



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 20, 2026 – 09:15 AM UTC

PDB ID : 4W29 / pdb_00004w29
Title : 70S ribosome translocation intermediate containing elongation factor EFG/GDP/fusidic acid, mRNA, and tRNAs trapped in the AP/AP pe/E chimeric hybrid state.
Authors : Zhou, J.; Lancaster, L.; Donohue, J.P.; Noller, H.F.
Deposited on : 2014-07-02
Resolution : 3.80 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

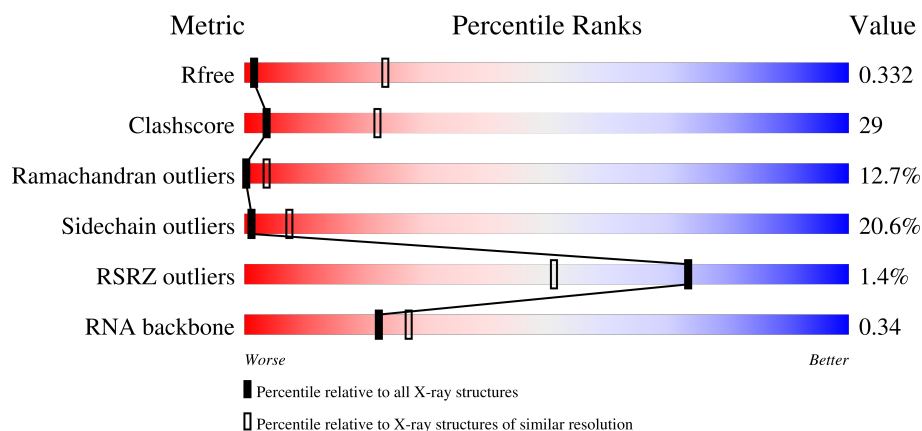
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.80 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



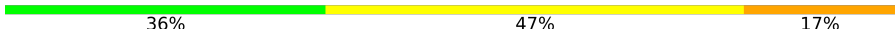
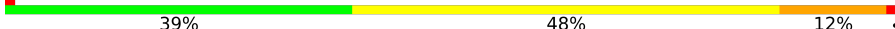
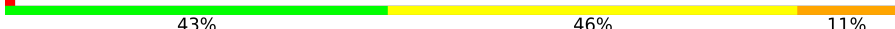
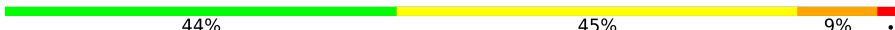
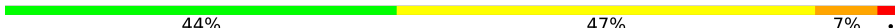
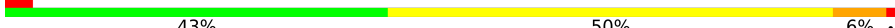
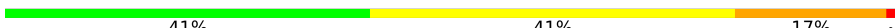
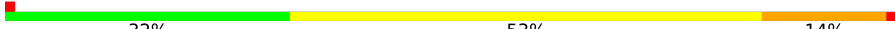
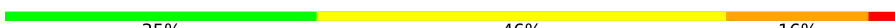
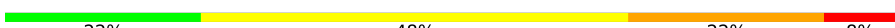
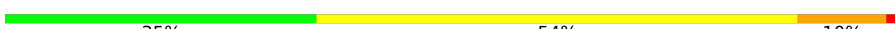
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1065 (3.96-3.64)
Clashscore	190562	1012 (3.94-3.66)
Ramachandran outliers	187476	1048 (3.96-3.64)
Sidechain outliers	187428	1043 (3.96-3.64)
RSRZ outliers	180081	1064 (3.96-3.64)
RNA backbone	3983	1007 (4.50-3.10)

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	AB	235	40% 43% 14% •
1	CB	235	37% 46% 14% •
2	AC	207	36% 48% 15% •

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Mol	Chain	Length	Quality of chain
2	CC	207	
3	AD	208	
3	CD	208	
4	AE	151	
4	CE	151	
5	AF	101	
5	CF	101	
6	AG	155	
6	CG	155	
7	AH	138	
7	CH	138	
8	AI	127	
8	CI	127	
9	AJ	99	
9	CJ	99	
10	AK	119	
10	CK	119	
11	AL	125	
11	CL	125	
12	AM	125	
12	CM	125	
13	AN	60	
13	CN	60	
14	AO	88	
14	CO	88	

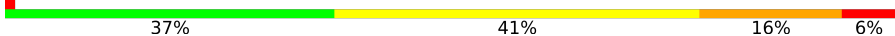
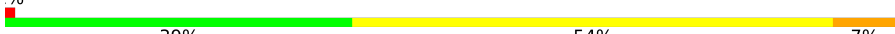
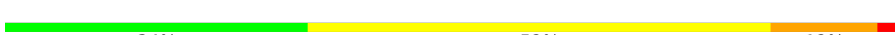
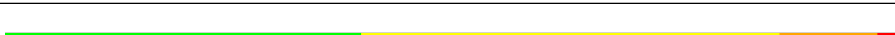
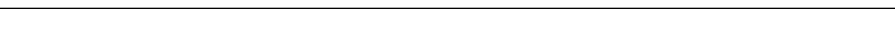
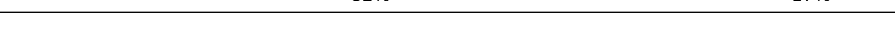
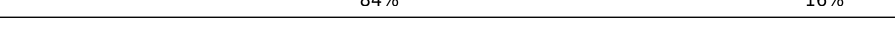
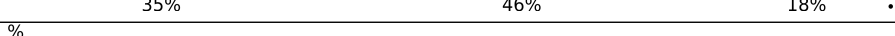
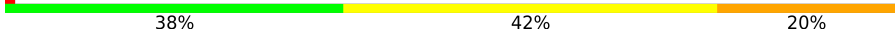
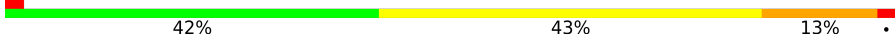
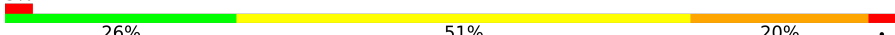
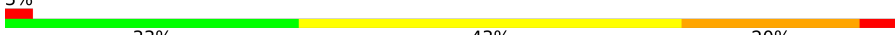
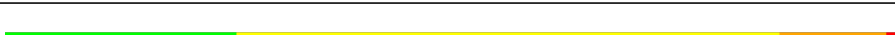
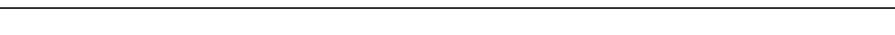
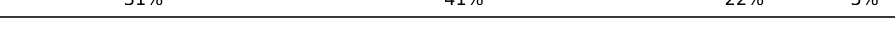
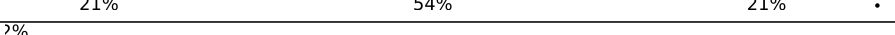
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Mol	Chain	Length	Quality of chain
15	AP	84	
15	CP	84	
16	AQ	100	
16	CQ	100	
17	AR	70	
17	CR	70	
18	AS	79	
18	CS	79	
19	AT	99	
19	CT	99	
20	AY	687	
20	CY	687	
21	AA	1511	
21	CA	1511	
22	AW	77	
22	CW	77	
23	AV	36	
23	CV	36	
24	AX	78	
24	CX	78	
25	BC	228	
25	DC	228	
26	BD	275	
26	DD	275	
27	BE	205	

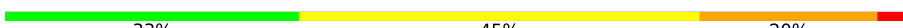
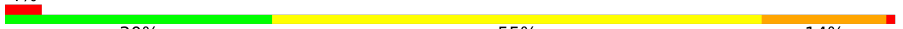
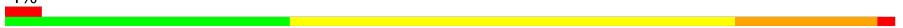
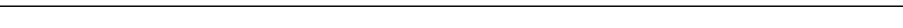
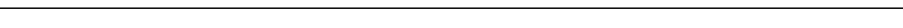
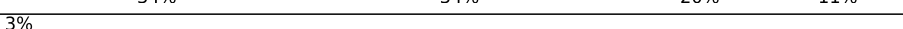
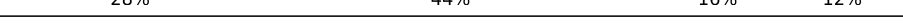
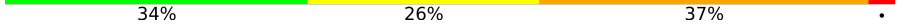
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Mol	Chain	Length	Quality of chain
27	DE	205	
28	BF	208	
28	DF	208	
29	BG	181	
29	DG	181	
30	BH	167	
30	DH	167	
31	BJ	170	
31	DJ	170	
32	BK	140	
32	DK	140	
33	BN	139	
33	DN	139	
34	BO	122	
34	DO	122	
35	BP	146	
35	DP	146	
36	BQ	141	
36	DQ	141	
37	BR	117	
37	DR	117	
38	BS	99	
38	DS	99	
39	BT	138	
39	DT	138	

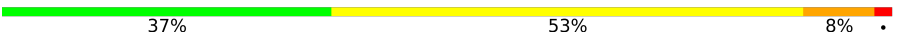
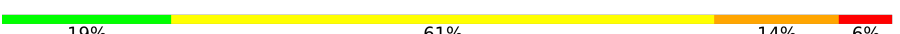
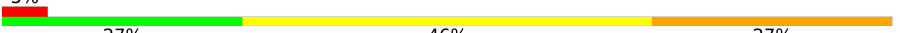
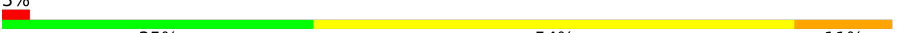
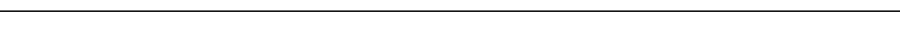
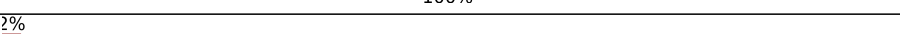
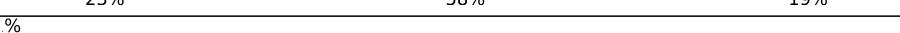
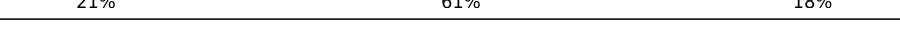
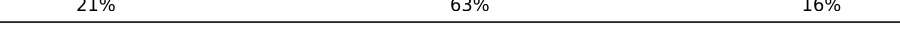
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Mol	Chain	Length	Quality of chain
40	BU	117	
40	DU	117	
41	BV	101	
41	DV	101	
42	BW	113	
42	DW	113	
43	BX	93	
43	DX	93	
44	BY	107	
44	DY	107	
45	BZ	185	
45	DZ	185	
46	B0	84	
46	D0	84	
47	B1	93	
47	D1	93	
48	B2	71	
48	D2	71	
49	B3	60	
49	D3	60	
50	B4	35	
50	D4	35	
51	B5	59	
51	D5	59	
52	B6	50	

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Mol	Chain	Length	Quality of chain
52	D6	50	
53	B7	49	
53	D7	49	
54	B8	64	
54	D8	64	
55	B9	37	
55	D9	37	
56	Be	103	
56	De	103	
57	Bf	31	
57	Bg	31	
57	Df	31	
57	Dg	31	
58	Bh	30	
58	Dh	30	
59	BA	2879	
59	DA	2879	
60	BB	119	
60	DB	119	

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
61	GDP	CY	701	-	-	X	-
62	FUA	AY	702	-	-	X	-
63	NMY	AA	1601	-	-	X	-
63	NMY	BA	2904	-	-	X	-
63	NMY	CA	1601	-	-	X	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
63	NMY	DA	2901	-	-	X	-

2 Entry composition

There are 64 unique types of molecules in this entry. The entry contains 312066 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 protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AB	235	Total	C	N	O	S	0	0	0
			1910	1218	342	345	5			
1	CB	235	Total	C	N	O	S	0	0	0
			1910	1218	342	345	5			

- Molecule 2 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AC	207	Total	C	N	O	S	0	0	0
			1621	1022	315	283	1			
2	CC	207	Total	C	N	O	S	0	0	0
			1621	1022	315	283	1			

- Molecule 3 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			
3	CD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 4 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AE	151	Total	C	N	O	S	0	0	0
			1156	729	218	205	4			
4	CE	151	Total	C	N	O	S	0	0	0
			1156	729	218	205	4			

- Molecule 5 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
5	CF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 6 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
6	CG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 7 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
7	CH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 8 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
8	AI	127	Total	C	N	O	0	0	0
			1010	639	197	174			
8	CI	127	Total	C	N	O	0	0	0
			1010	639	197	174			

- Molecule 9 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AJ	99	Total	C	N	O	S	0	0	0
			802	504	157	140	1			
9	CJ	99	Total	C	N	O	S	0	0	0
			802	504	157	140	1			

- Molecule 10 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

- Molecule 11 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AL	125	Total	C	N	O	S	0	0	0
			976	614	196	165	1			
11	CL	125	Total	C	N	O	S	0	0	0
			976	614	196	165	1			

- Molecule 12 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AM	125	Total	C	N	O	S	0	0	0
			997	617	207	171	2			
12	CM	125	Total	C	N	O	S	0	0	0
			997	617	207	171	2			

- Molecule 13 is a protein called 30S ribosomal protein S14 type Z.

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

- Molecule 14 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
14	CO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 15 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AP	84	Total	C	N	O	S	0	0	0
			706	446	140	119	1			
15	CP	84	Total	C	N	O	S	0	0	0
			706	446	140	119	1			

- Molecule 16 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AQ	100	Total	C	N	O	S	0	0	0
			835	534	155	144	2			
16	CQ	100	Total	C	N	O	S	0	0	0
			835	534	155	144	2			

- Molecule 17 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	AR	70	Total	C	N	O	0	0	0
			574	367	112	95			
17	CR	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 18 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AS	79	Total	C	N	O	S	0	0	0
			634	405	115	112	2			
18	CS	79	Total	C	N	O	S	0	0	0
			634	405	115	112	2			

- Molecule 19 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			
19	CT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

- Molecule 20 is a protein called Elongation factor G.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AY	661	Total	C	N	O	S	0	0	0
			5173	3288	884	983	18			
20	CY	661	Total	C	N	O	S	0	0	0
			5173	3288	884	983	18			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AY	40	THR	HIS	conflict	UNP Q72I01

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Chain	Residue	Modelled	Actual	Comment	Reference
AY	129	LYS	HIS	conflict	UNP Q72I01
AY	226	ASN	HIS	conflict	UNP Q72I01
CY	40	THR	HIS	conflict	UNP Q72I01
CY	129	LYS	HIS	conflict	UNP Q72I01
CY	226	ASN	HIS	conflict	UNP Q72I01

- Molecule 21 is a RNA chain called 16S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AA	1511	Total	C	N	O	P	0	0	0
			32474	14455	6015	10494	1510			
21	CA	1511	Total	C	N	O	P	0	0	0
			32474	14455	6015	10494	1510			

- Molecule 22 is a RNA chain called tRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AW	77	Total	C	N	O	P	0	0	0
			1635	732	291	536	76			
22	CW	77	Total	C	N	O	P	0	0	0
			1635	732	291	536	76			

- Molecule 23 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AV	36	Total	C	N	O	P	0	0	0
			783	351	159	237	36			
23	CV	36	Total	C	N	O	P	0	0	0
			781	352	159	235	35			

- Molecule 24 is a RNA chain called tRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AX	78	Total	C	N	O	P	0	0	0
			1629	730	293	531	75			
24	CX	78	Total	C	N	O	P	0	0	0
			1629	730	293	531	75			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AX	77	VAL	-	expression tag	GB 1154835240

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Chain	Residue	Modelled	Actual	Comment	Reference
AX	78	ACE	-	expression tag	GB 1154835240
CX	77	VAL	-	expression tag	GB 1154835240
CX	78	ACE	-	expression tag	GB 1154835240

- Molecule 25 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BC	228	Total	C	N	O	S	0	0	0
			1742	1101	319	319	3			
25	DC	228	Total	C	N	O	S	0	0	0
			1742	1101	319	319	3			

- Molecule 26 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BD	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			
26	DD	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			

- Molecule 27 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BE	205	Total	C	N	O	S	0	0	0
			1569	991	300	272	6			
27	DE	205	Total	C	N	O	S	0	0	0
			1569	991	300	272	6			

- Molecule 28 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BF	208	Total	C	N	O	S	0	0	0
			1628	1037	304	284	3			
28	DF	208	Total	C	N	O	S	0	0	0
			1628	1037	304	284	3			

- Molecule 29 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	DG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

- Molecule 30 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BH	167	Total	C	N	O	S	0	0	0
			1274	806	238	229	1			
30	DH	167	Total	C	N	O	S	0	0	0
			1274	806	238	229	1			

- Molecule 31 is a protein called 50S ribosomal protein l10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BJ	170	Total	C	N	O		0	0	0
			851	510	170	171				
31	DJ	170	Total	C	N	O		0	0	0
			851	510	170	171				

- Molecule 32 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BK	140	Total	C	N	O	S	0	0	0
			1035	659	183	188	5			
32	DK	140	Total	C	N	O	S	0	0	0
			1035	659	183	188	5			

- Molecule 33 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BN	139	Total	C	N	O	S	0	0	0
			1114	717	207	186	4			
33	DN	139	Total	C	N	O	S	0	0	0
			1114	717	207	186	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	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			
35	DP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- 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			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BQ	32	TYR	PHE	conflict	UNP Q72I11
DQ	32	TYR	PHE	conflict	UNP Q72I11

- Molecule 37 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BR	117	Total	C	N	O		0	0	0
			960	599	202	159				
37	DR	117	Total	C	N	O		0	0	0
			960	599	202	159				

- Molecule 38 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BS	99	Total	C	N	O		0	0	0
			775	488	155	132				
38	DS	99	Total	C	N	O		0	0	0
			775	488	155	132				

- Molecule 39 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BT	138	Total	C	N	O	S	0	0	0
			1147	713	235	198	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	DT	138	Total	C	N	O	S	0	0	0
			1147	713	235	198	1			

- Molecule 40 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			
40	DU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	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
			779	501	142	135	1			
41	DV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 42 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BW	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			
42	DW	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			

- Molecule 43 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
43	BX	93	Total	C	N	O	0	0	0
			734	477	132	125			
43	DX	93	Total	C	N	O	0	0	0
			734	477	132	125			

- 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
			818	524	155	134	5			
44	DY	107	Total	C	N	O	S	0	0	0
			818	524	155	134	5			

- Molecule 45 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BZ	185	Total	C	N	O	S	0	0	0
			1473	939	262	270	2			
45	DZ	185	Total	C	N	O	S	0	0	0
			1473	939	262	270	2			

- Molecule 46 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	B0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			
46	D0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			

- Molecule 47 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	B1	93	Total	C	N	O	S	0	0	0
			732	460	145	126	1			
47	D1	93	Total	C	N	O	S	0	0	0
			732	460	145	126	1			

- Molecule 48 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	B2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			
48	D2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			

- Molecule 49 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	B3	60	Total	C	N	O	S	0	0	0
			477	303	91	82	1			
49	D3	60	Total	C	N	O	S	0	0	0
			477	303	91	82	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B4	35	Total	C	N	O	S	0	0	0
			271	174	44	50	3			
50	D4	35	Total	C	N	O	S	0	0	0
			271	174	44	50	3			

- 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
			459	288	90	76	5			
51	D5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

- Molecule 52 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			
52	D6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			

- Molecule 53 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			
53	D7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	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
			517	331	102	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			

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

- Molecule 56 is a protein called 50S ribosomal protein L7/L12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	Be	102	Total	C	N	O		0	0	0
			686	430	119	137				
56	De	102	Total	C	N	O		0	0	0
			686	430	119	137				

There are 62 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Be	1	UNK	-	expression tag	UNP Q72GS2
Be	2	UNK	-	expression tag	UNP Q72GS2
Be	3	UNK	-	expression tag	UNP Q72GS2
Be	4	UNK	-	expression tag	UNP Q72GS2
Be	5	UNK	-	expression tag	UNP Q72GS2
Be	6	UNK	-	expression tag	UNP Q72GS2
Be	7	UNK	-	expression tag	UNP Q72GS2
Be	8	UNK	-	expression tag	UNP Q72GS2
Be	9	UNK	-	expression tag	UNP Q72GS2
Be	10	UNK	-	expression tag	UNP Q72GS2
Be	11	UNK	-	expression tag	UNP Q72GS2
Be	12	UNK	-	expression tag	UNP Q72GS2
Be	13	UNK	-	expression tag	UNP Q72GS2
Be	14	UNK	-	expression tag	UNP Q72GS2
Be	15	UNK	-	expression tag	UNP Q72GS2
Be	16	UNK	-	expression tag	UNP Q72GS2
Be	17	UNK	-	expression tag	UNP Q72GS2
Be	18	UNK	-	expression tag	UNP Q72GS2
Be	19	UNK	-	expression tag	UNP Q72GS2
Be	20	UNK	-	expression tag	UNP Q72GS2
Be	21	UNK	-	expression tag	UNP Q72GS2
Be	22	UNK	-	expression tag	UNP Q72GS2
Be	23	UNK	-	expression tag	UNP Q72GS2
Be	24	UNK	-	expression tag	UNP Q72GS2
Be	25	UNK	-	expression tag	UNP Q72GS2
Be	26	UNK	-	expression tag	UNP Q72GS2
Be	27	UNK	-	expression tag	UNP Q72GS2
Be	28	UNK	-	expression tag	UNP Q72GS2

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Chain	Residue	Modelled	Actual	Comment	Reference
Be	29	UNK	-	expression tag	UNP Q72GS2
Be	30	UNK	-	expression tag	UNP Q72GS2
Be	31	UNK	-	expression tag	UNP Q72GS2
De	1	UNK	-	expression tag	UNP Q72GS2
De	2	UNK	-	expression tag	UNP Q72GS2
De	3	UNK	-	expression tag	UNP Q72GS2
De	4	UNK	-	expression tag	UNP Q72GS2
De	5	UNK	-	expression tag	UNP Q72GS2
De	6	UNK	-	expression tag	UNP Q72GS2
De	7	UNK	-	expression tag	UNP Q72GS2
De	8	UNK	-	expression tag	UNP Q72GS2
De	9	UNK	-	expression tag	UNP Q72GS2
De	10	UNK	-	expression tag	UNP Q72GS2
De	11	UNK	-	expression tag	UNP Q72GS2
De	12	UNK	-	expression tag	UNP Q72GS2
De	13	UNK	-	expression tag	UNP Q72GS2
De	14	UNK	-	expression tag	UNP Q72GS2
De	15	UNK	-	expression tag	UNP Q72GS2
De	16	UNK	-	expression tag	UNP Q72GS2
De	17	UNK	-	expression tag	UNP Q72GS2
De	18	UNK	-	expression tag	UNP Q72GS2
De	19	UNK	-	expression tag	UNP Q72GS2
De	20	UNK	-	expression tag	UNP Q72GS2
De	21	UNK	-	expression tag	UNP Q72GS2
De	22	UNK	-	expression tag	UNP Q72GS2
De	23	UNK	-	expression tag	UNP Q72GS2
De	24	UNK	-	expression tag	UNP Q72GS2
De	25	UNK	-	expression tag	UNP Q72GS2
De	26	UNK	-	expression tag	UNP Q72GS2
De	27	UNK	-	expression tag	UNP Q72GS2
De	28	UNK	-	expression tag	UNP Q72GS2
De	29	UNK	-	expression tag	UNP Q72GS2
De	30	UNK	-	expression tag	UNP Q72GS2
De	31	UNK	-	expression tag	UNP Q72GS2

- Molecule 57 is a protein called 50S ribosomal protein L7/L12.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
57	Bf	31	Total	C	N	O	0	0	0
			156	93	31	32			
57	Bg	31	Total	C	N	O	0	0	0
			156	93	31	32			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
57	Df	31	Total	C	N	O	0	0	0
			156	93	31	32			
57	Dg	31	Total	C	N	O	0	0	0
			156	93	31	32			

- Molecule 58 is a protein called 50S ribosomal protein L7/L12.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
58	Bh	30	Total	C	N	O	0	0	0
			151	90	30	31			
58	Dh	30	Total	C	N	O	0	0	0
			151	90	30	31			

- Molecule 59 is a RNA chain called 23S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
59	BA	2879	Total	C	N	O	P	0	0	0
			61997	27594	11582	19943	2878			
59	DA	2879	Total	C	N	O	P	0	0	0
			61997	27594	11582	19943	2878			

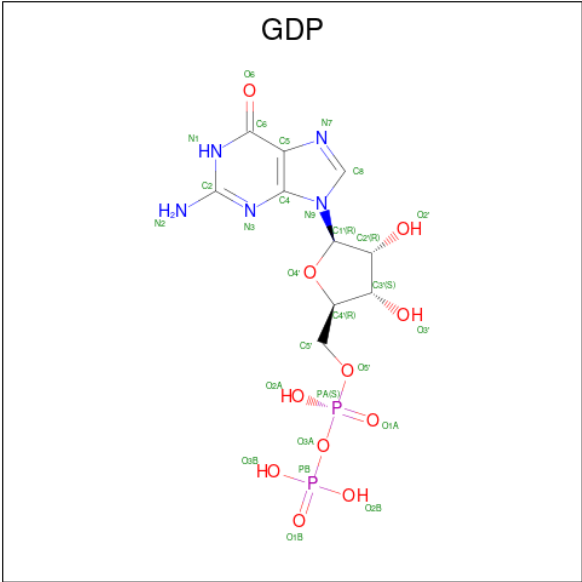
There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	1141A	U	C	conflict	GB 46197919
BA	2825	U	G	conflict	GB 46197919
DA	1141A	U	C	conflict	GB 46197919
DA	2825	U	G	conflict	GB 46197919

- Molecule 60 is a RNA chain called 5S Ribosomal RNA.

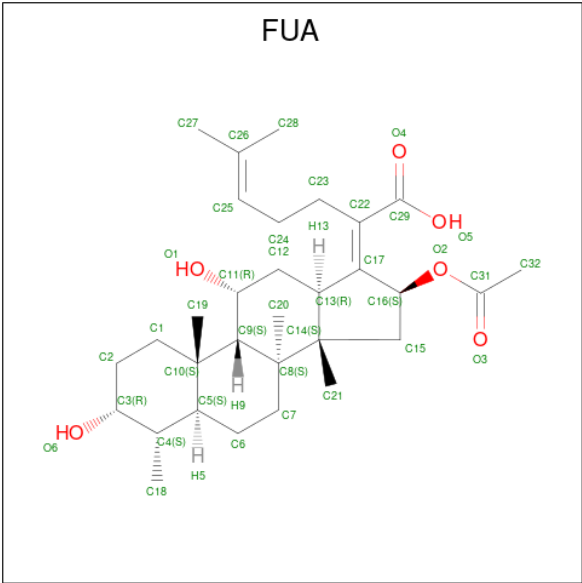
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
60	BB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			
60	DB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 61 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: C₁₀H₁₅N₅O₁₁P₂).



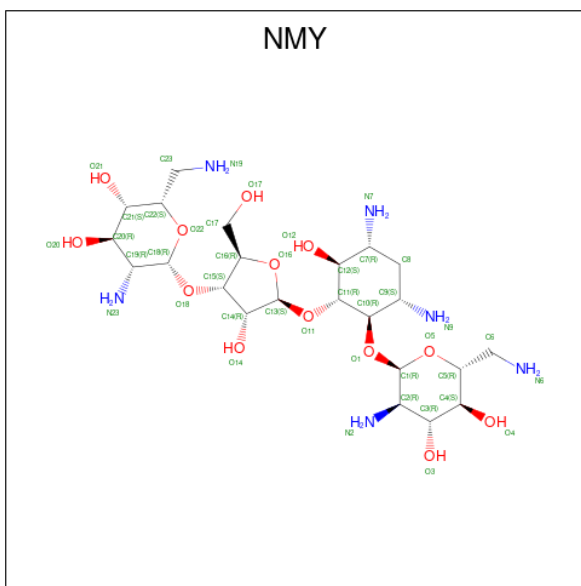
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
61	AY	1	Total	C	N	O	P	0	0
			28	10	5	11	2		
61	CY	1	Total	C	N	O	P	0	0
			28	10	5	11	2		

- Molecule 62 is FUSIDIC ACID (CCD ID: FUA) (formula: C₃₁H₄₈O₆).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
62	AY	1	Total	C	O	0	0
			37	31	6		
62	CY	1	Total	C	O	0	0
			37	31	6		

- Molecule 63 is NEOMYCIN (CCD ID: NMY) (formula: $C_{23}H_{46}N_6O_{13}$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
63	AA	1	Total 42	C 23	N 6	O 13	0	0
63	BA	1	Total 42	C 23	N 6	O 13	0	0
63	BA	1	Total 42	C 23	N 6	O 13	0	0
63	BA	1	Total 42	C 23	N 6	O 13	0	0
63	CA	1	Total 42	C 23	N 6	O 13	0	0
63	DA	1	Total 42	C 23	N 6	O 13	0	0

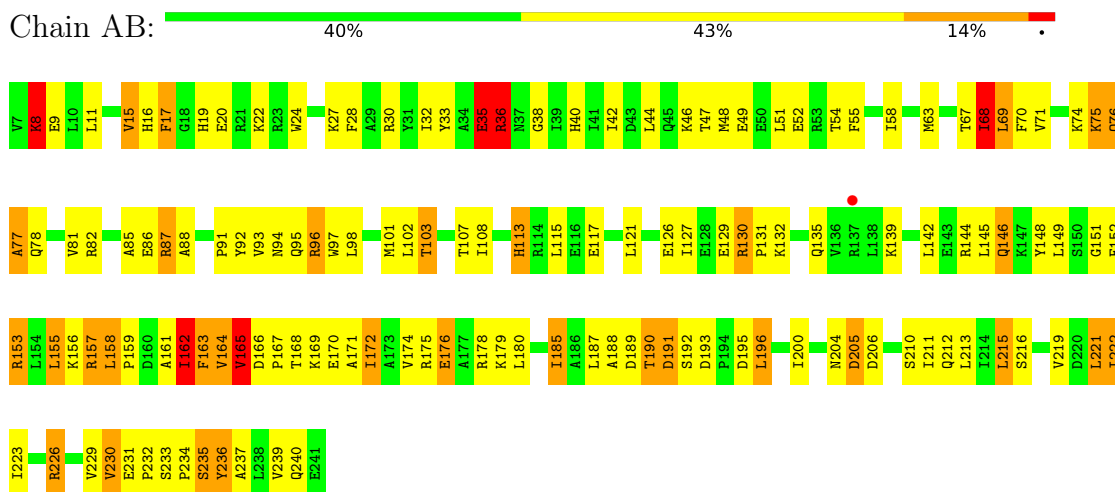
- Molecule 64 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
64	BA	1	Total Mg 1 1	0	0
64	CY	1	Total Mg 1 1	0	0

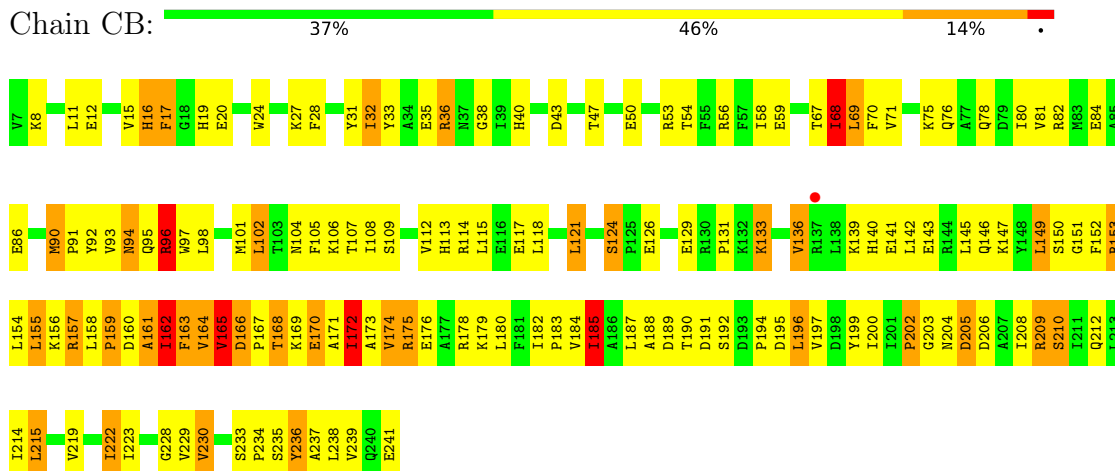
3 Residue-property plots

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: 30S ribosomal protein S2

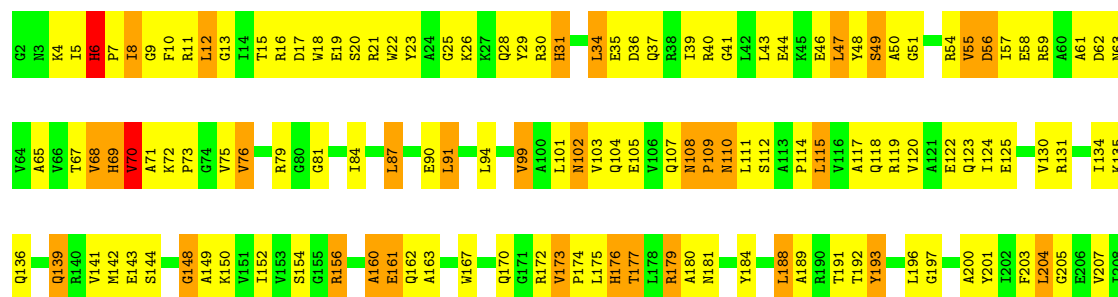


• Molecule 1: 30S ribosomal protein S2

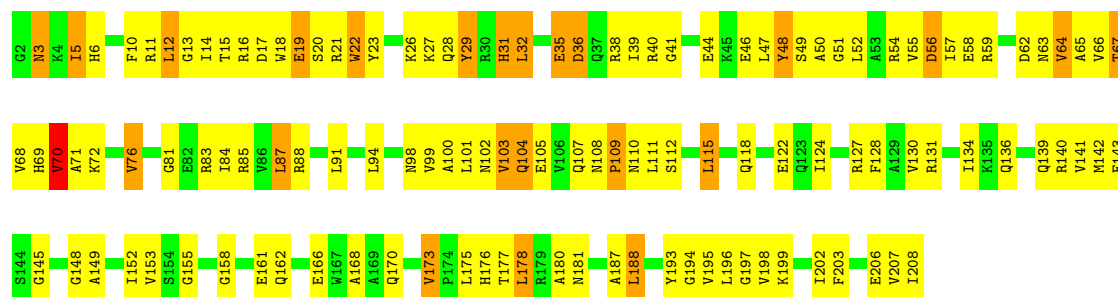


• Molecule 2: 30S ribosomal protein S3

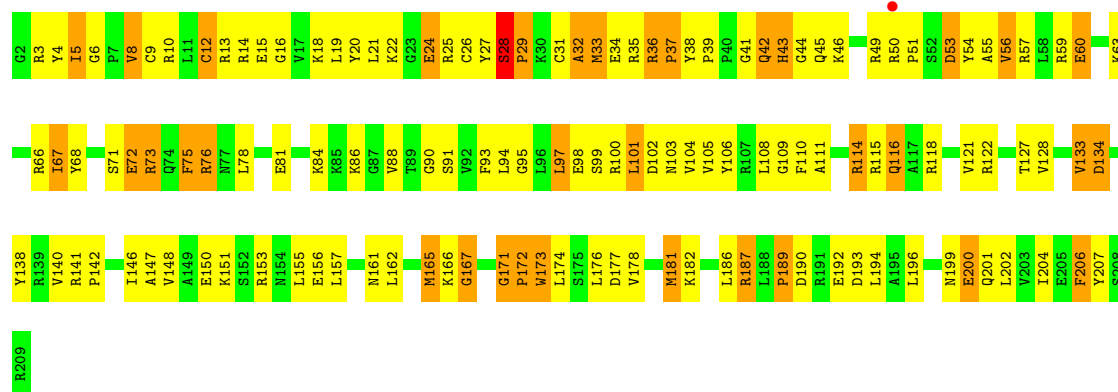




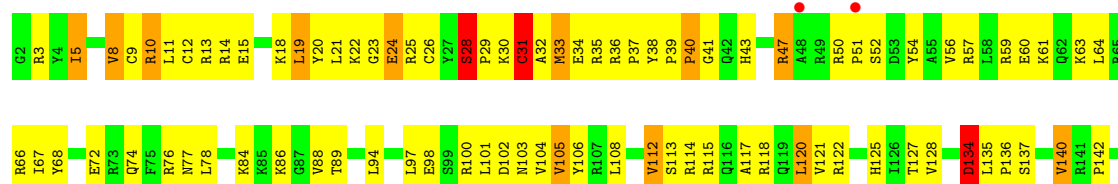
• Molecule 2: 30S ribosomal protein S3



• Molecule 3: 30S ribosomal protein S4

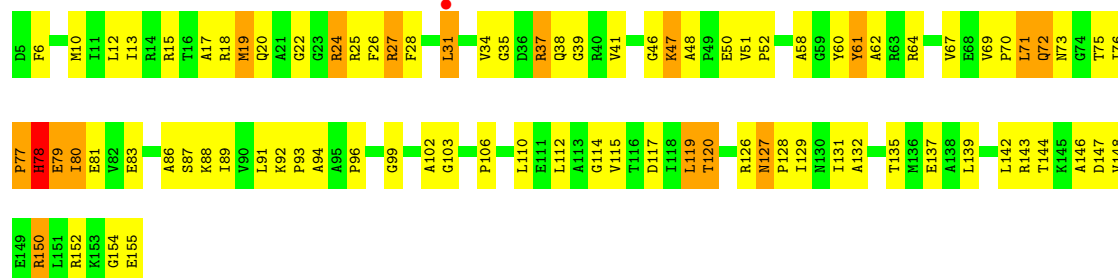
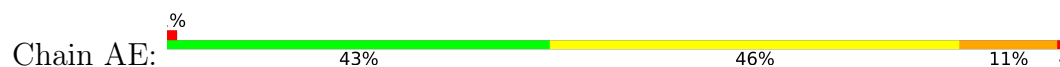


• Molecule 3: 30S ribosomal protein S4

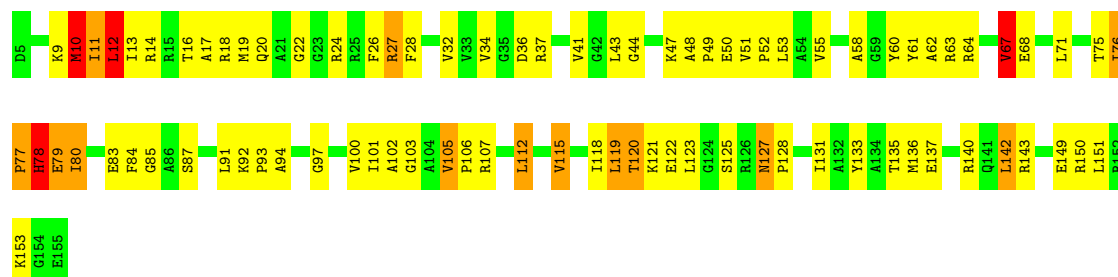




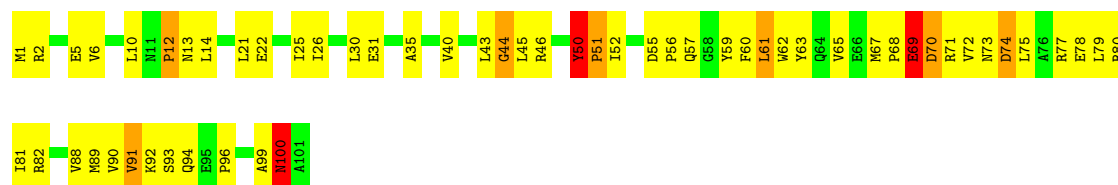
• Molecule 4: 30S ribosomal protein S5



• Molecule 4: 30S ribosomal protein S5



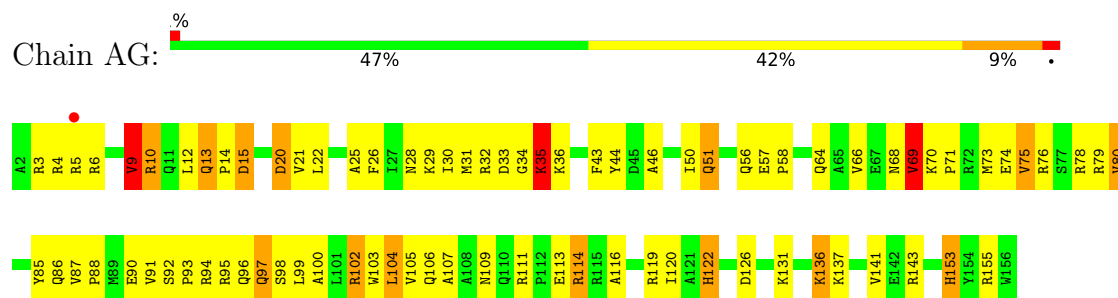
• Molecule 5: 30S ribosomal protein S6



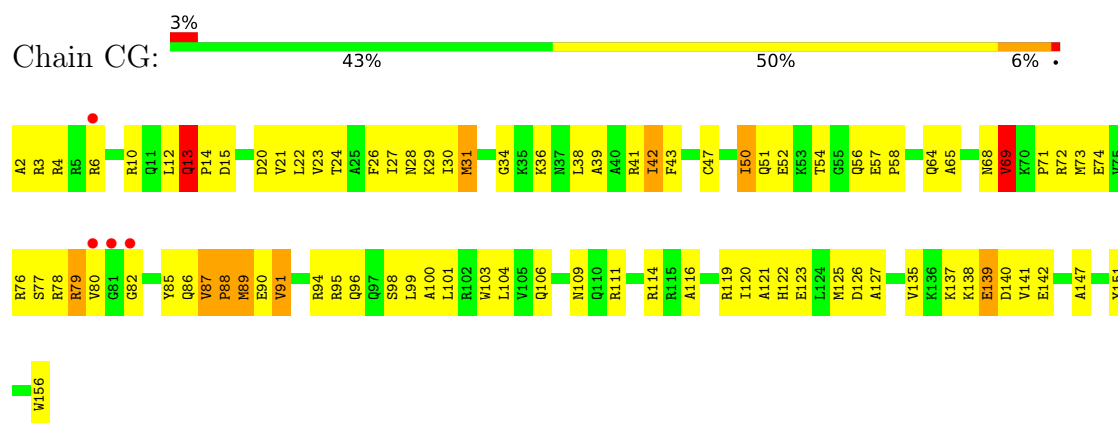
• Molecule 5: 30S ribosomal protein S6



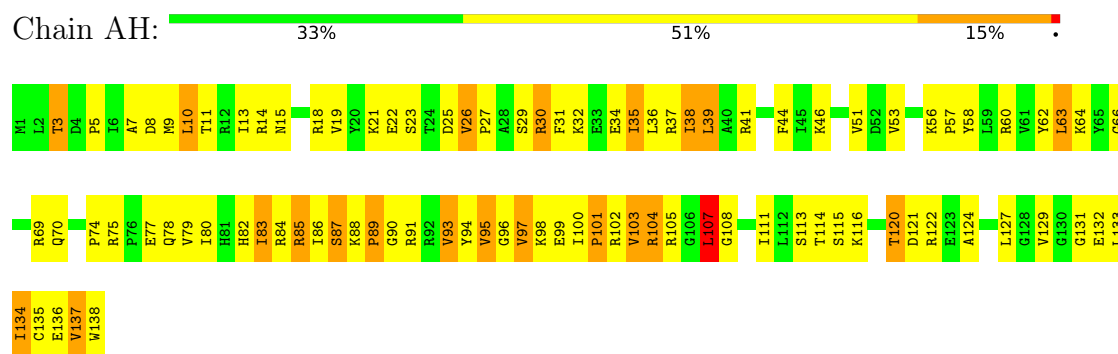
- Molecule 6: 30S ribosomal protein S7



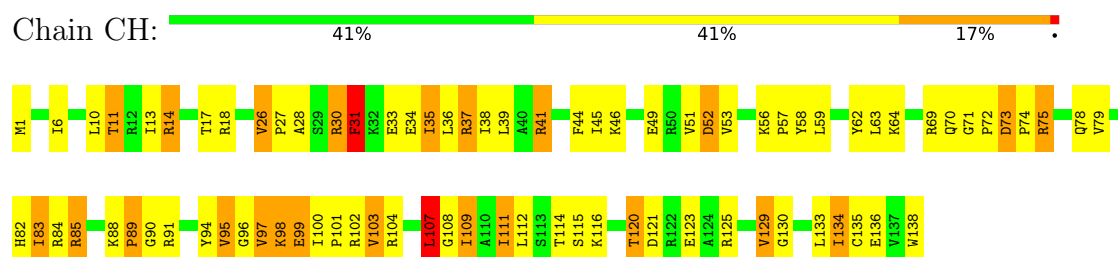
- Molecule 6: 30S ribosomal protein S7



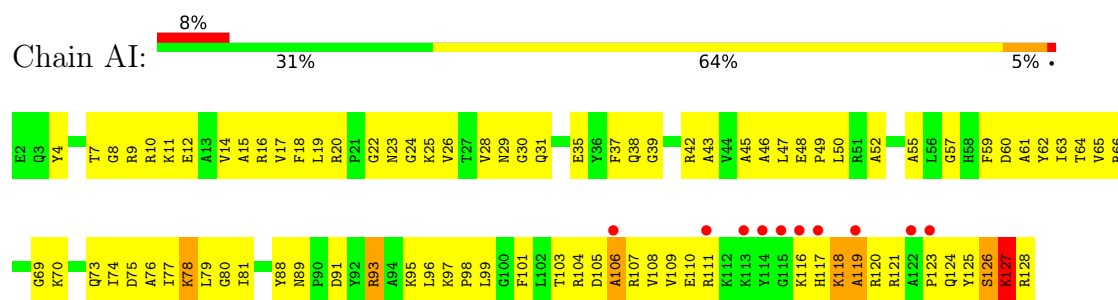
- Molecule 7: 30S ribosomal protein S8



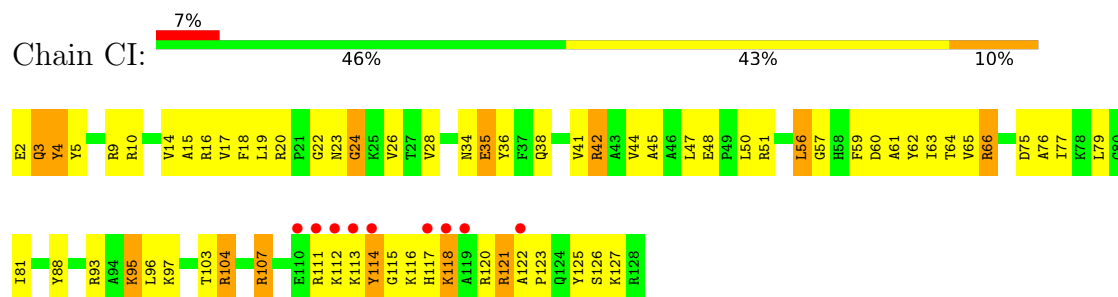
- Molecule 7: 30S ribosomal protein S8



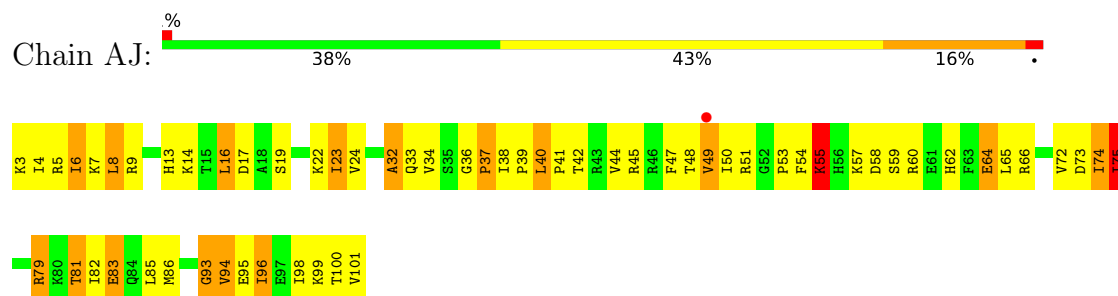
- Molecule 8: 30S ribosomal protein S9



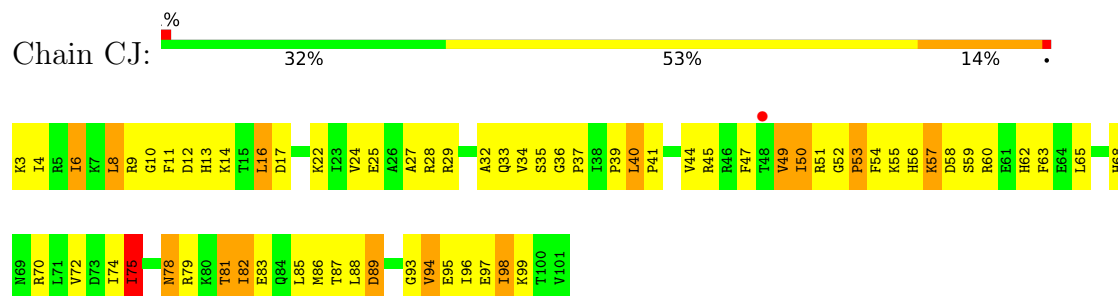
• Molecule 8: 30S ribosomal protein S9



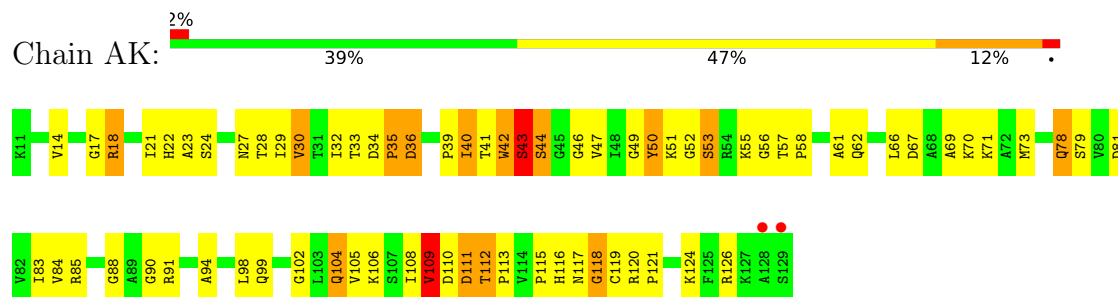
• Molecule 9: 30S ribosomal protein S10



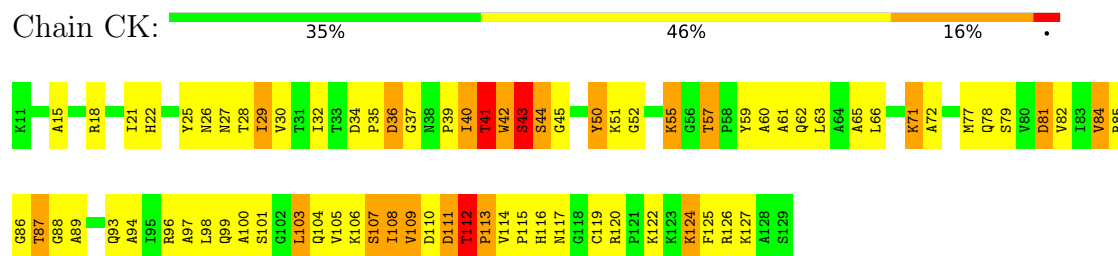
• Molecule 9: 30S ribosomal protein S10



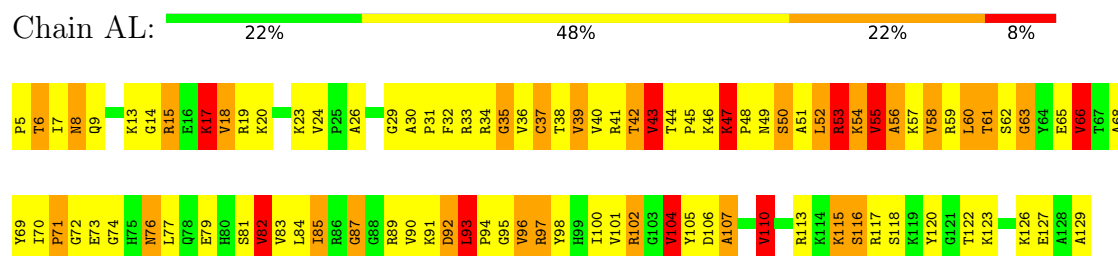
• Molecule 10: 30S ribosomal protein S11



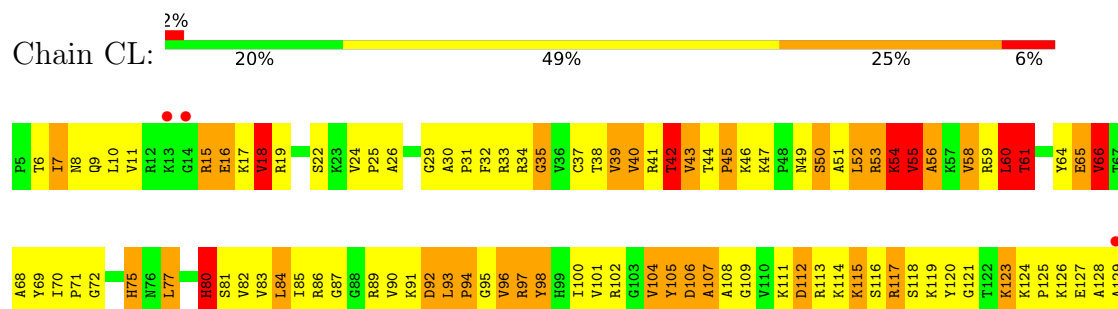
- Molecule 10: 30S ribosomal protein S11



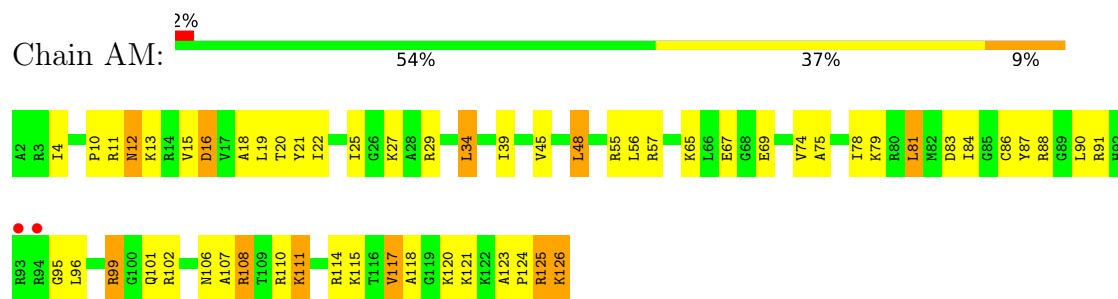
- Molecule 11: 30S ribosomal protein S12



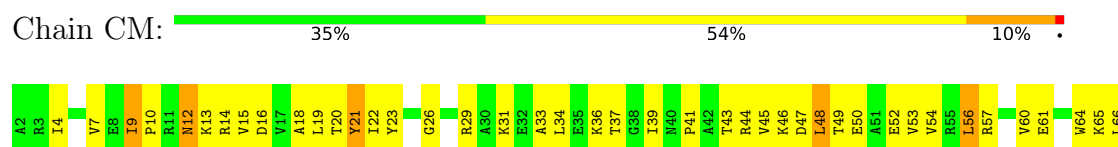
- Molecule 11: 30S ribosomal protein S12

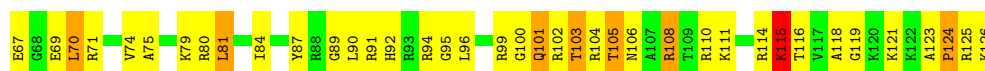


- Molecule 12: 30S ribosomal protein S13



- Molecule 12: 30S ribosomal protein S13





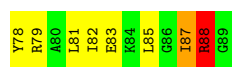
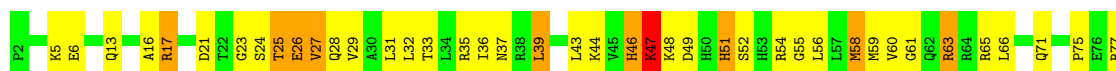
- Molecule 13: 30S ribosomal protein S14 type Z



- Molecule 13: 30S ribosomal protein S14 type Z



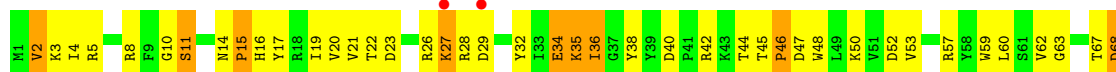
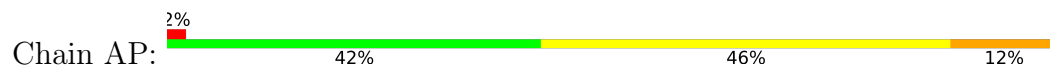
- Molecule 14: 30S ribosomal protein S15



- Molecule 14: 30S ribosomal protein S15

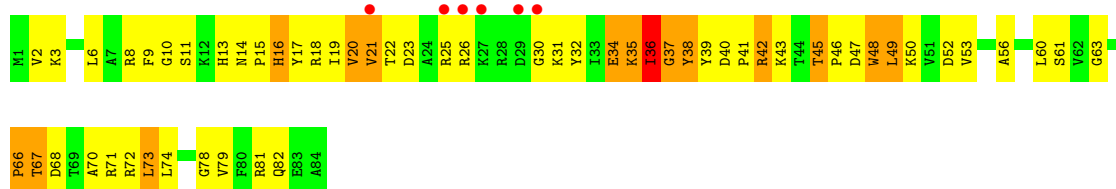


- Molecule 15: 30S ribosomal protein S16

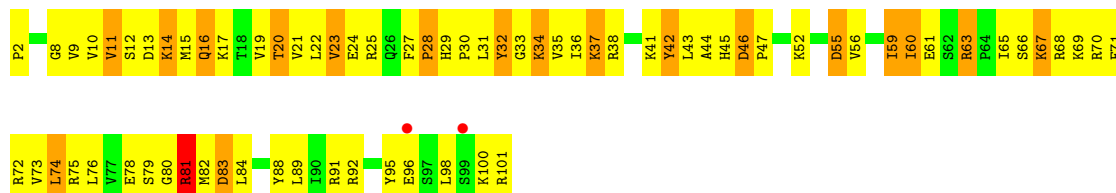
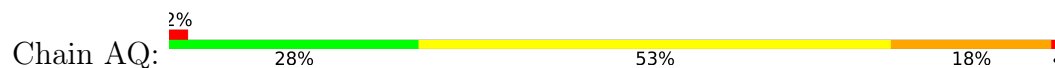


- Molecule 15: 30S ribosomal protein S16

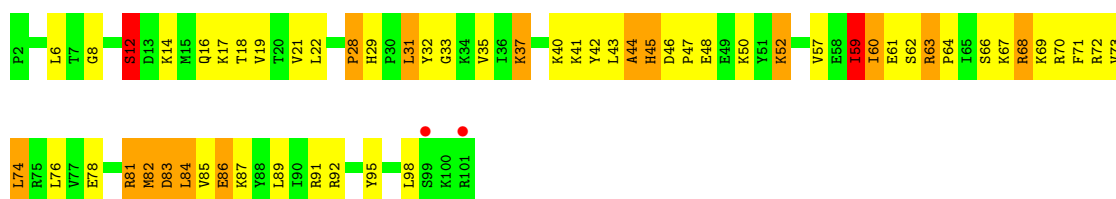




- Molecule 16: 30S ribosomal protein S17



- Molecule 16: 30S ribosomal protein S17



- Molecule 17: 30S ribosomal protein S18

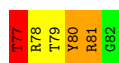


- Molecule 17: 30S ribosomal protein S18



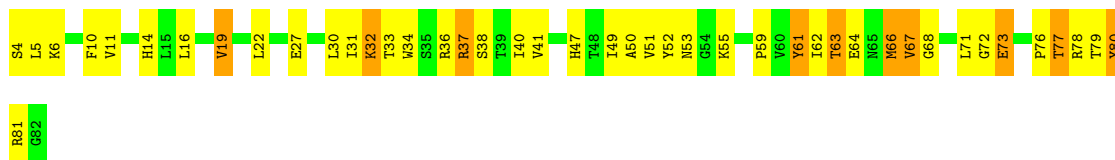
- Molecule 18: 30S ribosomal protein S19





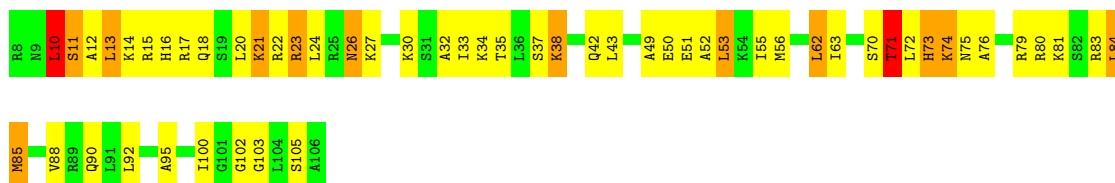
• Molecule 18: 30S ribosomal protein S19

Chain CS: 44% 43% 13%



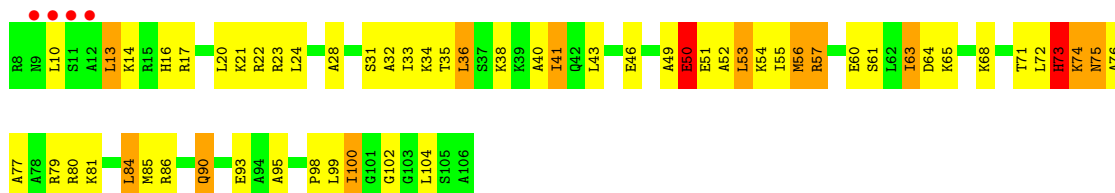
• Molecule 19: 30S ribosomal protein S20

Chain AT: 44% 41% 12%



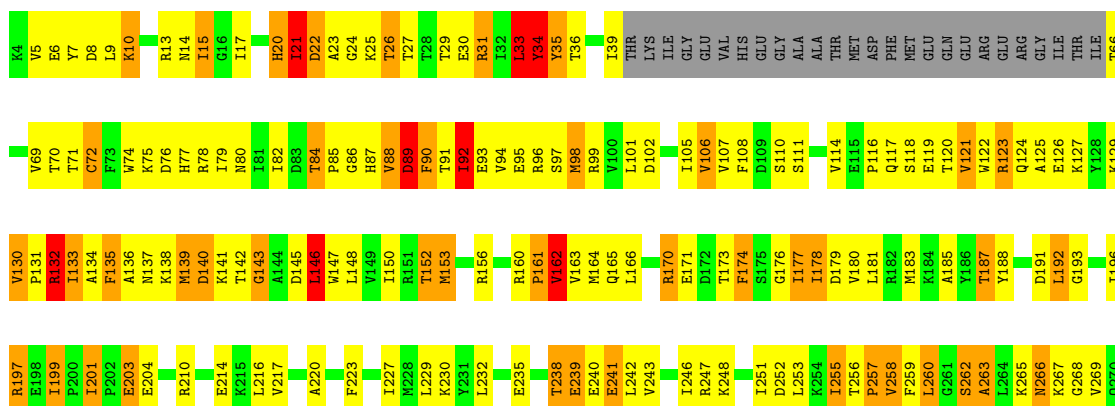
• Molecule 19: 30S ribosomal protein S20

Chain CT: 4% 41% 44% 12%

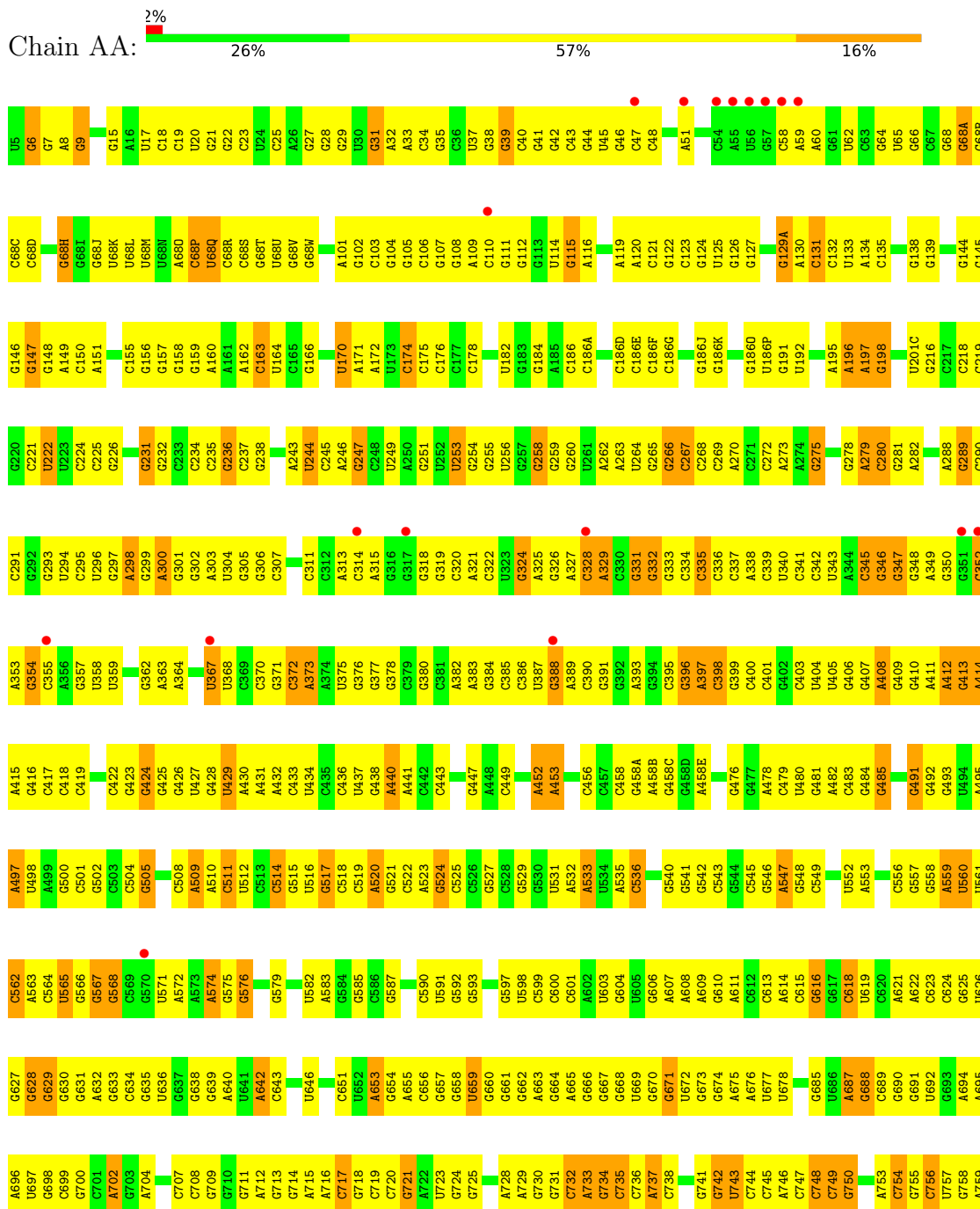


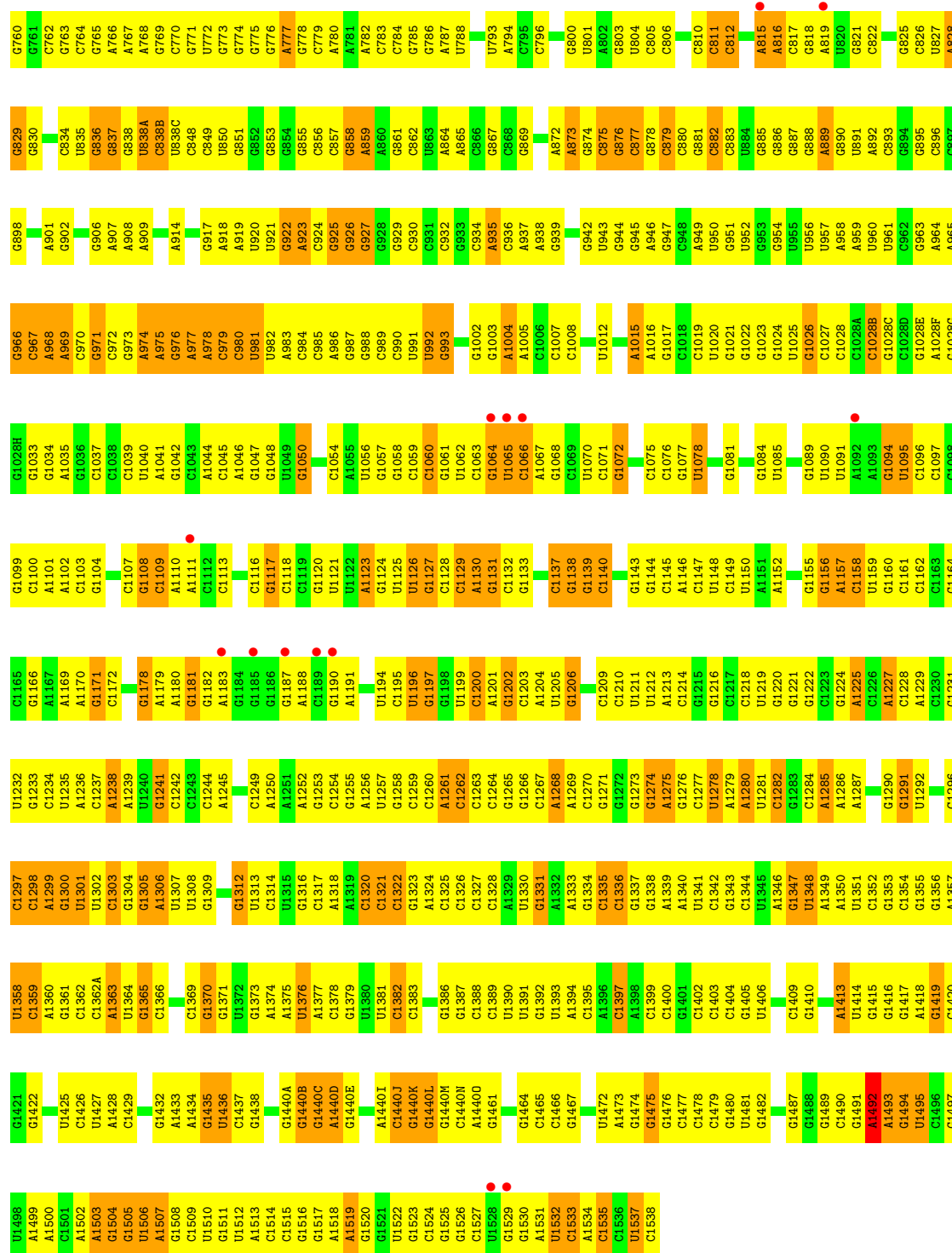
• Molecule 20: Elongation factor G

Chain AY: 2% 34% 44% 16%

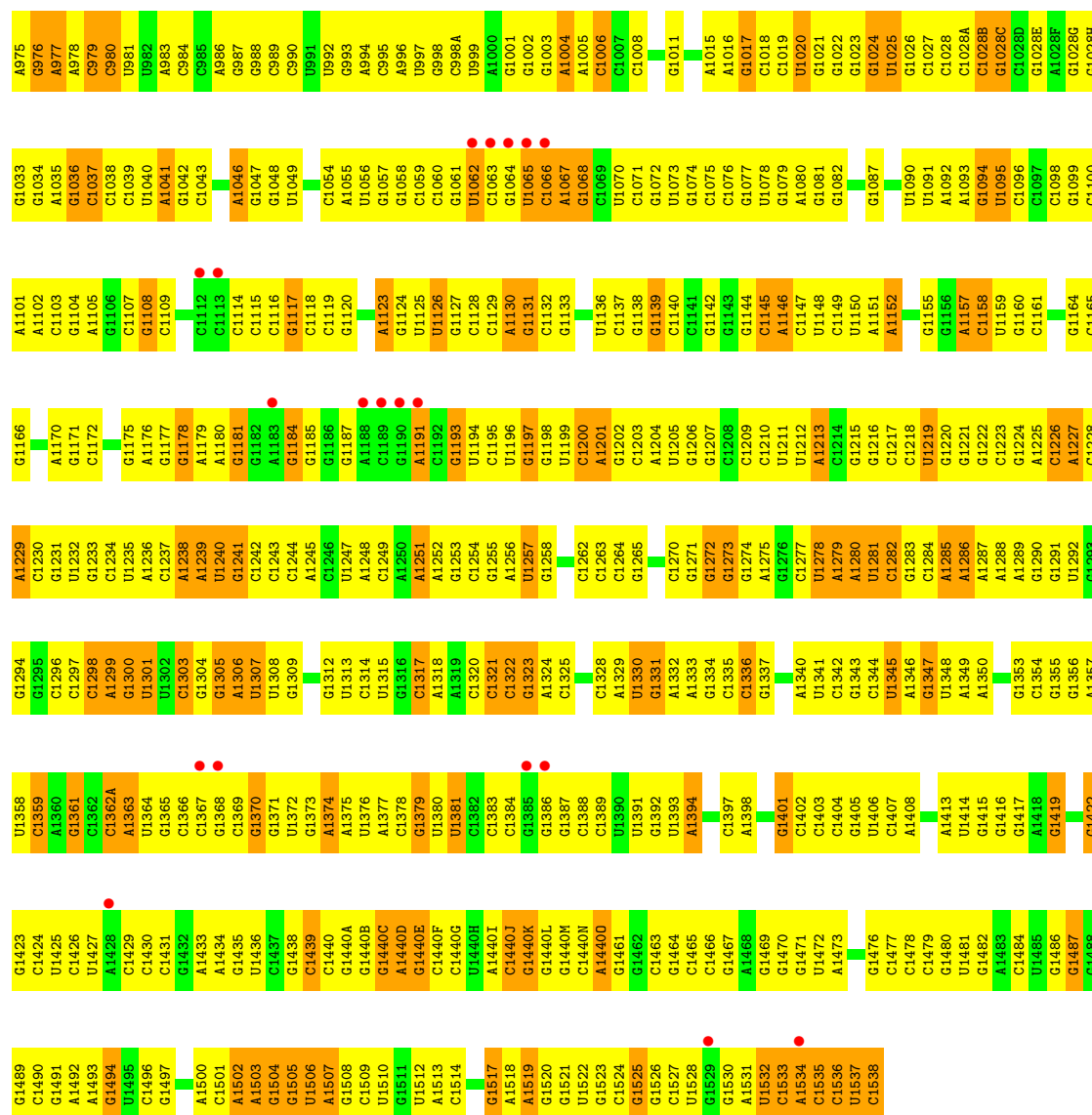




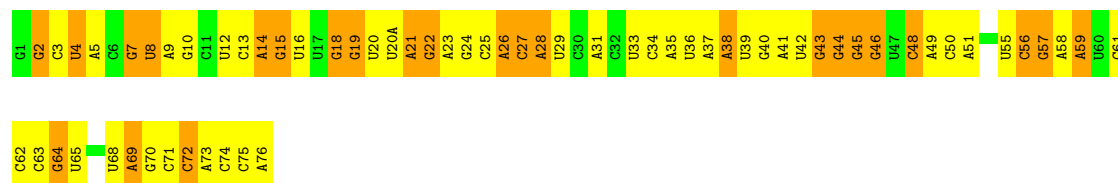
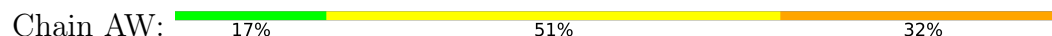




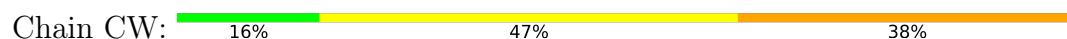
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G916	G853	A787	G725	C596	U534	C458	G391	C328	G266	U186P	G139	G88A
G917	G854	U788		C597	A535		G392	C329	G267	G191	A140	G88B
A918	G855	U789	A728	U598	C536	A458E	A393	C330	C268	G192	A141	C88C
A919	C856	A790	A729	C599	G537	G474		G331	C269	C193	G142	C88D
U920	C857	A791	G730	C600	G538	G475	G396	G332	A270	C194	A143	G88E
U921	G858	A792	G731	C601	A539	G476	A397	G333	C271	A195	G144	
G922	A859	U793	G732	A602	G540	G477	C398	G334	A272	A196	G145	G88H
A923	A860	A794	A733	U603	G541	A478	G399	C335	A197	A197	G146	G88I
G924	G861		G734	G604	G542	C479	C400	C336	G198		G147	G88J
G925			C735	U605	C543	A480	C401	C337			G148	U88K
G926	A864		C736	G606	G544	G481	C402	A338			A149	U88L
G927			A737	A607	C545	A482	C403	C339		C201		U88M
G928	G867	G799	C738	A608	G546	C483	U404	U340	A279		C150	U88N
G929	G868	U800	G739	A609	A547	G484	U405	C341	C280	U201C	A151	A880
G930	G869	U801	U740	G610	G548	G485	G406	A282	G216	C218	A152	C88P
G931	U870	A802	G741	A611	C549	U486	C407	C342	C217	C219	C153	U88Q
G932	U871	G803	G742	G612	G550	U487	A408		C284	C218	C154	U88R
G933	A872	U804	U743	U551	U552	C488	C409	G345	G285	G220	G155	C88S
G934	A873	C805	C744	U553	U554	C489	C410	G346	G286	C221	G156	G88T
A935	G874	C806	C745	A614	G557	U494	C411	G347	U287	U222	G157	U88U
G936	C875	A807	A746	G615	G558	A495	C412	G348			A160	U88V
A937	G876	C808	A747	G616	C559	A497	A413	A349	G288	U223	A161	G88W
A938	C877	G809	C748	G617	U560	U498	C414	G350	G289	C224	G162	G88X
G939	G878	G810	C749	U618	C561	G500	C422	G351	C290	G225	C163	U88Y
G940	C879	C811	C750	U619	G562	C501	C423	G352	C291	G226	U164	A101
G941		C812	C751	C620	G563	G502	C424	A353	G292		C165	G102
G942	G880	U813	U752	A621	U564	A499	U425	G354	U293		G166	C103
U943	C881	A814	C753	G622	U565	U498	U426	G355	G294	G230	G167	G104
G944	C882	A815	A754	C623	C566	A499	U427	A356	U295	G231	G168	G105
G945	G883	A816	C755	G624	C567	G500	C428	G357	U296	G232	C169	G106
A946	U884	C817	G756	G625	G568	G501	U429	U358	G297	C233		G107
A947	G885	C818	C757	U626	C569	G502	C425	U359	A298	C234	A172	G108
G948	G886	U819	U757	G627	G604	G503	C426	A360	G299	C235	U173	A109
A949	G887	U820	G758	G628	G566	G504	U427	G361	A300	G236	U174	C110
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G951	G890	C822		G630	G568	A509	U429	A363	G302	U239	G176	G112
U952	U891	G823	C762	G631		A510	A430	A364	A303	C240	C177	G113
G953	C892	C824	C763	G635	U571	A511	A431	U365	G305		C178	
G954	C893	G825	C764	U636	A572	C511	A432	C366	G306	A243	G181	A116
U955	G894	C826	G765	G637	A573	U512	C433	U367	U244		U182	
U956		U827	A766	G638	A574	C513	U434	U368	C245	C186A	G183	A120
U957	G897	A828	A767	G639	G575	C514	C435	C369	G308	A246	G184	C121
A958	G898	G829	G768	A640	G576	U516	U437	G370	G309	G247	A185	G122
A959	C899	G830	C770	U641	G579	G517	G438	C372	C311		C186	C123
U960	A900	U831		A642	U580	C518	A440	A373	C312	A250	C186A	G124
U961	A901	C832	C707	G643	G581	C519	A441	A374	A313	U252	C186B	U125
G962	G902	U833	G708	G644	U582	A520	C442	U375	C314	U253	G186C	G126
G963	G903	C834	G709	G645	A583	G521	C443		A315	G254	C186D	
A964	C904	U835	G710	U646	G584	C522	G444	G378	G316	G255	C186E	
A965	U905	G836		G647	G585	A523	G445	C379	G317	U256	C186F	U129
G966	G906	G837	A715	A648	C586	G524	G446	G380	G318	G257	C186G	G129A
G967	U907	G838	U716	G649	C587	C525	A448	C381	G319	G258	U186H	A130
A968	A908	C839	C717	G650	G588	C526	C449	A382	C320	G259	G186I	C131
A969	A909	C838B	G718	C651	C589	G527	A383	A383	A321	G260	U186J	G132
C970	C910	U838C	G719	U652	C590	C528	A452	G384	C322	U261	G186K	A134
G971	U911	C848	C720	A653	U591	G529	A453	C385	U323	G324	G186L	C135
C972	C912	C849	G721	G654	G592	G530	C454		G325	A262	G186M	C136
G973	U913	U850	A722	G655	U531	C455	C456	G388	A325	U264	U186N	C137
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- Molecule 22: tRNA

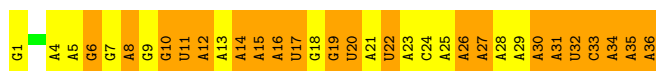


- Molecule 22: tRNA

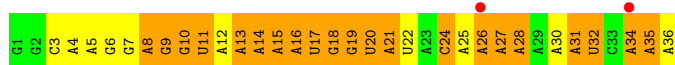




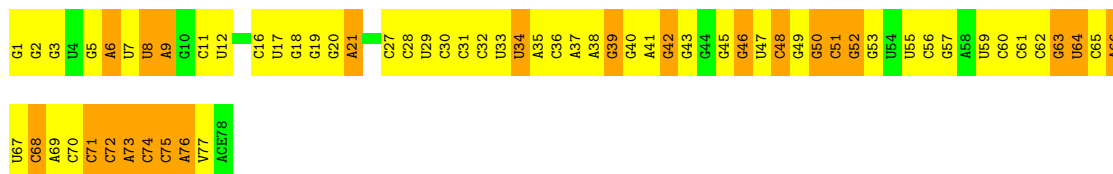
- Molecule 23: mRNA



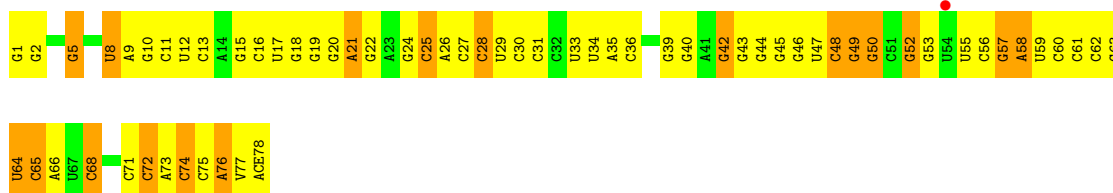
- Molecule 23: mRNA



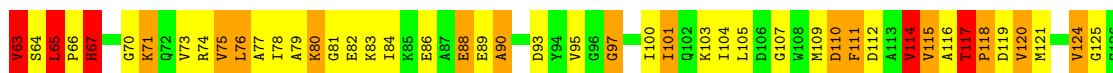
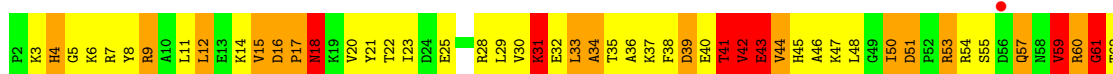
- Molecule 24: tRNA



- Molecule 24: tRNA

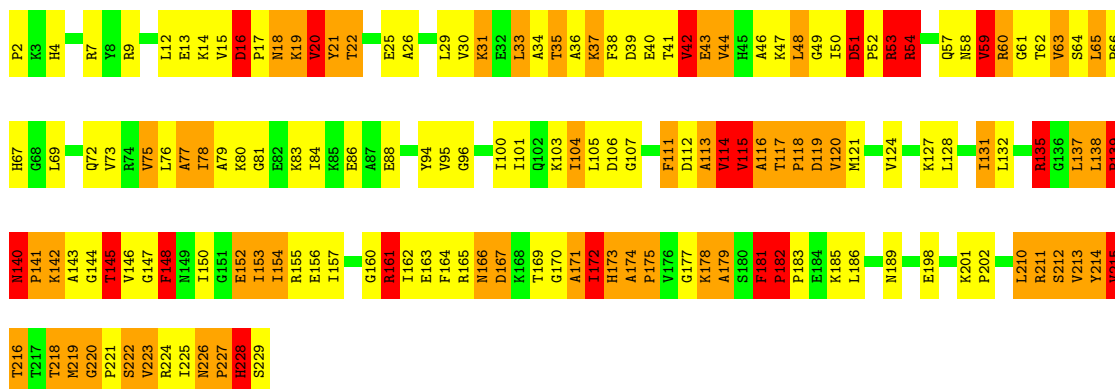


- Molecule 25: 50S ribosomal protein L1

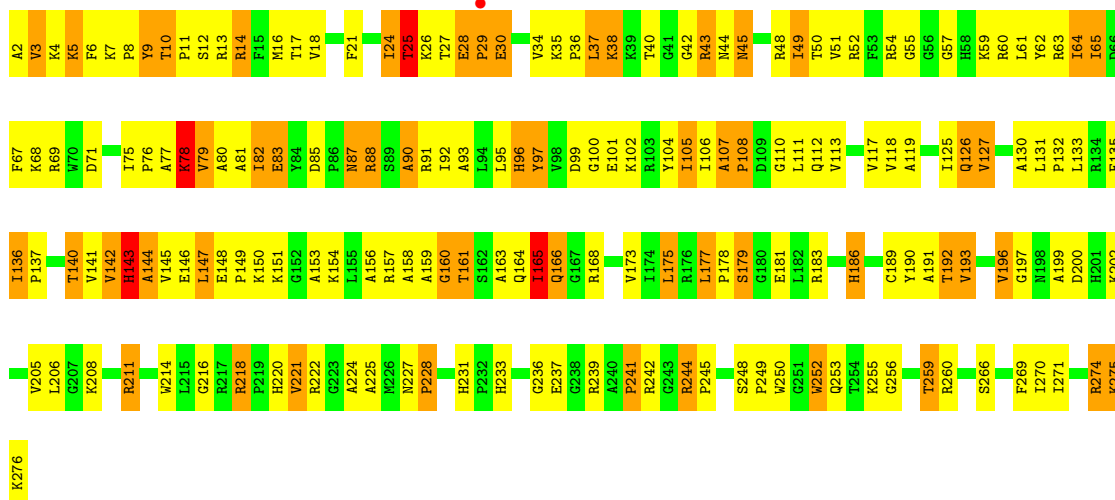
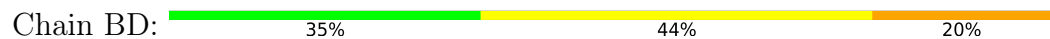




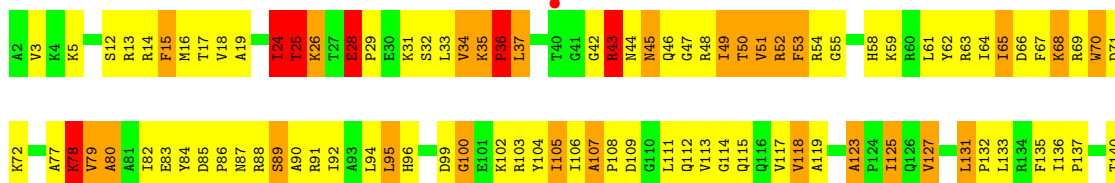
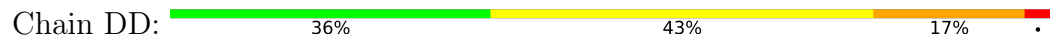
• Molecule 25: 50S ribosomal protein L1

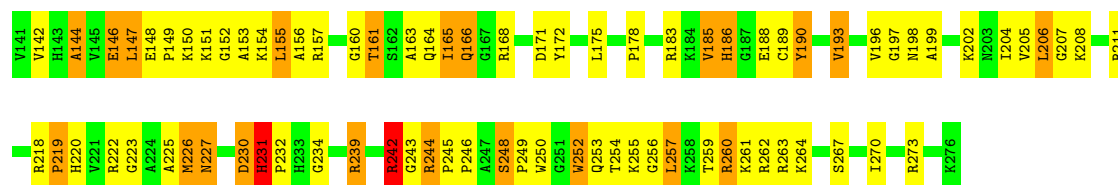


• Molecule 26: 50S ribosomal protein L2



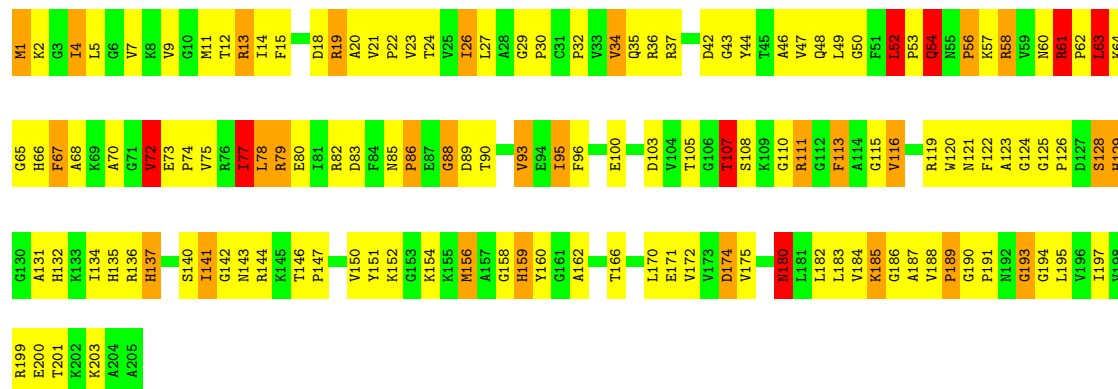
• Molecule 26: 50S ribosomal protein L2





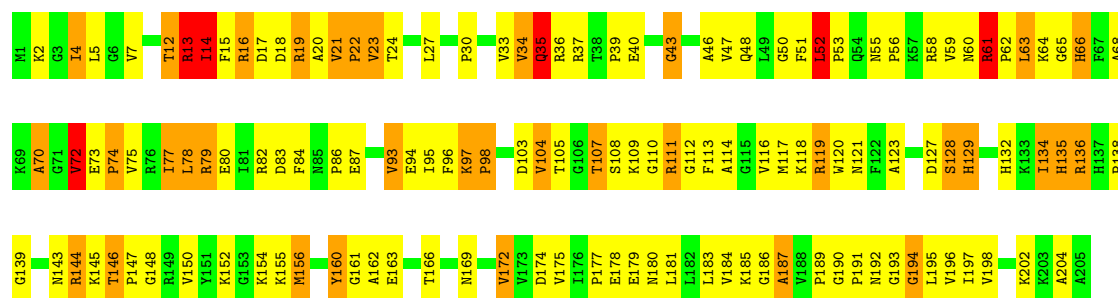
• Molecule 27: 50S ribosomal protein L3

Chain BE: 34% 49% 14%



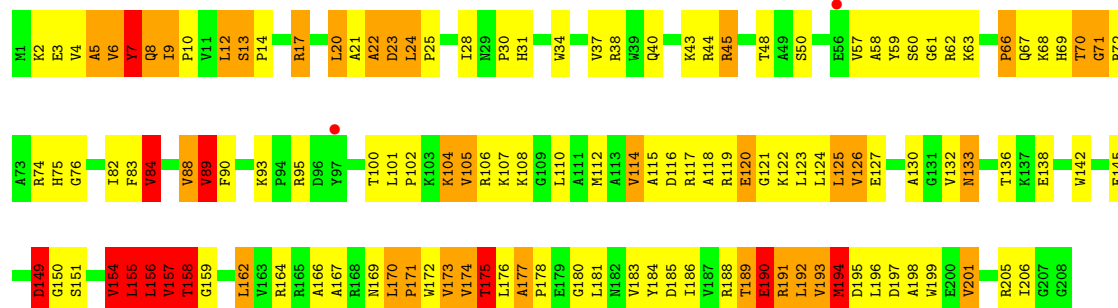
• Molecule 27: 50S ribosomal protein L3

Chain DE: 34% 46% 17%

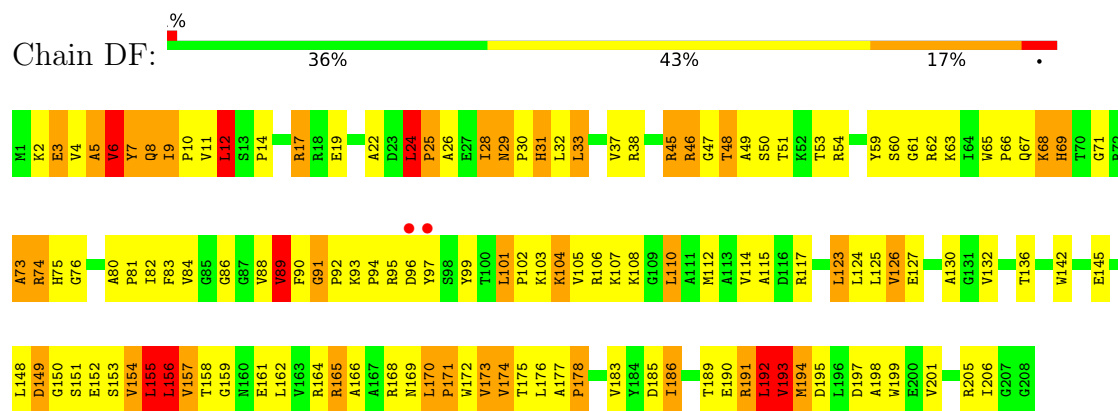


• Molecule 28: 50S ribosomal protein L4

Chain BF: 37% 41% 16% 6%



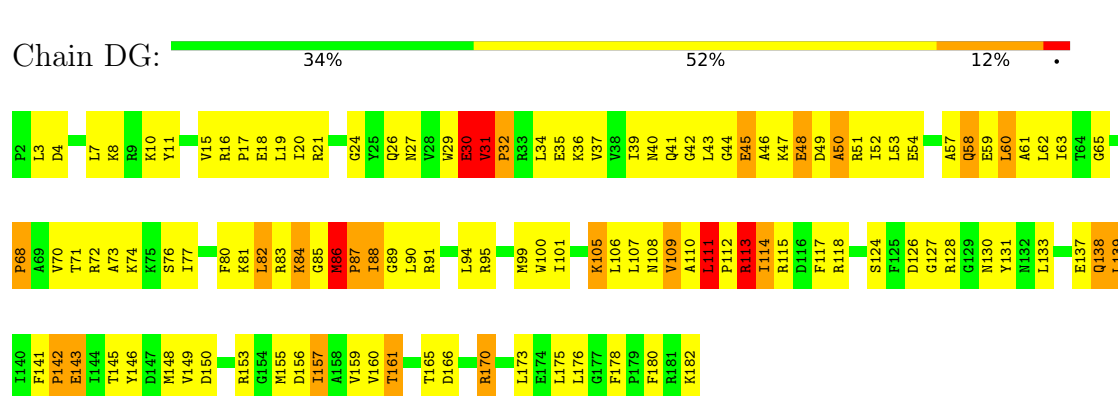
- Molecule 28: 50S ribosomal protein L4



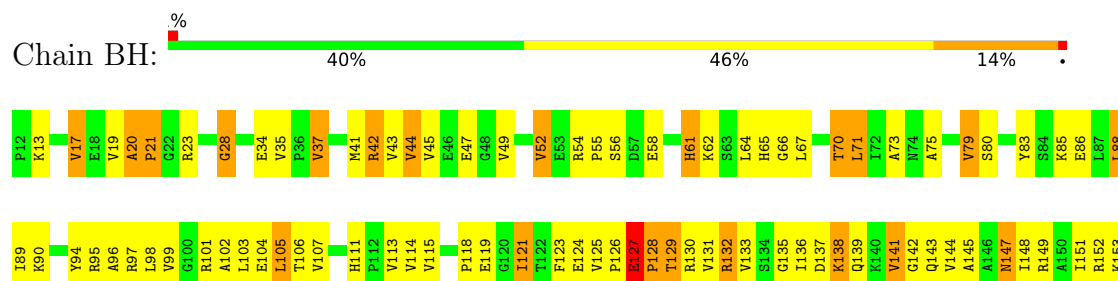
- Molecule 29: 50S ribosomal protein L5



- Molecule 29: 50S ribosomal protein L5



- Molecule 30: 50S ribosomal protein L6





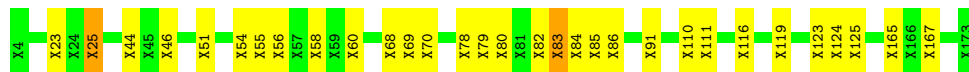
- Molecule 30: 50S ribosomal protein L6

Chain DH: 40% 47% 11%



- Molecule 31: 50S ribosomal protein I10

Chain BJ: 82% 17%



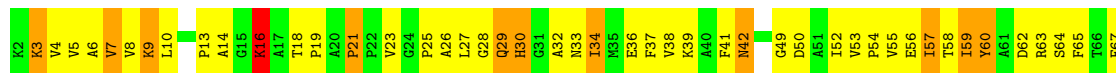
- Molecule 31: 50S ribosomal protein I10

Chain DJ: 84% 16%



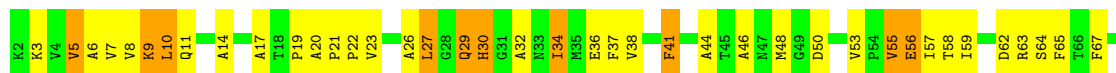
- Molecule 32: 50S ribosomal protein L11

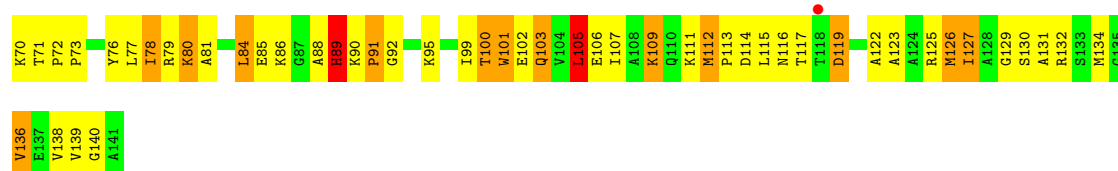
Chain BK: 35% 46% 18%



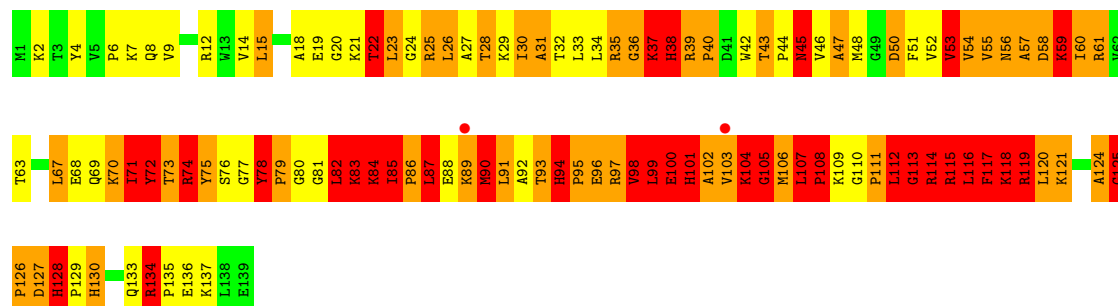
- Molecule 32: 50S ribosomal protein L11

Chain DK: 36% 46% 16%

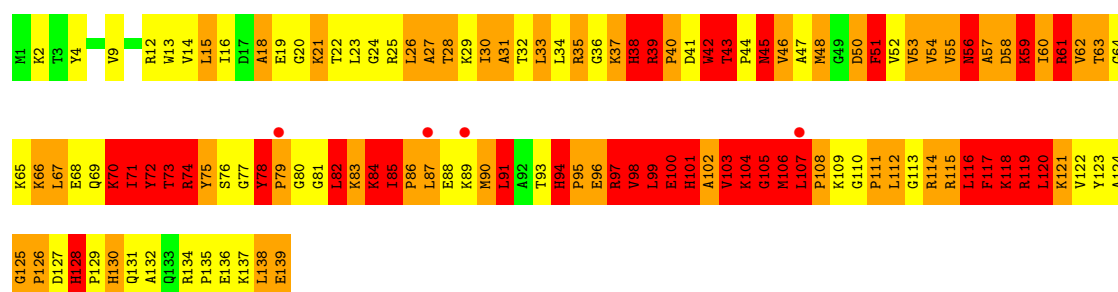




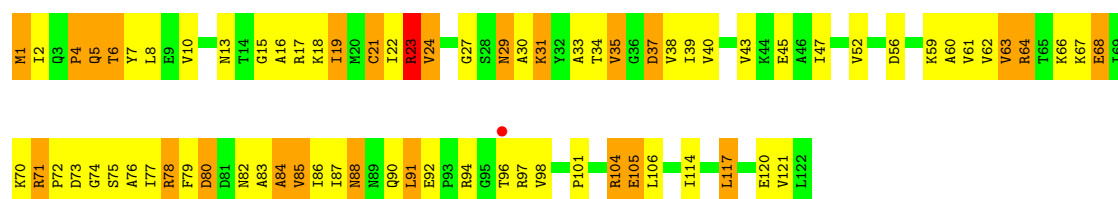
- Molecule 33: 50S ribosomal protein L13



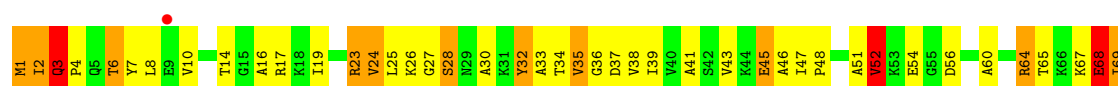
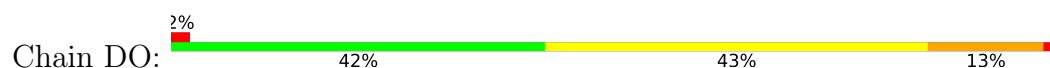
- Molecule 33: 50S ribosomal protein L13



- Molecule 34: 50S ribosomal protein L14

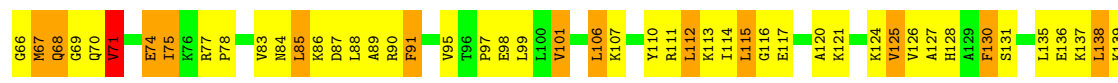


- Molecule 34: 50S ribosomal protein L14

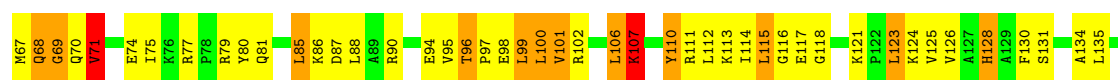




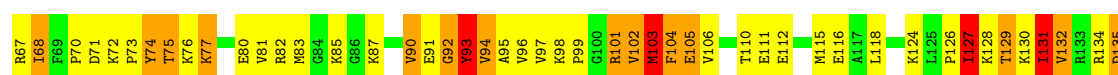
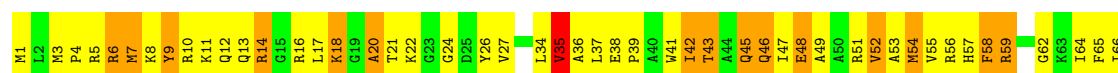
• Molecule 35: 50S ribosomal protein L15



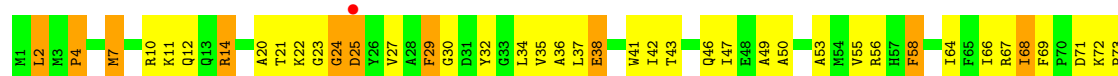
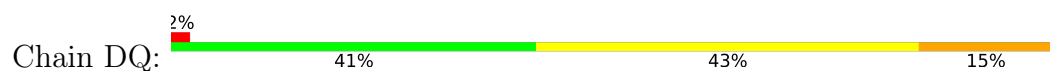
• Molecule 35: 50S ribosomal protein L15



• Molecule 36: 50S ribosomal protein L16

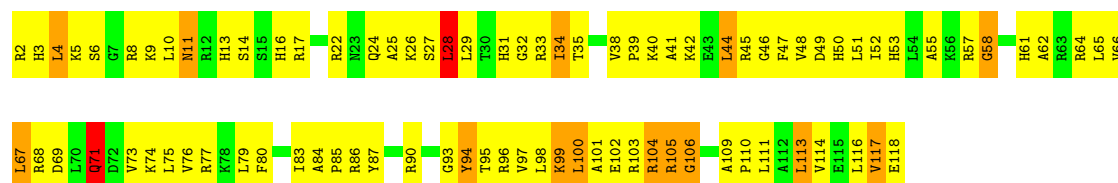


• Molecule 36: 50S ribosomal protein L16

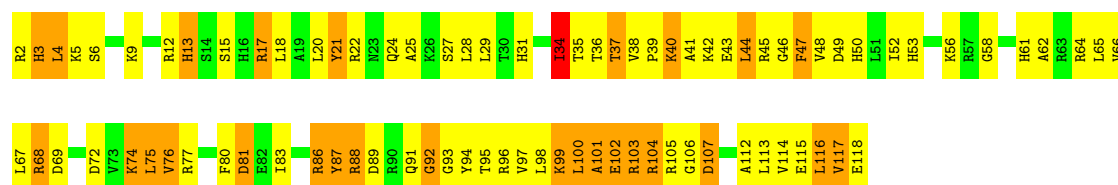




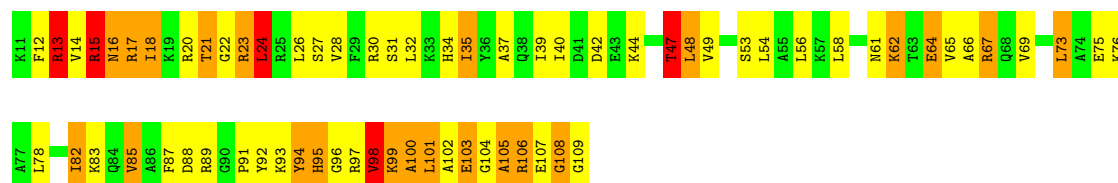
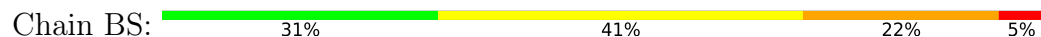
• Molecule 37: 50S ribosomal protein L17



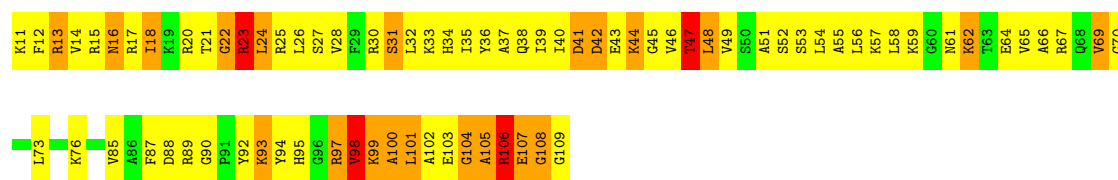
• Molecule 37: 50S ribosomal protein L17



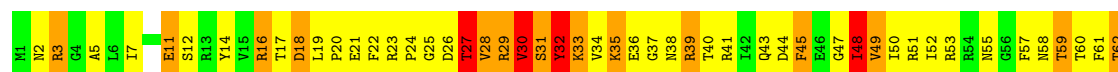
• Molecule 38: 50S ribosomal protein L18

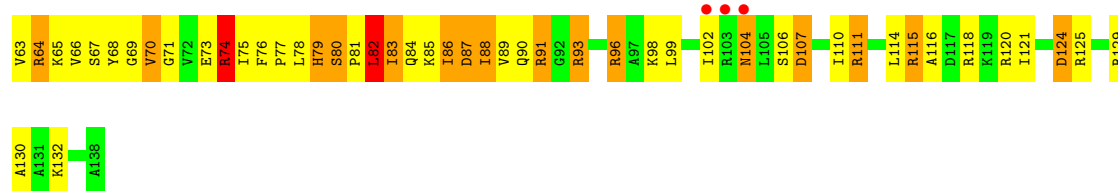


• Molecule 38: 50S ribosomal protein L18

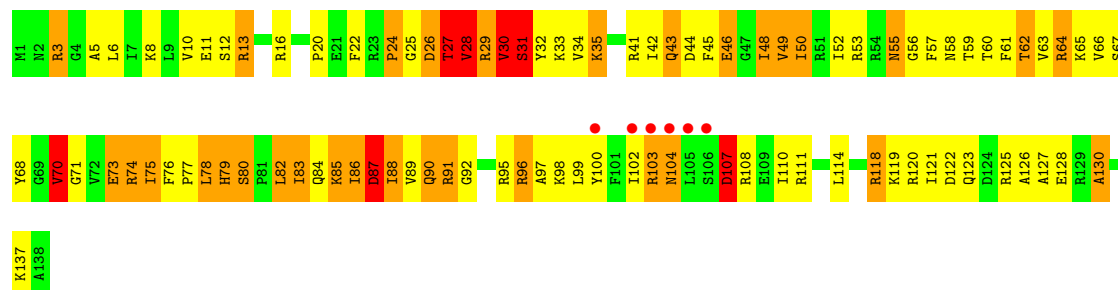


• Molecule 39: 50S ribosomal protein L19

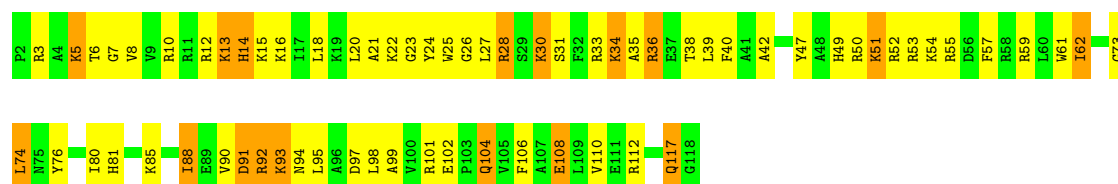




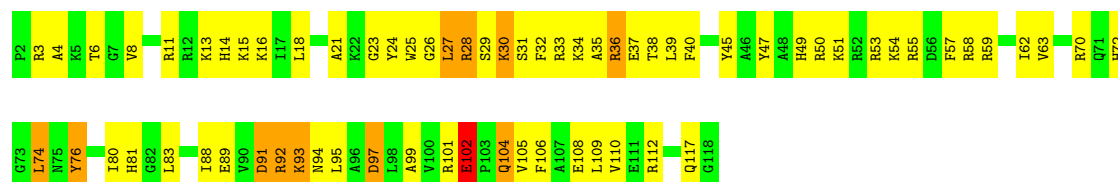
• Molecule 39: 50S ribosomal protein L19



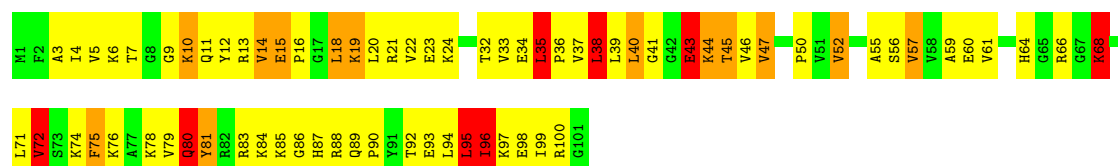
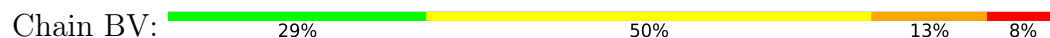
• Molecule 40: 50S ribosomal protein L20



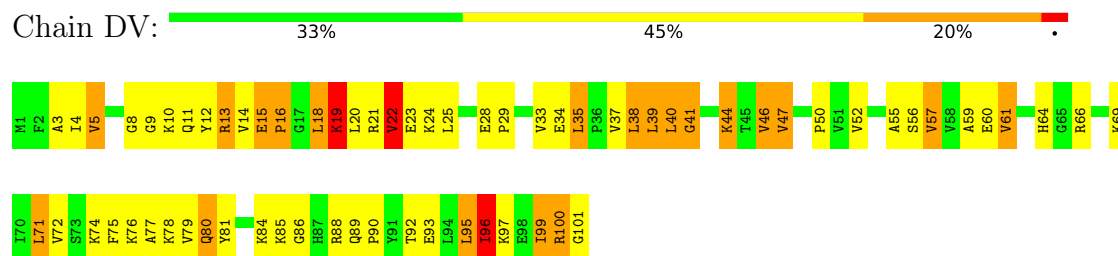
• Molecule 40: 50S ribosomal protein L20



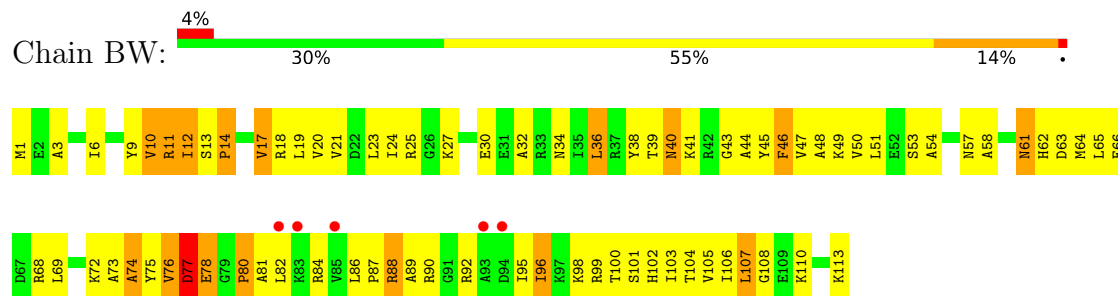
• Molecule 41: 50S ribosomal protein L21



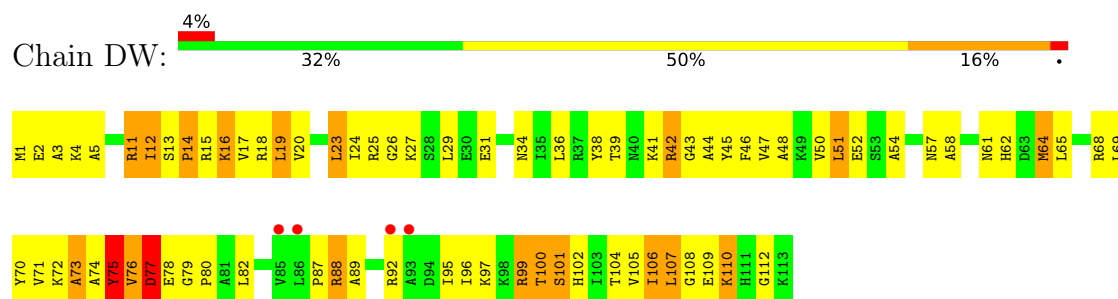
- Molecule 41: 50S ribosomal protein L21



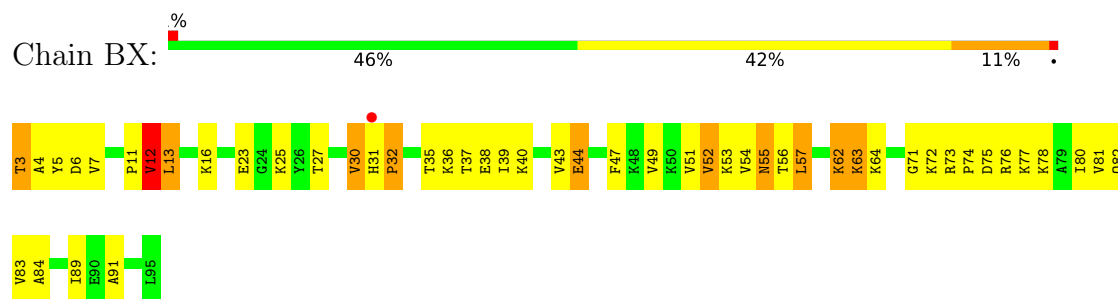
- Molecule 42: 50S ribosomal protein L22



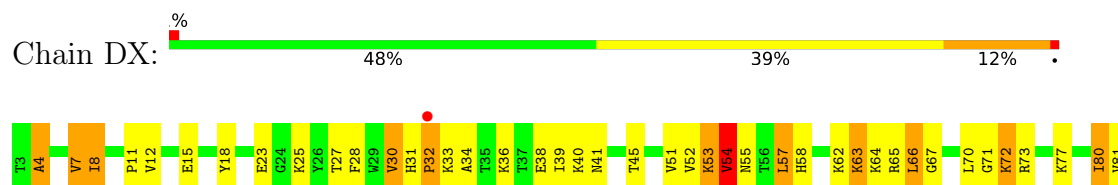
- Molecule 42: 50S ribosomal protein L22



- Molecule 43: 50S ribosomal protein L23

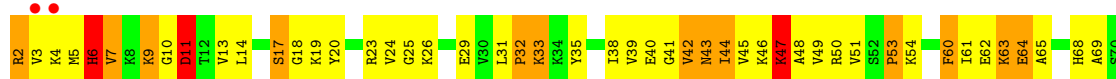


- Molecule 43: 50S ribosomal protein L23

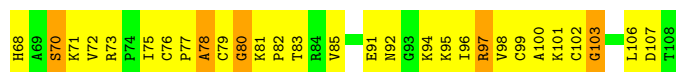
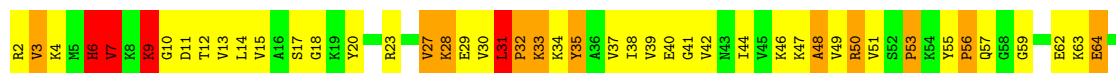




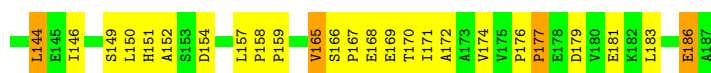
- Molecule 44: 50S ribosomal protein L24



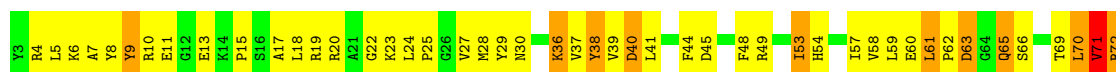
- Molecule 44: 50S ribosomal protein L24



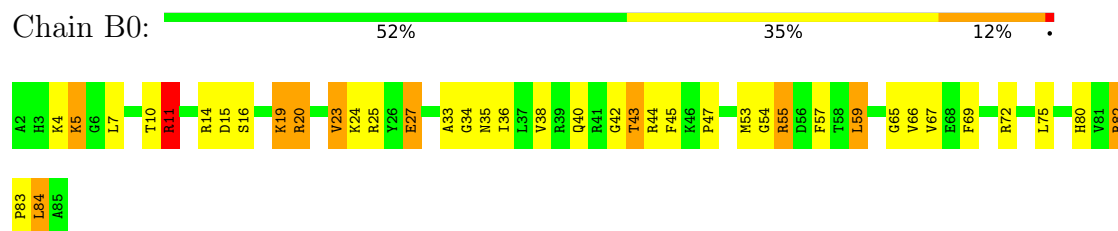
- Molecule 45: 50S ribosomal protein L25



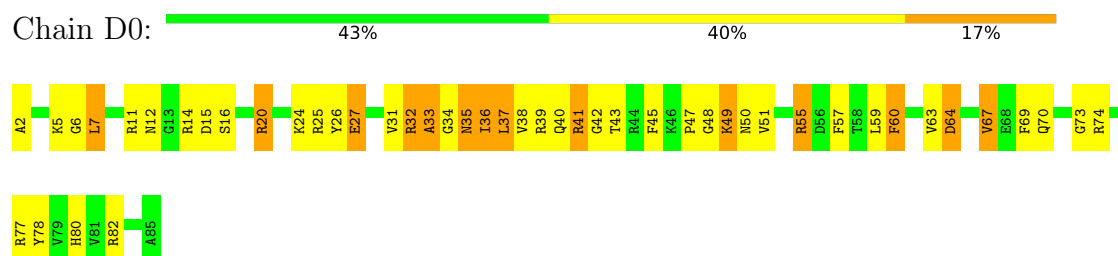
- Molecule 45: 50S ribosomal protein L25



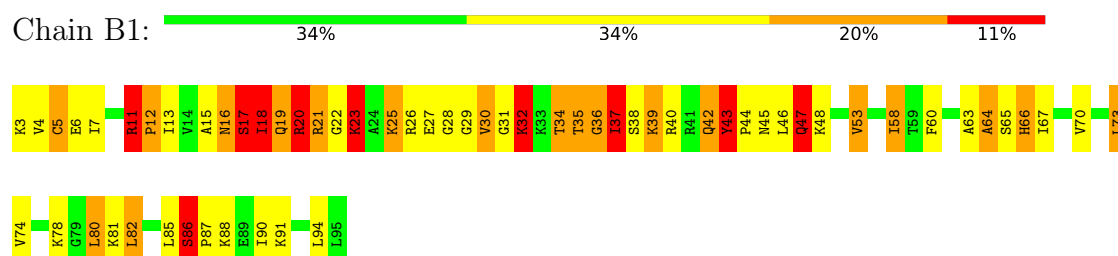
• Molecule 46: 50S ribosomal protein L27



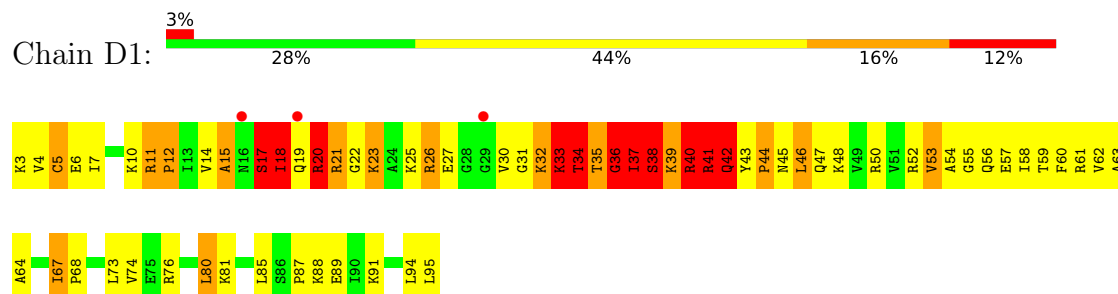
• Molecule 46: 50S ribosomal protein L27



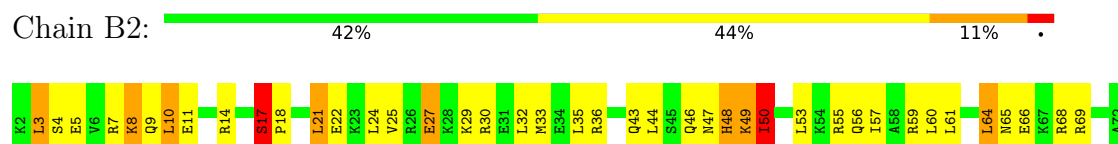
• Molecule 47: 50S ribosomal protein L28



• Molecule 47: 50S ribosomal protein L28

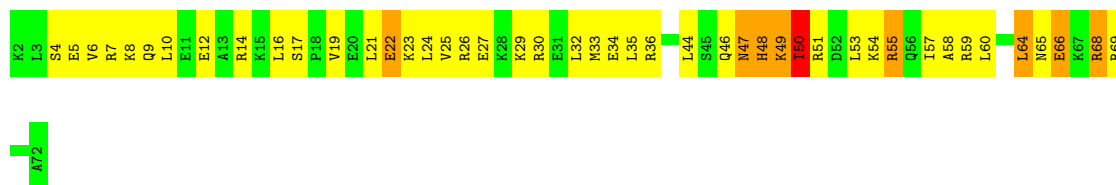


• Molecule 48: 50S ribosomal protein L29



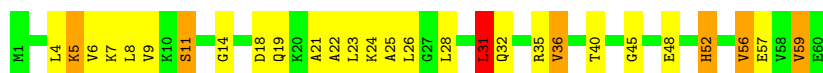
• Molecule 48: 50S ribosomal protein L29

Chain D2: 37% 51% 11% .



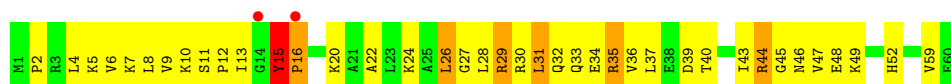
- Molecule 49: 50S ribosomal protein L30

Chain B3: 53% 35% 10% .



- Molecule 49: 50S ribosomal protein L30

Chain D3: 3% 35% 53% 10% .



- Molecule 50: 50S ribosomal protein L31

Chain B4: 49% 29% 14% 9% .



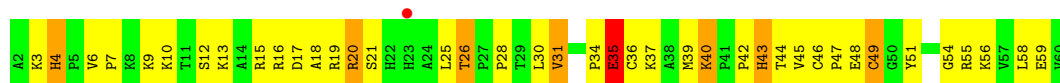
- Molecule 50: 50S ribosomal protein L31

Chain D4: 34% 26% 37% .



- Molecule 51: 50S ribosomal protein L32

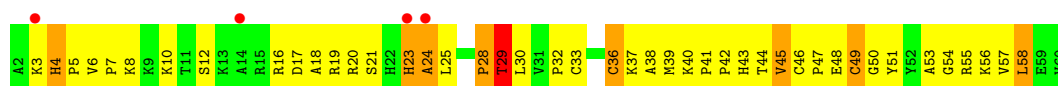
Chain B5: 2% 32% 54% 12% .



- Molecule 51: 50S ribosomal protein L32

Chain D5: 7% 25% 59% 14% .

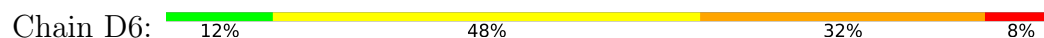




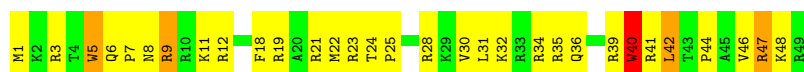
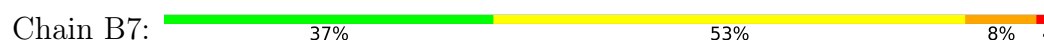
- Molecule 52: 50S ribosomal protein L33



- Molecule 52: 50S ribosomal protein L33



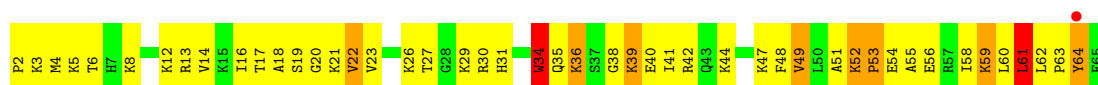
- Molecule 53: 50S ribosomal protein L34



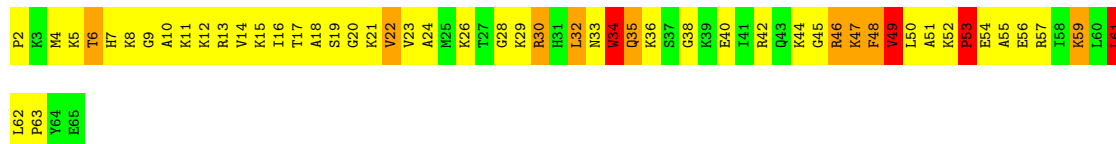
- Molecule 53: 50S ribosomal protein L34



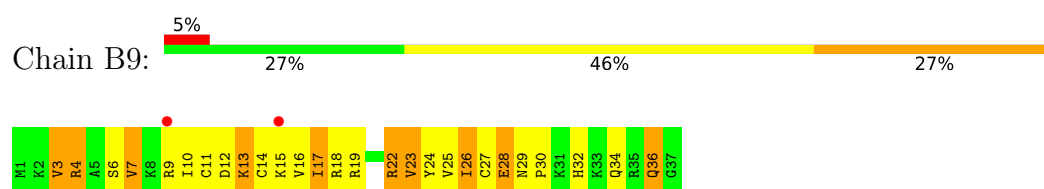
- Molecule 54: 50S ribosomal protein L35



- Molecule 54: 50S ribosomal protein L35



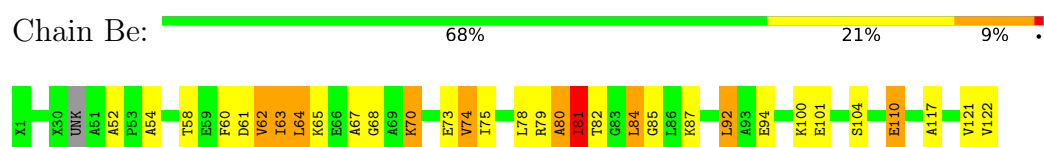
- Molecule 55: 50S ribosomal protein L36



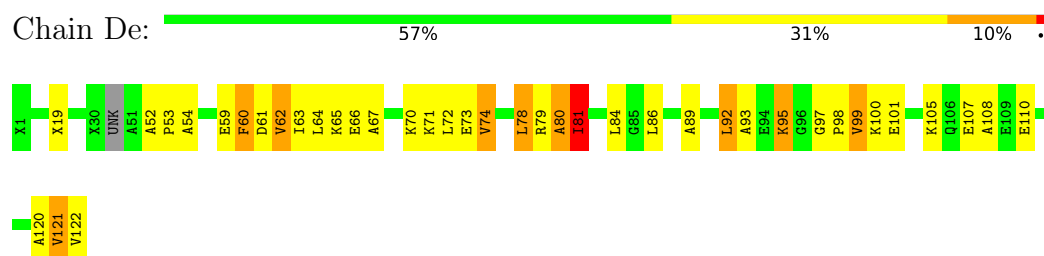
- Molecule 55: 50S ribosomal protein L36



- Molecule 56: 50S ribosomal protein L7/L12



- Molecule 56: 50S ribosomal protein L7/L12



- Molecule 57: 50S ribosomal protein L7/L12



There are no outlier residues recorded for this chain.

- Molecule 57: 50S ribosomal protein L7/L12



There are no outlier residues recorded for this chain.

- Molecule 57: 50S ribosomal protein L7/L12



- Molecule 57: 50S ribosomal protein L7/L12

Chain Dg:  100%

There are no outlier residues recorded for this chain.

- Molecule 58: 50S ribosomal protein L7/L12

Chain Bh:  93%  7%



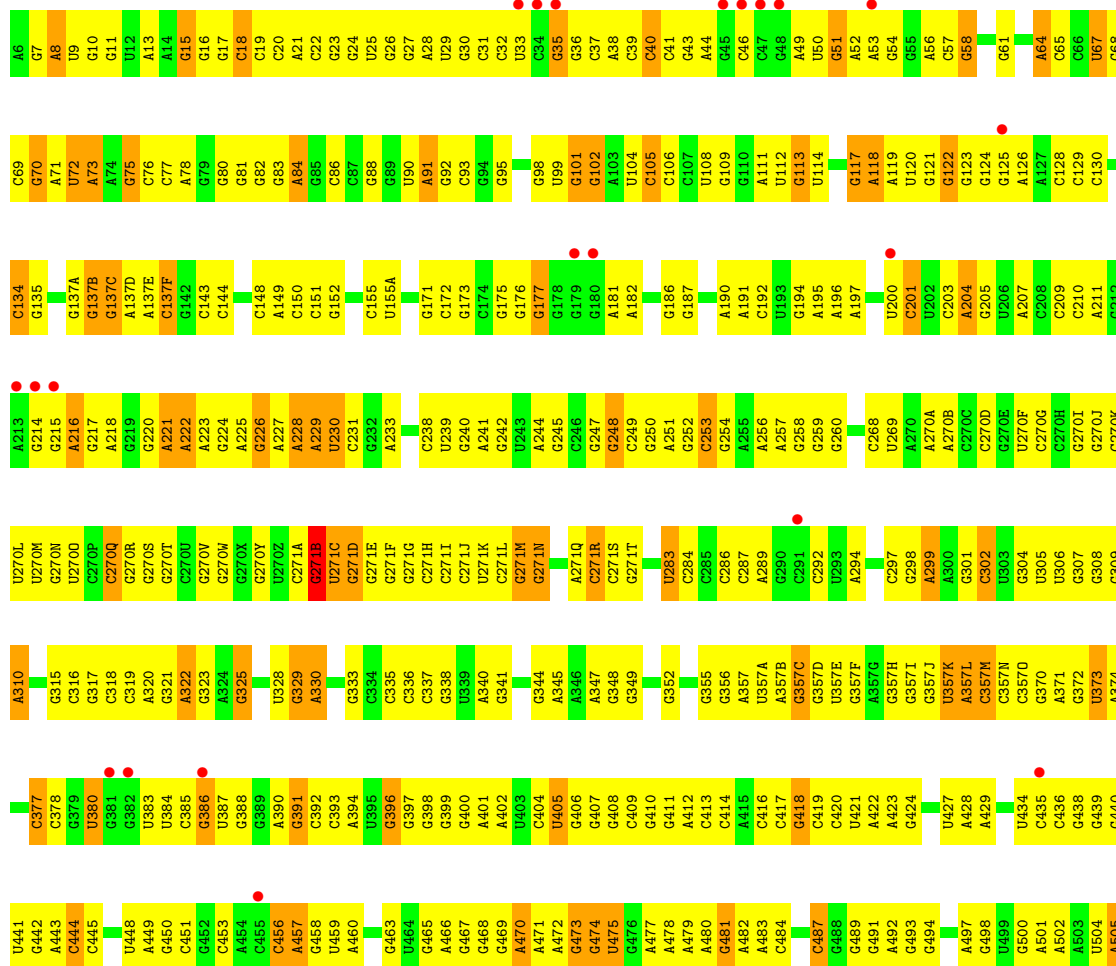
- Molecule 58: 50S ribosomal protein L7/L12

Chain Dh:  100%

There are no outlier residues recorded for this chain.

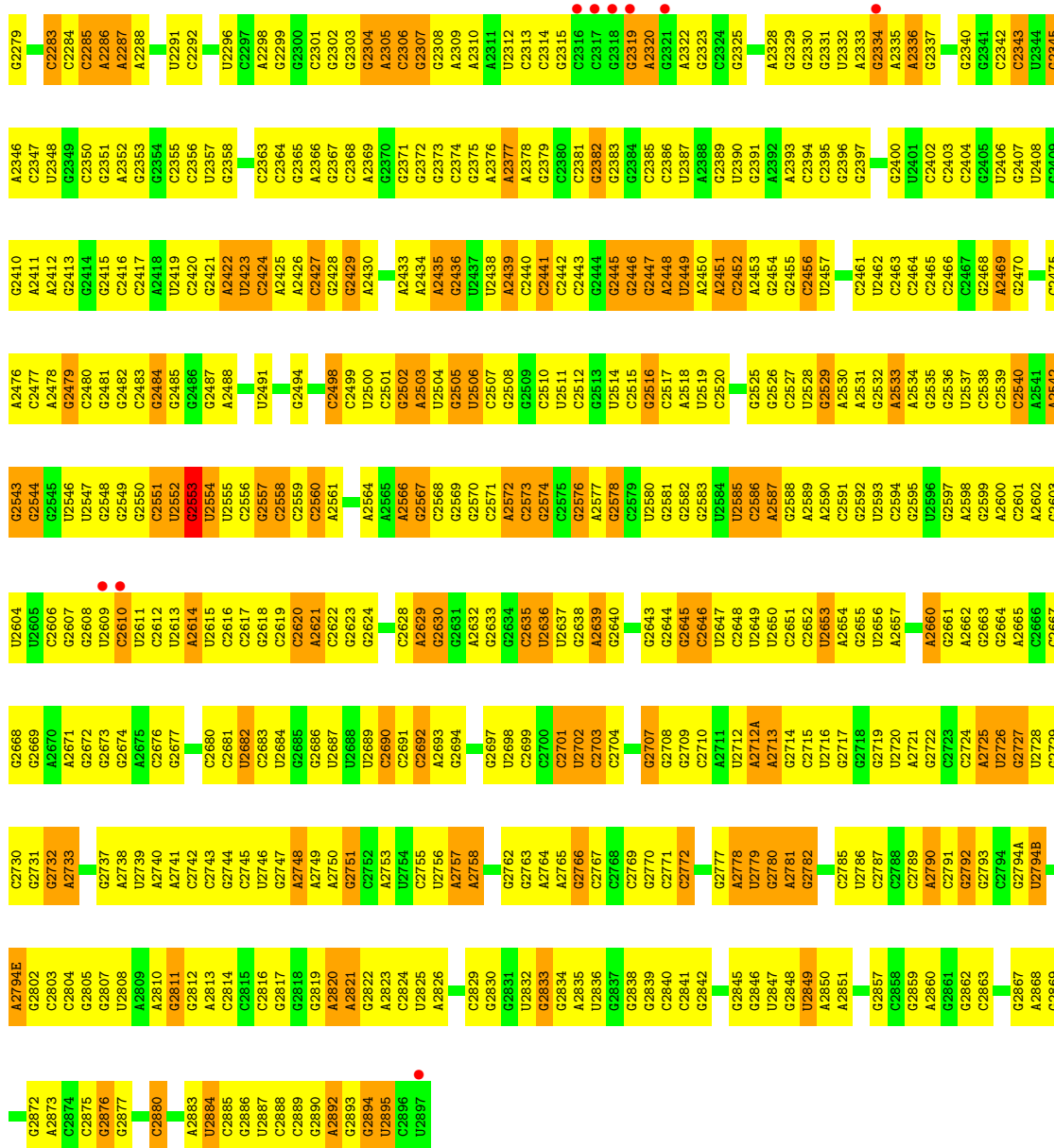
- Molecule 59: 23S Ribosomal RNA

Chain BA:  2%  23%  58%  19%

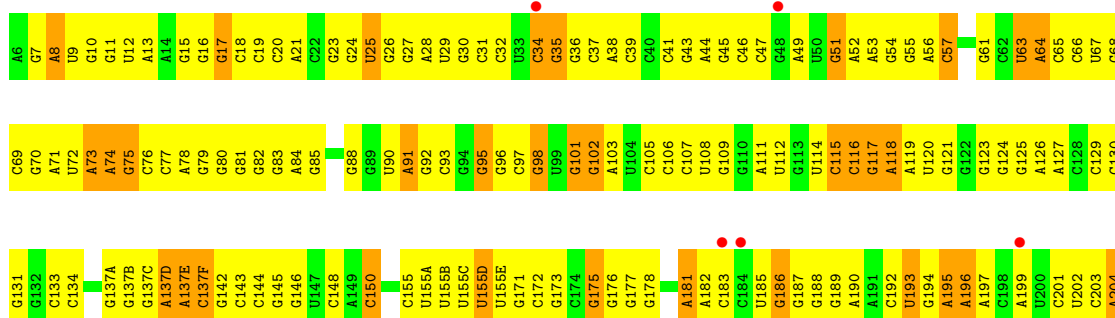


U1385	A1272	A1204	C1140	A1077	G1011	C949	C884	A820	C758	G696	A632	G573	G506
A1386	U1273	U1205	U1141	U1078	U1012	G952	C885	A821	G759	C697	A633	C574	A507
G1338	A1274	G1206	U1141A	C1079	C1013	A953	C886	U826	G760	A699	C634	U576	G508
U1339	A1275	C1207	A1142	C1080	G1016	C988	A887	U827	A761	G700	C635	U577	C509
U1340	G1276	G1208	A1143	U1081	G1017	C989	C888	U828	G762	G701	A637	A578	C510
U1341	G1277	G1209	G1144	U1082	C1018	C956	A890	A829	A764	G702	G638	C579	U511
A1342	A1278	A1210	G1145	U1083	U1019	A957	C892	G830	G765	G703	U639	G582	G512
G1343	G1279	U1211	C1146	A1084	A1020	U958	C892	U831	G766	G704	G641	A514	A515
C1344	G1280	A1212	G1149	A1085	A1021	A959	C894	G832	C767	G705	G642	C581	C516
G1345	A1213	A1214	G1150	G1087	G1022	A960	U895	G833	G768	A706	G643	G583	C517
G1283	G1215	G1151	G1151	A1088	U1023	C961	A896	C834	G769	G707	A644	C584	C518
A1284	G1216	C1152	C1152	G1089	G1024	C962	C897	A835	G770	C708	A645	G585	U519
G1285	C1153	C1090	C1090	U1090	G1025	U963	C898	G836	G771	U709	A646	A586	G520
A1286	G1154	G1091	G1091	G1091	U1026	C964	A899	C837	C772	G710	G647	G587	G521
A1287	A1155	C1220	A1155	C1220	A1027	C965	A900	C838	G773	G712	A648	U588	G522
U1288	C1221	C1221	G1156	U1094	A1028	G966	A901	U839	A774	G713	G649	C589	C523
C1289	G1157	A1095	G1157	A1095	C902	C967	C902	C840	G775	G714	C650	A590	U524
A1354	G1225	C1158	C1158	A1096	G1030	C968	C903	A841	G776	U714	G651	C591	U525
G1355	A1226	U1159	U1159	U1097	G1031	C969	C904	G842	A777	G715	U652	G592	A526
G1356	G1227	G1160	G1160	A1098	A1032	C970	U905	G843	G778	A716	C653	G593	A527
U1292	G1228	G1161	G1161	C971	U1033	C971	G906	C844	U779	G717	U654	U594	C528
C1293	G1229	G1162	G1162	G972	G1034	G972	U906	G845	G780	A718	A655	C595	A529
U1294	C1295	G1163	G1163	A973	U1035	A973	A910	C846	A781	C719	G656	C596	G530
A1359	U1234	G1164	G1164	G974	G1042	G974	A911	U847	A782	G720	U657	U597	C531
A1360	G1235	U1165	U1165	C974A	C1043	C974A	C912	G848	A783	G721	G658	G598	A532
G1299	G1236	C1166	C1166	G975	G1044	G975	U913	A849	A784	A722	C659	G599	G533
A1300	U1301	G1237	G1237	U1105	A1045	U1105	C914	C850	G785	G723	G660	G601	U534
A1301	A1302	G1238	G1238	U1106	A1046	G978	C915	U851	G786	U724	C661	C602	C535
A1302	G1239	G1239	G1239	U1107	A1047	G979	C916	G852	U787	G732	G662	A608	C541
A1303	U1240	G1171	G1171	U1108	G1048	G980	A917	G853	A788	A727	G663	A603	A536
G1304	A1241	G1172	G1172	G1110	A1049	A981	A918	G854	A789	G728	C664	G604	C537
C1305	A1242	G1173	G1173	G1111	C1049	C982	G919	U857	C790	G729	C665	C605	G538
C1306	U1243	G1174	G1174	U1112	A1050	A983	G920	U858	G791	C730	G666	U606	G539
A1307	G1244	G1175	G1175	U1113	G1051	A984	U922	G859	G792	G731	G667	U607	C540
A1308	A1177	G1176	G1176	C985	C1052	C985	U922	U860	A793	G733	G668	A609	C542
G1309	G1245	C1177	G1177	G1114	G1053	C986	C924	G861	G794	A734	A670	C610	G542
G1310	A1246	C1178	C1178	G1115	A1054	G987	C925	G862	C797	A735	C671	C611	A543D
G1311	G1247	C1179	C1179	G1116	G1055	A988	G925	A863	G798	C736	C672	C611A	G550
C1312	G1248	G1180	G1180	G1117	G1056	G989	A926	G864	G799	C737	C673	G611B	G553
U1313	U1249	C1181	C1181	C1118	A1057	C990	G928	C865	A800	G738	G674	U611C	U554
C1314	G1250	A1182	A1182	C1119	G1058	C991	G929	A866	G801	G739	A675	U611D	U555
G1315	C1251	G1183	G1183	G1120	G1059	C992	U930	C867	A802	U740	A676	G611E	G556
A1379	G1252	G1184	G1184	C1121	U1060	G993	G931	U868	U803	G741	A677	A611F	U557
G1316	A1253	C1185	C1185	G1122	G1061	C996	G932	G869	A804	G742	G681	G611G	G558
A1317	U1254	G1186	G1186	C1123	U1062	A997	A933	U870	C805	G745	C682	G617	C560
C1318	U1255	G1187	G1187	C1124	G1063	G997	C936	A872	C806	U746	C683	A621	G561
A1321	G1188	U1188	U1188	G1125	C1064	C998	U937	U871	U807	G747	G684	G622	U562
U1322	C1257	A1189	A1189	A1126	U1065	U999	G938	G872	G810	G748	A685	G623	G563
G1324	G1259	G1190	G1190	A1127	U1066	U1001	G938	G873	U810	G749	G886	C624	U564
G1325	G1260	G1193	G1193	A1128	A1067	A1002	G939	G874	U811	A750	U688	G625	U566
U1326	U1130	G1194	G1194	U1129	G1068	G1002	G940	G875	C812	A751	A689	G626	A567
G1327	G1195	G1195	G1195	G1131	A1069	G1003	A941	G876	U813	A752	G690	U626	U568
A1328	A1265	C1196	C1196	A1132	A1070	C1004	G942	U877	U814	A753	C691	A627	U569
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C1330	U1267	U1198	U1198	C1135	C1072	C1006	G944	G879	C816	C754	G693	G629	A571
A1331	A1268	U1199	U1199	G1136	A1073	C1007	A945	G880	C817	G755	U694	G630	A572
G1332	A1269	C1200	C1200	G1137	G1074	C1008	G946	G882	G818	C756	G695	A631	
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A2202E	U1406	A1468D	G1539	C1604	G1668	●	A1810	G1883	C1947	G2012	C2074	■	A2202F
G2202G	C1407	G1468E	G1540	C1605	A1669	■	G1811	A1884	C1948	A2013	U2075	■	G2202H
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G2202K	C1409	G1468G	G1542	C1607	U1671	■	C1752	G1886	G1950	A2015	A2077	■	G2202L
G2202M	G1410	■	A1543	A1608	G1672	■	G1753	G1887	U1951	U2016	■	■	G2202N
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G2202Q	A1412	A1544	A1545	A1610	G1674	■	A1755	A1889	A1953	G2018	C2081	■	G2202R
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A2205	G1414	G1483	■	C1612	A1676	■	U1757	G1891	G1955	A2020	G2083	■	G2202U
C2206	U1415	■	C1547	G1613	G1677	■	G1758	■	U1956	U2021	C2084	■	A2206
G2207	A1486	A1487	■	A1614	G1678	■	A1759	■	G1957	U2022	C2085	■	G2207
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G2216	U1497	A1496	■	G1628	G1687	■	U1768	■	A1966	A2031	U2096	■	G2216
G2217	G1498	U1497	■	U1629	U1688	■	G1769	■	G1967	G2032	C2097	■	G2217
G2218	C1499	■	■	G1630	A1689	■	C1832	■	G1968	A2033	U2098	■	G2218
G2219	G1500	■	■	A1631	A1690	■	U1833	■	A1969	U2034	U2099	■	G2219
G2220	C1501	■	■	C1632	G1691	■	U1834	■	A1970	G2035	G2100	■	G2220
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G2222	C1504	■	■	A1634	U1693	■	C1836	■	A1972	G2037	U2102	■	G2222
G2223	G1505	■	■	A1635	U1694	■	C1837	■	G1973	G2038	C2103	■	G2223
G2224	C1506	■	■	A1636	G1695	■	G1838	■	G1974	G2039	G2104	■	G2224
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G2227	A1506C	■	■	A1571	A1698	■	A1780	■	A1978	A2042	C2107	■	G2227
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G2229	A1506D	■	■	A1641	U1700	■	G1782	■	G1980	G2044	U2109	■	G2229
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G2231	C1506F	■	■	G1643	G1702	■	G1844	■	■	G2046	G2111	■	G2231
G2232	U1506G	■	■	A1580	G1703	■	G1845	■	■	U2047	G2112	■	G2232
G2233	G1506H	■	■	C1644	G1704	■	G1846	■	A1986	G2048	G2113	■	G2233
G2234	U1506I	■	■	G1645	U1705	■	A1847	■	G1987	G2049	A2114	■	G2234
G2235	C1506J	■	■	C1646	U1706	■	G1848	■	■	A2050	C2115	■	G2235
G2236	G1506K	■	■	G1647	G1707	■	G1849	■	■	A2051	G2116	■	G2236
G2237	U1506L	■	■	C1648	C1708	■	G1850	■	■	A2052	■	■	G2237
G2238	A1506M	■	■	A1583	U1709	■	C1851	■	■	G2052	■	■	G2238
G2239	G1506N	■	■	C1582	■	■	C1852	■	■	■	■	■	G2239
G2240	A1586	■	■	G1649	C1712	■	A1853	■	■	C2055	G2119	■	G2240
G2241	U1587	■	■	G1650	U1712A	■	A1854	■	■	G2056	G2120	■	G2241
G2242	G1524	■	■	A1588	G1712B	■	G1855	■	■	■	G2121	■	G2242
G2243	C1525	■	■	C1589	G1712C	■	U1794	■	■	■	U2122	■	G2243
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G2245	U1527	■	■	A1586	G1712E	■	U1796	■	■	A2060	G2124	■	G2245
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G2247	C1529	■	■	C1592	G1712G	■	G1858	■	■	A2062	A2126	■	G2247
G2248	G1593	■	■	G1593	G1712H	■	U1798	■	■	C2063	G2127	■	G2248
G2249	C1530	■	■	U1659	G1712I	■	C1800	■	■	A2064	C2128	■	G2249
G2250	A1595	■	■	C1662	A1712J	■	G1801	■	■	G2065	C2129	■	G2250
G2251	■	■	■	C1663	U1712K	■	A1802	■	■	C2066	U2130	■	G2251
G2252	C1596	■	■	A1662	A1712L	■	A1803	■	■	G2067	G2131	■	G2252
G2253	G1597	■	■	A1663	C1712M	■	G1804	■	■	A2068	U2132	■	G2253
G2254	■	■	■	A1664	U1712N	■	U1806	■	■	G2069	G2133	■	G2254
G2255	A1536	■	■	C1598	■	■	G1807	■	■	A2071	A2135	■	G2255
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G2267	■	■	■	■	■	■	■	■	■	■	■	■	G2267
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G2269	■	■	■	■	■	■	■	■	■	■	■	■	G2269
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G2271	■	■	■	■	■	■	■	■	■	■	■	■	G2271
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- Molecule 59: 23S Ribosomal RNA

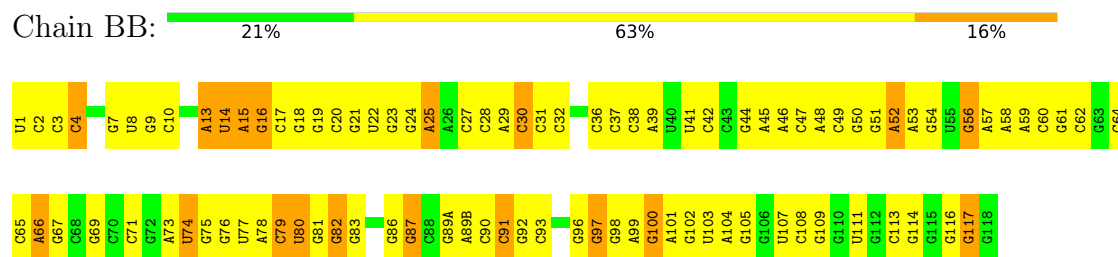


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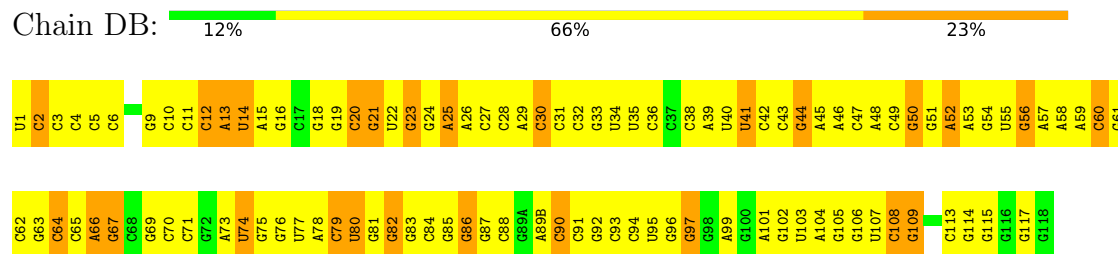
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A1936	G1862	U1798	G1797	G1712D	G1849	C1582	G1506M	C1452	C1386	C1258	U1198	G1137
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G1945	C1881		U1859	U1712P	U1859	A1596		U1397	U1397	U1267	G1208	C1145
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	C1886	G1811	C1863		A1864	C1600	G1536	A1468C	G1401	U1272	G1212	G1150
U1951	C1887	G1812	A1864	G1748	A1865	G1601	C1537	A1468D	C1402	U1273	A1213	G1151
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G1954	A1890	G1816	G1867	C1751	G1868	A1603	G1540	C1468G	G1343	G1277	G1216	G1154
U1955	G1891	G1817	A1668	C1752	A1669		U1541	C1468H	G1344	A1278	C1217	A1155
U1956	C1892	U1818	A1669	G1753	C1607		G1542	A1468I	G1345	G1279	C1218	A1156
C1957	C1893	A1819	C1870	G1754	A1608		A1543	G1468J	G1346	G1280	G1219	G1157
G1958	C1894	U1820	U1871	A1755	A1609		C1543A	G1468K	G1347	G1281	A1219A	C1158
G1959	A1895	A1821		G1756	A1610		A1544	G1468L	U1282	G1282	G1220	U1159
A1960	G1896	G1822			C1611		A1545	U1468M	A1349	A1283	C1221	G1160
C1961		G1823			C1612		A1546	A1412		A1284	G1222	C1161
C1962	G1899	A1824	G1675	A1762	C1676		C1547	G1484	U1352	G1285	G1223	
U1963	A1900	A1825	A1676	G1763	G1677		G1548	A1485	A1353	A1286	C1224	G1164
G1964	A1901	G1826	A1677	G1764	A1614		C1549	A1486	A1354	A1287	G1225	U1165
C1965	C1902	G1827	U1766	C1765	C1615		C1550	G1487	G1355	U1288	A1226	C1166
A1966	G1903	G1828	G1681	C1766	C1551		C1551	G1488	G1356	G1289	G1227	U1167
C1967	G1904	A1829	G1682	U1767	G1552		A1552	U1489	U1357	C1290	G1228	G1168
G1968	C1905	G1830	C1683	U1768	A1618		A1553	A1490	G1358	C1291	G1229	G1169
A1969	G1906	G1831	G1684	G1770	G1619		A1554	G1491	A1359		C1230	G1170
A1970	C1907	U1832	C1685	C1771	G1620		G1555	G1492	A1360	U1294	G1231	G1171
A1971	G1908	A1833	C1686	G1772	U1621		C1556	C1493	G1361	C1295	G1232	G1172
A1972	G1909	U1834	G1687	A1773	G1622		C1557	A1494	C1362	G1296	C1233	A1173
G1973	G1910	G1835	U1688	C1774	G1624		A1558	A1495	C1363	U1297	U1234	U1174
C1974	U1911		A1689	U1775	C1625		G1559	A1496	G1364		G1235	G1175
	A1912	G1776	A1690	G1776	G1626		G1560	U1497	A1365	U1300		A1177
A1981	A1913	G1838	C1691	U1777	G1627		G1561	C1498	A1366	A1301	G1238	C1178
C1982	C1914	G1839	C1696	U1778	G1628		A1562	C1499	A1367	A1302	G1239	C1179
G1983		U1841	G1697	U1779	U1629		G1563	G1500	G1368	G1303	U1240	C1180
U1984	U1917	G1842	C1698	A1780	G1630		C1564		G1369	C1432	A1241	C1181
G1985	A1918	C1843	A1698	C1781	C1630A		G1565	U1503	C1370	C1306	A1242	A1182
A1986	A1919	G1844		G1782			A1566	C1504	G1371	A1307	G1243	G1183
G1987	G1845	G1846	A1701	A1783	A1634		A1567	C1505	U1372	A1308	G1244	G1184
G1988	U1921	G1847	G1702	A1784	G1635		G1568	C1506	A1373	G1309	G1245	C1185
G1989	G1922	A1847	G1703	A1785	C1636		A1569	A1506A	G1374	G1310	A1246	G1186
C1990		A1848	G1704	C1637	A1637		A1570	A1506B	C1375	G1311	G1247	G1187
U1991	U1925	G1849	C1707	C1638			A1571	A1506C	G1376	U1312	U1248	U1188
G1992	U1926	A1787	G1707				A1572	A1506D	G1377	U1313	U1249	A1189
U1993	A1927	C1788	C1708		A1641			G1506E	A1378	C1314	G1250	G1190
G1994	A1928	A1789	G1709		G1642		C1575	C1506F	A1379	G1315	G1251	G1191
U1995	G1929	C1790	U1710		G1643		U1576	U1506G	G1380	U1316	G1192	G1192
C1996		G1792	C1711		C1644		C1577	C1506H	G1381	A1317	A1253	G1193

U2847	C2784	C2719	C2852	A2587	C2525	C2456	C2394	U2332	U2265	C2191	G2125	C2063	G1997
C2848	C2785	U2720	U2653	G2588	G2525	C2456	C2395	A2333	A2266	G2192	A2126	C2064	G1998
U2849	U2786	A2721	A2654	A2589	C2526	U2457	C2396	G2334	A2267	G2193		C2065	
A2850	C2787	C2722	C2850	A2590	C2527	C2457	C2397	A2335	A2268	C2194	C2129	C2066	
C2851	C2788	C2723	G2659	C2591	U2528	C2463	U2398	A2336	A2269	C2195	U2130		
C2852	C2789	C2724	A2660	G2592	G2529	C2464	C2399		G2270		G2131	G2069	
G2853	A2790	A2725	C2661	U2593	A2530	C2465	G2400		G2271	A2199	U2132	G2070	
C2854	C2791	U2726	A2662	C2594	A2531	C2466	U2401		U2272	C2200	C2133	A2071	
C2855	C2792	C2727	C2663	G2595	C2532	C2467	C2402		A2273	C2201	A2134	C2072	
C2856	G2793	U2728	G2664		A2533	C2468	C2403		A2274	C2202	A2135	C2073	
C2857	C2794	C2729	C2665	A2598	A2534	A2469	C2404		C2275	U2202A	C2136	U2074	
C2858	G2794A		C2666	G2599	G2535	G2470	C2405		G2276	C2202B	C2137	U2075	
C2859	G2732		C2667		G2536		U2406		G2277	G2202C	C2138	U2076	
C2860	A2733		C2668	A2602	U2537	U2473	G2407			G2202D	C2139	A2077	
C2861	C2734		C2669	G2603	C2538	C2474	U2408		G2280	A2202E	C2140	C2078	
C2862	A2794D		C2670	U2604	C2539	C2475	G2409		C2281	U2202F	G2141	U2079	
C2863	G2802	G2735	C2664	U2605	C2540	A2476	G2410		G2282	G2202G	C2142	G2080	
C2864	C2803	G2737	G2673	C2606	A2541	C2477	A2411		G2283	G2202H	C2143	C2081	
	C2804	U2738	C2674	C2607	A2542	A2478	A2412		C2284	G2221	U2144	A2082	
	G2805	U2739	C2675	G2608	G2543	G2479	G2413		C2285	G2222	C2145	G2083	
	U2807		C2678	U2609	G2544		G2414		A2286	G2223	C2146	A2084	
	C2808	A2741	A2679	C2610	G2545	G2482	G2415		A2287	G2224	G2147	C2085	
	A2809	C2742	C2680	U2611	U2546	C2483	C2416		A2288	G2225	C2148	A2086	
	C2810	C2743	C2681	C2612	U2547	G2484	C2417		C2226	A2226	G2149	G2087	
	A2811	G2744	U2682	U2613	G2548	G2485	A2418		G2227	A2227	U2150	G2088	
	C2812		C2683		C2549	G2486	U2419				G2151	U2089	
	A2813	U2745	U2684	C2614	G2550	G2487	C2420		G2230	G2230	C2152	G2090	
	C2814	C2747	G2685	C2615	U2551	A2488	C2421		C2231	G2231	C2153	G2091	
	C2815	U2748	G2686	G2616	U2552	G2489	A2422		U2232	U2232	G2154	U2092	
	C2816	A2749	U2687	C2620	C2553	G2490	U2423		U2233	U2233	C2155	G2093	
	C2817	U2750	U2688	A2621	U2554		C2424		G2234	G2234	C2156	G2094	
	A2818	G2751	U2689	C2622	U2555	G2494	A2425		G2235	G2235	C2157	C2095	
	C2819	C2752	C2690	G2623	C2556	G2495	A2426		G2236	C2236	A2158	U2096	
	A2820	U2753	C2691		G2557	C2496	C2427		G2237	G2237	C2159	G2097	
	C2821	U2754	C2692	G2626	C2558	A2497	G2428		G2238	G2238	C2160	U2098	
	U2887	C2755	A2693	C2627	C2559	C2498	U2429		A2304	G2239	C2161	U2099	
	C2823	U2756		C2628	C2560	C2499	A2430		G2306		G2162	G2100	
	U2889	A2757	U2696	A2629	A2561	U2500	U2431		G2307	G2242		G2101	
	C2824	C2758	G2697	C2630	U2562	C2501	A2432		C2308	U2243	U2167	G2307	
	A2825	U2759	U2698	C2631	U2563	G2502	C2433		C2309	C2373	C2103	C2103	
	C2826	C2760	C2699	A2632	A2564	A2503	A2434		A2169	U2244	C2169	C2104	
	C2827	G2762	C2699	G2633	A2565	U2504	A2435		G2246		A2170	C2105	
	C2828	U2763	C2700	G2634	A2566	U2506	U2436		A2247	U2249	C2171	C2106	
	U2895	A2764	C2701	C2635	C2567	C2507	U2437		C2248	U2249	A2171	G2107	
	C2830	C2765	C2702	U2636		C2508	A2438		C2249	C2314	A2173	C2108	
	G2831		C2703	U2636		C2509	A2439		G2250	U2250	C2174	C2109	
	U2832	C2768	C2704	G2638	C2571	G2509	C2440		G2251	G2251	C2175	G2110	
	C2833	C2769	A2705	A2639	A2572	C2510	C2441		G2252	G2252	A2176	G2111	
	C2834	C2770	G2706	C2639	G2640	U2511	C2442		G2253	G2253	C2177	G2112	
	A2835	C2771	C2707	C2640	C2573	C2512	C2443		G2254	G2254	C2178	G2113	
	U2836	C2772	G2708	G2641	C2574	C2513	C2444		G2255	G2255	C2179	A2114	
	C2837	C2773	C2709	C2642	C2575	U2514	G2445		G2256	G2256	U2180	G2115	
	G2838	C2773	C2710	C2643	C2576	U2514	G2446		U2257	U2257	G2181		
	C2839	A2776	C2711	G2644	A2577	C2515	C2447		G2258				
	U2839	C2777	G2712	C2645	C2578	U2516	G2447		G2258	G2258	C2182		
	C2840	C2778	A2713	C2646	C2579	C2517	A2448		G2259	G2259	C2183	A2119	
	U2841	C2779	C2714	U2647	C2580	C2518	A2449		C2260	C2260	C2184	G2120	
	C2842	U2779	C2715	C2648	G2582	U2519	A2450		C2261	G2261	C2185	G2121	
	G2843	C2780	C2716	U2649		C2520	A2451		U2262	U2262			
	U2844	A2781	U2716	C2649	C2583	C2521	C2452		G2263	G2263	C2189	A2122	
	C2845	C2782	C2717	U2650	U2585	U2522	A2453		C2264	C2264	U2189	G2123	
	G2846	C2783	C2718	C2651	C2586	U2523	A2454				C2190	G2124	

- Molecule 60: 5S Ribosomal RNA



- Molecule 60: 5S Ribosomal RNA



4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	306.92Å 677.00Å 356.78Å 90.00° 89.90° 90.00°	Depositor
Resolution (Å)	49.98 – 3.80 49.98 – 3.80	Depositor EDS
% Data completeness (in resolution range)	(Not available) (49.98-3.80) 60.1 (49.98-3.80)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.05 (at 3.78Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.9_1692)	Depositor
R, R_{free}	0.295 , 0.331 0.303 , 0.332	Depositor DCC
R_{free} test set	8467 reflections (1.98%)	wwPDB-VP
Wilson B-factor (Å ²)	66.8	Xtriage
Anisotropy	0.219	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.11 , 0.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.17$, $\langle L^2 \rangle = 0.05$	Xtriage
Estimated twinning fraction	0.340 for h,-k,-l	Xtriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	312066	wwPDB-VP
Average B, all atoms (Å ²)	85.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.07% 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: FUA, ACE, MG, GDP, NMY

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	AB	0.58	1/1945 (0.1%)	1.07	11/2621 (0.4%)
1	CB	0.60	3/1945 (0.2%)	1.09	21/2621 (0.8%)
2	AC	0.37	0/1645	0.86	1/2216 (0.0%)
2	CC	0.41	0/1645	0.90	2/2216 (0.1%)
3	AD	0.39	0/1733	0.96	6/2318 (0.3%)
3	CD	0.40	0/1733	0.98	7/2318 (0.3%)
4	AE	0.43	0/1172	0.92	4/1576 (0.3%)
4	CE	0.44	0/1172	1.00	6/1576 (0.4%)
5	AF	0.37	0/856	0.88	3/1154 (0.3%)
5	CF	0.44	0/856	0.90	1/1154 (0.1%)
6	AG	0.36	0/1276	0.88	3/1709 (0.2%)
6	CG	0.39	0/1276	0.89	2/1709 (0.1%)
7	AH	0.40	0/1136	0.91	2/1527 (0.1%)
7	CH	0.37	0/1136	0.86	0/1527
8	AI	0.34	0/1029	0.89	0/1379
8	CI	0.36	0/1029	0.84	0/1379
9	AJ	0.38	0/815	0.89	0/1095
9	CJ	0.43	0/815	0.97	0/1095
10	AK	0.56	0/900	0.99	4/1213 (0.3%)
10	CK	0.57	0/900	0.95	2/1213 (0.2%)
11	AL	0.63	0/992	1.17	9/1327 (0.7%)
11	CL	0.64	0/992	1.16	5/1327 (0.4%)
12	AM	0.37	0/1008	0.90	1/1347 (0.1%)
12	CM	0.37	0/1008	0.92	1/1347 (0.1%)
13	AN	0.36	0/501	0.87	1/664 (0.2%)
13	CN	0.38	0/501	0.84	0/664
14	AO	0.44	0/745	0.96	0/992
14	CO	0.43	0/745	0.86	0/992
15	AP	0.46	0/722	0.99	1/970 (0.1%)
15	CP	0.44	0/722	0.99	2/970 (0.2%)
16	AQ	0.45	0/848	1.10	7/1131 (0.6%)
16	CQ	0.48	0/848	1.11	8/1131 (0.7%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AR	0.37	0/579	0.91	3/768 (0.4%)
17	CR	0.42	0/579	0.96	1/768 (0.1%)
18	AS	0.39	0/647	0.86	0/870
18	CS	0.35	0/647	0.84	2/870 (0.2%)
19	AT	0.41	0/765	0.84	0/1007
19	CT	0.40	0/765	0.81	0/1007
20	AY	0.53	1/5270 (0.0%)	1.08	24/7135 (0.3%)
20	CY	0.52	1/5270 (0.0%)	1.07	36/7135 (0.5%)
21	AA	0.20	0/36351	0.45	2/56736 (0.0%)
21	CA	0.21	0/36351	0.46	0/56736
22	AW	0.25	0/1827	0.54	0/2845
22	CW	0.23	0/1827	0.51	0/2845
23	AV	0.84	1/881 (0.1%)	0.81	2/1372 (0.1%)
23	CV	0.38	0/880	0.85	0/1372
24	AX	0.29	0/1815	0.55	0/2826
24	CX	0.29	0/1815	0.57	0/2826
25	BC	0.69	1/1774 (0.1%)	1.40	38/2391 (1.6%)
25	DC	0.73	2/1774 (0.1%)	1.30	25/2391 (1.0%)
26	BD	0.70	5/2195 (0.2%)	1.03	11/2955 (0.4%)
26	DD	0.43	0/2195	1.02	8/2955 (0.3%)
27	BE	0.50	0/1602	1.05	6/2160 (0.3%)
27	DE	0.48	0/1602	1.07	8/2160 (0.4%)
28	BF	0.56	1/1663 (0.1%)	1.27	17/2249 (0.8%)
28	DF	0.53	0/1663	1.18	22/2249 (1.0%)
29	BG	0.37	0/1499	0.88	1/2016 (0.0%)
29	DG	0.39	0/1499	0.97	8/2016 (0.4%)
30	BH	0.40	0/1298	1.03	7/1751 (0.4%)
30	DH	0.39	0/1298	0.94	2/1751 (0.1%)
32	BK	0.43	0/1054	0.95	2/1427 (0.1%)
32	DK	0.48	0/1054	1.00	5/1427 (0.4%)
33	BN	1.26	13/1141 (1.1%)	1.89	48/1537 (3.1%)
33	DN	1.24	7/1141 (0.6%)	1.76	42/1537 (2.7%)
34	BO	0.46	0/943	1.04	3/1269 (0.2%)
34	DO	0.47	0/943	1.05	6/1269 (0.5%)
35	BP	0.40	0/1131	0.98	4/1504 (0.3%)
35	DP	0.41	0/1131	0.94	5/1504 (0.3%)
36	BQ	0.48	0/1143	1.06	3/1527 (0.2%)
36	DQ	0.44	0/1143	1.05	5/1527 (0.3%)
37	BR	0.45	0/974	0.94	0/1302
37	DR	0.42	0/974	0.90	3/1302 (0.2%)
38	BS	0.53	0/783	1.05	4/1041 (0.4%)
38	DS	0.54	0/783	1.11	2/1041 (0.2%)
39	BT	0.43	0/1161	0.99	6/1549 (0.4%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
39	DT	0.43	0/1161	0.95	3/1549 (0.2%)
40	BU	0.45	0/982	0.91	0/1306
40	DU	0.42	0/982	0.89	3/1306 (0.2%)
41	BV	0.49	0/790	1.07	5/1057 (0.5%)
41	DV	0.47	0/790	1.01	3/1057 (0.3%)
42	BW	0.45	0/911	1.02	4/1220 (0.3%)
42	DW	0.53	0/911	1.04	6/1220 (0.5%)
43	BX	0.37	0/748	0.87	0/1004
43	DX	0.36	0/748	0.85	0/1004
44	BY	0.40	0/831	0.94	2/1108 (0.2%)
44	DY	0.37	0/831	0.86	2/1108 (0.2%)
45	BZ	0.41	0/1505	0.97	2/2042 (0.1%)
45	DZ	0.43	0/1505	0.99	7/2042 (0.3%)
46	B0	0.32	0/671	0.93	3/892 (0.3%)
46	D0	0.35	0/671	0.87	2/892 (0.2%)
47	B1	0.86	5/739 (0.7%)	1.59	17/981 (1.7%)
47	D1	0.67	1/739 (0.1%)	1.40	12/981 (1.2%)
48	B2	0.45	0/600	0.93	2/793 (0.3%)
48	D2	0.44	0/600	1.00	1/793 (0.1%)
49	B3	0.48	0/482	0.99	2/646 (0.3%)
49	D3	0.38	0/482	1.02	2/646 (0.3%)
50	B4	0.63	0/276	1.18	4/372 (1.1%)
50	D4	0.58	0/276	1.25	6/372 (1.6%)
51	B5	0.47	0/473	1.05	2/639 (0.3%)
51	D5	0.51	0/473	1.04	2/639 (0.3%)
52	B6	0.43	0/440	1.12	2/586 (0.3%)
52	D6	0.43	0/440	0.94	0/586
53	B7	1.06	4/438 (0.9%)	1.45	8/575 (1.4%)
53	D7	0.37	0/438	0.94	1/575 (0.2%)
54	B8	0.44	0/525	0.89	0/691
54	D8	0.41	0/525	0.96	1/691 (0.1%)
55	B9	0.37	0/310	0.90	0/407
55	D9	0.39	0/310	0.92	0/407
56	Be	0.35	0/538	0.90	0/715
56	De	0.34	0/538	0.95	2/715 (0.3%)
59	BA	0.20	0/69437	0.45	6/108401 (0.0%)
59	DA	0.21	0/69437	0.46	3/108401 (0.0%)
60	BB	0.21	0/2853	0.47	0/4451
60	DB	0.23	0/2853	0.47	0/4451
All	All	0.34	46/334735 (0.0%)	0.68	586/498724 (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
1	AB	0	1
3	CD	0	1
10	AK	0	1
10	CK	0	1
15	AP	0	1
15	CP	0	1
20	AY	0	2
25	BC	0	6
25	DC	0	5
26	BD	0	1
26	DD	0	1
27	BE	0	1
28	BF	0	4
28	DF	0	2
29	DG	0	1
31	BJ	0	2
31	DJ	0	3
33	BN	0	17
33	DN	0	15
34	BO	0	1
34	DO	0	1
36	BQ	0	1
38	BS	0	1
38	DS	0	1
39	BT	0	1
39	DT	0	1
42	BW	0	1
42	DW	0	2
45	BZ	0	1
45	DZ	0	1
47	B1	0	4
47	D1	0	3
53	B7	0	1
All	All	0	86

All (46) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	AV	1	G	P-O5'	23.85	1.95	1.59
26	BD	143	HIS	CE1-NE2	-14.66	1.17	1.32
26	BD	143	HIS	CG-ND1	-14.65	1.22	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	BN	101	HIS	CA-C	-12.69	1.35	1.52
33	DN	117	PHE	CA-C	-12.48	1.36	1.52
33	DN	101	HIS	CA-C	-11.14	1.37	1.52
26	BD	143	HIS	ND1-CE1	10.87	1.43	1.32
33	BN	115	ARG	C-O	10.57	1.37	1.24
47	B1	35	THR	CA-C	9.53	1.57	1.52
53	B7	40	TRP	CD2-CE2	-9.05	1.25	1.41
33	BN	85	ILE	CA-C	8.93	1.62	1.52
33	DN	85	ILE	CA-C	8.83	1.62	1.52
53	B7	40	TRP	CZ2-CH2	-8.35	1.21	1.37
33	DN	98	VAL	CA-C	8.00	1.62	1.52
33	BN	115	ARG	CA-C	7.94	1.63	1.52
26	BD	143	HIS	CD2-NE2	7.92	1.46	1.37
33	BN	118	LYS	CA-C	-7.56	1.42	1.52
25	BC	43	GLU	C-O	7.17	1.33	1.24
53	B7	40	TRP	C-O	7.00	1.32	1.24
25	DC	215	VAL	CA-CB	6.89	1.63	1.54
1	CB	162	ILE	CA-CB	6.70	1.63	1.54
33	BN	115	ARG	N-CA	6.56	1.54	1.46
1	AB	162	ILE	CA-CB	6.50	1.63	1.54
33	BN	98	VAL	CA-C	6.38	1.60	1.52
47	B1	37	ILE	CA-C	6.34	1.60	1.52
33	BN	71	ILE	CA-C	6.19	1.60	1.52
28	BF	177	ALA	CA-C	6.18	1.58	1.52
33	DN	71	ILE	CA-C	6.03	1.60	1.52
53	B7	40	TRP	CD2-CE3	6.01	1.49	1.40
33	BN	85	ILE	CB-CG2	-5.99	1.32	1.52
33	DN	107	LEU	CA-C	5.97	1.60	1.52
47	B1	17	SER	C-O	5.97	1.31	1.24
47	B1	17	SER	CA-C	5.90	1.60	1.52
20	AY	31	ARG	C-O	5.87	1.31	1.24
33	DN	99	LEU	N-CA	5.51	1.53	1.46
25	DC	42	VAL	CA-CB	5.50	1.61	1.54
1	CB	185	ILE	C-O	5.50	1.31	1.24
26	BD	143	HIS	CB-CG	5.32	1.57	1.50
33	BN	117	PHE	CA-C	-5.25	1.45	1.52
33	BN	74	ARG	C-O	-5.19	1.17	1.24
33	BN	117	PHE	N-CA	5.15	1.52	1.46
1	CB	172	ILE	CA-CB	5.08	1.60	1.54
33	BN	85	ILE	C-O	5.07	1.30	1.24
47	D1	35	THR	CA-C	5.05	1.57	1.52
20	CY	35	TYR	N-CA	5.05	1.52	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
47	B1	37	ILE	C-N	5.03	1.37	1.33

All (586) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	DF	156	LEU	N-CA-C	-15.91	89.07	110.55
28	BF	193	VAL	N-CA-C	-15.72	87.60	109.45
28	BF	156	LEU	N-CA-C	-15.25	88.48	110.59
47	B1	19	GLN	N-CA-C	-13.97	93.25	112.94
28	DF	193	VAL	N-CA-C	-13.66	87.53	109.12
26	BD	107	ALA	CA-C-N	13.65	136.91	119.84
26	BD	107	ALA	C-N-CA	13.65	136.91	119.84
53	B7	40	TRP	CE2-CD2-CE3	-13.50	105.30	118.80
26	DD	107	ALA	CA-C-N	13.49	136.71	119.84
26	DD	107	ALA	C-N-CA	13.49	136.71	119.84
33	DN	116	LEU	N-CA-C	-13.30	93.66	113.61
23	AV	1	G	P-O5'-C5'	-12.85	101.62	120.90
33	BN	94	HIS	CA-C-N	-12.65	104.03	119.84
33	BN	94	HIS	C-N-CA	-12.65	104.03	119.84
53	B7	40	TRP	CE2-CD2-CG	12.58	122.30	107.20
25	BC	45	HIS	N-CA-C	-11.78	90.44	109.76
33	DN	117	PHE	N-CA-C	-10.97	87.44	110.80
28	BF	156	LEU	CA-C-N	-10.89	104.60	122.57
28	BF	156	LEU	C-N-CA	-10.89	104.60	122.57
25	DC	140	ASN	CA-C-N	10.89	133.46	119.84
25	DC	140	ASN	C-N-CA	10.89	133.46	119.84
3	AD	28	SER	CA-C-N	-10.76	106.39	119.84
3	AD	28	SER	C-N-CA	-10.76	106.39	119.84
6	CG	87	VAL	N-CA-C	10.67	118.11	107.55
33	DN	94	HIS	CA-C-N	-10.63	106.55	119.84
33	DN	94	HIS	C-N-CA	-10.63	106.55	119.84
47	D1	11	ARG	CA-C-N	10.61	133.11	119.84
47	D1	11	ARG	C-N-CA	10.61	133.11	119.84
47	B1	38	SER	N-CA-C	10.55	121.80	108.19
23	AV	1	G	O5'-P-OP2	10.52	139.56	108.00
47	B1	17	SER	N-CA-C	10.30	132.75	110.80
25	BC	220	GLY	CA-C-N	10.25	132.65	119.84
25	BC	220	GLY	C-N-CA	10.25	132.65	119.84
33	BN	118	LYS	CA-C-N	-10.21	102.05	121.54
33	BN	118	LYS	C-N-CA	-10.21	102.05	121.54
20	AY	612	THR	N-CA-C	10.17	117.37	108.22
20	AY	33	LEU	N-CA-C	-10.06	99.56	112.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BC	44	VAL	N-CA-C	-10.02	96.77	109.30
25	DC	220	GLY	CA-C-N	10.01	132.35	119.84
25	DC	220	GLY	C-N-CA	10.01	132.35	119.84
33	BN	115	ARG	CA-C-O	9.90	134.66	120.51
25	BC	181	PHE	CA-C-N	9.29	129.95	120.38
25	BC	181	PHE	C-N-CA	9.29	129.95	120.38
26	BD	143	HIS	CG-CD2-NE2	-9.29	97.91	107.20
47	D1	17	SER	N-CA-C	9.19	130.37	110.80
28	DF	156	LEU	CA-C-N	-9.03	107.67	122.57
28	DF	156	LEU	C-N-CA	-9.03	107.67	122.57
20	AY	679	VAL	CA-C-N	8.95	131.03	119.84
20	AY	679	VAL	C-N-CA	8.95	131.03	119.84
27	DE	14	ILE	N-CA-C	8.89	121.38	109.37
21	AA	1492	A	OP1-P-O3'	-8.88	81.37	108.00
20	CY	145	ASP	N-CA-C	8.86	122.53	109.07
20	CY	534	ILE	CA-C-N	8.78	130.82	119.84
20	CY	534	ILE	C-N-CA	8.78	130.82	119.84
42	DW	106	ILE	N-CA-C	-8.71	100.56	110.05
34	DO	47	ILE	CA-C-N	8.64	130.64	119.84
34	DO	47	ILE	C-N-CA	8.64	130.64	119.84
33	BN	116	LEU	N-CA-C	-8.62	100.41	113.51
33	BN	99	LEU	CA-C-O	8.62	129.85	120.20
33	BN	73	THR	N-CA-C	8.46	122.13	108.76
33	BN	102	ALA	CA-C-N	-8.45	106.76	121.97
33	BN	102	ALA	C-N-CA	-8.45	106.76	121.97
3	CD	28	SER	CA-C-N	-8.45	109.28	119.84
3	CD	28	SER	C-N-CA	-8.45	109.28	119.84
28	BF	7	TYR	N-CA-C	-8.42	104.15	114.75
47	B1	43	TYR	CA-C-N	-8.41	109.33	119.84
47	B1	43	TYR	C-N-CA	-8.41	109.33	119.84
33	DN	98	VAL	N-CA-C	8.39	126.79	109.34
47	B1	36	GLY	N-CA-C	8.34	123.49	112.65
33	DN	99	LEU	CA-C-O	8.34	129.45	119.61
46	B0	82	ARG	CA-C-N	8.33	130.25	119.84
46	B0	82	ARG	C-N-CA	8.33	130.25	119.84
53	B7	40	TRP	CD1-CG-CD2	-8.26	93.09	106.30
20	AY	553	GLY	CA-C-N	8.23	130.13	119.84
20	AY	553	GLY	C-N-CA	8.23	130.13	119.84
59	BA	1967	C	C4'-C3'-O3'	8.22	125.34	113.00
33	BN	119	ARG	N-CA-C	8.22	128.30	110.80
38	BS	99	LYS	N-CA-C	-8.19	102.31	111.07
20	AY	558	PHE	CA-C-N	8.17	130.06	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	AY	558	PHE	C-N-CA	8.17	130.06	119.84
53	B7	40	TRP	CE3-CZ3-CH2	-8.17	110.48	121.10
21	AA	1492	A	OP2-P-O3'	-8.08	83.77	108.00
25	BC	140	ASN	CA-C-N	8.06	129.91	119.84
25	BC	140	ASN	C-N-CA	8.06	129.91	119.84
33	DN	119	ARG	N-CA-C	8.02	124.10	113.20
33	DN	61	ARG	N-CA-C	7.92	118.35	107.73
41	DV	35	LEU	CA-C-N	7.91	129.72	119.84
41	DV	35	LEU	C-N-CA	7.91	129.72	119.84
16	CQ	60	ILE	N-CA-C	7.91	119.10	108.27
46	D0	82	ARG	CA-C-N	7.86	127.42	119.24
46	D0	82	ARG	C-N-CA	7.86	127.42	119.24
47	D1	33	LYS	N-CA-C	-7.85	101.37	112.13
20	CY	255	ILE	CA-C-N	-7.85	114.42	122.74
20	CY	255	ILE	C-N-CA	-7.85	114.42	122.74
33	DN	130	HIS	N-CA-C	7.84	118.33	108.45
33	DN	118	LYS	CA-C-N	-7.79	108.22	122.31
33	DN	118	LYS	C-N-CA	-7.79	108.22	122.31
28	DF	174	VAL	N-CA-C	-7.78	98.43	109.63
42	BW	13	SER	CA-C-N	7.76	129.54	119.84
42	BW	13	SER	C-N-CA	7.76	129.54	119.84
26	BD	143	HIS	ND1-CG-CD2	7.76	113.86	106.10
33	BN	120	LEU	N-CA-C	7.74	118.91	108.23
20	CY	287	PRO	CA-C-N	7.70	129.46	119.84
20	CY	287	PRO	C-N-CA	7.70	129.46	119.84
38	DS	16	ASN	N-CA-C	-7.67	102.05	111.33
16	AQ	59	ILE	CA-C-N	-7.64	112.13	122.98
16	AQ	59	ILE	C-N-CA	-7.64	112.13	122.98
10	AK	112	THR	CA-C-N	7.63	129.38	119.84
10	AK	112	THR	C-N-CA	7.63	129.38	119.84
33	BN	101	HIS	N-CA-C	-7.62	94.58	110.80
32	DK	71	THR	CA-C-N	7.60	128.21	120.38
32	DK	71	THR	C-N-CA	7.60	128.21	120.38
33	DN	71	ILE	N-CA-C	7.57	125.08	109.34
36	DQ	133	ARG	N-CA-C	7.55	114.97	108.78
47	B1	11	ARG	CA-C-N	7.55	129.28	119.84
47	B1	11	ARG	C-N-CA	7.55	129.28	119.84
29	BG	127	GLY	N-CA-C	-7.51	106.14	115.08
33	BN	98	VAL	N-CA-C	7.50	124.95	109.34
42	DW	100	THR	N-CA-C	7.48	121.12	109.52
25	DC	16	ASP	CA-C-N	7.48	129.19	119.84
25	DC	16	ASP	C-N-CA	7.48	129.19	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	CY	679	VAL	CA-C-N	7.43	129.13	119.84
20	CY	679	VAL	C-N-CA	7.43	129.13	119.84
47	D1	35	THR	N-CA-C	7.42	122.30	112.13
47	B1	35	THR	N-CA-C	7.36	119.83	108.12
25	BC	226	ASN	CA-C-N	7.33	129.00	119.84
25	BC	226	ASN	C-N-CA	7.33	129.00	119.84
39	DT	29	ARG	N-CA-C	7.29	120.41	110.35
27	BE	77	ILE	N-CA-C	7.26	124.45	109.34
28	BF	155	LEU	N-CA-C	-7.26	95.33	110.80
51	D5	40	LYS	CA-C-N	-7.25	114.44	119.66
51	D5	40	LYS	C-N-CA	-7.25	114.44	119.66
20	AY	130	VAL	CA-C-N	7.24	127.41	120.31
20	AY	130	VAL	C-N-CA	7.24	127.41	120.31
25	BC	51	ASP	CA-C-N	-7.24	112.33	119.64
25	BC	51	ASP	C-N-CA	-7.24	112.33	119.64
1	CB	188	ALA	N-CA-C	7.19	120.50	108.13
39	BT	29	ARG	N-CA-C	7.17	119.58	110.33
29	DG	111	LEU	CA-C-N	7.16	126.68	119.24
29	DG	111	LEU	C-N-CA	7.16	126.68	119.24
1	CB	233	SER	CA-C-N	-7.15	113.13	120.85
1	CB	233	SER	C-N-CA	-7.15	113.13	120.85
33	DN	105	GLY	N-CA-C	-7.12	96.31	113.18
33	BN	130	HIS	N-CA-C	7.07	117.31	108.19
25	DC	174	ALA	CA-C-N	7.06	128.67	119.84
25	DC	174	ALA	C-N-CA	7.06	128.67	119.84
33	BN	58	ASP	N-CA-C	7.05	117.18	107.73
28	DF	157	VAL	N-CA-C	-7.03	98.03	108.99
25	DC	226	ASN	CA-C-N	7.02	128.61	119.84
25	DC	226	ASN	C-N-CA	7.02	128.61	119.84
25	BC	174	ALA	CA-C-N	7.02	128.61	119.84
25	BC	174	ALA	C-N-CA	7.02	128.61	119.84
30	DH	20	ALA	CA-C-N	6.99	128.57	119.84
30	DH	20	ALA	C-N-CA	6.99	128.57	119.84
25	DC	44	VAL	N-CA-C	-6.98	99.58	109.63
26	BD	81	ALA	N-CA-C	6.95	119.64	109.07
33	BN	128	HIS	CA-C-N	6.90	128.47	119.84
33	BN	128	HIS	C-N-CA	6.90	128.47	119.84
20	AY	307	GLY	CA-C-N	6.89	128.45	119.84
20	AY	307	GLY	C-N-CA	6.89	128.45	119.84
33	BN	116	LEU	CB-CA-C	6.88	116.64	109.83
53	B7	40	TRP	NE1-CE2-CD2	-6.88	98.46	107.40
34	BO	47	ILE	CA-C-N	6.87	126.55	119.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BO	47	ILE	C-N-CA	6.87	126.55	119.82
20	AY	617	MET	N-CA-C	-6.87	103.87	111.36
25	BC	163	GLU	N-CA-C	6.83	121.28	112.26
17	CR	85	LEU	N-CA-C	6.82	117.04	108.45
28	BF	157	VAL	N-CA-C	-6.79	98.40	108.99
26	DD	50	THR	N-CA-C	-6.79	104.20	113.30
27	BE	194	GLY	CA-C-N	-6.79	113.42	122.99
27	BE	194	GLY	C-N-CA	-6.79	113.42	122.99
20	CY	404	VAL	N-CA-C	6.77	114.45	108.63
29	DG	127	GLY	N-CA-C	-6.77	106.47	115.40
11	AL	63	GLY	N-CA-C	6.76	120.43	110.63
25	BC	45	HIS	CA-C-O	-6.76	113.30	120.80
15	CP	37	GLY	N-CA-C	6.75	123.49	110.66
33	DN	102	ALA	CA-C-N	-6.75	109.82	121.97
33	DN	102	ALA	C-N-CA	-6.75	109.82	121.97
16	AQ	60	ILE	N-CA-C	6.74	117.75	107.77
53	B7	40	TRP	CH2-CZ2-CE2	6.74	126.26	117.50
50	D4	6	HIS	CA-C-N	6.73	128.25	119.84
50	D4	6	HIS	C-N-CA	6.73	128.25	119.84
25	BC	147	GLY	N-CA-C	6.72	118.90	110.29
28	DF	24	LEU	CA-C-N	-6.71	111.45	119.84
28	DF	24	LEU	C-N-CA	-6.71	111.45	119.84
33	BN	71	ILE	N-CA-C	6.71	123.29	109.34
33	BN	85	ILE	CB-CA-C	6.71	123.56	111.36
50	D4	34	GLU	CB-CA-C	-6.70	106.76	116.54
25	BC	138	LEU	CA-C-N	6.69	128.21	119.84
25	BC	138	LEU	C-N-CA	6.69	128.21	119.84
33	DN	39	ARG	N-CA-C	6.69	120.73	108.69
1	CB	172	ILE	N-CA-C	-6.68	104.00	110.42
33	DN	85	ILE	CB-CA-C	6.68	123.51	111.36
28	BF	174	VAL	N-CA-C	-6.67	100.02	109.63
28	DF	170	LEU	CA-C-N	6.66	128.16	119.84
28	DF	170	LEU	C-N-CA	6.66	128.16	119.84
26	DD	34	VAL	N-CA-C	-6.66	106.31	112.96
20	AY	255	ILE	CA-C-N	-6.64	115.22	122.59
20	AY	255	ILE	C-N-CA	-6.64	115.22	122.59
33	DN	73	THR	N-CA-C	6.61	119.16	108.32
13	AN	15	LYS	CB-CA-C	-6.59	108.98	116.63
42	DW	108	GLY	N-CA-C	6.58	119.31	110.43
16	AQ	46	ASP	CA-C-N	6.57	126.81	119.32
16	AQ	46	ASP	C-N-CA	6.57	126.81	119.32
33	BN	125	GLY	CA-C-N	6.56	128.04	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	BN	125	GLY	C-N-CA	6.56	128.04	119.84
45	BZ	158	PRO	CA-C-N	6.56	128.04	119.84
45	BZ	158	PRO	C-N-CA	6.56	128.04	119.84
47	B1	30	VAL	N-CA-C	-6.56	105.15	113.22
28	BF	190	GLU	CA-C-N	-6.56	112.58	123.33
28	BF	190	GLU	C-N-CA	-6.56	112.58	123.33
44	BY	17	SER	N-CA-C	6.53	115.02	108.75
25	DC	181	PHE	CA-C-N	6.51	127.08	120.38
25	DC	181	PHE	C-N-CA	6.51	127.08	120.38
20	CY	307	GLY	CA-C-N	6.51	126.54	119.90
20	CY	307	GLY	C-N-CA	6.51	126.54	119.90
33	DN	24	GLY	N-CA-C	-6.50	107.52	114.67
26	BD	143	HIS	CB-CG-CD2	-6.50	122.76	131.20
33	BN	101	HIS	O-C-N	6.48	131.21	122.59
1	CB	185	ILE	O-C-N	6.46	129.48	122.76
1	CB	160	ASP	N-CA-C	6.44	119.80	112.97
33	DN	101	HIS	N-CA-C	-6.42	97.13	110.80
33	BN	87	LEU	N-CA-C	6.41	124.46	110.80
16	CQ	42	TYR	CA-C-N	-6.41	114.51	122.84
16	CQ	42	TYR	C-N-CA	-6.41	114.51	122.84
39	DT	79	HIS	N-CA-C	6.39	122.19	112.54
33	BN	25	ARG	N-CA-C	-6.39	105.45	113.18
50	D4	34	GLU	N-CA-C	6.39	117.73	108.34
40	DU	102	GLU	CA-C-N	6.38	126.07	119.82
40	DU	102	GLU	C-N-CA	6.38	126.07	119.82
46	B0	66	VAL	N-CA-C	6.37	117.47	108.17
38	DS	99	LYS	N-CA-C	-6.37	104.39	111.71
26	DD	199	ALA	N-CA-C	-6.37	104.99	112.89
10	CK	112	THR	CA-C-N	6.37	127.80	119.84
10	CK	112	THR	C-N-CA	6.37	127.80	119.84
20	CY	375	GLY	N-CA-C	6.36	118.72	110.45
30	BH	127	GLU	CA-C-N	6.36	127.79	119.84
30	BH	127	GLU	C-N-CA	6.36	127.79	119.84
1	AB	235	SER	CB-CA-C	-6.35	109.26	116.63
17	AR	44	LEU	N-CA-C	6.35	117.90	110.41
25	BC	31	LYS	N-CA-C	-6.35	105.02	112.89
28	BF	170	LEU	CA-C-N	6.35	127.78	119.84
28	BF	170	LEU	C-N-CA	6.35	127.78	119.84
50	B4	12	ALA	CA-C-N	-6.34	113.79	122.16
50	B4	12	ALA	C-N-CA	-6.34	113.79	122.16
25	BC	30	VAL	N-CA-C	-6.33	106.56	112.83
20	CY	280	LEU	CA-C-N	6.33	127.75	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	CY	280	LEU	C-N-CA	6.33	127.75	119.84
25	BC	33	LEU	N-CA-C	6.30	118.43	108.67
32	BK	90	LYS	CA-C-N	6.29	127.71	119.84
32	BK	90	LYS	C-N-CA	6.29	127.71	119.84
39	BT	130	ALA	N-CA-C	-6.29	105.61	113.28
30	BH	28	GLY	CA-C-N	6.29	127.70	119.84
30	BH	28	GLY	C-N-CA	6.29	127.70	119.84
29	DG	111	LEU	O-C-N	-6.28	114.10	121.32
33	DN	38	HIS	N-CA-C	6.26	124.14	110.80
30	BH	20	ALA	CA-C-N	6.26	127.66	119.84
30	BH	20	ALA	C-N-CA	6.26	127.66	119.84
59	BA	2553	G	C4-N9-C1'	6.25	145.26	126.50
33	BN	22	THR	N-CA-C	6.25	124.10	110.80
33	BN	72	TYR	CA-CB-CG	6.24	125.13	113.90
33	BN	91	LEU	CA-CB-CG	6.24	138.14	116.30
1	CB	90	MET	CA-C-N	6.24	126.25	119.89
1	CB	90	MET	C-N-CA	6.24	126.25	119.89
33	DN	97	ARG	N-CA-C	6.24	120.78	112.30
59	BA	2553	G	C8-N9-C1'	-6.23	108.31	127.00
33	BN	116	LEU	CA-C-N	6.22	133.41	121.54
33	BN	116	LEU	C-N-CA	6.22	133.41	121.54
11	CL	93	LEU	CA-C-N	6.20	127.59	119.84
11	CL	93	LEU	C-N-CA	6.20	127.59	119.84
53	B7	39	ARG	CA-C-O	-6.20	114.64	121.58
37	DR	34	ILE	N-CA-C	6.19	117.03	108.12
36	BQ	35	VAL	N-CA-C	6.18	116.52	107.37
42	BW	78	GLU	N-CA-C	-6.17	107.59	114.62
33	BN	78	TYR	CA-C-N	-6.16	112.14	119.84
33	BN	78	TYR	C-N-CA	-6.16	112.14	119.84
15	CP	3	LYS	N-CA-C	6.14	118.11	108.96
20	CY	652	MET	N-CA-C	-6.13	104.28	110.97
47	D1	36	GLY	N-CA-C	6.13	127.71	113.18
36	DQ	133	ARG	CB-CA-C	-6.11	108.27	117.07
25	DC	63	VAL	N-CA-C	6.10	118.43	108.97
27	DE	52	LEU	CA-C-N	6.10	127.46	119.84
27	DE	52	LEU	C-N-CA	6.10	127.46	119.84
42	DW	77	ASP	N-CA-C	6.10	123.78	110.80
11	AL	61	THR	N-CA-C	-6.09	105.02	112.88
20	AY	545	GLY	N-CA-C	-6.09	104.98	112.77
1	CB	158	LEU	CA-C-N	6.08	127.45	119.84
1	CB	158	LEU	C-N-CA	6.08	127.45	119.84
3	AD	32	ALA	N-CA-C	-6.08	105.81	113.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	DN	72	TYR	CA-CB-CG	6.07	124.82	113.90
33	DN	91	LEU	N-CA-C	-6.07	103.99	111.33
33	BN	70	LYS	N-CA-C	6.07	119.59	109.95
25	BC	63	VAL	N-CA-C	6.06	118.51	109.17
25	DC	22	THR	CB-CA-C	-6.06	108.58	115.79
38	BS	103	GLU	N-CA-C	-6.06	103.84	111.11
20	CY	328	ILE	N-CA-C	6.04	117.38	108.45
47	D1	18	ILE	N-CA-C	6.03	117.04	108.42
33	BN	36	GLY	N-CA-C	-6.01	98.93	113.18
20	CY	614	GLU	N-CA-C	6.01	123.61	110.80
11	AL	93	LEU	CA-C-N	6.00	127.34	119.84
11	AL	93	LEU	C-N-CA	6.00	127.34	119.84
33	BN	38	HIS	N-CA-C	6.00	123.58	110.80
47	D1	38	SER	N-CA-C	6.00	123.57	110.80
28	BF	189	THR	CB-CA-C	-5.99	108.44	117.07
47	D1	37	ILE	CA-C-N	-5.99	110.10	121.54
47	D1	37	ILE	C-N-CA	-5.99	110.10	121.54
33	DN	125	GLY	CA-C-N	5.99	127.32	119.84
33	DN	125	GLY	C-N-CA	5.99	127.32	119.84
20	CY	553	GLY	CA-C-N	5.98	127.31	119.84
20	CY	553	GLY	C-N-CA	5.98	127.31	119.84
1	AB	163	PHE	N-CA-C	-5.97	102.64	110.53
28	DF	155	LEU	N-CA-C	-5.97	98.08	110.80
25	BC	16	ASP	CA-C-N	5.96	127.29	119.84
25	BC	16	ASP	C-N-CA	5.96	127.29	119.84
59	BA	1967	C	P-O3'-C3'	-5.96	111.26	120.20
42	BW	77	ASP	N-CA-C	5.96	123.48	110.80
30	BH	44	VAL	N-CA-C	5.95	114.96	107.70
50	B4	6	HIS	CA-C-N	5.95	127.27	119.84
50	B4	6	HIS	C-N-CA	5.95	127.27	119.84
1	AB	68	ILE	CA-C-N	-5.94	112.46	122.92
1	AB	68	ILE	C-N-CA	-5.94	112.46	122.92
49	D3	15	TYR	CA-C-N	5.93	127.26	119.84
49	D3	15	TYR	C-N-CA	5.93	127.26	119.84
33	DN	33	LEU	N-CA-C	5.91	120.06	112.26
25	DC	174	ALA	N-CA-C	5.91	118.16	109.42
29	DG	31	VAL	CA-C-N	5.91	127.22	119.84
29	DG	31	VAL	C-N-CA	5.91	127.22	119.84
1	CB	161	ALA	CA-C-N	-5.90	111.35	121.97
1	CB	161	ALA	C-N-CA	-5.90	111.35	121.97
39	BT	39	ARG	CB-CA-C	-5.88	109.78	116.54
25	BC	223	VAL	N-CA-C	5.88	121.57	109.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	DY	4	LYS	N-CA-C	-5.88	104.65	112.94
45	DZ	149	SER	N-CA-C	5.87	115.85	108.45
27	BE	52	LEU	CA-C-N	5.87	126.06	119.90
27	BE	52	LEU	C-N-CA	5.87	126.06	119.90
6	AG	6	ARG	N-CA-C	-5.85	106.05	112.72
28	DF	157	VAL	O-C-N	5.85	129.23	122.97
1	AB	163	PHE	O-C-N	5.84	129.45	122.79
1	AB	130	ARG	CA-C-N	5.84	127.14	119.84
1	AB	130	ARG	C-N-CA	5.84	127.14	119.84
25	BC	148	PHE	N-CA-C	-5.83	104.88	112.23
38	BS	16	ASN	N-CA-C	-5.83	105.01	111.71
28	BF	175	THR	CA-C-N	-5.83	113.66	122.81
28	BF	175	THR	C-N-CA	-5.83	113.66	122.81
33	DN	101	HIS	O-C-N	5.82	130.34	122.59
33	DN	120	LEU	N-CA-C	5.82	123.19	110.80
26	DD	131	LEU	N-CA-C	5.81	113.45	108.22
33	BN	106	MET	N-CA-C	-5.81	102.99	110.19
53	B7	42	LEU	N-CA-C	-5.80	107.19	114.56
25	DC	65	LEU	CA-C-N	-5.80	113.70	119.56
25	DC	65	LEU	C-N-CA	-5.80	113.70	119.56
33	BN	134	ARG	CA-C-N	-5.79	113.71	119.56
33	BN	134	ARG	C-N-CA	-5.79	113.71	119.56
25	DC	104	ILE	N-CA-C	-5.77	106.59	111.56
25	BC	90	ALA	N-CA-C	5.76	117.42	109.29
5	CF	65	VAL	N-CA-C	5.76	114.73	107.70
20	CY	143	GLY	N-CA-C	-5.75	106.05	114.90
41	BV	21	ARG	N-CA-C	5.74	117.57	108.79
1	CB	163	PHE	O-C-N	5.74	129.33	122.79
52	B6	11	LEU	N-CA-C	5.73	116.12	108.38
32	DK	115	LEU	CB-CA-C	-5.72	109.45	117.23
4	AE	48	ALA	N-CA-C	5.71	113.36	108.22
49	B3	11	SER	N-CA-C	5.71	116.17	109.60
20	AY	132	ARG	N-CA-C	5.71	116.92	107.73
39	BT	30	VAL	N-CA-C	5.70	121.19	109.34
28	DF	190	GLU	CA-C-N	-5.70	114.46	123.12
28	DF	190	GLU	C-N-CA	-5.70	114.46	123.12
20	AY	162	VAL	CA-C-N	5.70	131.22	122.68
20	AY	162	VAL	C-N-CA	5.70	131.22	122.68
25	BC	182	PRO	N-CA-C	5.68	117.64	110.70
59	BA	271(B)	G	P-O3'-C3'	5.68	126.51	119.70
16	CQ	59	ILE	CA-C-N	-5.68	113.25	122.33
16	CQ	59	ILE	C-N-CA	-5.68	113.25	122.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	DG	118	ARG	N-CA-C	-5.67	107.60	114.75
4	CE	127	ASN	CA-C-N	5.65	126.90	119.84
4	CE	127	ASN	C-N-CA	5.65	126.90	119.84
47	B1	37	ILE	CA-C-N	-5.65	111.69	122.08
47	B1	37	ILE	C-N-CA	-5.65	111.69	122.08
20	CY	35	TYR	N-CA-C	5.64	122.82	110.80
3	CD	171	GLY	CA-C-N	5.64	126.89	119.84
3	CD	171	GLY	C-N-CA	5.64	126.89	119.84
35	BP	53	GLY	N-CA-C	-5.64	99.82	113.18
28	DF	91	GLY	CA-C-N	5.64	125.83	120.31
28	DF	91	GLY	C-N-CA	5.64	125.83	120.31
2	CC	194	GLY	N-CA-C	5.63	118.68	110.63
33	BN	110	GLY	CA-C-N	5.60	126.84	119.84
33	BN	110	GLY	C-N-CA	5.60	126.84	119.84
50	D4	3	GLU	CB-CA-C	-5.59	110.15	116.63
45	DZ	24	LEU	CA-C-N	5.58	126.95	120.98
45	DZ	24	LEU	C-N-CA	5.58	126.95	120.98
50	D4	20	ASN	N-CA-C	5.57	117.51	110.33
47	B1	86	SER	CA-C-N	5.56	126.79	119.84
47	B1	86	SER	C-N-CA	5.56	126.79	119.84
48	B2	17	SER	CA-C-N	5.56	126.79	119.84
48	B2	17	SER	C-N-CA	5.56	126.79	119.84
3	CD	10	ARG	N-CA-C	-5.56	105.76	112.54
25	DC	223	VAL	N-CA-C	5.55	120.88	109.34
20	CY	426	GLN	N-CA-C	-5.55	105.31	111.36
34	DO	100	GLY	CA-C-N	5.55	125.45	119.85
34	DO	100	GLY	C-N-CA	5.55	125.45	119.85
59	DA	1022	G	P-O3'-C3'	5.53	128.49	120.20
5	AF	44	GLY	N-CA-C	5.53	119.77	111.42
35	BP	144	GLU	CA-C-N	5.53	126.75	119.84
35	BP	144	GLU	C-N-CA	5.53	126.75	119.84
54	D8	61	LEU	CB-CA-C	-5.52	109.72	117.23
6	CG	147	ALA	N-CA-C	-5.52	107.56	114.56
51	B5	26	THR	CA-C-N	5.51	126.05	120.38
51	B5	26	THR	C-N-CA	5.51	126.05	120.38
33	DN	85	ILE	CA-C-O	5.51	127.33	119.95
11	CL	105	TYR	N-CA-C	-5.51	106.23	113.17
26	DD	242	ARG	CB-CA-C	-5.51	109.74	117.23
45	DZ	116	VAL	N-CA-C	5.50	116.70	109.21
47	B1	32	LYS	N-CA-C	-5.50	104.97	110.97
20	CY	193	GLY	N-CA-C	-5.49	106.62	115.08
36	DQ	133	ARG	CA-C-O	5.49	121.12	117.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DC	135	ARG	N-CA-C	-5.49	106.43	113.23
36	BQ	131	ILE	N-CA-C	5.49	115.08	108.06
27	DE	13	ARG	N-CA-C	5.48	122.47	110.80
27	DE	194	GLY	CA-C-N	-5.48	115.27	122.99
27	DE	194	GLY	C-N-CA	-5.48	115.27	122.99
33	BN	39	ARG	N-CA-C	5.47	118.27	108.47
25	DC	154	ILE	N-CA-C	-5.47	104.25	111.09
1	AB	68	ILE	CA-C-O	-5.47	116.28	121.64
1	CB	68	ILE	CA-C-N	-5.47	112.96	122.64
1	CB	68	ILE	C-N-CA	-5.47	112.96	122.64
33	DN	64	GLY	N-CA-C	5.47	119.52	110.55
16	AQ	42	TYR	CA-C-N	-5.47	115.50	122.77
16	AQ	42	TYR	C-N-CA	-5.47	115.50	122.77
11	AL	47	LYS	CA-C-N	-5.47	113.01	119.84
11	AL	47	LYS	C-N-CA	-5.47	113.01	119.84
4	CE	12	LEU	CA-CB-CG	5.46	135.40	116.30
1	AB	35	GLU	N-CA-C	-5.45	99.19	110.80
28	DF	157	VAL	CA-C-N	5.44	131.94	121.54
28	DF	157	VAL	C-N-CA	5.44	131.94	121.54
39	BT	74	ARG	N-CA-C	5.43	117.48	108.13
4	CE	80	ILE	N-CA-C	5.43	116.53	108.65
4	CE	105	VAL	CB-CA-C	-5.43	108.54	113.70
41	BV	96	ILE	N-CA-C	5.43	120.63	109.34
33	BN	102	ALA	N-CA-C	-5.43	99.24	110.80
33	BN	112	LEU	N-CA-C	-5.43	105.92	112.54
11	AL	72	GLY	N-CA-C	5.42	118.74	111.20
17	AR	79	LEU	CA-C-N	5.42	125.59	119.90
17	AR	79	LEU	C-N-CA	5.42	125.59	119.90
33	DN	35	ARG	N-CA-C	5.42	116.76	108.52
33	BN	114	ARG	N-CA-C	-5.42	99.26	110.80
52	B6	21	TYR	N-CA-C	5.41	118.09	109.81
15	AP	53	VAL	N-CA-C	5.41	116.14	110.62
1	CB	162	ILE	CA-C-N	-5.41	111.12	120.97
1	CB	162	ILE	C-N-CA	-5.41	111.12	120.97
3	AD	171	GLY	CA-C-N	5.40	126.59	119.84
3	AD	171	GLY	C-N-CA	5.40	126.59	119.84
25	BC	89	GLU	N-CA-C	-5.40	106.56	114.39
36	DQ	103	MET	CA-C-N	-5.40	115.11	122.93
36	DQ	103	MET	C-N-CA	-5.40	115.11	122.93
33	DN	70	LYS	N-CA-C	5.39	118.37	109.85
2	AC	99	VAL	N-CA-C	5.37	115.97	108.89
7	AH	134	ILE	N-CA-C	5.36	116.62	112.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	AY	325	LEU	CA-C-N	-5.36	114.90	122.94
20	AY	325	LEU	C-N-CA	-5.36	114.90	122.94
36	BQ	71	ASP	N-CA-C	5.36	116.16	107.32
18	CS	27	GLU	CB-CA-C	-5.35	108.72	116.54
28	DF	101	LEU	CA-C-N	5.35	126.53	119.84
28	DF	101	LEU	C-N-CA	5.35	126.53	119.84
11	CL	41	ARG	CB-CA-C	-5.35	109.42	115.79
35	DP	77	ARG	CA-C-N	5.35	125.36	119.90
35	DP	77	ARG	C-N-CA	5.35	125.36	119.90
25	DC	111	PHE	N-CA-C	5.34	116.26	108.14
59	BA	1970	A	O4'-C1'-N9	-5.34	100.19	108.20
10	AK	53	SER	N-CA-C	-5.33	106.03	112.54
44	BY	17	SER	CB-CA-C	-5.33	108.69	116.53
33	DN	59	LYS	N-CA-C	5.33	117.50	111.11
42	DW	101	SER	N-CA-C	5.33	118.14	109.24
33	DN	43	THR	CA-C-N	-5.33	113.18	119.84
33	DN	43	THR	C-N-CA	-5.33	113.18	119.84
1	AB	185	ILE	N-CA-C	-5.32	100.72	108.97
28	DF	195	ASP	N-CA-C	-5.31	101.22	109.14
26	DD	234	GLY	N-CA-C	5.31	118.46	110.18
25	BC	111	PHE	N-CA-C	5.30	116.59	108.42
20	CY	569	ASP	N-CA-C	5.30	116.90	108.79
35	DP	110	TYR	CB-CA-C	-5.30	110.02	117.23
59	DA	1022	G	C2'-C3'-O3'	5.30	117.45	109.50
1	CB	82	ARG	N-CA-C	-5.30	105.40	111.07
4	AE	127	ASN	CA-C-N	5.29	126.45	119.84
4	AE	127	ASN	C-N-CA	5.29	126.45	119.84
11	AL	82	VAL	CA-C-N	-5.29	115.76	122.37
11	AL	82	VAL	C-N-CA	-5.29	115.76	122.37
16	CQ	44	ALA	CA-C-N	-5.28	114.74	122.19
16	CQ	44	ALA	C-N-CA	-5.28	114.74	122.19
20	CY	130	VAL	CA-C-N	5.27	128.21	120.46
20	CY	130	VAL	C-N-CA	5.27	128.21	120.46
34	DO	3	GLN	CA-C-N	-5.27	115.15	120.21
34	DO	3	GLN	C-N-CA	-5.27	115.15	120.21
33	DN	45	ASN	N-CA-C	5.26	118.25	110.46
33	DN	138	LEU	N-CA-C	-5.26	105.66	111.71
45	DZ	38	TYR	N-CA-C	5.25	116.27	108.60
44	DY	31	LEU	C-N-CD	-5.25	109.05	120.60
6	AG	92	SER	CA-C-N	5.25	126.40	119.84
6	AG	92	SER	C-N-CA	5.25	126.40	119.84
28	BF	178	PRO	N-CA-C	5.25	123.28	112.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	DE	97	LYS	CA-C-N	5.24	126.39	119.84
27	DE	97	LYS	C-N-CA	5.24	126.39	119.84
33	BN	83	LYS	CA-C-N	-5.23	111.56	121.54
33	BN	83	LYS	C-N-CA	-5.23	111.56	121.54
20	AY	578	SER	N-CA-C	5.22	115.43	108.38
48	D2	47	ASN	N-CA-C	5.22	116.44	108.30
2	CC	22	TRP	N-CA-C	5.21	115.23	107.88
11	CL	61	THR	N-CA-C	-5.21	105.59	112.94
3	AD	16	GLY	N-CA-C	-5.21	108.13	115.32
20	CY	394	ALA	CA-C-N	5.21	126.35	119.84
20	CY	394	ALA	C-N-CA	5.21	126.35	119.84
20	CY	558	PHE	CA-C-N	5.21	126.35	119.84
20	CY	558	PHE	C-N-CA	5.21	126.35	119.84
12	CM	9	ILE	N-CA-C	5.20	113.46	109.19
20	CY	79	ILE	N-CA-C	5.19	115.33	107.75
33	BN	35	ARG	N-CA-C	5.19	116.95	108.55
38	BS	21	THR	N-CA-C	-5.18	107.25	113.21
33	DN	110	GLY	CA-C-N	5.17	126.31	119.84
33	DN	110	GLY	C-N-CA	5.17	126.31	119.84
1	CB	158	LEU	N-CA-C	5.17	115.55	109.60
41	DV	96	ILE	N-CA-C	5.17	120.10	109.34
3	CD	188	LEU	CA-C-N	5.17	126.30	119.84
3	CD	188	LEU	C-N-CA	5.17	126.30	119.84
25	DC	182	PRO	N-CA-C	5.17	117.00	110.70
47	D1	54	ALA	CB-CA-C	-5.15	110.22	117.23
35	DP	71	VAL	CA-C-N	-5.15	113.69	120.96
35	DP	71	VAL	C-N-CA	-5.15	113.69	120.96
10	AK	30	VAL	N-CA-C	5.15	116.09	107.18
41	BV	35	LEU	CA-C-N	5.15	126.28	119.84
41	BV	35	LEU	C-N-CA	5.15	126.28	119.84
47	D1	42	GLN	N-CA-C	5.14	117.45	108.76
16	CQ	62	SER	N-CA-C	5.14	115.32	108.38
39	BT	79	HIS	N-CA-C	5.13	119.69	113.38
25	BC	65	LEU	CA-C-N	-5.13	113.42	119.84
25	BC	65	LEU	C-N-CA	-5.13	113.42	119.84
25	DC	148	PHE	N-CA-C	-5.13	106.87	113.23
20	AY	360	ALA	CB-CA-C	-5.13	110.68	116.63
27	BE	19	ARG	N-CA-C	5.12	117.79	109.24
4	CE	48	ALA	N-CA-C	5.12	112.73	108.13
26	BD	133	LEU	N-CA-C	5.11	116.93	111.36
26	BD	218	ARG	CA-C-N	5.11	125.39	119.93
26	BD	218	ARG	C-N-CA	5.11	125.39	119.93

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BC	42	VAL	N-CA-C	5.10	119.94	109.34
40	DU	74	LEU	CB-CA-C	-5.10	109.04	116.53
25	BC	61	GLY	CA-C-N	-5.09	116.17	123.20
25	BC	61	GLY	C-N-CA	-5.09	116.17	123.20
41	BV	14	VAL	N-CA-C	5.09	119.92	109.34
33	DN	84	LYS	CA-CB-CG	5.08	124.27	114.10
45	DZ	129	SER	CA-C-N	5.08	126.19	119.84
45	DZ	129	SER	C-N-CA	5.08	126.19	119.84
25	BC	5	GLY	N-CA-C	-5.08	104.49	112.61
34	BO	62	VAL	N-CA-C	5.08	115.28	108.17
42	DW	42	ARG	N-CA-C	-5.08	106.22	112.72
29	DG	52	ILE	N-CA-C	-5.07	105.60	113.16
47	B1	19	GLN	CA-C-N	5.07	131.22	121.54
47	B1	19	GLN	C-N-CA	5.07	131.22	121.54
28	BF	157	VAL	CB-CA-C	5.07	118.20	110.90
37	DR	86	ARG	N-CA-C	-5.07	105.84	111.36
49	B3	31	LEU	N-CA-C	5.06	116.86	110.33
4	AE	80	ILE	N-CA-C	5.06	114.70	108.53
33	DN	74	ARG	CA-CB-CG	-5.06	103.98	114.10
39	DT	130	ALA	N-CA-C	-5.06	106.62	112.89
1	CB	180	LEU	N-CA-C	5.06	119.02	113.21
1	AB	185	ILE	O-C-N	5.05	128.45	122.69
1	CB	185	ILE	CA-C-O	-5.05	116.01	121.92
59	DA	271(B)	G	P-O3'-C3'	5.05	125.76	119.70
35	BP	138	LEU	N-CA-C	-5.04	106.91	113.16
5	AF	50	TYR	CA-C-N	5.04	126.14	119.84
5	AF	50	TYR	C-N-CA	5.04	126.14	119.84
20	CY	162	VAL	CA-C-N	5.04	131.04	121.97
20	CY	162	VAL	C-N-CA	5.04	131.04	121.97
32	DK	20	ALA	CA-C-N	5.04	125.57	120.38
32	DK	20	ALA	C-N-CA	5.04	125.57	120.38
25	BC	25	GLU	N-CA-C	-5.04	105.79	111.28
12	AM	22	ILE	N-CA-C	5.04	116.21	108.71
7	AH	3	THR	N-CA-C	-5.03	107.09	113.18
20	AY	356	LEU	N-CA-C	5.03	115.17	108.38
18	CS	27	GLU	N-CA-C	5.03	115.73	108.34
26	BD	143	HIS	CE1-NE2-CD2	5.02	114.02	109.00
20	CY	259	PHE	N-CA-C	-5.02	103.42	110.50
56	De	97	GLY	CA-C-N	5.02	126.35	120.98
56	De	97	GLY	C-N-CA	5.02	126.35	120.98
20	CY	661	SER	N-CA-C	-5.01	106.85	113.12
28	DF	6	VAL	N-CA-C	-5.01	105.66	110.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	DR	68	ARG	N-CA-C	-5.01	106.01	111.82
53	D7	37	LYS	CB-CA-C	-5.01	109.17	116.53
26	BD	83	GLU	N-CA-C	5.00	116.59	109.14

There are no chirality outliers.

All (86) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AB	163	PHE	Peptide
10	AK	43	SER	Peptide
15	AP	34	GLU	Peptide
20	AY	34	TYR	Peptide
20	AY	630	GLN	Peptide
47	B1	16	ASN	Peptide
47	B1	17	SER	Peptide
47	B1	18	ILE	Peptide
47	B1	20	ARG	Peptide
53	B7	40	TRP	Mainchain
25	BC	161	ARG	Peptide
25	BC	162	ILE	Peptide
25	BC	163	GLU	Peptide
25	BC	171	ALA	Peptide
25	BC	210	LEU	Peptide
25	BC	88	GLU	Peptide
26	BD	164	GLN	Peptide
27	BE	107	THR	Peptide
28	BF	154	VAL	Peptide
28	BF	156	LEU	Peptide
28	BF	173	VAL	Peptide
28	BF	194	MET	Peptide
31	BJ	25	UNK	Peptide
31	BJ	83	UNK	Peptide
33	BN	100	GLU	Peptide
33	BN	105	GLY	Peptide
33	BN	112	LEU	Peptide
33	BN	113	GLY	Peptide
33	BN	116	LEU	Peptide
33	BN	117	PHE	Peptide
33	BN	118	LYS	Peptide
33	BN	125	GLY	Peptide
33	BN	70	LYS	Peptide
33	BN	71	ILE	Peptide

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Mol	Chain	Res	Type	Group
33	BN	72	TYR	Peptide
33	BN	78	TYR	Peptide
33	BN	82	LEU	Peptide
33	BN	84	LYS	Peptide
33	BN	86	PRO	Peptide
33	BN	90	MET	Peptide
33	BN	99	LEU	Peptide
34	BO	23	ARG	Peptide
36	BQ	101	ARG	Peptide
38	BS	98	VAL	Peptide
39	BT	32	TYR	Peptide
42	BW	75	TYR	Peptide
45	BZ	73	GLN	Peptide
3	CD	31	CYS	Peptide
10	CK	43	SER	Peptide
15	CP	34	GLU	Peptide
47	D1	17	SER	Peptide
47	D1	18	ILE	Peptide
47	D1	19	GLN	Peptide
25	DC	161	ARG	Peptide
25	DC	171	ALA	Peptide
25	DC	210	LEU	Peptide
25	DC	211	ARG	Peptide
25	DC	88	GLU	Peptide
26	DD	164	GLN	Peptide
28	DF	154	VAL	Peptide
28	DF	156	LEU	Peptide
29	DG	111	LEU	Mainchain
31	DJ	25	UNK	Peptide
31	DJ	53	UNK	Peptide
31	DJ	83	UNK	Peptide
33	DN	100	GLU	Peptide
33	DN	105	GLY	Peptide
33	DN	116	LEU	Peptide
33	DN	117	PHE	Peptide
33	DN	118	LYS	Peptide
33	DN	128	HIS	Peptide
33	DN	70	LYS	Peptide
33	DN	71	ILE	Peptide
33	DN	72	TYR	Peptide
33	DN	73	THR	Peptide
33	DN	78	TYR	Peptide

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Mol	Chain	Res	Type	Group
33	DN	82	LEU	Peptide
33	DN	84	LYS	Peptide
33	DN	90	MET	Peptide
33	DN	99	LEU	Peptide
34	DO	23	ARG	Peptide
38	DS	98	VAL	Peptide
39	DT	28	VAL	Peptide
42	DW	75	TYR	Peptide
42	DW	77	ASP	Peptide
45	DZ	73	GLN	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	AB	1910	0	1957	125	0
1	CB	1910	0	1957	116	0
2	AC	1621	0	1688	92	0
2	CC	1621	0	1688	86	0
3	AD	1703	0	1767	113	0
3	CD	1703	0	1767	97	0
4	AE	1156	0	1213	57	0
4	CE	1156	0	1213	57	0
5	AF	843	0	857	34	0
5	CF	843	0	857	51	0
6	AG	1257	0	1296	58	0
6	CG	1257	0	1296	61	0
7	AH	1116	0	1177	79	0
7	CH	1116	0	1177	80	0
8	AI	1010	0	1037	67	0
8	CI	1010	0	1037	61	0
9	AJ	802	0	849	49	0
9	CJ	802	0	849	56	0
10	AK	885	0	904	62	0
10	CK	885	0	904	64	0
11	AL	976	0	1062	110	0
11	CL	976	0	1062	105	0
12	AM	997	0	1072	36	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	CM	997	0	1072	68	0
13	AN	492	0	533	36	0
13	CN	492	0	533	39	0
14	AO	734	0	771	50	0
14	CO	734	0	771	32	0
15	AP	706	0	725	45	0
15	CP	706	0	725	46	0
16	AQ	835	0	904	71	0
16	CQ	835	0	904	63	0
17	AR	574	0	644	34	0
17	CR	574	0	644	35	0
18	AS	634	0	655	41	0
18	CS	634	0	655	31	0
19	AT	763	0	861	53	0
19	CT	763	0	861	45	0
20	AY	5173	0	5239	348	0
20	CY	5173	0	5239	342	0
21	AA	32474	0	16393	1213	0
21	CA	32474	0	16392	1576	0
22	AW	1635	0	831	83	0
22	CW	1635	0	831	86	0
23	AV	783	0	391	43	0
23	CV	781	0	393	74	0
24	AX	1629	0	832	76	0
24	CX	1629	0	832	93	0
25	BC	1742	0	1798	163	0
25	DC	1742	0	1798	133	0
26	BD	2145	0	2234	179	0
26	DD	2145	0	2234	161	0
27	BE	1569	0	1634	136	0
27	DE	1569	0	1634	125	0
28	BF	1628	0	1680	159	0
28	DF	1628	0	1680	134	0
29	BG	1474	0	1535	83	0
29	DG	1474	0	1535	104	0
30	BH	1274	0	1342	69	0
30	DH	1274	0	1342	77	0
31	BJ	851	0	207	26	0
31	DJ	851	0	207	18	0
32	BK	1035	0	1082	66	0
32	DK	1035	0	1082	77	0
33	BN	1114	0	1185	290	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
33	DN	1114	0	1185	320	0
34	BO	933	0	996	73	0
34	DO	933	0	996	64	0
35	BP	1114	0	1187	109	0
35	DP	1114	0	1187	113	0
36	BQ	1122	0	1179	97	0
36	DQ	1122	0	1179	88	0
37	BR	960	0	1021	87	0
37	DR	960	0	1021	85	0
38	BS	775	0	835	77	0
38	DS	775	0	835	86	0
39	BT	1147	0	1207	94	0
39	DT	1147	0	1207	95	0
40	BU	964	0	1022	79	0
40	DU	964	0	1022	70	0
41	BV	779	0	852	70	0
41	DV	779	0	852	56	0
42	BW	900	0	964	76	0
42	DW	900	0	964	58	0
43	BX	734	0	789	33	0
43	DX	734	0	789	28	0
44	BY	818	0	908	56	0
44	DY	818	0	908	62	0
45	BZ	1473	0	1497	85	0
45	DZ	1473	0	1497	80	0
46	B0	662	0	688	33	0
46	D0	662	0	688	49	0
47	B1	732	0	808	57	0
47	D1	732	0	808	67	0
48	B2	598	0	653	36	0
48	D2	598	0	653	56	0
49	B3	477	0	529	24	0
49	D3	477	0	529	29	0
50	B4	271	0	284	11	0
50	D4	271	0	284	23	0
51	B5	459	0	480	29	0
51	D5	459	0	480	36	0
52	B6	433	0	461	34	0
52	D6	433	0	461	47	0
53	B7	430	0	480	31	0
53	D7	430	0	480	33	0
54	B8	517	0	582	47	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	D8	517	0	582	48	0
55	B9	307	0	338	30	0
55	D9	307	0	338	26	0
56	Be	686	0	620	21	0
56	De	686	0	621	24	0
57	Bf	156	0	47	0	0
57	Bg	156	0	47	0	0
57	Df	156	0	48	2	0
57	Dg	156	0	46	0	0
58	Bh	151	0	41	1	0
58	Dh	151	0	48	0	0
59	BA	61997	0	31250	2491	0
59	DA	61997	0	31250	2834	0
60	BB	2551	0	1295	143	0
60	DB	2551	0	1295	162	0
61	AY	28	0	12	8	0
61	CY	28	0	12	14	0
62	AY	37	0	47	21	0
62	CY	37	0	47	14	0
63	AA	42	0	46	27	0
63	BA	126	0	138	60	0
63	CA	42	0	46	34	0
63	DA	42	0	46	23	0
64	BA	1	0	0	0	0
64	CY	1	0	0	0	0
All	All	312066	0	215233	15158	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 29.

All (15158) 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)
33:DN:114:ARG:HH21	59:DA:527:C:C1'	1.22	1.51
24:CX:75:C:N4	59:DA:2553:G:H1	1.11	1.47
59:DA:2681:C:N4	59:DA:2725:A:H62	1.09	1.47
33:DN:114:ARG:NH2	59:DA:527:C:H1'	1.12	1.44
21:CA:1538:C:C2	23:CV:7:G:N2	1.88	1.41
33:DN:78:TYR:CE2	33:DN:115:ARG:NH2	1.87	1.40
33:DN:114:ARG:CZ	59:DA:527:C:O2'	1.69	1.39
21:CA:408:A:H2	21:CA:434:U:N3	1.24	1.36

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DN:98:VAL:O	33:DN:101:HIS:N	1.58	1.35
59:BA:2681:C:N4	59:BA:2725:A:H62	1.22	1.35
21:AA:453:A:N6	21:AA:479:C:H42	1.25	1.34
33:BN:98:VAL:O	33:BN:101:HIS:N	1.60	1.32
21:CA:1538:C:N3	23:CV:7:G:N2	1.75	1.32
21:AA:453:A:H62	21:AA:479:C:N4	1.26	1.30
59:DA:879:G:H1	59:DA:898:C:N4	1.30	1.28
21:AA:1239:A:H62	21:AA:1299:A:N6	1.30	1.28
59:DA:2681:C:H41	59:DA:2725:A:N6	1.29	1.28
63:BA:2902:NMY:H19	63:BA:2902:NMY:C16	1.61	1.27
63:AA:1601:NMY:H19	63:AA:1601:NMY:C16	1.61	1.27
63:CA:1601:NMY:C16	63:CA:1601:NMY:H19	1.61	1.27
63:DA:2901:NMY:H19	63:DA:2901:NMY:C16	1.61	1.26
21:AA:1157:A:N6	21:AA:1178:G:N2	1.84	1.25
63:BA:2903:NMY:H19	63:BA:2903:NMY:C16	1.61	1.25
21:CA:1157:A:N6	21:CA:1178:G:N2	1.83	1.25
21:CA:1239:A:H62	21:CA:1299:A:N6	1.33	1.25
59:DA:583:G:H1	59:DA:1257:C:N4	1.33	1.25
59:DA:271(Q):A:N6	59:DA:357(E):U:H3	1.31	1.25
21:AA:1239:A:N6	21:AA:1299:A:N6	1.84	1.24
24:AX:75:C:N4	59:BA:2553:G:H1	1.32	1.24
33:DN:78:TYR:CZ	33:DN:115:ARG:NH2	2.05	1.24
63:BA:2902:NMY:H16	63:BA:2902:NMY:C19	1.65	1.23
63:DA:2901:NMY:H16	63:DA:2901:NMY:C19	1.65	1.23
21:CA:1239:A:N6	21:CA:1299:A:N6	1.85	1.22
33:DN:114:ARG:NH2	59:DA:528:A:N7	1.85	1.22
63:BA:2904:NMY:C16	63:BA:2904:NMY:H19	1.61	1.21
63:BA:2904:NMY:H16	63:BA:2904:NMY:C19	1.65	1.21
63:CA:1601:NMY:H16	63:CA:1601:NMY:C19	1.65	1.19
33:BN:114:ARG:O	33:BN:117:PHE:N	1.73	1.19
59:BA:1782:C:H42	59:BA:2586:C:N4	1.40	1.19
59:BA:2475:C:H42	59:BA:2529:G:N2	1.39	1.19
24:CX:1:G:C6	24:CX:72:C:N4	2.11	1.18
63:AA:1601:NMY:H16	63:AA:1601:NMY:C19	1.65	1.18
59:DA:585:G:H21	59:DA:1254:A:N6	1.39	1.18
21:AA:520:A:N6	21:AA:533:A:H61	1.41	1.18
24:CX:27:C:N4	24:CX:43:G:H1	1.39	1.17
59:BA:1664:A:H61	59:BA:1996:C:N4	1.41	1.17
59:BA:1932:A:N6	59:BA:1968:G:H21	1.42	1.17
24:CX:30:C:N4	24:CX:40:G:H1	1.42	1.17
21:CA:600:C:N4	21:CA:638:G:H1	1.41	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1932:A:H62	59:BA:1968:G:N2	1.42	1.16
59:BA:1664:A:N6	59:BA:1996:C:H42	1.44	1.16
21:AA:408:A:H2	21:AA:434:U:N3	1.43	1.16
59:DA:1269:A:N6	59:DA:2011:U:H3	1.43	1.16
21:AA:438:G:N2	21:AA:497:A:H62	1.44	1.15
24:CX:75:C:N4	59:DA:2553:G:N1	1.92	1.15
29:DG:108:ASN:O	29:DG:112:PRO:HG2	1.44	1.15
59:DA:1316:U:H3	59:DA:1336:A:N6	1.44	1.15
59:BA:2681:C:H41	59:BA:2725:A:N6	1.43	1.15
59:BA:2133:G:N2	59:BA:2158:A:H62	1.43	1.15
21:AA:438:G:H21	21:AA:497:A:N6	1.42	1.14
59:DA:1629:U:H3	59:DA:1637:A:N6	1.43	1.14
21:CA:372:C:N4	21:CA:389:A:H62	1.45	1.14
59:DA:1052:C:N3	59:DA:1107:G:N2	1.94	1.14
59:BA:1782:C:N4	59:BA:2586:C:H42	1.44	1.14
22:CW:4:U:H3	22:CW:69:A:N6	1.44	1.14
24:CX:49:G:N2	24:CX:65:C:N3	1.95	1.14
59:DA:2520:C:N4	59:DA:2545:G:H1	1.47	1.13
21:AA:367:U:H3	21:AA:393:A:N6	1.45	1.12
59:BA:2681:C:C5	59:BA:2725:A:N6	2.17	1.12
33:DN:114:ARG:NH2	59:DA:527:C:C1'	1.93	1.12
33:DN:114:ARG:NE	59:DA:527:C:O2'	1.80	1.12
59:DA:850:C:N4	59:DA:928:G:H1	1.48	1.12
59:DA:1311:G:N2	59:DA:1603:A:H62	1.46	1.12
21:CA:1239:A:N6	21:CA:1299:A:H62	1.44	1.11
21:CA:372:C:H42	21:CA:389:A:N6	1.45	1.11
59:DA:1317:A:N6	59:DA:1335:U:H3	1.47	1.11
59:DA:226:G:N2	59:DA:228:A:H62	1.48	1.11
22:AW:12:U:H3	22:AW:23:A:N6	1.48	1.11
24:AX:53:G:N2	24:AX:61:C:N3	1.99	1.11
21:CA:32:A:N6	21:CA:552:U:H3	1.46	1.11
59:DA:2247:A:N6	59:DA:2257:U:H3	1.47	1.11
23:CV:21:A:N1	24:CX:34:U:O4	1.84	1.10
33:BN:31:ALA:O	33:BN:33:LEU:N	1.84	1.10
21:CA:1072:G:N2	21:CA:1103:C:N3	2.00	1.10
63:BA:2903:NMY:H16	63:BA:2903:NMY:C19	1.65	1.10
59:DA:851:U:H3	59:DA:926:A:N6	1.48	1.10
59:BA:2133:G:H21	59:BA:2158:A:N6	1.50	1.09
33:DN:31:ALA:O	33:DN:33:LEU:N	1.84	1.09
11:CL:56:ALA:HB3	11:CL:68:ALA:HB3	1.27	1.09
62:CY:702:FUA:H5	62:CY:702:FUA:H202	1.29	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1126:U:C4	21:CA:1148:U:O4	2.04	1.09
21:CA:1157:A:N6	21:CA:1178:G:H21	1.46	1.09
24:CX:2:G:H1	24:CX:71:C:N4	1.49	1.09
60:DB:3:C:N3	60:DB:117:G:N2	2.01	1.09
21:CA:152:A:H62	21:CA:169:C:N4	1.51	1.09
24:CX:1:G:N1	24:CX:72:C:C4	2.20	1.09
59:DA:271(F):G:H1	59:DA:357(M):C:N4	1.51	1.08
59:BA:271(Q):A:N6	59:BA:357(E):U:H3	1.50	1.08
21:CA:1241:G:H1	21:CA:1296:C:N4	1.50	1.08
23:CV:8:A:C8	23:CV:9:G:N2	2.22	1.08
59:DA:1666:G:H1	59:DA:1994:C:N4	1.51	1.08
62:AY:702:FUA:H202	62:AY:702:FUA:H5	1.29	1.08
23:CV:19:G:N2	24:CX:36:C:N3	2.00	1.08
36:DQ:35:VAL:HA	36:DQ:102:VAL:HA	1.34	1.08
59:DA:1311:G:H21	59:DA:1603:A:N6	1.50	1.08
59:DA:585:G:N2	59:DA:1254:A:H62	1.50	1.08
21:CA:1070:U:H3	21:CA:1105:A:N6	1.50	1.07
59:BA:271(F):G:H1	59:BA:357(M):C:N4	1.51	1.07
59:DA:2634:G:H1	59:DA:2784:C:N4	1.52	1.07
59:BA:955:C:N3	59:BA:962:G:O6	1.88	1.07
21:CA:815:A:C2	21:CA:1527:C:O2	2.08	1.07
21:AA:408:A:C2	21:AA:434:U:N3	2.20	1.07
33:BN:74:ARG:H	33:BN:84:LYS:HB3	1.05	1.07
59:DA:949:C:N4	59:DA:968:G:H1	1.52	1.07
24:AX:50:G:O6	24:AX:64:U:O4	1.71	1.06
60:BB:22:U:O2	60:BB:61:G:O6	1.73	1.06
59:DA:1348:G:H1	59:DA:1598:C:N4	1.50	1.06
21:CA:590:C:N4	21:CA:649:G:H1	1.53	1.06
21:CA:1063:C:N4	21:CA:1193:G:H1	1.53	1.06
60:DB:70:C:N4	60:DB:106:G:H1	1.53	1.06
59:BA:2749:A:H62	59:BA:2753:A:N6	1.52	1.06
21:CA:987:G:H1	21:CA:1218:C:N4	1.51	1.06
33:DN:117:PHE:O	33:DN:119:ARG:N	1.88	1.06
59:DA:641:C:N4	59:DA:647:G:H1	1.53	1.06
59:DA:1708:C:N4	59:DA:1750:G:H1	1.53	1.06
60:DB:86:G:H1	60:DB:90:C:N4	1.54	1.05
59:BA:996:A:H2	59:BA:1159:U:N3	1.54	1.05
33:BN:114:ARG:O	33:BN:116:LEU:N	1.88	1.05
21:CA:998(A):C:N4	21:CA:1042:G:H1	1.53	1.05
59:DA:1468(J):G:H1	59:DA:1506(H):C:N4	1.54	1.05
59:DA:2532:G:N2	59:DA:2663:G:H21	1.53	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2652:C:N4	59:DA:2668:G:H1	1.54	1.05
59:DA:1324:G:H1	59:DA:1330:C:N4	1.55	1.05
23:CV:8:A:H8	23:CV:9:G:N2	1.53	1.04
11:AL:56:ALA:HB3	11:AL:68:ALA:HB3	1.35	1.04
59:BA:2681:C:N4	59:BA:2725:A:N6	2.00	1.04
60:BB:23:G:H1	60:BB:60:C:N4	1.54	1.04
21:CA:443:C:N4	21:CA:491:G:H1	1.55	1.04
21:AA:1126:U:C4	21:AA:1148:U:O4	2.09	1.04
21:CA:815:A:H2	21:CA:1527:C:O2	1.40	1.04
33:DN:71:ILE:HB	33:DN:97:ARG:HB2	1.37	1.04
60:DB:22:U:O2	60:DB:61:G:O6	1.74	1.04
59:BA:1311:G:N2	59:BA:1603:A:H62	1.56	1.04
59:BA:2475:C:N4	59:BA:2529:G:H22	1.55	1.04
21:CA:680:C:N4	21:CA:710:G:H1	1.56	1.04
21:CA:1047:G:H1	21:CA:1210:C:N4	1.54	1.04
60:DB:5:C:N4	60:DB:115:G:H1	1.54	1.04
22:CW:12:U:H3	22:CW:23:A:N6	1.57	1.03
60:DB:34:U:H3	60:DB:48:A:N6	1.55	1.03
59:BA:585:G:N2	59:BA:1254:A:H62	1.55	1.03
59:DA:32:C:N4	59:DA:473:G:H1	1.56	1.03
21:AA:782:A:H62	21:AA:800:G:N2	1.55	1.03
59:BA:150:C:N3	59:BA:176:G:N2	2.07	1.03
59:BA:692:C:H42	59:BA:770:G:H1	1.03	1.03
24:CX:50:G:O6	24:CX:64:U:O4	1.77	1.03
59:DA:2842:G:H1	59:DA:2875:C:N4	1.57	1.03
24:AX:52:G:N1	24:AX:62:C:O2	1.90	1.02
21:CA:600:C:N3	21:CA:638:G:N2	2.06	1.02
59:DA:134:C:N4	59:DA:145:G:H1	1.56	1.02
25:BC:47:LYS:HB3	25:BC:212:SER:HB2	1.39	1.02
59:DA:1415:U:H3	59:DA:1587:A:N6	1.57	1.02
25:BC:43:GLU:HB2	25:BC:216:THR:O	1.59	1.02
59:BA:585:G:H21	59:BA:1254:A:N6	1.56	1.02
59:BA:2119:A:N6	59:BA:2168:G:H21	1.56	1.02
21:CA:139:G:H1	21:CA:224:C:N4	1.57	1.02
53:B7:40:TRP:CD1	53:B7:41:ARG:H	1.78	1.01
21:CA:668:G:H1	21:CA:738:C:N4	1.57	1.01
59:BA:2119:A:H61	59:BA:2168:G:N2	1.56	1.01
59:DA:1430:C:N4	59:DA:1563:G:H1	1.58	1.01
22:AW:4:U:H3	22:AW:69:A:H61	1.05	1.01
59:BA:2749:A:N6	59:BA:2753:A:H61	1.56	1.01
21:CA:662:G:H1	21:CA:743:U:H3	1.02	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2681:C:N4	59:DA:2725:A:N6	1.93	1.01
22:AW:15:G:N2	22:AW:48:C:O2	1.93	1.00
47:D1:14:VAL:HA	47:D1:41:ARG:HB2	1.39	1.00
21:CA:253:U:H3	21:CA:273:A:H2	1.05	1.00
21:CA:998:G:N2	21:CA:1043:C:N3	2.07	1.00
21:CA:1538:C:O2	23:CV:7:G:N2	1.93	1.00
59:DA:708:C:H42	59:DA:723:G:H1	1.02	1.00
24:AX:75:C:N4	59:BA:2553:G:N1	2.08	1.00
21:CA:612:C:H42	21:CA:628:G:H1	1.08	1.00
59:DA:2066:C:H42	59:DA:2444:G:H1	1.01	1.00
21:CA:1072:G:C2	21:CA:1103:C:N3	2.29	1.00
59:DA:2359:C:H42	59:DA:2428:G:H1	1.06	1.00
23:CV:19:G:H1	24:CX:36:C:N4	1.59	1.00
24:AX:53:G:H1	24:AX:61:C:N4	1.58	1.00
59:DA:2119:A:N6	59:DA:2168:G:H21	1.60	1.00
59:DA:36:G:N2	59:DA:444:C:N3	2.10	1.00
59:DA:2049:G:H1	59:DA:2619:C:N4	1.59	1.00
60:BB:80:U:H3	60:BB:96:G:H1	1.03	0.99
59:BA:1945:G:O6	59:BA:1961:C:N3	1.95	0.99
21:CA:408:A:C2	21:CA:434:U:N3	2.05	0.99
33:DN:113:GLY:HA2	33:DN:117:PHE:HB2	1.41	0.99
59:DA:376:C:H42	59:DA:398:G:H1	1.09	0.99
59:DA:585:G:N2	59:DA:1254:A:N6	2.07	0.99
59:DA:950:G:H1	59:DA:967:C:N4	1.59	0.99
21:AA:782:A:N6	21:AA:800:G:H21	1.61	0.99
21:CA:186(E):C:N4	21:CA:186(L):G:H1	1.59	0.99
59:DA:2749:A:H62	59:DA:2753:A:N6	1.59	0.99
21:CA:147:G:H1	21:CA:175:C:N4	1.58	0.99
59:DA:1356:G:H1	59:DA:1375:C:H42	1.04	0.99
59:DA:2255:G:H1	59:DA:2275:C:H42	1.09	0.99
33:DN:78:TYR:CE2	33:DN:115:ARG:CZ	2.45	0.99
59:DA:589:C:H42	59:DA:668:G:H1	1.00	0.99
59:DA:1416:G:N2	59:DA:1582:C:N3	2.10	0.98
16:CQ:21:VAL:HG11	16:CQ:59:ILE:HD11	1.42	0.98
59:DA:2532:G:N2	59:DA:2663:G:N2	2.11	0.98
59:DA:2681:C:C5	59:DA:2725:A:N6	2.31	0.98
21:CA:925:G:H1	21:CA:1391:U:H3	1.10	0.98
36:BQ:35:VAL:HA	36:BQ:102:VAL:HA	1.45	0.98
21:CA:1224:G:N2	21:CA:1362(A):C:N3	2.12	0.98
59:DA:47:C:N4	59:DA:178:G:H1	1.62	0.98
59:DA:1710:C:H42	59:DA:1748:G:H1	1.10	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:429:U:H3	21:AA:431:A:N6	1.60	0.98
22:AW:71:C:O2	22:AW:72:C:N4	1.96	0.98
59:DA:1709:U:O2	59:DA:2859:G:N2	1.97	0.98
59:BA:2681:C:H5	59:BA:2725:A:H61	1.04	0.97
59:DA:2631:G:H1	59:DA:2787:C:H42	1.06	0.97
21:CA:943:U:O4	21:CA:1340:A:N1	1.97	0.97
59:DA:1170:G:H1	59:DA:1179:C:H42	0.99	0.97
59:DA:1674:G:H21	59:DA:1677:A:N6	1.63	0.97
21:AA:1157:A:C6	21:AA:1178:G:N2	2.31	0.97
47:B1:18:ILE:HA	47:B1:20:ARG:H	1.28	0.97
21:CA:27:G:H1	21:CA:556:C:N4	1.62	0.97
33:DN:114:ARG:NE	59:DA:527:C:C6	2.31	0.97
59:DA:2326:C:H42	59:DA:2389:G:H1	1.01	0.97
59:BA:271(S):C:H42	59:BA:357(C):G:H1	1.09	0.97
59:DA:2133:G:H21	59:DA:2158:A:H62	0.98	0.97
60:DB:23:G:H1	60:DB:60:C:H42	1.10	0.97
59:DA:61:G:H1	59:DA:93:C:N4	1.62	0.97
59:DA:539:G:H1	59:DA:554:U:H3	1.05	0.97
59:DA:380:U:H3	59:DA:394:A:H61	1.00	0.97
59:DA:1168:G:H1	59:DA:1181:C:H42	1.11	0.97
33:BN:97:ARG:HH11	33:BN:108:PRO:HB2	1.27	0.97
59:DA:947:G:H1	59:DA:970:C:H42	1.02	0.97
59:DA:1348:G:N2	59:DA:1598:C:N3	2.12	0.97
59:DA:2525:G:H1	59:DA:2538:C:H42	1.04	0.97
21:AA:1003:G:N2	21:AA:1037:C:N3	2.13	0.97
59:BA:586:A:H62	59:BA:1251:C:H42	1.06	0.97
21:CA:680:C:H42	21:CA:710:G:H1	1.01	0.97
21:CA:1305:G:N2	21:CA:1332:A:C8	2.31	0.97
59:DA:291:C:N4	59:DA:349:G:H1	1.63	0.97
21:AA:1239:A:N6	21:AA:1299:A:H62	1.55	0.97
59:BA:996:A:C2	59:BA:1159:U:N3	2.29	0.97
33:DN:84:LYS:HG2	33:DN:86:PRO:HD3	1.45	0.97
59:BA:1414:G:N2	59:BA:1588:C:N3	2.12	0.96
24:AX:31:C:H42	24:AX:39:G:H1	1.01	0.96
21:CA:998:G:H1	21:CA:1043:C:N4	1.63	0.96
59:DA:2819:G:H1	59:DA:2827:C:H42	1.12	0.96
59:BA:539:G:H1	59:BA:554:U:H3	1.13	0.96
59:BA:2726:U:HO2'	59:BA:2727:G:H8	1.09	0.96
21:CA:371:G:H1	21:CA:390:C:H42	1.13	0.96
59:DA:2749:A:N6	59:DA:2753:A:H61	1.61	0.96
59:BA:639:U:H3	59:BA:649:G:H1	1.12	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:131:G:H1	59:DA:148:C:H42	1.02	0.96
59:DA:1797:C:H42	59:DA:1822:G:H1	1.01	0.96
33:BN:46:VAL:HG13	33:BN:112:LEU:HD23	1.48	0.96
3:CD:115:ARG:HB3	21:CA:407:G:H5''	1.44	0.96
21:CA:1006:C:N3	21:CA:1023:G:N2	2.13	0.96
22:CW:7:G:H1	22:CW:66:C:H42	1.04	0.96
59:DA:2814:C:H42	59:DA:2886:G:H1	1.03	0.96
59:BA:1354:A:H62	59:BA:1377:G:H21	1.09	0.96
59:BA:1970:A:H4'	63:BA:2904:NMY:C23	1.95	0.96
16:CQ:45:HIS:HB3	16:CQ:72:ARG:HA	1.48	0.96
22:CW:31:A:H2	22:CW:39:U:H3	1.01	0.96
59:DA:225:A:H61	59:DA:230:U:H3	1.09	0.96
59:DA:1831:G:H1	59:DA:1974:C:H42	1.10	0.96
59:BA:1857:G:H21	59:BA:1885:A:H62	1.10	0.96
21:AA:520:A:H61	21:AA:533:A:N6	1.64	0.96
33:DN:74:ARG:HD3	59:DA:1138:G:H5''	1.46	0.96
59:DA:2549:G:H1	59:DA:2559:C:H42	1.12	0.96
21:CA:146:G:H1	21:CA:176:C:N4	1.64	0.95
59:DA:55:G:H1	59:DA:115:C:H42	1.11	0.95
59:DA:1207:C:H42	59:DA:1239:G:H1	1.11	0.95
59:DA:2475:C:H42	59:DA:2529:G:H22	1.11	0.95
24:AX:29:U:H3	24:AX:41:A:H61	1.13	0.95
21:CA:672:U:H3	21:CA:734:G:H1	1.13	0.95
59:BA:2681:C:C4	59:BA:2725:A:N6	2.31	0.95
60:BB:3:C:C2	60:BB:117:G:N2	2.35	0.95
21:CA:1224:G:H1	21:CA:1362(A):C:H42	0.98	0.95
59:DA:1052:C:H42	59:DA:1107:G:H1	1.04	0.95
21:CA:668:G:N2	21:CA:738:C:N3	2.12	0.95
21:CA:1401:G:H1	21:CA:1501:C:H42	1.00	0.95
22:CW:3:C:H42	22:CW:70:G:H1	0.97	0.95
59:DA:134:C:N3	59:DA:145:G:N2	2.14	0.95
59:DA:850:C:N3	59:DA:928:G:N2	2.14	0.95
21:AA:372:C:N4	21:AA:389:A:H62	1.63	0.95
21:CA:897:C:N4	21:CA:902:G:H1	1.64	0.95
59:DA:36:G:H1	59:DA:444:C:N4	1.64	0.95
21:AA:520:A:N6	21:AA:533:A:N6	2.14	0.95
24:CX:49:G:H1	24:CX:65:C:H42	1.11	0.95
59:DA:595:C:H42	59:DA:662:G:H1	1.06	0.95
59:DA:1217:C:H42	59:DA:1232:G:H1	1.00	0.95
59:DA:1347:G:H1	59:DA:1599:C:H42	1.00	0.95
59:BA:918:A:O2'	60:BB:96:G:N2	2.00	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DN:35:ARG:HG2	33:DN:38:HIS:HB2	1.46	0.95
59:DA:1040:C:H42	59:DA:1115:G:H1	1.05	0.95
21:CA:658:G:H1	21:CA:747:C:H42	1.11	0.95
21:CA:815:A:N6	21:CA:1508:G:H21	1.63	0.95
59:DA:1483:G:H1	59:DA:1506:C:N4	1.63	0.95
59:BA:540:C:N4	59:BA:553:G:H1	1.64	0.95
59:DA:583:G:N2	59:DA:1257:C:N3	2.15	0.95
59:DA:692:C:H42	59:DA:770:G:H1	0.99	0.95
45:DZ:76:LEU:HD22	45:DZ:83:PRO:HA	1.47	0.94
59:DA:61:G:H1	59:DA:93:C:H42	0.95	0.94
21:CA:773:G:H1	21:CA:806:C:H42	1.01	0.94
59:DA:584:C:N4	59:DA:1256:G:H1	1.64	0.94
59:BA:2587:A:H62	59:BA:2608:G:N2	1.66	0.94
21:CA:1303:C:H42	21:CA:1334:G:H1	1.04	0.94
59:DA:226:G:H21	59:DA:228:A:N6	1.64	0.94
59:DA:671:C:H42	59:DA:809:G:H1	0.95	0.94
59:DA:955:C:N3	59:DA:962:G:O6	2.00	0.94
59:DA:1939:U:H3	59:DA:1967:C:HO2'	1.10	0.94
21:CA:258:G:H1	21:CA:268:C:H42	0.97	0.94
21:CA:1072:G:N2	21:CA:1103:C:C2	2.35	0.94
59:DA:1674:G:N2	59:DA:1677:A:H61	1.65	0.94
20:AY:22:ASP:OD1	61:AY:701:GDP:H5'	1.68	0.94
59:DA:1793:C:H42	59:DA:1826:G:H1	1.15	0.94
59:BA:572:A:H61	59:BA:2029:G:N2	1.66	0.94
59:BA:1712(F):U:H3	59:BA:1712(L):G:H1	1.15	0.94
21:CA:500:G:O6	21:CA:545:C:N3	1.99	0.94
21:CA:505:G:H1	21:CA:526:C:H42	1.01	0.94
59:DA:846:C:H42	59:DA:931:G:H1	0.97	0.94
59:DA:1691:C:H42	59:DA:1696:G:H1	0.96	0.94
59:BA:1970:A:H4'	63:BA:2904:NMY:N19	1.81	0.94
59:DA:2134:A:C8	59:DA:2157:G:N2	2.36	0.94
27:BE:22:PRO:HB2	27:BE:186:GLY:HA3	1.48	0.94
21:CA:1413:A:H61	21:CA:1487:G:H1	0.96	0.94
24:CX:1:G:N1	24:CX:72:C:N4	2.14	0.94
59:DA:2133:G:N2	59:DA:2158:A:H62	1.64	0.94
11:AL:58:VAL:HG12	11:AL:60:LEU:H	1.31	0.93
59:BA:572:A:N6	59:BA:2029:G:H21	1.65	0.93
31:DJ:54:UNK:HA	31:DJ:79:UNK:HA	1.50	0.93
59:DA:226:G:H21	59:DA:228:A:H62	0.94	0.93
59:DA:671:C:N4	59:DA:809:G:H1	1.64	0.93
59:DA:1908:C:H42	59:DA:1922:G:H1	0.97	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2119:A:H61	59:DA:2168:G:N2	1.65	0.93
60:DB:30:C:H42	60:DB:54:G:H1	1.16	0.93
60:DB:82:G:H1	60:DB:94:C:H42	1.01	0.93
21:AA:618:C:H5'	21:AA:619:U:H5''	1.50	0.93
59:BA:32:C:H42	59:BA:473:G:H1	1.08	0.93
21:CA:147:G:N2	21:CA:175:C:N3	2.16	0.93
59:DA:29:U:H3	59:DA:511:U:H3	1.04	0.93
24:AX:53:G:H1	24:AX:61:C:H42	0.96	0.93
21:CA:184:G:O6	21:CA:193:C:N3	2.01	0.93
21:CA:1348:U:N3	21:CA:1374:A:N1	2.16	0.93
21:CA:1413:A:N6	21:CA:1487:G:H1	1.66	0.93
59:DA:1208:C:H42	59:DA:1238:G:H1	1.13	0.93
24:AX:27:C:H42	24:AX:43:G:H1	1.06	0.93
41:BV:76:LYS:HB2	41:BV:81:TYR:HB3	1.46	0.93
59:DA:8:A:N1	59:DA:2895:U:O4	2.01	0.93
43:BX:55:ASN:HB2	43:BX:80:ILE:HG12	1.49	0.93
6:CG:28:ASN:HB3	21:CA:1374:A:H4'	1.51	0.93
21:CA:139:G:N2	21:CA:224:C:N3	2.16	0.93
21:CA:367:U:H3	21:CA:393:A:H61	1.07	0.93
59:DA:701:G:H1	59:DA:731:C:H42	1.03	0.93
59:DA:2134:A:H8	59:DA:2157:G:H21	1.15	0.93
59:BA:1311:G:H21	59:BA:1603:A:N6	1.65	0.93
21:AA:372:C:H42	21:AA:389:A:N6	1.65	0.93
21:CA:68(H):G:H1	21:CA:68(R):C:H42	1.09	0.93
59:DA:2202:C:H42	59:DA:2221:G:H1	0.95	0.93
59:BA:221:A:H62	59:BA:427:U:H3	1.15	0.93
21:CA:442:C:H42	21:CA:492:G:H1	0.96	0.93
59:DA:854:G:H1	59:DA:923:C:N4	1.67	0.93
21:CA:186(E):C:N3	21:CA:186(L):G:N2	2.16	0.92
21:CA:296:U:H3	21:CA:301:G:H1	1.16	0.92
59:DA:864:G:H21	59:DA:866:A:H61	1.03	0.92
21:AA:1126:U:O4	21:AA:1148:U:O4	1.87	0.92
59:DA:236:C:H42	59:DA:261:G:H1	1.17	0.92
59:DA:997:G:H1	59:DA:1158:C:H42	0.94	0.92
22:AW:9:A:C8	22:AW:12:U:O4	2.22	0.92
24:CX:10:G:H1	24:CX:25:C:N4	1.67	0.92
59:DA:1483:G:N2	59:DA:1506:C:N3	2.15	0.92
59:DA:188:G:H1	59:DA:208:C:H42	0.95	0.92
59:DA:582:G:H1	59:DA:1258:C:H42	1.09	0.92
59:DA:641:C:N3	59:DA:647:G:N2	2.17	0.92
59:DA:861:A:H62	59:DA:916:G:H21	0.97	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:45:PRO:HA	11:AL:92:ASP:HB3	1.49	0.92
2:CC:22:TRP:HA	9:CJ:93:GLY:HA2	1.50	0.92
59:DA:269:U:H3	59:DA:370:G:H1	1.18	0.92
59:DA:1166:C:H42	59:DA:1183:G:H1	1.08	0.92
59:DA:1653:G:H5'	59:DA:2822:G:H1	1.34	0.92
59:DA:2061:G:H1	59:DA:2451:A:H61	0.95	0.92
59:DA:2466:C:H42	59:DA:2484:G:H1	1.16	0.92
6:CG:78:ARG:HB3	6:CG:85:TYR:HB2	1.52	0.92
21:CA:774:G:H1	21:CA:805:C:N4	1.66	0.92
21:CA:152:A:H62	21:CA:169:C:H42	0.98	0.92
21:CA:1423:G:H1	21:CA:1477:C:N4	1.66	0.92
33:BN:114:ARG:C	33:BN:116:LEU:H	1.77	0.92
60:BB:30:C:H42	60:BB:54:G:H1	1.16	0.92
24:CX:75:C:H3'	24:CX:76:A:H5''	1.52	0.92
22:AW:36:U:H3	23:AV:16:A:N6	1.67	0.92
21:CA:240:C:H42	21:CA:286:G:H1	1.00	0.92
59:DA:949:C:N3	59:DA:968:G:N2	2.17	0.92
59:DA:1782:C:H42	59:DA:2586:C:H42	1.18	0.92
21:CA:1006:C:H42	21:CA:1023:G:H1	1.01	0.91
21:CA:1072:G:N1	21:CA:1103:C:N4	2.16	0.91
35:BP:53:GLY:HA2	59:BA:832:G:H21	1.35	0.91
59:BA:150:C:H42	59:BA:176:G:H1	1.12	0.91
59:BA:2322:A:H61	59:BA:2335:A:H61	0.94	0.91
63:BA:2902:NMY:C16	63:BA:2902:NMY:C19	2.36	0.91
59:DA:271(D):G:H1	59:DA:357(O):C:H42	1.17	0.91
59:DA:854:G:H1	59:DA:923:C:H42	0.94	0.91
59:DA:1752:C:H42	59:DA:1756:G:H1	1.18	0.91
59:DA:2463:C:H42	59:DA:2487:G:H1	0.95	0.91
60:DB:83:G:H1	60:DB:93:C:H42	0.94	0.91
21:CA:156:G:H1	21:CA:165:C:H42	1.01	0.91
35:DP:60:MET:HB2	59:DA:2392:A:H1'	1.53	0.91
21:AA:1003:G:N2	21:AA:1037:C:C2	2.38	0.91
21:AA:1304:G:H21	21:AA:1333:A:H62	1.18	0.91
26:BD:24:ILE:HG13	26:BD:83:GLU:HA	1.50	0.91
21:CA:782:A:H62	21:CA:800:G:H21	0.92	0.91
59:DA:592:G:H1	59:DA:665:C:H42	1.08	0.91
59:DA:864:G:H21	59:DA:866:A:N6	1.68	0.91
59:BA:8:A:N1	59:BA:2895:U:O4	2.04	0.91
59:BA:572:A:H61	59:BA:2029:G:H21	0.96	0.91
59:DA:1416:G:H1	59:DA:1582:C:H42	1.03	0.91
59:DA:2121:G:H1	59:DA:2177:C:N4	1.67	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:19:ILE:H	15:AP:38:TYR:HA	1.35	0.91
21:CA:782:A:H62	21:CA:800:G:N2	1.68	0.91
24:CX:75:C:N3	59:DA:2553:G:N2	2.18	0.91
59:DA:691:C:N4	59:DA:771:G:H1	1.69	0.91
59:DA:691:C:H42	59:DA:771:G:H1	0.95	0.91
59:BA:858:U:H3	59:BA:919:G:H1	1.08	0.91
20:CY:176:GLY:HA3	20:CY:187:THR:HA	1.53	0.91
21:CA:258:G:H1	21:CA:268:C:N4	1.68	0.91
29:DG:113:ARG:O	29:DG:114:ILE:O	1.89	0.91
59:DA:270(G):C:H42	59:DA:270(S):G:H1	1.10	0.91
59:DA:997:G:H1	59:DA:1158:C:N4	1.68	0.91
59:DA:1110:G:HO2'	59:DA:1111:A:H8	0.96	0.91
23:CV:18:G:O6	22:CW:34:C:N3	2.03	0.91
59:DA:572:A:H61	59:DA:2029:G:H21	1.16	0.91
59:DA:1945:G:O6	59:DA:1961:C:N3	2.04	0.91
59:DA:2106:G:H1	59:DA:2183:C:H42	1.17	0.91
59:BA:1312:U:O4	59:BA:1340:U:O4	1.89	0.91
59:DA:1630(A):C:O2	59:DA:1635:G:N1	2.03	0.91
59:DA:2475:C:H42	59:DA:2529:G:N2	1.68	0.91
59:DA:2475:C:N4	59:DA:2529:G:H22	1.69	0.91
20:AY:611:THR:HA	20:AY:642:VAL:HG22	1.50	0.90
33:BN:74:ARG:N	33:BN:84:LYS:HB3	1.86	0.90
23:CV:8:A:H8	23:CV:9:G:C2	1.88	0.90
42:DW:14:PRO:HD2	42:DW:99:ARG:HG3	1.54	0.90
59:DA:150:C:H42	59:DA:176:G:H1	1.16	0.90
59:DA:1281:G:H1	59:DA:1289:C:H42	1.06	0.90
59:DA:2681:C:H5	59:DA:2725:A:H61	1.18	0.90
60:DB:83:G:H1	60:DB:93:C:N4	1.68	0.90
33:BN:101:HIS:O	33:BN:106:MET:N	2.04	0.90
33:BN:74:ARG:HB2	59:BA:1138:G:H4'	1.52	0.90
21:CA:442:C:N3	21:CA:492:G:N2	2.18	0.90
59:DA:1691:C:N4	59:DA:1696:G:H1	1.70	0.90
60:DB:32:C:O2	60:DB:50:G:N1	2.03	0.90
21:CA:1002:G:N2	21:CA:1038:C:N3	2.19	0.90
21:CA:1514:C:H42	21:CA:1521:G:H1	1.10	0.90
59:DA:1198:U:H3	59:DA:1247:A:H2	1.15	0.90
59:DA:2074:U:H3	59:DA:2435:A:H61	1.19	0.90
21:AA:1124:G:H1	21:AA:1149:C:H42	1.19	0.90
24:AX:3:G:O6	24:AX:70:C:N3	2.05	0.90
33:BN:26:LEU:HD11	33:BN:99:LEU:HD21	1.52	0.90
33:BN:74:ARG:H	33:BN:84:LYS:CB	1.85	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:536:A:H61	59:BA:557:U:H3	1.19	0.90
59:DA:946:G:H1	59:DA:971:C:H42	1.20	0.90
59:DA:1708:C:N3	59:DA:1750:G:N2	2.20	0.90
21:CA:774:G:N2	21:CA:805:C:N3	2.20	0.90
59:DA:869:G:N2	59:DA:908:C:N3	2.20	0.90
59:DA:872:A:H61	59:DA:905:U:H3	1.17	0.90
25:BC:64:SER:HA	25:BC:160:GLY:HA2	1.53	0.90
59:DA:864:G:N2	59:DA:866:A:H61	1.68	0.90
60:DB:87:G:N2	60:DB:89(B):A:C8	2.39	0.90
21:CA:257:G:H1	21:CA:269:C:N4	1.68	0.90
33:DN:111:PRO:O	33:DN:114:ARG:N	2.05	0.90
59:DA:1021:A:H2'	59:DA:1022:G:H4'	1.50	0.90
59:DA:1953:A:H2	59:DA:2549:G:H21	1.20	0.90
22:AW:9:A:N6	22:AW:23:A:N7	2.20	0.89
22:AW:36:U:H3	23:AV:16:A:H61	0.90	0.89
59:BA:2322:A:H61	59:BA:2335:A:N6	1.69	0.89
21:CA:47:C:H42	21:CA:361:G:H1	1.14	0.89
59:DA:188:G:H1	59:DA:208:C:N4	1.71	0.89
59:DA:1052:C:N4	59:DA:1107:G:H1	1.68	0.89
59:DA:2397:G:O6	59:DA:2419:U:O2	1.89	0.89
59:DA:2587:A:H62	59:DA:2608:G:H21	1.20	0.89
59:BA:271(F):G:H1	59:BA:357(M):C:H42	0.92	0.89
21:CA:144:G:H1	21:CA:178:C:H42	1.20	0.89
59:DA:193:U:H3	59:DA:202:U:H3	1.20	0.89
59:DA:817:C:H42	59:DA:1190:G:H1	1.19	0.89
59:DA:884:C:H42	59:DA:892:G:H1	1.14	0.89
59:DA:2121:G:H1	59:DA:2177:C:H42	0.93	0.89
59:DA:2137:C:H42	59:DA:2154:G:H1	0.97	0.89
21:AA:1535:C:H42	23:AV:8:A:H2	1.19	0.89
25:BC:43:GLU:HB3	25:BC:216:THR:HG23	1.54	0.89
63:BA:2903:NMY:C16	63:BA:2903:NMY:C19	2.36	0.89
25:DC:47:LYS:HB3	25:DC:212:SER:HB2	1.53	0.89
33:DN:54:VAL:HG23	33:DN:103:VAL:HG23	1.53	0.89
59:DA:871:U:O2	59:DA:906:G:N2	2.06	0.89
59:DA:1276:A:H61	59:DA:1294:U:H3	1.13	0.89
22:CW:15:G:N2	22:CW:48:C:O2	2.05	0.89
59:DA:2134:A:H62	59:DA:2157:G:H1'	1.36	0.89
60:DB:3:C:H42	60:DB:117:G:H1	1.17	0.89
10:AK:118:GLY:HA2	21:AA:716:A:H1'	1.53	0.89
22:AW:9:A:N7	22:AW:12:U:O4	2.05	0.89
59:DA:535:C:H42	59:DA:558:G:H1	0.96	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:815:C:H42	59:DA:1192:G:H1	1.16	0.89
21:CA:1423:G:H1	21:CA:1477:C:H42	0.93	0.89
21:CA:774:G:H1	21:CA:805:C:H42	0.90	0.89
24:CX:27:C:N3	24:CX:43:G:N2	2.20	0.89
28:DF:49:ALA:HB1	28:DF:92:PRO:HB2	1.55	0.89
43:DX:53:LYS:HB3	43:DX:82:GLN:HB3	1.54	0.89
59:DA:2681:C:C4	59:DA:2725:A:N6	2.34	0.89
59:BA:2475:C:N4	59:BA:2529:G:N2	2.18	0.89
21:CA:897:C:H42	21:CA:902:G:H1	0.89	0.89
21:CA:1306:A:N6	21:CA:1331:G:O2'	2.06	0.89
27:BE:65:GLY:HA2	27:BE:70:ALA:HA	1.54	0.89
59:BA:1586:A:H3'	59:BA:1587:A:H8	1.38	0.89
21:CA:897:C:N3	21:CA:902:G:N2	2.20	0.89
34:DO:68:GLU:H	34:DO:78:ARG:HD3	1.38	0.89
59:DA:948:G:H1	59:DA:969:U:H3	0.93	0.89
59:DA:1345:C:H42	59:DA:1601:G:H1	0.95	0.89
21:AA:520:A:H61	21:AA:533:A:H61	0.93	0.88
59:BA:51:G:H21	59:BA:118:A:H62	1.20	0.88
10:CK:113:PRO:HB3	21:CA:676:A:H4'	1.52	0.88
21:CA:257:G:H1	21:CA:269:C:H42	0.93	0.88
59:DA:1466:G:HO2'	59:DA:1546:C:HO2'	1.20	0.88
59:DA:2129:C:N3	59:DA:2159:G:O6	2.06	0.88
21:CA:152:A:N6	21:CA:169:C:H42	1.70	0.88
21:CA:618:C:H42	21:CA:622:A:H62	1.18	0.88
59:DA:639:U:H3	59:DA:649:G:H1	0.89	0.88
59:BA:1394:U:H4'	59:BA:1603:A:H4'	1.56	0.88
20:CY:135:PHE:HA	20:CY:260:LEU:HA	1.54	0.88
11:AL:34:ARG:HB2	11:AL:61:THR:HG23	1.54	0.88
59:BA:2475:C:H42	59:BA:2529:G:H22	0.95	0.88
20:CY:329:ARG:HD3	20:CY:374:LEU:HG	1.54	0.88
21:CA:146:G:H1	21:CA:176:C:H42	0.92	0.88
59:DA:535:C:N4	59:DA:558:G:H1	1.70	0.88
59:DA:947:G:H1	59:DA:970:C:N4	1.71	0.88
59:DA:1483:G:H1	59:DA:1506:C:H42	0.89	0.88
45:BZ:29:TYR:HB3	45:BZ:34:ASN:HA	1.56	0.88
24:CX:10:G:H1	24:CX:25:C:H42	0.94	0.88
24:CX:31:C:H42	24:CX:39:G:H1	1.16	0.88
59:BA:2322:A:N6	59:BA:2335:A:H61	1.71	0.88
22:CW:9:A:C8	22:CW:12:U:O4	2.26	0.88
36:DQ:73:PRO:HB3	36:DQ:90:VAL:HG12	1.55	0.88
59:DA:244:A:H62	59:DA:254:G:H21	1.17	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1166:C:N3	59:DA:1183:G:N2	2.20	0.88
59:DA:2202:C:N4	59:DA:2221:G:H1	1.71	0.88
60:DB:86:G:H1	60:DB:90:C:H42	0.88	0.88
59:DA:1385:G:N1	59:DA:1402:C:O2	2.05	0.88
24:AX:29:U:H3	24:AX:41:A:N6	1.70	0.88
59:BA:2681:C:H41	59:BA:2725:A:H62	0.88	0.88
1:CB:171:ALA:HA	1:CB:174:VAL:HB	1.56	0.88
21:CA:954:G:H22	21:CA:1227:A:H61	1.18	0.88
59:DA:950:G:H1	59:DA:967:C:H42	0.89	0.88
59:DA:1039:G:H1	59:DA:1116:C:H42	1.20	0.88
24:AX:49:G:H1	24:AX:65:C:H42	1.21	0.88
21:CA:146:G:N2	21:CA:176:C:N3	2.22	0.88
21:CA:1066:C:H42	21:CA:1191:A:H62	1.18	0.88
33:DN:100:GLU:O	33:DN:105:GLY:N	2.07	0.88
59:DA:226:G:N2	59:DA:228:A:N6	2.21	0.88
59:BA:2453:A:H4'	59:BA:2572:A:H1'	1.56	0.88
21:CA:1157:A:C6	21:CA:1178:G:N2	2.37	0.88
59:DA:406:G:H1	59:DA:421:U:H3	0.91	0.88
59:DA:918:A:O2'	60:DB:96:G:N2	2.06	0.88
17:AR:74:ARG:HG2	17:AR:79:LEU:HD22	1.54	0.87
21:CA:27:G:H1	21:CA:556:C:H42	0.89	0.87
21:CA:683:G:H1	21:CA:707:C:H42	1.22	0.87
21:AA:943:U:O4	21:AA:1340:A:N1	2.07	0.87
32:BK:72:PRO:HG2	32:BK:111:LYS:HZ1	1.39	0.87
59:BA:918:A:H62	59:BA:2268:A:H62	1.18	0.87
59:BA:2756:U:H3	59:BA:2758:A:H62	1.19	0.87
59:BA:2587:A:H62	59:BA:2608:G:H21	0.88	0.87
21:CA:442:C:N4	21:CA:492:G:H1	1.72	0.87
21:CA:590:C:N3	21:CA:649:G:N2	2.22	0.87
21:CA:1047:G:H1	21:CA:1210:C:H42	0.90	0.87
59:DA:854:G:N2	59:DA:923:C:N3	2.21	0.87
59:DA:699:A:H62	59:DA:733:G:H21	1.22	0.87
59:DA:2200:C:H42	59:DA:2223:G:H1	1.21	0.87
16:AQ:45:HIS:HB3	16:AQ:72:ARG:HA	1.57	0.87
21:CA:1224:G:H1	21:CA:1362(A):C:N4	1.71	0.87
59:DA:1908:C:N4	59:DA:1922:G:H1	1.71	0.87
59:DA:836:G:H1	59:DA:943:U:H3	1.21	0.87
21:CA:671:G:H1	21:CA:735:C:H42	1.23	0.87
21:CA:886:G:H1	21:CA:911:U:H3	1.22	0.87
59:DA:235:U:H3	59:DA:262:A:H61	1.15	0.87
59:DA:324:A:H62	59:DA:338:G:H21	1.19	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2066:C:N4	59:DA:2444:G:H1	1.73	0.87
59:DA:2137:C:N4	59:DA:2154:G:H1	1.73	0.87
24:AX:6:A:N1	24:AX:67:U:O4	2.07	0.87
33:DN:114:ARG:NE	59:DA:527:C:C2'	2.38	0.87
59:DA:36:G:H1	59:DA:444:C:H42	0.91	0.87
20:AY:465:ARG:HG2	62:AY:702:FUA:H3	1.56	0.87
59:BA:955:C:C4	59:BA:962:G:O6	2.27	0.87
59:BA:1005:C:H42	59:BA:1138:G:H1	1.20	0.87
8:CI:2:GLU:N	8:CI:88:TYR:HH	1.73	0.87
22:CW:9:A:N7	22:CW:12:U:O4	2.08	0.87
59:DA:1172:G:O2'	59:DA:1177:A:N6	2.08	0.87
33:BN:54:VAL:HB	33:BN:100:GLU:HG2	1.56	0.86
33:BN:116:LEU:C	33:BN:118:LYS:N	2.32	0.86
36:BQ:73:PRO:HB3	36:BQ:90:VAL:HG12	1.57	0.86
21:CA:815:A:H61	21:CA:1508:G:H21	0.89	0.86
21:CA:835:U:H3	21:CA:851:G:H1	0.89	0.86
21:CA:956:U:O2	21:CA:960:U:O2	1.93	0.86
33:DN:114:ARG:CZ	59:DA:527:C:C2'	2.53	0.86
59:DA:2202:C:N3	59:DA:2221:G:N2	2.21	0.86
28:DF:74:ARG:HH22	59:DA:673:C:H2'	1.40	0.86
59:DA:2137:C:N3	59:DA:2154:G:N2	2.21	0.86
25:BC:78:ILE:HG13	25:BC:124:VAL:HG21	1.57	0.86
27:BE:20:ALA:HB2	34:BO:74:GLY:HA2	1.57	0.86
21:CA:590:C:H42	21:CA:649:G:H1	0.91	0.86
21:CA:658:G:N2	21:CA:747:C:N3	2.21	0.86
33:DN:50:ASP:O	33:DN:53:VAL:N	2.07	0.86
40:DU:25:TRP:HD1	40:DU:26:GLY:H	1.21	0.86
59:DA:47:C:H42	59:DA:178:G:H1	0.88	0.86
59:DA:133:C:H42	59:DA:146:G:H1	1.23	0.86
59:DA:291:C:N3	59:DA:349:G:N2	2.23	0.86
7:AH:95:VAL:HG22	7:AH:99:GLU:HB3	1.55	0.86
33:BN:20:GLY:HA2	33:BN:60:ILE:HG21	1.55	0.86
21:CA:240:C:N3	21:CA:286:G:N2	2.23	0.86
21:CA:815:A:H61	21:CA:1508:G:N2	1.73	0.86
28:DF:156:LEU:H	28:DF:176:LEU:H	1.22	0.86
59:DA:291:C:H42	59:DA:349:G:H1	0.89	0.86
59:DA:644:A:H61	59:DA:2349:G:H21	1.18	0.86
59:DA:1674:G:H21	59:DA:1677:A:H61	0.88	0.86
59:DA:879:G:N2	59:DA:898:C:N3	2.23	0.86
21:CA:984:C:H42	21:CA:1221:G:H1	1.19	0.86
22:CW:3:C:N4	22:CW:70:G:H1	1.72	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1170:G:H1	59:DA:1179:C:N4	1.74	0.86
59:DA:1925:C:H42	59:DA:1929:G:H22	1.23	0.86
59:BA:44:A:H61	59:BA:434:U:H3	1.24	0.86
59:DA:2547:U:H3	59:DA:2561:A:H61	1.23	0.86
27:BE:53:PRO:HA	27:BE:74:PRO:HA	1.57	0.86
59:BA:2587:A:N6	59:BA:2608:G:H21	1.72	0.86
21:CA:240:C:N4	21:CA:286:G:H1	1.74	0.86
59:DA:380:U:H3	59:DA:394:A:N6	1.73	0.86
59:DA:1446:C:H42	59:DA:1465:G:H1	1.21	0.86
59:DA:2650:U:N3	59:DA:2670:A:H2	1.72	0.86
63:BA:2904:NMY:C16	63:BA:2904:NMY:C19	2.36	0.86
59:DA:38:A:H61	59:DA:441:U:H3	1.19	0.86
59:DA:846:C:N4	59:DA:931:G:H1	1.74	0.86
59:DA:1345:C:N4	59:DA:1601:G:H1	1.72	0.86
59:DA:2463:C:N4	59:DA:2487:G:H1	1.72	0.86
21:CA:17:U:O2	21:CA:1079:G:N2	2.09	0.86
33:DN:78:TYR:OH	33:DN:115:ARG:NH2	2.09	0.86
59:DA:1347:G:H1	59:DA:1599:C:N4	1.74	0.86
59:DA:1416:G:H1	59:DA:1582:C:N4	1.73	0.86
21:AA:950:U:H3	21:AA:1231:G:H1	1.22	0.85
60:BB:23:G:H1	60:BB:60:C:H42	1.04	0.85
6:CG:111:ARG:HH22	6:CG:126:ASP:HB2	1.40	0.85
59:DA:708:C:N4	59:DA:723:G:H1	1.74	0.85
18:AS:80:TYR:HB2	21:AA:957:U:H5'	1.58	0.85
27:BE:172:VAL:HA	27:BE:184:VAL:HG12	1.57	0.85
59:BA:877:U:H3	59:BA:899:A:H2	1.21	0.85
21:CA:147:G:H1	21:CA:175:C:H42	0.86	0.85
27:DE:172:VAL:HA	27:DE:184:VAL:HG12	1.58	0.85
33:DN:40:PRO:HD2	59:DA:1007:C:H1'	1.58	0.85
59:DA:1198:U:O4	59:DA:1247:A:N1	2.09	0.85
59:BA:1650:G:H1	59:BA:2007:C:H42	1.21	0.85
11:CL:39:VAL:HG12	11:CL:40:VAL:H	1.41	0.85
59:DA:1430:C:H42	59:DA:1563:G:H1	0.86	0.85
59:DA:1687:G:H21	59:DA:1701:A:H62	1.24	0.85
59:DA:2699:C:H42	59:DA:2708:G:H1	1.24	0.85
21:AA:815:A:H61	21:AA:1508:G:H21	1.24	0.85
27:BE:61:ARG:HB3	27:BE:62:PRO:HD2	1.59	0.85
59:BA:540:C:H42	59:BA:553:G:H1	0.86	0.85
21:CA:1401:G:H1	21:CA:1501:C:N4	1.73	0.85
24:CX:13:C:H42	24:CX:22:G:H1	1.19	0.85
33:DN:54:VAL:HB	33:DN:100:GLU:HG2	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:589:C:N4	59:DA:668:G:H1	1.74	0.85
59:BA:271(F):G:N2	59:BA:357(M):C:N3	2.24	0.85
59:BA:1416:G:N2	59:BA:1582:C:N3	2.24	0.85
63:CA:1601:NMY:C16	63:CA:1601:NMY:C19	2.35	0.85
60:DB:81:G:H1	60:DB:95:U:H3	1.22	0.85
21:AA:1028(B):C:N3	21:AA:1028(G):G:O6	2.09	0.85
38:BS:95:HIS:NE2	60:BB:37:C:O2	2.09	0.85
21:CA:378:G:H1	21:CA:385:C:H42	1.22	0.85
33:DN:117:PHE:C	33:DN:119:ARG:N	2.33	0.85
22:AW:34:C:N3	23:AV:18:G:O6	2.09	0.85
59:BA:1970:A:H4'	63:BA:2904:NMY:H231	1.58	0.85
11:CL:58:VAL:HG12	11:CL:60:LEU:H	1.41	0.85
21:CA:1312:G:H1	21:CA:1325:C:H42	1.23	0.85
22:CW:70:G:H21	59:DA:1851:U:H4'	1.42	0.85
24:CX:49:G:H1	24:CX:65:C:N4	1.73	0.85
33:DN:117:PHE:C	33:DN:119:ARG:H	1.83	0.85
59:DA:1217:C:N4	59:DA:1232:G:H1	1.74	0.85
59:DA:2326:C:N4	59:DA:2389:G:H1	1.74	0.85
33:DN:37:LYS:HE2	33:DN:38:HIS:HD2	1.42	0.85
59:DA:1797:C:N4	59:DA:1822:G:H1	1.73	0.85
20:AY:461:ILE:HG13	62:AY:702:FUA:H21	1.58	0.85
11:CL:45:PRO:HA	11:CL:92:ASP:HB3	1.59	0.85
33:DN:114:ARG:CZ	59:DA:527:C:C6	2.60	0.85
59:DA:271(L):C:H42	59:DA:357(F):G:H1	1.22	0.85
59:DA:539:G:N2	59:DA:554:U:O2	2.09	0.85
59:DA:2456:C:H42	59:DA:2495:G:H1	1.24	0.85
59:BA:151:C:H42	59:BA:175:G:H1	1.22	0.85
21:CA:1072:G:H1	21:CA:1103:C:N4	1.75	0.85
22:CW:30:C:H42	22:CW:40:G:H1	1.22	0.85
59:DA:584:C:N3	59:DA:1256:G:N2	2.23	0.85
60:DB:87:G:O2'	60:DB:89(B):A:N6	2.09	0.85
22:AW:2:G:H22	22:AW:72:C:H42	1.25	0.84
20:CY:185:ALA:HB2	20:CY:201:ILE:HG13	1.59	0.84
33:DN:56:ASN:H	33:DN:56:ASN:HD22	1.24	0.84
59:DA:227:A:H61	59:DA:410:G:H21	1.22	0.84
27:DE:13:ARG:HA	27:DE:21:VAL:O	1.77	0.84
59:DA:47:C:N3	59:DA:178:G:N2	2.24	0.84
59:BA:298:G:H21	59:BA:340:A:H62	1.22	0.84
60:DB:85:G:N1	60:DB:91:C:O2	2.09	0.84
21:AA:658:G:H1	21:AA:747:C:H42	1.24	0.84
3:CD:122:ARG:HD3	3:CD:136:PRO:HD3	1.59	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:954:G:N2	21:CA:1227:A:H61	1.74	0.84
24:CX:2:G:H1	24:CX:71:C:H42	0.88	0.84
59:DA:32:C:H42	59:DA:473:G:H1	0.86	0.84
59:DA:869:G:H1	59:DA:908:C:H42	1.24	0.84
59:DA:2075:U:O4	59:DA:2077:A:N7	2.10	0.84
33:DN:72:TYR:HA	33:DN:73:THR:HG22	1.58	0.84
60:DB:14:U:H1'	60:DB:107:U:H1'	1.60	0.84
18:AS:70:LYS:HG3	21:AA:1320:C:H5'	1.60	0.84
24:AX:31:C:N4	24:AX:39:G:H1	1.75	0.84
59:BA:1414:G:N2	59:BA:1588:C:C2	2.45	0.84
33:DN:114:ARG:HB2	59:DA:2779:U:OP2	1.77	0.84
42:DW:58:ALA:HA	42:DW:62:HIS:HB2	1.60	0.84
54:D8:53:PRO:HA	54:D8:56:GLU:HB2	1.60	0.84
1:AB:78:GLN:HG3	1:AB:94:ASN:HB2	1.59	0.84
33:BN:100:GLU:O	33:BN:105:GLY:N	2.11	0.84
59:BA:1414:G:H1	59:BA:1588:C:H42	1.20	0.84
21:CA:408:A:N1	21:CA:434:U:O4	2.11	0.84
59:DA:61:G:N2	59:DA:93:C:N3	2.24	0.84
59:DA:1394:U:H4'	59:DA:1603:A:H4'	1.59	0.84
59:DA:1415:U:O2	59:DA:1587:A:N1	2.10	0.84
59:DA:2650:U:H3	59:DA:2670:A:H2	0.88	0.84
21:CA:1006:C:N4	21:CA:1023:G:H1	1.76	0.84
24:CX:28:C:N3	24:CX:42:G:O6	2.11	0.84
59:DA:134:C:H42	59:DA:145:G:H1	0.84	0.84
55:B9:9:ARG:HH21	55:B9:16:VAL:HG12	1.42	0.83
59:BA:2450:A:H62	59:BA:2501:C:H42	1.22	0.83
21:CA:9:G:H1	21:CA:25:C:H42	1.26	0.83
21:CA:66:G:H1	21:CA:103:C:H42	1.22	0.83
21:CA:186(F):C:H42	21:CA:186(K):G:H1	1.24	0.83
59:DA:692:C:N4	59:DA:770:G:H1	1.74	0.83
59:DA:1831:G:H1	59:DA:1974:C:N4	1.75	0.83
59:DA:2352:A:H62	59:DA:2365:G:H21	1.25	0.83
59:DA:2685:G:H1	59:DA:2724:C:H42	1.24	0.83
59:DA:1314:C:H42	59:DA:1338:G:H1	1.25	0.83
20:AY:614:GLU:HA	20:AY:617:MET:HB3	1.58	0.83
54:B8:53:PRO:HA	54:B8:56:GLU:HB2	1.59	0.83
33:DN:114:ARG:CZ	59:DA:527:C:C1'	2.56	0.83
38:DS:25:ARG:HH12	60:DB:9:G:H5'	1.43	0.83
27:BE:13:ARG:HA	27:BE:21:VAL:O	1.77	0.83
20:CY:22:ASP:HB3	61:CY:701:GDP:H5''	1.60	0.83
21:CA:1419:G:H1	21:CA:1481:U:H3	1.22	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1051:G:N2	59:DA:1108:U:O2	2.10	0.83
59:DA:1855:G:H1	59:DA:1887:C:H42	1.21	0.83
60:DB:11:C:H42	60:DB:109:G:H1	1.21	0.83
60:DB:21:G:H1	60:DB:62:C:H42	1.24	0.83
59:BA:1820:U:H3'	59:BA:1821:A:H8	1.43	0.83
59:BA:2682:U:O4	59:BA:2727:G:N2	2.11	0.83
3:CD:103:ASN:HA	3:CD:106:TYR:HB3	1.61	0.83
21:CA:782:A:N6	21:CA:800:G:H21	1.75	0.83
21:CA:1535:C:N4	23:CV:9:G:H4'	1.92	0.83
25:DC:150:ILE:HA	25:DC:153:ILE:HB	1.59	0.83
59:DA:1011:G:O6	59:DA:1150:C:N3	2.11	0.83
59:DA:2818:G:H1	59:DA:2828:C:H42	1.24	0.83
20:AY:413:ILE:HD11	20:AY:474:ALA:HB1	1.59	0.83
26:BD:244:ARG:NH2	59:BA:1902:C:O2	2.11	0.83
21:CA:104:G:H4'	21:CA:174:C:H4'	1.60	0.83
25:DC:214:TYR:HD2	25:DC:222:SER:HB2	1.42	0.83
59:DA:584:C:H42	59:DA:1256:G:H1	0.85	0.83
59:DA:1091:G:H1	59:DA:1100:C:H42	1.25	0.83
21:AA:429:U:O2	21:AA:431:A:N7	2.11	0.83
12:CM:108:ARG:HH11	12:CM:108:ARG:HG3	1.44	0.83
20:CY:682:GLN:HA	20:CY:685:GLU:HB2	1.58	0.83
21:CA:156:G:H1	21:CA:165:C:N4	1.75	0.83
59:BA:404:C:H4'	59:BA:405:U:H5'	1.60	0.83
59:BA:2061:G:H1	59:BA:2451:A:H61	1.22	0.83
21:CA:68(H):G:H1	21:CA:68(R):C:N4	1.76	0.83
35:DP:66:GLY:HA2	59:DA:2415:G:H4'	1.61	0.83
59:DA:225:A:N6	59:DA:230:U:H3	1.76	0.83
59:DA:1044:G:H4'	59:DA:1047:G:H5''	1.61	0.83
22:AW:4:U:H3	22:AW:69:A:N6	1.75	0.83
21:CA:505:G:H1	21:CA:526:C:N4	1.75	0.83
21:CA:933:G:H1	21:CA:1384:C:H42	1.26	0.83
31:DJ:110:UNK:HA	31:DJ:116:UNK:HA	1.60	0.83
59:DA:2064:C:H42	59:DA:2446:G:H1	1.26	0.83
10:AK:111:ASP:HA	17:AR:84:LYS:HG3	1.61	0.83
20:CY:467:LYS:HA	20:CY:471:LYS:HA	1.60	0.83
21:CA:593:G:H1	21:CA:646:U:H3	1.21	0.83
59:DA:1030:G:H1	59:DA:1124:C:H42	1.27	0.83
59:DA:1414:G:H1	59:DA:1588:C:H42	1.27	0.83
48:B2:14:ARG:HH22	59:BA:78:A:H5'	1.43	0.82
59:BA:540:C:N3	59:BA:553:G:N2	2.24	0.82
21:CA:375:U:H3	21:CA:389:A:H61	1.21	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2477:C:O2'	59:DA:2479:G:N7	2.12	0.82
59:BA:828:U:O4	59:BA:2246:G:N2	2.12	0.82
59:BA:996:A:N1	59:BA:1159:U:O4	2.12	0.82
59:BA:1858:G:H1'	59:BA:1884:A:H61	1.43	0.82
21:CA:152:A:N6	21:CA:169:C:N4	2.25	0.82
21:CA:1002:G:N2	21:CA:1038:C:C2	2.47	0.82
21:CA:1003:G:N2	21:CA:1037:C:C2	2.48	0.82
24:CX:1:G:C6	24:CX:72:C:C4	2.64	0.82
28:DF:3:GLU:HB2	28:DF:24:LEU:H	1.43	0.82
33:DN:113:GLY:CA	33:DN:117:PHE:HB2	2.09	0.82
38:DS:13:ARG:O	38:DS:15:ARG:N	2.12	0.82
59:DA:962:G:H1'	59:DA:2496:C:H4'	1.60	0.82
60:DB:38:C:H2'	60:DB:39:A:H8	1.42	0.82
36:BQ:12:GLN:HA	59:BA:910:A:H62	1.45	0.82
21:CA:773:G:H1	21:CA:806:C:N4	1.76	0.82
27:DE:108:SER:HB3	27:DE:189:PRO:HB2	1.61	0.82
59:DA:32:C:N3	59:DA:473:G:N2	2.26	0.82
59:DA:75:G:H1	59:DA:111:A:H2	1.26	0.82
59:DA:659:C:H2'	59:DA:660:G:H8	1.45	0.82
59:DA:1356:G:H1	59:DA:1375:C:N4	1.76	0.82
19:AT:23:ARG:HH12	19:AT:24:LEU:HD23	1.44	0.82
29:BG:113:ARG:HA	29:BG:113:ARG:HE	1.43	0.82
2:CC:88:ARG:HH21	2:CC:100:ALA:HA	1.43	0.82
21:CA:1535:C:H41	23:CV:9:G:H4'	1.43	0.82
59:DA:1040:C:N4	59:DA:1115:G:H1	1.78	0.82
59:DA:2283:C:H42	59:DA:2325:G:H1	1.25	0.82
59:BA:584:C:H42	59:BA:1256:G:H1	1.24	0.82
59:BA:1288:U:H3	59:BA:1326:U:H3	1.26	0.82
59:BA:1312:U:O2	59:BA:1339:G:N1	2.12	0.82
21:CA:998(A):C:N3	21:CA:1042:G:N2	2.27	0.82
21:AA:829:G:H2'	21:AA:830:G:C8	2.14	0.82
59:BA:1968:G:H5''	63:BA:2904:NMY:N2	1.95	0.82
25:DC:20:VAL:HG13	25:DC:226:ASN:HB2	1.61	0.82
59:DA:948:G:N2	59:DA:969:U:O2	2.10	0.82
21:CA:1303:C:N4	21:CA:1334:G:H1	1.76	0.82
59:DA:2259:G:O6	59:DA:2281:C:N3	2.13	0.82
59:DA:2520:C:N3	59:DA:2545:G:N2	2.23	0.82
20:AY:633:GLY:HA3	20:AY:644:ARG:HB2	1.62	0.82
36:BQ:34:LEU:HB2	36:BQ:118:LEU:HD22	1.61	0.82
25:DC:138:LEU:HD22	25:DC:139:PRO:HD2	1.61	0.82
26:DD:88:ARG:HE	59:DA:1817:G:H5''	1.45	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:840:C:H42	59:DA:938:G:H1	1.25	0.82
60:BB:56:G:H21	60:BB:59:A:H61	1.28	0.82
20:CY:20:HIS:HB2	20:CY:117:GLN:HB3	1.61	0.82
21:CA:1126:U:O4	21:CA:1148:U:O4	1.98	0.82
32:DK:23:VAL:HG13	32:DK:27:LEU:HB3	1.60	0.82
59:DA:131:G:H1	59:DA:148:C:N4	1.78	0.82
59:DA:1281:G:H1	59:DA:1289:C:N4	1.78	0.82
59:DA:1846:G:H1	59:DA:1894:C:H42	1.27	0.82
21:AA:1003:G:H1	21:AA:1037:C:H42	1.28	0.82
36:BQ:70:PRO:HA	36:BQ:95:ALA:HB2	1.60	0.82
59:BA:586:A:H62	59:BA:1251:C:N4	1.77	0.82
59:DA:406:G:N2	59:DA:421:U:O2	2.12	0.82
59:DA:1297:C:H42	59:DA:1643:G:H1	1.26	0.82
21:AA:956:U:O2	21:AA:960:U:O2	1.96	0.81
35:BP:43:GLY:HA2	59:BA:670:A:H5''	1.62	0.81
59:DA:183:C:H42	59:DA:214:G:H1	1.27	0.81
59:DA:1207:C:N3	59:DA:1239:G:N2	2.27	0.81
59:DA:1712(B):G:H1	59:DA:1712(P):C:H42	1.22	0.81
59:BA:692:C:N4	59:BA:770:G:H1	1.78	0.81
63:BA:2904:NMY:H19	63:BA:2904:NMY:H16	0.83	0.81
3:CD:13:ARG:NH2	3:CD:32:ALA:O	2.12	0.81
33:DN:74:ARG:HA	33:DN:83:LYS:O	1.79	0.81
55:D9:27:CYS:HG	55:D9:32:HIS:HD1	1.26	0.81
59:DA:466:A:H1'	59:DA:683:C:H4'	1.60	0.81
59:DA:1768:U:H3	59:DA:1984:G:H1	1.25	0.81
63:AA:1601:NMY:C16	63:AA:1601:NMY:C19	2.35	0.81
59:BA:32:C:N4	59:BA:473:G:H1	1.77	0.81
59:BA:113:G:H5'	59:BA:114:U:H5'	1.61	0.81
59:BA:1220:C:H42	59:BA:1229:G:H1	1.29	0.81
59:BA:2681:C:H5	59:BA:2725:A:N6	1.67	0.81
60:BB:56:G:H21	60:BB:59:A:N6	1.78	0.81
8:CI:23:ASN:H	8:CI:60:ASP:HB2	1.45	0.81
21:CA:1028(B):C:H42	21:CA:1028(G):G:H1	1.25	0.81
21:CA:1123:A:H2	21:CA:1150:U:H3	1.27	0.81
21:CA:1414:U:H2'	21:CA:1415:G:C8	2.14	0.81
22:CW:15:G:N2	22:CW:48:C:C2	2.47	0.81
22:CW:50:C:N3	22:CW:65:U:O4	2.13	0.81
59:DA:521:G:H2'	59:DA:522:G:H8	1.46	0.81
59:DA:871:U:O2	59:DA:906:G:N1	2.13	0.81
59:DA:1064:C:N4	59:DA:1070:A:OP1	2.12	0.81
60:DB:82:G:H1	60:DB:94:C:N4	1.76	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:815:A:N6	21:AA:1508:G:H21	1.78	0.81
21:CA:998:G:H1	21:CA:1043:C:H42	0.86	0.81
59:DA:2679:A:H61	59:DA:2728:U:H3	1.23	0.81
47:B1:18:ILE:CA	47:B1:20:ARG:H	1.93	0.81
10:CK:62:GLN:HG2	10:CK:93:GLN:HB3	1.62	0.81
59:DA:1028:A:N6	59:DA:1126:A:OP1	2.13	0.81
59:DA:2525:G:H1	59:DA:2538:C:N4	1.77	0.81
63:AA:1601:NMY:H19	63:AA:1601:NMY:H16	0.83	0.81
59:BA:1955:U:H3	59:BA:2552:U:HO2'	1.25	0.81
11:CL:85:ILE:HG13	11:CL:98:TYR:HB3	1.61	0.81
48:D2:21:LEU:HD22	48:D2:64:LEU:HB2	1.60	0.81
59:DA:595:C:N4	59:DA:662:G:H1	1.79	0.81
2:CC:50:ALA:HB1	2:CC:72:LYS:HG3	1.63	0.81
42:DW:72:LYS:H	42:DW:107:LEU:HA	1.44	0.81
59:DA:542:C:H42	59:DA:551:G:H1	1.28	0.81
59:DA:2631:G:H1	59:DA:2787:C:N4	1.78	0.81
21:AA:1127:G:N1	21:AA:1145:C:O2	2.13	0.81
22:AW:2:G:N2	22:AW:72:C:H42	1.78	0.81
24:AX:2:G:H1	24:AX:71:C:H42	1.29	0.81
2:CC:161:GLU:HG3	21:CA:1055:A:H4'	1.61	0.81
59:DA:1414:G:N2	59:DA:1588:C:N3	2.27	0.81
33:BN:116:LEU:C	33:BN:118:LYS:H	1.88	0.81
21:CA:598:U:H3	21:CA:640:A:H2	1.28	0.81
59:DA:2061:G:H1	59:DA:2451:A:N6	1.76	0.81
30:BH:85:LYS:HE2	30:BH:141:VAL:HG22	1.63	0.81
21:CA:506:G:O6	21:CA:525:C:N3	2.13	0.81
33:BN:37:LYS:HB3	59:BA:1138:G:H21	1.46	0.80
43:BX:16:LYS:HE3	59:BA:1393:A:H62	1.43	0.80
59:BA:1207:C:H42	59:BA:1239:G:H1	1.27	0.80
63:BA:2903:NMY:H19	63:BA:2903:NMY:H16	0.83	0.80
9:CJ:51:ARG:NH1	21:CA:1061:G:OP1	2.13	0.80
21:CA:651:C:N4	21:CA:753:A:OP2	2.14	0.80
40:DU:25:TRP:CD1	40:DU:26:GLY:H	1.99	0.80
59:DA:2650:U:O4	59:DA:2670:A:N1	2.13	0.80
22:CW:15:G:C2	22:CW:48:C:O2	2.34	0.80
29:DG:113:ARG:O	29:DG:114:ILE:C	2.24	0.80
59:DA:2706:G:H4'	59:DA:2851:A:H5''	1.63	0.80
59:DA:2814:C:N4	59:DA:2886:G:H1	1.78	0.80
63:DA:2901:NMY:H19	63:DA:2901:NMY:H16	0.83	0.80
12:AM:108:ARG:HH12	12:AM:111:LYS:HB3	1.46	0.80
51:B5:36:CYS:SG	51:B5:37:LYS:N	2.53	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:79:VAL:HG12	26:DD:80:ALA:H	1.45	0.80
32:DK:130:SER:OG	59:DA:1059:G:N2	2.13	0.80
38:DS:26:LEU:HG	38:DS:39:ILE:HG13	1.61	0.80
59:DA:1207:C:N4	59:DA:1239:G:H1	1.78	0.80
59:DA:2532:G:H21	59:DA:2663:G:N2	1.78	0.80
60:BB:3:C:O2	60:BB:117:G:N2	2.14	0.80
21:CA:1245:A:N1	21:CA:1292:U:O4	2.14	0.80
22:CW:7:G:H1	22:CW:66:C:N4	1.79	0.80
59:DA:1413:G:N2	59:DA:1589:C:N3	2.26	0.80
21:AA:1428:A:H61	21:AA:1472:U:H3	1.30	0.80
59:BA:1933:G:H4'	63:BA:2902:NMY:H71	1.47	0.80
10:CK:27:ASN:ND2	10:CK:44:SER:OG	2.14	0.80
20:CY:656:ALA:HA	20:CY:659:LEU:HB3	1.63	0.80
21:CA:68(H):G:N2	21:CA:68(R):C:N3	2.28	0.80
21:CA:1241:G:N2	21:CA:1296:C:N3	2.25	0.80
21:CA:1538:C:N3	23:CV:7:G:C2	2.50	0.80
30:DH:98:LEU:HB2	30:DH:125:VAL:HB	1.61	0.80
59:DA:16:G:H1	59:DA:524:U:H3	1.25	0.80
59:DA:28:A:N6	59:DA:512:G:H1'	1.96	0.80
59:BA:90:U:H4'	59:BA:91:A:H5'	1.63	0.80
59:BA:585:G:H21	59:BA:1254:A:H62	0.82	0.80
22:CW:50:C:N4	22:CW:64:G:N1	2.28	0.80
25:DC:46:ALA:HA	25:DC:212:SER:O	1.82	0.80
25:BC:79:ALA:HB1	25:BC:83:LYS:HB2	1.63	0.80
27:DE:82:ARG:HH21	59:DA:2637:U:H5''	1.47	0.80
59:DA:67:U:H2'	59:DA:68:G:H8	1.45	0.80
63:DA:2901:NMY:C16	63:DA:2901:NMY:C19	2.36	0.80
21:AA:1157:A:N6	21:AA:1178:G:C2	2.50	0.80
59:BA:271(S):C:N4	59:BA:357(C):G:H1	1.79	0.80
59:BA:761:A:H5''	59:BA:762:U:H5''	1.64	0.80
59:BA:1413:G:H1	59:BA:1589:C:H42	1.27	0.80
21:CA:1003:G:H2'	21:CA:1004:A:H4'	1.63	0.80
27:DE:139:GLY:HA2	59:DA:2578:G:H1'	1.64	0.80
59:DA:1347:G:N2	59:DA:1599:C:N3	2.27	0.80
59:DA:1442:G:H1	59:DA:1549:C:H42	1.28	0.80
59:BA:954:G:O6	59:BA:963:U:O2	2.00	0.80
59:BA:1937:A:HO2'	59:BA:1939:U:H6	1.30	0.80
59:BA:1971:A:H5'	63:BA:2904:NMY:H232	1.64	0.80
21:CA:1001:G:N1	21:CA:1039:C:O2	2.14	0.80
60:DB:14:U:O2	60:DB:106:G:N2	2.14	0.80
21:AA:408:A:N1	21:AA:434:U:O4	2.14	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:4:ASP:HA	29:BG:8:LYS:HD3	1.64	0.80
4:CE:50:GLU:HG3	4:CE:52:PRO:HD2	1.63	0.80
7:CH:96:GLY:H	7:CH:99:GLU:HB2	1.47	0.80
42:BW:53:SER:O	42:BW:57:ASN:ND2	2.16	0.79
59:DA:701:G:H1	59:DA:731:C:N4	1.79	0.79
16:AQ:66:SER:HB3	16:AQ:69:LYS:HB3	1.64	0.79
29:BG:72:ARG:HB3	29:BG:86:MET:HA	1.62	0.79
21:CA:33:A:H2'	21:CA:34:C:C6	2.17	0.79
24:CX:49:G:N2	24:CX:65:C:C2	2.50	0.79
38:DS:39:ILE:HD11	38:DS:73:LEU:HD21	1.64	0.79
59:DA:1468(J):G:H2'	59:DA:1468(K):G:H8	1.48	0.79
60:DB:86:G:N2	60:DB:90:C:N3	2.29	0.79
59:BA:1858:G:H1'	59:BA:1884:A:N6	1.98	0.79
21:CA:34:C:H2'	21:CA:35:G:H8	1.47	0.79
21:CA:987:G:N2	21:CA:1218:C:N3	2.25	0.79
59:DA:691:C:N3	59:DA:771:G:N2	2.29	0.79
59:DA:2814:C:N3	59:DA:2886:G:N2	2.29	0.79
2:AC:17:ASP:O	2:AC:54:ARG:NH2	2.15	0.79
33:BN:111:PRO:O	33:BN:114:ARG:N	2.15	0.79
59:BA:1578:U:H2'	59:BA:1579:A:H5''	1.63	0.79
33:DN:35:ARG:HD3	33:DN:76:SER:HA	1.63	0.79
36:DQ:85:LYS:HB2	46:D0:7:LEU:HD22	1.61	0.79
59:DA:1138:G:H2'	59:DA:1139:G:O4'	1.83	0.79
21:AA:1427:U:H2'	21:AA:1428:A:H8	1.46	0.79
24:AX:2:G:H1	24:AX:71:C:N4	1.80	0.79
33:BN:77:GLY:N	33:BN:82:LEU:O	2.15	0.79
59:BA:880:G:H2'	59:BA:881:G:H8	1.46	0.79
63:BA:2902:NMY:H19	63:BA:2902:NMY:H16	0.83	0.79
20:CY:620:VAL:HG12	20:CY:662:LYS:HB3	1.64	0.79
21:CA:612:C:N4	21:CA:628:G:H1	1.80	0.79
21:CA:1047:G:N2	21:CA:1210:C:N3	2.28	0.79
63:CA:1601:NMY:H19	63:CA:1601:NMY:H16	0.83	0.79
52:D6:41:PRO:HD3	52:D6:47:THR:HG22	1.64	0.79
59:DA:1052:C:C2	59:DA:1107:G:N2	2.44	0.79
4:AE:39:GLY:HA2	4:AE:71:LEU:HD11	1.63	0.79
34:BO:19:ILE:HG22	34:BO:43:VAL:HA	1.63	0.79
34:BO:59:LYS:HB3	34:BO:87:ILE:HG13	1.62	0.79
59:BA:817:C:H3'	59:BA:818:G:C8	2.18	0.79
59:BA:2559:C:H2'	59:BA:2560:C:C6	2.18	0.79
1:CB:69:LEU:HB2	1:CB:162:ILE:HB	1.64	0.79
1:CB:91:PRO:HG2	1:CB:155:LEU:HB2	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:618:C:N4	21:CA:621:A:N7	2.30	0.79
59:DA:861:A:H62	59:DA:916:G:N2	1.76	0.79
21:AA:458(A):G:N2	21:AA:458(E):A:C8	2.51	0.79
21:AA:1436:U:O4	21:AA:1465:C:N3	2.16	0.79
34:BO:63:VAL:HG23	34:BO:64:ARG:HG3	1.63	0.79
39:BT:47:GLY:HA3	39:BT:65:LYS:HD3	1.64	0.79
59:BA:294:A:H62	59:BA:344:G:H21	1.29	0.79
16:CQ:43:LEU:HD12	16:CQ:69:LYS:HA	1.64	0.79
21:CA:975:A:H4'	21:CA:976:G:H5''	1.65	0.79
21:AA:249:U:H3	21:AA:275:G:H1	1.25	0.79
24:AX:27:C:N4	24:AX:43:G:H1	1.80	0.79
40:BU:25:TRP:HD1	40:BU:26:GLY:H	1.29	0.79
59:BA:1583:A:H61	21:CA:838(A):U:H5''	1.47	0.79
21:CA:367:U:H3	21:CA:393:A:N6	1.81	0.79
59:DA:1076:C:H2'	59:DA:1077:A:H4'	1.65	0.79
11:AL:41:ARG:HD2	11:AL:55:VAL:HG11	1.65	0.79
21:AA:898:G:N2	21:AA:901:A:OP2	2.15	0.79
59:BA:673:C:H42	59:BA:807:U:H3	1.28	0.79
59:BA:713:G:H21	59:BA:718:A:H62	1.28	0.79
59:BA:2653:U:H3	59:BA:2667:C:H42	1.31	0.79
11:CL:45:PRO:HD2	11:CL:49:ASN:HB2	1.62	0.79
1:AB:132:LYS:HG2	21:AA:1158:C:H1'	1.64	0.79
1:CB:162:ILE:O	1:CB:162:ILE:HG13	1.81	0.79
21:CA:456:C:H42	21:CA:476:G:H1	1.29	0.79
38:DS:30:ARG:HH22	38:DS:62:LYS:HB3	1.47	0.79
59:DA:271(F):G:H1	59:DA:357(M):C:H42	0.80	0.79
59:DA:1506(I):U:H2'	59:DA:1506(J):G:C8	2.18	0.79
2:AC:142:MET:HG3	2:AC:170:GLN:HB3	1.63	0.78
25:BC:139:PRO:HA	25:BC:145:THR:HG21	1.63	0.78
59:BA:2065:C:H2'	59:BA:2066:C:H6	1.48	0.78
21:CA:720:C:H3'	21:CA:721:G:H2'	1.64	0.78
37:DR:9:LYS:HG3	37:DR:43:GLU:HB2	1.64	0.78
39:DT:5:ALA:HA	39:DT:8:LYS:HB2	1.65	0.78
50:D4:33:VAL:HG12	50:D4:34:GLU:HG3	1.65	0.78
59:DA:639:U:O2	59:DA:649:G:N2	2.13	0.78
3:AD:172:PRO:HD2	3:AD:194:LEU:HD21	1.65	0.78
24:AX:53:G:N1	24:AX:61:C:N4	2.21	0.78
59:BA:698:C:O2'	59:BA:734:A:N6	2.17	0.78
19:CT:40:ALA:HB2	19:CT:55:ILE:HG21	1.66	0.78
21:CA:930:C:H42	21:CA:1387:G:H1	1.32	0.78
21:CA:1002:G:H1	21:CA:1038:C:H42	1.30	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:35:GLY:HA2	11:AL:58:VAL:HA	1.65	0.78
21:AA:618:C:N4	21:AA:621:A:N7	2.31	0.78
59:BA:2726:U:O2'	59:BA:2727:G:H8	1.67	0.78
21:CA:973:G:H3'	21:CA:974:A:H5''	1.64	0.78
22:CW:31:A:N1	22:CW:39:U:O4	2.16	0.78
20:AY:384:ILE:HG12	20:AY:387:ASP:HB3	1.65	0.78
33:BN:15:LEU:HA	33:BN:52:VAL:HA	1.65	0.78
39:BT:30:VAL:HA	39:BT:44:ASP:HB3	1.63	0.78
21:CA:112:G:H1	21:CA:315:A:H61	1.32	0.78
21:CA:443:C:H42	21:CA:491:G:H1	0.79	0.78
21:CA:829:G:H1	21:CA:857:C:H42	1.30	0.78
21:CA:979:C:OP1	21:CA:1223:C:N4	2.16	0.78
21:CA:1422:G:H1	21:CA:1478:C:H42	1.31	0.78
59:DA:1166:C:N4	59:DA:1183:G:H1	1.81	0.78
59:DA:2222:G:H2'	59:DA:2223:G:C8	2.19	0.78
59:DA:2743:C:H42	59:DA:2761:G:H1	1.29	0.78
6:AG:51:GLN:NE2	6:AG:56:GLN:O	2.16	0.78
21:CA:20:U:H3	21:CA:915:A:H61	1.31	0.78
52:B6:5:VAL:HB	59:BA:2283:C:H5'	1.64	0.78
59:BA:999:U:O2	59:BA:1155:A:N7	2.17	0.78
59:BA:1636:C:H2'	59:BA:1637:A:C8	2.18	0.78
12:CM:91:ARG:HH22	12:CM:103:THR:HG21	1.49	0.78
33:DN:114:ARG:NH2	59:DA:527:C:C6	2.51	0.78
34:DO:88:ASN:ND2	34:DO:92:GLU:O	2.16	0.78
47:D1:34:THR:HG21	59:DA:2432:A:H1'	1.64	0.78
59:DA:529:A:H62	59:DA:2041:U:H3	1.32	0.78
59:DA:1779:U:OP2	59:DA:1784:A:N6	2.16	0.78
11:AL:30:ALA:HB1	11:AL:33:ARG:HB2	1.66	0.78
21:AA:1354:C:H2'	21:AA:1355:G:C8	2.18	0.78
25:BC:214:TYR:HD2	25:BC:222:SER:HB2	1.48	0.78
29:BG:113:ARG:O	29:BG:114:ILE:O	1.99	0.78
33:BN:35:ARG:HB2	33:BN:75:TYR:O	1.83	0.78
59:BA:1043:C:O2	59:BA:1048:A:O2'	2.00	0.78
59:DA:1666:G:N2	59:DA:1994:C:N3	2.25	0.78
59:DA:2396:G:H1	59:DA:2420:C:H42	1.32	0.78
21:AA:967:C:H3'	21:AA:968:A:H2'	1.65	0.78
24:AX:1:G:H1	24:AX:72:C:H42	1.29	0.78
31:BJ:25:UNK:HA	31:BJ:80:UNK:HA	1.64	0.78
35:BP:62:LEU:HB3	59:BA:2393:A:H5''	1.66	0.78
59:BA:722:A:H2'	59:BA:723:G:C8	2.18	0.78
59:BA:1857:G:N2	59:BA:1885:A:H62	1.80	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2255:G:H3'	59:BA:2256:G:O4'	1.82	0.78
59:BA:2701:C:H2'	59:BA:2702:U:H2'	1.65	0.78
21:CA:144:G:H1	21:CA:178:C:N4	1.81	0.78
21:CA:186(E):C:H42	21:CA:186(L):G:H1	0.81	0.78
21:CA:408:A:H2	21:CA:434:U:C2	2.01	0.78
60:DB:81:G:O6	60:DB:95:U:O2	2.00	0.78
44:DY:51:VAL:HG12	44:DY:53:PRO:HD2	1.66	0.78
50:B4:9:LEU:HA	50:B4:27:THR:HA	1.66	0.78
59:BA:2450:A:H62	59:BA:2501:C:N4	1.81	0.78
21:CA:68(E):G:N2	21:CA:68(U):U:O2	2.15	0.78
59:DA:2842:G:H1	59:DA:2875:C:H42	0.82	0.78
24:AX:53:G:C2	24:AX:61:C:N3	2.52	0.77
54:B8:5:LYS:NZ	59:BA:254:G:N7	2.32	0.77
59:BA:470:A:H2'	59:BA:471:A:H8	1.48	0.77
21:CA:1514:C:N4	21:CA:1521:G:H1	1.82	0.77
27:DE:134:ILE:HG12	27:DE:135:HIS:H	1.48	0.77
59:DA:1629:U:O2	59:DA:1637:A:N1	2.17	0.77
59:DA:1630(A):C:N3	59:DA:1635:G:O6	2.17	0.77
59:DA:2267:A:N1	59:DA:2272:U:O2	2.16	0.77
59:DA:2345:G:H1'	59:DA:2382:G:H5'	1.65	0.77
59:DA:2489:G:H4'	59:DA:2518:A:H61	1.49	0.77
59:DA:2650:U:N3	59:DA:2670:A:C2	2.47	0.77
59:DA:2812:G:H2'	59:DA:2813:A:H8	1.47	0.77
20:AY:66:THR:N	62:AY:702:FUA:H121	2.00	0.77
59:BA:150:C:N4	59:BA:176:G:H1	1.81	0.77
20:CY:409:ILE:HG21	20:CY:456:GLU:HG2	1.65	0.77
28:DF:123:LEU:HD13	28:DF:192:LEU:HD23	1.65	0.77
36:DQ:58:PHE:HZ	36:DQ:64:ILE:HD11	1.48	0.77
37:DR:105:ARG:HH12	42:DW:41:LYS:H	1.31	0.77
38:DS:85:VAL:HG22	38:DS:106:ARG:HD3	1.65	0.77
59:DA:227:A:H61	59:DA:410:G:N2	1.82	0.77
59:DA:1496:A:H1'	59:DA:1577:C:O2'	1.84	0.77
3:AD:5:ILE:HG21	21:AA:406:G:H5''	1.65	0.77
26:BD:59:LYS:HB3	59:BA:1568:G:H4'	1.66	0.77
26:BD:148:GLU:HB3	26:BD:151:LYS:HG3	1.65	0.77
26:DD:165:ILE:HG22	26:DD:166:GLN:H	1.48	0.77
33:DN:78:TYR:HE2	33:DN:115:ARG:HH21	0.84	0.77
54:D8:34:TRP:CG	54:D8:35:GLN:H	2.00	0.77
55:D9:18:ARG:NH1	59:DA:1123:C:O2'	2.16	0.77
24:AX:28:C:N3	24:AX:42:G:O6	2.17	0.77
27:BE:13:ARG:NH1	34:BO:74:GLY:O	2.13	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BR:4:LEU:HB2	59:BA:1653:G:H3'	1.66	0.77
44:BY:97:ARG:HH11	44:BY:97:ARG:HA	1.49	0.77
21:CA:566:G:H4'	21:CA:567:G:H5'	1.65	0.77
21:CA:967:C:H3'	21:CA:968:A:H2'	1.65	0.77
55:D9:6:SER:HB3	59:DA:2466:C:H5''	1.66	0.77
59:DA:270(G):C:N4	59:DA:270(S):G:H1	1.83	0.77
25:BC:138:LEU:HD22	25:BC:139:PRO:HD2	1.67	0.77
27:BE:107:THR:HG23	27:BE:195:LEU:HB3	1.66	0.77
59:BA:827:U:H1'	59:BA:2246:G:H1'	1.66	0.77
11:CL:6:THR:O	11:CL:8:ASN:N	2.18	0.77
21:CA:618:C:H5'	21:CA:619:U:H5''	1.66	0.77
21:CA:1139:G:N2	21:CA:1142:G:O6	2.18	0.77
33:DN:114:ARG:NH2	59:DA:527:C:C2'	2.48	0.77
46:D0:27:GLU:HA	46:D0:67:VAL:HB	1.65	0.77
21:AA:1405:G:H3'	63:AA:1601:NMY:C23	2.15	0.77
2:CC:59:ARG:HD3	2:CC:64:VAL:HG22	1.66	0.77
10:CK:22:HIS:HB3	10:CK:29:ILE:HG22	1.66	0.77
30:DH:41:MET:HE1	30:DH:43:VAL:HG22	1.67	0.77
34:DO:68:GLU:HA	34:DO:78:ARG:HB3	1.67	0.77
40:DU:55:ARG:HH12	59:DA:977:G:H5'	1.48	0.77
59:DA:23:G:H1	59:DA:517:C:H42	1.33	0.77
59:DA:1468(J):G:N2	59:DA:1506(H):C:N3	2.26	0.77
59:DA:1710:C:N4	59:DA:1748:G:H1	1.83	0.77
59:DA:1804:C:H42	59:DA:1813:G:H1	1.30	0.77
59:DA:2427:C:H5''	59:DA:2429:G:H5'	1.67	0.77
20:AY:507:TYR:H	20:AY:577:SER:HA	1.49	0.77
21:AA:413:G:H4'	21:AA:414:A:H5''	1.66	0.77
33:BN:26:LEU:HD21	33:BN:99:LEU:HG	1.65	0.77
40:BU:55:ARG:HD3	59:BA:1155:A:H5'	1.66	0.77
59:BA:1459:G:O2'	59:BA:1461:G:OP2	2.03	0.77
23:CV:9:G:H3'	23:CV:10:G:N3	1.99	0.77
59:DA:592:G:H1	59:DA:665:C:N4	1.82	0.77
59:DA:1345:C:N3	59:DA:1601:G:N2	2.28	0.77
59:DA:2404:C:H42	59:DA:2413:G:H1	1.32	0.77
13:AN:24:CYS:HB2	13:AN:40:CYS:H	1.49	0.77
13:AN:60:SER:HB2	21:AA:1187:G:H21	1.50	0.77
28:BF:154:VAL:HG12	28:BF:156:LEU:HB3	1.65	0.77
59:BA:270(A):A:H62	59:BA:270(Y):G:H21	1.30	0.77
59:BA:589:C:H42	59:BA:668:G:H1	1.32	0.77
59:BA:1416:G:H1	59:BA:1582:C:H42	1.29	0.77
59:BA:1947:C:H2'	59:BA:1948:G:C8	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2122:U:O4	59:BA:2176:A:N1	2.18	0.77
60:BB:30:C:N3	60:BB:54:G:N2	2.32	0.77
22:CW:4:U:O2	22:CW:69:A:N1	2.17	0.77
59:DA:413:C:H42	59:DA:2410:G:H1	1.29	0.77
59:DA:1168:G:H1	59:DA:1181:C:N4	1.83	0.77
60:DB:70:C:N3	60:DB:106:G:N2	2.28	0.77
39:BT:53:ARG:NH2	39:BT:58:ASN:O	2.17	0.77
59:BA:1311:G:H21	59:BA:1603:A:H62	0.81	0.77
4:CE:78:HIS:HB2	7:CH:104:ARG:HG3	1.65	0.77
26:DD:108:PRO:HA	26:DD:197:GLY:H	1.47	0.77
43:DX:57:LEU:HB3	59:DA:1341:U:H4'	1.65	0.77
59:DA:956:G:O2'	59:DA:959:A:N6	2.16	0.77
59:DA:2636:U:H2'	59:DA:2637:U:C6	2.20	0.77
21:AA:112:G:HO2'	21:AA:354:G:HO2'	1.24	0.77
59:BA:2103:C:H42	59:BA:2186:G:H1	1.33	0.77
21:CA:27:G:N2	21:CA:556:C:N3	2.30	0.77
21:CA:1003:G:N2	21:CA:1037:C:N3	2.33	0.77
60:DB:23:G:H1	60:DB:60:C:N4	1.83	0.77
21:AA:1406:U:OP2	63:AA:1601:NMY:H232	1.85	0.76
33:BN:71:ILE:H	33:BN:87:LEU:HA	1.48	0.76
34:BO:23:ARG:NH2	59:BA:2547:U:O2	2.17	0.76
59:BA:1820:U:H3'	59:BA:1821:A:C8	2.20	0.76
59:BA:2751:G:N2	59:BA:2751:G:OP1	2.18	0.76
23:CV:19:G:H1	24:CX:36:C:H42	0.81	0.76
26:DD:256:GLY:H	59:DA:1796:U:H4'	1.50	0.76
59:DA:2139:C:N3	59:DA:2152:G:O6	2.18	0.76
21:AA:782:A:H62	21:AA:800:G:H21	0.82	0.76
21:AA:1200:C:O2	21:AA:1205:U:N3	2.18	0.76
59:BA:729:G:H4'	59:BA:763:G:H5'	1.66	0.76
59:BA:2549:G:H2'	59:BA:2550:G:C8	2.20	0.76
3:CD:13:ARG:NH1	3:CD:36:ARG:O	2.19	0.76
26:DD:100:GLY:HA3	59:DA:1500:G:H21	1.48	0.76
60:DB:38:C:H2'	60:DB:39:A:C8	2.20	0.76
2:AC:11:ARG:O	2:AC:13:GLY:N	2.18	0.76
16:AQ:60:ILE:HG23	16:AQ:72:ARG:HB3	1.68	0.76
31:BJ:23:UNK:O	31:BJ:85:UNK:N	2.18	0.76
59:BA:1172:G:O2'	59:BA:1177:A:N6	2.19	0.76
21:CA:1166:G:N2	21:CA:1170:A:OP2	2.18	0.76
21:CA:1324:A:H5''	21:CA:1362(A):C:H5'	1.68	0.76
21:CA:1494:G:P	63:CA:1601:NMY:H81	2.25	0.76
59:DA:630:G:N2	59:DA:633:A:OP2	2.17	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:861:A:N6	59:DA:916:G:H21	1.79	0.76
59:DA:1324:G:H1	59:DA:1330:C:H42	0.79	0.76
59:BA:2121:G:H1	59:BA:2177:C:H42	1.31	0.76
21:CA:371:G:H1	21:CA:390:C:N4	1.82	0.76
21:CA:953:G:H5''	21:CA:965:A:H2	1.51	0.76
28:DF:54:ARG:NH1	59:DA:801:G:O4'	2.19	0.76
33:DN:71:ILE:O	33:DN:72:TYR:HB2	1.84	0.76
33:DN:84:LYS:NZ	59:DA:2040:C:OP1	2.17	0.76
33:DN:85:ILE:N	33:DN:106:MET:HA	2.00	0.76
59:DA:2359:C:N4	59:DA:2428:G:H1	1.81	0.76
18:AS:52:TYR:OH	21:AA:986:A:N3	2.19	0.76
38:BS:40:ILE:HA	38:BS:47:THR:HA	1.65	0.76
59:BA:1003:G:H1	59:BA:1152:C:H42	1.33	0.76
21:CA:354:G:N2	21:CA:388:G:O2'	2.18	0.76
21:CA:616:G:H1	21:CA:624:C:H42	1.31	0.76
36:DQ:34:LEU:HB2	36:DQ:118:LEU:HD13	1.66	0.76
41:DV:56:SER:HB2	41:DV:100:ARG:HE	1.51	0.76
59:DA:582:G:H1	59:DA:1258:C:N4	1.82	0.76
59:DA:1312:U:O4	59:DA:1340:U:O4	2.04	0.76
60:DB:85:G:O6	60:DB:91:C:N3	2.18	0.76
1:AB:69:LEU:HB3	1:AB:71:VAL:HG23	1.68	0.76
20:AY:135:PHE:O	20:AY:137:ASN:N	2.18	0.76
28:BF:3:GLU:HA	28:BF:24:LEU:HB2	1.66	0.76
36:BQ:124:LYS:NZ	59:BA:2483:C:N3	2.34	0.76
46:B0:25:ARG:HH12	59:BA:2355:C:H5''	1.51	0.76
52:B6:11:LEU:HG	52:B6:26:ASN:HD22	1.51	0.76
59:BA:1800:C:H42	59:BA:1817:G:H22	1.33	0.76
59:BA:2133:G:H2'	59:BA:2157:G:H22	1.48	0.76
21:CA:658:G:H1	21:CA:747:C:N4	1.83	0.76
44:DY:10:GLY:HA2	44:DY:28:LYS:HG3	1.65	0.76
45:DZ:97:GLU:HG2	45:DZ:127:LYS:HB3	1.68	0.76
59:DA:271(T):G:H21	59:DA:357(B):A:H62	1.34	0.76
59:DA:821:A:H62	59:DA:972:G:H21	1.30	0.76
59:DA:2532:G:N2	59:DA:2663:G:C2	2.52	0.76
2:AC:22:TRP:HA	9:AJ:93:GLY:HA2	1.66	0.76
12:AM:20:THR:HG21	12:AM:27:LYS:HD2	1.66	0.76
21:AA:1157:A:N6	21:AA:1178:G:H21	1.78	0.76
24:AX:21:A:N6	24:AX:48:C:O2	2.17	0.76
59:BA:954:G:C6	59:BA:963:U:O2	2.38	0.76
59:BA:1530:G:O6	59:BA:1541:U:O2	2.03	0.76
10:CK:61:ALA:HB1	10:CK:94:ALA:HB2	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:169:GLY:HA3	20:CY:173:THR:HB	1.67	0.76
33:DN:16:ILE:HG22	33:DN:52:VAL:HG13	1.67	0.76
33:DN:35:ARG:NH2	33:DN:75:TYR:HB3	2.01	0.76
59:DA:871:U:O2	59:DA:906:G:C2	2.39	0.76
59:BA:840:C:H2'	59:BA:841:A:C8	2.21	0.76
21:CA:589:C:O2	21:CA:650:G:N1	2.19	0.76
21:CA:1348:U:H2'	21:CA:1349:A:C8	2.21	0.76
60:DB:31:C:N3	60:DB:51:G:O6	2.19	0.76
21:AA:1323:G:H2'	21:AA:1324:A:C8	2.21	0.76
24:CX:28:C:O2	24:CX:42:G:N1	2.19	0.76
35:DP:67:MET:HE1	59:DA:2413:G:H21	1.50	0.76
59:DA:638:G:H1	59:DA:650:C:H42	1.33	0.76
59:DA:815:C:N4	59:DA:1192:G:H1	1.84	0.76
59:DA:851:U:H2'	59:DA:852:G:C8	2.21	0.76
59:DA:2134:A:H2	59:DA:2159:G:H1'	1.50	0.76
20:AY:163:VAL:HG13	20:AY:258:VAL:HG22	1.68	0.76
21:AA:829:G:H2'	21:AA:830:G:H8	1.50	0.76
30:BH:28:GLY:HA3	30:BH:79:VAL:HB	1.68	0.76
59:BA:2442:C:H2'	59:BA:2443:C:C6	2.21	0.76
21:CA:401:C:O2'	21:CA:621:A:N3	2.19	0.76
24:CX:1:G:N1	24:CX:72:C:N3	2.34	0.76
59:DA:740:U:H2'	59:DA:741:G:C8	2.20	0.76
59:DA:1525:G:H2'	59:DA:1526:G:C8	2.21	0.76
59:DA:1676:A:H2'	59:DA:1677:A:C8	2.21	0.76
59:DA:2049:G:H1	59:DA:2619:C:H42	0.81	0.76
21:AA:1026:G:O6	21:AA:1035:A:N1	2.19	0.75
26:BD:61:LEU:HD13	59:BA:1568:G:H5''	1.66	0.75
39:DT:63:VAL:O	39:DT:73:GLU:HA	1.86	0.75
59:DA:1413:G:H1	59:DA:1589:C:H42	1.33	0.75
59:DA:2134:A:N6	59:DA:2157:G:H1'	2.00	0.75
27:BE:34:VAL:HG13	27:BE:48:GLN:HB3	1.68	0.75
20:CY:243:VAL:HA	20:CY:279:TYR:HE1	1.51	0.75
21:CA:1405:G:O5'	63:CA:1601:NMY:H231	1.85	0.75
33:DN:111:PRO:O	33:DN:114:ARG:HB3	1.86	0.75
14:AO:85:LEU:HD22	14:AO:87:ILE:HG12	1.67	0.75
2:CC:14:ILE:HA	9:CJ:14:LYS:HZ3	1.50	0.75
21:CA:152:A:N6	21:CA:169:C:C4	2.54	0.75
25:DC:41:THR:O	25:DC:43:GLU:N	2.19	0.75
25:DC:76:LEU:HB2	25:DC:111:PHE:HB3	1.66	0.75
28:DF:101:LEU:HD12	28:DF:102:PRO:HD2	1.68	0.75
59:DA:1208:C:N4	59:DA:1238:G:H1	1.84	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1221:G:OP1	21:AA:1320:C:N4	2.19	0.75
59:BA:190:A:H5''	59:BA:204:A:H61	1.51	0.75
59:BA:1414:G:H1	59:BA:1588:C:N4	1.85	0.75
59:DA:2687:U:O4	59:DA:2722:G:O6	2.05	0.75
60:DB:82:G:N2	60:DB:94:C:N3	2.31	0.75
29:BG:113:ARG:O	29:BG:114:ILE:C	2.26	0.75
59:BA:877:U:O4	59:BA:899:A:N1	2.20	0.75
44:DY:97:ARG:HA	44:DY:97:ARG:HH11	1.51	0.75
59:DA:1110:G:O2'	59:DA:1111:A:O5'	2.05	0.75
60:DB:3:C:C2	60:DB:117:G:N2	2.51	0.75
25:BC:169:THR:C	25:BC:171:ALA:H	1.94	0.75
47:B1:18:ILE:HA	47:B1:20:ARG:N	2.00	0.75
54:B8:26:LYS:HB3	54:B8:44:LYS:HE2	1.69	0.75
25:BC:44:VAL:HB	25:BC:174:ALA:HB3	1.67	0.75
32:BK:33:ASN:HB3	32:BK:36:GLU:HB3	1.67	0.75
46:B0:55:ARG:HE	59:BA:2386:C:H5''	1.50	0.75
49:B3:14:GLY:HA2	59:BA:970:C:H5'	1.68	0.75
21:CA:661:G:H1	21:CA:744:C:H42	1.35	0.75
2:AC:56:ASP:HB2	2:AC:67:THR:HB	1.67	0.75
20:AY:30:GLU:HA	20:AY:33:LEU:HB3	1.68	0.75
59:BA:2136:C:H42	59:BA:2155:G:H1	1.35	0.75
20:CY:573:HIS:HB3	20:CY:576:ASP:HB2	1.67	0.75
33:DN:35:ARG:HH22	33:DN:40:PRO:HD3	1.52	0.75
40:DU:53:ARG:NH2	59:DA:994:C:OP1	2.19	0.75
59:DA:463:G:N2	59:DA:466:A:OP2	2.13	0.75
21:AA:452:A:O2'	21:AA:478:A:N6	2.20	0.75
59:BA:581:C:H2'	59:BA:582:G:C8	2.21	0.75
21:CA:106:C:H2'	21:CA:107:G:H8	1.51	0.75
54:D8:8:LYS:NZ	59:DA:243:U:OP2	2.18	0.75
21:AA:1113:C:H42	21:AA:1187:G:H1	1.32	0.74
60:BB:23:G:N2	60:BB:60:C:N3	2.31	0.74
20:CY:24:GLY:H	61:CY:701:GDP:H5'	1.52	0.74
21:CA:66:G:H1	21:CA:103:C:N4	1.85	0.74
25:DC:51:ASP:HB2	25:DC:54:ARG:HD2	1.69	0.74
44:DY:68:HIS:HB3	44:DY:71:LYS:HE3	1.69	0.74
59:DA:1768:U:O2	59:DA:1984:G:N2	2.19	0.74
20:AY:30:GLU:HG3	20:AY:31:ARG:HH11	1.52	0.74
36:BQ:38:GLU:HB2	36:BQ:127:ILE:HD12	1.69	0.74
38:DS:100:ALA:O	38:DS:102:ALA:N	2.20	0.74
39:DT:49:VAL:HA	39:DT:63:VAL:HA	1.67	0.74
40:DU:28:ARG:HD3	40:DU:38:THR:HG21	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DX:8:ILE:O	48:D2:36:ARG:NH2	2.19	0.74
59:DA:1024:G:H3'	59:DA:1025:G:H5''	1.69	0.74
22:AW:3:C:H42	22:AW:70:G:H1	1.31	0.74
40:BU:15:LYS:HA	40:BU:18:LEU:HB3	1.68	0.74
59:BA:749:C:H1'	59:BA:1618:A:H2'	1.67	0.74
20:CY:10:LYS:HG2	20:CY:284:LEU:HD12	1.69	0.74
59:DA:55:G:H1	59:DA:115:C:N4	1.86	0.74
59:DA:407:G:H2'	59:DA:408:G:H8	1.52	0.74
20:AY:485:GLU:HG2	20:AY:601:ILE:HG12	1.70	0.74
26:BD:108:PRO:HA	26:BD:197:GLY:H	1.53	0.74
59:BA:1896:G:H2'	59:BA:1897:G:C8	2.23	0.74
59:BA:2532:G:H21	59:BA:2663:G:H21	1.32	0.74
1:CB:204:ASN:HD21	1:CB:206:ASP:HB3	1.53	0.74
21:CA:935:A:H61	21:CA:1380:U:H3	1.35	0.74
42:BW:76:VAL:HA	42:BW:102:HIS:O	1.86	0.74
27:DE:134:ILE:H	27:DE:134:ILE:HD13	1.52	0.74
59:DA:990:A:O2'	59:DA:992:C:OP2	2.06	0.74
59:DA:1002:G:H1	59:DA:1153:C:H42	1.33	0.74
59:DA:2819:G:H1	59:DA:2827:C:N4	1.85	0.74
62:AY:702:FUA:H202	62:AY:702:FUA:C5	2.15	0.74
25:BC:44:VAL:HG22	25:BC:215:VAL:HG22	1.68	0.74
32:BK:3:LYS:HE3	32:BK:29:GLN:HB3	1.69	0.74
35:BP:101:VAL:HG12	35:BP:106:LEU:HB3	1.69	0.74
20:CY:563:ILE:HG22	20:CY:565:VAL:H	1.52	0.74
48:D2:54:LYS:HE2	48:D2:55:ARG:HH12	1.51	0.74
59:DA:2551:C:O2	59:DA:2557:G:N1	2.19	0.74
59:DA:2687:U:H3	59:DA:2722:G:H1	0.79	0.74
12:AM:45:VAL:HG23	12:AM:48:LEU:HD12	1.67	0.74
27:BE:150:VAL:HG21	59:BA:2618:G:H21	1.51	0.74
59:BA:586:A:N6	59:BA:1251:C:H42	1.82	0.74
59:BA:1189:A:H3'	59:BA:1190:G:H8	1.52	0.74
1:CB:68:ILE:HG23	1:CB:163:PHE:H	1.51	0.74
16:CQ:17:LYS:HD2	21:CA:255:G:H4'	1.69	0.74
26:DD:132:PRO:HB3	26:DD:188:GLU:HA	1.69	0.74
21:AA:376:G:H2'	21:AA:377:G:C8	2.23	0.74
26:BD:151:LYS:HZ1	59:BA:2221:G:H21	1.34	0.74
35:BP:113:LYS:HE3	35:BP:131:SER:HB2	1.70	0.74
59:BA:2141:G:O6	59:BA:2150:U:O2	2.05	0.74
59:BA:2661:G:H2'	59:BA:2662:A:C8	2.23	0.74
20:CY:512:ILE:HD12	20:CY:589:ALA:HB1	1.70	0.74
21:CA:299:G:N2	21:CA:566:G:O6	2.15	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:614:A:H61	21:CA:626:U:H3	1.36	0.74
40:DU:32:PHE:HZ	59:DA:514:A:H4'	1.52	0.74
59:DA:1276:A:N6	59:DA:1294:U:H3	1.85	0.74
59:DA:2119:A:H61	59:DA:2168:G:H21	0.81	0.74
2:AC:17:ASP:HB3	2:AC:21:ARG:HH12	1.53	0.74
19:AT:85:MET:SD	21:AA:186:C:O2'	2.46	0.74
20:AY:292:THR:HG23	20:AY:398:ILE:HB	1.69	0.74
51:B5:12:SER:HB2	59:BA:2020:A:H5'	1.68	0.74
59:BA:1970:A:H4'	63:BA:2904:NMY:H192	1.52	0.74
23:CV:26:A:H2'	23:CV:27:A:C8	2.22	0.74
59:DA:67:U:H2'	59:DA:68:G:C8	2.22	0.74
59:DA:572:A:N6	59:DA:2029:G:H21	1.85	0.74
59:DA:872:A:N6	59:DA:905:U:H3	1.86	0.74
59:DA:2812:G:H2'	59:DA:2813:A:C8	2.22	0.74
43:BX:71:GLY:HA3	59:BA:64:A:H4'	1.70	0.74
59:BA:271(S):C:N3	59:BA:357(C):G:N2	2.35	0.74
59:BA:1271:G:H22	59:BA:1615:C:H42	1.35	0.74
59:BA:1969:A:OP1	63:BA:2904:NMY:H18	1.88	0.74
62:CY:702:FUA:H202	62:CY:702:FUA:C5	2.14	0.74
21:CA:668:G:H1	21:CA:738:C:H42	0.81	0.74
23:CV:10:G:N2	23:CV:10:G:OP2	2.20	0.74
33:DN:78:TYR:CE2	33:DN:115:ARG:NE	2.56	0.74
36:DQ:72:LYS:HB3	36:DQ:94:VAL:HG23	1.68	0.74
42:DW:11:ARG:NH2	42:DW:99:ARG:O	2.20	0.74
45:DZ:93:ASP:HA	45:DZ:130:PRO:HD2	1.69	0.74
45:DZ:99:TYR:HE2	45:DZ:125:LEU:HB2	1.53	0.74
59:DA:592:G:N2	59:DA:665:C:N3	2.30	0.74
59:DA:2842:G:N2	59:DA:2875:C:N3	2.29	0.74
36:BQ:46:GLN:HG2	36:BQ:126:PRO:HD3	1.70	0.73
44:BY:76:CYS:HB3	44:BY:96:ILE:HG13	1.69	0.73
59:BA:1965:C:H4'	63:BA:2903:NMY:H4	1.70	0.73
11:CL:86:ARG:HG3	21:CA:552:U:H4'	1.70	0.73
21:CA:131:C:H42	21:CA:231:G:H1	1.36	0.73
21:CA:320:C:H2'	21:CA:321:A:C8	2.22	0.73
21:CA:1034:G:H2'	21:CA:1035:A:C8	2.23	0.73
25:DC:43:GLU:OE2	59:DA:2124:G:H1'	1.88	0.73
25:DC:64:SER:HA	25:DC:160:GLY:HA3	1.68	0.73
59:DA:1820:U:H3'	59:DA:1821:A:C8	2.23	0.73
9:AJ:45:ARG:HB3	9:AJ:65:LEU:HB2	1.70	0.73
20:AY:164:MET:HE1	20:AY:216:LEU:HD12	1.69	0.73
40:BU:28:ARG:HD3	40:BU:38:THR:HG21	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:3:LYS:N	9:CJ:75:ILE:O	2.21	0.73
21:CA:424:G:H2'	21:CA:425:G:H8	1.53	0.73
27:DE:111:ARG:H	27:DE:161:GLY:HA2	1.53	0.73
42:DW:77:ASP:O	42:DW:101:SER:HA	1.87	0.73
52:D6:28:ARG:O	52:D6:30:THR:N	2.20	0.73
55:D9:19:ARG:NH1	59:DA:2756:U:OP2	2.21	0.73
59:DA:15:G:N2	59:DA:525:U:O2	2.17	0.73
59:DA:2326:C:N3	59:DA:2389:G:N2	2.34	0.73
59:DA:2636:U:H2'	59:DA:2637:U:H6	1.50	0.73
21:AA:1127:G:H21	21:AA:1147:C:H41	1.37	0.73
21:AA:1391:U:H2'	21:AA:1392:G:H8	1.52	0.73
59:BA:1183:G:H2'	59:BA:1184:G:C8	2.23	0.73
59:BA:2134:A:N6	59:BA:2157:G:H1'	2.03	0.73
59:BA:2202(E):A:H1'	59:BA:2202(G):G:C5	2.23	0.73
21:CA:139:G:H1	21:CA:224:C:H42	0.79	0.73
21:CA:1028(B):C:N4	21:CA:1028(G):G:H1	1.87	0.73
21:CA:1380:U:H4'	21:CA:1381:U:H5'	1.70	0.73
35:DP:35:HIS:H	59:DA:1190:G:H5''	1.53	0.73
59:DA:376:C:N4	59:DA:398:G:H1	1.83	0.73
59:DA:2308:G:O2'	59:DA:2310:A:OP2	2.06	0.73
1:AB:19:HIS:CG	1:AB:20:GLU:H	2.06	0.73
24:AX:33:U:O2'	24:AX:36:C:N4	2.21	0.73
59:BA:1654:A:H2'	59:BA:1655:A:H8	1.52	0.73
3:CD:25:ARG:NH2	21:CA:411:A:OP2	2.21	0.73
21:CA:520:A:N6	21:CA:533:A:H61	1.87	0.73
26:DD:35:LYS:HZ3	26:DD:61:LEU:HG	1.52	0.73
59:DA:137(A):G:H1	59:DA:137(F):C:H42	1.35	0.73
59:DA:481:G:OP1	59:DA:481:G:H4'	1.87	0.73
59:DA:1436:G:N1	59:DA:1556:C:O2	2.18	0.73
59:DA:1793:C:N4	59:DA:1826:G:H1	1.86	0.73
11:AL:23:LYS:HE2	11:AL:89:ARG:HD3	1.70	0.73
20:AY:485:GLU:HB2	20:AY:560:VAL:HG22	1.71	0.73
26:BD:24:ILE:HG12	26:BD:25:THR:N	2.03	0.73
59:BA:28:A:H61	59:BA:512:G:H1'	1.53	0.73
3:CD:3:ARG:HH21	3:CD:118:ARG:HE	1.37	0.73
27:DE:50:GLY:HA2	27:DE:78:LEU:HB3	1.70	0.73
36:DQ:37:LEU:HA	36:DQ:100:GLY:H	1.52	0.73
26:BD:242:ARG:NH1	59:BA:1971:A:OP2	2.22	0.73
7:CH:10:LEU:HB3	7:CH:83:ILE:HD11	1.71	0.73
7:CH:85:ARG:HA	7:CH:85:ARG:HH11	1.52	0.73
59:DA:271(F):G:H2'	59:DA:271(G):G:H8	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:34:C:H2'	21:AA:35:G:H8	1.54	0.73
27:BE:15:PHE:HA	27:BE:19:ARG:O	1.87	0.73
28:BF:20:LEU:HD22	28:BF:21:ALA:H	1.53	0.73
21:CA:1348:U:H2'	21:CA:1349:A:H8	1.54	0.73
33:DN:78:TYR:CD2	33:DN:115:ARG:NE	2.56	0.73
19:AT:17:ARG:NH1	21:AA:102:G:OP1	2.21	0.73
20:AY:310:ALA:HB3	20:AY:332:SER:HB2	1.70	0.73
21:AA:540:G:H2'	21:AA:541:G:C8	2.23	0.73
32:BK:125:ARG:HB2	59:BA:1080:C:H4'	1.69	0.73
43:BX:49:VAL:HB	43:BX:83:VAL:HG11	1.70	0.73
59:BA:392:C:H4'	59:BA:409:C:H5''	1.71	0.73
59:BA:2630:G:H1'	59:BA:2894:G:H1'	1.71	0.73
6:CG:73:MET:HG2	6:CG:90:GLU:HG2	1.69	0.73
10:CK:51:LYS:HA	10:CK:55:LYS:HE3	1.70	0.73
21:CA:1027:C:H2'	21:CA:1028:C:C6	2.24	0.73
29:DG:73:ALA:H	29:DG:87:PRO:HD2	1.53	0.73
59:DA:38:A:N6	59:DA:441:U:H3	1.86	0.73
59:DA:1676:A:H2'	59:DA:1677:A:H8	1.53	0.73
21:AA:777:A:H2'	21:AA:778:G:C8	2.23	0.73
21:AA:1064:G:O2'	21:AA:1065:U:OP2	2.06	0.73
36:BQ:5:ARG:NH2	59:BA:871:U:OP1	2.22	0.73
47:B1:47:GLN:HE21	47:B1:47:GLN:HA	1.53	0.73
60:BB:66:A:O2'	60:BB:67:G:N7	2.21	0.73
59:DA:577:G:O2'	59:DA:1254:A:OP1	2.05	0.73
21:AA:401:C:O2'	21:AA:621:A:N3	2.20	0.73
21:AA:1473:A:H2'	21:AA:1474:G:C8	2.24	0.73
26:BD:206:LEU:HB2	59:BA:1791:A:H4'	1.70	0.73
33:BN:35:ARG:HD3	33:BN:75:TYR:C	2.13	0.73
33:BN:45:ASN:HB3	33:BN:115:ARG:HB3	1.70	0.73
16:CQ:60:ILE:HG23	16:CQ:72:ARG:HB2	1.70	0.73
21:CA:824:C:H2'	21:CA:825:G:H8	1.54	0.73
21:CA:1440:C:O2	21:CA:1461:G:N1	2.22	0.73
21:CA:1535:C:N4	23:CV:10:G:N2	2.36	0.73
32:DK:91:PRO:HG2	59:DA:1062:G:N2	2.04	0.73
47:D1:33:LYS:HD2	47:D1:34:THR:HG22	1.70	0.73
59:DA:224:G:H1	59:DA:231:C:H42	1.33	0.73
21:AA:1148:U:H2'	21:AA:1149:C:O4'	1.88	0.72
44:BY:73:ARG:NH1	59:BA:302:C:OP2	2.19	0.72
59:BA:1183:G:H2'	59:BA:1184:G:H8	1.54	0.72
26:DD:206:LEU:O	59:DA:1791:A:O2'	2.06	0.72
59:DA:90:U:H4'	59:DA:91:A:H5'	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:150:C:N4	59:DA:176:G:H1	1.86	0.72
20:AY:25:LYS:HB2	20:AY:84:THR:HG23	1.71	0.72
21:AA:599:C:H2'	21:AA:600:C:C6	2.23	0.72
59:BA:453:C:H4'	59:BA:472:A:H62	1.53	0.72
60:BB:3:C:O2	60:BB:117:G:C2	2.42	0.72
12:CM:4:ILE:HG23	12:CM:57:ARG:HB2	1.71	0.72
38:DS:15:ARG:HB3	38:DS:18:ILE:HB	1.71	0.72
47:D1:5:CYS:SG	47:D1:6:GLU:N	2.62	0.72
59:DA:1636:C:H2'	59:DA:1637:A:H8	1.53	0.72
35:BP:49:ARG:HB3	54:B8:59:LYS:HD2	1.70	0.72
26:DD:144:ALA:H	26:DD:156:ALA:HB3	1.54	0.72
59:DA:543:C:N3	59:DA:550:G:O6	2.22	0.72
59:DA:851:U:O2	59:DA:926:A:N1	2.23	0.72
59:DA:884:C:N4	59:DA:892:G:H1	1.86	0.72
59:DA:1091:G:H1	59:DA:1100:C:N4	1.88	0.72
10:AK:34:ASP:O	10:AK:36:ASP:N	2.23	0.72
41:BV:24:LYS:HB3	59:BA:1162:G:H4'	1.71	0.72
59:BA:271(F):G:H2'	59:BA:271(G):G:H8	1.53	0.72
59:BA:709:U:H2'	59:BA:710:G:C8	2.24	0.72
59:BA:882:G:H2'	59:BA:883:G:C8	2.24	0.72
12:CM:91:ARG:HH21	12:CM:96:LEU:HB3	1.53	0.72
21:CA:1071:C:N3	21:CA:1104:G:O6	2.22	0.72
33:DN:50:ASP:HA	33:DN:103:VAL:HG11	1.71	0.72
33:DN:58:ASP:HB2	33:DN:98:VAL:HG11	1.71	0.72
59:DA:882:G:H1	59:DA:894:C:H42	1.35	0.72
59:DA:1664:A:H61	59:DA:1996:C:H42	1.37	0.72
59:DA:2331:G:H21	59:DA:2336:A:H2	1.37	0.72
3:AD:115:ARG:NH2	21:AA:408:A:OP2	2.21	0.72
21:AA:258:G:H1	21:AA:268:C:H42	1.38	0.72
44:BY:85:VAL:HA	44:BY:94:LYS:HA	1.69	0.72
1:CB:71:VAL:HB	1:CB:164:VAL:HG23	1.72	0.72
18:CS:36:ARG:O	21:CA:1320:C:N4	2.23	0.72
27:DE:107:THR:HG23	27:DE:195:LEU:HB3	1.71	0.72
33:DN:56:ASN:H	33:DN:56:ASN:ND2	1.82	0.72
56:De:63:ILE:HG23	56:De:116:GLU:HA	1.70	0.72
60:DB:5:C:H42	60:DB:115:G:H1	0.77	0.72
7:AH:89:PRO:HG2	21:AA:878:G:H5'	1.72	0.72
21:AA:987:G:H2'	21:AA:988:G:H8	1.53	0.72
21:AA:1124:G:H1	21:AA:1149:C:N4	1.87	0.72
31:BJ:110:UNK:HA	31:BJ:116:UNK:HA	1.69	0.72
33:BN:85:ILE:HG22	33:BN:97:ARG:CZ	2.19	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:817:C:H4'	59:BA:932:G:C6	2.24	0.72
59:BA:1019:U:C2	59:BA:1020:A:N7	2.58	0.72
11:CL:33:ARG:HG2	11:CL:60:LEU:HD12	1.72	0.72
11:CL:124:LYS:HZ1	21:CA:500:G:H5'	1.53	0.72
21:CA:30:U:O4	21:CA:553:A:N1	2.22	0.72
21:CA:375:U:H3	21:CA:389:A:N6	1.88	0.72
21:CA:424:G:H2'	21:CA:425:G:C8	2.24	0.72
21:CA:715:A:H2'	21:CA:716:A:C8	2.25	0.72
59:DA:521:G:H2'	59:DA:522:G:C8	2.24	0.72
59:DA:2466:C:N4	59:DA:2484:G:H1	1.87	0.72
20:AY:408:VAL:HG22	20:AY:454:MET:HA	1.72	0.72
63:BA:2904:NMY:H1	63:BA:2904:NMY:O11	1.90	0.72
21:CA:339:C:H42	21:CA:350:G:H1	1.38	0.72
24:CX:49:G:C2	24:CX:65:C:N3	2.57	0.72
27:DE:134:ILE:HD12	59:DA:2579:C:H4'	1.71	0.72
28:DF:176:LEU:HG	28:DF:177:ALA:H	1.54	0.72
38:DS:49:VAL:HG13	38:DS:76:LYS:HD2	1.72	0.72
59:DA:1032:A:H2	59:DA:1122:G:H1	1.37	0.72
59:DA:1082:U:H2'	59:DA:1083:U:H5'	1.71	0.72
59:DA:1663:C:H42	59:DA:1997:G:H1	1.35	0.72
9:AJ:40:LEU:HD13	9:AJ:41:PRO:HD2	1.72	0.72
20:AY:351:ARG:NH1	21:AA:368:U:OP1	2.23	0.72
21:AA:1516:G:N1	21:AA:1519:A:OP2	2.17	0.72
24:AX:49:G:N2	24:AX:65:C:N3	2.33	0.72
25:BC:75:VAL:HG21	25:BC:154:ILE:HG12	1.70	0.72
59:BA:1864(C):A:H2'	59:BA:1864(D):A:C8	2.25	0.72
1:CB:167:PRO:O	1:CB:171:ALA:HB2	1.89	0.72
10:CK:79:SER:HA	10:CK:104:GLN:HB3	1.72	0.72
18:CS:80:TYR:HB2	21:CA:957:U:H5'	1.71	0.72
21:CA:1537:U:O4	23:CV:8:A:N1	2.16	0.72
24:CX:75:C:N4	59:DA:2553:G:C6	2.58	0.72
27:DE:21:VAL:O	27:DE:23:VAL:N	2.21	0.72
29:DG:43:LEU:HB3	29:DG:45:GLU:HG2	1.72	0.72
33:DN:46:VAL:HG12	33:DN:107:LEU:HD22	1.71	0.72
39:DT:60:THR:HB	39:DT:75:ILE:HG23	1.72	0.72
46:D0:24:LYS:HE3	46:D0:39:ARG:HG3	1.72	0.72
59:DA:409:C:H42	59:DA:418:G:H1	1.37	0.72
59:DA:2049:G:N2	59:DA:2619:C:N3	2.30	0.72
1:AB:235:SER:OG	1:AB:236:TYR:N	2.22	0.72
2:AC:11:ARG:HB2	2:AC:16:ARG:HB2	1.72	0.72
20:AY:505:GLY:HA3	20:AY:576:ASP:HA	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:419:C:H42	21:AA:424:G:H1	1.37	0.72
21:AA:424:G:H2'	21:AA:425:G:H8	1.55	0.72
21:AA:1500:A:H5''	21:AA:1508:G:H5''	1.72	0.72
28:BF:25:PRO:HD3	28:BF:115:ALA:HB1	1.72	0.72
35:BP:61:ARG:HH11	54:B8:13:ARG:HD2	1.55	0.72
51:B5:19:ARG:NH2	59:BA:1264:G:OP1	2.23	0.72
59:BA:1659:U:H3	59:BA:2001:A:H61	1.37	0.72
21:CA:892:A:H2'	21:CA:893:C:C6	2.25	0.72
21:CA:1429:C:H42	21:CA:1471:G:H1	1.38	0.72
27:DE:174:ASP:HB3	27:DE:183:LEU:HD13	1.71	0.72
33:DN:106:MET:HB2	33:DN:107:LEU:HD23	1.70	0.72
59:DA:235:U:H3	59:DA:262:A:N6	1.87	0.72
20:AY:567:LEU:HD23	20:AY:568:TYR:H	1.54	0.72
21:AA:424:G:H2'	21:AA:425:G:C8	2.24	0.72
60:BB:3:C:H2'	60:BB:4:C:H5	1.54	0.72
10:CK:21:ILE:HD11	10:CK:98:LEU:HD11	1.71	0.72
59:DA:1468(J):G:H2'	59:DA:1468(K):G:C8	2.24	0.72
59:DA:2634:G:N2	59:DA:2784:C:N3	2.32	0.72
59:BA:841:A:H2'	59:BA:842:G:C8	2.25	0.71
63:BA:2903:NMY:H1	63:BA:2903:NMY:O11	1.90	0.71
2:CC:11:ARG:HB3	2:CC:15:THR:HB	1.71	0.71
20:CY:428:LEU:HD13	20:CY:440:VAL:HG11	1.71	0.71
23:CV:20:U:H3	24:CX:35:A:H2	1.35	0.71
26:DD:125:ILE:HG21	26:DD:137:PRO:HG2	1.71	0.71
33:DN:45:ASN:HB2	33:DN:46:VAL:HG22	1.71	0.71
59:DA:572:A:H61	59:DA:2029:G:N2	1.87	0.71
59:DA:2478:A:O2'	59:DA:2536:G:N2	2.23	0.71
21:AA:757:U:O2'	21:AA:879:C:O2	2.08	0.71
26:BD:67:PHE:HB3	26:BD:153:ALA:H	1.55	0.71
27:BE:126:PRO:HD2	27:BE:134:ILE:HD11	1.72	0.71
35:DP:26:GLY:HA2	35:DP:30:THR:HG23	1.71	0.71
59:DA:538:G:N2	59:DA:555:U:O2	2.22	0.71
59:DA:939:G:H2'	59:DA:940:G:C8	2.25	0.71
60:DB:33:G:H1	60:DB:49:C:H42	1.39	0.71
1:AB:75:LYS:O	1:AB:78:GLN:HB3	1.90	0.71
21:AA:1127:G:N1	21:AA:1145:C:C2	2.58	0.71
21:AA:1503:A:H61	23:AV:14:A:H2'	1.55	0.71
25:BC:41:THR:O	25:BC:175:PRO:HA	1.90	0.71
32:BK:14:ALA:HB3	32:BK:50:ASP:HA	1.71	0.71
35:BP:45:LEU:HG	35:BP:46:LYS:H	1.54	0.71
45:BZ:73:GLN:O	45:BZ:87:ASP:N	2.22	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:140:VAL:HG11	3:CD:146:ILE:HD11	1.71	0.71
7:CH:11:THR:HA	7:CH:14:ARG:HD2	1.71	0.71
7:CH:26:VAL:HG12	7:CH:59:LEU:HB3	1.70	0.71
59:DA:77:C:H2'	59:DA:78:A:C8	2.25	0.71
59:DA:692:C:N3	59:DA:770:G:N2	2.33	0.71
59:DA:1030:G:H2'	59:DA:1031:G:H8	1.55	0.71
59:DA:2307:G:N2	59:DA:2311:A:OP2	2.23	0.71
2:AC:58:GLU:HB2	2:AC:65:ALA:HB3	1.71	0.71
6:AG:113:GLU:HB2	6:AG:119:ARG:HG2	1.72	0.71
15:AP:40:ASP:HB3	15:AP:48:TRP:HB3	1.71	0.71
21:AA:1040:U:H2'	21:AA:1041:A:C8	2.25	0.71
59:BA:298:G:N2	59:BA:340:A:H62	1.88	0.71
59:BA:357(H):G:H2'	59:BA:357(I):G:H8	1.56	0.71
59:BA:880:G:H2'	59:BA:881:G:C8	2.24	0.71
59:BA:1189:A:H3'	59:BA:1190:G:C8	2.25	0.71
59:BA:1971:A:H3'	63:BA:2904:NMY:O21	1.90	0.71
59:BA:2345:G:O2'	59:BA:2381:C:O2	2.05	0.71
21:CA:1440(D):A:H4'	21:CA:1440(E):G:H5'	1.72	0.71
31:DJ:60:UNK:O	31:DJ:64:UNK:N	2.23	0.71
36:DQ:35:VAL:O	36:DQ:129:THR:OG1	2.08	0.71
40:DU:36:ARG:HG3	40:DU:40:PHE:HE1	1.54	0.71
59:DA:1008:C:H1'	59:DA:1009:A:N7	2.05	0.71
4:AE:19:MET:HA	4:AE:24:ARG:HA	1.72	0.71
26:BD:88:ARG:NH2	59:BA:1817:G:OP1	2.23	0.71
34:BO:1:MET:HE3	34:BO:67:LYS:HB3	1.73	0.71
41:BV:47:VAL:HA	41:BV:52:VAL:HG23	1.72	0.71
56:Be:78:LEU:HD11	56:Be:85:GLY:HA3	1.71	0.71
59:BA:1675:C:H2'	59:BA:1676:A:C8	2.26	0.71
5:CF:89:MET:HB2	17:CR:76:LEU:HD21	1.72	0.71
54:D8:14:VAL:HG23	54:D8:24:ALA:HB2	1.71	0.71
55:D9:35:ARG:HH12	59:DA:2741:A:H5''	1.55	0.71
21:AA:815:A:N3	21:AA:1527:C:O2'	2.19	0.71
21:AA:825:G:H2'	21:AA:826:C:C6	2.26	0.71
59:BA:77:C:H2'	59:BA:78:A:C8	2.26	0.71
20:CY:614:GLU:HA	20:CY:617:MET:HB3	1.71	0.71
21:CA:987:G:H1	21:CA:1218:C:H42	0.75	0.71
25:DC:132:LEU:HB2	25:DC:138:LEU:HD23	1.72	0.71
28:DF:32:LEU:HD13	28:DF:112:MET:HE1	1.72	0.71
59:DA:1027:A:H2'	59:DA:1028:A:C8	2.25	0.71
60:DB:51:G:H2'	60:DB:52:A:H5''	1.72	0.71
21:AA:144:G:H1	21:AA:178:C:H42	1.36	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:115:VAL:HA	25:BC:145:THR:HG22	1.71	0.71
33:BN:53:VAL:HG12	33:BN:120:LEU:HD12	1.71	0.71
38:BS:17:ARG:O	38:BS:21:THR:N	2.24	0.71
21:CA:184:G:N1	21:CA:193:C:O2	2.22	0.71
21:CA:757:U:O2'	21:CA:879:C:O2	2.07	0.71
21:CA:1376:U:H2'	21:CA:1377:A:C8	2.25	0.71
24:CX:13:C:N4	24:CX:22:G:H1	1.88	0.71
26:DD:165:ILE:HG22	26:DD:166:GLN:N	2.06	0.71
29:DG:42:GLY:O	59:DA:2305:A:N6	2.24	0.71
33:DN:30:ILE:O	33:DN:34:LEU:HB2	1.91	0.71
33:DN:116:LEU:O	33:DN:118:LYS:N	2.23	0.71
48:D2:50:ILE:HG21	59:DA:61:G:H5'	1.73	0.71
63:DA:2901:NMY:O11	63:DA:2901:NMY:H1	1.90	0.71
11:AL:6:THR:O	11:AL:8:ASN:N	2.24	0.71
28:BF:125:LEU:HB3	28:BF:194:MET:HB2	1.72	0.71
33:BN:90:MET:HB3	33:BN:97:ARG:CZ	2.20	0.71
59:BA:881:G:O6	59:BA:895:U:O2	2.09	0.71
59:BA:1565:C:H1'	59:BA:1566:A:H8	1.55	0.71
20:CY:163:VAL:HG13	20:CY:258:VAL:HG23	1.72	0.71
20:CY:256:THR:O	20:CY:258:VAL:N	2.24	0.71
20:CY:315:LYS:HB2	20:CY:327:PHE:HB2	1.71	0.71
21:CA:715:A:H2'	21:CA:716:A:H8	1.56	0.71
21:CA:1200:C:H4'	21:CA:1201:A:H5''	1.72	0.71
21:CA:1348:U:N3	21:CA:1374:A:C6	2.58	0.71
59:DA:946:G:H1	59:DA:971:C:N4	1.88	0.71
59:DA:1708:C:H42	59:DA:1750:G:H1	0.76	0.71
59:DA:2841:C:H2'	59:DA:2842:G:H8	1.54	0.71
7:AH:83:ILE:HG22	7:AH:137:VAL:HG13	1.71	0.71
62:AY:702:FUA:H122	62:AY:702:FUA:H231	1.73	0.71
33:BN:79:PRO:O	33:BN:81:GLY:N	2.24	0.71
39:BT:23:ARG:NH2	59:BA:2849:U:O4	2.23	0.71
47:B1:18:ILE:HG12	59:BA:380:U:OP1	1.91	0.71
59:BA:271(F):G:N1	59:BA:357(M):C:N4	2.20	0.71
59:BA:1346:G:H2'	59:BA:1347:G:C8	2.26	0.71
28:DF:106:ARG:HH11	28:DF:107:LYS:HE2	1.56	0.71
59:DA:808:G:H2'	59:DA:809:G:H8	1.55	0.71
16:AQ:72:ARG:HG2	16:AQ:73:VAL:H	1.56	0.71
21:AA:232:G:O2'	21:AA:262:A:N6	2.24	0.71
26:BD:111:LEU:HD11	26:BD:117:VAL:HG11	1.72	0.71
28:BF:157:VAL:H	28:BF:193:VAL:H	1.39	0.71
46:B0:72:ARG:HD2	46:B0:75:LEU:HD12	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1006:C:H2'	59:BA:1007:C:C6	2.26	0.71
8:CI:9:ARG:O	8:CI:104:ARG:NH1	2.21	0.71
10:CK:119:CYS:HB2	21:CA:778:G:H1'	1.73	0.71
21:CA:1200:C:O2'	21:CA:1201:A:OP2	2.09	0.71
33:DN:114:ARG:CZ	59:DA:527:C:HO2'	2.02	0.71
35:DP:8:PRO:HA	59:DA:1243:G:H1'	1.73	0.71
47:D1:48:LYS:HE2	47:D1:61:ARG:HG2	1.73	0.71
59:DA:514:A:H2'	59:DA:515:A:H8	1.55	0.71
9:AJ:16:LEU:HD23	9:AJ:94:VAL:HG11	1.71	0.70
17:AR:38:GLU:HA	17:AR:41:LYS:HB3	1.73	0.70
63:AA:1601:NMY:H19	63:AA:1601:NMY:C17	2.21	0.70
29:BG:113:ARG:HE	29:BG:113:ARG:CA	2.04	0.70
63:BA:2902:NMY:H1	63:BA:2902:NMY:O11	1.90	0.70
10:CK:122:LYS:HG3	21:CA:779:C:H5''	1.73	0.70
21:CA:581:G:N2	21:CA:759:A:OP2	2.22	0.70
21:CA:1408:A:H62	63:CA:1601:NMY:H14	1.56	0.70
28:DF:157:VAL:H	28:DF:193:VAL:H	1.37	0.70
59:DA:2685:G:N2	59:DA:2724:C:N3	2.36	0.70
21:AA:1157:A:H62	21:AA:1178:G:N2	1.89	0.70
32:BK:8:VAL:HG21	32:BK:26:ALA:HB1	1.73	0.70
33:BN:85:ILE:N	33:BN:106:MET:HA	2.07	0.70
63:BA:2904:NMY:H19	63:BA:2904:NMY:C17	2.21	0.70
3:CD:162:LEU:HD11	3:CD:181:MET:HG3	1.73	0.70
12:CM:45:VAL:HG23	12:CM:48:LEU:HD12	1.73	0.70
21:CA:186(F):C:N3	21:CA:186(K):G:N2	2.37	0.70
21:CA:253:U:N3	21:CA:273:A:H2	1.85	0.70
39:DT:26:ASP:HA	39:DT:48:ILE:HG23	1.72	0.70
59:DA:236:C:N4	59:DA:261:G:H1	1.88	0.70
59:DA:817:C:N4	59:DA:1190:G:H1	1.89	0.70
59:DA:2391:G:H1'	59:DA:2429:G:N2	2.06	0.70
3:AD:103:ASN:HA	3:AD:106:TYR:HB3	1.73	0.70
21:AA:29:G:H4'	21:AA:295:C:H4'	1.72	0.70
21:AA:68(D):C:H42	21:AA:68(V):G:H1	1.35	0.70
21:AA:1440(J):C:H1'	21:AA:1440(K):G:N2	2.06	0.70
36:BQ:9:TYR:OH	59:BA:912:C:OP1	2.09	0.70
6:CG:76:ARG:NH1	6:CG:89:MET:SD	2.64	0.70
21:CA:413:G:H4'	21:CA:414:A:H5''	1.72	0.70
28:DF:176:LEU:HG	28:DF:177:ALA:N	2.04	0.70
44:DY:50:ARG:HB3	44:DY:59:GLY:H	1.56	0.70
59:DA:13:A:N6	59:DA:526:A:OP2	2.24	0.70
60:DB:30:C:N3	60:DB:54:G:N2	2.33	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:154:GLY:HA2	7:AH:64:LYS:HD3	1.73	0.70
19:AT:49:ALA:HB1	19:AT:53:LEU:HD23	1.73	0.70
20:AY:91:THR:O	20:AY:93:GLU:N	2.25	0.70
21:AA:453:A:N6	21:AA:479:C:N4	2.05	0.70
59:BA:413:C:H42	59:BA:2410:G:H1	1.40	0.70
59:BA:1021:A:H2'	59:BA:1022:G:H4'	1.72	0.70
59:BA:2639:A:H2'	59:BA:2640:G:C8	2.26	0.70
11:CL:34:ARG:HD3	11:CL:82:VAL:HG13	1.72	0.70
33:DN:37:LYS:HB3	59:DA:1138:G:H21	1.56	0.70
38:DS:40:ILE:HA	38:DS:47:THR:HA	1.74	0.70
59:DA:855:G:H1	59:DA:922:U:H3	1.37	0.70
59:DA:2006:C:H5''	59:DA:2048:G:H5''	1.72	0.70
59:DA:2098:U:H3	59:DA:2191:G:H1	1.38	0.70
59:DA:2106:G:H1	59:DA:2183:C:N4	1.89	0.70
63:DA:2901:NMY:H19	63:DA:2901:NMY:C17	2.21	0.70
60:DB:71:C:H42	60:DB:105:G:H1	1.39	0.70
21:AA:575:G:O2'	21:AA:821:G:OP2	2.07	0.70
21:AA:815:A:N6	21:AA:1509:C:H1'	2.06	0.70
25:BC:31:LYS:HD2	25:BC:182:PRO:HA	1.72	0.70
34:BO:101:PRO:HB3	34:BO:120:GLU:HB3	1.73	0.70
49:B3:5:LYS:HB2	49:B3:36:VAL:HG12	1.72	0.70
59:BA:470:A:H2'	59:BA:471:A:C8	2.26	0.70
59:BA:539:G:N2	59:BA:554:U:O2	2.20	0.70
59:BA:851:U:H2'	59:BA:852:G:C8	2.27	0.70
59:BA:2397:G:O6	59:BA:2419:U:O2	2.09	0.70
63:BA:2902:NMY:H19	63:BA:2902:NMY:C17	2.21	0.70
21:CA:237:C:H2'	21:CA:238:G:H8	1.55	0.70
22:CW:19:G:H1'	22:CW:57:G:H21	1.55	0.70
25:DC:43:GLU:HB2	25:DC:216:THR:O	1.90	0.70
33:DN:78:TYR:CZ	33:DN:115:ARG:CZ	2.73	0.70
59:DA:2528:U:H3	59:DA:2535:G:H1	1.40	0.70
35:BP:67:MET:O	35:BP:69:GLY:N	2.24	0.70
35:BP:89:ALA:HA	35:BP:121:LYS:HD2	1.73	0.70
51:B5:21:SER:HB2	59:BA:15:G:H4'	1.73	0.70
59:BA:500:G:H21	59:BA:505:A:H62	1.37	0.70
21:CA:520:A:C6	21:CA:533:A:N6	2.54	0.70
21:CA:598:U:O4	21:CA:640:A:N1	2.25	0.70
59:DA:357(J):G:H2'	59:DA:357(K):U:O4'	1.92	0.70
59:DA:2133:G:H21	59:DA:2158:A:N6	1.81	0.70
21:AA:406:G:N7	21:AA:495:A:O2'	2.20	0.70
21:AA:908:A:H2'	21:AA:909:A:C8	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:16:ARG:HB2	29:BG:17:PRO:HD3	1.74	0.70
59:BA:71:A:H62	59:BA:114:U:H1'	1.56	0.70
59:BA:1412:A:H61	59:BA:1590:U:H3	1.39	0.70
59:BA:2868:A:H2'	59:BA:2869:G:C8	2.26	0.70
60:BB:30:C:N4	60:BB:54:G:H1	1.90	0.70
8:CI:120:ARG:HB2	21:CA:1349:A:H5'	1.71	0.70
15:CP:13:HIS:O	15:CP:42:ARG:NH2	2.25	0.70
62:CY:702:FUA:H122	62:CY:702:FUA:H231	1.73	0.70
21:CA:26:A:H62	21:CA:558:G:H21	1.40	0.70
24:CX:21:A:N6	24:CX:48:C:O2	2.23	0.70
47:D1:40:ARG:O	47:D1:41:ARG:HB3	1.91	0.70
48:D2:65:ASN:HB3	48:D2:69:ARG:HH21	1.57	0.70
20:AY:97:SER:O	20:AY:101:LEU:HG	1.92	0.70
21:AA:720:C:H3'	21:AA:721:G:H2'	1.73	0.70
21:AA:975:A:H4'	21:AA:976:G:H5''	1.74	0.70
38:BS:93:LYS:HD3	60:BB:47:C:H1'	1.73	0.70
41:BV:24:LYS:HD2	41:BV:90:PRO:HB2	1.73	0.70
44:BY:85:VAL:HG21	59:BA:297:C:H5''	1.73	0.70
51:B5:3:LYS:HG2	51:B5:4:HIS:H	1.57	0.70
59:BA:269:U:O2	59:BA:370:G:N2	2.15	0.70
59:BA:299:A:N3	59:BA:319:C:O2'	2.23	0.70
59:BA:873:G:H2'	59:BA:874:G:C8	2.26	0.70
63:BA:2903:NMY:H19	63:BA:2903:NMY:C17	2.21	0.70
22:CW:71:C:OP1	59:DA:1892:C:O2'	2.10	0.70
22:CW:71:C:H2'	22:CW:72:C:C6	2.26	0.70
31:DJ:58:UNK:O	31:DJ:60:UNK:N	2.25	0.70
32:DK:91:PRO:HG3	59:DA:1063:G:H1'	1.74	0.70
41:DV:60:GLU:H	41:DV:96:ILE:HA	1.54	0.70
59:DA:1269:A:N1	59:DA:2011:U:O2	2.24	0.70
59:DA:1570:A:H2'	59:DA:1571:A:C8	2.27	0.70
14:AO:43:LEU:HD12	59:BA:715:G:H22	1.56	0.70
21:AA:737:A:H2'	21:AA:738:C:C6	2.27	0.70
21:AA:1290:G:H3'	21:AA:1291:G:H8	1.55	0.70
21:AA:1427:U:H2'	21:AA:1428:A:C8	2.25	0.70
31:BJ:58:UNK:N	59:BA:1107:G:OP1	2.25	0.70
38:BS:20:ARG:HD3	38:BS:88:ASP:HA	1.74	0.70
43:BX:53:LYS:HB3	43:BX:82:GLN:HB3	1.74	0.70
59:BA:51:G:N2	59:BA:118:A:H62	1.88	0.70
15:CP:21:VAL:HG13	15:CP:34:GLU:HB3	1.74	0.70
17:CR:30:ASP:O	17:CR:36:ASN:ND2	2.18	0.70
21:CA:615:C:H42	21:CA:625:G:H1	1.38	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1305:G:H21	21:CA:1332:A:H8	1.26	0.70
24:CX:33:U:O2'	24:CX:36:C:N4	2.25	0.70
59:DA:227:A:N6	59:DA:410:G:H21	1.88	0.70
59:DA:2398:U:H2'	59:DA:2399:G:H8	1.57	0.70
21:AA:987:G:H2'	21:AA:988:G:C8	2.26	0.70
63:AA:1601:NMY:H1	63:AA:1601:NMY:O11	1.90	0.70
26:BD:37:LEU:HB3	26:BD:62:TYR:HB3	1.74	0.70
33:BN:35:ARG:HD2	33:BN:39:ARG:O	1.92	0.70
33:BN:85:ILE:HG22	33:BN:97:ARG:NE	2.07	0.70
33:BN:90:MET:SD	33:BN:97:ARG:NH2	2.64	0.70
41:BV:96:ILE:HG22	41:BV:97:LYS:H	1.55	0.70
46:B0:20:ARG:O	46:B0:24:LYS:NZ	2.25	0.70
59:BA:521:G:H2'	59:BA:522:G:H8	1.57	0.70
59:BA:1468(J):G:H2'	59:BA:1468(K):G:H8	1.55	0.70
19:CT:23:ARG:HD2	21:CA:322:C:H4'	1.74	0.70
21:CA:1300:G:O2'	21:CA:1301:U:O5'	2.10	0.70
37:DR:117:VAL:HG11	59:DA:2881:C:H5'	1.72	0.70
45:DZ:144:LEU:HD21	45:DZ:150:LEU:HD22	1.72	0.70
59:DA:271(Q):A:N6	59:DA:357(E):U:N3	2.10	0.70
59:DA:1413:G:N2	59:DA:1589:C:C2	2.60	0.70
28:BF:130:ALA:HB3	28:BF:142:TRP:HB2	1.73	0.69
21:CA:824:C:H2'	21:CA:825:G:C8	2.27	0.69
21:CA:1358:U:OP2	21:CA:1359:C:N4	2.24	0.69
30:DH:176:ALA:HA	59:DA:2529:G:H5''	1.74	0.69
35:DP:101:VAL:HG12	35:DP:106:LEU:HB3	1.73	0.69
35:DP:113:LYS:HE2	35:DP:131:SER:HB2	1.74	0.69
59:DA:246:C:H42	59:DA:252:G:H1	1.37	0.69
59:DA:1029:A:H3'	59:DA:1030:G:C8	2.27	0.69
59:DA:1364:G:H4'	59:DA:1808:U:H3	1.56	0.69
59:DA:2333:A:H5''	59:DA:2334:G:H3'	1.73	0.69
20:AY:88:VAL:O	20:AY:90:PHE:N	2.24	0.69
21:AA:1300:G:O2'	21:AA:1301:U:O5'	2.10	0.69
37:BR:101:ALA:O	37:BR:103:ARG:N	2.24	0.69
59:BA:883:G:N1	59:BA:893:C:O2	2.21	0.69
59:BA:1354:A:H62	59:BA:1377:G:N2	1.86	0.69
3:CD:8:VAL:HG11	3:CD:115:ARG:HD3	1.74	0.69
15:CP:78:GLY:HA2	15:CP:81:ARG:HB3	1.75	0.69
20:CY:89:ASP:HB2	20:CY:457:LEU:HD22	1.74	0.69
20:CY:317:MET:HB3	20:CY:325:LEU:HB2	1.72	0.69
21:CA:166:G:H2'	21:CA:167:G:C8	2.27	0.69
25:DC:44:VAL:O	25:DC:173:HIS:HA	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D5:45:VAL:HG11	51:D5:51:TYR:H	1.57	0.69
59:DA:465:G:H22	59:DA:794:G:H22	1.40	0.69
21:AA:1298:C:H4'	21:AA:1299:A:C4	2.27	0.69
24:AX:76:A:OP1	24:AX:77:VAL:HB	1.92	0.69
33:BN:116:LEU:CB	33:BN:118:LYS:HB2	2.21	0.69
36:BQ:18:LYS:HA	60:BB:90:C:H5'	1.73	0.69
41:BV:10:LYS:HE2	41:BV:23:GLU:HB2	1.73	0.69
59:BA:1214:A:H62	59:BA:1235:G:H21	1.38	0.69
59:BA:1426:G:H21	59:BA:1572:A:H62	1.36	0.69
2:CC:22:TRP:HB3	2:CC:59:ARG:H	1.57	0.69
25:DC:79:ALA:HB1	25:DC:83:LYS:HB2	1.74	0.69
26:DD:111:LEU:HD22	26:DD:115:GLN:HB3	1.75	0.69
27:DE:34:VAL:HG11	27:DE:64:LYS:HB3	1.73	0.69
34:DO:1:MET:SD	34:DO:1:MET:N	2.66	0.69
35:DP:62:LEU:HB3	59:DA:2393:A:H5''	1.74	0.69
59:DA:1069:A:H4'	59:DA:1070:A:H5''	1.74	0.69
3:AD:171:GLY:O	3:AD:173:TRP:N	2.25	0.69
20:AY:133:ILE:HG13	20:AY:272:LEU:HD11	1.74	0.69
21:AA:980:C:H5''	21:AA:981:U:C5	2.26	0.69
21:AA:1003:G:H1	21:AA:1037:C:N4	1.89	0.69
25:BC:9:ARG:HA	25:BC:12:LEU:HB3	1.73	0.69
25:BC:40:GLU:HA	25:BC:217:THR:HB	1.73	0.69
40:BU:25:TRP:HD1	40:BU:26:GLY:N	1.91	0.69
59:BA:515:A:O2'	59:BA:580:C:O2	2.10	0.69
59:BA:777:A:H2'	59:BA:778:G:C8	2.27	0.69
59:BA:1527:G:N2	59:BA:1544:A:H2'	2.08	0.69
60:BB:60:C:H2'	60:BB:61:G:H8	1.55	0.69
21:CA:253:U:O4	21:CA:273:A:N1	2.25	0.69
21:CA:1494:G:OP2	63:CA:1601:NMY:H81	1.91	0.69
37:DR:25:ALA:HB2	37:DR:47:PHE:HZ	1.57	0.69
39:DT:28:VAL:HG21	39:DT:89:VAL:HB	1.73	0.69
7:AH:87:SER:HB2	7:AH:133:LEU:O	1.93	0.69
21:AA:429:U:H4'	21:AA:430:A:H5'	1.75	0.69
59:BA:1506(H):C:H2'	59:BA:1506(I):U:C6	2.27	0.69
3:CD:76:ARG:NH1	3:CD:207:TYR:OH	2.24	0.69
21:CA:253:U:N3	21:CA:273:A:C2	2.53	0.69
24:CX:9:A:H4'	24:CX:46:G:H4'	1.74	0.69
24:CX:31:C:N4	24:CX:39:G:H1	1.89	0.69
36:DQ:129:THR:OG1	36:DQ:130:LYS:N	2.25	0.69
56:De:99:VAL:HG21	56:De:122:VAL:HB	1.74	0.69
59:DA:357:A:H2'	59:DA:357(A):U:C6	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DB:70:C:H42	60:DB:106:G:H1	0.75	0.69
20:AY:276:VAL:HA	20:AY:280:LEU:HD23	1.72	0.69
29:BG:107:LEU:HA	29:BG:111:LEU:HD12	1.72	0.69
53:B7:40:TRP:CD1	53:B7:41:ARG:N	2.58	0.69
59:BA:692:C:N3	59:BA:770:G:N2	2.32	0.69
59:BA:1506(K):C:H2'	59:BA:1506(L):G:C8	2.28	0.69
59:BA:2543:G:H21	59:BA:2646:C:H5''	1.56	0.69
12:CM:26:GLY:H	21:CA:1329:A:H5''	1.58	0.69
21:CA:766:A:H3'	21:CA:767:A:H8	1.57	0.69
21:CA:925:G:O6	21:CA:1391:U:O4	2.11	0.69
21:CA:984:C:N4	21:CA:1221:G:H1	1.91	0.69
21:CA:1095:U:H2'	21:CA:1096:C:O4'	1.93	0.69
63:CA:1601:NMY:H1	63:CA:1601:NMY:O11	1.90	0.69
22:CW:31:A:C2	22:CW:39:U:N3	2.55	0.69
24:CX:19:G:H8	24:CX:57:G:H21	1.38	0.69
28:DF:154:VAL:O	28:DF:156:LEU:N	2.24	0.69
59:DA:92:G:H2'	59:DA:93:C:C6	2.28	0.69
59:DA:226:G:C2	59:DA:228:A:N6	2.60	0.69
59:DA:883:G:N1	59:DA:893:C:O2	2.24	0.69
59:DA:1062:G:N2	59:DA:1077:A:O2'	2.24	0.69
3:AD:101:LEU:HA	3:AD:104:VAL:HB	1.74	0.69
24:AX:37:A:H2'	24:AX:38:A:O4'	1.92	0.69
30:BH:175:LYS:O	30:BH:177:GLY:N	2.25	0.69
36:BQ:35:VAL:CA	36:BQ:102:VAL:HA	2.22	0.69
59:BA:1221:C:H42	59:BA:1228:G:H1	1.37	0.69
1:CB:19:HIS:HB2	1:CB:204:ASN:HD22	1.57	0.69
34:DO:45:GLU:HA	34:DO:54:GLU:HG2	1.74	0.69
37:DR:24:GLN:O	37:DR:28:LEU:HB2	1.93	0.69
7:AH:84:ARG:HB3	7:AH:136:GLU:HG3	1.74	0.69
11:AL:35:GLY:HA3	11:AL:83:VAL:HG22	1.75	0.69
18:AS:19:VAL:HA	18:AS:22:LEU:HB2	1.74	0.69
20:AY:22:ASP:CG	61:AY:701:GDP:H5'	2.17	0.69
20:AY:357:ARG:NH1	20:AY:373:ASP:OD1	2.25	0.69
21:AA:1127:G:C2	21:AA:1145:C:O2	2.45	0.69
21:AA:1346:A:O3'	21:AA:1347:G:H4'	1.93	0.69
27:BE:1:MET:SD	27:BE:1:MET:N	2.53	0.69
32:BK:54:PRO:HB2	32:BK:70:LYS:HD3	1.75	0.69
36:BQ:17:LEU:HB3	36:BQ:98:LYS:HE2	1.73	0.69
46:B0:47:PRO:HG3	46:B0:59:LEU:HD22	1.74	0.69
59:BA:481:G:H4'	59:BA:481:G:OP1	1.92	0.69
59:BA:659:C:H2'	59:BA:660:G:H8	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2589:A:H2'	59:BA:2590:A:C8	2.27	0.69
7:CH:39:LEU:HB3	7:CH:45:ILE:HG12	1.74	0.69
8:CI:28:VAL:HG13	8:CI:63:ILE:HB	1.75	0.69
11:CL:39:VAL:HB	11:CL:55:VAL:HG11	1.75	0.69
20:CY:139:MET:HB3	20:CY:174:PHE:HE1	1.56	0.69
21:CA:160:A:H2'	21:CA:161:A:O4'	1.93	0.69
21:CA:680:C:N3	21:CA:710:G:N2	2.38	0.69
21:CA:1040:U:H2'	21:CA:1041:A:C8	2.28	0.69
21:CA:1494:G:C8	63:CA:1601:NMY:N7	2.60	0.69
22:CW:7:G:H2'	22:CW:49:A:H1'	1.74	0.69
22:CW:50:C:N4	22:CW:64:G:H1	1.91	0.69
33:DN:57:ALA:HA	33:DN:126:PRO:HD3	1.75	0.69
34:DO:27:GLY:HA3	59:DA:2674:G:H1'	1.73	0.69
36:DQ:82:ARG:HD2	59:DA:2250:G:C8	2.28	0.69
40:DU:112:ARG:HD3	41:DV:46:VAL:HG11	1.74	0.69
45:DZ:99:TYR:HB3	45:DZ:123:ASP:HB2	1.74	0.69
59:DA:709:U:H2'	59:DA:710:G:H8	1.57	0.69
59:DA:1285:G:N2	59:DA:1328:G:H5''	2.07	0.69
59:DA:1544:A:N7	59:DA:1545:A:N6	2.41	0.69
59:DA:2139:C:O2	59:DA:2152:G:N1	2.18	0.69
59:DA:2200:C:N4	59:DA:2223:G:H1	1.89	0.69
2:AC:154:SER:HB2	21:AA:1057:G:H5''	1.75	0.69
21:AA:626:U:H2'	21:AA:627:G:C8	2.27	0.69
20:CY:428:LEU:HA	20:CY:431:LEU:HB2	1.75	0.69
21:CA:34:C:H2'	21:CA:35:G:C8	2.28	0.69
21:CA:284:G:H2'	21:CA:285:G:H8	1.57	0.69
21:CA:1538:C:H42	23:CV:7:G:H1	1.41	0.69
24:CX:34:U:H3'	24:CX:35:A:C8	2.27	0.69
26:DD:253:GLN:NE2	26:DD:255:LYS:O	2.25	0.69
28:DF:117:ARG:HH21	28:DF:186:ILE:HG23	1.58	0.69
33:DN:114:ARG:NH2	59:DA:527:C:O2'	2.24	0.69
38:DS:39:ILE:HD13	38:DS:49:VAL:HB	1.75	0.69
46:D0:27:GLU:OE2	59:DA:855:G:N2	2.23	0.69
59:DA:603:A:N6	59:DA:625:G:O2'	2.25	0.69
60:DB:34:U:H3	60:DB:48:A:H61	0.78	0.69
16:AQ:27:PHE:HE2	16:AQ:30:PRO:HD3	1.58	0.69
21:AA:1218:C:H2'	21:AA:1219:U:C6	2.28	0.69
36:BQ:72:LYS:O	36:BQ:93:TYR:HA	1.92	0.69
20:CY:255:ILE:HG22	20:CY:257:PRO:HD3	1.76	0.69
20:CY:294:PRO:HD3	20:CY:397:VAL:HG12	1.73	0.69
21:CA:47:C:N4	21:CA:361:G:H1	1.90	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:954:G:H22	21:CA:1227:A:N6	1.91	0.69
21:CA:1063:C:H42	21:CA:1193:G:H1	0.74	0.69
59:DA:75:G:O6	59:DA:111:A:N1	2.25	0.69
59:DA:808:G:H2'	59:DA:809:G:C8	2.28	0.69
59:DA:2392:A:H2	59:DA:2424:C:H42	1.41	0.69
7:AH:38:ILE:HD13	7:AH:41:ARG:HH12	1.58	0.68
21:AA:1427:U:O4	21:AA:1473:A:N1	2.26	0.68
51:B5:15:ARG:HH21	59:BA:2021:C:H4'	1.58	0.68
59:BA:2491:U:H4'	59:BA:2570:G:H5''	1.73	0.68
59:BA:2620:C:H2'	59:BA:2621:A:C8	2.29	0.68
59:BA:2886:G:H2'	59:BA:2887:U:C6	2.27	0.68
60:BB:24:G:N2	60:BB:28:C:O2	2.26	0.68
1:CB:12:GLU:HA	1:CB:16:HIS:CD2	2.28	0.68
7:CH:69:ARG:HH22	7:CH:75:ARG:HB3	1.57	0.68
21:CA:1028(H):G:H2'	21:CA:1033:G:H8	1.59	0.68
52:D6:16:CYS:SG	52:D6:47:THR:OG1	2.51	0.68
59:DA:479:A:H1'	59:DA:481:G:H5''	1.73	0.68
59:DA:852:G:H1	59:DA:925:C:H42	1.40	0.68
59:DA:956:G:H2'	59:DA:957:A:H2'	1.75	0.68
59:DA:1712(B):G:H1	59:DA:1712(P):C:N4	1.89	0.68
6:AG:12:LEU:HD12	6:AG:21:VAL:HB	1.75	0.68
21:AA:147:G:H1	21:AA:175:C:H42	1.39	0.68
33:BN:22:THR:HG21	33:BN:25:ARG:HB2	1.76	0.68
33:BN:28:THR:H	33:BN:37:LYS:HD2	1.58	0.68
33:BN:50:ASP:HA	33:BN:103:VAL:HG11	1.74	0.68
35:BP:48:PRO:HB2	59:BA:833:U:H5'	1.76	0.68
47:B1:27:GLU:O	47:B1:32:LYS:NZ	2.26	0.68
59:BA:1368:G:H2'	59:BA:1369:G:H8	1.58	0.68
15:CP:43:LYS:NZ	21:CA:452:A:OP1	2.22	0.68
23:CV:26:A:H2'	23:CV:27:A:H8	1.58	0.68
25:DC:216:THR:HG21	59:DA:2176:A:H1'	1.74	0.68
30:DH:152:ARG:HB3	30:DH:162:ILE:HG13	1.73	0.68
35:DP:7:ARG:HH21	59:DA:1203:G:H4'	1.56	0.68
42:DW:18:ARG:HH11	42:DW:76:VAL:HG13	1.58	0.68
43:DX:53:LYS:O	43:DX:81:VAL:HA	1.93	0.68
59:DA:38:A:H2'	59:DA:39:C:C6	2.28	0.68
59:DA:2066:C:N3	59:DA:2444:G:N2	2.33	0.68
59:DA:2546:U:H5''	59:DA:2547:U:H5'	1.75	0.68
4:AE:34:VAL:H	4:AE:62:ALA:HB1	1.58	0.68
20:AY:309:LEU:HD23	20:AY:391:GLY:HA3	1.75	0.68
21:AA:516:U:O2	21:AA:533:A:N7	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:838(A):U:O2'	21:AA:838(B):C:H5''	1.92	0.68
35:BP:25:SER:HA	59:BA:811:U:H2'	1.75	0.68
41:BV:59:ALA:HA	41:BV:96:ILE:HA	1.74	0.68
42:BW:14:PRO:HB3	42:BW:18:ARG:HH21	1.56	0.68
46:B0:43:THR:O	46:B0:43:THR:OG1	2.09	0.68
59:BA:20:C:H2'	59:BA:21:A:H8	1.56	0.68
59:BA:1005:C:N4	59:BA:1138:G:H1	1.90	0.68
59:BA:1786:A:OP1	59:BA:1980:G:N2	2.27	0.68
18:CS:32:LYS:HA	18:CS:50:ALA:HB3	1.76	0.68
25:DC:40:GLU:O	25:DC:218:THR:N	2.26	0.68
28:DF:191:ARG:O	28:DF:193:VAL:N	2.25	0.68
33:DN:85:ILE:HG21	33:DN:109:LYS:H	1.58	0.68
35:DP:98:GLU:HA	35:DP:101:VAL:HG22	1.75	0.68
59:DA:24:G:H1	59:DA:516:C:H42	1.39	0.68
59:DA:1039:G:H1	59:DA:1116:C:N4	1.91	0.68
59:DA:1348:G:H1	59:DA:1598:C:H42	0.74	0.68
59:DA:1430:C:N3	59:DA:1563:G:N2	2.34	0.68
60:DB:18:G:H2'	60:DB:19:G:O4'	1.92	0.68
60:DB:65:C:C5	60:DB:66:A:H1'	2.28	0.68
33:BN:75:TYR:H	33:BN:82:LEU:HB2	1.58	0.68
33:BN:125:GLY:O	33:BN:127:ASP:N	2.26	0.68
59:BA:355:G:H2'	59:BA:356:G:H8	1.59	0.68
59:BA:1613:G:H3'	59:BA:1617:C:H42	1.58	0.68
59:BA:1654:A:H2'	59:BA:1655:A:C8	2.27	0.68
60:BB:3:C:C2	60:BB:117:G:C2	2.81	0.68
60:BB:108:C:H5'	60:BB:109:G:H4'	1.75	0.68
21:CA:832:C:H2'	21:CA:833:U:O4'	1.92	0.68
25:DC:61:GLY:O	25:DC:163:GLU:HA	1.94	0.68
33:DN:88:GLU:O	33:DN:91:LEU:HB3	1.93	0.68
37:DR:106:GLY:O	59:DA:2009:G:N2	2.26	0.68
56:De:108:ALA:HB1	56:De:122:VAL:HG12	1.75	0.68
59:DA:642:G:N2	59:DA:645:C:OP2	2.26	0.68
59:DA:1820:U:H3'	59:DA:1821:A:H8	1.58	0.68
59:DA:2745:C:H41	59:DA:2755:C:H4'	1.59	0.68
11:AL:71:PRO:HD2	11:AL:102:ARG:HD3	1.75	0.68
26:BD:260:ARG:HH21	26:BD:270:ILE:HD13	1.59	0.68
59:BA:73:A:H5'	59:BA:75:G:H1'	1.75	0.68
59:BA:584:C:N4	59:BA:1256:G:H1	1.91	0.68
59:BA:605:C:O2	59:BA:657:U:O2'	2.12	0.68
59:BA:1207:C:N3	59:BA:1239:G:N2	2.41	0.68
59:BA:1939:U:N3	59:BA:1967:C:O2'	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2086:U:H3	59:BA:2233:U:H3	1.38	0.68
59:BA:2178:C:H2'	59:BA:2179:C:H6	1.57	0.68
59:BA:2708:G:H2'	59:BA:2709:G:C8	2.28	0.68
20:CY:529:ILE:HD12	20:CY:532:GLY:HA2	1.76	0.68
21:CA:1291:G:H2'	21:CA:1292:U:H6	1.59	0.68
29:DG:36:LYS:HG2	29:DG:160:VAL:HB	1.75	0.68
29:DG:173:LEU:HB3	29:DG:178:PHE:HB2	1.75	0.68
45:DZ:61:LEU:HG	45:DZ:62:PRO:HD2	1.75	0.68
59:DA:882:G:H2'	59:DA:883:G:C8	2.29	0.68
59:DA:1399:C:H2'	59:DA:1400:G:H8	1.59	0.68
59:DA:1687:G:N2	59:DA:1701:A:H62	1.90	0.68
20:AY:328:ILE:HD12	20:AY:330:VAL:H	1.58	0.68
59:BA:2065:C:H2'	59:BA:2066:C:C6	2.29	0.68
59:BA:2552:U:H3'	59:BA:2553:G:H5'	1.75	0.68
8:CI:19:LEU:HD22	8:CI:59:PHE:HB3	1.76	0.68
21:CA:66:G:N2	21:CA:103:C:N3	2.40	0.68
33:DN:34:LEU:O	33:DN:35:ARG:HG3	1.94	0.68
33:DN:45:ASN:HB3	33:DN:78:TYR:HD2	1.58	0.68
33:DN:111:PRO:C	33:DN:114:ARG:H	2.01	0.68
59:DA:1061:U:H3'	59:DA:1062:G:H5''	1.76	0.68
59:DA:2115:G:H1'	59:DA:2171:A:H61	1.59	0.68
59:DA:2314:C:H2'	59:DA:2315:G:C8	2.29	0.68
59:DA:2777:G:H5''	59:DA:2778:A:H5'	1.76	0.68
15:AP:57:ARG:NH2	15:AP:81:ARG:O	2.27	0.68
19:AT:49:ALA:O	19:AT:52:ALA:N	2.27	0.68
21:AA:1537:U:N3	23:AV:8:A:O2'	2.27	0.68
27:BE:36:ARG:HH12	27:BE:86:PRO:HD2	1.58	0.68
37:BR:40:LYS:O	37:BR:44:LEU:HB2	1.92	0.68
40:BU:21:ALA:HA	40:BU:39:LEU:HD21	1.76	0.68
59:BA:18:C:O2'	59:BA:554:U:OP1	2.12	0.68
59:BA:2064:C:H2'	59:BA:2065:C:C6	2.29	0.68
10:CK:30:VAL:N	10:CK:43:SER:O	2.27	0.68
21:CA:766:A:H3'	21:CA:767:A:C8	2.28	0.68
63:CA:1601:NMY:H19	63:CA:1601:NMY:C17	2.21	0.68
59:DA:729:G:H4'	59:DA:763:G:H5'	1.76	0.68
59:DA:2255:G:H1	59:DA:2275:C:N4	1.85	0.68
16:AQ:28:PRO:HA	16:AQ:35:VAL:HA	1.75	0.68
20:AY:10:LYS:HE2	20:AY:284:LEU:HD13	1.75	0.68
33:BN:35:ARG:HE	33:BN:38:HIS:C	2.02	0.68
35:BP:27:HIS:HE1	59:BA:814:C:H41	1.39	0.68
45:BZ:60:GLU:HA	45:BZ:66:SER:HA	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2096:U:H2'	59:BA:2097:C:C6	2.29	0.68
20:CY:621:ILE:O	20:CY:625:ASN:ND2	2.26	0.68
21:CA:877:C:H2'	21:CA:878:G:H8	1.59	0.68
21:CA:1028(H):G:H2'	21:CA:1033:G:C8	2.28	0.68
21:CA:1076:C:H42	21:CA:1081:G:H1	1.42	0.68
28:DF:89:VAL:HG21	59:DA:586:A:H5'	1.76	0.68
32:DK:14:ALA:HB3	32:DK:50:ASP:HA	1.76	0.68
40:DU:92:ARG:HB3	40:DU:95:LEU:HG	1.76	0.68
59:DA:244:A:H62	59:DA:254:G:N2	1.89	0.68
59:DA:796:C:H2'	59:DA:797:C:C6	2.28	0.68
59:DA:1415:U:H3	59:DA:1587:A:H61	0.81	0.68
59:DA:2167:U:H2'	59:DA:2168:G:C8	2.29	0.68
15:AP:36:ILE:HB	15:AP:52:ASP:HB3	1.74	0.68
21:AA:458(A):G:C2	21:AA:458(E):A:N7	2.62	0.68
21:AA:927:G:H1	21:AA:1390:U:H3	1.38	0.68
34:BO:1:MET:SD	34:BO:1:MET:N	2.64	0.68
37:BR:39:PRO:HG2	59:BA:1651:G:H4'	1.74	0.68
38:BS:85:VAL:H	38:BS:106:ARG:HD3	1.58	0.68
42:BW:58:ALA:HA	42:BW:62:HIS:HB2	1.74	0.68
59:BA:969:U:H2'	59:BA:970:C:C6	2.28	0.68
3:CD:5:ILE:HD13	21:CA:406:G:H5''	1.76	0.68
7:CH:95:VAL:HG22	7:CH:99:GLU:HB3	1.76	0.68
21:CA:403:C:N4	21:CA:547:A:H5'	2.09	0.68
25:DC:44:VAL:HG13	25:DC:213:VAL:O	1.94	0.68
28:DF:12:LEU:HA	28:DF:17:ARG:HB3	1.76	0.68
32:DK:21:PRO:HA	32:DK:23:VAL:H	1.59	0.68
33:DN:18:ALA:N	33:DN:56:ASN:OD1	2.27	0.68
43:DX:66:LEU:HD11	59:DA:64:A:H1'	1.76	0.68
45:DZ:150:LEU:HD21	45:DZ:171:ILE:HD11	1.76	0.68
59:DA:1682:G:H2'	59:DA:1683:C:O4'	1.92	0.68
59:DA:1753:G:N2	59:DA:1756:G:O5'	2.27	0.68
20:AY:649:LEU:H	20:AY:652:MET:HB3	1.58	0.68
21:AA:352:C:O2	21:AA:355:C:N4	2.27	0.68
28:BF:156:LEU:HB2	28:BF:193:VAL:HB	1.75	0.68
29:BG:111:LEU:HB2	29:BG:112:PRO:HD3	1.75	0.68
48:B2:32:LEU:HB2	48:B2:53:LEU:HD22	1.76	0.68
59:BA:1358:G:H21	59:BA:1373:A:H62	1.43	0.68
59:BA:1949:G:H2'	59:BA:1950:G:C8	2.29	0.68
59:BA:2647:U:H2'	59:BA:2648:C:C6	2.29	0.68
21:CA:320:C:H1'	21:CA:1434:A:H2	1.59	0.68
21:CA:934:C:N3	21:CA:938:A:N1	2.42	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CX:76:A:OP2	59:DA:2573:C:N4	2.25	0.68
32:DK:30:HIS:NE2	32:DK:64:SER:O	2.26	0.68
59:DA:922:U:H2'	59:DA:923:C:C6	2.29	0.68
59:DA:1009:A:H1'	59:DA:1153:C:O2'	1.93	0.68
59:DA:1446:C:N4	59:DA:1465:G:H1	1.92	0.68
59:DA:1589:C:H2'	59:DA:1590:U:C6	2.29	0.68
59:DA:2329:G:H2'	59:DA:2330:G:C8	2.29	0.68
2:AC:109:PRO:O	2:AC:111:LEU:N	2.27	0.67
14:AO:16:ALA:HA	14:AO:27:VAL:HG22	1.76	0.67
21:AA:992:U:H3	21:AA:1044:A:H62	1.39	0.67
30:BH:98:LEU:HB2	30:BH:125:VAL:HB	1.76	0.67
32:BK:105:LEU:HD23	32:BK:106:GLU:H	1.59	0.67
33:BN:112:LEU:O	33:BN:115:ARG:N	2.26	0.67
38:BS:26:LEU:HD12	38:BS:85:VAL:HG21	1.75	0.67
59:BA:2313:C:H2'	59:BA:2314:C:C6	2.29	0.67
59:BA:2532:G:H21	59:BA:2663:G:N2	1.91	0.67
60:BB:23:G:N1	60:BB:60:C:N4	2.19	0.67
7:CH:129:VAL:HA	21:CA:600:C:H4'	1.75	0.67
21:CA:1002:G:H1	21:CA:1038:C:N4	1.91	0.67
26:DD:51:VAL:HG22	26:DD:52:ARG:H	1.59	0.67
55:D9:27:CYS:HB3	55:D9:32:HIS:HB2	1.75	0.67
60:DB:83:G:N2	60:DB:93:C:N3	2.37	0.67
7:AH:36:LEU:HA	7:AH:39:LEU:HB2	1.76	0.67
21:AA:695:A:H2'	21:AA:696:A:C8	2.29	0.67
21:AA:1323:G:H2'	21:AA:1324:A:H8	1.57	0.67
35:BP:66:GLY:HA2	59:BA:2415:G:H4'	1.75	0.67
59:BA:223:A:N1	59:BA:407:G:O2'	2.26	0.67
59:BA:955:C:N3	59:BA:962:G:C6	2.62	0.67
59:BA:1018:C:H2'	59:BA:1019:U:H6	1.57	0.67
59:BA:2817:G:H21	59:BA:2836:U:H1'	1.60	0.67
20:CY:519:ARG:HH12	20:CY:678:GLU:HB2	1.59	0.67
33:DN:65:LYS:O	33:DN:67:LEU:N	2.27	0.67
33:DN:114:ARG:HE	59:DA:527:C:C1'	2.07	0.67
37:DR:40:LYS:O	37:DR:44:LEU:HB2	1.94	0.67
37:DR:107:ASP:O	59:DA:1649:G:N2	2.26	0.67
59:DA:1712(G):G:H1'	59:DA:1712(K):A:N6	2.09	0.67
12:AM:99:ARG:NH2	21:AA:1309:G:OP2	2.27	0.67
21:AA:673:G:H1	21:AA:717:C:H42	1.42	0.67
21:AA:898:G:H1'	21:AA:901:A:N6	2.09	0.67
30:BH:96:ALA:H	30:BH:128:PRO:HB3	1.59	0.67
35:BP:95:VAL:HB	35:BP:125:VAL:HA	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BW:14:PRO:HD2	42:BW:99:ARG:HB2	1.76	0.67
46:B0:20:ARG:HH21	59:BA:2271:G:H5''	1.57	0.67
59:BA:2001:A:H2'	59:BA:2002:G:C8	2.30	0.67
25:DC:26:ALA:O	25:DC:30:VAL:HB	1.94	0.67
32:DK:62:ASP:HB2	56:De:98:PRO:HD3	1.75	0.67
33:DN:74:ARG:N	33:DN:84:LYS:HB3	2.09	0.67
34:DO:2:ILE:HG12	34:DO:33:ALA:HB3	1.77	0.67
38:DS:97:ARG:O	38:DS:99:LYS:N	2.27	0.67
43:DX:4:ALA:HB2	48:D2:26:ARG:HG2	1.77	0.67
49:D3:31:LEU:HD22	49:D3:32:GLN:HG2	1.76	0.67
59:DA:52:A:OP2	59:DA:117:G:N2	2.27	0.67
59:DA:2699:C:N4	59:DA:2708:G:H1	1.92	0.67
2:AC:12:LEU:HB2	13:AN:57:ARG:HH21	1.59	0.67
21:AA:1061:G:H1	21:AA:1195:C:H42	1.40	0.67
21:AA:1405:G:O5'	63:AA:1601:NMY:H231	1.93	0.67
22:AW:2:G:H22	22:AW:72:C:N4	1.92	0.67
22:AW:50:C:N4	22:AW:64:G:N1	2.41	0.67
27:BE:170:LEU:HD23	27:BE:185:LYS:HB2	1.77	0.67
33:BN:30:ILE:HG23	33:BN:34:LEU:HD12	1.76	0.67
42:BW:77:ASP:OD1	59:BA:23:G:N2	2.26	0.67
48:B2:32:LEU:HD13	48:B2:53:LEU:HB3	1.77	0.67
59:BA:2006:C:H5''	59:BA:2048:G:H5''	1.76	0.67
60:BB:28:C:H2'	60:BB:29:A:H8	1.58	0.67
10:CK:34:ASP:O	10:CK:36:ASP:N	2.24	0.67
10:CK:120:ARG:HB3	21:CA:778:G:H21	1.60	0.67
21:CA:17:U:H3	21:CA:918:A:H2	1.42	0.67
21:CA:974:A:H4'	21:CA:975:A:H3'	1.76	0.67
21:CA:1343:G:H21	21:CA:1349:A:H4'	1.60	0.67
59:DA:225:A:N1	59:DA:230:U:O2	2.28	0.67
59:DA:500:G:H21	59:DA:505:A:H62	1.39	0.67
59:DA:514:A:H2'	59:DA:515:A:C8	2.30	0.67
59:DA:520:G:H2'	59:DA:521:G:O4'	1.94	0.67
59:DA:1046:A:H3'	59:DA:1047:G:H5'	1.76	0.67
1:AB:95:GLN:HG3	1:AB:148:TYR:HA	1.75	0.67
3:AD:67:ILE:HG23	3:AD:68:TYR:HD1	1.58	0.67
21:AA:859:A:OP2	21:AA:869:G:N1	2.26	0.67
26:BD:145:VAL:HG12	26:BD:147:LEU:H	1.59	0.67
33:BN:50:ASP:O	33:BN:52:VAL:N	2.28	0.67
59:BA:644:A:H2	59:BA:2369:A:H1'	1.60	0.67
59:BA:1344:G:H4'	59:BA:1384:A:C5	2.29	0.67
59:BA:2167:U:H2'	59:BA:2168:G:C8	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2651:C:H42	59:BA:2669:G:H1	1.40	0.67
5:CF:12:PRO:HG3	5:CF:57:GLN:HG3	1.76	0.67
21:CA:951:G:N3	21:CA:970:C:O2'	2.24	0.67
21:CA:953:G:H5''	21:CA:965:A:C2	2.29	0.67
21:CA:1440:C:N3	21:CA:1461:G:O6	2.26	0.67
21:CA:1440(N):C:H2'	21:CA:1440(O):A:O4'	1.94	0.67
35:DP:6:LEU:HG	35:DP:8:PRO:HD2	1.76	0.67
3:AD:25:ARG:HG3	21:AA:410:G:OP2	1.95	0.67
15:AP:28:ARG:NH1	21:AA:375:U:O2	2.27	0.67
24:AX:53:G:N2	24:AX:61:C:C2	2.62	0.67
26:BD:183:ARG:HH22	26:BD:266:SER:HB2	1.60	0.67
47:B1:22:GLY:O	47:B1:23:LYS:HB2	1.93	0.67
59:BA:390:A:H4'	59:BA:391:G:H5'	1.75	0.67
59:BA:1636:C:H2'	59:BA:1637:A:H8	1.57	0.67
4:CE:18:ARG:NH1	21:CA:1082:G:OP1	2.27	0.67
20:CY:679:VAL:O	20:CY:681:LYS:N	2.28	0.67
33:DN:78:TYR:HB3	33:DN:79:PRO:HD3	1.76	0.67
59:DA:997:G:N2	59:DA:1158:C:N3	2.37	0.67
59:DA:1074:G:H2'	59:DA:1075:C:C6	2.29	0.67
59:DA:2819:G:N2	59:DA:2827:C:N3	2.36	0.67
62:AY:702:FUA:H201	62:AY:702:FUA:O1	1.95	0.67
21:AA:614:A:H2'	21:AA:615:C:C6	2.30	0.67
27:BE:156:MET:HE2	59:BA:2049:G:H21	1.60	0.67
37:BR:42:LYS:O	37:BR:45:ARG:HG3	1.95	0.67
45:BZ:67:LEU:HD12	45:BZ:68:PRO:HD2	1.75	0.67
59:BA:2807:G:N1	59:BA:2893:G:O6	2.27	0.67
6:CG:69:VAL:HG21	6:CG:104:LEU:HD21	1.75	0.67
21:CA:773:G:N2	21:CA:806:C:N3	2.36	0.67
21:CA:1090:U:O2	21:CA:1095:U:O4	2.13	0.67
30:DH:139:GLN:NE2	59:DA:2745:C:O2	2.24	0.67
33:DN:114:ARG:NE	59:DA:527:C:C1'	2.57	0.67
44:DY:46:LYS:H	44:DY:62:GLU:HB2	1.60	0.67
59:DA:1691:C:N3	59:DA:1696:G:N2	2.37	0.67
59:DA:1974:C:O2	63:DA:2901:NMY:N9	2.28	0.67
60:DB:80:U:H2'	60:DB:81:G:H21	1.57	0.67
4:AE:83:GLU:HB2	4:AE:88:LYS:HD3	1.75	0.67
8:AI:65:VAL:HG11	8:AI:77:ILE:HD11	1.77	0.67
8:AI:107:ARG:HB3	21:AA:1347:G:H5'	1.76	0.67
32:BK:53:VAL:HG13	32:BK:70:LYS:H	1.58	0.67
33:BN:104:LYS:HG3	33:BN:120:LEU:HD21	1.75	0.67
40:BU:14:HIS:NE2	59:BA:1252:G:OP2	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1416:G:H1	59:BA:1582:C:N4	1.93	0.67
59:BA:2450:A:N6	59:BA:2501:C:H42	1.91	0.67
19:CT:73:HIS:HB3	19:CT:74:LYS:HD3	1.75	0.67
33:DN:97:ARG:HH11	33:DN:108:PRO:HB2	1.60	0.67
45:DZ:60:GLU:HA	45:DZ:66:SER:HA	1.76	0.67
59:DA:842:G:H2'	59:DA:843:G:C8	2.30	0.67
59:DA:1855:G:H1	59:DA:1887:C:N4	1.91	0.67
59:DA:2525:G:H2'	59:DA:2526:G:C8	2.29	0.67
59:DA:2679:A:N6	59:DA:2728:U:H3	1.92	0.67
21:AA:34:C:H2'	21:AA:35:G:C8	2.29	0.67
21:AA:416:G:O6	21:AA:427:U:O2	2.13	0.67
21:AA:658:G:H1	21:AA:747:C:N4	1.93	0.67
21:AA:1440(K):G:N2	21:AA:1440(L):G:N7	2.43	0.67
22:AW:68:U:H2'	22:AW:69:A:C8	2.30	0.67
38:BS:97:ARG:O	38:BS:100:ALA:N	2.25	0.67
53:B7:34:ARG:HH12	59:BA:466:A:H5''	1.59	0.67
59:BA:2331:G:H21	59:BA:2336:A:H2	1.43	0.67
20:CY:647:VAL:HG11	20:CY:652:MET:HG2	1.77	0.67
21:CA:68(R):C:H2'	21:CA:68(S):C:H5	1.58	0.67
26:DD:112:GLN:H	26:DD:115:GLN:HG3	1.60	0.67
34:DO:16:ALA:HA	34:DO:46:ALA:HA	1.76	0.67
45:DZ:128:VAL:HG22	45:DZ:129:SER:H	1.60	0.67
19:AT:33:ILE:HD11	19:AT:62:LEU:HD13	1.77	0.67
21:AA:170:U:H2'	21:AA:171:A:C8	2.29	0.67
24:AX:52:G:N1	24:AX:62:C:C2	2.52	0.67
33:BN:88:GLU:C	33:BN:90:MET:N	2.52	0.67
59:BA:841:A:H2'	59:BA:842:G:H8	1.59	0.67
59:BA:1061:U:H4'	59:BA:1070:A:O3'	1.95	0.67
59:BA:1413:G:N2	59:BA:1589:C:N3	2.36	0.67
59:BA:1586:A:H3'	59:BA:1587:A:C8	2.27	0.67
59:BA:1712(A):U:H2'	59:BA:1712(B):G:C8	2.30	0.67
22:CW:21:A:H61	22:CW:46:G:H5''	1.59	0.67
26:DD:142:VAL:HG23	26:DD:193:VAL:HA	1.77	0.67
28:DF:8:GLN:HB2	28:DF:22:ALA:HB2	1.77	0.67
40:DU:95:LEU:HD22	41:DV:13:ARG:HB2	1.77	0.67
59:DA:579:G:O6	59:DA:1261:C:N3	2.28	0.67
12:AM:65:LYS:HD2	12:AM:69:GLU:HG2	1.76	0.66
31:BJ:54:UNK:HA	31:BJ:79:UNK:HA	1.75	0.66
35:BP:17:LYS:HD3	35:BP:19:VAL:HG23	1.78	0.66
35:BP:112:LEU:HD11	35:BP:114:ILE:HG23	1.77	0.66
47:B1:19:GLN:HB3	47:B1:40:ARG:HD3	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B2:48:HIS:CD2	48:B2:49:LYS:H	2.12	0.66
54:B8:36:LYS:HE3	54:B8:40:GLU:HG3	1.77	0.66
59:BA:20:C:H2'	59:BA:21:A:C8	2.29	0.66
59:BA:836:G:N1	59:BA:943:U:O2	2.18	0.66
59:BA:1486:A:H2'	59:BA:1487:G:H8	1.58	0.66
59:BA:2252:G:H5'	59:BA:2253:G:OP2	1.95	0.66
8:CI:10:ARG:HB2	8:CI:76:ALA:HA	1.77	0.66
9:CJ:27:ALA:HB1	9:CJ:34:VAL:HG21	1.77	0.66
21:CA:892:A:H62	21:CA:906:G:H21	1.40	0.66
24:CX:29:U:H1'	24:CX:42:G:C2	2.30	0.66
33:DN:37:LYS:O	33:DN:75:TYR:HB3	1.94	0.66
33:DN:114:ARG:CZ	59:DA:527:C:H6	2.08	0.66
59:DA:1925:C:N4	59:DA:1929:G:H22	1.94	0.66
59:DA:2247:A:H61	59:DA:2257:U:H3	0.74	0.66
59:DA:2535:G:H2'	59:DA:2536:G:C8	2.30	0.66
8:AI:105:ASP:HB3	8:AI:107:ARG:HG2	1.76	0.66
20:AY:272:LEU:HD12	20:AY:275:ALA:HB3	1.76	0.66
25:BC:7:ARG:HE	59:BA:2128:C:H5''	1.60	0.66
26:BD:253:GLN:HG2	26:BD:255:LYS:H	1.60	0.66
33:BN:27:ALA:HA	33:BN:30:ILE:HG22	1.77	0.66
33:BN:31:ALA:HB1	33:BN:38:HIS:HB2	1.76	0.66
37:BR:41:ALA:HB1	37:BR:97:VAL:HG11	1.75	0.66
59:BA:1225:G:H2'	59:BA:1226:A:C8	2.30	0.66
59:BA:1650:G:H1	59:BA:2007:C:N4	1.92	0.66
59:BA:2134:A:H62	59:BA:2157:G:H1'	1.59	0.66
15:CP:31:LYS:HG2	15:CP:32:TYR:H	1.59	0.66
16:CQ:45:HIS:HB3	16:CQ:72:ARG:HG2	1.77	0.66
20:CY:547:GLU:HA	20:CY:550:MET:HB3	1.77	0.66
21:CA:520:A:N6	21:CA:533:A:N6	2.43	0.66
21:CA:1264:C:H2'	21:CA:1265:G:C8	2.30	0.66
29:DG:86:MET:N	29:DG:86:MET:SD	2.69	0.66
33:DN:75:TYR:OH	59:DA:2039:C:OP1	2.11	0.66
33:DN:97:ARG:HB3	33:DN:105:GLY:HA2	1.75	0.66
42:DW:92:ARG:NH1	59:DA:2014:A:O2'	2.28	0.66
59:DA:373:U:H2'	59:DA:374:A:H8	1.59	0.66
59:DA:529:A:N7	59:DA:2041:U:O4	2.28	0.66
59:DA:2350:C:N3	59:DA:2367:G:O6	2.28	0.66
59:DA:2551:C:N3	59:DA:2557:G:O6	2.28	0.66
60:DB:11:C:N4	60:DB:109:G:H1	1.93	0.66
18:AS:79:THR:HB	21:AA:957:U:H4'	1.76	0.66
21:AA:1321:C:H3'	21:AA:1322:C:H5''	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1476:G:H2'	21:AA:1477:C:C6	2.29	0.66
25:BC:132:LEU:HB2	25:BC:138:LEU:HB2	1.78	0.66
59:BA:1336:A:H2'	59:BA:1337:G:C8	2.30	0.66
59:BA:2479:G:OP1	59:BA:2536:G:N2	2.27	0.66
20:CY:413:ILE:HD13	20:CY:476:VAL:HG22	1.78	0.66
62:CY:702:FUA:O1	62:CY:702:FUA:H201	1.95	0.66
28:DF:149:ASP:OD1	28:DF:149:ASP:N	2.28	0.66
33:DN:35:ARG:HH11	33:DN:76:SER:C	2.04	0.66
35:DP:96:THR:HG23	35:DP:99:LEU:HB3	1.76	0.66
53:D7:3:ARG:NE	59:DA:1613:G:O2'	2.29	0.66
59:DA:649:G:H2'	59:DA:650:C:C6	2.31	0.66
59:DA:659:C:H2'	59:DA:660:G:C8	2.27	0.66
59:DA:1416:G:N2	59:DA:1582:C:C2	2.60	0.66
59:DA:1967:C:H2'	59:DA:1968:G:H5'	1.77	0.66
59:DA:2426:A:H3'	59:DA:2427:C:H5'	1.76	0.66
59:DA:2535:G:H2'	59:DA:2536:G:H8	1.59	0.66
1:AB:78:GLN:NE2	1:AB:94:ASN:OD1	2.28	0.66
7:AH:30:ARG:HD3	21:AA:590:C:H5'	1.78	0.66
21:AA:579:G:O6	21:AA:762:C:N3	2.28	0.66
24:AX:75:C:N4	59:BA:2553:G:C6	2.63	0.66
25:BC:169:THR:HG21	59:BA:2121:G:H21	1.60	0.66
33:BN:116:LEU:HB3	33:BN:118:LYS:HB2	1.77	0.66
21:CA:512:U:O4	21:CA:539:A:N1	2.28	0.66
21:CA:966:G:N3	22:CW:34:C:O2'	2.28	0.66
29:DG:34:LEU:HD13	29:DG:99:MET:HE1	1.77	0.66
30:DH:41:MET:HB3	30:DH:55:PRO:HD3	1.77	0.66
35:DP:96:THR:H	35:DP:99:LEU:HD23	1.60	0.66
59:DA:1223:G:N2	59:DA:1226:A:OP2	2.27	0.66
59:DA:1281:G:N2	59:DA:1289:C:N3	2.38	0.66
1:AB:95:GLN:OE1	1:AB:96:ARG:NH2	2.29	0.66
5:AF:96:PRO:HA	17:AR:32:ARG:HB2	1.77	0.66
21:AA:901:A:O2'	21:AA:1513:A:OP1	2.13	0.66
34:BO:104:ARG:HH11	34:BO:104:ARG:HB3	1.60	0.66
39:BT:53:ARG:NH1	39:BT:60:THR:OG1	2.24	0.66
59:BA:540:C:H2'	59:BA:541:C:C6	2.30	0.66
59:BA:597:U:H2'	59:BA:598:G:C8	2.30	0.66
59:BA:2136:C:N4	59:BA:2155:G:H1	1.92	0.66
1:CB:91:PRO:HB3	1:CB:152:PHE:HA	1.78	0.66
21:CA:1278:U:H5'	21:CA:1279:A:C8	2.29	0.66
33:DN:116:LEU:C	33:DN:118:LYS:N	2.45	0.66
59:DA:1290:C:H2'	59:DA:1291:C:C6	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:116:ALA:HA	6:AG:119:ARG:HG3	1.77	0.66
14:AO:87:ILE:O	14:AO:88:ARG:HB2	1.94	0.66
21:AA:672:U:O2	21:AA:734:G:O6	2.14	0.66
21:AA:946:A:H2'	21:AA:947:G:C8	2.31	0.66
21:AA:1512:U:H2'	21:AA:1513:A:H8	1.61	0.66
25:BC:181:PHE:HB3	25:BC:185:LYS:HB2	1.77	0.66
29:BG:38:VAL:HB	29:BG:158:ALA:HB3	1.77	0.66
33:BN:35:ARG:NH1	33:BN:40:PRO:HB3	2.10	0.66
33:BN:74:ARG:O	33:BN:83:LYS:O	2.13	0.66
35:BP:46:LYS:HB3	35:BP:48:PRO:HB3	1.78	0.66
40:BU:92:ARG:HD3	40:BU:95:LEU:HG	1.77	0.66
45:BZ:69:THR:HG22	45:BZ:90:VAL:HG13	1.77	0.66
52:B6:15:GLU:HG3	52:B6:41:PRO:HB3	1.76	0.66
59:BA:1689:A:OP2	59:BA:1698:A:N6	2.29	0.66
59:BA:1960:A:H2'	59:BA:1961:C:C6	2.31	0.66
4:CE:10:MET:HA	4:CE:32:VAL:HG13	1.77	0.66
8:CI:107:ARG:HA	21:CA:1347:G:H5'	1.78	0.66
21:CA:68(P):C:H2'	21:CA:68(Q):U:C6	2.29	0.66
21:CA:324:G:N1	21:CA:327:A:OP2	2.29	0.66
21:CA:683:G:H1	21:CA:707:C:N4	1.94	0.66
26:DD:253:GLN:HB3	26:DD:257:LEU:HD12	1.78	0.66
41:DV:85:LYS:HD2	59:DA:814:C:H5''	1.78	0.66
59:DA:199:A:N6	59:DA:2434:A:N7	2.44	0.66
60:DB:5:C:N3	60:DB:115:G:N2	2.36	0.66
60:DB:79:C:H42	60:DB:97:G:H1	1.42	0.66
20:AY:415:PRO:HA	20:AY:474:ALA:HA	1.78	0.66
27:BE:13:ARG:HH21	39:BT:60:THR:HG21	1.59	0.66
37:BR:53:HIS:CG	59:BA:2840:C:H5''	2.31	0.66
45:BZ:74:VAL:HA	45:BZ:86:VAL:HA	1.77	0.66
59:BA:581:C:H2'	59:BA:582:G:H8	1.59	0.66
20:CY:28:THR:O	20:CY:32:ILE:HG12	1.94	0.66
20:CY:135:PHE:O	20:CY:137:ASN:N	2.28	0.66
21:CA:17:U:H2'	21:CA:18:C:C6	2.31	0.66
21:CA:452:A:H62	21:CA:480:U:H3	1.44	0.66
26:DD:206:LEU:HB2	59:DA:1791:A:H4'	1.77	0.66
31:DJ:68:UNK:O	31:DJ:70:UNK:N	2.29	0.66
39:DT:25:GLY:HA3	39:DT:92:GLY:HA2	1.77	0.66
59:DA:271(D):G:H1	59:DA:357(O):C:N4	1.90	0.66
59:DA:2122:U:H3	59:DA:2176:A:H61	1.42	0.66
59:DA:2641:G:H1	59:DA:2773:C:H42	1.43	0.66
25:BC:132:LEU:HB3	25:BC:138:LEU:H	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BN:74:ARG:HH11	33:BN:84:LYS:HD2	1.59	0.66
59:BA:150:C:C2	59:BA:176:G:N2	2.63	0.66
11:CL:16:GLU:O	21:CA:562:C:O2'	2.09	0.66
21:CA:1218:C:H2'	21:CA:1219:U:C6	2.31	0.66
33:DN:79:PRO:O	33:DN:81:GLY:N	2.26	0.66
41:DV:5:VAL:HA	41:DV:39:LEU:HD23	1.78	0.66
44:DY:96:ILE:HB	44:DY:99:CYS:HB2	1.78	0.66
48:D2:32:LEU:HD13	48:D2:53:LEU:HB3	1.77	0.66
56:De:121:VAL:HG12	56:De:122:VAL:HG23	1.78	0.66
59:DA:2074:U:H3	59:DA:2435:A:N6	1.93	0.66
59:DA:2634:G:H1	59:DA:2784:C:H42	0.75	0.66
59:DA:2841:C:H2'	59:DA:2842:G:C8	2.31	0.66
60:DB:50:G:H2'	60:DB:51:G:H8	1.60	0.66
10:AK:32:ILE:O	10:AK:40:ILE:HG12	1.96	0.66
10:AK:33:THR:HG22	10:AK:39:PRO:HA	1.77	0.66
21:AA:218:C:H4'	21:AA:458(C):G:H1	1.60	0.66
21:AA:1440(J):C:H1'	21:AA:1440(K):G:C2	2.31	0.66
33:BN:71:ILE:HB	33:BN:97:ARG:HB2	1.78	0.66
33:BN:78:TYR:HB3	33:BN:79:PRO:HD3	1.76	0.66
33:BN:83:LYS:HE3	33:BN:112:LEU:HD13	1.78	0.66
33:BN:104:LYS:NZ	33:BN:121:LYS:O	2.26	0.66
35:BP:112:LEU:HD12	35:BP:128:HIS:H	1.61	0.66
59:BA:1141:U:O2	59:BA:1142:A:N6	2.28	0.66
59:BA:2698:U:H2'	59:BA:2699:C:C6	2.31	0.66
60:BB:18:G:H2'	60:BB:19:G:O4'	1.96	0.66
1:CB:70:PHE:HE1	1:CB:90:MET:HB2	1.61	0.66
20:CY:334:THR:HG22	20:CY:370:LYS:HA	1.78	0.66
21:CA:559:A:H4'	21:CA:560:U:H5''	1.77	0.66
21:CA:998(A):C:H42	21:CA:1042:G:H1	0.77	0.66
21:CA:1312:G:H1	21:CA:1325:C:N4	1.93	0.66
48:D2:58:ALA:HA	59:DA:72:U:H1'	1.78	0.66
49:D3:24:LYS:HB3	59:DA:849:A:H2	1.61	0.66
59:DA:2303:G:H1	59:DA:2313:C:H42	1.42	0.66
59:DA:2512:C:H42	59:DA:2574:G:H1	1.44	0.66
60:DB:81:G:H5''	60:DB:82:G:H8	1.59	0.66
21:AA:1404:C:H2'	21:AA:1405:G:H8	1.60	0.66
22:AW:14:A:H1'	22:AW:22:G:H22	1.60	0.66
33:BN:88:GLU:C	33:BN:90:MET:H	2.04	0.66
33:BN:100:GLU:C	33:BN:102:ALA:N	2.48	0.66
59:BA:270(G):C:H42	59:BA:270(S):G:H1	1.43	0.66
59:BA:1069:A:O2'	59:BA:1073:A:N6	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:32:A:H1'	21:CA:48:C:H41	1.61	0.66
21:CA:37:U:O2	21:CA:397:A:N1	2.28	0.66
21:CA:745:C:H2'	21:CA:746:A:C8	2.30	0.66
21:CA:979:C:H3'	21:CA:980:C:H5''	1.78	0.66
21:CA:1217:C:H2'	21:CA:1218:C:C6	2.31	0.66
21:CA:1241:G:H2'	21:CA:1242:C:C6	2.31	0.66
21:CA:1513:A:H2'	21:CA:1514:C:C6	2.31	0.66
38:DS:70:GLY:HA3	38:DS:99:LYS:HB2	1.77	0.66
43:DX:64:LYS:HD2	43:DX:73:ARG:HH21	1.61	0.66
56:De:100:LYS:HE3	56:De:101:GLU:H	1.61	0.66
59:DA:65:C:O2'	59:DA:456:C:N3	2.25	0.66
59:DA:215:G:H4'	59:DA:216:A:H4'	1.78	0.66
59:DA:1664:A:H61	59:DA:1996:C:N4	1.93	0.66
59:DA:1752:C:N4	59:DA:1756:G:H1	1.91	0.66
59:DA:1782:C:N4	59:DA:2586:C:H42	1.90	0.66
59:DA:2134:A:H8	59:DA:2157:G:N2	1.83	0.66
59:DA:2647:U:H2'	59:DA:2648:C:C6	2.31	0.66
21:AA:411:A:H2'	21:AA:412:A:H4'	1.75	0.65
21:AA:1290:G:H3'	21:AA:1291:G:C8	2.31	0.65
28:BF:193:VAL:O	28:BF:194:MET:HG2	1.96	0.65
47:B1:13:ILE:H	47:B1:43:TYR:HA	1.61	0.65
47:B1:78:LYS:HA	47:B1:82:LEU:HD11	1.77	0.65
59:BA:1019:U:O2	59:BA:1020:A:N7	2.28	0.65
59:BA:1028:A:N6	59:BA:1126:A:OP1	2.28	0.65
21:CA:378:G:H1	21:CA:385:C:N4	1.92	0.65
21:CA:665:A:N7	21:CA:724:G:O6	2.28	0.65
25:DC:14:LYS:HD3	25:DC:33:LEU:HB3	1.77	0.65
38:DS:42:ASP:O	38:DS:44:LYS:N	2.29	0.65
59:DA:1709:U:O2'	59:DA:2859:G:N3	2.27	0.65
2:AC:176:HIS:N	21:AA:1108:G:OP1	2.27	0.65
14:AO:36:ILE:HG23	14:AO:56:LEU:HD11	1.77	0.65
20:AY:70:THR:HG23	20:AY:360:ALA:H	1.60	0.65
20:AY:465:ARG:CG	62:AY:702:FUA:H3	2.26	0.65
24:AX:76:A:H4'	24:AX:77:VAL:HA	1.78	0.65
26:BD:118:VAL:HG22	26:BD:119:ALA:H	1.61	0.65
27:BE:123:ALA:HB3	59:BA:2511:U:H5''	1.78	0.65
33:BN:72:TYR:HB3	33:BN:101:HIS:CD2	2.31	0.65
33:BN:84:LYS:NZ	59:BA:2041:U:OP2	2.28	0.65
59:BA:702:G:N1	59:BA:730:C:O2	2.28	0.65
59:BA:1139:G:H8	59:BA:1139:G:O5'	1.80	0.65
59:BA:1422:G:H2'	59:BA:1423:G:C8	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:13:HIS:HA	9:CJ:16:LEU:HB3	1.77	0.65
14:CO:48:LYS:HB2	21:CA:668:G:H4'	1.77	0.65
21:CA:452:A:O2'	21:CA:453:A:O5'	2.09	0.65
23:CV:8:A:C8	23:CV:9:G:C2	2.76	0.65
22:CW:52:G:H1	22:CW:62:C:H42	1.44	0.65
32:DK:100:THR:C	32:DK:102:GLU:H	2.05	0.65
32:DK:105:LEU:HD23	32:DK:106:GLU:H	1.61	0.65
33:DN:81:GLY:HA3	33:DN:82:LEU:HD22	1.77	0.65
33:DN:104:LYS:HZ2	33:DN:122:VAL:HA	1.60	0.65
40:DU:8:VAL:HG13	40:DU:11:ARG:HE	1.59	0.65
41:DV:18:LEU:H	41:DV:96:ILE:HG12	1.61	0.65
44:DY:38:ILE:HD11	44:DY:64:GLU:HB2	1.77	0.65
59:DA:882:G:H2'	59:DA:883:G:H8	1.61	0.65
59:DA:1832:C:C2	63:DA:2901:NMY:N6	2.63	0.65
60:DB:19:G:H1	60:DB:64:C:H42	1.43	0.65
7:AH:11:THR:HG21	21:AA:825:G:H21	1.59	0.65
21:AA:500:G:O6	21:AA:545:C:N3	2.28	0.65
21:AA:1028(B):C:N3	21:AA:1028(G):G:C6	2.64	0.65
29:BG:173:LEU:HB3	29:BG:178:PHE:HB2	1.78	0.65
46:B0:65:GLY:HA3	46:B0:82:ARG:O	1.97	0.65
59:BA:1080:C:H2'	59:BA:1081:U:C6	2.31	0.65
4:CE:100:VAL:HG12	4:CE:118:ILE:HG22	1.78	0.65
11:CL:35:GLY:HA2	11:CL:58:VAL:HA	1.77	0.65
11:CL:52:LEU:HG	11:CL:53:ARG:H	1.61	0.65
20:CY:422:GLU:HA	20:CY:425:SER:HB2	1.76	0.65
21:CA:887:G:H1	21:CA:910:C:H42	1.44	0.65
21:CA:1072:G:N1	21:CA:1103:C:C4	2.64	0.65
34:DO:64:ARG:HB3	34:DO:79:PHE:HB2	1.78	0.65
49:D3:4:LEU:O	49:D3:36:VAL:HA	1.96	0.65
59:DA:150:C:N3	59:DA:176:G:N2	2.39	0.65
59:DA:858:U:O3'	59:DA:2268:A:O2'	2.15	0.65
59:DA:1804:C:N4	59:DA:1813:G:H1	1.93	0.65
4:AE:79:GLU:HB3	4:AE:93:PRO:HD2	1.78	0.65
20:AY:485:GLU:N	20:AY:559:PRO:O	2.22	0.65
20:AY:513:LYS:H	20:AY:567:LEU:HA	1.61	0.65
33:BN:88:GLU:O	33:BN:91:LEU:N	2.30	0.65
59:BA:357(J):G:H2'	59:BA:357(K):U:O4'	1.96	0.65
59:BA:1090:U:H2'	59:BA:1091:G:C8	2.31	0.65
59:BA:1113:U:H2'	59:BA:1114:G:C8	2.31	0.65
59:BA:2487:G:H2'	59:BA:2488:A:C8	2.32	0.65
21:CA:411:A:H2	21:CA:430:A:H62	1.40	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:2:G:N2	22:CW:72:C:H42	1.94	0.65
25:DC:41:THR:O	25:DC:175:PRO:HA	1.95	0.65
33:DN:35:ARG:NH2	33:DN:40:PRO:HD3	2.11	0.65
59:DA:56:A:N1	59:DA:114:U:O4	2.29	0.65
59:DA:247:G:H1'	59:DA:251:A:H61	1.60	0.65
59:DA:1861:G:H1	59:DA:1881:C:H42	1.43	0.65
59:DA:2283:C:N4	59:DA:2325:G:H1	1.95	0.65
59:DA:2287:A:H61	59:DA:2346:A:H2	1.45	0.65
59:DA:2456:C:N4	59:DA:2495:G:H1	1.94	0.65
21:AA:593:G:H1	21:AA:646:U:H3	1.45	0.65
24:AX:52:G:C2	24:AX:62:C:O2	2.48	0.65
25:BC:214:TYR:CD2	25:BC:222:SER:HB2	2.32	0.65
39:BT:48:ILE:HG22	39:BT:49:VAL:HG12	1.79	0.65
56:Be:121:VAL:HG12	56:Be:122:VAL:HG23	1.78	0.65
59:BA:1021:A:H62	59:BA:1141:U:H3	1.45	0.65
59:BA:1333:C:H2'	59:BA:1334:G:H8	1.62	0.65
59:BA:1905:C:H5''	63:BA:2904:NMY:H81	1.78	0.65
3:CD:165:MET:O	3:CD:167:GLY:N	2.29	0.65
21:CA:33:A:H4'	21:CA:364:A:H1'	1.78	0.65
21:CA:186(F):C:N4	21:CA:186(K):G:H1	1.95	0.65
21:CA:618:C:N4	21:CA:622:A:H62	1.91	0.65
21:CA:877:C:H2'	21:CA:878:G:C8	2.32	0.65
32:DK:55:VAL:HG22	32:DK:56:GLU:H	1.61	0.65
44:DY:68:HIS:NE2	44:DY:70:SER:HB3	2.12	0.65
45:DZ:17:ALA:HA	45:DZ:20:ARG:HG2	1.77	0.65
59:DA:247:G:H4'	59:DA:386:G:C5	2.31	0.65
59:DA:390:A:H4'	59:DA:391:G:H5'	1.79	0.65
59:DA:1326:U:O2'	59:DA:2010:G:O2'	2.13	0.65
9:AJ:41:PRO:HG3	21:AA:1150:U:H4'	1.78	0.65
25:BC:114:VAL:O	25:BC:116:ALA:N	2.21	0.65
33:BN:59:LYS:N	33:BN:59:LYS:HD3	2.11	0.65
48:B2:48:HIS:CG	48:B2:49:LYS:H	2.14	0.65
59:BA:627:A:H4'	59:BA:628:G:H5'	1.79	0.65
59:BA:1207:C:N4	59:BA:1239:G:H1	1.93	0.65
3:CD:115:ARG:CB	21:CA:407:G:H5''	2.24	0.65
13:CN:58:LYS:O	13:CN:60:SER:N	2.29	0.65
21:CA:68(E):G:H1	21:CA:68(U):U:H3	1.42	0.65
21:CA:133:U:O2'	21:CA:134:A:N7	2.27	0.65
21:CA:1419:G:N2	21:CA:1481:U:O2	2.27	0.65
23:CV:18:G:N1	22:CW:34:C:O2	2.19	0.65
22:CW:30:C:N4	22:CW:40:G:H1	1.93	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:148:GLU:HB3	26:DD:151:LYS:HG3	1.77	0.65
40:DU:47:TYR:OH	59:DA:992:C:OP1	2.14	0.65
52:D6:15:GLU:HG3	52:D6:47:THR:HG21	1.77	0.65
59:DA:1422:G:H2'	59:DA:1423:G:C8	2.32	0.65
60:DB:81:G:H5''	60:DB:82:G:C8	2.32	0.65
1:AB:211:ILE:O	1:AB:215:LEU:HG	1.94	0.65
22:AW:2:G:N2	22:AW:72:C:N4	2.45	0.65
59:BA:108:U:H2'	59:BA:109:G:C8	2.32	0.65
59:BA:271(A):C:O2	59:BA:271(D):G:N2	2.30	0.65
59:BA:287:C:H2'	59:BA:289:A:C8	2.32	0.65
2:CC:19:GLU:HB3	2:CC:40:ARG:NH2	2.12	0.65
3:CD:13:ARG:NH1	3:CD:38:TYR:H	1.95	0.65
21:CA:296:U:O2	21:CA:301:G:N2	2.24	0.65
21:CA:629:G:H2'	21:CA:630:G:H8	1.61	0.65
25:DC:213:VAL:HG11	25:DC:225:ILE:HG12	1.79	0.65
28:DF:54:ARG:HB3	28:DF:81:PRO:HD3	1.79	0.65
33:DN:117:PHE:HD2	33:DN:118:LYS:C	2.04	0.65
39:DT:31:SER:HB2	39:DT:45:PHE:H	1.62	0.65
59:DA:1080:C:H2'	59:DA:1081:U:C6	2.32	0.65
59:DA:1149:G:H2'	59:DA:1150:C:C6	2.31	0.65
59:DA:1414:G:H1	59:DA:1588:C:N4	1.94	0.65
59:DA:1541:U:H3'	59:DA:1542:G:H3'	1.78	0.65
59:DA:2549:G:H1	59:DA:2559:C:N4	1.91	0.65
7:AH:69:ARG:HH22	7:AH:75:ARG:HB3	1.62	0.65
12:AM:126:LYS:HG2	21:AA:966:G:H4'	1.79	0.65
15:AP:8:ARG:HE	15:AP:15:PRO:HA	1.60	0.65
59:BA:2508:G:OP2	59:BA:2573:C:O2'	2.14	0.65
9:CJ:16:LEU:HD23	9:CJ:94:VAL:HG21	1.78	0.65
9:CJ:49:VAL:HG21	13:CN:41:ARG:HA	1.77	0.65
11:CL:53:ARG:NH2	21:CA:521:G:H5''	2.12	0.65
21:CA:9:G:H2'	21:CA:10:A:C8	2.31	0.65
21:CA:284:G:H2'	21:CA:285:G:C8	2.31	0.65
21:CA:321:A:N6	21:CA:329:A:OP2	2.30	0.65
21:CA:1020:U:H2'	21:CA:1021:G:C8	2.32	0.65
30:DH:55:PRO:HG2	30:DH:61:HIS:HE1	1.62	0.65
33:DN:38:HIS:HA	59:DA:1006:C:H1'	1.77	0.65
38:DS:39:ILE:HD12	38:DS:39:ILE:H	1.62	0.65
41:DV:76:LYS:NZ	59:DA:975:G:OP1	2.29	0.65
59:DA:341:G:H2'	59:DA:342:G:O4'	1.96	0.65
59:DA:1925:C:H42	59:DA:1929:G:N2	1.94	0.65
59:DA:2685:G:H1	59:DA:2724:C:N4	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:88:ALA:HB2	1:AB:219:VAL:HG22	1.77	0.65
6:AG:79:ARG:HG3	21:AA:1382:C:H5'	1.78	0.65
10:AK:27:ASN:ND2	21:AA:690:G:OP2	2.30	0.65
21:AA:104:G:H4'	21:AA:174:C:H4'	1.78	0.65
29:BG:48:GLU:O	29:BG:50:ALA:N	2.27	0.65
39:BT:31:SER:HB2	39:BT:45:PHE:HB2	1.78	0.65
59:BA:271(D):G:N7	59:BA:404:C:O2'	2.29	0.65
59:BA:1167:U:H3	59:BA:1182:A:H61	1.43	0.65
59:BA:1292:U:H2'	59:BA:1293:C:C6	2.32	0.65
2:CC:58:GLU:HB2	2:CC:65:ALA:HB3	1.77	0.65
4:CE:9:LYS:HB2	4:CE:112:LEU:HD21	1.79	0.65
6:CG:106:GLN:HA	6:CG:109:ASN:HB2	1.77	0.65
11:CL:42:THR:OG1	11:CL:43:VAL:N	2.24	0.65
18:CS:37:ARG:HB3	21:CA:1320:C:H41	1.61	0.65
20:CY:262:SER:H	20:CY:267:LYS:HB2	1.61	0.65
21:CA:65:U:O2'	21:CA:381:C:OP1	2.14	0.65
21:CA:296:U:O2'	21:CA:556:C:O2	2.15	0.65
21:CA:1151:A:H2'	21:CA:1152:A:C8	2.31	0.65
21:CA:1535:C:H1'	23:CV:11:U:O4	1.97	0.65
25:DC:7:ARG:NH1	25:DC:35:THR:O	2.30	0.65
35:DP:49:ARG:O	54:D8:59:LYS:HE3	1.97	0.65
59:DA:15:G:O6	59:DA:525:U:O4	2.14	0.65
59:DA:133:C:N4	59:DA:146:G:H1	1.94	0.65
59:DA:1030:G:H1	59:DA:1124:C:N4	1.94	0.65
59:DA:1297:C:N4	59:DA:1643:G:H1	1.94	0.65
59:DA:1797:C:N3	59:DA:1822:G:N2	2.36	0.65
60:DB:30:C:N4	60:DB:54:G:H1	1.90	0.65
60:DB:44:G:N3	60:DB:47:C:N4	2.45	0.65
3:AD:36:ARG:NH2	21:AA:427:U:OP2	2.29	0.65
12:AM:108:ARG:HH21	21:AA:1228:C:P	2.19	0.65
24:AX:49:G:H1	24:AX:65:C:N4	1.94	0.65
27:BE:36:ARG:HH22	27:BE:86:PRO:HG2	1.60	0.65
28:BF:76:GLY:H	59:BA:674:G:H5''	1.62	0.65
59:BA:319:C:H2'	59:BA:320:A:C8	2.31	0.65
59:BA:858:U:O4	59:BA:919:G:O6	2.13	0.65
59:BA:1368:G:H2'	59:BA:1369:G:C8	2.31	0.65
59:BA:1462:C:H4'	59:BA:2703:C:H5'	1.78	0.65
59:BA:2119:A:H61	59:BA:2168:G:H21	0.77	0.65
59:BA:2781:A:H5''	59:BA:2782:G:H8	1.62	0.65
20:CY:402:ILE:HG22	20:CY:404:VAL:HG23	1.79	0.65
21:CA:341:C:H42	21:CA:348:G:H1	1.45	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1048:G:H1	21:CA:1209:C:H42	1.43	0.65
23:CV:9:G:H3'	23:CV:10:G:C4	2.31	0.65
23:CV:19:G:N2	24:CX:36:C:C2	2.55	0.65
25:DC:60:ARG:HG2	25:DC:142:LYS:HD3	1.77	0.65
25:DC:214:TYR:CD2	25:DC:222:SER:HB2	2.29	0.65
30:DH:103:LEU:HB3	30:DH:115:VAL:HB	1.79	0.65
45:DZ:19:ARG:NH2	60:DB:76:G:O2'	2.30	0.65
59:DA:137(E):A:C8	59:DA:1408:C:H1'	2.32	0.65
59:DA:583:G:H1	59:DA:1257:C:H42	0.68	0.65
59:DA:644:A:H61	59:DA:2349:G:N2	1.93	0.65
59:DA:1660:C:H2'	59:DA:1661:G:H8	1.62	0.65
59:DA:1854:A:H62	59:DA:1888:G:H8	1.44	0.65
59:DA:2324:C:H42	59:DA:2331:G:H1	1.44	0.65
59:DA:2587:A:H62	59:DA:2608:G:N2	1.93	0.65
60:DB:21:G:H1	60:DB:62:C:N4	1.95	0.65
10:AK:17:GLY:HA2	10:AK:35:PRO:HD3	1.78	0.64
11:AL:90:VAL:HG22	11:AL:96:VAL:HG11	1.79	0.64
12:AM:16:ASP:N	12:AM:16:ASP:OD2	2.28	0.64
20:AY:111:SER:HB3	20:AY:141:LYS:HE3	1.79	0.64
21:AA:736:C:H2'	21:AA:737:A:C8	2.32	0.64
21:AA:920:U:HO2'	21:AA:1081:G:HO2'	1.45	0.64
21:AA:1108:G:H2'	21:AA:1109:C:H5'	1.79	0.64
21:AA:1224:G:O2'	21:AA:1322:C:OP2	2.15	0.64
21:AA:1346:A:C5	21:AA:1374:A:H2	2.14	0.64
21:AA:1404:C:H2'	21:AA:1405:G:C8	2.32	0.64
33:BN:134:ARG:HD2	33:BN:134:ARG:H	1.62	0.64
38:BS:97:ARG:O	38:BS:99:LYS:N	2.30	0.64
47:B1:12:PRO:HA	47:B1:43:TYR:HB2	1.80	0.64
59:BA:151:C:N4	59:BA:175:G:H1	1.92	0.64
13:CN:3:ARG:HB3	21:CA:1048:G:H5''	1.79	0.64
21:CA:112:G:N2	21:CA:315:A:N1	2.44	0.64
21:CA:828:A:H2'	21:CA:829:G:O4'	1.97	0.64
28:DF:11:VAL:HG12	28:DF:127:GLU:HB2	1.77	0.64
33:DN:100:GLU:C	33:DN:102:ALA:N	2.48	0.64
59:DA:371:A:C8	59:DA:402:A:N6	2.64	0.64
59:DA:525:U:H5'	59:DA:556:G:H5'	1.79	0.64
59:DA:648:G:H2'	59:DA:649:G:H8	1.62	0.64
59:DA:1468(I):A:H2'	59:DA:1468(J):G:O4'	1.97	0.64
59:DA:2064:C:N4	59:DA:2446:G:H1	1.95	0.64
59:DA:2233:U:H2'	59:DA:2234:G:C8	2.32	0.64
59:DA:2652:C:H42	59:DA:2668:G:H1	0.74	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:320:C:H2'	21:AA:321:A:C8	2.32	0.64
22:AW:14:A:H3'	22:AW:15:G:O4'	1.96	0.64
33:BN:15:LEU:HD12	33:BN:55:VAL:HG11	1.79	0.64
33:BN:106:MET:O	33:BN:107:LEU:HB2	1.97	0.64
33:BN:113:GLY:HA2	33:BN:117:PHE:HB2	1.79	0.64
59:BA:1806:C:H42	59:BA:1811:G:H1	1.45	0.64
2:CC:177:THR:HG22	2:CC:178:LEU:H	1.62	0.64
10:CK:21:ILE:HD12	10:CK:84:VAL:HG12	1.79	0.64
11:CL:9:GLN:NE2	21:CA:881:G:OP2	2.30	0.64
59:DA:764:A:H62	59:DA:1775:U:H3	1.45	0.64
59:DA:869:G:N2	59:DA:908:C:C2	2.62	0.64
59:DA:1468(J):G:H1	59:DA:1506(H):C:H42	0.76	0.64
9:AJ:50:ILE:HG22	9:AJ:60:ARG:HG2	1.78	0.64
21:AA:662:G:O2'	21:AA:836:G:OP1	2.16	0.64
21:AA:757:U:H2'	21:AA:758:G:O4'	1.98	0.64
21:AA:768:A:OP1	21:AA:804:U:H4'	1.96	0.64
33:BN:75:TYR:OH	59:BA:1137:G:H1'	1.96	0.64
43:BX:64:LYS:HB3	59:BA:64:A:H5'	1.79	0.64
45:BZ:112:ARG:O	45:BZ:112:ARG:NH1	2.30	0.64
52:B6:15:GLU:HB2	52:B6:20:ASN:HB2	1.79	0.64
59:BA:32:C:N3	59:BA:473:G:N2	2.43	0.64
59:BA:323:G:HO2'	59:BA:1205:U:H3	1.45	0.64
59:BA:2104:G:H2'	59:BA:2105:C:C6	2.31	0.64
59:BA:2532:G:N2	59:BA:2663:G:H21	1.94	0.64
59:BA:2597:G:H2'	59:BA:2598:A:C8	2.32	0.64
7:CH:85:ARG:HH12	7:CH:135:CYS:HB3	1.62	0.64
16:CQ:45:HIS:H	16:CQ:72:ARG:HA	1.63	0.64
20:CY:13:ARG:HB2	20:CY:79:ILE:HG12	1.78	0.64
27:DE:30:PRO:HD2	27:DE:52:LEU:HD11	1.79	0.64
27:DE:79:ARG:NH1	59:DA:2635:C:OP1	2.29	0.64
35:DP:94:GLU:HG2	35:DP:124:LYS:HB2	1.77	0.64
44:DY:9:LYS:HE2	44:DY:103:GLY:HA3	1.79	0.64
47:D1:7:ILE:HD13	47:D1:63:ALA:H	1.61	0.64
54:D8:34:TRP:CG	54:D8:35:GLN:N	2.63	0.64
55:D9:27:CYS:SG	55:D9:32:HIS:ND1	2.63	0.64
59:DA:481:G:H1'	59:DA:506:G:N2	2.12	0.64
59:DA:2202(E):A:H1'	59:DA:2202(G):G:C4	2.32	0.64
59:DA:2707:G:H2'	59:DA:2708:G:C8	2.32	0.64
59:DA:2815:C:H2'	59:DA:2816:C:O4'	1.97	0.64
20:AY:27:THR:O	20:AY:30:GLU:HG2	1.97	0.64
21:AA:1348:U:N3	21:AA:1374:A:C6	2.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:10:PRO:HB2	28:BF:17:ARG:HB2	1.79	0.64
30:BH:127:GLU:O	30:BH:129:THR:N	2.21	0.64
59:BA:259:G:H2'	59:BA:260:G:C8	2.32	0.64
59:BA:668:G:H2'	59:BA:670:A:H62	1.60	0.64
59:BA:1712(C):G:H2'	59:BA:1712(D):G:H8	1.61	0.64
59:BA:1971:A:N7	63:BA:2904:NMY:H15	2.12	0.64
59:BA:2589:A:H2'	59:BA:2590:A:H8	1.62	0.64
1:CB:117:GLU:O	1:CB:121:LEU:HB2	1.98	0.64
21:CA:62:U:H5''	21:CA:385:C:O2	1.97	0.64
21:CA:890:G:O2'	21:CA:906:G:O6	2.14	0.64
55:D9:10:ILE:HG13	55:D9:11:CYS:H	1.63	0.64
59:DA:324:A:H62	59:DA:338:G:N2	1.93	0.64
59:DA:580:C:H2'	59:DA:581:C:C6	2.32	0.64
59:DA:975:G:O6	59:DA:989:G:N2	2.31	0.64
59:DA:1565:C:H1'	59:DA:1566:A:H8	1.63	0.64
3:AD:33:MET:O	3:AD:35:ARG:N	2.26	0.64
22:AW:3:C:N4	22:AW:70:G:H1	1.96	0.64
25:BC:226:ASN:O	25:BC:228:HIS:N	2.31	0.64
59:BA:383:U:H2'	59:BA:385:C:H5	1.61	0.64
59:BA:532:A:H4'	59:BA:533:G:C8	2.32	0.64
59:BA:693:C:O2'	59:BA:1353:A:N3	2.24	0.64
59:BA:1905:C:OP2	63:BA:2904:NMY:H82	1.98	0.64
59:BA:2886:G:H2'	59:BA:2887:U:H6	1.62	0.64
1:CB:165:VAL:HG12	1:CB:166:ASP:H	1.61	0.64
11:CL:70:ILE:HG13	11:CL:72:GLY:H	1.62	0.64
11:CL:93:LEU:O	11:CL:95:GLY:N	2.30	0.64
12:CM:101:GLN:NE2	21:CA:949:A:OP1	2.29	0.64
20:CY:100:VAL:HG21	20:CY:329:ARG:HG2	1.80	0.64
21:CA:603:U:O2	21:CA:635:G:O6	2.16	0.64
32:DK:19:PRO:HB3	32:DK:34:ILE:HD11	1.79	0.64
36:DQ:42:ILE:HG23	36:DQ:97:VAL:HG21	1.79	0.64
59:DA:243:U:H3	59:DA:255:A:H62	1.46	0.64
59:DA:2099:U:H2'	59:DA:2100:G:C8	2.32	0.64
59:DA:2822:G:O2'	59:DA:2824:C:OP2	2.13	0.64
59:DA:2840:C:H2'	59:DA:2841:C:O4'	1.98	0.64
21:AA:37:U:O2'	21:AA:547:A:N1	2.31	0.64
21:AA:1504:G:OP1	21:AA:1507:A:O2'	2.10	0.64
22:AW:4:U:O2	22:AW:69:A:N1	2.31	0.64
42:BW:53:SER:HA	59:BA:487:C:H1'	1.79	0.64
59:BA:270(B):A:H61	59:BA:270(Y):G:H1'	1.62	0.64
13:CN:24:CYS:SG	13:CN:40:CYS:HB3	2.37	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:25:LYS:HE2	61:CY:701:GDP:O2B	1.98	0.64
21:CA:637:G:H2'	21:CA:638:G:O4'	1.98	0.64
21:CA:1440(J):C:O2'	21:CA:1440(K):G:N3	2.27	0.64
26:DD:66:ASP:HB3	26:DD:105:ILE:HG12	1.78	0.64
48:D2:48:HIS:CD2	48:D2:49:LYS:H	2.16	0.64
59:DA:44:A:H2	59:DA:435:C:H41	1.45	0.64
59:DA:2359:C:H2'	59:DA:2360:A:O4'	1.97	0.64
59:DA:2507:C:H42	59:DA:2582:G:H1	1.46	0.64
16:AQ:92:ARG:HA	16:AQ:95:TYR:HD2	1.63	0.64
18:AS:13:ASP:HA	18:AS:16:LEU:HB2	1.77	0.64
20:AY:133:ILE:HD12	20:AY:280:LEU:HD21	1.80	0.64
21:AA:114:U:H2'	21:AA:115:G:C8	2.33	0.64
32:BK:54:PRO:HD2	32:BK:70:LYS:HB2	1.79	0.64
33:BN:76:SER:HB2	33:BN:106:MET:SD	2.37	0.64
45:BZ:58:VAL:HA	45:BZ:68:PRO:HA	1.79	0.64
59:BA:1102:C:H2'	59:BA:1103:A:C8	2.33	0.64
59:BA:1583:A:N6	21:CA:838(A):U:H5''	2.13	0.64
59:BA:2810:A:H62	59:BA:2890:G:H21	1.43	0.64
60:BB:3:C:N3	60:BB:117:G:N1	2.45	0.64
2:CC:155:GLY:HA3	2:CC:196:LEU:HD12	1.80	0.64
5:CF:43:LEU:HB3	5:CF:60:PHE:HB2	1.78	0.64
10:CK:99:GLN:HG2	10:CK:105:VAL:HG11	1.79	0.64
21:CA:552:U:H2'	21:CA:553:A:C8	2.33	0.64
21:CA:681:C:H42	21:CA:709:G:H1	1.43	0.64
42:DW:12:ILE:HD11	42:DW:42:ARG:HD3	1.80	0.64
3:AD:10:ARG:HB2	21:AA:429:U:OP1	1.97	0.64
16:AQ:96:GLU:HG2	21:AA:278:G:H1	1.61	0.64
20:AY:14:ASN:HB3	20:AY:102:ASP:HB2	1.79	0.64
21:AA:980:C:H5''	21:AA:981:U:H5	1.63	0.64
24:AX:75:C:N3	59:BA:2553:G:N2	2.42	0.64
27:BE:72:VAL:HG12	27:BE:73:GLU:H	1.62	0.64
37:BR:103:ARG:HA	37:BR:111:LEU:HG	1.80	0.64
42:BW:92:ARG:HD2	59:BA:747:U:H1'	1.78	0.64
54:B8:42:ARG:NH2	59:BA:2348:U:OP2	2.31	0.64
55:B9:17:ILE:HD11	55:B9:19:ARG:HE	1.61	0.64
59:BA:108:U:H2'	59:BA:109:G:H8	1.63	0.64
59:BA:949:C:H42	59:BA:968:G:H1	1.46	0.64
59:BA:2089:U:H2'	59:BA:2090:G:C8	2.32	0.64
1:CB:78:GLN:O	1:CB:81:VAL:HG22	1.98	0.64
21:CA:7:G:H5'	21:CA:298:A:H5'	1.79	0.64
21:CA:1376:U:H2'	21:CA:1377:A:H8	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CV:15:A:H3'	23:CV:16:A:H5''	1.78	0.64
22:CW:31:A:H2	22:CW:39:U:N3	1.85	0.64
33:DN:38:HIS:HB3	33:DN:39:ARG:HG3	1.78	0.64
37:DR:39:PRO:HG2	59:DA:1651:G:H4'	1.78	0.64
59:DA:53:A:H61	59:DA:117:G:H1'	1.63	0.64
59:DA:1399:C:H2'	59:DA:1400:G:C8	2.33	0.64
59:DA:1414:G:N2	59:DA:1588:C:C2	2.65	0.64
6:AG:114:ARG:HA	21:AA:1298:C:H41	1.62	0.64
12:AM:13:LYS:HD2	12:AM:18:ALA:HB2	1.80	0.64
24:AX:51:C:O2	24:AX:63:G:N1	2.28	0.64
25:BC:41:THR:OG1	59:BA:2124:G:O2'	2.15	0.64
26:BD:274:ARG:NH2	59:BA:1798:U:O5'	2.23	0.64
28:BF:122:LYS:HD2	28:BF:191:ARG:HH21	1.63	0.64
35:BP:14:LYS:HB2	59:BA:598:G:H4'	1.80	0.64
46:B0:27:GLU:HA	46:B0:67:VAL:HB	1.80	0.64
52:B6:53:LYS:HG3	52:B6:54:ILE:HG12	1.78	0.64
59:BA:450:G:H5'	59:BA:1248:G:H1	1.63	0.64
2:CC:48:TYR:O	2:CC:50:ALA:N	2.31	0.64
3:CD:170:VAL:HB	3:CD:174:LEU:HB2	1.79	0.64
10:CK:79:SER:HB3	10:CK:106:LYS:HE2	1.80	0.64
21:CA:589:C:N3	21:CA:650:G:O6	2.31	0.64
21:CA:1056:U:H2'	21:CA:1057:G:H8	1.62	0.64
33:DN:37:LYS:NZ	59:DA:1005:C:O2'	2.31	0.64
33:DN:74:ARG:HA	33:DN:84:LYS:HB3	1.80	0.64
33:DN:114:ARG:NH2	59:DA:527:C:H6	1.92	0.64
33:DN:114:ARG:NH2	59:DA:528:A:C8	2.58	0.64
39:DT:31:SER:O	39:DT:84:GLN:NE2	2.31	0.64
59:DA:189:G:H1'	59:DA:207:A:H61	1.62	0.64
59:DA:357(G):A:H2'	59:DA:357(H):G:C8	2.32	0.64
59:DA:685:A:O2'	59:DA:773:U:O4	2.16	0.64
6:AG:22:LEU:HD21	6:AG:66:VAL:HG21	1.79	0.64
8:AI:93:ARG:HH22	8:AI:97:LYS:HD3	1.62	0.64
20:AY:5:VAL:O	20:AY:7:TYR:N	2.25	0.64
21:AA:492:G:H2'	21:AA:493:G:O4'	1.98	0.64
21:AA:877:C:H2'	21:AA:878:G:C8	2.33	0.64
25:BC:14:LYS:HD3	25:BC:33:LEU:HD22	1.80	0.64
28:BF:191:ARG:O	28:BF:193:VAL:N	2.31	0.64
39:BT:53:ARG:HH21	39:BT:58:ASN:HB3	1.62	0.64
59:BA:738:G:H3'	59:BA:739:G:C8	2.33	0.64
59:BA:797:C:H2'	59:BA:798:G:C8	2.33	0.64
59:BA:960:A:H2'	59:BA:962:G:H5''	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1431:U:H3	59:BA:1562:A:H61	1.44	0.64
59:BA:1496:A:H2'	59:BA:1498:C:C5	2.33	0.64
59:BA:1541:U:H3'	59:BA:1542:G:H3'	1.80	0.64
59:BA:2292:C:H42	59:BA:2340:G:H1	1.44	0.64
2:CC:52:LEU:HD11	2:CC:55:VAL:HG12	1.80	0.64
11:CL:102:ARG:HG2	11:CL:109:GLY:HA2	1.80	0.64
16:CQ:67:LYS:C	16:CQ:69:LYS:H	2.06	0.64
20:CY:98:MET:HG2	20:CY:125:ALA:HB1	1.79	0.64
21:CA:112:G:H1	21:CA:315:A:N6	1.96	0.64
21:CA:186(C):G:H1	21:CA:186(N):U:H3	0.76	0.64
21:CA:186(C):G:O6	21:CA:186(N):U:O4	2.16	0.64
21:CA:335:C:O2'	21:CA:1433:A:N3	2.30	0.64
22:CW:24:G:C2	22:CW:25:C:H1'	2.33	0.64
29:DG:72:ARG:HB3	29:DG:86:MET:HA	1.80	0.64
33:DN:85:ILE:HG22	33:DN:97:ARG:CZ	2.28	0.64
42:DW:74:ALA:HA	42:DW:104:THR:O	1.98	0.64
59:DA:24:G:N2	59:DA:516:C:N3	2.40	0.64
59:DA:1030:G:N2	59:DA:1124:C:N3	2.44	0.64
59:DA:1314:C:N4	59:DA:1338:G:H1	1.96	0.64
59:DA:1846:G:H1	59:DA:1894:C:N4	1.96	0.64
59:DA:2547:U:H3	59:DA:2561:A:N6	1.94	0.64
6:AG:102:ARG:NH2	21:AA:939:G:OP1	2.30	0.63
21:AA:1113:C:N4	21:AA:1187:G:H1	1.96	0.63
25:BC:213:VAL:HG12	25:BC:214:TYR:H	1.63	0.63
29:BG:73:ALA:HA	59:BA:2312:U:OP1	1.98	0.63
33:BN:119:ARG:NE	59:BA:8:A:OP1	2.28	0.63
56:Be:80:ALA:HB1	56:Be:84:LEU:HB3	1.79	0.63
59:BA:239:U:O2	59:BA:258:G:O6	2.16	0.63
59:BA:355:G:H2'	59:BA:356:G:C8	2.33	0.63
59:BA:371:A:H61	59:BA:401:A:H3'	1.62	0.63
59:BA:826:U:H5''	59:BA:2429:G:OP1	1.98	0.63
59:BA:890:A:H2'	59:BA:892:G:C8	2.33	0.63
59:BA:2749:A:H62	59:BA:2753:A:H61	0.76	0.63
1:CB:71:VAL:HG22	1:CB:93:VAL:HB	1.79	0.63
1:CB:209:ARG:HD3	1:CB:239:VAL:HG11	1.78	0.63
15:CP:38:TYR:CE1	15:CP:50:LYS:HG3	2.33	0.63
20:CY:656:ALA:HB2	20:CY:669:PHE:HE2	1.62	0.63
21:CA:445:G:H1	21:CA:489:C:H42	1.45	0.63
21:CA:671:G:H1	21:CA:735:C:N4	1.96	0.63
24:CX:26:A:N6	24:CX:43:G:O6	2.30	0.63
28:DF:12:LEU:HD23	28:DF:124:LEU:HD11	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:102:PRO:HB3	59:DA:606:U:H5''	1.81	0.63
33:DN:19:GLU:HB3	33:DN:56:ASN:HB3	1.80	0.63
35:DP:43:GLY:HA2	59:DA:670:A:H5'	1.79	0.63
36:DQ:87:LYS:HZ3	59:DA:955:C:H5''	1.61	0.63
40:DU:45:TYR:O	40:DU:49:HIS:ND1	2.25	0.63
59:DA:535:C:N3	59:DA:558:G:N2	2.39	0.63
59:DA:712:G:H1	59:DA:719:C:H42	1.46	0.63
2:AC:176:HIS:HB3	21:AA:1111:A:H61	1.61	0.63
17:AR:45:SER:HB3	17:AR:51:LEU:HD11	1.80	0.63
21:AA:951:G:H2'	21:AA:952:U:C6	2.33	0.63
23:AV:19:G:O2'	23:AV:19:G:N3	2.30	0.63
27:BE:34:VAL:HG11	27:BE:78:LEU:HD22	1.80	0.63
33:BN:36:GLY:H	33:BN:37:LYS:HG3	1.63	0.63
39:BT:124:ASP:HB3	39:BT:125:ARG:HH21	1.62	0.63
59:BA:576:U:H2'	59:BA:577:G:C8	2.33	0.63
59:BA:1506(I):U:H2'	59:BA:1506(J):G:C8	2.33	0.63
9:CJ:6:ILE:HB	9:CJ:98:ILE:HG12	1.80	0.63
21:CA:333:G:H2'	21:CA:334:C:C6	2.33	0.63
21:CA:408:A:N1	21:CA:434:U:C4	2.67	0.63
21:CA:1535:C:N4	23:CV:10:G:C2	2.66	0.63
27:DE:13:ARG:HH21	39:DT:60:THR:HG21	1.63	0.63
28:DF:63:LYS:HG3	28:DF:76:GLY:HA2	1.80	0.63
32:DK:106:GLU:HA	32:DK:109:LYS:HB2	1.80	0.63
59:DA:382:G:H1	59:DA:392:C:H42	1.44	0.63
20:AY:76:ASP:O	20:AY:77:HIS:ND1	2.31	0.63
20:AY:512:ILE:H	20:AY:512:ILE:HD13	1.62	0.63
21:AA:986:A:H2'	21:AA:987:G:O4'	1.98	0.63
33:BN:74:ARG:CB	59:BA:1138:G:H4'	2.26	0.63
33:BN:116:LEU:HB2	33:BN:118:LYS:H	1.61	0.63
39:BT:23:ARG:HD3	39:BT:120:ARG:HH12	1.64	0.63
45:BZ:112:ARG:NH1	59:BA:1077:A:OP1	2.31	0.63
59:BA:1428:C:C5	59:BA:1569:A:H5''	2.33	0.63
9:CJ:10:GLY:HA2	9:CJ:94:VAL:HG23	1.79	0.63
12:CM:13:LYS:HD2	12:CM:18:ALA:HB2	1.81	0.63
21:CA:908:A:H2'	21:CA:909:A:C8	2.33	0.63
30:DH:121:ILE:HG22	30:DH:135:GLY:HA2	1.79	0.63
59:DA:92:G:H2'	59:DA:93:C:H6	1.62	0.63
59:DA:224:G:OP2	59:DA:408:G:N2	2.32	0.63
59:DA:1652:A:H3'	59:DA:1653:G:H8	1.64	0.63
59:DA:2247:A:N6	59:DA:2257:U:N3	2.22	0.63
1:AB:71:VAL:HG22	1:AB:93:VAL:HB	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:167:PRO:O	1:AB:171:ALA:HB2	1.99	0.63
13:AN:2:ALA:HB3	21:AA:983:A:H5'	1.80	0.63
14:AO:54:ARG:NE	21:AA:579:G:O2'	2.31	0.63
16:AQ:9:VAL:HG13	16:AQ:56:VAL:HG22	1.79	0.63
21:AA:41:G:H2'	21:AA:42:G:C8	2.34	0.63
21:AA:1494:G:N7	63:AA:1601:NMY:H12	2.13	0.63
24:AX:31:C:N3	24:AX:39:G:N2	2.42	0.63
33:BN:71:ILE:O	33:BN:72:TYR:HB2	1.93	0.63
35:BP:147:LEU:O	35:BP:148:LEU:HB2	1.98	0.63
36:BQ:129:THR:OG1	36:BQ:130:LYS:N	2.31	0.63
39:BT:31:SER:HB3	39:BT:32:TYR:HD2	1.64	0.63
59:BA:434:U:H1'	59:BA:435:C:H5	1.63	0.63
59:BA:2142:C:H2'	59:BA:2143:C:C6	2.34	0.63
59:BA:2543:G:N2	59:BA:2646:C:H5''	2.13	0.63
21:CA:571:U:O4	21:CA:864:A:N6	2.31	0.63
21:CA:1425:U:H2'	21:CA:1426:C:C6	2.33	0.63
29:DG:105:LYS:HB3	29:DG:142:PRO:HG3	1.79	0.63
33:DN:35:ARG:HD3	33:DN:76:SER:CA	2.28	0.63
59:DA:271(Q):A:H61	59:DA:357(E):U:H3	0.72	0.63
59:DA:1197:G:H22	59:DA:1249:U:H1'	1.61	0.63
59:DA:2791:C:O2	59:DA:2893:G:O2'	2.14	0.63
60:DB:51:G:C2'	60:DB:52:A:H5''	2.28	0.63
21:AA:148:G:H2'	21:AA:149:A:C8	2.32	0.63
21:AA:565:U:H3'	21:AA:566:G:H8	1.62	0.63
21:AA:1117:G:H21	21:AA:1180:A:H1'	1.63	0.63
30:BH:64:LEU:HA	30:BH:67:LEU:HB3	1.81	0.63
33:BN:119:ARG:HH21	59:BA:8:A:H5''	1.63	0.63
59:BA:1060:U:H3	59:BA:1088:A:H8	1.46	0.63
59:BA:1681:G:N3	59:BA:1762:A:H2'	2.14	0.63
59:BA:2082:A:H62	59:BA:2237:G:H21	1.45	0.63
20:CY:97:SER:O	20:CY:101:LEU:HG	1.98	0.63
21:CA:68(I):G:O6	21:CA:68(Q):U:O4	2.17	0.63
21:CA:830:G:H1	21:CA:856:C:H42	1.46	0.63
59:DA:462:C:H42	59:DA:467:G:H1	1.44	0.63
59:DA:2487:G:H2'	59:DA:2488:A:H8	1.63	0.63
60:DB:34:U:O2	60:DB:48:A:N1	2.30	0.63
1:AB:171:ALA:HA	1:AB:174:VAL:HB	1.80	0.63
14:AO:48:LYS:HB2	21:AA:668:G:H4'	1.79	0.63
20:AY:148:LEU:O	20:AY:152:THR:OG1	2.16	0.63
20:AY:283:PRO:HA	20:AY:286:ILE:HB	1.79	0.63
21:AA:621:A:H2'	21:AA:622:A:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:745:C:H2'	21:AA:746:A:C8	2.33	0.63
27:BE:152:LYS:HA	59:BA:2619:C:H5''	1.79	0.63
28:BF:110:LEU:HD23	28:BF:206:ILE:HD11	1.81	0.63
28:BF:154:VAL:O	28:BF:156:LEU:N	2.31	0.63
32:BK:3:LYS:HD2	32:BK:3:LYS:H	1.63	0.63
33:BN:12:ARG:HG3	33:BN:14:VAL:HG23	1.80	0.63
42:BW:102:HIS:CD2	59:BA:24:G:H4'	2.32	0.63
44:BY:75:ILE:HA	44:BY:80:GLY:HA2	1.79	0.63
59:BA:283:U:H2'	59:BA:284:C:C6	2.33	0.63
59:BA:377:C:H2'	59:BA:378:C:C6	2.33	0.63
59:BA:1203:G:N1	59:BA:1241:A:OP2	2.27	0.63
59:BA:1406:U:H2'	59:BA:1407:C:C6	2.33	0.63
21:CA:320:C:H1'	21:CA:1434:A:C2	2.33	0.63
21:CA:998:G:N2	21:CA:1043:C:C2	2.64	0.63
21:CA:1532:U:N3	23:CV:13:A:N7	2.46	0.63
33:DN:45:ASN:HB3	33:DN:78:TYR:CD2	2.34	0.63
40:DU:21:ALA:HB2	40:DU:39:LEU:HD11	1.80	0.63
59:DA:357:A:H2'	59:DA:357(A):U:H6	1.63	0.63
59:DA:1530:G:C2	59:DA:1541:U:O2	2.52	0.63
59:DA:1660:C:H2'	59:DA:1661:G:C8	2.33	0.63
59:DA:1844:C:H42	59:DA:1896:G:H1	1.46	0.63
59:DA:2449:U:O2'	59:DA:2501:C:N4	2.32	0.63
16:AQ:61:GLU:HA	16:AQ:71:PHE:HD1	1.63	0.63
20:AY:428:LEU:HA	20:AY:431:LEU:HB2	1.79	0.63
21:AA:757:U:O2	21:AA:879:C:O2'	2.17	0.63
42:BW:25:ARG:NH2	59:BA:519:U:O2'	2.32	0.63
44:BY:102:CYS:SG	44:BY:103:GLY:N	2.64	0.63
55:B9:30:PRO:HG2	59:BA:2527:C:H5''	1.80	0.63
59:BA:228:A:H3'	59:BA:229:A:C5'	2.29	0.63
59:BA:1058:G:H2'	59:BA:1059:G:C8	2.33	0.63
59:BA:1105:U:H2'	59:BA:1106:G:C8	2.34	0.63
59:BA:1398:C:H2'	59:BA:1399:C:C6	2.34	0.63
8:CI:5:TYR:OH	21:CA:1147:C:O2'	2.16	0.63
20:CY:289:ILE:HG22	20:CY:290:LYS:H	1.63	0.63
22:CW:50:C:N4	22:CW:64:G:C6	2.66	0.63
24:CX:56:C:H1'	29:DG:76:SER:HB2	1.80	0.63
29:DG:57:ALA:HB1	29:DG:90:LEU:HD13	1.81	0.63
33:DN:74:ARG:H	33:DN:84:LYS:HB3	1.64	0.63
39:DT:52:ILE:HD13	39:DT:61:PHE:HB2	1.81	0.63
59:DA:670:A:H4'	59:DA:671:C:H5'	1.80	0.63
59:DA:869:G:H1	59:DA:908:C:N4	1.94	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:955:C:H2'	59:DA:956:G:H5'	1.81	0.63
59:DA:1028:A:H2'	59:DA:1029:A:C8	2.34	0.63
60:DB:3:C:N4	60:DB:117:G:H1	1.95	0.63
20:AY:388:THR:HA	20:AY:399:LEU:HD12	1.80	0.63
21:AA:1046:A:H3'	21:AA:1047:G:H8	1.64	0.63
25:BC:34:ALA:HB2	25:BC:217:THR:HG21	1.81	0.63
25:BC:164:PHE:HZ	25:BC:196:ALA:HB1	1.64	0.63
26:BD:206:LEU:HD12	59:BA:1791:A:H5''	1.79	0.63
28:BF:162:LEU:H	28:BF:162:LEU:HD12	1.63	0.63
36:BQ:14:ARG:HH12	59:BA:956:G:H8	1.46	0.63
37:BR:62:ALA:HA	37:BR:65:LEU:HB2	1.78	0.63
47:B1:4:VAL:HG21	47:B1:11:ARG:HD2	1.79	0.63
59:BA:1712(K):A:H2'	59:BA:1712(L):G:O4'	1.98	0.63
59:BA:1960:A:H2'	59:BA:1961:C:H6	1.64	0.63
59:BA:2336:A:H3'	59:BA:2337:G:H8	1.63	0.63
1:CB:191:ASP:OD1	1:CB:192:SER:N	2.30	0.63
1:CB:235:SER:O	1:CB:237:ALA:N	2.32	0.63
3:CD:172:PRO:O	3:CD:187:ARG:NH1	2.31	0.63
4:CE:27:ARG:HG2	4:CE:49:PRO:HA	1.79	0.63
11:CL:114:LYS:HB2	21:CA:538:G:H5''	1.81	0.63
20:CY:188:TYR:HA	20:CY:196:ILE:HA	1.81	0.63
21:CA:456:C:N4	21:CA:476:G:H1	1.97	0.63
21:CA:963:G:H2'	21:CA:964:A:C8	2.34	0.63
21:CA:1066:C:N4	21:CA:1191:A:H62	1.95	0.63
22:CW:50:C:N3	22:CW:65:U:C4	2.67	0.63
28:DF:156:LEU:HD12	28:DF:193:VAL:HB	1.80	0.63
59:DA:686:G:H2'	59:DA:788:A:H61	1.63	0.63
59:DA:1230:C:H2'	59:DA:1231:G:C8	2.34	0.63
59:DA:2537:U:H2'	59:DA:2538:C:C6	2.34	0.63
59:DA:2564:A:OP1	59:DA:2648:C:H4'	1.99	0.63
59:DA:2589:A:H2	59:DA:2605:U:H3	1.45	0.63
16:AQ:16:GLN:HE22	21:AA:273:A:H1'	1.62	0.63
21:AA:25:C:H5'	21:AA:524:G:H1'	1.81	0.63
21:AA:162:A:H8	21:AA:162:A:O5'	1.82	0.63
59:BA:500:G:N2	59:BA:505:A:H62	1.97	0.63
59:BA:1054:A:H2'	59:BA:1055:G:C8	2.34	0.63
3:CD:33:MET:O	3:CD:35:ARG:N	2.26	0.63
21:CA:1405:G:H3'	63:CA:1601:NMY:C23	2.29	0.63
21:CA:1440(C):G:H3'	21:CA:1440(D):A:H5'	1.80	0.63
32:DK:106:GLU:HG3	32:DK:109:LYS:HD3	1.81	0.63
34:DO:6:THR:HA	59:DA:1667:G:H5''	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:16:ARG:O	59:DA:661:C:O2'	2.12	0.63
35:DP:47:ASP:CG	35:DP:49:ARG:HE	2.06	0.63
59:DA:608:A:H2'	59:DA:609:A:C8	2.33	0.63
59:DA:1194:A:H2'	59:DA:1195:G:H8	1.64	0.63
59:DA:1527:G:N3	59:DA:1544:A:C8	2.67	0.63
59:DA:2708:G:H2'	59:DA:2709:G:C8	2.33	0.63
20:AY:420:ASP:HA	20:AY:423:LYS:HE2	1.80	0.62
21:AA:452:A:O2'	21:AA:453:A:O5'	2.16	0.62
21:AA:579:G:N1	21:AA:762:C:O2	2.28	0.62
21:AA:777:A:H2'	21:AA:778:G:H8	1.62	0.62
27:BE:110:GLY:HA2	27:BE:162:ALA:N	2.14	0.62
29:BG:77:ILE:O	29:BG:80:PHE:N	2.31	0.62
35:BP:7:ARG:H	35:BP:7:ARG:HH11	1.47	0.62
36:BQ:26:TYR:CE1	59:BA:906:G:H5''	2.34	0.62
56:Be:100:LYS:HB2	56:Be:104:SER:HB2	1.81	0.62
59:BA:2598:A:H8	59:BA:2598:A:O5'	1.81	0.62
20:CY:259:PHE:HB2	20:CY:272:LEU:HD13	1.80	0.62
20:CY:388:THR:HG23	20:CY:399:LEU:HG	1.81	0.62
21:CA:1059:C:H2'	21:CA:1060:C:C6	2.34	0.62
21:CA:1087:G:N1	21:CA:1098:C:O2	2.27	0.62
21:CA:1219:U:H2'	21:CA:1220:G:C8	2.34	0.62
24:CX:34:U:H3'	24:CX:35:A:H8	1.62	0.62
26:DD:100:GLY:HA3	59:DA:1500:G:N2	2.14	0.62
40:DU:106:PHE:HA	40:DU:109:LEU:HD12	1.81	0.62
48:D2:64:LEU:O	48:D2:68:ARG:N	2.32	0.62
59:DA:271(L):C:N4	59:DA:357(F):G:H1	1.96	0.62
59:DA:553:G:H2'	59:DA:554:U:C6	2.34	0.62
59:DA:2553:G:N2	59:DA:2554:U:H1'	2.14	0.62
20:AY:13:ARG:HH11	20:AY:282:SER:HB3	1.64	0.62
21:AA:115:G:O2'	21:AA:116:A:OP2	2.17	0.62
26:BD:206:LEU:HD13	26:BD:211:ARG:HB3	1.80	0.62
27:BE:26:ILE:HG13	27:BE:182:LEU:HB3	1.80	0.62
28:BF:125:LEU:CB	28:BF:194:MET:HB2	2.29	0.62
41:BV:96:ILE:HG22	41:BV:97:LYS:N	2.14	0.62
59:BA:1657:C:H2'	59:BA:1658:C:C6	2.34	0.62
59:BA:2256:G:H2'	59:BA:2257:U:C6	2.34	0.62
1:CB:131:PRO:HB2	1:CB:133:LYS:HE3	1.80	0.62
20:CY:542:VAL:HA	20:CY:583:LYS:HA	1.81	0.62
21:CA:933:G:H1	21:CA:1384:C:N4	1.96	0.62
21:CA:1404:C:H2'	21:CA:1405:G:H8	1.63	0.62
33:DN:113:GLY:HA2	33:DN:117:PHE:CB	2.24	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D2:47:ASN:HB3	48:D2:50:ILE:HD11	1.81	0.62
59:DA:2836:U:H2'	59:DA:2837:G:C8	2.34	0.62
22:AW:70:G:H21	59:BA:1851:U:H4'	1.64	0.62
28:BF:154:VAL:HG23	28:BF:173:VAL:HA	1.81	0.62
33:BN:72:TYR:H	33:BN:87:LEU:H	1.46	0.62
37:BR:5:LYS:HE3	59:BA:2820:A:H4'	1.81	0.62
47:B1:17:SER:H	47:B1:39:LYS:HA	1.65	0.62
59:BA:1933:G:H4'	63:BA:2902:NMY:N7	2.13	0.62
60:BB:24:G:N1	60:BB:56:G:N2	2.46	0.62
16:CQ:21:VAL:O	16:CQ:41:LYS:HA	1.98	0.62
20:CY:77:HIS:CG	20:CY:277:VAL:HG21	2.35	0.62
21:CA:1184:G:H2'	21:CA:1185:G:C8	2.34	0.62
21:CA:1440(G):C:N3	21:CA:1440(L):G:O6	2.33	0.62
25:DC:104:ILE:HG21	25:DC:132:LEU:HD11	1.82	0.62
26:DD:95:LEU:HD22	26:DD:117:VAL:HG21	1.80	0.62
27:DE:116:VAL:HG23	27:DE:120:TRP:HD1	1.64	0.62
33:DN:31:ALA:C	33:DN:33:LEU:N	2.57	0.62
33:DN:45:ASN:OD1	33:DN:115:ARG:NE	2.32	0.62
47:D1:5:CYS:SG	47:D1:7:ILE:N	2.72	0.62
47:D1:14:VAL:HA	47:D1:41:ARG:CB	2.22	0.62
52:D6:5:VAL:HB	59:DA:2283:C:H5'	1.80	0.62
55:D9:19:ARG:HG3	59:DA:2756:U:H3'	1.81	0.62
59:DA:269:U:O2	59:DA:370:G:N2	2.21	0.62
59:DA:373:U:H2'	59:DA:374:A:C8	2.34	0.62
59:DA:738:G:H3'	59:DA:739:G:C8	2.34	0.62
59:DA:826:U:H5''	59:DA:2429:G:OP1	1.99	0.62
59:DA:2630:G:N2	59:DA:2892:A:N3	2.46	0.62
21:AA:186(D):C:H2'	21:AA:186(E):C:C6	2.33	0.62
21:AA:609:A:H2'	21:AA:610:G:C8	2.34	0.62
24:AX:35:A:C2	24:AX:36:C:C2	2.88	0.62
59:BA:26:G:H4'	59:BA:1260:G:H4'	1.81	0.62
59:BA:270(A):A:H62	59:BA:270(Y):G:N2	1.98	0.62
59:BA:417:C:H2'	59:BA:418:G:C8	2.35	0.62
59:BA:538:G:H2'	59:BA:539:G:H8	1.64	0.62
59:BA:661:C:H2'	59:BA:662:G:C8	2.34	0.62
59:BA:1259:G:H2'	59:BA:1260:G:C8	2.34	0.62
59:BA:1283:G:N2	59:BA:1286:A:OP2	2.31	0.62
59:BA:1838:C:H4'	59:BA:1839:G:C8	2.34	0.62
13:CN:45:ARG:HH22	21:CA:1059:C:H5''	1.64	0.62
20:CY:507:TYR:O	20:CY:581:ALA:HB1	1.99	0.62
21:CA:11:G:H2'	21:CA:12:U:O4'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:408:A:H2'	21:CA:409:G:C8	2.34	0.62
21:CA:530:G:H5''	21:CA:531:U:H5''	1.80	0.62
21:CA:837:G:H2'	21:CA:838:G:H8	1.63	0.62
21:CA:1512:U:H2'	21:CA:1513:A:C8	2.34	0.62
28:DF:162:LEU:HD12	28:DF:162:LEU:H	1.64	0.62
33:DN:14:VAL:HG12	33:DN:15:LEU:H	1.64	0.62
33:DN:112:LEU:O	33:DN:115:ARG:HB3	1.99	0.62
34:DO:25:LEU:HB3	34:DO:38:VAL:HB	1.80	0.62
43:DX:55:ASN:ND2	59:DA:1341:U:O2'	2.31	0.62
59:DA:97:C:H2'	59:DA:98:G:H8	1.63	0.62
59:DA:1485:G:H1	59:DA:1504:C:H42	1.45	0.62
3:AD:57:ARG:HB3	3:AD:206:PHE:CB	2.30	0.62
7:AH:96:GLY:N	7:AH:99:GLU:OE1	2.31	0.62
21:AA:130:A:H1'	21:AA:263:A:O2'	1.99	0.62
21:AA:235:C:H2'	21:AA:236:G:C8	2.35	0.62
21:AA:373:A:H4'	21:AA:480:U:O2'	1.99	0.62
21:AA:1434:A:H61	21:AA:1467:G:H1'	1.65	0.62
26:BD:149:PRO:HG2	59:BA:2222:G:H4'	1.81	0.62
27:BE:56:PRO:HG2	27:BE:57:LYS:HD2	1.80	0.62
30:BH:35:VAL:HG11	30:BH:71:LEU:HB3	1.81	0.62
47:B1:18:ILE:HG21	59:BA:380:U:H4'	1.81	0.62
59:BA:64:A:H2'	59:BA:65:C:C6	2.35	0.62
59:BA:1081:U:H2'	59:BA:1082:U:C5	2.34	0.62
59:BA:1838:C:H4'	59:BA:1839:G:H8	1.64	0.62
59:BA:2008:C:H2'	59:BA:2009:G:C8	2.35	0.62
59:BA:2525:G:H2'	59:BA:2526:G:C8	2.34	0.62
10:CK:21:ILE:HB	10:CK:84:VAL:HA	1.79	0.62
19:CT:54:LYS:HA	19:CT:57:ARG:HE	1.64	0.62
21:CA:106:C:H2'	21:CA:107:G:C8	2.33	0.62
21:CA:947:G:N1	21:CA:1234:C:O2	2.32	0.62
21:CA:988:G:N1	21:CA:1217:C:O2	2.31	0.62
21:CA:1020:U:H2'	21:CA:1021:G:H8	1.65	0.62
21:CA:1184:G:H2'	21:CA:1185:G:H8	1.64	0.62
21:CA:1271:G:H2'	21:CA:1272:G:H5''	1.81	0.62
23:CV:9:G:H5'	23:CV:10:G:C6	2.35	0.62
26:DD:108:PRO:HA	26:DD:197:GLY:N	2.14	0.62
27:DE:143:ASN:HB3	27:DE:147:PRO:HD2	1.81	0.62
29:DG:91:ARG:HG3	59:DA:2313:C:H4'	1.81	0.62
33:DN:100:GLU:HA	33:DN:103:VAL:H	1.65	0.62
34:DO:73:ASP:OD1	34:DO:75:SER:OG	2.17	0.62
44:DY:30:VAL:HG22	44:DY:37:VAL:HG12	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:694:U:O2	59:DA:768:G:N2	2.32	0.62
59:DA:708:C:N3	59:DA:723:G:N2	2.36	0.62
59:DA:1081:U:H2'	59:DA:1082:U:H5	1.64	0.62
59:DA:1687:G:H21	59:DA:1701:A:N6	1.98	0.62
1:AB:8:LYS:HE3	1:AB:48:MET:HE3	1.81	0.62
1:AB:189:ASP:O	1:AB:191:ASP:N	2.32	0.62
17:AR:56:THR:HB	17:AR:58:LEU:HD23	1.81	0.62
21:AA:129(A):G:H5'	21:AA:186(K):G:H5'	1.81	0.62
21:AA:427:U:O2'	21:AA:541:G:OP1	2.18	0.62
21:AA:546:G:H4'	21:AA:548:G:H4'	1.81	0.62
21:AA:986:A:H61	21:AA:1219:U:H3	1.47	0.62
21:AA:1003:G:C2	21:AA:1037:C:N3	2.66	0.62
21:AA:1491:G:H5''	21:AA:1492:A:OP2	2.00	0.62
26:BD:87:ASN:OD1	26:BD:87:ASN:N	2.32	0.62
41:BV:40:LEU:HD13	41:BV:41:GLY:H	1.64	0.62
59:BA:1220:C:N4	59:BA:1229:G:H1	1.97	0.62
59:BA:1703:G:H2'	59:BA:1704:G:C8	2.34	0.62
6:CG:79:ARG:HB3	21:CA:1381:U:O2'	2.00	0.62
11:CL:90:VAL:HG22	11:CL:96:VAL:HG21	1.81	0.62
19:CT:49:ALA:O	19:CT:52:ALA:N	2.31	0.62
20:CY:21:ILE:HG13	20:CY:22:ASP:N	2.14	0.62
21:CA:269:C:H2'	21:CA:270:A:C8	2.35	0.62
33:DN:27:ALA:O	33:DN:29:LYS:N	2.32	0.62
59:DA:2447:G:N2	59:DA:2450:A:OP2	2.33	0.62
59:DA:2485:G:H2'	59:DA:2486:G:C8	2.34	0.62
59:DA:2804:C:H2'	59:DA:2805:G:C8	2.35	0.62
19:AT:83:ARG:NH2	21:AA:260:G:N7	2.48	0.62
21:AA:38:G:N1	21:AA:397:A:OP1	2.33	0.62
21:AA:908:A:H2'	21:AA:909:A:H8	1.64	0.62
34:BO:13:ASN:HB3	34:BO:97:ARG:HB3	1.81	0.62
40:BU:31:SER:OG	59:BA:581:C:OP1	2.16	0.62
59:BA:190:A:H3'	59:BA:191:A:H8	1.65	0.62
59:BA:269:U:H3	59:BA:370:G:H1	0.69	0.62
2:CC:48:TYR:OH	2:CC:122:GLU:OE2	2.17	0.62
3:CD:15:GLU:HA	3:CD:59:ARG:HH22	1.64	0.62
15:CP:68:ASP:HA	15:CP:71:ARG:HD2	1.81	0.62
20:CY:117:GLN:HE22	20:CY:665:GLY:HA3	1.64	0.62
21:CA:695:A:H2'	21:CA:696:A:C8	2.34	0.62
30:DH:127:GLU:HG2	30:DH:129:THR:H	1.64	0.62
37:DR:105:ARG:NH2	42:DW:39:THR:O	2.32	0.62
38:DS:28:VAL:HA	38:DS:37:ALA:HA	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:644:A:N6	59:DA:2349:G:H21	1.95	0.62
59:DA:683:C:N3	59:DA:794:G:O6	2.32	0.62
59:DA:1413:G:H2'	59:DA:1414:G:C8	2.35	0.62
59:DA:1711:C:H2'	59:DA:1712:C:H6	1.64	0.62
59:DA:2698:U:H3	59:DA:2709:G:H1	1.47	0.62
20:AY:631:ILE:HG22	20:AY:632:LEU:N	2.13	0.62
62:AY:702:FUA:O1	62:AY:702:FUA:H12	2.00	0.62
33:BN:30:ILE:O	33:BN:34:LEU:HB2	2.00	0.62
33:BN:67:LEU:HD22	33:BN:68:GLU:H	1.64	0.62
37:BR:50:HIS:HB2	59:BA:2839:G:H5''	1.82	0.62
38:BS:16:ASN:HB3	38:BS:20:ARG:HH21	1.65	0.62
38:BS:39:ILE:HB	38:BS:49:VAL:HB	1.82	0.62
38:BS:92:TYR:C	38:BS:94:TYR:H	2.08	0.62
42:BW:47:VAL:HA	42:BW:50:VAL:HG12	1.80	0.62
45:BZ:15:PRO:HB2	45:BZ:19:ARG:HE	1.65	0.62
45:BZ:99:TYR:HB3	45:BZ:123:ASP:HB2	1.82	0.62
46:B0:34:GLY:HA3	59:BA:2353:G:H1'	1.81	0.62
59:BA:44:A:N6	59:BA:434:U:H3	1.94	0.62
59:BA:676:A:N7	59:BA:2070:G:H1'	2.15	0.62
59:BA:1964:G:N2	59:BA:1967:C:H1'	2.14	0.62
59:BA:2728:U:H2'	59:BA:2729:G:C8	2.35	0.62
60:BB:14:U:HO2'	60:BB:107:U:HO2'	1.48	0.62
21:CA:1091:U:N3	21:CA:1094:G:OP2	2.33	0.62
21:CA:1423:G:N2	21:CA:1477:C:N3	2.42	0.62
33:DN:85:ILE:HG12	33:DN:109:LYS:HB2	1.82	0.62
43:DX:89:ILE:HG22	43:DX:92:LEU:H	1.64	0.62
45:DZ:15:PRO:HG3	60:DB:76:G:H5''	1.81	0.62
53:D7:39:ARG:HA	53:D7:39:ARG:HE	1.65	0.62
59:DA:55:G:N2	59:DA:115:C:N3	2.39	0.62
59:DA:193:U:H4'	59:DA:803:U:H5'	1.80	0.62
59:DA:918:A:N3	60:DB:80:U:O2'	2.32	0.62
59:DA:2641:G:H2'	59:DA:2642:G:C8	2.35	0.62
7:AH:88:LYS:O	7:AH:90:GLY:N	2.32	0.62
13:AN:53:LEU:HD13	13:AN:56:VAL:HG21	1.82	0.62
16:AQ:81:ARG:HH21	16:AQ:83:ASP:HB2	1.64	0.62
20:AY:315:LYS:HB2	20:AY:327:PHE:HB2	1.81	0.62
22:AW:29:U:O4	22:AW:41:A:N1	2.33	0.62
59:BA:18:C:O2'	59:BA:554:U:H5''	2.00	0.62
59:BA:523:C:O2	59:BA:554:U:O2'	2.17	0.62
2:CC:32:LEU:O	2:CC:36:ASP:HB3	2.00	0.62
3:CD:134:ASP:OD2	3:CD:134:ASP:N	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:309:LEU:HA	20:CY:333:GLY:HA3	1.82	0.62
62:CY:702:FUA:H271	59:DA:2662:A:OP1	1.99	0.62
21:CA:139:G:H2'	21:CA:140:A:C8	2.35	0.62
21:CA:831:U:H3	21:CA:855:G:H1	1.48	0.62
21:CA:1040:U:H2'	21:CA:1041:A:H8	1.64	0.62
27:DE:109:LYS:NZ	59:DA:2681:C:OP1	2.31	0.62
28:DF:82:ILE:HG13	28:DF:83:PHE:HD1	1.65	0.62
29:DG:72:ARG:HH11	60:DB:41:U:H3	1.47	0.62
33:DN:101:HIS:C	33:DN:101:HIS:CD2	2.77	0.62
33:DN:114:ARG:HE	59:DA:527:C:C2'	2.13	0.62
38:DS:106:ARG:HB3	38:DS:108:GLY:H	1.65	0.62
41:DV:39:LEU:HD12	41:DV:47:VAL:HG11	1.80	0.62
53:D7:26:GLY:HA3	59:DA:682:G:H5'	1.82	0.62
59:DA:15:G:H2'	59:DA:16:G:C8	2.34	0.62
59:DA:16:G:N2	59:DA:524:U:O2	2.28	0.62
59:DA:858:U:O4	59:DA:919:G:O6	2.17	0.62
10:AK:29:ILE:HA	10:AK:44:SER:HA	1.81	0.62
21:AA:68(H):G:H1	21:AA:68(R):C:H42	1.48	0.62
21:AA:1012:U:H3	21:AA:1017:G:H1	1.45	0.62
21:AA:1028(B):C:C4	21:AA:1028(G):G:O6	2.52	0.62
25:BC:125:GLY:HA2	25:BC:138:LEU:HD11	1.82	0.62
27:BE:171:GLU:HB3	27:BE:185:LYS:HE3	1.80	0.62
28:BF:28:ILE:HG22	28:BF:30:PRO:HD3	1.82	0.62
37:BR:67:LEU:HG	37:BR:73:VAL:HG22	1.81	0.62
59:BA:86:C:H4'	59:BA:104:U:H1'	1.81	0.62
59:BA:1430:C:H2'	59:BA:1431:U:O4'	1.99	0.62
59:BA:1570:A:H8	59:BA:1570:A:O5'	1.82	0.62
4:CE:142:LEU:C	4:CE:143:ARG:HE	2.07	0.62
9:CJ:54:PHE:O	9:CJ:56:HIS:N	2.32	0.62
21:CA:166:G:H2'	21:CA:167:G:H8	1.64	0.62
21:CA:430:A:H2'	21:CA:431:A:H5'	1.81	0.62
21:CA:1392:G:O2'	21:CA:1502:A:OP1	2.18	0.62
21:CA:1535:C:C4	23:CV:10:G:N2	2.67	0.62
34:DO:69:ILE:HG23	34:DO:71:ARG:HD3	1.82	0.62
37:DR:2:ARG:HB3	59:DA:2723:C:H5''	1.81	0.62
42:DW:43:GLY:HA2	42:DW:46:PHE:HB2	1.82	0.62
52:D6:9:LEU:HD13	52:D6:9:LEU:H	1.64	0.62
59:DA:17:G:H2'	59:DA:18:C:C6	2.34	0.62
59:DA:35:G:H2'	59:DA:36:G:O4'	2.00	0.62
59:DA:38:A:N1	59:DA:441:U:O2	2.33	0.62
59:DA:101:G:O2'	59:DA:102:G:OP1	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1091:G:N2	59:DA:1100:C:N3	2.44	0.62
59:DA:1166:C:H2'	59:DA:1167:U:C6	2.35	0.62
59:DA:2487:G:H2'	59:DA:2488:A:C8	2.35	0.62
1:AB:93:VAL:HG11	1:AB:97:TRP:HB2	1.81	0.61
3:AD:26:CYS:HA	3:AD:31:CYS:HA	1.81	0.61
19:AT:34:LYS:O	19:AT:37:SER:OG	2.15	0.61
19:AT:83:ARG:NH1	21:AA:260:G:OP2	2.32	0.61
20:AY:86:GLY:HA2	62:AY:702:FUA:H283	1.80	0.61
20:AY:580:MET:HA	20:AY:583:LYS:HB3	1.81	0.61
21:AA:408:A:H2	21:AA:434:U:C2	2.18	0.61
21:AA:766:A:H2'	21:AA:767:A:O4'	2.00	0.61
21:AA:1354:C:H2'	21:AA:1355:G:H8	1.63	0.61
21:AA:1440(D):A:H1'	21:AA:1440(E):G:H8	1.64	0.61
25:BC:80:LYS:HE3	25:BC:120:VAL:HG13	1.82	0.61
26:BD:11:PRO:HA	26:BD:14:ARG:HB3	1.81	0.61
33:BN:27:ALA:O	33:BN:29:LYS:N	2.33	0.61
33:BN:37:LYS:HZ3	33:BN:38:HIS:HD2	1.48	0.61
33:BN:43:THR:N	33:BN:78:TYR:HA	2.15	0.61
33:BN:85:ILE:HG21	33:BN:109:LYS:H	1.65	0.61
35:BP:54:GLY:HA3	59:BA:826:U:H1'	1.81	0.61
38:BS:31:SER:OG	38:BS:32:LEU:N	2.31	0.61
59:BA:600:G:H2'	59:BA:601:C:C6	2.35	0.61
59:BA:820:A:N3	59:BA:943:U:H4'	2.15	0.61
59:BA:1306:C:H2'	59:BA:1307:A:C8	2.34	0.61
6:CG:12:LEU:HB2	6:CG:21:VAL:HB	1.82	0.61
17:CR:33:ASP:O	17:CR:36:ASN:ND2	2.32	0.61
62:CY:702:FUA:O1	62:CY:702:FUA:H12	2.00	0.61
41:DV:84:LYS:N	59:DA:814:C:OP1	2.30	0.61
47:D1:50:ARG:N	59:DA:2200:C:OP1	2.27	0.61
59:DA:194:G:H1	59:DA:201:C:H42	1.46	0.61
59:DA:319:C:H2'	59:DA:320:A:O4'	1.99	0.61
59:DA:1504:C:H2'	59:DA:1505:C:C6	2.35	0.61
59:DA:1626:G:H5''	59:DA:1627:G:H5'	1.82	0.61
60:DB:24:G:N2	60:DB:28:C:O2	2.33	0.61
26:BD:45:ASN:HB3	59:BA:1813:G:H1'	1.82	0.61
28:BF:6:VAL:HG22	28:BF:121:GLY:HA2	1.82	0.61
35:BP:50:ARG:HD2	54:B8:59:LYS:HE3	1.82	0.61
46:B0:40:GLN:HB2	46:B0:44:ARG:HD3	1.81	0.61
59:BA:129:C:H2'	59:BA:130:C:C6	2.34	0.61
59:BA:1413:G:H1	59:BA:1589:C:N4	1.97	0.61
59:BA:1525:G:H2'	59:BA:1526:G:H8	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1540:G:C2	59:BA:1541:U:H1'	2.35	0.61
59:BA:1583:A:H61	21:CA:838(A):U:C5'	2.13	0.61
59:BA:1935:G:O2'	59:BA:1964:G:N2	2.33	0.61
1:CB:168:THR:HG23	1:CB:192:SER:HB2	1.82	0.61
6:CG:77:SER:HA	6:CG:85:TYR:O	2.00	0.61
21:CA:9:G:H1	21:CA:25:C:N4	1.98	0.61
21:CA:411:A:H2'	21:CA:412:A:H4'	1.82	0.61
21:CA:1041:A:C2	21:CA:1042:G:H1'	2.35	0.61
21:CA:1405:G:H3'	63:CA:1601:NMY:N19	2.14	0.61
21:CA:1491:G:C4	63:CA:1601:NMY:H4	2.35	0.61
24:CX:39:G:H2'	24:CX:40:G:C8	2.35	0.61
33:DN:27:ALA:C	33:DN:31:ALA:H	2.08	0.61
33:DN:71:ILE:CB	33:DN:97:ARG:HB2	2.21	0.61
35:DP:115:LEU:HA	35:DP:134:ALA:HB2	1.82	0.61
59:DA:51:G:O2'	59:DA:119:A:N1	2.32	0.61
59:DA:524:U:H2'	59:DA:525:U:C6	2.35	0.61
9:AJ:55:LYS:HG2	21:AA:973:G:H1'	1.83	0.61
10:AK:51:LYS:HA	10:AK:55:LYS:HB2	1.81	0.61
33:BN:97:ARG:CA	33:BN:105:GLY:HA2	2.30	0.61
37:BR:10:LEU:HB2	59:BA:1653:G:N7	2.15	0.61
53:B7:1:MET:N	59:BA:1619:G:N3	2.48	0.61
59:BA:1005:C:N3	59:BA:1138:G:N2	2.43	0.61
59:BA:1354:A:N6	59:BA:1377:G:H21	1.90	0.61
59:BA:1686:C:H42	59:BA:1702:G:H1	1.48	0.61
59:BA:1965:C:O5'	63:BA:2903:NMY:H62	1.99	0.61
59:BA:2069:G:H1	59:BA:2442:C:H42	1.48	0.61
59:BA:2487:G:H2'	59:BA:2488:A:H8	1.63	0.61
60:BB:32:C:O2	60:BB:50:G:N1	2.33	0.61
8:CI:122:ALA:HB3	21:CA:1343:G:H4'	1.81	0.61
28:DF:130:ALA:H	28:DF:142:TRP:CD1	2.19	0.61
28:DF:169:ASN:ND2	59:DA:322:A:H3'	2.16	0.61
30:DH:107:VAL:O	30:DH:109:PHE:N	2.28	0.61
36:DQ:55:VAL:HA	36:DQ:58:PHE:CE2	2.35	0.61
59:DA:24:G:H1	59:DA:516:C:N4	1.98	0.61
59:DA:28:A:H61	59:DA:512:G:H1'	1.62	0.61
59:DA:410:G:O6	59:DA:417:C:N3	2.33	0.61
59:DA:778:G:H3'	59:DA:779:U:C6	2.35	0.61
59:DA:1028:A:N6	59:DA:1125:G:H2'	2.15	0.61
59:DA:1058:G:H2'	59:DA:1059:G:C8	2.35	0.61
59:DA:1864(D):A:H8	59:DA:1864(D):A:O5'	1.83	0.61
59:DA:1921:G:H2'	59:DA:1922:G:O4'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2549:G:N2	59:DA:2559:C:N3	2.33	0.61
59:DA:2641:G:H2'	59:DA:2642:G:H8	1.64	0.61
60:DB:24:G:H1	60:DB:59:A:H61	1.46	0.61
1:AB:97:TRP:CH2	1:AB:176:GLU:HG3	2.36	0.61
7:AH:85:ARG:NH1	7:AH:134:ILE:O	2.31	0.61
7:AH:135:CYS:SG	7:AH:136:GLU:N	2.73	0.61
21:AA:349:A:H2'	21:AA:350:G:C8	2.36	0.61
21:AA:1409:C:H2'	21:AA:1410:G:C8	2.35	0.61
24:AX:52:G:O6	24:AX:62:C:N3	2.33	0.61
27:BE:174:ASP:HB3	27:BE:183:LEU:HD13	1.83	0.61
30:BH:138:LYS:HB3	59:BA:2746:U:H4'	1.83	0.61
33:BN:104:LYS:NZ	33:BN:124:ALA:HB3	2.15	0.61
54:B8:34:TRP:CG	54:B8:35:GLN:N	2.69	0.61
59:BA:271(D):G:H2'	59:BA:271(E):G:H8	1.64	0.61
59:BA:1312:U:C4	59:BA:1340:U:O4	2.54	0.61
59:BA:2146:C:H4'	59:BA:2147:G:C8	2.35	0.61
59:BA:2645:G:H3'	59:BA:2646:C:H5'	1.82	0.61
6:CG:91:VAL:O	6:CG:96:GLN:NE2	2.34	0.61
20:CY:24:GLY:N	61:CY:701:GDP:H5'	2.15	0.61
21:CA:17:U:O2'	21:CA:1079:G:N3	2.26	0.61
21:CA:532:A:H3'	21:CA:533:A:H5'	1.82	0.61
21:CA:923:A:H61	21:CA:1393:U:H3	1.46	0.61
21:CA:1255:G:O2'	21:CA:1258:G:N3	2.32	0.61
26:DD:157:ARG:HH21	59:DA:1818:U:H6	1.47	0.61
47:D1:12:PRO:HD3	47:D1:44:PRO:HG3	1.81	0.61
59:DA:188:G:N2	59:DA:208:C:N3	2.37	0.61
59:DA:698:C:OP1	59:DA:1634:A:N6	2.28	0.61
59:DA:882:G:H1	59:DA:894:C:N4	1.96	0.61
59:DA:1337:G:H2'	59:DA:1338:G:H8	1.66	0.61
59:DA:2339:G:H2'	59:DA:2340:G:H8	1.65	0.61
59:DA:2377:A:H2'	59:DA:2378:A:C8	2.35	0.61
59:DA:2662:A:H8	59:DA:2662:A:O5'	1.83	0.61
6:AG:78:ARG:HB3	6:AG:85:TYR:HB2	1.82	0.61
12:AM:126:LYS:HG3	22:AW:34:C:O3'	1.98	0.61
21:AA:413:G:H1'	21:AA:428:G:N2	2.15	0.61
21:AA:1126:U:C5	21:AA:1148:U:N3	2.69	0.61
21:AA:1157:A:N1	21:AA:1180:A:H2'	2.16	0.61
21:AA:1428:A:N6	21:AA:1472:U:H3	1.97	0.61
25:BC:16:ASP:O	25:BC:18:ASN:N	2.33	0.61
25:BC:43:GLU:CB	25:BC:216:THR:HG23	2.28	0.61
28:BF:125:LEU:HA	28:BF:194:MET:HB2	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:97:GLY:HA3	32:BK:136:VAL:HG22	1.82	0.61
36:BQ:68:ILE:HD12	36:BQ:103:MET:HB2	1.82	0.61
59:BA:357(H):G:H2'	59:BA:357(I):G:C8	2.35	0.61
59:BA:536:A:N6	59:BA:557:U:H3	1.93	0.61
59:BA:2121:G:N2	59:BA:2177:C:N3	2.46	0.61
59:BA:2389:G:H5''	59:BA:2390:U:O4'	1.99	0.61
2:CC:70:VAL:HG12	2:CC:71:ALA:H	1.64	0.61
21:CA:68(H):G:HO2'	21:CA:68(I):G:H8	1.47	0.61
21:CA:1126:U:C5	21:CA:1127:G:N3	2.69	0.61
21:CA:1157:A:N6	21:CA:1178:G:C2	2.64	0.61
35:DP:60:MET:O	59:DA:2392:A:O2'	2.19	0.61
42:DW:75:TYR:O	42:DW:104:THR:N	2.34	0.61
59:DA:1164:G:H2'	59:DA:1165:U:C6	2.35	0.61
59:DA:1352:U:H3	59:DA:1378:A:H62	1.46	0.61
59:DA:2329:G:H2'	59:DA:2330:G:H8	1.64	0.61
60:DB:101:A:H2'	60:DB:102:G:O4'	2.00	0.61
21:AA:430:A:H2'	21:AA:431:A:O4'	2.01	0.61
25:BC:112:ASP:HA	25:BC:137:LEU:HD23	1.83	0.61
31:BJ:23:UNK:HA	31:BJ:111:UNK:O	2.01	0.61
36:BQ:134:ARG:HA	36:BQ:137:TYR:HE2	1.65	0.61
45:BZ:40:ASP:O	45:BZ:44:PHE:HB2	1.99	0.61
60:BB:28:C:H2'	60:BB:29:A:C8	2.34	0.61
60:BB:60:C:H2'	60:BB:61:G:C8	2.35	0.61
11:CL:35:GLY:HA3	11:CL:83:VAL:HG22	1.82	0.61
12:CM:31:LYS:HA	12:CM:34:LEU:HD12	1.82	0.61
15:CP:22:THR:OG1	15:CP:23:ASP:N	2.27	0.61
20:CY:139:MET:HB3	20:CY:174:PHE:CE1	2.35	0.61
20:CY:178:ILE:HG12	20:CY:185:ALA:HA	1.81	0.61
21:CA:32:A:N6	21:CA:552:U:N3	2.24	0.61
21:CA:1118:C:H2'	21:CA:1119:C:C6	2.35	0.61
30:DH:25:LYS:HA	30:DH:34:GLU:HG2	1.82	0.61
54:D8:45:GLY:O	54:D8:46:ARG:HB2	2.00	0.61
59:DA:585:G:C2	59:DA:1254:A:N6	2.69	0.61
59:DA:1712(C):G:H2'	59:DA:1712(D):G:H8	1.64	0.61
59:DA:2844:G:H2'	59:DA:2845:G:O4'	2.01	0.61
59:DA:2847:U:H2'	59:DA:2848:G:O4'	2.01	0.61
7:AH:44:PHE:HE1	7:AH:80:ILE:HG13	1.65	0.61
16:AQ:63:ARG:HG3	21:AA:264:U:H1'	1.81	0.61
20:AY:512:ILE:HD12	20:AY:589:ALA:HB1	1.81	0.61
62:AY:702:FUA:H211	62:AY:702:FUA:O2	2.00	0.61
33:BN:100:GLU:HA	33:BN:103:VAL:H	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BQ:7:MET:SD	36:BQ:7:MET:N	2.73	0.61
37:BR:103:ARG:HG2	37:BR:110:PRO:HA	1.83	0.61
55:B9:7:VAL:HB	55:B9:25:VAL:HG21	1.83	0.61
59:BA:1410:G:H1	59:BA:1592:C:H42	1.49	0.61
59:BA:1993:U:H2'	59:BA:1994:C:O4'	2.00	0.61
2:CC:47:LEU:HD23	2:CC:76:VAL:HB	1.83	0.61
6:CG:27:ILE:HA	6:CG:30:ILE:HD12	1.83	0.61
7:CH:94:TYR:OH	21:CA:597:G:N2	2.33	0.61
16:CQ:61:GLU:HA	16:CQ:71:PHE:HD1	1.65	0.61
16:CQ:84:LEU:HD23	16:CQ:84:LEU:H	1.64	0.61
21:CA:551:U:H2'	21:CA:552:U:C6	2.36	0.61
21:CA:815:A:N6	21:CA:1508:G:N2	2.41	0.61
21:CA:1491:G:C2	63:CA:1601:NMY:H61	2.35	0.61
39:DT:20:PRO:HG2	39:DT:86:ILE:HG23	1.82	0.61
42:DW:18:ARG:NH1	42:DW:76:VAL:HG13	2.15	0.61
59:DA:271(F):G:H2'	59:DA:271(G):G:C8	2.34	0.61
59:DA:2063:C:H42	59:DA:2501:C:H1'	1.66	0.61
59:DA:2749:A:H62	59:DA:2753:A:H61	0.78	0.61
2:AC:175:LEU:N	21:AA:1108:G:OP1	2.34	0.61
20:AY:500:GLN:HG3	20:AY:504:ARG:O	2.01	0.61
21:AA:148:G:H2'	21:AA:149:A:H8	1.64	0.61
21:AA:377:G:H1	21:AA:386:C:H42	1.49	0.61
21:AA:1096:C:H2'	21:AA:1097:C:C6	2.35	0.61
21:AA:1304:G:N2	21:AA:1333:A:H62	1.94	0.61
24:AX:30:C:H42	24:AX:40:G:H1	1.49	0.61
26:BD:77:ALA:HA	26:BD:97:TYR:HA	1.82	0.61
26:BD:132:PRO:HB2	26:BD:135:PHE:CD1	2.36	0.61
28:BF:101:LEU:HG	28:BF:106:ARG:HB2	1.82	0.61
59:BA:858:U:H1'	59:BA:2268:A:O2'	2.01	0.61
59:BA:1341:U:OP1	59:BA:1602:U:O2'	2.17	0.61
59:BA:1357:U:H3	59:BA:1374:G:H1	1.48	0.61
1:CB:12:GLU:HA	1:CB:16:HIS:HD2	1.65	0.61
4:CE:27:ARG:HH21	4:CE:49:PRO:HG3	1.65	0.61
21:CA:614:A:H2'	21:CA:615:C:C6	2.36	0.61
21:CA:950:U:H3	21:CA:1231:G:H1	0.74	0.61
21:CA:1118:C:H2'	21:CA:1119:C:H6	1.66	0.61
21:CA:1126:U:C5	21:CA:1148:U:O4	2.54	0.61
21:CA:1374:A:H2'	21:CA:1375:A:O4'	2.00	0.61
25:DC:16:ASP:O	25:DC:18:ASN:N	2.34	0.61
27:DE:185:LYS:HD2	59:DA:2729:G:H4'	1.81	0.61
40:DU:92:ARG:HD3	40:DU:95:LEU:HG	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DW:72:LYS:O	42:DW:106:ILE:HB	2.01	0.61
47:D1:42:GLN:NE2	59:DA:379:G:H21	1.99	0.61
59:DA:407:G:H2'	59:DA:408:G:C8	2.36	0.61
59:DA:1356:G:N2	59:DA:1375:C:N3	2.42	0.61
59:DA:2222:G:H2'	59:DA:2223:G:H8	1.63	0.61
18:AS:39:THR:HA	18:AS:70:LYS:HA	1.82	0.61
28:BF:61:GLY:N	59:BA:798:G:OP2	2.32	0.61
33:BN:114:ARG:HG2	59:BA:2779:U:H2'	1.81	0.61
59:BA:340:A:H2'	59:BA:341:G:O4'	2.00	0.61
59:BA:481:G:H2'	59:BA:507:A:N1	2.15	0.61
59:BA:1133:U:O2	59:BA:1137:G:H5''	2.01	0.61
59:BA:1153:C:H3'	59:BA:1154:G:H8	1.65	0.61
59:BA:1612:C:H42	59:BA:1619:G:H1	1.47	0.61
60:BB:13:A:O2'	60:BB:15:A:N7	2.34	0.61
21:CA:829:G:H1	21:CA:857:C:N4	1.97	0.61
21:CA:1019:C:H2'	21:CA:1020:U:O4'	2.01	0.61
21:CA:1271:G:H5'	21:CA:1314:C:H5''	1.83	0.61
27:DE:13:ARG:C	27:DE:21:VAL:H	2.07	0.61
32:DK:17:ALA:HB2	32:DK:38:VAL:HG11	1.83	0.61
33:DN:85:ILE:HB	33:DN:107:LEU:N	2.16	0.61
36:DQ:35:VAL:CA	36:DQ:102:VAL:HA	2.22	0.61
44:DY:39:VAL:HG23	44:DY:40:GLU:H	1.64	0.61
45:DZ:72:ARG:NH1	60:DB:103:U:O3'	2.34	0.61
59:DA:566:U:H2'	59:DA:567:A:C8	2.36	0.61
59:DA:638:G:H1	59:DA:650:C:N4	1.98	0.61
59:DA:733:G:O6	59:DA:761:A:H3'	2.01	0.61
59:DA:1073:A:H2'	59:DA:1074:G:O4'	2.00	0.61
59:DA:2372:G:H2'	59:DA:2373:G:C8	2.36	0.61
59:DA:2647:U:H3	59:DA:2673:G:H1	1.48	0.61
59:DA:2703:C:H2'	59:DA:2704:C:C6	2.36	0.61
20:AY:265:LYS:O	20:AY:267:LYS:N	2.30	0.61
21:AA:651:C:N4	21:AA:753:A:OP2	2.34	0.61
25:BC:173:HIS:ND1	59:BA:2123:G:H1'	2.16	0.61
29:BG:30:GLU:HB2	60:BB:57:A:H1'	1.83	0.61
42:BW:6:ILE:HG22	59:BA:494:G:H4'	1.83	0.61
59:BA:1179:C:H2'	59:BA:1180:C:C6	2.36	0.61
59:BA:1486:A:H2'	59:BA:1487:G:C8	2.36	0.61
59:BA:1570:A:H2'	59:BA:1571:A:C8	2.36	0.61
59:BA:1800:C:H42	59:BA:1817:G:N2	1.97	0.61
59:BA:2645:G:H3'	59:BA:2646:C:C5'	2.31	0.61
59:BA:2786:U:H2'	59:BA:2787:C:H6	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BB:14:U:H1'	60:BB:107:U:H1'	1.82	0.61
1:CB:109:SER:O	1:CB:113:HIS:ND1	2.33	0.61
20:CY:130:VAL:O	20:CY:132:ARG:NH1	2.34	0.61
21:CA:258:G:N2	21:CA:268:C:N3	2.41	0.61
21:CA:827:U:H3	21:CA:872:A:H61	1.48	0.61
21:CA:1145:C:H5'	21:CA:1146:A:H5'	1.83	0.61
21:CA:1179:A:H2'	21:CA:1180:A:O4'	2.01	0.61
23:CV:17:U:H3	22:CW:35:A:H61	1.47	0.61
26:DD:88:ARG:HG3	26:DD:89:SER:H	1.66	0.61
26:DD:261:LYS:HB3	26:DD:264:LYS:HB2	1.83	0.61
28:DF:154:VAL:O	28:DF:175:THR:HA	2.01	0.61
38:DS:31:SER:OG	38:DS:32:LEU:N	2.33	0.61
47:D1:45:ASN:OD1	47:D1:46:LEU:N	2.33	0.61
59:DA:183:C:N4	59:DA:214:G:H1	1.99	0.61
59:DA:1654:A:H2'	59:DA:1655:A:H8	1.66	0.61
3:AD:18:LYS:HB2	3:AD:31:CYS:SG	2.41	0.60
16:AQ:67:LYS:HE3	21:AA:266:G:H2'	1.83	0.60
20:AY:92:ILE:HG21	20:AY:437:THR:HG22	1.81	0.60
20:AY:176:GLY:HA3	20:AY:187:THR:HA	1.82	0.60
21:AA:131:C:H2'	21:AA:132:C:C6	2.36	0.60
21:AA:666:G:H2'	21:AA:667:G:C8	2.36	0.60
28:BF:9:ILE:HG21	28:BF:125:LEU:H	1.66	0.60
30:BH:143:GLN:HG3	59:BA:2745:C:H1'	1.81	0.60
43:BX:52:VAL:N	43:BX:82:GLN:O	2.20	0.60
55:B9:29:ASN:HB2	55:B9:32:HIS:CE1	2.36	0.60
59:BA:742:G:H1'	59:BA:1676:A:H4'	1.81	0.60
59:BA:954:G:O6	59:BA:963:U:C2	2.54	0.60
59:BA:1800:C:N4	59:BA:1817:G:H22	1.99	0.60
59:BA:2328:A:H2'	59:BA:2329:G:C8	2.36	0.60
60:BB:78:A:H62	60:BB:98:G:H21	1.49	0.60
20:CY:394:ALA:O	20:CY:396:ARG:N	2.34	0.60
21:CA:662:G:O6	21:CA:743:U:O4	2.19	0.60
21:CA:949:A:H2'	21:CA:950:U:C6	2.36	0.60
21:CA:996:A:H2'	21:CA:997:U:H6	1.66	0.60
21:CA:1321:C:H3'	21:CA:1322:C:H5''	1.83	0.60
27:DE:110:GLY:N	59:DA:2821:A:OP1	2.34	0.60
28:DF:74:ARG:NH2	59:DA:674:G:O4'	2.34	0.60
33:DN:100:GLU:O	33:DN:103:VAL:N	2.34	0.60
45:DZ:6:LYS:NZ	45:DZ:7:ALA:O	2.33	0.60
52:D6:30:THR:O	52:D6:32:ASN:N	2.34	0.60
54:D8:2:PRO:HB3	59:DA:591:C:H1'	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:106:C:HO2'	59:DA:294:A:HO2'	1.49	0.60
59:DA:747:U:H5''	59:DA:748:G:H5'	1.83	0.60
59:DA:2589:A:H2'	59:DA:2590:A:C8	2.36	0.60
59:DA:2639:A:H2'	59:DA:2640:G:H8	1.66	0.60
1:AB:97:TRP:HH2	1:AB:176:GLU:HG3	1.66	0.60
26:BD:54:ARG:HH22	59:BA:1822:G:H5''	1.66	0.60
33:BN:27:ALA:C	33:BN:31:ALA:H	2.09	0.60
34:BO:98:VAL:HG22	34:BO:117:LEU:HD22	1.82	0.60
40:BU:40:PHE:HB3	41:BV:75:PHE:CD1	2.35	0.60
42:BW:21:VAL:HG13	42:BW:74:ALA:HB3	1.83	0.60
59:BA:1450:C:H42	59:BA:1461:G:H1	1.49	0.60
59:BA:2286:A:H4'	59:BA:2287:A:O4'	2.01	0.60
59:BA:2330:G:H3'	59:BA:2331:G:H8	1.66	0.60
7:CH:37:ARG:HD3	7:CH:41:ARG:HD3	1.83	0.60
20:CY:610:VAL:O	20:CY:642:VAL:HA	2.01	0.60
26:DD:260:ARG:HH12	59:DA:1799:G:H3'	1.66	0.60
28:DF:185:ASP:O	28:DF:189:THR:OG1	2.19	0.60
33:DN:125:GLY:O	33:DN:127:ASP:N	2.34	0.60
42:DW:48:ALA:O	42:DW:51:LEU:HB3	2.01	0.60
45:DZ:166:SER:H	45:DZ:167:PRO:HA	1.64	0.60
59:DA:142:G:H2'	59:DA:143:C:C6	2.36	0.60
59:DA:1085:A:O2'	59:DA:1104:C:O2'	2.16	0.60
59:DA:1338:G:H2'	59:DA:1339:G:H8	1.66	0.60
60:DB:24:G:H4'	60:DB:25:A:C8	2.36	0.60
1:AB:32:ILE:HD11	1:AB:42:ILE:HD13	1.81	0.60
9:AJ:5:ARG:NH1	9:AJ:73:ASP:OD2	2.35	0.60
11:AL:43:VAL:HG12	11:AL:44:THR:H	1.65	0.60
11:AL:84:LEU:HB2	11:AL:101:VAL:HG23	1.82	0.60
21:AA:150:C:H42	21:AA:171:A:H62	1.49	0.60
25:BC:61:GLY:O	25:BC:163:GLU:HA	2.00	0.60
33:BN:50:ASP:O	33:BN:53:VAL:N	2.24	0.60
36:BQ:77:LYS:HB3	36:BQ:77:LYS:HZ3	1.66	0.60
44:BY:39:VAL:HG23	44:BY:40:GLU:H	1.64	0.60
59:BA:270(A):A:N3	59:BA:357(N):C:O2'	2.28	0.60
59:BA:357(C):G:H2'	59:BA:357(D):G:C8	2.35	0.60
59:BA:736:C:H2'	59:BA:737:C:C6	2.36	0.60
59:BA:800:A:H4'	59:BA:801:G:H2'	1.83	0.60
59:BA:1777:U:O4	59:BA:1787:A:N1	2.34	0.60
59:BA:1890:A:O2'	59:BA:2085:C:O2'	2.08	0.60
59:BA:1941:C:N4	59:BA:1965:C:OP2	2.35	0.60
59:BA:2448:A:H4'	59:BA:2449:U:OP2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:69:LEU:HB3	1:CB:71:VAL:HG23	1.83	0.60
19:CT:74:LYS:HD3	19:CT:74:LYS:H	1.66	0.60
29:DG:126:ASP:OD1	59:DA:2302:G:N2	2.22	0.60
32:DK:56:GLU:O	32:DK:67:PHE:HA	2.01	0.60
49:D3:8:LEU:HD12	49:D3:33:GLN:HB3	1.82	0.60
51:D5:19:ARG:NH1	59:DA:1265:A:O5'	2.34	0.60
59:DA:576:U:H2'	59:DA:577:G:C8	2.37	0.60
3:AD:57:ARG:HB3	3:AD:206:PHE:HB3	1.81	0.60
6:AG:74:GLU:O	6:AG:88:PRO:HA	2.01	0.60
14:AO:82:ILE:HG13	14:AO:87:ILE:HG13	1.82	0.60
16:AQ:63:ARG:NH1	21:AA:130:A:OP2	2.30	0.60
20:AY:129:LYS:HB3	20:AY:253:LEU:HD11	1.83	0.60
20:AY:210:ARG:O	20:AY:214:GLU:HG2	2.01	0.60
20:AY:248:LYS:NZ	20:AY:252:ASP:OD2	2.27	0.60
25:BC:32:GLU:HG2	25:BC:33:LEU:HD23	1.84	0.60
25:BC:61:GLY:HA3	25:BC:164:PHE:CD1	2.36	0.60
27:BE:36:ARG:HH21	27:BE:88:GLY:HA2	1.65	0.60
30:BH:125:VAL:HG22	30:BH:131:VAL:HG13	1.82	0.60
31:BJ:58:UNK:O	31:BJ:60:UNK:N	2.34	0.60
33:BN:31:ALA:C	33:BN:33:LEU:N	2.57	0.60
45:BZ:52:SER:OG	45:BZ:53:ILE:N	2.34	0.60
55:B9:19:ARG:HG3	59:BA:2756:U:H3'	1.82	0.60
59:BA:40:C:H2'	59:BA:41:C:O4'	2.01	0.60
59:BA:449:A:H2'	59:BA:450:G:O4'	2.01	0.60
59:BA:1020:A:OP1	59:BA:1034:G:N2	2.33	0.60
59:BA:2508:G:H1	59:BA:2580:U:H3	1.49	0.60
59:BA:2514:U:H3	59:BA:2570:G:H1	1.49	0.60
3:CD:161:ASN:HA	3:CD:164:ALA:HB3	1.83	0.60
11:CL:70:ILE:HG13	11:CL:72:GLY:N	2.16	0.60
20:CY:541:ALA:HB1	20:CY:583:LYS:HE2	1.84	0.60
21:CA:21:G:H21	21:CA:914:A:H62	1.47	0.60
21:CA:299:G:H2'	21:CA:300:A:C8	2.37	0.60
21:CA:486:U:H2'	21:CA:487:A:H8	1.66	0.60
21:CA:1224:G:N2	21:CA:1362(A):C:C2	2.66	0.60
21:CA:1502:A:H8	21:CA:1505:G:H22	1.46	0.60
27:DE:62:PRO:HD3	59:DA:2787:C:H5'	1.84	0.60
59:DA:836:G:H2'	59:DA:837:C:C5	2.36	0.60
59:DA:2006:C:O2'	59:DA:2823:A:N3	2.32	0.60
59:DA:2202(E):A:H1'	59:DA:2202(G):G:C5	2.36	0.60
59:DA:2743:C:N4	59:DA:2761:G:H1	1.99	0.60
1:AB:91:PRO:HB3	1:AB:152:PHE:HA	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:162:ILE:O	1:AB:164:VAL:HG12	2.01	0.60
7:AH:69:ARG:NH1	7:AH:75:ARG:O	2.35	0.60
20:AY:256:THR:O	20:AY:258:VAL:N	2.35	0.60
21:AA:942:G:H1	21:AA:1341:U:H3	1.48	0.60
26:BD:177:LEU:HD13	26:BD:179:SER:H	1.66	0.60
28:BF:169:ASN:ND2	59:BA:320:A:N3	2.50	0.60
33:BN:38:HIS:NE2	59:BA:1006:C:H4'	2.17	0.60
41:BV:81:TYR:CE2	59:BA:1187:G:H5''	2.36	0.60
44:BY:40:GLU:HA	44:BY:64:GLU:HG2	1.82	0.60
47:B1:3:LYS:HG3	47:B1:4:VAL:HG12	1.82	0.60
59:BA:512:G:OP1	59:BA:1234:U:O2'	2.18	0.60
59:BA:926:A:H2'	59:BA:928:G:C8	2.36	0.60
59:BA:1132:A:N6	59:BA:2025:C:O2'	2.33	0.60
59:BA:1138:G:H2'	59:BA:1139:G:O4'	2.02	0.60
59:BA:2073:C:H2'	59:BA:2074:U:C6	2.37	0.60
59:BA:2726:U:O2'	59:BA:2727:G:O5'	2.19	0.60
3:CD:122:ARG:HH21	21:CA:403:C:H4'	1.65	0.60
12:CM:81:LEU:HD23	12:CM:92:HIS:HE1	1.66	0.60
14:CO:54:ARG:NH1	21:CA:728:A:OP1	2.34	0.60
20:CY:321:TYR:HD1	21:CA:55:A:H1'	1.66	0.60
32:DK:7:VAL:HB	32:DK:58:THR:HG23	1.83	0.60
37:DR:67:LEU:HD21	37:DR:76:VAL:HG21	1.84	0.60
52:D6:19:ARG:NH2	52:D6:21:TYR:OH	2.34	0.60
55:D9:30:PRO:HG2	59:DA:2527:C:H5''	1.82	0.60
59:DA:352:G:O2'	59:DA:354:G:N7	2.34	0.60
59:DA:460:A:H62	59:DA:469:G:H21	1.49	0.60
59:DA:1579:A:H2'	59:DA:1580:A:C8	2.37	0.60
59:DA:2018:G:H2'	59:DA:2019:A:O4'	2.00	0.60
59:DA:2398:U:H2'	59:DA:2399:G:C8	2.37	0.60
59:DA:2405:G:H21	59:DA:2412:A:H62	1.49	0.60
16:AQ:43:LEU:HD13	16:AQ:69:LYS:HA	1.83	0.60
20:AY:13:ARG:HB2	20:AY:79:ILE:HG12	1.82	0.60
21:AA:384:G:H2'	21:AA:385:C:C6	2.37	0.60
21:AA:408:A:N1	21:AA:434:U:C4	2.69	0.60
21:AA:1518:A:H2'	21:AA:1519:A:H8	1.65	0.60
26:BD:161:THR:HG22	26:BD:178:PRO:HG2	1.84	0.60
42:BW:19:LEU:HD12	51:B5:25:LEU:H	1.67	0.60
46:B0:40:GLN:HE22	46:B0:45:PHE:HB2	1.66	0.60
54:B8:17:THR:HB	59:BA:650:C:O3'	2.01	0.60
59:BA:1905:C:H6	63:BA:2904:NMY:H72	1.48	0.60
5:CF:60:PHE:HZ	17:CR:78:LEU:HD21	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:57:LYS:HB2	21:CA:972:C:H4'	1.83	0.60
62:CY:702:FUA:O2	62:CY:702:FUA:H211	2.00	0.60
21:CA:621:A:H2'	21:CA:622:A:H8	1.65	0.60
21:CA:973:G:OP2	21:CA:974:A:H3'	2.01	0.60
33:DN:38:HIS:NE2	59:DA:1006:C:H4'	2.17	0.60
33:DN:46:VAL:CG2	33:DN:115:ARG:HG2	2.32	0.60
36:DQ:58:PHE:CZ	36:DQ:64:ILE:HD11	2.33	0.60
52:D6:8:LYS:HA	52:D6:28:ARG:HB2	1.84	0.60
59:DA:455:C:H3'	59:DA:456:C:H5''	1.84	0.60
7:AH:34:GLU:O	7:AH:37:ARG:HB3	2.02	0.60
18:AS:10:PHE:CG	21:AA:1318:A:H4'	2.36	0.60
20:AY:516:PRO:HA	20:AY:563:ILE:HA	1.84	0.60
21:AA:877:C:H2'	21:AA:878:G:H8	1.67	0.60
21:AA:1342:C:H2'	21:AA:1343:G:C8	2.36	0.60
21:AA:1391:U:H2'	21:AA:1392:G:C8	2.35	0.60
22:AW:25:C:H2'	22:AW:26:A:H8	1.67	0.60
27:BE:2:LYS:HB2	27:BE:200:GLU:HB2	1.84	0.60
28:BF:45:ARG:NH2	59:BA:444:C:OP1	2.23	0.60
28:BF:88:VAL:HG22	28:BF:89:VAL:H	1.67	0.60
30:BH:70:THR:HG21	59:BA:2747:G:H5''	1.83	0.60
33:BN:75:TYR:HE1	59:BA:1137:G:HO2'	1.50	0.60
38:BS:24:LEU:HB3	38:BS:85:VAL:HA	1.82	0.60
59:BA:38:A:H61	59:BA:441:U:H3	1.50	0.60
59:BA:482:A:OP2	59:BA:507:A:N6	2.26	0.60
59:BA:1080:C:H2'	59:BA:1081:U:H6	1.66	0.60
5:CF:87:ARG:NH1	21:CA:673:G:H5''	2.15	0.60
11:CL:49:ASN:HD21	21:CA:528:C:H42	1.49	0.60
20:CY:91:THR:O	20:CY:93:GLU:N	2.35	0.60
21:CA:1087:G:O6	21:CA:1098:C:N3	2.35	0.60
21:CA:1157:A:H61	21:CA:1178:G:N2	1.91	0.60
27:DE:78:LEU:O	27:DE:79:ARG:HD3	2.02	0.60
29:DG:37:VAL:HB	29:DG:94:LEU:HB2	1.83	0.60
33:DN:107:LEU:O	33:DN:109:LYS:N	2.35	0.60
34:DO:77:ILE:HB	39:DT:74:ARG:HG2	1.82	0.60
59:DA:709:U:H2'	59:DA:710:G:C8	2.37	0.60
59:DA:722:A:H2'	59:DA:723:G:O4'	2.01	0.60
59:DA:1468(F):C:H2'	59:DA:1468(G):G:O4'	2.01	0.60
59:DA:1686:C:H42	59:DA:1702:G:H1	1.48	0.60
8:AI:46:ALA:HA	8:AI:78:LYS:HB2	1.82	0.60
11:AL:70:ILE:HG22	11:AL:100:ILE:HD12	1.82	0.60
20:AY:413:ILE:HD13	20:AY:476:VAL:HG22	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1491:G:H2'	63:AA:1601:NMY:H4	1.83	0.60
21:AA:1532:U:O2'	21:AA:1533:C:OP1	2.19	0.60
40:BU:92:ARG:O	40:BU:95:LEU:N	2.34	0.60
59:BA:996:A:N1	59:BA:1159:U:C4	2.70	0.60
59:BA:1525:G:H2'	59:BA:1526:G:C8	2.37	0.60
59:BA:2122:U:H3	59:BA:2176:A:H2	1.48	0.60
59:BA:2230:G:H2'	59:BA:2231:C:H6	1.67	0.60
59:BA:2756:U:H3	59:BA:2758:A:N6	1.96	0.60
59:BA:2832:U:H5''	59:BA:2833:G:H2'	1.84	0.60
6:CG:2:ALA:N	21:CA:1379:G:N7	2.50	0.60
8:CI:26:VAL:HG22	8:CI:61:ALA:HB3	1.84	0.60
15:CP:9:PHE:HE2	15:CP:18:ARG:HB2	1.65	0.60
21:CA:616:G:H1	21:CA:624:C:N4	1.99	0.60
21:CA:692:U:H5'	21:CA:797:C:H5'	1.84	0.60
21:CA:1241:G:H1	21:CA:1296:C:H42	0.71	0.60
25:DC:100:ILE:HG23	25:DC:103:LYS:HD2	1.84	0.60
33:DN:35:ARG:CZ	33:DN:75:TYR:HB3	2.32	0.60
33:DN:85:ILE:HB	33:DN:106:MET:C	2.26	0.60
37:DR:107:ASP:N	37:DR:107:ASP:OD2	2.35	0.60
44:DY:81:LYS:HB2	44:DY:96:ILE:HG22	1.84	0.60
45:DZ:54:HIS:HB3	45:DZ:101:PRO:HG3	1.84	0.60
47:D1:21:ARG:HD3	59:DA:2080:G:OP1	2.01	0.60
59:DA:18:C:O2'	59:DA:554:U:OP1	2.20	0.60
59:DA:1570:A:H2'	59:DA:1571:A:H8	1.67	0.60
59:DA:1577:C:H2'	59:DA:1578:U:C6	2.37	0.60
59:DA:1790:C:H3'	59:DA:1828:G:H22	1.66	0.60
59:DA:2041:U:H2'	59:DA:2042:A:C8	2.37	0.60
11:AL:74:GLY:O	11:AL:102:ARG:NH2	2.35	0.60
20:AY:165:GLN:NE2	20:AY:260:LEU:H	2.00	0.60
21:AA:269:C:H2'	21:AA:270:A:C8	2.37	0.60
21:AA:673:G:H2'	21:AA:674:G:C8	2.37	0.60
21:AA:1061:G:N2	21:AA:1195:C:N3	2.43	0.60
33:BN:50:ASP:C	33:BN:53:VAL:H	2.08	0.60
47:B1:58:ILE:HD11	47:B1:91:LYS:HD3	1.84	0.60
59:BA:1292:U:H2'	59:BA:1293:C:H6	1.67	0.60
59:BA:1333:C:H2'	59:BA:1334:G:C8	2.37	0.60
59:BA:1337:G:H2'	59:BA:1338:G:C8	2.37	0.60
59:BA:1506:C:H2'	59:BA:1506(A):A:C8	2.37	0.60
3:CD:171:GLY:O	3:CD:173:TRP:N	2.35	0.60
8:CI:56:LEU:HD23	8:CI:56:LEU:H	1.66	0.60
11:CL:95:GLY:C	11:CL:97:ARG:H	2.10	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:98:PRO:HB2	19:CT:104:LEU:HD21	1.84	0.60
21:CA:339:C:N4	21:CA:350:G:H1	2.00	0.60
21:CA:768:A:OP1	21:CA:804:U:H4'	2.01	0.60
25:DC:44:VAL:HB	25:DC:174:ALA:HB3	1.83	0.60
29:DG:101:ILE:O	29:DG:105:LYS:HG2	2.01	0.60
33:DN:72:TYR:CA	33:DN:73:THR:HG22	2.29	0.60
40:DU:37:GLU:OE2	59:DA:1252:G:N1	2.34	0.60
45:DZ:74:VAL:HG12	45:DZ:86:VAL:HG12	1.83	0.60
45:DZ:151:HIS:HB3	45:DZ:170:THR:HA	1.84	0.60
55:D9:3:VAL:HG21	59:DA:2539:C:H4'	1.83	0.60
59:DA:36:G:N2	59:DA:444:C:C2	2.65	0.60
59:DA:115:C:H2'	59:DA:116:C:O4'	2.01	0.60
59:DA:781:A:H5''	59:DA:782:A:N7	2.17	0.60
59:DA:1388:G:H2'	59:DA:1389:G:H8	1.67	0.60
11:AL:39:VAL:HG12	11:AL:40:VAL:H	1.67	0.60
14:AO:36:ILE:HD13	14:AO:60:VAL:HG22	1.84	0.60
21:AA:618:C:H42	21:AA:622:A:H62	1.50	0.60
30:BH:105:LEU:HD23	30:BH:113:VAL:HB	1.83	0.60
33:BN:50:ASP:HB3	33:BN:53:VAL:HG13	1.83	0.60
45:BZ:75:ASN:OD1	60:BB:75:G:N2	2.35	0.60
49:B3:25:ALA:HB2	59:BA:849:A:N1	2.16	0.60
59:BA:523:C:H5''	59:BA:540:C:O2'	2.01	0.60
59:BA:579:G:H2'	59:BA:580:C:C6	2.36	0.60
59:BA:767:U:O2'	59:BA:1622:G:H4'	2.02	0.60
59:BA:956:G:O2'	59:BA:959:A:N6	2.31	0.60
59:BA:966:G:H2'	59:BA:967:C:C6	2.37	0.60
59:BA:971:C:H5''	59:BA:974:G:O2'	2.02	0.60
59:BA:1435:G:H2'	59:BA:1436:G:C8	2.35	0.60
59:BA:1676:A:H2'	59:BA:1677:A:C8	2.36	0.60
59:BA:2037:G:H2'	59:BA:2038:G:C8	2.37	0.60
59:BA:2377:A:H2'	59:BA:2378:A:C8	2.37	0.60
59:BA:2791:C:H5''	59:BA:2792:G:C8	2.37	0.60
3:CD:173:TRP:HB2	3:CD:186:LEU:HB2	1.84	0.60
8:CI:121:ARG:NH1	21:CA:1343:G:N3	2.50	0.60
9:CJ:45:ARG:HB3	9:CJ:65:LEU:HB2	1.84	0.60
21:CA:408:A:C2	21:CA:434:U:C4	2.88	0.60
21:CA:1178:G:N2	21:CA:1181:G:C8	2.69	0.60
24:CX:11:C:H2'	24:CX:12:U:O4'	2.01	0.60
45:DZ:146:ILE:HA	45:DZ:174:VAL:HB	1.82	0.60
52:D6:15:GLU:HG2	52:D6:16:CYS:SG	2.42	0.60
59:DA:1365:A:H2'	59:DA:1366:A:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2463:C:N3	59:DA:2487:G:N2	2.38	0.60
59:DA:2520:C:H42	59:DA:2545:G:H1	0.70	0.60
4:AE:15:ARG:HG3	4:AE:28:PHE:HE2	1.65	0.59
20:AY:322:VAL:O	21:AA:358:U:O2'	2.10	0.59
28:BF:125:LEU:HD22	28:BF:194:MET:SD	2.42	0.59
41:BV:85:LYS:HA	59:BA:1225:G:H5'	1.83	0.59
52:B6:41:PRO:HD3	52:B6:47:THR:HG22	1.84	0.59
1:CB:102:LEU:HG	1:CB:176:GLU:HB3	1.83	0.59
5:CF:95:GLU:O	17:CR:32:ARG:NH1	2.35	0.59
9:CJ:52:GLY:O	13:CN:41:ARG:NH1	2.35	0.59
21:CA:1312:G:H2'	21:CA:1313:U:C6	2.37	0.59
22:CW:71:C:H2'	22:CW:72:C:C5	2.37	0.59
32:DK:30:HIS:ND1	32:DK:32:ALA:HB2	2.17	0.59
34:DO:43:VAL:HB	34:DO:56:ASP:H	1.67	0.59
59:DA:121:G:O6	59:DA:130:C:N3	2.35	0.59
59:DA:840:C:N4	59:DA:938:G:H1	1.97	0.59
59:DA:1595:G:H2'	59:DA:1596:A:C8	2.37	0.59
1:AB:240:GLN:O	1:AB:240:GLN:NE2	2.35	0.59
3:AD:122:ARG:HH21	21:AA:403:C:H4'	1.67	0.59
20:AY:161:PRO:O	20:AY:256:THR:N	2.34	0.59
21:AA:491:G:H2'	21:AA:492:G:H8	1.65	0.59
21:AA:715:A:H2'	21:AA:716:A:C8	2.37	0.59
21:AA:966:G:H22	23:AV:18:G:H22	1.49	0.59
24:AX:33:U:O2	24:AX:36:C:H5	1.85	0.59
40:BU:25:TRP:CD1	40:BU:26:GLY:H	2.15	0.59
45:BZ:115:GLY:HA3	45:BZ:146:ILE:HD11	1.83	0.59
59:BA:529:A:H62	59:BA:2041:U:H3	1.48	0.59
59:BA:2073:C:H2'	59:BA:2074:U:H6	1.66	0.59
59:BA:2119:A:N1	59:BA:2171:A:H1'	2.17	0.59
10:CK:84:VAL:HG22	10:CK:110:ASP:HA	1.84	0.59
21:CA:1434:A:H62	21:CA:1467:G:H21	1.48	0.59
24:CX:39:G:H2'	24:CX:40:G:H8	1.68	0.59
26:DD:69:ARG:C	26:DD:71:ASP:H	2.09	0.59
35:DP:48:PRO:C	35:DP:50:ARG:H	2.10	0.59
47:D1:22:GLY:O	47:D1:23:LYS:HB2	2.01	0.59
49:D3:13:ILE:HG21	59:DA:989:G:C6	2.37	0.59
59:DA:383:U:H2'	59:DA:385:C:H5	1.68	0.59
59:DA:920:G:H2'	59:DA:921:G:O4'	2.02	0.59
59:DA:1530:G:H22	59:DA:1541:U:H2'	1.66	0.59
59:DA:1538:G:H2'	59:DA:1539:G:H8	1.66	0.59
59:DA:2256:G:H2'	59:DA:2257:U:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DB:87:G:N2	60:DB:89(B):A:H8	1.97	0.59
15:AP:40:ASP:H	15:AP:48:TRP:HB2	1.66	0.59
20:AY:428:LEU:HD13	20:AY:440:VAL:HG11	1.84	0.59
21:AA:17:U:H2'	21:AA:18:C:C6	2.37	0.59
21:AA:692:U:H4'	21:AA:796:C:O2'	2.02	0.59
21:AA:748:C:O2'	21:AA:749:C:OP2	2.19	0.59
21:AA:1057:G:H2'	21:AA:1058:G:O4'	2.03	0.59
26:BD:44:ASN:HB3	26:BD:49:ILE:HG22	1.83	0.59
26:BD:48:ARG:HE	59:BA:778:G:H5'	1.67	0.59
27:BE:60:ASN:CG	27:BE:61:ARG:N	2.61	0.59
28:BF:126:VAL:HG21	28:BF:142:TRP:CZ2	2.37	0.59
28:BF:149:ASP:OD1	28:BF:149:ASP:N	2.35	0.59
32:BK:13:PRO:HG3	32:BK:52:ILE:HG12	1.83	0.59
36:BQ:11:LYS:HE3	59:BA:2278:A:OP1	2.03	0.59
40:BU:33:ARG:NE	59:BA:581:C:OP2	2.30	0.59
42:BW:25:ARG:HH21	59:BA:520:G:H5'	1.67	0.59
59:BA:733:G:O6	59:BA:761:A:H3'	2.02	0.59
59:BA:749:C:N3	59:BA:753:C:O2'	2.33	0.59
59:BA:2505:G:N2	59:BA:2610:C:O2	2.34	0.59
59:BA:2572:A:OP1	59:BA:2574:G:O2'	2.20	0.59
60:BB:80:U:H2'	60:BB:81:G:H21	1.67	0.59
16:CQ:67:LYS:HD2	21:CA:266:G:C8	2.37	0.59
20:CY:133:ILE:HD11	20:CY:276:VAL:HG22	1.84	0.59
29:DG:73:ALA:HB3	29:DG:85:GLY:HA2	1.84	0.59
32:DK:90:LYS:HE3	59:DA:1076:C:H4'	1.84	0.59
36:DQ:11:LYS:HG2	36:DQ:90:VAL:HG13	1.83	0.59
45:DZ:25:PRO:HA	45:DZ:38:TYR:HB3	1.85	0.59
59:DA:410:G:N1	59:DA:417:C:O2	2.28	0.59
59:DA:647:G:H2'	59:DA:648:G:C8	2.37	0.59
59:DA:826:U:H5''	59:DA:2429:G:P	2.42	0.59
59:DA:1800:C:H42	59:DA:1817:G:H22	1.50	0.59
59:DA:2108:C:O2	59:DA:2181:G:N1	2.30	0.59
59:DA:2651:C:H42	59:DA:2669:G:H1	1.50	0.59
25:BC:47:LYS:HB2	25:BC:169:THR:O	2.02	0.59
27:BE:189:PRO:HA	59:BA:2680:C:H5'	1.84	0.59
28:BF:166:ALA:HA	59:BA:321:G:H5'	1.82	0.59
59:BA:239:U:H2'	59:BA:240:G:C8	2.37	0.59
59:BA:1011:G:H1'	59:BA:1013:C:O4'	2.01	0.59
60:BB:61:G:H2'	60:BB:62:C:O4'	2.02	0.59
21:CA:757:U:H2'	21:CA:758:G:O4'	2.02	0.59
21:CA:835:U:O4	21:CA:851:G:O6	2.21	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1015:A:H1'	21:CA:1218:C:O2'	2.02	0.59
21:CA:1489:G:H2'	21:CA:1490:C:H6	1.67	0.59
22:CW:4:U:H3	22:CW:69:A:H61	0.70	0.59
26:DD:69:ARG:O	26:DD:71:ASP:N	2.34	0.59
26:DD:226:MET:HE2	26:DD:227:ASN:HD21	1.68	0.59
38:DS:30:ARG:NH2	38:DS:62:LYS:HB3	2.16	0.59
41:DV:35:LEU:HB2	41:DV:57:VAL:O	2.02	0.59
59:DA:75:G:N1	59:DA:111:A:C2	2.67	0.59
59:DA:209:C:H5'	59:DA:681:G:H4'	1.85	0.59
59:DA:270(X):G:O2'	59:DA:271(G):G:H4'	2.01	0.59
59:DA:489:G:H2'	59:DA:491:G:O4'	2.02	0.59
59:DA:597:U:O2	59:DA:660:G:O6	2.20	0.59
59:DA:959:A:O2'	59:DA:2457:U:H4'	2.03	0.59
59:DA:1352:U:O4	59:DA:1378:A:N7	2.35	0.59
60:DB:14:U:HO2'	60:DB:107:U:HO2'	1.50	0.59
8:AI:118:LYS:O	8:AI:120:ARG:N	2.34	0.59
20:AY:484:ARG:HG2	20:AY:559:PRO:HB2	1.84	0.59
20:AY:624:LEU:HB3	20:AY:631:ILE:HD11	1.83	0.59
21:AA:730:G:C5	21:AA:731:G:H1'	2.37	0.59
21:AA:983:A:O2'	21:AA:1050:G:OP2	2.17	0.59
21:AA:1275:A:H2'	21:AA:1276:G:C8	2.36	0.59
28:BF:5:ALA:HB3	28:BF:8:GLN:HA	1.85	0.59
38:BS:105:ALA:O	38:BS:107:GLU:N	2.35	0.59
42:BW:90:ARG:HA	59:BA:751:A:H5'	1.83	0.59
59:BA:105:C:H2'	59:BA:106:C:C6	2.36	0.59
59:BA:815:C:H2'	59:BA:816:C:H6	1.68	0.59
59:BA:1019:U:H3	59:BA:1020:A:H62	1.49	0.59
59:BA:2137:C:H42	59:BA:2154:G:H1	1.49	0.59
60:BB:56:G:N2	60:BB:59:A:H61	2.00	0.59
1:CB:179:LYS:HZ1	21:CA:1075:C:H5'	1.67	0.59
18:CS:34:TRP:CD1	21:CA:1219:U:HO2'	2.21	0.59
21:CA:1116:C:H2'	21:CA:1117:G:H5''	1.85	0.59
21:CA:1118:C:N3	21:CA:1155:G:O6	2.35	0.59
38:DS:13:ARG:H	38:DS:13:ARG:HE	1.49	0.59
38:DS:106:ARG:C	38:DS:108:GLY:H	2.09	0.59
44:DY:42:VAL:O	44:DY:64:GLU:HA	2.02	0.59
47:D1:21:ARG:NH1	59:DA:2079:U:O3'	2.35	0.59
52:D6:53:LYS:HG3	52:D6:54:ILE:H	1.67	0.59
59:DA:2395:C:H42	59:DA:2421:G:H1	1.50	0.59
59:DA:2832:U:H5''	59:DA:2833:G:C8	2.38	0.59
8:AI:26:VAL:HG22	8:AI:61:ALA:HB3	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:126:SER:HB3	21:AA:1231:G:H4'	1.85	0.59
9:AJ:3:LYS:HG3	9:AJ:4:ILE:HD12	1.85	0.59
19:AT:80:ARG:NH2	21:AA:260:G:OP1	2.36	0.59
21:AA:68(D):C:N4	21:AA:68(V):G:H1	2.00	0.59
21:AA:155:C:H42	21:AA:166:G:H1	1.50	0.59
21:AA:668:G:H1	21:AA:738:C:H42	1.49	0.59
26:BD:48:ARG:HH21	59:BA:774:A:H5''	1.68	0.59
33:BN:35:ARG:HH12	33:BN:40:PRO:HB3	1.66	0.59
35:BP:59:LEU:O	35:BP:61:ARG:N	2.35	0.59
41:BV:6:LYS:HG3	41:BV:11:GLN:HG2	1.85	0.59
45:BZ:54:HIS:HB3	45:BZ:101:PRO:HG3	1.83	0.59
59:BA:269:U:O4	59:BA:370:G:O6	2.20	0.59
59:BA:669:G:N2	59:BA:670:A:N1	2.51	0.59
59:BA:881:G:H2'	59:BA:882:G:O4'	2.02	0.59
59:BA:1923:U:H2'	59:BA:1924:C:C5	2.38	0.59
60:BB:17:C:H2'	60:BB:18:G:H8	1.68	0.59
4:CE:92:LYS:HG3	4:CE:93:PRO:HD2	1.85	0.59
19:CT:14:LYS:HA	19:CT:17:ARG:HH21	1.67	0.59
21:CA:43:C:H2'	21:CA:44:G:O4'	2.02	0.59
21:CA:299:G:C6	21:CA:300:A:C6	2.91	0.59
21:CA:1145:C:H4'	21:CA:1146:A:H5'	1.84	0.59
21:CA:1305:G:N2	21:CA:1332:A:H8	1.87	0.59
29:DG:15:VAL:HA	29:DG:175:LEU:HD13	1.83	0.59
30:DH:62:LYS:HB3	59:DA:2749:A:H4'	1.84	0.59
33:DN:106:MET:CB	33:DN:107:LEU:HD23	2.32	0.59
33:DN:107:LEU:C	33:DN:117:PHE:HE1	2.11	0.59
38:DS:103:GLU:O	38:DS:105:ALA:N	2.35	0.59
59:DA:669:G:N2	59:DA:670:A:N1	2.51	0.59
59:DA:1047:G:H1'	59:DA:1110:G:N2	2.18	0.59
59:DA:1210:A:H4'	59:DA:1211:U:H2'	1.84	0.59
59:DA:2631:G:N2	59:DA:2787:C:N3	2.44	0.59
3:AD:59:ARG:HH12	3:AD:66:ARG:HH12	1.49	0.59
6:AG:69:VAL:HG12	6:AG:71:PRO:HD3	1.84	0.59
10:AK:109:VAL:HG12	10:AK:110:ASP:H	1.68	0.59
11:AL:61:THR:HB	21:AA:362:G:H5''	1.84	0.59
21:AA:334:C:O2	21:AA:1434:A:O2'	2.21	0.59
21:AA:714:G:H2'	21:AA:715:A:C8	2.38	0.59
21:AA:977:A:O2'	21:AA:981:U:O2	2.13	0.59
33:BN:76:SER:H	33:BN:82:LEU:C	2.10	0.59
37:BR:90:ARG:HG2	37:BR:94:TYR:HD2	1.68	0.59
59:BA:918:A:N3	60:BB:80:U:O2'	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1571:A:H2'	59:BA:1572:A:C8	2.37	0.59
59:BA:2717:G:N2	59:BA:2847:U:O3'	2.35	0.59
60:BB:22:U:C2	60:BB:61:G:O6	2.53	0.59
20:CY:144:ALA:HB3	20:CY:170:ARG:HB3	1.85	0.59
21:CA:17:U:O4	21:CA:918:A:N1	2.35	0.59
21:CA:1312:G:N2	21:CA:1325:C:N3	2.43	0.59
36:DQ:72:LYS:N	36:DQ:94:VAL:O	2.36	0.59
38:DS:27:SER:H	38:DS:40:ILE:HG22	1.67	0.59
40:DU:3:ARG:HE	59:DA:449:A:H4'	1.68	0.59
59:DA:131:G:N2	59:DA:148:C:N3	2.41	0.59
59:DA:133:C:N3	59:DA:146:G:N2	2.41	0.59
59:DA:2375:G:N2	59:DA:2378:A:OP2	2.35	0.59
16:AQ:92:ARG:O	16:AQ:95:TYR:HB2	2.02	0.59
21:AA:1476:G:H2'	21:AA:1477:C:H6	1.66	0.59
59:BA:810:U:H4'	59:BA:811:U:C5	2.38	0.59
59:BA:2267:A:N1	59:BA:2272:U:O2	2.35	0.59
59:BA:2537:U:H2'	59:BA:2538:C:C6	2.36	0.59
5:CF:44:GLY:HA2	5:CF:59:TYR:CG	2.37	0.59
14:CO:75:PRO:HA	14:CO:78:TYR:HD2	1.68	0.59
20:CY:230:LYS:HE3	20:CY:237:PRO:HA	1.85	0.59
20:CY:350:GLU:HB3	20:CY:380:LEU:HD12	1.83	0.59
21:CA:20:U:H2'	21:CA:21:G:O4'	2.02	0.59
21:CA:406:G:H1	21:CA:436:C:H42	1.51	0.59
21:CA:1298:C:H4'	21:CA:1299:A:C4	2.37	0.59
50:D4:15:ILE:HB	50:D4:32:TYR:HB3	1.84	0.59
59:DA:1000:A:H2'	59:DA:1001:A:C8	2.38	0.59
59:DA:2008:C:H2'	59:DA:2009:G:H8	1.68	0.59
59:DA:2546:U:H4'	59:DA:2566:A:C2	2.37	0.59
3:AD:93:PHE:O	3:AD:97:LEU:HB2	2.02	0.59
4:AE:146:ALA:O	4:AE:150:ARG:NE	2.35	0.59
16:AQ:29:HIS:HB3	16:AQ:33:GLY:H	1.67	0.59
17:AR:58:LEU:HD12	17:AR:62:GLU:HB3	1.84	0.59
20:AY:124:GLN:HB3	20:AY:127:LYS:HD2	1.85	0.59
20:AY:631:ILE:HA	20:AY:645:ALA:HA	1.83	0.59
21:AA:399:G:H2'	21:AA:400:C:C6	2.38	0.59
21:AA:491:G:H2'	21:AA:492:G:C8	2.38	0.59
21:AA:542:G:H2'	21:AA:543:C:C6	2.38	0.59
21:AA:773:G:H1	21:AA:806:C:H42	1.50	0.59
22:AW:48:C:H2'	22:AW:59:A:H1'	1.85	0.59
23:AV:12:A:H4'	23:AV:12:A:OP1	2.03	0.59
26:BD:90:ALA:HB2	26:BD:159:ALA:HA	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:62:LEU:HD12	50:B4:7:PRO:HG3	1.83	0.59
35:BP:84:ASN:HA	35:BP:116:GLY:HA3	1.84	0.59
39:BT:129:ARG:HD3	39:BT:132:LYS:HB2	1.83	0.59
59:BA:271(Q):A:H61	59:BA:357(E):U:H3	0.69	0.59
59:BA:675:A:N7	59:BA:803:U:O2	2.36	0.59
59:BA:2306:C:H5'	59:BA:2307:G:C8	2.38	0.59
1:CB:185:ILE:HD12	1:CB:199:TYR:HB2	1.85	0.59
2:CC:20:SER:HB3	2:CC:57:ILE:HD13	1.85	0.59
4:CE:16:THR:HB	21:CA:1080:A:H5''	1.84	0.59
9:CJ:51:ARG:HB3	21:CA:1060:C:H5''	1.85	0.59
11:CL:33:ARG:H	11:CL:85:ILE:HB	1.68	0.59
12:CM:65:LYS:HE3	12:CM:70:LEU:HD23	1.84	0.59
22:CW:14:A:C4	22:CW:15:G:H1'	2.38	0.59
30:DH:62:LYS:HA	30:DH:65:HIS:HB3	1.84	0.59
32:DK:90:LYS:O	32:DK:92:GLY:N	2.32	0.59
32:DK:99:ILE:HG23	32:DK:103:GLN:HB2	1.84	0.59
33:DN:55:VAL:HG22	33:DN:126:PRO:HA	1.85	0.59
36:DQ:74:TYR:OH	59:DA:957:A:H4'	2.03	0.59
46:D0:55:ARG:NH1	59:DA:2384:G:OP2	2.35	0.59
59:DA:409:C:N4	59:DA:418:G:H1	2.01	0.59
59:DA:635:C:O2'	59:DA:639:U:OP1	2.20	0.59
59:DA:1102:C:H2'	59:DA:1103:A:C8	2.38	0.59
59:DA:1110:G:H4'	59:DA:1111:A:H5'	1.85	0.59
59:DA:2251:G:N2	59:DA:2602:A:O2'	2.36	0.59
2:AC:22:TRP:HB3	2:AC:59:ARG:H	1.67	0.59
20:AY:187:THR:OG1	20:AY:188:TYR:N	2.31	0.59
20:AY:388:THR:HG21	20:AY:398:ILE:HA	1.85	0.59
20:AY:513:LYS:HB3	20:AY:567:LEU:O	2.03	0.59
21:AA:1306:A:N6	21:AA:1331:G:O2'	2.36	0.59
34:BO:60:ALA:HA	34:BO:87:ILE:H	1.68	0.59
34:BO:63:VAL:HG12	34:BO:106:LEU:HD21	1.84	0.59
34:BO:64:ARG:HG2	34:BO:79:PHE:CG	2.38	0.59
59:BA:569:U:O2'	59:BA:946:G:N2	2.31	0.59
59:BA:996:A:H2	59:BA:1159:U:H3	0.71	0.59
59:BA:1800:C:O2	59:BA:1817:G:O6	2.21	0.59
60:BB:64:C:H2'	60:BB:108:C:H41	1.68	0.59
2:CC:17:ASP:HB3	2:CC:21:ARG:NH1	2.18	0.59
12:CM:52:GLU:O	12:CM:56:LEU:HB2	2.03	0.59
16:CQ:82:MET:O	16:CQ:85:VAL:N	2.36	0.59
20:CY:24:GLY:H	61:CY:701:GDP:C5'	2.15	0.59
20:CY:249:GLY:HA3	20:CY:255:ILE:HD12	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1006:C:C2	21:CA:1023:G:N2	2.66	0.59
21:CA:1226:C:O2	21:CA:1227:A:N6	2.35	0.59
21:CA:1304:G:H21	21:CA:1333:A:H62	1.51	0.59
29:DG:62:LEU:O	50:D4:27:THR:HG21	2.03	0.59
29:DG:113:ARG:HB2	50:D4:34:GLU:OE1	2.02	0.59
37:DR:45:ARG:HB3	37:DR:97:VAL:HG21	1.85	0.59
46:D0:2:ALA:HB1	59:DA:2494:G:H5'	1.84	0.59
59:DA:80:G:H1	59:DA:106:C:H42	1.51	0.59
59:DA:271(F):G:N2	59:DA:357(M):C:N3	2.39	0.59
59:DA:597:U:H2'	59:DA:598:G:C8	2.38	0.59
59:DA:1372:U:H2'	59:DA:1373:A:H8	1.67	0.59
59:DA:1652:A:N1	59:DA:2005:A:N6	2.51	0.59
59:DA:2141:G:O6	59:DA:2150:U:O2	2.20	0.59
59:DA:2147:G:H2'	59:DA:2148:G:O4'	2.03	0.59
8:AI:121:ARG:HH22	21:AA:1343:G:N2	2.01	0.58
19:AT:30:LYS:HG2	19:AT:34:LYS:HE3	1.85	0.58
20:AY:130:VAL:N	20:AY:253:LEU:HD21	2.18	0.58
20:AY:554:PRO:HG2	20:AY:594:VAL:HB	1.84	0.58
21:AA:68(A):G:H2'	21:AA:68(B):G:H8	1.68	0.58
21:AA:163:C:H2'	21:AA:164:U:C6	2.38	0.58
21:AA:946:A:H2'	21:AA:947:G:H8	1.66	0.58
21:AA:1426:C:H2'	21:AA:1427:U:C6	2.38	0.58
25:BC:40:GLU:O	25:BC:42:VAL:N	2.36	0.58
26:BD:79:VAL:O	26:BD:95:LEU:HA	2.03	0.58
28:BF:185:ASP:O	28:BF:189:THR:OG1	2.12	0.58
38:BS:66:ALA:O	38:BS:69:VAL:HG12	2.03	0.58
40:BU:92:ARG:HB3	40:BU:95:LEU:HG	1.83	0.58
44:BY:104:GLY:HA2	44:BY:108:THR:HB	1.85	0.58
46:B0:15:ASP:CG	59:BA:2264:C:H41	2.10	0.58
59:BA:357(C):G:H2'	59:BA:357(D):G:H8	1.66	0.58
59:BA:812:C:H42	59:BA:1195:G:H1	1.50	0.58
59:BA:1958:C:H2'	59:BA:1959:G:C8	2.38	0.58
5:CF:18:GLN:O	5:CF:22:GLU:HG2	2.03	0.58
7:CH:38:ILE:HG21	7:CH:111:ILE:HG21	1.84	0.58
12:CM:126:LYS:HE3	22:CW:35:A:H4'	1.85	0.58
20:CY:555:LEU:HB2	20:CY:556:ILE:HD13	1.85	0.58
21:CA:597:G:H2'	21:CA:598:U:H5'	1.84	0.58
21:CA:718:G:OP2	21:CA:720:C:N4	2.36	0.58
29:DG:51:ARG:HD3	29:DG:54:GLU:HB2	1.85	0.58
29:DG:143:GLU:HB3	50:D4:31:ILE:HG12	1.85	0.58
36:DQ:66:ILE:HG23	36:DQ:104:PHE:HE2	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DT:29:ARG:HA	39:DT:46:GLU:HB3	1.84	0.58
42:DW:87:PRO:HB3	59:DA:1614:A:C6	2.38	0.58
54:D8:34:TRP:CD1	54:D8:35:GLN:H	2.21	0.58
59:DA:1113:U:H2'	59:DA:1114:G:C8	2.37	0.58
59:DA:1277:G:H2'	59:DA:1278:A:C8	2.38	0.58
59:DA:1294:U:H2'	59:DA:1295:C:C6	2.38	0.58
59:DA:1436:G:O6	59:DA:1556:C:N3	2.36	0.58
59:DA:2102:U:H2'	59:DA:2103:C:C6	2.38	0.58
60:DB:24:G:H1'	60:DB:26:A:H62	1.67	0.58
21:AA:231:G:H2'	21:AA:232:G:C8	2.38	0.58
21:AA:888:G:H3'	21:AA:889:A:H5''	1.85	0.58
26:BD:208:LYS:HB2	59:BA:729:G:C5	2.37	0.58
27:BE:64:LYS:NZ	59:BA:2785:C:O2	2.35	0.58
28:BF:117:ARG:HB2	28:BF:186:ILE:HD11	1.85	0.58
29:BG:7:LEU:HD12	29:BG:104:GLU:HA	1.84	0.58
33:BN:45:ASN:HB2	33:BN:47:ALA:H	1.68	0.58
42:BW:12:ILE:HG21	42:BW:17:VAL:HG13	1.85	0.58
45:BZ:149:SER:HB2	59:BA:875:G:H5''	1.85	0.58
47:B1:17:SER:N	47:B1:39:LYS:HA	2.18	0.58
55:B9:14:CYS:HA	55:B9:26:ILE:O	2.03	0.58
59:BA:67:U:H2'	59:BA:68:G:H8	1.67	0.58
59:BA:122:G:H2'	59:BA:123:G:H8	1.68	0.58
59:BA:453:C:H4'	59:BA:472:A:N6	2.17	0.58
59:BA:962:G:H2'	59:BA:963:U:H5'	1.83	0.58
59:BA:1538:G:H2'	59:BA:1539:G:H8	1.68	0.58
59:BA:1654:A:N6	59:BA:2005:A:H2'	2.18	0.58
59:BA:1853:A:H2'	59:BA:1854:A:C8	2.37	0.58
59:BA:2106:G:H2'	59:BA:2107:C:O4'	2.03	0.58
59:BA:2548:G:H2'	59:BA:2549:G:O4'	2.03	0.58
59:BA:2742:C:H2'	59:BA:2743:C:H6	1.67	0.58
2:CC:12:LEU:HB2	13:CN:57:ARG:HH21	1.68	0.58
13:CN:24:CYS:SG	13:CN:40:CYS:N	2.76	0.58
21:CA:861:G:H21	21:CA:874:G:H5'	1.68	0.58
21:CA:1015:A:H2'	21:CA:1016:A:C8	2.38	0.58
21:CA:1126:U:O4	21:CA:1127:G:N2	2.37	0.58
21:CA:1417:G:H2'	21:CA:1482:G:N2	2.18	0.58
36:DQ:126:PRO:HA	59:DA:2485:G:H4'	1.85	0.58
59:DA:377:C:H2'	59:DA:378:C:H6	1.68	0.58
59:DA:1527:G:C2	59:DA:1544:A:H8	2.21	0.58
59:DA:1559:G:O2'	59:DA:1560:G:H5'	2.03	0.58
59:DA:2352:A:H62	59:DA:2365:G:N2	1.97	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AY:327:PHE:CE1	20:AY:376:ALA:HB2	2.39	0.58
21:AA:414:A:H3'	21:AA:415:A:C8	2.38	0.58
21:AA:862:C:H1'	21:AA:874:G:H5''	1.85	0.58
22:AW:27:C:H2'	22:AW:28:A:C8	2.38	0.58
23:AV:11:U:H3'	23:AV:12:A:H5''	1.85	0.58
28:BF:25:PRO:HG2	28:BF:119:ARG:HH21	1.68	0.58
29:BG:46:ALA:HB1	29:BG:51:ARG:HH22	1.68	0.58
30:BH:102:ALA:HB1	30:BH:115:VAL:O	2.03	0.58
37:BR:5:LYS:HB3	59:BA:2722:G:O2'	2.03	0.58
38:BS:13:ARG:O	38:BS:15:ARG:N	2.36	0.58
40:BU:25:TRP:CE2	59:BA:17:G:H4'	2.38	0.58
59:BA:91:A:H2'	59:BA:92:G:O4'	2.03	0.58
59:BA:210:C:H2'	59:BA:211:A:H8	1.68	0.58
59:BA:460:A:H62	59:BA:469:G:H21	1.50	0.58
59:BA:959:A:O2'	59:BA:2457:U:H4'	2.03	0.58
59:BA:1025:G:H1	59:BA:1139:G:H1	1.50	0.58
59:BA:1939:U:OP1	59:BA:2604:U:O2'	2.16	0.58
1:CB:136:VAL:HG13	1:CB:140:HIS:CE1	2.38	0.58
11:CL:55:VAL:O	11:CL:68:ALA:N	2.37	0.58
13:CN:50:LYS:O	13:CN:52:GLN:N	2.33	0.58
14:CO:64:ARG:NH2	21:CA:582:U:OP1	2.35	0.58
21:CA:1126:U:C5	21:CA:1148:U:N3	2.71	0.58
21:CA:1510:U:O2	21:CA:1525:G:O6	2.21	0.58
28:DF:169:ASN:HB2	59:DA:322:A:P	2.42	0.58
32:DK:3:LYS:HE3	32:DK:29:GLN:HG3	1.86	0.58
36:DQ:101:ARG:HH22	59:DA:907:U:H4'	1.68	0.58
45:DZ:77:ASP:O	45:DZ:79:ARG:N	2.36	0.58
59:DA:308:G:H1'	59:DA:501:A:C8	2.38	0.58
59:DA:641:C:H42	59:DA:647:G:H1	0.73	0.58
59:DA:2095:C:H2'	59:DA:2096:U:O4'	2.03	0.58
59:DA:2595:G:H21	59:DA:2598:A:H62	1.51	0.58
10:AK:84:VAL:HG11	10:AK:91:ARG:HG3	1.85	0.58
21:AA:22:G:H2'	21:AA:23:C:C6	2.39	0.58
21:AA:892:A:H62	21:AA:906:G:H21	1.51	0.58
28:BF:9:ILE:HG21	28:BF:124:LEU:HA	1.84	0.58
42:BW:19:LEU:HB3	51:B5:25:LEU:HB2	1.85	0.58
59:BA:1956:U:C4	59:BA:2551:C:H4'	2.39	0.58
59:BA:2643:G:H2'	59:BA:2644:G:O4'	2.03	0.58
59:BA:2668:G:H2'	59:BA:2669:G:O4'	2.04	0.58
16:CQ:28:PRO:HA	16:CQ:35:VAL:HA	1.85	0.58
16:CQ:60:ILE:HD13	16:CQ:72:ARG:HH21	1.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:628:ARG:HH21	20:CY:651:GLU:HB2	1.68	0.58
21:CA:677:U:O2	21:CA:777:A:O2'	2.21	0.58
21:CA:773:G:H2'	21:CA:774:G:H8	1.68	0.58
21:CA:1405:G:H3'	63:CA:1601:NMY:H192	1.67	0.58
28:DF:105:VAL:HG22	59:DA:600:G:H1'	1.84	0.58
30:DH:118:PRO:HG2	30:DH:121:ILE:HD11	1.85	0.58
33:DN:20:GLY:HA2	33:DN:60:ILE:HG21	1.85	0.58
35:DP:9:ASN:H	35:DP:10:PRO:HD3	1.67	0.58
35:DP:56:SER:O	35:DP:58:THR:N	2.37	0.58
45:DZ:9:TYR:CD2	45:DZ:61:LEU:HD21	2.38	0.58
59:DA:330:A:O2'	59:DA:331:A:H2'	2.03	0.58
59:DA:1102:C:H2'	59:DA:1103:A:H8	1.68	0.58
59:DA:1405:U:H3	59:DA:1597:A:H2	1.46	0.58
59:DA:2559:C:H2'	59:DA:2560:C:H6	1.67	0.58
1:AB:71:VAL:HB	1:AB:164:VAL:HG23	1.86	0.58
8:AI:48:GLU:HG3	8:AI:101:PHE:CZ	2.38	0.58
11:AL:58:VAL:HG11	11:AL:60:LEU:HD23	1.86	0.58
20:AY:114:VAL:HG23	20:AY:116:PRO:HD3	1.86	0.58
21:AA:1126:U:C5	21:AA:1148:U:O4	2.55	0.58
26:BD:151:LYS:NZ	59:BA:2221:G:H21	2.02	0.58
28:BF:110:LEU:HA	28:BF:183:VAL:HG11	1.86	0.58
32:BK:95:LYS:HB3	32:BK:137:GLU:HB3	1.85	0.58
59:BA:515:A:H1'	59:BA:581:C:H1'	1.85	0.58
59:BA:649:G:H2'	59:BA:650:C:C6	2.38	0.58
59:BA:979:G:H2'	59:BA:982:C:H42	1.68	0.58
59:BA:1074:G:H2'	59:BA:1075:C:C6	2.38	0.58
59:BA:2525:G:H2'	59:BA:2526:G:H8	1.68	0.58
15:CP:36:ILE:HB	15:CP:52:ASP:HB3	1.84	0.58
20:CY:134:ALA:HB2	20:CY:258:VAL:HG12	1.85	0.58
20:CY:163:VAL:HG12	20:CY:164:MET:H	1.69	0.58
20:CY:457:LEU:HD23	20:CY:458:HIS:H	1.69	0.58
21:CA:320:C:H42	21:CA:333:G:H1	1.50	0.58
21:CA:587:G:N1	21:CA:754:C:OP2	2.36	0.58
21:CA:621:A:H2'	21:CA:622:A:C8	2.37	0.58
21:CA:689:C:N3	21:CA:698:G:N2	2.49	0.58
24:CX:35:A:H2'	24:CX:36:C:C6	2.37	0.58
47:D1:30:VAL:HG11	59:DA:2421:G:H21	1.68	0.58
59:DA:714:U:N3	59:DA:717:G:OP2	2.35	0.58
59:DA:750:A:OP1	59:DA:1615:C:N4	2.35	0.58
59:DA:1368:G:H2'	59:DA:1369:G:H8	1.68	0.58
59:DA:1437:C:H42	59:DA:1555:G:H1	1.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2099:U:H2'	59:DA:2100:G:H8	1.68	0.58
59:DA:2818:G:H1	59:DA:2828:C:N4	1.97	0.58
9:AJ:6:ILE:HG23	9:AJ:72:VAL:HB	1.86	0.58
11:AL:33:ARG:HB3	11:AL:60:LEU:HD22	1.86	0.58
15:AP:38:TYR:CE2	15:AP:50:LYS:HG3	2.39	0.58
20:AY:117:GLN:CD	59:BA:2660:A:H4'	2.29	0.58
20:AY:165:GLN:HE21	20:AY:260:LEU:HD13	1.69	0.58
33:BN:100:GLU:HB3	33:BN:104:LYS:N	2.18	0.58
33:BN:111:PRO:C	33:BN:114:ARG:H	2.12	0.58
38:BS:13:ARG:HE	38:BS:13:ARG:H	1.52	0.58
59:BA:745:G:H21	59:BA:750:A:H61	1.52	0.58
59:BA:2252:G:H5''	59:BA:2252:G:N3	2.17	0.58
60:BB:9:G:H2'	60:BB:10:C:H6	1.68	0.58
21:CA:156:G:H2'	21:CA:157:G:H8	1.67	0.58
21:CA:689:C:C2	21:CA:698:G:N2	2.69	0.58
23:CV:26:A:O2'	23:CV:27:A:O5'	2.21	0.58
32:DK:131:ALA:HB1	32:DK:136:VAL:HG12	1.86	0.58
36:DQ:25:ASP:OD1	36:DQ:25:ASP:N	2.36	0.58
39:DT:91:ARG:HH22	39:DT:114:LEU:HD11	1.68	0.58
59:DA:37:C:H2'	59:DA:38:A:C8	2.38	0.58
59:DA:540:C:H2'	59:DA:541:C:C6	2.37	0.58
59:DA:1309:G:O2'	59:DA:1611:C:H4'	2.03	0.58
59:DA:1895:C:H2'	59:DA:1896:G:C8	2.38	0.58
59:DA:1964:G:O3'	59:DA:1966:A:H3'	2.04	0.58
59:DA:2549:G:H2'	59:DA:2550:G:N7	2.17	0.58
59:DA:2735:G:H2'	59:DA:2736:G:C8	2.39	0.58
1:AB:205:ASP:OD1	1:AB:205:ASP:N	2.31	0.58
3:AD:67:ILE:O	3:AD:114:ARG:NH1	2.37	0.58
10:AK:30:VAL:HG22	10:AK:43:SER:O	2.04	0.58
11:AL:60:LEU:HD12	11:AL:62:SER:OG	2.03	0.58
14:AO:54:ARG:HH21	21:AA:579:G:H4'	1.69	0.58
15:AP:8:ARG:HA	15:AP:17:TYR:HA	1.84	0.58
20:AY:132:ARG:HH22	20:AY:253:LEU:HA	1.68	0.58
21:AA:299:G:N2	21:AA:566:G:O6	2.31	0.58
21:AA:587:G:N1	21:AA:754:C:OP2	2.36	0.58
22:AW:50:C:N4	22:AW:64:G:H1	1.99	0.58
28:BF:44:ARG:HB3	59:BA:611(E):G:C2	2.38	0.58
34:BO:82:ASN:ND2	34:BO:82:ASN:O	2.37	0.58
35:BP:66:GLY:O	35:BP:68:GLN:N	2.36	0.58
38:BS:35:ILE:HB	38:BS:53:SER:HB2	1.83	0.58
39:BT:18:ASP:OD1	39:BT:18:ASP:N	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BV:66:ARG:HG2	41:BV:88:ARG:HG2	1.84	0.58
43:BX:53:LYS:O	43:BX:81:VAL:HA	2.03	0.58
59:BA:890:A:H2'	59:BA:892:G:H8	1.67	0.58
59:BA:1712(A):U:H2'	59:BA:1712(B):G:H8	1.69	0.58
59:BA:2644:G:H3'	59:BA:2645:G:C8	2.37	0.58
3:CD:14:ARG:HA	3:CD:39:PRO:HG3	1.86	0.58
6:CG:94:ARG:HH22	21:CA:1378:C:H4'	1.69	0.58
9:CJ:40:LEU:HD13	9:CJ:41:PRO:HD2	1.86	0.58
11:CL:24:VAL:HG11	21:CA:553:A:H5''	1.85	0.58
13:CN:60:SER:HB2	21:CA:1187:G:H21	1.69	0.58
21:CA:582:U:OP2	21:CA:758:G:N1	2.37	0.58
26:DD:48:ARG:HD2	59:DA:1806:C:H4'	1.85	0.58
28:DF:24:LEU:HB3	28:DF:25:PRO:HD2	1.85	0.58
33:DN:23:LEU:HD21	33:DN:62:VAL:HG23	1.85	0.58
33:DN:74:ARG:HH11	33:DN:74:ARG:HG2	1.69	0.58
42:DW:29:LEU:HD11	42:DW:51:LEU:HD21	1.84	0.58
44:DY:50:ARG:HG2	59:DA:484:C:H5'	1.85	0.58
59:DA:68:G:H2'	59:DA:69:C:O4'	2.02	0.58
59:DA:744:G:H2'	59:DA:745:G:O4'	2.02	0.58
59:DA:1238:G:H2'	59:DA:1239:G:H8	1.69	0.58
59:DA:1665:A:N1	59:DA:1995:U:O4	2.37	0.58
59:DA:2025:C:H2'	59:DA:2026:C:C6	2.39	0.58
59:DA:2107:C:N3	59:DA:2182:G:O6	2.37	0.58
59:DA:2199:A:H61	59:DA:2224:G:H1'	1.69	0.58
59:DA:2262:U:H2'	59:DA:2263:C:C6	2.38	0.58
3:AD:31:CYS:N	3:AD:33:MET:H	2.02	0.58
3:AD:147:ALA:HA	3:AD:182:LYS:HG3	1.85	0.58
17:AR:36:ASN:HB3	17:AR:39:VAL:HB	1.85	0.58
20:AY:311:ALA:HA	20:AY:330:VAL:O	2.04	0.58
34:BO:35:VAL:HG13	34:BO:63:VAL:HA	1.84	0.58
34:BO:64:ARG:O	34:BO:82:ASN:HA	2.04	0.58
37:BR:24:GLN:O	37:BR:28:LEU:HB2	2.04	0.58
41:BV:81:TYR:HE2	59:BA:1187:G:H5''	1.68	0.58
42:BW:76:VAL:HG23	42:BW:103:ILE:HG13	1.84	0.58
53:B7:3:ARG:HB2	59:BA:1612:C:O2'	2.04	0.58
59:BA:861:A:H62	59:BA:916:G:H21	1.50	0.58
59:BA:2270:G:H2'	59:BA:2271:G:O4'	2.04	0.58
3:CD:3:ARG:HH21	3:CD:118:ARG:NE	2.01	0.58
19:CT:50:GLU:HA	19:CT:100:ILE:HG21	1.86	0.58
21:CA:626:U:H2'	21:CA:627:G:C8	2.39	0.58
21:CA:639:G:H2'	21:CA:640:A:O4'	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:675:A:H2'	21:CA:676:A:O4'	2.03	0.58
21:CA:740:U:H2'	21:CA:741:G:C8	2.38	0.58
21:CA:1440(E):G:H2'	21:CA:1440(F):C:H5'	1.86	0.58
41:DV:23:GLU:O	41:DV:92:THR:OG1	2.17	0.58
44:DY:47:LYS:HG2	59:DA:482:A:H4'	1.84	0.58
45:DZ:44:PHE:HZ	45:DZ:86:VAL:HG21	1.69	0.58
45:DZ:111:VAL:HG12	45:DZ:112:ARG:H	1.68	0.58
53:D7:9:ARG:NH1	53:D7:47:ARG:O	2.36	0.58
59:DA:105:C:H2'	59:DA:106:C:C6	2.38	0.58
59:DA:248:G:C4	59:DA:2431:U:H4'	2.38	0.58
59:DA:648:G:H2'	59:DA:649:G:C8	2.38	0.58
59:DA:717:G:H2'	59:DA:718:A:H8	1.69	0.58
59:DA:1153:C:H2'	59:DA:1154:G:C8	2.39	0.58
59:DA:1213:A:O2'	59:DA:1239:G:O4'	2.20	0.58
59:DA:1775:U:H2'	59:DA:1776:G:O4'	2.04	0.58
5:AF:61:LEU:HD13	5:AF:63:TYR:HE2	1.68	0.58
6:AG:74:GLU:OE1	6:AG:76:ARG:NH1	2.37	0.58
7:AH:7:ALA:O	7:AH:11:THR:OG1	2.16	0.58
10:AK:42:TRP:CZ2	21:AA:687:A:H5'	2.39	0.58
33:BN:75:TYR:CE1	33:BN:82:LEU:HG	2.39	0.58
34:BO:71:ARG:NH2	34:BO:104:ARG:HG3	2.19	0.58
39:BT:52:ILE:HD13	39:BT:61:PHE:HB2	1.85	0.58
41:BV:71:LEU:HA	41:BV:86:GLY:HA2	1.86	0.58
59:BA:22:C:H42	59:BA:518:G:H1	1.50	0.58
59:BA:76:C:H2'	59:BA:77:C:C6	2.39	0.58
59:BA:851:U:H2'	59:BA:852:G:H8	1.68	0.58
59:BA:936:C:H2'	59:BA:937:U:O4'	2.04	0.58
59:BA:1131:G:OP2	59:BA:2515:C:H4'	2.04	0.58
59:BA:1281:G:H1	59:BA:1289:C:H42	1.50	0.58
1:CB:212:GLN:HG3	1:CB:235:SER:HB3	1.84	0.58
18:CS:55:LYS:O	21:CA:986:A:O2'	2.22	0.58
19:CT:72:LEU:HB3	19:CT:76:ALA:HB3	1.84	0.58
20:CY:567:LEU:HG	20:CY:568:TYR:H	1.68	0.58
21:CA:104:G:H2'	21:CA:105:G:C8	2.39	0.58
21:CA:666:G:H4'	21:CA:731:G:H22	1.68	0.58
21:CA:1127:G:H21	21:CA:1147:C:N4	2.02	0.58
21:CA:1291:G:H2'	21:CA:1292:U:C6	2.37	0.58
22:CW:22:G:H2'	22:CW:23:A:O4'	2.03	0.58
22:CW:50:C:N3	22:CW:64:G:N2	2.51	0.58
24:CX:1:G:C2	24:CX:72:C:N3	2.71	0.58
31:DJ:50:UNK:H	31:DJ:82:UNK:C	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:122:LEU:HD23	39:DT:43:GLN:HE22	1.68	0.58
44:DY:32:PRO:HD2	44:DY:34:LYS:H	1.69	0.58
59:DA:380:U:H2'	59:DA:381:G:C8	2.39	0.58
59:DA:777:A:H2'	59:DA:778:G:C8	2.39	0.58
59:DA:993:G:O6	59:DA:1161:C:N3	2.37	0.58
59:DA:1658:C:H42	59:DA:2002:G:H1	1.50	0.58
59:DA:2396:G:H1	59:DA:2420:C:N4	1.99	0.58
59:DA:2780:G:H3'	59:DA:2781:A:C8	2.39	0.58
60:DB:44:G:H5''	60:DB:45:A:N7	2.19	0.58
15:AP:67:THR:H	15:AP:70:ALA:HB3	1.69	0.58
21:AA:757:U:H1'	21:AA:879:C:H1'	1.85	0.58
21:AA:978:A:OP1	21:AA:978:A:H8	1.87	0.58
21:AA:1387:G:H2'	21:AA:1388:C:C6	2.38	0.58
25:BC:132:LEU:HB3	25:BC:137:LEU:HB2	1.85	0.58
27:BE:62:PRO:HB3	59:BA:2786:U:O2'	2.04	0.58
29:BG:109:VAL:HG21	29:BG:142:PRO:HD3	1.85	0.58
35:BP:61:ARG:O	54:B8:13:ARG:NH1	2.37	0.58
41:BV:35:LEU:HB2	41:BV:57:VAL:HG13	1.85	0.58
49:B3:5:LYS:HA	49:B3:35:ARG:O	2.03	0.58
59:BA:374:A:H61	59:BA:400:G:H1'	1.68	0.58
59:BA:910:A:H2'	59:BA:2264:C:O2'	2.04	0.58
59:BA:947:G:H1	59:BA:970:C:H42	1.50	0.58
59:BA:1951:U:C2	59:BA:1954:G:H8	2.22	0.58
59:BA:2150:U:H2'	59:BA:2151:G:C8	2.39	0.58
11:CL:90:VAL:HG22	11:CL:96:VAL:HG11	1.86	0.58
19:CT:74:LYS:HG2	19:CT:75:ASN:H	1.68	0.58
20:CY:19:ALA:HB2	20:CY:107:VAL:HB	1.86	0.58
20:CY:133:ILE:HD13	20:CY:280:LEU:HD21	1.84	0.58
21:CA:1124:G:H1	21:CA:1149:C:H42	1.51	0.58
33:DN:74:ARG:HB3	59:DA:1138:G:H4'	1.86	0.58
38:DS:17:ARG:O	38:DS:21:THR:N	2.36	0.58
39:DT:50:ILE:HG12	39:DT:102:ILE:HD11	1.85	0.58
48:D2:32:LEU:HB2	48:D2:53:LEU:HD22	1.86	0.58
59:DA:236:C:N3	59:DA:261:G:N2	2.44	0.58
59:DA:391:G:H2'	59:DA:392:C:H6	1.68	0.58
59:DA:717:G:H2'	59:DA:718:A:C8	2.38	0.58
59:DA:838:C:H2'	59:DA:839:U:O4'	2.04	0.58
59:DA:850:C:H42	59:DA:928:G:H1	0.71	0.58
59:DA:1506(C):A:H2'	59:DA:1506(D):A:C8	2.39	0.58
59:DA:1654:A:H2'	59:DA:1655:A:C8	2.39	0.58
59:DA:2397:G:C6	59:DA:2419:U:O2	2.57	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2570:G:H2'	59:DA:2571:C:O4'	2.04	0.58
1:AB:70:PHE:HB2	1:AB:92:TYR:HB2	1.86	0.57
5:AF:44:GLY:HA2	5:AF:59:TYR:CE1	2.39	0.57
16:AQ:15:MET:SD	21:AA:253:U:O2'	2.60	0.57
21:AA:231:G:H2'	21:AA:232:G:H8	1.69	0.57
21:AA:780:A:H4'	21:AA:1523:G:H4'	1.86	0.57
21:AA:1341:U:H2'	21:AA:1342:C:H6	1.69	0.57
21:AA:1397:C:N4	23:AV:24:C:O2'	2.37	0.57
25:BC:42:VAL:O	25:BC:44:VAL:N	2.37	0.57
26:BD:150:LYS:HD3	59:BA:2202(H):G:N2	2.19	0.57
32:BK:52:ILE:HB	32:BK:73:PRO:HD3	1.86	0.57
34:BO:68:GLU:HA	34:BO:78:ARG:HB3	1.85	0.57
46:B0:47:PRO:HG2	46:B0:53:MET:HB2	1.85	0.57
59:BA:904:C:H2'	59:BA:905:U:H6	1.69	0.57
59:BA:961:C:H4'	59:BA:962:G:OP2	2.04	0.57
59:BA:1290:C:H2'	59:BA:1291:C:C6	2.39	0.57
59:BA:1558:A:O2'	59:BA:1559:G:OP2	2.20	0.57
59:BA:1792:G:H2'	59:BA:1793:C:C6	2.39	0.57
59:BA:2121:G:H1	59:BA:2177:C:N4	1.99	0.57
59:BA:2406:U:H5''	59:BA:2408:U:OP2	2.04	0.57
6:CG:79:ARG:HD2	6:CG:79:ARG:H	1.69	0.57
12:CM:61:GLU:HA	12:CM:66:LEU:HD11	1.86	0.57
19:CT:57:ARG:HH11	19:CT:102:GLY:HA3	1.68	0.57
20:CY:413:ILE:HB	20:CY:476:VAL:HG13	1.87	0.57
21:CA:599:C:N3	21:CA:639:G:O6	2.37	0.57
21:CA:643:C:H2'	21:CA:644:G:C8	2.38	0.57
21:CA:715:A:H5''	21:CA:805:C:O2'	2.04	0.57
21:CA:1177:G:O6	21:CA:1181:G:N7	2.37	0.57
37:DR:48:VAL:O	37:DR:52:ILE:HG12	2.04	0.57
59:DA:689:A:H2'	59:DA:690:G:C8	2.38	0.57
59:DA:998:C:H2'	59:DA:999:U:O4'	2.03	0.57
59:DA:1422:G:H2'	59:DA:1423:G:H8	1.67	0.57
59:DA:2848:G:O2'	59:DA:2867:G:N2	2.37	0.57
11:AL:117:ARG:HH22	21:AA:501:C:H5'	1.68	0.57
13:AN:42:ILE:HG21	21:AA:1202:G:C6	2.39	0.57
20:AY:623:ASP:HA	20:AY:626:ALA:HB3	1.87	0.57
21:AA:367:U:O2	21:AA:393:A:N1	2.36	0.57
21:AA:716:A:H2'	21:AA:717:C:C6	2.39	0.57
25:BC:185:LYS:HA	25:BC:188:ASP:HB2	1.84	0.57
33:BN:114:ARG:O	33:BN:115:ARG:C	2.47	0.57
35:BP:53:GLY:HA3	35:BP:55:ARG:HD2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BP:124:LYS:HD3	35:BP:143:GLY:HA3	1.84	0.57
40:BU:25:TRP:CD1	40:BU:26:GLY:N	2.71	0.57
45:BZ:166:SER:H	45:BZ:167:PRO:HA	1.69	0.57
48:B2:66:GLU:O	48:B2:69:ARG:HG2	2.04	0.57
54:B8:34:TRP:CG	54:B8:35:GLN:H	2.22	0.57
59:BA:271(B):G:H4'	59:BA:271(C):U:H5'	1.86	0.57
59:BA:1506(P):U:H2'	59:BA:1524:G:C8	2.39	0.57
59:BA:1689:A:H2'	59:BA:1690:A:C8	2.39	0.57
59:BA:1945:G:O6	59:BA:1961:C:C4	2.56	0.57
59:BA:1945:G:C6	59:BA:1961:C:N3	2.71	0.57
59:BA:2103:C:N4	59:BA:2186:G:H1	2.01	0.57
59:BA:2202(A):U:O2	59:BA:2202(H):G:O6	2.22	0.57
59:BA:2567:G:H2'	59:BA:2568:C:C6	2.40	0.57
59:BA:2777:G:H5''	59:BA:2778:A:H5'	1.86	0.57
1:CB:75:LYS:O	1:CB:78:GLN:HB3	2.04	0.57
7:CH:91:ARG:HH22	16:CQ:32:TYR:HA	1.69	0.57
13:CN:40:CYS:SG	13:CN:41:ARG:N	2.76	0.57
17:CR:60:ALA:HB2	21:CA:834:C:H5''	1.86	0.57
21:CA:909:A:O2'	21:CA:1413:A:O2'	2.21	0.57
21:CA:1343:G:N2	21:CA:1349:A:O2'	2.37	0.57
23:CV:34:A:H4'	23:CV:35:A:OP1	2.03	0.57
24:CX:30:C:N3	24:CX:40:G:N2	2.41	0.57
25:DC:42:VAL:O	25:DC:44:VAL:N	2.37	0.57
33:DN:98:VAL:HG23	33:DN:100:GLU:HG3	1.86	0.57
53:D7:29:LYS:NZ	59:DA:681:G:O2'	2.37	0.57
59:DA:557:U:H2'	59:DA:558:G:C8	2.39	0.57
59:DA:558:G:H2'	59:DA:559:G:H8	1.69	0.57
59:DA:1165:U:H3	59:DA:1184:G:H1	1.52	0.57
59:DA:1562:A:H2'	59:DA:1563:G:C8	2.39	0.57
59:DA:1965:C:H5'	59:DA:1966:A:H2'	1.85	0.57
59:DA:2194:G:H2'	59:DA:2195:C:C6	2.37	0.57
59:DA:2556:C:H2'	59:DA:2557:G:H4'	1.87	0.57
1:AB:233:SER:H	1:AB:234:PRO:HD2	1.69	0.57
8:AI:120:ARG:HB3	21:AA:1344:C:H4'	1.85	0.57
20:AY:348:ARG:HB3	20:AY:350:GLU:HG2	1.86	0.57
21:AA:1512:U:H2'	21:AA:1513:A:C8	2.38	0.57
42:BW:89:ALA:HB1	59:BA:748:G:C8	2.39	0.57
44:BY:46:LYS:H	44:BY:62:GLU:HB2	1.68	0.57
52:B6:20:ASN:ND2	52:B6:43:CYS:SG	2.65	0.57
53:B7:40:TRP:HD1	53:B7:41:ARG:H	1.44	0.57
59:BA:297:C:H2'	59:BA:298:G:O4'	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:481:G:O2'	59:BA:506:G:N2	2.38	0.57
59:BA:521:G:H2'	59:BA:522:G:C8	2.39	0.57
59:BA:1003:G:H1	59:BA:1152:C:N4	2.00	0.57
59:BA:1468(B):G:N2	59:BA:1506(O):G:OP2	2.37	0.57
59:BA:2024:G:H2'	59:BA:2025:C:O4'	2.04	0.57
59:BA:2885:C:H2'	59:BA:2886:G:O4'	2.03	0.57
60:BB:51:G:N2	60:BB:53:A:H62	2.02	0.57
1:CB:161:ALA:HA	1:CB:183:PRO:O	2.04	0.57
4:CE:101:ILE:HD11	4:CE:119:LEU:HD13	1.85	0.57
7:CH:89:PRO:HG2	21:CA:878:G:H5'	1.85	0.57
21:CA:124:G:H2'	21:CA:125:U:O4'	2.04	0.57
21:CA:186(L):G:H2'	21:CA:186(M):G:C8	2.39	0.57
21:CA:964:A:H2'	21:CA:965:A:H5'	1.86	0.57
21:CA:983:A:H2	21:CA:984:C:C6	2.21	0.57
21:CA:1307:U:H3	21:CA:1330:U:H3	1.51	0.57
22:CW:8:U:H4'	22:CW:49:A:H5'	1.86	0.57
27:DE:105:THR:HB	27:DE:197:ILE:HG12	1.84	0.57
35:DP:36:LYS:H	59:DA:942:G:H5'	1.69	0.57
59:DA:699:A:H62	59:DA:733:G:N2	1.98	0.57
59:DA:1047:G:H1'	59:DA:1110:G:H22	1.68	0.57
59:DA:1442:G:H1	59:DA:1549:C:N4	1.98	0.57
59:DA:2683:C:H42	59:DA:2727:G:H2'	1.69	0.57
6:AG:13:GLN:O	6:AG:13:GLN:HG3	2.04	0.57
8:AI:117:HIS:N	8:AI:121:ARG:O	2.37	0.57
11:AL:53:ARG:HG3	11:AL:69:TYR:CZ	2.40	0.57
19:AT:63:ILE:HD13	19:AT:81:LYS:HG2	1.85	0.57
20:AY:506:GLN:OE1	59:BA:1913:A:N6	2.38	0.57
21:AA:1305:G:H1	21:AA:1331:G:H2'	1.70	0.57
25:BC:44:VAL:O	25:BC:173:HIS:HA	2.05	0.57
25:BC:169:THR:O	25:BC:171:ALA:N	2.34	0.57
33:BN:35:ARG:HB3	33:BN:37:LYS:H	1.69	0.57
36:BQ:26:TYR:HE1	59:BA:906:G:H5''	1.70	0.57
38:BS:58:LEU:HD23	38:BS:65:VAL:HG13	1.86	0.57
40:BU:81:HIS:CG	59:BA:1151:G:H4'	2.39	0.57
52:B6:16:CYS:O	52:B6:17:LYS:HB2	2.04	0.57
59:BA:661:C:H2'	59:BA:662:G:H8	1.70	0.57
3:CD:15:GLU:HB3	3:CD:63:LYS:HE2	1.87	0.57
20:CY:165:GLN:HB2	20:CY:178:ILE:O	2.05	0.57
21:CA:976:G:O4'	21:CA:1363:A:N6	2.37	0.57
21:CA:1126:U:C5	21:CA:1148:U:C4	2.92	0.57
25:DC:63:VAL:O	25:DC:161:ARG:N	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DN:29:LYS:O	33:DN:31:ALA:O	2.21	0.57
35:DP:62:LEU:HD23	35:DP:62:LEU:H	1.69	0.57
37:DR:46:GLY:HA2	59:DA:2838:G:O2'	2.05	0.57
37:DR:104:ARG:HE	59:DA:1287:A:H5'	1.68	0.57
44:DY:9:LYS:HB3	44:DY:94:LYS:NZ	2.20	0.57
49:D3:30:ARG:HH11	59:DA:1158:C:H5''	1.70	0.57
51:D5:36:CYS:SG	51:D5:37:LYS:N	2.77	0.57
55:D9:5:ALA:O	55:D9:36:GLN:NE2	2.37	0.57
59:DA:295:G:N1	59:DA:343:C:O2	2.31	0.57
59:DA:308:G:O2'	59:DA:329:G:N2	2.33	0.57
59:DA:817:C:H2'	59:DA:818:G:O4'	2.03	0.57
59:DA:1663:C:N4	59:DA:1997:G:H1	2.02	0.57
59:DA:1782:C:H42	59:DA:2586:C:N4	1.95	0.57
59:DA:1895:C:H2'	59:DA:1896:G:H8	1.67	0.57
59:DA:2098:U:H2'	59:DA:2099:U:O4'	2.05	0.57
59:DA:2404:C:N4	59:DA:2413:G:H1	2.01	0.57
21:AA:1405:G:H3'	63:AA:1601:NMY:H232	1.87	0.57
21:AA:1491:G:C4	63:AA:1601:NMY:H4	2.40	0.57
28:BF:157:VAL:H	28:BF:193:VAL:N	2.00	0.57
28:BF:176:LEU:HG	28:BF:177:ALA:N	2.20	0.57
33:BN:37:LYS:HB3	59:BA:1138:G:N2	2.19	0.57
33:BN:97:ARG:NH1	33:BN:108:PRO:HB2	2.09	0.57
33:BN:112:LEU:O	33:BN:114:ARG:C	2.47	0.57
44:BY:81:LYS:HD2	44:BY:97:ARG:HB3	1.86	0.57
59:BA:1077:A:C2	59:BA:1088:A:H2'	2.40	0.57
59:BA:2102:U:H2'	59:BA:2103:C:C5	2.38	0.57
59:BA:2143:C:N3	59:BA:2148:G:N2	2.51	0.57
59:BA:2426:A:H3'	59:BA:2427:C:H5'	1.86	0.57
60:BB:31:C:H1'	60:BB:54:G:N2	2.19	0.57
6:CG:13:GLN:O	6:CG:24:THR:HG21	2.03	0.57
11:CL:113:ARG:HG2	11:CL:120:TYR:HB2	1.87	0.57
21:CA:947:G:H4'	21:CA:1332:A:H2	1.69	0.57
21:CA:1039:C:H2'	21:CA:1040:U:C6	2.39	0.57
21:CA:1148:U:H2'	21:CA:1149:C:O4'	2.04	0.57
21:CA:1224:G:O2'	21:CA:1322:C:OP2	2.15	0.57
25:DC:118:PRO:O	25:DC:121:MET:HB3	2.05	0.57
26:DD:51:VAL:O	26:DD:52:ARG:HB2	2.05	0.57
29:DG:108:ASN:O	29:DG:112:PRO:CG	2.36	0.57
29:DG:109:VAL:HB	50:D4:33:VAL:HG11	1.86	0.57
33:DN:42:TRP:C	33:DN:78:TYR:HA	2.28	0.57
37:DR:36:THR:OG1	37:DR:37:THR:N	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DR:50:HIS:HB2	59:DA:2839:G:H5''	1.86	0.57
42:DW:42:ARG:NH1	59:DA:2011:U:OP1	2.38	0.57
45:DZ:151:HIS:HB2	45:DZ:168:GLU:O	2.04	0.57
59:DA:515:A:H3'	59:DA:516:C:H6	1.68	0.57
59:DA:583:G:N1	59:DA:1257:C:N4	2.14	0.57
59:DA:878:A:H5'	59:DA:879:G:OP2	2.04	0.57
59:DA:947:G:N2	59:DA:970:C:N3	2.45	0.57
59:DA:1654:A:N1	59:DA:2048:G:O2'	2.36	0.57
59:DA:2809:A:H2'	59:DA:2810:A:C8	2.39	0.57
20:AY:107:VAL:HG22	20:AY:135:PHE:HB3	1.87	0.57
20:AY:130:VAL:O	20:AY:132:ARG:NH1	2.38	0.57
21:AA:372:C:H42	21:AA:389:A:H62	0.79	0.57
21:AA:766:A:H61	21:AA:1511:G:H1'	1.69	0.57
22:AW:50:C:N4	22:AW:64:G:C6	2.72	0.57
25:BC:8:TYR:HA	25:BC:11:LEU:HB2	1.87	0.57
25:BC:42:VAL:HG13	25:BC:215:VAL:HG13	1.85	0.57
26:BD:218:ARG:NH2	59:BA:690:G:O3'	2.38	0.57
33:BN:99:LEU:C	33:BN:101:HIS:N	2.62	0.57
34:BO:66:LYS:NZ	34:BO:80:ASP:O	2.38	0.57
39:BT:27:THR:HG23	39:BT:28:VAL:H	1.69	0.57
53:B7:21:ARG:NH2	59:BA:465:G:O2'	2.38	0.57
59:BA:589:C:N4	59:BA:668:G:H1	2.00	0.57
59:BA:2876:G:H2'	59:BA:2877:G:C8	2.39	0.57
60:BB:24:G:C2	60:BB:56:G:N2	2.72	0.57
9:CJ:62:HIS:HD2	13:CN:61:TRP:HZ3	1.51	0.57
12:CM:45:VAL:HA	12:CM:48:LEU:HG	1.86	0.57
15:CP:31:LYS:HG3	21:CA:607:A:N3	2.19	0.57
16:CQ:66:SER:HA	21:CA:265:G:O3'	2.05	0.57
21:CA:33:A:H5''	21:CA:364:A:O2'	2.05	0.57
21:CA:338:A:N1	21:CA:351:G:O6	2.37	0.57
21:CA:930:C:N4	21:CA:1387:G:H1	2.02	0.57
33:DN:59:LYS:HD3	33:DN:59:LYS:H	1.70	0.57
59:DA:2040:C:H2'	59:DA:2041:U:C6	2.39	0.57
3:AD:3:ARG:NH2	21:AA:405:U:OP2	2.37	0.57
3:AD:13:ARG:HB2	3:AD:38:TYR:H	1.68	0.57
5:AF:70:ASP:O	5:AF:73:ASN:ND2	2.37	0.57
16:AQ:17:LYS:HZ3	21:AA:256:U:H5'	1.69	0.57
21:AA:600:C:H42	21:AA:638:G:H1	1.53	0.57
21:AA:676:A:N1	21:AA:714:G:O6	2.38	0.57
21:AA:1127:G:H21	21:AA:1147:C:N4	2.02	0.57
21:AA:1320:C:H2'	21:AA:1321:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1440(N):C:H2'	21:AA:1440(O):A:O4'	2.04	0.57
28:BF:8:GLN:HB2	28:BF:22:ALA:HB2	1.86	0.57
29:BG:111:LEU:HD13	29:BG:179:PRO:HG2	1.86	0.57
30:BH:66:GLY:O	30:BH:70:THR:OG1	2.21	0.57
33:BN:112:LEU:HG	33:BN:115:ARG:HB2	1.87	0.57
36:BQ:68:ILE:HD13	36:BQ:68:ILE:H	1.70	0.57
45:BZ:30:ASN:H	45:BZ:33:LEU:HB3	1.69	0.57
45:BZ:73:GLN:HB2	45:BZ:87:ASP:HB2	1.87	0.57
55:B9:4:ARG:HA	59:BA:2465:C:H5''	1.86	0.57
59:BA:904:C:H2'	59:BA:905:U:C6	2.39	0.57
59:BA:1102:C:H2'	59:BA:1103:A:H8	1.69	0.57
59:BA:1388:G:HO2'	59:BA:1525:G:HO2'	1.49	0.57
59:BA:1565:C:O2'	59:BA:1567:A:N7	2.38	0.57
59:BA:1638:C:H4'	59:BA:2710:C:O2	2.05	0.57
59:BA:2301:C:H2'	59:BA:2302:G:C8	2.39	0.57
21:CA:602:A:H61	21:CA:636:U:H3	1.51	0.57
21:CA:1233:G:H2'	21:CA:1234:C:C6	2.39	0.57
21:CA:1414:U:H2'	21:CA:1415:G:H8	1.67	0.57
26:DD:77:ALA:HB3	26:DD:117:VAL:HG23	1.86	0.57
27:DE:150:VAL:HG21	59:DA:2618:G:H21	1.69	0.57
41:DV:60:GLU:H	41:DV:96:ILE:CA	2.18	0.57
51:D5:16:ARG:HD3	59:DA:1263:U:H5''	1.87	0.57
53:D7:9:ARG:N	59:DA:1309:G:OP1	2.37	0.57
59:DA:1052:C:N3	59:DA:1107:G:C2	2.71	0.57
59:DA:1959:G:H2'	59:DA:1960:A:O4'	2.04	0.57
9:AJ:53:PRO:HD3	21:AA:1059:C:O2'	2.04	0.57
11:AL:47:LYS:NZ	21:AA:1492:A:H1'	2.19	0.57
13:AN:17:LYS:HD2	21:AA:1316:G:H5''	1.86	0.57
21:AA:1333:A:H2'	21:AA:1334:G:O4'	2.05	0.57
26:BD:91:ARG:C	26:BD:107:ALA:HB3	2.29	0.57
28:BF:105:VAL:O	28:BF:108:LYS:HB2	2.05	0.57
34:BO:66:LYS:HB3	59:BA:1665:A:H4'	1.86	0.57
35:BP:21:ARG:HG2	59:BA:663:G:H5''	1.85	0.57
37:BR:90:ARG:HH12	59:BA:2880:C:H4'	1.70	0.57
40:BU:76:TYR:CD2	59:BA:1010:A:H4'	2.40	0.57
59:BA:134:C:H2'	59:BA:135:G:C8	2.40	0.57
59:BA:1019:U:H3	59:BA:1020:A:N6	2.03	0.57
59:BA:1802:A:H2'	59:BA:1803:A:C8	2.39	0.57
59:BA:2081:C:H2'	59:BA:2082:A:H8	1.70	0.57
59:BA:2332:U:O2	59:BA:2335:A:H2	1.88	0.57
1:CB:136:VAL:O	1:CB:140:HIS:ND1	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:45:ARG:HH12	21:CA:1255:G:P	2.28	0.57
27:DE:33:VAL:HG23	27:DE:47:VAL:HG13	1.85	0.57
30:DH:28:GLY:HA3	30:DH:79:VAL:HB	1.87	0.57
33:DN:94:HIS:HB3	33:DN:95:PRO:HD3	1.87	0.57
37:DR:41:ALA:HB1	37:DR:97:VAL:HG11	1.85	0.57
37:DR:77:ARG:NH2	59:DA:1453:A:O2'	2.34	0.57
54:D8:23:VAL:HA	54:D8:48:PHE:O	2.05	0.57
59:DA:212:G:H2'	59:DA:213:A:H8	1.68	0.57
59:DA:246:C:N4	59:DA:252:G:H1	2.02	0.57
59:DA:915:C:H2'	59:DA:916:G:O4'	2.05	0.57
59:DA:1170:G:N2	59:DA:1179:C:N3	2.43	0.57
59:DA:1506(D):A:H2'	59:DA:1506(E):G:O4'	2.05	0.57
59:DA:1712(A):U:H2'	59:DA:1712(B):G:C8	2.39	0.57
7:AH:19:VAL:HG21	21:AA:827:U:H4'	1.87	0.57
20:AY:178:ILE:HA	20:AY:185:ALA:HA	1.86	0.57
21:AA:21:G:H2'	21:AA:22:G:C8	2.40	0.57
21:AA:144:G:H1	21:AA:178:C:N4	2.02	0.57
21:AA:895:G:H2'	21:AA:896:C:C6	2.40	0.57
21:AA:1494:G:C8	63:AA:1601:NMY:N7	2.72	0.57
26:BD:35:LYS:HG2	26:BD:63:ARG:HG3	1.87	0.57
26:BD:108:PRO:HA	26:BD:197:GLY:N	2.19	0.57
33:BN:75:TYR:N	33:BN:83:LYS:H	2.03	0.57
45:BZ:77:ASP:OD2	45:BZ:77:ASP:N	2.29	0.57
59:BA:1043:C:H42	59:BA:1112:G:H1	1.53	0.57
59:BA:1829:A:H3'	59:BA:1830:C:H6	1.69	0.57
59:BA:1849:G:H2'	59:BA:1850:G:C8	2.40	0.57
59:BA:2230:G:H2'	59:BA:2231:C:C6	2.40	0.57
59:BA:2342:C:H2'	59:BA:2343:C:O4'	2.05	0.57
2:CC:19:GLU:HG2	2:CC:54:ARG:HG3	1.87	0.57
3:CD:47:ARG:HB3	23:CV:31:A:OP1	2.04	0.57
3:CD:108:LEU:HD13	3:CD:174:LEU:HB3	1.86	0.57
11:CL:83:VAL:HB	11:CL:100:ILE:HG23	1.87	0.57
21:CA:257:G:N2	21:CA:269:C:N3	2.39	0.57
25:DC:59:VAL:HG22	25:DC:202:PRO:HD3	1.87	0.57
25:DC:218:THR:HG22	25:DC:219:MET:SD	2.45	0.57
38:DS:67:ARG:HA	38:DS:99:LYS:N	2.20	0.57
49:D3:11:SER:N	59:DA:988:A:OP2	2.31	0.57
50:D4:1:MET:HG3	60:DB:43:C:H4'	1.86	0.57
59:DA:143:C:H2'	59:DA:144:C:H6	1.69	0.57
59:DA:210:C:H2'	59:DA:211:A:C8	2.40	0.57
59:DA:413:C:N4	59:DA:2410:G:H1	2.01	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:767:U:H2'	59:DA:768:G:C8	2.40	0.57
59:DA:2374:C:H2'	59:DA:2375:G:O4'	2.05	0.57
59:DA:2466:C:N3	59:DA:2484:G:N2	2.47	0.57
59:DA:2696:U:H2'	59:DA:2697:G:C8	2.40	0.57
11:AL:102:ARG:HG3	11:AL:107:ALA:HB1	1.86	0.57
14:AO:88:ARG:HA	14:AO:88:ARG:HE	1.70	0.57
16:AQ:10:VAL:HA	16:AQ:21:VAL:HG22	1.87	0.57
19:AT:80:ARG:HA	19:AT:83:ARG:HD2	1.86	0.57
20:AY:164:MET:HE2	20:AY:181:LEU:HD13	1.87	0.57
20:AY:500:GLN:O	20:AY:501:THR:OG1	2.23	0.57
20:AY:615:GLU:H	20:AY:615:GLU:CD	2.12	0.57
21:AA:109:A:N6	21:AA:324:G:H1'	2.20	0.57
21:AA:598:U:H2'	21:AA:599:C:C6	2.40	0.57
21:AA:951:G:N3	21:AA:970:C:O2'	2.38	0.57
21:AA:1127:G:N2	21:AA:1147:C:H41	2.03	0.57
26:BD:274:ARG:C	26:BD:276:LYS:H	2.12	0.57
27:BE:13:ARG:NH2	39:BT:60:THR:HG21	2.19	0.57
27:BE:61:ARG:HH11	27:BE:61:ARG:CG	2.16	0.57
33:BN:107:LEU:O	33:BN:109:LYS:N	2.38	0.57
39:BT:60:THR:HG22	39:BT:77:PRO:HB3	1.87	0.57
49:B3:21:ALA:HB1	59:BA:849:A:N3	2.20	0.57
59:BA:1569:A:H2'	59:BA:1570:A:C8	2.40	0.57
59:BA:1820:U:H5''	59:BA:1821:A:N7	2.20	0.57
20:CY:424:LEU:HA	20:CY:427:ALA:HB3	1.85	0.57
21:CA:615:C:N4	21:CA:625:G:H1	2.03	0.57
21:CA:831:U:O2	21:CA:855:G:N2	2.32	0.57
21:CA:1274:G:H2'	21:CA:1275:A:C8	2.40	0.57
21:CA:1405:G:H1'	21:CA:1519:A:O4'	2.05	0.57
22:CW:71:C:H1'	59:DA:1851:U:O2'	2.05	0.57
25:DC:131:ILE:O	25:DC:135:ARG:HB2	2.05	0.57
27:DE:33:VAL:HG21	27:DE:36:ARG:HH21	1.69	0.57
29:DG:60:LEU:HD21	29:DG:153:ARG:HD3	1.87	0.57
33:DN:56:ASN:HD22	33:DN:56:ASN:N	2.00	0.57
33:DN:95:PRO:HD2	33:DN:108:PRO:HA	1.87	0.57
35:DP:67:MET:O	35:DP:69:GLY:N	2.38	0.57
55:D9:2:LYS:HG2	55:D9:33:LYS:HG2	1.87	0.57
59:DA:36:G:H2'	59:DA:37:C:C6	2.40	0.57
59:DA:954:G:N2	59:DA:963:U:O2	2.36	0.57
59:DA:1428:C:C5	59:DA:1569:A:H5''	2.40	0.57
19:AT:12:ALA:HB1	21:AA:332:G:H4'	1.86	0.56
21:AA:1067:A:N6	21:AA:1109:C:OP1	2.33	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:43:GLU:CD	59:BA:2123:G:H21	2.12	0.56
25:BC:76:LEU:HD22	25:BC:111:PHE:HB3	1.86	0.56
28:BF:6:VAL:HB	28:BF:7:TYR:HD1	1.70	0.56
28:BF:31:HIS:HB2	35:BP:13:ASN:ND2	2.20	0.56
32:BK:42:ASN:ND2	32:BK:49:GLY:O	2.38	0.56
33:BN:37:LYS:NZ	59:BA:1005:C:O2'	2.37	0.56
33:BN:118:LYS:HE3	59:BA:2780:G:H5''	1.86	0.56
35:BP:27:HIS:O	35:BP:29:LYS:N	2.38	0.56
39:BT:32:TYR:HA	39:BT:83:ILE:HG12	1.87	0.56
59:BA:1058:G:H2'	59:BA:1059:G:H8	1.69	0.56
59:BA:1212:G:H1'	59:BA:1237:A:H61	1.70	0.56
59:BA:1376:C:H2'	59:BA:1377:G:O4'	2.04	0.56
59:BA:1563:G:H2'	59:BA:1564:C:O4'	2.05	0.56
59:BA:2041:U:H2'	59:BA:2042:A:C8	2.40	0.56
59:BA:2080:G:H2'	59:BA:2081:C:C6	2.40	0.56
60:BB:50:G:H2'	60:BB:51:G:H8	1.70	0.56
4:CE:121:LYS:HG3	4:CE:122:GLU:H	1.69	0.56
9:CJ:88:LEU:O	9:CJ:89:ASP:HB2	2.04	0.56
21:CA:1303:C:H2'	21:CA:1304:G:O4'	2.04	0.56
25:DC:21:TYR:HE2	25:DC:29:LEU:HD22	1.70	0.56
27:DE:53:PRO:HA	27:DE:74:PRO:HA	1.86	0.56
33:DN:72:TYR:HB2	33:DN:101:HIS:HA	1.86	0.56
33:DN:104:LYS:N	33:DN:120:LEU:HD21	2.20	0.56
53:D7:8:ASN:HB3	53:D7:11:LYS:HB3	1.85	0.56
59:DA:71:A:H4'	59:DA:72:U:H3'	1.87	0.56
59:DA:1022:G:O2'	59:DA:1023:U:OP2	2.15	0.56
1:AB:91:PRO:HG2	1:AB:155:LEU:HD23	1.85	0.56
20:AY:34:TYR:CG	20:AY:35:TYR:N	2.74	0.56
20:AY:616:TYR:O	20:AY:620:VAL:HG13	2.03	0.56
21:AA:689:C:H2'	21:AA:690:G:O4'	2.05	0.56
21:AA:1102:A:H2'	21:AA:1103:C:C6	2.40	0.56
24:AX:56:C:H2'	24:AX:57:G:H5'	1.87	0.56
26:BD:50:THR:HB	59:BA:1805:U:H1'	1.85	0.56
26:BD:108:PRO:CB	26:BD:196:VAL:HA	2.35	0.56
32:BK:60:TYR:O	32:BK:62:ASP:N	2.36	0.56
33:BN:57:ALA:HB2	33:BN:126:PRO:HD3	1.86	0.56
33:BN:85:ILE:CG2	33:BN:97:ARG:CZ	2.82	0.56
39:BT:27:THR:O	39:BT:87:ASP:HB2	2.05	0.56
39:BT:32:TYR:O	39:BT:33:LYS:HB2	2.04	0.56
47:B1:86:SER:O	47:B1:90:ILE:N	2.38	0.56
52:B6:28:ARG:O	52:B6:30:THR:N	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:860:U:H2'	59:BA:861:A:C8	2.40	0.56
59:BA:1593:G:H2'	59:BA:1594:G:C8	2.40	0.56
59:BA:1990:C:H2'	59:BA:1991:U:O4'	2.04	0.56
1:CB:78:GLN:HG3	1:CB:94:ASN:HB2	1.86	0.56
2:CC:21:ARG:N	2:CC:57:ILE:O	2.34	0.56
5:CF:40:VAL:HG23	5:CF:63:TYR:HE1	1.69	0.56
21:CA:1354:C:H2'	21:CA:1355:G:C8	2.40	0.56
21:CA:1472:U:H2'	21:CA:1473:A:H8	1.70	0.56
23:CV:27:A:O2'	23:CV:28:A:OP1	2.22	0.56
22:CW:12:U:H3	22:CW:23:A:H61	0.75	0.56
29:DG:4:ASP:HA	29:DG:8:LYS:HD3	1.85	0.56
37:DR:31:HIS:HB2	37:DR:34:ILE:HD11	1.87	0.56
37:DR:53:HIS:CG	59:DA:2840:C:H5''	2.40	0.56
37:DR:97:VAL:HG22	37:DR:114:VAL:HG13	1.87	0.56
38:DS:25:ARG:NH1	60:DB:9:G:H5'	2.19	0.56
47:D1:18:ILE:HG12	59:DA:380:U:O3'	2.05	0.56
59:DA:253:C:H2'	59:DA:254:G:O4'	2.05	0.56
59:DA:595:C:H2'	59:DA:596:G:H8	1.70	0.56
59:DA:873:G:H2'	59:DA:874:G:C8	2.39	0.56
59:DA:919:G:H4'	60:DB:81:G:H1'	1.86	0.56
59:DA:1750:G:H21	59:DA:2860:A:H2	1.53	0.56
60:DB:20:C:H42	60:DB:63:G:H1	1.52	0.56
3:AD:141:ARG:HH12	21:AA:616:G:P	2.28	0.56
5:AF:5:GLU:HG3	5:AF:93:SER:HA	1.86	0.56
10:AK:120:ARG:HG3	10:AK:126:ARG:CZ	2.36	0.56
11:AL:15:ARG:NH1	21:AA:563:A:N3	2.52	0.56
11:AL:31:PRO:HG2	11:AL:32:PHE:CE2	2.39	0.56
21:AA:58:C:O2'	21:AA:388:G:OP1	2.23	0.56
21:AA:1019:C:H2'	21:AA:1020:U:O4'	2.04	0.56
21:AA:1020:U:H2'	21:AA:1021:G:C8	2.40	0.56
21:AA:1436:U:O4	21:AA:1465:C:C4	2.59	0.56
21:AA:1436:U:H2'	21:AA:1437:C:O4'	2.04	0.56
21:AA:1440(C):G:H3'	21:AA:1440(D):A:H5'	1.86	0.56
27:BE:15:PHE:HZ	39:BT:77:PRO:HG2	1.69	0.56
28:BF:24:LEU:HD13	28:BF:25:PRO:HD2	1.87	0.56
28:BF:126:VAL:HG21	28:BF:142:TRP:HZ2	1.70	0.56
30:BH:103:LEU:HB3	30:BH:115:VAL:HB	1.87	0.56
39:BT:93:ARG:HD2	39:BT:115:ARG:HB2	1.86	0.56
40:BU:3:ARG:HH22	59:BA:584:C:H5''	1.69	0.56
47:B1:7:ILE:HG21	47:B1:66:HIS:HB3	1.88	0.56
56:Be:81:ILE:HG13	56:Be:84:LEU:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:238:C:H4'	59:BA:608:A:O2'	2.06	0.56
59:BA:574:C:O4'	59:BA:2055:C:H5'	2.06	0.56
59:BA:736:C:H2'	59:BA:737:C:H6	1.68	0.56
59:BA:745:G:O6	59:BA:746:A:N6	2.38	0.56
59:BA:964:C:O2'	59:BA:2273:A:N3	2.36	0.56
59:BA:974:G:O2'	59:BA:974(A):C:OP1	2.20	0.56
59:BA:1000:A:H2'	59:BA:1001:A:C8	2.40	0.56
59:BA:1696:G:O2'	59:BA:1978:A:H4'	2.04	0.56
59:BA:2061:G:O2'	59:BA:2062:A:OP2	2.23	0.56
59:BA:2233:U:H2'	59:BA:2234:G:C8	2.40	0.56
59:BA:2422:A:H4'	59:BA:2423:U:OP1	2.06	0.56
59:BA:2781:A:H5''	59:BA:2782:G:C8	2.40	0.56
7:CH:17:THR:HB	7:CH:78:GLN:HG2	1.86	0.56
14:CO:28:GLN:O	14:CO:32:LEU:HG	2.06	0.56
15:CP:14:ASN:HA	15:CP:42:ARG:HH21	1.68	0.56
19:CT:68:LYS:HZ3	21:CA:195:A:H4'	1.71	0.56
19:CT:76:ALA:HB2	21:CA:262:A:H5''	1.88	0.56
20:CY:438:PHE:HA	20:CY:453:GLY:HA2	1.86	0.56
20:CY:500:GLN:HG3	20:CY:504:ARG:O	2.05	0.56
21:CA:928:G:H2'	21:CA:929:G:C8	2.41	0.56
21:CA:1072:G:C2	21:CA:1103:C:C4	2.91	0.56
21:CA:1491:G:N7	63:CA:1601:NMY:H2	2.20	0.56
21:CA:1506:U:O2'	21:CA:1507:A:OP1	2.24	0.56
25:DC:115:VAL:O	25:DC:117:THR:N	2.38	0.56
25:DC:118:PRO:HD3	25:DC:147:GLY:HA2	1.86	0.56
27:DE:64:LYS:HG3	27:DE:78:LEU:HD21	1.87	0.56
28:DF:106:ARG:NH1	28:DF:107:LYS:HE2	2.18	0.56
33:DN:40:PRO:HD2	59:DA:1007:C:C1'	2.32	0.56
33:DN:74:ARG:CA	33:DN:84:LYS:HB3	2.34	0.56
34:DO:10:VAL:HG22	34:DO:17:ARG:HA	1.87	0.56
36:DQ:89:ASN:O	36:DQ:91:GLU:N	2.36	0.56
38:DS:102:ALA:HA	38:DS:107:GLU:C	2.31	0.56
41:DV:77:ALA:O	41:DV:79:VAL:N	2.37	0.56
46:D0:47:PRO:HG3	46:D0:59:LEU:HD21	1.87	0.56
54:D8:26:LYS:HG2	54:D8:47:LYS:HG3	1.86	0.56
59:DA:287:C:H2'	59:DA:289:A:C8	2.40	0.56
59:DA:862:G:H2'	59:DA:863:A:O4'	2.06	0.56
59:DA:875:G:H2'	59:DA:876:C:O4'	2.05	0.56
59:DA:960:A:H2'	59:DA:962:G:H5''	1.85	0.56
59:DA:1110:G:O2'	59:DA:1111:A:H8	1.77	0.56
59:DA:1217:C:N3	59:DA:1232:G:N2	2.45	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1653:G:H5'	59:DA:2822:G:N1	2.11	0.56
59:DA:2114:A:C2	59:DA:2168:G:H1'	2.40	0.56
59:DA:2248:C:N3	59:DA:2256:G:O6	2.39	0.56
59:DA:2463:C:H2'	59:DA:2464:C:O4'	2.05	0.56
2:AC:91:LEU:HB3	2:AC:99:VAL:HG12	1.88	0.56
11:AL:34:ARG:HD3	11:AL:82:VAL:HG13	1.86	0.56
21:AA:33:A:OP2	21:AA:398:C:H5'	2.06	0.56
21:AA:144:G:H2'	21:AA:145:G:H8	1.70	0.56
21:AA:404:U:H2'	21:AA:405:U:H6	1.71	0.56
22:AW:56:C:C6	59:BA:2169:A:H1'	2.40	0.56
28:BF:3:GLU:CA	28:BF:24:LEU:HB2	2.36	0.56
30:BH:152:ARG:HB3	30:BH:162:ILE:HG13	1.85	0.56
32:BK:16:LYS:NZ	32:BK:18:THR:OG1	2.38	0.56
39:BT:32:TYR:HB3	39:BT:82:LEU:HA	1.87	0.56
42:BW:92:ARG:NH1	59:BA:2014:A:O2'	2.38	0.56
47:B1:5:CYS:SG	47:B1:6:GLU:N	2.77	0.56
52:B6:53:LYS:HG3	52:B6:54:ILE:H	1.71	0.56
53:B7:7:PRO:HD3	59:BA:1612:C:H5'	1.87	0.56
56:Be:79:ARG:O	56:Be:81:ILE:N	2.38	0.56
59:BA:444:C:H2'	59:BA:445:C:C6	2.40	0.56
59:BA:674:G:H2'	59:BA:804:A:H61	1.70	0.56
59:BA:1849:G:H2'	59:BA:1850:G:H8	1.69	0.56
59:BA:2143:C:C2	59:BA:2148:G:N2	2.70	0.56
12:CM:94:ARG:HE	18:CS:81:ARG:HB3	1.70	0.56
16:CQ:21:VAL:CG2	16:CQ:44:ALA:HB2	2.36	0.56
20:CY:616:TYR:CG	20:CY:663:THR:HA	2.41	0.56
21:CA:1028(G):G:H2'	21:CA:1028(H):G:O4'	2.04	0.56
26:DD:208:LYS:HD2	59:DA:729:G:C5	2.40	0.56
27:DE:60:ASN:O	27:DE:61:ARG:HB2	2.05	0.56
33:DN:83:LYS:HG3	33:DN:112:LEU:HD21	1.87	0.56
51:D5:6:VAL:HG13	59:DA:2015:A:C2	2.41	0.56
59:DA:270(C):C:H42	59:DA:270(W):G:H1	1.51	0.56
59:DA:443:A:H1'	59:DA:1201:C:O4'	2.04	0.56
59:DA:628:G:O2'	59:DA:651:G:O2'	2.18	0.56
59:DA:833:U:H2'	59:DA:834:C:C6	2.41	0.56
59:DA:1177:A:H8	59:DA:1177:A:O5'	1.89	0.56
59:DA:1328:G:H4'	59:DA:1329:U:H5	1.70	0.56
59:DA:1525:G:H2'	59:DA:1526:G:H8	1.65	0.56
59:DA:1576:U:H2'	59:DA:1577:C:C6	2.41	0.56
59:DA:1652:A:H3'	59:DA:1653:G:C8	2.41	0.56
59:DA:1711:C:H2'	59:DA:1712:C:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2525:G:N2	59:DA:2538:C:N3	2.42	0.56
7:AH:3:THR:HB	21:AA:587:G:H4'	1.86	0.56
13:AN:45:ARG:HH22	21:AA:1059:C:H5''	1.70	0.56
21:AA:563:A:O2'	21:AA:566:G:O3'	2.22	0.56
21:AA:992:U:O2'	21:AA:993:G:OP2	2.19	0.56
21:AA:1016:A:H2'	21:AA:1017:G:O4'	2.05	0.56
21:AA:1109:C:H2'	21:AA:1110:A:O4'	2.06	0.56
21:AA:1393:U:H2'	21:AA:1395:C:C5	2.41	0.56
26:BD:75:ILE:HG21	26:BD:99:ASP:HB2	1.86	0.56
26:BD:244:ARG:HH22	59:BA:1840:G:N2	2.04	0.56
27:BE:131:ALA:HB2	59:BA:2580:U:OP1	2.04	0.56
29:BG:76:SER:HA	29:BG:83:ARG:HA	1.87	0.56
32:BK:122:ALA:HB1	59:BA:1081:U:H5''	1.88	0.56
38:BS:27:SER:H	38:BS:40:ILE:HG22	1.70	0.56
41:BV:81:TYR:CE1	41:BV:83:ARG:HG2	2.40	0.56
45:BZ:144:LEU:HD11	45:BZ:150:LEU:HD22	1.86	0.56
59:BA:1213:A:H2'	59:BA:1214:A:C8	2.39	0.56
59:BA:2673:G:H2'	59:BA:2674:G:H8	1.71	0.56
7:CH:107:LEU:HD23	7:CH:107:LEU:H	1.70	0.56
12:CM:14:ARG:HG3	12:CM:44:ARG:HH11	1.70	0.56
20:CY:257:PRO:O	20:CY:259:PHE:N	2.37	0.56
21:CA:68(T):G:C2	21:CA:68(U):U:H1'	2.41	0.56
21:CA:411:A:H2	21:CA:430:A:N6	2.03	0.56
27:DE:15:PHE:HA	27:DE:19:ARG:O	2.05	0.56
32:DK:116:ASN:ND2	59:DA:1081:U:O2	2.39	0.56
33:DN:37:LYS:HB3	59:DA:1138:G:N2	2.20	0.56
48:D2:55:ARG:NH1	59:DA:73:A:H5'	2.21	0.56
59:DA:306:U:O4	59:DA:310:A:N7	2.38	0.56
59:DA:676:A:N7	59:DA:2070:G:H1'	2.20	0.56
59:DA:1326:U:H2'	59:DA:1327:C:H6	1.70	0.56
59:DA:2189:U:H2'	59:DA:2190:G:C8	2.41	0.56
60:DB:1:U:H2'	60:DB:2:C:H5	1.71	0.56
2:AC:189:ALA:HB3	2:AC:196:LEU:HB2	1.88	0.56
10:AK:27:ASN:HA	10:AK:56:GLY:HA2	1.87	0.56
11:AL:60:LEU:HB2	11:AL:62:SER:H	1.71	0.56
16:AQ:43:LEU:H	16:AQ:71:PHE:HD2	1.53	0.56
21:AA:41:G:H2'	21:AA:42:G:H8	1.70	0.56
21:AA:1261:A:H4'	21:AA:1284:C:OP1	2.05	0.56
26:BD:220:HIS:N	59:BA:1790:C:OP1	2.39	0.56
26:BD:259:THR:N	59:BA:1798:U:OP1	2.38	0.56
27:BE:61:ARG:HH11	27:BE:61:ARG:HG2	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:6:ALA:H	32:BK:59:ILE:HG22	1.70	0.56
33:BN:2:LYS:HE3	40:BU:101:ARG:HH22	1.70	0.56
39:BT:49:VAL:O	39:BT:64:ARG:HB3	2.06	0.56
50:B4:10:VAL:HG22	50:B4:11:PRO:HD2	1.88	0.56
59:BA:187:G:H21	59:BA:1366:A:H1'	1.69	0.56
59:BA:955:C:H2'	59:BA:956:G:H5'	1.86	0.56
59:BA:2147:G:H2'	59:BA:2148:G:O4'	2.05	0.56
1:CB:36:ARG:C	1:CB:38:GLY:H	2.14	0.56
4:CE:50:GLU:HB3	4:CE:53:LEU:HG	1.86	0.56
5:CF:43:LEU:N	5:CF:60:PHE:O	2.38	0.56
17:CR:71:LYS:NZ	21:CA:734:G:O2'	2.28	0.56
21:CA:443:C:N3	21:CA:491:G:N2	2.43	0.56
26:DD:34:VAL:HG21	26:DD:102:LYS:HG3	1.86	0.56
26:DD:78:LYS:HE2	26:DD:114:GLY:HA2	1.88	0.56
33:DN:82:LEU:HD22	33:DN:82:LEU:N	2.21	0.56
33:DN:99:LEU:C	33:DN:101:HIS:N	2.63	0.56
38:DS:25:ARG:HH21	38:DS:27:SER:HB2	1.71	0.56
59:DA:23:G:N2	59:DA:517:C:N3	2.45	0.56
59:DA:863:A:H2'	59:DA:864:G:H8	1.71	0.56
59:DA:1336:A:H2'	59:DA:1337:G:C8	2.41	0.56
59:DA:1372:U:H2'	59:DA:1373:A:C8	2.39	0.56
59:DA:1506:C:H2'	59:DA:1506(A):A:C8	2.40	0.56
59:DA:1570:A:H8	59:DA:1570:A:O5'	1.89	0.56
59:DA:1712(F):U:H2'	59:DA:1712(G):G:O4'	2.05	0.56
59:DA:1806:C:H2'	59:DA:1807:G:O4'	2.06	0.56
59:DA:1986:A:H2'	59:DA:1987:G:C8	2.41	0.56
59:DA:2200:C:N3	59:DA:2223:G:N2	2.44	0.56
59:DA:2244:U:O4	59:DA:2435:A:N7	2.39	0.56
1:AB:24:TRP:CD1	1:AB:24:TRP:H	2.21	0.56
21:AA:341:C:H2'	21:AA:342:C:H6	1.71	0.56
21:AA:571:U:O4	21:AA:864:A:N6	2.39	0.56
21:AA:1015:A:H1'	21:AA:1218:C:O2'	2.06	0.56
21:AA:1266:G:N2	21:AA:1270:C:N3	2.53	0.56
21:AA:1465:C:H2'	21:AA:1466:C:O4'	2.05	0.56
28:BF:117:ARG:NH2	28:BF:186:ILE:O	2.33	0.56
29:BG:19:LEU:HD11	29:BG:32:PRO:HG2	1.88	0.56
46:B0:44:ARG:NH1	59:BA:2330:G:O2'	2.37	0.56
59:BA:221:A:H4'	59:BA:222:A:O5'	2.05	0.56
59:BA:1027:A:H2'	59:BA:1028:A:H8	1.71	0.56
59:BA:1506(E):G:H2'	59:BA:1506(F):C:H6	1.70	0.56
59:BA:1830:C:H2'	59:BA:1831:G:H8	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BB:99:A:H3'	60:BB:100:G:H8	1.69	0.56
8:CI:42:ARG:HA	8:CI:45:ALA:HB3	1.87	0.56
21:CA:55:A:H62	21:CA:357:G:H21	1.54	0.56
21:CA:312:C:H2'	21:CA:313:A:C8	2.41	0.56
21:CA:565:U:H5''	21:CA:566:G:H2'	1.88	0.56
21:CA:837:G:H2'	21:CA:838:G:C8	2.40	0.56
21:CA:957:U:O2	21:CA:959:A:H8	1.88	0.56
21:CA:1440(C):G:C3'	21:CA:1440(D):A:H5'	2.36	0.56
21:CA:1535:C:H41	23:CV:9:G:C4'	2.17	0.56
21:CA:1536:C:N4	23:CV:8:A:C6	2.74	0.56
26:DD:242:ARG:NH2	59:DA:1825:A:O2'	2.39	0.56
36:DQ:35:VAL:HA	36:DQ:102:VAL:CA	2.24	0.56
46:D0:48:GLY:HA3	46:D0:80:HIS:CD2	2.40	0.56
48:D2:66:GLU:O	48:D2:69:ARG:HG2	2.05	0.56
59:DA:1172:G:H2'	59:DA:1174:U:H5'	1.87	0.56
59:DA:1296:G:N1	59:DA:1644:C:O2	2.33	0.56
59:DA:1972:A:H2'	59:DA:1973:G:C8	2.41	0.56
59:DA:2392:A:H2'	59:DA:2393:A:O4'	2.04	0.56
1:AB:85:ALA:C	1:AB:87:ARG:H	2.14	0.56
1:AB:92:TYR:CD2	1:AB:151:GLY:HA3	2.41	0.56
3:AD:173:TRP:HD1	3:AD:186:LEU:H	1.52	0.56
11:AL:15:ARG:NH2	21:AA:567:G:N7	2.53	0.56
11:AL:118:SER:HB3	21:AA:35:G:H21	1.70	0.56
21:AA:298:A:H2'	21:AA:299:G:C8	2.40	0.56
21:AA:419:C:N4	21:AA:424:G:H1	2.04	0.56
21:AA:1100:C:N4	21:AA:1103:C:OP1	2.39	0.56
21:AA:1118:C:H1'	21:AA:1179:A:C4	2.41	0.56
21:AA:1129:C:H5'	21:AA:1130:A:OP1	2.05	0.56
28:BF:142:TRP:HA	28:BF:145:GLU:HG3	1.87	0.56
28:BF:156:LEU:H	28:BF:176:LEU:H	1.53	0.56
32:BK:9:LYS:HA	32:BK:56:GLU:HA	1.88	0.56
33:BN:101:HIS:CD2	33:BN:101:HIS:C	2.84	0.56
35:BP:13:ASN:OD1	59:BA:598:G:O2'	2.24	0.56
53:B7:7:PRO:HB2	59:BA:1309:G:H4'	1.87	0.56
56:Be:63:ILE:HA	56:Be:117:ALA:HB3	1.88	0.56
59:BA:706:A:H2'	59:BA:707:G:O4'	2.06	0.56
59:BA:1812:A:H2'	59:BA:1813:G:C8	2.39	0.56
59:BA:2741:A:H62	59:BA:2763:G:H21	1.54	0.56
4:CE:14:ARG:HH22	21:CA:1079:G:H4'	1.71	0.56
7:CH:10:LEU:O	7:CH:13:ILE:HB	2.06	0.56
10:CK:25:TYR:HE1	10:CK:125:PHE:HZ	1.52	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:39:PRO:HD2	21:CA:684:A:H1'	1.87	0.56
24:CX:2:G:N1	24:CX:71:C:N4	2.21	0.56
25:DC:165:ARG:HG2	25:DC:166:ASN:H	1.71	0.56
33:DN:28:THR:H	33:DN:37:LYS:HD3	1.70	0.56
33:DN:45:ASN:HB3	33:DN:115:ARG:HE	1.71	0.56
33:DN:58:ASP:OD2	33:DN:59:LYS:NZ	2.32	0.56
42:DW:12:ILE:HG21	42:DW:17:VAL:HG13	1.88	0.56
48:D2:23:LYS:HA	48:D2:26:ARG:HD2	1.88	0.56
59:DA:542:C:N4	59:DA:551:G:H1	2.00	0.56
59:DA:694:U:H3	59:DA:768:G:H1	1.53	0.56
59:DA:863:A:H2'	59:DA:864:G:C8	2.40	0.56
59:DA:1023:U:O2'	59:DA:1122:G:H5''	2.06	0.56
59:DA:1496:A:H2'	59:DA:1498:C:C5	2.40	0.56
59:DA:2777:G:H4'	59:DA:2779:U:H5''	1.88	0.56
4:AE:102:ALA:HB2	4:AE:120:THR:HG23	1.87	0.56
7:AH:56:LYS:HD3	7:AH:57:PRO:HD2	1.87	0.56
17:AR:74:ARG:HD3	17:AR:81:PHE:HE2	1.71	0.56
21:AA:1535:C:N4	23:AV:8:A:H2	1.98	0.56
36:BQ:35:VAL:HG23	36:BQ:102:VAL:H	1.70	0.56
37:BR:55:ALA:HB1	37:BR:79:LEU:HD11	1.87	0.56
51:B5:9:LYS:HA	59:BA:2017:U:H4'	1.88	0.56
55:B9:10:ILE:HG13	55:B9:11:CYS:H	1.70	0.56
55:B9:25:VAL:HB	55:B9:34:GLN:HB2	1.86	0.56
59:BA:37:C:H2'	59:BA:38:A:C8	2.41	0.56
59:BA:377:C:H2'	59:BA:378:C:H6	1.68	0.56
59:BA:519:U:H2'	59:BA:520:G:C8	2.41	0.56
59:BA:1526:G:H3'	59:BA:1527:G:C8	2.41	0.56
59:BA:1526:G:H2'	59:BA:1527:G:O4'	2.06	0.56
59:BA:2842:G:H1	59:BA:2875:C:H42	1.52	0.56
3:CD:13:ARG:NH1	3:CD:38:TYR:O	2.39	0.56
3:CD:72:GLU:HB2	3:CD:76:ARG:HH12	1.70	0.56
4:CE:150:ARG:HA	4:CE:150:ARG:HE	1.71	0.56
19:CT:84:LEU:HG	19:CT:85:MET:N	2.21	0.56
20:CY:243:VAL:HA	20:CY:279:TYR:CE1	2.37	0.56
20:CY:312:LEU:HD13	20:CY:399:LEU:HD12	1.87	0.56
20:CY:655:TYR:CZ	20:CY:659:LEU:HB2	2.41	0.56
21:CA:20:U:H3	21:CA:915:A:N6	2.03	0.56
21:CA:762:C:H2'	21:CA:763:G:C8	2.41	0.56
21:CA:1027:C:H2'	21:CA:1028:C:H6	1.68	0.56
21:CA:1398:A:OP1	23:CV:24:C:N4	2.38	0.56
21:CA:1489:G:H2'	21:CA:1490:C:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:154:VAL:HG21	28:DF:173:VAL:HG13	1.88	0.56
30:DH:63:SER:O	30:DH:67:LEU:HB2	2.05	0.56
33:DN:71:ILE:O	33:DN:97:ARG:O	2.24	0.56
35:DP:27:HIS:NE2	59:DA:814:C:OP2	2.37	0.56
40:DU:92:ARG:O	40:DU:95:LEU:N	2.38	0.56
59:DA:29:U:O4	59:DA:511:U:O4	2.24	0.56
59:DA:787:U:H3'	59:DA:791:C:H41	1.71	0.56
59:DA:969:U:H2'	59:DA:970:C:C6	2.40	0.56
59:DA:1002:G:H1	59:DA:1153:C:N4	2.02	0.56
59:DA:2339:G:H2'	59:DA:2340:G:C8	2.40	0.56
60:DB:44:G:H4'	60:DB:46:A:N7	2.21	0.56
2:AC:69:HIS:HA	2:AC:104:GLN:O	2.06	0.56
7:AH:97:VAL:HG13	7:AH:98:LYS:H	1.71	0.56
9:AJ:49:VAL:HG22	9:AJ:50:ILE:H	1.71	0.56
11:AL:38:THR:HG23	11:AL:39:VAL:HG23	1.88	0.56
11:AL:52:LEU:HD12	11:AL:54:LYS:NZ	2.21	0.56
20:AY:160:ARG:HE	20:AY:162:VAL:HG23	1.71	0.56
21:AA:552:U:H2'	21:AA:553:A:H8	1.71	0.56
22:AW:8:U:H5'	22:AW:49:A:H5'	1.88	0.56
29:BG:176:LEU:HB3	29:BG:178:PHE:HE1	1.70	0.56
32:BK:132:ARG:HH11	32:BK:132:ARG:HB2	1.70	0.56
33:BN:97:ARG:HB3	33:BN:105:GLY:HA2	1.87	0.56
35:BP:6:LEU:HG	35:BP:8:PRO:HD2	1.88	0.56
36:BQ:81:VAL:HA	46:B0:4:LYS:HG2	1.86	0.56
40:BU:24:TYR:HD1	40:BU:28:ARG:HD2	1.71	0.56
59:BA:137(A):G:H5''	59:BA:137(B):G:OP2	2.04	0.56
59:BA:299:A:N1	59:BA:322:A:O2'	2.40	0.56
59:BA:307:G:N2	59:BA:310:A:O4'	2.38	0.56
59:BA:371:A:N6	59:BA:401:A:H3'	2.21	0.56
59:BA:839:U:H2'	59:BA:840:C:C6	2.41	0.56
59:BA:877:U:N3	59:BA:899:A:C2	2.66	0.56
59:BA:2298:A:H3'	59:BA:2299:G:H8	1.70	0.56
59:BA:2350:C:H2'	59:BA:2351:G:O4'	2.06	0.56
60:BB:83:G:H1	60:BB:93:C:H42	1.54	0.56
60:BB:87:G:N2	60:BB:89(B):A:OP2	2.39	0.56
7:CH:17:THR:HA	7:CH:78:GLN:HE21	1.71	0.56
15:CP:31:LYS:HG3	21:CA:607:A:C2	2.41	0.56
20:CY:114:VAL:HG23	20:CY:116:PRO:HD3	1.88	0.56
21:CA:68(R):C:H2'	21:CA:68(S):C:C5	2.40	0.56
21:CA:486:U:H2'	21:CA:487:A:C8	2.41	0.56
21:CA:664:G:H22	21:CA:741:G:H1	1.52	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1058:G:H1	21:CA:1199:U:H3	1.53	0.56
22:CW:52:G:H1	22:CW:62:C:N4	2.03	0.56
24:CX:75:C:H3'	24:CX:76:A:C5'	2.30	0.56
30:DH:41:MET:SD	30:DH:43:VAL:HG13	2.45	0.56
33:DN:50:ASP:O	33:DN:52:VAL:N	2.39	0.56
45:DZ:40:ASP:CG	45:DZ:41:LEU:H	2.14	0.56
59:DA:43:G:H2'	59:DA:44:A:C8	2.40	0.56
59:DA:300:A:N3	59:DA:319:C:H1'	2.21	0.56
59:DA:1468(E):G:H2'	59:DA:1468(F):C:C6	2.41	0.56
59:DA:2681:C:H41	59:DA:2725:A:H62	0.66	0.56
60:DB:29:A:H2'	60:DB:30:C:O4'	2.06	0.56
2:AC:7:PRO:HG3	2:AC:201:TYR:HE2	1.71	0.55
2:AC:31:HIS:HA	2:AC:34:LEU:HB2	1.89	0.55
2:AC:136:GLN:HA	2:AC:139:GLN:HB3	1.88	0.55
3:AD:25:ARG:HB2	21:AA:409:G:O5'	2.06	0.55
3:AD:162:LEU:HD22	3:AD:178:VAL:HG13	1.88	0.55
8:AI:128:ARG:NH2	21:AA:1231:G:OP1	2.39	0.55
15:AP:5:ARG:NH2	15:AP:26:ARG:O	2.38	0.55
15:AP:20:VAL:HA	15:AP:35:LYS:HA	1.89	0.55
21:AA:428:G:H4'	21:AA:429:U:OP1	2.05	0.55
21:AA:1028(E):G:N7	21:AA:1028(F):A:N6	2.54	0.55
21:AA:1414:U:H2'	21:AA:1415:G:C8	2.41	0.55
24:AX:1:G:H1	24:AX:72:C:N4	2.02	0.55
28:BF:125:LEU:CA	28:BF:194:MET:HB2	2.36	0.55
33:BN:28:THR:CA	33:BN:31:ALA:HB3	2.36	0.55
43:BX:36:LYS:HB3	59:BA:1598:C:H5'	1.89	0.55
52:B6:26:ASN:OD1	52:B6:27:LYS:N	2.37	0.55
59:BA:515:A:H3'	59:BA:516:C:C6	2.41	0.55
59:BA:793:A:H4'	59:BA:794:G:H5'	1.88	0.55
59:BA:1153:C:H3'	59:BA:1154:G:C8	2.41	0.55
59:BA:2099:U:O2	59:BA:2190:G:O6	2.23	0.55
59:BA:2248:C:H2'	59:BA:2275:C:H41	1.71	0.55
6:CG:64:GLN:NE2	6:CG:68:ASN:OD1	2.39	0.55
9:CJ:40:LEU:HD22	9:CJ:41:PRO:HD2	1.88	0.55
9:CJ:82:ILE:O	9:CJ:86:MET:HG2	2.06	0.55
10:CK:117:ASN:OD1	21:CA:716:A:O2'	2.24	0.55
21:CA:68(A):G:H2'	21:CA:68(B):G:H8	1.70	0.55
21:CA:156:G:N2	21:CA:165:C:N3	2.43	0.55
21:CA:538:G:H2'	21:CA:539:A:C8	2.41	0.55
26:DD:183:ARG:HH21	26:DD:260:ARG:HH22	1.53	0.55
28:DF:7:TYR:HD2	28:DF:19:GLU:HG3	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:143:GLN:HG3	59:DA:2744:G:H21	1.71	0.55
33:DN:46:VAL:HG11	33:DN:112:LEU:HB3	1.88	0.55
33:DN:74:ARG:H	33:DN:84:LYS:CB	2.18	0.55
33:DN:114:ARG:HA	59:DA:2779:U:OP1	2.07	0.55
35:DP:35:HIS:N	59:DA:1190:G:H5''	2.19	0.55
42:DW:89:ALA:HB1	59:DA:748:G:C8	2.41	0.55
46:D0:33:ALA:HB1	59:DA:2352:A:N3	2.20	0.55
59:DA:137(A):G:H2'	59:DA:137(C):G:N7	2.21	0.55
59:DA:1227:G:H2'	59:DA:1228:G:H8	1.71	0.55
59:DA:1362:C:O2	59:DA:1810:A:O2'	2.24	0.55
59:DA:1385:G:O6	59:DA:1402:C:N3	2.39	0.55
59:DA:2121:G:N2	59:DA:2177:C:N3	2.44	0.55
7:AH:98:LYS:H	7:AH:98:LYS:HD3	1.72	0.55
21:AA:106:C:H2'	21:AA:107:G:H8	1.71	0.55
23:AV:34:A:O2'	23:AV:35:A:OP1	2.24	0.55
26:BD:225:ALA:HB1	59:BA:1788:C:H5''	1.89	0.55
30:BH:103:LEU:O	30:BH:114:VAL:HA	2.06	0.55
32:BK:7:VAL:HB	32:BK:58:THR:HG23	1.88	0.55
33:BN:21:LYS:HG2	33:BN:22:THR:H	1.71	0.55
33:BN:29:LYS:O	33:BN:31:ALA:O	2.25	0.55
35:BP:56:SER:O	35:BP:58:THR:N	2.39	0.55
35:BP:88:LEU:HD11	35:BP:95:VAL:HG21	1.88	0.55
44:BY:68:HIS:HB3	44:BY:71:LYS:HE3	1.88	0.55
59:BA:344:G:N2	59:BA:345:A:N7	2.53	0.55
59:BA:755:C:H2'	59:BA:756:C:C6	2.41	0.55
59:BA:1172:G:H5''	59:BA:1173:A:OP2	2.06	0.55
59:BA:1356:G:H2'	59:BA:1357:U:H6	1.71	0.55
59:BA:1664:A:H3'	59:BA:1665:A:H8	1.69	0.55
59:BA:1782:C:H42	59:BA:2586:C:H42	0.68	0.55
59:BA:2355:C:H2'	59:BA:2356:C:O4'	2.06	0.55
59:BA:2623:G:H2'	59:BA:2624:G:H8	1.71	0.55
1:CB:27:LYS:HG2	1:CB:195:ASP:HB2	1.86	0.55
2:CC:20:SER:O	13:CN:54:PRO:HB3	2.06	0.55
2:CC:161:GLU:HB3	23:CV:25:A:H61	1.71	0.55
10:CK:111:ASP:HA	17:CR:84:LYS:HG3	1.88	0.55
14:CO:88:ARG:NE	14:CO:88:ARG:HA	2.22	0.55
21:CA:658:G:N2	21:CA:747:C:C2	2.72	0.55
21:CA:947:G:H4'	21:CA:1332:A:C2	2.40	0.55
25:DC:124:VAL:HB	25:DC:139:PRO:HG2	1.87	0.55
33:DN:62:VAL:HG11	33:DN:67:LEU:HG	1.88	0.55
33:DN:97:ARG:HA	33:DN:104:LYS:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:649:G:H2'	59:DA:650:C:H6	1.71	0.55
7:AH:113:SER:HB3	7:AH:134:ILE:HD13	1.87	0.55
10:AK:52:GLY:O	10:AK:55:LYS:HB3	2.06	0.55
14:AO:58:MET:SD	14:AO:58:MET:N	2.79	0.55
20:AY:146:LEU:O	20:AY:150:ILE:HG12	2.06	0.55
20:AY:227:ILE:HA	20:AY:230:LYS:HB3	1.87	0.55
21:AA:395:C:H2'	21:AA:396:G:C8	2.41	0.55
21:AA:609:A:H8	21:AA:609:A:O5'	1.90	0.55
21:AA:691:G:H2'	21:AA:692:U:C6	2.42	0.55
21:AA:1347:G:N1	21:AA:1374:A:OP2	2.34	0.55
26:BD:132:PRO:HB2	26:BD:135:PHE:HD1	1.70	0.55
27:BE:14:ILE:O	27:BE:21:VAL:HG22	2.06	0.55
27:BE:151:TYR:O	27:BE:154:LYS:HB2	2.06	0.55
29:BG:113:ARG:HA	29:BG:113:ARG:NE	2.18	0.55
31:BJ:23:UNK:O	31:BJ:84:UNK:C	2.55	0.55
33:BN:35:ARG:NE	33:BN:38:HIS:C	2.64	0.55
42:BW:10:VAL:HG12	42:BW:11:ARG:H	1.71	0.55
43:BX:53:LYS:HB3	43:BX:82:GLN:CB	2.35	0.55
48:B2:4:SER:HA	48:B2:7:ARG:HB2	1.88	0.55
59:BA:224:G:OP2	59:BA:408:G:N2	2.36	0.55
59:BA:590:A:H2'	59:BA:591:C:O4'	2.06	0.55
59:BA:837:C:N3	59:BA:941:A:N6	2.54	0.55
59:BA:926:A:H2'	59:BA:928:G:H8	1.71	0.55
59:BA:2715:C:H2'	59:BA:2716:U:C6	2.41	0.55
9:CJ:50:ILE:HA	9:CJ:60:ARG:HA	1.89	0.55
11:CL:113:ARG:HE	11:CL:116:SER:H	1.53	0.55
21:CA:184:G:C6	21:CA:193:C:N3	2.73	0.55
21:CA:315:A:H4'	21:CA:317:G:OP2	2.06	0.55
21:CA:815:A:N6	21:CA:1509:C:H1'	2.21	0.55
27:DE:13:ARG:HA	27:DE:21:VAL:C	2.30	0.55
35:DP:24:GLY:O	59:DA:811:U:H2'	2.06	0.55
48:D2:14:ARG:HH22	59:DA:78:A:H5'	1.71	0.55
51:D5:19:ARG:HD3	59:DA:1265:A:H5''	1.88	0.55
52:D6:53:LYS:HG3	52:D6:54:ILE:HG12	1.87	0.55
55:D9:7:VAL:HB	55:D9:25:VAL:HG21	1.87	0.55
59:DA:331:A:OP1	59:DA:1209:G:N2	2.40	0.55
59:DA:357(G):A:H2'	59:DA:357(H):G:H8	1.70	0.55
59:DA:797:C:H2'	59:DA:798:G:C8	2.41	0.55
59:DA:1347:G:H2'	59:DA:1348:G:C8	2.41	0.55
59:DA:1689:A:OP2	59:DA:1698:A:N6	2.38	0.55
59:DA:1849:G:H2'	59:DA:1850:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2633:G:O6	59:DA:2785:C:N3	2.39	0.55
59:DA:2678:C:N3	59:DA:2729:G:O6	2.39	0.55
8:AI:103:THR:HG23	21:AA:1180:A:H5''	1.88	0.55
19:AT:75:ASN:HB2	21:AA:262:A:H4'	1.88	0.55
21:AA:542:G:H2'	21:AA:543:C:H6	1.71	0.55
21:AA:1526:G:H2'	21:AA:1527:C:O4'	2.06	0.55
26:BD:67:PHE:CD2	26:BD:153:ALA:HB3	2.41	0.55
28:BF:62:ARG:NH1	59:BA:468:G:O2'	2.39	0.55
33:BN:82:LEU:HD21	59:BA:2039:C:P	2.47	0.55
33:BN:90:MET:HA	33:BN:93:THR:H	1.72	0.55
43:BX:57:LEU:HD21	43:BX:78:LYS:HE2	1.87	0.55
59:BA:628:G:H1'	59:BA:637:A:N1	2.20	0.55
59:BA:780:G:H21	59:BA:783:A:H62	1.53	0.55
59:BA:1954:G:N3	59:BA:2551:C:H5'	2.22	0.55
60:BB:19:G:H2'	60:BB:20:C:H6	1.72	0.55
3:CD:31:CYS:N	3:CD:33:MET:H	2.04	0.55
3:CD:170:VAL:HG13	3:CD:176:LEU:HD23	1.88	0.55
5:CF:90:VAL:O	21:CA:736:C:O2'	2.14	0.55
17:CR:45:SER:HB3	17:CR:51:LEU:HD11	1.88	0.55
20:CY:77:HIS:CD2	20:CY:277:VAL:HG21	2.41	0.55
20:CY:87:HIS:NE2	20:CY:117:GLN:HG3	2.22	0.55
20:CY:145:ASP:OD2	20:CY:148:LEU:HB3	2.07	0.55
21:CA:452:A:N7	21:CA:480:U:O4	2.40	0.55
21:CA:943:U:C4	21:CA:1340:A:N1	2.74	0.55
26:DD:12:SER:HB2	26:DD:208:LYS:HB3	1.87	0.55
26:DD:95:LEU:HD11	26:DD:103:ARG:HB2	1.89	0.55
56:De:105:LYS:HA	56:De:108:ALA:HB3	1.87	0.55
59:DA:20:C:H2'	59:DA:21:A:H8	1.70	0.55
59:DA:374:A:H62	59:DA:400:G:H21	1.54	0.55
59:DA:939:G:H2'	59:DA:940:G:H8	1.70	0.55
59:DA:2086:U:H2'	59:DA:2087:G:C8	2.41	0.55
59:DA:2661:G:C6	59:DA:2662:A:C2	2.95	0.55
59:DA:2696:U:H2'	59:DA:2697:G:H8	1.71	0.55
1:AB:97:TRP:CZ3	1:AB:172:ILE:HG13	2.41	0.55
6:AG:29:LYS:HD2	6:AG:102:ARG:HG3	1.87	0.55
7:AH:127:LEU:HB3	7:AH:129:VAL:HG22	1.89	0.55
8:AI:128:ARG:NH1	22:AW:31:A:OP1	2.39	0.55
12:AM:25:ILE:HG23	12:AM:29:ARG:HB2	1.87	0.55
15:AP:10:GLY:HA2	21:AA:624:C:H4'	1.89	0.55
21:AA:68(C):C:H2'	21:AA:68(D):C:H6	1.72	0.55
21:AA:376:G:H2'	21:AA:377:G:H8	1.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:185:LYS:O	25:BC:189:ASN:ND2	2.40	0.55
33:BN:93:THR:HA	59:BA:2639:A:H4'	1.89	0.55
35:BP:61:ARG:HD2	54:B8:13:ARG:HH11	1.70	0.55
35:BP:113:LYS:HE2	59:BA:636:G:C5	2.41	0.55
36:BQ:35:VAL:HA	36:BQ:102:VAL:CA	2.29	0.55
39:BT:35:LYS:HD3	39:BT:41:ARG:HD2	1.89	0.55
47:B1:21:ARG:HD3	59:BA:2080:G:OP1	2.06	0.55
48:B2:5:GLU:HA	48:B2:8:LYS:HB3	1.87	0.55
59:BA:270(I):G:H2'	59:BA:270(J):G:O4'	2.05	0.55
59:BA:2008:C:H2'	59:BA:2009:G:H8	1.70	0.55
59:BA:2546:U:H4'	59:BA:2566:A:H2	1.70	0.55
3:CD:23:GLY:HA3	3:CD:113:SER:HB2	1.89	0.55
5:CF:7:ASN:ND2	17:CR:34:TYR:HE1	2.05	0.55
10:CK:30:VAL:HG22	10:CK:43:SER:O	2.06	0.55
18:CS:76:PRO:C	18:CS:78:ARG:H	2.15	0.55
20:CY:628:ARG:NH2	20:CY:651:GLU:HB2	2.22	0.55
21:CA:145:G:H1	21:CA:177:C:H42	1.55	0.55
21:CA:1161:C:H42	21:CA:1175:G:H1	1.53	0.55
22:CW:4:U:O2'	59:DA:1850:G:O3'	2.24	0.55
28:DF:31:HIS:HB2	35:DP:13:ASN:HB3	1.89	0.55
32:DK:9:LYS:HD3	32:DK:9:LYS:H	1.72	0.55
33:DN:35:ARG:NH2	33:DN:37:LYS:O	2.40	0.55
33:DN:74:ARG:O	33:DN:83:LYS:C	2.50	0.55
35:DP:11:GLY:O	35:DP:13:ASN:N	2.39	0.55
41:DV:4:ILE:HA	41:DV:12:TYR:O	2.07	0.55
41:DV:71:LEU:H	41:DV:71:LEU:HD23	1.72	0.55
50:D4:28:LYS:HB3	50:D4:31:ILE:HD11	1.87	0.55
55:D9:13:LYS:HB2	55:D9:27:CYS:SG	2.47	0.55
59:DA:307:G:N2	59:DA:330:A:H62	2.04	0.55
59:DA:797:C:H2'	59:DA:798:G:H8	1.71	0.55
59:DA:918:A:H62	59:DA:2268:A:H62	1.55	0.55
59:DA:1777:U:O4	59:DA:1787:A:N1	2.39	0.55
59:DA:1831:G:H21	63:DA:2901:NMY:HN61	1.53	0.55
59:DA:2398:U:O4	59:DA:2418:A:N1	2.40	0.55
59:DA:2701:C:H2'	59:DA:2702:U:H2'	1.88	0.55
1:AB:92:TYR:CE1	1:AB:94:ASN:HB3	2.42	0.55
10:AK:61:ALA:HB1	10:AK:94:ALA:HB2	1.87	0.55
20:AY:466:LEU:HA	20:AY:470:PHE:HD2	1.70	0.55
21:AA:293:G:H5'	21:AA:610:G:N2	2.22	0.55
21:AA:784:C:H2'	21:AA:785:G:C8	2.42	0.55
21:AA:966:G:N2	23:AV:18:G:H22	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1268:A:H2'	21:AA:1269:A:C8	2.41	0.55
26:BD:43:ARG:HD3	59:BA:691:C:H4'	1.88	0.55
26:BD:165:ILE:HG22	26:BD:166:GLN:H	1.72	0.55
37:BR:3:HIS:HB3	59:BA:1654:A:OP2	2.06	0.55
37:BR:10:LEU:HB3	37:BR:17:ARG:NH2	2.22	0.55
41:BV:24:LYS:HD3	59:BA:1163:G:H5'	1.87	0.55
59:BA:538:G:H2'	59:BA:539:G:C8	2.40	0.55
59:BA:883:G:O6	59:BA:893:C:N3	2.39	0.55
59:BA:1133:U:O4	59:BA:2026:C:H1'	2.06	0.55
59:BA:1306:C:H2'	59:BA:1307:A:H8	1.71	0.55
1:CB:167:PRO:HG2	1:CB:192:SER:HB3	1.89	0.55
1:CB:179:LYS:NZ	21:CA:1075:C:H5'	2.22	0.55
3:CD:125:HIS:CD2	3:CD:151:LYS:HE3	2.41	0.55
6:CG:30:ILE:HD13	6:CG:43:PHE:HB2	1.88	0.55
7:CH:46:LYS:HB3	7:CH:62:TYR:HB3	1.86	0.55
13:CN:45:ARG:NH2	21:CA:1059:C:H5''	2.21	0.55
16:CQ:18:THR:OG1	16:CQ:69:LYS:HD2	2.07	0.55
20:CY:22:ASP:CB	61:CY:701:GDP:H5''	2.34	0.55
20:CY:566:THR:HG22	20:CY:567:LEU:H	1.72	0.55
21:CA:237:C:H2'	21:CA:238:G:C8	2.41	0.55
21:CA:834:C:H2'	21:CA:835:U:C6	2.42	0.55
21:CA:936:C:H2'	21:CA:937:A:H8	1.70	0.55
21:CA:1128:C:H1'	21:CA:1144:G:H22	1.71	0.55
21:CA:1404:C:H2'	21:CA:1405:G:C8	2.40	0.55
21:CA:1476:G:H2'	21:CA:1477:C:H6	1.69	0.55
25:DC:115:VAL:HG12	25:DC:154:ILE:HD11	1.88	0.55
33:DN:106:MET:O	33:DN:108:PRO:HD2	2.06	0.55
38:DS:25:ARG:NH2	38:DS:40:ILE:HG21	2.21	0.55
48:D2:5:GLU:HA	48:D2:8:LYS:HB3	1.89	0.55
59:DA:247:G:H1'	59:DA:251:A:N6	2.21	0.55
59:DA:307:G:H21	59:DA:330:A:H62	1.53	0.55
59:DA:504:U:H5''	59:DA:505:A:H5'	1.86	0.55
59:DA:566:U:H2'	59:DA:567:A:H8	1.72	0.55
59:DA:1339:G:H21	59:DA:1603:A:H1'	1.71	0.55
59:DA:2820:A:OP2	59:DA:2821:A:N6	2.28	0.55
4:AE:135:THR:O	4:AE:139:LEU:HG	2.06	0.55
9:AJ:6:ILE:HB	9:AJ:98:ILE:HG23	1.87	0.55
21:AA:186(D):C:H2'	21:AA:186(E):C:H6	1.72	0.55
21:AA:244:U:O4	21:AA:893:C:N3	2.39	0.55
21:AA:1015:A:H2'	21:AA:1016:A:C8	2.42	0.55
25:BC:114:VAL:C	25:BC:116:ALA:H	2.14	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:34:LEU:HD12	29:BG:99:MET:HE2	1.87	0.55
32:BK:9:LYS:HD3	32:BK:9:LYS:H	1.71	0.55
34:BO:71:ARG:HH22	34:BO:104:ARG:HG3	1.70	0.55
59:BA:172:C:H2'	59:BA:173:G:H8	1.72	0.55
59:BA:531:C:H4'	59:BA:532:A:O5'	2.07	0.55
59:BA:611(G):G:H2'	59:BA:617:G:O4'	2.05	0.55
59:BA:1165:U:H2'	59:BA:1166:C:C6	2.41	0.55
60:BB:14:U:H4'	60:BB:69:G:N2	2.22	0.55
10:CK:30:VAL:O	10:CK:42:TRP:HA	2.07	0.55
15:CP:8:ARG:HE	15:CP:15:PRO:HA	1.71	0.55
21:CA:138:G:H2'	21:CA:139:G:O4'	2.07	0.55
21:CA:1422:G:H1	21:CA:1478:C:N4	2.00	0.55
26:DD:112:GLN:HG2	26:DD:113:VAL:H	1.71	0.55
28:DF:169:ASN:O	59:DA:323:G:O2'	2.17	0.55
39:DT:30:VAL:HG13	39:DT:84:GLN:HE21	1.71	0.55
44:DY:95:LYS:HG3	44:DY:100:ALA:HA	1.89	0.55
59:DA:20:C:H2'	59:DA:21:A:C8	2.42	0.55
59:DA:155(D):U:H5''	59:DA:155(E):U:OP2	2.07	0.55
59:DA:224:G:H1	59:DA:231:C:N4	2.01	0.55
59:DA:2819:G:H2'	59:DA:2821:A:N7	2.22	0.55
60:DB:22:U:C2	60:DB:61:G:O6	2.54	0.55
60:DB:79:C:N4	60:DB:97:G:H1	2.05	0.55
1:AB:81:VAL:HG12	1:AB:215:LEU:HD13	1.88	0.55
6:AG:25:ALA:O	6:AG:29:LYS:HG2	2.07	0.55
8:AI:55:ALA:C	8:AI:57:GLY:H	2.15	0.55
10:AK:115:PRO:HA	21:AA:675:A:C2	2.41	0.55
20:AY:30:GLU:C	20:AY:33:LEU:H	2.15	0.55
20:AY:663:THR:O	20:AY:665:GLY:N	2.40	0.55
21:AA:196:A:O3'	21:AA:197:A:H2'	2.07	0.55
27:BE:103:ASP:OD2	27:BE:199:ARG:NH2	2.39	0.55
33:BN:72:TYR:HB3	33:BN:101:HIS:CG	2.41	0.55
33:BN:100:GLU:O	33:BN:103:VAL:N	2.40	0.55
37:BR:99:LYS:HD3	37:BR:99:LYS:H	1.72	0.55
40:BU:6:THR:HB	59:BA:584:C:OP1	2.07	0.55
41:BV:19:LYS:HG3	41:BV:20:LEU:N	2.22	0.55
53:B7:21:ARG:HH22	59:BA:466:A:H5'	1.71	0.55
59:BA:515:A:H3'	59:BA:516:C:H6	1.72	0.55
59:BA:596:G:H2'	59:BA:597:U:O4'	2.05	0.55
59:BA:601:C:H2'	59:BA:602:G:O4'	2.06	0.55
59:BA:1139:G:H2'	59:BA:1140:C:C6	2.41	0.55
59:BA:1406:U:H2'	59:BA:1407:C:H6	1.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1853:A:H2'	59:BA:1854:A:H8	1.71	0.55
59:BA:1986:A:H2'	59:BA:1987:G:C8	2.42	0.55
1:CB:208:ILE:HD12	1:CB:208:ILE:H	1.72	0.55
10:CK:78:GLN:HA	10:CK:103:LEU:HD12	1.89	0.55
17:CR:71:LYS:O	17:CR:75:ILE:HG12	2.07	0.55
20:CY:266:ASN:OD1	20:CY:266:ASN:N	2.30	0.55
21:CA:598:U:H2'	21:CA:599:C:H6	1.72	0.55
21:CA:950:U:O4	21:CA:1231:G:O6	2.24	0.55
21:CA:1203:C:H2'	21:CA:1204:A:C8	2.41	0.55
24:CX:52:G:N2	24:CX:62:C:C2	2.75	0.55
26:DD:157:ARG:NH2	59:DA:1817:G:H3'	2.22	0.55
27:DE:112:GLY:HA3	59:DA:2822:G:H5''	1.89	0.55
33:DN:74:ARG:HG2	33:DN:74:ARG:NH1	2.22	0.55
35:DP:49:ARG:O	35:DP:50:ARG:HB3	2.07	0.55
38:DS:46:VAL:HG13	60:DB:113:C:H4'	1.89	0.55
59:DA:190:A:N6	59:DA:207:A:H1'	2.21	0.55
59:DA:1327:C:H3'	59:DA:1328:G:C8	2.41	0.55
59:DA:1905:C:N4	59:DA:1969:A:OP2	2.40	0.55
59:DA:2020:A:N1	59:DA:2034:U:O4	2.40	0.55
59:DA:2075:U:H2'	59:DA:2077:A:OP2	2.07	0.55
59:DA:2134:A:C2	59:DA:2159:G:H1'	2.37	0.55
59:DA:2175:C:H2'	59:DA:2176:A:C8	2.41	0.55
59:DA:2266:A:H1'	59:DA:2272:U:C4	2.41	0.55
1:AB:19:HIS:CG	1:AB:20:GLU:N	2.74	0.55
1:AB:92:TYR:HE1	1:AB:94:ASN:HB3	1.71	0.55
4:AE:79:GLU:O	7:AH:104:ARG:NH1	2.40	0.55
5:AF:99:ALA:O	5:AF:100:ASN:ND2	2.28	0.55
7:AH:21:LYS:O	7:AH:63:LEU:HD11	2.06	0.55
16:AQ:79:SER:OG	16:AQ:80:GLY:N	2.40	0.55
20:AY:165:GLN:HA	20:AY:180:VAL:H	1.72	0.55
21:AA:139:G:N2	21:AA:224:C:C2	2.75	0.55
21:AA:849:C:H2'	21:AA:850:U:O4'	2.06	0.55
27:BE:47:VAL:HG21	27:BE:85:ASN:HA	1.89	0.55
38:BS:85:VAL:HG23	38:BS:106:ARG:HH11	1.72	0.55
45:BZ:89:PHE:CE2	60:BB:104:A:H4'	2.41	0.55
45:BZ:99:TYR:HA	45:BZ:124:ILE:O	2.06	0.55
59:BA:1071:G:H1'	59:BA:1089:G:H2'	1.88	0.55
59:BA:1821:A:H2'	59:BA:1822:G:C8	2.42	0.55
59:BA:2086:U:H2'	59:BA:2087:G:C8	2.42	0.55
59:BA:2884:U:H3'	59:BA:2885:C:H6	1.72	0.55
1:CB:152:PHE:CZ	1:CB:155:LEU:HB3	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:13:ARG:HH12	3:CD:38:TYR:H	1.53	0.55
9:CJ:40:LEU:HD21	21:CA:1280:A:C8	2.42	0.55
9:CJ:51:ARG:O	13:CN:45:ARG:NH1	2.40	0.55
11:CL:116:SER:O	11:CL:120:TYR:N	2.39	0.55
21:CA:293:G:H5'	21:CA:610:G:N2	2.21	0.55
21:CA:302:G:H2'	21:CA:303:A:C8	2.41	0.55
21:CA:783:C:H2'	21:CA:784:C:C6	2.42	0.55
21:CA:1016:A:H2'	21:CA:1017:G:O4'	2.07	0.55
36:DQ:124:LYS:NZ	59:DA:2467:C:O2	2.40	0.55
40:DU:25:TRP:NE1	59:DA:17:G:H4'	2.22	0.55
45:DZ:44:PHE:O	45:DZ:48:PHE:HB2	2.07	0.55
45:DZ:120:ILE:HG13	45:DZ:172:ALA:HA	1.89	0.55
47:D1:27:GLU:HA	47:D1:31:GLY:HA2	1.88	0.55
52:D6:8:LYS:HD2	52:D6:27:LYS:HD2	1.89	0.55
59:DA:108:U:H2'	59:DA:109:G:C8	2.42	0.55
59:DA:240:G:O2'	59:DA:257:A:N6	2.39	0.55
59:DA:271(R):C:H2'	59:DA:271(S):C:C6	2.42	0.55
59:DA:558:G:H2'	59:DA:559:G:C8	2.42	0.55
59:DA:675:A:H8	59:DA:803:U:H3	1.50	0.55
59:DA:1012:U:O2	59:DA:1143:A:N7	2.40	0.55
59:DA:1074:G:H2'	59:DA:1075:C:H6	1.71	0.55
59:DA:1290:C:H2'	59:DA:1291:C:H6	1.72	0.55
59:DA:1586:A:H3'	59:DA:1587:A:H8	1.71	0.55
59:DA:1807:G:O2'	59:DA:1810:A:N6	2.40	0.55
2:AC:30:ARG:O	2:AC:34:LEU:HB2	2.07	0.55
2:AC:173:VAL:C	21:AA:1107:C:H5''	2.32	0.55
10:AK:83:ILE:HA	10:AK:109:VAL:HB	1.89	0.55
20:AY:108:PHE:O	20:AY:137:ASN:N	2.40	0.55
21:AA:861:G:O2'	21:AA:874:G:O2'	2.22	0.55
21:AA:1120:G:H2'	21:AA:1121:U:H6	1.70	0.55
21:AA:1203:C:H2'	21:AA:1204:A:C8	2.42	0.55
22:AW:15:G:N2	22:AW:48:C:C2	2.64	0.55
27:BE:143:ASN:ND2	27:BE:146:THR:O	2.40	0.55
29:BG:29:TRP:HB3	60:BB:57:A:C2	2.42	0.55
29:BG:111:LEU:C	29:BG:113:ARG:H	2.15	0.55
29:BG:126:ASP:HB3	29:BG:128:ARG:H	1.70	0.55
42:BW:100:THR:OG1	42:BW:101:SER:N	2.40	0.55
45:BZ:132:ASN:HB3	45:BZ:134:PRO:HD3	1.88	0.55
46:B0:19:LYS:HG2	46:B0:20:ARG:H	1.73	0.55
59:BA:629:G:H2'	59:BA:630:G:H8	1.70	0.55
59:BA:2090:G:H2'	59:BA:2091:U:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:98:LEU:HB2	1:CB:101:MET:HE3	1.88	0.55
7:CH:96:GLY:HA3	21:CA:600:C:OP1	2.07	0.55
11:CL:124:LYS:O	11:CL:126:LYS:N	2.39	0.55
20:CY:489:LYS:HG2	20:CY:598:ASP:HB2	1.89	0.55
21:CA:692:U:H1'	21:CA:695:A:N7	2.22	0.55
21:CA:934:C:H42	21:CA:938:A:H2	1.51	0.55
21:CA:995:C:H2'	21:CA:996:A:C8	2.41	0.55
21:CA:1239:A:N6	21:CA:1299:A:C6	2.57	0.55
24:CX:1:G:N2	24:CX:72:C:N3	2.55	0.55
25:DC:212:SER:HG	59:DA:2177:C:HO2'	1.55	0.55
28:DF:24:LEU:HB3	28:DF:25:PRO:CD	2.37	0.55
28:DF:93:LYS:HD3	28:DF:94:PRO:HD2	1.88	0.55
28:DF:155:LEU:HD22	28:DF:186:ILE:HA	1.87	0.55
33:DN:35:ARG:NE	33:DN:37:LYS:O	2.40	0.55
33:DN:38:HIS:HA	59:DA:1006:C:O2'	2.07	0.55
37:DR:25:ALA:HB2	37:DR:47:PHE:CZ	2.39	0.55
42:DW:69:LEU:HD22	42:DW:107:LEU:HD23	1.89	0.55
51:D5:4:HIS:HB2	51:D5:5:PRO:HD3	1.88	0.55
59:DA:1215:G:H2'	59:DA:1216:G:H8	1.71	0.55
59:DA:1389:G:H5'	59:DA:1526:G:H5''	1.89	0.55
59:DA:1406:U:H2'	59:DA:1407:C:C6	2.42	0.55
59:DA:1636:C:H2'	59:DA:1637:A:C8	2.40	0.55
59:DA:2646:C:H2'	59:DA:2647:U:O4'	2.07	0.55
59:DA:2751:G:N2	59:DA:2751:G:OP1	2.40	0.55
1:AB:28:PHE:O	1:AB:32:ILE:HG12	2.07	0.54
7:AH:124:ALA:HA	7:AH:127:LEU:HB2	1.89	0.54
11:AL:36:VAL:H	11:AL:58:VAL:HA	1.72	0.54
20:AY:150:ILE:HA	20:AY:153:MET:SD	2.47	0.54
21:AA:1126:U:C5	21:AA:1148:U:C4	2.95	0.54
21:AA:1359:C:H1'	21:AA:1362:C:N4	2.22	0.54
26:BD:45:ASN:N	26:BD:45:ASN:OD1	2.39	0.54
26:BD:259:THR:OG1	26:BD:260:ARG:N	2.27	0.54
27:BE:50:GLY:HA3	27:BE:78:LEU:HD23	1.88	0.54
28:BF:40:GLN:NE2	28:BF:184:TYR:HB2	2.23	0.54
30:BH:62:LYS:HA	30:BH:65:HIS:HB3	1.88	0.54
40:BU:25:TRP:O	40:BU:28:ARG:NE	2.36	0.54
59:BA:2133:G:N2	59:BA:2158:A:N6	2.29	0.54
59:BA:2553:G:H5''	59:BA:2554:U:C6	2.42	0.54
59:BA:2814:C:H42	59:BA:2886:G:H1	1.53	0.54
8:CI:28:VAL:HG22	8:CI:63:ILE:HG13	1.89	0.54
12:CM:87:TYR:HA	12:CM:90:LEU:HD12	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:467:LYS:NZ	20:CY:472:VAL:O	2.32	0.54
20:CY:554:PRO:HG2	20:CY:594:VAL:HB	1.88	0.54
21:CA:1285:A:H4'	21:CA:1286:A:O5'	2.06	0.54
25:DC:166:ASN:HB2	25:DC:170:GLY:HA2	1.89	0.54
28:DF:2:LYS:O	28:DF:4:VAL:N	2.40	0.54
28:DF:45:ARG:HB3	28:DF:97:TYR:HD2	1.70	0.54
37:DR:42:LYS:O	37:DR:45:ARG:HG3	2.06	0.54
39:DT:22:PHE:HD2	39:DT:85:LYS:HZ2	1.53	0.54
44:DY:7:VAL:HG21	59:DA:336:C:H5''	1.89	0.54
47:D1:18:ILE:C	47:D1:20:ARG:N	2.65	0.54
59:DA:193:U:H5'	59:DA:802:A:H2'	1.87	0.54
59:DA:238:C:H4'	59:DA:608:A:O2'	2.07	0.54
59:DA:372:G:O2'	59:DA:400:G:O6	2.19	0.54
59:DA:1800:C:H42	59:DA:1817:G:N2	2.05	0.54
59:DA:2048:G:H2'	59:DA:2049:G:O4'	2.06	0.54
59:DA:2639:A:H2'	59:DA:2640:G:C8	2.41	0.54
59:DA:2652:C:N3	59:DA:2668:G:N2	2.43	0.54
3:AD:19:LEU:HB2	3:AD:21:LEU:HG	1.89	0.54
6:AG:94:ARG:NH2	21:AA:1378:C:O4'	2.41	0.54
16:AQ:43:LEU:HB3	16:AQ:69:LYS:HG3	1.89	0.54
17:AR:71:LYS:HA	17:AR:74:ARG:HG3	1.89	0.54
21:AA:109:A:H61	21:AA:324:G:H1'	1.71	0.54
21:AA:666:G:H2'	21:AA:667:G:H8	1.72	0.54
21:AA:1094:G:O2'	21:AA:1095:U:OP2	2.24	0.54
26:BD:206:LEU:HB3	26:BD:211:ARG:HD3	1.89	0.54
33:BN:73:THR:HA	33:BN:84:LYS:HB2	1.89	0.54
37:BR:45:ARG:O	37:BR:49:ASP:HB2	2.06	0.54
59:BA:848:G:C2	59:BA:933:A:H1'	2.43	0.54
59:BA:848:G:H2'	59:BA:849:A:C8	2.42	0.54
59:BA:889:C:O2'	59:BA:890:A:O4'	2.24	0.54
59:BA:1423:G:H1'	59:BA:1492:G:H21	1.71	0.54
59:BA:2628:C:O2'	59:BA:2781:A:H2'	2.07	0.54
2:CC:54:ARG:O	2:CC:69:HIS:HB2	2.07	0.54
7:CH:36:LEU:HA	7:CH:39:LEU:HB2	1.90	0.54
11:CL:56:ALA:CB	11:CL:68:ALA:HB3	2.19	0.54
21:CA:1272:G:H3'	21:CA:1273:G:H5''	1.89	0.54
21:CA:1345:U:H4'	21:CA:1346:A:H5'	1.88	0.54
26:DD:50:THR:HB	59:DA:1805:U:O2	2.07	0.54
29:DG:27:ASN:HB3	29:DG:30:GLU:HB3	1.89	0.54
32:DK:117:THR:OG1	32:DK:119:ASP:OD1	2.24	0.54
48:D2:21:LEU:O	48:D2:25:VAL:HG23	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D2:25:VAL:HG22	48:D2:60:LEU:HB3	1.88	0.54
59:DA:600:G:N2	59:DA:605:C:O3'	2.41	0.54
59:DA:641:C:H2'	59:DA:642:G:O4'	2.07	0.54
59:DA:1194:A:H2'	59:DA:1195:G:C8	2.42	0.54
59:DA:1503:U:H2'	59:DA:1504:C:C6	2.42	0.54
59:DA:1779:U:H2'	59:DA:1783:A:H62	1.72	0.54
1:AB:156:LYS:O	1:AB:157:ARG:HB2	2.08	0.54
1:AB:162:ILE:O	1:AB:162:ILE:HG13	2.08	0.54
2:AC:39:ILE:O	2:AC:43:LEU:HG	2.07	0.54
4:AE:26:PHE:O	4:AE:27:ARG:HB2	2.08	0.54
7:AH:86:ILE:O	7:AH:88:LYS:N	2.40	0.54
16:AQ:45:HIS:CB	16:AQ:72:ARG:HA	2.35	0.54
21:AA:741:G:H2'	21:AA:742:G:H8	1.71	0.54
22:AW:12:U:H3	22:AW:23:A:H61	0.70	0.54
28:BF:7:TYR:HD1	28:BF:7:TYR:N	2.05	0.54
33:BN:104:LYS:N	33:BN:120:LEU:HD11	2.23	0.54
38:BS:15:ARG:HH11	38:BS:17:ARG:HD2	1.72	0.54
59:BA:65:C:O2	59:BA:456:C:N4	2.40	0.54
59:BA:594:U:H2'	59:BA:595:C:C6	2.42	0.54
59:BA:1073:A:H2'	59:BA:1074:G:O4'	2.08	0.54
59:BA:1414:G:C2	59:BA:1588:C:N3	2.74	0.54
59:BA:1527:G:H2'	59:BA:1544:A:N7	2.21	0.54
1:CB:106:LYS:H	1:CB:106:LYS:HD2	1.71	0.54
7:CH:96:GLY:O	7:CH:100:ILE:HG13	2.07	0.54
21:CA:920:U:H2'	21:CA:921:U:C6	2.41	0.54
21:CA:1238:A:H2	21:CA:1241:G:N3	2.05	0.54
21:CA:1320:C:H2'	21:CA:1321:C:C6	2.43	0.54
33:DN:43:THR:OG1	59:DA:558:G:OP1	2.26	0.54
39:DT:27:THR:HG23	39:DT:28:VAL:H	1.72	0.54
44:DY:31:LEU:HD13	44:DY:32:PRO:HG3	1.90	0.54
53:D7:21:ARG:NH2	59:DA:684:G:OP1	2.36	0.54
56:De:19:UNK:HA	57:Df:29:UNK:HA	1.90	0.54
59:DA:1301:A:N6	59:DA:1626:G:HO2'	2.05	0.54
59:DA:1468(D):A:N6	59:DA:1506(N):G:H1'	2.23	0.54
59:DA:2810:A:H62	59:DA:2890:G:H21	1.55	0.54
2:AC:68:VAL:HG12	2:AC:70:VAL:HG22	1.88	0.54
20:AY:289:ILE:H	20:AY:289:ILE:HD12	1.71	0.54
22:AW:25:C:H2'	22:AW:26:A:C8	2.42	0.54
25:BC:118:PRO:O	25:BC:121:MET:HB2	2.07	0.54
28:BF:157:VAL:O	28:BF:193:VAL:O	2.26	0.54
40:BU:28:ARG:HH11	40:BU:38:THR:HG21	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:38:A:H2'	59:BA:39:C:C6	2.43	0.54
59:BA:826:U:H5''	59:BA:2429:G:P	2.48	0.54
59:BA:1418:G:H8	59:BA:1418:G:O5'	1.91	0.54
59:BA:1832:C:H2'	59:BA:1833:U:O4'	2.08	0.54
1:CB:70:PHE:O	1:CB:92:TYR:HB2	2.07	0.54
4:CE:14:ARG:NH1	21:CA:1079:G:O2'	2.40	0.54
16:CQ:19:VAL:HB	16:CQ:44:ALA:HB3	1.88	0.54
21:CA:341:C:H2'	21:CA:342:C:H6	1.72	0.54
21:CA:648:A:H2'	21:CA:649:G:O4'	2.08	0.54
21:CA:780:A:H2	21:CA:802:A:N7	2.05	0.54
21:CA:1355:G:H2'	21:CA:1356:G:H8	1.71	0.54
22:CW:72:C:H2'	22:CW:73:A:H5'	1.90	0.54
25:DC:50:ILE:HG21	25:DC:57:GLN:HB2	1.89	0.54
26:DD:161:THR:HG22	26:DD:178:PRO:HG2	1.89	0.54
33:DN:91:LEU:HG	33:DN:96:GLU:CD	2.32	0.54
39:DT:96:ARG:HB2	39:DT:96:ARG:HH11	1.72	0.54
41:DV:35:LEU:HB2	41:DV:57:VAL:HG13	1.88	0.54
45:DZ:61:LEU:HD23	45:DZ:63:ASP:H	1.70	0.54
59:DA:223:A:H1'	59:DA:407:G:H21	1.71	0.54
59:DA:1135:C:H42	59:DA:1138:G:H8	1.55	0.54
59:DA:1932:A:H2'	59:DA:1933:G:O4'	2.07	0.54
59:DA:2070:G:H1	59:DA:2441:C:H42	1.54	0.54
59:DA:2408:U:H2'	59:DA:2409:G:C8	2.43	0.54
3:AD:13:ARG:HB3	3:AD:33:MET:HE2	1.88	0.54
5:AF:26:ILE:O	5:AF:30:LEU:HG	2.07	0.54
25:BC:213:VAL:O	25:BC:214:TYR:HD1	1.91	0.54
27:BE:63:LEU:C	27:BE:65:GLY:N	2.66	0.54
28:BF:7:TYR:CE2	28:BF:10:PRO:HD3	2.43	0.54
28:BF:82:ILE:HG13	28:BF:83:PHE:HD1	1.71	0.54
28:BF:136:THR:HG21	59:BA:320:A:C8	2.42	0.54
36:BQ:48:GLU:O	36:BQ:52:VAL:HG23	2.08	0.54
47:B1:29:GLY:N	47:B1:31:GLY:O	2.38	0.54
55:B9:13:LYS:HB2	55:B9:27:CYS:SG	2.48	0.54
59:BA:150:C:H2'	59:BA:151:C:C6	2.43	0.54
59:BA:457:A:H61	59:BA:470:A:H3'	1.72	0.54
59:BA:1149:G:H2'	59:BA:1150:C:C6	2.42	0.54
59:BA:1171:G:H2'	59:BA:1172:G:H5'	1.88	0.54
59:BA:1187:G:H8	59:BA:1187:G:O5'	1.91	0.54
59:BA:1245:G:H2'	59:BA:1246:A:C8	2.42	0.54
59:BA:1842:G:H1	59:BA:1898:U:H3	1.54	0.54
59:BA:1937:A:N7	59:BA:1940:U:H5'	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1940:U:H1'	59:BA:1941:C:H5	1.73	0.54
59:BA:1972:A:C4'	63:BA:2904:NMY:H21	2.37	0.54
59:BA:2133:G:H21	59:BA:2158:A:H62	0.66	0.54
59:BA:2292:C:N4	59:BA:2340:G:H1	2.06	0.54
1:CB:94:ASN:H	1:CB:94:ASN:HD22	1.56	0.54
5:CF:30:LEU:HD13	5:CF:37:VAL:HG21	1.90	0.54
11:CL:84:LEU:HD22	11:CL:104:VAL:HG12	1.88	0.54
21:CA:154:C:H42	21:CA:167:G:H1	1.55	0.54
21:CA:614:A:N6	21:CA:626:U:H3	2.02	0.54
21:CA:1151:A:H2'	21:CA:1152:A:H8	1.72	0.54
24:CX:2:G:N2	24:CX:71:C:N3	2.44	0.54
26:DD:45:ASN:O	26:DD:47:GLY:N	2.41	0.54
26:DD:160:GLY:H	26:DD:196:VAL:HB	1.71	0.54
45:DZ:73:GLN:OE1	45:DZ:75:ASN:ND2	2.41	0.54
59:DA:679:C:H2'	59:DA:680:G:H8	1.73	0.54
59:DA:1051:G:H1	59:DA:1108:U:H3	0.71	0.54
59:DA:1791:A:N6	59:DA:1828:G:O2'	2.41	0.54
59:DA:1947:C:H2'	59:DA:1948:G:H8	1.73	0.54
59:DA:2041:U:H2'	59:DA:2042:A:H8	1.71	0.54
59:DA:2528:U:H2'	59:DA:2530:A:O5'	2.08	0.54
59:DA:2576:G:H5'	59:DA:2578:G:N7	2.23	0.54
7:AH:44:PHE:CE1	7:AH:80:ILE:HG13	2.43	0.54
21:AA:1157:A:O2'	21:AA:1158:C:C2	2.61	0.54
21:AA:1350:A:H2'	21:AA:1351:U:O4'	2.07	0.54
21:AA:1513:A:H2'	21:AA:1514:C:C6	2.42	0.54
22:AW:34:C:H2'	22:AW:35:A:C8	2.43	0.54
27:BE:111:ARG:HA	37:BR:2:ARG:N	2.23	0.54
35:BP:113:LYS:HG3	35:BP:115:LEU:HD23	1.90	0.54
44:BY:75:ILE:HG12	44:BY:76:CYS:H	1.72	0.54
47:B1:12:PRO:HD3	47:B1:44:PRO:HG3	1.89	0.54
59:BA:589:C:N3	59:BA:668:G:N2	2.51	0.54
59:BA:656:G:H2'	59:BA:657:U:C6	2.42	0.54
59:BA:815:C:H2'	59:BA:816:C:C6	2.43	0.54
59:BA:1028:A:N6	59:BA:1125:G:H2'	2.23	0.54
59:BA:1429:G:H2'	59:BA:1430:C:C6	2.43	0.54
59:BA:1907:G:O6	59:BA:1923:U:O2	2.26	0.54
59:BA:2236:C:H2'	59:BA:2237:G:C8	2.42	0.54
60:BB:51:G:H2'	60:BB:52:A:H5''	1.89	0.54
60:BB:87:G:O2'	60:BB:89(B):A:N6	2.40	0.54
2:CC:87:LEU:O	2:CC:91:LEU:HB2	2.07	0.54
11:CL:111:LYS:O	11:CL:113:ARG:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:64:ARG:HH22	21:CA:582:U:P	2.31	0.54
19:CT:35:THR:OG1	21:CA:1440(M):G:OP1	2.23	0.54
20:CY:456:GLU:HG3	20:CY:657:THR:HB	1.90	0.54
21:CA:61:G:H1	21:CA:106:C:H42	1.56	0.54
21:CA:589:C:H4'	21:CA:653:A:H61	1.72	0.54
21:CA:1063:C:N3	21:CA:1193:G:N2	2.39	0.54
21:CA:1417:G:N2	21:CA:1482:G:H2'	2.23	0.54
26:DD:152:GLY:O	26:DD:154:LYS:HG2	2.07	0.54
27:DE:139:GLY:HA3	59:DA:2511:U:O2	2.07	0.54
29:DG:70:VAL:HG11	29:DG:88:ILE:HG12	1.89	0.54
33:DN:50:ASP:OD1	33:DN:120:LEU:HB2	2.07	0.54
34:DO:1:MET:N	34:DO:33:ALA:O	2.31	0.54
41:DV:9:GLY:O	59:DA:1160:G:N2	2.35	0.54
45:DZ:103:ARG:HB3	45:DZ:138:GLU:HA	1.89	0.54
59:DA:27:G:H22	59:DA:512:G:H2'	1.73	0.54
59:DA:102:G:O3'	59:DA:103:A:H8	1.91	0.54
59:DA:223:A:H61	59:DA:374:A:H4'	1.72	0.54
59:DA:775:G:C5	59:DA:794:G:C8	2.96	0.54
59:DA:1105:U:H2'	59:DA:1106:G:H8	1.72	0.54
59:DA:1347:G:H2'	59:DA:1348:G:H8	1.72	0.54
59:DA:2270:G:H2'	59:DA:2271:G:O4'	2.07	0.54
59:DA:2395:C:H2'	59:DA:2396:G:C8	2.42	0.54
59:DA:2410:G:H2'	59:DA:2411:A:C8	2.42	0.54
59:DA:2546:U:H4'	59:DA:2566:A:H2	1.73	0.54
59:DA:2659:G:H2'	59:DA:2661:G:OP2	2.08	0.54
60:DB:66:A:N6	60:DB:107:U:H2'	2.23	0.54
60:DB:84:C:N3	60:DB:92:G:O6	2.40	0.54
1:AB:233:SER:N	1:AB:234:PRO:HD2	2.23	0.54
7:AH:34:GLU:O	7:AH:38:ILE:HG12	2.08	0.54
21:AA:321:A:H61	21:AA:332:G:H1	1.55	0.54
21:AA:1316:G:H1'	21:AA:1360:A:H2	1.72	0.54
27:BE:143:ASN:O	59:BA:2052:G:O2'	2.25	0.54
29:BG:68:PRO:HB2	29:BG:90:LEU:HD11	1.89	0.54
34:BO:29:ASN:HD22	34:BO:29:ASN:H	1.54	0.54
35:BP:27:HIS:NE2	59:BA:814:C:H5	2.05	0.54
37:BR:41:ALA:HB1	37:BR:97:VAL:CG1	2.38	0.54
37:BR:96:ARG:CB	37:BR:117:VAL:HG21	2.38	0.54
48:B2:48:HIS:HB3	59:BA:95:G:O2'	2.08	0.54
59:BA:210:C:H2'	59:BA:211:A:C8	2.41	0.54
59:BA:1909:C:H2'	59:BA:1910:G:H8	1.72	0.54
59:BA:2732:G:H3'	59:BA:2733:A:O4'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2832:U:C5	59:BA:2884:U:H5'	2.43	0.54
7:CH:14:ARG:NH1	21:CA:875:C:O3'	2.40	0.54
11:CL:53:ARG:HH21	21:CA:521:G:H5''	1.73	0.54
20:CY:621:ILE:HG22	20:CY:625:ASN:HD21	1.73	0.54
21:CA:9:G:H2'	21:CA:10:A:H8	1.71	0.54
21:CA:423:G:H2'	21:CA:424:G:O4'	2.06	0.54
21:CA:599:C:O2	21:CA:639:G:N1	2.36	0.54
21:CA:946:A:O2'	21:CA:1333:A:N3	2.39	0.54
21:CA:1328:C:H2'	21:CA:1329:A:C8	2.43	0.54
29:DG:39:ILE:HG12	29:DG:157:ILE:HG23	1.89	0.54
35:DP:6:LEU:HD23	35:DP:9:ASN:HB2	1.89	0.54
36:DQ:116:GLU:O	36:DQ:119:ARG:HB3	2.08	0.54
37:DR:100:LEU:HD22	37:DR:101:ALA:H	1.72	0.54
38:DS:34:HIS:NE2	38:DS:54:LEU:HB3	2.23	0.54
53:D7:28:ARG:HA	53:D7:31:LEU:HG	1.90	0.54
59:DA:693:C:H42	59:DA:769:G:H1	1.55	0.54
59:DA:949:C:H42	59:DA:968:G:H1	0.74	0.54
59:DA:1444:G:H2'	59:DA:1445:C:C5	2.43	0.54
59:DA:2301:C:H2'	59:DA:2302:G:C8	2.43	0.54
1:AB:101:MET:HG3	1:AB:108:ILE:HG12	1.88	0.54
1:AB:172:ILE:HB	1:AB:175:ARG:HH12	1.72	0.54
8:AI:23:ASN:O	8:AI:57:GLY:HA2	2.08	0.54
21:AA:338:A:H2'	21:AA:339:C:H5'	1.90	0.54
21:AA:456:C:H42	21:AA:476:G:H1	1.56	0.54
21:AA:687:A:O2'	21:AA:688:G:OP2	2.24	0.54
21:AA:770:C:H2'	21:AA:771:G:O4'	2.08	0.54
21:AA:892:A:H2'	21:AA:893:C:C6	2.43	0.54
21:AA:966:G:H22	23:AV:18:G:N2	2.06	0.54
21:AA:1061:G:H1	21:AA:1195:C:N4	2.06	0.54
26:BD:8:PRO:HA	26:BD:14:ARG:HB2	1.90	0.54
27:BE:4:ILE:HB	27:BE:96:PHE:HE2	1.73	0.54
28:BF:7:TYR:N	28:BF:7:TYR:CD1	2.76	0.54
33:BN:92:ALA:O	33:BN:94:HIS:N	2.40	0.54
36:BQ:37:LEU:C	36:BQ:99:PRO:HA	2.33	0.54
36:BQ:45:GLN:HB2	36:BQ:46:GLN:NE2	2.22	0.54
37:BR:26:LYS:HE2	37:BR:71:GLN:HB2	1.88	0.54
39:BT:66:VAL:HA	39:BT:71:GLY:HA2	1.89	0.54
40:BU:42:ALA:HB1	59:BA:534:U:H5'	1.89	0.54
40:BU:51:LYS:HB3	40:BU:55:ARG:HH21	1.72	0.54
49:B3:4:LEU:O	49:B3:36:VAL:HA	2.07	0.54
59:BA:422:A:H2'	59:BA:423:A:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2065:C:H1'	59:BA:2449:U:N3	2.22	0.54
59:BA:2336:A:H3'	59:BA:2337:G:C8	2.42	0.54
59:BA:2749:A:H3'	59:BA:2750:A:C8	2.42	0.54
9:CJ:13:HIS:HB3	9:CJ:68:HIS:NE2	2.22	0.54
20:CY:156:ARG:HB3	20:CY:157:LEU:HD12	1.89	0.54
20:CY:491:VAL:HB	20:CY:493:VAL:HG23	1.90	0.54
21:CA:60:A:H62	21:CA:110:C:N4	2.06	0.54
21:CA:894:G:H1	21:CA:905:U:H3	1.54	0.54
21:CA:1071:C:O2	21:CA:1104:G:N1	2.26	0.54
21:CA:1305:G:O2'	21:CA:1306:A:O4'	2.25	0.54
21:CA:1355:G:H2'	21:CA:1356:G:C8	2.42	0.54
21:CA:1536:C:H5''	21:CA:1537:U:OP2	2.08	0.54
30:DH:85:LYS:HD2	30:DH:133:VAL:HB	1.88	0.54
34:DO:3:GLN:NE2	34:DO:4:PRO:O	2.40	0.54
38:DS:17:ARG:NH1	38:DS:88:ASP:OD2	2.41	0.54
38:DS:104:GLY:O	38:DS:106:ARG:N	2.40	0.54
40:DU:27:LEU:O	40:DU:31:SER:N	2.34	0.54
46:D0:35:ASN:N	59:DA:2353:G:O2'	2.38	0.54
56:De:110:GLU:HA	56:De:113:LYS:HE2	1.90	0.54
59:DA:106:C:O2'	59:DA:294:A:O2'	2.18	0.54
59:DA:195:A:P	59:DA:196:A:H4'	2.47	0.54
59:DA:271(L):C:H3'	59:DA:271(M):G:H5''	1.90	0.54
59:DA:903:C:H2'	59:DA:904:C:C6	2.43	0.54
59:DA:1588:C:H2'	59:DA:1589:C:C6	2.43	0.54
59:DA:2262:U:H4'	59:DA:2328:A:C2	2.43	0.54
14:AO:36:ILE:HD12	14:AO:63:ARG:NH2	2.23	0.54
19:AT:17:ARG:O	19:AT:20:LEU:HB2	2.08	0.54
19:AT:18:GLN:HA	19:AT:21:LYS:HE3	1.89	0.54
20:AY:657:THR:O	20:AY:661:SER:OG	2.23	0.54
21:AA:272:C:H2'	21:AA:273:A:H8	1.73	0.54
21:AA:345:C:H4'	21:AA:346:G:C4	2.42	0.54
21:AA:545:C:H2'	21:AA:546:G:C8	2.43	0.54
21:AA:565:U:H5''	21:AA:566:G:H2'	1.88	0.54
21:AA:936:C:H2'	21:AA:937:A:O4'	2.08	0.54
21:AA:963:G:H2'	21:AA:964:A:O4'	2.08	0.54
26:BD:13:ARG:NH1	59:BA:729:G:OP2	2.40	0.54
27:BE:62:PRO:HG3	59:BA:2633:G:H21	1.73	0.54
33:BN:34:LEU:HD13	33:BN:102:ALA:HB1	1.88	0.54
33:BN:35:ARG:NH1	33:BN:82:LEU:HB3	2.22	0.54
33:BN:37:LYS:HE2	59:BA:1006:C:H1'	1.90	0.54
33:BN:54:VAL:HG23	33:BN:103:VAL:HG23	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BN:116:LEU:CA	33:BN:118:LYS:H	2.21	0.54
45:BZ:74:VAL:HG22	45:BZ:86:VAL:HG12	1.90	0.54
59:BA:786:C:H5''	59:BA:1780:A:C8	2.43	0.54
59:BA:876:C:H2'	59:BA:877:U:O4'	2.08	0.54
59:BA:877:U:C4	59:BA:899:A:N1	2.76	0.54
59:BA:2530:A:OP2	59:BA:2535:G:N2	2.41	0.54
59:BA:2834:G:O2'	59:BA:2883:A:N6	2.33	0.54
7:CH:103:VAL:HG12	7:CH:104:ARG:HD3	1.90	0.54
20:CY:99:ARG:HD3	20:CY:128:TYR:HB2	1.89	0.54
20:CY:660:ARG:HB2	59:DA:2660:A:N3	2.22	0.54
21:CA:144:G:N2	21:CA:178:C:N3	2.47	0.54
21:CA:216:G:H2'	21:CA:217:C:C6	2.42	0.54
21:CA:407:G:H2'	21:CA:408:A:C8	2.43	0.54
21:CA:614:A:H2'	21:CA:615:C:H6	1.71	0.54
21:CA:986:A:H2'	21:CA:987:G:C8	2.43	0.54
47:D1:30:VAL:HG11	59:DA:2421:G:N2	2.23	0.54
47:D1:42:GLN:HE22	59:DA:379:G:H21	1.55	0.54
52:D6:26:ASN:CG	52:D6:27:LYS:H	2.13	0.54
59:DA:745:G:H21	59:DA:750:A:H61	1.56	0.54
59:DA:779:U:H2'	59:DA:780:G:H8	1.73	0.54
59:DA:971:C:O2'	59:DA:983:A:H1'	2.08	0.54
59:DA:2202(D):G:H4'	59:DA:2202(E):A:C2	2.43	0.54
59:DA:2356:C:H2'	59:DA:2357:U:O4'	2.08	0.54
59:DA:2446:G:O2'	59:DA:2448:A:H5''	2.08	0.54
2:AC:25:GLY:O	2:AC:29:TYR:N	2.33	0.54
21:AA:131:C:H2'	21:AA:132:C:H6	1.73	0.54
21:AA:786:G:H2'	21:AA:787:A:C8	2.42	0.54
21:AA:1041:A:H2'	21:AA:1042:G:O4'	2.09	0.54
21:AA:1346:A:C5	21:AA:1374:A:C2	2.95	0.54
21:AA:1440(D):A:H1'	21:AA:1440(E):G:C8	2.43	0.54
23:AV:35:A:H5''	23:AV:35:A:H8	1.71	0.54
27:BE:158:GLY:HA3	59:BA:2620:C:O2'	2.08	0.54
32:BK:133:SER:HB3	59:BA:1088:A:N6	2.22	0.54
33:BN:75:TYR:N	33:BN:82:LEU:HB2	2.22	0.54
39:BT:106:SER:HB2	39:BT:110:ILE:HD11	1.89	0.54
40:BU:7:GLY:HA2	59:BA:29:U:H5''	1.90	0.54
45:BZ:10:ARG:NH2	45:BZ:26:GLY:O	2.41	0.54
51:B5:17:ASP:HA	51:B5:20:ARG:HB2	1.90	0.54
54:B8:4:MET:HE2	59:BA:592:G:H1'	1.90	0.54
59:BA:270(B):A:H1'	59:BA:357(N):C:H1'	1.89	0.54
59:BA:879:G:H2'	59:BA:880:G:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1416:G:N2	59:BA:1582:C:C2	2.68	0.54
59:BA:2482:G:H2'	59:BA:2483:C:O4'	2.08	0.54
3:CD:125:HIS:HD2	3:CD:151:LYS:HE3	1.73	0.54
4:CE:19:MET:SD	4:CE:24:ARG:HB3	2.48	0.54
5:CF:5:GLU:HG3	5:CF:93:SER:HA	1.89	0.54
20:CY:488:THR:HA	20:CY:516:PRO:HG3	1.90	0.54
20:CY:661:SER:HB2	59:DA:2660:A:N6	2.23	0.54
21:CA:869:G:H4'	21:CA:872:A:C8	2.43	0.54
21:CA:1277:C:H1'	21:CA:1282:C:O2	2.08	0.54
21:CA:1307:U:H2'	21:CA:1308:U:C6	2.43	0.54
23:CV:7:G:H2'	23:CV:8:A:H1'	1.89	0.54
22:CW:50:C:C4	22:CW:65:U:O4	2.61	0.54
26:DD:157:ARG:HB2	59:DA:1818:U:H3'	1.89	0.54
29:DG:41:GLN:HG2	59:DA:2305:A:N6	2.22	0.54
32:DK:106:GLU:O	32:DK:109:LYS:HB2	2.08	0.54
34:DO:1:MET:HE3	34:DO:67:LYS:HB3	1.90	0.54
37:DR:22:ARG:HH12	37:DR:69:ASP:HB3	1.73	0.54
37:DR:86:ARG:HH22	37:DR:116:LEU:HD13	1.72	0.54
38:DS:30:ARG:HB3	38:DS:89:ARG:NH2	2.23	0.54
41:DV:24:LYS:HD2	41:DV:90:PRO:HG2	1.89	0.54
44:DY:76:CYS:O	44:DY:78:ALA:N	2.34	0.54
48:D2:50:ILE:HD13	59:DA:61:G:O4'	2.08	0.54
59:DA:595:C:H2'	59:DA:596:G:C8	2.43	0.54
59:DA:815:C:N3	59:DA:1192:G:N2	2.45	0.54
59:DA:897:C:H42	59:DA:898:C:H41	1.57	0.54
59:DA:1076:C:H2'	59:DA:1077:A:C4'	2.37	0.54
59:DA:1707:G:H2'	59:DA:1708:C:C6	2.43	0.54
59:DA:1792:G:H2'	59:DA:1793:C:C6	2.42	0.54
59:DA:2561:A:H2'	59:DA:2562:U:O4'	2.08	0.54
1:AB:169:LYS:O	1:AB:172:ILE:N	2.37	0.53
2:AC:101:LEU:HD12	2:AC:102:ASN:N	2.22	0.53
14:AO:23:GLY:O	14:AO:28:GLN:NE2	2.41	0.53
16:AQ:19:VAL:N	16:AQ:46:ASP:OD1	2.41	0.53
20:AY:354:ARG:NH1	21:AA:368:U:O4	2.41	0.53
21:AA:425:G:H2'	21:AA:426:G:O4'	2.08	0.53
21:AA:662:G:H1'	21:AA:836:G:H5''	1.90	0.53
21:AA:707:C:H2'	21:AA:708:C:H6	1.73	0.53
21:AA:1327:C:H2'	21:AA:1328:C:C6	2.43	0.53
34:BO:71:ARG:HH11	34:BO:72:PRO:HD2	1.72	0.53
35:BP:52:GLU:HG2	59:BA:832:G:H1'	1.90	0.53
59:BA:784:A:N6	59:BA:2072:G:O2'	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1530:G:C6	59:BA:1541:U:O2	2.61	0.53
59:BA:1637:A:H2'	59:BA:1638:C:C6	2.43	0.53
59:BA:1864(A):G:N2	59:BA:1864(D):A:OP2	2.41	0.53
59:BA:2351:G:H21	59:BA:2366:A:H62	1.56	0.53
59:BA:2737:G:H2'	59:BA:2738:A:C8	2.43	0.53
3:CD:22:LYS:HB3	3:CD:26:CYS:SG	2.48	0.53
5:CF:72:VAL:HG13	5:CF:73:ASN:H	1.73	0.53
6:CG:68:ASN:ND2	6:CG:127:ALA:O	2.41	0.53
18:CS:63:THR:H	18:CS:66:MET:HE2	1.73	0.53
20:CY:616:TYR:O	20:CY:620:VAL:HG13	2.07	0.53
35:DP:35:HIS:NE2	59:DA:1191:G:OP1	2.40	0.53
36:DQ:108:GLY:HA3	45:DZ:116:VAL:HG11	1.89	0.53
44:DY:14:LEU:HD11	44:DY:73:ARG:HB2	1.90	0.53
48:D2:57:ILE:HA	48:D2:60:LEU:HD12	1.90	0.53
54:D8:23:VAL:HG13	54:D8:48:PHE:HA	1.89	0.53
59:DA:13:A:H61	59:DA:525:U:H3'	1.71	0.53
59:DA:285:C:H42	59:DA:355:G:H1	1.55	0.53
59:DA:1464:C:H2'	59:DA:1465:G:O4'	2.07	0.53
59:DA:1665:A:H2'	59:DA:1666:G:O4'	2.07	0.53
59:DA:2134:A:N7	59:DA:2157:G:N3	2.56	0.53
59:DA:2199:A:N6	59:DA:2224:G:H1'	2.23	0.53
59:DA:2647:U:H2'	59:DA:2648:C:H6	1.73	0.53
1:AB:19:HIS:ND1	1:AB:20:GLU:OE1	2.41	0.53
1:AB:32:ILE:HD12	1:AB:42:ILE:HA	1.90	0.53
21:AA:38:G:H22	21:AA:397:A:C5'	2.22	0.53
21:AA:606:G:H1'	21:AA:632:A:H61	1.72	0.53
23:AV:19:G:H2'	23:AV:20:U:C5	2.43	0.53
26:BD:69:ARG:NH2	26:BD:192:THR:HG21	2.23	0.53
26:BD:274:ARG:NH2	59:BA:1798:U:H3'	2.23	0.53
32:BK:60:TYR:C	32:BK:62:ASP:H	2.16	0.53
33:BN:37:LYS:HE3	59:BA:1005:C:O2	2.08	0.53
33:BN:96:GLU:O	33:BN:104:LYS:HG2	2.08	0.53
35:BP:120:ALA:HB2	35:BP:137:LYS:HD2	1.91	0.53
38:BS:30:ARG:HD3	38:BS:35:ILE:HG13	1.90	0.53
41:BV:80:GLN:O	41:BV:81:TYR:HB2	2.08	0.53
44:BY:62:GLU:HG2	44:BY:63:LYS:H	1.72	0.53
44:BY:76:CYS:O	44:BY:78:ALA:N	2.41	0.53
59:BA:662:G:H2'	59:BA:663:G:H8	1.73	0.53
59:BA:1044:G:H4'	59:BA:1047:G:H5''	1.90	0.53
59:BA:1267:U:H2'	59:BA:1268:A:C8	2.43	0.53
59:BA:1530:G:N2	59:BA:1542:G:OP1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2151:G:H2'	59:BA:2152:G:H8	1.72	0.53
1:CB:50:GLU:OE2	1:CB:53:ARG:NH1	2.42	0.53
2:CC:23:TYR:CD2	9:CJ:95:GLU:HB2	2.43	0.53
6:CG:104:LEU:HD12	6:CG:123:GLU:HG3	1.90	0.53
8:CI:5:TYR:HH	21:CA:1147:C:HO2'	1.52	0.53
11:CL:109:GLY:HA3	11:CL:120:TYR:C	2.33	0.53
12:CM:115:LYS:N	21:CA:1228:C:OP1	2.40	0.53
20:CY:22:ASP:HB3	61:CY:701:GDP:C5'	2.34	0.53
20:CY:139:MET:SD	20:CY:144:ALA:HB1	2.49	0.53
21:CA:20:U:H1'	21:CA:572:A:C4	2.43	0.53
21:CA:372:C:N3	21:CA:375:U:O4	2.41	0.53
21:CA:384:G:H2'	21:CA:385:C:C6	2.43	0.53
21:CA:673:G:H2'	21:CA:674:G:C8	2.43	0.53
21:CA:776:G:N2	21:CA:803:G:O6	2.42	0.53
21:CA:1123:A:H2	21:CA:1150:U:N3	1.98	0.53
21:CA:1306:A:C8	21:CA:1331:G:N2	2.74	0.53
35:DP:71:VAL:HA	59:DA:245:G:H4'	1.90	0.53
54:D8:59:LYS:N	54:D8:59:LYS:HD3	2.23	0.53
56:De:71:LYS:HA	56:De:74:VAL:HG23	1.89	0.53
59:DA:75:G:N1	59:DA:111:A:H2	2.02	0.53
59:DA:223:A:O2'	59:DA:420:C:O2	2.27	0.53
59:DA:1342:A:O2'	59:DA:1344:G:OP1	2.25	0.53
59:DA:1527:G:N3	59:DA:1544:A:H8	2.07	0.53
59:DA:2291:U:H2'	59:DA:2292:C:C6	2.43	0.53
59:DA:2303:G:H2'	59:DA:2304:G:O4'	2.08	0.53
1:AB:94:ASN:ND2	1:AB:95:GLN:HG2	2.24	0.53
4:AE:150:ARG:HE	4:AE:150:ARG:H	1.56	0.53
7:AH:11:THR:HA	7:AH:14:ARG:HD2	1.91	0.53
11:AL:33:ARG:HG2	11:AL:60:LEU:HB3	1.89	0.53
15:AP:14:ASN:O	15:AP:16:HIS:N	2.41	0.53
18:AS:36:ARG:HD3	21:AA:1220:G:O2'	2.08	0.53
18:AS:36:ARG:HH12	18:AS:77:THR:HB	1.73	0.53
21:AA:106:C:H2'	21:AA:107:G:C8	2.44	0.53
21:AA:702:A:H61	59:BA:1895:C:H1'	1.72	0.53
21:AA:901:A:O5'	21:AA:901:A:H8	1.92	0.53
21:AA:978:A:O2'	21:AA:1322:C:N3	2.40	0.53
21:AA:1356:G:H2'	21:AA:1357:A:C8	2.44	0.53
27:BE:1:MET:HG2	27:BE:200:GLU:HB3	1.89	0.53
30:BH:177:GLY:HA2	59:BA:2530:A:H5'	1.89	0.53
37:BR:48:VAL:O	37:BR:52:ILE:HG12	2.08	0.53
37:BR:90:ARG:NH1	59:BA:2880:C:O2'	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BZ:30:ASN:O	45:BZ:32:HIS:N	2.41	0.53
55:B9:12:ASP:O	55:B9:15:LYS:NZ	2.33	0.53
59:BA:71:A:N3	59:BA:73:A:N6	2.56	0.53
59:BA:271(D):G:H2'	59:BA:271(E):G:C8	2.43	0.53
59:BA:271(H):C:H2'	59:BA:271(I):C:C6	2.43	0.53
59:BA:271(L):C:H3'	59:BA:271(M):G:H5''	1.91	0.53
59:BA:829:A:N7	59:BA:2247:A:O2'	2.38	0.53
59:BA:1129:A:H5'	59:BA:2516:G:H5'	1.90	0.53
59:BA:1151:G:H2'	59:BA:1152:C:C6	2.44	0.53
59:BA:1349:A:N3	59:BA:1349:A:H5'	2.23	0.53
59:BA:2528:U:O2'	59:BA:2529:G:H3'	2.08	0.53
3:CD:9:CYS:HB3	3:CD:31:CYS:O	2.08	0.53
20:CY:265:LYS:O	20:CY:267:LYS:N	2.40	0.53
20:CY:660:ARG:HB2	59:DA:2660:A:C2	2.44	0.53
20:CY:674:ASP:OD1	20:CY:675:HIS:ND1	2.41	0.53
21:CA:661:G:H1	21:CA:744:C:N4	2.05	0.53
21:CA:762:C:H2'	21:CA:763:G:H8	1.73	0.53
21:CA:1057:G:H2'	21:CA:1058:G:O4'	2.08	0.53
21:CA:1270:C:H2'	21:CA:1271:G:C8	2.43	0.53
26:DD:263:ARG:NH1	59:DA:2227:A:OP1	2.42	0.53
35:DP:80:TYR:HB3	35:DP:113:LYS:HB2	1.89	0.53
37:DR:37:THR:HG23	37:DR:40:LYS:HG3	1.90	0.53
38:DS:20:ARG:NH1	38:DS:88:ASP:OD2	2.42	0.53
59:DA:658:C:H2'	59:DA:659:C:C6	2.44	0.53
59:DA:1058:G:H2'	59:DA:1059:G:H8	1.70	0.53
59:DA:1317:A:H61	59:DA:1335:U:H3	0.68	0.53
59:DA:1712(J):G:O2'	59:DA:1712(K):A:H8	1.91	0.53
59:DA:2105:C:H2'	59:DA:2106:G:C8	2.43	0.53
2:AC:54:ARG:HB2	2:AC:69:HIS:HB2	1.89	0.53
11:AL:58:VAL:HG12	11:AL:60:LEU:N	2.11	0.53
20:AY:137:ASN:ND2	61:AY:701:GDP:O6	2.42	0.53
20:AY:138:LYS:HE2	61:AY:701:GDP:C4	2.44	0.53
39:BT:16:ARG:HG3	39:BT:79:HIS:O	2.08	0.53
40:BU:97:ASP:C	40:BU:99:ALA:H	2.16	0.53
54:B8:26:LYS:HD3	54:B8:27:THR:H	1.73	0.53
59:BA:393:C:H2'	59:BA:394:A:H8	1.73	0.53
59:BA:699:A:O2'	59:BA:1633:G:O2'	2.20	0.53
59:BA:719:C:H2'	59:BA:720:C:C6	2.43	0.53
59:BA:1323:U:H2'	59:BA:1324:G:H5'	1.90	0.53
59:BA:1506(H):C:H2'	59:BA:1506(I):U:H6	1.74	0.53
59:BA:1695:G:H3'	59:BA:1695:G:N3	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2018:G:H2'	59:BA:2019:A:O4'	2.08	0.53
59:BA:2639:A:H2'	59:BA:2640:G:H8	1.72	0.53
59:BA:2749:A:H3'	59:BA:2750:A:H8	1.73	0.53
59:BA:2884:U:H3'	59:BA:2885:C:C6	2.43	0.53
60:BB:71:C:H42	60:BB:105:G:H1	1.54	0.53
1:CB:8:LYS:O	1:CB:12:GLU:HB2	2.07	0.53
4:CE:83:GLU:HA	4:CE:87:SER:O	2.08	0.53
10:CK:108:ILE:HD13	17:CR:87:ARG:HG2	1.90	0.53
11:CL:100:ILE:HG22	11:CL:102:ARG:H	1.74	0.53
17:CR:37:VAL:HG23	17:CR:38:GLU:H	1.73	0.53
19:CT:68:LYS:NZ	21:CA:195:A:H4'	2.24	0.53
20:CY:26:THR:OG1	61:CY:701:GDP:O2A	2.27	0.53
20:CY:572:TYR:HB3	20:CY:582:PHE:HZ	1.73	0.53
20:CY:633:GLY:HA3	20:CY:644:ARG:HB2	1.90	0.53
21:CA:216:G:H2'	21:CA:217:C:H6	1.74	0.53
26:DD:25:THR:HB	26:DD:26:LYS:HD2	1.90	0.53
29:DG:126:ASP:CG	29:DG:130:ASN:HB2	2.33	0.53
38:DS:27:SER:HA	38:DS:88:ASP:HB3	1.89	0.53
41:DV:25:LEU:H	41:DV:92:THR:HG23	1.73	0.53
42:DW:16:LYS:NZ	59:DA:1266:G:O6	2.42	0.53
45:DZ:11:GLU:HB2	45:DZ:13:GLU:HG3	1.90	0.53
59:DA:199:A:H61	59:DA:2433:A:H2'	1.72	0.53
59:DA:1635:G:H2'	59:DA:1636:C:O4'	2.08	0.53
59:DA:1838:C:H4'	59:DA:1839:G:C8	2.43	0.53
59:DA:1939:U:N3	59:DA:1967:C:O2'	2.23	0.53
59:DA:2194:G:H2'	59:DA:2195:C:H6	1.74	0.53
59:DA:2247:A:N6	59:DA:2257:U:C4	2.74	0.53
60:DB:24:G:N1	60:DB:56:G:N2	2.56	0.53
7:AH:14:ARG:NH1	21:AA:876:G:O5'	2.41	0.53
20:AY:87:HIS:CD2	20:AY:121:VAL:HG22	2.43	0.53
20:AY:90:PHE:HB2	20:AY:458:HIS:ND1	2.24	0.53
21:AA:225:C:H2'	21:AA:226:G:C8	2.43	0.53
21:AA:346:G:O4'	39:BT:35:LYS:NZ	2.41	0.53
21:AA:935:A:N3	21:AA:1383:C:N4	2.57	0.53
21:AA:1291:G:H2'	21:AA:1292:U:H6	1.73	0.53
22:AW:19:G:H1'	22:AW:57:G:H21	1.73	0.53
22:AW:69:A:H2'	22:AW:70:G:C8	2.43	0.53
33:BN:38:HIS:CD2	59:BA:1006:C:H4'	2.44	0.53
40:BU:52:ARG:HH12	59:BA:560:C:H4'	1.74	0.53
59:BA:298:G:O6	59:BA:338:G:H5''	2.09	0.53
59:BA:874:G:H2'	59:BA:875:G:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1023:U:H1'	59:BA:1122:G:H5''	1.91	0.53
59:BA:1837:C:HO2'	59:BA:1927:A:HO2'	1.52	0.53
59:BA:2585:U:HO2'	59:BA:2586:C:P	2.32	0.53
60:BB:9:G:H2'	60:BB:10:C:C6	2.43	0.53
2:CC:142:MET:HE2	2:CC:170:GLN:HG2	1.91	0.53
3:CD:26:CYS:HA	3:CD:31:CYS:HA	1.90	0.53
3:CD:117:ALA:O	3:CD:121:VAL:HG23	2.09	0.53
5:CF:33:TYR:HD2	5:CF:71:ARG:HB3	1.74	0.53
7:CH:30:ARG:NE	21:CA:591:U:OP2	2.33	0.53
11:CL:102:ARG:HG3	11:CL:107:ALA:HB1	1.91	0.53
21:CA:990:C:H5'	21:CA:1017:G:O2'	2.08	0.53
21:CA:1503:A:H61	23:CV:14:A:H1'	1.73	0.53
27:DE:7:VAL:HG12	27:DE:27:LEU:HB3	1.91	0.53
28:DF:5:ALA:HB3	28:DF:8:GLN:HA	1.89	0.53
28:DF:166:ALA:HA	59:DA:321:G:OP2	2.07	0.53
33:DN:74:ARG:O	33:DN:75:TYR:C	2.48	0.53
36:DQ:42:ILE:HD13	36:DQ:68:ILE:HB	1.90	0.53
41:DV:76:LYS:HB2	41:DV:81:TYR:CD1	2.44	0.53
45:DZ:10:ARG:H	45:DZ:37:VAL:HA	1.72	0.53
46:D0:33:ALA:O	59:DA:2353:G:O2'	2.26	0.53
48:D2:47:ASN:O	48:D2:50:ILE:HG13	2.08	0.53
59:DA:1344:G:H1	59:DA:1403:C:H42	1.57	0.53
59:DA:1434:A:H2'	59:DA:1435:G:C8	2.43	0.53
59:DA:1466:G:H5'	59:DA:1545:A:C2	2.44	0.53
59:DA:1468(K):G:H1	59:DA:1506(G):U:H3	1.57	0.53
59:DA:1769:G:O2'	59:DA:1958:C:OP1	2.19	0.53
59:DA:2650:U:C4	59:DA:2670:A:N1	2.77	0.53
2:AC:6:HIS:HB3	2:AC:9:GLY:H	1.74	0.53
20:AY:165:GLN:HB2	20:AY:177:ILE:HG12	1.89	0.53
21:AA:1339:A:H1'	22:AW:40:G:H21	1.73	0.53
25:BC:84:ILE:O	25:BC:88:GLU:N	2.41	0.53
26:BD:157:ARG:HB2	59:BA:1818:U:H2'	1.91	0.53
27:BE:116:VAL:HG21	27:BE:122:PHE:CD2	2.43	0.53
30:BH:148:ILE:HG23	30:BH:151:ILE:HD12	1.91	0.53
31:BJ:68:UNK:O	31:BJ:70:UNK:N	2.41	0.53
32:BK:126:MET:HG2	59:BA:1059:G:N2	2.23	0.53
33:BN:127:ASP:C	33:BN:128:HIS:HD1	2.17	0.53
38:BS:15:ARG:HB3	38:BS:18:ILE:HB	1.90	0.53
59:BA:16:G:H2'	59:BA:17:G:O4'	2.09	0.53
59:BA:609:A:H2'	59:BA:610:G:O4'	2.08	0.53
59:BA:1638:C:H2'	59:BA:1639:U:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1712(F):U:O4	59:BA:1712(L):G:O6	2.25	0.53
60:BB:30:C:H2'	60:BB:31:C:O4'	2.08	0.53
60:BB:65:C:N4	60:BB:67:G:O6	2.42	0.53
3:CD:101:LEU:HA	3:CD:104:VAL:HB	1.89	0.53
8:CI:66:ARG:HH11	8:CI:66:ARG:HB3	1.74	0.53
10:CK:82:VAL:HB	10:CK:108:ILE:HA	1.88	0.53
16:CQ:16:GLN:HE22	21:CA:254:G:H21	1.55	0.53
21:CA:626:U:H2'	21:CA:627:G:H8	1.72	0.53
21:CA:996:A:H2'	21:CA:997:U:C6	2.43	0.53
21:CA:1022:G:H2'	21:CA:1023:G:O4'	2.08	0.53
21:CA:1206:G:H2'	21:CA:1207:G:H8	1.73	0.53
21:CA:1429:C:N4	21:CA:1471:G:H1	2.06	0.53
25:DC:48:LEU:CD1	25:DC:49:GLY:H	2.22	0.53
25:DC:76:LEU:HD21	25:DC:100:ILE:HG22	1.89	0.53
30:DH:177:GLY:HA2	59:DA:2530:A:H5'	1.91	0.53
33:DN:15:LEU:HD12	33:DN:55:VAL:HG21	1.90	0.53
33:DN:34:LEU:HD13	33:DN:102:ALA:HB1	1.90	0.53
33:DN:93:THR:HG23	59:DA:2639:A:O2'	2.08	0.53
33:DN:102:ALA:O	33:DN:106:MET:HG2	2.08	0.53
36:DQ:85:LYS:HD2	46:D0:7:LEU:HD13	1.91	0.53
38:DS:97:ARG:O	38:DS:100:ALA:N	2.24	0.53
53:D7:39:ARG:HA	53:D7:39:ARG:NE	2.23	0.53
59:DA:90:U:H4'	59:DA:91:A:C5'	2.39	0.53
59:DA:137(A):G:H1	59:DA:137(F):C:N4	2.03	0.53
59:DA:203:C:H3'	59:DA:204:A:H5''	1.91	0.53
59:DA:701:G:N2	59:DA:731:C:N3	2.45	0.53
59:DA:779:U:H2'	59:DA:780:G:C8	2.44	0.53
59:DA:845:G:H1'	59:DA:847:U:O4	2.08	0.53
59:DA:1586:A:H2'	59:DA:1587:A:O4'	2.08	0.53
59:DA:2074:U:H2'	59:DA:2075:U:C5	2.44	0.53
59:DA:2559:C:H2'	59:DA:2560:C:C6	2.43	0.53
60:DB:28:C:H2'	60:DB:29:A:H8	1.73	0.53
12:AM:87:TYR:CE2	12:AM:91:ARG:HD2	2.43	0.53
20:AY:69:VAL:HG11	20:AY:327:PHE:CE1	2.43	0.53
21:AA:33:A:H2'	21:AA:34:C:C6	2.44	0.53
21:AA:186:C:H2'	21:AA:186(A):C:C6	2.44	0.53
21:AA:545:C:O2'	21:AA:549:C:OP1	2.27	0.53
21:AA:1239:A:N1	21:AA:1297:C:H1'	2.23	0.53
26:BD:125:ILE:HG12	26:BD:137:PRO:HG2	1.91	0.53
28:BF:37:VAL:HA	28:BF:40:GLN:NE2	2.24	0.53
30:BH:89:ILE:HG22	30:BH:162:ILE:HG12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:105:LEU:HD23	32:BK:106:GLU:N	2.24	0.53
45:BZ:87:ASP:OD2	60:BB:102:G:N2	2.42	0.53
59:BA:1079:C:H2'	59:BA:1080:C:O4'	2.09	0.53
59:BA:1955:U:H5'	59:BA:1956:U:H5	1.74	0.53
59:BA:2539:C:H2'	59:BA:2540:C:H6	1.74	0.53
59:BA:2791:C:OP1	59:BA:2792:G:H8	1.91	0.53
59:BA:2850:A:H2'	59:BA:2851:A:C8	2.43	0.53
1:CB:107:THR:HG21	21:CA:1103:C:H1'	1.89	0.53
6:CG:50:ILE:HG13	6:CG:121:ALA:HB1	1.90	0.53
8:CI:111:ARG:HG2	8:CI:112:LYS:N	2.24	0.53
11:CL:39:VAL:HG12	11:CL:40:VAL:N	2.19	0.53
12:CM:119:GLY:HA2	21:CA:953:G:H21	1.73	0.53
20:CY:13:ARG:HE	20:CY:277:VAL:HG23	1.73	0.53
21:CA:60:A:H8	21:CA:331:G:H1	1.54	0.53
26:DD:226:MET:HE2	26:DD:227:ASN:ND2	2.24	0.53
27:DE:144:ARG:O	59:DA:2052:G:O2'	2.25	0.53
32:DK:30:HIS:CG	32:DK:59:ILE:HB	2.44	0.53
35:DP:88:LEU:HD21	35:DP:123:LEU:HD21	1.91	0.53
36:DQ:118:LEU:HA	36:DQ:121:ALA:HB3	1.91	0.53
37:DR:12:ARG:O	59:DA:2002:G:H5''	2.09	0.53
44:DY:6:HIS:HD1	44:DY:35:TYR:HE1	1.55	0.53
59:DA:450:G:H5'	59:DA:1248:G:H1	1.74	0.53
59:DA:605:C:H1'	59:DA:657:U:O2'	2.09	0.53
59:DA:1230:C:H2'	59:DA:1231:G:H8	1.72	0.53
59:DA:2306:C:H5'	59:DA:2307:G:C8	2.43	0.53
60:DB:92:G:H2'	60:DB:93:C:C6	2.43	0.53
3:AD:33:MET:HG3	3:AD:37:PRO:HB3	1.91	0.53
8:AI:17:VAL:HG21	8:AI:80:GLY:HA3	1.91	0.53
10:AK:85:ARG:HA	10:AK:110:ASP:O	2.08	0.53
18:AS:53:ASN:C	18:AS:55:LYS:H	2.17	0.53
28:BF:76:GLY:N	59:BA:674:G:H5''	2.24	0.53
38:BS:26:LEU:O	38:BS:88:ASP:HB3	2.09	0.53
40:BU:93:LYS:HE3	59:BA:997:G:H5''	1.90	0.53
42:BW:76:VAL:HA	42:BW:102:HIS:C	2.34	0.53
55:B9:36:GLN:HB3	59:BA:1124:C:O2'	2.09	0.53
59:BA:309:G:H1	59:BA:1210:A:H2	1.56	0.53
59:BA:553:G:H2'	59:BA:554:U:C6	2.43	0.53
59:BA:579:G:H2'	59:BA:580:C:H6	1.74	0.53
59:BA:979:G:H2'	59:BA:982:C:N4	2.22	0.53
59:BA:1806:C:H2'	59:BA:1807:G:O4'	2.09	0.53
60:BB:51:G:C2'	60:BB:52:A:H5''	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BB:79:C:H42	60:BB:97:G:H1	1.56	0.53
1:CB:172:ILE:HA	1:CB:175:ARG:HH12	1.73	0.53
2:CC:29:TYR:HA	2:CC:32:LEU:HD11	1.91	0.53
5:CF:35:ALA:HB1	5:CF:65:VAL:HG21	1.90	0.53
8:CI:19:LEU:HD23	8:CI:61:ALA:HB2	1.91	0.53
14:CO:63:ARG:O	14:CO:67:LEU:HG	2.09	0.53
15:CP:10:GLY:HA3	15:CP:14:ASN:O	2.08	0.53
16:CQ:68:ARG:HA	16:CQ:70:ARG:HH12	1.74	0.53
18:CS:77:THR:HG22	21:CA:958:A:H61	1.74	0.53
21:CA:129(A):G:H5'	21:CA:186(K):G:H5'	1.89	0.53
21:CA:286:G:H2'	21:CA:287:U:C6	2.43	0.53
21:CA:513:C:H2'	21:CA:514:C:C5	2.44	0.53
21:CA:595:G:O2'	21:CA:640:A:N6	2.42	0.53
21:CA:934:C:N4	21:CA:938:A:C2	2.73	0.53
21:CA:988:G:H21	21:CA:1015:A:H2	1.54	0.53
21:CA:1002:G:C2	21:CA:1038:C:N3	2.76	0.53
21:CA:1046:A:H3'	21:CA:1047:G:H8	1.73	0.53
21:CA:1128:C:O2'	21:CA:1146:A:N6	2.41	0.53
21:CA:1220:G:H2'	21:CA:1221:G:H8	1.73	0.53
24:CX:50:G:O6	24:CX:64:U:C4	2.59	0.53
33:DN:59:LYS:HZ3	33:DN:60:ILE:H	1.56	0.53
33:DN:72:TYR:CB	33:DN:101:HIS:HA	2.39	0.53
34:DO:39:ILE:HG13	34:DO:60:ALA:HB3	1.90	0.53
48:D2:32:LEU:HA	48:D2:35:LEU:HD12	1.90	0.53
59:DA:817:C:H4'	59:DA:932:G:C5	2.44	0.53
59:DA:1060:U:H4'	59:DA:1061:U:H2'	1.91	0.53
59:DA:1308:A:H2'	59:DA:1309:G:O4'	2.09	0.53
59:DA:1688:U:H2'	59:DA:1698:A:N6	2.24	0.53
59:DA:1785:A:C2	59:DA:1787:A:H1'	2.44	0.53
59:DA:2886:G:H2'	59:DA:2887:U:C6	2.44	0.53
60:DB:19:G:N2	60:DB:64:C:N3	2.47	0.53
1:AB:70:PHE:HB3	1:AB:81:VAL:HB	1.90	0.53
3:AD:25:ARG:NH2	21:AA:411:A:OP2	2.38	0.53
3:AD:177:ASP:HB2	3:AD:182:LYS:HB3	1.90	0.53
8:AI:15:ALA:HA	8:AI:65:VAL:HA	1.91	0.53
9:AJ:79:ARG:O	9:AJ:83:GLU:HG2	2.08	0.53
10:AK:22:HIS:CE1	10:AK:24:SER:HB2	2.42	0.53
11:AL:69:TYR:O	11:AL:100:ILE:HG13	2.09	0.53
20:AY:605:ILE:HG22	20:AY:675:HIS:H	1.74	0.53
21:AA:741:G:H2'	21:AA:742:G:C8	2.44	0.53
21:AA:1205:U:H2'	21:AA:1206:G:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1491:G:C5	63:AA:1601:NMY:H2	2.44	0.53
31:BJ:44:UNK:C	31:BJ:46:UNK:H	2.22	0.53
32:BK:72:PRO:HG2	32:BK:111:LYS:NZ	2.17	0.53
32:BK:91:PRO:HG3	59:BA:1063:G:H1'	1.89	0.53
34:BO:39:ILE:HG13	34:BO:60:ALA:HB3	1.90	0.53
36:BQ:141:GLN:HA	59:BA:906:G:OP1	2.09	0.53
38:BS:106:ARG:O	38:BS:107:GLU:HB3	2.08	0.53
51:B5:34:PRO:O	51:B5:35:GLU:HB2	2.08	0.53
59:BA:269:U:H1'	59:BA:424:G:N2	2.24	0.53
59:BA:328:U:H3'	59:BA:329:G:C5'	2.39	0.53
59:BA:897:C:H2'	59:BA:898:C:C6	2.43	0.53
59:BA:918:A:N6	59:BA:2268:A:H62	1.98	0.53
59:BA:1199:U:H3	59:BA:1246:A:H2	1.52	0.53
59:BA:1638:C:H5''	59:BA:2710:C:O2'	2.09	0.53
59:BA:1687:G:N1	59:BA:1700:A:OP1	2.42	0.53
59:BA:1857:G:H21	59:BA:1885:A:N6	1.93	0.53
59:BA:2651:C:N4	59:BA:2669:G:H1	2.06	0.53
59:BA:2740:A:H2'	59:BA:2741:A:C8	2.44	0.53
63:BA:2902:NMY:H13	63:BA:2902:NMY:O12	2.09	0.53
60:BB:3:C:H2'	60:BB:4:C:C5	2.41	0.53
1:CB:96:ARG:NE	1:CB:96:ARG:H	2.07	0.53
3:CD:190:ASP:H	3:CD:193:ASP:HB2	1.73	0.53
5:CF:97:PHE:CG	5:CF:98:LEU:N	2.77	0.53
20:CY:176:GLY:HA2	20:CY:188:TYR:CE2	2.44	0.53
21:CA:22:G:H2'	21:CA:23:C:C6	2.43	0.53
21:CA:303:A:H2'	21:CA:304:U:O4'	2.09	0.53
21:CA:730:G:O2'	21:CA:814:A:N6	2.41	0.53
21:CA:737:A:H2'	21:CA:738:C:H6	1.73	0.53
21:CA:1129:C:O2	21:CA:1132:C:N4	2.38	0.53
30:DH:171:LEU:HD13	59:DA:2530:A:H62	1.74	0.53
30:DH:176:ALA:O	30:DH:178:ALA:N	2.35	0.53
35:DP:18:ARG:HD3	59:DA:1246:A:OP2	2.08	0.53
36:DQ:55:VAL:HA	36:DQ:58:PHE:HE2	1.73	0.53
37:DR:92:GLY:O	59:DA:2880:C:H1'	2.09	0.53
40:DU:49:HIS:O	40:DU:53:ARG:HB2	2.08	0.53
46:D0:25:ARG:HH21	46:D0:35:ASN:HD22	1.57	0.53
53:D7:19:ARG:HA	53:D7:22:MET:HG2	1.91	0.53
59:DA:579:G:H4'	59:DA:2017:U:H2'	1.91	0.53
59:DA:948:G:H2'	59:DA:949:C:C6	2.43	0.53
59:DA:1139:G:H8	59:DA:1139:G:OP2	1.91	0.53
59:DA:1279:G:H1	59:DA:1291:C:H42	1.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1413:G:H1	59:DA:1589:C:N4	2.03	0.53
59:DA:1674:G:O6	59:DA:1990:C:N3	2.41	0.53
59:DA:2360:A:H2'	59:DA:2361:A:O4'	2.08	0.53
3:AD:201:GLN:HA	3:AD:204:ILE:HB	1.90	0.53
9:AJ:74:ILE:HD12	9:AJ:75:ILE:HD12	1.90	0.53
20:AY:501:THR:O	24:AX:37:A:H4'	2.09	0.53
20:AY:614:GLU:C	20:AY:617:MET:H	2.17	0.53
21:AA:313:A:H2'	21:AA:314:C:C6	2.44	0.53
21:AA:638:G:H2'	21:AA:639:G:C8	2.44	0.53
21:AA:990:C:H2'	21:AA:991:U:O4'	2.08	0.53
23:AV:31:A:H3'	23:AV:32:U:H5''	1.90	0.53
27:BE:24:THR:HG22	27:BE:185:LYS:O	2.09	0.53
30:BH:35:VAL:HG23	30:BH:75:ALA:HB2	1.90	0.53
30:BH:171:LEU:HD21	59:BA:2529:G:OP2	2.09	0.53
33:BN:58:ASP:N	33:BN:58:ASP:OD2	2.40	0.53
38:BS:61:ASN:ND2	60:BB:50:G:OP1	2.41	0.53
38:BS:67:ARG:HD3	38:BS:98:VAL:HB	1.90	0.53
59:BA:108:U:H4'	59:BA:347:A:C2	2.44	0.53
59:BA:271(A):C:H2'	59:BA:271(B):G:C8	2.44	0.53
59:BA:705:A:H2'	59:BA:706:A:C8	2.44	0.53
59:BA:1278:A:H2'	59:BA:1279:G:C8	2.43	0.53
59:BA:1356:G:H2'	59:BA:1357:U:C6	2.43	0.53
59:BA:1415:U:H3	59:BA:1587:A:H61	1.55	0.53
59:BA:1912:A:N7	59:BA:1917:U:O2	2.42	0.53
59:BA:2539:C:H2'	59:BA:2540:C:C6	2.44	0.53
60:BB:24:G:C6	60:BB:56:G:N3	2.78	0.53
60:BB:31:C:H2'	60:BB:53:A:H61	1.73	0.53
10:CK:29:ILE:HA	10:CK:44:SER:HA	1.90	0.53
11:CL:90:VAL:HB	21:CA:523:A:C5	2.43	0.53
14:CO:22:THR:OG1	21:CA:657:G:N2	2.42	0.53
21:CA:33:A:H2'	21:CA:34:C:H6	1.72	0.53
21:CA:948:C:H5'	21:CA:1306:A:O2'	2.09	0.53
21:CA:1123:A:C2	21:CA:1150:U:N3	2.58	0.53
21:CA:1255:G:H2'	21:CA:1258:G:H21	1.74	0.53
21:CA:1328:C:H2'	21:CA:1329:A:H8	1.74	0.53
25:DC:127:LYS:HB3	25:DC:128:LEU:HD12	1.91	0.53
33:DN:59:LYS:HB3	33:DN:98:VAL:HG12	1.90	0.53
35:DP:61:ARG:O	54:D8:13:ARG:NH1	2.38	0.53
36:DQ:14:ARG:NH1	59:DA:958:U:OP2	2.38	0.53
40:DU:76:TYR:HE2	59:DA:1153:C:H5'	1.73	0.53
42:DW:68:ARG:HA	42:DW:110:LYS:HB3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DZ:73:GLN:NE2	60:DB:102:G:N3	2.56	0.53
48:D2:22:GLU:OE2	48:D2:64:LEU:HG	2.09	0.53
54:D8:8:LYS:HG3	59:DA:252:G:O6	2.09	0.53
54:D8:17:THR:C	54:D8:19:SER:H	2.16	0.53
56:De:79:ARG:O	56:De:81:ILE:N	2.34	0.53
59:DA:52:A:H2'	59:DA:53:A:C8	2.44	0.53
59:DA:2386:C:H2'	59:DA:2387:U:C6	2.44	0.53
1:AB:178:ARG:NH2	7:AH:70:GLN:OE1	2.42	0.52
6:AG:64:GLN:O	6:AG:68:ASN:ND2	2.29	0.52
6:AG:78:ARG:NH1	6:AG:155:ARG:O	2.42	0.52
16:AQ:17:LYS:HD2	21:AA:255:G:H4'	1.90	0.52
16:AQ:29:HIS:CG	16:AQ:32:TYR:HB2	2.44	0.52
20:AY:293:THR:HG1	20:AY:297:GLU:H	1.58	0.52
20:AY:330:VAL:O	20:AY:331:TYR:HB2	2.09	0.52
20:AY:631:ILE:O	20:AY:645:ALA:HA	2.10	0.52
21:AA:288:A:H2'	21:AA:289:G:H4'	1.90	0.52
21:AA:702:A:N6	59:BA:1895:C:H1'	2.24	0.52
23:AV:30:A:O2'	23:AV:31:A:OP1	2.23	0.52
24:AX:35:A:H2'	24:AX:36:C:C6	2.43	0.52
25:BC:101:ILE:HD13	25:BC:124:VAL:HG22	1.90	0.52
27:BE:111:ARG:HB2	27:BE:160:TYR:O	2.10	0.52
38:BS:67:ARG:HA	38:BS:99:LYS:N	2.25	0.52
39:BT:3:ARG:HG2	59:BA:2876:G:H4'	1.90	0.52
39:BT:53:ARG:NH2	59:BA:2683:C:H5''	2.24	0.52
45:BZ:7:ALA:HA	45:BZ:39:VAL:HG12	1.91	0.52
45:BZ:93:ASP:HA	45:BZ:130:PRO:HD2	1.92	0.52
59:BA:245:G:O2'	59:BA:384:U:O2	2.24	0.52
59:BA:397:G:H2'	59:BA:398:G:C8	2.43	0.52
59:BA:860:U:H2'	59:BA:861:A:H8	1.74	0.52
59:BA:923:C:H2'	59:BA:924:C:C6	2.44	0.52
59:BA:1288:U:O2	59:BA:1326:U:O4	2.26	0.52
59:BA:1504:C:H2'	59:BA:1505:C:C6	2.44	0.52
59:BA:2889:C:H2'	59:BA:2890:G:O4'	2.09	0.52
7:CH:36:LEU:HD22	7:CH:45:ILE:HD13	1.91	0.52
12:CM:124:PRO:HG2	21:CA:965:A:C2	2.44	0.52
13:CN:24:CYS:HB2	13:CN:28:GLY:H	1.72	0.52
21:CA:667:G:H2'	21:CA:668:G:O4'	2.09	0.52
21:CA:773:G:H2'	21:CA:774:G:C8	2.44	0.52
30:DH:67:LEU:HD11	59:DA:2757:A:N1	2.24	0.52
33:DN:93:THR:HA	59:DA:2639:A:H4'	1.91	0.52
38:DS:100:ALA:C	38:DS:102:ALA:H	2.16	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DV:38:LEU:HG	41:DV:57:VAL:HB	1.91	0.52
42:DW:14:PRO:HB3	42:DW:18:ARG:NE	2.23	0.52
45:DZ:99:TYR:HA	45:DZ:124:ILE:O	2.08	0.52
59:DA:63:U:H1'	59:DA:64:A:N7	2.24	0.52
59:DA:404:C:O2'	59:DA:405:U:OP2	2.25	0.52
59:DA:467:G:H2'	59:DA:468:G:O4'	2.09	0.52
59:DA:941:A:O2'	59:DA:1190:G:H4'	2.10	0.52
59:DA:1030:G:H2'	59:DA:1031:G:C8	2.40	0.52
59:DA:1090:U:H2'	59:DA:1091:G:C8	2.44	0.52
59:DA:1788:C:H2'	59:DA:1789:A:H8	1.74	0.52
59:DA:2736:G:H1	59:DA:2768:C:H42	1.57	0.52
4:AE:20:GLN:HG2	4:AE:22:GLY:H	1.74	0.52
4:AE:70:PRO:O	4:AE:72:GLN:N	2.42	0.52
5:AF:69:GLU:O	5:AF:71:ARG:N	2.42	0.52
7:AH:116:LYS:HE2	7:AH:129:VAL:HG11	1.91	0.52
11:AL:70:ILE:HD12	11:AL:102:ARG:NH2	2.24	0.52
12:AM:16:ASP:HB3	12:AM:34:LEU:HD13	1.91	0.52
20:AY:603:GLU:HG3	20:AY:677:GLN:O	2.09	0.52
21:AA:639:G:H2'	21:AA:640:A:C8	2.43	0.52
21:AA:716:A:H2'	21:AA:717:C:H6	1.75	0.52
21:AA:949:A:H2'	21:AA:950:U:C6	2.45	0.52
21:AA:1236:A:H4'	21:AA:1304:G:H4'	1.90	0.52
21:AA:1291:G:H2'	21:AA:1292:U:C6	2.44	0.52
21:AA:1518:A:H2'	21:AA:1519:A:C8	2.43	0.52
22:AW:38:A:H5''	22:AW:39:U:C5	2.44	0.52
27:BE:61:ARG:HB3	27:BE:62:PRO:CD	2.35	0.52
29:BG:70:VAL:HA	29:BG:90:LEU:HA	1.90	0.52
31:BJ:54:UNK:O	31:BJ:56:UNK:N	2.41	0.52
33:BN:28:THR:HA	33:BN:37:LYS:HZ3	1.74	0.52
33:BN:34:LEU:HD21	33:BN:103:VAL:HG22	1.90	0.52
42:BW:74:ALA:HA	42:BW:104:THR:O	2.10	0.52
47:B1:5:CYS:SG	47:B1:63:ALA:HB2	2.49	0.52
59:BA:92:G:H2'	59:BA:93:C:C6	2.44	0.52
59:BA:134:C:H2'	59:BA:135:G:H8	1.73	0.52
59:BA:190:A:H5''	59:BA:204:A:N6	2.23	0.52
59:BA:468:G:H2'	59:BA:469:G:O4'	2.08	0.52
59:BA:1410:G:H2'	59:BA:1411:C:C6	2.45	0.52
59:BA:1890:A:H2	59:BA:2235:G:H1'	1.73	0.52
59:BA:2126:A:H61	59:BA:2163:C:H4'	1.73	0.52
59:BA:2661:G:H8	59:BA:2661:G:O5'	1.91	0.52
1:CB:24:TRP:HB3	1:CB:40:HIS:CE1	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:163:PHE:CZ	1:CB:187:LEU:HB2	2.45	0.52
2:CC:180:ALA:HB1	2:CC:203:PHE:CE1	2.44	0.52
4:CE:121:LYS:HG2	21:CA:7:G:H21	1.74	0.52
4:CE:121:LYS:HD2	21:CA:8:A:H5''	1.90	0.52
8:CI:103:THR:HG23	21:CA:1180:A:H5'	1.91	0.52
8:CI:116:LYS:HE2	8:CI:122:ALA:HB2	1.90	0.52
11:CL:123:LYS:HA	21:CA:36:C:H5''	1.90	0.52
21:CA:68(Y):C:H2'	21:CA:101:A:C8	2.44	0.52
21:CA:1224:G:C6	21:CA:1322:C:H1'	2.44	0.52
23:CV:19:G:H3'	23:CV:20:U:H5''	1.91	0.52
25:DC:58:ASN:HB3	25:DC:165:ARG:HG3	1.91	0.52
26:DD:99:ASP:O	59:DA:1500:G:N2	2.42	0.52
32:DK:79:ARG:HA	32:DK:84:LEU:HB3	1.90	0.52
33:DN:85:ILE:CG2	33:DN:109:LYS:HB2	2.39	0.52
33:DN:97:ARG:CB	33:DN:105:GLY:HA2	2.39	0.52
37:DR:77:ARG:NH1	59:DA:1454:U:OP1	2.41	0.52
37:DR:101:ALA:O	37:DR:103:ARG:N	2.37	0.52
40:DU:3:ARG:H	59:DA:445:C:H5''	1.74	0.52
45:DZ:41:LEU:O	45:DZ:45:ASP:N	2.22	0.52
59:DA:1126:A:H4'	59:DA:1127:A:H5''	1.90	0.52
59:DA:1388:G:H2'	59:DA:1389:G:C8	2.45	0.52
59:DA:1827:C:H2'	59:DA:1828:G:C8	2.45	0.52
59:DA:2427:C:C5'	59:DA:2429:G:H5'	2.39	0.52
59:DA:2720:U:H1'	59:DA:2845:G:O2'	2.08	0.52
1:AB:153:ARG:O	1:AB:156:LYS:NZ	2.41	0.52
10:AK:18:ARG:HA	10:AK:81:ASP:HB2	1.91	0.52
14:AO:88:ARG:HA	14:AO:88:ARG:NE	2.24	0.52
20:AY:77:HIS:HD2	20:AY:277:VAL:HB	1.74	0.52
20:AY:139:MET:HB3	20:AY:174:PHE:CE1	2.44	0.52
20:AY:243:VAL:O	20:AY:247:ARG:HB2	2.09	0.52
21:AA:673:G:H1	21:AA:717:C:N4	2.06	0.52
27:BE:100:GLU:O	27:BE:172:VAL:N	2.38	0.52
31:BJ:58:UNK:HA	59:BA:1107:G:H5''	1.90	0.52
33:BN:71:ILE:O	33:BN:97:ARG:O	2.27	0.52
33:BN:105:GLY:N	33:BN:106:MET:O	2.43	0.52
33:BN:116:LEU:O	59:BA:2780:G:H5'	2.09	0.52
36:BQ:51:ARG:HA	36:BQ:54:MET:HE3	1.90	0.52
36:BQ:68:ILE:HD11	36:BQ:104:PHE:CE2	2.44	0.52
41:BV:81:TYR:HE1	41:BV:83:ARG:HG2	1.75	0.52
42:BW:25:ARG:NH2	59:BA:520:G:H5'	2.24	0.52
45:BZ:30:ASN:HA	45:BZ:89:PHE:CE2	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B1:26:ARG:O	47:B1:32:LYS:N	2.32	0.52
59:BA:41:C:C2	59:BA:43:G:C8	2.97	0.52
59:BA:357(B):A:H2'	59:BA:357(C):G:O4'	2.10	0.52
59:BA:701:G:H1	59:BA:731:C:H42	1.56	0.52
59:BA:1046:A:H3'	59:BA:1047:G:H5'	1.90	0.52
59:BA:1179:C:H2'	59:BA:1180:C:H6	1.74	0.52
59:BA:1468(J):G:H2'	59:BA:1468(K):G:C8	2.42	0.52
59:BA:1526:G:H3'	59:BA:1527:G:H8	1.74	0.52
59:BA:1669:A:O3'	59:BA:2549:G:H5''	2.10	0.52
59:BA:1712(C):G:H2'	59:BA:1712(D):G:C8	2.42	0.52
59:BA:2794(A):G:H3'	59:BA:2794(B):U:C5'	2.40	0.52
9:CJ:8:LEU:HD22	9:CJ:16:LEU:HD21	1.91	0.52
14:CO:21:ASP:OD2	21:CA:750:G:O2'	2.19	0.52
16:CQ:45:HIS:H	16:CQ:72:ARG:CA	2.22	0.52
18:CS:79:THR:HB	21:CA:957:U:H4'	1.89	0.52
20:CY:626:ALA:HA	59:DA:2473:U:O4'	2.10	0.52
21:CA:110:C:H2'	21:CA:111:G:O4'	2.09	0.52
21:CA:652:U:O4	21:CA:752:G:O2'	2.24	0.52
21:CA:864:A:H8	21:CA:864:A:P	2.33	0.52
21:CA:963:G:H2'	21:CA:964:A:H8	1.72	0.52
21:CA:1130:A:N6	21:CA:1131:G:O6	2.42	0.52
24:CX:15:G:H1	24:CX:59:U:H3	1.56	0.52
28:DF:83:PHE:HA	59:DA:1257:C:H1'	1.91	0.52
30:DH:113:VAL:HG11	30:DH:151:ILE:HD13	1.91	0.52
36:DQ:30:GLY:HA3	36:DQ:105:GLU:HB2	1.90	0.52
55:D9:37:GLY:HA2	59:DA:1125:G:H5'	1.91	0.52
59:DA:1352:U:H2'	59:DA:1353:A:H8	1.74	0.52
59:DA:1395:A:O2'	59:DA:1396:U:H5'	2.10	0.52
59:DA:2507:C:N4	59:DA:2582:G:H1	2.07	0.52
63:DA:2901:NMY:H13	63:DA:2901:NMY:O12	2.09	0.52
60:DB:33:G:H1	60:DB:49:C:N4	2.07	0.52
3:AD:10:ARG:NH2	21:AA:542:G:OP1	2.41	0.52
3:AD:38:TYR:OH	21:AA:426:G:OP1	2.23	0.52
9:AJ:53:PRO:O	9:AJ:55:LYS:N	2.43	0.52
10:AK:116:HIS:HA	21:AA:718:G:H1'	1.91	0.52
14:AO:82:ILE:HD11	14:AO:88:ARG:HG2	1.90	0.52
15:AP:38:TYR:H	15:AP:50:LYS:HB2	1.74	0.52
16:AQ:43:LEU:HB2	16:AQ:70:ARG:O	2.10	0.52
19:AT:23:ARG:HA	19:AT:26:ASN:HB2	1.91	0.52
20:AY:248:LYS:O	20:AY:252:ASP:HB2	2.09	0.52
21:AA:336:C:H2'	21:AA:337:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:61:GLY:HA3	25:BC:164:PHE:CG	2.44	0.52
33:BN:75:TYR:HA	33:BN:82:LEU:CB	2.39	0.52
33:BN:98:VAL:O	33:BN:100:GLU:C	2.48	0.52
37:BR:62:ALA:O	37:BR:66:VAL:HG23	2.09	0.52
52:B6:11:LEU:HG	52:B6:26:ASN:ND2	2.21	0.52
59:BA:325:G:H1	59:BA:337:C:H42	1.56	0.52
59:BA:393:C:H2'	59:BA:394:A:C8	2.45	0.52
59:BA:730:C:H2'	59:BA:731:C:C5	2.45	0.52
59:BA:884:C:N4	59:BA:885:C:O2	2.43	0.52
59:BA:981:A:N1	59:BA:2028:U:H5'	2.24	0.52
59:BA:1565:C:H1'	59:BA:1566:A:C8	2.40	0.52
59:BA:2018:G:C2	59:BA:2019:A:H1'	2.45	0.52
59:BA:2243:U:H2'	59:BA:2244:U:C6	2.44	0.52
59:BA:2876:G:H2'	59:BA:2877:G:H8	1.73	0.52
60:BB:36:C:C2	60:BB:49:C:H1'	2.45	0.52
4:CE:34:VAL:HG11	4:CE:63:ARG:HG3	1.90	0.52
19:CT:38:LYS:HD2	21:CA:1439:C:OP1	2.08	0.52
20:CY:289:ILE:H	20:CY:289:ILE:HD12	1.74	0.52
21:CA:27:G:H2'	21:CA:28:G:C8	2.45	0.52
21:CA:681:C:N4	21:CA:709:G:H1	2.07	0.52
21:CA:1226:C:HO2'	21:CA:1228:C:H5	1.57	0.52
21:CA:1440(L):G:H2'	21:CA:1440(M):G:O4'	2.09	0.52
22:CW:76:A:N1	59:DA:2421:G:H2'	2.24	0.52
24:CX:76:A:H61	46:D0:2:ALA:HB2	1.74	0.52
26:DD:79:VAL:O	26:DD:96:HIS:HB2	2.10	0.52
26:DD:105:ILE:HD12	26:DD:106:ILE:HG22	1.91	0.52
31:DJ:58:UNK:C	31:DJ:60:UNK:N	2.73	0.52
32:DK:41:PHE:HA	32:DK:44:ALA:HB3	1.91	0.52
33:DN:71:ILE:HD11	33:DN:91:LEU:HD12	1.90	0.52
36:DQ:56:ARG:HD3	59:DA:2469:A:H1'	1.90	0.52
36:DQ:72:LYS:O	36:DQ:93:TYR:HA	2.08	0.52
37:DR:45:ARG:NH2	59:DA:2837:G:H21	2.07	0.52
39:DT:98:LYS:HG3	39:DT:100:TYR:HE2	1.75	0.52
41:DV:99:ILE:O	41:DV:101:GLY:N	2.42	0.52
55:D9:2:LYS:O	59:DA:2538:C:O2'	2.27	0.52
59:DA:1312:U:C4	59:DA:1340:U:O4	2.62	0.52
59:DA:1328:G:H4'	59:DA:1329:U:C5	2.44	0.52
59:DA:1467:C:C5	59:DA:1546:C:H2'	2.45	0.52
59:DA:2075:U:C4	59:DA:2077:A:N7	2.78	0.52
1:AB:189:ASP:HB3	1:AB:205:ASP:H	1.74	0.52
4:AE:94:ALA:HB2	4:AE:119:LEU:HD22	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:28:VAL:HG13	8:AI:63:ILE:HB	1.91	0.52
11:AL:24:VAL:HG12	11:AL:98:TYR:HE2	1.74	0.52
14:AO:46:HIS:HE1	21:AA:669:U:H5'	1.74	0.52
16:AQ:21:VAL:HG23	16:AQ:44:ALA:HB2	1.91	0.52
20:AY:133:ILE:HG22	20:AY:257:PRO:HD2	1.92	0.52
21:AA:162:A:H3'	21:AA:163:C:H4'	1.92	0.52
21:AA:253:U:H3	21:AA:273:A:H2	1.58	0.52
21:AA:458(A):G:H1'	21:AA:458(E):A:N6	2.24	0.52
21:AA:642:A:H2'	21:AA:643:C:C6	2.43	0.52
21:AA:712:A:H2'	21:AA:713:G:O4'	2.10	0.52
21:AA:1039:C:H2'	21:AA:1040:U:C6	2.45	0.52
21:AA:1132:C:H2'	21:AA:1133:G:H8	1.73	0.52
21:AA:1440(C):G:O6	39:BT:93:ARG:NH2	2.43	0.52
21:AA:1491:G:C2	63:AA:1601:NMY:H61	2.44	0.52
33:BN:50:ASP:CA	33:BN:103:VAL:HG11	2.40	0.52
34:BO:18:LYS:HB2	34:BO:45:GLU:HG2	1.90	0.52
36:BQ:72:LYS:HB2	36:BQ:94:VAL:O	2.10	0.52
42:BW:36:LEU:HD13	42:BW:48:ALA:HA	1.90	0.52
46:B0:75:LEU:HD21	59:BA:2334:G:N1	2.25	0.52
59:BA:259:G:H2'	59:BA:260:G:H8	1.71	0.52
59:BA:444:C:H2'	59:BA:445:C:H6	1.73	0.52
59:BA:611(C):U:H4'	59:BA:611(F):A:C5	2.45	0.52
59:BA:839:U:H2'	59:BA:840:C:H6	1.74	0.52
59:BA:1506(I):U:O2	59:BA:1557:C:H4'	2.10	0.52
59:BA:2519:U:O2	59:BA:2542:A:N6	2.42	0.52
63:BA:2903:NMY:H13	63:BA:2903:NMY:O12	2.09	0.52
1:CB:20:GLU:HB2	1:CB:190:THR:HB	1.91	0.52
2:CC:54:ARG:HB3	2:CC:69:HIS:CG	2.45	0.52
3:CD:21:LEU:O	3:CD:113:SER:OG	2.16	0.52
4:CE:121:LYS:HG2	21:CA:7:G:N2	2.25	0.52
6:CG:50:ILE:O	6:CG:54:THR:HG22	2.09	0.52
9:CJ:53:PRO:HD2	21:CA:1059:C:O2'	2.09	0.52
10:CK:120:ARG:HH12	21:CA:1524:C:H5''	1.74	0.52
21:CA:1241:G:H2'	21:CA:1242:C:H6	1.72	0.52
21:CA:1504:G:H4'	21:CA:1505:G:O5'	2.09	0.52
25:DC:22:THR:HA	25:DC:225:ILE:O	2.10	0.52
40:DU:36:ARG:HG2	40:DU:37:GLU:N	2.24	0.52
48:D2:49:LYS:HE2	48:D2:53:LEU:HD12	1.92	0.52
51:D5:18:ALA:C	51:D5:21:SER:H	2.16	0.52
51:D5:18:ALA:O	51:D5:21:SER:N	2.40	0.52
59:DA:740:U:H5''	59:DA:1784:A:O5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1032:A:N1	59:DA:1122:G:O6	2.42	0.52
59:DA:1139:G:OP2	59:DA:1139:G:C8	2.63	0.52
59:DA:1416:G:H2'	59:DA:1417:C:C6	2.44	0.52
59:DA:1701:A:H4'	59:DA:1765:C:O2'	2.10	0.52
59:DA:2349:G:N1	59:DA:2368:C:O2	2.38	0.52
59:DA:2630:G:H3'	59:DA:2631:G:H8	1.74	0.52
60:DB:92:G:H2'	60:DB:93:C:H6	1.73	0.52
1:AB:139:LYS:O	1:AB:142:LEU:HB2	2.09	0.52
2:AC:119:ARG:HG3	2:AC:123:GLN:HE21	1.74	0.52
4:AE:19:MET:SD	21:AA:15:G:H1'	2.49	0.52
6:AG:29:LYS:NZ	21:AA:1375:A:O3'	2.43	0.52
6:AG:95:ARG:HE	6:AG:99:LEU:HD23	1.74	0.52
15:AP:20:VAL:HG23	15:AP:35:LYS:HA	1.92	0.52
16:AQ:70:ARG:HH21	21:AA:234:C:H5''	1.75	0.52
21:AA:68(O):A:C5	21:AA:68(P):C:H1'	2.45	0.52
21:AA:124:G:H4'	21:AA:291:C:O2'	2.10	0.52
21:AA:1262:C:H2'	21:AA:1263:C:C6	2.45	0.52
25:BC:11:LEU:HA	25:BC:14:LYS:HB2	1.91	0.52
25:BC:109:MET:HA	25:BC:111:PHE:CE2	2.45	0.52
33:BN:25:ARG:NH1	59:BA:1141:U:OP1	2.43	0.52
33:BN:84:LYS:C	33:BN:106:MET:HA	2.35	0.52
36:BQ:35:VAL:C	36:BQ:129:THR:HG1	2.11	0.52
40:BU:76:TYR:O	40:BU:80:ILE:HG12	2.09	0.52
42:BW:50:VAL:HG11	42:BW:103:ILE:HG21	1.92	0.52
54:B8:39:LYS:HE3	59:BA:2382:G:O2'	2.10	0.52
59:BA:1667:G:H1'	59:BA:1991:U:C5	2.44	0.52
59:BA:2050:C:H2'	59:BA:2051:A:O4'	2.09	0.52
59:BA:2622:C:O2'	59:BA:2824:C:N4	2.42	0.52
59:BA:2632:A:H2'	59:BA:2633:G:C8	2.45	0.52
59:BA:2683:C:H41	59:BA:2727:G:H21	1.57	0.52
9:CJ:4:ILE:HB	9:CJ:74:ILE:HG22	1.90	0.52
15:CP:35:LYS:O	15:CP:36:ILE:HG12	2.10	0.52
16:CQ:61:GLU:HA	16:CQ:71:PHE:CD1	2.45	0.52
20:CY:253:LEU:C	20:CY:254:LYS:HG2	2.34	0.52
21:CA:156:G:H2'	21:CA:157:G:C8	2.45	0.52
21:CA:571:U:O2	21:CA:918:A:H5'	2.08	0.52
21:CA:608:A:H2'	21:CA:609:A:O4'	2.10	0.52
21:CA:886:G:H4'	21:CA:915:A:H1'	1.91	0.52
21:CA:892:A:H2'	21:CA:893:C:H6	1.73	0.52
21:CA:1048:G:N2	21:CA:1209:C:N3	2.55	0.52
21:CA:1239:A:C6	21:CA:1299:A:N6	2.72	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CV:13:A:H4'	23:CV:14:A:OP2	2.07	0.52
27:DE:94:GLU:CD	27:DE:94:GLU:H	2.17	0.52
27:DE:191:PRO:O	27:DE:193:GLY:N	2.43	0.52
32:DK:99:ILE:O	32:DK:138:VAL:HA	2.09	0.52
33:DN:34:LEU:HD11	33:DN:103:VAL:HG22	1.91	0.52
35:DP:114:ILE:HG12	35:DP:130:PHE:HA	1.91	0.52
37:DR:77:ARG:O	37:DR:81:ASP:HB2	2.09	0.52
39:DT:53:ARG:HD3	59:DA:2684:U:OP2	2.10	0.52
39:DT:87:ASP:O	39:DT:88:ILE:HB	2.09	0.52
40:DU:62:ILE:HD11	40:DU:93:LYS:HD3	1.92	0.52
53:D7:16:HIS:CE1	59:DA:686:G:H1	2.28	0.52
59:DA:307:G:H1	59:DA:310:A:C5'	2.23	0.52
59:DA:493:G:H2'	59:DA:494:G:O4'	2.10	0.52
59:DA:965:C:H2'	59:DA:966:G:C8	2.44	0.52
59:DA:1337:G:H2'	59:DA:1338:G:C8	2.44	0.52
59:DA:1909:C:H2'	59:DA:1910:G:H8	1.74	0.52
1:AB:211:ILE:HG13	1:AB:212:GLN:N	2.25	0.52
2:AC:139:GLN:O	2:AC:143:GLU:HB2	2.10	0.52
11:AL:32:PHE:HB3	11:AL:84:LEU:HD23	1.92	0.52
16:AQ:25:ARG:CZ	21:AA:237:C:H5''	2.39	0.52
16:AQ:63:ARG:HB2	21:AA:130:A:N7	2.25	0.52
19:AT:32:ALA:HA	21:AA:1440(M):G:H5'	1.91	0.52
21:AA:160:A:C2	21:AA:343:U:H1'	2.45	0.52
21:AA:171:A:H2'	21:AA:172:A:C8	2.45	0.52
21:AA:657:G:H2'	21:AA:658:G:O4'	2.10	0.52
21:AA:1194:U:H2'	21:AA:1195:C:C6	2.43	0.52
21:AA:1307:U:H2'	21:AA:1308:U:C6	2.45	0.52
22:AW:21:A:N1	22:AW:46:G:H2'	2.25	0.52
25:BC:63:VAL:N	25:BC:161:ARG:O	2.43	0.52
25:BC:78:ILE:CG1	25:BC:124:VAL:HG21	2.37	0.52
33:BN:45:ASN:HB3	33:BN:115:ARG:HG3	1.91	0.52
34:BO:37:ASP:OD1	34:BO:37:ASP:N	2.40	0.52
40:BU:88:ILE:HG22	40:BU:90:VAL:O	2.10	0.52
41:BV:61:VAL:HG23	41:BV:93:GLU:O	2.10	0.52
43:BX:75:ASP:N	59:BA:58:G:OP1	2.43	0.52
44:BY:91:GLU:HG2	44:BY:92:ASN:H	1.74	0.52
45:BZ:15:PRO:HD3	60:BB:76:G:H5''	1.90	0.52
59:BA:1006:C:H2'	59:BA:1007:C:C5	2.44	0.52
59:BA:1016:G:O6	59:BA:1146:C:N3	2.42	0.52
59:BA:1337:G:H2'	59:BA:1338:G:H8	1.74	0.52
59:BA:2453:A:H2	59:BA:2500:U:O2	1.93	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2546:U:H4'	59:BA:2566:A:C2	2.45	0.52
59:BA:2786:U:H2'	59:BA:2787:C:C6	2.44	0.52
60:BB:24:G:H1'	60:BB:27:C:H42	1.72	0.52
60:BB:36:C:N3	60:BB:49:C:H1'	2.25	0.52
2:CC:109:PRO:C	2:CC:111:LEU:H	2.17	0.52
5:CF:70:ASP:O	5:CF:73:ASN:ND2	2.42	0.52
19:CT:43:LEU:HA	19:CT:46:GLU:HB3	1.92	0.52
21:CA:537:G:H2'	21:CA:538:G:O4'	2.08	0.52
21:CA:540:G:H2'	21:CA:541:G:O4'	2.10	0.52
21:CA:848:C:H2'	21:CA:849:C:H6	1.74	0.52
21:CA:1025:U:H5''	21:CA:1026:G:H5'	1.91	0.52
21:CA:1115:C:H2'	21:CA:1116:C:O4'	2.10	0.52
21:CA:1493:A:H5''	63:CA:1601:NMY:H92	1.74	0.52
23:CV:20:U:O4	24:CX:35:A:N1	2.42	0.52
27:DE:143:ASN:HD21	59:DA:2572:A:P	2.32	0.52
28:DF:75:HIS:CD2	28:DF:82:ILE:HD12	2.45	0.52
29:DG:44:GLY:HA3	59:DA:2311:A:C6	2.45	0.52
33:DN:100:GLU:HB3	33:DN:104:LYS:N	2.24	0.52
40:DU:33:ARG:HD3	59:DA:581:C:OP1	2.09	0.52
41:DV:15:GLU:HB3	41:DV:16:PRO:HD2	1.91	0.52
56:De:64:LEU:O	56:De:66:GLU:N	2.40	0.52
59:DA:1063:G:H2'	59:DA:1064:C:O4'	2.09	0.52
60:DB:13:A:N3	60:DB:14:U:H5''	2.25	0.52
15:AP:35:LYS:O	15:AP:36:ILE:HG12	2.10	0.52
20:AY:30:GLU:HG3	20:AY:31:ARG:NH1	2.21	0.52
20:AY:332:SER:HA	20:AY:371:ALA:HB1	1.90	0.52
21:AA:269:C:H2'	21:AA:270:A:H8	1.74	0.52
21:AA:521:G:N2	21:AA:536:C:O4'	2.31	0.52
28:BF:37:VAL:HA	28:BF:40:GLN:HE21	1.75	0.52
33:BN:82:LEU:N	33:BN:82:LEU:HD22	2.24	0.52
39:BT:121:ILE:O	39:BT:125:ARG:HG2	2.10	0.52
55:B9:24:TYR:OH	59:BA:2742:C:OP2	2.20	0.52
55:B9:27:CYS:SG	55:B9:32:HIS:ND1	2.83	0.52
56:Be:75:ILE:HD13	56:Be:82:THR:HG23	1.91	0.52
59:BA:635:C:H2'	59:BA:636:G:O4'	2.10	0.52
59:BA:910:A:H5'	59:BA:911:A:OP2	2.10	0.52
59:BA:1428:C:O2'	59:BA:1569:A:OP2	2.19	0.52
59:BA:1441:G:H4'	59:BA:1628:G:OP1	2.10	0.52
59:BA:1654:A:H61	59:BA:2005:A:H2'	1.74	0.52
59:BA:1779:U:H2'	59:BA:1783:A:N6	2.24	0.52
59:BA:2386:C:H2'	59:BA:2387:U:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2546:U:O2'	59:BA:2566:A:H1'	2.09	0.52
59:BA:2593:U:H2'	59:BA:2594:C:C6	2.44	0.52
59:BA:2875:C:H2'	59:BA:2876:G:O4'	2.10	0.52
6:CG:38:LEU:O	6:CG:42:ILE:HG12	2.10	0.52
14:CO:32:LEU:HD12	14:CO:63:ARG:HB3	1.92	0.52
20:CY:105:ILE:HG23	20:CY:133:ILE:HG13	1.91	0.52
20:CY:567:LEU:O	20:CY:568:TYR:HB3	2.09	0.52
21:CA:1405:G:P	63:CA:1601:NMY:H231	2.50	0.52
63:CA:1601:NMY:O12	63:CA:1601:NMY:H13	2.09	0.52
26:DD:136:ILE:O	26:DD:168:ARG:NH2	2.42	0.52
33:DN:37:LYS:HE2	33:DN:38:HIS:CD2	2.32	0.52
33:DN:85:ILE:H	33:DN:106:MET:HA	1.75	0.52
34:DO:24:VAL:C	34:DO:38:VAL:O	2.53	0.52
35:DP:9:ASN:N	35:DP:10:PRO:HD3	2.25	0.52
35:DP:58:THR:HG1	35:DP:61:ARG:HH21	1.56	0.52
37:DR:45:ARG:O	37:DR:49:ASP:HB2	2.09	0.52
52:D6:19:ARG:HA	52:D6:21:TYR:HE1	1.75	0.52
59:DA:635:C:H2'	59:DA:636:G:O4'	2.09	0.52
59:DA:852:G:H1	59:DA:925:C:N4	2.07	0.52
59:DA:1061:U:O2'	59:DA:1063:G:OP1	2.28	0.52
59:DA:1297:C:N3	59:DA:1643:G:N2	2.49	0.52
59:DA:1666:G:H1	59:DA:1994:C:H42	0.71	0.52
59:DA:1712(G):G:O2'	59:DA:1712(K):A:N6	2.43	0.52
11:AL:81:SER:HB3	11:AL:106:ASP:HB2	1.92	0.52
20:AY:119:GLU:O	20:AY:123:ARG:HB2	2.09	0.52
21:AA:638:G:H2'	21:AA:639:G:H8	1.75	0.52
21:AA:1120:G:H2'	21:AA:1121:U:C6	2.44	0.52
21:AA:1197:G:H5'	21:AA:1197:G:H8	1.75	0.52
21:AA:1203:C:H2'	21:AA:1204:A:H8	1.75	0.52
22:AW:76:A:N1	59:BA:2421:G:H2'	2.25	0.52
25:BC:172:ILE:HD13	25:BC:173:HIS:H	1.73	0.52
33:BN:35:ARG:NH2	33:BN:75:TYR:HD2	2.07	0.52
33:BN:37:LYS:HZ3	33:BN:38:HIS:CD2	2.27	0.52
36:BQ:13:GLN:HB3	59:BA:954:G:H5''	1.92	0.52
39:BT:78:LEU:HA	39:BT:82:LEU:HD21	1.90	0.52
59:BA:222:A:H5''	59:BA:421:U:OP1	2.10	0.52
59:BA:529:A:N7	59:BA:2041:U:O4	2.43	0.52
59:BA:832:G:N7	59:BA:944:G:N2	2.57	0.52
59:BA:1937:A:O2'	59:BA:1939:U:H6	1.90	0.52
59:BA:2463:C:H2'	59:BA:2464:C:O4'	2.09	0.52
1:CB:71:VAL:HB	1:CB:164:VAL:CG2	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:173:TRP:HD1	3:CD:186:LEU:H	1.57	0.52
11:CL:65:GLU:O	11:CL:66:VAL:HG22	2.10	0.52
18:CS:77:THR:HG21	21:CA:1221:G:H4'	1.90	0.52
21:CA:579:G:H4'	21:CA:728:A:H1'	1.91	0.52
21:CA:660:G:H1	21:CA:745:C:H42	1.57	0.52
21:CA:1222:G:OP1	21:CA:1321:C:H2'	2.10	0.52
33:DN:72:TYR:O	33:DN:85:ILE:O	2.28	0.52
36:DQ:75:THR:HB	36:DQ:88:GLY:HA3	1.91	0.52
45:DZ:4:ARG:HA	45:DZ:58:VAL:HB	1.91	0.52
47:D1:20:ARG:HG2	47:D1:22:GLY:HA3	1.92	0.52
59:DA:1080:C:H2'	59:DA:1081:U:H6	1.71	0.52
59:DA:1124:C:H2'	59:DA:1125:G:O4'	2.08	0.52
59:DA:1506(I):U:H2'	59:DA:1506(J):G:H8	1.71	0.52
4:AE:78:HIS:HB2	7:AH:104:ARG:HG3	1.92	0.52
7:AH:95:VAL:HB	7:AH:133:LEU:HG	1.91	0.52
10:AK:115:PRO:HA	21:AA:675:A:H2	1.75	0.52
11:AL:53:ARG:HH21	21:AA:521:G:H5''	1.75	0.52
18:AS:37:ARG:HD2	21:AA:1220:G:OP1	2.10	0.52
18:AS:76:PRO:C	18:AS:78:ARG:H	2.17	0.52
20:AY:668:SER:OG	20:AY:669:PHE:N	2.42	0.52
21:AA:22:G:H4'	21:AA:885:G:C8	2.45	0.52
21:AA:68(C):C:H2'	21:AA:68(D):C:C6	2.45	0.52
21:AA:626:U:H2'	21:AA:627:G:H8	1.75	0.52
21:AA:717:C:H5''	21:AA:733:A:O2'	2.09	0.52
25:BC:42:VAL:O	25:BC:43:GLU:C	2.53	0.52
27:BE:2:LYS:NZ	27:BE:95:ILE:O	2.36	0.52
33:BN:55:VAL:HG22	33:BN:126:PRO:HA	1.92	0.52
34:BO:1:MET:HG2	59:BA:1665:A:H1'	1.92	0.52
34:BO:91:LEU:HD22	34:BO:92:GLU:N	2.24	0.52
44:BY:43:ASN:HA	44:BY:63:LYS:O	2.11	0.52
56:Be:65:LYS:HD2	56:Be:65:LYS:H	1.74	0.52
59:BA:629:G:H2'	59:BA:630:G:C8	2.45	0.52
59:BA:731:C:O5'	59:BA:731:C:H6	1.93	0.52
59:BA:740:U:H1'	59:BA:1981:A:C4	2.46	0.52
59:BA:1412:A:N6	59:BA:1590:U:H3	2.08	0.52
59:BA:1418:G:OP1	59:BA:1588:C:H4'	2.10	0.52
59:BA:1636:C:O2	59:BA:1760:A:H2	1.91	0.52
59:BA:1674:G:H21	59:BA:1677:A:H61	1.56	0.52
60:BB:3:C:N3	60:BB:117:G:C2	2.78	0.52
1:CB:115:LEU:HD11	1:CB:146:GLN:HE22	1.75	0.52
1:CB:172:ILE:HA	1:CB:175:ARG:NH1	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:92:LYS:O	5:CF:94:GLN:N	2.43	0.52
6:CG:76:ARG:O	6:CG:86:GLN:HA	2.09	0.52
10:CK:97:ALA:HA	10:CK:100:ALA:HB3	1.90	0.52
21:CA:319:G:H1	21:CA:334:C:H42	1.56	0.52
21:CA:883:C:H2'	21:CA:884:U:C6	2.45	0.52
21:CA:928:G:H2'	21:CA:929:G:H8	1.75	0.52
21:CA:1060:C:H2'	21:CA:1061:G:O4'	2.09	0.52
21:CA:1476:G:H2'	21:CA:1477:C:C6	2.44	0.52
22:CW:25:C:C4	22:CW:26:A:N6	2.77	0.52
30:DH:103:LEU:O	30:DH:114:VAL:HA	2.10	0.52
31:DJ:33:UNK:HA	59:DA:1055:G:H5'	1.92	0.52
50:D4:10:VAL:HG22	50:D4:11:PRO:HD2	1.92	0.52
59:DA:836:G:H2'	59:DA:837:C:C6	2.45	0.52
59:DA:1356:G:H2'	59:DA:1357:U:C6	2.45	0.52
59:DA:1910:G:C2	59:DA:1911:U:H1'	2.45	0.52
59:DA:2081:C:H2'	59:DA:2082:A:H8	1.73	0.52
59:DA:2262:U:H2'	59:DA:2263:C:H6	1.74	0.52
59:DA:2643:G:H2'	59:DA:2644:G:O4'	2.10	0.52
6:AG:73:MET:HG2	6:AG:90:GLU:HG2	1.91	0.51
11:AL:60:LEU:HB2	11:AL:63:GLY:H	1.75	0.51
20:AY:512:ILE:HA	20:AY:567:LEU:HG	1.91	0.51
21:AA:629:G:H2'	21:AA:630:G:O4'	2.10	0.51
26:BD:224:ALA:HB2	26:BD:233:HIS:HD1	1.75	0.51
28:BF:9:ILE:HG21	28:BF:125:LEU:N	2.25	0.51
33:BN:60:ILE:HG22	33:BN:61:ARG:HB2	1.92	0.51
33:BN:71:ILE:HD11	33:BN:91:LEU:HG	1.91	0.51
33:BN:104:LYS:CB	33:BN:120:LEU:HD21	2.40	0.51
35:BP:30:THR:O	35:BP:33:ARG:N	2.43	0.51
42:BW:18:ARG:HA	42:BW:76:VAL:HG11	1.92	0.51
42:BW:72:LYS:HD2	42:BW:108:GLY:HA3	1.91	0.51
48:B2:10:LEU:HD22	48:B2:14:ARG:HH21	1.75	0.51
53:B7:8:ASN:HB3	53:B7:11:LYS:HB3	1.93	0.51
55:B9:17:ILE:HD11	55:B9:19:ARG:HB2	1.93	0.51
55:B9:18:ARG:NH2	59:BA:1032:A:H1'	2.26	0.51
59:BA:422:A:C2	59:BA:423:A:C4	2.98	0.51
59:BA:805:G:H5'	59:BA:806:C:C6	2.45	0.51
59:BA:1028:A:H2'	59:BA:1029:A:C8	2.45	0.51
59:BA:1214:A:H62	59:BA:1235:G:N2	2.07	0.51
59:BA:1221:C:N4	59:BA:1228:G:H1	2.04	0.51
59:BA:1422:G:H2'	59:BA:1423:G:H8	1.72	0.51
59:BA:1653:G:H5'	59:BA:2822:G:H22	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1765:C:H2'	59:BA:1766:U:C6	2.45	0.51
59:BA:2298:A:H3'	59:BA:2299:G:C8	2.44	0.51
59:BA:2655:G:O2'	59:BA:2664:G:O6	2.22	0.51
3:CD:173:TRP:HZ3	3:CD:194:LEU:HD21	1.75	0.51
4:CE:121:LYS:HG3	4:CE:122:GLU:N	2.25	0.51
7:CH:91:ARG:NH2	21:CA:564:C:H4'	2.25	0.51
11:CL:90:VAL:O	11:CL:92:ASP:N	2.43	0.51
11:CL:108:ALA:C	11:CL:121:GLY:HA3	2.35	0.51
20:CY:345:THR:HG22	20:CY:346:LYS:HG2	1.92	0.51
21:CA:109:A:N6	21:CA:324:G:H1'	2.26	0.51
21:CA:606:G:H2'	21:CA:631:G:N2	2.25	0.51
21:CA:811:C:H5'	21:CA:812:C:OP2	2.10	0.51
21:CA:950:U:O2	21:CA:1231:G:N2	2.25	0.51
21:CA:1251:A:N3	21:CA:1369:C:O2'	2.37	0.51
21:CA:1440(D):A:C6	39:DT:118:ARG:HD3	2.45	0.51
25:DC:185:LYS:O	25:DC:189:ASN:ND2	2.43	0.51
28:DF:102:PRO:HA	59:DA:607:U:P	2.50	0.51
30:DH:72:ILE:O	30:DH:76:VAL:HG23	2.10	0.51
32:DK:90:LYS:C	32:DK:92:GLY:H	2.18	0.51
33:DN:19:GLU:HG3	33:DN:20:GLY:N	2.25	0.51
33:DN:88:GLU:C	33:DN:90:MET:N	2.67	0.51
34:DO:23:ARG:HG2	59:DA:2562:U:H1'	1.92	0.51
35:DP:81:GLN:HE21	35:DP:106:LEU:HA	1.75	0.51
38:DS:34:HIS:CE1	38:DS:54:LEU:HB3	2.45	0.51
38:DS:105:ALA:O	38:DS:107:GLU:N	2.43	0.51
39:DT:48:ILE:HG22	39:DT:49:VAL:HG12	1.93	0.51
42:DW:13:SER:H	42:DW:16:LYS:HE2	1.76	0.51
42:DW:18:ARG:HH12	42:DW:77:ASP:HA	1.75	0.51
42:DW:70:TYR:HD2	42:DW:110:LYS:HA	1.74	0.51
59:DA:108:U:H2'	59:DA:109:G:H8	1.75	0.51
59:DA:950:G:N2	59:DA:967:C:N3	2.47	0.51
59:DA:1651:G:H2'	59:DA:1652:A:H8	1.75	0.51
59:DA:2649:U:H2'	59:DA:2650:U:C6	2.45	0.51
59:DA:2851:A:H2'	59:DA:2852:G:C8	2.45	0.51
3:AD:115:ARG:HB3	21:AA:407:G:H5''	1.92	0.51
5:AF:2:ARG:HD3	5:AF:92:LYS:HE2	1.92	0.51
5:AF:69:GLU:HB2	21:AA:738:C:H4'	1.91	0.51
12:AM:123:ALA:HB1	24:AX:31:C:H1'	1.92	0.51
15:AP:32:TYR:HB2	15:AP:34:GLU:O	2.09	0.51
20:AY:315:LYS:O	20:AY:326:THR:HA	2.09	0.51
21:AA:272:C:H2'	21:AA:273:A:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:604:G:O6	21:AA:634:C:N3	2.43	0.51
21:AA:1040:U:H2'	21:AA:1041:A:H8	1.74	0.51
25:BC:53:ARG:HG2	25:BC:54:ARG:N	2.24	0.51
25:BC:114:VAL:HB	25:BC:139:PRO:HD3	1.92	0.51
30:BH:148:ILE:HA	30:BH:151:ILE:HG13	1.92	0.51
34:BO:71:ARG:HG3	39:BT:74:ARG:HH21	1.75	0.51
37:BR:11:ASN:O	37:BR:17:ARG:NE	2.37	0.51
38:BS:102:ALA:HB2	38:BS:109:GLY:H	1.75	0.51
39:BT:67:SER:O	39:BT:69:GLY:N	2.43	0.51
40:BU:81:HIS:CE1	40:BU:85:LYS:HB2	2.46	0.51
40:BU:112:ARG:HH11	41:BV:46:VAL:HG21	1.74	0.51
47:B1:43:TYR:HB2	47:B1:44:PRO:HD3	1.91	0.51
59:BA:2331:G:H2'	59:BA:2332:U:C6	2.45	0.51
63:BA:2904:NMY:O12	63:BA:2904:NMY:H13	2.09	0.51
2:CC:67:THR:HG22	2:CC:104:GLN:HB2	1.92	0.51
3:CD:94:LEU:HD12	3:CD:191:ARG:HB2	1.93	0.51
3:CD:196:LEU:O	3:CD:198:VAL:N	2.42	0.51
12:CM:95:GLY:HA2	12:CM:110:ARG:NH1	2.26	0.51
20:CY:15:ILE:HB	20:CY:104:ALA:HA	1.91	0.51
20:CY:87:HIS:NE2	20:CY:117:GLN:O	2.43	0.51
21:CA:235:C:H2'	21:CA:236:G:H8	1.75	0.51
21:CA:898:G:N2	21:CA:901:A:OP2	2.44	0.51
21:CA:1048:G:H1	21:CA:1209:C:N4	2.06	0.51
21:CA:1116:C:C2'	21:CA:1117:G:H5''	2.40	0.51
21:CA:1491:G:H2'	63:CA:1601:NMY:H4	1.91	0.51
33:DN:40:PRO:HA	33:DN:77:GLY:HA2	1.92	0.51
33:DN:100:GLU:O	33:DN:101:HIS:C	2.53	0.51
33:DN:114:ARG:O	33:DN:114:ARG:HD3	2.10	0.51
34:DO:34:THR:OG1	34:DO:35:VAL:N	2.44	0.51
36:DQ:36:ALA:HA	36:DQ:129:THR:HB	1.91	0.51
43:DX:65:ARG:HD3	43:DX:70:LEU:HD23	1.91	0.51
44:DY:97:ARG:NE	59:DA:300:A:OP1	2.43	0.51
59:DA:204:A:H8	59:DA:204:A:OP1	1.93	0.51
59:DA:1340:U:H4'	59:DA:1394:U:O2'	2.10	0.51
59:DA:1468(D):A:H61	59:DA:1506(N):G:H1'	1.75	0.51
59:DA:1536:A:H5''	59:DA:1537:C:OP2	2.10	0.51
59:DA:2002:G:H2'	59:DA:2003:G:C8	2.45	0.51
3:AD:190:ASP:OD1	3:AD:192:GLU:N	2.43	0.51
11:AL:49:ASN:HA	21:AA:529:G:O6	2.09	0.51
20:AY:503:GLY:O	23:AV:21:A:H1'	2.11	0.51
21:AA:1268:A:H1'	21:AA:1326:C:O2'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1434:A:N6	21:AA:1467:G:H1'	2.25	0.51
21:AA:1440(K):G:N2	21:AA:1440(L):G:C5	2.79	0.51
25:BC:31:LYS:HG2	25:BC:186:LEU:HD12	1.92	0.51
25:BC:74:ARG:C	25:BC:76:LEU:H	2.17	0.51
26:BD:157:ARG:NH2	59:BA:1817:G:O5'	2.31	0.51
28:BF:4:VAL:HA	28:BF:22:ALA:HB3	1.92	0.51
28:BF:154:VAL:O	28:BF:175:THR:HA	2.11	0.51
28:BF:157:VAL:HG12	28:BF:194:MET:HG2	1.91	0.51
32:BK:55:VAL:HG22	32:BK:56:GLU:H	1.74	0.51
35:BP:97:PRO:HD3	35:BP:126:VAL:HB	1.92	0.51
40:BU:92:ARG:HB2	41:BV:11:GLN:CD	2.36	0.51
42:BW:103:ILE:H	42:BW:103:ILE:HD12	1.75	0.51
54:B8:2:PRO:HD3	59:BA:590:A:C2	2.45	0.51
54:B8:16:ILE:HG22	54:B8:22:VAL:HA	1.91	0.51
54:B8:47:LYS:HG2	54:B8:48:PHE:H	1.74	0.51
59:BA:151:C:N3	59:BA:175:G:N2	2.43	0.51
59:BA:151:C:H2'	59:BA:152:G:H8	1.74	0.51
59:BA:373:U:H2'	59:BA:374:A:C8	2.46	0.51
59:BA:893:C:H2'	59:BA:894:C:C6	2.45	0.51
59:BA:1653:G:H5'	59:BA:2822:G:N2	2.25	0.51
59:BA:1930:G:O6	63:BA:2904:NMY:H7	2.11	0.51
59:BA:2166:G:H2'	59:BA:2167:U:O4'	2.10	0.51
59:BA:2291:U:H2'	59:BA:2292:C:C6	2.45	0.51
59:BA:2769:C:H2'	59:BA:2770:G:C8	2.46	0.51
4:CE:75:THR:OG1	4:CE:76:ILE:N	2.43	0.51
9:CJ:6:ILE:HG23	9:CJ:72:VAL:HB	1.91	0.51
9:CJ:39:PRO:HB3	9:CJ:70:ARG:HE	1.75	0.51
11:CL:34:ARG:O	11:CL:82:VAL:HA	2.10	0.51
14:CO:89:GLY:C	59:DA:715:G:H5''	2.35	0.51
18:CS:73:GLU:HB3	21:CA:1320:C:H1'	1.91	0.51
20:CY:32:ILE:O	20:CY:35:TYR:HD2	1.94	0.51
20:CY:606:MET:SD	20:CY:671:MET:HB3	2.50	0.51
21:CA:68(H):G:O2'	21:CA:68(I):G:H8	1.92	0.51
21:CA:130:A:N6	21:CA:233:C:O2	2.44	0.51
21:CA:926:G:H22	23:CV:17:U:H5''	1.74	0.51
25:DC:73:VAL:C	25:DC:75:VAL:H	2.18	0.51
26:DD:12:SER:OG	26:DD:208:LYS:HD3	2.11	0.51
26:DD:91:ARG:C	26:DD:107:ALA:HB3	2.35	0.51
27:DE:72:VAL:HG12	27:DE:73:GLU:H	1.75	0.51
27:DE:119:ARG:NH1	27:DE:156:MET:O	2.40	0.51
33:DN:100:GLU:HB3	33:DN:104:LYS:H	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DZ:102:LEU:HB2	45:DZ:122:ARG:HA	1.92	0.51
48:D2:48:HIS:O	48:D2:50:ILE:N	2.43	0.51
52:D6:15:GLU:HG2	52:D6:16:CYS:HG	1.76	0.51
54:D8:33:ASN:HD22	59:DA:2419:U:P	2.34	0.51
59:DA:448:U:H3	59:DA:583:G:H1'	1.73	0.51
59:DA:813:U:H2'	59:DA:814:C:C6	2.44	0.51
59:DA:836:G:N2	59:DA:943:U:O2	2.30	0.51
59:DA:955:C:N3	59:DA:962:G:C6	2.76	0.51
59:DA:1203:G:N1	59:DA:1241:A:OP2	2.28	0.51
59:DA:1277:G:H2'	59:DA:1278:A:H8	1.75	0.51
59:DA:1936:A:H1'	59:DA:1940:U:O2'	2.10	0.51
59:DA:2789:C:H4'	59:DA:2892:A:H61	1.75	0.51
1:AB:187:LEU:HD23	1:AB:188:ALA:H	1.76	0.51
11:AL:69:TYR:CG	11:AL:70:ILE:N	2.75	0.51
11:AL:93:LEU:HD12	11:AL:96:VAL:HG13	1.92	0.51
18:AS:73:GLU:HB3	21:AA:1320:C:O2'	2.10	0.51
20:AY:95:GLU:O	20:AY:99:ARG:NH1	2.44	0.51
21:AA:395:C:H2'	21:AA:396:G:H8	1.75	0.51
21:AA:917:G:H2'	21:AA:918:A:C8	2.46	0.51
21:AA:957:U:N3	21:AA:960:U:OP2	2.36	0.51
29:BG:60:LEU:HD21	29:BG:153:ARG:HD3	1.93	0.51
33:BN:116:LEU:CB	33:BN:118:LYS:H	2.24	0.51
37:BR:103:ARG:O	37:BR:105:ARG:N	2.44	0.51
38:BS:22:GLY:O	38:BS:23:ARG:NE	2.43	0.51
49:B3:7:LYS:HE2	49:B3:32:GLN:HA	1.91	0.51
59:BA:767:U:H2'	59:BA:768:G:C8	2.45	0.51
59:BA:1958:C:H2'	59:BA:1959:G:H8	1.76	0.51
60:BB:15:A:H3'	60:BB:16:G:H8	1.76	0.51
60:BB:38:C:H2'	60:BB:39:A:H8	1.75	0.51
5:CF:42:GLU:HA	5:CF:61:LEU:HA	1.91	0.51
6:CG:69:VAL:HG21	6:CG:104:LEU:CD2	2.40	0.51
6:CG:74:GLU:O	6:CG:88:PRO:HA	2.11	0.51
7:CH:56:LYS:NZ	21:CA:653:A:O4'	2.33	0.51
13:CN:47:LEU:HD22	13:CN:53:LEU:HB2	1.93	0.51
16:CQ:45:HIS:CB	16:CQ:72:ARG:HA	2.33	0.51
21:CA:935:A:N6	21:CA:1380:U:H3	2.04	0.51
25:DC:153:ILE:O	25:DC:157:ILE:HG13	2.09	0.51
28:DF:59:TYR:HB3	59:DA:469:G:OP1	2.10	0.51
46:D0:37:LEU:HD12	46:D0:59:LEU:HB3	1.92	0.51
59:DA:458:G:H1'	59:DA:459:U:H5	1.75	0.51
59:DA:467:G:HO2'	59:DA:796:C:HO2'	1.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1594:G:H2'	59:DA:1595:G:C8	2.46	0.51
59:DA:1965:C:P	59:DA:1966:A:H3'	2.51	0.51
59:DA:2761:G:H2'	59:DA:2762:G:O4'	2.10	0.51
60:DB:36:C:N4	60:DB:49:C:H1'	2.26	0.51
7:AH:63:LEU:H	7:AH:63:LEU:HD22	1.76	0.51
16:AQ:21:VAL:HG21	16:AQ:59:ILE:HD11	1.92	0.51
19:AT:22:ARG:O	19:AT:26:ASN:HB2	2.11	0.51
20:AY:22:ASP:OD1	61:AY:701:GDP:C5'	2.52	0.51
21:AA:416:G:H2'	21:AA:417:C:O4'	2.11	0.51
27:BE:191:PRO:C	27:BE:193:GLY:H	2.19	0.51
28:BF:167:ALA:HB1	28:BF:173:VAL:HG11	1.93	0.51
28:BF:180:GLY:HA2	59:BA:611(G):G:H1'	1.92	0.51
37:BR:87:TYR:CE1	37:BR:94:TYR:HB3	2.46	0.51
42:BW:39:THR:O	42:BW:41:LYS:N	2.44	0.51
46:B0:54:GLY:O	46:B0:57:PHE:N	2.43	0.51
59:BA:308:G:H1'	59:BA:329:G:H22	1.75	0.51
59:BA:501:A:H2'	59:BA:502:A:O4'	2.10	0.51
59:BA:734:A:H2'	59:BA:735:A:C8	2.46	0.51
59:BA:1030:G:H2'	59:BA:1031:G:H8	1.74	0.51
59:BA:1330:C:H2'	59:BA:1331:A:C8	2.45	0.51
59:BA:2071:A:H2	59:BA:2438:U:H3	1.54	0.51
1:CB:96:ARG:HD3	21:CA:1099:G:P	2.50	0.51
3:CD:157:LEU:HA	3:CD:160:GLN:HB3	1.92	0.51
6:CG:43:PHE:O	6:CG:47:CYS:HB2	2.11	0.51
8:CI:24:GLY:HA3	8:CI:57:GLY:HA2	1.93	0.51
12:CM:31:LYS:HA	12:CM:34:LEU:HB2	1.91	0.51
20:CY:604:PRO:HA	20:CY:676:TYR:HB3	1.92	0.51
21:CA:107:G:H1'	21:CA:378:G:H4'	1.93	0.51
28:DF:82:ILE:HG13	28:DF:83:PHE:CD1	2.45	0.51
30:DH:111:HIS:NE2	59:DA:2668:G:H1'	2.26	0.51
33:DN:113:GLY:C	33:DN:117:PHE:HB2	2.35	0.51
33:DN:114:ARG:NH2	59:DA:528:A:C5	2.76	0.51
40:DU:3:ARG:HH21	59:DA:449:A:H5'	1.76	0.51
44:DY:81:LYS:HB3	44:DY:97:ARG:HB2	1.91	0.51
59:DA:271(Q):A:N1	59:DA:357(E):U:O2	2.44	0.51
59:DA:733:G:O2'	59:DA:734:A:O5'	2.25	0.51
59:DA:1019:U:OP1	59:DA:1035:U:O2'	2.17	0.51
59:DA:1494:A:H8	59:DA:1496:A:OP2	1.93	0.51
59:DA:2175:C:H2'	59:DA:2176:A:H8	1.74	0.51
60:DB:6:C:H42	60:DB:114:G:H1	1.58	0.51
3:AD:98:GLU:O	3:AD:100:ARG:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:78:HIS:NE2	4:AE:142:LEU:HD23	2.26	0.51
7:AH:83:ILE:H	7:AH:83:ILE:HD13	1.75	0.51
19:AT:35:THR:HG21	21:AA:1440(M):G:OP1	2.10	0.51
20:AY:358:MET:HA	20:AY:363:ARG:HG2	1.92	0.51
21:AA:382:A:N7	21:AA:383:A:N6	2.59	0.51
21:AA:881:G:H2'	21:AA:882:C:O4'	2.11	0.51
24:AX:72:C:H5'	24:AX:73:A:OP1	2.11	0.51
25:BC:75:VAL:HG11	25:BC:154:ILE:HD11	1.92	0.51
27:BE:37:ARG:HD2	27:BE:42:ASP:CG	2.36	0.51
27:BE:115:GLY:O	27:BE:119:ARG:HB2	2.10	0.51
29:BG:61:ALA:HA	29:BG:64:THR:HG22	1.91	0.51
32:BK:79:ARG:HD2	32:BK:86:LYS:HA	1.92	0.51
40:BU:91:ASP:O	40:BU:95:LEU:HB2	2.10	0.51
51:B5:10:LYS:N	59:BA:2017:U:O2'	2.44	0.51
59:BA:463:G:N2	59:BA:466:A:C8	2.77	0.51
59:BA:669:G:OP1	59:BA:670:A:N6	2.44	0.51
59:BA:1400:G:H2'	59:BA:1401:G:O4'	2.11	0.51
59:BA:1665:A:N6	59:BA:1992:G:O6	2.44	0.51
59:BA:1700:A:C2	59:BA:1766:U:H5''	2.45	0.51
59:BA:1923:U:H2'	59:BA:1924:C:H5	1.76	0.51
60:BB:13:A:H2'	60:BB:13:A:N3	2.26	0.51
9:CJ:83:GLU:O	9:CJ:87:THR:OG1	2.20	0.51
20:CY:128:TYR:HD2	20:CY:130:VAL:HB	1.75	0.51
20:CY:133:ILE:HG22	20:CY:257:PRO:HD2	1.91	0.51
20:CY:425:SER:O	20:CY:428:LEU:HG	2.11	0.51
21:CA:724:G:H2'	21:CA:725:G:H8	1.75	0.51
21:CA:956:U:H2'	21:CA:957:U:C6	2.46	0.51
30:DH:85:LYS:HZ1	30:DH:121:ILE:HD12	1.75	0.51
32:DK:53:VAL:HG13	32:DK:70:LYS:H	1.76	0.51
37:DR:117:VAL:O	37:DR:118:GLU:HB2	2.10	0.51
47:D1:17:SER:H	47:D1:39:LYS:HA	1.75	0.51
59:DA:71:A:OP1	59:DA:112:U:H2'	2.10	0.51
59:DA:582:G:H2'	59:DA:583:G:C8	2.46	0.51
59:DA:886:C:H2'	59:DA:889:C:N4	2.26	0.51
59:DA:1370:C:H2'	59:DA:1371:G:O4'	2.10	0.51
59:DA:2199:A:N6	59:DA:2224:G:O2'	2.44	0.51
8:AI:11:LYS:NZ	21:AA:1347:G:N7	2.48	0.51
12:AM:95:GLY:O	12:AM:96:LEU:HG	2.11	0.51
19:AT:49:ALA:O	19:AT:51:GLU:N	2.43	0.51
20:AY:90:PHE:HB2	20:AY:458:HIS:HD1	1.75	0.51
21:AA:633:G:H2'	21:AA:634:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:834:C:H2'	21:AA:835:U:O4'	2.11	0.51
21:AA:1233:G:H2'	21:AA:1234:C:C6	2.46	0.51
63:AA:1601:NMY:H13	63:AA:1601:NMY:O12	2.09	0.51
26:BD:13:ARG:HA	26:BD:16:MET:HB2	1.93	0.51
27:BE:47:VAL:O	27:BE:80:GLU:HA	2.11	0.51
32:BK:36:GLU:HA	32:BK:39:LYS:HE3	1.93	0.51
35:BP:23:PRO:HB2	35:BP:33:ARG:HG2	1.92	0.51
59:BA:192:C:O2'	59:BA:802:A:H1'	2.11	0.51
59:BA:883:G:H2'	59:BA:884:C:C6	2.45	0.51
59:BA:1160:G:H2'	59:BA:1161:C:C6	2.46	0.51
59:BA:1434:A:H2'	59:BA:1435:G:C8	2.46	0.51
59:BA:1506(I):U:H2'	59:BA:1506(J):G:O4'	2.11	0.51
59:BA:2445:G:H2'	59:BA:2446:G:C8	2.45	0.51
59:BA:2551:C:C2	59:BA:2552:U:H1'	2.46	0.51
59:BA:2717:G:H21	59:BA:2848:G:P	2.34	0.51
60:BB:24:G:H4'	60:BB:25:A:C8	2.45	0.51
3:CD:28:SER:HB2	3:CD:29:PRO:CD	2.41	0.51
19:CT:32:ALA:HA	21:CA:1440(M):G:H5'	1.93	0.51
20:CY:131:PRO:HB3	20:CY:250:THR:O	2.10	0.51
20:CY:512:ILE:HG22	20:CY:567:LEU:HD12	1.92	0.51
21:CA:8:A:O2'	21:CA:9:G:O4'	2.24	0.51
21:CA:41:G:C6	21:CA:402:G:C6	2.99	0.51
21:CA:388:G:H4'	21:CA:389:A:H5''	1.93	0.51
21:CA:593:G:H2'	21:CA:594:G:C8	2.45	0.51
21:CA:1308:U:H2'	21:CA:1309:G:H8	1.76	0.51
21:CA:1521:G:H2'	21:CA:1522:U:C6	2.45	0.51
22:CW:21:A:N6	22:CW:46:G:H5''	2.23	0.51
26:DD:54:ARG:NH2	59:DA:1822:G:H5''	2.25	0.51
28:DF:171:PRO:HA	59:DA:1205:U:C4	2.45	0.51
31:DJ:51:UNK:O	59:DA:1084:A:H5'	2.11	0.51
33:DN:25:ARG:HH22	59:DA:1140:C:HO2'	1.53	0.51
33:DN:73:THR:HB	33:DN:86:PRO:HA	1.93	0.51
33:DN:107:LEU:HB3	33:DN:117:PHE:CE1	2.46	0.51
38:DS:17:ARG:O	38:DS:21:THR:OG1	2.19	0.51
38:DS:92:TYR:HD1	38:DS:93:LYS:H	1.58	0.51
44:DY:85:VAL:HG12	44:DY:94:LYS:HG2	1.92	0.51
59:DA:244:A:N6	59:DA:254:G:H21	1.98	0.51
59:DA:842:G:H2'	59:DA:843:G:H8	1.72	0.51
59:DA:856:C:H2'	59:DA:857:C:C6	2.45	0.51
59:DA:959:A:H1'	59:DA:2457:U:O2'	2.10	0.51
59:DA:1019:U:O2	59:DA:1020:A:C8	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1233:C:H2'	59:DA:1234:U:C6	2.45	0.51
59:DA:1310:G:H5'	59:DA:1611:C:H5''	1.93	0.51
59:DA:1664:A:N6	59:DA:1996:C:H42	2.06	0.51
59:DA:1810:A:H2'	59:DA:1811:G:O4'	2.10	0.51
59:DA:1878:G:H2'	59:DA:1879:C:C6	2.45	0.51
59:DA:2005:A:O2'	59:DA:2049:G:OP1	2.28	0.51
59:DA:2408:U:H2'	59:DA:2409:G:H8	1.75	0.51
1:AB:174:VAL:HG11	1:AB:196:LEU:HD13	1.92	0.51
1:AB:212:GLN:HG3	1:AB:235:SER:OG	2.11	0.51
3:AD:133:VAL:HG13	21:AA:619:U:C2	2.45	0.51
16:AQ:14:LYS:HD3	21:AA:275:G:H5'	1.91	0.51
18:AS:78:ARG:HH11	21:AA:960:U:H5	1.57	0.51
20:AY:220:ALA:HB3	20:AY:227:ILE:HG21	1.93	0.51
20:AY:301:ILE:CG2	20:AY:331:TYR:HB3	2.41	0.51
21:AA:724:G:H2'	21:AA:725:G:O4'	2.11	0.51
21:AA:1432:G:HO2'	21:AA:1433:A:H8	1.57	0.51
24:AX:48:C:H2'	24:AX:59:U:O2'	2.10	0.51
25:BC:115:VAL:HB	25:BC:150:ILE:HG13	1.93	0.51
27:BE:44:TYR:CE2	27:BE:46:ALA:HB2	2.46	0.51
32:BK:7:VAL:HA	32:BK:58:THR:HA	1.91	0.51
33:BN:104:LYS:CG	33:BN:120:LEU:HD21	2.41	0.51
38:BS:103:GLU:O	38:BS:105:ALA:N	2.43	0.51
41:BV:9:GLY:HA3	59:BA:1160:G:H21	1.75	0.51
47:B1:18:ILE:HG22	47:B1:18:ILE:O	2.11	0.51
59:BA:24:G:H2'	59:BA:25:U:O4'	2.11	0.51
59:BA:374:A:H1'	59:BA:401:A:N6	2.26	0.51
59:BA:664:C:H2'	59:BA:665:C:C6	2.45	0.51
59:BA:918:A:HO2'	60:BB:96:G:N2	2.06	0.51
59:BA:1109:C:H2'	59:BA:1110:G:C8	2.45	0.51
59:BA:2246:G:O6	59:BA:2258:C:N3	2.44	0.51
59:BA:2506:U:H6	59:BA:2583:G:H22	1.58	0.51
59:BA:2841:C:H2'	59:BA:2842:G:C8	2.45	0.51
1:CB:178:ARG:HD3	7:CH:73:ASP:H	1.75	0.51
2:CC:27:LYS:HE2	21:CA:1257:U:H5''	1.92	0.51
2:CC:180:ALA:HB1	2:CC:203:PHE:HE1	1.75	0.51
6:CG:95:ARG:O	6:CG:99:LEU:HG	2.11	0.51
7:CH:30:ARG:NH1	21:CA:590:C:OP2	2.44	0.51
8:CI:45:ALA:O	8:CI:48:GLU:HB2	2.11	0.51
11:CL:32:PHE:HB3	11:CL:84:LEU:HG	1.92	0.51
13:CN:41:ARG:HG3	13:CN:42:ILE:H	1.75	0.51
20:CY:66:THR:HG21	62:CY:702:FUA:H193	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:467:LYS:HE3	20:CY:473:ASP:HA	1.92	0.51
21:CA:888:G:H3'	21:CA:889:A:H5''	1.93	0.51
21:CA:1003:G:H1	21:CA:1037:C:H42	1.58	0.51
21:CA:1076:C:N4	21:CA:1081:G:H1	2.08	0.51
21:CA:1505:G:H4'	23:CV:15:A:H61	1.75	0.51
24:CX:65:C:H2'	24:CX:66:A:C8	2.46	0.51
26:DD:230:ASP:O	26:DD:231:HIS:HB2	2.09	0.51
27:DE:34:VAL:HG12	27:DE:35:GLN:H	1.76	0.51
27:DE:37:ARG:HB2	27:DE:46:ALA:N	2.25	0.51
30:DH:176:ALA:C	30:DH:178:ALA:H	2.17	0.51
43:DX:53:LYS:HB3	43:DX:82:GLN:CB	2.33	0.51
59:DA:270(U):C:H2'	59:DA:270(V):G:C8	2.46	0.51
59:DA:1198:U:N3	59:DA:1247:A:C2	2.73	0.51
59:DA:1295:C:H2'	59:DA:1296:G:O4'	2.10	0.51
59:DA:2639:A:H1'	59:DA:2778:A:N1	2.26	0.51
59:DA:2683:C:H41	59:DA:2727:G:H21	1.59	0.51
8:AI:116:LYS:NZ	21:AA:1344:C:OP1	2.44	0.51
11:AL:15:ARG:HB3	21:AA:562:C:H1'	1.92	0.51
11:AL:47:LYS:HZ3	21:AA:1492:A:H1'	1.76	0.51
12:AM:108:ARG:HG2	12:AM:114:ARG:HG3	1.93	0.51
14:AO:39:LEU:HB3	14:AO:56:LEU:HD22	1.92	0.51
21:AA:1262:C:H2'	21:AA:1263:C:H6	1.75	0.51
24:AX:9:A:H4'	24:AX:46:G:H4'	1.92	0.51
26:BD:37:LEU:HD22	26:BD:62:TYR:HD1	1.76	0.51
33:BN:27:ALA:HB1	33:BN:31:ALA:HB2	1.93	0.51
35:BP:27:HIS:HB2	59:BA:813:U:OP2	2.11	0.51
35:BP:53:GLY:HA2	59:BA:832:G:N2	2.16	0.51
35:BP:54:GLY:HA3	59:BA:826:U:C1'	2.41	0.51
36:BQ:13:GLN:HG3	59:BA:910:A:C6	2.46	0.51
37:BR:5:LYS:NZ	59:BA:2821:A:OP2	2.40	0.51
40:BU:81:HIS:CE1	59:BA:1151:G:H5''	2.46	0.51
41:BV:4:ILE:HD13	41:BV:40:LEU:HG	1.92	0.51
45:BZ:73:GLN:O	45:BZ:86:VAL:HA	2.10	0.51
59:BA:764:A:O2'	59:BA:765:G:H5'	2.10	0.51
59:BA:922:U:H2'	59:BA:923:C:C6	2.46	0.51
59:BA:1524:G:H2'	59:BA:1525:G:O4'	2.11	0.51
59:BA:2623:G:H2'	59:BA:2624:G:C8	2.46	0.51
1:CB:172:ILE:HG12	1:CB:173:ALA:N	2.25	0.51
7:CH:69:ARG:NH1	7:CH:75:ARG:O	2.43	0.51
8:CI:2:GLU:N	8:CI:88:TYR:OH	2.39	0.51
8:CI:114:TYR:OH	9:CJ:51:ARG:NH2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:81:ARG:HA	21:CA:458(E):A:H4'	1.93	0.51
16:CQ:63:ARG:HG2	16:CQ:63:ARG:O	2.10	0.51
20:CY:87:HIS:O	20:CY:89:ASP:N	2.44	0.51
20:CY:110:SER:N	20:CY:137:ASN:O	2.28	0.51
21:CA:66:G:N7	21:CA:104:G:N2	2.58	0.51
21:CA:411:A:C2'	21:CA:412:A:H4'	2.40	0.51
21:CA:980:C:H5'	21:CA:981:U:C5	2.45	0.51
21:CA:1070:U:H2'	21:CA:1071:C:C6	2.46	0.51
21:CA:1157:A:O2'	21:CA:1158:C:C2	2.63	0.51
21:CA:1231:G:H2'	21:CA:1232:U:C6	2.45	0.51
27:DE:58:ARG:NH2	59:DA:2830:G:OP1	2.44	0.51
33:DN:28:THR:C	33:DN:31:ALA:HB3	2.36	0.51
36:DQ:29:PHE:HD1	36:DQ:30:GLY:H	1.59	0.51
37:DR:87:TYR:HD1	37:DR:94:TYR:CD2	2.28	0.51
59:DA:538:G:H2'	59:DA:539:G:C8	2.46	0.51
59:DA:733:G:H4'	59:DA:734:A:OP1	2.09	0.51
59:DA:1081:U:H2'	59:DA:1082:U:C5	2.46	0.51
59:DA:1136:G:H2'	59:DA:1137:G:O4'	2.11	0.51
59:DA:1485:G:H2'	59:DA:1486:A:C8	2.46	0.51
59:DA:1538:G:H2'	59:DA:1539:G:C8	2.45	0.51
59:DA:1859:A:N6	59:DA:1883:G:O2'	2.44	0.51
59:DA:2785:C:H2'	59:DA:2786:U:O4'	2.11	0.51
60:DB:13:A:N6	60:DB:69:G:O2'	2.43	0.51
2:AC:8:ILE:HD11	2:AC:184:TYR:HB3	1.93	0.51
13:AN:19:ARG:HD3	21:AA:980:C:H1'	1.92	0.51
19:AT:15:ARG:HG3	21:AA:108:G:N7	2.26	0.51
20:AY:22:ASP:OD1	20:AY:23:ALA:N	2.44	0.51
20:AY:24:GLY:HA3	61:AY:701:GDP:H8	1.75	0.51
21:AA:157:G:H2'	21:AA:158:G:C8	2.46	0.51
21:AA:993:G:O6	21:AA:1045:C:N3	2.44	0.51
21:AA:1065:U:OP2	21:AA:1190:G:N2	2.44	0.51
25:BC:117:THR:HG22	25:BC:147:GLY:HA2	1.92	0.51
25:BC:164:PHE:CZ	25:BC:196:ALA:HB1	2.46	0.51
25:BC:169:THR:C	25:BC:171:ALA:N	2.63	0.51
25:BC:213:VAL:O	25:BC:214:TYR:HB2	2.11	0.51
27:BE:136:ARG:HH12	59:BA:1998:G:P	2.33	0.51
28:BF:63:LYS:NZ	28:BF:75:HIS:O	2.36	0.51
30:BH:97:ARG:HB3	30:BH:99:VAL:HG23	1.92	0.51
31:BJ:83:UNK:C	31:BJ:85:UNK:N	2.74	0.51
32:BK:102:GLU:O	32:BK:105:LEU:HD22	2.10	0.51
33:BN:118:LYS:O	33:BN:119:ARG:HG3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BV:35:LEU:C	41:BV:37:VAL:H	2.19	0.51
54:B8:52:LYS:HG2	59:BA:834:C:H4'	1.93	0.51
59:BA:709:U:H3	59:BA:722:A:H2	1.54	0.51
59:BA:733:G:N2	59:BA:734:A:N7	2.59	0.51
59:BA:1022:G:H1'	59:BA:1023:U:OP2	2.11	0.51
59:BA:1024:G:OP2	59:BA:1025:G:H3'	2.11	0.51
59:BA:2129:C:H2'	59:BA:2130:U:H5'	1.92	0.51
59:BA:2244:U:O2	59:BA:2435:A:N7	2.44	0.51
59:BA:2256:G:H2'	59:BA:2257:U:H6	1.75	0.51
1:CB:165:VAL:HG13	1:CB:187:LEU:HD12	1.92	0.51
2:CC:187:ALA:HB3	2:CC:198:VAL:HB	1.93	0.51
12:CM:16:ASP:N	12:CM:16:ASP:OD2	2.44	0.51
20:CY:474:ALA:HB1	20:CY:476:VAL:HG23	1.93	0.51
21:CA:172:A:H3'	21:CA:174:C:H5	1.75	0.51
21:CA:258:G:H2'	21:CA:259:G:C8	2.46	0.51
21:CA:434:U:H2'	21:CA:435:C:C6	2.46	0.51
21:CA:780:A:N6	21:CA:801:U:OP2	2.44	0.51
25:DC:52:PRO:O	25:DC:53:ARG:HB3	2.11	0.51
26:DD:127:VAL:HA	26:DD:193:VAL:HG13	1.93	0.51
29:DG:19:LEU:HD13	29:DG:31:VAL:HG21	1.93	0.51
32:DK:117:THR:HG21	32:DK:123:ALA:HB2	1.93	0.51
40:DU:8:VAL:HG13	40:DU:11:ARG:NE	2.25	0.51
41:DV:33:VAL:HG13	41:DV:59:ALA:HB3	1.93	0.51
52:D6:41:PRO:HD2	52:D6:45:LYS:O	2.11	0.51
59:DA:248:G:H5'	59:DA:250:G:N7	2.25	0.51
59:DA:294:A:N7	59:DA:345:A:N6	2.59	0.51
59:DA:449:A:H2'	59:DA:450:G:O4'	2.11	0.51
59:DA:1012:U:H3	59:DA:1143:A:H62	1.59	0.51
59:DA:1019:U:C2	59:DA:1020:A:N7	2.79	0.51
59:DA:1088:A:H2'	59:DA:1088:A:N3	2.25	0.51
59:DA:1172:G:H5''	59:DA:1173:A:OP2	2.11	0.51
59:DA:1294:U:H2'	59:DA:1295:C:H6	1.75	0.51
59:DA:1960:A:H2'	59:DA:1961:C:C6	2.45	0.51
60:DB:81:G:O6	60:DB:95:U:C2	2.64	0.51
2:AC:61:ALA:C	2:AC:63:ASN:H	2.18	0.50
7:AH:29:SER:HA	21:AA:590:C:OP1	2.10	0.50
20:AY:86:GLY:C	20:AY:88:VAL:H	2.19	0.50
21:AA:1359:C:H1'	21:AA:1362:C:H42	1.77	0.50
21:AA:1425:U:O2	21:AA:1475:G:O6	2.29	0.50
29:BG:7:LEU:HD13	29:BG:107:LEU:HD12	1.92	0.50
33:BN:74:ARG:O	33:BN:75:TYR:C	2.53	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BN:93:THR:HB	33:BN:97:ARG:NH1	2.26	0.50
36:BQ:64:ILE:HG13	36:BQ:106:VAL:HG12	1.93	0.50
43:BX:83:VAL:HG12	43:BX:84:ALA:N	2.26	0.50
44:BY:11:ASP:N	44:BY:11:ASP:OD2	2.43	0.50
45:BZ:120:ILE:HG13	45:BZ:172:ALA:HA	1.92	0.50
52:B6:48:VAL:O	52:B6:49:HIS:HB2	2.10	0.50
55:B9:4:ARG:HB2	59:BA:2466:C:P	2.51	0.50
59:BA:271(Q):A:N6	59:BA:357(E):U:N3	2.29	0.50
59:BA:286:C:H2'	59:BA:287:C:C6	2.45	0.50
59:BA:730:C:H2'	59:BA:731:C:C6	2.46	0.50
59:BA:966:G:O3'	59:BA:2271:G:N2	2.44	0.50
59:BA:1076:C:H2'	59:BA:1077:A:H4'	1.93	0.50
59:BA:1130:U:O2'	59:BA:1131:G:H2'	2.11	0.50
59:BA:1348:G:H2'	59:BA:1349:A:H5''	1.92	0.50
59:BA:1569:A:H2'	59:BA:1570:A:N7	2.26	0.50
59:BA:1593:G:H2'	59:BA:1594:G:H8	1.74	0.50
59:BA:2023:G:H8	59:BA:2023:G:P	2.34	0.50
59:BA:2824:C:H2'	59:BA:2825:U:O4'	2.11	0.50
2:CC:199:LYS:HE2	21:CA:1058:G:H5''	1.93	0.50
4:CE:142:LEU:O	4:CE:143:ARG:NE	2.39	0.50
7:CH:34:GLU:O	7:CH:37:ARG:HB3	2.11	0.50
11:CL:33:ARG:HD2	21:CA:363:A:OP1	2.11	0.50
13:CN:31:ARG:NH2	21:CA:977:A:OP1	2.44	0.50
20:CY:536:LYS:H	20:CY:536:LYS:HD2	1.76	0.50
21:CA:131:C:N4	21:CA:231:G:H1	2.06	0.50
21:CA:860:A:N6	21:CA:869:G:H1'	2.26	0.50
21:CA:1093:A:O2'	21:CA:1095:U:OP1	2.22	0.50
21:CA:1124:G:N2	21:CA:1148:U:O4	2.44	0.50
21:CA:1365:G:N2	21:CA:1366:C:H1'	2.25	0.50
25:DC:101:ILE:HD11	25:DC:128:LEU:HD13	1.93	0.50
25:DC:115:VAL:O	25:DC:150:ILE:HG21	2.12	0.50
27:DE:111:ARG:H	27:DE:161:GLY:CA	2.24	0.50
28:DF:169:ASN:ND2	59:DA:323:G:H3'	2.26	0.50
30:DH:89:ILE:HG22	30:DH:162:ILE:HA	1.93	0.50
33:DN:111:PRO:O	33:DN:114:ARG:CB	2.57	0.50
40:DU:25:TRP:CD1	40:DU:26:GLY:N	2.76	0.50
42:DW:23:LEU:HG	42:DW:24:ILE:HG23	1.93	0.50
48:D2:46:GLN:HB3	48:D2:48:HIS:HE1	1.77	0.50
49:D3:12:PRO:HB2	49:D3:20:LYS:NZ	2.26	0.50
51:D5:43:HIS:NE2	59:DA:2883:A:O3'	2.44	0.50
59:DA:1043:C:O2	59:DA:1048:A:O2'	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1306:C:H2'	59:DA:1307:A:H8	1.75	0.50
59:DA:1340:U:H4'	59:DA:1394:U:HO2'	1.76	0.50
59:DA:1849:G:H2'	59:DA:1850:G:C8	2.47	0.50
59:DA:2267:A:H2	59:DA:2272:U:H3	1.59	0.50
59:DA:2289:G:O6	59:DA:2343:C:N3	2.44	0.50
59:DA:2539:C:H2'	59:DA:2540:C:H6	1.76	0.50
59:DA:2724:C:H2'	59:DA:2725:A:C8	2.46	0.50
11:AL:57:LYS:O	11:AL:65:GLU:HA	2.11	0.50
15:AP:15:PRO:HD2	15:AP:42:ARG:NH1	2.25	0.50
21:AA:62:U:H5''	21:AA:385:C:O2	2.10	0.50
21:AA:147:G:H1	21:AA:175:C:N4	2.08	0.50
21:AA:162:A:N7	21:AA:163:C:H1'	2.25	0.50
21:AA:992:U:O4	21:AA:1044:A:N7	2.45	0.50
26:BD:77:ALA:HB2	26:BD:97:TYR:CD1	2.46	0.50
26:BD:260:ARG:NH1	59:BA:1799:G:OP1	2.39	0.50
33:BN:58:ASP:HB2	33:BN:98:VAL:HG11	1.92	0.50
33:BN:115:ARG:O	33:BN:116:LEU:HD12	2.12	0.50
34:BO:91:LEU:O	34:BO:92:GLU:HB2	2.12	0.50
39:BT:36:GLU:O	39:BT:38:ASN:N	2.44	0.50
42:BW:69:LEU:HD22	42:BW:107:LEU:HB2	1.92	0.50
42:BW:82:LEU:HB3	42:BW:98:LYS:HB2	1.92	0.50
59:BA:172:C:H2'	59:BA:173:G:C8	2.46	0.50
59:BA:294:A:N6	59:BA:344:G:H21	2.05	0.50
59:BA:1594:G:H2'	59:BA:1595:G:O4'	2.11	0.50
59:BA:2464:C:H2'	59:BA:2465:C:C6	2.46	0.50
60:BB:13:A:N3	60:BB:14:U:H5''	2.25	0.50
3:CD:94:LEU:HD23	3:CD:97:LEU:HD12	1.94	0.50
12:CM:105:THR:HG21	21:CA:951:G:O6	2.11	0.50
20:CY:616:TYR:HB3	20:CY:662:LYS:O	2.11	0.50
21:CA:730:G:C5	21:CA:731:G:H1'	2.46	0.50
21:CA:750:G:H2'	21:CA:751:U:C6	2.45	0.50
21:CA:1244:C:H2'	21:CA:1245:A:O4'	2.11	0.50
21:CA:1506:U:H5''	23:CV:15:A:H62	1.76	0.50
25:DC:131:ILE:HG12	25:DC:132:LEU:N	2.26	0.50
26:DD:35:LYS:HG2	26:DD:63:ARG:HG3	1.93	0.50
29:DG:126:ASP:C	29:DG:128:ARG:H	2.20	0.50
36:DQ:29:PHE:CZ	36:DQ:67:ARG:HD2	2.45	0.50
38:DS:38:GLN:HE22	60:DB:115:G:H1'	1.76	0.50
39:DT:53:ARG:HH22	39:DT:58:ASN:C	2.19	0.50
45:DZ:73:GLN:HE21	60:DB:103:U:H5'	1.76	0.50
47:D1:11:ARG:HB2	47:D1:12:PRO:HD2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D3:9:VAL:HG23	49:D3:10:LYS:H	1.75	0.50
59:DA:322:A:O4'	59:DA:340:A:H1'	2.11	0.50
59:DA:462:C:N4	59:DA:467:G:H1	2.08	0.50
59:DA:515:A:H3'	59:DA:516:C:C6	2.46	0.50
59:DA:974:G:C6	59:DA:989:G:C6	2.99	0.50
59:DA:1431:U:H2'	59:DA:1432:C:H6	1.75	0.50
59:DA:1823:G:H2'	59:DA:1824:G:H8	1.76	0.50
59:DA:2125:G:N1	59:DA:2172:U:OP1	2.41	0.50
59:DA:2328:A:H2'	59:DA:2329:G:C8	2.46	0.50
16:AQ:19:VAL:HG22	16:AQ:46:ASP:OD1	2.11	0.50
21:AA:408:A:H2'	21:AA:409:G:C8	2.46	0.50
21:AA:922:G:H2'	21:AA:923:A:C8	2.47	0.50
21:AA:1250:A:H2	21:AA:1370:G:N3	2.10	0.50
21:AA:1308:U:H2'	21:AA:1309:G:H8	1.75	0.50
26:BD:118:VAL:HG22	26:BD:119:ALA:N	2.26	0.50
28:BF:107:LYS:HZ3	28:BF:110:LEU:HD13	1.76	0.50
30:BH:137:ASP:O	30:BH:141:VAL:HG23	2.10	0.50
33:BN:56:ASN:ND2	33:BN:56:ASN:H	2.09	0.50
33:BN:59:LYS:HB3	33:BN:98:VAL:HG12	1.93	0.50
37:BR:101:ALA:HB1	42:BW:38:TYR:HE2	1.77	0.50
40:BU:59:ARG:HH12	59:BA:1154:G:H5'	1.76	0.50
45:BZ:166:SER:N	45:BZ:167:PRO:HA	2.26	0.50
48:B2:47:ASN:O	48:B2:50:ILE:HG13	2.12	0.50
59:BA:609:A:H3'	59:BA:610:G:H8	1.76	0.50
59:BA:2096:U:H2'	59:BA:2097:C:H6	1.75	0.50
59:BA:2438:U:H5'	59:BA:2599:G:H4'	1.91	0.50
59:BA:2581:G:N2	59:BA:2581:G:OP2	2.44	0.50
59:BA:2697:G:H8	59:BA:2697:G:O5'	1.95	0.50
3:CD:115:ARG:NE	21:CA:408:A:OP2	2.44	0.50
12:CM:33:ALA:HB1	12:CM:56:LEU:HD11	1.94	0.50
17:CR:44:LEU:HD22	17:CR:79:LEU:HD21	1.93	0.50
20:CY:5:VAL:O	20:CY:7:TYR:N	2.44	0.50
20:CY:87:HIS:HE2	20:CY:117:GLN:HG3	1.75	0.50
21:CA:196:A:O3'	21:CA:197:A:H2'	2.11	0.50
21:CA:770:C:H2'	21:CA:771:G:H8	1.76	0.50
21:CA:830:G:H1	21:CA:856:C:N4	2.08	0.50
21:CA:1077:G:N2	21:CA:1080:A:OP2	2.38	0.50
21:CA:1091:U:H3	21:CA:1093:A:H3'	1.76	0.50
30:DH:37:VAL:HG13	30:DH:71:LEU:HD13	1.92	0.50
30:DH:175:LYS:O	30:DH:177:GLY:N	2.45	0.50
33:DN:67:LEU:HD22	33:DN:68:GLU:H	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DN:97:ARG:O	33:DN:105:GLY:HA2	2.10	0.50
46:D0:32:ARG:HA	46:D0:64:ASP:HA	1.93	0.50
46:D0:36:ILE:HA	46:D0:60:PHE:HA	1.93	0.50
47:D1:45:ASN:CG	47:D1:64:ALA:HB2	2.37	0.50
54:D8:32:LEU:HD11	59:DA:2391:G:OP1	2.10	0.50
59:DA:487:C:H2'	59:DA:488:G:C8	2.46	0.50
59:DA:495:G:H8	59:DA:495:G:O5'	1.94	0.50
59:DA:1450:C:O2'	59:DA:1453:A:N1	2.43	0.50
59:DA:1504:C:H2'	59:DA:1505:C:H6	1.75	0.50
59:DA:1844:C:H2'	59:DA:1845:G:O4'	2.11	0.50
60:DB:60:C:H2'	60:DB:61:G:H8	1.76	0.50
1:AB:155:LEU:HD11	1:AB:159:PRO:HD3	1.92	0.50
3:AD:63:LYS:HA	3:AD:66:ARG:HD2	1.93	0.50
6:AG:153:HIS:ND1	6:AG:153:HIS:O	2.45	0.50
7:AH:104:ARG:N	7:AH:104:ARG:HD2	2.27	0.50
10:AK:51:LYS:HA	10:AK:55:LYS:HE3	1.92	0.50
10:AK:112:THR:H	17:AR:84:LYS:HE3	1.76	0.50
11:AL:31:PRO:HB3	21:AA:553:A:O4'	2.11	0.50
11:AL:117:ARG:NH2	21:AA:501:C:OP1	2.45	0.50
20:AY:95:GLU:HB3	20:AY:99:ARG:CZ	2.41	0.50
21:AA:390:C:H2'	21:AA:391:G:C8	2.47	0.50
21:AA:856:C:H2'	21:AA:857:C:O4'	2.11	0.50
21:AA:1095:U:H2'	21:AA:1096:C:O4'	2.10	0.50
21:AA:1389:C:H2'	21:AA:1390:U:H6	1.76	0.50
21:AA:1440(O):A:H2'	21:AA:1461:G:O4'	2.11	0.50
22:AW:71:C:H2'	22:AW:72:C:C5	2.46	0.50
23:AV:19:G:H2'	23:AV:20:U:C6	2.46	0.50
26:BD:160:GLY:N	26:BD:196:VAL:HB	2.27	0.50
26:BD:208:LYS:HB2	59:BA:729:G:C6	2.46	0.50
28:BF:13:SER:HB3	28:BF:14:PRO:HD2	1.92	0.50
39:BT:53:ARG:NH1	39:BT:53:ARG:HB3	2.26	0.50
59:BA:323:G:H8	59:BA:1205:U:O2	1.94	0.50
59:BA:578:A:C4	59:BA:2018:G:H5'	2.46	0.50
59:BA:608:A:H2'	59:BA:609:A:C8	2.45	0.50
59:BA:779:U:H2'	59:BA:780:G:C8	2.46	0.50
59:BA:1659:U:H3	59:BA:2001:A:N6	2.04	0.50
59:BA:2154:G:H2'	59:BA:2155:G:H8	1.76	0.50
59:BA:2368:C:H2'	59:BA:2369:A:C8	2.46	0.50
59:BA:2391:G:O2'	59:BA:2424:C:N4	2.38	0.50
59:BA:2845:G:H2'	59:BA:2846:G:C8	2.46	0.50
60:BB:4:C:N3	60:BB:116:G:O6	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BB:79:C:N4	60:BB:97:G:H1	2.07	0.50
7:CH:28:ALA:HB2	7:CH:57:PRO:O	2.11	0.50
8:CI:125:TYR:OH	21:CA:967:C:O3'	2.28	0.50
10:CK:113:PRO:O	10:CK:115:PRO:HD3	2.11	0.50
15:CP:39:TYR:OH	15:CP:72:ARG:NH1	2.45	0.50
20:CY:87:HIS:CE1	20:CY:121:VAL:HG22	2.47	0.50
21:CA:68(C):C:O2	21:CA:68(W):G:N1	2.42	0.50
21:CA:363:A:H2'	21:CA:364:A:O4'	2.10	0.50
21:CA:1102:A:H2'	21:CA:1103:C:C6	2.47	0.50
21:CA:1347:G:O2'	21:CA:1348:U:OP2	2.29	0.50
29:DG:76:SER:HA	29:DG:83:ARG:HB3	1.93	0.50
33:DN:90:MET:HB2	33:DN:97:ARG:CZ	2.42	0.50
33:DN:101:HIS:O	33:DN:106:MET:N	2.43	0.50
42:DW:77:ASP:HB3	42:DW:102:HIS:HD2	1.77	0.50
48:D2:14:ARG:NH2	59:DA:78:A:H5'	2.26	0.50
51:D5:44:THR:HG22	51:D5:45:VAL:H	1.75	0.50
59:DA:37:C:H2'	59:DA:38:A:H8	1.76	0.50
59:DA:181:A:H2'	59:DA:182:A:C8	2.46	0.50
59:DA:648:G:H4'	59:DA:2351:G:H5''	1.92	0.50
59:DA:1024:G:H1	59:DA:1140:C:H42	1.57	0.50
59:DA:2202(D):G:H4'	59:DA:2202(E):A:N1	2.26	0.50
6:AG:15:ASP:OD2	6:AG:44:TYR:OH	2.28	0.50
9:AJ:44:VAL:HG22	9:AJ:66:ARG:HA	1.94	0.50
10:AK:22:HIS:HE1	10:AK:24:SER:HB2	1.75	0.50
17:AR:44:LEU:HD13	17:AR:79:LEU:HD21	1.93	0.50
17:AR:49:LYS:HB3	21:AA:719:C:H1'	1.93	0.50
19:AT:71:THR:HG22	19:AT:72:LEU:H	1.77	0.50
20:AY:229:LEU:HD21	56:Be:67:ALA:HB1	1.94	0.50
20:AY:580:MET:HG3	20:AY:583:LYS:HE3	1.94	0.50
21:AA:371:G:H1'	21:AA:482:A:H1'	1.92	0.50
21:AA:744:C:H2'	21:AA:745:C:C6	2.47	0.50
21:AA:976:G:OP2	21:AA:1358:U:O2'	2.24	0.50
21:AA:1323:G:H4'	21:AA:1362(A):C:C4	2.46	0.50
33:BN:44:PRO:HD2	33:BN:78:TYR:H	1.77	0.50
33:BN:97:ARG:HD3	33:BN:108:PRO:HD2	1.93	0.50
38:BS:85:VAL:HG22	38:BS:106:ARG:HD3	1.92	0.50
40:BU:13:LYS:O	40:BU:16:LYS:HB3	2.11	0.50
45:BZ:30:ASN:HB2	45:BZ:90:VAL:HB	1.93	0.50
46:B0:11:ARG:CZ	46:B0:14:ARG:HH22	2.25	0.50
51:B5:3:LYS:HZ3	59:BA:747:U:H5	1.56	0.50
53:B7:11:LYS:HE2	59:BA:686:G:C4	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:201:C:O4'	59:BA:386:G:N2	2.44	0.50
59:BA:210:C:H4'	59:BA:1367:A:H4'	1.92	0.50
59:BA:474:G:H1'	59:BA:475:U:OP1	2.12	0.50
59:BA:694:U:H2'	59:BA:695:G:H8	1.75	0.50
59:BA:2505:G:H2'	59:BA:2576:G:H1	1.77	0.50
59:BA:2530:A:O2'	59:BA:2534:A:N6	2.44	0.50
59:BA:2812:G:H1	59:BA:2888:C:H42	1.59	0.50
59:BA:2825:U:H2'	59:BA:2826:A:O4'	2.12	0.50
5:CF:52:ILE:HG13	5:CF:87:ARG:HH22	1.76	0.50
6:CG:41:ARG:HH11	6:CG:41:ARG:HB3	1.76	0.50
6:CG:78:ARG:HG2	6:CG:79:ARG:N	2.26	0.50
6:CG:103:TRP:CD1	6:CG:137:LYS:HD3	2.46	0.50
20:CY:13:ARG:NH1	20:CY:282:SER:HB3	2.26	0.50
20:CY:397:VAL:O	20:CY:398:ILE:HG13	2.12	0.50
21:CA:269:C:H2'	21:CA:270:A:H8	1.76	0.50
21:CA:1227:A:H8	21:CA:1227:A:P	2.35	0.50
24:CX:27:C:H42	24:CX:43:G:H1	0.63	0.50
26:DD:186:HIS:CE1	59:DA:2222:G:H5''	2.46	0.50
27:DE:116:VAL:HG23	27:DE:120:TRP:CD1	2.46	0.50
29:DG:74:LYS:NZ	59:DA:2313:C:OP2	2.45	0.50
30:DH:49:VAL:HG12	30:DH:50:VAL:H	1.77	0.50
36:DQ:42:ILE:O	36:DQ:94:VAL:HA	2.12	0.50
37:DR:39:PRO:HG2	59:DA:1651:G:H5'	1.94	0.50
39:DT:62:THR:HB	39:DT:75:ILE:HG13	1.92	0.50
59:DA:23:G:H1	59:DA:517:C:N4	2.03	0.50
59:DA:858:U:H3	59:DA:919:G:H1	0.73	0.50
59:DA:1047:G:H4'	59:DA:1048:A:H8	1.76	0.50
59:DA:2282:G:H1	59:DA:2427:C:H42	1.58	0.50
3:AD:60:GLU:HA	3:AD:63:LYS:HD2	1.92	0.50
21:AA:243:A:C2	21:AA:245:C:H2'	2.46	0.50
21:AA:254:G:H2'	21:AA:255:G:C8	2.46	0.50
21:AA:453:A:C6	21:AA:479:C:N4	2.76	0.50
21:AA:954:G:N2	21:AA:1227:A:N6	2.59	0.50
21:AA:1124:G:N2	21:AA:1149:C:N3	2.48	0.50
21:AA:1128:C:H1'	21:AA:1144:G:H22	1.76	0.50
21:AA:1224:G:H1	21:AA:1362(A):C:H42	1.58	0.50
21:AA:1308:U:H2'	21:AA:1309:G:C8	2.46	0.50
21:AA:1352:C:H2'	21:AA:1353:G:C8	2.46	0.50
28:BF:25:PRO:CD	28:BF:115:ALA:HB1	2.42	0.50
31:BJ:54:UNK:HA	31:BJ:78:UNK:O	2.12	0.50
33:BN:116:LEU:O	33:BN:118:LYS:HG3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BO:85:VAL:HG12	34:BO:86:ILE:H	1.76	0.50
37:BR:99:LYS:HZ1	51:B5:43:HIS:HB3	1.76	0.50
38:BS:17:ARG:O	38:BS:21:THR:OG1	2.23	0.50
51:B5:47:PRO:HB3	51:B5:59:GLU:HG3	1.92	0.50
54:B8:2:PRO:HA	59:BA:591:C:O2'	2.12	0.50
59:BA:28:A:N6	59:BA:512:G:H1'	2.25	0.50
59:BA:1344:G:O2'	59:BA:1385:G:H2'	2.12	0.50
59:BA:1712(J):G:O2'	59:BA:1712(K):A:H8	1.95	0.50
59:BA:1712(L):G:H2'	59:BA:1712(M):C:C6	2.46	0.50
59:BA:2105:C:N4	59:BA:2106:G:O6	2.43	0.50
59:BA:2202(B):C:H6	59:BA:2202(B):C:O5'	1.94	0.50
2:CC:28:GLN:O	2:CC:31:HIS:N	2.41	0.50
5:CF:60:PHE:CZ	17:CR:78:LEU:HD21	2.47	0.50
11:CL:32:PHE:CE1	21:CA:34:C:H1'	2.46	0.50
20:CY:484:ARG:HG3	20:CY:676:TYR:CZ	2.46	0.50
20:CY:555:LEU:HD11	20:CY:599:PRO:HB2	1.94	0.50
20:CY:617:MET:HA	20:CY:620:VAL:HG22	1.93	0.50
21:CA:32:A:N6	21:CA:552:U:C4	2.78	0.50
21:CA:438:G:O2'	21:CA:494:U:O4	2.30	0.50
21:CA:643:C:H2'	21:CA:644:G:H8	1.75	0.50
22:CW:25:C:H42	22:CW:45:G:N2	2.09	0.50
22:CW:26:A:N1	22:CW:44:G:O6	2.44	0.50
27:DE:143:ASN:CG	59:DA:2571:C:H2'	2.37	0.50
28:DF:156:LEU:HB3	28:DF:176:LEU:O	2.12	0.50
40:DU:23:GLY:N	59:DA:19:C:OP1	2.43	0.50
45:DZ:117:LEU:HA	45:DZ:174:VAL:HA	1.92	0.50
55:D9:11:CYS:SG	55:D9:12:ASP:N	2.84	0.50
59:DA:137(E):A:H8	59:DA:1408:C:H1'	1.75	0.50
59:DA:331:A:N6	59:DA:1209:G:H2'	2.26	0.50
59:DA:1652:A:O2'	59:DA:2822:G:N2	2.45	0.50
59:DA:1947:C:H2'	59:DA:1948:G:C8	2.46	0.50
59:DA:2201:C:H42	59:DA:2222:G:H1	1.59	0.50
60:DB:71:C:N4	60:DB:105:G:H1	2.07	0.50
11:AL:76:ASN:HB3	11:AL:107:ALA:HA	1.93	0.50
16:AQ:43:LEU:CD1	16:AQ:69:LYS:HA	2.42	0.50
17:AR:74:ARG:HA	17:AR:79:LEU:HB3	1.94	0.50
20:AY:140:ASP:OD1	20:AY:262:SER:OG	2.28	0.50
20:AY:426:GLN:O	20:AY:430:ARG:HD2	2.12	0.50
21:AA:501:C:H2'	21:AA:502:G:C8	2.47	0.50
21:AA:558:G:H3'	21:AA:559:A:H2'	1.94	0.50
21:AA:800:G:H2'	21:AA:801:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1405:G:H1'	21:AA:1519:A:O4'	2.12	0.50
22:AW:9:A:H8	22:AW:12:U:O4	1.90	0.50
26:BD:106:ILE:O	26:BD:108:PRO:HD3	2.12	0.50
27:BE:140:SER:HB2	59:BA:2578:G:C5	2.47	0.50
28:BF:12:LEU:HD22	28:BF:17:ARG:HB3	1.92	0.50
30:BH:66:GLY:HA3	59:BA:2748:A:H4'	1.93	0.50
33:BN:45:ASN:HB3	33:BN:115:ARG:CB	2.40	0.50
33:BN:93:THR:HG23	59:BA:2639:A:O2'	2.12	0.50
34:BO:27:GLY:HA3	59:BA:2674:G:O2'	2.12	0.50
45:BZ:19:ARG:HH21	60:BB:76:G:H4'	1.77	0.50
48:B2:21:LEU:HD22	48:B2:64:LEU:HB2	1.93	0.50
59:BA:81:G:H2'	59:BA:82:G:O4'	2.12	0.50
59:BA:659:C:H2'	59:BA:660:G:C8	2.43	0.50
59:BA:755:C:H2'	59:BA:756:C:H6	1.76	0.50
59:BA:1210:A:H4'	59:BA:1211:U:O5'	2.12	0.50
59:BA:1602:U:H3'	59:BA:1603:A:H5'	1.93	0.50
59:BA:1842:G:N2	59:BA:1898:U:O2	2.41	0.50
59:BA:2069:G:H2'	59:BA:2070:G:C8	2.47	0.50
59:BA:2333:A:H5''	59:BA:2334:G:H3'	1.93	0.50
59:BA:2551:C:N3	59:BA:2552:U:H1'	2.27	0.50
1:CB:40:HIS:CG	1:CB:190:THR:HG21	2.46	0.50
19:CT:43:LEU:CD2	19:CT:51:GLU:HB3	2.41	0.50
21:CA:957:U:C2	21:CA:960:U:H5''	2.47	0.50
21:CA:1494:G:H8	63:CA:1601:NMY:N7	2.08	0.50
24:CX:55:U:O2	24:CX:58:A:N6	2.45	0.50
25:DC:146:VAL:H	25:DC:150:ILE:HD13	1.76	0.50
26:DD:53:PHE:C	26:DD:218:ARG:HG2	2.37	0.50
26:DD:63:ARG:HD2	26:DD:63:ARG:H	1.76	0.50
26:DD:105:ILE:HD12	26:DD:106:ILE:H	1.76	0.50
28:DF:50:SER:HB2	59:DA:37:C:O2'	2.12	0.50
33:DN:100:GLU:CD	33:DN:104:LYS:HZ1	2.19	0.50
37:DR:96:ARG:HH21	59:DA:2881:C:H5''	1.77	0.50
40:DU:34:LYS:NZ	59:DA:2018:G:N3	2.47	0.50
40:DU:112:ARG:HH11	41:DV:46:VAL:HG21	1.77	0.50
43:DX:80:ILE:HG21	59:DA:1341:U:O2	2.12	0.50
45:DZ:69:THR:HA	45:DZ:91:LEU:HG	1.93	0.50
59:DA:83:G:N2	59:DA:103:A:OP2	2.44	0.50
59:DA:155:C:H2'	59:DA:155(A):U:O4'	2.11	0.50
59:DA:382:G:H1	59:DA:392:C:N4	2.09	0.50
59:DA:482:A:H1'	59:DA:498:G:H21	1.77	0.50
59:DA:503:A:H5'	59:DA:505:A:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:543(D):A:H8	59:DA:543(D):A:O5'	1.94	0.50
59:DA:1348:G:H2'	59:DA:1349:A:H5''	1.93	0.50
59:DA:1537:C:C2	59:DA:1538:G:H1'	2.46	0.50
59:DA:2096:U:H2'	59:DA:2097:C:C6	2.47	0.50
59:DA:2283:C:N3	59:DA:2325:G:N2	2.48	0.50
59:DA:2406:U:H5''	59:DA:2408:U:OP2	2.11	0.50
59:DA:2661:G:H2'	59:DA:2662:A:C8	2.45	0.50
59:DA:2678:C:O2	59:DA:2729:G:N1	2.34	0.50
1:AB:35:GLU:HG3	1:AB:40:HIS:CE1	2.47	0.50
11:AL:9:GLN:NE2	21:AA:881:G:N7	2.59	0.50
21:AA:1237:C:O2'	21:AA:1300:G:N2	2.45	0.50
22:AW:8:U:O4	22:AW:14:A:H8	1.94	0.50
22:AW:76:A:C2	59:BA:2421:G:H2'	2.47	0.50
23:AV:19:G:N3	23:AV:19:G:C2'	2.74	0.50
26:BD:28:GLU:HB2	26:BD:29:PRO:HD3	1.93	0.50
29:BG:77:ILE:O	29:BG:79:ASN:N	2.44	0.50
29:BG:126:ASP:CG	29:BG:130:ASN:HB2	2.37	0.50
31:BJ:58:UNK:C	31:BJ:60:UNK:N	2.75	0.50
33:BN:103:VAL:O	33:BN:107:LEU:HD23	2.12	0.50
39:BT:55:ASN:HB2	39:BT:58:ASN:HB2	1.93	0.50
46:B0:15:ASP:HA	59:BA:2263:C:H41	1.75	0.50
59:BA:308:G:H1'	59:BA:329:G:N2	2.27	0.50
59:BA:687:C:H2'	59:BA:688:U:O4'	2.11	0.50
59:BA:706:A:H3'	59:BA:707:G:H8	1.76	0.50
59:BA:921:G:H2'	59:BA:922:U:O4'	2.12	0.50
59:BA:1703:G:H2'	59:BA:1704:G:H8	1.74	0.50
59:BA:1771:C:H2'	59:BA:1772:G:H8	1.77	0.50
59:BA:1777:U:H2'	59:BA:1778:U:O4'	2.11	0.50
60:BB:3:C:O2	60:BB:3:C:H2'	2.11	0.50
3:CD:115:ARG:NH2	21:CA:408:A:OP2	2.45	0.50
5:CF:53:ALA:O	5:CF:54:LYS:HB2	2.11	0.50
10:CK:81:ASP:HA	10:CK:106:LYS:O	2.12	0.50
16:CQ:87:LYS:O	16:CQ:91:ARG:HG3	2.12	0.50
17:CR:59:SER:N	17:CR:62:GLU:OE1	2.44	0.50
20:CY:24:GLY:N	61:CY:701:GDP:O4'	2.44	0.50
20:CY:493:VAL:HG13	20:CY:592:GLU:CD	2.37	0.50
20:CY:504:ARG:N	20:CY:504:ARG:HD2	2.27	0.50
62:CY:702:FUA:O1	62:CY:702:FUA:C1	2.60	0.50
21:CA:192:U:H2'	21:CA:193:C:C6	2.47	0.50
21:CA:358:U:H2'	21:CA:359:U:C6	2.47	0.50
21:CA:411:A:C2	21:CA:430:A:N6	2.71	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:947:G:O6	21:CA:1234:C:N3	2.45	0.50
21:CA:1178:G:H5'	21:CA:1179:A:OP2	2.12	0.50
25:DC:21:TYR:O	25:DC:25:GLU:HB2	2.12	0.50
27:DE:55:ASN:HB2	27:DE:74:PRO:O	2.12	0.50
27:DE:108:SER:HA	27:DE:190:GLY:HA2	1.92	0.50
28:DF:154:VAL:O	28:DF:155:LEU:C	2.52	0.50
29:DG:65:GLY:HA2	50:D4:27:THR:HB	1.94	0.50
33:DN:45:ASN:ND2	33:DN:45:ASN:H	2.09	0.50
33:DN:78:TYR:HB3	33:DN:79:PRO:CD	2.41	0.50
34:DO:24:VAL:HG11	34:DO:32:TYR:O	2.11	0.50
38:DS:92:TYR:O	38:DS:93:LYS:HB3	2.12	0.50
41:DV:60:GLU:HG2	41:DV:97:LYS:HD3	1.94	0.50
44:DY:102:CYS:SG	44:DY:103:GLY:N	2.85	0.50
59:DA:414:C:H2'	59:DA:415:A:O4'	2.11	0.50
59:DA:1712(L):G:H2'	59:DA:1712(M):C:O4'	2.10	0.50
59:DA:2115:G:H21	59:DA:2171:A:H2	1.60	0.50
59:DA:2534:A:H2'	59:DA:2535:G:H8	1.77	0.50
11:AL:52:LEU:HD12	11:AL:54:LYS:HZ1	1.77	0.50
20:AY:93:GLU:OE2	20:AY:97:SER:OG	2.30	0.50
20:AY:230:LYS:NZ	20:AY:235:GLU:OE1	2.45	0.50
20:AY:292:THR:OG1	20:AY:293:THR:N	2.42	0.50
21:AA:1117:G:N2	21:AA:1180:A:H1'	2.26	0.50
21:AA:1506:U:H4'	23:AV:15:A:H61	1.77	0.50
26:BD:42:GLY:C	26:BD:44:ASN:H	2.20	0.50
29:BG:39:ILE:HD11	29:BG:94:LEU:HD11	1.92	0.50
29:BG:154:GLY:HA2	29:BG:155:MET:HE2	1.94	0.50
33:BN:81:GLY:C	33:BN:82:LEU:HD13	2.36	0.50
35:BP:65:ARG:O	59:BA:631:A:O2'	2.25	0.50
45:BZ:111:VAL:O	45:BZ:112:ARG:HB3	2.11	0.50
46:B0:23:VAL:HA	46:B0:38:VAL:HG22	1.93	0.50
48:B2:32:LEU:HD12	48:B2:35:LEU:HD22	1.93	0.50
59:BA:271(B):G:H4'	59:BA:271(C):U:C5'	2.42	0.50
59:BA:500:G:H21	59:BA:505:A:N6	2.09	0.50
59:BA:1055:G:N2	59:BA:1085:A:H1'	2.27	0.50
59:BA:1173:A:H3'	59:BA:1174:U:C5'	2.42	0.50
59:BA:1193:G:H2'	59:BA:1194:A:O4'	2.12	0.50
59:BA:1199:U:O4	59:BA:1246:A:N1	2.45	0.50
59:BA:2662:A:H2'	59:BA:2663:G:O4'	2.12	0.50
59:BA:2742:C:H2'	59:BA:2743:C:C6	2.45	0.50
1:CB:170:GLU:O	1:CB:174:VAL:HG23	2.12	0.50
5:CF:29:ALA:HB1	5:CF:75:LEU:HD11	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:56:HIS:NE2	21:CA:1061:G:O2'	2.44	0.50
21:CA:32:A:H61	21:CA:552:U:H3	0.63	0.50
21:CA:145:G:H2'	21:CA:146:G:C8	2.47	0.50
21:CA:183:G:N2	21:CA:223:U:O2'	2.41	0.50
21:CA:777:A:H2'	21:CA:778:G:H8	1.76	0.50
21:CA:1198:G:H2'	21:CA:1199:U:C6	2.46	0.50
23:CV:6:G:H8	23:CV:6:G:O5'	1.94	0.50
22:CW:31:A:N1	22:CW:39:U:C4	2.80	0.50
22:CW:32:C:O2	22:CW:37:A:N6	2.45	0.50
28:DF:46:ARG:HH21	28:DF:48:THR:HG21	1.77	0.50
35:DP:55:ARG:HD2	59:DA:825:C:O2'	2.12	0.50
35:DP:96:THR:HA	35:DP:126:VAL:HB	1.94	0.50
38:DS:62:LYS:HG3	60:DB:50:G:OP2	2.12	0.50
40:DU:94:ASN:O	40:DU:97:ASP:HB2	2.11	0.50
41:DV:61:VAL:HG23	41:DV:93:GLU:O	2.12	0.50
47:D1:20:ARG:O	47:D1:38:SER:HB2	2.12	0.50
53:D7:34:ARG:NH2	53:D7:42:LEU:HB3	2.26	0.50
59:DA:571:A:H1'	59:DA:573:G:C8	2.47	0.50
59:DA:1459:G:H2'	59:DA:1459:G:N3	2.26	0.50
8:AI:73:GLN:O	8:AI:77:ILE:HG13	2.12	0.49
14:AO:36:ILE:HG12	14:AO:56:LEU:HD11	1.94	0.49
20:AY:605:ILE:H	20:AY:676:TYR:HA	1.76	0.49
21:AA:33:A:H5''	21:AA:364:A:O2'	2.12	0.49
21:AA:992:U:HO2'	21:AA:993:G:P	2.34	0.49
21:AA:1197:G:OP2	21:AA:1197:G:H3'	2.12	0.49
21:AA:1422:G:H1	21:AA:1478:C:H42	1.59	0.49
25:BC:77:ALA:HA	25:BC:114:VAL:O	2.12	0.49
26:BD:7:LYS:HE3	26:BD:8:PRO:HD2	1.92	0.49
26:BD:248:SER:OG	26:BD:249:PRO:HD2	2.12	0.49
29:BG:71:THR:OG1	29:BG:89:GLY:O	2.23	0.49
39:BT:28:VAL:HG21	39:BT:89:VAL:HB	1.93	0.49
40:BU:47:TYR:HA	40:BU:50:ARG:HD2	1.94	0.49
41:BV:15:GLU:HB3	41:BV:16:PRO:HD2	1.93	0.49
44:BY:86:ARG:CZ	44:BY:95:LYS:HD2	2.42	0.49
49:B3:32:GLN:HB2	59:BA:1158:C:H4'	1.94	0.49
59:BA:190:A:H3'	59:BA:191:A:C8	2.47	0.49
59:BA:373:U:H2'	59:BA:374:A:H8	1.77	0.49
59:BA:1256:G:H2'	59:BA:1257:C:C5	2.47	0.49
59:BA:1426:G:N2	59:BA:1572:A:H62	2.07	0.49
59:BA:1532:C:H2'	59:BA:1533:C:H6	1.77	0.49
59:BA:2747:G:O6	59:BA:2755:C:H5''	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2790:A:H2'	59:BA:2791:C:H5'	1.94	0.49
1:CB:97:TRP:CH2	1:CB:176:GLU:HG3	2.48	0.49
15:CP:26:ARG:HH22	21:CA:310:G:H5''	1.77	0.49
20:CY:610:VAL:HB	20:CY:643:ILE:HB	1.93	0.49
21:CA:143:A:H5'	21:CA:196:A:N1	2.27	0.49
21:CA:618:C:H5''	21:CA:620:C:OP1	2.12	0.49
21:CA:861:G:H1	21:CA:868:C:H42	1.59	0.49
21:CA:1170:A:H8	21:CA:1170:A:O5'	1.95	0.49
21:CA:1300:G:H21	21:CA:1301:U:H5	1.59	0.49
26:DD:146:GLU:HG2	26:DD:190:TYR:H	1.76	0.49
27:DE:15:PHE:HZ	39:DT:77:PRO:HG2	1.77	0.49
27:DE:22:PRO:O	27:DE:186:GLY:HA3	2.12	0.49
28:DF:47:GLY:O	28:DF:94:PRO:HA	2.12	0.49
34:DO:25:LEU:HD12	59:DA:2562:U:O3'	2.12	0.49
40:DU:55:ARG:NH1	59:DA:977:G:H5'	2.24	0.49
49:D3:8:LEU:HD11	49:D3:28:LEU:HG	1.93	0.49
50:D4:6:HIS:NE2	60:DB:42:C:O3'	2.45	0.49
54:D8:29:LYS:HB2	54:D8:44:LYS:HZ2	1.76	0.49
59:DA:527:C:H1'	59:DA:528:A:N7	2.25	0.49
59:DA:609:A:H2'	59:DA:610:G:O4'	2.12	0.49
59:DA:1215:G:H2'	59:DA:1216:G:C8	2.47	0.49
59:DA:1225:G:H2'	59:DA:1226:A:C8	2.47	0.49
59:DA:1338:G:H2'	59:DA:1339:G:C8	2.46	0.49
59:DA:1712(G):G:H1'	59:DA:1712(K):A:H62	1.76	0.49
59:DA:1823:G:H2'	59:DA:1824:G:C8	2.47	0.49
59:DA:1910:G:H2'	59:DA:1911:U:O4'	2.12	0.49
59:DA:2300:G:H2'	59:DA:2301:C:C6	2.47	0.49
2:AC:70:VAL:HG12	2:AC:71:ALA:H	1.77	0.49
5:AF:99:ALA:HB2	17:AR:31:LEU:HG	1.93	0.49
8:AI:49:PRO:HG2	8:AI:81:ILE:HB	1.94	0.49
11:AL:44:THR:HG22	11:AL:50:SER:HA	1.94	0.49
15:AP:11:SER:HB3	21:AA:43:C:H4'	1.93	0.49
20:AY:504:ARG:HH11	21:AA:1495:U:P	2.35	0.49
21:AA:218:C:H2'	21:AA:219:C:C6	2.47	0.49
21:AA:237:C:H2'	21:AA:238:G:C8	2.47	0.49
21:AA:321:A:H2'	21:AA:322:C:C6	2.47	0.49
21:AA:774:G:H1	21:AA:805:C:H42	1.59	0.49
21:AA:1157:A:H2'	21:AA:1157:A:N3	2.27	0.49
25:BC:20:VAL:HG12	25:BC:22:THR:H	1.78	0.49
26:BD:199:ALA:O	26:BD:202:LYS:HG2	2.13	0.49
27:BE:62:PRO:HB2	27:BE:66:HIS:HE2	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BR:26:LYS:HZ2	59:BA:1295:C:H5'	1.76	0.49
37:BR:90:ARG:HH22	59:BA:2880:C:H4'	1.77	0.49
42:BW:72:LYS:O	42:BW:106:ILE:HB	2.12	0.49
45:BZ:167:PRO:C	45:BZ:169:GLU:H	2.20	0.49
59:BA:71:A:OP1	59:BA:112:U:O2'	2.23	0.49
59:BA:309:G:H22	59:BA:1210:A:H2	1.59	0.49
59:BA:945:A:O2'	59:BA:946:G:H4'	2.12	0.49
59:BA:948:G:O6	59:BA:969:U:O2	2.30	0.49
59:BA:1105:U:H2'	59:BA:1106:G:H8	1.76	0.49
59:BA:1970:A:C4'	63:BA:2904:NMY:H231	2.38	0.49
59:BA:2777:G:H4'	59:BA:2779:U:H5''	1.93	0.49
1:CB:210:SER:O	1:CB:214:ILE:HG12	2.11	0.49
2:CC:52:LEU:C	2:CC:115:LEU:HD11	2.37	0.49
2:CC:153:VAL:HG12	2:CC:198:VAL:HG13	1.93	0.49
2:CC:188:LEU:H	2:CC:188:LEU:HD13	1.77	0.49
3:CD:128:VAL:HG13	3:CD:146:ILE:HG13	1.95	0.49
7:CH:85:ARG:HA	7:CH:85:ARG:NH1	2.22	0.49
8:CI:112:LYS:HG3	8:CI:117:HIS:O	2.12	0.49
9:CJ:44:VAL:HA	9:CJ:65:LEU:O	2.13	0.49
21:CA:109:A:H61	21:CA:324:G:H1'	1.75	0.49
21:CA:431:A:H2'	21:CA:432:A:O4'	2.12	0.49
21:CA:994:A:C4	21:CA:1216:G:H4'	2.47	0.49
21:CA:1067:A:H4'	21:CA:1068:G:OP1	2.12	0.49
23:CV:9:G:H5'	23:CV:10:G:C5	2.46	0.49
22:CW:53:G:N2	25:DC:53:ARG:HG3	2.27	0.49
26:DD:43:ARG:O	26:DD:51:VAL:HG11	2.11	0.49
26:DD:263:ARG:O	59:DA:2227:A:H4'	2.12	0.49
28:DF:3:GLU:HB2	28:DF:24:LEU:N	2.21	0.49
28:DF:28:ILE:HG23	28:DF:30:PRO:HD3	1.94	0.49
29:DG:73:ALA:HA	59:DA:2312:U:OP1	2.11	0.49
29:DG:82:LEU:HD12	29:DG:87:PRO:HB3	1.94	0.49
33:DN:50:ASP:HA	33:DN:120:LEU:HD13	1.94	0.49
33:DN:75:TYR:CE2	59:DA:1137:G:N3	2.80	0.49
56:De:59:GLU:O	56:De:61:ASP:N	2.45	0.49
59:DA:193:U:H2'	59:DA:194:G:H8	1.76	0.49
59:DA:270(V):G:H2'	59:DA:270(W):G:C8	2.47	0.49
59:DA:665:C:H2'	59:DA:666:G:C8	2.47	0.49
59:DA:1039:G:H2'	59:DA:1040:C:H6	1.77	0.49
59:DA:1186:G:H2'	59:DA:1187:G:O4'	2.12	0.49
59:DA:1356:G:H2'	59:DA:1357:U:H6	1.76	0.49
59:DA:1544:A:H2'	59:DA:1545:A:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1664:A:H5''	59:DA:1665:A:OP2	2.12	0.49
59:DA:1794:U:H2'	59:DA:1795:C:O4'	2.12	0.49
59:DA:2071:A:H2'	59:DA:2072:G:H8	1.76	0.49
59:DA:2539:C:H2'	59:DA:2540:C:C6	2.47	0.49
2:AC:12:LEU:HB2	13:AN:57:ARG:NH2	2.26	0.49
18:AS:78:ARG:CZ	21:AA:1222:G:H5''	2.42	0.49
20:AY:107:VAL:HG13	20:AY:137:ASN:HB2	1.93	0.49
62:AY:702:FUA:O1	62:AY:702:FUA:C1	2.60	0.49
21:AA:627:G:H2'	21:AA:628:G:O4'	2.13	0.49
21:AA:1399:C:H4'	21:AA:1400:C:H3'	1.94	0.49
21:AA:1504:G:H4'	21:AA:1505:G:O5'	2.12	0.49
24:AX:28:C:O2	24:AX:42:G:N1	2.32	0.49
27:BE:34:VAL:HG13	27:BE:35:GLN:H	1.77	0.49
28:BF:57:VAL:C	28:BF:59:TYR:H	2.18	0.49
35:BP:112:LEU:HD22	35:BP:113:LYS:H	1.77	0.49
38:BS:17:ARG:NH2	60:BB:8:U:OP1	2.45	0.49
50:B4:15:ILE:HB	50:B4:32:TYR:HB2	1.94	0.49
52:B6:28:ARG:HH11	52:B6:28:ARG:HA	1.77	0.49
59:BA:31:C:H5''	59:BA:1239:G:OP1	2.12	0.49
59:BA:407:G:H2'	59:BA:408:G:H8	1.78	0.49
59:BA:871:U:H2'	59:BA:872:A:N7	2.27	0.49
59:BA:1506(J):G:H2'	59:BA:1506(K):C:O4'	2.12	0.49
59:BA:1576:U:H2'	59:BA:1577:C:H6	1.77	0.49
59:BA:1700:A:H3'	59:BA:1701:A:H8	1.76	0.49
59:BA:1878:G:H2'	59:BA:1879:C:C6	2.47	0.49
59:BA:2453:A:C2	59:BA:2500:U:N3	2.76	0.49
3:CD:24:GLU:HG2	3:CD:112:VAL:HG11	1.93	0.49
6:CG:86:GLN:O	6:CG:88:PRO:HD3	2.12	0.49
6:CG:88:PRO:HD2	6:CG:151:TYR:C	2.36	0.49
8:CI:113:LYS:HB2	8:CI:116:LYS:HB2	1.93	0.49
10:CK:59:TYR:O	10:CK:63:LEU:HG	2.13	0.49
20:CY:161:PRO:O	20:CY:256:THR:N	2.44	0.49
20:CY:322:VAL:HG21	20:CY:325:LEU:HG	1.95	0.49
21:CA:442:C:C2	21:CA:492:G:N2	2.77	0.49
21:CA:662:G:H2'	21:CA:663:A:C8	2.48	0.49
21:CA:1047:G:H2'	21:CA:1048:G:C8	2.47	0.49
21:CA:1283:G:H2'	21:CA:1284:C:C6	2.47	0.49
21:CA:1353:G:H1	21:CA:1369:C:H42	1.60	0.49
25:DC:218:THR:O	59:DA:2124:G:N2	2.38	0.49
29:DG:95:ARG:HB2	50:D4:1:MET:HE1	1.95	0.49
30:DH:85:LYS:NZ	30:DH:121:ILE:HD12	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:101:ARG:HB2	30:DH:117:PRO:HG3	1.95	0.49
32:DK:117:THR:C	32:DK:119:ASP:H	2.21	0.49
34:DO:70:LYS:NZ	34:DO:71:ARG:O	2.38	0.49
36:DQ:34:LEU:HD22	36:DQ:118:LEU:HD22	1.94	0.49
39:DT:28:VAL:HG12	39:DT:29:ARG:N	2.27	0.49
59:DA:210:C:H2'	59:DA:211:A:H8	1.75	0.49
59:DA:295:G:O6	59:DA:343:C:N3	2.45	0.49
59:DA:500:G:N2	59:DA:505:A:H62	2.08	0.49
59:DA:576:U:H4'	59:DA:2502:G:C5	2.48	0.49
59:DA:817:C:N3	59:DA:1190:G:N2	2.53	0.49
59:DA:862:G:H1	59:DA:915:C:H42	1.60	0.49
59:DA:897:C:N4	59:DA:898:C:H41	2.10	0.49
59:DA:900:A:H3'	59:DA:901:A:C8	2.47	0.49
59:DA:1218:C:H42	59:DA:1231:G:H1	1.59	0.49
59:DA:1376:C:H2'	59:DA:1377:G:C8	2.48	0.49
59:DA:2708:G:H2'	59:DA:2709:G:H8	1.77	0.49
1:AB:135:GLN:O	1:AB:139:LYS:HG3	2.12	0.49
2:AC:160:ALA:O	2:AC:162:GLN:N	2.46	0.49
16:AQ:29:HIS:ND1	16:AQ:32:TYR:HB2	2.27	0.49
17:AR:59:SER:OG	17:AR:60:ALA:N	2.43	0.49
20:AY:121:VAL:O	20:AY:125:ALA:HB2	2.11	0.49
21:AA:1491:G:N2	63:AA:1601:NMY:H61	2.27	0.49
33:BN:100:GLU:O	33:BN:103:VAL:C	2.55	0.49
36:BQ:5:ARG:HB3	36:BQ:6:ARG:NH2	2.27	0.49
39:BT:74:ARG:HB3	39:BT:76:PHE:CE1	2.47	0.49
44:BY:7:VAL:HG21	59:BA:336:C:H4'	1.94	0.49
45:BZ:94:GLU:O	45:BZ:96:VAL:N	2.46	0.49
49:B3:22:ALA:O	49:B3:26:LEU:HG	2.12	0.49
51:B5:46:CYS:SG	51:B5:47:PRO:HD2	2.53	0.49
52:B6:8:LYS:HE3	52:B6:25:LYS:NZ	2.27	0.49
59:BA:19:C:H2'	59:BA:20:C:C6	2.47	0.49
59:BA:56:A:H2'	59:BA:57:C:C6	2.47	0.49
59:BA:416:C:H2'	59:BA:417:C:O4'	2.11	0.49
59:BA:520:G:H2'	59:BA:521:G:O4'	2.11	0.49
59:BA:1317:A:H2'	59:BA:1318:C:C6	2.47	0.49
59:BA:1414:G:H2'	59:BA:1415:U:C6	2.48	0.49
59:BA:1943:U:H1'	59:BA:1945:G:H5'	1.95	0.49
59:BA:2538:C:H2'	59:BA:2539:C:C6	2.48	0.49
59:BA:2576:G:H8	59:BA:2581:G:O6	1.96	0.49
1:CB:68:ILE:HA	1:CB:161:ALA:O	2.12	0.49
9:CJ:13:HIS:HB3	9:CJ:68:HIS:CE1	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:30:ALA:HB1	11:CL:33:ARG:HD3	1.94	0.49
15:CP:26:ARG:NH2	21:CA:310:G:H5''	2.27	0.49
17:CR:58:LEU:O	17:CR:63:GLN:HB2	2.12	0.49
21:CA:26:A:H62	21:CA:558:G:N2	2.10	0.49
21:CA:398:C:H2'	21:CA:399:G:H8	1.76	0.49
21:CA:413:G:H1'	21:CA:428:G:N2	2.27	0.49
22:CW:70:G:O2'	59:DA:1850:G:N2	2.44	0.49
22:CW:70:G:N2	59:DA:1851:U:H4'	2.21	0.49
28:DF:90:PHE:CE2	59:DA:586:A:H4'	2.47	0.49
31:DJ:111:UNK:H	31:DJ:116:UNK:C	2.26	0.49
32:DK:112:MET:C	32:DK:114:ASP:H	2.21	0.49
33:DN:37:LYS:CE	33:DN:38:HIS:HD2	2.20	0.49
33:DN:138:LEU:O	33:DN:139:GLU:HB3	2.11	0.49
35:DP:123:LEU:O	35:DP:142:GLY:HA2	2.12	0.49
39:DT:26:ASP:CG	39:DT:27:THR:H	2.19	0.49
40:DU:92:ARG:HB2	41:DV:11:GLN:CD	2.37	0.49
47:D1:7:ILE:HD11	47:D1:62:VAL:HA	1.94	0.49
59:DA:640:C:H2'	59:DA:641:C:C6	2.46	0.49
59:DA:857:C:N4	59:DA:858:U:O4	2.46	0.49
59:DA:1215:G:C4	59:DA:1216:G:C8	3.00	0.49
59:DA:1410:G:H2'	59:DA:1411:C:H6	1.77	0.49
59:DA:1864(A):G:N2	59:DA:1864(D):A:OP2	2.41	0.49
59:DA:2006:C:H2'	59:DA:2007:C:C6	2.48	0.49
59:DA:2122:U:H3	59:DA:2176:A:N6	2.07	0.49
59:DA:2626:C:H2'	59:DA:2627:G:C8	2.47	0.49
60:DB:24:G:C6	60:DB:56:G:N3	2.80	0.49
11:AL:33:ARG:HD3	11:AL:60:LEU:HD13	1.95	0.49
17:AR:64:ARG:HH22	21:AA:835:U:H5''	1.76	0.49
21:AA:1070:U:H2'	21:AA:1071:C:C6	2.47	0.49
29:BG:91:ARG:HG3	59:BA:2313:C:H4'	1.93	0.49
32:BK:91:PRO:HD2	59:BA:1076:C:O2	2.13	0.49
33:BN:74:ARG:HG3	59:BA:1138:G:H5''	1.93	0.49
33:BN:81:GLY:HA3	33:BN:82:LEU:HD22	1.94	0.49
34:BO:66:LYS:CG	59:BA:1665:A:H5''	2.43	0.49
35:BP:10:PRO:HD2	59:BA:1243:G:O2'	2.12	0.49
40:BU:61:TRP:CE2	40:BU:94:ASN:HB2	2.48	0.49
45:BZ:119:GLU:CD	45:BZ:119:GLU:H	2.21	0.49
47:B1:88:LYS:HB2	47:B1:91:LYS:HE2	1.93	0.49
52:B6:11:LEU:HD22	52:B6:12:GLU:O	2.12	0.49
59:BA:407:G:H2'	59:BA:408:G:C8	2.47	0.49
59:BA:434:U:H1'	59:BA:435:C:C5	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1062:G:H2'	59:BA:1063:G:H8	1.77	0.49
59:BA:1503:U:H2'	59:BA:1504:C:O4'	2.11	0.49
59:BA:1889:A:H3'	59:BA:1890:A:H8	1.76	0.49
59:BA:2247:A:C2	59:BA:2248:C:H1'	2.48	0.49
59:BA:2356:C:H2'	59:BA:2357:U:O4'	2.12	0.49
3:CD:120:LEU:O	3:CD:125:HIS:HB2	2.12	0.49
20:CY:93:GLU:O	20:CY:97:SER:OG	2.23	0.49
20:CY:359:HIS:HB2	20:CY:364:GLU:HG2	1.95	0.49
21:CA:186(P):U:H2'	21:CA:191:G:C8	2.47	0.49
21:CA:337:C:H2'	21:CA:338:A:O4'	2.13	0.49
21:CA:612:C:N3	21:CA:628:G:N2	2.44	0.49
22:CW:7:G:O2'	22:CW:8:U:OP1	2.26	0.49
26:DD:248:SER:OG	26:DD:252:TRP:NE1	2.45	0.49
28:DF:155:LEU:HD12	28:DF:176:LEU:HB3	1.92	0.49
30:DH:65:HIS:CG	30:DH:66:GLY:N	2.80	0.49
30:DH:154:PRO:HA	30:DH:161:GLY:HA3	1.93	0.49
33:DN:25:ARG:HA	59:DA:1012:U:O4	2.13	0.49
33:DN:50:ASP:OD2	33:DN:119:ARG:HB3	2.12	0.49
33:DN:111:PRO:O	33:DN:114:ARG:CA	2.60	0.49
33:DN:132:ALA:O	33:DN:134:ARG:NH1	2.45	0.49
39:DT:5:ALA:HB3	59:DA:2875:C:H1'	1.94	0.49
39:DT:75:ILE:HD13	59:DA:2684:U:H5''	1.94	0.49
59:DA:155(E):U:H2'	59:DA:171:G:O4'	2.13	0.49
59:DA:455:C:H3'	59:DA:456:C:C5'	2.43	0.49
59:DA:635:C:O2'	59:DA:639:U:H5''	2.13	0.49
59:DA:1341:U:O2'	59:DA:1342:A:H5'	2.13	0.49
59:DA:2036:C:H2'	59:DA:2037:G:H8	1.78	0.49
59:DA:2235:G:H2'	59:DA:2236:C:C6	2.47	0.49
59:DA:2683:C:H41	59:DA:2727:G:N2	2.10	0.49
1:AB:47:THR:O	1:AB:51:LEU:HG	2.12	0.49
4:AE:76:ILE:HB	4:AE:77:PRO:HD2	1.95	0.49
9:AJ:3:LYS:N	9:AJ:75:ILE:O	2.45	0.49
11:AL:102:ARG:HA	11:AL:107:ALA:HB3	1.94	0.49
14:AO:29:VAL:O	14:AO:63:ARG:NH1	2.46	0.49
15:AP:46:PRO:HA	15:AP:48:TRP:CD1	2.48	0.49
20:AY:33:LEU:HD23	20:AY:34:TYR:HB3	1.93	0.49
20:AY:192:LEU:O	20:AY:266:ASN:HB2	2.12	0.49
20:AY:302:HIS:O	20:AY:332:SER:OG	2.28	0.49
20:AY:309:LEU:HD12	20:AY:333:GLY:HA3	1.94	0.49
20:AY:607:ARG:HB3	20:AY:672:PHE:HB2	1.95	0.49
21:AA:37:U:H2'	21:AA:38:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:69:A:H2'	22:AW:70:G:H8	1.77	0.49
24:AX:19:G:H4'	24:AX:57:G:O2'	2.12	0.49
25:BC:83:LYS:HD2	25:BC:117:THR:HG21	1.93	0.49
26:BD:179:SER:HB3	59:BA:1819:A:O2'	2.13	0.49
30:BH:143:GLN:HG2	59:BA:2744:G:N2	2.27	0.49
35:BP:138:LEU:HG	35:BP:142:GLY:HA3	1.93	0.49
36:BQ:34:LEU:HA	36:BQ:131:ILE:HG22	1.93	0.49
37:BR:64:ARG:O	37:BR:68:ARG:HB2	2.12	0.49
37:BR:97:VAL:HA	37:BR:113:LEU:O	2.12	0.49
39:BT:32:TYR:CG	39:BT:33:LYS:N	2.81	0.49
42:BW:40:ASN:O	59:BA:2009:G:H4'	2.12	0.49
44:BY:20:TYR:O	44:BY:23:ARG:HG2	2.12	0.49
46:B0:27:GLU:HB3	46:B0:69:PHE:HE1	1.77	0.49
52:B6:30:THR:O	52:B6:32:ASN:N	2.43	0.49
55:B9:4:ARG:HD3	55:B9:34:GLN:HE21	1.76	0.49
59:BA:37:C:H2'	59:BA:38:A:H8	1.78	0.49
59:BA:137(D):A:H8	59:BA:1408:C:O2'	1.95	0.49
59:BA:737:C:H42	59:BA:759:G:H1	1.60	0.49
59:BA:1129:A:O2'	59:BA:2515:C:O2	2.30	0.49
59:BA:2378:A:H8	59:BA:2378:A:O5'	1.95	0.49
59:BA:2395:C:H2'	59:BA:2396:G:C8	2.47	0.49
59:BA:2811:G:N2	59:BA:2890:G:H1'	2.28	0.49
5:CF:16:GLN:O	5:CF:19:LEU:HB3	2.12	0.49
10:CK:86:GLY:HA2	10:CK:112:THR:HG23	1.94	0.49
11:CL:42:THR:HA	11:CL:52:LEU:HA	1.95	0.49
15:CP:53:VAL:HG12	15:CP:79:VAL:HG22	1.93	0.49
18:CS:10:PHE:CD1	18:CS:38:SER:HA	2.48	0.49
21:CA:186(L):G:H2'	21:CA:186(M):G:H8	1.76	0.49
21:CA:669:U:H3	21:CA:737:A:H2	1.60	0.49
21:CA:1072:G:N2	21:CA:1103:C:C4	2.79	0.49
21:CA:1491:G:C5	63:CA:1601:NMY:H2	2.47	0.49
27:DE:79:ARG:HD2	59:DA:2636:U:P	2.52	0.49
29:DG:170:ARG:HH22	29:DG:182:LYS:HE2	1.77	0.49
30:DH:35:VAL:HG21	30:DH:75:ALA:HB2	1.95	0.49
33:DN:45:ASN:CB	33:DN:115:ARG:HE	2.26	0.49
33:DN:74:ARG:O	33:DN:76:SER:N	2.45	0.49
34:DO:68:GLU:N	34:DO:78:ARG:HD3	2.17	0.49
37:DR:44:LEU:O	37:DR:48:VAL:HG23	2.12	0.49
47:D1:18:ILE:HD12	47:D1:20:ARG:HD3	1.94	0.49
47:D1:23:LYS:HB2	47:D1:36:GLY:HA3	1.94	0.49
59:DA:45:G:H1	59:DA:433:C:H42	1.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:185:U:H2'	59:DA:186:G:O4'	2.13	0.49
59:DA:527:C:N4	59:DA:2777:G:O2'	2.43	0.49
59:DA:1110:G:O2'	59:DA:1111:A:P	2.71	0.49
59:DA:1226:A:H8	59:DA:1226:A:O5'	1.95	0.49
59:DA:1306:C:H2'	59:DA:1307:A:C8	2.48	0.49
59:DA:1668:A:H1'	59:DA:1670:C:N4	2.27	0.49
59:DA:1810:A:H8	59:DA:1810:A:O5'	1.95	0.49
59:DA:2780:G:H3'	59:DA:2781:A:H8	1.78	0.49
1:AB:167:PRO:HG2	1:AB:192:SER:HB3	1.94	0.49
3:AD:43:HIS:CD2	3:AD:43:HIS:H	2.29	0.49
4:AE:102:ALA:C	21:AA:8:A:H1'	2.38	0.49
10:AK:29:ILE:HG13	10:AK:42:TRP:O	2.12	0.49
15:AP:75:ARG:HG3	15:AP:80:PHE:CD1	2.47	0.49
16:AQ:100:LYS:N	21:AA:247:G:OP2	2.34	0.49
20:AY:358:MET:HG2	20:AY:363:ARG:HE	1.76	0.49
20:AY:493:VAL:HB	20:AY:512:ILE:HD11	1.95	0.49
21:AA:408:A:C2	21:AA:434:U:C4	2.99	0.49
21:AA:600:C:H2'	21:AA:601:C:H6	1.77	0.49
21:AA:1505:G:O2'	23:AV:17:U:OP2	2.24	0.49
29:BG:16:ARG:O	29:BG:20:ILE:HG12	2.13	0.49
33:BN:52:VAL:O	33:BN:55:VAL:N	2.45	0.49
33:BN:120:LEU:HG	33:BN:121:LYS:H	1.77	0.49
40:BU:21:ALA:HB2	40:BU:35:ALA:HB1	1.94	0.49
40:BU:34:LYS:HE2	59:BA:2018:G:H21	1.76	0.49
42:BW:57:ASN:O	42:BW:62:HIS:N	2.45	0.49
59:BA:209:C:H5'	59:BA:681:G:H4'	1.95	0.49
59:BA:692:C:H2'	59:BA:693:C:H6	1.77	0.49
59:BA:696:G:H2'	59:BA:697:C:C6	2.47	0.49
59:BA:713:G:H2'	59:BA:714:U:C6	2.47	0.49
59:BA:901:A:H2'	59:BA:902:C:O4'	2.12	0.49
59:BA:1412:A:H2'	59:BA:1413:G:O4'	2.13	0.49
59:BA:1712(F):U:H2'	59:BA:1712(G):G:O4'	2.12	0.49
59:BA:1890:A:C2	59:BA:2235:G:H1'	2.47	0.49
59:BA:1925:C:H2'	59:BA:1926:U:H5'	1.94	0.49
59:BA:1951:U:C2	59:BA:1954:G:C8	3.01	0.49
9:CJ:78:ASN:OD1	9:CJ:78:ASN:N	2.46	0.49
14:CO:38:ARG:NH1	21:CA:740:U:OP1	2.45	0.49
20:CY:536:LYS:C	20:CY:538:TYR:H	2.21	0.49
21:CA:44:G:H2'	21:CA:45:U:O4'	2.12	0.49
21:CA:181:G:O2'	21:CA:183:G:O6	2.27	0.49
21:CA:886:G:O6	21:CA:911:U:O4	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:924:C:O2'	21:CA:1502:A:N1	2.38	0.49
24:CX:49:G:N1	24:CX:65:C:N4	2.42	0.49
29:DG:7:LEU:HD11	29:DG:107:LEU:HD12	1.95	0.49
33:DN:21:LYS:HB3	33:DN:21:LYS:HZ2	1.77	0.49
35:DP:111:ARG:HB3	35:DP:128:HIS:HB2	1.95	0.49
40:DU:59:ARG:O	40:DU:63:VAL:HG23	2.12	0.49
41:DV:8:GLY:HA3	41:DV:23:GLU:HG2	1.94	0.49
51:D5:19:ARG:HH22	59:DA:1264:G:H5''	1.76	0.49
55:D9:4:ARG:HG3	55:D9:34:GLN:HE21	1.78	0.49
59:DA:65:C:H2'	59:DA:66:C:C6	2.48	0.49
59:DA:579:G:C4'	59:DA:2017:U:H2'	2.42	0.49
59:DA:844:C:H5''	59:DA:845:G:N2	2.28	0.49
59:DA:961:C:H4'	59:DA:962:G:OP2	2.11	0.49
59:DA:1410:G:H2'	59:DA:1411:C:C6	2.47	0.49
59:DA:1800:C:N4	59:DA:1817:G:H22	2.10	0.49
59:DA:2107:C:O2	59:DA:2182:G:N1	2.33	0.49
1:AB:15:VAL:HG23	1:AB:16:HIS:CE1	2.47	0.49
7:AH:11:THR:HG21	21:AA:825:G:N2	2.28	0.49
9:AJ:24:VAL:HG21	9:AJ:37:PRO:HD3	1.93	0.49
19:AT:84:LEU:O	19:AT:88:VAL:HG23	2.12	0.49
20:AY:606:MET:HG3	20:AY:649:LEU:HG	1.94	0.49
21:AA:246:A:C2	21:AA:282:A:C5	3.00	0.49
21:AA:1338:G:H2'	21:AA:1339:A:C8	2.48	0.49
24:AX:2:G:N1	24:AX:71:C:N4	2.47	0.49
26:BD:150:LYS:HD3	59:BA:2202(H):G:H21	1.77	0.49
27:BE:64:LYS:O	27:BE:67:PHE:HB3	2.12	0.49
32:BK:100:THR:HG22	32:BK:139:VAL:HB	1.93	0.49
33:BN:30:ILE:C	33:BN:31:ALA:O	2.54	0.49
33:BN:72:TYR:H	33:BN:87:LEU:N	2.11	0.49
33:BN:78:TYR:HB3	33:BN:79:PRO:CD	2.41	0.49
38:BS:13:ARG:C	38:BS:15:ARG:N	2.70	0.49
51:B5:10:LYS:HD2	59:BA:579:G:H1'	1.94	0.49
52:B6:12:GLU:HG2	52:B6:23:THR:HA	1.94	0.49
59:BA:305:U:H2'	59:BA:306:U:C6	2.47	0.49
59:BA:813:U:O2'	59:BA:1225:G:H1'	2.12	0.49
59:BA:872:A:C2	59:BA:905:U:N3	2.75	0.49
59:BA:880:G:O2'	59:BA:881:G:OP1	2.29	0.49
59:BA:922:U:H2'	59:BA:923:C:H6	1.78	0.49
59:BA:1855:G:H1	59:BA:1887:C:H42	1.61	0.49
59:BA:2319:G:H1'	59:BA:2320:A:C8	2.48	0.49
59:BA:2884:U:OP2	59:BA:2885:C:N4	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:94:ASN:CG	1:CB:95:GLN:HE21	2.21	0.49
3:CD:15:GLU:HA	3:CD:59:ARG:NH2	2.27	0.49
15:CP:19:ILE:HB	15:CP:37:GLY:HA3	1.93	0.49
21:CA:19:C:H2'	21:CA:20:U:C6	2.48	0.49
21:CA:593:G:H2'	21:CA:594:G:H8	1.78	0.49
21:CA:767:A:O3'	21:CA:1524:C:O2'	2.30	0.49
21:CA:1486:G:H2'	21:CA:1487:G:O4'	2.12	0.49
21:CA:1494:G:OP1	63:CA:1601:NMY:H81	2.13	0.49
25:DC:181:PHE:HB3	25:DC:185:LYS:HB2	1.94	0.49
26:DD:84:TYR:CD2	26:DD:86:PRO:HD3	2.47	0.49
27:DE:4:ILE:HD13	27:DE:5:LEU:N	2.27	0.49
27:DE:134:ILE:HG12	27:DE:135:HIS:N	2.24	0.49
33:DN:66:LYS:HB2	33:DN:70:LYS:HZ3	1.77	0.49
35:DP:64:LYS:HG3	59:DA:2416:C:OP1	2.13	0.49
38:DS:13:ARG:HE	38:DS:13:ARG:N	2.10	0.49
45:DZ:9:TYR:HD2	45:DZ:61:LEU:HD21	1.77	0.49
45:DZ:36:LYS:HD3	45:DZ:36:LYS:N	2.27	0.49
59:DA:249:C:OP2	59:DA:2394:C:O2'	2.26	0.49
59:DA:511:U:H4'	59:DA:1235:G:H4'	1.94	0.49
59:DA:1301:A:N6	59:DA:1626:G:O2'	2.46	0.49
59:DA:1453:A:H3'	59:DA:1454:U:H3'	1.94	0.49
59:DA:1496:A:H2'	59:DA:1498:C:C4	2.48	0.49
59:DA:1533:C:H2'	59:DA:1534:G:H5'	1.95	0.49
59:DA:1641:A:H2'	59:DA:1642:G:O4'	2.13	0.49
59:DA:1905:C:O2'	59:DA:1929:G:H8	1.95	0.49
60:DB:24:G:C2	60:DB:56:G:N2	2.80	0.49
3:AD:173:TRP:NE1	3:AD:174:LEU:HG	2.28	0.49
4:AE:17:ALA:HA	4:AE:26:PHE:HA	1.95	0.49
10:AK:78:GLN:OE1	10:AK:104:GLN:HB3	2.13	0.49
14:AO:79:ARG:HA	14:AO:82:ILE:HG22	1.95	0.49
21:AA:129(A):G:H4'	21:AA:130:A:H5''	1.93	0.49
21:AA:511:C:C2	21:AA:512:U:C5	3.00	0.49
21:AA:557:G:H2'	21:AA:558:G:O4'	2.13	0.49
21:AA:1195:C:H3'	21:AA:1196:U:C5'	2.43	0.49
21:AA:1440(J):C:O2'	21:AA:1440(K):G:H5''	2.13	0.49
22:AW:18:G:H22	22:AW:57:G:H2'	1.78	0.49
33:BN:97:ARG:HA	33:BN:105:GLY:HA2	1.93	0.49
34:BO:63:VAL:N	34:BO:84:ALA:HB2	2.27	0.49
47:B1:20:ARG:NH2	47:B1:37:ILE:HA	2.28	0.49
59:BA:413:C:N4	59:BA:2410:G:H1	2.08	0.49
59:BA:465:G:H21	59:BA:683:C:H2'	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1428:C:H42	59:BA:1570:A:H62	1.59	0.49
60:BB:24:G:H1'	60:BB:27:C:N4	2.28	0.49
1:CB:94:ASN:HD22	1:CB:94:ASN:N	2.11	0.49
3:CD:88:VAL:HG13	4:CE:97:GLY:HA3	1.95	0.49
7:CH:83:ILE:HG12	7:CH:84:ARG:N	2.27	0.49
8:CI:28:VAL:HB	8:CI:36:TYR:CD1	2.47	0.49
15:CP:14:ASN:HA	15:CP:42:ARG:NH2	2.28	0.49
20:CY:86:GLY:C	20:CY:88:VAL:H	2.21	0.49
20:CY:656:ALA:HB2	20:CY:669:PHE:CE2	2.45	0.49
21:CA:545:C:O2'	21:CA:549:C:OP1	2.30	0.49
21:CA:784:C:H2'	21:CA:785:G:O4'	2.13	0.49
21:CA:1206:G:C4	21:CA:1207:G:C8	3.01	0.49
21:CA:1238:A:H5'	21:CA:1336:C:H41	1.78	0.49
21:CA:1434:A:H2'	21:CA:1435:G:O4'	2.12	0.49
21:CA:1440(A):G:H5''	21:CA:1440(B):G:O4'	2.13	0.49
24:CX:13:C:N3	24:CX:22:G:N2	2.48	0.49
25:DC:105:LEU:HB2	25:DC:128:LEU:HD11	1.95	0.49
27:DE:191:PRO:O	27:DE:194:GLY:N	2.45	0.49
28:DF:157:VAL:HG21	28:DF:192:LEU:HD12	1.94	0.49
30:DH:109:PHE:CE2	59:DA:2667:C:H1'	2.47	0.49
32:DK:80:LYS:HE2	32:DK:80:LYS:HA	1.95	0.49
35:DP:36:LYS:H	59:DA:942:G:C5'	2.26	0.49
37:DR:3:HIS:HB2	59:DA:1654:A:OP1	2.13	0.49
39:DT:107:ASP:N	39:DT:110:ILE:HG13	2.27	0.49
44:DY:97:ARG:C	44:DY:99:CYS:H	2.19	0.49
45:DZ:100:VAL:HB	45:DZ:124:ILE:HD11	1.95	0.49
49:D3:7:LYS:HG2	49:D3:8:LEU:H	1.77	0.49
59:DA:34:C:N3	59:DA:455:C:H5'	2.28	0.49
59:DA:487:C:H2'	59:DA:488:G:H8	1.78	0.49
59:DA:687:C:N3	59:DA:787:U:H4'	2.28	0.49
59:DA:821:A:H62	59:DA:972:G:N2	2.06	0.49
59:DA:1243:G:H2'	59:DA:1244:G:O4'	2.12	0.49
59:DA:1352:U:H2'	59:DA:1353:A:C8	2.48	0.49
59:DA:1891:G:H2'	59:DA:1892:C:C6	2.47	0.49
59:DA:2108:C:H2'	59:DA:2109:U:C5	2.47	0.49
59:DA:2366:A:H2'	59:DA:2367:G:O4'	2.12	0.49
59:DA:2560:C:C2'	59:DA:2561:A:H5'	2.43	0.49
2:AC:161:GLU:HB2	23:AV:25:A:H61	1.77	0.49
13:AN:31:ARG:NH2	21:AA:977:A:OP1	2.46	0.49
16:AQ:91:ARG:NH1	21:AA:583:A:O2'	2.46	0.49
17:AR:40:LEU:HD12	17:AR:70:ILE:HG12	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:AY:702:FUA:H5	62:AY:702:FUA:C20	2.12	0.49
21:AA:321:A:H2'	21:AA:322:C:H6	1.78	0.49
21:AA:715:A:H2'	21:AA:716:A:H8	1.77	0.49
21:AA:1062:U:H2'	21:AA:1063:C:C6	2.48	0.49
25:BC:114:VAL:HG11	25:BC:124:VAL:HG11	1.94	0.49
26:BD:97:TYR:HB2	26:BD:102:LYS:HA	1.95	0.49
26:BD:106:ILE:C	26:BD:108:PRO:HD3	2.38	0.49
29:BG:111:LEU:C	29:BG:113:ARG:N	2.70	0.49
33:BN:90:MET:CB	33:BN:97:ARG:CZ	2.91	0.49
33:BN:103:VAL:O	33:BN:105:GLY:N	2.40	0.49
38:BS:97:ARG:CZ	60:BB:48:A:H5'	2.43	0.49
45:BZ:8:TYR:HB2	45:BZ:38:TYR:CZ	2.48	0.49
48:B2:64:LEU:O	48:B2:68:ARG:N	2.46	0.49
59:BA:175:G:H2'	59:BA:176:G:O4'	2.13	0.49
59:BA:253:C:H2'	59:BA:254:G:O4'	2.12	0.49
59:BA:902:C:H2'	59:BA:903:C:H6	1.77	0.49
59:BA:1668:A:N3	59:BA:1670:C:N4	2.61	0.49
59:BA:1972:A:O4'	63:BA:2904:NMY:H21	2.13	0.49
59:BA:2292:C:N3	59:BA:2340:G:N2	2.54	0.49
59:BA:2552:U:H3'	59:BA:2553:G:C5'	2.42	0.49
16:CQ:45:HIS:N	16:CQ:72:ARG:HA	2.28	0.49
19:CT:79:ARG:NH1	19:CT:80:ARG:HE	2.11	0.49
21:CA:224:C:H2'	21:CA:225:C:C6	2.48	0.49
21:CA:737:A:H2'	21:CA:738:C:C6	2.48	0.49
21:CA:1046:A:C8	21:CA:1047:G:C8	3.00	0.49
21:CA:1070:U:H3	21:CA:1105:A:H61	0.69	0.49
26:DD:35:LYS:NZ	26:DD:61:LEU:HG	2.27	0.49
26:DD:262:ARG:NH1	59:DA:2085:C:OP1	2.46	0.49
28:DF:51:THR:HG23	59:DA:450:G:H5''	1.94	0.49
28:DF:104:LYS:HE2	28:DF:108:LYS:HG3	1.94	0.49
32:DK:126:MET:HG3	59:DA:1058:G:H22	1.78	0.49
33:DN:104:LYS:HB3	33:DN:104:LYS:HE2	1.56	0.49
38:DS:30:ARG:HH21	38:DS:33:LYS:HA	1.77	0.49
59:DA:53:A:N6	59:DA:117:G:H1'	2.26	0.49
59:DA:241:A:H5'	59:DA:243:U:H1'	1.95	0.49
59:DA:286:C:H2'	59:DA:287:C:C6	2.48	0.49
59:DA:377:C:H2'	59:DA:378:C:C6	2.46	0.49
59:DA:693:C:H1'	59:DA:1354:A:H1'	1.95	0.49
59:DA:719:C:H2'	59:DA:720:C:C6	2.48	0.49
59:DA:1368:G:H2'	59:DA:1369:G:C8	2.47	0.49
59:DA:1430:C:C4	59:DA:1431:U:C4	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1437:C:O2'	59:DA:1506(K):C:H4'	2.12	0.49
59:DA:1578:U:O5'	59:DA:1578:U:H6	1.96	0.49
59:DA:2110:G:H4'	59:DA:2145:C:H42	1.78	0.49
59:DA:2351:G:O2'	59:DA:2366:A:N6	2.46	0.49
20:AY:341:VAL:HG12	20:AY:391:GLY:HA2	1.95	0.48
21:AA:124:G:H2'	21:AA:125:U:O4'	2.13	0.48
21:AA:1348:U:N3	21:AA:1374:A:C2	2.81	0.48
22:AW:7:G:H2'	22:AW:49:A:H1'	1.94	0.48
22:AW:72:C:H2'	22:AW:73:A:H5'	1.93	0.48
28:BF:59:TYR:HA	59:BA:469:G:OP1	2.12	0.48
28:BF:157:VAL:O	28:BF:158:THR:HB	2.13	0.48
28:BF:159:GLY:HA2	28:BF:164:ARG:HH21	1.77	0.48
34:BO:10:VAL:HG22	34:BO:17:ARG:HA	1.95	0.48
35:BP:115:LEU:HD22	59:BA:636:G:C2	2.48	0.48
36:BQ:16:ARG:HD2	60:BB:90:C:OP1	2.12	0.48
37:BR:97:VAL:HG22	37:BR:114:VAL:HG13	1.95	0.48
38:BS:34:HIS:NE2	38:BS:54:LEU:HB3	2.28	0.48
45:BZ:27:VAL:HG11	60:BB:75:G:H1'	1.95	0.48
45:BZ:152:ALA:HA	45:BZ:167:PRO:O	2.13	0.48
52:B6:26:ASN:CG	52:B6:27:LYS:H	2.20	0.48
56:Be:84:LEU:HA	56:Be:87:LYS:HG3	1.94	0.48
59:BA:247:G:H4'	59:BA:386:G:C5	2.48	0.48
59:BA:811:U:O3'	59:BA:1251:C:H5'	2.13	0.48
59:BA:1055:G:H21	59:BA:1085:A:H1'	1.78	0.48
59:BA:1225:G:C5	59:BA:1226:A:C6	3.01	0.48
59:BA:1359:A:OP2	59:BA:1371:G:N1	2.43	0.48
59:BA:1551:C:H2'	59:BA:1552:G:O4'	2.12	0.48
59:BA:1917:U:O5'	59:BA:1917:U:H6	1.96	0.48
59:BA:2115:G:H1'	59:BA:2171:A:N1	2.28	0.48
59:BA:2267:A:OP2	59:BA:2268:A:H5''	2.13	0.48
59:BA:2364:C:H2'	59:BA:2365:G:O4'	2.12	0.48
4:CE:43:LEU:HB2	4:CE:136:MET:HG3	1.95	0.48
7:CH:56:LYS:O	7:CH:58:TYR:N	2.46	0.48
11:CL:24:VAL:HG21	21:CA:553:A:H5''	1.93	0.48
13:CN:8:GLU:HA	13:CN:11:LYS:HB2	1.95	0.48
15:CP:56:ALA:O	15:CP:60:LEU:HG	2.13	0.48
20:CY:534:ILE:HD11	20:CY:570:GLY:C	2.38	0.48
20:CY:561:VAL:HG21	20:CY:676:TYR:HE2	1.77	0.48
21:CA:255:G:H2'	21:CA:256:U:C6	2.47	0.48
21:CA:919:A:H2'	21:CA:920:U:C6	2.48	0.48
21:CA:1117:G:N2	21:CA:1180:A:H1'	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CV:6:G:H2'	23:CV:7:G:O4'	2.13	0.48
24:CX:27:C:N4	24:CX:43:G:N1	2.21	0.48
26:DD:52:ARG:NH1	26:DD:249:PRO:HG3	2.28	0.48
27:DE:65:GLY:HA2	27:DE:70:ALA:O	2.13	0.48
28:DF:107:LYS:HE3	28:DF:205:ARG:HG3	1.95	0.48
29:DG:173:LEU:HD22	29:DG:178:PHE:CD1	2.48	0.48
33:DN:114:ARG:C	33:DN:114:ARG:CD	2.86	0.48
37:DR:20:LEU:O	37:DR:24:GLN:HB2	2.13	0.48
38:DS:15:ARG:HG2	59:DA:2334:G:C2	2.48	0.48
41:DV:72:VAL:HB	41:DV:74:LYS:HE2	1.95	0.48
44:DY:91:GLU:HG2	44:DY:92:ASN:H	1.77	0.48
49:D3:45:GLY:O	49:D3:48:GLU:HG2	2.12	0.48
59:DA:75:G:C6	59:DA:111:A:N1	2.81	0.48
59:DA:1552:G:O2'	59:DA:1553:A:O4'	2.31	0.48
59:DA:1832:C:C1'	63:DA:2901:NMY:HN62	2.25	0.48
59:DA:1952:A:C6	59:DA:1953:A:N6	2.81	0.48
59:DA:2506:U:H5'	59:DA:2507:C:OP1	2.12	0.48
2:AC:28:GLN:HA	2:AC:31:HIS:NE2	2.28	0.48
6:AG:71:PRO:O	6:AG:96:GLN:HG2	2.12	0.48
7:AH:97:VAL:HG13	7:AH:98:LYS:HD3	1.95	0.48
20:AY:14:ASN:HA	20:AY:80:ASN:H	1.78	0.48
20:AY:546:ILE:HA	20:AY:590:ILE:HG13	1.95	0.48
21:AA:258:G:H1	21:AA:268:C:N4	2.05	0.48
21:AA:517:G:H4'	21:AA:519:C:C2	2.48	0.48
21:AA:989:C:H2'	21:AA:990:C:H6	1.78	0.48
21:AA:1046:A:H3'	21:AA:1047:G:C8	2.46	0.48
21:AA:1241:G:H1	21:AA:1296:C:H42	1.60	0.48
21:AA:1241:G:H2'	21:AA:1242:C:C6	2.49	0.48
26:BD:242:ARG:NH2	59:BA:1826:G:H4'	2.28	0.48
27:BE:47:VAL:HG21	27:BE:86:PRO:HD2	1.95	0.48
27:BE:134:ILE:O	27:BE:136:ARG:N	2.46	0.48
28:BF:20:LEU:HD22	28:BF:21:ALA:N	2.27	0.48
29:BG:101:ILE:O	29:BG:105:LYS:HG2	2.13	0.48
30:BH:103:LEU:HD11	30:BH:105:LEU:HB3	1.95	0.48
30:BH:139:GLN:HE22	59:BA:2746:U:H1'	1.78	0.48
31:BJ:82:UNK:O	31:BJ:84:UNK:N	2.46	0.48
33:BN:75:TYR:HA	33:BN:82:LEU:HB3	1.95	0.48
33:BN:97:ARG:CB	33:BN:105:GLY:HA2	2.43	0.48
34:BO:40:VAL:HG22	34:BO:59:LYS:HG3	1.94	0.48
36:BQ:74:TYR:CE1	36:BQ:76:LYS:HD3	2.47	0.48
36:BQ:97:VAL:HG13	36:BQ:101:ARG:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:31:SER:H	39:BT:44:ASP:HA	1.78	0.48
40:BU:36:ARG:NH1	59:BA:1252:G:N7	2.61	0.48
43:BX:83:VAL:HG12	43:BX:84:ALA:H	1.77	0.48
54:B8:18:ALA:HB1	59:BA:628:G:H5''	1.95	0.48
59:BA:8:A:C2	59:BA:9:U:C2	3.01	0.48
59:BA:397:G:H2'	59:BA:398:G:H8	1.78	0.48
59:BA:705:A:H2'	59:BA:706:A:O4'	2.13	0.48
59:BA:723:G:H2'	59:BA:724:U:O4'	2.13	0.48
59:BA:783:A:H2'	59:BA:784:A:H4'	1.94	0.48
59:BA:947:G:H1	59:BA:970:C:N4	2.11	0.48
59:BA:971:C:H5''	59:BA:974:G:HO2'	1.76	0.48
59:BA:1082:U:H2'	59:BA:1083:U:H5'	1.95	0.48
59:BA:1271:G:H22	59:BA:1615:C:N4	2.07	0.48
59:BA:1435:G:H2'	59:BA:1436:G:H8	1.77	0.48
59:BA:1559:G:O2'	59:BA:1560:G:H5'	2.13	0.48
59:BA:1970:A:C4'	63:BA:2904:NMY:H192	2.23	0.48
59:BA:2030:A:H5''	59:BA:2031:A:N7	2.28	0.48
59:BA:2063:C:H1'	59:BA:2451:A:C2	2.48	0.48
59:BA:2194:G:H2'	59:BA:2195:C:O4'	2.13	0.48
59:BA:2225:A:H4'	59:BA:2226:C:C6	2.48	0.48
59:BA:2251:G:H2'	59:BA:2252:G:O5'	2.13	0.48
59:BA:2447:G:H4'	59:BA:2447:G:OP1	2.12	0.48
11:CL:33:ARG:HG2	11:CL:60:LEU:CD1	2.40	0.48
12:CM:87:TYR:CE2	21:CA:1321:C:H4'	2.48	0.48
12:CM:96:LEU:HD13	21:CA:1226:C:OP2	2.13	0.48
20:CY:573:HIS:O	20:CY:576:ASP:N	2.45	0.48
22:CW:20(A):U:H2'	22:CW:21:A:H5'	1.94	0.48
25:DC:132:LEU:C	25:DC:138:LEU:HB2	2.38	0.48
26:DD:218:ARG:NH2	59:DA:691:C:OP1	2.46	0.48
26:DD:260:ARG:NH1	59:DA:1799:G:OP1	2.44	0.48
27:DE:12:THR:HG22	39:DT:58:ASN:HD21	1.78	0.48
28:DF:7:TYR:N	28:DF:7:TYR:CD1	2.81	0.48
29:DG:60:LEU:O	29:DG:63:ILE:HG12	2.13	0.48
30:DH:37:VAL:HG11	30:DH:68:THR:HA	1.95	0.48
33:DN:12:ARG:HG3	33:DN:14:VAL:HG23	1.95	0.48
33:DN:88:GLU:O	33:DN:91:LEU:N	2.46	0.48
33:DN:95:PRO:O	33:DN:108:PRO:HG3	2.13	0.48
33:DN:107:LEU:HG	33:DN:120:LEU:HD22	1.93	0.48
34:DO:51:ALA:O	34:DO:52:VAL:HG22	2.13	0.48
35:DP:98:GLU:O	35:DP:102:ARG:N	2.46	0.48
37:DR:2:ARG:HH12	59:DA:2680:C:P	2.36	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DR:96:ARG:HB2	37:DR:117:VAL:CG2	2.43	0.48
39:DT:28:VAL:HG12	39:DT:29:ARG:HG3	1.95	0.48
39:DT:121:ILE:O	39:DT:125:ARG:HG2	2.14	0.48
50:D4:16:CYS:HB2	50:D4:20:ASN:HB2	1.93	0.48
56:De:74:VAL:HG12	56:De:78:LEU:HD12	1.94	0.48
59:DA:172:C:H2'	59:DA:173:G:O4'	2.13	0.48
59:DA:189:G:H2'	59:DA:205:G:H22	1.77	0.48
59:DA:296:C:H42	59:DA:342:G:H1	1.60	0.48
59:DA:697:C:H42	59:DA:765:G:H1	1.61	0.48
59:DA:797:C:O5'	59:DA:797:C:H6	1.96	0.48
59:DA:1054:A:H2'	59:DA:1055:G:C8	2.47	0.48
59:DA:1056:G:H5''	59:DA:1057:A:O4'	2.12	0.48
59:DA:1178:C:H2'	59:DA:1179:C:C6	2.49	0.48
59:DA:2023:G:O6	59:DA:2040:C:N3	2.46	0.48
59:DA:2045:C:H42	59:DA:2623:G:H1	1.61	0.48
59:DA:2678:C:H2'	59:DA:2679:A:C8	2.48	0.48
60:DB:24:G:H4'	60:DB:25:A:N7	2.28	0.48
1:AB:235:SER:O	1:AB:237:ALA:N	2.46	0.48
6:AG:30:ILE:O	6:AG:32:ARG:HG2	2.14	0.48
7:AH:94:TYR:CD2	21:AA:598:U:H4'	2.48	0.48
9:AJ:48:THR:HB	9:AJ:62:HIS:CE1	2.49	0.48
12:AM:83:ASP:OD2	12:AM:84:ILE:N	2.46	0.48
14:AO:44:LYS:HD3	59:BA:716:A:O2'	2.14	0.48
21:AA:197:A:N3	21:AA:198:G:H1'	2.29	0.48
21:AA:294:U:H2'	21:AA:295:C:C6	2.48	0.48
21:AA:639:G:H2'	21:AA:640:A:H8	1.78	0.48
21:AA:890:G:H22	21:AA:906:G:H2'	1.78	0.48
22:AW:34:C:H2'	22:AW:35:A:H8	1.78	0.48
25:BC:114:VAL:HG12	25:BC:139:PRO:HG3	1.95	0.48
29:BG:132:ASN:CG	59:BA:2303:G:H21	2.21	0.48
33:BN:31:ALA:HA	33:BN:34:LEU:C	2.38	0.48
33:BN:100:GLU:O	33:BN:101:HIS:C	2.51	0.48
35:BP:146:VAL:O	35:BP:148:LEU:N	2.39	0.48
38:BS:12:PHE:CZ	38:BS:91:PRO:HB3	2.49	0.48
39:BT:36:GLU:OE2	39:BT:40:THR:OG1	2.31	0.48
43:BX:3:THR:N	48:B2:29:LYS:HZ3	2.11	0.48
44:BY:9:LYS:HE3	44:BY:11:ASP:OD1	2.13	0.48
47:B1:19:GLN:OE1	47:B1:40:ARG:NH1	2.47	0.48
50:B4:33:VAL:HB	50:B4:34:GLU:H	1.54	0.48
59:BA:292:C:H42	59:BA:348:G:H1	1.60	0.48
59:BA:645:C:H3'	59:BA:646:A:C5'	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1537:C:C2	59:BA:1538:G:H1'	2.48	0.48
59:BA:1544:A:O2'	59:BA:1545:A:C8	2.62	0.48
59:BA:2115:G:H5''	59:BA:2166:G:O2'	2.14	0.48
59:BA:2374:C:H2'	59:BA:2375:G:H8	1.78	0.48
17:CR:47:THR:HB	17:CR:85:LEU:HD23	1.94	0.48
20:CY:89:ASP:O	20:CY:91:THR:N	2.46	0.48
20:CY:239:GLU:HA	20:CY:242:LEU:HD12	1.95	0.48
21:CA:500:G:C6	21:CA:545:C:N3	2.78	0.48
21:CA:770:C:H2'	21:CA:771:G:C8	2.48	0.48
21:CA:1015:A:O2'	21:CA:1218:C:H4'	2.13	0.48
21:CA:1148:U:C4	21:CA:1149:C:C2	3.00	0.48
21:CA:1305:G:H2'	21:CA:1331:G:N2	2.27	0.48
21:CA:1370:G:C2	21:CA:1371:G:C8	3.01	0.48
21:CA:1502:A:H8	21:CA:1505:G:N2	2.08	0.48
25:DC:39:ASP:HA	25:DC:178:LYS:O	2.13	0.48
26:DD:165:ILE:O	26:DD:166:GLN:HB2	2.12	0.48
26:DD:183:ARG:HG2	26:DD:270:ILE:HG22	1.96	0.48
26:DD:220:HIS:N	59:DA:1790:C:OP1	2.47	0.48
29:DG:68:PRO:HB2	29:DG:90:LEU:HD11	1.94	0.48
33:DN:114:ARG:NH2	59:DA:527:C:N1	2.57	0.48
34:DO:67:LYS:C	34:DO:68:GLU:HG2	2.39	0.48
38:DS:32:LEU:HD11	60:DB:29:A:N7	2.28	0.48
45:DZ:74:VAL:HB	45:DZ:76:LEU:HD21	1.94	0.48
52:D6:16:CYS:C	52:D6:18:ARG:H	2.21	0.48
59:DA:123:G:H2'	59:DA:124:G:O4'	2.13	0.48
59:DA:447:A:H2	59:DA:455:C:N3	2.11	0.48
59:DA:883:G:O6	59:DA:893:C:N3	2.46	0.48
59:DA:1027:A:H2'	59:DA:1028:A:H8	1.77	0.48
59:DA:1430:C:H2'	59:DA:1431:U:C6	2.48	0.48
59:DA:1932:A:N6	59:DA:1968:G:H1'	2.28	0.48
59:DA:1952:A:H2	59:DA:2548:G:H22	1.61	0.48
59:DA:2587:A:N6	59:DA:2608:G:H21	2.00	0.48
59:DA:2836:U:H2'	59:DA:2837:G:H8	1.79	0.48
2:AC:176:HIS:HB3	21:AA:1111:A:N6	2.27	0.48
3:AD:90:GLY:O	3:AD:93:PHE:HB3	2.13	0.48
3:AD:165:MET:SD	3:AD:176:LEU:HD22	2.53	0.48
4:AE:79:GLU:OE2	7:AH:105:ARG:HB2	2.14	0.48
10:AK:21:ILE:HB	10:AK:84:VAL:HA	1.96	0.48
10:AK:21:ILE:HD11	10:AK:98:LEU:HD11	1.94	0.48
11:AL:42:THR:HG23	11:AL:43:VAL:H	1.77	0.48
11:AL:69:TYR:CE1	11:AL:70:ILE:HG12	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AY:72:CYS:O	20:AY:78:ARG:HA	2.13	0.48
20:AY:145:ASP:O	20:AY:146:LEU:HB2	2.14	0.48
20:AY:259:PHE:HB2	20:AY:272:LEU:HD13	1.95	0.48
20:AY:499:ARG:NH2	59:BA:1913:A:OP1	2.47	0.48
21:AA:337:C:H2'	21:AA:338:A:O4'	2.13	0.48
21:AA:349:A:H2'	21:AA:350:G:H8	1.77	0.48
21:AA:971:G:P	21:AA:1231:G:H21	2.36	0.48
21:AA:1020:U:H2'	21:AA:1021:G:H8	1.76	0.48
21:AA:1091:U:N3	21:AA:1094:G:OP2	2.27	0.48
21:AA:1137:C:O2'	21:AA:1138:G:N2	2.46	0.48
21:AA:1420:C:H42	21:AA:1480:G:H1	1.62	0.48
21:AA:1440(O):A:H3'	21:AA:1461:G:H8	1.77	0.48
24:AX:37:A:C5	24:AX:38:A:C5	3.01	0.48
25:BC:100:ILE:O	25:BC:104:ILE:HG13	2.14	0.48
25:BC:105:LEU:HB2	25:BC:128:LEU:HD11	1.96	0.48
26:BD:77:ALA:HB3	26:BD:95:LEU:HD23	1.95	0.48
27:BE:143:ASN:ND2	59:BA:2572:A:OP1	2.44	0.48
28:BF:110:LEU:HD12	28:BF:183:VAL:HG13	1.95	0.48
30:BH:17:VAL:HB	30:BH:45:VAL:HG22	1.95	0.48
30:BH:58:GLU:O	30:BH:62:LYS:HG3	2.13	0.48
35:BP:87:ASP:OD1	35:BP:90:ARG:NH2	2.45	0.48
37:BR:84:ALA:HB3	37:BR:85:PRO:HD3	1.95	0.48
38:BS:13:ARG:HE	38:BS:13:ARG:N	2.10	0.48
59:BA:541:C:H2'	59:BA:542:C:C6	2.48	0.48
59:BA:701:G:H1	59:BA:731:C:N4	2.10	0.48
59:BA:805:G:N3	59:BA:831:G:H1'	2.28	0.48
59:BA:882:G:H2'	59:BA:883:G:H8	1.73	0.48
59:BA:991:C:H5'	59:BA:1185:C:H2'	1.94	0.48
59:BA:1025:G:H4'	59:BA:1026:U:O4'	2.13	0.48
59:BA:1595:G:H2'	59:BA:1596:A:C8	2.49	0.48
59:BA:1662:C:O2'	59:BA:2687:U:OP1	2.27	0.48
59:BA:2591:C:H2'	59:BA:2592:G:O4'	2.13	0.48
59:BA:2802:G:H2'	59:BA:2803:C:O4'	2.13	0.48
59:BA:2829:C:H2'	59:BA:2830:G:C8	2.48	0.48
60:BB:24:G:H1	60:BB:59:A:H61	1.60	0.48
5:CF:40:VAL:HG23	5:CF:63:TYR:CE1	2.47	0.48
7:CH:91:ARG:HH21	21:CA:564:C:H4'	1.78	0.48
7:CH:97:VAL:HG13	7:CH:98:LYS:HD3	1.94	0.48
9:CJ:51:ARG:HB2	9:CJ:59:SER:HB3	1.94	0.48
10:CK:41:THR:HB	10:CK:71:LYS:HZ3	1.79	0.48
11:CL:71:PRO:HB3	11:CL:120:TYR:CE2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CS:53:ASN:ND2	18:CS:53:ASN:O	2.47	0.48
21:CA:115:G:O2'	21:CA:116:A:P	2.71	0.48
23:CV:18:G:C6	22:CW:34:C:N3	2.79	0.48
24:CX:26:A:H2'	24:CX:27:C:C6	2.48	0.48
25:DC:174:ALA:HA	25:DC:175:PRO:HD3	1.57	0.48
27:DE:111:ARG:HB2	27:DE:160:TYR:O	2.13	0.48
29:DG:11:TYR:HB2	29:DG:176:LEU:HD21	1.95	0.48
29:DG:126:ASP:CG	59:DA:2302:G:H21	2.15	0.48
35:DP:40:SER:O	35:DP:45:LEU:HD22	2.13	0.48
35:DP:147:LEU:O	35:DP:148:LEU:HB2	2.13	0.48
36:DQ:32:TYR:CE2	36:DQ:111:GLU:HG3	2.48	0.48
43:DX:63:LYS:HA	43:DX:71:GLY:O	2.13	0.48
45:DZ:89:PHE:CE2	60:DB:104:A:H4'	2.48	0.48
51:D5:46:CYS:SG	51:D5:47:PRO:HD2	2.53	0.48
53:D7:25:PRO:HA	53:D7:28:ARG:HE	1.78	0.48
59:DA:477:A:H2'	59:DA:478:A:C8	2.49	0.48
59:DA:1506(K):C:H2'	59:DA:1506(L):G:C8	2.48	0.48
59:DA:1530:G:N1	59:DA:1541:U:C2	2.81	0.48
59:DA:1629:U:O2'	59:DA:2698:U:OP1	2.31	0.48
59:DA:1685:C:H42	59:DA:1703:G:H1	1.62	0.48
59:DA:1793:C:N3	59:DA:1826:G:N2	2.54	0.48
59:DA:1821:A:H2'	59:DA:1822:G:C8	2.49	0.48
1:AB:179:LYS:NZ	21:AA:1075:C:H5'	2.28	0.48
2:AC:173:VAL:O	21:AA:1107:C:H5''	2.13	0.48
7:AH:103:VAL:O	7:AH:104:ARG:HB2	2.12	0.48
10:AK:46:GLY:HA3	10:AK:55:LYS:HG3	1.95	0.48
11:AL:85:ILE:HG13	11:AL:98:TYR:HB3	1.95	0.48
12:AM:90:LEU:HD11	18:AS:81:ARG:NH2	2.28	0.48
17:AR:38:GLU:O	17:AR:42:ARG:HG3	2.13	0.48
17:AR:54:ARG:O	17:AR:55:ARG:HB2	2.13	0.48
21:AA:236:G:H2'	21:AA:237:C:C6	2.49	0.48
21:AA:604:G:N1	21:AA:634:C:O2	2.38	0.48
21:AA:835:U:H2'	21:AA:836:G:H8	1.79	0.48
25:BC:169:THR:HB	59:BA:2178:C:H1'	1.94	0.48
28:BF:9:ILE:HG23	28:BF:124:LEU:HD12	1.95	0.48
28:BF:82:ILE:HG13	28:BF:83:PHE:CD1	2.48	0.48
33:BN:38:HIS:HA	59:BA:1006:C:O2'	2.13	0.48
33:BN:94:HIS:HB3	33:BN:95:PRO:CD	2.43	0.48
41:BV:4:ILE:HG22	41:BV:39:LEU:HB2	1.94	0.48
48:B2:57:ILE:HD13	48:B2:60:LEU:HD12	1.94	0.48
59:BA:39:C:H2'	59:BA:40:C:C5	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:51:G:H21	59:BA:118:A:N6	2.00	0.48
59:BA:230:U:H2'	59:BA:231:C:C6	2.49	0.48
59:BA:301:G:C6	59:BA:317:G:C6	3.02	0.48
59:BA:1448:G:O2'	59:BA:1529:A:N6	2.46	0.48
59:BA:1578:U:C2'	59:BA:1579:A:H5''	2.37	0.48
59:BA:1612:C:N4	59:BA:1619:G:H1	2.11	0.48
59:BA:1926:U:H2'	59:BA:1927:A:H3'	1.95	0.48
59:BA:2178:C:H2'	59:BA:2179:C:C6	2.44	0.48
59:BA:2585:U:O2'	59:BA:2586:C:O5'	2.29	0.48
59:BA:2693:A:H2'	59:BA:2694:G:C8	2.49	0.48
60:BB:76:G:H2'	60:BB:77:U:H6	1.79	0.48
1:CB:139:LYS:HA	1:CB:142:LEU:HD12	1.96	0.48
6:CG:28:ASN:O	6:CG:31:MET:HB3	2.13	0.48
6:CG:78:ARG:HD3	6:CG:85:TYR:HD1	1.79	0.48
7:CH:100:ILE:HG21	7:CH:125:ARG:HG2	1.96	0.48
10:CK:109:VAL:HA	17:CR:85:LEU:O	2.13	0.48
11:CL:24:VAL:C	11:CL:26:ALA:H	2.21	0.48
11:CL:32:PHE:HZ	21:CA:33:A:N3	2.11	0.48
11:CL:113:ARG:NH1	21:CA:537:G:H5''	2.29	0.48
17:CR:38:GLU:HA	17:CR:41:LYS:HB3	1.95	0.48
18:CS:64:GLU:O	18:CS:67:VAL:N	2.39	0.48
20:CY:77:HIS:CE1	20:CY:277:VAL:HG11	2.47	0.48
21:CA:1440(D):A:H3'	21:CA:1440(D):A:OP2	2.14	0.48
25:DC:152:GLU:O	25:DC:155:ARG:HB2	2.14	0.48
26:DD:262:ARG:HD2	26:DD:262:ARG:H	1.77	0.48
28:DF:125:LEU:HD23	28:DF:194:MET:HG3	1.95	0.48
33:DN:50:ASP:CG	33:DN:119:ARG:HB3	2.39	0.48
45:DZ:120:ILE:HG22	45:DZ:121:HIS:ND1	2.29	0.48
48:D2:51:ARG:O	48:D2:54:LYS:HB3	2.13	0.48
59:DA:98:G:H2'	59:DA:98:G:N3	2.29	0.48
59:DA:143:C:H2'	59:DA:144:C:C6	2.48	0.48
59:DA:848:G:N3	59:DA:933:A:O2'	2.36	0.48
59:DA:2224:G:H4'	59:DA:2226:C:N3	2.28	0.48
59:DA:2303:G:H1	59:DA:2313:C:N4	2.10	0.48
59:DA:2450:A:H2'	59:DA:2450:A:N3	2.27	0.48
59:DA:2778:A:O2'	59:DA:2780:G:C8	2.67	0.48
2:AC:12:LEU:HD22	2:AC:18:TRP:HE1	1.79	0.48
4:AE:20:GLN:C	4:AE:22:GLY:H	2.22	0.48
4:AE:38:GLN:HG2	4:AE:114:GLY:HA3	1.94	0.48
20:AY:523:PHE:CE1	20:AY:563:ILE:HB	2.48	0.48
21:AA:335:C:O2'	21:AA:1433:A:N3	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:675:A:C2	21:AA:676:A:H1'	2.49	0.48
22:AW:8:U:H4'	22:AW:49:A:H5'	1.96	0.48
22:AW:43:G:C4	22:AW:44:G:H1'	2.49	0.48
23:AV:8:A:H3'	23:AV:9:G:C8	2.49	0.48
23:AV:9:G:H5''	23:AV:10:G:OP2	2.14	0.48
28:BF:188:ARG:HG3	28:BF:189:THR:HG23	1.95	0.48
33:BN:2:LYS:HG3	40:BU:101:ARG:HH12	1.78	0.48
37:BR:13:HIS:O	37:BR:16:HIS:N	2.47	0.48
39:BT:53:ARG:NE	39:BT:55:ASN:OD1	2.46	0.48
59:BA:181:A:H2'	59:BA:182:A:C8	2.48	0.48
59:BA:428:A:H2'	59:BA:429:A:O4'	2.13	0.48
59:BA:1317:A:H2'	59:BA:1318:C:O4'	2.14	0.48
59:BA:2345:G:H2'	59:BA:2372:G:N2	2.28	0.48
59:BA:2570:G:H2'	59:BA:2571:C:O4'	2.13	0.48
3:CD:10:ARG:HE	3:CD:40:PRO:HG3	1.79	0.48
13:CN:56:VAL:O	13:CN:57:ARG:HB2	2.13	0.48
15:CP:47:ASP:O	15:CP:49:LEU:N	2.37	0.48
16:CQ:37:LYS:H	16:CQ:37:LYS:HD2	1.79	0.48
20:CY:21:ILE:HG13	20:CY:23:ALA:H	1.78	0.48
20:CY:181:LEU:C	20:CY:183:MET:H	2.21	0.48
21:CA:31:G:C6	21:CA:306:G:H1'	2.49	0.48
21:CA:109:A:H2'	21:CA:109:A:N3	2.28	0.48
21:CA:297:G:H4'	21:CA:557:G:O2'	2.14	0.48
21:CA:596:C:H2'	21:CA:597:G:O4'	2.14	0.48
21:CA:781:A:H5'	21:CA:782:A:OP2	2.13	0.48
21:CA:1126:U:C4	21:CA:1148:U:C4	2.96	0.48
21:CA:1217:C:H2'	21:CA:1218:C:H6	1.75	0.48
24:CX:30:C:H42	24:CX:40:G:H1	0.63	0.48
24:CX:76:A:O2'	59:DA:2452:C:H4'	2.14	0.48
28:DF:148:LEU:HD23	28:DF:152:GLU:HG3	1.94	0.48
30:DH:176:ALA:HA	59:DA:2529:G:C5'	2.43	0.48
34:DO:77:ILE:HD13	39:DT:74:ARG:HG2	1.95	0.48
36:DQ:92:GLY:O	36:DQ:94:VAL:N	2.34	0.48
38:DS:33:LYS:HG2	38:DS:62:LYS:HE2	1.96	0.48
40:DU:76:TYR:O	40:DU:80:ILE:HG12	2.13	0.48
42:DW:34:ASN:O	42:DW:38:TYR:HD1	1.97	0.48
55:D9:6:SER:HB3	59:DA:2466:C:C5'	2.40	0.48
59:DA:130:C:H2'	59:DA:131:G:O4'	2.14	0.48
59:DA:1409:C:H2'	59:DA:1410:G:C8	2.48	0.48
59:DA:2514:U:H2'	59:DA:2515:C:C6	2.48	0.48
60:DB:96:G:H2'	60:DB:97:G:O4'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:13:ARG:NH1	3:AD:36:ARG:HE	2.12	0.48
3:AD:115:ARG:CB	21:AA:407:G:H5''	2.44	0.48
4:AE:148:VAL:HG13	4:AE:152:ARG:HD2	1.95	0.48
8:AI:125:TYR:HB3	21:AA:1342:C:H4'	1.95	0.48
10:AK:42:TRP:HZ2	21:AA:687:A:H5'	1.77	0.48
11:AL:84:LEU:HB2	11:AL:101:VAL:CG2	2.44	0.48
14:AO:21:ASP:OD2	21:AA:750:G:O2'	2.25	0.48
14:AO:81:LEU:HD11	14:AO:85:LEU:HD12	1.95	0.48
21:AA:632:A:H2'	21:AA:633:G:O4'	2.14	0.48
21:AA:920:U:H2'	21:AA:921:U:H6	1.77	0.48
21:AA:1026:G:C2	21:AA:1027:C:H1'	2.49	0.48
21:AA:1064:G:OP1	21:AA:1386:G:O2'	2.25	0.48
21:AA:1405:G:C8	63:AA:1601:NMY:N19	2.82	0.48
21:AA:1437:C:N3	21:AA:1464:G:O6	2.47	0.48
25:BC:150:ILE:HD12	25:BC:153:ILE:HB	1.96	0.48
25:BC:213:VAL:HG11	25:BC:225:ILE:HG12	1.95	0.48
27:BE:63:LEU:C	27:BE:65:GLY:H	2.20	0.48
30:BH:37:VAL:HG13	30:BH:71:LEU:HD12	1.96	0.48
30:BH:98:LEU:HD22	30:BH:125:VAL:H	1.78	0.48
32:BK:8:VAL:HB	32:BK:27:LEU:HD21	1.96	0.48
34:BO:63:VAL:H	34:BO:84:ALA:HB2	1.78	0.48
36:BQ:118:LEU:HB3	36:BQ:131:ILE:HG21	1.96	0.48
40:BU:76:TYR:CE1	40:BU:80:ILE:HD11	2.49	0.48
45:BZ:14:LYS:HB2	45:BZ:15:PRO:HD2	1.96	0.48
50:B4:28:LYS:HD2	50:B4:28:LYS:HA	1.60	0.48
52:B6:19:ARG:HG2	59:BA:2400:G:H4'	1.94	0.48
59:BA:786:C:H5''	59:BA:1780:A:N7	2.28	0.48
59:BA:866:A:N3	59:BA:866:A:H2'	2.28	0.48
59:BA:1679:U:H2'	59:BA:1680:U:H5'	1.96	0.48
59:BA:1798:U:H4'	59:BA:1803:A:O4'	2.13	0.48
59:BA:1944:U:O2'	59:BA:1945:G:H5''	2.14	0.48
59:BA:2816:C:H2'	59:BA:2817:G:C8	2.48	0.48
60:BB:45:A:H2'	60:BB:45:A:N3	2.29	0.48
60:BB:51:G:O2'	60:BB:52:A:H8	1.95	0.48
1:CB:96:ARG:H	1:CB:96:ARG:HE	1.61	0.48
1:CB:212:GLN:HG3	1:CB:235:SER:CB	2.44	0.48
2:CC:161:GLU:H	23:CV:25:A:N6	2.10	0.48
12:CM:16:ASP:HB3	12:CM:41:PRO:HB3	1.96	0.48
12:CM:75:ALA:O	12:CM:79:LYS:HG3	2.14	0.48
14:CO:36:ILE:HG23	14:CO:56:LEU:HD11	1.96	0.48
14:CO:60:VAL:HG13	14:CO:63:ARG:HH21	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:25:ARG:NH2	21:CA:230:G:H4'	2.29	0.48
19:CT:63:ILE:HG23	19:CT:77:ALA:HB1	1.94	0.48
20:CY:8:ASP:C	20:CY:10:LYS:H	2.21	0.48
20:CY:162:VAL:HG22	20:CY:219:VAL:HG21	1.96	0.48
20:CY:438:PHE:HB2	20:CY:452:SER:O	2.14	0.48
20:CY:659:LEU:O	20:CY:663:THR:OG1	2.21	0.48
21:CA:383:A:H8	21:CA:383:A:O5'	1.97	0.48
21:CA:479:C:H2'	21:CA:480:U:O4'	2.14	0.48
21:CA:669:U:O4	21:CA:737:A:N1	2.46	0.48
21:CA:919:A:H2'	21:CA:920:U:H6	1.78	0.48
21:CA:1018:C:H2'	21:CA:1019:C:C6	2.49	0.48
21:CA:1426:C:H2'	21:CA:1427:U:H6	1.78	0.48
25:DC:46:ALA:N	25:DC:171:ALA:O	2.44	0.48
26:DD:92:ILE:HD13	26:DD:104:TYR:HD2	1.78	0.48
27:DE:109:LYS:HB3	27:DE:191:PRO:HD3	1.95	0.48
28:DF:157:VAL:CG2	28:DF:192:LEU:HD12	2.43	0.48
28:DF:197:ASP:OD2	28:DF:198:ALA:N	2.43	0.48
31:DJ:165:UNK:C	31:DJ:167:UNK:H	2.26	0.48
33:DN:93:THR:O	33:DN:94:HIS:HB2	2.12	0.48
33:DN:113:GLY:HA2	33:DN:117:PHE:CD1	2.49	0.48
36:DQ:119:ARG:O	36:DQ:123:HIS:HB2	2.14	0.48
36:DQ:123:HIS:NE2	59:DA:2466:C:O2'	2.44	0.48
38:DS:21:THR:C	38:DS:23:ARG:H	2.21	0.48
51:D5:3:LYS:HG2	51:D5:4:HIS:N	2.29	0.48
59:DA:95:G:H2'	59:DA:96:G:H8	1.78	0.48
59:DA:897:C:N3	59:DA:898:C:C5	2.82	0.48
59:DA:1830:C:H2'	59:DA:1831:G:H8	1.78	0.48
59:DA:1974:C:O2'	63:DA:2901:NMY:H81	2.14	0.48
59:DA:2070:G:H2'	59:DA:2071:A:O4'	2.14	0.48
59:DA:2221:G:H2'	59:DA:2222:G:C8	2.48	0.48
59:DA:2468:G:H2'	59:DA:2476:A:N7	2.28	0.48
59:DA:2537:U:H2'	59:DA:2538:C:H6	1.78	0.48
3:AD:133:VAL:HG12	3:AD:134:ASP:H	1.79	0.48
5:AF:60:PHE:CZ	17:AR:78:LEU:HD21	2.48	0.48
15:AP:17:TYR:O	15:AP:38:TYR:HB2	2.14	0.48
16:AQ:67:LYS:O	16:AQ:68:ARG:HB3	2.14	0.48
20:AY:554:PRO:HD3	20:AY:591:LYS:HZ2	1.79	0.48
21:AA:630:G:H2'	21:AA:631:G:H8	1.79	0.48
21:AA:971:G:O6	21:AA:1364:U:N3	2.47	0.48
21:AA:1268:A:O2'	21:AA:1269:A:O4'	2.30	0.48
24:AX:7:U:O2'	24:AX:8:U:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:44:VAL:O	25:BC:172:ILE:O	2.31	0.48
27:BE:18:ASP:O	34:BO:73:ASP:HA	2.14	0.48
31:BJ:51:UNK:O	59:BA:1084:A:H5'	2.13	0.48
32:BK:90:LYS:HB3	59:BA:1076:C:O2'	2.14	0.48
33:BN:23:LEU:HD22	33:BN:63:THR:H	1.79	0.48
33:BN:114:ARG:O	33:BN:116:LEU:C	2.51	0.48
39:BT:102:ILE:O	39:BT:106:SER:HB3	2.13	0.48
40:BU:24:TYR:CG	59:BA:533:G:H5'	2.49	0.48
40:BU:108:GLU:HG3	41:BV:44:LYS:HE2	1.95	0.48
41:BV:84:LYS:O	59:BA:1225:G:H4'	2.13	0.48
43:BX:6:ASP:OD1	59:BA:71:A:O2'	2.31	0.48
44:BY:25:GLY:HA2	44:BY:39:VAL:HG21	1.95	0.48
59:BA:271(E):G:H2'	59:BA:271(F):G:O4'	2.13	0.48
59:BA:691:C:H2'	59:BA:692:C:C6	2.49	0.48
59:BA:868:U:H2'	59:BA:869:G:O4'	2.14	0.48
59:BA:1271:G:N2	59:BA:1615:C:H42	2.07	0.48
59:BA:1389:G:H5'	59:BA:1526:G:H5'	1.96	0.48
59:BA:2162:G:H2'	59:BA:2163:C:O4'	2.14	0.48
59:BA:2673:G:H2'	59:BA:2674:G:C8	2.48	0.48
59:BA:2810:A:H62	59:BA:2890:G:N2	2.11	0.48
60:BB:47:C:H2'	60:BB:48:A:C8	2.49	0.48
2:CC:131:ARG:HA	2:CC:134:ILE:HG22	1.96	0.48
4:CE:28:PHE:CG	4:CE:51:VAL:HG22	2.48	0.48
12:CM:60:VAL:HG12	12:CM:66:LEU:HD21	1.96	0.48
13:CN:32:SER:N	21:CA:976:G:OP2	2.47	0.48
17:CR:30:ASP:OD2	17:CR:33:ASP:HB2	2.13	0.48
20:CY:130:VAL:HA	20:CY:131:PRO:HD3	1.63	0.48
21:CA:5:U:H1'	21:CA:6:G:C5	2.48	0.48
21:CA:808:C:H2'	21:CA:809:G:C8	2.49	0.48
21:CA:943:U:H6	21:CA:943:U:O5'	1.97	0.48
21:CA:1001:G:C2	21:CA:1039:C:O2	2.67	0.48
21:CA:1016:A:H8	21:CA:1016:A:O5'	1.95	0.48
21:CA:1065:U:H3	21:CA:1109:C:H5''	1.78	0.48
21:CA:1224:G:C2	21:CA:1362(A):C:N3	2.80	0.48
21:CA:1506:U:H5''	23:CV:15:A:N6	2.28	0.48
22:CW:8:U:O4	22:CW:14:A:H8	1.96	0.48
24:CX:78:ACE:H1	59:DA:2451:A:N3	2.29	0.48
25:DC:2:PRO:HB3	59:DA:2129:C:O3'	2.14	0.48
26:DD:79:VAL:HG12	26:DD:80:ALA:N	2.23	0.48
26:DD:225:ALA:HB1	59:DA:1788:C:H5''	1.96	0.48
27:DE:120:TRP:CD2	27:DE:155:LYS:HB3	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:84:LYS:H	29:DG:84:LYS:HD2	1.79	0.48
36:DQ:21:THR:CG2	36:DQ:101:ARG:HB2	2.42	0.48
38:DS:93:LYS:HG2	38:DS:95:HIS:CE1	2.49	0.48
44:DY:3:VAL:HG23	59:DA:295:G:H5'	1.94	0.48
44:DY:15:VAL:HA	44:DY:72:VAL:HG12	1.95	0.48
47:D1:91:LYS:HA	47:D1:94:LEU:HD13	1.95	0.48
54:D8:4:MET:HE1	59:DA:592:G:H21	1.79	0.48
59:DA:238:C:H2'	59:DA:239:U:C6	2.49	0.48
59:DA:300:A:H2'	59:DA:334:C:O2'	2.14	0.48
59:DA:329:G:OP1	59:DA:329:G:H8	1.97	0.48
59:DA:373:U:C2	59:DA:374:A:C8	3.02	0.48
59:DA:740:U:H2'	59:DA:741:G:H8	1.78	0.48
59:DA:864:G:N2	59:DA:866:A:N6	2.40	0.48
59:DA:905:U:C4	59:DA:906:G:N7	2.82	0.48
59:DA:1025:G:H8	59:DA:1025:G:OP1	1.97	0.48
59:DA:1268:A:N6	59:DA:2012:G:H1'	2.28	0.48
59:DA:1961:C:C4	59:DA:1962:C:N4	2.81	0.48
59:DA:1974:C:H1'	63:DA:2901:NMY:H81	1.96	0.48
59:DA:2002:G:H2'	59:DA:2003:G:H8	1.78	0.48
59:DA:2532:G:H8	59:DA:2532:G:O5'	1.97	0.48
5:AF:82:ARG:CZ	5:AF:82:ARG:HA	2.43	0.48
7:AH:10:LEU:HB2	7:AH:83:ILE:HG13	1.94	0.48
7:AH:25:ASP:HA	7:AH:60:ARG:HG2	1.95	0.48
8:AI:96:LEU:HA	8:AI:99:LEU:HD23	1.95	0.48
9:AJ:7:LYS:HE3	9:AJ:9:ARG:HG3	1.95	0.48
12:AM:74:VAL:O	12:AM:78:ILE:HG12	2.14	0.48
20:AY:263:ALA:N	20:AY:265:LYS:O	2.47	0.48
20:AY:390:VAL:HG12	20:AY:397:VAL:HG22	1.94	0.48
20:AY:658:ASP:HB3	20:AY:662:LYS:NZ	2.28	0.48
21:AA:68(H):G:H1	21:AA:68(R):C:N4	2.12	0.48
21:AA:338:A:H3'	34:BO:97:ARG:HH12	1.79	0.48
21:AA:405:U:H3'	21:AA:406:G:H5'	1.96	0.48
21:AA:763:G:H2'	21:AA:764:C:C6	2.49	0.48
21:AA:1416:G:H3'	21:AA:1417:G:C8	2.49	0.48
22:AW:34:C:N3	23:AV:18:G:C6	2.82	0.48
24:AX:32:C:H2'	24:AX:33:U:O4'	2.13	0.48
25:BC:53:ARG:HG2	25:BC:54:ARG:H	1.79	0.48
27:BE:108:SER:HA	27:BE:190:GLY:HA2	1.95	0.48
28:BF:8:GLN:HG2	28:BF:22:ALA:HA	1.95	0.48
28:BF:34:TRP:O	28:BF:37:VAL:HB	2.14	0.48
29:BG:101:ILE:HG23	29:BG:105:LYS:HE2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:139:LEU:HD21	29:BG:149:VAL:HG21	1.95	0.48
31:BJ:23:UNK:N	31:BJ:119:UNK:HA	2.29	0.48
33:BN:25:ARG:HA	59:BA:1012:U:C4	2.48	0.48
33:BN:38:HIS:O	59:BA:1006:C:O2'	2.32	0.48
33:BN:44:PRO:HB2	33:BN:77:GLY:HA3	1.95	0.48
33:BN:75:TYR:CZ	33:BN:82:LEU:HG	2.48	0.48
37:BR:9:LYS:HE2	37:BR:39:PRO:HB3	1.95	0.48
39:BT:53:ARG:HH22	39:BT:60:THR:HG23	1.79	0.48
45:BZ:30:ASN:HA	45:BZ:89:PHE:HE2	1.78	0.48
48:B2:32:LEU:O	48:B2:35:LEU:HB3	2.14	0.48
59:BA:271(Q):A:C2	59:BA:271(R):C:H1'	2.49	0.48
59:BA:2305:A:H3'	59:BA:2306:C:H5''	1.96	0.48
60:BB:82:G:H2'	60:BB:83:G:C8	2.49	0.48
6:CG:116:ALA:O	6:CG:120:ILE:HG12	2.14	0.48
7:CH:1:MET:HE3	21:CA:756:C:H1'	1.95	0.48
7:CH:52:ASP:HA	7:CH:56:LYS:O	2.13	0.48
10:CK:65:ALA:HB3	10:CK:97:ALA:HB3	1.95	0.48
11:CL:9:GLN:HE21	21:CA:880:C:H3'	1.78	0.48
12:CM:26:GLY:HA3	21:CA:1329:A:OP1	2.14	0.48
20:CY:321:TYR:CD1	21:CA:55:A:H1'	2.48	0.48
20:CY:409:ILE:HD11	20:CY:656:ALA:HB3	1.96	0.48
21:CA:167:G:H2'	21:CA:168:G:O4'	2.14	0.48
21:CA:392:G:H2'	21:CA:393:A:O4'	2.14	0.48
21:CA:827:U:H3	21:CA:872:A:N6	2.11	0.48
21:CA:889:A:OP1	21:CA:889:A:H8	1.96	0.48
21:CA:1434:A:H62	21:CA:1467:G:N2	2.12	0.48
21:CA:1440(C):G:H2'	21:CA:1440(D):A:C2	2.48	0.48
21:CA:1466:C:H2'	21:CA:1467:G:O4'	2.14	0.48
26:DD:17:THR:H	26:DD:205:VAL:HB	1.79	0.48
32:DK:21:PRO:HA	32:DK:23:VAL:N	2.26	0.48
32:DK:30:HIS:CD2	32:DK:59:ILE:HB	2.48	0.48
35:DP:45:LEU:HG	35:DP:46:LYS:HD2	1.95	0.48
37:DR:24:GLN:OE1	59:DA:1277:G:O2'	2.31	0.48
37:DR:101:ALA:HB2	51:D5:41:PRO:HG3	1.95	0.48
38:DS:26:LEU:O	38:DS:88:ASP:HB3	2.13	0.48
39:DT:75:ILE:CD1	59:DA:2684:U:H5''	2.43	0.48
39:DT:100:TYR:C	39:DT:102:ILE:H	2.22	0.48
40:DU:21:ALA:CB	40:DU:35:ALA:HB1	2.44	0.48
40:DU:28:ARG:HH12	59:DA:532:A:H5'	1.78	0.48
40:DU:92:ARG:HD2	41:DV:11:GLN:HB2	1.96	0.48
42:DW:5:ALA:HB2	42:DW:57:ASN:ND2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D7:31:LEU:HA	53:D7:34:ARG:HG2	1.95	0.48
59:DA:576:U:H4'	59:DA:2502:G:C6	2.49	0.48
59:DA:589:C:N3	59:DA:668:G:N2	2.49	0.48
59:DA:690:G:H2'	59:DA:691:C:C6	2.49	0.48
59:DA:758:C:H2'	59:DA:759:G:H8	1.79	0.48
59:DA:786:C:H5''	59:DA:1780:A:C8	2.49	0.48
59:DA:1039:G:H2'	59:DA:1040:C:C6	2.49	0.48
59:DA:1087:G:H2'	59:DA:1089:G:C8	2.49	0.48
59:DA:1173:A:H3'	59:DA:1174:U:C5'	2.44	0.48
59:DA:1387:C:H2'	59:DA:1388:G:O4'	2.14	0.48
59:DA:1669:A:O3'	59:DA:2549:G:H5''	2.14	0.48
59:DA:1785:A:N1	59:DA:1787:A:H1'	2.28	0.48
60:DB:28:C:H2'	60:DB:29:A:C8	2.49	0.48
4:AE:126:ARG:NH2	21:AA:9:G:H5''	2.29	0.48
12:AM:95:GLY:HA2	12:AM:110:ARG:HH12	1.79	0.48
14:AO:33:THR:N	14:AO:63:ARG:HH12	2.11	0.48
19:AT:10:LEU:C	19:AT:12:ALA:H	2.22	0.48
19:AT:23:ARG:NH1	19:AT:24:LEU:HD23	2.22	0.48
20:AY:8:ASP:C	20:AY:10:LYS:H	2.21	0.48
20:AY:134:ALA:O	20:AY:135:PHE:HB2	2.13	0.48
20:AY:238:THR:OG1	20:AY:239:GLU:N	2.47	0.48
21:AA:929:G:H2'	21:AA:930:C:C6	2.49	0.48
25:BC:174:ALA:HA	25:BC:175:PRO:HD3	1.62	0.48
26:BD:48:ARG:HE	59:BA:778:G:C5'	2.27	0.48
26:BD:244:ARG:HA	26:BD:245:PRO:HA	1.74	0.48
33:BN:88:GLU:HG3	33:BN:91:LEU:CD1	2.44	0.48
34:BO:66:LYS:HG3	59:BA:1665:A:H5''	1.96	0.48
36:BQ:87:LYS:NZ	59:BA:955:C:OP1	2.47	0.48
52:B6:5:VAL:HG22	52:B6:6:ARG:HD2	1.96	0.48
54:B8:8:LYS:NZ	59:BA:244:A:OP2	2.36	0.48
59:BA:385:C:O2'	59:BA:388:G:N2	2.46	0.48
59:BA:722:A:H2'	59:BA:723:G:H8	1.71	0.48
1:CB:56:ARG:O	1:CB:59:GLU:HB3	2.13	0.48
1:CB:149:LEU:HD23	1:CB:152:PHE:O	2.14	0.48
5:CF:44:GLY:C	5:CF:59:TYR:HA	2.38	0.48
11:CL:56:ALA:HB3	11:CL:68:ALA:CB	2.19	0.48
18:CS:78:ARG:CZ	21:CA:1222:G:H5''	2.43	0.48
20:CY:171:GLU:C	20:CY:173:THR:H	2.22	0.48
21:CA:60:A:H4'	21:CA:61:G:C4'	2.44	0.48
21:CA:767:A:O2'	21:CA:1524:C:O2	2.31	0.48
21:CA:791:G:O6	21:CA:792:A:N6	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1263:C:H2'	21:CA:1264:C:H5'	1.95	0.48
21:CA:1308:U:H2'	21:CA:1309:G:C8	2.49	0.48
26:DD:54:ARG:HH22	59:DA:1822:G:H5''	1.78	0.48
26:DD:260:ARG:NH1	59:DA:1799:G:H3'	2.29	0.48
27:DE:93:VAL:HB	27:DE:175:VAL:CG2	2.43	0.48
27:DE:136:ARG:HB2	59:DA:1657:C:OP1	2.13	0.48
28:DF:192:LEU:HG	28:DF:194:MET:SD	2.54	0.48
29:DG:40:ASN:HD22	29:DG:156:ASP:HB2	1.78	0.48
35:DP:43:GLY:CA	59:DA:670:A:H5'	2.44	0.48
36:DQ:50:ALA:HB1	36:DQ:121:ALA:HB1	1.96	0.48
37:DR:18:LEU:HD23	37:DR:21:TYR:HD1	1.79	0.48
38:DS:16:ASN:O	38:DS:20:ARG:HG2	2.14	0.48
38:DS:99:LYS:O	38:DS:100:ALA:C	2.57	0.48
41:DV:47:VAL:HG12	41:DV:52:VAL:HG23	1.95	0.48
42:DW:88:ARG:NE	59:DA:748:G:OP2	2.46	0.48
43:DX:71:GLY:O	43:DX:73:ARG:N	2.45	0.48
59:DA:1311:G:H21	59:DA:1603:A:H62	0.66	0.48
59:DA:1421:G:H8	59:DA:1421:G:O5'	1.97	0.48
59:DA:2251:G:H2'	59:DA:2251:G:N3	2.29	0.48
59:DA:2553:G:C2	59:DA:2554:U:C6	3.02	0.48
2:AC:163:ALA:HB2	21:AA:1056:U:H5'	1.95	0.47
4:AE:78:HIS:N	4:AE:78:HIS:CD2	2.82	0.47
8:AI:19:LEU:HD21	8:AI:59:PHE:HB3	1.96	0.47
17:AR:61:LYS:HE3	17:AR:64:ARG:HH22	1.79	0.47
18:AS:33:THR:HG23	18:AS:51:VAL:HG13	1.96	0.47
21:AA:110:C:H2'	21:AA:111:G:O4'	2.14	0.47
21:AA:123:C:H2'	21:AA:124:G:H8	1.78	0.47
21:AA:221:C:C2'	21:AA:222:U:H5'	2.44	0.47
21:AA:717:C:H5''	21:AA:733:A:HO2'	1.78	0.47
21:AA:783:C:OP1	21:AA:1515:C:O2'	2.32	0.47
21:AA:971:G:O2'	21:AA:1365:G:O3'	2.31	0.47
21:AA:1336:C:H4'	21:AA:1337:G:N3	2.29	0.47
21:AA:1360:A:H2'	21:AA:1361:G:O4'	2.14	0.47
26:BD:144:ALA:O	26:BD:192:THR:HG23	2.14	0.47
26:BD:168:ARG:HG2	26:BD:173:VAL:HG12	1.96	0.47
33:BN:87:LEU:O	33:BN:97:ARG:HG3	2.13	0.47
33:BN:98:VAL:HG23	33:BN:100:GLU:HG3	1.95	0.47
36:BQ:43:THR:HG22	36:BQ:45:GLN:HG2	1.96	0.47
38:BS:82:ILE:HG22	38:BS:83:LYS:H	1.79	0.47
39:BT:51:ARG:HG2	39:BT:62:THR:HG22	1.95	0.47
42:BW:88:ARG:HG3	59:BA:748:G:OP2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B1:18:ILE:HD13	59:BA:380:U:H5'	1.95	0.47
53:B7:9:ARG:NH2	59:BA:1310:G:OP2	2.46	0.47
59:BA:689:A:H2'	59:BA:690:G:C8	2.49	0.47
59:BA:878:A:N6	59:BA:899:A:H1'	2.29	0.47
59:BA:897:C:H2'	59:BA:898:C:H6	1.79	0.47
59:BA:956:G:HO2'	59:BA:959:A:H62	1.59	0.47
59:BA:1212:G:H1'	59:BA:1237:A:N6	2.29	0.47
59:BA:1353:A:H2'	59:BA:1354:A:C8	2.48	0.47
59:BA:1937:A:O2'	59:BA:1939:U:H5''	2.13	0.47
59:BA:1953:A:H2	59:BA:2549:G:N3	2.12	0.47
59:BA:2374:C:H2'	59:BA:2375:G:C8	2.49	0.47
59:BA:2712:U:O2'	59:BA:2712(A):A:OP2	2.27	0.47
60:BB:77:U:H3	60:BB:99:A:H62	1.62	0.47
11:CL:29:GLY:O	11:CL:31:PRO:HD3	2.14	0.47
12:CM:123:ALA:HB3	12:CM:124:PRO:HD3	1.95	0.47
16:CQ:21:VAL:HG22	16:CQ:44:ALA:HB2	1.96	0.47
16:CQ:95:TYR:CE1	21:CA:279:A:H5'	2.48	0.47
20:CY:145:ASP:CG	20:CY:148:LEU:HB3	2.39	0.47
20:CY:289:ILE:HD13	20:CY:331:TYR:CE1	2.49	0.47
20:CY:431:LEU:HB3	20:CY:438:PHE:HZ	1.79	0.47
21:CA:106:C:O2'	21:CA:379:C:OP1	2.25	0.47
21:CA:891:U:H3	21:CA:907:A:H62	1.62	0.47
21:CA:1249:C:O2	21:CA:1288:A:N6	2.47	0.47
22:CW:14:A:H3'	22:CW:15:G:O4'	2.14	0.47
25:DC:67:HIS:CE1	25:DC:185:LYS:HG2	2.48	0.47
26:DD:149:PRO:HB2	59:DA:2221:G:O2'	2.14	0.47
27:DE:12:THR:O	27:DE:22:PRO:HA	2.14	0.47
33:DN:62:VAL:HG22	33:DN:63:THR:N	2.29	0.47
34:DO:19:ILE:HG22	34:DO:43:VAL:HA	1.96	0.47
37:DR:4:LEU:HD12	59:DA:1653:G:H5''	1.96	0.47
42:DW:79:GLY:HA2	59:DA:25:U:H5'	1.96	0.47
46:D0:20:ARG:HB2	46:D0:24:LYS:HZ3	1.78	0.47
53:D7:9:ARG:HB3	59:DA:125:G:H22	1.79	0.47
55:D9:3:VAL:HG22	55:D9:35:ARG:HE	1.78	0.47
59:DA:118:A:OP2	59:DA:119:A:H5''	2.14	0.47
59:DA:484:C:O5'	59:DA:484:C:H6	1.97	0.47
59:DA:601:C:H2'	59:DA:602:G:O4'	2.14	0.47
59:DA:833:U:H2'	59:DA:834:C:H6	1.78	0.47
59:DA:920:G:H21	59:DA:2269:A:H8	1.62	0.47
59:DA:1327:C:H42	59:DA:1647:G:N2	2.12	0.47
59:DA:1554:A:H3'	59:DA:1555:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1594:G:H2'	59:DA:1595:G:H8	1.79	0.47
59:DA:2202(G):G:C2	59:DA:2202(H):G:C8	3.02	0.47
59:DA:2540:C:H2'	59:DA:2541:A:O4'	2.14	0.47
59:DA:2735:G:H2'	59:DA:2736:G:H8	1.77	0.47
4:AE:110:LEU:HD22	4:AE:115:VAL:HG21	1.96	0.47
9:AJ:39:PRO:HG2	21:AA:1150:U:O2	2.14	0.47
10:AK:51:LYS:HE2	10:AK:51:LYS:HB3	1.64	0.47
12:AM:126:LYS:HE2	24:AX:32:C:O2'	2.13	0.47
13:AN:18:VAL:HG11	21:AA:1316:G:O2'	2.14	0.47
20:AY:20:HIS:NE2	20:AY:116:PRO:HD2	2.30	0.47
20:AY:145:ASP:OD2	20:AY:148:LEU:N	2.47	0.47
20:AY:191:ASP:OD1	20:AY:191:ASP:N	2.46	0.47
21:AA:112:G:H22	21:AA:315:A:H2	1.59	0.47
21:AA:382:A:H2'	21:AA:383:A:C8	2.49	0.47
21:AA:585:G:O2'	21:AA:879:C:OP1	2.29	0.47
21:AA:980:C:H3'	21:AA:981:U:C6	2.49	0.47
21:AA:1126:U:C5	21:AA:1127:G:H1'	2.49	0.47
26:BD:69:ARG:C	26:BD:71:ASP:H	2.20	0.47
26:BD:112:GLN:HG2	26:BD:113:VAL:H	1.79	0.47
27:BE:108:SER:CB	27:BE:189:PRO:HB2	2.44	0.47
27:BE:122:PHE:CD2	59:BA:2512:C:H5''	2.49	0.47
28:BF:60:SER:OG	59:BA:468:G:OP1	2.32	0.47
29:BG:37:VAL:HG23	29:BG:99:MET:HE3	1.96	0.47
29:BG:125:PHE:CE2	29:BG:166:ASP:HA	2.49	0.47
30:BH:98:LEU:HD13	30:BH:125:VAL:HG23	1.96	0.47
33:BN:75:TYR:N	33:BN:75:TYR:CD1	2.82	0.47
34:BO:24:VAL:HG21	34:BO:31:LYS:HA	1.96	0.47
37:BR:10:LEU:O	37:BR:11:ASN:HB2	2.13	0.47
40:BU:85:LYS:HD2	40:BU:117:GLN:HE21	1.78	0.47
42:BW:45:TYR:HA	42:BW:48:ALA:HB3	1.96	0.47
42:BW:77:ASP:HB3	42:BW:78:GLU:H	1.39	0.47
47:B1:21:ARG:HG3	59:BA:2080:G:H5''	1.96	0.47
48:B2:7:ARG:HA	48:B2:10:LEU:HD12	1.96	0.47
59:BA:155:C:H2'	59:BA:155(A):U:H5'	1.95	0.47
59:BA:203:C:H3'	59:BA:204:A:H5''	1.96	0.47
59:BA:249:C:H3'	59:BA:2394:C:O2'	2.13	0.47
59:BA:557:U:H2'	59:BA:558:G:C8	2.48	0.47
59:BA:1325:G:OP2	59:BA:1616:A:H2'	2.14	0.47
59:BA:1494:A:H1'	59:BA:1495:A:H5''	1.95	0.47
59:BA:2652:C:H2'	59:BA:2653:U:O4'	2.14	0.47
1:CB:71:VAL:HA	1:CB:93:VAL:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:36:ARG:O	3:CD:38:TYR:N	2.47	0.47
4:CE:17:ALA:HB2	4:CE:26:PHE:HD2	1.78	0.47
5:CF:45:LEU:HD13	5:CF:57:GLN:HB2	1.96	0.47
19:CT:63:ILE:HG21	19:CT:81:LYS:HD2	1.96	0.47
20:CY:275:ALA:O	20:CY:278:ASP:HB2	2.14	0.47
20:CY:578:SER:OG	20:CY:579:GLU:N	2.48	0.47
20:CY:653:PHE:O	20:CY:654:GLY:C	2.58	0.47
62:CY:702:FUA:O1	62:CY:702:FUA:C20	2.62	0.47
21:CA:60:A:H4'	21:CA:61:G:H4'	1.96	0.47
21:CA:164:U:H2'	21:CA:165:C:C6	2.49	0.47
21:CA:410:G:N1	21:CA:431:A:OP2	2.37	0.47
21:CA:745:C:H2'	21:CA:746:A:H8	1.74	0.47
21:CA:815:A:N1	21:CA:1527:C:O2	2.44	0.47
21:CA:940:C:O2	21:CA:1349:A:O2'	2.21	0.47
26:DD:24:ILE:HG23	26:DD:25:THR:H	1.78	0.47
26:DD:231:HIS:HD2	26:DD:249:PRO:HA	1.78	0.47
40:DU:36:ARG:HG3	40:DU:40:PHE:CE1	2.43	0.47
41:DV:19:LYS:HG3	41:DV:20:LEU:N	2.28	0.47
44:DY:38:ILE:HD11	44:DY:64:GLU:CB	2.43	0.47
44:DY:85:VAL:HA	44:DY:94:LYS:HA	1.95	0.47
49:D3:15:TYR:CG	49:D3:16:PRO:HD2	2.50	0.47
59:DA:52:A:H2'	59:DA:53:A:H8	1.79	0.47
59:DA:371:A:H8	59:DA:402:A:N6	2.09	0.47
59:DA:691:C:H2'	59:DA:692:C:H6	1.79	0.47
59:DA:843:G:H1	59:DA:935:C:H42	1.62	0.47
59:DA:1899:G:H21	59:DA:1902:C:H41	1.60	0.47
59:DA:1945:G:C6	59:DA:1961:C:N3	2.81	0.47
59:DA:2106:G:H2'	59:DA:2107:C:O4'	2.13	0.47
59:DA:2193:G:H2'	59:DA:2194:G:O4'	2.14	0.47
60:DB:1:U:H2'	60:DB:2:C:C5	2.49	0.47
60:DB:3:C:H2'	60:DB:4:C:H5	1.80	0.47
60:DB:69:G:H2'	60:DB:70:C:C6	2.49	0.47
2:AC:148:GLY:HA3	2:AC:172:ARG:O	2.13	0.47
3:AD:67:ILE:HG23	3:AD:68:TYR:CD1	2.46	0.47
20:AY:398:ILE:HG22	20:AY:399:LEU:H	1.79	0.47
20:AY:446:THR:OG1	20:AY:447:GLY:N	2.47	0.47
20:AY:616:TYR:CD1	20:AY:663:THR:HA	2.50	0.47
21:AA:132:C:H2'	21:AA:133:U:H6	1.78	0.47
21:AA:408:A:H2	21:AA:434:U:H3	0.63	0.47
21:AA:429:U:H3	21:AA:431:A:H62	0.74	0.47
21:AA:431:A:H2'	21:AA:432:A:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:668:G:H1	21:AA:738:C:N4	2.12	0.47
21:AA:1323:G:H4'	21:AA:1362(A):C:C5	2.49	0.47
22:AW:15:G:C2	22:AW:48:C:O2	2.63	0.47
23:AV:31:A:H3'	23:AV:32:U:C5'	2.44	0.47
25:BC:23:ILE:HD13	25:BC:191:ARG:HG2	1.96	0.47
26:BD:148:GLU:HG3	26:BD:149:PRO:HD2	1.96	0.47
28:BF:101:LEU:HD12	28:BF:102:PRO:HD2	1.96	0.47
28:BF:112:MET:HA	28:BF:115:ALA:HB3	1.96	0.47
28:BF:196:LEU:HD23	28:BF:199:TRP:HB3	1.96	0.47
30:BH:94:TYR:HA	30:BH:106:THR:O	2.14	0.47
32:BK:99:ILE:O	32:BK:138:VAL:HA	2.15	0.47
33:BN:85:ILE:CG2	33:BN:109:LYS:HB2	2.43	0.47
37:BR:74:LYS:HA	37:BR:77:ARG:HG3	1.97	0.47
37:BR:90:ARG:HG2	37:BR:94:TYR:CD2	2.48	0.47
38:BS:39:ILE:HD13	38:BS:73:LEU:HD11	1.96	0.47
39:BT:7:ILE:HG22	39:BT:11:GLU:OE2	2.14	0.47
39:BT:51:ARG:O	39:BT:61:PHE:HB2	2.14	0.47
39:BT:83:ILE:HG13	39:BT:84:GLN:H	1.78	0.47
42:BW:11:ARG:HD2	42:BW:98:LYS:HZ2	1.79	0.47
45:BZ:72:ARG:HB3	45:BZ:73:GLN:HE22	1.79	0.47
53:B7:19:ARG:HD3	59:BA:125:G:OP2	2.13	0.47
59:BA:8:A:N1	59:BA:2895:U:C4	2.81	0.47
59:BA:270(G):C:N4	59:BA:270(S):G:H1	2.11	0.47
59:BA:600:G:N2	59:BA:605:C:O2'	2.46	0.47
59:BA:611:C:H2'	59:BA:611(A):C:C6	2.49	0.47
59:BA:1195:G:H1'	59:BA:1225:G:H22	1.80	0.47
59:BA:1258:C:H2'	59:BA:1259:G:C8	2.48	0.47
59:BA:1316:U:H2'	59:BA:1317:A:H8	1.79	0.47
59:BA:1387:C:O2'	59:BA:1524:G:N2	2.48	0.47
59:BA:2002:G:H2'	59:BA:2003:G:C8	2.48	0.47
59:BA:2447:G:N2	59:BA:2450:A:OP2	2.46	0.47
59:BA:2450:A:C2	59:BA:2451:A:H5'	2.49	0.47
59:BA:2635:C:H2'	59:BA:2636:U:O4'	2.13	0.47
59:BA:2739:U:H2'	59:BA:2740:A:H8	1.79	0.47
59:BA:2794(E):A:H5''	59:BA:2895:U:O2'	2.15	0.47
2:CC:142:MET:HG3	2:CC:170:GLN:HB3	1.95	0.47
6:CG:31:MET:HA	6:CG:39:ALA:HB2	1.96	0.47
8:CI:120:ARG:HD2	21:CA:1344:C:H4'	1.96	0.47
11:CL:49:ASN:O	11:CL:50:SER:OG	2.27	0.47
11:CL:69:TYR:CG	11:CL:70:ILE:N	2.82	0.47
19:CT:73:HIS:HB3	19:CT:74:LYS:H	1.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:68(P):C:H2'	21:CA:68(Q):U:H6	1.76	0.47
21:CA:390:C:H2'	21:CA:391:G:O4'	2.15	0.47
21:CA:769:G:H4'	21:CA:1513:A:H4'	1.95	0.47
21:CA:825:G:H2'	21:CA:826:C:C6	2.48	0.47
21:CA:1524:C:H2'	21:CA:1525:G:O4'	2.15	0.47
22:CW:3:C:N3	22:CW:70:G:N2	2.48	0.47
24:CX:28:C:N3	24:CX:42:G:C6	2.82	0.47
26:DD:34:VAL:HB	26:DD:104:TYR:CE1	2.49	0.47
28:DF:4:VAL:HA	28:DF:22:ALA:HB3	1.97	0.47
28:DF:155:LEU:HD21	28:DF:192:LEU:HD13	1.95	0.47
28:DF:157:VAL:O	28:DF:193:VAL:O	2.32	0.47
29:DG:17:PRO:HA	29:DG:20:ILE:HG12	1.96	0.47
29:DG:18:GLU:HG2	29:DG:175:LEU:HD21	1.95	0.47
30:DH:60:ARG:O	30:DH:64:LEU:HG	2.14	0.47
32:DK:73:PRO:HG2	32:DK:76:TYR:HB2	1.96	0.47
33:DN:95:PRO:HG3	33:DN:121:LYS:HG2	1.97	0.47
38:DS:34:HIS:NE2	60:DB:27:C:OP1	2.47	0.47
39:DT:83:ILE:HG13	39:DT:84:GLN:H	1.79	0.47
51:D5:46:CYS:HB3	51:D5:49:CYS:SG	2.54	0.47
54:D8:47:LYS:HD3	54:D8:48:PHE:H	1.79	0.47
59:DA:194:G:H1	59:DA:201:C:N4	2.11	0.47
59:DA:465:G:N2	59:DA:794:G:H22	2.11	0.47
59:DA:909:A:H2'	59:DA:912:C:H5	1.79	0.47
59:DA:1028:A:H4'	60:DB:88:C:N4	2.29	0.47
59:DA:1974:C:C2'	63:DA:2901:NMY:H81	2.44	0.47
59:DA:2061:G:N7	59:DA:2501:C:H4'	2.30	0.47
59:DA:2441:C:H2'	59:DA:2442:C:O4'	2.13	0.47
1:AB:44:LEU:O	1:AB:47:THR:HB	2.15	0.47
1:AB:155:LEU:HD21	1:AB:159:PRO:HB3	1.95	0.47
3:AD:128:VAL:HG22	3:AD:146:ILE:HG23	1.95	0.47
4:AE:35:GLY:C	4:AE:37:ARG:H	2.23	0.47
11:AL:90:VAL:H	11:AL:96:VAL:HG21	1.79	0.47
19:AT:103:GLY:HA2	21:AA:191:G:H21	1.80	0.47
20:AY:21:ILE:HG13	20:AY:23:ALA:N	2.29	0.47
20:AY:274:ASP:HA	20:AY:277:VAL:HG13	1.97	0.47
20:AY:540:PRO:O	20:AY:544:LYS:HG3	2.13	0.47
20:AY:605:ILE:HD12	20:AY:648:PRO:HA	1.97	0.47
21:AA:372:C:H2'	21:AA:387:U:O4	2.13	0.47
21:AA:624:C:H2'	21:AA:625:G:H8	1.78	0.47
21:AA:677:U:H2'	21:AA:678:U:C6	2.49	0.47
21:AA:1267:C:O2	21:AA:1327:C:H4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1388:C:H2'	21:AA:1389:C:O4'	2.15	0.47
26:BD:127:VAL:HA	26:BD:193:VAL:HG13	1.95	0.47
26:BD:269:PHE:HZ	59:BA:2224:G:OP1	1.98	0.47
27:BE:60:ASN:CG	27:BE:61:ARG:H	2.22	0.47
29:BG:67:LYS:O	60:BB:42:C:O2'	2.15	0.47
29:BG:73:ALA:HB3	29:BG:85:GLY:HA2	1.96	0.47
36:BQ:11:LYS:HD2	59:BA:2277:G:H5'	1.96	0.47
37:BR:103:ARG:HB3	37:BR:109:ALA:O	2.14	0.47
42:BW:54:ALA:HB1	42:BW:107:LEU:HD21	1.95	0.47
59:BA:270(R):G:H2'	59:BA:270(S):G:C8	2.49	0.47
59:BA:713:G:N2	59:BA:718:A:H62	2.04	0.47
59:BA:1249:U:H2'	59:BA:1250:G:C8	2.49	0.47
59:BA:1270:C:O2'	59:BA:1325:G:H2'	2.14	0.47
59:BA:1854:A:H3'	59:BA:1855:G:H8	1.78	0.47
60:BB:60:C:H6	60:BB:60:C:O5'	1.97	0.47
2:CC:22:TRP:CG	2:CC:59:ARG:HB2	2.49	0.47
2:CC:108:ASN:HB3	2:CC:111:LEU:HD23	1.97	0.47
7:CH:30:ARG:NE	21:CA:590:C:H5'	2.28	0.47
16:CQ:45:HIS:NE2	16:CQ:47:PRO:HD3	2.30	0.47
20:CY:191:ASP:OD1	20:CY:191:ASP:N	2.47	0.47
20:CY:456:GLU:HA	20:CY:459:LEU:HD13	1.97	0.47
21:CA:63:C:H42	21:CA:104:G:H1	1.61	0.47
21:CA:320:C:H2'	21:CA:321:A:H8	1.77	0.47
21:CA:887:G:H2'	21:CA:888:G:O4'	2.14	0.47
21:CA:949:A:H2'	21:CA:950:U:C5	2.50	0.47
23:CV:9:G:C5'	23:CV:10:G:C5	2.98	0.47
24:CX:5:G:O6	24:CX:68:C:N3	2.47	0.47
25:DC:139:PRO:HA	25:DC:145:THR:CB	2.44	0.47
26:DD:219:PRO:HB2	59:DA:1789:A:H4'	1.96	0.47
28:DF:25:PRO:HD3	28:DF:115:ALA:HB1	1.96	0.47
29:DG:27:ASN:HD21	60:DB:56:G:H5''	1.79	0.47
35:DP:39:LYS:HB3	35:DP:39:LYS:HE3	1.50	0.47
35:DP:62:LEU:HB3	59:DA:2393:A:C5'	2.43	0.47
37:DR:38:VAL:HB	37:DR:39:PRO:HD3	1.96	0.47
38:DS:47:THR:HG22	38:DS:48:LEU:H	1.79	0.47
45:DZ:7:ALA:O	45:DZ:62:PRO:HD3	2.14	0.47
59:DA:603:A:N1	59:DA:656:G:H1'	2.30	0.47
59:DA:611(C):U:O2'	59:DA:611(F):A:OP1	2.18	0.47
59:DA:643:A:OP1	59:DA:643:A:H8	1.98	0.47
59:DA:798:G:H2'	59:DA:799:G:C8	2.50	0.47
59:DA:966:G:O3'	59:DA:2271:G:N2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1280:G:H2'	59:DA:1281:G:O4'	2.14	0.47
59:DA:2451:A:H8	59:DA:2452:C:C6	2.33	0.47
59:DA:2573:C:OP1	59:DA:2574:G:H5''	2.15	0.47
2:AC:188:LEU:H	2:AC:188:LEU:HD22	1.80	0.47
8:AI:103:THR:OG1	21:AA:1180:A:OP1	2.32	0.47
11:AL:53:ARG:HG3	11:AL:69:TYR:CE1	2.49	0.47
17:AR:74:ARG:HE	17:AR:79:LEU:HD22	1.79	0.47
21:AA:670:G:H2'	21:AA:671:G:O4'	2.14	0.47
21:AA:810:C:H2'	21:AA:811:C:O4'	2.14	0.47
21:AA:891:U:H3	21:AA:907:A:H62	1.61	0.47
21:AA:1057:G:H3'	21:AA:1058:G:C8	2.50	0.47
21:AA:1126:U:H5	21:AA:1127:G:H1'	1.78	0.47
23:AV:16:A:O2'	23:AV:17:U:OP1	2.28	0.47
27:BE:37:ARG:HG3	27:BE:80:GLU:CD	2.39	0.47
27:BE:189:PRO:HA	59:BA:2680:C:C5'	2.44	0.47
29:BG:81:LYS:HB3	29:BG:82:LEU:H	1.44	0.47
33:BN:72:TYR:CD1	33:BN:101:HIS:HB2	2.50	0.47
33:BN:88:GLU:O	33:BN:90:MET:N	2.48	0.47
35:BP:56:SER:O	35:BP:59:LEU:N	2.44	0.47
35:BP:61:ARG:NH1	54:B8:13:ARG:HD2	2.26	0.47
36:BQ:126:PRO:HA	59:BA:2485:G:H4'	1.96	0.47
43:BX:3:THR:O	43:BX:5:TYR:N	2.47	0.47
45:BZ:25:PRO:HA	45:BZ:38:TYR:CB	2.45	0.47
45:BZ:48:PHE:O	45:BZ:52:SER:HB2	2.14	0.47
49:B3:8:LEU:HD22	49:B3:31:LEU:HA	1.97	0.47
53:B7:12:ARG:NH2	59:BA:465:G:H5'	2.30	0.47
59:BA:948:G:H2'	59:BA:949:C:C6	2.50	0.47
59:BA:1676:A:H2'	59:BA:1677:A:H8	1.78	0.47
59:BA:1830:C:H2'	59:BA:1831:G:C8	2.47	0.47
59:BA:1998:G:H4'	59:BA:2724:C:H4'	1.96	0.47
59:BA:2019:A:H61	59:BA:2035:G:H1	1.61	0.47
59:BA:2103:C:H2'	59:BA:2104:G:O4'	2.13	0.47
59:BA:2552:U:C2	59:BA:2557:G:C5	3.03	0.47
1:CB:54:THR:O	1:CB:58:ILE:HG12	2.15	0.47
16:CQ:64:PRO:HA	16:CQ:70:ARG:HG2	1.95	0.47
21:CA:229:U:H2'	21:CA:230:G:O4'	2.15	0.47
21:CA:532:A:H3'	21:CA:533:A:C5'	2.44	0.47
21:CA:1171:G:H2'	21:CA:1172:C:C6	2.49	0.47
21:CA:1336:C:H1'	21:CA:1337:G:N2	2.29	0.47
29:DG:107:LEU:HD21	29:DG:178:PHE:CD1	2.50	0.47
30:DH:20:ALA:HB3	30:DH:23:ARG:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DN:19:GLU:C	33:DN:60:ILE:HG13	2.39	0.47
34:DO:98:VAL:HG22	34:DO:117:LEU:HD13	1.95	0.47
35:DP:57:THR:C	35:DP:59:LEU:H	2.23	0.47
36:DQ:82:ARG:HH11	59:DA:2250:G:H8	1.63	0.47
37:DR:62:ALA:O	37:DR:66:VAL:HG23	2.14	0.47
39:DT:33:LYS:HB2	39:DT:43:GLN:H	1.80	0.47
39:DT:49:VAL:O	39:DT:64:ARG:HB3	2.15	0.47
40:DU:3:ARG:HE	59:DA:449:A:C4'	2.26	0.47
46:D0:25:ARG:HH21	46:D0:35:ASN:ND2	2.12	0.47
48:D2:26:ARG:O	48:D2:29:LYS:HB2	2.15	0.47
48:D2:51:ARG:HE	48:D2:55:ARG:NH2	2.11	0.47
59:DA:1675:C:C4	59:DA:1676:A:C5	3.02	0.47
59:DA:2202(E):A:O2'	59:DA:2202(F):U:O5'	2.27	0.47
59:DA:2660:A:H2'	59:DA:2661:G:O4'	2.15	0.47
59:DA:2660:A:H2'	59:DA:2661:G:C8	2.50	0.47
3:AD:32:ALA:C	3:AD:33:MET:HE3	2.39	0.47
3:AD:55:ALA:O	3:AD:59:ARG:HG2	2.14	0.47
6:AG:28:ASN:HB3	21:AA:1374:A:O3'	2.14	0.47
7:AH:10:LEU:HD21	7:AH:85:ARG:HD2	1.96	0.47
8:AI:28:VAL:O	8:AI:30:GLY:N	2.48	0.47
14:AO:36:ILE:HD12	14:AO:63:ARG:HH22	1.80	0.47
16:AQ:65:ILE:C	21:AA:265:G:H4'	2.40	0.47
20:AY:17:ILE:HG13	20:AY:105:ILE:HB	1.97	0.47
20:AY:27:THR:HA	20:AY:30:GLU:CD	2.39	0.47
20:AY:227:ILE:HD11	20:AY:241:GLU:CD	2.40	0.47
21:AA:973:G:H3'	21:AA:974:A:H5''	1.97	0.47
21:AA:1084:G:O5'	21:AA:1085:U:H2'	2.14	0.47
21:AA:1405:G:H3'	63:AA:1601:NMY:N19	2.28	0.47
23:AV:22:U:H3'	23:AV:23:A:H8	1.80	0.47
24:AX:5:G:O6	24:AX:68:C:N3	2.48	0.47
27:BE:48:GLN:HG2	27:BE:78:LEU:HB2	1.96	0.47
27:BE:119:ARG:NH1	27:BE:156:MET:O	2.42	0.47
27:BE:122:PHE:CG	59:BA:2512:C:H5''	2.49	0.47
35:BP:23:PRO:HG2	35:BP:33:ARG:C	2.40	0.47
35:BP:127:ALA:H	35:BP:145:PRO:HD2	1.78	0.47
39:BT:26:ASP:CG	39:BT:27:THR:H	2.21	0.47
42:BW:14:PRO:HG3	42:BW:78:GLU:HA	1.96	0.47
45:BZ:70:LEU:HD23	45:BZ:70:LEU:HA	1.72	0.47
49:B3:45:GLY:O	49:B3:48:GLU:HG2	2.14	0.47
54:B8:55:ALA:O	54:B8:59:LYS:HD3	2.15	0.47
55:B9:6:SER:HB3	59:BA:2466:C:H5''	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1506(E):G:H2'	59:BA:1506(F):C:C6	2.49	0.47
59:BA:1605:C:H2'	59:BA:1606:G:O4'	2.15	0.47
59:BA:2257:U:O4	59:BA:2258:C:N4	2.47	0.47
59:BA:2532:G:O2'	59:BA:2657:A:N1	2.46	0.47
1:CB:70:PHE:HB2	1:CB:92:TYR:CB	2.44	0.47
5:CF:44:GLY:HA2	5:CF:59:TYR:CD2	2.48	0.47
20:CY:106:VAL:HG21	20:CY:122:TRP:CE3	2.50	0.47
20:CY:340:TYR:OH	21:CA:367:U:OP1	2.27	0.47
20:CY:461:ILE:HG13	20:CY:462:ILE:N	2.29	0.47
21:CA:113:G:H2'	21:CA:114:U:C6	2.50	0.47
21:CA:411:A:O2'	21:CA:413:G:OP1	2.31	0.47
21:CA:502:G:H4'	21:CA:550:G:H4'	1.96	0.47
21:CA:923:A:H2'	21:CA:924:C:C6	2.50	0.47
21:CA:1254:C:H2'	21:CA:1255:G:O4'	2.15	0.47
21:CA:1323:G:H2'	21:CA:1324:A:C8	2.49	0.47
21:CA:1347:G:N2	21:CA:1374:A:OP2	2.47	0.47
21:CA:1522:U:H2'	21:CA:1523:G:H8	1.80	0.47
22:CW:26:A:O2'	22:CW:27:C:OP1	2.28	0.47
28:DF:154:VAL:CG1	28:DF:156:LEU:HD13	2.45	0.47
33:DN:97:ARG:CA	33:DN:105:GLY:HA2	2.44	0.47
37:DR:27:SER:OG	59:DA:1278:A:H1'	2.14	0.47
37:DR:92:GLY:HA2	59:DA:2839:G:O2'	2.13	0.47
38:DS:42:ASP:O	38:DS:45:GLY:N	2.42	0.47
59:DA:51:G:H21	59:DA:118:A:H62	1.63	0.47
59:DA:966:G:H1'	59:DA:2267:A:N6	2.29	0.47
59:DA:1019:U:N3	59:DA:1020:A:N7	2.62	0.47
59:DA:1326:U:H2'	59:DA:1327:C:C6	2.49	0.47
59:DA:1332:G:H5'	59:DA:1333:C:H5	1.79	0.47
59:DA:1777:U:H2'	59:DA:1778:U:O4'	2.14	0.47
59:DA:1940:U:N3	59:DA:1964:G:H5'	2.30	0.47
60:DB:4:C:H41	60:DB:117:G:N2	2.12	0.47
1:AB:192:SER:OG	1:AB:193:ASP:N	2.47	0.47
2:AC:40:ARG:CZ	13:AN:52:GLN:HB3	2.44	0.47
2:AC:73:PRO:HA	2:AC:76:VAL:HG13	1.96	0.47
3:AD:72:GLU:OE1	21:AA:545:C:H5''	2.15	0.47
3:AD:73:ARG:HD2	21:AA:401:C:OP2	2.14	0.47
9:AJ:47:PHE:HE1	21:AA:1357:A:H4'	1.80	0.47
9:AJ:51:ARG:HE	9:AJ:59:SER:HB3	1.80	0.47
14:AO:75:PRO:O	14:AO:78:TYR:HB3	2.15	0.47
16:AQ:19:VAL:HG23	16:AQ:44:ALA:HB3	1.97	0.47
18:AS:76:PRO:O	18:AS:78:ARG:N	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AY:542:VAL:HA	20:AY:583:LYS:HA	1.96	0.47
21:AA:417:C:H42	21:AA:426:G:H1	1.62	0.47
21:AA:621:A:H2'	21:AA:622:A:H8	1.78	0.47
21:AA:952:U:H4'	21:AA:964:A:N1	2.28	0.47
21:AA:1255:G:H4'	21:AA:1258:G:O2'	2.14	0.47
21:AA:1355:G:H2'	21:AA:1356:G:O4'	2.13	0.47
22:AW:12:U:H2'	22:AW:13:C:O4'	2.14	0.47
25:BC:66:PRO:HB2	25:BC:67:HIS:CD2	2.50	0.47
25:BC:70:GLY:O	25:BC:71:LYS:HB2	2.15	0.47
25:BC:78:ILE:HG12	25:BC:114:VAL:HG22	1.97	0.47
25:BC:150:ILE:HA	25:BC:153:ILE:HB	1.96	0.47
26:BD:11:PRO:O	26:BD:12:SER:OG	2.27	0.47
26:BD:144:ALA:H	26:BD:156:ALA:HB3	1.79	0.47
28:BF:38:ARG:HH21	59:BA:1245:G:H5''	1.78	0.47
28:BF:63:LYS:HE3	28:BF:66:PRO:O	2.14	0.47
28:BF:90:PHE:HB3	59:BA:588:U:H1'	1.97	0.47
30:BH:70:THR:CG2	59:BA:2747:G:H5''	2.44	0.47
32:BK:130:SER:HB3	32:BK:134:MET:HE2	1.95	0.47
33:BN:38:HIS:HB3	33:BN:39:ARG:H	1.48	0.47
33:BN:107:LEU:HB2	33:BN:108:PRO:HD3	1.96	0.47
34:BO:6:THR:OG1	59:BA:1666:G:O2'	2.31	0.47
38:BS:42:ASP:O	38:BS:44:LYS:N	2.45	0.47
41:BV:71:LEU:HA	41:BV:86:GLY:CA	2.45	0.47
42:BW:38:TYR:O	51:B5:28:PRO:HG3	2.15	0.47
43:BX:5:TYR:HB3	48:B2:33:MET:HE2	1.96	0.47
48:B2:21:LEU:HD13	48:B2:64:LEU:HA	1.97	0.47
51:B5:4:HIS:O	51:B5:6:VAL:N	2.47	0.47
52:B6:16:CYS:SG	52:B6:48:VAL:HG23	2.54	0.47
52:B6:46:HIS:ND1	59:BA:2371:G:O2'	2.48	0.47
55:B9:10:ILE:HD11	55:B9:32:HIS:CD2	2.50	0.47
59:BA:30:G:H2'	59:BA:31:C:C6	2.49	0.47
59:BA:72:U:H3	59:BA:111:A:HO2'	1.61	0.47
59:BA:230:U:H2'	59:BA:231:C:H6	1.79	0.47
59:BA:640:C:H2'	59:BA:641:C:C6	2.50	0.47
59:BA:867:C:C4	59:BA:868:U:C4	3.03	0.47
59:BA:1046:A:H5''	59:BA:1047:G:H8	1.80	0.47
59:BA:1116:C:H2'	59:BA:1117:G:H8	1.79	0.47
59:BA:1243:G:H2'	59:BA:1244:G:O4'	2.14	0.47
59:BA:1256:G:H2'	59:BA:1257:C:C6	2.49	0.47
59:BA:1583:A:H4'	59:BA:1586:A:C8	2.48	0.47
59:BA:1646:C:H5''	59:BA:1647:G:H5''	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1882:C:H2'	59:BA:1883:G:O4'	2.14	0.47
59:BA:2017:U:O2'	59:BA:2019:A:OP2	2.23	0.47
59:BA:2137:C:N3	59:BA:2154:G:N2	2.56	0.47
59:BA:2343:C:O2'	59:BA:2373:G:H4'	2.14	0.47
59:BA:2461:C:H2'	59:BA:2462:U:C6	2.49	0.47
59:BA:2498:C:O2'	59:BA:2499:C:H5'	2.14	0.47
59:BA:2580:U:P	59:BA:2581:G:H1	2.37	0.47
60:BB:1:U:H2'	60:BB:2:C:C5	2.50	0.47
2:CC:62:ASP:O	2:CC:98:ASN:HB3	2.14	0.47
9:CJ:28:ARG:HH21	9:CJ:36:GLY:N	2.12	0.47
9:CJ:58:ASP:CG	9:CJ:59:SER:H	2.22	0.47
12:CM:54:VAL:O	12:CM:57:ARG:HG2	2.15	0.47
12:CM:104:ARG:HG3	21:CA:1226:C:C4	2.50	0.47
13:CN:5:ALA:HB3	21:CA:1216:G:H5''	1.97	0.47
20:CY:259:PHE:CE1	20:CY:275:ALA:HB1	2.49	0.47
20:CY:276:VAL:O	20:CY:280:LEU:HB2	2.15	0.47
20:CY:607:ARG:HB3	20:CY:672:PHE:O	2.15	0.47
21:CA:68(H):G:O2'	21:CA:68(I):G:C8	2.64	0.47
21:CA:277:C:H2'	21:CA:278:G:H5'	1.97	0.47
21:CA:321:A:N6	21:CA:328:C:H1'	2.30	0.47
21:CA:321:A:H62	21:CA:328:C:H1'	1.80	0.47
21:CA:373:A:H4'	21:CA:480:U:O2'	2.14	0.47
21:CA:1465:C:H2'	21:CA:1466:C:O4'	2.14	0.47
22:CW:48:C:H2'	22:CW:59:A:H1'	1.96	0.47
26:DD:72:LYS:HG3	26:DD:103:ARG:HH12	1.79	0.47
27:DE:110:GLY:HA2	27:DE:162:ALA:N	2.30	0.47
33:DN:26:LEU:HD12	33:DN:30:ILE:HD12	1.97	0.47
33:DN:31:ALA:HA	33:DN:34:LEU:O	2.14	0.47
33:DN:39:ARG:HG2	59:DA:1007:C:H5'	1.97	0.47
34:DO:91:LEU:HD22	34:DO:92:GLU:H	1.79	0.47
35:DP:116:GLY:HA2	59:DA:627:A:N6	2.29	0.47
36:DQ:92:GLY:C	36:DQ:94:VAL:H	2.22	0.47
41:DV:10:LYS:HB2	41:DV:10:LYS:HE3	1.65	0.47
41:DV:69:LYS:HA	41:DV:88:ARG:HG2	1.96	0.47
44:DY:9:LYS:HD2	44:DY:94:LYS:HZ2	1.80	0.47
47:D1:3:LYS:HD2	47:D1:3:LYS:HA	1.72	0.47
47:D1:25:LYS:HA	47:D1:34:THR:O	2.14	0.47
49:D3:31:LEU:HB2	59:DA:1157:G:O2'	2.15	0.47
50:D4:6:HIS:O	50:D4:8:LYS:N	2.47	0.47
50:D4:14:ILE:HG23	50:D4:33:VAL:HG23	1.96	0.47
51:D5:5:PRO:HG3	59:DA:2614:A:H5'	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D6:25:LYS:HB2	52:D6:25:LYS:HE3	1.59	0.47
54:D8:6:THR:HG22	54:D8:62:LEU:HB2	1.96	0.47
56:De:80:ALA:HB1	56:De:84:LEU:HB2	1.97	0.47
59:DA:15:G:H1	59:DA:525:U:H3	0.66	0.47
59:DA:17:G:H2'	59:DA:18:C:H6	1.79	0.47
59:DA:70:G:OP1	59:DA:112:U:N3	2.43	0.47
59:DA:305:U:H2'	59:DA:306:U:C6	2.50	0.47
59:DA:306:U:O4	59:DA:310:A:C8	2.68	0.47
59:DA:579:G:H2'	59:DA:580:C:O4'	2.13	0.47
59:DA:853:G:H1	59:DA:924:C:H42	1.62	0.47
59:DA:870:A:H2	59:DA:907:U:O2	1.98	0.47
59:DA:897:C:C4	59:DA:898:C:H5	2.32	0.47
59:DA:936:C:H2'	59:DA:937:U:O4'	2.14	0.47
59:DA:987:G:O2'	59:DA:1000:A:N3	2.43	0.47
59:DA:1105:U:H2'	59:DA:1106:G:C8	2.49	0.47
59:DA:1198:U:H2'	59:DA:1199:U:C5	2.49	0.47
59:DA:1261:C:H2'	59:DA:1262:A:H8	1.78	0.47
59:DA:1468(C):A:H2'	59:DA:1468(D):A:O4'	2.15	0.47
59:DA:1530:G:N2	59:DA:1541:U:H2'	2.28	0.47
59:DA:1710:C:H4'	59:DA:2858:C:C2	2.49	0.47
59:DA:1788:C:H2'	59:DA:1789:A:C8	2.50	0.47
59:DA:1834:U:OP1	59:DA:1835:G:H5'	2.15	0.47
59:DA:2248:C:C2'	59:DA:2275:C:H41	2.28	0.47
59:DA:2248:C:O2	59:DA:2256:G:N1	2.30	0.47
59:DA:2504:U:H1'	59:DA:2572:A:N1	2.30	0.47
60:DB:104:A:H2'	60:DB:105:G:O4'	2.14	0.47
2:AC:50:ALA:HB1	2:AC:72:LYS:HG3	1.97	0.47
3:AD:41:GLY:HA3	21:AA:542:G:H5'	1.96	0.47
5:AF:6:VAL:HG22	5:AF:90:VAL:HG13	1.97	0.47
9:AJ:81:THR:HG22	9:AJ:85:LEU:HD12	1.96	0.47
11:AL:39:VAL:HG12	11:AL:40:VAL:N	2.29	0.47
11:AL:52:LEU:H	11:AL:53:ARG:HD2	1.79	0.47
17:AR:60:ALA:HB2	21:AA:834:C:H5''	1.96	0.47
18:AS:77:THR:O	21:AA:958:A:N6	2.41	0.47
20:AY:251:ILE:HG12	20:AY:281:PRO:HG3	1.96	0.47
20:AY:299:VAL:HG22	20:AY:300:GLU:H	1.80	0.47
21:AA:27:G:H2'	21:AA:28:G:C8	2.49	0.47
21:AA:33:A:H4'	21:AA:364:A:H1'	1.96	0.47
21:AA:591:U:H2'	21:AA:592:G:O4'	2.15	0.47
21:AA:989:C:H2'	21:AA:990:C:C6	2.50	0.47
21:AA:1002:G:H2'	21:AA:1003:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1340:A:C2	21:AA:1341:U:C2	3.03	0.47
21:AA:1513:A:H61	21:AA:1522:U:H3	1.63	0.47
24:AX:49:G:N2	24:AX:65:C:C2	2.80	0.47
25:BC:54:ARG:O	25:BC:55:SER:OG	2.29	0.47
26:BD:78:LYS:N	26:BD:96:HIS:O	2.48	0.47
27:BE:116:VAL:HG23	27:BE:120:TRP:CD1	2.50	0.47
27:BE:136:ARG:NE	59:BA:1656:C:OP1	2.38	0.47
28:BF:107:LYS:HA	28:BF:107:LYS:HD3	1.55	0.47
32:BK:78:ILE:HG12	32:BK:99:ILE:HD12	1.97	0.47
32:BK:90:LYS:NZ	32:BK:93:ARG:HE	2.13	0.47
33:BN:90:MET:C	33:BN:92:ALA:N	2.70	0.47
34:BO:7:TYR:N	59:BA:1667:G:OP1	2.47	0.47
34:BO:22:ILE:HB	34:BO:40:VAL:O	2.15	0.47
40:BU:92:ARG:NH1	41:BV:11:GLN:O	2.33	0.47
40:BU:97:ASP:C	40:BU:99:ALA:N	2.73	0.47
41:BV:22:VAL:HG23	41:BV:23:GLU:O	2.15	0.47
42:BW:49:LYS:NZ	59:BA:489:G:O6	2.47	0.47
44:BY:47:LYS:HG3	44:BY:60:PHE:CE2	2.50	0.47
48:B2:46:GLN:HB3	48:B2:48:HIS:HE1	1.79	0.47
53:B7:40:TRP:CH2	59:BA:469:G:N1	2.83	0.47
59:BA:121:G:H4'	59:BA:148:C:H2'	1.97	0.47
59:BA:398:G:H2'	59:BA:399:G:O4'	2.15	0.47
59:BA:1930:G:O6	63:BA:2904:NMY:H9	2.14	0.47
59:BA:2114:A:C2	59:BA:2168:G:H1'	2.50	0.47
59:BA:2254:C:OP1	59:BA:2254:C:H4'	2.14	0.47
59:BA:2672:G:H2'	59:BA:2673:G:C8	2.50	0.47
1:CB:91:PRO:HG3	1:CB:154:LEU:HG	1.95	0.47
4:CE:94:ALA:HB2	4:CE:119:LEU:HB2	1.96	0.47
5:CF:59:TYR:CD2	5:CF:61:LEU:HD23	2.50	0.47
7:CH:31:PHE:HZ	21:CA:643:C:H5'	1.78	0.47
8:CI:47:LEU:O	8:CI:51:ARG:N	2.47	0.47
10:CK:29:ILE:HA	10:CK:43:SER:O	2.14	0.47
12:CM:119:GLY:HA2	21:CA:953:G:N2	2.30	0.47
18:CS:30:LEU:HD22	59:DA:888:C:OP1	2.15	0.47
19:CT:56:MET:O	19:CT:60:GLU:HB2	2.15	0.47
21:CA:575:G:H4'	21:CA:576:G:O5'	2.15	0.47
21:CA:680:C:N4	21:CA:710:G:N1	2.31	0.47
21:CA:901:A:H8	21:CA:901:A:O5'	1.96	0.47
21:CA:950:U:O2'	21:CA:971:G:H5'	2.15	0.47
21:CA:1305:G:HO2'	21:CA:1306:A:H8	1.63	0.47
21:CA:1321:C:H5''	21:CA:1322:C:H5''	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1340:A:C2	21:CA:1341:U:O2	2.68	0.47
21:CA:1343:G:H2'	21:CA:1344:C:O4'	2.14	0.47
26:DD:119:ALA:HB1	26:DD:190:TYR:HE2	1.79	0.47
27:DE:108:SER:HA	27:DE:190:GLY:CA	2.45	0.47
29:DG:141:PHE:HB3	29:DG:142:PRO:HD2	1.96	0.47
33:DN:46:VAL:HG12	33:DN:107:LEU:CD2	2.44	0.47
35:DP:46:LYS:HG3	35:DP:51:PHE:CD1	2.50	0.47
41:DV:95:LEU:O	41:DV:96:ILE:O	2.33	0.47
52:D6:35:GLU:HB3	52:D6:51:GLU:HB3	1.96	0.47
54:D8:11:LYS:HZ1	54:D8:63:PRO:HG3	1.79	0.47
59:DA:124:G:H5'	59:DA:1376:C:H4'	1.96	0.47
59:DA:193:U:H2'	59:DA:194:G:C8	2.50	0.47
59:DA:540:C:H2'	59:DA:541:C:C5	2.49	0.47
59:DA:1663:C:O2'	59:DA:1664:A:O4'	2.29	0.47
59:DA:1817:G:H2'	59:DA:1818:U:H5'	1.97	0.47
59:DA:1955:U:H3'	59:DA:1956:U:C6	2.49	0.47
59:DA:2255:G:H3'	59:DA:2256:G:C8	2.50	0.47
59:DA:2390:U:H2'	59:DA:2391:G:H8	1.79	0.47
59:DA:2776:A:N3	59:DA:2778:A:H2'	2.30	0.47
60:DB:19:G:H1	60:DB:64:C:N4	2.10	0.47
2:AC:12:LEU:HD12	13:AN:58:LYS:H	1.79	0.47
3:AD:73:ARG:HD2	21:AA:401:C:P	2.55	0.47
3:AD:173:TRP:CZ3	3:AD:189:PRO:HG3	2.50	0.47
7:AH:53:VAL:HB	7:AH:58:TYR:CD1	2.48	0.47
15:AP:42:ARG:HG2	21:AA:449:C:O2'	2.15	0.47
20:AY:631:ILE:O	20:AY:632:LEU:HB2	2.15	0.47
21:AA:186(G):C:H1'	21:AA:186(K):G:N2	2.30	0.47
21:AA:243:A:H4'	21:AA:244:U:H3'	1.97	0.47
21:AA:613:C:H2'	21:AA:614:A:O4'	2.15	0.47
21:AA:676:A:H2	21:AA:714:G:H1	1.62	0.47
21:AA:1363:A:H5'	21:AA:1364:U:C5	2.50	0.47
22:AW:72:C:N3	59:BA:1852:C:H5''	2.30	0.47
26:BD:85:ASP:OD2	26:BD:87:ASN:ND2	2.48	0.47
27:BE:61:ARG:NH2	59:BA:2632:A:O2'	2.47	0.47
27:BE:123:ALA:O	27:BE:125:GLY:N	2.48	0.47
29:BG:15:VAL:HG22	29:BG:175:LEU:HD13	1.96	0.47
33:BN:86:PRO:O	33:BN:90:MET:HB2	2.15	0.47
33:BN:97:ARG:O	33:BN:105:GLY:HA3	2.14	0.47
34:BO:4:PRO:HA	34:BO:21:CYS:O	2.14	0.47
35:BP:39:LYS:C	35:BP:41:ARG:H	2.22	0.47
59:BA:317:G:H2'	59:BA:318:C:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:650:C:H2'	59:BA:651:G:O4'	2.15	0.47
59:BA:1264:G:H21	59:BA:2015:A:H62	1.61	0.47
59:BA:1277:G:H2'	59:BA:1278:A:O4'	2.14	0.47
59:BA:1340:U:H4'	59:BA:1394:U:O2'	2.14	0.47
59:BA:1532:C:H2'	59:BA:1533:C:C6	2.50	0.47
59:BA:2373:G:H2'	59:BA:2374:C:C6	2.50	0.47
59:BA:2377:A:C6	59:BA:2378:A:C6	3.03	0.47
59:BA:2517:C:H4'	59:BA:2518:A:C8	2.50	0.47
59:BA:2558:C:H2'	59:BA:2559:C:C6	2.50	0.47
59:BA:2703:C:H2'	59:BA:2704:C:C6	2.50	0.47
1:CB:31:TYR:O	1:CB:43:ASP:HB3	2.15	0.47
6:CG:29:LYS:HZ3	21:CA:1375:A:H4'	1.80	0.47
16:CQ:63:ARG:NH2	21:CA:186(J):G:N7	2.62	0.47
16:CQ:67:LYS:HD2	21:CA:266:G:H8	1.79	0.47
16:CQ:91:ARG:CZ	21:CA:584:G:H5'	2.45	0.47
20:CY:39:ILE:HG13	20:CY:75:LYS:HG3	1.96	0.47
20:CY:654:GLY:O	20:CY:657:THR:HG22	2.15	0.47
21:CA:253:U:C4	21:CA:273:A:N1	2.82	0.47
21:CA:419:C:H2'	21:CA:420:U:O4'	2.15	0.47
21:CA:442:C:H2'	21:CA:443:C:C6	2.50	0.47
21:CA:927:G:OP1	21:CA:1505:G:N2	2.48	0.47
21:CA:1324:A:H2'	21:CA:1325:C:O4'	2.15	0.47
25:DC:177:GLY:O	25:DC:179:ALA:N	2.48	0.47
26:DD:59:LYS:HB3	59:DA:1568:G:H4'	1.95	0.47
26:DD:63:ARG:HD3	26:DD:87:ASN:HD21	1.80	0.47
26:DD:250:TRP:CZ2	59:DA:1805:U:H4'	2.50	0.47
26:DD:254:THR:HG23	26:DD:255:LYS:HD2	1.97	0.47
35:DP:27:HIS:HB2	59:DA:813:U:OP2	2.14	0.47
36:DQ:46:GLN:O	36:DQ:49:ALA:HB3	2.15	0.47
37:DR:18:LEU:HA	37:DR:21:TYR:HB2	1.97	0.47
41:DV:60:GLU:N	41:DV:96:ILE:HA	2.24	0.47
41:DV:76:LYS:H	41:DV:81:TYR:HD1	1.63	0.47
45:DZ:45:ASP:OD2	45:DZ:49:ARG:NH2	2.47	0.47
46:D0:25:ARG:HH12	59:DA:2355:C:H5'	1.80	0.47
47:D1:20:ARG:HG3	47:D1:38:SER:H	1.80	0.47
52:D6:14:THR:HG22	52:D6:52:VAL:HB	1.97	0.47
59:DA:187:G:N3	59:DA:1365:A:H2	2.13	0.47
59:DA:498:G:H2'	59:DA:499:U:C6	2.49	0.47
59:DA:503:A:H4'	59:DA:504:U:H5''	1.96	0.47
59:DA:593:G:H2'	59:DA:594:U:C6	2.50	0.47
59:DA:1807:G:H1'	59:DA:1810:A:H61	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1909:C:H2'	59:DA:1910:G:C8	2.50	0.47
59:DA:1933:G:O2'	63:DA:2901:NMY:H12	2.15	0.47
59:DA:2008:C:H2'	59:DA:2009:G:C8	2.48	0.47
59:DA:2016:U:H2'	59:DA:2017:U:O4'	2.13	0.47
59:DA:2667:C:H2'	59:DA:2668:G:O4'	2.13	0.47
59:DA:2689:U:H5'	59:DA:2713:A:C2	2.50	0.47
59:DA:2692:C:H1'	59:DA:2847:U:H1'	1.95	0.47
59:DA:2781:A:H5''	59:DA:2782:G:H8	1.80	0.47
59:DA:2856:C:H2'	59:DA:2857:G:C8	2.50	0.47
1:AB:107:THR:HG21	21:AA:1103:C:H1'	1.96	0.47
4:AE:15:ARG:HG3	4:AE:28:PHE:CE2	2.48	0.47
7:AH:9:MET:SD	7:AH:32:LYS:HD2	2.55	0.47
8:AI:18:PHE:HB2	8:AI:62:TYR:O	2.15	0.47
8:AI:20:ARG:O	8:AI:60:ASP:N	2.47	0.47
8:AI:99:LEU:HB3	8:AI:101:PHE:CE1	2.50	0.47
12:AM:95:GLY:O	12:AM:111:LYS:HD3	2.13	0.47
12:AM:124:PRO:HB3	12:AM:126:LYS:NZ	2.30	0.47
16:AQ:74:LEU:HB3	16:AQ:75:ARG:H	1.57	0.47
19:AT:27:LYS:HD3	19:AT:30:LYS:HD3	1.97	0.47
20:AY:132:ARG:HA	20:AY:280:LEU:HD11	1.97	0.47
20:AY:461:ILE:HG13	62:AY:702:FUA:C2	2.38	0.47
20:AY:556:ILE:HD11	20:AY:601:ILE:HD11	1.96	0.47
62:AY:702:FUA:O1	62:AY:702:FUA:C20	2.62	0.47
21:AA:774:G:H2'	21:AA:775:G:O4'	2.15	0.47
21:AA:815:A:C2	21:AA:1527:C:O2	2.67	0.47
21:AA:954:G:H21	21:AA:1227:A:N6	2.12	0.47
21:AA:1277:C:H1'	21:AA:1282:C:O2	2.15	0.47
21:AA:1437:C:H2'	21:AA:1438:G:C8	2.49	0.47
22:AW:75:C:H4'	47:B1:30:VAL:HG22	1.97	0.47
25:BC:182:PRO:HB2	25:BC:184:GLU:HG3	1.97	0.47
25:BC:203:GLU:N	25:BC:203:GLU:OE1	2.47	0.47
28:BF:133:ASN:HB2	28:BF:138:GLU:OE2	2.15	0.47
28:BF:157:VAL:HG12	28:BF:193:VAL:O	2.15	0.47
29:BG:82:LEU:HD12	29:BG:87:PRO:HB3	1.97	0.47
37:BR:10:LEU:HB2	59:BA:1653:G:C5	2.50	0.47
37:BR:104:ARG:O	37:BR:106:GLY:N	2.41	0.47
41:BV:33:VAL:HG12	41:BV:35:LEU:HD22	1.97	0.47
41:BV:40:LEU:HD22	41:BV:45:THR:O	2.15	0.47
51:B5:16:ARG:HH12	59:BA:517:C:H5''	1.80	0.47
53:B7:18:PHE:N	59:BA:126:A:OP2	2.48	0.47
59:BA:43:G:C4	59:BA:438:G:C2	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:882:G:N2	59:BA:894:C:C2	2.82	0.47
59:BA:1018:C:H2'	59:BA:1019:U:C6	2.45	0.47
59:BA:1083:U:O2'	59:BA:1084:A:H3'	2.15	0.47
59:BA:1167:U:H2'	59:BA:1168:G:H8	1.80	0.47
59:BA:2363:C:H2'	59:BA:2364:C:C6	2.50	0.47
59:BA:2551:C:H2'	59:BA:2552:U:H4'	1.96	0.47
1:CB:169:LYS:O	1:CB:172:ILE:N	2.44	0.47
4:CE:51:VAL:HB	4:CE:52:PRO:HD3	1.96	0.47
8:CI:28:VAL:HB	8:CI:36:TYR:HD1	1.79	0.47
8:CI:121:ARG:HD3	8:CI:121:ARG:HA	1.41	0.47
9:CJ:40:LEU:HD11	21:CA:1280:A:O4'	2.14	0.47
9:CJ:45:ARG:HG3	9:CJ:47:PHE:CE1	2.50	0.47
10:CK:120:ARG:NH1	21:CA:1524:C:H5''	2.30	0.47
20:CY:408:VAL:HG23	20:CY:409:ILE:HG12	1.97	0.47
20:CY:607:ARG:HA	20:CY:645:ALA:O	2.15	0.47
21:CA:509:A:N7	21:CA:510:A:N6	2.63	0.47
21:CA:815:A:C6	21:CA:1508:G:N2	2.83	0.47
21:CA:848:C:H2'	21:CA:849:C:C6	2.49	0.47
21:CA:947:G:H2'	21:CA:948:C:C6	2.50	0.47
21:CA:1072:G:C6	21:CA:1103:C:N4	2.74	0.47
21:CA:1372:U:C4	21:CA:1373:G:C6	3.02	0.47
21:CA:1408:A:N6	63:CA:1601:NMY:H14	2.27	0.47
25:DC:117:THR:HG22	25:DC:147:GLY:O	2.15	0.47
25:DC:165:ARG:HG2	25:DC:166:ASN:N	2.30	0.47
28:DF:164:ARG:O	28:DF:168:ARG:HB3	2.15	0.47
29:DG:173:LEU:HD12	29:DG:180:PHE:CZ	2.50	0.47
30:DH:126:PRO:HG3	30:DH:130:ARG:NH2	2.30	0.47
31:DJ:40:UNK:O	31:DJ:44:UNK:N	2.48	0.47
33:DN:74:ARG:CB	59:DA:1138:G:H4'	2.45	0.47
37:DR:64:ARG:O	37:DR:68:ARG:N	2.45	0.47
37:DR:104:ARG:HH22	59:DA:1278:A:P	2.38	0.47
38:DS:97:ARG:CZ	38:DS:97:ARG:HB2	2.44	0.47
39:DT:29:ARG:HA	39:DT:46:GLU:CB	2.45	0.47
39:DT:33:LYS:HB2	39:DT:43:GLN:N	2.30	0.47
41:DV:60:GLU:H	41:DV:96:ILE:C	2.22	0.47
51:D5:32:PRO:HA	51:D5:38:ALA:O	2.15	0.47
59:DA:217:G:H2'	59:DA:218:A:O4'	2.15	0.47
59:DA:305:U:H2'	59:DA:306:U:C5	2.50	0.47
59:DA:590:A:H2'	59:DA:591:C:C6	2.50	0.47
59:DA:757:U:H2'	59:DA:758:C:O4'	2.15	0.47
59:DA:809:G:H2'	59:DA:810:U:H5'	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:955:C:C4	59:DA:962:G:O6	2.67	0.47
59:DA:1048:A:C6	59:DA:1111:A:C4	3.02	0.47
59:DA:1398:C:H2'	59:DA:1399:C:O4'	2.15	0.47
59:DA:1459:G:O2'	59:DA:1461:G:OP2	2.28	0.47
59:DA:1526:G:O6	59:DA:1527:G:N1	2.47	0.47
59:DA:1954:G:H5'	59:DA:2550:G:H21	1.80	0.47
59:DA:2330:G:H2'	59:DA:2331:G:O4'	2.15	0.47
59:DA:2885:C:H2'	59:DA:2886:G:O4'	2.15	0.47
2:AC:117:ALA:HB2	2:AC:200:ALA:HB2	1.97	0.46
11:AL:37:CYS:HA	11:AL:57:LYS:H	1.79	0.46
11:AL:93:LEU:O	11:AL:95:GLY:N	2.49	0.46
20:AY:631:ILE:H	20:AY:631:ILE:HD12	1.80	0.46
21:AA:23:C:H5	21:AA:561:U:O4	1.97	0.46
21:AA:255:G:H2'	21:AA:256:U:C6	2.50	0.46
21:AA:383:A:H8	21:AA:383:A:O5'	1.98	0.46
21:AA:501:C:H2'	21:AA:502:G:H8	1.79	0.46
21:AA:566:G:H4'	21:AA:567:G:H5'	1.95	0.46
21:AA:696:A:H8	21:AA:696:A:O5'	1.99	0.46
21:AA:742:G:C2	21:AA:743:U:H1'	2.51	0.46
21:AA:865:A:H5'	21:AA:1078:U:H5	1.80	0.46
21:AA:1429:C:O2'	59:BA:1704:G:H5'	2.14	0.46
21:AA:1435:G:O2'	21:AA:1436:U:H5'	2.14	0.46
24:AX:27:C:H2'	24:AX:28:C:H6	1.80	0.46
26:BD:65:ILE:HG13	26:BD:67:PHE:CE2	2.50	0.46
26:BD:252:TRP:CD1	26:BD:252:TRP:H	2.31	0.46
27:BE:100:GLU:H	27:BE:172:VAL:HG12	1.80	0.46
29:BG:47:LYS:HD3	29:BG:81:LYS:HB2	1.97	0.46
35:BP:13:ASN:ND2	35:BP:14:LYS:H	2.13	0.46
37:BR:101:ALA:HB1	42:BW:38:TYR:CE2	2.50	0.46
43:BX:30:VAL:HG22	43:BX:77:LYS:O	2.15	0.46
46:B0:27:GLU:HB3	46:B0:69:PHE:CE1	2.50	0.46
53:B7:28:ARG:NH2	59:BA:1368:G:OP1	2.35	0.46
59:BA:733:G:H3'	59:BA:761:A:H61	1.79	0.46
59:BA:1177:A:C6	59:BA:1178:C:C2	3.03	0.46
59:BA:1265:A:H61	59:BA:2013:A:H3'	1.81	0.46
59:BA:1937:A:C8	59:BA:1939:U:H2'	2.51	0.46
59:BA:2095:C:H2'	59:BA:2096:U:C6	2.50	0.46
59:BA:2730:C:H2'	59:BA:2731:G:C8	2.50	0.46
59:BA:2769:C:H2'	59:BA:2770:G:H8	1.80	0.46
1:CB:114:ARG:O	1:CB:118:LEU:HG	2.14	0.46
5:CF:91:VAL:HG13	5:CF:92:LYS:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:79:ARG:NE	21:CA:1381:U:H4'	2.29	0.46
10:CK:52:GLY:HA2	21:CA:692:U:H3	1.79	0.46
16:CQ:29:HIS:CE1	16:CQ:32:TYR:HB2	2.50	0.46
20:CY:603:GLU:N	20:CY:677:GLN:O	2.39	0.46
21:CA:600:C:H42	21:CA:638:G:H1	0.64	0.46
21:CA:766:A:C2	21:CA:767:A:H1'	2.49	0.46
21:CA:1253:G:H2'	21:CA:1254:C:C6	2.50	0.46
21:CA:1426:C:H2'	21:CA:1427:U:C6	2.51	0.46
29:DG:47:LYS:HB3	29:DG:81:LYS:HD2	1.97	0.46
29:DG:77:ILE:HG22	29:DG:80:PHE:H	1.78	0.46
33:DN:85:ILE:O	33:DN:105:GLY:O	2.34	0.46
36:DQ:10:ARG:NH2	36:DQ:89:ASN:OD1	2.49	0.46
36:DQ:67:ARG:NH2	59:DA:906:G:O3'	2.48	0.46
37:DR:12:ARG:HB2	37:DR:17:ARG:HG2	1.97	0.46
38:DS:51:ALA:CB	38:DS:73:LEU:HB2	2.45	0.46
39:DT:95:ARG:O	39:DT:96:ARG:NH1	2.48	0.46
46:D0:20:ARG:NH1	59:DA:2356:C:O3'	2.47	0.46
48:D2:48:HIS:CG	48:D2:49:LYS:H	2.32	0.46
50:D4:15:ILE:H	50:D4:32:TYR:HA	1.80	0.46
59:DA:83:G:H22	59:DA:103:A:P	2.38	0.46
59:DA:510:C:H2'	59:DA:511:U:O4'	2.16	0.46
59:DA:634:C:H2'	59:DA:635:C:C6	2.50	0.46
59:DA:1238:G:H2'	59:DA:1239:G:C8	2.48	0.46
59:DA:1435:G:H2'	59:DA:1436:G:H8	1.80	0.46
59:DA:1528:A:H2'	59:DA:1529:A:O4'	2.15	0.46
59:DA:1642:G:H2'	59:DA:1643:G:O4'	2.15	0.46
59:DA:1791:A:H2'	59:DA:1792:G:O4'	2.15	0.46
59:DA:2064:C:N3	59:DA:2446:G:N2	2.50	0.46
59:DA:2261:C:H1'	59:DA:2388:A:N3	2.30	0.46
59:DA:2305:A:H2'	59:DA:2306:C:H4'	1.97	0.46
59:DA:2363:C:H2'	59:DA:2364:C:C6	2.50	0.46
59:DA:2485:G:H2'	59:DA:2486:G:H8	1.79	0.46
59:DA:2592:G:H2'	59:DA:2593:U:O4'	2.16	0.46
59:DA:2612:C:H2'	59:DA:2613:U:H5'	1.97	0.46
5:AF:80:ARG:NH2	5:AF:88:VAL:O	2.48	0.46
7:AH:91:ARG:NH1	16:AQ:32:TYR:O	2.48	0.46
20:AY:563:ILE:HG22	20:AY:564:LYS:N	2.30	0.46
62:AY:702:FUA:H322	62:AY:702:FUA:H16	1.74	0.46
21:AA:64:G:H4'	21:AA:66:G:OP1	2.15	0.46
21:AA:606:G:H3'	21:AA:607:A:H5'	1.97	0.46
21:AA:957:U:H2'	21:AA:959:A:OP2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AV:8:A:H2'	23:AV:9:G:O4'	2.15	0.46
33:BN:25:ARG:C	33:BN:27:ALA:H	2.24	0.46
33:BN:54:VAL:HG13	33:BN:56:ASN:OD1	2.13	0.46
37:BR:33:ARG:HA	37:BR:114:VAL:O	2.14	0.46
38:BS:28:VAL:HG12	38:BS:37:ALA:HA	1.96	0.46
38:BS:32:LEU:HD11	60:BB:29:A:N7	2.30	0.46
38:BS:61:ASN:HD22	38:BS:62:LYS:N	2.13	0.46
39:BT:41:ARG:HD3	39:BT:43:GLN:HB2	1.97	0.46
40:BU:52:ARG:NH1	59:BA:560:C:H4'	2.30	0.46
42:BW:30:GLU:OE2	42:BW:34:ASN:ND2	2.48	0.46
45:BZ:19:ARG:HA	45:BZ:23:LYS:O	2.14	0.46
54:B8:18:ALA:HB2	59:BA:629:G:P	2.55	0.46
54:B8:38:GLY:HA2	54:B8:41:ILE:HD12	1.98	0.46
59:BA:315:G:H2'	59:BA:316:C:C6	2.51	0.46
59:BA:879:G:H2'	59:BA:880:G:O4'	2.14	0.46
59:BA:1431:U:H2'	59:BA:1432:C:C6	2.50	0.46
59:BA:1450:C:N4	59:BA:1461:G:H1	2.13	0.46
59:BA:1538:G:H2'	59:BA:1539:G:C8	2.50	0.46
59:BA:1564:C:H2'	59:BA:1565:C:C6	2.50	0.46
59:BA:2126:A:N6	59:BA:2163:C:H4'	2.30	0.46
59:BA:2445:G:H2'	59:BA:2446:G:H8	1.80	0.46
59:BA:2564:A:C2	59:BA:2647:U:H4'	2.51	0.46
59:BA:2592:G:H2'	59:BA:2593:U:O4'	2.16	0.46
1:CB:32:ILE:HG21	1:CB:40:HIS:HB3	1.96	0.46
2:CC:19:GLU:HB3	2:CC:40:ARG:HH21	1.80	0.46
3:CD:94:LEU:O	3:CD:97:LEU:HB2	2.15	0.46
6:CG:78:ARG:HD3	6:CG:85:TYR:CD1	2.51	0.46
6:CG:111:ARG:CZ	6:CG:123:GLU:HA	2.45	0.46
10:CK:107:SER:C	10:CK:108:ILE:HD12	2.40	0.46
11:CL:94:PRO:HB3	21:CA:911:U:H5''	1.97	0.46
18:CS:80:TYR:CB	21:CA:957:U:H5'	2.43	0.46
19:CT:38:LYS:O	19:CT:41:ILE:HG12	2.16	0.46
20:CY:201:ILE:HD12	20:CY:201:ILE:H	1.79	0.46
21:CA:21:G:N2	21:CA:914:A:H62	2.11	0.46
21:CA:407:G:H1	21:CA:435:C:H42	1.62	0.46
21:CA:758:G:H5'	21:CA:821:G:N2	2.30	0.46
21:CA:925:G:N3	21:CA:1502:A:H1'	2.30	0.46
23:CV:14:A:O2'	23:CV:15:A:O5'	2.29	0.46
25:DC:50:ILE:HG22	25:DC:50:ILE:O	2.16	0.46
27:DE:61:ARG:HD3	27:DE:62:PRO:HD2	1.96	0.46
27:DE:148:GLY:HA2	59:DA:2052:G:O2'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:156:MET:HE3	27:DE:156:MET:HB3	1.70	0.46
28:DF:73:ALA:HB2	59:DA:1256:G:H4'	1.96	0.46
29:DG:35:GLU:HB2	29:DG:161:THR:HA	1.97	0.46
30:DH:41:MET:SD	30:DH:42:ARG:N	2.88	0.46
30:DH:58:GLU:HB2	30:DH:61:HIS:HD2	1.80	0.46
34:DO:76:ALA:HB2	59:DA:2684:U:H4'	1.96	0.46
50:D4:22:ILE:HG22	50:D4:23:GLU:H	1.80	0.46
53:D7:46:VAL:HG12	53:D7:47:ARG:HG2	1.96	0.46
59:DA:779:U:C2	59:DA:780:G:C8	3.03	0.46
59:DA:834:C:H2'	59:DA:835:A:O4'	2.14	0.46
59:DA:1450:C:H42	59:DA:1461:G:H1	1.61	0.46
59:DA:1861:G:H1	59:DA:1881:C:N4	2.12	0.46
59:DA:2110:G:H4'	59:DA:2145:C:N4	2.31	0.46
59:DA:2161:C:H2'	59:DA:2162:G:C8	2.50	0.46
59:DA:2683:C:N4	59:DA:2728:U:O4'	2.48	0.46
59:DA:2778:A:HO2'	59:DA:2780:G:H8	1.56	0.46
2:AC:197:GLY:HA3	21:AA:1057:G:O3'	2.15	0.46
3:AD:24:GLU:H	3:AD:24:GLU:HG2	1.42	0.46
3:AD:115:ARG:HB2	21:AA:407:G:H4'	1.96	0.46
6:AG:116:ALA:O	6:AG:120:ILE:HG12	2.15	0.46
8:AI:127:LYS:NZ	22:AW:34:C:OP2	2.23	0.46
11:AL:52:LEU:C	11:AL:53:ARG:HD2	2.40	0.46
13:AN:43:CYS:O	13:AN:46:GLU:HG2	2.16	0.46
14:AO:17:ARG:HA	14:AO:17:ARG:NE	2.30	0.46
20:AY:24:GLY:HA3	61:AY:701:GDP:C8	2.50	0.46
20:AY:425:SER:HA	20:AY:428:LEU:HD23	1.96	0.46
21:AA:139:G:N2	21:AA:224:C:N3	2.64	0.46
21:AA:633:G:H2'	21:AA:634:C:H6	1.79	0.46
21:AA:1436:U:H3'	21:AA:1437:C:C6	2.50	0.46
22:AW:4:U:O2'	59:BA:1850:G:O3'	2.32	0.46
24:AX:50:G:O6	24:AX:64:U:C4	2.62	0.46
25:BC:165:ARG:HG3	25:BC:166:ASN:N	2.30	0.46
27:BE:62:PRO:HB2	27:BE:66:HIS:NE2	2.30	0.46
27:BE:137:HIS:NE2	59:BA:2050:C:H5''	2.30	0.46
28:BF:102:PRO:HA	59:BA:607:U:OP2	2.16	0.46
28:BF:155:LEU:HB3	28:BF:189:THR:OG1	2.15	0.46
29:BG:25:TYR:HE1	29:BG:30:GLU:HG2	1.80	0.46
33:BN:69:GLN:O	33:BN:87:LEU:HD23	2.16	0.46
40:BU:62:ILE:HG23	40:BU:76:TYR:CE1	2.50	0.46
48:B2:59:ARG:HB3	59:BA:76:C:O3'	2.15	0.46
50:B4:6:HIS:O	50:B4:8:LYS:N	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:Bh:14:UNK:C	58:Bh:16:UNK:H	2.28	0.46
59:BA:605:C:H2'	59:BA:606:U:O4'	2.15	0.46
59:BA:631:A:H2'	59:BA:632:A:O4'	2.15	0.46
59:BA:787:U:H3'	59:BA:791:C:H41	1.79	0.46
59:BA:917:A:C2	60:BB:80:U:H1'	2.50	0.46
59:BA:1575:C:H2'	59:BA:1576:U:C6	2.50	0.46
59:BA:1751:C:H2'	59:BA:1752:C:C6	2.50	0.46
59:BA:1889:A:N3	59:BA:2086:U:O2'	2.48	0.46
59:BA:2131:G:OP1	59:BA:2133:G:H1'	2.14	0.46
59:BA:2692:C:O2	59:BA:2847:U:O2'	2.17	0.46
60:BB:24:G:C6	60:BB:56:G:C2	3.04	0.46
1:CB:96:ARG:HH12	1:CB:147:LYS:NZ	2.13	0.46
8:CI:111:ARG:HH12	21:CA:1187:G:H4'	1.80	0.46
11:CL:80:HIS:O	11:CL:82:VAL:N	2.42	0.46
11:CL:104:VAL:HG23	11:CL:106:ASP:H	1.80	0.46
12:CM:91:ARG:NH1	12:CM:100:GLY:HA2	2.30	0.46
13:CN:4:LYS:O	13:CN:7:ILE:HG12	2.16	0.46
20:CY:139:MET:HE3	20:CY:174:PHE:CZ	2.51	0.46
21:CA:740:U:H2'	21:CA:741:G:H8	1.79	0.46
21:CA:838(A):U:O2'	21:CA:838(B):C:H5''	2.15	0.46
21:CA:1070:U:O2	21:CA:1105:A:N1	2.48	0.46
21:CA:1176:A:H2'	21:CA:1177:G:O4'	2.16	0.46
21:CA:1422:G:H2'	21:CA:1423:G:C8	2.49	0.46
33:DN:104:LYS:HD3	33:DN:121:LYS:C	2.41	0.46
35:DP:35:HIS:H	59:DA:1190:G:C5'	2.26	0.46
37:DR:28:LEU:HA	37:DR:34:ILE:HD13	1.97	0.46
54:D8:42:ARG:HD3	59:DA:2349:G:H3'	1.97	0.46
59:DA:438:G:H2'	59:DA:439:G:C8	2.50	0.46
59:DA:503:A:H5'	59:DA:505:A:H5''	1.97	0.46
59:DA:1316:U:O2	59:DA:1336:A:N1	2.49	0.46
59:DA:2400:G:H1	59:DA:2416:C:H42	1.64	0.46
59:DA:2465:C:N3	59:DA:2485:G:O6	2.48	0.46
2:AC:150:LYS:HB2	2:AC:173:VAL:HG11	1.96	0.46
16:AQ:100:LYS:NZ	21:AA:246:A:OP2	2.48	0.46
18:AS:19:VAL:HG11	18:AS:44:MET:HG2	1.97	0.46
18:AS:36:ARG:HD2	18:AS:52:TYR:O	2.16	0.46
20:AY:96:ARG:HA	20:AY:99:ARG:HD2	1.97	0.46
20:AY:125:ALA:C	20:AY:127:LYS:H	2.22	0.46
20:AY:343:ASN:ND2	20:AY:346:LYS:O	2.48	0.46
21:AA:919:A:H2'	21:AA:920:U:H6	1.80	0.46
25:BC:7:ARG:NE	59:BA:2128:C:H5''	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:5:LYS:HB2	26:BD:5:LYS:HE3	1.55	0.46
27:BE:54:GLN:HB2	27:BE:75:VAL:HB	1.96	0.46
29:BG:57:ALA:HA	29:BG:60:LEU:HD23	1.98	0.46
30:BH:88:LEU:HB3	30:BH:130:ARG:HG3	1.98	0.46
37:BR:9:LYS:HE3	59:BA:1652:A:OP1	2.15	0.46
38:BS:99:LYS:O	38:BS:101:LEU:N	2.49	0.46
39:BT:33:LYS:HG3	39:BT:43:GLN:HB3	1.98	0.46
39:BT:34:VAL:HG13	39:BT:39:ARG:HA	1.96	0.46
41:BV:3:ALA:HA	41:BV:40:LEU:HB3	1.97	0.46
53:B7:5:TRP:HA	53:B7:5:TRP:CE3	2.51	0.46
59:BA:638:G:H2'	59:BA:639:U:C6	2.51	0.46
59:BA:687:C:N3	59:BA:787:U:H4'	2.30	0.46
59:BA:695:G:H1	59:BA:767:U:H3	1.64	0.46
59:BA:756:C:H2'	59:BA:757:U:O4'	2.15	0.46
59:BA:800:A:O4'	59:BA:802:A:H5'	2.14	0.46
59:BA:827:U:H4'	59:BA:828:U:O2	2.15	0.46
59:BA:845:G:N2	59:BA:845:G:OP2	2.49	0.46
59:BA:960:A:H4'	59:BA:2456:C:O2'	2.16	0.46
59:BA:1174:U:H2'	59:BA:1175:G:C8	2.49	0.46
59:BA:1388:G:H2'	59:BA:1389:G:H8	1.80	0.46
59:BA:1427:A:H4'	59:BA:1428:C:O4'	2.15	0.46
59:BA:2106:G:C2	59:BA:2107:C:H1'	2.50	0.46
59:BA:2637:U:H3'	59:BA:2638:G:C8	2.51	0.46
60:BB:48:A:H2'	60:BB:49:C:C6	2.51	0.46
1:CB:96:ARG:HH22	1:CB:147:LYS:HE2	1.81	0.46
1:CB:156:LYS:HD2	1:CB:156:LYS:N	2.30	0.46
11:CL:26:ALA:HB1	11:CL:30:ALA:HB3	1.97	0.46
11:CL:80:HIS:HB2	11:CL:81:SER:H	1.57	0.46
12:CM:13:LYS:H	12:CM:45:VAL:HG12	1.80	0.46
17:CR:53:ARG:HD2	17:CR:59:SER:HA	1.97	0.46
19:CT:22:ARG:HD3	21:CA:324:G:OP1	2.15	0.46
19:CT:28:ALA:O	19:CT:31:SER:OG	2.30	0.46
20:CY:207:ASP:HA	20:CY:210:ARG:HG2	1.98	0.46
20:CY:227:ILE:HA	20:CY:230:LYS:HB3	1.97	0.46
20:CY:339:SER:OG	20:CY:340:TYR:N	2.49	0.46
20:CY:572:TYR:HB3	20:CY:582:PHE:CZ	2.50	0.46
21:CA:55:A:H62	21:CA:357:G:N2	2.13	0.46
21:CA:66:G:C6	21:CA:104:G:C2	3.04	0.46
21:CA:272:C:H2'	21:CA:273:A:H8	1.81	0.46
21:CA:322:C:H5	21:CA:328:C:H5	1.63	0.46
21:CA:413:G:N2	21:CA:428:G:O2'	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:445:G:H1	21:CA:489:C:N4	2.12	0.46
21:CA:591:U:H2'	21:CA:592:G:C8	2.50	0.46
21:CA:1090:U:H2'	21:CA:1091:U:C6	2.51	0.46
21:CA:1491:G:H3'	63:CA:1601:NMV:O3	2.15	0.46
24:CX:55:U:N3	24:CX:58:A:N7	2.63	0.46
24:CX:78:ACE:CH3	59:DA:2451:A:H1'	2.45	0.46
25:DC:61:GLY:HA3	25:DC:164:PHE:CD1	2.50	0.46
27:DE:39:PRO:HA	27:DE:43:GLY:C	2.41	0.46
27:DE:50:GLY:CA	27:DE:78:LEU:HB3	2.43	0.46
33:DN:14:VAL:HG12	33:DN:15:LEU:N	2.31	0.46
33:DN:19:GLU:HG3	33:DN:20:GLY:H	1.80	0.46
34:DO:28:SER:HB3	59:DA:2566:A:N1	2.30	0.46
35:DP:49:ARG:HD2	54:D8:59:LYS:HD2	1.96	0.46
38:DS:17:ARG:HA	38:DS:20:ARG:HG3	1.98	0.46
38:DS:21:THR:C	38:DS:23:ARG:N	2.73	0.46
38:DS:52:SER:HB3	38:DS:55:ALA:HB3	1.98	0.46
39:DT:53:ARG:HH21	39:DT:55:ASN:CG	2.24	0.46
42:DW:3:ALA:O	42:DW:106:ILE:HG23	2.14	0.46
59:DA:355:G:H2'	59:DA:356:G:H8	1.80	0.46
59:DA:1000:A:H62	59:DA:1154:G:H2'	1.79	0.46
59:DA:1408:C:H2'	59:DA:1409:C:C6	2.50	0.46
59:DA:1844:C:N4	59:DA:1896:G:H1	2.14	0.46
59:DA:2534:A:H2'	59:DA:2535:G:C8	2.50	0.46
2:AC:119:ARG:O	2:AC:123:GLN:HG3	2.15	0.46
8:AI:74:ILE:HA	8:AI:77:ILE:HD12	1.97	0.46
9:AJ:40:LEU:HD21	21:AA:1280:A:H5''	1.96	0.46
10:AK:43:SER:H	10:AK:71:LYS:NZ	2.13	0.46
10:AK:85:ARG:HE	10:AK:111:ASP:HB3	1.81	0.46
13:AN:22:THR:OG1	21:AA:1359:C:OP2	2.34	0.46
15:AP:72:ARG:NH1	21:AA:452:A:N3	2.64	0.46
20:AY:311:ALA:O	20:AY:399:LEU:HD11	2.15	0.46
20:AY:655:TYR:HB3	20:AY:669:PHE:CZ	2.51	0.46
21:AA:302:G:O2'	21:AA:556:C:H5'	2.16	0.46
24:AX:3:G:O6	24:AX:70:C:C4	2.68	0.46
25:BC:177:GLY:C	25:BC:179:ALA:H	2.23	0.46
26:BD:93:ALA:N	26:BD:107:ALA:HB2	2.30	0.46
26:BD:222:ARG:N	59:BA:1789:A:OP1	2.36	0.46
30:BH:70:THR:O	30:BH:73:ALA:N	2.48	0.46
32:BK:115:LEU:HB3	32:BK:116:ASN:H	1.55	0.46
33:BN:35:ARG:HD3	33:BN:76:SER:N	2.31	0.46
36:BQ:39:PRO:N	36:BQ:99:PRO:HD3	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BR:87:TYR:HA	37:BR:90:ARG:HB3	1.96	0.46
50:B4:9:LEU:O	50:B4:10:VAL:HB	2.15	0.46
55:B9:27:CYS:SG	55:B9:28:GLU:N	2.88	0.46
59:BA:782:A:H8	59:BA:782:A:O5'	1.97	0.46
59:BA:1299:G:O2'	59:BA:1301:A:N6	2.48	0.46
59:BA:1336:A:H2'	59:BA:1337:G:H8	1.76	0.46
59:BA:1766:U:H2'	59:BA:1767:C:C6	2.50	0.46
59:BA:2186:G:H2'	59:BA:2187:G:H8	1.80	0.46
59:BA:2615:U:H2'	59:BA:2616:C:C6	2.51	0.46
59:BA:2692:C:H1'	59:BA:2847:U:H1'	1.96	0.46
1:CB:24:TRP:H	1:CB:24:TRP:CD1	2.33	0.46
3:CD:10:ARG:HG2	3:CD:40:PRO:HG3	1.96	0.46
3:CD:104:VAL:O	3:CD:108:LEU:HB2	2.16	0.46
4:CE:103:GLY:C	4:CE:106:PRO:HD2	2.40	0.46
6:CG:98:SER:O	6:CG:101:LEU:HB2	2.16	0.46
21:CA:174:C:H2'	21:CA:175:C:H6	1.81	0.46
21:CA:186(B):C:H2'	21:CA:186(C):G:O4'	2.16	0.46
21:CA:232:G:H2'	21:CA:233:C:H6	1.80	0.46
21:CA:258:G:C2	21:CA:259:G:C5	3.03	0.46
21:CA:407:G:N2	21:CA:435:C:N3	2.56	0.46
21:CA:545:C:H1'	21:CA:549:C:H5''	1.97	0.46
21:CA:637:G:C2	21:CA:638:G:H1'	2.51	0.46
21:CA:638:G:H2'	21:CA:639:G:C8	2.51	0.46
21:CA:692:U:O2'	21:CA:694:A:N7	2.42	0.46
21:CA:957:U:N3	21:CA:960:U:OP2	2.24	0.46
21:CA:1405:G:C8	63:CA:1601:NMY:N19	2.83	0.46
21:CA:1440(D):A:H1'	21:CA:1440(E):G:H8	1.80	0.46
25:DC:9:ARG:O	25:DC:12:LEU:HB3	2.16	0.46
28:DF:178:PRO:HB2	28:DF:201:VAL:HG21	1.96	0.46
33:DN:38:HIS:CE1	59:DA:1006:C:H4'	2.49	0.46
33:DN:95:PRO:O	33:DN:104:LYS:HD2	2.15	0.46
34:DO:24:VAL:HA	34:DO:39:ILE:HA	1.98	0.46
34:DO:39:ILE:HD12	34:DO:41:ALA:HB2	1.98	0.46
34:DO:104:ARG:NH1	39:DT:35:LYS:HA	2.30	0.46
35:DP:107:LYS:NZ	59:DA:623:G:N7	2.63	0.46
37:DR:98:LEU:HD21	59:DA:2882:A:O3'	2.15	0.46
39:DT:11:GLU:O	39:DT:13:ARG:N	2.48	0.46
39:DT:53:ARG:HB3	39:DT:53:ARG:NH1	2.31	0.46
43:DX:15:GLU:HA	43:DX:18:TYR:HD2	1.80	0.46
47:D1:7:ILE:H	47:D1:7:ILE:HD12	1.81	0.46
47:D1:64:ALA:HB3	59:DA:397:G:OP1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D5:12:SER:HB2	59:DA:2020:A:H5'	1.96	0.46
53:D7:34:ARG:NH2	59:DA:467:G:OP2	2.49	0.46
59:DA:438:G:H2'	59:DA:439:G:H8	1.81	0.46
59:DA:576:U:H2'	59:DA:577:G:H8	1.80	0.46
59:DA:679:C:H2'	59:DA:680:G:C8	2.48	0.46
59:DA:734:A:H2'	59:DA:735:A:C8	2.50	0.46
59:DA:1178:C:H2'	59:DA:1179:C:H6	1.80	0.46
59:DA:1833:U:C4	59:DA:1834:U:C4	3.03	0.46
59:DA:2589:A:N1	59:DA:2605:U:O4	2.48	0.46
59:DA:2834:G:H1'	59:DA:2883:A:H61	1.80	0.46
60:DB:13:A:N3	60:DB:13:A:H2'	2.31	0.46
60:DB:39:A:H1'	60:DB:46:A:N1	2.29	0.46
1:AB:68:ILE:HA	1:AB:161:ALA:O	2.16	0.46
3:AD:133:VAL:HG13	21:AA:619:U:N1	2.31	0.46
3:AD:165:MET:O	3:AD:167:GLY:N	2.49	0.46
8:AI:17:VAL:HG13	8:AI:63:ILE:HD12	1.97	0.46
8:AI:75:ASP:O	8:AI:78:LYS:HB3	2.14	0.46
10:AK:51:LYS:CA	10:AK:55:LYS:HB2	2.46	0.46
11:AL:52:LEU:O	11:AL:53:ARG:HB2	2.15	0.46
20:AY:553:GLY:HA3	20:AY:558:PHE:O	2.16	0.46
20:AY:567:LEU:CD2	20:AY:568:TYR:H	2.24	0.46
25:BC:104:ILE:HG22	25:BC:128:LEU:HD22	1.96	0.46
26:BD:140:THR:HG22	26:BD:141:VAL:H	1.81	0.46
27:BE:113:PHE:N	59:BA:2823:A:OP1	2.47	0.46
28:BF:106:ARG:HD2	28:BF:107:LYS:HE2	1.96	0.46
30:BH:41:MET:HA	30:BH:55:PRO:HD3	1.97	0.46
32:BK:101:TRP:HB2	32:BK:141:ALA:HB3	1.98	0.46
33:BN:93:THR:HB	33:BN:97:ARG:HH12	1.81	0.46
40:BU:80:ILE:HB	59:BA:1152:C:H4'	1.96	0.46
48:B2:56:GLN:O	48:B2:59:ARG:HG3	2.16	0.46
52:B6:8:LYS:NZ	52:B6:27:LYS:HD3	2.31	0.46
59:BA:57:C:H2'	59:BA:58:G:O4'	2.16	0.46
59:BA:101:G:O2'	59:BA:102:G:OP1	2.33	0.46
59:BA:2510:C:H2'	59:BA:2511:U:H5'	1.98	0.46
59:BA:2557:G:C2	59:BA:2558:C:C2	3.04	0.46
59:BA:2672:G:H2'	59:BA:2673:G:H8	1.81	0.46
60:BB:23:G:C6	60:BB:60:C:N4	2.78	0.46
1:CB:163:PHE:HZ	1:CB:187:LEU:HB2	1.80	0.46
7:CH:108:GLY:O	7:CH:109:ILE:HB	2.15	0.46
10:CK:62:GLN:OE1	10:CK:97:ALA:HB2	2.16	0.46
13:CN:2:ALA:HB3	21:CA:983:A:H5'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:67:LYS:C	16:CQ:69:LYS:N	2.71	0.46
20:CY:14:ASN:HA	20:CY:80:ASN:O	2.16	0.46
21:CA:1132:C:H2'	21:CA:1133:G:H8	1.80	0.46
21:CA:1227:A:H8	21:CA:1227:A:O5'	1.98	0.46
21:CA:1463:C:H2'	21:CA:1464:G:O4'	2.15	0.46
26:DD:50:THR:HA	59:DA:1805:U:O2'	2.16	0.46
26:DD:65:ILE:H	26:DD:65:ILE:HD13	1.80	0.46
27:DE:33:VAL:HG22	27:DE:36:ARG:HE	1.80	0.46
28:DF:10:PRO:HB2	28:DF:17:ARG:HB2	1.97	0.46
28:DF:68:LYS:HB3	28:DF:69:HIS:H	1.50	0.46
29:DG:59:GLU:O	29:DG:63:ILE:HG23	2.16	0.46
30:DH:115:VAL:HG21	30:DH:151:ILE:HD11	1.98	0.46
30:DH:158:HIS:HB2	30:DH:159:GLU:H	1.50	0.46
32:DK:91:PRO:HB3	32:DK:134:MET:C	2.40	0.46
33:DN:33:LEU:HD23	33:DN:48:MET:HG2	1.97	0.46
33:DN:107:LEU:HD12	33:DN:117:PHE:CZ	2.49	0.46
33:DN:135:PRO:O	33:DN:137:LYS:N	2.49	0.46
35:DP:16:ARG:NH1	35:DP:18:ARG:HD2	2.31	0.46
35:DP:62:LEU:HD12	54:D8:30:ARG:NH2	2.31	0.46
35:DP:86:LYS:HA	35:DP:86:LYS:HD2	1.74	0.46
39:DT:3:ARG:HG2	59:DA:2876:G:H4'	1.97	0.46
51:D5:45:VAL:HG11	51:D5:51:TYR:N	2.28	0.46
54:D8:46:ARG:HG2	54:D8:47:LYS:H	1.81	0.46
59:DA:142:G:H2'	59:DA:143:C:H6	1.79	0.46
59:DA:480:A:N1	59:DA:505:A:N1	2.64	0.46
59:DA:637:A:C5	59:DA:652:U:H4'	2.51	0.46
59:DA:678:C:H42	59:DA:799:G:H1	1.63	0.46
59:DA:1120:G:H2'	59:DA:1121:C:C6	2.50	0.46
59:DA:1468(L):G:H1	59:DA:1506(F):C:H42	1.62	0.46
59:DA:1544:A:C5	59:DA:1545:A:N6	2.83	0.46
59:DA:1751:C:H2'	59:DA:1752:C:C6	2.51	0.46
59:DA:2133:G:C2	59:DA:2158:A:N6	2.80	0.46
60:DB:32:C:N3	60:DB:50:G:O6	2.48	0.46
3:AD:24:GLU:C	3:AD:26:CYS:H	2.24	0.46
3:AD:118:ARG:HH11	21:AA:403:C:H5''	1.81	0.46
3:AD:118:ARG:NH1	21:AA:403:C:H5''	2.31	0.46
6:AG:15:ASP:HB3	6:AG:20:ASP:H	1.81	0.46
8:AI:8:GLY:O	8:AI:76:ALA:HB1	2.15	0.46
8:AI:111:ARG:HA	21:AA:1369:C:OP2	2.15	0.46
10:AK:29:ILE:HA	10:AK:43:SER:O	2.16	0.46
10:AK:79:SER:HB3	10:AK:106:LYS:HE2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:81:LYS:HB3	19:AT:81:LYS:HE2	1.70	0.46
20:AY:24:GLY:O	20:AY:26:THR:N	2.48	0.46
20:AY:77:HIS:CD2	20:AY:277:VAL:HB	2.50	0.46
20:AY:406:GLU:HG3	20:AY:407:PRO:HD2	1.98	0.46
20:AY:679:VAL:O	20:AY:681:LYS:N	2.49	0.46
21:AA:39:G:H2'	21:AA:40:C:H6	1.81	0.46
21:AA:522:C:H1'	21:AA:536:C:H5''	1.96	0.46
21:AA:1481:U:H2'	21:AA:1482:G:C8	2.51	0.46
25:BC:76:LEU:HA	25:BC:93:ASP:O	2.15	0.46
26:BD:35:LYS:HE3	26:BD:35:LYS:HB3	1.71	0.46
27:BE:191:PRO:HB3	59:BA:2820:A:C8	2.51	0.46
28:BF:90:PHE:CB	59:BA:588:U:H1'	2.46	0.46
33:BN:35:ARG:HH12	33:BN:82:LEU:HB3	1.80	0.46
36:BQ:98:LYS:HB3	45:BZ:79:ARG:HH12	1.81	0.46
44:BY:31:LEU:HA	44:BY:32:PRO:HA	1.65	0.46
54:B8:26:LYS:HA	54:B8:47:LYS:HD2	1.97	0.46
59:BA:29:U:H3	59:BA:511:U:H3	1.64	0.46
59:BA:697:C:H2'	59:BA:698:C:C6	2.51	0.46
59:BA:798:G:H2'	59:BA:799:G:C8	2.50	0.46
59:BA:821:A:H2'	59:BA:946:G:O4'	2.15	0.46
59:BA:1046:A:H5''	59:BA:1047:G:C8	2.50	0.46
59:BA:1498:C:H2'	59:BA:1499:C:O4'	2.15	0.46
59:BA:2135:A:H1'	59:BA:2160:G:H4'	1.97	0.46
3:CD:117:ALA:O	3:CD:120:LEU:HG	2.16	0.46
18:CS:49:ILE:O	18:CS:59:PRO:HA	2.15	0.46
20:CY:13:ARG:HH12	20:CY:282:SER:HB3	1.81	0.46
20:CY:465:ARG:O	20:CY:465:ARG:HD2	2.16	0.46
21:CA:286:G:H2'	21:CA:287:U:H6	1.81	0.46
21:CA:701:C:OP1	21:CA:702:A:O2'	2.33	0.46
21:CA:925:G:H1'	21:CA:1502:A:C8	2.51	0.46
21:CA:936:C:H1'	21:CA:1383:C:H42	1.80	0.46
21:CA:1472:U:H2'	21:CA:1473:A:C8	2.49	0.46
21:CA:1493:A:H5'	63:CA:1601:NMY:H9	1.98	0.46
22:CW:27:C:H2'	22:CW:28:A:H8	1.79	0.46
26:DD:86:PRO:HB3	59:DA:1567:A:OP2	2.16	0.46
28:DF:170:LEU:HD13	28:DF:171:PRO:HD2	1.97	0.46
30:DH:17:VAL:HB	30:DH:45:VAL:HG21	1.98	0.46
30:DH:19:VAL:HG11	30:DH:43:VAL:O	2.15	0.46
31:DJ:50:UNK:O	31:DJ:82:UNK:N	2.49	0.46
38:DS:26:LEU:CG	38:DS:39:ILE:HG13	2.38	0.46
44:DY:11:ASP:CG	44:DY:12:THR:H	2.24	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D3:22:ALA:O	49:D3:26:LEU:HG	2.16	0.46
52:D6:10:LEU:HB2	54:D8:34:TRP:HB2	1.98	0.46
59:DA:1556:C:H2'	59:DA:1557:C:C6	2.51	0.46
59:DA:2024:G:OP2	59:DA:2034:U:H4'	2.16	0.46
59:DA:2428:G:H5''	59:DA:2429:G:O5'	2.14	0.46
59:DA:2429:G:H3'	59:DA:2429:G:OP2	2.16	0.46
2:AC:180:ALA:HB1	2:AC:203:PHE:CE1	2.51	0.46
3:AD:171:GLY:HA2	3:AD:194:LEU:HD11	1.96	0.46
4:AE:155:GLU:CD	7:AH:66:GLY:HA2	2.41	0.46
5:AF:74:ASP:OD1	5:AF:74:ASP:N	2.33	0.46
10:AK:69:ALA:O	10:AK:73:MET:HG2	2.16	0.46
11:AL:31:PRO:HG2	11:AL:32:PHE:CD2	2.51	0.46
11:AL:34:ARG:N	21:AA:363:A:OP1	2.49	0.46
11:AL:34:ARG:HB3	11:AL:60:LEU:C	2.40	0.46
11:AL:34:ARG:O	11:AL:83:VAL:N	2.49	0.46
13:AN:40:CYS:HB3	13:AN:43:CYS:SG	2.56	0.46
16:AQ:81:ARG:HB3	16:AQ:82:MET:H	1.33	0.46
19:AT:76:ALA:HB1	19:AT:79:ARG:HH21	1.81	0.46
20:AY:106:VAL:HG23	20:AY:132:ARG:HG3	1.98	0.46
21:AA:155:C:H2'	21:AA:156:G:C8	2.50	0.46
21:AA:235:C:H2'	21:AA:236:G:H8	1.79	0.46
21:AA:413:G:N2	21:AA:428:G:O2'	2.49	0.46
21:AA:504:C:H2'	21:AA:511:C:H5	1.81	0.46
21:AA:516:U:C2	21:AA:533:A:N7	2.84	0.46
21:AA:821:G:H2'	21:AA:822:C:C6	2.51	0.46
21:AA:920:U:H2'	21:AA:921:U:C6	2.50	0.46
21:AA:1130:A:N6	21:AA:1131:G:O6	2.49	0.46
21:AA:1491:G:H3'	63:AA:1601:NMY:O3	2.15	0.46
25:BC:144:GLY:C	25:BC:150:ILE:HD11	2.40	0.46
26:BD:202:LYS:HB3	59:BA:1820:U:H1'	1.98	0.46
27:BE:4:ILE:HD13	27:BE:5:LEU:H	1.81	0.46
28:BF:45:ARG:NH2	59:BA:443:A:H3'	2.30	0.46
28:BF:172:TRP:CD1	28:BF:172:TRP:H	2.34	0.46
29:BG:71:THR:OG1	59:BA:2312:U:O3'	2.34	0.46
32:BK:16:LYS:H	32:BK:38:VAL:HG11	1.81	0.46
33:BN:22:THR:O	33:BN:26:LEU:HD13	2.16	0.46
39:BT:23:ARG:O	39:BT:25:GLY:N	2.49	0.46
41:BV:95:LEU:O	41:BV:96:ILE:O	2.33	0.46
42:BW:10:VAL:O	42:BW:100:THR:OG1	2.27	0.46
43:BX:63:LYS:HD2	59:BA:1312:U:P	2.55	0.46
54:B8:42:ARG:CZ	59:BA:2382:G:H21	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:329:G:OP1	59:BA:329:G:H8	1.98	0.46
59:BA:449:A:H8	59:BA:449:A:O5'	1.98	0.46
59:BA:974:G:C2	59:BA:1186:G:H1'	2.50	0.46
59:BA:1674:G:H21	59:BA:1677:A:N6	2.13	0.46
59:BA:1832:C:C2	63:BA:2902:NMY:N6	2.82	0.46
59:BA:1936:A:N3	59:BA:1940:U:N3	2.64	0.46
59:BA:1972:A:H4'	63:BA:2904:NMY:H21	1.97	0.46
59:BA:2025:C:H2'	59:BA:2026:C:C5	2.51	0.46
59:BA:2069:G:H2'	59:BA:2070:G:H8	1.81	0.46
59:BA:2081:C:H2'	59:BA:2082:A:C8	2.49	0.46
59:BA:2202(D):G:H3'	59:BA:2202(D):G:N3	2.31	0.46
59:BA:2647:U:H2'	59:BA:2648:C:H6	1.79	0.46
3:CD:175:SER:HB3	3:CD:184:LYS:HB2	1.97	0.46
4:CE:122:GLU:HG2	4:CE:123:LEU:N	2.31	0.46
6:CG:57:GLU:HB3	6:CG:58:PRO:HD2	1.97	0.46
7:CH:10:LEU:HD22	7:CH:83:ILE:HG13	1.98	0.46
7:CH:30:ARG:CZ	21:CA:590:C:H5'	2.46	0.46
7:CH:98:LYS:HD3	7:CH:98:LYS:H	1.80	0.46
10:CK:87:THR:O	10:CK:89:ALA:N	2.49	0.46
13:CN:2:ALA:CB	21:CA:983:A:H5'	2.46	0.46
19:CT:65:LYS:HE2	19:CT:68:LYS:HZ2	1.80	0.46
21:CA:505:G:OP2	21:CA:535:A:H5'	2.16	0.46
21:CA:623:C:H2'	21:CA:624:C:H6	1.80	0.46
21:CA:666:G:H4'	21:CA:731:G:N2	2.31	0.46
21:CA:900:A:H2'	21:CA:901:A:C8	2.50	0.46
21:CA:1264:C:H2'	21:CA:1265:G:H8	1.80	0.46
21:CA:1406:U:OP2	63:CA:1601:NMY:H232	2.15	0.46
21:CA:1438:G:H2'	21:CA:1439:C:O4'	2.16	0.46
21:CA:1522:U:H2'	21:CA:1523:G:C8	2.51	0.46
21:CA:1532:U:O2'	21:CA:1533:C:OP1	2.33	0.46
25:DC:53:ARG:HE	25:DC:54:ARG:H	1.64	0.46
25:DC:75:VAL:HA	25:DC:112:ASP:O	2.15	0.46
27:DE:120:TRP:CE2	27:DE:155:LYS:HB3	2.50	0.46
27:DE:123:ALA:HB3	59:DA:2511:U:H5''	1.98	0.46
30:DH:177:GLY:HA3	59:DA:2531:A:OP1	2.16	0.46
34:DO:60:ALA:N	34:DO:87:ILE:HG12	2.31	0.46
35:DP:25:SER:O	35:DP:30:THR:HA	2.16	0.46
36:DQ:22:LYS:HA	59:DA:863:A:OP1	2.16	0.46
41:DV:77:ALA:C	41:DV:79:VAL:H	2.22	0.46
45:DZ:74:VAL:HB	45:DZ:76:LEU:CD2	2.46	0.46
46:D0:49:LYS:HB2	46:D0:80:HIS:HB3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:63:U:H1'	59:DA:64:A:C8	2.50	0.46
59:DA:69:C:H2'	59:DA:70:G:H8	1.80	0.46
59:DA:118:A:OP2	59:DA:119:A:H2'	2.16	0.46
59:DA:391:G:C4	59:DA:392:C:C6	3.04	0.46
59:DA:928:G:H3'	59:DA:929:G:C8	2.51	0.46
59:DA:948:G:H2'	59:DA:949:C:H6	1.81	0.46
59:DA:1054:A:C6	59:DA:1055:G:C6	3.04	0.46
59:DA:1166:C:C2	59:DA:1183:G:N2	2.75	0.46
59:DA:1328:G:H2'	59:DA:1330:C:C5	2.51	0.46
59:DA:1506(A):A:H2'	59:DA:1506(B):A:O4'	2.16	0.46
59:DA:2162:G:H1'	59:DA:2173:A:H1'	1.98	0.46
59:DA:2301:C:H2'	59:DA:2302:G:H8	1.80	0.46
59:DA:2305:A:H3'	59:DA:2306:C:H5''	1.98	0.46
59:DA:2698:U:H2'	59:DA:2699:C:C6	2.51	0.46
60:DB:62:C:C2	60:DB:63:G:C8	3.04	0.46
1:AB:96:ARG:HD3	21:AA:1099:G:OP1	2.16	0.46
3:AD:28:SER:HB2	3:AD:29:PRO:HD3	1.98	0.46
3:AD:72:GLU:O	3:AD:76:ARG:HB2	2.16	0.46
9:AJ:47:PHE:CE1	21:AA:1357:A:H4'	2.51	0.46
11:AL:104:VAL:HB	11:AL:105:TYR:CD1	2.51	0.46
20:AY:135:PHE:HA	20:AY:260:LEU:HA	1.98	0.46
20:AY:272:LEU:HG	20:AY:276:VAL:HG23	1.98	0.46
21:AA:68(T):G:C2	21:AA:68(U):U:H1'	2.51	0.46
21:AA:149:A:H2'	21:AA:150:C:C6	2.51	0.46
21:AA:300:A:H8	21:AA:300:A:O5'	1.99	0.46
25:BC:34:ALA:CB	25:BC:217:THR:HG21	2.46	0.46
25:BC:192:ALA:HA	25:BC:195:ARG:NE	2.31	0.46
26:BD:233:HIS:NE2	26:BD:242:ARG:HG3	2.31	0.46
27:BE:129:HIS:H	27:BE:129:HIS:HD1	1.64	0.46
28:BF:34:TRP:HZ2	59:BA:1244:G:O3'	1.99	0.46
28:BF:48:THR:HA	59:BA:38:A:O2'	2.16	0.46
33:BN:23:LEU:HB3	59:BA:1140:C:OP1	2.16	0.46
33:BN:108:PRO:HA	59:BA:2780:G:O6	2.16	0.46
47:B1:81:LYS:C	47:B1:82:LEU:HG	2.41	0.46
54:B8:52:LYS:NZ	59:BA:834:C:O2'	2.44	0.46
56:Be:74:VAL:HA	56:Be:78:LEU:HB3	1.98	0.46
56:Be:81:ILE:HD11	56:Be:84:LEU:HD12	1.97	0.46
59:BA:118:A:OP2	59:BA:119:A:H2'	2.15	0.46
59:BA:474:G:O2'	59:BA:510:C:OP2	2.34	0.46
59:BA:514:A:H2'	59:BA:515:A:C8	2.51	0.46
59:BA:520:G:C6	59:BA:521:G:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:635:C:O2'	59:BA:639:U:H5''	2.15	0.46
59:BA:685:A:C2	59:BA:787:U:H1'	2.51	0.46
59:BA:708:C:H2'	59:BA:709:U:H6	1.81	0.46
59:BA:734:A:H2'	59:BA:735:A:H8	1.80	0.46
59:BA:1043:C:N4	59:BA:1112:G:H1	2.14	0.46
59:BA:1278:A:H2'	59:BA:1279:G:H8	1.81	0.46
59:BA:1357:U:H2'	59:BA:1358:G:O4'	2.15	0.46
59:BA:2781:A:H8	59:BA:2781:A:OP2	1.99	0.46
11:CL:44:THR:HG22	11:CL:50:SER:HA	1.98	0.46
12:CM:29:ARG:HB3	12:CM:64:TRP:CZ2	2.51	0.46
16:CQ:73:VAL:HG12	16:CQ:74:LEU:N	2.30	0.46
16:CQ:92:ARG:O	16:CQ:95:TYR:HB2	2.15	0.46
17:CR:68:LYS:O	17:CR:72:ARG:HG3	2.16	0.46
18:CS:52:TYR:OH	21:CA:986:A:N3	2.33	0.46
19:CT:22:ARG:HH22	21:CA:105:G:P	2.39	0.46
20:CY:293:THR:OG1	20:CY:297:GLU:HG2	2.15	0.46
20:CY:413:ILE:HA	20:CY:476:VAL:HA	1.97	0.46
21:CA:333:G:H2'	21:CA:334:C:H6	1.79	0.46
21:CA:1277:C:O4'	21:CA:1282:C:H1'	2.16	0.46
24:CX:50:G:C6	24:CX:64:U:O4	2.63	0.46
26:DD:132:PRO:HB2	26:DD:135:PHE:HB2	1.98	0.46
32:DK:112:MET:H	32:DK:113:PRO:HD2	1.81	0.46
33:DN:38:HIS:CD2	59:DA:1006:C:H4'	2.51	0.46
35:DP:39:LYS:NZ	59:DA:805:G:OP2	2.47	0.46
40:DU:28:ARG:CZ	59:DA:532:A:H3'	2.46	0.46
41:DV:16:PRO:O	41:DV:96:ILE:HG13	2.16	0.46
42:DW:14:PRO:C	42:DW:18:ARG:HG3	2.40	0.46
44:DY:73:ARG:CZ	59:DA:335:C:H5'	2.45	0.46
45:DZ:27:VAL:HG21	60:DB:74:U:O2	2.16	0.46
48:D2:25:VAL:HG22	48:D2:60:LEU:HD13	1.97	0.46
52:D6:19:ARG:HD2	52:D6:19:ARG:N	2.31	0.46
55:D9:7:VAL:HB	55:D9:25:VAL:CG2	2.45	0.46
59:DA:911:A:H1'	59:DA:2264:C:H1'	1.98	0.46
59:DA:1265:A:H61	59:DA:2013:A:H3'	1.81	0.46
59:DA:1279:G:H2'	59:DA:1280:G:C8	2.50	0.46
59:DA:1322:A:H2'	59:DA:1323:U:H6	1.80	0.46
59:DA:1576:U:H2'	59:DA:1577:C:H6	1.81	0.46
59:DA:1674:G:H1'	59:DA:1676:A:H62	1.80	0.46
59:DA:1707:G:H2'	59:DA:1708:C:H6	1.79	0.46
59:DA:1831:G:N2	63:DA:2901:NMY:HN61	2.12	0.46
59:DA:2134:A:N7	59:DA:2157:G:C2	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:116:GLN:HG3	21:AA:407:G:O2'	2.15	0.46
5:AF:35:ALA:HB1	5:AF:65:VAL:HG21	1.98	0.46
7:AH:21:LYS:O	7:AH:23:SER:N	2.49	0.46
7:AH:30:ARG:NE	21:AA:591:U:OP2	2.46	0.46
9:AJ:19:SER:O	9:AJ:23:ILE:HG13	2.15	0.46
14:AO:51:HIS:O	14:AO:54:ARG:HB3	2.16	0.46
21:AA:838:G:H2'	21:AA:838(A):U:H5'	1.98	0.46
24:AX:2:G:N3	46:B0:5:LYS:HD2	2.31	0.46
25:BC:90:ALA:HB1	25:BC:155:ARG:HE	1.80	0.46
25:BC:131:ILE:HG13	25:BC:132:LEU:H	1.80	0.46
26:BD:67:PHE:HZ	26:BD:157:ARG:NH1	2.14	0.46
26:BD:165:ILE:HA	26:BD:175:LEU:HD22	1.98	0.46
27:BE:57:LYS:HD2	27:BE:57:LYS:H	1.81	0.46
30:BH:43:VAL:HG12	30:BH:52:VAL:HA	1.97	0.46
33:BN:45:ASN:OD1	33:BN:115:ARG:NE	2.48	0.46
33:BN:90:MET:SD	33:BN:93:THR:OG1	2.68	0.46
35:BP:13:ASN:CG	35:BP:14:LYS:H	2.24	0.46
36:BQ:41:TRP:HB3	36:BQ:94:VAL:HB	1.98	0.46
45:BZ:85:HIS:NE2	60:BB:75:G:O2'	2.45	0.46
49:B3:8:LEU:HG	49:B3:28:LEU:HD21	1.98	0.46
56:Be:63:ILE:HG22	56:Be:64:LEU:N	2.31	0.46
59:BA:391:G:H2'	59:BA:392:C:H6	1.81	0.46
59:BA:1294:U:H2'	59:BA:1295:C:H6	1.81	0.46
59:BA:1576:U:H2'	59:BA:1577:C:C6	2.51	0.46
59:BA:2065:C:H1'	59:BA:2449:U:C4	2.51	0.46
59:BA:2173:A:P	59:BA:2174:C:H5	2.39	0.46
59:BA:2508:G:O6	59:BA:2580:U:O4	2.34	0.46
59:BA:2581:G:H2'	59:BA:2581:G:N3	2.31	0.46
59:BA:2655:G:H1'	59:BA:2656:U:H5	1.80	0.46
2:CC:35:GLU:O	2:CC:39:ILE:HG13	2.15	0.46
2:CC:65:ALA:HA	2:CC:100:ALA:HB3	1.98	0.46
16:CQ:68:ARG:NH2	21:CA:277:C:OP1	2.49	0.46
21:CA:115:G:O6	21:CA:312:C:N3	2.49	0.46
21:CA:514:C:H2'	21:CA:515:G:O4'	2.16	0.46
21:CA:917:G:H2'	21:CA:918:A:O4'	2.16	0.46
25:DC:42:VAL:O	25:DC:43:GLU:C	2.58	0.46
26:DD:42:GLY:C	26:DD:44:ASN:H	2.24	0.46
26:DD:67:PHE:CZ	26:DD:157:ARG:HD3	2.51	0.46
27:DE:93:VAL:HB	27:DE:175:VAL:HG23	1.98	0.46
33:DN:101:HIS:CA	33:DN:105:GLY:HA3	2.46	0.46
38:DS:67:ARG:HA	38:DS:99:LYS:HB3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DU:59:ARG:NH2	59:DA:1154:G:H5'	2.31	0.46
42:DW:54:ALA:HB1	42:DW:107:LEU:HD11	1.98	0.46
45:DZ:139:VAL:HG12	45:DZ:155:LEU:HD13	1.96	0.46
54:D8:10:ALA:O	54:D8:14:VAL:HG12	2.16	0.46
59:DA:7:G:H1	59:DA:2896:C:H42	1.64	0.46
59:DA:69:C:H2'	59:DA:70:G:C8	2.51	0.46
59:DA:902:C:C2	59:DA:903:C:C5	3.03	0.46
59:DA:1438:U:H3	59:DA:1553:A:H62	1.64	0.46
59:DA:1832:C:C2	59:DA:1833:U:C6	3.03	0.46
59:DA:2065:C:H1'	59:DA:2449:U:N3	2.30	0.46
59:DA:2391:G:H1'	59:DA:2429:G:H21	1.78	0.46
59:DA:2682:U:OP2	59:DA:2721:A:H5''	2.16	0.46
59:DA:2689:U:H4'	59:DA:2690:C:O5'	2.16	0.46
60:DB:33:G:N2	60:DB:49:C:N3	2.52	0.46
1:AB:102:LEU:HB3	1:AB:180:LEU:HD12	1.98	0.45
7:AH:100:ILE:HG22	7:AH:101:PRO:O	2.16	0.45
8:AI:16:ARG:HB3	8:AI:64:THR:HB	1.97	0.45
11:AL:5:PRO:HD3	21:AA:568:G:O6	2.15	0.45
12:AM:75:ALA:O	12:AM:79:LYS:HG3	2.16	0.45
14:AO:49:ASP:OD2	14:AO:52:SER:OG	2.24	0.45
20:AY:344:THR:OG1	20:AY:390:VAL:HG13	2.17	0.45
20:AY:394:ALA:HA	20:AY:395:PRO:HD3	1.73	0.45
21:AA:944:G:N1	21:AA:1338:G:OP2	2.36	0.45
21:AA:1132:C:H2'	21:AA:1133:G:C8	2.51	0.45
21:AA:1220:G:H2'	21:AA:1221:G:C8	2.51	0.45
21:AA:1346:A:C4	21:AA:1374:A:H2	2.33	0.45
32:BK:32:ALA:HB1	32:BK:57:ILE:HG21	1.98	0.45
32:BK:137:GLU:HB2	32:BK:139:VAL:HG23	1.98	0.45
33:BN:128:HIS:O	33:BN:130:HIS:HB2	2.16	0.45
36:BQ:49:ALA:HB1	36:BQ:124:LYS:HD3	1.97	0.45
38:BS:48:LEU:HB3	38:BS:49:VAL:HG23	1.98	0.45
39:BT:19:LEU:HD22	39:BT:85:LYS:HB3	1.98	0.45
45:BZ:72:ARG:HB3	45:BZ:73:GLN:NE2	2.31	0.45
48:B2:49:LYS:O	48:B2:50:ILE:C	2.59	0.45
59:BA:31:C:H4'	59:BA:1238:G:H5'	1.98	0.45
59:BA:35:G:H2'	59:BA:36:G:O4'	2.16	0.45
59:BA:38:A:N6	59:BA:441:U:H3	2.14	0.45
59:BA:123:G:H3'	59:BA:124:G:C8	2.50	0.45
59:BA:489:G:OP1	59:BA:1284:A:H1'	2.16	0.45
59:BA:684:G:H2'	59:BA:774:A:H61	1.81	0.45
59:BA:689:A:H2'	59:BA:690:G:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:765:G:H2'	59:BA:766:C:C6	2.51	0.45
59:BA:920:G:H2'	59:BA:921:G:C8	2.50	0.45
59:BA:1056:G:H5''	59:BA:1057:A:O4'	2.15	0.45
59:BA:1762:A:H5''	59:BA:1763:G:OP2	2.16	0.45
59:BA:2268:A:C2'	59:BA:2269:A:H5''	2.45	0.45
59:BA:2491:U:H1'	59:BA:2569:G:H4'	1.96	0.45
59:BA:2550:G:H2'	59:BA:2551:C:C6	2.50	0.45
1:CB:104:ASN:HB3	1:CB:107:THR:HB	1.97	0.45
4:CE:43:LEU:HD22	4:CE:136:MET:HG3	1.97	0.45
5:CF:67:MET:HB2	5:CF:68:PRO:HD2	1.98	0.45
9:CJ:56:HIS:CE1	21:CA:1061:G:HO2'	2.35	0.45
11:CL:89:ARG:HG2	11:CL:95:GLY:O	2.16	0.45
20:CY:22:ASP:C	61:CY:701:GDP:H5''	2.41	0.45
20:CY:30:GLU:O	20:CY:33:LEU:HB3	2.16	0.45
20:CY:510:VAL:HG11	20:CY:589:ALA:HB2	1.98	0.45
21:CA:113:G:H2'	21:CA:114:U:H6	1.79	0.45
21:CA:598:U:H2'	21:CA:599:C:C6	2.50	0.45
21:CA:1323:G:H2'	21:CA:1324:A:H8	1.81	0.45
25:DC:47:LYS:CB	25:DC:212:SER:HB2	2.37	0.45
25:DC:78:ILE:HG22	25:DC:120:VAL:HG11	1.98	0.45
26:DD:85:ASP:OD2	26:DD:87:ASN:ND2	2.44	0.45
28:DF:153:SER:HB2	28:DF:189:THR:HG22	1.98	0.45
29:DG:44:GLY:HA3	59:DA:2311:A:N1	2.31	0.45
30:DH:148:ILE:O	30:DH:151:ILE:HB	2.16	0.45
33:DN:114:ARG:HH21	59:DA:527:C:H1'	0.39	0.45
36:DQ:24:GLY:HA2	59:DA:907:U:OP1	2.16	0.45
38:DS:35:ILE:HG21	38:DS:69:VAL:HG11	1.98	0.45
38:DS:93:LYS:HE3	60:DB:47:C:O2'	2.15	0.45
39:DT:6:LEU:O	39:DT:10:VAL:HG23	2.16	0.45
39:DT:26:ASP:HB3	39:DT:90:GLN:O	2.16	0.45
39:DT:64:ARG:HH21	39:DT:103:ARG:HG2	1.81	0.45
39:DT:82:LEU:HB2	39:DT:85:LYS:HB2	1.97	0.45
41:DV:13:ARG:NH2	41:DV:15:GLU:OE2	2.48	0.45
43:DX:25:LYS:HG2	43:DX:82:GLN:HB2	1.97	0.45
43:DX:63:LYS:HD2	59:DA:1312:U:OP1	2.16	0.45
44:DY:17:SER:OG	44:DY:18:GLY:N	2.48	0.45
44:DY:29:GLU:HB2	44:DY:38:ILE:O	2.17	0.45
47:D1:81:LYS:HE2	59:DA:270(I):G:H5'	1.98	0.45
48:D2:51:ARG:HB2	48:D2:55:ARG:NH2	2.31	0.45
54:D8:54:GLU:O	54:D8:57:ARG:HB2	2.16	0.45
59:DA:748:G:O6	59:DA:751:A:H4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:828:U:H4'	59:DA:831:G:N1	2.30	0.45
59:DA:1564:C:O2'	59:DA:1565:C:H5'	2.16	0.45
59:DA:1612:C:C4	59:DA:1613:G:C8	3.04	0.45
59:DA:2548:G:C2	59:DA:2549:G:H1'	2.50	0.45
59:DA:2690:C:H4'	59:DA:2872:G:N2	2.31	0.45
2:AC:47:LEU:O	2:AC:49:SER:N	2.38	0.45
3:AD:33:MET:C	3:AD:35:ARG:N	2.74	0.45
3:AD:106:TYR:HA	3:AD:111:ALA:HB3	1.98	0.45
4:AE:77:PRO:HG3	4:AE:143:ARG:O	2.16	0.45
4:AE:132:ALA:O	4:AE:135:THR:HB	2.17	0.45
5:AF:77:ARG:HH12	21:AA:671:G:H4'	1.81	0.45
9:AJ:51:ARG:HG3	21:AA:1060:C:H4'	1.97	0.45
9:AJ:57:LYS:HD2	9:AJ:57:LYS:HA	1.55	0.45
10:AK:99:GLN:HG2	10:AK:105:VAL:HG21	1.98	0.45
11:AL:17:LYS:HB3	11:AL:17:LYS:HE2	1.64	0.45
11:AL:35:GLY:HA3	11:AL:83:VAL:CG2	2.45	0.45
11:AL:87:GLY:HA2	11:AL:98:TYR:HD2	1.81	0.45
12:AM:111:LYS:NZ	21:AA:1227:A:H5''	2.32	0.45
15:AP:48:TRP:CD1	15:AP:48:TRP:H	2.34	0.45
21:AA:508:C:H1'	21:AA:509:A:N7	2.31	0.45
21:AA:660:G:H2'	21:AA:661:G:C8	2.51	0.45
21:AA:1300:G:HO2'	21:AA:1301:U:P	2.38	0.45
21:AA:1440(A):G:H4'	21:AA:1440(B):G:C8	2.52	0.45
22:AW:64:G:H2'	22:AW:65:U:C6	2.51	0.45
26:BD:2:ALA:O	26:BD:3:VAL:HB	2.16	0.45
26:BD:21:PHE:HZ	59:BA:1565:C:H3'	1.82	0.45
28:BF:25:PRO:HG2	28:BF:119:ARG:NH2	2.30	0.45
29:BG:43:LEU:O	29:BG:45:GLU:N	2.47	0.45
33:BN:7:LYS:HB3	33:BN:8:GLN:H	1.65	0.45
33:BN:117:PHE:CD1	59:BA:2780:G:C6	3.04	0.45
37:BR:100:LEU:HD22	37:BR:101:ALA:H	1.81	0.45
38:BS:15:ARG:HG2	59:BA:2334:G:N2	2.32	0.45
40:BU:27:LEU:O	40:BU:31:SER:N	2.49	0.45
43:BX:63:LYS:HD2	59:BA:1312:U:OP1	2.16	0.45
59:BA:307:G:H21	59:BA:330:A:H62	1.65	0.45
59:BA:373:U:O2'	59:BA:423:A:H1'	2.16	0.45
59:BA:477:A:H2'	59:BA:478:A:C8	2.51	0.45
59:BA:647:G:H8	59:BA:647:G:OP2	1.99	0.45
59:BA:904:C:C2	59:BA:905:U:C5	3.04	0.45
59:BA:1030:G:H2'	59:BA:1031:G:C8	2.50	0.45
59:BA:1291:C:H2'	59:BA:1292:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1817:G:H2'	59:BA:1818:U:H5'	1.98	0.45
59:BA:1971:A:OP1	63:BA:2904:NMY:N19	2.49	0.45
59:BA:1999:C:H1'	59:BA:2687:U:H1'	1.96	0.45
59:BA:2202(C):G:H3'	59:BA:2202(C):G:N3	2.30	0.45
1:CB:104:ASN:O	1:CB:108:ILE:HG12	2.17	0.45
2:CC:83:ARG:O	2:CC:87:LEU:HB2	2.16	0.45
4:CE:93:PRO:HA	4:CE:118:ILE:HD12	1.97	0.45
5:CF:69:GLU:HG2	5:CF:70:ASP:H	1.81	0.45
10:CK:52:GLY:O	10:CK:55:LYS:HB3	2.16	0.45
11:CL:75:HIS:HB2	11:CL:77:LEU:HG	1.98	0.45
12:CM:56:LEU:O	12:CM:60:VAL:HG23	2.16	0.45
14:CO:48:LYS:O	21:CA:667:G:O2'	2.34	0.45
16:CQ:52:LYS:HE3	16:CQ:52:LYS:HB3	1.84	0.45
20:CY:163:VAL:HG12	20:CY:164:MET:N	2.30	0.45
20:CY:335:LEU:HD21	20:CY:341:VAL:HG12	1.99	0.45
21:CA:59:A:N6	21:CA:331:G:H1'	2.32	0.45
21:CA:599:C:H2'	21:CA:600:C:C6	2.51	0.45
21:CA:859:A:H2'	21:CA:860:A:O4'	2.16	0.45
21:CA:963:G:H1	21:CA:972:C:H42	1.65	0.45
21:CA:1281:U:H5''	21:CA:1282:C:C5	2.51	0.45
21:CA:1430:C:H2'	21:CA:1431:C:C6	2.51	0.45
21:CA:1479:C:H2'	21:CA:1480:G:O4'	2.16	0.45
25:DC:77:ALA:HA	25:DC:114:VAL:O	2.17	0.45
26:DD:252:TRP:H	26:DD:252:TRP:CD1	2.33	0.45
27:DE:61:ARG:HB3	27:DE:62:PRO:HD2	1.98	0.45
28:DF:117:ARG:NH2	28:DF:186:ILE:O	2.49	0.45
28:DF:172:TRP:H	28:DF:172:TRP:CD1	2.34	0.45
35:DP:60:MET:C	59:DA:2392:A:HO2'	2.23	0.45
39:DT:8:LYS:HA	39:DT:11:GLU:CD	2.41	0.45
39:DT:96:ARG:NH2	59:DA:2848:G:H5''	2.30	0.45
40:DU:13:LYS:O	40:DU:16:LYS:HB3	2.17	0.45
48:D2:54:LYS:HE2	48:D2:55:ARG:NH1	2.25	0.45
59:DA:270(C):C:N3	59:DA:270(W):G:N2	2.55	0.45
59:DA:321:G:C2	59:DA:341:G:H4'	2.51	0.45
59:DA:484:C:H2'	59:DA:485:C:C6	2.51	0.45
59:DA:854:G:N2	59:DA:923:C:C2	2.77	0.45
59:DA:909:A:H2'	59:DA:912:C:C5	2.51	0.45
59:DA:1169:G:H2'	59:DA:1170:G:O4'	2.17	0.45
59:DA:1423:G:H2'	59:DA:1424:G:H8	1.81	0.45
59:DA:1575:C:H2'	59:DA:1576:U:O4'	2.16	0.45
59:DA:2136:C:N3	59:DA:2155:G:O6	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2817:G:H21	59:DA:2836:U:H1'	1.81	0.45
60:DB:65:C:OP2	60:DB:108:C:N4	2.48	0.45
1:AB:68:ILE:HG13	1:AB:161:ALA:O	2.16	0.45
1:AB:77:ALA:HA	1:AB:211:ILE:HD13	1.97	0.45
1:AB:187:LEU:HD23	1:AB:188:ALA:N	2.32	0.45
2:AC:204:LEU:HB3	2:AC:205:GLY:H	1.44	0.45
3:AD:31:CYS:H	3:AD:33:MET:HB2	1.82	0.45
3:AD:105:VAL:HA	3:AD:108:LEU:HB3	1.97	0.45
4:AE:103:GLY:C	4:AE:106:PRO:HD2	2.41	0.45
11:AL:45:PRO:HB2	11:AL:49:ASN:OD1	2.16	0.45
14:AO:61:GLY:O	14:AO:65:ARG:HG3	2.15	0.45
16:AQ:17:LYS:NZ	21:AA:256:U:H5'	2.30	0.45
18:AS:11:VAL:HG22	18:AS:12:ASP:H	1.82	0.45
18:AS:32:LYS:HA	18:AS:50:ALA:HB3	1.98	0.45
20:AY:88:VAL:HG21	62:AY:702:FUA:H272	1.98	0.45
20:AY:164:MET:HB2	20:AY:259:PHE:CE1	2.52	0.45
21:AA:123:C:H5''	21:AA:311:C:O2'	2.16	0.45
21:AA:655:A:H2'	21:AA:656:C:C6	2.52	0.45
21:AA:730:G:H5'	21:AA:816:A:O2'	2.16	0.45
21:AA:1440(A):G:H5''	21:AA:1440(B):G:O4'	2.16	0.45
26:BD:16:MET:SD	26:BD:211:ARG:NH1	2.89	0.45
26:BD:54:ARG:NH2	59:BA:1822:G:H5''	2.32	0.45
26:BD:132:PRO:HA	26:BD:189:CYS:O	2.15	0.45
27:BE:82:ARG:HH21	59:BA:2638:G:P	2.40	0.45
29:BG:41:GLN:NE2	29:BG:153:ARG:O	2.50	0.45
32:BK:23:VAL:O	32:BK:28:GLY:N	2.49	0.45
33:BN:107:LEU:HG	33:BN:120:LEU:HD13	1.99	0.45
35:BP:85:LEU:HD21	35:BP:137:LYS:HG3	1.99	0.45
35:BP:114:ILE:HG12	35:BP:130:PHE:HA	1.98	0.45
39:BT:28:VAL:HA	39:BT:47:GLY:H	1.81	0.45
39:BT:34:VAL:HG13	39:BT:39:ARG:H	1.82	0.45
39:BT:89:VAL:HG12	39:BT:91:ARG:HG3	1.98	0.45
41:BV:37:VAL:O	41:BV:57:VAL:HG12	2.16	0.45
42:BW:103:ILE:HG22	42:BW:105:VAL:HG23	1.98	0.45
47:B1:20:ARG:HH21	47:B1:37:ILE:HA	1.81	0.45
47:B1:21:ARG:NH1	47:B1:23:LYS:HG2	2.31	0.45
48:B2:9:GLN:HE22	48:B2:56:GLN:HG2	1.80	0.45
59:BA:322:A:H4'	59:BA:323:G:OP2	2.16	0.45
59:BA:392:C:H4'	59:BA:409:C:C5'	2.43	0.45
59:BA:675:A:H8	59:BA:803:U:H3	1.60	0.45
59:BA:1331:A:O2'	59:BA:1332:G:H8	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1395:A:N1	59:BA:1398:C:H1'	2.32	0.45
59:BA:1765:C:H2'	59:BA:1766:U:H6	1.82	0.45
59:BA:1791:A:N1	59:BA:1829:A:H4'	2.31	0.45
59:BA:2133:G:H2'	59:BA:2157:G:N2	2.26	0.45
59:BA:2296:U:N3	59:BA:2333:A:H1'	2.32	0.45
59:BA:2301:C:H2'	59:BA:2302:G:H8	1.81	0.45
59:BA:2456:C:H2'	59:BA:2457:U:H5'	1.98	0.45
60:BB:38:C:H2'	60:BB:39:A:C8	2.51	0.45
2:CC:41:GLY:HA2	2:CC:44:GLU:CD	2.41	0.45
2:CC:197:GLY:HA3	21:CA:1057:G:O3'	2.15	0.45
8:CI:95:LYS:HE2	8:CI:95:LYS:HB2	1.61	0.45
13:CN:3:ARG:HA	13:CN:6:LEU:HD12	1.98	0.45
21:CA:259:G:C2	21:CA:260:G:H1'	2.52	0.45
21:CA:603:U:O2	21:CA:635:G:C6	2.69	0.45
21:CA:763:G:H2'	21:CA:764:C:H6	1.81	0.45
21:CA:999:U:C4	21:CA:1042:G:C2	3.05	0.45
21:CA:1011:G:O6	21:CA:1018:C:N3	2.50	0.45
21:CA:1037:C:H2'	21:CA:1038:C:C6	2.51	0.45
21:CA:1388:C:H2'	21:CA:1389:C:O4'	2.17	0.45
24:CX:49:G:O2'	24:CX:50:G:H5'	2.16	0.45
25:DC:47:LYS:HB3	25:DC:212:SER:CB	2.37	0.45
26:DD:109:ASP:HB2	26:DD:197:GLY:HA2	1.98	0.45
27:DE:62:PRO:HG3	59:DA:2786:U:O2'	2.16	0.45
27:DE:187:ALA:HB2	59:DA:2729:G:H1'	1.98	0.45
28:DF:169:ASN:HD21	59:DA:322:A:H3'	1.81	0.45
29:DG:95:ARG:HA	29:DG:95:ARG:HH11	1.81	0.45
39:DT:90:GLN:H	39:DT:90:GLN:HG3	1.49	0.45
43:DX:71:GLY:HA2	59:DA:64:A:H4'	1.98	0.45
44:DY:49:VAL:HA	59:DA:483:A:H4'	1.97	0.45
52:D6:20:ASN:HB3	52:D6:42:TRP:H	1.81	0.45
59:DA:307:G:H1	59:DA:310:A:H5''	1.81	0.45
59:DA:342:G:H2'	59:DA:343:C:O4'	2.17	0.45
59:DA:380:U:O2	59:DA:394:A:N1	2.49	0.45
59:DA:422:A:H2'	59:DA:423:A:C8	2.51	0.45
59:DA:489:G:C4	59:DA:1284:A:C6	3.05	0.45
59:DA:581:C:H2'	59:DA:582:G:O4'	2.17	0.45
59:DA:940:G:H21	59:DA:1191:G:H4'	1.82	0.45
59:DA:970:C:H2'	59:DA:971:C:C6	2.52	0.45
59:DA:1005:C:O2'	59:DA:1006:C:H5'	2.17	0.45
59:DA:1424:G:H2'	59:DA:1425:G:O4'	2.17	0.45
59:DA:1503:U:H2'	59:DA:1504:C:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1583:A:H4'	59:DA:1586:A:C4	2.51	0.45
59:DA:1933:G:O2'	63:DA:2901:NMY:C12	2.64	0.45
59:DA:2285:C:H1'	59:DA:2288:A:O2'	2.16	0.45
60:DB:31:C:H1'	60:DB:54:G:N2	2.31	0.45
2:AC:117:ALA:HA	2:AC:120:VAL:HB	1.98	0.45
5:AF:5:GLU:HB3	5:AF:62:TRP:HZ2	1.82	0.45
8:AI:66:ARG:NH1	21:AA:1250:A:OP1	2.49	0.45
8:AI:123:PRO:HA	21:AA:1233:G:OP1	2.16	0.45
20:AY:605:ILE:HG22	20:AY:675:HIS:C	2.41	0.45
21:AA:109:A:C8	21:AA:327:A:O4'	2.70	0.45
21:AA:155:C:H2'	21:AA:156:G:H8	1.79	0.45
21:AA:370:C:H2'	21:AA:371:G:H8	1.82	0.45
21:AA:888:G:C3'	21:AA:889:A:H5''	2.45	0.45
21:AA:1129:C:O2	21:AA:1132:C:N4	2.48	0.45
21:AA:1492:A:C5'	63:AA:1601:NMY:HO4	2.29	0.45
23:AV:30:A:HO2'	23:AV:31:A:P	2.38	0.45
24:AX:75:C:H3'	24:AX:76:A:H5''	1.98	0.45
26:BD:165:ILE:HA	26:BD:175:LEU:HD13	1.97	0.45
28:BF:93:LYS:HD3	28:BF:93:LYS:HA	1.72	0.45
28:BF:183:VAL:HA	28:BF:186:ILE:HG22	1.98	0.45
30:BH:118:PRO:HG2	30:BH:121:ILE:HD11	1.98	0.45
30:BH:142:GLY:HA3	59:BA:2745:C:H4'	1.99	0.45
32:BK:126:MET:HG2	59:BA:1059:G:C2	2.52	0.45
35:BP:114:ILE:O	35:BP:131:SER:HB3	2.16	0.45
37:BR:97:VAL:HG22	37:BR:114:VAL:HA	1.99	0.45
38:BS:15:ARG:C	38:BS:18:ILE:H	2.25	0.45
38:BS:31:SER:HB2	60:BB:29:A:OP2	2.17	0.45
45:BZ:55:HIS:O	45:BZ:70:LEU:HD21	2.17	0.45
47:B1:12:PRO:CA	47:B1:43:TYR:HB2	2.44	0.45
49:B3:7:LYS:HD2	49:B3:9:VAL:HG12	1.99	0.45
56:Be:100:LYS:HB3	56:Be:101:GLU:H	1.58	0.45
59:BA:939:G:H2'	59:BA:940:G:C8	2.51	0.45
59:BA:1135:C:H3'	59:BA:1137:G:OP1	2.16	0.45
59:BA:1375:C:H2'	59:BA:1376:C:C6	2.52	0.45
59:BA:1448:G:H2'	59:BA:1448(A):A:C8	2.51	0.45
59:BA:1779:U:O4	59:BA:1784:A:N7	2.50	0.45
59:BA:1832:C:H1'	63:BA:2902:NMY:HN62	1.82	0.45
59:BA:1837:C:O2'	59:BA:1927:A:O2'	2.25	0.45
59:BA:1945:G:H2'	59:BA:1946:U:O4'	2.16	0.45
59:BA:2232:U:H2'	59:BA:2233:U:C6	2.51	0.45
59:BA:2291:U:H2'	59:BA:2292:C:H6	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2469:A:H61	59:BA:2481:G:H1'	1.81	0.45
59:BA:2662:A:H8	59:BA:2662:A:O5'	1.99	0.45
59:BA:2681:C:H4'	59:BA:2682:U:H5'	1.99	0.45
1:CB:152:PHE:HD1	1:CB:153:ARG:N	2.14	0.45
2:CC:139:GLN:O	2:CC:143:GLU:HB2	2.17	0.45
17:CR:58:LEU:HB3	17:CR:62:GLU:HB2	1.97	0.45
20:CY:616:TYR:CD2	20:CY:663:THR:HA	2.52	0.45
20:CY:680:PRO:O	20:CY:682:GLN:N	2.47	0.45
21:CA:123:C:O2'	21:CA:290:C:O2	2.28	0.45
21:CA:197:A:H4'	21:CA:198:G:H4'	1.97	0.45
21:CA:401:C:C2	21:CA:402:G:C8	3.04	0.45
21:CA:440:A:OP2	21:CA:493:G:N2	2.50	0.45
21:CA:974:A:H4'	21:CA:975:A:C3'	2.45	0.45
23:CV:14:A:HO2'	23:CV:15:A:P	2.40	0.45
28:DF:102:PRO:HB2	28:DF:105:VAL:HG23	1.99	0.45
30:DH:91:GLY:HA2	30:DH:160:LYS:HG3	1.98	0.45
30:DH:96:ALA:O	30:DH:125:VAL:HG11	2.16	0.45
33:DN:21:LYS:HG2	33:DN:22:THR:HG23	1.99	0.45
33:DN:30:ILE:C	33:DN:31:ALA:O	2.59	0.45
33:DN:46:VAL:HG23	33:DN:47:ALA:N	2.32	0.45
33:DN:91:LEU:HA	33:DN:97:ARG:HG2	1.98	0.45
36:DQ:125:LEU:HD23	36:DQ:126:PRO:HD2	1.98	0.45
37:DR:97:VAL:HG22	37:DR:114:VAL:HG22	1.99	0.45
39:DT:70:VAL:HB	39:DT:71:GLY:H	1.58	0.45
40:DU:106:PHE:O	40:DU:110:VAL:HG23	2.15	0.45
42:DW:18:ARG:HH22	42:DW:77:ASP:HA	1.82	0.45
43:DX:32:PRO:O	43:DX:34:ALA:N	2.48	0.45
45:DZ:101:PRO:HG2	45:DZ:136:PHE:CB	2.46	0.45
46:D0:14:ARG:NH1	59:DA:2280:G:N7	2.64	0.45
51:D5:42:PRO:HB2	59:DA:2815:C:H1'	1.98	0.45
54:D8:38:GLY:N	59:DA:2348:U:OP2	2.41	0.45
59:DA:41:C:C2	59:DA:43:G:C8	3.04	0.45
59:DA:134:C:C2	59:DA:145:G:N2	2.76	0.45
59:DA:271(F):G:N1	59:DA:357(M):C:N4	2.29	0.45
59:DA:468:G:H3'	59:DA:469:G:H8	1.81	0.45
59:DA:481:G:O2'	59:DA:482:A:O5'	2.32	0.45
59:DA:582:G:N2	59:DA:1258:C:N3	2.54	0.45
59:DA:601:C:H1'	59:DA:605:C:H5''	1.98	0.45
59:DA:775:G:C6	59:DA:794:G:C8	3.04	0.45
59:DA:872:A:N1	59:DA:905:U:O2	2.49	0.45
59:DA:1158:C:H2'	59:DA:1159:U:H6	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1578:U:C2'	59:DA:1579:A:H5'	2.47	0.45
59:DA:1986:A:H2'	59:DA:1987:G:H8	1.79	0.45
59:DA:2108:C:N3	59:DA:2181:G:O6	2.49	0.45
59:DA:2178:C:H2'	59:DA:2179:C:H6	1.80	0.45
59:DA:2202(E):A:H1'	59:DA:2202(G):G:C8	2.52	0.45
59:DA:2242:G:H2'	59:DA:2243:U:O4'	2.17	0.45
3:AD:53:ASP:OD2	3:AD:57:ARG:NH2	2.48	0.45
3:AD:95:GLY:C	3:AD:97:LEU:H	2.23	0.45
3:AD:121:VAL:O	3:AD:134:ASP:HA	2.16	0.45
6:AG:46:ALA:O	6:AG:50:ILE:HG13	2.16	0.45
7:AH:31:PHE:O	7:AH:35:ILE:HG12	2.17	0.45
11:AL:8:ASN:OD1	16:AQ:34:LYS:NZ	2.49	0.45
11:AL:84:LEU:HD13	11:AL:104:VAL:HG11	1.98	0.45
11:AL:93:LEU:O	11:AL:96:VAL:N	2.39	0.45
16:AQ:41:LYS:NZ	16:AQ:88:TYR:OH	2.44	0.45
17:AR:61:LYS:HB2	21:AA:835:U:OP1	2.16	0.45
20:AY:117:GLN:OE1	59:BA:2660:A:H4'	2.16	0.45
20:AY:197:ARG:NE	20:AY:197:ARG:HA	2.30	0.45
20:AY:336:THR:C	20:AY:338:GLY:H	2.25	0.45
20:AY:637:ARG:HG3	20:AY:642:VAL:HB	1.98	0.45
20:AY:660:ARG:HD3	20:AY:665:GLY:HA2	1.99	0.45
21:AA:68(V):G:H2'	21:AA:68(W):G:O4'	2.16	0.45
21:AA:328:C:H1'	21:AA:329:A:OP2	2.15	0.45
21:AA:1155:G:H2'	21:AA:1156:G:O4'	2.15	0.45
25:BC:104:ILE:HB	25:BC:128:LEU:HD13	1.99	0.45
25:BC:132:LEU:HD12	25:BC:138:LEU:HD23	1.99	0.45
25:BC:139:PRO:CA	25:BC:145:THR:HG21	2.42	0.45
26:BD:63:ARG:HB3	26:BD:104:TYR:CE1	2.51	0.45
28:BF:45:ARG:HA	28:BF:45:ARG:HE	1.81	0.45
28:BF:157:VAL:N	28:BF:193:VAL:H	2.11	0.45
33:BN:46:VAL:HG12	33:BN:107:LEU:HD22	1.99	0.45
34:BO:22:ILE:HG21	59:BA:1952:A:C2	2.52	0.45
35:BP:53:GLY:C	35:BP:55:ARG:H	2.22	0.45
37:BR:35:THR:O	59:BA:1278:A:H5''	2.15	0.45
38:BS:17:ARG:HG2	38:BS:20:ARG:CZ	2.47	0.45
41:BV:66:ARG:HE	41:BV:88:ARG:HH11	1.64	0.45
42:BW:68:ARG:HG2	42:BW:110:LYS:HD2	1.97	0.45
43:BX:36:LYS:HG3	43:BX:56:THR:HG23	1.99	0.45
44:BY:47:LYS:HG3	44:BY:60:PHE:HE2	1.81	0.45
45:BZ:7:ALA:O	45:BZ:62:PRO:HD3	2.17	0.45
47:B1:5:CYS:SG	47:B1:7:ILE:N	2.74	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B2:3:LEU:HG	59:BA:98:G:O5'	2.16	0.45
59:BA:396:G:N2	59:BA:2232:U:H5'	2.31	0.45
59:BA:853:G:H2'	59:BA:854:G:O4'	2.17	0.45
59:BA:883:G:H2'	59:BA:884:C:H6	1.81	0.45
59:BA:1794:U:H4'	59:BA:1900:A:C5	2.51	0.45
59:BA:2089:U:H2'	59:BA:2090:G:H8	1.77	0.45
59:BA:2102:U:O2	59:BA:2187:G:O6	2.34	0.45
59:BA:2267:A:P	59:BA:2268:A:H5''	2.56	0.45
59:BA:2376:A:OP1	59:BA:2376:A:H8	2.00	0.45
59:BA:2580:U:OP2	59:BA:2581:G:N1	2.37	0.45
59:BA:2862:G:H2'	59:BA:2863:C:C6	2.52	0.45
60:BB:74:U:O5'	60:BB:74:U:H6	1.99	0.45
60:BB:89(B):A:H8	60:BB:89(B):A:O5'	2.00	0.45
1:CB:68:ILE:HD11	1:CB:161:ALA:HB3	1.99	0.45
2:CC:59:ARG:HH11	2:CC:64:VAL:HG22	1.80	0.45
2:CC:81:GLY:O	2:CC:85:ARG:HB3	2.17	0.45
5:CF:60:PHE:CE2	17:CR:78:LEU:HD11	2.51	0.45
19:CT:53:LEU:HD23	19:CT:100:ILE:HG23	1.99	0.45
20:CY:126:GLU:C	20:CY:129:LYS:H	2.24	0.45
21:CA:68(K):U:N3	21:CA:68(N):U:OP2	2.50	0.45
21:CA:146:G:H2'	21:CA:147:G:H8	1.81	0.45
21:CA:602:A:C2	21:CA:603:U:H1'	2.51	0.45
21:CA:729:A:H2'	21:CA:730:G:C8	2.51	0.45
21:CA:1028(C):G:H2'	21:CA:1028(E):G:OP2	2.16	0.45
21:CA:1066:C:H2'	21:CA:1067:A:O4'	2.17	0.45
22:CW:64:G:N2	22:CW:65:U:C4	2.84	0.45
27:DE:134:ILE:O	27:DE:136:ARG:N	2.41	0.45
28:DF:6:VAL:HB	28:DF:7:TYR:HD1	1.82	0.45
29:DG:72:ARG:NH1	60:DB:41:U:H3	2.12	0.45
33:DN:25:ARG:HG2	59:DA:1012:U:N3	2.32	0.45
35:DP:35:HIS:HA	59:DA:1190:G:H5''	1.98	0.45
35:DP:88:LEU:HG	35:DP:123:LEU:HD11	1.97	0.45
41:DV:89:GLN:HG3	59:DA:993:G:O2'	2.17	0.45
43:DX:28:PHE:CZ	43:DX:92:LEU:HD11	2.50	0.45
46:D0:45:PHE:HA	46:D0:77:ARG:O	2.16	0.45
47:D1:20:ARG:O	47:D1:22:GLY:N	2.49	0.45
48:D2:30:ARG:O	48:D2:33:MET:HB3	2.16	0.45
49:D3:49:LYS:HE2	59:DA:850:C:H4'	1.97	0.45
51:D5:6:VAL:O	51:D5:8:LYS:N	2.50	0.45
56:De:86:LEU:HB3	56:De:89:ALA:HB2	1.99	0.45
59:DA:108:U:H5'	59:DA:293:U:O2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:465:G:H22	59:DA:794:G:N2	2.10	0.45
59:DA:559:G:H2'	59:DA:560:C:O4'	2.17	0.45
59:DA:821:A:C5	59:DA:946:G:C8	3.05	0.45
59:DA:870:A:H2'	59:DA:871:U:O4'	2.16	0.45
59:DA:926:A:H2'	59:DA:928:G:O4'	2.17	0.45
59:DA:945:A:O2'	59:DA:946:G:H4'	2.16	0.45
59:DA:946:G:H2'	59:DA:947:G:C8	2.52	0.45
59:DA:1060:U:C6	59:DA:1062:G:H4'	2.51	0.45
59:DA:1083:U:H2'	59:DA:1085:A:OP2	2.17	0.45
59:DA:1128:A:H2	59:DA:2516:G:H21	1.65	0.45
59:DA:1703:G:H2'	59:DA:1704:G:H8	1.81	0.45
59:DA:1962:C:H6	59:DA:1962:C:H2'	1.56	0.45
59:DA:1988:C:H2'	59:DA:1989:G:C8	2.51	0.45
59:DA:2266:A:H1'	59:DA:2272:U:N3	2.31	0.45
59:DA:2425:A:H4'	59:DA:2426:A:O5'	2.16	0.45
59:DA:2769:C:H2'	59:DA:2770:G:C8	2.51	0.45
1:AB:98:LEU:H	1:AB:101:MET:HE1	1.82	0.45
2:AC:47:LEU:C	2:AC:49:SER:H	2.24	0.45
11:AL:15:ARG:O	21:AA:562:C:O2'	2.35	0.45
11:AL:31:PRO:C	11:AL:85:ILE:O	2.59	0.45
16:AQ:11:VAL:HG22	16:AQ:20:THR:O	2.16	0.45
16:AQ:31:LEU:HD11	21:AA:300:A:O2'	2.17	0.45
17:AR:76:LEU:HD23	17:AR:76:LEU:HA	1.80	0.45
18:AS:6:LYS:HZ2	21:AA:1314:C:H5''	1.81	0.45
19:AT:13:LEU:O	19:AT:17:ARG:HG3	2.16	0.45
20:AY:110:SER:OG	20:AY:139:MET:HA	2.17	0.45
20:AY:131:PRO:HG3	20:AY:251:ILE:HA	1.97	0.45
20:AY:246:ILE:HB	20:AY:279:TYR:CE1	2.51	0.45
20:AY:443:HIS:HB2	20:AY:448:GLN:O	2.15	0.45
21:AA:45:U:H2'	21:AA:46:G:C8	2.51	0.45
21:AA:104:G:H2'	21:AA:105:G:H8	1.81	0.45
21:AA:186(E):C:H2'	21:AA:186(F):C:C6	2.52	0.45
21:AA:346:G:P	39:BT:35:LYS:HZ1	2.40	0.45
21:AA:925:G:H1'	21:AA:1502:A:C5	2.52	0.45
21:AA:1164:G:H1	21:AA:1172:C:H42	1.64	0.45
21:AA:1473:A:H2'	21:AA:1474:G:H8	1.75	0.45
25:BC:100:ILE:HG23	25:BC:103:LYS:HD2	1.98	0.45
25:BC:103:LYS:HA	25:BC:107:GLY:H	1.82	0.45
26:BD:177:LEU:HD11	26:BD:181:GLU:HB3	1.97	0.45
31:BJ:82:UNK:C	31:BJ:84:UNK:N	2.80	0.45
33:BN:117:PHE:O	33:BN:117:PHE:CG	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BO:104:ARG:NH2	39:BT:43:GLN:OE1	2.50	0.45
37:BR:74:LYS:HG2	37:BR:77:ARG:HE	1.81	0.45
42:BW:86:LEU:HD12	42:BW:87:PRO:HD2	1.99	0.45
44:BY:14:LEU:HD11	44:BY:73:ARG:HB2	1.99	0.45
44:BY:38:ILE:HD12	44:BY:39:VAL:H	1.82	0.45
51:B5:3:LYS:HD3	51:B5:3:LYS:H	1.80	0.45
59:BA:226:G:O6	59:BA:419:C:H1'	2.17	0.45
59:BA:834:C:H1'	59:BA:2358:G:N3	2.31	0.45
59:BA:1785:A:C6	59:BA:1787:A:C4	3.04	0.45
59:BA:1829:A:H3'	59:BA:1830:C:C6	2.50	0.45
59:BA:1951:U:H3	59:BA:1954:G:P	2.40	0.45
59:BA:2266:A:H4'	59:BA:2267:A:N3	2.32	0.45
59:BA:2416:C:H2'	59:BA:2417:C:H6	1.81	0.45
59:BA:2588:G:H2'	59:BA:2589:A:O4'	2.17	0.45
60:BB:8:U:H2'	60:BB:9:G:H8	1.81	0.45
3:CD:190:ASP:N	3:CD:193:ASP:HB2	2.32	0.45
5:CF:44:GLY:HA2	5:CF:59:TYR:CD1	2.52	0.45
5:CF:69:GLU:O	5:CF:71:ARG:N	2.49	0.45
6:CG:80:VAL:HG21	6:CG:85:TYR:CE2	2.52	0.45
7:CH:6:ILE:H	7:CH:6:ILE:HD12	1.81	0.45
7:CH:115:SER:O	21:CA:641:U:H4'	2.16	0.45
8:CI:16:ARG:HB2	8:CI:64:THR:O	2.17	0.45
8:CI:125:TYR:HB3	21:CA:1342:C:H4'	1.98	0.45
20:CY:95:GLU:O	20:CY:99:ARG:HB2	2.16	0.45
20:CY:263:ALA:HB3	61:CY:701:GDP:N7	2.32	0.45
20:CY:514:VAL:HG13	20:CY:565:VAL:HA	1.99	0.45
20:CY:637:ARG:HB3	20:CY:638:GLY:H	1.56	0.45
21:CA:181:G:N2	21:CA:182:U:O4	2.44	0.45
21:CA:1194:U:H2'	21:CA:1195:C:C6	2.51	0.45
21:CA:1206:G:H2'	21:CA:1207:G:C8	2.52	0.45
21:CA:1239:A:N1	21:CA:1297:C:H1'	2.31	0.45
21:CA:1394:A:N1	21:CA:1500:A:O2'	2.46	0.45
21:CA:1532:U:H2'	21:CA:1534:A:C2	2.50	0.45
22:CW:9:A:H62	22:CW:23:A:H62	1.65	0.45
22:CW:21:A:H1'	22:CW:48:C:C4	2.51	0.45
25:DC:132:LEU:HD22	25:DC:137:LEU:HB2	1.99	0.45
28:DF:33:LEU:O	28:DF:37:VAL:HG23	2.17	0.45
28:DF:91:GLY:HA2	59:DA:1248:G:H5'	1.98	0.45
28:DF:107:LYS:HD3	28:DF:107:LYS:HA	1.53	0.45
29:DG:41:GLN:HG3	29:DG:155:MET:HA	1.98	0.45
31:DJ:63:UNK:O	31:DJ:67:UNK:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DN:88:GLU:C	33:DN:90:MET:H	2.24	0.45
35:DP:97:PRO:O	35:DP:101:VAL:HG13	2.16	0.45
35:DP:124:LYS:HD3	35:DP:143:GLY:HA3	1.99	0.45
36:DQ:41:TRP:HB3	36:DQ:94:VAL:HB	1.98	0.45
39:DT:56:GLY:H	39:DT:59:THR:HB	1.82	0.45
40:DU:58:ARG:O	40:DU:62:ILE:HG12	2.16	0.45
46:D0:24:LYS:N	46:D0:37:LEU:O	2.50	0.45
46:D0:40:GLN:HG2	46:D0:57:PHE:O	2.16	0.45
59:DA:192:C:O2'	59:DA:802:A:N3	2.42	0.45
59:DA:271(Q):A:N6	59:DA:357(E):U:C4	2.83	0.45
59:DA:563:G:C6	59:DA:2018:G:C5	3.05	0.45
59:DA:788:A:H4'	59:DA:789:A:C5'	2.47	0.45
59:DA:986:C:H2'	59:DA:987:G:H8	1.82	0.45
59:DA:1385:G:H1'	59:DA:1386:C:C6	2.51	0.45
59:DA:1529:A:H3'	59:DA:1530:G:C8	2.51	0.45
59:DA:1860:G:H2'	59:DA:1861:G:O4'	2.15	0.45
59:DA:1886:C:H2'	59:DA:1887:C:C6	2.52	0.45
59:DA:2224:G:H4'	59:DA:2226:C:C4	2.52	0.45
60:DB:12:C:O3'	60:DB:13:A:H4'	2.16	0.45
2:AC:36:ASP:OD2	2:AC:57:ILE:HD13	2.17	0.45
3:AD:100:ARG:HE	3:AD:102:ASP:CG	2.24	0.45
4:AE:78:HIS:CD2	4:AE:78:HIS:H	2.35	0.45
4:AE:154:GLY:HA2	7:AH:64:LYS:CD	2.42	0.45
5:AF:92:LYS:O	5:AF:94:GLN:N	2.47	0.45
11:AL:117:ARG:HH22	21:AA:501:C:C5'	2.29	0.45
19:AT:43:LEU:HD12	19:AT:43:LEU:HA	1.79	0.45
19:AT:53:LEU:HD12	19:AT:102:GLY:HA3	1.99	0.45
20:AY:501:THR:OG1	21:AA:1495:U:OP1	2.35	0.45
20:AY:573:HIS:HB3	20:AY:576:ASP:HB2	1.98	0.45
21:AA:890:G:O2'	21:AA:906:G:O6	2.35	0.45
25:BC:173:HIS:HD1	59:BA:2123:G:H1'	1.80	0.45
26:BD:244:ARG:NH2	59:BA:1841:U:H1'	2.31	0.45
28:BF:176:LEU:HG	28:BF:177:ALA:H	1.81	0.45
30:BH:20:ALA:HB1	30:BH:21:PRO:HD2	1.98	0.45
33:BN:35:ARG:NH2	33:BN:37:LYS:O	2.49	0.45
33:BN:74:ARG:NH1	33:BN:84:LYS:HD2	2.31	0.45
34:BO:6:THR:HG23	59:BA:1666:G:O3'	2.17	0.45
36:BQ:16:ARG:NH2	59:BA:953:A:OP2	2.50	0.45
38:BS:20:ARG:C	38:BS:22:GLY:H	2.24	0.45
41:BV:4:ILE:HA	41:BV:12:TYR:O	2.16	0.45
42:BW:53:SER:OG	59:BA:493:G:N2	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BW:57:ASN:O	42:BW:62:HIS:ND1	2.38	0.45
42:BW:77:ASP:CG	59:BA:23:G:H21	2.25	0.45
44:BY:77:PRO:HD2	44:BY:101:LYS:HB3	1.99	0.45
45:BZ:167:PRO:O	45:BZ:169:GLU:N	2.49	0.45
47:B1:3:LYS:HA	59:BA:1365:A:OP2	2.17	0.45
53:B7:28:ARG:HA	53:B7:31:LEU:HD12	1.98	0.45
59:BA:69:C:H2'	59:BA:70:G:C8	2.52	0.45
59:BA:497:A:H2'	59:BA:498:G:C8	2.51	0.45
59:BA:818:G:C6	59:BA:1187:G:H2'	2.51	0.45
59:BA:828:U:H4'	59:BA:831:G:C6	2.51	0.45
59:BA:864:G:O2'	59:BA:866:A:N6	2.45	0.45
59:BA:1220:C:N3	59:BA:1229:G:N2	2.57	0.45
59:BA:1709:U:O2'	59:BA:2859:G:H1'	2.15	0.45
59:BA:2143:C:H42	59:BA:2148:G:H1	1.65	0.45
59:BA:2143:C:N4	59:BA:2148:G:H1	2.14	0.45
59:BA:2224:G:H4'	59:BA:2226:C:C2	2.52	0.45
59:BA:2292:C:H4'	59:BA:2375:G:O4'	2.16	0.45
59:BA:2303:G:H2'	59:BA:2304:G:O4'	2.17	0.45
59:BA:2550:G:C5	59:BA:2551:C:N4	2.85	0.45
1:CB:139:LYS:O	1:CB:142:LEU:HB2	2.17	0.45
2:CC:36:ASP:OD2	2:CC:40:ARG:HD2	2.17	0.45
6:CG:42:ILE:HD13	6:CG:42:ILE:HA	1.83	0.45
7:CH:83:ILE:HA	7:CH:136:GLU:O	2.15	0.45
13:CN:34:TYR:HA	21:CA:1358:U:OP1	2.16	0.45
14:CO:85:LEU:HD22	14:CO:87:ILE:HG12	1.98	0.45
15:CP:20:VAL:HA	15:CP:35:LYS:HA	1.99	0.45
16:CQ:46:ASP:OD2	16:CQ:50:LYS:HG2	2.17	0.45
20:CY:268:GLY:HA2	20:CY:271:LEU:HD13	1.99	0.45
21:CA:59:A:H1'	21:CA:354:G:N2	2.32	0.45
21:CA:425:G:H2'	21:CA:426:G:O4'	2.17	0.45
21:CA:629:G:H2'	21:CA:630:G:C8	2.48	0.45
21:CA:1001:G:O6	21:CA:1039:C:N3	2.50	0.45
21:CA:1015:A:C6	21:CA:1016:A:C6	3.05	0.45
21:CA:1062:U:H2'	21:CA:1063:C:C6	2.51	0.45
25:DC:213:VAL:CG2	25:DC:227:PRO:HG3	2.47	0.45
25:DC:222:SER:OG	25:DC:223:VAL:N	2.41	0.45
27:DE:110:GLY:HA2	27:DE:161:GLY:C	2.41	0.45
29:DG:126:ASP:N	29:DG:126:ASP:OD2	2.50	0.45
32:DK:102:GLU:O	32:DK:105:LEU:N	2.36	0.45
33:DN:52:VAL:C	33:DN:54:VAL:N	2.75	0.45
33:DN:100:GLU:O	33:DN:104:LYS:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:31:ALA:HB1	59:DA:810:U:C5	2.52	0.45
35:DP:48:PRO:O	35:DP:50:ARG:N	2.50	0.45
35:DP:74:GLU:HB2	59:DA:244:A:O3'	2.17	0.45
37:DR:83:ILE:HG23	37:DR:87:TYR:CD2	2.52	0.45
42:DW:36:LEU:HD12	42:DW:51:LEU:HD12	1.99	0.45
44:DY:2:ARG:HH22	59:DA:81:G:H1'	1.82	0.45
59:DA:579:G:O2'	59:DA:2019:A:OP1	2.34	0.45
59:DA:723:G:H2'	59:DA:724:U:C6	2.51	0.45
59:DA:824:A:H2'	59:DA:825:C:O4'	2.16	0.45
59:DA:1057:A:N7	59:DA:1086:A:H2'	2.31	0.45
59:DA:2248:C:H5''	59:DA:2249:U:C5	2.52	0.45
59:DA:2378:A:H8	59:DA:2378:A:O5'	2.00	0.45
2:AC:12:LEU:HA	2:AC:16:ARG:HB3	1.99	0.45
6:AG:26:PHE:CE2	6:AG:30:ILE:HD11	2.52	0.45
11:AL:57:LYS:HD3	11:AL:65:GLU:HB2	1.98	0.45
14:AO:49:ASP:CG	21:AA:667:G:H1'	2.42	0.45
20:AY:20:HIS:CG	20:AY:21:ILE:HG23	2.51	0.45
20:AY:33:LEU:HD23	20:AY:34:TYR:N	2.32	0.45
20:AY:227:ILE:HG22	20:AY:227:ILE:O	2.17	0.45
20:AY:289:ILE:HD13	20:AY:331:TYR:CD1	2.52	0.45
21:AA:302:G:H2'	21:AA:303:A:O4'	2.16	0.45
21:AA:815:A:H62	21:AA:1509:C:H1'	1.82	0.45
21:AA:945:G:H1	21:AA:1236:A:H61	1.63	0.45
21:AA:1244:C:H2'	21:AA:1245:A:C8	2.52	0.45
21:AA:1252:A:H4'	21:AA:1369:C:H4'	1.99	0.45
21:AA:1348:U:C2	21:AA:1374:A:C6	3.05	0.45
26:BD:208:LYS:NZ	59:BA:729:G:OP1	2.50	0.45
33:BN:85:ILE:HB	33:BN:107:LEU:N	2.32	0.45
33:BN:87:LEU:HB3	33:BN:88:GLU:H	1.40	0.45
35:BP:30:THR:O	35:BP:32:THR:N	2.50	0.45
35:BP:120:ALA:HB1	35:BP:140:ALA:HB3	1.98	0.45
36:BQ:55:VAL:HA	36:BQ:58:PHE:HD2	1.82	0.45
36:BQ:58:PHE:HE1	36:BQ:62:GLY:H	1.64	0.45
39:BT:39:ARG:O	39:BT:40:THR:OG1	2.31	0.45
39:BT:86:ILE:HG22	39:BT:87:ASP:O	2.17	0.45
41:BV:34:GLU:O	41:BV:36:PRO:HD3	2.17	0.45
43:BX:37:THR:HG21	59:BA:137(F):C:O2	2.17	0.45
47:B1:18:ILE:HG21	59:BA:380:U:C4'	2.46	0.45
54:B8:3:LYS:HB3	59:BA:242:G:N7	2.32	0.45
59:BA:38:A:N1	59:BA:441:U:O2	2.50	0.45
59:BA:137(C):G:H8	59:BA:137(C):G:O5'	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:589:C:H2'	59:BA:590:A:C8	2.52	0.45
59:BA:699:A:H2'	59:BA:700:G:O4'	2.16	0.45
59:BA:1995:U:OP2	59:BA:1996:C:H3'	2.17	0.45
59:BA:2074:U:O2'	59:BA:2597:G:N3	2.45	0.45
59:BA:2682:U:O4	59:BA:2728:U:H1'	2.17	0.45
59:BA:2756:U:H4'	59:BA:2757:A:OP1	2.16	0.45
59:BA:2867:G:O3'	59:BA:2868:A:H8	2.00	0.45
1:CB:124:SER:C	1:CB:126:GLU:H	2.25	0.45
2:CC:29:TYR:OH	13:CN:54:PRO:O	2.34	0.45
2:CC:148:GLY:HA3	2:CC:203:PHE:HB3	1.99	0.45
3:CD:68:TYR:HA	3:CD:114:ARG:NH1	2.32	0.45
8:CI:121:ARG:HG2	21:CA:1350:A:P	2.57	0.45
12:CM:16:ASP:HA	12:CM:34:LEU:HD11	1.98	0.45
15:CP:8:ARG:HG2	15:CP:9:PHE:N	2.32	0.45
17:CR:70:ILE:O	17:CR:74:ARG:HG3	2.17	0.45
20:CY:259:PHE:CB	20:CY:272:LEU:HD13	2.46	0.45
21:CA:35:G:C6	21:CA:36:C:C4	3.04	0.45
21:CA:107:G:OP1	21:CA:325:A:N6	2.49	0.45
21:CA:520:A:C2	21:CA:536:C:H1'	2.51	0.45
21:CA:829:G:N2	21:CA:857:C:N3	2.60	0.45
21:CA:833:U:O2	21:CA:853:G:O6	2.35	0.45
21:CA:950:U:H2'	21:CA:951:G:O4'	2.16	0.45
21:CA:1466:C:H2'	21:CA:1467:G:C8	2.52	0.45
25:DC:115:VAL:CG1	25:DC:154:ILE:HD11	2.46	0.45
30:DH:59:ARG:NH2	59:DA:2750:A:H62	2.15	0.45
35:DP:35:HIS:NE2	59:DA:941:A:H4'	2.31	0.45
35:DP:87:ASP:OD1	35:DP:90:ARG:NH2	2.50	0.45
36:DQ:102:VAL:HG12	36:DQ:103:MET:N	2.32	0.45
36:DQ:129:THR:HG1	36:DQ:130:LYS:H	1.64	0.45
37:DR:99:LYS:O	51:D5:44:THR:HG23	2.17	0.45
38:DS:24:LEU:HG	38:DS:85:VAL:HG12	1.99	0.45
39:DT:103:ARG:H	39:DT:103:ARG:HG3	1.52	0.45
43:DX:36:LYS:HE3	59:DA:1598:C:H5'	1.98	0.45
46:D0:40:GLN:HG3	46:D0:42:GLY:H	1.81	0.45
47:D1:7:ILE:HD11	47:D1:60:PHE:HE1	1.82	0.45
47:D1:47:GLN:HE21	59:DA:2091:U:H1'	1.81	0.45
49:D3:5:LYS:HA	49:D3:35:ARG:O	2.16	0.45
49:D3:6:VAL:O	49:D3:34:GLU:HA	2.17	0.45
59:DA:271(I):C:H42	59:DA:357(I):G:H1	1.64	0.45
59:DA:454:A:H3'	59:DA:455:C:C6	2.52	0.45
59:DA:1401:G:H2'	59:DA:1402:C:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1797:C:H2'	59:DA:1798:U:O4'	2.17	0.45
59:DA:2521:C:H2'	59:DA:2522:U:O4'	2.15	0.45
59:DA:2662:A:C5	59:DA:2663:G:H1'	2.51	0.45
59:DA:2787:C:H2'	59:DA:2788:C:O4'	2.16	0.45
60:DB:34:U:H4'	60:DB:35:U:O5'	2.17	0.45
1:AB:121:LEU:HD22	1:AB:126:GLU:HG3	1.97	0.45
3:AD:153:ARG:HA	3:AD:181:MET:SD	2.57	0.45
5:AF:21:LEU:O	5:AF:25:ILE:HG12	2.17	0.45
6:AG:94:ARG:HG3	6:AG:95:ARG:H	1.82	0.45
11:AL:113:ARG:HG2	11:AL:120:TYR:HD1	1.81	0.45
14:AO:36:ILE:HG21	14:AO:60:VAL:HG22	1.99	0.45
20:AY:337:SER:HB3	20:AY:367:GLU:HA	1.99	0.45
20:AY:432:ALA:HB2	20:AY:438:PHE:CE2	2.52	0.45
20:AY:608:VAL:HG12	20:AY:645:ALA:HB3	1.99	0.45
21:AA:514:C:H2'	21:AA:515:G:O4'	2.16	0.45
21:AA:618:C:N4	21:AA:622:A:H62	2.14	0.45
21:AA:926:G:N2	23:AV:16:A:O3'	2.50	0.45
21:AA:978:A:H3'	21:AA:979:C:C6	2.52	0.45
21:AA:1327:C:H2'	21:AA:1328:C:H6	1.81	0.45
25:BC:37:LYS:HD2	25:BC:218:THR:HG21	1.98	0.45
25:BC:140:ASN:O	25:BC:142:LYS:N	2.50	0.45
25:BC:213:VAL:O	25:BC:214:TYR:CD1	2.70	0.45
28:BF:68:LYS:HD2	28:BF:68:LYS:HA	1.83	0.45
28:BF:102:PRO:HB3	59:BA:606:U:H5''	1.98	0.45
29:BG:102:PHE:HZ	29:BG:157:ILE:HD13	1.81	0.45
29:BG:105:LYS:O	29:BG:109:VAL:HG22	2.17	0.45
34:BO:34:THR:OG1	34:BO:35:VAL:N	2.50	0.45
38:BS:39:ILE:HD11	38:BS:73:LEU:HD21	1.97	0.45
40:BU:49:HIS:CE1	59:BA:559:G:H22	2.33	0.45
45:BZ:176:PRO:HA	45:BZ:177:PRO:HD3	1.81	0.45
52:B6:8:LYS:HG2	59:BA:2284:C:OP2	2.17	0.45
53:B7:25:PRO:HG3	59:BA:1368:G:O5'	2.17	0.45
53:B7:35:ARG:HH22	59:BA:54:G:H1'	1.81	0.45
59:BA:35:G:C6	59:BA:36:G:C5	3.05	0.45
59:BA:356:G:H2'	59:BA:357:A:C8	2.51	0.45
59:BA:372:G:H1'	59:BA:400:G:N1	2.32	0.45
59:BA:570:G:H1'	59:BA:983:A:N6	2.32	0.45
59:BA:668:G:H2'	59:BA:670:A:N6	2.31	0.45
59:BA:690:G:H2'	59:BA:691:C:O4'	2.17	0.45
59:BA:828:U:H4'	59:BA:831:G:N1	2.32	0.45
59:BA:1444:G:H2'	59:BA:1445:C:C5	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1701:A:H4'	59:BA:1765:C:O2'	2.17	0.45
59:BA:2038:G:H2'	59:BA:2039:C:C6	2.52	0.45
59:BA:2628:C:H4'	59:BA:2781:A:C5	2.52	0.45
60:BB:82:G:H2'	60:BB:83:G:H8	1.82	0.45
1:CB:145:LEU:O	1:CB:149:LEU:HB2	2.17	0.45
3:CD:18:LYS:HB3	3:CD:33:MET:SD	2.57	0.45
7:CH:70:GLN:HG2	7:CH:71:GLY:H	1.81	0.45
9:CJ:81:THR:O	9:CJ:85:LEU:HB2	2.16	0.45
10:CK:63:LEU:O	10:CK:66:LEU:HB3	2.17	0.45
16:CQ:16:GLN:NE2	21:CA:254:G:H21	2.15	0.45
16:CQ:29:HIS:CD2	16:CQ:32:TYR:HB2	2.52	0.45
20:CY:30:GLU:O	20:CY:33:LEU:N	2.50	0.45
20:CY:431:LEU:HB3	20:CY:438:PHE:CZ	2.52	0.45
20:CY:504:ARG:HB3	20:CY:504:ARG:HH21	1.82	0.45
21:CA:861:G:H1	21:CA:868:C:N4	2.14	0.45
21:CA:1534:A:H1'	23:CV:13:A:N1	2.31	0.45
22:CW:76:A:N6	59:DA:2422:A:O4'	2.50	0.45
25:DC:131:ILE:H	25:DC:131:ILE:HD13	1.82	0.45
27:DE:109:LYS:O	37:DR:2:ARG:NH2	2.35	0.45
27:DE:128:SER:OG	27:DE:129:HIS:N	2.50	0.45
29:DG:61:ALA:HB3	29:DG:68:PRO:HD3	1.99	0.45
33:DN:38:HIS:HB3	33:DN:39:ARG:H	1.40	0.45
33:DN:73:THR:OG1	33:DN:74:ARG:HD2	2.17	0.45
33:DN:121:LYS:HD2	33:DN:123:TYR:CZ	2.52	0.45
34:DO:3:GLN:HB2	34:DO:4:PRO:CD	2.47	0.45
39:DT:30:VAL:HA	39:DT:44:ASP:HB3	1.99	0.45
47:D1:12:PRO:HA	47:D1:44:PRO:HD3	1.99	0.45
47:D1:34:THR:HG21	59:DA:2432:A:N3	2.31	0.45
49:D3:28:LEU:HD13	49:D3:35:ARG:HG2	1.98	0.45
52:D6:30:THR:HG21	59:DA:2286:A:OP1	2.17	0.45
59:DA:270(S):G:C2	59:DA:270(T):G:N7	2.85	0.45
59:DA:270(Y):G:H5'	59:DA:271(G):G:OP1	2.17	0.45
59:DA:552:G:H2'	59:DA:553:G:O4'	2.17	0.45
59:DA:749:C:O2	59:DA:1618:A:H2'	2.17	0.45
59:DA:901:A:H2'	59:DA:902:C:O4'	2.17	0.45
59:DA:904:C:H2'	59:DA:905:U:H6	1.81	0.45
59:DA:1650:G:H1	59:DA:2007:C:H42	1.64	0.45
59:DA:2842:G:H2'	59:DA:2843:G:O4'	2.16	0.45
59:DA:2876:G:H2'	59:DA:2877:G:C8	2.52	0.45
1:AB:113:HIS:O	1:AB:117:GLU:HG2	2.17	0.45
3:AD:78:LEU:HA	3:AD:81:GLU:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:10:MET:SD	4:AE:10:MET:N	2.90	0.45
6:AG:126:ASP:O	6:AG:131:LYS:N	2.50	0.45
7:AH:46:LYS:HD3	7:AH:62:TYR:HB3	1.99	0.45
8:AI:97:LYS:HB3	8:AI:98:PRO:HD3	1.99	0.45
11:AL:65:GLU:O	11:AL:66:VAL:HG22	2.17	0.45
11:AL:116:SER:HB2	11:AL:120:TYR:CG	2.51	0.45
18:AS:11:VAL:HG22	18:AS:12:ASP:N	2.32	0.45
20:AY:30:GLU:O	20:AY:33:LEU:HB3	2.17	0.45
20:AY:179:ASP:OD1	20:AY:183:MET:N	2.49	0.45
21:AA:59:A:H1'	21:AA:354:G:C2	2.52	0.45
21:AA:458(A):G:H1'	21:AA:458(E):A:H62	1.81	0.45
21:AA:950:U:H2'	21:AA:951:G:C8	2.52	0.45
21:AA:1491:G:H2'	63:AA:1601:NMY:C4	2.47	0.45
26:BD:6:PHE:CE1	26:BD:18:VAL:HB	2.52	0.45
26:BD:21:PHE:CZ	59:BA:1565:C:H3'	2.52	0.45
26:BD:224:ALA:HB2	26:BD:233:HIS:ND1	2.32	0.45
28:BF:31:HIS:ND1	35:BP:13:ASN:OD1	2.50	0.45
30:BH:94:TYR:HE2	30:BH:161:GLY:H	1.65	0.45
32:BK:117:THR:OG1	32:BK:119:ASP:OD1	2.32	0.45
34:BO:83:ALA:O	34:BO:84:ALA:HB2	2.17	0.45
35:BP:115:LEU:HD13	59:BA:627:A:C6	2.52	0.45
35:BP:136:GLU:HA	35:BP:139:LYS:HB2	1.99	0.45
42:BW:14:PRO:HB3	42:BW:18:ARG:NH2	2.30	0.45
44:BY:47:LYS:HD2	59:BA:481:G:OP2	2.17	0.45
54:B8:42:ARG:NH2	59:BA:2382:G:H21	2.15	0.45
59:BA:704:G:N2	59:BA:727:A:H62	2.15	0.45
59:BA:1024:G:H3'	59:BA:1025:G:H5''	1.97	0.45
59:BA:1180:C:H2'	59:BA:1181:C:O4'	2.16	0.45
59:BA:1779:U:H3	59:BA:1784:A:H62	1.65	0.45
59:BA:1888:G:O2'	59:BA:1889:A:O4'	2.33	0.45
59:BA:1945:G:H3'	59:BA:1946:U:H6	1.82	0.45
59:BA:1972:A:H4'	63:BA:2904:NMY:C21	2.47	0.45
59:BA:1981:A:H5''	59:BA:1982:C:OP2	2.17	0.45
59:BA:2515:C:H2'	59:BA:2516:G:C8	2.52	0.45
59:BA:2811:G:H2'	59:BA:2812:G:O4'	2.17	0.45
7:CH:26:VAL:CG1	7:CH:59:LEU:HB3	2.44	0.45
10:CK:82:VAL:HB	10:CK:107:SER:O	2.17	0.45
11:CL:90:VAL:HB	21:CA:523:A:C6	2.52	0.45
11:CL:127:GLU:O	11:CL:129:ALA:N	2.50	0.45
14:CO:69:TYR:OH	21:CA:752:G:H4'	2.17	0.45
18:CS:36:ARG:HD3	21:CA:1220:G:O2'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:85:PRO:C	20:CY:87:HIS:H	2.24	0.45
20:CY:315:LYS:O	20:CY:326:THR:HA	2.17	0.45
21:CA:148:G:H2'	21:CA:149:A:C8	2.52	0.45
21:CA:659:U:H2'	21:CA:660:G:O4'	2.16	0.45
21:CA:687:A:C2	21:CA:704:A:C6	3.05	0.45
21:CA:757:U:O3'	21:CA:821:G:N2	2.50	0.45
21:CA:1046:A:H3'	21:CA:1047:G:C8	2.50	0.45
21:CA:1255:G:H4'	21:CA:1258:G:O2'	2.16	0.45
21:CA:1288:A:H2'	21:CA:1289:A:C8	2.52	0.45
21:CA:1305:G:C2	21:CA:1332:A:N7	2.84	0.45
21:CA:1503:A:N6	23:CV:14:A:H1'	2.32	0.45
25:DC:77:ALA:HB1	25:DC:95:VAL:HG13	1.99	0.45
27:DE:113:PHE:HB3	59:DA:1654:A:O2'	2.17	0.45
30:DH:37:VAL:HG12	30:DH:38:SER:H	1.82	0.45
32:DK:9:LYS:HD3	32:DK:9:LYS:N	2.31	0.45
32:DK:100:THR:HG22	32:DK:139:VAL:HB	1.99	0.45
32:DK:100:THR:HG22	32:DK:139:VAL:O	2.17	0.45
32:DK:109:LYS:HB3	32:DK:109:LYS:HE3	1.67	0.45
32:DK:126:MET:HE3	59:DA:1059:G:N3	2.31	0.45
33:DN:66:LYS:NZ	59:DA:1022:G:O6	2.49	0.45
33:DN:121:LYS:HZ2	59:DA:2780:G:N2	2.14	0.45
34:DO:104:ARG:HH21	39:DT:33:LYS:HD2	1.82	0.45
37:DR:68:ARG:HA	59:DA:2707:G:O2'	2.16	0.45
39:DT:27:THR:OG1	39:DT:87:ASP:HB3	2.17	0.45
42:DW:71:VAL:HA	42:DW:107:LEU:HB3	1.99	0.45
47:D1:18:ILE:HA	47:D1:20:ARG:HB2	1.98	0.45
59:DA:609:A:H3'	59:DA:610:G:H8	1.82	0.45
59:DA:733:G:HO2'	59:DA:734:A:C5'	2.30	0.45
59:DA:1268:A:H2'	59:DA:1269:A:O4'	2.17	0.45
59:DA:1429:G:H2'	59:DA:1430:C:H6	1.82	0.45
59:DA:1712(A):U:H2'	59:DA:1712(B):G:H8	1.81	0.45
59:DA:1953:A:H2'	59:DA:2550:G:N2	2.32	0.45
59:DA:2180:U:H2'	59:DA:2181:G:C8	2.52	0.45
59:DA:2482:G:H2'	59:DA:2483:C:H6	1.82	0.45
59:DA:2652:C:H2'	59:DA:2653:U:O4'	2.17	0.45
59:DA:2794(A):G:H3'	59:DA:2794(B):U:H5''	1.98	0.45
59:DA:2861:G:C6	59:DA:2862:G:C6	3.06	0.45
60:DB:24:G:H1	60:DB:59:A:N6	2.14	0.45
1:AB:36:ARG:C	1:AB:38:GLY:H	2.25	0.44
2:AC:37:GLN:O	2:AC:40:ARG:HB2	2.17	0.44
2:AC:84:ILE:HD11	2:AC:101:LEU:HD13	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:29:LYS:HB3	6:AG:105:VAL:HG21	1.98	0.44
11:AL:24:VAL:C	11:AL:26:ALA:H	2.25	0.44
13:AN:29:ARG:HG2	13:AN:31:ARG:H	1.82	0.44
18:AS:38:SER:O	18:AS:71:LEU:HB2	2.17	0.44
19:AT:21:LYS:HE3	19:AT:21:LYS:HB2	1.82	0.44
20:AY:632:LEU:HG	59:BA:1067:A:C8	2.51	0.44
21:AA:559:A:H4'	21:AA:560:U:H3'	1.98	0.44
21:AA:699:C:H2'	21:AA:700:G:H5'	1.99	0.44
21:AA:923:A:H2'	21:AA:924:C:C6	2.51	0.44
21:AA:974:A:H4'	21:AA:975:A:H3'	1.99	0.44
21:AA:1405:G:C2	21:AA:1406:U:C4	3.05	0.44
21:AA:1440(L):G:H2'	21:AA:1440(M):G:O4'	2.17	0.44
22:AW:8:U:C5'	22:AW:49:A:H5'	2.46	0.44
22:AW:76:A:N6	59:BA:2422:A:O4'	2.50	0.44
23:AV:26:A:O2'	23:AV:27:A:OP1	2.30	0.44
25:BC:161:ARG:HD2	25:BC:161:ARG:HA	1.59	0.44
27:BE:58:ARG:H	27:BE:58:ARG:HG3	1.51	0.44
28:BF:6:VAL:HG13	28:BF:121:GLY:HA3	1.99	0.44
28:BF:8:GLN:O	28:BF:9:ILE:HB	2.17	0.44
28:BF:107:LYS:HD2	28:BF:110:LEU:HD22	1.98	0.44
28:BF:157:VAL:O	28:BF:193:VAL:C	2.59	0.44
30:BH:124:GLU:OE2	30:BH:132:ARG:HD2	2.17	0.44
33:BN:79:PRO:HD2	33:BN:83:LYS:HE2	1.99	0.44
33:BN:97:ARG:HD2	33:BN:105:GLY:O	2.17	0.44
40:BU:49:HIS:O	40:BU:53:ARG:HB2	2.17	0.44
44:BY:5:MET:HE3	44:BY:5:MET:HA	2.00	0.44
44:BY:29:GLU:N	44:BY:29:GLU:OE1	2.51	0.44
52:B6:43:CYS:SG	52:B6:44:ARG:NH2	2.90	0.44
59:BA:106:C:O2'	59:BA:294:A:O2'	2.23	0.44
59:BA:256:A:H2'	59:BA:257:A:H8	1.82	0.44
59:BA:1951:U:H2'	59:BA:1953:A:OP2	2.16	0.44
59:BA:2023:G:H1	59:BA:2040:C:H42	1.64	0.44
60:BB:76:G:H2'	60:BB:77:U:C6	2.52	0.44
1:CB:69:LEU:HD22	1:CB:69:LEU:HA	1.84	0.44
7:CH:88:LYS:C	7:CH:90:GLY:H	2.25	0.44
10:CK:116:HIS:CD2	21:CA:674:G:H21	2.34	0.44
11:CL:80:HIS:C	11:CL:82:VAL:H	2.24	0.44
12:CM:108:ARG:HG3	12:CM:108:ARG:NH1	2.17	0.44
14:CO:26:GLU:H	14:CO:26:GLU:HG2	1.56	0.44
14:CO:61:GLY:O	14:CO:65:ARG:HG3	2.18	0.44
16:CQ:45:HIS:CD2	16:CQ:72:ARG:HD2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CR:58:LEU:HD22	17:CR:58:LEU:H	1.82	0.44
19:CT:21:LYS:O	19:CT:24:LEU:HB2	2.17	0.44
20:CY:285:ASP:O	20:CY:286:ILE:C	2.61	0.44
20:CY:397:VAL:HB	20:CY:398:ILE:H	1.62	0.44
20:CY:605:ILE:HG21	20:CY:646:PHE:HD1	1.82	0.44
21:CA:36:C:C4	21:CA:37:U:C4	3.05	0.44
21:CA:758:G:H5'	21:CA:821:G:H21	1.81	0.44
25:DC:20:VAL:HG12	25:DC:21:TYR:N	2.31	0.44
25:DC:48:LEU:HD12	25:DC:49:GLY:H	1.82	0.44
25:DC:104:ILE:HG23	25:DC:111:PHE:CZ	2.51	0.44
25:DC:148:PHE:C	25:DC:150:ILE:H	2.24	0.44
25:DC:201:LYS:HA	25:DC:202:PRO:HD3	1.85	0.44
26:DD:37:LEU:O	26:DD:62:TYR:HB3	2.17	0.44
29:DG:124:SER:HA	59:DA:2303:G:O3'	2.17	0.44
33:DN:31:ALA:HA	33:DN:34:LEU:C	2.42	0.44
33:DN:51:PHE:HD2	33:DN:51:PHE:HA	1.67	0.44
37:DR:35:THR:O	59:DA:1278:A:H5''	2.16	0.44
39:DT:92:GLY:HA3	39:DT:120:ARG:NH2	2.32	0.44
40:DU:76:TYR:CE2	40:DU:80:ILE:HG13	2.52	0.44
41:DV:64:HIS:ND1	41:DV:92:THR:HG22	2.32	0.44
42:DW:102:HIS:CD2	59:DA:24:G:H4'	2.52	0.44
59:DA:27:G:N2	59:DA:512:G:H2'	2.32	0.44
59:DA:761:A:H8	59:DA:761:A:O5'	2.01	0.44
59:DA:1060:U:H3	59:DA:1088:A:H8	1.65	0.44
59:DA:1300:U:H1'	59:DA:1301:A:OP2	2.17	0.44
59:DA:1565:C:H1'	59:DA:1566:A:C8	2.46	0.44
59:DA:2025:C:O2	59:DA:2038:G:N1	2.43	0.44
59:DA:2105:C:N4	59:DA:2106:G:O6	2.50	0.44
3:AD:72:GLU:HA	3:AD:75:PHE:HB3	1.98	0.44
4:AE:31:LEU:HD11	4:AE:129:ILE:HD13	1.98	0.44
7:AH:93:VAL:O	7:AH:132:GLU:HG3	2.17	0.44
7:AH:121:ASP:OD2	7:AH:122:ARG:N	2.45	0.44
9:AJ:64:GLU:HG2	13:AN:59:ALA:HB2	1.99	0.44
11:AL:60:LEU:HG	11:AL:63:GLY:O	2.17	0.44
16:AQ:9:VAL:HG21	16:AQ:84:LEU:HD13	1.99	0.44
16:AQ:46:ASP:HA	16:AQ:47:PRO:HD2	1.80	0.44
19:AT:76:ALA:O	19:AT:79:ARG:HB3	2.18	0.44
21:AA:380:G:N2	21:AA:383:A:OP2	2.46	0.44
21:AA:575:G:H4'	21:AA:576:G:H5''	1.99	0.44
21:AA:1171:G:H2'	21:AA:1172:C:C6	2.53	0.44
21:AA:1222:G:OP2	21:AA:1322:C:N4	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1300:G:N2	21:AA:1335:C:O4'	2.40	0.44
21:AA:1413:A:H61	21:AA:1487:G:H1	1.64	0.44
21:AA:1415:G:C4	21:AA:1416:G:C8	3.05	0.44
23:AV:34:A:HO2'	23:AV:35:A:P	2.41	0.44
24:AX:33:U:C2'	24:AX:36:C:H41	2.31	0.44
33:BN:54:VAL:HB	33:BN:100:GLU:CG	2.39	0.44
33:BN:116:LEU:HB2	33:BN:118:LYS:HB2	1.99	0.44
36:BQ:118:LEU:HD13	36:BQ:131:ILE:HG21	1.99	0.44
36:BQ:129:THR:HG1	36:BQ:130:LYS:H	1.64	0.44
39:BT:31:SER:CB	39:BT:45:PHE:HB2	2.46	0.44
40:BU:50:ARG:HH22	41:BV:72:VAL:HG12	1.82	0.44
40:BU:57:PHE:HD2	40:BU:61:TRP:HE1	1.66	0.44
41:BV:68:LYS:HD2	41:BV:68:LYS:HA	1.74	0.44
43:BX:62:LYS:C	43:BX:73:ARG:HG3	2.42	0.44
51:B5:30:LEU:HB3	51:B5:39:MET:HB3	1.99	0.44
59:BA:271(B):G:H1'	59:BA:271(C):U:OP2	2.16	0.44
59:BA:525:U:C5'	59:BA:556:G:H5'	2.47	0.44
59:BA:611(C):U:H1'	59:BA:611(F):A:O2'	2.17	0.44
59:BA:644:A:C2	59:BA:2369:A:H1'	2.48	0.44
59:BA:986:C:H2'	59:BA:987:G:H8	1.82	0.44
59:BA:1162:G:H2'	59:BA:1163:G:H8	1.82	0.44
59:BA:1294:U:H2'	59:BA:1295:C:C6	2.53	0.44
59:BA:1313:U:H2'	59:BA:1313:U:O2	2.16	0.44
59:BA:1434:A:H61	59:BA:1558:A:H62	1.64	0.44
59:BA:1800:C:N3	59:BA:1817:G:N1	2.52	0.44
59:BA:1965:C:C4'	63:BA:2903:NMY:H4	2.42	0.44
59:BA:2330:G:H3'	59:BA:2331:G:C8	2.49	0.44
59:BA:2553:G:H3'	59:BA:2554:U:O4'	2.17	0.44
60:BB:69:G:H1	60:BB:107:U:H3	1.64	0.44
3:CD:28:SER:HB2	3:CD:29:PRO:HD2	1.99	0.44
5:CF:35:ALA:HB1	5:CF:65:VAL:CG2	2.46	0.44
6:CG:69:VAL:HB	6:CG:100:ALA:HB1	1.99	0.44
15:CP:40:ASP:H	15:CP:48:TRP:HB2	1.80	0.44
15:CP:81:ARG:HG3	21:CA:474:G:H5'	1.99	0.44
18:CS:73:GLU:CB	21:CA:1320:C:H1'	2.47	0.44
20:CY:17:ILE:CG2	20:CY:107:VAL:HG23	2.48	0.44
21:CA:18:C:H4'	21:CA:1078:U:O2	2.17	0.44
21:CA:825:G:H2'	21:CA:826:C:H6	1.81	0.44
21:CA:828:A:H62	21:CA:858:G:H21	1.64	0.44
24:CX:1:G:C5	24:CX:72:C:N4	2.81	0.44
25:DC:135:ARG:HG3	59:DA:2170:A:H5'	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:146:VAL:H	25:DC:150:ILE:CD1	2.31	0.44
26:DD:48:ARG:HH11	59:DA:1806:C:H4'	1.82	0.44
26:DD:107:ALA:HA	26:DD:108:PRO:HD3	1.43	0.44
29:DG:106:LEU:HA	29:DG:110:ALA:HB3	1.98	0.44
29:DG:124:SER:HB3	29:DG:131:TYR:HE1	1.82	0.44
33:DN:54:VAL:HG12	33:DN:56:ASN:HB2	1.99	0.44
38:DS:66:ALA:O	38:DS:69:VAL:HG12	2.17	0.44
39:DT:28:VAL:C	39:DT:46:GLU:HB2	2.42	0.44
42:DW:18:ARG:NH1	59:DA:518:G:H4'	2.31	0.44
44:DY:73:ARG:NH2	59:DA:302:C:OP2	2.49	0.44
48:D2:48:HIS:CE1	59:DA:95:G:HO2'	2.35	0.44
52:D6:15:GLU:CG	52:D6:47:THR:HG21	2.44	0.44
55:D9:31:LYS:HD3	59:DA:2528:U:H5''	1.99	0.44
59:DA:1111:A:O3'	59:DA:1112:G:H4'	2.16	0.44
59:DA:1544:A:H2'	59:DA:1545:A:N7	2.32	0.44
59:DA:2353:G:H2'	59:DA:2354:G:O4'	2.17	0.44
60:DB:30:C:H2'	60:DB:31:C:H5'	1.99	0.44
3:AD:18:LYS:HB2	3:AD:18:LYS:HE3	1.81	0.44
3:AD:108:LEU:HD13	3:AD:174:LEU:HD22	1.99	0.44
4:AE:144:THR:H	4:AE:147:ASP:HB2	1.83	0.44
6:AG:75:VAL:HA	6:AG:87:VAL:O	2.18	0.44
8:AI:127:LYS:HD2	22:AW:33:U:P	2.57	0.44
9:AJ:82:ILE:O	9:AJ:86:MET:HB2	2.18	0.44
14:AO:82:ILE:HG13	14:AO:87:ILE:CG1	2.48	0.44
19:AT:14:LYS:HA	19:AT:17:ARG:NE	2.32	0.44
19:AT:56:MET:HE2	19:AT:56:MET:HA	1.98	0.44
20:AY:675:HIS:CG	20:AY:676:TYR:H	2.35	0.44
21:AA:19:C:H2'	21:AA:20:U:C6	2.53	0.44
21:AA:299:G:C6	21:AA:300:A:C6	3.06	0.44
21:AA:756:C:H2'	21:AA:757:U:C6	2.53	0.44
21:AA:1255:G:O2'	21:AA:1258:G:N3	2.43	0.44
25:BC:78:ILE:HG23	25:BC:97:GLY:C	2.42	0.44
25:BC:127:LYS:HB3	25:BC:127:LYS:HE2	1.79	0.44
26:BD:34:VAL:O	26:BD:64:ILE:HG22	2.18	0.44
26:BD:88:ARG:HE	26:BD:157:ARG:HH12	1.64	0.44
26:BD:241:PRO:HB3	59:BA:1971:A:H1'	1.99	0.44
27:BE:108:SER:HA	27:BE:190:GLY:CA	2.47	0.44
32:BK:133:SER:HB3	59:BA:1088:A:H62	1.83	0.44
34:BO:40:VAL:HG11	59:BA:2561:A:H4'	1.99	0.44
36:BQ:18:LYS:HG2	60:BB:91:C:OP1	2.17	0.44
37:BR:2:ARG:HA	37:BR:5:LYS:CE	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BR:58:GLY:HA2	37:BR:80:PHE:CE1	2.53	0.44
42:BW:18:ARG:CZ	59:BA:518:G:H4'	2.47	0.44
59:BA:862:G:H2'	59:BA:863:A:O4'	2.17	0.44
59:BA:1468(F):C:H2'	59:BA:1468(G):G:H8	1.82	0.44
59:BA:2040:C:H2'	59:BA:2041:U:C6	2.52	0.44
59:BA:2104:G:H1	59:BA:2185:C:H42	1.64	0.44
60:BB:56:G:H4'	60:BB:57:A:H8	1.82	0.44
1:CB:162:ILE:O	1:CB:185:ILE:O	2.36	0.44
1:CB:168:THR:O	1:CB:171:ALA:HB3	2.18	0.44
2:CC:134:ILE:HG23	2:CC:168:ALA:HB2	1.99	0.44
4:CE:34:VAL:H	4:CE:62:ALA:HB1	1.83	0.44
7:CH:85:ARG:HB3	7:CH:88:LYS:HG2	1.99	0.44
8:CI:3:GLN:NE2	21:CA:1130:A:O2'	2.50	0.44
10:CK:26:ASN:ND2	21:CA:691:G:OP2	2.41	0.44
10:CK:96:ARG:O	10:CK:100:ALA:N	2.47	0.44
15:CP:82:GLN:H	21:CA:458(E):A:H4'	1.83	0.44
16:CQ:68:ARG:HA	16:CQ:70:ARG:NH1	2.32	0.44
16:CQ:83:ASP:O	16:CQ:86:GLU:HB3	2.17	0.44
20:CY:33:LEU:HD23	20:CY:34:TYR:N	2.32	0.44
20:CY:428:LEU:O	20:CY:432:ALA:N	2.30	0.44
21:CA:321:A:H2'	21:CA:322:C:C6	2.53	0.44
21:CA:800:G:H2'	21:CA:801:U:C6	2.52	0.44
21:CA:967:C:H2'	21:CA:968:A:C8	2.52	0.44
21:CA:1407:C:N3	21:CA:1494:G:O6	2.50	0.44
24:CX:35:A:H2'	24:CX:36:C:H6	1.81	0.44
25:DC:31:LYS:HD3	25:DC:31:LYS:O	2.17	0.44
27:DE:113:PHE:HB2	59:DA:2823:A:OP1	2.17	0.44
27:DE:143:ASN:ND2	27:DE:144:ARG:H	2.16	0.44
27:DE:179:GLU:O	27:DE:180:ASN:HB2	2.18	0.44
28:DF:62:ARG:HD2	59:DA:797:C:OP1	2.18	0.44
29:DG:31:VAL:HA	29:DG:32:PRO:HD2	1.77	0.44
37:DR:35:THR:HA	37:DR:112:ALA:O	2.17	0.44
39:DT:90:GLN:HB2	39:DT:120:ARG:CD	2.48	0.44
46:D0:78:TYR:HB3	46:D0:80:HIS:NE2	2.33	0.44
47:D1:26:ARG:HD2	47:D1:26:ARG:HA	1.55	0.44
49:D3:40:THR:O	49:D3:44:ARG:N	2.49	0.44
52:D6:9:LEU:HB2	52:D6:10:LEU:H	1.64	0.44
59:DA:297:C:H2'	59:DA:298:G:O4'	2.18	0.44
59:DA:597:U:O2	59:DA:660:G:C6	2.70	0.44
59:DA:1120:G:H2'	59:DA:1121:C:H6	1.81	0.44
59:DA:1341:U:C4	59:DA:1395:A:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1389:G:H5'	59:DA:1526:G:C5'	2.48	0.44
59:DA:2131:G:H5'	59:DA:2158:A:N1	2.33	0.44
59:DA:2267:A:H5''	59:DA:2268:A:C5'	2.47	0.44
59:DA:2372:G:H1	59:DA:2381:C:H42	1.64	0.44
59:DA:2469:A:H2'	59:DA:2470:G:O4'	2.17	0.44
59:DA:2794(A):G:H3'	59:DA:2794(B):U:C5'	2.47	0.44
59:DA:2825:U:H2'	59:DA:2826:A:O4'	2.17	0.44
1:AB:166:ASP:O	1:AB:170:GLU:HB2	2.17	0.44
11:AL:97:ARG:HD3	11:AL:98:TYR:CE1	2.51	0.44
20:AY:486:THR:HA	20:AY:560:VAL:HG13	1.99	0.44
21:AA:184:G:H4'	21:AA:224:C:O3'	2.17	0.44
21:AA:410:G:N1	21:AA:431:A:OP2	2.48	0.44
21:AA:429:U:H4'	21:AA:430:A:C5'	2.47	0.44
21:AA:552:U:H2'	21:AA:553:A:C8	2.52	0.44
21:AA:1126:U:H1'	21:AA:1280:A:C5	2.52	0.44
21:AA:1493:A:OP2	63:AA:1601:NMY:H9	2.17	0.44
26:BD:67:PHE:HZ	26:BD:157:ARG:CZ	2.30	0.44
28:BF:50:SER:HB3	59:BA:38:A:H5'	1.99	0.44
32:BK:56:GLU:O	32:BK:67:PHE:HA	2.18	0.44
33:BN:100:GLU:HB3	33:BN:104:LYS:H	1.81	0.44
34:BO:59:LYS:HB3	34:BO:87:ILE:CG1	2.41	0.44
36:BQ:65:PHE:CE1	59:BA:873:G:H4'	2.53	0.44
37:BR:96:ARG:HB3	37:BR:117:VAL:HG21	1.99	0.44
40:BU:62:ILE:HD11	40:BU:93:LYS:HD3	1.98	0.44
45:BZ:6:LYS:HG3	45:BZ:7:ALA:H	1.82	0.44
59:BA:1028:A:H3'	59:BA:1125:G:H22	1.82	0.44
59:BA:1060:U:O5'	59:BA:1060:U:H6	1.99	0.44
59:BA:1132:A:H2'	59:BA:1133:U:C6	2.52	0.44
59:BA:1203:G:H2'	59:BA:1204:A:C2	2.52	0.44
59:BA:1283:G:H8	59:BA:1283:G:O5'	2.00	0.44
59:BA:1444:G:O2'	59:BA:1444(A):A:H2'	2.16	0.44
59:BA:2037:G:H2'	59:BA:2038:G:O4'	2.17	0.44
4:CE:11:ILE:O	4:CE:12:LEU:HD13	2.18	0.44
4:CE:133:TYR:HE1	21:CA:1078:U:H4'	1.82	0.44
5:CF:8:ILE:HB	5:CF:61:LEU:HD12	2.00	0.44
7:CH:30:ARG:O	7:CH:33:GLU:HB3	2.17	0.44
7:CH:100:ILE:HA	7:CH:101:PRO:HD3	1.77	0.44
10:CK:57:THR:HG23	10:CK:60:ALA:HB2	1.98	0.44
12:CM:23:TYR:CD2	21:CA:1330:U:H5'	2.53	0.44
20:CY:77:HIS:CE1	20:CY:277:VAL:HG21	2.53	0.44
20:CY:269:VAL:HB	20:CY:270:GLN:H	1.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:68(A):G:C2	21:CA:68(B):G:N7	2.85	0.44
21:CA:154:C:C4	21:CA:168:G:C2	3.06	0.44
21:CA:317:G:H2'	21:CA:318:G:C8	2.52	0.44
21:CA:682:G:H2'	21:CA:683:G:O4'	2.17	0.44
21:CA:763:G:H2'	21:CA:764:C:C6	2.52	0.44
21:CA:787:A:H2'	21:CA:788:U:C6	2.53	0.44
21:CA:1164:G:H2'	21:CA:1165:C:C6	2.53	0.44
21:CA:1197:G:H2'	21:CA:1198:G:O4'	2.18	0.44
25:DC:140:ASN:O	25:DC:142:LYS:N	2.49	0.44
26:DD:49:ILE:HG23	59:DA:779:U:OP1	2.18	0.44
26:DD:207:GLY:H	26:DD:211:ARG:HD3	1.83	0.44
28:DF:54:ARG:HB2	28:DF:80:ALA:HA	2.00	0.44
29:DG:81:LYS:HB3	29:DG:82:LEU:H	1.51	0.44
30:DH:20:ALA:O	30:DH:22:GLY:N	2.51	0.44
30:DH:73:ALA:HB1	30:DH:77:LYS:HE3	1.99	0.44
30:DH:142:GLY:C	59:DA:2745:C:H4'	2.43	0.44
31:DJ:54:UNK:O	59:DA:1107:G:H5'	2.17	0.44
32:DK:30:HIS:HA	32:DK:59:ILE:HD12	1.99	0.44
32:DK:84:LEU:HD22	32:DK:85:GLU:H	1.81	0.44
33:DN:58:ASP:HB2	33:DN:98:VAL:CG1	2.46	0.44
33:DN:103:VAL:O	33:DN:106:MET:HB2	2.17	0.44
35:DP:81:GLN:O	35:DP:112:LEU:HD22	2.17	0.44
35:DP:85:LEU:HB2	35:DP:118:GLY:H	1.83	0.44
36:DQ:82:ARG:NH1	59:DA:2250:G:H8	2.16	0.44
39:DT:74:ARG:HB3	39:DT:76:PHE:HE1	1.82	0.44
39:DT:77:PRO:O	39:DT:79:HIS:N	2.49	0.44
40:DU:54:LYS:NZ	59:DA:994:C:H3'	2.32	0.44
47:D1:15:ALA:H	47:D1:41:ARG:HB3	1.83	0.44
47:D1:34:THR:OG1	47:D1:35:THR:N	2.46	0.44
51:D5:45:VAL:HG21	51:D5:50:GLY:HA2	1.98	0.44
52:D6:38:LYS:HD3	52:D6:48:VAL:HA	1.99	0.44
59:DA:238:C:O2'	59:DA:608:A:H1'	2.17	0.44
59:DA:270(U):C:H2'	59:DA:270(V):G:H8	1.82	0.44
59:DA:611:C:H2'	59:DA:611(A):C:C5	2.53	0.44
59:DA:714:U:H1'	59:DA:717:G:C8	2.52	0.44
59:DA:839:U:H2'	59:DA:840:C:H6	1.82	0.44
59:DA:921:G:H2'	59:DA:922:U:C6	2.53	0.44
59:DA:2202(A):U:H2'	59:DA:2202(B):C:C6	2.53	0.44
59:DA:2352:A:N6	59:DA:2365:G:H21	2.05	0.44
59:DA:2660:A:C6	59:DA:2661:G:C6	3.06	0.44
59:DA:2686:G:H2'	59:DA:2687:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2811:G:H2'	59:DA:2812:G:O4'	2.17	0.44
4:AE:92:LYS:O	4:AE:119:LEU:HB2	2.17	0.44
9:AJ:55:LYS:HG2	21:AA:973:G:C1'	2.47	0.44
10:AK:23:ALA:HA	10:AK:28:THR:HG23	1.98	0.44
11:AL:58:VAL:HG21	11:AL:85:ILE:HD11	1.99	0.44
16:AQ:8:GLY:HA2	16:AQ:23:VAL:HG13	1.98	0.44
17:AR:30:ASP:OD2	17:AR:33:ASP:HB2	2.17	0.44
19:AT:51:GLU:O	19:AT:55:ILE:HG12	2.17	0.44
21:AA:43:C:H2'	21:AA:44:G:O4'	2.17	0.44
21:AA:367:U:H3	21:AA:393:A:H61	0.64	0.44
21:AA:458:C:N4	21:AA:458(A):G:O6	2.50	0.44
21:AA:1393:U:H2'	21:AA:1395:C:H5	1.80	0.44
21:AA:1491:G:N7	63:AA:1601:NMY:H2	2.32	0.44
25:BC:80:LYS:O	25:BC:82:GLU:N	2.50	0.44
26:BD:30:GLU:CD	26:BD:63:ARG:HE	2.26	0.44
27:BE:119:ARG:NH2	27:BE:159:HIS:O	2.49	0.44
33:BN:71:ILE:CG2	33:BN:98:VAL:HA	2.48	0.44
33:BN:103:VAL:C	33:BN:105:GLY:H	2.22	0.44
35:BP:21:ARG:HH22	35:BP:29:LYS:HE3	1.83	0.44
36:BQ:35:VAL:HG23	36:BQ:102:VAL:N	2.32	0.44
45:BZ:146:ILE:HG12	45:BZ:174:VAL:HG12	1.99	0.44
49:B3:5:LYS:O	49:B3:5:LYS:HG3	2.14	0.44
53:B7:32:LYS:O	53:B7:35:ARG:HB2	2.18	0.44
59:BA:600:G:H1	59:BA:657:U:H3	1.65	0.44
59:BA:910:A:O2'	59:BA:2265:U:H5'	2.18	0.44
59:BA:1081:U:H2'	59:BA:1082:U:H5	1.80	0.44
59:BA:1607:C:H4'	59:BA:1608:A:C8	2.53	0.44
59:BA:2077:A:O2'	59:BA:2434:A:H4'	2.18	0.44
59:BA:2475:C:H42	59:BA:2529:G:H21	1.48	0.44
2:CC:173:VAL:O	21:CA:1107:C:H5''	2.18	0.44
11:CL:118:SER:HB3	21:CA:35:G:H21	1.83	0.44
12:CM:13:LYS:HG2	12:CM:14:ARG:N	2.31	0.44
12:CM:87:TYR:CZ	21:CA:1321:C:H4'	2.53	0.44
14:CO:58:MET:SD	21:CA:580:U:H5''	2.58	0.44
15:CP:22:THR:HB	15:CP:32:TYR:HB3	1.98	0.44
16:CQ:29:HIS:HB3	16:CQ:33:GLY:N	2.32	0.44
21:CA:68(I):G:C6	21:CA:68(J):G:C5	3.06	0.44
21:CA:68(W):G:H2'	21:CA:68(X):U:C6	2.52	0.44
21:CA:114:U:H3	21:CA:313:A:H2	1.59	0.44
21:CA:1158:C:H3'	21:CA:1158:C:O2	2.18	0.44
21:CA:1240:U:H5''	21:CA:1241:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1469:G:H2'	21:CA:1470:G:C8	2.53	0.44
24:CX:74:C:C5	59:DA:2554:U:C5	3.05	0.44
25:DC:43:GLU:CD	59:DA:2124:G:H1'	2.43	0.44
28:DF:162:LEU:H	28:DF:162:LEU:CD1	2.30	0.44
29:DG:87:PRO:HB2	29:DG:88:ILE:H	1.52	0.44
30:DH:38:SER:HA	30:DH:39:PRO:HD3	1.75	0.44
33:DN:101:HIS:CG	33:DN:102:ALA:N	2.82	0.44
35:DP:27:HIS:O	35:DP:29:LYS:N	2.50	0.44
35:DP:107:LYS:NZ	59:DA:624:C:H41	2.15	0.44
36:DQ:53:ALA:O	36:DQ:56:ARG:HB3	2.17	0.44
38:DS:34:HIS:CE1	60:DB:27:C:H5''	2.53	0.44
46:D0:12:ASN:ND2	59:DA:2277:G:OP2	2.50	0.44
46:D0:47:PRO:HB3	46:D0:51:VAL:O	2.17	0.44
47:D1:67:ILE:H	47:D1:67:ILE:HG12	1.52	0.44
53:D7:34:ARG:HG2	53:D7:34:ARG:H	1.67	0.44
59:DA:9:U:H2'	59:DA:2629:A:H62	1.83	0.44
59:DA:81:G:O6	59:DA:105:C:N3	2.50	0.44
59:DA:579:G:N1	59:DA:1261:C:O2	2.33	0.44
59:DA:904:C:C4	59:DA:905:U:C5	3.06	0.44
59:DA:1264:G:H21	59:DA:2015:A:H62	1.66	0.44
59:DA:2668:G:H2'	59:DA:2669:G:C8	2.53	0.44
2:AC:115:LEU:HA	2:AC:118:GLN:HB2	2.00	0.44
8:AI:107:ARG:HB3	21:AA:1347:G:C5'	2.45	0.44
9:AJ:57:LYS:HG2	21:AA:972:C:P	2.58	0.44
10:AK:28:THR:O	10:AK:44:SER:HA	2.18	0.44
16:AQ:12:SER:HB3	16:AQ:20:THR:HG1	1.83	0.44
21:AA:447:G:O6	21:AA:485:G:H1'	2.18	0.44
21:AA:697:U:H1'	21:AA:786:G:H1'	2.00	0.44
21:AA:836:G:C6	21:AA:851:G:C6	3.06	0.44
21:AA:1157:A:H4'	21:AA:1157:A:OP1	2.17	0.44
21:AA:1493:A:C8	59:BA:1913:A:H2	2.36	0.44
33:BN:28:THR:C	33:BN:31:ALA:HB3	2.42	0.44
33:BN:50:ASP:OD1	33:BN:120:LEU:HB2	2.17	0.44
33:BN:88:GLU:C	33:BN:91:LEU:H	2.26	0.44
38:BS:99:LYS:C	38:BS:101:LEU:N	2.75	0.44
38:BS:106:ARG:C	38:BS:108:GLY:H	2.26	0.44
41:BV:87:HIS:CE1	59:BA:992:C:H1'	2.53	0.44
42:BW:66:GLU:H	42:BW:66:GLU:CD	2.25	0.44
45:BZ:48:PHE:HE2	45:BZ:71:VAL:HG21	1.83	0.44
59:BA:635:C:O2	59:BA:639:U:H4'	2.18	0.44
59:BA:675:A:H3'	59:BA:676:A:H2	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1155:A:H8	59:BA:1155:A:OP2	2.01	0.44
59:BA:1553:A:H5'	59:BA:1554:A:OP2	2.18	0.44
59:BA:1759:A:H4'	59:BA:2715:C:H5'	2.00	0.44
59:BA:1943:U:C2	59:BA:1945:G:O4'	2.71	0.44
59:BA:2151:G:H2'	59:BA:2152:G:C8	2.51	0.44
59:BA:2599:G:H2'	59:BA:2600:A:C8	2.53	0.44
1:CB:70:PHE:HB2	1:CB:92:TYR:HB2	2.00	0.44
2:CC:55:VAL:HA	2:CC:68:VAL:HA	1.99	0.44
3:CD:64:LEU:HD22	3:CD:203:VAL:HG11	1.99	0.44
8:CI:50:LEU:HD13	8:CI:56:LEU:HA	1.99	0.44
10:CK:85:ARG:HA	10:CK:110:ASP:O	2.18	0.44
16:CQ:8:GLY:HA3	16:CQ:59:ILE:HD13	2.00	0.44
16:CQ:66:SER:HB3	16:CQ:69:LYS:HB3	2.00	0.44
17:CR:58:LEU:HD12	17:CR:62:GLU:HB3	1.99	0.44
20:CY:312:LEU:HD12	20:CY:312:LEU:HA	1.83	0.44
21:CA:771:G:H2'	21:CA:772:U:C5	2.52	0.44
21:CA:951:G:H2'	21:CA:952:U:C6	2.53	0.44
21:CA:1028:C:C4	21:CA:1028(A):C:C4	3.06	0.44
21:CA:1047:G:H2'	21:CA:1048:G:H8	1.81	0.44
21:CA:1094:G:O2'	21:CA:1095:U:P	2.74	0.44
21:CA:1494:G:OP1	63:CA:1601:NMY:N7	2.44	0.44
24:CX:15:G:H2'	24:CX:15:G:N3	2.32	0.44
27:DE:117:MET:HG3	27:DE:136:ARG:HG3	1.99	0.44
33:DN:71:ILE:HD11	33:DN:91:LEU:HB2	1.98	0.44
34:DO:76:ALA:H	39:DT:75:ILE:HB	1.82	0.44
36:DQ:42:ILE:HB	36:DQ:47:ILE:HD11	2.00	0.44
37:DR:97:VAL:HA	37:DR:113:LEU:O	2.18	0.44
38:DS:13:ARG:C	38:DS:15:ARG:H	2.25	0.44
39:DT:24:PRO:HB3	39:DT:97:ALA:HA	2.00	0.44
42:DW:16:LYS:O	42:DW:20:VAL:HG23	2.18	0.44
43:DX:30:VAL:HG22	43:DX:77:LYS:O	2.17	0.44
44:DY:76:CYS:HB2	44:DY:96:ILE:HG13	1.99	0.44
45:DZ:71:VAL:O	45:DZ:72:ARG:HB2	2.18	0.44
47:D1:3:LYS:HG3	47:D1:4:VAL:H	1.82	0.44
52:D6:11:LEU:HD22	52:D6:12:GLU:O	2.18	0.44
59:DA:220:G:N3	59:DA:233:A:H2	2.15	0.44
59:DA:255:A:O2'	59:DA:384:U:OP1	2.35	0.44
59:DA:271(B):G:O2'	59:DA:420:C:H3'	2.18	0.44
59:DA:271(T):G:N2	59:DA:357(B):A:H62	2.07	0.44
59:DA:625:G:H2'	59:DA:626:U:O4'	2.16	0.44
59:DA:1000:A:OP2	59:DA:1154:G:N1	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1483:G:N2	59:DA:1506:C:C2	2.76	0.44
59:DA:1485:G:H1	59:DA:1504:C:N4	2.13	0.44
59:DA:1541:U:H5''	59:DA:1542:G:H3'	1.99	0.44
59:DA:1611:C:H2'	59:DA:1612:C:C6	2.53	0.44
59:DA:2075:U:H3	59:DA:2077:A:H8	1.62	0.44
59:DA:2202:C:C2	59:DA:2221:G:N2	2.80	0.44
59:DA:2324:C:N4	59:DA:2331:G:H1	2.13	0.44
59:DA:2512:C:N4	59:DA:2574:G:H1	2.10	0.44
1:AB:142:LEU:O	1:AB:146:GLN:HB2	2.18	0.44
1:AB:164:VAL:CG2	1:AB:170:GLU:HB3	2.48	0.44
1:AB:219:VAL:O	1:AB:223:ILE:HG13	2.18	0.44
2:AC:141:VAL:HG11	2:AC:149:ALA:HB2	1.99	0.44
4:AE:18:ARG:HD3	21:AA:1081:G:H5''	2.00	0.44
6:AG:4:ARG:NH1	21:AA:1091:U:OP2	2.50	0.44
10:AK:58:PRO:HA	10:AK:90:GLY:HA3	2.00	0.44
11:AL:56:ALA:O	11:AL:58:VAL:HG23	2.18	0.44
13:AN:29:ARG:O	13:AN:33:VAL:HG21	2.17	0.44
15:AP:8:ARG:HB2	15:AP:17:TYR:CE2	2.53	0.44
15:AP:35:LYS:CG	15:AP:36:ILE:H	2.29	0.44
18:AS:10:PHE:HZ	18:AS:37:ARG:HH21	1.65	0.44
21:AA:138:G:H2'	21:AA:139:G:O4'	2.18	0.44
21:AA:565:U:H3'	21:AA:566:G:C8	2.49	0.44
21:AA:858:G:H8	21:AA:858:G:OP2	2.01	0.44
21:AA:1157:A:N6	21:AA:1180:A:C8	2.86	0.44
21:AA:1494:G:H4'	59:BA:1913:A:N7	2.33	0.44
22:AW:50:C:C5	22:AW:51:A:C8	3.05	0.44
28:BF:9:ILE:CG2	28:BF:124:LEU:HA	2.47	0.44
28:BF:125:LEU:HD22	28:BF:194:MET:CG	2.47	0.44
28:BF:170:LEU:HA	28:BF:171:PRO:HD2	1.73	0.44
33:BN:104:LYS:HB2	33:BN:120:LEU:HD11	2.00	0.44
36:BQ:80:GLU:HG2	59:BA:2494:G:O2'	2.17	0.44
37:BR:25:ALA:O	37:BR:28:LEU:HB3	2.17	0.44
38:BS:95:HIS:O	38:BS:97:ARG:N	2.51	0.44
38:BS:109:GLY:HA3	59:BA:2376:A:H1'	2.00	0.44
41:BV:89:GLN:HA	41:BV:90:PRO:HD3	1.81	0.44
42:BW:74:ALA:HA	42:BW:104:THR:C	2.43	0.44
46:B0:35:ASN:OD1	59:BA:2353:G:O2'	2.32	0.44
48:B2:17:SER:HA	48:B2:18:PRO:HD2	1.70	0.44
49:B3:5:LYS:HB3	49:B3:59:VAL:HB	1.99	0.44
51:B5:43:HIS:NE2	59:BA:2883:A:H4'	2.33	0.44
59:BA:633:A:H5'	59:BA:2404:C:H4'	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1545:A:H2'	59:BA:1546:C:O4'	2.17	0.44
59:BA:1608:A:H62	59:BA:1621:U:H3	1.65	0.44
59:BA:2049:G:H1	59:BA:2619:C:H42	1.65	0.44
59:BA:2202:C:H2'	59:BA:2202(A):U:C6	2.53	0.44
59:BA:2202(B):C:H2'	59:BA:2202(C):G:N2	2.32	0.44
59:BA:2228:G:H8	59:BA:2228:G:O5'	2.00	0.44
59:BA:2446:G:H2'	59:BA:2447:G:OP1	2.18	0.44
59:BA:2560:C:H2'	59:BA:2561:A:C8	2.52	0.44
59:BA:2755:C:O5'	59:BA:2755:C:H6	2.01	0.44
60:BB:9:G:O6	60:BB:111:U:O2	2.36	0.44
1:CB:92:TYR:O	1:CB:151:GLY:HA3	2.18	0.44
2:CC:41:GLY:O	2:CC:44:GLU:HG2	2.17	0.44
3:CD:56:VAL:HA	3:CD:59:ARG:HB2	1.99	0.44
4:CE:17:ALA:HA	4:CE:26:PHE:HA	1.98	0.44
4:CE:102:ALA:HA	21:CA:8:A:O4'	2.17	0.44
9:CJ:51:ARG:HD2	9:CJ:59:SER:HB3	2.00	0.44
12:CM:94:ARG:HD3	12:CM:94:ARG:HA	1.85	0.44
14:CO:55:GLY:HA2	14:CO:58:MET:HG2	1.99	0.44
20:CY:534:ILE:HA	20:CY:535:PRO:HD3	1.64	0.44
20:CY:574:GLU:OE1	20:CY:574:GLU:N	2.49	0.44
20:CY:605:ILE:HG21	20:CY:646:PHE:CD1	2.52	0.44
20:CY:605:ILE:HG13	20:CY:647:VAL:O	2.18	0.44
21:CA:611:A:C6	21:CA:612:C:C5	3.06	0.44
21:CA:829:G:H2'	21:CA:830:G:C8	2.53	0.44
24:CX:15:G:H22	24:CX:59:U:H3	1.65	0.44
25:DC:50:ILE:O	25:DC:54:ARG:HB2	2.18	0.44
26:DD:262:ARG:HD3	59:DA:2085:C:OP1	2.17	0.44
30:DH:23:ARG:O	30:DH:23:ARG:HG2	2.16	0.44
32:DK:55:VAL:O	32:DK:56:GLU:HB2	2.18	0.44
33:DN:47:ALA:HA	33:DN:50:ASP:OD2	2.18	0.44
33:DN:75:TYR:OH	59:DA:1137:G:H1'	2.17	0.44
33:DN:98:VAL:O	33:DN:100:GLU:C	2.50	0.44
33:DN:114:ARG:NE	59:DA:527:C:N1	2.38	0.44
34:DO:73:ASP:C	34:DO:75:SER:H	2.26	0.44
35:DP:17:LYS:HD3	59:DA:662:G:H4'	2.00	0.44
38:DS:11:LYS:HD3	38:DS:11:LYS:HA	1.84	0.44
42:DW:79:GLY:HA3	42:DW:100:THR:HG23	2.00	0.44
45:DZ:108:PRO:HB3	45:DZ:144:LEU:H	1.83	0.44
47:D1:76:ARG:HH22	47:D1:95:LEU:HD22	1.82	0.44
47:D1:80:LEU:HG	59:DA:270(S):G:O2'	2.18	0.44
51:D5:17:ASP:HA	51:D5:20:ARG:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:D8:17:THR:O	54:D8:19:SER:N	2.49	0.44
59:DA:388:G:H5'	59:DA:389:G:OP2	2.17	0.44
59:DA:401:A:H2'	59:DA:402:A:O4'	2.18	0.44
59:DA:530:G:H21	59:DA:2021:C:H1'	1.82	0.44
59:DA:538:G:C2	59:DA:555:U:O2	2.70	0.44
59:DA:820:A:OP2	59:DA:973:A:N6	2.38	0.44
59:DA:1044:G:O2'	59:DA:1045:A:H5''	2.17	0.44
59:DA:2130:U:H1'	59:DA:2159:G:C6	2.52	0.44
59:DA:2350:C:H2'	59:DA:2351:G:O4'	2.18	0.44
59:DA:2737:G:H2'	59:DA:2738:A:C8	2.53	0.44
1:AB:24:TRP:HA	1:AB:190:THR:HG22	2.00	0.44
2:AC:12:LEU:HD13	13:AN:56:VAL:O	2.18	0.44
3:AD:194:LEU:HD13	3:AD:194:LEU:HA	1.90	0.44
8:AI:69:GLY:HA3	21:AA:1371:G:O3'	2.17	0.44
8:AI:70:LYS:NZ	21:AA:1249:C:O4'	2.39	0.44
12:AM:81:LEU:HD11	12:AM:88:ARG:HH21	1.82	0.44
12:AM:81:LEU:HD12	12:AM:86:CYS:SG	2.58	0.44
12:AM:87:TYR:CE2	21:AA:1321:C:H4'	2.53	0.44
13:AN:41:ARG:HH22	21:AA:973:G:H4'	1.83	0.44
16:AQ:24:GLU:HA	16:AQ:38:ARG:O	2.18	0.44
20:AY:358:MET:HG2	20:AY:363:ARG:NE	2.33	0.44
20:AY:549:ALA:HB2	20:AY:587:SER:HA	1.99	0.44
21:AA:158:G:H2'	21:AA:159:G:O4'	2.18	0.44
21:AA:659:U:H2'	21:AA:660:G:C8	2.53	0.44
21:AA:1058:G:H1	21:AA:1199:U:H3	1.66	0.44
21:AA:1218:C:H2'	21:AA:1219:U:C5	2.52	0.44
25:BC:73:VAL:HB	25:BC:112:ASP:HB3	2.00	0.44
25:BC:169:THR:HG21	59:BA:2121:G:N2	2.29	0.44
26:BD:59:LYS:NZ	26:BD:60:ARG:O	2.51	0.44
27:BE:93:VAL:HB	27:BE:175:VAL:HG23	2.00	0.44
28:BF:6:VAL:HB	28:BF:7:TYR:CD1	2.52	0.44
32:BK:52:ILE:O	32:BK:72:PRO:HA	2.17	0.44
35:BP:111:ARG:HB3	35:BP:128:HIS:HB2	1.98	0.44
36:BQ:7:MET:O	36:BQ:9:TYR:N	2.51	0.44
36:BQ:52:VAL:O	36:BQ:56:ARG:HB2	2.18	0.44
42:BW:86:LEU:HB2	42:BW:96:ILE:HG21	2.00	0.44
44:BY:32:PRO:HB2	44:BY:33:LYS:H	1.58	0.44
44:BY:38:ILE:HD13	44:BY:65:ALA:O	2.18	0.44
45:BZ:51:ALA:HA	45:BZ:55:HIS:HD2	1.82	0.44
49:B3:18:ASP:O	49:B3:21:ALA:HB3	2.17	0.44
53:B7:34:ARG:HE	53:B7:42:LEU:HD13	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B9:18:ARG:NH1	55:B9:23:VAL:HG22	2.33	0.44
59:BA:780:G:N2	59:BA:783:A:H62	2.14	0.44
59:BA:878:A:H61	59:BA:899:A:H1'	1.81	0.44
59:BA:1101:U:H2'	59:BA:1102:C:C6	2.53	0.44
59:BA:1771:C:H2'	59:BA:1772:G:C8	2.52	0.44
59:BA:1797:C:H2'	59:BA:1798:U:O4'	2.17	0.44
59:BA:1806:C:N4	59:BA:1811:G:H1	2.11	0.44
59:BA:2082:A:H3'	59:BA:2083:G:H8	1.83	0.44
59:BA:2769:C:C4	59:BA:2770:G:C5	3.05	0.44
1:CB:168:THR:C	1:CB:171:ALA:H	2.25	0.44
1:CB:189:ASP:N	1:CB:205:ASP:OD2	2.43	0.44
2:CC:88:ARG:HG2	2:CC:99:VAL:HG21	1.99	0.44
7:CH:37:ARG:HD2	7:CH:38:ILE:N	2.32	0.44
9:CJ:34:VAL:HG22	9:CJ:74:ILE:HG13	2.00	0.44
9:CJ:60:ARG:NH2	21:CA:1367:C:OP1	2.51	0.44
16:CQ:57:VAL:HA	16:CQ:76:LEU:HA	1.98	0.44
19:CT:61:SER:HA	21:CA:193:C:O2'	2.18	0.44
19:CT:85:MET:SD	21:CA:186(A):C:H1'	2.58	0.44
20:CY:210:ARG:O	20:CY:213:HIS:HB3	2.18	0.44
20:CY:341:VAL:HA	20:CY:391:GLY:HA2	2.00	0.44
20:CY:419:ALA:O	20:CY:423:LYS:HE2	2.17	0.44
21:CA:522:C:H4'	21:CA:536:C:O5'	2.18	0.44
21:CA:733:A:O2'	21:CA:734:G:H5'	2.17	0.44
21:CA:1003:G:H1	21:CA:1037:C:N4	2.16	0.44
21:CA:1238:A:N3	21:CA:1241:G:H1'	2.32	0.44
21:CA:1371:G:C6	21:CA:1372:U:C4	3.05	0.44
21:CA:1408:A:H62	63:CA:1601:NMY:C14	2.29	0.44
21:CA:1505:G:O2'	23:CV:17:U:OP2	2.31	0.44
26:DD:58:HIS:HE1	59:DA:1568:G:H1'	1.82	0.44
27:DE:47:VAL:O	27:DE:80:GLU:HA	2.18	0.44
28:DF:168:ARG:NH2	59:DA:322:A:OP1	2.47	0.44
29:DG:51:ARG:HH12	29:DG:88:ILE:HG13	1.81	0.44
30:DH:97:ARG:HB3	30:DH:104:GLU:HB3	1.99	0.44
33:DN:104:LYS:NZ	33:DN:121:LYS:O	2.45	0.44
35:DP:55:ARG:HH21	59:DA:825:C:H1'	1.83	0.44
35:DP:57:THR:C	35:DP:59:LEU:N	2.74	0.44
44:DY:15:VAL:HB	44:DY:23:ARG:H	1.83	0.44
44:DY:46:LYS:N	44:DY:62:GLU:HB2	2.29	0.44
44:DY:85:VAL:CG2	59:DA:297:C:H5''	2.48	0.44
46:D0:27:GLU:HB3	46:D0:69:PHE:CD1	2.52	0.44
52:D6:53:LYS:HD2	52:D6:53:LYS:HA	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D7:34:ARG:CZ	53:D7:42:LEU:HB3	2.48	0.44
59:DA:805:G:N3	59:DA:831:G:H1'	2.32	0.44
59:DA:1281:G:H2'	59:DA:1282:U:C6	2.53	0.44
59:DA:1613:G:C2	59:DA:1617:C:C2	3.06	0.44
59:DA:1630:G:H2'	59:DA:1630(A):C:O4'	2.18	0.44
59:DA:2291:U:H5''	59:DA:2380:C:O2'	2.18	0.44
59:DA:2304:G:H5'	59:DA:2305:A:OP2	2.18	0.44
59:DA:2440:C:H2'	59:DA:2441:C:H4'	2.00	0.44
59:DA:2507:C:O5'	59:DA:2507:C:H6	2.01	0.44
59:DA:2633:G:H2'	59:DA:2634:G:O4'	2.18	0.44
59:DA:2706:G:H2'	59:DA:2707:G:O4'	2.18	0.44
60:DB:9:G:H2'	60:DB:10:C:O4'	2.17	0.44
1:AB:96:ARG:NH1	1:AB:148:TYR:OH	2.51	0.44
1:AB:108:ILE:HG21	1:AB:152:PHE:HZ	1.81	0.44
2:AC:87:LEU:HD13	2:AC:87:LEU:HA	1.83	0.44
2:AC:179:ARG:H	2:AC:179:ARG:HG3	1.55	0.44
6:AG:9:VAL:O	6:AG:10:ARG:HB2	2.18	0.44
6:AG:107:ALA:O	6:AG:111:ARG:HG3	2.18	0.44
15:AP:69:THR:HA	15:AP:72:ARG:HB2	1.99	0.44
17:AR:75:ILE:HG13	21:AA:735:C:O2'	2.17	0.44
19:AT:23:ARG:HG3	21:AA:322:C:O3'	2.18	0.44
20:AY:10:LYS:HA	20:AY:282:SER:OG	2.17	0.44
20:AY:21:ILE:HG13	20:AY:22:ASP:N	2.32	0.44
20:AY:95:GLU:O	20:AY:99:ARG:HD2	2.17	0.44
20:AY:313:ALA:HA	20:AY:328:ILE:HA	1.98	0.44
21:AA:62:U:H5'	21:AA:378:G:H21	1.82	0.44
21:AA:959:A:H4'	21:AA:984:C:O2'	2.18	0.44
21:AA:981:U:H2'	21:AA:982:U:C5	2.53	0.44
21:AA:1027:C:H2'	21:AA:1028:C:C6	2.53	0.44
21:AA:1302:U:O2	21:AA:1302:U:H2'	2.16	0.44
21:AA:1303:C:H2'	21:AA:1304:G:O4'	2.18	0.44
21:AA:1479:C:H2'	21:AA:1480:G:O4'	2.18	0.44
22:AW:33:U:H2'	22:AW:35:A:OP2	2.18	0.44
25:BC:74:ARG:HH11	25:BC:110:ASP:HB3	1.83	0.44
26:BD:10:THR:HG21	59:BA:728:G:H1'	2.00	0.44
28:BF:9:ILE:CG2	28:BF:125:LEU:H	2.30	0.44
28:BF:166:ALA:HA	59:BA:321:G:C5'	2.46	0.44
29:BG:14:GLU:O	29:BG:18:GLU:HB2	2.18	0.44
31:BJ:55:UNK:N	31:BJ:78:UNK:O	2.51	0.44
32:BK:60:TYR:HB2	32:BK:64:SER:HB3	2.00	0.44
34:BO:71:ARG:HG2	34:BO:76:ALA:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BP:117:GLU:OE2	59:BA:637:A:H5'	2.18	0.44
37:BR:13:HIS:HB3	59:BA:2002:G:C5'	2.48	0.44
37:BR:22:ARG:HD3	37:BR:69:ASP:O	2.18	0.44
38:BS:30:ARG:HB3	38:BS:89:ARG:NH2	2.33	0.44
39:BT:34:VAL:HG22	39:BT:39:ARG:HG2	2.00	0.44
40:BU:24:TYR:CD1	40:BU:28:ARG:HD2	2.53	0.44
41:BV:84:LYS:HD3	59:BA:1226:A:H5'	1.99	0.44
42:BW:72:LYS:HB3	42:BW:106:ILE:HG22	1.98	0.44
43:BX:40:LYS:HG3	43:BX:51:VAL:HB	2.00	0.44
43:BX:89:ILE:HG22	43:BX:91:ALA:H	1.83	0.44
47:B1:70:VAL:O	47:B1:73:LEU:HB3	2.18	0.44
59:BA:458:G:H1'	59:BA:459:U:H5	1.83	0.44
59:BA:638:G:H2'	59:BA:639:U:H6	1.83	0.44
59:BA:684:G:H2'	59:BA:774:A:N6	2.33	0.44
59:BA:978:G:H2'	59:BA:979:G:O4'	2.18	0.44
59:BA:1629:U:H3	59:BA:1637:A:H61	1.66	0.44
60:BB:71:C:N4	60:BB:105:G:H1	2.16	0.44
2:CC:20:SER:HB2	2:CC:22:TRP:NE1	2.33	0.44
3:CD:25:ARG:HB2	21:CA:409:G:O5'	2.18	0.44
4:CE:44:GLY:HA3	4:CE:62:ALA:HB2	2.00	0.44
6:CG:26:PHE:CE2	6:CG:30:ILE:HD11	2.53	0.44
7:CH:13:ILE:O	7:CH:17:THR:HG23	2.16	0.44
12:CM:12:ASN:O	12:CM:12:ASN:ND2	2.49	0.44
12:CM:99:ARG:HD3	12:CM:99:ARG:HA	1.79	0.44
17:CR:49:LYS:O	17:CR:51:LEU:HD12	2.18	0.44
20:CY:136:ALA:H	20:CY:260:LEU:CB	2.30	0.44
21:CA:11:G:O2'	21:CA:506:G:N2	2.51	0.44
21:CA:748:C:H4'	21:CA:749:C:O5'	2.18	0.44
21:CA:1253:G:H1'	21:CA:1355:G:O2'	2.17	0.44
23:CV:27:A:HO2'	23:CV:28:A:P	2.39	0.44
25:DC:43:GLU:OE1	59:DA:2123:G:N2	2.45	0.44
26:DD:28:GLU:H	26:DD:29:PRO:HD2	1.83	0.44
27:DE:16:ARG:O	27:DE:17:ASP:HB3	2.17	0.44
27:DE:17:ASP:CG	27:DE:18:ASP:H	2.25	0.44
27:DE:109:LYS:HG3	37:DR:2:ARG:CZ	2.48	0.44
28:DF:156:LEU:HD12	28:DF:193:VAL:CB	2.48	0.44
28:DF:193:VAL:C	28:DF:194:MET:HG2	2.43	0.44
32:DK:78:ILE:HG12	32:DK:99:ILE:HD11	2.00	0.44
33:DN:94:HIS:HB3	33:DN:95:PRO:CD	2.47	0.44
38:DS:32:LEU:HG	60:DB:29:A:OP2	2.17	0.44
39:DT:66:VAL:HG13	39:DT:70:VAL:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DW:72:LYS:O	42:DW:73:ALA:O	2.36	0.44
48:D2:54:LYS:HE3	59:DA:73:A:H5''	2.00	0.44
54:D8:61:LEU:HD12	54:D8:61:LEU:HA	1.79	0.44
59:DA:270(N):G:O2'	59:DA:270(P):C:H5'	2.18	0.44
59:DA:270(U):C:O2'	59:DA:270(V):G:O4'	2.18	0.44
59:DA:674:G:C4	59:DA:804:A:N6	2.86	0.44
59:DA:1141:U:H4'	59:DA:1142:A:C8	2.53	0.44
59:DA:2090:G:C6	59:DA:2230:G:C6	3.06	0.44
59:DA:2811:G:N2	59:DA:2890:G:H1'	2.33	0.44
63:DA:2901:NMY:H19	63:DA:2901:NMY:H172	1.99	0.44
3:AD:25:ARG:CZ	21:AA:429:U:H2'	2.48	0.43
5:AF:35:ALA:HB1	5:AF:65:VAL:CG2	2.48	0.43
6:AG:71:PRO:HG2	6:AG:96:GLN:HA	2.00	0.43
7:AH:97:VAL:HG22	7:AH:98:LYS:N	2.33	0.43
10:AK:32:ILE:H	10:AK:41:THR:HG1	1.66	0.43
10:AK:67:ASP:O	10:AK:70:LYS:HB3	2.18	0.43
10:AK:120:ARG:HD2	21:AA:779:C:H1'	1.98	0.43
14:AO:46:HIS:CE1	21:AA:669:U:H5'	2.53	0.43
16:AQ:28:PRO:HB2	16:AQ:29:HIS:H	1.60	0.43
20:AY:309:LEU:HA	20:AY:333:GLY:HA3	1.99	0.43
20:AY:431:LEU:HB3	20:AY:438:PHE:CZ	2.53	0.43
20:AY:516:PRO:HA	20:AY:563:ILE:HG23	2.00	0.43
20:AY:684:GLN:O	20:AY:688:ILE:HG12	2.17	0.43
21:AA:131:C:C2	21:AA:132:C:C5	3.06	0.43
21:AA:253:U:O4	21:AA:273:A:N1	2.52	0.43
21:AA:306:G:H2'	21:AA:307:C:H6	1.83	0.43
21:AA:357:G:H1'	21:AA:368:U:O2	2.18	0.43
21:AA:377:G:H1	21:AA:386:C:N4	2.14	0.43
21:AA:676:A:H2'	21:AA:677:U:C6	2.53	0.43
21:AA:898:G:H1'	21:AA:901:A:H61	1.83	0.43
21:AA:1007:C:H2'	21:AA:1008:C:O4'	2.18	0.43
21:AA:1440(E):G:H1	21:AA:1440(N):C:H42	1.65	0.43
22:AW:64:G:N2	22:AW:65:U:C2	2.86	0.43
25:BC:182:PRO:HB3	25:BC:183:PRO:HD2	1.99	0.43
26:BD:221:VAL:HA	59:BA:1789:A:H5''	1.99	0.43
30:BH:56:SER:HB3	30:BH:61:HIS:CE1	2.53	0.43
30:BH:153:LYS:HG3	30:BH:154:PRO:HD2	2.00	0.43
34:BO:24:VAL:HG13	34:BO:37:ASP:HB3	1.99	0.43
35:BP:83:VAL:HG12	35:BP:114:ILE:HA	1.99	0.43
36:BQ:38:GLU:OE2	36:BQ:128:LYS:HG2	2.18	0.43
36:BQ:67:ARG:HD2	36:BQ:105:GLU:OE2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BQ:102:VAL:HG12	36:BQ:103:MET:N	2.33	0.43
38:BS:17:ARG:HA	38:BS:20:ARG:HB2	2.00	0.43
39:BT:96:ARG:NH2	59:BA:2717:G:H1'	2.32	0.43
41:BV:23:GLU:OE2	59:BA:993:G:N2	2.49	0.43
44:BY:6:HIS:HB2	44:BY:7:VAL:H	1.46	0.43
45:BZ:151:HIS:HA	45:BZ:171:ILE:HG12	2.00	0.43
47:B1:64:ALA:O	47:B1:66:HIS:N	2.46	0.43
48:B2:50:ILE:HG13	48:B2:50:ILE:H	1.65	0.43
54:B8:52:LYS:C	54:B8:54:GLU:N	2.76	0.43
54:B8:63:PRO:O	54:B8:64:TYR:HB2	2.18	0.43
55:B9:17:ILE:CD1	55:B9:19:ARG:HH21	2.31	0.43
59:BA:49:A:C8	59:BA:51:G:C2	3.06	0.43
59:BA:216:A:H2'	59:BA:217:G:O4'	2.18	0.43
59:BA:593:G:H2'	59:BA:594:U:C6	2.53	0.43
59:BA:669:G:H2'	59:BA:669:G:N3	2.32	0.43
59:BA:797:C:H2'	59:BA:798:G:H8	1.80	0.43
59:BA:810:U:H4'	59:BA:811:U:C6	2.53	0.43
59:BA:817:C:H2'	59:BA:839:U:H5''	2.00	0.43
59:BA:966:G:O4'	59:BA:2267:A:N6	2.51	0.43
59:BA:1177:A:H2'	59:BA:1178:C:O4'	2.18	0.43
59:BA:1313:U:C2	59:BA:1610:A:C2	3.06	0.43
59:BA:1458:C:H4'	59:BA:1459:G:O5'	2.18	0.43
59:BA:1712(F):U:C4	59:BA:1712(G):G:C5	3.06	0.43
59:BA:1852:C:N4	59:BA:1889:A:OP2	2.48	0.43
59:BA:1903:G:H2'	59:BA:1904:G:C8	2.53	0.43
59:BA:1905:C:H6	63:BA:2904:NMY:N7	2.15	0.43
59:BA:1951:U:O2'	59:BA:1953:A:N7	2.39	0.43
59:BA:2107:C:O2	59:BA:2182:G:N1	2.44	0.43
59:BA:2564:A:H5'	59:BA:2648:C:H4'	2.00	0.43
59:BA:2676:C:H2'	59:BA:2677:G:C8	2.53	0.43
3:CD:30:LYS:C	3:CD:32:ALA:N	2.75	0.43
3:CD:77:ASN:ND2	21:CA:401:C:OP1	2.47	0.43
4:CE:77:PRO:HD2	4:CE:142:LEU:HD22	2.00	0.43
7:CH:133:LEU:C	7:CH:134:ILE:HD12	2.43	0.43
9:CJ:24:VAL:HG21	9:CJ:37:PRO:HD3	2.01	0.43
10:CK:28:THR:O	10:CK:44:SER:HA	2.18	0.43
11:CL:115:LYS:C	11:CL:117:ARG:H	2.26	0.43
14:CO:33:THR:O	14:CO:36:ILE:HB	2.18	0.43
20:CY:183:MET:O	20:CY:184:LYS:HG3	2.18	0.43
20:CY:218:GLU:HG2	20:CY:231:TYR:CE1	2.53	0.43
20:CY:466:LEU:O	20:CY:471:LYS:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:489:LYS:HD3	20:CY:597:GLY:HA2	2.00	0.43
20:CY:561:VAL:HG21	20:CY:676:TYR:CE2	2.53	0.43
21:CA:62:U:H2'	21:CA:63:C:C6	2.53	0.43
21:CA:591:U:H2'	21:CA:592:G:H8	1.83	0.43
21:CA:608:A:H2'	21:CA:609:A:C8	2.53	0.43
21:CA:756:C:H2'	21:CA:757:U:C6	2.53	0.43
21:CA:897:C:C2	21:CA:902:G:N2	2.80	0.43
23:CV:26:A:O2'	23:CV:27:A:P	2.76	0.43
28:DF:155:LEU:H	28:DF:189:THR:HB	1.83	0.43
29:DG:82:LEU:HD23	29:DG:82:LEU:HA	1.81	0.43
29:DG:173:LEU:HD12	29:DG:180:PHE:HZ	1.83	0.43
32:DK:88:ALA:C	32:DK:89:HIS:CG	2.96	0.43
32:DK:123:ALA:O	32:DK:127:ILE:HG12	2.18	0.43
33:DN:88:GLU:C	33:DN:91:LEU:H	2.25	0.43
38:DS:13:ARG:C	38:DS:15:ARG:N	2.75	0.43
40:DU:102:GLU:HG3	40:DU:104:GLN:OE1	2.18	0.43
43:DX:53:LYS:HG3	43:DX:54:VAL:N	2.33	0.43
44:DY:82:PRO:HB2	44:DY:97:ARG:HD3	1.99	0.43
59:DA:27:G:H1'	59:DA:513:A:N6	2.33	0.43
59:DA:30:G:C5	59:DA:31:C:C5	3.06	0.43
59:DA:211:A:C4	59:DA:212:G:C8	3.06	0.43
59:DA:783:A:H2'	59:DA:784:A:H4'	1.99	0.43
59:DA:815:C:H2'	59:DA:816:C:H6	1.83	0.43
59:DA:1850:G:H2'	59:DA:1851:U:O4'	2.17	0.43
59:DA:1899:G:H21	59:DA:1902:C:N4	2.16	0.43
59:DA:2038:G:H2'	59:DA:2039:C:O4'	2.17	0.43
59:DA:2202(D):G:H4'	59:DA:2202(E):A:C6	2.53	0.43
59:DA:2411:A:H2'	59:DA:2412:A:C8	2.53	0.43
59:DA:2598:A:O2'	59:DA:2599:G:OP1	2.35	0.43
60:DB:66:A:O2'	60:DB:67:G:N7	2.44	0.43
2:AC:22:TRP:HB3	2:AC:59:ARG:N	2.31	0.43
3:AD:19:LEU:O	3:AD:21:LEU:N	2.50	0.43
4:AE:51:VAL:HB	4:AE:52:PRO:HD3	2.00	0.43
8:AI:111:ARG:HG3	13:AN:61:TRP:CZ2	2.52	0.43
11:AL:113:ARG:HE	11:AL:115:LYS:HB3	1.83	0.43
12:AM:125:ARG:HE	21:AA:969:A:H61	1.66	0.43
16:AQ:16:GLN:CD	21:AA:254:G:H21	2.26	0.43
19:AT:70:SER:HB2	21:AA:324:G:OP1	2.18	0.43
19:AT:73:HIS:O	19:AT:75:ASN:N	2.50	0.43
20:AY:286:ILE:HA	20:AY:287:PRO:HD3	1.76	0.43
20:AY:341:VAL:HB	20:AY:342:TYR:H	1.55	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AY:347:GLY:O	20:AY:348:ARG:NE	2.51	0.43
20:AY:563:ILE:HG22	20:AY:564:LYS:H	1.82	0.43
21:AA:31:G:H5'	21:AA:306:G:H22	1.83	0.43
21:AA:1340:A:C6	21:AA:1341:U:N3	2.86	0.43
25:BC:6:LYS:HA	25:BC:9:ARG:HB3	1.99	0.43
27:BE:50:GLY:HA2	27:BE:78:LEU:HA	2.00	0.43
28:BF:110:LEU:HA	28:BF:183:VAL:CG1	2.48	0.43
29:BG:82:LEU:HD23	29:BG:82:LEU:HA	1.87	0.43
32:BK:34:ILE:HA	32:BK:37:PHE:HB3	2.01	0.43
33:BN:72:TYR:HA	33:BN:73:THR:HG22	1.99	0.43
34:BO:4:PRO:HG2	34:BO:31:LYS:HE2	2.00	0.43
35:BP:40:SER:C	35:BP:42:SER:H	2.25	0.43
42:BW:50:VAL:O	42:BW:53:SER:HB2	2.18	0.43
42:BW:76:VAL:C	42:BW:102:HIS:H	2.26	0.43
42:BW:84:ARG:HD3	42:BW:84:ARG:HA	1.87	0.43
46:B0:42:GLY:C	46:B0:44:ARG:H	2.27	0.43
59:BA:122:G:H2'	59:BA:123:G:C8	2.50	0.43
59:BA:287:C:H2'	59:BA:289:A:H8	1.79	0.43
59:BA:1008:C:H1'	59:BA:1009:A:N7	2.33	0.43
59:BA:1326:U:H2'	59:BA:1327:C:O4'	2.17	0.43
59:BA:1667:G:H1'	59:BA:1991:U:H5	1.81	0.43
59:BA:1812:A:H2'	59:BA:1813:G:H8	1.83	0.43
59:BA:1864:U:H3	59:BA:1878:G:H1	1.66	0.43
59:BA:1905:C:C6	63:BA:2904:NMY:N7	2.86	0.43
59:BA:2082:A:H62	59:BA:2237:G:N2	2.14	0.43
59:BA:2439:A:H2	59:BA:2601:C:OP2	2.01	0.43
59:BA:2533:A:H2'	59:BA:2534:A:O4'	2.19	0.43
60:BB:65:C:C5	60:BB:66:A:H1'	2.52	0.43
3:CD:57:ARG:HD2	3:CD:206:PHE:HB2	2.00	0.43
4:CE:127:ASN:HA	4:CE:128:PRO:HD3	1.82	0.43
5:CF:8:ILE:HG23	5:CF:88:VAL:HG22	2.00	0.43
10:CK:84:VAL:N	10:CK:109:VAL:O	2.51	0.43
13:CN:23:ARG:NH1	13:CN:29:ARG:HA	2.33	0.43
15:CP:16:HIS:HB3	21:CA:625:G:H5'	2.00	0.43
16:CQ:12:SER:HB2	16:CQ:14:LYS:HE3	2.00	0.43
21:CA:5:U:H1'	21:CA:6:G:C6	2.53	0.43
21:CA:146:G:H2'	21:CA:147:G:C8	2.53	0.43
21:CA:346:G:H4'	39:DT:41:ARG:CZ	2.48	0.43
21:CA:400:C:H2'	21:CA:401:C:C6	2.52	0.43
21:CA:610:G:H2'	21:CA:611:A:H8	1.83	0.43
21:CA:722:A:H3'	21:CA:722:A:N3	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:776:G:O2'	21:CA:777:A:N7	2.50	0.43
21:CA:989:C:O2'	21:CA:1017:G:O2'	2.33	0.43
21:CA:1041:A:C5	21:CA:1042:G:C8	3.06	0.43
21:CA:1218:C:O2'	21:CA:1219:U:H5'	2.17	0.43
21:CA:1347:G:O2'	21:CA:1373:G:O6	2.34	0.43
21:CA:1348:U:C4	21:CA:1374:A:C2	3.06	0.43
63:CA:1601:NMY:H19	63:CA:1601:NMY:H172	1.99	0.43
29:DG:146:TYR:O	29:DG:149:VAL:HG12	2.18	0.43
33:DN:23:LEU:CD2	33:DN:62:VAL:HG23	2.47	0.43
33:DN:52:VAL:HG12	33:DN:54:VAL:HA	2.00	0.43
36:DQ:20:ALA:C	36:DQ:22:LYS:H	2.26	0.43
36:DQ:92:GLY:O	36:DQ:94:VAL:HG22	2.18	0.43
39:DT:46:GLU:O	39:DT:65:LYS:HD2	2.17	0.43
52:D6:16:CYS:C	52:D6:18:ARG:N	2.76	0.43
53:D7:29:LYS:H	53:D7:29:LYS:HG3	1.45	0.43
59:DA:8:A:C2	59:DA:9:U:C2	3.06	0.43
59:DA:684:G:N2	59:DA:775:G:N7	2.63	0.43
59:DA:699:A:N3	59:DA:1634:A:O2'	2.41	0.43
59:DA:712:G:H1	59:DA:719:C:N4	2.14	0.43
59:DA:814:C:H1'	59:DA:1224:C:H42	1.83	0.43
59:DA:922:U:H2'	59:DA:923:C:H6	1.79	0.43
59:DA:975:G:H1'	59:DA:990:A:N1	2.33	0.43
59:DA:1164:G:H1	59:DA:1185:C:H42	1.66	0.43
59:DA:1506(L):G:H2'	59:DA:1506(M):U:O4'	2.18	0.43
59:DA:1785:A:H2'	59:DA:1787:A:C8	2.54	0.43
59:DA:2478:A:H1'	59:DA:2528:U:O2'	2.19	0.43
59:DA:2632:A:H2	59:DA:2786:U:O2	2.01	0.43
59:DA:2742:C:H2'	59:DA:2743:C:C6	2.53	0.43
59:DA:2854:G:H1	59:DA:2863:C:H42	1.66	0.43
60:DB:52:A:H5'	60:DB:53:A:OP2	2.17	0.43
3:AD:9:CYS:O	3:AD:12:CYS:HB2	2.18	0.43
3:AD:109:GLY:O	3:AD:111:ALA:N	2.51	0.43
6:AG:57:GLU:HB3	6:AG:58:PRO:HD2	2.00	0.43
10:AK:42:TRP:H	10:AK:71:LYS:NZ	2.15	0.43
16:AQ:43:LEU:CB	16:AQ:69:LYS:HG3	2.47	0.43
19:AT:10:LEU:HD13	21:AA:331:G:H2'	2.00	0.43
19:AT:27:LYS:NZ	21:AA:1436:U:OP1	2.50	0.43
20:AY:26:THR:O	20:AY:29:THR:HB	2.17	0.43
20:AY:141:LYS:O	20:AY:143:GLY:N	2.52	0.43
20:AY:428:LEU:HD22	20:AY:440:VAL:HG11	1.99	0.43
20:AY:443:HIS:C	20:AY:445:GLU:H	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:186(O):G:H2'	21:AA:186(P):U:C6	2.54	0.43
21:AA:375:U:H2'	21:AA:376:G:O4'	2.18	0.43
21:AA:504:C:H2'	21:AA:511:C:C5	2.53	0.43
21:AA:556:C:H2'	21:AA:557:G:H8	1.83	0.43
21:AA:837:G:H2'	21:AA:838:G:H8	1.83	0.43
21:AA:1197:G:OP1	24:AX:34:U:O2'	2.36	0.43
21:AA:1389:C:H2'	21:AA:1390:U:C6	2.53	0.43
26:BD:57:GLY:HA2	26:BD:214:TRP:O	2.18	0.43
26:BD:76:PRO:HA	26:BD:118:VAL:HG23	1.99	0.43
29:BG:38:VAL:HG11	59:BA:2313:C:O2'	2.17	0.43
29:BG:75:LYS:HD3	29:BG:75:LYS:HA	1.70	0.43
31:BJ:86:UNK:O	31:BJ:91:UNK:N	2.51	0.43
33:BN:47:ALA:HB1	33:BN:119:ARG:HH11	1.83	0.43
33:BN:84:LYS:CG	33:BN:86:PRO:HD3	2.48	0.43
35:BP:5:ASP:OD2	35:BP:6:LEU:N	2.50	0.43
35:BP:48:PRO:C	35:BP:50:ARG:H	2.25	0.43
36:BQ:45:GLN:HB3	59:BA:2484:G:OP1	2.19	0.43
40:BU:21:ALA:HB2	40:BU:39:LEU:HD11	1.99	0.43
42:BW:48:ALA:O	42:BW:51:LEU:HB3	2.18	0.43
50:B4:6:HIS:C	50:B4:8:LYS:H	2.25	0.43
53:B7:5:TRP:HA	53:B7:5:TRP:HE3	1.83	0.43
53:B7:30:VAL:O	53:B7:34:ARG:HG2	2.18	0.43
54:B8:23:VAL:HA	54:B8:48:PHE:O	2.18	0.43
56:Be:60:PHE:C	56:Be:62:VAL:H	2.26	0.43
59:BA:271(F):G:N3	59:BA:271(G):G:C8	2.87	0.43
59:BA:534:U:H2'	59:BA:535:C:C6	2.53	0.43
59:BA:695:G:H4'	59:BA:1380:G:H4'	2.00	0.43
59:BA:709:U:O4	59:BA:722:A:N1	2.51	0.43
59:BA:902:C:H2'	59:BA:903:C:C6	2.52	0.43
59:BA:953:A:H1'	59:BA:2266:A:OP2	2.19	0.43
59:BA:1000:A:H2'	59:BA:1001:A:H8	1.82	0.43
59:BA:1047:G:O2'	59:BA:1110:G:N1	2.45	0.43
59:BA:1327:C:H2'	59:BA:1328:G:O4'	2.18	0.43
59:BA:2811:G:N2	59:BA:2812:G:H1'	2.34	0.43
59:BA:2845:G:H2'	59:BA:2846:G:H8	1.84	0.43
60:BB:92:G:H2'	60:BB:93:C:C6	2.53	0.43
5:CF:67:MET:HE1	5:CF:71:ARG:HB2	2.00	0.43
6:CG:94:ARG:NH2	21:CA:1378:C:H4'	2.33	0.43
8:CI:20:ARG:N	8:CI:60:ASP:O	2.50	0.43
11:CL:54:LYS:HB3	11:CL:55:VAL:H	1.58	0.43
12:CM:26:GLY:N	21:CA:1329:A:H5''	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:125:ARG:NH1	21:CA:969:A:N1	2.67	0.43
21:CA:145:G:N2	21:CA:177:C:N3	2.59	0.43
21:CA:335:C:H2'	21:CA:336:C:C6	2.53	0.43
21:CA:457:C:H2'	21:CA:458:C:C6	2.53	0.43
21:CA:677:U:O2	21:CA:778:G:H5'	2.17	0.43
21:CA:774:G:N2	21:CA:805:C:C2	2.80	0.43
21:CA:1145:C:C4'	21:CA:1146:A:H5'	2.48	0.43
21:CA:1158:C:C6	21:CA:1160:G:H1'	2.53	0.43
23:CV:8:A:N7	23:CV:9:G:N2	2.58	0.43
25:DC:19:LYS:HB3	25:DC:20:VAL:H	1.71	0.43
25:DC:214:TYR:C	25:DC:216:THR:H	2.26	0.43
26:DD:267:SER:O	26:DD:270:ILE:HG12	2.18	0.43
27:DE:14:ILE:O	27:DE:21:VAL:HG22	2.18	0.43
28:DF:33:LEU:HD11	28:DF:112:MET:HB3	2.00	0.43
29:DG:43:LEU:HB2	29:DG:88:ILE:CG2	2.48	0.43
33:DN:71:ILE:HB	33:DN:97:ARG:CB	2.28	0.43
35:DP:111:ARG:HB3	35:DP:128:HIS:CG	2.53	0.43
39:DT:84:GLN:O	39:DT:86:ILE:N	2.48	0.43
39:DT:84:GLN:C	39:DT:86:ILE:H	2.26	0.43
42:DW:47:VAL:HA	42:DW:50:VAL:HG12	2.00	0.43
45:DZ:71:VAL:HA	45:DZ:88:PHE:HD2	1.81	0.43
45:DZ:73:GLN:HB3	45:DZ:75:ASN:ND2	2.33	0.43
45:DZ:186:GLU:H	45:DZ:186:GLU:HG2	1.67	0.43
47:D1:43:TYR:HB3	59:DA:2231:C:OP1	2.18	0.43
59:DA:79:G:H2'	59:DA:80:G:O4'	2.17	0.43
59:DA:1062:G:H22	59:DA:1077:A:HO2'	1.61	0.43
59:DA:1198:U:C4	59:DA:1247:A:N1	2.83	0.43
59:DA:1348:G:N1	59:DA:1598:C:N4	2.30	0.43
59:DA:1630(A):C:N3	59:DA:1635:G:C6	2.84	0.43
59:DA:1908:C:N3	59:DA:1922:G:N2	2.49	0.43
63:DA:2901:NMY:O21	63:DA:2901:NMY:N23	2.52	0.43
60:DB:78:A:H3'	60:DB:79:C:C6	2.54	0.43
1:AB:69:LEU:HD13	1:AB:92:TYR:HA	2.00	0.43
1:AB:71:VAL:O	1:AB:165:VAL:HG23	2.18	0.43
1:AB:78:GLN:O	1:AB:81:VAL:HG22	2.18	0.43
1:AB:107:THR:CG2	21:AA:1103:C:H1'	2.48	0.43
2:AC:23:TYR:HB3	9:AJ:95:GLU:HB2	1.99	0.43
3:AD:102:ASP:CG	3:AD:103:ASN:H	2.27	0.43
10:AK:71:LYS:HB2	10:AK:71:LYS:HE2	1.70	0.43
12:AM:120:LYS:HD2	12:AM:120:LYS:HA	1.85	0.43
20:AY:71:THR:HG21	20:AY:357:ARG:HD3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AY:99:ARG:HE	20:AY:403:GLU:HG2	1.82	0.43
20:AY:120:THR:HG21	20:AY:665:GLY:O	2.18	0.43
20:AY:171:GLU:CD	20:AY:171:GLU:H	2.26	0.43
20:AY:415:PRO:HG2	20:AY:418:LYS:HA	1.99	0.43
20:AY:485:GLU:HA	20:AY:601:ILE:HA	2.01	0.43
20:AY:679:VAL:HA	20:AY:680:PRO:HD2	1.81	0.43
21:AA:123:C:O2'	21:AA:290:C:O2	2.33	0.43
21:AA:1016:A:H8	21:AA:1016:A:O5'	2.01	0.43
21:AA:1127:G:O2'	21:AA:1128:C:H5'	2.18	0.43
21:AA:1157:A:C2	21:AA:1181:G:C4	3.06	0.43
22:AW:44:G:H3'	22:AW:45:G:C8	2.53	0.43
26:BD:108:PRO:HB3	26:BD:196:VAL:HA	2.00	0.43
27:BE:61:ARG:HD3	27:BE:61:ARG:HA	1.56	0.43
33:BN:97:ARG:O	33:BN:105:GLY:CA	2.67	0.43
36:BQ:111:GLU:O	36:BQ:115:MET:HG3	2.19	0.43
37:BR:2:ARG:HA	37:BR:5:LYS:HE2	2.00	0.43
37:BR:38:VAL:HG23	37:BR:110:PRO:HB2	1.99	0.43
37:BR:68:ARG:HG3	59:BA:2707:G:O2'	2.18	0.43
38:BS:15:ARG:HG3	38:BS:18:ILE:N	2.33	0.43
38:BS:27:SER:HA	38:BS:88:ASP:HB3	2.00	0.43
38:BS:99:LYS:HG2	38:BS:100:ALA:N	2.34	0.43
39:BT:74:ARG:HD2	39:BT:76:PHE:CE2	2.54	0.43
40:BU:15:LYS:HG2	40:BU:18:LEU:HD13	2.01	0.43
45:BZ:183:LEU:O	45:BZ:186:GLU:HB3	2.19	0.43
49:B3:23:LEU:HB3	49:B3:28:LEU:HB3	1.99	0.43
53:B7:31:LEU:O	53:B7:34:ARG:HB2	2.19	0.43
59:BA:270(Q):C:H2'	59:BA:270(R):G:O4'	2.18	0.43
59:BA:357:A:H2'	59:BA:357(A):U:H6	1.83	0.43
59:BA:767:U:H2'	59:BA:768:G:H8	1.82	0.43
59:BA:957:A:H8	59:BA:957:A:OP1	2.01	0.43
59:BA:1250:G:OP2	59:BA:1250:G:H8	2.01	0.43
59:BA:1324:G:H1	59:BA:1330:C:H42	1.65	0.43
59:BA:1644:C:H2'	59:BA:1645:G:O4'	2.19	0.43
59:BA:1659:U:O2	59:BA:2001:A:N1	2.51	0.43
59:BA:1692:U:O2'	59:BA:1693:U:H2'	2.18	0.43
59:BA:1768:U:H2'	59:BA:1769:G:C8	2.52	0.43
59:BA:1949:G:C6	59:BA:1950:G:C6	3.07	0.43
59:BA:1968:G:O4'	59:BA:1968:G:P	2.76	0.43
59:BA:2538:C:H2'	59:BA:2539:C:H6	1.83	0.43
59:BA:2816:C:H2'	59:BA:2817:G:H8	1.84	0.43
59:BA:2862:G:H2'	59:BA:2863:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:235:SER:OG	1:CB:236:TYR:N	2.43	0.43
2:CC:88:ARG:NH2	2:CC:100:ALA:HA	2.24	0.43
3:CD:98:GLU:O	3:CD:104:VAL:HG23	2.19	0.43
6:CG:103:TRP:CH2	6:CG:141:VAL:HG21	2.54	0.43
11:CL:39:VAL:CG1	11:CL:40:VAL:H	2.23	0.43
12:CM:71:ARG:HA	12:CM:74:VAL:HB	1.99	0.43
13:CN:40:CYS:SG	13:CN:42:ILE:N	2.91	0.43
18:CS:36:ARG:HD2	18:CS:52:TYR:O	2.19	0.43
20:CY:519:ARG:HB3	20:CY:675:HIS:CD2	2.53	0.43
21:CA:192:U:H2'	21:CA:193:C:H6	1.82	0.43
21:CA:346:G:H4'	39:DT:41:ARG:NH2	2.33	0.43
21:CA:893:C:C2	21:CA:894:G:C8	3.06	0.43
21:CA:1359:C:O2'	21:CA:1361:G:N7	2.52	0.43
21:CA:1405:G:H3'	63:CA:1601:NMY:H232	1.99	0.43
23:CV:19:G:C2	24:CX:36:C:N3	2.80	0.43
22:CW:43:G:H2'	22:CW:44:G:C1'	2.49	0.43
28:DF:28:ILE:C	28:DF:29:ASN:HD22	2.25	0.43
35:DP:99:LEU:HG	35:DP:100:LEU:HD13	2.00	0.43
36:DQ:41:TRP:HB3	36:DQ:94:VAL:CB	2.48	0.43
39:DT:62:THR:CB	39:DT:75:ILE:HG13	2.49	0.43
41:DV:66:ARG:HG2	41:DV:88:ARG:HD3	2.00	0.43
46:D0:74:ARG:HG3	60:DB:12:C:O2'	2.18	0.43
47:D1:18:ILE:HD12	47:D1:18:ILE:HA	1.81	0.43
47:D1:48:LYS:HA	47:D1:60:PHE:O	2.18	0.43
48:D2:32:LEU:O	48:D2:35:LEU:HB2	2.19	0.43
54:D8:49:VAL:HG12	54:D8:50:LEU:H	1.84	0.43
59:DA:52:A:H8	59:DA:52:A:O5'	2.01	0.43
59:DA:82:G:H8	59:DA:82:G:O5'	2.00	0.43
59:DA:270(C):C:N4	59:DA:270(W):G:H1	2.15	0.43
59:DA:482:A:H1'	59:DA:498:G:N2	2.33	0.43
59:DA:784:A:O2'	59:DA:785:G:H8	2.00	0.43
59:DA:893:C:H2'	59:DA:894:C:C6	2.52	0.43
59:DA:1932:A:H3'	59:DA:1933:G:H8	1.84	0.43
59:DA:1951:U:H2'	59:DA:1953:A:OP2	2.18	0.43
59:DA:2023:G:H2'	59:DA:2024:G:O4'	2.18	0.43
59:DA:2311:A:O5'	59:DA:2312:U:H5	2.01	0.43
60:DB:32:C:O2	60:DB:50:G:C2	2.67	0.43
1:AB:49:GLU:O	1:AB:52:GLU:HB3	2.18	0.43
1:AB:70:PHE:O	1:AB:92:TYR:HB2	2.18	0.43
2:AC:22:TRP:CG	2:AC:59:ARG:HB2	2.53	0.43
2:AC:59:ARG:HH12	2:AC:62:ASP:H	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:26:VAL:HG13	7:AH:27:PRO:O	2.18	0.43
13:AN:53:LEU:HA	13:AN:54:PRO:HD3	1.86	0.43
15:AP:60:LEU:HD23	15:AP:60:LEU:HA	1.84	0.43
16:AQ:12:SER:HB3	16:AQ:20:THR:OG1	2.19	0.43
18:AS:46:GLY:HA2	18:AS:62:ILE:HG23	2.00	0.43
18:AS:53:ASN:N	18:AS:56:GLN:O	2.50	0.43
20:AY:268:GLY:HA2	20:AY:271:LEU:HD12	2.01	0.43
21:AA:370:C:H2'	21:AA:371:G:C8	2.53	0.43
21:AA:556:C:H2'	21:AA:557:G:C8	2.53	0.43
21:AA:653:A:H2'	21:AA:653:A:N3	2.34	0.43
21:AA:865:A:H5'	21:AA:1078:U:C5	2.52	0.43
21:AA:892:A:H2'	21:AA:893:C:H6	1.81	0.43
21:AA:1157:A:H61	21:AA:1180:A:H3'	1.84	0.43
25:BC:21:TYR:CE2	25:BC:29:LEU:HD22	2.54	0.43
25:BC:77:ALA:CB	25:BC:95:VAL:HG13	2.49	0.43
25:BC:84:ILE:HG12	25:BC:95:VAL:HG12	2.00	0.43
25:BC:104:ILE:HA	25:BC:111:PHE:CE2	2.54	0.43
25:BC:104:ILE:HG21	25:BC:132:LEU:HD11	2.00	0.43
27:BE:32:PRO:HA	27:BE:90:THR:HG23	2.00	0.43
27:BE:95:ILE:HD13	27:BE:95:ILE:H	1.83	0.43
28:BF:7:TYR:CZ	28:BF:10:PRO:HD3	2.53	0.43
30:BH:62:LYS:HB3	59:BA:2749:A:H4'	1.99	0.43
32:BK:19:PRO:HB3	32:BK:34:ILE:HD11	1.99	0.43
35:BP:97:PRO:O	35:BP:101:VAL:HG13	2.19	0.43
36:BQ:20:ALA:C	36:BQ:22:LYS:H	2.26	0.43
37:BR:98:LEU:HD23	37:BR:98:LEU:HA	1.84	0.43
38:BS:20:ARG:NH1	38:BS:88:ASP:OD2	2.46	0.43
40:BU:28:ARG:HA	40:BU:34:LYS:HB3	2.00	0.43
40:BU:106:PHE:O	40:BU:110:VAL:HG23	2.18	0.43
46:B0:15:ASP:CG	46:B0:16:SER:H	2.25	0.43
47:B1:58:ILE:HD11	47:B1:91:LYS:HB3	2.00	0.43
52:B6:14:THR:HB	52:B6:52:VAL:HG11	2.00	0.43
59:BA:77:C:H2'	59:BA:78:A:H8	1.81	0.43
59:BA:543(D):A:H8	59:BA:543(D):A:O5'	2.01	0.43
59:BA:692:C:H2'	59:BA:693:C:C6	2.53	0.43
59:BA:1048:A:H3'	59:BA:1049:C:H6	1.83	0.43
59:BA:1110:G:H8	59:BA:1110:G:O5'	2.02	0.43
59:BA:1664:A:H3'	59:BA:1665:A:C8	2.51	0.43
59:BA:1674:G:N2	59:BA:1677:A:H61	2.17	0.43
59:BA:2042:A:H2'	59:BA:2043:C:H5'	2.01	0.43
59:BA:2450:A:N3	59:BA:2451:A:H5'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2594:C:N4	59:BA:2595:G:O6	2.51	0.43
63:BA:2904:NMY:O21	63:BA:2904:NMY:N23	2.52	0.43
60:BB:71:C:N3	60:BB:105:G:N2	2.62	0.43
3:CD:162:LEU:HD13	3:CD:178:VAL:HG12	2.00	0.43
4:CE:44:GLY:HA3	4:CE:58:ALA:O	2.19	0.43
11:CL:6:THR:HG21	21:CA:880:C:H5	1.83	0.43
11:CL:15:ARG:NH2	21:CA:567:G:O6	2.50	0.43
17:CR:74:ARG:HG2	17:CR:79:LEU:HD22	2.00	0.43
20:CY:18:ALA:HB1	20:CY:121:VAL:CG1	2.49	0.43
20:CY:606:MET:HE3	20:CY:649:LEU:HG	1.99	0.43
20:CY:618:GLY:HA2	59:DA:1095:A:OP1	2.17	0.43
21:CA:103:C:O2'	21:CA:172:A:N1	2.46	0.43
21:CA:134:A:H8	21:CA:134:A:O5'	2.02	0.43
21:CA:272:C:C2	21:CA:273:A:C8	3.07	0.43
21:CA:279:A:C8	21:CA:281:G:C2	3.06	0.43
21:CA:607:A:H2'	21:CA:608:A:O4'	2.18	0.43
21:CA:1090:U:H2'	21:CA:1091:U:H6	1.82	0.43
21:CA:1158:C:H42	21:CA:1177:G:H22	1.66	0.43
22:CW:20:U:H3	22:CW:59:A:N6	2.16	0.43
26:DD:152:GLY:O	26:DD:154:LYS:N	2.52	0.43
29:DG:16:ARG:HB2	29:DG:17:PRO:HD3	2.00	0.43
30:DH:101:ARG:O	30:DH:117:PRO:HD3	2.18	0.43
30:DH:176:ALA:CA	59:DA:2529:G:H5''	2.47	0.43
33:DN:50:ASP:O	33:DN:51:PHE:C	2.62	0.43
33:DN:100:GLU:HB2	33:DN:104:LYS:O	2.19	0.43
33:DN:114:ARG:NH1	59:DA:527:C:O2'	2.36	0.43
35:DP:96:THR:O	35:DP:100:LEU:HD22	2.17	0.43
35:DP:146:VAL:O	35:DP:148:LEU:N	2.49	0.43
39:DT:5:ALA:N	59:DA:2875:C:O2'	2.38	0.43
40:DU:59:ARG:HD2	59:DA:1009:A:H5'	2.01	0.43
41:DV:3:ALA:O	41:DV:14:VAL:N	2.41	0.43
45:DZ:90:VAL:HG12	45:DZ:91:LEU:H	1.84	0.43
48:D2:48:HIS:C	48:D2:50:ILE:N	2.76	0.43
59:DA:36:G:C2	59:DA:444:C:N3	2.83	0.43
59:DA:270(V):G:H2'	59:DA:270(W):G:H8	1.83	0.43
59:DA:271(K):U:O2'	59:DA:271(L):C:H5'	2.18	0.43
59:DA:310:A:H2'	59:DA:312:G:N7	2.33	0.43
59:DA:525:U:H5'	59:DA:556:G:C5'	2.45	0.43
59:DA:764:A:O2'	59:DA:765:G:H5'	2.19	0.43
59:DA:1038:C:H2'	59:DA:1039:G:C8	2.54	0.43
59:DA:1098:A:H2'	59:DA:1099:G:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1170:G:H2'	59:DA:1171:G:H8	1.83	0.43
59:DA:1384:A:N3	59:DA:1405:U:H1'	2.33	0.43
59:DA:1535:U:O5'	59:DA:1535:U:H6	2.01	0.43
59:DA:2103:C:H2'	59:DA:2104:G:O4'	2.19	0.43
59:DA:2281:C:H5'	59:DA:2388:A:C6	2.53	0.43
59:DA:2641:G:H1	59:DA:2773:C:N4	2.11	0.43
59:DA:2687:U:C4	59:DA:2688:U:C5	3.07	0.43
59:DA:2769:C:H2'	59:DA:2770:G:H8	1.83	0.43
60:DB:24:G:N1	60:DB:56:G:C2	2.86	0.43
1:AB:82:ARG:HB2	1:AB:92:TYR:CZ	2.54	0.43
2:AC:148:GLY:O	2:AC:203:PHE:HB3	2.18	0.43
15:AP:59:TRP:CE3	15:AP:62:VAL:HG21	2.54	0.43
20:AY:139:MET:HE1	20:AY:145:ASP:O	2.18	0.43
20:AY:335:LEU:HD12	20:AY:335:LEU:HA	1.89	0.43
20:AY:409:ILE:HB	20:AY:455:GLY:O	2.19	0.43
20:AY:661:SER:HA	59:BA:2660:A:N7	2.34	0.43
21:AA:436:C:H2'	21:AA:437:U:C6	2.54	0.43
21:AA:440:A:C4	21:AA:497:A:C2	3.06	0.43
21:AA:943:U:O4	21:AA:1340:A:C6	2.70	0.43
21:AA:1170:A:H8	21:AA:1170:A:O5'	2.01	0.43
21:AA:1285:A:H62	21:AA:1355:G:H4'	1.83	0.43
26:BD:62:TYR:OH	59:BA:1817:G:OP1	2.24	0.43
28:BF:63:LYS:CG	28:BF:76:GLY:HA2	2.49	0.43
28:BF:149:ASP:HB2	28:BF:150:GLY:H	1.56	0.43
28:BF:156:LEU:HA	28:BF:191:ARG:O	2.18	0.43
29:BG:84:LYS:HD2	29:BG:84:LYS:H	1.83	0.43
33:BN:104:LYS:HB3	33:BN:104:LYS:HE2	1.75	0.43
35:BP:131:SER:OG	59:BA:637:A:OP2	2.35	0.43
37:BR:13:HIS:HB3	59:BA:2002:G:H5'	2.01	0.43
37:BR:38:VAL:HB	37:BR:39:PRO:HD3	2.00	0.43
37:BR:46:GLY:HA2	59:BA:2838:G:O2'	2.18	0.43
39:BT:35:LYS:HD2	39:BT:41:ARG:NH1	2.34	0.43
39:BT:111:ARG:HA	39:BT:114:LEU:HB3	2.01	0.43
42:BW:32:ALA:O	42:BW:36:LEU:HG	2.19	0.43
43:BX:51:VAL:HG13	43:BX:81:VAL:HG13	1.99	0.43
59:BA:531:C:OP1	59:BA:561:G:N1	2.52	0.43
59:BA:576:U:H5''	59:BA:2502:G:O2'	2.18	0.43
59:BA:708:C:H2'	59:BA:709:U:C6	2.54	0.43
59:BA:712:G:H2'	59:BA:713:G:O4'	2.19	0.43
59:BA:1152:C:H2'	59:BA:1153:C:O4'	2.19	0.43
59:BA:1207:C:H2'	59:BA:1208:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1788:C:O5'	59:BA:1788:C:H6	2.01	0.43
59:BA:1825:A:H2'	59:BA:1826:G:O4'	2.19	0.43
59:BA:2335:A:H1'	59:BA:2336:A:H2'	2.01	0.43
59:BA:2649:U:H2'	59:BA:2650:U:C6	2.54	0.43
3:CD:18:LYS:HB2	3:CD:31:CYS:SG	2.58	0.43
20:CY:357:ARG:C	20:CY:359:HIS:H	2.26	0.43
20:CY:670:VAL:HA	20:CY:671:MET:HE3	2.00	0.43
21:CA:316:G:C8	21:CA:351:G:C2	3.07	0.43
21:CA:317:G:H2'	21:CA:318:G:H8	1.83	0.43
21:CA:724:G:OP1	21:CA:854:G:O2'	2.36	0.43
26:DD:239:ARG:HG2	59:DA:1971:A:O2'	2.17	0.43
26:DD:242:ARG:HG2	26:DD:246:PRO:HG3	2.00	0.43
32:DK:100:THR:C	32:DK:102:GLU:N	2.73	0.43
33:DN:120:LEU:HG	33:DN:124:ALA:HB2	2.00	0.43
34:DO:2:ILE:HB	34:DO:6:THR:HG21	2.00	0.43
35:DP:107:LYS:HE3	35:DP:107:LYS:HB2	1.67	0.43
40:DU:25:TRP:CE2	59:DA:17:G:H4'	2.53	0.43
45:DZ:100:VAL:O	45:DZ:123:ASP:HA	2.17	0.43
52:D6:19:ARG:NE	59:DA:2400:G:H4'	2.33	0.43
53:D7:20:ALA:O	53:D7:24:THR:HG22	2.18	0.43
59:DA:34:C:C4	59:DA:455:C:H5'	2.54	0.43
59:DA:129:C:H2'	59:DA:130:C:C6	2.54	0.43
59:DA:190:A:H5''	59:DA:204:A:N6	2.33	0.43
59:DA:270(J):G:H8	59:DA:270(J):G:O5'	2.01	0.43
59:DA:902:C:H2'	59:DA:903:C:C6	2.54	0.43
59:DA:1415:U:C2	59:DA:1587:A:N1	2.83	0.43
59:DA:1416:G:C2	59:DA:1582:C:N3	2.84	0.43
59:DA:1506(O):G:H8	59:DA:1506(O):G:O5'	2.02	0.43
59:DA:1578:U:O2'	59:DA:1579:A:H5'	2.18	0.43
59:DA:2006:C:C5'	59:DA:2048:G:H5''	2.45	0.43
59:DA:2259:G:C6	59:DA:2281:C:N3	2.86	0.43
59:DA:2606:C:N4	59:DA:2607:G:O6	2.51	0.43
59:DA:2794(A):G:O2'	59:DA:2794(E):A:N6	2.50	0.43
60:DB:29:A:N1	60:DB:55:U:O4	2.51	0.43
1:AB:149:LEU:HB3	1:AB:152:PHE:O	2.19	0.43
2:AC:156:ARG:H	2:AC:156:ARG:HG3	1.62	0.43
3:AD:25:ARG:HD2	21:AA:410:G:N7	2.34	0.43
3:AD:56:VAL:O	3:AD:59:ARG:HB2	2.18	0.43
8:AI:118:LYS:HB3	21:AA:1349:A:OP1	2.18	0.43
9:AJ:57:LYS:HB2	21:AA:972:C:H4'	2.00	0.43
12:AM:106:ASN:HB3	12:AM:107:ALA:H	1.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:18:VAL:HG12	21:AA:1360:A:C4	2.54	0.43
19:AT:16:HIS:O	19:AT:20:LEU:HG	2.19	0.43
20:AY:92:ILE:HG23	20:AY:93:GLU:H	1.83	0.43
20:AY:170:ARG:HB3	20:AY:171:GLU:H	1.66	0.43
20:AY:289:ILE:O	20:AY:301:ILE:HG13	2.18	0.43
20:AY:339:SER:O	20:AY:352:VAL:HG22	2.18	0.43
20:AY:425:SER:O	20:AY:428:LEU:HG	2.19	0.43
21:AA:579:G:H4'	21:AA:728:A:H1'	1.99	0.43
21:AA:1254:C:H4'	21:AA:1357:A:OP1	2.18	0.43
21:AA:1440(O):A:H3'	21:AA:1461:G:C8	2.54	0.43
26:BD:260:ARG:HH12	59:BA:1799:G:H3'	1.83	0.43
33:BN:135:PRO:O	33:BN:137:LYS:N	2.51	0.43
35:BP:27:HIS:CE1	59:BA:814:C:H5	2.36	0.43
36:BQ:24:GLY:HA2	36:BQ:67:ARG:HH22	1.84	0.43
36:BQ:36:ALA:HB3	36:BQ:101:ARG:O	2.19	0.43
41:BV:40:LEU:CD1	41:BV:41:GLY:H	2.31	0.43
44:BY:81:LYS:NZ	44:BY:99:CYS:SG	2.86	0.43
46:B0:10:THR:HB	46:B0:11:ARG:H	1.71	0.43
54:B8:38:GLY:HA2	54:B8:41:ILE:HB	2.00	0.43
56:Be:74:VAL:HG12	56:Be:81:ILE:O	2.19	0.43
59:BA:271(G):G:H3'	59:BA:271(H):C:H6	1.83	0.43
59:BA:601:C:O2'	59:BA:605:C:OP1	2.36	0.43
59:BA:786:C:H2'	59:BA:787:U:C6	2.53	0.43
59:BA:1506(N):G:O3'	59:BA:1506(O):G:H8	2.02	0.43
60:BB:64:C:H2'	60:BB:108:C:N4	2.32	0.43
60:BB:116:G:N3	60:BB:116:G:H2'	2.34	0.43
1:CB:95:GLN:OE1	1:CB:96:ARG:NH2	2.51	0.43
11:CL:18:VAL:HG23	11:CL:19:ARG:H	1.84	0.43
12:CM:102:ARG:NH1	21:CA:950:U:OP2	2.52	0.43
18:CS:40:ILE:HB	18:CS:68:GLY:HA2	2.01	0.43
20:CY:69:VAL:HG23	20:CY:82:ILE:HG12	1.99	0.43
20:CY:80:ASN:C	20:CY:81:ILE:HG13	2.44	0.43
20:CY:87:HIS:CD2	20:CY:117:GLN:HG3	2.54	0.43
20:CY:457:LEU:O	20:CY:461:ILE:HG12	2.18	0.43
21:CA:154:C:N4	21:CA:167:G:H1	2.16	0.43
21:CA:225:C:H2'	21:CA:226:G:O4'	2.18	0.43
21:CA:453:A:N7	21:CA:454:C:N4	2.66	0.43
21:CA:1203:C:H2'	21:CA:1204:A:H8	1.82	0.43
21:CA:1415:G:C2	21:CA:1416:G:H1'	2.53	0.43
63:CA:1601:NMY:O21	63:CA:1601:NMY:N23	2.52	0.43
27:DE:51:PHE:HD1	27:DE:52:LEU:HB2	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:143:ASN:O	59:DA:2052:G:H4'	2.19	0.43
27:DE:154:LYS:HG3	27:DE:155:LYS:H	1.83	0.43
29:DG:8:LYS:HG3	29:DG:100:TRP:CE2	2.53	0.43
33:DN:39:ARG:HA	59:DA:1007:C:O4'	2.19	0.43
33:DN:46:VAL:HG21	33:DN:115:ARG:HG2	1.99	0.43
33:DN:99:LEU:HD12	33:DN:99:LEU:HA	1.86	0.43
38:DS:58:LEU:HD23	38:DS:65:VAL:HG13	2.00	0.43
45:DZ:108:PRO:CB	45:DZ:144:LEU:H	2.32	0.43
47:D1:3:LYS:HD3	59:DA:1364:G:C8	2.53	0.43
48:D2:57:ILE:O	48:D2:60:LEU:HB2	2.18	0.43
59:DA:15:G:H2'	59:DA:16:G:H8	1.80	0.43
59:DA:414:C:C2	59:DA:415:A:C8	3.07	0.43
59:DA:761:A:H5''	59:DA:762:U:H5''	2.01	0.43
59:DA:839:U:C2	59:DA:840:C:C5	3.07	0.43
59:DA:1608:A:H62	59:DA:1621:U:H3	1.65	0.43
59:DA:2030:A:H4'	59:DA:2031:A:C8	2.53	0.43
59:DA:2113:U:H2'	59:DA:2114:A:O4'	2.18	0.43
59:DA:2363:C:H2'	59:DA:2364:C:H6	1.83	0.43
3:AD:122:ARG:NH1	3:AD:134:ASP:OD1	2.49	0.43
4:AE:47:LYS:NZ	4:AE:61:TYR:HE1	2.17	0.43
9:AJ:8:LEU:HG	9:AJ:96:ILE:HG22	2.00	0.43
9:AJ:99:LYS:HD3	9:AJ:100:THR:N	2.34	0.43
13:AN:24:CYS:HB2	13:AN:40:CYS:N	2.24	0.43
15:AP:27:LYS:H	15:AP:27:LYS:HG2	1.40	0.43
15:AP:75:ARG:HG3	15:AP:80:PHE:HD1	1.84	0.43
16:AQ:63:ARG:O	16:AQ:65:ILE:HG12	2.19	0.43
19:AT:30:LYS:O	19:AT:34:LYS:HG3	2.18	0.43
20:AY:89:ASP:N	20:AY:89:ASP:OD2	2.49	0.43
20:AY:268:GLY:HA2	20:AY:271:LEU:HB2	2.00	0.43
21:AA:109:A:C6	21:AA:326:G:C6	3.07	0.43
21:AA:635:G:H2'	21:AA:636:U:C6	2.53	0.43
21:AA:711:G:N3	21:AA:711:G:H2'	2.34	0.43
21:AA:936:C:H1'	21:AA:1383:C:H42	1.84	0.43
21:AA:971:G:H1'	21:AA:1365:G:O2'	2.19	0.43
21:AA:1033:G:H2'	21:AA:1034:G:C8	2.54	0.43
21:AA:1179:A:H2'	21:AA:1180:A:C8	2.53	0.43
21:AA:1426:C:H2'	21:AA:1427:U:H6	1.81	0.43
25:BC:40:GLU:C	25:BC:42:VAL:H	2.26	0.43
25:BC:143:ALA:O	25:BC:161:ARG:NH2	2.49	0.43
27:BE:15:PHE:CD1	39:BT:80:SER:HB2	2.54	0.43
27:BE:47:VAL:HG21	27:BE:86:PRO:CD	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:195:ASP:HB3	28:BF:197:ASP:OD2	2.19	0.43
30:BH:58:GLU:HB2	30:BH:61:HIS:CG	2.54	0.43
30:BH:145:ALA:HA	30:BH:148:ILE:HG12	1.99	0.43
31:BJ:68:UNK:O	31:BJ:69:UNK:C	2.66	0.43
31:BJ:123:UNK:O	31:BJ:124:UNK:C	2.66	0.43
33:BN:95:PRO:HD2	33:BN:108:PRO:HA	2.00	0.43
34:BO:10:VAL:HG21	34:BO:16:ALA:O	2.19	0.43
35:BP:7:ARG:H	35:BP:7:ARG:NH1	2.15	0.43
35:BP:50:ARG:HD3	35:BP:50:ARG:N	2.34	0.43
35:BP:74:GLU:HB2	59:BA:244:A:H4'	1.99	0.43
35:BP:95:VAL:HA	35:BP:99:LEU:HD22	2.00	0.43
37:BR:45:ARG:HB3	37:BR:97:VAL:HG21	2.00	0.43
39:BT:84:GLN:C	39:BT:86:ILE:H	2.26	0.43
40:BU:6:THR:HG21	40:BU:10:ARG:HH21	1.83	0.43
41:BV:66:ARG:HG3	41:BV:90:PRO:HA	2.01	0.43
41:BV:84:LYS:N	59:BA:814:C:OP1	2.49	0.43
51:B5:42:PRO:C	51:B5:44:THR:H	2.25	0.43
54:B8:17:THR:OG1	54:B8:21:LYS:HB2	2.19	0.43
59:BA:30:G:C6	59:BA:31:C:N4	2.87	0.43
59:BA:67:U:H2'	59:BA:68:G:C8	2.50	0.43
59:BA:137(B):G:N3	59:BA:137(B):G:H5'	2.34	0.43
59:BA:256:A:H2'	59:BA:257:A:C8	2.54	0.43
59:BA:631:A:H61	59:BA:2415:G:H21	1.66	0.43
59:BA:872:A:H2'	59:BA:873:G:O4'	2.17	0.43
59:BA:1056:G:H4'	59:BA:1086:A:C8	2.54	0.43
59:BA:1468(D):A:N6	59:BA:1506(N):G:O2'	2.51	0.43
59:BA:2352:A:H62	59:BA:2365:G:H21	1.67	0.43
59:BA:2737:G:H1	59:BA:2767:C:H42	1.66	0.43
63:BA:2902:NMY:N23	63:BA:2902:NMY:O21	2.52	0.43
1:CB:155:LEU:HD11	1:CB:159:PRO:HG3	2.01	0.43
11:CL:6:THR:HG21	21:CA:880:C:C5	2.54	0.43
14:CO:51:HIS:O	14:CO:54:ARG:HB3	2.18	0.43
15:CP:8:ARG:HG2	15:CP:9:PHE:H	1.83	0.43
20:CY:239:GLU:O	20:CY:243:VAL:HG23	2.19	0.43
20:CY:384:ILE:HD11	20:CY:387:ASP:HB3	2.01	0.43
20:CY:445:GLU:HG3	20:CY:482:ALA:HB1	2.00	0.43
20:CY:679:VAL:HG12	20:CY:683:VAL:HB	2.00	0.43
21:CA:126:G:C6	21:CA:236:G:C6	3.07	0.43
21:CA:294:U:P	21:CA:610:G:H21	2.41	0.43
21:CA:778:G:H2'	21:CA:779:C:O4'	2.18	0.43
21:CA:959:A:H2	21:CA:1221:G:N3	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1003:G:N2	21:CA:1038:C:C4	2.87	0.43
21:CA:1423:G:H2'	21:CA:1424:C:C6	2.53	0.43
21:CA:1538:C:N4	23:CV:7:G:H1	2.12	0.43
24:CX:2:G:C6	24:CX:71:C:N4	2.79	0.43
26:DD:123:ALA:O	26:DD:125:ILE:HG13	2.19	0.43
27:DE:52:LEU:HA	27:DE:53:PRO:HD3	1.55	0.43
28:DF:103:LYS:HE3	59:DA:618:C:OP1	2.19	0.43
33:DN:4:TYR:OH	40:DU:94:ASN:ND2	2.52	0.43
34:DO:2:ILE:HG22	59:DA:1666:G:H4'	2.00	0.43
39:DT:53:ARG:NH1	59:DA:2683:C:O3'	2.51	0.43
40:DU:34:LYS:HE2	59:DA:563:G:H21	1.83	0.43
41:DV:86:GLY:O	59:DA:1224:C:O2'	2.32	0.43
52:D6:33:LYS:HB2	52:D6:34:LEU:HD12	2.01	0.43
55:D9:35:ARG:NH1	59:DA:2741:A:H5''	2.30	0.43
59:DA:111:A:H2'	59:DA:112:U:C6	2.54	0.43
59:DA:611(A):C:O5'	59:DA:611(A):C:H6	2.01	0.43
59:DA:691:C:H2'	59:DA:692:C:C6	2.54	0.43
59:DA:1011:G:C6	59:DA:1150:C:N3	2.83	0.43
59:DA:1218:C:H2'	59:DA:1219:G:O4'	2.19	0.43
59:DA:1331:A:O2'	59:DA:1332:G:H8	2.02	0.43
59:DA:1368:G:H8	59:DA:1368:G:OP2	2.01	0.43
59:DA:1396:U:O2	59:DA:1396:U:H2'	2.18	0.43
59:DA:1536:A:H3'	59:DA:1537:C:C6	2.53	0.43
59:DA:2048:G:C2	59:DA:2049:G:H1'	2.54	0.43
59:DA:2070:G:H2'	59:DA:2071:A:C8	2.53	0.43
59:DA:2832:U:H5''	59:DA:2833:G:H8	1.83	0.43
60:DB:31:C:H1'	60:DB:54:G:C2	2.54	0.43
3:AD:14:ARG:HA	3:AD:39:PRO:HA	2.00	0.43
8:AI:121:ARG:HH22	21:AA:1343:G:H21	1.67	0.43
9:AJ:7:LYS:HE2	9:AJ:7:LYS:HB3	1.88	0.43
15:AP:23:ASP:OD1	15:AP:26:ARG:HG3	2.18	0.43
18:AS:49:ILE:HB	18:AS:51:VAL:HG22	2.01	0.43
19:AT:34:LYS:O	19:AT:38:LYS:HG2	2.19	0.43
20:AY:171:GLU:C	20:AY:173:THR:H	2.27	0.43
20:AY:216:LEU:HD23	20:AY:217:VAL:N	2.33	0.43
21:AA:333:G:C2	21:AA:334:C:C5	3.07	0.43
21:AA:1264:C:H42	21:AA:1271:G:H1	1.66	0.43
21:AA:1339:A:C2	22:AW:31:A:H5'	2.54	0.43
25:BC:46:ALA:N	25:BC:171:ALA:O	2.42	0.43
26:BD:9:TYR:CD2	26:BD:10:THR:HG22	2.54	0.43
29:BG:126:ASP:HB2	29:BG:130:ASN:H	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:129:GLY:HA3	29:BG:163:ALA:O	2.18	0.43
30:BH:62:LYS:CB	59:BA:2749:A:H4'	2.49	0.43
33:BN:74:ARG:NH1	59:BA:2040:C:H5''	2.33	0.43
36:BQ:18:LYS:HE3	60:BB:80:U:OP1	2.18	0.43
43:BX:40:LYS:O	43:BX:44:GLU:HB2	2.19	0.43
44:BY:42:VAL:HB	44:BY:65:ALA:HB3	1.99	0.43
59:BA:392:C:H2'	59:BA:393:C:O4'	2.19	0.43
59:BA:914:C:H2'	59:BA:915:C:H5'	2.01	0.43
59:BA:968:G:H2'	59:BA:969:U:O4'	2.19	0.43
59:BA:1196:C:H2'	59:BA:1197:G:O4'	2.19	0.43
59:BA:1444:G:O3'	59:BA:1444(A):A:H8	2.02	0.43
59:BA:1468(F):C:H2'	59:BA:1468(G):G:C8	2.54	0.43
59:BA:1702:G:H2'	59:BA:1703:G:O4'	2.19	0.43
59:BA:1808:U:H2'	59:BA:1809:A:O4'	2.18	0.43
59:BA:1909:C:H2'	59:BA:1910:G:C8	2.52	0.43
59:BA:1936:A:N7	59:BA:1943:U:O2	2.52	0.43
59:BA:2419:U:H2'	59:BA:2420:C:C6	2.54	0.43
59:BA:2440:C:H2'	59:BA:2441:C:H4'	2.00	0.43
59:BA:2560:C:H2'	59:BA:2561:A:H8	1.84	0.43
59:BA:2720:U:C2	59:BA:2721:A:C8	3.07	0.43
2:CC:18:TRP:O	2:CC:21:ARG:NH1	2.52	0.43
6:CG:50:ILE:HD11	6:CG:125:MET:HG3	2.00	0.43
7:CH:49:GLU:O	7:CH:59:LEU:HG	2.18	0.43
7:CH:130:GLY:C	21:CA:599:C:H4'	2.43	0.43
8:CI:111:ARG:HA	21:CA:1369:C:OP2	2.19	0.43
11:CL:49:ASN:ND2	21:CA:521:G:O6	2.52	0.43
11:CL:83:VAL:HG11	11:CL:100:ILE:HD13	2.00	0.43
12:CM:54:VAL:HA	12:CM:57:ARG:NE	2.32	0.43
20:CY:35:TYR:CD1	20:CY:36:THR:N	2.87	0.43
20:CY:246:ILE:HB	20:CY:279:TYR:CE1	2.53	0.43
20:CY:614:GLU:H	20:CY:614:GLU:HG3	1.49	0.43
21:CA:45:U:O2	21:CA:396:G:O6	2.37	0.43
21:CA:68(U):U:O2'	21:CA:68(V):G:OP1	2.23	0.43
21:CA:231:G:H2'	21:CA:232:G:H8	1.83	0.43
21:CA:559:A:H4'	21:CA:560:U:C5'	2.47	0.43
21:CA:838(A):U:H4'	21:CA:838(B):C:C5	2.54	0.43
23:CV:14:A:H8	23:CV:14:A:H2'	1.61	0.43
24:CX:30:C:N4	24:CX:40:G:N1	2.22	0.43
26:DD:70:TRP:HH2	26:DD:151:LYS:C	2.26	0.43
27:DE:146:THR:HA	27:DE:147:PRO:C	2.43	0.43
28:DF:17:ARG:H	28:DF:17:ARG:HG3	1.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:149:ASP:HB2	28:DF:150:GLY:H	1.70	0.43
32:DK:126:MET:HB2	59:DA:1080:C:O2'	2.19	0.43
33:DN:85:ILE:CG2	33:DN:97:ARG:CZ	2.96	0.43
33:DN:107:LEU:HB3	33:DN:117:PHE:CZ	2.54	0.43
34:DO:71:ARG:HH11	34:DO:72:PRO:HD2	1.84	0.43
34:DO:101:PRO:HA	34:DO:120:GLU:O	2.19	0.43
34:DO:105:GLU:HA	34:DO:108:GLU:HG3	1.99	0.43
36:DQ:29:PHE:HZ	36:DQ:67:ARG:HD2	1.83	0.43
39:DT:90:GLN:HB2	39:DT:120:ARG:HD2	2.00	0.43
42:DW:26:GLY:HA2	42:DW:71:VAL:O	2.18	0.43
45:DZ:72:ARG:O	45:DZ:87:ASP:HB2	2.18	0.43
46:D0:55:ARG:C	46:D0:57:PHE:H	2.26	0.43
47:D1:17:SER:HB3	47:D1:18:ILE:H	1.45	0.43
49:D3:40:THR:HB	49:D3:43:ILE:HB	2.00	0.43
51:D5:10:LYS:HB2	59:DA:2017:U:O2	2.18	0.43
53:D7:31:LEU:HA	53:D7:34:ARG:CG	2.49	0.43
54:D8:6:THR:CG2	54:D8:62:LEU:HB2	2.49	0.43
54:D8:7:HIS:O	54:D8:11:LYS:HD3	2.19	0.43
55:D9:2:LYS:HD3	59:DA:2538:C:O2	2.19	0.43
55:D9:13:LYS:H	55:D9:13:LYS:HG2	1.70	0.43
59:DA:98:G:HO2'	59:DA:102:G:HO2'	1.54	0.43
59:DA:788:A:H4'	59:DA:789:A:H5'	1.99	0.43
59:DA:861:A:C2	59:DA:862:G:H1'	2.53	0.43
59:DA:1203:G:H2'	59:DA:1204:A:C2	2.54	0.43
59:DA:1204:A:C5	59:DA:1206:G:C6	3.07	0.43
59:DA:1240:U:HO2'	59:DA:1241:A:P	2.41	0.43
59:DA:1435:G:H2'	59:DA:1436:G:C8	2.54	0.43
59:DA:1676:A:C2	59:DA:1677:A:C5	3.07	0.43
59:DA:1681:G:N3	59:DA:1762:A:H2'	2.33	0.43
59:DA:2019:A:H61	59:DA:2035:G:H1	1.66	0.43
59:DA:2083:G:H2'	59:DA:2084:C:O4'	2.18	0.43
59:DA:2552:U:H5'	59:DA:2553:G:P	2.59	0.43
59:DA:2564:A:N1	59:DA:2647:U:H4'	2.34	0.43
1:AB:74:LYS:O	1:AB:78:GLN:HB2	2.18	0.43
2:AC:75:VAL:HG13	23:AV:36:A:N1	2.34	0.43
6:AG:99:LEU:HD13	6:AG:103:TRP:CE2	2.54	0.43
15:AP:19:ILE:N	15:AP:38:TYR:HA	2.18	0.43
15:AP:45:THR:O	15:AP:47:ASP:N	2.49	0.43
20:AY:262:SER:HB3	20:AY:265:LYS:HB2	2.01	0.43
21:AA:68(A):G:C2	21:AA:68(B):G:N7	2.87	0.43
21:AA:600:C:N4	21:AA:638:G:H1	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:707:C:H2'	21:AA:708:C:C6	2.53	0.43
21:AA:938:A:O2'	21:AA:1376:U:O3'	2.37	0.43
22:AW:71:C:OP1	59:BA:1892:C:O2'	2.35	0.43
23:AV:6:G:H8	23:AV:6:G:O5'	2.01	0.43
24:AX:8:U:H5''	24:AX:9:A:P	2.59	0.43
26:BD:159:ALA:C	26:BD:196:VAL:HB	2.44	0.43
26:BD:202:LYS:HD2	59:BA:1820:U:C6	2.54	0.43
27:BE:159:HIS:HB3	59:BA:2621:A:O2'	2.19	0.43
28:BF:48:THR:HB	59:BA:442:G:H21	1.84	0.43
28:BF:70:THR:HB	28:BF:71:GLY:H	1.48	0.43
28:BF:154:VAL:HG21	28:BF:173:VAL:HG13	2.00	0.43
29:BG:95:ARG:O	29:BG:99:MET:HB2	2.19	0.43
29:BG:176:LEU:HD23	29:BG:176:LEU:HA	1.78	0.43
32:BK:90:LYS:HA	59:BA:1076:C:H1'	1.99	0.43
35:BP:7:ARG:HH11	35:BP:7:ARG:N	2.16	0.43
35:BP:68:GLN:HB2	54:B8:12:LYS:HE2	2.00	0.43
37:BR:28:LEU:O	37:BR:32:GLY:N	2.48	0.43
38:BS:15:ARG:O	38:BS:18:ILE:HB	2.19	0.43
41:BV:72:VAL:HB	41:BV:74:LYS:HE2	2.01	0.43
41:BV:76:LYS:HD3	41:BV:76:LYS:HA	1.90	0.43
45:BZ:24:LEU:HD22	45:BZ:44:PHE:HE2	1.84	0.43
53:B7:19:ARG:O	53:B7:23:ARG:HG3	2.18	0.43
55:B9:6:SER:CB	59:BA:2466:C:H5''	2.49	0.43
56:Be:63:ILE:HD11	56:Be:73:GLU:CD	2.44	0.43
59:BA:143:C:H2'	59:BA:144:C:H6	1.83	0.43
59:BA:559:G:H2'	59:BA:560:C:O4'	2.19	0.43
59:BA:952:G:C6	59:BA:966:G:C6	3.07	0.43
59:BA:1056:G:O2'	59:BA:1103:A:N6	2.32	0.43
59:BA:1330:C:H2'	59:BA:1331:A:H8	1.84	0.43
59:BA:1495:A:H2'	59:BA:1496:A:N3	2.32	0.43
59:BA:1965:C:O5'	63:BA:2903:NMY:H4	2.18	0.43
59:BA:2061:G:C8	59:BA:2501:C:H4'	2.54	0.43
59:BA:2108:C:H2'	59:BA:2109:U:C6	2.54	0.43
59:BA:2109:U:H3	59:BA:2180:U:H3	1.66	0.43
59:BA:2411:A:H2'	59:BA:2412:A:O4'	2.18	0.43
59:BA:2506:U:H2'	59:BA:2583:G:N2	2.34	0.43
59:BA:2849:U:N3	59:BA:2867:G:O4'	2.45	0.43
60:BB:17:C:H2'	60:BB:18:G:C8	2.52	0.43
1:CB:80:ILE:HG23	1:CB:212:GLN:HG2	2.01	0.43
2:CC:56:ASP:O	2:CC:66:VAL:HA	2.19	0.43
3:CD:33:MET:C	3:CD:35:ARG:N	2.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:14:ARG:HE	7:CH:83:ILE:CD1	2.32	0.43
8:CI:122:ALA:HB1	8:CI:123:PRO:HD2	2.00	0.43
9:CJ:12:ASP:OD2	9:CJ:14:LYS:HE2	2.19	0.43
12:CM:36:LYS:HD3	12:CM:36:LYS:HA	1.73	0.43
17:CR:61:LYS:HB2	21:CA:835:U:OP1	2.19	0.43
19:CT:99:LEU:HB3	19:CT:100:ILE:H	1.57	0.43
20:CY:407:PRO:HG3	20:CY:439:ARG:HG3	2.01	0.43
20:CY:549:ALA:HB3	20:CY:590:ILE:HB	2.00	0.43
20:CY:606:MET:HB2	20:CY:649:LEU:HD12	2.01	0.43
21:CA:44:G:H3'	21:CA:45:U:C6	2.54	0.43
21:CA:197:A:C6	21:CA:221:C:H4'	2.54	0.43
21:CA:243:A:C2	21:CA:282:A:N6	2.83	0.43
21:CA:616:G:N2	21:CA:624:C:N3	2.55	0.43
21:CA:1023:G:C2	21:CA:1024:G:H1'	2.53	0.43
21:CA:1243:C:H42	21:CA:1294:G:H1	1.66	0.43
21:CA:1317:C:N4	21:CA:1318:A:N1	2.67	0.43
23:CV:18:G:H4'	23:CV:19:G:OP1	2.19	0.43
26:DD:13:ARG:HA	26:DD:16:MET:HB3	2.00	0.43
28:DF:50:SER:OG	28:DF:94:PRO:HD3	2.19	0.43
28:DF:155:LEU:O	28:DF:191:ARG:O	2.37	0.43
32:DK:37:PHE:HB2	32:DK:41:PHE:CD2	2.54	0.43
33:DN:35:ARG:HB3	33:DN:75:TYR:O	2.19	0.43
33:DN:70:LYS:HA	33:DN:87:LEU:HD23	2.01	0.43
33:DN:100:GLU:O	33:DN:105:GLY:CA	2.67	0.43
33:DN:103:VAL:C	33:DN:105:GLY:H	2.27	0.43
34:DO:3:GLN:O	34:DO:6:THR:HB	2.18	0.43
36:DQ:76:LYS:HA	36:DQ:76:LYS:HD2	1.80	0.43
38:DS:106:ARG:C	38:DS:108:GLY:N	2.76	0.43
39:DT:20:PRO:HD2	39:DT:86:ILE:HG12	2.00	0.43
40:DU:8:VAL:HG11	59:DA:1216:G:OP1	2.19	0.43
41:DV:22:VAL:HB	41:DV:23:GLU:H	1.55	0.43
48:D2:46:GLN:HB3	48:D2:48:HIS:CE1	2.53	0.43
53:D7:9:ARG:HG2	59:DA:1309:G:OP1	2.19	0.43
59:DA:558:G:C2	59:DA:559:G:C5	3.07	0.43
59:DA:897:C:H2'	59:DA:898:C:H5''	2.00	0.43
59:DA:1129:A:H1'	59:DA:2516:G:H1'	2.01	0.43
59:DA:1613:G:C2	59:DA:1619:G:C5	3.07	0.43
59:DA:1965:C:C5'	59:DA:1966:A:H2'	2.49	0.43
59:DA:2037:G:H2'	59:DA:2038:G:H8	1.83	0.43
59:DA:2476:A:H3'	59:DA:2476:A:N3	2.34	0.43
2:AC:19:GLU:HB2	13:AN:52:GLN:HA	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:110:ASN:HB2	2:AC:144:SER:OG	2.19	0.42
2:AC:131:ARG:HH12	2:AC:135:LYS:HE2	1.84	0.42
3:AD:42:GLN:O	3:AD:46:LYS:NZ	2.52	0.42
8:AI:24:GLY:HA2	8:AI:59:PHE:O	2.19	0.42
8:AI:116:LYS:HD2	8:AI:119:ALA:O	2.19	0.42
11:AL:73:GLU:O	11:AL:110:VAL:HG21	2.19	0.42
11:AL:118:SER:OG	21:AA:501:C:O3'	2.37	0.42
13:AN:41:ARG:NH2	21:AA:973:G:H4'	2.33	0.42
18:AS:11:VAL:HG13	18:AS:12:ASP:H	1.84	0.42
20:AY:22:ASP:OD1	20:AY:22:ASP:C	2.61	0.42
21:AA:6:G:O2'	21:AA:298:A:H4'	2.18	0.42
21:AA:68(A):G:H2'	21:AA:68(B):G:C8	2.51	0.42
21:AA:524:G:H3'	21:AA:525:C:C5	2.54	0.42
21:AA:725:G:H1	21:AA:732:C:H42	1.67	0.42
21:AA:828:A:H2'	21:AA:829:G:O4'	2.18	0.42
21:AA:872:A:O2'	21:AA:873:A:OP2	2.31	0.42
26:BD:24:ILE:HA	26:BD:82:ILE:HD12	2.00	0.42
26:BD:93:ALA:HB3	26:BD:105:ILE:HG22	2.01	0.42
26:BD:100:GLY:HA2	59:BA:1501:C:H1'	2.01	0.42
26:BD:142:VAL:HG22	26:BD:143:HIS:H	1.84	0.42
27:BE:12:THR:O	27:BE:23:VAL:N	2.40	0.42
29:BG:47:LYS:HA	29:BG:82:LEU:HG	2.01	0.42
30:BH:20:ALA:HB3	30:BH:23:ARG:O	2.19	0.42
33:BN:59:LYS:HA	33:BN:99:LEU:H	1.83	0.42
33:BN:85:ILE:HG21	33:BN:109:LYS:HB2	2.01	0.42
33:BN:105:GLY:C	33:BN:106:MET:O	2.59	0.42
36:BQ:18:LYS:HG2	60:BB:91:C:P	2.60	0.42
38:BS:92:TYR:C	38:BS:94:TYR:N	2.74	0.42
39:BT:5:ALA:H	59:BA:2875:C:H4'	1.83	0.42
41:BV:18:LEU:HB2	41:BV:19:LYS:H	1.72	0.42
59:BA:1258:C:H2'	59:BA:1259:G:H8	1.84	0.42
59:BA:1312:U:H1'	59:BA:1314:C:C5	2.54	0.42
59:BA:1843:C:H2'	59:BA:1844:C:O4'	2.19	0.42
59:BA:2013:A:H2'	59:BA:2014:A:C8	2.54	0.42
59:BA:2070:G:H2'	59:BA:2071:A:O4'	2.18	0.42
59:BA:2410:G:C6	59:BA:2411:A:C6	3.07	0.42
59:BA:2491:U:OP1	59:BA:2570:G:H4'	2.19	0.42
4:CE:71:LEU:HD21	4:CE:115:VAL:HG22	2.01	0.42
8:CI:4:TYR:HB2	8:CI:19:LEU:O	2.19	0.42
8:CI:44:VAL:O	8:CI:47:LEU:HB2	2.18	0.42
12:CM:20:THR:O	12:CM:22:ILE:N	2.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:69:VAL:HG23	20:CY:82:ILE:CG1	2.49	0.42
20:CY:197:ARG:HA	20:CY:197:ARG:NE	2.33	0.42
20:CY:313:ALA:HB1	20:CY:328:ILE:HG22	2.00	0.42
21:CA:68(I):G:O6	21:CA:68(Q):U:C4	2.71	0.42
21:CA:313:A:H2'	21:CA:314:C:C6	2.53	0.42
21:CA:341:C:N4	21:CA:348:G:H1	2.12	0.42
21:CA:482:A:H2'	21:CA:483:C:O4'	2.19	0.42
21:CA:560:U:OP2	21:CA:566:G:N2	2.49	0.42
21:CA:703:G:O3'	21:CA:704:A:H8	2.02	0.42
21:CA:749:C:H2'	21:CA:749:C:O2	2.18	0.42
21:CA:814:A:OP2	21:CA:816:A:N6	2.47	0.42
21:CA:874:G:H2'	21:CA:875:C:C6	2.54	0.42
21:CA:913:A:H4'	21:CA:914:A:H4'	2.01	0.42
21:CA:1057:G:H3'	21:CA:1058:G:H8	1.84	0.42
21:CA:1157:A:OP1	21:CA:1157:A:H4'	2.18	0.42
21:CA:1234:C:H2'	21:CA:1235:U:C6	2.54	0.42
21:CA:1300:G:H1'	21:CA:1301:U:H6	1.83	0.42
21:CA:1526:G:H2'	21:CA:1527:C:O4'	2.18	0.42
25:DC:139:PRO:HA	25:DC:145:THR:OG1	2.19	0.42
25:DC:164:PHE:CD2	25:DC:172:ILE:HD11	2.54	0.42
26:DD:88:ARG:CG	26:DD:89:SER:H	2.27	0.42
26:DD:250:TRP:HB2	26:DD:252:TRP:HE1	1.84	0.42
29:DG:113:ARG:HB2	50:D4:34:GLU:CD	2.44	0.42
30:DH:83:TYR:HA	30:DH:135:GLY:O	2.18	0.42
32:DK:64:SER:HB2	56:De:98:PRO:HG3	2.00	0.42
33:DN:53:VAL:HG11	33:DN:128:HIS:CE1	2.54	0.42
33:DN:60:ILE:HG22	33:DN:61:ARG:N	2.34	0.42
36:DQ:38:GLU:HB3	36:DQ:127:ILE:HG21	2.01	0.42
36:DQ:93:TYR:HA	36:DQ:93:TYR:HD2	1.66	0.42
36:DQ:134:ARG:HA	36:DQ:137:TYR:CE2	2.53	0.42
37:DR:53:HIS:CE1	37:DR:56:LYS:HD3	2.54	0.42
37:DR:98:LEU:HD23	37:DR:98:LEU:HA	1.81	0.42
37:DR:105:ARG:NH1	42:DW:41:LYS:H	2.09	0.42
42:DW:12:ILE:HG23	42:DW:16:LYS:HD2	2.01	0.42
43:DX:40:LYS:HA	43:DX:51:VAL:HG11	2.01	0.42
44:DY:20:TYR:O	44:DY:23:ARG:HG2	2.19	0.42
44:DY:32:PRO:HG2	44:DY:33:LYS:HE3	2.01	0.42
46:D0:36:ILE:HD11	59:DA:2355:C:H4'	2.01	0.42
47:D1:67:ILE:N	47:D1:68:PRO:HD2	2.34	0.42
48:D2:50:ILE:HB	48:D2:51:ARG:H	1.64	0.42
54:D8:52:LYS:O	54:D8:55:ALA:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:335:C:C2	59:DA:336:C:C5	3.07	0.42
59:DA:374:A:H1'	59:DA:401:A:N6	2.34	0.42
59:DA:451:C:H41	59:DA:454:A:H5'	1.84	0.42
59:DA:823:G:O6	59:DA:834:C:N3	2.52	0.42
59:DA:883:G:H2'	59:DA:884:C:C6	2.54	0.42
59:DA:918:A:H3'	59:DA:919:G:O4'	2.19	0.42
59:DA:1359:A:OP2	59:DA:1371:G:N1	2.43	0.42
59:DA:1487:G:H2'	59:DA:1488:G:O4'	2.19	0.42
59:DA:1710:C:H4'	59:DA:2858:C:O2	2.19	0.42
59:DA:2106:G:N2	59:DA:2183:C:N3	2.55	0.42
59:DA:2248:C:H2'	59:DA:2275:C:H41	1.84	0.42
59:DA:2468:G:H2'	59:DA:2476:A:C8	2.53	0.42
59:DA:2687:U:H2'	59:DA:2688:U:O4'	2.19	0.42
1:AB:211:ILE:HG13	1:AB:212:GLN:H	1.83	0.42
4:AE:46:GLY:HA3	4:AE:58:ALA:HB2	2.01	0.42
6:AG:80:VAL:HG21	6:AG:85:TYR:CE2	2.54	0.42
9:AJ:4:ILE:HB	9:AJ:74:ILE:HG12	2.01	0.42
11:AL:39:VAL:HB	11:AL:55:VAL:HG21	2.00	0.42
16:AQ:14:LYS:H	16:AQ:14:LYS:HG3	1.66	0.42
20:AY:130:VAL:HA	20:AY:131:PRO:HD3	1.69	0.42
20:AY:385:THR:OG1	20:AY:434:GLU:O	2.26	0.42
21:AA:482:A:H2'	21:AA:483:C:O4'	2.19	0.42
21:AA:769:G:H2'	21:AA:770:C:H6	1.84	0.42
21:AA:1004:A:H5'	21:AA:1005:A:OP2	2.19	0.42
21:AA:1225:A:N3	21:AA:1225:A:H2'	2.33	0.42
21:AA:1305:G:N1	21:AA:1331:G:H2'	2.34	0.42
21:AA:1347:G:H22	21:AA:1374:A:P	2.42	0.42
21:AA:1418:A:H3'	21:AA:1419:G:O4'	2.19	0.42
63:AA:1601:NMY:O21	63:AA:1601:NMY:N23	2.52	0.42
24:AX:74:C:N4	59:BA:2554:U:N1	2.67	0.42
25:BC:103:LYS:HA	25:BC:107:GLY:N	2.34	0.42
26:BD:37:LEU:HD13	26:BD:62:TYR:CD1	2.54	0.42
28:BF:93:LYS:HB2	28:BF:95:ARG:NE	2.34	0.42
33:BN:23:LEU:HA	33:BN:26:LEU:HD22	2.01	0.42
34:BO:5:GLN:NE2	59:BA:1669:A:OP1	2.41	0.42
36:BQ:52:VAL:O	36:BQ:53:ALA:C	2.61	0.42
38:BS:15:ARG:HD3	38:BS:15:ARG:HA	1.98	0.42
45:BZ:123:ASP:OD1	45:BZ:123:ASP:N	2.47	0.42
45:BZ:150:LEU:O	45:BZ:171:ILE:HG12	2.19	0.42
59:BA:566:U:H2'	59:BA:567:A:O4'	2.19	0.42
59:BA:702:G:C2	59:BA:730:C:O2	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1186:G:H2'	59:BA:1187:G:C8	2.54	0.42
59:BA:1468(B):G:H8	59:BA:1468(B):G:O5'	2.02	0.42
59:BA:1844:C:C2	59:BA:1845:G:C8	3.07	0.42
59:BA:2603:G:H2'	59:BA:2604:U:H5'	2.01	0.42
63:BA:2904:NMY:H19	63:BA:2904:NMY:H172	1.99	0.42
60:BB:92:G:H2'	60:BB:93:C:H6	1.83	0.42
60:BB:102:G:H2'	60:BB:103:U:H5'	2.01	0.42
3:CD:72:GLU:OE2	3:CD:76:ARG:NH2	2.52	0.42
7:CH:121:ASP:N	7:CH:121:ASP:OD2	2.52	0.42
8:CI:50:LEU:HB3	8:CI:56:LEU:HB3	2.01	0.42
9:CJ:6:ILE:HG13	9:CJ:97:GLU:O	2.19	0.42
9:CJ:58:ASP:CG	9:CJ:59:SER:N	2.77	0.42
20:CY:443:HIS:CE1	20:CY:445:GLU:HB2	2.54	0.42
20:CY:538:TYR:O	20:CY:539:ILE:HG13	2.18	0.42
21:CA:68(H):G:N2	21:CA:68(I):G:N7	2.68	0.42
21:CA:186(E):C:C2	21:CA:186(L):G:N2	2.80	0.42
21:CA:378:G:N2	21:CA:385:C:N3	2.54	0.42
21:CA:602:A:N6	21:CA:636:U:H3	2.17	0.42
21:CA:730:G:H5'	21:CA:816:A:O2'	2.18	0.42
21:CA:813:U:H5''	21:CA:903:G:O3'	2.20	0.42
21:CA:951:G:H1	21:CA:1230:C:H42	1.66	0.42
21:CA:1164:G:H2'	21:CA:1165:C:H6	1.84	0.42
21:CA:1229:A:H2'	21:CA:1230:C:C6	2.54	0.42
25:DC:140:ASN:HA	25:DC:141:PRO:HD2	1.61	0.42
26:DD:249:PRO:HG2	26:DD:250:TRP:CE3	2.54	0.42
28:DF:171:PRO:HD3	59:DA:323:G:C8	2.54	0.42
28:DF:183:VAL:O	28:DF:186:ILE:HG22	2.19	0.42
29:DG:58:GLN:O	29:DG:62:LEU:HB2	2.18	0.42
29:DG:166:ASP:OD2	29:DG:166:ASP:N	2.47	0.42
30:DH:60:ARG:HG3	30:DH:61:HIS:N	2.34	0.42
30:DH:85:LYS:HE3	30:DH:135:GLY:HA3	2.01	0.42
34:DO:71:ARG:HD2	34:DO:71:ARG:HA	1.81	0.42
36:DQ:4:PRO:HA	36:DQ:69:PHE:CZ	2.54	0.42
39:DT:123:GLN:HA	39:DT:126:ALA:HB3	1.99	0.42
42:DW:18:ARG:CZ	59:DA:518:G:H4'	2.49	0.42
44:DY:14:LEU:HG	44:DY:73:ARG:O	2.20	0.42
46:D0:43:THR:C	46:D0:45:PHE:H	2.26	0.42
48:D2:19:VAL:O	48:D2:22:GLU:HB2	2.18	0.42
48:D2:57:ILE:HD13	48:D2:60:LEU:HD12	1.99	0.42
49:D3:26:LEU:O	49:D3:28:LEU:N	2.53	0.42
50:D4:28:LYS:HA	50:D4:29:PRO:HD3	1.90	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D6:37:ARG:NH2	59:DA:2286:A:C8	2.87	0.42
59:DA:126:A:H2'	59:DA:127:A:C8	2.53	0.42
59:DA:189:G:H2'	59:DA:205:G:N2	2.34	0.42
59:DA:530:G:N2	59:DA:2021:C:H1'	2.34	0.42
59:DA:611(G):G:H2'	59:DA:617:G:C8	2.54	0.42
59:DA:986:C:H2'	59:DA:987:G:C8	2.55	0.42
59:DA:1180:C:H2'	59:DA:1181:C:H6	1.84	0.42
59:DA:1324:G:C2	59:DA:1328:G:N1	2.87	0.42
59:DA:1385:G:C6	59:DA:1403:C:C4	3.07	0.42
59:DA:1887:C:H3'	59:DA:1888:G:H5''	2.01	0.42
59:DA:2115:G:C1'	59:DA:2171:A:H61	2.30	0.42
59:DA:2159:G:C2	59:DA:2160:G:H1'	2.54	0.42
59:DA:2640:G:H2'	59:DA:2641:G:H5'	2.01	0.42
1:AB:142:LEU:O	1:AB:146:GLN:NE2	2.39	0.42
3:AD:22:LYS:HE3	21:AA:430:A:OP2	2.19	0.42
5:AF:50:TYR:HA	5:AF:51:PRO:HD2	1.83	0.42
5:AF:70:ASP:OD2	5:AF:71:ARG:HG2	2.19	0.42
6:AG:3:ARG:HB3	21:AA:932:C:P	2.59	0.42
6:AG:111:ARG:NH1	6:AG:122:HIS:HB3	2.34	0.42
7:AH:15:ASN:OD1	21:AA:874:G:N2	2.52	0.42
12:AM:107:ALA:C	12:AM:108:ARG:HD2	2.45	0.42
14:AO:29:VAL:O	14:AO:32:LEU:HB2	2.18	0.42
20:AY:251:ILE:HG21	20:AY:285:ASP:HB2	2.00	0.42
20:AY:568:TYR:HD1	20:AY:569:ASP:N	2.17	0.42
20:AY:590:ILE:O	20:AY:594:VAL:HG23	2.19	0.42
20:AY:612:THR:HG23	20:AY:613:PRO:O	2.19	0.42
21:AA:363:A:H2'	21:AA:364:A:O4'	2.18	0.42
21:AA:982:U:H5'	21:AA:983:A:C8	2.55	0.42
21:AA:1065:U:H4'	21:AA:1066:C:H5'	2.01	0.42
21:AA:1341:U:H2'	21:AA:1342:C:C6	2.52	0.42
25:BC:47:LYS:HA	25:BC:170:GLY:HA3	2.01	0.42
25:BC:138:LEU:HA	25:BC:139:PRO:HD2	1.74	0.42
25:BC:154:ILE:O	25:BC:157:ILE:HB	2.19	0.42
26:BD:136:ILE:HG12	26:BD:137:PRO:HD2	2.01	0.42
27:BE:13:ARG:HA	27:BE:21:VAL:C	2.43	0.42
30:BH:142:GLY:C	59:BA:2745:C:H4'	2.44	0.42
32:BK:115:LEU:HD21	32:BK:126:MET:SD	2.58	0.42
33:BN:89:LYS:H	33:BN:89:LYS:HD2	1.85	0.42
33:BN:127:ASP:N	33:BN:127:ASP:OD1	2.52	0.42
34:BO:63:VAL:HG22	34:BO:83:ALA:O	2.19	0.42
35:BP:98:GLU:HA	35:BP:101:VAL:HG22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BQ:56:ARG:HG3	59:BA:2469:A:H4'	2.01	0.42
36:BQ:102:VAL:HG12	36:BQ:103:MET:H	1.84	0.42
37:BR:71:GLN:NE2	59:BA:1295:C:OP1	2.48	0.42
38:BS:99:LYS:HG3	38:BS:101:LEU:HG	2.00	0.42
39:BT:14:TYR:HB2	39:BT:57:PHE:HE2	1.84	0.42
39:BT:33:LYS:HG3	39:BT:43:GLN:CD	2.44	0.42
41:BV:35:LEU:O	41:BV:56:SER:HB3	2.20	0.42
44:BY:31:LEU:HD22	44:BY:32:PRO:HA	2.02	0.42
45:BZ:69:THR:HB	45:BZ:89:PHE:O	2.19	0.42
59:BA:227:A:H4'	59:BA:228:A:C4	2.55	0.42
59:BA:271(K):U:H2'	59:BA:271(L):C:H5'	2.01	0.42
59:BA:357(L):A:H1'	59:BA:357(M):C:C5	2.54	0.42
59:BA:371:A:N6	59:BA:402:A:OP2	2.47	0.42
59:BA:448:U:O4	59:BA:582:G:N2	2.52	0.42
59:BA:460:A:H62	59:BA:469:G:N2	2.16	0.42
59:BA:553:G:H2'	59:BA:554:U:H6	1.84	0.42
59:BA:1410:G:H1	59:BA:1592:C:N4	2.15	0.42
59:BA:1759:A:H5'	59:BA:2715:C:H4'	2.00	0.42
59:BA:1859:A:H2'	59:BA:1860:G:O4'	2.19	0.42
63:BA:2903:NMY:O21	63:BA:2903:NMY:N23	2.52	0.42
3:CD:19:LEU:O	3:CD:21:LEU:N	2.41	0.42
3:CD:31:CYS:C	3:CD:33:MET:N	2.77	0.42
3:CD:102:ASP:CG	3:CD:103:ASN:H	2.27	0.42
4:CE:100:VAL:HG23	4:CE:107:ARG:HG3	2.01	0.42
7:CH:120:THR:H	7:CH:123:GLU:HB2	1.85	0.42
11:CL:87:GLY:HA2	11:CL:98:TYR:H	1.84	0.42
15:CP:40:ASP:C	15:CP:42:ARG:H	2.28	0.42
18:CS:16:LEU:HA	18:CS:19:VAL:HB	2.01	0.42
20:CY:34:TYR:O	20:CY:36:THR:N	2.52	0.42
20:CY:175:SER:C	20:CY:187:THR:HG1	2.26	0.42
20:CY:337:SER:HB3	20:CY:367:GLU:OE1	2.20	0.42
20:CY:475:ASN:OD1	20:CY:475:ASN:N	2.51	0.42
21:CA:43:C:C1'	21:CA:622:A:H2	2.32	0.42
21:CA:243:A:C2	21:CA:245:C:H2'	2.54	0.42
21:CA:264:U:H2'	21:CA:265:G:H5'	2.00	0.42
21:CA:448:A:C2	21:CA:449:C:C2	3.07	0.42
21:CA:684:A:H2'	21:CA:685:G:C8	2.55	0.42
21:CA:716:A:H2'	21:CA:717:C:C6	2.54	0.42
23:CV:7:G:H5''	23:CV:8:A:OP2	2.19	0.42
22:CW:43:G:H2'	22:CW:44:G:H1'	2.00	0.42
26:DD:35:LYS:HB3	26:DD:35:LYS:HE3	1.64	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:118:LYS:HE2	59:DA:1998:G:H5''	2.01	0.42
28:DF:107:LYS:HZ2	28:DF:110:LEU:HD22	1.82	0.42
28:DF:170:LEU:HA	28:DF:171:PRO:HD2	1.79	0.42
33:DN:43:THR:N	33:DN:78:TYR:HA	2.34	0.42
34:DO:65:THR:O	34:DO:78:ARG:HB2	2.19	0.42
35:DP:85:LEU:HD21	35:DP:134:ALA:HA	2.00	0.42
40:DU:32:PHE:HB2	59:DA:581:C:H5''	2.01	0.42
40:DU:91:ASP:O	40:DU:95:LEU:HB2	2.18	0.42
45:DZ:168:GLU:O	45:DZ:169:GLU:C	2.62	0.42
47:D1:53:VAL:HG13	47:D1:74:VAL:HG13	2.00	0.42
48:D2:12:GLU:HG2	48:D2:16:LEU:HD11	2.00	0.42
48:D2:48:HIS:CG	59:DA:95:G:HO2'	2.37	0.42
48:D2:49:LYS:O	48:D2:50:ILE:C	2.62	0.42
49:D3:2:PRO:O	49:D3:39:ASP:HB2	2.19	0.42
49:D3:32:GLN:HG3	59:DA:1158:C:H1'	2.01	0.42
59:DA:464:U:H2'	59:DA:465:G:O4'	2.19	0.42
59:DA:483:A:N7	59:DA:497:A:H2	2.17	0.42
59:DA:656:G:H2'	59:DA:657:U:H6	1.84	0.42
59:DA:889:C:O2'	59:DA:890:A:P	2.77	0.42
59:DA:1150:C:H2'	59:DA:1151:G:H8	1.84	0.42
59:DA:1499:C:H2'	59:DA:1500:G:H8	1.84	0.42
59:DA:1623:G:H2'	59:DA:1624:G:H8	1.84	0.42
59:DA:1771:C:H2'	59:DA:1772:G:O4'	2.19	0.42
59:DA:1937:A:N7	59:DA:1939:U:H2'	2.34	0.42
59:DA:2465:C:O2'	59:DA:2466:C:H5'	2.19	0.42
59:DA:2685:G:N2	59:DA:2724:C:C2	2.82	0.42
59:DA:2686:G:H2'	59:DA:2687:U:C5	2.54	0.42
60:DB:80:U:O2	60:DB:96:G:N2	2.40	0.42
3:AD:57:ARG:HB3	3:AD:206:PHE:HB2	1.98	0.42
3:AD:108:LEU:HB2	3:AD:174:LEU:HD13	2.01	0.42
3:AD:151:LYS:O	3:AD:155:LEU:HG	2.19	0.42
6:AG:100:ALA:O	6:AG:104:LEU:HD23	2.19	0.42
7:AH:94:TYR:OH	21:AA:597:G:N2	2.51	0.42
8:AI:28:VAL:C	8:AI:30:GLY:H	2.28	0.42
12:AM:108:ARG:HH22	12:AM:111:LYS:NZ	2.17	0.42
17:AR:61:LYS:HA	17:AR:64:ARG:CZ	2.49	0.42
20:AY:293:THR:OG1	20:AY:297:GLU:HG2	2.19	0.42
20:AY:357:ARG:HB2	20:AY:364:GLU:HG3	2.01	0.42
21:AA:413:G:H4'	21:AA:414:A:C5'	2.43	0.42
21:AA:579:G:C6	21:AA:762:C:N3	2.88	0.42
21:AA:663:A:H2'	21:AA:664:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:708:C:H2'	21:AA:709:G:H8	1.84	0.42
21:AA:943:U:H2'	21:AA:944:G:H5'	2.01	0.42
21:AA:1161:C:H2'	21:AA:1162:C:H6	1.83	0.42
21:AA:1203:C:C2	21:AA:1204:A:C8	3.08	0.42
26:BD:100:GLY:HA2	59:BA:1501:C:C1'	2.49	0.42
28:BF:22:ALA:HB1	28:BF:23:ASP:H	1.59	0.42
32:BK:95:LYS:CB	32:BK:137:GLU:HB3	2.49	0.42
33:BN:25:ARG:HG2	59:BA:1012:U:C4	2.54	0.42
33:BN:53:VAL:O	33:BN:54:VAL:C	2.61	0.42
35:BP:91:PHE:HD2	35:BP:91:PHE:HA	1.69	0.42
35:BP:107:LYS:HD2	59:BA:624:C:H41	1.84	0.42
36:BQ:54:MET:SD	36:BQ:64:ILE:HG21	2.60	0.42
38:BS:17:ARG:HG2	38:BS:20:ARG:NH1	2.34	0.42
39:BT:32:TYR:CE1	39:BT:81:PRO:HB2	2.54	0.42
44:BY:33:LYS:H	44:BY:33:LYS:HG2	1.65	0.42
44:BY:60:PHE:HD2	44:BY:60:PHE:HA	1.71	0.42
44:BY:85:VAL:HA	44:BY:94:LYS:CA	2.45	0.42
49:B3:6:VAL:HG12	49:B3:56:VAL:HA	2.01	0.42
51:B5:6:VAL:HG22	59:BA:2015:A:N3	2.33	0.42
59:BA:1167:U:H2'	59:BA:1168:G:C8	2.53	0.42
59:BA:1265:A:N6	59:BA:2013:A:H3'	2.35	0.42
59:BA:1437:C:H2'	59:BA:1438:U:C6	2.55	0.42
59:BA:1465:G:H2'	59:BA:1466:G:H5'	2.00	0.42
59:BA:1604:C:H2'	59:BA:1605:C:C6	2.53	0.42
59:BA:2066:C:H2'	59:BA:2067:G:H5'	2.01	0.42
59:BA:2173:A:H3'	59:BA:2174:C:C6	2.55	0.42
59:BA:2186:G:C2	59:BA:2187:G:N7	2.87	0.42
63:BA:2903:NMY:H19	63:BA:2903:NMY:H172	1.99	0.42
1:CB:219:VAL:O	1:CB:223:ILE:HG13	2.19	0.42
5:CF:10:LEU:HG	5:CF:85:VAL:HA	2.01	0.42
8:CI:104:ARG:NE	21:CA:1117:G:O2'	2.49	0.42
12:CM:67:GLU:N	12:CM:70:LEU:HD12	2.34	0.42
12:CM:91:ARG:HA	12:CM:94:ARG:HB2	2.01	0.42
20:CY:108:PHE:O	20:CY:137:ASN:N	2.52	0.42
20:CY:313:ALA:CB	20:CY:328:ILE:HG22	2.50	0.42
20:CY:436:PRO:O	20:CY:438:PHE:N	2.52	0.42
21:CA:246:A:C2	21:CA:282:A:C5	3.07	0.42
21:CA:432:A:C8	21:CA:433:C:C5	3.07	0.42
21:CA:1066:C:H42	21:CA:1191:A:N6	2.00	0.42
21:CA:1224:G:O6	21:CA:1322:C:H1'	2.19	0.42
21:CA:1277:C:H2'	21:CA:1279:A:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:40:GLU:HA	25:DC:218:THR:H	1.84	0.42
26:DD:52:ARG:O	26:DD:53:PHE:HB2	2.19	0.42
26:DD:147:LEU:HD12	26:DD:155:LEU:HD21	2.01	0.42
27:DE:97:LYS:HD3	27:DE:98:PRO:HD2	2.00	0.42
28:DF:101:LEU:HA	28:DF:102:PRO:HD2	1.81	0.42
29:DG:138:GLN:NE2	29:DG:139:LEU:HD23	2.33	0.42
30:DH:19:VAL:HG21	30:DH:44:VAL:HA	2.02	0.42
30:DH:98:LEU:HD22	30:DH:125:VAL:H	1.85	0.42
33:DN:53:VAL:HG12	33:DN:120:LEU:HD12	2.01	0.42
33:DN:114:ARG:CB	59:DA:2779:U:OP2	2.58	0.42
33:DN:118:LYS:HE3	33:DN:118:LYS:HB2	1.74	0.42
35:DP:6:LEU:HG	35:DP:8:PRO:CD	2.49	0.42
35:DP:121:LYS:O	35:DP:123:LEU:HD22	2.19	0.42
38:DS:39:ILE:O	38:DS:47:THR:HG22	2.20	0.42
46:D0:26:TYR:OH	59:DA:921:G:N2	2.44	0.42
53:D7:1:MET:N	59:DA:1619:G:N3	2.68	0.42
59:DA:227:A:C6	59:DA:2407:G:C8	3.07	0.42
59:DA:328:U:H3'	59:DA:329:G:C5'	2.50	0.42
59:DA:553:G:H2'	59:DA:554:U:H6	1.84	0.42
59:DA:956:G:N2	59:DA:962:G:N7	2.67	0.42
59:DA:2264:C:H2'	59:DA:2265:U:O4'	2.20	0.42
60:DB:3:C:H2'	60:DB:4:C:C5	2.53	0.42
60:DB:76:G:H2'	60:DB:77:U:O4'	2.20	0.42
1:AB:22:LYS:O	21:AA:830:G:H4'	2.19	0.42
1:AB:40:HIS:CD2	1:AB:40:HIS:N	2.87	0.42
1:AB:55:PHE:HD1	1:AB:221:LEU:HG	1.84	0.42
2:AC:54:ARG:HB2	2:AC:69:HIS:CB	2.49	0.42
3:AD:122:ARG:HD2	3:AD:122:ARG:HA	1.86	0.42
4:AE:20:GLN:HG2	4:AE:22:GLY:N	2.35	0.42
5:AF:67:MET:HB2	5:AF:68:PRO:HD2	2.01	0.42
13:AN:3:ARG:NH2	21:AA:1048:G:OP1	2.52	0.42
18:AS:20:LEU:HD23	18:AS:20:LEU:HA	1.87	0.42
61:AY:701:GDP:O3B	62:AY:702:FUA:H282	2.20	0.42
21:AA:103:C:C4	21:AA:104:G:N7	2.88	0.42
21:AA:582:U:OP2	21:AA:758:G:N1	2.47	0.42
21:AA:1015:A:C6	21:AA:1016:A:C6	3.07	0.42
21:AA:1361:G:H8	21:AA:1361:G:O5'	2.01	0.42
22:AW:22:G:H2'	22:AW:23:A:O4'	2.19	0.42
24:AX:74:C:N4	59:BA:2554:U:C6	2.86	0.42
26:BD:17:THR:OG1	26:BD:205:VAL:N	2.48	0.42
26:BD:146:GLU:O	26:BD:147:LEU:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:9:ILE:HD12	28:BF:124:LEU:HD12	2.01	0.42
33:BN:71:ILE:N	33:BN:87:LEU:HA	2.26	0.42
34:BO:2:ILE:HB	34:BO:33:ALA:HB3	2.01	0.42
37:BR:28:LEU:HA	37:BR:34:ILE:HD13	2.02	0.42
40:BU:51:LYS:HG2	59:BA:1156:A:C8	2.55	0.42
41:BV:72:VAL:H	41:BV:86:GLY:HA2	1.84	0.42
44:BY:19:LYS:HA	59:BA:329:G:O6	2.20	0.42
44:BY:69:ALA:C	44:BY:71:LYS:H	2.27	0.42
45:BZ:51:ALA:HA	45:BZ:55:HIS:CD2	2.54	0.42
45:BZ:77:ASP:HB3	45:BZ:84:GLU:OE1	2.19	0.42
47:B1:25:LYS:HA	47:B1:34:THR:O	2.19	0.42
47:B1:53:VAL:HG13	47:B1:74:VAL:HG13	2.00	0.42
48:B2:25:VAL:HG11	48:B2:61:LEU:HD21	2.00	0.42
48:B2:48:HIS:O	48:B2:50:ILE:N	2.52	0.42
54:B8:5:LYS:HD3	54:B8:5:LYS:HA	1.75	0.42
59:BA:52:A:OP2	59:BA:119:A:N6	2.47	0.42
59:BA:270(S):G:C2	59:BA:270(T):G:N7	2.88	0.42
59:BA:649:G:H2'	59:BA:650:C:H6	1.81	0.42
59:BA:759:G:H2'	59:BA:760:G:H8	1.84	0.42
59:BA:1204:A:N1	59:BA:1241:A:N1	2.68	0.42
59:BA:1312:U:H4'	59:BA:1313:U:O5'	2.20	0.42
59:BA:1423:G:H5'	59:BA:1492:G:O2'	2.19	0.42
59:BA:1642:G:H8	59:BA:1642:G:O5'	2.03	0.42
59:BA:2320:A:N1	59:BA:2333:A:H3'	2.34	0.42
63:BA:2902:NMY:H19	63:BA:2902:NMY:H172	1.99	0.42
60:BB:57:A:H2'	60:BB:58:A:H8	1.85	0.42
1:CB:112:VAL:HG11	1:CB:156:LYS:HE2	2.01	0.42
2:CC:6:HIS:HE1	21:CA:1059:C:OP1	2.02	0.42
3:CD:63:LYS:HA	3:CD:66:ARG:HB2	2.01	0.42
4:CE:149:GLU:O	4:CE:153:LYS:HB2	2.20	0.42
5:CF:10:LEU:HB3	5:CF:11:ASN:H	1.62	0.42
5:CF:97:PHE:HB2	17:CR:32:ARG:NH1	2.33	0.42
8:CI:111:ARG:HG3	13:CN:61:TRP:CZ2	2.54	0.42
9:CJ:9:ARG:O	9:CJ:94:VAL:HG23	2.19	0.42
11:CL:53:ARG:HG3	11:CL:69:TYR:CZ	2.55	0.42
14:CO:50:HIS:O	14:CO:53:HIS:HB3	2.19	0.42
16:CQ:67:LYS:HD3	21:CA:254:G:OP2	2.19	0.42
18:CS:30:LEU:HD11	18:CS:32:LYS:HE3	2.01	0.42
20:CY:95:GLU:H	20:CY:95:GLU:HG2	1.60	0.42
20:CY:139:MET:SD	20:CY:145:ASP:N	2.82	0.42
20:CY:148:LEU:CD1	20:CY:151:ARG:HH21	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:630:GLN:HE22	20:CY:632:LEU:HD12	1.83	0.42
21:CA:258:G:C2	21:CA:269:C:C4	3.07	0.42
21:CA:359:U:H2'	21:CA:360:A:O4'	2.20	0.42
21:CA:517:G:H21	21:CA:530:G:P	2.42	0.42
21:CA:820:U:H4'	21:CA:821:G:OP2	2.20	0.42
21:CA:989:C:H2'	21:CA:990:C:C6	2.53	0.42
21:CA:1107:C:C4	21:CA:1108:G:C8	3.07	0.42
21:CA:1171:G:H2'	21:CA:1172:C:H6	1.85	0.42
21:CA:1238:A:N7	21:CA:1301:U:O4	2.52	0.42
21:CA:1348:U:N3	21:CA:1374:A:C2	2.85	0.42
21:CA:1506:U:O4	21:CA:1521:G:H5''	2.19	0.42
21:CA:1533:C:H3'	21:CA:1534:A:O4'	2.20	0.42
25:DC:214:TYR:CE1	59:DA:2177:C:H4'	2.55	0.42
26:DD:32:SER:C	26:DD:36:PRO:HD3	2.43	0.42
27:DE:166:THR:HB	59:DA:2772:C:H4'	2.02	0.42
30:DH:173:PRO:C	30:DH:175:LYS:H	2.27	0.42
32:DK:123:ALA:O	32:DK:126:MET:HB3	2.19	0.42
35:DP:60:MET:HE3	59:DA:2392:A:H1'	2.02	0.42
36:DQ:2:LEU:HD13	36:DQ:2:LEU:HA	1.82	0.42
36:DQ:104:PHE:HD2	36:DQ:104:PHE:HA	1.73	0.42
36:DQ:134:ARG:HA	36:DQ:137:TYR:HE2	1.83	0.42
37:DR:64:ARG:HH21	59:DA:2851:A:H4'	1.84	0.42
39:DT:79:HIS:O	39:DT:80:SER:HB2	2.20	0.42
41:DV:38:LEU:C	41:DV:39:LEU:HD22	2.45	0.42
43:DX:31:HIS:HA	43:DX:32:PRO:HD3	1.93	0.42
45:DZ:18:LEU:HD23	45:DZ:25:PRO:HB3	2.01	0.42
50:D4:29:PRO:O	50:D4:31:ILE:HD12	2.20	0.42
53:D7:5:TRP:HB3	59:DA:1612:C:H4'	2.00	0.42
59:DA:34:C:N4	59:DA:454:A:O2'	2.46	0.42
59:DA:107:C:H4'	59:DA:293:U:H2'	2.00	0.42
59:DA:864:G:C2	59:DA:866:A:N6	2.83	0.42
59:DA:1259:G:H2'	59:DA:1260:G:O4'	2.19	0.42
59:DA:1285:G:C5	59:DA:1329:U:C4	3.07	0.42
59:DA:1495:A:H2'	59:DA:1496:A:N3	2.35	0.42
59:DA:1530:G:H8	59:DA:1530:G:O5'	2.02	0.42
59:DA:1630(A):C:C2	59:DA:1635:G:N1	2.77	0.42
59:DA:1831:G:H21	63:DA:2901:NMY:H91	1.67	0.42
59:DA:1933:G:HO2'	63:DA:2901:NMY:C12	2.32	0.42
59:DA:2074:U:H2'	59:DA:2075:U:C6	2.55	0.42
59:DA:2531:A:H2'	59:DA:2532:G:C8	2.54	0.42
59:DA:2552:U:H5'	59:DA:2553:G:O5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:170:GLU:O	1:AB:174:VAL:HG23	2.20	0.42
3:AD:150:GLU:O	3:AD:153:ARG:HG2	2.20	0.42
6:AG:136:LYS:HE3	6:AG:136:LYS:HB3	1.80	0.42
11:AL:92:ASP:HB2	11:AL:93:LEU:H	1.59	0.42
14:AO:25:THR:OG1	14:AO:26:GLU:N	2.48	0.42
15:AP:2:VAL:HA	15:AP:23:ASP:HA	2.01	0.42
16:AQ:95:TYR:HE1	21:AA:279:A:H5'	1.85	0.42
19:AT:105:SER:OG	21:AA:186(A):C:N3	2.49	0.42
20:AY:616:TYR:O	20:AY:620:VAL:HG22	2.19	0.42
21:AA:119:A:H4'	21:AA:120:A:C8	2.54	0.42
21:AA:674:G:H2'	21:AA:675:A:H8	1.83	0.42
21:AA:787:A:H2'	21:AA:788:U:C6	2.55	0.42
21:AA:951:G:H2'	21:AA:952:U:H6	1.80	0.42
21:AA:984:C:H42	21:AA:1221:G:H1	1.68	0.42
21:AA:1003:G:H2'	21:AA:1004:A:H4'	2.01	0.42
21:AA:1169:A:H2'	21:AA:1170:A:C8	2.55	0.42
21:AA:1238:A:N6	21:AA:1303:C:H5'	2.35	0.42
21:AA:1265:G:C6	21:AA:1266:G:C6	3.07	0.42
24:AX:68:C:H2'	24:AX:69:A:C8	2.54	0.42
25:BC:117:THR:HG22	25:BC:147:GLY:CA	2.50	0.42
26:BD:158:ALA:HB3	26:BD:161:THR:HG23	2.01	0.42
26:BD:250:TRP:CZ2	59:BA:1805:U:H4'	2.55	0.42
27:BE:126:PRO:C	27:BE:128:SER:H	2.27	0.42
28:BF:40:GLN:HA	28:BF:43:LYS:HD2	2.02	0.42
28:BF:75:HIS:HA	59:BA:674:G:H5''	2.01	0.42
31:BJ:54:UNK:C	31:BJ:56:UNK:N	2.82	0.42
33:BN:2:LYS:CE	40:BU:101:ARG:HH22	2.32	0.42
33:BN:6:PRO:HB2	33:BN:9:VAL:HG22	2.00	0.42
35:BP:107:LYS:CD	59:BA:624:C:H41	2.33	0.42
36:BQ:74:TYR:HE1	36:BQ:76:LYS:HD3	1.85	0.42
36:BQ:92:GLY:C	36:BQ:94:VAL:H	2.25	0.42
37:BR:50:HIS:O	37:BR:53:HIS:HB3	2.20	0.42
39:BT:28:VAL:HG12	39:BT:29:ARG:N	2.35	0.42
40:BU:27:LEU:HD23	40:BU:27:LEU:HA	1.79	0.42
40:BU:99:ALA:HB1	40:BU:106:PHE:CE2	2.54	0.42
41:BV:6:LYS:HE2	41:BV:6:LYS:HB3	1.76	0.42
45:BZ:104:PHE:HD1	45:BZ:139:VAL:HG23	1.85	0.42
54:B8:56:GLU:HA	54:B8:59:LYS:HE2	2.00	0.42
55:B9:13:LYS:H	55:B9:13:LYS:HG2	1.70	0.42
59:BA:356:G:H2'	59:BA:357:A:O4'	2.18	0.42
59:BA:357(O):C:H41	59:BA:404:C:P	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:419:C:H2'	59:BA:420:C:O4'	2.19	0.42
59:BA:692:C:H1'	59:BA:1354:A:O2'	2.18	0.42
59:BA:699:A:H62	59:BA:733:G:H21	1.66	0.42
59:BA:723:G:H2'	59:BA:724:U:C6	2.55	0.42
59:BA:817:C:C2'	59:BA:839:U:H5''	2.49	0.42
59:BA:852:G:C6	59:BA:853:G:C5	3.08	0.42
59:BA:975:G:H1'	59:BA:990:A:C2	2.54	0.42
59:BA:1076:C:H2'	59:BA:1077:A:C4'	2.49	0.42
59:BA:1167:U:H3	59:BA:1182:A:N6	2.13	0.42
59:BA:1227:G:H2'	59:BA:1228:G:H8	1.83	0.42
59:BA:1289:C:OP1	59:BA:1647:G:N1	2.52	0.42
59:BA:1327:C:H3'	59:BA:1328:G:C8	2.55	0.42
59:BA:1388:G:H2'	59:BA:1389:G:C8	2.53	0.42
59:BA:1637:A:H2'	59:BA:1638:C:H6	1.84	0.42
59:BA:1750:G:H21	59:BA:2860:A:H2	1.66	0.42
59:BA:1820:U:O2'	59:BA:1821:A:H5'	2.19	0.42
59:BA:1966:A:H5''	63:BA:2903:NMY:O3	2.20	0.42
59:BA:2101:G:H2'	59:BA:2102:U:O4'	2.19	0.42
59:BA:2147:G:H8	59:BA:2147:G:O5'	2.03	0.42
59:BA:2599:G:H8	59:BA:2599:G:OP2	2.02	0.42
59:BA:2614:A:H4'	59:BA:2615:U:OP1	2.19	0.42
59:BA:2832:U:O4	59:BA:2883:A:H5''	2.19	0.42
59:BA:2894:G:H5''	59:BA:2895:U:OP1	2.19	0.42
1:CB:115:LEU:HD21	1:CB:146:GLN:HE22	1.85	0.42
2:CC:197:GLY:N	21:CA:1057:G:H4'	2.34	0.42
5:CF:5:GLU:O	5:CF:91:VAL:HG12	2.19	0.42
7:CH:53:VAL:O	7:CH:56:LYS:HB2	2.20	0.42
10:CK:98:LEU:O	10:CK:101:SER:OG	2.36	0.42
15:CP:6:LEU:HB3	15:CP:17:TYR:CD2	2.55	0.42
15:CP:45:THR:HG22	15:CP:46:PRO:HD2	2.02	0.42
19:CT:13:LEU:HD12	19:CT:14:LYS:N	2.35	0.42
20:CY:422:GLU:CA	20:CY:425:SER:HB2	2.47	0.42
20:CY:534:ILE:HG22	20:CY:538:TYR:CG	2.54	0.42
21:CA:27:G:H2'	21:CA:28:G:H8	1.82	0.42
21:CA:43:C:H1'	21:CA:622:A:H2	1.85	0.42
21:CA:506:G:C6	21:CA:525:C:N3	2.86	0.42
21:CA:888:G:C3'	21:CA:889:A:H5''	2.50	0.42
21:CA:935:A:H2'	21:CA:936:C:O4'	2.20	0.42
21:CA:1073:U:H2'	21:CA:1074:G:O4'	2.19	0.42
21:CA:1093:A:O2'	21:CA:1094:G:H3'	2.19	0.42
21:CA:1271:G:C2	21:CA:1272:G:C8	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1433:A:H2'	21:CA:1434:A:C8	2.54	0.42
22:CW:9:A:C2	22:CW:46:G:C4	3.08	0.42
26:DD:18:VAL:HG22	26:DD:19:ALA:H	1.85	0.42
26:DD:35:LYS:N	26:DD:36:PRO:HD2	2.34	0.42
26:DD:43:ARG:HB3	59:DA:691:C:O2'	2.19	0.42
28:DF:10:PRO:HG2	28:DF:12:LEU:HD22	2.01	0.42
32:DK:44:ALA:C	32:DK:46:ALA:H	2.28	0.42
33:DN:45:ASN:ND2	33:DN:45:ASN:N	2.68	0.42
34:DO:109:LYS:HD3	34:DO:109:LYS:HA	1.74	0.42
36:DQ:72:LYS:HA	36:DQ:73:PRO:HD2	1.63	0.42
38:DS:46:VAL:O	38:DS:47:THR:O	2.37	0.42
39:DT:127:ALA:HA	39:DT:130:ALA:HB3	2.01	0.42
43:DX:63:LYS:HE2	43:DX:63:LYS:HB3	1.82	0.42
44:DY:50:ARG:H	44:DY:50:ARG:HG3	1.61	0.42
47:D1:21:ARG:NH2	59:DA:2079:U:O2'	2.53	0.42
59:DA:182:A:H2'	59:DA:183:C:H6	1.85	0.42
59:DA:528:A:N1	59:DA:2042:A:H2'	2.35	0.42
59:DA:737:C:C4	59:DA:738:G:C8	3.07	0.42
59:DA:1917:U:H2'	59:DA:1918:A:O4'	2.20	0.42
59:DA:2532:G:H8	59:DA:2532:G:P	2.43	0.42
59:DA:2817:G:H1	59:DA:2829:C:H42	1.68	0.42
59:DA:2834:G:H1'	59:DA:2883:A:N6	2.35	0.42
1:AB:94:ASN:HD21	1:AB:95:GLN:HG2	1.84	0.42
2:AC:22:TRP:CD2	2:AC:59:ARG:HB2	2.55	0.42
2:AC:174:PRO:HB2	2:AC:177:THR:OG1	2.20	0.42
3:AD:43:HIS:HA	3:AD:46:LYS:NZ	2.34	0.42
5:AF:78:GLU:O	5:AF:81:ILE:HB	2.19	0.42
7:AH:115:SER:HB2	21:AA:640:A:H2'	2.01	0.42
8:AI:37:PHE:HB3	8:AI:43:ALA:HB2	2.01	0.42
18:AS:34:TRP:HH2	21:AA:987:G:O2'	2.03	0.42
20:AY:301:ILE:H	20:AY:301:ILE:HG12	1.68	0.42
21:AA:102:G:H2'	21:AA:103:C:H6	1.85	0.42
21:AA:107:G:H3'	21:AA:108:G:H21	1.85	0.42
21:AA:965:A:H4'	21:AA:969:A:C8	2.55	0.42
21:AA:1260:C:H4'	21:AA:1284:C:H4'	2.01	0.42
21:AA:1266:G:H1	21:AA:1270:C:N4	2.17	0.42
21:AA:1273:G:C5	21:AA:1274:G:H1'	2.54	0.42
21:AA:1489:G:H2'	21:AA:1490:C:O4'	2.20	0.42
25:BC:64:SER:HA	25:BC:160:GLY:CA	2.36	0.42
25:BC:115:VAL:CA	25:BC:145:THR:HG22	2.45	0.42
25:BC:162:ILE:HD13	25:BC:175:PRO:HD2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:198:GLU:OE2	25:BC:210:LEU:HD11	2.20	0.42
26:BD:85:ASP:OD1	26:BD:88:ARG:HG2	2.20	0.42
29:BG:39:ILE:O	29:BG:91:ARG:HA	2.20	0.42
33:BN:53:VAL:O	33:BN:124:ALA:HB1	2.20	0.42
33:BN:54:VAL:C	33:BN:56:ASN:N	2.77	0.42
33:BN:75:TYR:HE1	59:BA:1137:G:O2'	2.03	0.42
35:BP:112:LEU:HD22	35:BP:113:LYS:N	2.34	0.42
36:BQ:85:LYS:HG2	59:BA:2275:C:O2	2.19	0.42
40:BU:74:LEU:HD22	40:BU:74:LEU:H	1.84	0.42
42:BW:20:VAL:O	42:BW:23:LEU:HB3	2.20	0.42
43:BX:39:ILE:O	43:BX:43:VAL:HG23	2.20	0.42
44:BY:47:LYS:HG2	59:BA:482:A:H4'	2.00	0.42
47:B1:39:LYS:O	47:B1:39:LYS:HG2	2.19	0.42
49:B3:11:SER:HB3	59:BA:988:A:P	2.59	0.42
51:B5:16:ARG:NH1	59:BA:517:C:H5''	2.35	0.42
52:B6:41:PRO:HD3	52:B6:47:THR:H	1.84	0.42
55:B9:22:ARG:H	55:B9:22:ARG:HD2	1.85	0.42
59:BA:121:G:C4'	59:BA:148:C:H2'	2.50	0.42
59:BA:218:A:H8	59:BA:218:A:O5'	2.02	0.42
59:BA:270(B):A:H1'	59:BA:357(N):C:C1'	2.48	0.42
59:BA:283:U:H2'	59:BA:284:C:H6	1.82	0.42
59:BA:515:A:C8	59:BA:516:C:C5	3.08	0.42
59:BA:624:C:H2'	59:BA:625:G:C8	2.54	0.42
59:BA:1226:A:H8	59:BA:1226:A:O5'	2.01	0.42
59:BA:1817:G:H2'	59:BA:1817:G:N3	2.35	0.42
59:BA:2163:C:H2'	59:BA:2164:C:H6	1.85	0.42
60:BB:57:A:H2'	60:BB:58:A:C8	2.55	0.42
1:CB:196:LEU:H	1:CB:196:LEU:HG	1.61	0.42
1:CB:222:ILE:HG13	1:CB:223:ILE:N	2.34	0.42
2:CC:11:ARG:HB2	2:CC:16:ARG:HB2	2.00	0.42
4:CE:10:MET:O	4:CE:32:VAL:HA	2.20	0.42
4:CE:67:VAL:HB	4:CE:140:ARG:NH1	2.34	0.42
7:CH:38:ILE:HG21	7:CH:111:ILE:CG2	2.49	0.42
7:CH:95:VAL:HG22	7:CH:99:GLU:CB	2.48	0.42
8:CI:63:ILE:HG21	8:CI:77:ILE:HG12	2.02	0.42
14:CO:15:PHE:HB3	14:CO:16:ALA:H	1.58	0.42
18:CS:53:ASN:C	18:CS:55:LYS:N	2.78	0.42
19:CT:51:GLU:O	19:CT:55:ILE:HG12	2.20	0.42
20:CY:110:SER:HB3	20:CY:145:ASP:HB2	2.02	0.42
20:CY:213:HIS:O	20:CY:216:LEU:HB3	2.19	0.42
20:CY:252:ASP:O	20:CY:253:LEU:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:411:A:N6	21:CA:429:U:O5'	2.52	0.42
21:CA:585:G:O2'	21:CA:879:C:OP1	2.27	0.42
21:CA:609:A:C5	21:CA:610:G:C5	3.07	0.42
21:CA:831:U:H2'	21:CA:832:C:H6	1.85	0.42
23:CV:31:A:N6	23:CV:32:U:O2	2.52	0.42
22:CW:71:C:N3	22:CW:72:C:N4	2.67	0.42
25:DC:182:PRO:HB3	25:DC:183:PRO:HD2	2.02	0.42
26:DD:108:PRO:HB3	26:DD:196:VAL:HA	2.01	0.42
26:DD:165:ILE:CG2	26:DD:166:GLN:N	2.78	0.42
27:DE:2:LYS:HA	27:DE:84:PHE:CD2	2.55	0.42
29:DG:48:GLU:HB3	29:DG:49:ASP:H	1.65	0.42
33:DN:23:LEU:O	33:DN:26:LEU:HB2	2.19	0.42
40:DU:70:ARG:NH2	59:DA:1012:U:OP1	2.51	0.42
44:DY:6:HIS:CD2	44:DY:6:HIS:H	2.37	0.42
44:DY:11:ASP:N	44:DY:11:ASP:OD2	2.52	0.42
44:DY:18:GLY:HA2	59:DA:309:G:O3'	2.20	0.42
44:DY:40:GLU:O	44:DY:64:GLU:HB3	2.20	0.42
44:DY:75:ILE:HA	44:DY:80:GLY:CA	2.50	0.42
45:DZ:60:GLU:H	45:DZ:60:GLU:HG2	1.72	0.42
46:D0:5:LYS:HB3	46:D0:6:GLY:H	1.70	0.42
46:D0:15:ASP:CG	46:D0:16:SER:H	2.28	0.42
52:D6:8:LYS:HD2	52:D6:27:LYS:CD	2.49	0.42
54:D8:22:VAL:HG11	54:D8:53:PRO:O	2.20	0.42
59:DA:137(E):A:N3	59:DA:137(E):A:H2'	2.35	0.42
59:DA:1190:G:H2'	59:DA:1191:G:H8	1.85	0.42
59:DA:1207:C:C2	59:DA:1239:G:N2	2.80	0.42
59:DA:1294:U:C2	59:DA:1295:C:C5	3.07	0.42
59:DA:1431:U:H2'	59:DA:1432:C:C6	2.55	0.42
59:DA:1587:A:H2'	59:DA:1588:C:O4'	2.20	0.42
59:DA:1681:G:H21	59:DA:1763:G:H5'	1.83	0.42
59:DA:2376:A:OP1	59:DA:2376:A:H8	2.02	0.42
59:DA:2397:G:H2'	59:DA:2398:U:C6	2.54	0.42
60:DB:76:G:H2'	60:DB:77:U:H6	1.83	0.42
1:AB:19:HIS:HB2	1:AB:204:ASN:ND2	2.35	0.42
1:AB:85:ALA:O	1:AB:87:ARG:N	2.45	0.42
1:AB:189:ASP:N	1:AB:205:ASP:OD2	2.52	0.42
2:AC:4:LYS:NZ	21:AA:1191:A:H5''	2.35	0.42
5:AF:69:GLU:C	5:AF:72:VAL:HG12	2.45	0.42
5:AF:72:VAL:HG13	5:AF:73:ASN:N	2.35	0.42
7:AH:10:LEU:O	7:AH:13:ILE:HB	2.19	0.42
8:AI:7:THR:O	8:AI:80:GLY:HA2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AY:229:LEU:HD23	20:AY:232:LEU:HD22	2.02	0.42
20:AY:602:LEU:HB2	20:AY:676:TYR:HB2	2.02	0.42
21:AA:146:G:H2'	21:AA:147:G:O4'	2.19	0.42
21:AA:186(E):C:H2'	21:AA:186(F):C:H6	1.83	0.42
21:AA:430:A:C2	21:AA:431:A:H1'	2.54	0.42
21:AA:1129:C:H4'	21:AA:1130:A:H5'	2.00	0.42
21:AA:1440(A):G:H1'	21:AA:1440(O):A:N6	2.34	0.42
23:AV:33:C:O2'	23:AV:34:A:O4'	2.37	0.42
25:BC:6:LYS:HG3	59:BA:2129:C:O3'	2.20	0.42
25:BC:34:ALA:CB	25:BC:40:GLU:HG2	2.50	0.42
26:BD:151:LYS:HE3	59:BA:2202:C:O2	2.20	0.42
26:BD:227:ASN:HB3	26:BD:228:PRO:HD2	2.02	0.42
27:BE:37:ARG:HH11	27:BE:42:ASP:HB3	1.85	0.42
27:BE:60:ASN:O	27:BE:61:ARG:HB2	2.19	0.42
27:BE:154:LYS:HB3	59:BA:2619:C:O2'	2.20	0.42
29:BG:89:GLY:HA3	59:BA:2312:U:H4'	2.01	0.42
33:BN:116:LEU:HB2	33:BN:118:LYS:N	2.29	0.42
34:BO:39:ILE:O	34:BO:60:ALA:HB3	2.20	0.42
35:BP:86:LYS:HB2	35:BP:117:GLU:O	2.19	0.42
36:BQ:65:PHE:CD1	59:BA:873:G:H4'	2.54	0.42
37:BR:24:GLN:HG2	59:BA:1277:G:O2'	2.20	0.42
43:BX:31:HIS:HA	43:BX:32:PRO:HD3	1.94	0.42
44:BY:68:HIS:CD2	59:BA:328:U:H4'	2.54	0.42
49:B3:19:GLN:O	49:B3:23:LEU:HG	2.20	0.42
59:BA:240:G:OP2	59:BA:241:A:O2'	2.29	0.42
59:BA:271(N):G:N7	59:BA:357(F):G:N1	2.68	0.42
59:BA:477:A:OP1	59:BA:477:A:H8	2.03	0.42
59:BA:557:U:H2'	59:BA:558:G:O4'	2.20	0.42
59:BA:563:G:C5	59:BA:2018:G:C6	3.07	0.42
59:BA:717:G:H3'	59:BA:718:A:C8	2.55	0.42
59:BA:974:G:H8	59:BA:974:G:H2'	1.72	0.42
59:BA:983:A:C6	59:BA:984:A:N6	2.88	0.42
59:BA:1106:G:H2'	59:BA:1107:G:O4'	2.20	0.42
59:BA:1238:G:H2'	59:BA:1239:G:O4'	2.19	0.42
59:BA:1257:C:H2'	59:BA:1258:C:O4'	2.20	0.42
59:BA:1408:C:H2'	59:BA:1409:C:C6	2.55	0.42
1:CB:155:LEU:HD21	1:CB:159:PRO:HB3	2.02	0.42
1:CB:202:PRO:HB2	1:CB:203:GLY:H	1.64	0.42
2:CC:3:ASN:C	2:CC:5:ILE:H	2.27	0.42
7:CH:73:ASP:OD1	7:CH:75:ARG:NH2	2.52	0.42
8:CI:5:TYR:HH	8:CI:16:ARG:HG2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:126:SER:HB3	21:CA:1231:G:H4'	2.01	0.42
11:CL:119:LYS:HE3	21:CA:551:U:H4'	2.02	0.42
14:CO:39:LEU:HD21	21:CA:741:G:O5'	2.20	0.42
20:CY:336:THR:HG23	20:CY:367:GLU:HG3	2.02	0.42
20:CY:550:MET:SD	20:CY:551:GLN:HG2	2.58	0.42
21:CA:38:G:H4'	21:CA:547:A:N6	2.35	0.42
21:CA:152:A:H3'	21:CA:153:C:H6	1.84	0.42
21:CA:186(A):C:H2'	21:CA:186(B):C:C6	2.54	0.42
21:CA:602:A:C6	21:CA:637:G:C6	3.08	0.42
21:CA:783:C:H2'	21:CA:784:C:H6	1.81	0.42
21:CA:837:G:H1	21:CA:849:C:H42	1.67	0.42
21:CA:1123:A:H2	21:CA:1150:U:C2	2.38	0.42
21:CA:1219:U:H2'	21:CA:1220:G:H8	1.84	0.42
21:CA:1219:U:H2'	21:CA:1220:G:O4'	2.19	0.42
22:CW:4:U:H3'	22:CW:5:A:C8	2.55	0.42
26:DD:157:ARG:NH2	59:DA:1818:U:H6	2.14	0.42
26:DD:157:ARG:HG3	59:DA:1818:U:H2'	2.01	0.42
26:DD:242:ARG:HB3	26:DD:243:GLY:H	1.44	0.42
27:DE:64:LYS:HD3	27:DE:64:LYS:HA	1.75	0.42
27:DE:119:ARG:HH22	59:DA:2621:A:P	2.43	0.42
28:DF:126:VAL:HG21	28:DF:142:TRP:CH2	2.55	0.42
28:DF:171:PRO:HB2	28:DF:172:TRP:H	1.59	0.42
31:DJ:134:UNK:O	31:DJ:136:UNK:N	2.52	0.42
32:DK:105:LEU:HG	32:DK:106:GLU:OE2	2.20	0.42
35:DP:25:SER:HA	59:DA:811:U:H2'	2.01	0.42
39:DT:49:VAL:C	39:DT:64:ARG:H	2.28	0.42
40:DU:4:ALA:HB3	59:DA:1249:U:H5'	2.01	0.42
40:DU:15:LYS:HA	40:DU:18:LEU:HB3	2.01	0.42
42:DW:19:LEU:HB3	51:D5:25:LEU:HD13	2.02	0.42
44:DY:50:ARG:HD2	59:DA:484:C:OP1	2.20	0.42
45:DZ:70:LEU:HD23	45:DZ:70:LEU:HA	1.82	0.42
48:D2:55:ARG:HH11	59:DA:73:A:H5'	1.85	0.42
51:D5:28:PRO:HB2	51:D5:29:THR:H	1.61	0.42
59:DA:18:C:H1'	59:DA:554:U:H5''	2.01	0.42
59:DA:534:U:C2	59:DA:535:C:C5	3.07	0.42
59:DA:650:C:H2'	59:DA:651:G:O4'	2.19	0.42
59:DA:775:G:H4'	59:DA:776:G:O5'	2.20	0.42
59:DA:972:G:H3'	59:DA:973:A:H2'	2.00	0.42
59:DA:1068:G:N2	59:DA:1095:A:O2'	2.52	0.42
59:DA:1324:G:H4'	59:DA:1616:A:C6	2.54	0.42
59:DA:1443:G:H1	59:DA:1548:C:H42	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1637:A:H2'	59:DA:1638:C:C6	2.55	0.42
59:DA:1748:G:H2'	59:DA:1749:A:C8	2.55	0.42
59:DA:1832:C:H1'	63:DA:2901:NMY:HN62	1.84	0.42
59:DA:1834:U:H1'	59:DA:1969:A:H2'	2.01	0.42
59:DA:2006:C:H2'	59:DA:2007:C:H6	1.83	0.42
59:DA:2061:G:C8	59:DA:2501:C:H4'	2.55	0.42
1:AB:212:GLN:HG3	1:AB:235:SER:CB	2.50	0.42
2:AC:59:ARG:HA	2:AC:63:ASN:O	2.19	0.42
2:AC:108:ASN:HA	2:AC:109:PRO:HD2	1.78	0.42
2:AC:191:THR:C	2:AC:193:TYR:H	2.27	0.42
14:AO:56:LEU:HA	14:AO:56:LEU:HD12	1.84	0.42
20:AY:145:ASP:CG	20:AY:146:LEU:H	2.26	0.42
20:AY:412:ALA:HB3	20:AY:448:GLN:HE21	1.85	0.42
20:AY:534:ILE:HD11	20:AY:570:GLY:HA3	2.00	0.42
21:AA:574:A:H1'	21:AA:883:C:O4'	2.20	0.42
21:AA:600:C:H2'	21:AA:601:C:C6	2.55	0.42
21:AA:862:C:H4'	21:AA:875:C:OP1	2.20	0.42
21:AA:885:G:C2	21:AA:886:G:C8	3.08	0.42
21:AA:990:C:C2	21:AA:1216:G:C2	3.08	0.42
21:AA:991:U:O2'	21:AA:993:G:H1'	2.20	0.42
21:AA:1046:A:C8	21:AA:1047:G:C8	3.07	0.42
21:AA:1205:U:H2'	21:AA:1206:G:H8	1.84	0.42
21:AA:1436:U:H3'	21:AA:1437:C:H6	1.84	0.42
22:AW:2:G:H2'	22:AW:3:C:C6	2.54	0.42
22:AW:70:G:O2'	59:BA:1850:G:N2	2.52	0.42
28:BF:194:MET:HE2	28:BF:194:MET:HB3	1.71	0.42
28:BF:197:ASP:OD2	28:BF:198:ALA:N	2.52	0.42
29:BG:173:LEU:HD12	29:BG:180:PHE:CZ	2.55	0.42
33:BN:45:ASN:HB3	33:BN:115:ARG:CG	2.50	0.42
34:BO:71:ARG:HD2	34:BO:71:ARG:HA	1.65	0.42
34:BO:77:ILE:HD12	39:BT:73:GLU:O	2.19	0.42
35:BP:148:LEU:HB3	35:BP:149:GLU:H	1.66	0.42
39:BT:53:ARG:HH22	39:BT:60:THR:CG2	2.33	0.42
45:BZ:8:TYR:HB2	45:BZ:38:TYR:CE2	2.54	0.42
46:B0:11:ARG:NH2	59:BA:2279:G:H8	2.18	0.42
50:B4:28:LYS:HG3	50:B4:29:PRO:HD2	2.01	0.42
55:B9:13:LYS:HB2	55:B9:28:GLU:H	1.85	0.42
59:BA:122:G:H1	59:BA:129:C:H42	1.68	0.42
59:BA:563:G:H22	59:BA:578:A:H2	1.67	0.42
59:BA:572:A:C5	59:BA:573:G:C8	3.08	0.42
59:BA:574:C:H1'	59:BA:2055:C:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:702:G:H2'	59:BA:703:U:C6	2.54	0.42
59:BA:1046:A:H3'	59:BA:1047:G:C5'	2.50	0.42
59:BA:1186:G:C6	59:BA:1187:G:C2	3.08	0.42
59:BA:2606:C:H2'	59:BA:2607:G:O4'	2.20	0.42
59:BA:2771:C:H2'	59:BA:2772:C:C6	2.55	0.42
2:CC:107:GLN:N	2:CC:107:GLN:OE1	2.53	0.42
6:CG:26:PHE:O	6:CG:30:ILE:HG13	2.20	0.42
7:CH:38:ILE:HA	7:CH:41:ARG:HH11	1.84	0.42
8:CI:120:ARG:HB3	21:CA:1344:C:H4'	2.02	0.42
12:CM:87:TYR:CE2	12:CM:91:ARG:HD2	2.55	0.42
15:CP:70:ALA:O	15:CP:74:LEU:HG	2.20	0.42
16:CQ:6:LEU:HD23	16:CQ:6:LEU:HA	1.76	0.42
20:CY:114:VAL:HA	20:CY:152:THR:HG21	2.02	0.42
20:CY:165:GLN:HE21	20:CY:260:LEU:HD22	1.84	0.42
21:CA:716:A:H2'	21:CA:717:C:H6	1.85	0.42
21:CA:1095:U:P	21:CA:1108:G:H1	2.43	0.42
21:CA:1220:G:H2'	21:CA:1221:G:C8	2.52	0.42
21:CA:1236:A:H4'	21:CA:1304:G:H4'	2.02	0.42
21:CA:1440(D):A:N1	39:DT:118:ARG:HD3	2.35	0.42
24:CX:76:A:HO2'	59:DA:2452:C:H4'	1.85	0.42
25:DC:75:VAL:HG13	25:DC:113:ALA:HB3	2.01	0.42
25:DC:215:VAL:O	25:DC:216:THR:C	2.63	0.42
26:DD:183:ARG:HH21	26:DD:260:ARG:NH2	2.16	0.42
28:DF:103:LYS:HG2	28:DF:106:ARG:NH1	2.34	0.42
28:DF:157:VAL:HB	28:DF:193:VAL:O	2.20	0.42
30:DH:103:LEU:HD23	30:DH:115:VAL:HB	2.00	0.42
32:DK:78:ILE:HD11	32:DK:136:VAL:HG21	2.01	0.42
33:DN:94:HIS:CB	33:DN:95:PRO:HD3	2.49	0.42
33:DN:95:PRO:HD2	33:DN:108:PRO:CA	2.49	0.42
36:DQ:22:LYS:HG3	59:DA:863:A:O5'	2.20	0.42
37:DR:65:LEU:HA	37:DR:68:ARG:HB3	2.02	0.42
39:DT:31:SER:HB3	39:DT:32:TYR:H	1.44	0.42
40:DU:50:ARG:NH2	59:DA:993:G:OP1	2.53	0.42
40:DU:101:ARG:NH2	41:DV:13:ARG:HH11	2.17	0.42
47:D1:47:GLN:O	47:D1:62:VAL:N	2.53	0.42
51:D5:23:HIS:HB3	51:D5:24:ALA:H	1.48	0.42
52:D6:19:ARG:NH1	52:D6:19:ARG:H	2.18	0.42
52:D6:20:ASN:N	52:D6:20:ASN:HD22	2.17	0.42
53:D7:10:ARG:HG2	59:DA:125:G:C6	2.55	0.42
59:DA:271(S):C:H2'	59:DA:271(T):G:O4'	2.19	0.42
59:DA:287:C:H2'	59:DA:289:A:H8	1.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:463:G:N2	59:DA:466:A:C8	2.85	0.42
59:DA:488:G:N2	59:DA:491:G:H3'	2.35	0.42
59:DA:1317:A:N1	59:DA:1335:U:O2	2.53	0.42
59:DA:1544:A:C5	59:DA:1545:A:C6	3.08	0.42
59:DA:1658:C:N4	59:DA:2002:G:H1	2.17	0.42
59:DA:1782:C:O2	59:DA:2608:G:O2'	2.24	0.42
59:DA:1847:A:O2'	59:DA:1848:A:H5'	2.19	0.42
59:DA:2349:G:O6	59:DA:2368:C:N3	2.53	0.42
59:DA:2867:G:O3'	59:DA:2868:A:H8	2.02	0.42
60:DB:20:C:N4	60:DB:63:G:H1	2.17	0.42
60:DB:106:G:H2'	60:DB:107:U:C6	2.55	0.42
1:AB:115:LEU:HD12	1:AB:115:LEU:HA	1.81	0.42
8:AI:23:ASN:H	8:AI:60:ASP:CG	2.28	0.42
11:AL:87:GLY:N	11:AL:98:TYR:HA	2.35	0.42
14:AO:21:ASP:OD1	14:AO:24:SER:HB2	2.20	0.42
14:AO:43:LEU:HD22	14:AO:47:LYS:CB	2.50	0.42
14:AO:48:LYS:HE2	14:AO:48:LYS:HB3	1.94	0.42
14:AO:55:GLY:O	14:AO:59:MET:HG3	2.19	0.42
15:AP:11:SER:H	15:AP:14:ASN:HB3	1.85	0.42
16:AQ:42:TYR:HD2	16:AQ:71:PHE:CE2	2.38	0.42
20:AY:166:LEU:HB2	20:AY:178:ILE:HG23	2.02	0.42
20:AY:328:ILE:O	20:AY:328:ILE:HG13	2.19	0.42
20:AY:497:PHE:CG	20:AY:497:PHE:O	2.73	0.42
20:AY:553:GLY:HA2	20:AY:554:PRO:HD3	1.85	0.42
21:AA:259:G:H1	21:AA:267:C:H42	1.68	0.42
21:AA:864:A:C6	21:AA:865:A:C6	3.07	0.42
22:AW:72:C:C2	59:BA:1852:C:H5''	2.54	0.42
26:BD:146:GLU:HA	26:BD:153:ALA:HA	2.02	0.42
26:BD:165:ILE:O	26:BD:166:GLN:CB	2.67	0.42
27:BE:141:ILE:HB	27:BE:142:GLY:H	1.63	0.42
28:BF:9:ILE:HG23	28:BF:10:PRO:HD2	2.01	0.42
28:BF:180:GLY:HA3	59:BA:611(F):A:N3	2.35	0.42
29:BG:170:ARG:NH2	29:BG:182:LYS:HG2	2.35	0.42
32:BK:41:PHE:HZ	32:BK:53:VAL:HB	1.84	0.42
35:BP:113:LYS:HG2	59:BA:636:G:C6	2.55	0.42
36:BQ:46:GLN:NE2	59:BA:2484:G:H4'	2.34	0.42
38:BS:75:GLU:HA	38:BS:78:LEU:HD12	2.02	0.42
42:BW:96:ILE:HD11	59:BA:2012:G:H4'	2.02	0.42
44:BY:75:ILE:HG12	44:BY:76:CYS:N	2.34	0.42
45:BZ:57:ILE:HG22	45:BZ:70:LEU:HA	2.02	0.42
45:BZ:151:HIS:HB3	45:BZ:170:THR:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B5:30:LEU:HD22	51:B5:39:MET:O	2.20	0.42
52:B6:43:CYS:O	52:B6:44:ARG:HB2	2.20	0.42
56:Be:62:VAL:HG11	56:Be:92:LEU:HD13	2.02	0.42
56:Be:63:ILE:HG22	56:Be:64:LEU:HG	2.02	0.42
59:BA:487:C:N3	59:BA:493:G:O6	2.53	0.42
59:BA:775:G:C5	59:BA:794:G:N7	2.88	0.42
59:BA:958:U:O2	60:BB:89(B):A:H4'	2.20	0.42
59:BA:1048:A:C8	59:BA:1110:G:N2	2.87	0.42
59:BA:1586:A:H5''	59:BA:1587:A:OP2	2.20	0.42
59:BA:1974:C:H2'	59:BA:1975:G:O4'	2.20	0.42
59:BA:2056:G:N2	59:BA:2577:A:N3	2.68	0.42
59:BA:2248:C:H3'	59:BA:2249:U:O4'	2.20	0.42
59:BA:2769:C:N4	59:BA:2770:G:C6	2.88	0.42
59:BA:2802:G:OP2	59:BA:2802:G:H8	2.03	0.42
2:CC:64:VAL:HG23	2:CC:98:ASN:O	2.20	0.42
10:CK:55:LYS:NZ	21:CA:690:G:O6	2.52	0.42
11:CL:58:VAL:HG22	11:CL:85:ILE:HD11	2.01	0.42
12:CM:87:TYR:O	12:CM:91:ARG:HG3	2.20	0.42
17:CR:76:LEU:HA	17:CR:76:LEU:HD23	1.87	0.42
19:CT:20:LEU:O	19:CT:24:LEU:HG	2.20	0.42
19:CT:61:SER:O	19:CT:65:LYS:HG2	2.20	0.42
20:CY:120:THR:HA	20:CY:123:ARG:HB3	2.02	0.42
20:CY:457:LEU:HD23	20:CY:458:HIS:N	2.35	0.42
21:CA:19:C:H2'	21:CA:20:U:H6	1.85	0.42
21:CA:41:G:H2'	21:CA:42:G:O4'	2.20	0.42
21:CA:68(P):C:H2'	21:CA:68(Q):U:C5	2.54	0.42
21:CA:352:C:H1'	21:CA:355:C:H41	1.85	0.42
21:CA:501:C:O2'	21:CA:549:C:O2	2.38	0.42
21:CA:502:G:O6	21:CA:543:C:N3	2.53	0.42
21:CA:560:U:H5'	21:CA:566:G:N2	2.35	0.42
21:CA:610:G:C5	21:CA:611:A:N7	2.88	0.42
21:CA:611:A:H2'	21:CA:612:C:H5'	2.02	0.42
21:CA:691:G:H2'	21:CA:692:U:C6	2.54	0.42
21:CA:768:A:H5'	21:CA:1524:C:H1'	2.02	0.42
21:CA:1028:C:H2'	21:CA:1028(A):C:O4'	2.19	0.42
21:CA:1145:C:C5'	21:CA:1146:A:H5'	2.49	0.42
21:CA:1273:G:H5'	21:CA:1274:G:OP2	2.20	0.42
21:CA:1305:G:N2	21:CA:1332:A:OP2	2.49	0.42
25:DC:40:GLU:C	25:DC:218:THR:H	2.24	0.42
26:DD:68:LYS:NZ	59:DA:2202(B):C:OP1	2.52	0.42
26:DD:83:GLU:HB2	26:DD:92:ILE:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:144:ARG:HB3	27:DE:145:LYS:H	1.59	0.42
28:DF:154:VAL:O	28:DF:154:VAL:HG12	2.20	0.42
28:DF:161:GLU:O	28:DF:165:ARG:HG2	2.20	0.42
32:DK:77:LEU:HD12	32:DK:107:ILE:HG23	2.02	0.42
33:DN:28:THR:HG23	59:DA:1005:C:HO2'	1.85	0.42
33:DN:35:ARG:NE	33:DN:39:ARG:N	2.68	0.42
35:DP:32:THR:HB	35:DP:36:LYS:HB2	2.01	0.42
45:DZ:94:GLU:O	45:DZ:96:VAL:N	2.52	0.42
45:DZ:104:PHE:HZ	45:DZ:122:ARG:HG2	1.84	0.42
49:D3:26:LEU:HD11	49:D3:46:ASN:OD1	2.20	0.42
53:D7:21:ARG:HB3	53:D7:31:LEU:HD21	2.00	0.42
56:De:63:ILE:HG22	56:De:64:LEU:N	2.35	0.42
59:DA:8:A:C2	59:DA:9:U:N3	2.87	0.42
59:DA:270(E):G:H2'	59:DA:270(F):U:C6	2.54	0.42
59:DA:357(I):G:C2	59:DA:357(J):G:C5	3.07	0.42
59:DA:711:G:H2'	59:DA:712:G:O4'	2.20	0.42
59:DA:1067:A:OP1	59:DA:1067:A:H8	2.03	0.42
59:DA:1115:G:H2'	59:DA:1116:C:C6	2.54	0.42
59:DA:1142:A:C4	59:DA:1144:G:C8	3.08	0.42
59:DA:2065:C:H2'	59:DA:2066:C:C6	2.54	0.42
59:DA:2405:G:N2	59:DA:2412:A:H62	2.16	0.42
60:DB:74:U:H2'	60:DB:75:G:O4'	2.20	0.42
60:DB:80:U:H3	60:DB:96:G:H1	1.68	0.42
3:AD:71:SER:HB2	21:AA:546:G:OP1	2.20	0.41
3:AD:199:ASN:HB3	3:AD:202:LEU:HG	2.02	0.41
4:AE:127:ASN:HA	4:AE:128:PRO:HD3	1.94	0.41
7:AH:38:ILE:HG21	7:AH:120:THR:HG22	2.01	0.41
8:AI:47:LEU:HG	8:AI:50:LEU:HD12	2.01	0.41
10:AK:50:TYR:HD2	10:AK:50:TYR:HA	1.76	0.41
14:AO:46:HIS:C	14:AO:47:LYS:HD3	2.45	0.41
15:AP:27:LYS:HG3	15:AP:29:ASP:O	2.19	0.41
18:AS:51:VAL:HG21	18:AS:71:LEU:HD21	2.02	0.41
20:AY:426:GLN:O	20:AY:429:ALA:HB3	2.20	0.41
62:AY:702:FUA:C15	62:AY:702:FUA:H323	2.49	0.41
21:AA:234:C:H2'	21:AA:235:C:O4'	2.19	0.41
21:AA:390:C:H2'	21:AA:391:G:H8	1.84	0.41
21:AA:771:G:H2'	21:AA:772:U:C6	2.55	0.41
21:AA:918:A:H2'	21:AA:919:A:C8	2.54	0.41
21:AA:967:C:C3'	21:AA:968:A:H2'	2.45	0.41
21:AA:1307:U:H2'	21:AA:1308:U:H6	1.83	0.41
21:AA:1522:U:H2'	21:AA:1523:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AX:7:U:O4	24:AX:66:A:N1	2.53	0.41
25:BC:73:VAL:C	25:BC:75:VAL:H	2.26	0.41
26:BD:110:GLY:HA3	26:BD:127:VAL:HG11	2.02	0.41
26:BD:119:ALA:CB	26:BD:130:ALA:HB3	2.50	0.41
28:BF:62:ARG:HB3	59:BA:797:C:OP1	2.20	0.41
28:BF:117:ARG:HA	28:BF:117:ARG:HD3	1.81	0.41
28:BF:154:VAL:CG2	28:BF:173:VAL:HA	2.49	0.41
29:BG:34:LEU:H	29:BG:34:LEU:HD23	1.85	0.41
30:BH:70:THR:O	30:BH:71:LEU:C	2.63	0.41
30:BH:85:LYS:HE3	30:BH:135:GLY:C	2.45	0.41
31:BJ:165:UNK:C	31:BJ:167:UNK:H	2.32	0.41
35:BP:35:HIS:HE1	59:BA:664:C:H5''	1.85	0.41
35:BP:63:PRO:HD2	59:BA:2394:C:OP1	2.20	0.41
36:BQ:72:LYS:HA	36:BQ:73:PRO:HD2	1.73	0.41
38:BS:87:PHE:CZ	38:BS:101:LEU:HD12	2.55	0.41
39:BT:30:VAL:HG13	39:BT:85:LYS:C	2.44	0.41
41:BV:4:ILE:O	41:BV:39:LEU:N	2.53	0.41
43:BX:47:PHE:CD2	43:BX:89:ILE:HG12	2.55	0.41
48:B2:35:LEU:HD23	48:B2:36:ARG:N	2.35	0.41
59:BA:304:G:H2'	59:BA:305:U:O4'	2.20	0.41
59:BA:481:G:H2'	59:BA:507:A:C6	2.55	0.41
59:BA:541:C:H6	59:BA:541:C:O5'	2.03	0.41
59:BA:701:G:N2	59:BA:731:C:N3	2.63	0.41
59:BA:875:G:H2'	59:BA:876:C:O4'	2.20	0.41
59:BA:964:C:C4	59:BA:965:C:C5	3.08	0.41
59:BA:1050:A:H2'	59:BA:1051:G:C8	2.54	0.41
59:BA:1065:U:H2'	59:BA:1066:U:O4'	2.19	0.41
59:BA:1082:U:O5'	59:BA:1082:U:H6	2.03	0.41
59:BA:1759:A:H5'	59:BA:2715:C:C4'	2.49	0.41
59:BA:1815:A:H5'	59:BA:1817:G:H1'	2.01	0.41
59:BA:1926:U:O2	59:BA:1928:A:H8	2.03	0.41
59:BA:2030:A:H5''	59:BA:2031:A:C8	2.54	0.41
59:BA:2123:G:H2'	59:BA:2124:G:H8	1.85	0.41
59:BA:2832:U:H5''	59:BA:2833:G:C8	2.55	0.41
60:BB:66:A:N6	60:BB:107:U:H2'	2.35	0.41
1:CB:196:LEU:HD12	1:CB:197:VAL:HG23	2.02	0.41
1:CB:212:GLN:CD	1:CB:234:PRO:HG2	2.44	0.41
6:CG:87:VAL:O	6:CG:89:MET:N	2.53	0.41
11:CL:49:ASN:ND2	21:CA:528:C:H42	2.17	0.41
11:CL:85:ILE:CG1	11:CL:98:TYR:HB3	2.42	0.41
19:CT:53:LEU:HD13	19:CT:53:LEU:HA	1.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:90:GLN:H	19:CT:90:GLN:HG3	1.50	0.41
20:CY:138:LYS:HG2	61:CY:701:GDP:C6	2.55	0.41
20:CY:315:LYS:CB	20:CY:327:PHE:HB2	2.44	0.41
62:CY:702:FUA:H212	62:CY:702:FUA:H72	1.88	0.41
21:CA:68(A):G:H2'	21:CA:68(B):G:C8	2.52	0.41
21:CA:141:A:H2'	21:CA:142:G:O4'	2.20	0.41
21:CA:335:C:H4'	21:CA:1433:A:O2'	2.20	0.41
21:CA:442:C:H2'	21:CA:443:C:H6	1.85	0.41
21:CA:560:U:H4'	21:CA:561:U:H5''	2.02	0.41
21:CA:808:C:H2'	21:CA:809:G:H8	1.85	0.41
21:CA:1213:A:C8	21:CA:1215:G:C5	3.08	0.41
21:CA:1401:G:N2	21:CA:1501:C:N3	2.54	0.41
25:DC:31:LYS:HA	25:DC:31:LYS:HE3	2.02	0.41
25:DC:39:ASP:O	25:DC:41:THR:N	2.52	0.41
26:DD:118:VAL:HG22	26:DD:119:ALA:N	2.35	0.41
27:DE:33:VAL:HG23	27:DE:47:VAL:CG1	2.49	0.41
27:DE:66:HIS:NE2	59:DA:2786:U:H5'	2.35	0.41
27:DE:129:HIS:CE1	59:DA:1675:C:N4	2.88	0.41
28:DF:24:LEU:HD23	28:DF:24:LEU:HA	1.81	0.41
33:DN:85:ILE:HG23	33:DN:109:LYS:HB2	2.02	0.41
35:DP:98:GLU:O	35:DP:102:ARG:HB2	2.20	0.41
35:DP:115:LEU:HB2	35:DP:116:GLY:H	1.62	0.41
43:DX:53:LYS:NZ	59:DA:1398:C:H5''	2.35	0.41
44:DY:9:LYS:HB3	44:DY:94:LYS:HZ3	1.85	0.41
46:D0:16:SER:HB3	59:DA:2262:U:OP2	2.20	0.41
52:D6:38:LYS:HG3	59:DA:2344:U:OP1	2.20	0.41
56:De:78:LEU:HD11	56:De:80:ALA:HB3	2.02	0.41
56:De:105:LYS:HE3	56:De:105:LYS:HB2	1.83	0.41
59:DA:85:G:O6	59:DA:97:C:N3	2.53	0.41
59:DA:284:C:H2'	59:DA:285:C:C6	2.54	0.41
59:DA:835:A:H2'	59:DA:836:G:O4'	2.20	0.41
59:DA:1178:C:C2	59:DA:1179:C:C5	3.07	0.41
59:DA:1422:G:H1	59:DA:1576:U:H3	1.68	0.41
59:DA:1506(N):G:H5''	59:DA:1506(O):G:OP1	2.20	0.41
59:DA:1615:C:O2'	59:DA:1616:A:H5'	2.20	0.41
59:DA:1770:G:H2'	59:DA:1771:C:O4'	2.20	0.41
59:DA:2683:C:H2'	59:DA:2684:U:H6	1.85	0.41
59:DA:2889:C:C2	59:DA:2890:G:C8	3.08	0.41
60:DB:89(B):A:H8	60:DB:89(B):A:O5'	2.03	0.41
60:DB:113:C:H2'	60:DB:114:G:C8	2.54	0.41
1:AB:70:PHE:HD2	1:AB:92:TYR:HB3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:76:ARG:O	6:AG:86:GLN:HA	2.20	0.41
11:AL:90:VAL:O	11:AL:92:ASP:N	2.45	0.41
19:AT:32:ALA:HB2	21:AA:1440(M):G:H4'	2.02	0.41
20:AY:526:VAL:CG2	20:AY:566:THR:HG23	2.50	0.41
21:AA:358:U:H2'	21:AA:359:U:C6	2.55	0.41
21:AA:887:G:H2'	21:AA:888:G:O4'	2.21	0.41
21:AA:1116:C:C2'	21:AA:1117:G:H5'	2.50	0.41
21:AA:1209:C:H2'	21:AA:1210:C:H6	1.84	0.41
21:AA:1258:G:H2'	21:AA:1259:C:C6	2.55	0.41
21:AA:1392:G:O2'	21:AA:1502:A:OP1	2.38	0.41
21:AA:1402:C:H2'	21:AA:1403:C:O4'	2.20	0.41
23:AV:14:A:H4'	23:AV:15:A:OP1	2.20	0.41
25:BC:7:ARG:NH1	25:BC:35:THR:O	2.53	0.41
25:BC:83:LYS:CD	25:BC:117:THR:HG21	2.49	0.41
26:BD:105:ILE:HD13	26:BD:105:ILE:HA	1.67	0.41
27:BE:4:ILE:HG23	27:BE:5:LEU:O	2.20	0.41
27:BE:65:GLY:CA	27:BE:70:ALA:HA	2.39	0.41
29:BG:55:LYS:O	29:BG:58:GLN:HG2	2.20	0.41
29:BG:125:PHE:CZ	29:BG:169:ALA:HB3	2.55	0.41
33:BN:40:PRO:HA	33:BN:77:GLY:HA2	2.02	0.41
33:BN:74:ARG:C	33:BN:83:LYS:O	2.62	0.41
36:BQ:126:PRO:HA	59:BA:2485:G:O3'	2.20	0.41
40:BU:3:ARG:H	59:BA:445:C:H5''	1.84	0.41
42:BW:23:LEU:HG	42:BW:24:ILE:HG23	2.01	0.41
45:BZ:104:PHE:HZ	45:BZ:121:HIS:O	2.03	0.41
48:B2:10:LEU:HD22	48:B2:14:ARG:HE	1.85	0.41
59:BA:428:A:N6	59:BA:429:A:N1	2.68	0.41
59:BA:623:G:H2'	59:BA:624:C:O4'	2.20	0.41
59:BA:1281:G:H1	59:BA:1289:C:N4	2.17	0.41
59:BA:1313:U:H4'	59:BA:1333:C:P	2.60	0.41
59:BA:1915:U:H2'	59:BA:1916:A:O4'	2.19	0.41
59:BA:2043:C:H1'	59:BA:2779:U:C5	2.55	0.41
59:BA:2628:C:O5'	59:BA:2629:A:H5''	2.20	0.41
2:CC:206:GLU:C	2:CC:208:ILE:H	2.28	0.41
3:CD:61:LYS:O	3:CD:64:LEU:HB3	2.20	0.41
6:CG:3:ARG:HB3	21:CA:932:C:P	2.60	0.41
6:CG:20:ASP:HB2	6:CG:23:VAL:HG23	2.02	0.41
7:CH:34:GLU:O	7:CH:38:ILE:HG13	2.20	0.41
9:CJ:41:PRO:HD3	21:CA:1150:U:O2'	2.20	0.41
10:CK:41:THR:HB	10:CK:71:LYS:NZ	2.35	0.41
10:CK:50:TYR:HD2	10:CK:50:TYR:HA	1.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:5:ALA:CB	21:CA:1216:G:H5''	2.51	0.41
16:CQ:31:LEU:HD11	21:CA:301:G:OP1	2.20	0.41
62:CY:702:FUA:H231	62:CY:702:FUA:C12	2.45	0.41
21:CA:21:G:H2'	21:CA:22:G:C8	2.55	0.41
21:CA:66:G:O2'	21:CA:173:U:H2'	2.20	0.41
21:CA:126:G:OP1	21:CA:605:U:O2'	2.27	0.41
21:CA:525:C:H2'	21:CA:526:C:C6	2.55	0.41
21:CA:771:G:H2'	21:CA:772:U:C6	2.55	0.41
21:CA:1102:A:H2'	21:CA:1103:C:C5	2.55	0.41
21:CA:1157:A:N3	21:CA:1157:A:H2'	2.36	0.41
21:CA:1274:G:H2'	21:CA:1275:A:H8	1.84	0.41
21:CA:1281:U:H5'	21:CA:1282:C:OP2	2.20	0.41
21:CA:1363:A:H1'	21:CA:1365:G:N7	2.35	0.41
21:CA:1440(J):C:H1'	21:CA:1440(K):G:N2	2.35	0.41
21:CA:1502:A:C8	21:CA:1505:G:N1	2.85	0.41
22:CW:40:G:H2'	22:CW:41:A:H5'	2.02	0.41
24:CX:26:A:C6	24:CX:27:C:N4	2.89	0.41
26:DD:105:ILE:CD1	26:DD:106:ILE:H	2.33	0.41
26:DD:123:ALA:O	26:DD:125:ILE:N	2.53	0.41
28:DF:157:VAL:HG23	28:DF:192:LEU:HA	2.02	0.41
30:DH:76:VAL:O	30:DH:79:VAL:HG22	2.21	0.41
31:DJ:110:UNK:HA	31:DJ:116:UNK:CA	2.42	0.41
32:DK:78:ILE:CD1	32:DK:84:LEU:HB2	2.50	0.41
33:DN:46:VAL:O	33:DN:50:ASP:N	2.51	0.41
33:DN:55:VAL:C	33:DN:57:ALA:N	2.76	0.41
36:DQ:21:THR:C	36:DQ:23:GLY:H	2.27	0.41
36:DQ:56:ARG:HD3	59:DA:2469:A:C1'	2.50	0.41
36:DQ:126:PRO:CA	59:DA:2485:G:H4'	2.49	0.41
37:DR:74:LYS:HB2	37:DR:74:LYS:HE3	1.72	0.41
47:D1:34:THR:HG23	47:D1:35:THR:H	1.85	0.41
52:D6:37:ARG:NH2	59:DA:2286:A:H8	2.18	0.41
56:De:61:ASP:OD2	56:De:95:LYS:HG2	2.20	0.41
59:DA:271(O):A:H2'	59:DA:271(P):C:C5	2.55	0.41
59:DA:479:A:C2	59:DA:480:A:C4	3.08	0.41
59:DA:577:G:H2'	59:DA:578:A:O4'	2.19	0.41
59:DA:700:G:C2	59:DA:701:G:H1'	2.55	0.41
59:DA:886:C:H2'	59:DA:889:C:H42	1.85	0.41
59:DA:919:G:H2'	59:DA:920:G:H8	1.85	0.41
59:DA:1055:G:H3'	59:DA:1056:G:H8	1.84	0.41
59:DA:1527:G:C2	59:DA:1544:A:C8	3.04	0.41
59:DA:1594:G:H2'	59:DA:1595:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2056:G:N3	59:DA:2056:G:H2'	2.35	0.41
59:DA:2630:G:C2	59:DA:2631:G:C4	3.09	0.41
59:DA:2637:U:C4	59:DA:2638:G:C6	3.08	0.41
1:AB:54:THR:O	1:AB:58:ILE:HG12	2.20	0.41
6:AG:33:ASP:OD1	21:AA:1350:A:O2'	2.39	0.41
8:AI:48:GLU:O	8:AI:52:ALA:N	2.53	0.41
9:AJ:51:ARG:CG	9:AJ:59:SER:HB3	2.50	0.41
10:AK:47:VAL:HG22	21:AA:688:G:O3'	2.19	0.41
11:AL:89:ARG:HA	11:AL:96:VAL:HB	2.01	0.41
12:AM:102:ARG:HB3	21:AA:949:A:P	2.60	0.41
14:AO:33:THR:HA	14:AO:63:ARG:NH2	2.35	0.41
16:AQ:67:LYS:HD2	21:AA:266:G:C8	2.55	0.41
20:AY:516:PRO:HB2	20:AY:517:LEU:H	1.66	0.41
20:AY:543:GLN:O	20:AY:546:ILE:HB	2.20	0.41
21:AA:131:C:O2	21:AA:262:A:H2	2.03	0.41
21:AA:440:A:H3'	21:AA:441:A:C8	2.56	0.41
21:AA:985:C:H2'	21:AA:986:A:H8	1.86	0.41
21:AA:1096:C:H2'	21:AA:1097:C:H6	1.81	0.41
22:AW:72:C:C6	22:AW:72:C:H3'	2.55	0.41
26:BD:30:GLU:H	26:BD:30:GLU:HG2	1.71	0.41
26:BD:163:ALA:HB2	26:BD:178:PRO:HD3	2.00	0.41
30:BH:144:VAL:HA	30:BH:147:ASN:HB3	2.02	0.41
34:BO:79:PHE:HB3	34:BO:80:ASP:H	1.76	0.41
35:BP:125:VAL:O	35:BP:145:PRO:HD3	2.21	0.41
36:BQ:74:TYR:CD1	36:BQ:74:TYR:C	2.98	0.41
38:BS:64:GLU:O	38:BS:67:ARG:HB2	2.20	0.41
41:BV:43:GLU:H	41:BV:43:GLU:HG2	1.58	0.41
44:BY:81:LYS:HB2	44:BY:96:ILE:HG23	2.01	0.41
55:B9:3:VAL:HG11	59:BA:2539:C:H5'	2.02	0.41
59:BA:37:C:C2	59:BA:38:A:C8	3.08	0.41
59:BA:248:G:H5'	59:BA:250:G:C6	2.55	0.41
59:BA:401:A:H2'	59:BA:402:A:H8	1.85	0.41
59:BA:659:C:C2	59:BA:660:G:C8	3.08	0.41
59:BA:953:A:H1'	59:BA:2266:A:P	2.60	0.41
59:BA:990:A:C5	59:BA:1186:G:H4'	2.55	0.41
59:BA:1413:G:N2	59:BA:1589:C:C2	2.80	0.41
59:BA:1641:A:H8	59:BA:1641:A:O5'	2.02	0.41
59:BA:2298:A:H2'	59:BA:2299:G:O4'	2.20	0.41
2:CC:29:TYR:HB3	13:CN:37:PHE:HE2	1.84	0.41
3:CD:162:LEU:O	3:CD:165:MET:HB3	2.21	0.41
4:CE:101:ILE:O	4:CE:120:THR:HG23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:97:PHE:HD2	17:CR:31:LEU:HD12	1.84	0.41
6:CG:22:LEU:HD11	6:CG:101:LEU:HD21	2.02	0.41
11:CL:43:VAL:HB	11:CL:93:LEU:HD21	2.02	0.41
15:CP:9:PHE:HB3	21:CA:624:C:O3'	2.20	0.41
15:CP:35:LYS:CG	15:CP:36:ILE:H	2.32	0.41
19:CT:49:ALA:O	19:CT:51:GLU:N	2.53	0.41
20:CY:90:PHE:HB3	20:CY:457:LEU:HD21	2.02	0.41
20:CY:344:THR:HB	20:CY:388:THR:HB	2.03	0.41
21:CA:231:G:H2'	21:CA:232:G:C8	2.54	0.41
21:CA:290:C:H2'	21:CA:291:C:O4'	2.20	0.41
21:CA:1077:G:H8	21:CA:1077:G:O5'	2.03	0.41
21:CA:1340:A:C6	21:CA:1341:U:N3	2.89	0.41
21:CA:1369:C:H2'	21:CA:1370:G:O4'	2.20	0.41
21:CA:1496:C:O2	21:CA:1517:G:N2	2.36	0.41
26:DD:14:ARG:HG3	26:DD:15:PHE:H	1.85	0.41
27:DE:104:VAL:HG12	27:DE:198:VAL:HA	2.02	0.41
27:DE:160:TYR:HD2	27:DE:160:TYR:HA	1.70	0.41
28:DF:3:GLU:HA	28:DF:24:LEU:HB2	2.03	0.41
28:DF:83:PHE:CZ	59:DA:1257:C:H4'	2.56	0.41
28:DF:159:GLY:HA2	28:DF:164:ARG:HH21	1.86	0.41
34:DO:32:TYR:HD2	34:DO:32:TYR:HA	1.79	0.41
34:DO:98:VAL:HG22	34:DO:117:LEU:HD22	2.01	0.41
35:DP:67:MET:C	35:DP:69:GLY:H	2.27	0.41
35:DP:75:ILE:H	35:DP:75:ILE:HG13	1.69	0.41
35:DP:146:VAL:C	35:DP:148:LEU:H	2.27	0.41
37:DR:93:GLY:HA3	59:DA:2880:C:O2	2.20	0.41
39:DT:62:THR:HA	39:DT:75:ILE:HA	2.01	0.41
40:DU:50:ARG:HG2	40:DU:53:ARG:NH2	2.36	0.41
41:DV:40:LEU:HD13	41:DV:41:GLY:H	1.85	0.41
45:DZ:48:PHE:CZ	45:DZ:71:VAL:HG21	2.54	0.41
47:D1:37:ILE:HD13	47:D1:37:ILE:HG21	1.88	0.41
47:D1:43:TYR:CG	47:D1:44:PRO:HD2	2.55	0.41
52:D6:19:ARG:H	52:D6:19:ARG:HH11	1.68	0.41
53:D7:1:MET:SD	59:DA:753:C:H5'	2.60	0.41
59:DA:215:G:C4'	59:DA:216:A:H4'	2.48	0.41
59:DA:1057:A:H62	59:DA:1087:G:P	2.43	0.41
59:DA:1095:A:H2'	59:DA:1096:A:C8	2.54	0.41
59:DA:1494:A:H2'	59:DA:1494:A:N3	2.35	0.41
59:DA:1809:A:H2'	59:DA:1810:A:O4'	2.20	0.41
59:DA:2184:G:H2'	59:DA:2185:C:C6	2.56	0.41
59:DA:2528:U:O2'	59:DA:2529:G:H3'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2794(E):A:H2'	59:DA:2802:G:C4'	2.50	0.41
60:DB:57:A:N6	60:DB:58:A:H62	2.18	0.41
60:DB:62:C:H2'	60:DB:63:G:H8	1.85	0.41
1:AB:11:LEU:HB3	1:AB:213:LEU:HD11	2.03	0.41
1:AB:46:LYS:HA	1:AB:49:GLU:HB3	2.01	0.41
1:AB:172:ILE:O	1:AB:175:ARG:HB3	2.21	0.41
1:AB:223:ILE:HA	1:AB:226:ARG:HB2	2.01	0.41
3:AD:161:ASN:N	3:AD:161:ASN:HD22	2.18	0.41
5:AF:50:TYR:CZ	17:AR:77:GLY:HA2	2.55	0.41
6:AG:26:PHE:O	6:AG:30:ILE:HG13	2.20	0.41
7:AH:3:THR:C	7:AH:5:PRO:HD3	2.44	0.41
8:AI:109:VAL:HG23	21:AA:1371:G:OP2	2.20	0.41
10:AK:115:PRO:C	10:AK:117:ASN:H	2.27	0.41
11:AL:32:PHE:HA	11:AL:84:LEU:HB3	2.01	0.41
14:AO:17:ARG:HD2	14:AO:77:ARG:HH22	1.84	0.41
18:AS:36:ARG:NH2	18:AS:72:GLY:O	2.54	0.41
20:AY:311:ALA:O	20:AY:389:LEU:HB3	2.20	0.41
20:AY:555:LEU:HD11	20:AY:599:PRO:HB2	2.02	0.41
21:AA:426:G:H2'	21:AA:427:U:C6	2.55	0.41
21:AA:618:C:H4'	21:AA:618:C:OP1	2.20	0.41
21:AA:659:U:H2'	21:AA:660:G:O4'	2.21	0.41
21:AA:669:U:O5'	21:AA:669:U:H6	2.03	0.41
21:AA:729:A:H2'	21:AA:730:G:O4'	2.20	0.41
21:AA:758:G:H5'	21:AA:880:C:H1'	2.01	0.41
21:AA:926:G:N2	21:AA:1505:G:O2'	2.53	0.41
21:AA:942:G:H2'	21:AA:943:U:C5	2.56	0.41
21:AA:992:U:H1'	21:AA:993:G:O5'	2.21	0.41
21:AA:1028(C):G:N2	21:AA:1028(G):G:N7	2.68	0.41
21:AA:1060:C:H2'	21:AA:1061:G:H8	1.85	0.41
22:AW:31:A:H2	22:AW:39:U:O2	2.03	0.41
25:BC:65:LEU:HD11	25:BC:162:ILE:HD11	2.03	0.41
25:BC:101:ILE:HD12	25:BC:104:ILE:HD12	2.02	0.41
26:BD:154:LYS:HD3	59:BA:1818:U:O4	2.20	0.41
27:BE:52:LEU:HD23	27:BE:53:PRO:HD2	2.02	0.41
27:BE:150:VAL:O	59:BA:2618:G:O2'	2.29	0.41
29:BG:126:ASP:C	29:BG:128:ARG:H	2.28	0.41
29:BG:138:GLN:CG	29:BG:155:MET:HE1	2.50	0.41
33:BN:19:GLU:HA	33:BN:99:LEU:CD2	2.50	0.41
34:BO:88:ASN:HB3	34:BO:94:ARG:HG3	2.02	0.41
36:BQ:21:THR:HG23	36:BQ:101:ARG:HB2	2.01	0.41
36:BQ:41:TRP:HA	36:BQ:95:ALA:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BZ:6:LYS:HA	45:BZ:60:GLU:HG3	2.02	0.41
45:BZ:14:LYS:HB2	45:BZ:14:LYS:HE3	1.81	0.41
54:B8:22:VAL:HG21	54:B8:53:PRO:O	2.20	0.41
59:BA:117:G:H5'	59:BA:126:A:H2	1.85	0.41
59:BA:176:G:H3'	59:BA:177:G:C2	2.55	0.41
59:BA:248:G:H21	59:BA:2433:A:H62	1.68	0.41
59:BA:374:A:N6	59:BA:400:G:H1'	2.32	0.41
59:BA:915:C:H2'	59:BA:916:G:C8	2.56	0.41
59:BA:1172:G:H2'	59:BA:1174:U:H5'	2.02	0.41
59:BA:1331:A:O2'	59:BA:1332:G:H2'	2.20	0.41
59:BA:1345:C:C4	59:BA:1346:G:N7	2.88	0.41
59:BA:1605:C:H3'	59:BA:1606:G:H8	1.86	0.41
59:BA:1632:A:H8	59:BA:1632:A:O5'	2.03	0.41
59:BA:1687:G:N2	59:BA:1688:U:O2	2.53	0.41
59:BA:2146:C:H6	59:BA:2146:C:H2'	1.72	0.41
59:BA:2302:G:H2'	59:BA:2303:G:C8	2.55	0.41
59:BA:2329:G:H2'	59:BA:2330:G:O4'	2.21	0.41
59:BA:2351:G:N2	59:BA:2366:A:H62	2.18	0.41
59:BA:2762:G:H2'	59:BA:2763:G:O4'	2.20	0.41
60:BB:32:C:O2	60:BB:50:G:C2	2.73	0.41
3:CD:155:LEU:HB3	3:CD:158:ILE:HD13	2.02	0.41
4:CE:51:VAL:O	4:CE:55:VAL:HG23	2.20	0.41
6:CG:78:ARG:HG3	6:CG:156:TRP:HA	2.02	0.41
7:CH:103:VAL:O	7:CH:104:ARG:HB2	2.19	0.41
8:CI:19:LEU:CD2	8:CI:61:ALA:HB2	2.51	0.41
11:CL:61:THR:O	11:CL:61:THR:OG1	2.36	0.41
19:CT:36:LEU:HD22	19:CT:36:LEU:HA	1.90	0.41
20:CY:164:MET:HG3	20:CY:259:PHE:CE1	2.55	0.41
21:CA:68(U):U:H2'	21:CA:68(V):G:C8	2.55	0.41
21:CA:103:C:O2	21:CA:172:A:C2	2.73	0.41
21:CA:407:G:H2'	21:CA:408:A:H8	1.86	0.41
21:CA:601:C:N3	21:CA:637:G:O6	2.54	0.41
21:CA:696:A:H8	21:CA:696:A:O5'	2.04	0.41
21:CA:887:G:H1	21:CA:910:C:N4	2.13	0.41
21:CA:1223:C:OP2	21:CA:1224:G:H2'	2.21	0.41
21:CA:1403:C:H1'	21:CA:1500:A:N1	2.35	0.41
21:CA:1518:A:H2'	21:CA:1519:A:C8	2.55	0.41
24:CX:8:U:H5'	24:CX:49:G:OP2	2.19	0.41
25:DC:25:GLU:O	25:DC:29:LEU:HB2	2.21	0.41
25:DC:66:PRO:HB2	25:DC:67:HIS:CE1	2.56	0.41
25:DC:75:VAL:C	25:DC:77:ALA:H	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:232:PRO:HG2	59:DA:2239:G:H5''	2.01	0.41
30:DH:23:ARG:HA	30:DH:36:PRO:HA	2.02	0.41
30:DH:70:THR:CG2	59:DA:2747:G:H5''	2.50	0.41
32:DK:56:GLU:HB2	32:DK:70:LYS:NZ	2.35	0.41
32:DK:102:GLU:O	32:DK:105:LEU:HD22	2.21	0.41
33:DN:75:TYR:CE1	33:DN:82:LEU:HG	2.55	0.41
34:DO:43:VAL:HG12	34:DO:54:GLU:HA	2.02	0.41
35:DP:51:PHE:O	35:DP:52:GLU:HB3	2.20	0.41
36:DQ:66:ILE:HB	59:DA:872:A:O2'	2.21	0.41
37:DR:49:ASP:HB3	59:DA:2839:G:H4'	2.03	0.41
37:DR:83:ILE:HG23	37:DR:87:TYR:CE2	2.55	0.41
39:DT:87:ASP:OD2	39:DT:90:GLN:HG2	2.20	0.41
42:DW:4:LYS:HG3	42:DW:106:ILE:HG12	2.03	0.41
42:DW:65:LEU:O	42:DW:69:LEU:HG	2.20	0.41
42:DW:78:GLU:O	42:DW:78:GLU:HG2	2.20	0.41
45:DZ:6:LYS:HD2	45:DZ:60:GLU:O	2.20	0.41
46:D0:41:ARG:HD2	46:D0:41:ARG:HA	1.71	0.41
46:D0:48:GLY:O	46:D0:50:ASN:N	2.53	0.41
48:D2:7:ARG:O	48:D2:10:LEU:HB2	2.20	0.41
48:D2:19:VAL:O	48:D2:23:LYS:HG3	2.21	0.41
50:D4:3:GLU:HB3	50:D4:4:GLY:H	1.53	0.41
52:D6:8:LYS:HG3	52:D6:8:LYS:O	2.21	0.41
54:D8:46:ARG:NH1	59:DA:649:G:O2'	2.54	0.41
59:DA:251:A:H2'	59:DA:252:G:O4'	2.20	0.41
59:DA:271(E):G:H2'	59:DA:271(F):G:O4'	2.21	0.41
59:DA:603:A:N3	59:DA:604:G:H1'	2.35	0.41
59:DA:1174:U:H2'	59:DA:1175:G:N7	2.35	0.41
59:DA:1279:G:H1	59:DA:1291:C:N4	2.19	0.41
59:DA:1423:G:H5'	59:DA:1492:G:O2'	2.21	0.41
59:DA:1563:G:H2'	59:DA:1564:C:O4'	2.20	0.41
59:DA:1563:G:C2	59:DA:1564:C:C2	3.08	0.41
59:DA:1751:C:H2'	59:DA:1752:C:H6	1.85	0.41
59:DA:1850:G:H2'	59:DA:1851:U:C6	2.55	0.41
59:DA:1925:C:O2	59:DA:1929:G:O6	2.37	0.41
59:DA:2271:G:H2'	59:DA:2272:U:C6	2.55	0.41
59:DA:2307:G:H1'	59:DA:2311:A:N7	2.35	0.41
59:DA:2473:U:P	59:DA:2473:U:H6	2.43	0.41
59:DA:2688:U:C6	59:DA:2721:A:N6	2.88	0.41
59:DA:2732:G:H3'	59:DA:2733:A:O4'	2.21	0.41
1:AB:27:LYS:O	1:AB:30:ARG:HG2	2.20	0.41
1:AB:67:THR:C	1:AB:68:ILE:HD12	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:222:ILE:O	1:AB:226:ARG:N	2.46	0.41
4:AE:86:ALA:HB2	21:AA:864:A:OP1	2.21	0.41
4:AE:96:PRO:HA	4:AE:117:ASP:CG	2.45	0.41
6:AG:35:LYS:HD2	21:AA:1290:G:H4'	2.02	0.41
6:AG:69:VAL:HB	6:AG:70:LYS:H	1.68	0.41
9:AJ:24:VAL:HG13	9:AJ:34:VAL:HB	2.01	0.41
9:AJ:57:LYS:NZ	21:AA:972:C:OP2	2.46	0.41
11:AL:82:VAL:HB	11:AL:105:TYR:CD1	2.55	0.41
12:AM:124:PRO:HG2	24:AX:32:C:H1'	2.02	0.41
14:AO:25:THR:O	14:AO:29:VAL:HG23	2.21	0.41
18:AS:81:ARG:HA	18:AS:81:ARG:HD2	1.96	0.41
20:AY:165:GLN:CD	20:AY:177:ILE:HG12	2.45	0.41
20:AY:608:VAL:CG2	20:AY:669:PHE:HB2	2.50	0.41
21:AA:232:G:H21	21:AA:263:A:H2	1.67	0.41
21:AA:676:A:C2	21:AA:677:U:C4	3.08	0.41
21:AA:767:A:O2'	21:AA:1524:C:O2	2.30	0.41
21:AA:1090:U:H2'	21:AA:1091:U:C6	2.54	0.41
21:AA:1139:G:H5'	21:AA:1140:C:OP1	2.20	0.41
21:AA:1166:G:N2	21:AA:1170:A:OP2	2.37	0.41
25:BC:148:PHE:C	25:BC:150:ILE:H	2.28	0.41
25:BC:186:LEU:HD23	25:BC:186:LEU:HA	1.77	0.41
27:BE:15:PHE:CZ	39:BT:77:PRO:HB2	2.56	0.41
27:BE:110:GLY:O	37:BR:2:ARG:HG3	2.20	0.41
28:BF:63:LYS:HG3	28:BF:76:GLY:HA2	2.02	0.41
28:BF:112:MET:O	28:BF:116:ASP:N	2.48	0.41
28:BF:201:VAL:O	28:BF:205:ARG:HD3	2.20	0.41
29:BG:35:GLU:HB2	29:BG:160:VAL:O	2.20	0.41
31:BJ:123:UNK:O	31:BJ:125:UNK:N	2.54	0.41
32:BK:80:LYS:HB3	32:BK:80:LYS:HE2	1.78	0.41
33:BN:35:ARG:NH2	33:BN:75:TYR:CD2	2.88	0.41
33:BN:84:LYS:HZ1	59:BA:2041:U:P	2.40	0.41
33:BN:127:ASP:O	33:BN:128:HIS:ND1	2.49	0.41
37:BR:31:HIS:C	37:BR:33:ARG:H	2.29	0.41
37:BR:83:ILE:O	37:BR:87:TYR:HD2	2.03	0.41
39:BT:33:LYS:HA	39:BT:33:LYS:HD3	1.91	0.41
45:BZ:93:ASP:OD2	45:BZ:131:ARG:HB2	2.21	0.41
47:B1:17:SER:CA	47:B1:39:LYS:HA	2.50	0.41
49:B3:8:LEU:HD22	49:B3:31:LEU:HG	2.02	0.41
59:BA:443:A:N1	59:BA:1245:G:O2'	2.50	0.41
59:BA:600:G:H2'	59:BA:601:C:H6	1.82	0.41
59:BA:637:A:N3	59:BA:638:G:H1'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1119:C:H2'	59:BA:1120:G:H8	1.85	0.41
59:BA:1342:A:C4	59:BA:1345:C:C4	3.08	0.41
59:BA:1582:C:H2'	59:BA:1583:A:H8	1.84	0.41
59:BA:1610:A:OP1	59:BA:1611:C:H5	2.04	0.41
59:BA:2314:C:H2'	59:BA:2315:G:C8	2.55	0.41
59:BA:2416:C:H2'	59:BA:2417:C:C6	2.54	0.41
59:BA:2819:G:H2'	59:BA:2821:A:N7	2.35	0.41
60:BB:29:A:C4	60:BB:30:C:H1'	2.55	0.41
1:CB:68:ILE:HG13	1:CB:161:ALA:O	2.20	0.41
1:CB:212:GLN:OE1	1:CB:234:PRO:HG2	2.20	0.41
3:CD:26:CYS:CA	3:CD:31:CYS:HA	2.49	0.41
7:CH:31:PHE:O	7:CH:35:ILE:HG12	2.20	0.41
10:CK:115:PRO:HA	21:CA:675:A:C2	2.55	0.41
11:CL:70:ILE:HG22	11:CL:100:ILE:HD12	2.01	0.41
12:CM:125:ARG:CZ	21:CA:969:A:H61	2.34	0.41
14:CO:5:LYS:H	14:CO:5:LYS:HG2	1.57	0.41
15:CP:73:LEU:HD22	15:CP:73:LEU:HA	1.84	0.41
16:CQ:43:LEU:HD12	16:CQ:69:LYS:CA	2.43	0.41
20:CY:23:ALA:O	20:CY:107:VAL:HG11	2.19	0.41
20:CY:88:VAL:HG23	20:CY:90:PHE:HE1	1.86	0.41
20:CY:197:ARG:HE	20:CY:198:GLU:H	1.67	0.41
20:CY:407:PRO:HD3	20:CY:439:ARG:HE	1.86	0.41
21:CA:232:G:H2'	21:CA:233:C:C6	2.55	0.41
21:CA:364:A:H2'	21:CA:365:U:C2	2.55	0.41
21:CA:821:G:O6	21:CA:879:C:N3	2.53	0.41
21:CA:918:A:H2'	21:CA:919:A:C8	2.55	0.41
24:CX:76:A:H1'	59:DA:2451:A:O2'	2.21	0.41
26:DD:69:ARG:C	26:DD:71:ASP:N	2.75	0.41
26:DD:91:ARG:HD3	26:DD:91:ARG:HA	1.73	0.41
26:DD:244:ARG:HA	26:DD:245:PRO:HA	1.91	0.41
27:DE:13:ARG:O	27:DE:20:ALA:HB1	2.21	0.41
31:DJ:24:UNK:HA	31:DJ:84:UNK:O	2.20	0.41
32:DK:78:ILE:HD13	32:DK:84:LEU:HB2	2.02	0.41
33:DN:37:LYS:HB3	59:DA:1138:G:N3	2.35	0.41
33:DN:72:TYR:CD1	33:DN:101:HIS:HB2	2.55	0.41
36:DQ:71:ASP:H	36:DQ:95:ALA:HB2	1.85	0.41
39:DT:53:ARG:O	39:DT:59:THR:HA	2.21	0.41
40:DU:47:TYR:HD1	40:DU:50:ARG:HH22	1.69	0.41
40:DU:62:ILE:HD12	40:DU:76:TYR:OH	2.21	0.41
45:DZ:101:PRO:HA	45:DZ:122:ARG:O	2.20	0.41
45:DZ:128:VAL:HG13	45:DZ:129:SER:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:D0:20:ARG:HB2	46:D0:24:LYS:NZ	2.36	0.41
49:D3:5:LYS:HE2	49:D3:59:VAL:HB	2.01	0.41
50:D4:27:THR:HG23	50:D4:28:LYS:N	2.35	0.41
51:D5:10:LYS:HD2	59:DA:579:G:H1'	2.02	0.41
52:D6:16:CYS:C	52:D6:17:LYS:HD2	2.46	0.41
57:Df:26:UNK:O	57:Df:31:UNK:HA	2.21	0.41
59:DA:177:G:OP2	59:DA:177:G:N2	2.48	0.41
59:DA:592:G:H2'	59:DA:593:G:C8	2.55	0.41
59:DA:790:C:H6	59:DA:790:C:H2'	1.68	0.41
59:DA:1638:C:H4'	59:DA:2710:C:O2	2.20	0.41
59:DA:1677:A:C2	59:DA:1678:G:H1'	2.55	0.41
59:DA:1677:A:H2	59:DA:1991:U:O2'	2.03	0.41
59:DA:2786:U:H2'	59:DA:2787:C:C5	2.56	0.41
60:DB:4:C:N4	60:DB:117:G:N2	2.68	0.41
1:AB:76:GLN:O	1:AB:77:ALA:C	2.64	0.41
1:AB:210:SER:OG	1:AB:211:ILE:N	2.54	0.41
2:AC:7:PRO:HG2	2:AC:184:TYR:HB2	2.03	0.41
4:AE:35:GLY:HA3	4:AE:112:LEU:HD12	2.01	0.41
4:AE:152:ARG:HH22	7:AH:108:GLY:HA2	1.86	0.41
7:AH:36:LEU:H	7:AH:36:LEU:HG	1.72	0.41
7:AH:78:GLN:HE21	7:AH:79:VAL:H	1.69	0.41
13:AN:27:CYS:SG	13:AN:28:GLY:N	2.93	0.41
14:AO:43:LEU:HD12	14:AO:44:LYS:HG3	2.03	0.41
14:AO:56:LEU:O	14:AO:60:VAL:HG23	2.21	0.41
20:AY:119:GLU:OE2	20:AY:120:THR:HG23	2.21	0.41
20:AY:201:ILE:O	20:AY:203:GLU:N	2.51	0.41
20:AY:239:GLU:HA	20:AY:242:LEU:HB3	2.02	0.41
20:AY:584:ILE:HD12	20:AY:584:ILE:HA	1.92	0.41
20:AY:608:VAL:CG1	20:AY:645:ALA:HB3	2.50	0.41
21:AA:160:A:N6	21:AA:347:G:O2'	2.53	0.41
21:AA:304:U:H2'	21:AA:305:G:C8	2.56	0.41
21:AA:413:G:H1'	21:AA:428:G:H21	1.84	0.41
21:AA:516:U:O2'	21:AA:519:C:N3	2.50	0.41
21:AA:858:G:H3'	21:AA:869:G:O6	2.20	0.41
21:AA:1126:U:O4	21:AA:1127:G:N2	2.54	0.41
21:AA:1171:G:H2'	21:AA:1172:C:H6	1.86	0.41
21:AA:1209:C:H2'	21:AA:1210:C:C6	2.55	0.41
21:AA:1266:G:N2	21:AA:1270:C:C2	2.88	0.41
21:AA:1494:G:H5''	63:AA:1601:NMY:H72	1.85	0.41
23:AV:19:G:N2	23:AV:20:U:C2	2.89	0.41
26:BD:38:LYS:HZ3	59:BA:1353:A:H4'	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:63:ARG:HD2	26:BD:63:ARG:N	2.35	0.41
27:BE:29:GLY:H	27:BE:180:ASN:HD22	1.68	0.41
28:BF:83:PHE:CZ	59:BA:1257:C:H4'	2.55	0.41
32:BK:27:LEU:HA	32:BK:30:HIS:HB3	2.03	0.41
34:BO:104:ARG:NH1	39:BT:35:LYS:HA	2.35	0.41
39:BT:98:LYS:HE2	59:BA:2719:G:H5'	2.02	0.41
41:BV:13:ARG:O	41:BV:13:ARG:HG2	2.21	0.41
44:BY:87:LYS:HB2	44:BY:87:LYS:HE3	1.82	0.41
45:BZ:54:HIS:HA	45:BZ:101:PRO:HD3	2.02	0.41
47:B1:45:ASN:ND2	59:BA:2230:G:N3	2.68	0.41
48:B2:53:LEU:O	48:B2:56:GLN:HB2	2.21	0.41
59:BA:137(B):G:N2	59:BA:137(C):G:O6	2.53	0.41
59:BA:527:C:H6	59:BA:528:A:C5	2.39	0.41
59:BA:691:C:H2'	59:BA:692:C:C5	2.55	0.41
59:BA:859:G:H4'	59:BA:860:U:O2	2.21	0.41
59:BA:1000:A:OP2	59:BA:1154:G:N1	2.33	0.41
59:BA:1085:A:H4'	59:BA:1104:C:O2'	2.20	0.41
59:BA:1819:A:O4'	59:BA:1821:A:C4	2.74	0.41
59:BA:1846:G:H22	59:BA:1848:A:H62	1.66	0.41
59:BA:2001:A:H2'	59:BA:2002:G:H8	1.78	0.41
59:BA:2031:A:O2'	59:BA:2455:G:H1'	2.21	0.41
59:BA:2047:U:H2'	59:BA:2048:G:C8	2.56	0.41
59:BA:2099:U:H2'	59:BA:2100:G:C8	2.56	0.41
59:BA:2156:G:H2'	59:BA:2157:G:O4'	2.20	0.41
59:BA:2646:C:H2'	59:BA:2647:U:O4'	2.20	0.41
59:BA:2812:G:H2'	59:BA:2813:A:C8	2.55	0.41
59:BA:2889:C:C2	59:BA:2890:G:C8	3.08	0.41
60:BB:113:C:H2'	60:BB:114:G:O4'	2.20	0.41
1:CB:84:GLU:HG3	1:CB:215:LEU:HB3	2.03	0.41
4:CE:78:HIS:CG	4:CE:79:GLU:H	2.37	0.41
4:CE:105:VAL:HB	4:CE:106:PRO:HD3	2.03	0.41
8:CI:112:LYS:HB3	21:CA:1368:G:H5''	2.02	0.41
16:CQ:28:PRO:HB2	16:CQ:29:HIS:H	1.64	0.41
16:CQ:68:ARG:O	16:CQ:70:ARG:N	2.50	0.41
20:CY:27:THR:O	20:CY:30:GLU:HG2	2.21	0.41
20:CY:92:ILE:HG23	20:CY:93:GLU:H	1.85	0.41
20:CY:93:GLU:HA	20:CY:96:ARG:HH21	1.86	0.41
20:CY:119:GLU:HB3	20:CY:156:ARG:HD2	2.02	0.41
21:CA:186(D):C:H2'	21:CA:186(E):C:C6	2.56	0.41
21:CA:413:G:H1'	21:CA:428:G:H21	1.85	0.41
21:CA:689:C:H42	21:CA:698:G:H1	1.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:716:A:H2'	21:CA:717:C:O4'	2.20	0.41
21:CA:812:C:H4'	21:CA:813:U:C6	2.56	0.41
21:CA:998:G:C2	21:CA:1043:C:N3	2.83	0.41
21:CA:1059:C:H2'	21:CA:1060:C:C5	2.55	0.41
21:CA:1247:U:H2'	21:CA:1248:A:O4'	2.21	0.41
21:CA:1300:G:HO2'	21:CA:1301:U:C4'	2.34	0.41
21:CA:1433:A:C6	21:CA:1434:A:C6	3.08	0.41
21:CA:1493:A:H2'	59:DA:1913:A:H61	1.84	0.41
22:CW:9:A:H62	22:CW:23:A:N6	2.18	0.41
26:DD:19:ALA:HB2	26:DD:204:ILE:HD11	2.03	0.41
26:DD:206:LEU:HD12	59:DA:1791:A:H5''	2.02	0.41
28:DF:90:PHE:HZ	59:DA:671:C:O2'	2.04	0.41
28:DF:99:TYR:HE2	28:DF:101:LEU:HD13	1.86	0.41
29:DG:10:LYS:HD2	29:DG:10:LYS:HA	1.82	0.41
29:DG:70:VAL:CG1	29:DG:88:ILE:HG12	2.49	0.41
29:DG:77:ILE:HG23	59:DA:2310:A:C2	2.55	0.41
30:DH:70:THR:HG21	59:DA:2747:G:H5''	2.01	0.41
33:DN:35:ARG:NH2	33:DN:38:HIS:O	2.54	0.41
33:DN:89:LYS:H	33:DN:89:LYS:HG3	1.72	0.41
37:DR:13:HIS:CD2	37:DR:13:HIS:N	2.89	0.41
39:DT:55:ASN:HD22	39:DT:55:ASN:HA	1.67	0.41
43:DX:36:LYS:HB2	59:DA:1598:C:H5'	2.02	0.41
45:DZ:128:VAL:HG23	45:DZ:161:VAL:HA	2.03	0.41
51:D5:33:CYS:SG	51:D5:49:CYS:HB3	2.60	0.41
59:DA:25:U:H5''	59:DA:26:G:OP2	2.21	0.41
59:DA:221:A:H4'	59:DA:222:A:O5'	2.20	0.41
59:DA:323:G:H1'	59:DA:1205:U:O2	2.21	0.41
59:DA:624:C:H2'	59:DA:625:G:H8	1.86	0.41
59:DA:970:C:H2'	59:DA:971:C:H6	1.84	0.41
59:DA:1062:G:OP2	59:DA:1070:A:H4'	2.20	0.41
59:DA:1180:C:H2'	59:DA:1181:C:C6	2.56	0.41
59:DA:1189:A:H3'	59:DA:1190:G:H8	1.86	0.41
59:DA:1385:G:C2	59:DA:1402:C:O2	2.71	0.41
59:DA:1712(H):A:H1'	59:DA:1712(I):U:O2	2.21	0.41
59:DA:1793:C:H2'	59:DA:1794:U:O4'	2.21	0.41
59:DA:2253:G:O5'	59:DA:2254:C:H5''	2.20	0.41
59:DA:2684:U:C2	59:DA:2727:G:H1'	2.55	0.41
1:AB:144:ARG:HG2	1:AB:145:LEU:HD22	2.02	0.41
2:AC:94:LEU:HD23	2:AC:94:LEU:HA	1.93	0.41
4:AE:50:GLU:HG3	4:AE:52:PRO:HD2	2.03	0.41
6:AG:137:LYS:O	6:AG:141:VAL:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:104:ARG:HB3	7:AH:107:LEU:HG	2.02	0.41
8:AI:12:GLU:HG3	21:AA:1370:G:O3'	2.21	0.41
8:AI:105:ASP:HB3	8:AI:106:ALA:H	1.59	0.41
8:AI:124:GLN:O	21:AA:1232:U:H5''	2.21	0.41
9:AJ:57:LYS:HZ1	21:AA:1366:C:H4'	1.86	0.41
10:AK:85:ARG:NH2	10:AK:111:ASP:OD1	2.54	0.41
13:AN:39:LEU:HD23	13:AN:39:LEU:HA	1.95	0.41
18:AS:51:VAL:HG12	18:AS:52:TYR:H	1.85	0.41
19:AT:10:LEU:HD23	19:AT:11:SER:N	2.35	0.41
20:AY:30:GLU:CA	20:AY:33:LEU:HB3	2.42	0.41
20:AY:603:GLU:HG2	20:AY:679:VAL:HG22	2.02	0.41
21:AA:38:G:N2	21:AA:397:A:O5'	2.50	0.41
21:AA:295:C:H2'	21:AA:296:U:O4'	2.21	0.41
21:AA:889:A:H8	21:AA:889:A:OP1	2.04	0.41
21:AA:1068:G:OP2	21:AA:1094:G:C8	2.74	0.41
24:AX:38:A:C6	24:AX:39:G:C4	3.09	0.41
25:BC:28:ARG:O	25:BC:31:LYS:HB2	2.21	0.41
25:BC:75:VAL:O	25:BC:77:ALA:N	2.45	0.41
25:BC:76:LEU:CD2	25:BC:111:PHE:HB3	2.48	0.41
25:BC:158:LYS:HE2	25:BC:158:LYS:HB2	1.88	0.41
27:BE:49:LEU:O	27:BE:78:LEU:HA	2.21	0.41
28:BF:45:ARG:NH2	59:BA:443:A:O5'	2.54	0.41
28:BF:114:VAL:HA	28:BF:186:ILE:CD1	2.50	0.41
30:BH:19:VAL:HG11	30:BH:43:VAL:O	2.21	0.41
33:BN:28:THR:HA	33:BN:37:LYS:NZ	2.34	0.41
33:BN:31:ALA:HB1	33:BN:38:HIS:CB	2.46	0.41
34:BO:35:VAL:HB	34:BO:105:GLU:HG2	2.02	0.41
34:BO:63:VAL:O	34:BO:83:ALA:O	2.39	0.41
36:BQ:14:ARG:NH1	59:BA:955:C:OP2	2.47	0.41
36:BQ:45:GLN:HB2	36:BQ:46:GLN:HE22	1.85	0.41
37:BR:86:ARG:HB3	37:BR:118:GLU:HG2	2.02	0.41
37:BR:104:ARG:HG3	59:BA:1287:A:OP1	2.20	0.41
43:BX:12:VAL:HG23	43:BX:13:LEU:H	1.85	0.41
47:B1:13:ILE:HG23	47:B1:42:GLN:O	2.20	0.41
48:B2:57:ILE:HA	48:B2:60:LEU:HD12	2.02	0.41
49:B3:31:LEU:HD23	49:B3:32:GLN:H	1.86	0.41
51:B5:31:VAL:O	51:B5:40:LYS:HG3	2.21	0.41
52:B6:25:LYS:HE2	52:B6:26:ASN:O	2.20	0.41
56:Be:70:LYS:H	56:Be:70:LYS:HG3	1.56	0.41
59:BA:271(L):C:H5''	59:BA:271(M):G:OP2	2.21	0.41
59:BA:439:G:H2'	59:BA:440:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:751:A:H8	59:BA:751:A:O5'	2.04	0.41
59:BA:903:C:H2'	59:BA:904:C:C6	2.55	0.41
59:BA:1358:G:N2	59:BA:1373:A:H62	2.14	0.41
59:BA:1498:C:O4'	59:BA:1577:C:H4'	2.20	0.41
59:BA:1822:G:C6	59:BA:1823:G:N7	2.89	0.41
59:BA:1926:U:H2'	59:BA:1928:A:OP2	2.20	0.41
59:BA:2002:G:H2'	59:BA:2003:G:H8	1.85	0.41
59:BA:2543:G:O2'	59:BA:2645:G:H2'	2.21	0.41
60:BB:22:U:O2	60:BB:61:G:C6	2.63	0.41
60:BB:24:G:H1	60:BB:59:A:N6	2.19	0.41
2:CC:59:ARG:HA	2:CC:63:ASN:O	2.21	0.41
6:CG:135:VAL:O	6:CG:139:GLU:HB2	2.21	0.41
7:CH:37:ARG:NH1	7:CH:38:ILE:HG13	2.35	0.41
11:CL:7:ILE:O	11:CL:11:VAL:HG23	2.21	0.41
11:CL:53:ARG:HG3	11:CL:69:TYR:CE1	2.56	0.41
11:CL:65:GLU:H	11:CL:65:GLU:HG3	1.61	0.41
11:CL:92:ASP:HB2	11:CL:93:LEU:H	1.70	0.41
12:CM:53:VAL:HG12	12:CM:57:ARG:HH21	1.86	0.41
12:CM:87:TYR:HE2	12:CM:91:ARG:HD2	1.85	0.41
20:CY:19:ALA:O	20:CY:121:VAL:HG21	2.21	0.41
20:CY:92:ILE:H	20:CY:454:MET:HE1	1.86	0.41
20:CY:443:HIS:ND1	20:CY:445:GLU:HB2	2.36	0.41
21:CA:9:G:N2	21:CA:25:C:N3	2.53	0.41
21:CA:68(I):G:H1	21:CA:68(Q):U:H3	1.67	0.41
21:CA:163:C:H2'	21:CA:164:U:C6	2.56	0.41
21:CA:1003:G:C2	21:CA:1037:C:N3	2.88	0.41
21:CA:1091:U:H3	21:CA:1094:G:P	2.44	0.41
21:CA:1438:G:O6	21:CA:1463:C:N3	2.53	0.41
23:CV:17:U:H3	22:CW:35:A:N6	2.15	0.41
24:CX:1:G:C2	24:CX:72:C:N4	2.87	0.41
24:CX:26:A:H2'	24:CX:27:C:H6	1.86	0.41
26:DD:102:LYS:HB3	26:DD:102:LYS:HE2	1.74	0.41
27:DE:22:PRO:HG3	59:DA:2728:U:O2'	2.21	0.41
27:DE:161:GLY:N	27:DE:163:GLU:OE1	2.41	0.41
28:DF:50:SER:HG	28:DF:94:PRO:HD3	1.84	0.41
29:DG:15:VAL:HG22	29:DG:175:LEU:HB3	2.03	0.41
32:DK:88:ALA:HB3	32:DK:134:MET:O	2.20	0.41
33:DN:36:GLY:H	33:DN:37:LYS:HG2	1.86	0.41
34:DO:34:THR:O	34:DO:36:GLY:N	2.54	0.41
34:DO:73:ASP:O	34:DO:75:SER:N	2.53	0.41
36:DQ:7:MET:H	36:DQ:7:MET:HG3	1.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DS:58:LEU:HD12	38:DS:58:LEU:HA	1.81	0.41
39:DT:57:PHE:C	39:DT:59:THR:H	2.28	0.41
41:DV:85:LYS:HA	59:DA:1225:G:H4'	2.02	0.41
46:D0:74:ARG:HH21	60:DB:13:A:H1'	1.85	0.41
47:D1:88:LYS:HG3	47:D1:89:GLU:HG3	2.03	0.41
48:D2:4:SER:HA	48:D2:7:ARG:HD3	2.03	0.41
52:D6:23:THR:OG1	54:D8:34:TRP:O	2.35	0.41
53:D7:5:TRP:HB3	59:DA:1612:C:O3'	2.21	0.41
54:D8:8:LYS:HB3	54:D8:12:LYS:HE3	2.02	0.41
54:D8:29:LYS:HB2	54:D8:44:LYS:NZ	2.35	0.41
59:DA:211:A:H2'	59:DA:212:G:H8	1.86	0.41
59:DA:270(E):G:H2'	59:DA:270(F):U:H6	1.85	0.41
59:DA:479:A:H4'	59:DA:480:A:OP1	2.20	0.41
59:DA:551:G:H2'	59:DA:552:G:C8	2.56	0.41
59:DA:681:G:C6	59:DA:682:G:C5	3.09	0.41
59:DA:858:U:O2	59:DA:919:G:N2	2.29	0.41
59:DA:906:G:H2'	59:DA:907:U:O4'	2.21	0.41
59:DA:957:A:H62	59:DA:2494:G:H22	1.69	0.41
59:DA:1686:C:H2'	59:DA:1687:G:O4'	2.21	0.41
59:DA:2122:U:O2	59:DA:2176:A:N1	2.53	0.41
59:DA:2451:A:C8	59:DA:2452:C:C6	3.09	0.41
59:DA:2547:U:O2	59:DA:2561:A:N1	2.53	0.41
59:DA:2576:G:O2'	59:DA:2579:C:OP2	2.22	0.41
59:DA:2610:C:H6	59:DA:2610:C:H2'	1.73	0.41
59:DA:2740:A:H2'	59:DA:2741:A:C8	2.55	0.41
1:AB:230:VAL:HB	1:AB:231:GLU:H	1.65	0.41
2:AC:5:ILE:N	21:AA:1190:G:OP1	2.41	0.41
3:AD:193:ASP:C	3:AD:194:LEU:HD22	2.46	0.41
7:AH:8:ASP:O	7:AH:11:THR:HB	2.21	0.41
7:AH:78:GLN:HE21	7:AH:79:VAL:N	2.19	0.41
10:AK:119:CYS:O	10:AK:121:PRO:HD3	2.21	0.41
14:AO:43:LEU:O	14:AO:47:LYS:HB3	2.21	0.41
15:AP:32:TYR:OH	21:AA:608:A:H4'	2.21	0.41
15:AP:67:THR:HB	15:AP:68:ASP:H	1.71	0.41
16:AQ:60:ILE:HG21	16:AQ:74:LEU:HD23	2.03	0.41
17:AR:60:ALA:O	17:AR:64:ARG:HG3	2.21	0.41
17:AR:61:LYS:HE2	21:AA:836:G:OP1	2.20	0.41
20:AY:153:MET:H	20:AY:153:MET:HG2	1.68	0.41
21:AA:144:G:H2'	21:AA:145:G:C8	2.51	0.41
21:AA:297:G:C5'	21:AA:557:G:H1'	2.51	0.41
21:AA:440:A:H2'	21:AA:441:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:769:G:H2'	21:AA:770:C:C6	2.55	0.41
21:AA:827:U:HO2'	21:AA:859:A:H2	1.66	0.41
21:AA:919:A:H2'	21:AA:920:U:C6	2.56	0.41
21:AA:1072:G:O5'	21:AA:1072:G:H8	2.04	0.41
21:AA:1116:C:H2'	21:AA:1117:G:H5'	2.01	0.41
21:AA:1300:G:O2'	21:AA:1303:C:N4	2.54	0.41
24:AX:76:A:O2'	59:BA:2452:C:H5''	2.21	0.41
25:BC:164:PHE:CE1	25:BC:200:HIS:HB2	2.56	0.41
26:BD:65:ILE:HD13	26:BD:65:ILE:H	1.86	0.41
26:BD:69:ARG:C	26:BD:71:ASP:N	2.79	0.41
27:BE:5:LEU:HD11	27:BE:49:LEU:O	2.20	0.41
27:BE:12:THR:O	27:BE:23:VAL:HG22	2.21	0.41
28:BF:75:HIS:CE1	28:BF:82:ILE:HD12	2.56	0.41
28:BF:82:ILE:H	28:BF:82:ILE:HG12	1.62	0.41
28:BF:138:GLU:H	28:BF:138:GLU:HG2	1.71	0.41
30:BH:111:HIS:CE1	59:BA:2668:G:H1'	2.55	0.41
32:BK:21:PRO:HG3	32:BK:25:PRO:HD3	2.02	0.41
33:BN:21:LYS:HG2	33:BN:22:THR:HG23	2.03	0.41
33:BN:97:ARG:O	33:BN:98:VAL:O	2.39	0.41
34:BO:24:VAL:C	34:BO:38:VAL:O	2.63	0.41
35:BP:63:PRO:HA	54:B8:13:ARG:HB3	2.03	0.41
35:BP:70:GLN:O	35:BP:71:VAL:HG23	2.19	0.41
36:BQ:55:VAL:HA	36:BQ:58:PHE:CD2	2.55	0.41
36:BQ:72:LYS:N	36:BQ:93:TYR:HD2	2.19	0.41
38:BS:48:LEU:HD23	38:BS:48:LEU:HA	1.96	0.41
41:BV:39:LEU:HA	41:BV:52:VAL:HB	2.02	0.41
41:BV:59:ALA:CA	41:BV:96:ILE:HA	2.44	0.41
42:BW:64:MET:HE1	42:BW:108:GLY:HA2	2.03	0.41
42:BW:78:GLU:HA	42:BW:100:THR:O	2.21	0.41
44:BY:61:ILE:HD12	44:BY:61:ILE:HA	1.95	0.41
46:B0:75:LEU:HD23	46:B0:75:LEU:HA	1.77	0.41
48:B2:59:ARG:HA	59:BA:76:C:O2'	2.21	0.41
59:BA:24:G:C2	59:BA:517:C:C2	3.09	0.41
59:BA:27:G:C5	59:BA:512:G:C2	3.09	0.41
59:BA:323:G:C2	59:BA:333:G:H1'	2.55	0.41
59:BA:729:G:O2'	59:BA:763:G:H4'	2.20	0.41
59:BA:1019:U:O2	59:BA:1019:U:H2'	2.20	0.41
59:BA:1068:G:O6	59:BA:1069:A:N6	2.53	0.41
59:BA:1506(I):U:H2'	59:BA:1506(J):G:H8	1.80	0.41
59:BA:1712(E):G:N2	59:BA:1712(N):U:H1'	2.36	0.41
59:BA:1801:G:H2'	59:BA:1801:G:N3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2105:C:H2'	59:BA:2106:G:C8	2.56	0.41
59:BA:2322:A:C8	59:BA:2323:G:C8	3.08	0.41
59:BA:2543:G:H4'	59:BA:2645:G:C2	2.55	0.41
59:BA:2756:U:O2	59:BA:2758:A:N7	2.54	0.41
60:BB:87:G:N2	60:BB:89(B):A:C8	2.89	0.41
1:CB:215:LEU:O	1:CB:219:VAL:HG23	2.20	0.41
2:CC:104:GLN:HG2	2:CC:105:GLU:H	1.85	0.41
2:CC:161:GLU:CB	23:CV:25:A:H61	2.34	0.41
6:CG:65:ALA:O	6:CG:69:VAL:HG23	2.21	0.41
7:CH:10:LEU:HB3	7:CH:83:ILE:CD1	2.43	0.41
12:CM:114:ARG:NH1	21:CA:1229:A:OP2	2.54	0.41
17:CR:60:ALA:HB3	21:CA:835:U:OP1	2.21	0.41
20:CY:311:ALA:HB3	20:CY:389:LEU:O	2.21	0.41
20:CY:415:PRO:HB2	20:CY:416:LYS:H	1.62	0.41
20:CY:620:VAL:O	20:CY:624:LEU:HD13	2.21	0.41
21:CA:29:G:H4'	21:CA:295:C:H4'	2.02	0.41
21:CA:186(F):C:C2	21:CA:186(K):G:N2	2.82	0.41
21:CA:398:C:H2'	21:CA:399:G:C8	2.56	0.41
21:CA:541:G:H2'	21:CA:542:G:H8	1.86	0.41
21:CA:551:U:H2'	21:CA:552:U:H6	1.83	0.41
21:CA:860:A:N6	21:CA:869:G:O2'	2.53	0.41
21:CA:1035:A:H2'	21:CA:1036:G:O4'	2.21	0.41
21:CA:1068:G:N7	21:CA:1094:G:O2'	2.34	0.41
21:CA:1072:G:C2	21:CA:1104:G:C5	3.08	0.41
21:CA:1440(E):G:C6	21:CA:1440(F):C:C5	3.09	0.41
22:CW:19:G:H1'	22:CW:57:G:N2	2.30	0.41
24:CX:74:C:N4	59:DA:2554:U:C2	2.89	0.41
25:DC:154:ILE:HA	25:DC:157:ILE:HD12	2.03	0.41
26:DD:245:PRO:HA	26:DD:246:PRO:HD3	1.94	0.41
27:DE:79:ARG:HD2	59:DA:2635:C:O3'	2.20	0.41
28:DF:9:ILE:HG12	28:DF:123:LEU:HG	2.03	0.41
28:DF:38:ARG:HH21	35:DP:16:ARG:HH22	1.69	0.41
28:DF:45:ARG:HB3	28:DF:97:TYR:CD2	2.54	0.41
29:DG:46:ALA:HB2	29:DG:88:ILE:HB	2.02	0.41
29:DG:71:THR:HG21	59:DA:2313:C:C5'	2.51	0.41
32:DK:72:PRO:HG2	32:DK:111:LYS:NZ	2.36	0.41
33:DN:85:ILE:HG21	33:DN:109:LYS:HB2	2.03	0.41
35:DP:95:VAL:HB	35:DP:125:VAL:HA	2.01	0.41
36:DQ:71:ASP:N	36:DQ:94:VAL:O	2.54	0.41
37:DR:96:ARG:HB2	37:DR:117:VAL:HG21	2.03	0.41
39:DT:67:SER:O	39:DT:68:TYR:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DU:24:TYR:HB2	40:DU:29:SER:HB3	2.02	0.41
49:D3:43:ILE:O	49:D3:47:VAL:HG23	2.20	0.41
59:DA:255:A:N3	59:DA:255:A:H2'	2.36	0.41
59:DA:409:C:H6	59:DA:409:C:O5'	2.03	0.41
59:DA:450:G:N1	59:DA:454:A:OP2	2.50	0.41
59:DA:565:C:H4'	59:DA:1253:A:C6	2.55	0.41
59:DA:583:G:C6	59:DA:1257:C:N4	2.81	0.41
59:DA:638:G:H2'	59:DA:639:U:C6	2.55	0.41
59:DA:910:A:H5'	59:DA:911:A:OP2	2.20	0.41
59:DA:1565:C:O2'	59:DA:1566:A:OP2	2.36	0.41
59:DA:1709:U:O4	59:DA:1749:A:N1	2.54	0.41
59:DA:1858:G:O2'	59:DA:1884:A:N6	2.54	0.41
59:DA:2262:U:OP1	59:DA:2387:U:O2'	2.32	0.41
59:DA:2395:C:N4	59:DA:2421:G:H1	2.19	0.41
59:DA:2704:C:H3'	59:DA:2705:A:C8	2.56	0.41
59:DA:2754:U:O2'	59:DA:2756:U:OP2	2.30	0.41
59:DA:2863:C:H2'	59:DA:2864:G:H8	1.85	0.41
1:AB:85:ALA:C	1:AB:87:ARG:N	2.77	0.41
1:AB:87:ARG:CG	1:AB:219:VAL:HG11	2.51	0.41
2:AC:150:LYS:O	2:AC:201:TYR:HB2	2.21	0.41
3:AD:50:ARG:HA	3:AD:51:PRO:HD3	1.89	0.41
3:AD:57:ARG:NH1	3:AD:202:LEU:HD22	2.36	0.41
3:AD:91:SER:HA	3:AD:94:LEU:HG	2.02	0.41
3:AD:101:LEU:HD21	3:AD:128:VAL:HG21	2.03	0.41
4:AE:99:GLY:C	4:AE:117:ASP:HA	2.46	0.41
5:AF:12:PRO:O	5:AF:14:LEU:N	2.54	0.41
7:AH:14:ARG:O	7:AH:18:ARG:HB2	2.21	0.41
7:AH:78:GLN:HG3	7:AH:80:ILE:N	2.35	0.41
8:AI:23:ASN:HB3	8:AI:25:LYS:HG2	2.02	0.41
9:AJ:17:ASP:OD2	21:AA:1152:A:O2'	2.20	0.41
9:AJ:32:ALA:HB3	9:AJ:75:ILE:HD11	2.03	0.41
9:AJ:48:THR:O	13:AN:34:TYR:OH	2.27	0.41
10:AK:58:PRO:O	10:AK:61:ALA:HB3	2.21	0.41
10:AK:119:CYS:HB3	21:AA:778:G:H1'	2.02	0.41
16:AQ:37:LYS:HD3	21:AA:585:G:OP1	2.21	0.41
16:AQ:38:ARG:HG2	21:AA:280:C:C2	2.55	0.41
17:AR:33:ASP:HB3	17:AR:36:ASN:OD1	2.21	0.41
18:AS:12:ASP:O	18:AS:16:LEU:HD23	2.21	0.41
19:AT:84:LEU:HG	19:AT:85:MET:N	2.35	0.41
20:AY:25:LYS:HE3	20:AY:84:THR:HA	2.03	0.41
20:AY:84:THR:N	20:AY:85:PRO:HD3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AY:95:GLU:O	20:AY:98:MET:HB2	2.21	0.41
20:AY:339:SER:OG	20:AY:340:TYR:N	2.53	0.41
20:AY:539:ILE:HB	20:AY:540:PRO:HD3	2.03	0.41
21:AA:339:C:H2'	21:AA:340:U:H6	1.85	0.41
21:AA:433:C:H2'	21:AA:434:U:C6	2.56	0.41
21:AA:667:G:OP1	21:AA:732:C:O2'	2.21	0.41
21:AA:670:G:H1	21:AA:736:C:H42	1.69	0.41
21:AA:984:C:H2'	21:AA:985:C:O4'	2.21	0.41
21:AA:1005:A:H5''	21:AA:1037:C:O2'	2.20	0.41
21:AA:1127:G:N2	21:AA:1147:C:N4	2.66	0.41
21:AA:1132:C:C2	21:AA:1133:G:C8	3.09	0.41
21:AA:1143:G:H2'	21:AA:1144:G:C8	2.56	0.41
21:AA:1234:C:H2'	21:AA:1235:U:C6	2.56	0.41
21:AA:1432:G:O2'	21:AA:1433:A:H8	2.03	0.41
24:AX:30:C:N4	24:AX:40:G:H1	2.18	0.41
25:BC:17:PRO:O	25:BC:18:ASN:ND2	2.54	0.41
25:BC:75:VAL:C	25:BC:77:ALA:H	2.29	0.41
26:BD:13:ARG:NE	59:BA:728:G:H4'	2.35	0.41
26:BD:87:ASN:HD22	26:BD:88:ARG:HH12	1.68	0.41
27:BE:21:VAL:O	27:BE:23:VAL:HG13	2.21	0.41
27:BE:48:GLN:HA	27:BE:79:ARG:O	2.21	0.41
27:BE:140:SER:HB2	59:BA:2578:G:N7	2.36	0.41
28:BF:5:ALA:HB2	28:BF:118:ALA:HB1	2.03	0.41
28:BF:83:PHE:HB3	28:BF:84:VAL:H	1.50	0.41
28:BF:162:LEU:H	28:BF:162:LEU:CD1	2.30	0.41
28:BF:169:ASN:HD21	59:BA:323:G:N2	2.19	0.41
29:BG:126:ASP:OD1	59:BA:2315:G:H1'	2.20	0.41
30:BH:54:ARG:NH1	30:BH:62:LYS:HG2	2.36	0.41
30:BH:149:ARG:HD2	30:BH:164:TYR:CZ	2.55	0.41
32:BK:126:MET:HE1	32:BK:127:ILE:HD13	2.02	0.41
33:BN:31:ALA:HA	33:BN:34:LEU:N	2.36	0.41
33:BN:35:ARG:HG2	33:BN:39:ARG:H	1.86	0.41
33:BN:55:VAL:C	33:BN:57:ALA:N	2.79	0.41
33:BN:56:ASN:ND2	33:BN:56:ASN:N	2.68	0.41
33:BN:72:TYR:CG	33:BN:101:HIS:CG	3.09	0.41
33:BN:84:LYS:HG2	33:BN:85:ILE:HA	2.02	0.41
34:BO:71:ARG:HB2	34:BO:75:SER:C	2.46	0.41
35:BP:27:HIS:CE1	59:BA:813:U:C4	3.09	0.41
35:BP:45:LEU:CG	35:BP:46:LYS:H	2.28	0.41
35:BP:75:ILE:H	35:BP:75:ILE:HG12	1.60	0.41
35:BP:113:LYS:CG	35:BP:115:LEU:HD23	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BQ:14:ARG:HH22	59:BA:956:G:H3'	1.85	0.41
37:BR:8:ARG:HD3	37:BR:8:ARG:HA	1.90	0.41
38:BS:40:ILE:HG13	38:BS:47:THR:HA	2.02	0.41
40:BU:47:TYR:HD1	40:BU:50:ARG:HH21	1.69	0.41
40:BU:61:TRP:CD2	40:BU:94:ASN:HB2	2.55	0.41
42:BW:9:TYR:CZ	42:BW:80:PRO:HG3	2.55	0.41
42:BW:18:ARG:HH12	42:BW:77:ASP:HA	1.86	0.41
44:BY:97:ARG:HA	44:BY:97:ARG:HD2	1.76	0.41
45:BZ:71:VAL:O	45:BZ:72:ARG:HB2	2.21	0.41
45:BZ:101:PRO:O	45:BZ:102:LEU:HD12	2.21	0.41
47:B1:91:LYS:HA	47:B1:94:LEU:HD13	2.01	0.41
52:B6:25:LYS:HE3	52:B6:25:LYS:HB2	1.75	0.41
54:B8:29:LYS:HB2	54:B8:44:LYS:NZ	2.36	0.41
54:B8:48:PHE:O	54:B8:49:VAL:HB	2.21	0.41
59:BA:18:C:H2'	59:BA:19:C:O4'	2.20	0.41
59:BA:53:A:H8	59:BA:53:A:P	2.44	0.41
59:BA:84:A:H62	59:BA:102:G:H21	1.69	0.41
59:BA:129:C:H2'	59:BA:130:C:H6	1.82	0.41
59:BA:227:A:C2	59:BA:2407:G:H1'	2.56	0.41
59:BA:294:A:H3'	59:BA:294:A:C8	2.55	0.41
59:BA:521:G:C2	59:BA:522:G:C5	3.09	0.41
59:BA:949:C:N4	59:BA:968:G:H1	2.14	0.41
59:BA:1326:U:C2	59:BA:1327:C:C6	3.09	0.41
59:BA:1917:U:H2'	59:BA:1918:A:O4'	2.21	0.41
59:BA:1955:U:H3'	59:BA:1956:U:H6	1.86	0.41
59:BA:1965:C:P	63:BA:2903:NMY:H62	2.60	0.41
59:BA:1998:G:H2'	59:BA:1999:C:C6	2.56	0.41
59:BA:2023:G:H4'	59:BA:2617:C:O2'	2.20	0.41
59:BA:2069:G:H1	59:BA:2442:C:N4	2.16	0.41
59:BA:2151:G:H8	59:BA:2151:G:P	2.44	0.41
59:BA:2166:G:H22	59:BA:2172:U:H5	1.69	0.41
59:BA:2195:C:H2'	59:BA:2196:C:C6	2.55	0.41
59:BA:2245:U:O2	59:BA:2436:G:H8	2.04	0.41
59:BA:2251:G:C2'	59:BA:2252:G:O5'	2.68	0.41
59:BA:2475:C:N3	59:BA:2529:G:N1	2.69	0.41
59:BA:2514:U:H2'	59:BA:2515:C:O4'	2.21	0.41
59:BA:2683:C:H41	59:BA:2727:G:N2	2.19	0.41
59:BA:2684:U:C2	59:BA:2727:G:H1'	2.56	0.41
59:BA:2712:U:O2'	59:BA:2712(A):A:P	2.79	0.41
59:BA:2814:C:N4	59:BA:2886:G:H1	2.19	0.41
60:BB:13:A:H2	60:BB:69:G:H21	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BB:24:G:N1	60:BB:56:G:C2	2.89	0.41
60:BB:30:C:C2	60:BB:54:G:N2	2.82	0.41
1:CB:208:ILE:HD13	1:CB:239:VAL:O	2.21	0.41
3:CD:50:ARG:HA	3:CD:51:PRO:HD3	1.85	0.41
5:CF:23:LYS:HE3	5:CF:23:LYS:HB3	1.84	0.41
5:CF:61:LEU:HD13	5:CF:63:TYR:OH	2.20	0.41
6:CG:47:CYS:O	6:CG:51:GLN:HG2	2.20	0.41
6:CG:138:LYS:O	6:CG:142:GLU:HG2	2.21	0.41
7:CH:64:LYS:HD2	7:CH:79:VAL:HG21	2.02	0.41
8:CI:2:GLU:HG3	8:CI:3:GLN:OE1	2.21	0.41
8:CI:5:TYR:OH	8:CI:16:ARG:HG2	2.21	0.41
8:CI:77:ILE:O	8:CI:81:ILE:HG13	2.21	0.41
9:CJ:27:ALA:HB2	9:CJ:85:LEU:HD11	2.02	0.41
9:CJ:45:ARG:CB	9:CJ:65:LEU:HB2	2.49	0.41
10:CK:32:ILE:HB	10:CK:40:ILE:O	2.21	0.41
10:CK:72:ALA:HB1	10:CK:77:MET:HG2	2.03	0.41
11:CL:58:VAL:HG12	11:CL:60:LEU:N	2.22	0.41
11:CL:58:VAL:CG1	11:CL:60:LEU:HD13	2.51	0.41
11:CL:100:ILE:HG22	11:CL:102:ARG:N	2.35	0.41
12:CM:89:GLY:O	12:CM:92:HIS:HB2	2.20	0.41
13:CN:4:LYS:HD3	21:CA:1047:G:H5'	2.03	0.41
13:CN:45:ARG:O	13:CN:49:HIS:HB2	2.19	0.41
14:CO:23:GLY:O	21:CA:750:G:N2	2.44	0.41
15:CP:9:PHE:O	21:CA:624:C:H4'	2.20	0.41
15:CP:41:PRO:O	15:CP:43:LYS:NZ	2.41	0.41
18:CS:37:ARG:HH21	21:CA:1318:A:H1'	1.86	0.41
20:CY:22:ASP:HA	61:CY:701:GDP:O2B	2.21	0.41
20:CY:92:ILE:HB	20:CY:454:MET:SD	2.60	0.41
20:CY:239:GLU:O	20:CY:239:GLU:HG2	2.19	0.41
20:CY:265:LYS:HB3	20:CY:267:LYS:HE2	2.03	0.41
20:CY:335:LEU:HD12	20:CY:336:THR:H	1.85	0.41
20:CY:344:THR:OG1	20:CY:390:VAL:HG22	2.20	0.41
20:CY:500:GLN:O	20:CY:501:THR:HB	2.21	0.41
21:CA:5:U:O2'	21:CA:6:G:O5'	2.38	0.41
21:CA:109:A:C8	21:CA:327:A:O4'	2.74	0.41
21:CA:112:G:O2'	21:CA:354:G:O2'	2.21	0.41
21:CA:432:A:H2'	21:CA:433:C:O4'	2.21	0.41
21:CA:654:G:H21	21:CA:755:G:H4'	1.86	0.41
21:CA:729:A:H2'	21:CA:730:G:H8	1.86	0.41
21:CA:775:G:H2'	21:CA:776:G:O4'	2.21	0.41
21:CA:782:A:H5'	21:CA:1514:C:O2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:799:G:H2'	21:CA:800:G:C8	2.56	0.41
21:CA:936:C:H2'	21:CA:937:A:C8	2.53	0.41
21:CA:968:A:C5	21:CA:1062:U:H4'	2.55	0.41
21:CA:1119:C:C2	21:CA:1120:G:C8	3.08	0.41
21:CA:1305:G:H2'	21:CA:1331:G:H22	1.86	0.41
21:CA:1357:A:O5'	21:CA:1359:C:N4	2.54	0.41
22:CW:21:A:N1	22:CW:46:G:H2'	2.36	0.41
25:DC:172:ILE:HG23	25:DC:172:ILE:HD12	1.73	0.41
26:DD:105:ILE:HG23	26:DD:106:ILE:N	2.36	0.41
26:DD:185:VAL:HG12	26:DD:189:CYS:SG	2.61	0.41
26:DD:242:ARG:NH1	59:DA:1826:G:H4'	2.36	0.41
26:DD:260:ARG:HD2	59:DA:1799:G:OP2	2.21	0.41
27:DE:136:ARG:HB3	59:DA:1656:C:H5''	2.02	0.41
27:DE:145:LYS:HE3	59:DA:574:C:N4	2.35	0.41
29:DG:53:LEU:HD23	29:DG:88:ILE:HD12	2.02	0.41
29:DG:84:LYS:H	29:DG:84:LYS:CD	2.34	0.41
32:DK:86:LYS:HE3	32:DK:86:LYS:HB2	1.92	0.41
32:DK:119:ASP:OD2	32:DK:122:ALA:N	2.54	0.41
33:DN:35:ARG:HB3	33:DN:37:LYS:H	1.86	0.41
33:DN:56:ASN:O	33:DN:57:ALA:HB3	2.21	0.41
33:DN:123:TYR:N	33:DN:123:TYR:CD2	2.89	0.41
34:DO:39:ILE:HG13	34:DO:39:ILE:O	2.20	0.41
36:DQ:72:LYS:HB3	36:DQ:94:VAL:CG2	2.45	0.41
37:DR:2:ARG:HG2	37:DR:5:LYS:HE2	2.03	0.41
37:DR:91:GLN:N	37:DR:91:GLN:OE1	2.53	0.41
38:DS:54:LEU:C	38:DS:56:LEU:H	2.28	0.41
38:DS:102:ALA:HB2	38:DS:109:GLY:C	2.46	0.41
40:DU:92:ARG:HB2	41:DV:11:GLN:HB2	2.02	0.41
41:DV:19:LYS:HE2	41:DV:19:LYS:HB2	1.70	0.41
42:DW:64:MET:HB2	42:DW:69:LEU:HD21	2.03	0.41
46:D0:27:GLU:HB3	46:D0:69:PHE:HD1	1.85	0.41
47:D1:17:SER:N	47:D1:39:LYS:HA	2.36	0.41
47:D1:21:ARG:HG3	59:DA:2080:G:H5'	2.03	0.41
47:D1:25:LYS:HG2	47:D1:34:THR:O	2.21	0.41
50:D4:6:HIS:C	50:D4:8:LYS:H	2.28	0.41
51:D5:29:THR:HG21	59:DA:2814:C:O2'	2.21	0.41
51:D5:41:PRO:HG2	51:D5:44:THR:HB	2.02	0.41
52:D6:19:ARG:C	52:D6:20:ASN:HD22	2.28	0.41
53:D7:3:ARG:HD3	53:D7:3:ARG:HA	1.91	0.41
53:D7:40:TRP:N	53:D7:40:TRP:CD1	2.89	0.41
54:D8:9:GLY:HA2	54:D8:12:LYS:HD2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:D8:15:LYS:NZ	54:D8:17:THR:HA	2.36	0.41
56:De:114:LYS:O	56:De:116:GLU:HG3	2.21	0.41
59:DA:13:A:O2'	59:DA:15:G:N7	2.54	0.41
59:DA:56:A:H2'	59:DA:57:C:O4'	2.21	0.41
59:DA:68:G:H21	59:DA:74:A:H5'	1.86	0.41
59:DA:270(S):G:C2	59:DA:270(T):G:C8	3.09	0.41
59:DA:271(G):G:C6	59:DA:271(H):C:N4	2.89	0.41
59:DA:409:C:N3	59:DA:418:G:N2	2.58	0.41
59:DA:460:A:H62	59:DA:469:G:N2	2.18	0.41
59:DA:481:G:H1'	59:DA:506:G:H22	1.86	0.41
59:DA:542:C:H2'	59:DA:543:C:H6	1.85	0.41
59:DA:611(A):C:H42	59:DA:611(G):G:H1	1.68	0.41
59:DA:674:G:H2'	59:DA:804:A:H61	1.85	0.41
59:DA:690:G:H2'	59:DA:691:C:H6	1.86	0.41
59:DA:750:A:H5'	59:DA:1617:C:O2	2.21	0.41
59:DA:834:C:H1'	59:DA:2358:G:N2	2.36	0.41
59:DA:845:G:H8	59:DA:847:U:O4	2.02	0.41
59:DA:1129:A:H62	59:DA:2490:G:H5''	1.85	0.41
59:DA:1314:C:C6	59:DA:1603:A:H2	2.39	0.41
59:DA:1366:A:H2'	59:DA:1367:A:O4'	2.21	0.41
59:DA:1557:C:H2'	59:DA:1558:A:C2	2.55	0.41
59:DA:1703:G:H2'	59:DA:1704:G:C8	2.55	0.41
59:DA:1832:C:H2'	59:DA:1833:U:O4'	2.21	0.41
59:DA:1846:G:N2	59:DA:1894:C:N3	2.58	0.41
59:DA:1942:C:H2'	59:DA:1943:U:C5	2.56	0.41
59:DA:2034:U:H2'	59:DA:2035:G:O4'	2.21	0.41
59:DA:2383:G:H2'	59:DA:2384:G:H8	1.86	0.41
59:DA:2406:U:H4'	59:DA:2407:G:H5''	2.03	0.41
59:DA:2453:A:N1	59:DA:2499:C:N4	2.69	0.41
59:DA:2707:G:H2'	59:DA:2708:G:H8	1.83	0.41
59:DA:2720:U:C2	59:DA:2721:A:C8	3.08	0.41
59:DA:2888:C:H2'	59:DA:2889:C:H6	1.86	0.41
1:AB:231:GLU:HA	1:AB:232:PRO:HD3	1.79	0.41
2:AC:41:GLY:O	2:AC:44:GLU:HG2	2.21	0.41
2:AC:118:GLN:O	2:AC:122:GLU:HG2	2.20	0.41
3:AD:6:GLY:O	3:AD:8:VAL:N	2.54	0.41
4:AE:25:ARG:HH12	21:AA:1070:U:H4'	1.85	0.41
4:AE:73:ASN:O	4:AE:75:THR:HG22	2.21	0.41
5:AF:12:PRO:HG3	5:AF:57:GLN:HG3	2.03	0.41
6:AG:34:GLY:HA2	21:AA:1373:G:H1'	2.02	0.41
6:AG:94:ARG:HG3	6:AG:95:ARG:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:64:LYS:HG2	7:AH:79:VAL:HG21	2.03	0.41
10:AK:53:SER:HB2	21:AA:694:A:OP1	2.21	0.41
11:AL:58:VAL:CG2	11:AL:85:ILE:HD11	2.51	0.41
13:AN:16:PHE:HB2	13:AN:18:VAL:HG22	2.02	0.41
20:AY:188:TYR:HA	20:AY:196:ILE:HA	2.02	0.41
21:AA:318:G:H2'	21:AA:319:G:H8	1.86	0.41
21:AA:505:G:OP2	21:AA:535:A:H5'	2.21	0.41
21:AA:545:C:H2'	21:AA:546:G:H8	1.84	0.41
21:AA:950:U:H2'	21:AA:951:G:H8	1.86	0.41
21:AA:1076:C:N4	21:AA:1077:G:O6	2.54	0.41
21:AA:1338:G:N2	22:AW:41:A:N3	2.69	0.41
22:AW:64:G:C2	22:AW:65:U:C2	3.08	0.41
25:BC:43:GLU:CD	59:BA:2123:G:N2	2.79	0.41
26:BD:108:PRO:CA	26:BD:196:VAL:HA	2.51	0.41
26:BD:179:SER:O	26:BD:275:LYS:N	2.54	0.41
27:BE:34:VAL:HG22	27:BE:35:GLN:N	2.37	0.41
27:BE:80:GLU:OE2	59:BA:2635:C:O2'	2.38	0.41
27:BE:105:THR:HA	27:BE:166:THR:HA	2.03	0.41
30:BH:90:LYS:HB2	30:BH:163:TYR:CE1	2.56	0.41
30:BH:157:TYR:CZ	59:BA:2531:A:H5''	2.55	0.41
37:BR:26:LYS:NZ	59:BA:1295:C:H5'	2.36	0.41
37:BR:39:PRO:HG2	59:BA:1651:G:OP1	2.21	0.41
38:BS:15:ARG:C	38:BS:17:ARG:N	2.78	0.41
41:BV:38:LEU:HB3	41:BV:52:VAL:HG12	2.01	0.41
43:BX:25:LYS:HZ3	43:BX:53:LYS:HG2	1.84	0.41
45:BZ:89:PHE:HD2	45:BZ:89:PHE:HA	1.78	0.41
45:BZ:128:VAL:HG22	45:BZ:129:SER:H	1.86	0.41
47:B1:13:ILE:O	47:B1:42:GLN:O	2.39	0.41
47:B1:17:SER:H	47:B1:39:LYS:CA	2.32	0.41
47:B1:36:GLY:O	47:B1:37:ILE:HB	2.19	0.41
47:B1:91:LYS:O	47:B1:94:LEU:HB2	2.20	0.41
48:B2:27:GLU:HA	48:B2:30:ARG:HD3	2.02	0.41
49:B3:24:LYS:NZ	59:BA:931:G:O3'	2.54	0.41
52:B6:15:GLU:CB	52:B6:20:ASN:HB2	2.49	0.41
53:B7:1:MET:N	59:BA:1620:G:O4'	2.44	0.41
59:BA:270(N):G:O2'	59:BA:270(O):U:H3'	2.21	0.41
59:BA:370:G:H4'	59:BA:371:A:OP2	2.20	0.41
59:BA:401:A:C2	59:BA:402:A:C4	3.09	0.41
59:BA:434:U:O2	59:BA:435:C:N4	2.26	0.41
59:BA:483:A:N3	59:BA:483:A:H2'	2.36	0.41
59:BA:1581:G:H2'	59:BA:1582:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1633:G:H2'	59:BA:1634:A:H2'	2.02	0.41
59:BA:1712(G):G:N2	59:BA:1712(J):G:C8	2.89	0.41
59:BA:2285:C:H5'	59:BA:2288:A:N6	2.36	0.41
59:BA:2330:G:H2'	59:BA:2331:G:O4'	2.21	0.41
59:BA:2829:C:H2'	59:BA:2830:G:H8	1.84	0.41
2:CC:18:TRP:N	2:CC:21:ARG:HH12	2.19	0.41
2:CC:22:TRP:CD1	2:CC:59:ARG:HB2	2.56	0.41
3:CD:41:GLY:C	21:CA:426:G:H4'	2.45	0.41
3:CD:169:LYS:HE2	3:CD:169:LYS:HB2	1.77	0.41
4:CE:9:LYS:HD2	4:CE:112:LEU:HD22	2.03	0.41
4:CE:84:PHE:HD1	4:CE:85:GLY:N	2.19	0.41
5:CF:22:GLU:O	5:CF:26:ILE:HG13	2.21	0.41
5:CF:67:MET:HB2	5:CF:67:MET:HE3	1.96	0.41
7:CH:10:LEU:HD13	7:CH:83:ILE:HD11	2.03	0.41
8:CI:17:VAL:HG22	8:CI:63:ILE:HG23	2.03	0.41
10:CK:27:ASN:ND2	10:CK:44:SER:HG	2.16	0.41
10:CK:40:ILE:HD13	10:CK:40:ILE:H	1.85	0.41
11:CL:39:VAL:O	11:CL:55:VAL:HG21	2.22	0.41
20:CY:22:ASP:HB3	61:CY:701:GDP:H4'	2.02	0.41
20:CY:484:ARG:HG3	20:CY:676:TYR:CE1	2.56	0.41
21:CA:552:U:H2'	21:CA:553:A:H8	1.85	0.41
21:CA:724:G:C4	21:CA:725:G:C8	3.09	0.41
21:CA:812:C:H4'	21:CA:813:U:H6	1.85	0.41
21:CA:821:G:H2'	21:CA:822:C:O4'	2.20	0.41
21:CA:834:C:C4	21:CA:853:G:C6	3.09	0.41
22:CW:9:A:C2	22:CW:46:G:C5	3.08	0.41
25:DC:54:ARG:O	25:DC:57:GLN:NE2	2.51	0.41
25:DC:150:ILE:O	25:DC:154:ILE:HG13	2.21	0.41
25:DC:228:HIS:HB3	25:DC:229:SER:H	1.56	0.41
26:DD:24:ILE:HD13	26:DD:25:THR:H	1.85	0.41
26:DD:142:VAL:HG12	26:DD:163:ALA:O	2.21	0.41
29:DG:29:TRP:CD1	60:DB:55:U:H1'	2.56	0.41
29:DG:139:LEU:HD22	29:DG:149:VAL:HG11	2.03	0.41
32:DK:129:GLY:HA3	59:DA:1079:C:O2'	2.20	0.41
33:DN:23:LEU:HD13	33:DN:62:VAL:HA	2.03	0.41
33:DN:35:ARG:CB	33:DN:75:TYR:O	2.70	0.41
33:DN:100:GLU:O	33:DN:103:VAL:C	2.63	0.41
33:DN:101:HIS:N	33:DN:105:GLY:HA3	2.36	0.41
35:DP:35:HIS:CA	59:DA:1190:G:H5''	2.51	0.41
35:DP:38:GLN:NE2	59:DA:944:G:OP2	2.54	0.41
36:DQ:120:ILE:HA	36:DQ:123:HIS:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DR:75:LEU:HD22	37:DR:75:LEU:HA	1.98	0.41
37:DR:87:TYR:CD2	37:DR:87:TYR:N	2.88	0.41
38:DS:64:GLU:O	38:DS:67:ARG:HB2	2.21	0.41
40:DU:81:HIS:HB2	59:DA:1151:G:O3'	2.21	0.41
45:DZ:73:GLN:NE2	60:DB:102:G:H2'	2.36	0.41
46:D0:34:GLY:HA3	59:DA:2353:G:H1'	2.03	0.41
54:D8:8:LYS:HD2	59:DA:245:G:O6	2.20	0.41
59:DA:61:G:N2	59:DA:93:C:C2	2.78	0.41
59:DA:137(D):A:O2'	59:DA:137(E):A:H5'	2.21	0.41
59:DA:357(B):A:H2'	59:DA:357(C):G:O4'	2.21	0.41
59:DA:534:U:H2'	59:DA:535:C:C6	2.56	0.41
59:DA:717:G:H2'	59:DA:718:A:O4'	2.20	0.41
59:DA:772:C:H2'	59:DA:773:U:C6	2.55	0.41
59:DA:1583:A:H4'	59:DA:1586:A:C8	2.56	0.41
59:DA:1829:A:H2'	59:DA:1830:C:H5'	2.02	0.41
59:DA:2093:G:H2'	59:DA:2094:G:C8	2.56	0.41
59:DA:2107:C:H2'	59:DA:2108:C:O4'	2.21	0.41
59:DA:2182:G:H2'	59:DA:2183:C:H6	1.86	0.41
59:DA:2510:C:C4	59:DA:2511:U:C5	3.09	0.41
59:DA:2680:C:H2'	59:DA:2681:C:O2	2.21	0.41
4:AE:127:ASN:O	4:AE:131:ILE:HG12	2.20	0.40
5:AF:75:LEU:O	5:AF:79:LEU:HG	2.21	0.40
6:AG:43:PHE:O	6:AG:46:ALA:HB3	2.22	0.40
8:AI:22:GLY:HA3	8:AI:60:ASP:OD1	2.21	0.40
10:AK:120:ARG:HB3	21:AA:778:G:H21	1.86	0.40
11:AL:96:VAL:C	11:AL:97:ARG:HG2	2.46	0.40
12:AM:117:VAL:HG23	21:AA:1228:C:H1'	2.04	0.40
20:AY:88:VAL:O	20:AY:457:LEU:HD21	2.21	0.40
20:AY:312:LEU:HD12	20:AY:313:ALA:H	1.85	0.40
20:AY:357:ARG:NH2	20:AY:366:VAL:HG11	2.36	0.40
20:AY:471:LYS:HE2	20:AY:471:LYS:HB2	1.86	0.40
20:AY:631:ILE:HA	20:AY:645:ALA:CA	2.49	0.40
21:AA:68(J):G:H2'	21:AA:68(K):U:O4'	2.20	0.40
21:AA:508:C:H6	21:AA:508:C:H2'	1.64	0.40
21:AA:560:U:O5'	21:AA:566:G:N2	2.54	0.40
21:AA:759:A:H4'	21:AA:881:G:OP1	2.20	0.40
21:AA:956:U:O2	21:AA:960:U:C2	2.72	0.40
21:AA:1278:U:H5''	21:AA:1279:A:C8	2.56	0.40
22:AW:75:C:O2'	47:B1:30:VAL:HG11	2.20	0.40
24:AX:63:G:H5''	36:BQ:10:ARG:CZ	2.52	0.40
25:BC:59:VAL:HG12	25:BC:60:ARG:H	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:83:LYS:O	25:BC:84:ILE:C	2.64	0.40
26:BD:165:ILE:O	26:BD:166:GLN:HB2	2.21	0.40
26:BD:186:HIS:NE2	59:BA:2222:G:H5''	2.35	0.40
27:BE:15:PHE:HZ	39:BT:77:PRO:CG	2.33	0.40
27:BE:111:ARG:N	59:BA:2822:G:OP1	2.54	0.40
28:BF:116:ASP:O	28:BF:120:GLU:HG2	2.20	0.40
29:BG:83:ARG:HD2	29:BG:83:ARG:N	2.36	0.40
30:BH:80:SER:O	30:BH:80:SER:OG	2.34	0.40
33:BN:89:LYS:O	33:BN:92:ALA:HB3	2.20	0.40
33:BN:104:LYS:H	33:BN:120:LEU:HD11	1.86	0.40
34:BO:30:ALA:HB2	59:BA:2674:G:O2'	2.21	0.40
35:BP:64:LYS:HG3	59:BA:2416:C:OP1	2.21	0.40
38:BS:97:ARG:HD2	60:BB:49:C:OP1	2.21	0.40
39:BT:65:LYS:HD2	39:BT:66:VAL:H	1.85	0.40
39:BT:132:LYS:O	39:BT:132:LYS:HD3	2.21	0.40
40:BU:12:ARG:HH21	59:BA:1216:G:P	2.44	0.40
44:BY:17:SER:HB2	44:BY:71:LYS:HD3	2.03	0.40
44:BY:97:ARG:C	44:BY:99:CYS:H	2.28	0.40
46:B0:82:ARG:HA	46:B0:83:PRO:HD3	1.87	0.40
52:B6:54:ILE:HG12	52:B6:54:ILE:H	1.55	0.40
54:B8:52:LYS:C	54:B8:54:GLU:H	2.30	0.40
59:BA:22:C:N4	59:BA:518:G:H1	2.17	0.40
59:BA:80:G:H2'	59:BA:81:G:H8	1.85	0.40
59:BA:238:C:H2'	59:BA:239:U:C6	2.56	0.40
59:BA:371:A:N7	59:BA:402:A:N7	2.69	0.40
59:BA:438:G:C2	59:BA:439:G:C5	3.09	0.40
59:BA:465:G:C6	59:BA:466:A:C6	3.09	0.40
59:BA:475:U:O2'	59:BA:505:A:N3	2.53	0.40
59:BA:584:C:H2'	59:BA:585:G:O4'	2.21	0.40
59:BA:621:A:C2	59:BA:622:G:H1'	2.56	0.40
59:BA:780:G:H3'	59:BA:782:A:H62	1.86	0.40
59:BA:1157:G:H3'	59:BA:1157:G:OP2	2.21	0.40
59:BA:1177:A:H8	59:BA:1177:A:O5'	2.04	0.40
59:BA:1543:A:C6	59:BA:1544:A:C5	3.09	0.40
59:BA:1774:C:H2'	59:BA:1774:C:O2	2.20	0.40
59:BA:1779:U:H5''	59:BA:1780:A:H5''	2.02	0.40
59:BA:1953:A:O2'	59:BA:2550:G:N2	2.55	0.40
59:BA:2168:G:N1	59:BA:2171:A:C8	2.89	0.40
59:BA:2259:G:H1'	59:BA:2427:C:C6	2.57	0.40
59:BA:2507:C:C5	59:BA:2583:G:N2	2.89	0.40
3:CD:18:LYS:HE3	3:CD:31:CYS:SG	2.61	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:33:MET:O	3:CD:35:ARG:HG2	2.22	0.40
3:CD:105:VAL:HG11	3:CD:120:LEU:HD11	2.02	0.40
4:CE:102:ALA:HB3	4:CE:106:PRO:HB2	2.03	0.40
5:CF:69:GLU:O	5:CF:72:VAL:HG12	2.21	0.40
7:CH:88:LYS:HE2	21:CA:877:C:OP1	2.21	0.40
8:CI:15:ALA:HA	8:CI:65:VAL:HB	2.03	0.40
19:CT:16:HIS:O	19:CT:20:LEU:HG	2.21	0.40
20:CY:76:ASP:C	20:CY:77:HIS:CD2	2.99	0.40
20:CY:136:ALA:H	20:CY:260:LEU:HB2	1.86	0.40
20:CY:206:LEU:HB3	20:CY:207:ASP:H	1.71	0.40
20:CY:355:LEU:HD13	20:CY:377:VAL:HG23	2.04	0.40
20:CY:526:VAL:CG2	20:CY:566:THR:HG23	2.51	0.40
21:CA:362:G:N2	21:CA:365:U:H3	2.19	0.40
21:CA:448:A:H2'	21:CA:449:C:C6	2.56	0.40
21:CA:957:U:O2	21:CA:959:A:H3'	2.21	0.40
21:CA:1296:C:H5'	21:CA:1297:C:OP2	2.20	0.40
21:CA:1393:U:O3'	21:CA:1394:A:H8	2.03	0.40
24:CX:74:C:O2	59:DA:2555:U:C2	2.74	0.40
25:DC:114:VAL:C	25:DC:116:ALA:H	2.29	0.40
25:DC:142:LYS:O	25:DC:144:GLY:N	2.46	0.40
25:DC:153:ILE:HA	25:DC:156:GLU:HB3	2.03	0.40
26:DD:43:ARG:HH12	59:DA:779:U:H5''	1.85	0.40
28:DF:126:VAL:CG2	28:DF:193:VAL:HG13	2.50	0.40
29:DG:39:ILE:O	29:DG:91:ARG:HA	2.21	0.40
29:DG:71:THR:HG21	59:DA:2313:C:H5'	2.04	0.40
32:DK:8:VAL:HG21	32:DK:26:ALA:HB1	2.03	0.40
32:DK:14:ALA:HA	32:DK:41:PHE:HE2	1.86	0.40
33:DN:28:THR:O	33:DN:31:ALA:HB3	2.21	0.40
33:DN:43:THR:H	33:DN:44:PRO:CD	2.35	0.40
35:DP:113:LYS:HG2	35:DP:115:LEU:HD23	2.04	0.40
36:DQ:67:ARG:HB2	36:DQ:103:MET:HA	2.03	0.40
38:DS:22:GLY:O	38:DS:23:ARG:HB2	2.20	0.40
40:DU:21:ALA:HA	40:DU:39:LEU:HD21	2.03	0.40
42:DW:36:LEU:CD1	42:DW:51:LEU:HD12	2.51	0.40
44:DY:3:VAL:CG2	59:DA:295:G:H5'	2.50	0.40
44:DY:56:PRO:HB2	44:DY:57:GLN:H	1.62	0.40
44:DY:81:LYS:HD3	44:DY:97:ARG:HB3	2.02	0.40
45:DZ:8:TYR:HD1	45:DZ:23:LYS:HZ1	1.64	0.40
45:DZ:99:TYR:CE2	45:DZ:125:LEU:HB2	2.44	0.40
54:D8:50:LEU:O	54:D8:53:PRO:HD2	2.21	0.40
59:DA:18:C:H2'	59:DA:19:C:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:175:G:H2'	59:DA:176:G:O4'	2.22	0.40
59:DA:225:A:N1	59:DA:230:U:C2	2.89	0.40
59:DA:521:G:C2	59:DA:522:G:C5	3.08	0.40
59:DA:813:U:H2'	59:DA:814:C:H6	1.86	0.40
59:DA:813:U:C2	59:DA:814:C:C5	3.09	0.40
59:DA:834:C:H1'	59:DA:2358:G:H21	1.86	0.40
59:DA:879:G:C2	59:DA:880:G:C8	3.08	0.40
59:DA:1140:C:H6	59:DA:1140:C:O5'	2.04	0.40
59:DA:1444:G:H1	59:DA:1547:C:H42	1.69	0.40
59:DA:1544:A:C8	59:DA:1545:A:N6	2.89	0.40
59:DA:1848:A:N3	59:DA:1848:A:H2'	2.36	0.40
59:DA:1864(C):A:H2'	59:DA:1864(D):A:C8	2.56	0.40
59:DA:2342:C:H2'	59:DA:2343:C:O4'	2.21	0.40
59:DA:2548:G:H2'	59:DA:2549:G:O4'	2.21	0.40
59:DA:2679:A:N1	59:DA:2728:U:O2	2.54	0.40
60:DB:23:G:H2'	60:DB:24:G:C8	2.56	0.40
60:DB:31:C:C4	60:DB:51:G:O6	2.74	0.40
1:AB:32:ILE:HG21	1:AB:40:HIS:HB3	2.02	0.40
1:AB:96:ARG:H	1:AB:96:ARG:NE	2.19	0.40
2:AC:84:ILE:HG12	2:AC:101:LEU:HD22	2.03	0.40
3:AD:59:ARG:NH1	3:AD:66:ARG:HH12	2.18	0.40
3:AD:94:LEU:HD21	3:AD:200:GLU:HB2	2.03	0.40
5:AF:5:GLU:O	5:AF:91:VAL:HG12	2.20	0.40
6:AG:71:PRO:HG3	6:AG:99:LEU:HD11	2.03	0.40
9:AJ:5:ARG:NH1	21:AA:1125:U:O4	2.54	0.40
9:AJ:36:GLY:HA3	21:AA:1123:A:H4'	2.03	0.40
10:AK:21:ILE:HD12	10:AK:84:VAL:HG22	2.03	0.40
11:AL:54:LYS:HB3	11:AL:55:VAL:H	1.76	0.40
13:AN:43:CYS:HA	13:AN:46:GLU:HG2	2.03	0.40
14:AO:5:LYS:H	14:AO:5:LYS:HG2	1.62	0.40
15:AP:4:ILE:HG12	15:AP:21:VAL:HG23	2.02	0.40
15:AP:21:VAL:HG13	15:AP:34:GLU:HB2	2.02	0.40
18:AS:6:LYS:HD3	18:AS:6:LYS:H	1.85	0.40
20:AY:8:ASP:C	20:AY:10:LYS:N	2.79	0.40
20:AY:20:HIS:HB3	20:AY:118:SER:CA	2.51	0.40
20:AY:69:VAL:HG23	20:AY:82:ILE:HG13	2.03	0.40
20:AY:416:LYS:HE2	20:AY:416:LYS:HB3	1.82	0.40
20:AY:504:ARG:NH1	21:AA:1495:U:OP1	2.48	0.40
21:AA:419:C:N3	21:AA:424:G:N2	2.56	0.40
21:AA:610:G:C6	21:AA:611:A:N7	2.89	0.40
21:AA:908:A:C2	21:AA:909:A:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1466:C:H2'	21:AA:1467:G:O4'	2.21	0.40
24:AX:11:C:H2'	24:AX:12:U:O4'	2.21	0.40
26:BD:38:LYS:NZ	59:BA:1353:A:H4'	2.36	0.40
26:BD:38:LYS:HB3	26:BD:38:LYS:HE3	1.69	0.40
26:BD:160:GLY:HA2	26:BD:196:VAL:O	2.22	0.40
27:BE:62:PRO:HG3	59:BA:2633:G:N2	2.35	0.40
28:BF:155:LEU:HD23	28:BF:191:ARG:N	2.37	0.40
30:BH:35:VAL:CG2	30:BH:75:ALA:HB2	2.51	0.40
30:BH:148:ILE:O	30:BH:151:ILE:N	2.53	0.40
35:BP:32:THR:OG1	35:BP:35:HIS:O	2.28	0.40
36:BQ:99:PRO:HD2	45:BZ:79:ARG:HH22	1.85	0.40
37:BR:9:LYS:HZ3	37:BR:42:LYS:HD2	1.86	0.40
39:BT:83:ILE:HG13	39:BT:84:GLN:N	2.36	0.40
41:BV:24:LYS:HB2	41:BV:90:PRO:O	2.22	0.40
42:BW:3:ALA:O	42:BW:106:ILE:HG23	2.22	0.40
42:BW:80:PRO:HB2	42:BW:81:ALA:H	1.75	0.40
44:BY:46:LYS:N	44:BY:62:GLU:HB2	2.33	0.40
47:B1:3:LYS:HB2	59:BA:1364:G:OP2	2.20	0.40
50:B4:9:LEU:HB3	50:B4:10:VAL:H	1.55	0.40
51:B5:18:ALA:O	51:B5:21:SER:N	2.55	0.40
52:B6:5:VAL:HG13	52:B6:6:ARG:O	2.21	0.40
55:B9:18:ARG:HH21	59:BA:1032:A:H1'	1.86	0.40
59:BA:207:A:O2'	59:BA:798:G:O2'	2.39	0.40
59:BA:270(V):G:H2'	59:BA:270(W):G:C8	2.56	0.40
59:BA:530:G:H1'	59:BA:532:A:H62	1.86	0.40
59:BA:675:A:N7	59:BA:803:U:C2	2.90	0.40
59:BA:750:A:N3	59:BA:752:A:H5'	2.36	0.40
59:BA:1199:U:H2'	59:BA:1200:C:O4'	2.21	0.40
59:BA:1712:C:H2'	59:BA:1712(A):U:C6	2.56	0.40
59:BA:1794:U:H2'	59:BA:1795:C:C6	2.56	0.40
59:BA:2543:G:H2'	59:BA:2544:G:O4'	2.20	0.40
59:BA:2720:U:O4	59:BA:2873:A:N7	2.54	0.40
59:BA:2751:G:H2'	59:BA:2751:G:N3	2.37	0.40
59:BA:2766:G:H2'	59:BA:2766:G:N3	2.35	0.40
59:BA:2857:G:N2	59:BA:2860:A:OP2	2.49	0.40
60:BB:100:G:H2'	60:BB:101:A:O4'	2.22	0.40
1:CB:114:ARG:HA	1:CB:114:ARG:HD2	1.85	0.40
6:CG:76:ARG:HB3	6:CG:77:SER:H	1.57	0.40
9:CJ:63:PHE:CE1	13:CN:58:LYS:HA	2.56	0.40
11:CL:6:THR:HG21	21:CA:880:C:H41	1.85	0.40
14:CO:23:GLY:HA2	21:CA:657:G:O2'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:39:TYR:OH	15:CP:41:PRO:HB3	2.21	0.40
16:CQ:66:SER:HB3	16:CQ:69:LYS:CB	2.51	0.40
20:CY:243:VAL:O	20:CY:247:ARG:HB2	2.21	0.40
20:CY:422:GLU:HA	20:CY:425:SER:CB	2.48	0.40
20:CY:505:GLY:CA	20:CY:576:ASP:HA	2.51	0.40
20:CY:615:GLU:O	20:CY:618:GLY:N	2.54	0.40
62:CY:702:FUA:C15	62:CY:702:FUA:H323	2.50	0.40
21:CA:107:G:N2	21:CA:108:G:H1'	2.36	0.40
21:CA:183:G:N2	21:CA:223:U:HO2'	2.19	0.40
21:CA:559:A:H4'	21:CA:560:U:H3'	2.02	0.40
21:CA:836:G:C6	21:CA:851:G:C6	3.09	0.40
21:CA:1205:U:H2'	21:CA:1206:G:H8	1.87	0.40
22:CW:25:C:H2'	22:CW:26:A:C8	2.56	0.40
24:CX:62:C:H2'	24:CX:63:G:C8	2.56	0.40
25:DC:105:LEU:CA	25:DC:128:LEU:HD21	2.51	0.40
25:DC:220:GLY:O	59:DA:2175:C:O2'	2.39	0.40
27:DE:48:GLN:HA	27:DE:79:ARG:O	2.21	0.40
27:DE:202:LYS:O	59:DA:2733:A:N6	2.54	0.40
29:DG:46:ALA:CB	29:DG:88:ILE:HB	2.51	0.40
29:DG:107:LEU:HD21	29:DG:178:PHE:CG	2.56	0.40
29:DG:111:LEU:HB3	29:DG:117:PHE:CZ	2.56	0.40
30:DH:109:PHE:HA	59:DA:2666:C:H42	1.85	0.40
32:DK:100:THR:OG1	32:DK:102:GLU:HB3	2.22	0.40
33:DN:86:PRO:C	33:DN:97:ARG:HH21	2.29	0.40
35:DP:79:ARG:HG2	35:DP:110:TYR:CG	2.56	0.40
36:DQ:81:VAL:HB	46:D0:7:LEU:HD21	2.03	0.40
38:DS:101:LEU:H	38:DS:101:LEU:HG	1.75	0.40
48:D2:58:ALA:O	48:D2:59:ARG:C	2.65	0.40
48:D2:59:ARG:HG2	59:DA:76:C:O3'	2.22	0.40
52:D6:5:VAL:HG12	59:DA:2284:C:P	2.61	0.40
56:De:70:LYS:HD3	56:De:92:LEU:HD11	2.04	0.40
59:DA:241:A:H5'	59:DA:243:U:C1'	2.51	0.40
59:DA:271(M):G:H2'	59:DA:271(N):G:C1'	2.51	0.40
59:DA:819:A:H2'	59:DA:820:A:C8	2.57	0.40
59:DA:1766:U:H2'	59:DA:1767:C:O4'	2.21	0.40
59:DA:2143:C:H2'	59:DA:2144:U:O4'	2.22	0.40
3:AD:15:GLU:OE2	3:AD:19:LEU:HD11	2.21	0.40
3:AD:128:VAL:HA	3:AD:146:ILE:HA	2.03	0.40
5:AF:50:TYR:OH	17:AR:74:ARG:O	2.39	0.40
8:AI:55:ALA:C	8:AI:57:GLY:N	2.80	0.40
10:AK:21:ILE:HG23	10:AK:30:VAL:HG12	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:83:ILE:HD13	10:AK:109:VAL:HG21	2.03	0.40
13:AN:53:LEU:HD23	13:AN:54:PRO:HD2	2.03	0.40
16:AQ:2:PRO:HB2	21:AA:127:G:O2'	2.22	0.40
18:AS:14:HIS:NE2	21:AA:1015:A:OP1	2.55	0.40
19:AT:38:LYS:HG2	19:AT:38:LYS:H	1.62	0.40
20:AY:93:GLU:HA	20:AY:96:ARG:HE	1.87	0.40
20:AY:99:ARG:HD3	20:AY:403:GLU:CD	2.45	0.40
20:AY:276:VAL:O	20:AY:280:LEU:HB2	2.21	0.40
20:AY:606:MET:HE1	20:AY:671:MET:HB3	2.02	0.40
21:AA:68(P):C:H2'	21:AA:68(Q):U:C6	2.55	0.40
21:AA:453:A:H62	21:AA:479:C:H42	0.52	0.40
21:AA:1100:C:C2	21:AA:1102:A:H5'	2.57	0.40
22:AW:12:U:N3	22:AW:23:A:N6	2.30	0.40
25:BC:4:HIS:O	25:BC:8:TYR:HB3	2.21	0.40
25:BC:42:VAL:HG21	25:BC:176:VAL:HG23	2.03	0.40
25:BC:65:LEU:HD23	25:BC:65:LEU:HA	1.83	0.40
25:BC:192:ALA:HA	25:BC:195:ARG:HG3	2.03	0.40
26:BD:59:LYS:O	59:BA:1568:G:H5'	2.21	0.40
26:BD:208:LYS:HB2	59:BA:729:G:N7	2.36	0.40
26:BD:274:ARG:NH1	59:BA:1798:U:OP2	2.55	0.40
27:BE:108:SER:HB2	27:BE:189:PRO:HB2	2.02	0.40
30:BH:41:MET:O	30:BH:42:ARG:HB2	2.21	0.40
32:BK:90:LYS:HZ1	32:BK:93:ARG:HH21	1.69	0.40
33:BN:31:ALA:HA	33:BN:34:LEU:CA	2.51	0.40
33:BN:71:ILE:HG22	33:BN:98:VAL:HA	2.04	0.40
35:BP:16:ARG:C	35:BP:16:ARG:HD3	2.47	0.40
36:BQ:127:ILE:HB	36:BQ:128:LYS:H	1.59	0.40
39:BT:17:THR:C	39:BT:19:LEU:H	2.29	0.40
40:BU:3:ARG:NH1	40:BU:5:LYS:HA	2.36	0.40
40:BU:104:GLN:CD	40:BU:104:GLN:H	2.28	0.40
41:BV:35:LEU:HD21	41:BV:59:ALA:HB3	2.03	0.40
42:BW:43:GLY:HA2	42:BW:46:PHE:HB2	2.03	0.40
49:B3:11:SER:HB3	59:BA:988:A:OP2	2.21	0.40
54:B8:61:LEU:HB3	54:B8:62:LEU:H	1.53	0.40
59:BA:203:C:C3'	59:BA:204:A:H5''	2.51	0.40
59:BA:250:G:C6	59:BA:251:A:N1	2.89	0.40
59:BA:270(F):U:H2'	59:BA:270(G):C:C6	2.56	0.40
59:BA:414:C:H5''	59:BA:1879:C:O2'	2.20	0.40
59:BA:570:G:H2'	59:BA:2030:A:N7	2.37	0.40
59:BA:663:G:H2'	59:BA:664:C:O4'	2.21	0.40
59:BA:812:C:N4	59:BA:1195:G:H1	2.17	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1025:G:H8	59:BA:1025:G:OP1	2.05	0.40
59:BA:1094:U:H3	59:BA:1096:A:H3'	1.86	0.40
59:BA:1279:G:H2'	59:BA:1280:G:O4'	2.21	0.40
59:BA:1341:U:H5'	59:BA:1602:U:N3	2.36	0.40
59:BA:2454:G:H2'	59:BA:2455:G:C8	2.57	0.40
59:BA:2503:A:H4'	59:BA:2504:U:OP1	2.20	0.40
59:BA:2690:C:H41	59:BA:2713:A:H1'	1.87	0.40
59:BA:2755:C:H4'	59:BA:2756:U:H5	1.86	0.40
59:BA:2789:C:H4'	59:BA:2892:A:H61	1.87	0.40
2:CC:35:GLU:O	2:CC:38:ARG:N	2.54	0.40
7:CH:14:ARG:HD3	21:CA:875:C:O2'	2.22	0.40
12:CM:65:LYS:HD2	12:CM:70:LEU:HA	2.03	0.40
12:CM:101:GLN:HE21	12:CM:101:GLN:HB2	1.63	0.40
13:CN:39:LEU:HB3	13:CN:43:CYS:SG	2.61	0.40
14:CO:17:ARG:HA	14:CO:17:ARG:NE	2.35	0.40
15:CP:66:PRO:HB2	15:CP:67:THR:H	1.67	0.40
16:CQ:18:THR:OG1	21:CA:254:G:H4'	2.22	0.40
18:CS:61:TYR:HD2	18:CS:61:TYR:HA	1.79	0.40
18:CS:80:TYR:CE2	21:CA:956:U:H4'	2.57	0.40
20:CY:519:ARG:HB3	20:CY:675:HIS:HD2	1.86	0.40
21:CA:56:U:H2'	21:CA:57:G:O4'	2.21	0.40
21:CA:68(A):G:N2	21:CA:101:A:N1	2.69	0.40
21:CA:114:U:O4	21:CA:313:A:N1	2.54	0.40
21:CA:174:C:H2'	21:CA:175:C:C6	2.56	0.40
21:CA:564:C:N4	21:CA:565:U:O4	2.53	0.40
21:CA:716:A:C2	21:CA:717:C:C2	3.09	0.40
21:CA:1314:C:O2'	21:CA:1315:U:H5'	2.21	0.40
21:CA:1538:C:N3	23:CV:6:G:O6	2.54	0.40
25:DC:84:ILE:HG12	25:DC:95:VAL:HG11	2.02	0.40
26:DD:260:ARG:HD2	59:DA:1799:G:P	2.62	0.40
29:DG:48:GLU:C	29:DG:50:ALA:N	2.79	0.40
29:DG:126:ASP:O	59:DA:2302:G:O2'	2.33	0.40
34:DO:7:TYR:N	59:DA:1667:G:OP1	2.54	0.40
34:DO:103:ALA:HB1	34:DO:105:GLU:CD	2.46	0.40
35:DP:88:LEU:HD12	35:DP:95:VAL:HG21	2.03	0.40
36:DQ:12:GLN:HG2	36:DQ:73:PRO:HG2	2.03	0.40
41:DV:56:SER:HB2	41:DV:100:ARG:NE	2.28	0.40
42:DW:19:LEU:HD12	51:D5:25:LEU:HB2	2.02	0.40
42:DW:76:VAL:O	42:DW:77:ASP:O	2.40	0.40
45:DZ:53:ILE:H	45:DZ:53:ILE:HG13	1.69	0.40
48:D2:6:VAL:O	48:D2:9:GLN:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D2:23:LYS:O	48:D2:27:GLU:HG3	2.22	0.40
49:D3:12:PRO:HB2	49:D3:20:LYS:HZ1	1.84	0.40
53:D7:32:LYS:O	53:D7:35:ARG:HB2	2.20	0.40
59:DA:26:G:N2	59:DA:513:A:OP2	2.55	0.40
59:DA:177:G:H3'	59:DA:178:G:H8	1.87	0.40
59:DA:543(D):A:O5'	59:DA:543(D):A:C8	2.74	0.40
59:DA:617:G:N2	59:DA:618:C:H1'	2.36	0.40
59:DA:940:G:H21	59:DA:1191:G:C4'	2.34	0.40
59:DA:1184:G:H2'	59:DA:1185:C:C6	2.57	0.40
59:DA:1964:G:O2'	59:DA:1967:C:OP1	2.23	0.40
60:DB:22:U:O2	60:DB:61:G:C6	2.66	0.40
1:AB:157:ARG:HB3	1:AB:158:LEU:H	1.65	0.40
2:AC:41:GLY:HA2	2:AC:44:GLU:CD	2.47	0.40
4:AE:102:ALA:HB2	4:AE:120:THR:CG2	2.51	0.40
6:AG:97:GLN:HG2	6:AG:98:SER:N	2.35	0.40
6:AG:106:GLN:HA	6:AG:109:ASN:ND2	2.36	0.40
8:AI:9:ARG:NH2	21:AA:1149:C:OP1	2.54	0.40
8:AI:10:ARG:NE	8:AI:105:ASP:OD2	2.54	0.40
8:AI:42:ARG:HA	8:AI:45:ALA:HB3	2.03	0.40
11:AL:87:GLY:HA2	11:AL:98:TYR:CD2	2.57	0.40
13:AN:31:ARG:NE	13:AN:31:ARG:HA	2.37	0.40
15:AP:3:LYS:O	15:AP:22:THR:O	2.40	0.40
16:AQ:98:LEU:HD22	21:AA:760:G:O2'	2.21	0.40
20:AY:122:TRP:O	20:AY:122:TRP:HD1	2.05	0.40
20:AY:312:LEU:HD13	20:AY:399:LEU:HD12	2.02	0.40
20:AY:354:ARG:HB2	20:AY:378:VAL:HB	2.04	0.40
20:AY:465:ARG:NH1	62:AY:702:FUA:H183	2.36	0.40
62:AY:702:FUA:H231	62:AY:702:FUA:C12	2.45	0.40
21:AA:104:G:H2'	21:AA:105:G:C8	2.56	0.40
21:AA:403:C:H2'	21:AA:404:U:C6	2.56	0.40
21:AA:417:C:H2'	21:AA:418:C:C6	2.57	0.40
21:AA:1261:A:H2'	21:AA:1261:A:N3	2.37	0.40
21:AA:1324:A:H2'	21:AA:1325:C:O4'	2.22	0.40
22:AW:34:C:O2	23:AV:18:G:N1	2.27	0.40
24:AX:53:G:N1	24:AX:61:C:C4	2.88	0.40
26:BD:54:ARG:HA	26:BD:216:GLY:O	2.22	0.40
26:BD:222:ARG:HG3	59:BA:1789:A:OP1	2.21	0.40
27:BE:7:VAL:CG1	27:BE:27:LEU:HB3	2.52	0.40
27:BE:141:ILE:HG13	59:BA:2052:G:OP1	2.21	0.40
28:BF:126:VAL:HG11	28:BF:142:TRP:HZ2	1.86	0.40
29:BG:111:LEU:H	29:BG:112:PRO:HD2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:111:HIS:CE1	59:BA:2668:G:N3	2.89	0.40
33:BN:83:LYS:HD2	33:BN:84:LYS:NZ	2.37	0.40
33:BN:103:VAL:C	33:BN:105:GLY:N	2.78	0.40
39:BT:16:ARG:HH11	39:BT:16:ARG:HB3	1.85	0.40
39:BT:62:THR:HA	39:BT:75:ILE:HA	2.02	0.40
39:BT:63:VAL:O	39:BT:73:GLU:HA	2.22	0.40
40:BU:50:ARG:NH2	41:BV:72:VAL:HG12	2.36	0.40
40:BU:51:LYS:HA	40:BU:54:LYS:HD2	2.02	0.40
41:BV:64:HIS:ND1	41:BV:92:THR:HG22	2.36	0.40
44:BY:53:PRO:HB2	44:BY:54:LYS:H	1.65	0.40
59:BA:36:G:C6	59:BA:37:C:C4	3.10	0.40
59:BA:194:G:H2'	59:BA:195:A:C8	2.57	0.40
59:BA:357:A:H2'	59:BA:357(A):U:O4'	2.20	0.40
59:BA:522:G:C6	59:BA:523:C:C4	3.09	0.40
59:BA:593:G:H2'	59:BA:594:U:H6	1.86	0.40
59:BA:653:C:H5''	59:BA:654:U:O4'	2.21	0.40
59:BA:690:G:H2'	59:BA:691:C:C6	2.57	0.40
59:BA:717:G:H3'	59:BA:718:A:H8	1.86	0.40
59:BA:938:G:O2'	59:BA:939:G:H5'	2.22	0.40
59:BA:991:C:H2'	59:BA:992:C:H6	1.85	0.40
59:BA:1023:U:H2'	59:BA:1024:G:H5'	2.02	0.40
59:BA:1468(C):A:N6	59:BA:1506(N):G:H2'	2.37	0.40
59:BA:1676:A:H2'	59:BA:1677:A:O4'	2.21	0.40
59:BA:2268:A:H8	59:BA:2268:A:OP2	2.05	0.40
59:BA:2814:C:N3	59:BA:2886:G:N2	2.62	0.40
60:BB:4:C:O2	60:BB:116:G:N1	2.47	0.40
2:CC:141:VAL:HG11	2:CC:149:ALA:HB2	2.03	0.40
2:CC:161:GLU:H	23:CV:25:A:H61	1.67	0.40
3:CD:100:ARG:HG3	3:CD:137:SER:HA	2.04	0.40
12:CM:14:ARG:HD2	21:CA:1296:C:OP1	2.21	0.40
13:CN:60:SER:HB2	21:CA:1114:C:H1'	2.03	0.40
14:CO:54:ARG:HH12	21:CA:728:A:P	2.44	0.40
20:CY:163:VAL:HA	20:CY:258:VAL:HG22	2.02	0.40
21:CA:402:G:H2'	21:CA:403:C:O4'	2.21	0.40
21:CA:1118:C:H1'	21:CA:1179:A:C5	2.55	0.40
21:CA:1222:G:H8	21:CA:1222:G:O5'	2.03	0.40
22:CW:9:A:C2	22:CW:45:G:C2	3.09	0.40
25:DC:141:PRO:O	25:DC:142:LYS:HB2	2.22	0.40
26:DD:111:LEU:HD22	26:DD:115:GLN:CB	2.49	0.40
27:DE:14:ILE:HG22	27:DE:16:ARG:H	1.86	0.40
27:DE:62:PRO:O	27:DE:63:LEU:HD12	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:168:ARG:HH21	59:DA:322:A:P	2.44	0.40
32:DK:34:ILE:C	32:DK:36:GLU:H	2.29	0.40
33:DN:117:PHE:HE2	33:DN:120:LEU:N	2.19	0.40
34:DO:6:THR:HG23	59:DA:1666:G:O3'	2.21	0.40
35:DP:25:SER:C	35:DP:27:HIS:H	2.30	0.40
35:DP:67:MET:HB3	35:DP:68:GLN:H	1.55	0.40
38:DS:51:ALA:HB1	38:DS:69:VAL:HG22	2.03	0.40
39:DT:53:ARG:CZ	59:DA:2683:C:H5''	2.51	0.40
46:D0:24:LYS:HD2	59:DA:2355:C:O3'	2.20	0.40
46:D0:60:PHE:CZ	59:DA:2365:G:H4'	2.56	0.40
51:D5:19:ARG:HH12	59:DA:1264:G:C5'	2.34	0.40
51:D5:30:LEU:CB	51:D5:39:MET:HB3	2.52	0.40
52:D6:28:ARG:HB3	52:D6:29:ASN:H	1.58	0.40
54:D8:4:MET:HG3	54:D8:61:LEU:HD23	2.03	0.40
54:D8:21:LYS:HG3	59:DA:651:G:OP1	2.21	0.40
59:DA:54:G:H1	59:DA:116:C:H42	1.68	0.40
59:DA:379:G:N1	59:DA:396:G:C6	2.89	0.40
59:DA:395:U:O2	59:DA:396:G:N7	2.54	0.40
59:DA:484:C:H2'	59:DA:485:C:H6	1.86	0.40
59:DA:500:G:C4	59:DA:502:A:OP2	2.75	0.40
59:DA:519:U:H2'	59:DA:520:G:H8	1.87	0.40
59:DA:584:C:H2'	59:DA:585:G:C8	2.57	0.40
59:DA:725:G:H8	59:DA:725:G:O5'	2.05	0.40
59:DA:1137:G:C2'	59:DA:1138:G:H5'	2.51	0.40
59:DA:1831:G:N2	63:DA:2901:NMY:N9	2.69	0.40
59:DA:1842:G:H2'	59:DA:1843:C:C6	2.56	0.40
59:DA:2089:U:H2'	59:DA:2090:G:H8	1.87	0.40
59:DA:2096:U:H2'	59:DA:2097:C:C5	2.56	0.40
59:DA:2118:U:H5''	59:DA:2119:A:OP1	2.22	0.40
59:DA:2447:G:H4'	59:DA:2448:A:O5'	2.21	0.40
59:DA:2486:G:H2'	59:DA:2487:G:O4'	2.21	0.40
59:DA:2794(E):A:H2'	59:DA:2802:G:H4'	2.02	0.40
1:AB:74:LYS:H	1:AB:74:LYS:HG2	1.65	0.40
2:AC:11:ARG:CB	2:AC:16:ARG:HB2	2.45	0.40
3:AD:101:LEU:HA	3:AD:101:LEU:HD12	1.84	0.40
6:AG:10:ARG:NE	6:AG:10:ARG:HA	2.36	0.40
10:AK:34:ASP:HB2	10:AK:35:PRO:HD2	2.03	0.40
11:AL:15:ARG:NH1	21:AA:563:A:H3'	2.37	0.40
11:AL:127:GLU:O	11:AL:129:ALA:N	2.46	0.40
15:AP:69:THR:HG22	21:AA:375:U:H5''	2.03	0.40
19:AT:53:LEU:HD13	19:AT:53:LEU:HA	1.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AY:86:GLY:O	20:AY:88:VAL:N	2.49	0.40
21:AA:37:U:H4'	21:AA:500:G:O2'	2.22	0.40
21:AA:745:C:H1'	21:AA:836:G:O2'	2.20	0.40
21:AA:765:G:N1	21:AA:812:C:H1'	2.36	0.40
21:AA:946:A:O2'	21:AA:1333:A:H1'	2.21	0.40
21:AA:1312:G:H2'	21:AA:1313:U:C6	2.56	0.40
22:AW:5:A:C2	22:AW:68:U:O2	2.75	0.40
23:AV:26:A:H2'	23:AV:27:A:C8	2.56	0.40
26:BD:130:ALA:HA	26:BD:191:ALA:O	2.21	0.40
33:BN:46:VAL:CG1	33:BN:107:LEU:HD22	2.51	0.40
33:BN:59:LYS:HE2	33:BN:60:ILE:HD13	2.04	0.40
34:BO:88:ASN:HD22	34:BO:90:GLN:H	1.69	0.40
35:BP:114:ILE:CG1	35:BP:130:PHE:HA	2.52	0.40
36:BQ:42:ILE:CD1	36:BQ:47:ILE:HD11	2.52	0.40
36:BQ:83:MET:HE2	36:BQ:83:MET:HB3	1.97	0.40
37:BR:33:ARG:O	37:BR:34:ILE:HD12	2.22	0.40
39:BT:115:ARG:HB2	39:BT:116:ALA:H	1.76	0.40
41:BV:38:LEU:O	41:BV:52:VAL:HB	2.21	0.40
41:BV:56:SER:O	41:BV:100:ARG:HG3	2.21	0.40
44:BY:2:ARG:N	59:BA:105:C:O2'	2.54	0.40
46:B0:14:ARG:NH2	59:BA:2279:G:N7	2.69	0.40
47:B1:25:LYS:HD3	47:B1:26:ARG:H	1.86	0.40
53:B7:3:ARG:NH2	59:BA:789:A:N1	2.70	0.40
53:B7:46:VAL:O	53:B7:47:ARG:HG2	2.22	0.40
54:B8:29:LYS:O	54:B8:31:HIS:N	2.49	0.40
59:BA:227:A:H61	59:BA:410:G:H21	1.68	0.40
59:BA:271(F):G:H2'	59:BA:271(G):G:C8	2.44	0.40
59:BA:335:C:H2'	59:BA:336:C:H6	1.86	0.40
59:BA:748:G:O6	59:BA:751:A:H4'	2.22	0.40
59:BA:897:C:C2	59:BA:898:C:C5	3.09	0.40
59:BA:972:G:OP2	59:BA:974:G:H2'	2.21	0.40
59:BA:1128:A:C4	59:BA:2518:A:N6	2.89	0.40
59:BA:1207:C:C2	59:BA:1239:G:N2	2.86	0.40
59:BA:1712(L):G:H2'	59:BA:1712(M):C:H6	1.83	0.40
59:BA:1791:A:H2'	59:BA:1792:G:O4'	2.21	0.40
59:BA:1801:G:N7	59:BA:2202:C:H5'	2.37	0.40
59:BA:2249:U:O2	59:BA:2249:U:H2'	2.20	0.40
59:BA:2453:A:H2	59:BA:2500:U:C2	2.40	0.40
59:BA:2722:G:H5''	59:BA:2820:A:C2	2.56	0.40
59:BA:2780:G:H4'	59:BA:2781:A:OP2	2.13	0.40
2:CC:109:PRO:O	2:CC:111:LEU:N	2.44	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:9:CYS:O	3:CD:33:MET:HE1	2.21	0.40
3:CD:11:LEU:HA	3:CD:11:LEU:HD23	1.81	0.40
8:CI:4:TYR:N	8:CI:4:TYR:CD1	2.90	0.40
8:CI:18:PHE:HB2	8:CI:62:TYR:O	2.21	0.40
10:CK:27:ASN:OD1	10:CK:55:LYS:HG2	2.21	0.40
10:CK:115:PRO:C	10:CK:117:ASN:H	2.29	0.40
12:CM:15:VAL:HG23	12:CM:41:PRO:HA	2.03	0.40
15:CP:74:LEU:HD22	15:CP:79:VAL:HG21	2.02	0.40
16:CQ:22:LEU:HD12	16:CQ:22:LEU:HA	1.90	0.40
16:CQ:46:ASP:HA	16:CQ:47:PRO:HD2	1.87	0.40
20:CY:22:ASP:O	20:CY:24:GLY:N	2.55	0.40
20:CY:160:ARG:HB3	20:CY:254:LYS:O	2.21	0.40
20:CY:311:ALA:CB	20:CY:330:VAL:HA	2.52	0.40
20:CY:337:SER:HA	20:CY:353:ALA:O	2.22	0.40
20:CY:353:ALA:HB3	20:CY:378:VAL:O	2.21	0.40
20:CY:465:ARG:HG3	62:CY:702:FUA:H183	2.04	0.40
21:CA:68(B):G:C2	21:CA:68(C):C:H1'	2.56	0.40
21:CA:255:G:H2'	21:CA:256:U:H6	1.85	0.40
21:CA:373:A:H1'	21:CA:481:G:N3	2.36	0.40
21:CA:934:C:N4	21:CA:938:A:H2	2.16	0.40
21:CA:1374:A:H3'	21:CA:1374:A:N3	2.36	0.40
21:CA:1512:U:H2'	21:CA:1513:A:H8	1.84	0.40
25:DC:118:PRO:O	25:DC:119:ASP:C	2.64	0.40
25:DC:138:LEU:HD13	25:DC:139:PRO:N	2.36	0.40
25:DC:186:LEU:HD23	25:DC:186:LEU:HA	1.87	0.40
26:DD:133:LEU:O	26:DD:136:ILE:HG22	2.21	0.40
27:DE:12:THR:OG1	27:DE:23:VAL:HG23	2.21	0.40
27:DE:52:LEU:HA	27:DE:52:LEU:HD12	1.73	0.40
27:DE:60:ASN:CG	27:DE:61:ARG:N	2.80	0.40
27:DE:114:ALA:HB3	27:DE:160:TYR:HB3	2.03	0.40
27:DE:143:ASN:OD1	59:DA:2574:G:O2'	2.17	0.40
28:DF:93:LYS:HB2	28:DF:95:ARG:NE	2.36	0.40
28:DF:93:LYS:HE2	28:DF:93:LYS:HA	2.02	0.40
29:DG:105:LYS:HD2	29:DG:142:PRO:HG3	2.03	0.40
33:DN:74:ARG:H	33:DN:84:LYS:HA	1.86	0.40
33:DN:97:ARG:CD	33:DN:108:PRO:HG2	2.51	0.40
33:DN:117:PHE:CD1	59:DA:2780:G:C6	3.10	0.40
34:DO:26:LYS:HD2	34:DO:26:LYS:HA	1.93	0.40
34:DO:37:ASP:N	34:DO:37:ASP:OD1	2.54	0.40
35:DP:48:PRO:C	35:DP:50:ARG:N	2.79	0.40
36:DQ:25:ASP:HB3	36:DQ:102:VAL:HG23	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DR:34:ILE:O	37:DR:113:LEU:HA	2.21	0.40
38:DS:41:ASP:HB3	38:DS:47:THR:O	2.22	0.40
44:DY:48:ALA:HB1	44:DY:55:TYR:CE1	2.56	0.40
45:DZ:108:PRO:HG2	45:DZ:111:VAL:HG23	2.04	0.40
46:D0:69:PHE:CG	59:DA:856:C:H4'	2.56	0.40
47:D1:80:LEU:CD2	47:D1:81:LYS:H	2.34	0.40
49:D3:29:ARG:HB3	59:DA:1184:G:OP1	2.21	0.40
52:D6:13:CYS:SG	52:D6:49:HIS:ND1	2.70	0.40
56:De:60:PHE:C	56:De:62:VAL:N	2.80	0.40
59:DA:593:G:H2'	59:DA:594:U:H6	1.85	0.40
59:DA:852:G:H2'	59:DA:853:G:C8	2.55	0.40
59:DA:1570:A:H8	59:DA:1570:A:P	2.45	0.40
59:DA:1686:C:N4	59:DA:1702:G:H1	2.15	0.40
59:DA:2225:A:H4'	59:DA:2226:C:O4'	2.22	0.40
59:DA:2349:G:C6	59:DA:2369:A:C6	3.10	0.40
59:DA:2389:G:H5''	59:DA:2390:U:O4'	2.21	0.40
59:DA:2404:C:H2'	59:DA:2405:G:O4'	2.22	0.40
59:DA:2559:C:O2'	59:DA:2560:C:H5'	2.21	0.40
59:DA:2588:G:H2'	59:DA:2589:A:O4'	2.20	0.40
59:DA:2620:C:H2'	59:DA:2621:A:C8	2.56	0.40
59:DA:2699:C:N3	59:DA:2708:G:N2	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	
1	AB	233/235 (99%)	168 (72%)	45 (19%)	20 (9%)	0	9
1	CB	233/235 (99%)	171 (73%)	45 (19%)	17 (7%)	1	11
2	AC	205/207 (99%)	137 (67%)	39 (19%)	29 (14%)	0	3
2	CC	205/207 (99%)	150 (73%)	35 (17%)	20 (10%)	0	7

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	AD	206/208 (99%)	140 (68%)	41 (20%)	25 (12%)	0	4
3	CD	206/208 (99%)	152 (74%)	33 (16%)	21 (10%)	0	7
4	AE	149/151 (99%)	122 (82%)	20 (13%)	7 (5%)	2	18
4	CE	149/151 (99%)	115 (77%)	24 (16%)	10 (7%)	1	13
5	AF	99/101 (98%)	76 (77%)	15 (15%)	8 (8%)	1	10
5	CF	99/101 (98%)	74 (75%)	16 (16%)	9 (9%)	0	8
6	AG	153/155 (99%)	123 (80%)	22 (14%)	8 (5%)	1	17
6	CG	153/155 (99%)	118 (77%)	23 (15%)	12 (8%)	1	11
7	AH	136/138 (99%)	102 (75%)	23 (17%)	11 (8%)	1	10
7	CH	136/138 (99%)	96 (71%)	30 (22%)	10 (7%)	1	11
8	AI	125/127 (98%)	97 (78%)	22 (18%)	6 (5%)	2	17
8	CI	125/127 (98%)	98 (78%)	21 (17%)	6 (5%)	2	17
9	AJ	97/99 (98%)	71 (73%)	15 (16%)	11 (11%)	0	5
9	CJ	97/99 (98%)	74 (76%)	16 (16%)	7 (7%)	1	12
10	AK	117/119 (98%)	83 (71%)	21 (18%)	13 (11%)	0	5
10	CK	117/119 (98%)	79 (68%)	21 (18%)	17 (14%)	0	2
11	AL	123/125 (98%)	41 (33%)	44 (36%)	38 (31%)	0	0
11	CL	123/125 (98%)	49 (40%)	37 (30%)	37 (30%)	0	0
12	AM	123/125 (98%)	94 (76%)	19 (15%)	10 (8%)	1	10
12	CM	123/125 (98%)	95 (77%)	17 (14%)	11 (9%)	0	9
13	AN	58/60 (97%)	38 (66%)	17 (29%)	3 (5%)	1	17
13	CN	58/60 (97%)	35 (60%)	14 (24%)	9 (16%)	0	2
14	AO	86/88 (98%)	72 (84%)	12 (14%)	2 (2%)	5	30
14	CO	86/88 (98%)	65 (76%)	18 (21%)	3 (4%)	3	23
15	AP	82/84 (98%)	58 (71%)	16 (20%)	8 (10%)	0	7
15	CP	82/84 (98%)	62 (76%)	13 (16%)	7 (8%)	0	9
16	AQ	98/100 (98%)	70 (71%)	22 (22%)	6 (6%)	1	14
16	CQ	98/100 (98%)	76 (78%)	16 (16%)	6 (6%)	1	14
17	AR	68/70 (97%)	50 (74%)	9 (13%)	9 (13%)	0	3
17	CR	68/70 (97%)	56 (82%)	8 (12%)	4 (6%)	1	15
18	AS	77/79 (98%)	43 (56%)	23 (30%)	11 (14%)	0	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	CS	77/79 (98%)	47 (61%)	27 (35%)	3 (4%)	2	20
19	AT	97/99 (98%)	72 (74%)	17 (18%)	8 (8%)	0	10
19	CT	97/99 (98%)	82 (84%)	10 (10%)	5 (5%)	1	17
20	AY	657/687 (96%)	407 (62%)	174 (26%)	76 (12%)	0	4
20	CY	657/687 (96%)	437 (66%)	135 (20%)	85 (13%)	0	3
25	BC	226/228 (99%)	107 (47%)	63 (28%)	56 (25%)	0	0
25	DC	226/228 (99%)	114 (50%)	52 (23%)	60 (26%)	0	0
26	BD	273/275 (99%)	174 (64%)	60 (22%)	39 (14%)	0	3
26	DD	273/275 (99%)	180 (66%)	59 (22%)	34 (12%)	0	4
27	BE	203/205 (99%)	134 (66%)	41 (20%)	28 (14%)	0	3
27	DE	203/205 (99%)	124 (61%)	49 (24%)	30 (15%)	0	2
28	BF	206/208 (99%)	139 (68%)	43 (21%)	24 (12%)	0	4
28	DF	206/208 (99%)	127 (62%)	51 (25%)	28 (14%)	0	3
29	BG	179/181 (99%)	131 (73%)	37 (21%)	11 (6%)	1	14
29	DG	179/181 (99%)	127 (71%)	37 (21%)	15 (8%)	0	9
30	BH	165/167 (99%)	117 (71%)	31 (19%)	17 (10%)	0	6
30	DH	165/167 (99%)	116 (70%)	30 (18%)	19 (12%)	0	4
32	BK	138/140 (99%)	91 (66%)	32 (23%)	15 (11%)	0	5
32	DK	138/140 (99%)	77 (56%)	44 (32%)	17 (12%)	0	4
33	BN	137/139 (99%)	52 (38%)	32 (23%)	53 (39%)	0	0
33	DN	137/139 (99%)	55 (40%)	28 (20%)	54 (39%)	0	0
34	BO	120/122 (98%)	89 (74%)	21 (18%)	10 (8%)	0	9
34	DO	120/122 (98%)	86 (72%)	22 (18%)	12 (10%)	0	7
35	BP	144/146 (99%)	84 (58%)	36 (25%)	24 (17%)	0	2
35	DP	144/146 (99%)	82 (57%)	39 (27%)	23 (16%)	0	2
36	BQ	139/141 (99%)	84 (60%)	35 (25%)	20 (14%)	0	3
36	DQ	139/141 (99%)	94 (68%)	34 (24%)	11 (8%)	1	10
37	BR	115/117 (98%)	80 (70%)	20 (17%)	15 (13%)	0	3
37	DR	115/117 (98%)	80 (70%)	22 (19%)	13 (11%)	0	5
38	BS	97/99 (98%)	52 (54%)	26 (27%)	19 (20%)	0	1
38	DS	97/99 (98%)	51 (53%)	27 (28%)	19 (20%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
39	BT	136/138 (99%)	81 (60%)	27 (20%)	28 (21%)	0	1
39	DT	136/138 (99%)	79 (58%)	31 (23%)	26 (19%)	0	1
40	BU	115/117 (98%)	88 (76%)	17 (15%)	10 (9%)	0	9
40	DU	115/117 (98%)	90 (78%)	17 (15%)	8 (7%)	1	12
41	BV	99/101 (98%)	56 (57%)	28 (28%)	15 (15%)	0	2
41	DV	99/101 (98%)	64 (65%)	21 (21%)	14 (14%)	0	3
42	BW	111/113 (98%)	74 (67%)	25 (22%)	12 (11%)	0	5
42	DW	111/113 (98%)	76 (68%)	23 (21%)	12 (11%)	0	5
43	BX	91/93 (98%)	71 (78%)	13 (14%)	7 (8%)	1	11
43	DX	91/93 (98%)	67 (74%)	10 (11%)	14 (15%)	0	2
44	BY	105/107 (98%)	54 (51%)	31 (30%)	20 (19%)	0	1
44	DY	105/107 (98%)	59 (56%)	26 (25%)	20 (19%)	0	1
45	BZ	183/185 (99%)	121 (66%)	43 (24%)	19 (10%)	0	6
45	DZ	183/185 (99%)	109 (60%)	45 (25%)	29 (16%)	0	2
46	B0	82/84 (98%)	63 (77%)	14 (17%)	5 (6%)	1	14
46	D0	82/84 (98%)	59 (72%)	18 (22%)	5 (6%)	1	14
47	B1	91/93 (98%)	48 (53%)	24 (26%)	19 (21%)	0	1
47	D1	91/93 (98%)	52 (57%)	20 (22%)	19 (21%)	0	1
48	B2	69/71 (97%)	51 (74%)	12 (17%)	6 (9%)	0	9
48	D2	69/71 (97%)	53 (77%)	12 (17%)	4 (6%)	1	15
49	B3	58/60 (97%)	49 (84%)	7 (12%)	2 (3%)	3	23
49	D3	58/60 (97%)	47 (81%)	8 (14%)	3 (5%)	1	17
50	B4	33/35 (94%)	15 (46%)	13 (39%)	5 (15%)	0	2
50	D4	33/35 (94%)	17 (52%)	11 (33%)	5 (15%)	0	2
51	B5	57/59 (97%)	36 (63%)	14 (25%)	7 (12%)	0	4
51	D5	57/59 (97%)	38 (67%)	6 (10%)	13 (23%)	0	0
52	B6	48/50 (96%)	24 (50%)	15 (31%)	9 (19%)	0	1
52	D6	48/50 (96%)	20 (42%)	17 (35%)	11 (23%)	0	0
53	B7	47/49 (96%)	33 (70%)	11 (23%)	3 (6%)	1	14
53	D7	47/49 (96%)	26 (55%)	14 (30%)	7 (15%)	0	2
54	B8	62/64 (97%)	34 (55%)	16 (26%)	12 (19%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
54	D8	62/64 (97%)	35 (56%)	13 (21%)	14 (23%)	0	0
55	B9	35/37 (95%)	29 (83%)	5 (14%)	1 (3%)	3	25
55	D9	35/37 (95%)	25 (71%)	7 (20%)	3 (9%)	0	9
56	Be	70/103 (68%)	39 (56%)	23 (33%)	8 (11%)	0	5
56	De	70/103 (68%)	40 (57%)	17 (24%)	13 (19%)	0	1
All	All	13246/13568 (98%)	8764 (66%)	2800 (21%)	1682 (13%)	0	4

All (1682) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	AB	76	GLN
1	AB	190	THR
2	AC	12	LEU
2	AC	110	ASN
2	AC	130	VAL
2	AC	160	ALA
2	AC	161	GLU
3	AD	20	TYR
3	AD	166	LYS
3	AD	172	PRO
3	AD	187	ARG
4	AE	27	ARG
4	AE	77	PRO
4	AE	78	HIS
4	AE	79	GLU
5	AF	69	GLU
5	AF	70	ASP
6	AG	10	ARG
6	AG	35	LYS
7	AH	22	GLU
7	AH	97	VAL
8	AI	110	GLU
9	AJ	75	ILE
10	AK	35	PRO
10	AK	109	VAL
11	AL	7	ILE
11	AL	15	ARG
11	AL	17	LYS
11	AL	39	VAL
11	AL	43	VAL

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Mol	Chain	Res	Type
11	AL	55	VAL
11	AL	66	VAL
11	AL	71	PRO
11	AL	94	PRO
11	AL	97	ARG
11	AL	104	VAL
11	AL	122	THR
11	AL	123	LYS
11	AL	126	LYS
14	AO	88	ARG
15	AP	35	LYS
15	AP	36	ILE
16	AQ	28	PRO
16	AQ	34	LYS
17	AR	37	VAL
17	AR	55	ARG
17	AR	60	ALA
18	AS	5	LEU
18	AS	27	GLU
19	AT	50	GLU
19	AT	74	LYS
20	AY	21	ILE
20	AY	22	ASP
20	AY	35	TYR
20	AY	92	ILE
20	AY	136	ALA
20	AY	142	THR
20	AY	146	LEU
20	AY	192	LEU
20	AY	204	GLU
20	AY	330	VAL
20	AY	331	TYR
20	AY	350	GLU
20	AY	382	GLU
20	AY	448	GLN
20	AY	480	GLN
20	AY	497	PHE
20	AY	501	THR
20	AY	559	PRO
20	AY	566	THR
20	AY	567	LEU
20	AY	613	PRO

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Mol	Chain	Res	Type
20	AY	631	ILE
20	AY	680	PRO
25	BC	17	PRO
25	BC	36	ALA
25	BC	41	THR
25	BC	42	VAL
25	BC	43	GLU
25	BC	71	LYS
25	BC	80	LYS
25	BC	114	VAL
25	BC	115	VAL
25	BC	117	THR
25	BC	119	ASP
25	BC	141	PRO
25	BC	161	ARG
25	BC	162	ILE
25	BC	182	PRO
25	BC	212	SER
25	BC	214	TYR
25	BC	221	PRO
25	BC	227	PRO
25	BC	228	HIS
26	BD	25	THR
26	BD	40	THR
26	BD	166	GLN
26	BD	256	GLY
27	BE	56	PRO
27	BE	61	ARG
27	BE	63	LEU
27	BE	68	ALA
27	BE	72	VAL
27	BE	77	ILE
27	BE	129	HIS
27	BE	135	HIS
27	BE	144	ARG
27	BE	180	ASN
27	BE	185	LYS
27	BE	188	VAL
28	BF	22	ALA
28	BF	66	PRO
28	BF	67	GLN
28	BF	69	HIS

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Mol	Chain	Res	Type
28	BF	88	VAL
28	BF	158	THR
29	BG	78	SER
29	BG	87	PRO
29	BG	114	ILE
30	BH	21	PRO
30	BH	47	GLU
30	BH	126	PRO
30	BH	128	PRO
30	BH	176	ALA
32	BK	5	VAL
32	BK	115	LEU
33	BN	22	THR
33	BN	28	THR
33	BN	31	ALA
33	BN	32	THR
33	BN	38	HIS
33	BN	40	PRO
33	BN	43	THR
33	BN	47	ALA
33	BN	50	ASP
33	BN	51	PHE
33	BN	59	LYS
33	BN	60	ILE
33	BN	72	TYR
33	BN	78	TYR
33	BN	80	GLY
33	BN	83	LYS
33	BN	93	THR
33	BN	94	HIS
33	BN	95	PRO
33	BN	98	VAL
33	BN	101	HIS
33	BN	107	LEU
33	BN	114	ARG
33	BN	115	ARG
33	BN	117	PHE
33	BN	121	LYS
33	BN	129	PRO
34	BO	52	VAL
34	BO	84	ALA
35	BP	14	LYS

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Mol	Chain	Res	Type
35	BP	38	GLN
35	BP	57	THR
35	BP	60	MET
35	BP	68	GLN
35	BP	110	TYR
35	BP	148	LEU
36	BQ	8	LYS
36	BQ	75	THR
36	BQ	93	TYR
36	BQ	102	VAL
36	BQ	103	MET
36	BQ	127	ILE
37	BR	11	ASN
37	BR	14	SER
37	BR	57	ARG
37	BR	104	ARG
38	BS	13	ARG
38	BS	47	THR
38	BS	48	LEU
38	BS	98	VAL
38	BS	100	ALA
38	BS	101	LEU
38	BS	106	ARG
39	BT	2	ASN
39	BT	30	VAL
39	BT	33	LYS
39	BT	37	GLY
39	BT	48	ILE
39	BT	68	TYR
39	BT	83	ILE
39	BT	107	ASP
40	BU	91	ASP
41	BV	14	VAL
41	BV	32	THR
41	BV	78	LYS
41	BV	81	TYR
41	BV	95	LEU
41	BV	96	ILE
42	BW	40	ASN
42	BW	74	ALA
42	BW	77	ASP
43	BX	12	VAL

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Mol	Chain	Res	Type
44	BY	32	PRO
44	BY	53	PRO
44	BY	98	VAL
44	BY	101	LYS
45	BZ	71	VAL
45	BZ	85	HIS
45	BZ	135	GLU
46	B0	33	ALA
46	B0	55	ARG
47	B1	17	SER
47	B1	18	ILE
47	B1	20	ARG
47	B1	47	GLN
47	B1	53	VAL
48	B2	50	ILE
49	B3	52	HIS
50	B4	29	PRO
50	B4	33	VAL
51	B5	35	GLU
51	B5	49	CYS
52	B6	8	LYS
52	B6	9	LEU
52	B6	17	LYS
52	B6	29	ASN
52	B6	33	LYS
53	B7	47	ARG
54	B8	34	TRP
1	CB	35	GLU
1	CB	76	GLN
1	CB	153	ARG
1	CB	202	PRO
1	CB	236	TYR
2	CC	49	SER
2	CC	127	ARG
2	CC	130	VAL
2	CC	207	VAL
3	CD	28	SER
3	CD	89	THR
3	CD	134	ASP
3	CD	166	LYS
3	CD	172	PRO
3	CD	175	SER

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Mol	Chain	Res	Type
4	CE	77	PRO
4	CE	78	HIS
4	CE	115	VAL
5	CF	100	ASN
7	CH	107	LEU
8	CI	35	GLU
9	CJ	55	LYS
10	CK	41	THR
10	CK	43	SER
10	CK	109	VAL
11	CL	7	ILE
11	CL	17	LYS
11	CL	22	SER
11	CL	39	VAL
11	CL	43	VAL
11	CL	47	LYS
11	CL	51	ALA
11	CL	56	ALA
11	CL	66	VAL
11	CL	94	PRO
11	CL	96	VAL
11	CL	104	VAL
11	CL	112	ASP
11	CL	123	LYS
12	CM	12	ASN
12	CM	21	TYR
13	CN	15	LYS
13	CN	49	HIS
13	CN	51	GLY
13	CN	56	VAL
13	CN	57	ARG
13	CN	59	ALA
15	CP	11	SER
15	CP	35	LYS
15	CP	36	ILE
16	CQ	28	PRO
16	CQ	83	ASP
17	CR	87	ARG
19	CT	50	GLU
19	CT	73	HIS
19	CT	100	ILE
20	CY	21	ILE

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Mol	Chain	Res	Type
20	CY	23	ALA
20	CY	35	TYR
20	CY	36	THR
20	CY	88	VAL
20	CY	92	ILE
20	CY	136	ALA
20	CY	161	PRO
20	CY	206	LEU
20	CY	269	VAL
20	CY	303	PRO
20	CY	330	VAL
20	CY	331	TYR
20	CY	359	HIS
20	CY	395	PRO
20	CY	501	THR
20	CY	535	PRO
20	CY	566	THR
20	CY	567	LEU
20	CY	631	ILE
20	CY	680	PRO
25	DC	17	PRO
25	DC	43	GLU
25	DC	53	ARG
25	DC	60	ARG
25	DC	80	LYS
25	DC	96	GLY
25	DC	116	ALA
25	DC	119	ASP
25	DC	141	PRO
25	DC	182	PRO
25	DC	211	ARG
25	DC	212	SER
25	DC	221	PRO
25	DC	227	PRO
25	DC	228	HIS
26	DD	3	VAL
26	DD	46	GLN
26	DD	52	ARG
26	DD	53	PHE
26	DD	90	ALA
26	DD	165	ILE
26	DD	166	GLN

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Mol	Chain	Res	Type
26	DD	231	HIS
26	DD	273	ARG
27	DE	12	THR
27	DE	35	GLN
27	DE	56	PRO
27	DE	68	ALA
27	DE	72	VAL
27	DE	74	PRO
27	DE	75	VAL
27	DE	144	ARG
28	DF	3	GLU
28	DF	48	THR
28	DF	66	PRO
28	DF	69	HIS
28	DF	84	VAL
28	DF	89	VAL
28	DF	158	THR
28	DF	171	PRO
28	DF	192	LEU
29	DG	30	GLU
29	DG	50	ALA
29	DG	113	ARG
29	DG	114	ILE
30	DH	109	PHE
30	DH	124	GLU
32	DK	5	VAL
32	DK	56	GLU
32	DK	89	HIS
33	DN	18	ALA
33	DN	28	THR
33	DN	31	ALA
33	DN	32	THR
33	DN	37	LYS
33	DN	38	HIS
33	DN	43	THR
33	DN	46	VAL
33	DN	50	ASP
33	DN	51	PHE
33	DN	54	VAL
33	DN	56	ASN
33	DN	57	ALA
33	DN	63	THR

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Mol	Chain	Res	Type
33	DN	66	LYS
33	DN	72	TYR
33	DN	74	ARG
33	DN	78	TYR
33	DN	83	LYS
33	DN	84	LYS
33	DN	86	PRO
33	DN	94	HIS
33	DN	95	PRO
33	DN	96	GLU
33	DN	98	VAL
33	DN	101	HIS
33	DN	106	MET
33	DN	107	LEU
33	DN	108	PRO
33	DN	115	ARG
33	DN	118	LYS
33	DN	128	HIS
33	DN	129	PRO
34	DO	24	VAL
34	DO	35	VAL
34	DO	68	GLU
35	DP	12	ALA
35	DP	50	ARG
35	DP	55	ARG
35	DP	57	THR
35	DP	68	GLN
35	DP	71	VAL
36	DQ	90	VAL
36	DQ	93	TYR
36	DQ	94	VAL
36	DQ	102	VAL
36	DQ	103	MET
38	DS	14	VAL
38	DS	23	ARG
38	DS	47	THR
38	DS	48	LEU
38	DS	53	SER
38	DS	94	TYR
38	DS	98	VAL
38	DS	101	LEU
38	DS	104	GLY

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Mol	Chain	Res	Type
38	DS	105	ALA
38	DS	106	ARG
38	DS	108	GLY
39	DT	12	SER
39	DT	30	VAL
39	DT	78	LEU
39	DT	80	SER
39	DT	83	ILE
39	DT	88	ILE
39	DT	104	ASN
39	DT	119	LYS
40	DU	91	ASP
40	DU	92	ARG
40	DU	99	ALA
40	DU	102	GLU
41	DV	46	VAL
41	DV	96	ILE
42	DW	73	ALA
42	DW	77	ASP
44	DY	6	HIS
44	DY	32	PRO
44	DY	53	PRO
44	DY	56	PRO
45	DZ	65	GLN
45	DZ	71	VAL
45	DZ	72	ARG
45	DZ	74	VAL
45	DZ	85	HIS
45	DZ	128	VAL
45	DZ	152	ALA
45	DZ	169	GLU
46	D0	35	ASN
46	D0	49	LYS
46	D0	55	ARG
47	D1	15	ALA
47	D1	34	THR
47	D1	36	GLY
47	D1	37	ILE
47	D1	40	ARG
48	D2	50	ILE
49	D3	27	GLY
50	D4	29	PRO

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Mol	Chain	Res	Type
51	D5	28	PRO
51	D5	49	CYS
52	D6	7	ILE
52	D6	16	CYS
52	D6	29	ASN
52	D6	31	PRO
52	D6	49	HIS
53	D7	8	ASN
53	D7	46	VAL
54	D8	32	LEU
54	D8	34	TRP
54	D8	35	GLN
54	D8	46	ARG
54	D8	49	VAL
56	De	52	ALA
56	De	120	ALA
1	AB	17	PHE
1	AB	35	GLU
1	AB	36	ARG
1	AB	103	THR
1	AB	157	ARG
1	AB	164	VAL
1	AB	165	VAL
1	AB	229	VAL
1	AB	236	TYR
2	AC	51	GLY
2	AC	55	VAL
2	AC	102	ASN
2	AC	207	VAL
3	AD	5	ILE
3	AD	73	ARG
3	AD	75	PHE
3	AD	99	SER
4	AE	6	PHE
4	AE	71	LEU
5	AF	13	ASN
5	AF	43	LEU
5	AF	100	ASN
6	AG	9	VAL
6	AG	114	ARG
7	AH	74	PRO
7	AH	107	LEU

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Mol	Chain	Res	Type
8	AI	29	ASN
8	AI	106	ALA
9	AJ	54	PHE
10	AK	42	TRP
10	AK	49	GLY
10	AK	88	GLY
10	AK	108	ILE
10	AK	111	ASP
10	AK	113	PRO
11	AL	6	THR
11	AL	29	GLY
11	AL	46	LYS
11	AL	50	SER
11	AL	56	ALA
11	AL	58	VAL
11	AL	96	VAL
12	AM	12	ASN
12	AM	67	GLU
12	AM	101	GLN
13	AN	14	PRO
13	AN	27	CYS
14	AO	47	LYS
15	AP	11	SER
15	AP	15	PRO
15	AP	68	ASP
16	AQ	55	ASP
17	AR	23	LYS
17	AR	59	SER
17	AR	87	ARG
18	AS	46	GLY
18	AS	48	THR
19	AT	11	SER
19	AT	71	THR
19	AT	100	ILE
20	AY	36	THR
20	AY	75	LYS
20	AY	89	ASP
20	AY	121	VAL
20	AY	123	ARG
20	AY	135	PHE
20	AY	161	PRO
20	AY	162	VAL

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Mol	Chain	Res	Type
20	AY	203	GLU
20	AY	266	ASN
20	AY	341	VAL
20	AY	437	THR
20	AY	466	LEU
20	AY	505	GLY
20	AY	565	VAL
20	AY	568	TYR
20	AY	654	GLY
20	AY	664	GLN
20	AY	675	HIS
25	BC	15	VAL
25	BC	18	ASN
25	BC	34	ALA
25	BC	57	GLN
25	BC	59	VAL
25	BC	65	LEU
25	BC	67	HIS
25	BC	81	GLY
25	BC	97	GLY
25	BC	118	PRO
25	BC	142	LYS
25	BC	213	VAL
25	BC	217	THR
25	BC	222	SER
25	BC	225	ILE
26	BD	38	LYS
26	BD	68	LYS
26	BD	78	LYS
26	BD	79	VAL
26	BD	90	ALA
26	BD	127	VAL
26	BD	165	ILE
26	BD	228	PRO
26	BD	237	GLU
26	BD	259	THR
27	BE	11	MET
27	BE	34	VAL
27	BE	124	GLY
27	BE	128	SER
27	BE	203	LYS
28	BF	5	ALA

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Mol	Chain	Res	Type
28	BF	8	GLN
28	BF	23	ASP
28	BF	84	VAL
28	BF	104	LYS
28	BF	190	GLU
28	BF	192	LEU
29	BG	82	LEU
30	BH	71	LEU
30	BH	101	ARG
30	BH	165	ALA
30	BH	175	LYS
32	BK	3	LYS
32	BK	76	TYR
32	BK	121	GLU
33	BN	18	ALA
33	BN	37	LYS
33	BN	45	ASN
33	BN	54	VAL
33	BN	57	ALA
33	BN	75	TYR
33	BN	79	PRO
33	BN	89	LYS
33	BN	96	GLU
33	BN	100	GLU
33	BN	104	LYS
33	BN	113	GLY
33	BN	126	PRO
33	BN	136	GLU
34	BO	5	GLN
34	BO	24	VAL
35	BP	17	LYS
35	BP	22	GLY
35	BP	28	GLY
35	BP	31	ALA
35	BP	50	ARG
35	BP	64	LYS
35	BP	71	VAL
36	BQ	27	VAL
36	BQ	54	MET
36	BQ	59	ARG
36	BQ	90	VAL
36	BQ	92	GLY

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Mol	Chain	Res	Type
37	BR	6	SER
37	BR	102	GLU
37	BR	116	LEU
38	BS	14	VAL
38	BS	23	ARG
38	BS	96	GLY
38	BS	104	GLY
38	BS	105	ALA
39	BT	3	ARG
39	BT	28	VAL
39	BT	32	TYR
39	BT	35	LYS
39	BT	50	ILE
39	BT	59	THR
39	BT	86	ILE
39	BT	104	ASN
40	BU	92	ARG
41	BV	43	GLU
41	BV	50	PRO
41	BV	55	ALA
41	BV	68	LYS
42	BW	12	ILE
44	BY	6	HIS
44	BY	41	GLY
44	BY	44	ILE
44	BY	77	PRO
44	BY	78	ALA
45	BZ	31	ARG
45	BZ	34	ASN
45	BZ	72	ARG
45	BZ	75	ASN
46	B0	84	LEU
47	B1	12	PRO
47	B1	15	ALA
47	B1	16	ASN
47	B1	21	ARG
47	B1	23	LYS
47	B1	64	ALA
47	B1	80	LEU
48	B2	43	GLN
48	B2	48	HIS
48	B2	49	LYS

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Mol	Chain	Res	Type
51	B5	48	GLU
52	B6	49	HIS
54	B8	19	SER
54	B8	36	LYS
54	B8	49	VAL
56	Be	54	ALA
56	Be	80	ALA
56	Be	81	ILE
56	Be	92	LEU
1	CB	96	ARG
1	CB	230	VAL
2	CC	103	VAL
3	CD	20	TYR
3	CD	52	SER
3	CD	173	TRP
4	CE	27	ARG
5	CF	69	GLU
5	CF	70	ASP
6	CG	114	ARG
7	CH	103	VAL
7	CH	109	ILE
8	CI	118	LYS
9	CJ	53	PRO
9	CJ	75	ILE
9	CJ	89	ASP
10	CK	88	GLY
10	CK	111	ASP
11	CL	35	GLY
11	CL	58	VAL
11	CL	91	LYS
11	CL	128	ALA
12	CM	10	PRO
12	CM	118	ALA
14	CO	47	LYS
15	CP	48	TRP
17	CR	37	VAL
17	CR	59	SER
18	CS	67	VAL
20	CY	5	VAL
20	CY	6	GLU
20	CY	90	PHE
20	CY	109	ASP

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Mol	Chain	Res	Type
20	CY	123	ARG
20	CY	183	MET
20	CY	266	ASN
20	CY	271	LEU
20	CY	343	ASN
20	CY	347	GLY
20	CY	396	ARG
20	CY	416	LYS
20	CY	437	THR
20	CY	471	LYS
20	CY	502	GLY
20	CY	557	GLY
20	CY	565	VAL
20	CY	568	TYR
25	DC	35	THR
25	DC	37	LYS
25	DC	42	VAL
25	DC	72	GLN
25	DC	75	VAL
25	DC	77	ALA
25	DC	81	GLY
25	DC	107	GLY
25	DC	115	VAL
25	DC	142	LYS
25	DC	162	ILE
25	DC	172	ILE
25	DC	222	SER
26	DD	24	ILE
26	DD	36	PRO
26	DD	43	ARG
26	DD	70	TRP
26	DD	79	VAL
26	DD	80	ALA
26	DD	125	ILE
26	DD	153	ALA
26	DD	222	ARG
27	DE	13	ARG
27	DE	61	ARG
27	DE	77	ILE
27	DE	86	PRO
27	DE	121	ASN
27	DE	128	SER

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Mol	Chain	Res	Type
27	DE	129	HIS
27	DE	187	ALA
27	DE	204	ALA
28	DF	5	ALA
28	DF	8	GLN
28	DF	25	PRO
28	DF	46	ARG
29	DG	24	GLY
29	DG	87	PRO
30	DH	37	VAL
30	DH	41	MET
30	DH	67	LEU
30	DH	123	PHE
30	DH	155	SER
30	DH	165	ALA
30	DH	166	GLY
30	DH	176	ALA
32	DK	6	ALA
32	DK	10	LEU
32	DK	30	HIS
32	DK	100	THR
32	DK	103	GLN
32	DK	105	LEU
33	DN	40	PRO
33	DN	42	TRP
33	DN	60	ILE
33	DN	71	ILE
33	DN	80	GLY
34	DO	14	THR
34	DO	69	ILE
35	DP	10	PRO
35	DP	11	GLY
35	DP	17	LYS
35	DP	45	LEU
35	DP	107	LYS
37	DR	72	ASP
37	DR	88	ARG
37	DR	101	ALA
38	DS	43	GLU
38	DS	100	ALA
39	DT	27	THR
39	DT	28	VAL

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Mol	Chain	Res	Type
39	DT	31	SER
39	DT	50	ILE
39	DT	70	VAL
39	DT	107	ASP
40	DU	88	ILE
41	DV	19	LYS
41	DV	22	VAL
41	DV	44	LYS
41	DV	50	PRO
41	DV	78	LYS
41	DV	80	GLN
41	DV	100	ARG
42	DW	15	ARG
42	DW	44	ALA
42	DW	109	GLU
43	DX	4	ALA
43	DX	33	LYS
44	DY	41	GLY
44	DY	63	LYS
44	DY	98	VAL
44	DY	107	ASP
45	DZ	5	LEU
45	DZ	76	LEU
45	DZ	81	ARG
45	DZ	90	VAL
45	DZ	95	PRO
45	DZ	151	HIS
47	D1	12	PRO
47	D1	20	ARG
47	D1	21	ARG
47	D1	23	LYS
47	D1	41	ARG
47	D1	52	ARG
47	D1	55	GLY
48	D2	48	HIS
49	D3	52	HIS
50	D4	7	PRO
50	D4	33	VAL
51	D5	48	GLU
51	D5	56	LYS
52	D6	9	LEU
52	D6	48	VAL

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Mol	Chain	Res	Type
53	D7	3	ARG
53	D7	7	PRO
54	D8	6	THR
54	D8	28	GLY
54	D8	30	ARG
54	D8	48	PHE
56	De	62	VAL
56	De	65	LYS
56	De	80	ALA
56	De	81	ILE
1	AB	8	LYS
1	AB	77	ALA
1	AB	206	ASP
2	AC	6	HIS
2	AC	10	PHE
2	AC	56	ASP
2	AC	91	LEU
2	AC	109	PRO
2	AC	112	SER
2	AC	181	ASN
3	AD	4	TYR
3	AD	27	TYR
3	AD	37	PRO
3	AD	110	PHE
3	AD	165	MET
3	AD	173	TRP
3	AD	181	MET
5	AF	51	PRO
8	AI	127	LYS
9	AJ	42	THR
9	AJ	55	LYS
9	AJ	83	GLU
9	AJ	94	VAL
10	AK	36	ASP
10	AK	102	GLY
11	AL	13	LYS
11	AL	14	GLY
11	AL	19	ARG
11	AL	35	GLY
11	AL	48	PRO
11	AL	51	ALA
11	AL	60	LEU

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Mol	Chain	Res	Type
11	AL	107	ALA
11	AL	115	LYS
12	AM	39	ILE
15	AP	83	GLU
16	AQ	14	LYS
16	AQ	67	LYS
17	AR	58	LEU
18	AS	11	VAL
18	AS	66	MET
18	AS	68	GLY
18	AS	77	THR
19	AT	90	GLN
19	AT	95	ALA
20	AY	6	GLU
20	AY	147	TRP
20	AY	193	GLY
20	AY	405	PRO
20	AY	433	GLU
20	AY	516	PRO
20	AY	535	PRO
20	AY	536	LYS
20	AY	539	ILE
20	AY	638	GLY
25	BC	39	ASP
25	BC	61	GLY
25	BC	167	ASP
25	BC	170	GLY
25	BC	175	PRO
25	BC	215	VAL
25	BC	224	ARG
26	BD	3	VAL
26	BD	9	TYR
26	BD	27	THR
26	BD	36	PRO
26	BD	52	ARG
26	BD	55	GLY
26	BD	80	ALA
26	BD	88	ARG
26	BD	144	ALA
26	BD	200	ASP
26	BD	239	ARG
26	BD	274	ARG

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Mol	Chain	Res	Type
26	BD	275	LYS
27	BE	187	ALA
28	BF	72	ARG
28	BF	89	VAL
28	BF	151	SER
28	BF	171	PRO
29	BG	12	TYR
29	BG	146	TYR
29	BG	151	ALA
30	BH	155	SER
30	BH	156	ALA
32	BK	63	ARG
32	BK	89	HIS
33	BN	24	GLY
33	BN	26	LEU
33	BN	74	ARG
33	BN	87	LEU
33	BN	105	GLY
33	BN	124	ALA
34	BO	6	THR
34	BO	64	ARG
35	BP	30	THR
35	BP	52	GLU
35	BP	67	MET
35	BP	141	ALA
36	BQ	4	PRO
36	BQ	14	ARG
36	BQ	82	ARG
36	BQ	135	ASP
37	BR	58	GLY
37	BR	105	ARG
38	BS	24	LEU
38	BS	56	LEU
38	BS	94	TYR
38	BS	108	GLY
39	BT	27	THR
39	BT	80	SER
40	BU	22	LYS
40	BU	36	ARG
41	BV	44	LYS
41	BV	80	GLN
42	BW	73	ALA

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Mol	Chain	Res	Type
42	BW	80	PRO
43	BX	32	PRO
43	BX	62	LYS
44	BY	26	LYS
44	BY	48	ALA
44	BY	97	ARG
45	BZ	22	GLY
45	BZ	73	GLN
45	BZ	93	ASP
45	BZ	95	PRO
45	BZ	168	GLU
46	B0	19	LYS
47	B1	43	TYR
47	B1	87	PRO
48	B2	17	SER
50	B4	7	PRO
52	B6	31	PRO
54	B8	6	THR
54	B8	51	ALA
54	B8	53	PRO
56	Be	52	ALA
56	Be	110	GLU
1	CB	17	PHE
1	CB	157	ARG
1	CB	164	VAL
1	CB	166	ASP
1	CB	210	SER
2	CC	10	PHE
2	CC	35	GLU
2	CC	102	ASN
2	CC	110	ASN
2	CC	112	SER
2	CC	158	GLY
2	CC	181	ASN
3	CD	47	ARG
3	CD	189	PRO
4	CE	10	MET
4	CE	12	LEU
5	CF	34	GLY
5	CF	54	LYS
5	CF	93	SER
6	CG	6	ARG

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Mol	Chain	Res	Type
6	CG	14	PRO
6	CG	15	ASP
6	CG	82	GLY
7	CH	72	PRO
8	CI	24	GLY
8	CI	115	GLY
9	CJ	32	ALA
10	CK	15	ALA
10	CK	35	PRO
10	CK	42	TRP
10	CK	124	LYS
10	CK	126	ARG
11	CL	46	LYS
11	CL	55	VAL
11	CL	65	GLU
11	CL	92	ASP
11	CL	98	TYR
11	CL	107	ALA
12	CM	101	GLN
12	CM	106	ASN
12	CM	121	LYS
14	CO	16	ALA
15	CP	66	PRO
16	CQ	12	SER
18	CS	80	TYR
20	CY	25	LYS
20	CY	91	THR
20	CY	116	PRO
20	CY	162	VAL
20	CY	175	SER
20	CY	257	PRO
20	CY	285	ASP
20	CY	345	THR
20	CY	353	ALA
20	CY	415	PRO
20	CY	436	PRO
20	CY	448	GLN
20	CY	539	ILE
20	CY	614	GLU
20	CY	628	ARG
20	CY	654	GLY
25	DC	18	ASN

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Mol	Chain	Res	Type
25	DC	21	TYR
25	DC	38	PHE
25	DC	59	VAL
25	DC	117	THR
25	DC	145	THR
25	DC	161	ARG
25	DC	167	ASP
25	DC	175	PRO
25	DC	178	LYS
25	DC	179	ALA
25	DC	224	ARG
26	DD	25	THR
26	DD	28	GLU
26	DD	89	SER
26	DD	144	ALA
27	DE	22	PRO
27	DE	43	GLY
27	DE	138	PRO
27	DE	177	PRO
27	DE	192	ASN
28	DF	12	LEU
28	DF	26	ALA
28	DF	60	SER
28	DF	73	ALA
28	DF	151	SER
28	DF	155	LEU
29	DG	32	PRO
29	DG	82	LEU
29	DG	84	LYS
29	DG	86	MET
30	DH	21	PRO
30	DH	47	GLU
30	DH	134	SER
30	DH	137	ASP
30	DH	173	PRO
32	DK	91	PRO
33	DN	41	ASP
33	DN	100	GLU
33	DN	111	PRO
33	DN	117	PHE
33	DN	121	LYS
33	DN	136	GLU

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Mol	Chain	Res	Type
34	DO	28	SER
34	DO	52	VAL
35	DP	39	LYS
35	DP	64	LYS
35	DP	106	LEU
36	DQ	4	PRO
37	DR	6	SER
37	DR	40	LYS
37	DR	92	GLY
37	DR	103	ARG
37	DR	104	ARG
38	DS	57	LYS
38	DS	59	LYS
38	DS	61	ASN
39	DT	3	ARG
39	DT	48	ILE
39	DT	87	ASP
39	DT	137	LYS
40	DU	30	LYS
42	DW	12	ILE
42	DW	14	PRO
42	DW	25	ARG
42	DW	61	ASN
42	DW	80	PRO
43	DX	32	PRO
43	DX	72	LYS
44	DY	27	VAL
44	DY	78	ALA
44	DY	80	GLY
45	DZ	30	ASN
45	DZ	75	ASN
45	DZ	78	LYS
45	DZ	135	GLU
45	DZ	168	GLU
45	DZ	177	PRO
46	D0	33	ALA
46	D0	73	GLY
47	D1	17	SER
48	D2	49	LYS
49	D3	16	PRO
50	D4	4	GLY
51	D5	58	LEU

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Mol	Chain	Res	Type
52	D6	15	GLU
53	D7	23	ARG
54	D8	18	ALA
54	D8	47	LYS
55	D9	11	CYS
56	De	54	ALA
56	De	60	PHE
56	De	93	ALA
1	AB	86	GLU
1	AB	130	ARG
1	AB	153	ARG
2	AC	35	GLU
2	AC	47	LEU
2	AC	48	TYR
2	AC	49	SER
2	AC	108	ASN
3	AD	29	PRO
3	AD	34	GLU
3	AD	134	ASP
5	AF	12	PRO
6	AG	69	VAL
7	AH	87	SER
7	AH	89	PRO
7	AH	103	VAL
8	AI	119	ALA
9	AJ	23	ILE
9	AJ	37	PRO
11	AL	47	LYS
11	AL	53	ARG
11	AL	91	LYS
12	AM	11	ARG
12	AM	118	ALA
12	AM	121	LYS
16	AQ	81	ARG
20	AY	74	TRP
20	AY	239	GLU
20	AY	262	SER
20	AY	380	LEU
20	AY	403	GLU
20	AY	416	LYS
20	AY	579	GLU
20	AY	604	PRO

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Mol	Chain	Res	Type
20	AY	681	LYS
25	BC	51	ASP
25	BC	60	ARG
25	BC	171	ALA
25	BC	176	VAL
26	BD	101	GLU
26	BD	108	PRO
26	BD	126	GLN
26	BD	147	LEU
26	BD	231	HIS
26	BD	244	ARG
27	BE	54	GLN
27	BE	86	PRO
27	BE	88	GLY
27	BE	189	PRO
27	BE	193	GLY
28	BF	9	ILE
28	BF	58	ALA
28	BF	149	ASP
28	BF	155	LEU
29	BG	111	LEU
30	BH	13	LYS
30	BH	37	VAL
30	BH	42	ARG
32	BK	16	LYS
32	BK	91	PRO
32	BK	102	GLU
34	BO	15	GLY
35	BP	39	LYS
35	BP	145	PRO
36	BQ	20	ALA
36	BQ	52	VAL
37	BR	28	LEU
37	BR	71	GLN
38	BS	15	ARG
38	BS	67	ARG
39	BT	24	PRO
39	BT	91	ARG
39	BT	93	ARG
40	BU	5	LYS
40	BU	93	LYS
41	BV	38	LEU

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Mol	Chain	Res	Type
42	BW	44	ALA
42	BW	65	LEU
43	BX	4	ALA
44	BY	11	ASP
44	BY	47	LYS
44	BY	63	LYS
44	BY	102	CYS
47	B1	28	GLY
47	B1	65	SER
48	B2	10	LEU
50	B4	16	CYS
51	B5	56	LYS
54	B8	20	GLY
54	B8	39	LYS
54	B8	64	TYR
2	CC	5	ILE
2	CC	12	LEU
2	CC	13	GLY
2	CC	29	TYR
2	CC	109	PRO
3	CD	34	GLU
3	CD	37	PRO
3	CD	167	GLY
3	CD	180	GLY
4	CE	11	ILE
4	CE	79	GLU
5	CF	96	PRO
6	CG	10	ARG
6	CG	69	VAL
6	CG	71	PRO
6	CG	72	ARG
7	CH	31	PHE
9	CJ	29	ARG
10	CK	44	SER
10	CK	113	PRO
11	CL	38	THR
11	CL	42	THR
11	CL	64	TYR
12	CM	39	ILE
12	CM	124	PRO
13	CN	3	ARG
16	CQ	68	ARG

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Mol	Chain	Res	Type
16	CQ	81	ARG
19	CT	95	ALA
20	CY	78	ARG
20	CY	135	PHE
20	CY	191	ASP
20	CY	224	ASP
20	CY	273	LEU
20	CY	397	VAL
20	CY	479	PRO
20	CY	503	GLY
20	CY	508	GLY
20	CY	516	PRO
20	CY	573	HIS
20	CY	637	ARG
20	CY	653	PHE
25	DC	16	ASP
25	DC	34	ALA
25	DC	65	LEU
25	DC	86	GLU
25	DC	113	ALA
25	DC	215	VAL
26	DD	68	LYS
26	DD	78	LYS
26	DD	198	ASN
26	DD	239	ARG
26	DD	244	ARG
27	DE	16	ARG
27	DE	70	ALA
27	DE	83	ASP
27	DE	98	PRO
27	DE	152	LYS
28	DF	67	GLN
28	DF	71	GLY
28	DF	165	ARG
29	DG	105	LYS
33	DN	53	VAL
33	DN	104	LYS
33	DN	120	LEU
34	DO	30	ALA
34	DO	64	ARG
34	DO	74	GLY
36	DQ	14	ARG

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Mol	Chain	Res	Type
36	DQ	87	LYS
37	DR	15	SER
37	DR	102	GLU
37	DR	116	LEU
38	DS	22	GLY
39	DT	26	ASP
39	DT	35	LYS
42	DW	75	TYR
43	DX	41	ASN
43	DX	67	GLY
44	DY	3	VAL
44	DY	77	PRO
45	DZ	143	GLY
47	D1	10	LYS
47	D1	32	LYS
47	D1	44	PRO
47	D1	53	VAL
47	D1	87	PRO
48	D2	17	SER
51	D5	4	HIS
51	D5	7	PRO
51	D5	23	HIS
51	D5	29	THR
51	D5	53	ALA
52	D6	18	ARG
52	D6	27	LYS
53	D7	9	ARG
55	D9	3	VAL
56	De	113	LYS
1	AB	131	PRO
2	AC	68	VAL
2	AC	103	VAL
2	AC	114	PRO
2	AC	192	THR
2	AC	193	TYR
3	AD	28	SER
3	AD	189	PRO
9	AJ	32	ALA
10	AK	43	SER
10	AK	118	GLY
11	AL	92	ASP
13	AN	13	THR

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Mol	Chain	Res	Type
17	AR	28	GLU
17	AR	77	GLY
18	AS	43	GLU
18	AS	80	TYR
19	AT	10	LEU
20	AY	88	VAL
20	AY	199	ILE
20	AY	257	PRO
20	AY	263	ALA
20	AY	314	PHE
20	AY	342	TYR
20	AY	348	ARG
20	AY	598	ASP
25	BC	76	LEU
25	BC	130	ARG
25	BC	172	ILE
25	BC	184	GLU
26	BD	28	GLU
26	BD	160	GLY
27	BE	141	ILE
28	BF	13	SER
28	BF	127	GLU
29	BG	44	GLY
29	BG	49	ASP
29	BG	167	GLU
30	BH	61	HIS
32	BK	30	HIS
32	BK	112	MET
32	BK	116	ASN
33	BN	108	PRO
33	BN	128	HIS
34	BO	96	THR
35	BP	78	PRO
35	BP	147	LEU
36	BQ	18	LYS
39	BT	82	LEU
39	BT	87	ASP
39	BT	88	ILE
40	BU	30	LYS
40	BU	88	ILE
42	BW	14	PRO
42	BW	61	ASN

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Mol	Chain	Res	Type
42	BW	63	ASP
43	BX	11	PRO
44	BY	79	CYS
45	BZ	74	VAL
45	BZ	159	PRO
45	BZ	165	VAL
46	B0	11	ARG
47	B1	34	THR
47	B1	37	ILE
51	B5	4	HIS
51	B5	54	GLY
52	B6	19	ARG
53	B7	9	ARG
54	B8	30	ARG
54	B8	61	LEU
55	B9	3	VAL
56	Be	61	ASP
3	CD	5	ILE
3	CD	40	PRO
3	CD	135	LEU
3	CD	197	PRO
4	CE	22	GLY
6	CG	34	GLY
7	CH	27	PRO
7	CH	35	ILE
7	CH	74	PRO
8	CI	127	LYS
10	CK	36	ASP
10	CK	55	LYS
11	CL	25	PRO
11	CL	50	SER
11	CL	54	LYS
11	CL	60	LEU
11	CL	115	LYS
12	CM	115	LYS
12	CM	116	THR
13	CN	13	THR
16	CQ	82	MET
17	CR	58	LEU
19	CT	34	LYS
20	CY	286	ILE
20	CY	301	ILE

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Mol	Chain	Res	Type
20	CY	341	VAL
20	CY	390	VAL
20	CY	537	GLU
20	CY	597	GLY
20	CY	604	PRO
20	CY	635	GLU
20	CY	681	LYS
25	DC	20	VAL
25	DC	36	ALA
25	DC	51	ASP
25	DC	54	ARG
25	DC	94	TYR
25	DC	210	LEU
25	DC	214	TYR
26	DD	55	GLY
26	DD	100	GLY
26	DD	123	ALA
27	DE	119	ARG
27	DE	135	HIS
29	DG	3	LEU
29	DG	142	PRO
30	DH	108	GLY
32	DK	55	VAL
32	DK	81	ALA
32	DK	101	TRP
32	DK	112	MET
33	DN	27	ALA
33	DN	58	ASP
33	DN	75	TYR
33	DN	126	PRO
35	DP	28	GLY
35	DP	34	GLY
35	DP	49	ARG
35	DP	52	GLU
35	DP	70	GLN
36	DQ	27	VAL
36	DQ	127	ILE
37	DR	117	VAL
39	DT	85	LYS
39	DT	86	ILE
40	DU	93	LYS
41	DV	16	PRO

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Mol	Chain	Res	Type
41	DV	55	ALA
43	DX	7	VAL
43	DX	62	LYS
44	DY	7	VAL
44	DY	48	ALA
44	DY	70	SER
44	DY	79	CYS
44	DY	103	GLY
45	DZ	40	ASP
45	DZ	166	SER
51	D5	24	ALA
52	D6	33	LYS
53	D7	40	TRP
54	D8	51	ALA
56	De	67	ALA
1	AB	226	ARG
6	AG	15	ASP
10	AK	78	GLN
11	AL	18	VAL
15	AP	63	GLY
18	AS	45	VAL
25	BC	75	VAL
25	BC	138	LEU
25	BC	139	PRO
26	BD	29	PRO
26	BD	241	PRO
27	BE	30	PRO
27	BE	83	ASP
28	BF	71	GLY
32	BK	86	LYS
33	BN	111	PRO
33	BN	134	ARG
37	BR	61	HIS
37	BR	93	GLY
39	BT	12	SER
39	BT	49	VAL
39	BT	70	VAL
43	BX	74	PRO
45	BZ	82	ARG
45	BZ	128	VAL
47	B1	66	HIS
49	B3	57	GLU

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Mol	Chain	Res	Type
50	B4	10	VAL
51	B5	7	PRO
52	B6	27	LYS
53	B7	44	PRO
3	CD	171	GLY
6	CG	88	PRO
8	CI	22	GLY
9	CJ	82	ILE
10	CK	107	SER
11	CL	40	VAL
11	CL	80	HIS
20	CY	172	ASP
20	CY	288	PRO
20	CY	498	ILE
25	DC	114	VAL
25	DC	118	PRO
25	DC	140	ASN
25	DC	143	ALA
25	DC	218	THR
26	DD	219	PRO
28	DF	61	GLY
30	DH	177	GLY
32	DK	63	ARG
33	DN	79	PRO
33	DN	105	GLY
34	DO	3	GLN
35	DP	148	LEU
39	DT	49	VAL
39	DT	91	ARG
40	DU	76	TYR
41	DV	29	PRO
41	DV	41	GLY
43	DX	39	ILE
44	DY	9	LYS
44	DY	101	LYS
45	DZ	93	ASP
45	DZ	146	ILE
47	D1	38	SER
55	D9	10	ILE
1	AB	127	ILE
2	AC	70	VAL
2	AC	148	GLY

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Mol	Chain	Res	Type
3	AD	44	GLY
3	AD	88	VAL
3	AD	133	VAL
6	AG	14	PRO
11	AL	110	VAL
20	AY	15	ILE
20	AY	143	GLY
25	BC	146	VAL
25	BC	223	VAL
26	BD	271	ILE
30	BH	141	VAL
30	BH	173	PRO
34	BO	35	VAL
36	BQ	94	VAL
37	BR	117	VAL
38	BS	85	VAL
43	BX	7	VAL
44	BY	18	GLY
45	BZ	15	PRO
56	Be	68	GLY
7	CH	73	ASP
10	CK	45	GLY
11	CL	45	PRO
11	CL	125	PRO
13	CN	28	GLY
20	CY	258	VAL
20	CY	638	GLY
20	CY	665	GLY
28	DF	178	PRO
29	DG	89	GLY
30	DH	141	VAL
43	DX	86	GLY
45	DZ	22	GLY
45	DZ	83	PRO
45	DZ	108	PRO
51	D5	57	VAL
56	De	53	PRO
2	AC	81	GLY
3	AD	167	GLY
4	AE	67	VAL
5	AF	56	PRO
9	AJ	49	VAL

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Mol	Chain	Res	Type
12	AM	4	ILE
12	AM	10	PRO
20	AY	308	PRO
20	AY	397	VAL
25	BC	50	ILE
26	BD	236	GLY
32	BK	21	PRO
33	BN	53	VAL
34	BO	4	PRO
40	BU	73	GLY
41	BV	79	VAL
42	BW	76	VAL
1	CB	159	PRO
1	CB	194	PRO
2	CC	51	GLY
2	CC	70	VAL
10	CK	37	GLY
14	CO	23	GLY
18	CS	72	GLY
25	DC	139	PRO
34	DO	48	PRO
41	DV	15	GLU
42	DW	112	GLY
43	DX	11	PRO
43	DX	54	VAL
54	D8	53	PRO
3	AD	142	PRO
6	AG	93	PRO
7	AH	51	VAL
8	AI	39	GLY
11	AL	82	VAL
15	AP	46	PRO
20	AY	303	PRO
27	BE	43	GLY
33	BN	71	ILE
35	BP	37	GLY
37	BR	106	GLY
40	BU	23	GLY
41	BV	72	VAL
44	BY	3	VAL
44	BY	10	GLY
45	BZ	177	PRO

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Mol	Chain	Res	Type
1	CB	165	VAL
3	CD	142	PRO
4	CE	67	VAL
6	CG	13	GLN
11	CL	18	VAL
15	CP	30	GLY
15	CP	63	GLY
20	CY	398	ILE
25	DC	181	PHE
26	DD	51	VAL
26	DD	118	VAL
26	DD	223	GLY
28	DF	24	LEU
28	DF	173	VAL
30	DH	48	GLY
32	DK	140	GLY
33	DN	103	VAL
36	DQ	24	GLY
37	DR	58	GLY
39	DT	24	PRO
43	DX	52	VAL
7	AH	131	GLY
11	AL	87	GLY
20	AY	269	VAL
36	BQ	132	VAL
39	BT	20	PRO
1	CB	229	VAL
2	CC	145	GLY
5	CF	26	ILE
27	DE	59	VAL
28	DF	86	GLY
29	DG	68	PRO
35	DP	69	GLY
39	DT	34	VAL
50	D4	11	PRO
54	D8	20	GLY
56	De	121	VAL
7	AH	35	ILE
7	AH	101	PRO
9	AJ	93	GLY
12	AM	117	VAL
20	AY	415	PRO

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Mol	Chain	Res	Type
1	CB	228	GLY
5	CF	72	VAL
7	CH	89	PRO
20	CY	559	PRO
28	DF	14	PRO
35	DP	9	ASN
38	DS	90	GLY
43	DX	94	GLY
45	DZ	165	VAL
51	D5	54	GLY
35	DP	48	PRO
32	DK	22	PRO
27	BE	147	PRO
35	BP	48	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	
1	AB	203/203 (100%)	168 (83%)	35 (17%)	2	13
1	CB	203/203 (100%)	156 (77%)	47 (23%)	1	5
2	AC	161/161 (100%)	130 (81%)	31 (19%)	1	9
2	CC	161/161 (100%)	125 (78%)	36 (22%)	1	5
3	AD	180/180 (100%)	146 (81%)	34 (19%)	1	10
3	CD	180/180 (100%)	150 (83%)	30 (17%)	2	13
4	AE	116/116 (100%)	93 (80%)	23 (20%)	1	8
4	CE	116/116 (100%)	90 (78%)	26 (22%)	1	5
5	AF	90/90 (100%)	74 (82%)	16 (18%)	2	12
5	CF	90/90 (100%)	75 (83%)	15 (17%)	2	13
6	AG	126/126 (100%)	107 (85%)	19 (15%)	3	16
6	CG	126/126 (100%)	110 (87%)	16 (13%)	4	21
7	AH	119/119 (100%)	99 (83%)	20 (17%)	2	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
7	CH	119/119 (100%)	89 (75%)	30 (25%)	0	3
8	AI	98/98 (100%)	81 (83%)	17 (17%)	2	12
8	CI	98/98 (100%)	77 (79%)	21 (21%)	1	6
9	AJ	89/89 (100%)	71 (80%)	18 (20%)	1	8
9	CJ	89/89 (100%)	68 (76%)	21 (24%)	1	5
10	AK	90/90 (100%)	79 (88%)	11 (12%)	5	21
10	CK	90/90 (100%)	74 (82%)	16 (18%)	2	12
11	AL	104/104 (100%)	82 (79%)	22 (21%)	1	6
11	CL	104/104 (100%)	80 (77%)	24 (23%)	1	5
12	AM	100/100 (100%)	83 (83%)	17 (17%)	2	13
12	CM	100/100 (100%)	78 (78%)	22 (22%)	1	5
13	AN	49/49 (100%)	39 (80%)	10 (20%)	1	7
13	CN	49/49 (100%)	36 (74%)	13 (26%)	0	3
14	AO	79/79 (100%)	59 (75%)	20 (25%)	0	3
14	CO	79/79 (100%)	70 (89%)	9 (11%)	5	23
15	AP	72/72 (100%)	68 (94%)	4 (6%)	19	45
15	CP	72/72 (100%)	60 (83%)	12 (17%)	2	13
16	AQ	95/95 (100%)	76 (80%)	19 (20%)	1	8
16	CQ	95/95 (100%)	79 (83%)	16 (17%)	2	13
17	AR	61/61 (100%)	47 (77%)	14 (23%)	1	5
17	CR	61/61 (100%)	53 (87%)	8 (13%)	4	20
18	AS	69/69 (100%)	52 (75%)	17 (25%)	1	4
18	CS	69/69 (100%)	48 (70%)	21 (30%)	0	1
19	AT	76/76 (100%)	61 (80%)	15 (20%)	1	8
19	CT	76/76 (100%)	57 (75%)	19 (25%)	0	4
20	AY	558/579 (96%)	446 (80%)	112 (20%)	1	8
20	CY	558/579 (96%)	440 (79%)	118 (21%)	1	6
25	BC	180/180 (100%)	128 (71%)	52 (29%)	0	2
25	DC	180/180 (100%)	140 (78%)	40 (22%)	1	5
26	BD	217/217 (100%)	176 (81%)	41 (19%)	1	10
26	DD	217/217 (100%)	169 (78%)	48 (22%)	1	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
27	BE	165/165 (100%)	134 (81%)	31 (19%)	1	10
27	DE	165/165 (100%)	127 (77%)	38 (23%)	1	5
28	BF	165/165 (100%)	128 (78%)	37 (22%)	1	5
28	DF	165/165 (100%)	130 (79%)	35 (21%)	1	6
29	BG	155/155 (100%)	139 (90%)	16 (10%)	7	27
29	DG	155/155 (100%)	129 (83%)	26 (17%)	2	13
30	BH	136/136 (100%)	110 (81%)	26 (19%)	1	9
30	DH	136/136 (100%)	116 (85%)	20 (15%)	3	17
32	BK	105/105 (100%)	78 (74%)	27 (26%)	0	3
32	DK	105/105 (100%)	80 (76%)	25 (24%)	1	5
33	BN	118/118 (100%)	83 (70%)	35 (30%)	0	2
33	DN	118/118 (100%)	76 (64%)	42 (36%)	0	0
34	BO	100/100 (100%)	76 (76%)	24 (24%)	1	4
34	DO	100/100 (100%)	83 (83%)	17 (17%)	2	13
35	BP	112/112 (100%)	87 (78%)	25 (22%)	1	5
35	DP	112/112 (100%)	87 (78%)	25 (22%)	1	5
36	BQ	111/111 (100%)	77 (69%)	34 (31%)	0	1
36	DQ	111/111 (100%)	93 (84%)	18 (16%)	2	14
37	BR	100/100 (100%)	83 (83%)	17 (17%)	2	13
37	DR	100/100 (100%)	75 (75%)	25 (25%)	0	4
38	BS	77/77 (100%)	63 (82%)	14 (18%)	2	12
38	DS	77/77 (100%)	58 (75%)	19 (25%)	1	4
39	BT	120/120 (100%)	93 (78%)	27 (22%)	1	5
39	DT	120/120 (100%)	91 (76%)	29 (24%)	1	4
40	BU	93/93 (100%)	78 (84%)	15 (16%)	2	14
40	DU	93/93 (100%)	75 (81%)	18 (19%)	1	9
41	BV	82/82 (100%)	59 (72%)	23 (28%)	0	2
41	DV	82/82 (100%)	61 (74%)	21 (26%)	0	3
42	BW	92/92 (100%)	79 (86%)	13 (14%)	3	18
42	DW	92/92 (100%)	69 (75%)	23 (25%)	0	4
43	BX	75/75 (100%)	59 (79%)	16 (21%)	1	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
43	DX	75/75 (100%)	58 (77%)	17 (23%)	1	5
44	BY	88/88 (100%)	61 (69%)	27 (31%)	0	1
44	DY	88/88 (100%)	73 (83%)	15 (17%)	2	13
45	BZ	162/162 (100%)	131 (81%)	31 (19%)	1	9
45	DZ	162/162 (100%)	132 (82%)	30 (18%)	1	11
46	B0	66/66 (100%)	55 (83%)	11 (17%)	2	13
46	D0	66/66 (100%)	51 (77%)	15 (23%)	1	5
47	B1	78/78 (100%)	54 (69%)	24 (31%)	0	1
47	D1	78/78 (100%)	57 (73%)	21 (27%)	0	3
48	B2	66/66 (100%)	54 (82%)	12 (18%)	2	12
48	D2	66/66 (100%)	57 (86%)	9 (14%)	3	18
49	B3	52/52 (100%)	45 (86%)	7 (14%)	4	19
49	D3	52/52 (100%)	45 (86%)	7 (14%)	4	19
50	B4	31/31 (100%)	22 (71%)	9 (29%)	0	2
50	D4	31/31 (100%)	22 (71%)	9 (29%)	0	2
51	B5	51/51 (100%)	39 (76%)	12 (24%)	1	5
51	D5	51/51 (100%)	46 (90%)	5 (10%)	7	29
52	B6	49/49 (100%)	34 (69%)	15 (31%)	0	1
52	D6	49/49 (100%)	30 (61%)	19 (39%)	0	0
53	B7	42/42 (100%)	35 (83%)	7 (17%)	2	13
53	D7	42/42 (100%)	35 (83%)	7 (17%)	2	13
54	B8	54/54 (100%)	46 (85%)	8 (15%)	3	16
54	D8	54/54 (100%)	44 (82%)	10 (18%)	1	11
55	B9	34/34 (100%)	25 (74%)	9 (26%)	0	3
55	D9	34/34 (100%)	31 (91%)	3 (9%)	9	33
56	Be	54/54 (100%)	44 (82%)	10 (18%)	1	11
56	De	54/54 (100%)	45 (83%)	9 (17%)	2	13
All	All	11130/11172 (100%)	8836 (79%)	2294 (21%)	1	7

All (2294) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AB	8	LYS

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Mol	Chain	Res	Type
1	AB	9	GLU
1	AB	15	VAL
1	AB	17	PHE
1	AB	33	TYR
1	AB	36	ARG
1	AB	63	MET
1	AB	68	ILE
1	AB	69	LEU
1	AB	75	LYS
1	AB	87	ARG
1	AB	96	ARG
1	AB	103	THR
1	AB	113	HIS
1	AB	129	GLU
1	AB	146	GLN
1	AB	155	LEU
1	AB	158	LEU
1	AB	162	ILE
1	AB	165	VAL
1	AB	168	THR
1	AB	172	ILE
1	AB	176	GLU
1	AB	185	ILE
1	AB	191	ASP
1	AB	195	ASP
1	AB	196	LEU
1	AB	200	ILE
1	AB	205	ASP
1	AB	215	LEU
1	AB	216	SER
1	AB	221	LEU
1	AB	222	ILE
1	AB	230	VAL
1	AB	239	VAL
2	AC	6	HIS
2	AC	8	ILE
2	AC	15	THR
2	AC	20	SER
2	AC	26	LYS
2	AC	31	HIS
2	AC	34	LEU
2	AC	46	GLU

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Mol	Chain	Res	Type
2	AC	55	VAL
2	AC	69	HIS
2	AC	70	VAL
2	AC	76	VAL
2	AC	79	ARG
2	AC	87	LEU
2	AC	90	GLU
2	AC	105	GLU
2	AC	107	GLN
2	AC	115	LEU
2	AC	124	ILE
2	AC	125	GLU
2	AC	134	ILE
2	AC	139	GLN
2	AC	152	ILE
2	AC	156	ARG
2	AC	167	TRP
2	AC	173	VAL
2	AC	176	HIS
2	AC	177	THR
2	AC	179	ARG
2	AC	188	LEU
2	AC	204	LEU
3	AD	8	VAL
3	AD	12	CYS
3	AD	24	GLU
3	AD	28	SER
3	AD	33	MET
3	AD	36	ARG
3	AD	42	GLN
3	AD	43	HIS
3	AD	45	GLN
3	AD	49	ARG
3	AD	53	ASP
3	AD	54	TYR
3	AD	56	VAL
3	AD	60	GLU
3	AD	67	ILE
3	AD	72	GLU
3	AD	76	ARG
3	AD	84	LYS
3	AD	86	LYS

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Mol	Chain	Res	Type
3	AD	97	LEU
3	AD	101	LEU
3	AD	114	ARG
3	AD	116	GLN
3	AD	127	THR
3	AD	138	TYR
3	AD	140	VAL
3	AD	148	VAL
3	AD	156	GLU
3	AD	157	LEU
3	AD	187	ARG
3	AD	196	LEU
3	AD	200	GLU
3	AD	206	PHE
3	AD	207	TYR
4	AE	12	LEU
4	AE	13	ILE
4	AE	19	MET
4	AE	24	ARG
4	AE	31	LEU
4	AE	37	ARG
4	AE	41	VAL
4	AE	47	LYS
4	AE	60	TYR
4	AE	61	TYR
4	AE	64	ARG
4	AE	69	VAL
4	AE	72	GLN
4	AE	78	HIS
4	AE	80	ILE
4	AE	81	GLU
4	AE	87	SER
4	AE	89	ILE
4	AE	91	LEU
4	AE	119	LEU
4	AE	120	THR
4	AE	137	GLU
4	AE	150	ARG
5	AF	1	MET
5	AF	10	LEU
5	AF	22	GLU
5	AF	31	GLU

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Mol	Chain	Res	Type
5	AF	40	VAL
5	AF	45	LEU
5	AF	46	ARG
5	AF	50	TYR
5	AF	52	ILE
5	AF	55	ASP
5	AF	61	LEU
5	AF	69	GLU
5	AF	74	ASP
5	AF	89	MET
5	AF	91	VAL
5	AF	100	ASN
6	AG	5	ARG
6	AG	9	VAL
6	AG	13	GLN
6	AG	20	ASP
6	AG	31	MET
6	AG	35	LYS
6	AG	36	LYS
6	AG	51	GLN
6	AG	69	VAL
6	AG	75	VAL
6	AG	80	VAL
6	AG	91	VAL
6	AG	97	GLN
6	AG	102	ARG
6	AG	104	LEU
6	AG	122	HIS
6	AG	136	LYS
6	AG	143	ARG
6	AG	153	HIS
7	AH	10	LEU
7	AH	26	VAL
7	AH	30	ARG
7	AH	38	ILE
7	AH	39	LEU
7	AH	63	LEU
7	AH	77	GLU
7	AH	82	HIS
7	AH	83	ILE
7	AH	85	ARG
7	AH	93	VAL

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Mol	Chain	Res	Type
7	AH	95	VAL
7	AH	102	ARG
7	AH	104	ARG
7	AH	107	LEU
7	AH	111	ILE
7	AH	114	THR
7	AH	120	THR
7	AH	137	VAL
7	AH	138	TRP
8	AI	4	TYR
8	AI	14	VAL
8	AI	31	GLN
8	AI	35	GLU
8	AI	38	GLN
8	AI	78	LYS
8	AI	79	LEU
8	AI	88	TYR
8	AI	89	ASN
8	AI	91	ASP
8	AI	93	ARG
8	AI	95	LYS
8	AI	104	ARG
8	AI	108	VAL
8	AI	118	LYS
8	AI	126	SER
8	AI	127	LYS
9	AJ	6	ILE
9	AJ	8	LEU
9	AJ	13	HIS
9	AJ	14	LYS
9	AJ	16	LEU
9	AJ	22	LYS
9	AJ	33	GLN
9	AJ	38	ILE
9	AJ	40	LEU
9	AJ	55	LYS
9	AJ	58	ASP
9	AJ	64	GLU
9	AJ	74	ILE
9	AJ	75	ILE
9	AJ	79	ARG
9	AJ	81	THR

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Mol	Chain	Res	Type
9	AJ	96	ILE
9	AJ	101	VAL
10	AK	14	VAL
10	AK	18	ARG
10	AK	40	ILE
10	AK	44	SER
10	AK	50	TYR
10	AK	57	THR
10	AK	62	GLN
10	AK	66	LEU
10	AK	104	GLN
10	AK	109	VAL
10	AK	124	LYS
11	AL	8	ASN
11	AL	17	LYS
11	AL	18	VAL
11	AL	20	LYS
11	AL	37	CYS
11	AL	42	THR
11	AL	43	VAL
11	AL	52	LEU
11	AL	53	ARG
11	AL	54	LYS
11	AL	55	VAL
11	AL	59	ARG
11	AL	66	VAL
11	AL	76	ASN
11	AL	77	LEU
11	AL	79	GLU
11	AL	85	ILE
11	AL	93	LEU
11	AL	102	ARG
11	AL	104	VAL
11	AL	110	VAL
11	AL	116	SER
12	AM	12	ASN
12	AM	15	VAL
12	AM	16	ASP
12	AM	19	LEU
12	AM	21	TYR
12	AM	34	LEU
12	AM	48	LEU

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Mol	Chain	Res	Type
12	AM	55	ARG
12	AM	56	LEU
12	AM	57	ARG
12	AM	81	LEU
12	AM	99	ARG
12	AM	108	ARG
12	AM	111	LYS
12	AM	115	LYS
12	AM	125	ARG
12	AM	126	LYS
13	AN	16	PHE
13	AN	22	THR
13	AN	25	VAL
13	AN	27	CYS
13	AN	35	ARG
13	AN	40	CYS
13	AN	43	CYS
13	AN	47	LEU
13	AN	53	LEU
13	AN	61	TRP
14	AO	6	GLU
14	AO	13	GLN
14	AO	17	ARG
14	AO	25	THR
14	AO	26	GLU
14	AO	27	VAL
14	AO	31	LEU
14	AO	35	ARG
14	AO	37	ASN
14	AO	39	LEU
14	AO	46	HIS
14	AO	47	LYS
14	AO	51	HIS
14	AO	58	MET
14	AO	63	ARG
14	AO	66	LEU
14	AO	71	GLN
14	AO	83	GLU
14	AO	87	ILE
14	AO	88	ARG
15	AP	2	VAL
15	AP	27	LYS

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Mol	Chain	Res	Type
15	AP	44	THR
15	AP	75	ARG
16	AQ	11	VAL
16	AQ	13	ASP
16	AQ	16	GLN
16	AQ	20	THR
16	AQ	22	LEU
16	AQ	23	VAL
16	AQ	32	TYR
16	AQ	36	ILE
16	AQ	37	LYS
16	AQ	52	LYS
16	AQ	55	ASP
16	AQ	63	ARG
16	AQ	74	LEU
16	AQ	76	LEU
16	AQ	78	GLU
16	AQ	81	ARG
16	AQ	83	ASP
16	AQ	89	LEU
16	AQ	101	ARG
17	AR	23	LYS
17	AR	26	LEU
17	AR	34	TYR
17	AR	37	VAL
17	AR	38	GLU
17	AR	40	LEU
17	AR	44	LEU
17	AR	50	ILE
17	AR	61	LYS
17	AR	75	ILE
17	AR	81	PHE
17	AR	82	THR
17	AR	85	LEU
17	AR	86	VAL
18	AS	5	LEU
18	AS	6	LYS
18	AS	16	LEU
18	AS	22	LEU
18	AS	23	ASN
18	AS	33	THR
18	AS	38	SER

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Mol	Chain	Res	Type
18	AS	41	VAL
18	AS	43	GLU
18	AS	51	VAL
18	AS	57	HIS
18	AS	62	ILE
18	AS	63	THR
18	AS	66	MET
18	AS	71	LEU
18	AS	77	THR
18	AS	81	ARG
19	AT	10	LEU
19	AT	13	LEU
19	AT	21	LYS
19	AT	23	ARG
19	AT	26	ASN
19	AT	38	LYS
19	AT	42	GLN
19	AT	53	LEU
19	AT	62	LEU
19	AT	71	THR
19	AT	73	HIS
19	AT	74	LYS
19	AT	84	LEU
19	AT	85	MET
19	AT	92	LEU
20	AY	9	LEU
20	AY	10	LYS
20	AY	15	ILE
20	AY	20	HIS
20	AY	21	ILE
20	AY	26	THR
20	AY	33	LEU
20	AY	34	TYR
20	AY	39	ILE
20	AY	72	CYS
20	AY	84	THR
20	AY	89	ASP
20	AY	90	PHE
20	AY	92	ILE
20	AY	94	VAL
20	AY	98	MET
20	AY	106	VAL

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Mol	Chain	Res	Type
20	AY	126	GLU
20	AY	132	ARG
20	AY	133	ILE
20	AY	139	MET
20	AY	140	ASP
20	AY	146	LEU
20	AY	152	THR
20	AY	153	MET
20	AY	156	ARG
20	AY	170	ARG
20	AY	174	PHE
20	AY	177	ILE
20	AY	178	ILE
20	AY	187	THR
20	AY	197	ARG
20	AY	199	ILE
20	AY	201	ILE
20	AY	223	PHE
20	AY	238	THR
20	AY	240	GLU
20	AY	241	GLU
20	AY	255	ILE
20	AY	258	VAL
20	AY	260	LEU
20	AY	273	LEU
20	AY	277	VAL
20	AY	278	ASP
20	AY	284	LEU
20	AY	286	ILE
20	AY	295	GLU
20	AY	300	GLU
20	AY	301	ILE
20	AY	317	MET
20	AY	328	ILE
20	AY	341	VAL
20	AY	344	THR
20	AY	348	ARG
20	AY	352	VAL
20	AY	355	LEU
20	AY	356	LEU
20	AY	358	MET
20	AY	398	ILE

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Mol	Chain	Res	Type
20	AY	406	GLU
20	AY	410	ASP
20	AY	417	THR
20	AY	420	ASP
20	AY	421	GLN
20	AY	425	SER
20	AY	428	LEU
20	AY	431	LEU
20	AY	443	HIS
20	AY	451	ILE
20	AY	454	MET
20	AY	457	LEU
20	AY	461	ILE
20	AY	465	ARG
20	AY	481	VAL
20	AY	483	TYR
20	AY	487	ILE
20	AY	504	ARG
20	AY	510	VAL
20	AY	512	ILE
20	AY	514	VAL
20	AY	526	VAL
20	AY	527	ASN
20	AY	529	ILE
20	AY	534	ILE
20	AY	542	VAL
20	AY	543	GLN
20	AY	550	MET
20	AY	556	ILE
20	AY	565	VAL
20	AY	567	LEU
20	AY	568	TYR
20	AY	572	TYR
20	AY	576	ASP
20	AY	583	LYS
20	AY	588	MET
20	AY	598	ASP
20	AY	615	GLU
20	AY	616	TYR
20	AY	617	MET
20	AY	624	LEU
20	AY	632	LEU

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Mol	Chain	Res	Type
20	AY	635	GLU
20	AY	646	PHE
20	AY	647	VAL
20	AY	652	MET
20	AY	657	THR
20	AY	671	MET
20	AY	676	TYR
20	AY	677	GLN
20	AY	679	VAL
20	AY	682	GLN
20	AY	685	GLU
25	BC	3	LYS
25	BC	4	HIS
25	BC	9	ARG
25	BC	12	LEU
25	BC	15	VAL
25	BC	18	ASN
25	BC	31	LYS
25	BC	38	PHE
25	BC	39	ASP
25	BC	41	THR
25	BC	48	LEU
25	BC	50	ILE
25	BC	53	ARG
25	BC	57	GLN
25	BC	59	VAL
25	BC	62	THR
25	BC	63	VAL
25	BC	67	HIS
25	BC	86	GLU
25	BC	101	ILE
25	BC	110	ASP
25	BC	114	VAL
25	BC	117	THR
25	BC	120	VAL
25	BC	124	VAL
25	BC	128	LEU
25	BC	138	LEU
25	BC	142	LYS
25	BC	146	VAL
25	BC	148	PHE
25	BC	150	ILE

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Mol	Chain	Res	Type
25	BC	152	GLU
25	BC	154	ILE
25	BC	164	PHE
25	BC	165	ARG
25	BC	166	ASN
25	BC	167	ASP
25	BC	169	THR
25	BC	172	ILE
25	BC	173	HIS
25	BC	176	VAL
25	BC	178	LYS
25	BC	182	PRO
25	BC	193	PHE
25	BC	198	GLU
25	BC	201	LYS
25	BC	203	GLU
25	BC	206	LYS
25	BC	216	THR
25	BC	218	THR
25	BC	219	MET
25	BC	225	ILE
26	BD	4	LYS
26	BD	5	LYS
26	BD	10	THR
26	BD	14	ARG
26	BD	24	ILE
26	BD	25	THR
26	BD	26	LYS
26	BD	30	GLU
26	BD	37	LEU
26	BD	43	ARG
26	BD	45	ASN
26	BD	49	ILE
26	BD	51	VAL
26	BD	64	ILE
26	BD	65	ILE
26	BD	78	LYS
26	BD	82	ILE
26	BD	87	ASN
26	BD	92	ILE
26	BD	96	HIS
26	BD	97	TYR

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Mol	Chain	Res	Type
26	BD	105	ILE
26	BD	126	GLN
26	BD	131	LEU
26	BD	136	ILE
26	BD	140	THR
26	BD	142	VAL
26	BD	143	HIS
26	BD	161	THR
26	BD	165	ILE
26	BD	175	LEU
26	BD	177	LEU
26	BD	179	SER
26	BD	186	HIS
26	BD	190	TYR
26	BD	192	THR
26	BD	193	VAL
26	BD	196	VAL
26	BD	211	ARG
26	BD	221	VAL
26	BD	252	TRP
27	BE	1	MET
27	BE	4	ILE
27	BE	9	VAL
27	BE	13	ARG
27	BE	26	ILE
27	BE	52	LEU
27	BE	54	GLN
27	BE	58	ARG
27	BE	61	ARG
27	BE	63	LEU
27	BE	67	PHE
27	BE	72	VAL
27	BE	77	ILE
27	BE	78	LEU
27	BE	79	ARG
27	BE	89	ASP
27	BE	93	VAL
27	BE	95	ILE
27	BE	107	THR
27	BE	111	ARG
27	BE	113	PHE
27	BE	116	VAL

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Mol	Chain	Res	Type
27	BE	121	ASN
27	BE	132	HIS
27	BE	137	HIS
27	BE	156	MET
27	BE	159	HIS
27	BE	174	ASP
27	BE	180	ASN
27	BE	197	ILE
27	BE	201	THR
28	BF	2	LYS
28	BF	6	VAL
28	BF	7	TYR
28	BF	12	LEU
28	BF	17	ARG
28	BF	20	LEU
28	BF	24	LEU
28	BF	45	ARG
28	BF	70	THR
28	BF	74	ARG
28	BF	84	VAL
28	BF	89	VAL
28	BF	100	THR
28	BF	104	LYS
28	BF	105	VAL
28	BF	114	VAL
28	BF	120	GLU
28	BF	123	LEU
28	BF	125	LEU
28	BF	126	VAL
28	BF	132	VAL
28	BF	133	ASN
28	BF	149	ASP
28	BF	154	VAL
28	BF	155	LEU
28	BF	156	LEU
28	BF	157	VAL
28	BF	158	THR
28	BF	162	LEU
28	BF	174	VAL
28	BF	175	THR
28	BF	181	LEU
28	BF	190	GLU

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Mol	Chain	Res	Type
28	BF	191	ARG
28	BF	192	LEU
28	BF	194	MET
28	BF	201	VAL
29	BG	21	ARG
29	BG	26	GLN
29	BG	60	LEU
29	BG	72	ARG
29	BG	79	ASN
29	BG	84	LYS
29	BG	99	MET
29	BG	113	ARG
29	BG	125	PHE
29	BG	126	ASP
29	BG	133	LEU
29	BG	135	LEU
29	BG	137	GLU
29	BG	148	MET
29	BG	155	MET
29	BG	161	THR
30	BH	17	VAL
30	BH	34	GLU
30	BH	44	VAL
30	BH	49	VAL
30	BH	52	VAL
30	BH	70	THR
30	BH	79	VAL
30	BH	83	TYR
30	BH	86	GLU
30	BH	88	LEU
30	BH	95	ARG
30	BH	104	GLU
30	BH	105	LEU
30	BH	107	VAL
30	BH	119	GLU
30	BH	121	ILE
30	BH	123	PHE
30	BH	127	GLU
30	BH	129	THR
30	BH	132	ARG
30	BH	133	VAL
30	BH	136	ILE

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Mol	Chain	Res	Type
30	BH	138	LYS
30	BH	147	ASN
30	BH	163	TYR
30	BH	164	TYR
32	BK	4	VAL
32	BK	7	VAL
32	BK	9	LYS
32	BK	10	LEU
32	BK	16	LYS
32	BK	29	GLN
32	BK	34	ILE
32	BK	42	ASN
32	BK	57	ILE
32	BK	59	ILE
32	BK	60	TYR
32	BK	65	PHE
32	BK	71	THR
32	BK	78	ILE
32	BK	84	LEU
32	BK	105	LEU
32	BK	106	GLU
32	BK	110	GLN
32	BK	115	LEU
32	BK	118	THR
32	BK	119	ASP
32	BK	120	LEU
32	BK	121	GLU
32	BK	126	MET
32	BK	132	ARG
32	BK	136	VAL
32	BK	138	VAL
33	BN	4	TYR
33	BN	15	LEU
33	BN	23	LEU
33	BN	30	ILE
33	BN	37	LYS
33	BN	38	HIS
33	BN	42	TRP
33	BN	45	ASN
33	BN	48	MET
33	BN	53	VAL
33	BN	55	VAL

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Mol	Chain	Res	Type
33	BN	56	ASN
33	BN	59	LYS
33	BN	61	ARG
33	BN	67	LEU
33	BN	71	ILE
33	BN	72	TYR
33	BN	78	TYR
33	BN	82	LEU
33	BN	84	LYS
33	BN	85	ILE
33	BN	90	MET
33	BN	97	ARG
33	BN	99	LEU
33	BN	101	HIS
33	BN	103	VAL
33	BN	104	LYS
33	BN	107	LEU
33	BN	108	PRO
33	BN	112	LEU
33	BN	114	ARG
33	BN	116	LEU
33	BN	119	ARG
33	BN	127	ASP
33	BN	133	GLN
34	BO	1	MET
34	BO	8	LEU
34	BO	19	ILE
34	BO	21	CYS
34	BO	23	ARG
34	BO	29	ASN
34	BO	31	LYS
34	BO	37	ASP
34	BO	56	ASP
34	BO	61	VAL
34	BO	63	VAL
34	BO	68	GLU
34	BO	70	LYS
34	BO	71	ARG
34	BO	78	ARG
34	BO	80	ASP
34	BO	85	VAL
34	BO	88	ASN

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Mol	Chain	Res	Type
34	BO	91	LEU
34	BO	104	ARG
34	BO	105	GLU
34	BO	114	ILE
34	BO	117	LEU
34	BO	121	VAL
35	BP	7	ARG
35	BP	16	ARG
35	BP	18	ARG
35	BP	19	VAL
35	BP	39	LYS
35	BP	40	SER
35	BP	49	ARG
35	BP	50	ARG
35	BP	51	PHE
35	BP	55	ARG
35	BP	58	THR
35	BP	71	VAL
35	BP	74	GLU
35	BP	75	ILE
35	BP	77	ARG
35	BP	85	LEU
35	BP	91	PHE
35	BP	101	VAL
35	BP	106	LEU
35	BP	112	LEU
35	BP	115	LEU
35	BP	125	VAL
35	BP	130	PHE
35	BP	135	LEU
35	BP	147	LEU
36	BQ	1	MET
36	BQ	3	MET
36	BQ	6	ARG
36	BQ	7	MET
36	BQ	9	TYR
36	BQ	35	VAL
36	BQ	42	ILE
36	BQ	43	THR
36	BQ	45	GLN
36	BQ	46	GLN
36	BQ	48	GLU

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Mol	Chain	Res	Type
36	BQ	57	HIS
36	BQ	58	PHE
36	BQ	59	ARG
36	BQ	66	ILE
36	BQ	68	ILE
36	BQ	74	TYR
36	BQ	75	THR
36	BQ	77	LYS
36	BQ	91	GLU
36	BQ	93	TYR
36	BQ	96	VAL
36	BQ	103	MET
36	BQ	104	PHE
36	BQ	105	GLU
36	BQ	110	THR
36	BQ	112	GLU
36	BQ	116	GLU
36	BQ	127	ILE
36	BQ	129	THR
36	BQ	131	ILE
36	BQ	132	VAL
36	BQ	135	ASP
36	BQ	137	TYR
37	BR	4	LEU
37	BR	27	SER
37	BR	28	LEU
37	BR	29	LEU
37	BR	34	ILE
37	BR	44	LEU
37	BR	47	PHE
37	BR	51	LEU
37	BR	67	LEU
37	BR	71	GLN
37	BR	75	LEU
37	BR	76	VAL
37	BR	94	TYR
37	BR	95	THR
37	BR	99	LYS
37	BR	100	LEU
37	BR	113	LEU
38	BS	13	ARG
38	BS	15	ARG

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Mol	Chain	Res	Type
38	BS	17	ARG
38	BS	18	ILE
38	BS	24	LEU
38	BS	35	ILE
38	BS	47	THR
38	BS	62	LYS
38	BS	64	GLU
38	BS	73	LEU
38	BS	76	LYS
38	BS	82	ILE
38	BS	95	HIS
38	BS	98	VAL
39	BT	11	GLU
39	BT	16	ARG
39	BT	18	ASP
39	BT	21	GLU
39	BT	22	PHE
39	BT	27	THR
39	BT	30	VAL
39	BT	31	SER
39	BT	32	TYR
39	BT	45	PHE
39	BT	48	ILE
39	BT	59	THR
39	BT	62	THR
39	BT	64	ARG
39	BT	70	VAL
39	BT	74	ARG
39	BT	82	LEU
39	BT	88	ILE
39	BT	90	GLN
39	BT	96	ARG
39	BT	99	LEU
39	BT	104	ASN
39	BT	107	ASP
39	BT	111	ARG
39	BT	115	ARG
39	BT	118	ARG
39	BT	124	ASP
40	BU	8	VAL
40	BU	13	LYS
40	BU	14	HIS

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Mol	Chain	Res	Type
40	BU	20	LEU
40	BU	28	ARG
40	BU	30	LYS
40	BU	34	LYS
40	BU	51	LYS
40	BU	62	ILE
40	BU	74	LEU
40	BU	98	LEU
40	BU	102	GLU
40	BU	104	GLN
40	BU	108	GLU
40	BU	117	GLN
41	BV	5	VAL
41	BV	7	THR
41	BV	10	LYS
41	BV	15	GLU
41	BV	18	LEU
41	BV	19	LYS
41	BV	35	LEU
41	BV	38	LEU
41	BV	40	LEU
41	BV	43	GLU
41	BV	45	THR
41	BV	47	VAL
41	BV	52	VAL
41	BV	57	VAL
41	BV	60	GLU
41	BV	68	LYS
41	BV	72	VAL
41	BV	75	PHE
41	BV	80	GLN
41	BV	94	LEU
41	BV	95	LEU
41	BV	98	GLU
41	BV	99	ILE
42	BW	1	MET
42	BW	10	VAL
42	BW	11	ARG
42	BW	17	VAL
42	BW	27	LYS
42	BW	36	LEU
42	BW	46	PHE

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Mol	Chain	Res	Type
42	BW	61	ASN
42	BW	88	ARG
42	BW	95	ILE
42	BW	96	ILE
42	BW	107	LEU
42	BW	113	LYS
43	BX	3	THR
43	BX	12	VAL
43	BX	13	LEU
43	BX	23	GLU
43	BX	27	THR
43	BX	30	VAL
43	BX	35	THR
43	BX	38	GLU
43	BX	44	GLU
43	BX	52	VAL
43	BX	54	VAL
43	BX	55	ASN
43	BX	57	LEU
43	BX	63	LYS
43	BX	72	LYS
43	BX	76	ARG
44	BY	2	ARG
44	BY	4	LYS
44	BY	6	HIS
44	BY	7	VAL
44	BY	9	LYS
44	BY	11	ASP
44	BY	13	VAL
44	BY	24	VAL
44	BY	33	LYS
44	BY	35	TYR
44	BY	42	VAL
44	BY	43	ASN
44	BY	44	ILE
44	BY	45	VAL
44	BY	47	LYS
44	BY	49	VAL
44	BY	50	ARG
44	BY	51	VAL
44	BY	60	PHE
44	BY	64	GLU

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Mol	Chain	Res	Type
44	BY	75	ILE
44	BY	76	CYS
44	BY	83	THR
44	BY	85	VAL
44	BY	90	LEU
44	BY	94	LYS
44	BY	97	ARG
45	BZ	3	TYR
45	BZ	13	GLU
45	BZ	14	LYS
45	BZ	27	VAL
45	BZ	29	TYR
45	BZ	32	HIS
45	BZ	36	LYS
45	BZ	42	VAL
45	BZ	50	GLN
45	BZ	60	GLU
45	BZ	63	ASP
45	BZ	65	GLN
45	BZ	71	VAL
45	BZ	77	ASP
45	BZ	98	MET
45	BZ	116	VAL
45	BZ	121	HIS
45	BZ	124	ILE
45	BZ	132	ASN
45	BZ	133	ILE
45	BZ	136	PHE
45	BZ	139	VAL
45	BZ	140	ASP
45	BZ	141	VAL
45	BZ	144	LEU
45	BZ	154	ASP
45	BZ	157	LEU
45	BZ	165	VAL
45	BZ	179	ASP
45	BZ	181	GLU
45	BZ	186	GLU
46	B0	5	LYS
46	B0	7	LEU
46	B0	11	ARG
46	B0	20	ARG

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Mol	Chain	Res	Type
46	B0	23	VAL
46	B0	27	GLU
46	B0	36	ILE
46	B0	43	THR
46	B0	59	LEU
46	B0	80	HIS
46	B0	84	LEU
47	B1	5	CYS
47	B1	11	ARG
47	B1	17	SER
47	B1	18	ILE
47	B1	20	ARG
47	B1	23	LYS
47	B1	25	LYS
47	B1	32	LYS
47	B1	35	THR
47	B1	37	ILE
47	B1	39	LYS
47	B1	42	GLN
47	B1	43	TYR
47	B1	46	LEU
47	B1	47	GLN
47	B1	48	LYS
47	B1	58	ILE
47	B1	60	PHE
47	B1	67	ILE
47	B1	73	LEU
47	B1	80	LEU
47	B1	82	LEU
47	B1	85	LEU
47	B1	86	SER
48	B2	3	LEU
48	B2	8	LYS
48	B2	11	GLU
48	B2	21	LEU
48	B2	22	GLU
48	B2	24	LEU
48	B2	27	GLU
48	B2	44	LEU
48	B2	50	ILE
48	B2	55	ARG
48	B2	64	LEU

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Mol	Chain	Res	Type
48	B2	65	ASN
49	B3	5	LYS
49	B3	31	LEU
49	B3	36	VAL
49	B3	40	THR
49	B3	52	HIS
49	B3	56	VAL
49	B3	59	VAL
50	B4	1	MET
50	B4	6	HIS
50	B4	9	LEU
50	B4	10	VAL
50	B4	20	ASN
50	B4	27	THR
50	B4	28	LYS
50	B4	30	GLU
50	B4	33	VAL
51	B5	13	LYS
51	B5	20	ARG
51	B5	26	THR
51	B5	31	VAL
51	B5	35	GLU
51	B5	40	LYS
51	B5	43	HIS
51	B5	45	VAL
51	B5	49	CYS
51	B5	51	TYR
51	B5	55	ARG
51	B5	58	LEU
52	B6	6	ARG
52	B6	9	LEU
52	B6	10	LEU
52	B6	11	LEU
52	B6	18	ARG
52	B6	23	THR
52	B6	27	LYS
52	B6	28	ARG
52	B6	33	LYS
52	B6	36	LEU
52	B6	39	TYR
52	B6	46	HIS
52	B6	48	VAL

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Mol	Chain	Res	Type
52	B6	52	VAL
52	B6	54	ILE
53	B7	5	TRP
53	B7	6	GLN
53	B7	22	MET
53	B7	24	THR
53	B7	36	GLN
53	B7	40	TRP
53	B7	48	LYS
54	B8	14	VAL
54	B8	22	VAL
54	B8	34	TRP
54	B8	52	LYS
54	B8	58	ILE
54	B8	59	LYS
54	B8	60	LEU
54	B8	61	LEU
55	B9	4	ARG
55	B9	7	VAL
55	B9	13	LYS
55	B9	17	ILE
55	B9	22	ARG
55	B9	23	VAL
55	B9	26	ILE
55	B9	28	GLU
55	B9	36	GLN
56	Be	58	THR
56	Be	62	VAL
56	Be	63	ILE
56	Be	64	LEU
56	Be	70	LYS
56	Be	74	VAL
56	Be	81	ILE
56	Be	84	LEU
56	Be	94	GLU
56	Be	110	GLU
1	CB	11	LEU
1	CB	15	VAL
1	CB	16	HIS
1	CB	17	PHE
1	CB	28	PHE
1	CB	32	ILE

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Mol	Chain	Res	Type
1	CB	33	TYR
1	CB	36	ARG
1	CB	47	THR
1	CB	67	THR
1	CB	68	ILE
1	CB	69	LEU
1	CB	86	GLU
1	CB	94	ASN
1	CB	96	ARG
1	CB	102	LEU
1	CB	105	PHE
1	CB	121	LEU
1	CB	124	SER
1	CB	129	GLU
1	CB	133	LYS
1	CB	136	VAL
1	CB	141	GLU
1	CB	143	GLU
1	CB	149	LEU
1	CB	150	SER
1	CB	155	LEU
1	CB	157	ARG
1	CB	162	ILE
1	CB	165	VAL
1	CB	168	THR
1	CB	170	GLU
1	CB	172	ILE
1	CB	174	VAL
1	CB	175	ARG
1	CB	182	ILE
1	CB	184	VAL
1	CB	185	ILE
1	CB	196	LEU
1	CB	200	ILE
1	CB	205	ASP
1	CB	209	ARG
1	CB	215	LEU
1	CB	222	ILE
1	CB	230	VAL
1	CB	238	LEU
1	CB	241	GLU
2	CC	3	ASN

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Mol	Chain	Res	Type
2	CC	19	GLU
2	CC	26	LYS
2	CC	31	HIS
2	CC	32	LEU
2	CC	36	ASP
2	CC	46	GLU
2	CC	48	TYR
2	CC	56	ASP
2	CC	64	VAL
2	CC	67	THR
2	CC	70	VAL
2	CC	76	VAL
2	CC	84	ILE
2	CC	87	LEU
2	CC	94	LEU
2	CC	101	LEU
2	CC	103	VAL
2	CC	104	GLN
2	CC	115	LEU
2	CC	118	GLN
2	CC	124	ILE
2	CC	128	PHE
2	CC	136	GLN
2	CC	140	ARG
2	CC	152	ILE
2	CC	162	GLN
2	CC	166	GLU
2	CC	173	VAL
2	CC	175	LEU
2	CC	176	HIS
2	CC	178	LEU
2	CC	188	LEU
2	CC	193	TYR
2	CC	195	VAL
2	CC	202	ILE
3	CD	8	VAL
3	CD	12	CYS
3	CD	19	LEU
3	CD	24	GLU
3	CD	31	CYS
3	CD	33	MET
3	CD	43	HIS

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Mol	Chain	Res	Type
3	CD	54	TYR
3	CD	60	GLU
3	CD	67	ILE
3	CD	74	GLN
3	CD	78	LEU
3	CD	84	LYS
3	CD	86	LYS
3	CD	105	VAL
3	CD	112	VAL
3	CD	120	LEU
3	CD	127	THR
3	CD	134	ASP
3	CD	140	VAL
3	CD	163	GLU
3	CD	165	MET
3	CD	176	LEU
3	CD	178	VAL
3	CD	181	MET
3	CD	190	ASP
3	CD	196	LEU
3	CD	203	VAL
3	CD	205	GLU
3	CD	207	TYR
4	CE	10	MET
4	CE	12	LEU
4	CE	13	ILE
4	CE	20	GLN
4	CE	36	ASP
4	CE	37	ARG
4	CE	41	VAL
4	CE	47	LYS
4	CE	60	TYR
4	CE	61	TYR
4	CE	64	ARG
4	CE	67	VAL
4	CE	68	GLU
4	CE	76	ILE
4	CE	78	HIS
4	CE	80	ILE
4	CE	91	LEU
4	CE	112	LEU
4	CE	119	LEU

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Mol	Chain	Res	Type
4	CE	120	THR
4	CE	125	SER
4	CE	131	ILE
4	CE	135	THR
4	CE	137	GLU
4	CE	142	LEU
4	CE	151	LEU
5	CF	4	TYR
5	CF	11	ASN
5	CF	15	ASP
5	CF	16	GLN
5	CF	17	SER
5	CF	38	GLU
5	CF	40	VAL
5	CF	45	LEU
5	CF	46	ARG
5	CF	52	ILE
5	CF	61	LEU
5	CF	72	VAL
5	CF	77	ARG
5	CF	82	ARG
5	CF	91	VAL
6	CG	4	ARG
6	CG	13	GLN
6	CG	31	MET
6	CG	36	LYS
6	CG	42	ILE
6	CG	50	ILE
6	CG	52	GLU
6	CG	56	GLN
6	CG	69	VAL
6	CG	79	ARG
6	CG	89	MET
6	CG	91	VAL
6	CG	119	ARG
6	CG	122	HIS
6	CG	139	GLU
6	CG	140	ASP
7	CH	11	THR
7	CH	14	ARG
7	CH	18	ARG
7	CH	26	VAL

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Mol	Chain	Res	Type
7	CH	30	ARG
7	CH	31	PHE
7	CH	37	ARG
7	CH	41	ARG
7	CH	44	PHE
7	CH	51	VAL
7	CH	52	ASP
7	CH	63	LEU
7	CH	75	ARG
7	CH	82	HIS
7	CH	83	ILE
7	CH	85	ARG
7	CH	95	VAL
7	CH	97	VAL
7	CH	98	LYS
7	CH	99	GLU
7	CH	102	ARG
7	CH	107	LEU
7	CH	111	ILE
7	CH	112	LEU
7	CH	114	THR
7	CH	116	LYS
7	CH	120	THR
7	CH	129	VAL
7	CH	134	ILE
7	CH	138	TRP
8	CI	3	GLN
8	CI	4	TYR
8	CI	14	VAL
8	CI	34	ASN
8	CI	35	GLU
8	CI	38	GLN
8	CI	41	VAL
8	CI	42	ARG
8	CI	56	LEU
8	CI	66	ARG
8	CI	75	ASP
8	CI	79	LEU
8	CI	93	ARG
8	CI	95	LYS
8	CI	96	LEU
8	CI	97	LYS

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Mol	Chain	Res	Type
8	CI	104	ARG
8	CI	107	ARG
8	CI	114	TYR
8	CI	118	LYS
8	CI	121	ARG
9	CJ	6	ILE
9	CJ	8	LEU
9	CJ	11	PHE
9	CJ	16	LEU
9	CJ	17	ASP
9	CJ	22	LYS
9	CJ	25	GLU
9	CJ	33	GLN
9	CJ	35	SER
9	CJ	40	LEU
9	CJ	49	VAL
9	CJ	50	ILE
9	CJ	57	LYS
9	CJ	75	ILE
9	CJ	78	ASN
9	CJ	79	ARG
9	CJ	81	THR
9	CJ	94	VAL
9	CJ	96	ILE
9	CJ	98	ILE
9	CJ	99	LYS
10	CK	18	ARG
10	CK	29	ILE
10	CK	40	ILE
10	CK	41	THR
10	CK	50	TYR
10	CK	57	THR
10	CK	71	LYS
10	CK	81	ASP
10	CK	84	VAL
10	CK	87	THR
10	CK	103	LEU
10	CK	108	ILE
10	CK	112	THR
10	CK	114	VAL
10	CK	124	LYS
10	CK	127	LYS

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Mol	Chain	Res	Type
11	CL	10	LEU
11	CL	15	ARG
11	CL	16	GLU
11	CL	18	VAL
11	CL	37	CYS
11	CL	42	THR
11	CL	52	LEU
11	CL	53	ARG
11	CL	54	LYS
11	CL	55	VAL
11	CL	59	ARG
11	CL	60	LEU
11	CL	61	THR
11	CL	66	VAL
11	CL	75	HIS
11	CL	77	LEU
11	CL	80	HIS
11	CL	84	LEU
11	CL	97	ARG
11	CL	101	VAL
11	CL	105	TYR
11	CL	106	ASP
11	CL	112	ASP
11	CL	117	ARG
12	CM	7	VAL
12	CM	9	ILE
12	CM	19	LEU
12	CM	21	TYR
12	CM	37	THR
12	CM	43	THR
12	CM	46	LYS
12	CM	47	ASP
12	CM	48	LEU
12	CM	49	THR
12	CM	50	GLU
12	CM	56	LEU
12	CM	69	GLU
12	CM	70	LEU
12	CM	80	ARG
12	CM	81	LEU
12	CM	84	ILE
12	CM	103	THR

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Mol	Chain	Res	Type
12	CM	105	THR
12	CM	108	ARG
12	CM	111	LYS
12	CM	115	LYS
13	CN	21	TYR
13	CN	22	THR
13	CN	25	VAL
13	CN	26	ARG
13	CN	32	SER
13	CN	35	ARG
13	CN	40	CYS
13	CN	44	LEU
13	CN	47	LEU
13	CN	49	HIS
13	CN	53	LEU
13	CN	56	VAL
13	CN	57	ARG
14	CO	17	ARG
14	CO	25	THR
14	CO	26	GLU
14	CO	27	VAL
14	CO	31	LEU
14	CO	72	ARG
14	CO	78	TYR
14	CO	81	LEU
14	CO	87	ILE
15	CP	2	VAL
15	CP	16	HIS
15	CP	20	VAL
15	CP	21	VAL
15	CP	36	ILE
15	CP	38	TYR
15	CP	42	ARG
15	CP	45	THR
15	CP	49	LEU
15	CP	61	SER
15	CP	67	THR
15	CP	73	LEU
16	CQ	12	SER
16	CQ	31	LEU
16	CQ	37	LYS
16	CQ	40	LYS

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Mol	Chain	Res	Type
16	CQ	45	HIS
16	CQ	48	GLU
16	CQ	52	LYS
16	CQ	59	ILE
16	CQ	63	ARG
16	CQ	74	LEU
16	CQ	78	GLU
16	CQ	81	ARG
16	CQ	84	LEU
16	CQ	86	GLU
16	CQ	89	LEU
16	CQ	98	LEU
17	CR	35	ARG
17	CR	38	GLU
17	CR	40	LEU
17	CR	44	LEU
17	CR	62	GLU
17	CR	81	PHE
17	CR	83	GLU
17	CR	86	VAL
18	CS	4	SER
18	CS	5	LEU
18	CS	6	LYS
18	CS	11	VAL
18	CS	14	HIS
18	CS	19	VAL
18	CS	22	LEU
18	CS	31	ILE
18	CS	32	LYS
18	CS	33	THR
18	CS	37	ARG
18	CS	41	VAL
18	CS	47	HIS
18	CS	51	VAL
18	CS	61	TYR
18	CS	62	ILE
18	CS	63	THR
18	CS	66	MET
18	CS	71	LEU
18	CS	73	GLU
18	CS	77	THR
19	CT	10	LEU

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Mol	Chain	Res	Type
19	CT	13	LEU
19	CT	33	ILE
19	CT	36	LEU
19	CT	41	ILE
19	CT	50	GLU
19	CT	53	LEU
19	CT	56	MET
19	CT	57	ARG
19	CT	63	ILE
19	CT	64	ASP
19	CT	71	THR
19	CT	73	HIS
19	CT	74	LYS
19	CT	75	ASN
19	CT	84	LEU
19	CT	86	ARG
19	CT	90	GLN
19	CT	93	GLU
20	CY	6	GLU
20	CY	9	LEU
20	CY	20	HIS
20	CY	21	ILE
20	CY	26	THR
20	CY	28	THR
20	CY	33	LEU
20	CY	34	TYR
20	CY	36	THR
20	CY	39	ILE
20	CY	69	VAL
20	CY	73	PHE
20	CY	77	HIS
20	CY	81	ILE
20	CY	92	ILE
20	CY	95	GLU
20	CY	96	ARG
20	CY	98	MET
20	CY	99	ARG
20	CY	101	LEU
20	CY	105	ILE
20	CY	120	THR
20	CY	121	VAL
20	CY	123	ARG

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Mol	Chain	Res	Type
20	CY	126	GLU
20	CY	132	ARG
20	CY	133	ILE
20	CY	145	ASP
20	CY	150	ILE
20	CY	153	MET
20	CY	170	ARG
20	CY	172	ASP
20	CY	173	THR
20	CY	174	PHE
20	CY	178	ILE
20	CY	194	THR
20	CY	195	ASP
20	CY	199	ILE
20	CY	207	ASP
20	CY	217	VAL
20	CY	223	PHE
20	CY	225	GLU
20	CY	229	LEU
20	CY	232	LEU
20	CY	239	GLU
20	CY	241	GLU
20	CY	253	LEU
20	CY	254	LYS
20	CY	260	LEU
20	CY	264	LEU
20	CY	266	ASN
20	CY	269	VAL
20	CY	289	ILE
20	CY	292	THR
20	CY	299	VAL
20	CY	304	ASP
20	CY	326	THR
20	CY	330	VAL
20	CY	335	LEU
20	CY	352	VAL
20	CY	356	LEU
20	CY	358	MET
20	CY	362	HIS
20	CY	378	VAL
20	CY	380	LEU
20	CY	382	GLU

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Mol	Chain	Res	Type
20	CY	383	THR
20	CY	389	LEU
20	CY	398	ILE
20	CY	406	GLU
20	CY	409	ILE
20	CY	413	ILE
20	CY	414	GLU
20	CY	417	THR
20	CY	428	LEU
20	CY	431	LEU
20	CY	437	THR
20	CY	442	THR
20	CY	449	THR
20	CY	457	LEU
20	CY	465	ARG
20	CY	472	VAL
20	CY	475	ASN
20	CY	487	ILE
20	CY	488	THR
20	CY	491	VAL
20	CY	498	ILE
20	CY	504	ARG
20	CY	510	VAL
20	CY	512	ILE
20	CY	537	GLU
20	CY	542	VAL
20	CY	550	MET
20	CY	555	LEU
20	CY	556	ILE
20	CY	565	VAL
20	CY	568	TYR
20	CY	580	MET
20	CY	592	GLU
20	CY	598	ASP
20	CY	600	VAL
20	CY	605	ILE
20	CY	615	GLU
20	CY	617	MET
20	CY	624	LEU
20	CY	625	ASN
20	CY	635	GLU
20	CY	651	GLU

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Mol	Chain	Res	Type
20	CY	655	TYR
20	CY	658	ASP
20	CY	659	LEU
20	CY	660	ARG
20	CY	668	SER
20	CY	671	MET
20	CY	676	TYR
20	CY	677	GLN
20	CY	684	GLN
20	CY	685	GLU
25	DC	4	HIS
25	DC	13	GLU
25	DC	15	VAL
25	DC	19	LYS
25	DC	20	VAL
25	DC	31	LYS
25	DC	33	LEU
25	DC	37	LYS
25	DC	48	LEU
25	DC	51	ASP
25	DC	53	ARG
25	DC	54	ARG
25	DC	59	VAL
25	DC	62	THR
25	DC	69	LEU
25	DC	78	ILE
25	DC	106	ASP
25	DC	114	VAL
25	DC	115	VAL
25	DC	120	VAL
25	DC	131	ILE
25	DC	135	ARG
25	DC	137	LEU
25	DC	138	LEU
25	DC	139	PRO
25	DC	145	THR
25	DC	148	PHE
25	DC	152	GLU
25	DC	153	ILE
25	DC	166	ASN
25	DC	167	ASP
25	DC	169	THR

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Mol	Chain	Res	Type
25	DC	172	ILE
25	DC	173	HIS
25	DC	198	GLU
25	DC	213	VAL
25	DC	215	VAL
25	DC	216	THR
25	DC	219	MET
25	DC	228	HIS
26	DD	5	LYS
26	DD	15	PHE
26	DD	24	ILE
26	DD	25	THR
26	DD	26	LYS
26	DD	28	GLU
26	DD	31	LYS
26	DD	33	LEU
26	DD	35	LYS
26	DD	36	PRO
26	DD	37	LEU
26	DD	43	ARG
26	DD	45	ASN
26	DD	49	ILE
26	DD	64	ILE
26	DD	65	ILE
26	DD	78	LYS
26	DD	82	ILE
26	DD	94	LEU
26	DD	95	LEU
26	DD	105	ILE
26	DD	127	VAL
26	DD	131	LEU
26	DD	140	THR
26	DD	146	GLU
26	DD	147	LEU
26	DD	150	LYS
26	DD	155	LEU
26	DD	161	THR
26	DD	171	ASP
26	DD	172	TYR
26	DD	175	LEU
26	DD	185	VAL
26	DD	186	HIS

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Mol	Chain	Res	Type
26	DD	190	TYR
26	DD	193	VAL
26	DD	202	LYS
26	DD	206	LEU
26	DD	226	MET
26	DD	227	ASN
26	DD	230	ASP
26	DD	231	HIS
26	DD	242	ARG
26	DD	248	SER
26	DD	252	TRP
26	DD	257	LEU
26	DD	259	THR
26	DD	260	ARG
27	DE	4	ILE
27	DE	13	ARG
27	DE	14	ILE
27	DE	19	ARG
27	DE	21	VAL
27	DE	23	VAL
27	DE	24	THR
27	DE	34	VAL
27	DE	35	GLN
27	DE	40	GLU
27	DE	52	LEU
27	DE	61	ARG
27	DE	63	LEU
27	DE	66	HIS
27	DE	72	VAL
27	DE	77	ILE
27	DE	78	LEU
27	DE	79	ARG
27	DE	87	GLU
27	DE	93	VAL
27	DE	95	ILE
27	DE	96	PHE
27	DE	103	ASP
27	DE	104	VAL
27	DE	107	THR
27	DE	111	ARG
27	DE	127	ASP
27	DE	132	HIS

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Mol	Chain	Res	Type
27	DE	134	ILE
27	DE	136	ARG
27	DE	146	THR
27	DE	156	MET
27	DE	160	TYR
27	DE	169	ASN
27	DE	172	VAL
27	DE	178	GLU
27	DE	181	LEU
27	DE	196	VAL
28	DF	6	VAL
28	DF	7	TYR
28	DF	9	ILE
28	DF	12	LEU
28	DF	17	ARG
28	DF	28	ILE
28	DF	29	ASN
28	DF	31	HIS
28	DF	33	LEU
28	DF	45	ARG
28	DF	53	THR
28	DF	65	TRP
28	DF	68	LYS
28	DF	74	ARG
28	DF	88	VAL
28	DF	89	VAL
28	DF	96	ASP
28	DF	104	LYS
28	DF	110	LEU
28	DF	114	VAL
28	DF	123	LEU
28	DF	126	VAL
28	DF	132	VAL
28	DF	136	THR
28	DF	145	GLU
28	DF	149	ASP
28	DF	156	LEU
28	DF	174	VAL
28	DF	186	ILE
28	DF	191	ARG
28	DF	192	LEU
28	DF	193	VAL

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Mol	Chain	Res	Type
28	DF	194	MET
28	DF	199	TRP
28	DF	206	ILE
29	DG	21	ARG
29	DG	26	GLN
29	DG	30	GLU
29	DG	31	VAL
29	DG	45	GLU
29	DG	48	GLU
29	DG	58	GLN
29	DG	60	LEU
29	DG	86	MET
29	DG	88	ILE
29	DG	109	VAL
29	DG	113	ARG
29	DG	115	ARG
29	DG	133	LEU
29	DG	137	GLU
29	DG	138	GLN
29	DG	139	LEU
29	DG	143	GLU
29	DG	145	THR
29	DG	148	MET
29	DG	150	ASP
29	DG	157	ILE
29	DG	159	VAL
29	DG	161	THR
29	DG	165	THR
29	DG	170	ARG
30	DH	23	ARG
30	DH	35	VAL
30	DH	37	VAL
30	DH	41	MET
30	DH	43	VAL
30	DH	44	VAL
30	DH	49	VAL
30	DH	52	VAL
30	DH	58	GLU
30	DH	65	HIS
30	DH	67	LEU
30	DH	79	VAL
30	DH	83	TYR

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Mol	Chain	Res	Type
30	DH	105	LEU
30	DH	106	THR
30	DH	114	VAL
30	DH	116	GLU
30	DH	121	ILE
30	DH	158	HIS
30	DH	171	LEU
32	DK	5	VAL
32	DK	9	LYS
32	DK	10	LEU
32	DK	11	GLN
32	DK	27	LEU
32	DK	29	GLN
32	DK	34	ILE
32	DK	41	PHE
32	DK	48	MET
32	DK	57	ILE
32	DK	65	PHE
32	DK	78	ILE
32	DK	80	LYS
32	DK	84	LEU
32	DK	89	HIS
32	DK	95	LYS
32	DK	101	TRP
32	DK	105	LEU
32	DK	109	LYS
32	DK	119	ASP
32	DK	125	ARG
32	DK	126	MET
32	DK	127	ILE
32	DK	132	ARG
32	DK	136	VAL
33	DN	2	LYS
33	DN	9	VAL
33	DN	13	TRP
33	DN	15	LEU
33	DN	21	LYS
33	DN	26	LEU
33	DN	30	ILE
33	DN	39	ARG
33	DN	42	TRP
33	DN	45	ASN

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Mol	Chain	Res	Type
33	DN	48	MET
33	DN	51	PHE
33	DN	55	VAL
33	DN	56	ASN
33	DN	59	LYS
33	DN	61	ARG
33	DN	62	VAL
33	DN	67	LEU
33	DN	69	GLN
33	DN	71	ILE
33	DN	72	TYR
33	DN	73	THR
33	DN	78	TYR
33	DN	82	LEU
33	DN	84	LYS
33	DN	85	ILE
33	DN	87	LEU
33	DN	91	LEU
33	DN	97	ARG
33	DN	99	LEU
33	DN	101	HIS
33	DN	103	VAL
33	DN	104	LYS
33	DN	106	MET
33	DN	107	LEU
33	DN	112	LEU
33	DN	114	ARG
33	DN	117	PHE
33	DN	119	ARG
33	DN	130	HIS
33	DN	131	GLN
33	DN	139	GLU
34	DO	1	MET
34	DO	2	ILE
34	DO	3	GLN
34	DO	6	THR
34	DO	8	LEU
34	DO	32	TYR
34	DO	45	GLU
34	DO	52	VAL
34	DO	68	GLU
34	DO	70	LYS

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Mol	Chain	Res	Type
34	DO	71	ARG
34	DO	73	ASP
34	DO	75	SER
34	DO	86	ILE
34	DO	91	LEU
34	DO	102	VAL
34	DO	114	ILE
35	DP	7	ARG
35	DP	9	ASN
35	DP	16	ARG
35	DP	19	VAL
35	DP	29	LYS
35	DP	39	LYS
35	DP	46	LYS
35	DP	50	ARG
35	DP	57	THR
35	DP	59	LEU
35	DP	61	ARG
35	DP	71	VAL
35	DP	85	LEU
35	DP	96	THR
35	DP	99	LEU
35	DP	100	LEU
35	DP	101	VAL
35	DP	107	LYS
35	DP	115	LEU
35	DP	117	GLU
35	DP	123	LEU
35	DP	128	HIS
35	DP	135	LEU
35	DP	144	GLU
35	DP	146	VAL
36	DQ	2	LEU
36	DQ	7	MET
36	DQ	25	ASP
36	DQ	29	PHE
36	DQ	38	GLU
36	DQ	43	THR
36	DQ	58	PHE
36	DQ	68	ILE
36	DQ	91	GLU
36	DQ	93	TYR

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Mol	Chain	Res	Type
36	DQ	97	VAL
36	DQ	104	PHE
36	DQ	105	GLU
36	DQ	106	VAL
36	DQ	112	GLU
36	DQ	129	THR
36	DQ	132	VAL
36	DQ	137	TYR
37	DR	3	HIS
37	DR	4	LEU
37	DR	13	HIS
37	DR	17	ARG
37	DR	21	TYR
37	DR	29	LEU
37	DR	34	ILE
37	DR	37	THR
37	DR	44	LEU
37	DR	47	PHE
37	DR	61	HIS
37	DR	74	LYS
37	DR	75	LEU
37	DR	76	VAL
37	DR	80	PHE
37	DR	81	ASP
37	DR	87	TYR
37	DR	88	ARG
37	DR	89	ASP
37	DR	95	THR
37	DR	99	LYS
37	DR	100	LEU
37	DR	102	GLU
37	DR	107	ASP
37	DR	115	GLU
38	DS	12	PHE
38	DS	13	ARG
38	DS	18	ILE
38	DS	23	ARG
38	DS	24	LEU
38	DS	31	SER
38	DS	36	TYR
38	DS	41	ASP
38	DS	42	ASP

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Mol	Chain	Res	Type
38	DS	44	LYS
38	DS	47	THR
38	DS	62	LYS
38	DS	69	VAL
38	DS	87	PHE
38	DS	93	LYS
38	DS	97	ARG
38	DS	98	VAL
38	DS	106	ARG
38	DS	107	GLU
39	DT	13	ARG
39	DT	16	ARG
39	DT	27	THR
39	DT	30	VAL
39	DT	31	SER
39	DT	42	ILE
39	DT	43	GLN
39	DT	46	GLU
39	DT	55	ASN
39	DT	62	THR
39	DT	64	ARG
39	DT	70	VAL
39	DT	73	GLU
39	DT	74	ARG
39	DT	75	ILE
39	DT	78	LEU
39	DT	82	LEU
39	DT	87	ASP
39	DT	90	GLN
39	DT	96	ARG
39	DT	99	LEU
39	DT	103	ARG
39	DT	104	ASN
39	DT	107	ASP
39	DT	108	ARG
39	DT	111	ARG
39	DT	118	ARG
39	DT	122	ASP
39	DT	128	GLU
40	DU	6	THR
40	DU	14	HIS
40	DU	27	LEU

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Mol	Chain	Res	Type
40	DU	28	ARG
40	DU	30	LYS
40	DU	36	ARG
40	DU	51	LYS
40	DU	57	PHE
40	DU	72	HIS
40	DU	74	LEU
40	DU	83	LEU
40	DU	89	GLU
40	DU	97	ASP
40	DU	102	GLU
40	DU	104	GLN
40	DU	105	VAL
40	DU	108	GLU
40	DU	117	GLN
41	DV	5	VAL
41	DV	13	ARG
41	DV	18	LEU
41	DV	19	LYS
41	DV	21	ARG
41	DV	22	VAL
41	DV	28	GLU
41	DV	34	GLU
41	DV	37	VAL
41	DV	38	LEU
41	DV	39	LEU
41	DV	40	LEU
41	DV	44	LYS
41	DV	47	VAL
41	DV	57	VAL
41	DV	61	VAL
41	DV	71	LEU
41	DV	75	PHE
41	DV	80	GLN
41	DV	95	LEU
41	DV	99	ILE
42	DW	1	MET
42	DW	2	GLU
42	DW	11	ARG
42	DW	16	LYS
42	DW	19	LEU
42	DW	23	LEU

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Mol	Chain	Res	Type
42	DW	27	LYS
42	DW	31	GLU
42	DW	45	TYR
42	DW	51	LEU
42	DW	52	GLU
42	DW	64	MET
42	DW	76	VAL
42	DW	77	ASP
42	DW	82	LEU
42	DW	88	ARG
42	DW	95	ILE
42	DW	96	ILE
42	DW	97	LYS
42	DW	99	ARG
42	DW	105	VAL
42	DW	107	LEU
42	DW	110	LYS
43	DX	7	VAL
43	DX	8	ILE
43	DX	12	VAL
43	DX	23	GLU
43	DX	27	THR
43	DX	30	VAL
43	DX	38	GLU
43	DX	45	THR
43	DX	53	LYS
43	DX	54	VAL
43	DX	57	LEU
43	DX	58	HIS
43	DX	63	LYS
43	DX	66	LEU
43	DX	72	LYS
43	DX	80	ILE
43	DX	87	GLN
44	DY	6	HIS
44	DY	7	VAL
44	DY	9	LYS
44	DY	13	VAL
44	DY	27	VAL
44	DY	28	LYS
44	DY	31	LEU
44	DY	33	LYS

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Mol	Chain	Res	Type
44	DY	35	TYR
44	DY	44	ILE
44	DY	50	ARG
44	DY	64	GLU
44	DY	83	THR
44	DY	97	ARG
44	DY	106	LEU
45	DZ	9	TYR
45	DZ	28	MET
45	DZ	29	TYR
45	DZ	36	LYS
45	DZ	39	VAL
45	DZ	53	ILE
45	DZ	57	ILE
45	DZ	59	LEU
45	DZ	61	LEU
45	DZ	63	ASP
45	DZ	65	GLN
45	DZ	70	LEU
45	DZ	71	VAL
45	DZ	74	VAL
45	DZ	81	ARG
45	DZ	90	VAL
45	DZ	98	MET
45	DZ	104	PHE
45	DZ	117	LEU
45	DZ	124	ILE
45	DZ	133	ILE
45	DZ	141	VAL
45	DZ	144	LEU
45	DZ	145	GLU
45	DZ	151	HIS
45	DZ	155	LEU
45	DZ	161	VAL
45	DZ	162	GLU
45	DZ	183	LEU
45	DZ	185	GLU
46	D0	7	LEU
46	D0	11	ARG
46	D0	20	ARG
46	D0	27	GLU
46	D0	31	VAL

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Mol	Chain	Res	Type
46	D0	32	ARG
46	D0	36	ILE
46	D0	37	LEU
46	D0	38	VAL
46	D0	41	ARG
46	D0	60	PHE
46	D0	63	VAL
46	D0	64	ASP
46	D0	67	VAL
46	D0	70	GLN
47	D1	5	CYS
47	D1	18	ILE
47	D1	20	ARG
47	D1	26	ARG
47	D1	32	LYS
47	D1	33	LYS
47	D1	34	THR
47	D1	37	ILE
47	D1	39	LYS
47	D1	40	ARG
47	D1	41	ARG
47	D1	42	GLN
47	D1	46	LEU
47	D1	56	GLN
47	D1	57	GLU
47	D1	58	ILE
47	D1	59	THR
47	D1	67	ILE
47	D1	73	LEU
47	D1	80	LEU
47	D1	85	LEU
48	D2	22	GLU
48	D2	24	LEU
48	D2	34	GLU
48	D2	44	LEU
48	D2	50	ILE
48	D2	55	ARG
48	D2	64	LEU
48	D2	66	GLU
48	D2	68	ARG
49	D3	15	TYR
49	D3	26	LEU

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Mol	Chain	Res	Type
49	D3	29	ARG
49	D3	31	LEU
49	D3	35	ARG
49	D3	37	LEU
49	D3	44	ARG
50	D4	8	LYS
50	D4	9	LEU
50	D4	10	VAL
50	D4	14	ILE
50	D4	22	ILE
50	D4	28	LYS
50	D4	30	GLU
50	D4	32	TYR
50	D4	33	VAL
51	D5	29	THR
51	D5	36	CYS
51	D5	45	VAL
51	D5	55	ARG
51	D5	58	LEU
52	D6	6	ARG
52	D6	8	LYS
52	D6	9	LEU
52	D6	10	LEU
52	D6	11	LEU
52	D6	18	ARG
52	D6	19	ARG
52	D6	20	ASN
52	D6	23	THR
52	D6	25	LYS
52	D6	28	ARG
52	D6	37	ARG
52	D6	39	TYR
52	D6	46	HIS
52	D6	48	VAL
52	D6	49	HIS
52	D6	50	ARG
52	D6	51	GLU
52	D6	53	LYS
53	D7	24	THR
53	D7	28	ARG
53	D7	34	ARG
53	D7	35	ARG

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Mol	Chain	Res	Type
53	D7	36	GLN
53	D7	40	TRP
53	D7	46	VAL
54	D8	5	LYS
54	D8	16	ILE
54	D8	22	VAL
54	D8	34	TRP
54	D8	36	LYS
54	D8	40	GLU
54	D8	49	VAL
54	D8	53	PRO
54	D8	59	LYS
54	D8	61	LEU
55	D9	12	ASP
55	D9	16	VAL
55	D9	20	HIS
56	De	72	LEU
56	De	73	GLU
56	De	74	VAL
56	De	78	LEU
56	De	81	ILE
56	De	92	LEU
56	De	95	LYS
56	De	99	VAL
56	De	107	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (126) such sidechains are listed below:

Mol	Chain	Res	Type
1	AB	40	HIS
1	AB	78	GLN
2	AC	123	GLN
2	AC	136	GLN
3	AD	45	GLN
3	AD	123	HIS
3	AD	125	HIS
3	AD	161	ASN
4	AE	141	GLN
8	AI	58	HIS
10	AK	38	ASN
10	AK	62	GLN
12	AM	40	ASN

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Mol	Chain	Res	Type
13	AN	52	GLN
14	AO	28	GLN
15	AP	13	HIS
15	AP	14	ASN
15	AP	16	HIS
15	AP	76	GLN
19	AT	26	ASN
20	AY	112	GLN
20	AY	165	GLN
20	AY	359	HIS
20	AY	448	GLN
20	AY	475	ASN
25	BC	18	ASN
25	BC	189	ASN
26	BD	112	GLN
26	BD	126	GLN
28	BF	75	HIS
28	BF	203	GLN
29	BG	41	GLN
30	BH	111	HIS
32	BK	33	ASN
32	BK	42	ASN
33	BN	38	HIS
33	BN	101	HIS
35	BP	27	HIS
35	BP	38	GLN
36	BQ	46	GLN
36	BQ	123	HIS
38	BS	61	ASN
39	BT	79	HIS
40	BU	66	ASN
40	BU	81	HIS
40	BU	104	GLN
40	BU	117	GLN
42	BW	34	ASN
42	BW	61	ASN
45	BZ	54	HIS
45	BZ	73	GLN
48	B2	46	GLN
48	B2	48	HIS
49	B3	33	GLN
50	B4	6	HIS

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Mol	Chain	Res	Type
54	B8	33	ASN
55	B9	34	GLN
1	CB	40	HIS
1	CB	94	ASN
1	CB	95	GLN
1	CB	146	GLN
1	CB	240	GLN
2	CC	37	GLN
2	CC	110	ASN
2	CC	136	GLN
3	CD	125	HIS
6	CG	97	GLN
6	CG	148	ASN
6	CG	153	HIS
7	CH	70	GLN
8	CI	3	GLN
9	CJ	69	ASN
11	CL	8	ASN
11	CL	49	ASN
12	CM	40	ASN
12	CM	92	HIS
12	CM	101	GLN
13	CN	49	HIS
14	CO	13	GLN
14	CO	42	HIS
14	CO	53	HIS
15	CP	14	ASN
18	CS	53	ASN
19	CT	73	HIS
20	CY	77	HIS
20	CY	117	GLN
20	CY	137	ASN
20	CY	165	GLN
20	CY	270	GLN
20	CY	527	ASN
20	CY	625	ASN
20	CY	630	GLN
25	DC	45	HIS
25	DC	67	HIS
25	DC	72	GLN
26	DD	45	ASN
27	DE	35	GLN

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Mol	Chain	Res	Type
27	DE	129	HIS
28	DF	40	GLN
28	DF	75	HIS
28	DF	169	ASN
29	DG	27	ASN
29	DG	138	GLN
30	DH	61	HIS
30	DH	158	HIS
32	DK	116	ASN
33	DN	38	HIS
33	DN	56	ASN
33	DN	101	HIS
34	DO	88	ASN
38	DS	61	ASN
39	DT	38	ASN
39	DT	43	GLN
39	DT	84	GLN
41	DV	89	GLN
42	DW	57	ASN
42	DW	102	HIS
43	DX	31	HIS
43	DX	55	ASN
44	DY	43	ASN
45	DZ	73	GLN
45	DZ	75	ASN
46	D0	12	ASN
47	D1	47	GLN
48	D2	71	ASN
54	D8	7	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
21	AA	1510/1511 (99%)	358 (23%)	16 (1%)
21	CA	1511/1511 (100%)	377 (24%)	16 (1%)
22	AW	76/77 (98%)	37 (48%)	1 (1%)
22	CW	76/77 (98%)	42 (55%)	2 (2%)
23	AV	35/36 (97%)	24 (68%)	9 (25%)
23	CV	35/36 (97%)	28 (80%)	7 (20%)
24	AX	75/78 (96%)	29 (38%)	1 (1%)
24	CX	75/78 (96%)	30 (40%)	0

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
59	BA	2878/2879 (99%)	748 (25%)	28 (0%)
59	DA	2878/2879 (99%)	717 (24%)	29 (1%)
60	BB	118/119 (99%)	27 (22%)	0
60	DB	118/119 (99%)	32 (27%)	0
All	All	9385/9400 (99%)	2449 (26%)	109 (1%)

All (2449) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
21	AA	6	G
21	AA	7	G
21	AA	9	G
21	AA	31	G
21	AA	32	A
21	AA	39	G
21	AA	47	C
21	AA	48	C
21	AA	51	A
21	AA	60	A
21	AA	65	U
21	AA	68	G
21	AA	68(A)	G
21	AA	68(H)	G
21	AA	68(L)	U
21	AA	68(M)	U
21	AA	68(P)	C
21	AA	68(Q)	U
21	AA	68(S)	C
21	AA	101	A
21	AA	115	G
21	AA	121	C
21	AA	122	G
21	AA	126	G
21	AA	129(A)	G
21	AA	131	C
21	AA	134	A
21	AA	135	C
21	AA	147	G
21	AA	151	A
21	AA	163	C
21	AA	170	U
21	AA	174	C

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Mol	Chain	Res	Type
21	AA	176	C
21	AA	182	U
21	AA	186(J)	G
21	AA	192	U
21	AA	195	A
21	AA	196	A
21	AA	197	A
21	AA	198	G
21	AA	201(C)	U
21	AA	216	G
21	AA	222	U
21	AA	231	G
21	AA	236	G
21	AA	244	U
21	AA	247	G
21	AA	251	G
21	AA	253	U
21	AA	258	G
21	AA	267	C
21	AA	275	G
21	AA	279	A
21	AA	280	C
21	AA	281	G
21	AA	289	G
21	AA	298	A
21	AA	300	A
21	AA	301	G
21	AA	324	G
21	AA	325	A
21	AA	328	C
21	AA	329	A
21	AA	331	G
21	AA	332	G
21	AA	335	C
21	AA	345	C
21	AA	346	G
21	AA	347	G
21	AA	348	G
21	AA	352	C
21	AA	353	A
21	AA	354	G
21	AA	367	U

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Mol	Chain	Res	Type
21	AA	372	C
21	AA	373	A
21	AA	388	G
21	AA	396	G
21	AA	397	A
21	AA	398	C
21	AA	408	A
21	AA	412	A
21	AA	413	G
21	AA	414	A
21	AA	422	C
21	AA	423	G
21	AA	424	G
21	AA	429	U
21	AA	440	A
21	AA	443	C
21	AA	452	A
21	AA	453	A
21	AA	458(B)	A
21	AA	481	G
21	AA	484	G
21	AA	485	G
21	AA	491	G
21	AA	497	A
21	AA	498	U
21	AA	505	G
21	AA	509	A
21	AA	510	A
21	AA	511	C
21	AA	514	C
21	AA	517	G
21	AA	518	C
21	AA	520	A
21	AA	523	A
21	AA	524	G
21	AA	527	G
21	AA	531	U
21	AA	532	A
21	AA	533	A
21	AA	536	C
21	AA	547	A
21	AA	559	A

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Mol	Chain	Res	Type
21	AA	560	U
21	AA	562	C
21	AA	564	C
21	AA	565	U
21	AA	567	G
21	AA	568	G
21	AA	572	A
21	AA	574	A
21	AA	576	G
21	AA	603	U
21	AA	616	G
21	AA	618	C
21	AA	623	C
21	AA	628	G
21	AA	629	G
21	AA	642	A
21	AA	653	A
21	AA	654	G
21	AA	659	U
21	AA	665	A
21	AA	671	G
21	AA	685	G
21	AA	688	G
21	AA	698	G
21	AA	702	A
21	AA	704	A
21	AA	717	C
21	AA	721	G
21	AA	723	U
21	AA	732	C
21	AA	733	A
21	AA	734	G
21	AA	735	C
21	AA	737	A
21	AA	742	G
21	AA	743	U
21	AA	749	C
21	AA	750	G
21	AA	754	C
21	AA	755	G
21	AA	756	C
21	AA	776	G

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Mol	Chain	Res	Type
21	AA	777	A
21	AA	793	U
21	AA	794	A
21	AA	803	G
21	AA	811	C
21	AA	812	C
21	AA	815	A
21	AA	816	A
21	AA	817	C
21	AA	818	G
21	AA	819	A
21	AA	828	A
21	AA	829	G
21	AA	836	G
21	AA	837	G
21	AA	838(A)	U
21	AA	838(B)	C
21	AA	838(C)	U
21	AA	848	C
21	AA	853	G
21	AA	855	G
21	AA	858	G
21	AA	859	A
21	AA	867	G
21	AA	873	A
21	AA	875	C
21	AA	876	G
21	AA	877	C
21	AA	879	C
21	AA	882	C
21	AA	889	A
21	AA	902	G
21	AA	914	A
21	AA	922	G
21	AA	923	A
21	AA	925	G
21	AA	926	G
21	AA	927	G
21	AA	934	C
21	AA	935	A
21	AA	961	U
21	AA	966	G

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Mol	Chain	Res	Type
21	AA	967	C
21	AA	968	A
21	AA	969	A
21	AA	971	G
21	AA	974	A
21	AA	975	A
21	AA	976	G
21	AA	977	A
21	AA	978	A
21	AA	979	C
21	AA	980	C
21	AA	981	U
21	AA	992	U
21	AA	993	G
21	AA	1004	A
21	AA	1015	A
21	AA	1022	G
21	AA	1023	G
21	AA	1024	G
21	AA	1025	U
21	AA	1026	G
21	AA	1028(B)	C
21	AA	1050	G
21	AA	1054	C
21	AA	1060	C
21	AA	1064	G
21	AA	1065	U
21	AA	1066	C
21	AA	1072	G
21	AA	1078	U
21	AA	1089	G
21	AA	1094	G
21	AA	1095	U
21	AA	1101	A
21	AA	1104	G
21	AA	1108	G
21	AA	1109	C
21	AA	1117	G
21	AA	1123	A
21	AA	1126	U
21	AA	1127	G
21	AA	1129	C

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Mol	Chain	Res	Type
21	AA	1130	A
21	AA	1131	G
21	AA	1137	C
21	AA	1138	G
21	AA	1139	G
21	AA	1140	C
21	AA	1146	A
21	AA	1156	G
21	AA	1157	A
21	AA	1158	C
21	AA	1159	U
21	AA	1160	G
21	AA	1171	G
21	AA	1178	G
21	AA	1181	G
21	AA	1182	G
21	AA	1183	A
21	AA	1188	A
21	AA	1196	U
21	AA	1197	G
21	AA	1200	C
21	AA	1201	A
21	AA	1202	G
21	AA	1206	G
21	AA	1211	U
21	AA	1212	U
21	AA	1213	A
21	AA	1214	C
21	AA	1225	A
21	AA	1227	A
21	AA	1229	A
21	AA	1238	A
21	AA	1241	G
21	AA	1253	G
21	AA	1256	A
21	AA	1257	U
21	AA	1261	A
21	AA	1262	C
21	AA	1268	A
21	AA	1274	G
21	AA	1275	A
21	AA	1278	U

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Mol	Chain	Res	Type
21	AA	1280	A
21	AA	1281	U
21	AA	1282	C
21	AA	1286	A
21	AA	1287	A
21	AA	1291	G
21	AA	1297	C
21	AA	1298	C
21	AA	1299	A
21	AA	1300	G
21	AA	1301	U
21	AA	1303	C
21	AA	1305	G
21	AA	1306	A
21	AA	1312	G
21	AA	1317	C
21	AA	1320	C
21	AA	1321	C
21	AA	1322	C
21	AA	1330	U
21	AA	1331	G
21	AA	1335	C
21	AA	1336	C
21	AA	1347	G
21	AA	1348	U
21	AA	1359	C
21	AA	1363	A
21	AA	1365	G
21	AA	1370	G
21	AA	1376	U
21	AA	1377	A
21	AA	1379	G
21	AA	1381	U
21	AA	1382	C
21	AA	1394	A
21	AA	1397	C
21	AA	1413	A
21	AA	1419	G
21	AA	1435	G
21	AA	1436	U
21	AA	1440(B)	G
21	AA	1440(C)	G

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Mol	Chain	Res	Type
21	AA	1440(D)	A
21	AA	1440(I)	A
21	AA	1440(J)	C
21	AA	1440(K)	G
21	AA	1440(L)	G
21	AA	1475	G
21	AA	1492	A
21	AA	1493	A
21	AA	1494	G
21	AA	1495	U
21	AA	1497	G
21	AA	1499	A
21	AA	1503	A
21	AA	1504	G
21	AA	1505	G
21	AA	1506	U
21	AA	1507	A
21	AA	1510	U
21	AA	1517	G
21	AA	1519	A
21	AA	1520	G
21	AA	1525	G
21	AA	1529	G
21	AA	1530	G
21	AA	1531	A
21	AA	1532	U
21	AA	1533	C
21	AA	1534	A
21	AA	1535	C
21	AA	1537	U
21	AA	1538	C
22	AW	2	G
22	AW	4	U
22	AW	8	U
22	AW	10	G
22	AW	14	A
22	AW	15	G
22	AW	16	U
22	AW	18	G
22	AW	19	G
22	AW	20	U
22	AW	20(A)	U

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Mol	Chain	Res	Type
22	AW	21	A
22	AW	22	G
22	AW	24	G
22	AW	26	A
22	AW	27	C
22	AW	28	A
22	AW	37	A
22	AW	38	A
22	AW	42	U
22	AW	43	G
22	AW	44	G
22	AW	45	G
22	AW	46	G
22	AW	48	C
22	AW	55	U
22	AW	56	C
22	AW	57	G
22	AW	58	A
22	AW	59	A
22	AW	61	C
22	AW	62	C
22	AW	63	C
22	AW	64	G
22	AW	69	A
22	AW	72	C
22	AW	74	C
23	AV	4	A
23	AV	5	A
23	AV	7	G
23	AV	8	A
23	AV	10	G
23	AV	11	U
23	AV	12	A
23	AV	13	A
23	AV	14	A
23	AV	15	A
23	AV	16	A
23	AV	17	U
23	AV	19	G
23	AV	20	U
23	AV	22	U
23	AV	26	A

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Mol	Chain	Res	Type
23	AV	27	A
23	AV	28	A
23	AV	30	A
23	AV	31	A
23	AV	32	U
23	AV	33	C
23	AV	35	A
23	AV	36	A
24	AX	6	A
24	AX	8	U
24	AX	9	A
24	AX	16	C
24	AX	17	U
24	AX	18	G
24	AX	20	G
24	AX	21	A
24	AX	34	U
24	AX	39	G
24	AX	42	G
24	AX	45	G
24	AX	46	G
24	AX	47	U
24	AX	48	C
24	AX	50	G
24	AX	51	C
24	AX	52	G
24	AX	55	U
24	AX	60	C
24	AX	63	G
24	AX	64	U
24	AX	66	A
24	AX	68	C
24	AX	72	C
24	AX	73	A
24	AX	74	C
24	AX	75	C
24	AX	76	A
59	BA	7	G
59	BA	8	A
59	BA	10	G
59	BA	11	G
59	BA	13	A

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Mol	Chain	Res	Type
59	BA	15	G
59	BA	18	C
59	BA	33	U
59	BA	35	G
59	BA	40	C
59	BA	46	C
59	BA	50	U
59	BA	51	G
59	BA	58	G
59	BA	61	G
59	BA	64	A
59	BA	67	U
59	BA	70	G
59	BA	72	U
59	BA	73	A
59	BA	75	G
59	BA	83	G
59	BA	84	A
59	BA	88	G
59	BA	91	A
59	BA	99	U
59	BA	101	G
59	BA	102	G
59	BA	105	C
59	BA	113	G
59	BA	117	G
59	BA	118	A
59	BA	120	U
59	BA	122	G
59	BA	128	C
59	BA	134	C
59	BA	137(B)	G
59	BA	137(C)	G
59	BA	137(E)	A
59	BA	137(F)	C
59	BA	149	A
59	BA	171	G
59	BA	177	G
59	BA	186	G
59	BA	196	A
59	BA	197	A
59	BA	200	U

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Mol	Chain	Res	Type
59	BA	201	C
59	BA	204	A
59	BA	205	G
59	BA	215	G
59	BA	216	A
59	BA	220	G
59	BA	221	A
59	BA	222	A
59	BA	225	A
59	BA	226	G
59	BA	228	A
59	BA	229	A
59	BA	230	U
59	BA	233	A
59	BA	248	G
59	BA	252	G
59	BA	253	C
59	BA	268	C
59	BA	270(D)	C
59	BA	270(K)	C
59	BA	270(L)	U
59	BA	270(M)	U
59	BA	270(Q)	C
59	BA	271(B)	G
59	BA	271(C)	U
59	BA	271(D)	G
59	BA	271(J)	C
59	BA	271(M)	G
59	BA	271(N)	G
59	BA	271(R)	C
59	BA	271(T)	G
59	BA	283	U
59	BA	299	A
59	BA	302	C
59	BA	310	A
59	BA	322	A
59	BA	325	G
59	BA	329	G
59	BA	330	A
59	BA	349	G
59	BA	352	G
59	BA	357(C)	G

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Mol	Chain	Res	Type
59	BA	357(K)	U
59	BA	357(M)	C
59	BA	373	U
59	BA	377	C
59	BA	380	U
59	BA	386	G
59	BA	387	U
59	BA	391	G
59	BA	396	G
59	BA	405	U
59	BA	406	G
59	BA	411	G
59	BA	412	A
59	BA	418	G
59	BA	436	C
59	BA	444	C
59	BA	451	C
59	BA	456	C
59	BA	457	A
59	BA	467	G
59	BA	470	A
59	BA	473	G
59	BA	475	U
59	BA	480	A
59	BA	481	G
59	BA	484	C
59	BA	487	C
59	BA	491	G
59	BA	492	A
59	BA	504	U
59	BA	505	A
59	BA	508	G
59	BA	509	C
59	BA	512	G
59	BA	518	G
59	BA	527	C
59	BA	530	G
59	BA	531	C
59	BA	532	A
59	BA	533	G
59	BA	541	C
59	BA	550	G

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Mol	Chain	Res	Type
59	BA	556	G
59	BA	563	G
59	BA	572	A
59	BA	573	G
59	BA	584	C
59	BA	588	U
59	BA	589	C
59	BA	591	C
59	BA	593	G
59	BA	602	G
59	BA	603	A
59	BA	611(D)	U
59	BA	611(E)	G
59	BA	611(F)	A
59	BA	611(G)	G
59	BA	620	G
59	BA	621	A
59	BA	627	A
59	BA	628	G
59	BA	634	C
59	BA	637	A
59	BA	645	C
59	BA	646	A
59	BA	653	C
59	BA	654	U
59	BA	655	A
59	BA	656	G
59	BA	661	C
59	BA	666	G
59	BA	668	G
59	BA	684	G
59	BA	686	G
59	BA	689	A
59	BA	692	C
59	BA	699	A
59	BA	719	C
59	BA	730	C
59	BA	738	G
59	BA	746	A
59	BA	747	U
59	BA	748	G
59	BA	750	A

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Mol	Chain	Res	Type
59	BA	752	A
59	BA	757	U
59	BA	761	A
59	BA	764	A
59	BA	765	G
59	BA	772	C
59	BA	776	G
59	BA	777	A
59	BA	782	A
59	BA	784	A
59	BA	785	G
59	BA	791	C
59	BA	792	G
59	BA	793	A
59	BA	798	G
59	BA	799	G
59	BA	805	G
59	BA	807	U
59	BA	812	C
59	BA	819	A
59	BA	827	U
59	BA	828	U
59	BA	831	G
59	BA	833	U
59	BA	843	G
59	BA	845	G
59	BA	846	C
59	BA	847	U
59	BA	857	C
59	BA	861	A
59	BA	865	C
59	BA	866	A
59	BA	868	U
59	BA	872	A
59	BA	881	G
59	BA	883	G
59	BA	885	C
59	BA	886	C
59	BA	887	A
59	BA	889	C
59	BA	890	A
59	BA	895	U

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Mol	Chain	Res	Type
59	BA	896	A
59	BA	897	C
59	BA	906	G
59	BA	910	A
59	BA	914	C
59	BA	917	A
59	BA	919	G
59	BA	930	U
59	BA	932	G
59	BA	933	A
59	BA	938	G
59	BA	939	G
59	BA	941	A
59	BA	943	U
59	BA	945	A
59	BA	946	G
59	BA	957	A
59	BA	959	A
59	BA	961	C
59	BA	962	G
59	BA	963	U
59	BA	964	C
59	BA	974	G
59	BA	974(A)	C
59	BA	980	A
59	BA	983	A
59	BA	988	A
59	BA	990	A
59	BA	996	A
59	BA	1003	G
59	BA	1004	C
59	BA	1005	C
59	BA	1008	C
59	BA	1009	A
59	BA	1011	G
59	BA	1012	U
59	BA	1013	C
59	BA	1022	G
59	BA	1023	U
59	BA	1025	G
59	BA	1026	U
59	BA	1027	A

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Mol	Chain	Res	Type
59	BA	1033	U
59	BA	1035	U
59	BA	1042	G
59	BA	1046	A
59	BA	1047	G
59	BA	1048	A
59	BA	1052	C
59	BA	1061	U
59	BA	1062	G
59	BA	1064	C
59	BA	1070	A
59	BA	1071	G
59	BA	1072	C
59	BA	1073	A
59	BA	1077	A
59	BA	1078	U
59	BA	1079	C
59	BA	1082	U
59	BA	1088	A
59	BA	1090	U
59	BA	1095	A
59	BA	1097	U
59	BA	1098	A
59	BA	1101	U
59	BA	1112	G
59	BA	1129	A
59	BA	1130	U
59	BA	1131	G
59	BA	1132	A
59	BA	1133	U
59	BA	1135	C
59	BA	1136	G
59	BA	1139	G
59	BA	1142	A
59	BA	1144	G
59	BA	1155	A
59	BA	1157	G
59	BA	1173	A
59	BA	1174	U
59	BA	1186	G
59	BA	1188	U
59	BA	1199	U

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Mol	Chain	Res	Type
59	BA	1204	A
59	BA	1205	U
59	BA	1210	A
59	BA	1211	U
59	BA	1212	G
59	BA	1213	A
59	BA	1215	G
59	BA	1219(A)	A
59	BA	1220	C
59	BA	1225	G
59	BA	1236	G
59	BA	1239	G
59	BA	1241	A
59	BA	1248	G
59	BA	1250	G
59	BA	1252	G
59	BA	1253	A
59	BA	1256	G
59	BA	1257	C
59	BA	1265	A
59	BA	1266	G
59	BA	1272	A
59	BA	1273	U
59	BA	1274	A
59	BA	1275	A
59	BA	1284	A
59	BA	1287	A
59	BA	1288	U
59	BA	1299	G
59	BA	1300	U
59	BA	1301	A
59	BA	1302	A
59	BA	1303	G
59	BA	1313	U
59	BA	1314	C
59	BA	1321	A
59	BA	1329	U
59	BA	1330	C
59	BA	1331	A
59	BA	1332	G
59	BA	1341	U
59	BA	1345	C

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Mol	Chain	Res	Type
59	BA	1349	A
59	BA	1352	U
59	BA	1359	A
59	BA	1360	A
59	BA	1371	G
59	BA	1378	A
59	BA	1380	G
59	BA	1384	A
59	BA	1385	G
59	BA	1386	C
59	BA	1395	A
59	BA	1396	U
59	BA	1416	G
59	BA	1417	C
59	BA	1420	U
59	BA	1421	G
59	BA	1422	G
59	BA	1427	A
59	BA	1428	C
59	BA	1438	U
59	BA	1444(A)	A
59	BA	1453	A
59	BA	1454	U
59	BA	1455	G
59	BA	1458	C
59	BA	1459	G
59	BA	1461	G
59	BA	1465	G
59	BA	1467	C
59	BA	1468(C)	A
59	BA	1483	G
59	BA	1486	A
59	BA	1490	A
59	BA	1491	G
59	BA	1493	C
59	BA	1494	A
59	BA	1495	A
59	BA	1497	U
59	BA	1498	C
59	BA	1506(C)	A
59	BA	1506(K)	C
59	BA	1506(O)	G

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Mol	Chain	Res	Type
59	BA	1536	A
59	BA	1538	G
59	BA	1541	U
59	BA	1542	G
59	BA	1543	A
59	BA	1543(A)	C
59	BA	1544	A
59	BA	1545	A
59	BA	1546	C
59	BA	1547	C
59	BA	1553	A
59	BA	1554	A
59	BA	1555	G
59	BA	1558	A
59	BA	1559	G
59	BA	1560	G
59	BA	1565	C
59	BA	1566	A
59	BA	1569	A
59	BA	1579	A
59	BA	1581	G
59	BA	1584	C
59	BA	1586	A
59	BA	1598	C
59	BA	1603	A
59	BA	1607	C
59	BA	1610	A
59	BA	1615	C
59	BA	1617	C
59	BA	1618	A
59	BA	1619	G
59	BA	1631	A
59	BA	1635	G
59	BA	1640	C
59	BA	1646	C
59	BA	1648	C
59	BA	1651	G
59	BA	1653	G
59	BA	1654	A
59	BA	1664	A
59	BA	1671	U
59	BA	1673	U

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Mol	Chain	Res	Type
59	BA	1674	G
59	BA	1690	A
59	BA	1695	G
59	BA	1696	G
59	BA	1698	A
59	BA	1702	G
59	BA	1705	G
59	BA	1712(H)	A
59	BA	1712(J)	G
59	BA	1712(K)	A
59	BA	1712(O)	C
59	BA	1750	G
59	BA	1756	G
59	BA	1759	A
59	BA	1763	G
59	BA	1764	G
59	BA	1773	A
59	BA	1781	C
59	BA	1782	C
59	BA	1783	A
59	BA	1784	A
59	BA	1787	A
59	BA	1788	C
59	BA	1793	C
59	BA	1794	U
59	BA	1800	C
59	BA	1801	G
59	BA	1806	C
59	BA	1815	A
59	BA	1816	G
59	BA	1821	A
59	BA	1829	A
59	BA	1831	G
59	BA	1835	G
59	BA	1839	G
59	BA	1840	G
59	BA	1841	U
59	BA	1847	A
59	BA	1848	A
59	BA	1860	G
59	BA	1878	G
59	BA	1888	G

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Mol	Chain	Res	Type
59	BA	1895	C
59	BA	1899	G
59	BA	1900	A
59	BA	1901	A
59	BA	1902	C
59	BA	1906	G
59	BA	1913	A
59	BA	1914	C
59	BA	1915	U
59	BA	1917	U
59	BA	1923	U
59	BA	1927	A
59	BA	1929	G
59	BA	1930	G
59	BA	1933	G
59	BA	1935	G
59	BA	1936	A
59	BA	1938	A
59	BA	1939	U
59	BA	1940	U
59	BA	1944	U
59	BA	1951	U
59	BA	1955	U
59	BA	1961	C
59	BA	1962	C
59	BA	1963	U
59	BA	1965	C
59	BA	1967	C
59	BA	1968	G
59	BA	1970	A
59	BA	1971	A
59	BA	1972	A
59	BA	1981	A
59	BA	1982	C
59	BA	1991	U
59	BA	1992	G
59	BA	1993	U
59	BA	1997	G
59	BA	1998	G
59	BA	2009	G
59	BA	2015	A
59	BA	2019	A

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Mol	Chain	Res	Type
59	BA	2020	A
59	BA	2023	G
59	BA	2025	C
59	BA	2031	A
59	BA	2032	G
59	BA	2033	A
59	BA	2036	C
59	BA	2041	U
59	BA	2042	A
59	BA	2043	C
59	BA	2045	C
59	BA	2047	U
59	BA	2050	C
59	BA	2051	A
59	BA	2055	C
59	BA	2056	G
59	BA	2059	A
59	BA	2060	A
59	BA	2061	G
59	BA	2068	U
59	BA	2069	G
59	BA	2075	U
59	BA	2104	G
59	BA	2105	C
59	BA	2107	C
59	BA	2111	C
59	BA	2112	G
59	BA	2113	U
59	BA	2114	A
59	BA	2116	G
59	BA	2120	G
59	BA	2131	G
59	BA	2132	U
59	BA	2133	G
59	BA	2136	C
59	BA	2144	U
59	BA	2145	C
59	BA	2148	G
59	BA	2154	G
59	BA	2156	G
59	BA	2158	A
59	BA	2159	G

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Mol	Chain	Res	Type
59	BA	2161	C
59	BA	2169	A
59	BA	2170	A
59	BA	2171	A
59	BA	2172	U
59	BA	2185	C
59	BA	2186	G
59	BA	2198	A
59	BA	2202(D)	G
59	BA	2202(E)	A
59	BA	2202(F)	U
59	BA	2223	G
59	BA	2225	A
59	BA	2226	C
59	BA	2232	U
59	BA	2235	G
59	BA	2238	G
59	BA	2243	U
59	BA	2245	U
59	BA	2246	G
59	BA	2247	A
59	BA	2249	U
59	BA	2250	G
59	BA	2251	G
59	BA	2252	G
59	BA	2253	G
59	BA	2254	C
59	BA	2255	G
59	BA	2256	G
59	BA	2259	G
59	BA	2266	A
59	BA	2268	A
59	BA	2270	G
59	BA	2275	C
59	BA	2277	G
59	BA	2278	A
59	BA	2283	C
59	BA	2285	C
59	BA	2286	A
59	BA	2287	A
59	BA	2304	G
59	BA	2305	A

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Mol	Chain	Res	Type
59	BA	2306	C
59	BA	2307	G
59	BA	2308	G
59	BA	2309	A
59	BA	2310	A
59	BA	2319	G
59	BA	2320	A
59	BA	2325	G
59	BA	2334	G
59	BA	2336	A
59	BA	2343	C
59	BA	2345	G
59	BA	2346	A
59	BA	2347	C
59	BA	2367	G
59	BA	2377	A
59	BA	2379	G
59	BA	2382	G
59	BA	2383	G
59	BA	2385	C
59	BA	2402	C
59	BA	2403	C
59	BA	2413	G
59	BA	2423	U
59	BA	2424	C
59	BA	2425	A
59	BA	2427	C
59	BA	2428	G
59	BA	2429	G
59	BA	2430	A
59	BA	2435	A
59	BA	2436	G
59	BA	2439	A
59	BA	2441	C
59	BA	2445	G
59	BA	2446	G
59	BA	2447	G
59	BA	2448	A
59	BA	2449	U
59	BA	2451	A
59	BA	2452	C
59	BA	2456	C

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Mol	Chain	Res	Type
59	BA	2468	G
59	BA	2469	A
59	BA	2470	G
59	BA	2476	A
59	BA	2477	C
59	BA	2478	A
59	BA	2479	G
59	BA	2480	C
59	BA	2484	G
59	BA	2498	C
59	BA	2502	G
59	BA	2503	A
59	BA	2505	G
59	BA	2506	U
59	BA	2516	G
59	BA	2520	C
59	BA	2529	G
59	BA	2533	A
59	BA	2540	C
59	BA	2542	A
59	BA	2543	G
59	BA	2544	G
59	BA	2551	C
59	BA	2552	U
59	BA	2553	G
59	BA	2554	U
59	BA	2555	U
59	BA	2556	C
59	BA	2557	G
59	BA	2558	C
59	BA	2560	C
59	BA	2566	A
59	BA	2567	G
59	BA	2572	A
59	BA	2573	C
59	BA	2574	G
59	BA	2576	G
59	BA	2578	G
59	BA	2582	G
59	BA	2586	C
59	BA	2587	A
59	BA	2602	A

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Mol	Chain	Res	Type
59	BA	2609	U
59	BA	2610	C
59	BA	2611	U
59	BA	2612	C
59	BA	2614	A
59	BA	2620	C
59	BA	2621	A
59	BA	2629	A
59	BA	2630	G
59	BA	2635	C
59	BA	2636	U
59	BA	2639	A
59	BA	2645	G
59	BA	2646	C
59	BA	2653	U
59	BA	2654	A
59	BA	2660	A
59	BA	2665	A
59	BA	2671	A
59	BA	2682	U
59	BA	2686	G
59	BA	2689	U
59	BA	2690	C
59	BA	2691	C
59	BA	2692	C
59	BA	2701	C
59	BA	2702	U
59	BA	2703	C
59	BA	2707	G
59	BA	2712(A)	A
59	BA	2713	A
59	BA	2714	G
59	BA	2725	A
59	BA	2726	U
59	BA	2727	G
59	BA	2732	G
59	BA	2733	A
59	BA	2748	A
59	BA	2751	G
59	BA	2757	A
59	BA	2758	A
59	BA	2764	A

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Mol	Chain	Res	Type
59	BA	2765	A
59	BA	2766	G
59	BA	2772	C
59	BA	2778	A
59	BA	2779	U
59	BA	2780	G
59	BA	2781	A
59	BA	2782	G
59	BA	2790	A
59	BA	2792	G
59	BA	2793	G
59	BA	2794(B)	U
59	BA	2794(E)	A
59	BA	2804	C
59	BA	2805	G
59	BA	2808	U
59	BA	2811	G
59	BA	2820	A
59	BA	2821	A
59	BA	2833	G
59	BA	2835	A
59	BA	2849	U
59	BA	2872	G
59	BA	2876	G
59	BA	2880	C
59	BA	2884	U
59	BA	2892	A
59	BA	2894	G
59	BA	2895	U
60	BB	4	C
60	BB	7	G
60	BB	13	A
60	BB	14	U
60	BB	15	A
60	BB	16	G
60	BB	21	G
60	BB	25	A
60	BB	30	C
60	BB	41	U
60	BB	44	G
60	BB	46	A
60	BB	52	A

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Mol	Chain	Res	Type
60	BB	56	G
60	BB	66	A
60	BB	73	A
60	BB	74	U
60	BB	79	C
60	BB	80	U
60	BB	82	G
60	BB	86	G
60	BB	87	G
60	BB	89(A)	G
60	BB	91	C
60	BB	97	G
60	BB	100	G
60	BB	117	G
21	CA	6	G
21	CA	9	G
21	CA	16	A
21	CA	31	G
21	CA	32	A
21	CA	39	G
21	CA	47	C
21	CA	48	C
21	CA	49	U
21	CA	51	A
21	CA	59	A
21	CA	65	U
21	CA	66	G
21	CA	68	G
21	CA	68(H)	G
21	CA	68(L)	U
21	CA	68(M)	U
21	CA	68(P)	C
21	CA	68(S)	C
21	CA	68(T)	G
21	CA	68(V)	G
21	CA	68(W)	G
21	CA	68(X)	U
21	CA	101	A
21	CA	108	G
21	CA	109	A
21	CA	116	A
21	CA	120	A

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Mol	Chain	Res	Type
21	CA	121	C
21	CA	123	C
21	CA	129	U
21	CA	129(A)	G
21	CA	131	C
21	CA	136	C
21	CA	144	G
21	CA	151	A
21	CA	161	A
21	CA	163	C
21	CA	174	C
21	CA	176	C
21	CA	185	A
21	CA	186(C)	G
21	CA	186(H)	U
21	CA	186(J)	G
21	CA	186(K)	G
21	CA	186(M)	G
21	CA	195	A
21	CA	197	A
21	CA	201	C
21	CA	201(C)	U
21	CA	216	G
21	CA	219	C
21	CA	230	G
21	CA	231	G
21	CA	247	G
21	CA	250	A
21	CA	251	G
21	CA	258	G
21	CA	262	A
21	CA	264	U
21	CA	267	C
21	CA	268	C
21	CA	279	A
21	CA	280	C
21	CA	281	G
21	CA	283	C
21	CA	289	G
21	CA	291	C
21	CA	306	G
21	CA	308	C

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Mol	Chain	Res	Type
21	CA	315	A
21	CA	316	G
21	CA	328	C
21	CA	329	A
21	CA	332	G
21	CA	340	U
21	CA	345	C
21	CA	346	G
21	CA	347	G
21	CA	352	C
21	CA	353	A
21	CA	354	G
21	CA	367	U
21	CA	372	C
21	CA	373	A
21	CA	378	G
21	CA	384	G
21	CA	389	A
21	CA	397	A
21	CA	398	C
21	CA	404	U
21	CA	412	A
21	CA	413	G
21	CA	414	A
21	CA	422	C
21	CA	423	G
21	CA	424	G
21	CA	427	U
21	CA	429	U
21	CA	430	A
21	CA	434	U
21	CA	440	A
21	CA	441	A
21	CA	452	A
21	CA	453	A
21	CA	455	C
21	CA	478	A
21	CA	481	G
21	CA	485	G
21	CA	497	A
21	CA	498	U
21	CA	499	A

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Mol	Chain	Res	Type
21	CA	501	C
21	CA	505	G
21	CA	511	C
21	CA	514	C
21	CA	516	U
21	CA	518	C
21	CA	519	C
21	CA	521	G
21	CA	524	G
21	CA	527	G
21	CA	532	A
21	CA	533	A
21	CA	535	A
21	CA	536	C
21	CA	547	A
21	CA	555	C
21	CA	559	A
21	CA	562	C
21	CA	567	G
21	CA	568	G
21	CA	572	A
21	CA	573	A
21	CA	574	A
21	CA	576	G
21	CA	585	G
21	CA	590	C
21	CA	596	C
21	CA	598	U
21	CA	603	U
21	CA	607	A
21	CA	616	G
21	CA	618	C
21	CA	620	C
21	CA	629	G
21	CA	638	G
21	CA	641	U
21	CA	652	U
21	CA	653	A
21	CA	661	G
21	CA	665	A
21	CA	671	G
21	CA	676	A

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Mol	Chain	Res	Type
21	CA	687	A
21	CA	688	G
21	CA	702	A
21	CA	704	A
21	CA	717	C
21	CA	721	G
21	CA	723	U
21	CA	734	G
21	CA	735	C
21	CA	741	G
21	CA	749	C
21	CA	754	C
21	CA	755	G
21	CA	762	C
21	CA	766	A
21	CA	777	A
21	CA	781	A
21	CA	782	A
21	CA	789	U
21	CA	793	U
21	CA	794	A
21	CA	796	C
21	CA	815	A
21	CA	816	A
21	CA	817	C
21	CA	818	G
21	CA	819	A
21	CA	828	A
21	CA	838(A)	U
21	CA	838(B)	C
21	CA	838(C)	U
21	CA	848	C
21	CA	853	G
21	CA	855	G
21	CA	859	A
21	CA	867	G
21	CA	870	U
21	CA	873	A
21	CA	876	G
21	CA	885	G
21	CA	887	G
21	CA	889	A

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Mol	Chain	Res	Type
21	CA	890	G
21	CA	892	A
21	CA	900	A
21	CA	907	A
21	CA	908	A
21	CA	909	A
21	CA	914	A
21	CA	916	G
21	CA	926	G
21	CA	927	G
21	CA	930	C
21	CA	936	C
21	CA	939	G
21	CA	941	G
21	CA	945	G
21	CA	950	U
21	CA	958	A
21	CA	960	U
21	CA	961	U
21	CA	965	A
21	CA	966	G
21	CA	967	C
21	CA	968	A
21	CA	969	A
21	CA	971	G
21	CA	974	A
21	CA	976	G
21	CA	977	A
21	CA	978	A
21	CA	979	C
21	CA	980	C
21	CA	992	U
21	CA	993	G
21	CA	1004	A
21	CA	1005	A
21	CA	1006	C
21	CA	1008	C
21	CA	1017	G
21	CA	1020	U
21	CA	1024	G
21	CA	1025	U
21	CA	1028(B)	C

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Mol	Chain	Res	Type
21	CA	1028(C)	G
21	CA	1036	G
21	CA	1037	C
21	CA	1041	A
21	CA	1046	A
21	CA	1049	U
21	CA	1054	C
21	CA	1062	U
21	CA	1065	U
21	CA	1066	C
21	CA	1068	G
21	CA	1092	A
21	CA	1094	G
21	CA	1095	U
21	CA	1100	C
21	CA	1101	A
21	CA	1108	G
21	CA	1117	G
21	CA	1123	A
21	CA	1125	U
21	CA	1126	U
21	CA	1130	A
21	CA	1131	G
21	CA	1136	U
21	CA	1137	C
21	CA	1138	G
21	CA	1139	G
21	CA	1140	C
21	CA	1145	C
21	CA	1146	A
21	CA	1152	A
21	CA	1157	A
21	CA	1158	C
21	CA	1159	U
21	CA	1178	G
21	CA	1181	G
21	CA	1184	G
21	CA	1191	A
21	CA	1193	G
21	CA	1196	U
21	CA	1197	G
21	CA	1201	A

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Mol	Chain	Res	Type
21	CA	1202	G
21	CA	1211	U
21	CA	1212	U
21	CA	1213	A
21	CA	1219	U
21	CA	1225	A
21	CA	1226	C
21	CA	1227	A
21	CA	1229	A
21	CA	1237	C
21	CA	1238	A
21	CA	1239	A
21	CA	1240	U
21	CA	1241	G
21	CA	1251	A
21	CA	1252	A
21	CA	1256	A
21	CA	1257	U
21	CA	1262	C
21	CA	1272	G
21	CA	1273	G
21	CA	1278	U
21	CA	1279	A
21	CA	1280	A
21	CA	1281	U
21	CA	1282	C
21	CA	1285	A
21	CA	1286	A
21	CA	1287	A
21	CA	1290	G
21	CA	1298	C
21	CA	1299	A
21	CA	1300	G
21	CA	1301	U
21	CA	1303	C
21	CA	1305	G
21	CA	1306	A
21	CA	1307	U
21	CA	1317	C
21	CA	1321	C
21	CA	1322	C
21	CA	1323	G

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Mol	Chain	Res	Type
21	CA	1330	U
21	CA	1331	G
21	CA	1335	C
21	CA	1336	C
21	CA	1345	U
21	CA	1347	G
21	CA	1359	C
21	CA	1361	G
21	CA	1362(A)	C
21	CA	1363	A
21	CA	1364	U
21	CA	1370	G
21	CA	1374	A
21	CA	1379	G
21	CA	1381	U
21	CA	1386	G
21	CA	1394	A
21	CA	1397	C
21	CA	1401	G
21	CA	1402	C
21	CA	1419	G
21	CA	1422	G
21	CA	1436	U
21	CA	1439	C
21	CA	1440(C)	G
21	CA	1440(D)	A
21	CA	1440(E)	G
21	CA	1440(I)	A
21	CA	1440(J)	C
21	CA	1440(K)	G
21	CA	1440(O)	A
21	CA	1484	C
21	CA	1487	G
21	CA	1492	A
21	CA	1494	G
21	CA	1497	G
21	CA	1502	A
21	CA	1503	A
21	CA	1504	G
21	CA	1505	G
21	CA	1506	U
21	CA	1507	A

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Mol	Chain	Res	Type
21	CA	1517	G
21	CA	1519	A
21	CA	1520	G
21	CA	1525	G
21	CA	1528	U
21	CA	1530	G
21	CA	1531	A
21	CA	1532	U
21	CA	1533	C
21	CA	1534	A
21	CA	1535	C
21	CA	1536	C
21	CA	1538	C
23	CV	3	C
23	CV	4	A
23	CV	5	A
23	CV	8	A
23	CV	9	G
23	CV	10	G
23	CV	11	U
23	CV	12	A
23	CV	13	A
23	CV	14	A
23	CV	15	A
23	CV	16	A
23	CV	17	U
23	CV	18	G
23	CV	19	G
23	CV	20	U
23	CV	21	A
23	CV	22	U
23	CV	24	C
23	CV	26	A
23	CV	27	A
23	CV	28	A
23	CV	30	A
23	CV	31	A
23	CV	32	U
23	CV	34	A
23	CV	35	A
23	CV	36	A
22	CW	2	G

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Mol	Chain	Res	Type
22	CW	3	C
22	CW	8	U
22	CW	10	G
22	CW	12	U
22	CW	13	C
22	CW	14	A
22	CW	15	G
22	CW	16	U
22	CW	18	G
22	CW	19	G
22	CW	20	U
22	CW	20(A)	U
22	CW	21	A
22	CW	22	G
22	CW	24	G
22	CW	25	C
22	CW	26	A
22	CW	27	C
22	CW	29	U
22	CW	32	C
22	CW	34	C
22	CW	37	A
22	CW	38	A
22	CW	42	U
22	CW	43	G
22	CW	44	G
22	CW	45	G
22	CW	46	G
22	CW	47	U
22	CW	48	C
22	CW	50	C
22	CW	52	G
22	CW	56	C
22	CW	57	G
22	CW	58	A
22	CW	59	A
22	CW	60	U
22	CW	61	C
22	CW	63	C
22	CW	64	G
22	CW	74	C
24	CX	5	G

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Mol	Chain	Res	Type
24	CX	8	U
24	CX	16	C
24	CX	17	U
24	CX	18	G
24	CX	20	G
24	CX	21	A
24	CX	24	G
24	CX	25	C
24	CX	28	C
24	CX	42	G
24	CX	44	G
24	CX	45	G
24	CX	47	U
24	CX	48	C
24	CX	49	G
24	CX	50	G
24	CX	52	G
24	CX	53	G
24	CX	57	G
24	CX	58	A
24	CX	60	C
24	CX	61	C
24	CX	64	U
24	CX	65	C
24	CX	68	C
24	CX	72	C
24	CX	73	A
24	CX	74	C
24	CX	76	A
59	DA	8	A
59	DA	10	G
59	DA	11	G
59	DA	12	U
59	DA	17	G
59	DA	25	U
59	DA	34	C
59	DA	35	G
59	DA	46	C
59	DA	49	A
59	DA	51	G
59	DA	57	C
59	DA	63	U

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Mol	Chain	Res	Type
59	DA	64	A
59	DA	73	A
59	DA	74	A
59	DA	75	G
59	DA	84	A
59	DA	88	G
59	DA	91	A
59	DA	95	G
59	DA	98	G
59	DA	101	G
59	DA	102	G
59	DA	115	C
59	DA	116	C
59	DA	117	G
59	DA	118	A
59	DA	120	U
59	DA	137(B)	G
59	DA	137(D)	A
59	DA	137(E)	A
59	DA	137(F)	C
59	DA	150	C
59	DA	155(B)	U
59	DA	155(C)	U
59	DA	155(D)	U
59	DA	175	G
59	DA	181	A
59	DA	186	G
59	DA	193	U
59	DA	195	A
59	DA	196	A
59	DA	197	A
59	DA	204	A
59	DA	205	G
59	DA	210	C
59	DA	216	A
59	DA	221	A
59	DA	222	A
59	DA	225	A
59	DA	228	A
59	DA	229	A
59	DA	230	U
59	DA	233	A

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Mol	Chain	Res	Type
59	DA	235	U
59	DA	241	A
59	DA	248	G
59	DA	252	G
59	DA	256	A
59	DA	264	C
59	DA	269	U
59	DA	270	A
59	DA	270(B)	A
59	DA	270(G)	C
59	DA	270(K)	C
59	DA	270(L)	U
59	DA	270(M)	U
59	DA	270(P)	C
59	DA	270(Q)	C
59	DA	270(S)	G
59	DA	270(U)	C
59	DA	271(C)	U
59	DA	271(D)	G
59	DA	271(F)	G
59	DA	271(M)	G
59	DA	271(N)	G
59	DA	271(P)	C
59	DA	271(Q)	A
59	DA	271(R)	C
59	DA	271(T)	G
59	DA	293	U
59	DA	294	A
59	DA	299	A
59	DA	302	C
59	DA	317	G
59	DA	321	G
59	DA	322	A
59	DA	323	G
59	DA	324	A
59	DA	329	G
59	DA	330	A
59	DA	345	A
59	DA	346	A
59	DA	352	G
59	DA	353	G
59	DA	357(F)	G

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Mol	Chain	Res	Type
59	DA	357(K)	U
59	DA	357(L)	A
59	DA	357(M)	C
59	DA	372	G
59	DA	375	C
59	DA	380	U
59	DA	386	G
59	DA	389	G
59	DA	390	A
59	DA	394	A
59	DA	405	U
59	DA	409	C
59	DA	411	G
59	DA	412	A
59	DA	421	U
59	DA	431	U
59	DA	439	G
59	DA	444	C
59	DA	449	A
59	DA	451	C
59	DA	456	C
59	DA	457	A
59	DA	467	G
59	DA	470	A
59	DA	473	G
59	DA	475	U
59	DA	476	G
59	DA	480	A
59	DA	481	G
59	DA	482	A
59	DA	505	A
59	DA	508	G
59	DA	509	C
59	DA	510	C
59	DA	517	C
59	DA	527	C
59	DA	528	A
59	DA	530	G
59	DA	531	C
59	DA	532	A
59	DA	540	C
59	DA	543(B)	C

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Mol	Chain	Res	Type
59	DA	543(C)	A
59	DA	550	G
59	DA	559	G
59	DA	563	G
59	DA	573	G
59	DA	575	A
59	DA	577	G
59	DA	582	G
59	DA	586	A
59	DA	588	U
59	DA	603	A
59	DA	604	G
59	DA	611	C
59	DA	611(A)	C
59	DA	611(E)	G
59	DA	611(F)	A
59	DA	611(G)	G
59	DA	621	A
59	DA	627	A
59	DA	629	G
59	DA	634	C
59	DA	636	G
59	DA	637	A
59	DA	645	C
59	DA	646	A
59	DA	654	U
59	DA	655	A
59	DA	662	G
59	DA	668	G
59	DA	670	A
59	DA	671	C
59	DA	686	G
59	DA	699	A
59	DA	701	G
59	DA	723	G
59	DA	730	C
59	DA	734	A
59	DA	747	U
59	DA	748	G
59	DA	755	C
59	DA	760	G
59	DA	764	A

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Mol	Chain	Res	Type
59	DA	765	G
59	DA	771	G
59	DA	775	G
59	DA	776	G
59	DA	782	A
59	DA	784	A
59	DA	785	G
59	DA	788	A
59	DA	790	C
59	DA	791	C
59	DA	792	G
59	DA	796	C
59	DA	800	A
59	DA	805	G
59	DA	806	C
59	DA	808	G
59	DA	812	C
59	DA	819	A
59	DA	827	U
59	DA	828	U
59	DA	843	G
59	DA	844	C
59	DA	846	C
59	DA	847	U
59	DA	859	G
59	DA	861	A
59	DA	874	G
59	DA	882	G
59	DA	885	C
59	DA	886	C
59	DA	887	A
59	DA	890	A
59	DA	896	A
59	DA	897	C
59	DA	898	C
59	DA	903	C
59	DA	907	U
59	DA	910	A
59	DA	917	A
59	DA	918	A
59	DA	919	G
59	DA	921	G

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Mol	Chain	Res	Type
59	DA	929	G
59	DA	932	G
59	DA	933	A
59	DA	938	G
59	DA	941	A
59	DA	945	A
59	DA	946	G
59	DA	948	G
59	DA	959	A
59	DA	961	C
59	DA	962	G
59	DA	963	U
59	DA	964	C
59	DA	967	C
59	DA	972	G
59	DA	974	G
59	DA	974(A)	C
59	DA	980	A
59	DA	983	A
59	DA	985	C
59	DA	988	A
59	DA	990	A
59	DA	996	A
59	DA	1003	G
59	DA	1004	C
59	DA	1005	C
59	DA	1006	C
59	DA	1009	A
59	DA	1011	G
59	DA	1012	U
59	DA	1013	C
59	DA	1022	G
59	DA	1023	U
59	DA	1025	G
59	DA	1026	U
59	DA	1033	U
59	DA	1047	G
59	DA	1048	A
59	DA	1051	G
59	DA	1053	C
59	DA	1060	U
59	DA	1065	U

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Mol	Chain	Res	Type
59	DA	1070	A
59	DA	1072	C
59	DA	1073	A
59	DA	1074	G
59	DA	1077	A
59	DA	1083	U
59	DA	1086	A
59	DA	1088	A
59	DA	1090	U
59	DA	1098	A
59	DA	1100	C
59	DA	1105	U
59	DA	1111	A
59	DA	1112	G
59	DA	1115	G
59	DA	1129	A
59	DA	1130	U
59	DA	1135	C
59	DA	1136	G
59	DA	1137	G
59	DA	1142	A
59	DA	1143	A
59	DA	1146	C
59	DA	1154	G
59	DA	1155	A
59	DA	1157	G
59	DA	1173	A
59	DA	1174	U
59	DA	1175	G
59	DA	1178	C
59	DA	1186	G
59	DA	1198	U
59	DA	1199	U
59	DA	1204	A
59	DA	1205	U
59	DA	1210	A
59	DA	1211	U
59	DA	1212	G
59	DA	1219(A)	A
59	DA	1220	C
59	DA	1221	C
59	DA	1229	G

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Mol	Chain	Res	Type
59	DA	1235	G
59	DA	1241	A
59	DA	1244	G
59	DA	1248	G
59	DA	1250	G
59	DA	1253	A
59	DA	1255	U
59	DA	1256	G
59	DA	1271	G
59	DA	1272	A
59	DA	1273	U
59	DA	1285	G
59	DA	1287	A
59	DA	1289	C
59	DA	1295	C
59	DA	1296	G
59	DA	1300	U
59	DA	1301	A
59	DA	1302	A
59	DA	1303	G
59	DA	1309	G
59	DA	1313	U
59	DA	1314	C
59	DA	1324	G
59	DA	1325	G
59	DA	1329	U
59	DA	1332	G
59	DA	1341	U
59	DA	1343	G
59	DA	1345	C
59	DA	1349	A
59	DA	1352	U
59	DA	1359	A
59	DA	1360	A
59	DA	1366	A
59	DA	1372	U
59	DA	1378	A
59	DA	1380	G
59	DA	1382	G
59	DA	1384	A
59	DA	1385	G
59	DA	1392	A

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Mol	Chain	Res	Type
59	DA	1395	A
59	DA	1396	U
59	DA	1398	C
59	DA	1416	G
59	DA	1420	U
59	DA	1421	G
59	DA	1428	C
59	DA	1438	U
59	DA	1441	G
59	DA	1443	G
59	DA	1444(A)	A
59	DA	1453	A
59	DA	1454	U
59	DA	1455	G
59	DA	1461	G
59	DA	1465	G
59	DA	1467	C
59	DA	1468(C)	A
59	DA	1468(H)	C
59	DA	1468(I)	A
59	DA	1483	G
59	DA	1484	G
59	DA	1490	A
59	DA	1491	G
59	DA	1493	C
59	DA	1494	A
59	DA	1495	A
59	DA	1497	U
59	DA	1498	C
59	DA	1506(B)	A
59	DA	1506(C)	A
59	DA	1538	G
59	DA	1540	G
59	DA	1541	U
59	DA	1542	G
59	DA	1543(A)	C
59	DA	1545	A
59	DA	1547	C
59	DA	1551	C
59	DA	1554	A
59	DA	1558	A
59	DA	1565	C

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Mol	Chain	Res	Type
59	DA	1566	A
59	DA	1569	A
59	DA	1572	A
59	DA	1575	C
59	DA	1576	U
59	DA	1579	A
59	DA	1581	G
59	DA	1584	C
59	DA	1586	A
59	DA	1589	C
59	DA	1598	C
59	DA	1607	C
59	DA	1608	A
59	DA	1610	A
59	DA	1613	G
59	DA	1615	C
59	DA	1617	C
59	DA	1618	A
59	DA	1627	G
59	DA	1645	G
59	DA	1646	C
59	DA	1648	C
59	DA	1651	G
59	DA	1653	G
59	DA	1654	A
59	DA	1664	A
59	DA	1665	A
59	DA	1667	G
59	DA	1670	C
59	DA	1671	U
59	DA	1674	G
59	DA	1678	G
59	DA	1696	G
59	DA	1698	A
59	DA	1708	C
59	DA	1712(F)	U
59	DA	1712(J)	G
59	DA	1712(K)	A
59	DA	1712(L)	G
59	DA	1712(Q)	G
59	DA	1756	G
59	DA	1763	G

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Mol	Chain	Res	Type
59	DA	1764	G
59	DA	1769	G
59	DA	1773	A
59	DA	1775	U
59	DA	1793	C
59	DA	1800	C
59	DA	1801	G
59	DA	1803	A
59	DA	1816	G
59	DA	1819	A
59	DA	1821	A
59	DA	1829	A
59	DA	1830	C
59	DA	1832	C
59	DA	1835	G
59	DA	1840	G
59	DA	1847	A
59	DA	1878	G
59	DA	1888	G
59	DA	1889	A
59	DA	1895	C
59	DA	1900	A
59	DA	1902	C
59	DA	1904	G
59	DA	1905	C
59	DA	1906	G
59	DA	1913	A
59	DA	1914	C
59	DA	1919	A
59	DA	1927	A
59	DA	1929	G
59	DA	1930	G
59	DA	1934	C
59	DA	1936	A
59	DA	1937	A
59	DA	1938	A
59	DA	1939	U
59	DA	1955	U
59	DA	1964	G
59	DA	1965	C
59	DA	1966	A
59	DA	1967	C

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Mol	Chain	Res	Type
59	DA	1968	G
59	DA	1970	A
59	DA	1971	A
59	DA	1972	A
59	DA	1974	C
59	DA	1981	A
59	DA	1982	C
59	DA	1984	G
59	DA	1987	G
59	DA	1992	G
59	DA	1993	U
59	DA	1997	G
59	DA	2011	U
59	DA	2014	A
59	DA	2020	A
59	DA	2027	G
59	DA	2031	A
59	DA	2032	G
59	DA	2033	A
59	DA	2034	U
59	DA	2036	C
59	DA	2041	U
59	DA	2043	C
59	DA	2045	C
59	DA	2047	U
59	DA	2052	G
59	DA	2055	C
59	DA	2056	G
59	DA	2060	A
59	DA	2061	G
59	DA	2069	G
59	DA	2077	A
59	DA	2080	G
59	DA	2093	G
59	DA	2108	C
59	DA	2111	C
59	DA	2112	G
59	DA	2118	U
59	DA	2120	G
59	DA	2126	A
59	DA	2132	U
59	DA	2133	G

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Mol	Chain	Res	Type
59	DA	2136	C
59	DA	2147	G
59	DA	2153	G
59	DA	2156	G
59	DA	2158	A
59	DA	2159	G
59	DA	2160	G
59	DA	2172	U
59	DA	2185	C
59	DA	2190	G
59	DA	2193	G
59	DA	2195	C
59	DA	2202(D)	G
59	DA	2202(E)	A
59	DA	2202(F)	U
59	DA	2202(G)	G
59	DA	2225	A
59	DA	2238	G
59	DA	2239	G
59	DA	2245	U
59	DA	2247	A
59	DA	2250	G
59	DA	2251	G
59	DA	2252	G
59	DA	2253	G
59	DA	2254	C
59	DA	2257	U
59	DA	2259	G
59	DA	2266	A
59	DA	2267	A
59	DA	2268	A
59	DA	2269	A
59	DA	2272	U
59	DA	2273	A
59	DA	2275	C
59	DA	2282	G
59	DA	2283	C
59	DA	2285	C
59	DA	2287	A
59	DA	2288	A
59	DA	2304	G
59	DA	2305	A

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Mol	Chain	Res	Type
59	DA	2306	C
59	DA	2309	A
59	DA	2310	A
59	DA	2311	A
59	DA	2319	G
59	DA	2320	A
59	DA	2322	A
59	DA	2323	G
59	DA	2325	G
59	DA	2327	A
59	DA	2334	G
59	DA	2336	A
59	DA	2343	C
59	DA	2345	G
59	DA	2347	C
59	DA	2348	U
59	DA	2350	C
59	DA	2353	G
59	DA	2354	G
59	DA	2379	G
59	DA	2381	C
59	DA	2383	G
59	DA	2385	C
59	DA	2387	U
59	DA	2391	G
59	DA	2392	A
59	DA	2400	G
59	DA	2402	C
59	DA	2403	C
59	DA	2418	A
59	DA	2423	U
59	DA	2425	A
59	DA	2427	C
59	DA	2428	G
59	DA	2429	G
59	DA	2430	A
59	DA	2431	U
59	DA	2435	A
59	DA	2436	G
59	DA	2439	A
59	DA	2441	C
59	DA	2447	G

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Mol	Chain	Res	Type
59	DA	2448	A
59	DA	2451	A
59	DA	2452	C
59	DA	2464	C
59	DA	2468	G
59	DA	2469	A
59	DA	2470	G
59	DA	2476	A
59	DA	2484	G
59	DA	2495	G
59	DA	2498	C
59	DA	2501	C
59	DA	2502	G
59	DA	2504	U
59	DA	2505	G
59	DA	2506	U
59	DA	2507	C
59	DA	2508	G
59	DA	2513	G
59	DA	2518	A
59	DA	2520	C
59	DA	2529	G
59	DA	2531	A
59	DA	2534	A
59	DA	2542	A
59	DA	2543	G
59	DA	2549	G
59	DA	2552	U
59	DA	2553	G
59	DA	2554	U
59	DA	2555	U
59	DA	2558	C
59	DA	2561	A
59	DA	2562	U
59	DA	2564	A
59	DA	2566	A
59	DA	2567	G
59	DA	2572	A
59	DA	2573	C
59	DA	2576	G
59	DA	2579	C
59	DA	2586	C

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Mol	Chain	Res	Type
59	DA	2587	A
59	DA	2599	G
59	DA	2602	A
59	DA	2604	U
59	DA	2610	C
59	DA	2611	U
59	DA	2612	C
59	DA	2613	U
59	DA	2620	C
59	DA	2621	A
59	DA	2629	A
59	DA	2630	G
59	DA	2632	A
59	DA	2634	G
59	DA	2637	U
59	DA	2638	G
59	DA	2645	G
59	DA	2646	C
59	DA	2651	C
59	DA	2654	A
59	DA	2662	A
59	DA	2664	G
59	DA	2665	A
59	DA	2682	U
59	DA	2687	U
59	DA	2689	U
59	DA	2690	C
59	DA	2691	C
59	DA	2693	A
59	DA	2702	U
59	DA	2703	C
59	DA	2712(A)	A
59	DA	2713	A
59	DA	2714	G
59	DA	2726	U
59	DA	2733	A
59	DA	2751	G
59	DA	2757	A
59	DA	2764	A
59	DA	2765	A
59	DA	2768	C
59	DA	2769	C

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Mol	Chain	Res	Type
59	DA	2778	A
59	DA	2779	U
59	DA	2780	G
59	DA	2781	A
59	DA	2782	G
59	DA	2790	A
59	DA	2791	C
59	DA	2792	G
59	DA	2793	G
59	DA	2794	C
59	DA	2794(B)	U
59	DA	2794(D)	A
59	DA	2802	G
59	DA	2808	U
59	DA	2819	G
59	DA	2820	A
59	DA	2821	A
59	DA	2833	G
59	DA	2835	A
59	DA	2842	G
59	DA	2849	U
59	DA	2850	A
59	DA	2854	G
59	DA	2861	G
59	DA	2872	G
59	DA	2876	G
59	DA	2877	G
59	DA	2880	C
59	DA	2881	C
59	DA	2884	U
59	DA	2886	G
59	DA	2892	A
60	DB	2	C
60	DB	12	C
60	DB	13	A
60	DB	14	U
60	DB	15	A
60	DB	16	G
60	DB	20	C
60	DB	21	G
60	DB	23	G
60	DB	25	A

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Mol	Chain	Res	Type
60	DB	30	C
60	DB	40	U
60	DB	41	U
60	DB	44	G
60	DB	50	G
60	DB	52	A
60	DB	56	G
60	DB	60	C
60	DB	64	C
60	DB	66	A
60	DB	67	G
60	DB	73	A
60	DB	74	U
60	DB	79	C
60	DB	80	U
60	DB	82	G
60	DB	86	G
60	DB	90	C
60	DB	97	G
60	DB	99	A
60	DB	108	C
60	DB	109	G

All (109) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
21	AA	266	G
21	AA	328	C
21	AA	687	A
21	AA	748	C
21	AA	815	A
21	AA	992	U
21	AA	1139	G
21	AA	1182	G
21	AA	1200	C
21	AA	1280	A
21	AA	1285	A
21	AA	1297	C
21	AA	1300	G
21	AA	1358	U
21	AA	1504	G
21	AA	1537	U

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Mol	Chain	Res	Type
22	AW	7	G
23	AV	6	G
23	AV	14	A
23	AV	16	A
23	AV	26	A
23	AV	27	A
23	AV	29	A
23	AV	30	A
23	AV	34	A
23	AV	35	A
24	AX	71	C
59	BA	214	G
59	BA	221	A
59	BA	271(B)	G
59	BA	357(L)	A
59	BA	474	G
59	BA	479	A
59	BA	611(F)	A
59	BA	775	G
59	BA	846	C
59	BA	880	G
59	BA	895	U
59	BA	961	C
59	BA	963	U
59	BA	1012	U
59	BA	1022	G
59	BA	1187	G
59	BA	1210	A
59	BA	1240	U
59	BA	1300	U
59	BA	1558	A
59	BA	1663	C
59	BA	2111	C
59	BA	2250	G
59	BA	2422	A
59	BA	2447	G
59	BA	2585	U
59	BA	2613	U
59	BA	2780	G
21	CA	5	U
21	CA	68(U)	U
21	CA	115	G

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Mol	Chain	Res	Type
21	CA	266	G
21	CA	328	C
21	CA	429	U
21	CA	748	C
21	CA	992	U
21	CA	1064	G
21	CA	1067	A
21	CA	1200	C
21	CA	1280	A
21	CA	1285	A
21	CA	1300	G
21	CA	1504	G
21	CA	1537	U
23	CV	14	A
23	CV	16	A
23	CV	18	G
23	CV	26	A
23	CV	27	A
23	CV	34	A
23	CV	35	A
22	CW	7	G
22	CW	26	A
59	DA	137(E)	A
59	DA	221	A
59	DA	271(B)	G
59	DA	479	A
59	DA	481	G
59	DA	611(F)	A
59	DA	733	G
59	DA	775	G
59	DA	846	C
59	DA	889	C
59	DA	1022	G
59	DA	1110	G
59	DA	1210	A
59	DA	1240	U
59	DA	1300	U
59	DA	1506(A)	A
59	DA	1964	G
59	DA	1966	A
59	DA	2202(E)	A
59	DA	2422	A

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Mol	Chain	Res	Type
59	DA	2438	U
59	DA	2447	G
59	DA	2497	A
59	DA	2503	A
59	DA	2553	G
59	DA	2585	U
59	DA	2598	A
59	DA	2689	U
59	DA	2756	U

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 12 ligands modelled in this entry, 2 are monoatomic - leaving 10 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
63	NMY	BA	2902	-	43,45,45	0.56	0	62,67,67	0.97	4 (6%)
61	GDP	AY	701	-	29,30,30	1.15	3 (10%)	45,47,47	1.97	14 (31%)
63	NMY	AA	1601	-	43,45,45	0.56	0	62,67,67	0.97	4 (6%)
62	FUA	CY	702	-	39,40,40	1.70	7 (17%)	50,64,64	1.70	8 (16%)
63	NMY	BA	2904	-	43,45,45	0.56	0	62,67,67	0.97	4 (6%)
61	GDP	CY	701	-	29,30,30	1.14	3 (10%)	45,47,47	1.98	12 (26%)
62	FUA	AY	702	-	39,40,40	1.70	7 (17%)	50,64,64	1.70	7 (14%)
63	NMY	BA	2903	-	43,45,45	0.57	0	62,67,67	0.97	4 (6%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
63	NMY	CA	1601	-	43,45,45	0.56	0	62,67,67	0.97	4 (6%)
63	NMY	DA	2901	-	43,45,45	0.56	0	62,67,67	0.97	4 (6%)

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
63	NMY	BA	2902	-	-	12/18/94/94	0/4/4/4
61	GDP	AY	701	-	-	2/16/32/32	0/3/3/3
63	NMY	AA	1601	-	-	12/18/94/94	0/4/4/4
62	FUA	CY	702	-	-	7/16/92/92	0/4/4/4
63	NMY	BA	2904	-	-	12/18/94/94	0/4/4/4
61	GDP	CY	701	-	-	5/16/32/32	0/3/3/3
62	FUA	AY	702	-	-	7/16/92/92	0/4/4/4
63	NMY	BA	2903	-	-	12/18/94/94	0/4/4/4
63	NMY	CA	1601	-	-	12/18/94/94	0/4/4/4
63	NMY	DA	2901	-	-	12/18/94/94	0/4/4/4

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
62	CY	702	FUA	C23-C22	-4.44	1.39	1.51
62	AY	702	FUA	C23-C22	-4.38	1.40	1.51
62	AY	702	FUA	C23-C24	-4.36	1.39	1.53
62	CY	702	FUA	C23-C24	-4.34	1.39	1.53
62	CY	702	FUA	C29-C22	4.22	1.53	1.47
62	AY	702	FUA	C29-C22	4.22	1.53	1.47
62	AY	702	FUA	C24-C25	-3.54	1.39	1.50
62	CY	702	FUA	C24-C25	-3.53	1.39	1.50
62	CY	702	FUA	C14-C8	-3.29	1.53	1.59
62	AY	702	FUA	C14-C8	-3.28	1.53	1.59
61	CY	701	GDP	C5-N7	-2.92	1.33	1.39
61	CY	701	GDP	PA-O3A	2.84	1.62	1.59
61	AY	701	GDP	C4-N9	-2.66	1.31	1.38
61	AY	701	GDP	C5-N7	-2.58	1.33	1.39
62	CY	702	FUA	C25-C26	2.27	1.39	1.32
61	AY	701	GDP	C8-N9	-2.27	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
62	AY	702	FUA	C25-C26	2.26	1.39	1.32
62	AY	702	FUA	C10-C9	-2.15	1.53	1.57
61	CY	701	GDP	PB-O3B	-2.12	1.46	1.54
62	CY	702	FUA	C10-C9	-2.10	1.53	1.57

All (65) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	CY	701	GDP	C2-N3-C4	5.86	122.40	112.30
61	CY	701	GDP	C5-C4-N3	-5.54	119.56	128.39
62	CY	702	FUA	C24-C23-C22	5.33	124.08	112.72
62	AY	702	FUA	C24-C23-C22	5.32	124.05	112.72
61	AY	701	GDP	C2-N3-C4	4.96	120.84	112.30
62	CY	702	FUA	C13-C12-C11	-4.17	105.84	111.90
62	AY	702	FUA	C13-C12-C11	-4.16	105.87	111.90
62	AY	702	FUA	C16-O2-C31	-3.95	111.13	117.00
62	CY	702	FUA	C16-O2-C31	-3.93	111.16	117.00
61	CY	701	GDP	C2-N1-C6	-3.91	118.01	125.11
61	AY	701	GDP	C2'-C1'-N9	3.89	124.07	113.25
61	CY	701	GDP	N9-C4-N3	3.43	132.80	125.95
62	CY	702	FUA	C8-C9-C10	-3.42	112.75	116.42
61	AY	701	GDP	N9-C8-N7	-3.42	107.06	113.40
62	AY	702	FUA	C8-C9-C10	-3.38	112.79	116.42
61	CY	701	GDP	O4'-C1'-N9	3.37	116.00	108.36
61	AY	701	GDP	C5-C4-N3	-3.36	123.04	128.39
61	AY	701	GDP	N9-C4-N3	3.25	132.46	125.95
61	AY	701	GDP	C5'-C4'-C3'	-3.22	103.62	115.21
61	AY	701	GDP	C8-N9-C4	3.11	111.86	106.03
62	AY	702	FUA	O2-C31-C32	3.07	116.56	111.09
62	CY	702	FUA	O2-C31-C32	3.07	116.56	111.09
61	AY	701	GDP	O5'-C5'-C4'	3.05	119.39	108.99
63	CA	1601	NMY	C13-O11-C11	-2.99	110.89	117.98
63	AA	1601	NMY	C13-O11-C11	-2.99	110.89	117.98
63	BA	2903	NMY	C13-O11-C11	-2.99	110.89	117.98
63	BA	2904	NMY	C13-O11-C11	-2.99	110.89	117.98
63	BA	2902	NMY	C13-O11-C11	-2.98	110.92	117.98
63	DA	2901	NMY	C13-O11-C11	-2.98	110.92	117.98
61	CY	701	GDP	C5'-C4'-C3'	-2.95	104.61	115.21
61	AY	701	GDP	C2-N1-C6	-2.84	119.96	125.11
61	CY	701	GDP	O6-C6-C5	-2.57	119.76	126.53
61	CY	701	GDP	C5-C6-N1	2.57	119.78	113.25
61	CY	701	GDP	C8-N7-C5	2.42	108.56	104.26

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	AY	701	GDP	C8-N7-C5	2.40	108.53	104.26
61	AY	701	GDP	C5-C6-N1	2.36	119.25	113.25
61	CY	701	GDP	C4-C5-N7	-2.35	106.94	110.67
62	AY	702	FUA	C28-C26-C27	2.26	119.79	114.59
62	CY	702	FUA	C28-C26-C27	2.26	119.79	114.59
62	CY	702	FUA	C21-C14-C8	-2.26	110.36	112.23
62	AY	702	FUA	C21-C14-C8	-2.23	110.38	112.23
63	BA	2902	NMY	C13-C14-C15	2.22	104.78	102.10
63	CA	1601	NMY	C13-C14-C15	2.22	104.78	102.10
61	CY	701	GDP	O2B-PB-O1B	2.22	119.50	110.83
61	AY	701	GDP	C6-C5-N7	2.22	134.33	130.29
63	BA	2904	NMY	C13-C14-C15	2.22	104.77	102.10
63	DA	2901	NMY	C13-C14-C15	2.21	104.76	102.10
63	BA	2903	NMY	O22-C22-C23	2.21	110.32	106.07
61	AY	701	GDP	N1-C2-N3	-2.21	119.28	123.32
63	AA	1601	NMY	C13-C14-C15	2.21	104.76	102.10
63	BA	2903	NMY	C13-C14-C15	2.20	104.75	102.10
63	BA	2904	NMY	C1-O1-C10	-2.20	112.77	117.98
63	AA	1601	NMY	O22-C22-C23	2.19	110.27	106.07
63	BA	2904	NMY	O22-C22-C23	2.18	110.26	106.07
63	BA	2902	NMY	C1-O1-C10	-2.18	112.81	117.98
63	DA	2901	NMY	C1-O1-C10	-2.18	112.81	117.98
63	BA	2903	NMY	C1-O1-C10	-2.18	112.82	117.98
63	CA	1601	NMY	O22-C22-C23	2.17	110.25	106.07
61	CY	701	GDP	N9-C8-N7	-2.17	109.37	113.40
63	CA	1601	NMY	C1-O1-C10	-2.17	112.83	117.98
63	BA	2902	NMY	O22-C22-C23	2.17	110.23	106.07
63	AA	1601	NMY	C1-O1-C10	-2.16	112.86	117.98
63	DA	2901	NMY	O22-C22-C23	2.15	110.21	106.07
62	CY	702	FUA	C10-C5-C4	-2.09	110.66	113.20
61	AY	701	GDP	O6-C6-C5	-2.01	121.23	126.53

There are no chirality outliers.

All (93) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
61	AY	701	GDP	PA-O3A-PB-O3B
61	CY	701	GDP	C5'-O5'-PA-O3A
61	CY	701	GDP	C5'-O5'-PA-O1A
61	CY	701	GDP	C5'-O5'-PA-O2A
61	CY	701	GDP	O4'-C4'-C5'-O5'
62	AY	702	FUA	C13-C17-C22-C23

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Mol	Chain	Res	Type	Atoms
62	AY	702	FUA	C13-C17-C22-C29
62	CY	702	FUA	C13-C17-C22-C23
62	CY	702	FUA	C13-C17-C22-C29
63	AA	1601	NMY	C4-C5-C6-N6
63	AA	1601	NMY	O5-C5-C6-N6
63	AA	1601	NMY	C14-C13-O11-C11
63	AA	1601	NMY	C16-C15-O18-C18
63	AA	1601	NMY	C19-C18-O18-C15
63	BA	2902	NMY	C4-C5-C6-N6
63	BA	2902	NMY	O5-C5-C6-N6
63	BA	2902	NMY	C14-C13-O11-C11
63	BA	2902	NMY	C16-C15-O18-C18
63	BA	2902	NMY	C19-C18-O18-C15
63	BA	2903	NMY	C4-C5-C6-N6
63	BA	2903	NMY	O5-C5-C6-N6
63	BA	2903	NMY	C14-C13-O11-C11
63	BA	2903	NMY	C16-C15-O18-C18
63	BA	2903	NMY	C19-C18-O18-C15
63	BA	2904	NMY	C4-C5-C6-N6
63	BA	2904	NMY	O5-C5-C6-N6
63	BA	2904	NMY	C14-C13-O11-C11
63	BA	2904	NMY	C16-C15-O18-C18
63	BA	2904	NMY	C19-C18-O18-C15
63	CA	1601	NMY	C4-C5-C6-N6
63	CA	1601	NMY	O5-C5-C6-N6
63	CA	1601	NMY	C14-C13-O11-C11
63	CA	1601	NMY	C16-C15-O18-C18
63	CA	1601	NMY	C19-C18-O18-C15
63	DA	2901	NMY	C4-C5-C6-N6
63	DA	2901	NMY	O5-C5-C6-N6
63	DA	2901	NMY	C14-C13-O11-C11
63	DA	2901	NMY	C16-C15-O18-C18
63	DA	2901	NMY	C19-C18-O18-C15
63	AA	1601	NMY	C15-C16-C17-O17
63	BA	2902	NMY	C15-C16-C17-O17
63	BA	2903	NMY	C15-C16-C17-O17
63	BA	2904	NMY	C15-C16-C17-O17
63	CA	1601	NMY	C15-C16-C17-O17
63	DA	2901	NMY	C15-C16-C17-O17
62	AY	702	FUA	C32-C31-O2-C16
62	CY	702	FUA	C32-C31-O2-C16
62	AY	702	FUA	O3-C31-O2-C16

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Mol	Chain	Res	Type	Atoms
62	CY	702	FUA	O3-C31-O2-C16
63	AA	1601	NMY	O16-C16-C17-O17
63	BA	2902	NMY	O16-C16-C17-O17
63	BA	2903	NMY	O16-C16-C17-O17
63	BA	2904	NMY	O16-C16-C17-O17
63	CA	1601	NMY	O16-C16-C17-O17
63	DA	2901	NMY	O16-C16-C17-O17
61	CY	701	GDP	C3'-C4'-C5'-O5'
62	AY	702	FUA	C29-C22-C23-C24
62	CY	702	FUA	C29-C22-C23-C24
63	AA	1601	NMY	O16-C13-O11-C11
63	BA	2902	NMY	O16-C13-O11-C11
63	BA	2903	NMY	O16-C13-O11-C11
63	BA	2904	NMY	O16-C13-O11-C11
63	CA	1601	NMY	O16-C13-O11-C11
63	DA	2901	NMY	O16-C13-O11-C11
63	AA	1601	NMY	C11-C10-O1-C1
63	BA	2902	NMY	C11-C10-O1-C1
63	BA	2903	NMY	C11-C10-O1-C1
63	BA	2904	NMY	C11-C10-O1-C1
63	CA	1601	NMY	C11-C10-O1-C1
63	DA	2901	NMY	C11-C10-O1-C1
62	AY	702	FUA	C17-C22-C23-C24
62	CY	702	FUA	C17-C22-C23-C24
63	AA	1601	NMY	O22-C18-O18-C15
63	BA	2904	NMY	O22-C18-O18-C15
63	CA	1601	NMY	O22-C18-O18-C15
63	BA	2902	NMY	O22-C18-O18-C15
63	BA	2903	NMY	O22-C18-O18-C15
63	DA	2901	NMY	O22-C18-O18-C15
63	AA	1601	NMY	C12-C11-O11-C13
63	BA	2902	NMY	C12-C11-O11-C13
63	BA	2904	NMY	C12-C11-O11-C13
63	DA	2901	NMY	C12-C11-O11-C13
63	CA	1601	NMY	C12-C11-O11-C13
63	BA	2903	NMY	C12-C11-O11-C13
63	CA	1601	NMY	C10-C11-O11-C13
63	AA	1601	NMY	C10-C11-O11-C13
63	BA	2902	NMY	C10-C11-O11-C13
63	BA	2903	NMY	C10-C11-O11-C13
63	BA	2904	NMY	C10-C11-O11-C13
63	DA	2901	NMY	C10-C11-O11-C13

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Mol	Chain	Res	Type	Atoms
61	AY	701	GDP	C5'-O5'-PA-O1A
62	CY	702	FUA	C23-C24-C25-C26
62	AY	702	FUA	C23-C24-C25-C26

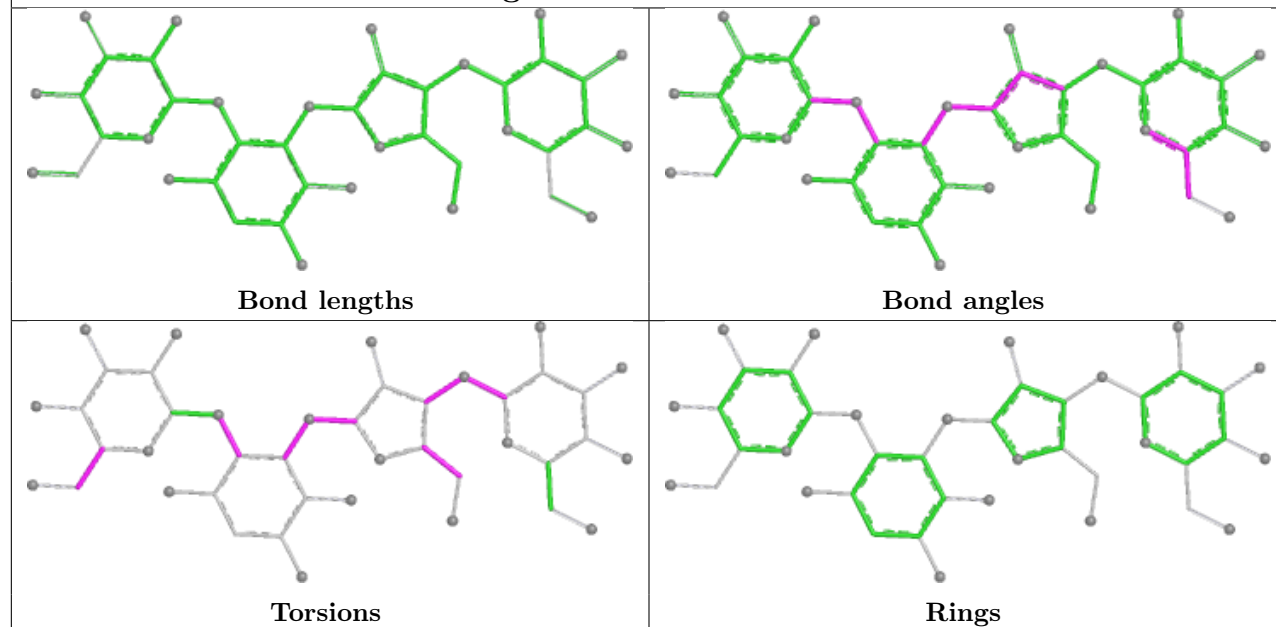
There are no ring outliers.

10 monomers are involved in 200 short contacts:

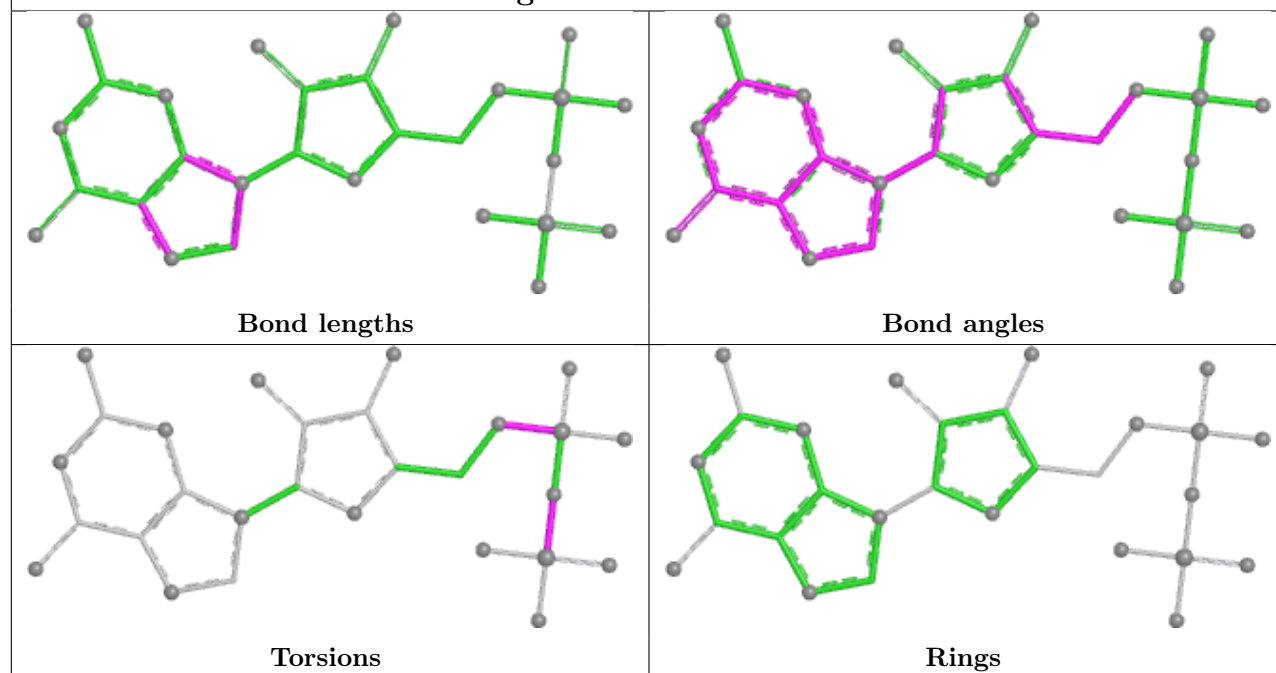
Mol	Chain	Res	Type	Clashes	Symm-Clashes
63	BA	2902	NMY	13	0
61	AY	701	GDP	8	0
63	AA	1601	NMY	27	0
62	CY	702	FUA	14	0
63	BA	2904	NMY	32	0
61	CY	701	GDP	14	0
62	AY	702	FUA	21	0
63	BA	2903	NMY	15	0
63	CA	1601	NMY	34	0
63	DA	2901	NMY	23	0

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

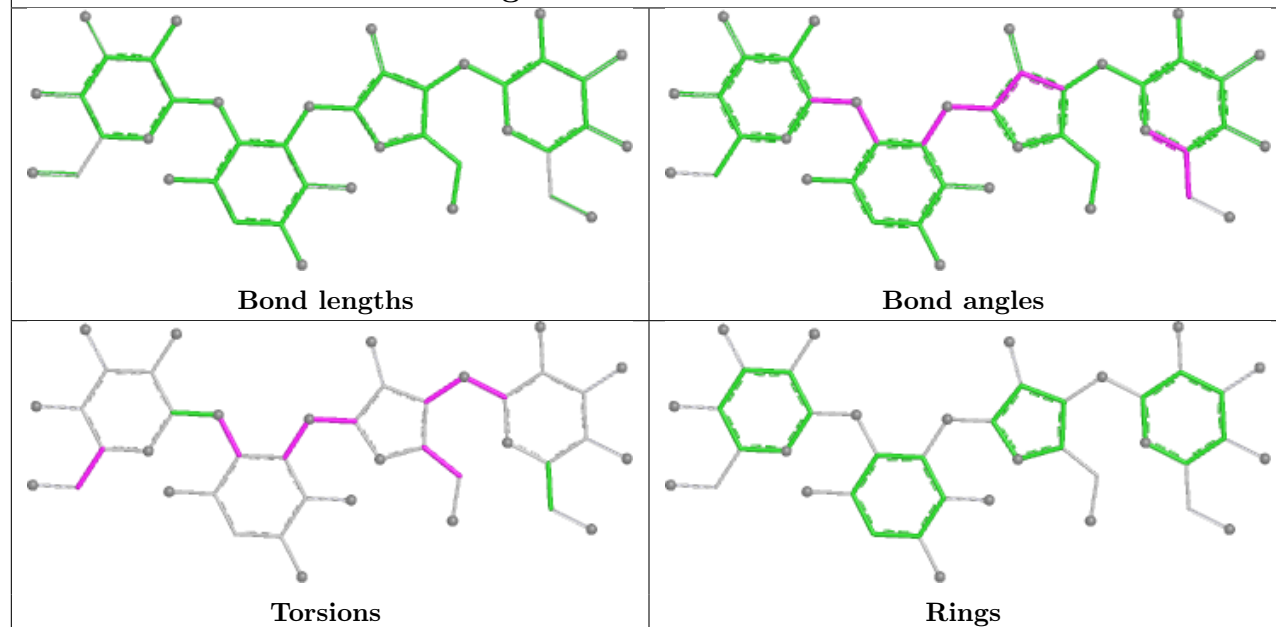
Ligand NMY BA 2902



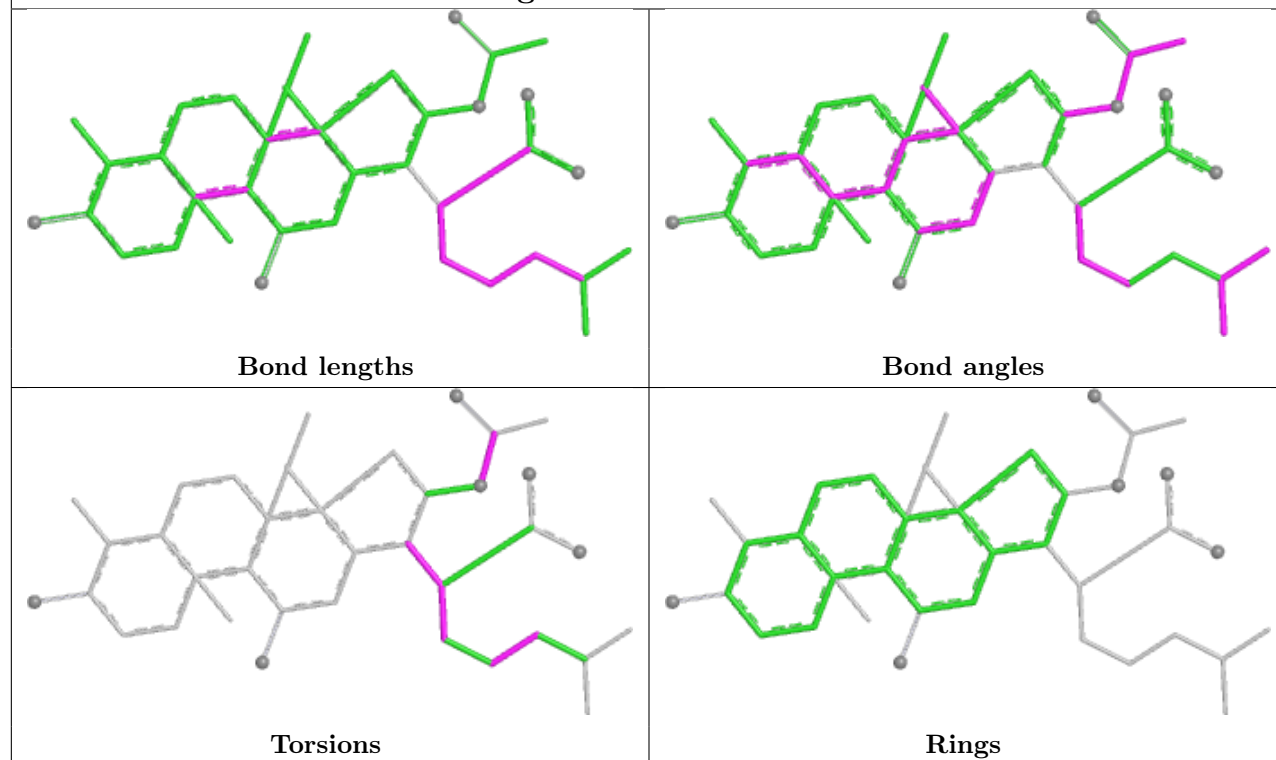
Ligand GDP AY 701



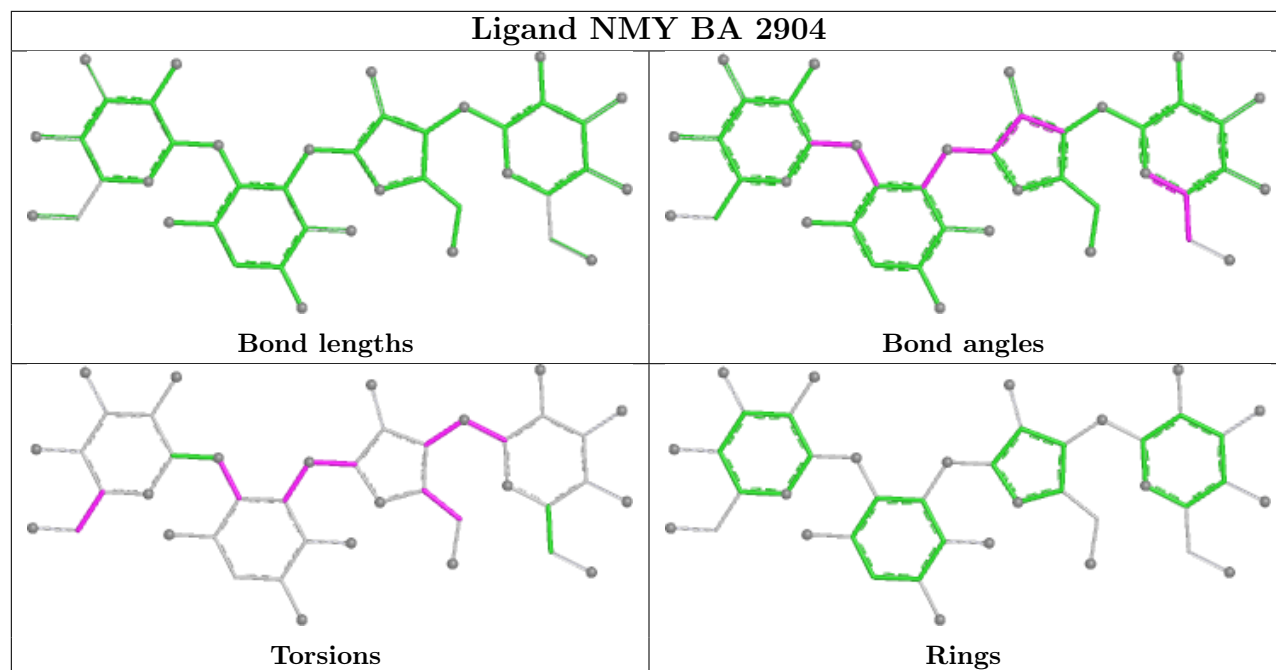
Ligand NMY AA 1601



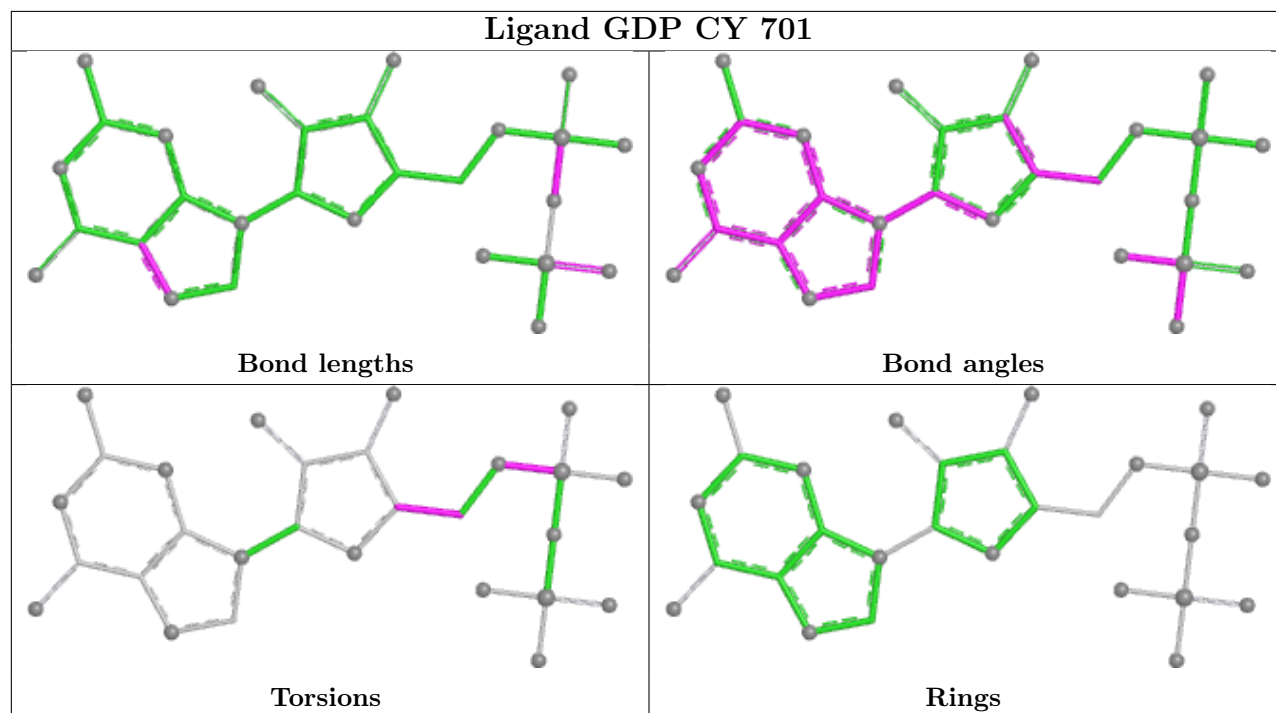
Ligand FUA CY 702

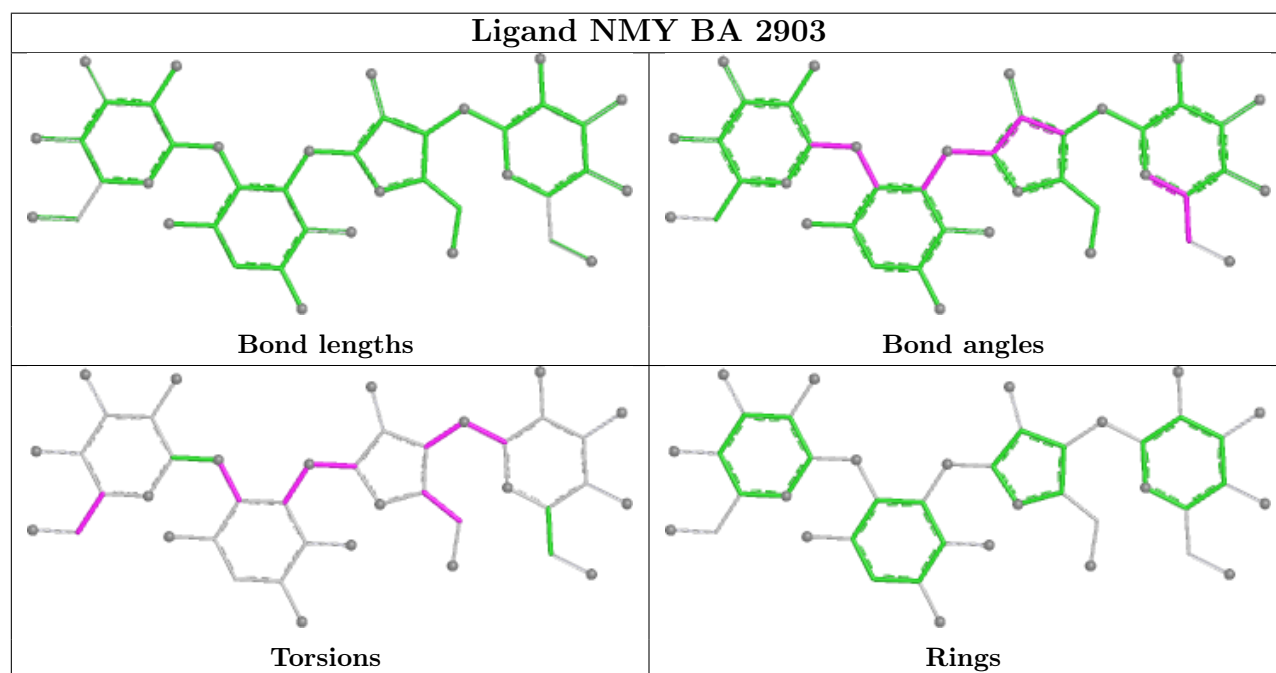
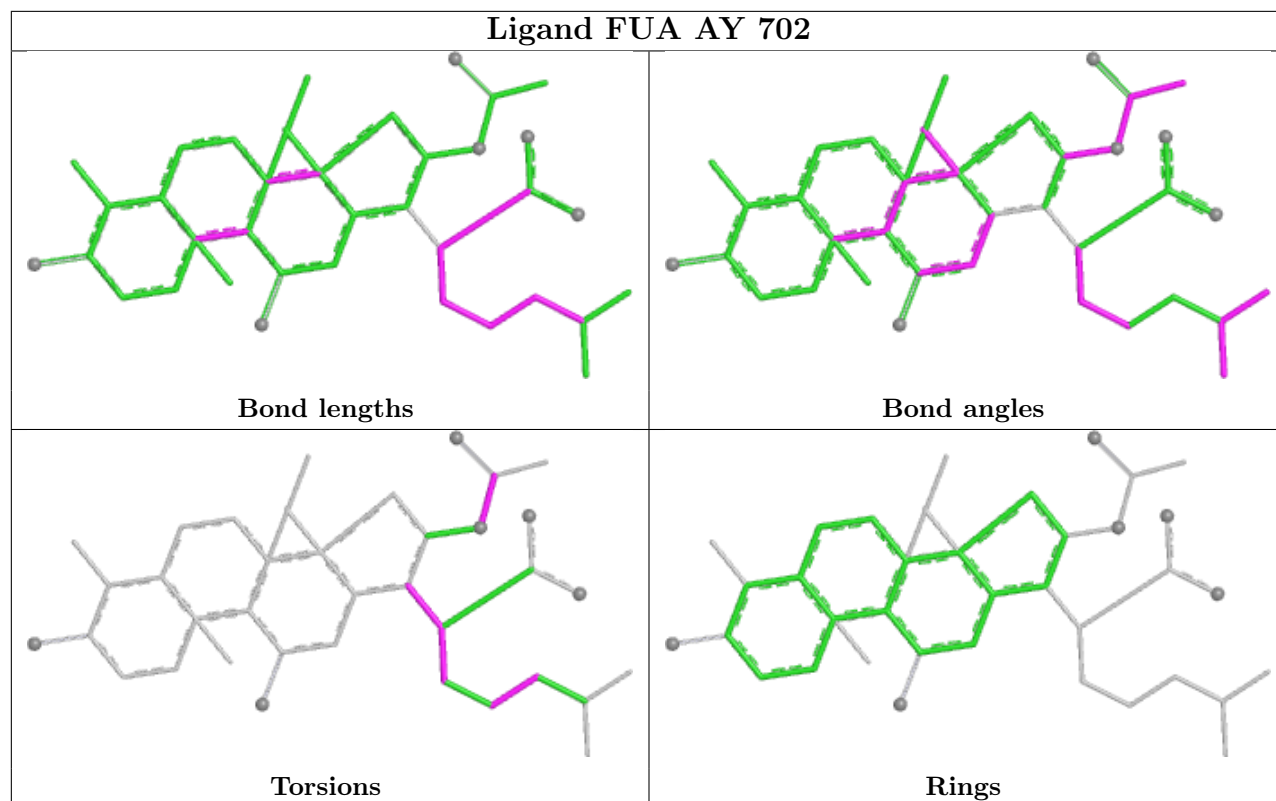


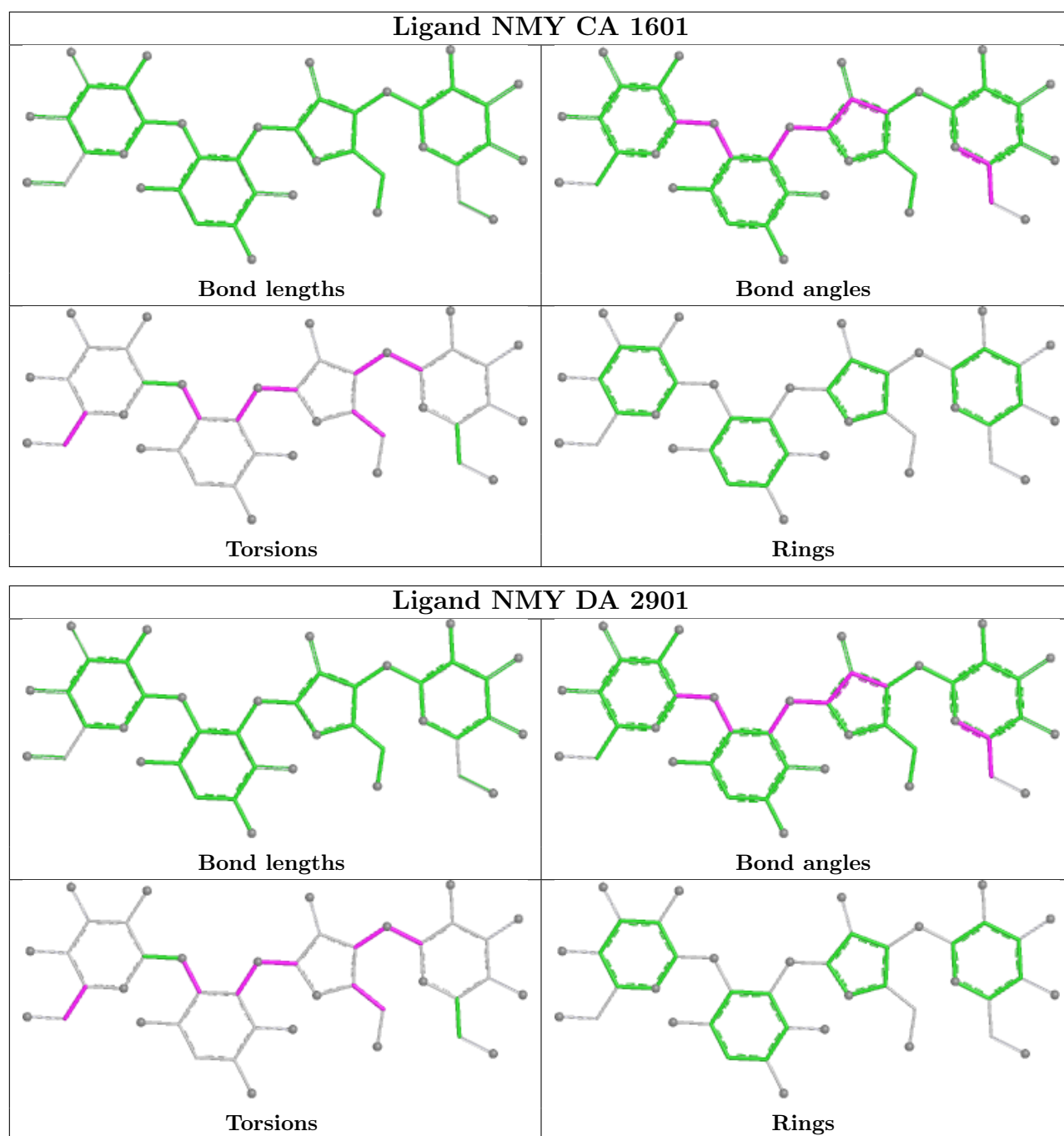
Ligand NMY BA 2904



Ligand GDP CY 701







5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
24	CX	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	CX	76:A	O3'	77:VAL	N	3.06

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	AB	235/235 (100%)	-1.24	1 (0%) 88 74	17, 55, 103, 129	0
1	CB	235/235 (100%)	-1.24	1 (0%) 88 74	17, 63, 111, 140	0
2	AC	207/207 (100%)	-1.22	0 100 100	18, 52, 99, 118	0
2	CC	207/207 (100%)	-1.11	0 100 100	15, 58, 99, 132	0
3	AD	208/208 (100%)	-1.22	1 (0%) 87 71	14, 59, 107, 137	0
3	CD	208/208 (100%)	-1.16	2 (0%) 79 58	20, 52, 102, 136	0
4	AE	151/151 (100%)	-0.81	1 (0%) 84 65	26, 62, 96, 129	0
4	CE	151/151 (100%)	-0.91	0 100 100	19, 56, 99, 143	0
5	AF	101/101 (100%)	-1.35	0 100 100	22, 57, 111, 128	0
5	CF	101/101 (100%)	-1.42	0 100 100	19, 56, 106, 128	0
6	AG	155/155 (100%)	-1.24	1 (0%) 85 68	26, 78, 122, 150	0
6	CG	155/155 (100%)	-1.01	4 (2%) 57 39	38, 85, 120, 147	0
7	AH	138/138 (100%)	-1.28	0 100 100	16, 43, 87, 109	0
7	CH	138/138 (100%)	-1.23	0 100 100	10, 49, 86, 102	0
8	AI	127/127 (100%)	-0.82	10 (7%) 18 17	30, 64, 101, 127	0
8	CI	127/127 (100%)	-0.69	9 (7%) 22 19	9, 77, 108, 134	0
9	AJ	99/99 (100%)	-1.15	1 (1%) 79 58	34, 64, 104, 146	0
9	CJ	99/99 (100%)	-1.19	1 (1%) 79 58	22, 57, 107, 115	0
10	AK	119/119 (100%)	-0.98	2 (1%) 69 47	13, 74, 139, 160	0
10	CK	119/119 (100%)	-1.03	0 100 100	21, 71, 125, 161	0
11	AL	125/125 (100%)	-0.98	0 100 100	15, 73, 145, 164	0
11	CL	125/125 (100%)	-0.85	3 (2%) 59 41	27, 85, 148, 170	0
12	AM	125/125 (100%)	-0.91	2 (1%) 70 48	43, 86, 129, 159	0
12	CM	125/125 (100%)	-1.02	0 100 100	27, 63, 103, 139	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AN	60/60 (100%)	-1.02	0 100 100	33, 70, 116, 128	0
13	CN	60/60 (100%)	-0.93	0 100 100	30, 58, 105, 128	0
14	AO	88/88 (100%)	-1.35	0 100 100	26, 53, 99, 110	0
14	CO	88/88 (100%)	-1.42	0 100 100	8, 44, 84, 109	0
15	AP	84/84 (100%)	-0.96	2 (2%) 59 41	33, 71, 110, 143	0
15	CP	84/84 (100%)	-0.62	6 (7%) 22 19	39, 69, 111, 165	0
16	AQ	100/100 (100%)	-0.89	2 (2%) 65 44	27, 62, 107, 131	0
16	CQ	100/100 (100%)	-0.97	2 (2%) 65 44	22, 66, 120, 135	0
17	AR	70/70 (100%)	-1.21	0 100 100	19, 61, 102, 130	0
17	CR	70/70 (100%)	-1.20	0 100 100	24, 56, 100, 125	0
18	AS	79/79 (100%)	-1.24	0 100 100	17, 69, 111, 124	0
18	CS	79/79 (100%)	-1.18	0 100 100	28, 65, 108, 130	0
19	AT	99/99 (100%)	-0.95	0 100 100	17, 51, 85, 128	0
19	CT	99/99 (100%)	-0.71	4 (4%) 42 30	26, 69, 110, 139	0
20	AY	661/687 (96%)	-1.05	13 (1%) 65 44	19, 64, 113, 178	0
20	CY	661/687 (96%)	-1.09	4 (0%) 85 68	11, 66, 108, 152	0
21	AA	1511/1511 (100%)	-1.22	32 (2%) 63 44	10, 90, 161, 248	0
21	CA	1511/1511 (100%)	-1.25	40 (2%) 57 39	10, 88, 160, 242	0
22	AW	77/77 (100%)	-1.52	0 100 100	15, 71, 130, 150	0
22	CW	77/77 (100%)	-1.64	0 100 100	30, 88, 145, 178	0
23	AV	36/36 (100%)	-0.94	0 100 100	32, 89, 137, 186	0
23	CV	36/36 (100%)	-0.36	2 (5%) 30 23	23, 139, 232, 237	0
24	AX	77/78 (98%)	-1.37	0 100 100	3, 65, 233, 320	0
24	CX	77/78 (98%)	-1.10	1 (1%) 75 53	37, 123, 185, 285	0
25	BC	228/228 (100%)	-1.00	1 (0%) 88 74	54, 104, 139, 159	0
25	DC	228/228 (100%)	-1.07	0 100 100	37, 90, 130, 169	0
26	BD	275/275 (100%)	-0.80	1 (0%) 88 74	10, 61, 103, 125	0
26	DD	275/275 (100%)	-0.93	1 (0%) 88 74	16, 57, 100, 127	0
27	BE	205/205 (100%)	-1.09	0 100 100	21, 60, 107, 131	0
27	DE	205/205 (100%)	-1.11	0 100 100	22, 57, 97, 142	0
28	BF	208/208 (100%)	-1.03	2 (0%) 79 58	20, 67, 108, 149	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DF	208/208 (100%)	-1.03	2 (0%) 79 58	23, 75, 120, 140	0
29	BG	181/181 (100%)	-1.46	1 (0%) 85 68	28, 69, 113, 148	0
29	DG	181/181 (100%)	-1.50	0 100 100	25, 71, 113, 148	0
30	BH	167/167 (100%)	-1.26	2 (1%) 76 54	29, 65, 108, 121	0
30	DH	167/167 (100%)	-1.39	0 100 100	24, 59, 100, 132	0
31	BJ	0/170	-	-	-	-
31	DJ	0/170	-	-	-	-
32	BK	140/140 (100%)	-1.28	0 100 100	32, 71, 114, 126	0
32	DK	140/140 (100%)	-1.14	1 (0%) 84 65	34, 77, 113, 138	0
33	BN	139/139 (100%)	-0.70	2 (1%) 73 51	23, 105, 298, 334	0
33	DN	139/139 (100%)	-0.69	4 (2%) 53 37	16, 116, 252, 312	0
34	BO	122/122 (100%)	-0.51	1 (0%) 82 62	12, 50, 93, 111	0
34	DO	122/122 (100%)	-0.60	3 (2%) 58 40	28, 59, 103, 132	0
35	BP	146/146 (100%)	-0.78	5 (3%) 48 33	25, 63, 106, 123	0
35	DP	146/146 (100%)	-0.67	4 (2%) 56 38	25, 67, 104, 131	0
36	BQ	141/141 (100%)	-1.06	0 100 100	5, 54, 93, 109	0
36	DQ	141/141 (100%)	-0.83	3 (2%) 63 44	27, 70, 113, 141	0
37	BR	117/117 (100%)	-0.97	0 100 100	29, 65, 116, 145	0
37	DR	117/117 (100%)	-1.05	0 100 100	27, 62, 97, 126	0
38	BS	99/99 (100%)	-1.38	0 100 100	14, 70, 108, 117	0
38	DS	99/99 (100%)	-1.25	0 100 100	19, 52, 96, 120	0
39	BT	138/138 (100%)	-0.90	3 (2%) 62 44	16, 59, 101, 123	0
39	DT	138/138 (100%)	-0.88	6 (4%) 40 28	15, 51, 109, 140	0
40	BU	117/117 (100%)	-1.17	0 100 100	20, 56, 96, 121	0
40	DU	117/117 (100%)	-1.21	0 100 100	13, 53, 94, 142	0
41	BV	101/101 (100%)	-1.19	0 100 100	21, 66, 108, 127	0
41	DV	101/101 (100%)	-1.23	0 100 100	15, 65, 101, 126	0
42	BW	113/113 (100%)	-0.93	5 (4%) 39 28	13, 54, 99, 111	0
42	DW	113/113 (100%)	-0.97	4 (3%) 47 33	15, 64, 116, 148	0
43	BX	93/93 (100%)	-1.09	1 (1%) 78 56	20, 54, 96, 115	0
43	DX	93/93 (100%)	-1.02	1 (1%) 78 56	13, 45, 87, 126	0
44	BY	107/107 (100%)	-0.91	2 (1%) 66 45	29, 58, 109, 149	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	DY	107/107 (100%)	-1.17	0 100 100	25, 62, 97, 138	0
45	BZ	185/185 (100%)	-1.39	0 100 100	17, 58, 97, 113	0
45	DZ	185/185 (100%)	-1.36	0 100 100	33, 64, 101, 138	0
46	B0	84/84 (100%)	-0.63	0 100 100	26, 75, 117, 131	0
46	D0	84/84 (100%)	-0.86	0 100 100	19, 65, 108, 116	0
47	B1	93/93 (100%)	-0.77	0 100 100	21, 84, 140, 156	0
47	D1	93/93 (100%)	-0.71	3 (3%) 50 35	31, 103, 148, 181	0
48	B2	71/71 (100%)	-1.54	0 100 100	23, 55, 95, 116	0
48	D2	71/71 (100%)	-1.46	0 100 100	35, 61, 103, 118	0
49	B3	60/60 (100%)	-1.28	0 100 100	29, 60, 99, 112	0
49	D3	60/60 (100%)	-0.92	2 (3%) 49 34	36, 68, 94, 110	0
50	B4	35/35 (100%)	-1.37	0 100 100	26, 71, 110, 122	0
50	D4	35/35 (100%)	-1.46	0 100 100	64, 109, 144, 185	0
51	B5	59/59 (100%)	-0.73	1 (1%) 69 47	24, 63, 106, 123	0
51	D5	59/59 (100%)	-0.48	4 (6%) 23 20	31, 68, 113, 138	0
52	B6	50/50 (100%)	-1.01	0 100 100	13, 57, 107, 154	0
52	D6	50/50 (100%)	-1.01	0 100 100	26, 65, 120, 154	0
53	B7	49/49 (100%)	-0.87	0 100 100	46, 91, 136, 164	0
53	D7	49/49 (100%)	-0.95	0 100 100	51, 73, 109, 134	0
54	B8	64/64 (100%)	-0.74	1 (1%) 70 48	26, 58, 109, 132	0
54	D8	64/64 (100%)	-0.66	0 100 100	30, 64, 104, 118	0
55	B9	37/37 (100%)	-0.76	2 (5%) 31 24	39, 64, 109, 116	0
55	D9	37/37 (100%)	-0.56	1 (2%) 56 38	34, 65, 116, 134	0
56	Be	72/103 (69%)	-1.37	0 100 100	15, 49, 122, 163	0
56	De	72/103 (69%)	-1.34	0 100 100	14, 57, 118, 157	0
57	Bf	0/31	-	-	-	-
57	Bg	0/31	-	-	-	-
57	Df	0/31	-	-	-	-
57	Dg	0/31	-	-	-	-
58	Bh	0/30	-	-	-	-
58	Dh	0/30	-	-	-	-
59	BA	2879/2879 (100%)	-1.24	64 (2%) 62 44	11, 89, 164, 284	0
59	DA	2879/2879 (100%)	-1.26	38 (1%) 75 53	9, 88, 171, 274	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
60	BB	119/119 (100%)	-1.63	0	100	100	18, 80, 158, 172	0
60	DB	119/119 (100%)	-1.59	0	100	100	30, 88, 150, 175	0
All	All	22852/23492 (97%)	-1.14	318 (1%)	73	51	3, 73, 146, 334	0

All (318) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
59	BA	34	C	10.6
59	BA	180	G	9.2
21	AA	388	G	9.0
21	AA	1529	G	7.5
59	BA	47	C	7.3
35	DP	22	GLY	7.3
59	BA	588	U	7.2
59	BA	1706	U	7.2
59	BA	1757	U	7.1
35	BP	22	GLY	6.5
59	DA	235	U	6.5
21	AA	351	G	6.5
21	AA	352	C	6.4
8	CI	111	ARG	6.3
59	DA	1712(O)	C	6.2
59	DA	1712(P)	C	6.1
8	AI	114	TYR	6.0
59	BA	179	G	6.0
59	DA	2717	G	6.0
59	BA	589	C	5.9
20	AY	320	PRO	5.9
6	CG	81	GLY	5.9
59	DA	508	G	5.8
21	CA	388	G	5.7
21	CA	1112	C	5.6
36	DQ	141	GLN	5.6
59	BA	508	G	5.6
24	CX	54	U	5.5
59	BA	1683	C	5.5
21	CA	1534	A	5.5
21	AA	1066	C	5.3
8	AI	115	GLY	5.3
21	CA	1189	C	5.3
59	DA	34	C	5.3

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Mol	Chain	Res	Type	RSRZ
59	BA	1631	A	5.3
21	CA	111	G	5.3
59	DA	1712(N)	U	5.2
21	CA	110	C	5.2
21	CA	818	G	5.2
8	CI	119	ALA	5.1
59	DA	588	U	5.1
21	AA	328	C	5.1
21	CA	58	C	5.0
59	DA	456	C	5.0
21	CA	1190	G	4.9
59	BA	1755	A	4.9
59	BA	214	G	4.8
16	CQ	101	ARG	4.8
51	D5	23	HIS	4.8
15	CP	29	ASP	4.8
21	AA	1185	G	4.8
59	DA	1551	C	4.7
42	DW	85	VAL	4.7
59	BA	2897	U	4.7
16	AQ	96	GLU	4.7
1	CB	137	ARG	4.7
21	AA	1065	U	4.7
59	BA	45	G	4.6
21	CA	1066	C	4.6
21	CA	57	G	4.5
59	BA	2318	G	4.5
21	AA	1183	A	4.5
20	AY	378	VAL	4.5
59	BA	1684	C	4.5
21	AA	819	A	4.5
59	BA	587	C	4.4
11	CL	129	ALA	4.4
51	D5	24	ALA	4.3
59	BA	455	C	4.3
59	BA	213	A	4.2
8	CI	113	LYS	4.2
59	BA	381	G	4.2
25	BC	56	ASP	4.2
8	AI	113	LYS	4.1
6	CG	6	ARG	4.1
59	BA	1630(A)	C	4.1

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Mol	Chain	Res	Type	RSRZ
21	AA	1190	G	4.1
42	DW	86	LEU	4.1
6	AG	5	ARG	4.0
21	AA	56	U	4.0
21	CA	1065	U	4.0
42	DW	93	ALA	4.0
8	AI	122	ALA	3.9
8	CI	112	LYS	3.9
39	DT	106	SER	3.9
59	BA	1302	A	3.9
21	AA	58	C	3.9
21	AA	355	C	3.8
59	DA	2321	G	3.8
59	BA	1712(P)	C	3.8
44	BY	3	VAL	3.8
20	AY	354	ARG	3.8
59	DA	2334	G	3.7
21	CA	1367	C	3.7
21	CA	1529	G	3.7
20	AY	321	TYR	3.7
59	BA	2609	U	3.7
21	AA	314	C	3.7
59	BA	46	C	3.7
59	BA	53	A	3.6
59	BA	2060	A	3.6
21	AA	1189	C	3.6
21	CA	1064	G	3.6
20	CY	321	TYR	3.6
59	BA	382	G	3.6
19	CT	11	SER	3.6
21	CA	356	A	3.6
59	DA	1621	U	3.5
21	CA	1183	A	3.5
20	AY	365	GLU	3.5
59	BA	1383	C	3.5
59	DA	215	G	3.5
42	BW	93	ALA	3.4
21	CA	1368	G	3.4
39	BT	104	ASN	3.4
59	DA	1607	C	3.4
42	BW	82	LEU	3.4
51	B5	23	HIS	3.4

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Mol	Chain	Res	Type	RSRZ
20	AY	322	VAL	3.4
9	CJ	48	THR	3.4
21	AA	570	G	3.4
59	DA	589	C	3.4
8	CI	110	GLU	3.3
20	AY	356	LEU	3.3
33	BN	89	LYS	3.3
21	CA	231	G	3.3
59	BA	215	G	3.3
59	DA	2718	G	3.3
36	DQ	140	ALA	3.3
59	BA	35	G	3.3
15	CP	27	LYS	3.2
59	BA	667	U	3.2
59	DA	214	G	3.2
35	BP	20	GLY	3.2
3	AD	50	ARG	3.2
6	CG	80	VAL	3.2
21	CA	331	G	3.1
42	BW	85	VAL	3.1
59	BA	33	U	3.1
33	DN	89	LYS	3.1
10	AK	128	ALA	3.1
59	DA	236	C	3.1
59	BA	2046	G	3.1
59	DA	1552	G	3.1
15	AP	29	ASP	3.1
20	AY	377	VAL	3.0
59	DA	2294	C	3.0
39	DT	100	TYR	3.0
21	AA	55	A	3.0
33	BN	103	VAL	3.0
8	AI	119	ALA	3.0
59	BA	671	C	3.0
21	CA	1385	G	3.0
59	BA	2319	G	3.0
6	CG	82	GLY	3.0
10	AK	129	SER	2.9
55	B9	15	LYS	2.9
21	AA	57	G	2.9
59	DA	2716	U	2.9
21	AA	1111	A	2.9

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Mol	Chain	Res	Type	RSRZ
42	BW	94	ASP	2.9
59	BA	200	U	2.9
59	BA	1712(O)	C	2.9
8	CI	114	TYR	2.9
21	AA	1092	A	2.8
21	CA	819	A	2.8
59	DA	587	C	2.8
59	BA	1707	G	2.8
59	BA	1756	G	2.8
30	BH	167	GLU	2.8
42	BW	83	LYS	2.8
49	D3	14	GLY	2.8
19	CT	10	LEU	2.8
59	DA	1754	C	2.7
59	BA	1630	G	2.7
23	CV	34	A	2.7
54	B8	64	TYR	2.7
12	AM	93	ARG	2.7
15	CP	26	ARG	2.7
21	AA	110	C	2.7
39	DT	103	ARG	2.7
4	AE	31	LEU	2.7
39	DT	105	LEU	2.7
21	CA	555	C	2.7
21	AA	367	U	2.7
21	AA	1528	U	2.7
59	DA	1420	U	2.7
28	DF	96	ASP	2.7
35	DP	20	GLY	2.7
26	DD	40	THR	2.7
34	BO	96	THR	2.7
44	BY	4	LYS	2.7
21	CA	352	C	2.7
59	DA	2690	C	2.7
43	BX	31	HIS	2.6
36	DQ	25	ASP	2.6
33	DN	87	LEU	2.6
20	CY	377	VAL	2.6
23	CV	26	A	2.6
21	CA	1062	U	2.6
49	D3	16	PRO	2.6
21	AA	1187	G	2.6

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Mol	Chain	Res	Type	RSRZ
59	DA	1935	G	2.6
21	CA	369	C	2.6
59	BA	1685	C	2.6
21	AA	815	A	2.6
21	CA	1188	A	2.6
34	DO	9	GLU	2.6
8	AI	111	ARG	2.6
33	DN	107	LEU	2.6
21	AA	317	G	2.6
34	DO	99	PHE	2.6
21	CA	1386	G	2.5
35	DP	53	GLY	2.5
59	BA	435	C	2.5
59	DA	2693	A	2.5
59	BA	1703	G	2.5
21	AA	54	C	2.5
43	DX	32	PRO	2.5
20	AY	353	ALA	2.5
59	DA	1662	C	2.5
21	CA	351	G	2.5
59	BA	2321	G	2.5
59	BA	2334	G	2.5
21	AA	51	A	2.5
39	DT	102	ILE	2.4
15	CP	30	GLY	2.4
20	AY	379	GLY	2.4
39	BT	102	ILE	2.4
3	CD	51	PRO	2.4
16	CQ	99	SER	2.4
20	AY	363	ARG	2.4
8	AI	117	HIS	2.4
20	AY	361	ASN	2.4
39	DT	104	ASN	2.4
16	AQ	99	SER	2.4
15	AP	27	LYS	2.4
21	CA	1191	A	2.3
21	CA	333	G	2.3
3	CD	48	ALA	2.3
8	AI	123	PRO	2.3
8	AI	116	LYS	2.3
19	CT	9	ASN	2.3
59	DA	184	C	2.3

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Mol	Chain	Res	Type	RSRZ
20	AY	360	ALA	2.3
35	BP	64	LYS	2.3
59	BA	48	G	2.3
59	BA	386	G	2.3
59	BA	807	U	2.3
28	BF	97	TYR	2.3
51	D5	14	ALA	2.3
59	BA	1632	A	2.3
11	CL	14	GLY	2.3
55	D9	15	LYS	2.3
15	CP	21	VAL	2.2
21	CA	261	U	2.2
21	CA	1063	C	2.2
21	CA	1113	C	2.2
59	BA	672	C	2.2
59	BA	2610	C	2.2
59	DA	183	C	2.2
28	DF	97	TYR	2.2
42	DW	92	ARG	2.2
33	DN	79	PRO	2.2
1	AB	137	ARG	2.2
12	AM	94	ARG	2.2
21	AA	1064	G	2.2
59	BA	125	G	2.2
20	CY	322	VAL	2.2
21	AA	59	A	2.2
21	CA	55	A	2.2
21	CA	968	A	2.2
8	CI	122	ALA	2.2
20	CY	320	PRO	2.2
59	DA	199	A	2.2
59	DA	382	G	2.2
59	DA	887	A	2.2
21	AA	47	C	2.2
32	DK	118	THR	2.2
47	D1	16	ASN	2.2
9	AJ	49	VAL	2.1
30	BH	168	PRO	2.1
59	BA	1633	G	2.1
59	DA	2697	G	2.1
19	CT	12	ALA	2.1
59	BA	673	C	2.1

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Mol	Chain	Res	Type	RSRZ
59	BA	2316	C	2.1
59	BA	2317	C	2.1
11	CL	13	LYS	2.1
35	BP	47	ASP	2.1
26	BD	29	PRO	2.1
59	DA	48	G	2.1
59	BA	291	C	2.1
59	BA	1644	C	2.1
59	BA	1754	C	2.1
59	BA	1914	C	2.1
34	DO	84	ALA	2.1
15	CP	25	ARG	2.1
59	BA	1305	C	2.1
29	BG	96	ARG	2.1
35	BP	61	ARG	2.1
39	BT	103	ARG	2.1
8	CI	118	LYS	2.1
28	BF	56	GLU	2.0
55	B9	9	ARG	2.0
51	D5	3	LYS	2.0
21	CA	355	C	2.0
59	BA	1682	G	2.0
59	DA	431	U	2.0
8	CI	117	HIS	2.0
21	CA	1428	A	2.0
47	D1	19	GLN	2.0
59	DA	1554	A	2.0
35	DP	21	ARG	2.0
47	D1	29	GLY	2.0
21	CA	54	C	2.0
21	CA	390	C	2.0
8	AI	106	ALA	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands

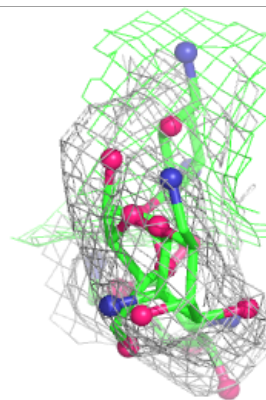
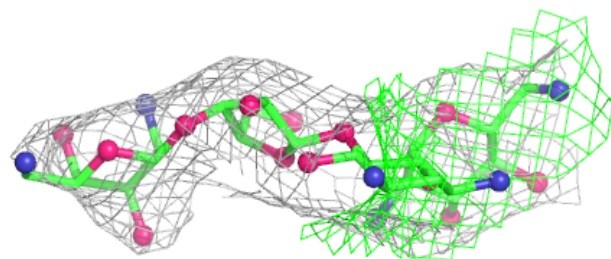
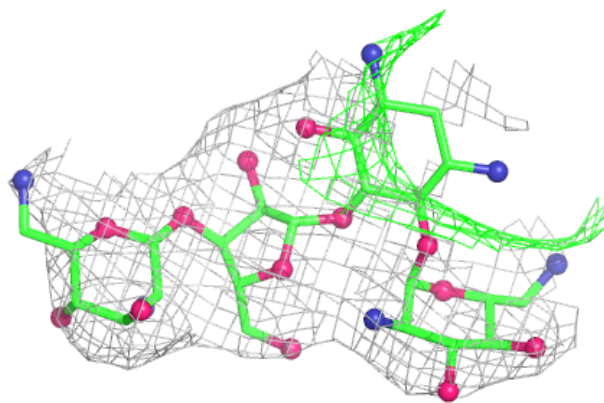
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists 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
63	NMY	BA	2902	42/42	0.96	0.07	14,24,43,44	42
63	NMY	BA	2904	42/42	0.97	0.04	42,50,59,62	42
63	NMY	DA	2901	42/42	0.97	0.10	31,42,51,53	42
61	GDP	AY	701	28/28	0.98	0.04	179,183,185,185	0
63	NMY	BA	2903	42/42	0.98	0.05	18,29,38,41	42
62	FUA	AY	702	37/37	0.98	0.06	198,199,200,201	0
62	FUA	CY	702	37/37	0.98	0.07	194,196,197,197	0
61	GDP	CY	701	28/28	0.99	0.02	104,108,109,110	0
63	NMY	CA	1601	42/42	0.99	0.04	14,25,34,37	42
63	NMY	AA	1601	42/42	0.99	0.04	16,27,36,38	42
64	MG	CY	703	1/1	0.99	0.06	6,6,6,6	0
64	MG	BA	2901	1/1	1.00	0.07	2,2,2,2	0

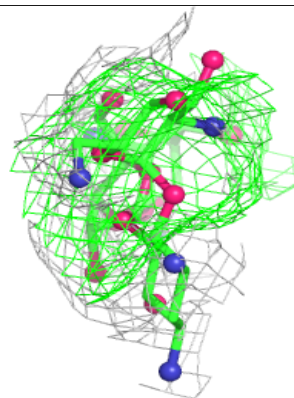
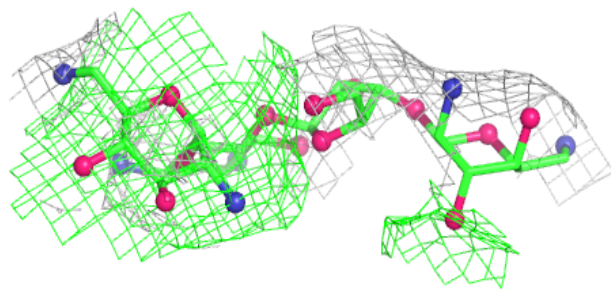
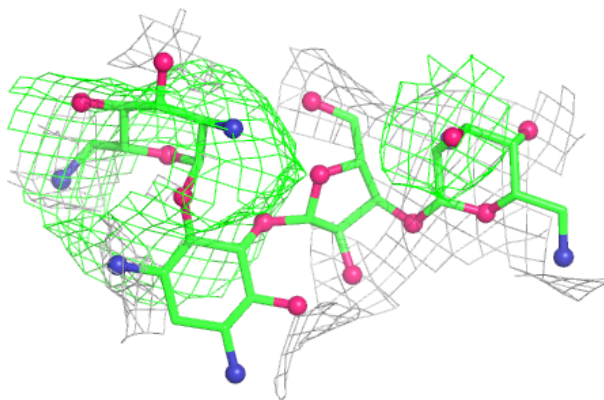
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around NMY BA 2902:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

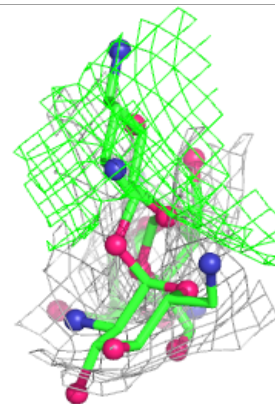
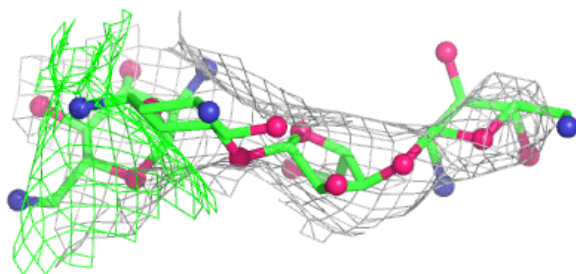
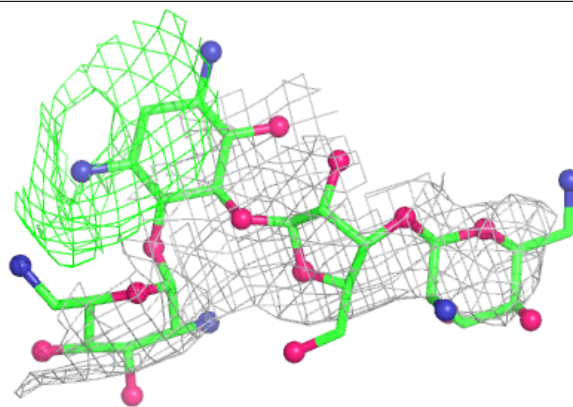
**Electron density around NMY BA 2904:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

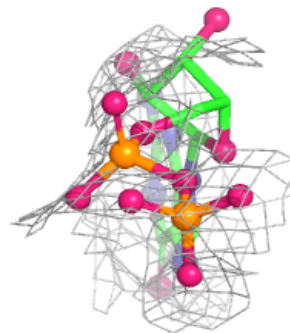
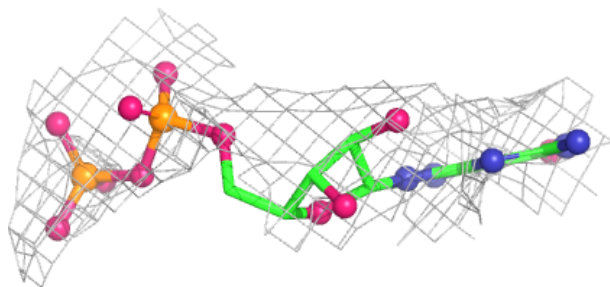
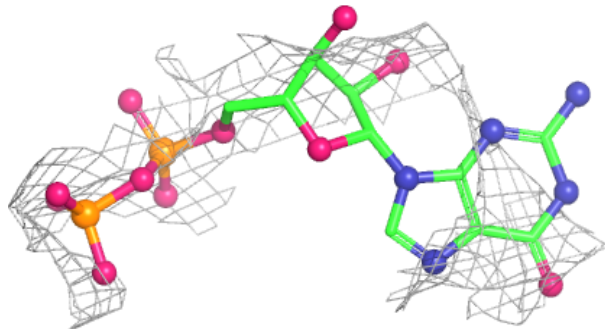


Electron density around NMY DA 2901:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

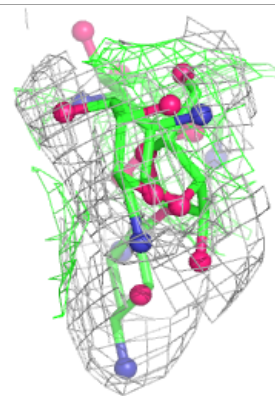
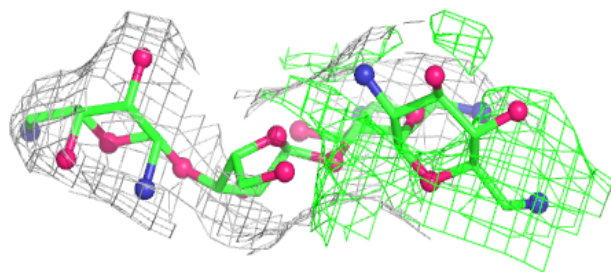
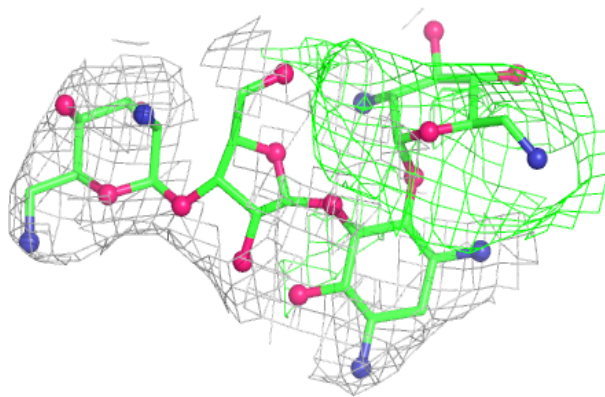
**Electron density around GDP AY 701:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

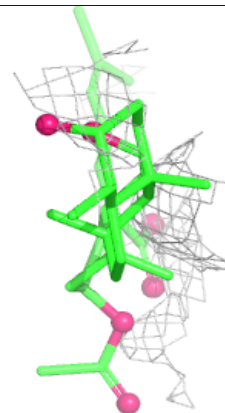
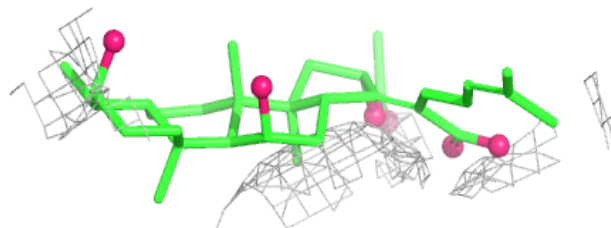
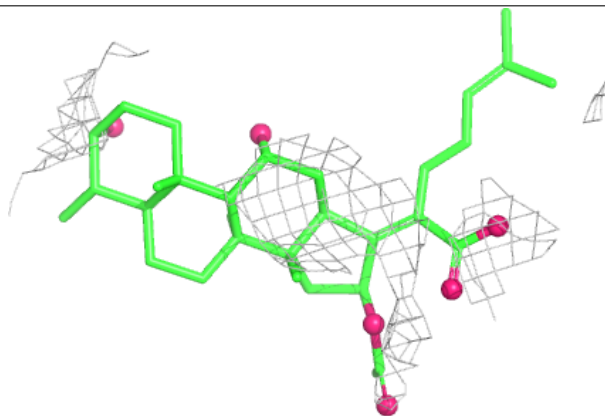


Electron density around NMY BA 2903:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

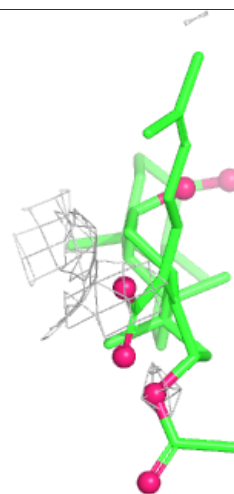
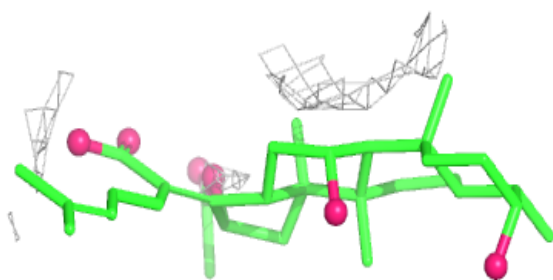
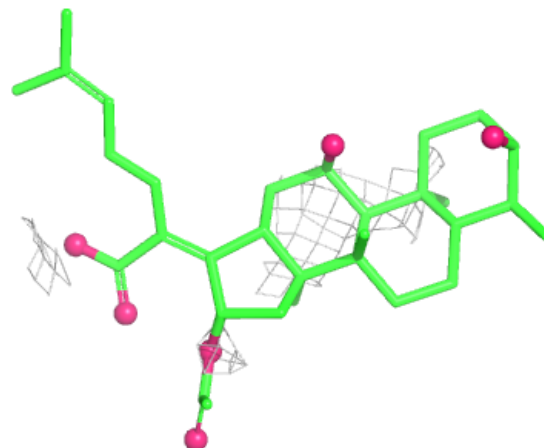
**Electron density around FUA AY 702:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



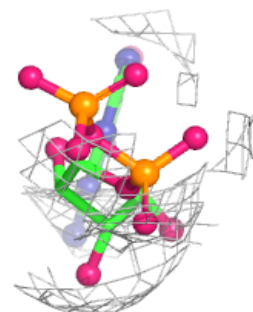
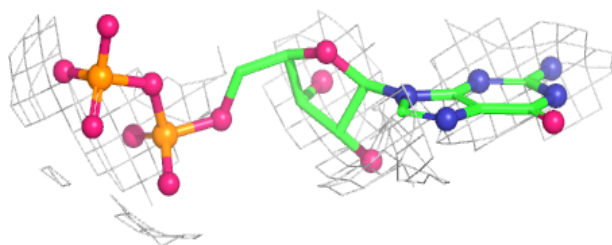
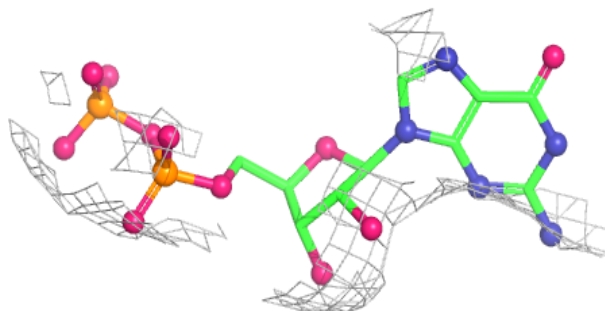
Electron density around FUA CY 702:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

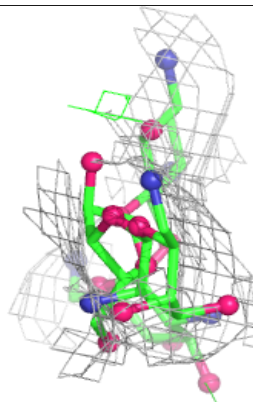
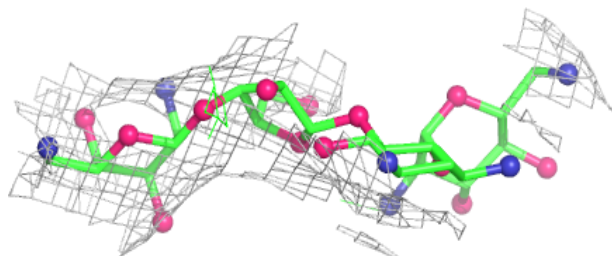
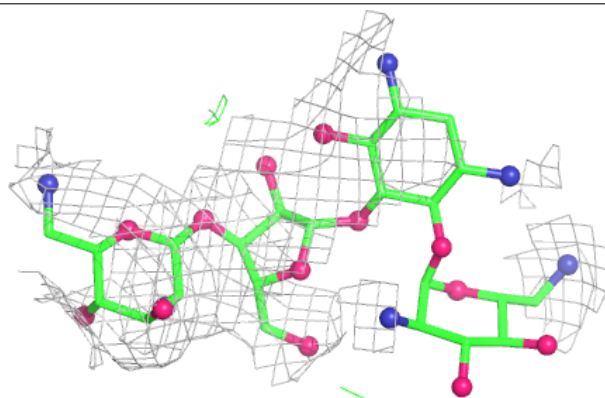


Electron density around GDP CY 701:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

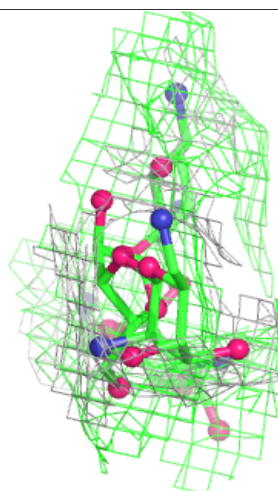
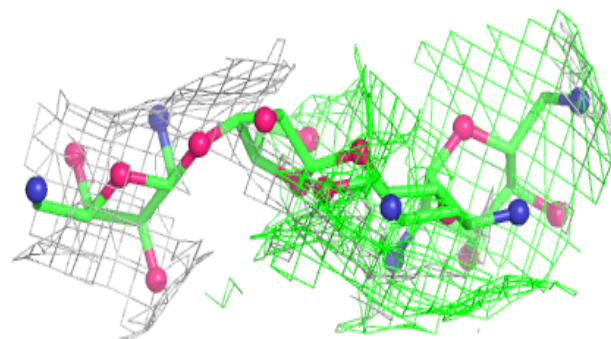
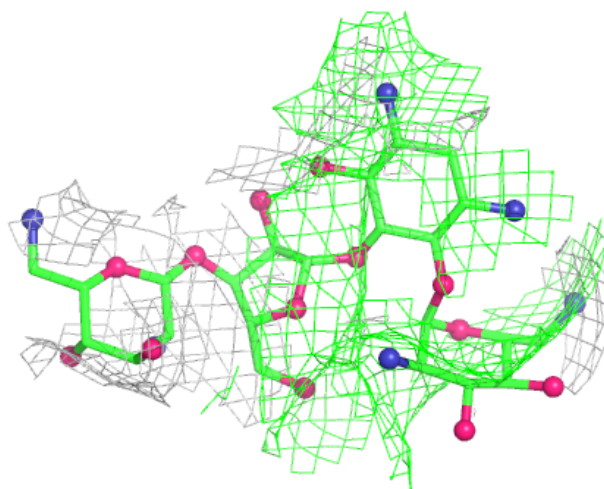
**Electron density around NMY CA 1601:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around NMY AA 1601:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



6.5 Other polymers [i](#)

There are no such residues in this entry.