY:102:CYS:SG	44:DY:103:GLY:N	2.67	0.68
25:BA:1463:C:O2'	25:BA:1633:A:N3	2.27	0.68
39:BT:24:PRO:HA	39:BT:49:VAL:HG22	1.74	0.68
2:CB:144:ARG:NH1	2:CB:148:TYR:OH	2.26	0.68
19:CS:42:PRO:HG3	50:D4:61:ARG:HG2	1.75	0.68
27:DD:132:PRO:HD3	27:DD:190:TYR:CZ	2.28	0.68
47:D1:50:ARG:HG2	47:D1:59:THR:HB	1.76	0.68
50:D4:44:THR:O	50:D4:46:GLN:N	2.27	0.68
2:AB:17:PHE:HB2	2:AB:44:LEU:HD21	1.74	0.68
25:BA:927:G:N2	25:BA:944:C:N3	2.41	0.68
1:CA:1193:G:O2'	5:CE:25:ARG:NH2	2.27	0.68
12:CL:57:LYS:HG2	12:CL:67:THR:HG22	1.73	0.68
13:CM:3:ARG:HE	13:CM:4:ILE:HG22	1.58	0.68
25:DA:639:U:H2'	25:DA:640:C:C6	2.29	0.68
50:D4:24:THR:OG1	50:D4:25:TYR:N	2.27	0.68
1:AA:836:G:OP2	18:AR:61:LYS:NZ	2.27	0.68
31:BH:149:ARG:NH1	31:BH:167:GLU:OE2	2.27	0.68
1:CA:735:C:H2'	1:CA:736:C:H6	1.58	0.68
3:CC:152:ILE:HG23	3:CC:199:LYS:HB2	1.76	0.68
25:DA:1200:C:H5'	61:DA:3770:HOH:O	1.94	0.68
27:DD:132:PRO:HG2	27:DD:135:PHE:HD2	1.57	0.68
1:AA:661:G:H1	1:AA:744:C:H42	1.39	0.68
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.74	0.68
25:BA:1047:A:OP2	61:BA:3917:HOH:O	2.11	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:8:GLN:NE2	29:BF:21:ALA:HB2	2.09	0.68
1:CA:646:U:H2'	1:CA:647:C:C6	2.29	0.68
25:DA:2393:A:H5''	35:DP:63:PRO:HB3	1.76	0.68
25:DA:2394:C:OP2	54:D8:30:ARG:NH1	2.27	0.68
1:AA:278:G:OP2	17:AQ:92:ARG:NH2	2.27	0.68
1:AA:664:G:H22	1:AA:741:G:H1	1.39	0.68
1:AA:1086:U:H3	1:AA:1099:G:H22	1.42	0.68
3:AC:3:ASN:N	3:AC:3:ASN:OD1	2.26	0.68
25:BA:2734:A:N7	61:BA:4015:HOH:O	2.27	0.68
1:CA:460:G:O6	1:CA:470:C:H5''	1.93	0.68
2:CB:210:SER:O	2:CB:214:ILE:HG12	1.94	0.68
25:BA:2212:G:H2'	25:BA:2213:G:O4'	1.93	0.68
40:BU:76:TYR:OH	40:BU:92:ARG:NH1	2.26	0.68
1:CA:474:G:H2'	1:CA:475:G:H8	1.58	0.68
25:DA:2287:A:N6	25:DA:2344:U:H3	1.92	0.68
25:DA:2427:C:OP1	61:DA:4257:HOH:O	2.11	0.68
27:DD:221:VAL:HG22	27:DD:226:MET:HE2	1.76	0.68
1:AA:342:C:N3	1:AA:343:U:H5	1.92	0.67
25:BA:335:A:OP2	61:BA:4497:HOH:O	2.11	0.67
61:BE:406:HOH:O	37:BR:3:HIS:NE2	2.27	0.67
5:CE:9:LYS:HB2	5:CE:112:LEU:HD11	1.76	0.67
25:DA:652(D):C:H42	25:DA:652(U):G:H1	1.42	0.67
1:AA:59:A:H3'	1:AA:331:G:H22	1.59	0.67
25:BA:1361:C:OP2	61:BA:4471:HOH:O	2.12	0.67
25:DA:1607:C:N4	25:DA:1622:G:OP2	2.27	0.67
46:D0:24:LYS:HE2	46:D0:24:LYS:HA	1.76	0.67
1:AA:946:A:H2'	1:AA:947:G:C8	2.28	0.67
1:CA:382:A:H2'	1:CA:383:A:C8	2.28	0.67
1:CA:1042:G:O2'	1:CA:1043:C:O4'	2.12	0.67
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.77	0.67
25:BA:2081:A:OP2	61:BA:4212:HOH:O	2.12	0.67
25:BA:2361:G:OP1	61:BA:3947:HOH:O	2.12	0.67
1:CA:565:U:OP2	61:CA:4054:HOH:O	2.13	0.67
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.76	0.67
25:DA:588:U:OP2	61:DA:3873:HOH:O	2.11	0.67
25:DA:962:G:OP1	61:DA:4173:HOH:O	2.12	0.67
25:DA:2006:C:OP2	61:DA:4388:HOH:O	2.12	0.67
34:DO:68:GLU:HB3	34:DO:78:ARG:HB2	1.74	0.67
47:D1:77:ALA:HA	47:D1:80:LEU:HD13	1.77	0.67
31:BH:56:SER:HB3	31:BH:61:HIS:ND1	2.10	0.67
1:CA:1251:A:O2'	1:CA:1369:C:O2'	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:272:G:H4'	25:DA:272(A):U:H5''	1.74	0.67
25:DA:994:C:OP2	40:DU:54:LYS:NZ	2.28	0.67
25:DA:2431:U:OP2	61:DA:3860:HOH:O	2.12	0.67
50:D4:62:ARG:O	50:D4:64:GLY:N	2.28	0.67
1:AA:1030(D):A:H62	1:AA:1031:G:H21	1.43	0.67
25:BA:1391:C:OP2	61:BA:3931:HOH:O	2.10	0.67
51:B5:16:ARG:NH1	51:B5:17:ASP:OD1	2.28	0.67
23:CX:73:A:H5''	23:CX:74:C:H5'	1.77	0.67
1:AA:933:G:O6	7:AG:3:ARG:NH2	2.28	0.67
1:AA:1063:C:OP2	1:AA:1064:G:O2'	2.10	0.67
1:AA:1108:G:O6	61:AA:4120:HOH:O	2.10	0.67
25:BA:324:A:OP2	44:BY:86:ARG:NH2	2.28	0.67
25:BA:2460:A:OP1	61:BA:4034:HOH:O	2.11	0.67
25:DA:754:C:H2'	25:DA:755:C:H6	1.60	0.67
25:DA:1971:A:OP1	61:DA:3909:HOH:O	2.13	0.67
25:DA:2291:U:H2'	25:DA:2292:C:C6	2.29	0.67
25:BA:2420:U:OP2	61:BA:4137:HOH:O	2.13	0.67
1:CA:117:G:OP2	61:CA:4053:HOH:O	2.13	0.67
1:CA:1075:C:OP1	2:CB:179:LYS:NZ	2.28	0.67
1:CA:1226:C:N4	13:CM:104:ARG:HG3	2.10	0.67
9:CI:33:PHE:HE1	9:CI:43:ALA:HB1	1.59	0.67
25:DA:2430:A:OP2	61:DA:4180:HOH:O	2.12	0.67
6:AF:68:PRO:HB2	6:AF:71:ARG:HG3	1.77	0.67
38:BS:25:ARG:NH1	38:BS:42:ASP:OD1	2.27	0.67
25:DA:1359:A:H2'	25:DA:1360:A:H5'	1.77	0.67
30:DG:16:ARG:O	30:DG:20:ILE:HG13	1.95	0.67
32:DI:104:GLN:O	32:DI:105:HIS:ND1	2.28	0.67
14:AN:37:PHE:HB3	14:AN:39:LEU:HD12	1.76	0.67
1:CA:619:U:N3	4:CD:134:ASP:OD1	2.20	0.67
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.30	0.67
47:D1:65:SER:HG	47:D1:66:HIS:HD1	1.41	0.67
25:BA:2897:U:H2'	25:BA:2898:C:C6	2.30	0.66
27:BD:132:PRO:HG2	27:BD:135:PHE:HD2	1.60	0.66
45:BZ:69:THR:HG22	45:BZ:90:VAL:HA	1.77	0.66
1:CA:1004:A:C6	1:CA:1037:C:C2	2.82	0.66
1:CA:1133:G:H2'	1:CA:1134:G:C8	2.31	0.66
1:CA:1170:A:O2'	1:CA:1171:G:O4'	2.12	0.66
23:CX:64:G:H4'	36:DQ:10:ARG:HH21	1.59	0.66
25:DA:602:G:O2'	25:DA:655:A:N6	2.28	0.66
1:AA:1286:A:C8	1:AA:1287:A:H4'	2.30	0.66
1:AA:1422:G:H5''	34:BO:48:PRO:HB3	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:3:GLN:OE1	9:AI:20:ARG:NH2	2.27	0.66
25:BA:449:A:OP2	61:BA:3954:HOH:O	2.13	0.66
25:BA:1007:G:OP1	61:BA:4616:HOH:O	2.12	0.66
1:CA:947:G:O3'	13:CM:109:THR:OG1	2.14	0.66
25:DA:2632:A:HO2'	25:DA:2811:G:HO2'	1.33	0.66
1:AA:1321:C:H5''	1:AA:1322:C:H2'	1.77	0.66
25:DA:1652:A:OP1	37:DR:8:ARG:NH1	2.28	0.66
45:DZ:108:PRO:HG3	45:DZ:141:VAL:HB	1.77	0.66
25:BA:2600:G:OP2	61:BA:4789:HOH:O	2.14	0.66
48:B2:16:LEU:O	48:B2:67:LYS:NZ	2.27	0.66
50:B4:1:MET:HE2	50:B4:6:HIS:CG	2.30	0.66
25:DA:773:U:OP1	61:DA:4405:HOH:O	2.12	0.66
25:DA:1606:G:OP1	61:DA:4577:HOH:O	2.13	0.66
25:DA:2685:G:O6	61:DA:3896:HOH:O	2.09	0.66
33:DN:20:GLY:HA2	33:DN:61:ARG:HE	1.58	0.66
1:AA:1189:C:OP1	10:AJ:51:ARG:NH2	2.28	0.66
23:CX:23:C:H2'	23:CX:24:U:C6	2.30	0.66
27:DD:206:LEU:HD22	27:DD:211:ARG:HG2	1.76	0.66
1:AA:243:A:H4'	1:AA:244:U:H5''	1.77	0.66
1:CA:1256:A:N6	1:CA:1278:U:H1'	2.10	0.66
25:DA:1301:A:OP1	61:DA:4411:HOH:O	2.13	0.66
25:DA:271(E):U:H2'	25:DA:271(F):C:C6	2.30	0.66
29:DF:18:ARG:NH2	29:DF:127:GLU:OE1	2.28	0.66
45:DZ:72:ARG:NH2	45:DZ:97:GLU:O	2.29	0.66
25:BA:2817:G:N1	25:BA:2902:G:O6	2.19	0.66
7:CG:113:GLU:HG2	7:CG:119:ARG:HG2	1.78	0.66
25:DA:1774:C:OP1	61:DA:3936:HOH:O	2.13	0.66
29:DF:13:SER:HA	29:DF:127:GLU:HG3	1.77	0.66
1:AA:407:G:H5''	4:AD:115:ARG:HB3	1.78	0.66
1:AA:452:A:H4'	16:AP:72:ARG:NH1	2.11	0.66
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.78	0.66
25:BA:1218:G:O2'	25:BA:1219:A:O4'	2.13	0.66
25:BA:2324:U:H5'	30:BG:88:ILE:HD11	1.78	0.66
42:BW:12:ILE:HD13	42:BW:17:VAL:HG13	1.77	0.66
3:CC:78:GLY:HA3	3:CC:83:ARG:H	1.60	0.66
5:CE:137:GLU:HG2	5:CE:140:ARG:HH11	1.61	0.66
1:AA:117:G:OP2	61:AA:4071:HOH:O	2.14	0.66
27:BD:108:PRO:HD2	27:BD:111:LEU:HG	1.78	0.66
1:CA:1120:G:O6	1:CA:1154:G:N2	2.29	0.66
4:CD:43:HIS:HA	4:CD:46:LYS:HG3	1.77	0.66
25:DA:818:G:OP2	61:DA:3837:HOH:O	2.13	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2070:G:OP2	61:DA:4339:HOH:O	2.13	0.66
50:D4:61:ARG:NH1	50:D4:61:ARG:O	2.28	0.66
25:BA:1091:A:OP1	25:BA:1091:A:H4'	1.94	0.65
6:CF:89:MET:HE1	18:CR:72:ARG:HB3	1.76	0.65
1:CA:539:A:H2'	1:CA:540:G:C8	2.31	0.65
1:CA:1236:A:O2'	1:CA:1304:G:H4'	1.96	0.65
5:CE:122:GLU:O	5:CE:126:ARG:NH1	2.30	0.65
10:CJ:29:ARG:HB2	10:CJ:84:GLN:HE22	1.60	0.65
25:DA:900:A:H2'	25:DA:901:A:H8	1.61	0.65
25:DA:1313:U:OP1	61:DA:3981:HOH:O	2.15	0.65
25:DA:2867:G:OP2	39:DT:119:LYS:NZ	2.28	0.65
26:DB:75:G:N2	45:DZ:87:ASP:OD1	2.28	0.65
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.78	0.65
25:BA:839:G:OP2	61:BA:4064:HOH:O	2.13	0.65
35:BP:59:LEU:HD11	54:B8:10:ALA:HB2	1.78	0.65
1:CA:56:U:H2'	1:CA:57:G:C8	2.31	0.65
2:CB:47:THR:O	2:CB:51:LEU:N	2.27	0.65
9:CI:85:LEU:HB3	9:CI:92:TYR:CD2	2.31	0.65
10:CJ:42:THR:HG21	10:CJ:68:HIS:HD2	1.61	0.65
19:CS:15:LEU:HD12	19:CS:18:LYS:HD2	1.79	0.65
1:AA:1182:G:H4'	1:AA:1183:A:H5'	1.78	0.65
2:AB:15:VAL:HB	2:AB:209:ARG:HG2	1.79	0.65
25:BA:601:A:OP2	61:BA:4002:HOH:O	2.14	0.65
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.30	0.65
25:DA:411:G:OP1	61:DA:3857:HOH:O	2.14	0.65
28:DE:14:ILE:HD11	28:DE:173:VAL:HG11	1.76	0.65
25:DA:981:A:N1	25:DA:2027:G:O2'	2.28	0.65
26:DB:55:U:O3'	30:DG:27:ASN:ND2	2.30	0.65
30:DG:25:TYR:HB3	30:DG:30:GLU:HB2	1.79	0.65
33:DN:15:LEU:HB2	33:DN:135:PRO:HB2	1.77	0.65
1:AA:1198:G:OP2	61:AA:4053:HOH:O	2.14	0.65
4:AD:31:CYS:SG	4:AD:32:ALA:N	2.69	0.65
25:BA:2832:G:OP2	61:BE:406:HOH:O	2.13	0.65
44:BY:98:VAL:HG12	44:BY:105:ALA:HA	1.78	0.65
8:CH:12:ARG:HD2	8:CH:26:VAL:HG12	1.79	0.65
1:AA:159:G:H2'	1:AA:161:A:OP2	1.97	0.65
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.32	0.65
25:BA:950:C:H2'	25:BA:951:U:C6	2.32	0.65
25:DA:31:C:OP1	61:DA:4153:HOH:O	2.14	0.65
1:AA:1095:U:OP1	1:AA:1108:G:N2	2.30	0.65
1:AA:1320:C:H5'	19:AS:70:LYS:HG3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:87:ARG:NH1	2:AB:233:SER:OG	2.30	0.65
9:AI:16:ARG:HB2	9:AI:64:THR:HB	1.77	0.65
25:BA:849:A:OP1	61:BA:4293:HOH:O	2.13	0.65
25:BA:2349:G:OP1	61:BA:4028:HOH:O	2.13	0.65
35:BP:44:GLY:O	61:BP:302:HOH:O	2.14	0.65
1:CA:662:G:O2'	1:CA:836:G:OP1	2.14	0.65
1:CA:1305:G:N2	1:CA:1331:G:H1'	2.12	0.65
8:CH:49:GLU:HG2	8:CH:62:TYR:HE2	1.62	0.65
23:CX:40:C:H2'	23:CX:41:C:H6	1.62	0.65
53:B7:33:ARG:NH2	61:B7:4001:HOH:O	2.30	0.65
1:CA:558:G:OP1	61:CA:4171:HOH:O	2.14	0.65
1:CA:1133:G:H2'	1:CA:1134:G:H8	1.62	0.65
25:DA:1557:C:OP2	25:DA:1558:A:O2'	2.14	0.65
32:DI:77:LEU:HB3	32:DI:142:VAL:HG12	1.79	0.65
1:AA:659:U:H2'	1:AA:660:G:H8	1.62	0.65
1:AA:673:G:H2'	1:AA:674:G:C8	2.32	0.65
24:AW:1:2QZ:H11	24:AW:9:MVA:HG23	1.77	0.65
25:BA:2442:A:OP2	61:BA:4633:HOH:O	2.14	0.65
2:CB:19:HIS:CE1	2:CB:206:ASP:HB2	2.32	0.65
25:DA:370:G:OP1	25:DA:403:U:N3	2.24	0.65
2:AB:16:HIS:HB3	2:AB:210:SER:CB	2.26	0.64
4:AD:173:TRP:NE1	4:AD:193:ASP:OD1	2.29	0.64
25:BA:1398:U:OP1	61:BA:3990:HOH:O	2.15	0.64
1:CA:353:A:H5'	1:CA:353:A:H8	1.62	0.64
2:CB:201:ILE:HG21	2:CB:214:ILE:HG21	1.77	0.64
17:CQ:22:LEU:HD13	17:CQ:41:LYS:HG3	1.79	0.64
25:DA:1430:C:H2'	25:DA:1431:U:C6	2.32	0.64
25:DA:2680:C:H1'	28:DE:187:ALA:HB1	1.78	0.64
39:DT:65:LYS:HE2	39:DT:67:SER:HB2	1.79	0.64
5:AE:137:GLU:HG2	5:AE:140:ARG:HH11	1.63	0.64
25:BA:589:U:H5''	35:BP:29:LYS:HE3	1.79	0.64
54:B8:6:THR:HG22	54:B8:63:PRO:HD2	1.79	0.64
25:DA:2708:G:H1'	37:DR:71:GLN:HE22	1.62	0.64
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.32	0.64
2:AB:210:SER:O	2:AB:214:ILE:HG12	1.97	0.64
5:AE:12:LEU:HB3	5:AE:31:LEU:HB2	1.78	0.64
25:BA:1848:G:OP1	27:BD:88:ARG:NH2	2.30	0.64
37:BR:28:LEU:HD12	37:BR:48:VAL:HG21	1.79	0.64
45:BZ:111:VAL:C	45:BZ:113:ALA:H	2.06	0.64
1:CA:69:G:H2'	1:CA:70:G:H8	1.62	0.64
25:DA:143:G:H2'	25:DA:143(A):C:C6	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:455:C:N3	25:DA:472:A:H2'	2.12	0.64
30:DG:129:GLY:O	30:DG:161:THR:HB	1.97	0.64
25:BA:1093:G:H2'	25:BA:1156:G:H22	1.61	0.64
1:CA:1154:G:N7	1:CA:1155:G:C4	2.66	0.64
1:CA:1273:G:H3'	1:CA:1274:G:H8	1.62	0.64
1:CA:1305:G:H5'	21:CU:4:GLY:HA3	1.79	0.64
29:DF:192:LEU:HD13	29:DF:194:MET:HE2	1.79	0.64
45:DZ:153:SER:OG	45:DZ:154:ASP:OD1	2.14	0.64
2:AB:231:GLU:HB3	2:AB:232:PRO:CD	2.28	0.64
19:AS:27:GLU:HB3	19:AS:28:LYS:HB3	1.77	0.64
35:BP:89:ALA:O	35:BP:121:LYS:NZ	2.29	0.64
25:DA:524:U:H2'	25:DA:525:U:C6	2.33	0.64
25:DA:2062:A:OP1	61:DA:3798:HOH:O	2.14	0.64
33:DN:38:HIS:CE1	33:DN:39:ARG:HG3	2.32	0.64
1:AA:56:U:H2'	1:AA:57:G:C8	2.33	0.64
1:AA:123:C:OP1	1:AA:311:C:O2'	2.13	0.64
1:AA:457:C:H2'	1:AA:458:C:C6	2.33	0.64
1:AA:476:G:H2'	1:AA:477:A:O4'	1.98	0.64
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.12	0.64
23:AX:6:G:H1	23:AX:67:C:H42	1.45	0.64
1:CA:419:C:OP1	1:CA:513:C:O2'	2.10	0.64
20:CT:86:ARG:O	20:CT:90:GLN:HB2	1.98	0.64
25:BA:2405:A:H5'	35:BP:63:PRO:HB3	1.79	0.64
1:CA:254:G:OP1	17:CQ:66:SER:OG	2.16	0.64
4:CD:92:VAL:O	4:CD:96:LEU:HD22	1.97	0.64
10:CJ:16:LEU:HD13	10:CJ:70:ARG:HG2	1.78	0.64
59:CX:101:FME:HCN	25:DA:2451:A:H2	1.62	0.64
25:DA:1776:G:OP2	61:DA:3756:HOH:O	2.14	0.64
28:DE:150:VAL:HG13	28:DE:154:LYS:HG3	1.79	0.64
1:AA:161:A:H2'	1:AA:162:A:C8	2.32	0.64
1:AA:193:C:H2'	1:AA:194:C:H6	1.61	0.64
1:AA:1042:G:O2'	1:AA:1043:C:O4'	2.14	0.64
1:AA:1530:G:H2'	1:AA:1531:A:O4'	1.97	0.64
3:AC:12:LEU:HD23	3:AC:16:ARG:HB3	1.78	0.64
25:BA:325:G:OP2	44:BY:84:ARG:NH2	2.31	0.64
25:BA:1997:G:OP2	61:BA:4529:HOH:O	2.15	0.64
1:CA:814:A:H2'	1:CA:816:A:H5''	1.78	0.64
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.33	0.64
1:CA:1133:G:H1	1:CA:1141:C:N4	1.95	0.64
1:CA:1312:G:N7	19:CS:2:PRO:HG2	2.12	0.64
13:CM:37:THR:O	13:CM:55:ARG:NH1	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:586:A:N1	25:DA:809:G:O2'	2.25	0.64
25:DA:594:U:H3	25:DA:663:G:H1	1.44	0.64
25:DA:1973:G:OP1	61:DA:4138:HOH:O	2.15	0.64
36:DQ:26:TYR:O	36:DQ:67:ARG:NH1	2.28	0.64
37:DR:97:VAL:HG22	37:DR:114:VAL:HG22	1.79	0.64
1:AA:630:G:H2'	1:AA:631:G:H8	1.62	0.64
12:AL:70:ILE:HG12	12:AL:100:ILE:HD12	1.80	0.64
16:AP:19:ILE:HD13	16:AP:36:ILE:HG13	1.78	0.64
37:BR:53:HIS:ND1	37:BR:94:TYR:OH	2.30	0.64
25:DA:1604:C:OP2	61:DA:4392:HOH:O	2.15	0.64
25:DA:2781:A:H5''	25:DA:2782:G:H5'	1.79	0.64
26:DB:11:C:OP2	26:DB:12:C:N4	2.27	0.64
3:AC:36:ASP:O	3:AC:40:ARG:HG3	1.98	0.64
25:BA:778:C:OP2	61:BA:4592:HOH:O	2.15	0.64
2:CB:16:HIS:CB	2:CB:204:ASN:HB3	2.24	0.64
19:CS:64:GLU:HB2	50:D4:59:PHE:HE1	1.62	0.64
25:DA:1266:G:O5'	42:DW:15:ARG:NH2	2.30	0.64
25:DA:2298:A:C6	25:DA:2321:G:N1	2.66	0.64
28:DE:73:GLU:O	28:DE:73:GLU:HG3	1.96	0.64
42:DW:71:VAL:HA	42:DW:107:LEU:HD12	1.79	0.64
1:AA:518:C:O2'	1:AA:530:G:N2	2.31	0.63
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.33	0.63
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.31	0.63
25:BA:641:G:OP1	29:BF:40:GLN:NE2	2.24	0.63
25:BA:1091:A:H1'	25:BA:1093:G:N3	2.13	0.63
13:CM:22:ILE:HB	13:CM:25:ILE:HD13	1.79	0.63
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.80	0.63
25:DA:365:C:OP2	61:DA:4447:HOH:O	2.15	0.63
36:DQ:59:ARG:O	36:DQ:61:GLY:N	2.23	0.63
1:AA:945:G:OP2	61:AA:4057:HOH:O	2.15	0.63
25:BA:2331:G:N2	38:BS:3:ARG:HA	2.14	0.63
25:BA:2369:U:OP1	46:B0:20:ARG:NH1	2.31	0.63
1:CA:59:A:H3'	1:CA:331:G:H22	1.62	0.63
1:CA:404:U:H5'	4:CD:122:ARG:HD3	1.80	0.63
1:CA:953:G:H5'	1:CA:965:A:N6	2.13	0.63
5:CE:78:HIS:HE1	5:CE:143:ARG:H	1.45	0.63
6:AF:97:PHE:N	18:AR:30:ASP:OD1	2.29	0.63
25:BA:53:G:O2'	53:B7:35:ARG:HD3	1.98	0.63
25:BA:1466:U:O2'	25:BA:1467:G:OP1	2.13	0.63
25:BA:2701:U:H4'	25:BA:2702:C:O5'	1.97	0.63
1:CA:405:U:O4	4:CD:2:GLY:N	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1129:C:H2'	1:CA:1139:G:N7	2.13	0.63
1:CA:1362:C:H2'	1:CA:1363:C:H5''	1.81	0.63
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.34	0.63
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.80	0.63
25:DA:910:A:H62	36:DQ:12:GLN:HA	1.63	0.63
45:BZ:151:HIS:C	45:BZ:153:SER:H	2.06	0.63
25:DA:1766:U:H2'	25:DA:1767:C:H6	1.63	0.63
25:DA:2816:C:O3'	37:DR:99:LYS:NZ	2.32	0.63
1:AA:333:G:H4'	20:AT:16:HIS:CE1	2.33	0.63
25:BA:560:C:O3'	40:BU:53:ARG:NH1	2.31	0.63
25:BA:1639:G:H2'	25:BA:1640:G:C8	2.33	0.63
1:CA:1320:C:H5'	19:CS:70:LYS:HG3	1.80	0.63
2:CB:56:ARG:HB3	2:CB:56:ARG:HH11	1.63	0.63
2:CB:87:ARG:HE	2:CB:233:SER:HB3	1.63	0.63
25:DA:298:G:H5''	25:DA:299:A:OP1	1.98	0.63
26:DB:14:U:OP2	26:DB:70:C:O2'	2.14	0.63
31:DH:28:GLY:HA3	31:DH:79:VAL:HB	1.80	0.63
12:AL:79:GLU:HB3	12:AL:80:HIS:HD2	1.64	0.63
25:BA:1701:A:OP2	61:BA:4089:HOH:O	2.15	0.63
1:CA:1145:C:H4'	1:CA:1146:A:H5'	1.81	0.63
4:CD:31:CYS:SG	4:CD:33:MET:N	2.71	0.63
25:DA:568:U:H5'	25:DA:945:A:N1	2.14	0.63
1:AA:922:G:H4'	5:AE:20:GLN:HA	1.80	0.63
2:AB:62:ALA:HB2	2:AB:222:ILE:HG22	1.80	0.63
2:AB:195:ASP:O	8:AH:68:ARG:NH2	2.31	0.63
4:AD:177:ASP:HB3	4:AD:182:LYS:HD3	1.81	0.63
25:BA:1020:C:OP1	61:BA:4060:HOH:O	2.16	0.63
25:BA:1044:C:OP1	61:BA:4480:HOH:O	2.15	0.63
11:CK:98:LEU:O	11:CK:101:SER:OG	2.13	0.63
23:CX:48:C:C2	23:CX:59:A:H1'	2.34	0.63
25:DA:144:C:H2'	25:DA:145:G:H8	1.62	0.63
40:DU:92:ARG:HA	40:DU:95:LEU:HB2	1.81	0.63
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.32	0.63
1:AA:503:C:OP2	12:AL:116:SER:HB3	1.99	0.63
1:AA:1346:A:OP1	9:AI:120:ARG:NH1	2.28	0.63
15:AO:5:LYS:H	15:AO:5:LYS:HD2	1.63	0.63
25:BA:599:U:OP1	61:BA:4467:HOH:O	2.15	0.63
29:DF:21:ALA:CB	29:DF:22:ALA:HA	2.28	0.63
2:AB:78:GLN:O	2:AB:81:VAL:HG23	1.98	0.63
5:AE:78:HIS:CD2	5:AE:142:LEU:HD23	2.34	0.63
38:BS:27:SER:HA	38:BS:88:ASP:HB3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1653:G:H3'	37:DR:2:ARG:HD3	1.81	0.63
25:DA:1688:U:O2	25:DA:1700:A:H5'	1.99	0.63
25:DA:1721:G:H8	25:DA:1741:A:H62	1.46	0.63
25:DA:1889:A:H2'	25:DA:1890:A:C8	2.33	0.63
25:DA:2803:C:H2'	25:DA:2804:C:H6	1.63	0.63
27:DD:183:ARG:HG3	27:DD:270:ILE:HG12	1.81	0.63
1:AA:200:G:H5'	1:AA:201:C:OP2	1.99	0.62
1:AA:400:C:H5''	4:AD:73:ARG:HH22	1.63	0.62
1:AA:445:G:H2'	1:AA:446:G:C8	2.33	0.62
4:AD:173:TRP:CE3	4:AD:174:LEU:HG	2.34	0.62
1:CA:45:U:H2'	1:CA:46:G:C8	2.34	0.62
25:DA:1159:U:H2'	25:DA:1160:G:C8	2.32	0.62
25:DA:2016:U:H2'	25:DA:2017:U:H6	1.64	0.62
25:DA:2098:U:H2'	25:DA:2099:U:O4'	1.99	0.62
25:DA:2469:A:H4'	36:DQ:56:ARG:HD2	1.79	0.62
29:DF:165:ARG:HG2	29:DF:168:ARG:NH2	2.14	0.62
50:D4:59:PHE:HA	50:D4:61:ARG:N	2.14	0.62
1:AA:404:U:H5'	4:AD:122:ARG:HD2	1.81	0.62
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG12	1.81	0.62
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.81	0.62
25:BA:2367:C:H1'	46:B0:39:ARG:HH21	1.63	0.62
44:BY:6:HIS:H	44:BY:6:HIS:CD2	2.15	0.62
1:CA:1163:C:N3	1:CA:1173:G:N2	2.47	0.62
13:CM:13:LYS:HA	13:CM:44:ARG:HH11	1.63	0.62
28:DE:72:VAL:HA	28:DE:73:GLU:HB3	1.81	0.62
1:AA:187:C:H2'	1:AA:188:C:H6	1.65	0.62
45:BZ:151:HIS:O	45:BZ:153:SER:N	2.31	0.62
25:DA:854:G:H2'	25:DA:855:G:H8	1.64	0.62
25:DA:2079:U:OP1	47:D1:21:ARG:NH2	2.32	0.62
25:DA:2206:G:H3'	25:DA:2207:G:N7	2.14	0.62
1:AA:486:U:H2'	1:AA:487:A:C8	2.35	0.62
1:AA:552:U:C2'	1:AA:553:A:H5'	2.29	0.62
1:AA:937:A:OP2	61:AA:4095:HOH:O	2.16	0.62
8:AH:14:ARG:NH2	8:AH:83:ILE:O	2.33	0.62
16:AP:43:LYS:HG2	16:AP:48:TRP:CD2	2.34	0.62
32:BI:40:THR:O	32:BI:44:LEU:HB2	1.99	0.62
25:DA:62:C:H42	25:DA:93:G:H1	1.46	0.62
25:DA:994:C:OP1	40:DU:53:ARG:NH2	2.32	0.62
1:AA:560:U:O2'	1:AA:561:U:OP2	2.16	0.62
1:AA:1305:G:N2	1:AA:1331:G:H1'	2.15	0.62
3:AC:114:PRO:O	3:AC:118:GLN:NE2	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.81	0.62
25:DA:2079:U:O3'	47:D1:35:THR:OG1	2.17	0.62
43:DX:53:LYS:HB3	43:DX:82:GLN:HB3	1.80	0.62
2:AB:74:LYS:NZ	2:AB:205:ASP:OD2	2.32	0.62
13:AM:79:LYS:HA	13:AM:82:MET:HE2	1.82	0.62
52:B6:13:CYS:SG	52:B6:47:THR:HG21	2.39	0.62
2:CB:163:PHE:CD1	2:CB:185:ILE:HG13	2.34	0.62
12:CL:49:ASN:ND2	12:CL:92:ASP:OD2	2.31	0.62
25:DA:333:G:H5''	25:DA:334:C:OP2	1.99	0.62
25:DA:1036:G:H1	25:DA:1119:C:H42	1.45	0.62
28:DE:3:GLY:HA3	28:DE:81:ILE:HD12	1.80	0.62
30:DG:179:PRO:HB2	50:D4:42:PHE:HE1	1.64	0.62
1:AA:96:U:H2'	1:AA:97:G:C8	2.35	0.62
1:AA:406:G:N3	4:AD:119:GLN:NE2	2.46	0.62
16:AP:53:VAL:HG22	16:AP:79:VAL:HG22	1.80	0.62
19:AS:36:ARG:HB3	19:AS:72:GLY:HA3	1.79	0.62
1:CA:1108:G:O6	61:CA:4092:HOH:O	2.14	0.62
3:CC:6:HIS:HB3	14:CN:49:HIS:ND1	2.14	0.62
1:AA:983:A:H1'	1:AA:1049:U:O2	2.00	0.62
16:AP:43:LYS:HG2	16:AP:48:TRP:CE2	2.35	0.62
25:BA:2348:A:H61	46:B0:43:THR:CG2	2.12	0.62
1:CA:586:C:O2'	1:CA:878:G:H4'	1.98	0.62
1:CA:1036:G:H5'	1:CA:1037:C:C6	2.35	0.62
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	1.81	0.62
3:CC:179:ARG:NH1	3:CC:206:GLU:OE1	2.33	0.62
23:CX:9:G:O2'	23:CX:10:G:N7	2.23	0.62
25:DA:1495:A:H2'	25:DA:1496:A:C8	2.35	0.62
25:DA:2584:U:O4	61:DA:3959:HOH:O	2.13	0.62
34:DO:35:VAL:HG11	34:DO:103:ALA:HB3	1.80	0.62
1:AA:863:U:OP1	61:AA:4128:HOH:O	2.16	0.62
25:DA:658:C:H2'	25:DA:659:C:C6	2.35	0.62
25:DA:1005:C:H2'	25:DA:1006:C:C6	2.35	0.62
1:AA:1125:U:C2	1:AA:1127:G:N7	2.68	0.62
9:AI:29:ASN:ND2	9:AI:65:VAL:O	2.33	0.62
32:BI:72:LEU:O	32:BI:74:ASN:N	2.31	0.62
45:BZ:102:LEU:HD13	45:BZ:123:ASP:HA	1.81	0.62
50:B4:15:ILE:HD12	50:B4:21:VAL:HG22	1.82	0.62
9:CI:85:LEU:HB3	9:CI:92:TYR:HD2	1.64	0.62
11:CK:110:ASP:HB3	18:CR:85:LEU:HB3	1.81	0.62
30:DG:11:TYR:CE2	30:DG:16:ARG:HD3	2.35	0.62
35:DP:89:ALA:O	35:DP:121:LYS:NZ	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DZ:45:ASP:OD1	45:DZ:49:ARG:NH1	2.32	0.62
1:AA:175:C:H2'	1:AA:176:C:H6	1.64	0.61
1:AA:460:G:O6	1:AA:470:C:H5''	2.00	0.61
20:AT:14:LYS:HG3	20:AT:17:ARG:NH2	2.15	0.61
1:CA:447:G:O6	61:CA:4157:HOH:O	2.16	0.61
1:CA:1502:A:H2	1:CA:1505:G:N1	1.95	0.61
19:CS:41:VAL:HG12	19:CS:43:GLU:H	1.63	0.61
25:DA:579:G:H2'	25:DA:580:C:C6	2.35	0.61
25:DA:2285:C:OP2	52:D6:6:ARG:NH1	2.33	0.61
29:DF:183:VAL:O	29:DF:187:VAL:HG23	2.00	0.61
1:AA:993:G:H1	1:AA:1045:C:H42	1.48	0.61
1:AA:1305:G:H22	1:AA:1331:G:H1'	1.64	0.61
1:AA:1442(A):G:C8	39:BT:118:ARG:HG2	2.35	0.61
8:AH:51:VAL:HG11	8:AH:60:ARG:HH12	1.65	0.61
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	1.82	0.61
1:CA:1239:A:H62	1:CA:1299:A:H62	1.47	0.61
25:DA:2218:U:O2	47:D1:52:ARG:NH2	2.33	0.61
30:DG:18:GLU:OE2	30:DG:21:ARG:NH1	2.32	0.61
1:AA:1241:G:H1	1:AA:1296:C:H42	1.49	0.61
19:AS:64:GLU:HB2	50:B4:59:PHE:HE1	1.65	0.61
25:BA:2713:C:H2'	25:BA:2714:U:H2'	1.81	0.61
1:CA:202:U:H3'	1:CA:203:U:H6	1.63	0.61
3:CC:47:LEU:HD12	3:CC:68:VAL:HG11	1.81	0.61
34:DO:119:PRO:HB2	39:DT:68:TYR:CE2	2.35	0.61
35:DP:50:ARG:HH21	35:DP:50:ARG:HG3	1.66	0.61
39:DT:85:LYS:NZ	39:DT:87:ASP:OD2	2.33	0.61
25:BA:2412:G:O6	61:BA:4067:HOH:O	2.14	0.61
1:CA:1041:A:N6	1:CA:1042:G:O6	2.33	0.61
20:CT:64:ASP:OD2	20:CT:81:LYS:NZ	2.28	0.61
25:DA:867:C:H2'	25:DA:868:U:C6	2.35	0.61
25:DA:1496:A:N3	25:DA:1577:C:O2'	2.32	0.61
25:DA:2640:G:N7	61:DA:3808:HOH:O	2.31	0.61
1:AA:1158:C:H5	1:AA:1181:G:N1	1.98	0.61
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.35	0.61
6:AF:38:GLU:HB2	6:AF:64:GLN:HG2	1.83	0.61
27:BD:71:ASP:CB	27:BD:103:ARG:HH22	2.13	0.61
1:CA:1004:A:H8	1:CA:1005:A:H4'	1.66	0.61
2:CB:48:MET:HA	2:CB:51:LEU:HB2	1.83	0.61
11:CK:58:PRO:HG3	11:CK:89:ALA:O	2.00	0.61
14:CN:37:PHE:HB3	14:CN:39:LEU:HD12	1.81	0.61
25:DA:1773:A:H5''	61:DA:4248:HOH:O	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2303:G:O2'	30:DG:132:ASN:HB2	2.01	0.61
25:DA:2748:A:O2'	31:DH:63:SER:O	2.19	0.61
39:DT:24:PRO:HA	39:DT:49:VAL:HG22	1.82	0.61
9:AI:50:LEU:HD13	9:AI:56:LEU:HA	1.82	0.61
28:BE:103:ASP:OD2	28:BE:168:MET:HE2	1.99	0.61
28:BE:175:VAL:HG22	28:BE:177:PRO:HD3	1.82	0.61
1:CA:1422:G:O3'	34:DO:49:ARG:NH1	2.34	0.61
15:CO:88:ARG:HB3	15:CO:88:ARG:HH21	1.63	0.61
25:DA:2404:C:O3'	35:DP:77:ARG:NH2	2.33	0.61
25:DA:2557:G:H2'	25:DA:2558:C:H6	1.66	0.61
1:AA:154:C:N4	1:AA:168:G:O6	2.34	0.61
1:AA:601:C:H2'	1:AA:602:A:H8	1.63	0.61
1:AA:1260:C:O5'	1:AA:1284:C:H4'	2.01	0.61
28:BE:24:THR:HG22	28:BE:186:GLY:O	2.01	0.61
1:CA:192:U:O2'	1:CA:193:C:H5'	2.00	0.61
6:CF:24:GLU:HG3	6:CF:28:ARG:HH11	1.65	0.61
15:CO:5:LYS:H	15:CO:5:LYS:HD2	1.64	0.61
23:CX:4:G:H1	23:CX:69:C:N4	1.97	0.61
25:DA:307:G:N1	25:DA:310:A:OP2	2.33	0.61
25:DA:958:U:OP2	36:DQ:14:ARG:NH1	2.34	0.61
25:DA:2273:A:H2'	25:DA:2274:A:C8	2.36	0.61
4:AD:184:LYS:NZ	4:AD:184:LYS:HB3	2.16	0.61
4:CD:17:VAL:HG11	4:CD:197:PRO:HG3	1.82	0.61
6:CF:25:ILE:HD13	6:CF:82:ARG:HE	1.65	0.61
25:DA:323:G:O2'	25:DA:1205:U:N3	2.32	0.61
25:DA:2589:A:OP1	61:DA:4063:HOH:O	2.15	0.61
41:DV:5:VAL:HG11	41:DV:57:VAL:HG21	1.83	0.61
1:AA:923:A:O2'	1:AA:1399:C:OP2	2.18	0.61
1:CA:9:G:H2'	1:CA:10:A:H8	1.65	0.61
1:CA:1150:U:O4	1:CA:1151:A:N6	2.34	0.61
20:CT:57:ARG:HH12	20:CT:100:ILE:HG13	1.65	0.61
25:DA:867:C:H2'	25:DA:868:U:H6	1.66	0.61
25:DA:887:A:O2'	25:DA:889:C:OP2	2.18	0.61
25:DA:948:G:OP1	61:DA:4173:HOH:O	2.16	0.61
29:DF:103:LYS:HA	29:DF:106:ARG:HG3	1.82	0.61
37:DR:36:THR:HG22	37:DR:37:THR:H	1.66	0.61
39:DT:95:ARG:HG2	39:DT:95:ARG:HH11	1.64	0.61
1:AA:1104:G:H4'	2:AB:111:ARG:NH1	2.16	0.61
5:AE:92:LYS:HB3	5:AE:119:LEU:HB2	1.83	0.61
25:BA:787:U:OP2	61:BA:4519:HOH:O	2.16	0.61
25:BA:1199:C:OP1	40:BU:92:ARG:NH1	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1405:A:H61	25:BA:1418:U:H3	1.49	0.61
25:BA:1577:C:HO2'	25:BA:1578:C:P	2.23	0.61
25:BA:2460:A:N1	61:BA:4605:HOH:O	2.31	0.61
29:BF:65:TRP:CZ2	29:BF:75:HIS:HD2	2.19	0.61
10:CJ:32:ALA:HB1	10:CJ:33:GLN:HA	1.82	0.61
25:DA:1900:A:OP2	61:DA:3902:HOH:O	2.16	0.61
25:DA:2845:G:H2'	25:DA:2846:G:C8	2.36	0.61
29:DF:11:VAL:HG22	29:DF:125:LEU:HB2	1.83	0.61
1:AA:552:U:H2'	1:AA:553:A:H5'	1.83	0.60
25:BA:1219:A:H4'	25:BA:1220:U:OP1	2.01	0.60
25:BA:1231:G:H2'	25:BA:1232:G:O4'	2.01	0.60
25:BA:1701:A:OP1	37:BR:1:MET:HA	2.00	0.60
1:CA:346:G:OP1	39:DT:41:ARG:NH2	2.32	0.60
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.16	0.60
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.36	0.60
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	1.83	0.60
6:CF:61:LEU:HB3	6:CF:63:TYR:HE1	1.65	0.60
25:DA:289:A:N6	25:DA:351:G:O2'	2.34	0.60
25:DA:973:A:OP2	61:DA:3814:HOH:O	2.17	0.60
26:DB:41:U:H5	30:DG:70:VAL:H	1.48	0.60
39:DT:16:ARG:NH1	39:DT:18:ASP:OD2	2.35	0.60
1:AA:1026:G:H5'	1:AA:1027:C:H5''	1.83	0.60
3:AC:40:ARG:NH2	3:AC:55:VAL:O	2.35	0.60
1:CA:1256:A:H61	1:CA:1278:U:H1'	1.65	0.60
11:CK:62:GLN:HG3	11:CK:97:ALA:HB2	1.82	0.60
16:CP:52:ASP:O	16:CP:54:GLU:N	2.32	0.60
25:DA:585:G:O2'	25:DA:1254:A:N6	2.31	0.60
25:DA:667:U:O2	54:D8:2:PRO:HD2	2.01	0.60
25:DA:1531:C:H42	25:DA:1538:G:H1	1.49	0.60
31:DH:41:MET:HE1	31:DH:54:ARG:HB3	1.84	0.60
1:AA:201:C:N4	1:AA:216:G:H1	1.91	0.60
1:AA:827:U:H5''	1:AA:828:A:OP2	2.02	0.60
1:AA:881:G:OP2	12:AL:12:ARG:NH2	2.34	0.60
1:AA:1271:G:H5''	1:AA:1314:C:OP1	2.02	0.60
25:BA:272:U:H4'	32:BI:50:ARG:NH1	2.16	0.60
25:BA:649:C:O2'	25:BA:704:U:OP1	2.19	0.60
25:BA:2340:A:H2'	25:BA:2341:G:C8	2.36	0.60
45:BZ:109:ALA:HB3	45:BZ:145:GLU:HG3	1.83	0.60
1:CA:826:C:H2'	1:CA:827:U:C6	2.35	0.60
3:CC:18:TRP:CD1	14:CN:54:PRO:HA	2.36	0.60
25:DA:390:A:N6	61:DA:4490:HOH:O	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:677:U:H3	1:AA:713:G:H22	1.47	0.60
25:BA:1829:U:H5'	27:BD:259:THR:CG2	2.28	0.60
1:CA:67:C:H2'	1:CA:68:G:C8	2.35	0.60
25:DA:1125:G:H5'	55:D9:37:GLY:HA2	1.81	0.60
25:DA:2570:G:O6	61:DA:4417:HOH:O	2.12	0.60
25:DA:2870:C:H2'	25:DA:2871:C:O4'	2.00	0.60
1:AA:953:G:H5'	1:AA:965:A:H61	1.66	0.60
5:AE:11:ILE:HB	5:AE:31:LEU:HB3	1.83	0.60
10:AJ:11:PHE:HE1	10:AJ:67:THR:HG22	1.66	0.60
25:BA:594:A:O2'	41:BV:78:LYS:NZ	2.32	0.60
30:BG:66:GLN:HG2	50:B4:1:MET:HE3	1.82	0.60
32:BI:72:LEU:C	32:BI:74:ASN:H	2.09	0.60
25:DA:2785:C:OP1	28:DE:41:LYS:NZ	2.17	0.60
1:AA:486:U:H2'	1:AA:487:A:H8	1.65	0.60
1:AA:691:G:H2'	1:AA:692:U:C6	2.36	0.60
1:AA:1007:C:N3	1:AA:1022:G:O6	2.35	0.60
9:AI:86:VAL:HG13	9:AI:96:LEU:HD12	1.83	0.60
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.82	0.60
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.34	0.60
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.82	0.60
25:DA:898:C:H2'	25:DA:899:A:O4'	2.02	0.60
28:DE:52:LEU:O	28:DE:76:ARG:N	2.24	0.60
33:DN:34:LEU:O	33:DN:49:GLY:HA3	2.01	0.60
43:DX:59:VAL:HG21	43:DX:78:LYS:HE3	1.84	0.60
44:DY:38:ILE:HD13	44:DY:66:PRO:HA	1.83	0.60
1:AA:128:G:O2'	17:AQ:3:LYS:NZ	2.34	0.60
1:AA:383:A:C2	1:AA:384:G:H1'	2.36	0.60
12:AL:59:ARG:HD3	24:AW:1:2QZ:OG1	2.02	0.60
25:BA:1739:U:H2'	25:BA:1741:C:C5	2.37	0.60
25:BA:2227:G:H3'	25:BA:2228:G:N7	2.15	0.60
31:BH:3:ARG:HG2	31:BH:6:ARG:HG2	1.84	0.60
1:CA:491:G:O6	61:CA:4132:HOH:O	2.11	0.60
1:CA:749:C:OP2	61:CA:4142:HOH:O	2.16	0.60
25:DA:2397:G:N2	25:DA:2420:C:H1'	2.16	0.60
30:DG:39:ILE:HG23	30:DG:157:ILE:HG12	1.83	0.60
1:AA:232:G:H1'	1:AA:262:A:N1	2.17	0.60
1:AA:322:C:O2'	20:AT:23:ARG:HD2	2.02	0.60
25:BA:1668:G:OP2	61:BA:4215:HOH:O	2.17	0.60
28:BE:120:TRP:CE3	28:BE:155:LYS:HD3	2.37	0.60
30:BG:170:ARG:NH2	30:BG:182:LYS:O	2.35	0.60
31:BH:40:GLU:OE1	31:BH:61:HIS:NE2	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:92:ILE:H	31:BH:92:ILE:HD12	1.67	0.60
1:CA:69:G:H2'	1:CA:70:G:C8	2.37	0.60
1:CA:1286:A:H2	21:CU:18:TYR:HH	1.50	0.60
25:DA:1266:G:O2'	25:DA:2012:G:O6	2.13	0.60
30:DG:16:ARG:HE	30:DG:31:VAL:HG11	1.65	0.60
50:D4:15:ILE:HB	50:D4:32:TYR:HD1	1.66	0.60
1:AA:961:U:OP2	1:AA:1223:C:O2'	2.16	0.60
2:AB:59:GLU:HG2	2:AB:63:MET:HE2	1.81	0.60
29:BF:183:VAL:O	29:BF:187:VAL:HG23	2.01	0.60
1:CA:735:C:H2'	1:CA:736:C:C6	2.35	0.60
1:CA:939:G:H1	1:CA:1344:C:N4	1.98	0.60
1:CA:1442:G:O2'	1:CA:1442(A):G:OP1	2.18	0.60
33:DN:42:TRP:HA	33:DN:48:MET:HE1	1.82	0.60
33:DN:96:GLU:H	33:DN:96:GLU:CD	2.10	0.60
36:DQ:66:ILE:HG12	36:DQ:104:PHE:CE2	2.37	0.60
38:DS:14:VAL:O	38:DS:18:ILE:HG12	2.02	0.60
1:AA:454:C:P	16:AP:75:ARG:HH22	2.24	0.60
6:AF:61:LEU:HB3	6:AF:63:TYR:HE1	1.65	0.60
25:BA:278:G:H2'	25:BA:279:G:H5''	1.82	0.60
25:BA:1889:G:N2	25:BA:1905:G:H2'	2.17	0.60
50:B4:62:ARG:HB2	50:B4:63:TYR:HD1	1.67	0.60
1:CA:426:G:OP1	4:CD:36:ARG:NH1	2.33	0.60
16:CP:14:ASN:OD1	16:CP:16:HIS:HE1	1.85	0.60
20:CT:58:LYS:HE3	20:CT:62:LEU:HD12	1.84	0.60
35:DP:47:ASP:OD2	35:DP:50:ARG:NH2	2.34	0.60
36:DQ:34:LEU:HB2	36:DQ:118:LEU:HD22	1.83	0.60
2:AB:163:PHE:HD1	2:AB:185:ILE:HD12	1.67	0.59
20:AT:44:ALA:HB2	20:AT:52:ALA:HB1	1.83	0.59
25:BA:98:U:OP1	25:BA:99:G:O2'	2.14	0.59
25:BA:599:U:H2'	25:BA:600:G:C8	2.36	0.59
25:BA:830:A:OP2	61:BA:4454:HOH:O	2.17	0.59
25:BA:922:G:H1	25:BA:948:C:H42	1.49	0.59
34:BO:98:VAL:HG11	34:BO:114:ILE:HG23	1.84	0.59
1:CA:1151:A:C5'	10:CJ:41:PRO:HA	2.32	0.59
2:CB:100:GLY:O	2:CB:104:ASN:N	2.34	0.59
3:CC:157:ILE:HD12	3:CC:164:ARG:HB3	1.84	0.59
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.84	0.59
11:CK:48:ILE:O	11:CK:50:TYR:N	2.33	0.59
25:DA:82:G:N1	25:DA:103:A:OP2	2.28	0.59
25:DA:443:A:H5''	25:DA:444:C:OP1	2.02	0.59
25:DA:704:G:H1'	25:DA:726:G:N2	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:98:VAL:HG13	34:DO:117:LEU:HB3	1.84	0.59
50:D4:46:GLN:C	50:D4:48:ARG:H	2.09	0.59
25:BA:542:C:OP1	51:B5:16:ARG:NH2	2.35	0.59
25:BA:2406:C:OP2	54:B8:30:ARG:NH1	2.35	0.59
19:CS:48:THR:HG22	19:CS:61:TYR:HA	1.82	0.59
27:DD:108:PRO:HG2	27:DD:111:LEU:HB2	1.84	0.59
50:D4:15:ILE:HB	50:D4:32:TYR:CD1	2.36	0.59
54:D8:33:ASN:HA	54:D8:36:LYS:HD2	1.84	0.59
1:AA:1277:C:O2'	1:AA:1279:A:H1'	2.02	0.59
46:B0:53:MET:HG3	46:B0:59:LEU:HD23	1.83	0.59
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.02	0.59
6:CF:33:TYR:HB2	6:CF:75:LEU:HD23	1.83	0.59
29:DF:21:ALA:HB3	29:DF:22:ALA:HA	1.84	0.59
31:DH:27:LYS:HZ3	31:DH:32:GLU:HB2	1.66	0.59
48:D2:29:LYS:HG2	48:D2:57:ILE:HD13	1.84	0.59
1:AA:501:C:H1'	1:AA:549:C:H1'	1.84	0.59
2:AB:51:LEU:HD23	2:AB:201:ILE:HD12	1.85	0.59
10:AJ:7:LYS:HB3	10:AJ:97:GLU:HB2	1.83	0.59
18:AR:42:ARG:HH21	18:AR:42:ARG:HA	1.67	0.59
25:BA:139:A:H8	25:BA:1454:C:O2'	1.86	0.59
25:BA:2092:G:N3	61:BA:3834:HOH:O	2.31	0.59
25:BA:2274:U:OP2	46:B0:19:LYS:NZ	2.34	0.59
39:BT:53:ARG:HB3	39:BT:53:ARG:HH11	1.67	0.59
12:CL:36:VAL:HG23	24:CW:10:2QY:H89	1.85	0.59
15:CO:3:ILE:HG21	15:CO:34:LEU:HD21	1.83	0.59
19:CS:51:VAL:O	19:CS:58:VAL:N	2.30	0.59
25:DA:226:G:H21	25:DA:228:A:H62	1.50	0.59
25:DA:885:C:H2'	25:DA:886:C:H4'	1.84	0.59
25:DA:1405:U:H2'	25:DA:1406:U:C6	2.37	0.59
25:DA:1903:G:OP1	27:DD:241:PRO:HB2	2.02	0.59
29:DF:184:TYR:CE2	29:DF:188:ARG:HD2	2.37	0.59
1:AA:1009:G:O6	1:AA:1020:U:O2	2.20	0.59
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.84	0.59
9:AI:24:GLY:HA2	9:AI:59:PHE:O	2.02	0.59
25:BA:1229:G:H5'	49:B3:29:ARG:NH1	2.17	0.59
25:BA:1501:U:O2'	25:BA:1502:G:N7	2.33	0.59
25:BA:1952:G:O2'	25:BA:1990:G:O6	2.20	0.59
25:BA:2213:G:H5'	25:BA:2214:G:OP2	2.03	0.59
1:CA:827:U:H5''	1:CA:828:A:OP2	2.02	0.59
2:CB:68:ILE:HG12	2:CB:161:ALA:HB3	1.84	0.59
5:CE:50:GLU:HB2	5:CE:53:LEU:HD13	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:212:G:H2'	25:DA:213:A:O4'	2.02	0.59
25:DA:799:G:O6	61:DA:4430:HOH:O	2.15	0.59
25:DA:1632:A:OP2	61:DA:4177:HOH:O	2.17	0.59
26:DB:48:A:H4'	38:DS:95:HIS:HD2	1.68	0.59
47:D1:3:LYS:HB2	47:D1:61:ARG:NH1	2.18	0.59
1:AA:78:G:H1	1:AA:92:C:N4	2.01	0.59
1:AA:623:C:H2'	1:AA:624:C:H6	1.68	0.59
2:AB:95:GLN:HG3	2:AB:147:LYS:HD3	1.84	0.59
4:AD:182:LYS:HG2	4:AD:183:GLY:N	2.16	0.59
25:BA:479:C:OP1	61:BA:4179:HOH:O	2.17	0.59
25:BA:1385:G:H5''	43:BX:16:LYS:HD3	1.83	0.59
25:BA:1897:C:H2'	25:BA:1898:A:O4'	2.02	0.59
1:CA:1104:G:H4'	2:CB:111:ARG:NH1	2.17	0.59
2:CB:7:VAL:HB	2:CB:9:GLU:HG3	1.85	0.59
4:CD:8:VAL:HB	4:CD:115:ARG:HH12	1.67	0.59
10:CJ:8:LEU:HD12	10:CJ:20:ALA:HB2	1.85	0.59
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.66	0.59
1:CA:776:G:N2	1:CA:802:A:OP2	2.29	0.59
47:D1:3:LYS:HB2	47:D1:61:ARG:HH11	1.66	0.59
1:AA:1442:G:O2'	1:AA:1442(A):G:OP1	2.18	0.59
16:AP:50:LYS:HE2	16:AP:50:LYS:HA	1.85	0.59
25:BA:1410:G:P	47:B1:3:LYS:HG3	2.43	0.59
27:BD:183:ARG:HG3	27:BD:270:ILE:HG12	1.85	0.59
30:BG:12:TYR:HA	30:BG:16:ARG:HG2	1.84	0.59
1:CA:427:U:H3'	1:CA:428:G:H2'	1.85	0.59
1:CA:457:C:H2'	1:CA:458:C:H6	1.68	0.59
3:CC:114:PRO:O	3:CC:118:GLN:HG2	2.03	0.59
25:DA:2074:U:OP1	61:DA:3911:HOH:O	2.17	0.59
25:DA:2802:G:H2'	25:DA:2803:C:O4'	2.01	0.59
30:DG:50:ALA:O	30:DG:52:ILE:N	2.35	0.59
34:DO:77:ILE:HG13	39:DT:74:ARG:HG2	1.83	0.59
55:D9:25:VAL:HB	55:D9:34:GLN:HB2	1.83	0.59
1:AA:433:C:H2'	1:AA:434:U:H6	1.67	0.59
1:AA:1126:U:C5	10:AJ:71:LEU:HD22	2.36	0.59
1:AA:1221:G:OP1	1:AA:1320:C:N4	2.34	0.59
25:BA:1077:G:H21	55:B9:36:GLN:HE22	1.50	0.59
1:CA:693:G:H2'	1:CA:694:A:H8	1.68	0.59
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.02	0.59
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.38	0.59
1:CA:1493:A:H1'	25:DA:1913:A:N6	2.13	0.59
3:CC:6:HIS:HD2	3:CC:8:ILE:H	1.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:36:ASP:HA	3:CC:39:ILE:HD12	1.85	0.59
5:CE:36:ASP:O	5:CE:38:GLN:N	2.36	0.59
25:DA:1314:C:OP1	61:DA:4076:HOH:O	2.17	0.59
25:DA:1359:A:N1	25:DA:1372:U:O4	2.35	0.59
31:DH:30:LYS:HG3	31:DH:80:SER:O	2.02	0.59
1:AA:174:C:H2'	1:AA:175:C:C6	2.38	0.59
1:AA:323:U:H2'	1:AA:324:G:O4'	2.02	0.59
1:AA:382:A:C2	1:AA:383:A:N7	2.70	0.59
1:AA:501:C:O2'	1:AA:549:C:O2	2.21	0.59
1:AA:659:U:H2'	1:AA:660:G:C8	2.38	0.59
1:AA:711:G:OP1	6:AF:54:LYS:NZ	2.35	0.59
1:AA:715:A:H2'	1:AA:716:A:C8	2.38	0.59
1:AA:913:A:OP1	12:AL:46:LYS:NZ	2.36	0.59
25:BA:129:G:OP1	61:BA:3963:HOH:O	2.17	0.59
52:B6:14:THR:HB	52:B6:48:VAL:O	2.03	0.59
1:CA:826:C:H2'	1:CA:827:U:H6	1.68	0.59
11:CK:22:HIS:HB3	11:CK:29:ILE:HB	1.84	0.59
16:CP:51:VAL:HG12	16:CP:53:VAL:H	1.68	0.59
25:DA:1359:A:H61	25:DA:1372:U:H3	1.50	0.59
25:DA:1840:G:OP2	61:DA:4306:HOH:O	2.16	0.59
25:DA:2298:A:N1	25:DA:2321:G:C6	2.71	0.59
1:AA:833:U:H2'	1:AA:834:C:C6	2.38	0.58
25:BA:2579:G:H2'	25:BA:2580:C:C6	2.38	0.58
43:BX:31:HIS:CD2	43:BX:33:LYS:HB2	2.37	0.58
1:CA:839:U:O2'	1:CA:840:C:OP1	2.20	0.58
1:CA:1005:A:H1'	1:CA:1036:G:N1	2.16	0.58
7:CG:76:ARG:O	7:CG:87:VAL:N	2.36	0.58
25:DA:143:G:H2'	25:DA:143(A):C:H6	1.66	0.58
25:DA:2299:G:N1	25:DA:2318:G:C8	2.71	0.58
25:DA:2472:G:N1	25:DA:2477:C:OP1	2.25	0.58
4:AD:31:CYS:SG	4:AD:33:MET:N	2.74	0.58
5:AE:143:ARG:NH1	8:AH:77:GLU:OE1	2.36	0.58
39:BT:51:ARG:HG3	39:BT:98:LYS:HD2	1.86	0.58
1:CA:552:U:C2'	1:CA:553:A:H5'	2.33	0.58
1:CA:999:C:N4	1:CA:1043:C:N3	2.51	0.58
1:CA:1286:A:C8	1:CA:1287:A:H4'	2.38	0.58
5:CE:9:LYS:HD2	5:CE:112:LEU:HD21	1.86	0.58
7:CG:75:VAL:HG13	7:CG:145:ALA:HA	1.85	0.58
7:CG:113:GLU:CG	7:CG:119:ARG:HG2	2.32	0.58
28:DE:28:ALA:HB3	28:DE:93:VAL:HG12	1.84	0.58
42:DW:60:ASN:HD22	42:DW:60:ASN:N	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DX:31:HIS:CD2	43:DX:33:LYS:H	2.21	0.58
48:D2:22:GLU:OE2	48:D2:68:ARG:NH2	2.36	0.58
1:AA:600:C:H2'	1:AA:601:C:C6	2.38	0.58
1:AA:713:G:H2'	1:AA:714:G:C8	2.38	0.58
1:AA:737:A:H2'	1:AA:738:C:C6	2.37	0.58
3:AC:157:ILE:HD12	3:AC:164:ARG:HB3	1.84	0.58
5:AE:110:LEU:HD13	5:AE:118:ILE:HG21	1.86	0.58
25:BA:1233:U:H4'	41:BV:79:VAL:HG22	1.84	0.58
32:BI:4:ILE:HG12	32:BI:18:VAL:HG22	1.84	0.58
1:CA:9:G:H2'	1:CA:10:A:C8	2.38	0.58
1:CA:202:U:H3'	1:CA:203:U:C6	2.38	0.58
1:CA:1047:G:H1	1:CA:1210:C:H42	1.51	0.58
1:CA:1121:U:H2'	1:CA:1122:U:O4'	2.03	0.58
1:CA:1271:G:H5''	1:CA:1314:C:OP1	2.04	0.58
2:CB:40:HIS:HB3	2:CB:190:THR:HG21	1.85	0.58
19:CS:37:ARG:O	19:CS:70:LYS:NZ	2.28	0.58
25:DA:2314:C:H2'	25:DA:2315:G:C8	2.38	0.58
25:DA:2502:G:N7	61:DA:4548:HOH:O	2.31	0.58
29:DF:137:LYS:HA	29:DF:140:LEU:HD23	1.85	0.58
53:D7:5:TRP:CD1	53:D7:7:PRO:HD3	2.38	0.58
1:AA:1030(C):G:H2'	1:AA:1030(D):A:C8	2.39	0.58
20:AT:45:GLN:HA	20:AT:91:LEU:HB3	1.84	0.58
25:BA:2745:G:P	28:BE:203:LYS:HZ1	2.26	0.58
1:CA:1086:U:H3	1:CA:1099:G:H22	1.51	0.58
3:CC:180:ALA:HB1	3:CC:203:PHE:HE1	1.69	0.58
1:AA:269:C:H2'	1:AA:270:A:C8	2.37	0.58
1:AA:1392:G:N2	1:AA:1502:A:H8	2.02	0.58
11:AK:15:ALA:HA	11:AK:77:MET:HA	1.84	0.58
25:BA:1185:C:O3'	33:BN:25:ARG:NH1	2.36	0.58
25:BA:2853:G:O6	61:BA:4561:HOH:O	2.17	0.58
31:BH:33:LEU:HD21	31:BH:136:ILE:HG13	1.85	0.58
31:BH:40:GLU:OE2	31:BH:60:ARG:NH1	2.37	0.58
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.85	0.58
1:CA:1138:G:C6	1:CA:1140:C:H1'	2.38	0.58
6:CF:81:ILE:HD11	27:DD:125:ILE:HB	1.86	0.58
25:DA:1188:U:H4'	41:DV:79:VAL:HG22	1.84	0.58
34:DO:80:ASP:OD1	39:DT:64:ARG:NH2	2.36	0.58
45:DZ:130:PRO:O	45:DZ:133:ILE:HG13	2.03	0.58
7:AG:46:ALA:O	7:AG:50:ILE:HG23	2.04	0.58
19:AS:41:VAL:HG12	19:AS:43:GLU:H	1.68	0.58
25:BA:2080:A:N7	61:BA:4112:HOH:O	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:222:U:H2'	1:CA:223:U:C6	2.38	0.58
1:CA:1123:A:H4'	10:CJ:37:PRO:HD2	1.86	0.58
25:DA:83:G:O2'	25:DA:102:G:N2	2.36	0.58
28:DE:9:VAL:HB	39:DT:3:ARG:HG2	1.85	0.58
40:DU:65:ILE:HD11	40:DU:95:LEU:HB3	1.86	0.58
44:DY:23:ARG:HG2	44:DY:42:VAL:HG22	1.84	0.58
1:AA:924:C:O2'	1:AA:1502:A:N6	2.35	0.58
5:AE:94:ALA:HB2	5:AE:119:LEU:HG	1.85	0.58
12:AL:36:VAL:HG22	12:AL:82:VAL:HG22	1.86	0.58
25:BA:1779:G:H8	25:BA:1779:G:H5''	1.68	0.58
26:BB:6:C:H2'	26:BB:7:G:H5''	1.85	0.58
34:BO:35:VAL:HG21	34:BO:69:ILE:HD13	1.85	0.58
43:BX:41:ASN:O	43:BX:45:THR:HG23	2.04	0.58
53:B7:47:ARG:HH11	53:B7:47:ARG:HB3	1.67	0.58
1:CA:130:A:O2'	1:CA:131:C:O5'	2.19	0.58
1:CA:975:A:N1	10:CJ:48:THR:HB	2.19	0.58
20:CT:16:HIS:O	20:CT:19:SER:OG	2.17	0.58
31:DH:124:GLU:HB2	31:DH:132:ARG:HB3	1.86	0.58
7:AG:42:ILE:HG23	7:AG:117:ALA:HA	1.84	0.58
9:AI:16:ARG:HD3	9:AI:64:THR:HG21	1.85	0.58
25:BA:2022:G:OP1	37:BR:5:LYS:NZ	2.37	0.58
25:BA:2251:G:OP2	61:BA:4210:HOH:O	2.17	0.58
39:BT:53:ARG:HB3	39:BT:53:ARG:NH1	2.18	0.58
1:CA:426:G:H2'	1:CA:427:U:C6	2.39	0.58
1:CA:913:A:OP1	12:CL:46:LYS:NZ	2.36	0.58
1:CA:1026:G:H5'	1:CA:1027:C:H5''	1.85	0.58
5:CE:78:HIS:CE1	5:CE:143:ARG:H	2.22	0.58
25:DA:7:G:H2'	25:DA:8:A:C8	2.38	0.58
25:DA:171:G:H2'	25:DA:172:C:C6	2.39	0.58
30:DG:38:VAL:HG22	30:DG:93:THR:HG23	1.84	0.58
32:BI:104:GLN:HG3	32:BI:105:HIS:CD2	2.38	0.58
36:BQ:110:THR:HG23	36:BQ:113:GLN:OE1	2.04	0.58
1:CA:437:U:H5'	4:CD:155:LEU:HD21	1.85	0.58
1:CA:642:A:N3	8:CH:113:SER:OG	2.35	0.58
1:CA:1316:G:H2'	1:CA:1318:A:OP2	2.04	0.58
2:CB:30:ARG:HH21	2:CB:194:PRO:HB2	1.68	0.58
25:DA:2680:C:OP2	28:DE:111:ARG:NH2	2.37	0.58
6:AF:10:LEU:HD23	6:AF:61:LEU:HD13	1.86	0.58
8:AH:83:ILE:HB	8:AH:137:VAL:HG13	1.86	0.58
25:BA:945:A:O2'	25:BA:946:A:H8	1.87	0.58
1:CA:582:U:OP1	15:CO:68:ARG:NH2	2.25	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:39:ILE:O	3:CC:43:LEU:HG	2.04	0.58
25:DA:1618:A:H5'	61:DA:3986:HOH:O	2.04	0.58
1:AA:300:A:O2'	1:AA:564:C:N3	2.36	0.57
1:AA:997:U:H3	1:AA:1044:A:H61	1.52	0.57
1:AA:1521:G:N3	61:AA:4036:HOH:O	2.32	0.57
5:AE:147:ASP:O	5:AE:151:LEU:HG	2.03	0.57
2:CB:87:ARG:NE	2:CB:233:SER:HB3	2.18	0.57
4:CD:150:GLU:OE2	4:CD:151:LYS:N	2.37	0.57
7:CG:14:PRO:HG3	7:CG:21:VAL:HG13	1.86	0.57
25:DA:1169:G:H1	25:DA:1180:C:H42	1.52	0.57
25:DA:1327:C:OP2	61:DA:3851:HOH:O	2.17	0.57
1:AA:1189:C:O2	61:AA:4114:HOH:O	2.16	0.57
3:AC:56:ASP:HB2	3:AC:67:THR:HB	1.86	0.57
19:AS:31:ILE:HB	19:AS:49:ILE:HG12	1.85	0.57
25:BA:1425:A:H4'	25:BA:1426:G:OP2	2.04	0.57
29:BF:53:THR:HG22	29:BF:56:GLU:HG3	1.85	0.57
31:BH:98:LEU:HD22	31:BH:125:VAL:HG23	1.85	0.57
1:CA:17:U:H2'	1:CA:18:C:C6	2.39	0.57
1:CA:392:G:H2'	1:CA:393:A:C8	2.39	0.57
1:CA:689:C:OP2	11:CK:55:LYS:NZ	2.35	0.57
1:CA:1422:G:H5''	34:DO:48:PRO:HB3	1.86	0.57
2:CB:162:ILE:HD11	2:CB:184:VAL:HG22	1.84	0.57
7:CG:26:PHE:O	7:CG:30:ILE:HG13	2.04	0.57
23:CX:23:C:H2'	23:CX:24:U:H6	1.69	0.57
25:DA:2591:C:OP1	27:DD:239:ARG:HD2	2.03	0.57
28:DE:116:VAL:HG13	28:DE:122:PHE:HB2	1.85	0.57
43:DX:31:HIS:HD2	43:DX:33:LYS:H	1.51	0.57
43:BX:88:LYS:NZ	43:BX:90:GLU:OE1	2.33	0.57
44:BY:54:LYS:HA	44:BY:56:PRO:CD	2.31	0.57
1:CA:1269:A:C8	1:CA:1270:C:H1'	2.38	0.57
1:CA:1309:G:O2'	13:CM:77:ASN:ND2	2.38	0.57
9:CI:51:ARG:HG2	9:CI:56:LEU:HD21	1.85	0.57
15:CO:54:ARG:O	15:CO:58:MET:HG3	2.04	0.57
25:DA:286:C:H2'	25:DA:287:C:C6	2.38	0.57
25:DA:1803:A:HO2'	27:DD:259:THR:HG21	1.67	0.57
1:AA:444:C:H2'	1:AA:445:G:H8	1.69	0.57
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.39	0.57
2:AB:60:ASP:OD1	2:AB:64:ARG:NE	2.35	0.57
7:AG:27:ILE:HD12	7:AG:40:ALA:HA	1.85	0.57
24:AW:4:PRO:O	24:AW:6:2R1:N	2.37	0.57
25:BA:1890:A:N6	25:BA:1905:G:O2'	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2045:G:H5'	25:BA:2629:C:H4'	1.86	0.57
28:BE:12:THR:HG22	28:BE:13:ARG:H	1.68	0.57
29:BF:197:ASP:N	29:BF:197:ASP:OD1	2.37	0.57
1:CA:148:G:H2'	1:CA:149:A:C8	2.37	0.57
7:CG:76:ARG:CZ	7:CG:89:MET:HB2	2.34	0.57
19:CS:64:GLU:HB2	50:D4:59:PHE:CE1	2.39	0.57
37:DR:83:ILE:O	37:DR:86:ARG:HG2	2.04	0.57
41:DV:24:LYS:HA	41:DV:92:THR:HG1	1.69	0.57
1:AA:1270:C:C2'	1:AA:1271:G:H5'	2.34	0.57
25:BA:303:C:N4	25:BA:385:G:H1	1.98	0.57
1:CA:785:G:C2'	1:CA:786:G:H5'	2.34	0.57
1:CA:1160:G:H22	1:CA:1176:A:H2	1.52	0.57
11:CK:20:TYR:CZ	11:CK:83:ILE:HD12	2.38	0.57
18:CR:47:THR:HG23	18:CR:49:LYS:HG3	1.87	0.57
25:DA:674:G:H1'	29:DF:74:ARG:HD3	1.87	0.57
25:DA:956:G:H5'	25:DA:957:A:OP2	2.04	0.57
25:DA:1031:G:H21	55:D9:36:GLN:HE22	1.52	0.57
25:DA:2023:G:H5'	25:DA:2617:C:H4'	1.87	0.57
25:DA:2839:G:H5'	37:DR:46:GLY:HA2	1.87	0.57
34:DO:87:ILE:HD12	34:DO:91:LEU:HA	1.86	0.57
45:DZ:39:VAL:HG21	45:DZ:44:PHE:HB2	1.85	0.57
1:AA:96:U:O2'	1:AA:97:G:H5'	2.04	0.57
1:AA:347:G:H21	1:AA:348:G:H3'	1.69	0.57
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.34	0.57
5:AE:50:GLU:HB2	5:AE:53:LEU:HD13	1.85	0.57
6:AF:44:GLY:HA2	6:AF:59:TYR:CZ	2.40	0.57
1:CA:243:A:H4'	1:CA:244:U:H5''	1.85	0.57
1:CA:974:A:OP2	14:CN:41:ARG:NH1	2.38	0.57
1:CA:1318:A:H5''	19:CS:3:ARG:NH2	2.15	0.57
2:CB:102:LEU:HD23	2:CB:182:ILE:HD12	1.86	0.57
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.86	0.57
3:CC:58:GLU:HB2	3:CC:65:ALA:HB3	1.86	0.57
10:CJ:8:LEU:HB3	10:CJ:16:LEU:HD22	1.86	0.57
11:CK:48:ILE:HD11	11:CK:64:ALA:HA	1.87	0.57
25:DA:195:A:H5''	25:DA:196:A:O5'	2.03	0.57
32:DI:43:ASN:HD22	32:DI:43:ASN:C	2.12	0.57
33:DN:58:ASP:OD1	33:DN:58:ASP:N	2.34	0.57
25:BA:625:G:O2'	25:BA:702:A:N6	2.38	0.57
25:BA:1068:G:H22	25:BA:1188:A:H2	1.47	0.57
1:CA:706:A:H5''	11:CK:22:HIS:CE1	2.39	0.57
2:CB:179:LYS:HA	8:CH:72:PRO:HG3	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:86:LYS:HB3	35:DP:118:GLY:HA3	1.86	0.57
1:AA:828:A:H2'	1:AA:829:G:O4'	2.05	0.57
1:AA:1162:C:N4	1:AA:1174:G:H1	2.01	0.57
1:AA:1392:G:H21	1:AA:1502:A:H8	1.53	0.57
25:BA:181:C:OP1	61:BA:3915:HOH:O	2.17	0.57
25:BA:572:A:O2'	25:BA:573:G:OP1	2.21	0.57
25:BA:2786:C:H2'	25:BA:2787:C:H6	1.68	0.57
14:CN:4:LYS:HA	14:CN:7:ILE:HD13	1.87	0.57
15:CO:4:THR:HB	15:CO:5:LYS:HD2	1.87	0.57
25:DA:10:G:H2'	25:DA:11:G:H8	1.70	0.57
25:DA:1778:U:H2'	25:DA:1784:A:N6	2.19	0.57
1:AA:216:G:H2'	1:AA:217:C:C6	2.40	0.57
14:AN:48:ALA:HB2	14:AN:53:LEU:HD12	1.87	0.57
25:BA:676:G:OP1	54:B8:19:SER:OG	2.21	0.57
25:BA:2299:A:N6	25:BA:2356:U:H3	2.01	0.57
25:BA:2308:U:OP2	38:BS:9:ARG:NH2	2.37	0.57
28:BE:174:ASP:OD1	28:BE:175:VAL:N	2.38	0.57
30:BG:47:LYS:HG3	30:BG:48:GLU:H	1.69	0.57
10:CJ:55:LYS:HG3	10:CJ:56:HIS:CD2	2.40	0.57
25:DA:30:G:H2'	25:DA:31:C:C6	2.40	0.57
25:DA:38:A:H2'	25:DA:39:C:C6	2.40	0.57
25:DA:660:G:H5'	29:DF:99:TYR:CE2	2.40	0.57
25:DA:2189:U:H2'	25:DA:2190:G:C8	2.40	0.57
25:DA:2312:U:C5	25:DA:2313:C:H5	2.23	0.57
25:DA:2562:U:H1'	34:DO:23:ARG:HH11	1.70	0.57
25:DA:2689:U:OP2	25:DA:2719:G:N2	2.36	0.57
27:DD:182:LEU:HB2	27:DD:272:ALA:HB3	1.86	0.57
28:DE:101:ARG:NH2	28:DE:171:GLU:HB2	2.19	0.57
30:DG:103:LEU:HD23	30:DG:106:LEU:HD23	1.86	0.57
30:DG:114:ILE:HB	30:DG:117:PHE:HB2	1.87	0.57
1:AA:1028:C:N4	1:AA:1033:G:H1	2.00	0.57
25:BA:311:C:H2'	25:BA:312:C:H6	1.69	0.57
25:BA:1836:U:O2	27:BD:50:THR:HB	2.04	0.57
35:BP:2:LYS:NZ	35:BP:4:SER:HB3	2.20	0.57
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.40	0.57
2:CB:44:LEU:HD22	2:CB:44:LEU:H	1.70	0.57
25:DA:82:G:O6	61:DA:4494:HOH:O	2.17	0.57
25:DA:2074:U:H2'	25:DA:2075:U:C6	2.39	0.57
28:DE:174:ASP:OD1	28:DE:175:VAL:N	2.37	0.57
45:DZ:48:PHE:CE1	45:DZ:52:SER:HA	2.40	0.57
1:AA:175:C:H2'	1:AA:176:C:C6	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:994:A:N1	1:AA:1047:G:H4'	2.20	0.56
1:AA:1002:G:H3'	1:AA:1003:G:H8	1.70	0.56
13:AM:56:LEU:O	13:AM:60:VAL:HG23	2.04	0.56
25:BA:118:U:OP2	61:BA:3886:HOH:O	2.17	0.56
25:BA:1338:U:H2'	25:BA:1339:C:C6	2.39	0.56
25:BA:2348:A:H61	46:B0:43:THR:HG22	1.70	0.56
45:BZ:158:PRO:O	45:BZ:161:VAL:HG12	2.04	0.56
1:CA:738:C:H2'	1:CA:739:C:H6	1.70	0.56
1:CA:1138:G:C5	1:CA:1140:C:H1'	2.40	0.56
1:CA:1157:A:N6	1:CA:1180:A:C4	2.72	0.56
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.30	0.56
10:CJ:8:LEU:HD23	10:CJ:96:ILE:HG23	1.87	0.56
10:CJ:65:LEU:HD12	14:CN:55:GLY:O	2.05	0.56
25:DA:71:A:H5''	25:DA:73:A:C8	2.40	0.56
25:DA:1636:C:H2'	25:DA:1637:A:C8	2.40	0.56
25:BA:692:C:H2'	25:BA:693:G:O4'	2.05	0.56
25:BA:1211:U:H2'	25:BA:1212:C:C6	2.40	0.56
1:CA:149:A:H2'	1:CA:150:C:C6	2.40	0.56
1:CA:255:G:OP1	17:CQ:69:LYS:NZ	2.35	0.56
1:CA:1414:U:H3	1:CA:1486:G:H1	1.53	0.56
4:CD:173:TRP:CZ3	4:CD:193:ASP:HB3	2.40	0.56
7:CG:106:GLN:O	7:CG:110:GLN:HG3	2.05	0.56
15:CO:25:THR:HG21	15:CO:70:LEU:HB2	1.87	0.56
32:DI:40:THR:O	32:DI:44:LEU:HB2	2.05	0.56
1:AA:78:G:H1	1:AA:92:C:H42	1.54	0.56
1:AA:149:A:H2'	1:AA:150:C:C6	2.40	0.56
1:AA:192:U:HO2'	1:AA:193:C:H6	1.52	0.56
1:AA:409:G:N2	1:AA:433:C:O2	2.38	0.56
1:AA:532:A:O2'	1:AA:533:A:OP1	2.20	0.56
1:AA:1025:U:C2	1:AA:1036:G:O6	2.58	0.56
2:AB:16:HIS:CG	2:AB:17:PHE:N	2.70	0.56
5:AE:103:GLY:O	5:AE:106:PRO:HD2	2.04	0.56
25:BA:2431:U:O4	61:BA:4236:HOH:O	2.14	0.56
25:BA:2860:A:OP2	25:BA:2876:U:H5	1.89	0.56
31:BH:86:GLU:OE2	31:BH:130:ARG:HD3	2.06	0.56
37:BR:44:LEU:HD22	37:BR:48:VAL:HG23	1.87	0.56
50:B4:56:VAL:HB	50:B4:60:GLN:HG3	1.88	0.56
1:CA:1318:A:O2'	19:CS:37:ARG:HB2	2.06	0.56
2:CB:120:ALA:O	2:CB:122:PHE:N	2.34	0.56
3:CC:56:ASP:O	3:CC:57:ILE:HD12	2.05	0.56
4:CD:31:CYS:SG	4:CD:32:ALA:N	2.79	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:10:LEU:HD22	8:CH:83:ILE:HD11	1.85	0.56
8:CH:68:ARG:NH1	8:CH:74:PRO:HB3	2.20	0.56
13:CM:81:LEU:HD22	13:CM:88:ARG:HB3	1.86	0.56
15:CO:5:LYS:H	15:CO:5:LYS:CD	2.17	0.56
16:CP:21:VAL:HG13	16:CP:33:ILE:HB	1.86	0.56
25:DA:1278:A:OP1	37:DR:36:THR:HG23	2.04	0.56
25:DA:1470:G:H5''	25:DA:1471:A:OP1	2.05	0.56
25:DA:1798:U:H5'	27:DD:259:THR:CG2	2.31	0.56
25:DA:2299:G:N2	25:DA:2318:G:H8	2.02	0.56
32:DI:110:ASP:H	32:DI:130:TYR:HH	1.49	0.56
1:AA:193:C:H2'	1:AA:194:C:C6	2.39	0.56
1:AA:538:G:H5''	12:AL:114:LYS:HB2	1.86	0.56
1:AA:1125:U:H1'	1:AA:1126:U:O5'	2.06	0.56
15:AO:25:THR:HG21	15:AO:70:LEU:HB2	1.88	0.56
17:AQ:3:LYS:HD2	17:AQ:60:ILE:HD11	1.87	0.56
18:AR:51:LEU:HD23	18:AR:52:PRO:HD2	1.87	0.56
25:BA:624:C:O2'	25:BA:628:C:OP1	2.16	0.56
25:BA:1000:C:OP1	36:BQ:87:LYS:HE3	2.05	0.56
25:BA:1066:A:N1	25:BA:1186:U:O2'	2.27	0.56
25:BA:2013:U:H2'	25:BA:2014:G:H5''	1.86	0.56
1:CA:834:C:H2'	1:CA:835:U:C6	2.40	0.56
1:CA:1104:G:H5'	2:CB:111:ARG:HD2	1.86	0.56
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.39	0.56
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.40	0.56
1:CA:1279:A:H5''	1:CA:1280:A:OP1	2.06	0.56
2:CB:98:LEU:HB2	2:CB:101:MET:HE3	1.87	0.56
2:CB:170:GLU:O	2:CB:174:VAL:HG23	2.04	0.56
25:DA:375:C:H2'	25:DA:376:C:C6	2.40	0.56
25:DA:479:A:N3	25:DA:481:G:H5''	2.20	0.56
25:DA:500:G:N1	25:DA:503:A:OP2	2.38	0.56
25:DA:1292:U:H2'	25:DA:1293:C:C6	2.40	0.56
28:DE:143:ASN:HD22	28:DE:147:PRO:HD3	1.70	0.56
53:D7:26:GLY:O	53:D7:30:VAL:HG23	2.05	0.56
1:AA:1125:U:H3'	10:AJ:5:ARG:HH22	1.70	0.56
1:AA:1202:G:N2	14:AN:46:GLU:OE1	2.32	0.56
16:AP:18:ARG:NH1	16:AP:32:TYR:OH	2.38	0.56
25:BA:83:A:H5'	44:BY:8:LYS:HG2	1.86	0.56
25:BA:1615:G:P	27:BD:63:ARG:HH22	2.29	0.56
25:BA:2694:U:OP2	61:BA:4014:HOH:O	2.17	0.56
26:BB:50:G:H5''	38:BS:61:ASN:HD22	1.69	0.56
1:CA:38:G:H22	1:CA:397:A:H5''	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1002:G:N2	1:CA:1039:C:N3	2.54	0.56
9:CI:6:GLY:H	9:CI:17:VAL:HG12	1.70	0.56
9:CI:125:TYR:HD1	9:CI:126:SER:N	2.03	0.56
12:CL:74:GLY:O	12:CL:102:ARG:NH1	2.27	0.56
23:CX:8:U:O5'	23:CX:8:U:H6	1.89	0.56
25:DA:1239:G:H2'	25:DA:1240:U:O4'	2.06	0.56
25:DA:1359:A:N6	25:DA:1372:U:H3	2.03	0.56
25:DA:2687:U:H2'	25:DA:2688:U:O4'	2.05	0.56
26:DB:95:C:H2'	26:DB:96:U:C6	2.40	0.56
29:DF:157:VAL:HB	29:DF:194:MET:HG2	1.87	0.56
1:AA:1030(D):A:H2'	1:AA:1031:G:O4'	2.06	0.56
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.30	0.56
25:BA:1553:A:O2'	25:BA:1554:A:O4'	2.24	0.56
25:BA:1597:C:OP1	25:BA:1765:U:O2'	2.19	0.56
25:BA:2481:A:O2'	36:BQ:56:ARG:HD2	2.06	0.56
28:BE:127:ASP:OD2	61:BE:408:HOH:O	2.18	0.56
1:CA:200:G:H2'	1:CA:201:C:C6	2.41	0.56
25:DA:271(H):G:H2'	25:DA:271(I):G:H8	1.69	0.56
25:DA:857:C:H4'	46:D0:23:VAL:HG21	1.88	0.56
25:DA:988:A:N7	61:DA:3839:HOH:O	2.32	0.56
30:DG:144:ILE:HA	30:DG:148:MET:HE1	1.87	0.56
1:AA:1318:A:H4'	19:AS:10:PHE:CZ	2.40	0.56
2:AB:231:GLU:HB3	2:AB:232:PRO:HD3	1.87	0.56
17:AQ:57:VAL:HG12	17:AQ:76:LEU:HA	1.88	0.56
27:BD:206:LEU:HD22	27:BD:211:ARG:HG2	1.87	0.56
34:BO:2:ILE:HB	34:BO:33:ALA:HB3	1.87	0.56
48:B2:32:LEU:HD12	48:B2:36:ARG:HH11	1.69	0.56
4:CD:103:ASN:OD1	4:CD:114:ARG:NE	2.37	0.56
59:CX:101:FME:HCN	25:DA:2451:A:C2	2.40	0.56
43:DX:8:ILE:O	48:D2:36:ARG:NH2	2.39	0.56
9:AI:4:TYR:CE1	9:AI:88:TYR:HA	2.41	0.56
14:AN:14:PRO:HG2	14:AN:16:PHE:O	2.06	0.56
14:AN:21:TYR:OH	14:AN:23:ARG:NH2	2.38	0.56
25:BA:930:G:H2'	25:BA:931:C:C6	2.41	0.56
25:BA:1067:A:H8	25:BA:1068:G:H5''	1.69	0.56
25:BA:1566:U:H2'	25:BA:1567:G:O4'	2.06	0.56
30:BG:72:ARG:NH1	30:BG:87:PRO:HG3	2.21	0.56
30:BG:179:PRO:HB2	50:B4:42:PHE:HE2	1.70	0.56
31:BH:11:VAL:HG21	31:BH:50:VAL:HG23	1.88	0.56
31:BH:125:VAL:HG12	31:BH:127:GLU:O	2.05	0.56
1:CA:187:C:H2'	1:CA:188:C:H6	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:861:G:OP1	8:CH:75:ARG:NH2	2.38	0.56
1:CA:1125:U:C2	10:CJ:38:ILE:HD13	2.41	0.56
1:CA:1287:A:N3	1:CA:1353:G:O2'	2.32	0.56
25:DA:172:C:H2'	25:DA:173:G:H8	1.70	0.56
25:DA:1338:G:N3	25:DA:1393:A:H2	2.04	0.56
26:DB:48:A:H2'	26:DB:49:C:C6	2.40	0.56
31:DH:69:ARG:HG3	31:DH:70:THR:N	2.20	0.56
37:DR:88:ARG:NH2	37:DR:89:ASP:OD2	2.38	0.56
1:AA:272:C:H2'	1:AA:273:A:H8	1.71	0.56
1:AA:1138:G:C6	1:AA:1140:C:H1'	2.41	0.56
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.06	0.56
29:BF:185:ASP:OD1	29:BF:188:ARG:NH1	2.35	0.56
41:BV:21:ARG:HG2	41:BV:91:TYR:CD1	2.41	0.56
1:CA:890:G:O2'	1:CA:906:G:O6	2.19	0.56
1:CA:1263:C:H2'	1:CA:1264:C:C6	2.41	0.56
11:CK:18:ARG:NH2	11:CK:35:PRO:O	2.32	0.56
11:CK:34:ASP:HB3	11:CK:40:ILE:HD11	1.88	0.56
19:CS:28:LYS:HB2	19:CS:29:ARG:CA	2.35	0.56
25:DA:247:G:H4'	25:DA:386:G:C5	2.40	0.56
25:DA:1815:A:OP2	27:DD:54:ARG:NH2	2.37	0.56
34:DO:68:GLU:CB	34:DO:78:ARG:HB2	2.36	0.56
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.06	0.56
4:AD:155:LEU:HD22	4:AD:156:GLU:H	1.70	0.56
33:BN:67:LEU:HD12	33:BN:87:LEU:HD13	1.87	0.56
8:CH:84:ARG:HD2	8:CH:136:GLU:HG2	1.87	0.56
9:CI:53:VAL:O	9:CI:55:ALA:N	2.39	0.56
12:CL:24:VAL:HG12	12:CL:27:LEU:HB2	1.86	0.56
30:DG:43:LEU:HD12	30:DG:45:GLU:HG3	1.88	0.56
1:AA:1030(C):G:H2'	1:AA:1030(D):A:H8	1.70	0.55
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.41	0.55
4:AD:154:ASN:HA	4:AD:159:ARG:HH21	1.71	0.55
25:BA:918:U:OP1	36:BQ:5:ARG:HD3	2.06	0.55
1:CA:814:A:N7	1:CA:816:A:C4	2.73	0.55
25:DA:275:G:H2'	25:DA:276:A:C8	2.41	0.55
25:DA:287:C:H2'	25:DA:288:C:C6	2.38	0.55
25:DA:2359:C:H2'	25:DA:2360:A:O4'	2.05	0.55
30:DG:12:TYR:HA	30:DG:16:ARG:HG2	1.88	0.55
1:AA:221:C:H2'	1:AA:222:U:C6	2.38	0.55
1:AA:520:A:N1	1:AA:536:C:H1'	2.21	0.55
8:AH:98:LYS:H	8:AH:98:LYS:HD3	1.71	0.55
15:AO:26:GLU:OE2	15:AO:77:ARG:NE	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:606:G:OP2	40:BU:10:ARG:NH1	2.36	0.55
29:BF:101:LEU:O	29:BF:106:ARG:HD3	2.06	0.55
39:BT:95:ARG:HG2	39:BT:95:ARG:NH1	2.21	0.55
48:B2:1:MET:N	48:B2:52:ASP:OD2	2.38	0.55
1:CA:8:A:N6	4:CD:209:ARG:HB2	2.21	0.55
1:CA:138:G:H8	1:CA:138:G:H5'	1.71	0.55
1:CA:444:C:H2'	1:CA:445:G:C8	2.34	0.55
2:CB:189:ASP:HB3	2:CB:204:ASN:HA	1.89	0.55
23:CX:59:A:H2'	23:CX:60:U:H5'	1.89	0.55
25:DA:1379:A:H4'	25:DA:1380:G:OP2	2.05	0.55
30:DG:101:ILE:HG22	30:DG:105:LYS:HE2	1.87	0.55
1:AA:437:U:H5'	4:AD:155:LEU:HD11	1.88	0.55
25:BA:7:G:H2'	25:BA:8:A:O4'	2.06	0.55
25:BA:231:G:O2'	25:BA:243:G:O6	2.20	0.55
25:BA:645:G:N3	25:BA:645:G:H5'	2.22	0.55
25:BA:2661:U:H2'	25:BA:2662:U:C6	2.41	0.55
61:BA:4299:HOH:O	37:BR:15:SER:HB3	2.06	0.55
30:BG:66:GLN:HG2	50:B4:1:MET:CE	2.37	0.55
3:CC:113:ALA:HB2	3:CC:202:ILE:HG13	1.87	0.55
27:DD:108:PRO:HB3	27:DD:143:HIS:CE1	2.40	0.55
55:D9:15:LYS:HE2	55:D9:17:ILE:HD13	1.89	0.55
1:AA:738:C:OP1	6:AF:2:ARG:NH1	2.39	0.55
2:AB:229:VAL:HG12	2:AB:230:VAL:H	1.70	0.55
20:AT:45:GLN:HB2	20:AT:91:LEU:HD13	1.88	0.55
25:BA:742:G:OP1	25:BA:1426:G:O2'	2.22	0.55
25:BA:934:A:H4'	25:BA:935:C:C5	2.39	0.55
25:BA:1553:A:O2'	25:BA:1554:A:H8	1.88	0.55
35:BP:62:LEU:O	54:B8:13:ARG:HD3	2.05	0.55
1:CA:324:G:N7	61:CA:4084:HOH:O	2.33	0.55
3:CC:43:LEU:HD21	3:CC:91:LEU:HD13	1.89	0.55
5:CE:100:VAL:O	5:CE:107:ARG:NH2	2.40	0.55
25:DA:286:C:H2'	25:DA:287:C:H6	1.71	0.55
25:DA:906:G:O2'	36:DQ:67:ARG:NH2	2.37	0.55
25:DA:957:A:H5'	36:DQ:76:LYS:HG3	1.88	0.55
25:DA:2357:U:OP1	46:D0:20:ARG:HD3	2.06	0.55
25:DA:2364:C:H2'	25:DA:2365:G:O4'	2.06	0.55
32:DI:134:PRO:C	32:DI:136:VAL:H	2.15	0.55
1:AA:487:A:H2'	1:AA:488:C:O4'	2.06	0.55
12:AL:71:PRO:HG2	12:AL:102:ARG:HG3	1.88	0.55
25:BA:721:G:H1'	29:BF:74:ARG:HD3	1.88	0.55
25:BA:2053:A:C6	25:BA:2510:C:H1'	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2332:A:N3	25:BA:2332:A:H2'	2.20	0.55
25:BA:2373:A:OP1	54:B8:27:THR:OG1	2.24	0.55
35:BP:50:ARG:HD3	54:B8:7:HIS:CD2	2.40	0.55
1:CA:433:C:H2'	1:CA:434:U:H6	1.72	0.55
1:CA:565:U:OP2	1:CA:566:G:O2'	2.22	0.55
7:CG:78:ARG:HG2	7:CG:79:ARG:HB2	1.87	0.55
15:CO:69:TYR:O	15:CO:73:GLU:HG2	2.07	0.55
15:CO:88:ARG:HB3	15:CO:88:ARG:NH2	2.21	0.55
31:DH:20:ALA:HB1	31:DH:21:PRO:HD2	1.88	0.55
36:DQ:29:PHE:HB2	36:DQ:105:GLU:OE2	2.06	0.55
1:AA:630:G:H2'	1:AA:631:G:C8	2.41	0.55
2:AB:219:VAL:HA	2:AB:222:ILE:HD11	1.88	0.55
3:AC:130:VAL:HG21	3:AC:157:ILE:HG23	1.88	0.55
25:BA:1001:G:OP2	36:BQ:14:ARG:NH2	2.39	0.55
25:BA:1766:G:H3'	25:BA:1767:A:H5''	1.87	0.55
30:BG:109:VAL:C	30:BG:112:PRO:HD2	2.31	0.55
32:BI:133:HIS:ND1	32:BI:134:PRO:O	2.38	0.55
1:CA:130:A:H5'	17:CQ:63:ARG:HE	1.71	0.55
1:CA:441:A:H3'	1:CA:442:C:C6	2.40	0.55
1:CA:1320:C:O4'	19:CS:73:GLU:HG3	2.07	0.55
2:CB:211:ILE:O	2:CB:215:LEU:HB2	2.07	0.55
6:CF:99:ALA:HB1	18:CR:23:LYS:HE3	1.88	0.55
25:DA:614(C):A:C4	29:DF:180:GLY:HA2	2.42	0.55
25:DA:2640:G:H1	25:DA:2774:C:H42	1.55	0.55
31:DH:149:ARG:NH1	31:DH:167:GLU:OE2	2.38	0.55
1:AA:768:A:OP2	61:AA:4024:HOH:O	2.18	0.55
1:AA:833:U:H2'	1:AA:834:C:H6	1.71	0.55
2:AB:163:PHE:HA	2:AB:185:ILE:HG13	1.89	0.55
16:AP:28:ARG:HG2	16:AP:29:ASP:OD1	2.05	0.55
25:BA:1466:U:HO2'	25:BA:1467:G:P	2.29	0.55
54:B8:39:LYS:O	54:B8:43:GLN:HG3	2.06	0.55
1:CA:445:G:H2'	1:CA:446:G:C8	2.42	0.55
1:CA:964:A:N3	1:CA:969:A:O2'	2.34	0.55
8:CH:112:LEU:HA	8:CH:134:ILE:HG12	1.89	0.55
11:CK:85:ARG:HE	11:CK:111:ASP:HB3	1.71	0.55
25:DA:2314:C:H2'	25:DA:2315:G:H8	1.72	0.55
25:DA:2541:A:N7	61:DA:3938:HOH:O	2.33	0.55
26:DB:95:C:H2'	26:DB:96:U:H6	1.71	0.55
1:AA:91:C:H2'	1:AA:92:C:C6	2.42	0.55
1:AA:727:G:N2	1:AA:730:G:OP2	2.39	0.55
1:AA:880:C:OP1	12:AL:8:ASN:ND2	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1239:A:H62	1:AA:1299:A:N6	2.05	0.55
1:AA:1260:C:OP1	1:AA:1284:C:O2'	2.25	0.55
4:AD:3:ARG:HE	4:AD:118:ARG:HD3	1.71	0.55
10:AJ:35:SER:CB	10:AJ:73:ASP:HB2	2.29	0.55
23:AX:59:A:H2'	23:AX:60:U:H5'	1.88	0.55
25:BA:1232:G:H5''	41:BV:81:TYR:CE1	2.41	0.55
25:BA:1698:G:OP1	37:BR:40:LYS:HE3	2.06	0.55
32:BI:29:TYR:C	32:BI:32:PRO:HD2	2.31	0.55
45:BZ:48:PHE:CE1	45:BZ:52:SER:HA	2.41	0.55
1:CA:927:G:H2'	1:CA:928:G:H8	1.72	0.55
9:CI:121:ARG:NH1	9:CI:122:ALA:O	2.39	0.55
13:CM:60:VAL:HG23	13:CM:64:TRP:CE3	2.42	0.55
25:DA:668:G:H5'	25:DA:669:G:OP2	2.06	0.55
25:DA:800:A:H8	25:DA:800:A:OP1	1.90	0.55
25:DA:1805:U:O2	27:DD:50:THR:HB	2.07	0.55
27:DD:73:VAL:HG13	27:DD:120:GLY:HA3	1.88	0.55
43:DX:92:LEU:C	43:DX:94:GLY:H	2.15	0.55
47:D1:85:LEU:HB3	47:D1:89:GLU:HB3	1.88	0.55
1:AA:1008:C:H42	1:AA:1021:G:H1	1.54	0.55
2:AB:30:ARG:HH21	2:AB:194:PRO:HB2	1.72	0.55
2:AB:87:ARG:NH2	2:AB:220:ASP:OD1	2.24	0.55
4:AD:107:ARG:NH2	4:AD:194:LEU:HD22	2.21	0.55
27:BD:132:PRO:HG2	27:BD:135:PHE:CD2	2.39	0.55
1:CA:840:C:H4'	1:CA:841:U:OP1	2.06	0.55
1:CA:1025:U:H1'	1:CA:1026:G:C8	2.42	0.55
1:CA:1272:G:H2'	1:CA:1273:G:O4'	2.06	0.55
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.22	0.55
7:CG:69:VAL:HG21	7:CG:104:LEU:HD11	1.88	0.55
25:DA:1448:G:H4'	25:DA:1542:A:OP1	2.06	0.55
25:DA:1889:A:N1	25:DA:2234:G:H1'	2.22	0.55
42:DW:9:TYR:H	42:DW:102:HIS:CE1	2.25	0.55
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.42	0.55
1:AA:1127:G:H1'	1:AA:1280:A:C6	2.42	0.55
2:AB:7:VAL:HG11	2:AB:221:LEU:HD23	1.89	0.55
25:BA:933:C:OP1	25:BA:933:C:H4'	2.05	0.55
25:BA:1639:G:H2'	25:BA:1640:G:H8	1.72	0.55
29:BF:116:ASP:OD2	35:BP:1:MET:HB2	2.07	0.55
46:B0:30:VAL:HG22	46:B0:66:VAL:HG22	1.89	0.55
1:CA:543:C:C2'	1:CA:544:G:H5'	2.36	0.55
1:CA:880:C:OP1	12:CL:8:ASN:ND2	2.40	0.55
25:DA:71:A:N7	43:DX:31:HIS:HE1	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:139(A):G:N7	61:DA:4443:HOH:O	2.33	0.55
25:DA:848:G:N3	25:DA:933:A:H1'	2.21	0.55
25:DA:1014:U:H2'	25:DA:1015:G:H8	1.72	0.55
35:DP:101:VAL:HA	35:DP:106:LEU:O	2.07	0.55
49:D3:10:LYS:HB3	49:D3:53:LEU:HA	1.89	0.55
1:AA:1216:G:OP1	14:AN:2:ALA:HA	2.06	0.54
2:AB:178:ARG:NH2	8:AH:68:ARG:HH22	2.05	0.54
5:AE:15:ARG:HD2	5:AE:26:PHE:CD2	2.41	0.54
10:AJ:47:PHE:CZ	14:AN:37:PHE:HE1	2.25	0.54
20:AT:47:GLY:HA2	20:AT:48:LYS:HB2	1.89	0.54
25:BA:2343:G:O2'	25:BA:2348:A:N1	2.35	0.54
1:CA:1216:G:H5''	14:CN:5:ALA:CB	2.37	0.54
5:CE:78:HIS:CE1	5:CE:142:LEU:HA	2.42	0.54
8:CH:68:ARG:HH11	8:CH:68:ARG:HG3	1.71	0.54
21:CU:12:LYS:HB3	21:CU:22:ARG:HD2	1.89	0.54
25:DA:19:C:H2'	25:DA:20:C:H6	1.71	0.54
25:DA:1009:A:OP2	61:DA:4091:HOH:O	2.18	0.54
25:DA:1427:A:H4'	25:DA:1428:C:O5'	2.07	0.54
25:DA:1651:G:OP1	37:DR:40:LYS:HE3	2.07	0.54
1:AA:339:C:OP2	34:BO:97:ARG:HD3	2.07	0.54
1:AA:877:C:H5''	8:AH:88:LYS:HD3	1.89	0.54
8:AH:21:LYS:O	8:AH:65:TYR:OH	2.24	0.54
25:BA:1405:A:N1	25:BA:1418:U:O4	2.40	0.54
33:BN:58:ASP:OD1	33:BN:58:ASP:N	2.37	0.54
37:BR:97:VAL:HG22	37:BR:114:VAL:HG22	1.89	0.54
50:B4:63:TYR:HD1	50:B4:63:TYR:N	2.06	0.54
1:CA:8:A:C6	4:CD:209:ARG:HB2	2.42	0.54
1:CA:192:U:H2'	1:CA:193:C:H6	1.71	0.54
1:CA:671:G:H2'	1:CA:672:U:O4'	2.07	0.54
1:CA:1051:C:H2'	1:CA:1052:U:H6	1.71	0.54
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.42	0.54
3:CC:116:VAL:HG21	3:CC:202:ILE:HD11	1.89	0.54
25:DA:1579:A:H2'	25:DA:1580:A:C8	2.43	0.54
1:AA:96:U:H2'	1:AA:97:G:H8	1.71	0.54
4:AD:103:ASN:O	4:AD:107:ARG:HG2	2.07	0.54
4:AD:172:PRO:HB2	4:AD:187:ARG:NH2	2.22	0.54
25:BA:1553:A:O2'	25:BA:1554:A:O5'	2.25	0.54
38:BS:11:LYS:HD2	38:BS:15:ARG:HH12	1.73	0.54
40:BU:76:TYR:HH	40:BU:92:ARG:HH11	1.50	0.54
49:B3:55:ARG:NH1	49:B3:57:GLU:OE1	2.36	0.54
1:CA:1025:U:N3	1:CA:1036:G:C6	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:53:LEU:H	5:CE:53:LEU:HD12	1.73	0.54
9:CI:23:ASN:OD1	9:CI:25:LYS:HE3	2.08	0.54
25:DA:2887:U:H2'	25:DA:2888:C:C6	2.42	0.54
52:D6:35:GLU:HG2	52:D6:50:ARG:HD3	1.88	0.54
1:AA:105:G:H2'	1:AA:106:C:C6	2.43	0.54
1:AA:986:A:H1'	19:AS:54:GLY:O	2.07	0.54
1:AA:1010:G:N2	1:AA:1020:U:O2'	2.40	0.54
10:AJ:8:LEU:HB2	10:AJ:70:ARG:HB2	1.90	0.54
25:BA:1003:U:OP2	36:BQ:14:ARG:NH1	2.41	0.54
25:BA:2044:U:O2'	25:BA:2629:C:H5'	2.08	0.54
27:BD:242:ARG:HD3	27:BD:242:ARG:N	2.22	0.54
30:BG:16:ARG:CZ	30:BG:31:VAL:HG11	2.37	0.54
1:CA:552:U:H2'	1:CA:553:A:H5'	1.89	0.54
1:CA:560:U:O2'	1:CA:561:U:OP2	2.22	0.54
1:CA:923:A:OP1	5:CE:21:ALA:HB2	2.08	0.54
1:CA:1120:G:C6	1:CA:1154:G:C2	2.95	0.54
4:CD:98:GLU:OE1	4:CD:103:ASN:ND2	2.39	0.54
25:DA:918:A:H5''	26:DB:98:G:O2'	2.08	0.54
25:DA:2335:A:O2'	25:DA:2336:A:H5''	2.07	0.54
32:DI:117:GLU:HG3	32:DI:118:LYS:H	1.71	0.54
39:DT:116:ALA:HB1	39:DT:121:ILE:HD11	1.88	0.54
50:D4:2:LYS:HB2	50:D4:5:ILE:HD13	1.89	0.54
4:AD:18:LYS:HD2	4:AD:31:CYS:SG	2.48	0.54
4:AD:122:ARG:HA	4:AD:122:ARG:HE	1.72	0.54
5:AE:36:ASP:OD2	5:AE:40:ARG:HB2	2.06	0.54
25:BA:144:C:H5'	43:BX:2:LYS:HE2	1.89	0.54
25:BA:762:G:H2'	25:BA:763:A:O4'	2.08	0.54
26:BB:43:C:H5''	50:B4:1:MET:HG2	1.90	0.54
33:BN:96:GLU:CD	33:BN:96:GLU:H	2.16	0.54
36:BQ:56:ARG:HH11	36:BQ:56:ARG:HG3	1.71	0.54
45:BZ:145:GLU:O	45:BZ:148:ASP:N	2.39	0.54
1:CA:250:A:H4'	1:CA:251:G:O5'	2.08	0.54
1:CA:1015:A:H2'	1:CA:1016:A:H8	1.72	0.54
21:CU:15:ARG:HH11	21:CU:15:ARG:HB2	1.72	0.54
27:DD:172:TYR:CD1	27:DD:186:HIS:HA	2.43	0.54
34:DO:116:SER:OG	34:DO:117:LEU:N	2.40	0.54
1:AA:159:G:N2	1:AA:161:A:H3'	2.22	0.54
1:AA:190:U:H2'	1:AA:191:G:H8	1.70	0.54
1:AA:1095:U:H5''	1:AA:1109:C:O2	2.07	0.54
5:AE:77:PRO:HD2	5:AE:142:LEU:HD22	1.89	0.54
25:BA:1475:G:H2'	25:BA:1476:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:92:VAL:HG11	32:BI:144:VAL:HG11	1.89	0.54
1:CA:1129:C:H1'	1:CA:1130:A:N7	2.21	0.54
1:CA:1154:G:N7	1:CA:1155:G:C8	2.76	0.54
9:CI:4:TYR:CZ	9:CI:88:TYR:HA	2.43	0.54
25:DA:348:G:H2'	25:DA:349:G:H8	1.72	0.54
25:DA:1032:A:O2'	25:DA:1034:G:OP2	2.25	0.54
44:DY:7:VAL:HG21	44:DY:72:VAL:HG12	1.90	0.54
49:D3:46:ASN:O	49:D3:50:VAL:HG22	2.07	0.54
10:AJ:49:VAL:HG23	14:AN:41:ARG:HD2	1.90	0.54
28:BE:59:VAL:HG21	28:BE:74:PRO:HB3	1.90	0.54
39:BT:5:ALA:O	39:BT:9:LEU:N	2.41	0.54
1:CA:1279:A:O2'	1:CA:1281:U:OP2	2.12	0.54
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.42	0.54
9:CI:4:TYR:CE2	9:CI:88:TYR:HD1	2.25	0.54
19:CS:17:GLU:O	19:CS:21:GLU:N	2.34	0.54
25:DA:607:U:OP1	29:DF:102:PRO:HA	2.08	0.54
25:DA:1341:U:OP2	25:DA:1394:U:O2'	2.23	0.54
25:DA:1667:G:O2'	25:DA:1991:U:O4	2.13	0.54
26:DB:50:G:OP1	38:DS:63:THR:OG1	2.19	0.54
29:DF:129:PHE:CD2	29:DF:163:VAL:HG21	2.43	0.54
50:D4:1:MET:HE2	50:D4:6:HIS:CD2	2.43	0.54
1:AA:72:C:H2'	1:AA:73:G:O4'	2.08	0.54
1:AA:78:G:C6	1:AA:91:C:N4	2.75	0.54
1:AA:186:C:H2'	1:AA:187:C:C6	2.42	0.54
1:AA:434:U:H2'	1:AA:435:C:C6	2.42	0.54
1:AA:1316:G:H2'	1:AA:1318:A:OP2	2.07	0.54
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.08	0.54
25:BA:236:G:H4'	25:BA:413:G:C5	2.43	0.54
25:BA:1471:G:H2'	25:BA:1472:G:C8	2.43	0.54
34:BO:35:VAL:HG11	34:BO:103:ALA:CB	2.36	0.54
1:CA:942:G:C2	1:CA:1342:C:C2	2.96	0.54
1:CA:991:U:O4	1:CA:1212:U:H1'	2.08	0.54
1:CA:1169:A:N7	1:CA:1170:A:C5	2.76	0.54
25:DA:340:A:N6	25:DA:341:G:C2	2.75	0.54
25:DA:1270:C:H5''	25:DA:1271:G:H5'	1.90	0.54
28:DE:24:THR:HG22	28:DE:186:GLY:O	2.07	0.54
38:DS:34:HIS:ND1	38:DS:53:SER:OG	2.33	0.54
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.07	0.54
5:AE:76:ILE:HB	5:AE:77:PRO:HD2	1.90	0.54
23:AX:61:C:H2'	23:AX:62:C:H6	1.72	0.54
25:BA:287:G:N7	25:BA:448:U:H2'	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:312:C:H2'	25:BA:313:A:H8	1.72	0.54
30:BG:11:TYR:CZ	30:BG:16:ARG:HD3	2.41	0.54
30:BG:143:GLU:OE2	50:B4:26:SER:OG	2.20	0.54
1:CA:1154:G:N7	1:CA:1155:G:N9	2.55	0.54
1:CA:1479:C:H2'	1:CA:1480:G:H8	1.72	0.54
3:CC:50:ALA:HB1	3:CC:72:LYS:O	2.08	0.54
9:CI:4:TYR:CE1	9:CI:88:TYR:HA	2.42	0.54
20:CT:56:MET:HE3	20:CT:88:VAL:HG11	1.89	0.54
25:DA:708:C:H42	25:DA:723:G:H1	1.55	0.54
25:DA:887:A:H5'	25:DA:888:C:OP1	2.07	0.54
25:DA:2268:A:OP1	61:DA:4048:HOH:O	2.18	0.54
25:DA:2331:G:O2'	46:D0:43:THR:HG22	2.08	0.54
25:DA:2706:G:N7	61:DA:4124:HOH:O	2.34	0.54
30:DG:96:ARG:N	30:DG:99:MET:HE2	2.22	0.54
1:AA:69:G:H2'	1:AA:70:G:C8	2.43	0.54
1:AA:1064:G:H4'	1:AA:1065:U:OP1	2.07	0.54
3:AC:129:ALA:HB3	3:AC:132:ARG:HB2	1.90	0.54
19:AS:61:TYR:CE2	19:AS:63:THR:HG23	2.44	0.54
25:BA:1067:A:H3'	25:BA:1067:A:C8	2.43	0.54
33:BN:4:TYR:CD2	40:BU:100:VAL:HG11	2.43	0.54
36:BQ:84:GLY:O	36:BQ:85:LYS:HB2	2.08	0.54
50:B4:24:THR:OG1	50:B4:25:TYR:N	2.31	0.54
1:CA:841:U:OP1	1:CA:841:U:H6	1.91	0.54
1:CA:985:C:H2'	1:CA:986:A:C8	2.43	0.54
9:CI:9:ARG:H	9:CI:79:LEU:HD23	1.73	0.54
13:CM:25:ILE:HD11	13:CM:66:LEU:HD13	1.90	0.54
25:DA:529:A:H62	25:DA:2041:U:H3	1.56	0.54
25:DA:1025:G:C4	25:DA:1135:C:H1'	2.42	0.54
25:DA:2657:A:O3'	31:DH:160:LYS:NZ	2.41	0.54
1:AA:316:G:OP2	1:AA:351:G:O2'	2.24	0.53
2:AB:109:SER:HA	2:AB:112:VAL:HG13	1.90	0.53
6:AF:69:GLU:OE1	6:AF:69:GLU:N	2.39	0.53
25:BA:479:C:O2	25:BA:483:A:O2'	2.24	0.53
25:BA:2474:U:H1'	25:BA:2503:U:O4	2.08	0.53
25:BA:2822:G:N2	25:BA:2899:C:O2	2.41	0.53
1:CA:276:G:H2'	1:CA:277:C:H5'	1.90	0.53
1:CA:737:A:H2'	1:CA:738:C:C6	2.43	0.53
1:CA:1128:C:H1'	1:CA:1147:C:H42	1.73	0.53
10:CJ:77:PRO:O	10:CJ:81:THR:OG1	2.25	0.53
12:CL:36:VAL:HG22	12:CL:82:VAL:HG22	1.89	0.53
19:CS:20:LEU:HD23	19:CS:23:ASN:HD22	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:807:U:OP1	35:DP:36:LYS:NZ	2.40	0.53
25:DA:997:G:OP1	40:DU:92:ARG:HG2	2.08	0.53
25:DA:2689:U:P	25:DA:2719:G:H22	2.31	0.53
28:DE:55:ASN:O	28:DE:58:ARG:HG2	2.07	0.53
40:DU:89:GLU:HB2	41:DV:50:PRO:HB2	1.89	0.53
1:AA:21:G:H2'	1:AA:22:G:C8	2.43	0.53
1:AA:1118:C:H2'	1:AA:1119:C:C6	2.42	0.53
1:AA:1243:C:H2'	1:AA:1244:C:C6	2.43	0.53
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.43	0.53
4:AD:116:GLN:NE2	4:AD:157:LEU:HD21	2.23	0.53
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.90	0.53
25:BA:272:U:OP1	32:BI:50:ARG:NH2	2.42	0.53
25:BA:469:A:H1'	25:BA:1246:C:O4'	2.08	0.53
25:BA:1346:U:H4'	25:BA:1347:A:H5'	1.91	0.53
25:BA:1834:A:O2'	27:BD:259:THR:HG21	2.09	0.53
25:BA:1985:U:H4'	25:BA:1986:G:OP1	2.08	0.53
26:BB:29:A:O2'	26:BB:58:A:N1	2.38	0.53
50:B4:1:MET:HE2	50:B4:6:HIS:CD2	2.44	0.53
50:B4:63:TYR:N	50:B4:63:TYR:CD1	2.76	0.53
1:CA:192:U:H2'	1:CA:193:C:C6	2.43	0.53
1:CA:1118:C:H1'	1:CA:1179:A:C5	2.43	0.53
5:CE:52:PRO:HG2	5:CE:53:LEU:HD12	1.91	0.53
15:CO:56:LEU:O	15:CO:60:VAL:HG23	2.08	0.53
23:CX:19:G:H4'	23:CX:20:U:OP2	2.09	0.53
25:DA:1469:A:H2'	25:DA:1470:G:O4'	2.08	0.53
25:DA:1826:G:H4'	27:DD:242:ARG:NH1	2.23	0.53
28:DE:119:ARG:HD2	28:DE:120:TRP:CE2	2.43	0.53
31:DH:64:LEU:O	31:DH:68:THR:OG1	2.20	0.53
7:AG:111:ARG:NH1	7:AG:113:GLU:OE2	2.38	0.53
8:AH:34:GLU:OE2	8:AH:37:ARG:NH1	2.34	0.53
11:AK:98:LEU:O	11:AK:101:SER:OG	2.17	0.53
35:BP:121:LYS:HG2	35:BP:122:PRO:HD2	1.91	0.53
43:BX:11:PRO:HB3	43:BX:92:LEU:HD11	1.90	0.53
1:CA:557:G:C6	1:CA:558:G:C6	2.96	0.53
1:CA:598:U:H2'	1:CA:599:C:C6	2.43	0.53
2:CB:16:HIS:HB2	2:CB:204:ASN:CB	2.26	0.53
10:CJ:48:THR:O	14:CN:34:TYR:OH	2.27	0.53
18:CR:29:PHE:HE1	18:CR:31:LEU:HD13	1.72	0.53
31:DH:33:LEU:HD21	31:DH:136:ILE:HG13	1.90	0.53
31:DH:80:SER:OG	31:DH:81:GLU:N	2.40	0.53
1:AA:262:A:C6	1:AA:263:A:C6	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:545:C:H5'	4:AD:72:GLU:HG2	1.90	0.53
25:BA:2642:G:H2'	25:BA:2643:G:C8	2.43	0.53
26:BB:33:G:C2	26:BB:50:G:C2	2.97	0.53
1:CA:999:C:N3	1:CA:1042:G:C2	2.77	0.53
1:CA:1170:A:O2'	1:CA:1171:G:C8	2.61	0.53
1:CA:1305:G:H22	1:CA:1331:G:H1'	1.73	0.53
2:CB:59:GLU:HG2	2:CB:63:MET:HE3	1.90	0.53
10:CJ:6:ILE:O	10:CJ:71:LEU:HD12	2.08	0.53
13:CM:92:HIS:CE1	13:CM:98:VAL:HG11	2.44	0.53
23:CX:10:G:N2	23:CX:26:G:H1'	2.24	0.53
25:DA:300:A:H1'	25:DA:319:C:H1'	1.88	0.53
25:DA:2557:G:H2'	25:DA:2558:C:C6	2.43	0.53
25:DA:2831:G:OP1	28:DE:58:ARG:NH2	2.28	0.53
28:DE:163:GLU:HG2	28:DE:164:ARG:N	2.23	0.53
30:DG:41:GLN:HB3	30:DG:43:LEU:HD22	1.91	0.53
1:AA:352:C:OP2	61:AA:4067:HOH:O	2.19	0.53
1:AA:664:G:N2	1:AA:741:G:H1	2.06	0.53
1:AA:991:U:N3	1:AA:1212:U:H1'	2.24	0.53
3:AC:121:ALA:HB1	3:AC:189:ALA:HB2	1.91	0.53
10:AJ:5:ARG:HH21	10:AJ:73:ASP:CG	2.17	0.53
11:AK:48:ILE:O	11:AK:50:TYR:N	2.40	0.53
26:BB:78:A:C2	26:BB:100:A:C4	2.95	0.53
1:CA:837:G:H1	1:CA:849:C:N4	2.06	0.53
1:CA:1126:U:H4'	1:CA:1281:U:H1'	1.91	0.53
1:CA:1128:C:H1'	1:CA:1147:C:N3	2.22	0.53
25:DA:1816:G:O6	27:DD:35:LYS:NZ	2.23	0.53
25:DA:2849:U:O4	39:DT:23:ARG:NH2	2.32	0.53
45:DZ:154:ASP:OD1	45:DZ:154:ASP:N	2.42	0.53
47:D1:23:LYS:HB3	47:D1:29:GLY:HA3	1.91	0.53
1:AA:33:A:H2'	1:AA:34:C:C6	2.44	0.53
1:AA:102:G:H2'	1:AA:103:C:C6	2.43	0.53
2:AB:35:GLU:HB2	2:AB:40:HIS:CD2	2.44	0.53
4:AD:196:LEU:H	4:AD:196:LEU:HD12	1.73	0.53
18:AR:40:LEU:HD22	18:AR:70:ILE:HG12	1.90	0.53
25:BA:346:A:H5'	25:BA:364:A:H1'	1.89	0.53
25:BA:776:G:H2'	25:BA:1806:U:H1'	1.90	0.53
25:BA:1293:A:OP1	29:BF:95:ARG:NH2	2.39	0.53
25:BA:1405:A:N3	25:BA:1405:A:H5'	2.24	0.53
25:BA:1775:C:H5'	25:BA:1776:G:OP2	2.08	0.53
25:BA:2255:U:H2'	25:BA:2256:U:C6	2.44	0.53
27:BD:148:GLU:HB2	27:BD:151:LYS:HD2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:108:THR:O	32:BI:109:ILE:HD12	2.09	0.53
35:BP:124:LYS:HG3	35:BP:144:GLU:HG2	1.91	0.53
44:BY:38:ILE:HD11	44:BY:66:PRO:HG3	1.90	0.53
1:CA:1104:G:H4'	2:CB:111:ARG:HH11	1.73	0.53
1:CA:1326:C:H5''	21:CU:18:TYR:O	2.09	0.53
2:CB:127:ILE:C	2:CB:129:GLU:H	2.16	0.53
16:CP:5:ARG:NH1	16:CP:28:ARG:HA	2.24	0.53
17:CQ:66:SER:OG	17:CQ:67:LYS:N	2.42	0.53
17:CQ:66:SER:O	17:CQ:70:ARG:NH1	2.41	0.53
25:DA:997:G:O2'	25:DA:998:C:H5'	2.08	0.53
25:DA:1914:C:H2'	25:DA:1915:U:O4'	2.08	0.53
25:DA:1946:U:H2'	25:DA:1947:C:C6	2.43	0.53
25:DA:2299:G:H22	25:DA:2318:G:H8	1.56	0.53
25:DA:2510:C:H4'	61:DA:4416:HOH:O	2.07	0.53
25:DA:2600:A:C6	25:DA:2601:C:N4	2.77	0.53
25:DA:2887:U:H2'	25:DA:2888:C:H6	1.73	0.53
45:DZ:53:ILE:HG22	45:DZ:71:VAL:O	2.09	0.53
1:AA:258:G:H2'	1:AA:259:G:H8	1.73	0.53
1:AA:376:G:O3'	16:AP:5:ARG:NH2	2.41	0.53
1:AA:473:G:C2	1:AA:474:G:C5	2.97	0.53
1:AA:652:U:O4	1:AA:752:G:O2'	2.22	0.53
1:AA:1031:G:H2'	1:AA:1032:G:H8	1.73	0.53
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.44	0.53
2:AB:219:VAL:O	2:AB:222:ILE:HG13	2.09	0.53
8:AH:39:LEU:HB3	8:AH:45:ILE:HD11	1.90	0.53
11:AK:15:ALA:O	11:AK:79:SER:N	2.33	0.53
19:AS:22:LEU:HD13	19:AS:47:HIS:CD2	2.44	0.53
23:AX:23:C:H2'	23:AX:24:U:C6	2.44	0.53
25:BA:1015:C:HO2'	25:BA:1030:A:HO2'	1.56	0.53
25:BA:1660:A:OP1	25:BA:1663:C:N4	2.39	0.53
35:BP:65:ARG:HG3	54:B8:25:MET:HG3	1.91	0.53
37:BR:55:ALA:HB2	37:BR:79:LEU:HD13	1.90	0.53
1:CA:587:G:N2	1:CA:754:C:OP2	2.34	0.53
1:CA:1182:G:H4'	1:CA:1183:A:H3'	1.90	0.53
1:CA:1220:G:O3'	19:CS:36:ARG:HD3	2.09	0.53
10:CJ:78:ASN:O	10:CJ:80:LYS:N	2.41	0.53
12:CL:117:ARG:HB3	12:CL:122:THR:HB	1.89	0.53
25:DA:67:U:H2'	25:DA:68:G:O4'	2.09	0.53
25:DA:2286:A:H4'	25:DA:2287:A:O4'	2.08	0.53
28:DE:108:SER:HB3	28:DE:165:VAL:HG21	1.91	0.53
30:DG:96:ARG:O	30:DG:99:MET:HB3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D2:28:LYS:HD3	48:D2:60:LEU:HD11	1.91	0.53
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.44	0.53
1:AA:243:A:C2	1:AA:246:A:C8	2.97	0.53
1:AA:438:G:O2'	1:AA:494:U:O4	2.23	0.53
4:AD:119:GLN:HG2	4:AD:123:HIS:CD2	2.43	0.53
9:AI:8:GLY:HA3	9:AI:76:ALA:O	2.09	0.53
25:BA:139:A:C8	25:BA:1454:C:O2'	2.60	0.53
25:BA:326:C:H2'	25:BA:327:U:H6	1.74	0.53
25:BA:407:U:H2'	25:BA:408:G:H8	1.73	0.53
25:BA:1067:A:H2'	25:BA:1069:U:H5'	1.89	0.53
7:CG:51:GLN:O	7:CG:55:GLY:HA2	2.08	0.53
13:CM:89:GLY:O	13:CM:93:ARG:HG3	2.09	0.53
18:CR:61:LYS:O	18:CR:65:ILE:HG12	2.08	0.53
25:DA:96:G:H4'	48:D2:48:HIS:CD2	2.43	0.53
25:DA:796:C:H2'	25:DA:797:C:C6	2.44	0.53
25:DA:1319:G:C6	25:DA:1320:C:N4	2.77	0.53
25:DA:2189:U:H2'	25:DA:2190:G:H8	1.74	0.53
25:DA:2469:A:C2	25:DA:2482:G:C8	2.97	0.53
25:DA:2698:U:H2'	25:DA:2699:C:C6	2.44	0.53
1:AA:381:C:N4	1:AA:382:A:C2	2.77	0.53
1:AA:987:G:H1	1:AA:1218:C:H42	1.57	0.53
23:AX:23:C:H2'	23:AX:24:U:H6	1.74	0.53
23:AX:59:A:C2'	23:AX:60:U:H5'	2.39	0.53
25:BA:934:A:O2'	25:BA:935:C:OP2	2.27	0.53
25:BA:2255:U:OP1	61:BA:3915:HOH:O	2.19	0.53
32:BI:3:VAL:HG12	32:BI:38:LEU:HA	1.91	0.53
34:BO:7:TYR:HE1	34:BO:20:MET:HE3	1.74	0.53
36:BQ:85:LYS:HG2	46:B0:7:LEU:HB3	1.91	0.53
41:BV:95:LEU:HD13	41:BV:97:LYS:HD3	1.90	0.53
1:CA:73:G:C6	1:CA:97:G:C6	2.97	0.53
1:CA:1007:C:C4	1:CA:1022:G:N1	2.73	0.53
1:CA:1122:U:C4	1:CA:1151:A:N1	2.77	0.53
25:DA:2712:U:H1'	25:DA:2712(A):A:C8	2.44	0.53
30:DG:63:ILE:HA	30:DG:143:GLU:HG3	1.89	0.53
35:DP:38:GLN:O	35:DP:39:LYS:HB3	2.09	0.53
38:DS:11:LYS:O	38:DS:15:ARG:HG3	2.09	0.53
1:AA:1027:C:C2	1:AA:1034:G:N1	2.69	0.53
2:AB:24:TRP:CD1	2:AB:24:TRP:H	2.26	0.53
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.91	0.53
13:AM:37:THR:HG21	13:AM:56:LEU:HA	1.90	0.53
25:BA:851:A:OP1	61:BA:4484:HOH:O	2.19	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:27:ARG:HD2	47:B1:71:TYR:CE1	2.44	0.53
32:BI:29:TYR:O	32:BI:32:PRO:HD2	2.09	0.53
1:CA:954:G:H2'	1:CA:955:U:C6	2.44	0.53
1:CA:1095:U:H2'	1:CA:1096:C:O4'	2.09	0.53
1:CA:1360:A:OP2	14:CN:35:ARG:NH2	2.41	0.53
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.90	0.53
15:CO:33:THR:HG21	15:CO:85:LEU:HD22	1.91	0.53
25:DA:687:C:H42	25:DA:787:U:H4'	1.73	0.53
1:AA:975:A:H5'	1:AA:975:A:H8	1.74	0.52
1:AA:1070:U:OP1	5:AE:25:ARG:NH1	2.38	0.52
25:BA:1653:C:H4'	25:BA:1654:A:O5'	2.09	0.52
25:BA:1993:A:C4	27:BD:241:PRO:HD3	2.45	0.52
27:BD:108:PRO:HG3	27:BD:143:HIS:CE1	2.43	0.52
52:B6:6:ARG:NH1	52:B6:26:ASN:HB2	2.24	0.52
1:CA:473:G:H2'	1:CA:474:G:C8	2.45	0.52
1:CA:850:U:H2'	1:CA:851:G:H5''	1.90	0.52
1:CA:983:A:H2	1:CA:984:C:C6	2.26	0.52
1:CA:1237:C:HO2'	1:CA:1300:G:H1	1.55	0.52
5:CE:90:VAL:O	5:CE:91:LEU:HD13	2.08	0.52
25:DA:475:U:C4	25:DA:481:G:O6	2.62	0.52
25:DA:1344:G:O2'	25:DA:1385:G:H2'	2.09	0.52
25:DA:1858:G:O6	61:DA:4292:HOH:O	2.16	0.52
25:DA:2750:A:H8	25:DA:2750:A:OP1	1.92	0.52
50:D4:46:GLN:HB3	50:D4:48:ARG:HG2	1.90	0.52
1:AA:56:U:H2'	1:AA:57:G:H8	1.72	0.52
1:AA:154:C:N3	1:AA:168:G:N1	2.58	0.52
1:AA:923:A:H2'	1:AA:924:C:C6	2.44	0.52
1:AA:1272:G:H2'	1:AA:1273:G:O4'	2.10	0.52
25:BA:1954:A:H2'	25:BA:1955:G:O4'	2.09	0.52
35:BP:82:GLY:HA2	35:BP:113:LYS:O	2.09	0.52
54:B8:33:ASN:HA	54:B8:36:LYS:HD2	1.90	0.52
1:CA:1116:C:H2'	1:CA:1117:G:H5''	1.90	0.52
2:CB:16:HIS:CG	2:CB:17:PHE:H	2.28	0.52
2:CB:178:ARG:CZ	8:CH:74:PRO:HG3	2.40	0.52
25:DA:10:G:H2'	25:DA:11:G:C8	2.44	0.52
25:DA:531:C:H5'	61:DA:4094:HOH:O	2.09	0.52
25:DA:1434:A:H61	25:DA:1558:A:N6	2.07	0.52
25:DA:2313:C:O2	25:DA:2313:C:H2'	2.09	0.52
25:DA:2646:C:H2'	25:DA:2647:U:O4'	2.09	0.52
31:DH:105:LEU:HD11	31:DH:148:ILE:HG23	1.91	0.52
43:DX:84:ALA:HB3	43:DX:87:GLN:NE2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.10	0.52
1:AA:1005:A:H1'	1:AA:1036:G:H22	1.75	0.52
1:AA:1187:G:H4'	9:AI:111:ARG:HH11	1.73	0.52
1:AA:1256:A:H5''	1:AA:1258:G:H1'	1.92	0.52
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.72	0.52
24:AW:8:2R3:H65	24:AW:10:2QY:CE1	2.38	0.52
25:BA:1913:G:H2'	25:BA:1914:C:C6	2.45	0.52
30:BG:16:ARG:HE	30:BG:31:VAL:HG11	1.73	0.52
49:B3:59:VAL:O	49:B3:60:GLU:HG2	2.09	0.52
1:CA:583:A:H2'	1:CA:584:G:O4'	2.09	0.52
1:CA:1179:A:N1	1:CA:1180:A:C8	2.78	0.52
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.44	0.52
16:CP:53:VAL:HG13	16:CP:79:VAL:HG22	1.91	0.52
25:DA:1219:G:H1	25:DA:1230:C:H42	1.55	0.52
25:DA:2454:G:H1'	61:DA:3886:HOH:O	2.08	0.52
32:DI:126:TYR:HB2	32:DI:142:VAL:HG23	1.92	0.52
36:DQ:56:ARG:CG	36:DQ:56:ARG:HH11	2.22	0.52
40:DU:78:THR:O	40:DU:117:GLN:NE2	2.42	0.52
1:AA:364:A:H2'	1:AA:365:U:C6	2.44	0.52
1:AA:558:G:H5''	1:AA:559:A:OP2	2.10	0.52
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.74	0.52
2:AB:201:ILE:HG21	2:AB:214:ILE:HG21	1.91	0.52
8:AH:96:GLY:H	8:AH:99:GLU:CD	2.18	0.52
25:BA:662:A:H8	35:BP:117:GLU:HG3	1.74	0.52
25:BA:1221:G:N2	25:BA:1223:C:OP2	2.43	0.52
26:BB:86:G:H1	26:BB:91:C:N4	2.08	0.52
34:BO:8:LEU:HB2	34:BO:19:ILE:HG13	1.91	0.52
1:CA:838:G:H1	1:CA:848:C:H42	1.56	0.52
1:CA:1131:G:OP1	9:CI:20:ARG:NH2	2.42	0.52
4:CD:175:SER:HB3	4:CD:186:LEU:HD11	1.91	0.52
25:DA:184:C:H2'	25:DA:185:U:H6	1.75	0.52
25:DA:446:G:OP1	40:DU:3:ARG:NH1	2.39	0.52
25:DA:991:C:OP1	61:DA:4100:HOH:O	2.19	0.52
25:DA:2099:U:H5'	25:DA:2100:G:OP2	2.09	0.52
25:DA:2562:U:H1'	34:DO:23:ARG:HD3	1.92	0.52
25:DA:2704:C:H2'	25:DA:2705:A:O4'	2.09	0.52
27:DD:133:LEU:HA	27:DD:136:ILE:HD12	1.90	0.52
34:DO:71:ARG:NE	34:DO:105:GLU:OE2	2.42	0.52
38:DS:26:LEU:HD22	38:DS:87:PHE:CE1	2.44	0.52
40:DU:79:PHE:CZ	40:DU:83:LEU:HD21	2.44	0.52
47:D1:73:LEU:HB3	47:D1:94:LEU:HD22	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:100:C:H2'	1:AA:101:A:C8	2.44	0.52
1:AA:503:C:H2'	1:AA:504:C:H6	1.74	0.52
1:AA:985:C:H2'	1:AA:986:A:C8	2.44	0.52
1:AA:1210:C:H2'	1:AA:1211:U:H5'	1.92	0.52
17:AQ:56:VAL:HB	17:AQ:78:GLU:HB3	1.91	0.52
25:BA:2819:A:C6	25:BA:2820:A:C6	2.98	0.52
1:CA:1004:A:N7	1:CA:1037:C:H2'	2.25	0.52
1:CA:1216:G:H5''	14:CN:5:ALA:HB2	1.91	0.52
1:CA:1310:G:H5'	13:CM:77:ASN:ND2	2.25	0.52
4:CD:99:SER:O	4:CD:140:VAL:HG23	2.09	0.52
18:CR:33:ASP:OD2	18:CR:36:ASN:HB2	2.08	0.52
25:DA:1589:C:H2'	25:DA:1590:U:C6	2.44	0.52
25:DA:2751:G:C8	31:DH:2:SER:N	2.77	0.52
30:DG:122:PRO:HG3	30:DG:180:PHE:HB3	1.92	0.52
32:DI:93:THR:O	32:DI:97:ILE:HG13	2.09	0.52
1:AA:134:A:H61	16:AP:25:ARG:NH1	2.07	0.52
1:AA:148:G:O2'	1:AA:149:A:H8	1.91	0.52
1:AA:195:A:N3	1:AA:222:U:O2'	2.30	0.52
1:AA:520:A:O2'	12:AL:73:GLU:OE1	2.14	0.52
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.44	0.52
7:AG:113:GLU:HG2	7:AG:119:ARG:HG2	1.90	0.52
28:BE:47:VAL:HG21	28:BE:86:PRO:CD	2.38	0.52
1:CA:358:U:H2'	1:CA:359:U:H6	1.75	0.52
1:CA:1399:C:C2	1:CA:1502:A:N6	2.78	0.52
25:DA:271(H):G:H2'	25:DA:271(I):G:C8	2.45	0.52
25:DA:468:G:H5''	29:DF:60:SER:HB2	1.90	0.52
25:DA:524:U:H2'	25:DA:525:U:H6	1.73	0.52
25:DA:539:G:H2'	25:DA:540:C:H6	1.73	0.52
25:DA:947:G:N2	25:DA:971:C:C2	2.78	0.52
25:DA:1300:U:H4'	25:DA:1301:A:H5''	1.91	0.52
25:DA:1309:G:O2'	25:DA:1611:C:O2'	2.27	0.52
25:DA:1857:G:O2'	25:DA:1885:A:N6	2.42	0.52
31:DH:56:SER:OG	31:DH:57:ASP:N	2.40	0.52
37:DR:38:VAL:HG22	37:DR:112:ALA:HB2	1.92	0.52
38:DS:3:ARG:O	38:DS:4:LEU:HD23	2.10	0.52
41:DV:62:LEU:HD11	41:DV:95:LEU:HB2	1.91	0.52
41:DV:65:GLY:HA3	41:DV:91:TYR:CZ	2.44	0.52
25:BA:173:C:H2'	25:BA:174:U:C6	2.44	0.52
25:BA:1941:A:H5''	25:BA:1942:C:OP2	2.10	0.52
25:BA:2897:U:H2'	25:BA:2898:C:H6	1.72	0.52
26:BB:76:G:N2	26:BB:101:G:O6	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1041:A:C6	1:CA:1042:G:C6	2.98	0.52
25:DA:592:G:O2'	54:D8:4:MET:HG3	2.09	0.52
25:DA:2262:U:H4'	25:DA:2328:A:C2	2.45	0.52
30:DG:82:LEU:HA	30:DG:86:MET:SD	2.49	0.52
33:DN:38:HIS:ND1	33:DN:39:ARG:HG3	2.25	0.52
36:DQ:59:ARG:C	36:DQ:61:GLY:H	2.13	0.52
45:DZ:6:LYS:HE2	45:DZ:43:GLU:OE1	2.09	0.52
45:DZ:152:ALA:O	45:DZ:155:LEU:HD22	2.10	0.52
45:DZ:157:LEU:HB3	45:DZ:161:VAL:HG13	1.92	0.52
1:AA:826:C:H2'	1:AA:827:U:C6	2.44	0.52
4:AD:85:LYS:HG3	4:AD:86:LYS:N	2.24	0.52
6:AF:67:MET:SD	6:AF:75:LEU:HD13	2.50	0.52
15:AO:33:THR:HG21	15:AO:85:LEU:HD22	1.91	0.52
15:AO:74:ASP:OD2	15:AO:77:ARG:HG3	2.09	0.52
25:BA:1717:C:O2	28:BE:129:HIS:NE2	2.34	0.52
25:BA:1814:A:OP1	61:BA:4519:HOH:O	2.18	0.52
25:BA:1993:A:OP2	27:BD:242:ARG:NH2	2.42	0.52
34:BO:16:ALA:HB2	34:BO:52:VAL:HG21	1.92	0.52
54:B8:62:LEU:HB3	54:B8:65:GLU:HG2	1.91	0.52
1:CA:192:U:C2'	1:CA:193:C:H5'	2.40	0.52
1:CA:792:A:H4'	1:CA:793:U:O5'	2.10	0.52
1:CA:1207:G:H2'	1:CA:1208:C:H6	1.75	0.52
2:CB:76:GLN:HB2	2:CB:208:ILE:HG12	1.91	0.52
25:DA:348:G:H2'	25:DA:349:G:C8	2.45	0.52
26:DB:19:G:H2'	26:DB:20:C:O4'	2.09	0.52
26:DB:46:A:H2'	26:DB:47:C:C6	2.44	0.52
30:DG:16:ARG:NE	30:DG:31:VAL:HG11	2.25	0.52
45:DZ:8:TYR:HB2	45:DZ:38:TYR:CE2	2.45	0.52
1:AA:407:G:H2'	1:AA:408:A:H8	1.74	0.52
1:AA:447:G:H2'	1:AA:485:G:N2	2.25	0.52
1:AA:692:U:O2'	1:AA:694:A:N7	2.28	0.52
9:AI:7:THR:O	9:AI:83:ARG:NH1	2.41	0.52
10:AJ:61:GLU:OE2	14:AN:45:ARG:NE	2.35	0.52
23:AX:10:G:N2	23:AX:26:G:H1'	2.25	0.52
25:BA:344:A:OP1	29:BF:135:LYS:NZ	2.41	0.52
29:BF:157:VAL:HB	29:BF:194:MET:HG2	1.91	0.52
32:BI:93:THR:HG22	32:BI:119:PRO:HB3	1.92	0.52
36:BQ:35:VAL:HG13	36:BQ:130:LYS:HB3	1.92	0.52
50:B4:63:TYR:N	50:B4:64:GLY:HA2	2.25	0.52
1:CA:1063:C:H5''	1:CA:1064:G:H2'	1.92	0.52
1:CA:1269:A:H2	1:CA:1312:G:N3	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1323:G:H4'	1:CA:1363:C:C2	2.45	0.52
1:CA:1492:A:H2'	1:CA:1493:A:H1'	1.92	0.52
2:CB:56:ARG:HB3	2:CB:56:ARG:NH1	2.25	0.52
9:CI:78:LYS:HD3	9:CI:101:PHE:HD2	1.75	0.52
19:CS:28:LYS:HB2	19:CS:29:ARG:CB	2.40	0.52
25:DA:72:U:OP2	48:D2:29:LYS:NZ	2.33	0.52
25:DA:1268:A:H2'	25:DA:1269:A:O4'	2.10	0.52
25:DA:2086:U:H2'	25:DA:2087:G:C8	2.45	0.52
27:DD:69:ARG:NH2	27:DD:128:GLY:O	2.39	0.52
37:DR:56:LYS:NZ	37:DR:90:ARG:O	2.43	0.52
43:DX:12:VAL:HG22	43:DX:29:TRP:CE2	2.45	0.52
2:AB:55:PHE:HA	2:AB:58:ILE:HD12	1.92	0.52
2:AB:60:ASP:O	2:AB:64:ARG:HB2	2.10	0.52
25:BA:864:C:O2'	25:BA:886:U:H5''	2.10	0.52
25:BA:2108:U:H2'	25:BA:2109:G:C8	2.45	0.52
25:BA:2784:C:H2'	25:BA:2785:C:C6	2.44	0.52
31:BH:24:VAL:HG13	31:BH:37:VAL:HG21	1.91	0.52
1:CA:1309:G:H5'	13:CM:78:ILE:HD11	1.92	0.52
9:CI:21:PRO:HA	9:CI:59:PHE:HA	1.92	0.52
20:CT:13:LEU:O	20:CT:17:ARG:HG3	2.10	0.52
25:DA:84:A:N1	25:DA:98:G:O2'	2.41	0.52
25:DA:154:G:O6	25:DA:172:C:N4	2.43	0.52
25:DA:601:C:O2	25:DA:605:C:H4'	2.10	0.52
25:DA:774:A:N3	25:DA:774:A:H2'	2.25	0.52
25:DA:864:G:C6	25:DA:865:C:N4	2.78	0.52
26:DB:66:A:H61	26:DB:109:C:H5'	1.75	0.52
28:DE:120:TRP:CE3	28:DE:155:LYS:HD3	2.45	0.52
29:DF:65:TRP:CZ2	29:DF:75:HIS:HD2	2.28	0.52
31:DH:106:THR:HG23	31:DH:112:PRO:HB3	1.92	0.52
40:DU:76:TYR:OH	40:DU:92:ARG:NH1	2.42	0.52
40:DU:78:THR:HG22	40:DU:117:GLN:NE2	2.24	0.52
1:AA:184:G:H2'	1:AA:185:A:C8	2.42	0.51
1:AA:396:G:O2'	1:AA:398:C:OP1	2.15	0.51
1:AA:503:C:H2'	1:AA:504:C:C6	2.46	0.51
1:AA:657:G:C2	1:AA:658:G:C8	2.98	0.51
1:AA:1223:C:H5''	1:AA:1224:G:C5'	2.40	0.51
25:BA:239:G:OP2	54:B8:13:ARG:NH2	2.43	0.51
26:BB:91:C:OP2	36:BQ:16:ARG:NH1	2.42	0.51
27:BD:234:GLY:O	61:BD:402:HOH:O	2.19	0.51
28:BE:11:MET:HG2	28:BE:24:THR:HB	1.92	0.51
1:CA:15:G:H2'	1:CA:16:A:H8	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:652:U:O2'	1:CA:653:A:OP2	2.24	0.51
1:CA:660:G:H1	1:CA:745:C:H42	1.58	0.51
1:CA:742:G:OP2	15:CO:35:ARG:NH2	2.40	0.51
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.44	0.51
1:CA:1517:G:H1'	25:DA:1919:A:O3'	2.10	0.51
12:CL:97:ARG:HB2	12:CL:98:TYR:CE2	2.45	0.51
25:DA:528:A:C2	25:DA:2042:A:H2'	2.45	0.51
25:DA:1529:G:H2'	25:DA:1530:C:H6	1.75	0.51
26:DB:43:C:H5''	50:D4:1:MET:HG2	1.91	0.51
29:DF:29:ASN:HB3	29:DF:112:MET:HE1	1.92	0.51
32:DI:62:LYS:HG2	32:DI:133:HIS:NE2	2.25	0.51
39:DT:19:LEU:HD22	39:DT:86:ILE:HG13	1.92	0.51
39:DT:23:ARG:HG3	39:DT:120:ARG:NH1	2.24	0.51
1:AA:192:U:O2'	1:AA:193:C:H6	1.92	0.51
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.92	0.51
1:AA:454:C:OP1	16:AP:75:ARG:NH2	2.42	0.51
1:AA:502:G:C6	1:AA:503:C:C4	2.98	0.51
1:AA:785:G:C2'	1:AA:786:G:H5'	2.41	0.51
25:BA:611:U:H2'	25:BA:612:C:C6	2.46	0.51
25:BA:1378:G:OP1	61:BA:4471:HOH:O	2.19	0.51
25:BA:2779:G:N3	25:BA:2779:G:H2'	2.24	0.51
32:BI:72:LEU:HA	32:BI:75:LEU:HD11	1.91	0.51
1:CA:1206:G:H4'	3:CC:192:THR:O	2.09	0.51
1:CA:1227:A:H8	1:CA:1227:A:H3'	1.75	0.51
1:CA:1311:G:H1	1:CA:1326:C:H42	1.57	0.51
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.10	0.51
25:DA:652(B):A:C2	25:DA:655:A:H1'	2.44	0.51
26:DB:6:C:H2'	26:DB:7:G:H5''	1.92	0.51
28:DE:141:ILE:O	28:DE:154:LYS:HE2	2.10	0.51
1:AA:45:U:H2'	1:AA:46:G:C8	2.45	0.51
1:AA:202:U:H3'	1:AA:203:U:H6	1.75	0.51
1:AA:626:U:C2	1:AA:627:G:C8	2.98	0.51
1:AA:1399:C:C2	1:AA:1502:A:N6	2.78	0.51
2:AB:220:ASP:O	2:AB:223:ILE:HG12	2.10	0.51
9:AI:64:THR:HG23	9:AI:66:ARG:HD2	1.92	0.51
25:BA:895:G:H2'	25:BA:896:A:C8	2.46	0.51
25:BA:1218:G:O2'	25:BA:1219:A:O5'	2.28	0.51
25:BA:2372:A:H8	25:BA:2372:A:O5'	1.92	0.51
25:BA:2889:C:OP2	61:BA:4427:HOH:O	2.19	0.51
36:BQ:51:ARG:HD3	36:BQ:66:ILE:HD11	1.93	0.51
45:BZ:110:GLY:O	45:BZ:113:ALA:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B1:3:LYS:HB2	47:B1:61:ARG:NH1	2.25	0.51
47:B1:91:LYS:O	47:B1:95:LEU:HD22	2.11	0.51
1:CA:344:A:H4'	1:CA:345:C:OP2	2.10	0.51
1:CA:1121:U:C4	1:CA:1122:U:C5	2.98	0.51
2:CB:167:PRO:HG3	2:CB:188:ALA:HB2	1.92	0.51
3:CC:180:ALA:HB1	3:CC:203:PHE:CE1	2.46	0.51
10:CJ:22:LYS:HA	10:CJ:25:GLU:HB2	1.93	0.51
25:DA:852:G:N2	25:DA:926:A:H1'	2.26	0.51
25:DA:1563:G:H2'	25:DA:1564:C:C6	2.45	0.51
25:DA:2327:A:H2'	25:DA:2328:A:C8	2.45	0.51
25:DA:2474:C:H5''	25:DA:2475:C:OP2	2.10	0.51
38:DS:88:ASP:OD1	38:DS:90:GLY:N	2.43	0.51
47:D1:51:VAL:HG11	47:D1:74:VAL:HG21	1.92	0.51
1:AA:413:G:N2	1:AA:428:G:H1'	2.24	0.51
1:AA:543:C:C2'	1:AA:544:G:H5'	2.41	0.51
1:AA:674:G:H2'	1:AA:675:A:H8	1.74	0.51
8:AH:25:ASP:N	8:AH:25:ASP:OD1	2.43	0.51
8:AH:41:ARG:NH2	8:AH:123:GLU:OE2	2.35	0.51
25:BA:1405:A:N6	25:BA:1418:U:H3	2.09	0.51
28:BE:2:LYS:HG3	28:BE:200:GLU:HB2	1.93	0.51
44:BY:99:CYS:HB2	44:BY:106:LEU:HD21	1.92	0.51
48:B2:2:LYS:O	48:B2:6:VAL:HG23	2.11	0.51
1:CA:266:G:H5'	1:CA:266:G:C8	2.46	0.51
1:CA:1004:A:H2'	1:CA:1005:A:H5'	1.92	0.51
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.44	0.51
8:CH:29:SER:HB3	8:CH:32:LYS:HG3	1.91	0.51
8:CH:86:ILE:HG13	8:CH:133:LEU:HD22	1.92	0.51
25:DA:184:C:H2'	25:DA:185:U:C6	2.45	0.51
1:AA:102:G:H2'	1:AA:103:C:H6	1.76	0.51
1:AA:671:G:H2'	1:AA:672:U:O4'	2.11	0.51
1:AA:865:A:C2	1:AA:918:A:H4'	2.46	0.51
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.45	0.51
2:AB:208:ILE:HA	2:AB:211:ILE:HD12	1.91	0.51
4:AD:158:ILE:O	4:AD:162:LEU:N	2.42	0.51
7:AG:146:GLU:O	7:AG:149:ARG:HB2	2.11	0.51
19:AS:65:ASN:HA	50:B4:58:ARG:HG3	1.93	0.51
25:BA:549:U:H2'	25:BA:550:U:C6	2.46	0.51
25:BA:559:U:H2'	25:BA:560:C:C6	2.45	0.51
48:B2:44:LEU:HD23	48:B2:47:ASN:HA	1.93	0.51
50:B4:61:ARG:HG3	50:B4:62:ARG:N	2.26	0.51
1:CA:392:G:H2'	1:CA:393:A:H8	1.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:424:G:H2'	1:CA:425:G:H8	1.75	0.51
1:CA:1001(A):G:H2'	1:CA:1002:G:O4'	2.11	0.51
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.45	0.51
5:CE:40:ARG:NH2	5:CE:68:GLU:HA	2.25	0.51
19:CS:64:GLU:O	19:CS:67:VAL:HG23	2.10	0.51
25:DA:588:U:H2'	25:DA:589:C:C6	2.45	0.51
25:DA:637:A:H8	35:DP:117:GLU:HG3	1.74	0.51
25:DA:1297:C:H2'	25:DA:1298:C:H6	1.76	0.51
25:DA:1766:U:H2'	25:DA:1767:C:C6	2.44	0.51
49:D3:16:PRO:HB2	49:D3:18:ASP:OD1	2.11	0.51
1:AA:714:G:H2'	1:AA:715:A:C8	2.46	0.51
1:AA:747:C:OP2	1:AA:748:C:N4	2.44	0.51
1:AA:1144:G:N2	1:AA:1146:A:H62	2.09	0.51
1:AA:1187:G:H2'	1:AA:1188:A:C8	2.45	0.51
1:AA:1289:A:N1	1:AA:1371:G:O2'	2.42	0.51
2:AB:19:HIS:CD2	2:AB:206:ASP:HB2	2.46	0.51
25:BA:155:C:OP2	25:BA:155:C:H6	1.94	0.51
25:BA:296:U:H2'	25:BA:297:C:H6	1.76	0.51
25:BA:581:G:OP1	33:BN:111:PRO:HD2	2.11	0.51
25:BA:1647:G:N7	61:BA:4116:HOH:O	2.35	0.51
30:BG:131:TYR:HB3	30:BG:159:VAL:HG13	1.91	0.51
1:CA:144:G:H1	1:CA:178:C:H42	1.59	0.51
1:CA:229:U:O2'	16:CP:23:ASP:OD2	2.26	0.51
1:CA:920:U:H2'	1:CA:921:U:C6	2.45	0.51
2:CB:138:LEU:HA	2:CB:141:GLU:HB3	1.92	0.51
5:CE:36:ASP:C	5:CE:38:GLN:H	2.18	0.51
13:CM:14:ARG:CZ	13:CM:42:ALA:HA	2.40	0.51
25:DA:271(A):A:N1	25:DA:272(D):G:O2'	2.40	0.51
25:DA:848:G:N9	25:DA:933:A:H8	2.08	0.51
25:DA:1709:U:H2'	25:DA:1710:C:C6	2.45	0.51
25:DA:1810:A:H2'	25:DA:1811:G:O4'	2.11	0.51
25:DA:2602:A:OP2	25:DA:2603:G:H5''	2.11	0.51
36:DQ:75:THR:HA	36:DQ:89:ASN:O	2.11	0.51
44:DY:44:ILE:HA	44:DY:63:LYS:O	2.11	0.51
1:AA:346:G:C6	1:AA:348:G:N2	2.78	0.51
6:AF:89:MET:HE1	18:AR:72:ARG:HB3	1.93	0.51
7:AG:111:ARG:HB3	7:AG:113:GLU:OE2	2.11	0.51
8:AH:11:THR:HG22	8:AH:15:ASN:ND2	2.25	0.51
25:BA:2050:U:H2'	25:BA:2051:G:O4'	2.11	0.51
34:BO:2:ILE:HD12	34:BO:6:THR:HG21	1.92	0.51
35:BP:121:LYS:O	35:BP:123:LEU:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BR:26:LYS:HE2	37:BR:70:LEU:O	2.10	0.51
38:BS:11:LYS:HD2	38:BS:15:ARG:NH1	2.25	0.51
50:B4:62:ARG:HB2	50:B4:63:TYR:CD1	2.44	0.51
1:CA:596:C:H2'	1:CA:597:G:H8	1.74	0.51
1:CA:620:C:C2	4:CD:135:LEU:HG	2.46	0.51
1:CA:1316:G:O2'	1:CA:1318:A:N7	2.38	0.51
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.46	0.51
2:CB:87:ARG:NH2	2:CB:220:ASP:OD1	2.35	0.51
3:CC:42:LEU:O	3:CC:46:GLU:HG2	2.11	0.51
3:CC:100:ALA:O	3:CC:102:ASN:ND2	2.44	0.51
25:DA:195:A:OP1	35:DP:46:LYS:NZ	2.37	0.51
25:DA:411:G:C5	35:DP:72:PRO:HB3	2.46	0.51
25:DA:2408:U:O5'	25:DA:2408:U:H6	1.94	0.51
25:DA:2849:U:H4'	25:DA:2868:A:C2	2.46	0.51
1:AA:738:C:H2'	1:AA:739:C:C6	2.46	0.51
1:AA:991:U:C4	1:AA:1212:U:H1'	2.46	0.51
1:AA:1442:G:H2'	1:AA:1442(A):G:H5'	1.93	0.51
4:AD:3:ARG:HE	4:AD:118:ARG:CD	2.24	0.51
4:AD:18:LYS:HG2	57:AD:501:SF4:S1	2.51	0.51
12:AL:59:ARG:HD3	24:AW:10:2QY:C	2.41	0.51
14:AN:3:ARG:HB3	14:AN:3:ARG:HH21	1.75	0.51
25:BA:8:A:H2'	25:BA:9:U:H6	1.76	0.51
25:BA:1284:G:OP2	61:BA:4767:HOH:O	2.18	0.51
25:BA:1373:C:O2'	61:BA:3810:HOH:O	2.17	0.51
27:BD:132:PRO:HD3	27:BD:190:TYR:CZ	2.46	0.51
45:BZ:150:LEU:HB3	45:BZ:171:ILE:HD11	1.92	0.51
1:CA:568:G:N7	12:CL:5:PRO:HD3	2.26	0.51
1:CA:980:C:H1'	14:CN:19:ARG:HA	1.92	0.51
1:CA:1002:G:N2	1:CA:1039:C:C4	2.79	0.51
1:CA:1009:G:H2'	1:CA:1010:G:O4'	2.10	0.51
1:CA:1162:C:N3	1:CA:1174:G:N2	2.45	0.51
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.46	0.51
2:CB:84:GLU:OE1	2:CB:216:SER:HA	2.11	0.51
3:CC:164:ARG:NH2	3:CC:166:GLU:OE1	2.44	0.51
7:CG:107:ALA:O	7:CG:111:ARG:HG3	2.10	0.51
25:DA:903:C:H2'	25:DA:904:C:C6	2.46	0.51
25:DA:924:C:H2'	25:DA:925:C:C6	2.46	0.51
25:DA:1164:G:H2'	25:DA:1165:U:C6	2.46	0.51
25:DA:1529:G:H2'	25:DA:1530:C:C6	2.45	0.51
25:DA:2293:C:H5'	38:DS:89:ARG:NH2	2.25	0.51
25:DA:2320:A:H2'	25:DA:2320:A:N3	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:1:MET:HE2	35:DP:5:ASP:HB2	1.92	0.51
1:AA:542:G:P	4:AD:10:ARG:HH22	2.34	0.51
1:AA:1328:C:OP1	21:AU:21:TYR:OH	2.25	0.51
2:AB:185:ILE:CG2	2:AB:199:TYR:HB2	2.41	0.51
12:AL:34:ARG:HG2	12:AL:35:GLY:N	2.26	0.51
13:AM:49:THR:HB	13:AM:52:GLU:H	1.75	0.51
20:AT:87:LYS:O	20:AT:91:LEU:HG	2.10	0.51
26:BB:86:G:H1	26:BB:91:C:H42	1.59	0.51
29:BF:172:TRP:H	29:BF:172:TRP:CD1	2.29	0.51
44:BY:92:ASN:HB3	44:BY:94:LYS:N	2.22	0.51
47:B1:50:ARG:HG2	47:B1:59:THR:HB	1.93	0.51
1:CA:599:C:C2'	1:CA:600:C:H5''	2.37	0.51
1:CA:623:C:H2'	1:CA:624:C:H6	1.75	0.51
1:CA:1119:C:H2'	1:CA:1120:G:C8	2.46	0.51
2:CB:91:PRO:HG3	2:CB:154:LEU:HD12	1.92	0.51
17:CQ:45:HIS:HA	17:CQ:69:LYS:HE3	1.92	0.51
25:DA:30:G:OP2	40:DU:5:LYS:HE2	2.10	0.51
25:DA:817:C:H2'	25:DA:818:G:O4'	2.11	0.51
25:DA:873:G:N2	25:DA:905:U:C2	2.78	0.51
25:DA:909:A:H2'	25:DA:912:C:H5	1.76	0.51
25:DA:1161:C:H2'	25:DA:1162:G:H8	1.76	0.51
25:DA:1639:U:H2'	25:DA:1640:C:H5''	1.92	0.51
25:DA:2850:A:OP2	25:DA:2866:U:H5	1.94	0.51
1:AA:394:G:H2'	1:AA:395:C:H6	1.76	0.51
1:AA:474:G:H2'	1:AA:475:G:C8	2.40	0.51
1:AA:693:G:H2'	1:AA:694:A:C8	2.46	0.51
3:AC:11:ARG:NH2	3:AC:177:THR:O	2.39	0.51
25:BA:1008:U:OP2	61:BA:4616:HOH:O	2.19	0.51
25:BA:1549:U:H2'	25:BA:1550:C:C6	2.46	0.51
25:BA:1921:G:H2'	25:BA:1921:G:N3	2.26	0.51
25:BA:2797:C:O2'	28:BE:42:ASP:OD1	2.22	0.51
27:BD:123:ALA:HB3	27:BD:131:LEU:HG	1.93	0.51
30:BG:137:GLU:OE1	30:BG:139:LEU:HD11	2.11	0.51
49:B3:44:ARG:O	49:B3:48:GLU:HG3	2.11	0.51
1:CA:396:G:O2'	1:CA:398:C:OP1	2.22	0.51
1:CA:1005:A:C2	1:CA:1026:G:C8	2.99	0.51
1:CA:1120:G:C6	1:CA:1121:U:C4	2.98	0.51
1:CA:1122:U:H3	1:CA:1151:A:H2	1.59	0.51
2:CB:60:ASP:O	2:CB:64:ARG:HG2	2.10	0.51
2:CB:162:ILE:O	2:CB:185:ILE:HG12	2.11	0.51
3:CC:35:GLU:OE2	3:CC:59:ARG:NH2	2.35	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:76:ARG:HD3	7:CG:89:MET:HG3	1.93	0.51
16:CP:51:VAL:HG12	16:CP:53:VAL:N	2.26	0.51
25:DA:784:A:C5	27:DD:229:VAL:HG21	2.46	0.51
25:DA:1022:G:N7	33:DN:66:LYS:HE2	2.26	0.51
25:DA:1833:U:H2'	25:DA:1834:U:H6	1.75	0.51
26:DB:21:G:H2'	26:DB:22:U:O4'	2.10	0.51
28:DE:92:THR:O	28:DE:95:ILE:HG23	2.11	0.51
33:DN:4:TYR:CD2	40:DU:100:VAL:HG11	2.46	0.51
45:DZ:52:SER:OG	45:DZ:53:ILE:N	2.40	0.51
1:AA:352:C:O2'	1:AA:354:G:OP1	2.28	0.50
1:AA:1002:G:H3'	1:AA:1003:G:C8	2.45	0.50
1:AA:1025:U:H3	1:AA:1036:G:H1	1.60	0.50
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.93	0.50
7:AG:26:PHE:O	7:AG:30:ILE:HG13	2.11	0.50
9:AI:23:ASN:ND2	9:AI:25:LYS:HG2	2.26	0.50
18:AR:59:SER:H	18:AR:62:GLU:HG3	1.76	0.50
23:AX:6:G:H1	23:AX:67:C:N4	2.09	0.50
25:BA:208:G:H2'	25:BA:209:G:O4'	2.11	0.50
25:BA:930:G:O6	25:BA:939:C:C2	2.64	0.50
25:BA:1846:A:OP2	27:BD:54:ARG:NH2	2.45	0.50
25:BA:2847:G:H21	37:BR:45:ARG:HH12	1.59	0.50
28:BE:116:VAL:HG13	28:BE:122:PHE:HB2	1.93	0.50
31:BH:94:TYR:CE2	31:BH:160:LYS:HG2	2.46	0.50
50:B4:63:TYR:HD1	50:B4:63:TYR:H	1.57	0.50
1:CA:127:G:OP1	1:CA:635:G:H1'	2.11	0.50
1:CA:545:C:OP1	4:CD:61:LYS:NZ	2.42	0.50
1:CA:758:G:N7	61:CA:4152:HOH:O	2.34	0.50
1:CA:922:G:H2'	1:CA:923:A:C8	2.45	0.50
1:CA:1060:C:H4'	10:CJ:51:ARG:HB3	1.93	0.50
2:CB:80:ILE:HD13	2:CB:80:ILE:O	2.11	0.50
3:CC:155:GLY:HA3	3:CC:196:LEU:HD13	1.92	0.50
6:CF:69:GLU:O	6:CF:72:VAL:HG12	2.11	0.50
12:CL:34:ARG:HG3	12:CL:105:TYR:CE2	2.45	0.50
25:DA:118:A:N3	25:DA:178:G:H1'	2.26	0.50
25:DA:1819:A:H5''	27:DD:161:THR:HG21	1.93	0.50
25:DA:2847:U:OP1	39:DT:98:LYS:NZ	2.42	0.50
29:DF:154:VAL:HG22	29:DF:191:ARG:HB2	1.94	0.50
31:DH:117:PRO:HG3	31:DH:123:PHE:CD2	2.46	0.50
25:BA:310:C:H2'	25:BA:311:C:C6	2.46	0.50
25:BA:346:A:OP1	29:BF:168:ARG:HD2	2.11	0.50
25:BA:831:A:C5	27:BD:229:VAL:HG21	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BB:42:C:C6	30:BG:69:ALA:HB2	2.46	0.50
28:BE:34:VAL:HG21	28:BE:78:LEU:HD11	1.93	0.50
29:BF:164:ARG:O	29:BF:168:ARG:HB2	2.11	0.50
35:BP:63:PRO:HD3	54:B8:27:THR:HG22	1.93	0.50
55:B9:25:VAL:HB	55:B9:34:GLN:HB2	1.93	0.50
1:CA:91:C:H2'	1:CA:92:C:C6	2.46	0.50
1:CA:509:A:C8	1:CA:509:A:H3'	2.45	0.50
1:CA:1014:A:C2	1:CA:1219:U:H1'	2.46	0.50
1:CA:1028:C:O2	1:CA:1034:G:H1'	2.11	0.50
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.45	0.50
1:CA:1273:G:H3'	1:CA:1274:G:C8	2.43	0.50
3:CC:181:ASN:ND2	3:CC:204:LEU:HD12	2.26	0.50
8:CH:73:ASP:OD1	8:CH:75:ARG:HD3	2.10	0.50
13:CM:80:ARG:HH22	19:CS:69:HIS:CE1	2.29	0.50
19:CS:28:LYS:HB2	19:CS:29:ARG:HA	1.92	0.50
23:CX:44:A:C6	23:CX:45:G:C6	3.00	0.50
25:DA:581:C:H2'	25:DA:582:G:C8	2.47	0.50
25:DA:1665:A:H4'	34:DO:67:LYS:HB2	1.93	0.50
25:DA:2316:C:O2'	30:DG:128:ARG:NH1	2.44	0.50
25:DA:2615:U:H2'	25:DA:2616:C:H6	1.77	0.50
30:DG:14:GLU:O	30:DG:17:PRO:HD2	2.11	0.50
30:DG:36:LYS:HE3	30:DG:95:ARG:NH1	2.27	0.50
30:DG:97:ASP:O	30:DG:101:ILE:HG13	2.11	0.50
34:DO:25:LEU:HD12	34:DO:38:VAL:HG12	1.93	0.50
35:DP:2:LYS:NZ	35:DP:4:SER:OG	2.42	0.50
35:DP:94:GLU:HG3	35:DP:124:LYS:HD3	1.94	0.50
1:AA:261:U:OP2	20:AT:79:ARG:NH2	2.44	0.50
1:AA:308:C:H2'	1:AA:309:G:C8	2.46	0.50
1:AA:946:A:O2'	1:AA:1333:A:N3	2.40	0.50
1:AA:985:C:H2'	1:AA:986:A:H8	1.76	0.50
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.41	0.50
1:AA:1036:G:H5'	1:AA:1037:C:C5	2.41	0.50
11:AK:34:ASP:HB3	11:AK:40:ILE:HD11	1.93	0.50
18:AR:59:SER:H	18:AR:62:GLU:CG	2.24	0.50
25:BA:239:G:H2'	25:BA:240:A:C8	2.47	0.50
27:BD:26:LYS:HB3	27:BD:83:GLU:HG2	1.93	0.50
46:B0:27:GLU:HG3	46:B0:68:GLU:HA	1.92	0.50
1:CA:487:A:H2'	1:CA:488:C:O4'	2.11	0.50
1:CA:689:C:OP1	11:CK:27:ASN:ND2	2.45	0.50
1:CA:1249:C:O4'	9:CI:70:LYS:HE2	2.11	0.50
5:CE:100:VAL:HG22	5:CE:118:ILE:HG22	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:454:A:H4'	25:DA:455:C:OP2	2.11	0.50
25:DA:1187:G:H5''	41:DV:81:TYR:CE1	2.46	0.50
30:DG:13:GLU:O	30:DG:15:VAL:N	2.44	0.50
1:AA:684:A:H2'	1:AA:685:G:C8	2.46	0.50
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.46	0.50
9:AI:3:GLN:HG2	9:AI:20:ARG:HE	1.77	0.50
19:AS:52:TYR:HA	19:AS:56:GLN:O	2.11	0.50
25:BA:275:C:H2'	25:BA:276:C:C6	2.47	0.50
25:BA:2062:C:H2'	25:BA:2063:U:O4'	2.12	0.50
25:BA:2377:G:O6	54:B8:39:LYS:HE3	2.11	0.50
27:BD:12:SER:HB3	27:BD:208:LYS:HB3	1.93	0.50
1:CA:300:A:H1'	1:CA:565:U:O2	2.11	0.50
1:CA:411:A:OP1	4:CD:30:LYS:NZ	2.25	0.50
1:CA:1256:A:H61	1:CA:1278:U:C1'	2.23	0.50
1:CA:1270:C:C2'	1:CA:1271:G:H5'	2.42	0.50
2:CB:76:GLN:HG3	2:CB:206:ASP:O	2.11	0.50
25:DA:250:G:H2'	25:DA:251:A:C8	2.47	0.50
25:DA:465:G:C6	25:DA:466:A:N6	2.79	0.50
33:DN:20:GLY:HA2	33:DN:61:ARG:NE	2.27	0.50
7:AG:16:LEU:HD23	9:AI:41:VAL:HG12	1.92	0.50
8:AH:4:ASP:OD2	8:AH:85:ARG:NH1	2.36	0.50
9:AI:48:GLU:OE2	9:AI:51:ARG:HD2	2.12	0.50
25:BA:1093:G:H2'	25:BA:1156:G:H1	1.77	0.50
25:BA:1834:A:H4'	27:BD:259:THR:HG23	1.93	0.50
43:BX:31:HIS:HD2	43:BX:33:LYS:N	2.05	0.50
52:B6:11:LEU:HB2	52:B6:21:TYR:HB2	1.92	0.50
1:CA:170:U:O2'	1:CA:171:A:H5'	2.12	0.50
1:CA:757:U:H2'	1:CA:758:G:O4'	2.11	0.50
1:CA:977:A:H2'	1:CA:977:A:N3	2.26	0.50
1:CA:998:G:N2	1:CA:1043:C:N3	2.48	0.50
1:CA:1072:G:C6	1:CA:1073:U:C4	3.00	0.50
20:CT:42:GLN:O	20:CT:45:GLN:HB3	2.11	0.50
25:DA:937:U:H2'	25:DA:938:G:O4'	2.12	0.50
25:DA:1412:A:H2'	25:DA:1413:G:H8	1.72	0.50
25:DA:1582:C:O2'	25:DA:1586:A:N3	2.44	0.50
25:DA:2336:A:H61	46:D0:43:THR:HG21	1.76	0.50
29:DF:167:ALA:O	29:DF:170:LEU:HB2	2.11	0.50
48:D2:1:MET:SD	48:D2:56:GLN:NE2	2.85	0.50
1:AA:36:C:O2'	1:AA:501:C:OP1	2.26	0.50
1:AA:67:C:H2'	1:AA:68:G:C8	2.46	0.50
1:AA:166:G:C4	1:AA:167:G:N7	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:382:A:N3	1:AA:383:A:N7	2.59	0.50
1:AA:407:G:OP1	4:AD:115:ARG:HD3	2.12	0.50
1:AA:738:C:H2'	1:AA:739:C:H6	1.75	0.50
1:AA:826:C:H2'	1:AA:827:U:H6	1.77	0.50
5:AE:98:THR:HG22	5:AE:99:GLY:O	2.12	0.50
7:AG:69:VAL:HG22	7:AG:135:VAL:HG22	1.94	0.50
9:AI:53:VAL:HG11	9:AI:92:TYR:CE1	2.46	0.50
20:AT:56:MET:HE3	20:AT:88:VAL:HG11	1.92	0.50
25:BA:1153:G:N3	25:BA:1153:G:H2'	2.27	0.50
25:BA:2211:U:H2'	25:BA:2212:G:H5'	1.92	0.50
61:BA:3804:HOH:O	51:B5:15:ARG:HG2	2.11	0.50
33:BN:15:LEU:HD12	33:BN:137:LYS:HG2	1.94	0.50
41:BV:14:VAL:HA	41:BV:18:LEU:HD12	1.93	0.50
50:B4:59:PHE:C	50:B4:61:ARG:H	2.18	0.50
1:CA:276:G:C2'	1:CA:277:C:H5'	2.41	0.50
1:CA:1004:A:C8	1:CA:1005:A:H4'	2.47	0.50
1:CA:1093:A:H5''	1:CA:1094:G:OP2	2.12	0.50
7:CG:16:LEU:HD22	7:CG:16:LEU:H	1.77	0.50
9:CI:9:ARG:O	9:CI:104:ARG:HG3	2.11	0.50
10:CJ:13:HIS:O	10:CJ:17:ASP:HB2	2.12	0.50
11:CK:81:ASP:OD1	11:CK:106:LYS:HE2	2.12	0.50
20:CT:9:ASN:O	20:CT:10:LEU:HB2	2.11	0.50
25:DA:253:C:OP2	54:D8:5:LYS:NZ	2.30	0.50
25:DA:1328:G:H2'	25:DA:1330:C:C5	2.47	0.50
25:DA:1359:A:N1	25:DA:1372:U:C4	2.80	0.50
25:DA:1563:G:H2'	25:DA:1564:C:H6	1.77	0.50
25:DA:1697:G:OP2	25:DA:1698:A:O2'	2.24	0.50
25:DA:2262:U:OP2	46:D0:19:LYS:HD3	2.12	0.50
25:DA:2293:C:H5'	25:DA:2294:C:OP2	2.11	0.50
28:DE:9:VAL:HG22	28:DE:25:VAL:HB	1.94	0.50
28:DE:101:ARG:CZ	28:DE:171:GLU:HB2	2.41	0.50
40:DU:66:ASN:O	40:DU:70:ARG:HG3	2.12	0.50
41:DV:95:LEU:HD13	41:DV:97:LYS:HD3	1.93	0.50
1:AA:397:A:H3'	1:AA:397:A:N3	2.26	0.50
1:AA:491:G:H2'	1:AA:492:G:O4'	2.12	0.50
1:AA:872:A:C8	1:AA:874:G:C8	3.00	0.50
1:AA:1066:C:O2'	1:AA:1067:A:H5'	2.11	0.50
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.47	0.50
2:AB:45:GLN:O	2:AB:49:GLU:HB2	2.11	0.50
2:AB:71:VAL:HB	2:AB:164:VAL:HG13	1.93	0.50
3:AC:58:GLU:HB2	3:AC:65:ALA:HB2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:78:ARG:HG2	7:AG:79:ARG:HB2	1.94	0.50
13:AM:84:ILE:HG13	19:AS:74:PHE:HE1	1.75	0.50
25:BA:179:A:N3	25:BA:726:C:O2'	2.37	0.50
27:BD:38:LYS:HE3	27:BD:39:LYS:O	2.12	0.50
46:B0:27:GLU:HA	46:B0:67:VAL:HG12	1.94	0.50
1:CA:1095:U:P	1:CA:1108:G:H1	2.35	0.50
9:CI:105:ASP:HB2	9:CI:107:ARG:HG3	1.93	0.50
25:DA:1153:C:H2'	25:DA:1154:G:O4'	2.12	0.50
25:DA:1346:G:OP2	61:DA:4263:HOH:O	2.20	0.50
25:DA:2293:C:H42	25:DA:2339:G:H1	1.58	0.50
25:DA:2336:A:H61	46:D0:43:THR:CG2	2.25	0.50
38:DS:25:ARG:NH1	38:DS:42:ASP:OD1	2.41	0.50
42:DW:35:ILE:HG23	51:D5:28:PRO:HD2	1.93	0.50
45:DZ:5:LEU:HD13	45:DZ:6:LYS:O	2.12	0.50
1:AA:414:A:H2'	1:AA:415:A:O4'	2.12	0.50
1:AA:701:C:O2	1:AA:703:G:N1	2.45	0.50
1:AA:1269:A:H2	1:AA:1312:G:N3	2.10	0.50
5:AE:90:VAL:O	5:AE:91:LEU:HD13	2.10	0.50
9:AI:19:LEU:HB3	9:AI:59:PHE:HD2	1.76	0.50
15:AO:74:ASP:CG	15:AO:77:ARG:HG3	2.37	0.50
25:BA:225:C:H2'	25:BA:226:C:C6	2.46	0.50
25:BA:864:C:O2'	25:BA:886:U:OP1	2.27	0.50
25:BA:1221:G:H1'	25:BA:1222:A:O5'	2.11	0.50
25:BA:1712:A:H4'	34:BO:67:LYS:HB2	1.92	0.50
25:BA:1855:G:OP1	27:BD:52:ARG:NH1	2.40	0.50
1:CA:153:C:H2'	1:CA:154:C:C6	2.47	0.50
1:CA:715:A:H2'	1:CA:716:A:C8	2.47	0.50
1:CA:1036:G:N7	1:CA:1037:C:C2	2.80	0.50
5:CE:80:ILE:HG22	5:CE:91:LEU:HB2	1.94	0.50
13:CM:93:ARG:HD3	25:DA:888:C:OP2	2.12	0.50
20:CT:43:LEU:O	20:CT:47:GLY:N	2.45	0.50
25:DA:330:A:H2	25:DA:1210:A:H2'	1.76	0.50
25:DA:954:G:C5	25:DA:955:C:C5	2.99	0.50
25:DA:1406:U:H2'	25:DA:1407:C:C6	2.46	0.50
25:DA:2386:C:H2'	25:DA:2387:U:C6	2.46	0.50
25:DA:2711:A:H5''	25:DA:2712:U:H5''	1.94	0.50
25:DA:2882:A:OP1	37:DR:96:ARG:NE	2.44	0.50
29:DF:150:GLY:HA2	29:DF:172:TRP:CE3	2.47	0.50
1:AA:137:C:H2'	1:AA:138:G:H5'	1.94	0.50
1:AA:174:C:H2'	1:AA:175:C:H6	1.76	0.50
1:AA:203:U:H2'	1:AA:203:U:OP2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:457:C:H2'	1:AA:458:C:H6	1.74	0.50
1:AA:1129:C:O2'	1:AA:1139:G:N7	2.33	0.50
1:AA:1224:G:O2'	1:AA:1322:C:OP1	2.29	0.50
4:AD:25:ARG:HG2	4:AD:25:ARG:O	2.11	0.50
13:AM:3:ARG:HG3	13:AM:4:ILE:H	1.77	0.50
19:AS:65:ASN:HD22	19:AS:65:ASN:N	2.08	0.50
25:BA:831:A:H5'	25:BA:832:G:OP1	2.12	0.50
25:BA:910:A:H2'	25:BA:911:G:H8	1.77	0.50
25:BA:1201:A:OP1	40:BU:55:ARG:HD3	2.11	0.50
25:BA:1312:G:O5'	42:BW:15:ARG:NH2	2.45	0.50
25:BA:1525:G:O2'	25:BA:1605:A:N1	2.43	0.50
27:BD:10:THR:OG1	27:BD:13:ARG:HB2	2.12	0.50
32:BI:93:THR:OG1	32:BI:96:ASP:OD1	2.19	0.50
1:CA:501:C:H2'	1:CA:502:G:C8	2.47	0.50
9:CI:53:VAL:C	9:CI:55:ALA:H	2.20	0.50
25:DA:754:C:H2'	25:DA:755:C:C6	2.43	0.50
25:DA:873:G:H2'	25:DA:874:G:H5''	1.94	0.50
25:DA:878:A:N6	25:DA:900:A:N7	2.60	0.50
25:DA:1453:U:OP1	37:DR:77:ARG:NH1	2.36	0.50
25:DA:2302:G:C6	25:DA:2303:G:N7	2.80	0.50
26:DB:3:C:H2'	26:DB:4:C:C6	2.47	0.50
27:DD:16:MET:HG3	27:DD:206:LEU:O	2.12	0.50
35:DP:65:ARG:HG3	54:D8:25:MET:HG3	1.93	0.50
49:D3:5:LYS:NZ	49:D3:34:GLU:OE2	2.37	0.50
1:AA:524:G:H2'	1:AA:525:C:C6	2.46	0.49
1:AA:1145:C:H4'	1:AA:1146:A:C5'	2.41	0.49
1:AA:1241:G:H1	1:AA:1296:C:N4	2.10	0.49
25:BA:2486:C:H5''	25:BA:2487:C:OP2	2.12	0.49
25:BA:2899:C:H2'	25:BA:2900:G:O4'	2.12	0.49
30:BG:16:ARG:HB2	30:BG:17:PRO:HD3	1.94	0.49
1:CA:1227:A:H3'	1:CA:1227:A:C8	2.47	0.49
4:CD:26:CYS:HA	57:CD:501:SF4:S2	2.52	0.49
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	1.93	0.49
11:CK:20:TYR:CE1	11:CK:83:ILE:HD12	2.46	0.49
15:CO:29:VAL:HG11	15:CO:81:LEU:HD21	1.94	0.49
18:CR:60:ALA:O	18:CR:64:ARG:HG3	2.12	0.49
38:DS:10:ARG:HH21	38:DS:91:PRO:HB2	1.77	0.49
48:D2:32:LEU:HD23	48:D2:53:LEU:HB3	1.94	0.49
1:AA:64:G:H4'	1:AA:65:U:H3'	1.93	0.49
1:AA:160:A:N1	1:AA:343:U:C2	2.80	0.49
1:AA:246:A:N1	1:AA:278:G:O2'	2.39	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1210:C:C2'	1:AA:1211:U:H5'	2.42	0.49
7:AG:78:ARG:HH21	7:AG:156:TRP:HB3	1.77	0.49
23:AX:20:U:H5''	23:AX:21:A:OP2	2.12	0.49
25:BA:1827:U:H2'	25:BA:1828:C:C6	2.47	0.49
46:B0:27:GLU:HB2	46:B0:69:PHE:HD1	1.77	0.49
1:CA:59:A:H5''	1:CA:60:A:H5''	1.94	0.49
1:CA:999:C:C4	1:CA:1042:G:C2	2.99	0.49
1:CA:1047:G:H5''	14:CN:4:LYS:HD3	1.93	0.49
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.47	0.49
1:CA:1277:C:O2'	1:CA:1279:A:H8	1.94	0.49
1:CA:1516:G:N2	1:CA:1519:A:OP2	2.45	0.49
2:CB:230:VAL:HG22	2:CB:231:GLU:H	1.77	0.49
7:CG:47:CYS:O	7:CG:50:ILE:HG12	2.11	0.49
8:CH:124:ALA:O	8:CH:128:GLY:N	2.44	0.49
19:CS:27:GLU:HG2	19:CS:47:HIS:NE2	2.28	0.49
25:DA:608:A:H2'	25:DA:609:A:C8	2.47	0.49
25:DA:1161:C:H2'	25:DA:1162:G:C8	2.46	0.49
25:DA:1651:G:H5'	37:DR:39:PRO:HG2	1.94	0.49
25:DA:1996:C:H4'	25:DA:1997:G:OP1	2.11	0.49
27:DD:71:ASP:HB2	27:DD:103:ARG:NH2	2.22	0.49
32:DI:140:LEU:HD13	32:DI:142:VAL:HG13	1.94	0.49
1:AA:41:G:H2'	1:AA:42:G:C8	2.47	0.49
1:AA:615:C:H2'	1:AA:616:G:O4'	2.12	0.49
1:AA:877:C:OP1	8:AH:88:LYS:NZ	2.34	0.49
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.46	0.49
1:AA:1492:A:H1'	25:BA:1935:A:H61	1.78	0.49
20:AT:57:ARG:HH22	20:AT:100:ILE:HD12	1.77	0.49
21:AU:9:ARG:HA	21:AU:22:ARG:HB2	1.94	0.49
25:BA:296:U:H2'	25:BA:297:C:C6	2.46	0.49
25:BA:354:A:HO2'	25:BA:355:A:H8	1.58	0.49
25:BA:1001:G:OP2	36:BQ:87:LYS:HE2	2.12	0.49
25:BA:1222:A:H3'	25:BA:1223:C:C6	2.48	0.49
25:BA:2314:G:C2	25:BA:2327:G:C2	3.00	0.49
31:BH:20:ALA:HB1	31:BH:21:PRO:HD2	1.93	0.49
32:BI:38:LEU:HB2	32:BI:40:THR:HG22	1.94	0.49
41:BV:98:GLU:OE1	41:BV:100:ARG:HD3	2.12	0.49
42:BW:18:ARG:NH1	42:BW:76:VAL:O	2.46	0.49
1:CA:297:G:N2	1:CA:300:A:OP2	2.45	0.49
1:CA:358:U:H2'	1:CA:359:U:C6	2.47	0.49
1:CA:691:G:H2'	1:CA:692:U:C6	2.46	0.49
1:CA:1057:G:C5	1:CA:1204:A:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:132:GLY:O	7:CG:136:LYS:HG2	2.12	0.49
10:CJ:11:PHE:CE1	10:CJ:67:THR:HG22	2.47	0.49
12:CL:54:LYS:O	12:CL:70:ILE:HG13	2.11	0.49
25:DA:812:C:H2'	25:DA:813:U:H6	1.77	0.49
26:DB:78:A:H2'	26:DB:79:C:O4'	2.12	0.49
29:DF:20:LEU:HD22	29:DF:21:ALA:H	1.77	0.49
31:DH:86:GLU:CD	31:DH:130:ARG:HD3	2.38	0.49
34:DO:2:ILE:HD12	34:DO:6:THR:HG21	1.94	0.49
35:DP:84:ASN:OD1	35:DP:117:GLU:HB2	2.12	0.49
47:D1:7:ILE:HG23	47:D1:98:LEU:HD11	1.93	0.49
54:D8:3:LYS:HB2	54:D8:64:TYR:OH	2.11	0.49
1:AA:391:G:O3'	16:AP:8:ARG:NH2	2.46	0.49
1:AA:757:U:H2'	1:AA:758:G:O4'	2.11	0.49
12:AL:25:PRO:HD2	12:AL:98:TYR:OH	2.12	0.49
25:BA:1248:G:O6	61:BA:4634:HOH:O	2.19	0.49
25:BA:1904:C:H2'	25:BA:1905:G:O4'	2.13	0.49
25:BA:2827:G:OP1	37:BR:99:LYS:HE2	2.12	0.49
26:BB:15:A:OP1	26:BB:108:U:O2'	2.24	0.49
29:BF:31:HIS:HB2	35:BP:9:ASN:OD1	2.12	0.49
29:BF:103:LYS:HA	29:BF:106:ARG:HG3	1.94	0.49
51:B5:16:ARG:HH11	51:B5:16:ARG:HG2	1.78	0.49
1:CA:189(L):G:H2'	1:CA:190:U:H6	1.76	0.49
1:CA:1025:U:O2'	1:CA:1026:G:H5''	2.12	0.49
1:CA:1079:G:O3'	5:CE:14:ARG:NH2	2.44	0.49
1:CA:1240:U:OP2	7:CG:115:ARG:HA	2.12	0.49
12:CL:24:VAL:HG13	12:CL:98:TYR:CE1	2.47	0.49
13:CM:60:VAL:HG23	13:CM:64:TRP:HE3	1.77	0.49
16:CP:74:LEU:O	16:CP:79:VAL:HG23	2.13	0.49
24:CW:9:MVA:HG13	24:CW:10:2QY:H82	1.94	0.49
25:DA:637:A:H2'	35:DP:117:GLU:OE2	2.11	0.49
25:DA:816:C:O2'	25:DA:932:G:O6	2.31	0.49
25:DA:2592:G:N7	61:DA:3923:HOH:O	2.34	0.49
31:DH:3:ARG:HH22	31:DH:5:GLY:H	1.61	0.49
35:DP:97:PRO:HD3	35:DP:126:VAL:O	2.11	0.49
39:DT:51:ARG:HG3	39:DT:98:LYS:HD2	1.94	0.49
50:D4:46:GLN:HG3	50:D4:48:ARG:HH21	1.77	0.49
1:AA:130:A:O2'	1:AA:131:C:O5'	2.28	0.49
1:AA:394:G:H2'	1:AA:395:C:C6	2.46	0.49
1:AA:665:A:H1'	1:AA:733:A:O4'	2.12	0.49
1:AA:1189:C:H5''	1:AA:1190:G:OP2	2.13	0.49
1:AA:1243:C:H2'	1:AA:1244:C:H6	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:30:LYS:HA	4:AD:35:ARG:HH11	1.78	0.49
25:BA:407:U:H2'	25:BA:408:G:C8	2.47	0.49
25:BA:809:U:H4'	25:BA:810:G:O5'	2.12	0.49
25:BA:1298:G:C2	25:BA:1299:A:C2	3.01	0.49
25:BA:1940:A:O2'	25:BA:1942:C:N4	2.46	0.49
25:BA:2398:C:O2'	61:BA:3871:HOH:O	2.20	0.49
40:BU:58:ARG:HA	40:BU:61:TRP:CE3	2.47	0.49
1:CA:1228:C:OP1	13:CM:115:LYS:N	2.33	0.49
4:CD:150:GLU:HA	4:CD:153:ARG:HE	1.77	0.49
8:CH:20:TYR:CE2	8:CH:75:ARG:HG2	2.47	0.49
8:CH:51:VAL:HG11	8:CH:60:ARG:NH1	2.20	0.49
25:DA:315:G:H2'	25:DA:316:C:C6	2.48	0.49
25:DA:483:A:O2'	44:DY:49:VAL:O	2.19	0.49
25:DA:684:G:OP1	53:D7:16:HIS:ND1	2.45	0.49
25:DA:1614:A:C2	42:DW:93:ALA:HB2	2.47	0.49
25:DA:2552:U:C2	25:DA:2554:U:H5''	2.48	0.49
25:DA:2845:G:H2'	25:DA:2846:G:H8	1.75	0.49
43:DX:44:GLU:O	43:DX:48:LYS:N	2.45	0.49
1:AA:542:G:H2'	1:AA:543:C:C6	2.47	0.49
1:AA:678:U:H2'	1:AA:679:C:C6	2.47	0.49
1:AA:999:C:H2'	1:AA:1000:U:O4'	2.13	0.49
2:AB:20:GLU:HG2	2:AB:191:ASP:HB3	1.94	0.49
5:AE:84:PHE:CE2	5:AE:133:TYR:HD2	2.31	0.49
13:AM:50:GLU:O	13:AM:54:VAL:HG22	2.13	0.49
25:BA:207:A:C2	25:BA:224:U:H4'	2.47	0.49
25:BA:672:G:H8	25:BA:672:G:O5'	1.96	0.49
25:BA:1825:U:H2'	25:BA:1826:C:C6	2.47	0.49
25:BA:1919:G:H2'	25:BA:1920:U:O4'	2.13	0.49
25:BA:2879:G:H2'	25:BA:2880:C:O4'	2.13	0.49
1:CA:628:G:H2'	1:CA:629:G:C8	2.48	0.49
1:CA:1423:G:P	34:DO:49:ARG:HH12	2.34	0.49
2:CB:221:LEU:HD13	2:CB:224:GLN:HE22	1.76	0.49
8:CH:21:LYS:O	8:CH:65:TYR:OH	2.22	0.49
9:CI:38:GLN:HG2	9:CI:39:GLY:N	2.27	0.49
12:CL:24:VAL:HG13	12:CL:98:TYR:HE1	1.77	0.49
25:DA:176:G:O2'	25:DA:177:G:H5'	2.12	0.49
25:DA:1472:A:H2'	25:DA:1473:G:O4'	2.13	0.49
25:DA:2471:C:N4	25:DA:2476:A:O2'	2.46	0.49
32:DI:70:GLU:O	32:DI:74:ASN:HB2	2.13	0.49
34:DO:7:TYR:HE1	34:DO:20:MET:HE3	1.78	0.49
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:540:G:H2'	1:AA:541:G:O4'	2.12	0.49
1:AA:1015:A:H2'	1:AA:1016:A:H8	1.78	0.49
2:AB:98:LEU:HB2	2:AB:101:MET:SD	2.52	0.49
9:AI:21:PRO:HA	9:AI:59:PHE:HA	1.94	0.49
13:AM:40:ASN:O	13:AM:43:THR:OG1	2.29	0.49
25:BA:1098:C:O5'	25:BA:1098:C:H6	1.96	0.49
25:BA:1552:C:O2'	25:BA:1553:A:H5'	2.13	0.49
25:BA:1700:G:H3'	37:BR:2:ARG:HD3	1.93	0.49
25:BA:2303:U:OP1	25:BA:2392:C:O2'	2.25	0.49
25:BA:2507:G:H5''	36:BQ:82:ARG:HG2	1.93	0.49
27:BD:175:LEU:HD12	27:BD:185:VAL:HG21	1.95	0.49
1:CA:253:U:H2'	1:CA:254:G:H8	1.77	0.49
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.13	0.49
1:CA:427:U:H2'	1:CA:428:G:C8	2.48	0.49
1:CA:975:A:H4'	1:CA:976:G:C5'	2.40	0.49
1:CA:1012:U:H2'	1:CA:1013:G:C8	2.47	0.49
1:CA:1151:A:H5''	10:CJ:41:PRO:HA	1.95	0.49
2:CB:23:ARG:HB2	2:CB:23:ARG:NH1	2.28	0.49
25:DA:491:G:H2'	25:DA:492:A:C8	2.48	0.49
25:DA:539:G:H2'	25:DA:540:C:C6	2.47	0.49
25:DA:601:C:O2'	29:DF:104:LYS:NZ	2.46	0.49
25:DA:895:U:O2'	25:DA:896:A:H2'	2.13	0.49
25:DA:1313:U:H2'	25:DA:1610:A:N1	2.27	0.49
25:DA:1899:G:N3	25:DA:1899:G:H2'	2.28	0.49
25:DA:2880:C:O3'	37:DR:90:ARG:NH1	2.45	0.49
1:AA:191:G:C6	1:AA:192:U:C4	3.01	0.49
1:AA:250:A:H4'	1:AA:251:G:O5'	2.13	0.49
1:AA:302:G:N3	1:AA:556:C:H4'	2.28	0.49
1:AA:445:G:H2'	1:AA:446:G:H8	1.78	0.49
1:AA:472:A:N6	1:AA:473:G:C2	2.80	0.49
25:BA:231:G:C8	54:B8:5:LYS:HG2	2.48	0.49
25:BA:330:U:H2'	25:BA:331:G:O4'	2.13	0.49
25:BA:821:A:N3	25:BA:821:A:H2'	2.27	0.49
25:BA:1317:G:OP2	61:BA:4516:HOH:O	2.20	0.49
25:BA:1521:C:H2'	25:BA:1522:G:C8	2.48	0.49
25:BA:1810:U:H2'	61:BA:4800:HOH:O	2.11	0.49
25:BA:2316:G:H22	25:BA:2324:U:H3	1.61	0.49
49:B3:11:SER:OG	49:B3:13:ILE:HG13	2.12	0.49
1:CA:600:C:H2'	1:CA:601:C:C6	2.48	0.49
1:CA:1255:G:O2'	1:CA:1258:G:O2'	2.23	0.49
2:CB:208:ILE:HA	2:CB:211:ILE:HD12	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:47:LEU:O	14:CN:51:GLY:N	2.44	0.49
25:DA:989:G:H4'	25:DA:990:A:OP1	2.12	0.49
25:DA:999:U:O2'	25:DA:1000:A:H5'	2.13	0.49
25:DA:1434:A:H61	25:DA:1558:A:H62	1.59	0.49
25:DA:1531:C:N4	25:DA:1538:G:H1	2.10	0.49
25:DA:2100:G:H2'	25:DA:2101:G:H5'	1.94	0.49
25:DA:2649:U:H2'	25:DA:2650:U:C6	2.47	0.49
27:DD:228:PRO:HD3	27:DD:235:GLY:CA	2.42	0.49
29:DF:88:VAL:HG21	29:DF:91:GLY:HA3	1.95	0.49
41:DV:24:LYS:HA	41:DV:92:THR:OG1	2.12	0.49
1:AA:308:C:H2'	1:AA:309:G:H8	1.77	0.49
1:AA:542:G:H2'	1:AA:543:C:H6	1.78	0.49
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.13	0.49
2:AB:20:GLU:O	2:AB:40:HIS:HB2	2.12	0.49
23:AX:8:U:H6	23:AX:8:U:O5'	1.95	0.49
25:BA:1588:G:H5''	25:BA:1589:A:OP2	2.12	0.49
32:BI:93:THR:H	32:BI:96:ASP:CG	2.21	0.49
36:BQ:79:LEU:O	46:B0:5:LYS:NZ	2.38	0.49
36:BQ:133:ARG:HG2	36:BQ:134:ARG:N	2.28	0.49
40:BU:24:TYR:HB2	40:BU:29:SER:HB3	1.95	0.49
1:CA:164:U:H2'	1:CA:165:C:C6	2.47	0.49
1:CA:1129:C:H4'	9:CI:16:ARG:HH22	1.78	0.49
9:CI:49:PRO:HG2	9:CI:81:ILE:HG23	1.95	0.49
30:DG:7:LEU:HD22	30:DG:100:TRP:HE3	1.78	0.49
33:DN:104:LYS:HA	33:DN:107:LEU:HD12	1.93	0.49
37:DR:72:ASP:O	37:DR:76:VAL:HG23	2.13	0.49
44:DY:14:LEU:HB2	44:DY:75:ILE:HD11	1.95	0.49
44:DY:35:TYR:CE2	44:DY:69:ALA:HB3	2.47	0.49
1:AA:276:G:H2'	1:AA:277:C:H5'	1.95	0.49
1:AA:392:G:H2'	1:AA:393:A:H8	1.78	0.49
1:AA:864:A:H2'	1:AA:865:A:C8	2.47	0.49
1:AA:1183:A:H3'	1:AA:1184:G:H5''	1.95	0.49
1:AA:1237:C:O2'	1:AA:1300:G:N2	2.45	0.49
9:AI:15:ALA:HB2	9:AI:65:VAL:HG23	1.94	0.49
25:BA:602:G:H2'	25:BA:603:C:C6	2.48	0.49
45:BZ:146:ILE:HA	45:BZ:147:GLY:HA2	1.62	0.49
50:B4:20:ASN:ND2	50:B4:36:CYS:SG	2.82	0.49
1:CA:532:A:H2	1:CA:1207:G:H4'	1.77	0.49
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.95	0.49
3:CC:29:TYR:OH	14:CN:54:PRO:O	2.23	0.49
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:28:ARG:HG3	16:CP:29:ASP:N	2.28	0.49
25:DA:321:G:OP2	29:DF:135:LYS:HG3	2.12	0.49
25:DA:1815:A:P	27:DD:54:ARG:HH22	2.36	0.49
25:DA:2740:A:C6	25:DA:2741:A:C6	3.01	0.49
35:DP:38:GLN:HG2	35:DP:45:LEU:H	1.78	0.49
38:DS:15:ARG:O	38:DS:19:LYS:HG2	2.12	0.49
1:AA:435:C:H2'	1:AA:436:C:H6	1.77	0.48
1:AA:438:G:OP1	4:AD:125:HIS:NE2	2.33	0.48
1:AA:1015:A:H8	1:AA:1015:A:O5'	1.96	0.48
1:AA:1145:C:H5''	1:AA:1146:A:OP1	2.13	0.48
1:AA:1438:G:H2'	1:AA:1439:C:H6	1.77	0.48
2:AB:10:LEU:HD12	2:AB:48:MET:HE1	1.94	0.48
20:AT:9:ASN:ND2	20:AT:10:LEU:H	2.11	0.48
25:BA:1615:G:OP2	27:BD:63:ARG:NH2	2.45	0.48
34:BO:7:TYR:CE1	34:BO:20:MET:HB2	2.48	0.48
1:CA:199:G:O2'	1:CA:200:G:H5'	2.12	0.48
1:CA:831:U:H3	1:CA:855:G:H1	1.60	0.48
1:CA:839:U:HO2'	1:CA:840:C:P	2.36	0.48
1:CA:1006:C:C4	1:CA:1007:C:C5	3.01	0.48
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.48	0.48
7:CG:22:LEU:HD13	7:CG:97:GLN:OE1	2.13	0.48
7:CG:133:GLY:O	7:CG:137:LYS:N	2.45	0.48
8:CH:83:ILE:HB	8:CH:137:VAL:HG13	1.95	0.48
12:CL:123:LYS:H	12:CL:123:LYS:HG2	1.37	0.48
25:DA:192:C:O2'	25:DA:802:A:N3	2.44	0.48
25:DA:409:C:O2'	25:DA:410:G:H5'	2.12	0.48
25:DA:792:G:OP2	61:DA:3818:HOH:O	2.20	0.48
25:DA:2505:G:O6	25:DA:2576:G:H2'	2.13	0.48
28:DE:178:GLU:OE2	28:DE:178:GLU:N	2.36	0.48
30:DG:170:ARG:C	30:DG:170:ARG:HD3	2.38	0.48
31:DH:86:GLU:OE1	31:DH:130:ARG:HD3	2.13	0.48
36:DQ:65:PHE:HB2	36:DQ:105:GLU:HB2	1.93	0.48
44:DY:49:VAL:HG21	44:DY:61:ILE:HG23	1.94	0.48
54:D8:6:THR:HG22	54:D8:63:PRO:HD2	1.94	0.48
54:D8:62:LEU:HB3	54:D8:65:GLU:HG2	1.94	0.48
1:AA:62:U:O2'	1:AA:379:C:H1'	2.14	0.48
1:AA:236:G:H2'	1:AA:237:C:C6	2.47	0.48
1:AA:293:G:C6	1:AA:294:U:C4	3.01	0.48
1:AA:1353:G:OP1	21:AU:10:ARG:NH1	2.45	0.48
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.48	0.48
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:839:G:H5''	25:BA:840:A:H5'	1.95	0.48
25:BA:870:G:C6	25:BA:882:A:N1	2.80	0.48
25:BA:1285:G:H2'	25:BA:1286:U:O4'	2.13	0.48
25:BA:1314:A:H2'	25:BA:1315:A:O4'	2.13	0.48
25:BA:1817:A:H1'	25:BA:1960:A:N6	2.28	0.48
25:BA:2444:A:C8	47:B1:33:LYS:HD2	2.48	0.48
1:CA:730:G:C5	1:CA:731:G:H1'	2.47	0.48
1:CA:736:C:H2'	1:CA:737:A:C8	2.47	0.48
1:CA:1036:G:H3'	1:CA:1037:C:O4'	2.14	0.48
1:CA:1277:C:O2'	1:CA:1279:A:C8	2.66	0.48
2:CB:105:PHE:CD2	2:CB:158:LEU:HG	2.48	0.48
4:CD:63:LYS:HG3	4:CD:198:VAL:HG22	1.95	0.48
7:CG:111:ARG:HB3	7:CG:113:GLU:OE2	2.12	0.48
25:DA:116:C:H2'	25:DA:117:G:O4'	2.12	0.48
25:DA:322:A:OP2	29:DF:169:ASN:HB2	2.13	0.48
25:DA:2261:C:O2'	25:DA:2262:U:H5'	2.13	0.48
25:DA:2360:A:H2'	25:DA:2361:A:O4'	2.13	0.48
25:DA:2391:G:O2'	25:DA:2422:A:N7	2.46	0.48
25:DA:2711:A:OP2	61:DA:3973:HOH:O	2.20	0.48
29:DF:167:ALA:HB1	29:DF:173:VAL:HG11	1.95	0.48
31:DH:94:TYR:CE2	31:DH:160:LYS:HG2	2.48	0.48
32:DI:75:LEU:HD11	32:DI:105:HIS:CD2	2.47	0.48
37:DR:103:ARG:NH1	37:DR:110:PRO:HD3	2.28	0.48
1:AA:430:A:OP2	4:AD:8:VAL:HG12	2.13	0.48
1:AA:437:U:O3'	4:AD:125:HIS:HE1	1.96	0.48
1:AA:1051:C:H2'	1:AA:1052:U:H6	1.79	0.48
1:AA:1052:U:H5''	1:AA:1053:G:OP2	2.13	0.48
1:AA:1340:A:O2'	23:AX:31:G:O3'	2.31	0.48
3:AC:52:LEU:HA	3:AC:70:VAL:HG22	1.95	0.48
20:AT:9:ASN:HD22	20:AT:10:LEU:H	1.61	0.48
20:AT:56:MET:HG3	20:AT:84:LEU:HD22	1.95	0.48
25:BA:70:A:H3'	25:BA:70:A:OP2	2.13	0.48
25:BA:347:G:C8	29:BF:171:PRO:HG3	2.48	0.48
25:BA:794:U:O2	25:BA:2036:A:H1'	2.13	0.48
27:BD:72:LYS:HE3	27:BD:75:ILE:HD12	1.95	0.48
36:BQ:55:VAL:HG12	36:BQ:64:ILE:HD12	1.96	0.48
44:BY:53:PRO:HA	44:BY:56:PRO:HD3	1.94	0.48
48:B2:32:LEU:HD23	48:B2:53:LEU:HB3	1.95	0.48
50:B4:46:GLN:HG2	50:B4:48:ARG:HG2	1.95	0.48
1:CA:5:U:H5'	1:CA:6:G:C5	2.48	0.48
1:CA:48:C:OP2	61:CA:4095:HOH:O	2.20	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:129(A):G:C6	1:CA:189(E):U:H4'	2.48	0.48
1:CA:460:G:H1'	1:CA:472:A:H61	1.77	0.48
1:CA:1014:A:H2'	1:CA:1015:A:C8	2.49	0.48
1:CA:1038:C:O2'	1:CA:1039:C:H5'	2.13	0.48
1:CA:1095:U:OP1	1:CA:1108:G:N2	2.36	0.48
1:CA:1288:A:H2'	1:CA:1289:A:C8	2.49	0.48
13:CM:37:THR:HG21	13:CM:56:LEU:HA	1.94	0.48
25:DA:328:U:H4'	44:DY:68:HIS:CD2	2.49	0.48
25:DA:1916:A:H2'	25:DA:1917:U:O4'	2.12	0.48
25:DA:2025:C:H2'	25:DA:2026:C:C6	2.49	0.48
36:DQ:27:VAL:HG11	36:DQ:134:ARG:HG3	1.95	0.48
38:DS:87:PHE:CZ	38:DS:102:ALA:HB2	2.48	0.48
40:DU:113:ALA:O	40:DU:117:GLN:HG2	2.13	0.48
1:AA:384:G:C2	1:AA:385:C:C4	3.02	0.48
1:AA:1530:G:OP1	1:AA:1530:G:H4'	2.13	0.48
2:AB:12:GLU:O	2:AB:15:VAL:HG13	2.14	0.48
2:AB:15:VAL:HG11	2:AB:213:LEU:HD12	1.95	0.48
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.95	0.48
2:AB:77:ALA:O	2:AB:81:VAL:HG22	2.13	0.48
4:AD:175:SER:OG	4:AD:184:LYS:HB2	2.13	0.48
7:AG:72:ARG:HG3	7:AG:142:GLU:OE2	2.12	0.48
25:BA:596:G:O2'	25:BA:597:C:H3'	2.13	0.48
25:BA:1845:G:H4'	27:BD:51:VAL:HG21	1.96	0.48
25:BA:2601:A:N3	61:BA:3847:HOH:O	2.35	0.48
25:BA:2623:U:H5'	25:BA:2623:U:H6	1.79	0.48
28:BE:179:GLU:HB3	28:BE:181:LEU:HD22	1.95	0.48
33:BN:28:THR:HG22	33:BN:29:LYS:N	2.29	0.48
36:BQ:7:MET:HE3	36:BQ:7:MET:HB2	1.67	0.48
36:BQ:54:MET:HG3	36:BQ:117:ALA:HB1	1.95	0.48
50:B4:62:ARG:C	50:B4:64:GLY:HA2	2.38	0.48
1:CA:216:G:H2'	1:CA:217:C:C6	2.49	0.48
1:CA:986:A:O2'	19:CS:55:LYS:O	2.31	0.48
1:CA:1005:A:H8	1:CA:1005:A:O5'	1.96	0.48
1:CA:1007:C:N4	1:CA:1022:G:C6	2.81	0.48
1:CA:1040:U:C4	1:CA:1041:A:C8	3.01	0.48
1:CA:1226:C:H4'	19:CS:80:TYR:CZ	2.49	0.48
1:CA:1446:U:O2'	1:CA:1447:A:O5'	2.31	0.48
2:CB:71:VAL:HG23	2:CB:164:VAL:HA	1.95	0.48
2:CB:97:TRP:CH2	2:CB:173:ALA:HA	2.49	0.48
2:CB:127:ILE:HG12	2:CB:128:GLU:H	1.78	0.48
6:CF:24:GLU:HG3	6:CF:28:ARG:HD3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.96	0.48
25:DA:330:A:HO2'	25:DA:331:A:H8	1.61	0.48
25:DA:614(C):A:N3	29:DF:180:GLY:HA2	2.29	0.48
25:DA:784:A:OP2	61:DA:4063:HOH:O	2.20	0.48
25:DA:994:C:O2'	25:DA:996:A:OP1	2.30	0.48
25:DA:1449:A:H5'	25:DA:1450:G:OP2	2.14	0.48
25:DA:1520:G:H3'	25:DA:1523:U:H6	1.78	0.48
25:DA:2001:A:H2'	25:DA:2002:G:C8	2.49	0.48
25:DA:2293:C:OP1	25:DA:2377:A:N6	2.46	0.48
25:DA:2872:G:C2	25:DA:2873:A:N6	2.82	0.48
27:DD:242:ARG:N	27:DD:242:ARG:HD3	2.28	0.48
30:DG:136:ARG:HD2	30:DG:137:GLU:N	2.28	0.48
31:DH:113:VAL:HG11	31:DH:151:ILE:HD13	1.94	0.48
32:DI:29:TYR:O	32:DI:33:ARG:HD2	2.14	0.48
1:AA:620:C:H2'	1:AA:621:A:O4'	2.14	0.48
1:AA:926:G:C6	1:AA:1505:G:C6	3.02	0.48
1:AA:1131:G:H8	1:AA:1131:G:O5'	1.96	0.48
1:AA:1182:G:C4'	1:AA:1183:A:H5'	2.43	0.48
1:AA:1327:C:H2'	1:AA:1328:C:C6	2.48	0.48
23:AX:19:G:H4'	23:AX:20:U:OP2	2.12	0.48
25:BA:956:A:C5	36:BQ:13:GLN:HG3	2.49	0.48
25:BA:2303:U:O2'	25:BA:2386:C:O2	2.24	0.48
27:BD:68:LYS:HD2	27:BD:70:TRP:CH2	2.48	0.48
30:BG:56:ALA:HA	30:BG:153:ARG:NH2	2.29	0.48
31:BH:56:SER:OG	31:BH:58:GLU:HG2	2.13	0.48
34:BO:101:PRO:HG3	39:BT:67:SER:OG	2.13	0.48
52:B6:21:TYR:CE2	52:B6:38:LYS:HG2	2.48	0.48
1:CA:520:A:N1	1:CA:536:C:H1'	2.29	0.48
1:CA:554:C:H2'	1:CA:555:C:H6	1.77	0.48
1:CA:839:U:H5''	1:CA:840:C:C5	2.48	0.48
1:CA:1003:G:C6	1:CA:1004:A:C2	3.02	0.48
2:CB:16:HIS:CG	2:CB:17:PHE:N	2.81	0.48
3:CC:34:LEU:HG	3:CC:38:ARG:HH12	1.78	0.48
6:CF:68:PRO:HB2	6:CF:71:ARG:HG3	1.95	0.48
11:CK:19:ALA:HA	11:CK:32:ILE:HD13	1.96	0.48
11:CK:33:THR:HA	11:CK:39:PRO:HA	1.95	0.48
25:DA:428:A:H3'	25:DA:429:A:C8	2.48	0.48
25:DA:507:A:H5''	25:DA:508:G:H3'	1.95	0.48
25:DA:934:G:H2'	25:DA:935:C:H6	1.79	0.48
25:DA:2680:C:H5'	28:DE:189:PRO:HA	1.96	0.48
30:DG:41:GLN:NE2	30:DG:154:GLY:O	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DH:26:VAL:HG12	31:DH:79:VAL:HG11	1.95	0.48
34:DO:98:VAL:HG22	34:DO:118:ALA:HA	1.95	0.48
36:DQ:54:MET:HE1	36:DQ:104:PHE:HB3	1.96	0.48
41:DV:30:GLY:H	41:DV:61:VAL:HG13	1.79	0.48
1:AA:1298:C:H2'	7:AG:114:ARG:NH1	2.28	0.48
2:AB:19:HIS:NE2	2:AB:206:ASP:OD2	2.46	0.48
2:AB:168:THR:OG1	2:AB:192:SER:HB3	2.13	0.48
7:AG:152:ALA:HB1	7:AG:155:ARG:NH2	2.28	0.48
9:AI:53:VAL:C	9:AI:55:ALA:H	2.17	0.48
10:AJ:5:ARG:HD3	10:AJ:71:LEU:HD11	1.95	0.48
10:AJ:57:LYS:HD2	10:AJ:60:ARG:HH21	1.79	0.48
13:AM:15:VAL:O	13:AM:19:LEU:HD22	2.13	0.48
19:AS:3:ARG:NH1	19:AS:10:PHE:HB2	2.27	0.48
25:BA:1537:G:O2'	27:BD:101:GLU:HB2	2.14	0.48
30:BG:102:PHE:HE1	30:BG:141:PHE:CE2	2.26	0.48
48:B2:32:LEU:HD12	48:B2:36:ARG:NH1	2.29	0.48
1:CA:270:A:H2'	1:CA:271:C:C6	2.48	0.48
1:CA:585:G:N3	1:CA:879:C:H4'	2.29	0.48
1:CA:1002:G:H1	1:CA:1038:C:H42	0.67	0.48
1:CA:1015:A:H1'	1:CA:1219:U:H5'	1.95	0.48
1:CA:1169:A:H8	1:CA:1169:A:H3'	1.79	0.48
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.29	0.48
2:CB:73:THR:HB	2:CB:95:GLN:O	2.14	0.48
7:CG:78:ARG:HH21	7:CG:156:TRP:HB3	1.78	0.48
8:CH:49:GLU:HG2	8:CH:62:TYR:CE2	2.45	0.48
9:CI:31:GLN:HB2	9:CI:35:GLU:OE2	2.13	0.48
10:CJ:42:THR:CG2	10:CJ:68:HIS:HD2	2.25	0.48
10:CJ:47:PHE:CZ	14:CN:37:PHE:HE1	2.32	0.48
12:CL:34:ARG:HG2	12:CL:35:GLY:N	2.29	0.48
25:DA:180:G:H5''	25:DA:181:A:OP2	2.13	0.48
25:DA:784:A:C8	25:DA:792:G:C5	3.01	0.48
25:DA:1163:G:C2	25:DA:1164:G:C8	3.01	0.48
25:DA:1666:G:OP1	34:DO:66:LYS:HE3	2.14	0.48
28:DE:111:ARG:HD3	37:DR:1:MET:HE1	1.96	0.48
30:DG:101:ILE:HD13	50:D4:25:TYR:HB2	1.94	0.48
31:DH:24:VAL:HG13	31:DH:37:VAL:HG21	1.96	0.48
34:DO:120:GLU:HG2	34:DO:122:LEU:HG	1.95	0.48
38:DS:27:SER:HA	38:DS:88:ASP:HB3	1.95	0.48
42:DW:70:TYR:OH	42:DW:72:LYS:HG3	2.14	0.48
1:AA:154:C:H5	1:AA:155:C:C5	2.31	0.48
1:AA:364:A:H2'	1:AA:365:U:H6	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:135:LYS:HE2	5:AE:53:LEU:HD11	1.95	0.48
10:AJ:68:HIS:H	10:AJ:68:HIS:CD2	2.31	0.48
25:BA:217:A:H2'	25:BA:219:U:O4'	2.13	0.48
25:BA:438:G:C5	35:BP:72:PRO:HB3	2.49	0.48
25:BA:1093:G:H2'	25:BA:1156:G:N2	2.26	0.48
25:BA:1604:C:H5''	25:BA:1605:A:OP2	2.14	0.48
25:BA:1815:A:H5''	61:BA:4186:HOH:O	2.13	0.48
32:BI:100:ALA:HA	32:BI:103:ARG:HG2	1.94	0.48
46:B0:53:MET:HG3	46:B0:59:LEU:CD2	2.43	0.48
1:CA:422:C:H4'	1:CA:423:G:C4	2.48	0.48
1:CA:688:G:H5'	11:CK:46:GLY:C	2.39	0.48
1:CA:758:G:H8	1:CA:758:G:H5''	1.78	0.48
1:CA:999:C:N4	1:CA:1042:G:C2	2.81	0.48
1:CA:999:C:N4	1:CA:1043:C:C4	2.81	0.48
1:CA:1137:C:H1'	1:CA:1138:G:C2	2.48	0.48
1:CA:1320:C:C1'	19:CS:73:GLU:HG3	2.44	0.48
1:CA:1342:C:H1'	9:CI:124:GLN:NE2	2.28	0.48
11:CK:99:GLN:C	11:CK:101:SER:H	2.21	0.48
25:DA:78:A:H2'	25:DA:79:G:H8	1.78	0.48
25:DA:1041:C:OP1	45:DZ:46:LYS:NZ	2.43	0.48
25:DA:2094:G:OP1	32:DI:22:LYS:HD2	2.14	0.48
25:DA:2489:G:C6	25:DA:2490:G:C6	3.02	0.48
26:DB:50:G:OP2	38:DS:62:LYS:HD3	2.13	0.48
41:DV:6:LYS:HB2	41:DV:38:LEU:HD21	1.94	0.48
1:AA:1206:G:C6	1:AA:1207:G:C5	3.01	0.48
3:AC:32:LEU:HD22	3:AC:59:ARG:HH12	1.79	0.48
13:AM:84:ILE:HD12	19:AS:74:PHE:HZ	1.78	0.48
16:AP:52:ASP:OD1	16:AP:54:GLU:HG3	2.14	0.48
20:AT:10:LEU:HB3	20:AT:12:ALA:H	1.79	0.48
25:BA:137:G:O2'	25:BA:138:G:H5'	2.14	0.48
25:BA:388:A:H2'	25:BA:389:G:H8	1.77	0.48
25:BA:860:U:H2'	25:BA:861:C:C6	2.48	0.48
25:BA:1183:G:N3	33:BN:106:MET:HE2	2.28	0.48
25:BA:1576:G:O2'	25:BA:1577:C:H5'	2.14	0.48
25:BA:2814:C:H2'	25:BA:2815:C:O4'	2.14	0.48
27:BD:9:TYR:CZ	27:BD:13:ARG:HG2	2.49	0.48
1:CA:364:A:H2'	1:CA:365:U:H6	1.79	0.48
1:CA:418:C:H2'	1:CA:419:C:C6	2.48	0.48
1:CA:797:C:O2'	1:CA:798:G:H5'	2.13	0.48
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.13	0.48
1:CA:1492:A:H2'	1:CA:1493:A:C1'	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:15:GLU:OE2	4:CD:66:ARG:NH1	2.46	0.48
10:CJ:8:LEU:CD2	10:CJ:96:ILE:HG23	2.43	0.48
14:CN:7:ILE:HG12	14:CN:8:GLU:N	2.27	0.48
15:CO:4:THR:OG1	15:CO:7:GLU:OE1	2.27	0.48
16:CP:51:VAL:O	16:CP:53:VAL:HG23	2.14	0.48
25:DA:1256:G:H5'	25:DA:1257:C:OP2	2.13	0.48
25:DA:1287:A:H5''	25:DA:1288:U:OP2	2.13	0.48
27:DD:132:PRO:HG2	27:DD:135:PHE:CD2	2.44	0.48
31:DH:20:ALA:HB3	31:DH:23:ARG:HG3	1.95	0.48
48:D2:10:LEU:HD22	48:D2:14:ARG:NH1	2.29	0.48
1:AA:300:A:H2'	1:AA:301:G:O4'	2.13	0.48
1:AA:430:A:OP1	4:AD:9:CYS:HB2	2.13	0.48
1:AA:658:G:H2'	1:AA:659:U:C6	2.48	0.48
1:AA:662:G:H2'	1:AA:663:A:C8	2.48	0.48
25:BA:905:U:O2	25:BA:2280:A:H2'	2.14	0.48
25:BA:1091:A:O2'	25:BA:1093:G:C4	2.57	0.48
25:BA:1093:G:HO2'	25:BA:1094:A:H8	1.61	0.48
25:BA:1362:U:H2'	25:BA:1363:A:C8	2.49	0.48
26:BB:8:U:O3'	38:BS:25:ARG:NH2	2.47	0.48
30:BG:50:ALA:O	30:BG:52:ILE:N	2.47	0.48
40:BU:16:LYS:HB3	40:BU:16:LYS:HE2	1.55	0.48
45:BZ:30:ASN:ND2	45:BZ:90:VAL:HB	2.28	0.48
45:BZ:152:ALA:HA	45:BZ:155:LEU:HD22	1.94	0.48
1:CA:192:U:O2'	20:CT:60:GLU:OE2	2.25	0.48
1:CA:790:A:H2'	1:CA:791:G:C8	2.49	0.48
1:CA:1151:A:O4'	10:CJ:39:PRO:HB2	2.14	0.48
1:CA:1321:C:H5''	1:CA:1322:C:H2'	1.95	0.48
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.13	0.48
6:CF:61:LEU:HD23	6:CF:63:TYR:OH	2.13	0.48
25:DA:892:G:H2'	25:DA:893:C:O4'	2.14	0.48
25:DA:1022:G:C6	25:DA:1140:C:C4	3.01	0.48
25:DA:1794:U:H2'	25:DA:1795:C:C6	2.49	0.48
25:DA:2261:C:H1'	25:DA:2388:A:N3	2.29	0.48
25:DA:2823:A:OP1	28:DE:159:HIS:NE2	2.42	0.48
34:DO:64:ARG:NH1	34:DO:81:ASP:OD1	2.47	0.48
34:DO:73:ASP:HB2	39:DT:82:LEU:HD13	1.96	0.48
45:DZ:19:ARG:HE	45:DZ:19:ARG:HB2	1.44	0.48
46:D0:27:GLU:HB2	46:D0:69:PHE:HD1	1.78	0.48
1:AA:376:G:H2'	1:AA:377:G:H8	1.79	0.48
1:AA:1028:C:H2'	1:AA:1029:C:O4'	2.14	0.48
1:AA:1234:C:C2'	1:AA:1235:U:H5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.96	0.48
25:BA:484:G:C8	53:B7:37:LYS:HG2	2.49	0.48
25:BA:1067:A:H8	25:BA:1067:A:H3'	1.79	0.48
26:BB:37:C:C5	26:BB:38:C:C5	3.02	0.48
42:BW:86:LEU:HD12	42:BW:87:PRO:HD2	1.96	0.48
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.49	0.48
2:CB:8:LYS:HD2	2:CB:51:LEU:HD13	1.96	0.48
6:CF:10:LEU:HD12	6:CF:85:VAL:HA	1.94	0.48
17:CQ:62:SER:OG	17:CQ:72:ARG:HD3	2.13	0.48
25:DA:271(F):C:H2'	25:DA:271(G):C:H6	1.78	0.48
25:DA:729:G:OP2	27:DD:13:ARG:NH1	2.45	0.48
25:DA:1463:C:H2'	25:DA:1464:C:H6	1.78	0.48
28:DE:127:ASP:OD2	61:DE:408:HOH:O	2.19	0.48
29:DF:164:ARG:O	29:DF:168:ARG:HB2	2.14	0.48
30:DG:11:TYR:O	30:DG:16:ARG:HG2	2.13	0.48
38:DS:53:SER:OG	38:DS:54:LEU:N	2.47	0.48
47:D1:64:ALA:HA	47:D1:67:ILE:HG13	1.96	0.48
1:AA:606:G:H1'	1:AA:632:A:H61	1.79	0.47
1:AA:1030(A):G:H2'	1:AA:1030(C):G:OP2	2.13	0.47
1:AA:1093:A:N3	1:AA:1109:C:O2'	2.46	0.47
4:AD:12:CYS:SG	4:AD:19:LEU:N	2.77	0.47
4:AD:155:LEU:HD22	4:AD:156:GLU:N	2.29	0.47
9:AI:99:LEU:HB3	9:AI:101:PHE:HE1	1.79	0.47
25:BA:671:A:H2'	25:BA:672:G:O4'	2.14	0.47
25:BA:777:C:OP2	61:BA:4592:HOH:O	2.20	0.47
25:BA:1220:U:OP1	25:BA:1222:A:N6	2.47	0.47
25:BA:1542:A:N3	25:BA:1624:C:O2'	2.43	0.47
25:BA:1925:G:OP1	27:BD:241:PRO:HB2	2.14	0.47
25:BA:2087:C:H2'	25:BA:2088:C:C6	2.49	0.47
25:BA:2303:U:H2'	25:BA:2304:C:C6	2.49	0.47
48:B2:32:LEU:CD1	48:B2:36:ARG:HH11	2.26	0.47
1:CA:671:G:H5'	6:CF:77:ARG:HH22	1.79	0.47
1:CA:785:G:H2'	1:CA:786:G:H5'	1.96	0.47
1:CA:1206:G:C6	1:CA:1207:G:C5	3.03	0.47
1:CA:1262:C:H42	1:CA:1273:G:H1	1.61	0.47
1:CA:1358:U:OP2	1:CA:1359:C:H5	1.97	0.47
2:CB:48:MET:HA	2:CB:51:LEU:HD12	1.96	0.47
6:CF:44:GLY:HA2	6:CF:59:TYR:CZ	2.48	0.47
19:CS:27:GLU:HB2	19:CS:28:LYS:HE2	1.95	0.47
25:DA:253:C:O2'	61:DA:4187:HOH:O	2.16	0.47
25:DA:688:U:H5'	25:DA:1780:A:C2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:867:C:O2	25:DA:913:U:H5'	2.14	0.47
25:DA:910:A:C5	36:DQ:13:GLN:HG3	2.49	0.47
25:DA:1593:G:C2	25:DA:1594:G:C4	3.02	0.47
27:DD:72:LYS:HB3	27:DD:75:ILE:HD12	1.96	0.47
29:DF:53:THR:HG22	29:DF:56:GLU:HG3	1.96	0.47
29:DF:126:VAL:HG21	29:DF:129:PHE:CZ	2.49	0.47
50:D4:59:PHE:HA	50:D4:60:GLN:C	2.39	0.47
1:AA:49:U:H3	1:AA:362:G:H1'	1.80	0.47
5:AE:72:GLN:O	5:AE:75:THR:HG22	2.14	0.47
6:AF:44:GLY:HA2	6:AF:59:TYR:CE2	2.49	0.47
25:BA:904:C:H4'	46:B0:23:VAL:HG21	1.96	0.47
25:BA:1086:C:H2'	25:BA:1087:C:O4'	2.14	0.47
25:BA:1091:A:OP1	25:BA:1092:A:H3'	2.13	0.47
25:BA:1686:U:O2'	25:BA:1687:C:H5'	2.14	0.47
28:BE:92:THR:O	28:BE:95:ILE:HG23	2.14	0.47
40:BU:104:GLN:CD	40:BU:104:GLN:H	2.22	0.47
44:BY:91:GLU:CD	44:BY:91:GLU:N	2.72	0.47
1:CA:109:A:H2'	1:CA:326:G:N2	2.28	0.47
1:CA:543:C:O2'	1:CA:544:G:H5'	2.14	0.47
4:CD:36:ARG:HG3	4:CD:38:TYR:CE2	2.49	0.47
20:CT:50:GLU:HB2	20:CT:99:LEU:HD23	1.96	0.47
25:DA:1149:G:H2'	25:DA:1150:C:C6	2.49	0.47
25:DA:1463:C:H2'	25:DA:1464:C:C6	2.49	0.47
27:DD:275:LYS:HB3	27:DD:276:LYS:HA	1.96	0.47
29:DF:7:TYR:O	29:DF:22:ALA:N	2.46	0.47
30:DG:103:LEU:HD22	30:DG:178:PHE:HZ	1.80	0.47
31:DH:87:LEU:HD23	31:DH:164:TYR:HA	1.96	0.47
47:D1:83:GLU:HA	47:D1:84:GLY:HA2	1.62	0.47
1:AA:129(A):G:C6	1:AA:189(E):U:H4'	2.50	0.47
1:AA:146:G:H8	1:AA:146:G:H5''	1.80	0.47
1:AA:1127:G:H21	1:AA:1148:U:H3	1.61	0.47
2:AB:24:TRP:H	2:AB:24:TRP:HD1	1.62	0.47
14:AN:37:PHE:CE2	14:AN:53:LEU:HD13	2.50	0.47
19:AS:65:ASN:ND2	19:AS:66:MET:HG3	2.29	0.47
25:BA:1740:U:O2'	27:BD:14:ARG:NH2	2.46	0.47
25:BA:1913:G:H2'	25:BA:1914:C:H6	1.78	0.47
25:BA:2698:G:H5'	61:BA:4643:HOH:O	2.15	0.47
34:BO:64:ARG:NH1	34:BO:81:ASP:OD1	2.46	0.47
1:CA:457:C:H2'	1:CA:458:C:C6	2.49	0.47
1:CA:577:G:C8	1:CA:816:A:C6	3.02	0.47
1:CA:932:C:H2'	1:CA:933:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1009:G:N2	1:CA:1010:G:H1'	2.30	0.47
1:CA:1157:A:N7	1:CA:1180:A:C6	2.82	0.47
6:CF:2:ARG:NE	6:CF:69:GLU:HG2	2.29	0.47
11:CK:48:ILE:C	11:CK:50:TYR:H	2.21	0.47
12:CL:79:GLU:HB3	12:CL:80:HIS:HD2	1.78	0.47
20:CT:46:GLU:O	20:CT:46:GLU:HG2	2.13	0.47
25:DA:1027:A:C6	25:DA:1126:A:C4	3.02	0.47
25:DA:1637:A:H4'	25:DA:2711:A:O2'	2.14	0.47
25:DA:1786:A:H1'	25:DA:1938:A:N6	2.29	0.47
25:DA:1935:G:H1'	25:DA:1964:G:N2	2.29	0.47
30:DG:114:ILE:HD12	30:DG:117:PHE:HD2	1.79	0.47
44:DY:9:LYS:HA	44:DY:10:GLY:HA2	1.67	0.47
1:AA:277:C:H5''	17:AQ:68:ARG:NH2	2.30	0.47
1:AA:430:A:H2'	1:AA:431:A:O4'	2.15	0.47
1:AA:1125:U:O4	1:AA:1128:C:C5	2.68	0.47
3:AC:123:GLN:HG2	3:AC:128:PHE:CD2	2.50	0.47
6:AF:99:ALA:O	18:AR:28:GLU:HG3	2.14	0.47
8:AH:6:ILE:HB	8:AH:85:ARG:NH1	2.29	0.47
10:AJ:5:ARG:O	10:AJ:98:ILE:HA	2.14	0.47
13:AM:20:THR:C	13:AM:22:ILE:H	2.21	0.47
14:AN:4:LYS:HD3	14:AN:7:ILE:CG2	2.44	0.47
25:BA:911:G:O2'	25:BA:912:C:H5'	2.14	0.47
25:BA:956:A:OP2	61:BA:4430:HOH:O	2.20	0.47
25:BA:2116:G:OP1	32:BI:22:LYS:HD2	2.14	0.47
25:BA:2538:G:H5'	25:BA:2755:C:O2'	2.13	0.47
25:BA:2643:G:N2	25:BA:2800:C:O2	2.40	0.47
27:BD:132:PRO:HA	27:BD:190:TYR:HA	1.96	0.47
28:BE:176:ILE:HB	28:BE:181:LEU:HB2	1.96	0.47
29:BF:7:TYR:CD2	29:BF:24:LEU:HB2	2.49	0.47
32:BI:110:ASP:HA	32:BI:111:PRO:HD2	1.72	0.47
1:CA:341:C:H6	1:CA:341:C:O5'	1.98	0.47
1:CA:554:C:H2'	1:CA:555:C:C6	2.49	0.47
2:CB:163:PHE:HA	2:CB:185:ILE:HG12	1.96	0.47
19:CS:30:LEU:CD1	19:CS:32:LYS:HG3	2.41	0.47
25:DA:118:A:H1'	25:DA:178:G:O4'	2.14	0.47
25:DA:1523:U:C2	25:DA:1524:G:C8	3.01	0.47
25:DA:1528(A):A:C8	25:DA:1529:G:C8	3.03	0.47
25:DA:1932:A:H2'	25:DA:1933:G:O4'	2.14	0.47
25:DA:2303:G:H2'	25:DA:2304:G:O4'	2.14	0.47
25:DA:2319:G:C2	38:DS:3:ARG:HA	2.49	0.47
28:DE:72:VAL:HA	28:DE:73:GLU:CB	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DF:165:ARG:HG2	29:DF:168:ARG:HH21	1.79	0.47
31:DH:13:LYS:HA	31:DH:14:GLY:HA2	1.61	0.47
45:DZ:153:SER:HB3	45:DZ:167:PRO:HB3	1.96	0.47
49:D3:3:ARG:HH11	49:D3:60:GLU:CB	2.27	0.47
50:D4:15:ILE:HG23	50:D4:21:VAL:HG22	1.96	0.47
52:D6:38:LYS:HB2	52:D6:38:LYS:NZ	2.29	0.47
1:AA:481:G:H1'	1:AA:483:C:N4	2.30	0.47
1:AA:685:G:C2	1:AA:686:U:C4	3.02	0.47
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.96	0.47
1:AA:1256:A:H5''	1:AA:1258:G:C1'	2.44	0.47
5:AE:69:VAL:HG22	5:AE:71:LEU:HD23	1.96	0.47
9:AI:28:VAL:HA	9:AI:63:ILE:HB	1.97	0.47
9:AI:49:PRO:HG3	9:AI:101:PHE:HD2	1.79	0.47
25:BA:83:A:H5''	44:BY:8:LYS:HE3	1.97	0.47
25:BA:1828:C:H4'	27:BD:257:LEU:O	2.15	0.47
25:BA:2702:C:N4	25:BA:2726:A:H1'	2.29	0.47
25:BA:2795:G:OP2	61:BA:4647:HOH:O	2.20	0.47
29:BF:7:TYR:HD2	29:BF:24:LEU:HB2	1.78	0.47
29:BF:110:LEU:HD12	29:BF:205:ARG:HG2	1.96	0.47
29:BF:195:ASP:HB3	29:BF:198:ALA:H	1.78	0.47
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.13	0.47
1:CA:834:C:H2'	1:CA:835:U:H6	1.77	0.47
1:CA:954:G:H21	1:CA:1227:A:N6	2.08	0.47
1:CA:1133:G:N2	1:CA:1141:C:N3	2.59	0.47
5:CE:83:GLU:HG2	5:CE:88:LYS:HG3	1.95	0.47
9:CI:6:GLY:HA3	9:CI:80:GLY:O	2.14	0.47
20:CT:56:MET:HE1	20:CT:85:MET:HG2	1.96	0.47
25:DA:78:A:H2'	25:DA:79:G:C8	2.49	0.47
25:DA:86:C:H4'	25:DA:104:U:H1'	1.96	0.47
25:DA:565:C:H2'	25:DA:566:U:O4'	2.15	0.47
25:DA:639:U:H2'	25:DA:640:C:H6	1.79	0.47
25:DA:1012:U:H5	33:DN:28:THR:HG21	1.79	0.47
25:DA:1291:C:H2'	25:DA:1292:U:C6	2.49	0.47
25:DA:1513:C:H2'	25:DA:1514:U:C6	2.49	0.47
29:DF:160:ASN:HB3	29:DF:163:VAL:HB	1.96	0.47
30:DG:106:LEU:HA	30:DG:110:ALA:HB3	1.95	0.47
35:DP:99:LEU:HD23	35:DP:99:LEU:H	1.79	0.47
47:D1:3:LYS:H	47:D1:61:ARG:HH12	1.62	0.47
1:AA:567:G:H1'	61:AA:4081:HOH:O	2.13	0.47
1:AA:674:G:H2'	1:AA:675:A:C8	2.49	0.47
1:AA:701:C:OP1	1:AA:702:A:O2'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1137:C:H5''	1:AA:1138:G:OP1	2.15	0.47
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.49	0.47
2:AB:16:HIS:CB	2:AB:204:ASN:HB3	2.29	0.47
2:AB:166:ASP:HA	2:AB:167:PRO:HD3	1.73	0.47
5:AE:8:GLU:OE1	5:AE:63:ARG:NH2	2.48	0.47
5:AE:33:VAL:HG21	5:AE:109:ILE:HA	1.96	0.47
6:AF:97:PHE:HD2	18:AR:31:LEU:HD23	1.80	0.47
16:AP:38:TYR:O	16:AP:49:LEU:HD12	2.15	0.47
20:AT:58:LYS:O	20:AT:62:LEU:HB2	2.14	0.47
25:BA:12:U:H2'	25:BA:12:U:O2	2.14	0.47
25:BA:1517:G:C6	25:BA:1567:G:N7	2.83	0.47
25:BA:1547:C:O4'	27:BD:100:GLY:HA2	2.15	0.47
25:BA:1549:U:H2'	25:BA:1550:C:H6	1.79	0.47
25:BA:2087:C:H2'	25:BA:2088:C:H6	1.79	0.47
25:BA:2285:A:H2'	25:BA:2286:A:C8	2.49	0.47
25:BA:2325:C:C2'	25:BA:2326:C:H5'	2.45	0.47
25:BA:2846:U:C4	25:BA:2893:A:N6	2.83	0.47
30:BG:67:LYS:H	50:B4:6:HIS:CE1	2.33	0.47
39:BT:37:GLY:HA2	39:BT:38:ASN:HA	1.66	0.47
39:BT:91:ARG:HH11	39:BT:120:ARG:NH1	2.12	0.47
1:CA:1023:G:H3'	1:CA:1024:G:H8	1.79	0.47
1:CA:1080:A:H5''	1:CA:1081:G:OP2	2.15	0.47
1:CA:1217:C:H2'	1:CA:1218:C:O4'	2.14	0.47
1:CA:1292:U:C2	1:CA:1293:G:C8	3.03	0.47
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.15	0.47
25:DA:735:A:C6	25:DA:736:C:C2	3.03	0.47
25:DA:900:A:H2'	25:DA:901:A:O4'	2.15	0.47
25:DA:2408:U:H2'	25:DA:2409:G:C8	2.49	0.47
26:DB:43:C:C5	26:DB:45:A:N6	2.82	0.47
27:DD:71:ASP:OD2	27:DD:103:ARG:NH2	2.47	0.47
27:DD:221:VAL:HG22	27:DD:226:MET:CE	2.42	0.47
30:DG:64:THR:HB	30:DG:94:LEU:HD11	1.96	0.47
30:DG:103:LEU:HA	30:DG:106:LEU:HB3	1.96	0.47
36:DQ:32:TYR:CE1	36:DQ:133:ARG:HG3	2.49	0.47
41:DV:5:VAL:CG1	41:DV:57:VAL:HG21	2.44	0.47
1:AA:110:C:O2'	16:AP:25:ARG:O	2.32	0.47
1:AA:676:A:H2'	1:AA:677:U:C6	2.50	0.47
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.80	0.47
1:AA:1346:A:C8	7:AG:10:ARG:NH2	2.83	0.47
4:AD:11:LEU:HD23	4:AD:66:ARG:HB3	1.96	0.47
5:AE:12:LEU:HD22	5:AE:13:ILE:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:53:LEU:HD12	5:AE:53:LEU:H	1.79	0.47
9:AI:9:ARG:HG2	9:AI:14:VAL:HG13	1.97	0.47
11:AK:44:SER:OG	11:AK:47:VAL:HG23	2.14	0.47
17:AQ:10:VAL:HG13	17:AQ:19:VAL:HB	1.97	0.47
25:BA:399:G:H8	47:B1:65:SER:O	1.97	0.47
25:BA:572:A:H61	41:BV:18:LEU:HD23	1.80	0.47
25:BA:908:A:H2'	25:BA:909:G:O4'	2.14	0.47
25:BA:1223:C:H2'	25:BA:1224:C:C6	2.49	0.47
25:BA:1577:C:H1'	25:BA:1578:C:OP1	2.15	0.47
25:BA:2642:G:H2'	25:BA:2643:G:H8	1.79	0.47
26:BB:29:A:C2	26:BB:30:C:C2	3.03	0.47
30:BG:11:TYR:CE2	30:BG:16:ARG:HD3	2.50	0.47
31:BH:86:GLU:OE1	31:BH:132:ARG:NH1	2.45	0.47
35:BP:63:PRO:HB2	54:B8:30:ARG:NH2	2.30	0.47
45:BZ:70:LEU:HD23	45:BZ:70:LEU:HA	1.58	0.47
45:BZ:144:LEU:HD11	45:BZ:150:LEU:HD22	1.95	0.47
50:B4:14:ILE:HD12	50:B4:24:THR:HG21	1.96	0.47
1:CA:337:C:H2'	1:CA:338:A:C8	2.50	0.47
1:CA:410:G:H5''	1:CA:411:A:OP1	2.14	0.47
1:CA:622:A:H3'	1:CA:623:C:C6	2.49	0.47
1:CA:865:A:C2	1:CA:918:A:H4'	2.50	0.47
1:CA:985:C:H2'	1:CA:986:A:H8	1.80	0.47
1:CA:1119:C:N3	1:CA:1154:G:O6	2.48	0.47
1:CA:1137:C:H5''	1:CA:1138:G:OP1	2.15	0.47
3:CC:140:ARG:NH1	3:CC:140:ARG:HB2	2.29	0.47
6:CF:35:ALA:HA	6:CF:67:MET:HB3	1.96	0.47
8:CH:6:ILE:O	8:CH:10:LEU:HG	2.15	0.47
9:CI:7:THR:OG1	9:CI:83:ARG:NH1	2.48	0.47
10:CJ:25:GLU:O	10:CJ:29:ARG:HD3	2.15	0.47
25:DA:153:C:OP2	47:D1:92:LYS:NZ	2.46	0.47
25:DA:1197:G:H5'	25:DA:1227:G:O2'	2.14	0.47
25:DA:1359:A:C2	25:DA:1372:U:O4	2.68	0.47
25:DA:2319:G:N2	38:DS:3:ARG:HA	2.29	0.47
25:DA:2508:G:C2	25:DA:2582:G:C6	3.02	0.47
25:DA:2659:G:N2	25:DA:2661:G:H3'	2.30	0.47
28:DE:143:ASN:HD22	28:DE:147:PRO:CD	2.28	0.47
32:DI:3:VAL:HG12	32:DI:38:LEU:HA	1.96	0.47
47:D1:25:LYS:HG3	47:D1:31:GLY:HA2	1.97	0.47
49:D3:6:VAL:HG13	49:D3:56:VAL:HG13	1.96	0.47
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.49	0.47
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:162:ILE:HD11	2:AB:184:VAL:HG22	1.95	0.47
3:AC:112:SER:O	3:AC:116:VAL:HG23	2.14	0.47
25:BA:623:G:N2	25:BA:628:C:O3'	2.47	0.47
25:BA:1496:A:H5'	25:BA:1497:G:OP2	2.14	0.47
25:BA:1759:C:H2'	25:BA:1760:U:O4'	2.15	0.47
25:BA:1833:A:N1	25:BA:1853:G:H1'	2.30	0.47
25:BA:2299:A:H2	25:BA:2358:A:H62	1.60	0.47
25:BA:2584:A:N7	28:BE:144:ARG:HD2	2.30	0.47
27:BD:16:MET:HG3	27:BD:206:LEU:O	2.15	0.47
38:BS:24:LEU:HA	38:BS:24:LEU:HD23	1.70	0.47
47:B1:64:ALA:HA	47:B1:67:ILE:HG13	1.97	0.47
1:CA:429:U:H1'	1:CA:430:A:H5''	1.97	0.47
1:CA:441:A:H3'	1:CA:442:C:H6	1.79	0.47
1:CA:452:A:O2'	1:CA:453:A:OP2	2.29	0.47
1:CA:1209:C:O2'	1:CA:1214:C:N4	2.30	0.47
1:CA:1226:C:H4'	19:CS:80:TYR:OH	2.14	0.47
1:CA:1302:U:OP2	13:CM:21:TYR:OH	2.33	0.47
25:DA:1188:U:C4'	41:DV:79:VAL:HG22	2.45	0.47
25:DA:2078:C:C4	25:DA:2079:U:C4	3.02	0.47
25:DA:2315:G:H2'	25:DA:2316:C:C6	2.49	0.47
25:DA:2364:C:OP1	46:D0:55:ARG:NH1	2.48	0.47
25:DA:2538:C:H2'	25:DA:2539:C:H6	1.79	0.47
26:DB:79:C:H2'	26:DB:80:U:O4'	2.15	0.47
30:DG:45:GLU:C	30:DG:47:LYS:H	2.23	0.47
1:AA:172:A:N7	1:AA:174:C:C4	2.83	0.47
1:AA:276:G:C2'	1:AA:277:C:H5'	2.45	0.47
1:AA:435:C:H2'	1:AA:436:C:C6	2.50	0.47
1:AA:652:U:O2'	1:AA:653:A:OP2	2.26	0.47
1:AA:1125:U:N3	1:AA:1127:G:C5	2.68	0.47
3:AC:44:GLU:HG2	3:AC:52:LEU:HD22	1.97	0.47
3:AC:181:ASN:ND2	3:AC:204:LEU:HD12	2.30	0.47
4:AD:65:ARG:HG2	4:AD:75:PHE:CD1	2.50	0.47
5:AE:68:GLU:HG2	5:AE:70:PRO:HG3	1.97	0.47
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.50	0.47
8:AH:112:LEU:HB3	8:AH:133:LEU:HA	1.97	0.47
11:AK:20:TYR:HB2	11:AK:31:THR:HG23	1.97	0.47
24:AW:9:MVA:O	24:AW:10:2QY:CD2	2.62	0.47
25:BA:553:A:C2	25:BA:2065:C:H4'	2.50	0.47
25:BA:932:C:H3'	25:BA:933:C:C5'	2.43	0.47
25:BA:1809:U:H2'	25:BA:1815:A:N6	2.30	0.47
25:BA:2335:G:H2'	25:BA:2336:C:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:101:LEU:HD12	29:BF:102:PRO:HD2	1.97	0.47
29:BF:150:GLY:HA2	29:BF:172:TRP:CE3	2.50	0.47
30:BG:145:THR:OG1	30:BG:148:MET:SD	2.73	0.47
40:BU:78:THR:HG22	40:BU:117:GLN:HE22	1.80	0.47
1:CA:78:G:H2'	1:CA:79:G:H5'	1.97	0.47
1:CA:838:G:H1	1:CA:848:C:N4	2.13	0.47
1:CA:859:A:H2'	1:CA:860:A:O4'	2.15	0.47
1:CA:885:G:O2'	1:CA:914:A:N1	2.38	0.47
1:CA:957:U:H2'	1:CA:959:A:OP2	2.14	0.47
1:CA:1154:G:C8	1:CA:1155:G:C8	3.02	0.47
5:CE:84:PHE:N	5:CE:87:SER:O	2.48	0.47
5:CE:104:ALA:HA	5:CE:107:ARG:HB3	1.96	0.47
7:CG:138:LYS:HE2	7:CG:142:GLU:OE1	2.15	0.47
13:CM:16:ASP:OD1	13:CM:16:ASP:N	2.48	0.47
18:CR:24:ALA:C	18:CR:26:LEU:H	2.23	0.47
20:CT:50:GLU:HG3	20:CT:100:ILE:HD13	1.97	0.47
25:DA:585:G:H2'	25:DA:1251:C:H42	1.79	0.47
25:DA:678:C:H2'	25:DA:679:C:C6	2.50	0.47
35:DP:45:LEU:HA	35:DP:45:LEU:HD23	1.51	0.47
39:DT:78:LEU:O	39:DT:78:LEU:HD13	2.14	0.47
40:DU:89:GLU:HB2	41:DV:50:PRO:CB	2.45	0.47
42:DW:59:VAL:HG12	42:DW:60:ASN:HD22	1.80	0.47
1:AA:159:G:O2'	1:AA:161:A:N7	2.35	0.47
1:AA:458:C:H2'	1:AA:460:G:C8	2.50	0.47
1:AA:499:A:N3	1:AA:546:G:N2	2.54	0.47
1:AA:735:C:H2'	1:AA:736:C:H6	1.80	0.47
1:AA:1140:C:H2'	1:AA:1141:C:C6	2.49	0.47
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.50	0.47
1:AA:1273:G:H3'	1:AA:1274:G:H8	1.78	0.47
2:AB:178:ARG:HH22	8:AH:68:ARG:HH22	1.62	0.47
4:AD:173:TRP:HB2	4:AD:187:ARG:O	2.15	0.47
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.39	0.47
15:AO:24:SER:OG	15:AO:25:THR:N	2.48	0.47
25:BA:908:A:N3	26:BB:79:C:O2'	2.41	0.47
25:BA:2745:G:H3'	25:BA:2746:A:O4'	2.14	0.47
1:CA:160:A:H61	1:CA:347:G:H1'	1.80	0.47
1:CA:1492:A:H5''	1:CA:1493:A:OP2	2.15	0.47
4:CD:184:LYS:HE3	4:CD:186:LEU:HD23	1.96	0.47
7:CG:79:ARG:HB3	7:CG:80:VAL:H	1.39	0.47
7:CG:155:ARG:HB3	7:CG:155:ARG:CZ	2.43	0.47
16:CP:21:VAL:HG22	16:CP:33:ILE:HD12	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:76:LEU:HD12	18:CR:76:LEU:HA	1.74	0.47
25:DA:10:G:H1'	25:DA:2801(A):A:C6	2.50	0.47
25:DA:19:C:H2'	25:DA:20:C:C6	2.50	0.47
25:DA:489:G:N7	42:DW:49:LYS:NZ	2.61	0.47
25:DA:701:G:N2	25:DA:732:C:C2	2.82	0.47
25:DA:922:U:H2'	25:DA:923:C:C6	2.50	0.47
25:DA:1509(B):A:H2'	25:DA:1510:G:H8	1.77	0.47
25:DA:2227:A:OP1	27:DD:263:ARG:HD2	2.15	0.47
27:DD:80:ALA:HB3	27:DD:94:LEU:HD13	1.96	0.47
32:DI:65:ALA:O	32:DI:69:LYS:N	2.46	0.47
36:DQ:125:LEU:O	61:DQ:302:HOH:O	2.20	0.47
43:DX:59:VAL:N	43:DX:76:ARG:O	2.33	0.47
1:AA:93:G:O2'	1:AA:96:U:H5'	2.15	0.46
1:AA:103:C:OP2	20:AT:14:LYS:NZ	2.30	0.46
1:AA:103:C:P	20:AT:17:ARG:HH21	2.38	0.46
1:AA:189(D):C:O2	1:AA:189(H):G:C6	2.68	0.46
1:AA:189(F):U:O2'	17:AQ:63:ARG:NH2	2.48	0.46
1:AA:342:C:N3	1:AA:348:G:O6	2.48	0.46
1:AA:1129:C:H5''	9:AI:16:ARG:HH12	1.79	0.46
1:AA:1392:G:N2	1:AA:1502:A:C8	2.83	0.46
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.49	0.46
6:AF:12:PRO:HG3	6:AF:57:GLN:O	2.15	0.46
7:AG:113:GLU:HG3	7:AG:118:VAL:HG12	1.97	0.46
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.98	0.46
10:AJ:27:ALA:HA	10:AJ:81:THR:CG2	2.45	0.46
10:AJ:57:LYS:HD2	10:AJ:60:ARG:NH2	2.30	0.46
13:AM:16:ASP:N	13:AM:16:ASP:OD1	2.47	0.46
25:BA:714:U:O2	54:B8:2:PRO:HD2	2.14	0.46
25:BA:1229:G:H5'	49:B3:29:ARG:HH12	1.80	0.46
46:B0:43:THR:HG23	46:B0:43:THR:O	2.14	0.46
1:CA:922:G:N3	1:CA:1398:A:H2	2.13	0.46
1:CA:1068:G:N2	1:CA:1191:A:N3	2.55	0.46
1:CA:1309:G:N2	1:CA:1329:A:H1'	2.30	0.46
1:CA:1310:G:H5'	13:CM:77:ASN:HD21	1.80	0.46
15:CO:39:LEU:HB3	15:CO:56:LEU:HD13	1.96	0.46
16:CP:55:ARG:O	16:CP:58:TYR:HB3	2.15	0.46
25:DA:75:G:H4'	48:D2:55:ARG:NH1	2.30	0.46
25:DA:807:U:OP2	35:DP:41:ARG:NH2	2.48	0.46
25:DA:1151:G:H5''	40:DU:81:HIS:CD2	2.50	0.46
25:DA:1199:U:H2'	25:DA:1200:C:C6	2.50	0.46
25:DA:1317:A:H2'	25:DA:1318:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2051:A:H5'	25:DA:2578:G:O4'	2.14	0.46
25:DA:2302:G:C2	25:DA:2303:G:C8	3.03	0.46
25:DA:2312:U:C4	25:DA:2313:C:H5	2.32	0.46
30:DG:78:SER:OG	30:DG:79:ASN:N	2.48	0.46
35:DP:44:GLY:CA	35:DP:45:LEU:HB2	2.45	0.46
35:DP:49:ARG:NH1	54:D8:61:LEU:HD23	2.30	0.46
35:DP:82:GLY:HA2	35:DP:113:LYS:O	2.15	0.46
53:D7:24:THR:O	53:D7:28:ARG:HG3	2.15	0.46
1:AA:646:U:H2'	1:AA:647:C:C6	2.50	0.46
1:AA:918:A:H2'	1:AA:919:A:C8	2.50	0.46
1:AA:1223:C:OP2	19:AS:78:ARG:NH2	2.45	0.46
2:AB:174:VAL:O	2:AB:178:ARG:HB2	2.14	0.46
6:AF:35:ALA:HA	6:AF:67:MET:HB3	1.96	0.46
25:BA:329:U:H2'	25:BA:330:U:C6	2.50	0.46
25:BA:768:C:H2'	25:BA:769:A:C8	2.49	0.46
25:BA:1688:A:H2'	25:BA:1689:G:O4'	2.14	0.46
25:BA:1900:G:H2'	25:BA:1901:C:C6	2.49	0.46
29:BF:106:ARG:H	29:BF:106:ARG:HG2	1.37	0.46
48:B2:37:PHE:O	48:B2:40:SER:HB3	2.14	0.46
1:CA:376:G:H2'	1:CA:377:G:H8	1.80	0.46
1:CA:840:C:H5''	1:CA:841:U:H5	1.80	0.46
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.77	0.46
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.15	0.46
6:CF:5:GLU:HG3	6:CF:93:SER:OG	2.16	0.46
10:CJ:57:LYS:HD2	10:CJ:60:ARG:HH21	1.81	0.46
25:DA:333:G:H2'	25:DA:333:G:N3	2.30	0.46
25:DA:924:C:H2'	25:DA:925:C:H6	1.79	0.46
25:DA:1221(A):C:C2	25:DA:1229:G:C2	3.03	0.46
25:DA:1669:A:H5''	25:DA:2550:G:OP1	2.15	0.46
25:DA:1866:C:H2'	25:DA:1876:A:O4'	2.15	0.46
25:DA:2348:U:O4	25:DA:2382:G:N1	2.48	0.46
29:DF:36:VAL:HG11	29:DF:183:VAL:HG11	1.97	0.46
1:AA:532:A:O2'	1:AA:533:A:P	2.74	0.46
1:AA:616:G:C2	1:AA:617:G:C8	3.04	0.46
1:AA:1005:A:H5'	1:AA:1038:C:H1'	1.96	0.46
1:AA:1131:G:H2'	1:AA:1132:C:C6	2.50	0.46
1:AA:1232:U:OP1	9:AI:124:GLN:HG2	2.15	0.46
2:AB:55:PHE:HE1	2:AB:218:ALA:HA	1.80	0.46
8:AH:34:GLU:CD	8:AH:37:ARG:HH22	2.23	0.46
10:AJ:20:ALA:HA	10:AJ:23:ILE:HG22	1.95	0.46
19:AS:20:LEU:HD23	19:AS:23:ASN:HD22	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AW:9:MVA:HA	24:AW:10:2QY:H82	1.39	0.46
25:BA:324:A:P	44:BY:86:ARG:HH22	2.38	0.46
25:BA:335:A:C6	25:BA:352:U:C4	3.04	0.46
25:BA:364:A:H2'	25:BA:365:G:O4'	2.15	0.46
25:BA:436:C:O2'	25:BA:437:G:H5'	2.16	0.46
25:BA:636:G:N2	25:BA:640:A:O2'	2.48	0.46
25:BA:664:U:H2'	25:BA:665:C:C6	2.50	0.46
25:BA:982:U:H2'	25:BA:983:G:O4'	2.15	0.46
25:BA:2314:G:N2	25:BA:2327:G:C4	2.84	0.46
25:BA:2389:A:H2'	25:BA:2390:A:C8	2.50	0.46
28:BE:51:PHE:H	28:BE:75:VAL:CG1	2.27	0.46
30:BG:16:ARG:O	30:BG:20:ILE:HG13	2.15	0.46
32:BI:81:VAL:HG21	32:BI:88:ILE:HD13	1.96	0.46
45:BZ:120:ILE:HB	45:BZ:171:ILE:HA	1.97	0.46
51:B5:42:PRO:HB2	51:B5:43:HIS:ND1	2.30	0.46
1:CA:1003:G:C6	1:CA:1004:A:H2	2.34	0.46
1:CA:1327:C:H2'	1:CA:1328:C:C6	2.51	0.46
2:CB:15:VAL:CG1	2:CB:209:ARG:HB3	2.41	0.46
2:CB:77:ALA:HA	2:CB:80:ILE:HG22	1.96	0.46
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.15	0.46
13:CM:60:VAL:HG22	13:CM:66:LEU:HD11	1.96	0.46
25:DA:263:C:H2'	25:DA:264:C:O4'	2.15	0.46
25:DA:491:G:H2'	25:DA:492:A:H8	1.80	0.46
25:DA:861:A:C2	25:DA:917:A:C4	3.03	0.46
25:DA:874:G:H2'	25:DA:875:G:O4'	2.15	0.46
25:DA:1593:G:C4	25:DA:1594:G:C8	3.03	0.46
25:DA:1668:A:H4'	25:DA:1669:A:O5'	2.14	0.46
25:DA:1740:G:H2'	25:DA:1741:A:C8	2.51	0.46
26:DB:33:G:C2	26:DB:50:G:C2	3.04	0.46
26:DB:90:A:N7	26:DB:91:C:H1'	2.30	0.46
29:DF:129:PHE:O	29:DF:132:VAL:HG13	2.15	0.46
30:DG:16:ARG:HB2	30:DG:17:PRO:HD3	1.98	0.46
40:DU:59:ARG:HB3	40:DU:59:ARG:HH11	1.80	0.46
40:DU:76:TYR:CZ	40:DU:80:ILE:HG13	2.51	0.46
1:AA:391:G:C6	1:AA:392:G:C5	3.03	0.46
1:AA:814:A:H2'	1:AA:816:A:H5''	1.97	0.46
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.15	0.46
4:AD:155:LEU:O	4:AD:158:ILE:HG12	2.15	0.46
8:AH:39:LEU:HD12	8:AH:39:LEU:HA	1.79	0.46
9:AI:121:ARG:NH1	9:AI:122:ALA:O	2.49	0.46
15:AO:8:LYS:O	15:AO:12:ILE:HG13	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:85:C:H4'	25:BA:102:U:H1'	1.97	0.46
25:BA:736:A:N3	25:BA:826:U:O2'	2.43	0.46
25:BA:926:G:H2'	25:BA:927:G:C1'	2.46	0.46
25:BA:1217:G:H3'	25:BA:1218:G:H5'	1.98	0.46
25:BA:1592:A:H2'	25:BA:1593:C:O4'	2.16	0.46
25:BA:2225:U:O4'	27:BD:151:LYS:HE2	2.14	0.46
25:BA:2658:C:OP2	25:BA:2745:G:O2'	2.19	0.46
44:BY:30:VAL:O	44:BY:32:PRO:HD3	2.16	0.46
1:CA:1192:C:OP2	3:CC:4:LYS:NZ	2.45	0.46
1:CA:1203:C:H2'	1:CA:1204:A:O4'	2.16	0.46
1:CA:1238:A:C2	1:CA:1303:C:H4'	2.50	0.46
1:CA:1240:U:O2'	7:CG:32:ARG:HD3	2.16	0.46
2:CB:167:PRO:HD3	2:CB:187:LEU:O	2.15	0.46
3:CC:6:HIS:CD2	3:CC:8:ILE:H	2.32	0.46
5:CE:10:MET:HE2	5:CE:55:VAL:HG11	1.96	0.46
14:CN:3:ARG:O	14:CN:7:ILE:HG23	2.15	0.46
25:DA:568:U:H5'	25:DA:945:A:C2	2.50	0.46
25:DA:647:G:H8	25:DA:647:G:O5'	1.99	0.46
25:DA:656:G:H2'	25:DA:657:U:O4'	2.14	0.46
25:DA:792:G:H5''	25:DA:793:A:H5'	1.98	0.46
25:DA:857:C:H2'	25:DA:858:U:C6	2.50	0.46
25:DA:888:C:H2'	25:DA:889:C:N3	2.30	0.46
25:DA:889:C:O2'	25:DA:890:A:H8	1.99	0.46
25:DA:956:G:OP1	36:DQ:87:LYS:HG3	2.16	0.46
25:DA:1142:U:O2	25:DA:1142:U:H2'	2.15	0.46
25:DA:1259:G:H2'	25:DA:1260:G:C8	2.50	0.46
25:DA:1358:G:O2'	25:DA:1359:A:H5''	2.15	0.46
25:DA:1529:G:O2'	25:DA:1530:C:H5'	2.16	0.46
25:DA:1794:U:H2'	25:DA:1795:C:H6	1.80	0.46
44:DY:5:MET:HE2	44:DY:5:MET:HB2	1.71	0.46
54:D8:30:ARG:HD3	54:D8:30:ARG:HA	1.69	0.46
1:AA:59:A:H5''	1:AA:60:A:H5''	1.97	0.46
1:AA:186:C:H2'	1:AA:187:C:H6	1.80	0.46
1:AA:437:U:O3'	4:AD:125:HIS:CE1	2.69	0.46
1:AA:863:U:H2'	1:AA:865:A:OP2	2.15	0.46
1:AA:1149:C:H2'	1:AA:1150:U:H6	1.81	0.46
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.50	0.46
2:AB:16:HIS:CD2	2:AB:17:PHE:N	2.81	0.46
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.96	0.46
8:AH:97:VAL:HG23	8:AH:129:VAL:O	2.16	0.46
25:BA:696:C:P	25:BA:696:C:H6	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:910:A:H2'	25:BA:911:G:C8	2.50	0.46
25:BA:2799:U:O2'	28:BE:62:PRO:O	2.25	0.46
1:CA:693:G:H1'	7:CG:82:GLY:HA3	1.97	0.46
1:CA:1120:G:N1	1:CA:1154:G:N3	2.64	0.46
1:CA:1240:U:C2	7:CG:32:ARG:HD2	2.50	0.46
1:CA:1286:A:H2'	1:CA:1287:A:H4'	1.96	0.46
2:CB:47:THR:HA	2:CB:202:PRO:HG2	1.98	0.46
3:CC:104:GLN:HE21	3:CC:104:GLN:HB3	1.58	0.46
5:CE:137:GLU:HG2	5:CE:140:ARG:NH1	2.29	0.46
6:CF:38:GLU:HB2	6:CF:64:GLN:HG2	1.96	0.46
13:CM:15:VAL:HG11	13:CM:48:LEU:HD21	1.96	0.46
13:CM:33:ALA:HA	13:CM:59:TYR:CE2	2.49	0.46
25:DA:34:C:H6	25:DA:34:C:OP1	1.99	0.46
25:DA:302:C:H2'	25:DA:303:U:C6	2.50	0.46
25:DA:1506:C:H2'	25:DA:1507:A:H5'	1.98	0.46
25:DA:2287:A:O2'	25:DA:2288:A:H3'	2.15	0.46
25:DA:2747:G:H21	25:DA:2757:A:H62	1.64	0.46
29:DF:184:TYR:CE1	35:DP:3:LEU:HD21	2.50	0.46
31:DH:137:ASP:HB3	31:DH:140:LYS:HB3	1.95	0.46
33:DN:71:ILE:HG21	33:DN:84:LYS:HB3	1.98	0.46
40:DU:78:THR:HG22	40:DU:117:GLN:HE21	1.81	0.46
1:AA:292:G:N7	1:AA:293:G:H1'	2.31	0.46
2:AB:36:ARG:C	2:AB:38:GLY:H	2.23	0.46
2:AB:127:ILE:HB	2:AB:129:GLU:H	1.79	0.46
25:BA:68:C:O2'	25:BA:69:G:H5'	2.16	0.46
25:BA:553:A:N1	25:BA:2064:A:H2'	2.30	0.46
25:BA:922:G:H1	25:BA:948:C:N4	2.13	0.46
25:BA:2736:C:O3'	37:BR:1:MET:HE3	2.16	0.46
25:BA:2901:A:N6	25:BA:2902:G:N1	2.64	0.46
1:CA:25:C:H2'	1:CA:26:A:C8	2.51	0.46
1:CA:32:A:C2	1:CA:33:A:C4	3.04	0.46
1:CA:323:U:H2'	1:CA:324:G:O4'	2.16	0.46
1:CA:1145:C:H5''	1:CA:1146:A:OP1	2.16	0.46
1:CA:1154:G:N7	1:CA:1155:G:C5	2.83	0.46
1:CA:1154:G:O6	1:CA:1155:G:N1	2.48	0.46
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.51	0.46
2:CB:17:PHE:HB2	2:CB:44:LEU:CD1	2.46	0.46
4:CD:191:ARG:HD2	4:CD:191:ARG:O	2.16	0.46
7:CG:12:LEU:H	7:CG:12:LEU:HD12	1.80	0.46
7:CG:89:MET:HE3	7:CG:89:MET:HB3	1.80	0.46
9:CI:26:VAL:HG22	9:CI:61:ALA:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:3:ARG:CA	50:D4:34:GLU:HG2	2.43	0.46
16:CP:6:LEU:HD23	16:CP:17:TYR:CG	2.51	0.46
19:CS:22:LEU:HB3	19:CS:27:GLU:HG3	1.97	0.46
20:CT:33:ILE:HG13	20:CT:62:LEU:HD22	1.96	0.46
25:DA:1341:U:OP1	25:DA:1397:U:N3	2.40	0.46
25:DA:1364:G:P	47:D1:3:LYS:HG3	2.55	0.46
25:DA:1589:C:H2'	25:DA:1590:U:H6	1.80	0.46
25:DA:2280:G:O2'	25:DA:2388:A:N1	2.38	0.46
29:DF:53:THR:HG23	29:DF:55:GLY:N	2.26	0.46
37:DR:1:MET:HE3	37:DR:3:HIS:CE1	2.51	0.46
38:DS:38:GLN:HB2	38:DS:47:THR:HG23	1.96	0.46
45:DZ:54:HIS:CG	45:DZ:101:PRO:HG3	2.51	0.46
1:AA:346:G:OP1	39:BT:41:ARG:NH2	2.48	0.46
1:AA:865:A:H2	1:AA:918:A:H4'	1.79	0.46
1:AA:1270:C:H2'	1:AA:1271:G:H5'	1.98	0.46
3:AC:58:GLU:O	3:AC:59:ARG:HG3	2.15	0.46
24:AW:3:004:C	24:AW:4:PRO:O	2.63	0.46
25:BA:1071:G:C4	25:BA:1180:C:H1'	2.50	0.46
30:BG:102:PHE:CE1	30:BG:141:PHE:HE2	2.25	0.46
36:BQ:21:THR:HG21	36:BQ:101:ARG:HB2	1.98	0.46
1:CA:232:G:H1'	1:CA:262:A:N1	2.30	0.46
1:CA:918:A:H2'	1:CA:919:A:C8	2.50	0.46
1:CA:1126:U:H6	1:CA:1281:U:O2	1.98	0.46
3:CC:106:VAL:HG11	3:CC:115:LEU:HD21	1.98	0.46
5:CE:7:GLU:OE1	5:CE:37:ARG:NH2	2.47	0.46
9:CI:14:VAL:HG22	9:CI:66:ARG:O	2.16	0.46
9:CI:99:LEU:HB3	9:CI:101:PHE:HE1	1.81	0.46
25:DA:1324:G:C2	25:DA:1331:A:C2	3.04	0.46
25:DA:1371:G:H2'	25:DA:1372:U:H5	1.80	0.46
25:DA:1420:U:HO2'	25:DA:1421:G:P	2.39	0.46
25:DA:2443:C:H2'	25:DA:2444:G:H8	1.80	0.46
25:DA:2885:C:O2'	51:D5:34:PRO:HG3	2.14	0.46
28:DE:36:ARG:HD3	28:DE:85:ASN:HD21	1.80	0.46
34:DO:120:GLU:HB2	39:DT:68:TYR:HE2	1.81	0.46
36:DQ:32:TYR:OH	36:DQ:111:GLU:OE1	2.29	0.46
43:DX:41:ASN:O	43:DX:45:THR:HG23	2.15	0.46
46:D0:82:ARG:HA	46:D0:83:PRO:HD3	1.73	0.46
51:D5:40:LYS:HD3	51:D5:41:PRO:O	2.16	0.46
1:AA:578:C:O2'	1:AA:728:A:N3	2.43	0.46
1:AA:658:G:C2	1:AA:749:C:N3	2.83	0.46
1:AA:676:A:H2'	1:AA:677:U:H6	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:54:THR:HG22	2:AB:58:ILE:HD11	1.97	0.46
3:AC:113:ALA:H	3:AC:183:ASP:CG	2.24	0.46
3:AC:115:LEU:O	3:AC:118:GLN:HG2	2.15	0.46
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.16	0.46
5:AE:77:PRO:HG2	5:AE:78:HIS:CD2	2.51	0.46
25:BA:279:G:H5''	25:BA:279:G:H8	1.81	0.46
25:BA:1233:U:C2'	25:BA:1234:A:H5'	2.45	0.46
25:BA:1662:A:H4'	25:BA:1663:C:OP2	2.15	0.46
31:BH:71:LEU:HD12	31:BH:71:LEU:HA	1.70	0.46
1:CA:96:U:O2'	1:CA:97:G:H5'	2.15	0.46
1:CA:174:C:H2'	1:CA:175:C:H6	1.81	0.46
1:CA:283:C:H2'	1:CA:284:G:O4'	2.15	0.46
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.98	0.46
1:CA:1491:G:H3'	1:CA:1492:A:C8	2.50	0.46
6:CF:22:GLU:O	6:CF:26:ILE:HG13	2.16	0.46
19:CS:20:LEU:HA	19:CS:23:ASN:HD22	1.81	0.46
25:DA:32:C:O2'	25:DA:33:U:H5'	2.16	0.46
25:DA:492:A:H2'	25:DA:493:G:O4'	2.16	0.46
25:DA:1198:U:H2'	25:DA:1199:U:C6	2.50	0.46
25:DA:1213:A:N3	25:DA:1238:G:O2'	2.46	0.46
25:DA:1773:A:C5	25:DA:1829:A:H1'	2.51	0.46
26:DB:31:C:C2'	26:DB:32:C:H5'	2.45	0.46
30:DG:170:ARG:HH21	30:DG:180:PHE:CB	2.28	0.46
50:D4:46:GLN:HG2	50:D4:48:ARG:HE	1.81	0.46
1:AA:303:A:HO2'	1:AA:555:C:HO2'	1.56	0.46
1:AA:597:G:H5''	1:AA:598:U:OP2	2.16	0.46
1:AA:736:C:H2'	1:AA:737:A:C8	2.51	0.46
1:AA:920:U:H2'	1:AA:921:U:C6	2.51	0.46
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.31	0.46
7:AG:69:VAL:HG12	7:AG:100:ALA:HA	1.96	0.46
9:AI:27:THR:O	9:AI:63:ILE:N	2.49	0.46
25:BA:160:G:O2'	25:BA:161:C:H5'	2.16	0.46
25:BA:593:G:H2'	25:BA:2052:A:C5	2.50	0.46
25:BA:1008:U:H2'	25:BA:1009:C:C6	2.51	0.46
25:BA:1096:A:H2'	25:BA:1096:A:N3	2.30	0.46
25:BA:1199:C:H2'	25:BA:1200:G:O4'	2.16	0.46
25:BA:2786:C:H2'	25:BA:2787:C:C6	2.51	0.46
40:BU:66:ASN:O	40:BU:70:ARG:HG3	2.15	0.46
40:BU:95:LEU:HD12	40:BU:95:LEU:HA	1.78	0.46
1:CA:89:C:H2'	1:CA:90:U:O4'	2.16	0.46
1:CA:757:U:O2'	1:CA:879:C:O2	2.32	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.51	0.46
2:CB:19:HIS:HB2	2:CB:204:ASN:HB2	1.98	0.46
2:CB:145:LEU:O	2:CB:149:LEU:HB2	2.15	0.46
7:CG:50:ILE:HD11	7:CG:58:PRO:HA	1.98	0.46
13:CM:20:THR:C	13:CM:22:ILE:H	2.23	0.46
17:CQ:41:LYS:NZ	17:CQ:92:ARG:HH21	2.14	0.46
18:CR:53:ARG:HA	18:CR:56:THR:HG1	1.81	0.46
25:DA:189:G:H2'	25:DA:205:G:N2	2.30	0.46
25:DA:704:G:H1'	25:DA:726:G:H22	1.81	0.46
25:DA:987:G:O2'	25:DA:1000:A:N3	2.44	0.46
25:DA:1163:G:O2'	25:DA:1164:G:H5'	2.16	0.46
25:DA:1417:C:H2'	25:DA:1418:G:O4'	2.16	0.46
25:DA:2228:G:C6	25:DA:2229:C:C4	3.04	0.46
25:DA:2831:G:P	28:DE:58:ARG:HH22	2.38	0.46
36:DQ:111:GLU:O	36:DQ:115:MET:HG2	2.16	0.46
52:D6:19:ARG:N	52:D6:19:ARG:HD2	2.30	0.46
55:D9:17:ILE:HD12	55:D9:17:ILE:HA	1.76	0.46
1:AA:78:G:C2	1:AA:91:C:N3	2.84	0.46
1:AA:658:G:H2'	1:AA:659:U:H6	1.80	0.46
10:AJ:30:SER:O	10:AJ:81:THR:HG23	2.16	0.46
25:BA:508:A:H5''	25:BA:509:A:OP1	2.16	0.46
25:BA:751:G:O2'	25:BA:773:G:N2	2.35	0.46
25:BA:1171:G:H5'	55:B9:37:GLY:HA2	1.98	0.46
25:BA:1264:G:OP2	40:BU:19:LYS:HE3	2.15	0.46
25:BA:1629:C:H2'	25:BA:1630:A:H8	1.81	0.46
25:BA:1854:G:OP1	27:BD:54:ARG:NH1	2.48	0.46
25:BA:2812:A:N3	25:BA:2904:U:H1'	2.31	0.46
27:BD:182:LEU:HD23	27:BD:182:LEU:HA	1.65	0.46
28:BE:143:ASN:HD22	28:BE:147:PRO:HD3	1.81	0.46
32:BI:104:GLN:HG3	32:BI:105:HIS:HD2	1.80	0.46
44:BY:15:VAL:HG21	44:BY:42:VAL:HG11	1.99	0.46
1:CA:923:A:H2'	1:CA:924:C:C6	2.51	0.46
1:CA:983:A:H3'	1:CA:983:A:N3	2.31	0.46
1:CA:1077:G:C2	1:CA:1081:G:C6	3.04	0.46
1:CA:1305:G:O2'	1:CA:1331:G:N2	2.49	0.46
16:CP:40:ASP:O	16:CP:48:TRP:HB2	2.16	0.46
25:DA:1885:A:H2'	25:DA:1886:C:O4'	2.17	0.46
25:DA:2207:G:H3'	25:DA:2208:A:H5''	1.98	0.46
25:DA:2354:G:OP1	46:D0:32:ARG:NH2	2.49	0.46
25:DA:2461:C:H2'	25:DA:2462:U:C6	2.51	0.46
33:DN:19:GLU:HA	33:DN:59:LYS:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DQ:108:GLY:HA3	45:DZ:116:VAL:HG13	1.96	0.46
45:DZ:70:LEU:HD23	45:DZ:70:LEU:HA	1.79	0.46
1:AA:752:G:H4'	15:AO:69:TYR:OH	2.16	0.45
1:AA:1424:C:H2'	1:AA:1425:U:O4'	2.15	0.45
4:AD:30:LYS:HA	4:AD:35:ARG:NH1	2.31	0.45
4:AD:190:ASP:OD1	4:AD:190:ASP:N	2.49	0.45
11:AK:31:THR:HA	11:AK:42:TRP:HA	1.98	0.45
11:AK:99:GLN:HG3	11:AK:105:VAL:HG11	1.97	0.45
26:BB:48:A:H4'	38:BS:95:HIS:CD2	2.42	0.45
26:BB:75:G:H5''	26:BB:75:G:H8	1.80	0.45
27:BD:72:LYS:HB3	27:BD:75:ILE:HD12	1.99	0.45
36:BQ:85:LYS:HD3	46:B0:7:LEU:HG	1.98	0.45
42:BW:71:VAL:HA	42:BW:107:LEU:HD12	1.98	0.45
1:CA:195:A:N3	1:CA:222:U:O2'	2.46	0.45
1:CA:433:C:H2'	1:CA:434:U:C6	2.49	0.45
1:CA:692:U:O2'	1:CA:694:A:N7	2.37	0.45
1:CA:931:C:H42	1:CA:1386:G:H1	1.64	0.45
1:CA:1058:G:N2	10:CJ:53:PRO:HG3	2.31	0.45
1:CA:1243:C:H2'	1:CA:1244:C:H6	1.81	0.45
3:CC:183:ASP:N	3:CC:202:ILE:O	2.46	0.45
4:CD:20:TYR:CD1	4:CD:26:CYS:HB3	2.51	0.45
13:CM:3:ARG:HD2	13:CM:3:ARG:C	2.41	0.45
25:DA:77:C:O2'	48:D2:14:ARG:NH2	2.49	0.45
25:DA:556:G:C6	25:DA:557:U:C4	3.04	0.45
25:DA:1405:U:H2'	25:DA:1406:U:H6	1.77	0.45
25:DA:1707:G:H2'	25:DA:1708:C:C6	2.51	0.45
25:DA:1783:A:H5'	25:DA:2608:G:H4'	1.98	0.45
25:DA:2065:C:H2'	25:DA:2066:C:H6	1.80	0.45
33:DN:30:ILE:O	33:DN:34:LEU:HD22	2.16	0.45
36:DQ:42:ILE:HG22	36:DQ:47:ILE:HG13	1.98	0.45
38:DS:77:ALA:HB1	38:DS:82:ILE:HB	1.97	0.45
39:DT:61:PHE:CE1	39:DT:76:PHE:HB2	2.51	0.45
44:DY:19:LYS:HE2	44:DY:20:TYR:CE1	2.51	0.45
50:D4:64:GLY:C	50:D4:66:SER:N	2.71	0.45
1:AA:923:A:OP1	5:AE:21:ALA:HB2	2.15	0.45
1:AA:958:A:C6	1:AA:959:A:N1	2.84	0.45
11:AK:84:VAL:HG11	11:AK:91:ARG:HD2	1.97	0.45
19:AS:38:SER:O	19:AS:70:LYS:HD3	2.17	0.45
25:BA:1702:A:H3'	25:BA:1703:C:H6	1.81	0.45
27:BD:43:ARG:HA	27:BD:48:ARG:O	2.16	0.45
28:BE:144:ARG:HB3	28:BE:145:LYS:H	1.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:8:GLN:OE1	29:BF:19:GLU:HG2	2.17	0.45
30:BG:97:ASP:O	30:BG:101:ILE:HG13	2.16	0.45
31:BH:174:GLY:O	31:BH:175:LYS:HB3	2.16	0.45
38:BS:59:LYS:HZ2	38:BS:68:GLN:HE22	1.65	0.45
39:BT:29:ARG:HB2	39:BT:46:GLU:HG3	1.97	0.45
41:BV:98:GLU:CD	41:BV:100:ARG:HH11	2.24	0.45
45:BZ:136:PHE:O	45:BZ:137:ILE:HG13	2.17	0.45
1:CA:689:C:O4'	1:CA:704:A:H2	1.99	0.45
1:CA:1004:A:H3'	1:CA:1005:A:O4'	2.16	0.45
1:CA:1329:A:P	13:CM:28:ALA:HB3	2.57	0.45
2:CB:51:LEU:HD23	2:CB:201:ILE:HD12	1.97	0.45
5:CE:33:VAL:HG13	5:CE:112:LEU:HD12	1.98	0.45
25:DA:57:C:H2'	25:DA:58:G:O4'	2.16	0.45
25:DA:94(A):G:N2	48:D2:47:ASN:OD1	2.40	0.45
25:DA:428:A:H3'	25:DA:429:A:H8	1.81	0.45
25:DA:776:G:C8	25:DA:793:A:C2	3.04	0.45
25:DA:858:U:O2	25:DA:2268:A:H2'	2.16	0.45
25:DA:881:G:C2	25:DA:882:G:C4	3.03	0.45
25:DA:1266:G:O4'	42:DW:15:ARG:NH2	2.48	0.45
25:DA:1321:A:H2'	25:DA:1322:A:O4'	2.16	0.45
25:DA:2443:C:H2'	25:DA:2444:G:C8	2.51	0.45
29:DF:31:HIS:NE2	29:DF:35:GLU:OE2	2.49	0.45
30:DG:61:ALA:HA	30:DG:66:GLN:O	2.15	0.45
34:DO:4:PRO:O	34:DO:5:GLN:HB2	2.17	0.45
38:DS:30:ARG:HD3	38:DS:98:VAL:HG22	1.97	0.45
41:DV:62:LEU:CD1	41:DV:95:LEU:HB2	2.46	0.45
45:DZ:6:LYS:HE3	45:DZ:8:TYR:OH	2.16	0.45
1:AA:181:G:N1	1:AA:195:A:C8	2.84	0.45
1:AA:323:U:OP1	20:AT:23:ARG:HA	2.16	0.45
1:AA:355:C:C4	1:AA:356:A:N7	2.84	0.45
1:AA:660:G:H2'	1:AA:661:G:H8	1.82	0.45
1:AA:1030:C:H5''	1:AA:1030(A):G:O5'	2.16	0.45
1:AA:1082:G:H2'	1:AA:1083:U:O4'	2.16	0.45
4:AD:107:ARG:HA	4:AD:107:ARG:HD2	1.72	0.45
5:AE:44:GLY:HA3	5:AE:62:ALA:HB2	1.99	0.45
19:AS:12:ASP:OD1	19:AS:37:ARG:HD2	2.16	0.45
25:BA:471:C:H2'	25:BA:472:G:O4'	2.16	0.45
29:BF:184:TYR:O	29:BF:188:ARG:HG3	2.16	0.45
45:BZ:28:MET:HA	45:BZ:88:PHE:O	2.16	0.45
1:CA:243:A:C2	1:CA:246:A:C8	3.05	0.45
1:CA:299:G:H2'	1:CA:300:A:C8	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:790:A:C6	1:CA:791:G:C6	3.05	0.45
1:CA:1007:C:N3	1:CA:1022:G:C2	2.83	0.45
1:CA:1194:U:H2'	1:CA:1195:C:C6	2.51	0.45
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.52	0.45
1:CA:1342:C:H4'	9:CI:125:TYR:HB3	1.97	0.45
1:CA:1479:C:H2'	1:CA:1480:G:C8	2.51	0.45
3:CC:28:GLN:HB3	3:CC:32:LEU:HD23	1.96	0.45
12:CL:117:ARG:NH2	12:CL:124:LYS:HB2	2.31	0.45
19:CS:22:LEU:HD23	19:CS:28:LYS:HA	1.98	0.45
20:CT:89:ARG:O	20:CT:93:GLU:HB2	2.15	0.45
25:DA:858:U:H1'	25:DA:2268:A:H2'	1.97	0.45
25:DA:903:C:H2'	25:DA:904:C:H6	1.80	0.45
25:DA:2335:A:C8	25:DA:2337:G:N7	2.84	0.45
25:DA:2439:A:H5'	25:DA:2439:A:C8	2.50	0.45
25:DA:2693:A:H2'	25:DA:2694:G:H8	1.81	0.45
36:DQ:56:ARG:HH11	36:DQ:56:ARG:HG3	1.81	0.45
1:AA:299:G:C6	1:AA:300:A:C6	3.04	0.45
1:AA:1035:A:H2	1:AA:1036:G:N7	2.15	0.45
1:AA:1523:G:OP1	11:AK:123:LYS:HD2	2.16	0.45
4:AD:15:GLU:HG2	4:AD:63:LYS:HB3	1.99	0.45
25:BA:270:C:H6	25:BA:270:C:O5'	1.99	0.45
25:BA:1825:U:H2'	25:BA:1826:C:H6	1.82	0.45
25:BA:1882:U:H3	25:BA:1913:G:H1	1.64	0.45
25:BA:2117:C:H2'	25:BA:2118:U:O4'	2.16	0.45
26:BB:32:C:C2	26:BB:51:G:N2	2.85	0.45
31:BH:159:GLU:HG3	31:BH:169:VAL:HG11	1.99	0.45
43:BX:26:TYR:CE2	43:BX:89:ILE:HG13	2.51	0.45
54:B8:30:ARG:HA	54:B8:30:ARG:HD3	1.58	0.45
1:CA:35:G:C6	1:CA:36:C:N4	2.85	0.45
1:CA:35:G:C5	1:CA:36:C:C4	3.04	0.45
1:CA:186:C:H2'	1:CA:187:C:C6	2.51	0.45
1:CA:474:G:H2'	1:CA:475:G:C8	2.47	0.45
1:CA:685:G:C2	1:CA:686:U:C4	3.04	0.45
1:CA:872:A:C4	1:CA:874:G:N7	2.85	0.45
1:CA:927:G:H2'	1:CA:928:G:C8	2.52	0.45
1:CA:1186:G:O3'	9:CI:113:LYS:NZ	2.49	0.45
3:CC:179:ARG:O	3:CC:206:GLU:HA	2.16	0.45
7:CG:153:HIS:CE1	11:CK:58:PRO:HD2	2.50	0.45
16:CP:22:THR:HA	16:CP:33:ILE:HG13	1.99	0.45
25:DA:140:G:N2	25:DA:1596:A:H4'	2.31	0.45
25:DA:747:U:O2	25:DA:2014:A:H1'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DH:163:TYR:CE2	31:DH:169:VAL:HG22	2.52	0.45
32:DI:129:THR:HG22	32:DI:139:GLN:HE22	1.80	0.45
35:DP:52:GLU:OE2	54:D8:57:ARG:NH1	2.46	0.45
45:DZ:45:ASP:OD2	45:DZ:49:ARG:HD2	2.16	0.45
46:D0:72:ARG:O	46:D0:75:LEU:HB2	2.16	0.45
1:AA:202:U:H3'	1:AA:203:U:C6	2.51	0.45
1:AA:433:C:H2'	1:AA:434:U:C6	2.49	0.45
1:AA:1030(C):G:N7	1:AA:1031:G:N2	2.65	0.45
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.51	0.45
1:AA:1239:A:H62	1:AA:1299:A:H62	1.64	0.45
7:AG:103:TRP:CH2	7:AG:141:VAL:HG21	2.52	0.45
8:AH:28:ALA:HA	8:AH:59:LEU:HG	1.98	0.45
8:AH:53:VAL:HG12	8:AH:54:ASP:OD1	2.16	0.45
9:AI:99:LEU:HB3	9:AI:101:PHE:CE1	2.52	0.45
28:BE:103:ASP:CG	28:BE:168:MET:HE2	2.41	0.45
34:BO:104:ARG:NH2	39:BT:43:GLN:OE1	2.50	0.45
36:BQ:34:LEU:HD11	36:BQ:129:THR:HB	1.99	0.45
38:BS:10:ARG:O	38:BS:14:VAL:HG13	2.16	0.45
45:BZ:8:TYR:HB2	45:BZ:38:TYR:CE2	2.51	0.45
52:B6:11:LEU:HB3	52:B6:49:HIS:HB3	1.99	0.45
1:CA:489:C:H2'	1:CA:490:G:H8	1.81	0.45
2:CB:180:LEU:HA	2:CB:180:LEU:HD23	1.69	0.45
3:CC:73:PRO:O	3:CC:77:ILE:HG12	2.16	0.45
4:CD:43:HIS:CA	4:CD:46:LYS:HG3	2.45	0.45
6:CF:65:VAL:HG21	6:CF:67:MET:HE2	1.99	0.45
13:CM:8:GLU:HG2	30:DG:146:TYR:HD2	1.81	0.45
14:CN:32:SER:O	14:CN:40:CYS:HA	2.17	0.45
25:DA:139(A):G:O2'	25:DA:140:G:H5'	2.17	0.45
25:DA:506:G:O3'	25:DA:507:A:H8	2.00	0.45
25:DA:714:U:O2	25:DA:716:A:C8	2.70	0.45
25:DA:1803:A:H4'	27:DD:259:THR:HG23	1.98	0.45
25:DA:1927:A:H2'	25:DA:1928:A:C8	2.52	0.45
25:DA:2564:A:OP1	25:DA:2648:C:H4'	2.16	0.45
26:DB:33:G:C2'	26:DB:34:U:H5'	2.47	0.45
31:DH:20:ALA:HB3	31:DH:23:ARG:CG	2.46	0.45
38:DS:36:TYR:N	38:DS:36:TYR:CD1	2.85	0.45
43:DX:26:TYR:CE2	43:DX:89:ILE:HG13	2.51	0.45
45:DZ:131:ARG:H	45:DZ:131:ARG:HD2	1.81	0.45
1:AA:130:A:H5'	17:AQ:63:ARG:HE	1.81	0.45
1:AA:419:C:OP1	1:AA:513:C:O2'	2.27	0.45
1:AA:473:G:H2'	1:AA:474:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1179:A:O3'	9:AI:103:THR:HB	2.16	0.45
1:AA:1309:G:OP1	13:AM:88:ARG:NH1	2.49	0.45
3:AC:58:GLU:HB2	3:AC:65:ALA:CB	2.46	0.45
5:AE:137:GLU:HG2	5:AE:140:ARG:NH1	2.30	0.45
6:AF:81:ILE:HD11	27:BD:125:ILE:HB	1.99	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:1003:U:HO2'	25:BA:1004:A:P	2.40	0.45
25:BA:1314:A:C2	25:BA:2035:A:C4	3.05	0.45
25:BA:1938:A:H2'	25:BA:1939:U:O4'	2.17	0.45
29:BF:7:TYR:O	29:BF:21:ALA:HA	2.16	0.45
45:BZ:74:VAL:HG22	45:BZ:86:VAL:HG12	1.99	0.45
47:B1:86:SER:N	47:B1:89:GLU:HG3	2.31	0.45
54:B8:4:MET:HE3	54:B8:63:PRO:CG	2.47	0.45
1:CA:840:C:H5''	1:CA:848:C:O2	2.17	0.45
1:CA:881:G:P	12:CL:12:ARG:HH22	2.40	0.45
1:CA:959:A:O2'	1:CA:984:C:O2'	2.14	0.45
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.17	0.45
4:CD:108:LEU:HD12	4:CD:108:LEU:HA	1.68	0.45
8:CH:63:LEU:HA	8:CH:63:LEU:HD13	1.85	0.45
9:CI:16:ARG:HB2	9:CI:64:THR:HB	1.99	0.45
9:CI:47:LEU:HD22	9:CI:50:LEU:HD21	1.99	0.45
13:CM:47:ASP:N	13:CM:47:ASP:OD1	2.50	0.45
17:CQ:94:ASN:O	17:CQ:98:LEU:HD13	2.16	0.45
18:CR:56:THR:HB	18:CR:58:LEU:HD23	1.98	0.45
25:DA:198:C:H5'	25:DA:2244:U:OP1	2.17	0.45
25:DA:222:A:C2	25:DA:233:A:H5''	2.52	0.45
25:DA:646:A:H2'	25:DA:647:G:O4'	2.16	0.45
25:DA:955:C:OP1	36:DQ:87:LYS:HE3	2.16	0.45
25:DA:1539:G:H2'	25:DA:1540:U:C6	2.52	0.45
25:DA:2658:C:O3'	31:DH:158:HIS:HE1	1.98	0.45
28:DE:77:ILE:HD13	28:DE:195:LEU:HD13	1.98	0.45
29:DF:33:LEU:HB3	35:DP:6:LEU:HD21	1.99	0.45
37:DR:60:LEU:HD23	37:DR:60:LEU:HA	1.77	0.45
38:DS:26:LEU:HD22	38:DS:87:PHE:CD1	2.51	0.45
40:DU:49:HIS:HA	40:DU:52:ARG:HB3	1.97	0.45
1:AA:109:A:H2'	1:AA:326:G:N2	2.32	0.45
1:AA:974:A:OP2	14:AN:29:ARG:NH2	2.50	0.45
1:AA:1123:A:H61	1:AA:1149:C:N4	2.15	0.45
1:AA:1125:U:HO2'	1:AA:1126:U:P	2.39	0.45
5:AE:36:ASP:OD1	5:AE:38:GLN:N	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:70:LYS:NZ	11:AK:70:LYS:HB2	2.31	0.45
25:BA:561:A:H2'	25:BA:562:C:C6	2.52	0.45
25:BA:943:C:O5'	25:BA:943:C:H6	2.00	0.45
25:BA:1002:A:N1	25:BA:2470:G:H4'	2.32	0.45
25:BA:1410:G:OP2	47:B1:3:LYS:HG3	2.16	0.45
26:BB:14:U:OP2	26:BB:70:C:O2'	2.29	0.45
28:BE:51:PHE:O	28:BE:75:VAL:HG13	2.16	0.45
29:BF:181:LEU:HD12	29:BF:181:LEU:HA	1.71	0.45
31:BH:13:LYS:HA	31:BH:14:GLY:HA2	1.78	0.45
36:BQ:54:MET:HB3	36:BQ:64:ILE:HD11	1.99	0.45
44:BY:55:TYR:N	44:BY:55:TYR:CD2	2.84	0.45
45:BZ:45:ASP:OD1	45:BZ:49:ARG:HD2	2.16	0.45
1:CA:376:G:H5''	16:CP:5:ARG:HB2	1.99	0.45
1:CA:584:G:H2'	1:CA:585:G:C8	2.51	0.45
1:CA:624:C:H2'	1:CA:625:G:H8	1.82	0.45
1:CA:1427:U:H2'	1:CA:1428:A:C8	2.52	0.45
2:CB:17:PHE:HB2	2:CB:44:LEU:HD12	1.97	0.45
3:CC:52:LEU:HD23	3:CC:68:VAL:HG13	1.98	0.45
4:CD:10:ARG:HB2	4:CD:40:PRO:HG3	1.99	0.45
14:CN:2:ALA:HB1	14:CN:6:LEU:HD13	1.97	0.45
14:CN:6:LEU:HB3	14:CN:23:ARG:NH2	2.32	0.45
20:CT:43:LEU:HB3	20:CT:52:ALA:HB2	1.99	0.45
25:DA:11:G:C2'	25:DA:12:U:H5'	2.43	0.45
25:DA:362:U:O2'	25:DA:363:G:H5'	2.17	0.45
25:DA:729:G:C5	27:DD:208:LYS:HB2	2.51	0.45
25:DA:919:G:C6	25:DA:920:G:C5	3.05	0.45
25:DA:1003:G:N2	25:DA:1153:C:C2	2.84	0.45
25:DA:1138:G:H2'	25:DA:1139:G:O4'	2.16	0.45
25:DA:1291:C:H2'	25:DA:1292:U:H6	1.82	0.45
25:DA:1786:A:C4	25:DA:1938:A:C6	3.04	0.45
25:DA:1876:A:H2'	25:DA:1877:A:H8	1.77	0.45
25:DA:2019:A:OP2	51:D5:9:LYS:NZ	2.30	0.45
25:DA:2370:G:H2'	25:DA:2371:G:C8	2.51	0.45
27:DD:268:ARG:HD3	27:DD:269:PHE:CE2	2.51	0.45
51:D5:41:PRO:HG2	51:D5:44:THR:OG1	2.16	0.45
1:AA:44:G:C2	1:AA:45:U:H1'	2.50	0.45
1:AA:721:G:C6	1:AA:733:A:C2	3.04	0.45
1:AA:991:U:H1'	1:AA:993:G:C8	2.52	0.45
1:AA:1002:G:H5''	1:AA:1003:G:OP2	2.17	0.45
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.17	0.45
1:AA:1285:A:O5'	1:AA:1285:A:H8	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1351:U:O4	9:AI:118:LYS:NZ	2.49	0.45
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.17	0.45
4:AD:5:ILE:HD13	4:AD:5:ILE:O	2.17	0.45
4:AD:189:PRO:HB3	4:AD:193:ASP:HB3	1.99	0.45
6:AF:60:PHE:CE2	18:AR:78:LEU:HD21	2.52	0.45
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.51	0.45
8:AH:7:ALA:HB2	8:AH:85:ARG:HD2	1.98	0.45
16:AP:56:ALA:O	16:AP:60:LEU:HD23	2.17	0.45
25:BA:211:A:H5''	25:BA:448:U:OP1	2.16	0.45
25:BA:1715:A:H4'	25:BA:1716:A:O5'	2.16	0.45
25:BA:1735:U:O2	25:BA:1747:A:H5'	2.17	0.45
25:BA:2092:G:H2'	25:BA:2093:A:O4'	2.16	0.45
25:BA:2289:G:OP2	46:B0:10:THR:HG21	2.16	0.45
26:BB:106:G:OP1	45:BZ:31:ARG:HG2	2.17	0.45
35:BP:46:LYS:HE3	35:BP:46:LYS:HB3	1.77	0.45
1:CA:21:G:H2'	1:CA:22:G:C8	2.52	0.45
1:CA:130:A:H5'	17:CQ:63:ARG:NE	2.32	0.45
1:CA:130:A:OP2	17:CQ:63:ARG:NE	2.44	0.45
1:CA:615:C:H2'	1:CA:616:G:O4'	2.16	0.45
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.82	0.45
1:CA:1118:C:C2	1:CA:1119:C:H5	2.35	0.45
1:CA:1403:C:O5'	1:CA:1403:C:H6	1.99	0.45
4:CD:132:ARG:NH2	4:CD:134:ASP:OD2	2.49	0.45
6:CF:61:LEU:HB3	6:CF:63:TYR:CE1	2.49	0.45
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.99	0.45
23:CX:67:C:C2'	23:CX:68:C:H5'	2.46	0.45
25:DA:64:A:O3'	43:DX:71:GLY:HA3	2.17	0.45
25:DA:1006:C:C2	25:DA:1138:G:N2	2.85	0.45
25:DA:1336:A:H2'	25:DA:1337:G:C8	2.52	0.45
25:DA:1477:A:H2'	25:DA:1478:G:O4'	2.16	0.45
25:DA:1710:C:H2'	25:DA:1711:C:C6	2.51	0.45
25:DA:1857:G:C6	25:DA:1858:G:N1	2.85	0.45
25:DA:2261:C:C5	46:D0:16:SER:HB3	2.52	0.45
25:DA:2528:U:O2'	25:DA:2529:G:H3'	2.16	0.45
26:DB:17:C:H2'	26:DB:18:G:O4'	2.16	0.45
27:DD:58:HIS:ND1	27:DD:59:LYS:N	2.65	0.45
27:DD:148:GLU:CB	27:DD:151:LYS:HD2	2.45	0.45
29:DF:120:GLU:HB3	29:DF:122:LYS:HG2	1.99	0.45
37:DR:28:LEU:HD23	37:DR:28:LEU:HA	1.85	0.45
39:DT:95:ARG:NH1	39:DT:95:ARG:HG2	2.31	0.45
1:AA:303:A:O2'	1:AA:555:C:O2'	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:921:U:O2	5:AE:19:MET:HB2	2.17	0.45
4:AD:13:ARG:HB3	4:AD:38:TYR:O	2.17	0.45
6:AF:11:ASN:HB3	6:AF:14:LEU:HG	1.99	0.45
25:BA:163:C:H2'	25:BA:164:G:O4'	2.17	0.45
25:BA:211:A:H3'	25:BA:448:U:H5'	1.99	0.45
25:BA:1342:G:OP1	25:BA:2721:G:O2'	2.34	0.45
25:BA:1834:A:C8	25:BA:1835:C:C5	3.04	0.45
25:BA:2299:A:C4	25:BA:2301:G:C8	3.05	0.45
25:BA:2624:C:H2'	25:BA:2625:U:H5'	1.99	0.45
26:BB:50:G:O5'	26:BB:50:G:H8	2.00	0.45
52:B6:19:ARG:NH2	52:B6:52:VAL:HG11	2.32	0.45
1:CA:35:G:O2'	12:CL:118:SER:O	2.34	0.45
1:CA:1005:A:O2'	1:CA:1006:C:OP1	2.20	0.45
1:CA:1106:G:H2'	1:CA:1107:C:C6	2.51	0.45
2:CB:81:VAL:O	2:CB:85:ALA:N	2.49	0.45
4:CD:17:VAL:HG11	4:CD:197:PRO:CG	2.47	0.45
4:CD:79:PHE:HE1	4:CD:204:ILE:HD13	1.81	0.45
9:CI:53:VAL:HG21	9:CI:92:TYR:OH	2.17	0.45
25:DA:193:U:O3'	25:DA:803:U:H4'	2.17	0.45
25:DA:587:C:OP2	35:DP:21:ARG:NH2	2.50	0.45
25:DA:652(B):A:H2	25:DA:655:A:H1'	1.82	0.45
25:DA:804:A:H5''	25:DA:805:G:OP1	2.17	0.45
25:DA:1525:G:H2'	25:DA:1526:G:H8	1.82	0.45
25:DA:2699:C:H2'	25:DA:2700:C:O4'	2.17	0.45
28:DE:1:MET:HB3	28:DE:83:ASP:O	2.16	0.45
28:DE:119:ARG:HB3	28:DE:120:TRP:CD1	2.52	0.45
49:D3:6:VAL:HG12	49:D3:56:VAL:HG22	1.98	0.45
49:D3:8:LEU:O	49:D3:32:GLN:N	2.38	0.45
1:AA:192:U:O2'	1:AA:193:C:C6	2.68	0.45
1:AA:452:A:O2'	1:AA:453:A:OP2	2.29	0.45
1:AA:1347:G:H5''	9:AI:107:ARG:HB3	1.99	0.45
2:AB:71:VAL:HA	2:AB:93:VAL:HG23	1.99	0.45
5:AE:127:ASN:HA	5:AE:128:PRO:HD3	1.85	0.45
9:AI:18:PHE:O	9:AI:61:ALA:HA	2.17	0.45
13:AM:84:ILE:N	13:AM:85:GLY:HA2	2.32	0.45
17:AQ:26:GLN:HE21	17:AQ:37:LYS:HG2	1.81	0.45
25:BA:217:A:OP1	35:BP:76:LYS:NZ	2.42	0.45
25:BA:254:A:H1'	25:BA:255:G:O4'	2.17	0.45
25:BA:1321:A:N1	25:BA:1341:C:O2'	2.48	0.45
25:BA:2211:U:C2'	25:BA:2212:G:H5'	2.47	0.45
25:BA:2473:C:H2'	25:BA:2474:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2660:C:H2'	25:BA:2661:U:C6	2.53	0.45
25:BA:2784:C:H2'	25:BA:2785:C:H6	1.82	0.45
27:BD:180:GLY:HA3	27:BD:275:LYS:HD2	1.98	0.45
30:BG:115:ARG:HB3	30:BG:136:ARG:HH22	1.81	0.45
40:BU:85:LYS:HE2	40:BU:85:LYS:HB3	1.78	0.45
46:B0:43:THR:OG1	46:B0:46:LYS:HG2	2.16	0.45
54:B8:54:GLU:O	54:B8:58:ILE:HG13	2.17	0.45
1:CA:590:C:H2'	1:CA:591:U:C6	2.52	0.45
1:CA:1038:C:H2'	1:CA:1039:C:C6	2.52	0.45
1:CA:1066:C:O2'	1:CA:1067:A:H5'	2.17	0.45
1:CA:1136:U:O5'	1:CA:1137:C:C4	2.69	0.45
1:CA:1227:A:N3	19:CS:83:HIS:HB3	2.32	0.45
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.82	0.45
1:CA:1289:A:H2	1:CA:1372:U:O4'	2.00	0.45
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.51	0.45
9:CI:77:ILE:O	9:CI:81:ILE:HG22	2.17	0.45
13:CM:87:TYR:O	13:CM:91:ARG:HG2	2.17	0.45
25:DA:453:C:O2	25:DA:457:A:O2'	2.35	0.45
25:DA:652(D):C:N4	25:DA:652(U):G:H1	2.10	0.45
25:DA:1575:C:H2'	25:DA:1576:U:H6	1.81	0.45
25:DA:1652:A:C2'	25:DA:1653:G:H5'	2.47	0.45
25:DA:1817:G:H2'	25:DA:1818:U:H5'	1.98	0.45
25:DA:2002:G:OP2	61:DA:3782:HOH:O	2.21	0.45
25:DA:2242:G:H2'	25:DA:2243:U:O4'	2.17	0.45
27:DD:2:ALA:O	27:DD:3:VAL:HB	2.16	0.45
28:DE:176:ILE:HB	28:DE:181:LEU:HB2	1.98	0.45
38:DS:23:ARG:NH2	38:DS:84:GLN:HG2	2.32	0.45
38:DS:57:LYS:HE2	38:DS:57:LYS:HB2	1.79	0.45
44:DY:49:VAL:CG2	44:DY:61:ILE:HG23	2.47	0.45
54:D8:54:GLU:O	54:D8:58:ILE:HG13	2.17	0.45
1:AA:590:C:H2'	1:AA:591:U:H6	1.81	0.44
1:AA:1187:G:H4'	9:AI:111:ARG:NH1	2.31	0.44
1:AA:1302:U:OP2	13:AM:21:TYR:OH	2.29	0.44
4:AD:61:LYS:NZ	4:AD:72:GLU:OE2	2.48	0.44
7:AG:89:MET:HE3	7:AG:89:MET:HB3	1.75	0.44
9:AI:54:ASP:C	9:AI:56:LEU:H	2.25	0.44
25:BA:659:C:H2'	25:BA:660:C:C6	2.52	0.44
25:BA:722:A:C8	25:BA:851:A:C6	3.05	0.44
25:BA:1032:C:C2'	25:BA:1033:G:H5'	2.47	0.44
36:BQ:135:ASP:OD2	45:BZ:49:ARG:NH2	2.50	0.44
42:BW:84:ARG:HG3	42:BW:98:LYS:HD2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B3:43:ILE:O	49:B3:47:VAL:HG23	2.18	0.44
54:B8:42:ARG:HD2	61:B8:203:HOH:O	2.17	0.44
1:CA:791:G:C5	1:CA:792:A:N7	2.85	0.44
1:CA:953:G:N7	13:CM:104:ARG:NH1	2.65	0.44
1:CA:1009:G:N2	1:CA:1021:G:H1'	2.32	0.44
1:CA:1030(A):G:HO2'	1:CA:1030(B):C:H5	1.61	0.44
1:CA:1118:C:H2'	1:CA:1119:C:H6	1.82	0.44
1:CA:1166:G:H1'	1:CA:1171:G:H22	1.81	0.44
1:CA:1291:G:C6	1:CA:1292:U:C4	3.05	0.44
1:CA:1295:G:O2'	1:CA:1302:U:O4	2.27	0.44
3:CC:12:LEU:HD23	3:CC:16:ARG:HB3	1.98	0.44
3:CC:66:VAL:HB	3:CC:101:LEU:HA	1.99	0.44
7:CG:56:GLN:O	7:CG:58:PRO:HD3	2.17	0.44
11:CK:44:SER:OG	11:CK:47:VAL:HG23	2.17	0.44
21:CU:22:ARG:HA	21:CU:23:PRO:HD3	1.74	0.44
23:CX:40:C:H2'	23:CX:41:C:C6	2.46	0.44
24:CW:4:PRO:O	24:CW:5:MVA:HG23	2.17	0.44
25:DA:39:C:H2'	25:DA:40:C:C6	2.52	0.44
25:DA:614:U:H4'	25:DA:614(C):A:N6	2.32	0.44
25:DA:911:A:H2'	36:DQ:9:TYR:CZ	2.53	0.44
25:DA:931:G:O2'	49:D3:24:LYS:HD3	2.16	0.44
25:DA:1022:G:C5	25:DA:1140:C:C4	3.06	0.44
25:DA:1489:U:O3'	25:DA:1490:A:H8	2.00	0.44
25:DA:1540:U:O2'	25:DA:1541:G:H5'	2.17	0.44
25:DA:1857:G:C6	25:DA:1858:G:C6	3.05	0.44
32:DI:27:ARG:HD2	47:D1:71:TYR:CE1	2.52	0.44
40:DU:65:ILE:CD1	40:DU:95:LEU:HB3	2.47	0.44
42:DW:18:ARG:NH1	42:DW:76:VAL:O	2.50	0.44
54:D8:34:TRP:CG	54:D8:35:GLN:N	2.85	0.44
1:AA:384:G:H2'	1:AA:385:C:C6	2.51	0.44
1:AA:922:G:C6	1:AA:923:A:C6	3.04	0.44
1:AA:1068:G:OP2	1:AA:1068:G:H8	2.00	0.44
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.98	0.44
4:AD:122:ARG:O	4:AD:134:ASP:HB2	2.18	0.44
4:AD:177:ASP:OD2	4:AD:180:GLY:HA3	2.16	0.44
6:AF:21:LEU:O	6:AF:24:GLU:HB3	2.16	0.44
9:AI:85:LEU:HB3	9:AI:92:TYR:HD2	1.82	0.44
20:AT:92:LEU:HD23	20:AT:92:LEU:HA	1.80	0.44
25:BA:597:C:H1'	25:BA:2077:C:C6	2.53	0.44
30:BG:34:LEU:HD23	30:BG:34:LEU:HA	1.76	0.44
31:BH:93:GLY:O	31:BH:95:ARG:NH2	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BQ:137:TYR:O	36:BQ:141:GLN:HG2	2.16	0.44
43:BX:24:GLY:O	43:BX:83:VAL:HG22	2.17	0.44
49:B3:46:ASN:O	49:B3:50:VAL:HG22	2.17	0.44
51:B5:33:CYS:HB2	51:B5:40:LYS:HD2	1.98	0.44
51:B5:48:GLU:OE1	51:B5:48:GLU:HA	2.16	0.44
1:CA:269:C:H2'	1:CA:270:A:C8	2.51	0.44
1:CA:719:C:N4	18:CR:71:LYS:HE2	2.32	0.44
1:CA:738:C:H2'	1:CA:739:C:C6	2.50	0.44
1:CA:1005:A:H3'	1:CA:1006:C:O4'	2.17	0.44
1:CA:1118:C:C2	1:CA:1119:C:C5	3.06	0.44
1:CA:1119:C:C4	1:CA:1154:G:O6	2.71	0.44
3:CC:58:GLU:O	3:CC:59:ARG:HG3	2.16	0.44
4:CD:43:HIS:ND1	4:CD:46:LYS:HE3	2.32	0.44
8:CH:17:THR:HA	8:CH:65:TYR:HE2	1.82	0.44
9:CI:51:ARG:HG2	9:CI:56:LEU:CD2	2.46	0.44
10:CJ:23:ILE:HD12	10:CJ:85:LEU:HD22	2.00	0.44
13:CM:78:ILE:HD12	13:CM:92:HIS:NE2	2.32	0.44
25:DA:949:C:H2'	25:DA:950:G:C8	2.51	0.44
25:DA:1420:U:O2'	25:DA:1421:G:OP1	2.31	0.44
25:DA:1527:G:H2'	25:DA:1542:A:N1	2.32	0.44
25:DA:2714:G:P	61:DA:3973:HOH:O	2.75	0.44
28:DE:150:VAL:CG1	28:DE:154:LYS:HG3	2.45	0.44
38:DS:36:TYR:OH	38:DS:54:LEU:HD22	2.17	0.44
1:AA:109:A:C6	1:AA:326:G:C6	3.06	0.44
1:AA:272:C:H2'	1:AA:273:A:C8	2.52	0.44
1:AA:977:A:H1'	1:AA:982:U:O4	2.17	0.44
1:AA:1286:A:H2	21:AU:18:TYR:HH	1.64	0.44
1:AA:1456:G:O3'	20:AT:39:LYS:NZ	2.51	0.44
3:AC:26:LYS:HA	14:AN:36:PHE:HE1	1.81	0.44
3:AC:26:LYS:HA	14:AN:36:PHE:CE1	2.52	0.44
6:AF:1:MET:HA	6:AF:67:MET:O	2.18	0.44
8:AH:121:ASP:HB2	8:AH:125:ARG:NH1	2.31	0.44
13:AM:65:LYS:NZ	50:B4:53:GLU:OE1	2.29	0.44
14:AN:13:THR:HA	14:AN:14:PRO:HD3	1.85	0.44
16:AP:68:ASP:C	16:AP:70:ALA:H	2.24	0.44
19:AS:48:THR:HG22	19:AS:61:TYR:HA	1.99	0.44
25:BA:11:G:C2'	25:BA:12:U:H5'	2.42	0.44
25:BA:288:U:H6	25:BA:288:U:H2'	1.56	0.44
25:BA:701:A:H2	25:BA:702:A:C2	2.36	0.44
25:BA:1709:C:H1'	25:BA:2699:U:H5''	1.99	0.44
25:BA:1778:G:H2'	25:BA:1779:G:H5''	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:69:ARG:HG3	31:BH:70:THR:N	2.32	0.44
33:BN:138:LEU:HD23	33:BN:138:LEU:HA	1.53	0.44
36:BQ:135:ASP:O	36:BQ:139:GLU:HG3	2.17	0.44
1:CA:7:G:O2'	5:CE:120:THR:O	2.35	0.44
1:CA:186:C:H2'	1:CA:187:C:H6	1.83	0.44
1:CA:671:G:N2	1:CA:735:C:O2	2.49	0.44
1:CA:1004:A:H62	1:CA:1037:C:H2'	1.81	0.44
1:CA:1339:A:H2'	1:CA:1340:A:O4'	2.18	0.44
2:CB:7:VAL:HG12	2:CB:8:LYS:HG2	1.99	0.44
3:CC:150:LYS:HD2	3:CC:201:TYR:HD2	1.82	0.44
6:CF:72:VAL:O	6:CF:75:LEU:HB3	2.18	0.44
7:CG:78:ARG:NH2	7:CG:79:ARG:HH22	2.16	0.44
10:CJ:16:LEU:HD23	10:CJ:16:LEU:HA	1.88	0.44
18:CR:36:ASN:OD1	18:CR:39:VAL:HG23	2.17	0.44
25:DA:341:G:H2'	25:DA:342:G:O4'	2.17	0.44
25:DA:583:G:OP2	40:DU:10:ARG:NH1	2.50	0.44
25:DA:953:A:O2'	25:DA:954:G:H5'	2.18	0.44
25:DA:1223:G:N2	25:DA:1226:A:OP2	2.44	0.44
25:DA:1448:G:H1'	25:DA:1528:A:N1	2.33	0.44
25:DA:2044:C:C2	25:DA:2625:G:C2	3.05	0.44
30:DG:110:ALA:HA	30:DG:140:ILE:O	2.17	0.44
30:DG:114:ILE:HD12	30:DG:117:PHE:CD2	2.52	0.44
31:DH:149:ARG:NH1	31:DH:154:PRO:HG2	2.32	0.44
33:DN:16:ILE:HB	33:DN:54:VAL:HG22	1.99	0.44
35:DP:62:LEU:O	54:D8:13:ARG:HD3	2.17	0.44
36:DQ:77:LYS:HE3	36:DQ:84:GLY:O	2.17	0.44
45:DZ:11:GLU:HB3	45:DZ:12:GLY:H	1.53	0.44
48:D2:3:LEU:HA	48:D2:3:LEU:HD23	1.72	0.44
52:D6:11:LEU:HD23	52:D6:11:LEU:HA	1.80	0.44
1:AA:144:G:H1	1:AA:178:C:H42	1.64	0.44
1:AA:149:A:H2'	1:AA:150:C:H6	1.81	0.44
1:AA:410:G:H5''	1:AA:411:A:OP1	2.17	0.44
2:AB:47:THR:O	2:AB:51:LEU:N	2.40	0.44
3:AC:43:LEU:HD21	3:AC:91:LEU:HD13	1.99	0.44
7:AG:56:GLN:O	7:AG:58:PRO:HD3	2.17	0.44
25:BA:41:C:H2'	25:BA:42:G:O4'	2.17	0.44
25:BA:768:C:H2'	25:BA:769:A:H8	1.82	0.44
25:BA:927:G:C2	25:BA:928:G:C8	3.05	0.44
25:BA:2042:A:O2'	25:BA:2043:C:H5'	2.17	0.44
25:BA:2101:U:OP1	47:B1:21:ARG:NH2	2.51	0.44
25:BA:2348:A:H61	46:B0:43:THR:HG21	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2425:G:H2'	25:BA:2426:G:O4'	2.18	0.44
28:BE:51:PHE:CD2	28:BE:52:LEU:HG	2.51	0.44
29:BF:28:ILE:O	29:BF:30:PRO:HD3	2.17	0.44
31:BH:87:LEU:HD23	31:BH:164:TYR:HA	1.99	0.44
36:BQ:32:TYR:OH	36:BQ:111:GLU:OE1	2.15	0.44
37:BR:65:LEU:HD13	37:BR:65:LEU:HA	1.59	0.44
45:BZ:120:ILE:HD13	45:BZ:120:ILE:N	2.33	0.44
50:B4:40:HIS:HA	50:B4:41:PRO:HD2	1.84	0.44
1:CA:189(L):G:H2'	1:CA:190:U:C6	2.52	0.44
1:CA:633:G:H2'	1:CA:634:C:C6	2.53	0.44
1:CA:1001(A):G:N3	1:CA:1002:G:H1'	2.32	0.44
1:CA:1091:U:H2'	1:CA:1093:A:OP2	2.18	0.44
1:CA:1223:C:H5''	1:CA:1224:G:C5'	2.43	0.44
1:CA:1243:C:H2'	1:CA:1244:C:C6	2.53	0.44
2:CB:9:GLU:HA	2:CB:48:MET:SD	2.58	0.44
2:CB:13:ALA:C	2:CB:15:VAL:H	2.25	0.44
3:CC:6:HIS:HA	3:CC:7:PRO:HD3	1.83	0.44
8:CH:98:LYS:HB2	8:CH:98:LYS:HE3	1.66	0.44
25:DA:675:A:C6	25:DA:676:A:C6	3.05	0.44
25:DA:1005:C:H4'	25:DA:1012:U:C6	2.52	0.44
25:DA:1041:C:H42	25:DA:1114:G:H1	1.64	0.44
25:DA:2708:G:H1'	37:DR:71:GLN:NE2	2.32	0.44
25:DA:2734:A:H2'	25:DA:2735:G:O4'	2.17	0.44
25:DA:2745:C:C4	25:DA:2746:U:C4	3.04	0.44
25:DA:2881:C:H2'	25:DA:2882:A:O4'	2.18	0.44
30:DG:11:TYR:HA	30:DG:15:VAL:HB	2.00	0.44
30:DG:70:VAL:HA	30:DG:90:LEU:HD23	2.00	0.44
50:D4:16:CYS:SG	50:D4:17:GLY:N	2.90	0.44
50:D4:46:GLN:HG3	50:D4:48:ARG:NH2	2.32	0.44
55:D9:2:LYS:HE2	55:D9:31:LYS:O	2.17	0.44
1:AA:321:A:N7	1:AA:328:C:O2'	2.44	0.44
1:AA:392:G:H2'	1:AA:393:A:C8	2.53	0.44
1:AA:500:G:N2	1:AA:546:G:H1'	2.32	0.44
1:AA:1030(B):C:H2'	1:AA:1030(C):G:H5'	2.00	0.44
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.51	0.44
2:AB:145:LEU:O	2:AB:149:LEU:HB2	2.18	0.44
3:AC:6:HIS:HD2	3:AC:8:ILE:H	1.65	0.44
7:AG:50:ILE:HD11	7:AG:58:PRO:CA	2.40	0.44
15:AO:54:ARG:O	15:AO:58:MET:HG3	2.17	0.44
19:AS:23:ASN:HA	19:AS:27:GLU:CD	2.43	0.44
20:AT:16:HIS:O	20:AT:19:SER:OG	2.24	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:640:A:C4	29:BF:180:GLY:HA2	2.53	0.44
25:BA:851:A:H5''	25:BA:852:G:OP1	2.17	0.44
25:BA:964:A:H5''	26:BB:98:G:O2'	2.18	0.44
25:BA:1002:A:H5'	36:BQ:76:LYS:HG3	1.98	0.44
25:BA:1044:C:OP2	40:BU:92:ARG:NH2	2.51	0.44
25:BA:1096:A:H3'	25:BA:1097:G:H8	1.82	0.44
25:BA:2116:G:P	32:BI:22:LYS:HD2	2.57	0.44
25:BA:2340:A:H2'	25:BA:2341:G:H8	1.83	0.44
25:BA:2410:U:H2'	25:BA:2411:G:C8	2.53	0.44
25:BA:2418:U:OP1	61:BA:4136:HOH:O	2.21	0.44
25:BA:2545:A:H2'	25:BA:2546:A:O4'	2.17	0.44
30:BG:43:LEU:HB3	30:BG:44:GLY:H	1.52	0.44
32:BI:99:GLU:O	32:BI:103:ARG:NH1	2.50	0.44
44:BY:5:MET:HE2	44:BY:5:MET:HB2	1.68	0.44
44:BY:20:TYR:CE1	44:BY:43:ASN:HA	2.52	0.44
45:BZ:161:VAL:HG13	45:BZ:161:VAL:O	2.18	0.44
1:CA:66:G:C2	1:CA:67:C:C6	3.05	0.44
1:CA:397:A:H3'	1:CA:397:A:N3	2.32	0.44
1:CA:620:C:H2'	1:CA:621:A:O4'	2.17	0.44
1:CA:1004:A:C6	1:CA:1038:C:C6	3.06	0.44
1:CA:1024:G:N3	1:CA:1024:G:H2'	2.33	0.44
1:CA:1259:C:C4	1:CA:1260:C:H1'	2.53	0.44
1:CA:1346:A:H5''	9:CI:120:ARG:HH12	1.83	0.44
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.52	0.44
7:CG:69:VAL:HG21	7:CG:104:LEU:CD1	2.48	0.44
10:CJ:30:SER:O	10:CJ:81:THR:HG23	2.17	0.44
13:CM:16:ASP:HB3	13:CM:34:LEU:CD1	2.46	0.44
25:DA:652(D):C:H2'	25:DA:652(E):G:O4'	2.17	0.44
25:DA:817:C:O2'	25:DA:839:U:H5''	2.18	0.44
25:DA:2318:G:N2	38:DS:3:ARG:NH1	2.66	0.44
26:DB:70:C:H2'	26:DB:71:C:H6	1.83	0.44
29:DF:64:ILE:HG21	29:DF:78:ILE:HG23	1.98	0.44
29:DF:102:PRO:HB2	29:DF:105:VAL:HG23	2.00	0.44
36:DQ:137:TYR:CE1	45:DZ:83:PRO:HG3	2.52	0.44
41:DV:35:LEU:HB2	41:DV:57:VAL:HG23	1.99	0.44
1:AA:62:U:OP1	1:AA:385:C:O2'	2.35	0.44
1:AA:444:C:H2'	1:AA:445:G:C8	2.50	0.44
1:AA:457:C:H2'	1:AA:458:C:C5	2.53	0.44
1:AA:1346:A:C8	1:AA:1348:U:O2	2.71	0.44
2:AB:113:HIS:HA	2:AB:116:GLU:HB2	2.00	0.44
2:AB:155:LEU:HD21	2:AB:159:PRO:HG3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:178:VAL:C	4:AD:180:GLY:H	2.26	0.44
4:AD:188:LEU:HD23	4:AD:188:LEU:H	1.82	0.44
12:AL:57:LYS:HG2	12:AL:65:GLU:OE2	2.18	0.44
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.82	0.44
14:AN:26:ARG:NH2	14:AN:47:LEU:HD21	2.33	0.44
16:AP:6:LEU:HD23	16:AP:17:TYR:CD2	2.52	0.44
16:AP:75:ARG:HA	16:AP:80:PHE:HD2	1.82	0.44
25:BA:927:G:C2'	25:BA:928:G:H5'	2.48	0.44
25:BA:939:C:O2'	25:BA:940:C:H5'	2.16	0.44
28:BE:111:ARG:HG3	28:BE:160:TYR:CD2	2.53	0.44
31:BH:28:GLY:HA3	31:BH:79:VAL:HB	2.00	0.44
40:BU:50:ARG:HG2	40:BU:53:ARG:NH2	2.33	0.44
50:B4:61:ARG:O	50:B4:62:ARG:C	2.60	0.44
1:CA:292:G:C5	1:CA:293:G:H1'	2.53	0.44
1:CA:407:G:N2	1:CA:436:C:C2	2.86	0.44
1:CA:472:A:C2	1:CA:473:G:H1'	2.53	0.44
1:CA:1036:G:N7	1:CA:1037:C:O2	2.51	0.44
1:CA:1380:U:C4	7:CG:3:ARG:HG2	2.52	0.44
2:CB:16:HIS:CB	2:CB:210:SER:HB3	2.42	0.44
2:CB:96:ARG:NH1	2:CB:98:LEU:HD13	2.33	0.44
2:CB:172:ILE:O	2:CB:176:GLU:HG3	2.18	0.44
7:CG:40:ALA:HB1	9:CI:41:VAL:HG21	1.98	0.44
7:CG:42:ILE:HD13	7:CG:116:ALA:HB3	1.99	0.44
25:DA:108:U:H2'	25:DA:109:G:C8	2.52	0.44
25:DA:311:A:C8	25:DA:332:A:N7	2.85	0.44
25:DA:815:C:C2	25:DA:1193:G:C2	3.05	0.44
25:DA:1027:A:N6	25:DA:1126:A:C4	2.86	0.44
25:DA:1721:G:H8	25:DA:1741:A:N6	2.12	0.44
25:DA:2318:G:H21	38:DS:3:ARG:HD3	1.83	0.44
25:DA:2461:C:H2'	25:DA:2462:U:H6	1.83	0.44
26:DB:31:C:H4'	30:DG:29:TRP:CZ2	2.52	0.44
44:DY:90:LEU:HD23	44:DY:92:ASN:HB2	1.99	0.44
1:AA:376:G:H2'	1:AA:377:G:C8	2.52	0.44
1:AA:720:C:O5'	1:AA:720:C:H6	2.01	0.44
1:AA:799:G:H5''	1:AA:799:G:H8	1.82	0.44
1:AA:1060:C:N4	3:AC:2:GLY:HA3	2.32	0.44
1:AA:1291:G:H2'	1:AA:1292:U:C6	2.53	0.44
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.17	0.44
3:AC:47:LEU:HD12	3:AC:68:VAL:HG11	1.98	0.44
3:AC:77:ILE:H	3:AC:77:ILE:HG12	1.70	0.44
4:AD:20:TYR:HD1	4:AD:26:CYS:HB3	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:4:ILE:HB	13:AM:57:ARG:HG3	1.99	0.44
20:AT:34:LYS:HB2	20:AT:34:LYS:HE2	1.69	0.44
25:BA:254:A:C8	25:BA:255:G:H1'	2.53	0.44
25:BA:276:C:O3'	32:BI:42:SER:OG	2.36	0.44
25:BA:442:A:H2'	25:BA:443:C:C6	2.53	0.44
25:BA:648:G:H2'	25:BA:649:C:C6	2.52	0.44
25:BA:2644:A:O2'	25:BA:2821:G:O2'	2.29	0.44
26:BB:12:C:H2'	46:B0:73:GLY:HA3	1.99	0.44
26:BB:31:C:H4'	30:BG:29:TRP:CH2	2.51	0.44
27:BD:158:ALA:O	27:BD:161:THR:OG1	2.29	0.44
28:BE:181:LEU:HD12	28:BE:181:LEU:HA	1.79	0.44
35:BP:59:LEU:HD21	54:B8:10:ALA:HA	1.99	0.44
1:CA:60:A:N6	1:CA:110:C:N3	2.64	0.44
1:CA:430:A:H2'	1:CA:431:A:O4'	2.18	0.44
1:CA:767:A:H2'	1:CA:768:A:O4'	2.16	0.44
1:CA:1191:A:OP2	3:CC:3:ASN:ND2	2.50	0.44
4:CD:64:LEU:HD22	4:CD:198:VAL:HG11	1.99	0.44
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.17	0.44
7:CG:131:LYS:HG2	7:CG:132:GLY:H	1.83	0.44
8:CH:13:ILE:O	8:CH:17:THR:HG23	2.18	0.44
8:CH:36:LEU:HD23	8:CH:36:LEU:HA	1.89	0.44
11:CK:85:ARG:HA	11:CK:112:THR:OG1	2.17	0.44
19:CS:14:HIS:O	19:CS:18:LYS:HG3	2.18	0.44
25:DA:460:A:P	53:D7:41:ARG:HH22	2.41	0.44
25:DA:984:A:H5''	25:DA:985:C:H5	1.81	0.44
25:DA:2294:C:OP2	38:DS:89:ARG:NH2	2.41	0.44
25:DA:2410:G:H2'	25:DA:2411:A:O4'	2.17	0.44
25:DA:2556:C:H2'	25:DA:2557:G:O4'	2.18	0.44
35:DP:64:LYS:HA	54:D8:13:ARG:HB3	2.00	0.44
44:DY:43:ASN:CG	44:DY:65:ALA:HB3	2.43	0.44
45:DZ:5:LEU:HD22	45:DZ:6:LYS:H	1.83	0.44
45:DZ:141:VAL:O	45:DZ:144:LEU:HB2	2.18	0.44
46:D0:40:GLN:HE21	46:D0:57:PHE:HB3	1.83	0.44
1:AA:456:C:H2'	1:AA:457:C:C6	2.53	0.44
1:AA:532:A:H5'	3:AC:161:GLU:OE2	2.18	0.44
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.53	0.44
1:AA:1084:G:C5	1:AA:1085:U:C4	3.06	0.44
1:AA:1125:U:O2'	1:AA:1126:U:P	2.75	0.44
1:AA:1134:G:H2'	1:AA:1134:G:N3	2.33	0.44
1:AA:1198:G:C6	1:AA:1199:U:C4	3.06	0.44
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1456:G:N1	20:AT:51:GLU:OE1	2.51	0.44
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.83	0.44
3:AC:175:LEU:HD21	3:AC:201:TYR:CE2	2.52	0.44
10:AJ:40:LEU:HB2	10:AJ:69:ASN:HB3	2.00	0.44
11:AK:85:ARG:HA	11:AK:112:THR:OG1	2.18	0.44
12:AL:79:GLU:C	12:AL:80:HIS:CD2	2.96	0.44
25:BA:926:G:H2'	25:BA:927:G:O4'	2.17	0.44
25:BA:1465:A:O2'	25:BA:1467:G:N7	2.44	0.44
25:BA:2336:C:H5''	25:BA:2337:G:H5'	2.00	0.44
25:BA:2850:C:H4'	37:BR:53:HIS:CE1	2.53	0.44
27:BD:145:VAL:HG12	27:BD:146:GLU:O	2.18	0.44
33:BN:30:ILE:HG22	33:BN:34:LEU:HD22	2.00	0.44
47:B1:51:VAL:HG11	47:B1:74:VAL:HG21	1.99	0.44
52:B6:9:LEU:HD21	52:B6:25:LYS:HB3	1.98	0.44
1:CA:922:G:C6	1:CA:923:A:C6	3.05	0.44
1:CA:933:G:C6	1:CA:1385:G:C6	3.05	0.44
1:CA:1005:A:H2	1:CA:1026:G:C8	2.36	0.44
1:CA:1068:G:H8	1:CA:1068:G:OP2	2.00	0.44
1:CA:1142:G:C2	1:CA:1143:G:H1'	2.52	0.44
2:CB:230:VAL:HG13	2:CB:231:GLU:O	2.18	0.44
3:CC:33:LEU:HD21	14:CN:53:LEU:CD2	2.48	0.44
4:CD:39:PRO:O	4:CD:44:GLY:HA3	2.18	0.44
6:CF:62:TRP:C	6:CF:63:TYR:HD1	2.26	0.44
13:CM:82:MET:O	13:CM:93:ARG:NH2	2.51	0.44
20:CT:14:LYS:O	20:CT:18:GLN:HG3	2.18	0.44
25:DA:55:G:H2'	25:DA:56:A:H8	1.83	0.44
25:DA:863:A:O2'	25:DA:864:G:H5'	2.18	0.44
25:DA:875:G:C2	25:DA:903:C:C2	3.06	0.44
25:DA:1115:G:H8	25:DA:1115:G:OP2	2.01	0.44
25:DA:2251:G:OP1	61:DA:4599:HOH:O	2.21	0.44
26:DB:42:C:O2'	30:DG:66:GLN:HG2	2.18	0.44
27:DD:77:ALA:HB2	27:DD:97:TYR:CD2	2.52	0.44
31:DH:150:ALA:HA	31:DH:153:LYS:HG3	2.00	0.44
36:DQ:27:VAL:O	36:DQ:29:PHE:N	2.51	0.44
1:AA:8:A:H5'	5:AE:101:ILE:HG22	2.00	0.44
1:AA:78:G:N1	1:AA:91:C:N4	2.66	0.44
1:AA:539:A:H2'	1:AA:540:G:C8	2.52	0.44
1:AA:600:C:H2'	1:AA:601:C:H6	1.83	0.44
1:AA:1164:G:H2'	1:AA:1165:C:H6	1.82	0.44
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.18	0.44
4:AD:106:TYR:HE2	4:AD:112:VAL:O	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:48:LEU:HD22	18:AR:77:GLY:HA3	1.99	0.44
10:AJ:31:GLY:HA2	10:AJ:32:ALA:HA	1.46	0.44
20:AT:42:GLN:NE2	20:AT:46:GLU:OE2	2.51	0.44
25:BA:63:A:O3'	43:BX:71:GLY:HA3	2.18	0.44
25:BA:1091:A:H2'	25:BA:1091:A:N3	2.31	0.44
25:BA:1157:A:N3	25:BA:1158:G:H1'	2.33	0.44
25:BA:1749:G:H2'	25:BA:1750:G:O4'	2.17	0.44
25:BA:1805:C:O5'	25:BA:1805:C:H6	2.01	0.44
25:BA:2214:G:H5'	25:BA:2215:G:OP2	2.18	0.44
25:BA:2614:A:N7	46:B0:3:HIS:CE1	2.86	0.44
25:BA:2830:A:OP1	37:BR:2:ARG:NH2	2.51	0.44
31:BH:126:PRO:HB2	31:BH:127:GLU:H	1.51	0.44
37:BR:72:ASP:OD2	37:BR:75:LEU:HB2	2.18	0.44
38:BS:103:GLU:O	38:BS:107:GLU:HG3	2.18	0.44
1:CA:142:G:H2'	1:CA:143:A:C8	2.53	0.44
1:CA:165:C:O5'	1:CA:165:C:H6	2.01	0.44
1:CA:713:G:H2'	1:CA:714:G:C8	2.53	0.44
1:CA:1324:A:H5'	1:CA:1362:C:O2'	2.18	0.44
3:CC:153:VAL:HA	3:CC:197:GLY:O	2.17	0.44
7:CG:51:GLN:HE21	7:CG:51:GLN:HB3	1.63	0.44
11:CK:33:THR:OG1	11:CK:34:ASP:O	2.31	0.44
12:CL:36:VAL:HG23	24:CW:10:2QY:CE1	2.47	0.44
14:CN:26:ARG:HB3	14:CN:43:CYS:SG	2.57	0.44
19:CS:28:LYS:HD2	19:CS:47:HIS:HA	2.00	0.44
25:DA:271(F):C:H2'	25:DA:271(G):C:C6	2.52	0.44
25:DA:2854:G:H2'	25:DA:2855:C:C6	2.52	0.44
30:DG:14:GLU:C	30:DG:17:PRO:HD2	2.41	0.44
33:DN:138:LEU:HD23	33:DN:138:LEU:HA	1.75	0.44
39:DT:88:ILE:HG21	39:DT:91:ARG:NE	2.33	0.44
1:AA:10:A:OP2	5:AE:126:ARG:HD2	2.17	0.43
1:AA:106:C:O2'	1:AA:379:C:H5''	2.17	0.43
1:AA:266:G:O3'	17:AQ:67:LYS:HB2	2.18	0.43
1:AA:346:G:H3'	1:AA:346:G:N3	2.33	0.43
1:AA:404:U:H2'	1:AA:405:U:C6	2.53	0.43
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.53	0.43
4:AD:110:PHE:N	4:AD:110:PHE:CD1	2.86	0.43
8:AH:25:ASP:HA	8:AH:60:ARG:HA	1.99	0.43
8:AH:94:TYR:HD1	8:AH:132:GLU:HA	1.83	0.43
14:AN:45:ARG:HG2	14:AN:49:HIS:HD2	1.83	0.43
19:AS:50:ALA:HA	19:AS:58:VAL:O	2.18	0.43
25:BA:31:C:C4	25:BA:32:C:C5	3.05	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:171:A:H2'	25:BA:172:C:O4'	2.18	0.43
25:BA:174:U:H4'	25:BA:207:A:H4'	2.00	0.43
25:BA:588:C:H2'	25:BA:589:U:O4'	2.18	0.43
25:BA:1188:A:C4	25:BA:1190:G:C8	3.05	0.43
25:BA:1319:U:H4'	25:BA:1321:A:OP2	2.18	0.43
25:BA:1617:A:H2'	25:BA:1618:A:C8	2.53	0.43
25:BA:1874:C:O5'	25:BA:1874:C:H6	2.01	0.43
25:BA:2804:C:OP2	25:BA:2804:C:H6	2.01	0.43
26:BB:33:G:C2'	26:BB:34:U:H5'	2.47	0.43
1:CA:89:C:C4	1:CA:90:U:C5	3.05	0.43
1:CA:93:G:O2'	1:CA:96:U:H5'	2.18	0.43
1:CA:380:G:C2	1:CA:384:G:C6	3.06	0.43
1:CA:579:G:C6	1:CA:580:U:C4	3.06	0.43
1:CA:926:G:C6	1:CA:1505:G:C6	3.06	0.43
1:CA:1017:G:H2'	1:CA:1018:C:O4'	2.17	0.43
1:CA:1066:C:H2'	1:CA:1067:A:C8	2.53	0.43
4:CD:112:VAL:HG22	4:CD:116:GLN:OE1	2.18	0.43
5:CE:84:PHE:CE2	5:CE:133:TYR:HD2	2.36	0.43
5:CE:102:ALA:HB2	5:CE:120:THR:HG21	2.00	0.43
15:CO:54:ARG:O	15:CO:57:LEU:HB2	2.18	0.43
23:CX:59:A:C2'	23:CX:60:U:H5'	2.47	0.43
25:DA:271(S):G:C2'	25:DA:271(T):C:H5'	2.47	0.43
25:DA:479:A:O2'	25:DA:481:G:H5'	2.18	0.43
25:DA:644:A:H4'	25:DA:645:C:N4	2.33	0.43
25:DA:777:A:H2'	25:DA:778:G:H8	1.83	0.43
25:DA:1275:A:N1	25:DA:1295:C:O2'	2.39	0.43
25:DA:1384:A:N3	25:DA:1405:U:H1'	2.32	0.43
25:DA:1671:U:O2'	25:DA:1673:U:H5	2.01	0.43
25:DA:1942:C:OP2	25:DA:1943:U:O2'	2.20	0.43
25:DA:1991:U:H2'	25:DA:1992:G:H5''	1.99	0.43
25:DA:2197:U:H1'	25:DA:2198:A:C8	2.53	0.43
27:DD:102:LYS:C	27:DD:103:ARG:HG2	2.41	0.43
27:DD:206:LEU:HD23	27:DD:206:LEU:HA	1.68	0.43
27:DD:206:LEU:CD2	27:DD:211:ARG:HG2	2.46	0.43
29:DF:196:LEU:HD23	29:DF:196:LEU:HA	1.66	0.43
30:DG:54:GLU:O	30:DG:57:ALA:HB3	2.17	0.43
39:DT:16:ARG:HD2	39:DT:18:ASP:OD1	2.18	0.43
40:DU:16:LYS:HB3	40:DU:16:LYS:HE2	1.78	0.43
45:DZ:67:LEU:HA	45:DZ:68:PRO:HD3	1.64	0.43
1:AA:428:G:O4'	1:AA:430:A:C8	2.72	0.43
1:AA:432:A:OP2	1:AA:433:C:N4	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:230:VAL:HG22	2:AB:231:GLU:H	1.83	0.43
8:AH:97:VAL:HG23	8:AH:129:VAL:C	2.43	0.43
17:AQ:50:LYS:HD2	17:AQ:51:TYR:CZ	2.53	0.43
25:BA:18:C:O2'	25:BA:577:U:OP1	2.31	0.43
25:BA:400:U:H1'	25:BA:450:A:N3	2.34	0.43
25:BA:733:G:OP2	25:BA:733:G:H4'	2.18	0.43
25:BA:1042:A:H4'	40:BU:91:ASP:OD2	2.17	0.43
25:BA:1072:U:H4'	25:BA:1073:A:OP1	2.18	0.43
25:BA:1899:A:H5'	25:BA:1900:G:OP2	2.18	0.43
27:BD:223:GLY:HA2	27:BD:226:MET:HE3	2.00	0.43
32:BI:10:GLU:O	32:BI:12:LEU:N	2.51	0.43
36:BQ:12:GLN:HG2	36:BQ:73:PRO:HD2	2.00	0.43
38:BS:35:ILE:HG12	38:BS:101:LEU:HD12	2.00	0.43
43:BX:40:LYS:HE2	61:BX:3103:HOH:O	2.17	0.43
1:CA:245:C:O2	1:CA:283:C:N3	2.51	0.43
1:CA:848:C:H2'	1:CA:849:C:O4'	2.18	0.43
1:CA:960:U:H2'	1:CA:960:U:O2	2.17	0.43
1:CA:1133:G:C2'	1:CA:1134:G:H8	2.30	0.43
1:CA:1224:G:O2'	1:CA:1322:C:OP1	2.26	0.43
1:CA:1237:C:O2'	1:CA:1300:G:N1	2.43	0.43
3:CC:12:LEU:HA	3:CC:16:ARG:HB3	2.00	0.43
3:CC:155:GLY:O	3:CC:157:ILE:HG13	2.19	0.43
18:CR:66:LEU:O	18:CR:70:ILE:HG13	2.18	0.43
19:CS:20:LEU:HA	19:CS:23:ASN:ND2	2.34	0.43
24:CW:1:2QZ:CG2	24:CW:10:2QY:H83	2.48	0.43
25:DA:307:G:H21	25:DA:330:A:H62	1.66	0.43
25:DA:657:U:H2'	25:DA:658:C:C6	2.52	0.43
25:DA:880:G:N2	25:DA:898:C:H1'	2.33	0.43
25:DA:910:A:H2'	25:DA:2264:C:O2'	2.18	0.43
25:DA:1268:A:C2	25:DA:2013:A:C4	3.06	0.43
25:DA:2274:A:C5	25:DA:2276:G:C8	3.05	0.43
28:DE:70:ALA:O	28:DE:72:VAL:N	2.42	0.43
29:DF:123:LEU:HD12	29:DF:124:LEU:N	2.32	0.43
35:DP:37:GLY:C	35:DP:38:GLN:O	2.61	0.43
35:DP:47:ASP:HA	35:DP:48:PRO:HD3	1.80	0.43
36:DQ:66:ILE:HG12	36:DQ:104:PHE:HE2	1.82	0.43
1:AA:180:U:O2'	1:AA:181:G:H5'	2.18	0.43
1:AA:375:U:C2	1:AA:376:G:C8	3.06	0.43
1:AA:400:C:H5''	4:AD:73:ARG:NH2	2.32	0.43
1:AA:414:A:C5	1:AA:431:A:C2	3.06	0.43
1:AA:584:G:H1	1:AA:757:U:H3	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1034:G:H5''	1:AA:1035:A:OP2	2.18	0.43
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.19	0.43
3:AC:24:ALA:HB1	3:AC:28:GLN:O	2.19	0.43
4:AD:129:ASN:OD1	4:AD:145:GLU:N	2.45	0.43
5:AE:52:PRO:HG2	5:AE:53:LEU:HD12	1.99	0.43
6:AF:22:GLU:OE2	6:AF:82:ARG:HG2	2.18	0.43
7:AG:22:LEU:HD13	7:AG:97:GLN:OE1	2.18	0.43
25:BA:609:A:H5'	29:BF:89:VAL:HG21	1.99	0.43
25:BA:843:C:H2'	25:BA:844:C:C6	2.54	0.43
25:BA:1541:A:C6	25:BA:1542:A:C6	3.06	0.43
25:BA:2307:C:C2'	25:BA:2308:U:H5'	2.48	0.43
25:BA:2671:G:O2'	31:BH:175:LYS:NZ	2.50	0.43
25:BA:2858:G:C8	39:BT:97:ALA:HB2	2.53	0.43
27:BD:77:ALA:O	27:BD:116:GLN:HG3	2.18	0.43
29:BF:81:PRO:HA	29:BF:87:GLY:O	2.17	0.43
37:BR:38:VAL:HB	37:BR:39:PRO:HD3	2.00	0.43
45:BZ:126:VAL:HG13	45:BZ:161:VAL:HG23	1.99	0.43
1:CA:791:G:C6	1:CA:792:A:N7	2.86	0.43
1:CA:1119:C:H2'	1:CA:1120:G:H8	1.82	0.43
1:CA:1134:G:H2'	1:CA:1135:U:H5'	2.00	0.43
2:CB:95:GLN:HB2	2:CB:148:TYR:HD1	1.83	0.43
2:CB:100:GLY:HA2	2:CB:103:THR:OG1	2.18	0.43
2:CB:187:LEU:HD13	2:CB:205:ASP:HA	2.01	0.43
5:CE:93:PRO:HG2	8:CH:105:ARG:NE	2.33	0.43
5:CE:148:VAL:HG21	8:CH:107:LEU:HD12	2.00	0.43
9:CI:128:ARG:NH2	23:CX:33:U:OP2	2.50	0.43
10:CJ:89:ASP:O	10:CJ:91:PRO:HD3	2.18	0.43
16:CP:74:LEU:HD23	16:CP:79:VAL:HG11	2.00	0.43
19:CS:28:LYS:CB	19:CS:29:ARG:HA	2.48	0.43
25:DA:1907:G:C2	25:DA:1908:C:C2	3.07	0.43
25:DA:2494:G:C4	25:DA:2495:G:C8	3.06	0.43
25:DA:2776:A:C6	25:DA:2782:G:H1'	2.54	0.43
29:DF:11:VAL:HG21	29:DF:20:LEU:HB2	1.99	0.43
31:DH:54:ARG:HD3	31:DH:65:HIS:ND1	2.34	0.43
32:DI:48:GLU:OE2	32:DI:52:ARG:HD3	2.18	0.43
32:DI:61:ARG:HD3	32:DI:61:ARG:HA	1.81	0.43
32:DI:92:VAL:CG2	32:DI:120:ILE:HB	2.48	0.43
39:DT:53:ARG:HD3	39:DT:60:THR:OG1	2.18	0.43
40:DU:61:TRP:CH2	40:DU:93:LYS:HB2	2.53	0.43
49:D3:7:LYS:HG3	49:D3:34:GLU:HG3	2.00	0.43
54:D8:50:LEU:HA	54:D8:50:LEU:HD23	1.75	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:D9:13:LYS:HD3	55:D9:28:GLU:OE2	2.17	0.43
1:AA:170:U:O2'	1:AA:171:A:H5'	2.17	0.43
1:AA:298:A:C6	1:AA:299:G:C2	3.06	0.43
1:AA:442:C:H5'	1:AA:443:C:OP2	2.18	0.43
1:AA:630:G:O2'	1:AA:631:G:H5'	2.18	0.43
1:AA:1125:U:C3'	10:AJ:5:ARG:HH22	2.30	0.43
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.53	0.43
1:AA:1502:A:H2	1:AA:1505:G:N1	2.04	0.43
2:AB:118:LEU:HD11	2:AB:141:GLU:HG2	2.01	0.43
3:AC:110:ASN:O	3:AC:141:VAL:HG22	2.19	0.43
6:AF:92:LYS:HE2	6:AF:92:LYS:HB2	1.83	0.43
12:AL:77:LEU:HD21	12:AL:107:ALA:HA	1.99	0.43
12:AL:105:TYR:C	12:AL:107:ALA:H	2.27	0.43
16:AP:68:ASP:O	16:AP:71:ARG:HG2	2.17	0.43
20:AT:56:MET:HE2	20:AT:85:MET:HA	1.99	0.43
25:BA:715:G:H5'	25:BA:716:G:OP2	2.18	0.43
25:BA:1721:G:H1'	25:BA:1723:A:N6	2.33	0.43
33:BN:38:HIS:H	33:BN:38:HIS:HD1	1.66	0.43
45:BZ:150:LEU:HB3	45:BZ:171:ILE:CD1	2.48	0.43
47:B1:3:LYS:HB2	47:B1:61:ARG:HH11	1.83	0.43
47:B1:23:LYS:HB3	47:B1:29:GLY:HA3	1.99	0.43
48:B2:63:VAL:O	48:B2:66:GLU:HB2	2.18	0.43
51:B5:40:LYS:HE2	51:B5:40:LYS:HB2	1.88	0.43
1:CA:1105:A:C2	1:CA:1106:G:N7	2.86	0.43
1:CA:1122:U:C4	1:CA:1123:A:N7	2.87	0.43
6:CF:25:ILE:CD1	6:CF:82:ARG:HH21	2.31	0.43
7:CG:94:ARG:O	7:CG:97:GLN:HB3	2.19	0.43
8:CH:33:GLU:HG2	8:CH:48:TYR:CE2	2.53	0.43
9:CI:46:ALA:HA	9:CI:78:LYS:HB2	2.01	0.43
12:CL:75:HIS:ND1	12:CL:77:LEU:HB2	2.33	0.43
19:CS:12:ASP:OD2	19:CS:38:SER:OG	2.36	0.43
25:DA:644:A:H4'	25:DA:645:C:C4	2.53	0.43
25:DA:729:G:C6	27:DD:208:LYS:HB2	2.53	0.43
25:DA:999:U:H3'	25:DA:1154:G:O6	2.19	0.43
25:DA:2249:U:O4	61:DA:3947:HOH:O	2.21	0.43
26:DB:46:A:C5	26:DB:47:C:C4	3.06	0.43
28:DE:195:LEU:HG	28:DE:196:VAL:N	2.30	0.43
29:DF:36:VAL:HG11	29:DF:183:VAL:CG1	2.48	0.43
45:DZ:30:ASN:ND2	45:DZ:90:VAL:HB	2.33	0.43
46:D0:24:LYS:O	46:D0:25:ARG:HD3	2.18	0.43
53:D7:22:MET:HA	53:D7:28:ARG:HG2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:147:G:C6	1:AA:148:G:C5	3.07	0.43
1:AA:353:A:H8	1:AA:353:A:H5'	1.84	0.43
1:AA:416:G:C6	1:AA:417:C:C4	3.06	0.43
1:AA:631:G:H2'	1:AA:632:A:H8	1.82	0.43
2:AB:146:GLN:O	2:AB:150:SER:HB3	2.19	0.43
8:AH:110:ALA:HB3	8:AH:121:ASP:HB3	2.00	0.43
25:BA:1183:G:H2'	25:BA:1184:G:O4'	2.18	0.43
25:BA:1324:A:OP1	37:BR:36:THR:HG22	2.18	0.43
25:BA:2768:C:C4	55:B9:19:ARG:NH1	2.86	0.43
26:BB:66:A:H61	26:BB:109:C:H5'	1.82	0.43
26:BB:73:A:C4	26:BB:105:A:C2	3.06	0.43
47:B1:82:LEU:HA	47:B1:85:LEU:HD12	2.01	0.43
53:B7:24:THR:HG22	53:B7:26:GLY:N	2.32	0.43
1:CA:35:G:C5	1:CA:36:C:N4	2.86	0.43
1:CA:401:C:H1'	1:CA:622:A:H1'	2.01	0.43
1:CA:545:C:H5'	4:CD:72:GLU:CB	2.49	0.43
1:CA:683:G:C6	1:CA:684:A:C5	3.07	0.43
1:CA:1038:C:C2'	1:CA:1039:C:H5'	2.49	0.43
1:CA:1118:C:H2'	1:CA:1119:C:C6	2.53	0.43
1:CA:1323:G:HO2'	1:CA:1362:C:HO2'	1.64	0.43
19:CS:31:ILE:HG22	19:CS:33:THR:HG22	2.00	0.43
25:DA:443:A:H1'	25:DA:1201:C:O4'	2.18	0.43
25:DA:483:A:O4'	44:DY:48:ALA:HB1	2.18	0.43
25:DA:1784:A:H4'	25:DA:1785:A:O5'	2.19	0.43
25:DA:1859:A:N6	25:DA:1883:G:O2'	2.52	0.43
25:DA:1970:A:OP2	61:DA:3905:HOH:O	2.20	0.43
26:DB:46:A:H2'	26:DB:47:C:H6	1.84	0.43
30:DG:25:TYR:HB3	30:DG:30:GLU:CB	2.47	0.43
35:DP:100:LEU:HD12	35:DP:112:LEU:HD11	1.99	0.43
37:DR:92:GLY:HA2	37:DR:94:TYR:CZ	2.54	0.43
1:AA:6:G:O2'	1:AA:7:G:H5'	2.18	0.43
1:AA:93:G:H2'	1:AA:96:U:O4'	2.19	0.43
1:AA:598:U:H2'	1:AA:599:C:H6	1.84	0.43
1:AA:1030:C:H3'	1:AA:1030(A):G:H4'	2.01	0.43
1:AA:1142:G:H3'	1:AA:1143:G:C8	2.53	0.43
3:AC:123:GLN:HG2	3:AC:128:PHE:HD2	1.84	0.43
6:AF:86:ARG:O	6:AF:87:ARG:HG2	2.19	0.43
7:AG:27:ILE:CD1	7:AG:40:ALA:HA	2.47	0.43
7:AG:50:ILE:O	7:AG:50:ILE:HD12	2.19	0.43
23:AX:6:G:N2	23:AX:68:C:C2	2.86	0.43
23:AX:66:C:H2'	23:AX:67:C:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:403:C:H42	25:BA:425:G:H1	1.65	0.43
25:BA:2306:C:OP2	38:BS:89:ARG:NH2	2.46	0.43
25:BA:2661:U:H2'	25:BA:2662:U:H6	1.84	0.43
26:BB:24:G:N7	26:BB:56:G:H2'	2.34	0.43
32:BI:87:LYS:HE3	32:BI:87:LYS:HB2	1.85	0.43
34:BO:2:ILE:HG23	34:BO:6:THR:HG21	2.01	0.43
49:B3:4:LEU:O	49:B3:36:VAL:HA	2.18	0.43
49:B3:18:ASP:OD1	49:B3:18:ASP:N	2.51	0.43
50:B4:59:PHE:HA	50:B4:61:ARG:HG2	2.00	0.43
1:CA:500:G:C6	1:CA:546:G:C2	3.07	0.43
1:CA:724:G:C2	1:CA:725:G:C8	3.06	0.43
1:CA:1032:G:H2'	1:CA:1033:G:C8	2.54	0.43
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.84	0.43
1:CA:1093:A:N3	1:CA:1109:C:O2'	2.47	0.43
1:CA:1134:G:H2'	1:CA:1134:G:N3	2.32	0.43
1:CA:1151:A:C4	1:CA:1152:A:N7	2.87	0.43
1:CA:1312:G:O6	19:CS:2:PRO:HD2	2.18	0.43
3:CC:12:LEU:HD23	3:CC:12:LEU:HA	1.86	0.43
4:CD:52:SER:O	4:CD:56:VAL:HG23	2.19	0.43
7:CG:23:VAL:HG13	7:CG:43:PHE:CE2	2.53	0.43
10:CJ:11:PHE:CD1	10:CJ:67:THR:HG22	2.54	0.43
10:CJ:78:ASN:C	10:CJ:80:LYS:N	2.77	0.43
13:CM:15:VAL:O	13:CM:19:LEU:HD22	2.19	0.43
13:CM:88:ARG:HG3	13:CM:98:VAL:HG12	2.00	0.43
18:CR:21:LYS:NZ	18:CR:54:ARG:O	2.37	0.43
23:CX:61:C:H2'	23:CX:62:C:H6	1.82	0.43
25:DA:271(X):G:C2	25:DA:271(Y):U:O4	2.71	0.43
25:DA:517:C:OP1	51:D5:16:ARG:NH2	2.51	0.43
25:DA:947:G:O2'	25:DA:984:A:N1	2.52	0.43
25:DA:1955:U:O4	25:DA:2554:U:H5	2.01	0.43
25:DA:2330:G:H2'	25:DA:2331:G:O4'	2.18	0.43
25:DA:2636:U:H1'	25:DA:2783:G:N2	2.34	0.43
26:DB:5:C:OP1	26:DB:61:G:O2'	2.34	0.43
28:DE:147:PRO:HB2	28:DE:149:ARG:HG2	2.01	0.43
30:DG:179:PRO:HG3	50:D4:43:TYR:OH	2.18	0.43
31:DH:169:VAL:HG12	31:DH:171:LEU:HD22	2.00	0.43
42:DW:88:ARG:NH1	42:DW:94:ASP:OD2	2.52	0.43
47:D1:95:LEU:O	47:D1:98:LEU:HB2	2.18	0.43
50:D4:62:ARG:H	50:D4:62:ARG:HD3	1.83	0.43
55:D9:17:ILE:HG21	55:D9:26:ILE:HD11	2.01	0.43
1:AA:389:A:C6	1:AA:390:C:H1'	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:436:C:H5''	4:AD:156:GLU:OE2	2.19	0.43
1:AA:625:G:O2'	1:AA:626:U:H5'	2.17	0.43
1:AA:1343:G:O2'	9:AI:121:ARG:HD2	2.19	0.43
2:AB:124:SER:HB3	2:AB:125:PRO:HA	2.01	0.43
6:AF:82:ARG:HB3	6:AF:85:VAL:HG23	2.00	0.43
10:AJ:81:THR:O	10:AJ:85:LEU:HG	2.18	0.43
21:AU:22:ARG:HA	21:AU:23:PRO:HD3	1.65	0.43
25:BA:199:C:H2'	25:BA:200:A:C8	2.54	0.43
25:BA:316:C:C2	25:BA:373:G:C2	3.07	0.43
25:BA:1034:A:O5'	25:BA:1034:A:H8	2.02	0.43
25:BA:1095:C:H2'	25:BA:1096:A:H8	1.84	0.43
25:BA:1558:G:H2'	25:BA:1559:C:C6	2.54	0.43
25:BA:2843:G:H4'	25:BA:2844:G:OP2	2.19	0.43
26:BB:96:U:H2'	26:BB:97:G:C8	2.54	0.43
27:BD:206:LEU:HA	27:BD:206:LEU:HD23	1.78	0.43
36:BQ:18:LYS:O	36:BQ:98:LYS:NZ	2.37	0.43
1:CA:445:G:H2'	1:CA:446:G:H8	1.83	0.43
1:CA:937:A:H1'	1:CA:1379:G:N2	2.34	0.43
1:CA:1015:A:C6	1:CA:1016:A:C6	3.07	0.43
1:CA:1052:U:H5''	1:CA:1053:G:OP2	2.17	0.43
1:CA:1125:U:H2'	1:CA:1127:G:N7	2.34	0.43
1:CA:1323:G:H4'	1:CA:1363:C:N3	2.32	0.43
3:CC:112:SER:O	3:CC:115:LEU:HB2	2.19	0.43
4:CD:67:ILE:HG22	4:CD:68:TYR:CD1	2.54	0.43
4:CD:163:GLU:C	4:CD:165:MET:H	2.26	0.43
9:CI:96:LEU:HD22	9:CI:101:PHE:HB2	2.00	0.43
10:CJ:16:LEU:HD13	10:CJ:70:ARG:CG	2.47	0.43
12:CL:34:ARG:HE	12:CL:34:ARG:HB3	1.37	0.43
17:CQ:56:VAL:O	17:CQ:77:VAL:HB	2.19	0.43
25:DA:31:C:H5'	25:DA:1239:G:OP1	2.19	0.43
25:DA:108:U:H2'	25:DA:109:G:H8	1.84	0.43
25:DA:154:G:C6	25:DA:173:G:C6	3.07	0.43
25:DA:242:G:H5''	54:D8:64:TYR:CE2	2.54	0.43
25:DA:702:G:C2	25:DA:731:C:C2	3.06	0.43
25:DA:763:G:H1'	25:DA:765:G:O4'	2.18	0.43
25:DA:844:C:C5	25:DA:845:G:C6	3.06	0.43
25:DA:863:A:H2'	25:DA:864:G:C8	2.53	0.43
25:DA:863:A:OP1	36:DQ:22:LYS:HG3	2.18	0.43
25:DA:952:G:C6	25:DA:953:A:N7	2.87	0.43
25:DA:1462:C:H4'	25:DA:2703:C:H5'	2.00	0.43
25:DA:1475:G:C2	25:DA:1517:G:C2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2027:G:H2'	25:DA:2028:U:O4'	2.19	0.43
25:DA:2464:C:C2	25:DA:2487:G:C2	3.07	0.43
25:DA:2537:U:H2'	25:DA:2538:C:C6	2.54	0.43
25:DA:2645:G:H4'	25:DA:2732:G:O3'	2.19	0.43
26:DB:28:C:H2'	26:DB:29:A:O4'	2.19	0.43
28:DE:181:LEU:HA	28:DE:181:LEU:HD12	1.58	0.43
29:DF:33:LEU:HD22	29:DF:112:MET:HE3	2.01	0.43
31:DH:3:ARG:NH1	31:DH:3:ARG:HB3	2.34	0.43
35:DP:96:THR:N	35:DP:99:LEU:HD21	2.24	0.43
42:DW:14:PRO:HG2	42:DW:78:GLU:CG	2.46	0.43
45:DZ:121:HIS:HB3	45:DZ:123:ASP:O	2.18	0.43
48:D2:65:ASN:OD1	48:D2:69:ARG:NH1	2.49	0.43
1:AA:113:G:H2'	1:AA:114:U:C6	2.54	0.43
1:AA:312:C:H2'	1:AA:313:A:H8	1.83	0.43
1:AA:637:G:C6	1:AA:638:G:C5	3.06	0.43
1:AA:975:A:H4'	1:AA:976:G:C5'	2.44	0.43
1:AA:1187:G:H2'	1:AA:1188:A:H8	1.84	0.43
2:AB:180:LEU:O	2:AB:181:PHE:HB2	2.18	0.43
3:AC:12:LEU:HD11	14:AN:51:GLY:CA	2.48	0.43
4:AD:163:GLU:O	4:AD:166:LYS:HG2	2.19	0.43
9:AI:19:LEU:HB3	9:AI:59:PHE:CD2	2.52	0.43
25:BA:866:A:C4	25:BA:1234:A:C2	3.06	0.43
25:BA:1781:G:O2'	25:BA:2870:A:N1	2.48	0.43
25:BA:1854:G:N2	61:BA:3835:HOH:O	2.41	0.43
25:BA:2418:U:H2'	25:BA:2418:U:OP2	2.19	0.43
32:BI:93:THR:O	32:BI:97:ILE:HG13	2.18	0.43
33:BN:48:MET:H	33:BN:48:MET:HG3	1.70	0.43
36:BQ:58:PHE:HB3	36:BQ:61:GLY:O	2.18	0.43
38:BS:14:VAL:O	38:BS:18:ILE:HG12	2.17	0.43
1:CA:452:A:C2	1:CA:453:A:C4	3.06	0.43
1:CA:473:G:O2'	1:CA:474:G:H5'	2.19	0.43
1:CA:961:U:OP2	1:CA:1223:C:O2'	2.31	0.43
1:CA:1005:A:N6	1:CA:1024:G:O2'	2.51	0.43
1:CA:1178:G:H2'	1:CA:1180:A:OP2	2.18	0.43
1:CA:1385:G:C6	1:CA:1386:G:C5	3.07	0.43
7:CG:65:ALA:HB3	7:CG:124:LEU:HD23	2.01	0.43
7:CG:73:MET:HE2	7:CG:73:MET:HB2	1.85	0.43
7:CG:111:ARG:HB2	7:CG:119:ARG:HD2	2.00	0.43
8:CH:37:ARG:NH2	8:CH:38:ILE:HG12	2.34	0.43
19:CS:23:ASN:OD1	19:CS:47:HIS:NE2	2.51	0.43
25:DA:214:G:O2'	25:DA:216:A:O2'	2.29	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:537:C:H2'	25:DA:538:G:O4'	2.19	0.43
25:DA:616:G:C2	25:DA:618:C:C2	3.06	0.43
25:DA:706:A:H2'	25:DA:707:G:O4'	2.19	0.43
25:DA:898:C:H3'	25:DA:898:C:H6	1.84	0.43
25:DA:1005:C:C2	25:DA:1143:A:C5	3.06	0.43
25:DA:1195:G:O2'	25:DA:1226:A:N1	2.46	0.43
25:DA:1578:U:O2	25:DA:1578:U:H2'	2.18	0.43
25:DA:1759:A:H4'	25:DA:2715:C:O4'	2.19	0.43
25:DA:2094:G:P	32:DI:22:LYS:HD2	2.59	0.43
25:DA:2318:G:H21	38:DS:3:ARG:CD	2.31	0.43
25:DA:2409:G:H2'	25:DA:2410:G:O4'	2.18	0.43
25:DA:2494:G:C5	25:DA:2495:G:N7	2.87	0.43
25:DA:2563:U:O2	25:DA:2565:A:H8	2.01	0.43
25:DA:2679:A:C2	25:DA:2729:G:C2	3.07	0.43
26:DB:11:C:H3'	26:DB:12:C:C6	2.54	0.43
28:DE:1:MET:O	28:DE:84:PHE:HB2	2.19	0.43
45:DZ:161:VAL:HG13	45:DZ:161:VAL:O	2.19	0.43
1:AA:114:U:H1'	1:AA:353:A:H1'	2.00	0.43
1:AA:161:A:H2'	1:AA:162:A:H8	1.82	0.43
1:AA:298:A:H5''	1:AA:299:G:OP2	2.18	0.43
1:AA:309:G:H1'	1:AA:608:A:C2	2.54	0.43
1:AA:327:A:C4	1:AA:329:A:C8	3.07	0.43
1:AA:357:G:O2'	1:AA:358:U:H5'	2.19	0.43
1:AA:433:C:H6	1:AA:433:C:O5'	2.02	0.43
1:AA:601:C:O2	1:AA:637:G:N2	2.27	0.43
1:AA:625:G:C2'	1:AA:626:U:H5'	2.48	0.43
1:AA:901:A:C5	1:AA:902:G:H1'	2.54	0.43
1:AA:958:A:C2	19:AS:55:LYS:HB2	2.54	0.43
1:AA:1443:G:C2	1:AA:1460:A:N3	2.87	0.43
2:AB:155:LEU:HD11	2:AB:159:PRO:HD3	2.01	0.43
3:AC:34:LEU:HD12	3:AC:34:LEU:O	2.19	0.43
4:AD:23:GLY:HA3	4:AD:112:VAL:HB	2.01	0.43
4:AD:164:ALA:C	4:AD:168:ARG:HH11	2.26	0.43
8:AH:40:ALA:HA	8:AH:45:ILE:HG13	2.00	0.43
10:AJ:78:ASN:C	10:AJ:80:LYS:H	2.25	0.43
12:AL:85:ILE:HD12	12:AL:98:TYR:HB3	2.00	0.43
25:BA:302:A:P	25:BA:302:A:H8	2.42	0.43
25:BA:1073:A:C2	25:BA:2500:A:H5'	2.53	0.43
25:BA:1176:U:O2	25:BA:2047:C:H5''	2.19	0.43
25:BA:1766:G:H3'	25:BA:1767:A:C5'	2.47	0.43
25:BA:2576:A:C2	25:BA:2659:U:H4'	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:73:GLU:H	28:BE:73:GLU:HG3	1.54	0.43
29:BF:11:VAL:HG22	29:BF:125:LEU:HB2	2.00	0.43
29:BF:149:ASP:OD1	29:BF:149:ASP:N	2.45	0.43
30:BG:150:ASP:OD2	30:BG:151:ALA:N	2.52	0.43
31:BH:41:MET:HE2	31:BH:65:HIS:N	2.34	0.43
36:BQ:37:LEU:HD21	36:BQ:130:LYS:HE2	2.00	0.43
39:BT:81:PRO:HG2	39:BT:82:LEU:HD12	2.01	0.43
42:BW:20:VAL:O	42:BW:23:LEU:HB2	2.19	0.43
45:BZ:19:ARG:HE	45:BZ:19:ARG:HB2	1.65	0.43
45:BZ:44:PHE:CZ	45:BZ:86:VAL:HG11	2.53	0.43
1:CA:402:G:C2'	1:CA:403:C:H5'	2.49	0.43
1:CA:1157:A:N6	1:CA:1180:A:N3	2.67	0.43
3:CC:16:ARG:HD2	3:CC:16:ARG:HA	1.80	0.43
5:CE:12:LEU:HD22	5:CE:13:ILE:N	2.33	0.43
25:DA:322:A:P	29:DF:169:ASN:HB2	2.59	0.43
25:DA:536:A:H2'	25:DA:537:C:C6	2.54	0.43
25:DA:881:G:H1	25:DA:895:U:H3	1.67	0.43
25:DA:1332:G:OP1	61:DA:4077:HOH:O	2.21	0.43
25:DA:1665:A:C4'	34:DO:67:LYS:HB2	2.48	0.43
25:DA:1711:C:H2'	25:DA:1712:C:C6	2.53	0.43
25:DA:2000:G:N7	61:DA:4008:HOH:O	2.36	0.43
25:DA:2648:C:H2'	25:DA:2649:U:C6	2.54	0.43
28:DE:163:GLU:HG2	28:DE:164:ARG:H	1.83	0.43
30:DG:23:PHE:HB2	30:DG:25:TYR:CZ	2.53	0.43
31:DH:95:ARG:HB2	31:DH:128:PRO:HB2	2.01	0.43
36:DQ:42:ILE:HD13	36:DQ:97:VAL:CG2	2.49	0.43
37:DR:96:ARG:HD3	37:DR:98:LEU:HD11	2.00	0.43
39:DT:88:ILE:HG13	39:DT:91:ARG:NH2	2.34	0.43
43:DX:53:LYS:NZ	43:DX:55:ASN:OD1	2.32	0.43
1:AA:309:G:O2'	1:AA:607:A:N1	2.48	0.43
1:AA:687:A:N3	1:AA:688:G:H1'	2.33	0.43
1:AA:1362:C:H2'	1:AA:1363:C:H5''	2.00	0.43
2:AB:192:SER:O	2:AB:194:PRO:HD3	2.18	0.43
4:AD:45:GLN:HE21	4:AD:45:GLN:HB3	1.59	0.43
13:AM:40:ASN:OD1	13:AM:42:ALA:HB3	2.19	0.43
16:AP:22:THR:HA	16:AP:33:ILE:HG12	2.00	0.43
20:AT:90:GLN:O	20:AT:93:GLU:HB3	2.19	0.43
25:BA:64:C:H2'	25:BA:65:C:H6	1.83	0.43
25:BA:1752:G:C6	25:BA:1753:U:C4	3.07	0.43
25:BA:2070:G:C5	25:BA:2071:G:C8	3.07	0.43
25:BA:2490:A:H2'	25:BA:2491:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2830:A:O2'	25:BA:2831:A:OP1	2.37	0.43
26:BB:1:U:H2'	26:BB:2:C:C6	2.53	0.43
31:BH:89:ILE:O	31:BH:129:THR:HG22	2.19	0.43
32:BI:65:ALA:HB1	32:BI:136:VAL:HG11	1.99	0.43
36:BQ:39:PRO:HA	36:BQ:97:VAL:O	2.19	0.43
45:BZ:5:LEU:O	45:BZ:59:LEU:HA	2.19	0.43
50:B4:59:PHE:HA	50:B4:61:ARG:H	1.83	0.43
1:CA:80:G:N2	1:CA:90:U:H1'	2.34	0.43
1:CA:261:U:C5	20:CT:79:ARG:CZ	3.02	0.43
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.54	0.43
1:CA:1375:A:O2'	7:CG:29:LYS:NZ	2.50	0.43
4:CD:19:LEU:O	4:CD:21:LEU:N	2.51	0.43
5:CE:11:ILE:HB	5:CE:31:LEU:HB3	2.00	0.43
5:CE:92:LYS:HA	5:CE:93:PRO:HD2	1.84	0.43
7:CG:101:LEU:O	7:CG:104:LEU:HB2	2.18	0.43
12:CL:55:VAL:HG12	12:CL:69:TYR:HA	2.01	0.43
13:CM:97:PRO:HB3	13:CM:101:GLN:OE1	2.19	0.43
15:CO:82:ILE:HB	15:CO:87:ILE:HB	2.01	0.43
25:DA:55:G:H2'	25:DA:56:A:C8	2.54	0.43
25:DA:196:A:H2'	25:DA:196:A:N3	2.34	0.43
25:DA:538:G:H2'	25:DA:539:G:H8	1.83	0.43
25:DA:601:C:O2'	25:DA:605:C:H5''	2.19	0.43
25:DA:854:G:H2'	25:DA:855:G:C8	2.48	0.43
25:DA:927:G:H2'	25:DA:928:G:C8	2.53	0.43
25:DA:1169:G:H8	25:DA:1169:G:O5'	2.01	0.43
25:DA:1638:C:H5''	25:DA:2710:C:O2'	2.19	0.43
25:DA:2257:U:H2'	25:DA:2258:C:C6	2.54	0.43
25:DA:2302:G:C6	25:DA:2315:G:C6	3.06	0.43
25:DA:2310:A:H61	30:DG:79:ASN:ND2	2.17	0.43
25:DA:2675:A:H4'	34:DO:29:ASN:ND2	2.34	0.43
27:DD:139:GLY:H	27:DD:165:ILE:HB	1.84	0.43
30:DG:16:ARG:HD2	30:DG:16:ARG:HA	1.69	0.43
30:DG:76:SER:CB	30:DG:84:LYS:H	2.32	0.43
34:DO:34:THR:O	34:DO:37:ASP:HB2	2.19	0.43
48:D2:35:LEU:HD23	48:D2:35:LEU:HA	1.80	0.43
54:D8:22:VAL:CG2	54:D8:59:LYS:HG3	2.48	0.43
1:AA:453:A:C5	1:AA:454:C:C4	3.07	0.42
1:AA:1129:C:H1'	1:AA:1130:A:N7	2.34	0.42
1:AA:1445:C:C4	1:AA:1446:U:C4	3.07	0.42
3:AC:44:GLU:HG2	3:AC:52:LEU:CD2	2.49	0.42
8:AH:73:ASP:OD2	8:AH:75:ARG:NH1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:64:THR:CG2	9:AI:66:ARG:HD2	2.49	0.42
25:BA:771:U:H2'	25:BA:772:G:O4'	2.18	0.42
25:BA:1702:A:H3'	25:BA:1703:C:C6	2.53	0.42
25:BA:1712:A:C4'	34:BO:67:LYS:HB2	2.49	0.42
25:BA:2331:G:C8	25:BA:2332:A:C2	3.07	0.42
25:BA:2658:C:H2'	25:BA:2659:U:O4'	2.19	0.42
26:BB:4:C:H2'	26:BB:5:C:O4'	2.19	0.42
30:BG:96:ARG:O	30:BG:99:MET:HB3	2.19	0.42
39:BT:1:MET:HE3	39:BT:1:MET:HB2	1.88	0.42
48:B2:1:MET:HE1	48:B2:9:GLN:OE1	2.19	0.42
1:CA:414:A:C5	1:CA:431:A:C2	3.07	0.42
1:CA:491:G:C2	1:CA:492:G:C4	3.07	0.42
1:CA:664:G:H5''	18:CR:64:ARG:NH2	2.33	0.42
1:CA:939:G:H2'	1:CA:940:C:C6	2.54	0.42
1:CA:1317:C:OP1	14:CN:17:LYS:HG2	2.19	0.42
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.82	0.42
1:CA:1445:C:C2	1:CA:1458:G:C2	3.07	0.42
7:CG:69:VAL:HG22	7:CG:135:VAL:HG22	2.01	0.42
25:DA:272(B):G:H2'	25:DA:272(C):G:C8	2.54	0.42
25:DA:879:G:C8	25:DA:880:G:C8	3.07	0.42
25:DA:2076:U:O5'	25:DA:2076:U:H6	2.02	0.42
26:DB:28:C:OP1	38:DS:36:TYR:OH	2.34	0.42
29:DF:31:HIS:HB2	35:DP:9:ASN:OD1	2.19	0.42
29:DF:138:GLU:O	29:DF:141:ALA:HB3	2.19	0.42
30:DG:33:ARG:O	30:DG:161:THR:HG23	2.18	0.42
30:DG:109:VAL:O	30:DG:113:ARG:HB2	2.19	0.42
33:DN:96:GLU:OE2	33:DN:96:GLU:N	2.46	0.42
1:AA:39:G:C6	1:AA:40:C:C4	3.07	0.42
1:AA:317:G:C6	1:AA:318:G:C5	3.07	0.42
1:AA:410:G:N1	1:AA:431:A:OP2	2.48	0.42
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.34	0.42
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	2.00	0.42
2:AB:54:THR:HG23	2:AB:199:TYR:HB3	2.00	0.42
4:AD:13:ARG:HB2	4:AD:40:PRO:HD3	2.00	0.42
4:AD:15:GLU:OE2	4:AD:66:ARG:NH1	2.52	0.42
4:AD:110:PHE:N	4:AD:110:PHE:HD1	2.16	0.42
8:AH:51:VAL:HG21	8:AH:60:ARG:HB2	2.00	0.42
10:AJ:16:LEU:HD21	10:AJ:70:ARG:CG	2.49	0.42
12:AL:6:THR:HG23	12:AL:9:GLN:OE1	2.19	0.42
20:AT:30:LYS:HA	20:AT:33:ILE:HD12	2.00	0.42
25:BA:21:A:H2'	25:BA:22:C:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:311:C:H2'	25:BA:312:C:C6	2.51	0.42
25:BA:873:U:H2'	25:BA:875:U:O4'	2.19	0.42
25:BA:2442:A:N3	25:BA:2442:A:H2'	2.33	0.42
26:BB:37:C:C5	26:BB:38:C:C4	3.06	0.42
34:BO:115:VAL:HG13	34:BO:121:VAL:HG21	2.00	0.42
35:BP:2:LYS:HZ1	35:BP:4:SER:HB3	1.84	0.42
38:BS:6:ALA:O	38:BS:10:ARG:HB2	2.18	0.42
45:BZ:15:PRO:O	45:BZ:19:ARG:HB2	2.19	0.42
51:B5:16:ARG:O	51:B5:20:ARG:HG3	2.19	0.42
54:B8:39:LYS:HA	54:B8:42:ARG:NH1	2.34	0.42
1:CA:339:C:H2'	1:CA:340:U:C6	2.54	0.42
1:CA:382:A:H2'	1:CA:383:A:H8	1.78	0.42
1:CA:811:C:O2'	1:CA:901:A:N1	2.48	0.42
1:CA:1205:U:O2'	3:CC:195:VAL:HG23	2.19	0.42
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.54	0.42
2:CB:23:ARG:HB2	2:CB:23:ARG:HH11	1.82	0.42
5:CE:10:MET:HG2	5:CE:13:ILE:HD11	2.00	0.42
13:CM:23:TYR:CD2	13:CM:70:LEU:HD13	2.54	0.42
17:CQ:5:VAL:O	17:CQ:6:LEU:HD13	2.19	0.42
23:CX:22:G:H2'	23:CX:23:C:C6	2.54	0.42
25:DA:77:C:H5''	48:D2:10:LEU:HD21	2.01	0.42
25:DA:754:C:H4'	25:DA:1272:A:N6	2.34	0.42
25:DA:768:G:C6	25:DA:769:G:C5	3.07	0.42
25:DA:945:A:C4	25:DA:2448:A:C2	3.07	0.42
25:DA:1412:A:C2	25:DA:1591:G:C2	3.07	0.42
25:DA:1514:U:H2'	25:DA:1515:G:C8	2.55	0.42
25:DA:1515:G:H2'	25:DA:1516:C:C6	2.55	0.42
25:DA:2193:G:H2'	25:DA:2194:G:C8	2.54	0.42
25:DA:2408:U:H2'	25:DA:2409:G:H8	1.84	0.42
28:DE:14:ILE:HB	39:DT:14:TYR:CE2	2.54	0.42
29:DF:37:VAL:HA	29:DF:40:GLN:HB2	2.00	0.42
30:DG:121:ASN:HB3	30:DG:124:SER:HB2	2.00	0.42
34:DO:7:TYR:CZ	34:DO:44:LYS:HG3	2.54	0.42
42:DW:46:PHE:O	42:DW:50:VAL:HG23	2.19	0.42
45:DZ:7:ALA:O	45:DZ:62:PRO:HD3	2.19	0.42
1:AA:310:G:H5''	16:AP:31:LYS:HB2	2.02	0.42
1:AA:1006:C:H2'	1:AA:1007:C:O4'	2.19	0.42
1:AA:1091:U:H2'	1:AA:1093:A:OP2	2.19	0.42
1:AA:1114:C:H42	1:AA:1186:G:H1	1.67	0.42
3:AC:64:VAL:HG13	3:AC:99:VAL:HA	2.01	0.42
4:AD:119:GLN:HG2	4:AD:123:HIS:NE2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:135:LEU:C	4:AD:137:SER:H	2.27	0.42
7:AG:51:GLN:O	7:AG:55:GLY:HA2	2.19	0.42
9:AI:3:GLN:CG	9:AI:20:ARG:HE	2.32	0.42
12:AL:24:VAL:CG1	12:AL:27:LEU:HD22	2.44	0.42
19:AS:64:GLU:O	19:AS:67:VAL:HG23	2.19	0.42
25:BA:287:G:O2'	25:BA:448:U:OP2	2.26	0.42
25:BA:1766:G:H8	25:BA:1770:A:H62	1.66	0.42
25:BA:2695:C:OP1	39:BT:53:ARG:NH2	2.52	0.42
33:BN:42:TRP:CE3	40:BU:63:VAL:HG11	2.54	0.42
36:BQ:14:ARG:HG2	36:BQ:41:TRP:HH2	1.83	0.42
43:BX:12:VAL:HG22	43:BX:29:TRP:CE2	2.54	0.42
45:BZ:111:VAL:HG12	45:BZ:112:ARG:N	2.34	0.42
50:B4:8:LYS:HB3	50:B4:8:LYS:HE2	1.70	0.42
1:CA:9:G:O6	1:CA:558:G:H2'	2.20	0.42
1:CA:19:C:H5''	5:CE:86:ALA:HB3	2.02	0.42
1:CA:438:G:O2'	1:CA:494:U:O4	2.32	0.42
1:CA:448:A:P	1:CA:485:G:H22	2.42	0.42
1:CA:833:U:H2'	1:CA:834:C:C6	2.54	0.42
1:CA:1014:A:H4'	19:CS:14:HIS:CE1	2.54	0.42
1:CA:1122:U:C5	1:CA:1123:A:N7	2.88	0.42
2:CB:187:LEU:HD23	2:CB:201:ILE:HG22	2.00	0.42
8:CH:28:ALA:HB3	8:CH:57:PRO:HB2	2.02	0.42
8:CH:121:ASP:OD1	8:CH:121:ASP:N	2.50	0.42
9:CI:53:VAL:C	9:CI:55:ALA:N	2.78	0.42
25:DA:180:G:H5''	25:DA:181:A:P	2.59	0.42
25:DA:289:A:H2'	25:DA:290:G:C8	2.54	0.42
25:DA:652(D):C:C2'	25:DA:652(E):G:H5'	2.49	0.42
25:DA:660:G:H5'	29:DF:99:TYR:CD2	2.55	0.42
25:DA:760:G:H2'	25:DA:761:A:O4'	2.19	0.42
25:DA:837:C:N3	25:DA:941:A:N6	2.67	0.42
25:DA:934:G:H2'	25:DA:935:C:C6	2.55	0.42
25:DA:1167:U:O2	25:DA:1183:G:N2	2.52	0.42
25:DA:2275:C:H6	25:DA:2275:C:H5'	1.84	0.42
29:DF:184:TYR:O	29:DF:188:ARG:HG3	2.20	0.42
38:DS:69:VAL:O	38:DS:72:ALA:HB3	2.18	0.42
47:D1:52:ARG:NH2	47:D1:57:GLU:HB2	2.34	0.42
1:AA:922:G:H2'	1:AA:923:A:C8	2.54	0.42
1:AA:998:G:H2'	1:AA:999:C:C6	2.55	0.42
1:AA:1086:U:C2'	1:AA:1087:G:H5'	2.49	0.42
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.34	0.42
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1524:C:OP1	11:AK:120:ARG:NH1	2.50	0.42
3:AC:29:TYR:CD1	3:AC:29:TYR:C	2.98	0.42
8:AH:104:ARG:HG3	8:AH:138:TRP:CD2	2.54	0.42
16:AP:6:LEU:HB3	16:AP:17:TYR:CD2	2.54	0.42
16:AP:34:GLU:OE2	16:AP:55:ARG:NH2	2.39	0.42
25:BA:776:G:OP2	27:BD:13:ARG:NH1	2.45	0.42
25:BA:895:G:O6	25:BA:974:G:H2'	2.20	0.42
25:BA:2760:G:C2	25:BA:2769:U:C5	3.07	0.42
30:BG:86:MET:HA	30:BG:87:PRO:HD3	1.90	0.42
31:BH:17:VAL:HG21	31:BH:50:VAL:HG21	2.01	0.42
39:BT:7:ILE:O	39:BT:11:GLU:HG3	2.19	0.42
45:BZ:111:VAL:HG12	45:BZ:112:ARG:H	1.84	0.42
1:CA:35:G:H2'	1:CA:36:C:C6	2.55	0.42
1:CA:97:G:O2'	1:CA:98:G:O4'	2.35	0.42
1:CA:383:A:H5''	1:CA:384:G:OP2	2.20	0.42
1:CA:473:G:H2'	1:CA:474:G:H8	1.81	0.42
1:CA:540:G:H2'	1:CA:541:G:O4'	2.19	0.42
1:CA:590:C:H2'	1:CA:591:U:H6	1.84	0.42
1:CA:1005:A:H1'	1:CA:1036:G:C6	2.55	0.42
1:CA:1023:G:C4	1:CA:1024:G:C8	3.07	0.42
1:CA:1120:G:C6	1:CA:1154:G:N2	2.87	0.42
1:CA:1210:C:H2'	1:CA:1211:U:H5''	2.01	0.42
2:CB:130:ARG:HA	2:CB:131:PRO:HD3	1.80	0.42
4:CD:90:GLY:HA2	4:CD:204:ILE:HD11	2.01	0.42
6:CF:76:ALA:O	6:CF:80:ARG:HG3	2.20	0.42
9:CI:33:PHE:CE1	9:CI:43:ALA:HB1	2.46	0.42
9:CI:99:LEU:HB3	9:CI:101:PHE:CE1	2.54	0.42
16:CP:53:VAL:O	16:CP:57:ARG:HB2	2.19	0.42
25:DA:836:G:H2'	25:DA:837:C:C6	2.53	0.42
25:DA:871:U:H5''	36:DQ:69:PHE:CE2	2.54	0.42
25:DA:1418:G:H8	25:DA:1418:G:O5'	2.03	0.42
25:DA:1517:G:C6	25:DA:1518:U:C4	3.07	0.42
25:DA:2298:A:C8	25:DA:2299:G:C8	3.07	0.42
25:DA:2419:U:H2'	25:DA:2420:C:C6	2.54	0.42
25:DA:2477:C:N4	55:D9:10:ILE:HG23	2.34	0.42
27:DD:134:ARG:NH1	27:DD:188:GLU:OE2	2.51	0.42
29:DF:110:LEU:HD21	29:DF:181:LEU:HG	2.00	0.42
31:DH:88:LEU:HD23	31:DH:165:ALA:HA	2.01	0.42
34:DO:2:ILE:HB	34:DO:33:ALA:HB3	2.01	0.42
38:DS:24:LEU:HD23	38:DS:24:LEU:HA	1.88	0.42
38:DS:78:LEU:HD11	38:DS:108:GLY:O	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DV:62:LEU:HD22	41:DV:94:LEU:C	2.44	0.42
51:D5:40:LYS:NZ	51:D5:44:THR:O	2.48	0.42
51:D5:48:GLU:O	51:D5:60:VAL:HG11	2.20	0.42
52:D6:11:LEU:HB2	52:D6:21:TYR:HB2	2.00	0.42
1:AA:406:G:N2	4:AD:119:GLN:HE22	2.18	0.42
1:AA:448:A:H2'	1:AA:449:C:C6	2.54	0.42
1:AA:575:G:O2'	1:AA:821:G:H5'	2.19	0.42
1:AA:1129:C:N4	1:AA:1143:G:N1	2.40	0.42
1:AA:1486:G:H2'	1:AA:1487:G:C1'	2.50	0.42
2:AB:170:GLU:O	2:AB:174:VAL:HG23	2.20	0.42
19:AS:19:VAL:O	19:AS:22:LEU:HB2	2.19	0.42
25:BA:904:C:N4	25:BA:905:U:O4	2.52	0.42
25:BA:2245:U:H2'	25:BA:2246:G:C8	2.54	0.42
26:BB:16:G:C6	26:BB:69:G:C2	3.08	0.42
28:BE:49:LEU:HD12	28:BE:49:LEU:HA	1.89	0.42
34:BO:10:VAL:HG21	34:BO:16:ALA:HB3	2.01	0.42
37:BR:83:ILE:O	37:BR:86:ARG:HG2	2.20	0.42
47:B1:98:LEU:HD23	47:B1:98:LEU:HA	1.88	0.42
49:B3:3:ARG:HD3	49:B3:60:GLU:CD	2.45	0.42
50:B4:53:GLU:O	50:B4:56:VAL:HG13	2.20	0.42
1:CA:373:A:H2'	1:CA:374:A:H8	1.84	0.42
1:CA:391:G:C6	1:CA:392:G:C5	3.07	0.42
1:CA:460:G:C6	1:CA:470:C:H5''	2.53	0.42
1:CA:622:A:H3'	1:CA:623:C:H6	1.84	0.42
1:CA:973:G:H3'	1:CA:974:A:H5''	2.01	0.42
1:CA:1023:G:H3'	1:CA:1024:G:C8	2.54	0.42
1:CA:1179:A:C6	1:CA:1180:A:C8	3.07	0.42
4:CD:110:PHE:N	4:CD:110:PHE:CD1	2.87	0.42
5:CE:40:ARG:HH21	5:CE:68:GLU:HA	1.82	0.42
16:CP:5:ARG:HH12	16:CP:28:ARG:HA	1.84	0.42
24:CW:9:MVA:O	24:CW:10:2QY:CD2	2.63	0.42
24:CW:9:MVA:CB	24:CW:10:2QY:H82	2.49	0.42
25:DA:319:C:N4	25:DA:320:A:C6	2.87	0.42
25:DA:442:G:O4'	29:DF:46:ARG:HG3	2.19	0.42
25:DA:576:U:H2'	25:DA:577:G:C8	2.55	0.42
25:DA:608:A:C6	25:DA:609:A:C6	3.07	0.42
25:DA:829:A:N7	25:DA:2248:C:H5'	2.35	0.42
25:DA:900:A:C2'	25:DA:901:A:H8	2.32	0.42
25:DA:1636:C:H2'	25:DA:1637:A:H8	1.80	0.42
25:DA:1790:C:H5''	25:DA:1791:A:OP1	2.19	0.42
25:DA:1815:A:P	27:DD:54:ARG:NH2	2.92	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2005:A:H5''	25:DA:2006:C:OP2	2.20	0.42
25:DA:2055:C:H5'	25:DA:2056:G:O5'	2.19	0.42
25:DA:2298:A:N6	25:DA:2321:G:H1	2.18	0.42
25:DA:2740:A:C6	25:DA:2764:A:C8	3.07	0.42
35:DP:6:LEU:HD23	35:DP:6:LEU:HA	1.76	0.42
35:DP:83:VAL:O	35:DP:115:LEU:N	2.44	0.42
36:DQ:18:LYS:HB2	36:DQ:18:LYS:HE3	1.91	0.42
38:DS:103:GLU:O	38:DS:107:GLU:HG3	2.20	0.42
45:DZ:95:PRO:HA	45:DZ:129:SER:HA	2.00	0.42
45:DZ:122:ARG:HH11	45:DZ:122:ARG:HG2	1.84	0.42
45:DZ:150:LEU:HD12	45:DZ:150:LEU:HA	1.58	0.42
1:AA:271:C:H2'	1:AA:272:C:C6	2.54	0.42
1:AA:1041:A:C2'	1:AA:1042:G:H5'	2.49	0.42
1:AA:1346:A:H5''	9:AI:120:ARG:NH1	2.34	0.42
4:AD:158:ILE:HB	4:AD:162:LEU:HD12	2.01	0.42
14:AN:45:ARG:HG2	14:AN:49:HIS:CD2	2.53	0.42
15:AO:5:LYS:H	15:AO:5:LYS:CD	2.31	0.42
16:AP:57:ARG:HH21	16:AP:79:VAL:C	2.28	0.42
23:AX:19:G:C5	23:AX:57:A:C2	3.07	0.42
25:BA:196:A:H2'	25:BA:197:C:O4'	2.18	0.42
25:BA:354:A:H2	25:BA:1255:A:O2'	2.02	0.42
25:BA:1308:A:OP1	42:BW:99:ARG:NH1	2.49	0.42
25:BA:2703:C:O3'	25:BA:2881:C:H4'	2.20	0.42
27:BD:33:LEU:HD23	27:BD:33:LEU:HA	1.81	0.42
30:BG:125:PHE:HB3	30:BG:166:ASP:OD1	2.20	0.42
48:B2:3:LEU:HD23	48:B2:3:LEU:HA	1.76	0.42
1:CA:735:C:H5'	18:CR:71:LYS:HD3	2.00	0.42
1:CA:837:G:H2'	1:CA:838:G:C8	2.55	0.42
1:CA:881:G:H2'	1:CA:882:C:O4'	2.19	0.42
1:CA:999:C:C2	1:CA:1042:G:N2	2.87	0.42
1:CA:1002:G:N3	1:CA:1003:G:N7	2.67	0.42
1:CA:1057:G:C4	1:CA:1204:A:C2	3.07	0.42
1:CA:1145:C:H4'	1:CA:1146:A:C5'	2.48	0.42
2:CB:61:LEU:HD23	2:CB:68:ILE:HD11	2.01	0.42
4:CD:81:GLU:O	4:CD:85:LYS:HB2	2.20	0.42
4:CD:173:TRP:CE2	4:CD:189:PRO:HG3	2.54	0.42
25:DA:14:A:C6	25:DA:526:A:C2	3.08	0.42
25:DA:172:C:H2'	25:DA:173:G:C8	2.52	0.42
25:DA:1479:G:C6	25:DA:1480:G:C5	3.08	0.42
25:DA:1510:G:H8	25:DA:1510:G:O5'	2.03	0.42
25:DA:1844:C:OP1	27:DD:257:LEU:HD23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2046:G:H2'	25:DA:2047:U:C6	2.53	0.42
25:DA:2399:G:C6	25:DA:2400:G:C5	3.07	0.42
26:DB:15:A:O4'	26:DB:110:G:C8	2.73	0.42
26:DB:24:G:H4'	26:DB:25:A:N7	2.35	0.42
29:DF:32:LEU:HD11	29:DF:105:VAL:HG13	2.00	0.42
29:DF:51:THR:HG23	29:DF:92:PRO:HG2	2.01	0.42
1:AA:68:G:H22	1:AA:101:A:H2	1.67	0.42
1:AA:341:C:O2'	1:AA:342:C:H5'	2.20	0.42
1:AA:840:C:H4'	1:AA:841:U:OP1	2.20	0.42
1:AA:1001:A:N6	1:AA:1001(A):G:O6	2.53	0.42
1:AA:1047:G:O3'	14:AN:4:LYS:HB2	2.20	0.42
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.55	0.42
1:AA:1438:G:H2'	1:AA:1439:C:C6	2.54	0.42
2:AB:102:LEU:HB3	2:AB:180:LEU:CD1	2.50	0.42
2:AB:156:LYS:HB3	2:AB:156:LYS:HE2	1.81	0.42
3:AC:19:GLU:HB3	3:AC:40:ARG:NH2	2.35	0.42
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.87	0.42
4:AD:121:VAL:HA	4:AD:126:ILE:HG13	2.01	0.42
9:AI:4:TYR:CZ	9:AI:88:TYR:HD1	2.38	0.42
25:BA:415:G:O2'	25:BA:416:G:N7	2.43	0.42
25:BA:416:G:N1	35:BP:70:GLN:HG3	2.34	0.42
25:BA:2887:G:O2'	25:BA:2888:U:H5'	2.18	0.42
39:BT:16:ARG:HD2	39:BT:18:ASP:OD1	2.20	0.42
49:B3:3:ARG:HD3	49:B3:60:GLU:OE2	2.20	0.42
1:CA:149:A:H2'	1:CA:150:C:H6	1.83	0.42
1:CA:189:G:C5	1:CA:189(A):C:C4	3.07	0.42
1:CA:811:C:H4'	1:CA:900:A:N6	2.34	0.42
1:CA:865:A:H2	1:CA:918:A:H4'	1.83	0.42
1:CA:1002:G:N2	1:CA:1038:C:C2	2.82	0.42
1:CA:1002:G:H5''	1:CA:1003:G:OP2	2.19	0.42
1:CA:1002:G:C2	1:CA:1038:C:N3	2.83	0.42
1:CA:1158:C:H2'	1:CA:1160:G:H5'	2.02	0.42
1:CA:1239:A:H62	1:CA:1299:A:N6	2.16	0.42
2:CB:28:PHE:CD1	2:CB:31:TYR:HB2	2.55	0.42
2:CB:69:LEU:HD12	2:CB:70:PHE:H	1.84	0.42
2:CB:78:GLN:O	2:CB:94:ASN:ND2	2.52	0.42
25:DA:824:A:H2'	25:DA:825:C:O4'	2.19	0.42
25:DA:864:G:OP2	36:DQ:22:LYS:HE2	2.20	0.42
25:DA:1425:G:H2'	25:DA:1426:G:O4'	2.19	0.42
25:DA:1654:A:O2'	28:DE:113:PHE:O	2.30	0.42
25:DA:2009:G:O2'	25:DA:2010:G:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2307:G:H8	25:DA:2307:G:OP1	2.03	0.42
25:DA:2319:G:H22	38:DS:3:ARG:HE	1.68	0.42
25:DA:2348:U:OP2	54:D8:42:ARG:NH2	2.52	0.42
25:DA:2510:C:C4	25:DA:2511:U:C4	3.08	0.42
26:DB:45:A:H2'	26:DB:46:A:H8	1.84	0.42
27:DD:145:VAL:HG12	27:DD:146:GLU:O	2.18	0.42
30:DG:170:ARG:HD3	30:DG:170:ARG:O	2.19	0.42
31:DH:42:ARG:NH1	31:DH:53:GLU:OE2	2.52	0.42
31:DH:118:PRO:HD2	31:DH:121:ILE:HB	2.00	0.42
38:DS:68:GLN:HA	38:DS:68:GLN:HE21	1.85	0.42
1:AA:1057:G:OP2	61:AA:4014:HOH:O	2.22	0.42
1:AA:1503:A:H8	1:AA:1503:A:OP1	2.03	0.42
2:AB:119:GLU:OE2	2:AB:153:ARG:NH2	2.53	0.42
2:AB:141:GLU:O	2:AB:145:LEU:HB2	2.20	0.42
3:AC:32:LEU:HD22	3:AC:59:ARG:NH1	2.34	0.42
3:AC:121:ALA:O	3:AC:125:GLU:HG3	2.19	0.42
6:AF:63:TYR:N	6:AF:63:TYR:CD1	2.88	0.42
25:BA:83:A:C5'	44:BY:8:LYS:HG2	2.49	0.42
25:BA:589:U:OP1	35:BP:29:LYS:HD2	2.19	0.42
25:BA:753:A:H2'	25:BA:754:G:O4'	2.20	0.42
25:BA:950:C:H2'	25:BA:951:U:H6	1.83	0.42
25:BA:1273:G:OP1	40:BU:13:LYS:HG2	2.19	0.42
25:BA:2326:C:H2'	25:BA:2327:G:C8	2.55	0.42
26:BB:6:C:C2	26:BB:116:G:N2	2.88	0.42
28:BE:3:GLY:HA3	28:BE:81:ILE:HD12	2.01	0.42
31:BH:167:GLU:HA	31:BH:168:PRO:HD3	1.86	0.42
32:BI:130:TYR:HB3	32:BI:138:ILE:HB	2.02	0.42
35:BP:135:LEU:HA	35:BP:135:LEU:HD23	1.86	0.42
38:BS:58:LEU:HD23	38:BS:58:LEU:HA	1.83	0.42
39:BT:16:ARG:HH11	39:BT:18:ASP:CG	2.27	0.42
48:B2:18:PRO:HA	48:B2:21:LEU:HB2	2.02	0.42
1:CA:15:G:H2'	1:CA:16:A:C8	2.53	0.42
1:CA:176:C:H2'	1:CA:177:C:C6	2.54	0.42
1:CA:683:G:H2'	1:CA:684:A:C8	2.55	0.42
1:CA:741:G:H2'	1:CA:742:G:O4'	2.20	0.42
1:CA:938:A:N6	1:CA:939:G:C6	2.88	0.42
1:CA:947:G:H2'	1:CA:948:C:O4'	2.20	0.42
1:CA:991:U:C4	1:CA:1212:U:H1'	2.54	0.42
1:CA:1095:U:H5''	1:CA:1109:C:O2	2.20	0.42
1:CA:1289:A:N1	1:CA:1371:G:O2'	2.50	0.42
1:CA:1292:U:O2'	1:CA:1293:G:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1522:U:H2'	1:CA:1523:G:H8	1.84	0.42
2:CB:20:GLU:HG3	2:CB:191:ASP:HB3	2.02	0.42
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.19	0.42
9:CI:95:LYS:HA	9:CI:99:LEU:HD13	2.00	0.42
16:CP:21:VAL:CG1	16:CP:34:GLU:HB3	2.50	0.42
19:CS:50:ALA:HA	19:CS:58:VAL:O	2.20	0.42
20:CT:39:LYS:HE3	20:CT:39:LYS:HB2	1.90	0.42
24:CW:8:2R3:H62	24:CW:9:MVA:HN1	1.62	0.42
25:DA:9:U:O4	25:DA:2629:A:H2	2.02	0.42
25:DA:13:A:N1	25:DA:525:U:H2'	2.34	0.42
25:DA:530:G:N3	25:DA:530:G:O4'	2.53	0.42
25:DA:571:A:N6	25:DA:2499:C:O3'	2.53	0.42
25:DA:959:A:C6	25:DA:960:A:C6	3.08	0.42
25:DA:1015:G:O2'	25:DA:1016:G:H5'	2.20	0.42
25:DA:1184:G:OP1	49:D3:30:ARG:HD2	2.19	0.42
25:DA:1364:G:OP2	47:D1:3:LYS:HG3	2.20	0.42
25:DA:1375:C:H2'	25:DA:1376:C:H6	1.84	0.42
25:DA:2590:A:O2'	25:DA:2591:C:H5'	2.20	0.42
27:DD:13:ARG:HD2	27:DD:13:ARG:HA	1.43	0.42
27:DD:127:VAL:HA	27:DD:193:VAL:HG22	2.01	0.42
29:DF:154:VAL:HG22	29:DF:191:ARG:CB	2.49	0.42
29:DF:172:TRP:CD1	29:DF:172:TRP:H	2.38	0.42
35:DP:1:MET:HE2	35:DP:5:ASP:CB	2.49	0.42
50:D4:60:GLN:HA	50:D4:62:ARG:HG2	2.02	0.42
54:D8:26:LYS:HG2	54:D8:48:PHE:CD1	2.55	0.42
1:AA:66:G:O3'	1:AA:199:G:H4'	2.20	0.42
1:AA:130:A:N3	1:AA:263:A:O2'	2.51	0.42
1:AA:357:G:C2	1:AA:358:U:C5	3.08	0.42
1:AA:589:C:O2'	1:AA:590:C:H5'	2.20	0.42
1:AA:657:G:C2	1:AA:750:G:C5	3.08	0.42
1:AA:977:A:H2'	1:AA:978:A:H5''	2.01	0.42
1:AA:1060:C:H41	3:AC:2:GLY:HA3	1.85	0.42
1:AA:1256:A:C2	1:AA:1277:C:N4	2.88	0.42
1:AA:1277:C:H1'	1:AA:1282:C:C2	2.55	0.42
7:AG:73:MET:HE2	7:AG:73:MET:HB2	1.80	0.42
9:AI:110:GLU:OE2	9:AI:113:LYS:NZ	2.49	0.42
16:AP:58:TYR:CD1	16:AP:58:TYR:C	2.98	0.42
17:AQ:27:PHE:CZ	17:AQ:36:ILE:HD11	2.55	0.42
23:AX:19:G:C4	23:AX:57:A:C2	3.07	0.42
25:BA:439:A:H8	25:BA:439:A:O5'	2.03	0.42
25:BA:1370:G:C4	25:BA:1374:G:O6	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1387:U:OP1	25:BA:1443:U:N3	2.47	0.42
25:BA:1522:G:N2	25:BA:1565:G:C4	2.87	0.42
25:BA:1629:C:C2	25:BA:1630:A:C8	3.08	0.42
25:BA:1790:A:H1'	25:BA:2723:A:C2	2.55	0.42
25:BA:1898:A:H2'	25:BA:1899:A:C8	2.54	0.42
25:BA:2589:A:OP2	51:B5:3:LYS:NZ	2.52	0.42
25:BA:2623:U:H2'	51:B5:2:ALA:O	2.20	0.42
25:BA:2860:A:C2	25:BA:2861:A:C4	3.08	0.42
29:BF:192:LEU:HD13	29:BF:194:MET:HE2	2.02	0.42
32:BI:6:LEU:HG	32:BI:36:ALA:HA	2.01	0.42
34:BO:7:TYR:CZ	34:BO:44:LYS:HG3	2.55	0.42
45:BZ:67:LEU:HA	45:BZ:68:PRO:HD3	1.72	0.42
1:CA:160:A:H2'	1:CA:161:A:C8	2.55	0.42
1:CA:472:A:H2'	1:CA:473:G:O4'	2.20	0.42
1:CA:576:G:N2	1:CA:760:G:OP2	2.53	0.42
1:CA:677:U:H1'	11:CK:119:CYS:SG	2.60	0.42
1:CA:714:G:H2'	1:CA:715:A:C8	2.55	0.42
1:CA:951:G:C6	1:CA:952:U:C4	3.08	0.42
6:CF:80:ARG:NH1	6:CF:88:VAL:O	2.53	0.42
9:CI:33:PHE:CD1	9:CI:33:PHE:C	2.97	0.42
19:CS:27:GLU:HG2	19:CS:47:HIS:HE2	1.83	0.42
25:DA:144:C:H2'	25:DA:145:G:C8	2.50	0.42
25:DA:244:A:C2	25:DA:255:A:C4	3.08	0.42
25:DA:459:U:H4'	53:D7:40:TRP:CZ3	2.55	0.42
25:DA:537:C:H1'	33:DN:45:ASN:HD21	1.85	0.42
25:DA:595:C:H2'	25:DA:596:G:O4'	2.19	0.42
25:DA:1912:A:C8	25:DA:1918:A:C2	3.08	0.42
25:DA:2298:A:N7	25:DA:2299:G:C4	2.88	0.42
25:DA:2641:G:OP2	33:DN:83:LYS:NZ	2.49	0.42
25:DA:2821:A:C2	25:DA:2822:G:C4	3.08	0.42
30:DG:128:ARG:HE	30:DG:128:ARG:HB2	1.55	0.42
35:DP:127:ALA:C	35:DP:148:LEU:HD23	2.44	0.42
40:DU:79:PHE:O	40:DU:83:LEU:HD22	2.20	0.42
1:AA:22:G:H2'	1:AA:23:C:C6	2.55	0.42
1:AA:55:A:C5	1:AA:56:U:C5	3.08	0.42
1:AA:192:U:C2	1:AA:193:C:C5	3.08	0.42
1:AA:673:G:N2	1:AA:674:G:C2	2.88	0.42
1:AA:684:A:H2'	1:AA:685:G:H8	1.84	0.42
1:AA:890:G:O2'	1:AA:906:G:O6	2.31	0.42
1:AA:1162:C:H2'	1:AA:1163:C:H6	1.85	0.42
1:AA:1277:C:H2'	1:AA:1279:A:C8	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1308:U:H5''	13:AM:98:VAL:CG2	2.49	0.42
2:AB:95:GLN:HB3	2:AB:147:LYS:HZ2	1.85	0.42
2:AB:158:LEU:HA	2:AB:159:PRO:HD3	1.88	0.42
3:AC:22:TRP:CD1	3:AC:59:ARG:HD2	2.54	0.42
3:AC:175:LEU:HD21	3:AC:201:TYR:HE2	1.85	0.42
5:AE:20:GLN:NE2	5:AE:21:ALA:O	2.53	0.42
15:AO:61:GLY:O	15:AO:65:ARG:HG3	2.19	0.42
16:AP:71:ARG:O	16:AP:75:ARG:N	2.30	0.42
25:BA:374:U:H2'	25:BA:375:G:O4'	2.20	0.42
25:BA:738:C:O2'	25:BA:739:C:H5'	2.20	0.42
25:BA:801:C:H2'	25:BA:802:C:C6	2.55	0.42
25:BA:831:A:C8	25:BA:839:G:C5	3.08	0.42
25:BA:1224:C:O2'	25:BA:1225:C:H5'	2.20	0.42
25:BA:2376:C:H2'	25:BA:2377:G:O4'	2.20	0.42
25:BA:2517:G:O6	25:BA:2588:G:H2'	2.19	0.42
25:BA:2673:G:H2'	25:BA:2674:A:C8	2.55	0.42
25:BA:2677:A:C2	25:BA:2678:C:C2	3.08	0.42
27:BD:145:VAL:HB	27:BD:155:LEU:HB2	2.02	0.42
28:BE:178:GLU:OE2	28:BE:178:GLU:N	2.47	0.42
37:BR:117:VAL:HG12	37:BR:118:GLU:N	2.34	0.42
39:BT:101:PHE:HD2	39:BT:105:LEU:HD11	1.84	0.42
40:BU:112:ARG:H	40:BU:112:ARG:HG2	1.53	0.42
49:B3:26:LEU:O	49:B3:35:ARG:NE	2.51	0.42
1:CA:59:A:H5''	1:CA:60:A:C5'	2.49	0.42
1:CA:226:G:C2	1:CA:227:G:C8	3.08	0.42
1:CA:952:U:O2'	1:CA:965:A:N6	2.52	0.42
1:CA:1188:A:H2'	1:CA:1189:C:O4'	2.19	0.42
1:CA:1228:C:H4'	13:CM:116:THR:HA	2.01	0.42
1:CA:1270:C:H2'	1:CA:1271:G:H5'	2.02	0.42
1:CA:1291:G:H4'	9:CI:39:GLY:HA3	2.02	0.42
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.54	0.42
4:CD:135:LEU:O	4:CD:137:SER:N	2.53	0.42
9:CI:96:LEU:HD23	9:CI:96:LEU:HA	1.92	0.42
19:CS:29:ARG:O	19:CS:31:ILE:HG13	2.19	0.42
24:CW:9:MVA:HN3	24:CW:10:2QY:CE2	2.49	0.42
25:DA:190:A:OP2	47:D1:39:LYS:HE3	2.19	0.42
25:DA:597:U:H2'	25:DA:598:G:C8	2.55	0.42
25:DA:776:G:C8	25:DA:793:A:N3	2.88	0.42
25:DA:1024:G:H8	25:DA:1024:G:O5'	2.02	0.42
25:DA:1575:C:H2'	25:DA:1576:U:C6	2.55	0.42
27:DD:228:PRO:HD3	27:DD:235:GLY:HA3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DH:130:ARG:HH11	31:DH:132:ARG:NH2	2.18	0.42
32:DI:4:ILE:HG12	32:DI:18:VAL:HG22	2.01	0.42
32:DI:14:ASP:OD1	32:DI:15:VAL:N	2.53	0.42
34:DO:69:ILE:H	34:DO:69:ILE:HD13	1.85	0.42
36:DQ:133:ARG:HG2	36:DQ:134:ARG:N	2.34	0.42
41:DV:58:VAL:O	41:DV:97:LYS:N	2.38	0.42
51:D5:49:CYS:SG	51:D5:51:TYR:HB2	2.59	0.42
1:AA:503:C:O2'	1:AA:504:C:H5'	2.20	0.41
1:AA:622:A:H3'	1:AA:623:C:C6	2.55	0.41
1:AA:767:A:H2'	1:AA:768:A:O4'	2.20	0.41
2:AB:219:VAL:HA	2:AB:222:ILE:CD1	2.49	0.41
4:AD:81:GLU:OE2	4:AD:139:ARG:NH2	2.53	0.41
12:AL:124:LYS:HA	12:AL:125:PRO:HD3	1.77	0.41
18:AR:24:ALA:C	18:AR:26:LEU:H	2.28	0.41
25:BA:202:A:H2'	25:BA:203:G:O4'	2.19	0.41
25:BA:310:C:H2'	25:BA:311:C:H6	1.85	0.41
25:BA:312:C:H2'	25:BA:313:A:C8	2.53	0.41
25:BA:518:G:H2'	25:BA:519:G:O4'	2.20	0.41
25:BA:2798:C:H2'	25:BA:2799:U:C6	2.55	0.41
31:BH:37:VAL:HG13	31:BH:68:THR:CG2	2.50	0.41
34:BO:120:GLU:OE1	39:BT:67:SER:OG	2.27	0.41
35:BP:6:LEU:HA	35:BP:6:LEU:HD23	1.71	0.41
43:BX:31:HIS:HD2	43:BX:33:LYS:HB2	1.84	0.41
1:CA:61:G:C5	1:CA:107:G:C2	3.08	0.41
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.55	0.41
1:CA:447:G:H2'	1:CA:485:G:N2	2.35	0.41
1:CA:538:G:OP2	12:CL:115:LYS:HB2	2.18	0.41
1:CA:922:G:H2'	1:CA:923:A:H8	1.85	0.41
1:CA:1105:A:C2	1:CA:1106:G:C8	3.08	0.41
1:CA:1245:A:H61	1:CA:1292:U:H3	1.68	0.41
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.20	0.41
4:CD:110:PHE:N	4:CD:110:PHE:HD1	2.18	0.41
10:CJ:23:ILE:HD13	10:CJ:23:ILE:HA	1.74	0.41
10:CJ:49:VAL:HG23	14:CN:41:ARG:HD2	2.00	0.41
11:CK:43:SER:HA	11:CK:47:VAL:HG21	2.02	0.41
13:CM:80:ARG:O	13:CM:84:ILE:HG23	2.20	0.41
15:CO:76:GLU:OE1	15:CO:76:GLU:HA	2.20	0.41
21:CU:9:ARG:O	21:CU:13:ILE:HG13	2.20	0.41
25:DA:30:G:H2'	25:DA:31:C:H6	1.84	0.41
25:DA:275:G:H2'	25:DA:276:A:H8	1.83	0.41
25:DA:489:G:H2'	25:DA:491:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:590:A:H2'	25:DA:591:C:C6	2.54	0.41
25:DA:623:G:C2	25:DA:624:C:C2	3.08	0.41
25:DA:721:C:H2'	25:DA:722:A:C8	2.55	0.41
25:DA:848:G:C4	25:DA:933:A:H8	2.38	0.41
25:DA:884:C:H5'	25:DA:885:C:OP2	2.20	0.41
25:DA:1032:A:O3'	55:D9:16:VAL:HG11	2.19	0.41
25:DA:1138:G:O2'	33:DN:105:GLY:HA3	2.20	0.41
25:DA:1339:G:H5''	43:DX:16:LYS:HD3	2.01	0.41
25:DA:1366:A:H2'	25:DA:1367:A:O4'	2.20	0.41
25:DA:1833:U:O2'	25:DA:1969:A:N1	2.37	0.41
25:DA:1954:G:N2	25:DA:1956:U:C2	2.89	0.41
25:DA:2376:A:N3	38:DS:106:ARG:NH2	2.60	0.41
25:DA:2758:A:C2	25:DA:2759:G:H1'	2.55	0.41
32:DI:127:VAL:O	32:DI:128:LEU:HD23	2.19	0.41
35:DP:85:LEU:HG	35:DP:115:LEU:O	2.20	0.41
36:DQ:43:THR:OG1	36:DQ:45:GLN:HG2	2.20	0.41
42:DW:31:GLU:O	42:DW:34:ASN:HB2	2.20	0.41
43:DX:46:ALA:O	48:D2:30:ARG:NH2	2.50	0.41
50:D4:1:MET:HE2	50:D4:6:HIS:CG	2.56	0.41
1:AA:20:U:H1'	1:AA:916:G:N2	2.34	0.41
1:AA:342:C:N3	1:AA:348:G:C6	2.87	0.41
1:AA:545:C:H5'	4:AD:72:GLU:CB	2.51	0.41
1:AA:1004:A:C8	1:AA:1037:C:C2	3.09	0.41
1:AA:1020:U:H2'	1:AA:1021:G:C8	2.55	0.41
1:AA:1118:C:OP1	9:AI:104:ARG:NH1	2.48	0.41
1:AA:1325:C:O2'	1:AA:1326:C:H5'	2.19	0.41
4:AD:138:TYR:HE1	4:AD:140:VAL:HA	1.85	0.41
25:BA:233:A:C2	25:BA:244:A:C4	3.08	0.41
25:BA:1889:G:H21	25:BA:1905:G:H2'	1.84	0.41
25:BA:2285:A:O2'	25:BA:2286:A:H5'	2.20	0.41
38:BS:61:ASN:O	38:BS:65:VAL:HG23	2.19	0.41
45:BZ:121:HIS:HB3	45:BZ:123:ASP:O	2.20	0.41
49:B3:31:LEU:HD23	49:B3:31:LEU:HA	1.88	0.41
1:CA:44:G:H2'	1:CA:45:U:O4'	2.20	0.41
1:CA:137:C:H2'	1:CA:138:G:H5'	2.00	0.41
1:CA:189(C):C:H2'	1:CA:189(D):C:O4'	2.20	0.41
1:CA:407:G:O2'	4:CD:116:GLN:HG3	2.20	0.41
1:CA:557:G:N1	1:CA:558:G:C2	2.88	0.41
1:CA:833:U:H2'	1:CA:834:C:H6	1.85	0.41
1:CA:991:U:H3'	1:CA:1212:U:N3	2.35	0.41
1:CA:1245:A:H2'	1:CA:1246:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:11:ARG:HB3	3:CC:15:THR:HB	2.00	0.41
4:CD:8:VAL:HA	4:CD:11:LEU:HD13	2.02	0.41
6:CF:89:MET:HG2	6:CF:91:VAL:HG23	2.02	0.41
15:CO:15:PHE:CZ	15:CO:84:LYS:HG2	2.55	0.41
23:CX:19:G:C4	23:CX:57:A:C2	3.08	0.41
25:DA:442:G:H21	29:DF:48:THR:HB	1.86	0.41
25:DA:826:U:H5''	25:DA:2428:G:O3'	2.20	0.41
25:DA:843:G:C2	25:DA:936:C:C2	3.08	0.41
25:DA:1026:U:H4'	25:DA:1027:A:OP1	2.20	0.41
25:DA:1399:C:O2'	25:DA:1400:G:H5'	2.20	0.41
25:DA:1782:C:O4'	25:DA:2609:U:C2	2.73	0.41
25:DA:2022:U:O2'	25:DA:2617:C:H5'	2.19	0.41
25:DA:2058:A:N7	61:DA:3842:HOH:O	2.37	0.41
25:DA:2070:G:C2	25:DA:2442:C:C2	3.08	0.41
25:DA:2416:C:H2'	25:DA:2417:C:H6	1.85	0.41
26:DB:33:G:C6	26:DB:34:U:C4	3.08	0.41
27:DD:68:LYS:O	27:DD:69:ARG:HB2	2.20	0.41
27:DD:232:PRO:HG2	27:DD:248:SER:O	2.20	0.41
30:DG:117:PHE:CE1	30:DG:119:GLY:HA2	2.55	0.41
30:DG:178:PHE:HA	30:DG:179:PRO:HD2	1.87	0.41
31:DH:123:PHE:CD1	31:DH:133:VAL:HG22	2.56	0.41
36:DQ:141:GLN:NE2	45:DZ:74:VAL:O	2.42	0.41
41:DV:40:LEU:HD11	41:DV:55:ALA:HB2	2.01	0.41
43:DX:72:LYS:HG2	43:DX:73:ARG:O	2.20	0.41
47:D1:65:SER:OG	47:D1:66:HIS:ND1	2.36	0.41
53:D7:12:ARG:NH2	53:D7:44:PRO:HB3	2.35	0.41
1:AA:258:G:N3	1:AA:259:G:C8	2.89	0.41
1:AA:1001(A):G:C5	1:AA:1002:G:C8	3.08	0.41
1:AA:1039:C:N4	1:AA:1040:U:O4	2.53	0.41
1:AA:1085:U:OP2	61:AA:4121:HOH:O	2.22	0.41
1:AA:1162:C:C2	1:AA:1175:G:C2	3.09	0.41
3:AC:19:GLU:HB3	3:AC:40:ARG:HH21	1.85	0.41
4:AD:71:SER:OG	4:AD:74:GLN:HB2	2.21	0.41
10:AJ:38:ILE:HA	10:AJ:39:PRO:HD3	1.85	0.41
16:AP:55:ARG:HD2	16:AP:55:ARG:HA	1.89	0.41
19:AS:31:ILE:O	19:AS:49:ILE:HG23	2.20	0.41
23:AX:8:U:O2	23:AX:21:A:H2	2.03	0.41
25:BA:324:A:H2'	25:BA:358:C:H1'	2.02	0.41
25:BA:442:A:H2'	25:BA:443:C:H6	1.85	0.41
25:BA:694:G:N1	25:BA:696:C:O2	2.53	0.41
25:BA:895:G:N9	25:BA:978:A:H8	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1722:C:H2'	25:BA:1723:A:O4'	2.20	0.41
25:BA:1775:C:H6	25:BA:1775:C:H5''	1.85	0.41
25:BA:2038:U:H1'	51:B5:6:VAL:HG13	2.02	0.41
25:BA:2455:C:OP1	29:BF:68:LYS:HD3	2.20	0.41
32:BI:102:SER:HA	32:BI:106:GLY:HA3	2.01	0.41
39:BT:16:ARG:NH1	39:BT:18:ASP:OD2	2.53	0.41
39:BT:88:ILE:HG21	39:BT:91:ARG:NE	2.35	0.41
48:B2:10:LEU:HD23	48:B2:10:LEU:HA	1.90	0.41
50:B4:56:VAL:HB	50:B4:57:GLU:H	1.65	0.41
55:B9:17:ILE:HD12	55:B9:17:ILE:HA	1.81	0.41
1:CA:445:G:C6	1:CA:490:G:C6	3.09	0.41
1:CA:663:A:C2'	1:CA:664:G:H5'	2.49	0.41
1:CA:1151:A:C2	1:CA:1152:A:C5	3.08	0.41
1:CA:1155:G:N7	1:CA:1156:G:C5	2.88	0.41
1:CA:1260:C:O5'	1:CA:1284:C:H4'	2.20	0.41
1:CA:1309:G:H2'	1:CA:1310:G:O4'	2.20	0.41
4:CD:135:LEU:C	4:CD:137:SER:H	2.29	0.41
13:CM:29:ARG:NH1	13:CM:64:TRP:HB3	2.35	0.41
18:CR:35:ARG:O	18:CR:37:VAL:N	2.51	0.41
24:CW:1:2QZ:CB	24:CW:10:2QY:H83	2.49	0.41
24:CW:8:2R3:H69	24:CW:8:2R3:H67	1.72	0.41
25:DA:79:G:C4	25:DA:80:G:C8	3.08	0.41
25:DA:254:G:N7	54:D8:5:LYS:HE2	2.35	0.41
25:DA:340:A:H2'	25:DA:341:G:O4'	2.19	0.41
25:DA:674:G:C1'	29:DF:74:ARG:HD3	2.50	0.41
25:DA:729:G:O5'	27:DD:208:LYS:NZ	2.54	0.41
25:DA:1639:U:C2'	25:DA:1640:C:H5''	2.51	0.41
25:DA:2030:A:H4'	25:DA:2031:A:C8	2.55	0.41
25:DA:2319:G:H4'	25:DA:2320:A:OP1	2.19	0.41
25:DA:2517:C:C6	25:DA:2542:A:N7	2.88	0.41
25:DA:2892:A:H2'	25:DA:2893:G:H5'	2.02	0.41
31:DH:71:LEU:HD12	31:DH:71:LEU:HA	1.78	0.41
35:DP:16:ARG:HH11	35:DP:16:ARG:HD2	1.73	0.41
36:DQ:72:LYS:HB3	36:DQ:94:VAL:HG23	2.01	0.41
36:DQ:106:VAL:HG21	36:DQ:114:ALA:HB1	2.02	0.41
37:DR:21:TYR:OH	37:DR:43:GLU:HG2	2.21	0.41
37:DR:65:LEU:HD12	37:DR:65:LEU:HA	1.65	0.41
43:DX:43:VAL:HG21	43:DX:81:VAL:HG11	2.03	0.41
45:DZ:5:LEU:HD22	45:DZ:6:LYS:N	2.35	0.41
47:D1:23:LYS:HB2	47:D1:23:LYS:HE3	1.70	0.41
48:D2:21:LEU:HD23	48:D2:21:LEU:HA	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:258:G:H2'	1:AA:259:G:C8	2.55	0.41
1:AA:1349:A:OP2	9:AI:118:LYS:HE3	2.20	0.41
4:AD:190:ASP:H	4:AD:193:ASP:HB2	1.86	0.41
8:AH:28:ALA:HB3	8:AH:57:PRO:HB2	2.01	0.41
19:AS:22:LEU:HD13	19:AS:47:HIS:HD2	1.85	0.41
25:BA:223:C:H2'	25:BA:224:U:C6	2.56	0.41
25:BA:469:A:H5''	25:BA:470:C:OP1	2.19	0.41
25:BA:1506:G:H5''	25:BA:1507:A:OP2	2.20	0.41
29:BF:129:PHE:CD2	29:BF:163:VAL:HG21	2.56	0.41
30:BG:6:ALA:HB3	30:BG:104:GLU:OE2	2.20	0.41
34:BO:4:PRO:O	34:BO:5:GLN:HB2	2.20	0.41
35:BP:27:HIS:O	35:BP:31:ALA:HA	2.19	0.41
39:BT:101:PHE:CD2	39:BT:105:LEU:HD11	2.56	0.41
50:B4:68:ARG:HB3	50:B4:69:LYS:H	1.43	0.41
1:CA:22:G:O2'	1:CA:913:A:N1	2.50	0.41
1:CA:328:C:H4'	1:CA:329:A:H5'	2.02	0.41
1:CA:558:G:H5''	1:CA:559:A:OP2	2.20	0.41
1:CA:727:G:N2	1:CA:730:G:OP2	2.51	0.41
1:CA:865:A:H5'	1:CA:1078:U:O4	2.20	0.41
1:CA:971:G:OP1	1:CA:971:G:H3'	2.19	0.41
1:CA:1001:A:N6	1:CA:1001(A):G:O6	2.53	0.41
1:CA:1077:G:N1	1:CA:1081:G:C6	2.89	0.41
1:CA:1120:G:H8	1:CA:1120:G:O5'	2.02	0.41
1:CA:1266:G:N2	1:CA:1268:A:H3'	2.35	0.41
2:CB:192:SER:O	2:CB:194:PRO:HD3	2.20	0.41
2:CB:213:LEU:HD22	2:CB:214:ILE:HD13	2.02	0.41
4:CD:100:ARG:HG2	4:CD:137:SER:HA	2.01	0.41
5:CE:81:GLU:OE1	5:CE:88:LYS:HE2	2.20	0.41
5:CE:137:GLU:HA	5:CE:140:ARG:HB3	2.02	0.41
8:CH:58:TYR:O	8:CH:59:LEU:HD23	2.21	0.41
18:CR:26:LEU:HD13	18:CR:26:LEU:HA	1.93	0.41
25:DA:45:C:H2'	25:DA:47:C:C6	2.56	0.41
25:DA:996:A:H4'	40:DU:91:ASP:OD2	2.20	0.41
25:DA:1313:U:H2'	25:DA:1610:A:C2	2.55	0.41
25:DA:1364:G:C8	47:D1:3:LYS:HD2	2.55	0.41
25:DA:2023:G:H4'	25:DA:2617:C:O3'	2.20	0.41
26:DB:33:G:N3	26:DB:50:G:C2	2.88	0.41
26:DB:90:A:C5	26:DB:91:C:H1'	2.56	0.41
28:DE:166:THR:HG21	28:DE:199:ARG:HH22	1.85	0.41
30:DG:17:PRO:HA	30:DG:20:ILE:HD12	2.01	0.41
35:DP:38:GLN:O	35:DP:39:LYS:CB	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DW:79:GLY:CA	42:DW:100:THR:HG22	2.51	0.41
54:D8:56:GLU:HA	54:D8:59:LYS:HE3	2.02	0.41
1:AA:404:U:H2'	1:AA:405:U:H6	1.86	0.41
1:AA:512:U:H2'	1:AA:513:C:C6	2.56	0.41
1:AA:995:C:N3	1:AA:1046:A:O2'	2.47	0.41
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.86	0.41
2:AB:80:ILE:HD11	2:AB:212:GLN:HA	2.01	0.41
3:AC:152:ILE:O	3:AC:198:VAL:HA	2.20	0.41
5:AE:31:LEU:HD23	5:AE:31:LEU:HA	1.80	0.41
5:AE:78:HIS:CE1	8:AH:104:ARG:NH1	2.89	0.41
6:AF:62:TRP:CD1	18:AR:35:ARG:HD2	2.56	0.41
9:AI:128:ARG:NH2	23:AX:33:U:OP2	2.53	0.41
19:AS:20:LEU:HD13	50:B4:69:LYS:HE2	2.03	0.41
25:BA:1047:A:H2'	25:BA:1048:G:O4'	2.20	0.41
25:BA:1074:A:N6	25:BA:1171:G:H2'	2.35	0.41
25:BA:1155:C:C5	25:BA:1156:G:C6	3.09	0.41
25:BA:1520:G:C6	25:BA:1521:C:N3	2.89	0.41
25:BA:1530:G:N2	25:BA:1552:C:C2	2.88	0.41
30:BG:77:ILE:HG21	30:BG:80:PHE:CD2	2.56	0.41
33:BN:10:GLU:OE1	33:BN:11:PRO:HD2	2.21	0.41
36:BQ:137:TYR:HB3	45:BZ:76:LEU:HD21	2.01	0.41
38:BS:110:LEU:HD12	38:BS:110:LEU:HA	1.70	0.41
40:BU:18:LEU:HD23	40:BU:18:LEU:HA	1.89	0.41
44:BY:9:LYS:HA	44:BY:10:GLY:HA2	1.80	0.41
1:CA:53:A:N6	1:CA:54:C:C4	2.88	0.41
1:CA:325:A:H2'	1:CA:326:G:O4'	2.20	0.41
1:CA:868:C:H2'	1:CA:869:G:O4'	2.21	0.41
1:CA:919:A:O2'	1:CA:1080:A:N1	2.50	0.41
1:CA:1127:G:H2'	1:CA:1128:C:C6	2.55	0.41
1:CA:1179:A:C6	1:CA:1180:A:N7	2.89	0.41
1:CA:1227:A:C8	1:CA:1227:A:C3'	3.03	0.41
1:CA:1264:C:C2	1:CA:1272:G:N2	2.88	0.41
1:CA:1460:A:H2'	1:CA:1461:G:O4'	2.21	0.41
2:CB:7:VAL:HB	2:CB:8:LYS:H	1.72	0.41
4:CD:153:ARG:HB2	4:CD:181:MET:SD	2.61	0.41
4:CD:171:GLY:HA2	4:CD:172:PRO:HD3	1.93	0.41
13:CM:91:ARG:HA	13:CM:91:ARG:HD2	1.93	0.41
16:CP:55:ARG:O	16:CP:58:TYR:N	2.51	0.41
20:CT:26:ASN:OD1	20:CT:71:THR:HG23	2.21	0.41
25:DA:343:C:H2'	25:DA:344:G:H8	1.85	0.41
25:DA:372:G:O2'	25:DA:373:U:OP2	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:632:A:H2'	25:DA:633:A:C8	2.55	0.41
25:DA:705:A:H2'	25:DA:706:A:O4'	2.21	0.41
25:DA:966:G:C6	25:DA:967:C:N4	2.88	0.41
25:DA:1790:C:O3'	25:DA:1791:A:C8	2.73	0.41
25:DA:2297:C:H3'	25:DA:2297:C:C6	2.55	0.41
25:DA:2472:G:H2'	25:DA:2475:C:H42	1.85	0.41
26:DB:3:C:H2'	26:DB:4:C:H6	1.84	0.41
28:DE:167:VAL:HG11	28:DE:189:PRO:HD3	2.02	0.41
30:DG:18:GLU:HG2	30:DG:175:LEU:HD21	2.01	0.41
43:DX:18:TYR:C	43:DX:20:GLY:N	2.77	0.41
43:DX:26:TYR:HB3	43:DX:92:LEU:CD2	2.51	0.41
45:DZ:45:ASP:CG	45:DZ:49:ARG:HH11	2.27	0.41
46:D0:19:LYS:NZ	46:D0:19:LYS:H	2.18	0.41
1:AA:376:G:OP1	16:AP:5:ARG:HB2	2.20	0.41
1:AA:538:G:O2'	1:AA:539:A:H5'	2.21	0.41
1:AA:628:G:H2'	1:AA:629:G:C8	2.55	0.41
1:AA:1005:A:H1'	1:AA:1036:G:N2	2.35	0.41
2:AB:30:ARG:HG3	2:AB:31:TYR:CD1	2.55	0.41
2:AB:48:MET:HA	2:AB:51:LEU:HD12	2.03	0.41
2:AB:137:ARG:NH1	2:AB:137:ARG:HB3	2.36	0.41
3:AC:35:GLU:CD	3:AC:59:ARG:HH22	2.28	0.41
4:AD:59:ARG:NH2	4:AD:66:ARG:NH1	2.68	0.41
9:AI:48:GLU:CD	9:AI:51:ARG:HD2	2.46	0.41
17:AQ:62:SER:CB	17:AQ:72:ARG:HD3	2.49	0.41
19:AS:15:LEU:HD12	19:AS:15:LEU:HA	1.96	0.41
25:BA:999:G:N3	25:BA:2286:A:C2	2.88	0.41
25:BA:1421:C:H2'	25:BA:1422:C:H6	1.85	0.41
25:BA:2555:G:H2'	25:BA:2556:G:C8	2.55	0.41
36:BQ:41:TRP:CD1	36:BQ:96:VAL:HG22	2.55	0.41
47:B1:11:ARG:HH11	47:B1:11:ARG:HD2	1.70	0.41
53:B7:24:THR:HG22	53:B7:26:GLY:H	1.86	0.41
1:CA:429:U:H3'	4:CD:9:CYS:SG	2.61	0.41
1:CA:749:C:O2'	1:CA:750:G:H5'	2.20	0.41
1:CA:1074:G:O2'	1:CA:1101:A:N1	2.37	0.41
1:CA:1111:A:H2'	1:CA:1112:C:C6	2.56	0.41
2:CB:200:ILE:O	2:CB:200:ILE:HG12	2.21	0.41
4:CD:15:GLU:CG	4:CD:63:LYS:HB3	2.46	0.41
8:CH:82:HIS:NE2	8:CH:84:ARG:HG2	2.36	0.41
19:CS:41:VAL:HG12	19:CS:43:GLU:N	2.30	0.41
23:CX:43:A:C2	23:CX:44:A:C4	3.09	0.41
24:CW:4:PRO:HA	24:CW:5:MVA:HN1	1.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:301:G:C4	25:DA:302:C:C5	3.08	0.41
25:DA:705:A:H1'	27:DD:9:TYR:CE1	2.55	0.41
25:DA:1525:G:H2'	25:DA:1526:G:C8	2.56	0.41
25:DA:1580:A:OP2	25:DA:1580:A:H8	2.04	0.41
25:DA:1788:C:H2'	25:DA:1789:A:O4'	2.20	0.41
25:DA:1854:A:H2'	25:DA:1855:G:O4'	2.20	0.41
25:DA:2640:G:H1	25:DA:2774:C:N4	2.17	0.41
29:DF:110:LEU:HD23	29:DF:110:LEU:HA	1.79	0.41
38:DS:29:PHE:CD1	38:DS:30:ARG:N	2.89	0.41
43:DX:84:ALA:O	43:DX:87:GLN:HG3	2.21	0.41
1:AA:1258:G:H1	1:AA:1277:C:H42	1.68	0.41
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.21	0.41
1:AA:1508:G:H2'	1:AA:1509:C:O4'	2.21	0.41
7:AG:104:LEU:HD13	7:AG:104:LEU:HA	1.88	0.41
9:AI:23:ASN:ND2	9:AI:25:LYS:HE3	2.36	0.41
13:AM:49:THR:OG1	13:AM:52:GLU:OE1	2.28	0.41
25:BA:642:G:H5'	29:BF:205:ARG:HD2	2.02	0.41
25:BA:816:G:H5'	25:BA:1425:A:N6	2.36	0.41
25:BA:1362:U:H2'	25:BA:1363:A:H8	1.85	0.41
25:BA:1505:C:H4'	25:BA:1506:G:O5'	2.19	0.41
30:BG:139:LEU:H	30:BG:139:LEU:HG	1.53	0.41
32:BI:30:LEU:HD23	32:BI:30:LEU:HA	1.70	0.41
49:B3:15:TYR:HA	49:B3:16:PRO:HD3	1.88	0.41
50:B4:59:PHE:C	50:B4:61:ARG:N	2.79	0.41
51:B5:35:GLU:HG3	51:B5:51:TYR:CD2	2.56	0.41
1:CA:10:A:O2'	1:CA:11:G:H5'	2.20	0.41
1:CA:647:C:C2'	1:CA:648:A:H5'	2.50	0.41
1:CA:664:G:P	18:CR:64:ARG:HH12	2.44	0.41
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.21	0.41
1:CA:955:U:O2'	19:CS:83:HIS:HD2	2.03	0.41
1:CA:991:U:N3	1:CA:1212:U:O2	2.53	0.41
1:CA:1039:C:N4	1:CA:1040:U:O4	2.54	0.41
1:CA:1191:A:OP1	3:CC:4:LYS:HG3	2.20	0.41
1:CA:1245:A:H2'	1:CA:1246:C:C6	2.56	0.41
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.21	0.41
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.21	0.41
3:CC:18:TRP:NE1	14:CN:53:LEU:O	2.53	0.41
7:CG:69:VAL:HG12	7:CG:69:VAL:O	2.21	0.41
15:CO:64:ARG:HH11	15:CO:68:ARG:NH2	2.17	0.41
23:CX:30:G:C4	23:CX:31:G:C8	3.09	0.41
24:CW:3:004:O	24:CW:6:2R1:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:375:C:H2'	25:DA:376:C:H6	1.84	0.41
25:DA:784:A:H5'	25:DA:785:G:OP1	2.20	0.41
25:DA:811:U:H2'	35:DP:21:ARG:HA	2.02	0.41
25:DA:910:A:C6	25:DA:911:A:C6	3.08	0.41
25:DA:1341:U:H3'	25:DA:1397:U:O2	2.21	0.41
25:DA:1487:G:H2'	25:DA:1488:G:H8	1.85	0.41
25:DA:1850:G:C6	25:DA:1851:U:C4	3.09	0.41
25:DA:2320:A:H4'	25:DA:2321:G:N7	2.36	0.41
25:DA:2328:A:H2'	25:DA:2329:G:C8	2.56	0.41
25:DA:2337:G:C2	25:DA:2338:G:C8	3.08	0.41
25:DA:2467:C:C5	25:DA:2468:G:C6	3.08	0.41
25:DA:2488:A:O2'	25:DA:2489:G:H5'	2.21	0.41
25:DA:2836:U:C4	25:DA:2883:A:N6	2.88	0.41
26:DB:5:C:OP1	26:DB:62:C:H5'	2.21	0.41
26:DB:83:G:H5''	49:D3:52:HIS:CE1	2.55	0.41
31:DH:3:ARG:NH2	31:DH:5:GLY:H	2.19	0.41
37:DR:33:ARG:NH2	51:D5:57:VAL:O	2.49	0.41
40:DU:81:HIS:O	40:DU:84:LYS:HB3	2.21	0.41
41:DV:43:GLU:N	41:DV:43:GLU:OE2	2.54	0.41
43:DX:31:HIS:HA	43:DX:32:PRO:HD3	1.87	0.41
45:DZ:144:LEU:HD23	45:DZ:144:LEU:HA	1.89	0.41
48:D2:8:LYS:HD2	48:D2:8:LYS:HA	1.92	0.41
1:AA:178:C:H2'	1:AA:179:A:O4'	2.21	0.41
1:AA:197:A:N1	1:AA:220:G:O2'	2.49	0.41
1:AA:872:A:C4	1:AA:874:G:N7	2.88	0.41
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.56	0.41
2:AB:71:VAL:HG13	2:AB:93:VAL:HG21	2.02	0.41
2:AB:109:SER:O	2:AB:112:VAL:HG22	2.20	0.41
3:AC:12:LEU:HD23	3:AC:12:LEU:HA	1.96	0.41
4:AD:79:PHE:HE1	4:AD:204:ILE:HD13	1.86	0.41
13:AM:3:ARG:CG	13:AM:8:GLU:HA	2.51	0.41
13:AM:17:VAL:O	13:AM:20:THR:OG1	2.19	0.41
14:AN:12:ARG:HG2	14:AN:13:THR:N	2.35	0.41
14:AN:51:GLY:C	14:AN:53:LEU:H	2.29	0.41
25:BA:771:U:C4	25:BA:772:G:C5	3.09	0.41
25:BA:776:G:C6	27:BD:208:LYS:HB2	2.56	0.41
25:BA:785:G:C6	25:BA:786:G:C2	3.07	0.41
25:BA:1051:C:O2	25:BA:1189:A:C6	2.74	0.41
25:BA:1652:G:H5''	25:BA:1653:C:OP1	2.21	0.41
25:BA:1821:C:H5''	25:BA:1822:A:OP1	2.20	0.41
25:BA:2120:U:C4	25:BA:2121:U:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2219:U:H1'	25:BA:2220:A:C8	2.55	0.41
30:BG:7:LEU:HA	30:BG:7:LEU:HD23	1.85	0.41
30:BG:137:GLU:HG2	30:BG:152:LEU:HD22	2.03	0.41
44:BY:68:HIS:CE1	44:BY:70:SER:HB3	2.56	0.41
48:B2:41:ILE:H	48:B2:41:ILE:HG12	1.67	0.41
50:B4:15:ILE:HB	50:B4:32:TYR:CD1	2.55	0.41
50:B4:18:CYS:SG	50:B4:20:ASN:HB2	2.61	0.41
1:CA:202:U:O2'	1:CA:203:U:O5'	2.19	0.41
1:CA:292:G:N7	1:CA:293:G:H1'	2.35	0.41
1:CA:437:U:C5'	4:CD:155:LEU:HD11	2.50	0.41
1:CA:541:G:H2'	1:CA:542:G:H8	1.85	0.41
1:CA:678:U:H2'	1:CA:679:C:C6	2.56	0.41
1:CA:1005:A:O2'	1:CA:1036:G:N1	2.54	0.41
1:CA:1218:C:OP2	14:CN:9:LYS:NZ	2.31	0.41
1:CA:1258:G:HO2'	1:CA:1259:C:H5'	1.86	0.41
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.84	0.41
1:CA:1442:G:H2'	1:CA:1442(A):G:H5'	2.02	0.41
3:CC:91:LEU:C	3:CC:93:LYS:H	2.29	0.41
3:CC:180:ALA:HA	3:CC:206:GLU:HB3	2.02	0.41
4:CD:38:TYR:HA	4:CD:39:PRO:HD3	1.92	0.41
7:CG:26:PHE:CD2	7:CG:30:ILE:HD11	2.56	0.41
8:CH:97:VAL:O	8:CH:100:ILE:HG13	2.21	0.41
9:CI:54:ASP:O	9:CI:56:LEU:N	2.44	0.41
10:CJ:6:ILE:HD13	10:CJ:98:ILE:HD11	2.02	0.41
10:CJ:8:LEU:HB3	10:CJ:16:LEU:CD2	2.51	0.41
10:CJ:21:GLN:O	10:CJ:25:GLU:HG2	2.20	0.41
11:CK:81:ASP:OD1	11:CK:106:LYS:HB2	2.21	0.41
25:DA:527:C:H5'	25:DA:527:C:O2	2.21	0.41
25:DA:932:G:H4'	25:DA:933:A:O5'	2.21	0.41
25:DA:990:A:N1	25:DA:1186:G:O2'	2.52	0.41
25:DA:1274:A:N3	25:DA:1297:C:H1'	2.35	0.41
25:DA:1486:A:O2'	25:DA:1487:G:H5'	2.21	0.41
25:DA:1649:G:C2'	25:DA:1650:G:H5'	2.51	0.41
25:DA:1664:A:OP1	61:DA:4384:HOH:O	2.21	0.41
25:DA:2590:A:OP2	27:DD:238:GLY:HA2	2.20	0.41
25:DA:2638:G:P	28:DE:82:ARG:NH2	2.94	0.41
27:DD:182:LEU:HD23	27:DD:182:LEU:HA	1.90	0.41
28:DE:31:CYS:HA	28:DE:32:PRO:HD2	1.83	0.41
30:DG:43:LEU:HB3	30:DG:44:GLY:H	1.48	0.41
31:DH:3:ARG:CD	31:DH:54:ARG:HH12	2.34	0.41
34:DO:29:ASN:N	34:DO:29:ASN:OD1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DS:19:LYS:HG2	38:DS:19:LYS:H	1.59	0.41
39:DT:27:THR:O	39:DT:89:VAL:HG22	2.20	0.41
41:DV:31:ALA:O	41:DV:61:VAL:HG12	2.20	0.41
51:D5:19:ARG:HH11	51:D5:19:ARG:HD2	1.74	0.41
52:D6:21:TYR:CE1	52:D6:38:LYS:HG2	2.55	0.41
1:AA:138:G:H2'	1:AA:139:G:O4'	2.21	0.41
1:AA:146:G:C4	1:AA:147:G:C8	3.08	0.41
1:AA:509:A:O4'	4:AD:58:LEU:HD12	2.21	0.41
1:AA:717:C:H5''	1:AA:717:C:H6	1.86	0.41
1:AA:741:G:H2'	1:AA:742:G:O4'	2.21	0.41
1:AA:857:C:H2'	1:AA:858:G:O4'	2.21	0.41
1:AA:872:A:C5	1:AA:874:G:C8	3.09	0.41
1:AA:1058:G:H2'	1:AA:1059:C:O4'	2.20	0.41
1:AA:1084:G:H2'	1:AA:1085:U:C5	2.56	0.41
1:AA:1136:U:H5''	1:AA:1137:C:C4	2.56	0.41
1:AA:1168:A:C6	1:AA:1169:A:C6	3.09	0.41
1:AA:1304:G:C6	1:AA:1305:G:N1	2.89	0.41
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.20	0.41
2:AB:71:VAL:HG12	2:AB:170:GLU:HG2	2.03	0.41
2:AB:211:ILE:H	2:AB:211:ILE:HG13	1.69	0.41
3:AC:82:GLU:O	3:AC:85:ARG:HB2	2.21	0.41
4:AD:85:LYS:HG3	4:AD:86:LYS:H	1.85	0.41
7:AG:65:ALA:HB1	7:AG:127:ALA:HB3	2.02	0.41
10:AJ:38:ILE:HG13	10:AJ:71:LEU:HB3	2.03	0.41
11:AK:44:SER:O	11:AK:48:ILE:HD13	2.21	0.41
13:AM:108:ARG:HA	13:AM:108:ARG:HD3	1.83	0.41
14:AN:46:GLU:O	14:AN:50:LYS:HG3	2.21	0.41
17:AQ:81:ARG:HD2	17:AQ:81:ARG:HA	1.86	0.41
19:AS:22:LEU:O	19:AS:27:GLU:HG3	2.21	0.41
20:AT:86:ARG:O	20:AT:90:GLN:NE2	2.54	0.41
25:BA:26:G:C6	25:BA:27:G:N1	2.88	0.41
25:BA:146:G:C6	25:BA:147:U:C4	3.09	0.41
25:BA:215:G:H21	25:BA:217:A:H62	1.67	0.41
25:BA:441:C:O2'	25:BA:442:A:H5'	2.21	0.41
25:BA:496:A:C8	25:BA:496:A:H5''	2.56	0.41
25:BA:870:G:C6	25:BA:882:A:C6	3.09	0.41
25:BA:1830:G:O2'	27:BD:181:GLU:OE2	2.29	0.41
25:BA:2119:C:H2'	25:BA:2120:U:O4'	2.21	0.41
25:BA:2240:G:C5	25:BA:2241:C:C4	3.09	0.41
30:BG:109:VAL:HG13	50:B4:33:VAL:HG11	2.03	0.41
32:BI:14:ASP:OD1	32:BI:15:VAL:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:72:LEU:C	32:BI:74:ASN:N	2.77	0.41
32:BI:134:PRO:C	32:BI:136:VAL:H	2.28	0.41
34:BO:108:GLU:H	34:BO:108:GLU:HG3	1.63	0.41
39:BT:126:ALA:C	39:BT:127:ALA:O	2.61	0.41
40:BU:19:LYS:O	40:BU:22:LYS:HG3	2.21	0.41
43:BX:92:LEU:O	43:BX:94:GLY:N	2.51	0.41
45:BZ:119:GLU:OE2	45:BZ:122:ARG:NH1	2.54	0.41
48:B2:65:ASN:OD1	48:B2:69:ARG:NH1	2.39	0.41
50:B4:40:HIS:O	50:B4:43:TYR:N	2.54	0.41
1:CA:22:G:H4'	1:CA:885:G:C8	2.56	0.41
1:CA:353:A:H5'	1:CA:353:A:C8	2.49	0.41
1:CA:410:G:OP1	4:CD:30:LYS:NZ	2.22	0.41
1:CA:454:C:OP2	1:CA:455:C:N4	2.52	0.41
1:CA:500:G:N2	1:CA:546:G:H1'	2.36	0.41
1:CA:505:G:C6	1:CA:535:A:C2	3.09	0.41
1:CA:589:C:O2'	1:CA:590:C:H5'	2.21	0.41
1:CA:601:C:C2	1:CA:638:G:N2	2.88	0.41
1:CA:919:A:O5'	1:CA:919:A:H8	2.03	0.41
1:CA:939:G:N2	1:CA:1344:C:N3	2.59	0.41
1:CA:952:U:C5	13:CM:104:ARG:NH1	2.89	0.41
1:CA:1047:G:H1	1:CA:1210:C:N4	2.16	0.41
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.85	0.41
1:CA:1154:G:H8	1:CA:1154:G:H2'	1.35	0.41
1:CA:1233:G:H2'	1:CA:1234:C:C6	2.55	0.41
1:CA:1256:A:H2	1:CA:1277:C:H42	1.67	0.41
1:CA:1330:U:O3'	13:CM:23:TYR:HE1	2.04	0.41
1:CA:1493:A:O2'	1:CA:1494:G:O5'	2.34	0.41
1:CA:1511:G:H2'	1:CA:1512:U:O4'	2.20	0.41
2:CB:52:GLU:HG2	2:CB:56:ARG:NH2	2.30	0.41
2:CB:56:ARG:HH11	2:CB:56:ARG:CB	2.31	0.41
2:CB:219:VAL:O	2:CB:223:ILE:HG23	2.21	0.41
3:CC:11:ARG:HD3	3:CC:15:THR:HB	2.02	0.41
3:CC:59:ARG:HG3	3:CC:64:VAL:HA	2.03	0.41
4:CD:88:VAL:HG13	5:CE:97:GLY:HA2	2.02	0.41
4:CD:196:LEU:O	4:CD:198:VAL:N	2.46	0.41
8:CH:20:TYR:HE2	8:CH:75:ARG:HG2	1.85	0.41
9:CI:23:ASN:H	9:CI:23:ASN:HD22	1.68	0.41
9:CI:106:ALA:O	9:CI:108:VAL:HG23	2.21	0.41
16:CP:58:TYR:O	16:CP:61:SER:N	2.52	0.41
16:CP:68:ASP:C	16:CP:70:ALA:H	2.28	0.41
19:CS:58:VAL:HA	19:CS:59:PRO:HD2	1.80	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:335:C:H4'	44:DY:73:ARG:CD	2.51	0.41
25:DA:863:A:H2'	25:DA:864:G:H8	1.86	0.41
25:DA:878:A:C6	25:DA:900:A:N7	2.89	0.41
25:DA:1348:G:O6	25:DA:1349:A:N6	2.54	0.41
25:DA:1533:G:C2	25:DA:1537:G:C6	3.08	0.41
25:DA:1607:C:H5''	25:DA:1608:A:H5'	2.03	0.41
25:DA:1739:U:O2'	25:DA:1740:G:H8	2.04	0.41
25:DA:1804:C:O5'	25:DA:1804:C:H6	2.02	0.41
25:DA:2274:A:C6	25:DA:2276:G:C8	3.09	0.41
25:DA:2416:C:H6	25:DA:2416:C:O5'	2.04	0.41
25:DA:2505:G:H2'	25:DA:2576:G:O6	2.20	0.41
25:DA:2516:G:C6	25:DA:2517:C:C4	3.09	0.41
25:DA:2627:G:N3	25:DA:2781:A:H2	2.19	0.41
25:DA:2840:C:H2'	25:DA:2841:C:C6	2.56	0.41
26:DB:24:G:N7	26:DB:56:G:H2'	2.35	0.41
26:DB:43:C:C4	26:DB:45:A:C6	3.08	0.41
26:DB:48:A:H4'	38:DS:95:HIS:CD2	2.53	0.41
27:DD:12:SER:HB3	27:DD:208:LYS:HB3	2.03	0.41
27:DD:175:LEU:HD12	27:DD:185:VAL:HG21	2.03	0.41
27:DD:182:LEU:O	27:DD:271:ILE:N	2.47	0.41
29:DF:110:LEU:HD11	29:DF:181:LEU:HD23	2.03	0.41
30:DG:11:TYR:O	30:DG:16:ARG:N	2.49	0.41
30:DG:53:LEU:HD23	30:DG:53:LEU:HA	1.84	0.41
30:DG:91:ARG:HE	30:DG:91:ARG:HB3	1.53	0.41
33:DN:36:GLY:HA3	33:DN:49:GLY:HA2	2.03	0.41
33:DN:114:ARG:HH11	33:DN:114:ARG:HD2	1.75	0.41
37:DR:20:LEU:O	37:DR:24:GLN:HG3	2.21	0.41
40:DU:88:ILE:HG22	40:DU:90:VAL:HG23	2.03	0.41
43:DX:27:THR:OG1	43:DX:80:ILE:HG12	2.21	0.41
44:DY:56:PRO:C	44:DY:58:GLY:H	2.28	0.41
45:DZ:5:LEU:HG	45:DZ:47:VAL:HG21	2.03	0.41
45:DZ:125:LEU:HG	45:DZ:164:ALA:HB3	2.01	0.41
45:DZ:156:LYS:NZ	45:DZ:158:PRO:HD3	2.35	0.41
52:D6:5:VAL:O	52:D6:27:LYS:HG2	2.21	0.41
1:AA:475:G:O2'	1:AA:476:G:H5'	2.19	0.41
1:AA:827:U:H2'	1:AA:859:A:H61	1.85	0.41
1:AA:991:U:H1'	1:AA:993:G:H8	1.86	0.41
1:AA:1125:U:H2'	1:AA:1125:U:OP2	2.21	0.41
1:AA:1216:G:N2	1:AA:1217:C:C2	2.89	0.41
1:AA:1371:G:C6	1:AA:1372:U:C4	3.08	0.41
2:AB:197:VAL:HB	2:AB:200:ILE:CG2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:150:LYS:HG2	3:AC:151:VAL:N	2.36	0.41
6:AF:19:LEU:HD11	6:AF:59:TYR:CE2	2.56	0.41
25:BA:1024:G:C2	25:BA:1032:C:C2	3.09	0.41
25:BA:1210:G:H2'	25:BA:1211:U:C6	2.56	0.41
25:BA:1908:C:H6	25:BA:1908:C:O5'	2.04	0.41
25:BA:2710:U:H2'	25:BA:2711:C:C6	2.56	0.41
26:BB:78:A:H2'	26:BB:79:C:O4'	2.21	0.41
31:BH:117:PRO:HG3	31:BH:123:PHE:CD2	2.56	0.41
34:BO:110:GLY:HA2	34:BO:112:MET:HE2	2.03	0.41
36:BQ:16:ARG:HG3	36:BQ:17:LEU:H	1.86	0.41
45:BZ:14:LYS:HA	45:BZ:15:PRO:HD3	1.95	0.41
45:BZ:52:SER:OG	45:BZ:53:ILE:N	2.54	0.41
54:B8:50:LEU:HD23	54:B8:50:LEU:HA	1.94	0.41
1:CA:20:U:H2'	1:CA:21:G:O4'	2.21	0.41
1:CA:263:A:OP1	20:CT:79:ARG:NH1	2.54	0.41
1:CA:426:G:OP1	4:CD:38:TYR:OH	2.33	0.41
1:CA:955:U:H2'	1:CA:956:U:O4'	2.21	0.41
1:CA:991:U:H3'	1:CA:1212:U:C4	2.56	0.41
1:CA:1492:A:H2'	25:DA:1913:A:H62	1.84	0.41
2:CB:127:ILE:O	2:CB:128:GLU:HB2	2.20	0.41
2:CB:137:ARG:HB3	2:CB:137:ARG:NH1	2.36	0.41
4:CD:50:ARG:HA	4:CD:51:PRO:HD3	1.92	0.41
6:CF:89:MET:HE3	6:CF:91:VAL:HG21	2.03	0.41
7:CG:46:ALA:O	7:CG:50:ILE:HG23	2.21	0.41
13:CM:107:ALA:HB3	13:CM:111:LYS:HE3	2.03	0.41
15:CO:81:LEU:HD11	15:CO:85:LEU:HD12	2.02	0.41
25:DA:623:G:C6	25:DA:624:C:C4	3.09	0.41
25:DA:658:C:H2'	25:DA:659:C:H6	1.85	0.41
25:DA:855:G:H2'	25:DA:856:C:C6	2.56	0.41
25:DA:994:C:H1'	41:DV:10:LYS:HE3	2.03	0.41
25:DA:1334:G:H2'	25:DA:1335:U:C6	2.56	0.41
25:DA:2193:G:H2'	25:DA:2194:G:H8	1.87	0.41
25:DA:2287:A:C4	25:DA:2289:G:C8	3.09	0.41
25:DA:2416:C:O2'	25:DA:2417:C:H5'	2.21	0.41
25:DA:2746:U:H2'	25:DA:2747:G:H5'	2.01	0.41
25:DA:2801(A):A:N3	25:DA:2895:U:H1'	2.36	0.41
26:DB:114:C:H4'	38:DS:46:VAL:HG22	2.02	0.41
30:DG:145:THR:HG23	30:DG:148:MET:HE3	2.03	0.41
32:DI:104:GLN:O	32:DI:105:HIS:CG	2.73	0.41
38:DS:61:ASN:O	38:DS:65:VAL:HG23	2.21	0.41
1:AA:44:G:H2'	1:AA:45:U:O4'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:266:G:H5'	1:AA:266:G:C8	2.56	0.40
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.21	0.40
1:AA:584:G:O6	61:AA:4012:HOH:O	2.20	0.40
1:AA:684:A:C6	1:AA:685:G:C6	3.09	0.40
1:AA:933:G:C6	1:AA:1385:G:C6	3.09	0.40
1:AA:1127:G:C2'	1:AA:1128:C:H5'	2.50	0.40
1:AA:1223:C:P	19:AS:78:ARG:HH21	2.44	0.40
1:AA:1314:C:N4	1:AA:1315:U:O4	2.54	0.40
1:AA:1315:U:O2'	1:AA:1360:A:N3	2.49	0.40
2:AB:78:GLN:NE2	2:AB:95:GLN:OE1	2.54	0.40
2:AB:102:LEU:HB3	2:AB:180:LEU:HD12	2.02	0.40
2:AB:189:ASP:OD1	2:AB:189:ASP:N	2.35	0.40
5:AE:69:VAL:HA	5:AE:70:PRO:HD3	1.72	0.40
6:AF:37:VAL:HG12	6:AF:38:GLU:N	2.36	0.40
7:AG:79:ARG:HB2	7:AG:79:ARG:HH21	1.85	0.40
18:AR:59:SER:OG	18:AR:62:GLU:HG2	2.21	0.40
25:BA:496:A:OP1	25:BA:496:A:H4'	2.20	0.40
25:BA:639:G:N2	29:BF:44:ARG:O	2.53	0.40
25:BA:815:G:C6	25:BA:816:G:C5	3.08	0.40
25:BA:857:U:O5'	25:BA:857:U:H6	2.04	0.40
25:BA:922:G:O2'	45:BZ:151:HIS:CE1	2.74	0.40
25:BA:1067:A:C8	25:BA:1067:A:C3'	3.04	0.40
25:BA:1223:C:H2'	25:BA:1224:C:H6	1.85	0.40
25:BA:1431:G:H4'	25:BA:1432:C:OP1	2.21	0.40
25:BA:1541:A:H2'	25:BA:1542:A:C8	2.55	0.40
25:BA:2564:U:C2	25:BA:2566:U:H5'	2.56	0.40
25:BA:2718:G:C2	25:BA:2719:G:H1'	2.56	0.40
28:BE:9:VAL:HB	39:BT:3:ARG:HG2	2.02	0.40
29:BF:56:GLU:OE2	29:BF:93:LYS:NZ	2.47	0.40
29:BF:135:LYS:HB2	29:BF:138:GLU:CD	2.47	0.40
41:BV:14:VAL:HB	41:BV:96:ILE:HG13	2.03	0.40
45:BZ:91:LEU:HD13	45:BZ:91:LEU:HA	1.88	0.40
47:B1:86:SER:H	47:B1:89:GLU:HG3	1.85	0.40
48:B2:48:HIS:CE1	48:B2:49:LYS:HG3	2.56	0.40
54:B8:16:ILE:HD11	54:B8:62:LEU:HD12	2.02	0.40
1:CA:233:C:O5'	1:CA:233:C:H6	2.04	0.40
1:CA:236:G:C6	1:CA:237:C:C4	3.09	0.40
1:CA:401:C:O2'	1:CA:621:A:N3	2.47	0.40
1:CA:446:G:H1	1:CA:488:C:H42	1.70	0.40
1:CA:1074:G:C2	1:CA:1075:C:C2	3.09	0.40
1:CA:1220:G:H2'	1:CA:1221:G:O4'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1325:C:O2'	1:CA:1326:C:H5'	2.22	0.40
4:CD:11:LEU:HD23	4:CD:66:ARG:HB3	2.03	0.40
5:CE:152:ARG:HG3	8:CH:43:GLY:O	2.21	0.40
7:CG:155:ARG:HB3	7:CG:155:ARG:NH1	2.36	0.40
9:CI:96:LEU:O	9:CI:100:GLY:N	2.54	0.40
9:CI:116:LYS:HA	9:CI:123:PRO:HD3	2.02	0.40
12:CL:6:THR:HG23	12:CL:9:GLN:OE1	2.21	0.40
12:CL:28:LYS:N	12:CL:29:GLY:HA2	2.36	0.40
13:CM:92:HIS:CE1	13:CM:98:VAL:HG21	2.55	0.40
18:CR:51:LEU:HA	18:CR:52:PRO:HD3	1.94	0.40
19:CS:41:VAL:CG1	19:CS:43:GLU:H	2.29	0.40
19:CS:52:TYR:HB2	19:CS:57:HIS:CE1	2.56	0.40
19:CS:63:THR:OG1	19:CS:64:GLU:N	2.54	0.40
25:DA:89:G:C3'	25:DA:90:U:H5''	2.44	0.40
25:DA:227:A:C2	25:DA:2407:G:H1'	2.56	0.40
25:DA:1131:G:C2	25:DA:1132:A:C4	3.10	0.40
25:DA:1590:U:H2'	25:DA:1591:G:C8	2.57	0.40
25:DA:1682:G:H1'	25:DA:1762:A:C6	2.57	0.40
25:DA:1801:G:H3'	25:DA:1802:A:H5'	2.03	0.40
25:DA:1957:C:O2'	25:DA:1985:G:H1'	2.22	0.40
25:DA:2228:G:C5	25:DA:2229:C:C4	3.09	0.40
25:DA:2436:G:C6	25:DA:2437:U:C4	3.10	0.40
25:DA:2716:U:O2'	25:DA:2717:G:H5'	2.20	0.40
27:DD:164:GLN:NE2	27:DD:176:ARG:HH22	2.19	0.40
28:DE:2:LYS:HB2	28:DE:95:ILE:HD12	2.03	0.40
29:DF:101:LEU:HD12	29:DF:102:PRO:HD2	2.03	0.40
30:DG:167:GLU:H	30:DG:167:GLU:CD	2.29	0.40
31:DH:9:ILE:HA	31:DH:10:PRO:HD2	1.94	0.40
31:DH:149:ARG:HA	31:DH:162:ILE:HG21	2.03	0.40
32:DI:60:GLU:CB	32:DI:61:ARG:HH21	2.34	0.40
32:DI:72:LEU:HB2	32:DI:138:ILE:HG21	2.03	0.40
35:DP:121:LYS:HG2	35:DP:122:PRO:HD2	2.03	0.40
40:DU:80:ILE:HD13	40:DU:80:ILE:HA	1.91	0.40
44:DY:40:GLU:O	44:DY:42:VAL:HG23	2.21	0.40
45:DZ:33:LEU:HD21	45:DZ:90:VAL:HG21	2.03	0.40
1:AA:92:C:H2'	1:AA:93:G:C8	2.56	0.40
1:AA:237:C:OP2	17:AQ:40:LYS:NZ	2.48	0.40
1:AA:491:G:C4	1:AA:492:G:C8	3.09	0.40
1:AA:670:G:C4	1:AA:671:G:C8	3.09	0.40
1:AA:1110:A:OP2	61:AA:4115:HOH:O	2.22	0.40
1:AA:1139:G:N2	1:AA:1143:G:C6	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1164:G:H2'	1:AA:1165:C:C6	2.56	0.40
1:AA:1164:G:O2'	1:AA:1165:C:H5'	2.21	0.40
2:AB:55:PHE:CE1	2:AB:218:ALA:HA	2.56	0.40
7:AG:152:ALA:HB1	7:AG:155:ARG:HH21	1.86	0.40
12:AL:60:LEU:HD13	12:AL:60:LEU:HA	1.93	0.40
12:AL:88:GLY:O	12:AL:99:HIS:HD2	2.04	0.40
17:AQ:26:GLN:HG2	17:AQ:37:LYS:HG2	2.03	0.40
20:AT:45:GLN:HE21	20:AT:45:GLN:HB3	1.60	0.40
25:BA:505:A:N3	25:BA:507:G:H5''	2.37	0.40
25:BA:1316:C:H5''	25:BA:1317:G:O5'	2.21	0.40
25:BA:2075:G:OP1	28:BE:144:ARG:HG2	2.20	0.40
25:BA:2354:C:O2'	25:BA:2386:C:H5''	2.20	0.40
36:BQ:108:GLY:HA3	45:BZ:116:VAL:HG13	2.03	0.40
43:BX:92:LEU:C	43:BX:94:GLY:N	2.71	0.40
52:B6:40:CYS:HA	52:B6:41:PRO:HD3	1.85	0.40
1:CA:458:C:C2	1:CA:460:G:C8	3.10	0.40
1:CA:489:C:H2'	1:CA:490:G:C8	2.57	0.40
1:CA:522:C:H5''	12:CL:120:TYR:OH	2.21	0.40
1:CA:598:U:H2'	1:CA:599:C:H6	1.86	0.40
1:CA:986:A:H1'	19:CS:54:GLY:O	2.21	0.40
1:CA:1014:A:N3	1:CA:1219:U:H1'	2.36	0.40
1:CA:1063:C:H3'	1:CA:1064:G:H2'	2.04	0.40
1:CA:1178:G:N3	1:CA:1180:A:H2	2.19	0.40
1:CA:1226:C:H6	13:CM:103:THR:OG1	2.04	0.40
1:CA:1244:C:H42	1:CA:1293:G:H1	1.68	0.40
1:CA:1465:C:H2'	1:CA:1466:C:O4'	2.21	0.40
3:CC:113:ALA:CB	3:CC:202:ILE:HG13	2.50	0.40
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	2.03	0.40
20:CT:10:LEU:HD12	20:CT:10:LEU:HA	1.88	0.40
25:DA:112:U:H2'	25:DA:113:G:O4'	2.21	0.40
25:DA:282:A:N6	25:DA:284:U:C2	2.89	0.40
25:DA:300:A:H1'	25:DA:319:C:C1'	2.51	0.40
25:DA:324:A:N6	25:DA:338:G:O2'	2.50	0.40
25:DA:530:G:C5	25:DA:2022:U:H5''	2.56	0.40
25:DA:699:A:H4'	25:DA:1554:A:N6	2.36	0.40
25:DA:996:A:N6	25:DA:1160:G:C6	2.90	0.40
25:DA:1022:G:C6	25:DA:1140:C:N3	2.90	0.40
25:DA:1032:A:H2	25:DA:1122:G:H22	1.70	0.40
25:DA:1971:A:C4	27:DD:241:PRO:HD3	2.57	0.40
25:DA:2282:G:H4'	25:DA:2389:G:O2'	2.21	0.40
25:DA:2298:A:N1	25:DA:2321:G:C2	2.88	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DB:32:C:C4	26:DB:33:G:N7	2.89	0.40
28:DE:93:VAL:O	28:DE:95:ILE:N	2.54	0.40
30:DG:25:TYR:CD2	30:DG:30:GLU:HB3	2.57	0.40
34:DO:35:VAL:HG11	34:DO:103:ALA:CB	2.50	0.40
35:DP:46:LYS:HE3	35:DP:46:LYS:HB3	1.90	0.40
41:DV:40:LEU:HB2	41:DV:46:VAL:HG22	2.02	0.40
44:DY:19:LYS:HE2	44:DY:19:LYS:HB3	1.91	0.40
48:D2:48:HIS:O	48:D2:52:ASP:HB2	2.20	0.40
54:D8:9:GLY:O	54:D8:13:ARG:HG2	2.20	0.40
54:D8:38:GLY:O	54:D8:42:ARG:HB2	2.20	0.40
1:AA:78:G:N2	1:AA:91:C:N3	2.69	0.40
1:AA:184:G:O4'	1:AA:224:C:H4'	2.21	0.40
1:AA:341:C:C2'	1:AA:342:C:H5'	2.51	0.40
1:AA:477:A:O2'	1:AA:479:C:H5'	2.22	0.40
1:AA:633:G:H2'	1:AA:634:C:C6	2.57	0.40
1:AA:731:G:OP1	1:AA:766:A:H1'	2.20	0.40
1:AA:864:A:O5'	1:AA:864:A:H8	2.05	0.40
1:AA:1127:G:H22	1:AA:1147:C:N4	2.20	0.40
1:AA:1277:C:H2'	1:AA:1279:A:H8	1.85	0.40
1:AA:1321:C:H3'	1:AA:1322:C:H6	1.86	0.40
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.56	0.40
3:AC:92:ALA:HA	3:AC:95:THR:CB	2.51	0.40
4:AD:171:GLY:HA2	4:AD:172:PRO:HD3	1.95	0.40
4:AD:173:TRP:HA	4:AD:186:LEU:HB2	2.02	0.40
17:AQ:60:ILE:HG12	17:AQ:61:GLU:N	2.36	0.40
25:BA:26:G:C6	25:BA:27:G:C6	3.09	0.40
25:BA:1736:A:N6	25:BA:1745:A:H2	2.04	0.40
25:BA:1744:G:OP2	25:BA:1745:A:O2'	2.33	0.40
25:BA:1900:G:H2'	25:BA:1901:C:H6	1.86	0.40
25:BA:2428:C:O5'	25:BA:2428:C:H6	2.04	0.40
25:BA:2430:A:H2'	25:BA:2431:U:O4'	2.21	0.40
25:BA:2701:U:OP2	25:BA:2882:G:N2	2.47	0.40
27:BD:127:VAL:HA	27:BD:193:VAL:HG22	2.04	0.40
27:BD:275:LYS:HB3	27:BD:276:LYS:H	1.36	0.40
35:BP:94:GLU:HG3	35:BP:124:LYS:HB3	2.03	0.40
39:BT:91:ARG:HH11	39:BT:120:ARG:HH11	1.68	0.40
50:B4:46:GLN:O	50:B4:47:GLN:C	2.63	0.40
1:CA:41:G:H2'	1:CA:42:G:C8	2.56	0.40
1:CA:340:U:C2	1:CA:350:G:N2	2.89	0.40
1:CA:654:G:H2'	1:CA:655:A:O4'	2.21	0.40
1:CA:1122:U:C4	1:CA:1123:A:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:104:GLN:HG2	11:CK:106:LYS:HG2	2.02	0.40
18:CR:44:LEU:HD11	18:CR:79:LEU:HB3	2.02	0.40
25:DA:45:C:H2'	25:DA:47:C:H6	1.86	0.40
25:DA:94(A):G:H2'	25:DA:95:G:O4'	2.21	0.40
25:DA:248:G:H5'	25:DA:250:G:N7	2.35	0.40
25:DA:392:C:H5''	25:DA:409:C:H5''	2.03	0.40
25:DA:675:A:N3	25:DA:2443:C:O2'	2.47	0.40
25:DA:724:U:H2'	25:DA:725:G:O4'	2.21	0.40
25:DA:870:A:C2	25:DA:908:C:C2	3.09	0.40
25:DA:1753:G:H2'	25:DA:1755:A:OP2	2.22	0.40
25:DA:2267:A:H5''	25:DA:2268:A:C5'	2.47	0.40
25:DA:2329:G:H2'	25:DA:2330:G:O4'	2.22	0.40
25:DA:2536:G:C5	25:DA:2537:U:C5	3.09	0.40
30:DG:121:ASN:HA	30:DG:122:PRO:HD3	1.89	0.40
30:DG:165:THR:HG23	30:DG:168:GLU:OE2	2.21	0.40
34:DO:7:TYR:CE1	34:DO:20:MET:HB2	2.57	0.40
36:DQ:45:GLN:CD	36:DQ:45:GLN:N	2.80	0.40
36:DQ:110:THR:HG23	36:DQ:113:GLN:OE1	2.21	0.40
38:DS:10:ARG:O	38:DS:14:VAL:HG13	2.22	0.40
38:DS:50:SER:O	38:DS:76:LYS:NZ	2.49	0.40
40:DU:76:TYR:CE1	40:DU:80:ILE:HG13	2.57	0.40
1:AA:235:C:H2'	1:AA:236:G:H8	1.87	0.40
1:AA:256:U:H2'	1:AA:257:G:C8	2.57	0.40
1:AA:583:A:N6	1:AA:758:G:O2'	2.54	0.40
1:AA:1030:C:N4	1:AA:1031:G:C6	2.90	0.40
1:AA:1122:U:C4	1:AA:1123:A:N7	2.89	0.40
1:AA:1247:U:H2'	1:AA:1248:A:O4'	2.22	0.40
1:AA:1443:G:C2	1:AA:1460:A:C2	3.09	0.40
2:AB:215:LEU:HD23	2:AB:215:LEU:HA	1.86	0.40
4:AD:65:ARG:HG2	4:AD:75:PHE:CG	2.57	0.40
5:AE:27:ARG:HE	5:AE:27:ARG:HB2	1.45	0.40
8:AH:6:ILE:O	8:AH:10:LEU:HG	2.21	0.40
8:AH:78:GLN:HE21	8:AH:78:GLN:HB2	1.65	0.40
25:BA:105:C:H2'	25:BA:106:U:H6	1.85	0.40
25:BA:346:A:OP2	29:BF:169:ASN:HB2	2.21	0.40
25:BA:511:C:H2'	25:BA:512:C:C6	2.56	0.40
25:BA:1184:G:O2'	25:BA:1189:A:N1	2.49	0.40
25:BA:1686:U:H4'	25:BA:2711:C:H4'	2.02	0.40
25:BA:1857:G:H4'	27:BD:242:ARG:CZ	2.51	0.40
25:BA:2528:G:C6	25:BA:2529:C:N4	2.89	0.40
25:BA:2650:G:P	28:BE:82:ARG:HH22	2.45	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:11:VAL:HA	31:BH:12:PRO:HD3	1.94	0.40
37:BR:109:ALA:O	37:BR:111:LEU:HD22	2.22	0.40
38:BS:36:TYR:CD1	38:BS:36:TYR:N	2.90	0.40
40:BU:98:LEU:HA	40:BU:98:LEU:HD23	1.80	0.40
44:BY:106:LEU:O	44:BY:107:ASP:HB2	2.20	0.40
45:BZ:34:ASN:O	45:BZ:35:ARG:HD2	2.21	0.40
46:B0:49:LYS:O	46:B0:50:ASN:HB2	2.22	0.40
50:B4:59:PHE:CA	50:B4:61:ARG:H	2.34	0.40
53:B7:24:THR:O	53:B7:28:ARG:HG3	2.22	0.40
1:CA:79:G:H1	1:CA:90:U:H3	1.70	0.40
1:CA:194:C:H5''	1:CA:195:A:OP2	2.22	0.40
1:CA:363:A:C5	12:CL:31:PRO:HD2	2.57	0.40
1:CA:551:U:H2'	1:CA:552:U:C6	2.56	0.40
1:CA:596:C:H2'	1:CA:597:G:C8	2.54	0.40
1:CA:688:G:H2'	1:CA:689:C:H6	1.85	0.40
1:CA:708:C:H2'	1:CA:709:G:H8	1.86	0.40
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.52	0.40
1:CA:1150:U:C4	1:CA:1151:A:N6	2.89	0.40
1:CA:1166:G:H2'	1:CA:1169:A:OP2	2.22	0.40
1:CA:1317:C:H42	14:CN:19:ARG:HH21	1.69	0.40
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	2.21	0.40
6:CF:82:ARG:HB3	6:CF:82:ARG:NH1	2.36	0.40
8:CH:20:TYR:HA	8:CH:65:TYR:CZ	2.56	0.40
8:CH:51:VAL:HG21	8:CH:60:ARG:HB2	2.04	0.40
15:CO:74:ASP:OD1	15:CO:76:GLU:HB2	2.21	0.40
18:CR:52:PRO:HB2	18:CR:54:ARG:HG2	2.03	0.40
25:DA:30:G:H2'	25:DA:31:C:O4'	2.21	0.40
25:DA:143:G:C6	25:DA:143(A):C:C4	3.10	0.40
25:DA:373:U:H2'	25:DA:374:A:H8	1.86	0.40
25:DA:1131:G:C8	25:DA:2025:C:H4'	2.56	0.40
25:DA:1288:U:O2'	25:DA:1647:G:N2	2.55	0.40
25:DA:2478:A:OP2	55:D9:2:LYS:NZ	2.46	0.40
25:DA:2580:U:C5	25:DA:2581:G:C6	3.09	0.40
25:DA:2745:C:H4'	31:DH:142:GLY:O	2.20	0.40
25:DA:2769:C:H2'	25:DA:2770:G:O4'	2.21	0.40
26:DB:98:G:C5	26:DB:99:G:C8	3.09	0.40
28:DE:12:THR:HG21	39:DT:11:GLU:OE2	2.21	0.40
28:DE:14:ILE:HB	39:DT:14:TYR:CZ	2.56	0.40
28:DE:38:THR:O	28:DE:42:ASP:N	2.40	0.40
28:DE:105:THR:HG21	28:DE:164:ARG:CZ	2.51	0.40
34:DO:20:MET:HE3	34:DO:44:LYS:HE3	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DR:70:LEU:O	37:DR:72:ASP:N	2.55	0.40
39:DT:59:THR:HG23	39:DT:78:LEU:HB2	2.03	0.40
45:DZ:96:VAL:N	45:DZ:128:VAL:O	2.45	0.40
52:D6:25:LYS:HE3	52:D6:27:LYS:HA	2.04	0.40
1:AA:41:G:H2'	1:AA:42:G:H8	1.87	0.40
1:AA:69:G:H2'	1:AA:70:G:H8	1.82	0.40
1:AA:676:A:H2	11:AK:119:CYS:SG	2.44	0.40
1:AA:828:A:N6	1:AA:829:G:C2	2.90	0.40
1:AA:1005:A:H5''	1:AA:1006:C:OP2	2.20	0.40
1:AA:1079:G:C6	1:AA:1080:A:N6	2.90	0.40
1:AA:1095:U:P	1:AA:1108:G:H1	2.43	0.40
1:AA:1367:C:N3	1:AA:1368:G:C8	2.90	0.40
1:AA:1456:G:H22	20:AT:51:GLU:CD	2.29	0.40
2:AB:19:HIS:HE1	2:AB:189:ASP:CB	2.35	0.40
2:AB:95:GLN:HB3	2:AB:147:LYS:NZ	2.36	0.40
4:AD:61:LYS:HD2	4:AD:207:TYR:OH	2.21	0.40
4:AD:107:ARG:HH22	4:AD:194:LEU:HD22	1.86	0.40
5:AE:57:LYS:HD3	5:AE:61:TYR:HE2	1.87	0.40
14:AN:3:ARG:HH21	14:AN:3:ARG:CB	2.34	0.40
16:AP:59:TRP:HB3	16:AP:64:ALA:HB2	2.04	0.40
17:AQ:58:GLU:O	17:AQ:74:LEU:N	2.43	0.40
18:AR:40:LEU:HA	18:AR:40:LEU:HD23	1.72	0.40
25:BA:218:A:C8	25:BA:218:A:H3'	2.57	0.40
25:BA:504:A:C6	25:BA:506:A:C6	3.09	0.40
25:BA:938:G:C2	25:BA:939:C:C2	3.10	0.40
25:BA:1394:G:O6	25:BA:1395:A:N6	2.55	0.40
25:BA:1698:G:N2	25:BA:2029:C:C2	2.90	0.40
25:BA:2274:U:O2'	25:BA:2275:C:H5'	2.21	0.40
25:BA:2310:A:H2'	25:BA:2311:G:O4'	2.21	0.40
25:BA:2372:A:C2	25:BA:2373:A:H1'	2.56	0.40
32:BI:140:LEU:HD23	32:BI:140:LEU:HA	1.71	0.40
34:BO:12:ASP:CG	34:BO:14:THR:HG23	2.46	0.40
41:BV:18:LEU:O	41:BV:95:LEU:HD23	2.22	0.40
45:BZ:163:LEU:HD12	45:BZ:163:LEU:HA	1.87	0.40
46:B0:27:GLU:HB2	46:B0:69:PHE:CD1	2.56	0.40
49:B3:7:LYS:HG3	49:B3:34:GLU:HG3	2.04	0.40
50:B4:9:LEU:HD23	50:B4:9:LEU:HA	1.96	0.40
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.52	0.40
1:CA:1086:U:H2'	1:CA:1087:G:O4'	2.21	0.40
1:CA:1183:A:H8	1:CA:1183:A:H5'	1.85	0.40
1:CA:1272:G:C5	1:CA:1273:G:C8	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:18:TRP:O	3:CC:21:ARG:NH1	2.54	0.40
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	2.04	0.40
9:CI:33:PHE:C	9:CI:33:PHE:HD1	2.29	0.40
10:CJ:49:VAL:HG12	10:CJ:61:GLU:O	2.22	0.40
13:CM:90:LEU:HD23	13:CM:93:ARG:NE	2.37	0.40
19:CS:36:ARG:NH1	19:CS:53:ASN:HA	2.37	0.40
25:DA:478:A:C6	25:DA:480:A:C6	3.09	0.40
25:DA:1171:G:H1	25:DA:1178:C:H42	1.69	0.40
25:DA:1301:A:C8	25:DA:1303:G:C8	3.09	0.40
25:DA:1416:G:HO2'	25:DA:1417:C:H5	1.65	0.40
25:DA:1842:G:H2'	25:DA:1843:C:O4'	2.22	0.40
25:DA:2433:A:H5''	25:DA:2434:A:OP1	2.21	0.40
25:DA:2748:A:C6	25:DA:2749:A:C5	3.10	0.40
37:DR:37:THR:HA	37:DR:111:LEU:HD12	2.02	0.40
39:DT:61:PHE:CZ	39:DT:76:PHE:HB2	2.57	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%)	200 (87%)	23 (10%)	6 (3%)	4	21
2	CB	229/256 (90%)	201 (88%)	18 (8%)	10 (4%)	2	12
3	AC	204/239 (85%)	179 (88%)	22 (11%)	3 (2%)	8	32
3	CC	204/239 (85%)	178 (87%)	24 (12%)	2 (1%)	12	41
4	AD	206/209 (99%)	182 (88%)	22 (11%)	2 (1%)	12	41
4	CD	206/209 (99%)	185 (90%)	18 (9%)	3 (2%)	8	32
5	AE	146/162 (90%)	127 (87%)	15 (10%)	4 (3%)	4	20
5	CE	146/162 (90%)	133 (91%)	10 (7%)	3 (2%)	5	25

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	AF	98/101 (97%)	92 (94%)	6 (6%)	0	100	100
6	CF	98/101 (97%)	93 (95%)	5 (5%)	0	100	100
7	AG	153/156 (98%)	137 (90%)	14 (9%)	2 (1%)	9	35
7	CG	153/156 (98%)	137 (90%)	15 (10%)	1 (1%)	18	49
8	AH	135/138 (98%)	129 (96%)	6 (4%)	0	100	100
8	CH	135/138 (98%)	129 (96%)	5 (4%)	1 (1%)	18	49
9	AI	125/128 (98%)	111 (89%)	10 (8%)	4 (3%)	3	18
9	CI	125/128 (98%)	112 (90%)	11 (9%)	2 (2%)	7	30
10	AJ	95/105 (90%)	85 (90%)	7 (7%)	3 (3%)	3	18
10	CJ	94/105 (90%)	86 (92%)	7 (7%)	1 (1%)	11	39
11	AK	112/129 (87%)	98 (88%)	13 (12%)	1 (1%)	14	44
11	CK	112/129 (87%)	99 (88%)	12 (11%)	1 (1%)	14	44
12	AL	120/132 (91%)	116 (97%)	4 (3%)	0	100	100
12	CL	120/132 (91%)	112 (93%)	8 (7%)	0	100	100
13	AM	121/126 (96%)	106 (88%)	15 (12%)	0	100	100
13	CM	120/126 (95%)	104 (87%)	14 (12%)	2 (2%)	7	30
14	AN	58/61 (95%)	54 (93%)	4 (7%)	0	100	100
14	CN	58/61 (95%)	55 (95%)	3 (5%)	0	100	100
15	AO	86/89 (97%)	82 (95%)	4 (5%)	0	100	100
15	CO	86/89 (97%)	80 (93%)	5 (6%)	1 (1%)	10	37
16	AP	80/88 (91%)	69 (86%)	11 (14%)	0	100	100
16	CP	80/88 (91%)	70 (88%)	10 (12%)	0	100	100
17	AQ	97/105 (92%)	91 (94%)	6 (6%)	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	32
18	CR	66/88 (75%)	60 (91%)	5 (8%)	1 (2%)	8	32
19	AS	81/93 (87%)	74 (91%)	7 (9%)	0	100	100
19	CS	81/93 (87%)	69 (85%)	12 (15%)	0	100	100
20	AT	94/106 (89%)	84 (89%)	5 (5%)	5 (5%)	1	10
20	CT	94/106 (89%)	85 (90%)	3 (3%)	6 (6%)	1	6
21	AU	21/27 (78%)	17 (81%)	4 (19%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
21	CU	21/27 (78%)	18 (86%)	1 (5%)	2 (10%)	0	3
24	AW	3/10 (30%)	1 (33%)	0	2 (67%)	0	0
24	CW	3/10 (30%)	1 (33%)	1 (33%)	1 (33%)	0	0
27	BD	273/276 (99%)	259 (95%)	13 (5%)	1 (0%)	30	61
27	DD	273/276 (99%)	257 (94%)	13 (5%)	3 (1%)	11	39
28	BE	202/206 (98%)	195 (96%)	6 (3%)	1 (0%)	24	57
28	DE	202/206 (98%)	194 (96%)	6 (3%)	2 (1%)	12	41
29	BF	201/210 (96%)	193 (96%)	7 (4%)	1 (0%)	24	57
29	DF	201/210 (96%)	189 (94%)	10 (5%)	2 (1%)	12	41
30	BG	179/182 (98%)	163 (91%)	13 (7%)	3 (2%)	7	30
30	DG	179/182 (98%)	160 (89%)	13 (7%)	6 (3%)	3	16
31	BH	172/180 (96%)	161 (94%)	10 (6%)	1 (1%)	21	52
31	DH	172/180 (96%)	159 (92%)	11 (6%)	2 (1%)	10	37
32	BI	144/148 (97%)	122 (85%)	17 (12%)	5 (4%)	3	16
32	DI	144/148 (97%)	123 (85%)	17 (12%)	4 (3%)	4	20
33	BN	138/140 (99%)	134 (97%)	4 (3%)	0	100	100
33	DN	138/140 (99%)	131 (95%)	6 (4%)	1 (1%)	18	49
34	BO	120/122 (98%)	115 (96%)	4 (3%)	1 (1%)	16	47
34	DO	120/122 (98%)	117 (98%)	2 (2%)	1 (1%)	16	47
35	BP	147/150 (98%)	132 (90%)	14 (10%)	1 (1%)	18	49
35	DP	147/150 (98%)	133 (90%)	12 (8%)	2 (1%)	9	34
36	BQ	139/141 (99%)	130 (94%)	8 (6%)	1 (1%)	18	49
36	DQ	139/141 (99%)	129 (93%)	8 (6%)	2 (1%)	9	34
37	BR	116/118 (98%)	110 (95%)	5 (4%)	1 (1%)	14	44
37	DR	116/118 (98%)	109 (94%)	7 (6%)	0	100	100
38	BS	108/112 (96%)	100 (93%)	7 (6%)	1 (1%)	14	44
38	DS	108/112 (96%)	102 (94%)	5 (5%)	1 (1%)	14	44
39	BT	129/146 (88%)	124 (96%)	4 (3%)	1 (1%)	16	47
39	DT	129/146 (88%)	125 (97%)	4 (3%)	0	100	100
40	BU	114/118 (97%)	114 (100%)	0	0	100	100
40	DU	114/118 (97%)	113 (99%)	1 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
41	BV	99/101 (98%)	91 (92%)	7 (7%)	1 (1%)	12	41
41	DV	99/101 (98%)	92 (93%)	6 (6%)	1 (1%)	12	41
42	BW	110/113 (97%)	109 (99%)	1 (1%)	0	100	100
42	DW	110/113 (97%)	108 (98%)	2 (2%)	0	100	100
43	BX	93/96 (97%)	89 (96%)	3 (3%)	1 (1%)	11	39
43	DX	93/96 (97%)	87 (94%)	6 (6%)	0	100	100
44	BY	105/110 (96%)	95 (90%)	10 (10%)	0	100	100
44	DY	105/110 (96%)	97 (92%)	8 (8%)	0	100	100
45	BZ	169/206 (82%)	150 (89%)	17 (10%)	2 (1%)	10	37
45	DZ	172/206 (84%)	157 (91%)	15 (9%)	0	100	100
46	B0	81/85 (95%)	77 (95%)	3 (4%)	1 (1%)	10	37
46	D0	81/85 (95%)	76 (94%)	5 (6%)	0	100	100
47	B1	95/98 (97%)	93 (98%)	0	2 (2%)	5	25
47	D1	95/98 (97%)	92 (97%)	2 (2%)	1 (1%)	11	39
48	B2	68/72 (94%)	66 (97%)	2 (3%)	0	100	100
48	D2	68/72 (94%)	65 (96%)	3 (4%)	0	100	100
49	B3	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
49	D3	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
50	B4	67/71 (94%)	50 (75%)	9 (13%)	8 (12%)	0	1
50	D4	67/71 (94%)	50 (75%)	8 (12%)	9 (13%)	0	1
51	B5	57/60 (95%)	56 (98%)	1 (2%)	0	100	100
51	D5	57/60 (95%)	56 (98%)	1 (2%)	0	100	100
52	B6	51/54 (94%)	48 (94%)	3 (6%)	0	100	100
52	D6	51/54 (94%)	48 (94%)	3 (6%)	0	100	100
53	B7	46/49 (94%)	45 (98%)	1 (2%)	0	100	100
53	D7	46/49 (94%)	44 (96%)	1 (2%)	1 (2%)	5	24
54	B8	62/65 (95%)	60 (97%)	2 (3%)	0	100	100
54	D8	62/65 (95%)	59 (95%)	3 (5%)	0	100	100
55	B9	35/37 (95%)	35 (100%)	0	0	100	100
55	D9	35/37 (95%)	35 (100%)	0	0	100	100
All	All	11415/12148 (94%)	10525 (92%)	749 (7%)	141 (1%)	10	37

All (141) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	17	PHE
2	AB	125	PRO
3	AC	65	ALA
3	AC	107	GLN
4	AD	166	LYS
7	AG	4	ARG
9	AI	54	ASP
9	AI	56	LEU
10	AJ	31	GLY
10	AJ	79	ARG
18	AR	60	ALA
20	AT	10	LEU
27	BD	275	LYS
29	BF	130	ALA
30	BG	51	ARG
30	BG	126	ASP
31	BH	126	PRO
32	BI	73	GLU
36	BQ	60	ARG
38	BS	60	GLY
47	B1	3	LYS
50	B4	49	PHE
50	B4	55	ARG
50	B4	68	ARG
2	CB	16	HIS
2	CB	126	GLU
2	CB	231	GLU
3	CC	91	LEU
3	CC	181	ASN
7	CG	7	ALA
13	CM	106	ASN
20	CT	95	ALA
20	CT	99	LEU
27	DD	239	ARG
29	DF	21	ALA
29	DF	130	ALA
30	DG	14	GLU
30	DG	47	LYS
30	DG	51	ARG
30	DG	81	LYS
30	DG	126	ASP
31	DH	126	PRO

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Mol	Chain	Res	Type
32	DI	10	GLU
35	DP	38	GLN
36	DQ	28	ALA
36	DQ	60	ARG
47	D1	3	LYS
50	D4	39	CYS
50	D4	45	GLY
50	D4	55	ARG
50	D4	63	TYR
53	D7	46	VAL
2	AB	16	HIS
2	AB	19	HIS
4	AD	171	GLY
5	AE	85	GLY
5	AE	140	ARG
9	AI	95	LYS
11	AK	49	GLY
20	AT	47	GLY
32	BI	11	ASN
32	BI	106	GLY
34	BO	5	GLN
41	BV	79	VAL
46	B0	13	GLY
50	B4	47	GLN
50	B4	56	VAL
50	B4	66	SER
2	CB	8	LYS
2	CB	10	LEU
2	CB	17	PHE
2	CB	20	GLU
2	CB	121	LEU
2	CB	123	ALA
9	CI	54	ASP
9	CI	55	ALA
10	CJ	79	ARG
11	CK	49	GLY
31	DH	80	SER
33	DN	2	LYS
34	DO	5	GLN
41	DV	79	VAL
50	D4	38	LYS
50	D4	60	GLN

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Mol	Chain	Res	Type
50	D4	62	ARG
2	AB	128	GLU
9	AI	55	ALA
20	AT	102	GLY
35	BP	29	LYS
37	BR	45	ARG
43	BX	93	GLU
45	BZ	152	ALA
50	B4	57	GLU
50	B4	62	ARG
2	CB	21	ARG
5	CE	146	ALA
13	CM	10	PRO
20	CT	47	GLY
21	CU	3	LYS
28	DE	52	LEU
32	DI	30	LEU
32	DI	135	GLU
38	DS	84	GLN
50	D4	49	PHE
3	AC	66	VAL
20	AT	71	THR
24	AW	7	PRO
28	BE	52	LEU
32	BI	107	VAL
39	BT	127	ALA
4	CD	47	ARG
5	CE	37	ARG
21	CU	23	PRO
24	CW	4	PRO
27	DD	3	VAL
28	DE	73	GLU
7	AG	81	GLY
30	BG	47	LYS
32	BI	117	GLU
4	CD	136	PRO
15	CO	88	ARG
18	CR	60	ALA
20	CT	71	THR
20	CT	102	GLY
35	DP	45	LEU
5	AE	146	ALA

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Mol	Chain	Res	Type
10	AJ	77	PRO
47	B1	45	ASN
8	CH	73	ASP
30	DG	117	PHE
32	DI	85	GLU
50	D4	29	PRO
2	AB	231	GLU
24	AW	4	PRO
20	AT	100	ILE
20	CT	100	ILE
27	DD	238	GLY
5	AE	69	VAL
45	BZ	114	GLY
5	CE	69	VAL
4	CD	7	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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%)	143 (74%)	49 (26%)	0	2
2	CB	187/220 (85%)	144 (77%)	43 (23%)	1	4
3	AC	143/188 (76%)	121 (85%)	22 (15%)	2	12
3	CC	140/188 (74%)	115 (82%)	25 (18%)	2	9
4	AD	170/181 (94%)	142 (84%)	28 (16%)	2	11
4	CD	173/181 (96%)	146 (84%)	27 (16%)	2	12
5	AE	113/123 (92%)	100 (88%)	13 (12%)	5	23
5	CE	114/123 (93%)	103 (90%)	11 (10%)	8	30
6	AF	83/90 (92%)	74 (89%)	9 (11%)	6	25
6	CF	85/90 (94%)	79 (93%)	6 (7%)	13	41
7	AG	119/127 (94%)	90 (76%)	29 (24%)	1	3
7	CG	120/127 (94%)	97 (81%)	23 (19%)	1	7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	AH	114/119 (96%)	94 (82%)	20 (18%)	2	9
8	CH	114/119 (96%)	95 (83%)	19 (17%)	2	10
9	AI	90/99 (91%)	74 (82%)	16 (18%)	2	9
9	CI	89/99 (90%)	74 (83%)	15 (17%)	2	10
10	AJ	66/92 (72%)	57 (86%)	9 (14%)	3	16
10	CJ	69/92 (75%)	63 (91%)	6 (9%)	9	34
11	AK	82/99 (83%)	72 (88%)	10 (12%)	5	20
11	CK	83/99 (84%)	74 (89%)	9 (11%)	6	25
12	AL	97/109 (89%)	88 (91%)	9 (9%)	8	31
12	CL	97/109 (89%)	86 (89%)	11 (11%)	5	23
13	AM	93/101 (92%)	81 (87%)	12 (13%)	4	18
13	CM	92/101 (91%)	78 (85%)	14 (15%)	3	13
14	AN	49/50 (98%)	40 (82%)	9 (18%)	1	8
14	CN	49/50 (98%)	42 (86%)	7 (14%)	3	14
15	AO	78/80 (98%)	67 (86%)	11 (14%)	3	15
15	CO	78/80 (98%)	65 (83%)	13 (17%)	2	10
16	AP	69/74 (93%)	58 (84%)	11 (16%)	2	12
16	CP	68/74 (92%)	60 (88%)	8 (12%)	5	21
17	AQ	94/97 (97%)	88 (94%)	6 (6%)	16	44
17	CQ	94/97 (97%)	84 (89%)	10 (11%)	6	26
18	AR	59/77 (77%)	54 (92%)	5 (8%)	10	35
18	CR	59/77 (77%)	51 (86%)	8 (14%)	3	16
19	AS	69/80 (86%)	62 (90%)	7 (10%)	7	28
19	CS	67/80 (84%)	54 (81%)	13 (19%)	1	7
20	AT	70/82 (85%)	59 (84%)	11 (16%)	2	12
20	CT	70/82 (85%)	58 (83%)	12 (17%)	2	10
21	AU	18/22 (82%)	14 (78%)	4 (22%)	1	4
21	CU	18/22 (82%)	16 (89%)	2 (11%)	6	24
24	AW	3/3 (100%)	2 (67%)	1 (33%)	0	0
24	CW	3/3 (100%)	2 (67%)	1 (33%)	0	0
27	BD	215/218 (99%)	190 (88%)	25 (12%)	5	22

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
27	DD	215/218 (99%)	190 (88%)	25 (12%)	5	22
28	BE	164/166 (99%)	138 (84%)	26 (16%)	2	12
28	DE	164/166 (99%)	139 (85%)	25 (15%)	3	13
29	BF	160/166 (96%)	135 (84%)	25 (16%)	2	12
29	DF	159/166 (96%)	140 (88%)	19 (12%)	5	21
30	BG	143/156 (92%)	119 (83%)	24 (17%)	2	10
30	DG	142/156 (91%)	118 (83%)	24 (17%)	2	10
31	BH	144/148 (97%)	128 (89%)	16 (11%)	6	24
31	DH	144/148 (97%)	126 (88%)	18 (12%)	4	19
32	BI	110/124 (89%)	82 (74%)	28 (26%)	0	2
32	DI	104/124 (84%)	85 (82%)	19 (18%)	2	8
33	BN	118/119 (99%)	100 (85%)	18 (15%)	3	12
33	DN	118/119 (99%)	99 (84%)	19 (16%)	2	11
34	BO	100/100 (100%)	91 (91%)	9 (9%)	9	33
34	DO	100/100 (100%)	85 (85%)	15 (15%)	3	13
35	BP	115/116 (99%)	98 (85%)	17 (15%)	3	13
35	DP	115/116 (99%)	97 (84%)	18 (16%)	2	12
36	BQ	111/111 (100%)	96 (86%)	15 (14%)	4	16
36	DQ	111/111 (100%)	96 (86%)	15 (14%)	4	16
37	BR	101/101 (100%)	82 (81%)	19 (19%)	1	7
37	DR	101/101 (100%)	83 (82%)	18 (18%)	2	9
38	BS	87/88 (99%)	72 (83%)	15 (17%)	2	10
38	DS	85/88 (97%)	65 (76%)	20 (24%)	1	3
39	BT	115/127 (91%)	101 (88%)	14 (12%)	5	20
39	DT	113/127 (89%)	100 (88%)	13 (12%)	5	23
40	BU	93/94 (99%)	82 (88%)	11 (12%)	5	21
40	DU	93/94 (99%)	82 (88%)	11 (12%)	5	21
41	BV	80/82 (98%)	66 (82%)	14 (18%)	2	9
41	DV	80/82 (98%)	65 (81%)	15 (19%)	1	7
42	BW	90/92 (98%)	80 (89%)	10 (11%)	6	24
42	DW	90/92 (98%)	78 (87%)	12 (13%)	4	17

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
43	BX	77/78 (99%)	71 (92%)	6 (8%)	11	38
43	DX	77/78 (99%)	72 (94%)	5 (6%)	15	44
44	BY	85/91 (93%)	79 (93%)	6 (7%)	13	41
44	DY	85/91 (93%)	80 (94%)	5 (6%)	18	48
45	BZ	145/179 (81%)	118 (81%)	27 (19%)	1	8
45	DZ	145/179 (81%)	127 (88%)	18 (12%)	4	19
46	B0	65/67 (97%)	61 (94%)	4 (6%)	16	46
46	D0	65/67 (97%)	59 (91%)	6 (9%)	8	31
47	B1	80/83 (96%)	70 (88%)	10 (12%)	4	19
47	D1	80/83 (96%)	69 (86%)	11 (14%)	3	15
48	B2	65/67 (97%)	55 (85%)	10 (15%)	2	12
48	D2	65/67 (97%)	57 (88%)	8 (12%)	4	20
49	B3	51/52 (98%)	42 (82%)	9 (18%)	2	9
49	D3	50/52 (96%)	41 (82%)	9 (18%)	2	8
50	B4	59/63 (94%)	46 (78%)	13 (22%)	1	4
50	D4	53/63 (84%)	43 (81%)	10 (19%)	1	7
51	B5	50/52 (96%)	43 (86%)	7 (14%)	3	15
51	D5	50/52 (96%)	46 (92%)	4 (8%)	11	37
52	B6	51/52 (98%)	45 (88%)	6 (12%)	5	21
52	D6	50/52 (96%)	46 (92%)	4 (8%)	11	37
53	B7	41/42 (98%)	37 (90%)	4 (10%)	7	29
53	D7	41/42 (98%)	36 (88%)	5 (12%)	5	20
54	B8	53/55 (96%)	49 (92%)	4 (8%)	12	39
54	D8	54/55 (98%)	49 (91%)	5 (9%)	8	31
55	B9	34/34 (100%)	31 (91%)	3 (9%)	9	33
55	D9	34/34 (100%)	31 (91%)	3 (9%)	9	33
All	All	9325/10072 (93%)	7977 (86%)	1348 (14%)	3	14

All (1348) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	7	VAL
2	AB	11	LEU

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Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	19	HIS
2	AB	20	GLU
2	AB	21	ARG
2	AB	53	ARG
2	AB	56	ARG
2	AB	67	THR
2	AB	71	VAL
2	AB	80	ILE
2	AB	81	VAL
2	AB	87	ARG
2	AB	90	MET
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	121	LEU
2	AB	126	GLU
2	AB	128	GLU
2	AB	142	LEU
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	164	VAL
2	AB	170	GLU
2	AB	178	ARG
2	AB	179	LYS
2	AB	185	ILE
2	AB	187	LEU
2	AB	190	THR
2	AB	192	SER
2	AB	196	LEU
2	AB	200	ILE
2	AB	208	ILE
2	AB	209	ARG
2	AB	213	LEU
2	AB	217	ARG

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Mol	Chain	Res	Type
2	AB	221	LEU
2	AB	222	ILE
2	AB	223	ILE
2	AB	229	VAL
2	AB	233	SER
3	AC	3	ASN
3	AC	17	ASP
3	AC	26	LYS
3	AC	27	LYS
3	AC	28	GLN
3	AC	29	TYR
3	AC	47	LEU
3	AC	52	LEU
3	AC	57	ILE
3	AC	77	ILE
3	AC	82	GLU
3	AC	104	GLN
3	AC	118	GLN
3	AC	119	ARG
3	AC	131	ARG
3	AC	150	LYS
3	AC	154	SER
3	AC	165	THR
3	AC	178	LEU
3	AC	192	THR
3	AC	202	ILE
3	AC	206	GLU
4	AD	5	ILE
4	AD	19	LEU
4	AD	30	LYS
4	AD	31	CYS
4	AD	47	ARG
4	AD	58	LEU
4	AD	65	ARG
4	AD	85	LYS
4	AD	86	LYS
4	AD	108	LEU
4	AD	110	PHE
4	AD	112	VAL
4	AD	122	ARG
4	AD	126	ILE
4	AD	127	THR

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Mol	Chain	Res	Type
4	AD	135	LEU
4	AD	140	VAL
4	AD	146	ILE
4	AD	155	LEU
4	AD	157	LEU
4	AD	158	ILE
4	AD	168	ARG
4	AD	181	MET
4	AD	182	LYS
4	AD	184	LYS
4	AD	188	LEU
4	AD	193	ASP
4	AD	196	LEU
5	AE	10	MET
5	AE	12	LEU
5	AE	13	ILE
5	AE	31	LEU
5	AE	38	GLN
5	AE	40	ARG
5	AE	41	VAL
5	AE	57	LYS
5	AE	71	LEU
5	AE	79	GLU
5	AE	82	VAL
5	AE	91	LEU
5	AE	111	GLU
6	AF	10	LEU
6	AF	54	LYS
6	AF	55	ASP
6	AF	63	TYR
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	12	LEU
7	AG	13	GLN
7	AG	21	VAL
7	AG	27	ILE
7	AG	50	ILE

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Mol	Chain	Res	Type
7	AG	51	GLN
7	AG	52	GLU
7	AG	57	GLU
7	AG	59	LEU
7	AG	61	VAL
7	AG	66	VAL
7	AG	72	ARG
7	AG	73	MET
7	AG	75	VAL
7	AG	76	ARG
7	AG	79	ARG
7	AG	87	VAL
7	AG	89	MET
7	AG	91	VAL
7	AG	97	GLN
7	AG	104	LEU
7	AG	113	GLU
7	AG	114	ARG
7	AG	135	VAL
7	AG	138	LYS
7	AG	140	ASP
7	AG	144	MET
8	AH	2	LEU
8	AH	23	SER
8	AH	25	ASP
8	AH	26	VAL
8	AH	33	GLU
8	AH	37	ARG
8	AH	45	ILE
8	AH	51	VAL
8	AH	52	ASP
8	AH	53	VAL
8	AH	63	LEU
8	AH	75	ARG
8	AH	78	GLN
8	AH	83	ILE
8	AH	91	ARG
8	AH	97	VAL
8	AH	98	LYS
8	AH	107	LEU
8	AH	112	LEU
8	AH	137	VAL

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Mol	Chain	Res	Type
9	AI	11	LYS
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	65	VAL
9	AI	66	ARG
9	AI	75	ASP
9	AI	81	ILE
9	AI	103	THR
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	65	LEU
10	AJ	68	HIS
10	AJ	92	THR
10	AJ	96	ILE
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
11	AK	114	VAL
12	AL	6	THR
12	AL	27	LEU
12	AL	33	ARG
12	AL	46	LYS
12	AL	55	VAL
12	AL	57	LYS
12	AL	60	LEU

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Mol	Chain	Res	Type
12	AL	67	THR
12	AL	70	ILE
13	AM	3	ARG
13	AM	4	ILE
13	AM	8	GLU
13	AM	19	LEU
13	AM	43	THR
13	AM	50	GLU
13	AM	56	LEU
13	AM	70	LEU
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	50	LYS
15	AO	3	ILE
15	AO	5	LYS
15	AO	22	THR
15	AO	24	SER
15	AO	26	GLU
15	AO	39	LEU
15	AO	41	GLU
15	AO	76	GLU
15	AO	83	GLU
15	AO	84	LYS
15	AO	87	ILE
16	AP	2	VAL
16	AP	5	ARG
16	AP	8	ARG
16	AP	19	ILE
16	AP	20	VAL
16	AP	22	THR
16	AP	28	ARG
16	AP	45	THR

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Mol	Chain	Res	Type
16	AP	50	LYS
16	AP	60	LEU
16	AP	67	THR
17	AQ	9	VAL
17	AQ	53	LEU
17	AQ	60	ILE
17	AQ	63	ARG
17	AQ	74	LEU
17	AQ	91	ARG
18	AR	26	LEU
18	AR	32	ARG
18	AR	61	LYS
18	AR	76	LEU
18	AR	82	THR
19	AS	5	LEU
19	AS	6	LYS
19	AS	28	LYS
19	AS	37	ARG
19	AS	41	VAL
19	AS	63	THR
19	AS	65	ASN
20	AT	8	ARG
20	AT	9	ASN
20	AT	13	LEU
20	AT	31	SER
20	AT	34	LYS
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
21	AU	15	ARG
24	AW	2	VAL
27	BD	3	VAL
27	BD	12	SER
27	BD	13	ARG
27	BD	54	ARG
27	BD	61	LEU

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Mol	Chain	Res	Type
27	BD	71	ASP
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	155	LEU
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	242	ARG
27	BD	257	LEU
27	BD	259	THR
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	47	VAL
28	BE	49	LEU
28	BE	73	GLU
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	144	ARG
28	BE	145	LYS
28	BE	154	LYS
28	BE	163	GLU

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Mol	Chain	Res	Type
28	BE	170	LEU
28	BE	175	VAL
28	BE	181	LEU
28	BE	203	LYS
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	53	THR
29	BF	57	VAL
29	BF	64	ILE
29	BF	74	ARG
29	BF	78	ILE
29	BF	88	VAL
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	197	ASP
29	BF	200	GLU
29	BF	201	VAL
30	BG	3	LEU
30	BG	5	VAL
30	BG	28	VAL
30	BG	31	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

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Mol	Chain	Res	Type
30	BG	91	ARG
30	BG	133	LEU
30	BG	135	LEU
30	BG	136	ARG
30	BG	139	LEU
30	BG	140	ILE
30	BG	143	GLU
30	BG	148	MET
30	BG	159	VAL
30	BG	170	ARG
30	BG	181	ARG
31	BH	4	ILE
31	BH	13	LYS
31	BH	15	VAL
31	BH	24	VAL
31	BH	41	MET
31	BH	44	VAL
31	BH	49	VAL
31	BH	59	ARG
31	BH	69	ARG
31	BH	71	LEU
31	BH	95	ARG
31	BH	98	LEU
31	BH	122	THR
31	BH	129	THR
31	BH	172	LYS
31	BH	175	LYS
32	BI	9	LEU
32	BI	15	VAL
32	BI	19	VAL
32	BI	20	ASP
32	BI	31	LEU
32	BI	38	LEU
32	BI	40	THR
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

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Mol	Chain	Res	Type
32	BI	68	LEU
32	BI	74	ASN
32	BI	75	LEU
32	BI	77	LEU
32	BI	78	THR
32	BI	92	VAL
32	BI	101	LEU
32	BI	107	VAL
32	BI	109	ILE
32	BI	114	LEU
32	BI	140	LEU
32	BI	142	VAL
32	BI	144	VAL
33	BN	14	VAL
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	84	LYS
33	BN	87	LEU
33	BN	97	ARG
33	BN	99	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	23	ARG
34	BO	24	VAL
34	BO	35	VAL
34	BO	58	VAL
34	BO	92	GLU
34	BO	94	ARG
34	BO	98	VAL
35	BP	15	ARG
35	BP	21	ARG

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Mol	Chain	Res	Type
35	BP	42	SER
35	BP	59	LEU
35	BP	65	ARG
35	BP	68	GLN
35	BP	75	ILE
35	BP	76	LYS
35	BP	83	VAL
35	BP	95	VAL
35	BP	98	GLU
35	BP	100	LEU
35	BP	106	LEU
35	BP	112	LEU
35	BP	125	VAL
35	BP	144	GLU
35	BP	149	GLU
36	BQ	1	MET
36	BQ	5	ARG
36	BQ	7	MET
36	BQ	8	LYS
36	BQ	21	THR
36	BQ	45	GLN
36	BQ	55	VAL
36	BQ	56	ARG
36	BQ	60	ARG
36	BQ	63	LYS
36	BQ	75	THR
36	BQ	81	VAL
36	BQ	109	VAL
36	BQ	110	THR
36	BQ	129	THR
37	BR	1	MET
37	BR	6	SER
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

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Mol	Chain	Res	Type
37	BR	67	LEU
37	BR	75	LEU
37	BR	79	LEU
37	BR	86	ARG
37	BR	91	GLN
37	BR	100	LEU
37	BR	111	LEU
38	BS	3	ARG
38	BS	14	VAL
38	BS	20	ARG
38	BS	21	THR
38	BS	36	TYR
38	BS	43	GLU
38	BS	48	LEU
38	BS	50	SER
38	BS	57	LYS
38	BS	59	LYS
38	BS	61	ASN
38	BS	78	LEU
38	BS	98	VAL
38	BS	103	GLU
38	BS	110	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	85	LYS
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	59	ARG
40	BU	60	LEU
40	BU	74	LEU
40	BU	83	LEU

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Mol	Chain	Res	Type
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	21	ARG
41	BV	43	GLU
41	BV	46	VAL
41	BV	51	VAL
41	BV	52	VAL
41	BV	61	VAL
41	BV	62	LEU
41	BV	72	VAL
41	BV	79	VAL
41	BV	95	LEU
41	BV	100	ARG
42	BW	11	ARG
42	BW	17	VAL
42	BW	23	LEU
42	BW	51	LEU
42	BW	60	ASN
42	BW	63	ASP
42	BW	95	ILE
42	BW	96	ILE
42	BW	100	THR
42	BW	107	LEU
43	BX	52	VAL
43	BX	57	LEU
43	BX	66	LEU
43	BX	70	LEU
43	BX	76	ARG
43	BX	92	LEU
44	BY	2	ARG
44	BY	7	VAL
44	BY	43	ASN
44	BY	72	VAL
44	BY	90	LEU
44	BY	91	GLU
45	BZ	5	LEU

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Mol	Chain	Res	Type
45	BZ	6	LYS
45	BZ	11	GLU
45	BZ	19	ARG
45	BZ	31	ARG
45	BZ	33	LEU
45	BZ	37	VAL
45	BZ	41	LEU
45	BZ	42	VAL
45	BZ	61	LEU
45	BZ	76	LEU
45	BZ	82	ARG
45	BZ	86	VAL
45	BZ	91	LEU
45	BZ	107	THR
45	BZ	120	ILE
45	BZ	126	VAL
45	BZ	132	ASN
45	BZ	135	GLU
45	BZ	136	PHE
45	BZ	144	LEU
45	BZ	150	LEU
45	BZ	154	ASP
45	BZ	155	LEU
45	BZ	156	LYS
45	BZ	162	GLU
45	BZ	165	VAL
46	B0	7	LEU
46	B0	10	THR
46	B0	20	ARG
46	B0	49	LYS
47	B1	21	ARG
47	B1	35	THR
47	B1	40	ARG
47	B1	46	LEU
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	19	VAL
48	B2	28	LYS

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Mol	Chain	Res	Type
48	B2	30	ARG
48	B2	41	ILE
48	B2	45	SER
48	B2	52	ASP
48	B2	53	LEU
48	B2	55	ARG
48	B2	64	LEU
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	32	GLN
49	B3	55	ARG
49	B3	56	VAL
49	B3	58	VAL
50	B4	5	ILE
50	B4	28	LYS
50	B4	33	VAL
50	B4	34	GLU
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
50	B4	66	SER
50	B4	68	ARG
51	B5	6	VAL
51	B5	16	ARG
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	38	LYS
52	B6	47	THR

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Mol	Chain	Res	Type
52	B6	48	VAL
53	B7	1	MET
53	B7	9	ARG
53	B7	43	THR
53	B7	47	ARG
54	B8	14	VAL
54	B8	29	LYS
54	B8	32	LEU
54	B8	41	ILE
55	B9	3	VAL
55	B9	17	ILE
55	B9	26	ILE
2	CB	7	VAL
2	CB	11	LEU
2	CB	15	VAL
2	CB	23	ARG
2	CB	44	LEU
2	CB	56	ARG
2	CB	67	THR
2	CB	71	VAL
2	CB	80	ILE
2	CB	87	ARG
2	CB	90	MET
2	CB	94	ASN
2	CB	96	ARG
2	CB	108	ILE
2	CB	115	LEU
2	CB	121	LEU
2	CB	126	GLU
2	CB	128	GLU
2	CB	136	VAL
2	CB	140	HIS
2	CB	142	LEU
2	CB	144	ARG
2	CB	145	LEU
2	CB	153	ARG
2	CB	154	LEU
2	CB	155	LEU
2	CB	158	LEU
2	CB	164	VAL
2	CB	169	LYS
2	CB	178	ARG

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Mol	Chain	Res	Type
2	CB	179	LYS
2	CB	185	ILE
2	CB	187	LEU
2	CB	189	ASP
2	CB	192	SER
2	CB	200	ILE
2	CB	217	ARG
2	CB	221	LEU
2	CB	224	GLN
2	CB	226	ARG
2	CB	229	VAL
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	77	ILE
3	CC	82	GLU
3	CC	98	ASN
3	CC	101	LEU
3	CC	104	GLN
3	CC	115	LEU
3	CC	116	VAL
3	CC	118	GLN
3	CC	124	ILE
3	CC	131	ARG
3	CC	143	GLU
3	CC	152	ILE
3	CC	154	SER
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	19	LEU
4	CD	30	LYS
4	CD	31	CYS

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Mol	Chain	Res	Type
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	122	ARG
4	CD	126	ILE
4	CD	127	THR
4	CD	135	LEU
4	CD	140	VAL
4	CD	150	GLU
4	CD	155	LEU
4	CD	157	LEU
4	CD	170	VAL
4	CD	181	MET
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	12	LEU
5	CE	31	LEU
5	CE	40	ARG
5	CE	41	VAL
5	CE	47	LYS
5	CE	57	LYS
5	CE	71	LEU
5	CE	79	GLU
5	CE	82	VAL
5	CE	91	LEU
5	CE	111	GLU
6	CF	10	LEU
6	CF	23	LYS
6	CF	28	ARG
6	CF	41	GLU
6	CF	63	TYR
6	CF	69	GLU
7	CG	9	VAL
7	CG	12	LEU

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Mol	Chain	Res	Type
7	CG	13	GLN
7	CG	16	LEU
7	CG	27	ILE
7	CG	50	ILE
7	CG	51	GLN
7	CG	52	GLU
7	CG	58	PRO
7	CG	61	VAL
7	CG	66	VAL
7	CG	73	MET
7	CG	75	VAL
7	CG	85	TYR
7	CG	89	MET
7	CG	104	LEU
7	CG	113	GLU
7	CG	114	ARG
7	CG	131	LYS
7	CG	135	VAL
7	CG	140	ASP
7	CG	144	MET
7	CG	155	ARG
8	CH	2	LEU
8	CH	23	SER
8	CH	25	ASP
8	CH	33	GLU
8	CH	38	ILE
8	CH	45	ILE
8	CH	51	VAL
8	CH	53	VAL
8	CH	68	ARG
8	CH	78	GLN
8	CH	83	ILE
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	17	VAL

Continued on next page...

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Mol	Chain	Res	Type
9	CI	23	ASN
9	CI	27	THR
9	CI	58	HIS
9	CI	64	THR
9	CI	66	ARG
9	CI	75	ASP
9	CI	81	ILE
9	CI	86	VAL
9	CI	92	TYR
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	65	LEU
10	CJ	68	HIS
10	CJ	96	ILE
11	CK	70	LYS
11	CK	79	SER
11	CK	82	VAL
11	CK	84	VAL
11	CK	95	ILE
11	CK	96	ARG
11	CK	109	VAL
11	CK	114	VAL
11	CK	126	ARG
12	CL	6	THR
12	CL	33	ARG
12	CL	34	ARG
12	CL	52	LEU
12	CL	55	VAL
12	CL	60	LEU
12	CL	70	ILE
12	CL	83	VAL
12	CL	97	ARG
12	CL	123	LYS
12	CL	124	LYS
13	CM	3	ARG
13	CM	4	ILE
13	CM	8	GLU

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Mol	Chain	Res	Type
13	CM	19	LEU
13	CM	27	LYS
13	CM	47	ASP
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	18	VAL
14	CN	22	THR
14	CN	23	ARG
14	CN	33	VAL
14	CN	50	LYS
15	CO	3	ILE
15	CO	5	LYS
15	CO	7	GLU
15	CO	10	LYS
15	CO	22	THR
15	CO	24	SER
15	CO	26	GLU
15	CO	39	LEU
15	CO	41	GLU
15	CO	54	ARG
15	CO	76	GLU
15	CO	83	GLU
15	CO	84	LYS
16	CP	2	VAL
16	CP	5	ARG
16	CP	8	ARG
16	CP	20	VAL
16	CP	46	PRO
16	CP	60	LEU
16	CP	67	THR
16	CP	69	THR
17	CQ	6	LEU
17	CQ	9	VAL
17	CQ	53	LEU

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Mol	Chain	Res	Type
17	CQ	60	ILE
17	CQ	63	ARG
17	CQ	65	ILE
17	CQ	66	SER
17	CQ	74	LEU
17	CQ	83	ASP
17	CQ	91	ARG
18	CR	26	LEU
18	CR	32	ARG
18	CR	41	LYS
18	CR	42	ARG
18	CR	46	GLU
18	CR	54	ARG
18	CR	64	ARG
18	CR	76	LEU
19	CS	6	LYS
19	CS	12	ASP
19	CS	22	LEU
19	CS	28	LYS
19	CS	30	LEU
19	CS	33	THR
19	CS	37	ARG
19	CS	41	VAL
19	CS	43	GLU
19	CS	56	GLN
19	CS	63	THR
19	CS	65	ASN
19	CS	71	LEU
20	CT	24	LEU
20	CT	36	LEU
20	CT	38	LYS
20	CT	41	ILE
20	CT	45	GLN
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	15	ARG

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Mol	Chain	Res	Type
24	CW	2	VAL
27	DD	13	ARG
27	DD	32	SER
27	DD	54	ARG
27	DD	61	LEU
27	DD	94	LEU
27	DD	103	ARG
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	155	LEU
27	DD	165	ILE
27	DD	193	VAL
27	DD	211	ARG
27	DD	217	ARG
27	DD	221	VAL
27	DD	229	VAL
27	DD	257	LEU
27	DD	259	THR
27	DD	260	ARG
27	DD	274	ARG
27	DD	276	LYS
28	DE	1	MET
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	49	LEU
28	DE	52	LEU
28	DE	72	VAL
28	DE	73	GLU
28	DE	75	VAL
28	DE	78	LEU
28	DE	82	ARG
28	DE	111	ARG

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Mol	Chain	Res	Type
28	DE	116	VAL
28	DE	119	ARG
28	DE	134	ILE
28	DE	144	ARG
28	DE	154	LYS
28	DE	163	GLU
28	DE	175	VAL
28	DE	181	LEU
28	DE	188	VAL
29	DF	12	LEU
29	DF	13	SER
29	DF	20	LEU
29	DF	24	LEU
29	DF	33	LEU
29	DF	57	VAL
29	DF	74	ARG
29	DF	88	VAL
29	DF	106	ARG
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	200	GLU
29	DF	201	VAL
30	DG	5	VAL
30	DG	21	ARG
30	DG	28	VAL
30	DG	31	VAL
30	DG	35	GLU
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

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Mol	Chain	Res	Type
30	DG	128	ARG
30	DG	133	LEU
30	DG	136	ARG
30	DG	139	LEU
30	DG	140	ILE
30	DG	143	GLU
30	DG	145	THR
30	DG	148	MET
30	DG	159	VAL
30	DG	164	GLU
31	DH	3	ARG
31	DH	6	ARG
31	DH	15	VAL
31	DH	24	VAL
31	DH	42	ARG
31	DH	49	VAL
31	DH	63	SER
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	106	THR
31	DH	122	THR
31	DH	139	GLN
31	DH	171	LEU
31	DH	172	LYS
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	66	GLU
32	DI	68	LEU
32	DI	75	LEU
32	DI	77	LEU
32	DI	114	LEU

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Mol	Chain	Res	Type
32	DI	121	LYS
32	DI	122	GLU
32	DI	140	LEU
32	DI	142	VAL
32	DI	144	VAL
33	DN	5	VAL
33	DN	12	ARG
33	DN	14	VAL
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	61	ARG
33	DN	62	VAL
33	DN	68	GLU
33	DN	85	ILE
33	DN	87	LEU
33	DN	97	ARG
33	DN	99	LEU
33	DN	120	LEU
33	DN	133	GLN
33	DN	137	LYS
34	DO	8	LEU
34	DO	10	VAL
34	DO	23	ARG
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	92	GLU
34	DO	94	ARG
34	DO	98	VAL
34	DO	108	GLU
34	DO	113	LYS
35	DP	1	MET
35	DP	2	LYS
35	DP	21	ARG

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Mol	Chain	Res	Type
35	DP	29	LYS
35	DP	42	SER
35	DP	55	ARG
35	DP	58	THR
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	98	GLU
35	DP	100	LEU
35	DP	106	LEU
35	DP	112	LEU
35	DP	125	VAL
36	DQ	1	MET
36	DQ	7	MET
36	DQ	8	LYS
36	DQ	10	ARG
36	DQ	11	LYS
36	DQ	16	ARG
36	DQ	21	THR
36	DQ	45	GLN
36	DQ	55	VAL
36	DQ	56	ARG
36	DQ	75	THR
36	DQ	81	VAL
36	DQ	109	VAL
36	DQ	110	THR
36	DQ	112	GLU
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	51	LEU
37	DR	54	LEU
37	DR	57	ARG

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Mol	Chain	Res	Type
37	DR	60	LEU
37	DR	65	LEU
37	DR	75	LEU
37	DR	79	LEU
37	DR	100	LEU
37	DR	111	LEU
38	DS	3	ARG
38	DS	14	VAL
38	DS	20	ARG
38	DS	21	THR
38	DS	35	ILE
38	DS	36	TYR
38	DS	43	GLU
38	DS	48	LEU
38	DS	50	SER
38	DS	57	LYS
38	DS	58	LEU
38	DS	67	ARG
38	DS	68	GLN
38	DS	69	VAL
38	DS	75	GLU
38	DS	78	LEU
38	DS	83	LYS
38	DS	98	VAL
38	DS	103	GLU
38	DS	110	LEU
39	DT	6	LEU
39	DT	13	ARG
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
39	DT	119	LYS
40	DU	5	LYS
40	DU	59	ARG
40	DU	60	LEU

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Mol	Chain	Res	Type
40	DU	74	LEU
40	DU	83	LEU
40	DU	89	GLU
40	DU	92	ARG
40	DU	95	LEU
40	DU	100	VAL
40	DU	104	GLN
40	DU	108	GLU
41	DV	6	LYS
41	DV	10	LYS
41	DV	15	GLU
41	DV	18	LEU
41	DV	19	LYS
41	DV	21	ARG
41	DV	24	LYS
41	DV	46	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
41	DV	95	LEU
42	DW	4	LYS
42	DW	11	ARG
42	DW	17	VAL
42	DW	23	LEU
42	DW	27	LYS
42	DW	51	LEU
42	DW	60	ASN
42	DW	63	ASP
42	DW	95	ILE
42	DW	96	ILE
42	DW	100	THR
42	DW	107	LEU
43	DX	35	THR
43	DX	57	LEU
43	DX	70	LEU
43	DX	76	ARG
43	DX	92	LEU
44	DY	2	ARG
44	DY	11	ASP

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Mol	Chain	Res	Type
44	DY	49	VAL
44	DY	72	VAL
44	DY	91	GLU
45	DZ	5	LEU
45	DZ	11	GLU
45	DZ	19	ARG
45	DZ	31	ARG
45	DZ	33	LEU
45	DZ	40	ASP
45	DZ	41	LEU
45	DZ	42	VAL
45	DZ	61	LEU
45	DZ	72	ARG
45	DZ	76	LEU
45	DZ	86	VAL
45	DZ	91	LEU
45	DZ	107	THR
45	DZ	126	VAL
45	DZ	154	ASP
45	DZ	155	LEU
45	DZ	165	VAL
46	D0	7	LEU
46	D0	10	THR
46	D0	19	LYS
46	D0	20	ARG
46	D0	24	LYS
46	D0	49	LYS
47	D1	4	VAL
47	D1	21	ARG
47	D1	26	ARG
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
48	D2	19	VAL
48	D2	28	LYS
48	D2	30	ARG
48	D2	40	SER

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Mol	Chain	Res	Type
48	D2	45	SER
48	D2	53	LEU
48	D2	55	ARG
48	D2	70	GLN
49	D3	3	ARG
49	D3	6	VAL
49	D3	8	LEU
49	D3	23	LEU
49	D3	24	LYS
49	D3	30	ARG
49	D3	32	GLN
49	D3	44	ARG
49	D3	56	VAL
50	D4	5	ILE
50	D4	8	LYS
50	D4	14	ILE
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	40	LYS
51	D5	58	LEU
52	D6	6	ARG
52	D6	9	LEU
52	D6	38	LYS
52	D6	48	VAL
53	D7	1	MET
53	D7	4	THR
53	D7	9	ARG
53	D7	43	THR
53	D7	48	LYS
54	D8	14	VAL
54	D8	26	LYS
54	D8	29	LYS
54	D8	32	LEU
54	D8	41	ILE
55	D9	17	ILE

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Mol	Chain	Res	Type
55	D9	25	VAL
55	D9	26	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (154) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	40	HIS
2	AB	146	GLN
3	AC	6	HIS
3	AC	28	GLN
3	AC	37	GLN
3	AC	69	HIS
3	AC	104	GLN
3	AC	118	GLN
3	AC	136	GLN
3	AC	181	ASN
4	AD	45	GLN
4	AD	160	GLN
5	AE	56	GLN
5	AE	141	GLN
6	AF	57	GLN
6	AF	94	GLN
7	AG	28	ASN
7	AG	51	GLN
7	AG	56	GLN
7	AG	122	HIS
7	AG	148	ASN
9	AI	23	ASN
9	AI	31	GLN
9	AI	34	ASN
9	AI	73	GLN
9	AI	89	ASN
9	AI	124	GLN
10	AJ	13	HIS
10	AJ	21	GLN
10	AJ	56	HIS
11	AK	22	HIS
11	AK	62	GLN
11	AK	93	GLN
12	AL	78	GLN
12	AL	99	HIS
13	AM	92	HIS

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Mol	Chain	Res	Type
15	AO	28	GLN
15	AO	62	GLN
16	AP	13	HIS
17	AQ	16	GLN
17	AQ	26	GLN
19	AS	23	ASN
19	AS	47	HIS
19	AS	57	HIS
19	AS	65	ASN
19	AS	69	HIS
20	AT	9	ASN
20	AT	45	GLN
20	AT	90	GLN
27	BD	126	GLN
27	BD	253	GLN
28	BE	180	ASN
29	BF	69	HIS
29	BF	169	ASN
29	BF	203	GLN
30	BG	26	GLN
31	BH	158	HIS
32	BI	43	ASN
32	BI	104	GLN
32	BI	139	GLN
33	BN	94	HIS
33	BN	101	HIS
34	BO	89	ASN
35	BP	38	GLN
36	BQ	13	GLN
36	BQ	45	GLN
39	BT	123	GLN
43	BX	31	HIS
43	BX	82	GLN
44	BY	6	HIS
44	BY	43	ASN
45	BZ	32	HIS
45	BZ	151	HIS
46	B0	3	HIS
46	B0	40	GLN
47	B1	19	GLN
48	B2	38	GLN
48	B2	70	GLN

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Mol	Chain	Res	Type
49	B3	32	GLN
55	B9	36	GLN
2	CB	19	HIS
2	CB	40	HIS
2	CB	146	GLN
2	CB	212	GLN
2	CB	224	GLN
3	CC	6	HIS
3	CC	28	GLN
3	CC	104	GLN
3	CC	118	GLN
3	CC	136	GLN
4	CD	45	GLN
4	CD	77	ASN
4	CD	125	HIS
5	CE	78	HIS
5	CE	141	GLN
6	CF	73	ASN
6	CF	94	GLN
7	CG	28	ASN
7	CG	51	GLN
7	CG	56	GLN
7	CG	86	GLN
7	CG	106	GLN
8	CH	78	GLN
9	CI	31	GLN
9	CI	58	HIS
10	CJ	68	HIS
11	CK	22	HIS
11	CK	93	GLN
11	CK	117	ASN
12	CL	78	GLN
13	CM	77	ASN
15	CO	28	GLN
16	CP	16	HIS
19	CS	23	ASN
19	CS	57	HIS
19	CS	65	ASN
19	CS	69	HIS
20	CT	16	HIS
27	DD	87	ASN
27	DD	112	GLN

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Mol	Chain	Res	Type
27	DD	164	GLN
27	DD	253	GLN
28	DE	85	ASN
28	DE	180	ASN
29	DF	69	HIS
29	DF	75	HIS
29	DF	133	ASN
29	DF	169	ASN
29	DF	203	GLN
30	DG	40	ASN
32	DI	43	ASN
33	DN	101	HIS
35	DP	38	GLN
36	DQ	45	GLN
36	DQ	123	HIS
37	DR	13	HIS
37	DR	50	HIS
37	DR	71	GLN
38	DS	68	GLN
39	DT	84	GLN
39	DT	123	GLN
40	DU	81	HIS
41	DV	64	HIS
42	DW	62	HIS
43	DX	31	HIS
43	DX	82	GLN
44	DY	6	HIS
44	DY	43	ASN
45	DZ	50	GLN
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%)	395 (26%)	25 (1%)
1	CA	1502/1522 (98%)	389 (25%)	31 (2%)
22	AV	4/24 (16%)	1 (25%)	0

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
22	CV	4/24 (16%)	1 (25%)	0
23	AX	75/77 (97%)	16 (21%)	0
23	CX	75/77 (97%)	16 (21%)	0
25	BA	2722/2915 (93%)	516 (18%)	40 (1%)
25	DA	2704/2915 (92%)	540 (19%)	37 (1%)
26	BB	119/122 (97%)	18 (15%)	0
26	DB	119/122 (97%)	24 (20%)	1 (0%)
All	All	8819/9320 (94%)	1916 (21%)	134 (1%)

All (1916) RNA backbone outliers are listed below:

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

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Mol	Chain	Res	Type
1	AA	141	A
1	AA	142	G
1	AA	143	A
1	AA	144	G
1	AA	148	G
1	AA	149	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(D)	C
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	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	301	G
1	AA	321	A
1	AA	328	C
1	AA	332	G

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Mol	Chain	Res	Type
1	AA	342	C
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	383	A
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	409	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	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

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Mol	Chain	Res	Type
1	AA	505	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
1	AA	533	A
1	AA	536	C
1	AA	544	G
1	AA	547	A
1	AA	553	A
1	AA	559	A
1	AA	561	U
1	AA	571	U
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	592	G
1	AA	596	C
1	AA	597	G
1	AA	606	G
1	AA	626	U
1	AA	630	G
1	AA	631	G
1	AA	633	G
1	AA	639	G
1	AA	641	U
1	AA	649	G
1	AA	650	G
1	AA	651	C
1	AA	653	A
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	704	A

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Mol	Chain	Res	Type
1	AA	711	G
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	749	C
1	AA	752	G
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	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	836	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	876	G
1	AA	902	G
1	AA	913	A
1	AA	914	A
1	AA	916	G
1	AA	922	G

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Mol	Chain	Res	Type
1	AA	926	G
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	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	1009	G
1	AA	1011	G
1	AA	1013	G
1	AA	1014	A
1	AA	1019	C
1	AA	1020	U
1	AA	1022	G
1	AA	1024	G
1	AA	1025	U
1	AA	1026	G

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Mol	Chain	Res	Type
1	AA	1027	C
1	AA	1028	C
1	AA	1029	C
1	AA	1030	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	1070	U
1	AA	1076	C
1	AA	1081	G
1	AA	1087	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	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1128	C
1	AA	1130	A
1	AA	1132	C
1	AA	1134	G

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Mol	Chain	Res	Type
1	AA	1135	U
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
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	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
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1259	C

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Mol	Chain	Res	Type
1	AA	1260	C
1	AA	1262	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	1282	C
1	AA	1283	G
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	1338	G
1	AA	1340	A
1	AA	1343	G
1	AA	1346	A
1	AA	1347	G
1	AA	1353	G
1	AA	1354	C
1	AA	1358	U
1	AA	1360	A
1	AA	1361	G
1	AA	1363	C
1	AA	1370	G
1	AA	1377	A
1	AA	1379	G
1	AA	1393	U

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Mol	Chain	Res	Type
1	AA	1396	A
1	AA	1397	C
1	AA	1402	C
1	AA	1419	G
1	AA	1422	G
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
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	1487	G
1	AA	1489	G
1	AA	1493	A
1	AA	1494	G
1	AA	1497	G
1	AA	1502	A
1	AA	1503	A
1	AA	1504	G
1	AA	1506	U
1	AA	1517	G
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	19	G
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	60	U
23	AX	61	C

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Mol	Chain	Res	Type
23	AX	67	C
23	AX	68	C
23	AX	70	G
23	AX	76	A
25	BA	9	U
25	BA	11	G
25	BA	12	U
25	BA	14	A
25	BA	34	C
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	99	G
25	BA	100	G
25	BA	116	A
25	BA	118	U
25	BA	120	G
25	BA	125	A
25	BA	155	C
25	BA	161	C
25	BA	185	A
25	BA	186	A
25	BA	187	C
25	BA	188	A
25	BA	194	G
25	BA	203	G
25	BA	204	G
25	BA	205	A
25	BA	206	G
25	BA	210	A
25	BA	211	A
25	BA	217	A
25	BA	218	A
25	BA	222	A

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Mol	Chain	Res	Type
25	BA	237	G
25	BA	250	G
25	BA	263	C
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	288	U
25	BA	289	G
25	BA	294	C
25	BA	296	U
25	BA	303	C
25	BA	306	A
25	BA	307	A
25	BA	332	G
25	BA	335	A
25	BA	353	G
25	BA	354	A
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	432	U
25	BA	434	G
25	BA	438	G
25	BA	439	A
25	BA	448	U
25	BA	455	A
25	BA	469	A
25	BA	470	C
25	BA	474	U
25	BA	478	G
25	BA	482	C

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Mol	Chain	Res	Type
25	BA	483	A
25	BA	496	A
25	BA	505	A
25	BA	506	A
25	BA	507	G
25	BA	508	A
25	BA	515	G
25	BA	519	G
25	BA	522	A
25	BA	526	A
25	BA	529	U
25	BA	530	A
25	BA	534	C
25	BA	543	G
25	BA	549	U
25	BA	554	A
25	BA	555	G
25	BA	556	C
25	BA	557	A
25	BA	558	G
25	BA	569	G
25	BA	573	G
25	BA	586	G
25	BA	596	G
25	BA	598	A
25	BA	609	A
25	BA	610	C
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	659	C
25	BA	662	A
25	BA	670	C
25	BA	671	A
25	BA	692	C
25	BA	693	G

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Mol	Chain	Res	Type
25	BA	697	C
25	BA	698	G
25	BA	701	A
25	BA	712	C
25	BA	716	G
25	BA	717	A
25	BA	724	A
25	BA	733	G
25	BA	745	C
25	BA	749	G
25	BA	764	G
25	BA	777	C
25	BA	811	A
25	BA	822	G
25	BA	823	G
25	BA	826	U
25	BA	829	A
25	BA	831	A
25	BA	832	G
25	BA	839	G
25	BA	852	G
25	BA	858	U
25	BA	859	C
25	BA	866	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	938	G
25	BA	940	C

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Mol	Chain	Res	Type
25	BA	942	A
25	BA	944	C
25	BA	945	A
25	BA	946	A
25	BA	956	A
25	BA	965	G
25	BA	977	G
25	BA	983	G
25	BA	986	A
25	BA	989	G
25	BA	990	A
25	BA	991	G
25	BA	998	A
25	BA	1003	U
25	BA	1004	A
25	BA	1006	C
25	BA	1015	C
25	BA	1019	G
25	BA	1020	C
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	1067	A
25	BA	1068	G
25	BA	1069	U
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	1153	G
25	BA	1154	U

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Mol	Chain	Res	Type
25	BA	1156	G
25	BA	1158	G
25	BA	1168	G
25	BA	1174	A
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	1188	A
25	BA	1189	A
25	BA	1195	G
25	BA	1202	A
25	BA	1210	G
25	BA	1216	G
25	BA	1217	G
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	1229	G
25	BA	1255	A
25	BA	1256	U
25	BA	1263	C
25	BA	1266	C
25	BA	1296	G
25	BA	1298	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	1346	U
25	BA	1347	A
25	BA	1359	U

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Mol	Chain	Res	Type
25	BA	1360	C
25	BA	1367	A
25	BA	1384	G
25	BA	1398	U
25	BA	1405	A
25	BA	1406	A
25	BA	1411	A
25	BA	1416	C
25	BA	1417	G
25	BA	1418	U
25	BA	1425	A
25	BA	1426	G
25	BA	1430	A
25	BA	1431	G
25	BA	1432	C
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	1487	G
25	BA	1491	A
25	BA	1496	A
25	BA	1507	A
25	BA	1514	C
25	BA	1518	A
25	BA	1519	A
25	BA	1525	G
25	BA	1529	G
25	BA	1536	A
25	BA	1539	C
25	BA	1554	A
25	BA	1555	C
25	BA	1556	A
25	BA	1569	U
25	BA	1574	A
25	BA	1578	C
25	BA	1579	C
25	BA	1589	A
25	BA	1590	C
25	BA	1592	A

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Mol	Chain	Res	Type
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	1654	A
25	BA	1655	A
25	BA	1656	A
25	BA	1660	A
25	BA	1686	U
25	BA	1694	G
25	BA	1695	C
25	BA	1696	G
25	BA	1700	G
25	BA	1701	A
25	BA	1711	A
25	BA	1721	G
25	BA	1722	C
25	BA	1735	U
25	BA	1742	G
25	BA	1743	G
25	BA	1747	A
25	BA	1748	A
25	BA	1766	G
25	BA	1767	A
25	BA	1768	U
25	BA	1769	G
25	BA	1776	G
25	BA	1777	G
25	BA	1779	G
25	BA	1787	G
25	BA	1791	A
25	BA	1793	A
25	BA	1794	G
25	BA	1795	G
25	BA	1804	A
25	BA	1811	A
25	BA	1813	C
25	BA	1822	A
25	BA	1831	C

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Mol	Chain	Res	Type
25	BA	1832	G
25	BA	1843	A
25	BA	1847	G
25	BA	1860	A
25	BA	1870	G
25	BA	1878	A
25	BA	1879	A
25	BA	1899	A
25	BA	1900	G
25	BA	1911	A
25	BA	1922	A
25	BA	1928	G
25	BA	1935	A
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	1958	A
25	BA	1960	A
25	BA	1963	C
25	BA	1977	U
25	BA	1985	U
25	BA	1987	C
25	BA	1989	C
25	BA	1992	A
25	BA	1993	A
25	BA	1994	A
25	BA	2014	G
25	BA	2015	U
25	BA	2019	G
25	BA	2042	A
25	BA	2045	G
25	BA	2053	A
25	BA	2054	G
25	BA	2055	A
25	BA	2065	C
25	BA	2071	G
25	BA	2074	G
25	BA	2077	C
25	BA	2078	G

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Mol	Chain	Res	Type
25	BA	2082	A
25	BA	2083	G
25	BA	2084	A
25	BA	2091	G
25	BA	2115	G
25	BA	2121	U
25	BA	2122	G
25	BA	2212	G
25	BA	2214	G
25	BA	2217	C
25	BA	2220	A
25	BA	2227	G
25	BA	2228	G
25	BA	2229	A
25	BA	2230	U
25	BA	2237	A
25	BA	2246	G
25	BA	2250	G
25	BA	2251	G
25	BA	2260	C
25	BA	2264	G
25	BA	2280	A
25	BA	2281	A
25	BA	2285	A
25	BA	2287	C
25	BA	2295	C
25	BA	2299	A
25	BA	2301	G
25	BA	2306	C
25	BA	2308	U
25	BA	2317	A
25	BA	2320	G
25	BA	2326	C
25	BA	2332	A
25	BA	2337	G
25	BA	2339	A
25	BA	2346	G
25	BA	2347	A
25	BA	2348	A
25	BA	2353	G
25	BA	2355	C
25	BA	2359	C

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Mol	Chain	Res	Type
25	BA	2362	C
25	BA	2366	G
25	BA	2373	A
25	BA	2384	G
25	BA	2388	A
25	BA	2391	G
25	BA	2395	G
25	BA	2397	C
25	BA	2401	G
25	BA	2412	G
25	BA	2418	U
25	BA	2419	G
25	BA	2422	G
25	BA	2430	A
25	BA	2434	A
25	BA	2435	U
25	BA	2436	C
25	BA	2437	A
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	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	2578	A

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Mol	Chain	Res	Type
25	BA	2579	G
25	BA	2594	G
25	BA	2614	A
25	BA	2615	G
25	BA	2621	U
25	BA	2622	C
25	BA	2623	U
25	BA	2624	C
25	BA	2632	C
25	BA	2641	A
25	BA	2642	G
25	BA	2653	G
25	BA	2666	A
25	BA	2674	A
25	BA	2690	C
25	BA	2691	A
25	BA	2701	U
25	BA	2702	C
25	BA	2703	C
25	BA	2714	U
25	BA	2715	C
25	BA	2719	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	2788	A
25	BA	2791	A
25	BA	2803	A
25	BA	2804	C
25	BA	2807	C
25	BA	2813	G
25	BA	2816	G
25	BA	2828	G

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Mol	Chain	Res	Type
25	BA	2830	A
25	BA	2831	A
25	BA	2843	G
25	BA	2845	A
25	BA	2849	G
25	BA	2876	U
25	BA	2882	G
25	BA	2883	A
25	BA	2884	C
25	BA	2890	C
25	BA	2893	A
25	BA	2899	C
25	BA	2901	A
25	BA	2902	G
25	BA	2903	G
25	BA	2906	U
26	BB	2	C
26	BB	7	G
26	BB	12	C
26	BB	13	A
26	BB	34	U
26	BB	42	C
26	BB	56	G
26	BB	59	A
26	BB	73	A
26	BB	75	G
26	BB	85	G
26	BB	88	C
26	BB	89	G
26	BB	93	G
26	BB	106	G
26	BB	110	G
26	BB	112	U
26	BB	119	G
1	CA	7	G
1	CA	9	G
1	CA	15	G
1	CA	22	G
1	CA	32	A
1	CA	39	G
1	CA	44	G
1	CA	47	C

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Mol	Chain	Res	Type
1	CA	48	C
1	CA	50	A
1	CA	51	A
1	CA	59	A
1	CA	63	C
1	CA	65	U
1	CA	66	G
1	CA	69	G
1	CA	77	G
1	CA	78	G
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	98	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	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	190	U
1	CA	193	C
1	CA	194	C

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Mol	Chain	Res	Type
1	CA	195	A
1	CA	197	A
1	CA	199	G
1	CA	201	C
1	CA	203	U
1	CA	204	U
1	CA	216	G
1	CA	220	G
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	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	383	A
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	409	G
1	CA	411	A

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Mol	Chain	Res	Type
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	415	A
1	CA	422	C
1	CA	424	G
1	CA	427	U
1	CA	429	U
1	CA	430	A
1	CA	439	A
1	CA	442	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	505	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	544	G
1	CA	547	A
1	CA	553	A
1	CA	559	A
1	CA	561	U
1	CA	571	U
1	CA	572	A
1	CA	573	A
1	CA	576	G
1	CA	592	G

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Mol	Chain	Res	Type
1	CA	596	C
1	CA	597	G
1	CA	600	C
1	CA	606	G
1	CA	626	U
1	CA	630	G
1	CA	631	G
1	CA	633	G
1	CA	639	G
1	CA	641	U
1	CA	650	G
1	CA	651	C
1	CA	653	A
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	755	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
1	CA	802	A
1	CA	806	C
1	CA	812	C
1	CA	815	A
1	CA	816	A
1	CA	817	C
1	CA	818	G
1	CA	821	G
1	CA	827	U

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Mol	Chain	Res	Type
1	CA	828	A
1	CA	829	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	873	A
1	CA	876	G
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
1	CA	975	A
1	CA	976	G
1	CA	977	A
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	1001	A
1	CA	1001(A)	G

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Mol	Chain	Res	Type
1	CA	1002	G
1	CA	1003	G
1	CA	1004	A
1	CA	1005	A
1	CA	1006	C
1	CA	1007	C
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	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
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

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Mol	Chain	Res	Type
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
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	1171	G
1	CA	1173	G
1	CA	1176	A
1	CA	1181	G
1	CA	1183	A
1	CA	1184	G

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Mol	Chain	Res	Type
1	CA	1189	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	1214	C
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	1250	A
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G
1	CA	1259	C
1	CA	1260	C
1	CA	1262	C
1	CA	1270	C
1	CA	1271	G
1	CA	1273	G
1	CA	1278	U
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

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Mol	Chain	Res	Type
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
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	1393	U
1	CA	1396	A
1	CA	1397	C
1	CA	1402	C
1	CA	1419	G
1	CA	1422	G
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1447	A
1	CA	1456	G
1	CA	1457	G
1	CA	1469	G
1	CA	1487	G
1	CA	1489	G
1	CA	1493	A
1	CA	1497	G
1	CA	1502	A
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

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Mol	Chain	Res	Type
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	19	G
23	CX	20	U
23	CX	21	A
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	68	C
23	CX	70	G
23	CX	76	A
25	DA	8	A
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	61	G
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

Continued on next page...

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Mol	Chain	Res	Type
25	DA	119	A
25	DA	120	U
25	DA	125	G
25	DA	133	C
25	DA	141	A
25	DA	149	A
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
25	DA	196	A
25	DA	199	A
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(E)	U
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(T)	C
25	DA	272(A)	U
25	DA	272(B)	G
25	DA	277	C
25	DA	278	A
25	DA	292	C

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Mol	Chain	Res	Type
25	DA	304	G
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
25	DA	351	G
25	DA	352	G
25	DA	363	G
25	DA	363(C)	G
25	DA	386	G
25	DA	396	G
25	DA	399	G
25	DA	405	U
25	DA	407	G
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	454	A
25	DA	455	C
25	DA	456	C
25	DA	457	A
25	DA	470	A
25	DA	480	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

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Mol	Chain	Res	Type
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	587	C
25	DA	592	G
25	DA	603	A
25	DA	604	G
25	DA	606	U
25	DA	607	U
25	DA	610	G
25	DA	614(B)	G
25	DA	614(C)	A
25	DA	615	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	669	G
25	DA	670	A
25	DA	685	A
25	DA	686	G
25	DA	717	G
25	DA	726	G
25	DA	730	C
25	DA	747	U
25	DA	749	C
25	DA	752	A
25	DA	753	C
25	DA	765	G

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Mol	Chain	Res	Type
25	DA	771	G
25	DA	775	G
25	DA	776	G
25	DA	782	A
25	DA	784	A
25	DA	785	G
25	DA	790	C
25	DA	792	G
25	DA	805	G
25	DA	812	C
25	DA	819	A
25	DA	827	U
25	DA	828	U
25	DA	854	G
25	DA	857	C
25	DA	859	G
25	DA	866	A
25	DA	867	C
25	DA	869	G
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	910	A
25	DA	911	A
25	DA	913	U
25	DA	914	C
25	DA	917	A

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Mol	Chain	Res	Type
25	DA	923	C
25	DA	926	A
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	957	A
25	DA	958	U
25	DA	959	A
25	DA	961	C
25	DA	974	G
25	DA	975	C
25	DA	983	A
25	DA	996	A
25	DA	1010	A
25	DA	1012	U
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	1118	C
25	DA	1119	C
25	DA	1130	U
25	DA	1135	C
25	DA	1136	G
25	DA	1139	G
25	DA	1142(A)	A
25	DA	1155	A
25	DA	1170	G

Continued on next page...

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Mol	Chain	Res	Type
25	DA	1171	G
25	DA	1186	G
25	DA	1204	A
25	DA	1205	U
25	DA	1210	A
25	DA	1211	U
25	DA	1219	G
25	DA	1220	A
25	DA	1230	C
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
25	DA	1287	A
25	DA	1300	U
25	DA	1301	A
25	DA	1313	U
25	DA	1314	C
25	DA	1315	C
25	DA	1321	A
25	DA	1332	G
25	DA	1345	C
25	DA	1359	A
25	DA	1360	A
25	DA	1365	A
25	DA	1366	A
25	DA	1368	G
25	DA	1370	C
25	DA	1380	G
25	DA	1384	A
25	DA	1385	G
25	DA	1386	C
25	DA	1395	A
25	DA	1403	C
25	DA	1410	G
25	DA	1411	C
25	DA	1416	G
25	DA	1417	C
25	DA	1419	A

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Mol	Chain	Res	Type
25	DA	1420	U
25	DA	1421	G
25	DA	1427	A
25	DA	1428	C
25	DA	1437	C
25	DA	1445	A
25	DA	1445(A)	C
25	DA	1449	A
25	DA	1450	G
25	DA	1455	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	1492	G
25	DA	1493	C
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	1531	C
25	DA	1541	G
25	DA	1542	A
25	DA	1543	C
25	DA	1544	A
25	DA	1547	C
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	1588	C
25	DA	1595	G
25	DA	1598	C

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Mol	Chain	Res	Type
25	DA	1603	A
25	DA	1608	A
25	DA	1609	A
25	DA	1610	A
25	DA	1613	G
25	DA	1618	A
25	DA	1625	C
25	DA	1631(A)	A
25	DA	1632	A
25	DA	1640	C
25	DA	1648	C
25	DA	1654	A
25	DA	1674	G
25	DA	1676	A
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
25	DA	1740	G
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	1786	A
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	1829	A
25	DA	1835	G
25	DA	1836	C
25	DA	1847	A

Continued on next page...

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Mol	Chain	Res	Type
25	DA	1848	A
25	DA	1860	G
25	DA	1877	A
25	DA	1878	G
25	DA	1881	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	1938	A
25	DA	1955	U
25	DA	1960	A
25	DA	1963	U
25	DA	1966	A
25	DA	1967	C
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	2049	G
25	DA	2055	C
25	DA	2056	G
25	DA	2060	A
25	DA	2061	G
25	DA	2062	A

Continued on next page...

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Mol	Chain	Res	Type
25	DA	2069	G
25	DA	2076	U
25	DA	2082	A
25	DA	2093	G
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
25	DA	2239	G
25	DA	2243	U
25	DA	2251	G
25	DA	2267	A
25	DA	2268	A
25	DA	2269	A
25	DA	2275	C
25	DA	2278	A
25	DA	2279	G
25	DA	2283	C
25	DA	2286	A
25	DA	2287	A
25	DA	2289	G
25	DA	2291	U
25	DA	2298	A
25	DA	2303	G
25	DA	2305	A
25	DA	2308	G
25	DA	2312	U
25	DA	2318	G
25	DA	2319	G
25	DA	2320	A
25	DA	2321	G

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Mol	Chain	Res	Type
25	DA	2325	G
25	DA	2327	A
25	DA	2334	G
25	DA	2335	A
25	DA	2336	A
25	DA	2343	C
25	DA	2347	C
25	DA	2348	U
25	DA	2359	C
25	DA	2376	A
25	DA	2383	G
25	DA	2384	G
25	DA	2385	C
25	DA	2388	A
25	DA	2391	G
25	DA	2401	U
25	DA	2402	C
25	DA	2406	U
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
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	2465	C
25	DA	2468	G
25	DA	2469	A
25	DA	2474	C
25	DA	2476	A
25	DA	2487	G
25	DA	2492	U
25	DA	2497	A
25	DA	2502	G
25	DA	2505	G
25	DA	2518	A

Continued on next page...

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Mol	Chain	Res	Type
25	DA	2520	C
25	DA	2525	G
25	DA	2529	G
25	DA	2549	G
25	DA	2554	U
25	DA	2566	A
25	DA	2567	G
25	DA	2586	C
25	DA	2602	A
25	DA	2609	U
25	DA	2611	U
25	DA	2612	C
25	DA	2615	U
25	DA	2629	A
25	DA	2630	G
25	DA	2632	A
25	DA	2654	A
25	DA	2663	G
25	DA	2689	U
25	DA	2690	C
25	DA	2691	C
25	DA	2703	C
25	DA	2712(A)	A
25	DA	2713	A
25	DA	2717	G
25	DA	2726	U
25	DA	2733	A
25	DA	2751	G
25	DA	2752	C
25	DA	2757	A
25	DA	2758	A
25	DA	2761	G
25	DA	2764	A
25	DA	2765	A
25	DA	2766	G
25	DA	2778	A
25	DA	2779	U
25	DA	2780	G
25	DA	2789	C
25	DA	2793	G
25	DA	2802	G
25	DA	2803	C

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Mol	Chain	Res	Type
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	2872	G
25	DA	2879	C
25	DA	2880	C
25	DA	2892	A
25	DA	2893	G
25	DA	2894	G
25	DA	2895	U
25	DA	2897	U
26	DB	2	C
26	DB	7	G
26	DB	8	U
26	DB	12	C
26	DB	13	A
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
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	112	U
26	DB	116	G
26	DB	119	G

All (134) RNA pucker outliers are listed below:

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Mol	Chain	Res	Type
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Mol	Chain	Res	Type
1	AA	97	G
1	AA	115	G
1	AA	148	G
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	1299	A
1	AA	1442	G
25	BA	70	A
25	BA	99	G
25	BA	184	A
25	BA	185	A
25	BA	273	G
25	BA	302	A
25	BA	553	A
25	BA	716	G
25	BA	732	A
25	BA	793	A
25	BA	811	A
25	BA	821	A
25	BA	874	U
25	BA	945	A
25	BA	990	A
25	BA	1003	U

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Mol	Chain	Res	Type
25	BA	1019	G
25	BA	1219	A
25	BA	1220	U
25	BA	1221	G
25	BA	1255	A
25	BA	1425	A
25	BA	1466	U
25	BA	1507	A
25	BA	1577	C
25	BA	1654	A
25	BA	1655	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	2623	U
25	BA	2701	U
25	BA	2763	A
25	BA	2769	U
25	BA	2902	G
1	CA	4	U
1	CA	5	U
1	CA	65	U
1	CA	97	G
1	CA	115	G
1	CA	204	U
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	1027	C

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Mol	Chain	Res	Type
1	CA	1054	C
1	CA	1064	G
1	CA	1065	U
1	CA	1067	A
1	CA	1128	C
1	CA	1137	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	249	C
25	DA	271(M)	G
25	DA	277	C
25	DA	310	A
25	DA	503	A
25	DA	528	A
25	DA	620	G
25	DA	669	G
25	DA	685	A
25	DA	752	A
25	DA	827	U
25	DA	856	C
25	DA	900	A
25	DA	1026	U
25	DA	1210	A
25	DA	1378	A
25	DA	1379	A
25	DA	1395	A
25	DA	1420	U
25	DA	1427	A
25	DA	1530	C
25	DA	1543	C
25	DA	1558	A
25	DA	1559	G
25	DA	1608	A
25	DA	1653	G
25	DA	1790	C
25	DA	1992	G

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Mol	Chain	Res	Type
25	DA	2318	G
25	DA	2335	A
25	DA	2406	U
25	DA	2439	A
25	DA	2611	U
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 ⓘ

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	0.98	1 (16%)	6,8,10	1.63	2 (33%)
24	MVA	AW	9	24	6,7,8	0.45	0	6,8,10	1.08	1 (16%)
24	MVA	AW	5	24	6,7,8	0.38	0	6,8,10	0.96	0
24	2R3	AW	8	24	12,14,15	0.82	0	16,18,20	1.74	5 (31%)
24	2R3	CW	8	24	12,14,15	0.68	0	16,18,20	1.65	4 (25%)
24	004	AW	3	24	9,10,11	1.11	1 (11%)	9,12,14	1.54	3 (33%)
24	2QY	CW	10	24	12,13,14	2.05	2 (16%)	14,16,18	3.33	3 (21%)
24	2QZ	CW	1	24	7,8,9	0.63	0	7,10,12	3.86	1 (14%)
24	MVA	CW	5	24	6,7,8	0.70	0	6,8,10	1.55	1 (16%)
24	2QZ	AW	1	24	7,8,9	0.40	0	7,10,12	4.39	1 (14%)
24	2R1	AW	6	24	10,10,11	2.21	3 (30%)	8,13,15	4.70	3 (37%)
24	2R1	CW	6	24	10,10,11	1.94	2 (20%)	8,13,15	3.97	3 (37%)
24	004	CW	3	24	9,10,11	1.34	2 (22%)	9,12,14	1.05	0
24	2QY	AW	10	24	12,13,14	1.82	2 (16%)	14,16,18	3.99	5 (35%)

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	MVA	AW	9	24	-	4/6/8/10	-
24	MVA	AW	5	24	-	3/6/8/10	-
24	2R3	AW	8	24	-	4/11/12/14	0/1/1/1
24	2R3	CW	8	24	-	7/11/12/14	0/1/1/1
24	004	AW	3	24	-	0/4/6/8	0/1/1/1
24	2QY	CW	10	24	-	2/5/8/10	0/1/1/1
24	2QZ	CW	1	24	-	1/8/10/12	-
24	MVA	CW	5	24	-	5/6/8/10	-
24	2QZ	AW	1	24	-	3/8/10/12	-
24	2R1	AW	6	24	-	1/2/14/16	0/1/1/1
24	2R1	CW	6	24	-	0/2/14/16	0/1/1/1
24	004	CW	3	24	-	0/4/6/8	0/1/1/1
24	2QY	AW	10	24	-	3/5/8/10	0/1/1/1

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	CW	10	2QY	C-CA	5.98	1.53	1.43
24	AW	10	2QY	C-CA	5.42	1.52	1.43
24	AW	6	2R1	OD1-CG1	4.56	1.55	1.42
24	CW	6	2R1	CA-N	4.04	1.46	1.36
24	AW	6	2R1	CA-N	3.71	1.45	1.36
24	CW	10	2QY	CG-CB	3.33	1.53	1.46
24	CW	6	2R1	C-CA	3.28	1.50	1.45
24	CW	3	004	CB-CA	-3.24	1.49	1.52
24	AW	3	004	CA-C	2.58	1.55	1.51
24	CW	9	MVA	CB-CA	2.28	1.58	1.54
24	CW	3	004	CA-C	2.10	1.54	1.51
24	AW	10	2QY	CG-CB	2.08	1.50	1.46
24	AW	6	2R1	C-CA	2.08	1.48	1.45

All (32) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	AW	6	2R1	OD2-CG2-CB	-12.41	88.98	111.99
24	AW	1	2QZ	OG1-CB-CG2	11.13	142.97	109.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	AW	10	2QY	CN-N-CA	-10.64	107.83	123.98
24	CW	6	2R1	OD2-CG2-CB	-9.99	93.46	111.99
24	CW	10	2QY	CN-N-CA	-9.73	109.22	123.98
24	CW	1	2QZ	OG1-CB-CG2	9.69	138.68	109.68
24	AW	10	2QY	CB-CA-N	6.52	132.28	121.98
24	AW	10	2QY	O-C-CA	-5.73	118.21	125.39
24	CW	10	2QY	CB-CA-N	5.54	130.73	121.98
24	CW	10	2QY	O-C-CA	-4.93	119.21	125.39
24	AW	10	2QY	CG-CB-CA	-4.65	123.86	130.72
24	CW	6	2R1	C-CA-N	3.72	124.67	116.15
24	AW	6	2R1	O-C-CA	-3.40	119.16	125.53
24	AW	8	2R3	OB-CB-CA	3.18	114.47	107.49
24	CW	6	2R1	O-C-CA	-3.15	119.62	125.53
24	CW	8	2R3	CO-OH-CZ	-3.13	110.78	117.50
24	AW	8	2R3	CE2-CD2-CG	3.05	124.22	121.18
24	CW	5	MVA	CB-CA-N	2.95	115.01	111.17
24	CW	8	2R3	CD2-CE2-CZ	-2.89	116.43	119.73
24	AW	3	004	CB-CA-C	2.64	119.50	112.09
24	CW	8	2R3	CE2-CD2-CG	2.53	123.71	121.18
24	AW	8	2R3	CD2-CE2-CZ	-2.43	116.95	119.73
24	AW	8	2R3	CD1-CE1-CZ	2.37	122.43	119.73
24	CW	8	2R3	O-C-CA	-2.32	118.81	124.77
24	AW	8	2R3	CO-OH-CZ	-2.28	112.62	117.50
24	AW	9	MVA	O-C-CA	-2.26	118.89	124.86
24	AW	10	2QY	CD1-CG-CD2	2.23	120.96	117.65
24	AW	6	2R1	CG1-CB-CA	2.15	125.12	119.74
24	AW	3	004	CG1-CB-CA	-2.12	117.35	120.64
24	AW	3	004	CG2-CB-CA	2.11	123.92	120.64
24	CW	9	MVA	CB-CA-N	2.10	113.91	111.17
24	CW	9	MVA	CG2-CB-CA	2.02	114.26	111.18

There are no chirality outliers.

All (38) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	AW	1	2QZ	N-CA-CB-OG1
24	AW	1	2QZ	C-CA-CB-OG1
24	AW	5	MVA	CB-CA-N-CN
24	AW	5	MVA	C-CA-CB-CG1
24	AW	5	MVA	C-CA-CB-CG2
24	AW	8	2R3	N-CA-CB-OB
24	AW	8	2R3	N-CA-CB-CG

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

There are no ring outliers.

13 monomers are involved in 23 short contacts:

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

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	CW	1	2QZ	2	0
24	CW	5	MVA	2	0
24	AW	1	2QZ	2	0
24	AW	6	2R1	1	0
24	CW	6	2R1	1	0
24	CW	3	004	1	0
24	AW	10	2QY	5	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	$\# Z > 2$
59	FME	CX	101	23	8,9,10	0.99	0	8,9,11	1.45	3 (37%)
59	FME	AX	101	23	8,9,10	0.87	0	8,9,11	1.63	2 (25%)
57	SF4	CD	501	4	0,12,12	-	-	-		
57	SF4	AD	501	4	0,12,12	-	-	-		

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
59	FME	CX	101	23	-	3/7/9/11	-
59	FME	AX	101	23	-	3/7/9/11	-
57	SF4	CD	501	4	-	-	0/6/5/5
57	SF4	AD	501	4	-	-	0/6/5/5

There are no bond length outliers.

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	AX	101	FME	CA-N-CN	-2.85	118.44	122.82
59	AX	101	FME	CB-CA-N	2.41	114.90	110.52
59	CX	101	FME	CA-N-CN	-2.17	119.49	122.82
59	CX	101	FME	CB-CA-N	2.17	114.47	110.52
59	CX	101	FME	C-CA-N	2.08	113.52	109.50

There are no chirality outliers.

All (6) torsion outliers are listed below:

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

There are no ring outliers.

3 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
59	CX	101	FME	2	0
57	CD	501	SF4	1	0
57	AD	501	SF4	1	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th 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%)	-0.09	21 (1%) 73 53	36, 80, 103, 123	0
1	CA	1503/1522 (98%)	-0.05	20 (1%) 75 56	38, 80, 103, 122	0
2	AB	231/256 (90%)	0.38	8 (3%) 47 27	71, 88, 98, 107	0
2	CB	231/256 (90%)	0.49	4 (1%) 69 48	71, 89, 99, 108	0
3	AC	206/239 (86%)	0.34	5 (2%) 59 38	74, 87, 96, 108	0
3	CC	206/239 (86%)	0.56	7 (3%) 48 28	75, 89, 98, 106	0
4	AD	208/209 (99%)	0.51	6 (2%) 53 32	62, 80, 92, 99	0
4	CD	208/209 (99%)	0.32	3 (1%) 73 53	61, 79, 92, 99	0
5	AE	148/162 (91%)	0.01	2 (1%) 73 53	53, 73, 83, 96	0
5	CE	148/162 (91%)	0.14	1 (0%) 84 68	54, 74, 85, 98	0
6	AF	100/101 (99%)	0.16	0 100 100	60, 78, 89, 92	0
6	CF	100/101 (99%)	0.17	1 (1%) 79 61	62, 79, 89, 94	0
7	AG	155/156 (99%)	0.20	2 (1%) 75 56	74, 85, 97, 104	0
7	CG	155/156 (99%)	0.32	6 (3%) 43 24	76, 86, 99, 105	0
8	AH	137/138 (99%)	0.16	1 (0%) 84 68	60, 75, 83, 90	0
8	CH	137/138 (99%)	0.16	0 100 100	61, 76, 83, 90	0
9	AI	127/128 (99%)	0.77	9 (7%) 22 12	70, 92, 99, 103	0
9	CI	127/128 (99%)	1.27	28 (22%) 2 1	69, 93, 100, 105	0
10	AJ	97/105 (92%)	0.80	6 (6%) 26 14	71, 93, 101, 106	0
10	CJ	96/105 (91%)	1.20	16 (16%) 4 2	75, 95, 102, 107	0
11	AK	114/129 (88%)	-0.08	1 (0%) 81 63	53, 74, 88, 93	0
11	CK	114/129 (88%)	-0.00	0 100 100	54, 76, 88, 93	0
12	AL	122/132 (92%)	0.26	5 (4%) 41 23	56, 68, 80, 86	0
12	CL	122/132 (92%)	0.20	1 (0%) 82 65	55, 68, 79, 87	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	123/126 (97%)	0.27	3 (2%) 59 38	67, 83, 95, 104	0
13	CM	122/126 (96%)	0.83	7 (5%) 29 16	77, 91, 101, 105	0
14	AN	60/61 (98%)	0.75	6 (10%) 12 6	74, 85, 95, 97	0
14	CN	60/61 (98%)	1.18	9 (15%) 5 3	77, 88, 95, 100	0
15	AO	88/89 (98%)	0.04	1 (1%) 78 59	59, 73, 87, 94	0
15	CO	88/89 (98%)	0.13	2 (2%) 61 39	58, 73, 87, 95	0
16	AP	82/88 (93%)	0.56	2 (2%) 59 38	66, 77, 88, 95	0
16	CP	82/88 (93%)	0.54	2 (2%) 59 38	66, 76, 88, 93	0
17	AQ	99/105 (94%)	0.26	1 (1%) 79 61	59, 73, 84, 87	0
17	CQ	99/105 (94%)	0.17	1 (1%) 79 61	60, 73, 84, 85	0
18	AR	68/88 (77%)	0.01	0 100 100	66, 76, 86, 90	0
18	CR	68/88 (77%)	0.20	1 (1%) 72 52	67, 77, 87, 89	0
19	AS	83/93 (89%)	0.70	7 (8%) 17 9	79, 91, 100, 105	0
19	CS	83/93 (89%)	1.03	13 (15%) 5 2	82, 92, 102, 106	0
20	AT	96/106 (90%)	0.53	9 (9%) 14 8	62, 75, 88, 91	0
20	CT	96/106 (90%)	0.33	3 (3%) 51 30	62, 75, 86, 94	0
21	AU	23/27 (85%)	1.26	1 (4%) 40 22	76, 87, 90, 91	0
21	CU	23/27 (85%)	1.38	5 (21%) 2 1	77, 87, 91, 92	0
22	AV	7/24 (29%)	0.21	0 100 100	61, 73, 97, 100	0
22	CV	6/24 (25%)	0.17	0 100 100	64, 75, 94, 103	0
23	AX	76/77 (98%)	-0.50	0 100 100	48, 79, 96, 101	0
23	CX	76/77 (98%)	-0.27	0 100 100	47, 81, 98, 101	0
24	AW	3/10 (30%)	0.79	0 100 100	78, 78, 93, 96	0
24	CW	3/10 (30%)	0.68	1 (33%) 1 0	67, 67, 87, 96	0
25	BA	2731/2915 (93%)	-0.68	8 (0%) 90 80	24, 44, 86, 114	0
25	DA	2714/2915 (93%)	-0.69	7 (0%) 90 80	27, 48, 87, 118	0
26	BB	120/122 (98%)	-0.35	0 100 100	41, 68, 81, 96	0
26	DB	120/122 (98%)	0.09	0 100 100	47, 73, 86, 98	0
27	BD	275/276 (99%)	-0.42	0 100 100	24, 41, 62, 85	0
27	DD	275/276 (99%)	-0.34	0 100 100	25, 44, 63, 86	0
28	BE	204/206 (99%)	-0.40	0 100 100	22, 45, 68, 90	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DE	204/206 (99%)	-0.38	1 (0%) 87 73	24, 47, 70, 90	0
29	BF	203/210 (96%)	-0.11	1 (0%) 87 73	24, 52, 77, 97	0
29	DF	203/210 (96%)	-0.17	0 100 100	25, 56, 79, 96	0
30	BG	181/182 (99%)	0.17	1 (0%) 85 70	61, 76, 89, 100	0
30	DG	181/182 (99%)	0.50	3 (1%) 69 48	65, 79, 91, 100	0
31	BH	174/180 (96%)	0.11	1 (0%) 85 70	49, 67, 81, 85	0
31	DH	174/180 (96%)	0.37	2 (1%) 78 59	54, 72, 85, 89	0
32	BI	146/148 (98%)	0.07	0 100 100	49, 77, 88, 94	0
32	DI	146/148 (98%)	0.12	0 100 100	49, 78, 88, 94	0
33	BN	140/140 (100%)	-0.22	1 (0%) 84 68	33, 48, 71, 78	0
33	DN	140/140 (100%)	-0.19	1 (0%) 84 68	35, 52, 73, 81	0
34	BO	122/122 (100%)	-0.53	0 100 100	23, 40, 61, 76	0
34	DO	122/122 (100%)	-0.37	0 100 100	37, 53, 71, 80	0
35	BP	149/150 (99%)	-0.13	1 (0%) 84 68	25, 54, 77, 83	0
35	DP	149/150 (99%)	-0.06	0 100 100	27, 57, 81, 87	0
36	BQ	141/141 (100%)	-0.07	2 (1%) 73 53	36, 52, 68, 79	0
36	DQ	141/141 (100%)	-0.08	3 (2%) 63 42	38, 55, 71, 81	0
37	BR	118/118 (100%)	-0.54	0 100 100	20, 35, 52, 64	0
37	DR	118/118 (100%)	-0.24	0 100 100	36, 52, 68, 84	0
38	BS	110/112 (98%)	-0.42	0 100 100	35, 54, 71, 85	0
38	DS	110/112 (98%)	0.53	5 (4%) 38 20	65, 81, 92, 95	0
39	BT	131/146 (89%)	-0.36	0 100 100	31, 45, 75, 92	0
39	DT	131/146 (89%)	-0.18	1 (0%) 82 65	45, 59, 80, 90	0
40	BU	116/118 (98%)	-0.67	0 100 100	21, 31, 52, 63	0
40	DU	116/118 (98%)	-0.11	0 100 100	36, 61, 78, 92	0
41	BV	101/101 (100%)	-0.29	0 100 100	27, 53, 73, 80	0
41	DV	101/101 (100%)	-0.26	0 100 100	29, 58, 78, 80	0
42	BW	112/113 (99%)	-0.49	0 100 100	27, 38, 62, 92	0
42	DW	112/113 (99%)	-0.41	0 100 100	30, 42, 64, 94	0
43	BX	95/96 (98%)	-0.15	2 (2%) 63 42	29, 47, 72, 81	0
43	DX	95/96 (98%)	-0.03	1 (1%) 78 59	33, 51, 73, 82	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BY	107/110 (97%)	0.10	2 (1%) 66 45	39, 61, 80, 89	0
44	DY	107/110 (97%)	0.19	3 (2%) 55 34	43, 65, 82, 92	0
45	BZ	171/206 (83%)	0.12	5 (2%) 53 32	53, 71, 85, 96	0
45	DZ	174/206 (84%)	0.27	1 (0%) 85 70	58, 74, 87, 95	0
46	B0	83/85 (97%)	-0.11	7 (8%) 17 9	25, 39, 80, 108	0
46	D0	83/85 (97%)	0.39	7 (8%) 17 9	42, 66, 86, 104	0
47	B1	97/98 (98%)	-0.37	1 (1%) 79 61	27, 44, 74, 83	0
47	D1	97/98 (98%)	-0.09	1 (1%) 79 61	35, 58, 79, 86	0
48	B2	70/72 (97%)	-0.26	1 (1%) 73 53	35, 48, 64, 90	0
48	D2	70/72 (97%)	0.02	0 100 100	59, 74, 83, 92	0
49	B3	59/60 (98%)	-0.46	0 100 100	24, 38, 63, 85	0
49	D3	59/60 (98%)	-0.19	0 100 100	45, 62, 80, 90	0
50	B4	69/71 (97%)	0.19	0 100 100	60, 85, 103, 105	0
50	D4	69/71 (97%)	0.70	4 (5%) 29 16	82, 96, 106, 112	0
51	B5	59/60 (98%)	-0.68	0 100 100	14, 36, 59, 74	0
51	D5	59/60 (98%)	-0.36	0 100 100	31, 50, 72, 82	0
52	B6	53/54 (98%)	-0.45	0 100 100	43, 53, 68, 75	0
52	D6	53/54 (98%)	-0.15	0 100 100	45, 56, 69, 73	0
53	B7	48/49 (97%)	-0.33	0 100 100	24, 32, 62, 84	0
53	D7	48/49 (97%)	-0.24	1 (2%) 63 42	26, 35, 63, 86	0
54	B8	64/65 (98%)	-0.28	0 100 100	31, 42, 51, 64	0
54	D8	64/65 (98%)	-0.15	0 100 100	34, 46, 56, 66	0
55	B9	37/37 (100%)	0.01	1 (2%) 56 35	43, 53, 71, 77	0
55	D9	37/37 (100%)	0.31	1 (2%) 56 35	46, 58, 73, 78	0
All	All	20462/21468 (95%)	-0.14	303 (1%) 72 52	14, 65, 95, 123	0

All (303) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
13	CM	124	PRO	7.2
13	CM	123	ALA	6.1
14	CN	2	ALA	5.8
13	AM	123	ALA	5.7
9	CI	105	ASP	5.7

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Mol	Chain	Res	Type	RSRZ
20	CT	9	ASN	5.5
47	D1	2	SER	5.0
9	CI	10	ARG	4.7
12	AL	91	LYS	4.7
13	CM	102	ARG	4.5
19	CS	13	ASP	4.5
46	D0	3	HIS	4.5
12	AL	89	ARG	4.3
46	B0	3	HIS	4.2
9	CI	11	LYS	4.2
21	CU	14	TRP	4.1
46	B0	7	LEU	4.1
1	CA	1030(B)	C	4.1
14	AN	2	ALA	4.1
31	BH	2	SER	4.0
13	AM	124	PRO	4.0
21	CU	6	ARG	4.0
2	CB	134	GLU	3.9
7	CG	16	LEU	3.9
7	AG	80	VAL	3.8
3	CC	159	GLY	3.8
46	B0	5	LYS	3.8
1	AA	1001	A	3.8
25	BA	2815	C	3.7
9	CI	30	GLY	3.7
44	BY	1	MET	3.7
12	AL	99	HIS	3.7
9	AI	13	ALA	3.6
1	AA	1000	U	3.6
19	AS	13	ASP	3.6
20	AT	12	ALA	3.6
46	D0	7	LEU	3.6
43	BX	65	ARG	3.6
19	CS	9	VAL	3.5
46	B0	8	GLY	3.5
25	BA	2814	C	3.5
1	AA	1001(A)	G	3.5
1	CA	1001(A)	G	3.4
9	CI	14	VAL	3.4
10	CJ	40	LEU	3.4
9	CI	119	ALA	3.4
3	CC	207	VAL	3.4

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Mol	Chain	Res	Type	RSRZ
9	CI	62	TYR	3.4
53	D7	48	LYS	3.4
3	AC	158	GLY	3.3
50	D4	56	VAL	3.3
38	DS	33	LYS	3.3
4	AD	154	ASN	3.3
30	DG	2	PRO	3.2
9	CI	66	ARG	3.2
36	BQ	61	GLY	3.2
20	AT	18	GLN	3.2
3	CC	155	GLY	3.2
1	AA	202	U	3.2
25	DA	1536	C	3.2
10	CJ	5	ARG	3.2
25	BA	2816	G	3.1
2	AB	165	VAL	3.1
14	AN	15	LYS	3.1
1	AA	1030(B)	C	3.0
19	CS	15	LEU	3.0
9	AI	14	VAL	3.0
2	AB	237	ALA	3.0
9	CI	36	TYR	3.0
5	AE	98	THR	3.0
9	CI	2	GLU	3.0
19	CS	2	PRO	3.0
3	AC	207	VAL	3.0
9	CI	118	LYS	2.9
13	CM	121	LYS	2.9
46	B0	4	LYS	2.9
46	B0	6	GLY	2.9
44	DY	57	GLN	2.9
17	AQ	35	VAL	2.9
1	CA	1149	C	2.9
19	CS	49	ILE	2.9
9	CI	9	ARG	2.9
1	AA	1286	A	2.9
1	CA	1036	G	2.9
25	DA	2188	C	2.8
46	B0	2	ALA	2.8
46	D0	5	LYS	2.8
20	AT	10	LEU	2.8
1	CA	1030(A)	G	2.8

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Mol	Chain	Res	Type	RSRZ
46	D0	4	LYS	2.8
3	AC	193	TYR	2.8
48	B2	70	GLN	2.8
19	CS	71	LEU	2.8
25	BA	935	C	2.8
33	BN	53	VAL	2.8
9	CI	64	THR	2.8
30	DG	53	LEU	2.8
5	AE	118	ILE	2.8
25	DA	229	A	2.8
3	CC	129	ALA	2.8
9	AI	10	ARG	2.8
2	AB	196	LEU	2.8
10	CJ	59	SER	2.7
20	AT	9	ASN	2.7
20	AT	74	LYS	2.7
9	CI	117	HIS	2.7
19	CS	67	VAL	2.7
25	BA	696	C	2.7
14	CN	21	TYR	2.7
19	CS	33	THR	2.7
43	DX	68	ARG	2.7
19	AS	38	SER	2.7
10	CJ	49	VAL	2.7
50	D4	49	PHE	2.7
1	CA	1002	G	2.7
1	CA	1532	U	2.7
9	CI	5	TYR	2.7
17	CQ	32	TYR	2.7
2	CB	129	GLU	2.6
1	CA	1034	G	2.6
10	CJ	58	ASP	2.6
21	CU	13	ILE	2.6
4	AD	153	ARG	2.6
38	DS	3	ARG	2.6
1	CA	1493	A	2.6
55	D9	12	ASP	2.6
4	AD	179	GLU	2.6
14	CN	20	ALA	2.6
10	AJ	5	ARG	2.6
9	CI	126	SER	2.6
31	DH	2	SER	2.6

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Mol	Chain	Res	Type	RSRZ
14	CN	14	PRO	2.6
20	CT	8	ARG	2.6
2	AB	187	LEU	2.6
14	CN	8	GLU	2.6
12	AL	126	LYS	2.6
1	AA	1002	G	2.5
10	CJ	73	ASP	2.5
3	CC	160	ALA	2.5
10	CJ	38	ILE	2.5
1	CA	1363	C	2.5
9	CI	21	PRO	2.5
38	DS	7	TYR	2.5
45	BZ	99	TYR	2.5
45	BZ	118	GLN	2.5
45	BZ	112	ARG	2.5
10	CJ	32	ALA	2.5
10	AJ	31	GLY	2.5
19	CS	84	GLY	2.5
13	CM	122	LYS	2.5
20	AT	14	LYS	2.5
36	BQ	60	ARG	2.5
21	AU	11	GLY	2.5
16	AP	82	GLN	2.5
1	AA	1030(C)	G	2.5
25	DA	1171	G	2.5
46	D0	9	SER	2.5
9	CI	7	THR	2.5
1	CA	1001	A	2.4
25	DA	652(B)	A	2.4
3	CC	177	THR	2.4
1	AA	201	C	2.4
1	AA	1028	C	2.4
8	AH	2	LEU	2.4
9	CI	123	PRO	2.4
2	CB	165	VAL	2.4
24	CW	2	VAL	2.4
2	AB	134	GLU	2.4
9	AI	107	ARG	2.4
35	BP	15	ARG	2.4
10	CJ	65	LEU	2.4
1	CA	1035	A	2.4
55	B9	12	ASP	2.4

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Mol	Chain	Res	Type	RSRZ
12	CL	99	HIS	2.4
31	DH	82	GLY	2.4
1	AA	1029	C	2.4
1	CA	1029	C	2.4
6	CF	89	MET	2.4
9	CI	102	LEU	2.4
18	CR	31	LEU	2.4
1	CA	1202	G	2.4
13	AM	122	LYS	2.4
7	AG	16	LEU	2.4
38	DS	54	LEU	2.4
9	AI	2	GLU	2.4
7	CG	80	VAL	2.4
1	AA	1027	C	2.3
15	CO	86	GLY	2.3
14	CN	15	LYS	2.3
33	DN	104	LYS	2.3
19	AS	71	LEU	2.3
19	AS	4	SER	2.3
13	CM	100	GLY	2.3
28	DE	204	ALA	2.3
25	BA	2807	C	2.3
10	AJ	33	GLN	2.3
1	AA	630	G	2.3
1	AA	1036	G	2.3
9	CI	17	VAL	2.3
46	D0	6	GLY	2.3
45	DZ	1	MET	2.3
29	BF	134	GLY	2.3
19	CS	16	LEU	2.3
1	CA	1026	G	2.3
14	AN	16	PHE	2.3
25	BA	2806	G	2.3
38	DS	29	PHE	2.3
11	AK	36	ASP	2.3
44	BY	63	LYS	2.3
1	CA	1531	A	2.3
4	CD	150	GLU	2.3
3	CC	8	ILE	2.3
2	CB	237	ALA	2.3
7	CG	2	ALA	2.3
16	CP	69	THR	2.3

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Mol	Chain	Res	Type	RSRZ
16	AP	17	TYR	2.3
10	CJ	55	LYS	2.3
1	CA	1030(C)	G	2.2
25	DA	1533	G	2.2
2	AB	131	PRO	2.2
3	AC	2	GLY	2.2
4	AD	164	ALA	2.2
50	D4	54	GLY	2.2
7	CG	156	TRP	2.2
9	AI	64	THR	2.2
36	DQ	22	LYS	2.2
9	CI	121	ARG	2.2
16	CP	82	GLN	2.2
10	CJ	76	ASN	2.2
25	BA	933	C	2.2
4	AD	155	LEU	2.2
9	CI	96	LEU	2.2
30	BG	75	LYS	2.2
19	CS	40	ILE	2.2
1	CA	1124	G	2.2
10	CJ	37	PRO	2.2
4	AD	149	ALA	2.2
9	AI	12	GLU	2.2
9	AI	15	ALA	2.2
30	DG	54	GLU	2.2
5	CE	85	GLY	2.2
19	AS	84	GLY	2.2
43	BX	68	ARG	2.2
1	CA	1033	G	2.2
25	DA	2318	G	2.2
20	AT	55	ILE	2.1
19	AS	5	LEU	2.1
14	CN	17	LYS	2.1
10	CJ	20	ALA	2.1
7	CG	4	ARG	2.1
20	AT	17	ARG	2.1
14	AN	18	VAL	2.1
13	CM	6	GLY	2.1
44	DY	58	GLY	2.1
45	BZ	97	GLU	2.1
47	B1	2	SER	2.1
1	AA	1030	C	2.1

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Mol	Chain	Res	Type	RSRZ
19	CS	10	PHE	2.1
3	AC	87	LEU	2.1
14	AN	7	ILE	2.1
14	AN	17	LYS	2.1
14	CN	13	THR	2.1
39	DT	131	ALA	2.1
19	CS	4	SER	2.1
4	CD	154	ASN	2.1
1	AA	380	G	2.1
1	AA	1030(A)	G	2.1
1	AA	163	C	2.1
19	AS	39	THR	2.1
36	DQ	60	ARG	2.1
9	CI	13	ALA	2.1
9	CI	15	ALA	2.1
10	AJ	32	ALA	2.1
4	CD	179	GLU	2.1
10	CJ	47	PHE	2.1
7	CG	38	LEU	2.1
10	CJ	74	ILE	2.1
1	AA	306	G	2.1
1	AA	1031	G	2.1
1	CA	1032	G	2.1
9	AI	106	ALA	2.1
9	CI	45	ALA	2.1
21	CU	11	GLY	2.1
12	AL	115	LYS	2.0
15	CO	68	ARG	2.0
20	AT	13	LEU	2.0
20	CT	25	ARG	2.0
9	CI	27	THR	2.0
9	CI	37	PHE	2.0
46	D0	8	GLY	2.0
2	AB	22	LYS	2.0
10	CJ	64	GLU	2.0
10	AJ	34	VAL	2.0
14	CN	33	VAL	2.0
15	AO	88	ARG	2.0
1	AA	204	U	2.0
10	AJ	76	ASN	2.0
44	DY	1	MET	2.0
21	CU	17	THR	2.0

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Mol	Chain	Res	Type	RSRZ
50	D4	67	TYR	2.0
36	DQ	61	GLY	2.0
45	BZ	136	PHE	2.0
2	AB	214	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, 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
24	2R1	AW	6	10/11	0.73	0.14	68,82,98,104	0
24	004	AW	3	10/11	0.76	0.17	71,89,99,106	0
24	2R1	CW	6	10/11	0.76	0.12	79,86,90,94	0
24	MVA	AW	5	8/9	0.81	0.15	66,87,90,90	0
24	2QY	CW	10	13/14	0.87	0.11	55,69,84,94	0
24	2R3	AW	8	14/15	0.89	0.09	54,79,87,90	0
24	004	CW	3	10/11	0.90	0.10	60,76,84,86	0
24	MVA	CW	5	8/9	0.90	0.08	51,78,86,88	0
24	MVA	CW	9	8/9	0.91	0.14	61,72,80,84	0
24	MVA	AW	9	8/9	0.91	0.14	65,78,87,91	0
24	2R3	CW	8	14/15	0.93	0.07	47,70,74,79	0
24	2QZ	CW	1	9/10	0.94	0.12	57,72,81,93	0
24	2QY	AW	10	13/14	0.95	0.06	55,67,75,79	0
24	2QZ	AW	1	9/10	0.95	0.10	58,64,81,82	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($\text{\AA}^2$)	Q<0.9
56	MG	BZ	3001	1/1	0.47	0.26	61,61,61,61	0
56	MG	B4	3001	1/1	0.48	0.21	100,100,100,100	0
56	MG	DB	3001	1/1	0.48	0.17	68,68,68,68	0
56	MG	CA	3114	1/1	0.51	0.19	82,82,82,82	0
56	MG	CA	3025	1/1	0.51	0.26	94,94,94,94	0
56	MG	CA	3139	1/1	0.53	0.21	75,75,75,75	0
56	MG	CA	3042	1/1	0.56	0.35	85,85,85,85	0
56	MG	BA	3579	1/1	0.59	0.23	63,63,63,63	0
56	MG	AA	3093	1/1	0.60	0.38	88,88,88,88	0
56	MG	BA	3247	1/1	0.60	0.17	68,68,68,68	0
56	MG	AA	3147	1/1	0.61	0.17	61,61,61,61	0
56	MG	AA	3087	1/1	0.61	0.18	72,72,72,72	0
56	MG	AA	3061	1/1	0.63	0.13	82,82,82,82	0
56	MG	BA	3353	1/1	0.63	0.14	57,57,57,57	0
56	MG	CA	3110	1/1	0.64	0.22	97,97,97,97	0
56	MG	BA	3140	1/1	0.64	0.23	64,64,64,64	0
56	MG	AA	3132	1/1	0.65	0.32	76,76,76,76	0
56	MG	AA	3120	1/1	0.65	0.35	71,71,71,71	0
56	MG	AA	3164	1/1	0.65	0.20	69,69,69,69	0
56	MG	AA	3084	1/1	0.66	0.41	78,78,78,78	0
56	MG	CA	3147	1/1	0.66	0.17	66,66,66,66	0
56	MG	CA	3127	1/1	0.66	0.22	79,79,79,79	0
56	MG	DA	3464	1/1	0.67	0.21	50,50,50,50	0
56	MG	AA	3129	1/1	0.67	0.26	77,77,77,77	0
56	MG	BA	3622	1/1	0.68	0.23	77,77,77,77	0
56	MG	AA	3067	1/1	0.68	0.34	87,87,87,87	0
56	MG	CA	3030	1/1	0.69	0.32	73,73,73,73	0
56	MG	CA	3067	1/1	0.70	0.25	80,80,80,80	0
56	MG	CA	3081	1/1	0.70	0.16	72,72,72,72	0
56	MG	CA	3109	1/1	0.70	0.16	83,83,83,83	0
56	MG	BA	3658	1/1	0.70	0.18	79,79,79,79	0
56	MG	AA	3030	1/1	0.70	0.41	69,69,69,69	0
56	MG	CA	3038	1/1	0.71	0.19	70,70,70,70	0
56	MG	AA	3013	1/1	0.71	0.11	78,78,78,78	0
56	MG	DA	3615	1/1	0.71	0.16	60,60,60,60	0
56	MG	DA	3638	1/1	0.71	0.20	62,62,62,62	0
56	MG	BA	3088	1/1	0.71	0.14	56,56,56,56	0
56	MG	CA	3070	1/1	0.72	0.16	55,55,55,55	0
56	MG	BA	3023	1/1	0.72	0.21	66,66,66,66	0
56	MG	DA	3062	1/1	0.73	0.15	55,55,55,55	0
56	MG	DA	3256	1/1	0.73	0.16	63,63,63,63	0
56	MG	DA	3553	1/1	0.74	0.15	70,70,70,70	0
56	MG	DA	3598	1/1	0.74	0.13	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3462	1/1	0.74	0.14	52,52,52,52	0
56	MG	DA	3635	1/1	0.74	0.20	58,58,58,58	0
56	MG	DA	3284	1/1	0.74	0.12	68,68,68,68	0
56	MG	AA	3022	1/1	0.74	0.17	48,48,48,48	0
56	MG	BA	3288	1/1	0.75	0.26	61,61,61,61	0
56	MG	AA	3136	1/1	0.75	0.16	62,62,62,62	0
56	MG	DA	3410	1/1	0.75	0.28	69,69,69,69	0
56	MG	DA	3438	1/1	0.75	0.20	70,70,70,70	0
56	MG	AA	3180	1/1	0.75	0.21	66,66,66,66	0
56	MG	DA	3482	1/1	0.75	0.14	55,55,55,55	0
56	MG	DA	3503	1/1	0.75	0.19	71,71,71,71	0
56	MG	CA	3125	1/1	0.75	0.13	72,72,72,72	0
56	MG	CA	3053	1/1	0.75	0.44	73,73,73,73	0
56	MG	BA	3495	1/1	0.75	0.16	84,84,84,84	0
56	MG	CA	3003	1/1	0.75	0.14	66,66,66,66	0
56	MG	CQ	201	1/1	0.75	0.14	56,56,56,56	0
56	MG	AA	3044	1/1	0.75	0.16	66,66,66,66	0
56	MG	DQ	205	1/1	0.75	0.16	55,55,55,55	0
56	MG	BA	3354	1/1	0.76	0.13	74,74,74,74	0
56	MG	BA	3370	1/1	0.76	0.10	54,54,54,54	0
56	MG	DA	3484	1/1	0.76	0.12	51,51,51,51	0
56	MG	DA	3162	1/1	0.76	0.29	71,71,71,71	0
56	MG	DA	3526	1/1	0.76	0.12	54,54,54,54	0
56	MG	DA	3240	1/1	0.76	0.14	51,51,51,51	0
56	MG	BA	3180	1/1	0.76	0.45	43,43,43,43	0
56	MG	BA	3297	1/1	0.76	0.36	53,53,53,53	0
56	MG	BA	3040	1/1	0.76	0.26	51,51,51,51	0
56	MG	DA	3427	1/1	0.76	0.19	60,60,60,60	0
56	MG	CA	3161	1/1	0.76	0.11	54,54,54,54	0
56	MG	DA	3460	1/1	0.76	0.12	50,50,50,50	0
59	FME	CX	101	10/11	0.76	0.32	71,82,97,105	0
56	MG	DA	3492	1/1	0.77	0.16	68,68,68,68	0
56	MG	BA	3089	1/1	0.77	0.12	61,61,61,61	0
56	MG	CA	3135	1/1	0.77	0.27	76,76,76,76	0
56	MG	AA	3131	1/1	0.77	0.24	56,56,56,56	0
56	MG	BA	3669	1/1	0.77	0.17	75,75,75,75	0
56	MG	CA	3153	1/1	0.77	0.15	83,83,83,83	0
56	MG	DA	3623	1/1	0.77	0.15	53,53,53,53	0
56	MG	BN	3002	1/1	0.77	0.11	56,56,56,56	0
56	MG	AA	3162	1/1	0.77	0.21	74,74,74,74	0
56	MG	DA	3001	1/1	0.77	0.30	78,78,78,78	0
56	MG	DB	3011	1/1	0.77	0.19	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	CA	3047	1/1	0.77	0.17	63,63,63,63	0
56	MG	AA	3218	1/1	0.77	0.33	65,65,65,65	0
56	MG	BB	3014	1/1	0.78	0.19	69,69,69,69	0
56	MG	BA	3157	1/1	0.78	0.18	63,63,63,63	0
56	MG	CE	3001	1/1	0.78	0.31	68,68,68,68	0
56	MG	DA	3624	1/1	0.78	0.22	51,51,51,51	0
56	MG	CA	3048	1/1	0.78	0.27	62,62,62,62	0
56	MG	DA	3401	1/1	0.78	0.24	58,58,58,58	0
56	MG	AA	3085	1/1	0.78	0.23	69,69,69,69	0
56	MG	BA	3215	1/1	0.78	0.20	69,69,69,69	0
56	MG	DA	3093	1/1	0.78	0.10	53,53,53,53	0
56	MG	DA	3563	1/1	0.78	0.14	64,64,64,64	0
56	MG	DA	3185	1/1	0.79	0.19	52,52,52,52	0
56	MG	DA	3500	1/1	0.79	0.12	50,50,50,50	0
56	MG	DA	3195	1/1	0.79	0.20	50,50,50,50	0
56	MG	DA	3228	1/1	0.79	0.10	45,45,45,45	0
56	MG	BA	3693	1/1	0.79	0.15	64,64,64,64	0
56	MG	BA	3727	1/1	0.79	0.25	68,68,68,68	0
56	MG	DA	3279	1/1	0.79	0.18	63,63,63,63	0
56	MG	DA	3613	1/1	0.79	0.10	54,54,54,54	0
56	MG	CA	3073	1/1	0.79	0.21	55,55,55,55	0
56	MG	CA	3035	1/1	0.79	0.19	52,52,52,52	0
56	MG	BA	3331	1/1	0.79	0.18	47,47,47,47	0
56	MG	CA	3041	1/1	0.79	0.29	75,75,75,75	0
56	MG	BA	3136	1/1	0.79	0.15	58,58,58,58	0
56	MG	BA	3067	1/1	0.79	0.19	53,53,53,53	0
56	MG	DB	3010	1/1	0.79	0.20	73,73,73,73	0
56	MG	AA	3021	1/1	0.79	0.14	76,76,76,76	0
56	MG	DF	302	1/1	0.79	0.09	43,43,43,43	0
56	MG	DA	3099	1/1	0.79	0.17	44,44,44,44	0
56	MG	AA	3109	1/1	0.79	0.19	65,65,65,65	0
60	K	DA	3231	1/1	0.79	0.25	96,96,96,96	0
56	MG	AA	3206	1/1	0.80	0.12	70,70,70,70	0
56	MG	AA	3007	1/1	0.80	0.23	82,82,82,82	0
56	MG	DA	3134	1/1	0.80	0.13	46,46,46,46	0
56	MG	AA	3009	1/1	0.80	0.23	79,79,79,79	0
56	MG	CA	3086	1/1	0.80	0.26	80,80,80,80	0
56	MG	BA	3158	1/1	0.80	0.37	64,64,64,64	0
56	MG	BA	3168	1/1	0.80	0.18	42,42,42,42	0
56	MG	CA	3007	1/1	0.80	0.14	68,68,68,68	0
56	MG	AA	3039	1/1	0.80	0.15	60,60,60,60	0
56	MG	BA	3193	1/1	0.80	0.18	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	CA	3032	1/1	0.80	0.17	42,42,42,42	0
56	MG	DA	3361	1/1	0.80	0.12	61,61,61,61	0
56	MG	BA	3611	1/1	0.80	0.13	52,52,52,52	0
56	MG	AA	3090	1/1	0.80	0.17	68,68,68,68	0
56	MG	BA	3234	1/1	0.80	0.18	55,55,55,55	0
56	MG	AA	3071	1/1	0.80	0.27	60,60,60,60	0
56	MG	BA	3683	1/1	0.80	0.22	60,60,60,60	0
56	MG	AA	3200	1/1	0.80	0.21	68,68,68,68	0
56	MG	BA	3094	1/1	0.80	0.31	61,61,61,61	0
56	MG	BB	3005	1/1	0.80	0.23	61,61,61,61	0
56	MG	AA	3059	1/1	0.81	0.27	54,54,54,54	0
56	MG	BA	3027	1/1	0.81	0.12	45,45,45,45	0
56	MG	BA	3496	1/1	0.81	0.26	57,57,57,57	0
56	MG	DA	3510	1/1	0.81	0.15	63,63,63,63	0
56	MG	DA	3515	1/1	0.81	0.12	48,48,48,48	0
56	MG	BQ	203	1/1	0.81	0.14	58,58,58,58	0
56	MG	AA	3019	1/1	0.81	0.10	74,74,74,74	0
56	MG	CA	3057	1/1	0.81	0.19	49,49,49,49	0
56	MG	AA	3088	1/1	0.81	0.42	63,63,63,63	0
56	MG	DA	3609	1/1	0.81	0.24	64,64,64,64	0
56	MG	BA	3289	1/1	0.81	0.28	60,60,60,60	0
56	MG	DA	3303	1/1	0.81	0.09	47,47,47,47	0
56	MG	DA	3314	1/1	0.81	0.18	64,64,64,64	0
56	MG	AA	3128	1/1	0.81	0.18	68,68,68,68	0
56	MG	AA	3212	1/1	0.81	0.10	79,79,79,79	0
56	MG	DA	3061	1/1	0.81	0.24	52,52,52,52	0
56	MG	BA	3183	1/1	0.81	0.25	48,48,48,48	0
56	MG	BA	3189	1/1	0.81	0.12	54,54,54,54	0
56	MG	BA	3712	1/1	0.81	0.16	58,58,58,58	0
56	MG	DA	3117	1/1	0.81	0.10	53,53,53,53	0
56	MG	DA	3465	1/1	0.81	0.11	49,49,49,49	0
56	MG	DA	3122	1/1	0.81	0.19	62,62,62,62	0
56	MG	AA	3065	1/1	0.81	0.23	60,60,60,60	0
56	MG	DA	3267	1/1	0.82	0.14	61,61,61,61	0
56	MG	DA	3030	1/1	0.82	0.17	51,51,51,51	0
56	MG	BA	3144	1/1	0.82	0.28	74,74,74,74	0
56	MG	AA	3112	1/1	0.82	0.23	51,51,51,51	0
56	MG	DA	3084	1/1	0.82	0.16	70,70,70,70	0
56	MG	AA	3113	1/1	0.82	0.21	68,68,68,68	0
56	MG	BA	3507	1/1	0.82	0.24	68,68,68,68	0
56	MG	DA	3115	1/1	0.82	0.12	63,63,63,63	0
56	MG	CA	3146	1/1	0.82	0.14	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	DA	3621	1/1	0.82	0.09	54,54,54,54	0
56	MG	AA	3046	1/1	0.82	0.24	73,73,73,73	0
56	MG	DA	3456	1/1	0.82	0.16	47,47,47,47	0
56	MG	AA	3060	1/1	0.82	0.36	60,60,60,60	0
56	MG	DA	3161	1/1	0.82	0.16	60,60,60,60	0
56	MG	CA	3157	1/1	0.82	0.13	54,54,54,54	0
56	MG	DA	3481	1/1	0.82	0.09	47,47,47,47	0
56	MG	AA	3094	1/1	0.82	0.11	68,68,68,68	0
56	MG	CA	3170	1/1	0.82	0.22	50,50,50,50	0
56	MG	BA	3099	1/1	0.82	0.19	44,44,44,44	0
56	MG	AA	3089	1/1	0.82	0.31	78,78,78,78	0
56	MG	BA	3029	1/1	0.82	0.34	53,53,53,53	0
56	MG	AX	106	1/1	0.83	0.10	73,73,73,73	0
56	MG	DA	3207	1/1	0.83	0.14	58,58,58,58	0
56	MG	BA	3718	1/1	0.83	0.13	57,57,57,57	0
56	MG	DA	3238	1/1	0.83	0.07	61,61,61,61	0
56	MG	DA	3511	1/1	0.83	0.16	65,65,65,65	0
56	MG	AA	3117	1/1	0.83	0.11	71,71,71,71	0
56	MG	DA	3054	1/1	0.83	0.20	51,51,51,51	0
56	MG	DA	3060	1/1	0.83	0.15	55,55,55,55	0
56	MG	AA	3072	1/1	0.83	0.24	79,79,79,79	0
56	MG	DA	3581	1/1	0.83	0.30	73,73,73,73	0
56	MG	DA	3590	1/1	0.83	0.19	80,80,80,80	0
56	MG	BA	3598	1/1	0.83	0.12	56,56,56,56	0
56	MG	BA	3103	1/1	0.83	0.16	53,53,53,53	0
56	MG	CA	3044	1/1	0.83	0.18	63,63,63,63	0
56	MG	BA	3613	1/1	0.83	0.17	76,76,76,76	0
56	MG	DA	3620	1/1	0.83	0.11	71,71,71,71	0
56	MG	DA	3112	1/1	0.83	0.28	54,54,54,54	0
56	MG	DA	3402	1/1	0.83	0.13	61,61,61,61	0
56	MG	AA	3024	1/1	0.83	0.12	53,53,53,53	0
56	MG	B2	101	1/1	0.83	0.15	40,40,40,40	0
56	MG	AA	3209	1/1	0.83	0.14	70,70,70,70	0
56	MG	DA	3123	1/1	0.83	0.26	59,59,59,59	0
56	MG	DA	3124	1/1	0.83	0.13	67,67,67,67	0
56	MG	DA	3131	1/1	0.83	0.09	54,54,54,54	0
56	MG	AA	3023	1/1	0.83	0.26	65,65,65,65	0
56	MG	DG	3001	1/1	0.83	0.13	63,63,63,63	0
56	MG	BA	3156	1/1	0.83	0.33	56,56,56,56	0
56	MG	DW	202	1/1	0.83	0.15	58,58,58,58	0
59	FME	AX	101	10/11	0.83	0.22	48,75,97,113	0
56	MG	CA	3021	1/1	0.83	0.18	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	AA	3035	1/1	0.83	0.15	71,71,71,71	0
56	MG	AA	3017	1/1	0.84	0.24	55,55,55,55	0
56	MG	DA	3224	1/1	0.84	0.17	47,47,47,47	0
56	MG	BA	3562	1/1	0.84	0.14	73,73,73,73	0
56	MG	DA	3023	1/1	0.84	0.19	52,52,52,52	0
56	MG	AA	3076	1/1	0.84	0.24	66,66,66,66	0
56	MG	DA	3545	1/1	0.84	0.17	75,75,75,75	0
56	MG	BA	3580	1/1	0.84	0.15	58,58,58,58	0
56	MG	DA	3557	1/1	0.84	0.16	45,45,45,45	0
56	MG	BW	205	1/1	0.84	0.22	41,41,41,41	0
56	MG	DA	3564	1/1	0.84	0.17	61,61,61,61	0
56	MG	BA	3263	1/1	0.84	0.28	79,79,79,79	0
56	MG	AA	3045	1/1	0.84	0.30	61,61,61,61	0
56	MG	DA	3286	1/1	0.84	0.14	62,62,62,62	0
56	MG	DA	3071	1/1	0.84	0.22	46,46,46,46	0
56	MG	AA	3006	1/1	0.84	0.12	78,78,78,78	0
56	MG	DA	3340	1/1	0.84	0.07	47,47,47,47	0
56	MG	AA	3047	1/1	0.84	0.16	61,61,61,61	0
56	MG	BA	3645	1/1	0.84	0.12	56,56,56,56	0
56	MG	DA	3107	1/1	0.84	0.09	55,55,55,55	0
56	MG	BA	3160	1/1	0.84	0.28	53,53,53,53	0
56	MG	DA	3631	1/1	0.84	0.09	56,56,56,56	0
56	MG	AX	103	1/1	0.84	0.15	66,66,66,66	0
56	MG	AA	3068	1/1	0.84	0.15	66,66,66,66	0
56	MG	AA	3069	1/1	0.84	0.10	84,84,84,84	0
56	MG	CA	3141	1/1	0.84	0.28	70,70,70,70	0
56	MG	BA	3700	1/1	0.84	0.11	67,67,67,67	0
56	MG	BA	3706	1/1	0.84	0.28	63,63,63,63	0
56	MG	BA	3123	1/1	0.84	0.22	69,69,69,69	0
56	MG	BA	3135	1/1	0.84	0.18	42,42,42,42	0
56	MG	AA	3002	1/1	0.84	0.09	57,57,57,57	0
56	MG	BA	3739	1/1	0.84	0.20	50,50,50,50	0
56	MG	DA	3499	1/1	0.84	0.12	46,46,46,46	0
56	MG	BB	3003	1/1	0.84	0.14	43,43,43,43	0
56	MG	CA	3159	1/1	0.85	0.33	91,91,91,91	0
56	MG	DA	3164	1/1	0.85	0.15	48,48,48,48	0
56	MG	DA	3169	1/1	0.85	0.24	57,57,57,57	0
56	MG	DA	3170	1/1	0.85	0.18	57,57,57,57	0
56	MG	BA	3632	1/1	0.85	0.17	57,57,57,57	0
56	MG	CA	3065	1/1	0.85	0.15	75,75,75,75	0
56	MG	BA	3372	1/1	0.85	0.14	38,38,38,38	0
56	MG	BA	3402	1/1	0.85	0.16	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	DA	3527	1/1	0.85	0.10	46,46,46,46	0
56	MG	DA	3537	1/1	0.85	0.14	65,65,65,65	0
56	MG	CX	103	1/1	0.85	0.15	60,60,60,60	0
56	MG	CA	3071	1/1	0.85	0.15	63,63,63,63	0
56	MG	BA	3405	1/1	0.85	0.10	34,34,34,34	0
56	MG	DA	3248	1/1	0.85	0.22	51,51,51,51	0
56	MG	DA	3252	1/1	0.85	0.15	45,45,45,45	0
56	MG	AN	103	1/1	0.85	0.19	60,60,60,60	0
56	MG	DA	3039	1/1	0.85	0.23	59,59,59,59	0
56	MG	AA	3195	1/1	0.85	0.24	71,71,71,71	0
56	MG	BA	3276	1/1	0.85	0.19	40,40,40,40	0
56	MG	AA	3102	1/1	0.85	0.19	64,64,64,64	0
56	MG	BA	3061	1/1	0.85	0.28	51,51,51,51	0
56	MG	BA	3065	1/1	0.85	0.11	50,50,50,50	0
56	MG	DA	3074	1/1	0.85	0.18	54,54,54,54	0
56	MG	DA	3357	1/1	0.85	0.12	56,56,56,56	0
56	MG	BA	3205	1/1	0.85	0.10	40,40,40,40	0
56	MG	BA	3334	1/1	0.85	0.25	73,73,73,73	0
56	MG	CA	3138	1/1	0.85	0.18	72,72,72,72	0
56	MG	AA	3189	1/1	0.85	0.11	77,77,77,77	0
56	MG	DA	3654	1/1	0.85	0.27	52,52,52,52	0
56	MG	BA	3221	1/1	0.85	0.19	44,44,44,44	0
56	MG	CA	3142	1/1	0.85	0.08	59,59,59,59	0
56	MG	BB	3009	1/1	0.85	0.13	48,48,48,48	0
56	MG	BA	3617	1/1	0.85	0.18	62,62,62,62	0
56	MG	CA	3148	1/1	0.85	0.16	68,68,68,68	0
56	MG	CA	3150	1/1	0.85	0.08	59,59,59,59	0
56	MG	DA	3479	1/1	0.85	0.20	57,57,57,57	0
56	MG	BA	3075	1/1	0.85	0.09	45,45,45,45	0
56	MG	BA	3628	1/1	0.85	0.21	41,41,41,41	0
60	K	BA	3300	1/1	0.85	0.21	100,100,100,100	0
56	MG	CA	3158	1/1	0.85	0.14	76,76,76,76	0
56	MG	DA	3154	1/1	0.86	0.36	45,45,45,45	0
56	MG	BA	3543	1/1	0.86	0.17	52,52,52,52	0
56	MG	AX	104	1/1	0.86	0.26	76,76,76,76	0
56	MG	BA	3309	1/1	0.86	0.13	46,46,46,46	0
56	MG	CA	3164	1/1	0.86	0.17	49,49,49,49	0
56	MG	DA	3502	1/1	0.86	0.06	65,65,65,65	0
56	MG	CA	3061	1/1	0.86	0.20	46,46,46,46	0
56	MG	CA	3171	1/1	0.86	0.16	67,67,67,67	0
56	MG	BA	3198	1/1	0.86	0.16	52,52,52,52	0
56	MG	BA	3593	1/1	0.86	0.08	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	DA	3212	1/1	0.86	0.10	48,48,48,48	0
56	MG	CT	3001	1/1	0.86	0.27	57,57,57,57	0
56	MG	AA	3138	1/1	0.86	0.23	37,37,37,37	0
56	MG	AA	3096	1/1	0.86	0.17	44,44,44,44	0
56	MG	DA	3013	1/1	0.86	0.18	47,47,47,47	0
56	MG	AA	3029	1/1	0.86	0.24	52,52,52,52	0
56	MG	AA	3133	1/1	0.86	0.33	63,63,63,63	0
56	MG	BA	3618	1/1	0.86	0.10	46,46,46,46	0
56	MG	DA	3565	1/1	0.86	0.10	57,57,57,57	0
56	MG	DA	3265	1/1	0.86	0.15	51,51,51,51	0
56	MG	B0	103	1/1	0.86	0.29	59,59,59,59	0
56	MG	AA	3170	1/1	0.86	0.28	101,101,101,101	0
56	MG	BA	3119	1/1	0.86	0.19	58,58,58,58	0
56	MG	AA	3134	1/1	0.86	0.32	70,70,70,70	0
56	MG	BA	3426	1/1	0.86	0.24	51,51,51,51	0
56	MG	BA	3430	1/1	0.86	0.29	49,49,49,49	0
56	MG	DA	3322	1/1	0.86	0.15	55,55,55,55	0
56	MG	DA	3080	1/1	0.86	0.15	44,44,44,44	0
56	MG	CA	3022	1/1	0.86	0.09	70,70,70,70	0
56	MG	BA	3444	1/1	0.86	0.08	74,74,74,74	0
56	MG	DA	3632	1/1	0.86	0.12	71,71,71,71	0
56	MG	BA	3673	1/1	0.86	0.09	53,53,53,53	0
56	MG	BA	3282	1/1	0.86	0.21	49,49,49,49	0
56	MG	DA	3647	1/1	0.86	0.24	66,66,66,66	0
56	MG	BA	3482	1/1	0.86	0.12	72,72,72,72	0
56	MG	DA	3415	1/1	0.86	0.12	56,56,56,56	0
56	MG	AA	3095	1/1	0.86	0.31	58,58,58,58	0
56	MG	AA	3194	1/1	0.86	0.16	54,54,54,54	0
56	MG	DA	3454	1/1	0.86	0.10	55,55,55,55	0
56	MG	CA	3149	1/1	0.86	0.11	74,74,74,74	0
56	MG	DA	3458	1/1	0.86	0.13	71,71,71,71	0
56	MG	BA	3293	1/1	0.86	0.09	45,45,45,45	0
56	MG	BA	3714	1/1	0.86	0.11	58,58,58,58	0
56	MG	CA	3156	1/1	0.86	0.15	70,70,70,70	0
56	MG	BA	3511	1/1	0.86	0.09	39,39,39,39	0
56	MG	DA	3135	1/1	0.86	0.15	50,50,50,50	0
56	MG	DA	3018	1/1	0.87	0.18	48,48,48,48	0
56	MG	BA	3147	1/1	0.87	0.21	46,46,46,46	0
56	MG	DA	3222	1/1	0.87	0.18	71,71,71,71	0
56	MG	DA	3223	1/1	0.87	0.30	66,66,66,66	0
56	MG	DA	3024	1/1	0.87	0.20	65,65,65,65	0
56	MG	CA	3014	1/1	0.87	0.28	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	AA	3083	1/1	0.87	0.12	65,65,65,65	0
56	MG	DA	3041	1/1	0.87	0.28	57,57,57,57	0
56	MG	DA	3243	1/1	0.87	0.16	67,67,67,67	0
56	MG	CA	3119	1/1	0.87	0.15	64,64,64,64	0
56	MG	AA	3110	1/1	0.87	0.14	48,48,48,48	0
56	MG	AA	3155	1/1	0.87	0.18	70,70,70,70	0
56	MG	AA	3063	1/1	0.87	0.32	61,61,61,61	0
56	MG	DA	3554	1/1	0.87	0.27	70,70,70,70	0
56	MG	AA	3037	1/1	0.87	0.19	61,61,61,61	0
56	MG	CA	3034	1/1	0.87	0.20	65,65,65,65	0
56	MG	BA	3440	1/1	0.87	0.16	38,38,38,38	0
56	MG	BA	3735	1/1	0.87	0.11	45,45,45,45	0
56	MG	DA	3293	1/1	0.87	0.13	53,53,53,53	0
56	MG	AA	3114	1/1	0.87	0.30	66,66,66,66	0
56	MG	DA	3591	1/1	0.87	0.14	58,58,58,58	0
56	MG	DA	3592	1/1	0.87	0.18	65,65,65,65	0
56	MG	DA	3096	1/1	0.87	0.11	60,60,60,60	0
56	MG	BA	3619	1/1	0.87	0.21	40,40,40,40	0
56	MG	BA	3134	1/1	0.87	0.21	47,47,47,47	0
56	MG	DA	3352	1/1	0.87	0.13	47,47,47,47	0
56	MG	AA	3178	1/1	0.87	0.19	65,65,65,65	0
56	MG	AA	3100	1/1	0.87	0.18	40,40,40,40	0
56	MG	DA	3363	1/1	0.87	0.17	57,57,57,57	0
56	MG	CA	3049	1/1	0.87	0.29	53,53,53,53	0
56	MG	DA	3626	1/1	0.87	0.07	68,68,68,68	0
56	MG	BF	308	1/1	0.87	0.10	28,28,28,28	0
56	MG	CA	3054	1/1	0.87	0.20	48,48,48,48	0
56	MG	BG	3004	1/1	0.87	0.14	62,62,62,62	0
56	MG	BA	3644	1/1	0.87	0.09	43,43,43,43	0
56	MG	DA	3640	1/1	0.87	0.41	56,56,56,56	0
56	MG	CA	3063	1/1	0.87	0.12	61,61,61,61	0
56	MG	AA	3079	1/1	0.87	0.39	74,74,74,74	0
56	MG	AA	3190	1/1	0.87	0.21	67,67,67,67	0
56	MG	BA	3661	1/1	0.87	0.10	68,68,68,68	0
56	MG	BA	3664	1/1	0.87	0.21	68,68,68,68	0
56	MG	BA	3206	1/1	0.87	0.15	57,57,57,57	0
56	MG	BA	3146	1/1	0.87	0.15	52,52,52,52	0
56	MG	BA	3216	1/1	0.87	0.17	41,41,41,41	0
56	MG	CA	3103	1/1	0.87	0.16	83,83,83,83	0
56	MG	D0	101	1/1	0.87	0.12	63,63,63,63	0
56	MG	D5	101	1/1	0.87	0.33	53,53,53,53	0
56	MG	DA	3186	1/1	0.87	0.14	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	CA	3105	1/1	0.87	0.10	79,79,79,79	0
56	MG	DA	3487	1/1	0.87	0.17	57,57,57,57	0
56	MG	DA	3491	1/1	0.87	0.08	56,56,56,56	0
56	MG	BA	3502	1/1	0.88	0.13	43,43,43,43	0
56	MG	CA	3062	1/1	0.88	0.28	57,57,57,57	0
56	MG	DA	3069	1/1	0.88	0.09	51,51,51,51	0
56	MG	BA	3724	1/1	0.88	0.12	58,58,58,58	0
56	MG	BA	3071	1/1	0.88	0.17	55,55,55,55	0
56	MG	BA	3262	1/1	0.88	0.25	56,56,56,56	0
56	MG	AA	3111	1/1	0.88	0.10	95,95,95,95	0
56	MG	BA	3546	1/1	0.88	0.22	48,48,48,48	0
56	MG	DA	3466	1/1	0.88	0.17	56,56,56,56	0
56	MG	BA	3560	1/1	0.88	0.26	61,61,61,61	0
56	MG	BA	3086	1/1	0.88	0.25	49,49,49,49	0
56	MG	AA	3219	1/1	0.88	0.19	57,57,57,57	0
56	MG	DA	3110	1/1	0.88	0.09	49,49,49,49	0
56	MG	BB	3017	1/1	0.88	0.14	64,64,64,64	0
56	MG	AN	101	1/1	0.88	0.10	63,63,63,63	0
56	MG	BA	3164	1/1	0.88	0.22	56,56,56,56	0
56	MG	BN	3001	1/1	0.88	0.26	54,54,54,54	0
56	MG	CA	3111	1/1	0.88	0.15	64,64,64,64	0
56	MG	BA	3597	1/1	0.88	0.20	60,60,60,60	0
56	MG	DA	3127	1/1	0.88	0.10	48,48,48,48	0
56	MG	BA	3165	1/1	0.88	0.20	53,53,53,53	0
56	MG	CA	3124	1/1	0.88	0.10	61,61,61,61	0
56	MG	BQ	205	1/1	0.88	0.13	49,49,49,49	0
56	MG	DA	3519	1/1	0.88	0.09	44,44,44,44	0
56	MG	BA	3608	1/1	0.88	0.07	68,68,68,68	0
56	MG	AA	3004	1/1	0.88	0.20	55,55,55,55	0
56	MG	BA	3173	1/1	0.88	0.29	37,37,37,37	0
56	MG	DA	3543	1/1	0.88	0.12	42,42,42,42	0
56	MG	AA	3048	1/1	0.88	0.15	57,57,57,57	0
56	MG	AA	3052	1/1	0.88	0.25	60,60,60,60	0
56	MG	B7	101	1/1	0.88	0.12	43,43,43,43	0
56	MG	DA	3172	1/1	0.88	0.20	51,51,51,51	0
56	MG	DA	3562	1/1	0.88	0.15	61,61,61,61	0
56	MG	DA	3178	1/1	0.88	0.38	43,43,43,43	0
56	MG	B7	103	1/1	0.88	0.17	48,48,48,48	0
56	MG	B9	502	1/1	0.88	0.19	49,49,49,49	0
56	MG	DA	3566	1/1	0.88	0.30	71,71,71,71	0
56	MG	BA	3104	1/1	0.88	0.28	45,45,45,45	0
56	MG	BA	3620	1/1	0.88	0.14	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	CA	3008	1/1	0.88	0.25	53,53,53,53	0
56	MG	DA	3218	1/1	0.88	0.09	62,62,62,62	0
56	MG	DA	3221	1/1	0.88	0.26	49,49,49,49	0
56	MG	BA	3192	1/1	0.88	0.12	58,58,58,58	0
56	MG	CA	3018	1/1	0.88	0.10	54,54,54,54	0
56	MG	CA	3019	1/1	0.88	0.14	49,49,49,49	0
56	MG	AA	3012	1/1	0.88	0.07	56,56,56,56	0
56	MG	BA	3196	1/1	0.88	0.32	56,56,56,56	0
56	MG	BA	3197	1/1	0.88	0.11	39,39,39,39	0
56	MG	AA	3118	1/1	0.88	0.33	52,52,52,52	0
56	MG	CA	3166	1/1	0.88	0.11	59,59,59,59	0
56	MG	DA	3627	1/1	0.88	0.15	43,43,43,43	0
56	MG	CA	3168	1/1	0.88	0.23	77,77,77,77	0
56	MG	BA	3646	1/1	0.88	0.23	52,52,52,52	0
56	MG	CA	3033	1/1	0.88	0.16	68,68,68,68	0
56	MG	BA	3649	1/1	0.88	0.18	66,66,66,66	0
56	MG	BA	3422	1/1	0.88	0.17	42,42,42,42	0
56	MG	DA	3643	1/1	0.88	0.24	53,53,53,53	0
56	MG	BA	3203	1/1	0.88	0.22	32,32,32,32	0
56	MG	AA	3141	1/1	0.88	0.20	48,48,48,48	0
56	MG	AA	3106	1/1	0.88	0.21	56,56,56,56	0
56	MG	DA	3005	1/1	0.88	0.09	42,42,42,42	0
56	MG	AA	3127	1/1	0.88	0.21	62,62,62,62	0
56	MG	DA	3015	1/1	0.88	0.24	49,49,49,49	0
56	MG	CA	3046	1/1	0.88	0.31	53,53,53,53	0
56	MG	BA	3456	1/1	0.88	0.10	52,52,52,52	0
56	MG	AA	3005	1/1	0.88	0.40	66,66,66,66	0
56	MG	BA	3479	1/1	0.88	0.13	56,56,56,56	0
56	MG	DA	3034	1/1	0.88	0.10	40,40,40,40	0
56	MG	AA	3026	1/1	0.88	0.15	41,41,41,41	0
56	MG	AA	3217	1/1	0.88	0.35	67,67,67,67	0
56	MG	CA	3056	1/1	0.88	0.26	64,64,64,64	0
56	MG	BA	3238	1/1	0.88	0.27	51,51,51,51	0
56	MG	BA	3295	1/1	0.89	0.31	75,75,75,75	0
56	MG	AA	3196	1/1	0.89	0.22	65,65,65,65	0
56	MG	DA	3483	1/1	0.89	0.09	49,49,49,49	0
56	MG	BU	201	1/1	0.89	0.36	39,39,39,39	0
56	MG	BU	204	1/1	0.89	0.22	44,44,44,44	0
56	MG	CA	3172	1/1	0.89	0.10	51,51,51,51	0
56	MG	BA	3653	1/1	0.89	0.12	69,69,69,69	0
56	MG	DA	3494	1/1	0.89	0.12	78,78,78,78	0
56	MG	DA	3497	1/1	0.89	0.15	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3304	1/1	0.89	0.15	49,49,49,49	0
56	MG	BA	3083	1/1	0.89	0.26	63,63,63,63	0
56	MG	AA	3051	1/1	0.89	0.12	73,73,73,73	0
56	MG	AX	105	1/1	0.89	0.09	56,56,56,56	0
56	MG	AA	3169	1/1	0.89	0.11	76,76,76,76	0
56	MG	DA	3211	1/1	0.89	0.18	51,51,51,51	0
56	MG	DA	3008	1/1	0.89	0.14	51,51,51,51	0
56	MG	BA	3674	1/1	0.89	0.15	55,55,55,55	0
56	MG	DA	3525	1/1	0.89	0.41	70,70,70,70	0
56	MG	CA	3079	1/1	0.89	0.13	48,48,48,48	0
56	MG	AX	108	1/1	0.89	0.18	61,61,61,61	0
56	MG	DA	3536	1/1	0.89	0.13	80,80,80,80	0
56	MG	BA	3692	1/1	0.89	0.18	36,36,36,36	0
56	MG	CA	3005	1/1	0.89	0.19	54,54,54,54	0
56	MG	DA	3029	1/1	0.89	0.16	61,61,61,61	0
56	MG	CA	3006	1/1	0.89	0.10	77,77,77,77	0
56	MG	BA	3159	1/1	0.89	0.06	48,48,48,48	0
56	MG	DA	3036	1/1	0.89	0.11	35,35,35,35	0
56	MG	BA	3697	1/1	0.89	0.12	78,78,78,78	0
56	MG	BA	3588	1/1	0.89	0.12	48,48,48,48	0
56	MG	CA	3016	1/1	0.89	0.14	76,76,76,76	0
56	MG	DA	3260	1/1	0.89	0.10	40,40,40,40	0
56	MG	DA	3058	1/1	0.89	0.11	47,47,47,47	0
56	MG	BA	3703	1/1	0.89	0.10	31,31,31,31	0
56	MG	DA	3268	1/1	0.89	0.07	40,40,40,40	0
56	MG	DA	3278	1/1	0.89	0.10	47,47,47,47	0
56	MG	CA	3123	1/1	0.89	0.12	77,77,77,77	0
56	MG	DA	3593	1/1	0.89	0.21	73,73,73,73	0
56	MG	BA	3020	1/1	0.89	0.20	45,45,45,45	0
56	MG	DA	3602	1/1	0.89	0.16	52,52,52,52	0
56	MG	DA	3603	1/1	0.89	0.14	55,55,55,55	0
56	MG	BA	3225	1/1	0.89	0.31	62,62,62,62	0
56	MG	BA	3102	1/1	0.89	0.22	52,52,52,52	0
56	MG	AA	3137	1/1	0.89	0.13	42,42,42,42	0
56	MG	CA	3027	1/1	0.89	0.17	57,57,57,57	0
56	MG	CA	3029	1/1	0.89	0.17	59,59,59,59	0
56	MG	CA	3140	1/1	0.89	0.19	73,73,73,73	0
56	MG	BA	3244	1/1	0.89	0.26	65,65,65,65	0
56	MG	AA	3016	1/1	0.89	0.09	63,63,63,63	0
56	MG	DA	3100	1/1	0.89	0.26	56,56,56,56	0
56	MG	BA	3615	1/1	0.89	0.15	36,36,36,36	0
56	MG	DA	3383	1/1	0.89	0.09	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	DA	3387	1/1	0.89	0.08	56,56,56,56	0
56	MG	BA	3736	1/1	0.89	0.10	48,48,48,48	0
56	MG	BA	3259	1/1	0.89	0.30	27,27,27,27	0
56	MG	BA	3108	1/1	0.89	0.15	55,55,55,55	0
56	MG	DA	3414	1/1	0.89	0.10	49,49,49,49	0
56	MG	DA	3652	1/1	0.89	0.14	60,60,60,60	0
56	MG	AA	3139	1/1	0.89	0.20	56,56,56,56	0
56	MG	DA	3119	1/1	0.89	0.14	44,44,44,44	0
56	MG	DB	3003	1/1	0.89	0.13	63,63,63,63	0
56	MG	CA	3151	1/1	0.89	0.12	80,80,80,80	0
56	MG	DA	3440	1/1	0.89	0.19	33,33,33,33	0
56	MG	DD	306	1/1	0.89	0.85	44,44,44,44	0
56	MG	DE	303	1/1	0.89	0.14	41,41,41,41	0
56	MG	DA	3450	1/1	0.89	0.09	43,43,43,43	0
56	MG	AA	3081	1/1	0.89	0.23	41,41,41,41	0
56	MG	DA	3455	1/1	0.89	0.13	60,60,60,60	0
56	MG	BA	3464	1/1	0.89	0.07	43,43,43,43	0
56	MG	AA	3033	1/1	0.89	0.24	64,64,64,64	0
56	MG	D3	101	1/1	0.89	0.11	63,63,63,63	0
56	MG	AA	3221	1/1	0.89	0.22	64,64,64,64	0
56	MG	BA	3641	1/1	0.89	0.17	45,45,45,45	0
56	MG	AA	3098	1/1	0.89	0.21	72,72,72,72	0
56	MG	DA	3141	1/1	0.89	0.16	62,62,62,62	0
56	MG	AA	3074	1/1	0.89	0.25	47,47,47,47	0
56	MG	BA	3391	1/1	0.90	0.21	48,48,48,48	0
56	MG	DA	3092	1/1	0.90	0.24	39,39,39,39	0
56	MG	B0	102	1/1	0.90	0.15	40,40,40,40	0
56	MG	DA	3095	1/1	0.90	0.17	61,61,61,61	0
56	MG	DA	3445	1/1	0.90	0.19	39,39,39,39	0
56	MG	BA	3068	1/1	0.90	0.33	54,54,54,54	0
56	MG	DA	3452	1/1	0.90	0.10	56,56,56,56	0
56	MG	DA	3453	1/1	0.90	0.14	61,61,61,61	0
56	MG	AA	3025	1/1	0.90	0.07	69,69,69,69	0
56	MG	BA	3643	1/1	0.90	0.14	43,43,43,43	0
56	MG	DA	3106	1/1	0.90	0.08	41,41,41,41	0
56	MG	BA	3072	1/1	0.90	0.24	45,45,45,45	0
56	MG	CA	3126	1/1	0.90	0.10	61,61,61,61	0
56	MG	AA	3168	1/1	0.90	0.13	68,68,68,68	0
56	MG	DA	3113	1/1	0.90	0.15	43,43,43,43	0
56	MG	CA	3132	1/1	0.90	0.15	70,70,70,70	0
56	MG	DA	3471	1/1	0.90	0.12	37,37,37,37	0
56	MG	DA	3478	1/1	0.90	0.11	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	AA	3202	1/1	0.90	0.16	76,76,76,76	0
56	MG	AA	3203	1/1	0.90	0.13	63,63,63,63	0
56	MG	BA	3241	1/1	0.90	0.17	63,63,63,63	0
56	MG	BA	3654	1/1	0.90	0.13	25,25,25,25	0
56	MG	AA	3097	1/1	0.90	0.21	43,43,43,43	0
56	MG	DA	3125	1/1	0.90	0.15	48,48,48,48	0
56	MG	BA	3245	1/1	0.90	0.09	47,47,47,47	0
56	MG	CA	3009	1/1	0.90	0.07	47,47,47,47	0
56	MG	BA	3463	1/1	0.90	0.12	55,55,55,55	0
56	MG	DA	3495	1/1	0.90	0.19	39,39,39,39	0
56	MG	DA	3496	1/1	0.90	0.23	53,53,53,53	0
56	MG	AA	3108	1/1	0.90	0.15	67,67,67,67	0
56	MG	DA	3139	1/1	0.90	0.12	40,40,40,40	0
56	MG	BA	3467	1/1	0.90	0.13	40,40,40,40	0
56	MG	DA	3150	1/1	0.90	0.08	64,64,64,64	0
56	MG	DA	3153	1/1	0.90	0.13	38,38,38,38	0
56	MG	BA	3003	1/1	0.90	0.14	43,43,43,43	0
56	MG	DA	3157	1/1	0.90	0.37	62,62,62,62	0
56	MG	DA	3158	1/1	0.90	0.22	57,57,57,57	0
56	MG	DA	3517	1/1	0.90	0.11	50,50,50,50	0
56	MG	BA	3675	1/1	0.90	0.18	49,49,49,49	0
56	MG	AA	3210	1/1	0.90	0.09	40,40,40,40	0
56	MG	AA	3041	1/1	0.90	0.17	49,49,49,49	0
56	MG	DA	3167	1/1	0.90	0.19	48,48,48,48	0
56	MG	BA	3269	1/1	0.90	0.28	34,34,34,34	0
56	MG	AA	3216	1/1	0.90	0.20	58,58,58,58	0
56	MG	DA	3538	1/1	0.90	0.08	44,44,44,44	0
56	MG	BA	3277	1/1	0.90	0.18	45,45,45,45	0
56	MG	DA	3544	1/1	0.90	0.12	51,51,51,51	0
56	MG	DA	3176	1/1	0.90	0.18	39,39,39,39	0
56	MG	CA	3160	1/1	0.90	0.17	59,59,59,59	0
56	MG	BA	3510	1/1	0.90	0.18	40,40,40,40	0
56	MG	AA	3140	1/1	0.90	0.08	70,70,70,70	0
56	MG	BA	3709	1/1	0.90	0.20	86,86,86,86	0
56	MG	BA	3105	1/1	0.90	0.33	34,34,34,34	0
56	MG	DA	3210	1/1	0.90	0.23	40,40,40,40	0
56	MG	CA	3036	1/1	0.90	0.08	68,68,68,68	0
56	MG	BA	3713	1/1	0.90	0.10	66,66,66,66	0
56	MG	DA	3567	1/1	0.90	0.19	62,62,62,62	0
56	MG	CA	3039	1/1	0.90	0.25	72,72,72,72	0
56	MG	DA	3587	1/1	0.90	0.06	64,64,64,64	0
56	MG	BA	3545	1/1	0.90	0.20	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3717	1/1	0.90	0.21	57,57,57,57	0
56	MG	BA	3186	1/1	0.90	0.10	53,53,53,53	0
56	MG	BA	3291	1/1	0.90	0.10	41,41,41,41	0
56	MG	AA	3099	1/1	0.90	0.18	60,60,60,60	0
56	MG	DA	3003	1/1	0.90	0.10	56,56,56,56	0
56	MG	BA	3111	1/1	0.90	0.14	53,53,53,53	0
56	MG	DA	3607	1/1	0.90	0.09	45,45,45,45	0
56	MG	BA	3296	1/1	0.90	0.23	46,46,46,46	0
56	MG	BA	3112	1/1	0.90	0.10	38,38,38,38	0
56	MG	BB	3001	1/1	0.90	0.16	54,54,54,54	0
56	MG	BA	3298	1/1	0.90	0.09	49,49,49,49	0
56	MG	DA	3022	1/1	0.90	0.10	45,45,45,45	0
56	MG	BB	3004	1/1	0.90	0.18	54,54,54,54	0
56	MG	BA	3044	1/1	0.90	0.20	42,42,42,42	0
56	MG	BA	3048	1/1	0.90	0.15	31,31,31,31	0
56	MG	BA	3601	1/1	0.90	0.27	64,64,64,64	0
56	MG	BA	3604	1/1	0.90	0.19	72,72,72,72	0
56	MG	BD	306	1/1	0.90	0.08	46,46,46,46	0
56	MG	BA	3059	1/1	0.90	0.34	45,45,45,45	0
56	MG	DA	3288	1/1	0.90	0.17	47,47,47,47	0
56	MG	DA	3291	1/1	0.90	0.15	35,35,35,35	0
56	MG	DA	3040	1/1	0.90	0.09	42,42,42,42	0
56	MG	BA	3201	1/1	0.90	0.20	36,36,36,36	0
56	MG	DA	3307	1/1	0.90	0.21	37,37,37,37	0
56	MG	DA	3043	1/1	0.90	0.27	54,54,54,54	0
56	MG	DA	3318	1/1	0.90	0.11	45,45,45,45	0
56	MG	DA	3321	1/1	0.90	0.15	41,41,41,41	0
56	MG	DA	3048	1/1	0.90	0.21	37,37,37,37	0
56	MG	DA	3329	1/1	0.90	0.07	53,53,53,53	0
56	MG	BA	3340	1/1	0.90	0.08	57,57,57,57	0
56	MG	DA	3056	1/1	0.90	0.21	43,43,43,43	0
56	MG	DA	3353	1/1	0.90	0.10	62,62,62,62	0
56	MG	DF	305	1/1	0.90	0.16	39,39,39,39	0
56	MG	AA	3038	1/1	0.90	0.30	66,66,66,66	0
56	MG	AA	3126	1/1	0.90	0.24	54,54,54,54	0
56	MG	AA	3135	1/1	0.90	0.12	41,41,41,41	0
56	MG	DA	3365	1/1	0.90	0.11	40,40,40,40	0
56	MG	CA	3099	1/1	0.90	0.17	65,65,65,65	0
56	MG	BA	3210	1/1	0.90	0.13	34,34,34,34	0
56	MG	BA	3376	1/1	0.90	0.08	48,48,48,48	0
56	MG	BV	201	1/1	0.90	0.17	53,53,53,53	0
56	MG	DA	3078	1/1	0.90	0.10	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3384	1/1	0.90	0.17	60,60,60,60	0
56	MG	DA	3053	1/1	0.91	0.11	42,42,42,42	0
56	MG	BA	3719	1/1	0.91	0.08	25,25,25,25	0
56	MG	DA	3216	1/1	0.91	0.16	31,31,31,31	0
56	MG	BA	3127	1/1	0.91	0.16	50,50,50,50	0
56	MG	BA	3129	1/1	0.91	0.14	36,36,36,36	0
56	MG	BA	3731	1/1	0.91	0.12	55,55,55,55	0
56	MG	BA	3466	1/1	0.91	0.14	61,61,61,61	0
56	MG	BA	3230	1/1	0.91	0.15	46,46,46,46	0
56	MG	DA	3068	1/1	0.91	0.09	55,55,55,55	0
56	MG	BA	3475	1/1	0.91	0.18	36,36,36,36	0
56	MG	CA	3028	1/1	0.91	0.26	43,43,43,43	0
56	MG	BA	3231	1/1	0.91	0.23	38,38,38,38	0
56	MG	BB	3002	1/1	0.91	0.16	59,59,59,59	0
56	MG	DA	3249	1/1	0.91	0.18	28,28,28,28	0
56	MG	BA	3233	1/1	0.91	0.23	47,47,47,47	0
56	MG	BA	3488	1/1	0.91	0.14	35,35,35,35	0
56	MG	DA	3524	1/1	0.91	0.09	28,28,28,28	0
56	MG	DA	3086	1/1	0.91	0.19	43,43,43,43	0
56	MG	BA	3312	1/1	0.91	0.12	58,58,58,58	0
56	MG	DA	3266	1/1	0.91	0.13	43,43,43,43	0
56	MG	DA	3528	1/1	0.91	0.08	56,56,56,56	0
56	MG	BB	3006	1/1	0.91	0.16	39,39,39,39	0
56	MG	AA	3020	1/1	0.91	0.07	77,77,77,77	0
56	MG	DA	3269	1/1	0.91	0.13	48,48,48,48	0
56	MG	BA	3016	1/1	0.91	0.19	33,33,33,33	0
56	MG	BA	3336	1/1	0.91	0.21	54,54,54,54	0
56	MG	DA	3280	1/1	0.91	0.09	57,57,57,57	0
56	MG	BA	3098	1/1	0.91	0.15	35,35,35,35	0
56	MG	DA	3105	1/1	0.91	0.12	48,48,48,48	0
56	MG	BD	312	1/1	0.91	0.24	80,80,80,80	0
56	MG	BE	301	1/1	0.91	0.21	43,43,43,43	0
56	MG	DA	3108	1/1	0.91	0.17	37,37,37,37	0
56	MG	BA	3650	1/1	0.91	0.20	45,45,45,45	0
56	MG	BG	3003	1/1	0.91	0.09	42,42,42,42	0
56	MG	AA	3055	1/1	0.91	0.17	50,50,50,50	0
56	MG	BA	3535	1/1	0.91	0.11	37,37,37,37	0
56	MG	DA	3578	1/1	0.91	0.17	49,49,49,49	0
56	MG	BA	3142	1/1	0.91	0.39	46,46,46,46	0
56	MG	DA	3118	1/1	0.91	0.06	39,39,39,39	0
56	MG	BA	3356	1/1	0.91	0.15	56,56,56,56	0
56	MG	BA	3663	1/1	0.91	0.23	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	DA	3342	1/1	0.91	0.08	52,52,52,52	0
56	MG	DA	3350	1/1	0.91	0.07	32,32,32,32	0
56	MG	BA	3101	1/1	0.91	0.12	35,35,35,35	0
56	MG	BA	3549	1/1	0.91	0.15	27,27,27,27	0
56	MG	BA	3554	1/1	0.91	0.16	31,31,31,31	0
56	MG	DA	3606	1/1	0.91	0.08	58,58,58,58	0
56	MG	BV	203	1/1	0.91	0.32	46,46,46,46	0
56	MG	BA	3559	1/1	0.91	0.14	48,48,48,48	0
56	MG	BA	3257	1/1	0.91	0.26	38,38,38,38	0
56	MG	BA	3678	1/1	0.91	0.23	53,53,53,53	0
56	MG	DA	3617	1/1	0.91	0.19	58,58,58,58	0
56	MG	DA	3386	1/1	0.91	0.11	56,56,56,56	0
56	MG	BA	3373	1/1	0.91	0.17	36,36,36,36	0
56	MG	DA	3388	1/1	0.91	0.08	54,54,54,54	0
56	MG	DA	3390	1/1	0.91	0.08	42,42,42,42	0
56	MG	DA	3140	1/1	0.91	0.22	54,54,54,54	0
56	MG	AA	3119	1/1	0.91	0.28	63,63,63,63	0
56	MG	CA	3074	1/1	0.91	0.22	54,54,54,54	0
56	MG	DA	3412	1/1	0.91	0.18	30,30,30,30	0
56	MG	DA	3152	1/1	0.91	0.13	50,50,50,50	0
56	MG	DA	3636	1/1	0.91	0.12	61,61,61,61	0
56	MG	DA	3012	1/1	0.91	0.14	57,57,57,57	0
56	MG	CA	3075	1/1	0.91	0.24	76,76,76,76	0
56	MG	DA	3155	1/1	0.91	0.20	50,50,50,50	0
56	MG	DA	3156	1/1	0.91	0.25	29,29,29,29	0
56	MG	CA	3077	1/1	0.91	0.22	53,53,53,53	0
56	MG	AA	3043	1/1	0.91	0.30	74,74,74,74	0
56	MG	DA	3159	1/1	0.91	0.08	51,51,51,51	0
56	MG	BA	3151	1/1	0.91	0.11	52,52,52,52	0
56	MG	DB	3007	1/1	0.91	0.22	45,45,45,45	0
56	MG	AA	3027	1/1	0.91	0.08	55,55,55,55	0
56	MG	BA	3039	1/1	0.91	0.14	42,42,42,42	0
56	MG	DB	3012	1/1	0.91	0.23	59,59,59,59	0
56	MG	CA	3002	1/1	0.91	0.13	62,62,62,62	0
56	MG	DA	3168	1/1	0.91	0.27	48,48,48,48	0
56	MG	DA	3459	1/1	0.91	0.09	33,33,33,33	0
56	MG	AA	3173	1/1	0.91	0.08	32,32,32,32	0
56	MG	AA	3001	1/1	0.91	0.11	68,68,68,68	0
56	MG	DN	5001	1/1	0.91	0.09	75,75,75,75	0
56	MG	DA	3171	1/1	0.91	0.16	39,39,39,39	0
56	MG	DV	202	1/1	0.91	0.23	63,63,63,63	0
56	MG	BA	3209	1/1	0.91	0.16	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3085	1/1	0.91	0.31	48,48,48,48	0
56	MG	BA	3214	1/1	0.91	0.21	53,53,53,53	0
56	MG	AA	3070	1/1	0.91	0.11	75,75,75,75	0
56	MG	CA	3011	1/1	0.91	0.27	42,42,42,42	0
56	MG	DA	3044	1/1	0.91	0.16	46,46,46,46	0
56	MG	BA	3053	1/1	0.91	0.23	39,39,39,39	0
56	MG	DA	3051	1/1	0.91	0.08	46,46,46,46	0
56	MG	CA	3010	1/1	0.92	0.10	32,32,32,32	0
56	MG	CA	3152	1/1	0.92	0.19	55,55,55,55	0
56	MG	AX	102	1/1	0.92	0.19	74,74,74,74	0
56	MG	BA	3684	1/1	0.92	0.15	58,58,58,58	0
56	MG	BA	3690	1/1	0.92	0.15	53,53,53,53	0
56	MG	AA	3082	1/1	0.92	0.21	39,39,39,39	0
56	MG	DA	3145	1/1	0.92	0.14	65,65,65,65	0
56	MG	DA	3147	1/1	0.92	0.11	53,53,53,53	0
56	MG	DA	3148	1/1	0.92	0.16	47,47,47,47	0
56	MG	BA	3537	1/1	0.92	0.23	31,31,31,31	0
56	MG	BA	3694	1/1	0.92	0.32	56,56,56,56	0
56	MG	BA	3541	1/1	0.92	0.13	30,30,30,30	0
56	MG	CA	3163	1/1	0.92	0.08	65,65,65,65	0
56	MG	AA	3040	1/1	0.92	0.11	55,55,55,55	0
56	MG	BA	3132	1/1	0.92	0.08	35,35,35,35	0
56	MG	BA	3204	1/1	0.92	0.24	25,25,25,25	0
56	MG	BA	3548	1/1	0.92	0.20	50,50,50,50	0
56	MG	BA	3133	1/1	0.92	0.16	32,32,32,32	0
56	MG	BA	3550	1/1	0.92	0.18	45,45,45,45	0
56	MG	BA	3066	1/1	0.92	0.18	44,44,44,44	0
56	MG	BA	3558	1/1	0.92	0.10	35,35,35,35	0
56	MG	AA	3105	1/1	0.92	0.15	46,46,46,46	0
56	MG	CX	102	1/1	0.92	0.11	61,61,61,61	0
56	MG	BA	3313	1/1	0.92	0.16	36,36,36,36	0
56	MG	AA	3011	1/1	0.92	0.34	55,55,55,55	0
56	MG	DA	3002	1/1	0.92	0.26	55,55,55,55	0
56	MG	BA	3211	1/1	0.92	0.16	38,38,38,38	0
56	MG	BA	3728	1/1	0.92	0.22	32,32,32,32	0
56	MG	DA	3007	1/1	0.92	0.15	30,30,30,30	0
56	MG	DA	3181	1/1	0.92	0.17	36,36,36,36	0
56	MG	DA	3504	1/1	0.92	0.07	44,44,44,44	0
56	MG	DA	3509	1/1	0.92	0.14	55,55,55,55	0
56	MG	DA	3183	1/1	0.92	0.12	54,54,54,54	0
56	MG	BA	3139	1/1	0.92	0.18	51,51,51,51	0
56	MG	DA	3512	1/1	0.92	0.33	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	AA	3184	1/1	0.92	0.07	72,72,72,72	0
56	MG	BA	3591	1/1	0.92	0.14	48,48,48,48	0
56	MG	AA	3211	1/1	0.92	0.15	36,36,36,36	0
56	MG	DA	3521	1/1	0.92	0.12	62,62,62,62	0
56	MG	DA	3522	1/1	0.92	0.10	61,61,61,61	0
56	MG	DA	3208	1/1	0.92	0.17	43,43,43,43	0
56	MG	DA	3016	1/1	0.92	0.23	37,37,37,37	0
56	MG	BA	3594	1/1	0.92	0.14	42,42,42,42	0
56	MG	BA	3005	1/1	0.92	0.14	36,36,36,36	0
56	MG	DA	3215	1/1	0.92	0.24	29,29,29,29	0
56	MG	CA	3052	1/1	0.92	0.12	39,39,39,39	0
56	MG	BA	3145	1/1	0.92	0.29	38,38,38,38	0
56	MG	BA	3599	1/1	0.92	0.12	46,46,46,46	0
56	MG	BA	3368	1/1	0.92	0.15	35,35,35,35	0
56	MG	DA	3032	1/1	0.92	0.10	46,46,46,46	0
56	MG	BA	3082	1/1	0.92	0.16	41,41,41,41	0
56	MG	DA	3550	1/1	0.92	0.04	53,53,53,53	0
56	MG	BA	3008	1/1	0.92	0.08	50,50,50,50	0
56	MG	AA	3042	1/1	0.92	0.13	44,44,44,44	0
56	MG	BA	3017	1/1	0.92	0.13	44,44,44,44	0
56	MG	BD	305	1/1	0.92	0.20	48,48,48,48	0
56	MG	AA	3159	1/1	0.92	0.18	57,57,57,57	0
56	MG	AA	3086	1/1	0.92	0.07	51,51,51,51	0
56	MG	AA	3077	1/1	0.92	0.30	65,65,65,65	0
56	MG	CA	3072	1/1	0.92	0.19	38,38,38,38	0
56	MG	BE	308	1/1	0.92	0.18	52,52,52,52	0
56	MG	BF	302	1/1	0.92	0.16	46,46,46,46	0
56	MG	BA	3028	1/1	0.92	0.10	48,48,48,48	0
56	MG	DA	3057	1/1	0.92	0.13	52,52,52,52	0
56	MG	CA	3076	1/1	0.92	0.18	40,40,40,40	0
56	MG	DA	3059	1/1	0.92	0.10	46,46,46,46	0
56	MG	DA	3274	1/1	0.92	0.10	52,52,52,52	0
56	MG	BA	3246	1/1	0.92	0.14	46,46,46,46	0
56	MG	DA	3594	1/1	0.92	0.10	47,47,47,47	0
56	MG	BA	3621	1/1	0.92	0.13	74,74,74,74	0
56	MG	AA	3054	1/1	0.92	0.15	45,45,45,45	0
56	MG	DA	3064	1/1	0.92	0.14	50,50,50,50	0
56	MG	DA	3285	1/1	0.92	0.10	55,55,55,55	0
56	MG	CA	3084	1/1	0.92	0.17	64,64,64,64	0
56	MG	CA	3085	1/1	0.92	0.18	43,43,43,43	0
56	MG	DA	3610	1/1	0.92	0.09	54,54,54,54	0
56	MG	BA	3249	1/1	0.92	0.17	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3031	1/1	0.92	0.58	41,41,41,41	0
56	MG	DA	3294	1/1	0.92	0.11	47,47,47,47	0
56	MG	DA	3077	1/1	0.92	0.14	50,50,50,50	0
56	MG	BA	3166	1/1	0.92	0.21	59,59,59,59	0
56	MG	BR	201	1/1	0.92	0.20	51,51,51,51	0
56	MG	CA	3108	1/1	0.92	0.13	52,52,52,52	0
56	MG	AA	3197	1/1	0.92	0.07	69,69,69,69	0
56	MG	DA	3087	1/1	0.92	0.14	49,49,49,49	0
56	MG	DA	3630	1/1	0.92	0.13	40,40,40,40	0
56	MG	DA	3325	1/1	0.92	0.11	36,36,36,36	0
56	MG	DA	3089	1/1	0.92	0.10	57,57,57,57	0
56	MG	BA	3457	1/1	0.92	0.10	57,57,57,57	0
56	MG	AD	502	1/1	0.92	0.22	43,43,43,43	0
56	MG	BA	3043	1/1	0.92	0.16	52,52,52,52	0
56	MG	BW	204	1/1	0.92	0.15	35,35,35,35	0
56	MG	DA	3641	1/1	0.92	0.21	61,61,61,61	0
56	MG	DA	3097	1/1	0.92	0.19	61,61,61,61	0
56	MG	DA	3098	1/1	0.92	0.63	43,43,43,43	0
56	MG	BA	3648	1/1	0.92	0.22	49,49,49,49	0
56	MG	DA	3653	1/1	0.92	0.09	60,60,60,60	0
56	MG	BA	3275	1/1	0.92	0.16	46,46,46,46	0
56	MG	AF	3001	1/1	0.92	0.17	61,61,61,61	0
56	MG	DB	3002	1/1	0.92	0.17	56,56,56,56	0
56	MG	DA	3366	1/1	0.92	0.19	36,36,36,36	0
56	MG	DB	3004	1/1	0.92	0.13	68,68,68,68	0
56	MG	DA	3376	1/1	0.92	0.07	31,31,31,31	0
56	MG	DB	3008	1/1	0.92	0.14	45,45,45,45	0
56	MG	DA	3377	1/1	0.92	0.14	59,59,59,59	0
56	MG	BA	3651	1/1	0.92	0.20	45,45,45,45	0
56	MG	AA	3034	1/1	0.92	0.14	48,48,48,48	0
56	MG	BA	3280	1/1	0.92	0.35	69,69,69,69	0
56	MG	BA	3281	1/1	0.92	0.20	52,52,52,52	0
56	MG	DF	301	1/1	0.92	0.24	32,32,32,32	0
56	MG	BA	3110	1/1	0.92	0.27	55,55,55,55	0
56	MG	DA	3400	1/1	0.92	0.10	42,42,42,42	0
56	MG	BA	3284	1/1	0.92	0.11	54,54,54,54	0
56	MG	BA	3287	1/1	0.92	0.21	53,53,53,53	0
56	MG	DQ	203	1/1	0.92	0.09	57,57,57,57	0
56	MG	BA	3050	1/1	0.92	0.12	21,21,21,21	0
56	MG	DR	201	1/1	0.92	0.24	65,65,65,65	0
56	MG	CA	3004	1/1	0.92	0.09	96,96,96,96	0
56	MG	DW	201	1/1	0.92	0.07	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	CA	3143	1/1	0.92	0.09	87,87,87,87	0
56	MG	BA	3671	1/1	0.92	0.13	57,57,57,57	0
56	MG	DA	3420	1/1	0.92	0.10	51,51,51,51	0
56	MG	BA	3501	1/1	0.92	0.13	59,59,59,59	0
56	MG	BA	3052	1/1	0.92	0.14	29,29,29,29	0
56	MG	BA	3290	1/1	0.92	0.14	49,49,49,49	0
56	MG	AA	3201	1/1	0.92	0.14	67,67,67,67	0
56	MG	DA	3447	1/1	0.92	0.06	56,56,56,56	0
56	MG	DA	3441	1/1	0.93	0.24	53,53,53,53	0
56	MG	BA	3030	1/1	0.93	0.23	51,51,51,51	0
56	MG	AA	3028	1/1	0.93	0.21	60,60,60,60	0
56	MG	BY	201	1/1	0.93	0.26	58,58,58,58	0
56	MG	AA	3207	1/1	0.93	0.16	45,45,45,45	0
56	MG	CA	3145	1/1	0.93	0.05	43,43,43,43	0
56	MG	AA	3148	1/1	0.93	0.09	66,66,66,66	0
56	MG	BA	3481	1/1	0.93	0.09	38,38,38,38	0
56	MG	DA	3146	1/1	0.93	0.16	34,34,34,34	0
56	MG	DA	3457	1/1	0.93	0.12	37,37,37,37	0
56	MG	B1	3001	1/1	0.93	0.32	54,54,54,54	0
56	MG	BA	3087	1/1	0.93	0.07	61,61,61,61	0
56	MG	B3	102	1/1	0.93	0.10	59,59,59,59	0
56	MG	DA	3461	1/1	0.93	0.07	41,41,41,41	0
56	MG	B3	103	1/1	0.93	0.23	41,41,41,41	0
56	MG	BA	3484	1/1	0.93	0.15	54,54,54,54	0
56	MG	BA	3660	1/1	0.93	0.19	71,71,71,71	0
56	MG	BA	3138	1/1	0.93	0.17	46,46,46,46	0
56	MG	AA	3181	1/1	0.93	0.17	57,57,57,57	0
56	MG	AA	3058	1/1	0.93	0.18	50,50,50,50	0
56	MG	DA	3480	1/1	0.93	0.09	52,52,52,52	0
56	MG	BA	3666	1/1	0.93	0.15	61,61,61,61	0
56	MG	BA	3668	1/1	0.93	0.10	38,38,38,38	0
56	MG	BA	3498	1/1	0.93	0.09	39,39,39,39	0
56	MG	BA	3047	1/1	0.93	0.10	47,47,47,47	0
56	MG	BA	3672	1/1	0.93	0.21	48,48,48,48	0
56	MG	DA	3489	1/1	0.93	0.05	36,36,36,36	0
56	MG	BA	3292	1/1	0.93	0.08	63,63,63,63	0
56	MG	BA	3097	1/1	0.93	0.20	33,33,33,33	0
56	MG	BA	3509	1/1	0.93	0.09	27,27,27,27	0
56	MG	BA	3294	1/1	0.93	0.22	37,37,37,37	0
56	MG	CA	3012	1/1	0.93	0.06	49,49,49,49	0
56	MG	CA	3013	1/1	0.93	0.06	51,51,51,51	0
56	MG	BA	3680	1/1	0.93	0.19	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	AA	3158	1/1	0.93	0.12	44,44,44,44	0
56	MG	DA	3180	1/1	0.93	0.29	46,46,46,46	0
56	MG	AA	3080	1/1	0.93	0.13	53,53,53,53	0
56	MG	BA	3686	1/1	0.93	0.09	25,25,25,25	0
56	MG	DA	3184	1/1	0.93	0.18	45,45,45,45	0
56	MG	CA	3020	1/1	0.93	0.14	47,47,47,47	0
56	MG	BA	3100	1/1	0.93	0.29	48,48,48,48	0
56	MG	DA	3189	1/1	0.93	0.07	55,55,55,55	0
56	MG	DA	3514	1/1	0.93	0.09	39,39,39,39	0
56	MG	DA	3191	1/1	0.93	0.13	47,47,47,47	0
56	MG	BA	3691	1/1	0.93	0.14	49,49,49,49	0
56	MG	DA	3196	1/1	0.93	0.22	44,44,44,44	0
56	MG	DA	3197	1/1	0.93	0.27	36,36,36,36	0
56	MG	BA	3218	1/1	0.93	0.09	62,62,62,62	0
56	MG	AA	3101	1/1	0.93	0.10	56,56,56,56	0
56	MG	BA	3306	1/1	0.93	0.14	48,48,48,48	0
56	MG	BA	3307	1/1	0.93	0.21	33,33,33,33	0
56	MG	BA	3699	1/1	0.93	0.12	56,56,56,56	0
56	MG	DA	3213	1/1	0.93	0.17	44,44,44,44	0
56	MG	DA	3535	1/1	0.93	0.13	33,33,33,33	0
56	MG	CA	3031	1/1	0.93	0.27	53,53,53,53	0
56	MG	BA	3547	1/1	0.93	0.11	31,31,31,31	0
56	MG	AA	3014	1/1	0.93	0.11	28,28,28,28	0
56	MG	BA	3311	1/1	0.93	0.11	42,42,42,42	0
56	MG	BA	3009	1/1	0.93	0.10	25,25,25,25	0
56	MG	BA	3551	1/1	0.93	0.18	25,25,25,25	0
56	MG	DA	3547	1/1	0.93	0.09	41,41,41,41	0
56	MG	CA	3037	1/1	0.93	0.21	67,67,67,67	0
56	MG	DA	3225	1/1	0.93	0.14	45,45,45,45	0
56	MG	BA	3060	1/1	0.93	0.28	40,40,40,40	0
56	MG	DA	3555	1/1	0.93	0.10	41,41,41,41	0
56	MG	BA	3011	1/1	0.93	0.06	37,37,37,37	0
56	MG	DA	3239	1/1	0.93	0.14	39,39,39,39	0
56	MG	BA	3332	1/1	0.93	0.16	39,39,39,39	0
56	MG	BA	3107	1/1	0.93	0.19	40,40,40,40	0
56	MG	CA	3043	1/1	0.93	0.15	49,49,49,49	0
56	MG	BA	3235	1/1	0.93	0.07	47,47,47,47	0
56	MG	DA	3251	1/1	0.93	0.11	54,54,54,54	0
56	MG	DA	3572	1/1	0.93	0.09	53,53,53,53	0
56	MG	BA	3573	1/1	0.93	0.14	56,56,56,56	0
56	MG	BA	3163	1/1	0.93	0.09	50,50,50,50	0
56	MG	DA	3582	1/1	0.93	0.07	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	AA	3053	1/1	0.93	0.15	49,49,49,49	0
56	MG	DA	3046	1/1	0.93	0.16	56,56,56,56	0
56	MG	BA	3242	1/1	0.93	0.23	48,48,48,48	0
56	MG	BA	3732	1/1	0.93	0.10	61,61,61,61	0
56	MG	AA	3050	1/1	0.93	0.15	63,63,63,63	0
56	MG	BA	3366	1/1	0.93	0.15	63,63,63,63	0
56	MG	DA	3597	1/1	0.93	0.12	47,47,47,47	0
56	MG	DA	3273	1/1	0.93	0.06	30,30,30,30	0
56	MG	DA	3599	1/1	0.93	0.10	72,72,72,72	0
56	MG	CA	3055	1/1	0.93	0.26	62,62,62,62	0
56	MG	BA	3737	1/1	0.93	0.19	60,60,60,60	0
56	MG	BA	3738	1/1	0.93	0.07	59,59,59,59	0
56	MG	AA	3116	1/1	0.93	0.17	52,52,52,52	0
56	MG	DA	3608	1/1	0.93	0.14	57,57,57,57	0
56	MG	AA	3107	1/1	0.93	0.18	44,44,44,44	0
56	MG	BA	3169	1/1	0.93	0.52	46,46,46,46	0
56	MG	BA	3114	1/1	0.93	0.27	51,51,51,51	0
56	MG	DA	3287	1/1	0.93	0.17	53,53,53,53	0
56	MG	BA	3252	1/1	0.93	0.07	55,55,55,55	0
56	MG	CA	3068	1/1	0.93	0.13	41,41,41,41	0
56	MG	BA	3382	1/1	0.93	0.08	51,51,51,51	0
56	MG	BA	3253	1/1	0.93	0.12	51,51,51,51	0
56	MG	BB	3008	1/1	0.93	0.08	35,35,35,35	0
56	MG	DA	3075	1/1	0.93	0.07	44,44,44,44	0
56	MG	BA	3609	1/1	0.93	0.13	46,46,46,46	0
56	MG	BA	3387	1/1	0.93	0.10	48,48,48,48	0
56	MG	DA	3319	1/1	0.93	0.05	53,53,53,53	0
56	MG	BA	3256	1/1	0.93	0.10	58,58,58,58	0
56	MG	BB	3018	1/1	0.93	0.14	60,60,60,60	0
56	MG	BA	3115	1/1	0.93	0.29	36,36,36,36	0
56	MG	BA	3116	1/1	0.93	0.20	31,31,31,31	0
56	MG	DA	3330	1/1	0.93	0.10	37,37,37,37	0
56	MG	AK	3001	1/1	0.93	0.17	45,45,45,45	0
56	MG	BA	3188	1/1	0.93	0.13	37,37,37,37	0
56	MG	DA	3644	1/1	0.93	0.10	42,42,42,42	0
56	MG	BE	305	1/1	0.93	0.23	42,42,42,42	0
56	MG	BA	3264	1/1	0.93	0.19	30,30,30,30	0
56	MG	CA	3093	1/1	0.93	0.06	53,53,53,53	0
56	MG	BA	3432	1/1	0.93	0.12	60,60,60,60	0
56	MG	DA	3359	1/1	0.93	0.12	46,46,46,46	0
56	MG	DA	3360	1/1	0.93	0.10	41,41,41,41	0
56	MG	BF	304	1/1	0.93	0.15	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3268	1/1	0.93	0.23	46,46,46,46	0
56	MG	BA	3624	1/1	0.93	0.19	52,52,52,52	0
56	MG	AA	3175	1/1	0.93	0.14	76,76,76,76	0
56	MG	DB	3009	1/1	0.93	0.27	40,40,40,40	0
56	MG	DA	3367	1/1	0.93	0.07	42,42,42,42	0
56	MG	BA	3631	1/1	0.93	0.09	78,78,78,78	0
56	MG	BA	3446	1/1	0.93	0.08	49,49,49,49	0
56	MG	DD	302	1/1	0.93	0.15	46,46,46,46	0
56	MG	CA	3113	1/1	0.93	0.10	77,77,77,77	0
56	MG	DE	301	1/1	0.93	0.35	51,51,51,51	0
56	MG	DA	3109	1/1	0.93	0.11	66,66,66,66	0
56	MG	DE	304	1/1	0.93	0.13	41,41,41,41	0
56	MG	BN	3004	1/1	0.93	0.17	66,66,66,66	0
56	MG	BN	3005	1/1	0.93	0.24	52,52,52,52	0
56	MG	BQ	202	1/1	0.93	0.18	28,28,28,28	0
56	MG	DA	3391	1/1	0.93	0.07	41,41,41,41	0
56	MG	DA	3395	1/1	0.93	0.20	34,34,34,34	0
56	MG	DQ	201	1/1	0.93	0.11	48,48,48,48	0
56	MG	BA	3637	1/1	0.93	0.18	33,33,33,33	0
56	MG	BA	3640	1/1	0.93	0.09	60,60,60,60	0
56	MG	BA	3270	1/1	0.93	0.19	50,50,50,50	0
56	MG	DA	3409	1/1	0.93	0.09	32,32,32,32	0
56	MG	DV	203	1/1	0.93	0.21	54,54,54,54	0
56	MG	DV	204	1/1	0.93	0.10	41,41,41,41	0
56	MG	AA	3176	1/1	0.93	0.10	63,63,63,63	0
56	MG	DA	3120	1/1	0.93	0.28	51,51,51,51	0
56	MG	BA	3078	1/1	0.93	0.07	17,17,17,17	0
56	MG	BU	206	1/1	0.93	0.13	60,60,60,60	0
56	MG	CA	3136	1/1	0.93	0.15	45,45,45,45	0
56	MG	BA	3130	1/1	0.93	0.18	43,43,43,43	0
56	MG	DA	3435	1/1	0.93	0.12	46,46,46,46	0
56	MG	DA	3126	1/1	0.93	0.19	43,43,43,43	0
56	MG	BA	3278	1/1	0.93	0.14	34,34,34,34	0
56	MG	DA	3436	1/1	0.94	0.08	62,62,62,62	0
56	MG	CA	3024	1/1	0.94	0.23	65,65,65,65	0
56	MG	AA	3062	1/1	0.94	0.10	32,32,32,32	0
56	MG	CA	3026	1/1	0.94	0.10	52,52,52,52	0
56	MG	DA	3442	1/1	0.94	0.14	40,40,40,40	0
56	MG	BA	3122	1/1	0.94	0.11	52,52,52,52	0
56	MG	BA	3045	1/1	0.94	0.17	34,34,34,34	0
56	MG	BA	3124	1/1	0.94	0.05	39,39,39,39	0
56	MG	CA	3169	1/1	0.94	0.14	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	AA	3121	1/1	0.94	0.16	51,51,51,51	0
56	MG	BA	3236	1/1	0.94	0.11	36,36,36,36	0
56	MG	BA	3301	1/1	0.94	0.07	56,56,56,56	0
56	MG	DA	3163	1/1	0.94	0.12	39,39,39,39	0
56	MG	BA	3626	1/1	0.94	0.07	43,43,43,43	0
56	MG	CF	3001	1/1	0.94	0.12	55,55,55,55	0
56	MG	BA	3171	1/1	0.94	0.12	40,40,40,40	0
56	MG	BA	3630	1/1	0.94	0.20	52,52,52,52	0
56	MG	AA	3124	1/1	0.94	0.16	57,57,57,57	0
56	MG	DA	3462	1/1	0.94	0.09	55,55,55,55	0
56	MG	BA	3177	1/1	0.94	0.08	62,62,62,62	0
56	MG	BA	3634	1/1	0.94	0.64	63,63,63,63	0
56	MG	DA	3173	1/1	0.94	0.30	39,39,39,39	0
56	MG	DA	3174	1/1	0.94	0.14	41,41,41,41	0
56	MG	DA	3476	1/1	0.94	0.12	45,45,45,45	0
56	MG	BA	3049	1/1	0.94	0.23	35,35,35,35	0
56	MG	BA	3639	1/1	0.94	0.08	50,50,50,50	0
56	MG	DA	3179	1/1	0.94	0.22	46,46,46,46	0
56	MG	BA	3181	1/1	0.94	0.15	38,38,38,38	0
56	MG	AA	3125	1/1	0.94	0.07	47,47,47,47	0
56	MG	BD	304	1/1	0.94	0.18	58,58,58,58	0
56	MG	AA	3003	1/1	0.94	0.08	63,63,63,63	0
56	MG	BA	3328	1/1	0.94	0.09	42,42,42,42	0
56	MG	BA	3248	1/1	0.94	0.15	43,43,43,43	0
56	MG	DA	3187	1/1	0.94	0.30	59,59,59,59	0
56	MG	DA	3188	1/1	0.94	0.13	47,47,47,47	0
56	MG	AA	3064	1/1	0.94	0.07	79,79,79,79	0
56	MG	BE	304	1/1	0.94	0.08	49,49,49,49	0
56	MG	DA	3193	1/1	0.94	0.14	65,65,65,65	0
56	MG	DA	3021	1/1	0.94	0.20	35,35,35,35	0
56	MG	DA	3498	1/1	0.94	0.07	56,56,56,56	0
56	MG	BA	3251	1/1	0.94	0.15	61,61,61,61	0
56	MG	BA	3515	1/1	0.94	0.08	56,56,56,56	0
56	MG	DA	3202	1/1	0.94	0.14	42,42,42,42	0
56	MG	DA	3206	1/1	0.94	0.18	42,42,42,42	0
56	MG	BA	3523	1/1	0.94	0.13	48,48,48,48	0
56	MG	BA	3530	1/1	0.94	0.14	31,31,31,31	0
56	MG	BF	307	1/1	0.94	0.07	47,47,47,47	0
56	MG	BA	3058	1/1	0.94	0.18	38,38,38,38	0
56	MG	DA	3033	1/1	0.94	0.11	39,39,39,39	0
56	MG	BA	3021	1/1	0.94	0.29	42,42,42,42	0
56	MG	DA	3035	1/1	0.94	0.09	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3657	1/1	0.94	0.18	56,56,56,56	0
56	MG	CA	3064	1/1	0.94	0.08	58,58,58,58	0
56	MG	DA	3219	1/1	0.94	0.18	60,60,60,60	0
56	MG	BA	3540	1/1	0.94	0.14	34,34,34,34	0
56	MG	DA	3523	1/1	0.94	0.10	55,55,55,55	0
56	MG	BA	3254	1/1	0.94	0.15	59,59,59,59	0
56	MG	DA	3042	1/1	0.94	0.21	36,36,36,36	0
56	MG	BN	3003	1/1	0.94	0.11	59,59,59,59	0
56	MG	CA	3069	1/1	0.94	0.20	69,69,69,69	0
56	MG	DA	3227	1/1	0.94	0.15	53,53,53,53	0
56	MG	DA	3534	1/1	0.94	0.15	45,45,45,45	0
56	MG	BA	3255	1/1	0.94	0.11	41,41,41,41	0
56	MG	DA	3229	1/1	0.94	0.04	40,40,40,40	0
56	MG	DA	3233	1/1	0.94	0.08	42,42,42,42	0
56	MG	BA	3662	1/1	0.94	0.18	39,39,39,39	0
56	MG	DA	3539	1/1	0.94	0.11	53,53,53,53	0
56	MG	BO	201	1/1	0.94	0.08	70,70,70,70	0
56	MG	BQ	201	1/1	0.94	0.24	61,61,61,61	0
56	MG	DA	3241	1/1	0.94	0.13	15,15,15,15	0
56	MG	AA	3031	1/1	0.94	0.15	41,41,41,41	0
56	MG	DA	3247	1/1	0.94	0.06	31,31,31,31	0
56	MG	DA	3551	1/1	0.94	0.10	52,52,52,52	0
56	MG	AA	3103	1/1	0.94	0.19	38,38,38,38	0
56	MG	BA	3062	1/1	0.94	0.23	42,42,42,42	0
56	MG	BA	3260	1/1	0.94	0.12	22,22,22,22	0
56	MG	CA	3078	1/1	0.94	0.11	46,46,46,46	0
56	MG	BA	3141	1/1	0.94	0.16	43,43,43,43	0
56	MG	CA	3080	1/1	0.94	0.15	55,55,55,55	0
56	MG	DA	3264	1/1	0.94	0.13	49,49,49,49	0
56	MG	BA	3670	1/1	0.94	0.15	59,59,59,59	0
56	MG	BA	3199	1/1	0.94	0.22	36,36,36,36	0
56	MG	DA	3066	1/1	0.94	0.32	53,53,53,53	0
56	MG	DA	3067	1/1	0.94	0.25	43,43,43,43	0
56	MG	DA	3575	1/1	0.94	0.10	43,43,43,43	0
56	MG	BU	208	1/1	0.94	0.61	56,56,56,56	0
56	MG	DA	3580	1/1	0.94	0.18	46,46,46,46	0
56	MG	DA	3270	1/1	0.94	0.14	36,36,36,36	0
56	MG	BA	3374	1/1	0.94	0.06	44,44,44,44	0
56	MG	DA	3585	1/1	0.94	0.09	62,62,62,62	0
56	MG	DA	3070	1/1	0.94	0.23	44,44,44,44	0
56	MG	CA	3087	1/1	0.94	0.11	41,41,41,41	0
56	MG	DA	3072	1/1	0.94	0.15	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	DA	3073	1/1	0.94	0.11	44,44,44,44	0
56	MG	CA	3089	1/1	0.94	0.12	52,52,52,52	0
56	MG	CA	3092	1/1	0.94	0.11	47,47,47,47	0
56	MG	DA	3596	1/1	0.94	0.11	67,67,67,67	0
56	MG	AA	3104	1/1	0.94	0.10	37,37,37,37	0
56	MG	CA	3096	1/1	0.94	0.08	60,60,60,60	0
56	MG	BW	201	1/1	0.94	0.21	53,53,53,53	0
56	MG	DA	3082	1/1	0.94	0.04	19,19,19,19	0
56	MG	DA	3292	1/1	0.94	0.07	37,37,37,37	0
56	MG	BA	3555	1/1	0.94	0.11	53,53,53,53	0
56	MG	CA	3104	1/1	0.94	0.17	62,62,62,62	0
56	MG	DA	3296	1/1	0.94	0.06	31,31,31,31	0
56	MG	DA	3299	1/1	0.94	0.12	40,40,40,40	0
56	MG	AA	3115	1/1	0.94	0.15	48,48,48,48	0
56	MG	DA	3611	1/1	0.94	0.05	42,42,42,42	0
56	MG	BA	3676	1/1	0.94	0.12	51,51,51,51	0
56	MG	DA	3309	1/1	0.94	0.12	33,33,33,33	0
56	MG	DA	3616	1/1	0.94	0.15	62,62,62,62	0
56	MG	DA	3312	1/1	0.94	0.27	43,43,43,43	0
56	MG	DA	3618	1/1	0.94	0.08	39,39,39,39	0
56	MG	DA	3313	1/1	0.94	0.14	52,52,52,52	0
56	MG	BA	3677	1/1	0.94	0.14	67,67,67,67	0
56	MG	DA	3622	1/1	0.94	0.08	55,55,55,55	0
56	MG	B0	101	1/1	0.94	0.11	36,36,36,36	0
56	MG	AA	3066	1/1	0.94	0.21	38,38,38,38	0
56	MG	BA	3386	1/1	0.94	0.14	58,58,58,58	0
56	MG	B0	104	1/1	0.94	0.07	43,43,43,43	0
56	MG	CA	3116	1/1	0.94	0.14	76,76,76,76	0
56	MG	DA	3326	1/1	0.94	0.11	33,33,33,33	0
56	MG	CA	3118	1/1	0.94	0.07	37,37,37,37	0
56	MG	AA	3036	1/1	0.94	0.12	71,71,71,71	0
56	MG	DA	3332	1/1	0.94	0.11	33,33,33,33	0
56	MG	DA	3102	1/1	0.94	0.08	41,41,41,41	0
56	MG	BA	3563	1/1	0.94	0.09	37,37,37,37	0
56	MG	DA	3343	1/1	0.94	0.09	41,41,41,41	0
56	MG	BA	3568	1/1	0.94	0.14	47,47,47,47	0
56	MG	BA	3689	1/1	0.94	0.17	39,39,39,39	0
56	MG	BA	3038	1/1	0.94	0.30	51,51,51,51	0
56	MG	DA	3648	1/1	0.94	0.15	52,52,52,52	0
56	MG	DA	3650	1/1	0.94	0.21	48,48,48,48	0
56	MG	B5	502	1/1	0.94	0.10	54,54,54,54	0
56	MG	CA	3129	1/1	0.94	0.14	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3578	1/1	0.94	0.21	54,54,54,54	0
56	MG	CA	3133	1/1	0.94	0.12	49,49,49,49	0
56	MG	BA	3392	1/1	0.94	0.21	56,56,56,56	0
56	MG	BA	3394	1/1	0.94	0.08	49,49,49,49	0
56	MG	BA	3207	1/1	0.94	0.17	35,35,35,35	0
56	MG	DB	3006	1/1	0.94	0.07	42,42,42,42	0
56	MG	BA	3150	1/1	0.94	0.19	34,34,34,34	0
56	MG	DA	3369	1/1	0.94	0.09	47,47,47,47	0
56	MG	DA	3373	1/1	0.94	0.13	29,29,29,29	0
56	MG	DA	3374	1/1	0.94	0.05	37,37,37,37	0
56	MG	AA	3032	1/1	0.94	0.23	57,57,57,57	0
56	MG	BA	3153	1/1	0.94	0.17	35,35,35,35	0
56	MG	DA	3378	1/1	0.94	0.07	45,45,45,45	0
56	MG	BA	3212	1/1	0.94	0.20	43,43,43,43	0
56	MG	BA	3705	1/1	0.94	0.12	39,39,39,39	0
56	MG	DE	302	1/1	0.94	0.14	44,44,44,44	0
56	MG	BA	3073	1/1	0.94	0.27	41,41,41,41	0
56	MG	BA	3708	1/1	0.94	0.07	40,40,40,40	0
56	MG	BA	3074	1/1	0.94	0.10	42,42,42,42	0
56	MG	DA	3128	1/1	0.94	0.12	52,52,52,52	0
56	MG	DF	304	1/1	0.94	0.15	44,44,44,44	0
56	MG	AA	3008	1/1	0.94	0.16	54,54,54,54	0
56	MG	DA	3396	1/1	0.94	0.11	35,35,35,35	0
56	MG	DA	3398	1/1	0.94	0.14	35,35,35,35	0
56	MG	BA	3603	1/1	0.94	0.05	39,39,39,39	0
56	MG	BA	3041	1/1	0.94	0.23	32,32,32,32	0
56	MG	BA	3607	1/1	0.94	0.35	53,53,53,53	0
56	MG	DA	3404	1/1	0.94	0.11	47,47,47,47	0
56	MG	BA	3450	1/1	0.94	0.17	46,46,46,46	0
56	MG	BA	3007	1/1	0.94	0.05	35,35,35,35	0
56	MG	CA	3155	1/1	0.94	0.08	71,71,71,71	0
56	MG	BA	3117	1/1	0.94	0.24	25,25,25,25	0
56	MG	BA	3227	1/1	0.94	0.23	32,32,32,32	0
56	MG	BA	3228	1/1	0.94	0.14	63,63,63,63	0
56	MG	DA	3423	1/1	0.94	0.07	29,29,29,29	0
56	MG	BA	3616	1/1	0.94	0.13	33,33,33,33	0
58	ZN	B4	3002	1/1	0.94	0.09	165,165,165,165	0
56	MG	DA	3430	1/1	0.94	0.15	55,55,55,55	0
56	MG	DA	3431	1/1	0.94	0.07	41,41,41,41	0
56	MG	DA	3434	1/1	0.94	0.21	49,49,49,49	0
56	MG	DA	3151	1/1	0.94	0.38	60,60,60,60	0
56	MG	BA	3057	1/1	0.95	0.17	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3273	1/1	0.95	0.25	42,42,42,42	0
56	MG	DA	3433	1/1	0.95	0.14	48,48,48,48	0
56	MG	BA	3710	1/1	0.95	0.13	48,48,48,48	0
56	MG	BA	3274	1/1	0.95	0.18	52,52,52,52	0
56	MG	BA	3401	1/1	0.95	0.06	42,42,42,42	0
56	MG	DA	3437	1/1	0.95	0.06	49,49,49,49	0
56	MG	CA	3015	1/1	0.95	0.11	51,51,51,51	0
56	MG	BA	3018	1/1	0.95	0.22	40,40,40,40	0
56	MG	CA	3162	1/1	0.95	0.13	46,46,46,46	0
56	MG	DA	3160	1/1	0.95	0.08	44,44,44,44	0
56	MG	DA	3443	1/1	0.95	0.09	53,53,53,53	0
56	MG	DA	3444	1/1	0.95	0.12	43,43,43,43	0
56	MG	CA	3017	1/1	0.95	0.15	42,42,42,42	0
56	MG	DA	3446	1/1	0.95	0.07	52,52,52,52	0
56	MG	AA	3177	1/1	0.95	0.08	80,80,80,80	0
56	MG	CA	3165	1/1	0.95	0.08	40,40,40,40	0
56	MG	BA	3602	1/1	0.95	0.07	35,35,35,35	0
56	MG	DA	3165	1/1	0.95	0.15	44,44,44,44	0
56	MG	CA	3167	1/1	0.95	0.05	78,78,78,78	0
56	MG	AA	3073	1/1	0.95	0.09	46,46,46,46	0
56	MG	AA	3204	1/1	0.95	0.13	54,54,54,54	0
56	MG	BA	3726	1/1	0.95	0.20	47,47,47,47	0
56	MG	AA	3123	1/1	0.95	0.29	39,39,39,39	0
56	MG	BA	3152	1/1	0.95	0.19	46,46,46,46	0
56	MG	BA	3729	1/1	0.95	0.23	46,46,46,46	0
56	MG	BA	3730	1/1	0.95	0.32	45,45,45,45	0
56	MG	DA	3175	1/1	0.95	0.15	40,40,40,40	0
56	MG	AA	3161	1/1	0.95	0.11	72,72,72,72	0
56	MG	BA	3610	1/1	0.95	0.11	40,40,40,40	0
56	MG	BA	3734	1/1	0.95	0.21	45,45,45,45	0
56	MG	DA	3469	1/1	0.95	0.10	47,47,47,47	0
56	MG	BA	3155	1/1	0.95	0.16	57,57,57,57	0
56	MG	CX	104	1/1	0.95	0.10	40,40,40,40	0
56	MG	DA	3182	1/1	0.95	0.13	32,32,32,32	0
56	MG	BA	3285	1/1	0.95	0.13	32,32,32,32	0
56	MG	BA	3448	1/1	0.95	0.08	29,29,29,29	0
56	MG	AA	3208	1/1	0.95	0.14	46,46,46,46	0
56	MG	DA	3004	1/1	0.95	0.05	29,29,29,29	0
56	MG	BA	3452	1/1	0.95	0.13	47,47,47,47	0
56	MG	DA	3006	1/1	0.95	0.08	42,42,42,42	0
56	MG	AA	3015	1/1	0.95	0.06	73,73,73,73	0
56	MG	AA	3188	1/1	0.95	0.15	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3461	1/1	0.95	0.10	36,36,36,36	0
56	MG	DA	3194	1/1	0.95	0.08	48,48,48,48	0
56	MG	BA	3069	1/1	0.95	0.20	41,41,41,41	0
56	MG	DA	3014	1/1	0.95	0.06	34,34,34,34	0
56	MG	AA	3142	1/1	0.95	0.10	38,38,38,38	0
56	MG	DA	3199	1/1	0.95	0.03	42,42,42,42	0
56	MG	DA	3200	1/1	0.95	0.11	42,42,42,42	0
56	MG	BA	3001	1/1	0.95	0.10	69,69,69,69	0
56	MG	BA	3625	1/1	0.95	0.16	51,51,51,51	0
56	MG	DA	3020	1/1	0.95	0.18	52,52,52,52	0
56	MG	AA	3166	1/1	0.95	0.09	48,48,48,48	0
56	MG	DA	3209	1/1	0.95	0.18	41,41,41,41	0
56	MG	DA	3505	1/1	0.95	0.06	65,65,65,65	0
56	MG	CA	3045	1/1	0.95	0.14	54,54,54,54	0
56	MG	BB	3010	1/1	0.95	0.11	40,40,40,40	0
56	MG	BA	3627	1/1	0.95	0.07	50,50,50,50	0
56	MG	DA	3027	1/1	0.95	0.17	39,39,39,39	0
56	MG	DA	3513	1/1	0.95	0.08	49,49,49,49	0
56	MG	BB	3015	1/1	0.95	0.08	37,37,37,37	0
56	MG	AA	3191	1/1	0.95	0.08	71,71,71,71	0
56	MG	BA	3468	1/1	0.95	0.10	30,30,30,30	0
56	MG	BD	301	1/1	0.95	0.10	28,28,28,28	0
56	MG	DA	3220	1/1	0.95	0.09	37,37,37,37	0
56	MG	BD	302	1/1	0.95	0.22	58,58,58,58	0
56	MG	BD	303	1/1	0.95	0.12	42,42,42,42	0
56	MG	BA	3470	1/1	0.95	0.14	54,54,54,54	0
56	MG	BA	3474	1/1	0.95	0.11	42,42,42,42	0
56	MG	CA	3058	1/1	0.95	0.08	40,40,40,40	0
56	MG	DA	3226	1/1	0.95	0.23	50,50,50,50	0
56	MG	CA	3059	1/1	0.95	0.16	51,51,51,51	0
56	MG	DA	3530	1/1	0.95	0.12	49,49,49,49	0
56	MG	DA	3533	1/1	0.95	0.10	68,68,68,68	0
56	MG	BA	3042	1/1	0.95	0.45	47,47,47,47	0
56	MG	BD	310	1/1	0.95	0.11	48,48,48,48	0
56	MG	DA	3232	1/1	0.95	0.20	50,50,50,50	0
56	MG	BD	311	1/1	0.95	0.12	45,45,45,45	0
56	MG	DA	3235	1/1	0.95	0.10	50,50,50,50	0
56	MG	DA	3237	1/1	0.95	0.12	45,45,45,45	0
56	MG	DA	3045	1/1	0.95	0.21	41,41,41,41	0
56	MG	BA	3167	1/1	0.95	0.20	39,39,39,39	0
56	MG	BA	3232	1/1	0.95	0.06	29,29,29,29	0
56	MG	DA	3049	1/1	0.95	0.13	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	DA	3242	1/1	0.95	0.18	35,35,35,35	0
56	MG	DA	3050	1/1	0.95	0.12	31,31,31,31	0
56	MG	DA	3246	1/1	0.95	0.09	24,24,24,24	0
56	MG	CA	3066	1/1	0.95	0.10	55,55,55,55	0
56	MG	DA	3052	1/1	0.95	0.07	23,23,23,23	0
56	MG	BE	302	1/1	0.95	0.18	33,33,33,33	0
56	MG	BE	303	1/1	0.95	0.11	29,29,29,29	0
56	MG	DA	3055	1/1	0.95	0.15	48,48,48,48	0
56	MG	DA	3254	1/1	0.95	0.12	30,30,30,30	0
56	MG	BA	3120	1/1	0.95	0.12	51,51,51,51	0
56	MG	BA	3076	1/1	0.95	0.16	41,41,41,41	0
56	MG	BA	3642	1/1	0.95	0.19	51,51,51,51	0
56	MG	BA	3486	1/1	0.95	0.08	38,38,38,38	0
56	MG	BA	3170	1/1	0.95	0.58	48,48,48,48	0
56	MG	DA	3577	1/1	0.95	0.10	44,44,44,44	0
56	MG	AA	3143	1/1	0.95	0.10	45,45,45,45	0
56	MG	BA	3237	1/1	0.95	0.46	51,51,51,51	0
56	MG	BG	3001	1/1	0.95	0.07	64,64,64,64	0
56	MG	DA	3065	1/1	0.95	0.12	38,38,38,38	0
56	MG	DA	3583	1/1	0.95	0.14	48,48,48,48	0
56	MG	DA	3584	1/1	0.95	0.14	61,61,61,61	0
56	MG	BG	3002	1/1	0.95	0.15	42,42,42,42	0
56	MG	BA	3647	1/1	0.95	0.08	34,34,34,34	0
56	MG	DA	3275	1/1	0.95	0.08	38,38,38,38	0
56	MG	BA	3079	1/1	0.95	0.10	42,42,42,42	0
56	MG	BA	3499	1/1	0.95	0.09	55,55,55,55	0
56	MG	BA	3500	1/1	0.95	0.07	37,37,37,37	0
56	MG	BA	3174	1/1	0.95	0.12	48,48,48,48	0
56	MG	BA	3175	1/1	0.95	0.10	48,48,48,48	0
56	MG	BA	3243	1/1	0.95	0.17	48,48,48,48	0
56	MG	BN	3006	1/1	0.95	0.04	24,24,24,24	0
56	MG	CA	3088	1/1	0.95	0.08	43,43,43,43	0
56	MG	DA	3601	1/1	0.95	0.09	77,77,77,77	0
56	MG	DA	3076	1/1	0.95	0.27	44,44,44,44	0
56	MG	BA	3320	1/1	0.95	0.14	57,57,57,57	0
56	MG	CA	3091	1/1	0.95	0.05	72,72,72,72	0
56	MG	DA	3079	1/1	0.95	0.06	37,37,37,37	0
56	MG	DA	3295	1/1	0.95	0.18	39,39,39,39	0
56	MG	BA	3324	1/1	0.95	0.18	36,36,36,36	0
56	MG	DA	3297	1/1	0.95	0.09	57,57,57,57	0
56	MG	BA	3327	1/1	0.95	0.10	38,38,38,38	0
56	MG	CA	3094	1/1	0.95	0.21	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	DA	3614	1/1	0.95	0.07	48,48,48,48	0
56	MG	DA	3085	1/1	0.95	0.09	36,36,36,36	0
56	MG	BA	3514	1/1	0.95	0.14	37,37,37,37	0
56	MG	DA	3310	1/1	0.95	0.12	53,53,53,53	0
56	MG	CA	3097	1/1	0.95	0.12	48,48,48,48	0
56	MG	DA	3619	1/1	0.95	0.06	48,48,48,48	0
56	MG	BA	3176	1/1	0.95	0.10	38,38,38,38	0
56	MG	DA	3091	1/1	0.95	0.29	44,44,44,44	0
56	MG	DA	3316	1/1	0.95	0.15	58,58,58,58	0
56	MG	CA	3100	1/1	0.95	0.08	60,60,60,60	0
56	MG	BA	3080	1/1	0.95	0.20	45,45,45,45	0
56	MG	DA	3094	1/1	0.95	0.09	26,26,26,26	0
56	MG	BR	202	1/1	0.95	0.07	27,27,27,27	0
56	MG	DA	3628	1/1	0.95	0.14	63,63,63,63	0
56	MG	AA	3130	1/1	0.95	0.17	46,46,46,46	0
56	MG	CA	3107	1/1	0.95	0.11	60,60,60,60	0
56	MG	DA	3327	1/1	0.95	0.07	29,29,29,29	0
56	MG	DA	3634	1/1	0.95	0.10	51,51,51,51	0
56	MG	AA	3018	1/1	0.95	0.14	38,38,38,38	0
56	MG	BA	3667	1/1	0.95	0.09	63,63,63,63	0
56	MG	DA	3637	1/1	0.95	0.15	48,48,48,48	0
56	MG	BA	3335	1/1	0.95	0.08	35,35,35,35	0
56	MG	DA	3334	1/1	0.95	0.14	49,49,49,49	0
56	MG	DA	3335	1/1	0.95	0.15	38,38,38,38	0
56	MG	BA	3182	1/1	0.95	0.28	51,51,51,51	0
56	MG	DA	3103	1/1	0.95	0.19	48,48,48,48	0
56	MG	DA	3645	1/1	0.95	0.07	30,30,30,30	0
56	MG	DA	3646	1/1	0.95	0.06	38,38,38,38	0
56	MG	DA	3104	1/1	0.95	0.13	62,62,62,62	0
56	MG	DA	3348	1/1	0.95	0.13	37,37,37,37	0
56	MG	DA	3649	1/1	0.95	0.15	24,24,24,24	0
56	MG	BA	3339	1/1	0.95	0.07	43,43,43,43	0
56	MG	DA	3651	1/1	0.95	0.10	52,52,52,52	0
56	MG	BA	3046	1/1	0.95	0.09	29,29,29,29	0
56	MG	BA	3351	1/1	0.95	0.06	30,30,30,30	0
56	MG	BA	3352	1/1	0.95	0.10	34,34,34,34	0
56	MG	BX	3001	1/1	0.95	0.13	55,55,55,55	0
56	MG	BA	3185	1/1	0.95	0.19	47,47,47,47	0
56	MG	DA	3111	1/1	0.95	0.15	53,53,53,53	0
56	MG	DA	3362	1/1	0.95	0.07	41,41,41,41	0
56	MG	BA	3010	1/1	0.95	0.14	32,32,32,32	0
56	MG	BA	3187	1/1	0.95	0.14	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	DA	3114	1/1	0.95	0.06	37,37,37,37	0
56	MG	BA	3361	1/1	0.95	0.12	34,34,34,34	0
56	MG	DA	3116	1/1	0.95	0.14	39,39,39,39	0
56	MG	DA	3372	1/1	0.95	0.10	45,45,45,45	0
56	MG	BA	3365	1/1	0.95	0.10	20,20,20,20	0
56	MG	BA	3679	1/1	0.95	0.19	27,27,27,27	0
56	MG	CA	3131	1/1	0.95	0.08	55,55,55,55	0
56	MG	DD	307	1/1	0.95	0.09	38,38,38,38	0
56	MG	AA	3150	1/1	0.95	0.18	46,46,46,46	0
56	MG	BA	3013	1/1	0.95	0.06	40,40,40,40	0
56	MG	DA	3381	1/1	0.95	0.14	47,47,47,47	0
56	MG	BA	3014	1/1	0.95	0.27	34,34,34,34	0
56	MG	DE	305	1/1	0.95	0.23	65,65,65,65	0
56	MG	BA	3093	1/1	0.95	0.06	25,25,25,25	0
56	MG	BA	3194	1/1	0.95	0.07	55,55,55,55	0
56	MG	DF	303	1/1	0.95	0.07	43,43,43,43	0
56	MG	AA	3153	1/1	0.95	0.14	45,45,45,45	0
56	MG	DA	3389	1/1	0.95	0.12	27,27,27,27	0
56	MG	AA	3049	1/1	0.95	0.20	51,51,51,51	0
56	MG	BA	3564	1/1	0.95	0.05	52,52,52,52	0
56	MG	DA	3129	1/1	0.95	0.05	43,43,43,43	0
56	MG	B8	101	1/1	0.95	0.28	49,49,49,49	0
56	MG	DA	3133	1/1	0.95	0.17	33,33,33,33	0
56	MG	DA	3399	1/1	0.95	0.08	41,41,41,41	0
56	MG	DR	202	1/1	0.95	0.12	37,37,37,37	0
56	MG	B8	102	1/1	0.95	0.07	60,60,60,60	0
56	MG	CA	3144	1/1	0.95	0.18	63,63,63,63	0
56	MG	BA	3377	1/1	0.95	0.12	32,32,32,32	0
56	MG	BA	3380	1/1	0.95	0.12	53,53,53,53	0
56	MG	DA	3405	1/1	0.95	0.11	47,47,47,47	0
56	MG	BA	3055	1/1	0.95	0.09	44,44,44,44	0
56	MG	BA	3383	1/1	0.95	0.11	38,38,38,38	0
56	MG	BA	3056	1/1	0.95	0.25	44,44,44,44	0
56	MG	D8	5001	1/1	0.95	0.18	47,47,47,47	0
56	MG	BA	3143	1/1	0.95	0.13	40,40,40,40	0
56	MG	BA	3704	1/1	0.95	0.09	85,85,85,85	0
56	MG	DA	3149	1/1	0.95	0.06	47,47,47,47	0
56	MG	BA	3590	1/1	0.95	0.09	64,64,64,64	0
56	MG	BA	3202	1/1	0.95	0.08	41,41,41,41	0
56	MG	BP	201	1/1	0.96	0.27	40,40,40,40	0
56	MG	BP	202	1/1	0.96	0.08	40,40,40,40	0
56	MG	DA	3136	1/1	0.96	0.05	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	DA	3507	1/1	0.96	0.13	54,54,54,54	0
56	MG	DA	3508	1/1	0.96	0.12	38,38,38,38	0
56	MG	DA	3137	1/1	0.96	0.21	56,56,56,56	0
56	MG	DA	3138	1/1	0.96	0.15	42,42,42,42	0
56	MG	DA	3009	1/1	0.96	0.05	31,31,31,31	0
56	MG	DA	3011	1/1	0.96	0.10	45,45,45,45	0
56	MG	BP	203	1/1	0.96	0.41	29,29,29,29	0
56	MG	DA	3142	1/1	0.96	0.23	33,33,33,33	0
56	MG	DA	3143	1/1	0.96	0.07	46,46,46,46	0
56	MG	DA	3516	1/1	0.96	0.05	40,40,40,40	0
56	MG	DA	3298	1/1	0.96	0.13	37,37,37,37	0
56	MG	DA	3144	1/1	0.96	0.19	36,36,36,36	0
56	MG	DA	3520	1/1	0.96	0.07	51,51,51,51	0
56	MG	DA	3302	1/1	0.96	0.10	22,22,22,22	0
56	MG	BP	204	1/1	0.96	0.06	55,55,55,55	0
56	MG	BA	3250	1/1	0.96	0.11	45,45,45,45	0
56	MG	AA	3057	1/1	0.96	0.04	37,37,37,37	0
56	MG	BA	3161	1/1	0.96	0.22	49,49,49,49	0
56	MG	BA	3435	1/1	0.96	0.13	24,24,24,24	0
56	MG	BA	3438	1/1	0.96	0.12	30,30,30,30	0
56	MG	BA	3566	1/1	0.96	0.07	53,53,53,53	0
56	MG	BR	204	1/1	0.96	0.19	43,43,43,43	0
56	MG	DA	3531	1/1	0.96	0.10	57,57,57,57	0
56	MG	DA	3532	1/1	0.96	0.05	57,57,57,57	0
56	MG	BA	3162	1/1	0.96	0.15	23,23,23,23	0
56	MG	BA	3688	1/1	0.96	0.12	54,54,54,54	0
56	MG	BA	3126	1/1	0.96	0.13	24,24,24,24	0
56	MG	DA	3028	1/1	0.96	0.04	35,35,35,35	0
56	MG	BA	3445	1/1	0.96	0.10	25,25,25,25	0
56	MG	AA	3171	1/1	0.96	0.15	72,72,72,72	0
56	MG	BA	3322	1/1	0.96	0.13	22,22,22,22	0
56	MG	DA	3541	1/1	0.96	0.13	35,35,35,35	0
56	MG	DA	3542	1/1	0.96	0.11	32,32,32,32	0
56	MG	DA	3328	1/1	0.96	0.08	28,28,28,28	0
56	MG	BA	3095	1/1	0.96	0.15	55,55,55,55	0
56	MG	AA	3199	1/1	0.96	0.09	88,88,88,88	0
56	MG	BA	3453	1/1	0.96	0.08	18,18,18,18	0
56	MG	DA	3549	1/1	0.96	0.18	52,52,52,52	0
56	MG	DA	3333	1/1	0.96	0.13	58,58,58,58	0
56	MG	BA	3698	1/1	0.96	0.06	41,41,41,41	0
56	MG	BA	3592	1/1	0.96	0.09	28,28,28,28	0
56	MG	BA	3208	1/1	0.96	0.11	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3131	1/1	0.96	0.43	54,54,54,54	0
56	MG	AX	107	1/1	0.96	0.05	66,66,66,66	0
56	MG	DA	3558	1/1	0.96	0.09	37,37,37,37	0
56	MG	DA	3559	1/1	0.96	0.12	46,46,46,46	0
56	MG	DA	3560	1/1	0.96	0.05	34,34,34,34	0
56	MG	CA	3095	1/1	0.96	0.09	39,39,39,39	0
56	MG	DA	3349	1/1	0.96	0.14	54,54,54,54	0
56	MG	AA	3167	1/1	0.96	0.08	67,67,67,67	0
56	MG	DA	3351	1/1	0.96	0.14	35,35,35,35	0
56	MG	BA	3019	1/1	0.96	0.09	39,39,39,39	0
56	MG	BA	3707	1/1	0.96	0.09	36,36,36,36	0
56	MG	DA	3569	1/1	0.96	0.14	37,37,37,37	0
56	MG	DA	3571	1/1	0.96	0.12	46,46,46,46	0
56	MG	AA	3122	1/1	0.96	0.33	44,44,44,44	0
56	MG	DA	3358	1/1	0.96	0.15	46,46,46,46	0
56	MG	BA	3338	1/1	0.96	0.16	50,50,50,50	0
56	MG	BA	3002	1/1	0.96	0.23	54,54,54,54	0
56	MG	DA	3579	1/1	0.96	0.09	23,23,23,23	0
56	MG	BA	3711	1/1	0.96	0.09	86,86,86,86	0
56	MG	CA	3106	1/1	0.96	0.16	64,64,64,64	0
56	MG	BA	3022	1/1	0.96	0.15	52,52,52,52	0
56	MG	BA	3345	1/1	0.96	0.09	33,33,33,33	0
56	MG	BA	3473	1/1	0.96	0.06	51,51,51,51	0
56	MG	BA	3271	1/1	0.96	0.21	36,36,36,36	0
56	MG	AA	3193	1/1	0.96	0.10	60,60,60,60	0
56	MG	DA	3588	1/1	0.96	0.07	40,40,40,40	0
56	MG	DA	3589	1/1	0.96	0.10	59,59,59,59	0
56	MG	DA	3370	1/1	0.96	0.12	38,38,38,38	0
56	MG	CA	3112	1/1	0.96	0.10	59,59,59,59	0
56	MG	BA	3476	1/1	0.96	0.08	40,40,40,40	0
56	MG	BA	3721	1/1	0.96	0.07	25,25,25,25	0
56	MG	BA	3219	1/1	0.96	0.07	65,65,65,65	0
56	MG	DA	3595	1/1	0.96	0.09	72,72,72,72	0
56	MG	CA	3117	1/1	0.96	0.12	68,68,68,68	0
56	MG	DA	3063	1/1	0.96	0.05	52,52,52,52	0
56	MG	BA	3004	1/1	0.96	0.08	24,24,24,24	0
56	MG	DA	3192	1/1	0.96	0.11	47,47,47,47	0
56	MG	BA	3355	1/1	0.96	0.12	64,64,64,64	0
56	MG	CA	3120	1/1	0.96	0.10	58,58,58,58	0
56	MG	CA	3121	1/1	0.96	0.23	53,53,53,53	0
56	MG	DA	3604	1/1	0.96	0.10	54,54,54,54	0
56	MG	BA	3106	1/1	0.96	0.18	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3357	1/1	0.96	0.07	49,49,49,49	0
56	MG	DA	3198	1/1	0.96	0.15	48,48,48,48	0
56	MG	BA	3358	1/1	0.96	0.06	33,33,33,33	0
56	MG	BA	3489	1/1	0.96	0.09	43,43,43,43	0
56	MG	DA	3201	1/1	0.96	0.06	48,48,48,48	0
56	MG	BA	3490	1/1	0.96	0.07	38,38,38,38	0
56	MG	BA	3494	1/1	0.96	0.16	18,18,18,18	0
56	MG	BA	3623	1/1	0.96	0.08	47,47,47,47	0
56	MG	BA	3360	1/1	0.96	0.09	38,38,38,38	0
56	MG	BA	3226	1/1	0.96	0.20	32,32,32,32	0
56	MG	BA	3497	1/1	0.96	0.12	62,62,62,62	0
56	MG	DA	3408	1/1	0.96	0.17	37,37,37,37	0
56	MG	BA	3178	1/1	0.96	0.11	48,48,48,48	0
56	MG	BA	3279	1/1	0.96	0.21	48,48,48,48	0
56	MG	BA	3629	1/1	0.96	0.12	47,47,47,47	0
56	MG	AA	3160	1/1	0.96	0.17	52,52,52,52	0
56	MG	AM	3001	1/1	0.96	0.04	65,65,65,65	0
56	MG	DA	3419	1/1	0.96	0.07	31,31,31,31	0
56	MG	DA	3217	1/1	0.96	0.23	54,54,54,54	0
56	MG	DA	3422	1/1	0.96	0.06	38,38,38,38	0
56	MG	AA	3213	1/1	0.96	0.07	29,29,29,29	0
56	MG	BA	3633	1/1	0.96	0.07	58,58,58,58	0
56	MG	DA	3428	1/1	0.96	0.18	51,51,51,51	0
56	MG	DA	3429	1/1	0.96	0.17	44,44,44,44	0
56	MG	BA	3504	1/1	0.96	0.17	41,41,41,41	0
56	MG	DA	3088	1/1	0.96	0.04	46,46,46,46	0
56	MG	DA	3432	1/1	0.96	0.10	66,66,66,66	0
56	MG	BA	3505	1/1	0.96	0.10	59,59,59,59	0
56	MG	BA	3638	1/1	0.96	0.09	37,37,37,37	0
56	MG	BA	3506	1/1	0.96	0.08	30,30,30,30	0
56	MG	AA	3214	1/1	0.96	0.13	75,75,75,75	0
56	MG	BB	3016	1/1	0.96	0.15	21,21,21,21	0
56	MG	BA	3508	1/1	0.96	0.17	34,34,34,34	0
56	MG	BA	3034	1/1	0.96	0.27	52,52,52,52	0
56	MG	BA	3113	1/1	0.96	0.14	32,32,32,32	0
56	MG	DA	3230	1/1	0.96	0.12	62,62,62,62	0
56	MG	BA	3084	1/1	0.96	0.12	33,33,33,33	0
56	MG	BA	3513	1/1	0.96	0.06	45,45,45,45	0
56	MG	BA	3035	1/1	0.96	0.04	37,37,37,37	0
56	MG	DA	3236	1/1	0.96	0.15	46,46,46,46	0
56	MG	BA	3036	1/1	0.96	0.12	38,38,38,38	0
56	MG	DA	3449	1/1	0.96	0.08	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3521	1/1	0.96	0.09	49,49,49,49	0
56	MG	BD	309	1/1	0.96	0.13	42,42,42,42	0
56	MG	BA	3522	1/1	0.96	0.09	49,49,49,49	0
56	MG	BA	3190	1/1	0.96	0.07	42,42,42,42	0
56	MG	DB	3005	1/1	0.96	0.19	43,43,43,43	0
56	MG	BA	3527	1/1	0.96	0.09	64,64,64,64	0
56	MG	BA	3528	1/1	0.96	0.13	33,33,33,33	0
56	MG	DA	3244	1/1	0.96	0.18	29,29,29,29	0
56	MG	BA	3240	1/1	0.96	0.16	28,28,28,28	0
56	MG	BA	3385	1/1	0.96	0.07	26,26,26,26	0
56	MG	BA	3536	1/1	0.96	0.09	27,27,27,27	0
56	MG	BA	3659	1/1	0.96	0.15	46,46,46,46	0
56	MG	BA	3191	1/1	0.96	0.06	52,52,52,52	0
56	MG	DD	304	1/1	0.96	0.16	35,35,35,35	0
56	MG	BA	3037	1/1	0.96	0.15	31,31,31,31	0
56	MG	DA	3253	1/1	0.96	0.10	42,42,42,42	0
56	MG	DD	308	1/1	0.96	0.05	55,55,55,55	0
56	MG	CA	3051	1/1	0.96	0.09	63,63,63,63	0
56	MG	DA	3467	1/1	0.96	0.04	35,35,35,35	0
56	MG	DA	3468	1/1	0.96	0.07	48,48,48,48	0
56	MG	BA	3154	1/1	0.96	0.09	61,61,61,61	0
56	MG	DA	3470	1/1	0.96	0.12	52,52,52,52	0
56	MG	BA	3542	1/1	0.96	0.16	19,19,19,19	0
56	MG	DA	3473	1/1	0.96	0.21	32,32,32,32	0
56	MG	AA	3215	1/1	0.96	0.09	53,53,53,53	0
56	MG	AA	3186	1/1	0.96	0.05	49,49,49,49	0
56	MG	BA	3398	1/1	0.96	0.08	41,41,41,41	0
56	MG	BA	3121	1/1	0.96	0.20	57,57,57,57	0
56	MG	BA	3090	1/1	0.96	0.12	46,46,46,46	0
56	MG	DO	5001	1/1	0.96	0.08	35,35,35,35	0
56	MG	BA	3404	1/1	0.96	0.13	35,35,35,35	0
56	MG	CA	3060	1/1	0.96	0.25	43,43,43,43	0
56	MG	DQ	204	1/1	0.96	0.12	43,43,43,43	0
56	MG	DA	3272	1/1	0.96	0.12	27,27,27,27	0
56	MG	DA	3485	1/1	0.96	0.05	38,38,38,38	0
56	MG	BA	3091	1/1	0.96	0.25	45,45,45,45	0
56	MG	DA	3488	1/1	0.96	0.05	46,46,46,46	0
56	MG	BA	3408	1/1	0.96	0.07	24,24,24,24	0
56	MG	DA	3490	1/1	0.96	0.08	39,39,39,39	0
56	MG	BA	3409	1/1	0.96	0.13	27,27,27,27	0
56	MG	DA	3276	1/1	0.96	0.07	36,36,36,36	0
56	MG	BA	3415	1/1	0.96	0.14	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	DA	3130	1/1	0.96	0.09	32,32,32,32	0
56	MG	BA	3557	1/1	0.96	0.16	31,31,31,31	0
56	MG	DA	3281	1/1	0.96	0.12	42,42,42,42	0
56	MG	DA	3282	1/1	0.96	0.07	36,36,36,36	0
58	ZN	D4	501	1/1	0.96	0.11	153,153,153,153	0
56	MG	DA	3283	1/1	0.96	0.06	33,33,33,33	0
56	MG	DA	3132	1/1	0.96	0.21	54,54,54,54	0
56	MG	DA	3501	1/1	0.96	0.11	23,23,23,23	0
56	MG	BA	3200	1/1	0.96	0.13	25,25,25,25	0
56	MG	BA	3333	1/1	0.97	0.16	49,49,49,49	0
56	MG	BA	3538	1/1	0.97	0.08	36,36,36,36	0
56	MG	BA	3652	1/1	0.97	0.14	64,64,64,64	0
56	MG	DA	3010	1/1	0.97	0.06	39,39,39,39	0
56	MG	BA	3539	1/1	0.97	0.09	35,35,35,35	0
56	MG	BA	3032	1/1	0.97	0.13	49,49,49,49	0
56	MG	BE	306	1/1	0.97	0.15	46,46,46,46	0
56	MG	DA	3323	1/1	0.97	0.06	30,30,30,30	0
56	MG	DA	3324	1/1	0.97	0.17	40,40,40,40	0
56	MG	BE	307	1/1	0.97	0.17	39,39,39,39	0
56	MG	BA	3655	1/1	0.97	0.10	52,52,52,52	0
56	MG	BE	310	1/1	0.97	0.08	50,50,50,50	0
56	MG	DA	3017	1/1	0.97	0.07	46,46,46,46	0
56	MG	DA	3529	1/1	0.97	0.12	63,63,63,63	0
56	MG	BA	3433	1/1	0.97	0.14	39,39,39,39	0
56	MG	BF	303	1/1	0.97	0.12	36,36,36,36	0
56	MG	BA	3172	1/1	0.97	0.44	48,48,48,48	0
56	MG	BF	305	1/1	0.97	0.09	35,35,35,35	0
56	MG	BF	306	1/1	0.97	0.09	37,37,37,37	0
56	MG	BA	3012	1/1	0.97	0.11	40,40,40,40	0
56	MG	DA	3339	1/1	0.97	0.07	37,37,37,37	0
56	MG	DA	3166	1/1	0.97	0.05	32,32,32,32	0
56	MG	DA	3025	1/1	0.97	0.27	44,44,44,44	0
56	MG	BA	3439	1/1	0.97	0.07	34,34,34,34	0
56	MG	DA	3344	1/1	0.97	0.07	26,26,26,26	0
56	MG	DA	3346	1/1	0.97	0.11	29,29,29,29	0
56	MG	BA	3054	1/1	0.97	0.21	46,46,46,46	0
56	MG	BA	3239	1/1	0.97	0.11	33,33,33,33	0
56	MG	BA	3148	1/1	0.97	0.24	52,52,52,52	0
56	MG	DA	3546	1/1	0.97	0.13	44,44,44,44	0
56	MG	DA	3031	1/1	0.97	0.10	55,55,55,55	0
56	MG	BA	3341	1/1	0.97	0.04	33,33,33,33	0
56	MG	BA	3665	1/1	0.97	0.10	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	AA	3185	1/1	0.97	0.15	46,46,46,46	0
56	MG	DA	3552	1/1	0.97	0.06	34,34,34,34	0
56	MG	BA	3449	1/1	0.97	0.06	21,21,21,21	0
56	MG	BA	3552	1/1	0.97	0.17	29,29,29,29	0
56	MG	DA	3038	1/1	0.97	0.07	39,39,39,39	0
56	MG	BA	3346	1/1	0.97	0.09	37,37,37,37	0
56	MG	BA	3451	1/1	0.97	0.11	28,28,28,28	0
56	MG	BA	3347	1/1	0.97	0.08	25,25,25,25	0
56	MG	DA	3364	1/1	0.97	0.06	32,32,32,32	0
56	MG	BA	3349	1/1	0.97	0.12	43,43,43,43	0
56	MG	BA	3454	1/1	0.97	0.06	22,22,22,22	0
56	MG	CA	3082	1/1	0.97	0.05	47,47,47,47	0
56	MG	CA	3083	1/1	0.97	0.07	39,39,39,39	0
56	MG	BA	3455	1/1	0.97	0.09	47,47,47,47	0
56	MG	DA	3371	1/1	0.97	0.05	44,44,44,44	0
56	MG	AA	3151	1/1	0.97	0.05	41,41,41,41	0
56	MG	DA	3570	1/1	0.97	0.14	28,28,28,28	0
56	MG	BA	3125	1/1	0.97	0.10	39,39,39,39	0
56	MG	BA	3458	1/1	0.97	0.06	29,29,29,29	0
56	MG	DA	3573	1/1	0.97	0.11	40,40,40,40	0
56	MG	DA	3574	1/1	0.97	0.09	56,56,56,56	0
56	MG	DA	3375	1/1	0.97	0.08	60,60,60,60	0
56	MG	DA	3576	1/1	0.97	0.08	38,38,38,38	0
56	MG	BA	3283	1/1	0.97	0.08	17,17,17,17	0
56	MG	AA	3172	1/1	0.97	0.08	53,53,53,53	0
56	MG	BA	3571	1/1	0.97	0.06	65,65,65,65	0
56	MG	BA	3682	1/1	0.97	0.11	38,38,38,38	0
56	MG	AA	3146	1/1	0.97	0.10	48,48,48,48	0
56	MG	DA	3385	1/1	0.97	0.07	35,35,35,35	0
56	MG	BA	3574	1/1	0.97	0.07	54,54,54,54	0
56	MG	BU	202	1/1	0.97	0.23	32,32,32,32	0
56	MG	BU	203	1/1	0.97	0.07	33,33,33,33	0
56	MG	DA	3586	1/1	0.97	0.03	29,29,29,29	0
56	MG	BA	3576	1/1	0.97	0.13	23,23,23,23	0
56	MG	BA	3577	1/1	0.97	0.07	52,52,52,52	0
56	MG	BU	207	1/1	0.97	0.11	40,40,40,40	0
56	MG	DA	3393	1/1	0.97	0.10	41,41,41,41	0
56	MG	DA	3203	1/1	0.97	0.08	41,41,41,41	0
56	MG	DA	3204	1/1	0.97	0.22	34,34,34,34	0
56	MG	DA	3205	1/1	0.97	0.09	38,38,38,38	0
56	MG	CA	3101	1/1	0.97	0.07	70,70,70,70	0
56	MG	CA	3102	1/1	0.97	0.05	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3286	1/1	0.97	0.14	32,32,32,32	0
56	MG	BA	3465	1/1	0.97	0.07	40,40,40,40	0
56	MG	DA	3403	1/1	0.97	0.07	28,28,28,28	0
56	MG	AA	3174	1/1	0.97	0.10	33,33,33,33	0
56	MG	BA	3582	1/1	0.97	0.12	25,25,25,25	0
56	MG	BW	203	1/1	0.97	0.16	45,45,45,45	0
56	MG	BA	3584	1/1	0.97	0.11	22,22,22,22	0
56	MG	DA	3214	1/1	0.97	0.10	64,64,64,64	0
56	MG	BA	3587	1/1	0.97	0.12	23,23,23,23	0
56	MG	AA	3163	1/1	0.97	0.08	28,28,28,28	0
56	MG	BA	3589	1/1	0.97	0.09	51,51,51,51	0
56	MG	DA	3416	1/1	0.97	0.04	44,44,44,44	0
56	MG	BA	3184	1/1	0.97	0.11	49,49,49,49	0
56	MG	AA	3154	1/1	0.97	0.08	63,63,63,63	0
56	MG	DA	3421	1/1	0.97	0.15	34,34,34,34	0
56	MG	BA	3702	1/1	0.97	0.06	56,56,56,56	0
56	MG	BA	3471	1/1	0.97	0.18	51,51,51,51	0
56	MG	DA	3424	1/1	0.97	0.07	30,30,30,30	0
56	MG	DA	3426	1/1	0.97	0.15	74,74,74,74	0
56	MG	BA	3364	1/1	0.97	0.08	29,29,29,29	0
56	MG	AA	3092	1/1	0.97	0.27	50,50,50,50	0
56	MG	BA	3109	1/1	0.97	0.04	36,36,36,36	0
56	MG	BA	3367	1/1	0.97	0.04	50,50,50,50	0
56	MG	DA	3081	1/1	0.97	0.14	48,48,48,48	0
56	MG	AA	3157	1/1	0.97	0.04	35,35,35,35	0
56	MG	BA	3600	1/1	0.97	0.06	47,47,47,47	0
56	MG	BA	3006	1/1	0.97	0.05	42,42,42,42	0
56	MG	BA	3220	1/1	0.97	0.09	57,57,57,57	0
56	MG	BA	3483	1/1	0.97	0.06	53,53,53,53	0
56	MG	B7	104	1/1	0.97	0.07	51,51,51,51	0
56	MG	BA	3025	1/1	0.97	0.07	28,28,28,28	0
56	MG	BA	3605	1/1	0.97	0.13	59,59,59,59	0
56	MG	DA	3633	1/1	0.97	0.14	54,54,54,54	0
56	MG	BA	3715	1/1	0.97	0.06	47,47,47,47	0
56	MG	BA	3606	1/1	0.97	0.14	25,25,25,25	0
56	MG	CA	3134	1/1	0.97	0.06	82,82,82,82	0
56	MG	BA	3222	1/1	0.97	0.19	25,25,25,25	0
56	MG	BA	3375	1/1	0.97	0.13	31,31,31,31	0
56	MG	CA	3137	1/1	0.97	0.08	48,48,48,48	0
56	MG	BA	3720	1/1	0.97	0.11	33,33,33,33	0
56	MG	DA	3642	1/1	0.97	0.06	35,35,35,35	0
56	MG	DA	3448	1/1	0.97	0.14	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3223	1/1	0.97	0.23	47,47,47,47	0
56	MG	BA	3299	1/1	0.97	0.11	9,9,9,9	0
56	MG	BA	3379	1/1	0.97	0.12	22,22,22,22	0
56	MG	BA	3258	1/1	0.97	0.23	40,40,40,40	0
56	MG	BA	3303	1/1	0.97	0.07	35,35,35,35	0
56	MG	BA	3224	1/1	0.97	0.29	64,64,64,64	0
56	MG	BA	3305	1/1	0.97	0.10	44,44,44,44	0
56	MG	BA	3137	1/1	0.97	0.10	42,42,42,42	0
56	MG	AA	3075	1/1	0.97	0.09	52,52,52,52	0
56	MG	DA	3255	1/1	0.97	0.11	40,40,40,40	0
56	MG	BA	3733	1/1	0.97	0.07	27,27,27,27	0
56	MG	DA	3257	1/1	0.97	0.05	48,48,48,48	0
56	MG	DA	3258	1/1	0.97	0.11	32,32,32,32	0
56	MG	DA	3463	1/1	0.97	0.11	43,43,43,43	0
56	MG	DA	3259	1/1	0.97	0.15	47,47,47,47	0
56	MG	BA	3308	1/1	0.97	0.06	44,44,44,44	0
56	MG	DA	3261	1/1	0.97	0.10	35,35,35,35	0
56	MG	BA	3388	1/1	0.97	0.12	34,34,34,34	0
56	MG	BA	3503	1/1	0.97	0.10	31,31,31,31	0
56	MG	BA	3389	1/1	0.97	0.06	48,48,48,48	0
56	MG	AA	3149	1/1	0.97	0.08	50,50,50,50	0
56	MG	CA	3154	1/1	0.97	0.11	49,49,49,49	0
56	MG	DA	3472	1/1	0.97	0.07	36,36,36,36	0
56	MG	DD	301	1/1	0.97	0.08	46,46,46,46	0
56	MG	BA	3070	1/1	0.97	0.13	35,35,35,35	0
56	MG	DD	303	1/1	0.97	0.08	19,19,19,19	0
56	MG	DA	3474	1/1	0.97	0.05	61,61,61,61	0
56	MG	BA	3265	1/1	0.97	0.13	20,20,20,20	0
56	MG	DA	3477	1/1	0.97	0.06	49,49,49,49	0
56	MG	BA	3397	1/1	0.97	0.07	28,28,28,28	0
56	MG	BA	3266	1/1	0.97	0.19	46,46,46,46	0
56	MG	BA	3314	1/1	0.97	0.10	24,24,24,24	0
56	MG	DA	3121	1/1	0.97	0.07	48,48,48,48	0
56	MG	BA	3267	1/1	0.97	0.13	41,41,41,41	0
56	MG	BA	3512	1/1	0.97	0.12	40,40,40,40	0
56	MG	BA	3195	1/1	0.97	0.09	47,47,47,47	0
56	MG	AA	3198	1/1	0.97	0.06	87,87,87,87	0
56	MG	BA	3326	1/1	0.97	0.12	41,41,41,41	0
56	MG	BB	3012	1/1	0.97	0.08	56,56,56,56	0
56	MG	BB	3013	1/1	0.97	0.06	39,39,39,39	0
56	MG	BA	3635	1/1	0.97	0.07	78,78,78,78	0
56	MG	BA	3636	1/1	0.97	0.06	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3517	1/1	0.97	0.10	49,49,49,49	0
56	MG	DA	3493	1/1	0.97	0.08	29,29,29,29	0
56	MG	DQ	202	1/1	0.97	0.14	34,34,34,34	0
56	MG	BA	3518	1/1	0.97	0.08	41,41,41,41	0
56	MG	AA	3183	1/1	0.97	0.09	42,42,42,42	0
56	MG	DA	3290	1/1	0.97	0.05	42,42,42,42	0
56	MG	BA	3118	1/1	0.97	0.11	39,39,39,39	0
56	MG	CA	3040	1/1	0.97	0.19	42,42,42,42	0
56	MG	DV	201	1/1	0.97	0.08	55,55,55,55	0
56	MG	CE	3002	1/1	0.97	0.06	55,55,55,55	0
56	MG	BA	3416	1/1	0.97	0.25	42,42,42,42	0
56	MG	BA	3524	1/1	0.97	0.21	55,55,55,55	0
56	MG	BA	3525	1/1	0.97	0.13	43,43,43,43	0
56	MG	BA	3526	1/1	0.97	0.08	19,19,19,19	0
56	MG	DY	502	1/1	0.97	0.09	60,60,60,60	0
56	MG	BA	3417	1/1	0.97	0.11	18,18,18,18	0
56	MG	BD	307	1/1	0.97	0.07	43,43,43,43	0
56	MG	BD	308	1/1	0.97	0.16	23,23,23,23	0
56	MG	D5	102	1/1	0.97	0.18	55,55,55,55	0
56	MG	BA	3419	1/1	0.97	0.08	24,24,24,24	0
56	MG	DA	3305	1/1	0.97	0.06	33,33,33,33	0
58	ZN	CN	501	1/1	0.97	0.04	108,108,108,108	0
56	MG	BA	3272	1/1	0.97	0.17	7,7,7,7	0
56	MG	CA	3050	1/1	0.97	0.10	43,43,43,43	0
56	MG	AA	3145	1/1	0.97	0.11	63,63,63,63	0
56	MG	DA	3311	1/1	0.97	0.09	32,32,32,32	0
56	MG	BA	3427	1/1	0.97	0.09	48,48,48,48	0
56	MG	BA	3063	1/1	0.98	0.18	43,43,43,43	0
56	MG	BA	3064	1/1	0.98	0.08	39,39,39,39	0
56	MG	AA	3220	1/1	0.98	0.05	40,40,40,40	0
56	MG	DA	3417	1/1	0.98	0.11	34,34,34,34	0
56	MG	BA	3217	1/1	0.98	0.07	28,28,28,28	0
56	MG	BA	3033	1/1	0.98	0.16	35,35,35,35	0
56	MG	BA	3519	1/1	0.98	0.10	39,39,39,39	0
56	MG	CA	3122	1/1	0.98	0.13	47,47,47,47	0
56	MG	BA	3149	1/1	0.98	0.11	40,40,40,40	0
56	MG	DA	3277	1/1	0.98	0.12	49,49,49,49	0
56	MG	DA	3425	1/1	0.98	0.05	27,27,27,27	0
56	MG	BA	3685	1/1	0.98	0.07	67,67,67,67	0
56	MG	CA	3023	1/1	0.98	0.06	37,37,37,37	0
56	MG	BA	3128	1/1	0.98	0.08	40,40,40,40	0
56	MG	BA	3687	1/1	0.98	0.15	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	CA	3128	1/1	0.98	0.09	41,41,41,41	0
56	MG	AA	3078	1/1	0.98	0.21	42,42,42,42	0
56	MG	CA	3130	1/1	0.98	0.06	65,65,65,65	0
56	MG	BE	309	1/1	0.98	0.12	25,25,25,25	0
56	MG	AA	3179	1/1	0.98	0.18	34,34,34,34	0
56	MG	BF	301	1/1	0.98	0.18	45,45,45,45	0
56	MG	BA	3051	1/1	0.98	0.09	20,20,20,20	0
56	MG	BA	3348	1/1	0.98	0.06	64,64,64,64	0
56	MG	BA	3390	1/1	0.98	0.09	30,30,30,30	0
56	MG	DA	3439	1/1	0.98	0.09	28,28,28,28	0
56	MG	BA	3459	1/1	0.98	0.12	31,31,31,31	0
56	MG	BA	3612	1/1	0.98	0.07	37,37,37,37	0
56	MG	BA	3696	1/1	0.98	0.10	39,39,39,39	0
56	MG	BA	3529	1/1	0.98	0.13	35,35,35,35	0
56	MG	DA	3177	1/1	0.98	0.06	33,33,33,33	0
56	MG	BA	3614	1/1	0.98	0.16	30,30,30,30	0
56	MG	AA	3187	1/1	0.98	0.04	62,62,62,62	0
56	MG	BA	3532	1/1	0.98	0.12	34,34,34,34	0
56	MG	DA	3301	1/1	0.98	0.13	45,45,45,45	0
56	MG	BA	3701	1/1	0.98	0.10	32,32,32,32	0
56	MG	BA	3533	1/1	0.98	0.07	32,32,32,32	0
56	MG	DA	3451	1/1	0.98	0.05	49,49,49,49	0
56	MG	DA	3304	1/1	0.98	0.07	35,35,35,35	0
56	MG	AA	3205	1/1	0.98	0.10	61,61,61,61	0
56	MG	DA	3306	1/1	0.98	0.08	33,33,33,33	0
56	MG	DA	3605	1/1	0.98	0.05	44,44,44,44	0
56	MG	BA	3393	1/1	0.98	0.06	38,38,38,38	0
56	MG	DA	3308	1/1	0.98	0.06	30,30,30,30	0
56	MG	AX	110	1/1	0.98	0.14	42,42,42,42	0
56	MG	BA	3395	1/1	0.98	0.09	25,25,25,25	0
56	MG	BA	3179	1/1	0.98	0.11	43,43,43,43	0
56	MG	BA	3024	1/1	0.98	0.19	35,35,35,35	0
56	MG	BA	3399	1/1	0.98	0.14	18,18,18,18	0
56	MG	BA	3469	1/1	0.98	0.05	38,38,38,38	0
56	MG	DA	3315	1/1	0.98	0.04	31,31,31,31	0
56	MG	BA	3400	1/1	0.98	0.06	24,24,24,24	0
56	MG	BA	3544	1/1	0.98	0.13	27,27,27,27	0
56	MG	BA	3229	1/1	0.98	0.13	22,22,22,22	0
56	MG	DA	3320	1/1	0.98	0.12	30,30,30,30	0
56	MG	AA	3091	1/1	0.98	0.06	75,75,75,75	0
56	MG	BA	3403	1/1	0.98	0.11	41,41,41,41	0
56	MG	BQ	204	1/1	0.98	0.04	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3096	1/1	0.98	0.17	62,62,62,62	0
56	MG	BA	3315	1/1	0.98	0.08	37,37,37,37	0
56	MG	DA	3625	1/1	0.98	0.09	35,35,35,35	0
56	MG	DA	3090	1/1	0.98	0.10	47,47,47,47	0
56	MG	BA	3477	1/1	0.98	0.05	25,25,25,25	0
56	MG	DA	3475	1/1	0.98	0.10	36,36,36,36	0
56	MG	BR	203	1/1	0.98	0.06	15,15,15,15	0
56	MG	BA	3478	1/1	0.98	0.10	29,29,29,29	0
56	MG	BA	3406	1/1	0.98	0.05	28,28,28,28	0
56	MG	DA	3331	1/1	0.98	0.07	34,34,34,34	0
56	MG	BA	3722	1/1	0.98	0.08	32,32,32,32	0
56	MG	BA	3723	1/1	0.98	0.08	49,49,49,49	0
56	MG	BA	3359	1/1	0.98	0.05	23,23,23,23	0
56	MG	BU	205	1/1	0.98	0.09	42,42,42,42	0
56	MG	DA	3336	1/1	0.98	0.06	27,27,27,27	0
56	MG	DA	3337	1/1	0.98	0.06	27,27,27,27	0
56	MG	DA	3338	1/1	0.98	0.06	29,29,29,29	0
56	MG	BA	3725	1/1	0.98	0.09	49,49,49,49	0
56	MG	BA	3316	1/1	0.98	0.05	28,28,28,28	0
56	MG	DA	3341	1/1	0.98	0.08	23,23,23,23	0
56	MG	DA	3101	1/1	0.98	0.08	48,48,48,48	0
56	MG	BA	3556	1/1	0.98	0.14	27,27,27,27	0
56	MG	BA	3410	1/1	0.98	0.05	27,27,27,27	0
56	MG	BV	202	1/1	0.98	0.14	56,56,56,56	0
56	MG	DA	3347	1/1	0.98	0.11	62,62,62,62	0
56	MG	BA	3026	1/1	0.98	0.08	36,36,36,36	0
56	MG	BV	204	1/1	0.98	0.13	20,20,20,20	0
56	MG	BA	3485	1/1	0.98	0.13	44,44,44,44	0
56	MG	BW	202	1/1	0.98	0.15	34,34,34,34	0
56	MG	BA	3362	1/1	0.98	0.07	43,43,43,43	0
56	MG	BA	3363	1/1	0.98	0.07	39,39,39,39	0
56	MG	DA	3354	1/1	0.98	0.05	27,27,27,27	0
56	MG	DA	3355	1/1	0.98	0.10	18,18,18,18	0
56	MG	AA	3056	1/1	0.98	0.07	39,39,39,39	0
56	MG	BA	3421	1/1	0.98	0.08	36,36,36,36	0
56	MG	BA	3565	1/1	0.98	0.04	55,55,55,55	0
56	MG	BA	3491	1/1	0.98	0.08	23,23,23,23	0
56	MG	BA	3567	1/1	0.98	0.13	37,37,37,37	0
56	MG	BA	3492	1/1	0.98	0.12	23,23,23,23	0
56	MG	BA	3569	1/1	0.98	0.12	19,19,19,19	0
56	MG	BA	3570	1/1	0.98	0.07	61,61,61,61	0
56	MG	BA	3077	1/1	0.98	0.10	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3572	1/1	0.98	0.12	36,36,36,36	0
56	MG	B3	101	1/1	0.98	0.10	28,28,28,28	0
56	MG	BA	3425	1/1	0.98	0.14	36,36,36,36	0
56	MG	DA	3234	1/1	0.98	0.10	33,33,33,33	0
56	MG	DD	305	1/1	0.98	0.21	49,49,49,49	0
56	MG	BA	3325	1/1	0.98	0.12	58,58,58,58	0
56	MG	CA	3090	1/1	0.98	0.08	73,73,73,73	0
56	MG	BA	3261	1/1	0.98	0.24	34,34,34,34	0
56	MG	BB	3007	1/1	0.98	0.04	47,47,47,47	0
56	MG	BA	3428	1/1	0.98	0.08	45,45,45,45	0
56	MG	B7	102	1/1	0.98	0.06	40,40,40,40	0
56	MG	DA	3019	1/1	0.98	0.05	30,30,30,30	0
56	MG	AA	3182	1/1	0.98	0.05	49,49,49,49	0
56	MG	DE	306	1/1	0.98	0.06	32,32,32,32	0
56	MG	DA	3379	1/1	0.98	0.08	28,28,28,28	0
56	MG	BA	3431	1/1	0.98	0.11	17,17,17,17	0
56	MG	DA	3382	1/1	0.98	0.05	25,25,25,25	0
56	MG	BA	3369	1/1	0.98	0.06	45,45,45,45	0
56	MG	DA	3384	1/1	0.98	0.05	23,23,23,23	0
56	MG	DF	306	1/1	0.98	0.11	50,50,50,50	0
56	MG	DA	3245	1/1	0.98	0.08	37,37,37,37	0
56	MG	CA	3098	1/1	0.98	0.13	46,46,46,46	0
56	MG	BA	3581	1/1	0.98	0.04	51,51,51,51	0
56	MG	BA	3015	1/1	0.98	0.24	44,44,44,44	0
56	MG	DA	3026	1/1	0.98	0.06	37,37,37,37	0
56	MG	DA	3250	1/1	0.98	0.05	31,31,31,31	0
56	MG	CA	3001	1/1	0.98	0.09	55,55,55,55	0
56	MG	DA	3392	1/1	0.98	0.08	35,35,35,35	0
56	MG	DA	3540	1/1	0.98	0.21	54,54,54,54	0
56	MG	BA	3371	1/1	0.98	0.06	15,15,15,15	0
56	MG	DA	3394	1/1	0.98	0.06	47,47,47,47	0
56	MG	BA	3585	1/1	0.98	0.05	51,51,51,51	0
56	MG	BA	3436	1/1	0.98	0.04	37,37,37,37	0
56	MG	BA	3437	1/1	0.98	0.06	42,42,42,42	0
56	MG	BA	3329	1/1	0.98	0.10	29,29,29,29	0
56	MG	BA	3330	1/1	0.98	0.08	39,39,39,39	0
56	MG	AA	3010	1/1	0.98	0.10	70,70,70,70	0
56	MG	BA	3441	1/1	0.98	0.14	25,25,25,25	0
56	MG	BA	3443	1/1	0.98	0.09	26,26,26,26	0
56	MG	DA	3037	1/1	0.98	0.18	35,35,35,35	0
56	MG	DA	3262	1/1	0.98	0.08	44,44,44,44	0
56	MG	DA	3406	1/1	0.98	0.06	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	SF4	CD	501	8/8	0.98	0.04	64,75,91,95	0
58	ZN	AN	102	1/1	0.98	0.03	90,90,90,90	0
56	MG	AA	3156	1/1	0.98	0.11	62,62,62,62	0
56	MG	BA	3595	1/1	0.98	0.11	41,41,41,41	0
58	ZN	DY	501	1/1	0.98	0.03	83,83,83,83	0
56	MG	BA	3596	1/1	0.98	0.05	51,51,51,51	0
56	MG	DA	3411	1/1	0.98	0.05	21,21,21,21	0
56	MG	BA	3213	1/1	0.98	0.07	41,41,41,41	0
56	MG	DA	3561	1/1	0.98	0.07	45,45,45,45	0
56	MG	DA	3413	1/1	0.98	0.08	53,53,53,53	0
56	MG	B8	103	1/1	0.99	0.06	24,24,24,24	0
56	MG	BA	3472	1/1	0.99	0.06	30,30,30,30	0
56	MG	BA	3323	1/1	0.99	0.06	23,23,23,23	0
56	MG	BA	3381	1/1	0.99	0.05	37,37,37,37	0
56	MG	BB	3011	1/1	0.99	0.08	37,37,37,37	0
56	MG	DA	3506	1/1	0.99	0.04	59,59,59,59	0
56	MG	AX	109	1/1	0.99	0.07	43,43,43,43	0
56	MG	BA	3310	1/1	0.99	0.10	13,13,13,13	0
56	MG	BA	3516	1/1	0.99	0.03	47,47,47,47	0
56	MG	DA	3380	1/1	0.99	0.04	26,26,26,26	0
56	MG	BA	3561	1/1	0.99	0.08	24,24,24,24	0
56	MG	BA	3342	1/1	0.99	0.06	31,31,31,31	0
56	MG	BA	3656	1/1	0.99	0.04	33,33,33,33	0
56	MG	BA	3442	1/1	0.99	0.09	12,12,12,12	0
56	MG	CA	3115	1/1	0.99	0.03	55,55,55,55	0
56	MG	BA	3343	1/1	0.99	0.08	40,40,40,40	0
56	MG	BA	3480	1/1	0.99	0.09	17,17,17,17	0
56	MG	DA	3518	1/1	0.99	0.03	40,40,40,40	0
56	MG	BA	3344	1/1	0.99	0.05	30,30,30,30	0
56	MG	BA	3411	1/1	0.99	0.08	38,38,38,38	0
56	MG	BA	3412	1/1	0.99	0.09	26,26,26,26	0
56	MG	DA	3047	1/1	0.99	0.06	34,34,34,34	0
56	MG	DA	3271	1/1	0.99	0.10	37,37,37,37	0
56	MG	BA	3447	1/1	0.99	0.06	37,37,37,37	0
56	MG	BA	3413	1/1	0.99	0.05	20,20,20,20	0
56	MG	BA	3414	1/1	0.99	0.09	19,19,19,19	0
56	MG	BA	3487	1/1	0.99	0.07	31,31,31,31	0
56	MG	DA	3397	1/1	0.99	0.11	41,41,41,41	0
56	MG	BA	3716	1/1	0.99	0.05	27,27,27,27	0
56	MG	DA	3600	1/1	0.99	0.03	45,45,45,45	0
56	MG	BA	3092	1/1	0.99	0.08	51,51,51,51	0
56	MG	BA	3302	1/1	0.99	0.06	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	BA	3575	1/1	0.99	0.09	51,51,51,51	0
56	MG	BA	3531	1/1	0.99	0.15	38,38,38,38	0
56	MG	AA	3144	1/1	0.99	0.06	48,48,48,48	0
56	MG	BA	3418	1/1	0.99	0.08	27,27,27,27	0
56	MG	BA	3534	1/1	0.99	0.04	41,41,41,41	0
56	MG	AA	3152	1/1	0.99	0.04	19,19,19,19	0
56	MG	DA	3407	1/1	0.99	0.09	21,21,21,21	0
56	MG	BA	3493	1/1	0.99	0.11	15,15,15,15	0
56	MG	DA	3345	1/1	0.99	0.03	31,31,31,31	0
56	MG	DA	3612	1/1	0.99	0.02	39,39,39,39	0
56	MG	BA	3420	1/1	0.99	0.09	33,33,33,33	0
56	MG	AV	101	1/1	0.99	0.09	36,36,36,36	0
56	MG	BA	3350	1/1	0.99	0.03	47,47,47,47	0
56	MG	DA	3289	1/1	0.99	0.03	26,26,26,26	0
56	MG	BA	3586	1/1	0.99	0.08	29,29,29,29	0
56	MG	BA	3423	1/1	0.99	0.08	26,26,26,26	0
56	MG	BA	3681	1/1	0.99	0.12	40,40,40,40	0
56	MG	DA	3548	1/1	0.99	0.03	37,37,37,37	0
56	MG	BA	3424	1/1	0.99	0.07	15,15,15,15	0
56	MG	DA	3418	1/1	0.99	0.12	29,29,29,29	0
56	MG	BA	3460	1/1	0.99	0.05	33,33,33,33	0
56	MG	BA	3081	1/1	0.99	0.03	14,14,14,14	0
56	MG	BA	3317	1/1	0.99	0.10	40,40,40,40	0
56	MG	DA	3486	1/1	0.99	0.02	38,38,38,38	0
56	MG	BA	3318	1/1	0.99	0.04	33,33,33,33	0
56	MG	DA	3556	1/1	0.99	0.03	56,56,56,56	0
56	MG	DA	3629	1/1	0.99	0.06	19,19,19,19	0
56	MG	BA	3396	1/1	0.99	0.08	22,22,22,22	0
56	MG	BA	3319	1/1	0.99	0.07	25,25,25,25	0
56	MG	DA	3300	1/1	0.99	0.06	37,37,37,37	0
56	MG	AA	3192	1/1	0.99	0.07	57,57,57,57	0
56	MG	BA	3321	1/1	0.99	0.09	29,29,29,29	0
57	SF4	AD	501	8/8	0.99	0.04	59,72,92,96	0
56	MG	BA	3337	1/1	0.99	0.07	23,23,23,23	0
56	MG	BA	3434	1/1	0.99	0.04	32,32,32,32	0
58	ZN	BY	202	1/1	0.99	0.02	71,71,71,71	0
56	MG	BA	3378	1/1	0.99	0.02	20,20,20,20	0
58	ZN	B5	501	1/1	0.99	0.02	54,54,54,54	0
56	MG	BA	3553	1/1	0.99	0.03	31,31,31,31	0
56	MG	DA	3639	1/1	0.99	0.13	15,15,15,15	0
56	MG	DA	3368	1/1	0.99	0.04	39,39,39,39	0
58	ZN	D5	103	1/1	0.99	0.02	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
58	ZN	D6	501	1/1	0.99	0.04	61,61,61,61	0
58	ZN	D9	501	1/1	0.99	0.04	66,66,66,66	0
56	MG	BA	3695	1/1	0.99	0.10	15,15,15,15	0
56	MG	DA	3568	1/1	0.99	0.04	42,42,42,42	0
56	MG	AA	3165	1/1	0.99	0.08	23,23,23,23	0
56	MG	DA	3083	1/1	0.99	0.04	41,41,41,41	0
56	MG	BA	3429	1/1	1.00	0.05	20,20,20,20	0
56	MG	DA	3356	1/1	1.00	0.02	27,27,27,27	0
56	MG	BA	3583	1/1	1.00	0.07	27,27,27,27	0
56	MG	DA	3190	1/1	1.00	0.02	37,37,37,37	0
56	MG	BA	3520	1/1	1.00	0.07	34,34,34,34	0
56	MG	DA	3317	1/1	1.00	0.03	32,32,32,32	0
56	MG	DA	3263	1/1	1.00	0.05	31,31,31,31	0
56	MG	BA	3407	1/1	1.00	0.06	15,15,15,15	0
58	ZN	B6	501	1/1	1.00	0.04	49,49,49,49	0
58	ZN	B9	501	1/1	1.00	0.03	48,48,48,48	0

6.5 Other polymers

There are no such residues in this entry.