Full wwPDB X-ray Structure Validation Report ⓘ

Mar 20, 2026 – 04:37 AM UTC

PDB ID	:	4V9J / pdb_00004v9j
Title	:	70S ribosome translocation intermediate GDPNP-II containing elongation factor EFG/GDPNP, mRNA, and tRNA bound in the pe*/E state.
Authors	:	Zhou, J.; Lancaster, L.; Donohue, J.P.; Noller, H.F.
Deposited on	:	2013-04-23
Resolution	:	3.86 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

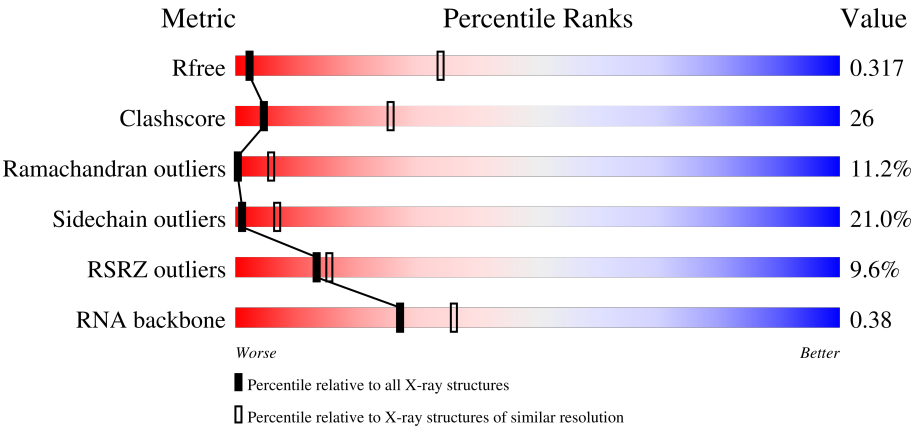
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.86 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	1165 (4.02-3.70)
Clashscore	190562	1207 (4.02-3.70)
Ramachandran outliers	187476	1149 (4.02-3.70)
Sidechain outliers	187428	1142 (4.02-3.70)
RSRZ outliers	180081	1164 (4.02-3.70)
RNA backbone	3983	1012 (4.62-3.10)

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 <=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	8% 34% 44% 18% .
1	CB	235	5% 36% 45% 16% .
2	AC	207	3% 38% 46% 15%
2	CC	207	4% 40% 43% 16% .

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Mol	Chain	Length	Quality of chain
3	AD	208	17% 36% 48% 15%
3	CD	208	17% 34% 52% 12%
4	AE	151	3% 42% 44% 12%
4	CE	151	4% 42% 46% 11%
5	AF	101	4% 41% 49% 11%
5	CF	101	7% 39% 47% 13%
6	AG	155	3% 43% 43% 14%
6	CG	155	4% 37% 50% 12%
7	AH	138	4% 35% 49% 14%
7	CH	138	2% 32% 51% 15%
8	AI	127	10% 40% 46% 13%
8	CI	127	11% 41% 52% 7%
9	AJ	99	11% 35% 46% 16%
9	CJ	99	12% 35% 49% 14%
10	AK	119	7% 37% 45% 16%
10	CK	119	9% 44% 41% 13%
11	AL	125	17% 19% 44% 24% 13%
11	CL	125	19% 19% 46% 28% 6%
12	AM	125	13% 36% 46% 15%
12	CM	125	9% 34% 51% 14%
13	AN	60	8% 43% 48% 8%
13	CN	60	15% 48% 38% 13%
14	AO	88	6% 36% 47% 17%
14	CO	88	8% 32% 55% 13%
15	AP	84	18% 42% 46% 12%

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Mol	Chain	Length	Quality of chain
15	CP	84	21% 52% 35% 13%
16	AQ	100	11% 20% 59% 15% 6%
16	CQ	100	13% 29% 54% 15%
17	AR	70	% 31% 47% 20%
17	CR	70	% 36% 46% 17%
18	AS	79	8% 38% 43% 14% 5%
18	CS	79	11% 33% 43% 24%
19	AT	99	5% 46% 45% 7%
19	CT	99	15% 43% 48% 6%
20	AA	1511	5% 30% 55% 15%
20	CA	1511	4% 31% 55% 13%
21	AV	18	6% 22% 39% 39%
21	CV	18	6% 22% 44% 33%
22	AW	77	4% 18% 52% 30%
22	CW	77	6% 23% 48% 29%
23	AY	687	6% 37% 45% 16%
23	CY	687	9% 39% 43% 15%
24	AU	6	83% 17%
24	CU	6	83% 17%
25	BC	228	18% 19% 46% 29% 7%
25	DC	228	15% 27% 39% 24% 11%
26	BD	275	19% 35% 44% 18%
26	DD	275	20% 31% 48% 18%
27	BE	205	26% 30% 44% 23%
27	DE	205	20% 34% 47% 16%

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Mol	Chain	Length	Quality of chain
28	BF	208	18% 33% 39% 22% 6%
28	DF	208	14% 30% 45% 19% 6%
29	BG	181	4% 33% 50% 14%
29	DG	181	6% 35% 50% 13%
30	BH	167	5% 45% 40% 14%
30	DH	167	7% 44% 43% 12%
31	BJ	170	78% 22%
31	DJ	170	79% 20%
32	BK	140	6% 47% 41% 10%
32	DK	140	9% 48% 41% 11%
33	BO	122	2% 34% 48% 16%
33	DO	122	3% 34% 53% 12%
34	BP	146	11% 33% 43% 20%
34	DP	146	10% 34% 44% 18%
35	BQ	141	14% 38% 40% 20%
35	DQ	141	20% 35% 48% 17%
36	BR	117	10% 26% 46% 26%
36	DR	117	10% 31% 52% 15%
37	BS	99	15% 27% 40% 22% 10%
37	DS	99	18% 25% 47% 19% 8%
38	BT	138	8% 35% 38% 22% 5%
38	DT	138	5% 33% 42% 19% 6%
39	BU	117	15% 38% 48% 14%
39	DU	117	19% 39% 43% 17%
40	BV	101	9% 29% 46% 22%

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Mol	Chain	Length	Quality of chain
40	DV	101	7% 32% 49% 19%
41	BW	113	12% 33% 51% 12%
41	DW	113	17% 36% 44% 18%
42	BX	93	10% 32% 54% 14%
42	DX	93	10% 39% 51% 11%
43	BY	107	8% 31% 49% 19%
43	DY	107	11% 38% 38% 20%
44	BZ	185	5% 41% 44% 14%
44	DZ	185	8% 37% 44% 17%
45	B0	84	23% 38% 46% 15%
45	D0	84	18% 38% 49% 13%
46	B1	93	22% 31% 35% 27% 6%
46	D1	93	33% 27% 35% 29% 9%
47	B4	35	3% 29% 49% 17% 6%
47	D4	35	3% 43% 34% 17% 6%
48	BN	138	34% 21% 55% 24%
48	DN	138	36% 21% 55% 24%
49	B2	71	3% 35% 52% 11%
49	D2	71	3% 42% 48% 10%
50	B3	60	10% 45% 45% 10%
50	D3	60	8% 35% 55% 10%
51	B5	59	15% 41% 42% 14%
51	D5	59	15% 34% 49% 12% 5%
52	B6	50	18% 22% 44% 24% 10%
52	D6	50	26% 30% 38% 24% 8%

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Mol	Chain	Length	Quality of chain
53	B7	49	39% 39% 51% 10%
53	D7	49	22% 37% 49% 12%
54	B8	64	28% 28% 45% 23%
54	D8	64	27% 33% 44% 20%
55	B9	37	70% 27% 57% 16%
55	D9	37	76% 19% 57% 19% 5%
56	Be	103	5% 65% 29%
56	De	103	4% 63% 30% 6%
57	Bf	31	94% 6%
57	Bg	31	100%
57	Df	31	100%
57	Dg	31	100%
58	Bh	30	97%
58	Dh	30	97%
59	BB	119	5% 32% 53% 15%
59	DB	119	5% 38% 52% 10%
60	BA	2879	8% 26% 56% 18%
60	DA	2879	7% 28% 56% 16%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
24	KBE	AU	1	-	-	-	X
24	DPP	AU	2	-	-	X	-
24	5OH	AU	6	-	-	X	-
24	5OH	CU	6	-	-	X	-
61	GNP	CY	702	-	-	X	-

2 Entry composition (i)

There are 62 unique types of molecules in this entry. The entry contains 308202 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
			1011	639	198	174			
8	CI	127	Total	C	N	O	0	0	0
			1011	639	198	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 885	C 549	N 168	O 165	S 3	0	0	0

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

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

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

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

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

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

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

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

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

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

- 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	156	143	2			
16	CQ	100	Total	C	N	O	S	0	0	0
			835	534	156	143	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
			762	469	162	129	2			
19	CT	99	Total	C	N	O	S	0	0	0
			762	469	162	129	2			

- Molecule 20 is a RNA chain called 16S ribosomal RNA.

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

- Molecule 21 is a RNA chain called messenger RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AV	18	Total	C	N	O	P	0	0	0
			393	177	81	118	17			
21	CV	18	Total	C	N	O	P	0	0	0
			393	177	81	118	17			

- Molecule 22 is a RNA chain called tRNA-Met.

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 protein called Elongation factor G.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AY	687	Total	C	N	O	S	0	0	0
			5380	3414	922	1024	20			
23	CY	687	Total	C	N	O	S	0	0	0
			5380	3414	922	1024	20			

There are 4 discrepancies between the modelled and reference sequences:

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

- Molecule 24 is a protein called Viomycin.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
24	AU	6	Total	C	N	O	0	0	0
			48	25	13	10			
24	CU	6	Total	C	N	O	0	0	0
			48	25	13	10			

- 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			

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

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BC	20	VAL	ILE	conflict	UNP Q72GV9
BC	28	ARG	HIS	conflict	UNP Q72GV9
DC	20	VAL	ILE	conflict	UNP Q72GV9
DC	28	ARG	HIS	conflict	UNP Q72GV9

- 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			

There are 10 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BF	2	LYS	-	insertion	UNP Q72I05
BF	3	GLU	-	insertion	UNP Q72I05
BF	4	VAL	-	insertion	UNP Q72I05

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Chain	Residue	Modelled	Actual	Comment	Reference
BF	5	ALA	-	insertion	UNP Q72I05
BF	6	VAL	-	insertion	UNP Q72I05
DF	2	LYS	-	insertion	UNP Q72I05
DF	3	GLU	-	insertion	UNP Q72I05
DF	4	VAL	-	insertion	UNP Q72I05
DF	5	ALA	-	insertion	UNP Q72I05
DF	6	VAL	-	insertion	UNP Q72I05

- 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			
29	DG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BG	5	VAL	LEU	conflict	UNP Q72I16
DG	5	VAL	LEU	conflict	UNP Q72I16

- 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 L14.

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

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BO	69	ILE	VAL	conflict	UNP Q72I14
DO	69	ILE	VAL	conflict	UNP Q72I14

- Molecule 34 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			
34	DP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- Molecule 35 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
35	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 36 is a protein called 50S ribosomal protein L17.

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

- Molecule 37 is a protein called 50S ribosomal protein L18.

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

- Molecule 38 is a protein called 50S ribosomal protein L19.

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

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BT	123	GLN	LYS	conflict	UNP Q72JU9
BT	135	ALA	VAL	conflict	UNP Q72JU9
DT	123	GLN	LYS	conflict	UNP Q72JU9
DT	135	ALA	VAL	conflict	UNP Q72JU9

- Molecule 39 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BU	117	Total 964	C 610	N 202	O 151	S 1	0	0	0
39	DU	117	Total 964	C 610	N 202	O 151	S 1	0	0	0

- Molecule 40 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BV	101	Total 779	C 501	N 142	O 135	S 1	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	DV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 41 is a protein called 50S ribosomal protein L22.

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

- Molecule 42 is a protein called 50S ribosomal protein L23.

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

- Molecule 43 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BY	107	Total	C	N	O	S	0	0	0
			818	524	155	134	5			
43	DY	107	Total	C	N	O	S	0	0	0
			818	524	155	134	5			

- Molecule 44 is a protein called 50S ribosomal protein L25.

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

- Molecule 45 is a protein called 50S ribosomal protein L27.

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

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B0	11	ARG	LYS	conflict	UNP Q72HR3
D0	11	ARG	LYS	conflict	UNP Q72HR3

- Molecule 46 is a protein called 50S ribosomal protein L28.

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

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B1	81	LYS	ARG	conflict	UNP Q72G84
D1	81	LYS	ARG	conflict	UNP Q72G84

- Molecule 47 is a protein called 50S ribosomal protein L31.

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

- Molecule 48 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
48	DN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 49 is a protein called 50S ribosomal protein L29.

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

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

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

- 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			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B5	29	THR	ILE	conflict	UNP P62652
D5	29	THR	ILE	conflict	UNP P62652

- 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			

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

- Molecule 55 is a protein called 50S ribosomal protein L36.

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

- Molecule 56 is 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			

- 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			
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			

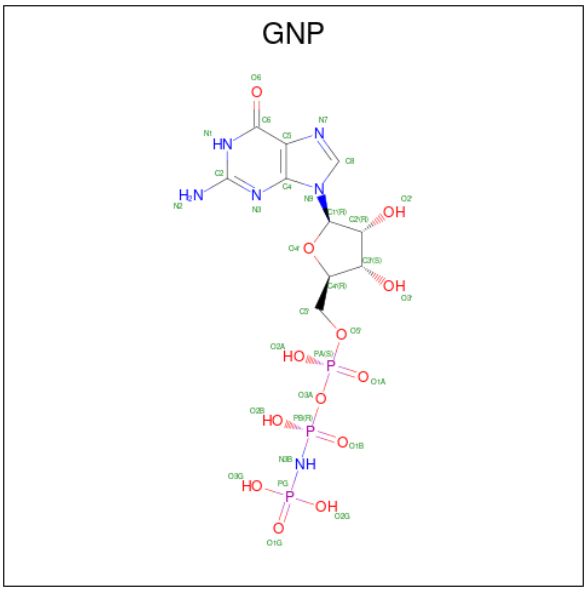
- Molecule 59 is a RNA chain called 5S ribosomal RNA.

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

- Molecule 60 is a RNA chain called 23S ribosomal RNA.

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

- Molecule 61 is PHOSPHOAMINOPHOSPHONIC ACID-GUANYLATE ESTER (CCD ID: GNP) (formula: $C_{10}H_{17}N_6O_{13}P_3$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
61	AY	1	Total	C	N	O	P	0	0
			32	10	6	13	3		
61	CY	1	Total	C	N	O	P	0	0
			32	10	6	13	3		

- Molecule 62 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
62	AY	1	Total	Mg	0	0
			1	1		

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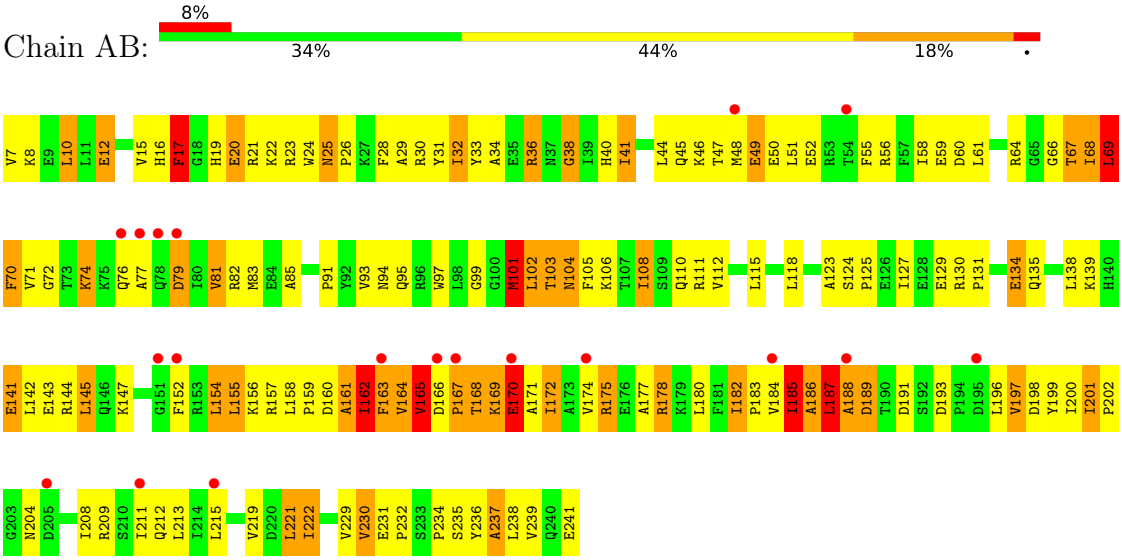
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Mg		
62	CY	1	1	1	0	0

3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

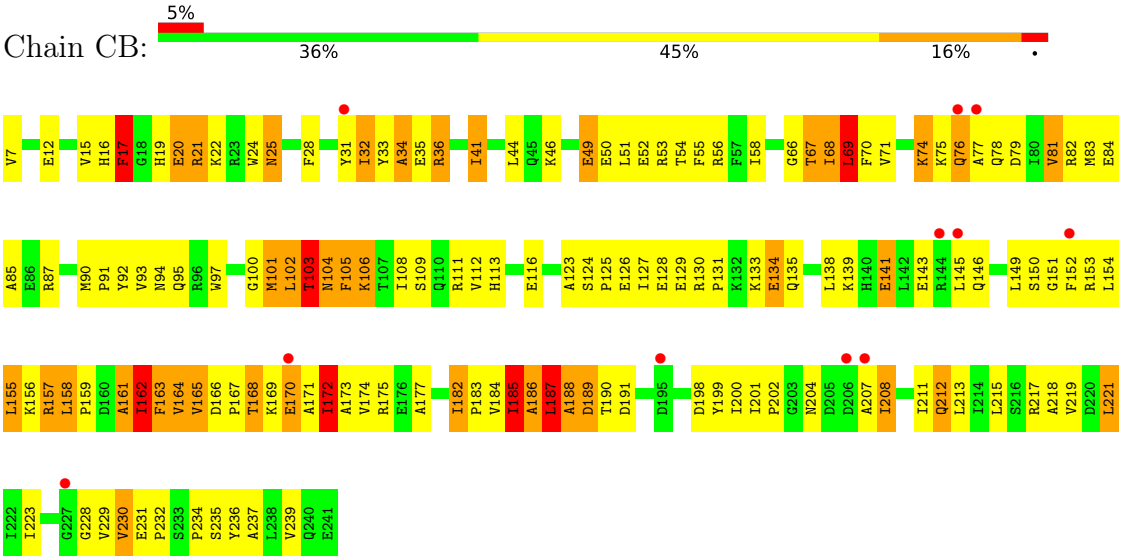
• Molecule 1: 30S ribosomal protein S2

Chain AB:



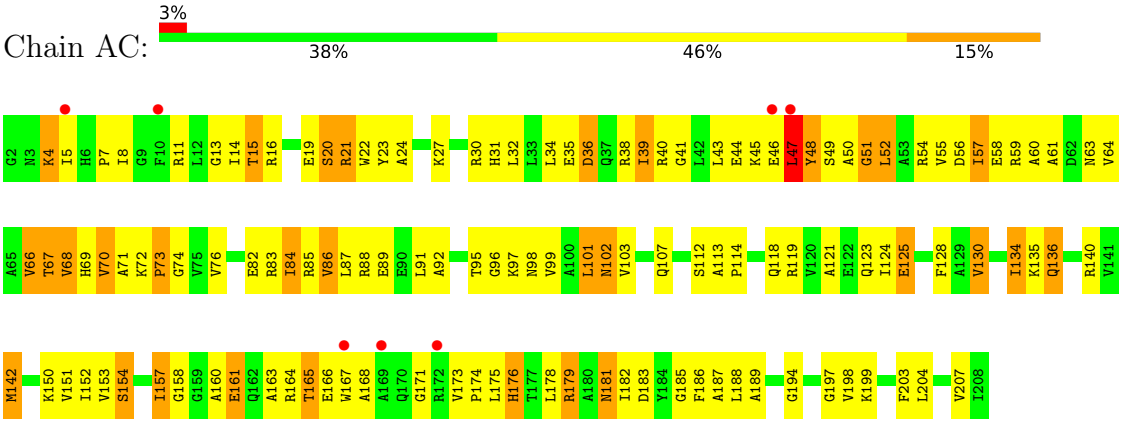
• Molecule 1: 30S ribosomal protein S2

Chain CB:



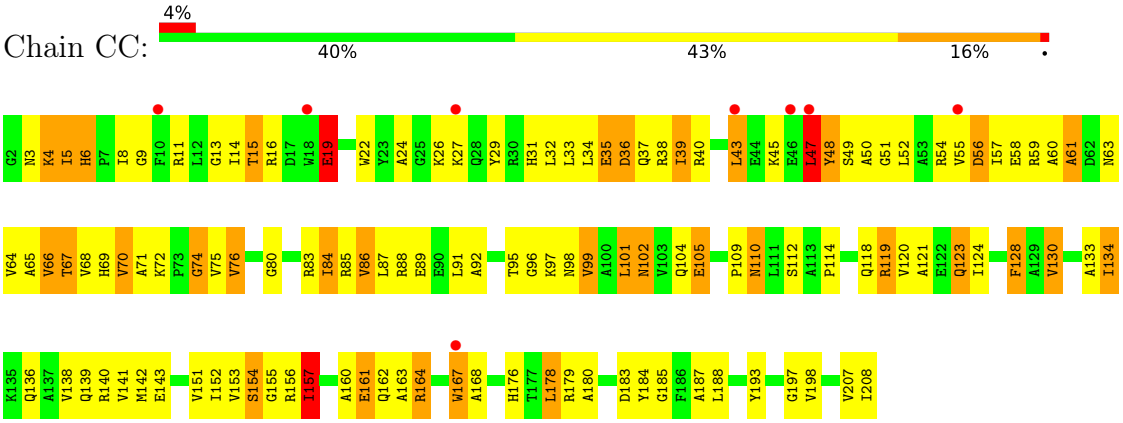
• Molecule 2: 30S ribosomal protein S3

Chain AC:



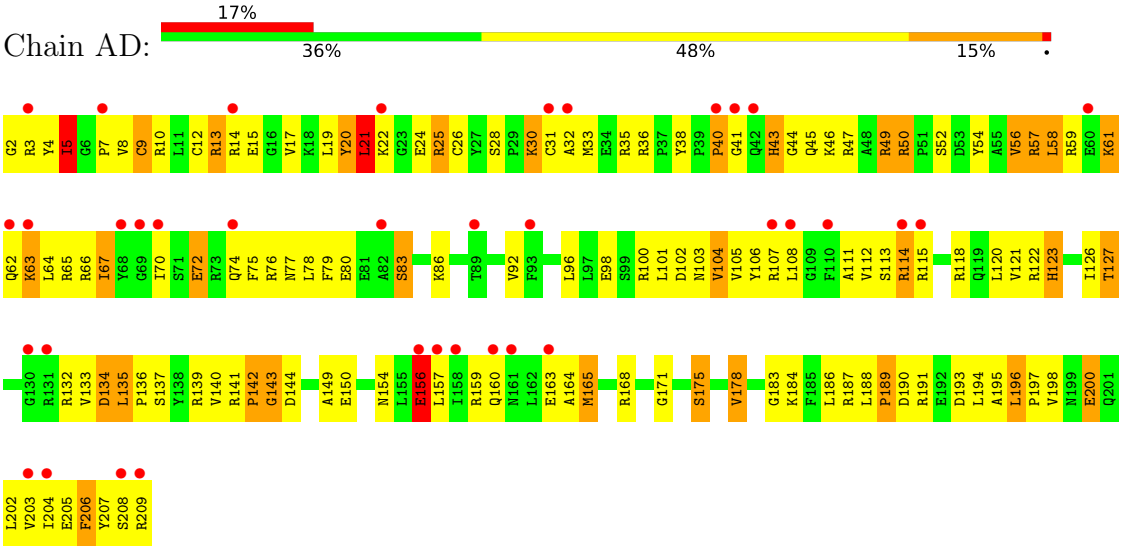
• Molecule 2: 30S ribosomal protein S3

Chain CC:



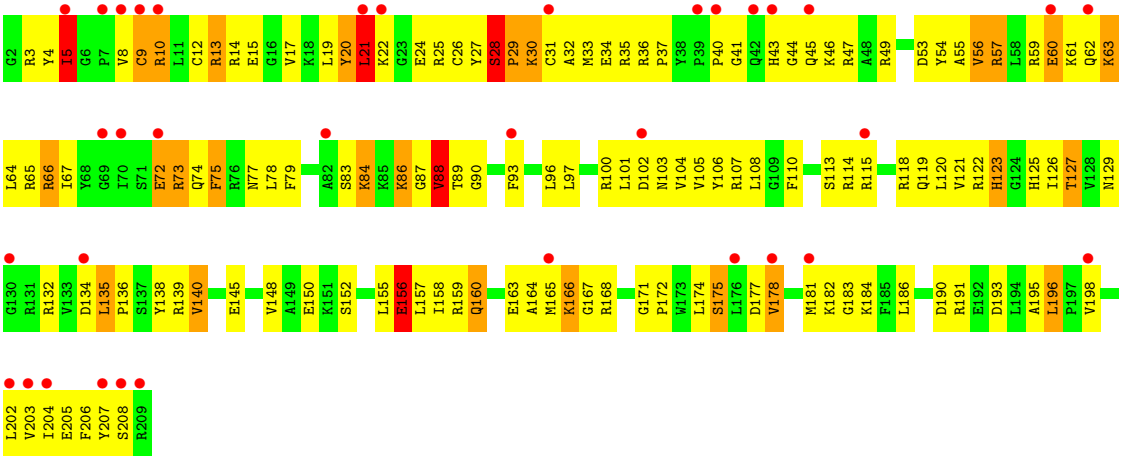
• Molecule 3: 30S ribosomal protein S4

Chain AD:

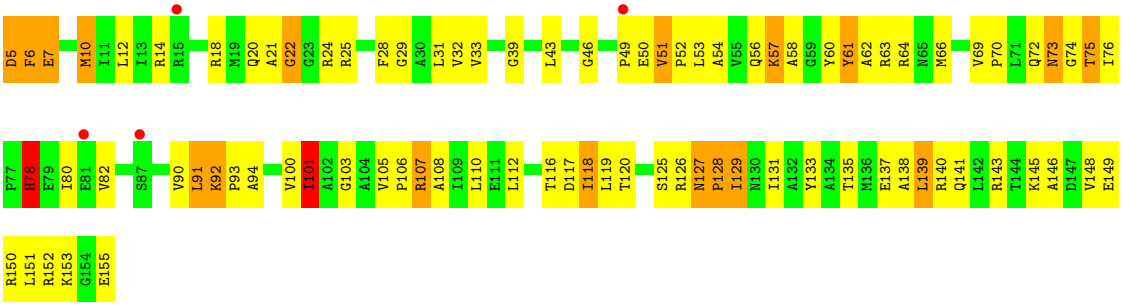


• Molecule 3: 30S ribosomal protein S4

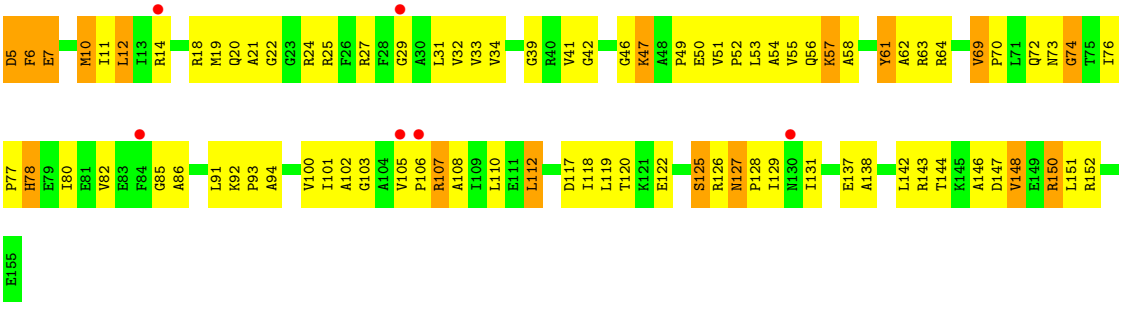
Chain CD:



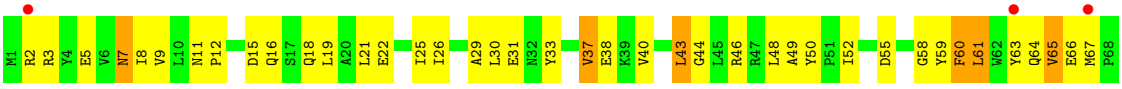
• Molecule 4: 30S ribosomal protein S5

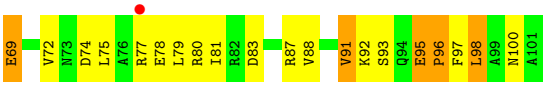


• Molecule 4: 30S ribosomal protein S5

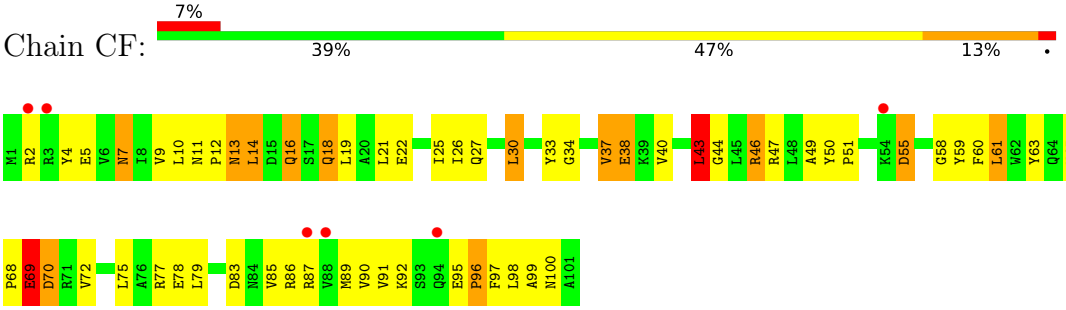


• Molecule 5: 30S ribosomal protein S6

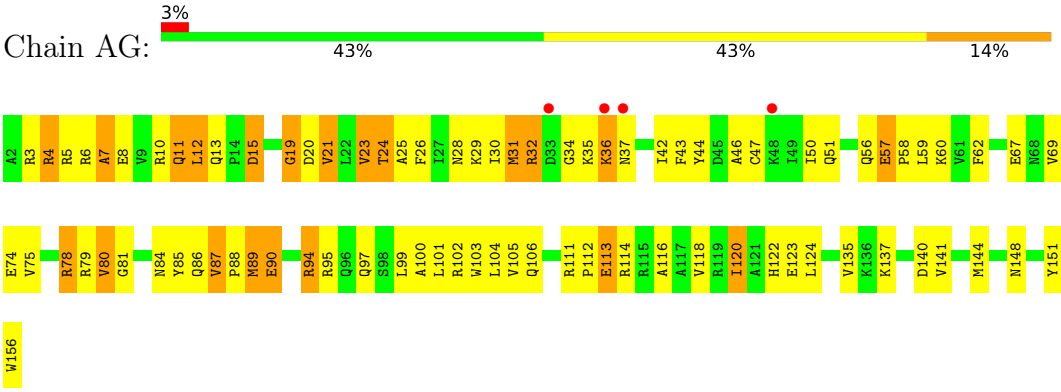




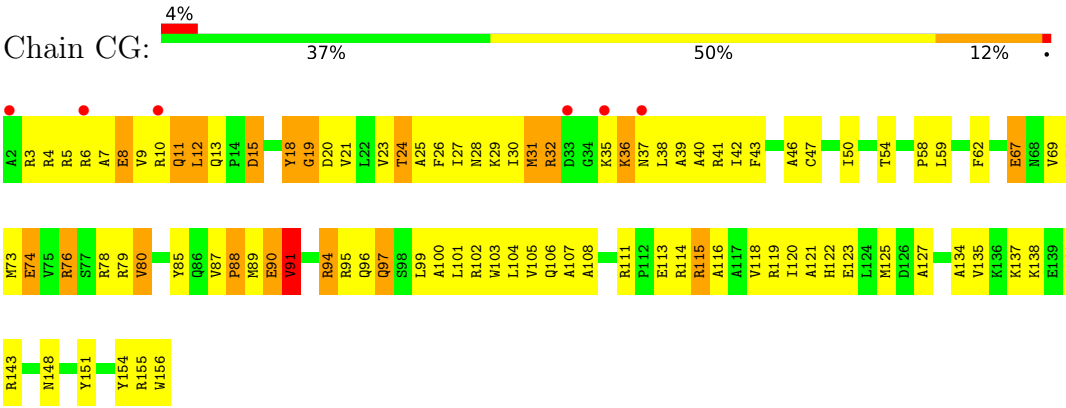
• Molecule 5: 30S ribosomal protein S6



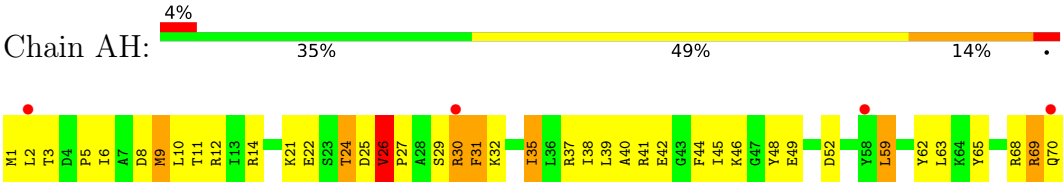
• Molecule 6: 30S ribosomal protein S7

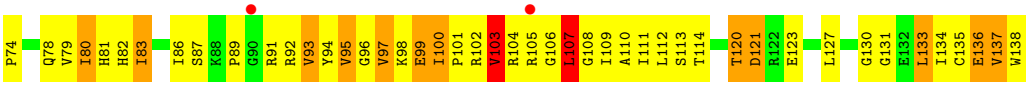


• Molecule 6: 30S ribosomal protein S7

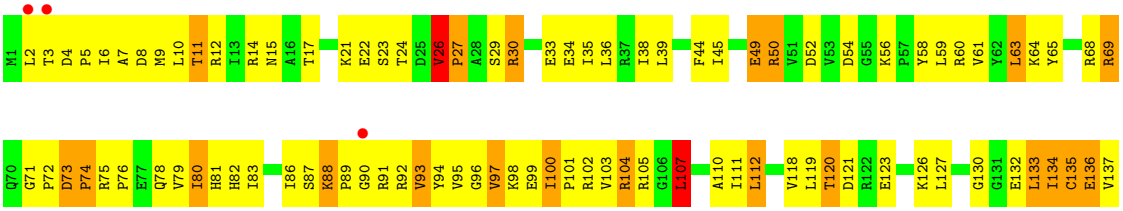


• Molecule 7: 30S ribosomal protein S8

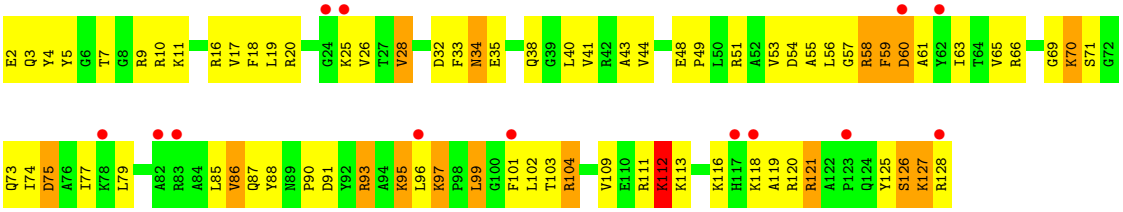




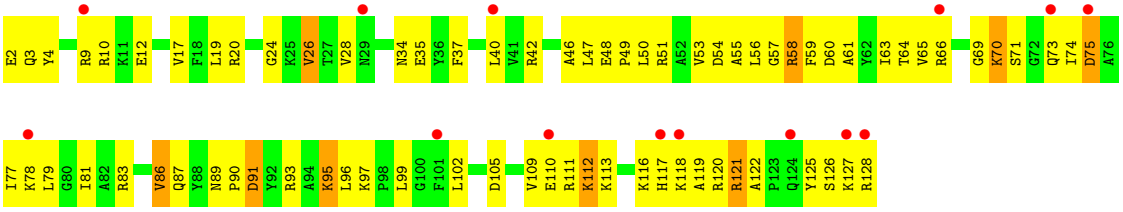
• Molecule 7: 30S ribosomal protein S8



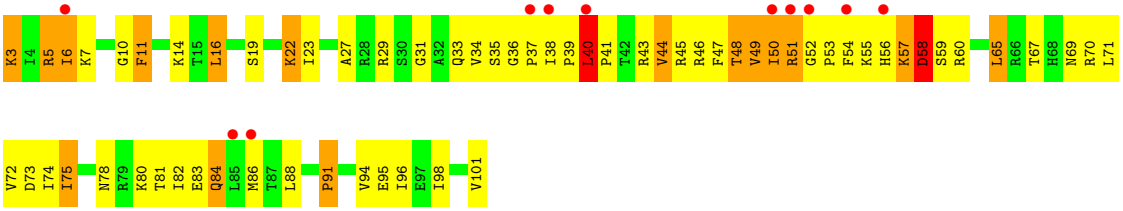
• Molecule 8: 30S ribosomal protein S9



• Molecule 8: 30S ribosomal protein S9

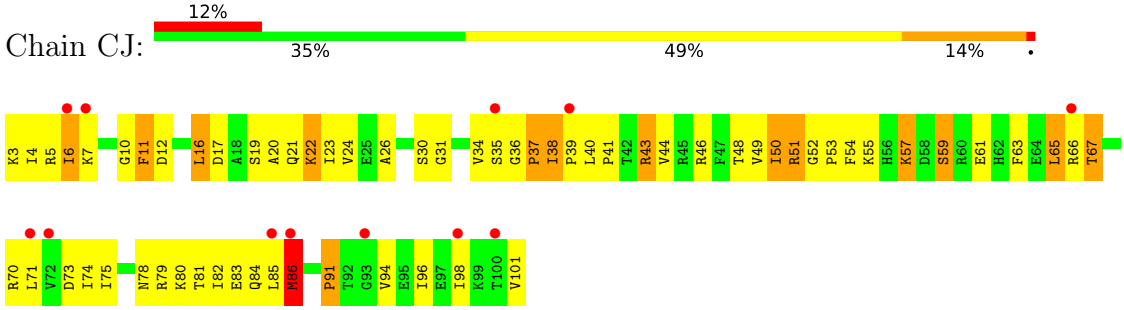


• Molecule 9: 30S ribosomal protein S10



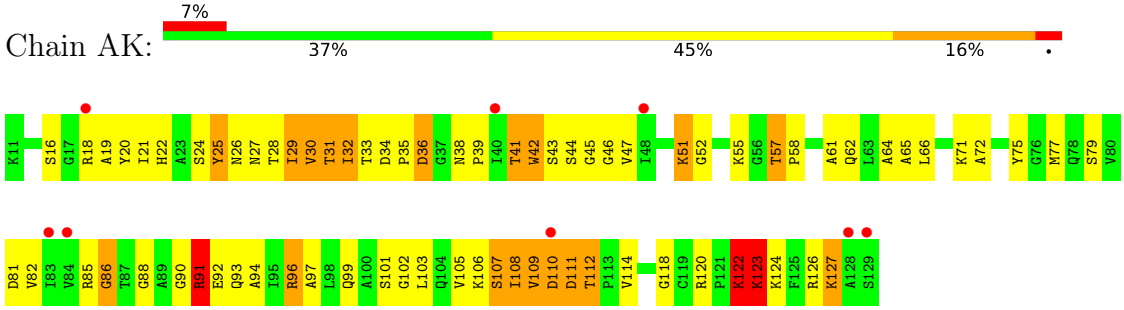
• Molecule 9: 30S ribosomal protein S10

Chain CJ:



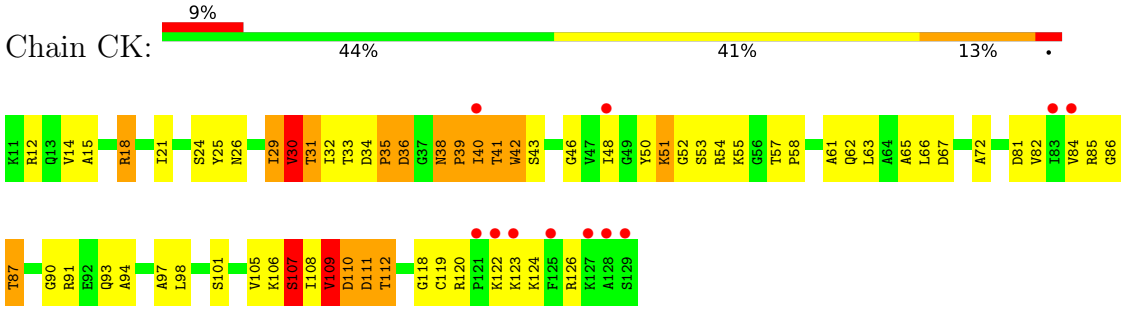
• Molecule 10: 30S ribosomal protein S11

Chain AK:



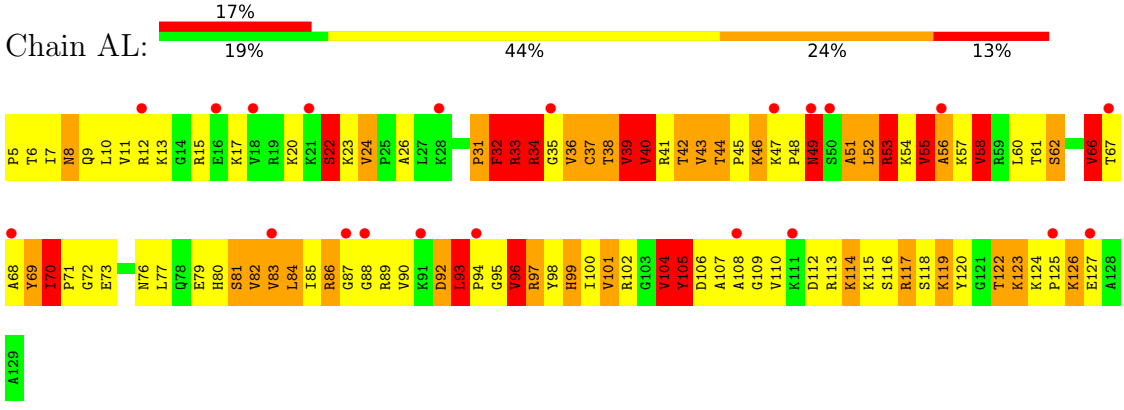
• Molecule 10: 30S ribosomal protein S11

Chain CK:



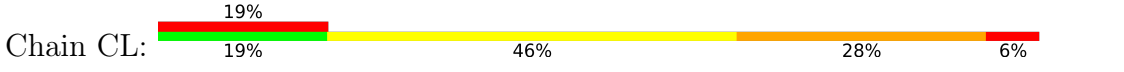
• Molecule 11: 30S ribosomal protein S12

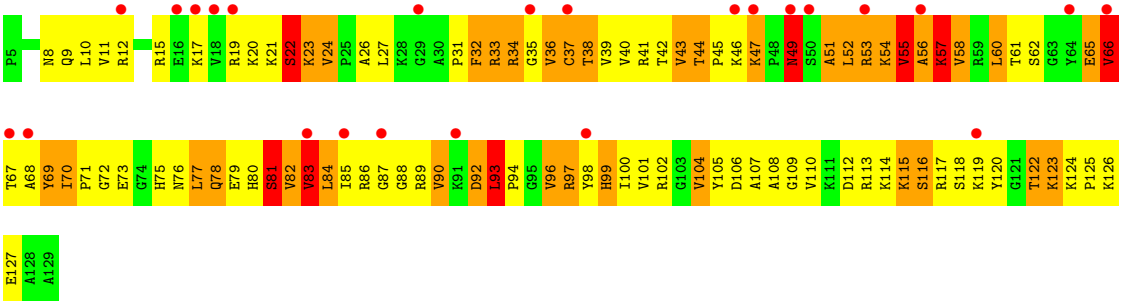
Chain AL:



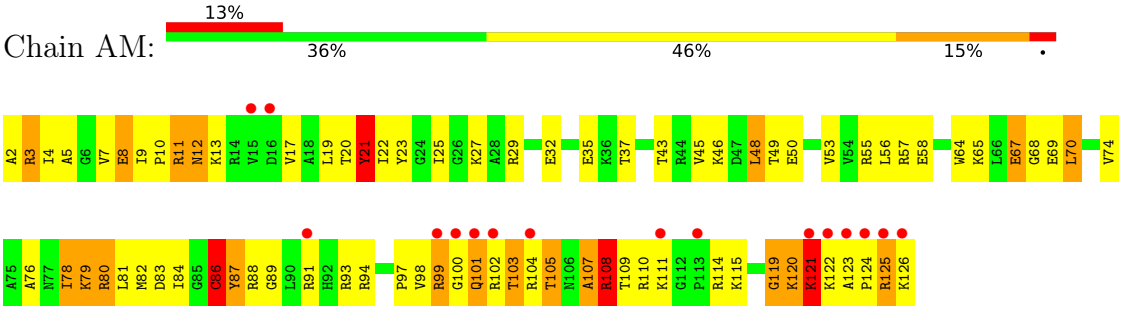
• Molecule 11: 30S ribosomal protein S12

Chain CL:

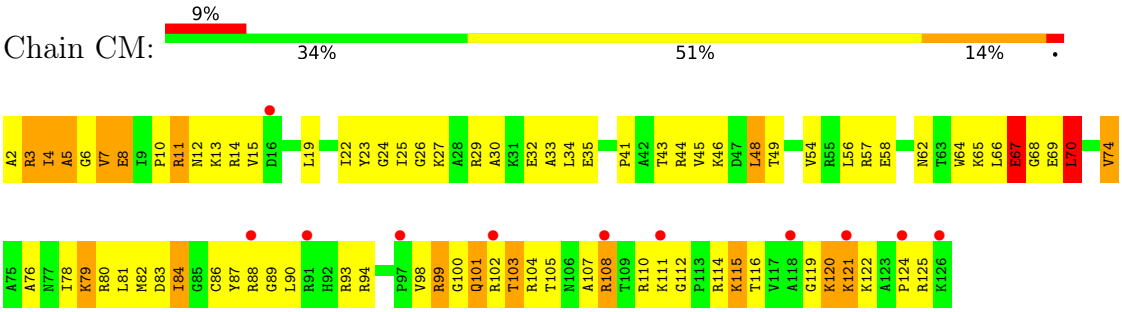




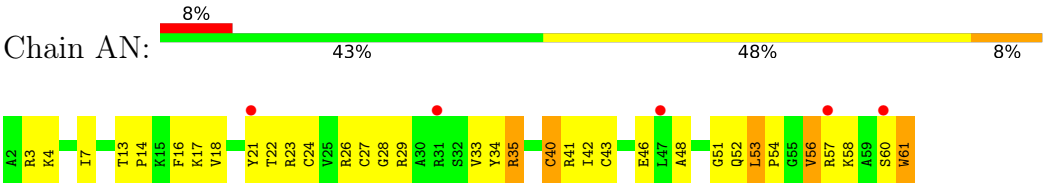
• Molecule 12: 30S ribosomal protein S13



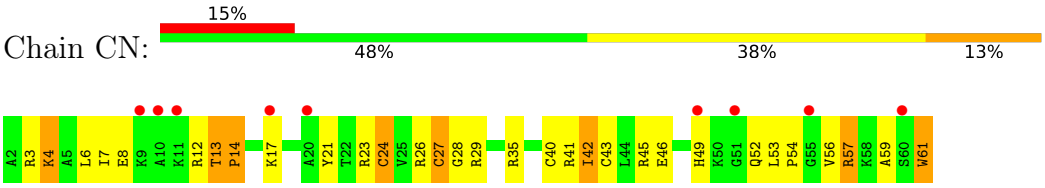
• Molecule 12: 30S ribosomal protein S13



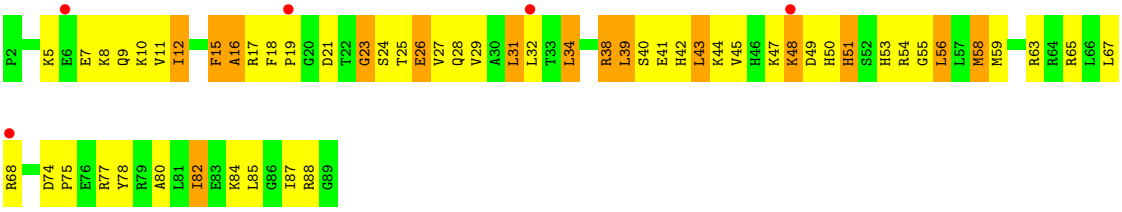
• Molecule 13: 30S ribosomal protein S14 type Z



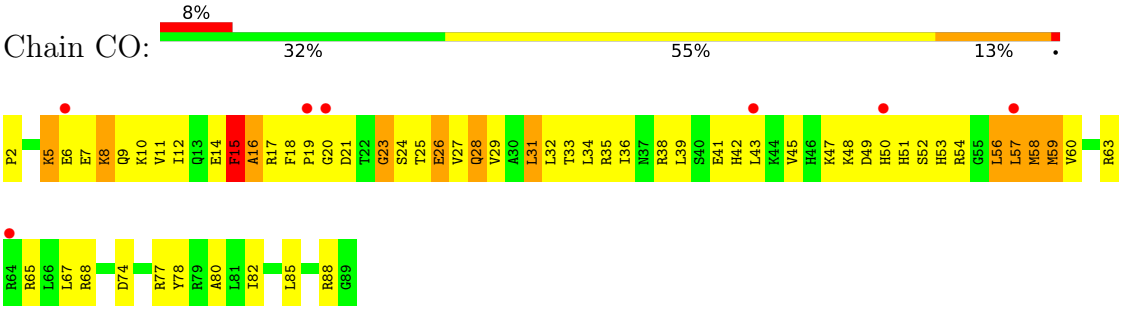
• Molecule 13: 30S ribosomal protein S14 type Z



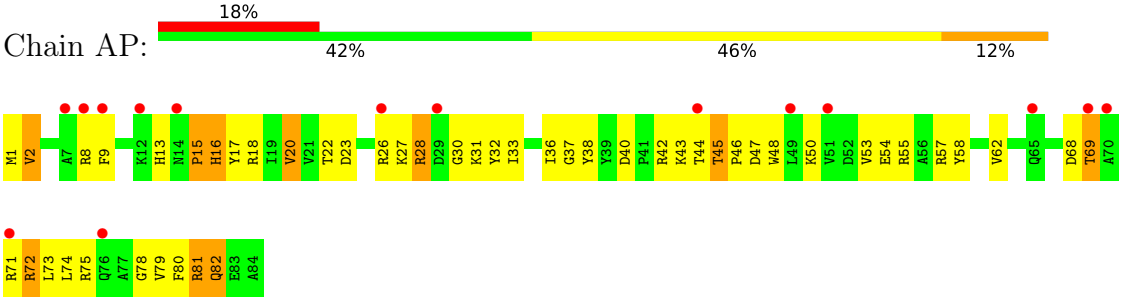
• Molecule 14: 30S ribosomal protein S15



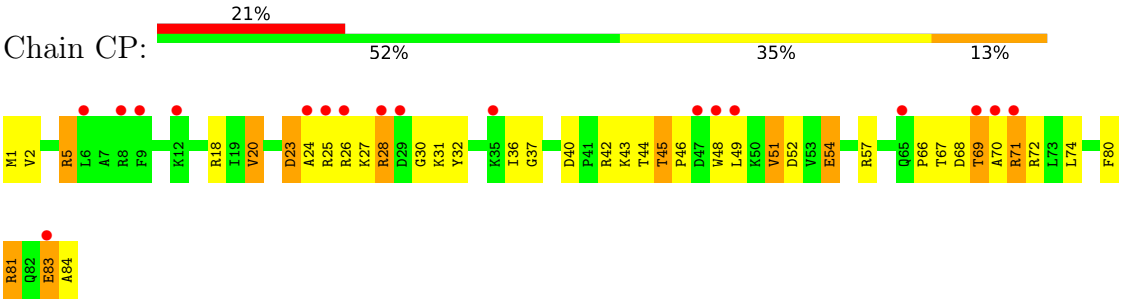
• Molecule 14: 30S ribosomal protein S15



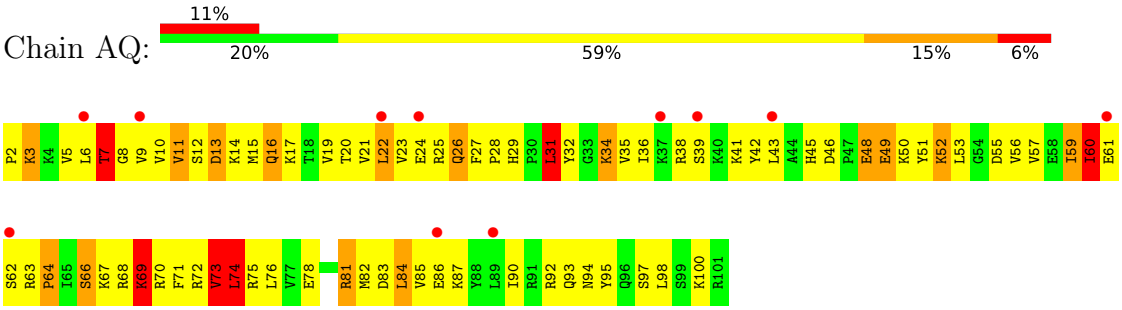
• Molecule 15: 30S ribosomal protein S16



• Molecule 15: 30S ribosomal protein S16

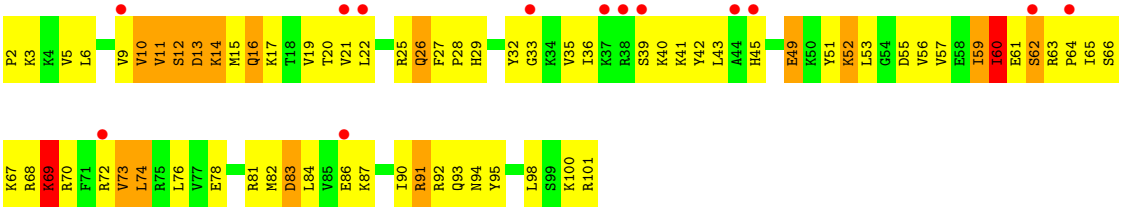


• Molecule 16: 30S ribosomal protein S17



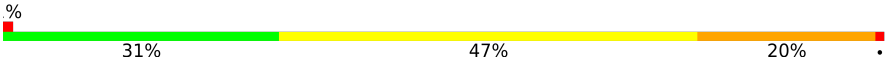
• Molecule 16: 30S ribosomal protein S17

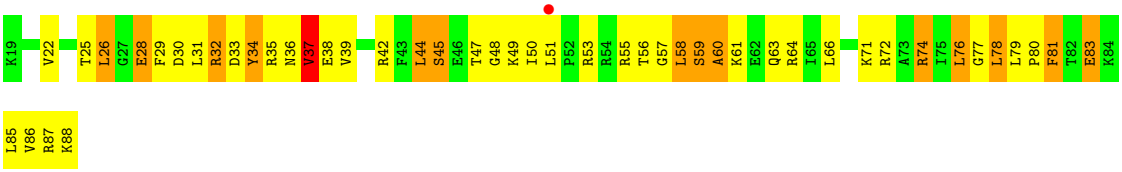
Chain CQ:



• Molecule 17: 30S ribosomal protein S18

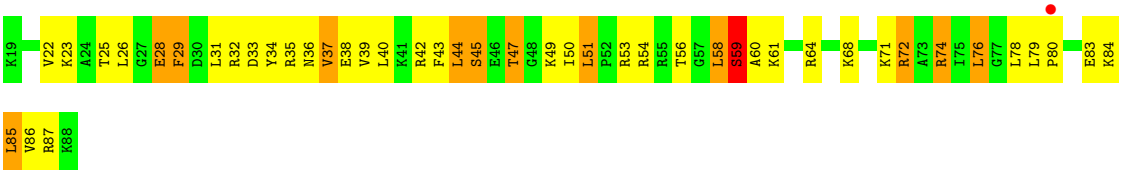
Chain AR:





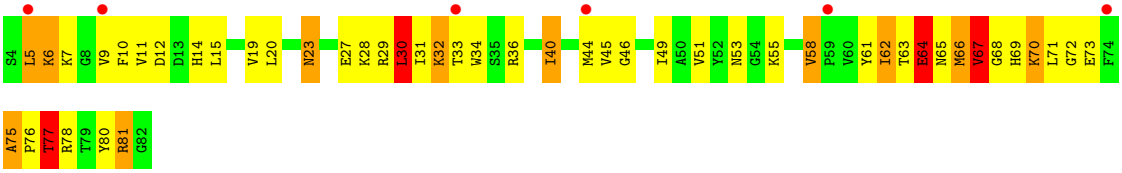
• Molecule 17: 30S ribosomal protein S18

Chain CR:



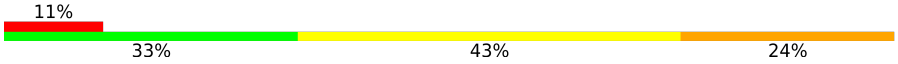
• Molecule 18: 30S ribosomal protein S19

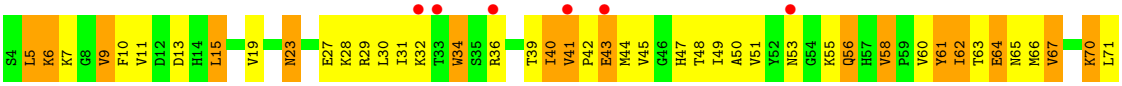
Chain AS:

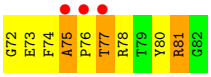


• Molecule 18: 30S ribosomal protein S19

Chain CS:

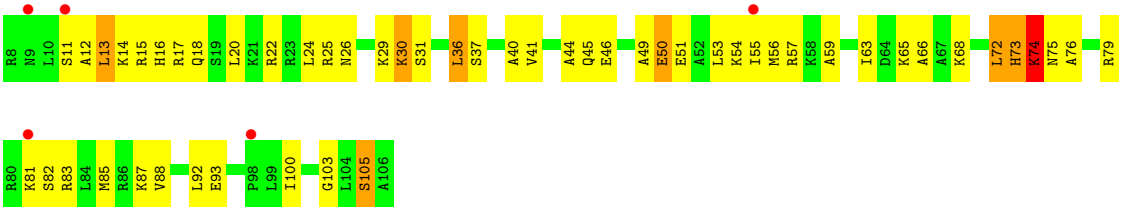






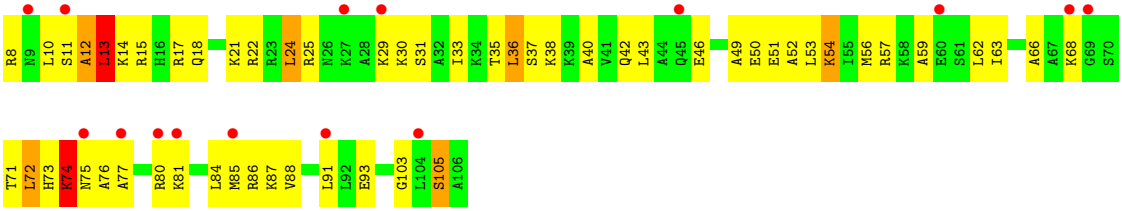
• Molecule 19: 30S ribosomal protein S20

Chain AT:



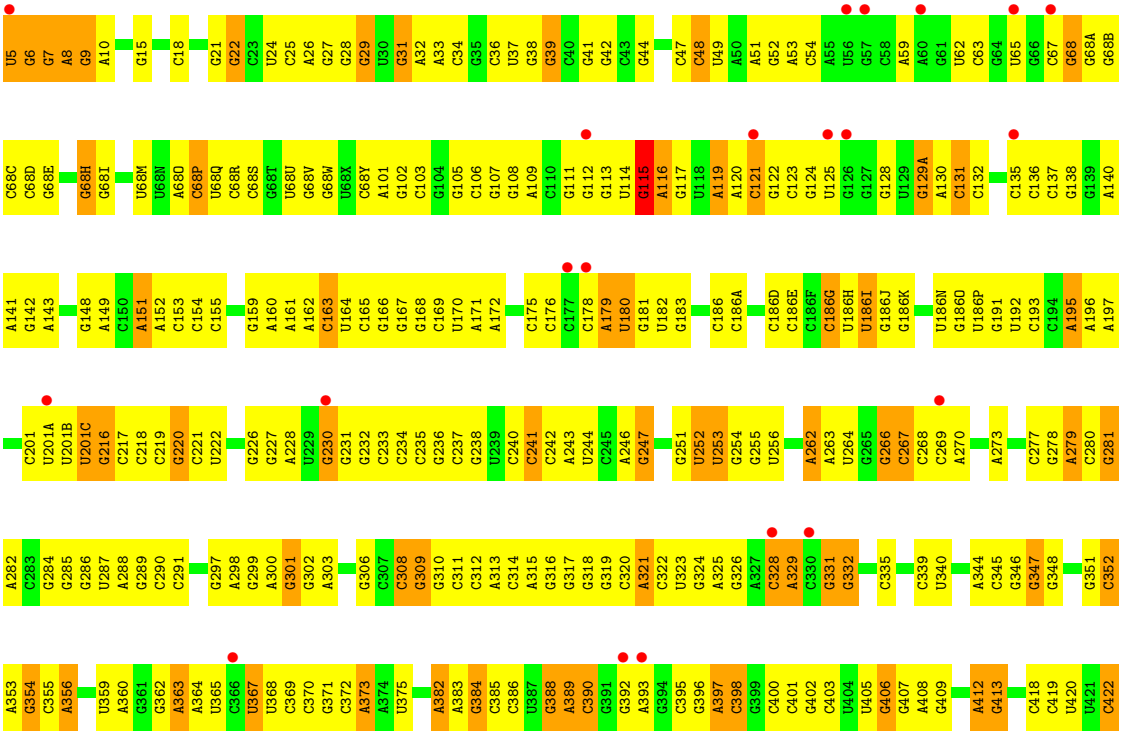
• Molecule 19: 30S ribosomal protein S20

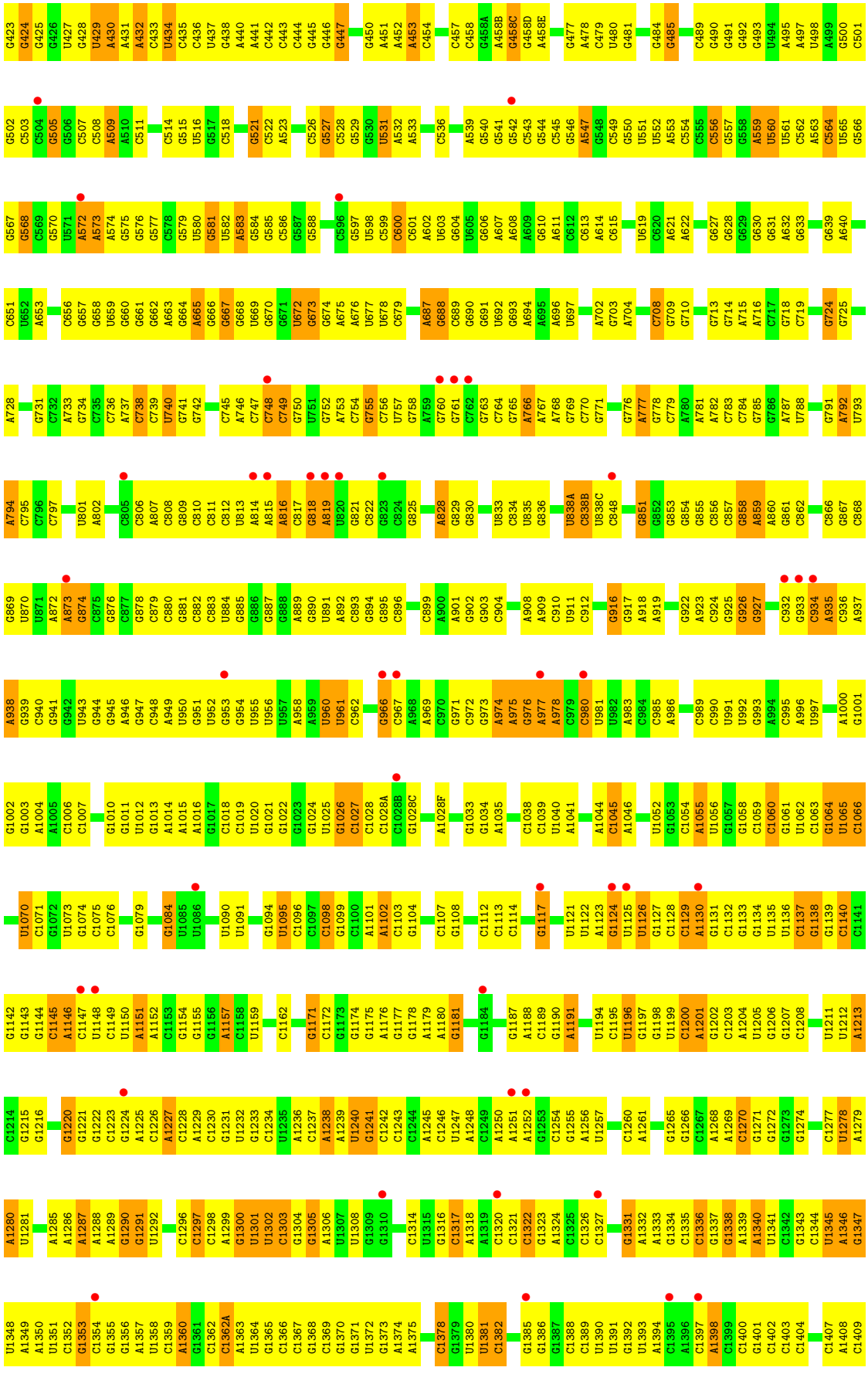
Chain CT:



• Molecule 20: 16S ribosomal RNA

Chain AA:

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G502 C503 C504 G505 G506 C507 C508 A509 A510 C511 C514 G515 U516 G517 C518 G521 C522 A523 C526 G527 C528 G529 G530 U531 A532 A533 C536 A539 G540 G541 C542 G543 G544 C545 G546 A547 G548 C549 G550 U551 U552 A553 C554 C555 C556 G557 G558 A559 U560 U561 C562 A563 G564 U565 G566
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A794 C795 C796 C797 U801 A802 C805 C806 A807 C808 G809 C810 C811 C812 U813 A814 A815 A816 C817 G818 A819 U820 G821 C822 G823 C824 G825 A828 G829 G830 U833 C834 U835 G836 U838A C838B U838C C848 G851 G852 G853 G854 G855 C856 C857 G858 A859 A860 G861 C862 C866 G867 C868
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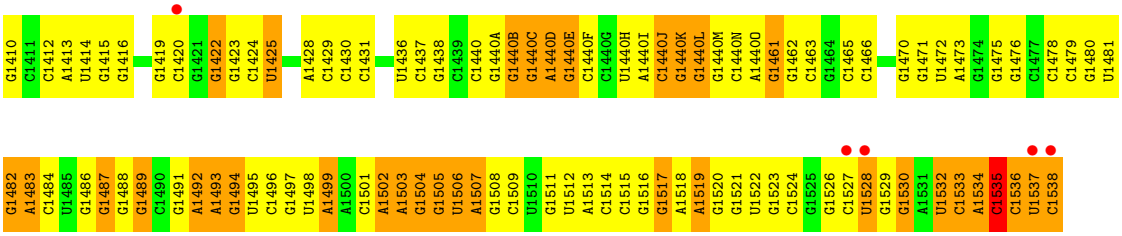
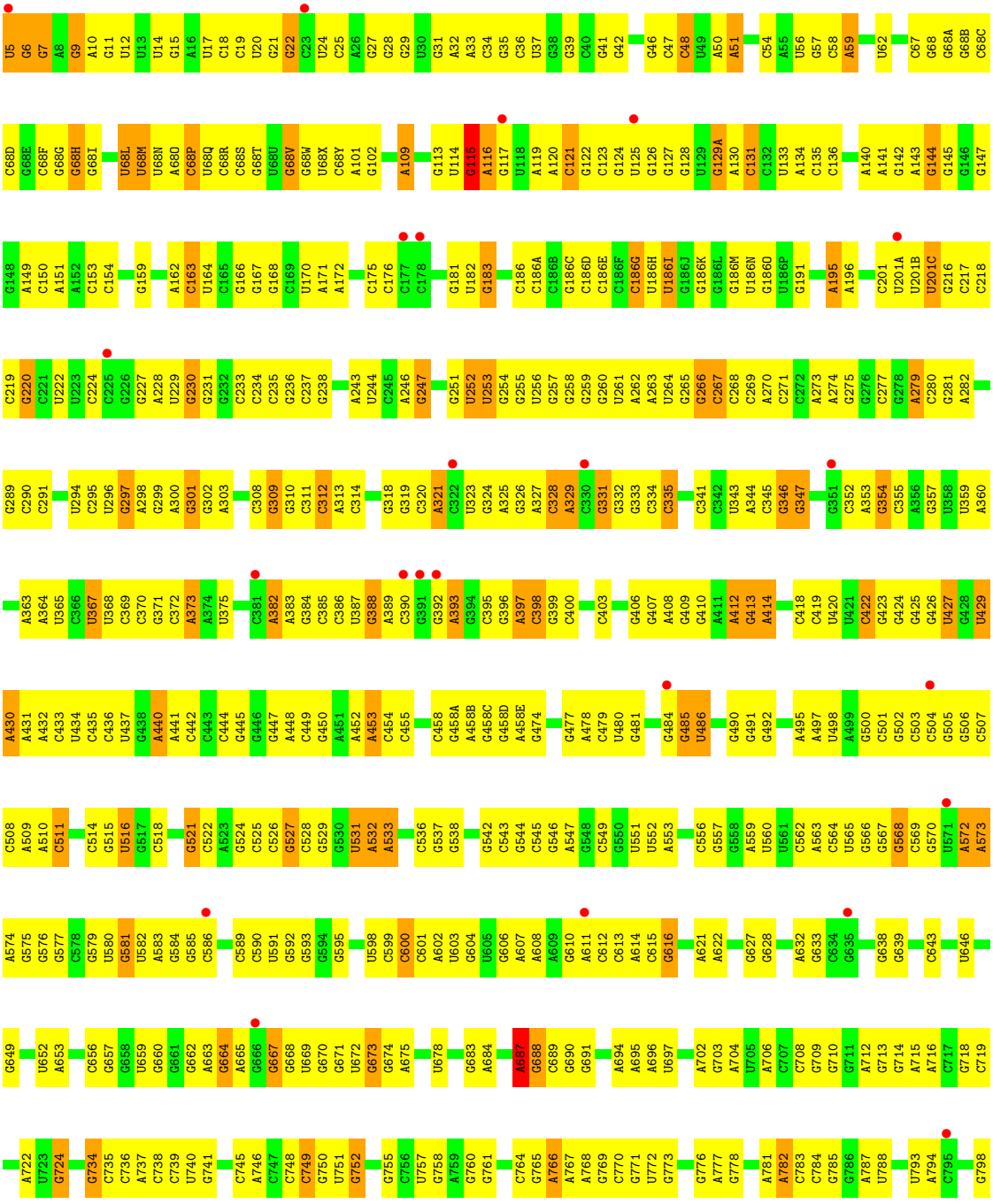
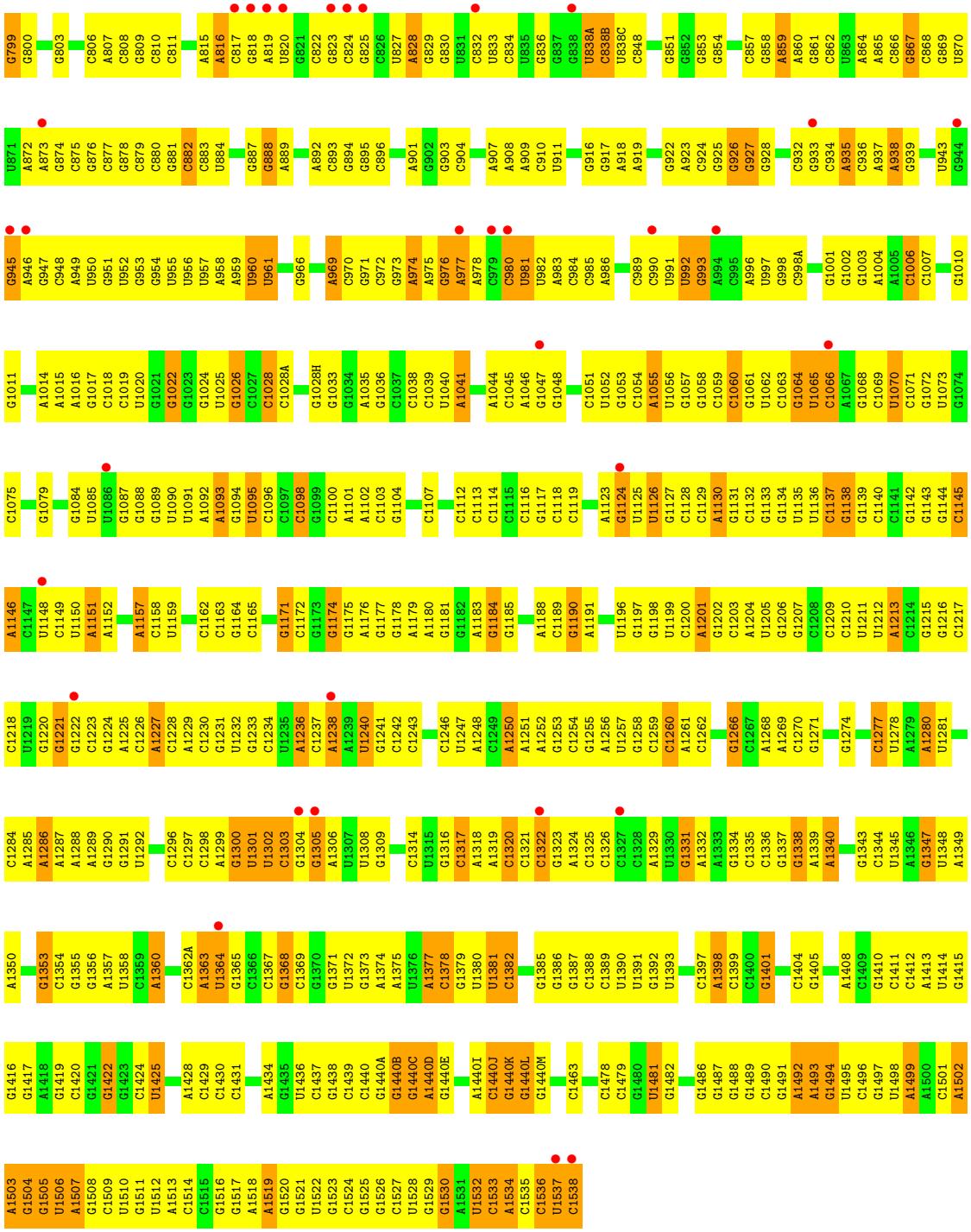


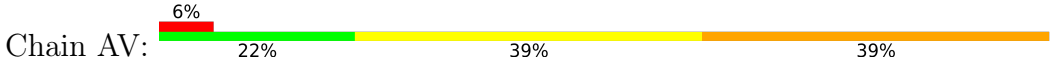
• Molecule 20: 16S ribosomal RNA

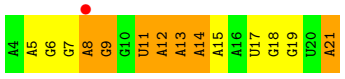
Chain CA:





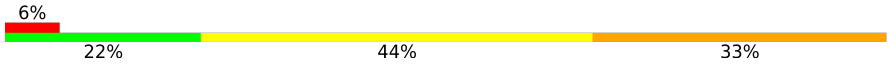
• Molecule 21: messenger RNA

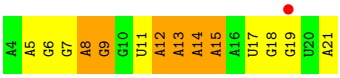




• Molecule 21: messenger RNA

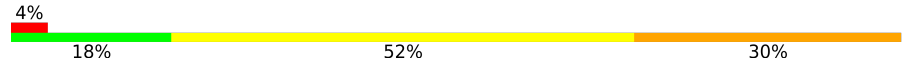
Chain CV:

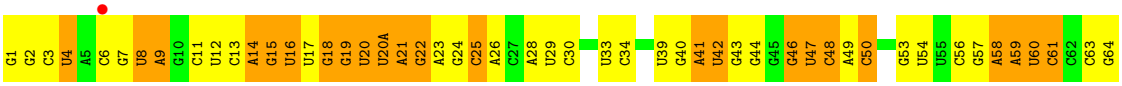


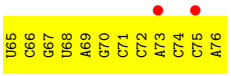


• Molecule 22: tRNA-Met

Chain AW:

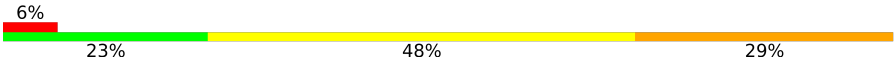


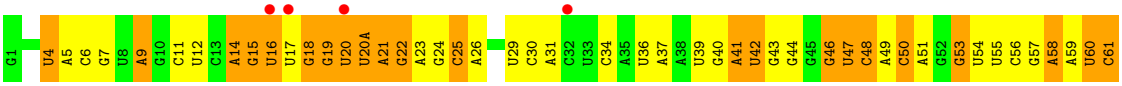


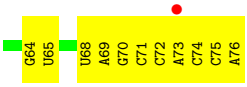


• Molecule 22: tRNA-Met

Chain CW:

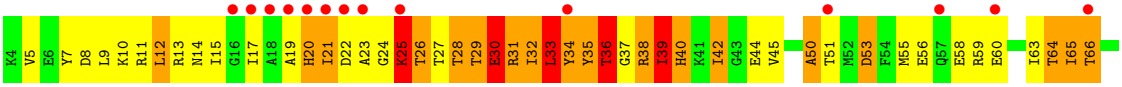


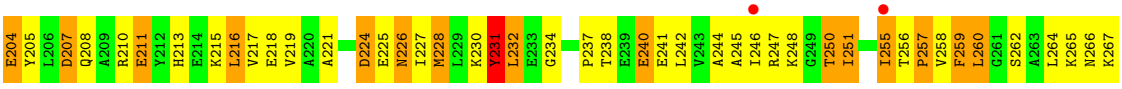


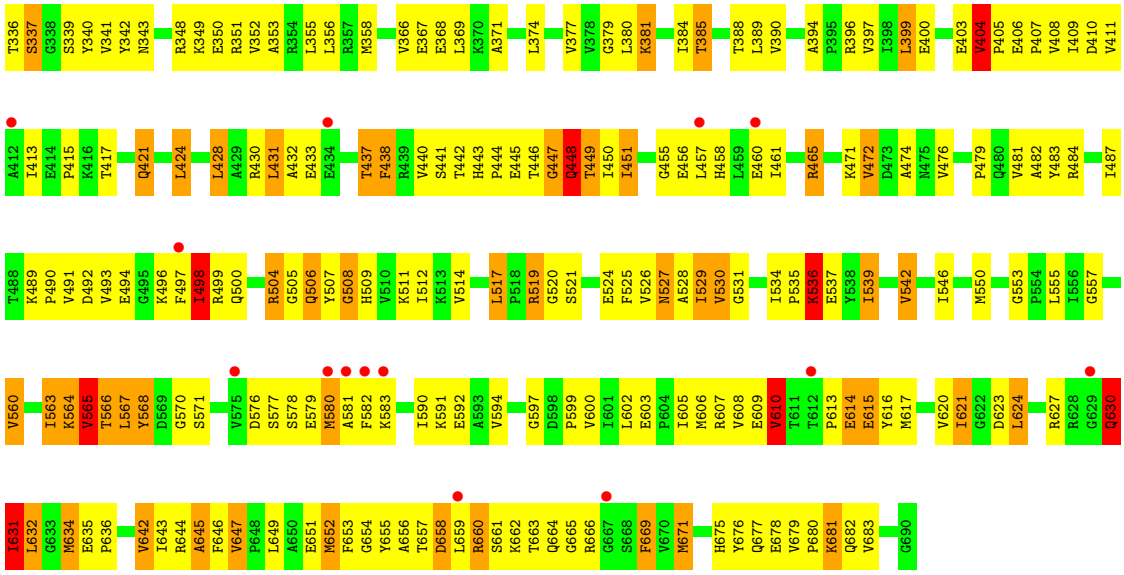


• Molecule 23: Elongation factor G

Chain AY:

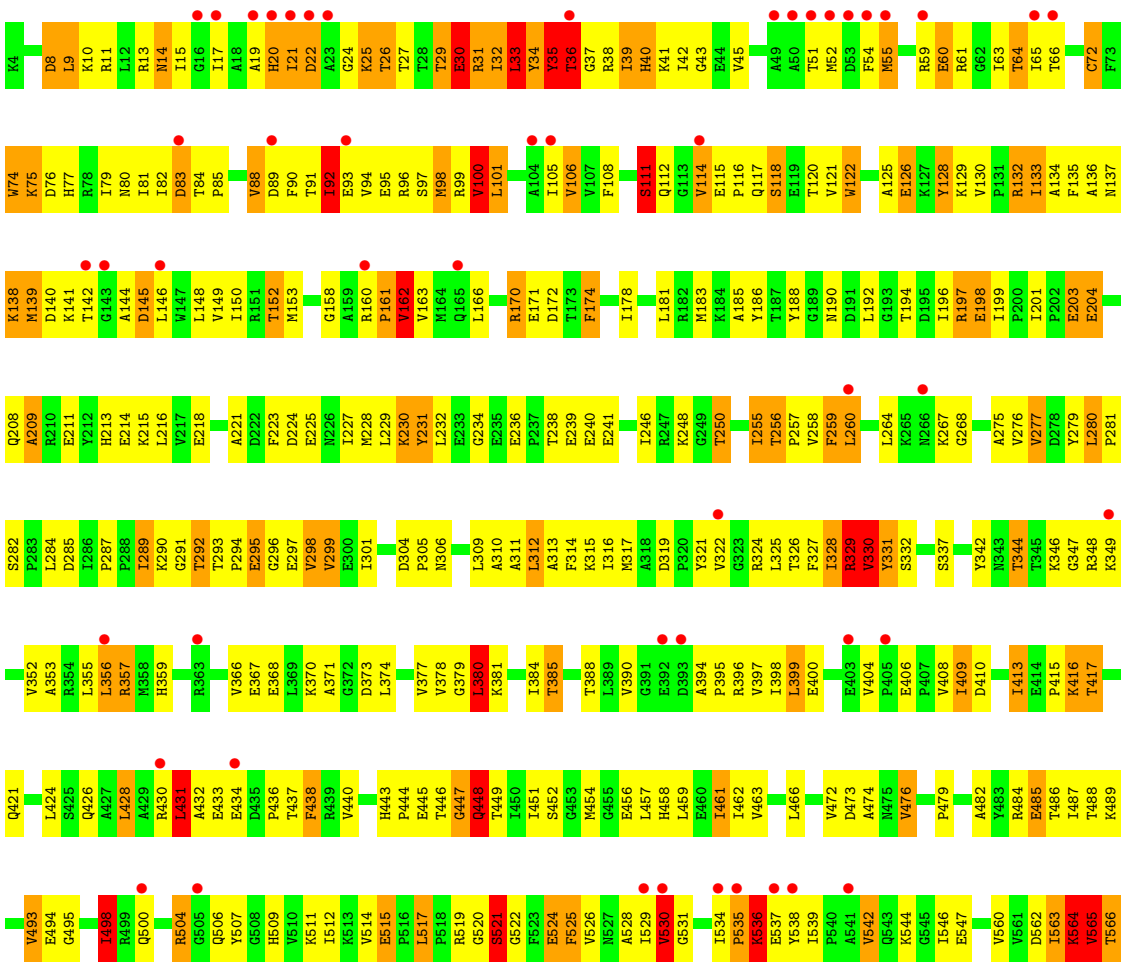


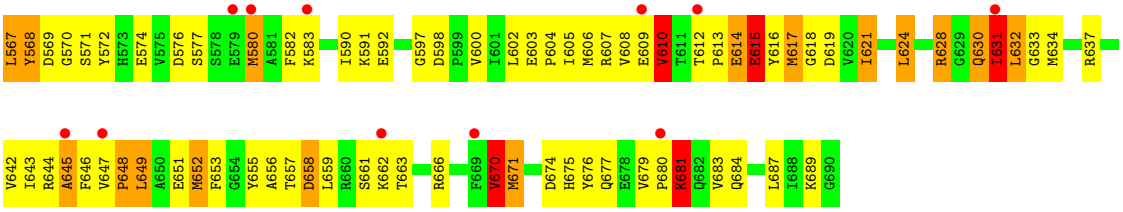




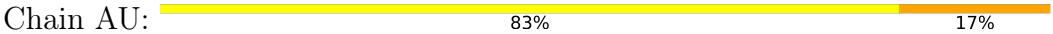
• Molecule 23: Elongation factor G

Chain CY:

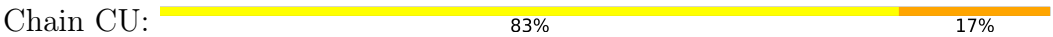




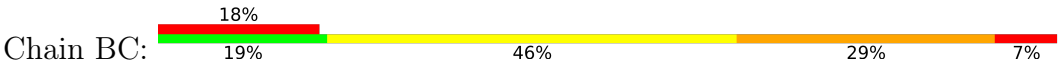
• Molecule 24: Viomycin

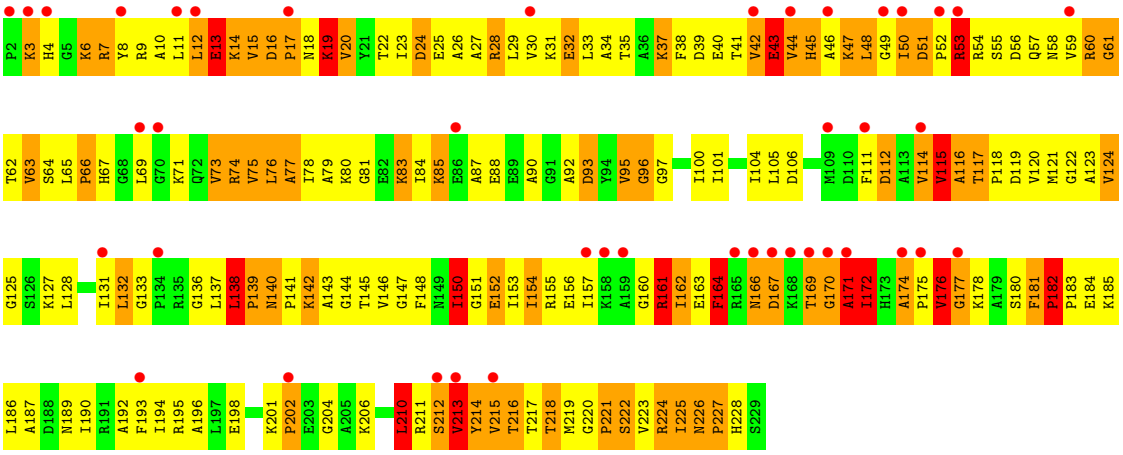


• Molecule 24: Viomycin

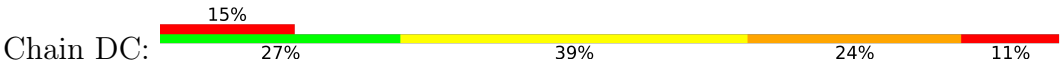


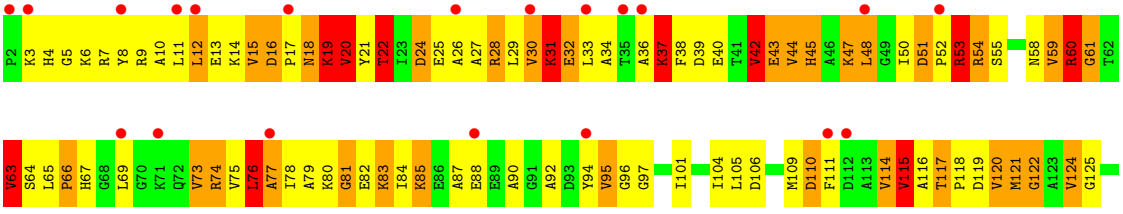
• Molecule 25: 50S ribosomal protein L1

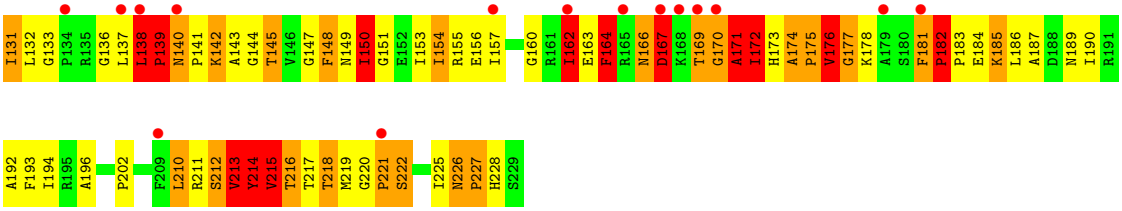




• Molecule 25: 50S ribosomal protein L1

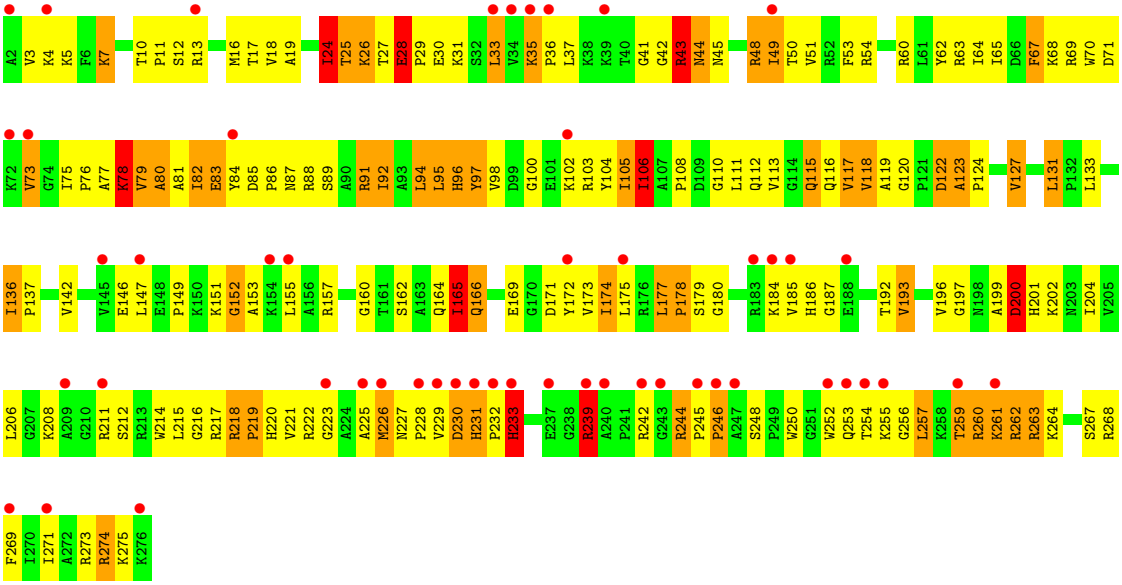






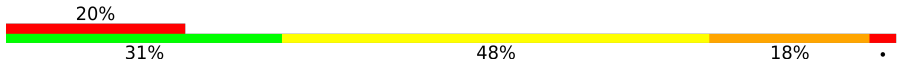
• Molecule 26: 50S ribosomal protein L2

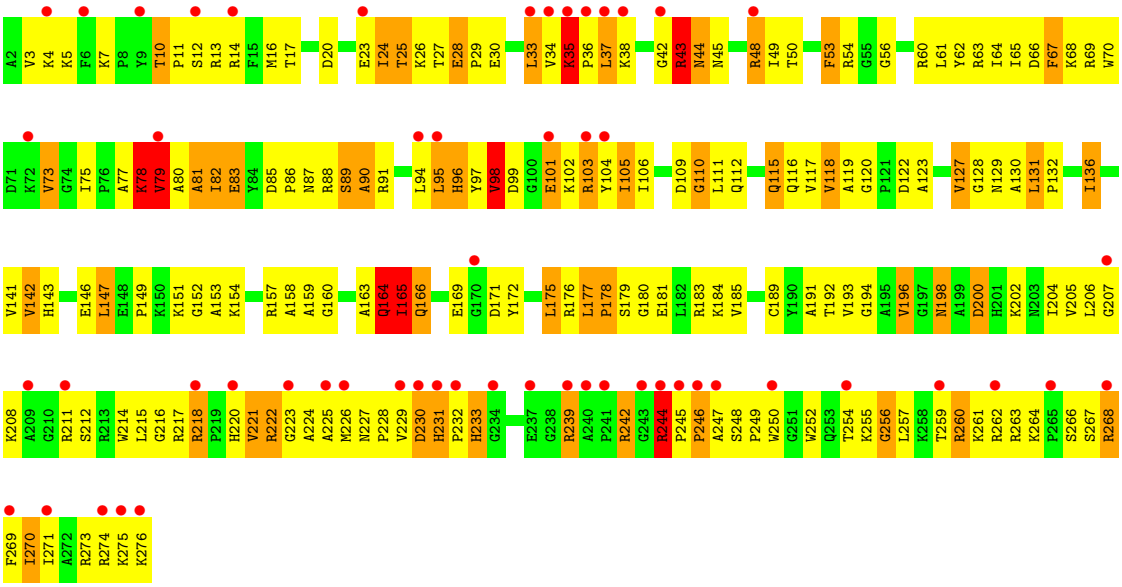
Chain BD:



• Molecule 26: 50S ribosomal protein L2

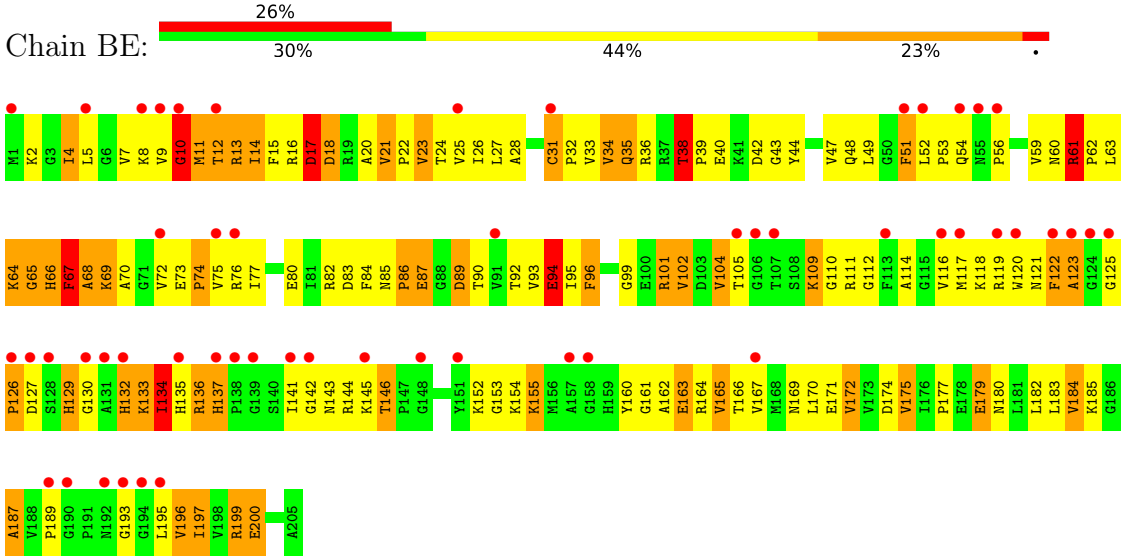
Chain DD:





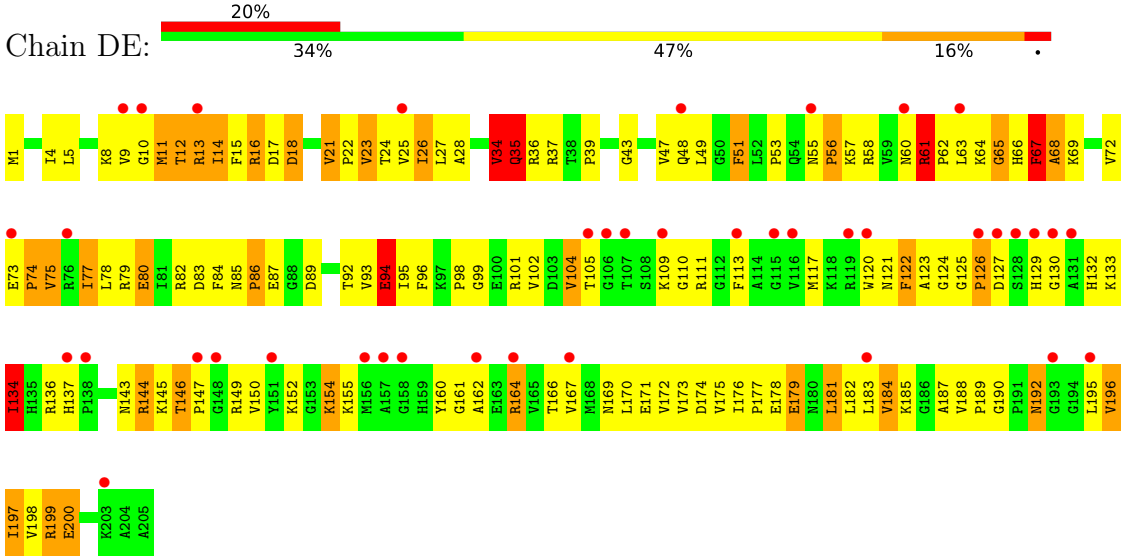
• Molecule 27: 50S ribosomal protein L3

Chain BE:



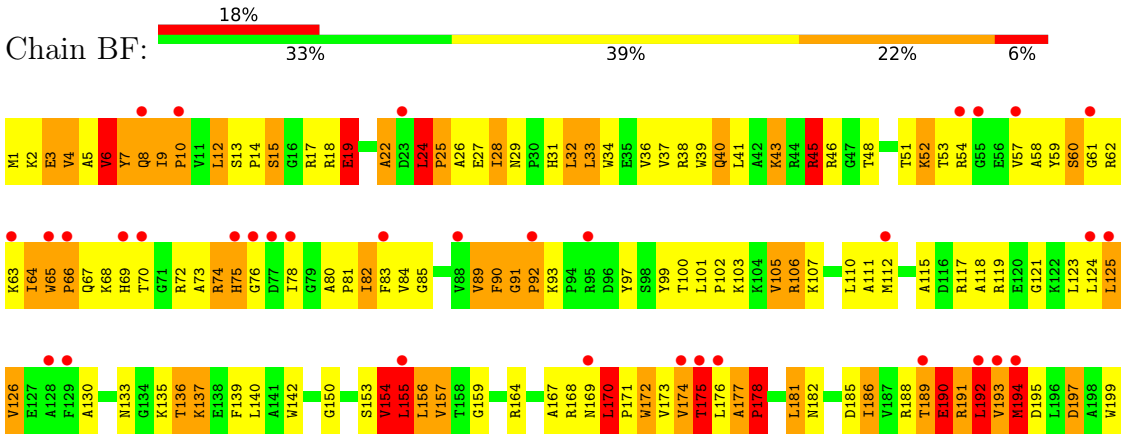
• Molecule 27: 50S ribosomal protein L3

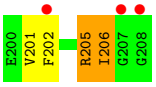
Chain DE:



• Molecule 28: 50S ribosomal protein L4

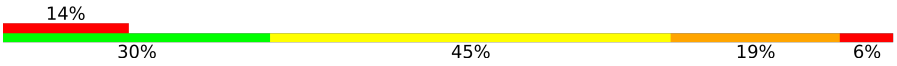
Chain BF:

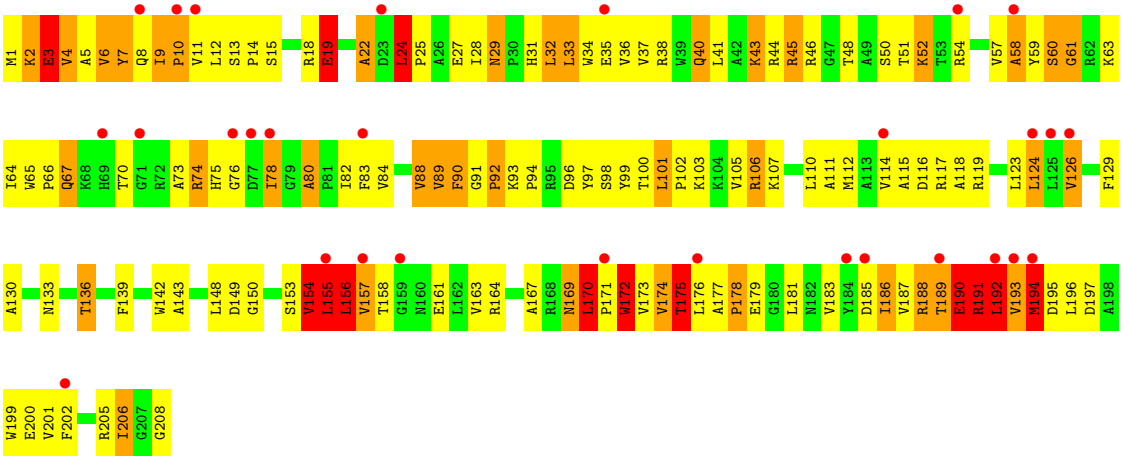




• Molecule 28: 50S ribosomal protein L4

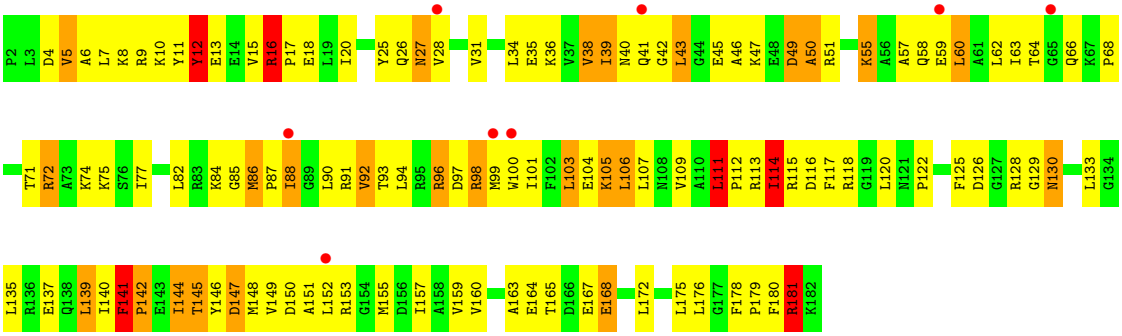
Chain DF:





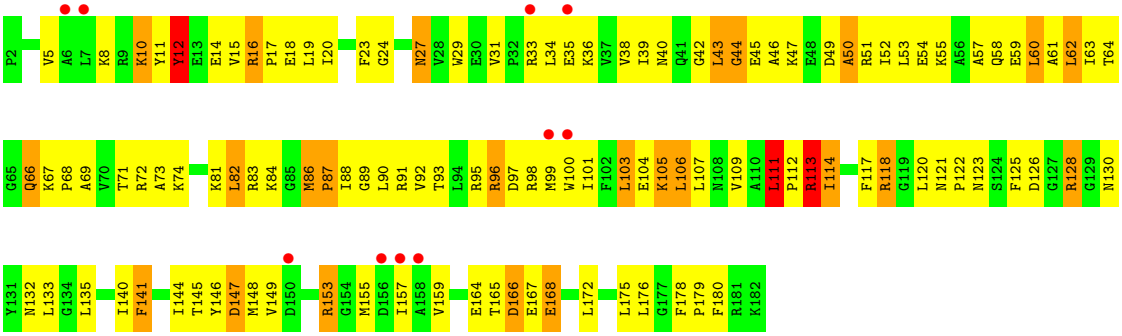
• Molecule 29: 50S ribosomal protein L5

Chain BG:



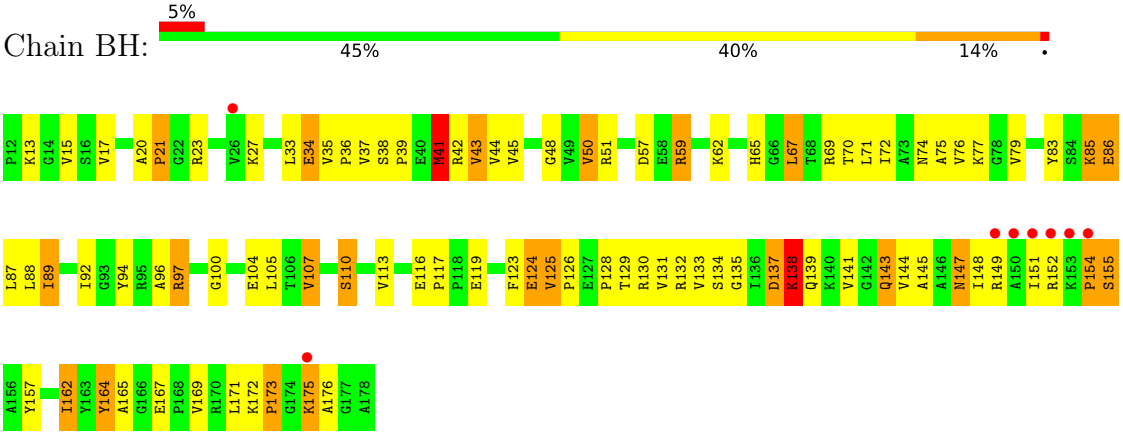
• Molecule 29: 50S ribosomal protein L5

Chain DG:



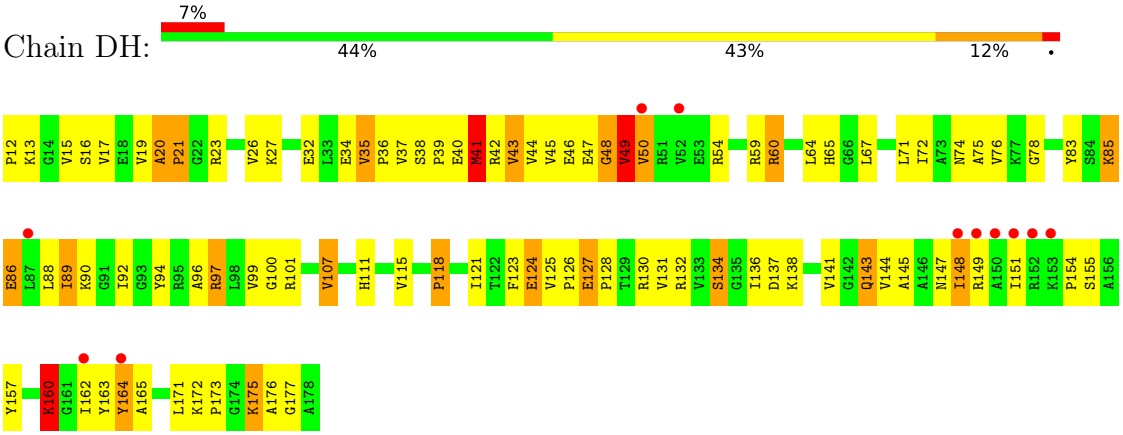
• Molecule 30: 50S ribosomal protein L6

Chain BH:



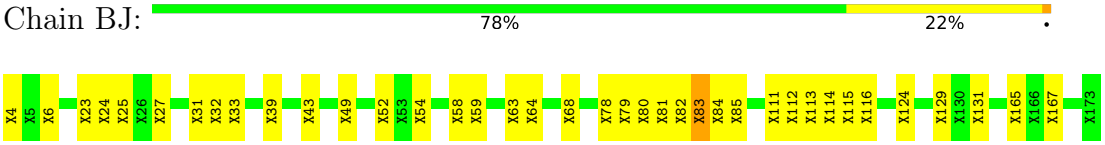
• Molecule 30: 50S ribosomal protein L6

Chain DH:



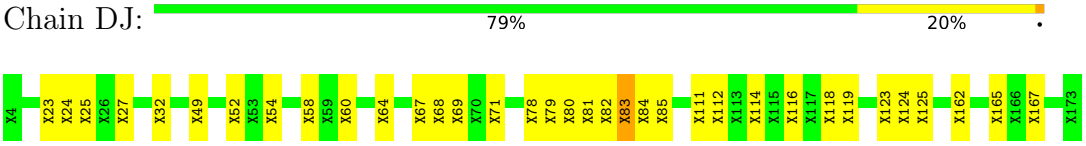
• Molecule 31: 50S ribosomal protein L10

Chain BJ:



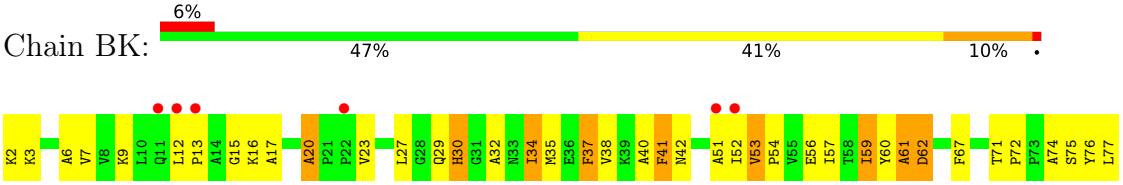
• Molecule 31: 50S ribosomal protein L10

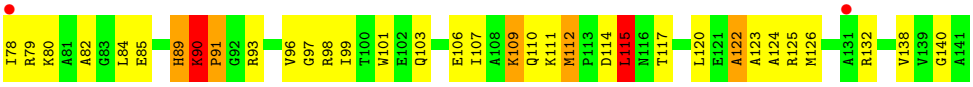
Chain DJ:



• Molecule 32: 50S ribosomal protein L11

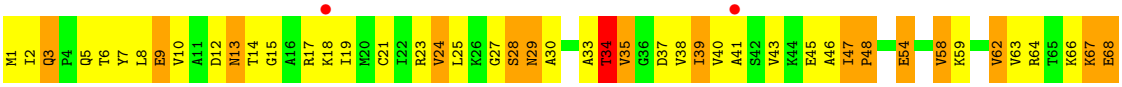
Chain BK:

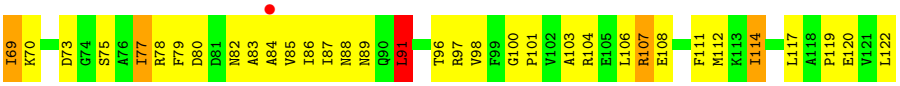




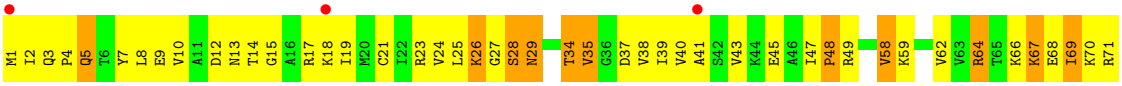
• Molecule 32: 50S ribosomal protein L11

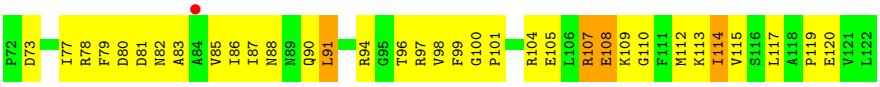
• Molecule 33: 50S ribosomal protein L14



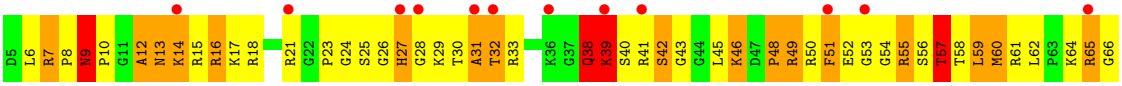


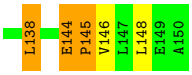
• Molecule 33: 50S ribosomal protein L14





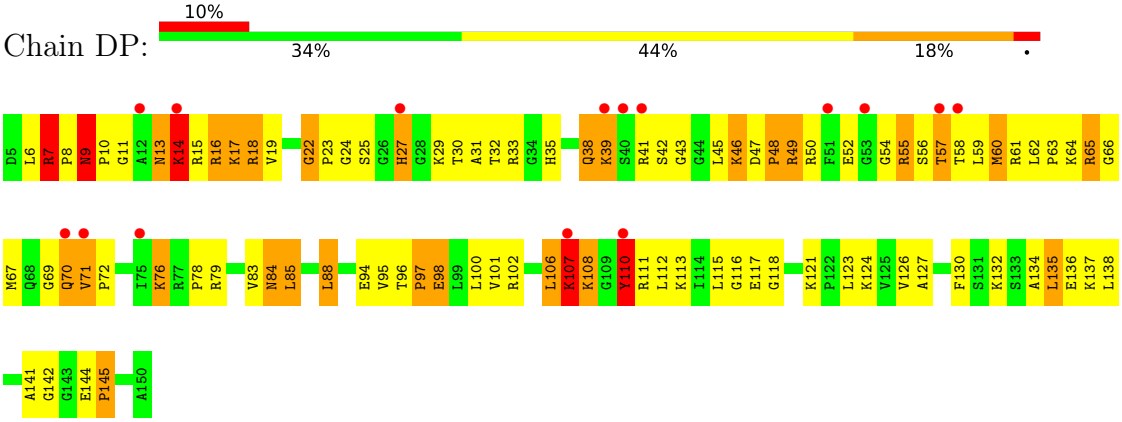
• Molecule 34: 50S ribosomal protein L15





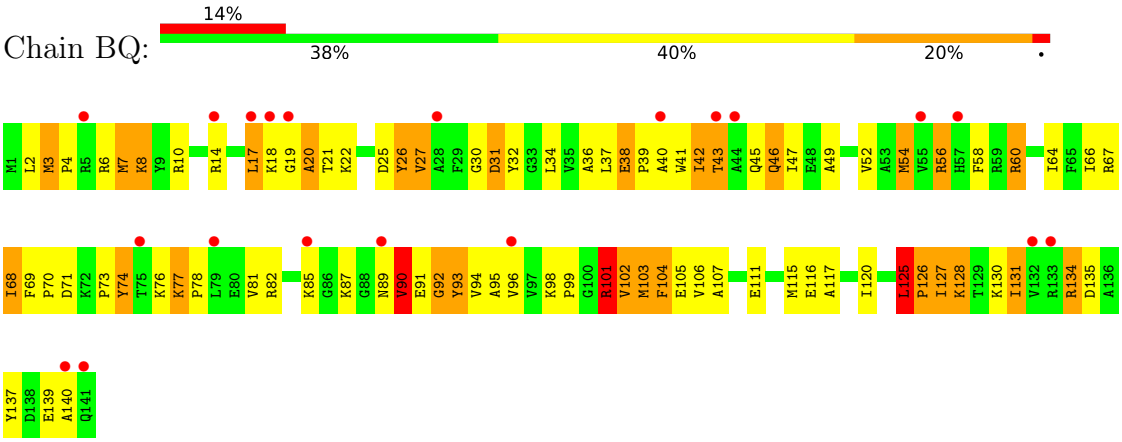
• Molecule 34: 50S ribosomal protein L15

Chain DP:



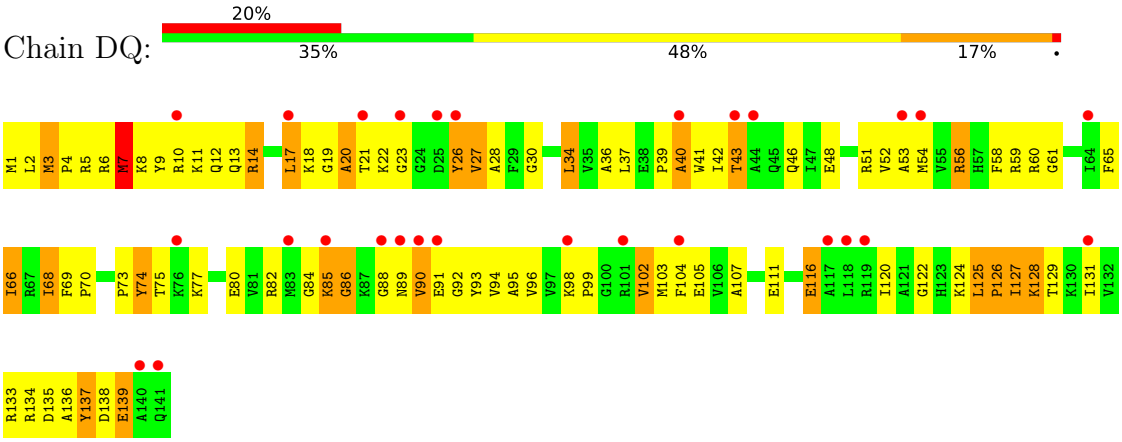
• Molecule 35: 50S ribosomal protein L16

Chain BQ:



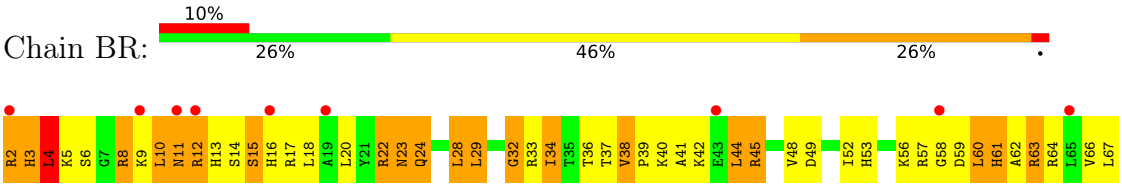
• Molecule 35: 50S ribosomal protein L16

Chain DQ:



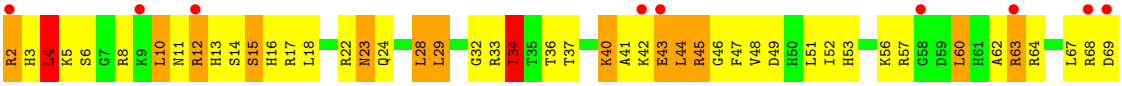
• Molecule 36: 50S ribosomal protein L17

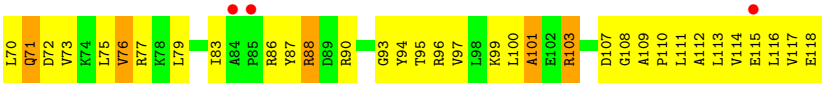
Chain BR:



• Molecule 36: 50S ribosomal protein L17

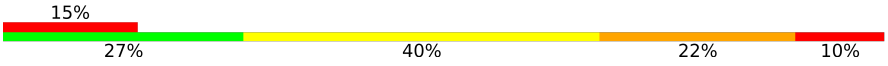
Chain DR:

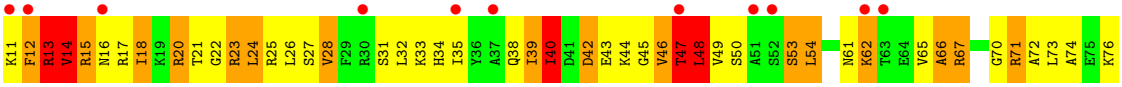


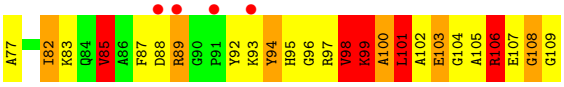


• Molecule 37: 50S ribosomal protein L18

Chain BS:

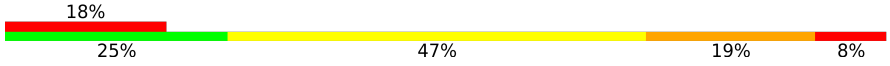


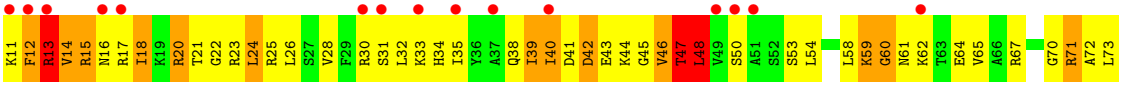


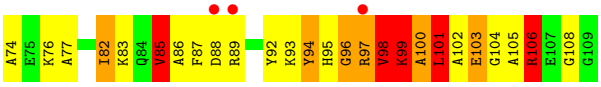


• Molecule 37: 50S ribosomal protein L18

Chain DS:

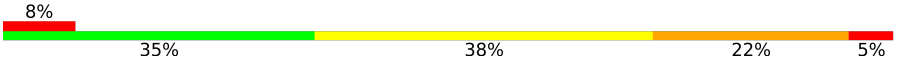


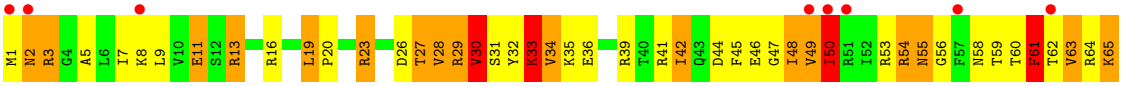


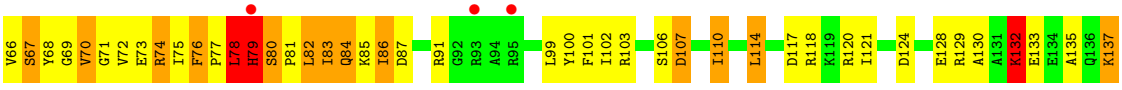


• Molecule 38: 50S ribosomal protein L19

Chain BT:

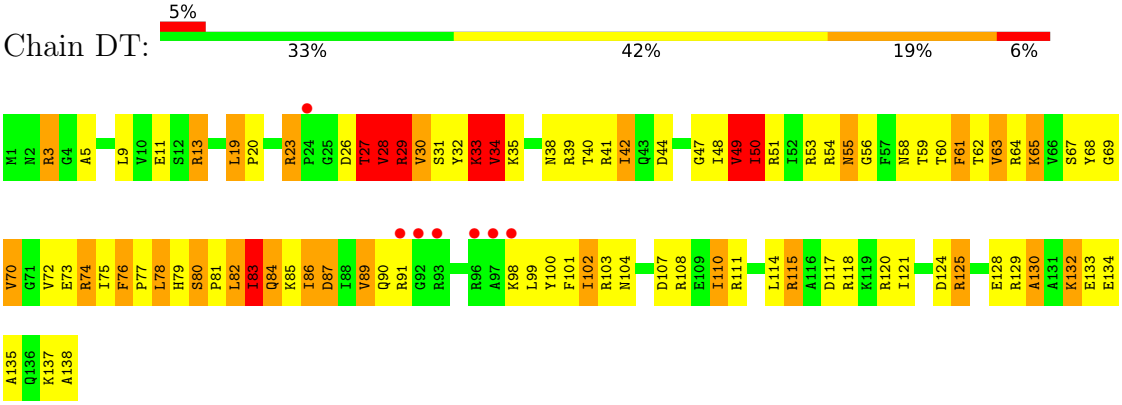






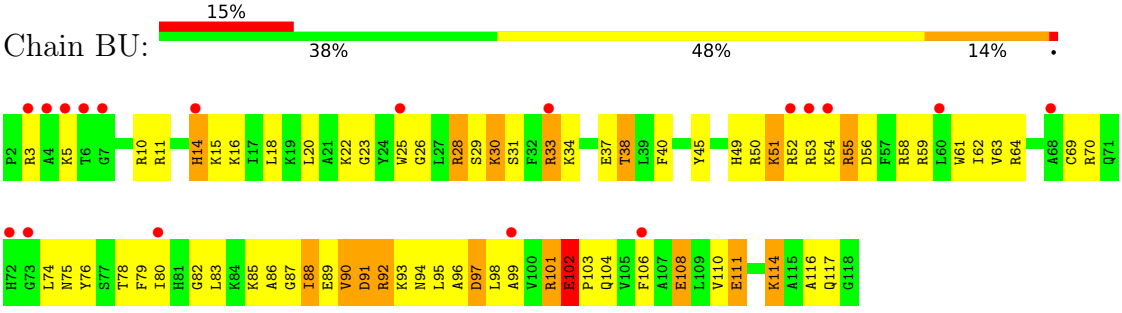
• Molecule 38: 50S ribosomal protein L19

Chain DT:



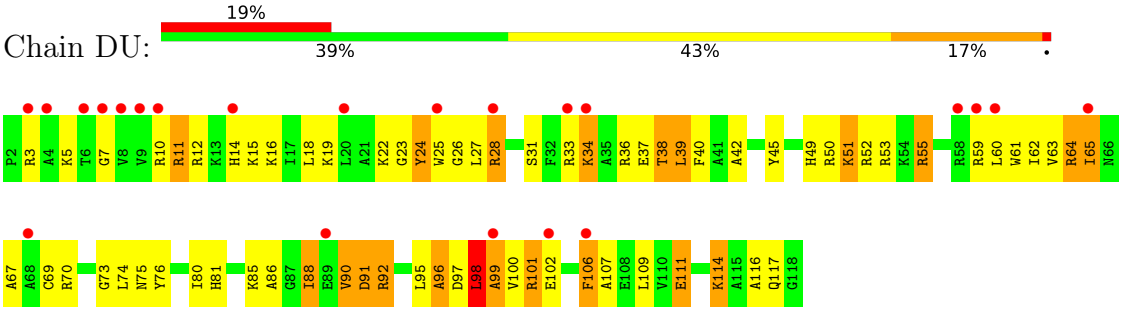
• Molecule 39: 50S ribosomal protein L20

Chain BU:



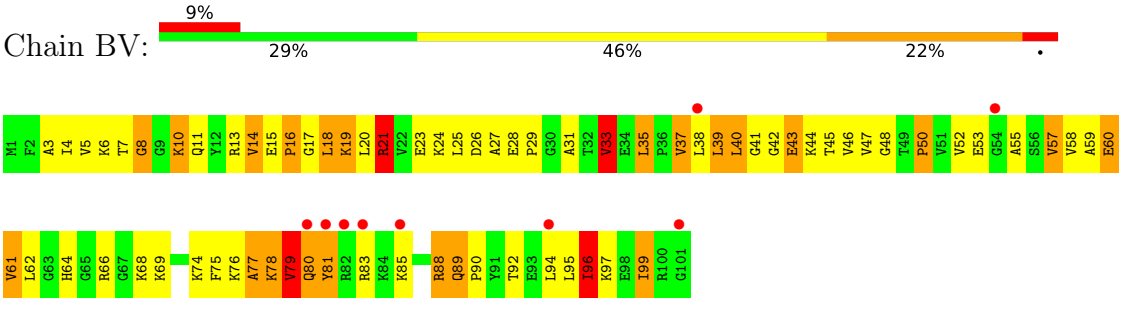
• Molecule 39: 50S ribosomal protein L20

Chain DU:



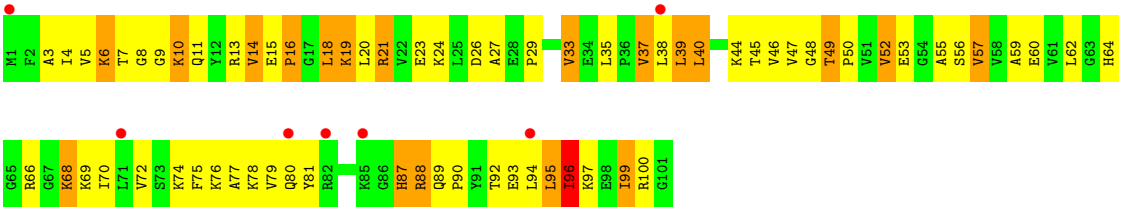
• Molecule 40: 50S ribosomal protein L21

Chain BV:



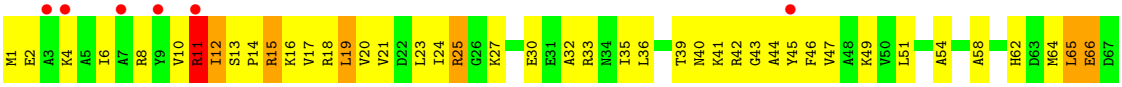
• Molecule 40: 50S ribosomal protein L21

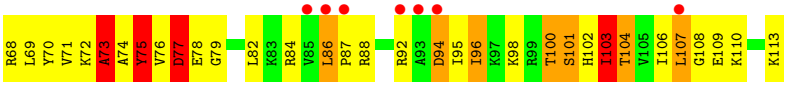
Chain DV:



• Molecule 41: 50S ribosomal protein L22

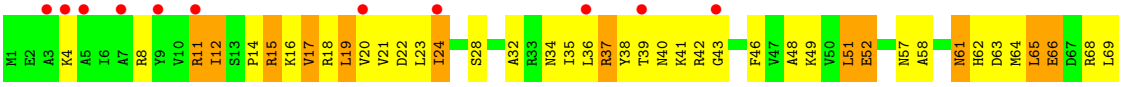
Chain BW:

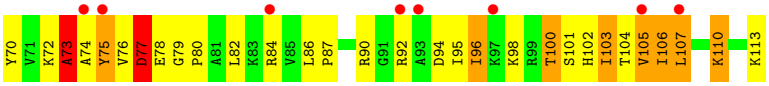




• Molecule 41: 50S ribosomal protein L22

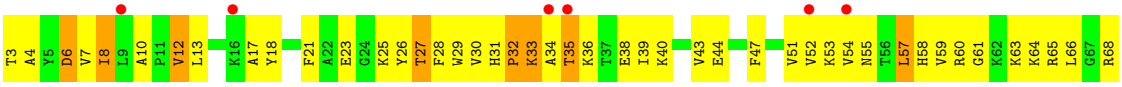
Chain DW:

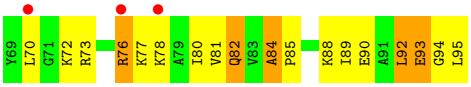




• Molecule 42: 50S ribosomal protein L23

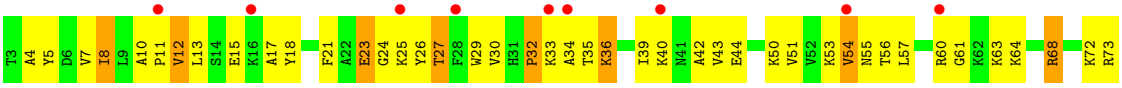
Chain BX:

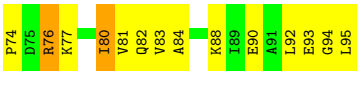




• Molecule 42: 50S ribosomal protein L23

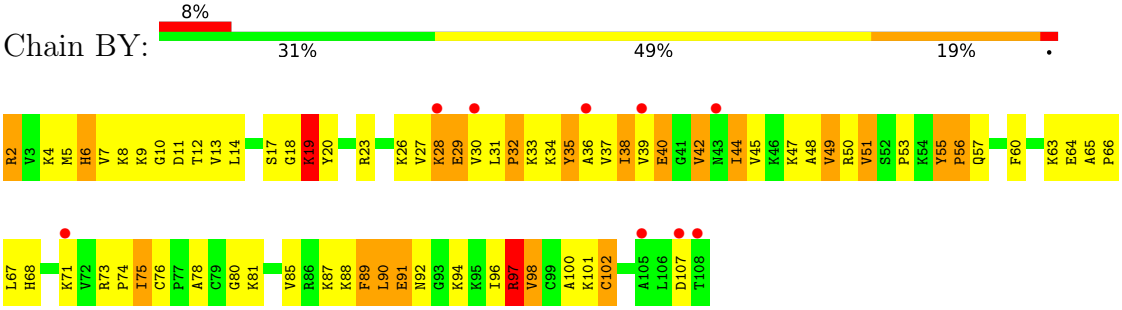
Chain DX:





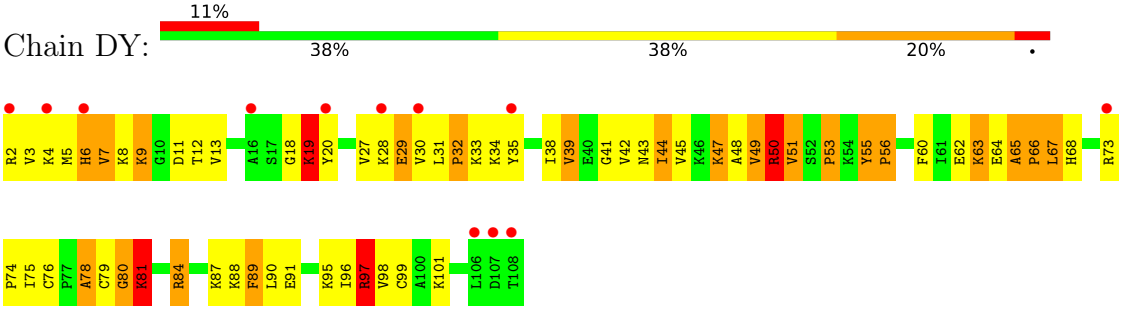
• Molecule 43: 50S ribosomal protein L24

Chain BY:



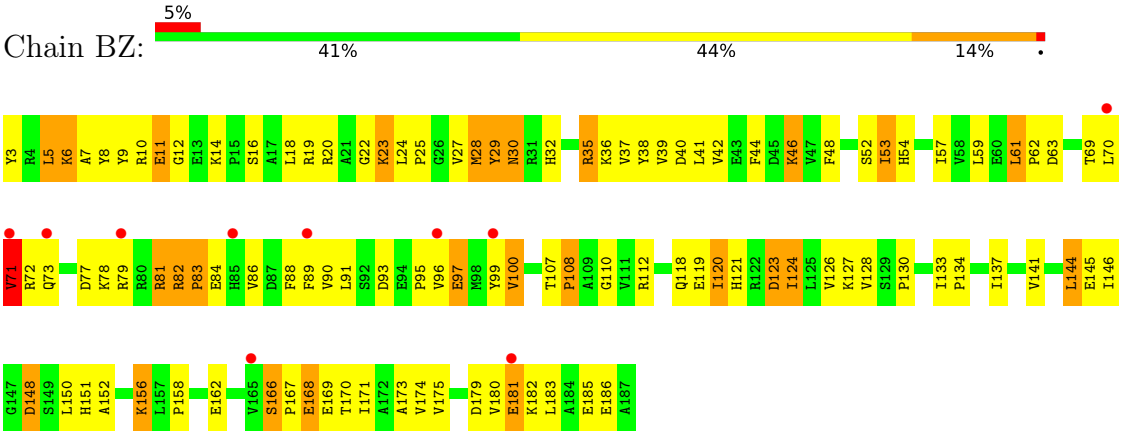
• Molecule 43: 50S ribosomal protein L24

Chain DY:



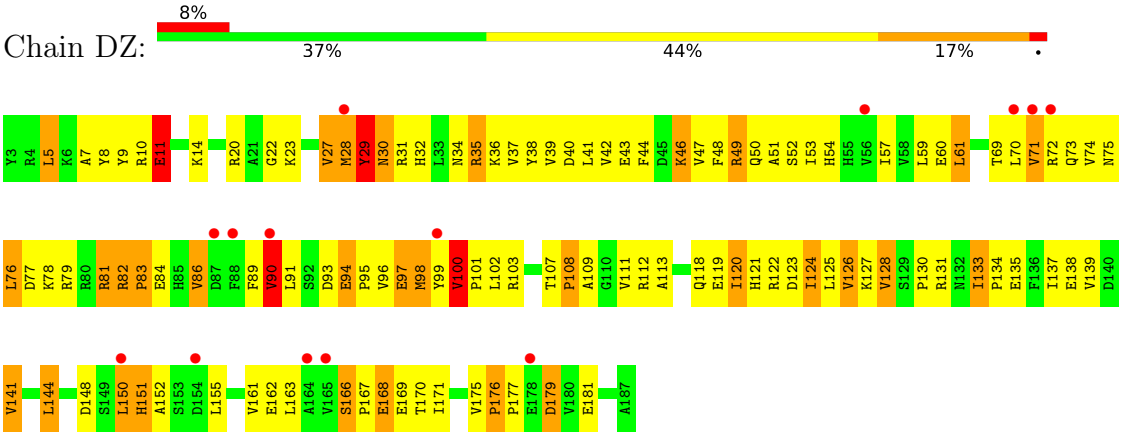
• Molecule 44: 50S ribosomal protein L25

Chain BZ:



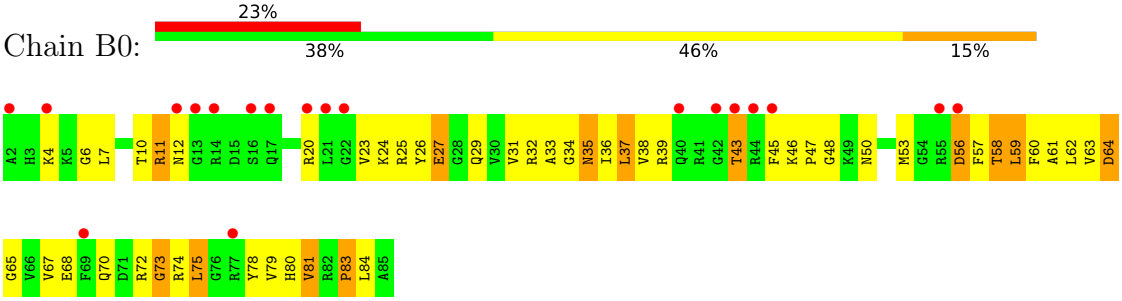
• Molecule 44: 50S ribosomal protein L25

Chain DZ:



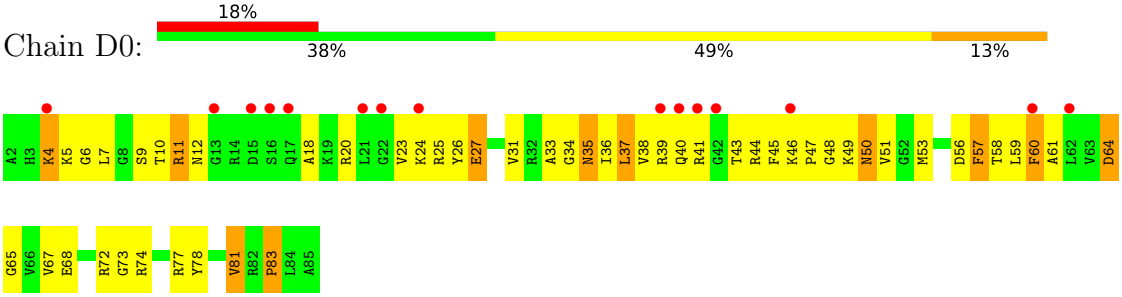
• Molecule 45: 50S ribosomal protein L27

Chain B0:



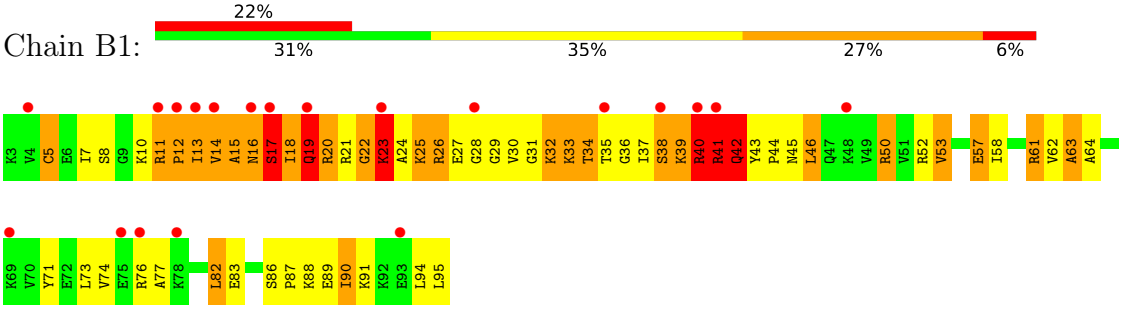
• Molecule 45: 50S ribosomal protein L27

Chain D0:



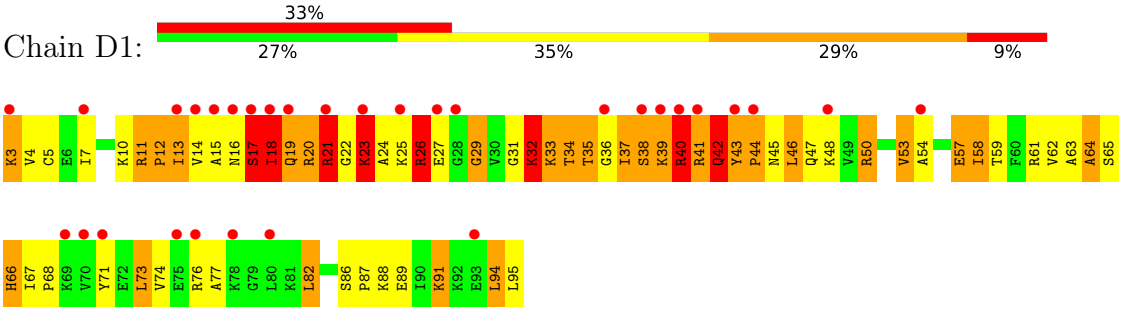
• Molecule 46: 50S ribosomal protein L28

Chain B1:



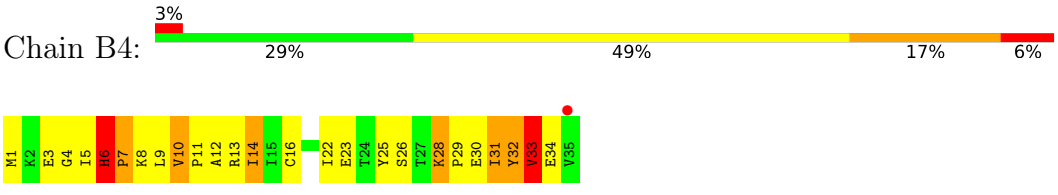
• Molecule 46: 50S ribosomal protein L28

Chain D1:



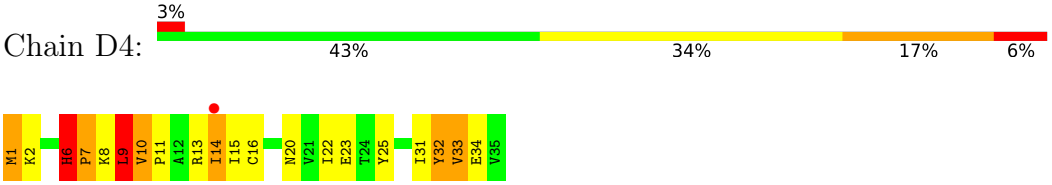
• Molecule 47: 50S ribosomal protein L31

Chain B4:



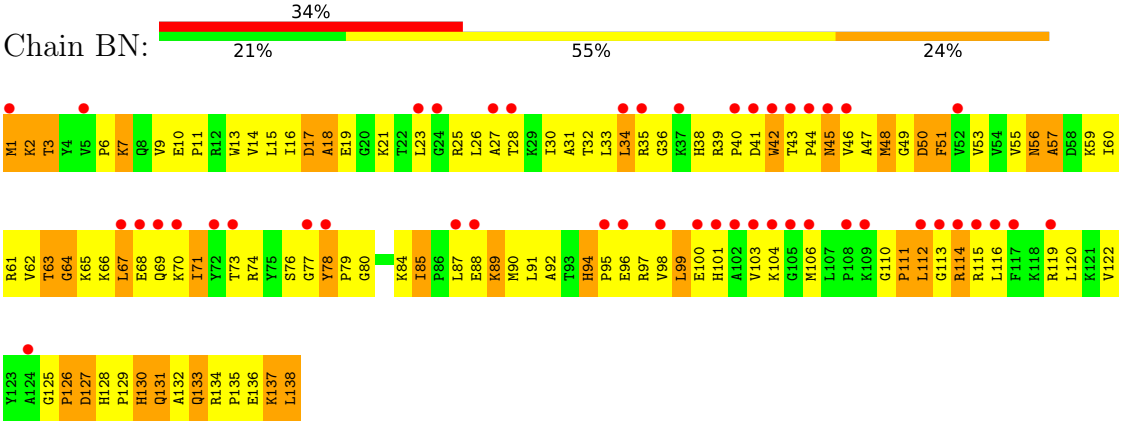
• Molecule 47: 50S ribosomal protein L31

Chain D4:



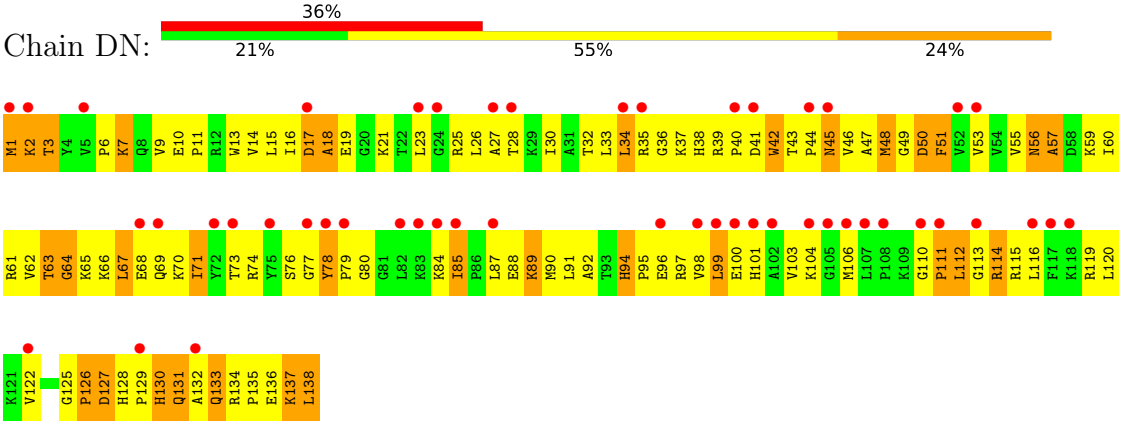
• Molecule 48: 50S ribosomal protein L13

Chain BN:



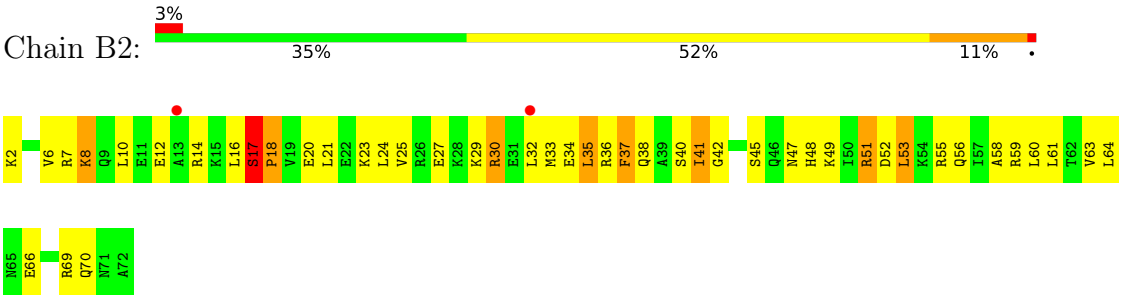
• Molecule 48: 50S ribosomal protein L13

Chain DN:



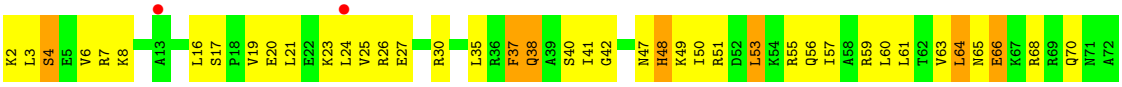
• Molecule 49: 50S ribosomal protein L29

Chain B2:



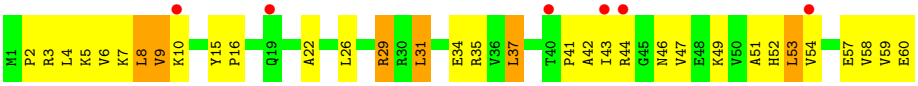
• Molecule 49: 50S ribosomal protein L29

Chain D2:



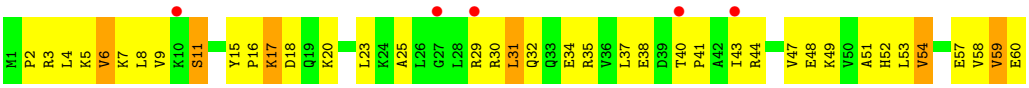
• Molecule 50: 50S ribosomal protein L30

Chain B3:



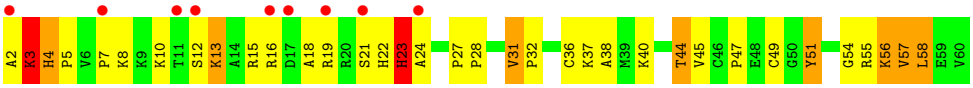
• Molecule 50: 50S ribosomal protein L30

Chain D3:



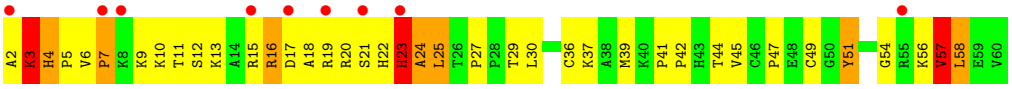
• Molecule 51: 50S ribosomal protein L32

Chain B5:



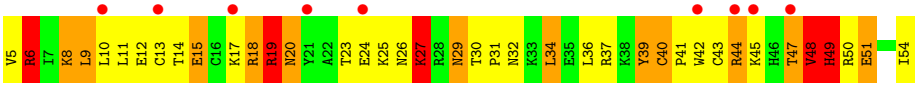
• Molecule 51: 50S ribosomal protein L32

Chain D5:



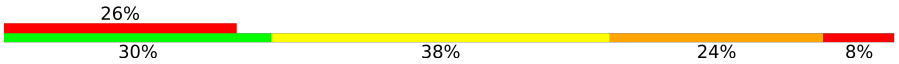
• Molecule 52: 50S ribosomal protein L33

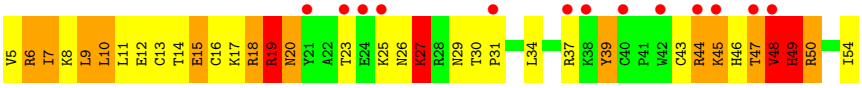
Chain B6:



• Molecule 52: 50S ribosomal protein L33

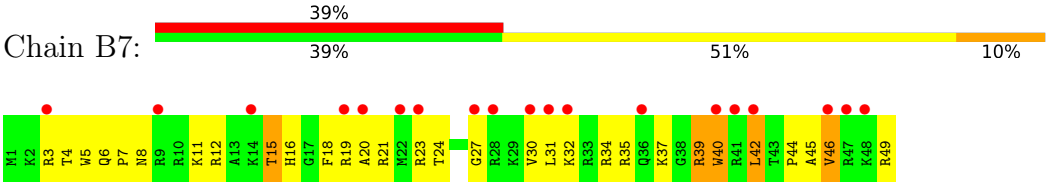
Chain D6:





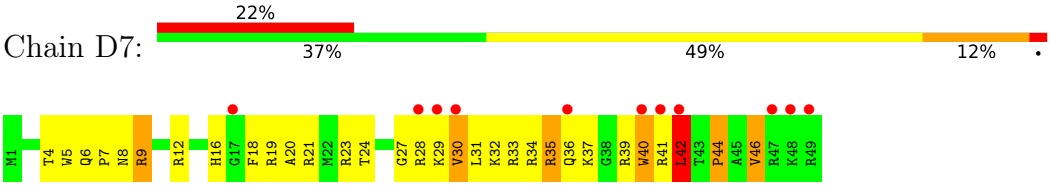
• Molecule 53: 50S ribosomal protein L34

Chain B7:



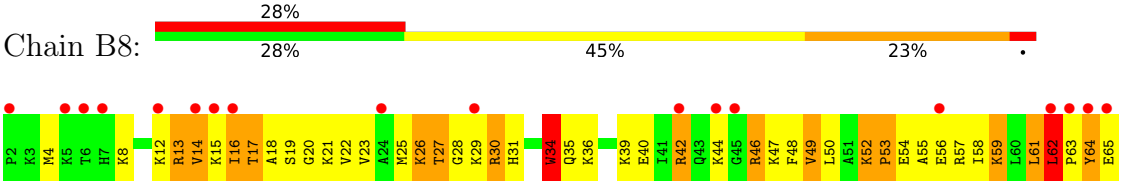
• Molecule 53: 50S ribosomal protein L34

Chain D7:



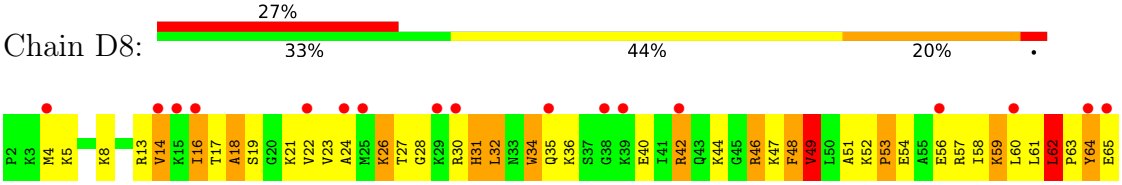
• Molecule 54: 50S ribosomal protein L35

Chain B8:



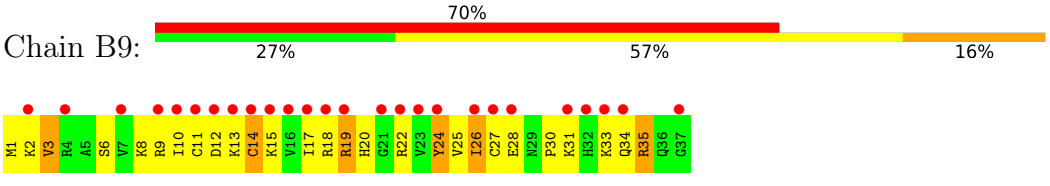
• Molecule 54: 50S ribosomal protein L35

Chain D8:



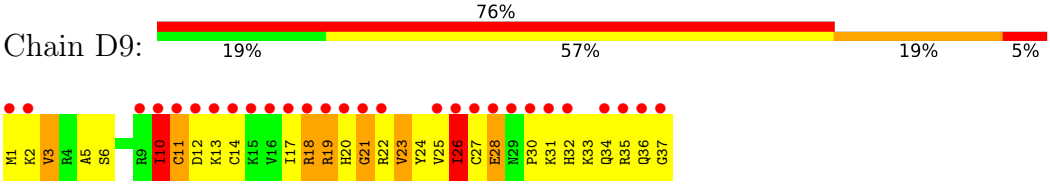
• Molecule 55: 50S ribosomal protein L36

Chain B9:



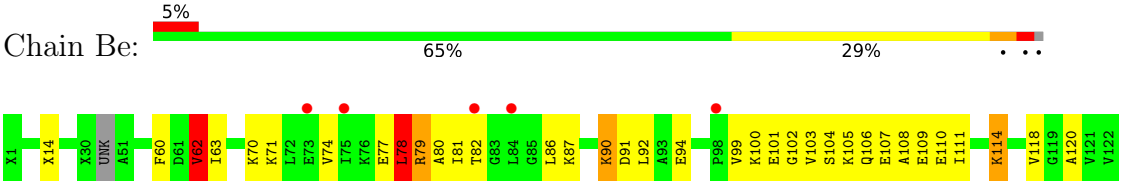
• Molecule 55: 50S ribosomal protein L36

Chain D9:



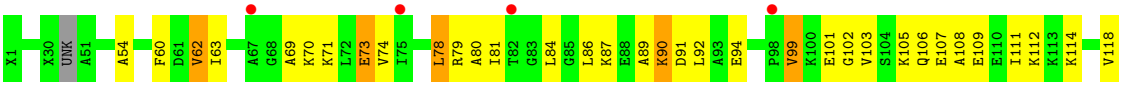
• Molecule 56: 50S ribosomal protein L7/L12

Chain Be:



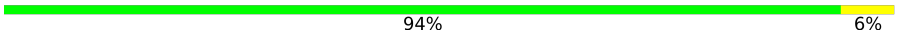
• Molecule 56: 50S ribosomal protein L7/L12

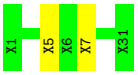
Chain De:



• Molecule 57: 50S ribosomal protein L7/L12

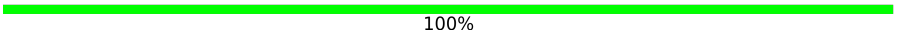
Chain Bf:





• Molecule 57: 50S ribosomal protein L7/L12

Chain Bg:



There are no outlier residues recorded for this chain.

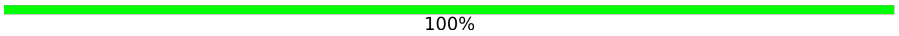
• Molecule 57: 50S ribosomal protein L7/L12

Chain Df:

There are no outlier residues recorded for this chain.

• Molecule 57: 50S ribosomal protein L7/L12

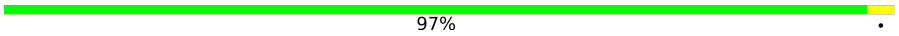
Chain Dg:



There are no outlier residues recorded for this chain.

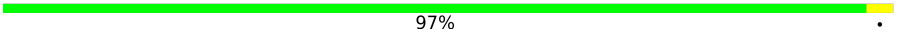
• Molecule 58: 50S ribosomal protein L7/L12

Chain Bh:



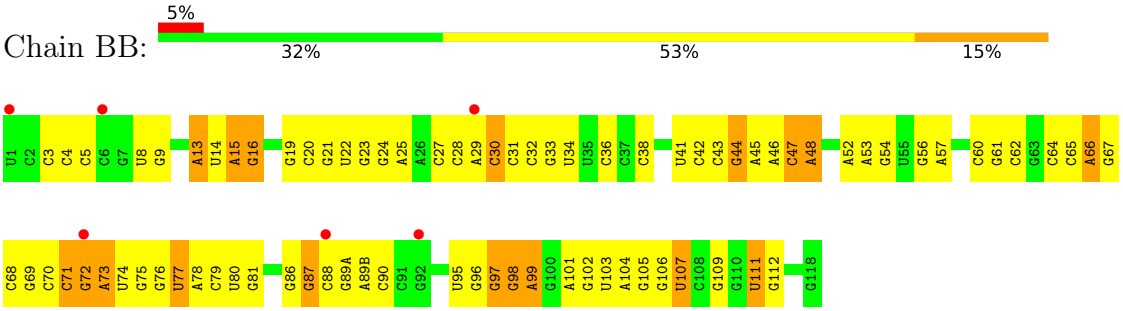
• Molecule 58: 50S ribosomal protein L7/L12

Chain Dh:



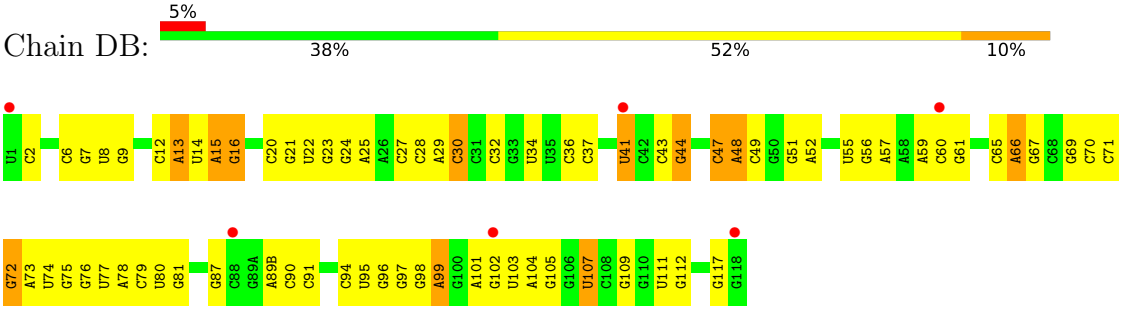
• Molecule 59: 5S ribosomal RNA

Chain BB:



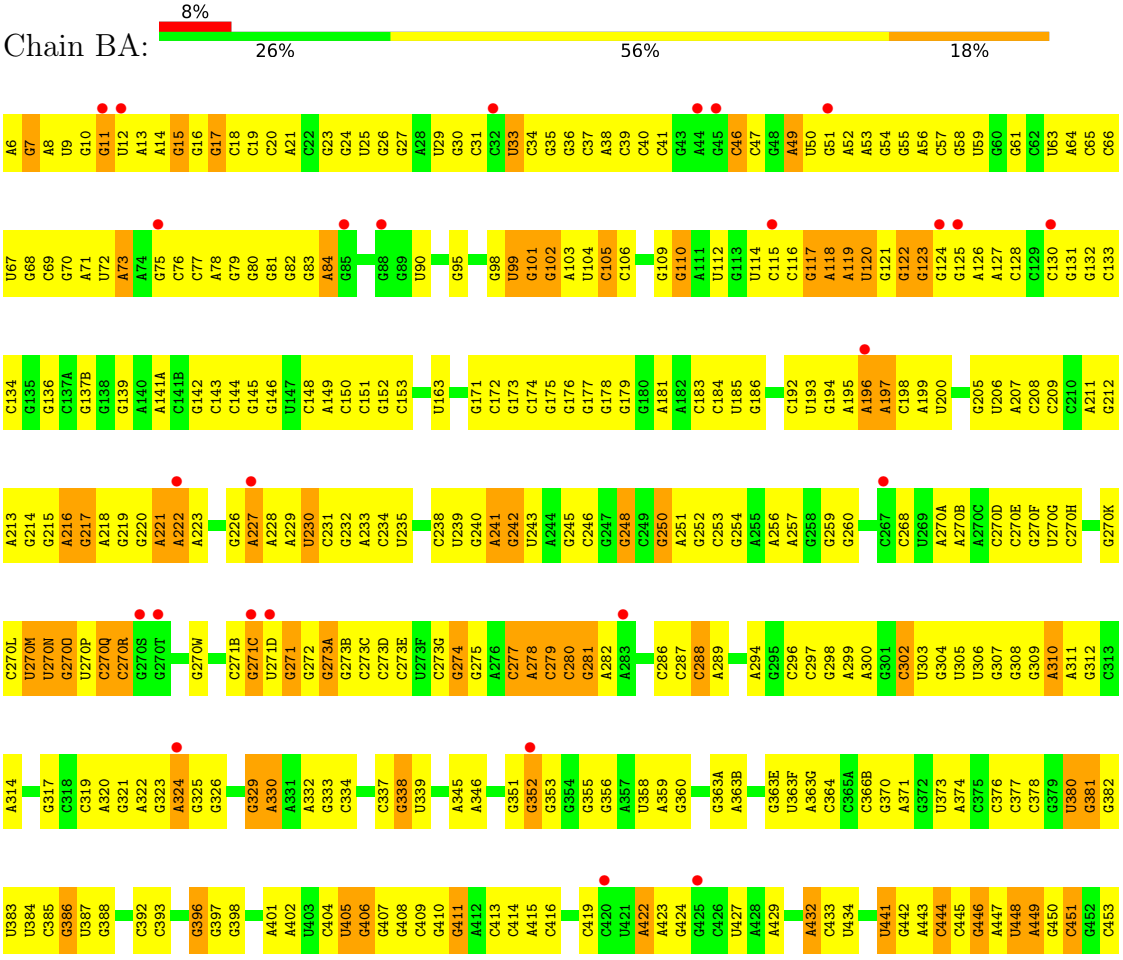
• Molecule 59: 5S ribosomal RNA

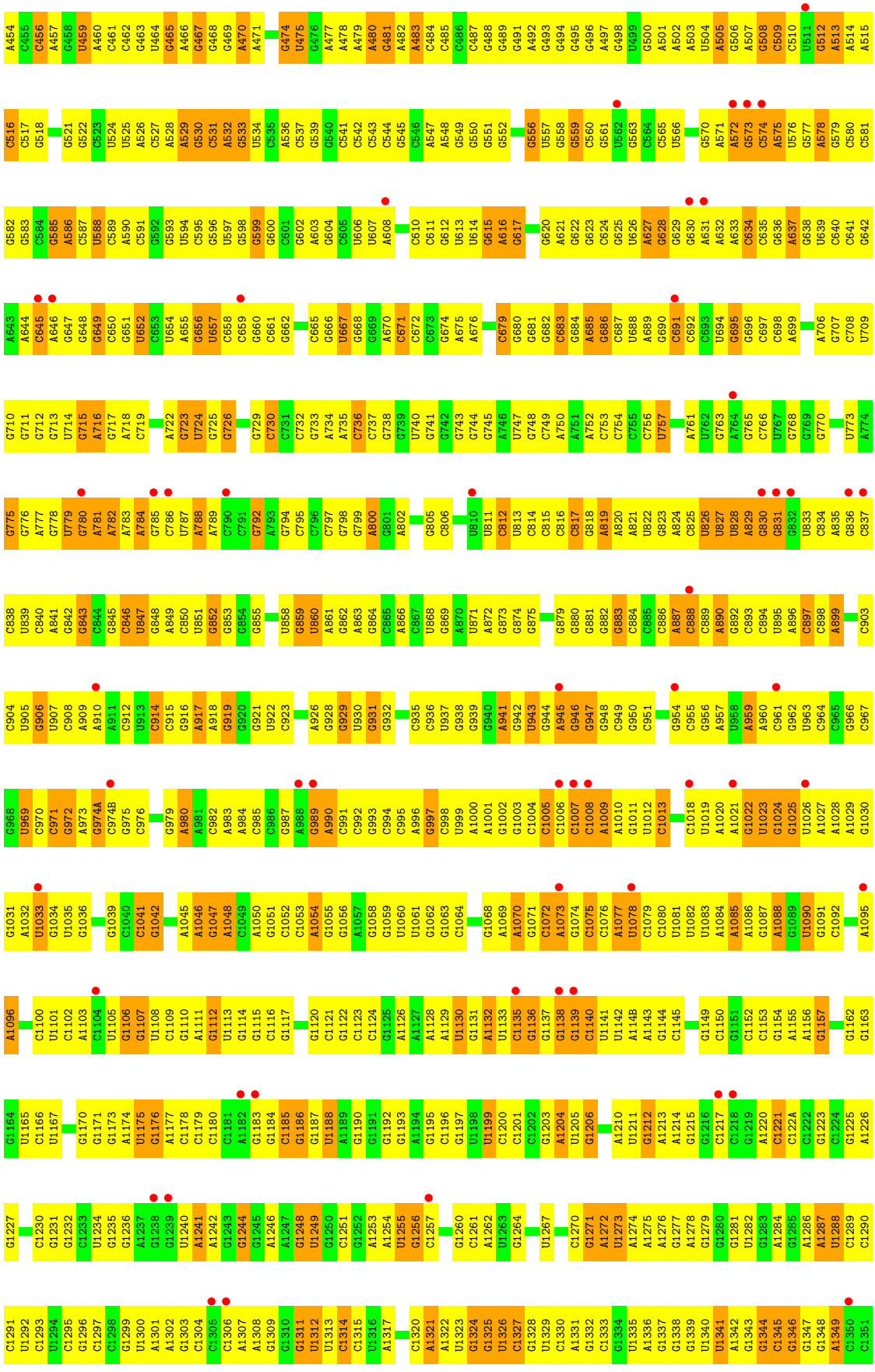
Chain DB:

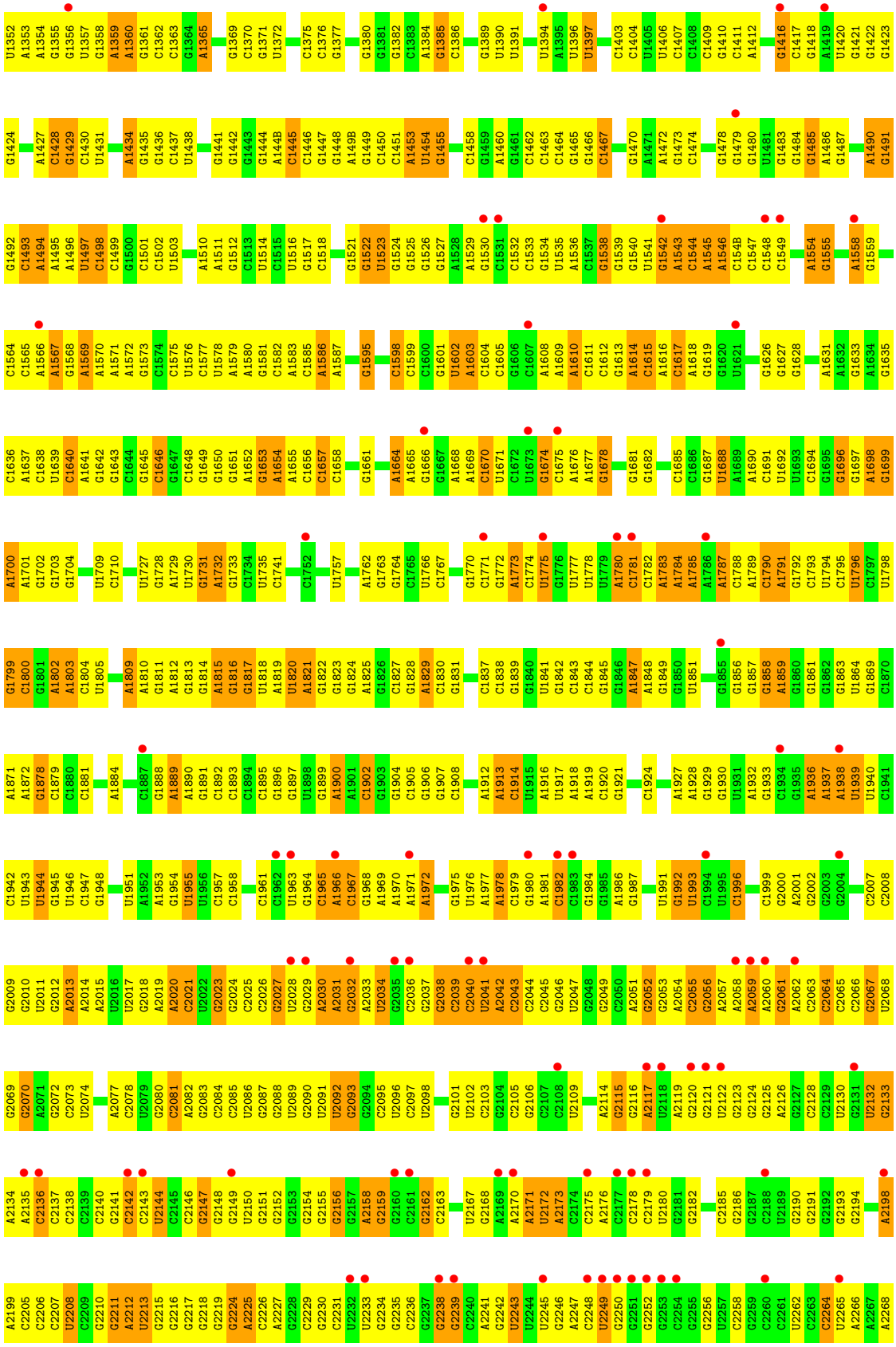


• Molecule 60: 23S ribosomal RNA

Chain BA:






U1352 A1353 A1354 G1355 G1356 U1357 G1358 A1359 A1360 G1361 C1362 C1363 G1364 A1365 G1369 C1370 C1371 U1372 C1375 C1376 G1377 G1380 G1381 G1382 C1383 A1384 G1385 C1386 G1389 U1390 U1391 U1394 A1395 U1396 U1397 C1403 C1404 U1405 U1406 C1407 C1408 C1409 G1410 C1411 A1412 G1416 C1417 G1418 A1419 U1420 G1421 G1422 G1423
G1424 A1427 C1428 G1429 C1430 U1431 A1434 G1435 G1436 C1437 U1438 G1441 G1442 G1443 G1444 A1444B C1445 C1446 G1447 G1448 A1449B G1449 C1450 C1451 A1453 U1454 G1455 C1458 G1459 A1460 G1461 C1462 C1463 C1464 G1465 G1466 C1467 G1470 A1471 A1472 G1473 C1474 G1478 G1479 G1480 U1481 G1483 G1484 G1485 A1486 G1487 A1490 G1491
G1492 C1493 A1494 A1495 A1496 U1497 C1498 C1499 G1500 C1501 C1502 U1503 A1510 A1511 G1512 C1513 U1514 C1515 U1516 C1517 C1518 G1521 G1522 U1523 G1524 G1525 G1526 G1527 A1528 A1529 G1530 C1531 C1532 C1533 G1534 U1535 A1536 C1537 G1538 G1539 G1540 U1541 G1542 A1543 C1544 A1545 A1546 C1547 C1548 C1549 A1554 G1555 A1558 G1559
C1564 C1565 A1566 A1567 G1568 A1569 A1570 A1571 A1572 G1573 C1574 C1575 U1576 C1577 U1578 A1579 A1580 G1581 C1582 A1583 C1585 A1586 A1587 G1595 C1598 C1599 C1600 G1601 U1602 A1603 C1604 C1605 G1606 C1607 A1608 A1609 A1610 C1611 C1612 G1613 A1614 C1615 A1616 C1617 A1618 G1619 G1620 U1621 G1626 G1627 G1628 A1631 A1632 G1633 A1634 G1635
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A1700 A1701 G1702 G1703 G1704 U1709 C1710 U1727 G1728 A1729 U1730 G1731 A1732 G1733 C1734 U1735 C1741 C1752 U1757 A1762 G1763 G1764 C1765 U1766 C1767 G1770 C1771 G1772 A1773 C1774 U1775 G1776 U1777 U1778 U1779 A1780 C1781 C1782 A1783 A1784 A1785 A1786 A1787 C1788 A1789 C1790 A1791 G1792 C1793 U1794 C1795 U1796 C1797 U1798
G1799 C1800 G1801 A1802 A1803 C1804 U1805 A1809 A1810 G1811 A1812 G1813 G1814 A1815 G1816 G1817 U1818 A1819 U1820 A1821 G1822 G1823 G1824 A1825 G1826 C1827 G1828 A1829 C1830 G1831 C1837 C1838 G1839 G1840 U1841 G1842 C1843 C1844 C1845 G1846 A1847 A1848 G1849 G1850 U1851 G1855 G1856 G1857 G1858 A1859 G1860 G1861 G1862 G1863 U1864 A1869 C1870
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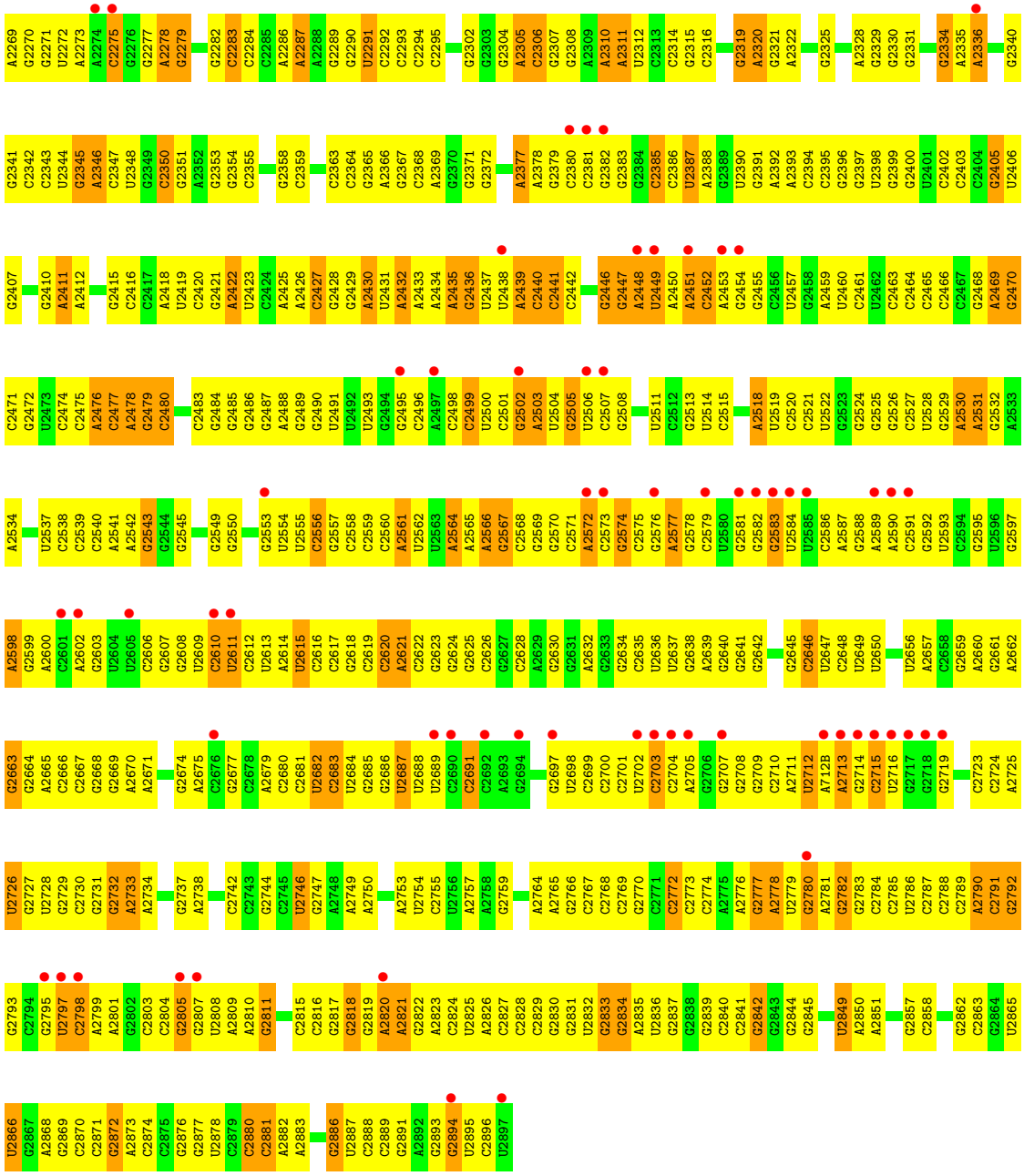

• Molecule 60: 23S ribosomal RNA

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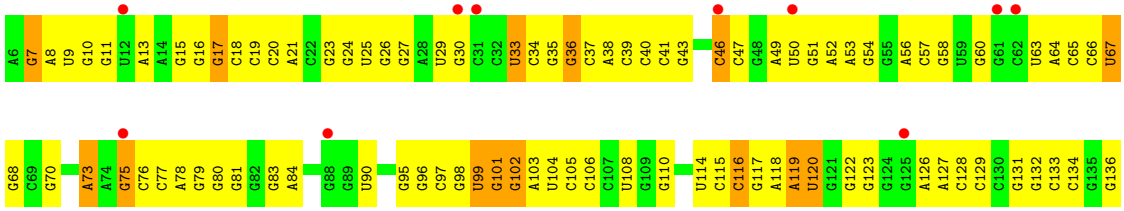

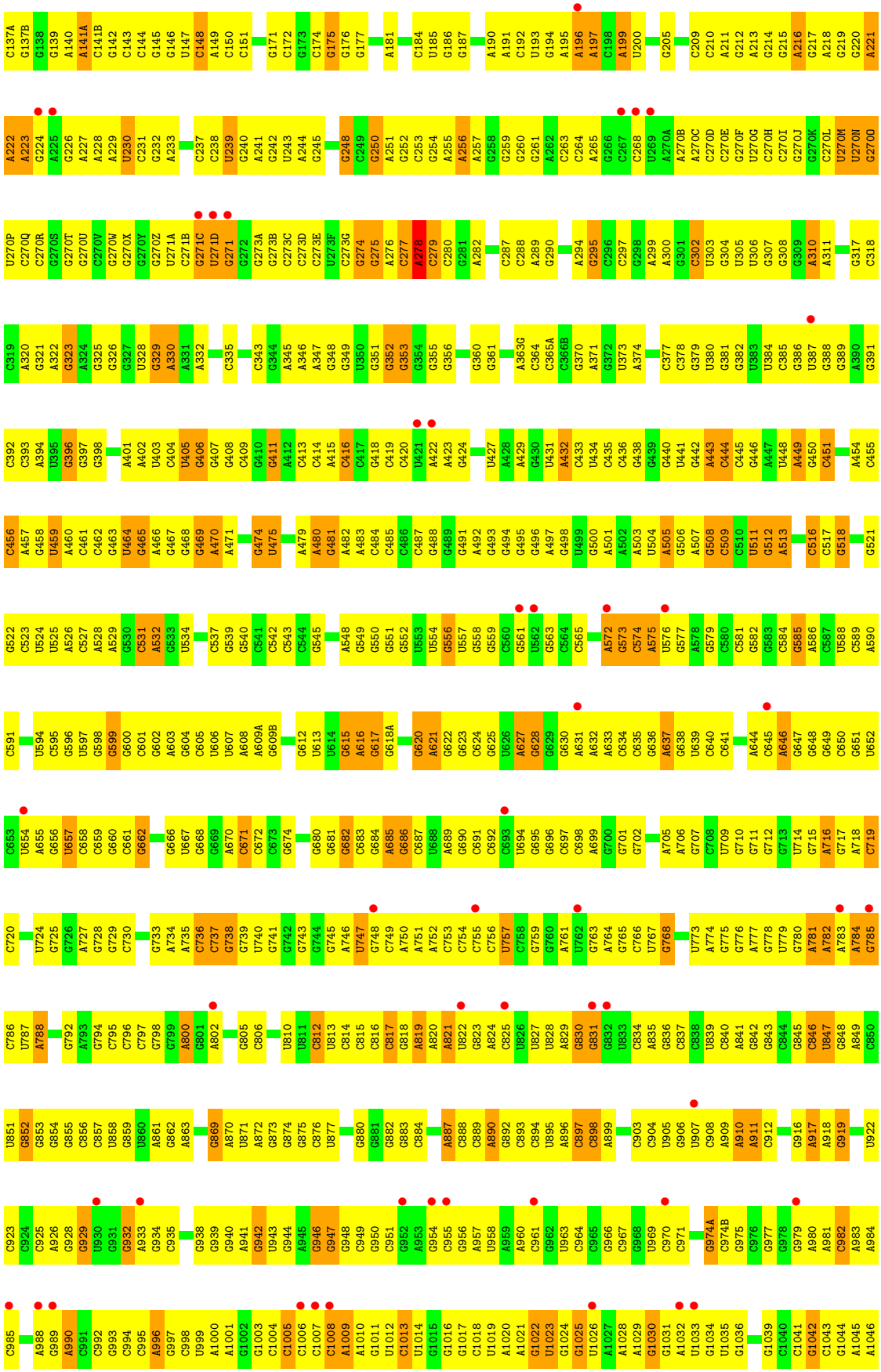

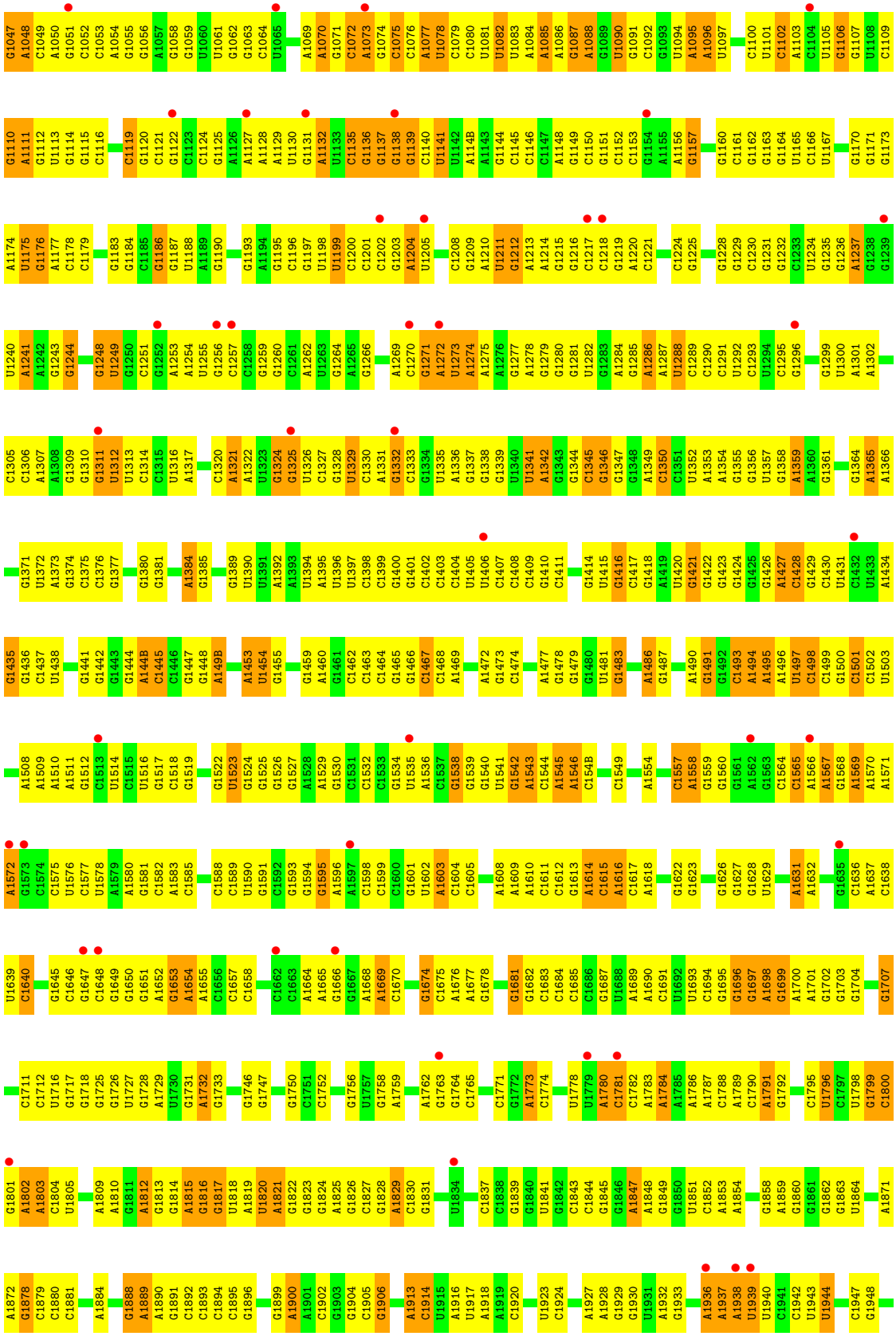
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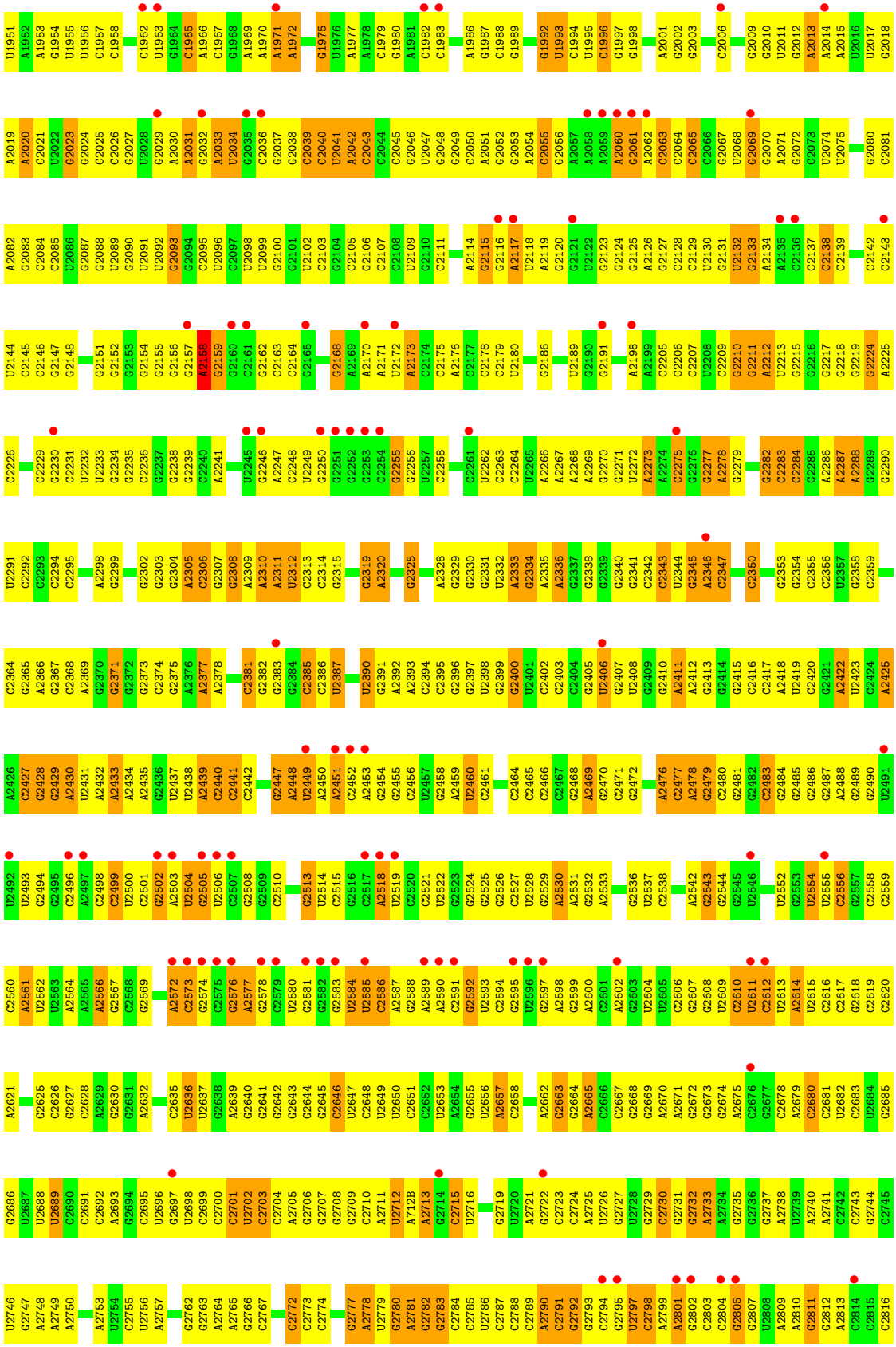
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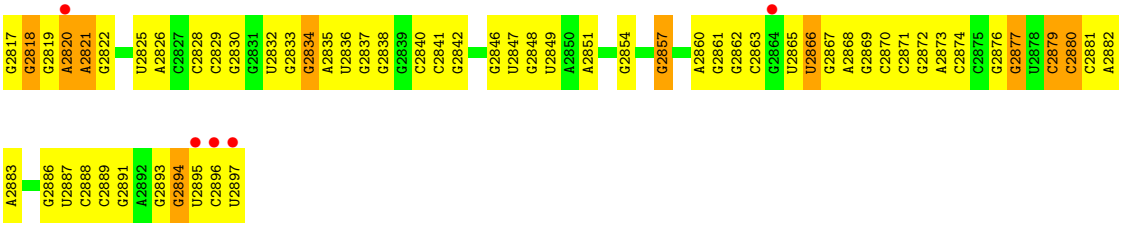
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4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	302.39Å 683.92Å 356.70Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 3.86 40.00 – 3.87	Depositor EDS
% Data completeness (in resolution range)	(Not available) (40.00-3.86) 64.3 (40.00-3.87)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.34	Depositor
$< I/\sigma(I) >$ [1]	1.11 (at 3.89Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.264 , 0.317 0.270 , 0.317	Depositor DCC
R_{free} test set	21652 reflections (3.22%)	wwPDB-VP
Wilson B-factor (Å^2)	76.3	Xtriage
Anisotropy	0.322	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.15 , 0.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.24$, $< L^2 > = 0.09$	Xtriage
Estimated twinning fraction	0.320 for h,-k,-l	Xtriage
F_o,F_c correlation	0.86	EDS
Total number of atoms	308202	wwPDB-VP
Average B, all atoms (Å^2)	86.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.42% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: DPP, UAL, MG, KBE, GNP, 5OH

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	0.66	3/1945 (0.2%)	1.26	24/2621 (0.9%)
1	CB	0.61	2/1945 (0.1%)	1.28	26/2621 (1.0%)
2	AC	0.42	0/1645	0.93	1/2216 (0.0%)
2	CC	0.41	0/1645	0.91	2/2216 (0.1%)
3	AD	0.43	0/1733	0.98	6/2318 (0.3%)
3	CD	0.39	0/1733	0.94	6/2318 (0.3%)
4	AE	0.44	0/1172	0.99	5/1576 (0.3%)
4	CE	0.42	0/1172	0.99	4/1576 (0.3%)
5	AF	0.37	0/856	0.90	2/1154 (0.2%)
5	CF	0.38	0/856	0.86	0/1154
6	AG	0.38	0/1276	0.89	1/1709 (0.1%)
6	CG	0.38	0/1276	0.88	1/1709 (0.1%)
7	AH	0.43	0/1136	1.01	5/1527 (0.3%)
7	CH	0.42	0/1136	0.96	2/1527 (0.1%)
8	AI	0.42	0/1029	0.88	1/1378 (0.1%)
8	CI	0.43	0/1029	0.87	0/1378
9	AJ	0.40	0/815	0.94	3/1095 (0.3%)
9	CJ	0.41	0/815	0.93	1/1095 (0.1%)
10	AK	0.52	0/900	1.18	11/1213 (0.9%)
10	CK	0.56	1/900 (0.1%)	1.19	9/1213 (0.7%)
11	AL	0.69	0/992	1.34	19/1327 (1.4%)
11	CL	0.63	0/992	1.29	15/1327 (1.1%)
12	AM	0.42	0/1008	0.98	1/1347 (0.1%)
12	CM	0.39	0/1008	0.98	4/1347 (0.3%)
13	AN	0.37	0/501	0.83	2/664 (0.3%)
13	CN	0.35	0/501	0.75	0/664
14	AO	0.42	0/745	0.85	0/992
14	CO	0.44	0/745	0.95	2/992 (0.2%)
15	AP	0.35	0/722	0.89	1/970 (0.1%)
15	CP	0.36	0/722	0.83	3/970 (0.3%)
16	AQ	0.53	0/848	1.10	7/1131 (0.6%)
16	CQ	0.51	0/848	1.12	5/1131 (0.4%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AR	0.39	0/579	0.97	3/768 (0.4%)
17	CR	0.37	0/579	1.00	4/768 (0.5%)
18	AS	0.44	0/647	0.93	3/870 (0.3%)
18	CS	0.42	0/647	1.02	2/870 (0.2%)
19	AT	0.44	0/764	0.89	1/1006 (0.1%)
19	CT	0.43	0/764	0.89	2/1006 (0.2%)
20	AA	0.20	0/36351	0.44	3/56736 (0.0%)
20	CA	0.20	0/36351	0.43	4/56736 (0.0%)
21	AV	0.23	0/443	0.45	0/691
21	CV	0.18	0/443	0.39	0/691
22	AW	0.22	0/1827	0.47	0/2845
22	CW	0.20	0/1827	0.46	0/2845
23	AY	0.54	3/5481 (0.1%)	1.05	33/7418 (0.4%)
23	CY	0.59	7/5481 (0.1%)	1.07	34/7418 (0.5%)
24	AU	0.94	0/11	1.89	0/13
24	CU	0.95	0/11	1.89	0/13
25	BC	0.72	1/1774 (0.1%)	1.36	28/2391 (1.2%)
25	DC	0.73	1/1774 (0.1%)	1.40	32/2391 (1.3%)
26	BD	0.50	0/2195	0.97	6/2955 (0.2%)
26	DD	0.47	1/2195 (0.0%)	1.00	10/2955 (0.3%)
27	BE	0.55	2/1602 (0.1%)	1.16	18/2160 (0.8%)
27	DE	0.52	0/1602	1.09	10/2160 (0.5%)
28	BF	0.65	3/1663 (0.2%)	1.30	26/2249 (1.2%)
28	DF	0.61	3/1663 (0.2%)	1.28	26/2249 (1.2%)
29	BG	0.61	1/1499 (0.1%)	1.79	9/2016 (0.4%)
29	DG	0.58	3/1499 (0.2%)	1.09	9/2016 (0.4%)
30	BH	0.40	0/1298	0.98	5/1751 (0.3%)
30	DH	0.41	0/1298	0.98	3/1751 (0.2%)
32	BK	0.43	0/1054	1.01	7/1427 (0.5%)
32	DK	0.40	0/1054	0.97	6/1427 (0.4%)
33	BO	0.40	0/943	1.02	3/1269 (0.2%)
33	DO	0.40	0/943	0.94	3/1269 (0.2%)
34	BP	0.46	0/1131	1.11	7/1504 (0.5%)
34	DP	0.42	0/1131	1.04	11/1504 (0.7%)
35	BQ	0.43	0/1143	0.99	9/1527 (0.6%)
35	DQ	0.44	0/1143	1.03	3/1527 (0.2%)
36	BR	0.43	0/974	0.94	2/1302 (0.2%)
36	DR	0.42	0/974	0.93	1/1302 (0.1%)
37	BS	0.49	0/783	1.10	7/1041 (0.7%)
37	DS	0.50	0/783	1.08	5/1041 (0.5%)
38	BT	0.48	0/1161	1.12	11/1549 (0.7%)
38	DT	0.46	0/1161	1.10	10/1549 (0.6%)
39	BU	0.49	0/982	0.93	3/1306 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
39	DU	0.50	0/982	0.95	3/1306 (0.2%)
40	BV	0.51	0/790	1.12	7/1057 (0.7%)
40	DV	0.46	0/790	0.98	3/1057 (0.3%)
41	BW	0.52	0/911	1.04	5/1220 (0.4%)
41	DW	0.51	0/911	0.99	3/1220 (0.2%)
42	BX	0.38	0/748	0.96	5/1004 (0.5%)
42	DX	0.37	0/748	0.91	3/1004 (0.3%)
43	BY	0.43	0/831	0.98	4/1108 (0.4%)
43	DY	0.44	0/831	0.97	7/1108 (0.6%)
44	BZ	0.44	0/1505	0.98	4/2042 (0.2%)
44	DZ	0.44	0/1505	1.02	9/2042 (0.4%)
45	B0	0.34	0/671	0.83	1/892 (0.1%)
45	D0	0.35	0/671	0.85	1/892 (0.1%)
46	B1	0.73	1/739 (0.1%)	1.21	10/981 (1.0%)
46	D1	0.80	2/739 (0.3%)	1.33	13/981 (1.3%)
47	B4	0.60	0/276	1.10	2/372 (0.5%)
47	D4	0.60	0/276	1.12	2/372 (0.5%)
48	BN	0.43	0/1131	1.07	9/1525 (0.6%)
48	DN	0.43	0/1131	1.07	9/1525 (0.6%)
49	B2	0.46	0/600	0.97	2/793 (0.3%)
49	D2	0.44	0/600	0.89	0/793
50	B3	0.41	0/482	1.02	4/646 (0.6%)
50	D3	0.41	0/482	0.98	6/646 (0.9%)
51	B5	0.51	0/473	0.99	2/639 (0.3%)
51	D5	0.44	0/473	0.87	0/639
52	B6	0.42	0/440	0.96	2/586 (0.3%)
52	D6	0.46	0/440	0.96	0/586
53	B7	0.38	0/438	0.91	1/575 (0.2%)
53	D7	0.40	0/438	0.87	0/575
54	B8	0.45	0/525	1.07	5/691 (0.7%)
54	D8	0.48	0/525	1.03	3/691 (0.4%)
55	B9	0.47	0/310	1.08	3/407 (0.7%)
55	D9	0.40	0/310	1.07	3/407 (0.7%)
56	Be	0.45	0/538	0.90	1/715 (0.1%)
56	De	0.43	0/538	0.93	2/715 (0.3%)
59	BB	0.20	0/2853	0.43	0/4451
59	DB	0.19	0/2853	0.41	0/4451
60	BA	0.20	0/69437	0.45	1/108401 (0.0%)
60	DA	0.20	0/69437	0.44	3/108401 (0.0%)
All	All	0.33	34/330652 (0.0%)	0.68	666/492274 (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	3
1	CB	0	3
11	AL	0	1
11	CL	0	2
23	AY	0	4
23	CY	0	4
25	BC	0	5
25	DC	0	3
26	BD	0	2
26	DD	0	2
28	BF	0	1
28	DF	0	1
29	BG	0	2
29	DG	0	2
31	BJ	0	1
31	DJ	0	1
37	BS	0	3
37	DS	0	3
38	DT	0	1
41	BW	0	1
41	DW	0	2
46	B1	0	2
46	D1	0	2
All	All	0	51

All (34) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	BG	114	ILE	C-N	17.84	1.58	1.33
29	DG	114	ILE	N-CA	-12.42	1.31	1.46
29	DG	113	ARG	CA-C	-7.21	1.42	1.52
23	CY	140	ASP	C-N	-7.13	1.23	1.33
1	AB	185	ILE	C-O	6.82	1.32	1.24
23	CY	33	LEU	CA-C	-6.51	1.43	1.52
46	D1	38	SER	CA-C	6.37	1.59	1.53
28	BF	156	LEU	CA-C	-6.29	1.44	1.52
28	DF	156	LEU	CA-C	-6.22	1.44	1.52
28	BF	154	VAL	CA-CB	6.20	1.60	1.53
23	CY	564	LYS	C-O	6.14	1.31	1.24
25	BC	45	HIS	C-O	-6.07	1.16	1.23
1	CB	172	ILE	CA-CB	6.01	1.61	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	D1	13	ILE	CA-CB	6.01	1.62	1.54
23	AY	33	LEU	CA-C	-5.89	1.45	1.52
23	CY	35	TYR	CA-C	5.75	1.60	1.52
23	AY	207	ASP	C-N	5.73	1.41	1.33
23	CY	329	ARG	C-O	5.68	1.31	1.23
1	AB	187	LEU	N-CA	5.67	1.52	1.46
27	BE	21	VAL	CA-C	5.63	1.57	1.52
23	CY	31	ARG	C-O	5.55	1.31	1.24
23	CY	31	ARG	CA-C	5.54	1.60	1.52
1	CB	185	ILE	C-O	5.53	1.31	1.24
10	CK	40	ILE	C-O	5.41	1.29	1.24
23	AY	31	ARG	C-O	5.37	1.30	1.24
28	BF	177	ALA	CA-C	5.30	1.59	1.52
29	DG	111	LEU	C-N	5.21	1.40	1.34
26	DD	79	VAL	CA-CB	5.15	1.61	1.54
27	BE	21	VAL	N-CA	5.15	1.49	1.45
28	DF	154	VAL	CA-CB	5.14	1.61	1.54
1	AB	172	ILE	CA-CB	5.12	1.61	1.54
28	DF	157	VAL	CA-CB	5.11	1.59	1.54
46	B1	38	SER	CA-C	5.09	1.59	1.53
25	DC	45	HIS	C-O	-5.05	1.17	1.23

All (666) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	BG	114	ILE	O-C-N	-66.36	39.62	122.57
29	DG	111	LEU	CA-C-N	-15.70	103.79	119.64
29	DG	111	LEU	C-N-CA	-15.70	103.79	119.64
20	AA	1535	C	O3'-P-O5'	-14.66	82.00	104.00
1	AB	172	ILE	N-CA-C	-14.51	96.07	110.72
1	CB	172	ILE	N-CA-C	-13.41	97.55	110.42
27	BE	61	ARG	CA-C-N	-13.35	106.16	119.64
27	BE	61	ARG	C-N-CA	-13.35	106.16	119.64
23	AY	33	LEU	N-CA-C	-13.34	95.10	111.11
1	AB	162	ILE	CB-CA-C	11.73	129.46	110.69
23	CY	33	LEU	N-CA-C	-11.53	92.35	111.37
27	DE	61	ARG	CA-C-N	-11.28	107.86	120.04
27	DE	61	ARG	C-N-CA	-11.28	107.86	120.04
23	AY	23	ALA	N-CA-C	-11.23	99.12	113.72
1	AB	163	PHE	N-CA-C	-11.22	92.10	109.95
1	CB	162	ILE	CB-CA-C	11.20	128.61	110.69
1	CB	163	PHE	N-CA-C	-10.88	93.55	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	BF	155	LEU	N-CA-C	-10.81	87.76	110.80
18	CS	75	ALA	CA-C-N	10.79	130.46	119.24
18	CS	75	ALA	C-N-CA	10.79	130.46	119.24
25	BC	63	VAL	N-CA-C	10.79	123.27	108.17
28	DF	155	LEU	N-CA-C	-10.42	88.61	110.80
25	BC	220	GLY	CA-C-N	10.19	132.58	119.84
25	BC	220	GLY	C-N-CA	10.19	132.58	119.84
25	DC	181	PHE	CA-C-N	10.09	130.78	120.38
25	DC	181	PHE	C-N-CA	10.09	130.78	120.38
25	DC	220	GLY	CA-C-N	9.99	132.33	119.84
25	DC	220	GLY	C-N-CA	9.99	132.33	119.84
28	BF	153	SER	CA-C-N	-9.91	110.94	122.93
28	BF	153	SER	C-N-CA	-9.91	110.94	122.93
29	BG	141	PHE	CA-C-N	9.79	132.08	119.84
29	BG	141	PHE	C-N-CA	9.79	132.08	119.84
20	AA	1535	C	P-O3'-C3'	9.70	134.76	120.20
33	BO	47	ILE	CA-C-N	9.51	131.72	119.84
33	BO	47	ILE	C-N-CA	9.51	131.72	119.84
28	BF	6	VAL	N-CA-C	-9.49	101.31	110.42
12	CM	84	ILE	N-CA-C	-9.46	104.72	113.71
46	B1	17	SER	N-CA-C	-9.43	96.32	110.28
1	CB	161	ALA	CA-C-N	-9.42	107.72	122.69
1	CB	161	ALA	C-N-CA	-9.42	107.72	122.69
37	DS	99	LYS	N-CA-C	-9.40	101.01	111.07
27	BE	65	GLY	N-CA-C	-9.30	100.91	113.37
1	CB	188	ALA	N-CA-C	9.29	120.50	108.24
46	D1	17	SER	N-CA-C	-9.29	96.54	110.28
1	AB	161	ALA	CA-C-N	-9.27	107.96	122.69
1	AB	161	ALA	C-N-CA	-9.27	107.96	122.69
28	DF	172	TRP	N-CA-C	-9.20	100.94	113.18
25	DC	19	LYS	N-CA-C	9.17	120.35	108.34
10	CK	38	ASN	CA-C-N	9.09	129.65	119.83
10	CK	38	ASN	C-N-CA	9.09	129.65	119.83
16	CQ	60	ILE	N-CA-C	9.09	123.54	108.81
16	AQ	60	ILE	N-CA-C	9.00	123.38	108.81
11	AL	47	LYS	CA-C-N	-8.92	110.55	120.45
11	AL	47	LYS	C-N-CA	-8.92	110.55	120.45
1	AB	188	ALA	N-CA-C	8.85	120.33	108.38
37	BS	103	GLU	N-CA-C	-8.82	101.59	111.82
28	BF	195	ASP	N-CA-C	-8.76	97.52	110.48
28	DF	191	ARG	N-CA-C	8.66	125.80	107.70
7	AH	100	ILE	CA-C-N	8.65	130.66	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	AH	100	ILE	C-N-CA	8.65	130.66	119.84
42	DX	94	GLY	N-CA-C	-8.57	102.29	115.66
25	BC	181	PHE	CA-C-N	8.56	129.20	120.38
25	BC	181	PHE	C-N-CA	8.56	129.20	120.38
25	DC	214	TYR	N-CA-C	-8.47	92.76	110.80
25	BC	174	ALA	CA-C-N	8.46	130.42	119.84
25	BC	174	ALA	C-N-CA	8.46	130.42	119.84
46	D1	19	GLN	N-CA-C	-8.41	102.19	114.39
11	AL	70	ILE	CA-C-N	-8.40	110.97	120.04
11	AL	70	ILE	C-N-CA	-8.40	110.97	120.04
11	AL	31	PRO	CB-CA-C	-8.38	100.62	110.00
23	AY	207	ASP	CA-C-N	-8.36	106.75	120.72
23	AY	207	ASP	C-N-CA	-8.36	106.75	120.72
38	DT	76	PHE	CA-C-N	8.35	130.28	119.84
38	DT	76	PHE	C-N-CA	8.35	130.28	119.84
11	AL	55	VAL	CB-CA-C	-8.35	97.60	111.29
25	DC	44	VAL	CA-C-N	-8.26	109.86	122.09
25	DC	44	VAL	C-N-CA	-8.26	109.86	122.09
28	DF	195	ASP	N-CA-C	-8.24	98.28	110.48
11	AL	49	ASN	N-CA-C	8.23	119.49	108.38
4	AE	127	ASN	CA-C-N	8.19	130.08	119.84
4	AE	127	ASN	C-N-CA	8.19	130.08	119.84
28	BF	191	ARG	N-CA-C	8.17	125.13	107.49
27	DE	65	GLY	N-CA-C	-8.14	101.65	113.86
28	BF	170	LEU	CA-C-N	8.10	129.11	120.12
28	BF	170	LEU	C-N-CA	8.10	129.11	120.12
23	AY	166	LEU	CA-C-N	8.05	128.07	119.78
23	AY	166	LEU	C-N-CA	8.05	128.07	119.78
27	DE	23	VAL	N-CA-C	8.05	120.94	106.61
25	DC	140	ASN	CA-C-N	7.98	129.82	119.84
25	DC	140	ASN	C-N-CA	7.98	129.82	119.84
23	AY	255	ILE	CA-C-N	-7.97	115.26	122.28
23	AY	255	ILE	C-N-CA	-7.97	115.26	122.28
28	BF	174	VAL	N-CA-C	-7.94	97.24	109.78
28	DF	156	LEU	N-CA-C	-7.92	93.94	110.80
10	AK	38	ASN	CA-C-N	7.88	129.69	119.84
10	AK	38	ASN	C-N-CA	7.88	129.69	119.84
28	BF	193	VAL	CB-CA-C	7.88	122.93	112.46
37	DS	72	ALA	N-CA-C	-7.88	102.64	111.07
25	DC	170	GLY	N-CA-C	-7.86	103.58	114.67
11	CL	33	ARG	N-CA-C	7.83	121.55	110.50
43	BY	4	LYS	N-CA-C	-7.79	103.03	112.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	CB	185	ILE	O-C-N	7.79	130.57	122.54
28	DF	6	VAL	N-CA-C	-7.78	102.19	110.36
48	BN	114	ARG	N-CA-C	-7.76	103.94	113.41
48	DN	114	ARG	N-CA-C	-7.75	103.95	113.41
17	CR	44	LEU	N-CA-C	7.71	120.25	110.61
3	CD	28	SER	CA-C-N	-7.71	110.20	119.84
3	CD	28	SER	C-N-CA	-7.71	110.20	119.84
25	BC	14	LYS	N-CA-C	7.70	120.73	110.88
50	B3	15	TYR	CA-C-N	7.68	129.44	119.84
50	B3	15	TYR	C-N-CA	7.68	129.44	119.84
55	B9	26	ILE	N-CA-C	7.67	119.97	108.23
11	CL	55	VAL	CB-CA-C	-7.64	98.75	111.29
25	BC	226	ASN	CA-C-N	7.61	129.35	119.84
25	BC	226	ASN	C-N-CA	7.61	129.35	119.84
1	CB	69	LEU	N-CA-C	-7.54	100.80	110.53
29	BG	111	LEU	CA-C-N	-7.54	110.42	119.84
29	BG	111	LEU	C-N-CA	-7.54	110.42	119.84
25	DC	63	VAL	N-CA-C	7.53	120.31	108.87
25	DC	124	VAL	N-CA-C	-7.51	105.23	112.29
46	D1	18	ILE	N-CA-C	7.48	116.82	107.70
25	BC	16	ASP	CA-C-N	7.47	129.18	119.84
25	BC	16	ASP	C-N-CA	7.47	129.18	119.84
30	BH	165	ALA	N-CA-C	-7.47	102.41	112.94
27	DE	125	GLY	CA-C-N	7.45	129.16	119.84
27	DE	125	GLY	C-N-CA	7.45	129.16	119.84
28	DF	174	VAL	N-CA-C	-7.45	98.01	109.78
46	D1	40	ARG	N-CA-C	7.42	126.59	110.80
26	DD	81	ALA	N-CA-C	7.41	121.65	109.06
11	AL	93	LEU	CA-C-N	7.40	129.09	119.84
11	AL	93	LEU	C-N-CA	7.40	129.09	119.84
33	DO	47	ILE	CA-C-N	7.36	129.04	119.84
33	DO	47	ILE	C-N-CA	7.36	129.04	119.84
23	AY	621	ILE	N-CA-C	-7.35	103.36	110.42
30	DH	165	ALA	N-CA-C	-7.34	102.59	112.94
46	D1	17	SER	CA-C-N	-7.32	114.66	121.97
46	D1	17	SER	C-N-CA	-7.32	114.66	121.97
1	AB	164	VAL	CB-CA-C	-7.31	99.31	111.29
37	BS	16	ASN	N-CA-C	-7.31	103.47	112.38
29	DG	141	PHE	CA-C-N	7.30	126.83	119.24
29	DG	141	PHE	C-N-CA	7.30	126.83	119.24
1	CB	69	LEU	CA-C-N	-7.29	112.85	123.05
1	CB	69	LEU	C-N-CA	-7.29	112.85	123.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	AY	610	VAL	N-CA-C	7.26	119.06	108.53
46	D1	13	ILE	CB-CA-C	7.22	121.69	110.28
29	BG	114	ILE	CA-C-N	7.21	135.31	121.54
29	BG	114	ILE	C-N-CA	7.21	135.31	121.54
10	AK	30	VAL	N-CA-C	7.20	117.28	106.42
11	CL	93	LEU	CA-C-N	7.18	128.81	119.84
11	CL	93	LEU	C-N-CA	7.18	128.81	119.84
54	B8	62	LEU	CA-C-N	-7.17	113.52	120.83
54	B8	62	LEU	C-N-CA	-7.17	113.52	120.83
4	CE	112	LEU	N-CA-C	-7.17	104.69	113.50
10	CK	30	VAL	N-CA-C	7.15	117.22	106.42
29	DG	114	ILE	N-CA-C	-7.15	98.00	108.87
28	BF	156	LEU	N-CA-C	-7.13	95.61	110.80
27	BE	21	VAL	N-CA-C	7.10	122.96	107.92
11	CL	49	ASN	N-CA-C	7.09	118.95	108.60
18	AS	75	ALA	CA-C-N	7.09	126.72	119.56
18	AS	75	ALA	C-N-CA	7.09	126.72	119.56
46	D1	33	LYS	N-CA-C	-7.07	101.81	111.56
10	CK	112	THR	CA-C-N	7.07	128.67	119.84
10	CK	112	THR	C-N-CA	7.07	128.67	119.84
25	DC	138	LEU	N-CA-C	7.06	125.41	109.81
28	BF	19	GLU	N-CA-C	7.06	121.35	110.20
26	DD	34	VAL	N-CA-C	-7.05	107.01	113.71
38	BT	19	LEU	CA-C-N	7.05	127.08	119.89
38	BT	19	LEU	C-N-CA	7.05	127.08	119.89
44	DZ	94	GLU	CA-C-N	7.04	128.65	119.84
44	DZ	94	GLU	C-N-CA	7.04	128.65	119.84
55	D9	26	ILE	N-CA-C	7.03	118.42	108.36
28	DF	193	VAL	CB-CA-C	7.03	121.81	112.46
38	BT	130	ALA	N-CA-C	-7.03	104.28	112.92
25	DC	16	ASP	CA-C-N	7.02	128.62	119.84
25	DC	16	ASP	C-N-CA	7.02	128.62	119.84
37	DS	16	ASN	N-CA-C	-7.02	103.81	112.38
16	AQ	59	ILE	CA-C-N	-7.00	112.22	122.58
16	AQ	59	ILE	C-N-CA	-7.00	112.22	122.58
26	BD	131	LEU	N-CA-C	7.00	114.43	108.13
1	CB	163	PHE	O-C-N	6.99	130.93	123.03
32	DK	20	ALA	CA-C-N	6.98	127.57	120.38
32	DK	20	ALA	C-N-CA	6.98	127.57	120.38
1	CB	162	ILE	N-CA-C	-6.97	97.50	108.86
38	BT	76	PHE	CA-C-N	6.94	128.52	119.84
38	BT	76	PHE	C-N-CA	6.94	128.52	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	DF	170	LEU	CA-C-N	6.93	128.14	120.45
28	DF	170	LEU	C-N-CA	6.93	128.14	120.45
27	BE	125	GLY	CA-C-N	6.91	128.48	119.84
27	BE	125	GLY	C-N-CA	6.91	128.48	119.84
37	BS	99	LYS	N-CA-C	-6.91	102.97	111.33
7	CH	26	VAL	CA-C-N	6.89	128.45	119.84
7	CH	26	VAL	C-N-CA	6.89	128.45	119.84
23	CY	255	ILE	CA-C-N	-6.89	116.22	122.28
23	CY	255	ILE	C-N-CA	-6.89	116.22	122.28
41	BW	101	SER	N-CA-C	6.88	118.56	108.86
56	Be	109	GLU	N-CA-C	-6.88	104.88	112.72
23	AY	404	VAL	N-CA-C	6.85	123.67	108.88
28	BF	154	VAL	N-CA-C	6.84	116.18	106.53
49	B2	17	SER	CA-C-N	6.84	128.39	119.84
49	B2	17	SER	C-N-CA	6.84	128.39	119.84
11	CL	26	ALA	N-CA-C	-6.83	103.89	111.82
1	AB	187	LEU	N-CA-C	6.83	120.77	108.48
25	BC	140	ASN	CA-C-N	6.82	128.36	119.84
25	BC	140	ASN	C-N-CA	6.82	128.36	119.84
37	BS	72	ALA	N-CA-C	-6.81	103.78	111.07
4	CE	127	ASN	CA-C-N	6.81	128.35	119.84
4	CE	127	ASN	C-N-CA	6.81	128.35	119.84
17	AR	44	LEU	N-CA-C	6.80	121.03	111.30
1	AB	163	PHE	CA-C-N	6.80	134.22	121.97
1	AB	163	PHE	C-N-CA	6.80	134.22	121.97
27	BE	21	VAL	CA-C-O	6.79	123.47	119.94
25	BC	170	GLY	N-CA-C	-6.79	105.10	114.67
19	CT	12	ALA	N-CA-C	-6.79	104.62	113.17
47	B4	6	HIS	CA-C-N	6.76	128.29	119.84
47	B4	6	HIS	C-N-CA	6.76	128.29	119.84
17	CR	45	SER	CB-CA-C	-6.75	107.76	115.79
34	DP	137	LYS	N-CA-C	-6.72	105.11	113.38
35	BQ	125	LEU	CA-C-N	6.72	128.24	119.84
35	BQ	125	LEU	C-N-CA	6.72	128.24	119.84
46	B1	40	ARG	N-CA-C	6.72	125.11	110.80
23	CY	15	ILE	N-CA-C	6.71	118.39	108.65
11	CL	47	LYS	CA-C-N	-6.69	112.79	120.89
11	CL	47	LYS	C-N-CA	-6.69	112.79	120.89
11	AL	53	ARG	N-CA-C	6.69	121.21	113.38
10	CK	39	PRO	N-CA-C	6.69	121.33	111.03
23	CY	145	ASP	N-CA-C	6.68	117.39	108.38
38	DT	130	ALA	N-CA-C	-6.68	104.76	113.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	B9	31	LYS	N-CA-C	-6.67	104.88	113.16
1	AB	185	ILE	O-C-N	6.67	130.91	122.57
51	B5	31	VAL	CA-C-N	-6.67	113.65	120.85
51	B5	31	VAL	C-N-CA	-6.67	113.65	120.85
38	DT	29	ARG	N-CA-C	6.65	119.14	110.43
40	BV	89	GLN	CA-C-N	6.65	126.63	119.78
40	BV	89	GLN	C-N-CA	6.65	126.63	119.78
48	DN	51	PHE	N-CA-C	-6.64	100.65	110.48
48	BN	51	PHE	N-CA-C	-6.64	100.65	110.48
1	CB	187	LEU	N-CA-C	6.64	119.98	108.76
30	BH	116	GLU	CA-C-N	6.63	127.21	120.38
30	BH	116	GLU	C-N-CA	6.63	127.21	120.38
41	BW	103	ILE	N-CA-C	6.63	117.64	108.89
28	BF	190	GLU	CA-C-N	-6.62	112.48	123.33
28	BF	190	GLU	C-N-CA	-6.62	112.48	123.33
25	BC	51	ASP	CA-C-N	6.61	128.10	119.84
25	BC	51	ASP	C-N-CA	6.61	128.10	119.84
10	AK	86	GLY	N-CA-C	6.60	123.27	112.84
16	CQ	59	ILE	CA-C-N	-6.60	112.81	122.58
16	CQ	59	ILE	C-N-CA	-6.60	112.81	122.58
25	DC	51	ASP	CA-C-N	6.58	128.07	119.84
25	DC	51	ASP	C-N-CA	6.58	128.07	119.84
25	DC	174	ALA	CA-C-N	6.58	128.07	119.84
25	DC	174	ALA	C-N-CA	6.58	128.07	119.84
2	AC	194	GLY	N-CA-C	6.57	118.70	110.29
29	DG	44	GLY	N-CA-C	-6.57	106.17	115.43
47	D4	6	HIS	CA-C-N	6.57	128.05	119.84
47	D4	6	HIS	C-N-CA	6.57	128.05	119.84
39	BU	96	ALA	N-CA-C	-6.55	105.25	113.18
23	CY	83	ASP	N-CA-C	6.52	116.89	108.34
27	DE	21	VAL	N-CA-C	6.49	121.68	107.92
23	CY	610	VAL	N-CA-C	6.49	117.94	108.53
23	AY	30	GLU	CA-C-N	-6.44	110.30	120.60
23	AY	30	GLU	C-N-CA	-6.44	110.30	120.60
1	AB	25	ASN	CA-C-N	6.44	125.93	119.24
1	AB	25	ASN	C-N-CA	6.44	125.93	119.24
27	DE	21	VAL	CA-C-O	6.43	123.29	119.94
46	B1	42	GLN	N-CA-C	6.43	118.92	107.80
1	AB	163	PHE	O-C-N	6.41	131.23	123.16
28	DF	156	LEU	CA-C-N	-6.38	111.94	120.50
28	DF	156	LEU	C-N-CA	-6.38	111.94	120.50
43	DY	55	TYR	CA-C-N	6.37	127.80	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
43	DY	55	TYR	C-N-CA	6.37	127.80	119.84
10	AK	110	ASP	N-CA-C	-6.37	106.14	114.04
4	CE	69	VAL	N-CA-C	6.36	114.41	107.60
27	BE	165	VAL	N-CA-C	6.36	116.65	107.88
1	CB	185	ILE	N-CA-C	-6.35	103.04	110.21
25	BC	124	VAL	N-CA-C	-6.34	106.33	112.29
28	BF	154	VAL	CB-CA-C	6.34	118.95	111.59
23	AY	28	THR	N-CA-C	-6.34	104.28	111.07
25	DC	182	PRO	N-CA-C	6.34	118.43	110.70
27	BE	38	THR	CA-C-N	6.31	127.72	119.84
27	BE	38	THR	C-N-CA	6.31	127.72	119.84
39	DU	99	ALA	N-CA-C	-6.28	106.58	114.56
28	DF	19	GLU	N-CA-C	6.28	119.58	110.28
52	B6	40	CYS	CA-C-N	6.28	126.24	120.21
52	B6	40	CYS	C-N-CA	6.28	126.24	120.21
38	BT	79	HIS	N-CA-C	6.27	120.74	112.72
41	DW	101	SER	N-CA-C	6.26	117.68	108.86
27	BE	23	VAL	N-CA-C	6.25	122.35	109.34
36	DR	34	ILE	N-CA-C	6.25	117.12	108.12
35	BQ	104	PHE	N-CA-C	6.25	119.43	108.75
36	BR	34	ILE	N-CA-C	6.24	116.85	107.80
42	BX	94	GLY	N-CA-C	-6.23	105.82	115.73
54	B8	14	VAL	N-CA-C	6.21	116.57	107.75
16	AQ	66	SER	N-CA-C	6.21	115.63	108.49
1	AB	162	ILE	N-CA-C	-6.20	98.75	108.86
26	DD	268	ARG	N-CA-C	-6.20	106.94	114.75
11	AL	31	PRO	N-CA-C	-6.20	107.55	114.92
34	BP	144	GLU	CA-C-N	6.17	127.55	119.84
34	BP	144	GLU	C-N-CA	6.17	127.55	119.84
25	DC	154	ILE	N-CA-C	-6.17	104.27	111.00
34	BP	16	ARG	N-CA-C	-6.13	106.13	113.97
26	BD	35	LYS	CA-C-N	6.13	127.50	119.84
26	BD	35	LYS	C-N-CA	6.13	127.50	119.84
1	CB	164	VAL	CB-CA-C	-6.13	101.24	111.29
32	DK	90	LYS	CA-C-N	6.12	127.50	119.84
32	DK	90	LYS	C-N-CA	6.12	127.50	119.84
46	B1	33	LYS	N-CA-C	-6.12	103.98	112.30
53	B7	39	ARG	N-CA-C	6.12	118.58	109.59
46	D1	14	VAL	N-CA-C	6.11	118.82	108.86
23	CY	256	THR	CA-C-N	6.11	127.47	119.84
23	CY	256	THR	C-N-CA	6.11	127.47	119.84
34	DP	16	ARG	N-CA-C	-6.09	106.82	114.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	D9	13	LYS	N-CA-C	-6.09	107.08	114.75
38	BT	67	SER	N-CA-C	6.08	118.10	108.79
19	AT	12	ALA	N-CA-C	-6.08	105.90	113.38
3	CD	10	ARG	N-CA-C	-6.08	104.73	111.36
34	DP	110	TYR	CB-CA-C	-6.08	109.58	116.63
25	DC	213	VAL	N-CA-C	-6.06	96.73	109.34
25	BC	225	ILE	CB-CA-C	-6.05	101.36	111.29
25	DC	215	VAL	CB-CA-C	-6.05	103.59	111.88
46	D1	42	GLN	N-CA-C	6.03	118.22	108.34
9	AJ	53	PRO	N-CA-C	-6.02	108.42	114.68
23	AY	36	THR	N-CA-C	6.02	123.63	110.80
48	BN	80	GLY	N-CA-C	-6.02	105.81	115.08
11	CL	83	VAL	CA-C-N	-6.01	113.03	121.99
11	CL	83	VAL	C-N-CA	-6.01	113.03	121.99
11	AL	51	ALA	N-CA-C	6.01	116.17	108.24
12	CM	112	GLY	CA-C-N	6.00	127.35	119.84
12	CM	112	GLY	C-N-CA	6.00	127.35	119.84
20	AA	115	G	C2'-C3'-O3'	6.00	118.50	109.50
46	B1	14	VAL	N-CA-C	6.00	118.63	108.86
48	DN	80	GLY	N-CA-C	-6.00	105.84	115.08
7	AH	26	VAL	CA-C-N	6.00	127.33	119.84
7	AH	26	VAL	C-N-CA	6.00	127.33	119.84
37	DS	12	PHE	N-CA-C	-5.98	103.70	111.71
39	BU	102	GLU	CA-C-N	5.96	125.67	119.05
39	BU	102	GLU	C-N-CA	5.96	125.67	119.05
28	DF	190	GLU	CA-C-N	-5.95	114.39	122.95
28	DF	190	GLU	C-N-CA	-5.95	114.39	122.95
38	BT	78	LEU	N-CA-C	5.93	123.44	110.80
44	DZ	151	HIS	N-CA-C	5.92	115.30	108.49
38	BT	61	PHE	N-CA-C	5.92	118.05	108.34
10	CK	57	THR	CA-C-N	5.92	125.79	119.28
10	CK	57	THR	C-N-CA	5.92	125.79	119.28
23	AY	287	PRO	CA-C-N	5.92	127.24	119.84
23	AY	287	PRO	C-N-CA	5.92	127.24	119.84
32	BK	71	THR	CA-C-N	5.91	126.47	120.38
32	BK	71	THR	C-N-CA	5.91	126.47	120.38
23	CY	498	ILE	N-CA-C	5.91	121.63	109.34
26	BD	218	ARG	CA-C-N	5.91	127.22	119.84
26	BD	218	ARG	C-N-CA	5.91	127.22	119.84
3	CD	66	ARG	N-CA-C	-5.91	104.79	112.23
28	BF	157	VAL	N-CA-CB	5.90	118.04	110.13
32	BK	75	SER	N-CA-C	-5.90	106.00	112.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	BD	81	ALA	N-CA-C	5.90	119.09	108.48
25	BC	182	PRO	N-CA-C	5.89	117.89	110.70
23	AY	280	LEU	CA-C-N	5.89	127.20	119.84
23	AY	280	LEU	C-N-CA	5.89	127.20	119.84
23	CY	33	LEU	CA-CB-CG	5.89	136.91	116.30
23	CY	30	GLU	CA-C-N	-5.88	111.17	120.63
23	CY	30	GLU	C-N-CA	-5.88	111.17	120.63
55	D9	31	LYS	N-CA-C	-5.88	106.07	113.18
40	DV	49	THR	CA-C-N	5.87	127.17	119.84
40	DV	49	THR	C-N-CA	5.87	127.17	119.84
25	DC	226	ASN	CA-C-N	5.86	127.17	119.84
25	DC	226	ASN	C-N-CA	5.86	127.17	119.84
25	DC	164	PHE	N-CA-CB	5.86	120.40	110.49
34	BP	110	TYR	N-CA-C	5.86	116.67	108.00
50	D3	6	VAL	N-CA-C	5.86	117.12	108.45
23	CY	166	LEU	CA-C-N	5.86	125.83	120.21
23	CY	166	LEU	C-N-CA	5.86	125.83	120.21
29	DG	113	ARG	CA-C-N	-5.86	113.13	122.50
29	DG	113	ARG	C-N-CA	-5.86	113.13	122.50
25	DC	148	PHE	N-CA-C	-5.85	106.76	114.31
20	CA	115	G	C2'-C3'-O3'	5.84	118.27	109.50
54	B8	13	ARG	N-CA-C	5.84	119.69	112.03
16	AQ	11	VAL	N-CA-C	5.84	116.02	107.37
44	DZ	176	PRO	CA-C-N	5.84	127.14	119.84
44	DZ	176	PRO	C-N-CA	5.84	127.14	119.84
11	AL	105	TYR	N-CA-C	-5.83	104.72	112.94
20	CA	687	A	P-O3'-C3'	5.82	128.93	120.20
29	BG	111	LEU	O-C-N	-5.81	114.63	121.32
23	AY	83	ASP	N-CA-C	5.81	115.95	108.34
37	BS	12	PHE	N-CA-C	-5.81	103.76	112.54
4	AE	75	THR	N-CA-C	5.80	115.76	108.45
18	AS	70	LYS	N-CA-C	5.80	123.16	110.80
45	B0	10	THR	N-CA-C	5.80	116.07	108.07
20	CA	687	A	C2'-C3'-O3'	5.78	118.17	109.50
26	DD	177	LEU	CA-C-N	5.77	127.05	119.84
26	DD	177	LEU	C-N-CA	5.77	127.05	119.84
27	BE	10	GLY	N-CA-C	5.76	126.84	113.18
44	BZ	82	ARG	CA-C-N	5.76	127.05	119.84
44	BZ	82	ARG	C-N-CA	5.76	127.05	119.84
30	DH	20	ALA	CA-C-N	5.76	127.03	119.84
30	DH	20	ALA	C-N-CA	5.76	127.03	119.84
48	BN	94	HIS	CA-C-N	5.75	125.45	119.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	BN	94	HIS	C-N-CA	5.75	125.45	119.64
41	BW	104	THR	N-CA-C	5.75	118.12	107.60
17	AR	45	SER	CB-CA-C	-5.75	108.95	115.79
6	AG	87	VAL	N-CA-C	5.75	114.15	107.89
48	DN	94	HIS	CA-C-N	5.75	125.44	119.64
48	DN	94	HIS	C-N-CA	5.75	125.44	119.64
33	DO	41	ALA	N-CA-C	5.74	117.57	108.79
56	De	109	GLU	N-CA-C	-5.74	106.09	112.57
15	CP	5	ARG	N-CA-C	5.73	117.31	109.18
10	AK	57	THR	CA-C-N	5.72	125.26	119.19
10	AK	57	THR	C-N-CA	5.72	125.26	119.19
39	DU	96	ALA	N-CA-C	-5.72	106.25	113.18
23	CY	100	VAL	N-CA-C	5.72	116.14	111.62
23	AY	231	TYR	N-CA-C	-5.72	107.54	114.75
44	BZ	100	VAL	CA-C-N	5.72	126.20	120.14
44	BZ	100	VAL	C-N-CA	5.72	126.20	120.14
10	CK	110	ASP	N-CA-C	-5.72	106.93	114.31
12	AM	79	LYS	N-CA-C	-5.71	105.06	111.28
23	CY	287	PRO	CA-C-N	5.71	126.97	119.84
23	CY	287	PRO	C-N-CA	5.71	126.97	119.84
35	BQ	77	LYS	CA-C-N	5.70	126.97	119.84
35	BQ	77	LYS	C-N-CA	5.70	126.97	119.84
15	CP	83	GLU	CB-CA-C	-5.70	110.02	116.63
26	DD	35	LYS	CA-C-N	5.69	126.96	119.84
26	DD	35	LYS	C-N-CA	5.69	126.96	119.84
46	B1	41	ARG	N-CA-C	5.69	117.06	108.46
23	CY	564	LYS	N-CA-C	5.69	122.92	110.80
29	BG	72	ARG	N-CA-C	5.68	116.86	108.86
4	AE	101	ILE	N-CA-C	5.67	114.99	106.42
11	AL	46	LYS	CB-CA-C	-5.67	110.02	116.54
35	BQ	90	VAL	CB-CA-C	-5.67	101.99	111.29
23	CY	101	LEU	N-CA-C	5.67	117.22	110.19
34	DP	22	GLY	CA-C-N	5.67	126.92	119.84
34	DP	22	GLY	C-N-CA	5.67	126.92	119.84
23	AY	645	ALA	N-CA-C	5.66	118.66	108.48
54	D8	62	LEU	CA-C-N	-5.66	115.06	120.83
54	D8	62	LEU	C-N-CA	-5.66	115.06	120.83
20	CA	115	G	P-O3'-C3'	5.65	128.68	120.20
1	CB	163	PHE	CA-C-N	5.65	132.14	121.97
1	CB	163	PHE	C-N-CA	5.65	132.14	121.97
42	BX	84	ALA	CA-C-N	5.65	125.65	119.89
42	BX	84	ALA	C-N-CA	5.65	125.65	119.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	CP	37	GLY	N-CA-C	5.65	118.20	110.58
42	DX	84	ALA	CA-C-N	5.64	126.89	119.84
42	DX	84	ALA	C-N-CA	5.64	126.89	119.84
34	BP	86	LYS	N-CA-C	-5.63	106.25	113.23
34	DP	142	GLY	N-CA-C	5.63	118.22	110.56
55	B9	15	LYS	N-CA-C	5.63	118.24	109.52
25	DC	115	VAL	N-CA-C	5.63	121.05	109.34
54	B8	34	TRP	N-CA-C	5.62	117.20	111.14
1	CB	16	HIS	N-CA-C	5.60	117.91	109.23
23	AY	130	VAL	CA-C-N	5.60	126.84	119.84
23	AY	130	VAL	C-N-CA	5.60	126.84	119.84
1	AB	38	GLY	N-CA-C	-5.60	107.94	115.21
25	DC	42	VAL	CB-CA-C	-5.59	102.11	111.29
25	DC	45	HIS	N-CA-C	-5.59	100.56	109.96
28	BF	175	THR	CB-CA-C	-5.59	103.80	112.07
23	CY	645	ALA	N-CA-C	5.59	118.56	109.06
1	AB	185	ILE	CA-C-N	5.59	132.21	121.54
1	AB	185	ILE	C-N-CA	5.59	132.21	121.54
1	CB	32	ILE	N-CA-C	5.59	116.35	108.36
28	DF	190	GLU	N-CA-C	5.58	122.69	110.80
28	BF	175	THR	CA-C-N	-5.58	112.13	121.39
28	BF	175	THR	C-N-CA	-5.58	112.13	121.39
43	BY	100	ALA	N-CA-C	5.58	117.27	110.41
46	D1	38	SER	N-CA-C	5.57	114.90	108.49
25	BC	166	ASN	N-CA-C	5.57	118.87	112.97
38	DT	19	LEU	CA-C-N	5.57	126.80	119.84
38	DT	19	LEU	C-N-CA	5.57	126.80	119.84
11	CL	46	LYS	CB-CA-C	-5.56	110.15	116.54
6	CG	91	VAL	N-CA-C	5.55	116.23	109.30
36	BR	68	ARG	N-CA-C	-5.54	105.14	111.07
40	BV	96	ILE	N-CA-C	5.54	120.87	109.34
35	DQ	104	PHE	N-CA-C	5.54	118.23	108.75
10	AK	112	THR	CA-C-N	5.54	126.76	119.84
10	AK	112	THR	C-N-CA	5.54	126.76	119.84
23	AY	330	VAL	N-CA-C	5.54	120.85	109.34
40	DV	96	ILE	N-CA-C	5.53	120.85	109.34
15	AP	37	GLY	N-CA-C	5.53	118.32	110.74
50	B3	6	VAL	N-CA-C	5.53	116.63	108.45
41	BW	77	ASP	N-CA-C	5.52	122.56	110.80
23	CY	197	ARG	N-CA-C	5.52	115.53	108.24
38	DT	61	PHE	N-CA-C	5.52	117.40	108.41
5	AF	11	ASN	CA-C-N	5.51	126.73	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	AF	11	ASN	C-N-CA	5.51	126.73	119.84
23	AY	23	ALA	N-CA-CB	-5.51	102.55	110.65
1	CB	182	ILE	N-CA-C	5.51	114.17	107.61
19	CT	13	LEU	N-CA-C	-5.51	105.17	111.07
28	DF	80	ALA	N-CA-C	-5.50	103.71	110.31
3	AD	206	PHE	N-CA-C	-5.50	105.20	111.14
23	CY	633	GLY	N-CA-C	5.49	118.27	110.74
10	AK	127	LYS	N-CA-C	-5.49	104.83	112.30
27	BE	64	LYS	N-CA-C	-5.49	106.17	112.86
23	CY	209	ALA	N-CA-C	-5.48	104.54	111.11
8	AI	59	PHE	N-CA-C	5.47	116.35	107.32
25	BC	164	PHE	N-CA-CB	5.46	119.72	110.49
11	CL	41	ARG	N-CA-C	5.46	116.08	108.00
38	BT	91	ARG	CB-CA-C	-5.46	109.30	115.79
23	AY	539	ILE	CB-CA-C	-5.45	108.57	114.35
28	DF	153	SER	CA-C-N	-5.45	112.15	121.97
28	DF	153	SER	C-N-CA	-5.45	112.15	121.97
17	AR	55	ARG	N-CA-C	-5.45	106.09	114.16
14	CO	78	TYR	N-CA-C	-5.45	105.25	111.14
11	CL	61	THR	N-CA-C	-5.45	104.31	112.54
23	CY	36	THR	N-CA-C	5.45	122.41	110.80
10	AK	122	LYS	N-CA-C	5.44	122.40	110.80
50	D3	11	SER	N-CA-C	5.44	115.86	109.60
43	BY	55	TYR	CA-C-N	5.44	126.64	119.84
43	BY	55	TYR	C-N-CA	5.44	126.64	119.84
27	BE	73	GLU	CA-C-N	5.44	126.64	119.84
27	BE	73	GLU	C-N-CA	5.44	126.64	119.84
3	AD	135	LEU	CA-C-N	5.43	125.08	119.05
3	AD	135	LEU	C-N-CA	5.43	125.08	119.05
25	BC	172	ILE	N-CA-C	5.43	117.28	109.51
7	AH	100	ILE	N-CA-C	5.43	120.61	108.88
28	BF	178	PRO	N-CA-C	5.43	123.65	112.47
1	AB	182	ILE	N-CA-C	5.43	113.81	107.89
14	CO	15	PHE	N-CA-C	5.43	116.75	108.12
3	AD	171	GLY	CA-C-N	5.42	124.88	119.24
3	AD	171	GLY	C-N-CA	5.42	124.88	119.24
38	DT	63	VAL	N-CA-C	5.41	115.38	107.37
23	CY	515	GLU	CA-C-N	5.41	126.60	119.84
23	CY	515	GLU	C-N-CA	5.41	126.60	119.84
23	CY	280	LEU	CA-C-N	5.41	126.60	119.84
23	CY	280	LEU	C-N-CA	5.41	126.60	119.84
45	D0	60	PHE	N-CA-C	5.40	115.53	108.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	DF	175	THR	CB-CA-C	-5.40	103.36	111.73
28	BF	156	LEU	CA-C-N	-5.39	113.45	120.63
28	BF	156	LEU	C-N-CA	-5.39	113.45	120.63
39	DU	100	VAL	N-CA-C	-5.39	105.24	110.42
23	AY	132	ARG	N-CA-C	5.39	116.84	109.18
34	DP	59	LEU	N-CA-C	-5.38	106.69	113.20
46	B1	11	ARG	CA-C-N	5.37	126.56	119.84
46	B1	11	ARG	C-N-CA	5.37	126.56	119.84
60	BA	271(C)	G	P-O3'-C3'	5.37	126.14	119.70
13	AN	53	LEU	CA-C-N	5.36	126.50	120.66
13	AN	53	LEU	C-N-CA	5.36	126.50	120.66
25	BC	19	LYS	N-CA-C	5.34	115.29	108.24
28	DF	157	VAL	CB-CA-C	5.34	120.03	111.32
28	BF	91	GLY	CA-C-N	5.34	126.51	119.84
28	BF	91	GLY	C-N-CA	5.34	126.51	119.84
43	DY	65	ALA	CA-C-N	5.34	126.51	119.84
43	DY	65	ALA	C-N-CA	5.34	126.51	119.84
23	AY	197	ARG	N-CA-C	5.32	115.56	108.38
32	BK	90	LYS	CA-C-N	5.32	126.49	119.84
32	BK	90	LYS	C-N-CA	5.32	126.49	119.84
42	BX	31	HIS	CA-C-N	5.32	126.48	119.84
42	BX	31	HIS	C-N-CA	5.32	126.48	119.84
26	DD	120	GLY	CA-C-N	5.31	126.48	119.84
26	DD	120	GLY	C-N-CA	5.31	126.48	119.84
16	AQ	46	ASP	CA-C-N	5.31	125.12	119.28
16	AQ	46	ASP	C-N-CA	5.31	125.12	119.28
50	B3	53	LEU	N-CA-C	-5.31	106.69	114.39
23	CY	524	GLU	N-CA-C	5.30	115.28	108.34
44	DZ	11	GLU	CB-CA-C	-5.29	108.75	116.53
25	BC	223	VAL	N-CA-C	5.29	120.34	109.34
40	BV	35	LEU	CA-C-N	5.28	126.22	120.83
40	BV	35	LEU	C-N-CA	5.28	126.22	120.83
34	DP	110	TYR	N-CA-C	5.27	116.99	108.08
32	BK	20	ALA	CA-C-N	5.27	125.81	120.38
32	BK	20	ALA	C-N-CA	5.27	125.81	120.38
34	BP	110	TYR	CB-CA-C	-5.26	108.97	116.34
11	AL	32	PHE	N-CA-C	-5.26	102.41	110.14
11	AL	26	ALA	N-CA-C	-5.25	105.73	111.82
23	CY	631	ILE	N-CA-C	5.25	120.27	109.34
27	BE	104	VAL	N-CA-C	5.25	115.46	108.27
37	BS	21	THR	N-CA-C	-5.25	105.62	112.23
28	BF	190	GLU	N-CA-C	5.23	121.94	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	CL	81	SER	N-CA-C	5.23	121.95	110.80
23	AY	251	ILE	N-CA-C	-5.23	108.74	113.71
12	CM	79	LYS	N-CA-C	-5.23	105.58	111.28
28	DF	189	THR	CB-CA-C	-5.23	108.84	116.53
48	BN	57	ALA	N-CA-C	-5.23	106.86	113.18
48	DN	57	ALA	N-CA-C	-5.22	106.86	113.18
35	BQ	38	GLU	CA-C-N	5.22	126.37	119.84
35	BQ	38	GLU	C-N-CA	5.22	126.37	119.84
35	DQ	40	ALA	N-CA-C	5.22	114.72	107.73
9	CJ	86	MET	N-CA-C	-5.22	108.18	114.75
26	DD	171	ASP	N-CA-C	-5.21	106.94	113.72
23	AY	631	ILE	N-CA-C	5.21	120.17	109.34
44	DZ	176	PRO	N-CA-C	5.20	115.46	110.47
1	AB	69	LEU	O-C-N	5.20	129.51	122.59
1	CB	25	ASN	CA-C-N	5.20	124.52	118.85
1	CB	25	ASN	C-N-CA	5.20	124.52	118.85
28	DF	101	LEU	CA-C-N	5.19	125.18	119.89
28	DF	101	LEU	C-N-CA	5.19	125.18	119.89
60	DA	2158	A	P-O3'-C3'	5.19	127.98	120.20
1	AB	167	PRO	CA-C-O	-5.18	117.39	121.38
11	AL	101	VAL	N-CA-C	5.17	116.47	112.12
30	BH	125	VAL	N-CA-C	5.17	112.98	107.76
17	CR	51	LEU	CA-C-N	-5.17	115.27	120.85
17	CR	51	LEU	C-N-CA	-5.17	115.27	120.85
46	B1	13	ILE	CB-CA-C	5.17	119.74	110.65
1	AB	67	THR	N-CA-C	5.16	121.79	110.80
1	CB	185	ILE	CA-C-N	5.16	131.39	121.54
1	CB	185	ILE	C-N-CA	5.16	131.39	121.54
28	DF	24	LEU	CA-C-N	-5.16	113.39	119.84
28	DF	24	LEU	C-N-CA	-5.16	113.39	119.84
43	DY	4	LYS	N-CA-C	-5.16	105.78	111.71
32	DK	24	GLY	CA-C-N	5.16	126.28	119.84
32	DK	24	GLY	C-N-CA	5.16	126.28	119.84
11	AL	33	ARG	N-CA-C	5.15	121.78	110.80
34	BP	59	LEU	N-CA-C	-5.15	107.02	113.15
34	DP	7	ARG	CA-C-N	-5.15	116.45	121.65
34	DP	7	ARG	C-N-CA	-5.15	116.45	121.65
16	CQ	78	GLU	N-CA-C	5.14	115.32	108.38
54	D8	34	TRP	N-CA-C	5.14	116.57	110.97
35	BQ	74	TYR	N-CA-C	-5.13	102.89	110.48
60	DA	271(C)	G	P-O3'-C3'	5.13	125.86	119.70
23	CY	621	ILE	N-CA-C	-5.13	105.39	110.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	DP	88	LEU	N-CA-C	-5.13	105.38	111.69
1	AB	8	LYS	CB-CA-C	-5.13	110.68	116.63
38	DT	132	LYS	N-CA-C	-5.12	107.16	113.41
9	AJ	40	LEU	CA-C-N	5.12	126.24	119.84
9	AJ	40	LEU	C-N-CA	5.12	126.24	119.84
2	CC	19	GLU	N-CA-C	-5.12	107.54	112.97
2	CC	76	VAL	N-CA-C	-5.12	107.85	113.43
48	DN	78	TYR	N-CA-C	5.12	117.15	110.08
33	BO	41	ALA	N-CA-C	5.12	116.62	108.79
41	DW	73	ALA	N-CA-C	5.12	121.70	110.80
27	DE	73	GLU	CA-C-N	5.11	126.22	119.84
27	DE	73	GLU	C-N-CA	5.11	126.22	119.84
60	DA	278	A	C2'-C3'-O3'	5.11	117.16	109.50
48	BN	34	LEU	N-CA-C	-5.11	106.15	112.38
50	D3	15	TYR	CA-C-N	5.10	126.21	119.84
50	D3	15	TYR	C-N-CA	5.10	126.21	119.84
50	D3	11	SER	CA-C-N	5.09	124.70	119.56
50	D3	11	SER	C-N-CA	5.09	124.70	119.56
46	B1	19	GLN	N-CA-C	-5.09	99.95	110.80
41	BW	73	ALA	N-CA-C	5.09	121.64	110.80
11	AL	58	VAL	N-CA-C	5.09	119.92	109.34
11	CL	58	VAL	N-CA-C	5.09	119.93	109.34
48	BN	85	ILE	N-CA-C	5.09	113.66	107.61
46	D1	11	ARG	CA-C-N	5.09	126.20	119.84
46	D1	11	ARG	C-N-CA	5.09	126.20	119.84
3	AD	104	VAL	N-CA-C	-5.08	104.95	110.23
56	De	87	LYS	N-CA-C	-5.08	105.83	112.23
48	BN	78	TYR	N-CA-C	5.08	117.09	110.08
4	AE	94	ALA	N-CA-C	5.07	115.74	108.74
1	CB	158	LEU	CA-C-N	5.07	125.28	120.31
1	CB	158	LEU	C-N-CA	5.07	125.28	120.31
30	BH	117	PRO	N-CA-C	5.07	116.88	110.70
25	BC	116	ALA	CB-CA-C	-5.06	110.72	116.54
37	BS	40	ILE	N-CA-C	5.06	115.14	107.75
48	DN	85	ILE	N-CA-C	5.06	113.63	107.61
48	DN	34	LEU	N-CA-C	-5.06	106.21	112.38
25	BC	154	ILE	N-CA-C	-5.05	105.62	110.72
38	DT	13	ARG	N-CA-C	-5.05	106.54	113.30
38	BT	132	LYS	N-CA-C	-5.04	107.16	113.72
35	DQ	86	GLY	N-CA-C	5.04	117.42	110.56
25	DC	31	LYS	N-CA-C	-5.04	105.25	111.40
40	BV	33	VAL	N-CA-C	5.03	115.34	107.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	DZ	100	VAL	CA-C-N	5.03	126.42	120.23
44	DZ	100	VAL	C-N-CA	5.03	126.42	120.23
23	AY	33	LEU	CA-CB-CG	5.03	133.90	116.30
25	BC	152	GLU	N-CA-C	-5.03	105.88	111.36
23	AY	79	ILE	N-CA-C	5.03	115.27	107.28
27	BE	31	CYS	CA-C-N	5.03	126.12	119.84
27	BE	31	CYS	C-N-CA	5.03	126.12	119.84
3	CD	171	GLY	CA-C-N	5.03	126.12	119.84
3	CD	171	GLY	C-N-CA	5.03	126.12	119.84
23	CY	634	MET	N-CA-C	5.02	116.16	108.52
1	AB	16	HIS	N-CA-C	5.02	117.01	109.23
29	DG	53	LEU	N-CA-C	-5.02	107.11	113.18
43	DY	81	LYS	CA-C-N	5.02	126.11	119.84
43	DY	81	LYS	C-N-CA	5.02	126.11	119.84
23	CY	139	MET	O-C-N	5.01	129.75	122.43
16	CQ	11	VAL	N-CA-C	5.01	114.78	107.37
40	BV	21	ARG	N-CA-C	5.01	116.75	110.24
37	DS	101	LEU	N-CA-C	5.00	121.46	110.80
41	DW	77	ASP	N-CA-C	5.00	121.46	110.80

There are no chirality outliers.

All (51) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AB	170	GLU	Peptide
1	AB	185	ILE	Peptide
1	AB	68	ILE	Peptide
11	AL	32	PHE	Peptide
23	AY	162	VAL	Peptide
23	AY	207	ASP	Mainchain
23	AY	34	TYR	Peptide
23	AY	630	GLN	Peptide
46	B1	16	ASN	Peptide
46	B1	17	SER	Peptide
25	BC	161	ARG	Peptide
25	BC	171	ALA	Peptide
25	BC	210	LEU	Peptide
25	BC	211	ARG	Peptide
25	BC	213	VAL	Peptide
26	BD	164	GLN	Peptide
26	BD	78	LYS	Peptide
28	BF	154	VAL	Peptide

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Mol	Chain	Res	Type	Group
29	BG	111	LEU	Mainchain
29	BG	114	ILE	Mainchain
31	BJ	83	UNK	Peptide
37	BS	14	VAL	Peptide
37	BS	46	VAL	Peptide
37	BS	98	VAL	Peptide
41	BW	75	TYR	Peptide
1	CB	170	GLU	Peptide
1	CB	185	ILE	Peptide
1	CB	68	ILE	Peptide
11	CL	32	PHE	Peptide
11	CL	57	LYS	Peptide
23	CY	162	VAL	Peptide
23	CY	329	ARG	Peptide
23	CY	34	TYR	Peptide
23	CY	564	LYS	Peptide
46	D1	16	ASN	Peptide
46	D1	17	SER	Peptide
25	DC	171	ALA	Peptide
25	DC	211	ARG	Peptide
25	DC	60	ARG	Peptide
26	DD	164	GLN	Peptide
26	DD	78	LYS	Peptide
28	DF	154	VAL	Peptide
29	DG	111	LEU	Mainchain
29	DG	113	ARG	Peptide
31	DJ	83	UNK	Peptide
37	DS	14	VAL	Peptide
37	DS	46	VAL	Peptide
37	DS	98	VAL	Peptide
38	DT	28	VAL	Peptide
41	DW	73	ALA	Peptide
41	DW	75	TYR	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AB	1910	0	1957	123	0
1	CB	1910	0	1957	126	0
2	AC	1621	0	1688	83	0
2	CC	1621	0	1688	88	0
3	AD	1703	0	1763	114	0
3	CD	1703	0	1763	119	0
4	AE	1156	0	1213	58	0
4	CE	1156	0	1213	63	0
5	AF	843	0	857	46	0
5	CF	843	0	857	48	0
6	AG	1257	0	1296	71	0
6	CG	1257	0	1296	83	0
7	AH	1116	0	1177	78	0
7	CH	1116	0	1177	85	0
8	AI	1011	0	1043	61	0
8	CI	1011	0	1043	58	0
9	AJ	802	0	849	55	0
9	CJ	802	0	849	61	0
10	AK	885	0	904	51	0
10	CK	885	0	904	55	0
11	AL	976	0	1062	135	0
11	CL	976	0	1062	114	0
12	AM	997	0	1072	71	0
12	CM	997	0	1072	72	0
13	AN	492	0	529	30	0
13	CN	492	0	529	26	0
14	AO	734	0	771	44	0
14	CO	734	0	771	47	0
15	AP	706	0	725	36	0
15	CP	706	0	725	30	0
16	AQ	835	0	906	83	0
16	CQ	835	0	906	72	0
17	AR	574	0	644	44	0
17	CR	574	0	644	44	0
18	AS	634	0	655	39	0
18	CS	634	0	655	42	0
19	AT	762	0	859	47	0
19	CT	762	0	859	46	0
20	AA	32474	0	16393	1072	0
20	CA	32474	0	16393	1056	0
21	AV	393	0	197	18	0
21	CV	393	0	197	14	0
22	AW	1635	0	831	72	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	CW	1635	0	831	72	0
23	AY	5380	0	5435	339	0
23	CY	5380	0	5436	330	0
24	AU	48	0	40	42	0
24	CU	48	0	41	16	0
25	BC	1742	0	1798	184	0
25	DC	1742	0	1798	186	0
26	BD	2145	0	2234	177	0
26	DD	2145	0	2234	164	0
27	BE	1569	0	1634	147	0
27	DE	1569	0	1634	133	0
28	BF	1628	0	1680	179	0
28	DF	1628	0	1680	166	0
29	BG	1474	0	1535	92	0
29	DG	1474	0	1535	83	0
30	BH	1274	0	1342	66	0
30	DH	1274	0	1342	55	0
31	BJ	851	0	199	35	0
31	DJ	851	0	203	35	0
32	BK	1035	0	1082	51	0
32	DK	1035	0	1082	61	0
33	BO	933	0	996	69	0
33	DO	933	0	996	61	0
34	BP	1114	0	1187	87	0
34	DP	1114	0	1187	80	0
35	BQ	1122	0	1179	69	0
35	DQ	1122	0	1179	79	0
36	BR	960	0	1021	87	0
36	DR	960	0	1021	74	0
37	BS	775	0	835	70	0
37	DS	775	0	835	73	0
38	BT	1147	0	1207	105	0
38	DT	1147	0	1207	84	0
39	BU	964	0	1022	85	0
39	DU	964	0	1022	86	0
40	BV	779	0	852	65	0
40	DV	779	0	852	65	0
41	BW	900	0	964	60	0
41	DW	900	0	964	60	0
42	BX	734	0	789	42	0
42	DX	734	0	789	51	0
43	BY	818	0	908	46	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
43	DY	818	0	908	45	0
44	BZ	1473	0	1497	72	0
44	DZ	1473	0	1497	72	0
45	B0	662	0	688	45	0
45	D0	662	0	688	45	0
46	B1	732	0	808	79	0
46	D1	732	0	808	79	0
47	B4	271	0	284	21	0
47	D4	271	0	284	17	0
48	BN	1104	0	1180	217	0
48	DN	1104	0	1180	230	0
49	B2	598	0	653	34	0
49	D2	598	0	653	30	0
50	B3	477	0	529	20	0
50	D3	477	0	529	24	0
51	B5	459	0	477	31	0
51	D5	459	0	477	40	0
52	B6	433	0	461	37	0
52	D6	433	0	461	32	0
53	B7	430	0	480	39	0
53	D7	430	0	480	37	0
54	B8	517	0	582	47	0
54	D8	517	0	582	41	0
55	B9	307	0	336	23	0
55	D9	307	0	338	31	0
56	Be	686	0	620	22	0
56	De	686	0	620	26	0
57	Bf	156	0	37	1	0
57	Bg	156	0	39	0	0
57	Df	156	0	38	0	0
57	Dg	156	0	40	0	0
58	Bh	151	0	39	1	0
58	Dh	151	0	40	1	0
59	BB	2551	0	1295	93	0
59	DB	2551	0	1295	83	0
60	BA	61997	0	31250	2256	0
60	DA	61997	0	31250	2190	0
61	AY	32	0	13	8	0
61	CY	32	0	13	18	0
62	AY	1	0	0	0	0
62	CY	1	0	0	0	0
All	All	308202	0	213207	13289	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 26.

All (13289) 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)
48:DN:78:TYR:CD2	60:DA:2642:G:C5'	1.74	1.62
39:DU:64:ARG:CD	48:DN:41:ASP:HA	1.14	1.60
39:BU:64:ARG:CD	48:BN:41:ASP:HA	1.32	1.57
39:DU:64:ARG:HD2	48:DN:41:ASP:CA	1.06	1.52
39:BU:64:ARG:HD2	48:BN:41:ASP:CA	1.37	1.49
48:DN:76:SER:HB3	60:DA:2641:G:C5'	1.44	1.48
20:AA:1492:A:H3'	24:AU:6:5OH:NP	1.26	1.42
48:DN:78:TYR:CD2	60:DA:2642:G:H5'	1.35	1.36
20:AA:1492:A:H5'	24:AU:6:5OH:CB	1.56	1.34
60:DA:1311:G:H21	60:DA:1603:A:N6	1.26	1.34
20:AA:1493:A:OP2	24:AU:6:5OH:NP	1.60	1.33
60:DA:1311:G:N2	60:DA:1603:A:H62	1.26	1.32
60:BA:2681:C:N4	60:BA:2725:A:H62	1.23	1.31
48:DN:78:TYR:CG	60:DA:2642:G:H5'	1.64	1.31
60:DA:1354:A:N6	60:DA:1377:G:H21	1.28	1.31
60:DA:1354:A:H62	60:DA:1377:G:N2	1.27	1.29
39:DU:64:ARG:NE	48:DN:41:ASP:HA	1.47	1.28
60:BA:1311:G:N2	60:BA:1603:A:H62	1.27	1.28
48:DN:76:SER:CB	60:DA:2641:G:H5"	1.64	1.28
48:BN:78:TYR:CD2	60:BA:2642:G:C5'	2.17	1.27
60:BA:1311:G:H21	60:BA:1603:A:N6	1.28	1.27
20:AA:815:A:H2	20:AA:1527:C:O2	1.19	1.25
48:DN:78:TYR:CE2	60:DA:2642:G:H4'	1.72	1.24
60:DA:1019:U:O2	60:DA:1020:A:N7	1.71	1.23
22:CW:50:C:N4	22:CW:64:G:H1	1.36	1.22
20:AA:1492:A:H3'	24:AU:6:5OH:CQ	1.68	1.20
60:DA:2681:C:C5	60:DA:2725:A:N6	2.09	1.19
60:BA:289:A:N6	60:BA:351:G:H21	1.41	1.16
20:AA:1492:A:H5'	24:AU:6:5OH:CR	1.74	1.16
60:BA:2681:C:C5	60:BA:2725:A:N6	2.14	1.16
48:DN:66:LYS:NZ	60:DA:1140:C:OP2	1.78	1.15
60:BA:289:A:H62	60:BA:351:G:N2	1.44	1.15
48:BN:78:TYR:CD2	60:BA:2642:G:H5"	1.81	1.15
60:BA:1354:A:N6	60:BA:1377:G:H21	1.43	1.14
11:AL:56:ALA:HB3	11:AL:68:ALA:HB3	1.29	1.14
60:BA:2681:C:H41	60:BA:2725:A:N6	1.41	1.14
60:BA:1354:A:H62	60:BA:1377:G:N2	1.43	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2681:C:N4	60:DA:2725:A:H62	1.46	1.14
23:CY:30:GLU:O	23:CY:33:LEU:N	1.79	1.13
48:BN:78:TYR:CE2	60:BA:2642:G:H4'	1.81	1.13
60:BA:2699:C:N4	60:BA:2708:G:H1	1.47	1.13
20:AA:1492:A:C3'	24:AU:6:5OH:NP	2.10	1.12
48:DN:78:TYR:HB2	60:DA:2642:G:OP1	1.49	1.12
48:DN:78:TYR:CD2	60:DA:2642:G:C4'	2.30	1.12
20:AA:1493:A:O5'	24:AU:2:DPP:HB3	1.49	1.12
20:AA:1492:A:H5'	24:AU:6:5OH:HP	1.30	1.11
39:DU:64:ARG:CD	48:DN:41:ASP:CA	1.90	1.11
20:CA:369:C:N4	20:CA:392:G:H1	1.46	1.11
60:DA:2681:C:H5	60:DA:2725:A:N6	1.46	1.10
25:BC:44:VAL:HB	25:BC:174:ALA:HB3	1.31	1.10
60:BA:882:G:N2	60:BA:894:C:N3	2.00	1.10
20:CA:1007:C:N4	20:CA:1022:G:H1	1.47	1.10
23:AY:63:ILE:HB	61:AY:701:GNP:O1G	1.52	1.10
20:CA:815:A:C2	20:CA:1527:C:O2	2.03	1.10
20:AA:815:A:C2	20:AA:1527:C:O2	2.04	1.09
48:BN:39:ARG:HH21	48:BN:41:ASP:HB2	1.13	1.09
48:DN:78:TYR:CD2	60:DA:2642:G:H5"	1.70	1.09
60:BA:529:A:N6	60:BA:2041:U:H3	1.50	1.08
60:BA:2747:G:N2	60:BA:2757:A:H62	1.48	1.08
60:DA:2699:C:N4	60:DA:2708:G:H1	1.51	1.08
11:CL:56:ALA:HB3	11:CL:68:ALA:HB3	1.35	1.07
60:DA:882:G:N2	60:DA:894:C:N3	2.00	1.07
48:BN:78:TYR:CD2	60:BA:2642:G:H4'	1.89	1.07
60:BA:1492:G:H1	60:BA:1498:C:N4	1.52	1.07
20:AA:1492:A:C5'	24:AU:6:5OH:HP	1.83	1.07
48:BN:76:SER:HB3	60:BA:2641:G:H5"	1.11	1.07
48:DN:39:ARG:HH21	48:DN:41:ASP:HB2	1.13	1.07
23:AY:63:ILE:HD11	23:AY:88:VAL:HG11	1.37	1.06
60:DA:1324:G:H1	60:DA:1330:C:N4	1.51	1.06
48:BN:66:LYS:NZ	60:BA:1140:C:OP2	1.87	1.06
48:DN:78:TYR:CE2	60:DA:2642:G:C4'	2.36	1.06
20:AA:687:A:H62	20:AA:703:G:N2	1.53	1.06
60:BA:529:A:N6	60:BA:2041:U:N3	2.02	1.06
60:BA:1320:C:N4	60:BA:1331:A:H62	1.52	1.05
60:DA:529:A:N6	60:DA:2041:U:H3	1.53	1.05
48:BN:131:GLN:HG3	60:BA:7:G:O2'	1.55	1.05
48:BN:65:LYS:NZ	60:BA:1021:A:H5'	1.71	1.04
60:BA:2747:G:H21	60:BA:2757:A:N6	1.54	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DU:63:VAL:HG11	48:DN:42:TRP:CD1	1.92	1.03
48:DN:63:THR:HG21	60:DA:1141:U:P	1.99	1.03
20:AA:687:A:N6	20:AA:703:G:H21	1.56	1.03
60:BA:226:G:H21	60:BA:228:A:H62	1.06	1.03
60:DA:2255:G:H1	60:DA:2275:C:N4	1.54	1.03
23:AY:526:VAL:HB	23:AY:566:THR:HG23	1.40	1.02
39:DU:64:ARG:HD2	48:DN:41:ASP:C	1.83	1.02
20:AA:1493:A:P	24:AU:2:DPP:NG	2.32	1.02
60:BA:1320:C:H42	60:BA:1331:A:N6	1.57	1.01
60:DA:2125:G:N2	60:DA:2173:A:H62	1.57	1.01
28:BF:123:LEU:HB2	28:BF:192:LEU:HD22	1.41	1.01
22:AW:50:C:N4	22:AW:64:G:H1	1.58	1.00
20:CA:950:U:H3	20:CA:1231:G:H1	1.09	1.00
25:DC:44:VAL:HB	25:DC:174:ALA:HB3	1.43	1.00
60:DA:1664:A:H61	60:DA:1996:C:N4	1.57	1.00
60:BA:2681:C:N4	60:BA:2725:A:N6	2.01	1.00
60:DA:460:A:H62	60:DA:469:G:H21	1.03	1.00
60:DA:1664:A:N6	60:DA:1996:C:H42	1.60	1.00
48:DN:78:TYR:CG	60:DA:2642:G:C5'	2.31	1.00
22:CW:12:U:H3	22:CW:23:A:N6	1.59	1.00
60:DA:1347:G:H1	60:DA:1599:C:H42	1.09	1.00
60:DA:2505:G:H22	60:DA:2610:C:N4	1.59	1.00
60:BA:585:G:N2	60:BA:1254:A:H62	1.58	0.99
60:DA:1487:G:H1	60:DA:1502:C:H42	1.10	0.99
28:DF:129:PHE:HE2	28:DF:158:THR:HG1	1.07	0.99
48:DN:78:TYR:HD2	60:DA:2642:G:C5'	1.66	0.99
23:CY:163:VAL:HG13	23:CY:258:VAL:HB	1.42	0.99
23:CY:526:VAL:HB	23:CY:566:THR:HG23	1.44	0.99
60:DA:1416:G:H1	60:DA:1582:C:H42	1.05	0.99
38:BT:49:VAL:HA	38:BT:63:VAL:HA	1.42	0.99
20:CA:1162:C:H42	20:CA:1174:G:H1	1.08	0.99
59:BB:87:G:H21	59:BB:89(B):A:H62	1.03	0.99
60:BA:1003:G:H1	60:BA:1152:C:H42	1.00	0.99
60:BA:2109:U:H3	60:BA:2180:U:H3	1.04	0.99
60:BA:2464:C:H42	60:BA:2486:G:H1	1.03	0.99
60:BA:2681:C:C4	60:BA:2725:A:N6	2.31	0.99
20:AA:815:A:N1	20:AA:1508:G:N2	2.11	0.99
48:DN:78:TYR:CD2	60:DA:2642:G:H4'	1.90	0.99
20:CA:1028:C:H42	20:CA:1033:G:H1	1.04	0.99
20:CA:1056:U:H3	20:CA:1204:A:N6	1.61	0.99
60:DA:131:G:H1	60:DA:148:C:H42	1.05	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:306:U:H3	60:BA:310:A:H62	1.11	0.98
20:CA:514:C:H42	20:CA:537:G:H1	1.03	0.98
60:DA:2125:G:H21	60:DA:2173:A:N6	1.59	0.98
60:DA:2505:G:N2	60:DA:2610:C:H42	1.61	0.98
60:DA:1030:G:H1	60:DA:1124:C:N4	1.61	0.98
60:BA:2505:G:O6	60:BA:2610:C:O2	1.79	0.98
60:DA:1019:U:H3	60:DA:1020:A:N6	1.60	0.98
20:CA:1028:C:N3	20:CA:1033:G:N2	2.10	0.98
60:DA:2290:G:H1	60:DA:2342:C:N4	1.61	0.98
20:AA:1492:A:H5'	24:AU:6:5OH:HRA	1.42	0.98
60:BA:1324:G:H1	60:BA:1330:C:H42	1.00	0.98
20:CA:984:C:H42	20:CA:1221:G:H1	1.04	0.98
23:CY:22:ASP:O	61:CY:702:GNP:O1B	1.80	0.98
60:DA:1305:C:H42	60:DA:1623:G:H1	0.99	0.98
60:DA:1317:A:H61	60:DA:1335:U:H3	1.00	0.98
11:CL:33:ARG:HB3	11:CL:60:LEU:HD12	1.46	0.98
20:CA:418:C:N4	20:CA:425:G:H1	1.60	0.98
22:AW:12:U:H3	22:AW:23:A:N6	1.60	0.97
60:BA:2330:G:H1	60:BA:2385:C:H42	1.08	0.97
60:DA:1359:A:N6	60:DA:1372:U:H3	1.61	0.97
48:BN:65:LYS:NZ	60:BA:1021:A:C5'	2.27	0.97
60:DA:289:A:H62	60:DA:351:G:N2	1.62	0.97
60:DA:585:G:H21	60:DA:1254:A:H62	0.98	0.97
48:DN:133:GLN:HG2	48:DN:135:PRO:HD3	1.45	0.97
35:BQ:120:ILE:HG12	60:BA:2468:G:H5'	1.45	0.97
60:BA:585:G:H21	60:BA:1254:A:N6	1.60	0.97
60:BA:1025:G:O6	60:BA:1139:G:N2	1.98	0.97
20:CA:862:C:H42	20:CA:867:G:H1	1.10	0.97
48:DN:78:TYR:CE2	60:DA:2642:G:H5'	2.00	0.97
25:BC:164:PHE:HA	25:BC:172:ILE:HG13	1.47	0.97
60:DA:1487:G:H1	60:DA:1502:C:N4	1.63	0.97
20:AA:1252:A:H61	20:AA:1285:A:N6	1.62	0.96
60:BA:1664:A:H61	60:BA:1996:C:N4	1.62	0.96
60:DA:1019:U:C2	60:DA:1020:A:N7	2.33	0.96
20:AA:1408:A:N1	24:AU:2:DPP:O	1.98	0.96
48:BN:78:TYR:CG	60:BA:2642:G:C5'	2.48	0.96
60:BA:2405:G:H21	60:BA:2412:A:H62	1.07	0.96
48:BN:78:TYR:HB2	60:BA:2642:G:OP1	1.63	0.96
60:DA:226:G:N2	60:DA:228:A:H62	1.62	0.96
20:AA:1492:A:C5'	24:AU:6:5OH:CB	2.40	0.96
60:DA:882:G:H1	60:DA:894:C:H42	1.10	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BN:131:GLN:CG	60:BA:7:G:O2'	2.13	0.96
48:BN:133:GLN:HG2	48:BN:135:PRO:HD3	1.45	0.96
60:BA:2505:G:N1	60:BA:2610:C:C2	2.32	0.96
60:DA:1447:G:H1	60:DA:1464:C:H42	1.07	0.96
39:DU:64:ARG:HD2	48:DN:41:ASP:N	1.58	0.96
60:DA:24:G:N1	60:DA:516:C:O2	1.97	0.96
60:DA:268:C:H42	60:DA:424:G:H1	1.08	0.96
60:DA:2294:C:H42	60:DA:2338:G:H1	1.08	0.95
20:CA:131:C:N4	20:CA:231:G:H1	1.64	0.95
38:DT:49:VAL:HA	38:DT:63:VAL:HA	1.48	0.95
60:DA:2330:G:H1	60:DA:2385:C:N4	1.64	0.95
60:DA:57:C:N4	60:DA:70:G:H1	1.64	0.95
23:AY:30:GLU:O	23:AY:33:LEU:N	1.98	0.95
8:CI:55:ALA:HB2	8:CI:58:ARG:HH21	1.32	0.95
60:DA:2205:C:H42	60:DA:2219:G:H1	1.05	0.95
60:BA:1664:A:N6	60:BA:1996:C:H42	1.65	0.95
20:CA:27:G:H1	20:CA:556:C:H42	1.14	0.95
60:DA:289:A:N6	60:DA:351:G:H21	1.64	0.95
48:BN:73:THR:HG22	48:BN:84:LYS:HB3	1.49	0.95
28:BF:154:VAL:HG23	28:BF:173:VAL:HG22	1.47	0.95
20:CA:1001:G:N2	20:CA:1039:C:N3	2.13	0.95
20:CA:1116:C:H42	20:CA:1184:G:H1	1.15	0.95
48:DN:76:SER:CB	60:DA:2641:G:C5'	2.31	0.95
60:DA:1628:G:H1	60:DA:1638:C:H42	1.14	0.95
60:BA:2248:C:O2	60:BA:2256:G:N1	1.99	0.95
39:BU:64:ARG:NE	48:BN:41:ASP:HA	1.82	0.94
20:CA:928:G:H1	20:CA:1389:C:N4	1.64	0.94
60:DA:226:G:H21	60:DA:228:A:H62	1.03	0.94
60:BA:2205:C:H42	60:BA:2219:G:H1	1.04	0.94
48:DN:78:TYR:CE2	60:DA:2642:G:C5'	2.51	0.94
60:DA:1281:G:H1	60:DA:1289:C:N4	1.64	0.94
20:CA:772:U:H3	20:CA:807:A:H61	1.04	0.94
48:DN:73:THR:HG22	48:DN:84:LYS:HB3	1.49	0.94
60:DA:1658:C:H42	60:DA:2002:G:H1	0.96	0.94
48:BN:78:TYR:CD2	60:BA:2642:G:C4'	2.50	0.94
59:BB:77:U:H3	59:BB:99:A:H62	1.08	0.94
39:DU:64:ARG:NH2	48:DN:42:TRP:O	2.00	0.94
60:DA:413:C:H42	60:DA:2410:G:H1	1.13	0.94
60:DA:2681:C:H41	60:DA:2725:A:N6	1.66	0.94
20:CA:815:A:H2	20:CA:1527:C:O2	1.43	0.94
60:DA:280:C:H42	60:DA:360:G:H1	1.08	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:1711:C:H42	60:DA:1747:G:H1	1.03	0.94
23:AY:566:THR:HG22	23:AY:567:LEU:H	1.32	0.94
60:BA:1324:G:H1	60:BA:1330:C:N4	1.66	0.94
60:DA:1845:G:H1	60:DA:1895:C:N4	1.64	0.94
20:AA:1493:A:P	24:AU:2:DPP:CB	2.55	0.94
20:CA:1303:C:H42	20:CA:1334:G:H1	1.14	0.94
60:BA:2505:G:C6	60:BA:2610:C:O2	2.20	0.94
23:AY:63:ILE:CD1	23:AY:88:VAL:HG11	1.98	0.94
60:BA:53:A:H62	60:BA:117:G:H21	1.16	0.94
37:DS:40:ILE:HA	37:DS:47:THR:HA	1.50	0.94
22:AW:50:C:H42	22:AW:64:G:H1	1.14	0.93
29:BG:98:ARG:HH11	29:BG:98:ARG:HG2	1.33	0.93
27:DE:13:ARG:HA	27:DE:21:VAL:O	1.67	0.93
60:DA:2459:A:H61	60:DA:2493:U:H3	1.08	0.93
20:AA:1493:A:P	24:AU:2:DPP:HB3	2.08	0.93
60:DA:565:C:N4	60:DA:576:U:H3	1.65	0.93
20:AA:418:C:H42	20:AA:425:G:H1	1.08	0.93
20:AA:1056:U:H3	20:AA:1204:A:H61	0.94	0.93
20:CA:1491:G:H2'	24:CU:6:5OH:HA	1.49	0.93
48:DN:78:TYR:CB	60:DA:2642:G:OP1	2.17	0.93
60:DA:2088:G:H1	60:DA:2231:C:H42	1.10	0.93
20:AA:1252:A:H61	20:AA:1285:A:H61	0.95	0.93
60:BA:459:U:H3	60:BA:470:A:H62	1.17	0.93
60:DA:585:G:N2	60:DA:1254:A:H62	1.66	0.93
20:AA:1493:A:OP1	24:AU:2:DPP:CB	2.15	0.93
20:CA:127:G:H1	20:CA:234:C:H42	1.13	0.93
23:CY:31:ARG:HA	23:CY:33:LEU:HD22	1.50	0.93
60:DA:2737:G:H1	60:DA:2767:C:H42	1.15	0.93
22:AW:11:C:H42	22:AW:24:G:H1	1.09	0.93
60:DA:1448:G:H1	60:DA:1463:C:H42	0.97	0.93
23:CY:138:LYS:HG2	61:CY:702:GNP:C6	1.98	0.93
60:DA:954:G:H1	60:DA:963:U:H3	1.08	0.93
60:DA:1416:G:N2	60:DA:1582:C:N3	2.16	0.93
20:CA:1001:G:H1	20:CA:1039:C:H42	1.04	0.93
48:DN:91:LEU:HA	48:DN:95:PRO:HB3	1.50	0.93
60:DA:134:C:H42	60:DA:145:G:H1	1.13	0.93
60:DA:2681:C:H5	60:DA:2725:A:H61	0.97	0.92
60:BA:1315:C:H42	60:BA:1337:G:H1	1.09	0.92
60:BA:2681:C:H5	60:BA:2725:A:H61	1.01	0.92
20:AA:1252:A:N6	20:AA:1285:A:H61	1.67	0.92
60:DA:2681:C:H41	60:DA:2725:A:H62	1.09	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DP:49:ARG:HB3	54:D8:59:LYS:HE2	1.48	0.92
60:DA:1442:G:H1	60:DA:1549:C:H42	1.16	0.92
60:DA:2810:A:H62	60:DA:2891:G:H21	1.14	0.92
54:B8:53:PRO:HA	54:B8:56:GLU:HB2	1.51	0.92
11:CL:35:GLY:HA3	11:CL:83:VAL:HG22	1.50	0.92
20:CA:506:G:H1	20:CA:525:C:H42	0.97	0.92
20:CA:570:G:H1	20:CA:866:C:H42	1.13	0.92
20:CA:1305:G:N2	20:CA:1332:A:N7	2.18	0.92
23:CY:602:LEU:HB3	23:CY:676:TYR:HB3	1.49	0.92
60:DA:1350:C:H42	60:DA:1381:G:H1	1.11	0.92
60:DA:1685:C:H42	60:DA:1703:G:H1	1.07	0.92
60:DA:2455:G:H1	60:DA:2496:C:N4	1.68	0.92
8:AI:4:TYR:HB2	8:AI:19:LEU:HB2	1.51	0.92
48:BN:78:TYR:CG	60:BA:2642:G:H5"	2.05	0.91
48:DN:15:LEU:HG	48:DN:134:ARG:HE	1.33	0.91
20:AA:321:A:H61	20:AA:332:G:H1	1.17	0.91
44:BZ:151:HIS:HB3	44:BZ:170:THR:HA	1.51	0.91
48:BN:39:ARG:NH2	48:BN:41:ASP:HB2	1.85	0.91
48:BN:91:LEU:HA	48:BN:95:PRO:HB3	1.50	0.91
60:BA:226:G:N2	60:BA:228:A:H62	1.68	0.91
60:BA:1492:G:N2	60:BA:1498:C:N3	2.16	0.91
20:CA:961:U:O2	20:CA:1201:A:N1	2.03	0.91
60:DA:2291:U:H3	60:DA:2341:G:H1	1.16	0.91
60:BA:83:G:N2	60:BA:103:A:N7	2.18	0.91
60:BA:1685:C:H42	60:BA:1703:G:H1	1.01	0.91
42:DX:53:LYS:HB3	42:DX:82:GLN:HB3	1.50	0.91
60:DA:19:C:H42	60:DA:521:G:H1	1.09	0.91
60:DA:1862:G:H1	60:DA:1880:C:H42	1.13	0.91
60:DA:2636:U:H3	60:DA:2782:G:H1	0.95	0.91
60:DA:843:G:H1	60:DA:935:C:H42	0.92	0.91
60:DA:1003:G:H1	60:DA:1152:C:N4	1.69	0.91
60:DA:2455:G:H1	60:DA:2496:C:H42	0.92	0.91
5:AF:9:VAL:HB	5:AF:87:ARG:HB2	1.52	0.91
20:AA:961:U:O2	20:AA:1201:A:N1	2.03	0.91
48:BN:15:LEU:HG	48:BN:134:ARG:HE	1.33	0.91
23:CY:98:MET:HG2	23:CY:125:ALA:HB1	1.51	0.91
28:BF:170:LEU:HG	28:BF:173:VAL:HB	1.50	0.91
20:AA:1056:U:H3	20:AA:1204:A:N6	1.69	0.91
60:DA:1320:C:H42	60:DA:1331:A:H62	1.19	0.91
60:DA:585:G:H21	60:DA:1254:A:N6	1.67	0.91
48:BN:15:LEU:HB2	48:BN:134:ARG:HG2	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:667:G:H1	20:CA:739:C:H42	1.18	0.90
60:DA:80:G:H1	60:DA:106:C:N4	1.69	0.90
60:DA:1003:G:H1	60:DA:1152:C:H42	0.91	0.90
35:DQ:54:MET:HG2	35:DQ:58:PHE:HE2	1.36	0.90
60:BA:2459:A:N6	60:BA:2493:U:H3	1.69	0.90
48:DN:39:ARG:NH2	48:DN:41:ASP:HB2	1.85	0.90
60:BA:2749:A:H62	60:BA:2753:A:H61	1.19	0.90
20:AA:1305:G:N2	20:AA:1332:A:N7	2.20	0.90
20:CA:895:G:H1	20:CA:904:C:H42	0.95	0.90
60:DA:1414:G:H1	60:DA:1588:C:H42	1.00	0.90
60:BA:847:U:HO2'	60:BA:848:G:H8	0.98	0.90
60:BA:1173:G:H21	60:BA:1177:A:H62	1.20	0.90
20:CA:895:G:H1	20:CA:904:C:N4	1.70	0.90
22:CW:50:C:N3	22:CW:64:G:N2	2.20	0.90
60:BA:843:G:H1	60:BA:935:C:H42	1.20	0.90
28:BF:154:VAL:HG12	28:BF:156:LEU:HA	1.52	0.90
54:D8:53:PRO:HA	54:D8:56:GLU:HB2	1.53	0.90
60:DA:882:G:N2	60:DA:894:C:C2	2.39	0.90
60:BA:882:G:N2	60:BA:894:C:C2	2.40	0.90
31:BJ:52:UNK:HA	31:BJ:81:UNK:HA	1.54	0.89
60:BA:2125:G:H21	60:BA:2173:A:H62	0.92	0.89
39:DU:64:ARG:CD	48:DN:41:ASP:C	2.42	0.89
60:DA:843:G:H1	60:DA:935:C:N4	1.68	0.89
60:DA:80:G:H1	60:DA:106:C:H42	0.96	0.89
20:AA:1278:U:H5"	20:AA:1279:A:H5'	1.52	0.89
20:AA:1493:A:P	24:AU:6:5OH:NP	2.44	0.89
60:BA:1479:G:H1	60:BA:1514:U:H3	1.16	0.89
60:DA:699:A:H62	60:DA:733:G:H21	1.13	0.89
34:BP:49:ARG:HB3	54:B8:59:LYS:HE2	1.52	0.89
37:BS:40:ILE:HA	37:BS:47:THR:HA	1.55	0.89
28:DF:154:VAL:HG12	28:DF:156:LEU:HA	1.53	0.89
60:DA:2109:U:H3	60:DA:2180:U:H3	1.19	0.89
60:BA:882:G:H1	60:BA:894:C:H42	1.16	0.89
60:DA:1658:C:N4	60:DA:2002:G:H1	1.69	0.89
60:DA:122:G:H1	60:DA:129:C:H42	1.20	0.89
60:DA:2747:G:N2	60:DA:2757:A:H62	1.69	0.89
60:DA:2747:G:H21	60:DA:2757:A:H62	0.89	0.89
3:AD:175:SER:HB3	3:AD:184:LYS:HB2	1.52	0.89
51:B5:36:CYS:SG	51:B5:37:LYS:N	2.45	0.89
20:CA:131:C:H42	20:CA:231:G:H1	0.90	0.89
60:BA:1076:C:H2'	60:BA:1077:A:H4'	1.55	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:34:TRP:HB2	34:DP:10:PRO:HB2	1.54	0.88
59:DB:24:G:H1	59:DB:59:A:H61	1.21	0.88
48:BN:78:TYR:CG	60:BA:2642:G:H5'	2.08	0.88
20:CA:1237:C:H4'	20:CA:1334:G:H21	1.37	0.88
22:CW:50:C:H42	22:CW:64:G:H1	0.89	0.88
56:De:102:GLY:H	56:De:105:LYS:HG2	1.35	0.88
60:DA:600:G:H1	60:DA:657:U:H3	1.21	0.88
60:DA:1530:G:O6	60:DA:1541:U:O2	1.91	0.88
60:DA:711:G:H1	60:DA:720:C:H42	1.15	0.88
28:BF:154:VAL:H	28:BF:173:VAL:HA	1.37	0.88
60:BA:529:A:N7	60:BA:2041:U:O4	2.07	0.88
20:CA:506:G:H1	20:CA:525:C:N4	1.72	0.88
48:DN:15:LEU:HB2	48:DN:134:ARG:HG2	1.53	0.88
60:DA:1448:G:H1	60:DA:1463:C:N4	1.71	0.88
35:BQ:19:GLY:HA2	35:BQ:98:LYS:HG2	1.54	0.88
10:CK:82:VAL:HB	10:CK:108:ILE:HA	1.55	0.88
20:CA:928:G:H1	20:CA:1389:C:H42	0.89	0.88
39:DU:111:GLU:HA	39:DU:114:LYS:HD2	1.56	0.88
59:DB:14:U:H1'	59:DB:107:U:H1'	1.55	0.88
59:DB:77:U:H3	59:DB:99:A:H62	1.21	0.88
60:DA:277:C:H3'	60:DA:278:A:H8	1.39	0.88
48:BN:78:TYR:CD2	60:BA:2642:G:H5'	2.06	0.88
1:CB:69:LEU:H	1:CB:162:ILE:HA	1.39	0.88
20:CA:514:C:N4	20:CA:537:G:H1	1.71	0.88
28:DF:63:LYS:HE3	28:DF:67:GLN:HE22	1.38	0.88
37:DS:100:ALA:O	37:DS:102:ALA:N	2.06	0.88
60:DA:2505:G:N1	60:DA:2610:C:N3	2.21	0.88
20:CA:442:C:H42	20:CA:492:G:H1	1.20	0.88
48:DN:62:VAL:HG22	48:DN:66:LYS:HG3	1.55	0.88
60:DA:696:G:H1	60:DA:766:C:H42	1.18	0.88
60:BA:572:A:H61	60:BA:2029:G:H1'	1.38	0.88
20:AA:352:C:N3	20:AA:356:A:N6	2.22	0.87
20:AA:1414:U:H2'	20:AA:1415:G:H8	1.37	0.87
60:BA:1025:G:H1	60:BA:1139:G:H1	1.21	0.87
11:AL:71:PRO:HG2	11:AL:102:ARG:HG2	1.57	0.87
28:BF:5:ALA:HB1	28:BF:123:LEU:HD21	1.56	0.87
60:BA:2125:G:N2	60:BA:2173:A:H62	1.71	0.87
60:DA:57:C:H42	60:DA:70:G:H1	0.90	0.87
60:DA:237:C:H42	60:DA:260:G:H1	1.18	0.87
27:BE:174:ASP:HB3	27:BE:183:LEU:HB2	1.54	0.87
20:CA:1028:C:N4	20:CA:1033:G:H1	1.72	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2699:C:N3	60:DA:2708:G:N2	2.22	0.87
60:BA:2699:C:N3	60:BA:2708:G:N2	2.23	0.87
60:DA:2505:G:H22	60:DA:2610:C:H42	0.87	0.87
60:BA:136:G:H1	60:BA:143:C:H42	1.16	0.87
60:BA:2459:A:H61	60:BA:2493:U:H3	0.93	0.87
60:BA:2505:G:N1	60:BA:2610:C:N3	2.22	0.87
34:DP:115:LEU:HA	34:DP:134:ALA:HB2	1.56	0.87
9:CJ:40:LEU:HD22	9:CJ:41:PRO:HD2	1.57	0.87
36:DR:63:ARG:HH22	36:DR:77:ARG:HH12	1.16	0.87
11:AL:113:ARG:HE	11:AL:114:LYS:H	1.23	0.86
23:CY:329:ARG:HB2	23:CY:374:LEU:HG	1.58	0.86
28:DF:154:VAL:HG23	28:DF:173:VAL:HG22	1.56	0.86
60:DA:1281:G:H1	60:DA:1289:C:H42	0.88	0.86
60:DA:2681:C:N4	60:DA:2725:A:N6	2.23	0.86
60:DA:2747:G:H21	60:DA:2757:A:N6	1.74	0.86
34:BP:115:LEU:HA	34:BP:134:ALA:HB2	1.54	0.86
51:B5:3:LYS:HG2	51:B5:5:PRO:HD2	1.58	0.86
48:BN:42:TRP:HA	48:BN:48:MET:HE1	1.58	0.86
20:CA:1414:U:H2'	20:CA:1415:G:H8	1.39	0.86
49:D2:35:LEU:HD21	49:D2:50:ILE:HG12	1.57	0.86
60:DA:743:G:H1	60:DA:754:C:H42	1.23	0.86
20:CA:657:G:H1	20:CA:749:C:H42	1.18	0.86
48:BN:62:VAL:HG22	48:BN:66:LYS:HG3	1.55	0.86
60:BA:1685:C:N4	60:BA:1703:G:H1	1.74	0.86
60:BA:2681:C:H41	60:BA:2725:A:H62	0.90	0.86
20:CA:369:C:N3	20:CA:392:G:N2	2.23	0.86
28:BF:89:VAL:HG21	60:BA:586:A:H5'	1.57	0.86
20:AA:1408:A:H61	24:AU:2:DPP:H	1.20	0.86
60:BA:2699:C:H42	60:BA:2708:G:H1	0.89	0.86
60:DA:1305:C:N4	60:DA:1623:G:H1	1.73	0.86
60:DA:1359:A:H62	60:DA:1372:U:H3	0.87	0.86
60:DA:2330:G:H1	60:DA:2385:C:H42	0.89	0.86
60:BA:1003:G:N2	60:BA:1152:C:N3	2.24	0.85
23:CY:313:ALA:HA	23:CY:328:ILE:HA	1.58	0.85
60:DA:2037:G:H2'	60:DA:2038:G:C8	2.11	0.85
27:DE:61:ARG:HD2	60:DA:2811:G:H5'	1.58	0.85
34:DP:138:LEU:HD21	34:DP:144:GLU:HB2	1.58	0.85
60:DA:1139:G:O2'	60:DA:1140:C:O4'	1.92	0.85
12:AM:114:ARG:HB3	20:AA:1228:C:H5"	1.58	0.85
1:CB:171:ALA:HA	1:CB:174:VAL:HB	1.59	0.85
27:DE:189:PRO:HA	60:DA:2680:C:H5'	1.56	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:947:G:H1	60:BA:970:C:H42	1.25	0.85
20:CA:1124:G:H1	20:CA:1149:C:H42	1.23	0.85
46:D1:20:ARG:HH12	46:D1:24:ALA:HB2	1.39	0.85
60:DA:2290:G:N2	60:DA:2342:C:N3	2.24	0.85
34:BP:61:ARG:HH11	54:B8:13:ARG:HD2	1.42	0.85
3:CD:175:SER:HB3	3:CD:184:LYS:HB2	1.59	0.85
20:CA:923:A:H61	20:CA:1393:U:H3	1.23	0.85
48:DN:111:PRO:HD2	60:DA:558:G:OP2	1.76	0.85
60:BA:1416:G:H1	60:BA:1582:C:H42	1.23	0.85
17:CR:86:VAL:HG12	17:CR:87:ARG:HG3	1.59	0.85
20:CA:1350:A:H61	20:CA:1372:U:H3	1.18	0.85
46:D1:19:GLN:NE2	60:DA:2233:U:OP2	2.09	0.85
60:BA:882:G:C2	60:BA:894:C:N3	2.44	0.85
60:BA:1345:C:H42	60:BA:1601:G:H1	1.25	0.85
20:CA:862:C:N3	20:CA:867:G:N2	2.25	0.85
20:AA:369:C:H42	20:AA:392:G:H1	1.20	0.85
39:BU:64:ARG:NH2	48:BN:42:TRP:O	2.10	0.85
60:BA:119:A:H4'	60:BA:120:U:H5'	1.59	0.85
60:BA:698:C:O2'	60:BA:734:A:N6	2.10	0.85
20:CA:129(A):G:N2	20:CA:186(G):C:O2	2.09	0.85
33:DO:28:SER:HB2	60:DA:2566:A:H61	1.40	0.85
48:DN:42:TRP:HA	48:DN:48:MET:HE1	1.58	0.85
60:DA:947:G:H1	60:DA:970:C:H42	1.19	0.84
60:DA:1414:G:H1	60:DA:1588:C:N4	1.74	0.84
11:AL:80:HIS:O	11:AL:82:VAL:N	2.09	0.84
23:CY:95:GLU:HB3	23:CY:99:ARG:HH21	1.42	0.84
60:DA:1024:G:H1	60:DA:1140:C:H42	1.21	0.84
60:DA:1317:A:N6	60:DA:1335:U:H3	1.75	0.84
60:BA:2205:C:N4	60:BA:2219:G:H1	1.76	0.84
1:CB:71:VAL:HA	1:CB:93:VAL:HB	1.59	0.84
60:DA:136:G:H1	60:DA:143:C:H42	1.25	0.84
60:DA:1752:C:H42	60:DA:1756:G:H1	1.25	0.84
31:BJ:54:UNK:HA	31:BJ:79:UNK:HA	1.58	0.84
60:BA:2447:G:O6	60:BA:2451:A:N6	2.10	0.84
60:DA:1711:C:N4	60:DA:1747:G:H1	1.76	0.84
48:BN:25:ARG:NH2	60:BA:1140:C:O3'	2.10	0.84
20:CA:943:U:O4	20:CA:1340:A:N1	2.10	0.84
60:DA:1076:C:H2'	60:DA:1077:A:H4'	1.58	0.84
20:CA:1056:U:H3	20:CA:1204:A:H61	0.85	0.84
23:CY:566:THR:HG22	23:CY:567:LEU:H	1.43	0.84
1:AB:83:MET:HB2	1:AB:234:PRO:HG3	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:51:ARG:HB3	20:AA:1060:C:H4'	1.59	0.84
20:CA:126:G:H1	20:CA:235:C:H42	1.21	0.84
60:DA:696:G:N2	60:DA:766:C:N3	2.26	0.84
60:BA:529:A:H62	60:BA:2041:U:H3	0.88	0.84
11:CL:102:ARG:HB3	11:CL:109:GLY:H	1.43	0.84
20:CA:1261:A:H62	20:CA:1274:G:H21	1.25	0.84
60:DA:1487:G:N2	60:DA:1502:C:N3	2.25	0.84
60:BA:1317:A:H61	60:BA:1335:U:H3	1.21	0.84
2:CC:11:ARG:HD2	2:CC:15:THR:HB	1.60	0.83
60:BA:1032:A:N1	60:BA:1122:G:O6	2.11	0.83
60:DA:1345:C:H42	60:DA:1601:G:H1	1.26	0.83
14:CO:57:LEU:HD21	20:CA:580:U:H4'	1.60	0.83
48:BN:78:TYR:CE2	60:BA:2642:G:C4'	2.61	0.83
28:BF:124:LEU:HD21	28:BF:126:VAL:HG23	1.59	0.83
23:CY:566:THR:O	23:CY:567:LEU:HD23	1.77	0.83
60:DA:1416:G:H1	60:DA:1582:C:N4	1.75	0.83
11:AL:35:GLY:HA2	11:AL:58:VAL:HG13	1.61	0.83
41:BW:66:GLU:HA	41:BW:69:LEU:HB2	1.58	0.83
46:B1:13:ILE:HG13	46:B1:17:SER:HB2	1.60	0.83
23:CY:63:ILE:HD11	61:CY:702:GNP:O1A	1.78	0.83
60:BA:1135:C:N4	60:BA:1137:G:H3'	1.94	0.83
25:BC:51:ASP:O	25:BC:53:ARG:N	2.11	0.83
60:BA:16:G:H1	60:BA:524:U:H3	0.85	0.83
60:BA:528:A:H61	60:BA:2042:A:H3'	1.44	0.83
60:BA:1090:U:H2'	60:BA:1091:G:C8	2.13	0.83
60:BA:2125:G:H21	60:BA:2173:A:N6	1.75	0.83
7:CH:97:VAL:HB	20:CA:600:C:H5"	1.59	0.83
20:AA:1438:G:H1	20:AA:1463:C:H42	1.24	0.83
48:BN:65:LYS:HZ2	60:BA:1021:A:C5'	1.92	0.83
60:BA:1003:G:H1	60:BA:1152:C:N4	1.76	0.83
20:AA:862:C:H42	20:AA:867:G:H1	1.26	0.82
28:DF:192:LEU:HD23	28:DF:194:MET:HE2	1.61	0.82
39:DU:3:ARG:HB2	60:DA:445:C:H5"	1.61	0.82
60:DA:1845:G:H1	60:DA:1895:C:H42	0.87	0.82
20:CA:984:C:N4	20:CA:1221:G:H1	1.77	0.82
46:D1:25:LYS:HG3	46:D1:34:THR:HA	1.60	0.82
60:DA:1305:C:N3	60:DA:1623:G:N2	2.25	0.82
25:DC:51:ASP:O	25:DC:53:ARG:N	2.11	0.82
60:DA:2651:C:H42	60:DA:2669:G:H1	1.24	0.82
60:BA:1005:C:H42	60:BA:1138:G:H1	1.28	0.82
60:DA:131:G:H1	60:DA:148:C:N4	1.75	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:692:C:H42	60:BA:770:G:H1	1.23	0.82
22:CW:50:C:N4	22:CW:64:G:N1	2.15	0.82
23:CY:484:ARG:HB2	23:CY:602:LEU:HB2	1.59	0.82
8:CI:28:VAL:HG12	8:CI:63:ILE:HB	1.62	0.82
12:CM:101:GLN:NE2	20:CA:949:A:OP1	2.11	0.82
20:CA:1414:U:H2'	20:CA:1415:G:C8	2.14	0.82
35:DQ:98:LYS:HB3	44:DZ:79:ARG:HH12	1.43	0.82
60:DA:529:A:N7	60:DA:2041:U:O4	2.13	0.82
10:AK:31:THR:HA	10:AK:42:TRP:HA	1.60	0.82
16:AQ:31:LEU:HD21	20:AA:301:G:H5'	1.61	0.82
20:AA:1414:U:H2'	20:AA:1415:G:C8	2.13	0.82
25:BC:214:TYR:HD2	25:BC:222:SER:HB2	1.44	0.82
60:BA:2464:C:N4	60:BA:2486:G:H1	1.78	0.82
60:BA:2526:G:H1	60:BA:2537:U:H3	1.28	0.82
26:DD:165:ILE:HG22	26:DD:166:GLN:H	1.45	0.82
60:DA:882:G:C2	60:DA:894:C:N3	2.48	0.82
25:DC:79:ALA:HB1	25:DC:83:LYS:HB2	1.61	0.82
60:DA:981:A:OP2	60:DA:982:C:N4	2.11	0.82
28:BF:154:VAL:HB	28:BF:173:VAL:HG13	1.62	0.82
60:BA:1201:C:H42	60:BA:1244:G:H1	1.25	0.82
20:CA:1321:C:H3'	20:CA:1322:C:H5"	1.62	0.82
51:D5:45:VAL:HG13	51:D5:51:TYR:H	1.44	0.82
27:BE:13:ARG:HA	27:BE:21:VAL:O	1.77	0.81
48:BN:76:SER:HB3	60:BA:2641:G:C5'	2.04	0.81
60:BA:2400:G:H1	60:BA:2416:C:H42	1.27	0.81
59:DB:24:G:H1	59:DB:59:A:N6	1.78	0.81
32:BK:115:LEU:HD12	32:BK:123:ALA:HB1	1.60	0.81
48:DN:78:TYR:HD2	60:DA:2642:G:H5"	1.25	0.81
60:DA:2400:G:H1	60:DA:2416:C:H42	1.25	0.81
17:AR:33:ASP:O	17:AR:36:ASN:ND2	2.13	0.81
48:BN:125:GLY:HA3	48:BN:126:PRO:O	1.80	0.81
52:B6:42:TRP:HA	60:BA:2348:U:H4'	1.63	0.81
60:BA:270(N):U:H4'	60:BA:270(O):G:H5'	1.63	0.81
23:CY:63:ILE:HG13	61:CY:702:GNP:O1G	1.80	0.81
25:DC:164:PHE:HA	25:DC:172:ILE:HG13	1.62	0.81
49:D2:4:SER:HA	49:D2:7:ARG:HD2	1.62	0.81
60:DA:2685:G:H1	60:DA:2724:C:H42	1.23	0.81
60:BA:685:A:OP1	60:BA:686:G:N2	2.12	0.81
23:CY:517:LEU:HD22	23:CY:564:LYS:HB2	1.63	0.81
60:DA:2505:G:O6	60:DA:2610:C:O2	1.99	0.81
59:BB:87:G:N2	59:BB:89(B):A:H62	1.79	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:15:G:H1	60:BA:525:U:H3	1.28	0.81
60:BA:2248:C:N3	60:BA:2256:G:O6	2.13	0.81
18:CS:36:ARG:HH22	18:CS:75:ALA:HB3	1.45	0.81
18:CS:62:ILE:HG13	18:CS:66:MET:HG3	1.61	0.81
25:DC:42:VAL:HA	25:DC:217:THR:HA	1.61	0.81
60:DA:882:G:H1	60:DA:894:C:N4	1.78	0.81
26:BD:261:LYS:HE3	60:BA:2227:A:H5"	1.62	0.81
28:BF:125:LEU:HB3	28:BF:194:MET:HB2	1.63	0.81
28:BF:197:ASP:OD2	28:BF:197:ASP:N	2.14	0.81
29:BG:103:LEU:HA	29:BG:106:LEU:HB3	1.61	0.81
60:BA:2205:C:N3	60:BA:2219:G:N2	2.26	0.81
28:DF:1:MET:HB3	28:DF:3:GLU:HG2	1.62	0.81
48:BN:76:SER:CB	60:BA:2641:G:H5"	2.04	0.81
51:B5:45:VAL:HG13	51:B5:51:TYR:H	1.45	0.81
60:DA:56:A:N1	60:DA:114:U:O4	2.14	0.81
60:DA:270(N):U:H4'	60:DA:270(O):G:H5'	1.61	0.81
60:DA:371:A:H61	60:DA:401:A:H3'	1.45	0.81
48:DN:125:GLY:HA3	48:DN:126:PRO:O	1.80	0.81
60:DA:392:C:H5"	60:DA:409:C:H5"	1.61	0.81
60:DA:2610:C:H4'	60:DA:2611:U:H5'	1.61	0.81
23:AY:33:LEU:HB2	23:AY:50:ALA:HB1	1.63	0.81
60:BA:1858:G:H1'	60:BA:1884:A:N6	1.95	0.81
60:DA:2330:G:N2	60:DA:2385:C:N3	2.26	0.81
26:BD:180:GLY:HA3	26:BD:275:LYS:HB3	1.62	0.81
11:CL:80:HIS:O	11:CL:82:VAL:N	2.14	0.81
60:DA:1030:G:N2	60:DA:1124:C:N3	2.27	0.81
60:DA:2205:C:N4	60:DA:2219:G:H1	1.77	0.81
59:BB:21:G:H1	59:BB:62:C:H42	1.29	0.80
60:BA:2393:A:H62	60:BA:2422:A:H61	1.25	0.80
32:DK:89:HIS:HA	60:DA:1064:C:H4'	1.63	0.80
60:DA:2454:G:H1	60:DA:2498:C:H42	1.29	0.80
26:BD:63:ARG:H	26:BD:87:ASN:HD21	1.27	0.80
27:BE:111:ARG:HA	36:BR:2:ARG:HG3	1.62	0.80
60:BA:1479:G:N2	60:BA:1514:U:O2	2.11	0.80
20:CA:1001:G:H1	20:CA:1039:C:N4	1.79	0.80
23:CY:138:LYS:HG2	61:CY:702:GNP:N1	1.96	0.80
60:DA:474:G:OP2	60:DA:508:G:N2	2.14	0.80
46:B1:18:ILE:HG12	46:B1:20:ARG:H	1.43	0.80
48:BN:65:LYS:HZ1	60:BA:1021:A:C5'	1.95	0.80
60:BA:2734:A:H62	60:BA:2770:G:H21	1.27	0.80
44:DZ:151:HIS:HB3	44:DZ:170:THR:HA	1.61	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:268:C:N4	60:DA:424:G:H1	1.79	0.80
2:AC:67:THR:HA	2:AC:102:ASN:HB3	1.64	0.80
11:AL:31:PRO:HB3	20:AA:553:A:O4'	1.82	0.80
27:BE:65:GLY:HA2	27:BE:70:ALA:HA	1.64	0.80
60:BA:503:A:H4'	60:BA:504:U:H5"	1.63	0.80
20:CA:862:C:N4	20:CA:867:G:H1	1.79	0.80
46:D1:88:LYS:NZ	60:DA:1361:G:OP1	2.14	0.80
1:AB:60:ASP:HB3	1:AB:64:ARG:HH21	1.47	0.80
1:AB:169:LYS:O	1:AB:172:ILE:N	2.11	0.80
11:CL:71:PRO:HD3	11:CL:100:ILE:HB	1.63	0.80
48:DN:78:TYR:HE2	60:DA:2642:G:H4'	1.37	0.80
60:DA:1030:G:H1	60:DA:1124:C:H42	0.86	0.80
40:BV:24:LYS:HA	40:BV:92:THR:HG23	1.62	0.80
48:BN:111:PRO:HA	48:BN:114:ARG:NH1	1.97	0.80
23:CY:608:VAL:HG21	23:CY:652:MET:HE2	1.62	0.80
29:DG:118:ARG:HG2	60:DA:888:C:H1'	1.62	0.80
35:DQ:60:ARG:H	44:DZ:179:ASP:HB3	1.47	0.80
16:AQ:10:VAL:HA	16:AQ:21:VAL:HG22	1.62	0.80
22:AW:11:C:N4	22:AW:24:G:H1	1.80	0.80
60:BA:1278:A:H2'	60:BA:1279:G:C8	2.17	0.80
1:CB:83:MET:HB2	1:CB:234:PRO:HG3	1.64	0.80
29:DG:105:LYS:HZ1	47:D4:31:ILE:HG21	1.46	0.80
60:DA:1676:A:H2'	60:DA:1677:A:C8	2.17	0.80
6:AG:87:VAL:HG22	6:AG:151:TYR:HB3	1.62	0.80
20:AA:114:U:H3	20:AA:313:A:H2	1.27	0.80
20:AA:1493:A:OP2	24:AU:2:DPP:NG	2.15	0.80
60:BA:392:C:H5"	60:BA:409:C:H5"	1.62	0.80
60:BA:1676:A:H2'	60:BA:1677:A:C8	2.16	0.80
25:DC:139:PRO:HA	25:DC:145:THR:HB	1.64	0.80
1:AB:71:VAL:HA	1:AB:93:VAL:HB	1.64	0.80
3:AD:164:ALA:O	3:AD:168:ARG:NH1	2.15	0.80
30:BH:85:LYS:HE3	30:BH:145:ALA:HB2	1.64	0.80
3:CD:61:LYS:HG2	3:CD:203:VAL:HG13	1.63	0.80
4:CE:10:MET:HB3	4:CE:32:VAL:HG22	1.61	0.80
7:CH:89:PRO:HA	7:CH:92:ARG:HH22	1.44	0.80
39:DU:25:TRP:HD1	39:DU:26:GLY:H	1.30	0.80
48:DN:112:LEU:HD23	48:DN:113:GLY:N	1.96	0.80
12:AM:101:GLN:NE2	20:AA:949:A:OP1	2.15	0.80
48:BN:39:ARG:HH21	48:BN:41:ASP:CB	1.93	0.80
3:CD:57:ARG:HH21	4:CE:107:ARG:HH21	1.28	0.80
11:CL:53:ARG:HG2	11:CL:93:LEU:HD22	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:216:THR:HG21	60:DA:2176:A:H4'	1.64	0.80
46:D1:86:SER:HB2	46:D1:89:GLU:HB2	1.63	0.80
60:DA:8:A:N1	60:DA:2895:U:O4	2.15	0.80
4:AE:151:LEU:HB3	7:AH:79:VAL:HG22	1.62	0.79
29:BG:66:GLN:HG2	47:B4:1:MET:HG2	1.64	0.79
39:BU:85:LYS:HG3	39:BU:117:GLN:HG2	1.64	0.79
60:BA:642:G:N2	60:BA:645:C:OP2	2.16	0.79
60:BA:1315:C:N4	60:BA:1337:G:H1	1.80	0.79
29:DG:103:LEU:HA	29:DG:106:LEU:HB3	1.64	0.79
18:AS:66:MET:O	18:AS:69:HIS:ND1	2.15	0.79
48:BN:112:LEU:HD23	48:BN:113:GLY:N	1.96	0.79
48:BN:131:GLN:HG3	60:BA:7:G:HO2'	1.44	0.79
60:BA:576:U:H5"	60:BA:2502:G:H2'	1.64	0.79
60:BA:2679:A:H61	60:BA:2728:U:H3	1.30	0.79
1:CB:70:PHE:O	1:CB:93:VAL:N	2.14	0.79
22:CW:11:C:H42	22:CW:24:G:H1	1.28	0.79
28:DF:155:LEU:HD22	28:DF:186:ILE:HB	1.63	0.79
60:DA:1018:C:H2'	60:DA:1019:U:H6	1.46	0.79
20:AA:526:C:H2'	20:AA:527:G:H4'	1.65	0.79
60:BA:1007:C:H5"	60:BA:1008:C:H2'	1.62	0.79
40:DV:15:GLU:HB3	40:DV:16:PRO:HD2	1.64	0.79
48:DN:55:VAL:HB	48:DN:126:PRO:HB3	1.65	0.79
60:DA:1854:A:H62	60:DA:1888:G:H8	1.29	0.79
20:AA:443:C:H42	20:AA:491:G:H1	1.27	0.79
26:BD:54:ARG:HH22	60:BA:1822:G:H5"	1.48	0.79
60:DA:289:A:H62	60:DA:351:G:H21	0.83	0.79
11:AL:102:ARG:HB3	11:AL:109:GLY:H	1.46	0.79
28:BF:117:ARG:HB2	28:BF:186:ILE:HD11	1.62	0.79
20:CA:657:G:H1	20:CA:749:C:N4	1.81	0.79
28:DF:154:VAL:HB	28:DF:173:VAL:HG13	1.64	0.79
60:DA:2675:A:H61	60:DA:2732:G:H1	1.30	0.79
60:BA:882:G:H1	60:BA:894:C:N4	1.80	0.79
39:DU:28:ARG:NH1	39:DU:38:THR:OG1	2.15	0.79
60:DA:280:C:N3	60:DA:360:G:N2	2.29	0.79
1:CB:101:MET:HB2	1:CB:102:LEU:HD12	1.65	0.79
20:CA:667:G:H1	20:CA:739:C:N4	1.79	0.79
35:DQ:19:GLY:HA2	35:DQ:98:LYS:HG2	1.64	0.79
60:DA:741:G:H1	60:DA:756:C:H42	1.28	0.79
20:AA:943:U:O4	20:AA:1340:A:N1	2.16	0.79
25:BC:26:ALA:O	25:BC:30:VAL:HB	1.82	0.79
26:BD:177:LEU:HD23	26:BD:178:PRO:HD2	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:111:ALA:HA	28:DF:202:PHE:HZ	1.47	0.79
48:DN:111:PRO:HA	48:DN:114:ARG:NH1	1.97	0.79
60:DA:2503:A:O2'	60:DA:2505:G:OP2	1.99	0.79
22:AW:50:C:N3	22:AW:64:G:N2	2.31	0.79
39:BU:64:ARG:CD	48:BN:41:ASP:CA	2.18	0.79
18:AS:31:ILE:HG12	18:AS:49:ILE:HA	1.65	0.79
41:BW:82:LEU:HB2	41:BW:98:LYS:HB2	1.65	0.79
60:BA:2330:G:H1	60:BA:2385:C:N4	1.81	0.79
60:DA:1003:G:N2	60:DA:1152:C:N3	2.25	0.79
60:DA:1447:G:H1	60:DA:1464:C:N4	1.81	0.79
20:AA:115:G:O2'	20:AA:116:A:OP2	1.99	0.78
60:BA:1487:G:H1	60:BA:1502:C:H42	1.31	0.78
41:DW:20:VAL:HG21	41:DW:43:GLY:HA3	1.62	0.78
60:DA:1414:G:N2	60:DA:1588:C:N3	2.29	0.78
60:DA:2459:A:N6	60:DA:2493:U:H3	1.82	0.78
27:BE:61:ARG:HD2	60:BA:2811:G:H5'	1.65	0.78
46:B1:50:ARG:NH2	60:BA:2206:C:OP2	2.14	0.78
20:CA:115:G:O2'	20:CA:116:A:OP2	2.00	0.78
60:DA:2699:C:H42	60:DA:2708:G:H1	0.82	0.78
23:AY:31:ARG:HA	23:AY:33:LEU:HD22	1.64	0.78
20:CA:570:G:H1	20:CA:866:C:N4	1.79	0.78
39:DU:90:VAL:HG11	40:DV:11:GLN:HE22	1.49	0.78
48:DN:120:LEU:HD21	48:DN:122:VAL:HG23	1.64	0.78
60:DA:814:C:H42	60:DA:1193:G:H1	1.31	0.78
60:DA:1795:C:H42	60:DA:1824:G:H1	1.31	0.78
60:DA:2290:G:H1	60:DA:2342:C:H42	0.85	0.78
22:AW:29:U:H2'	22:AW:30:C:C6	2.19	0.78
23:CY:26:THR:OG1	61:CY:702:GNP:O2B	2.02	0.78
60:DA:1044:G:H4'	60:DA:1048:A:H1'	1.65	0.78
60:DA:2854:G:H1	60:DA:2863:C:H42	1.31	0.78
43:BY:97:ARG:NH2	60:BA:300:A:OP2	2.17	0.78
48:BN:65:LYS:HZ1	60:BA:1021:A:H5'	1.46	0.78
60:BA:1230:C:H2'	60:BA:1231:G:H8	1.49	0.78
60:BA:2105:C:H2'	60:BA:2106:G:C8	2.18	0.78
9:CJ:80:LYS:HB3	9:CJ:84:GLN:HE22	1.48	0.78
55:D9:30:PRO:HB2	60:DA:2527:C:H5"	1.64	0.78
60:DA:226:G:H21	60:DA:228:A:N6	1.81	0.78
25:BC:120:VAL:O	25:BC:124:VAL:N	2.11	0.78
60:BA:1024:G:H3'	60:BA:1025:G:H5"	1.66	0.78
23:CY:22:ASP:HB3	61:CY:702:GNP:H5'2	1.65	0.78
23:CY:161:PRO:O	23:CY:256:THR:N	2.17	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:418:C:N4	20:AA:425:G:H1	1.81	0.78
39:BU:62:ILE:HD11	39:BU:93:LYS:HD2	1.66	0.78
48:BN:55:VAL:HB	48:BN:126:PRO:HB3	1.65	0.78
60:BA:2151:G:H2'	60:BA:2152:G:H8	1.48	0.78
15:CP:57:ARG:NH2	15:CP:81:ARG:O	2.17	0.78
20:CA:418:C:H42	20:CA:425:G:H1	0.85	0.78
33:DO:68:GLU:HB3	33:DO:78:ARG:HB2	1.65	0.78
60:DA:1347:G:H1	60:DA:1599:C:N4	1.82	0.78
59:BB:87:G:H21	59:BB:89(B):A:N6	1.82	0.78
60:BA:1628:G:H1	60:BA:1638:C:H42	1.32	0.78
60:BA:2405:G:N2	60:BA:2412:A:H62	1.82	0.78
25:DC:63:VAL:HG13	25:DC:162:ILE:HB	1.66	0.78
30:DH:85:LYS:HE3	30:DH:145:ALA:HB2	1.65	0.78
15:CP:81:ARG:HH22	20:CA:474:G:H5'	1.49	0.78
19:CT:66:ALA:HB1	19:CT:72:LEU:HB2	1.66	0.78
60:DA:813:U:HO2'	60:DA:1225:G:HO2'	1.30	0.78
20:AA:1492:A:O5'	24:AU:6:5OH:HP	1.83	0.78
38:BT:117:ASP:HB3	38:BT:120:ARG:HG2	1.66	0.78
60:DA:460:A:H62	60:DA:469:G:N2	1.82	0.78
60:BA:2675:A:H61	60:BA:2732:G:H1	1.32	0.77
30:DH:41:MET:HE1	30:DH:43:VAL:HG22	1.65	0.77
31:DJ:54:UNK:O	60:DA:1106:G:O2'	2.02	0.77
5:AF:43:LEU:HD21	5:AF:46:ARG:HD2	1.65	0.77
20:AA:312:C:H2'	20:AA:313:A:C8	2.19	0.77
20:AA:369:C:N4	20:AA:392:G:H1	1.80	0.77
20:AA:663:A:H61	20:AA:742:G:H1	1.32	0.77
19:CT:75:ASN:HB2	20:CA:262:A:H4'	1.67	0.77
48:DN:28:THR:HA	48:DN:106:MET:HE1	1.66	0.77
48:DN:39:ARG:HH21	48:DN:41:ASP:CB	1.93	0.77
23:AY:13:ARG:HH21	23:AY:277:VAL:HG23	1.50	0.77
48:BN:120:LEU:HD21	48:BN:122:VAL:HG23	1.64	0.77
20:CA:516:U:O2	20:CA:533:A:N7	2.17	0.77
48:BN:28:THR:HA	48:BN:106:MET:HE1	1.66	0.77
59:BB:80:U:O2'	60:BA:918:A:N3	2.17	0.77
34:DP:121:LYS:HG3	34:DP:123:LEU:HD22	1.67	0.77
59:DB:24:G:O2'	59:DB:27:C:N4	2.16	0.77
20:AA:68(H):G:H1	20:AA:68(R):C:H42	1.30	0.77
1:CB:169:LYS:O	1:CB:172:ILE:N	2.16	0.77
11:CL:93:LEU:HG	11:CL:96:VAL:HG22	1.64	0.77
60:DA:1675:C:H3'	60:DA:1676:A:H8	1.49	0.77
60:DA:2810:A:H62	60:DA:2891:G:N2	1.83	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:85:ARG:HG2	10:AK:111:ASP:HB3	1.66	0.77
11:AL:90:VAL:HG22	11:AL:96:VAL:HG11	1.65	0.77
20:AA:114:U:O4	20:AA:313:A:N1	2.16	0.77
23:AY:342:TYR:HD1	23:AY:349:LYS:HG2	1.50	0.77
20:CA:68(H):G:H1	20:CA:68(R):C:H42	1.32	0.77
60:DA:2088:G:H1	60:DA:2231:C:N4	1.81	0.77
33:BO:28:SER:HB2	60:BA:2566:A:H61	1.49	0.77
60:BA:2503:A:O2'	60:BA:2505:G:OP2	2.02	0.77
9:CJ:16:LEU:HD12	9:CJ:70:ARG:HH11	1.47	0.77
25:DC:39:ASP:HB3	25:DC:178:LYS:HD2	1.66	0.77
4:AE:10:MET:HB3	4:AE:32:VAL:HG22	1.64	0.77
11:AL:86:ARG:HG3	11:AL:99:HIS:HB2	1.66	0.77
25:BC:65:LEU:O	25:BC:67:HIS:N	2.18	0.77
27:BE:105:THR:HB	27:BE:197:ILE:HG23	1.64	0.77
60:BA:712:G:H1	60:BA:719:C:H42	1.32	0.77
12:CM:114:ARG:HB3	20:CA:1228:C:H5"	1.65	0.77
28:DF:29:ASN:HB3	28:DF:32:LEU:HB2	1.66	0.77
51:D5:22:HIS:NE2	60:DA:2045:C:O2	2.17	0.77
32:BK:89:HIS:HA	60:BA:1064:C:H4'	1.67	0.77
51:B5:12:SER:HB2	60:BA:2020:A:H5'	1.65	0.77
60:BA:529:A:N6	60:BA:2041:U:C2	2.51	0.77
8:CI:4:TYR:HB2	8:CI:19:LEU:HB2	1.66	0.77
37:DS:106:ARG:HE	37:DS:108:GLY:HA3	1.48	0.77
39:DU:51:LYS:HB3	39:DU:55:ARG:HH21	1.49	0.77
60:DA:134:C:N4	60:DA:145:G:H1	1.82	0.77
60:DA:648:G:H2'	60:DA:649:G:H8	1.47	0.77
60:DA:1350:C:N4	60:DA:1381:G:H1	1.83	0.77
60:DA:2593:U:H3	60:DA:2600:A:H61	1.33	0.77
5:AF:5:GLU:HB2	5:AF:91:VAL:HG12	1.65	0.77
17:AR:25:THR:HG22	17:AR:42:ARG:HH11	1.50	0.77
23:AY:19:ALA:H	23:AY:25:LYS:HD3	1.49	0.77
26:BD:244:ARG:HG2	26:BD:245:PRO:HA	1.65	0.77
42:BX:12:VAL:O	42:BX:29:TRP:NE1	2.18	0.77
44:BZ:82:ARG:HG2	44:BZ:83:PRO:HD2	1.66	0.77
51:D5:3:LYS:HG2	51:D5:4:HIS:H	1.49	0.77
29:BG:27:ASN:HD21	59:BB:56:G:H5"	1.49	0.76
46:B1:23:LYS:HE2	46:B1:33:LYS:HD3	1.67	0.76
60:BA:289:A:H62	60:BA:351:G:H21	0.77	0.76
31:DJ:25:UNK:HA	31:DJ:80:UNK:HA	1.68	0.76
32:DK:91:PRO:HA	32:DK:135:GLY:HA2	1.66	0.76
40:DV:6:LYS:HB3	40:DV:37:VAL:HG11	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:667:G:H1	20:AA:739:C:H42	1.32	0.76
20:CA:772:U:H3	20:CA:807:A:N6	1.82	0.76
39:DU:64:ARG:HD3	48:DN:42:TRP:N	2.00	0.76
11:AL:123:LYS:HA	20:AA:36:C:H5"	1.67	0.76
16:AQ:45:HIS:HB3	16:AQ:72:ARG:HG2	1.66	0.76
60:BA:1636:C:H2'	60:BA:1637:A:H8	1.51	0.76
60:BA:2047:U:O2'	60:BA:2823:A:N1	2.19	0.76
60:BA:2793:G:N1	60:BA:2803:C:O2	2.17	0.76
20:CA:657:G:N2	20:CA:749:C:N3	2.32	0.76
44:DZ:137:ILE:HG21	44:DZ:155:LEU:HD12	1.66	0.76
60:DA:280:C:N4	60:DA:360:G:H1	1.82	0.76
60:DA:1685:C:N4	60:DA:1703:G:H1	1.80	0.76
23:AY:609:GLU:HA	23:AY:643:ILE:O	1.86	0.76
60:BA:1248:G:H3'	60:BA:1249:U:H5"	1.65	0.76
60:BA:2207:C:H42	60:BA:2217:G:H1	1.33	0.76
20:CA:1162:C:N4	20:CA:1174:G:H1	1.83	0.76
23:CY:246:ILE:O	23:CY:250:THR:OG1	2.03	0.76
23:CY:316:ILE:HD12	23:CY:326:THR:HG22	1.66	0.76
26:DD:165:ILE:HA	26:DD:175:LEU:HA	1.66	0.76
60:DA:1090:U:H2'	60:DA:1091:G:C8	2.20	0.76
60:DA:2447:G:O6	60:DA:2451:A:N6	2.19	0.76
60:DA:2749:A:H62	60:DA:2753:A:H61	1.34	0.76
20:AA:129(A):G:N2	20:AA:186(G):C:O2	2.18	0.76
34:DP:56:SER:O	34:DP:58:THR:N	2.19	0.76
36:DR:41:ALA:HB1	36:DR:97:VAL:HG11	1.68	0.76
60:BA:813:U:HO2'	60:BA:1225:G:HO2'	1.33	0.76
60:BA:1138:G:O2'	60:BA:1139:G:O4'	2.04	0.76
60:BA:2031:A:H2'	60:BA:2454:G:H21	1.51	0.76
60:BA:2778:A:N3	60:BA:2780:G:N2	2.34	0.76
20:CA:418:C:N3	20:CA:425:G:N2	2.32	0.76
60:DA:1948:G:H1	60:DA:1958:C:H42	1.34	0.76
20:AA:1492:A:C5'	24:AU:6:5OH:HRA	2.16	0.76
60:BA:2472:G:H21	60:BA:2478:A:H62	1.29	0.76
9:CJ:70:ARG:HH21	20:CA:1151:A:H4'	1.51	0.76
10:CK:81:ASP:OD1	10:CK:107:SER:OG	2.04	0.76
20:CA:1007:C:N3	20:CA:1022:G:N2	2.29	0.76
20:CA:1512:U:H2'	20:CA:1513:A:C8	2.20	0.76
22:CW:64:G:C2	22:CW:65:U:N3	2.54	0.76
27:DE:58:ARG:NH2	60:DA:2830:G:OP1	2.19	0.76
31:DJ:64:UNK:O	31:DJ:68:UNK:N	2.19	0.76
48:DN:19:GLU:HA	48:DN:59:LYS:O	1.86	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1408:A:N1	24:AU:2:DPP:C	2.48	0.76
48:BN:15:LEU:HD12	48:BN:136:GLU:HG3	1.68	0.76
48:BN:19:GLU:HA	48:BN:59:LYS:O	1.86	0.76
60:BA:581:C:H2'	60:BA:582:G:C8	2.20	0.76
60:BA:938:G:H2'	60:BA:939:G:C8	2.20	0.76
60:BA:2043:C:OP2	60:BA:2777:G:O2'	2.04	0.76
9:CJ:49:VAL:HG23	13:CN:41:ARG:HB2	1.68	0.76
10:CK:118:GLY:HA2	20:CA:716:A:H1'	1.68	0.76
23:CY:289:ILE:H	23:CY:289:ILE:HD12	1.50	0.76
39:DU:15:LYS:NZ	60:DA:1217:C:OP1	2.18	0.76
3:AD:4:TYR:OH	3:AD:10:ARG:NH1	2.18	0.76
39:BU:49:HIS:CD2	60:BA:559:G:H22	2.03	0.76
23:CY:409:ILE:HG13	23:CY:656:ALA:HB3	1.67	0.76
51:D5:36:CYS:SG	51:D5:37:LYS:N	2.59	0.76
25:DC:75:VAL:HG21	25:DC:154:ILE:HG12	1.67	0.76
25:DC:78:ILE:HG21	25:DC:124:VAL:HG21	1.65	0.76
60:DA:1442:G:N2	60:DA:1549:C:N3	2.31	0.76
14:AO:28:GLN:HG2	20:AA:657:G:H4'	1.68	0.75
22:AW:12:U:H3	22:AW:23:A:H61	0.83	0.75
60:BA:1416:G:N2	60:BA:1582:C:N3	2.34	0.75
60:BA:2525:G:H2'	60:BA:2526:G:H8	1.52	0.75
10:CK:123:LYS:HA	10:CK:126:ARG:HB3	1.68	0.75
46:D1:25:LYS:HG2	46:D1:26:ARG:H	1.50	0.75
60:DA:1347:G:N2	60:DA:1599:C:N3	2.32	0.75
60:DA:2287:A:H62	60:DA:2344:U:H3	1.34	0.75
1:AB:166:ASP:HA	1:AB:188:ALA:HB2	1.67	0.75
22:AW:12:U:O2	22:AW:23:A:N1	2.19	0.75
27:BE:117:MET:HA	27:BE:122:PHE:H	1.49	0.75
20:CA:218:C:H5'	20:CA:458(C):G:H1	1.50	0.75
25:DC:42:VAL:O	25:DC:44:VAL:N	2.18	0.75
11:AL:51:ALA:HB1	11:AL:53:ARG:HD2	1.68	0.75
14:AO:53:HIS:HA	14:AO:56:LEU:HD23	1.67	0.75
20:AA:218:C:H5'	20:AA:458(C):G:H1	1.49	0.75
59:BB:44:G:H4'	59:BB:45:A:H5"	1.67	0.75
23:CY:163:VAL:HA	23:CY:258:VAL:H	1.50	0.75
46:D1:48:LYS:HE2	46:D1:61:ARG:HG2	1.67	0.75
48:DN:76:SER:HB2	60:DA:2641:G:H4'	1.67	0.75
60:DA:2812:G:H1	60:DA:2888:C:H42	1.33	0.75
2:AC:153:VAL:HG12	2:AC:198:VAL:HG22	1.69	0.75
46:B1:19:GLN:HB3	46:B1:40:ARG:HD3	1.66	0.75
19:CT:81:LYS:HG2	19:CT:85:MET:HE2	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:950:U:O2	20:CA:1231:G:N2	2.15	0.75
60:DA:1442:G:H1	60:DA:1549:C:N4	1.84	0.75
60:DA:2040:C:H2'	60:DA:2041:U:C6	2.20	0.75
20:AA:862:C:N3	20:AA:867:G:N2	2.34	0.75
23:AY:163:VAL:HA	23:AY:258:VAL:H	1.52	0.75
46:B1:88:LYS:NZ	60:BA:1361:G:OP1	2.19	0.75
48:BN:65:LYS:HZ2	60:BA:1021:A:H5"	1.50	0.75
60:BA:1664:A:H61	60:BA:1996:C:H42	0.82	0.75
25:DC:8:TYR:HA	25:DC:11:LEU:HB2	1.68	0.75
39:DU:49:HIS:CD2	60:DA:559:G:H22	2.04	0.75
46:D1:13:ILE:HG13	46:D1:17:SER:HB2	1.69	0.75
60:DA:459:U:H3	60:DA:470:A:H62	1.33	0.75
60:DA:1447:G:N2	60:DA:1464:C:N3	2.32	0.75
60:DA:1674:G:H21	60:DA:1677:A:H61	1.34	0.75
10:AK:30:VAL:HG21	10:AK:65:ALA:HA	1.69	0.75
11:AL:15:ARG:NH1	20:AA:563:A:N3	2.35	0.75
27:BE:143:ASN:ND2	27:BE:146:THR:O	2.20	0.75
60:BA:575:A:OP2	60:BA:2499:C:O2'	2.05	0.75
9:CJ:51:ARG:HB3	20:CA:1060:C:H4'	1.67	0.75
41:DW:82:LEU:HB2	41:DW:98:LYS:HB2	1.68	0.75
51:D5:3:LYS:HG2	51:D5:5:PRO:HD2	1.68	0.75
60:DA:2635:C:H42	60:DA:2783:G:H1	1.35	0.75
60:BA:1230:C:H2'	60:BA:1231:G:C8	2.20	0.75
20:CA:925:G:O2'	20:CA:927:G:OP1	2.04	0.75
20:CA:1491:G:H2'	24:CU:6:5OH:CA	2.16	0.75
23:CY:98:MET:HG3	23:CY:130:VAL:HG11	1.69	0.75
45:D0:24:LYS:N	45:D0:37:LEU:O	2.15	0.75
60:DA:1359:A:N7	60:DA:1372:U:O4	2.19	0.75
60:DA:1771:C:H42	60:DA:1980:G:H1	1.33	0.75
60:DA:2255:G:H1	60:DA:2275:C:H42	0.80	0.75
60:BA:1101:U:H2'	60:BA:1102:C:C6	2.21	0.75
60:DA:565:C:H42	60:DA:576:U:H3	0.81	0.75
60:BA:2092:U:O2'	60:BA:2093:G:OP2	2.04	0.75
4:CE:148:VAL:HG13	4:CE:152:ARG:HD2	1.67	0.75
20:CA:369:C:H42	20:CA:392:G:H1	0.77	0.75
20:CA:1303:C:N4	20:CA:1334:G:H1	1.85	0.75
36:DR:97:VAL:HG22	36:DR:114:VAL:HA	1.67	0.75
41:DW:68:ARG:HB3	41:DW:110:LYS:H	1.50	0.75
11:AL:39:VAL:HG12	11:AL:40:VAL:H	1.52	0.74
27:BE:146:THR:O	60:BA:2571:C:O2'	2.05	0.74
37:BS:17:ARG:HA	37:BS:20:ARG:HB2	1.66	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:136:G:N2	60:BA:143:C:N3	2.34	0.74
60:BA:1771:C:H42	60:BA:1980:G:H1	1.33	0.74
60:BA:2734:A:H62	60:BA:2770:G:N2	1.85	0.74
26:DD:164:GLN:O	26:DD:164:GLN:NE2	2.19	0.74
2:AC:32:LEU:HD22	2:AC:59:ARG:HH22	1.52	0.74
20:AA:1026:G:O6	20:AA:1035:A:N1	2.19	0.74
23:AY:106:VAL:HG23	23:AY:132:ARG:HG3	1.69	0.74
23:AY:517:LEU:HD22	23:AY:564:LYS:HB2	1.69	0.74
60:BA:355:G:H2'	60:BA:356:G:H8	1.52	0.74
28:DF:88:VAL:HG22	28:DF:89:VAL:H	1.52	0.74
31:DJ:52:UNK:HA	31:DJ:81:UNK:HA	1.68	0.74
45:D0:74:ARG:NH2	59:DB:15:A:N7	2.33	0.74
60:DA:19:C:N4	60:DA:521:G:H1	1.83	0.74
35:BQ:73:PRO:HB3	35:BQ:90:VAL:HG12	1.69	0.74
41:BW:4:LYS:NZ	60:BA:495:G:OP1	2.19	0.74
46:B1:46:LEU:HD23	46:B1:61:ARG:HH12	1.53	0.74
3:CD:43:HIS:HA	3:CD:46:LYS:HD3	1.69	0.74
26:DD:244:ARG:HG2	26:DD:245:PRO:HA	1.69	0.74
60:DA:852:G:H2'	60:DA:853:G:C8	2.22	0.74
3:AD:57:ARG:NH1	3:AD:205:GLU:HB2	2.03	0.74
6:AG:67:GLU:HA	6:AG:70:LYS:HD2	1.69	0.74
9:AJ:70:ARG:HH21	20:AA:1151:A:H4'	1.51	0.74
20:AA:1493:A:OP2	24:AU:6:5OH:CQ	2.35	0.74
43:BY:73:ARG:NH2	60:BA:302:C:OP2	2.18	0.74
60:BA:979:G:H2'	60:BA:982:C:H42	1.53	0.74
10:CK:108:ILE:HB	17:CR:87:ARG:HA	1.68	0.74
16:CQ:45:HIS:HB3	16:CQ:72:ARG:HG2	1.68	0.74
20:CA:923:A:N6	20:CA:1393:U:H3	1.85	0.74
28:DF:103:LYS:HE3	28:DF:107:LYS:HE3	1.66	0.74
46:D1:50:ARG:NH2	60:DA:2206:C:OP2	2.20	0.74
60:DA:1324:G:H1	60:DA:1330:C:H42	0.77	0.74
60:DA:2205:C:N3	60:DA:2219:G:N2	2.31	0.74
20:AA:115:G:HO2'	20:AA:116:A:P	2.11	0.74
28:BF:156:LEU:HD12	28:BF:193:VAL:HB	1.70	0.74
37:BS:100:ALA:O	37:BS:102:ALA:N	2.20	0.74
60:BA:413:C:H42	60:BA:2410:G:H1	1.32	0.74
60:DA:2455:G:N2	60:DA:2496:C:N3	2.33	0.74
22:AW:4:U:O4	22:AW:69:A:N1	2.20	0.74
25:BC:75:VAL:HG21	25:BC:154:ILE:HG12	1.67	0.74
28:BF:176:LEU:HG	28:BF:177:ALA:H	1.53	0.74
60:BA:585:G:H21	60:BA:1254:A:H62	0.80	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:732:C:H3'	60:BA:761:A:H61	1.51	0.74
25:DC:114:VAL:O	25:DC:116:ALA:N	2.20	0.74
28:DF:164:ARG:HA	28:DF:167:ALA:HB3	1.68	0.74
4:AE:61:TYR:OH	20:AA:1075:C:OP2	2.05	0.74
6:AG:87:VAL:HG21	6:AG:154:TYR:HB2	1.69	0.74
25:BC:115:VAL:HA	25:BC:145:THR:HA	1.70	0.74
28:BF:175:THR:O	28:BF:175:THR:OG1	1.99	0.74
60:BA:874:G:H2'	60:BA:875:G:C8	2.22	0.74
28:DF:2:LYS:O	28:DF:4:VAL:N	2.21	0.74
60:DA:2294:C:N4	60:DA:2338:G:H1	1.83	0.74
9:AJ:45:ARG:HB3	9:AJ:65:LEU:HB2	1.70	0.74
60:BA:355:G:H2'	60:BA:356:G:C8	2.22	0.74
25:DC:132:LEU:HB3	25:DC:137:LEU:HB2	1.70	0.74
42:DX:63:LYS:HB3	42:DX:72:LYS:HG3	1.69	0.74
48:DN:15:LEU:HD12	48:DN:136:GLU:HG3	1.68	0.74
60:DA:659:C:H2'	60:DA:660:G:C8	2.23	0.74
11:AL:42:THR:HA	11:AL:52:LEU:HA	1.68	0.74
20:AA:1492:A:H3'	24:AU:6:5OH:NQ	2.03	0.74
45:B0:34:GLY:HA3	60:BA:2353:G:H1'	1.69	0.74
45:B0:34:GLY:H	45:B0:61:ALA:HB3	1.53	0.74
60:BA:2086:U:H2'	60:BA:2087:G:C8	2.22	0.74
1:CB:104:ASN:OD1	1:CB:104:ASN:N	2.21	0.74
16:CQ:59:ILE:HA	16:CQ:73:VAL:HA	1.68	0.74
20:CA:887:G:H1	20:CA:910:C:H42	1.33	0.74
48:DN:65:LYS:NZ	60:DA:1021:A:H5'	2.02	0.74
60:DA:529:A:H62	60:DA:2041:U:H3	0.76	0.74
60:DA:581:C:H2'	60:DA:582:G:C8	2.23	0.74
60:DA:1448:G:N2	60:DA:1463:C:N3	2.32	0.74
60:DA:1858:G:H1'	60:DA:1884:A:N6	2.02	0.74
60:DA:2314:C:H2'	60:DA:2315:G:H8	1.51	0.74
28:BF:125:LEU:HB3	28:BF:194:MET:CB	2.18	0.74
60:BA:956:G:N2	60:BA:960:A:OP2	2.21	0.74
11:CL:38:THR:HG23	11:CL:57:LYS:HD3	1.70	0.74
20:CA:27:G:H1	20:CA:556:C:N4	1.85	0.74
39:DU:64:ARG:CD	48:DN:42:TRP:N	2.50	0.74
60:DA:2521:C:O2'	60:DA:2564:A:N3	2.20	0.74
6:AG:25:ALA:HA	6:AG:28:ASN:HD22	1.53	0.73
20:AA:745:C:H2'	20:AA:746:A:C8	2.22	0.73
25:BC:114:VAL:O	25:BC:116:ALA:N	2.21	0.73
60:BA:1782:C:H42	60:BA:2586:C:H42	1.32	0.73
20:CA:672:U:H3	20:CA:734:G:H1	1.36	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:311:ALA:HA	23:CY:330:VAL:O	1.86	0.73
23:CY:514:VAL:HA	23:CY:565:VAL:HA	1.69	0.73
28:DF:24:LEU:HB3	28:DF:25:PRO:HD2	1.70	0.73
48:DN:76:SER:HB3	60:DA:2641:G:H5'	1.67	0.73
60:DA:1120:G:H2'	60:DA:1121:C:C6	2.23	0.73
1:AB:171:ALA:HA	1:AB:174:VAL:HB	1.70	0.73
20:AA:129(A):G:H5'	20:AA:186(K):G:H5'	1.69	0.73
23:AY:95:GLU:HB3	23:AY:99:ARG:HH21	1.52	0.73
60:BA:659:C:H2'	60:BA:660:G:C8	2.23	0.73
60:DA:413:C:N4	60:DA:2410:G:H1	1.85	0.73
60:DA:2314:C:H2'	60:DA:2315:G:C8	2.23	0.73
20:AA:1002:G:H2'	20:AA:1003:G:C8	2.24	0.73
39:BU:63:VAL:HG11	48:BN:42:TRP:CD1	2.23	0.73
20:CA:1060:C:H2'	20:CA:1061:G:H8	1.52	0.73
27:DE:117:MET:HA	27:DE:122:PHE:H	1.53	0.73
28:DF:10:PRO:HB3	28:DF:19:GLU:HA	1.68	0.73
46:D1:44:PRO:O	60:DA:2230:G:O2'	2.06	0.73
48:DN:45:ASN:H	48:DN:45:ASN:HD22	1.35	0.73
53:B7:12:ARG:NH2	60:BA:465:G:OP1	2.22	0.73
9:CJ:57:LYS:HB2	20:CA:972:C:H4'	1.69	0.73
60:DA:711:G:H1	60:DA:720:C:N4	1.85	0.73
60:DA:1278:A:H2'	60:DA:1279:G:C8	2.23	0.73
23:AY:133:ILE:HG13	23:AY:272:LEU:HD11	1.69	0.73
60:BA:1018:C:H2'	60:BA:1019:U:H6	1.52	0.73
4:AE:148:VAL:HG13	4:AE:152:ARG:HD2	1.70	0.73
27:BE:5:LEU:HD23	27:BE:197:ILE:HB	1.71	0.73
34:BP:7:ARG:HG2	60:BA:1203:G:H4'	1.70	0.73
60:BA:2078:C:H42	60:BA:2242:G:H1	1.34	0.73
12:CM:29:ARG:HA	12:CM:32:GLU:HG2	1.71	0.73
20:CA:869:G:O2'	20:CA:872:A:N7	2.20	0.73
60:DA:485:C:H42	60:DA:495:G:H1	1.35	0.73
60:DA:2780:G:H4'	60:DA:2781:A:OP2	1.88	0.73
16:AQ:5:VAL:HG12	16:AQ:60:ILE:HG13	1.71	0.73
43:BY:76:CYS:HB3	43:BY:96:ILE:HG13	1.71	0.73
48:BN:45:ASN:HD22	48:BN:45:ASN:H	1.35	0.73
60:BA:581:C:H2'	60:BA:582:G:H8	1.51	0.73
60:BA:1359:A:H62	60:BA:1372:U:H3	1.34	0.73
60:BA:1685:C:N3	60:BA:1703:G:N2	2.32	0.73
2:CC:22:TRP:HB3	2:CC:59:ARG:H	1.54	0.73
9:CJ:10:GLY:HA3	9:CJ:16:LEU:HD21	1.71	0.73
12:CM:80:ARG:HH11	18:CS:65:ASN:HB3	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1248:A:C2	20:CA:1289:A:N6	2.57	0.73
27:BE:189:PRO:HA	60:BA:2680:C:H5'	1.69	0.73
34:BP:52:GLU:HG3	34:BP:54:GLY:H	1.54	0.73
34:BP:62:LEU:HD22	54:B8:27:THR:HG22	1.70	0.73
60:BA:576:U:H2'	60:BA:577:G:C8	2.22	0.73
60:BA:2037:G:H2'	60:BA:2038:G:C8	2.23	0.73
28:DF:170:LEU:HB3	28:DF:173:VAL:HB	1.70	0.73
60:DA:1511:A:H2'	60:DA:1512:G:H8	1.53	0.73
48:BN:15:LEU:HG	48:BN:134:ARG:NE	2.03	0.73
60:BA:883:G:N1	60:BA:893:C:O2	2.22	0.73
20:CA:515:G:H1	20:CA:536:C:H42	1.33	0.73
43:DY:2:ARG:HG2	60:DA:106:C:H1'	1.71	0.73
54:D8:8:LYS:NZ	60:DA:243:U:OP2	2.22	0.73
60:DA:979:G:H2'	60:DA:982:C:H42	1.54	0.73
60:DA:1342:A:O2'	60:DA:1344:G:OP2	2.07	0.73
60:DA:2700:C:H42	60:DA:2707:G:H1	1.37	0.73
9:AJ:57:LYS:HB2	20:AA:972:C:H4'	1.71	0.73
20:AA:908:A:H2'	20:AA:909:A:C8	2.24	0.73
23:AY:163:VAL:HG13	23:AY:258:VAL:HB	1.71	0.73
35:BQ:14:ARG:HB3	35:BQ:41:TRP:HZ2	1.54	0.73
59:BB:24:G:O2'	59:BB:27:C:N4	2.22	0.73
60:BA:1904:G:N2	60:BA:1928:A:N3	2.34	0.73
4:CE:76:ILE:HG12	4:CE:78:HIS:H	1.54	0.73
20:CA:1026:G:O6	20:CA:1035:A:N1	2.20	0.73
25:BC:83:LYS:HG3	25:BC:117:THR:HG21	1.71	0.72
28:BF:24:LEU:HB3	28:BF:25:PRO:HD2	1.71	0.72
20:CA:673:G:H2'	20:CA:674:G:C8	2.23	0.72
25:DC:140:ASN:O	25:DC:142:LYS:N	2.22	0.72
40:DV:8:GLY:HA3	40:DV:23:GLU:HG3	1.71	0.72
4:AE:100:VAL:HG12	4:AE:118:ILE:HG22	1.70	0.72
19:AT:15:ARG:NH2	20:AA:107:G:N7	2.35	0.72
60:BA:1369:G:H1'	60:BA:1809:A:H61	1.54	0.72
14:CO:48:LYS:HB2	20:CA:668:G:H4'	1.71	0.72
22:CW:41:A:H2'	22:CW:42:U:C6	2.24	0.72
60:DA:575:A:OP2	60:DA:2499:C:O2'	2.05	0.72
60:DA:1138:G:O2'	60:DA:1139:G:O5'	2.07	0.72
20:AA:784:C:H2'	20:AA:785:G:H8	1.53	0.72
60:BA:2778:A:H1'	60:BA:2780:G:H21	1.53	0.72
60:DA:2681:C:C4	60:DA:2725:A:N6	2.44	0.72
26:BD:108:PRO:HA	26:BD:197:GLY:H	1.53	0.72
29:BG:46:ALA:HB1	29:BG:50:ALA:HA	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:91:PRO:HG3	60:BA:1062:G:H21	1.52	0.72
38:BT:77:PRO:O	38:BT:79:HIS:N	2.20	0.72
60:BA:1674:G:H1'	60:BA:1676:A:H62	1.54	0.72
60:BA:2487:G:H2'	60:BA:2488:A:H8	1.53	0.72
12:CM:116:THR:HA	20:CA:1228:C:H4'	1.72	0.72
20:CA:127:G:H1	20:CA:234:C:N4	1.85	0.72
20:CA:131:C:N3	20:CA:231:G:N2	2.33	0.72
20:CA:154:C:H42	20:CA:167:G:H1	1.37	0.72
25:DC:84:ILE:HG23	25:DC:95:VAL:HB	1.70	0.72
26:DD:220:HIS:NE2	60:DA:1825:A:OP2	2.22	0.72
31:DJ:23:UNK:O	31:DJ:85:UNK:N	2.22	0.72
37:DS:85:VAL:H	37:DS:106:ARG:HG2	1.54	0.72
48:DN:15:LEU:HG	48:DN:134:ARG:NE	2.03	0.72
16:AQ:43:LEU:HD12	16:AQ:69:LYS:HA	1.71	0.72
20:AA:713:G:H21	20:AA:777:A:H1'	1.52	0.72
22:AW:9:A:OP2	22:AW:13:C:N4	2.21	0.72
23:AY:616:TYR:HB3	23:AY:663:THR:HA	1.71	0.72
25:BC:11:LEU:HD23	25:BC:14:LYS:HD2	1.69	0.72
27:BE:126:PRO:HB3	27:BE:130:GLY:HA3	1.71	0.72
28:BF:154:VAL:CG2	28:BF:173:VAL:HG22	2.19	0.72
56:De:86:LEU:HB3	56:De:89:ALA:HB2	1.71	0.72
3:AD:20:TYR:O	3:AD:22:LYS:N	2.23	0.72
6:AG:95:ARG:HH12	20:AA:938:A:H4'	1.55	0.72
7:AH:97:VAL:HB	20:AA:600:C:H5"	1.71	0.72
23:AY:135:PHE:HA	23:AY:260:LEU:HA	1.72	0.72
60:BA:53:A:H62	60:BA:117:G:N2	1.86	0.72
60:BA:595:C:H2'	60:BA:596:G:C8	2.24	0.72
60:BA:2304:G:H1	60:BA:2312:U:H3	1.36	0.72
11:CL:42:THR:HA	11:CL:52:LEU:HA	1.71	0.72
22:CW:12:U:H3	22:CW:23:A:H61	0.82	0.72
23:CY:658:ASP:N	23:CY:658:ASP:OD2	2.21	0.72
31:DJ:54:UNK:HA	31:DJ:79:UNK:HA	1.71	0.72
38:DT:53:ARG:NH1	38:DT:60:THR:OG1	2.21	0.72
48:DN:76:SER:HB3	60:DA:2641:G:H5"	0.75	0.72
60:DA:355:G:H2'	60:DA:356:G:C8	2.23	0.72
60:DA:602:G:H4'	60:DA:604:G:H4'	1.70	0.72
60:DA:975:G:O6	60:DA:989:G:N2	2.22	0.72
60:DA:1230:C:H2'	60:DA:1231:G:H8	1.55	0.72
23:AY:14:ASN:ND2	23:AY:80:ASN:HB2	2.05	0.72
27:BE:10:GLY:HA3	38:BT:8:LYS:HE3	1.71	0.72
36:BR:40:LYS:O	36:BR:44:LEU:HB2	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:839:U:H2'	60:BA:840:C:C6	2.24	0.72
60:BA:1120:G:H2'	60:BA:1121:C:C6	2.25	0.72
60:BA:1658:C:H42	60:BA:2002:G:H1	1.36	0.72
20:CA:552:U:H2'	20:CA:553:A:H8	1.54	0.72
23:CY:133:ILE:HD12	23:CY:280:LEU:HD21	1.72	0.72
27:DE:39:PRO:HA	27:DE:43:GLY:H	1.55	0.72
37:DS:20:ARG:HD3	37:DS:88:ASP:HA	1.71	0.72
60:DA:1435:G:H2'	60:DA:1436:G:C8	2.25	0.72
60:DA:1628:G:H1	60:DA:1638:C:N4	1.85	0.72
7:AH:12:ARG:NH2	20:AA:825:G:O2'	2.19	0.72
22:AW:1:G:H1	22:AW:72:C:H42	1.36	0.72
40:BV:20:LEU:HG	40:BV:21:ARG:HG3	1.72	0.72
59:BB:24:G:N2	59:BB:28:C:O2	2.22	0.72
60:BA:1462:C:H4'	60:BA:2703:C:H5'	1.72	0.72
3:CD:164:ALA:O	3:CD:168:ARG:NH1	2.22	0.72
8:CI:55:ALA:HB2	8:CI:58:ARG:NH2	2.04	0.72
20:CA:1002:G:H2'	20:CA:1003:G:C8	2.24	0.72
22:CW:64:G:C6	22:CW:65:U:O4	2.42	0.72
46:D1:37:ILE:HG12	60:DA:200:U:H4'	1.69	0.72
51:D5:12:SER:HB2	60:DA:2020:A:H5'	1.71	0.72
60:DA:745:G:H21	60:DA:750:A:H61	1.36	0.72
23:AY:33:LEU:HD23	23:AY:34:TYR:H	1.55	0.72
23:AY:655:TYR:O	23:AY:659:LEU:N	2.19	0.72
56:Be:71:LYS:HE3	56:Be:86:LEU:HD22	1.71	0.72
32:DK:115:LEU:O	60:DA:1058:G:O2'	2.06	0.72
60:DA:947:G:H1	60:DA:970:C:N4	1.86	0.72
20:AA:1213:A:O2'	20:AA:1215:G:N7	2.20	0.72
23:AY:59:ARG:HG2	23:AY:65:ILE:HD13	1.70	0.72
25:BC:84:ILE:HD11	25:BC:97:GLY:H	1.55	0.72
27:BE:144:ARG:HG3	60:BA:2572:A:H2'	1.71	0.72
60:BA:1516:U:H2'	60:BA:1517:G:C8	2.24	0.72
7:CH:89:PRO:HG2	20:CA:878:G:H5'	1.70	0.72
20:CA:324:G:N1	20:CA:327:A:OP2	2.23	0.72
29:DG:126:ASP:OD1	60:DA:2302:G:N2	2.22	0.72
60:DA:780:G:H21	60:DA:783:A:H62	1.36	0.72
60:DA:1017:G:O6	60:DA:1145:C:N3	2.23	0.72
60:DA:1538:G:H2'	60:DA:1539:G:C8	2.24	0.72
12:AM:80:ARG:HH11	18:AS:65:ASN:HB3	1.55	0.71
20:AA:610:G:H2'	20:AA:611:A:H8	1.55	0.71
25:BC:44:VAL:HG13	25:BC:213:VAL:O	1.88	0.71
60:BA:136:G:H1	60:BA:143:C:N4	1.87	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:448:U:O4	60:BA:582:G:N2	2.23	0.71
60:DA:699:A:H62	60:DA:733:G:N2	1.87	0.71
20:CA:62:U:OP1	20:CA:385:C:O2'	2.08	0.71
23:CY:276:VAL:HA	23:CY:280:LEU:HD23	1.71	0.71
28:DF:170:LEU:HD13	28:DF:171:PRO:HD2	1.71	0.71
33:DO:66:LYS:HG3	60:DA:1665:A:H5"	1.72	0.71
25:BC:132:LEU:HB3	25:BC:137:LEU:HB2	1.71	0.71
10:CK:58:PRO:HB2	10:CK:93:GLN:HG3	1.71	0.71
12:CM:103:THR:HB	20:CA:1226:C:H2'	1.72	0.71
41:DW:77:ASP:O	41:DW:102:HIS:N	2.23	0.71
48:DN:76:SER:CB	60:DA:2641:G:C4'	2.68	0.71
60:DA:871:U:H2'	60:DA:872:A:C8	2.24	0.71
60:DA:1674:G:H1'	60:DA:1676:A:H62	1.53	0.71
60:DA:2794:C:N3	60:DA:2802:G:O6	2.23	0.71
23:AY:150:ILE:HG23	23:AY:161:PRO:HG3	1.73	0.71
23:AY:630:GLN:O	23:AY:646:PHE:HB2	1.91	0.71
37:BS:74:ALA:HB2	37:BS:104:GLY:HA2	1.71	0.71
60:BA:371:A:H61	60:BA:401:A:H3'	1.56	0.71
60:BA:2505:G:H22	60:BA:2610:C:N4	1.88	0.71
23:CY:456:GLU:HB3	23:CY:657:THR:HG21	1.71	0.71
43:DY:41:GLY:O	43:DY:43:ASN:ND2	2.23	0.71
6:AG:111:ARG:HE	6:AG:123:GLU:HB2	1.56	0.71
40:BV:17:GLY:HA2	40:BV:96:ILE:HB	1.73	0.71
48:BN:35:ARG:HB3	48:BN:42:TRP:HZ3	1.54	0.71
60:BA:16:G:N2	60:BA:524:U:O2	2.19	0.71
20:CA:140:A:H2'	20:CA:141:A:C8	2.25	0.71
20:CA:1007:C:H42	20:CA:1022:G:H1	0.74	0.71
28:DF:8:GLN:NE2	28:DF:9:ILE:O	2.24	0.71
36:DR:96:ARG:HG3	60:DA:2882:A:H5'	1.72	0.71
60:DA:2580:U:OP2	60:DA:2581:G:N1	2.22	0.71
44:BZ:28:MET:SD	44:BZ:28:MET:N	2.63	0.71
60:BA:2098:U:H3	60:BA:2191:G:H1	1.37	0.71
60:BA:2489:G:N2	60:BA:2491:U:O4	2.21	0.71
60:BA:2647:U:H2'	60:BA:2648:C:C6	2.25	0.71
14:CO:53:HIS:HA	14:CO:56:LEU:HD23	1.71	0.71
20:CA:687:A:O2'	20:CA:688:G:OP2	2.07	0.71
60:DA:576:U:H2'	60:DA:577:G:C8	2.25	0.71
10:AK:21:ILE:HG12	10:AK:30:VAL:HG12	1.71	0.71
16:AQ:22:LEU:HD13	16:AQ:41:LYS:HG2	1.71	0.71
17:AR:33:ASP:HB3	17:AR:36:ASN:HD21	1.56	0.71
20:AA:1512:U:H2'	20:AA:1513:A:C8	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:36:ARG:HG3	27:BE:47:VAL:HG22	1.71	0.71
16:CQ:28:PRO:HA	16:CQ:35:VAL:HA	1.71	0.71
20:CA:581:G:N2	20:CA:760:G:N7	2.38	0.71
23:CY:258:VAL:HG12	23:CY:260:LEU:HD12	1.72	0.71
30:DH:19:VAL:HG23	30:DH:45:VAL:HG23	1.72	0.71
30:DH:118:PRO:HG2	30:DH:121:ILE:HD11	1.72	0.71
60:DA:216:A:H62	60:DA:431:U:H3	1.39	0.71
60:DA:462:C:N4	60:DA:463:G:O6	2.23	0.71
60:DA:1101:U:H2'	60:DA:1102:C:C6	2.25	0.71
10:AK:118:GLY:HA2	20:AA:716:A:H1'	1.71	0.71
20:AA:68(A):G:H2'	20:AA:68(B):G:H8	1.55	0.71
20:AA:559:A:H4'	20:AA:560:U:H5"	1.72	0.71
39:BU:64:ARG:HH21	48:BN:41:ASP:C	1.98	0.71
60:BA:459:U:O4	60:BA:470:A:N7	2.24	0.71
60:BA:2405:G:H21	60:BA:2412:A:N6	1.88	0.71
4:CE:151:LEU:HB3	7:CH:79:VAL:HG22	1.73	0.71
23:CY:609:GLU:HA	23:CY:643:ILE:O	1.90	0.71
25:DC:30:VAL:HG22	25:DC:33:LEU:HD12	1.71	0.71
28:DF:31:HIS:HB3	34:DP:13:ASN:HB3	1.71	0.71
34:DP:60:MET:HB3	60:DA:2392:A:H1'	1.72	0.71
46:D1:11:ARG:HB2	46:D1:12:PRO:HD2	1.72	0.71
60:DA:1277:G:O6	60:DA:1293:C:N3	2.24	0.71
3:AD:61:LYS:HG2	3:AD:203:VAL:HG13	1.71	0.71
10:AK:86:GLY:HA2	10:AK:112:THR:HG23	1.71	0.71
20:AA:925:G:O2'	20:AA:927:G:OP1	2.08	0.71
31:BJ:112:UNK:O	31:BJ:114:UNK:N	2.24	0.71
60:BA:1139:G:O2'	60:BA:1140:C:O4'	2.08	0.71
60:BA:1525:G:H2'	60:BA:1526:G:C8	2.25	0.71
60:BA:2086:U:H2'	60:BA:2087:G:H8	1.54	0.71
5:CF:43:LEU:HD23	5:CF:60:PHE:HB2	1.73	0.71
20:CA:1123:A:H2	20:CA:1150:U:H3	1.38	0.71
20:CA:1255:G:O2'	20:CA:1258:G:N3	2.21	0.71
23:CY:388:THR:HG21	23:CY:398:ILE:HA	1.70	0.71
60:DA:557:U:H2'	60:DA:558:G:C8	2.26	0.71
7:AH:111:ILE:HB	7:AH:135:CYS:H	1.55	0.71
20:AA:600:C:H2'	20:AA:601:C:C6	2.25	0.71
25:BC:101:ILE:HD13	25:BC:124:VAL:HG13	1.73	0.71
26:BD:244:ARG:NH2	60:BA:1841:U:O2	2.23	0.71
60:BA:142:G:H2'	60:BA:143:C:H6	1.56	0.71
60:BA:462:C:H42	60:BA:467:G:H1	1.38	0.71
60:BA:2586:C:H2'	60:BA:2587:A:C8	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:36:GLY:HA3	20:CA:1123:A:H4'	1.73	0.71
37:DS:74:ALA:HA	37:DS:105:ALA:HB2	1.72	0.71
59:DB:74:U:H2'	59:DB:75:G:H8	1.55	0.71
23:AY:10:LYS:O	23:AY:13:ARG:NH1	2.23	0.70
23:AY:610:VAL:HG13	23:AY:643:ILE:HB	1.73	0.70
59:BB:77:U:O4	59:BB:99:A:N7	2.24	0.70
3:CD:57:ARG:NH1	3:CD:205:GLU:HB2	2.04	0.70
18:CS:11:VAL:HG13	18:CS:15:LEU:HD12	1.72	0.70
34:DP:65:ARG:NH2	54:D8:14:VAL:O	2.24	0.70
60:DA:2304:G:H1	60:DA:2312:U:H3	1.37	0.70
60:DA:2647:U:H2'	60:DA:2648:C:C6	2.26	0.70
20:AA:287:U:H2'	20:AA:288:A:H8	1.56	0.70
22:AW:64:G:C2	22:AW:65:U:N3	2.59	0.70
36:BR:2:ARG:HB2	36:BR:5:LYS:HE2	1.72	0.70
39:BU:28:ARG:NH1	39:BU:38:THR:OG1	2.24	0.70
48:BN:16:ILE:CD1	48:BN:137:LYS:HB2	2.21	0.70
60:BA:1028:A:H2'	60:BA:1029:A:C8	2.26	0.70
60:BA:2393:A:H62	60:BA:2422:A:N6	1.89	0.70
7:CH:34:GLU:HB3	7:CH:118:VAL:HG21	1.73	0.70
59:DB:80:U:O2'	60:DA:918:A:N3	2.24	0.70
60:DA:2030:A:H4'	60:DA:2031:A:C8	2.26	0.70
60:DA:2438:U:H5"	60:DA:2600:A:H5'	1.72	0.70
18:AS:78:ARG:NH2	20:AA:1222:G:OP1	2.23	0.70
20:AA:41:G:H2'	20:AA:42:G:H8	1.55	0.70
20:AA:1321:C:H3'	20:AA:1322:C:H5"	1.73	0.70
60:BA:1538:G:H2'	60:BA:1539:G:C8	2.27	0.70
60:BA:2314:C:H2'	60:BA:2315:G:C8	2.26	0.70
4:CE:110:LEU:HD13	4:CE:118:ILE:HG21	1.72	0.70
23:CY:514:VAL:HG13	23:CY:565:VAL:HA	1.72	0.70
53:D7:30:VAL:O	53:D7:34:ARG:NH1	2.24	0.70
5:AF:43:LEU:HD23	5:AF:60:PHE:HB2	1.73	0.70
38:BT:118:ARG:H	38:BT:118:ARG:HD2	1.56	0.70
46:B1:11:ARG:HB2	46:B1:12:PRO:HD2	1.72	0.70
48:BN:15:LEU:HB2	48:BN:134:ARG:CG	2.21	0.70
60:BA:142:G:H2'	60:BA:143:C:C6	2.26	0.70
26:DD:5:LYS:HB3	26:DD:17:THR:HG22	1.73	0.70
27:DE:143:ASN:ND2	27:DE:146:THR:O	2.24	0.70
29:DG:39:ILE:HG22	29:DG:157:ILE:HA	1.72	0.70
36:DR:64:ARG:O	36:DR:68:ARG:N	2.24	0.70
44:DZ:53:ILE:HD11	44:DZ:99:TYR:HB2	1.73	0.70
60:DA:1007:C:H5"	60:DA:1008:C:H2'	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2737:G:H1	60:DA:2767:C:N4	1.87	0.70
1:AB:69:LEU:O	1:AB:71:VAL:HG23	1.91	0.70
46:B1:86:SER:HB2	46:B1:89:GLU:HB2	1.73	0.70
60:BA:226:G:H21	60:BA:228:A:N6	1.86	0.70
10:CK:31:THR:HA	10:CK:42:TRP:HA	1.72	0.70
20:CA:1492:A:H3'	24:CU:6:5OH:NP	2.06	0.70
23:CY:293:THR:HA	23:CY:397:VAL:HG12	1.71	0.70
38:DT:23:ARG:HB2	38:DT:120:ARG:HH22	1.54	0.70
48:DN:15:LEU:HB2	48:DN:134:ARG:CG	2.21	0.70
60:DA:696:G:H1	60:DA:766:C:N4	1.89	0.70
60:DA:698:C:H4'	60:DA:734:A:H61	1.55	0.70
19:AT:75:ASN:HB2	20:AA:262:A:H4'	1.74	0.70
29:BG:36:LYS:HG2	29:BG:160:VAL:HB	1.73	0.70
30:BH:41:MET:HE1	30:BH:43:VAL:HG22	1.72	0.70
36:BR:12:ARG:HB3	36:BR:16:HIS:HB3	1.73	0.70
60:BA:613:U:H4'	60:BA:616:A:C6	2.26	0.70
20:CA:957:U:O2'	20:CA:959:A:N7	2.21	0.70
30:DH:172:LYS:HB2	30:DH:176:ALA:HB2	1.72	0.70
48:DN:16:ILE:CD1	48:DN:137:LYS:HB2	2.21	0.70
48:DN:68:GLU:HG2	48:DN:88:GLU:OE1	1.92	0.70
60:DA:133:C:H42	60:DA:146:G:H1	1.36	0.70
60:DA:273(A):G:H1	60:DA:364:C:H42	1.39	0.70
60:DA:659:C:H2'	60:DA:660:G:H8	1.54	0.70
60:DA:2105:C:H2'	60:DA:2106:G:C8	2.27	0.70
23:AY:246:ILE:O	23:AY:250:THR:OG1	2.08	0.70
45:B0:12:ASN:HD22	60:BA:2278:A:H8	1.39	0.70
60:BA:743:G:H1	60:BA:754:C:H42	1.40	0.70
30:DH:149:ARG:HH11	30:DH:164:TYR:H	1.40	0.70
33:DO:64:ARG:HH22	38:DT:69:GLY:HA3	1.57	0.70
48:DN:35:ARG:HB3	48:DN:42:TRP:HZ3	1.54	0.70
60:DA:648:G:H2'	60:DA:649:G:C8	2.27	0.70
60:DA:1355:G:H1	60:DA:1376:C:H42	1.39	0.70
60:DA:1491:G:OP1	60:DA:1494:A:N6	2.24	0.70
1:AB:69:LEU:H	1:AB:162:ILE:HA	1.57	0.70
10:AK:41:THR:HB	10:AK:71:LYS:HD2	1.72	0.70
34:BP:56:SER:O	34:BP:58:THR:N	2.24	0.70
60:BA:2514:U:H2'	60:BA:2515:C:C6	2.27	0.70
17:CR:33:ASP:HA	17:CR:35:ARG:HH21	1.56	0.70
18:CS:61:TYR:OH	29:DG:118:ARG:NH1	2.24	0.70
20:CA:175:C:H2'	20:CA:176:C:C6	2.26	0.70
20:CA:806:C:H2'	20:CA:807:A:H8	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:606:MET:HG3	23:CY:649:LEU:HG	1.73	0.70
25:DC:65:LEU:HD22	25:DC:176:VAL:HG13	1.72	0.70
27:DE:12:THR:O	27:DE:22:PRO:HA	1.92	0.70
30:DH:23:ARG:HA	30:DH:36:PRO:HA	1.73	0.70
60:DA:947:G:H2'	60:DA:948:G:H8	1.57	0.70
60:DA:1685:C:N3	60:DA:1703:G:N2	2.36	0.70
13:AN:23:ARG:HH11	13:AN:29:ARG:HA	1.56	0.70
23:AY:161:PRO:O	23:AY:256:THR:N	2.22	0.70
28:BF:167:ALA:HB1	28:BF:175:THR:HB	1.73	0.70
31:BJ:23:UNK:O	31:BJ:85:UNK:N	2.25	0.70
32:BK:30:HIS:CG	32:BK:59:ILE:HB	2.27	0.70
33:BO:85:VAL:HG11	33:BO:114:ILE:HD12	1.72	0.70
48:BN:68:GLU:HG2	48:BN:88:GLU:OE1	1.92	0.70
60:BA:858:U:H3	60:BA:919:G:H1	1.36	0.70
60:BA:1636:C:H2'	60:BA:1637:A:C8	2.26	0.70
22:CW:68:U:H2'	22:CW:69:A:C8	2.27	0.70
23:CY:59:ARG:HB3	23:CY:64:THR:HA	1.73	0.70
26:DD:202:LYS:HB3	60:DA:1820:U:H1'	1.74	0.70
28:DF:13:SER:O	28:DF:15:SER:N	2.25	0.70
37:DS:15:ARG:HB3	37:DS:18:ILE:HB	1.73	0.70
39:DU:64:ARG:NE	48:DN:41:ASP:CA	2.36	0.70
1:AB:102:LEU:HD23	1:AB:177:ALA:HB2	1.74	0.70
10:AK:34:ASP:O	10:AK:36:ASP:N	2.22	0.70
20:AA:1044:A:C5	20:AA:1045:C:H1'	2.27	0.70
23:AY:133:ILE:HD12	23:AY:280:LEU:HD21	1.72	0.70
25:BC:138:LEU:HD22	25:BC:139:PRO:HD2	1.72	0.70
2:CC:161:GLU:HG3	20:CA:1055:A:H4'	1.73	0.70
20:CA:1116:C:N4	20:CA:1184:G:H1	1.87	0.70
27:DE:110:GLY:H	60:DA:2821:A:H5"	1.57	0.70
40:DV:24:LYS:HE3	40:DV:64:HIS:HD2	1.57	0.70
20:AA:355:C:O2'	20:AA:388:G:N3	2.23	0.69
2:CC:58:GLU:H	2:CC:65:ALA:HB3	1.57	0.69
36:DR:107:ASP:HA	60:DA:2009:G:H1'	1.74	0.69
60:DA:131:G:H2'	60:DA:132:G:H8	1.57	0.69
60:DA:1486:A:H2'	60:DA:1487:G:C8	2.27	0.69
28:BF:105:VAL:HG22	60:BA:600:G:H1'	1.74	0.69
38:BT:65:LYS:HE3	38:BT:66:VAL:H	1.57	0.69
60:BA:6:A:H2'	60:BA:7:G:H8	1.57	0.69
60:BA:2134:A:N3	60:BA:2159:G:O2'	2.23	0.69
60:BA:2459:A:N1	60:BA:2493:U:O2	2.25	0.69
11:CL:58:VAL:HG21	11:CL:85:ILE:HD11	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:1604:C:H2'	60:DA:1605:C:C6	2.27	0.69
20:AA:175:C:H2'	20:AA:176:C:C6	2.27	0.69
28:BF:75:HIS:HA	60:BA:674:G:H4'	1.73	0.69
48:BN:112:LEU:HA	48:BN:115:ARG:HB2	1.73	0.69
60:BA:1183:G:H2'	60:BA:1184:G:C8	2.28	0.69
54:D8:52:LYS:HG2	60:DA:834:C:H4'	1.73	0.69
60:DA:415:A:H61	60:DA:2408:U:H3	1.40	0.69
60:DA:1272:A:O2'	60:DA:1273:U:OP1	2.10	0.69
60:DA:1814:G:H3'	60:DA:1815:A:H2'	1.73	0.69
7:AH:10:LEU:HB3	7:AH:83:ILE:HD11	1.75	0.69
8:AI:96:LEU:HG	8:AI:101:PHE:HB2	1.74	0.69
26:BD:84:TYR:HA	26:BD:91:ARG:HD2	1.74	0.69
48:BN:67:LEU:O	48:BN:88:GLU:HB2	1.93	0.69
59:BB:9:G:H1	59:BB:111:U:H3	1.39	0.69
60:BA:382:G:H1	60:BA:392:C:H42	1.41	0.69
60:BA:964:C:O2'	60:BA:2273:A:N3	2.22	0.69
60:BA:1062:G:H2'	60:BA:1063:G:C8	2.27	0.69
60:BA:2685:G:H1	60:BA:2724:C:H42	1.40	0.69
3:CD:127:THR:HA	3:CD:132:ARG:HA	1.72	0.69
4:CE:102:ALA:HB1	4:CE:106:PRO:HB2	1.74	0.69
5:CF:50:TYR:OH	17:CR:74:ARG:O	2.11	0.69
6:CG:87:VAL:HG22	6:CG:151:TYR:HB3	1.74	0.69
23:CY:135:PHE:HA	23:CY:260:LEU:HA	1.74	0.69
60:DA:77:C:H2'	60:DA:78:A:H8	1.58	0.69
60:DA:1019:U:H3	60:DA:1020:A:H62	0.79	0.69
60:DA:1862:G:H1	60:DA:1880:C:N4	1.86	0.69
25:BC:73:VAL:HG22	25:BC:75:VAL:H	1.56	0.69
48:BN:111:PRO:HD2	60:BA:558:G:P	2.32	0.69
60:BA:890:A:H2'	60:BA:892:G:C8	2.27	0.69
4:CE:125:SER:OG	20:CA:19:C:OP1	2.08	0.69
20:CA:832:C:O2'	20:CA:1538:C:H5'	1.91	0.69
59:DB:60:C:H2'	59:DB:61:G:C8	2.27	0.69
60:DA:1024:G:H3'	60:DA:1025:G:H5"	1.75	0.69
1:AB:178:ARG:HD3	7:AH:73:ASP:HA	1.74	0.69
20:AA:121:C:N4	20:AA:236:G:N7	2.40	0.69
23:AY:289:ILE:H	23:AY:289:ILE:HD12	1.57	0.69
25:BC:216:THR:HG21	60:BA:2176:A:H4'	1.74	0.69
28:BF:13:SER:O	28:BF:15:SER:N	2.25	0.69
45:B0:47:PRO:HG3	45:B0:59:LEU:HD22	1.74	0.69
60:BA:852:G:H2'	60:BA:853:G:C8	2.28	0.69
40:DV:39:LEU:HA	40:DV:47:VAL:HG11	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:874:G:H2'	60:DA:875:G:C8	2.26	0.69
20:AA:237:C:H2'	20:AA:238:G:H8	1.57	0.69
23:AY:69:VAL:HG23	23:AY:82:ILE:HG12	1.75	0.69
23:AY:614:GLU:HA	23:AY:617:MET:HE3	1.73	0.69
37:BS:42:ASP:OD1	37:BS:42:ASP:N	2.26	0.69
28:DF:188:ARG:HG3	28:DF:189:THR:HG23	1.75	0.69
34:DP:88:LEU:HD11	34:DP:123:LEU:HD21	1.75	0.69
39:DU:63:VAL:HG11	48:DN:42:TRP:HD1	1.54	0.69
46:D1:12:PRO:HA	46:D1:44:PRO:HD3	1.73	0.69
60:DA:237:C:N4	60:DA:260:G:H1	1.90	0.69
60:DA:577:G:O2'	60:DA:1254:A:OP1	2.11	0.69
60:DA:733:G:OP2	60:DA:761:A:N6	2.25	0.69
60:DA:2043:C:OP2	60:DA:2777:G:O2'	2.11	0.69
3:AD:43:HIS:HA	3:AD:46:LYS:HD3	1.74	0.69
13:AN:57:ARG:NH1	13:AN:58:LYS:O	2.26	0.69
20:AA:1391:U:H2'	20:AA:1392:G:H8	1.56	0.69
22:AW:68:U:H2'	22:AW:69:A:C8	2.28	0.69
23:AY:30:GLU:C	23:AY:33:LEU:H	2.01	0.69
28:BF:164:ARG:HD3	28:BF:177:ALA:HB2	1.75	0.69
30:BH:143:GLN:OE1	60:BA:2744:G:N2	2.25	0.69
31:BJ:49:UNK:H	31:BJ:82:UNK:HA	1.58	0.69
59:BB:81:G:H1'	60:BA:919:G:H4'	1.73	0.69
60:BA:699:A:H62	60:BA:733:G:H21	1.40	0.69
60:BA:819:A:H62	60:BA:1188:U:H3	1.39	0.69
60:BA:1032:A:H2	60:BA:1122:G:H1	1.41	0.69
60:BA:1306:C:H2'	60:BA:1307:A:C8	2.28	0.69
60:BA:2784:C:H2'	60:BA:2785:C:C6	2.28	0.69
11:CL:15:ARG:NH1	20:CA:563:A:N3	2.40	0.69
20:CA:442:C:N4	20:CA:492:G:H1	1.91	0.69
20:CA:928:G:N2	20:CA:1389:C:N3	2.37	0.69
20:CA:1040:U:H2'	20:CA:1041:A:C8	2.28	0.69
23:CY:431:LEU:O	23:CY:433:GLU:N	2.26	0.69
26:DD:99:ASP:O	60:DA:1500:G:N2	2.25	0.69
34:DP:48:PRO:O	34:DP:50:ARG:N	2.24	0.69
48:DN:15:LEU:CG	48:DN:134:ARG:HE	2.05	0.69
48:DN:16:ILE:HD13	48:DN:137:LYS:HB2	1.75	0.69
48:DN:112:LEU:HA	48:DN:115:ARG:HB2	1.73	0.69
54:D8:57:ARG:NH1	54:D8:64:TYR:OH	2.24	0.69
60:DA:432:A:H2'	60:DA:433:C:C6	2.28	0.69
60:DA:975:G:H1'	60:DA:990:A:C2	2.28	0.69
3:AD:204:ILE:O	3:AD:208:SER:N	2.19	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:602:LEU:HB3	23:AY:676:TYR:HB3	1.74	0.69
28:BF:2:LYS:O	28:BF:4:VAL:N	2.25	0.69
29:BG:43:LEU:HB2	29:BG:88:ILE:HG23	1.75	0.69
48:BN:16:ILE:HD13	48:BN:137:LYS:HB2	1.75	0.69
60:BA:1080:C:H2'	60:BA:1081:U:C6	2.28	0.69
1:CB:131:PRO:HG2	1:CB:134:GLU:HB2	1.74	0.69
20:CA:68(A):G:H2'	20:CA:68(B):G:H8	1.56	0.69
12:AM:97:PRO:HA	12:AM:110:ARG:HD3	1.74	0.69
20:AA:600:C:H2'	20:AA:601:C:H6	1.58	0.69
42:BX:53:LYS:HB3	42:BX:82:GLN:HB3	1.75	0.69
60:BA:1324:G:N2	60:BA:1330:C:N3	2.36	0.69
60:BA:1645:G:H5"	60:BA:1646:C:H5'	1.75	0.69
12:CM:78:ILE:HD12	12:CM:81:LEU:HD22	1.75	0.69
20:CA:521:G:O2'	20:CA:536:C:O2'	2.11	0.69
23:CY:74:TRP:CD1	23:CY:77:HIS:HD1	2.10	0.69
28:DF:124:LEU:HD21	28:DF:126:VAL:HG23	1.73	0.69
42:DX:36:LYS:HD2	60:DA:1598:C:H5'	1.73	0.69
60:DA:573:G:N1	60:DA:2031:A:OP2	2.26	0.69
60:DA:1024:G:H1	60:DA:1140:C:N4	1.91	0.69
25:BC:84:ILE:HA	25:BC:95:VAL:HG11	1.75	0.68
28:BF:102:PRO:HB3	60:BA:606:U:H5"	1.76	0.68
35:BQ:82:ARG:HA	60:BA:2495:G:H5"	1.75	0.68
37:BS:25:ARG:HB3	37:BS:40:ILE:HG23	1.75	0.68
38:BT:47:GLY:HA2	38:BT:65:LYS:HB2	1.75	0.68
43:BY:48:ALA:O	60:BA:483:A:O2'	2.11	0.68
56:Be:74:VAL:HG21	56:Be:86:LEU:HD11	1.73	0.68
60:BA:2610:C:H4'	60:BA:2611:U:H5'	1.74	0.68
2:CC:54:ARG:HB2	2:CC:69:HIS:HB2	1.74	0.68
11:CL:34:ARG:HG3	11:CL:82:VAL:HG13	1.74	0.68
11:CL:71:PRO:HG2	11:CL:102:ARG:HG2	1.75	0.68
20:CA:143:A:H2	20:CA:220:G:H22	1.40	0.68
35:DQ:124:LYS:NZ	60:DA:2483:C:O2	2.26	0.68
42:DX:12:VAL:O	42:DX:29:TRP:NE1	2.22	0.68
60:DA:528:A:H61	60:DA:2042:A:H3'	1.58	0.68
60:DA:2461:C:H42	60:DA:2489:G:H1	1.40	0.68
8:AI:53:VAL:O	8:AI:55:ALA:N	2.23	0.68
11:AL:90:VAL:HB	20:AA:523:A:C6	2.28	0.68
18:AS:46:GLY:HA2	18:AS:62:ILE:HG12	1.74	0.68
32:BK:13:PRO:HB3	32:BK:52:ILE:HG12	1.74	0.68
60:BA:131:G:H1	60:BA:148:C:H42	1.41	0.68
20:CA:1350:A:N6	20:CA:1372:U:H3	1.89	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:29:U:H2'	22:CW:30:C:C6	2.27	0.68
25:DC:43:GLU:HG3	25:DC:218:THR:HA	1.75	0.68
31:DJ:112:UNK:O	31:DJ:114:UNK:N	2.26	0.68
40:DV:66:ARG:HG2	40:DV:88:ARG:HD2	1.74	0.68
60:DA:355:G:H2'	60:DA:356:G:H8	1.58	0.68
60:DA:1248:G:H3'	60:DA:1249:U:H5"	1.73	0.68
23:AY:484:ARG:HB2	23:AY:602:LEU:HB2	1.76	0.68
26:BD:35:LYS:O	26:BD:37:LEU:N	2.25	0.68
38:BT:30:VAL:HG23	38:BT:44:ASP:HA	1.73	0.68
42:BX:10:ALA:HB3	42:BX:29:TRP:HB2	1.75	0.68
60:BA:987:G:O2'	60:BA:1000:A:N3	2.25	0.68
60:BA:2290:G:H1	60:BA:2342:C:H42	1.41	0.68
39:DU:50:ARG:HH22	40:DV:72:VAL:HG12	1.58	0.68
43:DY:76:CYS:HB3	43:DY:96:ILE:HG13	1.75	0.68
60:DA:2632:A:N1	60:DA:2786:U:O4	2.27	0.68
60:DA:2857:G:N2	60:DA:2860:A:OP2	2.25	0.68
7:AH:89:PRO:HG2	20:AA:878:G:H5'	1.76	0.68
26:BD:5:LYS:HB3	26:BD:17:THR:HG22	1.73	0.68
29:BG:128:ARG:HB2	29:BG:130:ASN:HD21	1.58	0.68
60:BA:690:G:H2'	60:BA:691:C:O4'	1.92	0.68
60:BA:1530:G:O6	60:BA:1541:U:O2	2.10	0.68
1:CB:167:PRO:O	1:CB:171:ALA:HB2	1.94	0.68
23:CY:41:LYS:HE2	23:CY:43:GLY:HA3	1.74	0.68
39:DU:97:ASP:C	39:DU:99:ALA:H	1.99	0.68
60:DA:1197:G:N2	60:DA:1249:U:O2	2.23	0.68
60:DA:2650:U:O4	60:DA:2670:A:N1	2.26	0.68
22:AW:64:G:C6	22:AW:65:U:O4	2.46	0.68
27:BE:136:ARG:HB3	60:BA:1656:C:H5"	1.74	0.68
53:B7:34:ARG:HD3	53:B7:39:ARG:HD2	1.75	0.68
60:BA:24:G:N1	60:BA:516:C:O2	2.23	0.68
2:CC:67:THR:HA	2:CC:102:ASN:HB3	1.74	0.68
25:DC:153:ILE:HA	25:DC:156:GLU:HB2	1.74	0.68
59:DB:75:G:H2'	59:DB:76:G:O4'	1.94	0.68
25:BC:61:GLY:HA3	25:BC:164:PHE:CG	2.28	0.68
25:BC:139:PRO:HA	25:BC:145:THR:HB	1.75	0.68
26:BD:165:ILE:HG13	26:BD:175:LEU:HG	1.76	0.68
28:BF:29:ASN:HB3	28:BF:32:LEU:HB2	1.76	0.68
48:BN:15:LEU:CG	48:BN:134:ARG:HE	2.05	0.68
48:BN:65:LYS:NZ	60:BA:1021:A:H5"	2.03	0.68
60:BA:1135:C:N4	60:BA:1138:G:H8	1.92	0.68
27:DE:11:MET:HA	27:DE:23:VAL:O	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DU:11:ARG:HH11	39:DU:15:LYS:HZ1	1.41	0.68
48:DN:67:LEU:O	48:DN:88:GLU:HB2	1.93	0.68
59:DB:44:G:H21	59:DB:47:C:H42	1.41	0.68
60:DA:613:U:H4'	60:DA:616:A:C6	2.29	0.68
60:DA:621:A:C2	60:DA:622:G:H1'	2.28	0.68
60:DA:1845:G:N2	60:DA:1895:C:N3	2.33	0.68
28:BF:137:LYS:NZ	60:BA:319:C:OP2	2.25	0.68
38:BT:64:ARG:HA	38:BT:73:GLU:HG2	1.76	0.68
60:BA:975:G:H1'	60:BA:990:A:C2	2.29	0.68
60:BA:1019:U:C2	60:BA:1020:A:N7	2.61	0.68
60:BA:1416:G:H1	60:BA:1582:C:N4	1.91	0.68
25:DC:101:ILE:HD13	25:DC:124:VAL:HG13	1.75	0.68
43:DY:6:HIS:HB3	43:DY:35:TYR:HE1	1.59	0.68
52:D6:45:LYS:HD3	60:DA:2371:G:H4'	1.74	0.68
60:DA:951:C:H42	60:DA:966:G:H1	1.41	0.68
8:AI:57:GLY:O	8:AI:59:PHE:N	2.25	0.68
20:AA:1254:C:H2'	20:AA:1255:G:H8	1.59	0.68
22:AW:41:A:H2'	22:AW:42:U:C6	2.29	0.68
60:BA:1434:A:H61	60:BA:1558:A:N6	1.92	0.68
1:CB:71:VAL:HB	1:CB:164:VAL:HG13	1.75	0.68
26:DD:35:LYS:O	26:DD:37:LEU:N	2.27	0.68
44:DZ:14:LYS:NZ	59:DB:95:U:OP2	2.22	0.68
48:DN:55:VAL:HB	48:DN:126:PRO:CB	2.24	0.68
48:DN:111:PRO:HD2	60:DA:558:G:P	2.33	0.68
60:DA:136:G:H1	60:DA:143:C:N4	1.90	0.68
60:DA:2657:A:H62	60:DA:2664:G:H21	1.39	0.68
8:AI:118:LYS:O	8:AI:120:ARG:N	2.27	0.68
11:AL:93:LEU:HG	11:AL:96:VAL:HG22	1.75	0.68
12:AM:78:ILE:HD12	12:AM:81:LEU:HD22	1.76	0.68
17:AR:86:VAL:HG12	17:AR:87:ARG:HG3	1.75	0.68
20:AA:606:G:H3'	20:AA:607:A:H5'	1.76	0.68
26:BD:226:MET:HE3	60:BA:782:A:C2	2.29	0.68
37:BS:85:VAL:H	37:BS:106:ARG:HG2	1.59	0.68
38:BT:42:ILE:HG21	38:BT:83:ILE:HG12	1.76	0.68
41:BW:68:ARG:HB3	41:BW:110:LYS:HB2	1.76	0.68
48:BN:18:ALA:O	48:BN:21:LYS:HB2	1.93	0.68
60:DA:16:G:H1	60:DA:524:U:H3	1.40	0.68
60:DA:1525:G:H2'	60:DA:1526:G:C8	2.29	0.68
20:AA:1084:G:O2'	20:AA:1103:C:N4	2.22	0.68
24:AU:4:SER:HA	60:BA:1913:A:HO2'	1.58	0.68
27:BE:134:ILE:HD13	27:BE:134:ILE:H	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BR:101:ALA:HB2	51:B5:44:THR:HG21	1.75	0.68
48:BN:25:ARG:HH21	60:BA:1141:U:P	2.16	0.68
60:BA:278:A:H2'	60:BA:279:C:C6	2.28	0.68
60:BA:819:A:N7	60:BA:1188:U:O4	2.27	0.68
60:BA:855:G:H1	60:BA:922:U:H3	1.40	0.68
60:BA:1355:G:H2'	60:BA:1356:G:C8	2.29	0.68
60:BA:2862:G:H2'	60:BA:2863:C:C6	2.28	0.68
20:CA:1522:U:H2'	20:CA:1523:G:H8	1.59	0.68
23:CY:141:LYS:HZ1	60:DA:2657:A:P	2.16	0.68
37:DS:17:ARG:NH2	59:DB:8:U:OP1	2.26	0.68
38:DT:47:GLY:HA2	38:DT:65:LYS:HB2	1.75	0.68
42:DX:40:LYS:NZ	60:DA:139:G:O6	2.26	0.68
60:DA:360:G:H2'	60:DA:361:G:H8	1.58	0.68
60:DA:529:A:N6	60:DA:2041:U:N3	2.22	0.68
60:DA:550:G:H2'	60:DA:551:G:H8	1.59	0.68
60:DA:1110:G:O2'	60:DA:1111:A:O5'	2.11	0.68
60:DA:2212:A:H1'	60:DA:2215:G:C6	2.29	0.68
6:AG:15:ASP:HB3	6:AG:19:GLY:H	1.58	0.67
10:AK:47:VAL:HG22	20:AA:688:G:H5'	1.75	0.67
23:AY:339:SER:O	23:AY:351:ARG:NH2	2.27	0.67
23:AY:563:ILE:O	23:AY:565:VAL:N	2.25	0.67
60:BA:1287:A:H2	60:BA:1649:G:H4'	1.59	0.67
20:CA:68(P):C:H2'	20:CA:68(Q):U:C6	2.29	0.67
46:D1:45:ASN:HD22	60:DA:2230:G:H1'	1.59	0.67
48:DN:30:ILE:HG22	48:DN:34:LEU:CD2	2.24	0.67
60:DA:192:C:O2'	60:DA:802:A:N3	2.28	0.67
60:DA:1162:G:H2'	60:DA:1163:G:H8	1.59	0.67
60:DA:1173:G:H21	60:DA:1177:A:H62	1.39	0.67
20:AA:1040:U:H2'	20:AA:1041:A:C8	2.28	0.67
25:BC:213:VAL:HG11	25:BC:225:ILE:CD1	2.25	0.67
26:BD:226:MET:HE2	26:BD:230:ASP:HB3	1.76	0.67
30:BH:172:LYS:HB2	30:BH:176:ALA:HB2	1.76	0.67
59:BB:24:G:C6	59:BB:56:G:N3	2.63	0.67
60:BA:137(B):G:O6	60:BA:139:G:O2'	2.11	0.67
60:BA:843:G:H1	60:BA:935:C:N4	1.91	0.67
60:BA:2749:A:H62	60:BA:2753:A:N6	1.90	0.67
20:CA:1065:U:OP2	20:CA:1190:G:N2	2.26	0.67
32:DK:90:LYS:HB3	32:DK:93:ARG:HB2	1.76	0.67
34:DP:126:VAL:HA	34:DP:145:PRO:HG2	1.74	0.67
48:DN:14:VAL:HG11	48:DN:137:LYS:HG3	1.75	0.67
48:DN:18:ALA:O	48:DN:21:LYS:HB2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:131:G:H2'	60:DA:132:G:C8	2.28	0.67
3:AD:115:ARG:NH1	20:AA:407:G:OP1	2.27	0.67
23:AY:185:ALA:HB2	23:AY:201:ILE:HG13	1.77	0.67
23:AY:188:TYR:HA	23:AY:196:ILE:HA	1.77	0.67
23:AY:524:GLU:HG3	23:AY:525:PHE:H	1.58	0.67
27:BE:166:THR:HB	60:BA:2772:C:H5"	1.76	0.67
47:B4:1:MET:HE3	59:BB:43:C:H4'	1.76	0.67
48:BN:30:ILE:HG22	48:BN:34:LEU:CD2	2.24	0.67
50:B3:43:ILE:HA	50:B3:46:ASN:HD22	1.60	0.67
53:B7:30:VAL:O	53:B7:34:ARG:NH1	2.27	0.67
60:BA:814:C:H42	60:BA:1193:G:H1	1.41	0.67
4:CE:32:VAL:HB	4:CE:58:ALA:HB1	1.77	0.67
9:CJ:40:LEU:HD21	20:CA:1280:A:H5'	1.76	0.67
26:DD:218:ARG:NH1	60:DA:690:G:O3'	2.21	0.67
28:DF:175:THR:O	28:DF:175:THR:OG1	2.09	0.67
32:DK:116:ASN:ND2	60:DA:1081:U:O2	2.27	0.67
37:DS:73:LEU:HD13	37:DS:101:LEU:HD22	1.76	0.67
10:AK:123:LYS:HA	10:AK:126:ARG:HB3	1.76	0.67
12:AM:80:ARG:HA	12:AM:83:ASP:HB3	1.77	0.67
20:AA:321:A:N6	20:AA:332:G:H1	1.90	0.67
20:AA:1522:U:H2'	20:AA:1523:G:C8	2.30	0.67
26:BD:78:LYS:HA	26:BD:116:GLN:HA	1.75	0.67
39:BU:26:GLY:O	39:BU:29:SER:OG	2.12	0.67
40:BV:39:LEU:HA	40:BV:47:VAL:HG11	1.76	0.67
48:BN:55:VAL:HB	48:BN:126:PRO:CB	2.24	0.67
60:BA:504:U:H4'	60:BA:505:A:H5'	1.76	0.67
60:BA:572:A:N6	60:BA:2029:G:H1'	2.08	0.67
4:CE:50:GLU:HG3	4:CE:52:PRO:HD2	1.76	0.67
7:CH:30:ARG:NH1	20:CA:590:C:OP2	2.28	0.67
20:CA:126:G:H1	20:CA:235:C:N4	1.92	0.67
28:DF:74:ARG:NH2	60:DA:674:G:N3	2.42	0.67
34:DP:23:PRO:HB3	34:DP:29:LYS:HB2	1.76	0.67
46:D1:43:TYR:OH	60:DA:1365:A:OP1	2.11	0.67
12:AM:102:ARG:NE	12:AM:105:THR:OG1	2.24	0.67
20:AA:300:A:O2'	20:AA:564:C:N3	2.22	0.67
30:BH:175:LYS:HE2	30:BH:176:ALA:H	1.59	0.67
40:BV:15:GLU:HB3	40:BV:16:PRO:HD2	1.77	0.67
41:BW:72:LYS:H	41:BW:107:LEU:HA	1.59	0.67
48:BN:17:ASP:O	48:BN:18:ALA:HB2	1.95	0.67
60:BA:837:C:H42	60:BA:942:G:H1	1.41	0.67
60:BA:2734:A:N6	60:BA:2770:G:H21	1.92	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:119:GLN:HE22	20:CA:406:G:H21	1.42	0.67
60:DA:2098:U:H3	60:DA:2191:G:H1	1.43	0.67
60:DA:2656:U:H3	60:DA:2665:A:H62	1.41	0.67
60:DA:2683:C:N3	60:DA:2727:G:O2'	2.26	0.67
14:AO:26:GLU:OE2	14:AO:77:ARG:NH1	2.27	0.67
23:AY:301:ILE:HG21	23:AY:331:TYR:HB3	1.75	0.67
38:BT:82:LEU:O	38:BT:84:GLN:N	2.27	0.67
60:BA:1135:C:H42	60:BA:1138:G:H8	1.43	0.67
60:BA:1270:C:H5"	60:BA:1271:G:H5"	1.77	0.67
60:BA:2681:C:H5	60:BA:2725:A:N6	1.61	0.67
6:CG:111:ARG:HB3	6:CG:113:GLU:HG2	1.77	0.67
20:CA:101:A:H2'	20:CA:102:G:H8	1.60	0.67
36:DR:101:ALA:HB2	51:D5:44:THR:HG21	1.76	0.67
60:DA:922:U:H2'	60:DA:923:C:C6	2.30	0.67
60:DA:1009:A:H2'	60:DA:1010:A:C8	2.30	0.67
2:AC:11:ARG:HB3	2:AC:16:ARG:HB2	1.75	0.67
2:AC:134:ILE:HD11	2:AC:151:VAL:HB	1.75	0.67
7:AH:12:ARG:HH11	7:AH:26:VAL:HG23	1.59	0.67
9:AJ:80:LYS:HB3	9:AJ:84:GLN:HE22	1.60	0.67
49:B2:52:ASP:OD1	49:B2:56:GLN:NE2	2.26	0.67
59:BB:9:G:N2	59:BB:111:U:O2	2.26	0.67
10:CK:53:SER:HB2	20:CA:694:A:H5"	1.76	0.67
15:CP:28:ARG:NH1	20:CA:375:U:O2	2.27	0.67
20:CA:566:G:H4'	20:CA:567:G:H5'	1.75	0.67
20:CA:713:G:H2'	20:CA:714:G:C8	2.29	0.67
27:DE:105:THR:HB	27:DE:197:ILE:HG23	1.77	0.67
53:D7:34:ARG:HD3	53:D7:39:ARG:HD2	1.77	0.67
60:DA:1711:C:N3	60:DA:1747:G:N2	2.39	0.67
60:DA:2791:C:OP1	60:DA:2893:G:N2	2.26	0.67
28:BF:32:LEU:HD22	28:BF:112:MET:HE1	1.76	0.67
31:BJ:25:UNK:HA	31:BJ:80:UNK:HA	1.77	0.67
36:BR:6:SER:O	36:BR:8:ARG:NH2	2.28	0.67
38:BT:50:ILE:HG23	38:BT:99:LEU:H	1.60	0.67
44:BZ:8:TYR:HB2	44:BZ:38:TYR:CE1	2.29	0.67
48:BN:14:VAL:HG11	48:BN:137:LYS:HG3	1.75	0.67
48:BN:35:ARG:HB3	48:BN:42:TRP:CZ3	2.30	0.67
60:BA:2023:G:H8	60:BA:2023:G:P	2.18	0.67
60:BA:2397:G:H2'	60:BA:2398:U:C6	2.30	0.67
17:CR:45:SER:HB3	17:CR:51:LEU:HD11	1.77	0.67
20:CA:440:A:H3'	20:CA:441:A:C8	2.30	0.67
25:DC:214:TYR:HD2	25:DC:222:SER:HB2	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:78:LYS:HD2	26:DD:98:VAL:HG22	1.76	0.67
28:DF:102:PRO:HB3	60:DA:606:U:H5"	1.76	0.67
48:DN:71:ILE:H	48:DN:71:ILE:HD12	1.60	0.67
16:AQ:67:LYS:C	16:AQ:69:LYS:H	2.01	0.67
23:AY:13:ARG:HB2	23:AY:79:ILE:HG12	1.76	0.67
48:BN:1:MET:HE2	48:BN:2:LYS:H	1.58	0.67
55:B9:6:SER:HB3	60:BA:2466:C:H5"	1.77	0.67
60:BA:278:A:O2'	60:BA:279:C:O5'	2.13	0.67
60:BA:1869:G:O2'	60:BA:1871:A:N6	2.26	0.67
3:CD:25:ARG:HB2	20:CA:410:G:OP2	1.95	0.67
20:CA:440:A:H3'	20:CA:441:A:H8	1.60	0.67
23:CY:138:LYS:CG	61:CY:702:GNP:C6	2.71	0.67
60:DA:2448:A:H5'	60:DA:2449:U:H2'	1.77	0.67
1:AB:71:VAL:HB	1:AB:164:VAL:HG13	1.77	0.67
15:AP:42:ARG:HA	20:AA:450:G:H5'	1.77	0.67
17:AR:53:ARG:HE	17:AR:59:SER:HA	1.60	0.67
29:BG:126:ASP:OD1	60:BA:2302:G:N2	2.28	0.67
32:BK:30:HIS:HA	32:BK:59:ILE:HD12	1.76	0.67
60:BA:56:A:N1	60:BA:114:U:O4	2.27	0.67
60:BA:871:U:H2'	60:BA:872:A:C8	2.30	0.67
60:BA:1478:G:H2'	60:BA:1479:G:H8	1.60	0.67
60:BA:2632:A:N1	60:BA:2786:U:O4	2.27	0.67
60:BA:2788:C:H2'	60:BA:2789:C:O4'	1.95	0.67
20:CA:610:G:H2'	20:CA:611:A:H8	1.60	0.67
28:DF:154:VAL:H	28:DF:173:VAL:HA	1.59	0.67
29:DG:50:ALA:HB1	29:DG:51:ARG:HE	1.58	0.67
60:DA:1135:C:N4	60:DA:1137:G:H3'	2.11	0.67
60:DA:2487:G:H2'	60:DA:2488:A:H8	1.59	0.67
4:AE:29:GLY:HA2	4:AE:46:GLY:O	1.94	0.66
16:AQ:57:VAL:HG12	16:AQ:76:LEU:HA	1.77	0.66
23:AY:528:ALA:HB3	23:AY:568:TYR:HA	1.77	0.66
23:AY:535:PRO:O	23:AY:537:GLU:N	2.28	0.66
37:BS:53:SER:HA	37:BS:65:VAL:HG11	1.75	0.66
60:BA:732:C:H3'	60:BA:761:A:N6	2.10	0.66
60:BA:1577:C:H2'	60:BA:1578:U:C6	2.30	0.66
17:CR:54:ARG:NH2	20:CA:1536:C:O2'	2.27	0.66
20:CA:490:G:H2'	20:CA:491:G:C8	2.30	0.66
28:DF:5:ALA:HB3	28:DF:8:GLN:H	1.59	0.66
41:DW:66:GLU:HA	41:DW:69:LEU:HB2	1.76	0.66
48:DN:35:ARG:HB3	48:DN:42:TRP:CZ3	2.30	0.66
55:D9:22:ARG:HB3	55:D9:36:GLN:HB2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:223:A:O2'	60:DA:420:C:O2	2.12	0.66
60:DA:2151:G:H2'	60:DA:2152:G:H8	1.59	0.66
23:AY:91:THR:O	23:AY:93:GLU:N	2.29	0.66
28:BF:74:ARG:NH2	60:BA:674:G:N3	2.43	0.66
36:BR:33:ARG:HA	36:BR:114:VAL:O	1.95	0.66
60:BA:482:A:OP2	60:BA:507:A:N6	2.22	0.66
10:CK:31:THR:HG21	20:CA:706:A:O2'	1.96	0.66
23:CY:74:TRP:HD1	23:CY:77:HIS:HD1	1.42	0.66
25:DC:26:ALA:HA	25:DC:30:VAL:HG23	1.77	0.66
48:DN:1:MET:HE2	48:DN:2:LYS:H	1.58	0.66
60:DA:1011:G:O6	60:DA:1150:C:N3	2.29	0.66
2:AC:187:ALA:HB3	2:AC:198:VAL:HB	1.77	0.66
3:AD:56:VAL:HA	3:AD:59:ARG:HB2	1.75	0.66
4:AE:50:GLU:HG3	4:AE:52:PRO:HD2	1.76	0.66
7:AH:96:GLY:HA2	7:AH:130:GLY:HA3	1.78	0.66
23:AY:546:ILE:HG23	23:AY:590:ILE:HG13	1.78	0.66
26:BD:106:ILE:HD12	26:BD:196:VAL:HG12	1.77	0.66
27:BE:133:LYS:O	27:BE:135:HIS:N	2.24	0.66
30:BH:23:ARG:HA	30:BH:36:PRO:HA	1.76	0.66
52:B6:24:GLU:OE2	60:BA:2286:A:N6	2.28	0.66
53:B7:34:ARG:HD2	53:B7:42:LEU:HD22	1.76	0.66
60:BA:1007:C:H3'	60:BA:1008:C:H2'	1.77	0.66
60:BA:1429:G:H2'	60:BA:1430:C:C6	2.30	0.66
60:BA:2487:G:H2'	60:BA:2488:A:C8	2.30	0.66
6:CG:36:LYS:HD2	20:CA:1373:G:H5"	1.77	0.66
20:CA:828:A:H62	20:CA:858:G:H21	1.43	0.66
20:CA:1385:G:H2'	20:CA:1386:G:H8	1.59	0.66
60:DA:2087:G:H1	60:DA:2232:U:H3	1.43	0.66
11:AL:53:ARG:HG3	11:AL:69:TYR:CD1	2.30	0.66
20:AA:1123:A:H2	20:AA:1150:U:H3	1.42	0.66
28:BF:118:ALA:HA	28:BF:123:LEU:HD22	1.77	0.66
56:Be:102:GLY:H	56:Be:105:LYS:HG2	1.61	0.66
60:BA:1173:G:N2	60:BA:1177:A:H62	1.93	0.66
60:BA:2088:G:H1	60:BA:2231:C:H42	1.43	0.66
29:DG:8:LYS:NZ	29:DG:97:ASP:OD1	2.27	0.66
60:DA:712:G:H1	60:DA:719:C:H42	1.41	0.66
3:AD:127:THR:HA	3:AD:132:ARG:HA	1.78	0.66
11:AL:12:ARG:NH2	20:AA:881:G:OP2	2.28	0.66
20:AA:1388:C:H2'	20:AA:1389:C:H6	1.61	0.66
25:BC:64:SER:HA	25:BC:160:GLY:O	1.96	0.66
27:BE:12:THR:O	27:BE:22:PRO:HA	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:64:UNK:O	31:BJ:68:UNK:N	2.27	0.66
59:BB:60:C:H2'	59:BB:61:G:C8	2.31	0.66
11:CL:66:VAL:HB	11:CL:98:TYR:HD1	1.60	0.66
20:CA:806:C:H2'	20:CA:807:A:C8	2.30	0.66
28:DF:80:ALA:HB3	28:DF:83:PHE:HE1	1.61	0.66
37:DS:26:LEU:HD22	37:DS:87:PHE:HA	1.77	0.66
2:AC:154:SER:O	2:AC:197:GLY:N	2.27	0.66
11:AL:84:LEU:HB2	11:AL:104:VAL:HG11	1.76	0.66
15:AP:26:ARG:HD3	15:AP:31:LYS:HB3	1.75	0.66
20:AA:806:C:H2'	20:AA:807:A:C8	2.31	0.66
20:AA:1269:A:H1'	20:AA:1326:C:H1'	1.77	0.66
26:BD:33:LEU:HD11	60:BA:1423:G:H5"	1.78	0.66
47:B4:14:ILE:HG13	47:B4:22:ILE:HB	1.78	0.66
60:BA:819:A:H2'	60:BA:820:A:H8	1.60	0.66
60:BA:852:G:H2'	60:BA:853:G:H8	1.61	0.66
60:BA:1174:A:H3'	60:BA:1175:U:H4'	1.78	0.66
60:BA:1546:A:H2'	60:BA:154(B):C:O4'	1.96	0.66
11:CL:19:ARG:HG2	11:CL:20:LYS:H	1.61	0.66
27:DE:184:VAL:HG12	27:DE:185:LYS:H	1.60	0.66
37:DS:42:ASP:N	37:DS:42:ASP:OD1	2.26	0.66
60:DA:1821:A:H2'	60:DA:1822:G:C8	2.31	0.66
20:AA:105:G:H2'	20:AA:106:C:C6	2.30	0.66
20:AA:745:C:H2'	20:AA:746:A:H8	1.61	0.66
35:BQ:7:MET:SD	35:BQ:93:TYR:OH	2.54	0.66
39:BU:37:GLU:HA	39:BU:40:PHE:HD1	1.60	0.66
40:BV:10:LYS:HD3	60:BA:994:C:H1'	1.77	0.66
60:BA:947:G:H1	60:BA:970:C:N4	1.94	0.66
1:CB:91:PRO:HG2	1:CB:155:LEU:HD23	1.77	0.66
10:CK:81:ASP:HA	10:CK:106:LYS:O	1.94	0.66
37:DS:26:LEU:HD21	37:DS:101:LEU:HD13	1.78	0.66
43:DY:32:PRO:HD2	43:DY:34:LYS:H	1.60	0.66
3:AD:21:LEU:HD22	3:AD:114:ARG:HE	1.60	0.66
15:AP:82:GLN:NE2	20:AA:458(D):G:N3	2.43	0.66
20:AA:887:G:H1	20:AA:910:C:H42	1.43	0.66
20:AA:1493:A:OP1	24:AU:2:DPP:HB2	1.95	0.66
22:AW:11:C:N3	22:AW:24:G:N2	2.36	0.66
37:BS:42:ASP:O	37:BS:44:LYS:N	2.28	0.66
46:B1:91:LYS:HA	46:B1:94:LEU:HD22	1.78	0.66
20:CA:1143:G:H2'	20:CA:1144:G:C8	2.31	0.66
28:DF:8:GLN:HB2	28:DF:22:ALA:HB2	1.77	0.66
40:DV:3:ALA:O	40:DV:14:VAL:N	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DX:36:LYS:HG3	42:DX:54:VAL:HB	1.77	0.66
44:DZ:102:LEU:HD21	44:DZ:124:ILE:HD12	1.78	0.66
60:DA:1538:G:H2'	60:DA:1539:G:H8	1.61	0.66
2:AC:22:TRP:HB3	2:AC:59:ARG:H	1.61	0.66
11:AL:82:VAL:HG21	11:AL:105:TYR:CD2	2.31	0.66
48:BN:71:ILE:H	48:BN:71:ILE:HD12	1.60	0.66
56:Be:63:ILE:HB	56:Be:70:LYS:HG2	1.78	0.66
60:BA:324:A:H62	60:BA:338:G:H21	1.43	0.66
60:BA:1136:G:C4	60:BA:1137:G:C8	2.84	0.66
60:BA:2538:C:H2'	60:BA:2539:C:C6	2.31	0.66
11:CL:34:ARG:HB2	20:CA:363:A:OP1	1.96	0.66
22:CW:48:C:O2'	22:CW:59:A:H4'	1.96	0.66
42:DX:36:LYS:HA	42:DX:39:ILE:HD12	1.78	0.66
60:DA:612:G:N2	60:DA:616:A:O2'	2.28	0.66
60:DA:1752:C:N4	60:DA:1756:G:H1	1.94	0.66
60:DA:2810:A:N6	60:DA:2891:G:H21	1.92	0.66
31:BJ:165:UNK:O	31:BJ:167:UNK:N	2.29	0.66
33:BO:34:THR:OG1	33:BO:35:VAL:N	2.27	0.66
40:BV:35:LEU:HD23	40:BV:57:VAL:HG22	1.77	0.66
60:BA:1005:C:N4	60:BA:1138:G:H1	1.94	0.66
20:CA:123:C:OP1	20:CA:311:C:O2'	2.14	0.66
25:DC:218:THR:O	60:DA:2175:C:O2'	2.12	0.66
36:DR:63:ARG:NH2	36:DR:77:ARG:HH12	1.92	0.66
36:DR:100:LEU:HD22	36:DR:101:ALA:H	1.61	0.66
1:AB:115:LEU:HD13	1:AB:145:LEU:HB3	1.76	0.65
20:AA:662:G:H2'	20:AA:663:A:C8	2.30	0.65
27:BE:15:PHE:HD1	38:BT:80:SER:HB2	1.60	0.65
34:BP:6:LEU:HG	34:BP:8:PRO:HD2	1.78	0.65
38:BT:29:ARG:HG2	38:BT:30:VAL:HB	1.78	0.65
41:BW:11:ARG:HB3	41:BW:12:ILE:HD12	1.78	0.65
41:BW:45:TYR:OH	60:BA:489:G:O6	2.14	0.65
60:BA:557:U:H2'	60:BA:558:G:C8	2.32	0.65
60:BA:846:C:H4'	60:BA:847:U:H5'	1.78	0.65
60:BA:969:U:H2'	60:BA:970:C:C6	2.31	0.65
60:BA:1035:U:H2'	60:BA:1036:G:C8	2.31	0.65
60:BA:1201:C:N4	60:BA:1244:G:H1	1.93	0.65
60:BA:1299:G:H1'	60:BA:1641:A:N6	2.11	0.65
5:CF:11:ASN:HD22	5:CF:14:LEU:HG	1.61	0.65
45:D0:65:GLY:HA3	45:D0:81:VAL:HG13	1.76	0.65
48:DN:74:ARG:NH2	60:DA:2640:G:H5"	2.11	0.65
60:DA:1139:G:H2'	60:DA:1140:C:C6	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2405:G:H21	60:DA:2412:A:H62	1.42	0.65
20:AA:68(P):C:H2'	20:AA:68(Q):U:C6	2.31	0.65
20:AA:1236:A:H4'	20:AA:1304:G:H4'	1.78	0.65
20:AA:1239:A:H2'	20:AA:1298:C:H42	1.61	0.65
20:AA:1388:C:H2'	20:AA:1389:C:C6	2.31	0.65
26:BD:5:LYS:HA	26:BD:17:THR:HA	1.78	0.65
60:BA:273(G):C:H3'	60:BA:274:G:H5"	1.78	0.65
60:BA:740:U:H2'	60:BA:741:G:C8	2.31	0.65
60:BA:1149:G:H2'	60:BA:1150:C:C6	2.31	0.65
60:BA:1986:A:H2'	60:BA:1987:G:C8	2.30	0.65
5:CF:91:VAL:HG23	20:CA:736:C:H5"	1.78	0.65
20:CA:678:U:O2'	20:CA:778:G:OP1	2.10	0.65
20:CA:1002:G:H2'	20:CA:1003:G:H8	1.58	0.65
20:CA:1059:C:H2'	20:CA:1060:C:O4'	1.97	0.65
23:CY:328:ILE:HD12	23:CY:330:VAL:H	1.60	0.65
28:DF:64:ILE:HG22	28:DF:76:GLY:HA2	1.77	0.65
48:DN:55:VAL:HG23	48:DN:56:ASN:OD1	1.97	0.65
60:DA:24:G:H2'	60:DA:25:U:C6	2.31	0.65
60:DA:595:C:H2'	60:DA:596:G:C8	2.31	0.65
60:DA:630:G:N2	60:DA:633:A:OP2	2.28	0.65
6:AG:29:LYS:HE2	20:AA:1375:A:H5"	1.79	0.65
11:AL:92:ASP:OD1	11:AL:92:ASP:N	2.27	0.65
20:AA:159:G:H1'	20:AA:162:A:N6	2.10	0.65
27:BE:53:PRO:HA	27:BE:74:PRO:HA	1.79	0.65
29:BG:55:LYS:NZ	29:BG:55:LYS:O	2.29	0.65
60:BA:1525:G:H2'	60:BA:1526:G:H8	1.61	0.65
60:BA:1728:G:N2	60:BA:1731:G:O2'	2.29	0.65
60:BA:2055:C:N4	60:BA:2500:U:O4'	2.29	0.65
60:BA:2559:C:H2'	60:BA:2560:C:C6	2.32	0.65
2:CC:134:ILE:HD11	2:CC:151:VAL:HB	1.77	0.65
20:CA:570:G:N2	20:CA:866:C:N3	2.38	0.65
20:CA:1300:G:OP2	20:CA:1335:C:N4	2.30	0.65
28:DF:5:ALA:HB1	28:DF:123:LEU:HD21	1.76	0.65
28:DF:9:ILE:HG21	28:DF:124:LEU:HA	1.77	0.65
60:DA:852:G:H2'	60:DA:853:G:H8	1.59	0.65
60:DA:2131:G:H5'	60:DA:2133:G:O4'	1.96	0.65
60:DA:2685:G:H1	60:DA:2724:C:N4	1.93	0.65
7:AH:135:CYS:SG	7:AH:136:GLU:N	2.65	0.65
16:AQ:95:TYR:OH	20:AA:279:A:OP2	2.08	0.65
20:AA:1503:A:N6	21:AV:14:A:H2'	2.12	0.65
23:AY:20:HIS:CD2	23:AY:21:ILE:HG23	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:529:ILE:HD12	23:AY:539:ILE:HD11	1.78	0.65
48:BN:131:GLN:HG2	60:BA:7:G:O2'	1.94	0.65
60:BA:52:A:H62	60:BA:119:A:H62	1.44	0.65
60:BA:1129:A:N6	60:BA:2490:G:H5"	2.11	0.65
60:BA:2314:C:H2'	60:BA:2315:G:H8	1.61	0.65
20:CA:406:G:H1	20:CA:436:C:H42	1.44	0.65
20:CA:659:U:H2'	20:CA:660:G:C8	2.31	0.65
60:DA:1417:C:H4'	60:DA:1588:C:H1'	1.77	0.65
60:DA:2133:G:O2'	60:DA:2158:A:N6	2.30	0.65
60:DA:2291:U:O2'	60:DA:2374:C:O2	2.14	0.65
23:AY:606:MET:HG3	23:AY:649:LEU:HG	1.79	0.65
29:BG:106:LEU:HD23	29:BG:107:LEU:HG	1.77	0.65
36:BR:64:ARG:O	36:BR:68:ARG:N	2.30	0.65
19:CT:74:LYS:HG2	19:CT:75:ASN:H	1.62	0.65
22:CW:12:U:O2	22:CW:23:A:N1	2.30	0.65
23:CY:329:ARG:HG3	23:CY:374:LEU:CD1	2.27	0.65
45:D0:39:ARG:HH21	60:DA:2355:C:H1'	1.61	0.65
48:DN:17:ASP:O	48:DN:18:ALA:HB2	1.95	0.65
3:AD:12:CYS:HB3	3:AD:33:MET:HG2	1.79	0.65
20:AA:1492:A:H5'	24:AU:6:5OH:NP	2.08	0.65
21:AV:8:A:O2'	21:AV:9:G:OP1	2.15	0.65
26:BD:80:ALA:HB3	26:BD:94:LEU:HD22	1.79	0.65
38:BT:60:THR:HG22	38:BT:77:PRO:HA	1.79	0.65
44:BZ:22:GLY:HA2	44:BZ:41:LEU:HG	1.79	0.65
8:CI:55:ALA:CB	8:CI:58:ARG:HH21	2.09	0.65
14:CO:2:PRO:HA	20:CA:740:U:OP2	1.97	0.65
18:CS:40:ILE:HG12	18:CS:71:LEU:HD23	1.79	0.65
20:CA:932:C:H2'	20:CA:933:G:C8	2.32	0.65
23:CY:188:TYR:HA	23:CY:196:ILE:HA	1.76	0.65
27:DE:12:THR:HB	38:DT:58:ASN:HD21	1.59	0.65
38:DT:53:ARG:NH2	60:DA:2683:C:OP1	2.30	0.65
39:DU:92:ARG:HB3	39:DU:95:LEU:HB2	1.79	0.65
60:DA:150:C:H2'	60:DA:151:C:C6	2.32	0.65
20:AA:740:U:O2'	20:AA:741:G:O4'	2.15	0.65
20:AA:1354:C:H2'	20:AA:1355:G:C8	2.32	0.65
28:BF:8:GLN:HE22	28:BF:125:LEU:HD21	1.62	0.65
41:BW:75:TYR:O	41:BW:104:THR:N	2.30	0.65
46:B1:20:ARG:HH12	46:B1:24:ALA:HB2	1.61	0.65
3:CD:13:ARG:HH21	3:CD:36:ARG:HG3	1.59	0.65
9:CJ:61:GLU:OE2	13:CN:45:ARG:NH1	2.29	0.65
20:CA:1422:G:O2'	33:DO:49:ARG:NH2	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1491:G:C2'	24:CU:6:5OH:HA	2.25	0.65
25:DC:28:ARG:HG3	25:DC:183:PRO:HB3	1.78	0.65
40:DV:24:LYS:HA	40:DV:92:THR:HG23	1.78	0.65
60:DA:743:G:H1	60:DA:754:C:N4	1.95	0.65
60:DA:1355:G:H2'	60:DA:1356:G:C8	2.32	0.65
15:AP:45:THR:O	15:AP:47:ASP:N	2.30	0.65
20:AA:862:C:N4	20:AA:867:G:H1	1.94	0.65
22:AW:76:A:C6	60:BA:2421:G:H2'	2.32	0.65
48:BN:120:LEU:HD23	48:BN:120:LEU:C	2.21	0.65
54:B8:23:VAL:HG13	54:B8:48:PHE:HA	1.78	0.65
60:BA:622:G:H2'	60:BA:623:G:C8	2.32	0.65
60:BA:692:C:N4	60:BA:770:G:H1	1.94	0.65
60:BA:1010:A:O2'	60:BA:1152:C:O2'	2.15	0.65
13:CN:24:CYS:O	13:CN:28:GLY:N	2.29	0.65
20:CA:46:G:O2'	20:CA:365:U:O2'	2.14	0.65
20:CA:159:G:H1'	20:CA:162:A:N6	2.12	0.65
20:CA:757:U:H2'	20:CA:758:G:O4'	1.97	0.65
20:CA:783:C:H42	20:CA:799:G:H1	1.45	0.65
23:CY:10:LYS:O	23:CY:13:ARG:NH1	2.28	0.65
23:CY:61:ARG:NH1	60:DA:2663:G:OP1	2.30	0.65
26:DD:24:ILE:HG13	26:DD:82:ILE:HB	1.77	0.65
10:AK:58:PRO:HB2	10:AK:93:GLN:HG3	1.79	0.65
20:AA:1070:U:H2'	20:AA:1071:C:C6	2.32	0.65
20:AA:1291:G:H2'	20:AA:1292:U:C6	2.32	0.65
20:AA:1492:A:C3'	24:AU:6:5OH:CQ	2.62	0.65
21:AV:6:G:H2'	21:AV:7:G:C8	2.32	0.65
22:AW:56:C:H2'	22:AW:57:G:H8	1.60	0.65
26:BD:260:ARG:NH1	60:BA:1799:G:OP1	2.30	0.65
29:BG:126:ASP:HB2	29:BG:130:ASN:HD22	1.62	0.65
34:BP:114:ILE:HG12	34:BP:130:PHE:HD1	1.62	0.65
35:BQ:70:PRO:HA	35:BQ:95:ALA:HB2	1.79	0.65
37:BS:45:GLY:O	59:BB:112:G:N2	2.30	0.65
39:BU:98:LEU:HD22	39:BU:101:ARG:HH12	1.61	0.65
41:BW:77:ASP:O	41:BW:102:HIS:N	2.29	0.65
60:BA:280:C:H42	60:BA:360:G:H1	1.45	0.65
60:BA:551:G:H2'	60:BA:552:G:O4'	1.97	0.65
60:BA:572:A:C2	60:BA:2029:G:N2	2.63	0.65
60:BA:2235:G:H2'	60:BA:2236:C:C6	2.31	0.65
1:CB:55:PHE:HA	1:CB:58:ILE:HB	1.78	0.65
20:CA:67:C:O2'	20:CA:171:A:N3	2.22	0.65
27:DE:5:LEU:HD23	27:DE:197:ILE:HB	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:85:LYS:HD2	30:DH:141:VAL:HG12	1.79	0.65
34:DP:66:GLY:HA2	60:DA:2415:G:H4'	1.79	0.65
35:DQ:85:LYS:HG3	45:D0:7:LEU:HD13	1.77	0.65
44:DZ:9:TYR:HA	44:DZ:37:VAL:HG12	1.77	0.65
46:D1:17:SER:OG	46:D1:42:GLN:N	2.29	0.65
60:DA:1019:U:O2	60:DA:1020:A:C8	2.49	0.65
60:DA:1080:C:H2'	60:DA:1081:U:C6	2.32	0.65
60:DA:1570:A:H2'	60:DA:1571:A:C8	2.31	0.65
60:DA:2400:G:H1	60:DA:2416:C:N4	1.94	0.65
8:AI:128:ARG:NH1	20:AA:1341:U:O2'	2.30	0.65
18:AS:62:ILE:HG13	18:AS:66:MET:HG3	1.79	0.65
27:BE:133:LYS:HB2	27:BE:134:ILE:HD13	1.78	0.65
60:BA:2070:G:H1	60:BA:2441:C:H42	1.45	0.65
60:BA:2819:G:H1	60:BA:2827:C:H42	1.45	0.65
20:CA:123:C:H2'	20:CA:124:G:C8	2.32	0.65
22:CW:56:C:H2'	22:CW:57:G:H8	1.61	0.65
23:CY:563:ILE:O	23:CY:565:VAL:N	2.27	0.65
26:DD:165:ILE:O	26:DD:166:GLN:HB2	1.97	0.65
52:D6:48:VAL:O	52:D6:49:HIS:HB2	1.97	0.65
23:AY:388:THR:HG23	23:AY:399:LEU:HD22	1.79	0.64
23:AY:506:GLN:HG2	23:AY:580:MET:HE1	1.79	0.64
27:BE:36:ARG:NH1	27:BE:85:ASN:OD1	2.30	0.64
29:BG:114:ILE:C	29:BG:116:ASP:H	2.04	0.64
40:BV:3:ALA:O	40:BV:14:VAL:N	2.30	0.64
40:BV:47:VAL:HG12	40:BV:52:VAL:HB	1.78	0.64
40:BV:62:LEU:HG	40:BV:95:LEU:HB2	1.79	0.64
60:BA:1303:G:O2'	60:BA:1642:G:O2'	2.13	0.64
6:CG:73:MET:HG2	6:CG:90:GLU:HA	1.79	0.64
15:CP:42:ARG:NH2	20:CA:449:C:O2	2.30	0.64
20:CA:832:C:H42	20:CA:854:G:H1	1.44	0.64
20:CA:1124:G:H1	20:CA:1149:C:N4	1.94	0.64
25:DC:138:LEU:HD22	25:DC:139:PRO:HD2	1.78	0.64
40:DV:4:ILE:HD13	40:DV:40:LEU:HD23	1.79	0.64
52:D6:8:LYS:HE3	52:D6:25:LYS:HE2	1.77	0.64
59:DB:95:U:H2'	59:DB:96:G:C8	2.32	0.64
60:DA:463:G:H21	60:DA:466:A:H62	1.45	0.64
60:DA:784:A:N6	60:DA:2072:G:O2'	2.30	0.64
60:DA:2636:U:O4	60:DA:2782:G:O6	2.15	0.64
16:AQ:61:GLU:HA	16:AQ:71:PHE:HD1	1.62	0.64
20:AA:1060:C:H2'	20:AA:1061:G:H8	1.61	0.64
28:BF:154:VAL:O	28:BF:156:LEU:N	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:169:ASN:HB2	60:BA:322:A:P	2.37	0.64
30:BH:172:LYS:HB3	30:BH:175:LYS:HB3	1.80	0.64
36:BR:67:LEU:HA	36:BR:70:LEU:HB2	1.77	0.64
3:CD:12:CYS:HA	3:CD:19:LEU:HD13	1.79	0.64
20:CA:62:U:H5'	20:CA:385:C:H1'	1.77	0.64
28:DF:155:LEU:HA	28:DF:176:LEU:CB	2.27	0.64
29:DG:135:LEU:HD22	29:DG:140:ILE:HD11	1.79	0.64
52:D6:18:ARG:O	52:D6:19:ARG:HB2	1.96	0.64
10:AK:21:ILE:HD13	10:AK:94:ALA:HB1	1.78	0.64
20:AA:41:G:H2'	20:AA:42:G:C8	2.32	0.64
20:AA:1237:C:H4'	20:AA:1334:G:H21	1.62	0.64
28:BF:111:ALA:HA	28:BF:202:PHE:HZ	1.63	0.64
59:BB:73:A:N7	59:BB:103:U:O4	2.30	0.64
60:BA:77:C:H2'	60:BA:78:A:C8	2.33	0.64
60:BA:1375:C:H2'	60:BA:1376:C:C6	2.31	0.64
1:CB:71:VAL:HB	1:CB:164:VAL:HA	1.79	0.64
20:CA:444:C:H42	20:CA:490:G:H1	1.46	0.64
20:CA:1492:A:H3'	24:CU:6:5OH:HNP	1.60	0.64
22:CW:6:C:H2'	22:CW:7:G:C8	2.31	0.64
45:D0:25:ARG:NH2	60:DA:2354:G:O3'	2.30	0.64
60:DA:1664:A:H61	60:DA:1996:C:H42	0.77	0.64
20:AA:784:C:H2'	20:AA:785:G:C8	2.33	0.64
23:AY:457:LEU:HD11	60:BA:2661:G:O2'	1.96	0.64
25:BC:33:LEU:HB3	25:BC:221:PRO:HD2	1.79	0.64
33:BO:68:GLU:HB3	33:BO:78:ARG:HB2	1.80	0.64
41:BW:64:MET:HE2	41:BW:69:LEU:HD21	1.79	0.64
46:B1:16:ASN:HB3	60:BA:381:G:H5'	1.79	0.64
48:BN:126:PRO:O	48:BN:127:ASP:HB2	1.98	0.64
60:BA:1030:G:H2'	60:BA:1031:G:H8	1.63	0.64
60:BA:1312:U:O4	60:BA:1340:U:O4	2.15	0.64
20:CA:815:A:H61	20:CA:1508:G:H21	1.46	0.64
23:CY:137:ASN:ND2	61:CY:702:GNP:O6	2.30	0.64
32:DK:59:ILE:HG13	32:DK:61:ALA:H	1.62	0.64
48:DN:126:PRO:O	48:DN:127:ASP:HB2	1.98	0.64
60:DA:969:U:H2'	60:DA:970:C:C6	2.32	0.64
60:DA:1183:G:H2'	60:DA:1184:G:H8	1.62	0.64
60:DA:1636:C:H2'	60:DA:1637:A:C8	2.32	0.64
60:DA:2210:G:H21	60:DA:2211:G:H5'	1.63	0.64
2:AC:84:ILE:HG13	2:AC:101:LEU:HD13	1.80	0.64
8:AI:65:VAL:HG11	8:AI:77:ILE:HD11	1.79	0.64
20:AA:869:G:O2'	20:AA:872:A:N7	2.29	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1409:C:H2'	20:AA:1410:G:C8	2.33	0.64
20:AA:1486:G:H2'	20:AA:1487:G:O4'	1.98	0.64
25:BC:41:THR:O	25:BC:43:GLU:N	2.30	0.64
30:BH:20:ALA:HB1	30:BH:21:PRO:HD2	1.80	0.64
41:BW:84:ARG:HB2	41:BW:96:ILE:HG23	1.80	0.64
48:BN:111:PRO:HD2	60:BA:558:G:OP1	1.97	0.64
1:CB:167:PRO:HD2	1:CB:188:ALA:HB2	1.79	0.64
6:CG:29:LYS:HG3	6:CG:101:LEU:HD13	1.79	0.64
6:CG:156:TRP:HH2	20:CA:1378:C:H2'	1.62	0.64
7:CH:135:CYS:SG	7:CH:136:GLU:N	2.70	0.64
20:CA:559:A:H4'	20:CA:560:U:H5"	1.79	0.64
20:CA:950:U:H2'	20:CA:951:G:C8	2.33	0.64
23:CY:14:ASN:ND2	23:CY:80:ASN:HB2	2.13	0.64
26:DD:12:SER:HB2	26:DD:208:LYS:HB3	1.79	0.64
44:DZ:151:HIS:HB2	44:DZ:168:GLU:O	1.98	0.64
60:DA:245:G:H21	60:DA:384:U:H4'	1.61	0.64
60:DA:1288:U:H3	60:DA:1326:U:H3	1.46	0.64
60:DA:1631:A:N6	60:DA:1682:G:O2'	2.30	0.64
60:DA:2282:G:H21	60:DA:2390:U:H3	1.44	0.64
60:DA:2651:C:N4	60:DA:2669:G:H1	1.95	0.64
3:AD:67:ILE:O	3:AD:114:ARG:NH2	2.31	0.64
26:BD:63:ARG:NH1	26:BD:87:ASN:OD1	2.30	0.64
26:BD:228:PRO:HG3	60:BA:2598:A:H4'	1.80	0.64
44:BZ:14:LYS:NZ	59:BB:95:U:OP2	2.29	0.64
54:B8:52:LYS:HE3	60:BA:834:C:H4'	1.79	0.64
60:BA:1030:G:H2'	60:BA:1031:G:C8	2.33	0.64
2:CC:86:VAL:HA	2:CC:89:GLU:HB2	1.78	0.64
4:CE:61:TYR:OH	20:CA:1075:C:OP2	2.16	0.64
8:CI:20:ARG:O	8:CI:60:ASP:N	2.21	0.64
20:CA:479:C:H2'	20:CA:480:U:C6	2.33	0.64
44:DZ:10:ARG:HB3	44:DZ:36:LYS:HB2	1.79	0.64
48:DN:137:LYS:HZ3	48:DN:137:LYS:HA	1.62	0.64
60:DA:37:C:H2'	60:DA:38:A:C8	2.33	0.64
60:DA:647:G:H2'	60:DA:648:G:O4'	1.98	0.64
60:DA:1136:G:H2'	60:DA:1137:G:O4'	1.98	0.64
60:DA:1416:G:N2	60:DA:1582:C:C2	2.63	0.64
60:DA:1516:U:H2'	60:DA:1517:G:C8	2.33	0.64
60:DA:1796:U:H3	60:DA:1823:G:H1	1.43	0.64
6:AG:4:ARG:NH1	20:AA:932:C:OP1	2.30	0.64
13:AN:26:ARG:NH1	13:AN:46:GLU:OE2	2.31	0.64
20:AA:1438:G:H1	20:AA:1463:C:N4	1.95	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:133:LEU:N	26:BD:187:GLY:O	2.31	0.64
26:BD:165:ILE:HA	26:BD:175:LEU:HA	1.78	0.64
26:BD:244:ARG:HG2	26:BD:246:PRO:HD3	1.78	0.64
35:BQ:54:MET:HG2	35:BQ:58:PHE:CE2	2.33	0.64
48:BN:55:VAL:HG23	48:BN:56:ASN:OD1	1.97	0.64
20:CA:1297:C:H4'	20:CA:1299:A:H2	1.63	0.64
23:CY:293:THR:O	23:CY:295:GLU:N	2.27	0.64
29:DG:43:LEU:HD13	60:DA:2305:A:H61	1.62	0.64
29:DG:47:LYS:HD3	29:DG:81:LYS:HD2	1.80	0.64
60:DA:1516:U:H2'	60:DA:1517:G:H8	1.63	0.64
60:DA:2487:G:H2'	60:DA:2488:A:C8	2.32	0.64
60:DA:2793:G:N1	60:DA:2803:C:O2	2.24	0.64
60:DA:2879:C:O2	60:DA:2881:C:N4	2.31	0.64
1:AB:19:HIS:HB2	1:AB:204:ASN:HD22	1.62	0.64
9:AJ:40:LEU:HD22	9:AJ:41:PRO:HD2	1.80	0.64
20:AA:1027:C:O2	20:AA:1034:G:N1	2.29	0.64
20:AA:1343:G:H2'	20:AA:1344:C:C6	2.33	0.64
23:AY:14:ASN:HD22	23:AY:80:ASN:HB2	1.63	0.64
25:BC:140:ASN:O	25:BC:142:LYS:N	2.31	0.64
26:BD:202:LYS:HB3	60:BA:1820:U:H1'	1.79	0.64
59:BB:73:A:H62	59:BB:103:U:H3	1.42	0.64
60:BA:131:G:H2'	60:BA:132:G:H8	1.63	0.64
60:BA:270(E):C:H2'	60:BA:270(F):G:C8	2.33	0.64
60:BA:956:G:H2'	60:BA:957:A:H2'	1.80	0.64
60:BA:2876:G:H2'	60:BA:2877:G:H8	1.61	0.64
4:CE:20:GLN:OE1	4:CE:25:ARG:NH2	2.31	0.64
20:CA:572:A:HO2'	20:CA:916:G:HO2'	1.44	0.64
20:CA:673:G:H2'	20:CA:674:G:H8	1.60	0.64
20:CA:1248:A:H2	20:CA:1289:A:N6	1.96	0.64
20:CA:1503:A:N6	21:CV:14:A:H2'	2.12	0.64
20:CA:1522:U:H2'	20:CA:1523:G:C8	2.33	0.64
23:CY:92:ILE:HG21	23:CY:437:THR:HG21	1.79	0.64
27:DE:36:ARG:HG3	27:DE:47:VAL:HG22	1.78	0.64
28:DF:101:LEU:HD12	28:DF:102:PRO:HD2	1.79	0.64
28:DF:117:ARG:HB2	28:DF:186:ILE:HD11	1.79	0.64
28:DF:155:LEU:HA	28:DF:176:LEU:HB3	1.79	0.64
32:DK:7:VAL:HB	32:DK:58:THR:HG23	1.80	0.64
40:DV:66:ARG:HA	40:DV:90:PRO:HA	1.80	0.64
48:DN:120:LEU:HD23	48:DN:120:LEU:C	2.21	0.64
60:DA:503:A:H4'	60:DA:504:U:H5"	1.78	0.64
60:DA:1511:A:H2'	60:DA:1512:G:C8	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:1674:G:H1'	60:DA:1676:A:N6	2.12	0.64
60:DA:2696:U:H3	60:DA:2711:A:H61	1.45	0.64
11:AL:71:PRO:HD3	11:AL:100:ILE:HB	1.78	0.64
20:AA:490:G:H2'	20:AA:491:G:H8	1.63	0.64
41:BW:69:LEU:HD22	41:BW:107:LEU:HD23	1.80	0.64
46:B1:14:VAL:HG13	46:B1:41:ARG:HD2	1.80	0.64
60:BA:77:C:H2'	60:BA:78:A:H8	1.62	0.64
60:BA:659:C:H2'	60:BA:660:G:H8	1.62	0.64
60:BA:1317:A:N6	60:BA:1335:U:H3	1.94	0.64
60:BA:1969:A:O2'	60:BA:1972:A:N3	2.31	0.64
20:CA:656:C:H42	20:CA:750:G:H1	1.46	0.64
20:CA:1225:A:H2'	20:CA:1226:C:C5	2.33	0.64
28:DF:169:ASN:HB2	60:DA:322:A:P	2.38	0.64
40:DV:62:LEU:HG	40:DV:95:LEU:HB2	1.80	0.64
60:DA:996:A:H2'	60:DA:997:G:C8	2.33	0.64
60:DA:1218:C:H42	60:DA:1231:G:H1	1.44	0.64
60:DA:2675:A:N6	60:DA:2732:G:H1	1.96	0.64
11:AL:33:ARG:HB3	11:AL:60:LEU:HD12	1.80	0.64
11:AL:122:THR:HG22	11:AL:125:PRO:HG3	1.79	0.64
16:AQ:28:PRO:HA	16:AQ:35:VAL:HA	1.80	0.64
23:AY:658:ASP:N	23:AY:658:ASP:OD2	2.29	0.64
28:BF:176:LEU:HG	28:BF:177:ALA:N	2.09	0.64
38:BT:100:TYR:HB3	38:BT:103:ARG:HH21	1.63	0.64
45:B0:72:ARG:O	45:B0:74:ARG:N	2.31	0.64
48:BN:120:LEU:HD23	48:BN:120:LEU:O	1.98	0.64
60:BA:195:A:H2'	60:BA:198:C:H41	1.63	0.64
60:BA:992:C:H2'	60:BA:993:G:H8	1.63	0.64
60:BA:2783:G:H2'	60:BA:2784:C:C6	2.32	0.64
60:DA:278:A:H2'	60:DA:279:C:C6	2.33	0.64
60:DA:504:U:H4'	60:DA:505:A:H5'	1.79	0.64
60:DA:2229:C:H2'	60:DA:2230:G:H8	1.62	0.64
11:AL:32:PHE:HA	11:AL:85:ILE:O	1.97	0.63
11:AL:46:LYS:NZ	20:AA:1491:G:OP1	2.32	0.63
26:BD:218:ARG:NH2	60:BA:691:C:OP1	2.30	0.63
29:BG:77:ILE:HG23	60:BA:2310:A:H2	1.63	0.63
34:BP:45:LEU:HG	34:BP:46:LYS:H	1.63	0.63
43:BY:47:LYS:HB2	60:BA:482:A:H4'	1.81	0.63
60:BA:481:G:H4'	60:BA:481:G:OP1	1.94	0.63
60:BA:576:U:H2'	60:BA:577:G:H8	1.63	0.63
60:BA:1604:C:H2'	60:BA:1605:C:C6	2.33	0.63
5:CF:37:VAL:HA	5:CF:65:VAL:HG12	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:33:THR:HG22	10:CK:39:PRO:HA	1.80	0.63
16:CQ:17:LYS:NZ	20:CA:255:G:O2'	2.24	0.63
23:CY:19:ALA:H	23:CY:25:LYS:HD3	1.64	0.63
25:DC:29:LEU:O	25:DC:32:GLU:HG3	1.98	0.63
35:DQ:34:LEU:HD21	35:DQ:122:GLY:HA3	1.79	0.63
60:DA:1394:U:H4'	60:DA:1603:A:H4'	1.79	0.63
60:DA:1529:A:H62	60:DA:1542:G:N2	1.96	0.63
60:DA:2647:U:H2'	60:DA:2648:C:H6	1.60	0.63
3:AD:67:ILE:HD13	3:AD:114:ARG:HH21	1.63	0.63
3:AD:100:ARG:HH12	3:AD:118:ARG:HH22	1.44	0.63
8:AI:120:ARG:NH1	20:AA:1346:A:OP1	2.30	0.63
20:AA:1440(J):C:O2'	20:AA:1440(K):G:N3	2.31	0.63
23:AY:33:LEU:HD13	23:AY:51:THR:HG21	1.80	0.63
25:BC:7:ARG:HH22	60:BA:2128:C:H5"	1.63	0.63
25:BC:28:ARG:HG3	25:BC:183:PRO:HB3	1.80	0.63
27:BE:92:THR:H	27:BE:95:ILE:HD11	1.63	0.63
43:BY:28:LYS:HA	43:BY:39:VAL:HA	1.80	0.63
60:BA:733:G:OP2	60:BA:761:A:N6	2.31	0.63
60:BA:819:A:H3'	60:BA:973:A:H61	1.64	0.63
20:CA:123:C:H2'	20:CA:124:G:H8	1.63	0.63
20:CA:612:C:H42	20:CA:628:G:H1	1.46	0.63
20:CA:827:U:H3	20:CA:872:A:H61	1.45	0.63
25:DC:132:LEU:HB2	25:DC:138:LEU:HG	1.80	0.63
27:DE:13:ARG:HG2	38:DT:58:ASN:HD22	1.63	0.63
28:DF:206:ILE:HG22	28:DF:208:GLY:H	1.62	0.63
41:DW:42:ARG:HD2	60:DA:2010:G:H4'	1.80	0.63
60:DA:193:U:H2'	60:DA:194:G:C8	2.34	0.63
60:DA:268:C:N3	60:DA:424:G:N2	2.44	0.63
60:DA:278:A:O2'	60:DA:279:C:O5'	2.17	0.63
60:DA:822:U:H2'	60:DA:823:G:H8	1.62	0.63
3:AD:9:CYS:HB3	3:AD:32:ALA:HB3	1.79	0.63
19:AT:63:ILE:HD12	19:AT:81:LYS:HG3	1.81	0.63
20:AA:613:C:H42	20:AA:627:G:H1	1.44	0.63
25:BC:213:VAL:HG11	25:BC:225:ILE:HD13	1.81	0.63
60:BA:200:U:O4	60:BA:250:G:N1	2.31	0.63
2:CC:68:VAL:HG12	2:CC:70:VAL:HG22	1.79	0.63
6:CG:87:VAL:HG21	6:CG:154:TYR:HB2	1.78	0.63
23:CY:213:HIS:O	23:CY:216:LEU:HB3	1.98	0.63
23:CY:314:PHE:N	23:CY:327:PHE:O	2.30	0.63
26:DD:102:LYS:NZ	60:DA:1500:G:O2'	2.31	0.63
28:DF:143:ALA:HB1	28:DF:148:LEU:HD12	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:1359:A:N6	60:DA:1372:U:N3	2.30	0.63
1:AB:131:PRO:HG2	1:AB:134:GLU:HB2	1.80	0.63
4:AE:46:GLY:HA3	4:AE:54:ALA:HB1	1.80	0.63
9:AJ:43:ARG:HB2	9:AJ:67:THR:HB	1.79	0.63
20:AA:450:G:H3'	20:AA:481:G:H1	1.64	0.63
23:AY:30:GLU:HB2	23:AY:51:THR:HG22	1.79	0.63
27:BE:12:THR:HG23	38:BT:8:LYS:HE2	1.80	0.63
40:BV:96:ILE:HG22	40:BV:97:LYS:H	1.63	0.63
59:BB:21:G:H1	59:BB:62:C:N4	1.97	0.63
60:BA:24:G:H2'	60:BA:25:U:C6	2.33	0.63
60:BA:2675:A:N6	60:BA:2732:G:H1	1.96	0.63
11:CL:122:THR:HG22	11:CL:125:PRO:HG3	1.80	0.63
20:CA:218:C:H4'	20:CA:458(C):G:H22	1.63	0.63
20:CA:764:C:H2'	20:CA:765:G:C8	2.34	0.63
25:DC:26:ALA:CB	25:DC:215:VAL:HG21	2.28	0.63
27:DE:133:LYS:HB2	27:DE:134:ILE:HD13	1.80	0.63
29:DG:120:LEU:HB2	29:DG:180:PHE:HA	1.80	0.63
33:DO:85:VAL:HG11	33:DO:114:ILE:HD12	1.81	0.63
37:DS:42:ASP:O	37:DS:44:LYS:N	2.32	0.63
39:DU:18:LEU:HD22	39:DU:22:LYS:HE2	1.80	0.63
39:DU:25:TRP:CD1	39:DU:26:GLY:H	2.15	0.63
43:DY:28:LYS:HE3	43:DY:30:VAL:HG22	1.81	0.63
20:AA:1507:A:H2'	20:AA:1508:G:H8	1.63	0.63
28:BF:5:ALA:HB3	28:BF:8:GLN:H	1.63	0.63
28:BF:45:ARG:NH2	60:BA:444:C:OP1	2.31	0.63
38:BT:132:LYS:HA	38:BT:135:ALA:HB3	1.79	0.63
60:BA:1007:C:H5"	60:BA:1008:C:C2'	2.27	0.63
7:CH:9:MET:HE2	7:CH:10:LEU:HD23	1.80	0.63
15:CP:42:ARG:O	20:CA:449:C:O2'	2.16	0.63
44:DZ:98:MET:HE3	44:DZ:128:VAL:HG11	1.79	0.63
48:DN:120:LEU:HD23	48:DN:120:LEU:O	1.98	0.63
60:DA:550:G:H2'	60:DA:551:G:C8	2.33	0.63
20:AA:927:G:H1	20:AA:1390:U:H3	1.47	0.63
28:BF:101:LEU:HD12	28:BF:102:PRO:HD2	1.79	0.63
60:BA:131:G:H2'	60:BA:132:G:C8	2.34	0.63
60:BA:1070:A:H5'	60:BA:1072:C:OP2	1.97	0.63
7:CH:10:LEU:HD22	7:CH:83:ILE:HD11	1.79	0.63
20:CA:593:G:H1	20:CA:646:U:H3	1.46	0.63
20:CA:1010:G:H2'	20:CA:1011:G:H8	1.63	0.63
25:DC:29:LEU:O	25:DC:33:LEU:HG	1.99	0.63
37:DS:97:ARG:O	37:DS:99:LYS:N	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DX:64:LYS:HD3	60:DA:64:A:H5'	1.81	0.63
46:D1:18:ILE:O	60:DA:379:G:O2'	2.12	0.63
60:DA:77:C:H2'	60:DA:78:A:C8	2.33	0.63
60:DA:903:C:H2'	60:DA:904:C:H6	1.64	0.63
60:DA:1069:A:O2'	60:DA:1073:A:N6	2.32	0.63
60:DA:1320:C:O2'	60:DA:1321:A:OP2	2.17	0.63
60:DA:1652:A:H3'	60:DA:1653:G:C8	2.34	0.63
20:AA:1238:A:H2	20:AA:1241:G:N3	1.95	0.63
23:AY:313:ALA:HA	23:AY:328:ILE:HA	1.81	0.63
48:BN:45:ASN:HD22	48:BN:45:ASN:N	1.95	0.63
6:CG:118:VAL:O	6:CG:122:HIS:ND1	2.32	0.63
11:CL:89:ARG:HA	11:CL:96:VAL:HB	1.80	0.63
20:CA:1254:C:H2'	20:CA:1255:G:H8	1.64	0.63
25:DC:64:SER:HA	25:DC:160:GLY:O	1.99	0.63
38:DT:115:ARG:HD2	38:DT:115:ARG:H	1.63	0.63
39:DU:63:VAL:CG1	48:DN:42:TRP:CD1	2.77	0.63
60:DA:216:A:N7	60:DA:431:U:O4	2.32	0.63
60:DA:392:C:H2'	60:DA:393:C:C6	2.33	0.63
60:DA:1320:C:N4	60:DA:1331:A:H62	1.95	0.63
60:DA:1416:G:H2'	60:DA:1417:C:C6	2.34	0.63
60:DA:1486:A:H2'	60:DA:1487:G:H8	1.61	0.63
3:AD:122:ARG:HH21	20:AA:403:C:H4'	1.63	0.63
7:AH:97:VAL:HG13	7:AH:98:LYS:H	1.63	0.63
14:AO:39:LEU:HD23	20:AA:740:U:H4'	1.79	0.63
20:AA:838(A):U:O2'	20:AA:838(B):C:H5"	1.98	0.63
40:BV:96:ILE:HG22	40:BV:97:LYS:N	2.14	0.63
48:BN:78:TYR:CB	60:BA:2642:G:H5"	2.28	0.63
59:BB:80:U:O2	60:BA:918:A:O2'	2.17	0.63
60:BA:6:A:H2'	60:BA:7:G:C8	2.34	0.63
10:CK:111:ASP:HA	17:CR:84:LYS:HG3	1.80	0.63
11:CL:83:VAL:HA	11:CL:100:ILE:HG23	1.80	0.63
20:CA:506:G:N2	20:CA:525:C:N3	2.38	0.63
22:CW:54:U:H3	22:CW:58:A:H62	1.46	0.63
24:CU:3:SER:O	24:CU:4:SER:HB3	1.99	0.63
34:DP:6:LEU:HG	34:DP:8:PRO:HD2	1.81	0.63
35:DQ:41:TRP:HB3	35:DQ:94:VAL:HG21	1.79	0.63
44:DZ:151:HIS:HA	44:DZ:171:ILE:HG23	1.81	0.63
60:DA:1025:G:H8	60:DA:1025:G:OP1	1.80	0.63
60:DA:1230:C:H2'	60:DA:1231:G:C8	2.34	0.63
60:DA:2030:A:H4'	60:DA:2031:A:H8	1.64	0.63
1:AB:101:MET:HA	1:AB:108:ILE:HG12	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:70:VAL:HG21	2:AC:103:VAL:HG13	1.80	0.63
7:AH:42:GLU:HG3	7:AH:109:ILE:HD12	1.81	0.63
14:AO:16:ALA:HB1	14:AO:21:ASP:HB3	1.80	0.63
20:AA:242:C:H42	20:AA:284:G:H1	1.46	0.63
20:AA:1512:U:H2'	20:AA:1513:A:H8	1.64	0.63
32:BK:90:LYS:HB3	32:BK:93:ARG:HB2	1.80	0.63
33:BO:9:GLU:HA	33:BO:18:LYS:HA	1.79	0.63
42:BX:54:VAL:HG12	42:BX:81:VAL:HG12	1.81	0.63
52:B6:39:TYR:OH	60:BA:2346:A:H3'	1.99	0.63
54:B8:17:THR:O	54:B8:19:SER:N	2.29	0.63
60:BA:648:G:H2'	60:BA:649:G:H8	1.63	0.63
1:CB:92:TYR:HE1	1:CB:94:ASN:HB2	1.63	0.63
15:CP:26:ARG:HD3	15:CP:31:LYS:HB3	1.80	0.63
20:CA:1113:C:H2'	20:CA:1114:C:H6	1.64	0.63
23:CY:13:ARG:HH21	23:CY:277:VAL:HG23	1.64	0.63
27:DE:172:VAL:HB	27:DE:184:VAL:HG13	1.80	0.63
28:DF:169:ASN:ND2	60:DA:322:A:H3'	2.14	0.63
38:DT:51:ARG:NE	38:DT:100:TYR:OH	2.31	0.63
41:DW:11:ARG:CZ	41:DW:12:ILE:H	2.12	0.63
59:DB:87:G:H21	59:DB:89(B):A:H62	1.46	0.63
60:DA:690:G:H2'	60:DA:691:C:O4'	1.99	0.63
2:AC:11:ARG:HE	2:AC:182:ILE:H	1.47	0.62
16:AQ:17:LYS:HD2	20:AA:255:G:H4'	1.81	0.62
23:AY:27:THR:O	23:AY:30:GLU:HG2	1.99	0.62
40:BV:3:ALA:HB3	40:BV:14:VAL:HB	1.81	0.62
45:B0:24:LYS:N	45:B0:37:LEU:O	2.19	0.62
60:BA:401:A:H2'	60:BA:402:A:C8	2.34	0.62
3:CD:4:TYR:OH	3:CD:10:ARG:NH1	2.32	0.62
12:CM:88:ARG:HD3	12:CM:88:ARG:H	1.64	0.62
20:CA:600:C:H2'	20:CA:601:C:C6	2.33	0.62
23:CY:185:ALA:HB2	23:CY:201:ILE:HG13	1.80	0.62
29:DG:57:ALA:HB1	29:DG:90:LEU:HD22	1.81	0.62
42:DX:36:LYS:HE2	42:DX:56:THR:HG23	1.80	0.62
1:AB:169:LYS:O	1:AB:172:ILE:HG12	1.98	0.62
2:AC:40:ARG:HH12	13:AN:52:GLN:HB3	1.64	0.62
9:AJ:22:LYS:O	9:AJ:22:LYS:NZ	2.31	0.62
12:AM:2:ALA:O	12:AM:4:ILE:N	2.32	0.62
20:AA:659:U:H2'	20:AA:660:G:C8	2.34	0.62
25:BC:63:VAL:N	25:BC:161:ARG:O	2.32	0.62
29:BG:18:GLU:HG2	29:BG:175:LEU:HD21	1.79	0.62
29:BG:42:GLY:O	60:BA:2306:C:N4	2.28	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1467:C:C6	60:BA:154(B):C:H2'	2.33	0.62
60:BA:1486:A:H2'	60:BA:1487:G:C8	2.34	0.62
60:BA:1771:C:H2'	60:BA:1772:G:H8	1.64	0.62
60:BA:2210:G:N2	60:BA:2211:G:O3'	2.32	0.62
60:BA:2679:A:N6	60:BA:2728:U:H3	1.97	0.62
20:CA:770:C:H2'	20:CA:771:G:C8	2.35	0.62
36:DR:90:ARG:HH12	60:DA:2880:C:H4'	1.64	0.62
43:DY:51:VAL:HB	43:DY:55:TYR:HD2	1.65	0.62
50:D3:31:LEU:HB2	60:DA:1157:G:O2'	1.99	0.62
60:DA:600:G:O6	60:DA:657:U:O4	2.17	0.62
60:DA:1437:C:H2'	60:DA:1438:U:C6	2.35	0.62
1:AB:164:VAL:HB	1:AB:186:ALA:HA	1.80	0.62
3:AD:123:HIS:HE1	20:AA:438:G:H4'	1.62	0.62
6:AG:78:ARG:O	6:AG:84:ASN:ND2	2.32	0.62
12:AM:102:ARG:NH2	20:AA:952:U:O4	2.29	0.62
12:AM:119:GLY:O	12:AM:120:LYS:HB2	1.97	0.62
18:AS:11:VAL:HG13	18:AS:15:LEU:HD12	1.79	0.62
20:AA:1534:A:H2'	20:AA:1535:C:C5	2.35	0.62
22:AW:74:C:H5"	46:B1:32:LYS:O	1.99	0.62
26:BD:218:ARG:NH1	60:BA:691:C:H5'	2.13	0.62
36:BR:12:ARG:NH2	60:BA:1276:A:O2'	2.29	0.62
38:BT:128:GLU:HG2	38:BT:129:ARG:HG2	1.81	0.62
39:BU:64:ARG:HD2	48:BN:41:ASP:HA	0.72	0.62
60:BA:1183:G:H2'	60:BA:1184:G:H8	1.62	0.62
2:CC:56:ASP:OD1	2:CC:56:ASP:N	2.26	0.62
7:CH:97:VAL:HG13	7:CH:98:LYS:H	1.63	0.62
16:CQ:67:LYS:HD2	20:CA:266:G:H2'	1.82	0.62
20:CA:25:C:H5'	20:CA:524:G:H1'	1.81	0.62
40:DV:96:ILE:HG22	40:DV:97:LYS:N	2.14	0.62
60:DA:226:G:N2	60:DA:228:A:N6	2.42	0.62
60:DA:2303:G:H1	60:DA:2313:C:H42	1.47	0.62
8:AI:2:GLU:HG3	8:AI:3:GLN:HG3	1.81	0.62
20:AA:581:G:N2	20:AA:760:G:N7	2.47	0.62
21:AV:19:G:N1	22:AW:34:C:O2	2.31	0.62
25:BC:39:ASP:HB3	25:BC:178:LYS:HD2	1.82	0.62
27:BE:28:ALA:HB3	27:BE:93:VAL:HG22	1.80	0.62
35:BQ:46:GLN:HG2	35:BQ:126:PRO:HD3	1.82	0.62
46:B1:22:GLY:O	46:B1:37:ILE:N	2.32	0.62
60:BA:1272:A:O2'	60:BA:1273:U:OP1	2.18	0.62
60:BA:2681:C:H4'	60:BA:2682:U:H5'	1.81	0.62
60:BA:2715:C:H2'	60:BA:2716:U:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:149:A:H2'	20:CA:150:C:C6	2.34	0.62
20:CA:815:A:N6	20:CA:1508:G:H21	1.97	0.62
23:CY:63:ILE:HG23	61:CY:702:GNP:O1G	1.99	0.62
26:DD:56:GLY:N	60:DA:692:C:OP1	2.32	0.62
26:DD:61:LEU:O	26:DD:63:ARG:NH1	2.32	0.62
43:DY:66:PRO:O	43:DY:67:LEU:HB2	1.98	0.62
48:DN:76:SER:HB2	60:DA:2641:G:C4'	2.28	0.62
60:DA:843:G:N2	60:DA:935:C:N3	2.38	0.62
60:DA:1437:C:H2'	60:DA:1438:U:H6	1.62	0.62
60:DA:2074:U:O2'	60:DA:2597:G:N3	2.26	0.62
11:AL:38:THR:HG23	11:AL:57:LYS:HB2	1.80	0.62
19:AT:76:ALA:HB2	20:AA:262:A:H5"	1.81	0.62
20:AA:661:G:H2'	20:AA:662:G:H5'	1.81	0.62
23:AY:276:VAL:HA	23:AY:280:LEU:HD23	1.80	0.62
24:AU:3:SER:O	24:AU:4:SER:HB3	1.99	0.62
29:BG:114:ILE:O	29:BG:116:ASP:N	2.24	0.62
48:BN:56:ASN:H	48:BN:126:PRO:HA	1.64	0.62
59:BB:69:G:H2'	59:BB:70:C:O4'	1.99	0.62
60:BA:858:U:O4	60:BA:919:G:O6	2.16	0.62
60:BA:1487:G:H1	60:BA:1502:C:N4	1.97	0.62
60:BA:2171:A:O2'	60:BA:2172:U:O5'	2.17	0.62
60:BA:2212:A:H1'	60:BA:2215:G:C6	2.35	0.62
19:CT:76:ALA:HB2	20:CA:262:A:H5"	1.79	0.62
20:CA:1070:U:H2'	20:CA:1071:C:H6	1.65	0.62
20:CA:1507:A:H2'	20:CA:1508:G:H8	1.62	0.62
23:CY:388:THR:HG23	23:CY:399:LEU:HD22	1.82	0.62
37:DS:24:LEU:HB3	37:DS:85:VAL:HG12	1.81	0.62
38:DT:130:ALA:HA	38:DT:133:GLU:HB3	1.80	0.62
48:DN:74:ARG:HH21	60:DA:2640:G:H5"	1.65	0.62
60:DA:122:G:H1	60:DA:129:C:N4	1.93	0.62
60:DA:724:U:H2'	60:DA:725:G:C8	2.35	0.62
1:AB:129:GLU:O	1:AB:135:GLN:NE2	2.33	0.62
11:AL:34:ARG:HA	11:AL:82:VAL:HG13	1.82	0.62
20:AA:757:U:H5"	20:AA:822:C:O2'	2.00	0.62
20:AA:1270:C:H2'	20:AA:1271:G:H8	1.64	0.62
26:BD:218:ARG:HH12	60:BA:691:C:H5'	1.63	0.62
29:BG:120:LEU:HB2	29:BG:180:PHE:HA	1.80	0.62
30:BH:74:ASN:ND2	60:BA:2747:G:OP1	2.33	0.62
34:BP:121:LYS:HG3	34:BP:123:LEU:HD22	1.81	0.62
48:BN:7:LYS:HZ3	48:BN:7:LYS:N	1.97	0.62
48:BN:137:LYS:HZ3	48:BN:137:LYS:HA	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:573:G:H22	60:BA:2030:A:H2'	1.65	0.62
60:BA:694:U:H2'	60:BA:695:G:C8	2.34	0.62
60:BA:1429:G:H2'	60:BA:1430:C:H6	1.65	0.62
60:BA:1918:A:O2'	60:BA:1920:C:N4	2.32	0.62
3:CD:165:MET:HA	3:CD:168:ARG:HD2	1.79	0.62
10:CK:86:GLY:HA2	10:CK:112:THR:HG23	1.81	0.62
31:DJ:162:UNK:HA	58:Dh:30:UNK:HA	1.82	0.62
33:DO:3:GLN:O	33:DO:5:GLN:N	2.30	0.62
38:DT:26:ASP:HA	38:DT:48:ILE:HG23	1.81	0.62
48:DN:56:ASN:H	48:DN:126:PRO:HA	1.64	0.62
59:DB:74:U:H2'	59:DB:75:G:C8	2.34	0.62
60:DA:305:U:H2'	60:DA:306:U:C6	2.35	0.62
60:DA:496:G:H2'	60:DA:497:A:O4'	2.00	0.62
60:DA:1802:A:C8	60:DA:1815:A:N6	2.67	0.62
60:DA:2708:G:H2'	60:DA:2709:G:C8	2.35	0.62
60:DA:2788:C:H2'	60:DA:2789:C:O4'	2.00	0.62
11:AL:5:PRO:HA	11:AL:9:GLN:HB2	1.81	0.62
12:AM:86:CYS:O	12:AM:88:ARG:N	2.33	0.62
20:AA:237:C:H2'	20:AA:238:G:C8	2.35	0.62
20:AA:1492:A:C5'	24:AU:6:5OH:CR	2.66	0.62
25:BC:101:ILE:HG12	25:BC:127:LYS:HD2	1.80	0.62
38:BT:50:ILE:HG12	38:BT:99:LEU:HB2	1.81	0.62
48:BN:30:ILE:HG22	48:BN:34:LEU:HD21	1.82	0.62
55:B9:24:TYR:OH	60:BA:2742:C:OP2	2.09	0.62
60:BA:516:C:H2'	60:BA:517:C:C6	2.35	0.62
60:BA:1174:A:C8	60:BA:1175:U:H1'	2.35	0.62
60:BA:2245:U:H5"	60:BA:2246:G:H5'	1.81	0.62
31:DJ:49:UNK:H	31:DJ:82:UNK:HA	1.64	0.62
34:DP:16:ARG:O	60:DA:661:C:O2'	2.17	0.62
39:DU:64:ARG:HD2	48:DN:42:TRP:N	2.15	0.62
43:DY:48:ALA:O	60:DA:483:A:O2'	2.17	0.62
60:DA:1202:C:H42	60:DA:1243:G:H1	1.47	0.62
60:DA:1986:A:H2'	60:DA:1987:G:C8	2.35	0.62
60:DA:2589:A:H2'	60:DA:2590:A:C8	2.34	0.62
4:AE:75:THR:OG1	4:AE:76:ILE:N	2.33	0.62
5:AF:100:ASN:HB2	17:AR:28:GLU:H	1.64	0.62
22:AW:6:C:H2'	22:AW:7:G:C8	2.35	0.62
23:AY:72:CYS:HB3	23:AY:79:ILE:O	1.99	0.62
60:BA:56:A:H2'	60:BA:57:C:C6	2.35	0.62
60:BA:578:A:OP1	60:BA:1255:U:O2'	2.18	0.62
60:BA:1197:G:N2	60:BA:1249:U:O2	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1295:C:H2'	60:BA:1296:G:C8	2.35	0.62
60:BA:1297:C:H42	60:BA:1643:G:H1	1.48	0.62
60:BA:1357:U:H2'	60:BA:1358:G:O4'	2.00	0.62
60:BA:1423:G:H2'	60:BA:1424:G:H8	1.64	0.62
60:BA:1814:G:H3'	60:BA:1815:A:H2'	1.81	0.62
1:CB:155:LEU:HD11	1:CB:159:PRO:HG3	1.82	0.62
3:CD:26:CYS:HA	3:CD:31:CYS:HA	1.81	0.62
3:CD:115:ARG:NH1	20:CA:407:G:OP1	2.33	0.62
3:CD:157:LEU:HA	3:CD:160:GLN:HB2	1.82	0.62
12:CM:76:ALA:HA	12:CM:79:LYS:HG3	1.80	0.62
20:CA:833:U:H2'	20:CA:834:C:C6	2.35	0.62
20:CA:1010:G:H2'	20:CA:1011:G:C8	2.35	0.62
23:CY:160:ARG:HG2	23:CY:162:VAL:HG23	1.80	0.62
42:DX:72:LYS:HD2	42:DX:72:LYS:H	1.65	0.62
60:DA:1306:C:H2'	60:DA:1307:A:C8	2.34	0.62
60:DA:2248:C:N3	60:DA:2256:G:O6	2.33	0.62
3:AD:191:ARG:HH12	3:AD:195:ALA:HA	1.65	0.62
20:AA:521:G:O2'	20:AA:536:C:O2'	2.18	0.62
25:BC:15:VAL:HG13	25:BC:221:PRO:HB3	1.82	0.62
49:B2:21:LEU:HA	49:B2:24:LEU:HD12	1.81	0.62
60:BA:550:G:O2'	60:BA:1220:A:N3	2.31	0.62
60:BA:1511:A:H2'	60:BA:1512:G:H8	1.65	0.62
60:BA:2648:C:H2'	60:BA:2649:U:C6	2.35	0.62
4:CE:5:ASP:OD1	4:CE:5:ASP:N	2.33	0.62
4:CE:27:ARG:HE	4:CE:49:PRO:HD3	1.65	0.62
12:CM:83:ASP:OD1	12:CM:84:ILE:N	2.33	0.62
18:CS:31:ILE:HD11	18:CS:49:ILE:HG12	1.81	0.62
20:CA:526:C:H2'	20:CA:527:G:H4'	1.82	0.62
25:DC:76:LEU:HB2	25:DC:111:PHE:HB3	1.81	0.62
29:DG:18:GLU:HG2	29:DG:175:LEU:HD21	1.80	0.62
45:D0:20:ARG:H	45:D0:20:ARG:HD2	1.64	0.62
60:DA:119:A:H4'	60:DA:120:U:H5'	1.81	0.62
60:DA:1645:G:H5"	60:DA:1646:C:H5'	1.82	0.62
60:DA:2783:G:H2'	60:DA:2784:C:C6	2.35	0.62
2:AC:163:ALA:HB3	20:AA:1056:U:H4'	1.80	0.62
14:AO:63:ARG:HH21	14:AO:87:ILE:HG22	1.63	0.62
15:AP:45:THR:C	15:AP:47:ASP:H	2.08	0.62
20:AA:443:C:N4	20:AA:491:G:H1	1.96	0.62
20:AA:766:A:H61	20:AA:1511:G:H1'	1.64	0.62
20:AA:828:A:H62	20:AA:858:G:H21	1.46	0.62
20:AA:1465:C:H2'	20:AA:1466:C:C6	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:128:ARG:CZ	60:BA:2315:G:H21	2.13	0.62
46:B1:34:THR:HG23	46:B1:35:THR:HG23	1.82	0.62
60:BA:1338:G:H2'	60:BA:1339:G:O4'	2.00	0.62
60:BA:1478:G:H2'	60:BA:1479:G:C8	2.35	0.62
60:BA:2712:U:OP1	60:BA:2714:G:O2'	2.18	0.62
10:CK:120:ARG:HH12	20:CA:1524:C:H5"	1.65	0.62
20:CA:1415:G:H2'	20:CA:1416:G:O4'	2.00	0.62
22:CW:21:A:N6	22:CW:46:G:H2'	2.15	0.62
32:DK:13:PRO:HB3	32:DK:52:ILE:HG12	1.81	0.62
32:DK:130:SER:OG	60:DA:1059:G:N2	2.32	0.62
60:DA:625:G:H4'	60:DA:656:G:H4'	1.81	0.62
60:DA:1529:A:H62	60:DA:1542:G:H21	1.46	0.62
12:AM:20:THR:HG21	20:AA:1302:U:H5'	1.81	0.61
14:AO:65:ARG:NH2	20:AA:581:G:OP1	2.32	0.61
20:AA:255:G:H2'	20:AA:256:U:C6	2.35	0.61
20:AA:1513:A:H2'	20:AA:1514:C:H6	1.65	0.61
23:AY:74:TRP:CD1	23:AY:77:HIS:HD1	2.18	0.61
27:BE:51:PHE:C	27:BE:74:PRO:HB3	2.24	0.61
28:BF:170:LEU:HB3	28:BF:173:VAL:O	1.99	0.61
35:BQ:52:VAL:O	35:BQ:56:ARG:HB2	1.99	0.61
36:BR:24:GLN:HB2	36:BR:44:LEU:HD11	1.82	0.61
60:BA:1345:C:N4	60:BA:1601:G:H1	1.94	0.61
60:BA:2330:G:N2	60:BA:2385:C:N3	2.39	0.61
60:BA:2515:C:H42	60:BA:2569:G:H1	1.48	0.61
20:CA:671:G:H1	20:CA:735:C:H42	1.48	0.61
20:CA:985:C:H2'	20:CA:986:A:C8	2.35	0.61
20:CA:1357:A:H61	20:CA:1365:G:H1	1.47	0.61
44:DZ:23:LYS:HB3	44:DZ:38:TYR:CD1	2.35	0.61
48:DN:13:TRP:O	48:DN:135:PRO:HD2	2.00	0.61
60:DA:24:G:O6	60:DA:516:C:N3	2.33	0.61
60:DA:710:G:H2'	60:DA:711:G:C8	2.35	0.61
60:DA:966:G:H2'	60:DA:967:C:C6	2.35	0.61
10:AK:19:ALA:HB3	10:AK:82:VAL:HA	1.82	0.61
19:AT:14:LYS:HA	19:AT:17:ARG:HE	1.64	0.61
20:AA:346:G:O2'	38:BT:41:ARG:NH2	2.33	0.61
20:AA:490:G:H2'	20:AA:491:G:C8	2.36	0.61
20:AA:1065:U:H4'	20:AA:1066:C:H5'	1.83	0.61
23:AY:264:LEU:HD12	61:AY:701:GNP:N1	2.15	0.61
34:BP:13:ASN:O	34:BP:14:LYS:HB2	2.00	0.61
34:BP:96:THR:HA	34:BP:126:VAL:HB	1.80	0.61
44:BZ:27:VAL:HG11	59:BB:75:G:H1'	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:537:C:H2'	60:BA:539:G:C8	2.34	0.61
60:BA:765:G:H2'	60:BA:766:C:C6	2.35	0.61
60:BA:926:A:H2'	60:BA:928:G:C8	2.35	0.61
60:BA:1022:G:O2'	60:BA:1023:U:OP2	2.16	0.61
60:BA:1069:A:O2'	60:BA:1073:A:N6	2.32	0.61
60:BA:2398:U:H2'	60:BA:2399:G:H8	1.64	0.61
60:BA:2667:C:H2'	60:BA:2668:G:C8	2.35	0.61
1:CB:164:VAL:HB	1:CB:186:ALA:HA	1.81	0.61
20:CA:68(O):A:C8	20:CA:68(P):C:H1'	2.35	0.61
20:CA:133:U:H3	20:CA:229:U:H3	1.48	0.61
26:DD:256:GLY:O	60:DA:1843:C:O2'	2.18	0.61
27:DE:8:LYS:HE3	27:DE:188:VAL:HG13	1.81	0.61
47:D4:15:ILE:HB	47:D4:32:TYR:HB3	1.82	0.61
48:DN:9:VAL:HG11	48:DN:39:ARG:HH12	1.65	0.61
48:DN:131:GLN:HG3	60:DA:7:G:O2'	2.00	0.61
49:D2:65:ASN:HA	49:D2:68:ARG:HB2	1.82	0.61
60:DA:529:A:N6	60:DA:2041:U:C2	2.65	0.61
60:DA:890:A:H2'	60:DA:892:G:C8	2.35	0.61
60:DA:1231:G:H2'	60:DA:1232:G:H8	1.63	0.61
60:DA:1782:C:H42	60:DA:2586:C:H42	1.47	0.61
11:AL:58:VAL:HG12	11:AL:60:LEU:H	1.66	0.61
12:AM:103:THR:HB	20:AA:1226:C:H2'	1.83	0.61
20:AA:39:G:N1	20:AA:403:C:O2	2.32	0.61
20:AA:748:C:O2'	20:AA:749:C:OP2	2.16	0.61
20:AA:1385:G:H2'	20:AA:1386:G:H8	1.65	0.61
28:BF:154:VAL:O	28:BF:174:VAL:O	2.18	0.61
36:BR:4:LEU:HB2	60:BA:1653:G:H3'	1.82	0.61
38:BT:61:PHE:CE2	38:BT:76:PHE:HB2	2.35	0.61
60:BA:680:G:H1	60:BA:797:C:H42	1.48	0.61
60:BA:1613:G:H3'	60:BA:1614:A:H5'	1.83	0.61
60:BA:2641:G:H1	60:BA:2773:C:H42	1.48	0.61
60:BA:2818:G:H2'	60:BA:2819:G:H8	1.65	0.61
5:CF:9:VAL:HB	5:CF:87:ARG:HB2	1.82	0.61
9:CJ:39:PRO:HB2	20:CA:1151:A:H5'	1.81	0.61
16:CQ:100:LYS:HB2	20:CA:246:A:H3'	1.80	0.61
20:CA:600:C:H2'	20:CA:601:C:H6	1.64	0.61
22:CW:11:C:N4	22:CW:24:G:H1	1.97	0.61
23:CY:27:THR:O	23:CY:30:GLU:HG2	2.00	0.61
38:DT:34:VAL:HG13	38:DT:39:ARG:HA	1.82	0.61
54:D8:17:THR:O	54:D8:19:SER:N	2.30	0.61
60:DA:248:G:C4	60:DA:2431:U:H4'	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:822:U:H2'	60:DA:823:G:C8	2.35	0.61
60:DA:1335:U:H2'	60:DA:1336:A:C8	2.34	0.61
60:DA:2514:U:H2'	60:DA:2515:C:C6	2.35	0.61
60:DA:2692:C:H2'	60:DA:2693:A:H8	1.63	0.61
12:AM:11:ARG:O	12:AM:13:LYS:N	2.32	0.61
20:AA:1366:C:H2'	20:AA:1367:C:C6	2.34	0.61
25:BC:79:ALA:O	25:BC:84:ILE:HG13	1.99	0.61
27:BE:11:MET:HA	27:BE:23:VAL:O	2.00	0.61
32:BK:74:ALA:HA	32:BK:77:LEU:HB2	1.80	0.61
37:BS:27:SER:HA	37:BS:88:ASP:HB3	1.83	0.61
60:BA:628:G:H2'	60:BA:629:G:C8	2.35	0.61
60:BA:783:A:H4'	60:BA:2588:G:H4'	1.82	0.61
60:BA:1045:A:N3	60:BA:1047:G:N2	2.48	0.61
60:BA:2136:C:N3	60:BA:2155:G:O6	2.34	0.61
60:BA:2708:G:H2'	60:BA:2709:G:C8	2.35	0.61
6:CG:78:ARG:HB3	6:CG:85:TYR:HB2	1.81	0.61
19:CT:54:LYS:HE3	19:CT:57:ARG:HH21	1.64	0.61
19:CT:56:MET:HE1	19:CT:84:LEU:HD11	1.81	0.61
20:CA:521:G:O6	20:CA:528:C:N3	2.33	0.61
20:CA:1440(C):G:C5	38:DT:118:ARG:HD3	2.36	0.61
23:CY:100:VAL:HG23	23:CY:329:ARG:HD2	1.81	0.61
23:CY:114:VAL:HG23	23:CY:116:PRO:HD3	1.82	0.61
23:CY:311:ALA:HA	23:CY:330:VAL:C	2.24	0.61
26:DD:183:ARG:NH1	26:DD:184:LYS:O	2.33	0.61
46:D1:88:LYS:HA	46:D1:91:LYS:HD3	1.81	0.61
48:DN:128:HIS:NE2	48:DN:134:ARG:HD2	2.16	0.61
60:DA:558:G:H2'	60:DA:559:G:H8	1.66	0.61
60:DA:926:A:H2'	60:DA:928:G:C8	2.36	0.61
60:DA:2471:C:H2'	60:DA:2472:G:C8	2.35	0.61
11:AL:81:SER:HA	11:AL:106:ASP:HB3	1.83	0.61
20:AA:673:G:H2'	20:AA:674:G:C8	2.34	0.61
20:AA:1522:U:H2'	20:AA:1523:G:H8	1.64	0.61
23:AY:33:LEU:HB2	23:AY:50:ALA:CB	2.30	0.61
25:BC:214:TYR:CD2	25:BC:222:SER:HB2	2.31	0.61
28:BF:117:ARG:HE	28:BF:186:ILE:HD11	1.65	0.61
35:BQ:87:LYS:NZ	60:BA:956:G:OP2	2.32	0.61
48:BN:13:TRP:O	48:BN:135:PRO:HD2	2.00	0.61
48:BN:137:LYS:HZ3	48:BN:138:LEU:HD23	1.65	0.61
60:BA:268:C:H42	60:BA:424:G:H1	1.48	0.61
60:BA:270(E):C:H2'	60:BA:270(F):G:H8	1.65	0.61
60:BA:777:A:H2'	60:BA:778:G:C8	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1223:G:N2	60:BA:1226:A:OP2	2.26	0.61
60:BA:1335:U:H2'	60:BA:1336:A:C8	2.35	0.61
60:BA:1403:C:H2'	60:BA:1404:C:C6	2.35	0.61
14:CO:54:ARG:HE	20:CA:579:G:HO2'	1.48	0.61
20:CA:186(G):C:H1'	20:CA:186(K):G:C2	2.35	0.61
20:CA:627:G:H2'	20:CA:628:G:C8	2.36	0.61
22:CW:54:U:O4	22:CW:58:A:N7	2.34	0.61
23:CY:415:PRO:HB3	23:CY:474:ALA:HA	1.82	0.61
26:DD:96:HIS:HE2	60:DA:1501:C:H5'	1.66	0.61
27:DE:51:PHE:C	27:DE:74:PRO:HB3	2.25	0.61
28:DF:38:ARG:NH2	60:DA:660:G:O3'	2.34	0.61
30:DH:74:ASN:HB3	30:DH:138:LYS:HD2	1.83	0.61
60:DA:2178:C:H2'	60:DA:2179:C:C6	2.35	0.61
11:AL:56:ALA:HB3	11:AL:68:ALA:CB	2.19	0.61
17:AR:22:VAL:H	17:AR:56:THR:HA	1.64	0.61
20:AA:985:C:H2'	20:AA:986:A:H8	1.65	0.61
20:AA:1028(C):G:N2	20:AA:1028(F):A:C8	2.67	0.61
26:BD:146:GLU:HA	26:BD:153:ALA:HA	1.82	0.61
28:BF:159:GLY:O	28:BF:164:ARG:NH2	2.34	0.61
39:BU:64:ARG:NH2	48:BN:41:ASP:C	2.58	0.61
41:BW:20:VAL:HG21	41:BW:43:GLY:HA3	1.83	0.61
60:BA:537:C:H2'	60:BA:539:G:H8	1.65	0.61
60:BA:2400:G:H1	60:BA:2416:C:N4	1.96	0.61
20:CA:143:A:H5'	20:CA:196:A:N1	2.15	0.61
20:CA:745:C:H2'	20:CA:746:A:C8	2.35	0.61
20:CA:1128:C:O2'	20:CA:1130:A:N7	2.26	0.61
28:DF:130:ALA:HB3	28:DF:142:TRP:HD1	1.66	0.61
37:DS:97:ARG:O	37:DS:100:ALA:N	2.21	0.61
52:D6:12:GLU:HG3	52:D6:23:THR:HG22	1.82	0.61
60:DA:270(B):A:N3	60:DA:365(A):C:O2'	2.32	0.61
60:DA:1135:C:H42	60:DA:1138:G:H8	1.48	0.61
60:DA:1345:C:N4	60:DA:1601:G:H1	1.96	0.61
60:DA:1467:C:C6	60:DA:154(B):C:H2'	2.35	0.61
60:DA:2782:G:H3'	60:DA:2783:G:H8	1.66	0.61
60:DA:2787:C:H2'	60:DA:2788:C:C6	2.36	0.61
60:DA:2811:G:H1	60:DA:2889:C:H42	1.47	0.61
3:AD:36:ARG:HD2	3:AD:38:TYR:HE2	1.65	0.61
9:AJ:46:ARG:HD2	13:AN:61:TRP:CH2	2.35	0.61
11:AL:33:ARG:HG3	11:AL:34:ARG:H	1.66	0.61
11:AL:89:ARG:HA	11:AL:96:VAL:HB	1.82	0.61
12:AM:78:ILE:HA	12:AM:81:LEU:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:28:ARG:HD2	20:AA:389:A:H2	1.63	0.61
16:AQ:64:PRO:HB3	16:AQ:70:ARG:CZ	2.31	0.61
19:AT:74:LYS:HG2	19:AT:75:ASN:H	1.65	0.61
20:AA:116:A:H61	20:AA:313:A:H1'	1.66	0.61
20:AA:1428:A:H2'	20:AA:1429:C:C6	2.36	0.61
21:AV:19:G:C2	22:AW:34:C:O2	2.54	0.61
25:BC:46:ALA:HA	25:BC:212:SER:O	2.01	0.61
27:BE:187:ALA:HB2	60:BA:2729:G:H1'	1.83	0.61
45:B0:4:LYS:HD2	45:B0:7:LEU:HD11	1.80	0.61
60:BA:422:A:H2'	60:BA:423:A:C8	2.36	0.61
60:BA:1008:C:H1'	60:BA:1009:A:N7	2.15	0.61
19:CT:86:ARG:NH2	20:CA:258:G:OP1	2.31	0.61
20:CA:41:G:H2'	20:CA:42:G:H8	1.66	0.61
20:CA:1145:C:O2'	20:CA:1146:A:O5'	2.17	0.61
20:CA:1291:G:H2'	20:CA:1292:U:C6	2.35	0.61
20:CA:1306:A:H61	20:CA:1331:G:H1'	1.64	0.61
25:DC:65:LEU:O	25:DC:67:HIS:N	2.33	0.61
28:DF:164:ARG:HD3	28:DF:177:ALA:HB2	1.81	0.61
39:DU:52:ARG:NH1	60:DA:559:G:O2'	2.33	0.61
55:D9:5:ALA:HB3	60:DA:2466:C:H5'	1.83	0.61
1:AB:33:TYR:O	1:AB:41:ILE:HB	2.01	0.61
12:AM:45:VAL:HG23	12:AM:48:LEU:HD12	1.83	0.61
20:AA:102:G:O2'	20:AA:151:A:N3	2.26	0.61
23:AY:145:ASP:OD2	23:AY:148:LEU:N	2.27	0.61
29:BG:168:GLU:O	29:BG:172:LEU:HG	2.01	0.61
39:BU:92:ARG:O	39:BU:95:LEU:N	2.33	0.61
60:BA:40:C:H2'	60:BA:41:C:C6	2.36	0.61
60:BA:1542:G:O2'	60:BA:1543:A:OP2	2.19	0.61
60:BA:2841:C:H2'	60:BA:2842:G:C8	2.36	0.61
3:CD:20:TYR:O	3:CD:22:LYS:N	2.27	0.61
23:CY:679:VAL:O	23:CY:681:LYS:N	2.33	0.61
59:DB:13:A:N1	59:DB:69:G:O2'	2.33	0.61
60:DA:20:C:H2'	60:DA:21:A:H8	1.65	0.61
60:DA:1203:G:N1	60:DA:1241:A:OP2	2.30	0.61
20:AA:539:A:H2'	20:AA:540:G:C8	2.36	0.61
20:AA:947:G:H2'	20:AA:948:C:C6	2.36	0.61
23:AY:137:ASN:ND2	23:AY:262:SER:HA	2.16	0.61
25:BC:164:PHE:HZ	25:BC:196:ALA:HB1	1.66	0.61
34:BP:125:VAL:O	34:BP:145:PRO:HG3	2.00	0.61
60:BA:536:A:H2'	60:BA:537:C:C6	2.36	0.61
60:BA:1576:U:H2'	60:BA:1577:C:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1614:A:H5'	60:BA:1617:C:H42	1.65	0.61
60:BA:1830:C:H2'	60:BA:1831:G:H8	1.66	0.61
60:BA:2053:G:H1	60:BA:2616:C:H42	1.48	0.61
26:DD:77:ALA:HA	26:DD:97:TYR:HA	1.82	0.61
38:DT:30:VAL:HG23	38:DT:44:ASP:HA	1.82	0.61
48:DN:65:LYS:HZ2	60:DA:1021:A:H5'	1.62	0.61
60:DA:238:C:O2'	60:DA:608:A:N3	2.33	0.61
60:DA:1287:A:H2'	60:DA:1288:U:H5'	1.83	0.61
60:DA:2123:G:H1	60:DA:2175:C:H42	1.47	0.61
60:DA:2468:G:OP2	60:DA:2476:A:N6	2.34	0.61
60:DA:2646:C:H2'	60:DA:2647:U:O4'	2.01	0.61
2:AC:161:GLU:HG3	20:AA:1055:A:H4'	1.81	0.61
20:AA:1504:G:OP1	20:AA:1507:A:O2'	2.13	0.61
28:BF:8:GLN:HB2	28:BF:22:ALA:HB2	1.82	0.61
35:BQ:56:ARG:NE	60:BA:2469:A:O2'	2.34	0.61
48:BN:57:ALA:O	48:BN:60:ILE:HG13	2.01	0.61
52:B6:20:ASN:ND2	52:B6:43:CYS:SG	2.73	0.61
60:BA:712(B):A:H3'	60:BA:2713:A:H5'	1.81	0.61
4:CE:20:GLN:O	4:CE:22:GLY:N	2.34	0.61
20:CA:1254:C:H2'	20:CA:1255:G:C8	2.36	0.61
23:CY:292:THR:HG23	23:CY:297:GLU:H	1.66	0.61
25:DC:61:GLY:HA3	25:DC:164:PHE:CG	2.36	0.61
29:DG:69:ALA:HB1	59:DB:41:U:H5	1.66	0.61
41:DW:32:ALA:O	41:DW:36:LEU:HG	2.01	0.61
54:D8:23:VAL:HG13	54:D8:48:PHE:HA	1.83	0.61
60:DA:240:G:O2'	60:DA:257:A:N6	2.30	0.61
60:DA:1658:C:N3	60:DA:2002:G:N2	2.44	0.61
60:DA:1940:U:OP1	60:DA:1965:C:N4	2.33	0.61
9:AJ:39:PRO:HA	9:AJ:70:ARG:HG3	1.83	0.60
13:AN:29:ARG:HD3	20:AA:1202:G:H4'	1.83	0.60
23:AY:33:LEU:HD23	23:AY:34:TYR:N	2.14	0.60
28:BF:154:VAL:N	28:BF:173:VAL:HA	2.12	0.60
32:BK:106:GLU:HA	32:BK:109:LYS:HD3	1.82	0.60
34:BP:23:PRO:HD2	34:BP:33:ARG:HG3	1.82	0.60
39:BU:3:ARG:N	60:BA:445:C:OP1	2.34	0.60
40:BV:4:ILE:HG13	40:BV:13:ARG:HA	1.82	0.60
48:BN:9:VAL:HG11	48:BN:39:ARG:HH12	1.65	0.60
1:CB:19:HIS:HB2	1:CB:204:ASN:HD22	1.65	0.60
3:CD:32:ALA:HB1	20:CA:429:U:H5'	1.83	0.60
20:CA:309:G:H2'	20:CA:310:G:C8	2.36	0.60
20:CA:1305:G:O2'	20:CA:1331:G:N2	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DR:12:ARG:HB3	36:DR:16:HIS:HB3	1.82	0.60
48:DN:57:ALA:O	48:DN:60:ILE:HG13	2.01	0.60
53:D7:34:ARG:HD2	53:D7:42:LEU:HD22	1.83	0.60
60:DA:81:G:H1	60:DA:105:C:H42	1.49	0.60
60:DA:136:G:N2	60:DA:143:C:N3	2.46	0.60
60:DA:459:U:O4	60:DA:470:A:N7	2.34	0.60
60:DA:1312:U:H5'	60:DA:1313:U:C6	2.36	0.60
14:AO:48:LYS:HB2	20:AA:668:G:H4'	1.83	0.60
19:AT:50:GLU:HG2	19:AT:51:GLU:H	1.65	0.60
23:AY:180:VAL:HG23	23:AY:216:LEU:HD13	1.83	0.60
31:BJ:54:UNK:O	60:BA:1106:G:O2'	2.13	0.60
34:BP:75:ILE:HG22	34:BP:77:ARG:HB3	1.82	0.60
41:BW:33:ARG:HA	41:BW:36:LEU:HD12	1.83	0.60
60:BA:8:A:N1	60:BA:2895:U:O4	2.34	0.60
60:BA:696:G:H1	60:BA:766:C:H42	1.49	0.60
60:BA:1101:U:H2'	60:BA:1102:C:H6	1.66	0.60
60:BA:1435:G:H2'	60:BA:1436:G:C8	2.36	0.60
6:CG:95:ARG:HH12	20:CA:938:A:H4'	1.66	0.60
7:CH:33:GLU:OE1	7:CH:50:ARG:NH2	2.34	0.60
10:CK:108:ILE:HD13	17:CR:87:ARG:HG2	1.82	0.60
12:CM:119:GLY:O	12:CM:120:LYS:HB2	2.00	0.60
20:CA:68(D):C:N3	20:CA:68(V):G:O6	2.34	0.60
20:CA:186(D):C:H2'	20:CA:186(E):C:C6	2.36	0.60
20:CA:515:G:H1	20:CA:536:C:N4	1.99	0.60
23:CY:542:VAL:HG23	23:CY:582:PHE:HB3	1.82	0.60
23:CY:546:ILE:HG23	23:CY:590:ILE:HG13	1.83	0.60
26:DD:242:ARG:NH1	60:DA:1902:C:OP1	2.33	0.60
41:DW:79:GLY:N	41:DW:100:THR:O	2.28	0.60
48:DN:63:THR:HG21	60:DA:1141:U:OP2	2.01	0.60
60:DA:741:G:H1	60:DA:756:C:N4	1.98	0.60
60:DA:2812:G:H2'	60:DA:2813:A:C8	2.35	0.60
5:AF:7:ASN:ND2	5:AF:61:LEU:O	2.34	0.60
20:AA:316:G:OP2	20:AA:351:G:O2'	2.18	0.60
20:AA:1145:C:O2'	20:AA:1146:A:O5'	2.20	0.60
27:BE:99:GLY:N	27:BE:172:VAL:O	2.29	0.60
45:B0:70:GLN:HB3	45:B0:78:TYR:HB2	1.84	0.60
48:BN:38:HIS:ND1	48:BN:39:ARG:N	2.49	0.60
48:BN:89:LYS:HB3	48:BN:89:LYS:NZ	2.17	0.60
52:B6:37:ARG:NE	60:BA:2344:U:O2'	2.35	0.60
60:BA:597:U:H2'	60:BA:598:G:C8	2.35	0.60
60:BA:2345:G:O6	60:BA:2371:G:N2	2.29	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:2865:U:H3'	60:BA:2866:U:O2	2.01	0.60
1:CB:106:LYS:H	1:CB:106:LYS:HD2	1.66	0.60
19:CT:33:ILE:HD11	19:CT:62:LEU:HB3	1.83	0.60
25:DC:33:LEU:HB3	25:DC:221:PRO:HD2	1.83	0.60
33:DO:85:VAL:HG21	33:DO:114:ILE:HG21	1.83	0.60
35:DQ:36:ALA:N	35:DQ:103:MET:SD	2.74	0.60
41:DW:84:ARG:HB2	41:DW:96:ILE:HG23	1.83	0.60
44:DZ:90:VAL:HG12	44:DZ:91:LEU:H	1.66	0.60
60:DA:40:C:H2'	60:DA:41:C:C6	2.36	0.60
60:DA:1270:C:H5"	60:DA:1271:G:H5"	1.83	0.60
60:DA:1546:A:H2'	60:DA:154(B):C:O4'	2.01	0.60
60:DA:2789:C:O3'	60:DA:2790:A:H4'	2.01	0.60
1:AB:155:LEU:HD21	1:AB:159:PRO:HG3	1.83	0.60
7:AH:111:ILE:O	7:AH:134:ILE:N	2.32	0.60
11:AL:36:VAL:O	11:AL:37:CYS:HB2	2.02	0.60
20:AA:67:C:O2'	20:AA:171:A:N3	2.27	0.60
20:AA:1440(L):G:H2'	20:AA:1440(M):G:C8	2.36	0.60
39:BU:25:TRP:CD1	39:BU:26:GLY:H	2.18	0.60
60:BA:242:G:H1'	60:BA:243:U:H5	1.65	0.60
60:BA:432:A:H2'	60:BA:433:C:C6	2.36	0.60
60:BA:628:G:H2'	60:BA:629:G:H8	1.65	0.60
60:BA:1389:G:H2'	60:BA:1390:U:O4'	2.02	0.60
4:CE:101:ILE:O	4:CE:120:THR:OG1	2.18	0.60
6:CG:12:LEU:HD13	6:CG:25:ALA:HB2	1.82	0.60
20:CA:1355:G:H2'	20:CA:1356:G:C8	2.36	0.60
47:D4:16:CYS:HB2	47:D4:20:ASN:HB2	1.81	0.60
48:DN:30:ILE:HG22	48:DN:34:LEU:HD21	1.82	0.60
51:D5:56:LYS:HE2	51:D5:58:LEU:HD11	1.82	0.60
52:D6:37:ARG:NH2	60:DA:2344:U:O2	2.33	0.60
60:DA:137(B):G:O6	60:DA:139:G:O2'	2.13	0.60
60:DA:783:A:H4'	60:DA:2588:G:H4'	1.83	0.60
60:DA:1199:U:H2'	60:DA:1200:C:C6	2.35	0.60
60:DA:1523:U:H2'	60:DA:1524:G:C8	2.36	0.60
60:DA:2784:C:H2'	60:DA:2785:C:C6	2.35	0.60
1:AB:77:ALA:O	1:AB:81:VAL:HG13	2.01	0.60
20:AA:143:A:H2	20:AA:220:G:H22	1.50	0.60
20:AA:663:A:H2'	20:AA:664:G:O4'	2.02	0.60
22:AW:28:A:H2	22:AW:42:U:H3	1.46	0.60
38:BT:67:SER:O	38:BT:69:GLY:N	2.34	0.60
47:B4:31:ILE:HG22	47:B4:32:TYR:H	1.65	0.60
60:BA:1010:A:HO2'	60:BA:1152:C:HO2'	1.45	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1416:G:H2'	60:BA:1417:C:C6	2.36	0.60
60:BA:1821:A:H2'	60:BA:1822:G:C8	2.36	0.60
60:BA:1940:U:OP1	60:BA:1965:C:N4	2.33	0.60
60:BA:2749:A:N6	60:BA:2753:A:H61	1.95	0.60
60:BA:2818:G:H2'	60:BA:2819:G:C8	2.36	0.60
20:CA:1131:G:H2'	20:CA:1132:C:C6	2.37	0.60
20:CA:1306:A:N6	20:CA:1331:G:H1'	2.17	0.60
23:CY:357:ARG:NH1	23:CY:373:ASP:OD2	2.35	0.60
28:DF:74:ARG:HE	60:DA:674:G:H1'	1.66	0.60
35:DQ:17:LEU:HD13	35:DQ:40:ALA:HA	1.83	0.60
44:DZ:8:TYR:HB2	44:DZ:38:TYR:CE1	2.36	0.60
44:DZ:102:LEU:HD13	44:DZ:139:VAL:HG11	1.83	0.60
59:DB:36:C:H2'	59:DB:37:C:H6	1.66	0.60
60:DA:698:C:H42	60:DA:763:G:H1	1.49	0.60
20:AA:1513:A:H2'	20:AA:1514:C:C6	2.36	0.60
22:AW:21:A:N6	22:AW:46:G:H2'	2.17	0.60
23:AY:197:ARG:HA	23:AY:197:ARG:HE	1.67	0.60
37:BS:97:ARG:O	37:BS:99:LYS:N	2.34	0.60
56:Be:101:GLU:HA	56:Be:105:LYS:HB3	1.83	0.60
60:BA:130:C:H4'	60:BA:1349:A:H1'	1.84	0.60
60:BA:824:A:N1	60:BA:833:U:O4	2.35	0.60
60:BA:2398:U:H2'	60:BA:2399:G:C8	2.37	0.60
1:CB:153:ARG:O	1:CB:156:LYS:NZ	2.24	0.60
16:CQ:95:TYR:OH	20:CA:279:A:OP2	2.11	0.60
20:CA:237:C:H2'	20:CA:238:G:H8	1.67	0.60
22:CW:75:C:OP2	46:D1:33:LYS:HG3	2.01	0.60
23:CY:529:ILE:HD12	23:CY:539:ILE:HD11	1.83	0.60
25:DC:186:LEU:O	25:DC:190:ILE:HG12	2.01	0.60
30:DH:49:VAL:HG12	30:DH:50:VAL:H	1.65	0.60
32:DK:55:VAL:HG23	32:DK:69:THR:HG22	1.83	0.60
37:DS:73:LEU:HA	37:DS:76:LYS:HD2	1.84	0.60
41:DW:36:LEU:HD13	41:DW:48:ALA:HA	1.83	0.60
48:DN:99:LEU:O	48:DN:103:VAL:HG23	2.02	0.60
60:DA:1128:A:O2'	60:DA:2490:G:OP1	2.16	0.60
60:DA:1316:U:H3	60:DA:1336:A:H61	1.47	0.60
60:DA:1423:G:H2'	60:DA:1424:G:H8	1.66	0.60
60:DA:2089:U:H2'	60:DA:2090:G:C8	2.35	0.60
60:DA:2291:U:H2'	60:DA:2292:C:C6	2.36	0.60
16:AQ:61:GLU:HA	16:AQ:71:PHE:CD1	2.36	0.60
20:AA:403:C:N4	20:AA:547:A:H5'	2.17	0.60
20:AA:1493:A:OP2	24:AU:6:5OH:C	2.48	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:24:ILE:HG23	26:BD:25:THR:H	1.67	0.60
26:BD:27:THR:HG23	26:BD:83:GLU:HB3	1.83	0.60
27:BE:175:VAL:HG22	27:BE:177:PRO:HD3	1.83	0.60
37:BS:39:ILE:HD13	37:BS:73:LEU:HD11	1.83	0.60
40:BV:69:LYS:HA	40:BV:88:ARG:HG2	1.84	0.60
53:B7:34:ARG:NE	53:B7:42:LEU:HD13	2.16	0.60
59:BB:75:G:H2'	59:BB:76:G:O4'	2.02	0.60
60:BA:822:U:H2'	60:BA:823:G:C8	2.36	0.60
60:BA:2286:A:H5'	60:BA:2286:A:N3	2.15	0.60
39:DU:37:GLU:HA	39:DU:40:PHE:HD1	1.66	0.60
60:DA:576:U:H2'	60:DA:577:G:H8	1.66	0.60
60:DA:2598:A:H8	60:DA:2598:A:O5'	1.85	0.60
2:AC:48:TYR:O	2:AC:50:ALA:N	2.35	0.60
11:AL:46:LYS:HB2	11:AL:48:PRO:HD2	1.84	0.60
14:AO:32:LEU:HD22	14:AO:59:MET:HE3	1.84	0.60
20:AA:266:G:H5'	20:AA:267:C:C5	2.37	0.60
20:AA:440:A:H3'	20:AA:441:A:C8	2.37	0.60
20:AA:1006:C:H2'	20:AA:1007:C:C6	2.37	0.60
23:AY:82:ILE:HB	23:AY:101:LEU:HD21	1.82	0.60
48:BN:128:HIS:NE2	48:BN:134:ARG:HD2	2.16	0.60
54:B8:16:ILE:HB	54:B8:22:VAL:HA	1.84	0.60
60:BA:192:C:O2'	60:BA:802:A:N3	2.34	0.60
60:BA:722:A:H2'	60:BA:723:G:O4'	2.01	0.60
60:BA:1018:C:H2'	60:BA:1019:U:C6	2.36	0.60
60:BA:1804:C:H42	60:BA:1813:G:H1	1.50	0.60
60:BA:2046:G:H1	60:BA:2622:C:H42	1.49	0.60
60:BA:2778:A:H1'	60:BA:2780:G:N2	2.17	0.60
60:BA:2868:A:H2'	60:BA:2869:G:C8	2.37	0.60
6:CG:79:ARG:HB2	20:CA:1381:U:C2	2.36	0.60
20:CA:115:G:HO2'	20:CA:116:A:P	2.24	0.60
20:CA:832:C:H4'	20:CA:1538:C:H5"	1.82	0.60
26:DD:146:GLU:HA	26:DD:153:ALA:HA	1.83	0.60
27:DE:61:ARG:HB3	27:DE:62:PRO:HD3	1.82	0.60
42:DX:68:ARG:NH1	60:DA:456:C:O2'	2.29	0.60
46:D1:13:ILE:HG13	46:D1:17:SER:CB	2.32	0.60
60:DA:903:C:H2'	60:DA:904:C:C6	2.37	0.60
16:AQ:16:GLN:CD	20:AA:254:G:H21	2.09	0.60
23:AY:135:PHE:CD1	23:AY:272:LEU:HD22	2.37	0.60
26:BD:79:VAL:HA	26:BD:95:LEU:HA	1.82	0.60
33:BO:87:ILE:HD13	33:BO:91:LEU:HD23	1.83	0.60
39:BU:52:ARG:NH1	60:BA:559:G:O2'	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B7:11:LYS:O	53:B7:15:THR:OG1	2.10	0.60
60:BA:306:U:O4	60:BA:310:A:N7	2.34	0.60
60:BA:1464:C:H2'	60:BA:1465:G:C8	2.37	0.60
11:CL:123:LYS:HA	20:CA:36:C:H5"	1.84	0.60
20:CA:757:U:O2'	20:CA:879:C:O2	2.19	0.60
25:DC:169:THR:C	25:DC:171:ALA:H	2.07	0.60
26:DD:33:LEU:HD11	60:DA:1423:G:H5"	1.83	0.60
28:DF:154:VAL:O	28:DF:156:LEU:N	2.34	0.60
31:DJ:25:UNK:N	31:DJ:112:UNK:N	2.49	0.60
42:DX:10:ALA:HB3	42:DX:29:TRP:HB2	1.84	0.60
48:DN:36:GLY:C	48:DN:42:TRP:HB2	2.27	0.60
56:De:62:VAL:HG11	56:De:92:LEU:HD13	1.83	0.60
60:DA:635:C:H2'	60:DA:636:G:O4'	2.02	0.60
60:DA:1792:G:O2'	60:DA:1830:C:OP1	2.16	0.60
60:DA:2836:U:H2'	60:DA:2837:G:H8	1.65	0.60
11:AL:95:GLY:C	11:AL:97:ARG:H	2.09	0.60
15:AP:57:ARG:NH2	15:AP:81:ARG:O	2.34	0.60
16:AQ:81:ARG:HG3	16:AQ:84:LEU:HD11	1.83	0.60
23:AY:498:ILE:HG22	23:AY:507:TYR:HA	1.83	0.60
37:BS:47:THR:O	37:BS:48:LEU:HB2	2.02	0.60
49:B2:48:HIS:O	49:B2:51:ARG:HG3	2.02	0.60
60:BA:998:C:H42	60:BA:1157:G:H1	1.48	0.60
3:CD:14:ARG:HA	3:CD:40:PRO:HD2	1.81	0.60
4:CE:105:VAL:HB	4:CE:106:PRO:HD3	1.84	0.60
11:CL:58:VAL:CG2	11:CL:85:ILE:HD11	2.31	0.60
12:CM:74:VAL:O	12:CM:78:ILE:HG12	2.02	0.60
14:CO:24:SER:HA	20:CA:751:U:H1'	1.84	0.60
20:CA:573:A:N3	20:CA:883:C:O2'	2.35	0.60
23:CY:507:TYR:HB2	23:CY:576:ASP:HB3	1.84	0.60
25:DC:185:LYS:O	25:DC:189:ASN:HB2	2.01	0.60
27:DE:11:MET:HA	27:DE:23:VAL:C	2.26	0.60
60:DA:2732:G:H3'	60:DA:2733:A:O4'	2.02	0.60
11:AL:70:ILE:HD12	11:AL:72:GLY:O	2.02	0.59
20:AA:567:G:C2	20:AA:568:G:H1'	2.37	0.59
20:AA:781:A:H2	20:AA:1514:C:H1'	1.67	0.59
23:AY:131:PRO:HD2	23:AY:281:PRO:HG3	1.84	0.59
23:AY:203:GLU:O	23:AY:205:TYR:N	2.35	0.59
26:BD:230:ASP:O	26:BD:231:HIS:HB2	2.01	0.59
28:BF:12:LEU:HD22	28:BF:17:ARG:HB3	1.84	0.59
31:BJ:58:UNK:HA	60:BA:1107:G:P	2.42	0.59
50:B3:5:LYS:HA	50:B3:35:ARG:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:287:C:H2'	60:BA:288:C:C6	2.38	0.59
60:BA:545:G:H1'	60:BA:548:A:H61	1.67	0.59
60:BA:842:G:H2'	60:BA:843:G:C8	2.36	0.59
60:BA:883:G:C2	60:BA:893:C:O2	2.55	0.59
1:CB:184:VAL:H	1:CB:198:ASP:HB2	1.67	0.59
2:CC:156:ARG:HH21	2:CC:161:GLU:HA	1.65	0.59
20:CA:908:A:H2'	20:CA:909:A:C8	2.37	0.59
21:CV:6:G:H2'	21:CV:7:G:C8	2.37	0.59
23:CY:485:GLU:HB2	23:CY:560:VAL:HG22	1.84	0.59
25:DC:11:LEU:HD23	25:DC:14:LYS:HD2	1.84	0.59
33:DO:68:GLU:OE2	33:DO:78:ARG:NH1	2.34	0.59
44:DZ:40:ASP:O	44:DZ:44:PHE:HB3	2.02	0.59
48:DN:74:ARG:HH12	48:DN:85:ILE:HD11	1.67	0.59
60:DA:756:C:H2'	60:DA:757:U:O4'	2.01	0.59
60:DA:852:G:H1	60:DA:925:C:H42	1.49	0.59
60:DA:964:C:O2'	60:DA:2273:A:N3	2.34	0.59
60:DA:1016:G:H1	60:DA:1146:C:H42	1.49	0.59
1:AB:70:PHE:O	1:AB:93:VAL:N	2.20	0.59
8:AI:111:ARG:HH21	20:AA:1187:G:H4'	1.67	0.59
9:AJ:48:THR:O	13:AN:34:TYR:OH	2.19	0.59
25:BC:54:ARG:O	25:BC:56:ASP:N	2.30	0.59
26:BD:165:ILE:O	26:BD:166:GLN:HB2	2.01	0.59
32:BK:6:ALA:H	32:BK:59:ILE:HG23	1.67	0.59
37:BS:15:ARG:HB3	37:BS:18:ILE:HB	1.84	0.59
48:BN:36:GLY:C	48:BN:42:TRP:HB2	2.27	0.59
60:BA:443:A:OP2	60:BA:615:G:N2	2.35	0.59
60:BA:635:C:H2'	60:BA:636:G:O4'	2.03	0.59
60:BA:661:C:H2'	60:BA:662:G:C8	2.37	0.59
60:BA:786:C:H5"	60:BA:1780:A:C8	2.37	0.59
7:CH:94:TYR:CG	20:CA:598:U:H4'	2.37	0.59
7:CH:111:ILE:HB	7:CH:135:CYS:H	1.67	0.59
11:CL:100:ILE:HG22	11:CL:101:VAL:H	1.67	0.59
20:CA:41:G:H2'	20:CA:42:G:C8	2.37	0.59
20:CA:490:G:H2'	20:CA:491:G:H8	1.65	0.59
20:CA:1224:G:N2	20:CA:1362(A):C:N3	2.50	0.59
20:CA:1343:G:H2'	20:CA:1344:C:C6	2.37	0.59
41:DW:58:ALA:HA	41:DW:62:HIS:HB2	1.83	0.59
48:DN:38:HIS:ND1	48:DN:39:ARG:N	2.49	0.59
60:DA:624:C:H2'	60:DA:625:G:C8	2.38	0.59
60:DA:998:C:H2'	60:DA:999:U:O4'	2.01	0.59
60:DA:1047:G:N3	60:DA:1110:G:N1	2.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2178:C:H2'	60:DA:2179:C:H6	1.66	0.59
60:DA:2586:C:H2'	60:DA:2587:A:C8	2.37	0.59
20:AA:1391:U:H2'	20:AA:1392:G:C8	2.36	0.59
23:AY:33:LEU:HG	23:AY:34:TYR:CD2	2.37	0.59
23:AY:442:THR:HA	23:AY:449:THR:HA	1.82	0.59
28:BF:191:ARG:O	28:BF:193:VAL:HG23	2.02	0.59
38:BT:23:ARG:HB2	38:BT:120:ARG:HH22	1.67	0.59
60:BA:105:C:H2'	60:BA:106:C:C6	2.37	0.59
60:BA:212:G:H2'	60:BA:213:A:C8	2.37	0.59
60:BA:273(C):C:H2'	60:BA:273(D):C:C6	2.37	0.59
60:BA:385:C:O2'	60:BA:388:G:N2	2.35	0.59
60:BA:828:U:H4'	60:BA:831:G:N1	2.17	0.59
60:BA:1444:G:H2'	60:BA:1445:C:C5	2.37	0.59
60:BA:1674:G:H1'	60:BA:1676:A:N6	2.17	0.59
60:BA:2250:G:O2'	60:BA:2496:C:OP1	2.19	0.59
60:BA:2311:A:H5"	60:BA:2312:U:C5	2.38	0.59
60:BA:2834:G:H1'	60:BA:2883:A:N6	2.17	0.59
5:CF:26:ILE:O	5:CF:30:LEU:HG	2.02	0.59
10:CK:32:ILE:HD12	10:CK:72:ALA:HB2	1.84	0.59
12:CM:115:LYS:NZ	20:CA:1228:C:OP1	2.35	0.59
18:CS:76:PRO:HB3	18:CS:81:ARG:HH22	1.66	0.59
23:CY:117:GLN:O	23:CY:120:THR:OG1	2.13	0.59
23:CY:227:ILE:HD11	23:CY:241:GLU:HG3	1.82	0.59
49:D2:27:GLU:O	49:D2:30:ARG:HG3	2.02	0.59
60:DA:19:C:H2'	60:DA:20:C:C6	2.37	0.59
60:DA:373:U:H2'	60:DA:374:A:C8	2.37	0.59
60:DA:1149:G:H2'	60:DA:1150:C:C6	2.36	0.59
39:BU:51:LYS:HB3	39:BU:55:ARG:HH21	1.65	0.59
44:BZ:93:ASP:HA	44:BZ:130:PRO:HB2	1.84	0.59
45:B0:39:ARG:HH21	60:BA:2355:C:H1'	1.67	0.59
48:BN:111:PRO:HA	48:BN:114:ARG:CZ	2.33	0.59
60:BA:193:U:H2'	60:BA:194:G:C8	2.37	0.59
60:BA:2328:A:H2'	60:BA:2329:G:C8	2.36	0.59
17:CR:74:ARG:NH1	20:CA:718:G:O6	2.36	0.59
20:CA:201(B):U:H5"	20:CA:201(C):U:OP1	2.01	0.59
20:CA:879:C:H2'	20:CA:880:C:C6	2.37	0.59
20:CA:1513:A:H2'	20:CA:1514:C:C6	2.36	0.59
22:CW:76:A:N6	60:DA:2422:A:O4'	2.36	0.59
25:DC:78:ILE:HG13	25:DC:124:VAL:HG11	1.83	0.59
25:DC:83:LYS:HG3	25:DC:117:THR:HG21	1.83	0.59
29:DG:43:LEU:HB2	29:DG:88:ILE:HG23	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DN:137:LYS:HZ3	48:DN:138:LEU:HD23	1.67	0.59
60:DA:954:G:H2'	60:DA:955:C:C6	2.37	0.59
60:DA:1943:U:H4'	60:DA:1944:U:H2'	1.84	0.59
60:DA:2653:U:H3	60:DA:2667:C:H42	1.49	0.59
2:AC:39:ILE:HG22	2:AC:43:LEU:HD21	1.85	0.59
16:AQ:43:LEU:HB2	16:AQ:70:ARG:O	2.02	0.59
20:AA:509:A:N3	20:AA:543:C:O2'	2.30	0.59
20:AA:1124:G:O2'	20:AA:1145:C:N4	2.36	0.59
26:BD:146:GLU:OE2	26:BD:151:LYS:N	2.36	0.59
27:BE:64:LYS:HB3	27:BE:67:PHE:HB3	1.85	0.59
30:BH:144:VAL:HA	30:BH:147:ASN:ND2	2.17	0.59
34:BP:23:PRO:HB3	34:BP:29:LYS:HB3	1.84	0.59
37:BS:92:TYR:CE2	37:BS:94:TYR:HB2	2.37	0.59
46:B1:11:ARG:NH2	60:BA:1365:A:O2'	2.36	0.59
60:BA:184:C:H2'	60:BA:185:U:C6	2.37	0.59
60:BA:216:A:H2'	60:BA:217:G:O4'	2.01	0.59
60:BA:780:G:H21	60:BA:783:A:H62	1.50	0.59
60:BA:2078:C:N3	60:BA:2242:G:N2	2.47	0.59
2:CC:163:ALA:HB3	20:CA:1056:U:H4'	1.83	0.59
20:CA:977:A:H8	20:CA:1223:C:C4	2.20	0.59
20:CA:1385:G:H2'	20:CA:1386:G:C8	2.38	0.59
20:CA:1388:C:H2'	20:CA:1389:C:H6	1.67	0.59
21:CV:17:U:H2'	21:CV:18:G:C8	2.38	0.59
22:CW:9:A:H8	22:CW:12:U:O4	1.85	0.59
27:DE:101:ARG:NH2	60:DA:2730:C:OP2	2.35	0.59
59:DB:24:G:N2	59:DB:28:C:O2	2.36	0.59
60:DA:270(C):A:O2'	60:DA:364:C:O2	2.21	0.59
60:DA:640:C:H2'	60:DA:641:C:C6	2.37	0.59
60:DA:1058:G:H2'	60:DA:1059:G:C8	2.37	0.59
60:DA:2578:G:OP1	60:DA:2614:A:N6	2.35	0.59
2:AC:59:ARG:HD3	2:AC:64:VAL:HG13	1.84	0.59
9:AJ:50:ILE:HG23	13:AN:41:ARG:HH12	1.66	0.59
20:AA:607:A:H3'	20:AA:608:A:H8	1.67	0.59
20:AA:667:G:H1	20:AA:739:C:N4	2.00	0.59
23:AY:33:LEU:HD13	23:AY:51:THR:CG2	2.33	0.59
25:BC:23:ILE:HG22	25:BC:187:ALA:HA	1.83	0.59
25:BC:25:GLU:O	25:BC:29:LEU:HB2	2.03	0.59
28:BF:167:ALA:HA	28:BF:170:LEU:HD23	1.85	0.59
48:BN:46:VAL:O	48:BN:47:ALA:HB3	2.02	0.59
55:B9:14:CYS:SG	55:B9:27:CYS:HB2	2.42	0.59
60:BA:392:C:H2'	60:BA:393:C:H6	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1090:U:H2'	60:BA:1091:G:H8	1.66	0.59
60:BA:1791:A:N6	60:BA:1828:G:O2'	2.35	0.59
60:BA:1947:C:H2'	60:BA:1948:G:H8	1.67	0.59
60:BA:2471:C:H2'	60:BA:2472:G:C8	2.37	0.59
1:CB:208:ILE:HB	1:CB:239:VAL:HG22	1.84	0.59
12:CM:45:VAL:HG23	12:CM:48:LEU:HD12	1.84	0.59
20:CA:114:U:O4	20:CA:313:A:N1	2.36	0.59
20:CA:892:A:O2'	20:CA:1415:G:O2'	2.20	0.59
40:DV:10:LYS:HE3	40:DV:23:GLU:OE1	2.03	0.59
48:DN:15:LEU:HD13	48:DN:16:ILE:N	2.17	0.59
48:DN:111:PRO:HA	48:DN:114:ARG:CZ	2.33	0.59
53:D7:9:ARG:N	60:DA:1309:G:OP1	2.23	0.59
55:D9:11:CYS:SG	55:D9:32:HIS:ND1	2.75	0.59
60:DA:2038:G:N3	60:DA:2039:C:H1'	2.16	0.59
60:DA:2038:G:H2'	60:DA:2039:C:O4'	2.02	0.59
60:DA:2698:U:H2'	60:DA:2699:C:C6	2.37	0.59
60:DA:2841:C:H2'	60:DA:2842:G:C8	2.36	0.59
1:AB:209:ARG:HG3	1:AB:239:VAL:HG11	1.83	0.59
3:AD:79:PHE:O	3:AD:83:SER:OG	2.20	0.59
4:AE:93:PRO:HG3	7:AH:105:ARG:HG2	1.85	0.59
5:AF:50:TYR:OH	17:AR:74:ARG:O	2.17	0.59
7:AH:111:ILE:HG22	7:AH:134:ILE:HB	1.83	0.59
20:AA:1296:C:H4'	20:AA:1302:U:C4	2.37	0.59
23:AY:87:HIS:HD2	23:AY:121:VAL:HG22	1.67	0.59
23:AY:491:VAL:HG21	23:AY:597:GLY:HA2	1.84	0.59
23:AY:534:ILE:HD11	23:AY:570:GLY:HA3	1.85	0.59
25:BC:181:PHE:HB3	25:BC:185:LYS:HB3	1.85	0.59
26:BD:54:ARG:HH21	26:BD:217:ARG:HH22	1.48	0.59
26:BD:160:GLY:H	26:BD:196:VAL:HG23	1.67	0.59
32:BK:91:PRO:HG3	60:BA:1062:G:N2	2.18	0.59
33:BO:98:VAL:HG23	33:BO:119:PRO:HD3	1.85	0.59
51:B5:45:VAL:HG22	51:B5:51:TYR:HB2	1.85	0.59
60:BA:46:C:H2'	60:BA:47:C:C6	2.37	0.59
60:BA:105:C:H2'	60:BA:106:C:H6	1.66	0.59
60:BA:1830:C:H42	60:BA:1975:G:H1	1.50	0.59
60:BA:2023:G:N1	60:BA:2040:C:O2	2.32	0.59
22:CW:20(A):U:O2'	22:CW:21:A:O5'	2.17	0.59
23:CY:111:SER:OG	23:CY:112:GLN:N	2.33	0.59
25:DC:164:PHE:HZ	25:DC:196:ALA:HB1	1.66	0.59
44:DZ:123:ASP:N	44:DZ:123:ASP:OD1	2.36	0.59
48:DN:89:LYS:NZ	48:DN:89:LYS:HB3	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:1183:G:H2'	60:DA:1184:G:C8	2.36	0.59
2:AC:182:ILE:HG12	2:AC:203:PHE:HA	1.83	0.59
3:AD:159:ARG:O	3:AD:163:GLU:HB2	2.02	0.59
20:AA:949:A:H2'	20:AA:950:U:C6	2.38	0.59
20:AA:985:C:H2'	20:AA:986:A:C8	2.37	0.59
20:AA:1297:C:H5'	20:AA:1299:A:H2	1.67	0.59
22:AW:60:U:H5'	22:AW:61:C:H5	1.68	0.59
39:BU:92:ARG:HB3	39:BU:95:LEU:HB2	1.83	0.59
48:BN:99:LEU:O	48:BN:103:VAL:HG23	2.02	0.59
59:BB:24:G:C2	59:BB:56:G:N2	2.71	0.59
60:BA:270(K):G:H2'	60:BA:270(L):C:H6	1.68	0.59
60:BA:531:C:OP1	60:BA:561:G:N2	2.34	0.59
3:CD:96:LEU:HG	3:CD:139:ARG:NH2	2.18	0.59
8:CI:118:LYS:O	8:CI:120:ARG:N	2.36	0.59
11:CL:37:CYS:SG	11:CL:38:THR:N	2.75	0.59
12:CM:84:ILE:HD11	18:CS:63:THR:HG23	1.84	0.59
20:CA:985:C:H2'	20:CA:986:A:H8	1.67	0.59
20:CA:1001:G:N2	20:CA:1039:C:C2	2.65	0.59
20:CA:1354:C:H2'	20:CA:1355:G:C8	2.38	0.59
26:DD:13:ARG:NH1	60:DA:729:G:OP2	2.32	0.59
27:DE:25:VAL:HG12	27:DE:181:LEU:HD12	1.85	0.59
27:DE:197:ILE:HD11	27:DE:199:ARG:HD3	1.84	0.59
28:DF:154:VAL:O	28:DF:174:VAL:O	2.18	0.59
28:DF:191:ARG:HB3	28:DF:193:VAL:HG23	1.83	0.59
44:DZ:43:GLU:O	44:DZ:47:VAL:HG23	2.03	0.59
51:D5:45:VAL:HG22	51:D5:51:TYR:HB2	1.84	0.59
60:DA:847:U:HO2'	60:DA:848:G:H8	1.49	0.59
60:DA:956:G:H2'	60:DA:957:A:H2'	1.85	0.59
60:DA:1530:G:N2	60:DA:1541:U:O2'	2.26	0.59
60:DA:1891:G:H2'	60:DA:1892:C:C6	2.38	0.59
60:DA:2207:C:H42	60:DA:2217:G:H1	1.49	0.59
1:AB:102:LEU:O	1:AB:103:THR:OG1	2.18	0.59
11:AL:49:ASN:HB3	20:AA:529:G:O6	2.03	0.59
12:AM:87:TYR:CE1	18:AS:76:PRO:HB3	2.38	0.59
22:AW:4:U:H3	22:AW:69:A:H2	1.51	0.59
25:BC:29:LEU:O	25:BC:33:LEU:HG	2.02	0.59
27:BE:15:PHE:CD1	38:BT:80:SER:HB2	2.37	0.59
28:BF:164:ARG:O	28:BF:168:ARG:N	2.36	0.59
34:BP:64:LYS:HZ1	60:BA:2416:C:H5"	1.67	0.59
38:BT:66:VAL:HG22	38:BT:71:GLY:HA2	1.83	0.59
60:BA:212:G:H2'	60:BA:213:A:H8	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1654:A:H2'	60:BA:1655:A:H8	1.68	0.59
20:CA:313:A:H2'	20:CA:314:C:C6	2.37	0.59
20:CA:1271:G:H5'	20:CA:1314:C:H5'	1.85	0.59
20:CA:1356:G:H2'	20:CA:1357:A:C8	2.36	0.59
25:DC:47:LYS:HB3	25:DC:212:SER:HB2	1.85	0.59
26:DD:96:HIS:NE2	60:DA:1501:C:H5'	2.17	0.59
43:DY:28:LYS:HA	43:DY:39:VAL:HA	1.84	0.59
11:AL:86:ARG:O	20:AA:552:U:O2'	2.20	0.59
20:AA:528:C:N4	20:AA:529:G:O6	2.36	0.59
20:AA:614:A:H2'	20:AA:615:C:C6	2.37	0.59
20:AA:1148:U:H2'	20:AA:1149:C:O4'	2.03	0.59
20:AA:1149:C:H2'	20:AA:1150:U:C6	2.37	0.59
26:BD:219:PRO:HB3	60:BA:1789:A:O2'	2.03	0.59
43:BY:32:PRO:HD2	43:BY:34:LYS:H	1.67	0.59
44:BZ:9:TYR:HA	44:BZ:37:VAL:HG12	1.84	0.59
45:B0:11:ARG:HH12	60:BA:2278:A:H3'	1.68	0.59
48:BN:14:VAL:CG1	48:BN:137:LYS:HG3	2.33	0.59
55:B9:14:CYS:HA	55:B9:26:ILE:O	2.03	0.59
60:BA:392:C:H2'	60:BA:393:C:C6	2.38	0.59
60:BA:602:G:N2	60:BA:655:A:N7	2.51	0.59
60:BA:2142:C:H2'	60:BA:2143:C:C6	2.37	0.59
60:BA:2386:C:H2'	60:BA:2387:U:C6	2.38	0.59
5:CF:13:ASN:ND2	5:CF:55:ASP:OD2	2.35	0.59
6:CG:32:ARG:HG2	20:CA:1240:U:C2	2.38	0.59
11:CL:90:VAL:H	11:CL:96:VAL:HG21	1.67	0.59
18:CS:29:ARG:HD3	60:DA:888:C:H5'	1.85	0.59
23:CY:82:ILE:HB	23:CY:101:LEU:HD21	1.84	0.59
23:CY:223:PHE:HB3	23:CY:248:LYS:HD3	1.85	0.59
25:DC:176:VAL:O	25:DC:178:LYS:N	2.36	0.59
42:DX:5:TYR:OH	42:DX:42:ALA:O	2.21	0.59
42:DX:21:PHE:CE2	42:DX:26:TYR:HA	2.38	0.59
44:DZ:96:VAL:HG22	44:DZ:97:GLU:H	1.67	0.59
48:DN:46:VAL:O	48:DN:47:ALA:HB3	2.02	0.59
60:DA:216:A:H2'	60:DA:217:G:O4'	2.02	0.59
1:AB:167:PRO:O	1:AB:171:ALA:HB2	2.01	0.58
16:AQ:66:SER:O	16:AQ:70:ARG:NH1	2.36	0.58
20:AA:123:C:H5"	20:AA:311:C:O2'	2.03	0.58
20:AA:767:A:H2'	20:AA:768:A:O4'	2.03	0.58
25:BC:8:TYR:HA	25:BC:11:LEU:HB2	1.85	0.58
25:BC:63:VAL:HG12	25:BC:162:ILE:HB	1.84	0.58
25:BC:79:ALA:HB1	25:BC:83:LYS:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:38:ARG:NH2	60:BA:660:G:O3'	2.35	0.58
28:BF:185:ASP:O	28:BF:189:THR:OG1	2.20	0.58
37:BS:74:ALA:HA	37:BS:105:ALA:HB2	1.85	0.58
38:BT:49:VAL:O	38:BT:64:ARG:HB3	2.02	0.58
39:BU:90:VAL:C	39:BU:92:ARG:H	2.09	0.58
44:BZ:96:VAL:HG22	44:BZ:97:GLU:H	1.68	0.58
46:B1:5:CYS:HB2	46:B1:63:ALA:HB2	1.83	0.58
46:B1:29:GLY:O	60:BA:2396:G:O2'	2.21	0.58
46:B1:44:PRO:HB3	60:BA:396:G:H4'	1.84	0.58
60:BA:222:A:N6	60:BA:232:G:H1'	2.18	0.58
60:BA:259:G:H2'	60:BA:260:G:H8	1.68	0.58
60:BA:784:A:N6	60:BA:2072:G:O2'	2.35	0.58
6:CG:79:ARG:HD3	6:CG:79:ARG:H	1.66	0.58
9:CJ:55:LYS:HG3	20:CA:973:G:O4'	2.02	0.58
16:CQ:13:ASP:O	16:CQ:15:MET:N	2.34	0.58
20:CA:861:G:HO2'	20:CA:874:G:HO2'	1.24	0.58
25:DC:120:VAL:O	25:DC:124:VAL:N	2.16	0.58
25:DC:213:VAL:O	25:DC:214:TYR:HB2	2.01	0.58
31:DJ:25:UNK:CA	31:DJ:80:UNK:HA	2.32	0.58
31:DJ:64:UNK:O	31:DJ:67:UNK:N	2.36	0.58
32:DK:101:TRP:CD1	32:DK:140:GLY:HA2	2.38	0.58
34:DP:24:GLY:HA2	34:DP:30:THR:HA	1.85	0.58
48:DN:78:TYR:CG	60:DA:2642:G:H5"	2.18	0.58
60:DA:1576:U:H2'	60:DA:1577:C:C6	2.38	0.58
60:DA:1853:A:H1'	60:DA:2233:U:O2'	2.03	0.58
60:DA:2255:G:N2	60:DA:2275:C:N3	2.40	0.58
60:DA:2685:G:N2	60:DA:2724:C:N3	2.42	0.58
5:AF:2:ARG:HB3	5:AF:92:LYS:HE3	1.85	0.58
16:AQ:100:LYS:N	20:AA:247:G:OP2	2.37	0.58
20:AA:68(H):G:H1	20:AA:68(R):C:N4	1.98	0.58
20:AA:1440(C):G:C5	38:BT:118:ARG:HD3	2.38	0.58
24:AU:5:UAL:C	24:AU:6:5OH:HS	2.33	0.58
25:BC:42:VAL:HG21	25:BC:176:VAL:HG23	1.84	0.58
25:BC:132:LEU:HB2	25:BC:138:LEU:HG	1.84	0.58
28:BF:29:ASN:O	28:BF:33:LEU:HD22	2.03	0.58
28:BF:34:TRP:HB2	34:BP:10:PRO:HB2	1.84	0.58
32:BK:17:ALA:HB2	32:BK:38:VAL:HG11	1.84	0.58
46:B1:13:ILE:HG13	46:B1:17:SER:CB	2.32	0.58
48:BN:36:GLY:O	48:BN:42:TRP:HB2	2.03	0.58
52:B6:23:THR:HB	54:B8:34:TRP:HA	1.85	0.58
60:BA:1540:G:C2	60:BA:1541:U:H1'	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:35:GLY:HA2	11:CL:58:VAL:HG13	1.85	0.58
20:CA:601:C:H2'	20:CA:602:A:H8	1.68	0.58
20:CA:1412:C:H2'	20:CA:1413:A:C8	2.38	0.58
41:DW:4:LYS:NZ	60:DA:495:G:OP1	2.36	0.58
46:D1:22:GLY:HA2	46:D1:37:ILE:HA	1.85	0.58
48:DN:36:GLY:O	48:DN:42:TRP:HB2	2.03	0.58
60:DA:694:U:H2'	60:DA:695:G:C8	2.38	0.58
60:DA:1287:A:H2	60:DA:1649:G:H4'	1.68	0.58
60:DA:2646:C:OP2	60:DA:2732:G:O2'	2.21	0.58
60:DA:2696:U:H2'	60:DA:2697:G:C8	2.38	0.58
1:AB:101:MET:HB2	1:AB:102:LEU:HD12	1.86	0.58
9:AJ:40:LEU:HD11	20:AA:1280:A:H5"	1.84	0.58
20:AA:59:A:H3'	20:AA:331:G:H22	1.69	0.58
20:AA:59:A:H1'	20:AA:354:G:N2	2.18	0.58
20:AA:137:C:H2'	20:AA:138:G:C8	2.38	0.58
20:AA:143:A:H5'	20:AA:196:A:N1	2.18	0.58
20:AA:154:C:N3	20:AA:167:G:N2	2.49	0.58
20:AA:572:A:O2'	20:AA:916:G:O2'	2.21	0.58
20:AA:579:G:H4'	20:AA:728:A:H1'	1.84	0.58
20:AA:1137:C:H4'	20:AA:1138:G:C2	2.38	0.58
20:AA:1143:G:H2'	20:AA:1144:G:C8	2.38	0.58
25:BC:132:LEU:HD22	25:BC:137:LEU:HD12	1.84	0.58
30:BH:86:GLU:HB2	30:BH:132:ARG:HA	1.85	0.58
33:BO:8:LEU:HD21	33:BO:21:CYS:HB2	1.86	0.58
42:BX:90:GLU:HA	42:BX:93:GLU:HB2	1.84	0.58
60:BA:17:G:H2'	60:BA:18:C:C6	2.38	0.58
60:BA:647:G:H2'	60:BA:648:G:O4'	2.02	0.58
60:BA:1010:A:N3	60:BA:1153:C:H1'	2.18	0.58
60:BA:1677:A:H2'	60:BA:1678:G:C8	2.39	0.58
60:BA:2114:A:N3	60:BA:2167:U:O2'	2.36	0.58
60:BA:2246:G:H2'	60:BA:2247:A:O4'	2.04	0.58
20:CA:431:A:H2'	20:CA:432:A:H8	1.68	0.58
20:CA:1039:C:H2'	20:CA:1040:U:C6	2.38	0.58
20:CA:1440(J):C:O2'	20:CA:1440(K):G:H5"	2.02	0.58
25:DC:9:ARG:O	25:DC:12:LEU:HB3	2.03	0.58
25:DC:15:VAL:HG13	25:DC:221:PRO:HB3	1.85	0.58
25:DC:121:MET:O	25:DC:125:GLY:N	2.37	0.58
27:DE:11:MET:HA	27:DE:24:THR:HA	1.84	0.58
29:DG:71:THR:OG1	29:DG:89:GLY:O	2.17	0.58
36:DR:48:VAL:O	36:DR:52:ILE:HG12	2.04	0.58
41:DW:84:ARG:NH2	60:DA:1322:A:O2'	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:277:C:H3'	60:DA:278:A:C8	2.30	0.58
60:DA:1540:G:C2	60:DA:1541:U:H1'	2.38	0.58
60:DA:2454:G:H1	60:DA:2498:C:N4	1.98	0.58
16:AQ:56:VAL:HB	16:AQ:78:GLU:HG2	1.84	0.58
23:AY:406:GLU:HG2	23:AY:407:PRO:HD2	1.84	0.58
30:BH:59:ARG:HB2	60:BA:1036:G:OP1	2.02	0.58
44:BZ:23:LYS:HB3	44:BZ:38:TYR:CD1	2.38	0.58
52:B6:18:ARG:O	52:B6:19:ARG:HB2	2.03	0.58
59:BB:24:G:C2	59:BB:56:G:C2	2.91	0.58
60:BA:230:U:H2'	60:BA:231:C:C6	2.38	0.58
60:BA:922:U:H2'	60:BA:923:C:C6	2.38	0.58
60:BA:2828:C:H2'	60:BA:2829:C:H6	1.66	0.58
2:CC:119:ARG:HG2	2:CC:140:ARG:HH22	1.69	0.58
18:CS:39:THR:HA	18:CS:70:LYS:HA	1.86	0.58
24:CU:5:UAL:C	24:CU:6:5OH:HS	2.33	0.58
26:DD:228:PRO:HG3	60:DA:2598:A:H4'	1.85	0.58
28:DF:167:ALA:HB1	28:DF:175:THR:HB	1.83	0.58
35:DQ:21:THR:OG1	35:DQ:99:PRO:O	2.21	0.58
39:DU:64:ARG:HH21	48:DN:41:ASP:C	2.10	0.58
46:D1:45:ASN:HB3	60:DA:397:G:H5"	1.84	0.58
48:DN:76:SER:CB	60:DA:2641:G:H4'	2.32	0.58
60:DA:2023:G:P	60:DA:2023:G:H8	2.25	0.58
60:DA:2817:G:O2'	60:DA:2836:U:O2	2.20	0.58
2:AC:21:ARG:HH22	2:AC:56:ASP:HB2	1.67	0.58
16:AQ:13:ASP:HA	16:AQ:19:VAL:HG12	1.84	0.58
33:BO:66:LYS:HG3	60:BA:1665:A:H5"	1.85	0.58
42:BX:68:ARG:NH1	60:BA:456:C:O2'	2.28	0.58
43:BY:96:ILE:HG22	43:BY:97:ARG:H	1.67	0.58
60:BA:572:A:H2	60:BA:2029:G:H21	1.47	0.58
60:BA:681:G:H2'	60:BA:682:G:H8	1.69	0.58
60:BA:1186:G:H2'	60:BA:1187:G:O4'	2.03	0.58
9:CJ:39:PRO:HA	9:CJ:70:ARG:HG3	1.85	0.58
25:DC:30:VAL:HG12	25:DC:217:THR:HG23	1.85	0.58
26:DD:206:LEU:O	26:DD:208:LYS:N	2.37	0.58
27:DE:171:GLU:HB3	27:DE:185:LYS:HG2	1.85	0.58
28:DF:169:ASN:HB2	60:DA:322:A:OP1	2.03	0.58
35:DQ:125:LEU:O	35:DQ:127:ILE:N	2.32	0.58
37:DS:26:LEU:HD13	37:DS:106:ARG:NH1	2.18	0.58
40:DV:19:LYS:HB2	40:DV:96:ILE:HG13	1.86	0.58
50:D3:48:GLU:HA	50:D3:51:ALA:HB2	1.85	0.58
60:DA:193:U:H2'	60:DA:194:G:H8	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:819:A:H2'	60:DA:820:A:H8	1.68	0.58
60:DA:2061:G:H2'	60:DA:2063:C:H41	1.69	0.58
60:DA:2114:A:H2	60:DA:2168:G:H1'	1.68	0.58
60:DA:2812:G:H1	60:DA:2888:C:N4	2.02	0.58
11:AL:42:THR:OG1	11:AL:43:VAL:N	2.34	0.58
11:AL:83:VAL:HB	11:AL:100:ILE:HG23	1.86	0.58
12:AM:114:ARG:NH1	20:AA:1229:A:OP2	2.37	0.58
28:BF:192:LEU:HD21	28:BF:194:MET:HE2	1.85	0.58
50:B3:42:ALA:O	60:BA:851:U:O2'	2.21	0.58
60:BA:723:G:H2'	60:BA:724:U:C6	2.38	0.58
60:BA:724:U:H2'	60:BA:725:G:O4'	2.02	0.58
60:BA:862:G:H2'	60:BA:863:A:O4'	2.03	0.58
60:BA:1221:C:H2'	60:BA:122(A):C:C6	2.38	0.58
60:BA:1409:C:H2'	60:BA:1410:G:H8	1.68	0.58
18:CS:53:ASN:HB2	18:CS:58:VAL:HG22	1.86	0.58
20:CA:201(A):U:O2'	20:CA:201(B):U:H5'	2.04	0.58
20:CA:938:A:H2'	20:CA:939:G:O4'	2.03	0.58
20:CA:1237:C:H4'	20:CA:1334:G:N2	2.13	0.58
20:CA:1528:U:O2'	20:CA:1530:G:H5'	2.03	0.58
32:DK:55:VAL:HG22	32:DK:56:GLU:H	1.68	0.58
36:DR:33:ARG:HA	36:DR:114:VAL:O	2.03	0.58
53:D7:16:HIS:ND1	60:DA:684:G:OP1	2.32	0.58
60:DA:392:C:H2'	60:DA:393:C:H6	1.69	0.58
60:DA:1007:C:H5"	60:DA:1008:C:C2'	2.32	0.58
60:DA:1654:A:H2'	60:DA:1655:A:H8	1.68	0.58
60:DA:2841:C:H2'	60:DA:2842:G:H8	1.69	0.58
60:DA:2854:G:H1	60:DA:2863:C:N4	1.98	0.58
20:AA:1065:U:OP2	20:AA:1190:G:N2	2.34	0.58
20:AA:1261:A:H62	20:AA:1274:G:H21	1.51	0.58
20:AA:1301:U:H3'	20:AA:1302:U:H5"	1.84	0.58
43:BY:6:HIS:HB3	43:BY:35:TYR:HE1	1.69	0.58
46:B1:18:ILE:HG12	46:B1:20:ARG:N	2.16	0.58
60:BA:680:G:H2'	60:BA:681:G:C8	2.38	0.58
60:BA:1055:G:N2	60:BA:1085:A:N3	2.51	0.58
60:BA:1321:A:H2'	60:BA:1322:A:O4'	2.04	0.58
60:BA:1434:A:H2'	60:BA:1435:G:C8	2.38	0.58
60:BA:1628:G:H1	60:BA:1638:C:N4	1.99	0.58
60:BA:2013:A:H2'	60:BA:2014:A:C8	2.39	0.58
1:CB:101:MET:HA	1:CB:108:ILE:HG12	1.86	0.58
8:CI:17:VAL:HA	8:CI:63:ILE:HG23	1.85	0.58
9:CJ:35:SER:HB3	9:CJ:73:ASP:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:68(H):G:H1	20:CA:68(R):C:N4	1.98	0.58
20:CA:652:U:O4	20:CA:752:G:O2'	2.21	0.58
20:CA:687:A:N3	20:CA:688:G:H1'	2.18	0.58
20:CA:903:G:H2'	20:CA:904:C:C6	2.38	0.58
20:CA:1261:A:H62	20:CA:1274:G:N2	1.97	0.58
22:CW:6:C:H2'	22:CW:7:G:H8	1.69	0.58
23:CY:91:THR:O	23:CY:93:GLU:N	2.37	0.58
39:DU:50:ARG:HH21	60:DA:993:G:H5"	1.69	0.58
46:D1:34:THR:HG23	46:D1:35:THR:HG23	1.84	0.58
55:D9:1:MET:HE3	60:DA:2477:C:H3'	1.86	0.58
60:DA:661:C:H2'	60:DA:662:G:C8	2.38	0.58
60:DA:1017:G:N1	60:DA:1145:C:O2	2.25	0.58
60:DA:1411:C:H42	60:DA:1591:G:H1	1.51	0.58
60:DA:2392:A:H2'	60:DA:2393:A:O4'	2.04	0.58
2:AC:142:MET:HE2	2:AC:171:GLY:HA3	1.84	0.58
8:AI:5:TYR:HA	8:AI:17:VAL:O	2.03	0.58
8:AI:113:LYS:HE3	20:AA:1187:G:H5'	1.86	0.58
11:AL:53:ARG:HG2	11:AL:93:LEU:HD22	1.86	0.58
12:AM:122:LYS:HA	20:AA:954:G:H5'	1.85	0.58
20:AA:687:A:H62	20:AA:703:G:H21	0.76	0.58
20:AA:1518:A:H2'	20:AA:1519:A:C8	2.38	0.58
23:AY:38:ARG:O	23:AY:39:ILE:HB	2.03	0.58
25:BC:121:MET:O	25:BC:125:GLY:N	2.37	0.58
28:BF:52:LYS:HZ1	60:BA:38:A:H5'	1.69	0.58
39:BU:15:LYS:NZ	60:BA:1217:C:OP1	2.36	0.58
42:BX:29:TRP:HA	42:BX:78:LYS:HA	1.86	0.58
59:BB:32:C:O2'	59:BB:52:A:N6	2.37	0.58
60:BA:134:C:H42	60:BA:145:G:H1	1.49	0.58
60:BA:1447:G:H1	60:BA:1464:C:H42	1.50	0.58
60:BA:1638:C:H5"	60:BA:2710:C:O2'	2.04	0.58
60:BA:2078:C:N4	60:BA:2242:G:H1	2.00	0.58
60:BA:2411:A:H2'	60:BA:2412:A:C8	2.39	0.58
60:BA:2468:G:OP2	60:BA:2476:A:N6	2.36	0.58
2:CC:130:VAL:HG21	2:CC:157:ILE:HG22	1.86	0.58
3:CD:8:VAL:HG11	3:CD:115:ARG:HD3	1.86	0.58
10:CK:30:VAL:HG21	10:CK:65:ALA:HA	1.86	0.58
11:CL:84:LEU:HB2	11:CL:104:VAL:HG11	1.85	0.58
20:CA:584:G:H2'	20:CA:585:G:C8	2.39	0.58
20:CA:1071:C:N3	20:CA:1104:G:O6	2.37	0.58
20:CA:1126:U:H2'	20:CA:1127:G:O4'	2.04	0.58
25:DC:26:ALA:HB1	25:DC:215:VAL:HG21	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:116:UNK:O	31:DJ:118:UNK:N	2.37	0.58
40:DV:20:LEU:HG	40:DV:21:ARG:H	1.68	0.58
44:DZ:118:GLN:HG3	44:DZ:120:ILE:HG12	1.85	0.58
50:D3:17:LYS:HE2	60:DA:969:U:OP1	2.04	0.58
60:DA:2095:C:H2'	60:DA:2096:U:O4'	2.04	0.58
60:DA:2282:G:O2'	60:DA:2425:A:N6	2.29	0.58
14:AO:7:GLU:O	14:AO:10:LYS:HG3	2.04	0.58
18:AS:36:ARG:HH22	18:AS:75:ALA:HB3	1.69	0.58
25:BC:60:ARG:HG2	25:BC:142:LYS:HD3	1.86	0.58
26:BD:50:THR:HA	60:BA:1805:U:O2'	2.04	0.58
28:BF:63:LYS:HE3	28:BF:67:GLN:HE22	1.69	0.58
36:BR:101:ALA:C	36:BR:103:ARG:H	2.11	0.58
38:BT:34:VAL:HG13	38:BT:39:ARG:HA	1.85	0.58
41:BW:12:ILE:HD11	41:BW:42:ARG:HH12	1.67	0.58
42:BX:36:LYS:HG2	42:BX:54:VAL:HB	1.86	0.58
60:BA:358:U:H2'	60:BA:359:A:C8	2.38	0.58
60:BA:1149:G:H2'	60:BA:1150:C:H6	1.69	0.58
60:BA:1698:A:H1'	60:BA:1699:G:H3'	1.86	0.58
60:BA:1770:G:H1	60:BA:1982:C:H42	1.50	0.58
60:BA:2052:G:H2'	60:BA:2053:G:H8	1.69	0.58
60:BA:2426:A:H3'	60:BA:2427:C:H5'	1.84	0.58
3:CD:65:ARG:HB3	3:CD:75:PHE:CE2	2.39	0.58
4:CE:29:GLY:HA2	4:CE:46:GLY:O	2.04	0.58
16:CQ:10:VAL:HA	16:CQ:21:VAL:HG22	1.86	0.58
20:CA:59:A:H3'	20:CA:331:G:H22	1.69	0.58
20:CA:662:G:H2'	20:CA:663:A:C8	2.38	0.58
20:CA:1231:G:H2'	20:CA:1232:U:C6	2.38	0.58
27:DE:13:ARG:HG2	38:DT:58:ASN:ND2	2.19	0.58
27:DE:24:THR:O	27:DE:183:LEU:HA	2.04	0.58
31:DJ:165:UNK:O	31:DJ:167:UNK:N	2.36	0.58
34:DP:45:LEU:HG	34:DP:46:LYS:H	1.67	0.58
34:DP:48:PRO:C	34:DP:50:ARG:H	2.11	0.58
35:DQ:52:VAL:O	35:DQ:56:ARG:HB2	2.03	0.58
36:DR:24:GLN:OE1	60:DA:1277:G:O2'	2.22	0.58
37:DS:74:ALA:HB2	37:DS:104:GLY:HA2	1.84	0.58
39:DU:40:PHE:HB3	40:DV:75:PHE:CE1	2.39	0.58
46:D1:25:LYS:CG	46:D1:26:ARG:H	2.17	0.58
60:DA:243:U:O2	60:DA:255:A:N7	2.37	0.58
60:DA:1389:G:H2'	60:DA:1390:U:O4'	2.04	0.58
60:DA:1541:U:H3'	60:DA:1542:G:O3'	2.04	0.58
60:DA:2809:A:H2'	60:DA:2810:A:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2889:C:H2'	60:DA:2891:G:O4'	2.02	0.58
1:AB:22:LYS:HE2	20:AA:830:G:H5"	1.85	0.58
1:AB:164:VAL:HG12	1:AB:165:VAL:N	2.18	0.58
3:AD:26:CYS:HA	3:AD:31:CYS:HA	1.85	0.58
5:AF:87:ARG:NH2	20:AA:673:G:O3'	2.37	0.58
6:AG:99:LEU:HD22	6:AG:103:TRP:HE1	1.69	0.58
20:AA:599:C:H2'	20:AA:600:C:C6	2.38	0.58
20:AA:833:U:H2'	20:AA:834:C:C6	2.38	0.58
23:AY:314:PHE:N	23:AY:327:PHE:O	2.35	0.58
26:BD:54:ARG:NH2	60:BA:1822:G:H5"	2.18	0.58
26:BD:118:VAL:HG22	26:BD:119:ALA:H	1.69	0.58
48:BN:15:LEU:HD13	48:BN:16:ILE:N	2.17	0.58
54:B8:35:GLN:OE1	60:BA:2284:C:N4	2.37	0.58
60:BA:574:C:O4'	60:BA:2055:C:H5"	2.04	0.58
60:BA:713:G:H2'	60:BA:714:U:C6	2.39	0.58
60:BA:1025:G:O6	60:BA:1139:G:C2	2.57	0.58
60:BA:1287:A:H2'	60:BA:1288:U:H5'	1.86	0.58
60:BA:2083:G:H2'	60:BA:2084:C:C6	2.39	0.58
60:BA:2085:C:H2'	60:BA:2086:U:C6	2.39	0.58
1:CB:77:ALA:O	1:CB:81:VAL:HG13	2.04	0.58
11:CL:33:ARG:O	11:CL:85:ILE:HD13	2.03	0.58
12:CM:78:ILE:HA	12:CM:81:LEU:HB2	1.86	0.58
20:CA:1367:C:H2'	20:CA:1368:G:O4'	2.04	0.58
20:CA:1534:A:H1'	21:CV:12:A:H61	1.69	0.58
22:CW:14:A:H2'	22:CW:15:G:O4'	2.04	0.58
23:CY:30:GLU:HB2	23:CY:51:THR:HG22	1.85	0.58
23:CY:504:ARG:HG2	60:DA:1913:A:H61	1.69	0.58
23:CY:616:TYR:HB3	23:CY:663:THR:HA	1.85	0.58
28:DF:154:VAL:HG12	28:DF:156:LEU:CA	2.32	0.58
32:DK:91:PRO:HG3	60:DA:1062:G:N2	2.18	0.58
41:DW:39:THR:O	41:DW:41:LYS:N	2.36	0.58
44:DZ:99:TYR:HB3	44:DZ:123:ASP:HB2	1.84	0.58
48:DN:14:VAL:CG1	48:DN:137:LYS:HG3	2.33	0.58
50:D3:40:THR:HB	50:D3:43:ILE:HG12	1.85	0.58
60:DA:1028:A:H2'	60:DA:1029:A:C8	2.39	0.58
60:DA:1101:U:H2'	60:DA:1102:C:H6	1.69	0.58
5:AF:26:ILE:O	5:AF:30:LEU:HG	2.04	0.57
21:AV:13:A:H5"	21:AV:14:A:OP2	2.04	0.57
23:AY:610:VAL:HB	23:AY:669:PHE:HB3	1.84	0.57
28:BF:32:LEU:HD11	60:BA:600:G:H5'	1.86	0.57
29:BG:16:ARG:O	29:BG:20:ILE:HG13	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:111:UNK:O	31:BJ:116:UNK:HA	2.04	0.57
36:BR:37:THR:OG1	60:BA:1651:G:OP1	2.16	0.57
39:BU:37:GLU:HA	39:BU:40:PHE:CD1	2.39	0.57
59:BB:72:G:H1'	59:BB:104:A:H61	1.67	0.57
60:BA:305:U:H2'	60:BA:306:U:C6	2.39	0.57
60:BA:1166:C:H2'	60:BA:1167:U:C6	2.39	0.57
60:BA:1353:A:H2'	60:BA:1354:A:C8	2.39	0.57
60:BA:2645:G:H3'	60:BA:2646:C:H5'	1.86	0.57
2:CC:120:VAL:HA	2:CC:123:GLN:HG3	1.84	0.57
4:CE:146:ALA:HB1	4:CE:150:ARG:HH22	1.69	0.57
20:CA:68(A):G:H2'	20:CA:68(B):G:C8	2.37	0.57
20:CA:195:A:N3	20:CA:222:U:O2'	2.33	0.57
20:CA:560:U:H5'	20:CA:566:G:N2	2.19	0.57
22:CW:39:U:H2'	22:CW:40:G:C8	2.39	0.57
22:CW:70:G:H4'	60:DA:1893:C:O2'	2.04	0.57
23:CY:317:MET:HE2	23:CY:319:ASP:HB2	1.86	0.57
25:DC:77:ALA:HB2	25:DC:115:VAL:HG22	1.86	0.57
45:D0:44:ARG:NH2	60:DA:858:U:OP1	2.36	0.57
60:DA:33:U:O4	60:DA:446:G:O2'	2.17	0.57
60:DA:874:G:H1	60:DA:903:C:H42	1.52	0.57
60:DA:1077:A:H3'	60:DA:1078:U:O4'	2.03	0.57
60:DA:1437:C:O2'	60:DA:1518:C:O2'	2.21	0.57
60:DA:1669:A:H61	60:DA:1993:U:H3	1.52	0.57
60:DA:1830:C:H42	60:DA:1975:G:H1	1.52	0.57
1:AB:104:ASN:N	1:AB:104:ASN:OD1	2.35	0.57
9:AJ:80:LYS:HB3	9:AJ:84:GLN:NE2	2.19	0.57
17:AR:60:ALA:HB2	20:AA:834:C:H5"	1.86	0.57
20:AA:137:C:H2'	20:AA:138:G:H8	1.68	0.57
20:AA:658:G:H1	20:AA:747:C:H42	1.51	0.57
20:AA:1248:A:C2	20:AA:1289:A:N6	2.71	0.57
21:AV:8:A:H2'	21:AV:9:G:C8	2.39	0.57
21:AV:18:G:H2'	21:AV:19:G:O4'	2.04	0.57
30:BH:96:ALA:HB3	30:BH:128:PRO:HA	1.86	0.57
31:BJ:39:UNK:O	31:BJ:43:UNK:N	2.37	0.57
35:BQ:39:PRO:HA	35:BQ:98:LYS:HA	1.86	0.57
38:BT:27:THR:O	38:BT:87:ASP:HB2	2.05	0.57
60:BA:826:U:H3	60:BA:831:G:H1	1.50	0.57
60:BA:1947:C:H2'	60:BA:1948:G:C8	2.39	0.57
20:CA:130:A:N1	20:CA:233:C:H1'	2.19	0.57
20:CA:892:A:H2'	20:CA:893:C:C6	2.39	0.57
23:CY:514:VAL:HA	23:CY:565:VAL:CA	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CU:6:5OH:HS	24:CU:6:5OH:N	2.19	0.57
28:DF:37:VAL:HA	28:DF:40:GLN:CD	2.29	0.57
42:DX:44:GLU:HG3	42:DX:51:VAL:HG23	1.86	0.57
44:DZ:69:THR:HG22	44:DZ:90:VAL:HA	1.85	0.57
50:D3:5:LYS:O	50:D3:57:GLU:HB3	2.04	0.57
60:DA:1010:A:N3	60:DA:1153:C:H1'	2.19	0.57
60:DA:1523:U:H2'	60:DA:1524:G:H8	1.68	0.57
60:DA:1530:G:C6	60:DA:1541:U:O2	2.57	0.57
1:AB:175:ARG:HH22	20:AA:1076:C:H5'	1.68	0.57
14:AO:55:GLY:O	14:AO:59:MET:HG2	2.04	0.57
17:AR:56:THR:OG1	17:AR:57:GLY:N	2.36	0.57
20:AA:692:U:H5'	20:AA:797:C:H5'	1.86	0.57
20:AA:1324:A:H5'	20:AA:1362(A):C:H5"	1.86	0.57
20:AA:1412:C:H2'	20:AA:1413:A:C8	2.38	0.57
23:AY:335:LEU:HD23	23:AY:369:LEU:HB3	1.85	0.57
28:BF:5:ALA:HB2	28:BF:118:ALA:HB1	1.86	0.57
29:BG:137:GLU:HB2	29:BG:140:ILE:HG23	1.86	0.57
48:BN:73:THR:CG2	48:BN:84:LYS:HB3	2.30	0.57
48:BN:74:ARG:HH12	48:BN:85:ILE:HD11	1.67	0.57
56:Be:62:VAL:HG21	56:Be:92:LEU:HD13	1.85	0.57
60:BA:2009:G:H2'	60:BA:2010:G:H8	1.67	0.57
10:CK:122:LYS:NZ	20:CA:798:G:OP2	2.36	0.57
13:CN:23:ARG:HH11	13:CN:29:ARG:HA	1.70	0.57
20:CA:1338:G:N2	22:CW:41:A:H1'	2.20	0.57
25:DC:166:ASN:HB2	25:DC:170:GLY:HA2	1.87	0.57
28:DF:2:LYS:HB2	28:DF:24:LEU:HD12	1.84	0.57
28:DF:123:LEU:HB2	28:DF:192:LEU:HD22	1.86	0.57
40:DV:35:LEU:HD23	40:DV:57:VAL:HG22	1.86	0.57
42:DX:54:VAL:HG12	42:DX:81:VAL:HG12	1.86	0.57
49:D2:35:LEU:CD2	49:D2:50:ILE:HG12	2.30	0.57
51:D5:10:LYS:HB2	60:DA:2017:U:O2	2.05	0.57
60:DA:306:U:H3	60:DA:310:A:H62	1.52	0.57
60:DA:348:G:H2'	60:DA:349:G:C8	2.40	0.57
60:DA:1070:A:H5'	60:DA:1072:C:OP2	2.04	0.57
60:DA:1186:G:H2'	60:DA:1187:G:O4'	2.04	0.57
60:DA:1324:G:N2	60:DA:1330:C:N3	2.40	0.57
6:AG:15:ASP:OD2	6:AG:44:TYR:OH	2.21	0.57
9:AJ:34:VAL:HG22	9:AJ:74:ILE:HG22	1.86	0.57
16:AQ:29:HIS:CG	16:AQ:32:TYR:HB2	2.39	0.57
20:AA:9:G:H2'	20:AA:10:A:H8	1.68	0.57
20:AA:308:C:H2'	20:AA:309:G:H8	1.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:816:A:OP2	20:AA:1526:G:O2'	2.17	0.57
20:AA:1225:A:H2'	20:AA:1226:C:C5	2.39	0.57
20:AA:1233:G:H2'	20:AA:1234:C:C6	2.39	0.57
25:BC:218:THR:O	60:BA:2175:C:O2'	2.23	0.57
27:BE:74:PRO:HB2	27:BE:76:ARG:H	1.69	0.57
38:BT:49:VAL:HG22	38:BT:50:ILE:H	1.68	0.57
60:BA:602:G:H4'	60:BA:604:G:H4'	1.87	0.57
60:BA:1162:G:H2'	60:BA:1163:G:H8	1.69	0.57
60:BA:1571:A:H2'	60:BA:1572:A:C8	2.38	0.57
60:BA:2595:G:H21	60:BA:2598:A:H62	1.52	0.57
3:CD:56:VAL:HA	3:CD:59:ARG:HB2	1.84	0.57
3:CD:166:LYS:HE2	3:CD:178:VAL:HB	1.87	0.57
20:CA:614:A:H2'	20:CA:615:C:C6	2.39	0.57
20:CA:1224:G:H1	20:CA:1362(A):C:H42	1.50	0.57
23:CY:83:ASP:OD1	23:CY:83:ASP:N	2.36	0.57
23:CY:130:VAL:O	23:CY:132:ARG:HD3	2.04	0.57
60:DA:261:G:HO2'	60:DA:609(B):G:HO2'	1.51	0.57
60:DA:481:G:OP1	60:DA:481:G:H4'	2.05	0.57
9:AJ:35:SER:HB3	9:AJ:73:ASP:HB2	1.85	0.57
15:AP:53:VAL:HG12	15:AP:79:VAL:HG22	1.87	0.57
20:AA:42:G:N3	20:AA:622:A:H2	2.01	0.57
20:AA:892:A:HO2'	20:AA:1415:G:HO2'	1.50	0.57
26:BD:256:GLY:O	60:BA:1843:C:O2'	2.19	0.57
36:BR:97:VAL:HG22	36:BR:114:VAL:HA	1.87	0.57
38:BT:16:ARG:HB3	38:BT:19:LEU:HG	1.87	0.57
38:BT:62:THR:HA	38:BT:75:ILE:HG12	1.87	0.57
56:Be:63:ILE:HG13	56:Be:70:LYS:HA	1.87	0.57
60:BA:541:C:H42	60:BA:552:G:H1	1.51	0.57
60:BA:1658:C:N4	60:BA:2002:G:H1	2.02	0.57
60:BA:1771:C:H2'	60:BA:1772:G:C8	2.39	0.57
60:BA:2089:U:H2'	60:BA:2090:G:C8	2.40	0.57
60:BA:2747:G:H21	60:BA:2757:A:H62	0.70	0.57
1:CB:79:ASP:O	1:CB:82:ARG:HG2	2.04	0.57
1:CB:92:TYR:CE1	1:CB:94:ASN:HB2	2.39	0.57
12:CM:19:LEU:HD13	12:CM:22:ILE:HD12	1.86	0.57
14:CO:63:ARG:O	14:CO:67:LEU:HG	2.04	0.57
20:CA:62:U:C5'	20:CA:385:C:H1'	2.35	0.57
34:DP:67:MET:HE1	34:DP:70:GLN:HG2	1.85	0.57
35:DQ:8:LYS:NZ	60:DA:912:C:OP1	2.37	0.57
37:DS:47:THR:O	37:DS:48:LEU:HB2	2.04	0.57
42:DX:8:ILE:HG23	42:DX:30:VAL:HG12	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:De:63:ILE:HG13	56:De:70:LYS:HA	1.87	0.57
60:DA:232:G:H22	60:DA:420:C:H5"	1.67	0.57
60:DA:545:G:H1'	60:DA:548:A:N6	2.19	0.57
60:DA:1135:C:N4	60:DA:1138:G:H8	2.02	0.57
60:DA:1326:U:H2'	60:DA:1327:C:O4'	2.05	0.57
60:DA:1674:G:H21	60:DA:1677:A:N6	2.01	0.57
60:DA:2697:G:H2'	60:DA:2698:U:O4'	2.03	0.57
7:AH:121:ASP:OD1	7:AH:121:ASP:N	2.38	0.57
11:AL:87:GLY:H	11:AL:99:HIS:H	1.51	0.57
14:AO:63:ARG:O	14:AO:67:LEU:HG	2.04	0.57
19:AT:53:LEU:HD12	19:AT:100:ILE:O	2.04	0.57
20:AA:745:C:H1'	20:AA:836:G:O2'	2.05	0.57
20:AA:1113:C:H2'	20:AA:1114:C:H6	1.69	0.57
27:BE:111:ARG:HB2	27:BE:160:TYR:O	2.05	0.57
29:BG:43:LEU:HD13	60:BA:2305:A:H61	1.69	0.57
37:BS:17:ARG:NH2	59:BB:8:U:OP1	2.37	0.57
41:BW:77:ASP:OD2	60:BA:23:G:N2	2.37	0.57
48:BN:45:ASN:H	48:BN:45:ASN:ND2	2.02	0.57
60:BA:122:G:H2'	60:BA:123:G:O4'	2.05	0.57
11:CL:102:ARG:NH2	11:CL:109:GLY:O	2.37	0.57
20:CA:442:C:N3	20:CA:492:G:N2	2.45	0.57
20:CA:1143:G:H2'	20:CA:1144:G:H8	1.68	0.57
23:CY:188:TYR:OH	23:CY:268:GLY:N	2.37	0.57
26:DD:38:LYS:HA	26:DD:61:LEU:HD12	1.85	0.57
26:DD:141:VAL:HA	26:DD:164:GLN:HB2	1.87	0.57
33:DO:1:MET:H2	33:DO:67:LYS:HB2	1.69	0.57
37:DS:17:ARG:HA	37:DS:20:ARG:HB2	1.87	0.57
38:DT:3:ARG:NE	60:DA:2876:G:O2'	2.35	0.57
39:DU:28:ARG:HA	39:DU:31:SER:HB3	1.87	0.57
40:DV:10:LYS:HD3	60:DA:994:C:H1'	1.85	0.57
60:DA:1613:G:H3'	60:DA:1614:A:H5'	1.86	0.57
60:DA:2377:A:H2'	60:DA:2378:A:C8	2.39	0.57
60:DA:2558:C:H2'	60:DA:2559:C:C6	2.40	0.57
60:DA:2589:A:H2'	60:DA:2590:A:H8	1.69	0.57
1:AB:29:ALA:HA	1:AB:32:ILE:HB	1.85	0.57
7:AH:107:LEU:HD23	7:AH:107:LEU:H	1.70	0.57
20:AA:217:C:H2'	20:AA:218:C:H6	1.69	0.57
20:AA:1247:U:H3	20:AA:1290:G:H1	1.53	0.57
20:AA:1493:A:O5'	24:AU:2:DPP:CB	2.39	0.57
23:AY:634:MET:SD	23:AY:634:MET:N	2.77	0.57
25:BC:77:ALA:HB3	25:BC:95:VAL:HG13	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:145:LYS:HD2	60:BA:2053:G:H5"	1.85	0.57
28:BF:164:ARG:HA	28:BF:167:ALA:HB3	1.86	0.57
35:BQ:49:ALA:HB2	60:BA:2484:G:H5'	1.86	0.57
36:BR:36:THR:OG1	36:BR:37:THR:N	2.36	0.57
46:B1:22:GLY:O	46:B1:23:LYS:HB2	2.04	0.57
59:BB:79:C:O2'	60:BA:917:A:N1	2.35	0.57
60:BA:712:G:H1	60:BA:719:C:N4	2.02	0.57
60:BA:1341:U:H5'	60:BA:1602:U:C4	2.40	0.57
60:BA:2589:A:H2'	60:BA:2590:A:H8	1.70	0.57
60:BA:2698:U:H2'	60:BA:2699:C:C6	2.39	0.57
4:CE:72:GLN:O	4:CE:74:GLY:N	2.33	0.57
5:CF:97:PHE:HB3	17:CR:31:LEU:HD12	1.86	0.57
16:CQ:21:VAL:HG11	16:CQ:59:ILE:HD11	1.86	0.57
20:CA:10:A:H61	20:CA:24:U:H3	1.51	0.57
20:CA:354:G:N2	20:CA:388:G:O2'	2.35	0.57
20:CA:674:G:H2'	20:CA:675:A:C8	2.39	0.57
23:CY:227:ILE:HA	23:CY:230:LYS:HB2	1.87	0.57
23:CY:612:THR:OG1	23:CY:616:TYR:HB2	2.03	0.57
25:DC:31:LYS:HG3	25:DC:182:PRO:HA	1.85	0.57
25:DC:60:ARG:HA	25:DC:60:ARG:HH11	1.69	0.57
25:DC:133:GLY:HA2	25:DC:138:LEU:HB2	1.86	0.57
48:DN:91:LEU:CA	48:DN:95:PRO:HB3	2.30	0.57
52:D6:39:TYR:OH	60:DA:2346:A:H3'	2.05	0.57
60:DA:174:C:H2'	60:DA:175:G:O4'	2.04	0.57
60:DA:839:U:H2'	60:DA:840:C:C6	2.39	0.57
60:DA:1791:A:N6	60:DA:1828:G:O2'	2.30	0.57
60:DA:2102:U:H2'	60:DA:2103:C:C6	2.40	0.57
60:DA:2612:C:H2'	60:DA:2613:U:H5'	1.86	0.57
60:DA:2862:G:H2'	60:DA:2863:C:C6	2.40	0.57
1:AB:144:ARG:NH1	20:AA:1098:C:OP1	2.38	0.57
5:AF:37:VAL:HA	5:AF:65:VAL:HG12	1.85	0.57
6:AG:12:LEU:HD13	6:AG:25:ALA:HB2	1.85	0.57
10:AK:24:SER:OG	10:AK:25:TYR:N	2.37	0.57
15:AP:13:HIS:O	15:AP:42:ARG:NH1	2.37	0.57
20:AA:266:G:O2'	20:AA:268:C:OP2	2.22	0.57
20:AA:367:U:H3	20:AA:393:A:H61	1.53	0.57
20:AA:1254:C:H2'	20:AA:1255:G:C8	2.38	0.57
24:AU:6:5OH:HS	24:AU:6:5OH:N	2.19	0.57
28:BF:117:ARG:NH2	28:BF:186:ILE:O	2.37	0.57
29:BG:68:PRO:HB3	29:BG:92:VAL:HB	1.87	0.57
39:BU:92:ARG:HD3	39:BU:95:LEU:HG	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BW:11:ARG:CZ	41:BW:12:ILE:H	2.18	0.57
59:BB:72:G:H1'	59:BB:104:A:N6	2.20	0.57
60:BA:401:A:H2'	60:BA:402:A:H8	1.67	0.57
60:BA:649:G:H2'	60:BA:650:C:C6	2.40	0.57
60:BA:991:C:O4'	60:BA:1185:C:O2'	2.22	0.57
60:BA:1281:G:H1	60:BA:1289:C:H42	1.53	0.57
60:BA:1511:A:H2'	60:BA:1512:G:C8	2.40	0.57
60:BA:2102:U:H2'	60:BA:2103:C:C6	2.40	0.57
60:BA:2663:G:H3'	60:BA:2664:G:C8	2.40	0.57
11:CL:124:LYS:HE2	20:CA:500:G:H5'	1.86	0.57
18:CS:41:VAL:O	18:CS:43:GLU:N	2.37	0.57
20:CA:454:C:N4	20:CA:479:C:N3	2.53	0.57
20:CA:1513:A:H2'	20:CA:1514:C:H6	1.69	0.57
22:CW:64:G:H2'	22:CW:65:U:C6	2.40	0.57
26:DD:231:HIS:O	26:DD:233:HIS:N	2.38	0.57
27:DE:102:VAL:HG12	27:DE:200:GLU:HA	1.86	0.57
28:DF:25:PRO:HD3	28:DF:115:ALA:O	2.04	0.57
34:DP:27:HIS:HD2	60:DA:813:U:H3'	1.69	0.57
39:DU:98:LEU:HD22	39:DU:101:ARG:NH1	2.19	0.57
41:DW:70:TYR:O	41:DW:107:LEU:HB2	2.05	0.57
44:DZ:100:VAL:HG11	44:DZ:137:ILE:HD12	1.86	0.57
48:DN:7:LYS:HZ3	48:DN:7:LYS:N	2.02	0.57
51:D5:2:ALA:HB3	60:DA:747:U:C2	2.39	0.57
56:De:111:ILE:HG22	56:De:112:LYS:HD2	1.87	0.57
59:DB:32:C:O2'	59:DB:52:A:N6	2.35	0.57
60:DA:557:U:H2'	60:DA:558:G:H8	1.66	0.57
60:DA:851:U:H2'	60:DA:852:G:C8	2.40	0.57
60:DA:1062:G:H2'	60:DA:1063:G:C8	2.39	0.57
9:AJ:48:THR:OG1	20:AA:975:A:N6	2.38	0.57
16:AQ:94:ASN:HA	16:AQ:97:SER:HB3	1.87	0.57
22:AW:19:G:H5'	22:AW:20:U:O5'	2.05	0.57
23:AY:137:ASN:ND2	61:AY:701:GNP:O6	2.38	0.57
23:AY:519:ARG:HH21	23:AY:677:GLN:HB2	1.70	0.57
28:BF:125:LEU:HA	28:BF:194:MET:O	2.05	0.57
37:BS:34:HIS:CE1	37:BS:54:LEU:HB3	2.39	0.57
59:BB:78:A:H2'	59:BB:79:C:O4'	2.03	0.57
60:BA:1196:C:O2'	60:BA:1227:G:O2'	2.12	0.57
60:BA:1687:G:H1	60:BA:1700:A:P	2.27	0.57
60:BA:2378:A:H8	60:BA:2378:A:O5'	1.87	0.57
3:CD:120:LEU:HA	3:CD:123:HIS:HB2	1.87	0.57
9:CJ:48:THR:OG1	20:CA:975:A:N6	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1202:G:H2'	20:CA:1203:C:O4'	2.05	0.57
23:CY:631:ILE:HA	23:CY:645:ALA:HA	1.86	0.57
25:DC:104:ILE:HG21	25:DC:132:LEU:HD11	1.86	0.57
25:DC:219:MET:SD	60:DA:2124:G:N2	2.74	0.57
37:DS:70:GLY:HA3	37:DS:99:LYS:HG3	1.85	0.57
38:DT:118:ARG:HD2	38:DT:118:ARG:H	1.70	0.57
44:DZ:126:VAL:HG12	44:DZ:163:LEU:HA	1.86	0.57
59:DB:60:C:H2'	59:DB:61:G:H8	1.67	0.57
60:DA:226:G:C2	60:DA:228:A:N6	2.73	0.57
60:DA:1007:C:H3'	60:DA:1008:C:H2'	1.86	0.57
60:DA:1332:G:N2	60:DA:1609:A:O2'	2.37	0.57
60:DA:1462:C:H4'	60:DA:2703:C:H5'	1.87	0.57
60:DA:2235:G:H2'	60:DA:2236:C:C6	2.39	0.57
3:AD:57:ARG:HB2	3:AD:202:LEU:HB3	1.87	0.57
10:AK:33:THR:HG22	10:AK:39:PRO:HA	1.87	0.57
20:AA:38:G:N1	20:AA:397:A:OP1	2.37	0.57
23:AY:496:LYS:HG3	23:AY:509:HIS:HB2	1.86	0.57
23:AY:506:GLN:HG3	23:AY:578:SER:HB3	1.87	0.57
25:BC:186:LEU:O	25:BC:190:ILE:HG12	2.05	0.57
59:BB:15:A:H5'	59:BB:16:G:C8	2.40	0.57
60:BA:325:G:H2'	60:BA:326:G:C8	2.39	0.57
6:CG:118:VAL:HG13	6:CG:122:HIS:CE1	2.40	0.57
9:CJ:50:ILE:HG12	13:CN:41:ARG:NH1	2.20	0.57
15:CP:72:ARG:HH11	20:CA:453:A:H1'	1.70	0.57
20:CA:68(Q):U:H2'	20:CA:68(R):C:O4'	2.05	0.57
20:CA:1388:C:H2'	20:CA:1389:C:C6	2.40	0.57
20:CA:1422:G:H5'	33:DO:48:PRO:HB3	1.87	0.57
23:CY:20:HIS:HD2	23:CY:117:GLN:HB2	1.69	0.57
25:DC:82:GLU:HA	25:DC:85:LYS:HE3	1.86	0.57
29:DG:149:VAL:HG23	29:DG:153:ARG:HD2	1.87	0.57
36:DR:40:LYS:O	36:DR:44:LEU:HB2	2.05	0.57
44:DZ:5:LEU:HB2	44:DZ:57:ILE:HD11	1.87	0.57
46:D1:54:ALA:HB2	46:D1:82:LEU:HD22	1.87	0.57
59:DB:24:G:C6	59:DB:56:G:N3	2.73	0.57
60:DA:220:G:H1	60:DA:427:U:H3'	1.70	0.57
60:DA:348:G:H2'	60:DA:349:G:H8	1.69	0.57
60:DA:1375:C:H2'	60:DA:1376:C:C6	2.40	0.57
9:AJ:49:VAL:HG23	13:AN:41:ARG:HD3	1.87	0.56
11:AL:113:ARG:NE	11:AL:114:LYS:H	2.00	0.56
20:AA:21:G:H2'	20:AA:22:G:C8	2.40	0.56
20:AA:217:C:H2'	20:AA:218:C:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:889:A:H4'	20:AA:890:G:H4'	1.86	0.56
20:AA:1359:C:O2'	20:AA:1362:C:N4	2.36	0.56
23:AY:237:PRO:HB2	23:AY:242:LEU:HD11	1.85	0.56
44:BZ:28:MET:SD	44:BZ:37:VAL:HG22	2.45	0.56
48:BN:94:HIS:HB2	48:BN:96:GLU:OE2	2.05	0.56
60:BA:17:G:H2'	60:BA:18:C:H6	1.70	0.56
60:BA:834:C:H1'	60:BA:2358:G:N3	2.19	0.56
60:BA:975:G:O6	60:BA:989:G:N2	2.38	0.56
60:BA:1047:G:N3	60:BA:1110:G:N1	2.53	0.56
60:BA:1782:C:H42	60:BA:2586:C:N4	2.03	0.56
1:CB:189:ASP:OD1	1:CB:189:ASP:N	2.29	0.56
2:CC:66:VAL:O	2:CC:102:ASN:N	2.38	0.56
9:CJ:50:ILE:HG23	13:CN:41:ARG:HH12	1.70	0.56
23:CY:138:LYS:HE2	61:CY:702:GNP:C4	2.35	0.56
23:CY:519:ARG:HD3	23:CY:677:GLN:HA	1.87	0.56
26:DD:262:ARG:NH1	60:DA:2085:C:O3'	2.37	0.56
29:DG:135:LEU:HD11	29:DG:155:MET:HE3	1.86	0.56
35:DQ:54:MET:HG2	35:DQ:58:PHE:CE2	2.28	0.56
40:DV:40:LEU:HA	40:DV:45:THR:HB	1.87	0.56
47:D4:10:VAL:HG22	47:D4:11:PRO:HD2	1.87	0.56
53:D7:8:ASN:HA	60:DA:1309:G:H5"	1.87	0.56
55:D9:33:LYS:NZ	60:DA:2526:G:O2'	2.25	0.56
60:DA:38:A:H2'	60:DA:39:C:C6	2.40	0.56
60:DA:883:G:H2'	60:DA:884:C:C6	2.40	0.56
60:DA:1321:A:H2'	60:DA:1322:A:O4'	2.05	0.56
60:DA:1718:G:H2'	60:DA:1725:G:H8	1.69	0.56
60:DA:2506:U:OP2	60:DA:2576:G:N2	2.38	0.56
60:DA:2829:C:H2'	60:DA:2830:G:C8	2.40	0.56
20:AA:163:C:H2'	20:AA:164:U:C6	2.40	0.56
20:AA:757:U:H2'	20:AA:758:G:O4'	2.04	0.56
23:AY:655:TYR:CD1	23:AY:658:ASP:HB2	2.40	0.56
24:AU:4:SER:HA	60:BA:1913:A:O2'	2.04	0.56
28:BF:154:VAL:HG13	28:BF:191:ARG:HB2	1.86	0.56
31:BJ:25:UNK:N	31:BJ:112:UNK:N	2.54	0.56
36:BR:41:ALA:HB1	36:BR:97:VAL:HG11	1.87	0.56
37:BS:73:LEU:HA	37:BS:76:LYS:HD2	1.86	0.56
40:BV:18:LEU:HG	40:BV:19:LYS:H	1.69	0.56
41:BW:32:ALA:O	41:BW:36:LEU:HG	2.05	0.56
41:BW:79:GLY:N	41:BW:100:THR:O	2.35	0.56
51:B5:22:HIS:NE2	60:BA:2045:C:O2	2.37	0.56
60:BA:352:G:O2'	60:BA:353:G:N7	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:475:U:H4'	60:BA:510:C:H5'	1.87	0.56
60:BA:1019:U:O2'	60:BA:1021:A:N1	2.34	0.56
60:BA:1108:U:H2'	60:BA:1109:C:O4'	2.06	0.56
60:BA:1899:G:H21	60:BA:1902:C:N4	2.03	0.56
60:BA:2397:G:H2'	60:BA:2398:U:H6	1.70	0.56
4:CE:93:PRO:HG3	7:CH:105:ARG:HG2	1.86	0.56
15:CP:66:PRO:HG2	15:CP:71:ARG:HH22	1.70	0.56
19:CT:36:LEU:HD12	19:CT:59:ALA:HB2	1.86	0.56
20:CA:667:G:N2	20:CA:739:C:N3	2.47	0.56
20:CA:695:A:H2'	20:CA:696:A:C8	2.40	0.56
28:DF:51:THR:H	28:DF:92:PRO:HB2	1.70	0.56
34:DP:50:ARG:HB3	54:D8:59:LYS:NZ	2.19	0.56
34:DP:113:LYS:HE2	34:DP:115:LEU:HD23	1.86	0.56
35:DQ:30:GLY:HA2	35:DQ:107:ALA:HB2	1.86	0.56
42:DX:61:GLY:HA3	42:DX:73:ARG:HB2	1.88	0.56
45:D0:34:GLY:H	45:D0:61:ALA:HB3	1.71	0.56
3:AD:122:ARG:HD3	3:AD:136:PRO:HD3	1.86	0.56
5:AF:19:LEU:HD11	5:AF:59:TYR:CE1	2.40	0.56
11:AL:119:LYS:HG3	11:AL:120:TYR:HD2	1.70	0.56
19:AT:59:ALA:O	19:AT:63:ILE:HG13	2.05	0.56
20:AA:227:G:H2'	20:AA:228:A:H8	1.69	0.56
20:AA:308:C:H2'	20:AA:309:G:C8	2.39	0.56
20:AA:405:U:H5"	20:AA:495:A:H2	1.68	0.56
20:AA:666:G:H5'	20:AA:725:G:N2	2.20	0.56
20:AA:944:G:N1	20:AA:1338:G:OP2	2.35	0.56
20:AA:974:A:H8	20:AA:974:A:OP1	1.88	0.56
20:AA:1498:U:H1'	20:AA:1499:A:N7	2.19	0.56
25:BC:30:VAL:HG13	25:BC:217:THR:HG23	1.87	0.56
26:BD:18:VAL:HG22	26:BD:19:ALA:H	1.70	0.56
27:BE:25:VAL:HG22	27:BE:183:LEU:HG	1.86	0.56
27:BE:62:PRO:O	27:BE:64:LYS:N	2.37	0.56
31:BJ:25:UNK:C	31:BJ:111:UNK:HA	2.35	0.56
32:BK:56:GLU:O	32:BK:67:PHE:HA	2.05	0.56
33:BO:14:THR:HG21	33:BO:86:ILE:HG21	1.87	0.56
35:BQ:17:LEU:HD13	35:BQ:40:ALA:HA	1.86	0.56
36:BR:96:ARG:NH1	36:BR:115:GLU:OE1	2.38	0.56
39:BU:40:PHE:HB3	40:BV:75:PHE:CE1	2.40	0.56
44:BZ:28:MET:HE1	44:BZ:35:ARG:HB3	1.87	0.56
44:BZ:123:ASP:OD1	44:BZ:123:ASP:N	2.39	0.56
45:B0:32:ARG:HH22	60:BA:2353:G:H5"	1.70	0.56
48:BN:78:TYR:HD2	60:BA:2642:G:H5"	1.62	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BN:128:HIS:HE2	48:BN:134:ARG:HD2	1.69	0.56
60:BA:363(E):G:H2'	60:BA:363(F):U:O4'	2.05	0.56
60:BA:541:C:H2'	60:BA:542:C:C6	2.40	0.56
60:BA:1139:G:H4'	60:BA:1143:A:N1	2.20	0.56
60:BA:1278:A:H2'	60:BA:1279:G:H8	1.67	0.56
60:BA:1320:C:H42	60:BA:1331:A:H62	0.73	0.56
60:BA:1529:A:H62	60:BA:1542:G:H21	1.53	0.56
60:BA:1529:A:H62	60:BA:1542:G:N2	2.03	0.56
60:BA:1878:G:H2'	60:BA:1879:C:C6	2.39	0.56
60:BA:1986:A:H2'	60:BA:1987:G:H8	1.68	0.56
60:BA:2133:G:O2'	60:BA:2158:A:N6	2.38	0.56
60:BA:2472:G:N2	60:BA:2478:A:H62	2.00	0.56
60:BA:2623:G:H2'	60:BA:2624:G:H8	1.70	0.56
60:BA:2646:C:H2'	60:BA:2647:U:O4'	2.04	0.56
60:BA:2772:C:H2'	60:BA:2773:C:C6	2.41	0.56
1:CB:162:ILE:HG12	1:CB:164:VAL:HG22	1.87	0.56
8:CI:110:GLU:HG2	8:CI:113:LYS:HZ3	1.68	0.56
11:CL:34:ARG:NH1	20:CA:363:A:OP2	2.38	0.56
12:CM:80:ARG:HA	12:CM:83:ASP:HB3	1.85	0.56
14:CO:43:LEU:O	14:CO:47:LYS:HB3	2.04	0.56
16:CQ:5:VAL:HG12	16:CQ:60:ILE:HG13	1.86	0.56
16:CQ:13:ASP:OD1	16:CQ:13:ASP:N	2.33	0.56
17:CR:25:THR:HG22	17:CR:42:ARG:HH11	1.69	0.56
20:CA:408:A:H2'	20:CA:409:G:C8	2.39	0.56
20:CA:422:C:O2	20:CA:423:G:N2	2.37	0.56
20:CA:669:U:H2'	20:CA:670:G:C8	2.41	0.56
20:CA:1233:G:H2'	20:CA:1234:C:C6	2.40	0.56
20:CA:1436:U:H2'	20:CA:1437:C:C6	2.40	0.56
20:CA:1440(J):C:O2'	20:CA:1440(K):G:N3	2.38	0.56
22:CW:22:G:H2'	22:CW:23:A:H8	1.69	0.56
23:CY:33:LEU:HD23	23:CY:34:TYR:H	1.69	0.56
23:CY:514:VAL:CG1	23:CY:565:VAL:HA	2.35	0.56
25:DC:48:LEU:HD13	25:DC:50:ILE:HG23	1.87	0.56
25:DC:69:LEU:HG	25:DC:160:GLY:HA2	1.86	0.56
26:DD:180:GLY:HA3	26:DD:275:LYS:HB3	1.86	0.56
30:DH:12:PRO:HG2	30:DH:49:VAL:HG13	1.86	0.56
30:DH:157:TYR:CD1	30:DH:171:LEU:HB3	2.41	0.56
32:DK:30:HIS:O	56:De:79:ARG:NH2	2.37	0.56
38:DT:27:THR:O	38:DT:87:ASP:HB2	2.05	0.56
38:DT:29:ARG:HG3	38:DT:30:VAL:HB	1.85	0.56
40:DV:96:ILE:HG22	40:DV:97:LYS:H	1.68	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DX:36:LYS:HB3	60:DA:1599:C:OP1	2.05	0.56
45:D0:72:ARG:O	45:D0:74:ARG:N	2.39	0.56
48:DN:45:ASN:HD22	48:DN:45:ASN:N	1.95	0.56
48:DN:74:ARG:HH12	48:DN:85:ILE:CD1	2.18	0.56
48:DN:94:HIS:HB2	48:DN:96:GLU:OE2	2.05	0.56
50:D3:18:ASP:OD2	50:D3:49:LYS:NZ	2.37	0.56
52:D6:43:CYS:O	52:D6:44:ARG:NE	2.34	0.56
60:DA:382:G:H1	60:DA:392:C:H42	1.52	0.56
60:DA:687:C:H42	60:DA:787:U:H4'	1.70	0.56
60:DA:696:G:N2	60:DA:766:C:C2	2.70	0.56
60:DA:848:G:H2'	60:DA:849:A:C8	2.40	0.56
60:DA:1203:G:H2'	60:DA:1204:A:C2	2.40	0.56
60:DA:2561:A:H2'	60:DA:2562:U:O4'	2.05	0.56
1:AB:91:PRO:HG2	1:AB:155:LEU:HD23	1.88	0.56
1:AB:108:ILE:O	1:AB:112:VAL:HG23	2.05	0.56
2:AC:59:ARG:HG2	2:AC:64:VAL:HA	1.87	0.56
3:AD:62:GLN:O	3:AD:66:ARG:HG2	2.06	0.56
19:AT:66:ALA:HB1	19:AT:72:LEU:HB2	1.85	0.56
19:AT:79:ARG:NH1	20:AA:263:A:OP2	2.38	0.56
23:AY:26:THR:OG1	61:AY:701:GNP:O2B	2.24	0.56
27:BE:24:THR:O	27:BE:183:LEU:HA	2.05	0.56
36:BR:39:PRO:HD2	60:BA:1651:G:OP1	2.05	0.56
48:BN:74:ARG:HH12	48:BN:85:ILE:CD1	2.18	0.56
60:BA:223:A:H1'	60:BA:407:G:H21	1.70	0.56
60:BA:903:C:H2'	60:BA:904:C:H6	1.69	0.56
60:BA:938:G:H2'	60:BA:939:G:H8	1.68	0.56
60:BA:1999:C:H2'	60:BA:2000:G:O4'	2.05	0.56
16:CQ:68:ARG:C	16:CQ:70:ARG:H	2.13	0.56
19:CT:11:SER:HA	19:CT:13:LEU:HG	1.87	0.56
19:CT:43:LEU:HB3	19:CT:52:ALA:HB2	1.87	0.56
20:CA:181:G:O2'	20:CA:183:G:N7	2.38	0.56
20:CA:308:C:H2'	20:CA:309:G:H8	1.70	0.56
20:CA:397:A:O2'	20:CA:399:G:OP2	2.12	0.56
20:CA:551:U:H2'	20:CA:552:U:C6	2.41	0.56
20:CA:1355:G:H2'	20:CA:1356:G:H8	1.69	0.56
25:DC:24:ASP:O	25:DC:28:ARG:NE	2.37	0.56
25:DC:212:SER:HG	25:DC:214:TYR:HE1	1.54	0.56
26:DD:142:VAL:HG23	26:DD:193:VAL:HA	1.87	0.56
28:DF:99:TYR:CD2	60:DA:660:G:H5'	2.41	0.56
29:DG:145:THR:OG1	29:DG:146:TYR:N	2.29	0.56
39:DU:10:ARG:HH21	60:DA:1251:C:H2'	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:71:VAL:HB	1:AB:164:VAL:HA	1.86	0.56
1:AB:200:ILE:HG22	1:AB:202:PRO:HD3	1.87	0.56
2:AC:154:SER:N	2:AC:197:GLY:O	2.38	0.56
4:AE:108:ALA:O	4:AE:112:LEU:HG	2.05	0.56
6:AG:58:PRO:O	6:AG:62:PHE:HB2	2.05	0.56
8:AI:25:LYS:H	8:AI:60:ASP:HA	1.70	0.56
8:AI:34:ASN:OD1	8:AI:34:ASN:N	2.32	0.56
16:AQ:59:ILE:HA	16:AQ:73:VAL:HA	1.86	0.56
27:BE:143:ASN:ND2	27:BE:144:ARG:H	2.03	0.56
29:BG:117:PHE:HZ	29:BG:179:PRO:HB2	1.71	0.56
34:BP:48:PRO:O	34:BP:50:ARG:N	2.30	0.56
40:BV:28:GLU:HB2	40:BV:31:ALA:HB2	1.87	0.56
54:B8:55:ALA:HA	54:B8:58:ILE:HD12	1.88	0.56
59:BB:33:G:N2	59:BB:36:C:H42	2.04	0.56
60:BA:1409:C:H2'	60:BA:1410:G:C8	2.40	0.56
60:BA:1889:A:H2'	60:BA:1890:A:H8	1.71	0.56
60:BA:1943:U:H4'	60:BA:1944:U:H2'	1.87	0.56
60:BA:2039:C:C2	60:BA:2040:C:C5	2.93	0.56
60:BA:2077:A:H2'	60:BA:2078:C:C6	2.40	0.56
60:BA:2783:G:H2'	60:BA:2784:C:H6	1.70	0.56
1:CB:168:THR:C	1:CB:171:ALA:H	2.13	0.56
4:CE:101:ILE:HD12	20:CA:7:G:H3'	1.87	0.56
10:CK:21:ILE:HG12	10:CK:30:VAL:HG12	1.88	0.56
11:CL:113:ARG:NH1	20:CA:537:G:OP1	2.34	0.56
16:CQ:57:VAL:HB	16:CQ:73:VAL:HG11	1.87	0.56
20:CA:509:A:N3	20:CA:543:C:O2'	2.31	0.56
20:CA:895:G:N2	20:CA:904:C:N3	2.43	0.56
20:CA:1510:U:H2'	20:CA:1511:G:C8	2.41	0.56
23:CY:670:VAL:O	23:CY:671:MET:HB3	2.05	0.56
38:DT:117:ASP:HB3	38:DT:120:ARG:HG2	1.86	0.56
39:DU:64:ARG:NH2	48:DN:41:ASP:C	2.62	0.56
59:DB:101:A:H3'	59:DB:102:G:C8	2.40	0.56
60:DA:273(G):C:H3'	60:DA:274:G:H5"	1.87	0.56
60:DA:2031:A:H2'	60:DA:2454:G:H21	1.71	0.56
60:DA:2411:A:H2'	60:DA:2412:A:C8	2.40	0.56
1:AB:152:PHE:HE2	1:AB:155:LEU:HD12	1.70	0.56
3:AD:205:GLU:OE2	4:AE:100:VAL:N	2.38	0.56
19:AT:105:SER:N	20:AA:186(A):C:O2	2.38	0.56
20:AA:113:G:H2'	20:AA:114:U:C6	2.40	0.56
20:AA:1135:U:O2	20:AA:1138:G:N2	2.37	0.56
20:AA:1349:A:H2'	20:AA:1350:A:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:38:ARG:HD3	23:AY:44:GLU:HB2	1.86	0.56
23:AY:498:ILE:HA	23:AY:506:GLN:O	2.06	0.56
27:BE:16:ARG:O	27:BE:18:ASP:N	2.34	0.56
27:BE:117:MET:HE3	27:BE:136:ARG:HG3	1.87	0.56
28:BF:101:LEU:O	28:BF:106:ARG:NH2	2.31	0.56
28:BF:125:LEU:CB	28:BF:194:MET:HB2	2.33	0.56
28:BF:155:LEU:HA	28:BF:176:LEU:HB3	1.88	0.56
36:BR:48:VAL:O	36:BR:52:ILE:HG12	2.05	0.56
38:BT:16:ARG:HG3	38:BT:79:HIS:O	2.05	0.56
41:BW:8:ARG:O	41:BW:10:VAL:HG23	2.05	0.56
53:B7:21:ARG:HH22	60:BA:684:G:P	2.28	0.56
56:Be:110:GLU:O	56:Be:114:LYS:HB2	2.05	0.56
60:BA:794:G:H2'	60:BA:795:C:H6	1.71	0.56
60:BA:1019:U:H2'	60:BA:1020:A:H8	1.69	0.56
60:BA:1792:G:O2'	60:BA:1830:C:OP1	2.22	0.56
60:BA:2411:A:H2'	60:BA:2412:A:H8	1.71	0.56
10:CK:48:ILE:HD11	10:CK:67:ASP:HB2	1.86	0.56
18:CS:53:ASN:N	18:CS:56:GLN:O	2.36	0.56
20:CA:816:A:OP2	20:CA:1526:G:O2'	2.23	0.56
20:CA:1201:A:H4'	20:CA:1202:G:H5"	1.88	0.56
20:CA:1486:G:H2'	20:CA:1487:G:O4'	2.06	0.56
23:CY:312:LEU:HD23	23:CY:313:ALA:H	1.71	0.56
29:DG:55:LYS:HA	29:DG:58:GLN:HG3	1.88	0.56
31:DJ:23:UNK:O	31:DJ:84:UNK:C	2.53	0.56
36:DR:2:ARG:NH1	60:DA:2723:C:H5"	2.20	0.56
42:DX:27:THR:HB	42:DX:80:ILE:HG22	1.87	0.56
46:D1:58:ILE:HG13	46:D1:91:LYS:HB2	1.87	0.56
49:D2:56:GLN:O	49:D2:60:LEU:HG	2.06	0.56
60:DA:184:C:H2'	60:DA:185:U:C6	2.41	0.56
60:DA:1165:U:H2'	60:DA:1166:C:C6	2.41	0.56
60:DA:1942:C:OP2	60:DA:1943:U:O2'	2.20	0.56
60:DA:2812:G:H2'	60:DA:2813:A:H8	1.68	0.56
3:AD:19:LEU:HB3	3:AD:21:LEU:HG	1.87	0.56
3:AD:196:LEU:O	3:AD:198:VAL:N	2.38	0.56
9:AJ:56:HIS:O	9:AJ:58:ASP:N	2.39	0.56
13:AN:33:VAL:HA	13:AN:40:CYS:HA	1.87	0.56
19:AT:103:GLY:C	20:AA:191:G:H21	2.13	0.56
20:AA:770:C:O2'	20:AA:899:C:N3	2.37	0.56
21:AV:19:G:N2	22:AW:34:C:O2	2.39	0.56
23:AY:316:ILE:HD12	23:AY:326:THR:HG22	1.86	0.56
28:BF:157:VAL:HA	28:BF:176:LEU:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B2:56:GLN:O	49:B2:60:LEU:HG	2.06	0.56
52:B6:8:LYS:HE3	52:B6:25:LYS:HE2	1.88	0.56
53:B7:4:THR:OG1	60:BA:788:A:N3	2.39	0.56
60:BA:2668:G:H2'	60:BA:2669:G:O4'	2.05	0.56
1:CB:22:LYS:HE2	20:CA:830:G:H5"	1.88	0.56
1:CB:102:LEU:HD23	1:CB:177:ALA:HB2	1.87	0.56
7:CH:54:ASP:O	7:CH:56:LYS:NZ	2.39	0.56
9:CJ:34:VAL:HG22	9:CJ:74:ILE:HG22	1.86	0.56
9:CJ:43:ARG:HB2	9:CJ:67:THR:HB	1.87	0.56
20:CA:1142:G:H2'	20:CA:1143:G:O4'	2.06	0.56
20:CA:1204:A:H3'	20:CA:1205:U:C6	2.41	0.56
23:CY:221:ALA:HB1	23:CY:228:MET:HG3	1.88	0.56
23:CY:325:LEU:HD21	23:CY:356:LEU:HD22	1.87	0.56
27:DE:133:LYS:O	60:DA:1657:C:H5"	2.06	0.56
28:DF:41:LEU:HB3	60:DA:443:A:N6	2.21	0.56
32:DK:5:VAL:HA	32:DK:59:ILE:HG12	1.87	0.56
35:DQ:46:GLN:HG2	35:DQ:126:PRO:HD3	1.87	0.56
45:D0:48:GLY:H	45:D0:51:VAL:HB	1.70	0.56
59:DB:96:G:H2'	59:DB:97:G:O4'	2.05	0.56
60:DA:108:U:H4'	60:DA:347:A:C2	2.41	0.56
60:DA:134:C:N3	60:DA:145:G:N2	2.45	0.56
60:DA:597:U:H2'	60:DA:598:G:C8	2.40	0.56
3:AD:13:ARG:NH1	3:AD:40:PRO:HB3	2.20	0.56
6:AG:36:LYS:HB3	20:AA:1373:G:H5"	1.86	0.56
9:AJ:91:PRO:HB2	9:AJ:94:VAL:O	2.06	0.56
21:AV:17:U:H2'	21:AV:18:G:C8	2.41	0.56
23:AY:292:THR:HG23	23:AY:297:GLU:H	1.71	0.56
23:AY:293:THR:HA	23:AY:397:VAL:HG12	1.86	0.56
25:BC:66:PRO:HD2	25:BC:192:ALA:HB1	1.88	0.56
26:BD:69:ARG:NH2	26:BD:105:ILE:HG13	2.20	0.56
28:BF:28:ILE:O	28:BF:29:ASN:ND2	2.39	0.56
36:BR:73:VAL:O	36:BR:76:VAL:HG12	2.06	0.56
52:B6:12:GLU:HG2	60:BA:2419:U:H4'	1.86	0.56
54:B8:27:THR:HB	60:BA:2393:A:H5'	1.87	0.56
59:BB:13:A:N1	59:BB:69:G:O2'	2.37	0.56
59:BB:102:G:C2	59:BB:103:U:C5	2.94	0.56
60:BA:550:G:H2'	60:BA:551:G:H8	1.71	0.56
60:BA:822:U:C5	60:BA:944:G:H1'	2.40	0.56
60:BA:960:A:H8	60:BA:960:A:O5'	1.88	0.56
60:BA:1058:G:H2'	60:BA:1059:G:C8	2.41	0.56
60:BA:2023:G:O2'	60:BA:2618:G:H5"	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:32:PHE:O	11:CL:84:LEU:HD12	2.06	0.56
16:CQ:43:LEU:HB2	16:CQ:70:ARG:O	2.05	0.56
20:CA:298:A:H2'	20:CA:299:G:O4'	2.06	0.56
20:CA:308:C:H2'	20:CA:309:G:C8	2.41	0.56
20:CA:1072:G:H2'	20:CA:1073:U:C6	2.41	0.56
20:CA:1131:G:H2'	20:CA:1132:C:H6	1.70	0.56
21:CV:8:A:H2'	21:CV:9:G:C8	2.41	0.56
22:CW:64:G:C2	22:CW:65:U:C4	2.93	0.56
23:CY:617:MET:O	23:CY:621:ILE:HG12	2.05	0.56
41:DW:19:LEU:HB3	51:D5:25:LEU:HG	1.88	0.56
48:DN:128:HIS:HE2	48:DN:134:ARG:HD2	1.69	0.56
49:D2:48:HIS:HD2	49:D2:49:LYS:HG2	1.71	0.56
55:D9:27:CYS:SG	55:D9:28:GLU:N	2.78	0.56
60:DA:422:A:H2'	60:DA:423:A:C8	2.41	0.56
60:DA:2479:G:OP1	60:DA:2536:G:N2	2.38	0.56
60:DA:2615:U:H2'	60:DA:2616:C:C6	2.41	0.56
3:AD:2:GLY:HA3	20:AA:546:G:H2'	1.88	0.56
3:AD:62:GLN:NE2	20:AA:544:G:OP1	2.38	0.56
6:AG:69:VAL:HG22	6:AG:135:VAL:HG22	1.87	0.56
8:AI:9:ARG:NH2	20:AA:1149:C:OP1	2.39	0.56
20:AA:574:A:O2'	20:AA:882:C:O2'	2.19	0.56
20:AA:1504:G:H4'	20:AA:1505:G:O4'	2.05	0.56
25:BC:58:ASN:HA	25:BC:166:ASN:OD1	2.05	0.56
25:BC:78:ILE:O	25:BC:120:VAL:HG11	2.05	0.56
26:BD:211:ARG:O	26:BD:215:LEU:HG	2.06	0.56
42:BX:3:THR:N	42:BX:6:ASP:OD1	2.39	0.56
46:B1:12:PRO:HA	46:B1:44:PRO:HD3	1.88	0.56
60:BA:474:G:OP2	60:BA:508:G:N2	2.34	0.56
60:BA:589:C:H2'	60:BA:590:A:C8	2.41	0.56
60:BA:589:C:H2'	60:BA:590:A:H8	1.70	0.56
60:BA:692:C:N3	60:BA:770:G:N2	2.46	0.56
60:BA:794:G:H2'	60:BA:795:C:C6	2.41	0.56
60:BA:1203:G:H2'	60:BA:1204:A:C2	2.41	0.56
60:BA:1324:G:H3'	60:BA:1325:G:C5'	2.34	0.56
60:BA:1802:A:C8	60:BA:1815:A:N6	2.73	0.56
60:BA:2096:U:H2'	60:BA:2097:C:C6	2.40	0.56
60:BA:2101:G:H2'	60:BA:2102:U:C6	2.41	0.56
5:CF:44:GLY:HA2	5:CF:59:TYR:CE2	2.40	0.56
12:CM:87:TYR:CE2	20:CA:1321:C:H4'	2.40	0.56
18:CS:29:ARG:HA	18:CS:47:HIS:NE2	2.21	0.56
20:CA:385:C:H2'	20:CA:386:C:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:917:G:H2'	20:CA:918:A:C8	2.40	0.56
20:CA:1391:U:H2'	20:CA:1392:G:H8	1.70	0.56
20:CA:1492:A:H2'	24:CU:6:5OH:NQ	2.20	0.56
26:DD:28:GLU:H	26:DD:29:PRO:HD2	1.71	0.56
27:DE:28:ALA:HB3	27:DE:93:VAL:HG13	1.88	0.56
29:DG:86:MET:N	29:DG:86:MET:SD	2.79	0.56
32:DK:78:ILE:HD11	32:DK:136:VAL:HG11	1.88	0.56
34:DP:9:ASN:H	34:DP:10:PRO:HD2	1.70	0.56
42:DX:23:GLU:HB3	42:DX:25:LYS:HZ3	1.71	0.56
42:DX:27:THR:HA	42:DX:80:ILE:HA	1.88	0.56
43:DY:28:LYS:HG2	43:DY:39:VAL:HG22	1.88	0.56
46:D1:46:LEU:HD23	46:D1:61:ARG:HH12	1.71	0.56
60:DA:947:G:H2'	60:DA:948:G:C8	2.39	0.56
60:DA:1604:C:H2'	60:DA:1605:C:H6	1.71	0.56
60:DA:1654:A:H2'	60:DA:1655:A:C8	2.40	0.56
60:DA:1986:A:H2'	60:DA:1987:G:H8	1.69	0.56
2:AC:13:GLY:HA2	13:AN:57:ARG:HE	1.71	0.56
2:AC:30:ARG:O	2:AC:34:LEU:HG	2.06	0.56
3:AD:165:MET:HE1	3:AD:178:VAL:HG11	1.88	0.56
11:AL:45:PRO:HA	11:AL:92:ASP:HB3	1.88	0.56
11:AL:49:ASN:N	11:AL:49:ASN:OD1	2.38	0.56
20:AA:154:C:H42	20:AA:167:G:H1	1.52	0.56
20:AA:911:U:H2'	20:AA:912:C:C6	2.41	0.56
20:AA:1070:U:H2'	20:AA:1071:C:H6	1.70	0.56
29:BG:107:LEU:HA	29:BG:111:LEU:HD12	1.88	0.56
30:BH:41:MET:SD	30:BH:42:ARG:N	2.79	0.56
41:BW:18:ARG:CZ	60:BA:518:G:H4'	2.36	0.56
46:B1:25:LYS:O	46:B1:32:LYS:HB3	2.06	0.56
48:BN:99:LEU:O	48:BN:99:LEU:HD13	2.06	0.56
51:B5:5:PRO:HA	60:BA:2577:A:H2	1.71	0.56
60:BA:1114:G:H2'	60:BA:1115:G:C8	2.40	0.56
60:BA:1462:C:H2'	60:BA:1463:C:H5'	1.87	0.56
60:BA:1523:U:H2'	60:BA:1524:G:H8	1.71	0.56
60:BA:1639:U:H2'	60:BA:1640:C:H5"	1.88	0.56
60:BA:2286:A:H4'	60:BA:2287:A:O4'	2.04	0.56
60:BA:2581:G:H2'	60:BA:2581:G:N3	2.21	0.56
60:BA:2648:C:H2'	60:BA:2649:U:H6	1.71	0.56
60:BA:2679:A:N1	60:BA:2728:U:O2	2.39	0.56
6:CG:36:LYS:HB3	20:CA:1373:G:H5"	1.88	0.56
10:CK:97:ALA:O	10:CK:101:SER:OG	2.23	0.56
11:CL:42:THR:HG23	11:CL:43:VAL:H	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:121:C:N4	20:CA:236:G:N7	2.53	0.56
20:CA:1229:A:H2'	20:CA:1230:C:C6	2.40	0.56
20:CA:1481:U:H2'	20:CA:1482:G:C8	2.41	0.56
29:DG:82:LEU:HD13	29:DG:87:PRO:HB3	1.88	0.56
60:DA:1008:C:H1'	60:DA:1009:A:N7	2.21	0.56
1:AB:34:ALA:HB3	1:AB:41:ILE:HB	1.88	0.55
2:AC:30:ARG:NH1	13:AN:35:ARG:O	2.38	0.55
7:AH:83:ILE:HA	7:AH:136:GLU:O	2.06	0.55
11:AL:85:ILE:HG13	11:AL:98:TYR:HB3	1.88	0.55
19:AT:31:SER:OG	20:AA:1440(N):C:OP1	2.23	0.55
20:AA:152:A:N6	20:AA:169:C:O2	2.39	0.55
20:AA:434:U:H2'	20:AA:435:C:C6	2.41	0.55
20:AA:1002:G:H2'	20:AA:1003:G:H8	1.72	0.55
27:BE:16:ARG:HD2	27:BE:17:ASP:HB3	1.88	0.55
29:BG:145:THR:OG1	29:BG:146:TYR:N	2.38	0.55
30:BH:59:ARG:HA	30:BH:62:LYS:HE3	1.87	0.55
30:BH:144:VAL:O	30:BH:148:ILE:HG12	2.05	0.55
36:BR:34:ILE:O	36:BR:113:LEU:HA	2.06	0.55
45:B0:64:ASP:OD1	45:B0:64:ASP:N	2.38	0.55
60:BA:2521:C:O2'	60:BA:2564:A:N3	2.34	0.55
20:CA:1149:C:H2'	20:CA:1150:U:C6	2.41	0.55
26:DD:206:LEU:HB2	60:DA:1791:A:H4'	1.87	0.55
35:DQ:46:GLN:NE2	60:DA:2484:G:O3'	2.39	0.55
35:DQ:84:GLY:O	35:DQ:86:GLY:N	2.39	0.55
41:DW:86:LEU:HB3	41:DW:94:ASP:HB2	1.88	0.55
42:DX:63:LYS:HE2	42:DX:72:LYS:HE3	1.87	0.55
46:D1:23:LYS:HZ3	46:D1:33:LYS:HB3	1.71	0.55
51:D5:29:THR:O	51:D5:42:PRO:HD3	2.06	0.55
60:DA:270(E):C:H2'	60:DA:270(F):G:C8	2.41	0.55
60:DA:1032:A:N1	60:DA:1122:G:O6	2.39	0.55
60:DA:1359:A:N6	60:DA:1372:U:C2	2.72	0.55
4:AE:129:ILE:HG22	4:AE:133:TYR:HE1	1.71	0.55
5:AF:50:TYR:HD2	5:AF:52:ILE:HD11	1.71	0.55
12:AM:107:ALA:H	12:AM:108:ARG:HD2	1.72	0.55
16:AQ:13:ASP:O	16:AQ:15:MET:N	2.39	0.55
16:AQ:59:ILE:HG23	16:AQ:72:ARG:O	2.05	0.55
20:AA:489:C:N4	20:AA:490:G:O6	2.40	0.55
20:AA:1028:C:H42	20:AA:1033:G:H1	1.53	0.55
25:BC:16:ASP:O	25:BC:18:ASN:N	2.39	0.55
26:BD:60:ARG:NH1	26:BD:86:PRO:O	2.40	0.55
30:BH:45:VAL:HG22	30:BH:50:VAL:HG22	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:59:UNK:O	31:BJ:63:UNK:N	2.39	0.55
40:BV:69:LYS:NZ	60:BA:1225:G:OP1	2.39	0.55
55:B9:19:ARG:NH1	55:B9:24:TYR:HB2	2.21	0.55
60:BA:1063:G:H2'	60:BA:1064:C:O4'	2.06	0.55
60:BA:1129:A:H62	60:BA:2490:G:H5"	1.71	0.55
60:BA:1312:U:H5'	60:BA:1313:U:C5	2.41	0.55
60:BA:1346:G:H2'	60:BA:1347:G:C8	2.41	0.55
60:BA:1638:C:H2'	60:BA:1639:U:O4'	2.07	0.55
60:BA:1674:G:H4'	60:BA:1675:C:H5	1.71	0.55
60:BA:2525:G:H2'	60:BA:2526:G:C8	2.38	0.55
60:BA:2686:G:H2'	60:BA:2687:U:O4'	2.06	0.55
1:CB:53:ARG:O	1:CB:56:ARG:HB2	2.06	0.55
3:CD:190:ASP:H	3:CD:193:ASP:HB2	1.70	0.55
8:CI:120:ARG:HH11	20:CA:1345:U:H5"	1.71	0.55
12:CM:26:GLY:N	20:CA:1329:A:H5"	2.21	0.55
25:DC:111:PHE:HE1	25:DC:137:LEU:HD13	1.71	0.55
30:DH:94:TYR:HA	30:DH:107:VAL:HG12	1.88	0.55
36:DR:4:LEU:HB2	60:DA:1653:G:H3'	1.88	0.55
37:DS:87:PHE:HB2	37:DS:106:ARG:HH22	1.70	0.55
48:DN:45:ASN:H	48:DN:45:ASN:ND2	2.02	0.55
60:DA:907:U:H2'	60:DA:908:C:C6	2.41	0.55
60:DA:1200:C:H2'	60:DA:1201:C:H6	1.72	0.55
60:DA:1356:G:H2'	60:DA:1357:U:O4'	2.06	0.55
60:DA:2525:G:H2'	60:DA:2526:G:H8	1.71	0.55
20:AA:369:C:N3	20:AA:392:G:N2	2.49	0.55
20:AA:1010:G:H2'	20:AA:1011:G:H8	1.71	0.55
23:AY:482:ALA:HB1	23:AY:484:ARG:HH11	1.72	0.55
25:BC:150:ILE:O	25:BC:154:ILE:HG13	2.06	0.55
27:BE:119:ARG:HG3	27:BE:160:TYR:HB2	1.88	0.55
28:BF:25:PRO:HD3	28:BF:115:ALA:O	2.07	0.55
29:BG:109:VAL:C	29:BG:112:PRO:HD2	2.30	0.55
29:BG:133:LEU:HD11	29:BG:157:ILE:HD12	1.87	0.55
33:BO:107:ARG:NH2	38:BT:35:LYS:O	2.39	0.55
34:BP:26:GLY:HA2	34:BP:30:THR:HG21	1.87	0.55
39:BU:87:GLY:O	39:BU:89:GLU:N	2.40	0.55
44:BZ:40:ASP:O	44:BZ:44:PHE:HB3	2.06	0.55
46:B1:25:LYS:HG2	46:B1:34:THR:HA	1.86	0.55
49:B2:20:GLU:O	49:B2:23:LYS:N	2.39	0.55
60:BA:14:A:N1	60:BA:2044:C:H1'	2.21	0.55
60:BA:81:G:H1	60:BA:105:C:H42	1.54	0.55
60:BA:211:A:H2'	60:BA:212:G:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:560:C:H2'	60:BA:561:G:H8	1.71	0.55
60:BA:2026:C:H2'	60:BA:2027:G:O4'	2.05	0.55
60:BA:2555:U:H2'	60:BA:2556:C:H5'	1.88	0.55
60:BA:2784:C:H2'	60:BA:2785:C:H6	1.72	0.55
11:CL:34:ARG:HG3	11:CL:82:VAL:CG1	2.37	0.55
12:CM:32:GLU:HA	12:CM:35:GLU:HB3	1.88	0.55
14:CO:33:THR:HA	14:CO:36:ILE:HD12	1.87	0.55
17:CR:22:VAL:H	17:CR:56:THR:HA	1.70	0.55
20:CA:219:C:H2'	20:CA:220:G:O4'	2.06	0.55
20:CA:383:A:H8	20:CA:383:A:O5'	1.89	0.55
23:CY:137:ASN:CG	61:CY:702:GNP:O6	2.50	0.55
23:CY:342:TYR:HA	23:CY:349:LYS:HA	1.88	0.55
27:DE:174:ASP:HB3	27:DE:183:LEU:HB2	1.88	0.55
33:DO:17:ARG:HB2	33:DO:45:GLU:HG3	1.87	0.55
36:DR:53:HIS:ND1	36:DR:94:TYR:OH	2.36	0.55
38:DT:56:GLY:O	38:DT:79:HIS:NE2	2.39	0.55
41:DW:77:ASP:OD2	60:DA:23:G:N2	2.33	0.55
60:DA:122:G:H2'	60:DA:123:G:O4'	2.06	0.55
60:DA:401:A:H2'	60:DA:402:A:H8	1.70	0.55
60:DA:883:G:N1	60:DA:893:C:O2	2.40	0.55
60:DA:2415:G:H2'	60:DA:2416:C:H6	1.69	0.55
9:AJ:16:LEU:HD12	9:AJ:70:ARG:HH11	1.71	0.55
9:AJ:78:ASN:O	9:AJ:81:THR:OG1	2.25	0.55
13:AN:24:CYS:O	13:AN:28:GLY:N	2.39	0.55
14:AO:47:LYS:O	14:AO:49:ASP:N	2.36	0.55
20:AA:385:C:H2'	20:AA:386:C:C6	2.42	0.55
20:AA:1238:A:H4'	20:AA:1336:C:H41	1.70	0.55
25:BC:78:ILE:HG13	25:BC:124:VAL:HG11	1.88	0.55
25:BC:84:ILE:HD11	25:BC:97:GLY:N	2.22	0.55
25:BC:213:VAL:HG11	25:BC:225:ILE:HG12	1.89	0.55
27:BE:66:HIS:NE2	60:BA:2786:U:OP1	2.37	0.55
60:BA:954:G:H2'	60:BA:955:C:C6	2.42	0.55
60:BA:1003:G:H21	60:BA:1010:A:H2	1.54	0.55
60:BA:1102:C:H2'	60:BA:1103:A:C8	2.40	0.55
60:BA:2146:C:H4'	60:BA:2147:G:C8	2.42	0.55
60:BA:2439:A:H1'	60:BA:2587:A:H5'	1.88	0.55
14:CO:7:GLU:O	14:CO:10:LYS:HG3	2.07	0.55
19:CT:73:HIS:NE2	20:CA:325:A:H5"	2.21	0.55
26:DD:14:ARG:NH1	60:DA:1693:U:O2'	2.39	0.55
30:DH:111:HIS:NE2	60:DA:2668:G:H1'	2.21	0.55
36:DR:23:ASN:HD21	60:DA:1277:G:H1'	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DY:96:ILE:HG22	43:DY:97:ARG:H	1.72	0.55
44:DZ:28:MET:HE1	44:DZ:35:ARG:HB3	1.89	0.55
46:D1:25:LYS:HD3	60:DA:388:G:P	2.47	0.55
49:D2:38:GLN:O	49:D2:41:ILE:HG12	2.07	0.55
53:D7:20:ALA:HA	53:D7:23:ARG:HD2	1.88	0.55
60:DA:862:G:H2'	60:DA:863:A:O4'	2.06	0.55
60:DA:2465:C:H2'	60:DA:2466:C:C6	2.42	0.55
60:DA:2792:G:N1	60:DA:2804:C:O2	2.34	0.55
11:AL:31:PRO:O	11:AL:86:ARG:HA	2.06	0.55
16:AQ:66:SER:OG	16:AQ:67:LYS:N	2.27	0.55
20:AA:1026:G:H1	20:AA:1035:A:H2	1.54	0.55
20:AA:1177:G:O6	20:AA:1181:G:N7	2.40	0.55
25:BC:93:ASP:OD1	25:BC:93:ASP:N	2.39	0.55
25:BC:112:ASP:HA	25:BC:137:LEU:HD22	1.86	0.55
29:BG:149:VAL:HG23	29:BG:153:ARG:HD2	1.89	0.55
30:BH:157:TYR:CD1	30:BH:171:LEU:HB3	2.41	0.55
33:BO:64:ARG:HB2	33:BO:83:ALA:HB3	1.89	0.55
35:BQ:64:ILE:HG13	35:BQ:106:VAL:HG12	1.88	0.55
41:BW:54:ALA:HB1	41:BW:107:LEU:HD11	1.88	0.55
60:BA:443:A:H1'	60:BA:1201:C:H1'	1.89	0.55
60:BA:1782:C:N4	60:BA:2586:C:H42	2.02	0.55
60:BA:2037:G:C6	60:BA:2038:G:O6	2.58	0.55
60:BA:2271:G:H2'	60:BA:2272:U:C6	2.42	0.55
60:BA:2446:G:N7	60:BA:2501:C:O2'	2.34	0.55
60:BA:2649:U:H2'	60:BA:2650:U:C6	2.42	0.55
1:CB:175:ARG:NH2	20:CA:1075:C:O3'	2.39	0.55
2:CC:66:VAL:HB	2:CC:101:LEU:HA	1.89	0.55
3:CD:53:ASP:HB2	4:CE:107:ARG:HH22	1.71	0.55
4:CE:119:LEU:HD11	20:CA:6:G:C5	2.42	0.55
7:CH:119:LEU:HD13	7:CH:127:LEU:HD23	1.87	0.55
9:CJ:24:VAL:HG21	9:CJ:37:PRO:HG3	1.88	0.55
9:CJ:51:ARG:HG2	9:CJ:59:SER:O	2.06	0.55
12:CM:84:ILE:HD12	18:CS:66:MET:HE1	1.88	0.55
17:CR:74:ARG:HA	17:CR:79:LEU:HB3	1.88	0.55
20:CA:227:G:H2'	20:CA:228:A:H8	1.71	0.55
20:CA:667:G:H2'	20:CA:668:G:C8	2.41	0.55
23:CY:59:ARG:HD3	23:CY:65:ILE:H	1.70	0.55
23:CY:448:GLN:HE22	23:CY:479:PRO:HA	1.71	0.55
25:DC:58:ASN:ND2	25:DC:166:ASN:OD1	2.40	0.55
28:DF:45:ARG:NH1	60:DA:444:C:OP2	2.40	0.55
30:DH:20:ALA:HB1	30:DH:21:PRO:HD2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DP:96:THR:HA	34:DP:126:VAL:HB	1.88	0.55
36:DR:17:ARG:NH2	60:DA:2002:G:OP1	2.40	0.55
39:DU:90:VAL:C	39:DU:92:ARG:H	2.13	0.55
45:D0:18:ALA:O	45:D0:20:ARG:NH1	2.39	0.55
48:DN:115:ARG:NH2	60:DA:10:G:OP1	2.40	0.55
52:D6:16:CYS:HA	52:D6:50:ARG:HH11	1.71	0.55
60:DA:29:U:H3	60:DA:511:U:H3	1.54	0.55
60:DA:783:A:H2'	60:DA:784:A:H4'	1.88	0.55
60:DA:873:G:H2'	60:DA:874:G:O4'	2.07	0.55
60:DA:956:G:H1'	60:DA:960:A:N6	2.22	0.55
60:DA:1557:C:H2'	60:DA:1558:A:H2	1.70	0.55
1:AB:211:ILE:O	1:AB:215:LEU:HB2	2.07	0.55
3:AD:96:LEU:O	3:AD:139:ARG:NE	2.39	0.55
3:AD:102:ASP:HA	3:AD:121:VAL:HG21	1.89	0.55
7:AH:96:GLY:H	7:AH:99:GLU:HB2	1.71	0.55
15:AP:28:ARG:HD2	20:AA:389:A:C2	2.42	0.55
20:AA:781:A:O2'	20:AA:1522:U:O2	2.19	0.55
20:AA:833:U:H3	20:AA:853:G:H1	1.53	0.55
25:BC:153:ILE:HA	25:BC:156:GLU:HB2	1.87	0.55
26:BD:78:LYS:HD3	26:BD:98:VAL:HG22	1.88	0.55
27:BE:62:PRO:HB3	60:BA:2787:C:H5'	1.88	0.55
38:BT:35:LYS:HG3	38:BT:41:ARG:HH11	1.70	0.55
55:B9:14:CYS:SG	55:B9:25:VAL:HG12	2.47	0.55
60:BA:992:C:H42	60:BA:1162:G:H1	1.53	0.55
60:BA:1771:C:N4	60:BA:1980:G:H1	2.03	0.55
60:BA:2453:A:H4'	60:BA:2572:A:H1'	1.88	0.55
2:CC:37:GLN:HA	2:CC:40:ARG:HD2	1.88	0.55
12:CM:11:ARG:O	12:CM:13:LYS:N	2.40	0.55
23:CY:607:ARG:HA	23:CY:645:ALA:O	2.06	0.55
26:DD:149:PRO:HG2	60:DA:2218:G:H4'	1.87	0.55
27:DE:110:GLY:HA2	27:DE:162:ALA:N	2.20	0.55
28:DF:11:VAL:HB	28:DF:18:ARG:HB3	1.89	0.55
30:DH:147:ASN:O	30:DH:151:ILE:HG13	2.07	0.55
41:DW:42:ARG:HG3	60:DA:2010:G:H5"	1.88	0.55
44:DZ:150:LEU:HD12	44:DZ:171:ILE:HD11	1.87	0.55
46:D1:73:LEU:HD11	46:D1:95:LEU:HB3	1.88	0.55
59:DB:24:G:N1	59:DB:59:A:N6	2.44	0.55
60:DA:99:U:OP1	60:DA:101:G:H3'	2.07	0.55
60:DA:460:A:N6	60:DA:469:G:H21	1.87	0.55
60:DA:537:C:H2'	60:DA:539:G:C8	2.42	0.55
60:DA:909:A:H2'	60:DA:912:C:C5	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:1287:A:C2	60:DA:1649:G:H4'	2.42	0.55
60:DA:2440:C:H5"	60:DA:2587:A:H4'	1.89	0.55
1:AB:79:ASP:O	1:AB:82:ARG:HG2	2.06	0.55
1:AB:187:LEU:HD23	1:AB:201:ILE:HB	1.88	0.55
2:AC:86:VAL:HA	2:AC:89:GLU:HB2	1.89	0.55
7:AH:44:PHE:HD2	7:AH:80:ILE:HG13	1.70	0.55
20:AA:201(B):U:H5"	20:AA:201(C):U:OP1	2.07	0.55
20:AA:922:G:H21	20:AA:1398:A:H2	1.54	0.55
20:AA:935:A:H2'	20:AA:936:C:C6	2.42	0.55
20:AA:1429:C:H2'	20:AA:1430:C:C6	2.41	0.55
20:AA:1505:G:H5'	20:AA:1506:U:H5"	1.88	0.55
23:AY:32:ILE:HA	23:AY:34:TYR:O	2.07	0.55
23:AY:238:THR:HG22	23:AY:241:GLU:HG2	1.88	0.55
25:BC:19:LYS:HE3	25:BC:20:VAL:H	1.72	0.55
25:BC:61:GLY:HA3	25:BC:164:PHE:CD1	2.42	0.55
30:BH:85:LYS:HD2	30:BH:141:VAL:HG12	1.88	0.55
34:BP:23:PRO:O	34:BP:33:ARG:HA	2.07	0.55
34:BP:110:TYR:HD2	34:BP:111:ARG:HD2	1.71	0.55
38:BT:58:ASN:HB3	60:BA:2683:C:H5'	1.88	0.55
39:BU:5:LYS:NZ	60:BA:29:U:OP1	2.39	0.55
47:B4:10:VAL:HG22	47:B4:11:PRO:HD2	1.88	0.55
47:B4:11:PRO:HA	47:B4:25:TYR:HA	1.88	0.55
60:BA:565:C:H42	60:BA:576:U:H3	1.53	0.55
60:BA:1028:A:OP2	60:BA:1126:A:N6	2.34	0.55
60:BA:1195:G:H2'	60:BA:1196:C:H6	1.71	0.55
60:BA:1271:G:H22	60:BA:1615:C:H42	1.55	0.55
60:BA:1652:A:H3'	60:BA:1653:G:C8	2.42	0.55
60:BA:1838:C:H4'	60:BA:1839:G:H5'	1.89	0.55
5:CF:12:PRO:HD2	5:CF:86:ARG:NH1	2.21	0.55
8:CI:17:VAL:HG13	8:CI:63:ILE:HD12	1.88	0.55
20:CA:881:G:H2'	20:CA:882:C:C6	2.42	0.55
20:CA:1246:C:H42	20:CA:1291:G:H1	1.53	0.55
23:CY:438:PHE:H	23:CY:438:PHE:HD2	1.55	0.55
25:DC:83:LYS:HD2	25:DC:148:PHE:CE1	2.42	0.55
26:DD:118:VAL:HG22	26:DD:119:ALA:H	1.71	0.55
30:DH:143:GLN:OE1	60:DA:2744:G:N2	2.32	0.55
34:DP:7:ARG:HE	60:DA:1203:G:H5'	1.71	0.55
34:DP:98:GLU:HA	34:DP:101:VAL:HG22	1.88	0.55
44:DZ:128:VAL:HG21	44:DZ:133:ILE:HA	1.87	0.55
60:DA:858:U:O2	60:DA:2268:A:H2'	2.07	0.55
60:DA:1445:C:H42	60:DA:1466:G:H1	1.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:1810:A:H8	60:DA:1810:A:O5'	1.90	0.55
3:AD:12:CYS:HA	3:AD:19:LEU:HD13	1.88	0.55
3:AD:157:LEU:HA	3:AD:160:GLN:HB2	1.89	0.55
3:AD:209:ARG:HD3	20:AA:8:A:N7	2.21	0.55
6:AG:26:PHE:CE2	6:AG:30:ILE:HD11	2.42	0.55
8:AI:111:ARG:NH2	20:AA:1187:G:H4'	2.21	0.55
20:AA:278:G:H2'	20:AA:279:A:H2	1.70	0.55
20:AA:317:G:H2'	20:AA:318:G:O4'	2.07	0.55
20:AA:1412:C:H2'	20:AA:1413:A:H8	1.70	0.55
22:AW:6:C:H2'	22:AW:7:G:H8	1.72	0.55
32:BK:12:LEU:HD11	32:BK:23:VAL:HG22	1.88	0.55
32:BK:115:LEU:O	60:BA:1058:G:O2'	2.24	0.55
36:BR:68:ARG:HE	60:BA:2707:G:H5"	1.71	0.55
37:BS:97:ARG:O	37:BS:100:ALA:N	2.27	0.55
38:BT:102:ILE:HB	38:BT:110:ILE:HD11	1.87	0.55
40:BV:38:LEU:HD13	40:BV:55:ALA:HB1	1.88	0.55
41:BW:71:VAL:HA	41:BW:107:LEU:HB3	1.89	0.55
42:BX:40:LYS:HG2	42:BX:51:VAL:HB	1.87	0.55
59:BB:8:U:H2'	59:BB:9:G:C8	2.41	0.55
59:BB:29:A:H2'	59:BB:30:C:O4'	2.06	0.55
60:BA:2121:G:H2'	60:BA:2122:U:C6	2.42	0.55
4:CE:100:VAL:HG23	4:CE:107:ARG:HD3	1.88	0.55
8:CI:111:ARG:HG3	20:CA:1369:C:P	2.47	0.55
19:CT:13:LEU:O	19:CT:17:ARG:HG3	2.07	0.55
19:CT:18:GLN:O	19:CT:22:ARG:HG3	2.06	0.55
20:CA:1236:A:H4'	20:CA:1304:G:H4'	1.89	0.55
25:DC:181:PHE:HB3	25:DC:185:LYS:HB3	1.89	0.55
27:DE:92:THR:H	27:DE:95:ILE:HD11	1.72	0.55
32:DK:99:ILE:HD11	32:DK:136:VAL:HG11	1.89	0.55
36:DR:67:LEU:HA	36:DR:70:LEU:HB2	1.88	0.55
44:DZ:28:MET:SD	44:DZ:28:MET:N	2.80	0.55
48:DN:49:GLY:O	48:DN:119:ARG:NH1	2.39	0.55
60:DA:565:C:N4	60:DA:576:U:N3	2.38	0.55
60:DA:1000:A:H2'	60:DA:1001:A:C8	2.42	0.55
60:DA:2001:A:H2'	60:DA:2002:G:C8	2.41	0.55
7:AH:11:THR:HA	7:AH:14:ARG:HG3	1.88	0.55
19:AT:66:ALA:HB1	19:AT:72:LEU:CB	2.36	0.55
20:AA:1230:C:H5'	22:AW:30:C:H4'	1.88	0.55
23:AY:11:ARG:HB2	23:AY:77:HIS:HA	1.88	0.55
23:AY:605:ILE:HD11	23:AY:677:GLN:HG2	1.88	0.55
25:BC:176:VAL:HG11	25:BC:189:ASN:ND2	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:263:ARG:NH1	60:BA:2227:A:OP1	2.39	0.55
27:BE:112:GLY:N	60:BA:2822:G:OP1	2.39	0.55
28:BF:63:LYS:HE3	28:BF:67:GLN:NE2	2.22	0.55
33:BO:107:ARG:HH22	38:BT:36:GLU:CD	2.15	0.55
54:B8:48:PHE:O	54:B8:49:VAL:HG22	2.07	0.55
60:BA:36:G:H4'	60:BA:451:C:C2	2.42	0.55
60:BA:1200:C:H2'	60:BA:1201:C:H6	1.71	0.55
60:BA:2143:C:C2	60:BA:2144:U:H1'	2.42	0.55
1:CB:161:ALA:HA	1:CB:183:PRO:O	2.07	0.55
2:CC:88:ARG:HA	2:CC:91:LEU:HG	1.88	0.55
2:CC:187:ALA:HB3	2:CC:198:VAL:HB	1.88	0.55
7:CH:120:THR:OG1	7:CH:121:ASP:N	2.39	0.55
11:CL:85:ILE:HG23	11:CL:98:TYR:HB3	1.89	0.55
14:CO:18:PHE:O	14:CO:20:GLY:N	2.40	0.55
16:CQ:40:LYS:HB3	16:CQ:42:TYR:HE1	1.71	0.55
20:CA:255:G:N1	20:CA:271:C:O2	2.34	0.55
20:CA:291:C:H42	20:CA:309:G:H1	1.53	0.55
20:CA:296:U:O2'	20:CA:556:C:O2	2.24	0.55
20:CA:458(A):G:O6	20:CA:458(C):G:H5"	2.07	0.55
20:CA:864:A:H2'	20:CA:865:A:C8	2.42	0.55
20:CA:1491:G:H2'	24:CU:6:5OH:C	2.37	0.55
22:CW:74:C:H5"	46:D1:32:LYS:O	2.07	0.55
26:DD:260:ARG:HH22	60:DA:1799:G:H3'	1.71	0.55
27:DE:167:VAL:HG13	27:DE:170:LEU:HD11	1.87	0.55
34:DP:71:VAL:H	34:DP:72:PRO:CD	2.19	0.55
46:D1:39:LYS:NZ	46:D1:40:ARG:O	2.40	0.55
52:D6:37:ARG:NE	60:DA:2344:U:O2'	2.39	0.55
60:DA:105:C:H2'	60:DA:106:C:C6	2.41	0.55
60:DA:950:G:H2'	60:DA:951:C:C6	2.42	0.55
60:DA:2092:U:O2'	60:DA:2093:G:OP2	2.23	0.55
1:AB:219:VAL:O	1:AB:222:ILE:HG12	2.07	0.55
15:AP:2:VAL:HA	15:AP:23:ASP:HA	1.89	0.55
16:AQ:21:VAL:HG11	16:AQ:59:ILE:HD11	1.90	0.55
20:AA:151:A:H62	20:AA:170:U:H3	1.55	0.55
20:AA:713:G:H2'	20:AA:714:G:C8	2.42	0.55
20:AA:1221:G:H2'	20:AA:1222:G:O4'	2.07	0.55
25:BC:78:ILE:HG21	25:BC:124:VAL:HG21	1.90	0.55
26:BD:70:TRP:HA	26:BD:73:VAL:HG23	1.89	0.55
26:BD:262:ARG:HH22	60:BA:2085:C:H4'	1.72	0.55
38:BT:26:ASP:HA	38:BT:48:ILE:HG23	1.90	0.55
38:BT:74:ARG:HD2	38:BT:76:PHE:CE2	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BZ:5:LEU:HB2	44:BZ:57:ILE:HD11	1.89	0.55
53:B7:8:ASN:ND2	60:BA:1309:G:OP1	2.40	0.55
60:BA:1184:G:H2'	60:BA:1185:C:H5'	1.87	0.55
60:BA:1453:A:H3'	60:BA:1454:U:H2'	1.88	0.55
60:BA:1492:G:H1	60:BA:1498:C:H42	0.73	0.55
60:BA:2238:G:H4'	60:BA:2239:G:N7	2.22	0.55
60:BA:2439:A:H2'	60:BA:2439:A:N3	2.21	0.55
5:CF:5:GLU:HB2	5:CF:91:VAL:HG12	1.89	0.55
16:CQ:56:VAL:HG23	16:CQ:81:ARG:HG3	1.88	0.55
16:CQ:101:ARG:HG2	20:CA:247:G:OP2	2.07	0.55
20:CA:5:U:O2'	20:CA:6:G:O5'	2.18	0.55
20:CA:18:C:N3	20:CA:917:G:O6	2.40	0.55
20:CA:431:A:H2'	20:CA:432:A:C8	2.42	0.55
20:CA:947:G:H2'	20:CA:948:C:C6	2.42	0.55
20:CA:1028:C:C2	20:CA:1033:G:N2	2.63	0.55
20:CA:1305:G:H1	20:CA:1331:G:H2'	1.72	0.55
22:CW:47:U:H4'	22:CW:48:C:H5"	1.89	0.55
23:CY:25:LYS:HE3	61:CY:702:GNP:O1B	2.07	0.55
26:DD:198:ASN:HD21	26:DD:200:ASP:HB2	1.72	0.55
27:DE:61:ARG:HB3	27:DE:62:PRO:CD	2.36	0.55
29:DG:72:ARG:HB3	29:DG:87:PRO:HD2	1.89	0.55
33:DO:64:ARG:HA	33:DO:79:PHE:CG	2.42	0.55
39:DU:75:ASN:ND2	60:DA:1011:G:OP1	2.33	0.55
43:DY:97:ARG:HA	43:DY:97:ARG:HH11	1.72	0.55
45:D0:39:ARG:NH2	60:DA:2355:C:O2	2.40	0.55
60:DA:874:G:H2'	60:DA:875:G:H8	1.69	0.55
60:DA:2772:C:H2'	60:DA:2773:C:H6	1.72	0.55
26:BD:222:ARG:NH1	60:BA:1827:C:O5'	2.40	0.54
36:BR:17:ARG:NH2	60:BA:2002:G:OP1	2.38	0.54
39:BU:58:ARG:HA	39:BU:61:TRP:CE3	2.41	0.54
43:BY:20:TYR:HB3	43:BY:23:ARG:HG3	1.88	0.54
44:BZ:24:LEU:HD12	44:BZ:41:LEU:HD23	1.88	0.54
46:B1:76:ARG:HH22	46:B1:95:LEU:HD13	1.72	0.54
60:BA:2828:C:H2'	60:BA:2829:C:C6	2.42	0.54
2:CC:123:GLN:HE21	2:CC:133:ALA:HB1	1.71	0.54
6:CG:58:PRO:O	6:CG:62:PHE:HB2	2.07	0.54
14:CO:54:ARG:NE	20:CA:579:G:O2'	2.30	0.54
20:CA:879:C:H2'	20:CA:880:C:H6	1.72	0.54
20:CA:1060:C:H2'	20:CA:1061:G:C8	2.38	0.54
20:CA:1498:U:H1'	20:CA:1499:A:N7	2.22	0.54
21:CV:8:A:H2'	21:CV:9:G:H8	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:257:PRO:HB2	23:CY:259:PHE:CZ	2.42	0.54
23:CY:456:GLU:HA	23:CY:459:LEU:HD12	1.89	0.54
28:DF:57:VAL:O	28:DF:59:TYR:N	2.35	0.54
29:DG:166:ASP:N	29:DG:166:ASP:OD2	2.39	0.54
40:DV:5:VAL:HG21	40:DV:35:LEU:HB3	1.88	0.54
48:DN:99:LEU:O	48:DN:99:LEU:HD13	2.06	0.54
60:DA:273(C):C:H2'	60:DA:273(D):C:C6	2.42	0.54
60:DA:680:G:H2'	60:DA:681:G:C8	2.42	0.54
60:DA:1120:G:H2'	60:DA:1121:C:H6	1.69	0.54
60:DA:1697:G:H5"	60:DA:1698:A:H5"	1.88	0.54
60:DA:2333:A:H5"	60:DA:2335:A:H5'	1.90	0.54
60:DA:2738:A:H61	60:DA:2766:G:H1	1.55	0.54
3:AD:134:ASP:N	3:AD:134:ASP:OD2	2.38	0.54
4:AE:32:VAL:HB	4:AE:58:ALA:HB1	1.89	0.54
11:AL:7:ILE:HD11	16:AQ:34:LYS:HB2	1.89	0.54
15:AP:27:LYS:HD2	20:AA:111:G:H5"	1.89	0.54
16:AQ:2:PRO:HA	20:AA:128:G:H5'	1.89	0.54
20:AA:323:U:H2'	20:AA:324:G:O4'	2.07	0.54
20:AA:776:G:HO2'	20:AA:777:A:H8	1.56	0.54
20:AA:1303:C:H42	20:AA:1334:G:H1	1.53	0.54
20:AA:1306:A:H1'	20:AA:1332:A:C6	2.42	0.54
23:AY:291:GLY:O	23:AY:299:VAL:HG12	2.07	0.54
30:BH:137:ASP:O	30:BH:141:VAL:HG23	2.07	0.54
37:BS:95:HIS:NE2	59:BB:48:A:H4'	2.21	0.54
54:B8:62:LEU:HD13	60:BA:242:G:H5'	1.88	0.54
60:BA:271:G:H2'	60:BA:272:G:C8	2.43	0.54
60:BA:413:C:N4	60:BA:2410:G:H1	2.02	0.54
60:BA:1084:A:H2	60:BA:1105:U:H1'	1.71	0.54
60:BA:2836:U:H2'	60:BA:2837:G:C8	2.42	0.54
3:CD:191:ARG:HH12	3:CD:195:ALA:HA	1.71	0.54
9:CJ:55:LYS:O	20:CA:972:C:O2'	2.22	0.54
16:CQ:66:SER:HB3	16:CQ:69:LYS:HB2	1.89	0.54
20:CA:504:C:H2'	20:CA:511:C:H5	1.73	0.54
20:CA:1507:A:H2'	20:CA:1508:G:C8	2.42	0.54
23:CY:33:LEU:HD23	23:CY:34:TYR:N	2.22	0.54
23:CY:624:LEU:HD21	23:CY:643:ILE:HG21	1.90	0.54
25:DC:84:ILE:HD11	25:DC:97:GLY:H	1.72	0.54
30:DH:41:MET:SD	30:DH:42:ARG:N	2.80	0.54
30:DH:60:ARG:O	30:DH:64:LEU:HG	2.07	0.54
33:DO:1:MET:N	33:DO:67:LYS:HB2	2.22	0.54
34:DP:61:ARG:HH11	54:D8:13:ARG:HD2	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:D4:11:PRO:HA	47:D4:25:TYR:HA	1.89	0.54
60:DA:325:G:H2'	60:DA:326:G:C8	2.42	0.54
60:DA:479:A:H4'	60:DA:480:A:O5'	2.06	0.54
60:DA:1795:C:N4	60:DA:1824:G:H1	2.02	0.54
20:AA:1215:G:H2'	20:AA:1216:G:H8	1.71	0.54
20:AA:1237:C:H4'	20:AA:1334:G:N2	2.22	0.54
20:AA:1419:G:H2'	20:AA:1420:C:C6	2.42	0.54
23:AY:227:ILE:HD11	23:AY:241:GLU:HG3	1.89	0.54
23:AY:329:ARG:HG3	23:AY:374:LEU:HG	1.89	0.54
28:BF:155:LEU:HA	28:BF:176:LEU:CB	2.37	0.54
33:BO:1:MET:N	60:BA:1665:A:O2'	2.28	0.54
39:BU:82:GLY:O	39:BU:86:ALA:N	2.35	0.54
48:BN:91:LEU:CA	48:BN:95:PRO:HB3	2.30	0.54
60:BA:681:G:H2'	60:BA:682:G:C8	2.42	0.54
60:BA:1009:A:H2'	60:BA:1010:A:C8	2.42	0.54
60:BA:2792:G:N1	60:BA:2804:C:O2	2.39	0.54
20:CA:367:U:H3	20:CA:393:A:H61	1.54	0.54
20:CA:444:C:H2'	20:CA:445:G:H8	1.72	0.54
20:CA:782:A:H62	20:CA:800:G:H21	1.55	0.54
20:CA:1070:U:H2'	20:CA:1071:C:C6	2.43	0.54
20:CA:1213:A:O2'	20:CA:1215:G:N7	2.35	0.54
20:CA:1251:A:H2'	20:CA:1252:A:C8	2.42	0.54
20:CA:1504:G:H4'	20:CA:1505:G:O4'	2.06	0.54
30:DH:54:ARG:HB3	30:DH:65:HIS:HB2	1.88	0.54
38:DT:49:VAL:HG22	38:DT:50:ILE:H	1.72	0.54
41:DW:16:LYS:O	41:DW:19:LEU:HB2	2.08	0.54
46:D1:18:ILE:HG12	46:D1:20:ARG:H	1.70	0.54
48:DN:98:VAL:HG23	48:DN:99:LEU:N	2.23	0.54
55:D9:19:ARG:NH1	55:D9:24:TYR:HB2	2.22	0.54
60:DA:1231:G:H2'	60:DA:1232:G:C8	2.41	0.54
60:DA:1923:U:H2'	60:DA:1924:C:C6	2.42	0.54
12:AM:120:LYS:O	12:AM:121:LYS:HB2	2.06	0.54
14:AO:39:LEU:HD12	14:AO:56:LEU:HD22	1.90	0.54
17:AR:33:ASP:C	17:AR:35:ARG:H	2.15	0.54
18:AS:73:GLU:HG3	20:AA:1320:C:H1'	1.90	0.54
20:AA:9:G:H2'	20:AA:10:A:C8	2.41	0.54
20:AA:124:G:H2'	20:AA:125:U:O4'	2.06	0.54
20:AA:1440(L):G:H2'	20:AA:1440(M):G:H8	1.72	0.54
20:AA:1478:C:H2'	20:AA:1479:C:H6	1.72	0.54
23:AY:264:LEU:HD12	61:AY:701:GNP:C2	2.37	0.54
25:BC:30:VAL:CG1	25:BC:217:THR:HG23	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:93:VAL:C	27:BE:95:ILE:H	2.14	0.54
41:BW:18:ARG:HG2	41:BW:76:VAL:HG11	1.90	0.54
59:BB:74:U:H2'	59:BB:75:G:H8	1.71	0.54
60:BA:196:A:H3'	60:BA:197:A:H5"	1.89	0.54
60:BA:363(A):G:H2'	60:BA:363(B):A:H8	1.72	0.54
60:BA:949:C:H2'	60:BA:950:G:H8	1.72	0.54
60:BA:1324:G:H3'	60:BA:1325:G:H4'	1.88	0.54
60:BA:1416:G:N2	60:BA:1582:C:C2	2.75	0.54
60:BA:2294:C:H2'	60:BA:2295:C:C6	2.42	0.54
1:CB:162:ILE:HG23	1:CB:184:VAL:HG13	1.89	0.54
1:CB:166:ASP:HA	1:CB:188:ALA:HB2	1.89	0.54
16:CQ:81:ARG:HB3	16:CQ:84:LEU:HD12	1.88	0.54
20:CA:243:A:H4'	20:CA:244:U:H3'	1.88	0.54
20:CA:434:U:H2'	20:CA:435:C:C6	2.42	0.54
20:CA:627:G:H2'	20:CA:628:G:H8	1.72	0.54
20:CA:1211:U:H1'	20:CA:1213:A:C2	2.42	0.54
28:DF:161:GLU:HG3	28:DF:164:ARG:NH2	2.22	0.54
46:D1:23:LYS:NZ	46:D1:24:ALA:O	2.41	0.54
60:DA:230:U:H2'	60:DA:231:C:C6	2.43	0.54
60:DA:1652:A:H3'	60:DA:1653:G:H8	1.71	0.54
60:DA:2410:G:H2'	60:DA:2411:A:C8	2.42	0.54
60:DA:2868:A:H2'	60:DA:2869:G:C8	2.42	0.54
1:AB:28:PHE:O	1:AB:31:TYR:HB2	2.06	0.54
4:AE:92:LYS:HG2	4:AE:93:PRO:HD2	1.88	0.54
7:AH:113:SER:HB2	7:AH:134:ILE:HD11	1.88	0.54
9:AJ:51:ARG:HG2	9:AJ:59:SER:O	2.07	0.54
11:AL:56:ALA:CB	11:AL:68:ALA:HB3	2.21	0.54
12:AM:98:VAL:O	12:AM:99:ARG:NH1	2.41	0.54
17:AR:47:THR:HG23	17:AR:49:LYS:H	1.72	0.54
20:AA:396:G:H2'	20:AA:398:C:H5	1.72	0.54
20:AA:1516:G:H2'	20:AA:1518:A:OP2	2.08	0.54
27:BE:11:MET:HA	27:BE:23:VAL:C	2.33	0.54
41:BW:76:VAL:HA	41:BW:103:ILE:HA	1.88	0.54
48:BN:49:GLY:O	48:BN:119:ARG:NH1	2.39	0.54
59:BB:13:A:H4'	59:BB:15:A:N7	2.23	0.54
60:BA:594:U:H2'	60:BA:595:C:C6	2.43	0.54
60:BA:822:U:H2'	60:BA:823:G:H8	1.72	0.54
60:BA:1138:G:O2'	60:BA:1139:G:O5'	2.24	0.54
60:BA:1829:A:H3'	60:BA:1830:C:C6	2.43	0.54
60:BA:1845:G:H1	60:BA:1895:C:H42	1.55	0.54
6:CG:87:VAL:HG11	6:CG:154:TYR:C	2.32	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:63:ARG:HE	20:CA:130:A:H5'	1.72	0.54
20:CA:101:A:H2'	20:CA:102:G:C8	2.40	0.54
20:CA:924:C:O2'	20:CA:1502:A:N1	2.37	0.54
23:CY:24:GLY:HA2	61:CY:702:GNP:H8	1.90	0.54
25:DC:84:ILE:HD11	25:DC:97:GLY:N	2.22	0.54
31:DJ:82:UNK:O	31:DJ:84:UNK:N	2.40	0.54
38:DT:49:VAL:H	38:DT:63:VAL:HG13	1.71	0.54
39:DU:61:TRP:CH2	60:DA:996:A:H5"	2.43	0.54
40:DV:21:ARG:HA	40:DV:93:GLU:HA	1.90	0.54
45:D0:74:ARG:NE	59:DB:12:C:O2'	2.40	0.54
48:DN:73:THR:CG2	48:DN:84:LYS:HB3	2.30	0.54
53:D7:35:ARG:NH2	60:DA:53:A:N3	2.55	0.54
60:DA:29:U:H2'	60:DA:30:G:C8	2.42	0.54
60:DA:998:C:H42	60:DA:1157:G:H1	1.56	0.54
60:DA:1327:C:H3'	60:DA:1328:G:C8	2.43	0.54
60:DA:1428:C:C5	60:DA:1569:A:H5"	2.43	0.54
60:DA:2692:C:H2'	60:DA:2693:A:C8	2.41	0.54
20:AA:892:A:H2'	20:AA:893:C:H6	1.71	0.54
20:AA:947:G:H2'	20:AA:948:C:H6	1.72	0.54
20:AA:1204:A:H3'	20:AA:1205:U:C6	2.41	0.54
20:AA:1492:A:N6	23:AY:579:GLU:OE2	2.35	0.54
25:BC:47:LYS:HB2	25:BC:169:THR:HB	1.89	0.54
26:BD:177:LEU:O	26:BD:179:SER:N	2.40	0.54
26:BD:239:ARG:NE	60:BA:2590:A:H5"	2.23	0.54
27:BE:172:VAL:HB	27:BE:184:VAL:HG13	1.88	0.54
28:BF:68:LYS:O	28:BF:70:THR:N	2.39	0.54
35:BQ:21:THR:HG21	35:BQ:25:ASP:HB3	1.89	0.54
48:BN:46:VAL:HG13	48:BN:47:ALA:N	2.23	0.54
52:B6:9:LEU:HD23	52:B6:54:ILE:HG22	1.88	0.54
54:B8:34:TRP:HB3	60:BA:2420:C:OP1	2.08	0.54
59:BB:105:G:H2'	59:BB:106:G:C8	2.43	0.54
60:BA:282:A:N7	60:BA:358:U:O2	2.40	0.54
60:BA:903:C:H2'	60:BA:904:C:C6	2.42	0.54
60:BA:2587:A:H62	60:BA:2608:G:H21	1.56	0.54
60:BA:2822:G:O2'	60:BA:2824:C:OP2	2.21	0.54
3:CD:65:ARG:HB3	3:CD:75:PHE:CZ	2.43	0.54
3:CD:86:LYS:HE2	3:CD:87:GLY:N	2.22	0.54
4:CE:52:PRO:O	4:CE:56:GLN:HG2	2.05	0.54
8:CI:46:ALA:HB2	8:CI:74:ILE:HG22	1.87	0.54
16:CQ:68:ARG:O	16:CQ:70:ARG:N	2.34	0.54
23:CY:163:VAL:HG22	23:CY:258:VAL:CG2	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:344:THR:HB	23:CY:398:ILE:HG12	1.88	0.54
25:DC:44:VAL:HA	25:DC:214:TYR:O	2.08	0.54
28:DF:158:THR:O	28:DF:178:PRO:HD3	2.08	0.54
30:DH:88:LEU:HG	30:DH:130:ARG:HG3	1.90	0.54
35:DQ:12:GLN:HG3	60:DA:910:A:H62	1.72	0.54
39:DU:92:ARG:O	39:DU:96:ALA:N	2.41	0.54
48:DN:25:ARG:NH2	60:DA:1140:C:O3'	2.35	0.54
60:DA:573:G:H1	60:DA:2030:A:H2'	1.71	0.54
60:DA:948:G:N2	60:DA:985:C:OP2	2.41	0.54
60:DA:992:C:H2'	60:DA:993:G:H8	1.71	0.54
60:DA:1003:G:H2'	60:DA:1004:C:C6	2.42	0.54
60:DA:1434:A:H61	60:DA:1558:A:N6	2.06	0.54
60:DA:2834:G:H1'	60:DA:2883:A:N6	2.22	0.54
4:AE:14:ARG:NH2	20:AA:1079:G:O3'	2.40	0.54
10:AK:20:TYR:HB3	10:AK:31:THR:HG23	1.89	0.54
11:AL:33:ARG:H	11:AL:85:ILE:N	2.05	0.54
11:AL:33:ARG:NH1	11:AL:61:THR:OG1	2.39	0.54
16:AQ:56:VAL:HG23	16:AQ:81:ARG:HG2	1.88	0.54
20:AA:632:A:H2'	20:AA:633:G:O4'	2.08	0.54
20:AA:1073:U:H2'	20:AA:1074:G:H8	1.73	0.54
20:AA:1132:C:H42	20:AA:1142:G:H1	1.54	0.54
20:AA:1200:C:H5"	20:AA:1203:C:H41	1.73	0.54
27:BE:171:GLU:HB3	27:BE:185:LYS:HG2	1.90	0.54
28:BF:192:LEU:HD23	28:BF:194:MET:HG3	1.89	0.54
35:BQ:71:ASP:N	35:BQ:71:ASP:OD1	2.40	0.54
45:B0:36:ILE:HG13	60:BA:2354:G:O2'	2.07	0.54
46:B1:13:ILE:HG23	46:B1:42:GLN:O	2.08	0.54
48:BN:60:ILE:HD13	48:BN:99:LEU:HD23	1.89	0.54
55:B9:1:MET:HE3	60:BA:2477:C:H3'	1.89	0.54
60:BA:462:C:N4	60:BA:463:G:O6	2.41	0.54
60:BA:1356:G:H2'	60:BA:1357:U:O4'	2.07	0.54
60:BA:1789:A:H2'	60:BA:1790:C:O4'	2.07	0.54
3:CD:12:CYS:HB3	3:CD:33:MET:HG2	1.88	0.54
6:CG:74:GLU:HB3	6:CG:91:VAL:HG21	1.90	0.54
7:CH:89:PRO:O	20:CA:586:C:H4'	2.08	0.54
22:CW:9:A:C8	22:CW:12:U:O4	2.61	0.54
23:CY:29:THR:HG21	23:CY:81:ILE:HG21	1.90	0.54
23:CY:390:VAL:HG21	23:CY:396:ARG:HA	1.90	0.54
23:CY:482:ALA:HB1	23:CY:484:ARG:HH11	1.73	0.54
26:DD:200:ASP:O	26:DD:204:ILE:HG13	2.08	0.54
60:DA:736:C:H2'	60:DA:737:C:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:1039:G:H1	60:DA:1116:C:H42	1.55	0.54
60:DA:1084:A:H2	60:DA:1105:U:H1'	1.73	0.54
60:DA:2115:G:H1	60:DA:2117:A:H3'	1.73	0.54
60:DA:2212:A:H1'	60:DA:2215:G:C5	2.42	0.54
4:AE:91:LEU:HD22	4:AE:120:THR:HG22	1.89	0.54
6:AG:118:VAL:O	6:AG:122:HIS:ND1	2.36	0.54
7:AH:25:ASP:O	7:AH:26:VAL:HB	2.06	0.54
14:AO:54:ARG:NE	14:AO:58:MET:HE1	2.22	0.54
20:AA:1206:G:H2'	20:AA:1207:G:C8	2.42	0.54
22:AW:23:A:H2'	22:AW:24:G:C8	2.42	0.54
31:BJ:4:UNK:O	31:BJ:6:UNK:N	2.41	0.54
31:BJ:23:UNK:O	31:BJ:84:UNK:C	2.56	0.54
42:BX:21:PHE:CE2	42:BX:26:TYR:HA	2.43	0.54
60:BA:998:C:H2'	60:BA:999:U:O4'	2.07	0.54
60:BA:1437:C:HO2'	60:BA:1518:C:HO2'	1.47	0.54
60:BA:2358:G:H2'	60:BA:2359:C:O4'	2.07	0.54
3:CD:9:CYS:HB3	3:CD:32:ALA:HB3	1.89	0.54
6:CG:140:ASP:HA	6:CG:143:ARG:HH21	1.73	0.54
11:CL:31:PRO:HB2	20:CA:552:U:O2'	2.08	0.54
11:CL:40:VAL:HA	11:CL:54:LYS:HA	1.89	0.54
17:CR:53:ARG:HH21	17:CR:59:SER:HA	1.72	0.54
20:CA:320:C:H2'	20:CA:321:A:C8	2.43	0.54
20:CA:1405:G:H1	20:CA:1496:C:H42	1.56	0.54
20:CA:1440(C):G:O6	60:DA:2863:C:H4'	2.07	0.54
23:CY:136:ALA:HB3	23:CY:260:LEU:HB2	1.90	0.54
26:DD:79:VAL:HA	26:DD:95:LEU:HA	1.90	0.54
26:DD:136:ILE:HG21	26:DD:165:ILE:HD13	1.90	0.54
27:DE:104:VAL:O	27:DE:167:VAL:HG12	2.08	0.54
36:DR:107:ASP:HB2	60:DA:1649:G:H21	1.73	0.54
46:D1:45:ASN:HB3	60:DA:397:G:C5'	2.38	0.54
48:DN:63:THR:CG2	60:DA:1141:U:OP2	2.55	0.54
51:D5:19:ARG:HH12	60:DA:1264:G:P	2.30	0.54
60:DA:699:A:N6	60:DA:733:G:H21	1.95	0.54
60:DA:1871:A:H2'	60:DA:1872:A:C8	2.42	0.54
60:DA:1948:G:H1	60:DA:1958:C:N4	2.03	0.54
60:DA:1969:A:O2'	60:DA:1972:A:N3	2.40	0.54
60:DA:2038:G:C4	60:DA:2039:C:H1'	2.42	0.54
60:DA:2258:C:O2'	60:DA:2427:C:OP2	2.26	0.54
2:AC:150:LYS:HB2	2:AC:173:VAL:HG21	1.89	0.54
5:AF:91:VAL:HG23	20:AA:736:C:H5"	1.89	0.54
20:AA:227:G:H2'	20:AA:228:A:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1239:A:H2'	20:AA:1298:C:N4	2.21	0.54
26:BD:239:ARG:HE	60:BA:2590:A:H5"	1.73	0.54
28:BF:111:ALA:HB2	28:BF:206:ILE:HD11	1.89	0.54
34:BP:50:ARG:HD3	54:B8:59:LYS:HD2	1.90	0.54
46:B1:42:GLN:NE2	60:BA:2231:C:O3'	2.41	0.54
48:BN:30:ILE:CD1	48:BN:99:LEU:HD11	2.38	0.54
60:BA:131:G:H1	60:BA:148:C:N4	2.06	0.54
60:BA:178:G:H2'	60:BA:179:G:O4'	2.08	0.54
60:BA:206:U:H2'	60:BA:207:A:H8	1.73	0.54
60:BA:238:C:O2'	60:BA:608:A:N3	2.41	0.54
60:BA:307:G:H21	60:BA:330:A:N6	2.06	0.54
60:BA:637:A:N7	60:BA:652:U:O2'	2.41	0.54
60:BA:962:G:O2'	60:BA:2496:C:H4'	2.08	0.54
60:BA:1203:G:N1	60:BA:1241:A:OP2	2.31	0.54
60:BA:1295:C:H2'	60:BA:1296:G:H8	1.73	0.54
60:BA:1464:C:H2'	60:BA:1465:G:H8	1.73	0.54
60:BA:2207:C:N4	60:BA:2217:G:H1	2.04	0.54
60:BA:2575:C:H2'	60:BA:2578:G:O6	2.08	0.54
60:BA:2620:C:H2'	60:BA:2621:A:C8	2.43	0.54
60:BA:2638:G:N1	60:BA:2776:A:OP2	2.24	0.54
14:CO:16:ALA:HB1	14:CO:21:ASP:HB3	1.90	0.54
16:CQ:51:TYR:HE1	16:CQ:76:LEU:HB2	1.72	0.54
20:CA:1018:C:H2'	20:CA:1019:C:C6	2.42	0.54
20:CA:1347:G:N2	20:CA:1373:G:H2'	2.23	0.54
20:CA:1356:G:H2'	20:CA:1357:A:H8	1.71	0.54
23:CY:11:ARG:HB2	23:CY:76:ASP:O	2.08	0.54
26:DD:242:ARG:HD3	26:DD:246:PRO:HG3	1.89	0.54
30:DH:46:GLU:O	30:DH:48:GLY:N	2.41	0.54
30:DH:99:VAL:O	30:DH:101:ARG:N	2.41	0.54
31:DJ:23:UNK:N	31:DJ:119:UNK:HA	2.23	0.54
60:DA:46:C:H2'	60:DA:47:C:C6	2.43	0.54
60:DA:1628:G:N2	60:DA:1638:C:N3	2.48	0.54
60:DA:2133:G:H2'	60:DA:2157:G:N2	2.22	0.54
60:DA:2749:A:H3'	60:DA:2750:A:H2'	1.90	0.54
3:AD:61:LYS:HG3	3:AD:206:PHE:HD2	1.72	0.54
20:AA:218:C:H5'	20:AA:458(C):G:N1	2.21	0.54
20:AA:614:A:H2'	20:AA:615:C:H6	1.71	0.54
20:AA:665:A:H1'	20:AA:733:A:H5"	1.90	0.54
20:AA:673:G:H2'	20:AA:674:G:H8	1.73	0.54
20:AA:835:U:H2'	20:AA:836:G:H8	1.73	0.54
20:AA:1039:C:H2'	20:AA:1040:U:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:115:GLU:HB3	23:AY:118:SER:HB3	1.89	0.54
23:AY:141:LYS:NZ	60:BA:2656:U:O3'	2.29	0.54
25:BC:30:VAL:HG22	25:BC:33:LEU:HD12	1.90	0.54
25:BC:214:TYR:OH	25:BC:224:ARG:NH1	2.40	0.54
27:BE:4:ILE:HD13	27:BE:5:LEU:N	2.22	0.54
27:BE:67:PHE:CZ	27:BE:69:LYS:HB3	2.43	0.54
27:BE:82:ARG:NH2	60:BA:2637:U:OP1	2.38	0.54
28:BF:8:GLN:NE2	28:BF:8:GLN:O	2.41	0.54
38:BT:59:THR:HG23	38:BT:78:LEU:HD23	1.90	0.54
39:BU:83:LEU:HA	39:BU:86:ALA:HB3	1.89	0.54
60:BA:49:A:H4'	60:BA:50:U:H5"	1.89	0.54
60:BA:496:G:H2'	60:BA:497:A:O4'	2.08	0.54
60:BA:521:G:H2'	60:BA:522:G:C8	2.43	0.54
6:CG:111:ARG:HE	6:CG:123:GLU:HB2	1.72	0.54
12:CM:67:GLU:OE1	12:CM:68:GLY:N	2.39	0.54
20:CA:246:A:C2	20:CA:282:A:C4	2.95	0.54
20:CA:1134:G:C2	20:CA:1135:U:H1'	2.43	0.54
20:CA:1162:C:N3	20:CA:1174:G:N2	2.42	0.54
27:DE:136:ARG:NH2	60:DA:1998:G:OP2	2.40	0.54
40:DV:75:PHE:HB2	40:DV:81:TYR:O	2.08	0.54
48:DN:30:ILE:CD1	48:DN:99:LEU:HD11	2.38	0.54
48:DN:46:VAL:HG13	48:DN:47:ALA:N	2.23	0.54
60:DA:2783:G:H2'	60:DA:2784:C:H6	1.72	0.54
60:DA:2816:C:O2	60:DA:2883:A:O2'	2.26	0.54
5:AF:46:ARG:HB3	5:AF:60:PHE:CE1	2.42	0.53
7:AH:96:GLY:HA2	20:AA:599:C:H5"	1.90	0.53
12:AM:99:ARG:HA	12:AM:99:ARG:NE	2.22	0.53
20:AA:783:C:H2'	20:AA:784:C:C6	2.43	0.53
20:AA:1246:C:N3	20:AA:1291:G:N2	2.53	0.53
26:BD:54:ARG:HD3	26:BD:216:GLY:O	2.08	0.53
28:BF:9:ILE:HG21	28:BF:124:LEU:HA	1.90	0.53
28:BF:63:LYS:HG3	28:BF:76:GLY:HA3	1.90	0.53
29:BG:114:ILE:C	29:BG:116:ASP:N	2.66	0.53
31:BJ:24:UNK:HA	31:BJ:84:UNK:C	2.39	0.53
33:BO:2:ILE:HB	33:BO:33:ALA:HB3	1.89	0.53
39:BU:15:LYS:O	39:BU:18:LEU:HB2	2.08	0.53
60:BA:325:G:H2'	60:BA:326:G:H8	1.72	0.53
60:BA:494:G:H2'	60:BA:495:G:C8	2.43	0.53
60:BA:937:U:H2'	60:BA:938:G:C8	2.43	0.53
60:BA:1327:C:H3'	60:BA:1328:G:C8	2.42	0.53
60:BA:1864:U:H2'	60:BA:1869:G:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:2372:G:H1	60:BA:2381:C:H42	1.55	0.53
60:BA:2506:U:H5	60:BA:2583:G:H22	1.57	0.53
2:CC:40:ARG:HH12	13:CN:52:GLN:HB3	1.73	0.53
5:CF:7:ASN:ND2	5:CF:61:LEU:O	2.38	0.53
6:CG:38:LEU:HA	6:CG:41:ARG:HD3	1.88	0.53
6:CG:113:GLU:HB2	6:CG:119:ARG:HG2	1.89	0.53
11:CL:84:LEU:HB2	11:CL:104:VAL:CG1	2.38	0.53
15:CP:42:ARG:HA	20:CA:450:G:H5'	1.90	0.53
20:CA:318:G:H2'	20:CA:319:G:C8	2.43	0.53
20:CA:570:G:H8	20:CA:570:G:O5'	1.90	0.53
20:CA:1438:G:H1	20:CA:1463:C:H42	1.56	0.53
28:DF:38:ARG:HA	28:DF:41:LEU:HB2	1.90	0.53
28:DF:197:ASP:HA	28:DF:200:GLU:HB2	1.89	0.53
29:DG:73:ALA:H	29:DG:87:PRO:HD2	1.74	0.53
31:DJ:24:UNK:HA	31:DJ:84:UNK:C	2.39	0.53
42:DX:90:GLU:HA	42:DX:93:GLU:HB2	1.90	0.53
48:DN:60:ILE:HD13	48:DN:99:LEU:HD23	1.89	0.53
60:DA:329:G:H8	60:DA:329:G:OP2	1.91	0.53
60:DA:485:C:N4	60:DA:495:G:H1	2.05	0.53
60:DA:898:C:C2	60:DA:899:A:C8	2.96	0.53
60:DA:1178:C:H2'	60:DA:1179:C:C6	2.43	0.53
60:DA:2040:C:OP1	60:DA:2040:C:H6	1.89	0.53
11:AL:69:TYR:CG	11:AL:70:ILE:N	2.76	0.53
16:AQ:22:LEU:HD11	16:AQ:39:SER:HB2	1.90	0.53
20:AA:218:C:H4'	20:AA:458(C):G:H22	1.73	0.53
25:BC:11:LEU:HA	25:BC:14:LYS:HG2	1.90	0.53
26:BD:37:LEU:HB3	26:BD:62:TYR:HD1	1.73	0.53
27:BE:114:ALA:HB1	27:BE:118:LYS:HD3	1.89	0.53
39:BU:25:TRP:HD1	39:BU:26:GLY:H	1.56	0.53
48:BN:126:PRO:O	48:BN:127:ASP:CB	2.56	0.53
53:B7:12:ARG:HH21	53:B7:44:PRO:HG3	1.73	0.53
60:BA:874:G:H2'	60:BA:875:G:H8	1.71	0.53
60:BA:1047:G:O3'	60:BA:1048:A:H8	1.91	0.53
60:BA:1637:A:H4'	60:BA:2711:A:O2'	2.08	0.53
60:BA:2283:C:H2'	60:BA:2284:C:H5'	1.89	0.53
60:BA:2738:A:H61	60:BA:2766:G:H1	1.56	0.53
1:CB:146:GLN:O	1:CB:150:SER:OG	2.26	0.53
12:CM:102:ARG:CZ	12:CM:104:ARG:HB3	2.39	0.53
12:CM:122:LYS:HA	20:CA:954:G:H5'	1.89	0.53
14:CO:47:LYS:HD3	14:CO:47:LYS:H	1.73	0.53
20:CA:584:G:H2'	20:CA:585:G:H8	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:722:A:H2'	20:CA:724:G:C8	2.43	0.53
20:CA:887:G:H1	20:CA:910:C:N4	2.04	0.53
20:CA:989:C:H2'	20:CA:990:C:H6	1.72	0.53
20:CA:1176:A:H2'	20:CA:1177:G:O4'	2.09	0.53
23:CY:313:ALA:HA	23:CY:328:ILE:CA	2.36	0.53
25:DC:142:LYS:C	25:DC:144:GLY:H	2.16	0.53
28:DF:171:PRO:HB3	60:DA:323:G:C8	2.43	0.53
35:DQ:125:LEU:C	35:DQ:127:ILE:H	2.15	0.53
39:DU:45:TYR:O	39:DU:49:HIS:ND1	2.41	0.53
42:DX:21:PHE:HE1	42:DX:92:LEU:HB3	1.73	0.53
45:D0:27:GLU:HB3	45:D0:68:GLU:HA	1.90	0.53
48:DN:126:PRO:O	48:DN:127:ASP:CB	2.56	0.53
59:DB:24:G:C2	59:DB:56:G:N2	2.77	0.53
60:DA:1357:U:H2'	60:DA:1358:G:O4'	2.08	0.53
60:DA:1444:G:H2'	60:DA:1445:C:H5	1.72	0.53
60:DA:1472:A:H3'	60:DA:1473:G:C8	2.43	0.53
1:AB:139:LYS:O	1:AB:143:GLU:HG2	2.09	0.53
5:AF:77:ARG:O	5:AF:81:ILE:HG13	2.07	0.53
7:AH:95:VAL:HG12	7:AH:99:GLU:HB3	1.90	0.53
7:AH:120:THR:HG23	7:AH:123:GLU:HG3	1.90	0.53
15:AP:28:ARG:NH1	20:AA:375:U:O2	2.41	0.53
20:AA:151:A:N7	20:AA:170:U:O4	2.41	0.53
20:AA:689:C:H2'	20:AA:690:G:O4'	2.09	0.53
20:AA:1250:A:N3	20:AA:1370:G:O2'	2.38	0.53
23:AY:448:GLN:HE22	23:AY:479:PRO:HA	1.72	0.53
23:AY:627:ARG:HH22	23:AY:658:ASP:HB3	1.73	0.53
25:BC:43:GLU:OE2	60:BA:2123:G:N2	2.37	0.53
26:BD:136:ILE:HD13	26:BD:137:PRO:HD2	1.90	0.53
26:BD:269:PHE:HE2	60:BA:2219:G:H5"	1.72	0.53
27:BE:94:GLU:HG3	27:BE:177:PRO:HB3	1.90	0.53
29:BG:105:LYS:HB3	29:BG:142:PRO:HG3	1.90	0.53
36:BR:96:ARG:HG3	60:BA:2882:A:H5'	1.90	0.53
49:B2:63:VAL:O	49:B2:66:GLU:HG2	2.07	0.53
53:B7:11:LYS:HE2	60:BA:686:G:C4	2.43	0.53
60:BA:33:U:O4	60:BA:446:G:O2'	2.25	0.53
60:BA:715:G:H2'	60:BA:716:A:C8	2.44	0.53
1:CB:198:ASP:OD2	7:CH:68:ARG:NH2	2.41	0.53
3:CD:15:GLU:HG2	3:CD:59:ARG:HH22	1.72	0.53
4:CE:100:VAL:HG12	4:CE:118:ILE:HG22	1.88	0.53
7:CH:8:ASP:OD2	7:CH:12:ARG:NH2	2.42	0.53
7:CH:71:GLY:O	7:CH:73:ASP:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:57:GLY:C	8:CI:59:PHE:H	2.17	0.53
11:CL:49:ASN:OD1	11:CL:49:ASN:N	2.39	0.53
20:CA:892:A:H2'	20:CA:893:C:H6	1.73	0.53
20:CA:1251:A:N3	20:CA:1369:C:O2'	2.36	0.53
23:CY:9:LEU:O	23:CY:282:SER:OG	2.26	0.53
27:DE:28:ALA:C	27:DE:93:VAL:HG22	2.33	0.53
27:DE:93:VAL:O	27:DE:95:ILE:N	2.39	0.53
40:DV:47:VAL:HG12	40:DV:52:VAL:HB	1.91	0.53
41:DW:72:LYS:H	41:DW:107:LEU:HA	1.72	0.53
48:DN:78:TYR:CB	60:DA:2642:G:H5"	2.38	0.53
60:DA:1765:C:H42	60:DA:1987:G:H1	1.56	0.53
8:AI:70:LYS:O	8:AI:73:GLN:HB2	2.08	0.53
20:AA:418:C:N3	20:AA:425:G:N2	2.46	0.53
20:AA:532:A:H5"	20:AA:532:A:H8	1.73	0.53
20:AA:697:U:O2	20:AA:785:G:N2	2.32	0.53
20:AA:892:A:H2'	20:AA:893:C:C6	2.44	0.53
20:AA:1018:C:H2'	20:AA:1019:C:C6	2.43	0.53
22:AW:43:G:H2'	22:AW:44:G:H8	1.73	0.53
23:AY:187:THR:O	23:AY:197:ARG:N	2.40	0.53
23:AY:343:ASN:HA	23:AY:389:LEU:HA	1.89	0.53
23:AY:438:PHE:HD2	23:AY:438:PHE:H	1.55	0.53
25:BC:177:GLY:HA2	25:BC:186:LEU:HD21	1.91	0.53
27:BE:143:ASN:ND2	60:BA:2571:C:O2'	2.41	0.53
28:BF:52:LYS:NZ	60:BA:38:A:H5'	2.23	0.53
40:BV:75:PHE:HB2	40:BV:81:TYR:O	2.08	0.53
42:BX:72:LYS:H	42:BX:72:LYS:HD2	1.74	0.53
48:BN:98:VAL:HG23	48:BN:99:LEU:N	2.23	0.53
60:BA:2367:G:H2'	60:BA:2368:C:H6	1.73	0.53
60:BA:2371:G:H2'	60:BA:2372:G:C8	2.44	0.53
60:BA:2479:G:H2'	60:BA:2480:C:O4'	2.07	0.53
60:BA:2524:G:H2'	60:BA:2525:G:C8	2.43	0.53
8:CI:65:VAL:HG11	8:CI:77:ILE:HD11	1.91	0.53
10:CK:24:SER:OG	10:CK:25:TYR:N	2.41	0.53
11:CL:58:VAL:HG12	11:CL:60:LEU:H	1.73	0.53
12:CM:26:GLY:H	20:CA:1329:A:H5"	1.73	0.53
16:CQ:86:GLU:O	16:CQ:90:ILE:HG13	2.08	0.53
20:CA:621:A:H2'	20:CA:622:A:C8	2.43	0.53
20:CA:955:U:H2'	20:CA:956:U:O4'	2.08	0.53
20:CA:1224:G:N2	20:CA:1362(A):C:C2	2.77	0.53
23:CY:514:VAL:HA	23:CY:565:VAL:O	2.08	0.53
25:DC:42:VAL:O	25:DC:43:GLU:C	2.52	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:100:THR:O	60:DA:659:C:H4'	2.08	0.53
28:DF:155:LEU:O	28:DF:191:ARG:O	2.25	0.53
29:DG:128:ARG:CZ	60:DA:2315:G:H21	2.20	0.53
30:DH:137:ASP:O	30:DH:141:VAL:HG23	2.08	0.53
33:DO:13:ASN:O	33:DO:15:GLY:N	2.36	0.53
60:DA:468:G:H3'	60:DA:469:G:C8	2.43	0.53
60:DA:814:C:N4	60:DA:1193:G:H1	2.02	0.53
60:DA:1170:G:H2'	60:DA:1171:G:H8	1.74	0.53
60:DA:1278:A:H2'	60:DA:1279:G:H8	1.73	0.53
60:DA:1499:C:H2'	60:DA:1500:G:O4'	2.08	0.53
60:DA:2298:A:H2'	60:DA:2299:G:O4'	2.09	0.53
4:AE:103:GLY:C	4:AE:106:PRO:HD2	2.34	0.53
5:AF:67:MET:SD	5:AF:72:VAL:HB	2.48	0.53
8:AI:111:ARG:HG3	20:AA:1369:C:P	2.47	0.53
9:AJ:69:ASN:C	9:AJ:70:ARG:HD2	2.33	0.53
20:AA:436:C:H2'	20:AA:437:U:C6	2.44	0.53
20:AA:663:A:N6	20:AA:742:G:H1	2.02	0.53
20:AA:1306:A:H1'	20:AA:1332:A:N1	2.23	0.53
22:AW:13:C:O2	22:AW:22:G:N1	2.41	0.53
23:AY:282:SER:C	23:AY:284:LEU:H	2.16	0.53
26:BD:79:VAL:O	26:BD:96:HIS:HB2	2.07	0.53
26:BD:157:ARG:HH21	60:BA:1818:U:H6	1.56	0.53
34:BP:127:ALA:HB3	34:BP:130:PHE:CE1	2.44	0.53
54:B8:17:THR:C	54:B8:19:SER:H	2.15	0.53
59:BB:98:G:O2'	59:BB:99:A:O5'	2.25	0.53
60:BA:1423:G:H2'	60:BA:1424:G:C8	2.42	0.53
60:BA:1674:G:H21	60:BA:1677:A:H61	1.55	0.53
60:BA:2258:C:O2'	60:BA:2427:C:OP2	2.27	0.53
1:CB:211:ILE:O	1:CB:215:LEU:HB2	2.09	0.53
2:CC:6:HIS:HD2	2:CC:8:ILE:HB	1.73	0.53
20:CA:68(R):C:H2'	20:CA:68(S):C:C5	2.43	0.53
20:CA:186(N):U:H2'	20:CA:186(O):G:C8	2.43	0.53
20:CA:1179:A:H2'	20:CA:1180:A:O4'	2.08	0.53
20:CA:1504:G:OP1	20:CA:1507:A:O2'	2.15	0.53
23:CY:139:MET:HB3	23:CY:174:PHE:HE1	1.74	0.53
23:CY:311:ALA:CB	23:CY:330:VAL:HA	2.38	0.53
25:DC:213:VAL:HG23	25:DC:227:PRO:HG3	1.90	0.53
27:DE:110:GLY:N	60:DA:2821:A:OP1	2.42	0.53
37:DS:25:ARG:HB3	37:DS:40:ILE:HG23	1.90	0.53
48:DN:56:ASN:HB3	48:DN:125:GLY:C	2.33	0.53
48:DN:115:ARG:HH11	48:DN:115:ARG:HG2	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D3:5:LYS:HA	50:D3:35:ARG:O	2.08	0.53
60:DA:65:C:H2'	60:DA:66:C:H6	1.73	0.53
60:DA:133:C:N4	60:DA:146:G:H1	2.05	0.53
60:DA:738:G:H3'	60:DA:739:G:C8	2.43	0.53
60:DA:745:G:O6	60:DA:746:A:N6	2.41	0.53
60:DA:2294:C:H2'	60:DA:2295:C:C6	2.43	0.53
60:DA:2398:U:H3	60:DA:2418:A:H2	1.54	0.53
60:DA:2524:G:H2'	60:DA:2525:G:C8	2.44	0.53
1:AB:168:THR:C	1:AB:171:ALA:H	2.16	0.53
3:AD:72:GLU:CD	20:AA:545:C:H5"	2.34	0.53
7:AH:35:ILE:HD11	7:AH:111:ILE:HG23	1.90	0.53
12:AM:102:ARG:CZ	12:AM:104:ARG:HB3	2.38	0.53
15:AP:40:ASP:HB3	15:AP:48:TRP:HB2	1.91	0.53
19:AT:26:ASN:OD1	19:AT:30:LYS:NZ	2.42	0.53
25:BC:41:THR:C	25:BC:43:GLU:H	2.17	0.53
25:BC:81:GLY:O	25:BC:84:ILE:HB	2.08	0.53
25:BC:104:ILE:HG23	25:BC:111:PHE:HZ	1.73	0.53
25:BC:104:ILE:HG21	25:BC:132:LEU:HD11	1.91	0.53
25:BC:201:LYS:HD3	25:BC:202:PRO:HD2	1.91	0.53
32:BK:57:ILE:HG13	32:BK:67:PHE:HB3	1.91	0.53
33:BO:67:LYS:NZ	60:BA:1664:A:H2'	2.23	0.53
36:BR:53:HIS:CD2	60:BA:2840:C:H5"	2.43	0.53
36:BR:68:ARG:O	60:BA:2708:G:H5'	2.09	0.53
38:BT:47:GLY:CA	38:BT:65:LYS:HB2	2.39	0.53
40:BV:95:LEU:O	40:BV:96:ILE:O	2.27	0.53
42:BX:12:VAL:HG12	42:BX:17:ALA:HB1	1.89	0.53
59:BB:44:G:H5'	59:BB:45:A:H8	1.73	0.53
60:BA:101:G:N3	60:BA:101:G:H2'	2.23	0.53
60:BA:733:G:P	60:BA:761:A:H61	2.32	0.53
60:BA:837:C:N4	60:BA:942:G:H1	2.06	0.53
60:BA:1796:U:H3	60:BA:1823:G:H1	1.56	0.53
60:BA:1913:A:O2'	60:BA:1914:C:OP2	2.18	0.53
60:BA:2023:G:H4'	60:BA:2617:C:O3'	2.09	0.53
60:BA:2728:U:H2'	60:BA:2729:G:C8	2.44	0.53
4:CE:108:ALA:O	4:CE:112:LEU:HG	2.09	0.53
7:CH:12:ARG:NH2	20:CA:825:G:O2'	2.41	0.53
8:CI:42:ARG:HD2	8:CI:71:SER:HB2	1.90	0.53
11:CL:17:LYS:NZ	20:CA:303:A:H5'	2.23	0.53
12:CM:2:ALA:O	12:CM:4:ILE:N	2.41	0.53
20:CA:1419:G:H2'	20:CA:1420:C:C6	2.43	0.53
23:CY:356:LEU:HB2	23:CY:378:VAL:HG23	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:511:LYS:HB3	23:CY:568:TYR:CZ	2.43	0.53
39:DU:49:HIS:O	39:DU:53:ARG:HB2	2.08	0.53
40:DV:8:GLY:HA2	60:DA:1161:C:H4'	1.89	0.53
40:DV:19:LYS:HB3	40:DV:94:LEU:O	2.09	0.53
41:DW:23:LEU:HD22	51:D5:25:LEU:HB3	1.91	0.53
46:D1:48:LYS:HG2	46:D1:61:ARG:HA	1.91	0.53
48:DN:120:LEU:CD2	48:DN:122:VAL:HG23	2.38	0.53
51:D5:7:PRO:HD2	60:DA:2015:A:N1	2.23	0.53
55:D9:19:ARG:HH12	55:D9:26:ILE:HG13	1.71	0.53
60:DA:325:G:H2'	60:DA:326:G:H8	1.74	0.53
60:DA:954:G:N2	60:DA:963:U:O2	2.26	0.53
60:DA:1063:G:H2'	60:DA:1064:C:O4'	2.09	0.53
60:DA:1208:C:H2'	60:DA:1209:G:C8	2.44	0.53
60:DA:1444:G:H2'	60:DA:1445:C:C5	2.44	0.53
60:DA:1947:C:H2'	60:DA:1948:G:C8	2.43	0.53
3:AD:35:ARG:HD3	20:AA:412:A:N1	2.23	0.53
16:AQ:68:ARG:O	16:AQ:70:ARG:N	2.39	0.53
19:AT:103:GLY:O	20:AA:191:G:N2	2.41	0.53
20:AA:320:C:H2'	20:AA:321:A:C8	2.43	0.53
20:AA:584:G:H2'	20:AA:585:G:C8	2.44	0.53
20:AA:1064:G:P	20:AA:1386:G:H4'	2.48	0.53
20:AA:1333:A:H3'	20:AA:1334:G:H8	1.74	0.53
23:AY:17:ILE:HG21	23:AY:25:LYS:HA	1.91	0.53
23:AY:456:GLU:HB3	23:AY:657:THR:HG21	1.90	0.53
25:BC:74:ARG:O	25:BC:76:LEU:N	2.35	0.53
32:BK:101:TRP:CD1	32:BK:140:GLY:HA2	2.43	0.53
36:BR:62:ALA:HB3	36:BR:80:PHE:HZ	1.72	0.53
39:BU:34:LYS:NZ	60:BA:2018:G:H21	2.07	0.53
40:BV:76:LYS:NZ	60:BA:974(A):G:H4'	2.23	0.53
44:BZ:28:MET:HB3	44:BZ:88:PHE:HB2	1.90	0.53
48:BN:17:ASP:O	48:BN:18:ALA:CB	2.57	0.53
60:BA:8:A:C2	60:BA:9:U:C2	2.97	0.53
60:BA:624:C:O2'	60:BA:657:U:H4'	2.09	0.53
60:BA:1281:G:H2'	60:BA:1282:U:O4'	2.08	0.53
60:BA:1472:A:H62	60:BA:1521:G:H21	1.55	0.53
60:BA:1581:G:H2'	60:BA:1582:C:C6	2.43	0.53
60:BA:2230:G:H2'	60:BA:2231:C:H6	1.74	0.53
5:CF:69:GLU:O	5:CF:72:VAL:HG12	2.09	0.53
8:CI:2:GLU:HG3	8:CI:3:GLN:HG3	1.89	0.53
20:CA:12:U:O2	20:CA:22:G:O6	2.27	0.53
20:CA:810:C:H2'	20:CA:811:C:O4'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:45:ASN:HB2	60:DA:1812:A:O2'	2.09	0.53
28:DF:90:PHE:CD2	60:DA:588:U:H1'	2.44	0.53
28:DF:191:ARG:HB3	28:DF:193:VAL:CG2	2.38	0.53
32:DK:74:ALA:HA	32:DK:77:LEU:HB2	1.89	0.53
35:DQ:126:PRO:HA	60:DA:2485:G:H4'	1.90	0.53
38:DT:61:PHE:CE2	38:DT:76:PHE:HB2	2.44	0.53
39:DU:70:ARG:HG2	39:DU:75:ASN:HA	1.90	0.53
40:DV:39:LEU:HD12	40:DV:47:VAL:HG21	1.89	0.53
60:DA:797:C:H2'	60:DA:798:G:C8	2.44	0.53
60:DA:841:A:H2'	60:DA:842:G:C8	2.43	0.53
60:DA:1197:G:H2'	60:DA:1198:U:H6	1.74	0.53
60:DA:2151:G:H2'	60:DA:2152:G:C8	2.43	0.53
60:DA:2311:A:H5"	60:DA:2312:U:OP2	2.09	0.53
1:AB:170:GLU:O	1:AB:174:VAL:HG23	2.08	0.53
3:AD:196:LEU:HB2	3:AD:197:PRO:HD2	1.89	0.53
7:AH:40:ALA:HB2	7:AH:45:ILE:HD11	1.91	0.53
20:AA:318:G:H2'	20:AA:319:G:C8	2.44	0.53
20:AA:1059:C:H2'	20:AA:1060:C:O4'	2.09	0.53
20:AA:1367:C:H2'	20:AA:1368:G:O4'	2.09	0.53
23:AY:33:LEU:CB	23:AY:50:ALA:HB1	2.37	0.53
25:BC:219:MET:SD	60:BA:2124:G:N2	2.78	0.53
26:BD:206:LEU:HB2	60:BA:1791:A:H4'	1.91	0.53
34:BP:62:LEU:HB3	60:BA:2393:A:H5"	1.90	0.53
36:BR:20:LEU:O	36:BR:24:GLN:HG2	2.09	0.53
40:BV:47:VAL:HB	40:BV:50:PRO:O	2.08	0.53
44:BZ:9:TYR:HD2	44:BZ:37:VAL:HG12	1.74	0.53
48:BN:30:ILE:HG22	48:BN:34:LEU:HD23	1.90	0.53
52:B6:48:VAL:O	52:B6:49:HIS:HB2	2.07	0.53
60:BA:684:G:H5'	60:BA:685:A:OP2	2.09	0.53
60:BA:828:U:H5'	60:BA:831:G:N2	2.23	0.53
60:BA:860:U:H5	60:BA:2268:A:C8	2.27	0.53
60:BA:1005:C:H2'	60:BA:1006:C:O4'	2.08	0.53
60:BA:2029:G:O6	60:BA:2032:G:H3'	2.08	0.53
1:CB:35:GLU:H	1:CB:36:ARG:NH2	2.06	0.53
10:CK:21:ILE:HD11	10:CK:98:LEU:HD11	1.90	0.53
13:CN:42:ILE:HD13	13:CN:45:ARG:HD3	1.90	0.53
16:CQ:67:LYS:HB3	20:CA:254:G:OP2	2.09	0.53
16:CQ:90:ILE:HG21	20:CA:583:A:H5'	1.90	0.53
18:CS:41:VAL:C	18:CS:43:GLU:H	2.17	0.53
20:CA:501:C:H2'	20:CA:502:G:C8	2.43	0.53
20:CA:1251:A:H2'	20:CA:1252:A:H8	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1404:C:H2'	20:CA:1405:G:C8	2.43	0.53
23:CY:133:ILE:HB	23:CY:259:PHE:HE1	1.74	0.53
23:CY:150:ILE:HG23	23:CY:161:PRO:HG3	1.91	0.53
23:CY:214:GLU:O	23:CY:218:GLU:N	2.36	0.53
25:DC:44:VAL:O	25:DC:172:ILE:O	2.27	0.53
25:DC:81:GLY:O	25:DC:84:ILE:HB	2.08	0.53
27:DE:166:THR:HB	60:DA:2772:C:H5"	1.90	0.53
28:DF:4:VAL:H	28:DF:24:LEU:HG	1.73	0.53
29:DG:43:LEU:HB3	29:DG:45:GLU:H	1.73	0.53
34:DP:55:ARG:HG2	34:DP:56:SER:O	2.08	0.53
40:DV:4:ILE:HB	40:DV:39:LEU:HB2	1.89	0.53
41:DW:11:ARG:HB3	41:DW:12:ILE:HD12	1.90	0.53
60:DA:1090:U:H2'	60:DA:1091:G:H8	1.73	0.53
60:DA:1100:C:H2'	60:DA:1101:U:O4'	2.09	0.53
60:DA:1534:G:H3'	60:DA:1535:U:H5"	1.90	0.53
60:DA:2134:A:N6	60:DA:2157:G:O2'	2.38	0.53
4:AE:72:GLN:O	4:AE:74:GLY:N	2.42	0.53
9:AJ:16:LEU:O	9:AJ:19:SER:OG	2.25	0.53
11:AL:73:GLU:HA	20:AA:521:G:OP1	2.09	0.53
20:AA:566:G:H4'	20:AA:567:G:H5'	1.90	0.53
20:AA:917:G:H2'	20:AA:918:A:C8	2.44	0.53
20:AA:1306:A:N6	20:AA:1331:G:H1'	2.24	0.53
20:AA:1465:C:H2'	20:AA:1466:C:H6	1.74	0.53
22:AW:14:A:H2'	22:AW:15:G:O4'	2.09	0.53
27:BE:15:PHE:CE1	38:BT:81:PRO:HD3	2.44	0.53
27:BE:141:ILE:HG12	60:BA:2051:A:H4'	1.90	0.53
28:BF:24:LEU:HD13	28:BF:119:ARG:HE	1.72	0.53
37:BS:89:ARG:HB3	37:BS:92:TYR:HB3	1.91	0.53
46:B1:26:ARG:HH11	46:B1:26:ARG:HA	1.73	0.53
48:BN:120:LEU:CD2	48:BN:122:VAL:HG23	2.38	0.53
53:B7:30:VAL:O	53:B7:34:ARG:HG2	2.09	0.53
60:BA:193:U:H2'	60:BA:194:G:H8	1.73	0.53
60:BA:698:C:H42	60:BA:763:G:H1	1.57	0.53
60:BA:828:U:H2'	60:BA:829:A:C5	2.44	0.53
60:BA:992:C:H2'	60:BA:993:G:C8	2.43	0.53
60:BA:2809:A:H2'	60:BA:2810:A:C8	2.44	0.53
7:CH:83:ILE:HB	7:CH:137:VAL:HG22	1.91	0.53
11:CL:113:ARG:HH21	11:CL:115:LYS:HB2	1.74	0.53
18:CS:78:ARG:HE	20:CA:1222:G:H5"	1.74	0.53
20:CA:312:C:H2'	20:CA:313:A:C8	2.44	0.53
20:CA:444:C:H2'	20:CA:445:G:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:736:C:H2'	20:CA:737:A:C8	2.44	0.53
23:CY:390:VAL:HB	23:CY:394:ALA:HB3	1.91	0.53
25:DC:77:ALA:HB3	25:DC:95:VAL:HG13	1.91	0.53
27:DE:82:ARG:NH2	60:DA:2637:U:H5"	2.24	0.53
39:DU:15:LYS:O	39:DU:18:LEU:HB2	2.09	0.53
44:DZ:48:PHE:HA	44:DZ:51:ALA:HB3	1.91	0.53
46:D1:23:LYS:NZ	46:D1:33:LYS:HB3	2.24	0.53
50:D3:20:LYS:HA	50:D3:23:LEU:HD12	1.90	0.53
54:D8:4:MET:O	54:D8:62:LEU:HD11	2.09	0.53
60:DA:1018:C:C2	60:DA:1019:U:C6	2.97	0.53
60:DA:1229:G:H2'	60:DA:1230:C:C6	2.43	0.53
60:DA:1569:A:H2'	60:DA:1570:A:C8	2.44	0.53
60:DA:2134:A:H1'	60:DA:2159:G:H21	1.74	0.53
60:DA:2700:C:N4	60:DA:2707:G:H1	2.07	0.53
60:DA:2715:C:H2'	60:DA:2716:U:C6	2.43	0.53
1:AB:124:SER:HB3	1:AB:125:PRO:HD2	1.91	0.53
8:AI:86:VAL:HG22	8:AI:93:ARG:HB2	1.90	0.53
12:AM:19:LEU:HD13	12:AM:22:ILE:HD12	1.90	0.53
15:AP:45:THR:HG22	15:AP:47:ASP:H	1.73	0.53
20:AA:114:U:C4	20:AA:313:A:N1	2.76	0.53
23:AY:162:VAL:HG21	23:AY:219:VAL:HG21	1.90	0.53
38:BT:20:PRO:HG3	38:BT:86:ILE:HG12	1.91	0.53
41:BW:39:THR:HB	41:BW:44:ALA:HB2	1.91	0.53
48:BN:56:ASN:HB3	48:BN:125:GLY:C	2.34	0.53
48:BN:115:ARG:HH11	48:BN:115:ARG:HG2	1.73	0.53
52:B6:6:ARG:HD2	52:B6:6:ARG:H	1.74	0.53
52:B6:14:THR:O	52:B6:50:ARG:HG2	2.09	0.53
60:BA:38:A:H2'	60:BA:39:C:C6	2.44	0.53
60:BA:573:G:H1	60:BA:2030:A:H3'	1.74	0.53
60:BA:883:G:H2'	60:BA:884:C:C6	2.43	0.53
60:BA:1221:C:H2'	60:BA:122(A):C:H6	1.72	0.53
60:BA:1523:U:H2'	60:BA:1524:G:C8	2.43	0.53
60:BA:1564:C:H2'	60:BA:1565:C:C6	2.44	0.53
60:BA:2137:C:H2'	60:BA:2138:C:C6	2.44	0.53
60:BA:2330:G:H2'	60:BA:2331:G:C8	2.44	0.53
60:BA:2623:G:H2'	60:BA:2624:G:C8	2.44	0.53
60:BA:2876:G:H2'	60:BA:2877:G:C8	2.44	0.53
1:CB:167:PRO:HD2	1:CB:188:ALA:CB	2.38	0.53
6:CG:87:VAL:HG13	6:CG:151:TYR:HB3	1.91	0.53
6:CG:94:ARG:NH1	20:CA:1377:A:OP1	2.42	0.53
7:CH:87:SER:HB3	7:CH:132:GLU:OE2	2.10	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:40:ILE:HG22	10:CK:41:THR:HG23	1.91	0.53
11:CL:36:VAL:H	11:CL:58:VAL:HA	1.74	0.53
11:CL:45:PRO:HA	11:CL:92:ASP:HB3	1.90	0.53
11:CL:85:ILE:HG13	11:CL:98:TYR:HB3	1.90	0.53
20:CA:1436:U:H2'	20:CA:1437:C:H6	1.73	0.53
29:DG:107:LEU:HD11	29:DG:178:PHE:CE1	2.44	0.53
34:DP:50:ARG:HB3	54:D8:59:LYS:HZ3	1.73	0.53
37:DS:15:ARG:HG2	60:DA:2334:G:N2	2.24	0.53
37:DS:31:SER:O	37:DS:33:LYS:N	2.42	0.53
39:DU:25:TRP:HD1	39:DU:26:GLY:N	2.02	0.53
39:DU:92:ARG:HD3	39:DU:95:LEU:HG	1.91	0.53
39:DU:107:ALA:O	39:DU:111:GLU:HG2	2.09	0.53
43:DY:73:ARG:HD2	60:DA:335:C:H4'	1.90	0.53
45:D0:34:GLY:HA3	60:DA:2353:G:H1'	1.91	0.53
60:DA:24:G:C2	60:DA:516:C:O2	2.62	0.53
60:DA:76:C:H2'	60:DA:77:C:C6	2.44	0.53
60:DA:273(A):G:H1	60:DA:364:C:N4	2.07	0.53
60:DA:442:G:H5"	60:DA:615:G:H22	1.74	0.53
60:DA:996:A:H2'	60:DA:997:G:H8	1.71	0.53
60:DA:1478:G:H2'	60:DA:1479:G:H8	1.74	0.53
60:DA:2013:A:H2'	60:DA:2014:A:C8	2.44	0.53
4:AE:101:ILE:O	4:AE:120:THR:OG1	2.26	0.52
7:AH:110:ALA:H	7:AH:121:ASP:CG	2.18	0.52
16:AQ:59:ILE:HG12	16:AQ:73:VAL:HG13	1.92	0.52
23:AY:108:PHE:CD1	23:AY:115:GLU:HG3	2.44	0.52
23:AY:390:VAL:HG21	23:AY:396:ARG:HG2	1.90	0.52
23:AY:636:PRO:HG3	32:BK:20:ALA:HA	1.91	0.52
25:BC:213:VAL:HG11	25:BC:225:ILE:CG1	2.39	0.52
28:BF:74:ARG:HE	60:BA:674:G:H1'	1.74	0.52
33:BO:27:GLY:O	33:BO:29:ASN:N	2.37	0.52
35:BQ:37:LEU:HD12	35:BQ:128:LYS:HB2	1.90	0.52
36:BR:90:ARG:NH1	60:BA:2880:C:O2'	2.41	0.52
52:B6:43:CYS:O	52:B6:44:ARG:HB2	2.09	0.52
60:BA:65:C:H2'	60:BA:66:C:H6	1.75	0.52
60:BA:150:C:H2'	60:BA:151:C:C6	2.44	0.52
60:BA:521:G:H2'	60:BA:522:G:H8	1.74	0.52
60:BA:1320:C:O2'	60:BA:1321:A:OP2	2.23	0.52
60:BA:2064:C:H2'	60:BA:2065:C:C6	2.45	0.52
60:BA:2345:G:N3	60:BA:2381:C:H2'	2.23	0.52
60:BA:2465:C:H2'	60:BA:2466:C:C6	2.45	0.52
60:BA:2538:C:H2'	60:BA:2539:C:H6	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:2709:G:H2'	60:BA:2710:C:O4'	2.08	0.52
1:CB:135:GLN:O	1:CB:139:LYS:HG3	2.09	0.52
7:CH:6:ILE:O	7:CH:10:LEU:HG	2.09	0.52
11:CL:53:ARG:H	11:CL:54:LYS:HZ1	1.57	0.52
20:CA:175:C:H2'	20:CA:176:C:H6	1.72	0.52
20:CA:1088:G:H2'	20:CA:1089:G:C8	2.43	0.52
23:CY:346:LYS:O	23:CY:348:ARG:N	2.43	0.52
27:DE:11:MET:SD	60:DA:2681:C:H5'	2.50	0.52
28:DF:154:VAL:HG13	28:DF:191:ARG:HB2	1.90	0.52
33:DO:35:VAL:O	33:DO:109:LYS:NZ	2.35	0.52
33:DO:64:ARG:HB2	33:DO:83:ALA:HB3	1.91	0.52
39:DU:64:ARG:HH21	48:DN:42:TRP:C	2.16	0.52
39:DU:67:ALA:CB	48:DN:40:PRO:HA	2.39	0.52
44:DZ:5:LEU:HD11	44:DZ:44:PHE:HB2	1.92	0.52
46:D1:43:TYR:CG	46:D1:44:PRO:HD2	2.44	0.52
55:D9:3:VAL:HG22	55:D9:37:GLY:HA3	1.91	0.52
60:DA:1135:C:H3'	60:DA:1137:G:OP2	2.09	0.52
60:DA:1409:C:H2'	60:DA:1410:G:C8	2.44	0.52
60:DA:1409:C:H2'	60:DA:1410:G:H8	1.73	0.52
60:DA:2641:G:H1	60:DA:2773:C:H42	1.56	0.52
3:AD:58:LEU:O	3:AD:62:GLN:HG2	2.09	0.52
7:AH:14:ARG:HH12	20:AA:876:G:H4'	1.74	0.52
7:AH:120:THR:N	7:AH:123:GLU:HB2	2.23	0.52
18:AS:63:THR:OG1	18:AS:66:MET:SD	2.63	0.52
20:AA:27:G:H2'	20:AA:28:G:C8	2.44	0.52
20:AA:1126:U:H2'	20:AA:1127:G:O4'	2.10	0.52
23:AY:55:MET:HG2	23:AY:56:GLU:H	1.73	0.52
27:BE:184:VAL:HG12	27:BE:185:LYS:H	1.74	0.52
29:BG:5:VAL:HG23	29:BG:8:LYS:HB2	1.92	0.52
40:BV:40:LEU:HA	40:BV:45:THR:HB	1.92	0.52
44:BZ:119:GLU:CD	44:BZ:119:GLU:H	2.16	0.52
60:BA:2340:G:H2'	60:BA:2341:G:H8	1.73	0.52
60:BA:2688:U:H5	60:BA:2719:G:C4	2.26	0.52
3:CD:64:LEU:HD22	3:CD:203:VAL:HG11	1.90	0.52
10:CK:34:ASP:O	10:CK:36:ASP:N	2.34	0.52
17:CR:74:ARG:HH12	20:CA:719:C:H42	1.56	0.52
20:CA:1006:C:H2'	20:CA:1007:C:C6	2.45	0.52
20:CA:1323:G:H2'	20:CA:1324:A:C8	2.43	0.52
23:CY:63:ILE:CG1	61:CY:702:GNP:O1G	2.55	0.52
23:CY:108:PHE:HD1	23:CY:115:GLU:HG3	1.75	0.52
23:CY:301:ILE:HG21	23:CY:331:TYR:HB3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:394:ALA:O	23:CY:396:ARG:N	2.43	0.52
25:DC:37:LYS:HB2	25:DC:38:PHE:CD1	2.44	0.52
25:DC:44:VAL:O	25:DC:173:HIS:HA	2.08	0.52
25:DC:65:LEU:HD12	25:DC:160:GLY:HA2	1.91	0.52
26:DD:110:GLY:HA3	26:DD:127:VAL:HG11	1.91	0.52
26:DD:245:PRO:O	26:DD:247:ALA:N	2.42	0.52
32:DK:27:LEU:HD23	32:DK:30:HIS:ND1	2.24	0.52
32:DK:124:ALA:HB3	32:DK:125:ARG:HH11	1.74	0.52
36:DR:2:ARG:CZ	60:DA:2723:C:H5"	2.39	0.52
38:DT:3:ARG:HG3	60:DA:2876:G:H4'	1.91	0.52
38:DT:128:GLU:HG2	38:DT:129:ARG:HG2	1.90	0.52
48:DN:17:ASP:O	48:DN:18:ALA:CB	2.57	0.52
48:DN:30:ILE:O	48:DN:34:LEU:HD23	2.09	0.52
51:D5:6:VAL:HG13	60:DA:2015:A:C2	2.44	0.52
60:DA:984:A:OP1	60:DA:985:C:N4	2.38	0.52
60:DA:1091:G:H2'	60:DA:1092:C:H6	1.73	0.52
60:DA:1138:G:O2'	60:DA:1139:G:O4'	2.26	0.52
60:DA:1324:G:H3'	60:DA:1325:G:H4'	1.91	0.52
60:DA:1453:A:H3'	60:DA:1454:U:H2'	1.91	0.52
60:DA:2294:C:N3	60:DA:2338:G:N2	2.44	0.52
2:AC:92:ALA:HB2	2:AC:99:VAL:HG21	1.92	0.52
10:AK:32:ILE:HD12	10:AK:72:ALA:HB2	1.90	0.52
10:AK:82:VAL:HB	10:AK:107:SER:O	2.09	0.52
12:AM:84:ILE:HD11	18:AS:63:THR:HG23	1.89	0.52
12:AM:98:VAL:HG23	12:AM:110:ARG:HH11	1.75	0.52
17:AR:44:LEU:HG	17:AR:50:ILE:HA	1.91	0.52
20:AA:68(Q):U:H2'	20:AA:68(R):C:O4'	2.10	0.52
20:AA:130:A:N1	20:AA:233:C:H1'	2.24	0.52
20:AA:1507:A:H2'	20:AA:1508:G:C8	2.44	0.52
23:AY:494:GLU:HB2	23:AY:511:LYS:HE2	1.91	0.52
26:BD:242:ARG:NH1	60:BA:1902:C:OP1	2.41	0.52
33:BO:34:THR:H	33:BO:37:ASP:CG	2.17	0.52
34:BP:66:GLY:HA2	60:BA:2415:G:H4'	1.91	0.52
36:BR:39:PRO:HA	36:BR:42:LYS:HG3	1.92	0.52
37:BS:40:ILE:HA	37:BS:47:THR:CA	2.35	0.52
40:BV:24:LYS:HE3	40:BV:64:HIS:HD2	1.74	0.52
42:BX:61:GLY:HA3	42:BX:73:ARG:HB2	1.90	0.52
48:BN:11:PRO:HB2	48:BN:51:PHE:HE1	1.74	0.52
48:BN:137:LYS:NZ	48:BN:138:LEU:HD23	2.24	0.52
49:B2:7:ARG:HA	49:B2:10:LEU:HD12	1.92	0.52
60:BA:19:C:H2'	60:BA:20:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:730:C:OP1	60:BA:1775:U:H1'	2.10	0.52
60:BA:1023:U:O2'	60:BA:1123:C:OP2	2.23	0.52
60:BA:1131:G:O2'	60:BA:1132:A:OP2	2.24	0.52
60:BA:1445:C:H2'	60:BA:1446:C:H6	1.74	0.52
60:BA:1999:C:H5"	60:BA:2723:C:O2'	2.09	0.52
60:BA:2173:A:H8	60:BA:2173:A:OP2	1.93	0.52
60:BA:2178:C:H2'	60:BA:2179:C:C6	2.44	0.52
3:CD:34:GLU:HA	3:CD:37:PRO:HG3	1.91	0.52
10:CK:85:ARG:HA	10:CK:110:ASP:O	2.09	0.52
19:CT:50:GLU:HG2	19:CT:51:GLU:H	1.74	0.52
20:CA:68(H):G:N2	20:CA:68(R):C:N3	2.46	0.52
20:CA:552:U:H2'	20:CA:553:A:C8	2.39	0.52
20:CA:772:U:H2'	20:CA:773:G:C8	2.44	0.52
20:CA:827:U:H3	20:CA:872:A:N6	2.06	0.52
20:CA:1440(J):C:H1'	20:CA:1440(K):G:C2	2.45	0.52
23:CY:30:GLU:O	23:CY:31:ARG:C	2.47	0.52
23:CY:630:GLN:O	23:CY:646:PHE:HB2	2.08	0.52
25:DC:74:ARG:O	25:DC:92:ALA:HA	2.09	0.52
30:DH:89:ILE:HG22	30:DH:162:ILE:HG23	1.90	0.52
32:DK:90:LYS:HG3	32:DK:91:PRO:HD2	1.90	0.52
37:DS:99:LYS:HG2	37:DS:100:ALA:N	2.23	0.52
39:DU:81:HIS:CG	60:DA:1151:G:H4'	2.43	0.52
48:DN:137:LYS:NZ	48:DN:138:LEU:HD23	2.24	0.52
49:D2:21:LEU:HA	49:D2:24:LEU:HD12	1.91	0.52
60:DA:65:C:H2'	60:DA:66:C:C6	2.43	0.52
60:DA:307:G:H21	60:DA:330:A:N6	2.07	0.52
60:DA:926:A:H2'	60:DA:928:G:H8	1.74	0.52
60:DA:1053:C:H2'	60:DA:1054:A:O4'	2.10	0.52
60:DA:1115:G:H2'	60:DA:1116:C:H6	1.74	0.52
60:DA:1603:A:H5'	60:DA:1604:C:OP2	2.09	0.52
60:DA:1947:C:H2'	60:DA:1948:G:H8	1.74	0.52
60:DA:2397:G:H2'	60:DA:2398:U:C6	2.45	0.52
60:DA:2656:U:O4	60:DA:2665:A:N7	2.42	0.52
13:AN:17:LYS:HD2	20:AA:1316:G:H5"	1.90	0.52
20:AA:579:G:H2'	20:AA:580:U:H5'	1.91	0.52
20:AA:656:C:H2'	20:AA:657:G:O4'	2.09	0.52
20:AA:778:G:H2'	20:AA:779:C:H6	1.75	0.52
20:AA:1537:U:O2'	20:AA:1538:C:OP1	2.26	0.52
23:AY:137:ASN:ND2	23:AY:138:LYS:H	2.07	0.52
23:AY:526:VAL:H	23:AY:566:THR:HA	1.73	0.52
26:BD:165:ILE:HG23	26:BD:166:GLN:H	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:66:GLN:HE21	47:B4:1:MET:HE2	1.74	0.52
36:BR:53:HIS:ND1	36:BR:94:TYR:OH	2.36	0.52
43:BY:2:ARG:HG2	60:BA:106:C:H1'	1.92	0.52
45:B0:11:ARG:HH22	60:BA:2278:A:H5'	1.75	0.52
45:B0:11:ARG:NH2	60:BA:2279:G:OP2	2.42	0.52
45:B0:25:ARG:NH2	60:BA:2354:G:O2'	2.42	0.52
48:BN:26:LEU:HD23	48:BN:99:LEU:HD21	1.92	0.52
60:BA:271:G:H2'	60:BA:272:G:H8	1.73	0.52
60:BA:591:C:H42	60:BA:666:G:H1	1.57	0.52
60:BA:1498:C:H2'	60:BA:1499:C:C6	2.44	0.52
60:BA:2881:C:H2'	60:BA:2882:A:C8	2.45	0.52
3:CD:15:GLU:HB3	3:CD:63:LYS:HE2	1.92	0.52
3:CD:152:SER:HA	3:CD:155:LEU:HD12	1.91	0.52
6:CG:94:ARG:NH2	6:CG:95:ARG:HB2	2.25	0.52
8:CI:50:LEU:HD23	8:CI:53:VAL:HG23	1.90	0.52
11:CL:69:TYR:CG	11:CL:70:ILE:N	2.77	0.52
12:CM:3:ARG:HH21	12:CM:7:VAL:HG22	1.74	0.52
16:CQ:22:LEU:HD13	16:CQ:41:LYS:HG2	1.91	0.52
20:CA:163:C:H2'	20:CA:164:U:C6	2.44	0.52
23:CY:208:GLN:O	23:CY:211:GLU:HG2	2.08	0.52
28:DF:167:ALA:HA	28:DF:170:LEU:HD23	1.91	0.52
36:DR:73:VAL:O	36:DR:76:VAL:HG12	2.10	0.52
38:DT:49:VAL:O	38:DT:64:ARG:HB3	2.10	0.52
39:DU:12:ARG:HH21	60:DA:1215:G:H5"	1.74	0.52
39:DU:106:PHE:O	39:DU:109:LEU:N	2.43	0.52
42:DX:11:PRO:O	42:DX:13:LEU:HG	2.09	0.52
46:D1:41:ARG:HH12	46:D1:43:TYR:HD1	1.58	0.52
56:De:63:ILE:HB	56:De:70:LYS:HG2	1.91	0.52
60:DA:1047:G:O2'	60:DA:1109:C:N4	2.41	0.52
60:DA:1826:G:N2	60:DA:1900:A:H2	2.07	0.52
10:AK:85:ARG:NH2	20:AA:708:C:OP1	2.32	0.52
20:AA:29:G:H1	20:AA:554:C:H42	1.57	0.52
22:AW:64:G:H2'	22:AW:65:U:C6	2.44	0.52
23:AY:421:GLN:HA	23:AY:424:LEU:HD23	1.91	0.52
23:AY:443:HIS:CE1	23:AY:445:GLU:HB2	2.45	0.52
23:AY:635:GLU:O	23:AY:642:VAL:HG23	2.10	0.52
26:BD:10:THR:HG23	26:BD:13:ARG:HB3	1.92	0.52
26:BD:233:HIS:HE2	26:BD:246:PRO:HA	1.73	0.52
37:BS:26:LEU:HD21	37:BS:101:LEU:HD13	1.92	0.52
37:BS:61:ASN:OD1	37:BS:62:LYS:N	2.43	0.52
44:BZ:144:LEU:HD12	44:BZ:174:VAL:HG23	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:B0:62:LEU:HG	60:BA:2366:A:H4'	1.91	0.52
48:BN:30:ILE:O	48:BN:34:LEU:HD23	2.09	0.52
48:BN:76:SER:HG	60:BA:2642:G:P	2.32	0.52
53:B7:16:HIS:HE1	60:BA:684:G:H5'	1.75	0.52
55:B9:22:ARG:NH2	55:B9:35:ARG:HH22	2.06	0.52
60:BA:577:G:O2'	60:BA:1254:A:OP1	2.19	0.52
60:BA:956:G:H1'	60:BA:960:A:N6	2.25	0.52
60:BA:1045:A:OP1	60:BA:1046:A:O2'	2.23	0.52
60:BA:1638:C:H4'	60:BA:2710:C:O2	2.09	0.52
60:BA:2229:C:H2'	60:BA:2230:G:H8	1.75	0.52
60:BA:2234:G:H2'	60:BA:2235:G:O4'	2.09	0.52
60:BA:2893:G:H5"	60:BA:2894:G:O4'	2.10	0.52
1:CB:81:VAL:O	1:CB:85:ALA:N	2.38	0.52
3:CD:62:GLN:NE2	20:CA:544:G:OP1	2.33	0.52
3:CD:118:ARG:HG3	3:CD:136:PRO:HG2	1.91	0.52
7:CH:5:PRO:HA	7:CH:8:ASP:HB3	1.91	0.52
7:CH:111:ILE:O	7:CH:134:ILE:N	2.42	0.52
16:CQ:83:ASP:OD1	16:CQ:83:ASP:N	2.41	0.52
22:CW:72:C:H2'	22:CW:73:A:O4'	2.10	0.52
23:CY:602:LEU:HA	23:CY:677:GLN:O	2.10	0.52
25:DC:150:ILE:O	25:DC:154:ILE:HG13	2.10	0.52
39:DU:3:ARG:HD3	60:DA:445:C:H4'	1.91	0.52
52:D6:39:TYR:HE2	60:DA:2347:C:H4'	1.74	0.52
60:DA:54:G:H1	60:DA:116:C:H42	1.58	0.52
60:DA:413:C:H2'	60:DA:414:C:C6	2.44	0.52
60:DA:579:G:O2'	60:DA:2019:A:OP1	2.24	0.52
60:DA:1771:C:N4	60:DA:1980:G:H1	2.05	0.52
60:DA:2020:A:N1	60:DA:2034:U:O4	2.42	0.52
60:DA:2331:G:H21	60:DA:2336:A:H2	1.57	0.52
60:DA:2870:C:H2'	60:DA:2871:C:O4'	2.10	0.52
1:AB:69:LEU:HD21	1:AB:155:LEU:HG	1.90	0.52
6:AG:42:ILE:HG21	6:AG:116:ALA:HB3	1.92	0.52
8:AI:93:ARG:NE	20:AA:1178:G:OP1	2.40	0.52
20:AA:1250:A:H3'	20:AA:1251:A:C8	2.45	0.52
20:AA:1271:G:H2'	20:AA:1272:G:C8	2.45	0.52
22:AW:23:A:H2'	22:AW:24:G:H8	1.75	0.52
23:AY:330:VAL:O	23:AY:331:TYR:CG	2.63	0.52
23:AY:566:THR:HG22	23:AY:567:LEU:N	2.14	0.52
23:AY:566:THR:O	23:AY:567:LEU:HD23	2.09	0.52
25:BC:74:ARG:O	25:BC:92:ALA:HA	2.09	0.52
26:BD:13:ARG:HA	26:BD:16:MET:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:96:HIS:HA	26:BD:102:LYS:HG3	1.91	0.52
29:BG:128:ARG:NH1	60:BA:2316:C:H1'	2.25	0.52
31:BJ:79:UNK:O	31:BJ:81:UNK:N	2.43	0.52
54:B8:4:MET:O	54:B8:62:LEU:HD11	2.10	0.52
60:BA:175:G:H2'	60:BA:176:G:O4'	2.10	0.52
60:BA:1091:G:H2'	60:BA:1092:C:H6	1.75	0.52
60:BA:1346:G:H2'	60:BA:1347:G:H8	1.75	0.52
60:BA:1534:G:H3'	60:BA:1535:U:H5"	1.92	0.52
60:BA:2645:G:H3'	60:BA:2646:C:C5'	2.39	0.52
15:CP:27:LYS:HG3	15:CP:30:GLY:HA3	1.91	0.52
20:CA:1237:C:H42	20:CA:1337:G:H1	1.57	0.52
20:CA:1338:G:H21	22:CW:41:A:H1'	1.74	0.52
20:CA:1381:U:H2'	20:CA:1382:C:H5'	1.92	0.52
22:CW:39:U:H2'	22:CW:40:G:H8	1.75	0.52
23:CY:534:ILE:HD11	23:CY:570:GLY:HA3	1.92	0.52
23:CY:535:PRO:O	23:CY:537:GLU:N	2.43	0.52
26:DD:127:VAL:HA	26:DD:193:VAL:HG13	1.91	0.52
34:DP:25:SER:HB2	60:DA:812:C:H3'	1.91	0.52
37:DS:92:TYR:C	37:DS:94:TYR:H	2.17	0.52
41:DW:41:LYS:NZ	60:DA:2010:G:OP2	2.33	0.52
46:D1:15:ALA:HA	46:D1:40:ARG:O	2.09	0.52
60:DA:1712:C:H42	60:DA:1746:G:H1	1.58	0.52
60:DA:2817:G:O6	60:DA:2829:C:N3	2.43	0.52
60:DA:2821:A:H2'	60:DA:2822:G:H8	1.74	0.52
1:AB:106:LYS:HD2	1:AB:106:LYS:H	1.75	0.52
1:AB:164:VAL:HG12	1:AB:165:VAL:H	1.74	0.52
5:AF:21:LEU:O	5:AF:25:ILE:HG12	2.10	0.52
20:AA:325:A:H2'	20:AA:326:G:O4'	2.10	0.52
20:AA:1422:G:H2'	20:AA:1423:G:H8	1.74	0.52
20:AA:1528:U:O2'	20:AA:1530:G:H5'	2.09	0.52
23:AY:21:ILE:HG22	60:BA:2661:G:C5'	2.39	0.52
23:AY:213:HIS:O	23:AY:216:LEU:HB3	2.08	0.52
25:BC:33:LEU:HD13	25:BC:221:PRO:HB2	1.92	0.52
27:BE:94:GLU:CD	27:BE:94:GLU:H	2.17	0.52
37:BS:14:VAL:HA	60:BA:2334:G:H4'	1.91	0.52
37:BS:15:ARG:HG2	60:BA:2334:G:N2	2.25	0.52
39:BU:90:VAL:HG21	40:BV:11:GLN:CD	2.35	0.52
48:BN:78:TYR:CB	60:BA:2642:G:OP1	2.49	0.52
60:BA:528:A:N6	60:BA:2042:A:C8	2.77	0.52
60:BA:994:C:O2'	60:BA:995:C:H3'	2.09	0.52
60:BA:1819:A:H4'	60:BA:1820:U:H5'	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:2074:U:H2'	60:BA:2597:G:H21	1.74	0.52
60:BA:2340:G:H2'	60:BA:2341:G:C8	2.45	0.52
60:BA:2708:G:H8	60:BA:2708:G:O5'	1.93	0.52
14:CO:33:THR:O	14:CO:36:ILE:HB	2.10	0.52
19:CT:14:LYS:HG3	19:CT:17:ARG:NH2	2.25	0.52
20:CA:395:C:H2'	20:CA:396:G:H8	1.74	0.52
23:CY:628:ARG:HE	23:CY:648:PRO:HG2	1.74	0.52
25:DC:53:ARG:C	25:DC:55:SER:H	2.18	0.52
37:DS:89:ARG:HB3	37:DS:92:TYR:HB3	1.92	0.52
39:DU:15:LYS:HG2	39:DU:18:LEU:HD12	1.90	0.52
43:DY:49:VAL:HG12	43:DY:50:ARG:H	1.75	0.52
48:DN:26:LEU:HD23	48:DN:99:LEU:HD21	1.92	0.52
48:DN:129:PRO:O	48:DN:131:GLN:N	2.43	0.52
56:De:108:ALA:HA	56:De:112:LYS:HD3	1.91	0.52
59:DB:36:C:H2'	59:DB:37:C:C6	2.43	0.52
60:DA:698:C:O2'	60:DA:734:A:N6	2.43	0.52
60:DA:887:A:HO2'	60:DA:889:C:H5	1.57	0.52
60:DA:1354:A:H2'	60:DA:1355:G:H5'	1.91	0.52
60:DA:1403:C:H2'	60:DA:1404:C:C6	2.45	0.52
60:DA:1690:A:H2'	60:DA:1691:C:O4'	2.10	0.52
60:DA:2282:G:H1	60:DA:2427:C:H42	1.56	0.52
60:DA:2528:U:H2'	60:DA:2530:A:OP1	2.09	0.52
60:DA:2593:U:H3	60:DA:2600:A:N6	2.05	0.52
60:DA:2599:G:H8	60:DA:2599:G:OP2	1.93	0.52
60:DA:2649:U:H2'	60:DA:2650:U:C6	2.44	0.52
3:AD:21:LEU:HD22	3:AD:114:ARG:NE	2.23	0.52
5:AF:8:ILE:HD11	5:AF:79:LEU:HD13	1.91	0.52
11:AL:124:LYS:HE2	20:AA:500:G:H5'	1.92	0.52
12:AM:48:LEU:HD13	12:AM:53:VAL:HG22	1.92	0.52
16:AQ:48:GLU:O	16:AQ:50:LYS:N	2.43	0.52
20:AA:27:G:H1	20:AA:556:C:H42	1.57	0.52
25:BC:63:VAL:HG21	25:BC:195:ARG:HH12	1.73	0.52
29:BG:25:TYR:O	29:BG:27:ASN:N	2.43	0.52
34:BP:23:PRO:HB3	34:BP:29:LYS:CB	2.39	0.52
36:BR:61:HIS:HE1	60:BA:2850:A:C2	2.28	0.52
37:BS:89:ARG:NH2	59:BB:48:A:OP1	2.42	0.52
37:BS:99:LYS:HG2	37:BS:100:ALA:N	2.24	0.52
44:BZ:18:LEU:HB3	44:BZ:25:PRO:HD3	1.92	0.52
50:B3:7:LYS:HD3	50:B3:34:GLU:HG3	1.92	0.52
53:B7:40:TRP:H	53:B7:40:TRP:CD1	2.28	0.52
54:B8:42:ARG:NH2	60:BA:2382:G:H21	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1041:C:H2'	60:BA:1042:G:O4'	2.10	0.52
60:BA:1114:G:H2'	60:BA:1115:G:H8	1.73	0.52
60:BA:1936:A:OP2	60:BA:1961:C:N4	2.42	0.52
60:BA:2065:C:H2'	60:BA:2066:C:H6	1.74	0.52
60:BA:2074:U:O2'	60:BA:2597:G:N3	2.33	0.52
60:BA:2230:G:H2'	60:BA:2231:C:C6	2.45	0.52
60:BA:2787:C:H2'	60:BA:2788:C:C6	2.44	0.52
12:CM:8:GLU:HG2	12:CM:22:ILE:HG23	1.91	0.52
20:CA:58:C:H2'	20:CA:59:A:O4'	2.09	0.52
20:CA:861:G:H1	20:CA:868:C:H42	1.56	0.52
20:CA:1507:A:OP2	21:CV:15:A:N6	2.40	0.52
23:CY:538:TYR:OH	23:CY:577:SER:O	2.27	0.52
25:DC:47:LYS:HG2	25:DC:212:SER:HB2	1.91	0.52
26:DD:79:VAL:O	26:DD:94:LEU:O	2.28	0.52
26:DD:183:ARG:HG3	26:DD:270:ILE:HA	1.92	0.52
35:DQ:51:ARG:HA	35:DQ:54:MET:HE2	1.92	0.52
38:DT:58:ASN:ND2	60:DA:2682:U:O2'	2.42	0.52
39:DU:65:ILE:O	39:DU:69:CYS:HB2	2.10	0.52
46:D1:91:LYS:HA	46:D1:94:LEU:HD22	1.91	0.52
60:DA:745:G:N2	60:DA:750:A:H61	2.06	0.52
1:AB:82:ARG:NH1	1:AB:83:MET:SD	2.83	0.52
2:AC:88:ARG:HA	2:AC:91:LEU:HG	1.92	0.52
6:AG:46:ALA:O	6:AG:50:ILE:HG13	2.10	0.52
11:AL:31:PRO:HB2	20:AA:552:U:O2'	2.10	0.52
11:AL:33:ARG:HG3	20:AA:363:A:OP1	2.10	0.52
19:AT:105:SER:HB3	20:AA:186(P):U:O2	2.10	0.52
20:AA:153:C:H42	20:AA:168:G:H1	1.57	0.52
20:AA:440:A:OP2	20:AA:493:G:N1	2.43	0.52
20:AA:677:U:H2'	20:AA:678:U:H6	1.74	0.52
20:AA:903:G:H2'	20:AA:904:C:C6	2.45	0.52
23:AY:317:MET:HE2	23:AY:325:LEU:HD12	1.91	0.52
25:BC:73:VAL:HG22	25:BC:75:VAL:N	2.24	0.52
25:BC:120:VAL:HA	25:BC:123:ALA:HB3	1.92	0.52
26:BD:269:PHE:CE2	60:BA:2219:G:H5"	2.44	0.52
38:BT:84:GLN:HG2	38:BT:86:ILE:HG13	1.92	0.52
39:BU:64:ARG:CD	48:BN:41:ASP:C	2.83	0.52
46:B1:18:ILE:CG2	60:BA:380:U:H4'	2.40	0.52
55:B9:30:PRO:HB2	60:BA:2527:C:H5"	1.91	0.52
60:BA:947:G:H2'	60:BA:948:G:H8	1.74	0.52
60:BA:966:G:H2'	60:BA:967:C:C6	2.45	0.52
60:BA:2055:C:H41	60:BA:2499:C:H2'	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:119:ARG:HD3	2:CC:140:ARG:HH12	1.74	0.52
3:CD:61:LYS:HG3	3:CD:206:PHE:HD2	1.74	0.52
20:CA:947:G:O2'	20:CA:1306:A:H4'	2.09	0.52
20:CA:1137:C:H4'	20:CA:1138:G:C2	2.45	0.52
20:CA:1230:C:H5'	22:CW:30:C:H5"	1.91	0.52
20:CA:1247:U:H3	20:CA:1290:G:H1	1.58	0.52
20:CA:1493:A:P	24:CU:2:DPP:HB3	2.49	0.52
23:CY:379:GLY:O	23:CY:380:LEU:HB2	2.09	0.52
26:DD:78:LYS:HD3	26:DD:78:LYS:H	1.73	0.52
26:DD:261:LYS:HG2	26:DD:263:ARG:H	1.75	0.52
27:DE:26:ILE:HD11	27:DE:182:LEU:HD23	1.92	0.52
27:DE:102:VAL:HB	27:DE:199:ARG:O	2.10	0.52
28:DF:2:LYS:HD3	28:DF:119:ARG:HH21	1.74	0.52
29:DG:60:LEU:O	29:DG:63:ILE:HG12	2.09	0.52
33:DO:9:GLU:OE2	33:DO:81:ASP:HB2	2.10	0.52
43:DY:81:LYS:NZ	43:DY:99:CYS:SG	2.83	0.52
53:D7:30:VAL:O	53:D7:34:ARG:HG2	2.10	0.52
53:D7:31:LEU:HA	53:D7:34:ARG:HG2	1.92	0.52
53:D7:32:LYS:HA	53:D7:35:ARG:HG3	1.90	0.52
54:D8:42:ARG:HG3	60:DA:2350:C:H5"	1.92	0.52
56:De:101:GLU:C	56:De:103:VAL:H	2.18	0.52
60:DA:1131:G:O2'	60:DA:1132:A:OP2	2.23	0.52
60:DA:1829:A:H2'	60:DA:1830:C:O4'	2.10	0.52
3:AD:49:ARG:HA	3:AD:49:ARG:NH1	2.25	0.52
3:AD:79:PHE:CE2	3:AD:207:TYR:HB3	2.45	0.52
11:AL:107:ALA:O	11:AL:109:GLY:N	2.42	0.52
15:AP:74:LEU:HD22	15:AP:79:VAL:HB	1.91	0.52
16:AQ:25:ARG:O	16:AQ:26:GLN:NE2	2.43	0.52
20:AA:674:G:H2'	20:AA:675:A:C8	2.45	0.52
20:AA:806:C:H2'	20:AA:807:A:H8	1.73	0.52
20:AA:1355:G:H2'	20:AA:1356:G:C8	2.44	0.52
20:AA:1381:U:H2'	20:AA:1382:C:H5'	1.92	0.52
20:AA:1419:G:H2'	20:AA:1420:C:H6	1.75	0.52
22:AW:72:C:H2'	22:AW:73:A:O4'	2.09	0.52
23:AY:259:PHE:HB2	23:AY:272:LEU:HD13	1.91	0.52
25:BC:60:ARG:HG3	25:BC:62:THR:CG2	2.39	0.52
26:BD:12:SER:HB2	26:BD:208:LYS:HB3	1.90	0.52
27:BE:114:ALA:HA	60:BA:1655:A:H4'	1.90	0.52
29:BG:42:GLY:C	60:BA:2306:C:H42	2.15	0.52
29:BG:135:LEU:O	60:BA:2305:A:H1'	2.09	0.52
33:BO:85:VAL:HG21	33:BO:114:ILE:HG21	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BQ:26:TYR:O	35:BQ:102:VAL:HG21	2.10	0.52
39:BU:97:ASP:C	39:BU:99:ALA:H	2.16	0.52
40:BV:19:LYS:HG3	40:BV:20:LEU:H	1.75	0.52
48:BN:129:PRO:O	48:BN:131:GLN:N	2.43	0.52
49:B2:25:VAL:HG11	49:B2:61:LEU:HG	1.92	0.52
51:B5:4:HIS:N	51:B5:4:HIS:ND1	2.58	0.52
60:BA:545:G:H1'	60:BA:548:A:N6	2.25	0.52
60:BA:686:G:H21	60:BA:788:A:H61	1.56	0.52
60:BA:1541:U:H3'	60:BA:1542:G:O3'	2.09	0.52
60:BA:1569:A:H2'	60:BA:1570:A:C8	2.44	0.52
60:BA:2038:G:H2'	60:BA:2039:C:O4'	2.10	0.52
60:BA:2379:G:H2'	60:BA:2380:C:C6	2.45	0.52
1:CB:208:ILE:HD13	1:CB:239:VAL:HA	1.92	0.52
2:CC:61:ALA:C	2:CC:63:ASN:H	2.18	0.52
11:CL:34:ARG:CG	11:CL:82:VAL:HG13	2.40	0.52
11:CL:76:ASN:H	11:CL:77:LEU:HD12	1.75	0.52
16:CQ:11:VAL:HG23	16:CQ:20:THR:HB	1.92	0.52
20:CA:154:C:N4	20:CA:167:G:H1	2.05	0.52
20:CA:1113:C:H2'	20:CA:1114:C:C6	2.44	0.52
20:CA:1504:G:H4'	20:CA:1505:G:O5'	2.09	0.52
22:CW:58:A:O2'	22:CW:60:U:OP2	2.28	0.52
25:DC:6:LYS:HD2	60:DA:2132:U:O4	2.10	0.52
25:DC:111:PHE:CE1	25:DC:137:LEU:HD13	2.45	0.52
25:DC:132:LEU:O	25:DC:137:LEU:N	2.43	0.52
32:DK:103:GLN:O	32:DK:107:ILE:HG12	2.10	0.52
35:DQ:13:GLN:H	60:DA:910:A:N6	2.08	0.52
35:DQ:14:ARG:HB3	35:DQ:41:TRP:CZ2	2.45	0.52
37:DS:96:GLY:O	37:DS:100:ALA:HB2	2.09	0.52
40:DV:15:GLU:HB3	40:DV:16:PRO:CD	2.39	0.52
44:DZ:30:ASN:O	44:DZ:32:HIS:N	2.39	0.52
44:DZ:166:SER:H	44:DZ:167:PRO:HA	1.74	0.52
48:DN:11:PRO:HB2	48:DN:51:PHE:CE1	2.45	0.52
60:DA:96:G:H2'	60:DA:97:C:H6	1.74	0.52
60:DA:401:A:H2'	60:DA:402:A:C8	2.45	0.52
60:DA:1346:G:H2'	60:DA:1347:G:H8	1.75	0.52
60:DA:1473:G:H2'	60:DA:1474:C:H6	1.74	0.52
60:DA:2041:U:H6	60:DA:2041:U:OP2	1.93	0.52
60:DA:2345:G:N3	60:DA:2381:C:H2'	2.25	0.52
60:DA:2865:U:H3'	60:DA:2866:U:O2	2.09	0.52
1:AB:171:ALA:HA	1:AB:174:VAL:H	1.74	0.51
6:AG:78:ARG:HD2	6:AG:79:ARG:HD3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:322:C:H41	20:AA:328:C:H6	1.58	0.51
20:AA:1246:C:H42	20:AA:1291:G:H1	1.58	0.51
20:AA:1429:C:H2'	20:AA:1430:C:H6	1.74	0.51
22:AW:70:G:H4'	60:BA:1893:C:O2'	2.09	0.51
23:AY:529:ILE:HD11	23:AY:534:ILE:HB	1.91	0.51
25:BC:24:ASP:O	25:BC:28:ARG:NE	2.39	0.51
26:BD:273:ARG:HH22	60:BA:1798:U:P	2.33	0.51
29:BG:39:ILE:HG13	29:BG:92:VAL:HG13	1.90	0.51
32:BK:132:ARG:HH12	32:BK:138:VAL:HG23	1.75	0.51
34:BP:25:SER:HB2	60:BA:812:C:H3'	1.92	0.51
36:BR:5:LYS:HE3	60:BA:2820:A:H4'	1.93	0.51
37:BS:66:ALA:HB1	37:BS:99:LYS:HD2	1.92	0.51
41:BW:25:ARG:NH2	41:BW:74:ALA:H	2.08	0.51
45:B0:34:GLY:N	45:B0:61:ALA:HB3	2.23	0.51
48:BN:11:PRO:HB2	48:BN:51:PHE:CE1	2.45	0.51
53:B7:42:LEU:HD21	60:BA:466:A:H5"	1.92	0.51
54:B8:61:LEU:O	54:B8:64:TYR:N	2.37	0.51
60:BA:1312:U:H5'	60:BA:1313:U:C6	2.45	0.51
60:BA:2041:U:H2'	60:BA:2042:A:O4'	2.10	0.51
60:BA:2085:C:H2'	60:BA:2086:U:H6	1.75	0.51
3:CD:165:MET:O	3:CD:167:GLY:N	2.43	0.51
6:CG:42:ILE:HG21	6:CG:116:ALA:HB3	1.91	0.51
8:CI:112:LYS:HZ1	8:CI:116:LYS:HB2	1.75	0.51
16:CQ:22:LEU:HD11	16:CQ:39:SER:HB2	1.93	0.51
20:CA:217:C:H2'	20:CA:218:C:H6	1.75	0.51
20:CA:1175:G:H2'	20:CA:1176:A:O4'	2.10	0.51
20:CA:1225:A:H2'	20:CA:1226:C:C6	2.45	0.51
20:CA:1494:G:H2'	20:CA:1495:U:H6	1.75	0.51
23:CY:163:VAL:HG22	23:CY:258:VAL:HG21	1.92	0.51
25:DC:25:GLU:O	25:DC:29:LEU:HB2	2.10	0.51
28:DF:25:PRO:HB2	28:DF:27:GLU:O	2.09	0.51
28:DF:169:ASN:ND2	60:DA:323:G:H3'	2.25	0.51
60:DA:142:G:H2'	60:DA:143:C:C6	2.45	0.51
60:DA:1041:C:H2'	60:DA:1042:G:O4'	2.10	0.51
60:DA:1696:G:H2'	60:DA:1697:G:O4'	2.09	0.51
60:DA:2037:G:H2'	60:DA:2038:G:H8	1.69	0.51
60:DA:2576:G:C8	60:DA:2581:G:N7	2.79	0.51
3:AD:92:VAL:O	3:AD:96:LEU:HB2	2.11	0.51
20:AA:1113:C:H2'	20:AA:1114:C:C6	2.45	0.51
23:AY:519:ARG:HD3	23:AY:677:GLN:HA	1.91	0.51
25:BC:48:LEU:HD13	25:BC:50:ILE:HG12	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:45:ASN:HB2	60:BA:1812:A:O2'	2.09	0.51
35:BQ:56:ARG:HH11	44:BZ:180:VAL:HG11	1.75	0.51
42:BX:36:LYS:HD2	60:BA:1598:C:H5'	1.92	0.51
42:BX:66:LEU:HD13	60:BA:64:A:H1'	1.92	0.51
46:B1:15:ALA:H	46:B1:41:ARG:HG2	1.76	0.51
59:BB:14:U:H1'	59:BB:107:U:H1'	1.91	0.51
60:BA:15:G:O6	60:BA:525:U:O4	2.28	0.51
60:BA:576:U:H4'	60:BA:2502:G:C5	2.44	0.51
60:BA:907:U:H2'	60:BA:908:C:C6	2.45	0.51
60:BA:1473:G:H2'	60:BA:1474:C:H6	1.74	0.51
60:BA:1654:A:H2'	60:BA:1655:A:C8	2.45	0.51
60:BA:2625:G:H2'	60:BA:2626:C:O4'	2.10	0.51
60:BA:2732:G:H3'	60:BA:2733:A:O4'	2.10	0.51
1:CB:19:HIS:CG	1:CB:20:GLU:N	2.79	0.51
3:CD:61:LYS:HD3	3:CD:207:TYR:CZ	2.45	0.51
12:CM:58:GLU:O	12:CM:62:ASN:ND2	2.43	0.51
12:CM:122:LYS:HB3	20:CA:953:G:O2'	2.10	0.51
20:CA:974:A:H4'	20:CA:975:A:H3'	1.91	0.51
20:CA:1266:G:N2	20:CA:1268:A:H3'	2.25	0.51
20:CA:1505:G:H5'	20:CA:1506:U:H5"	1.90	0.51
23:CY:223:PHE:O	23:CY:248:LYS:NZ	2.41	0.51
27:DE:36:ARG:NH2	27:DE:86:PRO:HG2	2.25	0.51
31:DJ:111:UNK:O	31:DJ:116:UNK:HA	2.10	0.51
48:DN:63:THR:CG2	60:DA:1141:U:P	2.87	0.51
48:DN:120:LEU:HD21	48:DN:122:VAL:CG2	2.40	0.51
60:DA:1306:C:N3	60:DA:1622:G:O6	2.43	0.51
60:DA:1687:G:H21	60:DA:1701:A:H62	1.56	0.51
60:DA:2080:G:H2'	60:DA:2081:C:C6	2.45	0.51
60:DA:2773:C:H2'	60:DA:2774:C:H6	1.75	0.51
1:AB:171:ALA:O	1:AB:175:ARG:HB2	2.11	0.51
3:AD:135:LEU:H	3:AD:135:LEU:HD22	1.75	0.51
20:AA:5:U:O2'	20:AA:6:G:O5'	2.27	0.51
20:AA:68(C):C:H2'	20:AA:68(D):C:C6	2.46	0.51
20:AA:309:G:H2'	20:AA:310:G:C8	2.45	0.51
20:AA:424:G:H2'	20:AA:425:G:O4'	2.09	0.51
20:AA:955:U:H2'	20:AA:956:U:O4'	2.09	0.51
20:AA:1215:G:H2'	20:AA:1216:G:C8	2.46	0.51
20:AA:1229:A:H2'	20:AA:1230:C:C6	2.45	0.51
20:AA:1347:G:N2	20:AA:1373:G:H2'	2.26	0.51
23:AY:86:GLY:C	23:AY:88:VAL:H	2.18	0.51
23:AY:224:ASP:HB2	23:AY:245:ALA:HB2	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:539:ILE:O	23:AY:542:VAL:HG12	2.10	0.51
26:BD:157:ARG:HE	60:BA:1818:U:H6	1.58	0.51
27:BE:177:PRO:C	27:BE:179:GLU:H	2.17	0.51
29:BG:91:ARG:NH1	60:BA:2314:C:OP1	2.44	0.51
29:BG:122:PRO:HA	29:BG:125:PHE:HE1	1.76	0.51
34:BP:27:HIS:HD2	60:BA:813:U:H3'	1.74	0.51
34:BP:61:ARG:NH1	54:B8:13:ARG:HD2	2.20	0.51
36:BR:22:ARG:HG2	36:BR:69:ASP:O	2.10	0.51
37:BS:15:ARG:HG2	60:BA:2334:G:H21	1.74	0.51
38:BT:27:THR:C	38:BT:87:ASP:HB2	2.36	0.51
39:BU:3:ARG:HD3	60:BA:445:C:H5"	1.93	0.51
40:BV:78:LYS:O	40:BV:80:GLN:N	2.44	0.51
48:BN:132:ALA:O	48:BN:133:GLN:C	2.53	0.51
49:B2:33:MET:HA	49:B2:36:ARG:HE	1.74	0.51
52:B6:8:LYS:HD3	52:B6:27:LYS:HG2	1.92	0.51
55:B9:9:ARG:NH2	60:BA:1033:U:OP1	2.44	0.51
60:BA:306:U:H3	60:BA:310:A:N6	1.93	0.51
60:BA:1626:G:H5"	60:BA:1627:G:H5'	1.92	0.51
60:BA:2561:A:H2'	60:BA:2562:U:O4'	2.11	0.51
1:CB:223:ILE:O	1:CB:228:GLY:N	2.41	0.51
2:CC:48:TYR:O	2:CC:50:ALA:N	2.43	0.51
2:CC:63:ASN:HA	2:CC:98:ASN:HB2	1.92	0.51
3:CD:165:MET:O	3:CD:168:ARG:N	2.43	0.51
12:CM:88:ARG:HH11	20:CA:1320:C:H4'	1.76	0.51
20:CA:1316:G:N1	20:CA:1319:A:OP2	2.39	0.51
20:CA:1511:G:H2'	20:CA:1512:U:O4'	2.10	0.51
25:DC:118:PRO:HD3	25:DC:147:GLY:HA2	1.92	0.51
25:DC:218:THR:HG21	60:DA:2124:G:H1'	1.91	0.51
26:DD:255:LYS:HZ2	60:DA:1824:G:H21	1.57	0.51
33:DO:12:ASP:HA	33:DO:97:ARG:O	2.09	0.51
40:DV:38:LEU:HD13	40:DV:55:ALA:HB1	1.93	0.51
48:DN:30:ILE:HG22	48:DN:34:LEU:HD23	1.90	0.51
49:D2:20:GLU:O	49:D2:24:LEU:HG	2.10	0.51
60:DA:117:G:H5'	60:DA:126:A:N3	2.25	0.51
60:DA:528:A:N1	60:DA:2042:A:H2'	2.24	0.51
60:DA:780:G:N2	60:DA:783:A:H62	2.07	0.51
60:DA:1077:A:C2	60:DA:1088:A:H2'	2.45	0.51
60:DA:1295:C:H2'	60:DA:1296:G:C8	2.45	0.51
60:DA:2663:G:H2'	60:DA:2664:G:O4'	2.11	0.51
60:DA:2749:A:H62	60:DA:2753:A:N6	2.05	0.51
11:AL:82:VAL:O	11:AL:104:VAL:HG21	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:100:LYS:HG3	20:AA:246:A:H2'	1.92	0.51
20:AA:269:C:H2'	20:AA:270:A:C8	2.46	0.51
20:AA:413:G:H21	20:AA:428:G:H21	1.58	0.51
20:AA:1323:G:H2'	20:AA:1324:A:C8	2.46	0.51
23:AY:191:ASP:HB2	23:AY:265:LYS:HB3	1.91	0.51
23:AY:328:ILE:HD12	23:AY:330:VAL:H	1.74	0.51
23:AY:335:LEU:HB3	23:AY:369:LEU:O	2.10	0.51
25:BC:101:ILE:HD11	25:BC:127:LYS:HB2	1.91	0.51
27:BE:10:GLY:O	27:BE:25:VAL:N	2.44	0.51
36:BR:53:HIS:O	36:BR:56:LYS:HB3	2.10	0.51
60:BA:273(D):C:H2'	60:BA:273(E):C:H6	1.75	0.51
60:BA:371:A:N6	60:BA:401:A:H3'	2.23	0.51
60:BA:756:C:H2'	60:BA:757:U:O4'	2.10	0.51
60:BA:1406:U:H2'	60:BA:1407:C:C6	2.45	0.51
60:BA:1628:G:N2	60:BA:1638:C:N3	2.49	0.51
8:CI:61:ALA:O	8:CI:63:ILE:HG12	2.11	0.51
10:CK:84:VAL:N	10:CK:109:VAL:O	2.43	0.51
20:CA:1440(K):G:H2'	20:CA:1440(L):G:O4'	2.10	0.51
20:CA:1537:U:O2'	20:CA:1538:C:OP1	2.27	0.51
23:CY:305:PRO:HB2	23:CY:370:LYS:HD2	1.92	0.51
23:CY:331:TYR:O	23:CY:371:ALA:HB1	2.09	0.51
25:DC:6:LYS:HA	25:DC:9:ARG:HD3	1.93	0.51
26:DD:60:ARG:NH1	26:DD:86:PRO:O	2.44	0.51
28:DF:110:LEU:HB3	28:DF:202:PHE:HE1	1.76	0.51
37:DS:70:GLY:O	37:DS:73:LEU:HB3	2.10	0.51
39:DU:34:LYS:HZ2	60:DA:2019:A:H1'	1.74	0.51
59:DB:22:U:H2'	59:DB:23:G:C8	2.46	0.51
60:DA:442:G:H5"	60:DA:615:G:N2	2.25	0.51
60:DA:516:C:H2'	60:DA:517:C:C6	2.45	0.51
60:DA:816:C:H2'	60:DA:817:C:O4'	2.10	0.51
60:DA:1211:U:O2'	60:DA:1212:G:OP1	2.29	0.51
60:DA:2083:G:H2'	60:DA:2084:C:C6	2.44	0.51
60:DA:2515:C:H42	60:DA:2569:G:H1	1.58	0.51
60:DA:2887:U:H2'	60:DA:2888:C:C6	2.45	0.51
1:AB:55:PHE:HA	1:AB:58:ILE:HB	1.92	0.51
7:AH:112:LEU:HB3	7:AH:133:LEU:HA	1.92	0.51
11:AL:31:PRO:HB3	20:AA:553:A:C4'	2.40	0.51
11:AL:90:VAL:H	11:AL:96:VAL:HG21	1.75	0.51
11:AL:115:LYS:HB3	20:AA:503:C:OP2	2.10	0.51
20:AA:161:A:N6	20:AA:347:G:O2'	2.39	0.51
20:AA:457:C:H2'	20:AA:458:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:677:U:H2'	20:AA:678:U:C6	2.45	0.51
20:AA:801:U:H2'	20:AA:802:A:H8	1.75	0.51
20:AA:881:G:H2'	20:AA:882:C:C6	2.46	0.51
20:AA:894:G:C2	20:AA:895:G:H1'	2.46	0.51
23:AY:109:ASP:OD1	23:AY:110:SER:N	2.44	0.51
25:BC:115:VAL:HB	25:BC:150:ILE:HG13	1.92	0.51
26:BD:171:ASP:HB3	26:BD:186:HIS:CE1	2.46	0.51
31:BJ:25:UNK:HA	31:BJ:79:UNK:C	2.40	0.51
38:BT:121:ILE:O	38:BT:124:ASP:N	2.43	0.51
39:BU:50:ARG:HH21	60:BA:993:G:H5"	1.76	0.51
40:BV:99:ILE:HD13	40:BV:99:ILE:H	1.75	0.51
43:BY:10:GLY:HA2	43:BY:28:LYS:HE2	1.91	0.51
45:B0:73:GLY:C	45:B0:75:LEU:H	2.19	0.51
48:BN:138:LEU:HD23	48:BN:138:LEU:N	2.26	0.51
50:B3:4:LEU:HB2	50:B3:37:LEU:HD12	1.93	0.51
54:B8:23:VAL:HG12	54:B8:46:ARG:HH12	1.75	0.51
59:BB:31:C:H2'	59:BB:32:C:C6	2.46	0.51
60:BA:218:A:H2'	60:BA:219:G:O4'	2.11	0.51
60:BA:487:C:H2'	60:BA:488:G:O4'	2.10	0.51
60:BA:572:A:N1	60:BA:2029:G:N3	2.59	0.51
60:BA:750:A:OP1	60:BA:1615:C:N4	2.42	0.51
60:BA:1073:A:H2'	60:BA:1074:G:O4'	2.11	0.51
60:BA:1385:G:O2'	60:BA:1386:C:OP2	2.26	0.51
60:BA:1795:C:H42	60:BA:1824:G:H1	1.59	0.51
60:BA:2092:U:HO2'	60:BA:2093:G:P	2.32	0.51
60:BA:2410:G:H2'	60:BA:2411:A:C8	2.45	0.51
1:CB:164:VAL:CG1	1:CB:170:GLU:HB3	2.39	0.51
3:CD:61:LYS:O	3:CD:64:LEU:HB3	2.10	0.51
9:CJ:44:VAL:HA	9:CJ:65:LEU:O	2.10	0.51
12:CM:102:ARG:NH2	20:CA:952:U:O4	2.42	0.51
20:CA:945:G:C2	20:CA:946:A:C8	2.98	0.51
20:CA:1016:A:H8	20:CA:1016:A:O5'	1.93	0.51
20:CA:1298:C:H5'	20:CA:1299:A:N3	2.24	0.51
22:CW:42:U:H2'	22:CW:43:G:O4'	2.10	0.51
25:DC:53:ARG:O	25:DC:55:SER:N	2.44	0.51
33:DO:98:VAL:HG23	33:DO:119:PRO:HD3	1.92	0.51
36:DR:117:VAL:O	36:DR:118:GLU:HB2	2.11	0.51
38:DT:74:ARG:HD2	38:DT:76:PHE:CE2	2.46	0.51
40:DV:95:LEU:O	40:DV:96:ILE:O	2.27	0.51
55:D9:14:CYS:HA	55:D9:26:ILE:O	2.10	0.51
60:DA:17:G:H1	60:DA:523:C:H42	1.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:218:A:H2'	60:DA:219:G:O4'	2.11	0.51
60:DA:397:G:H2'	60:DA:398:G:C8	2.45	0.51
60:DA:875:G:H2'	60:DA:876:C:O4'	2.09	0.51
60:DA:1564:C:H2'	60:DA:1565:C:C6	2.45	0.51
60:DA:1638:C:H2'	60:DA:1639:U:O4'	2.10	0.51
60:DA:2836:U:H2'	60:DA:2837:G:C8	2.45	0.51
1:AB:19:HIS:CG	1:AB:20:GLU:N	2.78	0.51
5:AF:40:VAL:HG23	5:AF:63:TYR:HD1	1.75	0.51
20:AA:62:U:H2'	20:AA:63:C:C6	2.46	0.51
20:AA:339:C:H2'	20:AA:340:U:H6	1.76	0.51
20:AA:1271:G:H5"	20:AA:1314:C:H5'	1.92	0.51
20:AA:1440(J):C:O2'	20:AA:1440(K):G:H5"	2.11	0.51
20:AA:1532:U:H1'	20:AA:1533:C:OP1	2.11	0.51
23:AY:356:LEU:HD21	23:AY:358:MET:HG2	1.93	0.51
28:BF:103:LYS:O	28:BF:106:ARG:HD2	2.11	0.51
33:BO:25:LEU:HB3	33:BO:38:VAL:HG23	1.92	0.51
36:BR:28:LEU:HG	36:BR:114:VAL:HG11	1.92	0.51
48:BN:103:VAL:O	48:BN:106:MET:N	2.36	0.51
60:BA:442:G:H5"	60:BA:615:G:N2	2.26	0.51
60:BA:1005:C:H2'	60:BA:1006:C:C6	2.46	0.51
60:BA:2545:G:H21	60:BA:2565:A:H2	1.59	0.51
60:BA:2667:C:H2'	60:BA:2668:G:H8	1.75	0.51
5:CF:46:ARG:HB3	5:CF:60:PHE:CE1	2.45	0.51
11:CL:109:GLY:HA3	11:CL:120:TYR:C	2.34	0.51
14:CO:8:LYS:HE3	14:CO:12:ILE:HD11	1.93	0.51
20:CA:10:A:H2'	20:CA:11:G:C8	2.46	0.51
20:CA:151:A:N7	20:CA:170:U:O4	2.43	0.51
20:CA:294:U:OP1	20:CA:610:G:O2'	2.28	0.51
20:CA:299:G:H2'	20:CA:300:A:C8	2.46	0.51
20:CA:545:C:O2'	20:CA:549:C:H5'	2.11	0.51
20:CA:808:C:H2'	20:CA:809:G:C8	2.46	0.51
20:CA:1088:G:H2'	20:CA:1089:G:H8	1.76	0.51
26:DD:163:ALA:HB2	26:DD:178:PRO:HD2	1.93	0.51
48:DN:11:PRO:HB2	48:DN:51:PHE:HE1	1.74	0.51
48:DN:132:ALA:O	48:DN:133:GLN:C	2.53	0.51
52:D6:12:GLU:O	52:D6:14:THR:N	2.44	0.51
55:D9:22:ARG:HH21	55:D9:35:ARG:HH22	1.59	0.51
60:DA:609(A):A:H3'	60:DA:609(B):G:H8	1.76	0.51
60:DA:780:G:H5"	60:DA:781:A:OP2	2.11	0.51
60:DA:1013:C:H2'	60:DA:1014:U:C6	2.46	0.51
60:DA:1904:G:N2	60:DA:1928:A:N3	2.52	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2364:C:H2'	60:DA:2365:G:O4'	2.10	0.51
60:DA:2532:G:O2'	60:DA:2657:A:N1	2.43	0.51
60:DA:2678:C:H2'	60:DA:2679:A:H8	1.75	0.51
60:DA:2772:C:H2'	60:DA:2773:C:C6	2.46	0.51
4:AE:105:VAL:HB	4:AE:106:PRO:HD3	1.92	0.51
5:AF:95:GLU:O	17:AR:32:ARG:NH2	2.24	0.51
6:AG:57:GLU:HB2	6:AG:60:LYS:HB2	1.92	0.51
7:AH:78:GLN:HE21	7:AH:80:ILE:H	1.59	0.51
10:AK:62:GLN:HG3	10:AK:97:ALA:HB2	1.91	0.51
10:AK:91:ARG:NH2	10:AK:92:GLU:OE1	2.44	0.51
11:AL:62:SER:O	11:AL:62:SER:OG	2.29	0.51
13:AN:43:CYS:O	13:AN:46:GLU:HG2	2.10	0.51
15:AP:22:THR:HA	15:AP:33:ILE:HG13	1.92	0.51
19:AT:11:SER:HB3	19:AT:14:LYS:HD3	1.92	0.51
20:AA:68(O):A:C8	20:AA:68(P):C:H1'	2.46	0.51
20:AA:582:U:OP2	20:AA:758:G:N2	2.39	0.51
23:AY:172:ASP:C	23:AY:174:PHE:H	2.18	0.51
23:AY:578:SER:OG	23:AY:579:GLU:N	2.44	0.51
28:BF:181:LEU:HD23	28:BF:205:ARG:HD3	1.92	0.51
36:BR:32:GLY:HA3	36:BR:116:LEU:HG	1.92	0.51
38:BT:33:LYS:HG2	38:BT:74:ARG:HH22	1.75	0.51
45:B0:48:GLY:HA3	45:B0:80:HIS:CE1	2.46	0.51
56:Be:78:LEU:O	56:Be:80:ALA:N	2.44	0.51
60:BA:1661:G:N2	60:BA:2688:U:OP1	2.37	0.51
60:BA:1978:A:H2'	60:BA:1979:C:O4'	2.10	0.51
60:BA:2105:C:H2'	60:BA:2106:G:H8	1.72	0.51
60:BA:2307:G:H1'	60:BA:2311:A:C5	2.45	0.51
60:BA:2415:G:H2'	60:BA:2416:C:H6	1.75	0.51
8:CI:110:GLU:HG2	8:CI:113:LYS:NZ	2.25	0.51
11:CL:31:PRO:HB3	20:CA:553:A:O4'	2.10	0.51
11:CL:113:ARG:NH2	11:CL:115:LYS:HB2	2.26	0.51
20:CA:757:U:H5"	20:CA:822:C:O2'	2.10	0.51
20:CA:989:C:H2'	20:CA:990:C:C6	2.45	0.51
23:CY:63:ILE:CG2	61:CY:702:GNP:O1G	2.58	0.51
23:CY:141:LYS:NZ	60:DA:2657:A:OP1	2.39	0.51
28:DF:157:VAL:HA	28:DF:176:LEU:O	2.10	0.51
29:DG:61:ALA:HB2	29:DG:68:PRO:HD3	1.93	0.51
34:DP:94:GLU:HG3	34:DP:124:LYS:HB2	1.93	0.51
37:DS:106:ARG:NE	37:DS:108:GLY:HA3	2.22	0.51
42:DX:25:LYS:NZ	42:DX:82:GLN:OE1	2.33	0.51
60:DA:385:C:O2'	60:DA:388:G:N2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:482:A:H1'	60:DA:498:G:N2	2.26	0.51
60:DA:817:C:H2'	60:DA:818:G:O4'	2.11	0.51
60:DA:1338:G:H2'	60:DA:1339:G:O4'	2.11	0.51
60:DA:1615:C:O2'	60:DA:1616:A:H5'	2.10	0.51
3:AD:14:ARG:HG2	3:AD:66:ARG:HH12	1.76	0.51
3:AD:175:SER:O	3:AD:183:GLY:HA2	2.10	0.51
5:AF:80:ARG:NH2	5:AF:88:VAL:O	2.44	0.51
18:AS:78:ARG:O	18:AS:81:ARG:NH1	2.43	0.51
20:AA:383:A:H8	20:AA:383:A:O5'	1.94	0.51
20:AA:423:G:H5'	20:AA:424:G:OP2	2.10	0.51
20:AA:627:G:H2'	20:AA:628:G:C8	2.45	0.51
20:AA:776:G:O2'	20:AA:777:A:H8	1.94	0.51
20:AA:1064:G:O2'	20:AA:1065:U:OP2	2.29	0.51
20:AA:1345:U:H4'	20:AA:1346:A:H5"	1.93	0.51
26:BD:54:ARG:HH21	26:BD:217:ARG:NH2	2.08	0.51
27:BE:141:ILE:HG13	27:BE:142:GLY:N	2.25	0.51
34:BP:46:LYS:H	34:BP:46:LYS:HD2	1.76	0.51
36:BR:2:ARG:HG2	60:BA:2821:A:OP2	2.11	0.51
36:BR:42:LYS:O	36:BR:45:ARG:NE	2.44	0.51
36:BR:92:GLY:HA3	60:BA:2880:C:H1'	1.91	0.51
59:BB:32:C:H2'	59:BB:33:G:H8	1.75	0.51
59:BB:77:U:H3	59:BB:99:A:N6	1.92	0.51
60:BA:240:G:O2'	60:BA:257:A:N6	2.44	0.51
60:BA:1675:C:C2	60:BA:1676:A:C8	2.98	0.51
60:BA:2024:G:C6	60:BA:2040:C:C4	2.99	0.51
60:BA:2151:G:H2'	60:BA:2152:G:C8	2.39	0.51
60:BA:2411:A:H8	60:BA:2411:A:O5'	1.93	0.51
60:BA:2726:U:O2'	60:BA:2727:G:H8	1.93	0.51
3:CD:15:GLU:OE1	3:CD:66:ARG:HG3	2.11	0.51
10:CK:82:VAL:N	10:CK:107:SER:O	2.44	0.51
20:CA:5:U:HO2'	20:CA:6:G:P	2.33	0.51
20:CA:1340:A:O2'	22:CW:31:A:O2'	2.28	0.51
23:CY:315:LYS:NZ	23:CY:434:GLU:OE2	2.42	0.51
23:CY:330:VAL:O	23:CY:331:TYR:CG	2.63	0.51
25:DC:213:VAL:HG11	25:DC:225:ILE:HG12	1.93	0.51
27:DE:134:ILE:HG22	27:DE:137:HIS:HB2	1.93	0.51
28:DF:70:THR:N	60:DA:2060:A:OP1	2.36	0.51
28:DF:156:LEU:CD1	28:DF:193:VAL:HB	2.41	0.51
35:DQ:26:TYR:O	35:DQ:102:VAL:HG21	2.11	0.51
39:DU:69:CYS:HA	39:DU:106:PHE:HE2	1.75	0.51
49:D2:25:VAL:HG11	49:D2:61:LEU:HG	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D6:16:CYS:HA	52:D6:50:ARG:NH1	2.26	0.51
54:D8:34:TRP:HB3	60:DA:2420:C:OP1	2.10	0.51
60:DA:237:C:N3	60:DA:260:G:N2	2.50	0.51
60:DA:468:G:H3'	60:DA:469:G:H8	1.76	0.51
60:DA:589:C:H2'	60:DA:590:A:C8	2.46	0.51
60:DA:1070:A:H2'	60:DA:1097:U:OP1	2.10	0.51
60:DA:1346:G:H2'	60:DA:1347:G:C8	2.45	0.51
60:DA:1394:U:H5"	60:DA:1604:C:OP1	2.11	0.51
60:DA:1889:A:H2'	60:DA:1890:A:C8	2.46	0.51
60:DA:2304:G:H22	60:DA:2312:U:H3	1.59	0.51
1:AB:198:ASP:OD2	7:AH:68:ARG:NH2	2.43	0.51
5:AF:40:VAL:HG23	5:AF:63:TYR:CD1	2.45	0.51
7:AH:82:HIS:O	7:AH:137:VAL:HA	2.11	0.51
15:AP:8:ARG:HB2	15:AP:17:TYR:CE2	2.46	0.51
16:AQ:11:VAL:HG23	16:AQ:20:THR:HB	1.92	0.51
20:AA:123:C:OP1	20:AA:312:C:H5'	2.11	0.51
20:AA:180:U:N3	20:AA:195:A:C8	2.74	0.51
20:AA:944:G:H1'	20:AA:1339:A:H61	1.76	0.51
20:AA:1508:G:H2'	20:AA:1509:C:O4'	2.11	0.51
23:AY:109:ASP:O	23:AY:113:GLY:HA2	2.11	0.51
23:AY:526:VAL:N	23:AY:566:THR:HA	2.26	0.51
26:BD:172:TYR:HA	26:BD:186:HIS:HA	1.92	0.51
30:BH:176:ALA:O	60:BA:2530:A:H5'	2.11	0.51
32:BK:3:LYS:HD2	56:Be:79:ARG:HH12	1.76	0.51
39:BU:28:ARG:C	39:BU:30:LYS:H	2.19	0.51
39:BU:76:TYR:OH	39:BU:80:ILE:HD11	2.10	0.51
49:B2:35:LEU:HD12	49:B2:53:LEU:HD23	1.91	0.51
60:BA:586:A:H5"	60:BA:587:C:OP1	2.10	0.51
60:BA:2226:C:H2'	60:BA:2227:A:O4'	2.10	0.51
60:BA:2815:C:H2'	60:BA:2816:C:O4'	2.11	0.51
60:BA:2869:G:H2'	60:BA:2870:C:O4'	2.11	0.51
1:CB:170:GLU:O	1:CB:174:VAL:HG23	2.11	0.51
13:CN:45:ARG:HG3	13:CN:49:HIS:CE1	2.46	0.51
16:CQ:51:TYR:CE1	16:CQ:76:LEU:HB2	2.46	0.51
20:CA:1026:G:H1	20:CA:1035:A:H2	1.58	0.51
20:CA:1116:C:N3	20:CA:1184:G:N2	2.49	0.51
20:CA:1389:C:H2'	20:CA:1390:U:H6	1.75	0.51
20:CA:1440(L):G:H2'	20:CA:1440(M):G:H8	1.76	0.51
23:CY:85:PRO:HB3	23:CY:94:VAL:HG22	1.93	0.51
35:DQ:4:PRO:HD3	35:DQ:69:PHE:HE2	1.76	0.51
46:D1:21:ARG:HG3	60:DA:2080:G:H5"	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DB:29:A:H2'	59:DB:30:C:O4'	2.11	0.51
60:DA:392:C:C5'	60:DA:409:C:H5"	2.38	0.51
60:DA:634:C:H2'	60:DA:635:C:C6	2.46	0.51
60:DA:1119:C:H2'	60:DA:1120:G:C8	2.46	0.51
60:DA:1435:G:H2'	60:DA:1436:G:H8	1.73	0.51
60:DA:1677:A:H2'	60:DA:1678:G:O4'	2.10	0.51
60:DA:1954:G:N1	60:DA:1986:A:OP1	2.37	0.51
60:DA:2001:A:H4'	60:DA:2689:U:C2	2.45	0.51
60:DA:2319:G:N3	60:DA:2320:A:N6	2.58	0.51
60:DA:2332:U:H4'	60:DA:2336:A:N6	2.26	0.51
2:AC:35:GLU:O	2:AC:38:ARG:N	2.44	0.51
12:AM:89:GLY:O	12:AM:93:ARG:HG3	2.11	0.51
18:AS:28:LYS:NZ	60:BA:887:A:OP1	2.29	0.51
20:AA:269:C:H2'	20:AA:270:A:H8	1.75	0.51
20:AA:766:A:H2'	20:AA:767:A:O4'	2.11	0.51
20:AA:1266:G:N2	20:AA:1268:A:H3'	2.25	0.51
20:AA:1385:G:H2'	20:AA:1386:G:C8	2.45	0.51
23:AY:197:ARG:HA	23:AY:197:ARG:NE	2.26	0.51
23:AY:337:SER:HB3	23:AY:367:GLU:HG3	1.93	0.51
25:BC:194:ILE:HD11	25:BC:225:ILE:HD11	1.91	0.51
26:BD:151:LYS:HE3	60:BA:2208:U:H1'	1.93	0.51
28:BF:7:TYR:C	28:BF:9:ILE:H	2.19	0.51
29:BG:13:GLU:O	29:BG:17:PRO:HD2	2.11	0.51
36:BR:49:ASP:OD1	36:BR:94:TYR:N	2.44	0.51
37:BS:70:GLY:HA3	37:BS:99:LYS:HG3	1.92	0.51
39:BU:28:ARG:NH1	39:BU:34:LYS:O	2.44	0.51
39:BU:51:LYS:HG2	60:BA:1156:A:C8	2.46	0.51
48:BN:111:PRO:HD2	60:BA:558:G:OP2	2.11	0.51
49:B2:21:LEU:O	49:B2:25:VAL:HG23	2.10	0.51
59:BB:74:U:H2'	59:BB:75:G:C8	2.46	0.51
60:BA:184:C:H4'	60:BA:217:G:H21	1.75	0.51
60:BA:665:C:H2'	60:BA:666:G:C8	2.46	0.51
60:BA:708:C:H2'	60:BA:709:U:C6	2.46	0.51
60:BA:1165:U:H2'	60:BA:1166:C:C6	2.46	0.51
60:BA:2135:A:N6	60:BA:2156:G:O2'	2.37	0.51
60:BA:2393:A:N6	60:BA:2422:A:H61	2.03	0.51
1:CB:68:ILE:HG22	1:CB:163:PHE:N	2.26	0.51
1:CB:183:PRO:HA	1:CB:198:ASP:OD1	2.11	0.51
5:CF:96:PRO:HA	17:CR:32:ARG:HB2	1.93	0.51
7:CH:91:ARG:HB3	7:CH:93:VAL:HG23	1.93	0.51
12:CM:34:LEU:HD13	12:CM:41:PRO:HA	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:582:U:H3'	20:CA:583:A:H8	1.76	0.51
20:CA:656:C:N4	20:CA:750:G:H1	2.08	0.51
20:CA:869:G:H4'	20:CA:872:A:C8	2.45	0.51
20:CA:1136:U:H5"	20:CA:1137:C:C5	2.46	0.51
28:DF:50:SER:HB2	28:DF:94:PRO:HD3	1.93	0.51
32:DK:124:ALA:HB3	32:DK:125:ARG:NH1	2.26	0.51
36:DR:63:ARG:CZ	60:DA:1454:U:H5'	2.41	0.51
38:DT:48:ILE:N	38:DT:64:ARG:O	2.34	0.51
44:DZ:75:ASN:HD21	59:DB:75:G:H22	1.59	0.51
47:D4:16:CYS:HB3	47:D4:34:GLU:O	2.11	0.51
51:D5:7:PRO:HA	60:DA:2615:U:H1'	1.93	0.51
53:D7:18:PHE:N	60:DA:126:A:OP2	2.44	0.51
53:D7:23:ARG:O	53:D7:28:ARG:NH1	2.44	0.51
60:DA:270(I):C:H2'	60:DA:270(J):G:H8	1.75	0.51
60:DA:689:A:H2'	60:DA:690:G:C8	2.46	0.51
60:DA:1992:G:O2'	60:DA:1993:U:OP2	2.27	0.51
60:DA:2134:A:N6	60:DA:2157:G:H1'	2.26	0.51
60:DA:2832:U:O4	60:DA:2883:A:H5"	2.11	0.51
3:AD:76:ARG:HG3	3:AD:80:GLU:OE1	2.11	0.50
10:AK:31:THR:CA	10:AK:42:TRP:HA	2.36	0.50
11:AL:66:VAL:HB	11:AL:98:TYR:HD1	1.76	0.50
11:AL:86:ARG:CG	11:AL:99:HIS:HB2	2.39	0.50
12:AM:87:TYR:CE2	20:AA:1321:C:H4'	2.46	0.50
20:AA:37:U:H2'	20:AA:38:G:O4'	2.11	0.50
20:AA:1242:C:H2'	20:AA:1243:C:C6	2.46	0.50
23:AY:156:ARG:HH12	23:AY:666:ARG:HD2	1.76	0.50
26:BD:106:ILE:O	26:BD:108:PRO:HD3	2.11	0.50
27:BE:102:VAL:HG12	27:BE:200:GLU:HA	1.92	0.50
30:BH:33:LEU:HD11	30:BH:75:ALA:HB1	1.92	0.50
32:BK:27:LEU:HD21	32:BK:57:ILE:HD13	1.92	0.50
36:BR:45:ARG:HB3	36:BR:97:VAL:HG23	1.94	0.50
36:BR:101:ALA:O	36:BR:103:ARG:N	2.41	0.50
39:BU:23:GLY:HA2	60:BA:19:C:H5'	1.92	0.50
46:B1:37:ILE:HG12	60:BA:200:U:H4'	1.92	0.50
48:BN:65:LYS:O	48:BN:66:LYS:C	2.54	0.50
49:B2:8:LYS:HB3	49:B2:8:LYS:HZ2	1.75	0.50
49:B2:10:LEU:HD22	49:B2:14:ARG:HH22	1.77	0.50
60:BA:30:G:H2'	60:BA:31:C:C6	2.46	0.50
60:BA:37:C:H2'	60:BA:38:A:C8	2.45	0.50
60:BA:248:G:N3	60:BA:2431:U:H4'	2.26	0.50
60:BA:752:A:O2'	60:BA:1781:C:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1497:U:H5'	60:BA:1498:C:C5	2.46	0.50
60:BA:1916:A:H2'	60:BA:1917:U:H6	1.76	0.50
60:BA:2448:A:H5'	60:BA:2449:U:H2'	1.93	0.50
1:CB:46:LYS:O	1:CB:50:GLU:HG2	2.11	0.50
1:CB:71:VAL:HG21	1:CB:162:ILE:HD11	1.92	0.50
6:CG:47:CYS:O	6:CG:50:ILE:HB	2.10	0.50
9:CJ:55:LYS:HE3	20:CA:973:G:H1'	1.92	0.50
12:CM:89:GLY:O	12:CM:93:ARG:HG3	2.11	0.50
12:CM:98:VAL:N	20:CA:1308:U:OP1	2.44	0.50
19:CT:105:SER:N	20:CA:186(A):C:O2	2.36	0.50
23:CY:291:GLY:HA3	23:CY:399:LEU:HA	1.93	0.50
28:DF:9:ILE:CG2	28:DF:124:LEU:HA	2.40	0.50
29:DG:29:TRP:HD1	59:DB:55:U:H1'	1.76	0.50
34:DP:52:GLU:HG3	34:DP:54:GLY:H	1.76	0.50
36:DR:87:TYR:HB3	36:DR:94:TYR:CD2	2.46	0.50
37:DS:71:ARG:O	37:DS:74:ALA:HB3	2.11	0.50
46:D1:53:VAL:HG21	46:D1:74:VAL:HG22	1.93	0.50
60:DA:139:G:H22	60:DA:1596:A:H4'	1.76	0.50
60:DA:360:G:H2'	60:DA:361:G:C8	2.43	0.50
60:DA:576:U:H5"	60:DA:2502:G:H2'	1.93	0.50
60:DA:851:U:H2'	60:DA:852:G:H8	1.75	0.50
60:DA:2105:C:H2'	60:DA:2106:G:H8	1.74	0.50
2:AC:11:ARG:HD3	2:AC:15:THR:HB	1.93	0.50
4:AE:119:LEU:HD11	20:AA:6:G:C5	2.46	0.50
4:AE:129:ILE:HG22	4:AE:133:TYR:CE1	2.47	0.50
4:AE:145:LYS:NZ	4:AE:149:GLU:OE2	2.31	0.50
5:AF:98:LEU:HB3	17:AR:30:ASP:HA	1.92	0.50
6:AG:79:ARG:HD3	6:AG:79:ARG:H	1.77	0.50
9:AJ:38:ILE:HG23	9:AJ:71:LEU:HB3	1.93	0.50
10:AK:26:ASN:O	10:AK:55:LYS:HB2	2.11	0.50
14:AO:43:LEU:O	14:AO:47:LYS:HB3	2.11	0.50
20:AA:1028:C:N3	20:AA:1033:G:N2	2.55	0.50
20:AA:1255:G:N7	20:AA:1279:A:N6	2.58	0.50
23:AY:341:VAL:O	23:AY:350:GLU:N	2.36	0.50
23:AY:607:ARG:HA	23:AY:645:ALA:O	2.11	0.50
25:BC:65:LEU:HD22	25:BC:176:VAL:HG13	1.93	0.50
26:BD:264:LYS:HB3	26:BD:267:SER:HB2	1.93	0.50
29:BG:111:LEU:N	29:BG:112:PRO:CD	2.74	0.50
30:BH:138:LYS:HG3	60:BA:2746:U:H4'	1.93	0.50
31:BJ:54:UNK:CA	31:BJ:79:UNK:HA	2.35	0.50
38:BT:3:ARG:NE	60:BA:2876:G:O2'	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BZ:69:THR:HG22	44:BZ:90:VAL:HA	1.94	0.50
45:B0:23:VAL:HA	45:B0:38:VAL:HA	1.92	0.50
48:BN:65:LYS:NZ	60:BA:1021:A:OP2	2.39	0.50
51:B5:10:LYS:HB2	60:BA:2017:U:O2	2.11	0.50
60:BA:671:C:H2'	60:BA:672:C:H6	1.76	0.50
60:BA:820:A:N3	60:BA:943:U:H4'	2.25	0.50
60:BA:1466:G:O3'	60:BA:154(B):C:O2'	2.28	0.50
60:BA:2379:G:H2'	60:BA:2380:C:H6	1.76	0.50
3:CD:13:ARG:HH11	3:CD:40:PRO:HB3	1.75	0.50
7:CH:30:ARG:NH2	20:CA:643:C:OP1	2.44	0.50
16:CQ:92:ARG:O	16:CQ:95:TYR:HB2	2.11	0.50
19:CT:84:LEU:O	19:CT:88:VAL:HG23	2.11	0.50
20:CA:126:G:N2	20:CA:235:C:N3	2.52	0.50
20:CA:368:U:OP2	23:CY:353:ALA:HA	2.10	0.50
20:CA:687:A:H62	20:CA:703:G:H21	1.59	0.50
20:CA:1391:U:H2'	20:CA:1392:G:C8	2.45	0.50
26:DD:66:ASP:HB2	26:DD:103:ARG:HB3	1.94	0.50
28:DF:82:ILE:HG23	28:DF:83:PHE:CE1	2.47	0.50
34:DP:35:HIS:N	60:DA:1190:G:H5"	2.26	0.50
37:DS:17:ARG:HG3	37:DS:88:ASP:OD2	2.11	0.50
40:DV:14:VAL:HG12	40:DV:96:ILE:HD13	1.93	0.50
60:DA:481:G:O2'	60:DA:506:G:N2	2.43	0.50
60:DA:576:U:H4'	60:DA:2502:G:C5	2.45	0.50
60:DA:689:A:H2'	60:DA:690:G:H8	1.75	0.50
60:DA:1418:G:H1'	60:DA:1580:A:H61	1.76	0.50
60:DA:1464:C:H2'	60:DA:1465:G:C8	2.47	0.50
60:DA:2704:C:H2'	60:DA:2705:A:O4'	2.11	0.50
1:AB:185:ILE:HG23	1:AB:199:TYR:HB2	1.94	0.50
9:AJ:10:GLY:HA3	9:AJ:16:LEU:HD21	1.92	0.50
20:AA:287:U:H2'	20:AA:288:A:C8	2.42	0.50
20:AA:405:U:H5"	20:AA:495:A:C2	2.46	0.50
20:AA:434:U:H2'	20:AA:435:C:H6	1.76	0.50
22:AW:20(A):U:O2'	22:AW:21:A:O5'	2.25	0.50
22:AW:69:A:H2'	22:AW:70:G:H8	1.75	0.50
28:BF:155:LEU:O	28:BF:191:ARG:O	2.29	0.50
35:BQ:43:THR:O	35:BQ:47:ILE:HG13	2.11	0.50
39:BU:90:VAL:HG11	40:BV:11:GLN:HE22	1.76	0.50
46:B1:30:VAL:HG12	60:BA:2396:G:H1'	1.93	0.50
60:BA:950:G:H2'	60:BA:951:C:C6	2.46	0.50
60:BA:1131:G:N2	60:BA:1132:A:N3	2.58	0.50
60:BA:1299:G:N2	60:BA:1640:C:H5'	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:2061:G:O2'	60:BA:2063:C:N4	2.28	0.50
60:BA:2109:U:O4	60:BA:2180:U:O4	2.29	0.50
1:CB:55:PHE:HE1	1:CB:218:ALA:HA	1.76	0.50
1:CB:103:THR:C	1:CB:105:PHE:H	2.18	0.50
6:CG:78:ARG:HD2	6:CG:79:ARG:H	1.76	0.50
9:CJ:78:ASN:O	9:CJ:81:THR:OG1	2.29	0.50
11:CL:102:ARG:C	11:CL:104:VAL:H	2.19	0.50
19:CT:103:GLY:C	20:CA:191:G:H21	2.20	0.50
20:CA:21:G:H2'	20:CA:22:G:C8	2.47	0.50
20:CA:323:U:H2'	20:CA:324:G:O4'	2.10	0.50
20:CA:1440(C):G:H2'	20:CA:1440(D):A:C2	2.47	0.50
23:CY:14:ASN:HD21	23:CY:374:LEU:HD22	1.77	0.50
23:CY:238:THR:HG22	23:CY:241:GLU:HG2	1.94	0.50
26:DD:222:ARG:HG2	60:DA:1789:A:OP1	2.11	0.50
46:D1:12:PRO:HA	46:D1:44:PRO:CD	2.40	0.50
52:D6:5:VAL:N	60:DA:2283:C:H5'	2.26	0.50
59:DB:24:G:C2	59:DB:56:G:C2	2.99	0.50
59:DB:95:U:H2'	59:DB:96:G:H8	1.73	0.50
60:DA:263:C:H2'	60:DA:264:C:O4'	2.11	0.50
60:DA:320:A:H4'	60:DA:322:A:N7	2.26	0.50
60:DA:415:A:N6	60:DA:2408:U:H3	2.07	0.50
60:DA:1403:C:H2'	60:DA:1404:C:H6	1.76	0.50
60:DA:2657:A:H62	60:DA:2664:G:N2	2.08	0.50
6:AG:151:TYR:HA	6:AG:154:TYR:CD1	2.46	0.50
9:AJ:82:ILE:O	9:AJ:86:MET:HG2	2.11	0.50
10:AK:97:ALA:O	10:AK:101:SER:OG	2.26	0.50
12:AM:55:ARG:HA	12:AM:58:GLU:HB2	1.93	0.50
12:AM:115:LYS:HD2	20:AA:1227:A:H4'	1.94	0.50
12:AM:125:ARG:O	20:AA:966:G:H5'	2.11	0.50
20:AA:186(G):C:H1'	20:AA:186(K):G:C2	2.46	0.50
20:AA:252:U:H2'	20:AA:253:U:C5	2.47	0.50
20:AA:894:G:H2'	20:AA:895:G:O4'	2.11	0.50
23:AY:96:ARG:NH1	23:AY:385:THR:OG1	2.44	0.50
23:AY:109:ASP:OD1	23:AY:111:SER:N	2.45	0.50
23:AY:226:ASN:OD1	23:AY:226:ASN:N	2.44	0.50
23:AY:304:ASP:C	23:AY:306:ASN:H	2.20	0.50
23:AY:326:THR:O	23:AY:328:ILE:HG23	2.10	0.50
25:BC:27:ALA:HB1	25:BC:183:PRO:O	2.11	0.50
46:B1:52:ARG:HA	46:B1:57:GLU:HA	1.92	0.50
53:B7:40:TRP:CD1	53:B7:40:TRP:N	2.78	0.50
59:BB:34:U:H1'	59:BB:36:C:H41	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BB:89(A):G:H2'	59:BB:89(B):A:C8	2.46	0.50
60:BA:46:C:OP2	60:BA:215:G:H5"	2.11	0.50
60:BA:273(D):C:H2'	60:BA:273(E):C:C6	2.46	0.50
60:BA:308:G:N2	60:BA:329:G:O2'	2.43	0.50
60:BA:1292:U:H2'	60:BA:1293:C:C6	2.46	0.50
60:BA:1735:U:H2'	60:BA:1741:C:H6	1.77	0.50
60:BA:2092:U:OP1	60:BA:2199:A:O2'	2.29	0.50
60:BA:2472:G:H21	60:BA:2478:A:N6	2.04	0.50
6:CG:29:LYS:HE3	6:CG:101:LEU:HD11	1.92	0.50
6:CG:47:CYS:HA	6:CG:50:ILE:HD12	1.93	0.50
6:CG:87:VAL:HG12	6:CG:155:ARG:HG2	1.93	0.50
9:CJ:38:ILE:HG23	9:CJ:71:LEU:HB3	1.92	0.50
14:CO:38:ARG:HB3	20:CA:740:U:OP1	2.11	0.50
20:CA:395:C:H2'	20:CA:396:G:C8	2.46	0.50
20:CA:888:G:H3'	20:CA:889:A:H2'	1.93	0.50
20:CA:1417:G:H2'	20:CA:1482:G:N2	2.27	0.50
21:CV:13:A:H5"	21:CV:14:A:OP2	2.11	0.50
23:CY:329:ARG:CB	23:CY:374:LEU:HG	2.36	0.50
23:CY:631:ILE:C	23:CY:645:ALA:HA	2.36	0.50
25:DC:212:SER:C	25:DC:213:VAL:O	2.53	0.50
26:DD:147:LEU:O	26:DD:185:VAL:HG13	2.10	0.50
28:DF:154:VAL:CG2	28:DF:173:VAL:HG22	2.36	0.50
30:DH:86:GLU:HB3	30:DH:132:ARG:HG3	1.93	0.50
30:DH:144:VAL:O	30:DH:147:ASN:HB3	2.12	0.50
31:DJ:32:UNK:O	60:DA:1055:G:H4'	2.10	0.50
32:DK:6:ALA:H	32:DK:59:ILE:HG23	1.75	0.50
35:DQ:18:LYS:HD3	59:DB:90:C:H5'	1.93	0.50
40:DV:76:LYS:NZ	60:DA:974(A):G:H4'	2.26	0.50
46:D1:25:LYS:O	46:D1:26:ARG:HB2	2.10	0.50
48:DN:129:PRO:O	48:DN:130:HIS:C	2.54	0.50
48:DN:138:LEU:HD23	48:DN:138:LEU:N	2.26	0.50
52:D6:7:ILE:HG22	52:D6:29:ASN:HB2	1.93	0.50
60:DA:413:C:N3	60:DA:2410:G:N2	2.47	0.50
60:DA:685:A:OP1	60:DA:686:G:N2	2.45	0.50
60:DA:854:G:H1	60:DA:923:C:H42	1.58	0.50
60:DA:1005:C:H2'	60:DA:1006:C:C6	2.46	0.50
60:DA:1269:A:H61	60:DA:2011:U:H3	1.60	0.50
60:DA:1325:G:OP1	60:DA:1647:G:O2'	2.16	0.50
60:DA:1355:G:H1	60:DA:1376:C:N4	2.08	0.50
60:DA:1418:G:H1'	60:DA:1580:A:N6	2.27	0.50
60:DA:1819:A:H4'	60:DA:1820:U:H5'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2331:G:H2'	60:DA:2332:U:O4'	2.10	0.50
60:DA:2673:G:H2'	60:DA:2674:G:H8	1.75	0.50
60:DA:2762:G:H2'	60:DA:2763:G:O4'	2.11	0.50
60:DA:2795:G:H3'	60:DA:2797:U:H5"	1.93	0.50
1:AB:178:ARG:NH1	7:AH:71:GLY:O	2.44	0.50
6:AG:81:GLY:HA2	20:AA:1382:C:H5'	1.94	0.50
12:AM:74:VAL:O	12:AM:78:ILE:HG12	2.11	0.50
20:AA:573:A:O2'	20:AA:883:C:H4'	2.11	0.50
20:AA:980:C:H5'	20:AA:981:U:C5	2.46	0.50
20:AA:1127:G:N2	20:AA:1147:C:H41	2.09	0.50
28:BF:1:MET:HB2	28:BF:3:GLU:HG2	1.92	0.50
31:BJ:25:UNK:CA	31:BJ:80:UNK:HA	2.41	0.50
33:BO:29:ASN:HB2	60:BA:2675:A:H4'	1.93	0.50
34:BP:21:ARG:HH21	34:BP:29:LYS:HD3	1.76	0.50
39:BU:49:HIS:HA	39:BU:52:ARG:HB3	1.94	0.50
41:BW:21:VAL:O	41:BW:24:ILE:HG12	2.12	0.50
42:BX:57:LEU:HD12	60:BA:1341:U:O4'	2.12	0.50
46:B1:90:ILE:O	46:B1:94:LEU:HD13	2.11	0.50
54:B8:16:ILE:HB	54:B8:22:VAL:HG22	1.93	0.50
60:BA:84:A:N6	60:BA:102:G:O2'	2.39	0.50
60:BA:1081:U:H2'	60:BA:1082:U:C6	2.46	0.50
60:BA:1437:C:H2'	60:BA:1438:U:C6	2.46	0.50
60:BA:1441:G:H2'	60:BA:1442:G:C8	2.47	0.50
60:BA:1727:U:C4	60:BA:1728:G:C6	2.99	0.50
60:BA:1942:C:OP2	60:BA:1943:U:O2'	2.24	0.50
60:BA:2773:C:H2'	60:BA:2774:C:H6	1.76	0.50
1:CB:156:LYS:O	1:CB:157:ARG:HB2	2.10	0.50
6:CG:13:GLN:O	6:CG:24:THR:OG1	2.17	0.50
11:CL:45:PRO:CA	11:CL:92:ASP:HB3	2.41	0.50
14:CO:23:GLY:HA3	20:CA:750:G:N3	2.26	0.50
14:CO:50:HIS:CG	20:CA:764:C:H5"	2.46	0.50
20:CA:385:C:H2'	20:CA:386:C:H6	1.77	0.50
23:CY:11:ARG:HD3	23:CY:40:HIS:CE1	2.46	0.50
23:CY:30:GLU:O	23:CY:32:ILE:N	2.44	0.50
23:CY:55:MET:H	23:CY:59:ARG:HB2	1.76	0.50
23:CY:162:VAL:HB	23:CY:255:ILE:HG13	1.93	0.50
25:DC:42:VAL:HG23	25:DC:176:VAL:H	1.75	0.50
26:DD:96:HIS:CD2	26:DD:102:LYS:HD2	2.46	0.50
26:DD:101:GLU:C	26:DD:102:LYS:HD3	2.37	0.50
27:DE:51:PHE:H	27:DE:74:PRO:HG3	1.77	0.50
27:DE:101:ARG:CZ	27:DE:169:ASN:HD21	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:30:HIS:HA	32:DK:59:ILE:HD12	1.94	0.50
33:DO:13:ASN:CG	33:DO:14:THR:H	2.19	0.50
33:DO:105:GLU:O	33:DO:108:GLU:HG2	2.11	0.50
36:DR:42:LYS:O	36:DR:45:ARG:HG3	2.11	0.50
43:DY:38:ILE:HA	43:DY:66:PRO:HA	1.93	0.50
44:DZ:93:ASP:OD1	44:DZ:93:ASP:N	2.44	0.50
44:DZ:121:HIS:HB3	44:DZ:124:ILE:HG22	1.94	0.50
45:D0:65:GLY:HA2	45:D0:83:PRO:HA	1.93	0.50
54:D8:46:ARG:HH11	54:D8:47:LYS:H	1.60	0.50
59:DB:76:G:H2'	59:DB:77:U:C6	2.46	0.50
60:DA:373:U:H2'	60:DA:374:A:H8	1.75	0.50
60:DA:2398:U:H2'	60:DA:2399:G:C8	2.47	0.50
1:AB:24:TRP:CD1	1:AB:24:TRP:H	2.30	0.50
7:AH:89:PRO:O	7:AH:92:ARG:NH1	2.44	0.50
9:AJ:36:GLY:HA3	20:AA:1123:A:H4'	1.94	0.50
26:BD:25:THR:HB	26:BD:26:LYS:HD2	1.94	0.50
26:BD:98:VAL:O	60:BA:1501:C:O2'	2.28	0.50
30:BH:139:GLN:OE1	60:BA:2759:G:N2	2.44	0.50
36:BR:81:ASP:OD1	36:BR:81:ASP:N	2.44	0.50
39:BU:64:ARG:HD3	48:BN:42:TRP:N	2.26	0.50
40:BV:38:LEU:HD11	40:BV:99:ILE:HB	1.94	0.50
46:B1:45:ASN:CB	60:BA:397:G:H5"	2.42	0.50
59:BB:32:C:H2'	59:BB:33:G:C8	2.47	0.50
60:BA:366(B):C:N4	60:BA:404:C:OP2	2.39	0.50
60:BA:414:C:H2'	60:BA:415:A:H8	1.77	0.50
60:BA:492:A:H2'	60:BA:493:G:O4'	2.11	0.50
60:BA:1184:G:C2'	60:BA:1185:C:H5'	2.42	0.50
60:BA:1195:G:H2'	60:BA:1196:C:C6	2.46	0.50
60:BA:2171:A:O2'	60:BA:2172:U:O4'	2.30	0.50
60:BA:2697:G:H2'	60:BA:2698:U:O4'	2.11	0.50
3:CD:72:GLU:CD	20:CA:545:C:H5"	2.36	0.50
20:CA:543:C:H2'	20:CA:544:G:C8	2.46	0.50
20:CA:1145:C:HO2'	20:CA:1146:A:P	2.34	0.50
23:CY:315:LYS:H	23:CY:327:PHE:HB2	1.75	0.50
23:CY:443:HIS:CE1	23:CY:445:GLU:HB2	2.46	0.50
26:DD:54:ARG:HH21	60:DA:1822:G:H5"	1.77	0.50
29:DG:10:LYS:O	29:DG:14:GLU:HB3	2.11	0.50
32:DK:90:LYS:CG	60:DA:1076:C:H1'	2.42	0.50
49:D2:21:LEU:O	49:D2:25:VAL:HG23	2.11	0.50
54:D8:54:GLU:OE2	54:D8:57:ARG:NE	2.38	0.50
60:DA:1019:U:H2'	60:DA:1020:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:1115:G:H2'	60:DA:1116:C:C6	2.46	0.50
60:DA:1429:G:H2'	60:DA:1430:C:C6	2.47	0.50
60:DA:1830:C:H2'	60:DA:1831:G:H8	1.76	0.50
60:DA:2378:A:H8	60:DA:2378:A:O5'	1.94	0.50
60:DA:2581:G:N3	60:DA:2581:G:H2'	2.26	0.50
2:AC:43:LEU:O	2:AC:47:LEU:HB3	2.11	0.50
6:AG:3:ARG:HG3	20:AA:1380:U:C5	2.46	0.50
6:AG:11:GLN:CD	6:AG:12:LEU:H	2.20	0.50
10:AK:51:LYS:HE2	10:AK:52:GLY:N	2.27	0.50
16:AQ:52:LYS:H	16:AQ:52:LYS:HD2	1.75	0.50
20:AA:581:G:N2	20:AA:761:G:O6	2.44	0.50
20:AA:736:C:H2'	20:AA:737:A:C8	2.46	0.50
20:AA:977:A:H8	20:AA:1223:C:C4	2.29	0.50
20:AA:1127:G:H1'	20:AA:1148:U:N3	2.27	0.50
20:AA:1516:G:N2	20:AA:1519:A:OP2	2.45	0.50
22:AW:50:C:N4	22:AW:64:G:N1	2.34	0.50
22:AW:76:A:H1'	60:BA:2421:G:N2	2.27	0.50
23:AY:409:ILE:HG13	23:AY:656:ALA:HB3	1.93	0.50
23:AY:514:VAL:HA	23:AY:565:VAL:HA	1.93	0.50
30:BH:147:ASN:O	30:BH:151:ILE:HG13	2.12	0.50
39:BU:10:ARG:NH2	60:BA:1251:C:OP2	2.44	0.50
42:BX:27:THR:HB	42:BX:80:ILE:HG22	1.94	0.50
44:BZ:30:ASN:HA	44:BZ:89:PHE:CE2	2.47	0.50
44:BZ:182:LYS:HA	44:BZ:185:GLU:HB3	1.93	0.50
47:B4:16:CYS:HB3	47:B4:34:GLU:O	2.11	0.50
60:BA:152:G:H2'	60:BA:153:C:C6	2.46	0.50
60:BA:610:C:H2'	60:BA:611:C:C6	2.47	0.50
60:BA:675:A:H3'	60:BA:676:A:H2	1.77	0.50
60:BA:718:A:H2'	60:BA:719:C:O4'	2.12	0.50
60:BA:1051:G:H2'	60:BA:1052:C:H6	1.77	0.50
60:BA:1053:C:H2'	60:BA:1054:A:O4'	2.12	0.50
60:BA:1288:U:H3	60:BA:1326:U:H3	1.58	0.50
60:BA:1804:C:H2'	60:BA:1805:U:O4'	2.12	0.50
60:BA:1872:A:H8	60:BA:1872:A:O5'	1.95	0.50
60:BA:2319:G:H8	60:BA:2319:G:OP2	1.95	0.50
60:BA:2572:A:H5'	60:BA:2574:G:H4'	1.93	0.50
60:BA:2887:U:H2'	60:BA:2888:C:C6	2.47	0.50
3:CD:204:ILE:O	3:CD:208:SER:N	2.41	0.50
7:CH:15:ASN:ND2	20:CA:827:U:O4'	2.36	0.50
7:CH:44:PHE:HD2	7:CH:80:ILE:HG13	1.76	0.50
7:CH:83:ILE:HA	7:CH:136:GLU:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:80:LYS:HB3	9:CJ:84:GLN:NE2	2.22	0.50
20:CA:1135:U:O2	20:CA:1138:G:N2	2.33	0.50
26:DD:79:VAL:HG12	26:DD:80:ALA:N	2.27	0.50
30:DH:124:GLU:O	30:DH:126:PRO:HD3	2.12	0.50
36:DR:6:SER:HB2	60:DA:2873:A:N3	2.27	0.50
48:DN:15:LEU:HD13	48:DN:15:LEU:C	2.37	0.50
55:D9:14:CYS:SG	55:D9:27:CYS:HB2	2.52	0.50
56:De:101:GLU:HA	56:De:105:LYS:HB3	1.94	0.50
60:DA:1166:C:H2'	60:DA:1167:U:C6	2.47	0.50
60:DA:1320:C:H42	60:DA:1331:A:N6	1.99	0.50
60:DA:1341:U:H3'	60:DA:1342:A:C8	2.47	0.50
60:DA:2504:U:C2'	60:DA:2505:G:H5'	2.41	0.50
60:DA:2655:G:O2'	60:DA:2664:G:O6	2.26	0.50
60:DA:2793:G:O6	60:DA:2803:C:N3	2.45	0.50
3:AD:43:HIS:O	3:AD:45:GLN:N	2.45	0.50
3:AD:194:LEU:O	3:AD:196:LEU:HD12	2.12	0.50
8:AI:17:VAL:HA	8:AI:63:ILE:HG23	1.93	0.50
10:AK:90:GLY:HA2	10:AK:93:GLN:HB2	1.94	0.50
15:AP:9:PHE:HE2	15:AP:18:ARG:HD2	1.77	0.50
17:AR:76:LEU:C	17:AR:78:LEU:H	2.19	0.50
20:AA:1231:G:H2'	20:AA:1232:U:C6	2.47	0.50
20:AA:1245:A:H2'	20:AA:1246:C:C6	2.47	0.50
23:AY:311:ALA:HA	23:AY:330:VAL:C	2.37	0.50
25:BC:19:LYS:HE3	25:BC:20:VAL:N	2.26	0.50
26:BD:105:ILE:HD13	26:BD:106:ILE:HG12	1.93	0.50
26:BD:218:ARG:HH22	60:BA:691:C:P	2.35	0.50
27:BE:110:GLY:H	60:BA:2821:A:H5"	1.76	0.50
28:BF:53:THR:HG23	28:BF:93:LYS:HZ1	1.77	0.50
29:BG:49:ASP:OD1	29:BG:49:ASP:N	2.45	0.50
37:BS:39:ILE:CD1	37:BS:73:LEU:HD11	2.42	0.50
41:BW:92:ARG:C	60:BA:1614:A:H61	2.20	0.50
43:BY:87:LYS:O	43:BY:89:PHE:N	2.44	0.50
50:B3:29:ARG:HH21	60:BA:1183:G:H4'	1.75	0.50
55:B9:11:CYS:O	55:B9:13:LYS:N	2.37	0.50
59:BB:30:C:H2'	59:BB:31:C:O4'	2.12	0.50
60:BA:1086:A:H3'	60:BA:1086:A:N3	2.27	0.50
60:BA:1260:G:H2'	60:BA:1261:C:C6	2.47	0.50
60:BA:1530:G:C6	60:BA:1541:U:O2	2.65	0.50
60:BA:1856:G:H2'	60:BA:1857:G:O4'	2.12	0.50
60:BA:2233:U:H2'	60:BA:2234:G:C8	2.46	0.50
60:BA:2593:U:H3	60:BA:2600:A:H61	1.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:174:VAL:HG22	1:CB:184:VAL:HG11	1.92	0.50
3:CD:22:LYS:HB3	3:CD:26:CYS:HB2	1.92	0.50
3:CD:74:GLN:O	3:CD:78:LEU:HG	2.12	0.50
6:CG:69:VAL:HG13	6:CG:138:LYS:HB2	1.94	0.50
9:CJ:52:GLY:HA2	20:CA:1059:C:O2'	2.12	0.50
10:CK:84:VAL:HG23	10:CK:110:ASP:HA	1.92	0.50
11:CL:22:SER:O	11:CL:24:VAL:N	2.33	0.50
12:CM:48:LEU:HD23	12:CM:49:THR:H	1.77	0.50
20:CA:1494:G:H2'	20:CA:1495:U:C6	2.46	0.50
22:CW:22:G:H2'	22:CW:23:A:C8	2.47	0.50
23:CY:511:LYS:HB2	23:CY:569:ASP:O	2.10	0.50
26:DD:211:ARG:HA	26:DD:214:TRP:CE3	2.47	0.50
27:DE:154:LYS:NZ	60:DA:2513:G:O2'	2.42	0.50
29:DG:61:ALA:CB	29:DG:68:PRO:HD3	2.42	0.50
35:DQ:20:ALA:C	35:DQ:22:LYS:H	2.19	0.50
48:DN:90:MET:HE2	48:DN:90:MET:HA	1.94	0.50
60:DA:80:G:N2	60:DA:106:C:N3	2.47	0.50
60:DA:84:A:N6	60:DA:102:G:O2'	2.41	0.50
60:DA:632:A:H2'	60:DA:633:A:C8	2.47	0.50
60:DA:1145:C:H2'	60:DA:1146:C:C6	2.46	0.50
60:DA:1495:A:H2	60:DA:1578:U:H1'	1.77	0.50
60:DA:1637:A:H2'	60:DA:1638:C:H6	1.77	0.50
60:DA:2024:G:H2'	60:DA:2025:C:H6	1.76	0.50
60:DA:2233:U:H2'	60:DA:2234:G:C8	2.47	0.50
60:DA:2895:U:H2'	60:DA:2896:C:O4'	2.12	0.50
3:AD:114:ARG:N	3:AD:114:ARG:HD2	2.27	0.50
5:AF:44:GLY:HA2	5:AF:59:TYR:CE2	2.46	0.50
19:AT:81:LYS:HG2	19:AT:85:MET:HE2	1.93	0.50
20:AA:33:A:H2'	20:AA:34:C:C6	2.47	0.50
20:AA:116:A:H2'	20:AA:117:G:O4'	2.12	0.50
20:AA:179:A:H3'	20:AA:180:U:H5	1.77	0.50
20:AA:1326:C:H2'	20:AA:1327:C:C6	2.47	0.50
26:BD:201:HIS:NE2	60:BA:1821:A:OP1	2.44	0.50
30:BH:83:TYR:HA	30:BH:135:GLY:O	2.12	0.50
41:BW:16:LYS:O	41:BW:19:LEU:HB2	2.11	0.50
60:BA:259:G:H2'	60:BA:260:G:C8	2.47	0.50
60:BA:397:G:H2'	60:BA:398:G:C8	2.46	0.50
60:BA:497:A:H2'	60:BA:498:G:H8	1.76	0.50
60:BA:879:G:H2'	60:BA:880:G:C8	2.47	0.50
60:BA:1077:A:H2'	60:BA:1077:A:N3	2.27	0.50
60:BA:1095:A:N1	60:BA:1096:A:N6	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1138:G:O2'	60:BA:1139:G:P	2.69	0.50
60:BA:1871:A:H2'	60:BA:1872:A:C8	2.47	0.50
2:CC:160:ALA:O	2:CC:162:GLN:N	2.44	0.50
12:CM:94:ARG:CZ	18:CS:81:ARG:HG3	2.41	0.50
15:CP:18:ARG:HG2	15:CP:20:VAL:HG12	1.94	0.50
18:CS:19:VAL:O	18:CS:23:ASN:HB3	2.12	0.50
20:CA:1047:G:H1	20:CA:1210:C:H42	1.59	0.50
20:CA:1277:C:H2'	20:CA:1278:U:H5'	1.93	0.50
20:CA:1306:A:H1'	20:CA:1332:A:N1	2.26	0.50
28:DF:24:LEU:C	28:DF:115:ALA:HB1	2.37	0.50
39:DU:64:ARG:CD	48:DN:42:TRP:H	2.25	0.50
39:DU:67:ALA:HB3	48:DN:40:PRO:HA	1.93	0.50
39:DU:86:ALA:HB2	39:DU:116:ALA:HB2	1.94	0.50
41:DW:37:ARG:HG3	41:DW:38:TYR:CD2	2.46	0.50
59:DB:81:G:H1'	60:DA:919:G:H5'	1.93	0.50
60:DA:142:G:H2'	60:DA:143:C:H6	1.77	0.50
60:DA:668:G:H2'	60:DA:670:A:N7	2.27	0.50
60:DA:1082:U:H2'	60:DA:1083:U:H5'	1.93	0.50
60:DA:1144:G:H2'	60:DA:1145:C:H6	1.77	0.50
60:DA:1878:G:H2'	60:DA:1879:C:C6	2.47	0.50
60:DA:2437:U:H2'	60:DA:2438:U:C6	2.47	0.50
60:DA:2439:A:N7	60:DA:2586:C:H4'	2.27	0.50
60:DA:2552:U:C2	60:DA:2554:U:H5'	2.47	0.50
60:DA:2599:G:H2'	60:DA:2600:A:H8	1.77	0.50
1:AB:81:VAL:O	1:AB:85:ALA:N	2.34	0.49
2:AC:72:LYS:HD2	2:AC:73:PRO:HD2	1.94	0.49
7:AH:79:VAL:O	7:AH:81:HIS:N	2.45	0.49
11:AL:22:SER:O	11:AL:24:VAL:N	2.32	0.49
13:AN:43:CYS:HA	13:AN:46:GLU:CD	2.37	0.49
20:AA:140:A:H2'	20:AA:141:A:C8	2.47	0.49
20:AA:887:G:H1	20:AA:910:C:N4	2.09	0.49
20:AA:1176:A:H2'	20:AA:1177:G:C8	2.47	0.49
23:AY:312:LEU:HD23	23:AY:313:ALA:O	2.11	0.49
26:BD:44:ASN:HB2	26:BD:49:ILE:HA	1.94	0.49
30:BH:149:ARG:NH1	30:BH:164:TYR:H	2.10	0.49
32:BK:9:LYS:HA	32:BK:56:GLU:HA	1.94	0.49
43:BY:51:VAL:HB	43:BY:55:TYR:HD2	1.76	0.49
46:B1:18:ILE:HG12	46:B1:19:GLN:H	1.76	0.49
48:BN:90:MET:HE2	48:BN:90:MET:HA	1.94	0.49
49:B2:27:GLU:O	49:B2:30:ARG:HG3	2.12	0.49
55:B9:25:VAL:HG21	55:B9:34:GLN:HB2	1.92	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:649:G:H2'	60:BA:650:C:H6	1.77	0.49
60:BA:761:A:H8	60:BA:761:A:O5'	1.95	0.49
60:BA:1655:A:C2	60:BA:2049:G:H5"	2.47	0.49
60:BA:1945:G:C4	60:BA:1946:U:C5	3.00	0.49
60:BA:2657:A:H62	60:BA:2664:G:H21	1.59	0.49
1:CB:217:ARG:O	1:CB:221:LEU:HB2	2.12	0.49
3:CD:53:ASP:OD1	3:CD:53:ASP:N	2.45	0.49
9:CJ:10:GLY:HA3	9:CJ:16:LEU:CD2	2.42	0.49
11:CL:88:GLY:O	11:CL:99:HIS:NE2	2.45	0.49
16:CQ:45:HIS:CB	16:CQ:72:ARG:HG2	2.37	0.49
20:CA:301:G:H2'	20:CA:302:G:C8	2.46	0.49
20:CA:976:G:OP2	20:CA:1358:U:O2'	2.29	0.49
20:CA:1221:G:H2'	20:CA:1222:G:O4'	2.11	0.49
20:CA:1440(A):G:H5"	20:CA:1440(B):G:O5'	2.12	0.49
23:CY:609:GLU:HG2	23:CY:644:ARG:HA	1.94	0.49
26:DD:50:THR:HA	60:DA:1805:U:O2'	2.11	0.49
26:DD:177:LEU:O	26:DD:179:SER:N	2.42	0.49
32:DK:134:MET:HG2	60:DA:1063:G:H5'	1.94	0.49
33:DO:110:GLY:HA2	33:DO:112:MET:HE1	1.94	0.49
40:DV:56:SER:HB2	40:DV:100:ARG:HD2	1.94	0.49
40:DV:89:GLN:OE1	60:DA:1162:G:N2	2.43	0.49
60:DA:37:C:H2'	60:DA:38:A:H8	1.73	0.49
60:DA:737:C:H42	60:DA:759:G:H1	1.60	0.49
60:DA:909:A:H2'	60:DA:912:C:H5	1.77	0.49
60:DA:1058:G:H2'	60:DA:1059:G:H8	1.77	0.49
60:DA:1478:G:H2'	60:DA:1479:G:C8	2.47	0.49
60:DA:1611:C:H2'	60:DA:1612:C:C6	2.48	0.49
60:DA:1665:A:N1	60:DA:1995:U:O4	2.45	0.49
60:DA:1666:G:H1	60:DA:1994:C:H42	1.60	0.49
60:DA:2419:U:H2'	60:DA:2420:C:C6	2.46	0.49
60:DA:2896:C:H2'	60:DA:2897:U:C6	2.46	0.49
1:AB:171:ALA:HA	1:AB:174:VAL:CB	2.40	0.49
8:AI:17:VAL:HG13	8:AI:63:ILE:HD12	1.93	0.49
11:AL:17:LYS:NZ	20:AA:302:G:O2'	2.45	0.49
11:AL:76:ASN:H	11:AL:77:LEU:HD12	1.78	0.49
19:AT:18:GLN:O	19:AT:22:ARG:HG3	2.12	0.49
20:AA:429:U:H1'	20:AA:430:A:H5"	1.93	0.49
20:AA:501:C:H2'	20:AA:502:G:C8	2.47	0.49
20:AA:1062:U:H2'	20:AA:1063:C:C6	2.47	0.49
20:AA:1208:C:O2'	23:AY:536:LYS:HD3	2.12	0.49
22:AW:75:C:OP2	46:B1:33:LYS:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:63:ILE:CB	61:AY:701:GNP:O1G	2.42	0.49
23:AY:187:THR:HG21	23:AY:199:ILE:HG23	1.94	0.49
23:AY:394:ALA:O	23:AY:396:ARG:HG3	2.12	0.49
28:BF:65:TRP:HH2	28:BF:75:HIS:CD2	2.30	0.49
32:BK:38:VAL:O	32:BK:42:ASN:HB2	2.12	0.49
32:BK:103:GLN:O	32:BK:107:ILE:HG12	2.11	0.49
37:BS:102:ALA:HB1	37:BS:108:GLY:C	2.37	0.49
42:BX:59:VAL:HG22	42:BX:76:ARG:O	2.11	0.49
46:B1:19:GLN:O	46:B1:21:ARG:N	2.40	0.49
54:B8:52:LYS:HE2	60:BA:2359:C:H1'	1.94	0.49
59:BB:60:C:H2'	59:BB:61:G:H8	1.77	0.49
60:BA:278:A:HO2'	60:BA:279:C:C5'	2.25	0.49
1:CB:33:TYR:O	1:CB:34:ALA:O	2.31	0.49
1:CB:187:LEU:HD23	1:CB:201:ILE:HG22	1.94	0.49
11:CL:36:VAL:N	11:CL:58:VAL:HA	2.26	0.49
14:CO:65:ARG:O	14:CO:68:ARG:HB3	2.11	0.49
20:CA:129(A):G:H5'	20:CA:186(K):G:H5'	1.94	0.49
25:DC:34:ALA:HB2	25:DC:217:THR:HG21	1.93	0.49
25:DC:87:ALA:HB3	25:DC:95:VAL:HG11	1.93	0.49
33:DO:8:LEU:HD21	33:DO:21:CYS:HB2	1.93	0.49
33:DO:78:ARG:NH2	38:DT:73:GLU:OE1	2.46	0.49
38:DT:5:ALA:O	38:DT:9:LEU:HG	2.11	0.49
44:DZ:10:ARG:N	44:DZ:36:LYS:O	2.41	0.49
44:DZ:28:MET:SD	44:DZ:37:VAL:HG22	2.51	0.49
48:DN:65:LYS:O	48:DN:66:LYS:C	2.54	0.49
52:D6:43:CYS:SG	52:D6:44:ARG:NH2	2.82	0.49
53:D7:40:TRP:N	53:D7:40:TRP:CD1	2.80	0.49
60:DA:232:G:H22	60:DA:420:C:C5'	2.25	0.49
60:DA:581:C:H2'	60:DA:582:G:H8	1.71	0.49
60:DA:822:U:C5	60:DA:944:G:H1'	2.47	0.49
60:DA:947:G:N2	60:DA:970:C:N3	2.48	0.49
60:DA:1095:A:H2'	60:DA:1096:A:C8	2.48	0.49
60:DA:1780:A:H3'	60:DA:1781:C:H2'	1.93	0.49
60:DA:2635:C:N4	60:DA:2783:G:H1	2.06	0.49
2:AC:151:VAL:O	2:AC:168:ALA:HB3	2.11	0.49
3:AD:121:VAL:HA	3:AD:126:ILE:HG13	1.95	0.49
4:AE:5:ASP:OD1	4:AE:5:ASP:N	2.44	0.49
9:AJ:50:ILE:HG12	13:AN:41:ARG:NH1	2.27	0.49
11:AL:88:GLY:O	11:AL:99:HIS:NE2	2.45	0.49
12:AM:37:THR:HG21	12:AM:56:LEU:HD23	1.95	0.49
14:AO:25:THR:O	14:AO:29:VAL:HG23	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:6:LYS:HG2	18:AS:7:LYS:H	1.78	0.49
20:AA:778:G:H2'	20:AA:779:C:C6	2.47	0.49
20:AA:938:A:H2'	20:AA:939:G:O4'	2.13	0.49
20:AA:1266:G:H22	20:AA:1268:A:H3'	1.77	0.49
20:AA:1503:A:C6	21:AV:14:A:H2'	2.48	0.49
23:AY:123:ARG:HB2	23:AY:157:LEU:HD21	1.94	0.49
23:AY:631:ILE:C	23:AY:645:ALA:HA	2.37	0.49
25:BC:65:LEU:HG	25:BC:162:ILE:HG13	1.93	0.49
26:BD:172:TYR:HD1	26:BD:184:LYS:HB3	1.78	0.49
28:BF:51:THR:H	28:BF:92:PRO:HB2	1.77	0.49
28:BF:80:ALA:HB3	28:BF:83:PHE:HE1	1.78	0.49
36:BR:12:ARG:HE	36:BR:16:HIS:CD2	2.30	0.49
36:BR:107:ASP:HA	60:BA:2009:G:O2'	2.13	0.49
46:B1:45:ASN:OD1	46:B1:46:LEU:N	2.46	0.49
48:BN:78:TYR:HE2	60:BA:2642:G:H4'	1.65	0.49
60:BA:117:G:H5'	60:BA:126:A:N3	2.27	0.49
60:BA:410:G:OP1	60:BA:411:G:H5'	2.11	0.49
60:BA:1889:A:H2'	60:BA:1890:A:C8	2.47	0.49
60:BA:2484:G:H2'	60:BA:2485:G:C8	2.47	0.49
1:CB:164:VAL:HG12	1:CB:165:VAL:N	2.26	0.49
3:CD:119:GLN:HG2	3:CD:120:LEU:HG	1.94	0.49
7:CH:80:ILE:H	7:CH:80:ILE:HD12	1.76	0.49
9:CJ:17:ASP:HA	9:CJ:20:ALA:HB3	1.93	0.49
20:CA:757:U:H4'	20:CA:822:C:O2	2.13	0.49
22:CW:71:C:H2'	22:CW:72:C:C6	2.47	0.49
23:CY:32:ILE:HA	23:CY:34:TYR:O	2.13	0.49
23:CY:580:MET:O	23:CY:583:LYS:HB3	2.12	0.49
28:DF:190:GLU:O	28:DF:191:ARG:HG3	2.11	0.49
36:DR:22:ARG:HG2	36:DR:69:ASP:O	2.12	0.49
38:DT:49:VAL:O	38:DT:50:ILE:HG13	2.12	0.49
38:DT:50:ILE:HG12	38:DT:99:LEU:HB2	1.93	0.49
45:D0:20:ARG:HD3	60:DA:2356:C:O3'	2.12	0.49
60:DA:273(D):C:H2'	60:DA:273(E):C:H6	1.77	0.49
60:DA:273(D):C:H2'	60:DA:273(E):C:C6	2.47	0.49
60:DA:391:G:H1'	60:DA:411:G:C4	2.48	0.49
60:DA:408:G:H1	60:DA:419:C:H42	1.58	0.49
60:DA:1047:G:H21	60:DA:1111:A:H62	1.61	0.49
60:DA:1281:G:N2	60:DA:1289:C:N3	2.49	0.49
60:DA:1291:C:H2'	60:DA:1292:U:C6	2.48	0.49
2:AC:7:PRO:O	2:AC:11:ARG:HG2	2.13	0.49
3:AD:77:ASN:HA	3:AD:80:GLU:HG2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:48:TYR:HD1	7:AH:59:LEU:HD21	1.76	0.49
11:AL:71:PRO:HD2	11:AL:102:ARG:HD3	1.94	0.49
16:AQ:68:ARG:C	16:AQ:70:ARG:H	2.20	0.49
20:AA:313:A:H2'	20:AA:314:C:C6	2.47	0.49
23:AY:20:HIS:CE1	23:AY:21:ILE:HG12	2.47	0.49
27:BE:13:ARG:HA	27:BE:21:VAL:C	2.36	0.49
27:BE:119:ARG:HD3	27:BE:120:TRP:NE1	2.27	0.49
27:BE:143:ASN:HD21	60:BA:2571:C:C2'	2.25	0.49
27:BE:187:ALA:O	60:BA:2679:A:O2'	2.24	0.49
28:BF:51:THR:O	28:BF:52:LYS:HB2	2.12	0.49
30:BH:33:LEU:HD22	30:BH:79:VAL:HG13	1.94	0.49
34:BP:50:ARG:HB3	54:B8:59:LYS:NZ	2.27	0.49
38:BT:49:VAL:O	38:BT:50:ILE:HG13	2.13	0.49
40:BV:64:HIS:CG	40:BV:92:THR:HG22	2.47	0.49
48:BN:129:PRO:O	48:BN:130:HIS:C	2.54	0.49
60:BA:2364:C:H2'	60:BA:2365:G:O4'	2.12	0.49
2:CC:31:HIS:HA	2:CC:34:LEU:HD12	1.93	0.49
9:CJ:19:SER:O	9:CJ:23:ILE:HG12	2.11	0.49
20:CA:31:G:N2	20:CA:48:C:H5"	2.26	0.49
20:CA:396:G:OP1	23:CY:349:LYS:NZ	2.45	0.49
20:CA:408:A:H2'	20:CA:409:G:H8	1.76	0.49
20:CA:767:A:H2'	20:CA:768:A:O4'	2.13	0.49
20:CA:828:A:H2'	20:CA:829:G:O4'	2.12	0.49
20:CA:1062:U:H2'	20:CA:1063:C:C6	2.48	0.49
20:CA:1399:C:H42	20:CA:1504:G:H1	1.60	0.49
23:CY:144:ALA:HB3	23:CY:170:ARG:HG3	1.94	0.49
29:DG:42:GLY:C	60:DA:2306:C:H42	2.20	0.49
29:DG:107:LEU:HD23	29:DG:111:LEU:HD11	1.93	0.49
38:DT:27:THR:HG23	38:DT:28:VAL:H	1.77	0.49
48:DN:103:VAL:O	48:DN:106:MET:N	2.37	0.49
52:D6:16:CYS:HB2	52:D6:17:LYS:HD2	1.93	0.49
53:D7:4:THR:OG1	60:DA:788:A:N3	2.42	0.49
60:DA:150:C:O2	60:DA:176:G:N1	2.45	0.49
60:DA:270(D):C:O2'	60:DA:273(C):C:H5"	2.13	0.49
60:DA:994:C:O2'	60:DA:995:C:H3'	2.12	0.49
60:DA:1005:C:H2'	60:DA:1006:C:O4'	2.12	0.49
60:DA:1091:G:H2'	60:DA:1092:C:C6	2.46	0.49
60:DA:1136:G:C4	60:DA:1137:G:C8	3.00	0.49
60:DA:1203:G:H5"	60:DA:1204:A:OP2	2.12	0.49
1:AB:162:ILE:HG12	1:AB:164:VAL:CG2	2.43	0.49
6:AG:79:ARG:HB2	20:AA:1381:U:N1	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:9:MET:HB2	7:AH:26:VAL:HG21	1.95	0.49
7:AH:89:PRO:O	20:AA:586:C:H4'	2.11	0.49
9:AJ:50:ILE:HG12	13:AN:41:ARG:CZ	2.43	0.49
16:AQ:86:GLU:O	16:AQ:90:ILE:HG13	2.12	0.49
19:AT:22:ARG:HD3	20:AA:323:U:H4'	1.95	0.49
20:AA:384:G:H2'	20:AA:385:C:C6	2.47	0.49
20:AA:801:U:H2'	20:AA:802:A:C8	2.48	0.49
20:AA:1271:G:H2'	20:AA:1272:G:H8	1.76	0.49
23:AY:8:ASP:HB3	23:AY:11:ARG:HG2	1.94	0.49
29:BG:100:TRP:O	29:BG:104:GLU:HB2	2.13	0.49
30:BH:173:PRO:C	30:BH:175:LYS:H	2.20	0.49
32:BK:27:LEU:HD21	32:BK:57:ILE:HB	1.94	0.49
33:BO:19:ILE:HG22	33:BO:43:VAL:HA	1.95	0.49
34:BP:83:VAL:HG12	34:BP:114:ILE:HA	1.95	0.49
41:BW:32:ALA:HA	41:BW:35:ILE:HD12	1.93	0.49
46:B1:88:LYS:HA	46:B1:91:LYS:HB3	1.95	0.49
48:BN:15:LEU:HD13	48:BN:15:LEU:C	2.37	0.49
48:BN:112:LEU:HA	48:BN:115:ARG:CB	2.42	0.49
59:BB:44:G:H21	59:BB:47:C:N4	2.11	0.49
60:BA:16:G:O6	60:BA:524:U:O4	2.29	0.49
60:BA:571:A:O2'	60:BA:573:G:OP2	2.31	0.49
60:BA:1287:A:C2	60:BA:1649:G:H4'	2.45	0.49
60:BA:1434:A:H61	60:BA:1558:A:H62	1.60	0.49
60:BA:1682:G:P	60:BA:1699:G:H22	2.35	0.49
60:BA:2289:G:H2'	60:BA:2290:G:O4'	2.13	0.49
60:BA:2772:C:H2'	60:BA:2773:C:H6	1.78	0.49
60:BA:2810:A:H62	60:BA:2891:G:H21	1.59	0.49
3:CD:61:LYS:HA	3:CD:203:VAL:HG22	1.94	0.49
3:CD:88:VAL:O	3:CD:90:GLY:N	2.45	0.49
7:CH:69:ARG:NH2	7:CH:74:PRO:O	2.45	0.49
10:CK:110:ASP:O	10:CK:112:THR:N	2.45	0.49
11:CL:38:THR:CG2	11:CL:57:LYS:HB2	2.41	0.49
16:CQ:13:ASP:HA	16:CQ:19:VAL:HG12	1.94	0.49
20:CA:186:C:H2'	20:CA:186(A):C:C6	2.48	0.49
20:CA:702:A:C2	60:DA:1847:A:H5'	2.48	0.49
20:CA:828:A:H62	20:CA:858:G:N2	2.10	0.49
23:CY:118:SER:HA	23:CY:121:VAL:HG22	1.94	0.49
23:CY:238:THR:OG1	23:CY:239:GLU:N	2.46	0.49
26:DD:198:ASN:ND2	26:DD:200:ASP:HB2	2.27	0.49
36:DR:14:SER:O	36:DR:18:LEU:HG	2.13	0.49
45:D0:25:ARG:HH22	60:DA:2355:C:P	2.35	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:De:60:PHE:HB3	56:De:62:VAL:HG22	1.94	0.49
60:DA:13:A:N6	60:DA:526:A:OP2	2.42	0.49
60:DA:506:G:H4'	60:DA:509:C:O2	2.12	0.49
60:DA:682:G:H1	60:DA:795:C:H42	1.59	0.49
60:DA:1025:G:O6	60:DA:1139:G:N2	2.46	0.49
60:DA:1728:G:N2	60:DA:1731:G:O2'	2.45	0.49
60:DA:1804:C:H2'	60:DA:1805:U:H6	1.77	0.49
9:AJ:52:GLY:C	9:AJ:54:PHE:H	2.20	0.49
11:AL:71:PRO:O	11:AL:120:TYR:OH	2.31	0.49
17:AR:26:LEU:HD13	17:AR:39:VAL:HG22	1.94	0.49
20:AA:672:U:O2'	20:AA:673:G:O5'	2.25	0.49
20:AA:1131:G:H2'	20:AA:1132:C:C6	2.47	0.49
20:AA:1147:C:H2'	20:AA:1148:U:H5'	1.94	0.49
20:AA:1179:A:H2'	20:AA:1180:A:O4'	2.12	0.49
20:AA:1306:A:H61	20:AA:1331:G:H1'	1.77	0.49
23:AY:563:ILE:H	23:AY:563:ILE:HD13	1.77	0.49
25:BC:214:TYR:H	25:BC:214:TYR:HD1	1.61	0.49
26:BD:78:LYS:N	26:BD:116:GLN:HG2	2.28	0.49
29:BG:74:LYS:HB2	29:BG:75:LYS:HE3	1.95	0.49
29:BG:146:TYR:O	29:BG:148:MET:N	2.45	0.49
45:B0:26:TYR:HB3	45:B0:27:GLU:OE2	2.13	0.49
46:B1:43:TYR:CG	46:B1:44:PRO:HD2	2.47	0.49
59:BB:24:G:N1	59:BB:56:G:C2	2.81	0.49
59:BB:24:G:N7	59:BB:56:G:O2'	2.44	0.49
60:BA:462:C:N4	60:BA:467:G:H1	2.06	0.49
60:BA:610:C:H2'	60:BA:611:C:H6	1.78	0.49
60:BA:824:A:H1'	60:BA:2358:G:N7	2.28	0.49
60:BA:1135:C:H3'	60:BA:1137:G:OP2	2.12	0.49
60:BA:1615:C:O2	60:BA:1617:C:H5"	2.13	0.49
60:BA:2670:A:H2'	60:BA:2671:A:C8	2.48	0.49
60:BA:2819:G:H2'	60:BA:2821:A:N7	2.28	0.49
1:CB:150:SER:O	1:CB:153:ARG:HB3	2.13	0.49
3:CD:31:CYS:H	3:CD:33:MET:HB2	1.76	0.49
16:CQ:17:LYS:HD2	20:CA:255:G:H4'	1.95	0.49
20:CA:124:G:H2'	20:CA:125:U:O4'	2.12	0.49
26:DD:85:ASP:OD1	26:DD:88:ARG:N	2.40	0.49
28:DF:75:HIS:HA	60:DA:674:G:H4'	1.94	0.49
28:DF:118:ALA:HA	28:DF:123:LEU:HD22	1.94	0.49
30:DH:160:LYS:HZ1	60:DA:2658:C:H5'	1.76	0.49
32:DK:5:VAL:HG12	32:DK:60:TYR:HA	1.95	0.49
35:DQ:80:GLU:HA	60:DA:2494:G:O2'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DS:17:ARG:O	37:DS:21:THR:N	2.46	0.49
59:DB:34:U:O2'	59:DB:44:G:N7	2.42	0.49
60:DA:493:G:H2'	60:DA:494:G:O4'	2.12	0.49
60:DA:828:U:H4'	60:DA:831:G:N1	2.27	0.49
60:DA:1035:U:H2'	60:DA:1036:G:C8	2.47	0.49
60:DA:2064:C:H2'	60:DA:2065:C:C6	2.47	0.49
60:DA:2461:C:N4	60:DA:2489:G:H1	2.09	0.49
60:DA:2464:C:H42	60:DA:2486:G:H1	1.59	0.49
60:DA:2573:C:OP1	60:DA:2574:G:H5"	2.13	0.49
2:AC:136:GLN:O	2:AC:140:ARG:HG3	2.12	0.49
6:AG:78:ARG:HB3	6:AG:85:TYR:O	2.13	0.49
8:AI:16:ARG:NH1	20:AA:1147:C:O2	2.45	0.49
20:AA:186(D):C:H2'	20:AA:186(E):C:C6	2.48	0.49
20:AA:1246:C:C2	20:AA:1291:G:N2	2.78	0.49
28:BF:10:PRO:CB	28:BF:19:GLU:HA	2.43	0.49
28:BF:174:VAL:HG12	28:BF:189:THR:HG21	1.94	0.49
50:B3:9:VAL:HG23	50:B3:10:LYS:HG3	1.95	0.49
53:B7:32:LYS:O	53:B7:35:ARG:HB2	2.13	0.49
60:BA:544:C:H2'	60:BA:545:G:H5'	1.95	0.49
60:BA:1292:U:H2'	60:BA:1293:C:H6	1.76	0.49
60:BA:2054:A:H5"	60:BA:2055:C:H4'	1.94	0.49
10:CK:29:ILE:HG12	10:CK:30:VAL:N	2.27	0.49
15:CP:45:THR:HG21	20:CA:616:G:O2'	2.12	0.49
19:CT:87:LYS:O	19:CT:91:LEU:HG	2.13	0.49
20:CA:485:G:H4'	20:CA:486:U:H6	1.78	0.49
20:CA:783:C:H2'	20:CA:784:C:H6	1.78	0.49
20:CA:1411:C:H42	20:CA:1489:G:H1	1.61	0.49
25:DC:37:LYS:NZ	60:DA:2127:G:H4'	2.28	0.49
36:DR:13:HIS:ND1	60:DA:712(B):A:H4'	2.27	0.49
38:DT:115:ARG:HD2	38:DT:115:ARG:N	2.28	0.49
41:DW:28:SER:HA	41:DW:70:TYR:HA	1.94	0.49
45:D0:47:PRO:HG3	45:D0:59:LEU:HD22	1.94	0.49
50:D3:43:ILE:O	50:D3:47:VAL:HG23	2.12	0.49
59:DB:56:G:H4'	59:DB:57:A:C8	2.47	0.49
60:DA:56:A:H2'	60:DA:57:C:C6	2.48	0.49
60:DA:78:A:H61	60:DA:108:U:H3	1.60	0.49
60:DA:83:G:H21	60:DA:103:A:N6	2.11	0.49
60:DA:856:C:H2'	60:DA:857:C:C6	2.48	0.49
60:DA:1858:G:H1'	60:DA:1884:A:H62	1.76	0.49
60:DA:1954:G:O2'	60:DA:1956:U:O4	2.28	0.49
2:AC:95:THR:O	2:AC:95:THR:OG1	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:74:GLN:O	3:AD:78:LEU:HG	2.12	0.49
3:AD:190:ASP:H	3:AD:193:ASP:HB2	1.77	0.49
9:AJ:6:ILE:HG22	9:AJ:98:ILE:HA	1.93	0.49
10:AK:81:ASP:HA	10:AK:106:LYS:O	2.12	0.49
11:AL:43:VAL:O	11:AL:51:ALA:HB3	2.13	0.49
11:AL:101:VAL:HG12	11:AL:102:ARG:O	2.12	0.49
11:AL:113:ARG:HD3	11:AL:116:SER:HB2	1.94	0.49
12:AM:4:ILE:HG23	12:AM:57:ARG:HB3	1.95	0.49
12:AM:19:LEU:HA	12:AM:22:ILE:HD12	1.94	0.49
12:AM:88:ARG:HD3	12:AM:88:ARG:H	1.78	0.49
17:AR:53:ARG:NE	17:AR:59:SER:HA	2.28	0.49
20:AA:186(N):U:H2'	20:AA:186(O):G:C8	2.47	0.49
20:AA:255:G:H2'	20:AA:256:U:H6	1.77	0.49
20:AA:443:C:N3	20:AA:491:G:N2	2.51	0.49
20:AA:621:A:H2'	20:AA:622:A:C8	2.48	0.49
26:BD:218:ARG:HD2	26:BD:218:ARG:N	2.27	0.49
34:BP:60:MET:O	54:B8:27:THR:HG21	2.12	0.49
48:BN:51:PHE:CE2	48:BN:119:ARG:HD2	2.48	0.49
49:B2:59:ARG:HG2	60:BA:76:C:O3'	2.12	0.49
53:B7:16:HIS:ND1	60:BA:684:G:OP1	2.36	0.49
53:B7:31:LEU:HA	53:B7:34:ARG:CG	2.42	0.49
53:B7:37:LYS:HB2	53:B7:39:ARG:HH21	1.78	0.49
60:BA:238:C:H2'	60:BA:239:U:C6	2.47	0.49
60:BA:451:C:C2	60:BA:453:C:C5	3.01	0.49
60:BA:1019:U:N3	60:BA:1020:A:N7	2.61	0.49
60:BA:1028:A:N3	60:BA:2486:G:O2'	2.42	0.49
60:BA:1102:C:H2'	60:BA:1103:A:H8	1.77	0.49
60:BA:1290:C:H2'	60:BA:1291:C:H6	1.77	0.49
2:CC:39:ILE:O	2:CC:43:LEU:HG	2.12	0.49
8:CI:70:LYS:O	8:CI:73:GLN:HB2	2.13	0.49
9:CJ:51:ARG:CB	20:CA:1060:C:H4'	2.38	0.49
11:CL:101:VAL:HB	11:CL:104:VAL:HG13	1.93	0.49
13:CN:57:ARG:HH11	13:CN:57:ARG:HB3	1.76	0.49
20:CA:882:C:O2'	20:CA:883:C:H5'	2.13	0.49
23:CY:74:TRP:HB3	23:CY:77:HIS:HB2	1.95	0.49
23:CY:526:VAL:N	23:CY:566:THR:HA	2.27	0.49
26:DD:35:LYS:HB3	26:DD:35:LYS:HE3	1.56	0.49
26:DD:111:LEU:HD11	26:DD:128:GLY:HA3	1.94	0.49
27:DE:79:ARG:NH1	60:DA:2635:C:OP1	2.45	0.49
28:DF:167:ALA:HA	28:DF:170:LEU:HB2	1.95	0.49
29:DG:12:TYR:O	29:DG:16:ARG:HG2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:160:LYS:NZ	60:DA:2658:C:H5'	2.28	0.49
38:DT:32:TYR:HE2	38:DT:76:PHE:HD2	1.61	0.49
44:DZ:7:ALA:O	44:DZ:61:LEU:HA	2.12	0.49
44:DZ:22:GLY:HA2	44:DZ:41:LEU:HG	1.94	0.49
53:D7:42:LEU:HD21	60:DA:466:A:H5"	1.95	0.49
60:DA:27:G:H1'	60:DA:513:A:N6	2.28	0.49
60:DA:80:G:H2'	60:DA:81:G:O4'	2.12	0.49
60:DA:701:G:H2'	60:DA:702:G:C8	2.48	0.49
60:DA:752:A:O2'	60:DA:1781:C:H5'	2.12	0.49
60:DA:1327:C:C4	60:DA:1328:G:C6	3.00	0.49
3:AD:123:HIS:CE1	20:AA:438:G:H4'	2.44	0.49
6:AG:103:TRP:HH2	6:AG:141:VAL:HG21	1.78	0.49
9:AJ:27:ALA:HB1	9:AJ:34:VAL:HG21	1.95	0.49
20:AA:102:G:H2'	20:AA:103:C:C6	2.48	0.49
20:AA:515:G:H1	20:AA:536:C:H42	1.60	0.49
22:AW:28:A:N1	22:AW:42:U:O4	2.45	0.49
23:AY:114:VAL:HG23	23:AY:116:PRO:HD3	1.94	0.49
28:BF:191:ARG:HB3	28:BF:193:VAL:CG2	2.43	0.49
37:BS:24:LEU:HB3	37:BS:85:VAL:HG12	1.95	0.49
40:BV:62:LEU:CG	40:BV:95:LEU:HB2	2.41	0.49
54:B8:39:LYS:NZ	60:BA:2365:G:N7	2.59	0.49
60:BA:277:C:H5"	60:BA:278:A:C8	2.48	0.49
60:BA:459:U:H3	60:BA:470:A:N6	1.97	0.49
60:BA:1083:U:N3	60:BA:1086:A:OP2	2.45	0.49
60:BA:1829:A:H2'	60:BA:1830:C:O4'	2.13	0.49
1:CB:105:PHE:HB3	1:CB:106:LYS:HZ2	1.77	0.49
5:CF:90:VAL:O	20:CA:736:C:H4'	2.13	0.49
6:CG:67:GLU:HA	6:CG:70:LYS:HD2	1.95	0.49
20:CA:124:G:H5"	20:CA:310:G:H21	1.77	0.49
20:CA:260:G:N2	20:CA:265:G:N7	2.57	0.49
20:CA:738:C:H2'	20:CA:739:C:H6	1.77	0.49
22:CW:50:C:H2'	22:CW:51:A:O4'	2.13	0.49
25:DC:166:ASN:HA	25:DC:170:GLY:O	2.12	0.49
26:DD:244:ARG:HA	26:DD:246:PRO:HD3	1.94	0.49
26:DD:254:THR:HG21	60:DA:1824:G:H1'	1.94	0.49
27:DE:99:GLY:H	27:DE:173:VAL:HA	1.78	0.49
35:DQ:134:ARG:HH12	44:DZ:119:GLU:CG	2.26	0.49
37:DS:13:ARG:O	37:DS:15:ARG:N	2.46	0.49
41:DW:38:TYR:CZ	51:D5:41:PRO:HD3	2.48	0.49
41:DW:90:ARG:HH11	60:DA:751:A:H4'	1.78	0.49
42:DX:64:LYS:HD2	42:DX:73:ARG:HH21	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D0:38:VAL:HG12	45:D0:40:GLN:HB3	1.95	0.49
48:DN:21:LYS:O	48:DN:61:ARG:N	2.42	0.49
53:D7:34:ARG:CD	53:D7:42:LEU:HD22	2.43	0.49
60:DA:231:C:H2'	60:DA:232:G:O4'	2.12	0.49
60:DA:551:G:H2'	60:DA:552:G:O4'	2.13	0.49
60:DA:594:U:H2'	60:DA:595:C:C6	2.48	0.49
60:DA:2109:U:O4	60:DA:2180:U:O4	2.31	0.49
60:DA:2209:C:N3	60:DA:2215:G:O6	2.45	0.49
60:DA:2411:A:H2'	60:DA:2412:A:H8	1.77	0.49
60:DA:2627:G:O2'	60:DA:2781:A:N1	2.36	0.49
60:DA:2876:G:H2'	60:DA:2877:G:H8	1.77	0.49
1:AB:49:GLU:O	1:AB:52:GLU:HB3	2.13	0.49
1:AB:103:THR:HG22	1:AB:180:LEU:HD21	1.94	0.49
3:AD:25:ARG:CZ	3:AD:30:LYS:HZ2	2.25	0.49
6:AG:24:THR:O	6:AG:28:ASN:ND2	2.45	0.49
20:AA:232:G:H2'	20:AA:233:C:C6	2.48	0.49
20:AA:444:C:H2'	20:AA:445:G:C8	2.47	0.49
20:AA:1073:U:H2'	20:AA:1074:G:C8	2.48	0.49
23:AY:211:GLU:O	23:AY:215:LYS:HG3	2.13	0.49
25:BC:27:ALA:HB3	25:BC:28:ARG:HH21	1.77	0.49
26:BD:166:GLN:N	26:BD:174:ILE:O	2.46	0.49
29:BG:139:LEU:HD13	29:BG:144:ILE:O	2.13	0.49
33:BO:62:VAL:HG12	33:BO:84:ALA:HB2	1.95	0.49
37:BS:71:ARG:O	37:BS:74:ALA:HB3	2.13	0.49
42:BX:60:ARG:HD2	60:BA:1312:U:C5	2.48	0.49
60:BA:150:C:H2'	60:BA:151:C:H6	1.77	0.49
60:BA:671:C:H2'	60:BA:672:C:C6	2.48	0.49
60:BA:897:C:H2'	60:BA:898:C:C6	2.48	0.49
60:BA:1080:C:H2'	60:BA:1081:U:H6	1.76	0.49
60:BA:1082:U:H2'	60:BA:1083:U:H5'	1.94	0.49
60:BA:2119:A:C2	60:BA:2170:A:H2'	2.47	0.49
2:CC:59:ARG:HG2	2:CC:64:VAL:HA	1.95	0.49
6:CG:127:ALA:HA	6:CG:135:VAL:HG21	1.95	0.49
7:CH:110:ALA:HB3	7:CH:121:ASP:HB3	1.94	0.49
10:CK:62:GLN:HG3	10:CK:97:ALA:HB2	1.95	0.49
19:CT:31:SER:OG	20:CA:1440(M):G:H5"	2.13	0.49
20:CA:363:A:H2'	20:CA:364:A:C8	2.48	0.49
20:CA:838(A):U:O2'	20:CA:838(B):C:H5"	2.11	0.49
20:CA:975:A:H4'	20:CA:976:G:H5"	1.95	0.49
20:CA:1253:G:H2'	20:CA:1254:C:C6	2.47	0.49
20:CA:1419:G:H2'	20:CA:1420:C:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:19:G:H22	22:CW:56:C:H42	1.59	0.49
23:CY:96:ARG:NH1	23:CY:385:THR:OG1	2.46	0.49
23:CY:514:VAL:HA	23:CY:565:VAL:C	2.37	0.49
41:DW:87:PRO:HB3	60:DA:1614:A:N7	2.28	0.49
43:DY:96:ILE:O	43:DY:98:VAL:N	2.46	0.49
44:DZ:82:ARG:HG2	44:DZ:83:PRO:HD2	1.94	0.49
52:D6:10:LEU:HD11	60:DA:2420:C:H5"	1.94	0.49
60:DA:638:G:H2'	60:DA:639:U:O4'	2.13	0.49
60:DA:1077:A:H2'	60:DA:1077:A:N3	2.28	0.49
60:DA:2173:A:H8	60:DA:2173:A:OP2	1.96	0.49
9:AJ:55:LYS:HG3	20:AA:973:G:O4'	2.13	0.48
20:AA:149:A:C2	20:AA:172:A:N6	2.81	0.48
20:AA:559:A:H4'	20:AA:560:U:H3'	1.94	0.48
20:AA:583:A:H2'	20:AA:584:G:O4'	2.12	0.48
20:AA:926:G:H21	20:AA:1505:G:H2'	1.78	0.48
20:AA:1238:A:H4'	20:AA:1336:C:N4	2.28	0.48
22:AW:64:G:C2	22:AW:65:U:C4	3.01	0.48
23:AY:95:GLU:HB3	23:AY:99:ARG:NH2	2.25	0.48
27:BE:133:LYS:O	60:BA:1657:C:H5"	2.13	0.48
27:BE:134:ILE:HG13	60:BA:2579:C:H4'	1.95	0.48
28:BF:10:PRO:HB3	28:BF:19:GLU:HA	1.93	0.48
34:BP:115:LEU:HB2	60:BA:637:A:OP2	2.13	0.48
41:BW:24:ILE:HD11	41:BW:47:VAL:HG11	1.95	0.48
42:BX:35:THR:HG21	60:BA:142:G:H4'	1.94	0.48
44:BZ:89:PHE:CE2	59:BB:104:A:H4'	2.48	0.48
48:BN:21:LYS:O	48:BN:61:ARG:N	2.42	0.48
52:B6:15:GLU:OE2	52:B6:17:LYS:HD3	2.13	0.48
55:B9:33:LYS:NZ	60:BA:2526:G:O2'	2.35	0.48
60:BA:514:A:H2'	60:BA:515:A:C8	2.48	0.48
60:BA:547:A:H3'	60:BA:548:A:C8	2.48	0.48
60:BA:558:G:H2'	60:BA:559:G:C8	2.48	0.48
60:BA:607:U:O2	60:BA:621:A:N7	2.46	0.48
60:BA:889:C:O2'	60:BA:890:A:OP2	2.30	0.48
60:BA:1430:C:H2'	60:BA:1431:U:C6	2.48	0.48
60:BA:2059:A:HO2'	60:BA:2061:G:P	2.35	0.48
60:BA:2461:C:H42	60:BA:2489:G:H1	1.59	0.48
60:BA:2685:G:H1	60:BA:2724:C:N4	2.08	0.48
60:BA:2886:G:H2'	60:BA:2887:U:C6	2.48	0.48
3:CD:155:LEU:HB3	3:CD:158:ILE:HD13	1.94	0.48
5:CF:12:PRO:O	5:CF:13:ASN:ND2	2.46	0.48
20:CA:301:G:H2'	20:CA:302:G:H8	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:595:G:H22	20:CA:643:C:H42	1.61	0.48
20:CA:1134:G:H2'	20:CA:1135:U:O4'	2.13	0.48
23:CY:259:PHE:CZ	23:CY:275:ALA:HB1	2.48	0.48
25:DC:120:VAL:O	25:DC:121:MET:C	2.56	0.48
34:DP:101:VAL:HG12	34:DP:106:LEU:HB3	1.95	0.48
36:DR:97:VAL:HG12	36:DR:112:ALA:HB1	1.95	0.48
48:DN:76:SER:O	48:DN:78:TYR:N	2.46	0.48
60:DA:195:A:O5'	60:DA:196:A:H4'	2.13	0.48
60:DA:1030:G:H2'	60:DA:1031:G:H8	1.78	0.48
60:DA:1837:C:O2'	60:DA:1927:A:N3	2.34	0.48
60:DA:2398:U:H2'	60:DA:2399:G:H8	1.77	0.48
60:DA:2411:A:H8	60:DA:2411:A:O5'	1.95	0.48
7:AH:46:LYS:HB3	7:AH:62:TYR:HB3	1.95	0.48
8:AI:126:SER:O	8:AI:128:ARG:N	2.46	0.48
10:AK:85:ARG:HA	10:AK:110:ASP:O	2.13	0.48
17:AR:74:ARG:NH1	20:AA:719:C:H42	2.10	0.48
20:AA:201(A):U:O2'	20:AA:201(B):U:H5'	2.13	0.48
20:AA:745:C:OP1	20:AA:851:G:O2'	2.24	0.48
20:AA:1143:G:H2'	20:AA:1144:G:H8	1.76	0.48
20:AA:1305:G:H1	20:AA:1331:G:H2'	1.77	0.48
22:AW:66:C:H2'	22:AW:67:G:C8	2.48	0.48
29:BG:50:ALA:HB1	29:BG:51:ARG:HE	1.77	0.48
35:BQ:43:THR:HA	35:BQ:94:VAL:HG12	1.94	0.48
38:BT:55:ASN:H	38:BT:59:THR:HB	1.78	0.48
45:B0:23:VAL:HG12	45:B0:38:VAL:HG13	1.95	0.48
46:B1:16:ASN:C	46:B1:18:ILE:HB	2.37	0.48
48:BN:76:SER:O	48:BN:78:TYR:N	2.46	0.48
50:B3:5:LYS:O	50:B3:57:GLU:HB3	2.14	0.48
53:B7:8:ASN:HA	60:BA:1309:G:H5"	1.95	0.48
56:Be:107:GLU:HB3	56:Be:111:ILE:HD13	1.93	0.48
59:BB:71:C:H2'	59:BB:72:G:H5'	1.95	0.48
60:BA:1467:C:H6	60:BA:154(B):C:H2'	1.79	0.48
60:BA:1491:G:OP1	60:BA:1494:A:N6	2.46	0.48
60:BA:1526:G:H2'	60:BA:1527:G:O4'	2.13	0.48
60:BA:1710:C:HO2'	60:BA:2858:C:H42	1.56	0.48
60:BA:1790:C:OP2	60:BA:1828:G:N1	2.46	0.48
60:BA:2635:C:H42	60:BA:2783:G:H1	1.61	0.48
60:BA:2817:G:O2'	60:BA:2836:U:O2	2.25	0.48
3:CD:10:ARG:HH21	20:CA:542:G:H5"	1.78	0.48
3:CD:31:CYS:N	3:CD:33:MET:HB2	2.29	0.48
3:CD:101:LEU:HD13	3:CD:138:TYR:HD2	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:127:ASN:O	4:CE:131:ILE:HG12	2.12	0.48
4:CE:151:LEU:O	7:CH:64:LYS:NZ	2.46	0.48
16:CQ:25:ARG:O	16:CQ:26:GLN:NE2	2.45	0.48
19:CT:63:ILE:HB	19:CT:81:LYS:HD3	1.94	0.48
20:CA:109:A:H62	20:CA:324:G:H21	1.60	0.48
20:CA:943:U:C4	20:CA:1340:A:N1	2.79	0.48
20:CA:1297:C:H4'	20:CA:1299:A:C2	2.43	0.48
20:CA:1389:C:H2'	20:CA:1390:U:C6	2.48	0.48
23:CY:8:ASP:HB3	23:CY:11:ARG:H	1.77	0.48
23:CY:610:VAL:HG13	23:CY:643:ILE:HB	1.94	0.48
26:DD:53:PHE:HE1	26:DD:220:HIS:CD2	2.31	0.48
27:DE:25:VAL:HG13	27:DE:183:LEU:HD11	1.95	0.48
27:DE:62:PRO:HB3	60:DA:2787:C:H5'	1.95	0.48
27:DE:170:LEU:HB3	27:DE:184:VAL:HG11	1.95	0.48
36:DR:87:TYR:HB3	36:DR:94:TYR:HD2	1.77	0.48
38:DT:84:GLN:HG2	38:DT:86:ILE:HG13	1.93	0.48
44:DZ:46:LYS:O	44:DZ:50:GLN:NE2	2.47	0.48
45:D0:23:VAL:HG12	45:D0:38:VAL:HG13	1.95	0.48
47:D4:13:ARG:O	47:D4:15:ILE:N	2.46	0.48
51:D5:19:ARG:NH1	60:DA:1264:G:OP1	2.45	0.48
60:DA:83:G:H21	60:DA:103:A:H62	1.61	0.48
60:DA:184:C:H4'	60:DA:217:G:H21	1.78	0.48
60:DA:711:G:N2	60:DA:720:C:N3	2.48	0.48
60:DA:882:G:H2'	60:DA:883:G:C8	2.47	0.48
60:DA:1049:C:H1'	60:DA:1113:U:H4'	1.94	0.48
60:DA:2103:C:N3	60:DA:2186:G:O6	2.46	0.48
60:DA:2230:G:H2'	60:DA:2231:C:H6	1.79	0.48
60:DA:2560:C:C2'	60:DA:2561:A:H5'	2.43	0.48
4:AE:28:PHE:CD1	4:AE:51:VAL:HG13	2.47	0.48
11:AL:95:GLY:O	11:AL:97:ARG:N	2.45	0.48
12:AM:108:ARG:HB2	20:AA:948:C:OP2	2.13	0.48
16:AQ:45:HIS:CB	16:AQ:72:ARG:HG2	2.42	0.48
20:AA:68(C):C:H2'	20:AA:68(D):C:C5	2.49	0.48
20:AA:179:A:H3'	20:AA:180:U:C5	2.48	0.48
20:AA:945:G:C2	20:AA:946:A:C8	3.02	0.48
20:AA:1013:G:O2'	20:AA:1015:A:N6	2.43	0.48
23:AY:542:VAL:HG23	23:AY:582:PHE:O	2.14	0.48
25:BC:85:LYS:HA	25:BC:88:GLU:HB2	1.95	0.48
27:BE:87:GLU:OE1	27:BE:89:ASP:HB2	2.14	0.48
29:BG:45:GLU:OE2	29:BG:47:LYS:NZ	2.45	0.48
31:BJ:113:UNK:C	31:BJ:115:UNK:H	2.25	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BP:84:ASN:HA	34:BP:115:LEU:O	2.13	0.48
36:BR:63:ARG:O	36:BR:67:LEU:HB2	2.13	0.48
36:BR:107:ASP:HA	60:BA:2009:G:H1'	1.94	0.48
46:B1:25:LYS:HD3	60:BA:388:G:OP1	2.13	0.48
51:B5:16:ARG:NH1	60:BA:518:G:OP2	2.46	0.48
59:BB:21:G:N2	59:BB:62:C:N3	2.46	0.48
59:BB:73:A:N6	59:BB:103:U:H3	2.10	0.48
60:BA:234:C:H2'	60:BA:235:U:C6	2.48	0.48
60:BA:959:A:N3	60:BA:2457:U:O2'	2.45	0.48
60:BA:1297:C:N4	60:BA:1643:G:H1	2.11	0.48
60:BA:1675:C:H3'	60:BA:1676:A:H8	1.78	0.48
60:BA:2270:G:C2	60:BA:2271:G:H1'	2.48	0.48
60:BA:2439:A:H2	60:BA:2600:A:H5"	1.79	0.48
60:BA:2543:G:H5"	60:BA:2767:C:OP1	2.13	0.48
60:BA:2832:U:H5"	60:BA:2833:G:H2'	1.94	0.48
1:CB:97:TRP:CE3	1:CB:172:ILE:HG13	2.48	0.48
5:CF:46:ARG:HB3	5:CF:60:PHE:CD1	2.48	0.48
11:CL:69:TYR:HB3	11:CL:99:HIS:ND1	2.29	0.48
11:CL:87:GLY:HA2	11:CL:98:TYR:H	1.78	0.48
20:CA:140:A:H2'	20:CA:141:A:H8	1.73	0.48
20:CA:243:A:C2	20:CA:282:A:N6	2.78	0.48
20:CA:1028(H):G:H2'	20:CA:1033:G:O4'	2.13	0.48
20:CA:1321:C:H3'	20:CA:1322:C:C5'	2.36	0.48
20:CA:1415:G:C5	20:CA:1416:G:C8	3.01	0.48
20:CA:1532:U:H1'	20:CA:1533:C:OP1	2.13	0.48
26:DD:86:PRO:HB3	60:DA:1567:A:OP2	2.13	0.48
27:DE:111:ARG:HB2	27:DE:160:TYR:O	2.13	0.48
28:DF:191:ARG:O	28:DF:193:VAL:N	2.47	0.48
32:DK:13:PRO:HA	32:DK:52:ILE:HA	1.95	0.48
33:DO:104:ARG:O	33:DO:107:ARG:HB3	2.14	0.48
34:DP:110:TYR:HB3	34:DP:111:ARG:H	1.45	0.48
38:DT:26:ASP:OD2	38:DT:48:ILE:HG23	2.13	0.48
40:DV:87:HIS:HE1	60:DA:992:C:O2	1.97	0.48
41:DW:24:ILE:HD12	41:DW:36:LEU:HD21	1.94	0.48
42:DX:32:PRO:HA	42:DX:77:LYS:HB3	1.95	0.48
50:D3:7:LYS:HD3	50:D3:34:GLU:HG3	1.94	0.48
53:D7:7:PRO:HA	60:DA:686:G:C8	2.49	0.48
59:DB:6:C:H2'	59:DB:7:G:H8	1.78	0.48
60:DA:39:C:H42	60:DA:440:G:H1	1.62	0.48
60:DA:253:C:H2'	60:DA:254:G:O4'	2.13	0.48
60:DA:650:C:H2'	60:DA:651:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:777:A:H2'	60:DA:778:G:C8	2.49	0.48
60:DA:1013:C:H2'	60:DA:1014:U:H6	1.78	0.48
60:DA:1173:G:C5	60:DA:1175:U:H5'	2.48	0.48
60:DA:1296:G:OP1	60:DA:2709:G:O2'	2.22	0.48
60:DA:1312:U:H4'	60:DA:1313:U:O5'	2.13	0.48
60:DA:1939:U:OP1	60:DA:2604:U:O2'	2.29	0.48
60:DA:2701:C:H2'	60:DA:2702:U:H2'	1.95	0.48
1:AB:102:LEU:HD12	1:AB:102:LEU:H	1.78	0.48
3:AD:15:GLU:HG2	3:AD:63:LYS:HE2	1.95	0.48
3:AD:61:LYS:O	3:AD:64:LEU:HB3	2.13	0.48
4:AE:28:PHE:HD1	4:AE:51:VAL:HG13	1.79	0.48
9:AJ:23:ILE:HG21	9:AJ:72:VAL:HG11	1.96	0.48
11:AL:53:ARG:HG2	11:AL:93:LEU:CD2	2.42	0.48
17:AR:60:ALA:O	17:AR:64:ARG:HG3	2.13	0.48
19:AT:37:SER:O	19:AT:40:ALA:HB3	2.12	0.48
20:AA:165:C:H2'	20:AA:166:G:H8	1.78	0.48
20:AA:505:G:H1	20:AA:526:C:H42	1.62	0.48
20:AA:951:G:H1	20:AA:1230:C:H42	1.61	0.48
20:AA:1408:A:N6	24:AU:2:DPP:H	1.99	0.48
23:AY:620:VAL:HG22	23:AY:662:LYS:HB2	1.93	0.48
26:BD:51:VAL:CG2	26:BD:54:ARG:HB2	2.43	0.48
27:BE:110:GLY:HA2	27:BE:162:ALA:N	2.28	0.48
28:BF:9:ILE:CG2	28:BF:125:LEU:H	2.27	0.48
28:BF:194:MET:HE1	28:BF:199:TRP:HD1	1.79	0.48
29:BG:128:ARG:HH11	60:BA:2316:C:H1'	1.78	0.48
35:BQ:54:MET:HG2	35:BQ:58:PHE:CZ	2.48	0.48
36:BR:39:PRO:HG2	60:BA:1651:G:H5'	1.95	0.48
41:BW:1:MET:HG3	41:BW:2:GLU:H	1.78	0.48
60:BA:382:G:H1	60:BA:392:C:N4	2.10	0.48
60:BA:500:G:H21	60:BA:505:A:H62	1.61	0.48
60:BA:743:G:H1	60:BA:754:C:N4	2.09	0.48
60:BA:2031:A:H2'	60:BA:2454:G:N2	2.23	0.48
60:BA:2218:G:H2'	60:BA:2219:G:H8	1.79	0.48
60:BA:2345:G:H8	60:BA:2345:G:H5'	1.77	0.48
60:BA:2659:G:H2'	60:BA:2661:G:OP2	2.13	0.48
60:BA:2674:G:H2'	60:BA:2675:A:H8	1.77	0.48
5:CF:43:LEU:HD21	5:CF:46:ARG:HD2	1.94	0.48
11:CL:100:ILE:HG22	11:CL:101:VAL:N	2.28	0.48
16:CQ:40:LYS:HB3	16:CQ:42:TYR:CE1	2.46	0.48
18:CS:31:ILE:HG12	18:CS:48:THR:O	2.13	0.48
20:CA:504:C:H2'	20:CA:511:C:C5	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1238:A:C8	20:CA:1303:C:H1'	2.49	0.48
23:CY:108:PHE:CD1	23:CY:115:GLU:HG3	2.49	0.48
25:DC:85:LYS:O	25:DC:88:GLU:HB2	2.14	0.48
25:DC:167:ASP:OD1	25:DC:171:ALA:HB2	2.14	0.48
26:DD:27:THR:HG21	26:DD:81:ALA:HB1	1.95	0.48
26:DD:96:HIS:NE2	26:DD:102:LYS:HD2	2.28	0.48
28:DF:48:THR:HG21	60:DA:442:G:H1'	1.95	0.48
30:DH:16:SER:HB3	30:DH:27:LYS:HE2	1.94	0.48
31:DJ:25:UNK:C	31:DJ:111:UNK:HA	2.44	0.48
33:DO:37:ASP:O	33:DO:62:VAL:HG22	2.13	0.48
34:DP:17:LYS:HE3	34:DP:19:VAL:HB	1.96	0.48
35:DQ:66:ILE:HD13	35:DQ:66:ILE:H	1.77	0.48
36:DR:95:THR:OG1	36:DR:115:GLU:O	2.30	0.48
38:DT:41:ARG:HG2	38:DT:42:ILE:H	1.78	0.48
44:DZ:27:VAL:HG11	59:DB:75:G:H1'	1.95	0.48
44:DZ:155:LEU:H	44:DZ:155:LEU:HD23	1.78	0.48
48:DN:134:ARG:HG2	48:DN:134:ARG:O	2.13	0.48
55:D9:36:GLN:HB3	60:DA:1124:C:O2'	2.13	0.48
59:DB:15:A:H5'	59:DB:16:G:C8	2.47	0.48
60:DA:144:C:H2'	60:DA:145:G:H8	1.79	0.48
60:DA:616:A:H4'	60:DA:617:G:OP1	2.13	0.48
60:DA:1086:A:N3	60:DA:1086:A:H3'	2.29	0.48
60:DA:2134:A:H61	60:DA:2157:G:H1'	1.78	0.48
60:DA:2834:G:H1'	60:DA:2883:A:H61	1.79	0.48
4:AE:78:HIS:HB2	7:AH:104:ARG:HG3	1.94	0.48
19:AT:22:ARG:HH21	20:AA:324:G:H5'	1.79	0.48
23:AY:244:ALA:O	23:AY:248:LYS:HB2	2.14	0.48
25:BC:43:GLU:HG3	25:BC:218:THR:HA	1.96	0.48
26:BD:165:ILE:CG2	26:BD:166:GLN:N	2.77	0.48
26:BD:208:LYS:NZ	60:BA:729:G:O5'	2.44	0.48
27:BE:123:ALA:HB3	60:BA:2511:U:H5"	1.95	0.48
28:BF:80:ALA:HB3	28:BF:83:PHE:CE1	2.48	0.48
32:BK:77:LEU:HD12	32:BK:111:LYS:HD2	1.96	0.48
39:BU:69:CYS:SG	39:BU:79:PHE:HB2	2.53	0.48
43:BY:90:LEU:HG	43:BY:91:GLU:H	1.79	0.48
44:BZ:29:TYR:CD2	44:BZ:29:TYR:N	2.82	0.48
45:B0:50:ASN:HD22	45:B0:63:VAL:HG11	1.78	0.48
47:B4:14:ILE:HG22	47:B4:16:CYS:SG	2.53	0.48
48:BN:15:LEU:HD22	48:BN:53:VAL:O	2.14	0.48
60:BA:358:U:H2'	60:BA:359:A:H8	1.78	0.48
60:BA:686:G:N2	60:BA:788:A:H61	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1024:G:OP2	60:BA:1025:G:H3'	2.13	0.48
60:BA:1521:G:H2'	60:BA:1522:G:H8	1.79	0.48
60:BA:2639:A:H2'	60:BA:2640:G:O4'	2.14	0.48
60:BA:2889:C:H2'	60:BA:2891:G:O4'	2.14	0.48
6:CG:11:GLN:CD	6:CG:12:LEU:H	2.22	0.48
8:CI:121:ARG:HG3	20:CA:1350:A:OP1	2.13	0.48
9:CJ:6:ILE:HG22	9:CJ:98:ILE:HA	1.96	0.48
11:CL:33:ARG:HG2	11:CL:60:LEU:HB3	1.96	0.48
11:CL:86:ARG:HB3	11:CL:99:HIS:HB2	1.95	0.48
16:CQ:57:VAL:HG12	16:CQ:76:LEU:HA	1.94	0.48
20:CA:448:A:OP2	20:CA:485:G:N2	2.37	0.48
20:CA:507:C:H3'	20:CA:508:C:H2'	1.96	0.48
20:CA:543:C:H2'	20:CA:544:G:H8	1.78	0.48
20:CA:953:G:H2'	20:CA:954:G:O4'	2.13	0.48
20:CA:1019:C:H2'	20:CA:1020:U:O4'	2.14	0.48
20:CA:1230:C:H5'	22:CW:30:C:C5'	2.42	0.48
25:DC:63:VAL:HG22	25:DC:162:ILE:HD12	1.95	0.48
25:DC:149:ASN:O	25:DC:149:ASN:ND2	2.46	0.48
25:DC:226:ASN:O	25:DC:226:ASN:ND2	2.46	0.48
26:DD:260:ARG:HH12	60:DA:1799:G:H5"	1.79	0.48
27:DE:66:HIS:CD2	60:DA:2786:U:H4'	2.49	0.48
27:DE:74:PRO:HB2	27:DE:75:VAL:H	1.32	0.48
27:DE:84:PHE:CE1	27:DE:86:PRO:HD3	2.48	0.48
27:DE:98:PRO:HG3	27:DE:175:VAL:HG12	1.96	0.48
33:DO:77:ILE:HD13	38:DT:74:ARG:HG2	1.94	0.48
33:DO:77:ILE:HD11	38:DT:72:VAL:HG22	1.95	0.48
34:DP:7:ARG:HD3	34:DP:7:ARG:C	2.39	0.48
34:DP:107:LYS:C	34:DP:108:LYS:HD2	2.37	0.48
38:DT:129:ARG:HD3	38:DT:132:LYS:HB2	1.95	0.48
48:DN:15:LEU:HD21	48:DN:55:VAL:HG13	1.95	0.48
48:DN:78:TYR:CD1	60:DA:2642:G:H5'	2.38	0.48
54:D8:63:PRO:O	54:D8:65:GLU:N	2.46	0.48
60:DA:49:A:H4'	60:DA:50:U:H5"	1.95	0.48
60:DA:389:G:C8	60:DA:2413:G:H4'	2.48	0.48
60:DA:405:U:H3'	60:DA:406:G:H5'	1.96	0.48
60:DA:443:A:H1'	60:DA:1201:C:C1'	2.43	0.48
60:DA:1007:C:C5	60:DA:1008:C:N3	2.82	0.48
60:DA:1083:U:H2'	60:DA:1085:A:OP2	2.14	0.48
60:DA:2386:C:H2'	60:DA:2387:U:C6	2.48	0.48
60:DA:2472:G:H21	60:DA:2478:A:H62	1.60	0.48
60:DA:2695:C:H2'	60:DA:2696:U:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:97:GLN:O	6:AG:100:ALA:HB3	2.12	0.48
11:AL:53:ARG:HE	11:AL:53:ARG:N	2.11	0.48
14:AO:15:PHE:HZ	14:AO:84:LYS:HD2	1.77	0.48
16:AQ:16:GLN:O	20:AA:254:G:O2'	2.32	0.48
20:AA:285:G:H2'	20:AA:286:G:H8	1.79	0.48
20:AA:691:G:H1'	20:AA:696:A:N6	2.29	0.48
20:AA:787:A:H2'	20:AA:788:U:H6	1.78	0.48
20:AA:859:A:H2'	20:AA:860:A:O4'	2.13	0.48
20:AA:1407:C:H2'	20:AA:1408:A:H5'	1.95	0.48
23:AY:35:TYR:CD1	23:AY:36:THR:N	2.82	0.48
23:AY:188:TYR:CD2	23:AY:267:LYS:HG2	2.49	0.48
23:AY:499:ARG:O	23:AY:505:GLY:HA3	2.13	0.48
23:AY:506:GLN:HB3	23:AY:581:ALA:HB2	1.96	0.48
26:BD:44:ASN:ND2	26:BD:48:ARG:O	2.47	0.48
26:BD:63:ARG:NH2	60:BA:1568:G:OP1	2.47	0.48
26:BD:200:ASP:O	26:BD:204:ILE:HG13	2.13	0.48
27:BE:152:LYS:HA	60:BA:2619:C:O3'	2.13	0.48
28:BF:137:LYS:HA	28:BF:140:LEU:HB3	1.94	0.48
28:BF:155:LEU:O	28:BF:191:ARG:C	2.56	0.48
35:BQ:54:MET:HE1	35:BQ:64:ILE:HG12	1.96	0.48
36:BR:2:ARG:CB	36:BR:5:LYS:HE2	2.41	0.48
39:BU:97:ASP:C	39:BU:99:ALA:N	2.72	0.48
42:BX:25:LYS:HA	42:BX:82:GLN:HA	1.95	0.48
44:BZ:151:HIS:HB2	44:BZ:168:GLU:O	2.13	0.48
60:BA:143:C:H2'	60:BA:144:C:C6	2.49	0.48
60:BA:317:G:H1	60:BA:334:C:H42	1.61	0.48
60:BA:1975:G:H2'	60:BA:1976:U:C6	2.48	0.48
60:BA:2179:C:H2'	60:BA:2180:U:H6	1.79	0.48
1:CB:33:TYR:O	1:CB:41:ILE:HB	2.14	0.48
3:CD:57:ARG:NH1	3:CD:202:LEU:HA	2.29	0.48
3:CD:101:LEU:O	3:CD:105:VAL:HG23	2.14	0.48
9:CJ:49:VAL:HG12	9:CJ:61:GLU:O	2.13	0.48
10:CK:50:TYR:CG	10:CK:54:ARG:HB3	2.49	0.48
10:CK:85:ARG:HH22	20:CA:708:C:P	2.37	0.48
11:CL:11:VAL:HG22	16:CQ:29:HIS:CD2	2.49	0.48
16:CQ:63:ARG:HG3	20:CA:130:A:C8	2.49	0.48
19:CT:53:LEU:O	19:CT:56:MET:HB2	2.12	0.48
20:CA:738:C:H2'	20:CA:739:C:C6	2.49	0.48
20:CA:1064:G:O2'	20:CA:1065:U:OP2	2.32	0.48
20:CA:1511:G:H1	20:CA:1524:C:H42	1.60	0.48
26:DD:42:GLY:C	26:DD:43:ARG:HG3	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:16:ARG:O	27:DE:18:ASP:N	2.40	0.48
28:DF:7:TYR:C	28:DF:9:ILE:H	2.21	0.48
28:DF:112:MET:O	28:DF:116:ASP:N	2.38	0.48
28:DF:156:LEU:HD12	28:DF:193:VAL:HB	1.96	0.48
28:DF:176:LEU:HG	28:DF:177:ALA:N	2.28	0.48
29:DG:132:ASN:HA	29:DG:157:ILE:O	2.14	0.48
34:DP:112:LEU:HD12	34:DP:127:ALA:HB2	1.95	0.48
37:DS:13:ARG:C	37:DS:15:ARG:N	2.71	0.48
44:DZ:75:ASN:O	44:DZ:84:GLU:N	2.42	0.48
45:D0:35:ASN:OD1	60:DA:2353:G:O2'	2.30	0.48
46:D1:64:ALA:O	46:D1:66:HIS:N	2.47	0.48
60:DA:531:C:H4'	60:DA:532:A:O5'	2.14	0.48
60:DA:740:U:H2'	60:DA:741:G:C8	2.49	0.48
60:DA:938:G:H2'	60:DA:939:G:H8	1.78	0.48
60:DA:949:C:H2'	60:DA:950:G:H8	1.79	0.48
60:DA:1024:G:N2	60:DA:1140:C:N3	2.45	0.48
60:DA:1441:G:H2'	60:DA:1442:G:C8	2.49	0.48
60:DA:2147:G:H2'	60:DA:2148:G:O4'	2.13	0.48
3:AD:49:ARG:HA	3:AD:49:ARG:HH11	1.79	0.48
18:AS:77:THR:OG1	20:AA:958:A:N6	2.46	0.48
20:AA:186(J):G:H4'	20:AA:186(K):G:OP2	2.13	0.48
20:AA:764:C:H2'	20:AA:765:G:C8	2.49	0.48
20:AA:1010:G:H2'	20:AA:1011:G:C8	2.48	0.48
20:AA:1058:G:H2'	20:AA:1059:C:C6	2.49	0.48
20:AA:1136:U:H5"	20:AA:1137:C:C5	2.49	0.48
23:AY:21:ILE:HG22	60:BA:2661:G:H5"	1.96	0.48
23:AY:65:ILE:HG22	23:AY:66:THR:N	2.28	0.48
25:BC:56:ASP:O	25:BC:58:ASN:N	2.47	0.48
28:BF:31:HIS:NE2	60:BA:599:G:H4'	2.29	0.48
31:BJ:31:UNK:O	31:BJ:33:UNK:N	2.47	0.48
32:BK:32:ALA:O	32:BK:34:ILE:HG13	2.14	0.48
32:BK:90:LYS:HG3	32:BK:91:PRO:HD2	1.96	0.48
34:BP:126:VAL:HA	34:BP:145:PRO:HG2	1.96	0.48
39:BU:18:LEU:HD22	39:BU:22:LYS:HE2	1.96	0.48
40:BV:33:VAL:HG13	40:BV:59:ALA:O	2.13	0.48
43:BY:68:HIS:HB3	43:BY:71:LYS:HG3	1.95	0.48
49:B2:49:LYS:HA	49:B2:52:ASP:HB3	1.96	0.48
60:BA:1175:U:H2'	60:BA:1176:G:N7	2.29	0.48
60:BA:1213:A:N6	60:BA:1236:G:H1'	2.27	0.48
60:BA:1463:C:H2'	60:BA:1464:C:C6	2.49	0.48
60:BA:2039:C:C2	60:BA:2040:C:H5	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:2178:C:H2'	60:BA:2179:C:H6	1.78	0.48
60:BA:2342:C:H2'	60:BA:2343:C:O4'	2.14	0.48
60:BA:2398:U:O4	60:BA:2418:A:N1	2.46	0.48
60:BA:2466:C:H42	60:BA:2484:G:H1	1.60	0.48
60:BA:2660:A:H2'	60:BA:2661:G:O4'	2.14	0.48
1:CB:67:THR:HA	1:CB:90:MET:SD	2.54	0.48
3:CD:29:PRO:HG2	3:CD:30:LYS:HZ3	1.79	0.48
3:CD:73:ARG:HB2	20:CA:546:G:OP1	2.14	0.48
18:CS:77:THR:OG1	20:CA:958:A:N6	2.47	0.48
20:CA:144:G:H2'	20:CA:145:G:O4'	2.13	0.48
21:CV:8:A:HO2'	21:CV:9:G:P	2.37	0.48
21:CV:18:G:H2'	21:CV:19:G:O4'	2.13	0.48
24:CU:4:SER:HA	60:DA:1913:A:HO2'	1.79	0.48
28:DF:192:LEU:CD2	28:DF:194:MET:HE2	2.38	0.48
29:DG:96:ARG:O	29:DG:99:MET:HG2	2.14	0.48
31:DJ:69:UNK:O	31:DJ:71:UNK:N	2.46	0.48
35:DQ:5:ARG:HH22	60:DA:871:U:P	2.37	0.48
35:DQ:137:TYR:HD1	35:DQ:137:TYR:H	1.60	0.48
38:DT:78:LEU:C	38:DT:79:HIS:HD1	2.22	0.48
39:DU:62:ILE:HA	39:DU:65:ILE:HB	1.96	0.48
40:DV:9:GLY:O	60:DA:1160:G:N2	2.29	0.48
40:DV:20:LEU:HG	40:DV:21:ARG:HG3	1.94	0.48
44:DZ:76:LEU:HA	44:DZ:83:PRO:HA	1.95	0.48
48:DN:15:LEU:HD22	48:DN:53:VAL:O	2.14	0.48
48:DN:66:LYS:O	48:DN:67:LEU:C	2.56	0.48
50:D3:25:ALA:HB2	60:DA:849:A:C2	2.49	0.48
51:D5:3:LYS:HE3	51:D5:5:PRO:HG2	1.96	0.48
52:D6:15:GLU:HG2	52:D6:48:VAL:HG23	1.96	0.48
53:D7:21:ARG:NH2	60:DA:684:G:OP1	2.46	0.48
60:DA:287:C:H2'	60:DA:288:C:C6	2.48	0.48
60:DA:1175:U:H2'	60:DA:1176:G:N7	2.28	0.48
1:AB:68:ILE:HG22	1:AB:163:PHE:N	2.29	0.48
1:AB:193:ASP:OD2	1:AB:196:LEU:N	2.46	0.48
8:AI:55:ALA:CB	8:AI:58:ARG:HH21	2.25	0.48
9:AJ:5:ARG:HH11	9:AJ:101:VAL:HG11	1.77	0.48
11:AL:51:ALA:HB1	11:AL:53:ARG:CD	2.41	0.48
18:AS:36:ARG:HG3	20:AA:1320:C:H42	1.78	0.48
19:AT:13:LEU:O	19:AT:17:ARG:HG3	2.14	0.48
20:AA:27:G:H2'	20:AA:28:G:H8	1.79	0.48
26:BD:111:LEU:HD22	26:BD:115:GLN:HE22	1.78	0.48
26:BD:254:THR:HG21	60:BA:1824:G:N3	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BY:67:LEU:HG	43:BY:71:LYS:HD2	1.95	0.48
46:B1:45:ASN:HB2	60:BA:397:G:H5"	1.96	0.48
46:B1:53:VAL:HG21	46:B1:74:VAL:HG22	1.94	0.48
48:BN:63:THR:O	48:BN:64:GLY:O	2.32	0.48
51:B5:3:LYS:HG2	51:B5:4:HIS:H	1.78	0.48
56:Be:100:LYS:HB2	56:Be:104:SER:HB2	1.96	0.48
60:BA:550:G:H2'	60:BA:551:G:C8	2.48	0.48
60:BA:687:C:H42	60:BA:787:U:H4'	1.79	0.48
60:BA:710:G:H2'	60:BA:711:G:C8	2.49	0.48
60:BA:1100:C:H2'	60:BA:1101:U:O4'	2.14	0.48
60:BA:1105:U:H2'	60:BA:1106:G:H8	1.79	0.48
60:BA:1234:U:H2'	60:BA:1235:G:C8	2.49	0.48
60:BA:2009:G:H2'	60:BA:2010:G:C8	2.48	0.48
2:CC:35:GLU:HG2	2:CC:39:ILE:HD11	1.96	0.48
6:CG:103:TRP:HZ3	6:CG:138:LYS:HA	1.77	0.48
17:CR:71:LYS:O	17:CR:74:ARG:HG3	2.14	0.48
20:CA:201:C:O2'	20:CA:201(A):U:H2'	2.13	0.48
20:CA:758:G:H5'	20:CA:880:C:H1'	1.95	0.48
20:CA:1040:U:H2'	20:CA:1041:A:H8	1.78	0.48
20:CA:1188:A:H2'	20:CA:1189:C:O4'	2.13	0.48
25:DC:16:ASP:O	25:DC:18:ASN:N	2.47	0.48
28:DF:155:LEU:HD12	28:DF:176:LEU:HD23	1.95	0.48
55:D9:10:ILE:HG13	55:D9:14:CYS:SG	2.54	0.48
59:DB:12:C:H4'	59:DB:15:A:N6	2.28	0.48
60:DA:681:G:H2'	60:DA:682:G:C8	2.49	0.48
60:DA:1113:U:H2'	60:DA:1114:G:C8	2.48	0.48
60:DA:1542:G:O2'	60:DA:1543:A:OP2	2.30	0.48
60:DA:2064:C:H1'	60:DA:2450:A:C6	2.49	0.48
60:DA:2801:A:H2'	60:DA:2802:G:O4'	2.14	0.48
60:DA:2848:G:O2'	60:DA:2867:G:N1	2.42	0.48
1:AB:161:ALA:HA	1:AB:183:PRO:HB2	1.95	0.48
2:AC:8:ILE:HG21	13:AN:51:GLY:HA3	1.96	0.48
2:AC:40:ARG:NH1	13:AN:52:GLN:HB3	2.28	0.48
3:AD:9:CYS:O	3:AD:12:CYS:HB2	2.14	0.48
5:AF:49:ALA:HB1	17:AR:80:PRO:HB3	1.96	0.48
8:AI:4:TYR:CE2	8:AI:88:TYR:HB2	2.49	0.48
11:AL:52:LEU:HD21	20:AA:521:G:OP2	2.14	0.48
16:AQ:82:MET:O	16:AQ:86:GLU:HB2	2.13	0.48
17:AR:45:SER:HB3	17:AR:51:LEU:HD13	1.95	0.48
18:AS:71:LEU:O	18:AS:73:GLU:N	2.47	0.48
19:AT:25:ARG:O	19:AT:29:LYS:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:31:G:N2	20:AA:48:C:OP1	2.45	0.48
20:AA:68(E):G:O6	20:AA:68(U):U:O2	2.32	0.48
20:AA:738:C:H2'	20:AA:739:C:C6	2.49	0.48
20:AA:1206:G:H2'	20:AA:1207:G:H8	1.77	0.48
22:AW:3:C:O2'	60:BA:1851:U:H5"	2.13	0.48
22:AW:18:G:H2'	22:AW:57:G:N2	2.29	0.48
23:AY:331:TYR:O	23:AY:371:ALA:HB1	2.14	0.48
25:BC:12:LEU:C	25:BC:14:LYS:H	2.21	0.48
29:BG:9:ARG:HA	29:BG:12:TYR:HD1	1.79	0.48
34:BP:135:LEU:HD13	34:BP:138:LEU:HD23	1.95	0.48
35:BQ:20:ALA:C	35:BQ:22:LYS:H	2.22	0.48
36:BR:68:ARG:HH21	60:BA:2707:G:H5"	1.78	0.48
38:BT:13:ARG:HA	38:BT:13:ARG:NE	2.29	0.48
38:BT:53:ARG:HH11	38:BT:53:ARG:HB3	1.79	0.48
40:BV:66:ARG:HG2	40:BV:88:ARG:HD2	1.95	0.48
40:BV:78:LYS:HG3	40:BV:79:VAL:H	1.79	0.48
59:BB:3:C:H2'	59:BB:4:C:H6	1.79	0.48
59:BB:104:A:H2'	59:BB:105:G:O4'	2.14	0.48
60:BA:226:G:N2	60:BA:228:A:N6	2.50	0.48
60:BA:859:G:H5'	60:BA:2268:A:O2'	2.14	0.48
60:BA:947:G:H2'	60:BA:948:G:C8	2.48	0.48
60:BA:947:G:N2	60:BA:970:C:N3	2.54	0.48
60:BA:1003:G:H2'	60:BA:1004:C:C6	2.49	0.48
60:BA:1435:G:H2'	60:BA:1436:G:H8	1.79	0.48
60:BA:1570:A:H8	60:BA:1570:A:O5'	1.97	0.48
60:BA:1913:A:HO2'	60:BA:1914:C:P	2.35	0.48
60:BA:1958:C:H5'	60:BA:1984:G:H22	1.78	0.48
60:BA:2522:U:H3	60:BA:2543:G:H1	1.61	0.48
5:CF:18:GLN:O	5:CF:21:LEU:HB3	2.14	0.48
13:CN:41:ARG:HD2	13:CN:42:ILE:N	2.29	0.48
19:CT:10:LEU:C	19:CT:12:ALA:H	2.21	0.48
19:CT:37:SER:O	19:CT:40:ALA:HB3	2.14	0.48
20:CA:325:A:H2'	20:CA:326:G:O4'	2.13	0.48
20:CA:355:C:H1'	20:CA:388:G:H1'	1.96	0.48
20:CA:522:C:O4'	20:CA:536:C:H4'	2.14	0.48
20:CA:975:A:C8	20:CA:1357:A:H2	2.32	0.48
20:CA:1343:G:H2'	20:CA:1344:C:H6	1.78	0.48
20:CA:1492:A:H2'	24:CU:6:5OH:HNQ	1.77	0.48
23:CY:614:GLU:HA	23:CY:617:MET:HE3	1.95	0.48
28:DF:33:LEU:O	28:DF:37:VAL:HG23	2.14	0.48
29:DG:29:TRP:HA	29:DG:29:TRP:CE3	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:128:ARG:HB2	29:DG:130:ASN:HD21	1.79	0.48
39:DU:64:ARG:HD3	48:DN:42:TRP:H	1.75	0.48
46:D1:13:ILE:O	46:D1:42:GLN:O	2.32	0.48
46:D1:13:ILE:HG23	46:D1:42:GLN:O	2.13	0.48
60:DA:270(T):G:H2'	60:DA:270(U):G:H8	1.78	0.48
60:DA:1110:G:HO2'	60:DA:1111:A:H8	1.56	0.48
60:DA:1199:U:H2'	60:DA:1200:C:H6	1.78	0.48
60:DA:1213:A:N6	60:DA:1236:G:H1'	2.29	0.48
60:DA:1899:G:H21	60:DA:1902:C:N4	2.12	0.48
60:DA:2054:A:H62	60:DA:2577:A:H61	1.62	0.48
60:DA:2088:G:N2	60:DA:2231:C:N3	2.48	0.48
60:DA:2375:G:H2'	60:DA:2377:A:N7	2.29	0.48
1:AB:103:THR:O	1:AB:105:PHE:N	2.47	0.48
20:AA:431:A:C2	20:AA:432:A:H1'	2.49	0.48
20:AA:791:G:N1	20:AA:1498:U:OP1	2.38	0.48
20:AA:996:A:H2'	20:AA:997:U:C6	2.48	0.48
25:BC:115:VAL:N	25:BC:145:THR:HG22	2.29	0.48
26:BD:24:ILE:HD12	26:BD:82:ILE:HB	1.96	0.48
27:BE:66:HIS:O	27:BE:68:ALA:N	2.46	0.48
27:BE:144:ARG:HG2	60:BA:2575:C:H5'	1.95	0.48
27:BE:169:ASN:HB3	60:BA:2730:C:H4'	1.96	0.48
30:BH:149:ARG:HH11	30:BH:164:TYR:HD2	1.62	0.48
36:BR:61:HIS:HE1	60:BA:2850:A:H2	1.62	0.48
37:BS:13:ARG:C	37:BS:15:ARG:N	2.72	0.48
37:BS:74:ALA:HA	37:BS:105:ALA:N	2.28	0.48
38:BT:55:ASN:N	38:BT:59:THR:HB	2.29	0.48
44:BZ:6:LYS:HG2	44:BZ:8:TYR:CZ	2.49	0.48
48:BN:66:LYS:O	48:BN:67:LEU:C	2.56	0.48
48:BN:111:PRO:CD	60:BA:558:G:OP1	2.62	0.48
52:B6:18:ARG:HD2	52:B6:18:ARG:N	2.28	0.48
59:BB:44:G:H21	59:BB:47:C:H42	1.61	0.48
60:BA:99:U:OP1	60:BA:101:G:H3'	2.13	0.48
60:BA:1068:G:O6	60:BA:1069:A:N6	2.47	0.48
60:BA:1231:G:H2'	60:BA:1232:G:H8	1.78	0.48
60:BA:2782:G:H3'	60:BA:2783:G:H8	1.79	0.48
6:CG:30:ILE:HG22	6:CG:39:ALA:HB1	1.95	0.48
7:CH:10:LEU:O	7:CH:14:ARG:HG3	2.13	0.48
10:CK:31:THR:CA	10:CK:42:TRP:HA	2.42	0.48
14:CO:5:LYS:O	14:CO:9:GLN:HG2	2.13	0.48
14:CO:32:LEU:O	14:CO:36:ILE:HG13	2.14	0.48
14:CO:77:ARG:HA	14:CO:80:ALA:HB3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:68(L):U:H5”	20:CA:68(M):U:OP2	2.13	0.48
20:CA:266:G:O2’	20:CA:268:C:OP2	2.18	0.48
20:CA:632:A:H2’	20:CA:633:G:O4’	2.14	0.48
20:CA:1095:U:H2’	20:CA:1096:C:C6	2.49	0.48
23:CY:148:LEU:O	23:CY:152:THR:OG1	2.27	0.48
23:CY:192:LEU:HG	23:CY:194:THR:HG23	1.96	0.48
23:CY:448:GLN:HE21	23:CY:448:GLN:HB2	1.51	0.48
25:DC:58:ASN:HA	25:DC:166:ASN:CG	2.38	0.48
27:DE:145:LYS:HB2	60:DA:2572:A:N7	2.29	0.48
28:DF:164:ARG:CD	28:DF:177:ALA:HB2	2.44	0.48
37:DS:34:HIS:CE1	59:DB:27:C:H5”	2.49	0.48
42:DX:53:LYS:HD2	42:DX:55:ASN:CG	2.39	0.48
43:DY:38:ILE:HD11	43:DY:64:GLU:HB3	1.96	0.48
43:DY:87:LYS:O	43:DY:89:PHE:N	2.47	0.48
46:D1:29:GLY:C	60:DA:2396:G:HO2’	2.22	0.48
59:DB:32:C:H1’	59:DB:52:A:H62	1.79	0.48
60:DA:712:G:H1	60:DA:719:C:N4	2.11	0.48
60:DA:1077:A:H5”	60:DA:1078:U:C6	2.49	0.48
60:DA:1408:C:H42	60:DA:1594:G:H1	1.61	0.48
60:DA:1916:A:H2’	60:DA:1917:U:C6	2.49	0.48
60:DA:1916:A:H2’	60:DA:1917:U:H6	1.78	0.48
60:DA:2142:C:H2’	60:DA:2143:C:C6	2.49	0.48
60:DA:2294:C:H2’	60:DA:2295:C:H6	1.78	0.48
60:DA:2308:G:OP1	60:DA:2308:G:H4’	2.13	0.48
60:DA:2447:G:H1’	60:DA:2448:A:OP2	2.14	0.48
60:DA:2618:G:H2’	60:DA:2619:C:O4’	2.14	0.48
60:DA:2681:C:H4’	60:DA:2682:U:H5’	1.95	0.48
2:AC:22:TRP:HB3	2:AC:59:ARG:N	2.28	0.47
3:AD:100:ARG:O	3:AD:104:VAL:HG23	2.14	0.47
7:AH:83:ILE:HB	7:AH:137:VAL:HG22	1.95	0.47
16:AQ:68:ARG:HH22	20:AA:277:C:H5”	1.79	0.47
16:AQ:95:TYR:HB3	20:AA:278:G:N1	2.28	0.47
18:AS:31:ILE:HD11	18:AS:49:ILE:HG12	1.95	0.47
26:BD:273:ARG:HG2	26:BD:274:ARG:H	1.79	0.47
27:BE:31:CYS:C	27:BE:90:THR:HG23	2.39	0.47
27:BE:145:LYS:NZ	60:BA:2054:A:OP1	2.45	0.47
29:BG:139:LEU:HA	29:BG:144:ILE:HG23	1.96	0.47
30:BH:152:ARG:HB3	30:BH:162:ILE:HD11	1.95	0.47
32:BK:109:LYS:HA	32:BK:120:LEU:HD21	1.95	0.47
34:BP:46:LYS:HG2	34:BP:51:PHE:CE1	2.48	0.47
38:BT:99:LEU:HA	38:BT:101:PHE:CE1	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BU:49:HIS:NE2	60:BA:534:U:O2	2.47	0.47
49:B2:40:SER:C	49:B2:42:GLY:H	2.21	0.47
60:BA:57:C:H42	60:BA:70:G:H1	1.62	0.47
60:BA:65:C:H2'	60:BA:66:C:C6	2.48	0.47
60:BA:80:G:H2'	60:BA:81:G:O4'	2.13	0.47
60:BA:121:G:H2'	60:BA:122:G:C8	2.49	0.47
60:BA:273(G):C:H3'	60:BA:274:G:C5'	2.44	0.47
60:BA:465:G:O2'	60:BA:683:C:O2'	2.26	0.47
60:BA:834:C:H2'	60:BA:835:A:H8	1.79	0.47
60:BA:1863:G:H2'	60:BA:1864:U:O4'	2.14	0.47
60:BA:1907:G:H2'	60:BA:1908:C:O4'	2.14	0.47
60:BA:2088:G:H1	60:BA:2231:C:N4	2.08	0.47
60:BA:2343:C:H2'	60:BA:2344:U:H5'	1.96	0.47
60:BA:2567:G:H2'	60:BA:2568:C:C6	2.49	0.47
60:BA:2589:A:H2'	60:BA:2590:A:C8	2.47	0.47
8:CI:91:ASP:OD1	8:CI:91:ASP:N	2.47	0.47
18:CS:63:THR:OG1	18:CS:66:MET:SD	2.64	0.47
20:CA:62:U:H5'	20:CA:385:C:O2	2.13	0.47
20:CA:585:G:H2'	20:CA:586:C:C6	2.49	0.47
20:CA:595:G:H22	20:CA:643:C:N4	2.12	0.47
20:CA:1224:G:H1	20:CA:1362(A):C:N4	2.11	0.47
23:CY:509:HIS:HB3	23:CY:571:SER:OG	2.14	0.47
25:DC:26:ALA:HB2	25:DC:215:VAL:HG21	1.94	0.47
26:DD:218:ARG:N	26:DD:218:ARG:HD2	2.28	0.47
27:DE:8:LYS:NZ	27:DE:190:GLY:O	2.25	0.47
28:DF:46:ARG:HA	28:DF:46:ARG:HD2	1.76	0.47
28:DF:171:PRO:HG2	28:DF:172:TRP:HD1	1.78	0.47
34:DP:47:ASP:HB3	34:DP:48:PRO:O	2.14	0.47
38:DT:62:THR:HG23	38:DT:75:ILE:HG12	1.96	0.47
40:DV:56:SER:O	40:DV:100:ARG:HG3	2.14	0.47
47:D4:14:ILE:HB	47:D4:22:ILE:HB	1.96	0.47
48:DN:9:VAL:HG11	48:DN:39:ARG:NH1	2.29	0.47
48:DN:78:TYR:HB3	60:DA:2642:G:OP1	2.10	0.47
50:D3:8:LEU:HD22	50:D3:31:LEU:HA	1.96	0.47
53:D7:33:ARG:NH1	60:DA:467:G:OP1	2.47	0.47
60:DA:1292:U:H2'	60:DA:1293:C:H6	1.78	0.47
60:DA:1341:U:H5"	60:DA:1397:U:O2	2.14	0.47
60:DA:2343:C:HO2'	60:DA:2373:G:HO2'	1.60	0.47
60:DA:2458:G:O2'	60:DA:2490:G:N1	2.46	0.47
2:AC:114:PRO:HA	2:AC:185:GLY:HA3	1.96	0.47
11:AL:33:ARG:CB	11:AL:60:LEU:HD12	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:85:ILE:CG1	11:AL:98:TYR:HB3	2.44	0.47
16:AQ:51:TYR:HE1	16:AQ:76:LEU:HB2	1.79	0.47
20:AA:105:G:H2'	20:AA:106:C:H6	1.77	0.47
20:AA:601:C:C2	20:AA:602:A:C8	3.02	0.47
20:AA:639:G:H2'	20:AA:640:A:H8	1.79	0.47
20:AA:1157:A:C2	20:AA:1181:G:C4	3.02	0.47
20:AA:1493:A:OP2	24:AU:6:5OH:CB	2.57	0.47
23:AY:257:PRO:HB2	23:AY:259:PHE:CE1	2.49	0.47
23:AY:280:LEU:HD13	23:AY:281:PRO:HD2	1.95	0.47
23:AY:311:ALA:CB	23:AY:330:VAL:HA	2.44	0.47
25:BC:210:LEU:HD22	25:BC:227:PRO:HB3	1.96	0.47
28:BF:9:ILE:HG12	28:BF:124:LEU:HD12	1.96	0.47
29:BG:101:ILE:HG21	47:B4:26:SER:HA	1.95	0.47
29:BG:141:PHE:HD2	29:BG:142:PRO:HD2	1.79	0.47
31:BJ:83:UNK:C	31:BJ:85:UNK:N	2.77	0.47
35:BQ:38:GLU:HB2	35:BQ:127:ILE:HG21	1.96	0.47
36:BR:72:ASP:OD1	36:BR:75:LEU:HD23	2.15	0.47
37:BS:47:THR:HG22	37:BS:48:LEU:H	1.79	0.47
48:BN:7:LYS:HZ3	48:BN:7:LYS:CA	2.27	0.47
48:BN:15:LEU:HD21	48:BN:55:VAL:HG13	1.95	0.47
50:B3:31:LEU:HB2	60:BA:1157:G:O2'	2.13	0.47
53:B7:5:TRP:HD1	60:BA:1612:C:O3'	1.97	0.47
60:BA:64:A:H2'	60:BA:65:C:H6	1.79	0.47
60:BA:183:C:H2'	60:BA:184:C:H5'	1.96	0.47
60:BA:627:A:H61	60:BA:637:A:H5"	1.80	0.47
60:BA:667:U:H2'	60:BA:668:G:O4'	2.14	0.47
60:BA:880:G:H2'	60:BA:881:G:H8	1.79	0.47
60:BA:1034:G:H1	60:BA:1121:C:H42	1.62	0.47
60:BA:1135:C:H41	60:BA:1138:G:P	2.36	0.47
60:BA:1774:C:H2'	60:BA:1774:C:O2	2.13	0.47
60:BA:2559:C:H2'	60:BA:2560:C:H6	1.78	0.47
60:BA:2749:A:H3'	60:BA:2750:A:H2'	1.95	0.47
2:CC:16:ARG:NH2	2:CC:183:ASP:OD1	2.47	0.47
4:CE:126:ARG:HA	4:CE:131:ILE:HD11	1.95	0.47
7:CH:44:PHE:CD2	7:CH:80:ILE:HG13	2.49	0.47
10:CK:26:ASN:O	10:CK:55:LYS:HB2	2.13	0.47
11:CL:118:SER:O	20:CA:35:G:H1'	2.13	0.47
15:CP:25:ARG:NH2	20:CA:230:G:O4'	2.47	0.47
17:CR:60:ALA:O	17:CR:64:ARG:HG3	2.14	0.47
20:CA:19:C:H2'	20:CA:20:U:C6	2.49	0.47
20:CA:783:C:H2'	20:CA:784:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1290:G:H3'	20:CA:1291:G:C8	2.49	0.47
20:CA:1424:C:H2'	20:CA:1425:U:C6	2.49	0.47
25:DC:212:SER:OG	60:DA:2178:C:OP1	2.32	0.47
28:DF:89:VAL:HG21	60:DA:586:A:H5'	1.97	0.47
34:DP:95:VAL:HG12	34:DP:100:LEU:HD21	1.96	0.47
37:DS:39:ILE:HG12	37:DS:85:VAL:HG21	1.94	0.47
37:DS:102:ALA:HA	37:DS:108:GLY:H	1.79	0.47
41:DW:90:ARG:NH1	60:DA:751:A:O2'	2.48	0.47
46:D1:23:LYS:HE2	46:D1:33:LYS:HB3	1.96	0.47
54:D8:61:LEU:O	54:D8:64:TYR:N	2.43	0.47
60:DA:16:G:H2'	60:DA:17:G:C8	2.49	0.47
60:DA:463:G:H2'	60:DA:464:U:H5"	1.96	0.47
60:DA:558:G:H2'	60:DA:559:G:C8	2.47	0.47
60:DA:1139:G:C2'	60:DA:1140:C:C6	2.97	0.47
60:DA:1234:U:H2'	60:DA:1235:G:C8	2.49	0.47
60:DA:1336:A:H2'	60:DA:1337:G:O4'	2.14	0.47
60:DA:2469:A:H61	60:DA:2481:G:H1'	1.80	0.47
5:AF:92:LYS:HE2	5:AF:93:SER:O	2.14	0.47
11:AL:119:LYS:HG3	11:AL:120:TYR:CD2	2.49	0.47
12:AM:8:GLU:HG2	12:AM:22:ILE:HG12	1.97	0.47
12:AM:12:ASN:HA	12:AM:46:LYS:HB2	1.95	0.47
20:AA:373:A:H4'	20:AA:480:U:O2'	2.13	0.47
20:AA:808:C:H2'	20:AA:809:G:O4'	2.14	0.47
20:AA:1090:U:H2'	20:AA:1091:U:C6	2.49	0.47
20:AA:1296:C:H5"	20:AA:1297:C:OP2	2.13	0.47
22:AW:40:G:H2'	22:AW:41:A:C8	2.49	0.47
22:AW:76:A:H1'	60:BA:2421:G:C2	2.49	0.47
23:AY:508:GLY:HA2	23:AY:582:PHE:CZ	2.48	0.47
25:BC:29:LEU:O	25:BC:32:GLU:HG3	2.13	0.47
31:BJ:82:UNK:O	31:BJ:84:UNK:N	2.47	0.47
33:BO:18:LYS:HB2	33:BO:45:GLU:HB3	1.96	0.47
34:BP:41:ARG:CZ	34:BP:45:LEU:HD22	2.43	0.47
37:BS:92:TYR:OH	60:BA:2293:C:OP1	2.15	0.47
49:B2:48:HIS:CD2	49:B2:49:LYS:HG2	2.49	0.47
60:BA:36:G:H4'	60:BA:451:C:N3	2.29	0.47
60:BA:54:G:H1	60:BA:116:C:H42	1.62	0.47
60:BA:174:C:H2'	60:BA:175:G:O4'	2.14	0.47
60:BA:383:U:H2'	60:BA:385:C:H5	1.80	0.47
60:BA:1542:G:H4'	60:BA:1543:A:O4'	2.14	0.47
60:BA:2092:U:C2	60:BA:2225:A:H2	2.33	0.47
60:BA:2769:C:H2'	60:BA:2770:G:H8	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:70:VAL:HG23	2:CC:104:GLN:H	1.78	0.47
2:CC:123:GLN:NE2	2:CC:133:ALA:HB1	2.29	0.47
7:CH:36:LEU:HD22	7:CH:61:VAL:HG11	1.97	0.47
16:CQ:29:HIS:CG	16:CQ:32:TYR:HB2	2.49	0.47
20:CA:28:G:O2'	20:CA:296:U:H5"	2.14	0.47
20:CA:745:C:H2'	20:CA:746:A:H8	1.78	0.47
20:CA:1015:A:H2'	20:CA:1016:A:C8	2.49	0.47
22:CW:49:A:C6	22:CW:50:C:N4	2.82	0.47
25:DC:44:VAL:CB	25:DC:174:ALA:HB3	2.31	0.47
26:DD:70:TRP:HA	26:DD:73:VAL:HG23	1.95	0.47
27:DE:15:PHE:HD1	38:DT:80:SER:HB2	1.77	0.47
28:DF:52:LYS:HA	28:DF:93:LYS:NZ	2.28	0.47
28:DF:117:ARG:NH2	28:DF:187:VAL:HA	2.29	0.47
29:DG:16:ARG:NH2	29:DG:33:ARG:HG2	2.29	0.47
29:DG:29:TRP:CD1	59:DB:55:U:H1'	2.49	0.47
38:DT:67:SER:O	38:DT:69:GLY:N	2.47	0.47
39:DU:97:ASP:C	39:DU:99:ALA:N	2.69	0.47
48:DN:6:PRO:C	48:DN:7:LYS:HZ3	2.22	0.47
60:DA:20:C:H2'	60:DA:21:A:C8	2.47	0.47
60:DA:644:A:N1	60:DA:646:A:C8	2.82	0.47
60:DA:1398:C:H2'	60:DA:1399:C:C6	2.49	0.47
60:DA:1428:C:O2'	60:DA:1569:A:OP2	2.15	0.47
60:DA:1853:A:N3	60:DA:2233:U:O2'	2.44	0.47
60:DA:2146:C:H4'	60:DA:2147:G:C8	2.50	0.47
3:AD:5:ILE:HG12	3:AD:115:ARG:HH11	1.79	0.47
5:AF:44:GLY:HA2	5:AF:59:TYR:CZ	2.49	0.47
7:AH:5:PRO:O	7:AH:32:LYS:HD2	2.14	0.47
9:AJ:16:LEU:HD12	9:AJ:70:ARG:HD3	1.95	0.47
14:AO:63:ARG:NH2	14:AO:87:ILE:HG22	2.30	0.47
17:AR:31:LEU:C	17:AR:33:ASP:H	2.22	0.47
20:AA:142:G:O2'	20:AA:195:A:N6	2.47	0.47
20:AA:180:U:O2	20:AA:195:A:N7	2.47	0.47
20:AA:627:G:H2'	20:AA:628:G:H8	1.79	0.47
20:AA:787:A:H2'	20:AA:788:U:C6	2.50	0.47
20:AA:856:C:H2'	20:AA:857:C:H6	1.79	0.47
20:AA:1095:U:H2'	20:AA:1096:C:C6	2.49	0.47
20:AA:1201:A:H4'	20:AA:1202:G:H5"	1.95	0.47
23:AY:390:VAL:HG21	23:AY:396:ARG:HA	1.95	0.47
23:AY:632:LEU:N	23:AY:644:ARG:O	2.48	0.47
25:BC:73:VAL:HG11	25:BC:157:ILE:HG22	1.96	0.47
25:BC:76:LEU:HA	25:BC:93:ASP:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:64:LYS:HA	27:BE:67:PHE:H	1.80	0.47
28:BF:57:VAL:C	28:BF:59:TYR:H	2.22	0.47
28:BF:125:LEU:HB3	28:BF:194:MET:HB3	1.96	0.47
34:BP:21:ARG:O	34:BP:23:PRO:HD3	2.15	0.47
34:BP:138:LEU:HD22	34:BP:144:GLU:HB2	1.96	0.47
37:BS:20:ARG:HD3	37:BS:88:ASP:HA	1.96	0.47
44:BZ:53:ILE:HD11	44:BZ:99:TYR:CD1	2.49	0.47
46:B1:31:GLY:HA3	46:B1:34:THR:HB	1.95	0.47
49:B2:16:LEU:O	49:B2:20:GLU:HB3	2.14	0.47
52:B6:39:TYR:CE2	60:BA:2345:G:H5"	2.49	0.47
56:Be:60:PHE:C	56:Be:62:VAL:H	2.22	0.47
60:BA:231:C:H2'	60:BA:232:G:O4'	2.14	0.47
60:BA:373:U:H2'	60:BA:374:A:C8	2.50	0.47
60:BA:573:G:N1	60:BA:2031:A:OP2	2.48	0.47
60:BA:980:A:C1'	60:BA:1136:G:H1'	2.45	0.47
60:BA:1023:U:H2'	60:BA:1024:G:H5'	1.95	0.47
60:BA:1088:A:H2'	60:BA:1088:A:N3	2.28	0.47
60:BA:1359:A:N7	60:BA:1372:U:O4	2.48	0.47
60:BA:2053:G:H1	60:BA:2616:C:N4	2.11	0.47
1:CB:51:LEU:HD22	1:CB:55:PHE:HE2	1.78	0.47
2:CC:59:ARG:HD2	2:CC:64:VAL:HG22	1.97	0.47
6:CG:42:ILE:HD12	6:CG:115:ARG:HH21	1.79	0.47
6:CG:156:TRP:HZ3	20:CA:1379:G:H4'	1.79	0.47
20:CA:42:G:N3	20:CA:622:A:H2	2.12	0.47
20:CA:327:A:O2'	20:CA:328:C:O4'	2.29	0.47
23:CY:33:LEU:HG	23:CY:34:TYR:CD2	2.49	0.47
23:CY:493:VAL:HG21	23:CY:592:GLU:HB3	1.96	0.47
25:DC:61:GLY:O	25:DC:163:GLU:HA	2.13	0.47
26:DD:102:LYS:C	26:DD:103:ARG:HG2	2.39	0.47
26:DD:220:HIS:O	60:DA:1789:A:H5"	2.15	0.47
27:DE:93:VAL:C	27:DE:95:ILE:H	2.21	0.47
28:DF:194:MET:HE1	28:DF:199:TRP:HD1	1.79	0.47
32:DK:8:VAL:HG11	32:DK:26:ALA:HB1	1.96	0.47
33:DO:79:PHE:CE2	33:DO:101:PRO:HG2	2.49	0.47
37:DS:39:ILE:HD12	37:DS:73:LEU:HD11	1.96	0.47
38:DT:28:VAL:HG12	38:DT:29:ARG:N	2.29	0.47
39:DU:76:TYR:CD2	60:DA:1010:A:H4'	2.50	0.47
48:DN:51:PHE:CE2	48:DN:119:ARG:HD2	2.48	0.47
55:D9:6:SER:HB3	60:DA:2466:C:H5"	1.97	0.47
60:DA:573:G:O2'	60:DA:574:C:H3'	2.15	0.47
60:DA:706:A:H2'	60:DA:707:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:858:U:H3	60:DA:919:G:H1	1.61	0.47
60:DA:951:C:N4	60:DA:966:G:H1	2.07	0.47
60:DA:1175:U:H2'	60:DA:1176:G:C8	2.50	0.47
60:DA:1320:C:HO2'	60:DA:1321:A:P	2.35	0.47
60:DA:1493:C:H2'	60:DA:1493:C:O2	2.14	0.47
60:DA:1525:G:H2'	60:DA:1526:G:H8	1.73	0.47
60:DA:2047:U:H2'	60:DA:2048:G:C8	2.48	0.47
60:DA:2615:U:H2'	60:DA:2616:C:H6	1.77	0.47
4:AE:126:ARG:HA	4:AE:131:ILE:HD11	1.96	0.47
11:AL:38:THR:OG1	11:AL:39:VAL:HG23	2.15	0.47
20:AA:180:U:C2	20:AA:195:A:N7	2.83	0.47
20:AA:501:C:O2	20:AA:549:C:O2'	2.32	0.47
20:AA:551:U:H2'	20:AA:552:U:C6	2.50	0.47
20:AA:1461:G:H2'	20:AA:1462:G:H8	1.79	0.47
22:AW:39:U:H2'	22:AW:40:G:C8	2.50	0.47
23:AY:496:LYS:HA	23:AY:509:HIS:HA	1.96	0.47
23:AY:608:VAL:HG23	23:AY:647:VAL:HG21	1.95	0.47
25:BC:176:VAL:O	25:BC:178:LYS:N	2.48	0.47
26:BD:173:VAL:HG22	26:BD:185:VAL:O	2.14	0.47
26:BD:200:ASP:OD1	26:BD:200:ASP:N	2.38	0.47
27:BE:94:GLU:CG	27:BE:177:PRO:HB3	2.44	0.47
27:BE:104:VAL:O	27:BE:167:VAL:HG12	2.14	0.47
37:BS:106:ARG:C	37:BS:108:GLY:H	2.22	0.47
44:BZ:11:GLU:HB2	44:BZ:12:GLY:H	1.56	0.47
47:B4:12:ALA:HB1	47:B4:31:ILE:HD12	1.96	0.47
50:B3:3:ARG:HB2	50:B3:59:VAL:O	2.14	0.47
60:BA:70:G:H5"	60:BA:112:U:H3	1.80	0.47
60:BA:734:A:O2'	60:BA:1635:G:H5'	2.15	0.47
60:BA:745:G:H21	60:BA:750:A:H61	1.62	0.47
60:BA:1074:G:H2'	60:BA:1075:C:C5	2.50	0.47
60:BA:1131:G:O6	60:BA:2040:C:H1'	2.13	0.47
60:BA:1170:G:H2'	60:BA:1171:G:H8	1.78	0.47
60:BA:1290:C:H2'	60:BA:1291:C:C6	2.49	0.47
60:BA:1472:A:H3'	60:BA:1473:G:C8	2.50	0.47
60:BA:2591:C:H2'	60:BA:2592:G:C8	2.49	0.47
60:BA:2795:G:H3'	60:BA:2797:U:H5"	1.96	0.47
60:BA:2819:G:H1	60:BA:2827:C:N4	2.11	0.47
1:CB:124:SER:C	1:CB:126:GLU:H	2.21	0.47
2:CC:193:TYR:C	20:CA:1206:G:H4'	2.40	0.47
3:CD:79:PHE:CE2	3:CD:207:TYR:HB3	2.49	0.47
3:CD:96:LEU:HG	3:CD:139:ARG:HH22	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:196:LEU:HD13	3:CD:198:VAL:HB	1.96	0.47
6:CG:30:ILE:HD12	6:CG:43:PHE:HB2	1.95	0.47
20:CA:266:G:O2'	20:CA:267:C:O5'	2.33	0.47
22:CW:18:G:H2'	22:CW:57:G:N2	2.30	0.47
27:DE:152:LYS:HA	60:DA:2619:C:O3'	2.15	0.47
33:DO:7:TYR:O	33:DO:8:LEU:HD13	2.15	0.47
37:DS:47:THR:HG22	37:DS:48:LEU:H	1.80	0.47
38:DT:128:GLU:O	38:DT:129:ARG:NE	2.44	0.47
39:DU:42:ALA:HB1	60:DA:534:U:H5'	1.96	0.47
40:DV:19:LYS:HG3	40:DV:20:LEU:H	1.79	0.47
42:DX:64:LYS:HD2	42:DX:73:ARG:NH2	2.30	0.47
45:D0:11:ARG:HH22	60:DA:2278:A:H3'	1.79	0.47
53:D7:33:ARG:HA	53:D7:36:GLN:HG2	1.96	0.47
60:DA:837:C:H42	60:DA:942:G:H1	1.61	0.47
60:DA:1292:U:H2'	60:DA:1293:C:C6	2.50	0.47
60:DA:1774:C:O2	60:DA:1774:C:H2'	2.14	0.47
60:DA:2505:G:C6	60:DA:2610:C:O2	2.67	0.47
1:AB:52:GLU:O	1:AB:56:ARG:HG3	2.15	0.47
2:AC:31:HIS:O	2:AC:34:LEU:HB2	2.13	0.47
3:AD:24:GLU:N	20:AA:409:G:OP1	2.47	0.47
11:AL:45:PRO:CA	11:AL:92:ASP:HB3	2.44	0.47
11:AL:69:TYR:OH	20:AA:522:C:OP2	2.32	0.47
14:AO:58:MET:SD	20:AA:580:U:H5"	2.54	0.47
20:AA:389:A:H2'	20:AA:390:C:O4'	2.15	0.47
20:AA:1478:C:H2'	20:AA:1479:C:C6	2.49	0.47
23:AY:247:ARG:NH2	23:AY:280:LEU:O	2.47	0.47
27:BE:10:GLY:O	27:BE:24:THR:HA	2.15	0.47
35:BQ:98:LYS:HB3	44:BZ:79:ARG:HH12	1.79	0.47
36:BR:88:ARG:NH2	36:BR:89:ASP:OD1	2.47	0.47
39:BU:114:LYS:HE3	39:BU:114:LYS:HB3	1.63	0.47
47:B4:13:ARG:O	47:B4:14:ILE:HG12	2.14	0.47
48:BN:6:PRO:C	48:BN:7:LYS:HZ3	2.22	0.47
48:BN:39:ARG:HG2	48:BN:40:PRO:HD2	1.96	0.47
48:BN:95:PRO:C	48:BN:97:ARG:N	2.70	0.47
50:B3:46:ASN:ND2	60:BA:851:U:H1'	2.30	0.47
59:BB:53:A:H2'	59:BB:54:G:O4'	2.14	0.47
60:BA:218:A:C2	60:BA:235:U:H4'	2.49	0.47
60:BA:675:A:H3'	60:BA:676:A:C2	2.50	0.47
60:BA:1603:A:H5'	60:BA:1604:C:OP2	2.15	0.47
60:BA:2193:G:H2'	60:BA:2194:G:C8	2.50	0.47
60:BA:2212:A:H4'	60:BA:2213:U:C5	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:2291:U:H2'	60:BA:2292:C:C6	2.50	0.47
3:CD:175:SER:O	3:CD:183:GLY:HA2	2.15	0.47
7:CH:14:ARG:NH1	20:CA:875:C:O2'	2.46	0.47
9:CJ:26:ALA:HB1	9:CJ:85:LEU:CD2	2.45	0.47
9:CJ:52:GLY:C	9:CJ:54:PHE:H	2.21	0.47
12:CM:19:LEU:HD12	12:CM:25:ILE:HG21	1.97	0.47
14:CO:39:LEU:HD12	14:CO:56:LEU:HD22	1.95	0.47
17:CR:74:ARG:HB3	17:CR:79:LEU:HD22	1.96	0.47
20:CA:10:A:H2'	20:CA:11:G:H8	1.80	0.47
20:CA:227:G:H2'	20:CA:228:A:C8	2.49	0.47
20:CA:1429:C:H4'	60:DA:1704:G:H5'	1.96	0.47
21:CV:8:A:O2'	21:CV:9:G:OP1	2.27	0.47
23:CY:77:HIS:CE1	23:CY:277:VAL:HG21	2.50	0.47
23:CY:149:VAL:O	23:CY:153:MET:HG3	2.14	0.47
23:CY:276:VAL:O	23:CY:280:LEU:HB2	2.15	0.47
23:CY:506:GLN:HG2	23:CY:580:MET:HE1	1.96	0.47
23:CY:566:THR:C	23:CY:567:LEU:HD23	2.39	0.47
25:DC:60:ARG:HG2	25:DC:142:LYS:HD3	1.97	0.47
27:DE:145:LYS:HD2	60:DA:2053:G:H5"	1.96	0.47
27:DE:169:ASN:HB3	60:DA:2730:C:H4'	1.97	0.47
38:DT:64:ARG:HH12	38:DT:103:ARG:HA	1.78	0.47
43:DY:47:LYS:HB2	60:DA:482:A:H4'	1.96	0.47
50:D3:3:ARG:HB2	50:D3:59:VAL:O	2.14	0.47
60:DA:295:G:O6	60:DA:343:C:N3	2.47	0.47
60:DA:524:U:H4'	60:DA:554:U:H4'	1.97	0.47
60:DA:876:C:H2'	60:DA:877:U:O4'	2.15	0.47
60:DA:880:G:H1	60:DA:897:C:H42	1.62	0.47
60:DA:990:A:H1'	60:DA:1156:A:C2	2.50	0.47
60:DA:1121:C:H2'	60:DA:1122:G:O4'	2.15	0.47
60:DA:1844:C:H42	60:DA:1896:G:H1	1.63	0.47
60:DA:2011:U:H2'	60:DA:2012:G:O4'	2.15	0.47
60:DA:2840:C:H2'	60:DA:2841:C:C6	2.50	0.47
3:AD:22:LYS:HB3	3:AD:26:CYS:HB2	1.97	0.47
4:AE:127:ASN:ND2	20:AA:18:C:O5'	2.48	0.47
5:AF:75:LEU:O	5:AF:79:LEU:HG	2.15	0.47
6:AG:10:ARG:HD2	6:AG:11:GLN:H	1.79	0.47
11:AL:12:ARG:HH12	11:AL:13:LYS:HE3	1.80	0.47
11:AL:102:ARG:HD2	11:AL:107:ALA:HB1	1.97	0.47
15:AP:38:TYR:CZ	15:AP:50:LYS:HB3	2.50	0.47
16:AQ:42:TYR:C	16:AQ:43:LEU:HD23	2.39	0.47
16:AQ:43:LEU:HD12	16:AQ:69:LYS:CA	2.42	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:74:ARG:HH12	20:AA:719:C:H42	1.62	0.47
18:AS:5:LEU:HD23	18:AS:10:PHE:HB2	1.96	0.47
20:AA:68(A):G:H2'	20:AA:68(B):G:C8	2.42	0.47
20:AA:297:G:H4'	20:AA:557:G:O2'	2.14	0.47
20:AA:613:C:N4	20:AA:627:G:H1	2.12	0.47
20:AA:770:C:H2'	20:AA:771:G:C8	2.50	0.47
20:AA:810:C:H2'	20:AA:811:C:O4'	2.15	0.47
20:AA:813:U:H2'	20:AA:814:A:H8	1.79	0.47
20:AA:943:U:O2	20:AA:1341:U:O2	2.32	0.47
20:AA:1132:C:N3	20:AA:1142:G:N2	2.63	0.47
23:AY:14:ASN:ND2	23:AY:374:LEU:HD22	2.29	0.47
23:AY:15:ILE:HD12	23:AY:105:ILE:HD11	1.96	0.47
23:AY:620:VAL:O	23:AY:624:LEU:HD22	2.14	0.47
23:AY:655:TYR:HD1	23:AY:658:ASP:HB2	1.79	0.47
25:BC:132:LEU:HD12	25:BC:138:LEU:HD23	1.96	0.47
26:BD:78:LYS:CD	26:BD:98:VAL:HG22	2.45	0.47
26:BD:172:TYR:CD1	26:BD:184:LYS:HB3	2.50	0.47
30:BH:83:TYR:CD1	30:BH:134:SER:HA	2.50	0.47
32:BK:37:PHE:O	32:BK:41:PHE:HB3	2.15	0.47
32:BK:82:ALA:HB1	32:BK:97:GLY:O	2.15	0.47
35:BQ:18:LYS:HD3	59:BB:90:C:H5'	1.97	0.47
35:BQ:21:THR:HG23	35:BQ:101:ARG:HD3	1.96	0.47
37:BS:38:GLN:HG2	37:BS:50:SER:HA	1.96	0.47
38:BT:7:ILE:HG22	38:BT:11:GLU:OE1	2.15	0.47
39:BU:34:LYS:HZ1	60:BA:2018:G:H21	1.62	0.47
39:BU:49:HIS:O	39:BU:53:ARG:HB2	2.15	0.47
43:BY:8:LYS:HB3	43:BY:28:LYS:HZ1	1.79	0.47
45:B0:37:LEU:HG	45:B0:59:LEU:O	2.14	0.47
48:BN:34:LEU:HD12	48:BN:116:LEU:O	2.15	0.47
52:B6:19:ARG:HB3	52:B6:20:ASN:H	1.52	0.47
59:BB:24:G:N1	59:BB:56:G:N2	2.63	0.47
59:BB:45:A:H5'	59:BB:46:A:OP2	2.15	0.47
60:BA:67:U:C2	60:BA:68:G:C8	3.02	0.47
60:BA:197:A:H3'	60:BA:198:C:H6	1.79	0.47
60:BA:206:U:H2'	60:BA:207:A:C8	2.49	0.47
60:BA:765:G:H2'	60:BA:766:C:H6	1.80	0.47
60:BA:1176:G:H2'	60:BA:1177:A:O4'	2.15	0.47
60:BA:1614:A:H5'	60:BA:1617:C:N4	2.27	0.47
60:BA:2080:G:H2'	60:BA:2081:C:C6	2.50	0.47
60:BA:2141:G:O6	60:BA:2150:U:O2	2.32	0.47
60:BA:2418:A:H2'	60:BA:2419:U:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:2505:G:C2	60:BA:2610:C:N3	2.83	0.47
60:BA:2599:G:H2'	60:BA:2600:A:C8	2.50	0.47
60:BA:2615:U:H2'	60:BA:2616:C:H6	1.78	0.47
1:CB:169:LYS:O	1:CB:172:ILE:HG12	2.14	0.47
4:CE:11:ILE:HG22	4:CE:12:LEU:HD12	1.96	0.47
6:CG:31:MET:HE1	20:CA:1374:A:H1'	1.96	0.47
7:CH:88:LYS:HB3	20:CA:877:C:H5"	1.96	0.47
10:CK:46:GLY:HA3	10:CK:55:LYS:HG2	1.97	0.47
12:CM:46:LYS:HD3	12:CM:46:LYS:C	2.40	0.47
12:CM:86:CYS:O	12:CM:90:LEU:N	2.41	0.47
15:CP:25:ARG:NH2	20:CA:229:U:O2'	2.32	0.47
18:CS:6:LYS:HG2	18:CS:7:LYS:H	1.80	0.47
20:CA:115:G:H1'	20:CA:116:A:C8	2.50	0.47
20:CA:300:A:H8	20:CA:300:A:O5'	1.97	0.47
20:CA:399:G:H2'	20:CA:400:C:C6	2.49	0.47
22:CW:43:G:H2'	22:CW:44:G:H8	1.80	0.47
23:CY:93:GLU:O	23:CY:97:SER:OG	2.27	0.47
23:CY:203:GLU:HB3	23:CY:204:GLU:H	1.42	0.47
23:CY:446:THR:OG1	23:CY:447:GLY:N	2.47	0.47
25:DC:37:LYS:HB2	25:DC:38:PHE:HD1	1.79	0.47
25:DC:162:ILE:HD13	25:DC:193:PHE:CD1	2.49	0.47
26:DD:88:ARG:HB3	60:DA:1817:G:H5"	1.96	0.47
26:DD:226:MET:HE3	60:DA:782:A:H2	1.79	0.47
26:DD:242:ARG:NH1	60:DA:1971:A:OP2	2.47	0.47
27:DE:15:PHE:CD1	38:DT:81:PRO:HD3	2.49	0.47
28:DF:57:VAL:HG12	28:DF:59:TYR:CD2	2.50	0.47
28:DF:114:VAL:HG13	28:DF:192:LEU:HD21	1.97	0.47
29:DG:15:VAL:HA	29:DG:175:LEU:HD13	1.97	0.47
31:DJ:54:UNK:CA	31:DJ:79:UNK:HA	2.44	0.47
32:DK:56:GLU:O	32:DK:67:PHE:HA	2.15	0.47
34:DP:23:PRO:HD2	34:DP:33:ARG:HG3	1.96	0.47
34:DP:135:LEU:HD13	34:DP:138:LEU:HD23	1.95	0.47
36:DR:60:LEU:HD11	60:DA:1454:U:H1'	1.96	0.47
41:DW:76:VAL:HA	41:DW:103:ILE:HA	1.97	0.47
42:DX:12:VAL:HG23	42:DX:13:LEU:H	1.79	0.47
45:D0:27:GLU:OE1	60:DA:855:G:O2'	2.22	0.47
46:D1:22:GLY:O	46:D1:37:ILE:N	2.48	0.47
48:DN:25:ARG:CZ	60:DA:1140:C:H4'	2.45	0.47
48:DN:63:THR:O	48:DN:64:GLY:O	2.32	0.47
55:D9:10:ILE:HD12	55:D9:32:HIS:HB3	1.95	0.47
56:De:71:LYS:HE3	56:De:86:LEU:HD22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:De:90:LYS:HD2	56:De:90:LYS:H	1.78	0.47
60:DA:613:U:H4'	60:DA:616:A:C5	2.49	0.47
60:DA:671:C:H2'	60:DA:672:C:H6	1.80	0.47
60:DA:840:C:OP2	60:DA:932:G:N2	2.48	0.47
60:DA:949:C:H2'	60:DA:950:G:C8	2.50	0.47
60:DA:1081:U:H2'	60:DA:1082:U:C6	2.50	0.47
60:DA:1228:G:H2'	60:DA:1229:G:O4'	2.14	0.47
60:DA:1626:G:H5"	60:DA:1627:G:H5'	1.97	0.47
60:DA:2438:U:O2'	60:DA:2439:A:O5'	2.30	0.47
60:DA:2663:G:H3'	60:DA:2664:G:C8	2.49	0.47
2:AC:176:HIS:CG	20:AA:1108:G:H5'	2.50	0.47
4:AE:24:ARG:HH12	20:AA:15:G:H4'	1.79	0.47
11:AL:102:ARG:NH2	11:AL:109:GLY:O	2.48	0.47
13:AN:54:PRO:C	13:AN:56:VAL:H	2.23	0.47
14:AO:8:LYS:O	14:AO:12:ILE:HG13	2.14	0.47
15:AP:16:HIS:CE1	15:AP:38:TYR:HB2	2.50	0.47
20:AA:674:G:H2'	20:AA:675:A:H8	1.79	0.47
20:AA:678:U:H2'	20:AA:679:C:H6	1.79	0.47
20:AA:1352:C:H42	20:AA:1370:G:H1	1.63	0.47
29:BG:38:VAL:HG22	29:BG:93:THR:HA	1.97	0.47
34:BP:42:SER:O	34:BP:42:SER:OG	2.25	0.47
35:BQ:85:LYS:HE2	45:B0:7:LEU:HD13	1.95	0.47
37:BS:25:ARG:HH12	59:BB:9:G:H5'	1.80	0.47
40:BV:4:ILE:HD13	40:BV:40:LEU:HD23	1.96	0.47
40:BV:40:LEU:HD13	40:BV:47:VAL:HG22	1.97	0.47
54:B8:52:LYS:C	54:B8:54:GLU:H	2.22	0.47
60:BA:109:G:H2'	60:BA:110:G:O4'	2.14	0.47
60:BA:579:G:H4'	60:BA:2018:G:H5"	1.96	0.47
60:BA:640:C:H2'	60:BA:641:C:C6	2.50	0.47
60:BA:648:G:H2'	60:BA:649:G:C8	2.47	0.47
60:BA:711:G:H2'	60:BA:712:G:O4'	2.14	0.47
60:BA:1669:A:H61	60:BA:1993:U:H3	1.63	0.47
60:BA:2040:C:H4'	60:BA:2041:U:OP1	2.14	0.47
60:BA:2219:G:H2'	60:BA:2224:G:O4'	2.14	0.47
1:CB:92:TYR:CE2	1:CB:151:GLY:HA3	2.49	0.47
8:CI:69:GLY:HA3	20:CA:1371:G:O3'	2.15	0.47
16:CQ:45:HIS:HB3	16:CQ:72:ARG:HA	1.97	0.47
20:CA:252:U:H2'	20:CA:253:U:C5	2.49	0.47
20:CA:256:U:O4	20:CA:270:A:N1	2.48	0.47
20:CA:593:G:O6	20:CA:646:U:O4	2.33	0.47
20:CA:832:C:O2'	20:CA:1538:C:C5'	2.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:859:A:H2'	20:CA:860:A:C8	2.49	0.47
20:CA:1291:G:H2'	20:CA:1292:U:C5	2.50	0.47
23:CY:32:ILE:C	23:CY:34:TYR:N	2.68	0.47
23:CY:106:VAL:HB	23:CY:108:PHE:CZ	2.50	0.47
25:DC:212:SER:O	25:DC:213:VAL:O	2.33	0.47
25:DC:213:VAL:HG21	25:DC:225:ILE:HG12	1.97	0.47
27:DE:37:ARG:NH1	60:DA:2784:C:O2'	2.48	0.47
27:DE:56:PRO:HD2	27:DE:58:ARG:HB3	1.95	0.47
28:DF:90:PHE:O	28:DF:92:PRO:HD2	2.14	0.47
29:DG:95:ARG:HG3	59:DB:43:C:O2'	2.15	0.47
33:DO:112:MET:HA	33:DO:115:VAL:HB	1.97	0.47
34:DP:39:LYS:HA	34:DP:39:LYS:HD2	1.50	0.47
35:DQ:7:MET:H	35:DQ:7:MET:HG3	1.41	0.47
36:DR:115:GLU:CD	36:DR:117:VAL:H	2.23	0.47
44:DZ:163:LEU:H	44:DZ:163:LEU:HD23	1.80	0.47
45:D0:36:ILE:HA	45:D0:60:PHE:HA	1.97	0.47
45:D0:65:GLY:HA2	45:D0:83:PRO:CA	2.45	0.47
48:DN:78:TYR:HB3	60:DA:2642:G:H5"	1.97	0.47
52:D6:25:LYS:HB2	52:D6:25:LYS:HE3	1.57	0.47
54:D8:5:LYS:HG2	60:DA:242:G:N7	2.30	0.47
54:D8:28:GLY:HA2	60:DA:2392:A:H5"	1.95	0.47
56:De:112:LYS:HE3	56:De:120:ALA:H	1.80	0.47
59:DB:20:C:H2'	59:DB:21:G:H8	1.79	0.47
60:DA:150:C:H2'	60:DA:151:C:H6	1.77	0.47
60:DA:441:U:H2'	60:DA:442:G:C8	2.50	0.47
60:DA:1918:A:O2'	60:DA:1920:C:N4	2.48	0.47
60:DA:2229:C:H2'	60:DA:2230:G:C8	2.48	0.47
60:DA:2418:A:H2'	60:DA:2419:U:O4'	2.15	0.47
60:DA:2584:U:H5"	60:DA:2585:U:OP2	2.14	0.47
60:DA:2668:G:H2'	60:DA:2669:G:O4'	2.14	0.47
1:AB:144:ARG:HA	1:AB:147:LYS:HB3	1.96	0.47
1:AB:161:ALA:HA	1:AB:183:PRO:O	2.15	0.47
2:AC:20:SER:OG	2:AC:40:ARG:NH2	2.48	0.47
4:AE:52:PRO:O	4:AE:56:GLN:HG2	2.15	0.47
4:AE:107:ARG:HA	4:AE:110:LEU:HD12	1.97	0.47
6:AG:90:GLU:H	6:AG:155:ARG:NH1	2.12	0.47
12:AM:91:ARG:HA	12:AM:94:ARG:HG2	1.95	0.47
15:AP:80:PHE:HB3	20:AA:458(E):A:H5"	1.96	0.47
19:AT:44:ALA:HB2	19:AT:88:VAL:HG13	1.95	0.47
20:AA:68(B):G:H2'	20:AA:68(C):C:O4'	2.15	0.47
20:AA:382:A:H2'	20:AA:383:A:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:809:G:O2'	20:AA:810:C:H5'	2.15	0.47
20:AA:862:C:C2	20:AA:867:G:N2	2.80	0.47
20:AA:1220:G:H2'	20:AA:1221:G:H8	1.78	0.47
23:AY:504:ARG:HD3	23:AY:504:ARG:H	1.80	0.47
23:AY:565:VAL:HG12	23:AY:566:THR:O	2.14	0.47
26:BD:54:ARG:HA	26:BD:216:GLY:O	2.15	0.47
26:BD:96:HIS:NE2	60:BA:1501:C:H5'	2.30	0.47
26:BD:223:GLY:O	26:BD:225:ALA:N	2.48	0.47
28:BF:173:VAL:C	28:BF:174:VAL:O	2.51	0.47
30:BH:57:ASP:O	30:BH:62:LYS:HE2	2.15	0.47
36:BR:42:LYS:O	36:BR:45:ARG:HG3	2.14	0.47
38:BT:76:PHE:HA	38:BT:77:PRO:HD3	1.71	0.47
38:BT:99:LEU:HA	38:BT:101:PHE:HE1	1.80	0.47
60:BA:370:G:H4'	60:BA:371:A:OP2	2.14	0.47
60:BA:376:C:H42	60:BA:398:G:H1	1.63	0.47
60:BA:858:U:O2	60:BA:2268:A:H2'	2.15	0.47
60:BA:1355:G:H2'	60:BA:1356:G:H8	1.79	0.47
60:BA:1611:C:H2'	60:BA:1612:C:C6	2.50	0.47
60:BA:1896:G:H2'	60:BA:1897:G:H8	1.79	0.47
60:BA:2439:A:C8	60:BA:2586:C:H4'	2.50	0.47
60:BA:2469:A:H2'	60:BA:2470:G:H5'	1.97	0.47
60:BA:2895:U:H2'	60:BA:2896:C:O4'	2.15	0.47
1:CB:100:GLY:HA2	1:CB:104:ASN:CG	2.39	0.47
2:CC:83:ARG:O	2:CC:87:LEU:HD23	2.14	0.47
4:CE:46:GLY:HA3	4:CE:54:ALA:HB1	1.96	0.47
5:CF:16:GLN:CD	5:CF:16:GLN:H	2.22	0.47
7:CH:86:ILE:HG13	7:CH:133:LEU:HD22	1.96	0.47
9:CJ:82:ILE:O	9:CJ:86:MET:HG2	2.14	0.47
20:CA:68(O):A:H3'	20:CA:68(P):C:C4'	2.45	0.47
20:CA:186(G):C:H1'	20:CA:186(K):G:N1	2.29	0.47
20:CA:346:G:H5'	20:CA:347:G:OP2	2.15	0.47
20:CA:607:A:H2'	20:CA:608:A:O4'	2.14	0.47
20:CA:712:A:H2'	20:CA:713:G:O4'	2.15	0.47
20:CA:1440(L):G:H2'	20:CA:1440(M):G:C8	2.50	0.47
23:CY:257:PRO:HB2	23:CY:259:PHE:CE1	2.50	0.47
23:CY:466:LEU:HG	23:CY:472:VAL:HB	1.95	0.47
26:DD:37:LEU:HB3	26:DD:62:TYR:HD1	1.80	0.47
27:DE:34:VAL:HG11	27:DE:78:LEU:HD22	1.97	0.47
29:DG:27:ASN:HD21	59:DB:56:G:H5"	1.80	0.47
29:DG:100:TRP:O	29:DG:104:GLU:HB2	2.15	0.47
35:DQ:13:GLN:H	60:DA:910:A:H62	1.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DS:53:SER:HA	37:DS:65:VAL:HG11	1.97	0.47
48:DN:39:ARG:HG2	48:DN:40:PRO:HD2	1.96	0.47
48:DN:95:PRO:C	48:DN:97:ARG:N	2.70	0.47
55:D9:25:VAL:HG21	55:D9:34:GLN:HB2	1.97	0.47
60:DA:141(A):A:N6	60:DA:1595:G:O2'	2.48	0.47
60:DA:608:A:H2'	60:DA:609(A):A:C8	2.50	0.47
60:DA:819:A:N7	60:DA:1188:U:O4	2.48	0.47
60:DA:1638:C:H4'	60:DA:2710:C:O2	2.15	0.47
60:DA:2398:U:O4	60:DA:2418:A:N1	2.48	0.47
60:DA:2688:U:H5	60:DA:2719:G:C4	2.33	0.47
60:DA:2711:A:H3'	60:DA:2712:U:H5'	1.97	0.47
7:AH:108:GLY:HA2	7:AH:138:TRP:HA	1.97	0.47
10:AK:77:MET:HE2	10:AK:77:MET:HB2	1.78	0.47
11:AL:58:VAL:HG12	11:AL:60:LEU:N	2.29	0.47
11:AL:123:LYS:HD2	20:AA:37:U:OP2	2.14	0.47
12:AM:32:GLU:HA	12:AM:35:GLU:HB2	1.97	0.47
13:AN:53:LEU:HA	13:AN:54:PRO:HD3	1.70	0.47
16:AQ:7:THR:OG1	16:AQ:8:GLY:N	2.47	0.47
20:AA:165:C:H2'	20:AA:166:G:C8	2.49	0.47
20:AA:447:G:N1	20:AA:485:G:H1'	2.30	0.47
20:AA:731:G:H8	20:AA:731:G:OP2	1.97	0.47
20:AA:1265:G:H2'	20:AA:1266:G:C8	2.50	0.47
20:AA:1415:G:H2'	20:AA:1416:G:O4'	2.15	0.47
21:AV:11:U:H2'	21:AV:12:A:C8	2.50	0.47
22:AW:25:C:C4	22:AW:26:A:N7	2.82	0.47
25:BC:33:LEU:HD22	25:BC:221:PRO:HG2	1.97	0.47
25:BC:118:PRO:HD3	25:BC:147:GLY:N	2.30	0.47
26:BD:212:SER:HB3	26:BD:217:ARG:HB2	1.97	0.47
29:BG:146:TYR:C	29:BG:148:MET:H	2.22	0.47
36:BR:45:ARG:HB3	36:BR:97:VAL:CG2	2.45	0.47
42:BX:25:LYS:HG2	42:BX:82:GLN:HB2	1.96	0.47
48:BN:134:ARG:HG2	48:BN:134:ARG:O	2.14	0.47
53:B7:6:GLN:O	60:BA:686:G:H8	1.97	0.47
53:B7:34:ARG:CD	53:B7:42:LEU:HD22	2.44	0.47
60:BA:81:G:H2'	60:BA:82:G:O4'	2.15	0.47
60:BA:449:A:H2'	60:BA:450:G:O4'	2.15	0.47
60:BA:689:A:H2'	60:BA:690:G:C8	2.50	0.47
60:BA:946:G:H1	60:BA:971:C:H42	1.62	0.47
60:BA:1575:C:H2'	60:BA:1576:U:O4'	2.15	0.47
60:BA:1579:A:H2'	60:BA:1580:A:O4'	2.14	0.47
60:BA:1654:A:N1	60:BA:2049:G:H5'	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:2095:C:H2'	60:BA:2096:U:O4'	2.15	0.47
60:BA:2377:A:H2'	60:BA:2378:A:C8	2.50	0.47
60:BA:2451:A:N7	60:BA:2452:C:C5	2.83	0.47
60:BA:2527:C:H2'	60:BA:2528:U:C6	2.50	0.47
2:CC:121:ALA:HB2	2:CC:187:ALA:HB1	1.97	0.47
3:CD:100:ARG:O	3:CD:104:VAL:HG23	2.15	0.47
3:CD:135:LEU:HD12	20:CA:403:C:H5'	1.97	0.47
5:CF:21:LEU:O	5:CF:25:ILE:HG12	2.14	0.47
5:CF:89:MET:HE3	5:CF:90:VAL:H	1.80	0.47
6:CG:72:ARG:HA	6:CG:96:GLN:NE2	2.30	0.47
7:CH:87:SER:HB2	7:CH:93:VAL:HB	1.97	0.47
8:CI:116:LYS:HG2	8:CI:122:ALA:HA	1.97	0.47
11:CL:52:LEU:HD12	11:CL:54:LYS:NZ	2.29	0.47
11:CL:123:LYS:HD2	20:CA:37:U:OP2	2.15	0.47
12:CM:19:LEU:HA	12:CM:22:ILE:HD12	1.97	0.47
16:CQ:21:VAL:CG1	16:CQ:59:ILE:HD11	2.44	0.47
16:CQ:45:HIS:CB	16:CQ:72:ARG:HA	2.44	0.47
20:CA:237:C:H2'	20:CA:238:G:C8	2.49	0.47
20:CA:437:U:H3	20:CA:495:A:H62	1.63	0.47
20:CA:947:G:H2'	20:CA:948:C:H6	1.78	0.47
20:CA:1223:C:OP2	20:CA:1224:G:H2'	2.15	0.47
20:CA:1252:A:H61	20:CA:1285:A:H61	1.63	0.47
20:CA:1270:C:H2'	20:CA:1271:G:H8	1.80	0.47
23:CY:197:ARG:HG3	23:CY:198:GLU:H	1.80	0.47
25:DC:63:VAL:HG11	25:DC:164:PHE:HE2	1.80	0.47
26:DD:224:ALA:HB2	26:DD:233:HIS:HB3	1.95	0.47
29:DG:16:ARG:HB2	29:DG:17:PRO:HD3	1.97	0.47
29:DG:68:PRO:HB3	29:DG:92:VAL:HB	1.97	0.47
29:DG:114:ILE:O	29:DG:117:PHE:HB2	2.15	0.47
35:DQ:70:PRO:HA	35:DQ:95:ALA:HB2	1.97	0.47
37:DS:41:ASP:HB3	37:DS:46:VAL:O	2.15	0.47
39:DU:92:ARG:HD2	40:DV:11:GLN:HB2	1.96	0.47
43:DY:51:VAL:HG12	43:DY:53:PRO:HD2	1.96	0.47
45:D0:10:THR:HG21	60:DA:2277:G:OP2	2.15	0.47
46:D1:7:ILE:HD13	46:D1:62:VAL:HA	1.97	0.47
46:D1:31:GLY:C	46:D1:34:THR:H	2.22	0.47
48:DN:78:TYR:CB	60:DA:2642:G:C5'	2.91	0.47
59:DB:8:U:H2'	59:DB:9:G:C8	2.50	0.47
60:DA:270(G):U:H2'	60:DA:270(H):C:C6	2.50	0.47
60:DA:591:C:H42	60:DA:666:G:H1	1.63	0.47
60:DA:624:C:O2'	60:DA:657:U:H4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:1178:C:H2'	60:DA:1179:C:H6	1.80	0.47
60:DA:1639:U:H2'	60:DA:1640:C:H5"	1.96	0.47
60:DA:2050:C:H2'	60:DA:2051:A:O4'	2.14	0.47
60:DA:2114:A:C2	60:DA:2168:G:H1'	2.47	0.47
60:DA:2162:G:H2'	60:DA:2163:C:O4'	2.14	0.47
60:DA:2460:U:H2'	60:DA:2461:C:O4'	2.14	0.47
3:AD:57:ARG:NH1	3:AD:202:LEU:HA	2.30	0.46
5:AF:7:ASN:OD1	17:AR:76:LEU:HD11	2.15	0.46
6:AG:75:VAL:HA	6:AG:88:PRO:HA	1.97	0.46
12:AM:21:TYR:OH	20:AA:1301:U:H4'	2.15	0.46
16:AQ:84:LEU:HA	16:AQ:87:LYS:NZ	2.29	0.46
20:AA:995:C:H2'	20:AA:996:A:H8	1.79	0.46
23:AY:29:THR:HG21	23:AY:81:ILE:HG21	1.96	0.46
23:AY:457:LEU:O	23:AY:460:GLU:N	2.48	0.46
23:AY:623:ASP:CG	23:AY:627:ARG:HE	2.23	0.46
30:BH:41:MET:SD	30:BH:43:VAL:HG13	2.55	0.46
31:BJ:114:UNK:C	31:BJ:124:UNK:HA	2.45	0.46
33:BO:8:LEU:HD23	33:BO:19:ILE:HD11	1.97	0.46
34:BP:69:GLY:HA3	60:BA:245:G:OP1	2.15	0.46
38:BT:128:GLU:O	38:BT:129:ARG:NE	2.40	0.46
39:BU:15:LYS:NZ	60:BA:513:A:O2'	2.48	0.46
46:B1:5:CYS:SG	46:B1:8:SER:N	2.70	0.46
52:B6:40:CYS:HA	52:B6:41:PRO:HD2	1.83	0.46
59:BB:8:U:H2'	59:BB:9:G:H8	1.80	0.46
60:BA:491:G:H2'	60:BA:492:A:O4'	2.15	0.46
60:BA:638:G:H2'	60:BA:639:U:O4'	2.15	0.46
60:BA:828:U:H5'	60:BA:831:G:C2	2.50	0.46
60:BA:830:G:H4'	60:BA:831:G:OP2	2.15	0.46
60:BA:1095:A:H8	60:BA:1095:A:P	2.38	0.46
60:BA:1394:U:H5"	60:BA:1604:C:OP1	2.14	0.46
60:BA:1682:G:OP2	60:BA:1699:G:N2	2.47	0.46
60:BA:1709:U:H2'	60:BA:1710:C:C6	2.50	0.46
60:BA:2248:C:N3	60:BA:2256:G:C6	2.82	0.46
60:BA:2793:G:O6	60:BA:2803:C:N3	2.48	0.46
60:BA:2873:A:O2'	60:BA:2874:C:H5'	2.15	0.46
1:CB:139:LYS:O	1:CB:143:GLU:HG2	2.14	0.46
2:CC:72:LYS:HE3	2:CC:74:GLY:H	1.81	0.46
3:CD:14:ARG:NH2	3:CD:40:PRO:HG2	2.30	0.46
3:CD:25:ARG:C	3:CD:27:TYR:H	2.24	0.46
3:CD:62:GLN:O	3:CD:66:ARG:HG2	2.15	0.46
3:CD:102:ASP:HA	3:CD:121:VAL:HG21	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:75:LEU:O	5:CF:79:LEU:HG	2.15	0.46
8:CI:73:GLN:O	8:CI:77:ILE:HG13	2.15	0.46
10:CK:107:SER:HA	17:CR:86:VAL:HG13	1.97	0.46
11:CL:104:VAL:HG23	11:CL:105:TYR:H	1.80	0.46
15:CP:5:ARG:HH12	15:CP:24:ALA:HA	1.79	0.46
16:CQ:68:ARG:C	16:CQ:70:ARG:N	2.73	0.46
17:CR:33:ASP:HB3	17:CR:36:ASN:ND2	2.29	0.46
17:CR:60:ALA:HB2	20:CA:834:C:H5"	1.96	0.46
20:CA:294:U:H2'	20:CA:295:C:C6	2.50	0.46
20:CA:396:G:H2'	20:CA:398:C:H5	1.79	0.46
20:CA:949:A:H2'	20:CA:950:U:C6	2.51	0.46
20:CA:1068:G:H1	20:CA:1107:C:H42	1.63	0.46
23:CY:14:ASN:HD22	23:CY:80:ASN:HB2	1.79	0.46
23:CY:41:LYS:HG2	23:CY:43:GLY:H	1.78	0.46
23:CY:290:LYS:HB3	23:CY:298:VAL:HG22	1.97	0.46
25:DC:164:PHE:CZ	25:DC:196:ALA:HB1	2.49	0.46
26:DD:250:TRP:CZ2	60:DA:1805:U:H4'	2.50	0.46
27:DE:26:ILE:HG13	27:DE:182:LEU:HB3	1.97	0.46
27:DE:120:TRP:O	27:DE:121:ASN:HB2	2.15	0.46
27:DE:177:PRO:C	27:DE:179:GLU:H	2.23	0.46
28:DF:45:ARG:HG2	60:DA:443:A:N7	2.30	0.46
30:DH:38:SER:OG	30:DH:40:GLU:HG2	2.15	0.46
31:DJ:54:UNK:HA	31:DJ:78:UNK:O	2.14	0.46
35:DQ:37:LEU:HG	35:DQ:129:THR:HA	1.97	0.46
35:DQ:136:ALA:C	35:DQ:138:ASP:H	2.21	0.46
37:DS:23:ARG:HA	37:DS:23:ARG:HD3	1.63	0.46
40:DV:64:HIS:CG	40:DV:92:THR:HG22	2.50	0.46
48:DN:30:ILE:CG2	48:DN:34:LEU:HD21	2.44	0.46
48:DN:34:LEU:HD12	48:DN:116:LEU:O	2.15	0.46
52:D6:12:GLU:HG2	60:DA:2419:U:H4'	1.97	0.46
59:DB:14:U:H2'	59:DB:15:A:C2	2.50	0.46
60:DA:1285:G:H21	60:DA:1328:G:H5"	1.78	0.46
60:DA:2342:C:H2'	60:DA:2343:C:O4'	2.15	0.46
60:DA:2811:G:H1	60:DA:2889:C:N4	2.13	0.46
2:AC:20:SER:O	13:AN:54:PRO:HB3	2.15	0.46
2:AC:52:LEU:HD13	2:AC:68:VAL:HG13	1.97	0.46
4:AE:135:THR:O	4:AE:139:LEU:HG	2.15	0.46
6:AG:47:CYS:O	6:AG:50:ILE:HB	2.14	0.46
12:AM:87:TYR:CD2	20:AA:1321:C:H4'	2.50	0.46
17:AR:74:ARG:HH21	17:AR:81:PHE:HA	1.80	0.46
19:AT:41:VAL:O	19:AT:45:GLN:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1429:C:H4'	60:BA:1704:G:H5'	1.98	0.46
21:AV:8:A:H2'	21:AV:9:G:H8	1.79	0.46
23:AY:13:ARG:N	23:AY:78:ARG:O	2.47	0.46
23:AY:152:THR:HA	23:AY:155:GLU:HB2	1.97	0.46
25:BC:87:ALA:HB1	25:BC:92:ALA:HB3	1.97	0.46
27:BE:134:ILE:HG22	27:BE:137:HIS:HB2	1.95	0.46
33:BO:23:ARG:HG3	33:BO:24:VAL:H	1.80	0.46
38:BT:133:GLU:O	38:BT:137:LYS:N	2.36	0.46
43:BY:28:LYS:HE3	43:BY:30:VAL:HG23	1.96	0.46
44:BZ:23:LYS:HD3	44:BZ:38:TYR:CE1	2.50	0.46
49:B2:6:VAL:HG22	49:B2:59:ARG:HH12	1.80	0.46
53:B7:7:PRO:HA	60:BA:686:G:N7	2.31	0.46
60:BA:697:C:H2'	60:BA:698:C:C6	2.50	0.46
60:BA:845:G:H8	60:BA:847:U:O4	1.97	0.46
60:BA:2216:G:H2'	60:BA:2217:G:O4'	2.15	0.46
60:BA:2513:G:H2'	60:BA:2514:U:O4'	2.15	0.46
1:CB:149:LEU:HD22	1:CB:152:PHE:HD1	1.79	0.46
3:CD:13:ARG:NH1	3:CD:40:PRO:HB3	2.29	0.46
3:CD:122:ARG:HH21	20:CA:403:C:H4'	1.80	0.46
8:CI:69:GLY:O	8:CI:73:GLN:HG3	2.15	0.46
20:CA:1292:U:O5'	20:CA:1292:U:H6	1.98	0.46
20:CA:1518:A:H2'	20:CA:1519:A:C8	2.50	0.46
23:CY:145:ASP:OD2	23:CY:148:LEU:N	2.46	0.46
26:DD:30:GLU:HB2	26:DD:104:TYR:OH	2.15	0.46
26:DD:211:ARG:O	26:DD:215:LEU:HG	2.15	0.46
27:DE:101:ARG:HA	27:DE:170:LEU:O	2.15	0.46
27:DE:172:VAL:HA	27:DE:184:VAL:HA	1.96	0.46
36:DR:36:THR:OG1	36:DR:37:THR:N	2.47	0.46
38:DT:98:LYS:HE2	60:DA:2719:G:H5'	1.97	0.46
48:DN:56:ASN:HB3	48:DN:126:PRO:N	2.30	0.46
53:D7:12:ARG:NH2	60:DA:464:U:O3'	2.48	0.46
60:DA:380:U:H3	60:DA:394:A:H61	1.63	0.46
60:DA:1162:G:H2'	60:DA:1163:G:C8	2.47	0.46
60:DA:2018:G:H2'	60:DA:2019:A:O4'	2.15	0.46
60:DA:2098:U:H2'	60:DA:2099:U:O4'	2.15	0.46
60:DA:2230:G:H2'	60:DA:2231:C:C6	2.49	0.46
60:DA:2262:U:H4'	60:DA:2328:A:H2	1.79	0.46
60:DA:2447:G:H1	60:DA:2452:C:H41	1.63	0.46
5:AF:96:PRO:HA	17:AR:32:ARG:HB2	1.96	0.46
6:AG:36:LYS:HB3	20:AA:1373:G:C5'	2.45	0.46
6:AG:88:PRO:HD2	6:AG:151:TYR:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:137:LYS:O	6:AG:140:ASP:HB3	2.16	0.46
23:AY:431:LEU:O	23:AY:433:GLU:N	2.48	0.46
23:AY:530:VAL:HG13	23:AY:531:GLY:H	1.80	0.46
25:BC:14:LYS:HE2	25:BC:14:LYS:HB3	1.82	0.46
26:BD:157:ARG:NH2	60:BA:1817:G:H3'	2.30	0.46
28:BF:157:VAL:CG1	28:BF:194:MET:HG2	2.46	0.46
30:BH:74:ASN:O	30:BH:77:LYS:HG2	2.14	0.46
34:BP:62:LEU:HD21	54:B8:25:MET:HG3	1.97	0.46
35:BQ:60:ARG:HA	44:BZ:179:ASP:HB3	1.97	0.46
35:BQ:125:LEU:O	35:BQ:127:ILE:N	2.33	0.46
38:BT:65:LYS:HG3	38:BT:66:VAL:N	2.31	0.46
48:BN:9:VAL:HG11	48:BN:39:ARG:NH1	2.29	0.46
48:BN:10:GLU:OE2	48:BN:11:PRO:HD2	2.15	0.46
49:B2:20:GLU:O	49:B2:21:LEU:C	2.59	0.46
60:BA:185:U:H4'	60:BA:218:A:H4'	1.98	0.46
60:BA:273(C):C:H2'	60:BA:273(D):C:H6	1.80	0.46
60:BA:572:A:C4	60:BA:573:G:C8	3.03	0.46
60:BA:799:G:H3'	60:BA:800:A:H2'	1.98	0.46
60:BA:1050:A:H2'	60:BA:1051:G:C8	2.50	0.46
60:BA:1136:G:C5	60:BA:1137:G:N7	2.83	0.46
60:BA:2058:A:OP2	60:BA:2059:A:N6	2.48	0.46
60:BA:2841:C:H2'	60:BA:2842:G:H8	1.80	0.46
4:CE:50:GLU:CG	4:CE:52:PRO:HD2	2.43	0.46
7:CH:91:ARG:HH22	20:CA:564:C:H4'	1.80	0.46
7:CH:100:ILE:HA	7:CH:101:PRO:HD3	1.82	0.46
8:CI:63:ILE:HG22	8:CI:64:THR:H	1.80	0.46
17:CR:44:LEU:HG	17:CR:50:ILE:HA	1.96	0.46
20:CA:142:G:O2'	20:CA:195:A:N6	2.46	0.46
20:CA:866:C:H4'	20:CA:919:A:H5'	1.97	0.46
23:CY:530:VAL:HG13	23:CY:531:GLY:H	1.81	0.46
26:DD:61:LEU:HD22	60:DA:1569:A:H5'	1.98	0.46
26:DD:118:VAL:HG22	26:DD:119:ALA:N	2.31	0.46
26:DD:132:PRO:HA	26:DD:189:CYS:O	2.15	0.46
26:DD:146:GLU:HB2	26:DD:151:LYS:O	2.15	0.46
26:DD:172:TYR:CD1	26:DD:184:LYS:HB3	2.50	0.46
27:DE:15:PHE:CD1	38:DT:80:SER:HB2	2.50	0.46
28:DF:3:GLU:HA	28:DF:24:LEU:H	1.81	0.46
29:DG:43:LEU:CD1	60:DA:2305:A:H61	2.28	0.46
33:DO:19:ILE:HG22	33:DO:43:VAL:HA	1.97	0.46
33:DO:27:GLY:O	33:DO:29:ASN:N	2.42	0.46
36:DR:32:GLY:HA3	36:DR:116:LEU:HG	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DT:49:VAL:HG23	38:DT:63:VAL:HG22	1.98	0.46
43:DY:84:ARG:HG3	43:DY:95:LYS:O	2.16	0.46
54:D8:26:LYS:HB2	54:D8:46:ARG:O	2.16	0.46
56:De:107:GLU:HB3	56:De:111:ILE:HD13	1.96	0.46
60:DA:248:G:N3	60:DA:2431:U:H4'	2.29	0.46
60:DA:705:A:C2	60:DA:727:A:H1'	2.51	0.46
60:DA:889:C:O2'	60:DA:890:A:OP2	2.30	0.46
5:AF:29:ALA:HB1	5:AF:75:LEU:HD11	1.97	0.46
11:AL:87:GLY:HA2	11:AL:98:TYR:H	1.80	0.46
12:AM:98:VAL:O	12:AM:99:ARG:HG2	2.15	0.46
14:AO:7:GLU:O	14:AO:11:VAL:HG23	2.16	0.46
16:AQ:90:ILE:HG22	16:AQ:94:ASN:HD21	1.81	0.46
20:AA:68(I):G:N1	20:AA:68(R):C:O2	2.48	0.46
20:AA:129(A):G:O6	20:AA:186(G):C:O2'	2.31	0.46
20:AA:442:C:H42	20:AA:492:G:H1	1.64	0.46
20:AA:953:G:H1	20:AA:1228:C:H42	1.64	0.46
26:BD:54:ARG:NH1	60:BA:1815:A:OP1	2.48	0.46
27:BE:80:GLU:OE2	60:BA:2635:C:O2'	2.30	0.46
29:BG:100:TRP:HA	29:BG:100:TRP:CE3	2.51	0.46
34:BP:65:ARG:HD3	54:B8:12:LYS:O	2.16	0.46
35:BQ:4:PRO:HD3	35:BQ:69:PHE:CE2	2.51	0.46
37:BS:70:GLY:HA2	37:BS:101:LEU:HD23	1.96	0.46
39:BU:104:GLN:H	39:BU:104:GLN:CD	2.23	0.46
48:BN:78:TYR:CE2	60:BA:2642:G:C5'	2.86	0.46
48:BN:95:PRO:C	48:BN:97:ARG:H	2.24	0.46
48:BN:137:LYS:HZ3	48:BN:137:LYS:CA	2.29	0.46
53:B7:49:ARG:NH1	60:BA:1311:G:O6	2.48	0.46
60:BA:270(A):A:H1'	60:BA:370:G:N2	2.29	0.46
60:BA:614:U:H4'	60:BA:615:G:H5"	1.96	0.46
60:BA:684:G:H21	60:BA:788:A:P	2.38	0.46
60:BA:861:A:H2'	60:BA:862:G:O4'	2.16	0.46
60:BA:945:A:O2'	60:BA:946:G:H4'	2.15	0.46
60:BA:1120:G:H2'	60:BA:1121:C:H6	1.74	0.46
60:BA:1121:C:H2'	60:BA:1122:G:O4'	2.15	0.46
60:BA:1201:C:N3	60:BA:1244:G:N2	2.50	0.46
60:BA:1891:G:H2'	60:BA:1892:C:C6	2.50	0.46
60:BA:2531:A:H3'	60:BA:2532:G:C8	2.50	0.46
60:BA:2698:U:H2'	60:BA:2699:C:C5	2.51	0.46
1:CB:200:ILE:HG22	1:CB:202:PRO:HD3	1.97	0.46
3:CD:121:VAL:HA	3:CD:126:ILE:HG13	1.96	0.46
3:CD:165:MET:HE3	3:CD:165:MET:HB3	1.73	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:87:VAL:HG22	6:CG:151:TYR:CG	2.50	0.46
18:CS:73:GLU:HA	20:CA:1320:C:H1'	1.98	0.46
20:CA:127:G:N2	20:CA:234:C:N3	2.51	0.46
20:CA:447:G:N1	20:CA:485:G:H1'	2.31	0.46
20:CA:807:A:H2'	20:CA:808:C:H5'	1.97	0.46
20:CA:1298:C:H5'	20:CA:1299:A:C2	2.50	0.46
25:DC:45:HIS:O	25:DC:213:VAL:C	2.58	0.46
26:DD:165:ILE:HG22	26:DD:166:GLN:N	2.24	0.46
26:DD:230:ASP:O	26:DD:231:HIS:HB2	2.14	0.46
27:DE:34:VAL:HG23	27:DE:67:PHE:CG	2.51	0.46
27:DE:37:ARG:HH12	60:DA:2784:C:H1'	1.79	0.46
27:DE:80:GLU:HG3	60:DA:2636:U:P	2.55	0.46
27:DE:144:ARG:HB3	27:DE:145:LYS:H	1.50	0.46
28:DF:24:LEU:HB3	28:DF:25:PRO:CD	2.40	0.46
29:DG:19:LEU:HA	29:DG:23:PHE:HD1	1.80	0.46
30:DH:26:VAL:O	30:DH:32:GLU:HA	2.16	0.46
31:DJ:123:UNK:C	31:DJ:125:UNK:H	2.28	0.46
34:DP:101:VAL:HG23	34:DP:102:ARG:HG3	1.97	0.46
36:DR:94:TYR:O	36:DR:117:VAL:HB	2.14	0.46
40:DV:59:ALA:HB1	40:DV:96:ILE:HA	1.96	0.46
45:D0:64:ASP:OD1	45:D0:64:ASP:N	2.49	0.46
51:D5:58:LEU:H	51:D5:58:LEU:HG	1.52	0.46
60:DA:270(F):G:H2'	60:DA:270(G):U:C6	2.50	0.46
60:DA:1468:C:H2'	60:DA:1469:A:C8	2.51	0.46
60:DA:1800:C:N3	60:DA:1818:U:N3	2.64	0.46
60:DA:2100:G:H1	60:DA:2189:U:H3	1.63	0.46
60:DA:2368:C:H2'	60:DA:2369:A:C8	2.50	0.46
3:AD:13:ARG:HG2	3:AD:40:PRO:HD3	1.96	0.46
3:AD:106:TYR:HA	3:AD:111:ALA:HB3	1.98	0.46
3:AD:133:VAL:HG13	20:AA:619:U:C2	2.51	0.46
8:AI:120:ARG:HH12	20:AA:1346:A:P	2.38	0.46
11:AL:83:VAL:HA	11:AL:100:ILE:HG23	1.98	0.46
16:AQ:62:SER:HA	20:AA:186(I):U:O4	2.15	0.46
16:AQ:64:PRO:HB2	20:AA:264:U:O2	2.16	0.46
20:AA:197:A:N6	20:AA:221:C:H5'	2.30	0.46
20:AA:1409:C:H2'	20:AA:1410:G:H8	1.80	0.46
20:AA:1413:A:H2'	20:AA:1414:U:H5'	1.97	0.46
20:AA:1424:C:H2'	20:AA:1425:U:C6	2.51	0.46
23:AY:660:ARG:HG2	23:AY:665:GLY:HA2	1.98	0.46
25:BC:34:ALA:HB2	25:BC:217:THR:HG21	1.98	0.46
25:BC:169:THR:C	25:BC:171:ALA:H	2.22	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:134:ILE:H	27:BE:134:ILE:CD1	2.20	0.46
28:BF:107:LYS:HA	28:BF:107:LYS:HD3	1.71	0.46
28:BF:154:VAL:HG13	28:BF:191:ARG:CB	2.46	0.46
33:BO:12:ASP:N	33:BO:12:ASP:OD2	2.49	0.46
33:BO:101:PRO:HA	33:BO:120:GLU:O	2.15	0.46
34:BP:21:ARG:C	34:BP:23:PRO:HD3	2.41	0.46
36:BR:2:ARG:NH2	60:BA:2723:C:H5"	2.30	0.46
41:BW:94:ASP:N	41:BW:94:ASP:OD2	2.47	0.46
45:B0:83:PRO:HB2	45:B0:84:LEU:H	1.59	0.46
47:B4:3:GLU:HB3	47:B4:4:GLY:H	1.60	0.46
51:B5:23:HIS:HB3	51:B5:24:ALA:H	1.47	0.46
52:B6:5:VAL:HG12	60:BA:2284:C:OP1	2.15	0.46
60:BA:215:G:H4'	60:BA:216:A:H4'	1.96	0.46
60:BA:248:G:C4	60:BA:2431:U:H4'	2.50	0.46
60:BA:460:A:H3'	60:BA:461:C:H6	1.79	0.46
60:BA:847:U:O2'	60:BA:848:G:H8	1.79	0.46
60:BA:962:G:H2'	60:BA:963:U:O4'	2.16	0.46
60:BA:1444:G:H2'	60:BA:1445:C:H5	1.79	0.46
60:BA:1487:G:N2	60:BA:1502:C:N3	2.57	0.46
60:BA:2030:A:H4'	60:BA:2031:A:C8	2.51	0.46
60:BA:2054:A:H62	60:BA:2577:A:H61	1.62	0.46
60:BA:2205:C:C2	60:BA:2219:G:N2	2.77	0.46
60:BA:2329:G:H2'	60:BA:2330:G:O4'	2.16	0.46
60:BA:2825:U:H2'	60:BA:2826:A:O4'	2.15	0.46
1:CB:54:THR:O	1:CB:58:ILE:HG12	2.15	0.46
2:CC:5:ILE:HD13	2:CC:6:HIS:H	1.79	0.46
5:CF:100:ASN:HA	17:CR:23:LYS:HE3	1.97	0.46
9:CJ:46:ARG:HD2	13:CN:61:TRP:CH2	2.50	0.46
15:CP:48:TRP:CE3	15:CP:49:LEU:HB2	2.50	0.46
20:CA:113:G:H2'	20:CA:114:U:C6	2.51	0.46
20:CA:1355:G:H1	20:CA:1367:C:H42	1.64	0.46
23:CY:162:VAL:HB	23:CY:255:ILE:CG1	2.45	0.46
23:CY:314:PHE:CE1	23:CY:327:PHE:HB3	2.50	0.46
25:DC:139:PRO:CA	25:DC:145:THR:HB	2.40	0.46
29:DG:168:GLU:O	29:DG:172:LEU:HG	2.16	0.46
30:DH:96:ALA:H	30:DH:128:PRO:HA	1.80	0.46
31:DJ:83:UNK:C	31:DJ:85:UNK:N	2.78	0.46
33:DO:66:LYS:HD3	33:DO:78:ARG:HD2	1.97	0.46
35:DQ:128:LYS:HB3	60:DA:1030:G:OP1	2.16	0.46
36:DR:5:LYS:CD	60:DA:2820:A:H4'	2.46	0.46
40:DV:87:HIS:ND1	60:DA:992:C:O2'	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DW:74:ALA:HA	41:DW:104:THR:O	2.16	0.46
50:D3:11:SER:OG	60:DA:989:G:OP2	2.21	0.46
53:D7:34:ARG:NE	53:D7:42:LEU:HD13	2.29	0.46
53:D7:41:ARG:HH21	53:D7:44:PRO:HB2	1.81	0.46
59:DB:44:G:H21	59:DB:47:C:N4	2.11	0.46
60:DA:371:A:N6	60:DA:401:A:H3'	2.22	0.46
60:DA:443:A:H1'	60:DA:1201:C:H1'	1.98	0.46
60:DA:1328:G:O2'	60:DA:1329:U:H5"	2.16	0.46
60:DA:1675:C:H3'	60:DA:1676:A:C8	2.39	0.46
60:DA:2397:G:O6	60:DA:2419:U:O2	2.34	0.46
60:DA:2628:C:O2'	60:DA:2781:A:H3'	2.16	0.46
3:AD:112:VAL:O	3:AD:113:SER:OG	2.32	0.46
11:AL:36:VAL:H	11:AL:58:VAL:HA	1.79	0.46
15:AP:69:THR:O	15:AP:72:ARG:HB3	2.16	0.46
16:AQ:25:ARG:HH11	20:AA:237:C:H5"	1.80	0.46
20:AA:59:A:H2'	20:AA:59:A:N3	2.29	0.46
20:AA:159:G:H1'	20:AA:162:A:H61	1.78	0.46
20:AA:159:G:N2	20:AA:162:A:OP2	2.48	0.46
20:AA:856:C:H2'	20:AA:857:C:C6	2.50	0.46
20:AA:901:A:O5'	20:AA:901:A:H8	1.98	0.46
20:AA:1440(K):G:H2'	20:AA:1440(L):G:O4'	2.15	0.46
20:AA:1496:C:H2'	20:AA:1497:G:O4'	2.16	0.46
23:AY:649:LEU:HA	23:AY:652:MET:HB3	1.97	0.46
25:BC:120:VAL:O	25:BC:121:MET:C	2.56	0.46
25:BC:142:LYS:C	25:BC:144:GLY:H	2.23	0.46
27:BE:67:PHE:CG	27:BE:68:ALA:N	2.83	0.46
28:BF:80:ALA:HB1	28:BF:81:PRO:HD2	1.98	0.46
31:BJ:24:UNK:HA	31:BJ:84:UNK:O	2.16	0.46
34:BP:59:LEU:HA	34:BP:61:ARG:NE	2.31	0.46
35:BQ:128:LYS:HD2	60:BA:1030:G:OP2	2.15	0.46
38:BT:32:TYR:CD2	38:BT:82:LEU:HA	2.50	0.46
40:BV:19:LYS:HB2	40:BV:96:ILE:HG13	1.96	0.46
48:BN:19:GLU:C	48:BN:21:LYS:H	2.24	0.46
53:B7:19:ARG:HD3	53:B7:23:ARG:NH2	2.30	0.46
53:B7:31:LEU:HA	53:B7:34:ARG:HG2	1.97	0.46
54:B8:61:LEU:HD23	60:BA:593:G:H4'	1.97	0.46
60:BA:329:G:H8	60:BA:329:G:OP2	1.99	0.46
60:BA:577:G:H2'	60:BA:578:A:O4'	2.15	0.46
60:BA:797:C:H2'	60:BA:798:G:C8	2.51	0.46
60:BA:840:C:H2'	60:BA:841:A:C8	2.51	0.46
60:BA:1272:A:H2'	60:BA:1646:C:N3	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1326:U:O2	60:BA:1327:C:H1'	2.15	0.46
60:BA:1330:C:H2'	60:BA:1331:A:C8	2.51	0.46
60:BA:1473:G:H2'	60:BA:1474:C:C6	2.50	0.46
60:BA:1837:C:H1'	60:BA:1927:A:C2	2.51	0.46
60:BA:1913:A:H4'	60:BA:1914:C:O5'	2.15	0.46
60:BA:2483:C:H2'	60:BA:2484:G:H5'	1.97	0.46
60:BA:2807:G:N1	60:BA:2893:G:C6	2.83	0.46
1:CB:162:ILE:O	1:CB:185:ILE:O	2.34	0.46
1:CB:174:VAL:O	1:CB:175:ARG:C	2.57	0.46
4:CE:106:PRO:O	4:CE:110:LEU:HG	2.16	0.46
7:CH:35:ILE:HD13	7:CH:35:ILE:HA	1.78	0.46
10:CK:18:ARG:HG2	10:CK:33:THR:O	2.16	0.46
17:CR:53:ARG:NH2	17:CR:59:SER:HA	2.30	0.46
17:CR:74:ARG:HE	17:CR:79:LEU:HD22	1.80	0.46
20:CA:186(N):U:H2'	20:CA:186(O):G:H8	1.80	0.46
20:CA:252:U:O2'	20:CA:275:G:N2	2.46	0.46
20:CA:888:G:H5"	20:CA:889:A:H3'	1.97	0.46
20:CA:922:G:H2'	20:CA:923:A:H8	1.79	0.46
20:CA:1001:G:H2'	20:CA:1002:G:C8	2.50	0.46
23:CY:17:ILE:HG22	23:CY:25:LYS:HG2	1.98	0.46
23:CY:600:VAL:HG23	23:CY:684:GLN:HE22	1.81	0.46
23:CY:628:ARG:HG3	23:CY:651:GLU:HG2	1.96	0.46
26:DD:17:THR:HG1	26:DD:205:VAL:H	1.58	0.46
27:DE:111:ARG:NE	27:DE:161:GLY:HA2	2.30	0.46
31:DJ:24:UNK:HA	31:DJ:84:UNK:O	2.15	0.46
37:DS:45:GLY:O	59:DB:112:G:N2	2.48	0.46
38:DT:26:ASP:CG	38:DT:27:THR:H	2.24	0.46
49:D2:53:LEU:O	49:D2:57:ILE:HG12	2.16	0.46
50:D3:3:ARG:HA	50:D3:38:GLU:HA	1.98	0.46
53:D7:37:LYS:HB3	60:DA:458:G:H2'	1.97	0.46
59:DB:65:C:H2'	59:DB:66:A:H5'	1.97	0.46
60:DA:144:C:H2'	60:DA:145:G:C8	2.51	0.46
60:DA:196:A:H3'	60:DA:197:A:H5"	1.98	0.46
60:DA:401:A:C4	60:DA:402:A:C8	3.03	0.46
60:DA:497:A:H2'	60:DA:498:G:C8	2.51	0.46
60:DA:607:U:C5	60:DA:620:G:C2	3.04	0.46
60:DA:1070:A:C4	60:DA:1097:U:H4'	2.50	0.46
60:DA:1281:G:H2'	60:DA:1282:U:O4'	2.16	0.46
60:DA:1473:G:H2'	60:DA:1474:C:C6	2.50	0.46
60:DA:1481:U:H2'	60:DA:1483:G:H4'	1.98	0.46
60:DA:2366:A:H3'	60:DA:2367:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2577:A:H2'	60:DA:2614:A:N6	2.30	0.46
60:DA:2599:G:H2'	60:DA:2600:A:C8	2.50	0.46
1:AB:154:LEU:HA	1:AB:156:LYS:NZ	2.30	0.46
6:AG:89:MET:HA	6:AG:155:ARG:HD2	1.98	0.46
8:AI:33:PHE:CZ	8:AI:43:ALA:HB1	2.50	0.46
8:AI:57:GLY:C	8:AI:59:PHE:H	2.18	0.46
11:AL:33:ARG:HG2	11:AL:60:LEU:HD12	1.97	0.46
11:AL:123:LYS:HD2	20:AA:37:U:P	2.56	0.46
15:AP:15:PRO:HB2	15:AP:16:HIS:H	1.55	0.46
18:AS:76:PRO:C	18:AS:78:ARG:H	2.24	0.46
20:AA:724:G:OP1	20:AA:854:G:O2'	2.24	0.46
20:AA:1129:C:H4'	20:AA:1130:A:C8	2.51	0.46
20:AA:1326:C:H2'	20:AA:1327:C:H6	1.80	0.46
20:AA:1430:C:H2'	20:AA:1431:C:C6	2.50	0.46
22:AW:48:C:O2'	22:AW:59:A:H4'	2.15	0.46
23:AY:484:ARG:HB2	23:AY:602:LEU:HD12	1.98	0.46
25:BC:83:LYS:HD2	25:BC:148:PHE:CE1	2.50	0.46
28:BF:33:LEU:O	28:BF:37:VAL:HG23	2.16	0.46
28:BF:36:VAL:O	28:BF:39:TRP:HB3	2.15	0.46
28:BF:135:LYS:NZ	60:BA:321:G:OP1	2.41	0.46
28:BF:157:VAL:O	28:BF:194:MET:N	2.49	0.46
28:BF:170:LEU:HA	28:BF:171:PRO:HD2	1.70	0.46
29:BG:96:ARG:O	29:BG:99:MET:HG2	2.16	0.46
35:BQ:7:MET:HE1	35:BQ:10:ARG:HA	1.96	0.46
38:BT:45:PHE:CE1	38:BT:65:LYS:HG2	2.51	0.46
44:BZ:44:PHE:O	44:BZ:48:PHE:HB2	2.16	0.46
46:B1:17:SER:OG	46:B1:42:GLN:N	2.49	0.46
48:BN:112:LEU:HD23	48:BN:112:LEU:C	2.41	0.46
53:B7:3:ARG:HB2	60:BA:1612:C:O2'	2.15	0.46
53:B7:27:GLY:O	53:B7:31:LEU:HG	2.16	0.46
59:BB:96:G:H2'	59:BB:97:G:O4'	2.15	0.46
60:BA:280:C:N4	60:BA:360:G:H1	2.12	0.46
60:BA:536:A:H2'	60:BA:537:C:H6	1.81	0.46
60:BA:850:C:H2'	60:BA:851:U:C6	2.51	0.46
60:BA:883:G:N1	60:BA:893:C:C2	2.77	0.46
60:BA:1042:G:O6	60:BA:1113:U:O2	2.34	0.46
60:BA:1203:G:H5"	60:BA:1204:A:OP2	2.15	0.46
60:BA:1521:G:H2'	60:BA:1522:G:C8	2.51	0.46
60:BA:1581:G:H2'	60:BA:1582:C:H6	1.80	0.46
60:BA:2162:G:H2'	60:BA:2163:C:O4'	2.15	0.46
60:BA:2290:G:H1	60:BA:2342:C:N4	2.09	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:2307:G:H8	60:BA:2307:G:O5'	1.98	0.46
60:BA:2834:G:H1'	60:BA:2883:A:H61	1.80	0.46
1:CB:167:PRO:HA	1:CB:170:GLU:C	2.41	0.46
4:CE:19:MET:SD	20:CA:15:G:H1'	2.56	0.46
7:CH:17:THR:HB	7:CH:78:GLN:CD	2.41	0.46
20:CA:150:C:H2'	20:CA:151:A:O4'	2.16	0.46
20:CA:833:U:H2'	20:CA:834:C:H6	1.79	0.46
20:CA:974:A:OP1	20:CA:974:A:H8	1.98	0.46
23:CY:536:LYS:HE3	23:CY:536:LYS:N	2.31	0.46
30:DH:144:VAL:O	30:DH:148:ILE:HG12	2.15	0.46
33:DO:40:VAL:HG13	33:DO:59:LYS:HG3	1.96	0.46
34:DP:22:GLY:O	34:DP:33:ARG:NH2	2.48	0.46
39:DU:37:GLU:HA	39:DU:40:PHE:CD1	2.50	0.46
43:DY:8:LYS:H	43:DY:8:LYS:HD2	1.81	0.46
44:DZ:77:ASP:O	44:DZ:79:ARG:N	2.48	0.46
46:D1:94:LEU:O	46:D1:95:LEU:HB2	2.15	0.46
48:DN:27:ALA:HB1	48:DN:103:VAL:HG22	1.97	0.46
60:DA:526:A:N6	60:DA:2626:C:H4'	2.30	0.46
60:DA:600:G:H2'	60:DA:601:C:O4'	2.15	0.46
60:DA:775:G:C5	60:DA:794:G:C8	3.04	0.46
60:DA:1030:G:H2'	60:DA:1031:G:C8	2.51	0.46
60:DA:1423:G:H2'	60:DA:1424:G:C8	2.47	0.46
60:DA:2080:G:H2'	60:DA:2081:C:H6	1.80	0.46
60:DA:2657:A:H2'	60:DA:2658:C:O4'	2.16	0.46
1:AB:162:ILE:HG23	1:AB:184:VAL:HG22	1.97	0.46
2:AC:121:ALA:HB2	2:AC:187:ALA:HB1	1.98	0.46
3:AD:72:GLU:HA	3:AD:75:PHE:HD2	1.81	0.46
7:AH:21:LYS:N	7:AH:65:TYR:OH	2.49	0.46
8:AI:34:ASN:O	8:AI:38:GLN:NE2	2.44	0.46
9:AJ:6:ILE:HG12	9:AJ:72:VAL:O	2.16	0.46
11:AL:83:VAL:HB	11:AL:100:ILE:HD13	1.96	0.46
19:AT:22:ARG:HB2	20:AA:323:U:H4'	1.97	0.46
20:AA:154:C:C2	20:AA:167:G:N2	2.80	0.46
20:AA:738:C:H2'	20:AA:739:C:H6	1.81	0.46
20:AA:950:U:H2'	20:AA:951:G:C8	2.51	0.46
23:AY:75:LYS:HB3	23:AY:75:LYS:HE3	1.61	0.46
23:AY:191:ASP:CB	23:AY:265:LYS:HB3	2.46	0.46
26:BD:262:ARG:HD3	26:BD:262:ARG:H	1.80	0.46
26:BD:262:ARG:HD3	26:BD:262:ARG:N	2.30	0.46
28:BF:156:LEU:O	28:BF:157:VAL:C	2.56	0.46
28:BF:172:TRP:CD2	28:BF:173:VAL:HG23	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BP:88:LEU:HD11	34:BP:123:LEU:HD21	1.97	0.46
35:BQ:54:MET:HE2	35:BQ:54:MET:HB3	1.72	0.46
39:BU:111:GLU:HA	39:BU:114:LYS:HD2	1.98	0.46
41:BW:35:ILE:HA	51:B5:28:PRO:HG3	1.98	0.46
44:BZ:144:LEU:HD11	44:BZ:148:ASP:O	2.15	0.46
48:BN:30:ILE:CG2	48:BN:34:LEU:HD21	2.44	0.46
48:BN:56:ASN:HB3	48:BN:126:PRO:N	2.30	0.46
48:BN:89:LYS:HB3	48:BN:89:LYS:HZ3	1.80	0.46
48:BN:98:VAL:CG2	48:BN:99:LEU:N	2.78	0.46
50:B3:46:ASN:HD21	60:BA:851:U:H1'	1.80	0.46
60:BA:227:A:H61	60:BA:410:G:H21	1.62	0.46
60:BA:696:G:H2'	60:BA:697:C:C6	2.51	0.46
60:BA:1091:G:H2'	60:BA:1092:C:C6	2.50	0.46
60:BA:1111:A:O3'	60:BA:1112:G:H4'	2.15	0.46
60:BA:1323:U:C4	60:BA:1324:G:C6	3.04	0.46
60:BA:1341:U:H5"	60:BA:1397:U:O2	2.15	0.46
60:BA:2591:C:H2'	60:BA:2592:G:H8	1.80	0.46
60:BA:2840:C:N3	60:BA:2877:G:O6	2.49	0.46
3:CD:100:ARG:HH12	3:CD:118:ARG:NH2	2.13	0.46
4:CE:51:VAL:HB	4:CE:52:PRO:HD3	1.98	0.46
5:CF:33:TYR:CD2	5:CF:75:LEU:HB2	2.50	0.46
7:CH:39:LEU:HB3	7:CH:45:ILE:H	1.81	0.46
11:CL:47:LYS:HE3	20:CA:1492:A:H5"	1.98	0.46
11:CL:66:VAL:HB	11:CL:98:TYR:CD1	2.46	0.46
12:CM:125:ARG:HD2	20:CA:969:A:C6	2.51	0.46
20:CA:663:A:H2'	20:CA:664:G:O4'	2.16	0.46
20:CA:950:U:H2'	20:CA:951:G:H8	1.79	0.46
23:CY:63:ILE:HG13	61:CY:702:GNP:PG	2.55	0.46
26:DD:99:ASP:HB3	26:DD:101:GLU:HG3	1.97	0.46
26:DD:157:ARG:NH2	60:DA:1817:G:H3'	2.31	0.46
33:DO:101:PRO:HA	33:DO:120:GLU:O	2.16	0.46
35:DQ:120:ILE:HG12	60:DA:2468:G:H5'	1.96	0.46
40:DV:18:LEU:HG	40:DV:19:LYS:H	1.80	0.46
41:DW:8:ARG:NH2	60:DA:25:U:OP1	2.49	0.46
41:DW:12:ILE:HG21	41:DW:17:VAL:HG13	1.97	0.46
45:D0:50:ASN:N	45:D0:50:ASN:OD1	2.49	0.46
45:D0:74:ARG:NH2	59:DB:12:C:H1'	2.31	0.46
48:DN:10:GLU:OE2	48:DN:11:PRO:HD2	2.15	0.46
49:D2:23:LYS:HA	49:D2:26:ARG:HD2	1.97	0.46
56:De:102:GLY:N	56:De:105:LYS:HG2	2.16	0.46
60:DA:245:G:N2	60:DA:384:U:H4'	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:310:A:O2'	60:DA:311:A:H2'	2.16	0.46
60:DA:609(A):A:H2'	60:DA:609(B):G:O4'	2.16	0.46
60:DA:697:C:H2'	60:DA:698:C:C6	2.51	0.46
60:DA:861:A:H2'	60:DA:862:G:O4'	2.15	0.46
60:DA:1496:A:H2'	60:DA:1498:C:C5	2.50	0.46
60:DA:1726:G:H2'	60:DA:1727:U:O4'	2.16	0.46
60:DA:2111:C:H4'	60:DA:2118:U:H4'	1.97	0.46
2:AC:52:LEU:HB2	2:AC:70:VAL:HA	1.98	0.46
2:AC:134:ILE:HG23	2:AC:168:ALA:HB2	1.96	0.46
3:AD:30:LYS:HE2	3:AD:30:LYS:N	2.31	0.46
7:AH:78:GLN:HE21	7:AH:80:ILE:N	2.13	0.46
15:AP:58:TYR:O	15:AP:62:VAL:HG22	2.16	0.46
18:AS:58:VAL:HG21	18:AS:75:ALA:CB	2.45	0.46
20:AA:166:G:H2'	20:AA:167:G:O4'	2.16	0.46
20:AA:669:U:H2'	20:AA:670:G:C8	2.50	0.46
20:AA:1138:G:C6	20:AA:1140:C:H1'	2.51	0.46
20:AA:1188:A:H2'	20:AA:1189:C:O4'	2.16	0.46
23:AY:563:ILE:O	23:AY:563:ILE:HG12	2.15	0.46
23:AY:610:VAL:H	23:AY:643:ILE:HB	1.81	0.46
25:BC:177:GLY:HA2	25:BC:186:LEU:CD2	2.46	0.46
26:BD:227:ASN:HB2	26:BD:228:PRO:HD2	1.97	0.46
27:BE:38:THR:N	27:BE:42:ASP:OD2	2.49	0.46
27:BE:63:LEU:CB	27:BE:65:GLY:H	2.29	0.46
28:BF:191:ARG:O	28:BF:193:VAL:N	2.49	0.46
42:BX:43:VAL:HG13	42:BX:47:PHE:HD1	1.81	0.46
43:BY:6:HIS:HB2	43:BY:7:VAL:H	1.55	0.46
51:B5:4:HIS:HE1	60:BA:2611:U:H2'	1.81	0.46
54:B8:29:LYS:HB2	54:B8:44:LYS:HG2	1.97	0.46
60:BA:209:C:H4'	60:BA:681:G:H4'	1.97	0.46
60:BA:223:A:H61	60:BA:374:A:H4'	1.81	0.46
60:BA:246:C:O2'	60:BA:386:G:N7	2.38	0.46
60:BA:460:A:H3'	60:BA:461:C:C6	2.51	0.46
60:BA:699:A:H62	60:BA:733:G:N2	2.10	0.46
60:BA:817:C:H2'	60:BA:818:G:C8	2.51	0.46
60:BA:1370:C:H2'	60:BA:1371:G:O4'	2.16	0.46
60:BA:1448:G:H2'	60:BA:149(B):A:H8	1.81	0.46
60:BA:1554:A:O2'	60:BA:1555:G:O5'	2.31	0.46
60:BA:1824:G:H2'	60:BA:1825:A:C8	2.50	0.46
60:BA:2056:G:H2'	60:BA:2057:A:C8	2.51	0.46
60:BA:2623:G:O5'	60:BA:2826:A:H1'	2.16	0.46
60:BA:2886:G:H2'	60:BA:2887:U:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:78:HIS:CE1	4:CE:143:ARG:H	2.34	0.46
7:CH:14:ARG:HG2	7:CH:83:ILE:HG23	1.98	0.46
7:CH:112:LEU:HG	7:CH:119:LEU:O	2.15	0.46
10:CK:63:LEU:O	10:CK:66:LEU:HB2	2.15	0.46
10:CK:65:ALA:HB3	10:CK:97:ALA:HB3	1.98	0.46
11:CL:9:GLN:NE2	20:CA:880:C:H3'	2.31	0.46
20:CA:68(V):G:C2	20:CA:68(W):G:H1'	2.51	0.46
20:CA:612:C:N4	20:CA:628:G:H1	2.12	0.46
20:CA:901:A:H8	20:CA:901:A:O5'	1.98	0.46
20:CA:1124:G:O2'	20:CA:1145:C:N4	2.48	0.46
20:CA:1242:C:H2'	20:CA:1243:C:C6	2.51	0.46
20:CA:1412:C:H2'	20:CA:1413:A:H8	1.81	0.46
20:CA:1430:C:H2'	20:CA:1431:C:C6	2.50	0.46
26:DD:105:ILE:HD13	26:DD:106:ILE:H	1.80	0.46
26:DD:248:SER:O	26:DD:250:TRP:N	2.40	0.46
29:DG:29:TRP:HA	29:DG:29:TRP:HE3	1.81	0.46
32:DK:84:LEU:HD22	32:DK:96:VAL:HB	1.98	0.46
33:DO:34:THR:HG23	33:DO:35:VAL:H	1.81	0.46
34:DP:46:LYS:H	34:DP:46:LYS:HD2	1.80	0.46
34:DP:127:ALA:HB3	34:DP:130:PHE:CE1	2.50	0.46
36:DR:34:ILE:O	36:DR:113:LEU:HA	2.16	0.46
38:DT:128:GLU:C	38:DT:129:ARG:HE	2.23	0.46
46:D1:71:TYR:O	46:D1:74:VAL:HB	2.16	0.46
48:DN:76:SER:OG	60:DA:2641:G:O3'	2.33	0.46
54:D8:34:TRP:CG	54:D8:35:GLN:N	2.84	0.46
60:DA:574:C:C4	60:DA:2033:A:H5"	2.50	0.46
60:DA:1011:G:H1'	60:DA:1013:C:O4'	2.15	0.46
60:DA:2709:G:H2'	60:DA:2710:C:O4'	2.16	0.46
1:AB:10:LEU:HD22	1:AB:10:LEU:HA	1.78	0.46
2:AC:125:GLU:OE1	2:AC:189:ALA:HA	2.16	0.46
10:AK:27:ASN:ND2	20:AA:689:C:OP1	2.47	0.46
11:AL:7:ILE:CD1	16:AQ:34:LYS:HB2	2.46	0.46
12:AM:105:THR:HG23	20:AA:1229:A:N6	2.31	0.46
16:AQ:25:ARG:NH1	20:AA:237:C:H5"	2.31	0.46
16:AQ:43:LEU:CD1	16:AQ:69:LYS:HA	2.42	0.46
16:AQ:67:LYS:HD2	20:AA:266:G:H2'	1.97	0.46
20:AA:135:C:O5'	20:AA:135:C:H6	1.98	0.46
20:AA:201:C:O2'	20:AA:201(A):U:H2'	2.16	0.46
20:AA:232:G:H2'	20:AA:233:C:H6	1.80	0.46
20:AA:521:G:O6	20:AA:528:C:N3	2.49	0.46
20:AA:1321:C:H3'	20:AA:1322:C:C5'	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:77:HIS:CE1	23:AY:277:VAL:HG21	2.51	0.46
23:AY:215:LYS:HG2	56:Be:87:LYS:NZ	2.31	0.46
23:AY:617:MET:O	23:AY:621:ILE:HG12	2.15	0.46
26:BD:51:VAL:HG21	26:BD:54:ARG:HB2	1.98	0.46
26:BD:88:ARG:HH21	60:BA:1817:G:P	2.39	0.46
27:BE:4:ILE:HD13	27:BE:5:LEU:H	1.80	0.46
28:BF:110:LEU:HD21	28:BF:182:ASN:HA	1.98	0.46
28:BF:154:VAL:O	28:BF:155:LEU:C	2.51	0.46
28:BF:154:VAL:HG13	28:BF:191:ARG:CA	2.45	0.46
28:BF:177:ALA:HB1	28:BF:178:PRO:CD	2.45	0.46
30:BH:74:ASN:O	30:BH:77:LYS:N	2.49	0.46
30:BH:85:LYS:HD2	30:BH:141:VAL:CG1	2.45	0.46
38:BT:64:ARG:HH12	38:BT:103:ARG:HA	1.80	0.46
39:BU:28:ARG:HA	39:BU:31:SER:HB3	1.97	0.46
40:BV:19:LYS:HB2	40:BV:96:ILE:HD11	1.98	0.46
44:BZ:10:ARG:N	44:BZ:36:LYS:O	2.37	0.46
46:B1:13:ILE:O	46:B1:42:GLN:O	2.34	0.46
47:B4:32:TYR:HD1	47:B4:32:TYR:O	1.99	0.46
48:BN:76:SER:OG	60:BA:2642:G:OP1	2.31	0.46
56:Be:78:LEU:C	56:Be:80:ALA:H	2.24	0.46
60:BA:848:G:H2'	60:BA:849:A:C8	2.51	0.46
60:BA:1027:A:H2'	60:BA:1028:A:C8	2.50	0.46
60:BA:1344:G:O2'	60:BA:1385:G:H2'	2.16	0.46
60:BA:1572:A:C4	60:BA:1573:G:C8	3.04	0.46
60:BA:1649:G:H2'	60:BA:1650:G:H8	1.81	0.46
60:BA:2440:C:H2'	60:BA:2441:C:H4'	1.98	0.46
60:BA:2769:C:H2'	60:BA:2770:G:C8	2.51	0.46
2:CC:35:GLU:O	2:CC:38:ARG:N	2.50	0.46
3:CD:121:VAL:HA	3:CD:126:ILE:CG1	2.46	0.46
7:CH:9:MET:O	7:CH:12:ARG:N	2.49	0.46
7:CH:69:ARG:H	7:CH:69:ARG:HG3	1.59	0.46
8:CI:48:GLU:N	8:CI:49:PRO:HD2	2.31	0.46
8:CI:57:GLY:O	8:CI:59:PHE:N	2.48	0.46
11:CL:56:ALA:HB3	11:CL:68:ALA:CB	2.26	0.46
16:CQ:16:GLN:CD	20:CA:254:G:H21	2.24	0.46
20:CA:297:G:H4'	20:CA:557:G:O2'	2.14	0.46
20:CA:667:G:H2'	20:CA:668:G:H8	1.81	0.46
20:CA:691:G:H1'	20:CA:696:A:N6	2.30	0.46
20:CA:697:U:O2	20:CA:785:G:N2	2.38	0.46
23:CY:291:GLY:O	23:CY:299:VAL:HG12	2.15	0.46
23:CY:310:ALA:O	23:CY:331:TYR:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:512:ILE:HG22	23:CY:567:LEU:HB3	1.97	0.46
25:DC:6:LYS:HA	25:DC:9:ARG:CD	2.46	0.46
25:DC:181:PHE:HB3	25:DC:185:LYS:CB	2.46	0.46
26:DD:24:ILE:HG23	26:DD:25:THR:H	1.81	0.46
26:DD:221:VAL:HA	60:DA:1789:A:H5"	1.97	0.46
28:DF:2:LYS:HD3	28:DF:119:ARG:NH2	2.31	0.46
29:DG:91:ARG:NH1	60:DA:2314:C:OP1	2.49	0.46
32:DK:121:GLU:HA	32:DK:125:ARG:HH12	1.80	0.46
33:DO:68:GLU:OE2	33:DO:78:ARG:HD3	2.16	0.46
35:DQ:48:GLU:O	35:DQ:52:VAL:HG23	2.15	0.46
35:DQ:68:ILE:H	35:DQ:68:ILE:HD13	1.81	0.46
37:DS:101:LEU:O	37:DS:106:ARG:HB2	2.16	0.46
40:DV:23:GLU:O	40:DV:92:THR:OG1	2.32	0.46
41:DW:23:LEU:HD21	51:D5:27:PRO:HA	1.98	0.46
41:DW:61:ASN:HD21	60:DA:496:G:H1'	1.81	0.46
44:DZ:100:VAL:O	44:DZ:123:ASP:HA	2.16	0.46
45:D0:46:LYS:HD3	45:D0:78:TYR:CZ	2.51	0.46
46:D1:22:GLY:O	46:D1:23:LYS:HB2	2.16	0.46
55:D9:33:LYS:HZ2	60:DA:2526:G:HO2'	1.52	0.46
60:DA:273(A):G:C2	60:DA:273(B):G:C8	3.04	0.46
60:DA:537:C:H2'	60:DA:539:G:H8	1.80	0.46
60:DA:597:U:H2'	60:DA:598:G:H8	1.81	0.46
60:DA:779:U:H2'	60:DA:780:G:O4'	2.16	0.46
60:DA:797:C:H2'	60:DA:798:G:H8	1.80	0.46
60:DA:1022:G:O2'	60:DA:1023:U:OP2	2.29	0.46
60:DA:1218:C:N4	60:DA:1231:G:H1	2.12	0.46
60:DA:1290:C:H2'	60:DA:1291:C:C6	2.51	0.46
60:DA:1401:G:H2'	60:DA:1402:C:C6	2.51	0.46
60:DA:2671:A:H2'	60:DA:2672:G:C8	2.51	0.46
1:AB:12:GLU:HG2	1:AB:44:LEU:HD22	1.96	0.45
2:AC:165:THR:HG22	2:AC:166:GLU:H	1.80	0.45
8:AI:90:PRO:O	8:AI:93:ARG:HB3	2.16	0.45
12:AM:126:LYS:HG2	21:AV:21:A:N3	2.31	0.45
14:AO:15:PHE:CZ	14:AO:84:LYS:HD2	2.50	0.45
16:AQ:45:HIS:HB3	16:AQ:72:ARG:HA	1.97	0.45
17:AR:44:LEU:HD23	17:AR:48:GLY:O	2.16	0.45
19:AT:83:ARG:O	19:AT:87:LYS:HB2	2.17	0.45
20:AA:68(Y):C:H2'	20:AA:101:A:O4'	2.16	0.45
20:AA:162:A:H8	20:AA:162:A:O5'	1.98	0.45
20:AA:230:G:H2'	20:AA:231:G:C8	2.51	0.45
20:AA:400:C:H2'	20:AA:401:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:444:C:H2'	20:AA:445:G:H8	1.82	0.45
20:AA:687:A:N3	20:AA:688:G:H1'	2.30	0.45
20:AA:1440(E):G:H2'	20:AA:1440(F):C:C6	2.51	0.45
23:AY:92:ILE:HG21	23:AY:437:THR:HG21	1.99	0.45
26:BD:43:ARG:NE	60:BA:691:C:O2'	2.43	0.45
26:BD:45:ASN:HB3	60:BA:1813:G:H1'	1.99	0.45
28:BF:7:TYR:CZ	28:BF:9:ILE:HA	2.52	0.45
28:BF:37:VAL:HA	28:BF:40:GLN:CD	2.41	0.45
28:BF:130:ALA:HB3	28:BF:142:TRP:HD1	1.79	0.45
28:BF:171:PRO:HA	60:BA:1205:U:N3	2.31	0.45
33:BO:10:VAL:HG22	33:BO:17:ARG:HA	1.98	0.45
34:BP:105:LEU:HG	60:BA:626:U:N3	2.31	0.45
36:BR:18:LEU:O	36:BR:22:ARG:HD3	2.16	0.45
37:BS:13:ARG:O	37:BS:15:ARG:N	2.49	0.45
37:BS:26:LEU:HD22	37:BS:87:PHE:HA	1.97	0.45
37:BS:77:ALA:HB3	37:BS:105:ALA:HB1	1.98	0.45
48:BN:27:ALA:HB1	48:BN:103:VAL:HG22	1.97	0.45
60:BA:528:A:N1	60:BA:2042:A:H2'	2.30	0.45
60:BA:630:G:N2	60:BA:632:A:H3'	2.31	0.45
60:BA:1586:A:H3'	60:BA:1587:A:H8	1.81	0.45
60:BA:1803:A:H62	60:BA:1814:G:H21	1.64	0.45
60:BA:1955:U:H3	60:BA:2557:G:N2	2.14	0.45
60:BA:2019:A:C5	60:BA:2020:A:C8	3.04	0.45
3:CD:103:ASN:HA	3:CD:106:TYR:HB3	1.98	0.45
7:CH:7:ALA:O	7:CH:11:THR:OG1	2.30	0.45
7:CH:93:VAL:O	7:CH:132:GLU:HA	2.16	0.45
9:CJ:46:ARG:HD2	13:CN:61:TRP:CZ3	2.50	0.45
16:CQ:64:PRO:HB3	16:CQ:70:ARG:NH2	2.30	0.45
18:CS:10:PHE:CG	20:CA:1318:A:H4'	2.51	0.45
20:CA:68(N):U:H3'	20:CA:68(O):A:C8	2.51	0.45
20:CA:166:G:H2'	20:CA:167:G:O4'	2.16	0.45
20:CA:413:G:H4'	20:CA:414:A:H5'	1.98	0.45
20:CA:683:G:H2'	20:CA:684:A:C8	2.52	0.45
20:CA:1303:C:N3	20:CA:1334:G:N2	2.41	0.45
20:CA:1488:G:H2'	20:CA:1489:G:O4'	2.15	0.45
23:CY:443:HIS:C	23:CY:445:GLU:H	2.24	0.45
26:DD:16:MET:SD	26:DD:211:ARG:NH1	2.89	0.45
30:DH:125:VAL:HG13	30:DH:131:VAL:HG22	1.96	0.45
37:DS:77:ALA:HB3	37:DS:105:ALA:HB1	1.97	0.45
40:DV:39:LEU:HB3	40:DV:40:LEU:HD22	1.98	0.45
40:DV:69:LYS:HA	40:DV:88:ARG:HG2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:D4:6:HIS:C	47:D4:8:LYS:H	2.24	0.45
49:D2:48:HIS:CD2	49:D2:49:LYS:HG2	2.50	0.45
53:D7:24:THR:O	53:D7:28:ARG:HG3	2.16	0.45
60:DA:274:G:H2'	60:DA:275:G:O4'	2.16	0.45
60:DA:487:C:H2'	60:DA:488:G:O4'	2.16	0.45
60:DA:545:G:H1'	60:DA:548:A:H61	1.80	0.45
60:DA:775:G:C4	60:DA:794:G:C8	3.04	0.45
60:DA:847:U:H3	60:DA:934:G:N2	2.15	0.45
60:DA:1088:A:H2'	60:DA:1088:A:N3	2.30	0.45
60:DA:1341:U:H3'	60:DA:1342:A:H8	1.81	0.45
60:DA:1426:G:H2'	60:DA:1427:A:C8	2.51	0.45
1:AB:138:LEU:O	1:AB:142:LEU:HB2	2.17	0.45
1:AB:162:ILE:CG1	1:AB:164:VAL:HG22	2.47	0.45
3:AD:26:CYS:HA	3:AD:30:LYS:O	2.17	0.45
4:AE:6:PHE:HB2	4:AE:63:ARG:CZ	2.47	0.45
8:AI:116:LYS:HD3	8:AI:121:ARG:H	1.81	0.45
11:AL:97:ARG:NH1	20:AA:911:U:OP1	2.49	0.45
20:AA:59:A:H3'	20:AA:331:G:N2	2.31	0.45
20:AA:68(O):A:H3'	20:AA:68(P):C:O4'	2.16	0.45
20:AA:354:G:N2	20:AA:388:G:O2'	2.43	0.45
20:AA:419:C:H2'	20:AA:420:U:O4'	2.16	0.45
23:AY:514:VAL:HG13	23:AY:565:VAL:HA	1.96	0.45
23:AY:614:GLU:O	23:AY:617:MET:HB3	2.16	0.45
26:BD:53:PHE:O	26:BD:218:ARG:N	2.48	0.45
27:BE:14:ILE:O	27:BE:21:VAL:HG22	2.16	0.45
28:BF:9:ILE:HG23	28:BF:10:PRO:N	2.30	0.45
32:BK:60:TYR:O	32:BK:62:ASP:N	2.49	0.45
33:BO:24:VAL:HG12	33:BO:38:VAL:O	2.17	0.45
35:BQ:89:ASN:O	35:BQ:91:GLU:N	2.47	0.45
36:BR:15:SER:HB2	60:BA:1275:A:H62	1.81	0.45
38:BT:5:ALA:O	38:BT:9:LEU:HG	2.16	0.45
40:BV:33:VAL:HG13	40:BV:59:ALA:C	2.41	0.45
52:B6:36:LEU:HA	52:B6:50:ARG:HA	1.98	0.45
54:B8:26:LYS:HG2	54:B8:47:LYS:HG3	1.98	0.45
60:BA:121:G:H2'	60:BA:122:G:H8	1.81	0.45
60:BA:250:G:C6	60:BA:251:A:C2	3.04	0.45
60:BA:277:C:H3'	60:BA:278:A:H8	1.82	0.45
60:BA:310:A:O2'	60:BA:311:A:H2'	2.16	0.45
60:BA:483:A:N7	60:BA:497:A:H2	2.13	0.45
60:BA:529:A:C2	60:BA:2023:G:C8	3.04	0.45
60:BA:668:G:O6	60:BA:670:A:O2'	2.33	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:792:G:N3	60:BA:2072:G:O2'	2.46	0.45
60:BA:858:U:O2'	60:BA:2268:A:N3	2.39	0.45
60:BA:1344:G:H21	60:BA:1385:G:H5"	1.82	0.45
60:BA:1376:C:H2'	60:BA:1377:G:O4'	2.16	0.45
60:BA:1454:U:O2'	60:BA:1455:G:N7	2.49	0.45
60:BA:1773:A:C5	60:BA:1829:A:H1'	2.51	0.45
60:BA:1821:A:C6	60:BA:1822:G:C6	3.04	0.45
60:BA:2515:C:N4	60:BA:2569:G:H1	2.13	0.45
60:BA:2808:U:C2	60:BA:2893:G:O6	2.69	0.45
1:CB:74:LYS:HD2	1:CB:74:LYS:H	1.81	0.45
4:CE:94:ALA:HA	20:CA:6:G:O6	2.15	0.45
5:CF:4:TYR:CD1	5:CF:92:LYS:HA	2.51	0.45
6:CG:111:ARG:HB2	6:CG:119:ARG:HD2	1.99	0.45
11:CL:15:ARG:HH12	20:CA:563:A:H2'	1.81	0.45
12:CM:102:ARG:HH21	12:CM:105:THR:HG23	1.81	0.45
14:CO:54:ARG:NE	14:CO:58:MET:HE1	2.32	0.45
18:CS:27:GLU:HB3	18:CS:28:LYS:H	1.47	0.45
20:CA:18:C:O2	20:CA:917:G:N1	2.37	0.45
20:CA:56:U:H2'	20:CA:57:G:H8	1.81	0.45
20:CA:591:U:H2'	20:CA:592:G:C8	2.51	0.45
20:CA:862:C:C2	20:CA:867:G:N2	2.74	0.45
20:CA:1316:G:H1'	20:CA:1360:A:H2	1.80	0.45
25:DC:150:ILE:HA	25:DC:153:ILE:HB	1.99	0.45
28:DF:45:ARG:HD3	28:DF:97:TYR:CE1	2.51	0.45
33:DO:14:THR:HG23	33:DO:94:ARG:HB2	1.98	0.45
33:DO:26:LYS:HB3	33:DO:27:GLY:H	1.64	0.45
40:DV:33:VAL:HG13	40:DV:59:ALA:O	2.16	0.45
41:DW:70:TYR:HE2	41:DW:110:LYS:HA	1.81	0.45
42:DX:43:VAL:HB	42:DX:51:VAL:HG21	1.99	0.45
48:DN:63:THR:HG21	60:DA:1141:U:O5'	2.17	0.45
54:D8:56:GLU:O	54:D8:60:LEU:HG	2.15	0.45
60:DA:176:G:H3'	60:DA:177:G:C2	2.50	0.45
60:DA:377:C:H2'	60:DA:378:C:C6	2.51	0.45
60:DA:411:G:OP2	60:DA:2406:U:O2'	2.25	0.45
60:DA:622:G:H2'	60:DA:623:G:C8	2.50	0.45
60:DA:848:G:H1'	60:DA:933:A:H8	1.81	0.45
60:DA:1248:G:H3'	60:DA:1249:U:C5'	2.43	0.45
60:DA:1271:G:H22	60:DA:1615:C:H42	1.64	0.45
60:DA:1350:C:N3	60:DA:1381:G:N2	2.50	0.45
60:DA:1414:G:H2'	60:DA:1415:U:C6	2.52	0.45
60:DA:1416:G:C2	60:DA:1582:C:N3	2.83	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:1593:G:H2'	60:DA:1594:G:O4'	2.15	0.45
60:DA:2039:C:H2'	60:DA:2039:C:O2	2.15	0.45
60:DA:2250:G:O2'	60:DA:2496:C:OP1	2.30	0.45
1:AB:12:GLU:HB3	1:AB:44:LEU:HD13	1.99	0.45
1:AB:174:VAL:O	1:AB:175:ARG:C	2.59	0.45
1:AB:175:ARG:C	1:AB:175:ARG:HD3	2.41	0.45
5:AF:12:PRO:HG2	5:AF:55:ASP:CG	2.40	0.45
11:AL:8:ASN:ND2	20:AA:585:G:O2'	2.49	0.45
20:AA:68(R):C:H2'	20:AA:68(S):C:C5	2.52	0.45
20:AA:123:C:O2'	20:AA:290:C:H1'	2.16	0.45
20:AA:263:A:H2'	20:AA:264:U:C6	2.52	0.45
20:AA:1392:G:O2'	20:AA:1502:A:H4'	2.16	0.45
23:AY:99:ARG:NH2	23:AY:403:GLU:HG2	2.31	0.45
25:BC:10:ALA:O	25:BC:13:GLU:N	2.49	0.45
25:BC:42:VAL:HG12	25:BC:44:VAL:N	2.30	0.45
27:BE:172:VAL:HG23	27:BE:183:LEU:O	2.16	0.45
30:BH:85:LYS:HE3	30:BH:145:ALA:CB	2.43	0.45
30:BH:137:ASP:C	30:BH:141:VAL:HG23	2.42	0.45
33:BO:13:ASN:HD21	33:BO:96:THR:HG22	1.80	0.45
41:BW:58:ALA:HA	41:BW:62:HIS:HB2	1.98	0.45
41:BW:73:ALA:O	41:BW:106:ILE:N	2.44	0.45
43:BY:42:VAL:HG21	43:BY:67:LEU:HD13	1.98	0.45
46:B1:18:ILE:HA	46:B1:41:ARG:N	2.31	0.45
49:B2:12:GLU:O	49:B2:16:LEU:HD11	2.17	0.45
59:BB:4:C:H2'	59:BB:5:C:C6	2.51	0.45
60:BA:132:G:H2'	60:BA:133:C:C6	2.52	0.45
60:BA:530:G:N3	60:BA:2021:C:H1'	2.31	0.45
60:BA:595:C:H2'	60:BA:596:G:H8	1.79	0.45
60:BA:898:C:C2	60:BA:899:A:C8	3.04	0.45
60:BA:1056:G:C2'	60:BA:1103:A:H61	2.29	0.45
60:BA:1493:C:O2	60:BA:1493:C:H2'	2.16	0.45
60:BA:1819:A:C4'	60:BA:1820:U:H5'	2.46	0.45
60:BA:2540:C:H2'	60:BA:2541:A:O4'	2.16	0.45
3:CD:93:PHE:O	3:CD:97:LEU:HG	2.16	0.45
16:CQ:12:SER:HB2	16:CQ:14:LYS:HE2	1.99	0.45
18:CS:78:ARG:O	18:CS:81:ARG:NH1	2.48	0.45
19:CT:72:LEU:HB3	19:CT:77:ALA:HB2	1.98	0.45
20:CA:359:U:H2'	20:CA:360:A:C8	2.51	0.45
20:CA:992:U:H1'	20:CA:993:G:OP2	2.17	0.45
20:CA:1015:A:C6	20:CA:1016:A:C6	3.04	0.45
20:CA:1357:A:N6	20:CA:1365:G:H1	2.13	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:145:ASP:CG	23:CY:146:LEU:H	2.24	0.45
23:CY:413:ILE:HA	23:CY:476:VAL:HA	1.98	0.45
25:DC:5:GLY:HA2	60:DA:2129:C:OP1	2.16	0.45
25:DC:27:ALA:HA	25:DC:186:LEU:HB3	1.99	0.45
25:DC:145:THR:N	25:DC:150:ILE:HD11	2.31	0.45
27:DE:67:PHE:CG	27:DE:68:ALA:N	2.84	0.45
30:DH:17:VAL:HG12	30:DH:26:VAL:HG22	1.98	0.45
32:DK:84:LEU:HB3	32:DK:87:GLY:O	2.15	0.45
33:DO:58:VAL:HG21	33:DO:86:ILE:HD11	1.96	0.45
39:DU:90:VAL:HG23	39:DU:91:ASP:H	1.81	0.45
46:D1:23:LYS:HE3	46:D1:23:LYS:HB3	1.65	0.45
48:DN:53:VAL:HG11	48:DN:128:HIS:CB	2.47	0.45
50:D3:4:LEU:HD23	50:D3:58:VAL:HG13	1.97	0.45
60:DA:176:G:H3'	60:DA:177:G:N2	2.32	0.45
60:DA:416:C:N3	60:DA:2407:G:O6	2.49	0.45
60:DA:1285:G:H5"	60:DA:1286:A:OP2	2.16	0.45
60:DA:1423:G:H1	60:DA:1575:C:H42	1.63	0.45
60:DA:1542:G:H4'	60:DA:1543:A:O5'	2.15	0.45
60:DA:1577:C:H2'	60:DA:1578:U:C6	2.51	0.45
60:DA:2125:G:H21	60:DA:2173:A:H62	0.75	0.45
60:DA:2782:G:H3'	60:DA:2783:G:C8	2.50	0.45
60:DA:2795:G:H3'	60:DA:2797:U:C5'	2.44	0.45
1:AB:171:ALA:CA	1:AB:174:VAL:HB	2.45	0.45
3:AD:7:PRO:HA	20:AA:430:A:OP2	2.17	0.45
3:AD:101:LEU:O	3:AD:105:VAL:HG23	2.17	0.45
4:AE:82:VAL:HG21	4:AE:138:ALA:HA	1.97	0.45
6:AG:79:ARG:HB2	20:AA:1381:U:H1'	1.98	0.45
6:AG:101:LEU:HD12	6:AG:102:ARG:N	2.30	0.45
8:AI:48:GLU:HA	8:AI:51:ARG:HB2	1.99	0.45
12:AM:29:ARG:HA	12:AM:32:GLU:HG2	1.98	0.45
14:AO:23:GLY:HA3	20:AA:750:G:N3	2.31	0.45
15:AP:40:ASP:OD2	15:AP:42:ARG:HG2	2.17	0.45
19:AT:53:LEU:O	19:AT:56:MET:HB2	2.16	0.45
20:AA:768:A:H5'	20:AA:1524:C:H1'	1.98	0.45
20:AA:1536:C:H42	21:AV:9:G:H1	1.64	0.45
25:BC:3:LYS:HG3	25:BC:4:HIS:ND1	2.31	0.45
26:BD:244:ARG:HG3	60:BA:1902:C:O4'	2.16	0.45
27:BE:80:GLU:N	60:BA:2636:U:OP1	2.49	0.45
27:BE:166:THR:HG23	27:BE:199:ARG:HE	1.81	0.45
29:BG:101:ILE:HG12	47:B4:25:TYR:O	2.15	0.45
32:BK:3:LYS:HD3	32:BK:29:GLN:HA	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:40:ALA:HB3	32:BK:67:PHE:HZ	1.81	0.45
33:BO:79:PHE:CE2	33:BO:101:PRO:HG2	2.51	0.45
39:BU:70:ARG:HG3	39:BU:75:ASN:HA	1.97	0.45
40:BV:5:VAL:HG12	40:BV:14:VAL:HG22	1.96	0.45
44:BZ:7:ALA:O	44:BZ:61:LEU:HA	2.17	0.45
44:BZ:61:LEU:C	44:BZ:63:ASP:H	2.25	0.45
46:B1:23:LYS:HE3	46:B1:23:LYS:HB3	1.77	0.45
60:BA:470:A:H2'	60:BA:471:A:O4'	2.17	0.45
60:BA:621:A:N3	60:BA:621:A:H2'	2.32	0.45
60:BA:624:C:N4	60:BA:625:G:O6	2.50	0.45
60:BA:684:G:O2'	60:BA:788:A:N7	2.48	0.45
60:BA:821:A:N6	60:BA:972:G:H1'	2.32	0.45
60:BA:1035:U:H2'	60:BA:1036:G:H8	1.77	0.45
60:BA:1567:A:H4'	60:BA:1568:G:O4'	2.16	0.45
60:BA:2475:C:H42	60:BA:2529:G:N2	2.13	0.45
60:BA:2478:A:C2	60:BA:2529:G:H2'	2.52	0.45
60:BA:2521:C:O4'	60:BA:2565:A:H1'	2.16	0.45
1:CB:75:LYS:O	1:CB:78:GLN:HB3	2.17	0.45
3:CD:14:ARG:NH2	20:CA:542:G:O3'	2.50	0.45
6:CG:95:ARG:HE	6:CG:99:LEU:HD11	1.82	0.45
8:CI:53:VAL:O	8:CI:55:ALA:N	2.49	0.45
8:CI:111:ARG:NH1	20:CA:1368:G:OP1	2.50	0.45
14:CO:28:GLN:HB3	20:CA:657:G:H4'	1.98	0.45
15:CP:81:ARG:HA	20:CA:458(E):A:H4'	1.98	0.45
20:CA:34:C:H2'	20:CA:35:G:C8	2.51	0.45
20:CA:68(X):U:H2'	20:CA:68(Y):C:C6	2.52	0.45
20:CA:151:A:H62	20:CA:170:U:H3	1.65	0.45
20:CA:230:G:H2'	20:CA:231:G:O4'	2.17	0.45
20:CA:894:G:H2'	20:CA:895:G:O4'	2.17	0.45
20:CA:1089:G:H2'	20:CA:1090:U:O4'	2.16	0.45
20:CA:1224:G:C2	20:CA:1362(A):C:N3	2.85	0.45
23:CY:21:ILE:HG13	23:CY:22:ASP:N	2.32	0.45
23:CY:22:ASP:C	61:CY:702:GNP:O1B	2.54	0.45
23:CY:136:ALA:H	23:CY:260:LEU:HA	1.81	0.45
23:CY:462:ILE:O	23:CY:466:LEU:HB2	2.16	0.45
25:DC:151:GLY:C	25:DC:154:ILE:H	2.24	0.45
25:DC:194:ILE:HD11	25:DC:225:ILE:HD11	1.99	0.45
27:DE:82:ARG:HH21	60:DA:2637:U:H5"	1.80	0.45
28:DF:96:ASP:OD2	28:DF:98:SER:OG	2.31	0.45
31:DJ:25:UNK:O	31:DJ:27:UNK:N	2.49	0.45
34:DP:132:LYS:O	34:DP:136:GLU:HG2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DQ:43:THR:HA	35:DQ:94:VAL:HG12	1.98	0.45
36:DR:2:ARG:HB3	36:DR:5:LYS:HE2	1.99	0.45
36:DR:79:LEU:HD13	36:DR:83:ILE:HB	1.97	0.45
40:DV:35:LEU:HB2	40:DV:57:VAL:HG22	1.98	0.45
40:DV:99:ILE:H	40:DV:99:ILE:HD13	1.82	0.45
41:DW:16:LYS:HA	41:DW:19:LEU:HD22	1.97	0.45
41:DW:74:ALA:HA	41:DW:105:VAL:HA	1.98	0.45
46:D1:18:ILE:HG22	60:DA:380:U:H4'	1.98	0.45
46:D1:19:GLN:O	46:D1:20:ARG:HG2	2.17	0.45
48:DN:95:PRO:C	48:DN:97:ARG:H	2.24	0.45
48:DN:98:VAL:CG2	48:DN:99:LEU:N	2.78	0.45
53:D7:37:LYS:HB2	53:D7:39:ARG:HH21	1.81	0.45
55:D9:19:ARG:O	55:D9:21:GLY:N	2.47	0.45
60:DA:137(A):C:H42	60:DA:142:G:H1	1.65	0.45
60:DA:302:C:H2'	60:DA:303:U:H6	1.82	0.45
60:DA:449:A:H2'	60:DA:450:G:O4'	2.17	0.45
60:DA:697:C:H42	60:DA:765:G:H1	1.65	0.45
60:DA:745:G:H21	60:DA:750:A:N6	2.09	0.45
60:DA:1353:A:H2'	60:DA:1354:A:C8	2.52	0.45
60:DA:2038:G:C6	60:DA:2039:C:C2	3.04	0.45
60:DA:2341:G:H2'	60:DA:2342:C:C6	2.50	0.45
60:DA:2396:G:C2	60:DA:2397:G:C8	3.05	0.45
60:DA:2726:U:O2'	60:DA:2727:G:H8	2.00	0.45
1:AB:189:ASP:C	1:AB:191:ASP:H	2.23	0.45
6:AG:94:ARG:NH2	6:AG:95:ARG:HB2	2.31	0.45
8:AI:25:LYS:HZ2	8:AI:25:LYS:HB2	1.81	0.45
8:AI:118:LYS:HD2	20:AA:1349:A:OP2	2.16	0.45
16:AQ:92:ARG:O	16:AQ:95:TYR:HB2	2.17	0.45
20:AA:62:U:H5"	20:AA:385:C:H1'	1.97	0.45
20:AA:243:A:H4'	20:AA:244:U:H3'	1.97	0.45
20:AA:1230:C:H5'	22:AW:30:C:C5'	2.47	0.45
22:AW:54:U:O4	22:AW:58:A:N7	2.50	0.45
23:AY:415:PRO:HB3	23:AY:474:ALA:HA	1.98	0.45
26:BD:7:LYS:HE2	60:BA:706:A:H5'	1.98	0.45
26:BD:211:ARG:HA	26:BD:214:TRP:CE3	2.51	0.45
28:BF:110:LEU:HD12	28:BF:205:ARG:HG2	1.99	0.45
28:BF:117:ARG:HE	28:BF:186:ILE:CD1	2.29	0.45
29:BG:66:GLN:NE2	47:B4:1:MET:HE2	2.31	0.45
33:BO:13:ASN:O	33:BO:15:GLY:N	2.40	0.45
36:BR:9:LYS:HE2	36:BR:39:PRO:HB3	1.97	0.45
37:BS:92:TYR:C	37:BS:94:TYR:H	2.23	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BW:92:ARG:O	60:BA:1614:A:N6	2.48	0.45
43:BY:11:ASP:CG	43:BY:12:THR:H	2.24	0.45
43:BY:97:ARG:HH11	43:BY:97:ARG:HA	1.81	0.45
44:BZ:137:ILE:HG12	44:BZ:156:LYS:HE3	1.97	0.45
48:BN:120:LEU:HD21	48:BN:122:VAL:CG2	2.39	0.45
51:B5:56:LYS:HG3	51:B5:58:LEU:HD11	1.98	0.45
59:BB:44:G:H5'	59:BB:45:A:C8	2.50	0.45
60:BA:133:C:H42	60:BA:146:G:H1	1.63	0.45
60:BA:1019:U:H2'	60:BA:1020:A:C8	2.51	0.45
60:BA:1613:G:C2	60:BA:1619:G:C5	3.05	0.45
60:BA:2065:C:H2'	60:BA:2066:C:C6	2.51	0.45
60:BA:2872:G:O2'	60:BA:2873:A:O4'	2.32	0.45
2:CC:109:PRO:HG2	2:CC:110:ASN:OD1	2.17	0.45
2:CC:136:GLN:O	2:CC:140:ARG:HG3	2.16	0.45
6:CG:107:ALA:HB3	6:CG:134:ALA:HB2	1.99	0.45
11:CL:116:SER:C	11:CL:118:SER:H	2.24	0.45
18:CS:5:LEU:HD23	18:CS:10:PHE:HB2	1.98	0.45
20:CA:254:G:H2'	20:CA:255:G:H8	1.82	0.45
20:CA:269:C:H2'	20:CA:270:A:C8	2.52	0.45
20:CA:612:C:H2'	20:CA:613:C:O4'	2.15	0.45
20:CA:936:C:H2'	20:CA:937:A:O4'	2.16	0.45
20:CA:1084:G:N7	20:CA:1085:U:N3	2.64	0.45
20:CA:1090:U:H2'	20:CA:1091:U:C6	2.52	0.45
23:CY:632:LEU:N	23:CY:644:ARG:O	2.50	0.45
23:CY:659:LEU:O	23:CY:663:THR:OG1	2.29	0.45
25:DC:66:PRO:HD2	25:DC:192:ALA:HB1	1.98	0.45
26:DD:67:PHE:CZ	26:DD:157:ARG:HD2	2.52	0.45
30:DH:74:ASN:O	30:DH:78:GLY:N	2.50	0.45
41:DW:65:LEU:O	41:DW:69:LEU:HG	2.17	0.45
42:DX:53:LYS:HD2	42:DX:55:ASN:ND2	2.31	0.45
46:D1:11:ARG:CB	46:D1:12:PRO:HD2	2.43	0.45
47:D4:6:HIS:O	47:D4:8:LYS:N	2.45	0.45
60:DA:132:G:H2'	60:DA:133:C:C6	2.52	0.45
60:DA:140:A:H8	60:DA:1408:C:O2'	2.00	0.45
60:DA:171:G:H2'	60:DA:172:C:C6	2.51	0.45
60:DA:576:U:H4'	60:DA:2502:G:C4	2.52	0.45
60:DA:1406:U:H2'	60:DA:1407:C:C6	2.51	0.45
60:DA:1411:C:N4	60:DA:1591:G:H1	2.14	0.45
60:DA:1497:U:H5'	60:DA:1498:C:C5	2.52	0.45
60:DA:1773:A:C5	60:DA:1829:A:H1'	2.52	0.45
60:DA:2147:G:C8	60:DA:2147:G:H3'	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2543:G:H2'	60:DA:2544:G:C8	2.52	0.45
9:AJ:55:LYS:O	20:AA:972:C:O2'	2.28	0.45
10:AK:29:ILE:HG12	10:AK:42:TRP:O	2.16	0.45
14:AO:39:LEU:HD22	14:AO:42:HIS:HB3	1.99	0.45
14:AO:43:LEU:C	14:AO:45:VAL:H	2.25	0.45
16:AQ:6:LEU:HD23	16:AQ:6:LEU:HA	1.85	0.45
17:AR:71:LYS:O	17:AR:74:ARG:HG3	2.16	0.45
23:AY:11:ARG:HD3	23:AY:40:HIS:CE1	2.52	0.45
23:AY:265:LYS:O	23:AY:267:LYS:HG3	2.17	0.45
23:AY:631:ILE:HA	23:AY:645:ALA:HA	1.99	0.45
28:BF:46:ARG:N	60:BA:443:A:OP1	2.46	0.45
28:BF:48:THR:OG1	60:BA:442:G:H1'	2.16	0.45
29:BG:122:PRO:HD3	29:BG:181:ARG:HB2	1.97	0.45
30:BH:88:LEU:HG	30:BH:130:ARG:HG3	1.98	0.45
33:BO:73:ASP:OD1	33:BO:75:SER:OG	2.26	0.45
35:BQ:41:TRP:HB3	35:BQ:94:VAL:HG21	1.98	0.45
35:BQ:76:LYS:HB3	35:BQ:91:GLU:OE1	2.16	0.45
35:BQ:130:LYS:HD3	35:BQ:131:ILE:N	2.31	0.45
36:BR:23:ASN:HD21	60:BA:1277:G:H1'	1.81	0.45
36:BR:66:VAL:HG12	36:BR:70:LEU:HD12	1.99	0.45
37:BS:11:LYS:HD2	37:BS:13:ARG:HE	1.82	0.45
37:BS:95:HIS:O	37:BS:97:ARG:N	2.49	0.45
41:BW:14:PRO:CG	41:BW:78:GLU:HB2	2.47	0.45
44:BZ:3:TYR:O	44:BZ:57:ILE:HD12	2.17	0.45
46:B1:77:ALA:HB1	46:B1:82:LEU:HD21	1.98	0.45
54:B8:50:LEU:O	54:B8:53:PRO:HD2	2.15	0.45
60:BA:37:C:H2'	60:BA:38:A:H8	1.81	0.45
60:BA:134:C:N4	60:BA:145:G:H1	2.15	0.45
60:BA:407:G:H2'	60:BA:408:G:C8	2.52	0.45
60:BA:531:C:H5"	60:BA:532:A:C2	2.52	0.45
60:BA:542:C:H2'	60:BA:543:C:C6	2.52	0.45
60:BA:831:G:H8	60:BA:831:G:O5'	1.99	0.45
60:BA:954:G:H2'	60:BA:955:C:H6	1.81	0.45
60:BA:960:A:H2'	60:BA:962:G:O4'	2.17	0.45
60:BA:1001:A:H2'	60:BA:1002:G:O4'	2.17	0.45
60:BA:1199:U:H2'	60:BA:1200:C:O4'	2.16	0.45
60:BA:1441:G:H4'	60:BA:1628:G:OP1	2.16	0.45
60:BA:1783:A:HO2'	60:BA:2607:G:HO2'	1.61	0.45
60:BA:2090:G:H2'	60:BA:2091:U:O4'	2.17	0.45
60:BA:2387:U:O5'	60:BA:2387:U:H6	1.99	0.45
60:BA:2439:A:O2'	60:BA:2440:C:OP2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:2446:G:O2'	60:BA:2448:A:H5"	2.16	0.45
60:BA:2647:U:H2'	60:BA:2648:C:H6	1.74	0.45
60:BA:2831:G:H1'	60:BA:2883:A:H2'	1.99	0.45
1:CB:108:ILE:O	1:CB:112:VAL:HG23	2.16	0.45
1:CB:162:ILE:HG12	1:CB:164:VAL:CG2	2.47	0.45
1:CB:165:VAL:O	1:CB:187:LEU:N	2.46	0.45
7:CH:88:LYS:H	7:CH:88:LYS:HG3	1.55	0.45
9:CJ:50:ILE:HG12	13:CN:41:ARG:HH12	1.81	0.45
9:CJ:53:PRO:HG3	20:CA:1058:G:N2	2.31	0.45
12:CM:66:LEU:O	12:CM:68:GLY:N	2.50	0.45
15:CP:51:VAL:HG12	15:CP:52:ASP:H	1.81	0.45
20:CA:234:C:H2'	20:CA:235:C:H6	1.82	0.45
20:CA:254:G:H2'	20:CA:255:G:C8	2.52	0.45
20:CA:581:G:H8	20:CA:581:G:OP2	1.99	0.45
20:CA:1440(J):C:H1'	20:CA:1440(K):G:N2	2.31	0.45
23:CY:126:GLU:C	23:CY:129:LYS:H	2.25	0.45
25:DC:182:PRO:HB3	25:DC:183:PRO:HD2	1.99	0.45
27:DE:16:ARG:HE	27:DE:16:ARG:HB3	1.43	0.45
27:DE:34:VAL:O	27:DE:48:GLN:HB2	2.16	0.45
37:DS:94:TYR:HE1	37:DS:100:ALA:HB1	1.81	0.45
46:D1:18:ILE:HG12	46:D1:20:ARG:N	2.31	0.45
48:DN:78:TYR:HB2	60:DA:2642:G:P	2.50	0.45
60:DA:635:C:O2	60:DA:639:U:H4'	2.16	0.45
60:DA:711:G:H2'	60:DA:712:G:O4'	2.16	0.45
60:DA:715:G:H2'	60:DA:716:A:C8	2.52	0.45
60:DA:1173:G:N2	60:DA:1177:A:H62	2.11	0.45
60:DA:2893:G:H5"	60:DA:2894:G:O4'	2.16	0.45
3:AD:100:ARG:HG3	3:AD:137:SER:HA	1.98	0.45
11:AL:85:ILE:HA	11:AL:99:HIS:O	2.16	0.45
14:AO:50:HIS:CE1	20:AA:764:C:H5"	2.51	0.45
14:AO:82:ILE:HG12	14:AO:87:ILE:H	1.82	0.45
15:AP:1:MET:HB3	20:AA:135:C:C4	2.52	0.45
18:AS:30:LEU:HD22	18:AS:32:LYS:HD2	1.99	0.45
20:AA:359:U:H2'	20:AA:360:A:C8	2.52	0.45
20:AA:406:G:H2'	20:AA:407:G:O4'	2.17	0.45
20:AA:1028:C:N4	20:AA:1033:G:H1	2.15	0.45
20:AA:1062:U:H2'	20:AA:1063:C:C5	2.52	0.45
23:AY:446:THR:OG1	23:AY:447:GLY:N	2.46	0.45
23:AY:616:TYR:CE1	23:AY:666:ARG:HD3	2.52	0.45
25:BC:114:VAL:HG23	25:BC:137:LEU:HB3	1.99	0.45
27:BE:111:ARG:HG2	36:BR:2:ARG:NH2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:24:LEU:HB3	28:BF:25:PRO:CD	2.45	0.45
28:BF:72:ARG:NH1	60:BA:1256:G:O5'	2.49	0.45
30:BH:87:LEU:HB3	30:BH:162:ILE:HG22	1.97	0.45
31:BJ:25:UNK:O	31:BJ:27:UNK:N	2.49	0.45
33:BO:3:GLN:HG2	60:BA:1666:G:O2'	2.16	0.45
38:BT:1:MET:HG3	38:BT:2:ASN:H	1.81	0.45
38:BT:128:GLU:C	38:BT:129:ARG:HE	2.24	0.45
39:BU:61:TRP:CG	39:BU:94:ASN:HA	2.52	0.45
39:BU:90:VAL:C	39:BU:92:ARG:N	2.74	0.45
42:BX:8:ILE:HG23	42:BX:30:VAL:HG12	1.97	0.45
44:BZ:77:ASP:O	44:BZ:79:ARG:N	2.50	0.45
44:BZ:128:VAL:HG21	44:BZ:134:PRO:HD3	1.97	0.45
46:B1:43:TYR:CD2	46:B1:44:PRO:HD2	2.52	0.45
50:B3:8:LEU:HD22	50:B3:31:LEU:HA	1.98	0.45
60:BA:1162:G:H2'	60:BA:1163:G:C8	2.52	0.45
60:BA:1290:C:C2	60:BA:1291:C:C5	3.05	0.45
60:BA:1347:G:H1	60:BA:1599:C:H42	1.65	0.45
60:BA:1516:U:H2'	60:BA:1517:G:H8	1.75	0.45
60:BA:1653:G:H4'	60:BA:1654:A:O5'	2.16	0.45
60:BA:2045:C:H2'	60:BA:2046:G:O4'	2.17	0.45
60:BA:2506:U:OP2	60:BA:2576:G:N2	2.48	0.45
2:CC:83:ARG:NH1	2:CC:87:LEU:HD21	2.32	0.45
2:CC:139:GLN:O	2:CC:143:GLU:HG3	2.17	0.45
4:CE:39:GLY:O	4:CE:69:VAL:N	2.50	0.45
5:CF:99:ALA:N	17:CR:29:PHE:O	2.43	0.45
6:CG:138:LYS:O	6:CG:142:GLU:HG2	2.16	0.45
7:CH:119:LEU:HB3	7:CH:123:GLU:HB3	1.98	0.45
7:CH:120:THR:H	7:CH:123:GLU:HB2	1.82	0.45
11:CL:93:LEU:HD11	11:CL:96:VAL:HG13	1.99	0.45
12:CM:33:ALA:C	12:CM:35:GLU:H	2.25	0.45
13:CN:61:TRP:CZ2	20:CA:1368:G:H4'	2.50	0.45
19:CT:36:LEU:HG	19:CT:62:LEU:HD12	1.98	0.45
20:CA:134:A:H2'	20:CA:135:C:C6	2.52	0.45
20:CA:781:A:H2	20:CA:1514:C:H1'	1.80	0.45
20:CA:1478:C:H2'	20:CA:1479:C:H6	1.81	0.45
23:CY:322:VAL:HB	23:CY:378:VAL:HG13	1.99	0.45
23:CY:325:LEU:HD13	23:CY:327:PHE:HE2	1.82	0.45
23:CY:356:LEU:HB2	23:CY:378:VAL:CG2	2.47	0.45
23:CY:526:VAL:H	23:CY:566:THR:HA	1.81	0.45
25:DC:172:ILE:CG2	25:DC:193:PHE:HZ	2.30	0.45
27:DE:145:LYS:NZ	60:DA:2054:A:OP1	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:10:PRO:CB	28:DF:19:GLU:HA	2.41	0.45
28:DF:58:ALA:C	28:DF:59:TYR:HD2	2.25	0.45
29:DG:40:ASN:HA	29:DG:90:LEU:O	2.16	0.45
34:DP:60:MET:O	54:D8:27:THR:HG21	2.16	0.45
34:DP:64:LYS:HE3	60:DA:2416:C:H5"	1.99	0.45
38:DT:137:LYS:HG2	38:DT:138:ALA:H	1.82	0.45
41:DW:18:ARG:CZ	60:DA:518:G:H4'	2.47	0.45
42:DX:82:GLN:NE2	42:DX:83:VAL:O	2.50	0.45
48:DN:137:LYS:HZ3	48:DN:137:LYS:CA	2.27	0.45
49:D2:21:LEU:HB2	49:D2:64:LEU:HD23	1.98	0.45
59:DB:59:A:H2'	59:DB:60:C:O4'	2.16	0.45
60:DA:46:C:OP2	60:DA:215:G:H2'	2.17	0.45
60:DA:259:G:H2'	60:DA:260:G:C8	2.51	0.45
60:DA:628:G:H1'	60:DA:637:A:N1	2.31	0.45
60:DA:773:U:H2'	60:DA:778:G:O2'	2.16	0.45
60:DA:800:A:OP1	60:DA:800:A:H8	2.00	0.45
60:DA:836:G:H2'	60:DA:837:C:C6	2.52	0.45
60:DA:845:G:OP2	60:DA:845:G:N2	2.40	0.45
60:DA:922:U:H2'	60:DA:923:C:H6	1.81	0.45
60:DA:1274:A:H8	60:DA:1274:A:O5'	2.00	0.45
60:DA:1430:C:H2'	60:DA:1431:U:C6	2.52	0.45
60:DA:1479:G:H1	60:DA:1514:U:H3	1.64	0.45
60:DA:1727:U:C4	60:DA:1728:G:C6	3.04	0.45
60:DA:2504:U:H2'	60:DA:2505:G:H5'	1.98	0.45
60:DA:2670:A:H2'	60:DA:2671:A:C8	2.52	0.45
60:DA:712(B):A:H3'	60:DA:2713:A:H5'	1.98	0.45
3:AD:57:ARG:HH21	4:AE:107:ARG:HH21	1.65	0.45
4:AE:127:ASN:HD21	20:AA:18:C:P	2.39	0.45
6:AG:13:GLN:O	6:AG:24:THR:OG1	2.21	0.45
7:AH:87:SER:HB2	7:AH:93:VAL:HB	1.97	0.45
11:AL:53:ARG:HE	11:AL:53:ARG:H	1.65	0.45
11:AL:92:ASP:HB2	11:AL:93:LEU:H	1.40	0.45
20:AA:52:G:H2'	20:AA:53:A:O4'	2.17	0.45
20:AA:318:G:H2'	20:AA:319:G:H8	1.81	0.45
20:AA:328:C:H1'	20:AA:329:A:OP2	2.16	0.45
20:AA:868:C:H1'	20:AA:873:A:O2'	2.17	0.45
20:AA:1151:A:H1'	20:AA:1152:A:C8	2.52	0.45
20:AA:1438:G:N2	20:AA:1463:C:N3	2.49	0.45
20:AA:1440(J):C:H1'	20:AA:1440(K):G:C2	2.52	0.45
20:AA:1517:G:H1'	60:BA:1919:A:O3'	2.16	0.45
23:AY:25:LYS:NZ	23:AY:84:THR:HG23	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:342:TYR:CD1	23:AY:349:LYS:HG2	2.41	0.45
23:AY:567:LEU:O	23:AY:568:TYR:HB3	2.17	0.45
23:AY:580:MET:O	23:AY:583:LYS:HB3	2.16	0.45
25:BC:84:ILE:HG23	25:BC:95:VAL:HB	1.97	0.45
27:BE:67:PHE:CE1	27:BE:69:LYS:HB3	2.52	0.45
28:BF:191:ARG:HB3	28:BF:193:VAL:HG23	1.98	0.45
28:BF:194:MET:CE	28:BF:199:TRP:HD1	2.29	0.45
32:BK:98:ARG:H	32:BK:98:ARG:HG3	1.62	0.45
34:BP:85:LEU:H	34:BP:85:LEU:HG	1.63	0.45
38:BT:129:ARG:HE	38:BT:129:ARG:HA	1.82	0.45
40:BV:35:LEU:HB2	40:BV:57:VAL:HG22	1.98	0.45
51:B5:3:LYS:NZ	60:BA:2015:A:H2	2.15	0.45
51:B5:18:ALA:C	51:B5:21:SER:H	2.23	0.45
59:BB:95:U:H2'	59:BB:96:G:C8	2.52	0.45
60:BA:363(G):A:H8	60:BA:363(G):A:O5'	2.00	0.45
60:BA:572:A:H2	60:BA:2029:G:N2	2.09	0.45
60:BA:1025:G:C5	60:BA:1135:C:H1'	2.52	0.45
60:BA:1308:A:H2'	60:BA:1309:G:O4'	2.17	0.45
60:BA:1965:C:H3'	60:BA:1966:A:H8	1.82	0.45
60:BA:2086:U:H3	60:BA:2233:U:H3	1.65	0.45
60:BA:2096:U:H2'	60:BA:2097:C:C5	2.51	0.45
60:BA:2737:G:H2'	60:BA:2738:A:H8	1.81	0.45
60:BA:2789:C:O3'	60:BA:2790:A:H4'	2.17	0.45
2:CC:65:ALA:O	2:CC:67:THR:N	2.50	0.45
2:CC:84:ILE:HG13	2:CC:101:LEU:HD13	1.99	0.45
3:CD:21:LEU:HD11	3:CD:66:ARG:O	2.16	0.45
4:CE:34:VAL:HG11	4:CE:63:ARG:HG2	1.99	0.45
5:CF:49:ALA:HB1	17:CR:80:PRO:HB3	1.98	0.45
6:CG:89:MET:HA	6:CG:155:ARG:HD2	1.97	0.45
6:CG:97:GLN:O	6:CG:100:ALA:HB3	2.17	0.45
11:CL:58:VAL:CG1	11:CL:60:LEU:HD13	2.46	0.45
12:CM:122:LYS:NZ	12:CM:125:ARG:HH21	2.14	0.45
14:CO:35:ARG:O	14:CO:38:ARG:HB2	2.17	0.45
15:CP:54:GLU:H	15:CP:54:GLU:HG3	1.47	0.45
20:CA:584:G:H1	20:CA:757:U:H3	1.62	0.45
20:CA:996:A:H2'	20:CA:997:U:H6	1.82	0.45
20:CA:1213:A:O2'	20:CA:1215:G:C8	2.70	0.45
20:CA:1440(D):A:N3	20:CA:1440(D):A:H2'	2.32	0.45
23:CY:133:ILE:HB	23:CY:259:PHE:CE1	2.51	0.45
23:CY:170:ARG:HB3	23:CY:171:GLU:H	1.58	0.45
26:DD:160:GLY:HA3	60:DA:1820:U:C4	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:173:VAL:C	28:DF:174:VAL:O	2.51	0.45
29:DG:122:PRO:HA	29:DG:125:PHE:HE1	1.81	0.45
33:DO:71:ARG:C	33:DO:73:ASP:H	2.25	0.45
37:DS:28:VAL:HG22	37:DS:88:ASP:O	2.17	0.45
48:DN:78:TYR:HD2	60:DA:2642:G:C4'	2.07	0.45
48:DN:78:TYR:HA	48:DN:79:PRO:HD3	1.85	0.45
51:D5:3:LYS:HG3	60:DA:2613:U:OP2	2.17	0.45
51:D5:9:LYS:NZ	60:DA:2019:A:OP2	2.44	0.45
53:D7:19:ARG:O	53:D7:23:ARG:N	2.50	0.45
60:DA:187:G:H1	60:DA:209:C:H42	1.64	0.45
60:DA:830:G:H4'	60:DA:831:G:OP2	2.17	0.45
60:DA:1426:G:H2'	60:DA:1427:A:N7	2.31	0.45
60:DA:1474:C:H42	60:DA:1519:G:H1	1.64	0.45
60:DA:2595:G:H21	60:DA:2598:A:H62	1.65	0.45
60:DA:2707:G:H2'	60:DA:2708:G:C8	2.52	0.45
60:DA:2798:C:H5"	60:DA:2799:A:OP2	2.17	0.45
2:AC:95:THR:O	2:AC:97:LYS:N	2.50	0.45
7:AH:110:ALA:HB3	7:AH:121:ASP:HB3	1.98	0.45
8:AI:95:LYS:HE2	8:AI:95:LYS:HB2	1.61	0.45
10:AK:110:ASP:O	10:AK:112:THR:N	2.49	0.45
11:AL:33:ARG:HH11	11:AL:61:THR:HG1	1.65	0.45
17:AR:71:LYS:HA	17:AR:74:ARG:HG3	1.99	0.45
20:AA:479:C:H2'	20:AA:480:U:O4'	2.17	0.45
20:AA:783:C:H2'	20:AA:784:C:H6	1.81	0.45
20:AA:1154:G:H2'	20:AA:1155:G:C8	2.52	0.45
23:AY:590:ILE:O	23:AY:594:VAL:HG23	2.17	0.45
25:BC:90:ALA:HB1	25:BC:154:ILE:HG21	1.98	0.45
26:BD:76:PRO:C	26:BD:98:VAL:HG23	2.41	0.45
27:BE:69:LYS:HG2	27:BE:69:LYS:O	2.16	0.45
29:BG:16:ARG:HB2	29:BG:17:PRO:HD3	1.99	0.45
29:BG:58:GLN:O	29:BG:62:LEU:HD13	2.16	0.45
29:BG:72:ARG:C	60:BA:2312:U:H5"	2.42	0.45
29:BG:135:LEU:HD22	29:BG:140:ILE:HD11	1.98	0.45
30:BH:175:LYS:HE2	30:BH:176:ALA:N	2.29	0.45
31:BJ:23:UNK:HA	31:BJ:111:UNK:O	2.17	0.45
34:BP:57:THR:O	34:BP:57:THR:OG1	2.26	0.45
34:BP:81:GLN:HB3	34:BP:112:LEU:HA	1.99	0.45
35:BQ:3:MET:N	35:BQ:3:MET:SD	2.90	0.45
35:BQ:7:MET:HB2	35:BQ:8:LYS:H	1.59	0.45
38:BT:28:VAL:N	38:BT:47:GLY:O	2.48	0.45
39:BU:106:PHE:O	39:BU:110:VAL:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BN:2:LYS:O	48:BN:3:THR:C	2.60	0.45
48:BN:128:HIS:CE1	48:BN:134:ARG:CZ	3.00	0.45
52:B6:47:THR:OG1	52:B6:48:VAL:HG22	2.16	0.45
60:BA:55:G:O2'	60:BA:127:A:N1	2.42	0.45
60:BA:797:C:H2'	60:BA:798:G:H8	1.82	0.45
60:BA:859:G:N1	60:BA:917:A:OP2	2.40	0.45
60:BA:1020:A:H61	60:BA:1142:U:H5'	1.82	0.45
60:BA:1175:U:H2'	60:BA:1176:G:C8	2.52	0.45
60:BA:1920:C:H2'	60:BA:1921:G:O4'	2.17	0.45
60:BA:1937:A:N7	60:BA:1939:U:H2'	2.32	0.45
60:BA:2093:G:H1'	60:BA:2198:A:H2	1.82	0.45
60:BA:2392:A:H2'	60:BA:2393:A:O4'	2.17	0.45
1:CB:101:MET:H	1:CB:101:MET:HG3	1.58	0.45
5:CF:19:LEU:HD11	5:CF:59:TYR:CE1	2.52	0.45
6:CG:26:PHE:CE2	6:CG:30:ILE:HD11	2.51	0.45
7:CH:60:ARG:HB2	7:CH:60:ARG:NH1	2.32	0.45
13:CN:43:CYS:O	13:CN:46:GLU:HG2	2.17	0.45
16:CQ:63:ARG:NH2	20:CA:186(I):U:H1'	2.32	0.45
16:CQ:83:ASP:O	16:CQ:87:LYS:HG3	2.17	0.45
18:CS:7:LYS:HD3	18:CS:7:LYS:HA	1.73	0.45
20:CA:255:G:O6	20:CA:271:C:N3	2.49	0.45
20:CA:1516:G:H2'	20:CA:1518:A:OP2	2.16	0.45
23:CY:25:LYS:NZ	23:CY:84:THR:HG23	2.31	0.45
23:CY:616:TYR:CE1	23:CY:666:ARG:HD3	2.52	0.45
25:DC:40:GLU:HB3	25:DC:217:THR:C	2.41	0.45
25:DC:47:LYS:HB2	25:DC:169:THR:HB	1.98	0.45
27:DE:13:ARG:HA	27:DE:21:VAL:C	2.40	0.45
27:DE:143:ASN:HB3	27:DE:147:PRO:HD2	1.99	0.45
29:DG:111:LEU:O	29:DG:112:PRO:C	2.59	0.45
37:DS:95:HIS:NE2	59:DB:48:A:H4'	2.31	0.45
41:DW:48:ALA:O	41:DW:52:GLU:HB2	2.17	0.45
44:DZ:93:ASP:HA	44:DZ:130:PRO:HB2	1.99	0.45
44:DZ:111:VAL:HG12	44:DZ:112:ARG:H	1.82	0.45
44:DZ:112:ARG:HD3	44:DZ:113:ALA:N	2.32	0.45
48:DN:19:GLU:C	48:DN:21:LYS:H	2.24	0.45
48:DN:100:GLU:O	48:DN:101:HIS:C	2.60	0.45
54:D8:48:PHE:O	54:D8:49:VAL:HG22	2.17	0.45
59:DB:24:G:N7	59:DB:56:G:O2'	2.49	0.45
60:DA:1782:C:H42	60:DA:2586:C:N4	2.14	0.45
1:AB:48:MET:HA	1:AB:51:LEU:HD12	1.98	0.45
3:AD:70:ILE:HD13	3:AD:75:PHE:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:20:ARG:O	8:AI:59:PHE:HA	2.17	0.45
11:AL:116:SER:HB3	11:AL:120:TYR:CD2	2.52	0.45
14:AO:77:ARG:HA	14:AO:80:ALA:HB3	1.99	0.45
15:AP:16:HIS:NE2	15:AP:38:TYR:HB2	2.32	0.45
20:AA:363:A:H2'	20:AA:364:A:C8	2.52	0.45
20:AA:395:C:H2'	20:AA:396:G:H8	1.82	0.45
20:AA:422:C:O2	20:AA:423:G:N2	2.50	0.45
20:AA:507:C:C6	20:AA:508:C:H6	2.35	0.45
20:AA:669:U:H2'	20:AA:670:G:O4'	2.17	0.45
20:AA:976:G:OP2	20:AA:1358:U:O2'	2.25	0.45
20:AA:1134:G:C2	20:AA:1135:U:H1'	2.52	0.45
20:AA:1287:A:N3	20:AA:1353:G:O2'	2.43	0.45
20:AA:1404:C:C2	20:AA:1499:A:C2	3.05	0.45
23:AY:53:ASP:OD1	61:AY:701:GNP:H3'	2.16	0.45
23:AY:59:ARG:CD	23:AY:65:ILE:H	2.29	0.45
23:AY:74:TRP:HD1	23:AY:77:HIS:HD1	1.63	0.45
23:AY:550:MET:HE3	23:AY:560:VAL:HB	1.98	0.45
25:BC:43:GLU:CD	60:BA:2123:G:H21	2.23	0.45
25:BC:47:LYS:HD3	25:BC:169:THR:HG22	1.99	0.45
33:BO:69:ILE:HD12	33:BO:69:ILE:HA	1.75	0.45
36:BR:5:LYS:CD	60:BA:2820:A:H4'	2.47	0.45
39:BU:83:LEU:HG	39:BU:88:ILE:HD12	1.99	0.45
42:BX:12:VAL:CG1	42:BX:17:ALA:HB1	2.47	0.45
43:BY:96:ILE:O	43:BY:98:VAL:N	2.50	0.45
46:B1:25:LYS:HB3	60:BA:388:G:P	2.57	0.45
48:BN:25:ARG:O	48:BN:28:THR:HB	2.17	0.45
49:B2:25:VAL:O	49:B2:29:LYS:HB2	2.17	0.45
49:B2:48:HIS:CG	60:BA:95:G:HO2'	2.35	0.45
52:B6:41:PRO:HD2	52:B6:45:LYS:O	2.17	0.45
55:B9:2:LYS:HG2	55:B9:33:LYS:O	2.17	0.45
60:BA:220:G:H22	60:BA:427:U:H2'	1.81	0.45
60:BA:466:A:H8	60:BA:466:A:O5'	1.99	0.45
60:BA:506:G:H4'	60:BA:509:C:O2	2.17	0.45
60:BA:949:C:H2'	60:BA:950:G:C8	2.50	0.45
60:BA:1136:G:H2'	60:BA:1137:G:O4'	2.17	0.45
60:BA:2528:U:H2'	60:BA:2530:A:OP1	2.16	0.45
1:CB:24:TRP:H	1:CB:24:TRP:CD1	2.35	0.45
11:CL:78:GLN:H	11:CL:78:GLN:HG2	1.56	0.45
12:CM:120:LYS:HG2	20:CA:955:U:H5'	2.00	0.45
19:CT:25:ARG:HG3	19:CT:29:LYS:HE3	1.99	0.45
19:CT:56:MET:SD	19:CT:88:VAL:HG21	2.57	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:419:C:H2'	20:CA:420:U:O4'	2.17	0.45
22:CW:75:C:O3'	22:CW:76:A:H8	1.98	0.45
25:DC:4:HIS:HB3	25:DC:8:TYR:HB3	1.99	0.45
25:DC:131:ILE:HG12	25:DC:132:LEU:H	1.81	0.45
26:DD:43:ARG:NH2	60:DA:690:G:O2'	2.48	0.45
26:DD:212:SER:HB3	26:DD:217:ARG:HD2	1.99	0.45
26:DD:239:ARG:HE	60:DA:2590:A:H5"	1.82	0.45
27:DE:61:ARG:HG3	60:DA:2811:G:OP1	2.16	0.45
28:DF:110:LEU:HD23	28:DF:183:VAL:HG13	1.99	0.45
30:DH:90:LYS:HG3	30:DH:163:TYR:CD1	2.52	0.45
32:DK:91:PRO:HA	32:DK:135:GLY:CA	2.42	0.45
34:DP:23:PRO:O	34:DP:33:ARG:HA	2.17	0.45
37:DS:33:LYS:O	37:DS:62:LYS:HE2	2.16	0.45
41:DW:4:LYS:HE3	41:DW:4:LYS:HB3	1.88	0.45
44:DZ:103:ARG:HB2	44:DZ:138:GLU:HG2	1.99	0.45
48:DN:112:LEU:HA	48:DN:115:ARG:CB	2.42	0.45
51:D5:16:ARG:HH12	60:DA:517:C:H5"	1.82	0.45
51:D5:23:HIS:HB3	51:D5:24:ALA:H	1.40	0.45
51:D5:56:LYS:HB3	51:D5:57:VAL:H	1.64	0.45
60:DA:384:U:H2'	60:DA:385:C:C6	2.52	0.45
60:DA:542:C:H2'	60:DA:543:C:C6	2.52	0.45
60:DA:550:G:O2'	60:DA:1220:A:N3	2.41	0.45
60:DA:1005:C:N3	60:DA:1006:C:C4	2.85	0.45
60:DA:1229:G:H2'	60:DA:1230:C:H6	1.81	0.45
60:DA:1892:C:H2'	60:DA:1893:C:O4'	2.17	0.45
60:DA:2366:A:H2'	60:DA:2367:G:O4'	2.17	0.45
4:AE:57:LYS:O	4:AE:60:TYR:HB3	2.17	0.44
6:AG:86:GLN:O	6:AG:148:ASN:ND2	2.50	0.44
7:AH:95:VAL:HG23	7:AH:131:GLY:O	2.17	0.44
8:AI:93:ARG:HE	20:AA:1178:G:P	2.40	0.44
11:AL:113:ARG:HE	11:AL:115:LYS:H	1.65	0.44
20:AA:319:G:H2'	20:AA:320:C:O4'	2.16	0.44
20:AA:818:G:H3'	20:AA:819:A:H5"	1.99	0.44
20:AA:1472:U:H2'	20:AA:1473:A:C8	2.52	0.44
23:AY:238:THR:HG23	23:AY:240:GLU:H	1.82	0.44
25:BC:166:ASN:HB2	25:BC:170:GLY:HA2	1.99	0.44
26:BD:108:PRO:HA	26:BD:197:GLY:N	2.25	0.44
26:BD:248:SER:O	26:BD:250:TRP:N	2.45	0.44
27:BE:105:THR:O	27:BE:196:VAL:HA	2.17	0.44
28:BF:45:ARG:NH1	60:BA:444:C:OP2	2.50	0.44
29:BG:5:VAL:HG21	29:BG:100:TRP:HB3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BR:33:ARG:NH2	36:BR:116:LEU:HB2	2.31	0.44
37:BS:23:ARG:HD3	37:BS:23:ARG:HA	1.33	0.44
38:BT:65:LYS:HE3	38:BT:66:VAL:N	2.29	0.44
41:BW:35:ILE:O	41:BW:39:THR:OG1	2.35	0.44
41:BW:68:ARG:HB3	41:BW:110:LYS:H	1.82	0.44
60:BA:124:G:N2	60:BA:128:C:N3	2.65	0.44
60:BA:141(A):A:N6	60:BA:1595:G:O2'	2.50	0.44
60:BA:268:C:N4	60:BA:424:G:H1	2.15	0.44
60:BA:628:G:H1'	60:BA:637:A:N1	2.31	0.44
60:BA:1417:C:H2'	60:BA:1418:G:O4'	2.17	0.44
60:BA:1479:G:H2'	60:BA:1480:G:H8	1.82	0.44
60:BA:2041:U:H2'	60:BA:2042:A:C1'	2.48	0.44
2:CC:72:LYS:HA	2:CC:72:LYS:HD2	1.83	0.44
2:CC:110:ASN:OD1	2:CC:110:ASN:N	2.49	0.44
6:CG:23:VAL:O	6:CG:27:ILE:HG13	2.16	0.44
7:CH:21:LYS:N	7:CH:65:TYR:OH	2.50	0.44
7:CH:104:ARG:HB3	7:CH:107:LEU:HG	1.99	0.44
11:CL:60:LEU:HB2	11:CL:62:SER:H	1.80	0.44
15:CP:81:ARG:HH11	15:CP:81:ARG:HB2	1.82	0.44
18:CS:49:ILE:HG22	18:CS:51:VAL:HG13	1.98	0.44
19:CT:14:LYS:HA	19:CT:17:ARG:NE	2.32	0.44
20:CA:124:G:OP1	20:CA:310:G:N2	2.50	0.44
20:CA:186(C):G:C6	20:CA:186(O):G:C6	3.05	0.44
20:CA:867:G:H2'	20:CA:868:C:C6	2.52	0.44
20:CA:984:C:N3	20:CA:1221:G:N2	2.47	0.44
20:CA:997:U:H3	20:CA:1044:A:H2	1.64	0.44
20:CA:1428:A:H2'	20:CA:1429:C:H6	1.82	0.44
23:CY:342:TYR:N	23:CY:390:VAL:O	2.39	0.44
23:CY:683:VAL:HG12	23:CY:687:LEU:HG	1.98	0.44
26:DD:24:ILE:HD12	26:DD:91:ARG:HG3	2.00	0.44
26:DD:95:LEU:HD11	26:DD:105:ILE:HB	1.98	0.44
26:DD:143:HIS:CE1	26:DD:192:THR:HB	2.52	0.44
26:DD:159:ALA:HB1	26:DD:198:ASN:O	2.17	0.44
27:DE:13:ARG:N	27:DE:23:VAL:HG22	2.32	0.44
30:DH:85:LYS:HD2	30:DH:141:VAL:CG1	2.46	0.44
33:DO:70:LYS:HD2	60:DA:2683:C:O2	2.17	0.44
43:DY:28:LYS:HE2	43:DY:28:LYS:HB3	1.86	0.44
43:DY:84:ARG:CZ	43:DY:97:ARG:HH12	2.30	0.44
46:D1:67:ILE:N	46:D1:68:PRO:HD2	2.32	0.44
47:D4:1:MET:HE2	59:DB:43:C:H4'	1.99	0.44
48:DN:25:ARG:O	48:DN:28:THR:HB	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:D9:2:LYS:HZ1	55:D9:35:ARG:HG3	1.81	0.44
60:DA:200:U:O4	60:DA:250:G:N2	2.50	0.44
60:DA:694:U:H2'	60:DA:695:G:H8	1.82	0.44
60:DA:1187:G:H8	60:DA:1187:G:O5'	2.00	0.44
60:DA:1285:G:N2	60:DA:1328:G:H5"	2.32	0.44
60:DA:1819:A:C4'	60:DA:1820:U:H5'	2.46	0.44
1:AB:175:ARG:NH2	20:AA:1075:C:O3'	2.50	0.44
7:AH:80:ILE:H	7:AH:80:ILE:HD12	1.81	0.44
9:AJ:19:SER:O	9:AJ:23:ILE:HG12	2.16	0.44
14:AO:58:MET:HE3	14:AO:58:MET:HB2	1.70	0.44
16:AQ:3:LYS:HG3	20:AA:128:G:H4'	1.99	0.44
17:AR:61:LYS:HB2	17:AR:61:LYS:HE3	1.77	0.44
18:AS:49:ILE:HG22	18:AS:51:VAL:HG13	1.99	0.44
18:AS:67:VAL:O	18:AS:69:HIS:N	2.47	0.44
19:AT:66:ALA:C	19:AT:68:LYS:H	2.25	0.44
20:AA:68(A):G:H1	20:AA:68(Y):C:H42	1.64	0.44
20:AA:279:A:H5"	20:AA:281:G:O4'	2.17	0.44
20:AA:1052:U:H3	20:AA:1206:G:H1	1.64	0.44
20:AA:1271:G:C5'	20:AA:1314:C:H5'	2.47	0.44
20:AA:1290:G:H3'	20:AA:1291:G:C8	2.52	0.44
20:AA:1369:C:H2'	20:AA:1370:G:O4'	2.17	0.44
20:AA:1494:G:H2'	20:AA:1495:U:C6	2.52	0.44
23:AY:326:THR:OG1	23:AY:377:VAL:HG13	2.17	0.44
23:AY:580:MET:HA	23:AY:583:LYS:HB3	2.00	0.44
23:AY:591:LYS:HD3	23:AY:591:LYS:HA	1.74	0.44
25:BC:90:ALA:HA	25:BC:155:ARG:NH2	2.33	0.44
25:BC:213:VAL:HG21	25:BC:225:ILE:HD11	1.99	0.44
28:BF:27:GLU:HB3	28:BF:28:ILE:H	1.63	0.44
28:BF:59:TYR:CD2	28:BF:59:TYR:N	2.84	0.44
28:BF:170:LEU:HD13	28:BF:171:PRO:HD2	1.99	0.44
28:BF:192:LEU:CD2	28:BF:194:MET:HE2	2.46	0.44
30:BH:94:TYR:HA	30:BH:107:VAL:HA	1.99	0.44
36:BR:68:ARG:NE	60:BA:2707:G:O3'	2.50	0.44
41:BW:70:TYR:O	41:BW:107:LEU:HB2	2.18	0.44
43:BY:75:ILE:HD13	43:BY:76:CYS:H	1.82	0.44
55:B9:30:PRO:CG	60:BA:2527:C:H5"	2.48	0.44
60:BA:67:U:H2'	60:BA:68:G:H8	1.82	0.44
60:BA:270(L):C:H2'	60:BA:270(M):U:H5"	1.99	0.44
60:BA:775:G:C4	60:BA:794:G:C8	3.05	0.44
60:BA:859:G:H22	60:BA:917:A:H5"	1.82	0.44
60:BA:1077:A:C2	60:BA:1088:A:H2'	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1510:A:H2'	60:BA:1511:A:N9	2.32	0.44
60:BA:1669:A:O3'	60:BA:2549:G:H5'	2.17	0.44
60:BA:1681:G:N3	60:BA:1762:A:H2'	2.32	0.44
60:BA:1932:A:H3'	60:BA:1933:G:H8	1.82	0.44
60:BA:2037:G:H2'	60:BA:2038:G:N7	2.31	0.44
60:BA:2475:C:H42	60:BA:2529:G:H22	1.65	0.44
60:BA:2795:G:H3'	60:BA:2797:U:C5'	2.46	0.44
60:BA:2829:C:H2'	60:BA:2830:G:C8	2.51	0.44
60:BA:2836:U:H2'	60:BA:2837:G:H8	1.81	0.44
1:CB:207:ALA:O	1:CB:211:ILE:HG12	2.18	0.44
2:CC:6:HIS:HB3	2:CC:9:GLY:H	1.82	0.44
2:CC:54:ARG:HB3	2:CC:56:ASP:OD1	2.17	0.44
3:CD:15:GLU:OE1	3:CD:63:LYS:HG3	2.17	0.44
5:CF:40:VAL:HG23	5:CF:63:TYR:CD1	2.53	0.44
8:CI:117:HIS:HB2	8:CI:121:ARG:HB3	1.98	0.44
9:CJ:16:LEU:HD22	9:CJ:16:LEU:HA	1.79	0.44
11:CL:104:VAL:HG23	11:CL:106:ASP:H	1.82	0.44
14:CO:58:MET:HE3	14:CO:58:MET:HB2	1.78	0.44
14:CO:68:ARG:NH1	20:CA:583:A:OP1	2.50	0.44
15:CP:31:LYS:HB3	15:CP:31:LYS:HE2	1.78	0.44
16:CQ:69:LYS:HG3	20:CA:254:G:H5"	1.99	0.44
20:CA:31:G:H22	20:CA:48:C:H5"	1.82	0.44
20:CA:217:C:H2'	20:CA:218:C:C6	2.52	0.44
20:CA:567:G:C2	20:CA:568:G:H1'	2.51	0.44
20:CA:776:G:HO2'	20:CA:777:A:H8	1.64	0.44
25:DC:14:LYS:HG3	25:DC:33:LEU:HD22	1.99	0.44
25:DC:78:ILE:HB	25:DC:120:VAL:HG21	1.97	0.44
26:DD:239:ARG:NE	60:DA:2590:A:H5"	2.32	0.44
27:DE:126:PRO:HB3	27:DE:130:GLY:HA3	1.98	0.44
27:DE:197:ILE:HG12	27:DE:198:VAL:N	2.28	0.44
28:DF:31:HIS:NE2	60:DA:599:G:H4'	2.32	0.44
28:DF:91:GLY:O	28:DF:93:LYS:N	2.49	0.44
29:DG:29:TRP:HB3	59:DB:57:A:C2	2.52	0.44
30:DH:149:ARG:NH1	30:DH:164:TYR:H	2.12	0.44
32:DK:6:ALA:O	32:DK:8:VAL:HG23	2.17	0.44
33:DO:1:MET:O	60:DA:1665:A:O2'	2.34	0.44
35:DQ:9:TYR:OH	60:DA:911:A:H2'	2.17	0.44
35:DQ:39:PRO:HB3	35:DQ:99:PRO:HD3	1.99	0.44
35:DQ:127:ILE:C	35:DQ:128:LYS:HD3	2.43	0.44
38:DT:38:ASN:O	38:DT:40:THR:HG23	2.17	0.44
39:DU:95:LEU:HD13	40:DV:4:ILE:HG12	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DW:75:TYR:O	41:DW:104:THR:N	2.50	0.44
46:D1:23:LYS:CE	46:D1:33:LYS:HB3	2.47	0.44
48:DN:1:MET:O	48:DN:2:LYS:HB2	2.18	0.44
50:D3:25:ALA:HB2	60:DA:849:A:N1	2.33	0.44
59:DB:14:U:OP2	59:DB:70:C:O2'	2.28	0.44
60:DA:780:G:H2'	60:DA:782:A:C5	2.52	0.44
60:DA:1056:G:H1'	60:DA:1103:A:H61	1.82	0.44
60:DA:1213:A:C8	60:DA:1236:G:N2	2.77	0.44
60:DA:1305:C:C2	60:DA:1623:G:N2	2.79	0.44
60:DA:2587:A:H62	60:DA:2608:G:H21	1.66	0.44
60:DA:2594:C:H2'	60:DA:2595:G:O4'	2.17	0.44
4:AE:146:ALA:O	4:AE:150:ARG:NH1	2.51	0.44
5:AF:12:PRO:HB3	5:AF:58:GLY:CA	2.47	0.44
5:AF:67:MET:HB2	5:AF:67:MET:HE3	1.61	0.44
7:AH:97:VAL:HG12	20:AA:600:C:OP1	2.17	0.44
7:AH:103:VAL:HG21	7:AH:110:ALA:N	2.32	0.44
8:AI:120:ARG:HH11	20:AA:1345:U:H5"	1.83	0.44
11:AL:104:VAL:C	11:AL:105:TYR:HD1	2.25	0.44
19:AT:16:HIS:O	19:AT:20:LEU:HG	2.18	0.44
20:AA:368:U:OP2	23:AY:353:ALA:HA	2.18	0.44
20:AA:715:A:H8	20:AA:715:A:O5'	1.99	0.44
20:AA:833:U:H2'	20:AA:834:C:H6	1.83	0.44
22:AW:12:U:C2	22:AW:23:A:N1	2.85	0.44
22:AW:56:C:H2'	22:AW:57:G:C8	2.48	0.44
25:BC:133:GLY:CA	25:BC:138:LEU:HB2	2.47	0.44
26:BD:30:GLU:HB2	26:BD:104:TYR:OH	2.17	0.44
28:BF:57:VAL:O	28:BF:59:TYR:N	2.45	0.44
32:BK:9:LYS:HB3	32:BK:56:GLU:HG3	1.98	0.44
35:BQ:30:GLY:HA2	35:BQ:107:ALA:HB2	1.99	0.44
35:BQ:125:LEU:HG	35:BQ:126:PRO:HD2	1.98	0.44
41:BW:87:PRO:HB3	60:BA:1614:A:N7	2.32	0.44
42:BX:84:ALA:HA	42:BX:85:PRO:HD2	1.83	0.44
45:B0:27:GLU:CD	45:B0:27:GLU:H	2.25	0.44
46:B1:18:ILE:HG13	46:B1:40:ARG:H	1.82	0.44
53:B7:20:ALA:O	53:B7:24:THR:HG22	2.17	0.44
54:B8:54:GLU:OE2	54:B8:57:ARG:NE	2.51	0.44
59:BB:14:U:H5"	59:BB:70:C:O2'	2.17	0.44
59:BB:105:G:H2'	59:BB:106:G:H8	1.81	0.44
60:BA:504:U:H5'	60:BA:506:G:OP2	2.18	0.44
60:BA:515:A:H2'	60:BA:516:C:H5'	1.99	0.44
60:BA:632:A:H2'	60:BA:633:A:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:684:G:N2	60:BA:788:A:OP1	2.47	0.44
60:BA:1011:G:O2'	60:BA:1013:C:H5"	2.17	0.44
60:BA:1542:G:H4'	60:BA:1543:A:O5'	2.17	0.44
60:BA:1783:A:O2'	60:BA:2607:G:O2'	2.32	0.44
60:BA:1794:U:H2'	60:BA:1795:C:C6	2.52	0.44
60:BA:2147:G:H2'	60:BA:2148:G:O4'	2.18	0.44
1:CB:123:ALA:HA	1:CB:127:ILE:HD11	1.99	0.44
2:CC:4:LYS:HZ3	2:CC:4:LYS:HA	1.81	0.44
3:CD:156:GLU:HB3	3:CD:157:LEU:HD12	1.99	0.44
6:CG:15:ASP:HB2	6:CG:20:ASP:O	2.16	0.44
12:CM:5:ALA:O	12:CM:7:VAL:N	2.47	0.44
12:CM:120:LYS:O	12:CM:121:LYS:HB2	2.18	0.44
15:CP:40:ASP:OD2	15:CP:42:ARG:HG2	2.17	0.44
16:CQ:66:SER:OG	16:CQ:67:LYS:N	2.51	0.44
17:CR:47:THR:HG23	17:CR:49:LYS:H	1.82	0.44
20:CA:6:G:O2'	20:CA:7:G:H5"	2.17	0.44
20:CA:1347:G:H4'	20:CA:1348:U:H6	1.82	0.44
20:CA:1401:G:H1	20:CA:1501:C:H42	1.64	0.44
23:CY:41:LYS:HG2	23:CY:43:GLY:N	2.32	0.44
23:CY:188:TYR:CD2	23:CY:267:LYS:HG2	2.53	0.44
23:CY:687:LEU:C	23:CY:689:LYS:H	2.24	0.44
25:DC:48:LEU:HD11	25:DC:170:GLY:HA3	1.97	0.44
25:DC:76:LEU:HD22	25:DC:111:PHE:CD2	2.52	0.44
25:DC:90:ALA:HB1	25:DC:154:ILE:HG21	1.99	0.44
26:DD:94:LEU:HA	26:DD:104:TYR:HD2	1.82	0.44
26:DD:164:GLN:O	26:DD:176:ARG:HB3	2.17	0.44
28:DF:7:TYR:CZ	28:DF:9:ILE:HG13	2.53	0.44
28:DF:40:GLN:H	28:DF:40:GLN:HG3	1.51	0.44
28:DF:176:LEU:HD22	28:DF:185:ASP:OD2	2.17	0.44
29:DG:128:ARG:NH1	60:DA:2315:G:H21	2.16	0.44
33:DO:25:LEU:HB3	33:DO:38:VAL:HG23	1.99	0.44
37:DS:26:LEU:O	37:DS:88:ASP:HB3	2.17	0.44
43:DY:2:ARG:HD2	43:DY:3:VAL:HG23	2.00	0.44
45:D0:49:LYS:O	45:D0:51:VAL:HG23	2.17	0.44
48:DN:2:LYS:O	48:DN:3:THR:C	2.60	0.44
54:D8:40:GLU:O	54:D8:44:LYS:N	2.50	0.44
56:De:71:LYS:N	56:De:71:LYS:HD2	2.32	0.44
60:DA:460:A:H2'	60:DA:461:C:O4'	2.18	0.44
60:DA:1477:A:H2'	60:DA:1478:G:C8	2.52	0.44
60:DA:1802:A:H2'	60:DA:1803:A:C8	2.51	0.44
60:DA:1863:G:H2'	60:DA:1864:U:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2288:A:H2	60:DA:2325:G:C8	2.35	0.44
60:DA:2417:C:H2'	60:DA:2418:A:O4'	2.17	0.44
60:DA:2441:C:H2'	60:DA:2442:C:H6	1.83	0.44
60:DA:2822:G:H1'	60:DA:2826:A:N6	2.32	0.44
60:DA:2825:U:H2'	60:DA:2826:A:O4'	2.16	0.44
1:AB:111:ARG:NH1	20:AA:1103:C:O2'	2.50	0.44
4:AE:90:VAL:O	4:AE:120:THR:HA	2.17	0.44
7:AH:99:GLU:N	7:AH:99:GLU:OE1	2.48	0.44
20:AA:246:A:C2	20:AA:282:A:C4	3.06	0.44
20:AA:755:G:H2'	20:AA:756:C:C6	2.53	0.44
20:AA:769:G:H1	20:AA:810:C:H42	1.65	0.44
20:AA:1149:C:H1'	20:AA:1280:A:H61	1.81	0.44
20:AA:1245:A:N1	20:AA:1292:U:O4	2.51	0.44
20:AA:1440(B):G:H3'	20:AA:1440(C):G:H5"	1.99	0.44
23:AY:221:ALA:HB1	23:AY:228:MET:HG3	1.99	0.44
23:AY:424:LEU:O	23:AY:428:LEU:HD23	2.17	0.44
23:AY:624:LEU:CD2	23:AY:643:ILE:HG21	2.48	0.44
27:BE:101:ARG:HA	27:BE:170:LEU:O	2.17	0.44
29:BG:43:LEU:CD1	60:BA:2305:A:H61	2.31	0.44
34:BP:21:ARG:NH2	60:BA:1192:G:OP2	2.50	0.44
37:BS:15:ARG:C	37:BS:18:ILE:H	2.25	0.44
38:BT:56:GLY:H	38:BT:59:THR:HB	1.82	0.44
44:BZ:16:SER:O	44:BZ:20:ARG:HG2	2.16	0.44
44:BZ:52:SER:C	44:BZ:54:HIS:H	2.25	0.44
47:B4:28:LYS:HA	47:B4:29:PRO:HD3	1.85	0.44
48:BN:53:VAL:HG11	48:BN:128:HIS:CB	2.47	0.44
52:B6:24:GLU:HB3	52:B6:25:LYS:H	1.62	0.44
60:BA:52:A:C5	60:BA:118:A:C2	3.06	0.44
60:BA:299:A:N1	60:BA:322:A:O2'	2.44	0.44
60:BA:710:G:H2'	60:BA:711:G:O4'	2.18	0.44
60:BA:1205:U:H4'	60:BA:1206:G:OP2	2.17	0.44
60:BA:1674:G:H21	60:BA:1677:A:N6	2.15	0.44
60:BA:2711:A:H3'	60:BA:2712:U:H5'	1.98	0.44
1:CB:12:GLU:HB3	1:CB:44:LEU:HD13	2.00	0.44
9:CJ:22:LYS:NZ	9:CJ:26:ALA:HB2	2.33	0.44
11:CL:70:ILE:HB	11:CL:72:GLY:H	1.82	0.44
14:CO:17:ARG:HA	14:CO:17:ARG:NE	2.33	0.44
16:CQ:41:LYS:HE3	20:CA:277:C:OP1	2.17	0.44
20:CA:996:A:H2'	20:CA:997:U:C6	2.52	0.44
20:CA:1428:A:H2'	20:CA:1429:C:C6	2.52	0.44
22:CW:19:G:OP1	22:CW:59:A:N6	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:64:G:N1	22:CW:65:U:O4	2.50	0.44
26:DD:130:ALA:HA	26:DD:191:ALA:O	2.18	0.44
26:DD:255:LYS:NZ	60:DA:1824:G:H21	2.15	0.44
27:DE:25:VAL:HG22	27:DE:183:LEU:HG	1.99	0.44
27:DE:94:GLU:HG2	27:DE:177:PRO:HB3	2.00	0.44
28:DF:179:GLU:O	28:DF:205:ARG:NH2	2.50	0.44
29:DG:17:PRO:HA	29:DG:20:ILE:HB	1.98	0.44
29:DG:46:ALA:HB1	29:DG:50:ALA:HA	1.98	0.44
32:DK:76:TYR:O	32:DK:80:LYS:N	2.49	0.44
35:DQ:34:LEU:HD23	35:DQ:103:MET:HE2	1.99	0.44
38:DT:82:LEU:O	38:DT:83:ILE:HG13	2.17	0.44
42:DX:60:ARG:HD2	60:DA:1312:U:C5	2.52	0.44
42:DX:63:LYS:HA	42:DX:72:LYS:HA	1.99	0.44
43:DY:81:LYS:HB2	43:DY:81:LYS:HE3	1.71	0.44
46:D1:26:ARG:HA	46:D1:26:ARG:HH11	1.82	0.44
51:D5:29:THR:O	51:D5:30:LEU:HD23	2.18	0.44
56:De:63:ILE:HG21	56:De:69:ALA:O	2.18	0.44
56:De:99:VAL:HG21	56:De:122:VAL:HB	2.00	0.44
60:DA:302:C:H2'	60:DA:303:U:C6	2.52	0.44
60:DA:1417:C:H42	60:DA:1581:G:H1	1.64	0.44
60:DA:2162:G:N2	60:DA:2163:C:H1'	2.32	0.44
60:DA:2246:G:H2'	60:DA:2247:A:O4'	2.17	0.44
60:DA:2270:G:H2'	60:DA:2271:G:O4'	2.18	0.44
1:AB:19:HIS:CG	1:AB:20:GLU:H	2.35	0.44
1:AB:44:LEU:HA	1:AB:47:THR:HB	1.99	0.44
4:AE:6:PHE:HB3	4:AE:7:GLU:H	1.45	0.44
7:AH:11:THR:HG21	20:AA:876:G:H1'	2.00	0.44
7:AH:94:TYR:OH	20:AA:597:G:N2	2.19	0.44
8:AI:59:PHE:O	8:AI:61:ALA:N	2.51	0.44
8:AI:127:LYS:HG3	20:AA:967:C:H5'	2.00	0.44
11:AL:70:ILE:HA	11:AL:100:ILE:HD12	2.00	0.44
15:AP:55:ARG:HA	15:AP:55:ARG:HD2	1.75	0.44
16:AQ:67:LYS:C	16:AQ:69:LYS:N	2.69	0.44
17:AR:33:ASP:HB3	17:AR:36:ASN:ND2	2.29	0.44
17:AR:81:PHE:HB3	20:AA:718:G:H1	1.83	0.44
19:AT:53:LEU:HA	19:AT:56:MET:HG2	2.00	0.44
20:AA:1231:G:H2'	20:AA:1232:U:H6	1.82	0.44
20:AA:1440:C:H2'	20:AA:1440(A):G:O4'	2.18	0.44
20:AA:1497:G:H1'	20:AA:1518:A:H2	1.82	0.44
23:AY:664:GLN:HE22	30:BH:173:PRO:HG2	1.82	0.44
26:BD:155:LEU:HD23	60:BA:1799:G:N2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:10:PRO:HB2	28:BF:18:ARG:O	2.17	0.44
31:BJ:32:UNK:O	60:BA:1055:G:H4'	2.17	0.44
39:BU:15:LYS:HG2	39:BU:18:LEU:HD12	1.99	0.44
40:BV:79:VAL:O	60:BA:1188:U:H4'	2.18	0.44
43:BY:37:VAL:O	43:BY:67:LEU:N	2.50	0.44
44:BZ:46:LYS:HE2	44:BZ:46:LYS:HB3	1.81	0.44
59:BB:19:G:H2'	59:BB:20:C:C6	2.53	0.44
60:BA:270(G):U:H2'	60:BA:270(H):C:C6	2.52	0.44
60:BA:979:G:H2'	60:BA:982:C:N4	2.27	0.44
60:BA:1128:A:C5	60:BA:2518:A:N6	2.85	0.44
60:BA:1326:U:H2'	60:BA:1327:C:O4'	2.18	0.44
60:BA:2206:C:H42	60:BA:2218:G:H1	1.64	0.44
60:BA:2491:U:O2'	60:BA:2570:G:OP1	2.34	0.44
60:BA:2615:U:H2'	60:BA:2616:C:C6	2.50	0.44
1:CB:105:PHE:HB3	1:CB:106:LYS:NZ	2.33	0.44
2:CC:151:VAL:O	2:CC:168:ALA:HB3	2.17	0.44
3:CD:30:LYS:N	3:CD:30:LYS:HE2	2.33	0.44
3:CD:122:ARG:HD3	3:CD:136:PRO:HD3	1.99	0.44
15:CP:67:THR:O	15:CP:71:ARG:NH1	2.50	0.44
16:CQ:52:LYS:HE3	16:CQ:52:LYS:HB3	1.82	0.44
20:CA:68(Y):C:H2'	20:CA:101:A:O4'	2.16	0.44
20:CA:335:C:H1'	20:CA:1434:A:H1'	1.99	0.44
20:CA:369:C:N4	20:CA:392:G:N1	2.23	0.44
20:CA:565:U:OP2	20:CA:566:G:O2'	2.30	0.44
20:CA:769:G:OP2	20:CA:803:G:O2'	2.34	0.44
20:CA:1178:G:N2	20:CA:1180:A:H3'	2.33	0.44
20:CA:1284:C:OP2	20:CA:1285:A:O2'	2.32	0.44
20:CA:1299:A:H2'	20:CA:1301:U:C6	2.52	0.44
20:CA:1374:A:H2'	20:CA:1375:A:C8	2.52	0.44
20:CA:1495:U:OP2	23:CY:504:ARG:NH1	2.44	0.44
20:CA:1507:A:P	21:CV:15:A:H61	2.41	0.44
23:CY:631:ILE:HA	23:CY:645:ALA:CA	2.47	0.44
25:DC:19:LYS:HE3	25:DC:20:VAL:N	2.32	0.44
27:DE:174:ASP:HB3	27:DE:183:LEU:CB	2.48	0.44
29:DG:8:LYS:HD2	29:DG:100:TRP:CD1	2.53	0.44
32:DK:53:VAL:HA	32:DK:54:PRO:HD3	1.81	0.44
32:DK:67:PHE:N	32:DK:67:PHE:CD1	2.85	0.44
36:DR:96:ARG:HH21	60:DA:2881:C:H5"	1.82	0.44
38:DT:125:ARG:O	38:DT:128:GLU:HB3	2.18	0.44
42:DX:74:PRO:O	42:DX:76:ARG:HD2	2.18	0.44
51:D5:7:PRO:HA	60:DA:2615:U:C1'	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D5:13:LYS:NZ	60:DA:517:C:OP2	2.50	0.44
53:D7:27:GLY:O	53:D7:31:LEU:HG	2.17	0.44
60:DA:99:U:OP1	60:DA:99:U:H4'	2.17	0.44
60:DA:221:A:H4'	60:DA:222:A:O5'	2.18	0.44
60:DA:436:C:H2'	60:DA:438:G:H8	1.82	0.44
60:DA:847:U:O2'	60:DA:848:G:H8	1.99	0.44
60:DA:859:G:O2'	60:DA:916:G:O6	2.32	0.44
60:DA:1074:G:H2'	60:DA:1075:C:C5	2.52	0.44
60:DA:1086:A:H5"	60:DA:1087:G:H5'	1.98	0.44
60:DA:1442:G:N2	60:DA:1549:C:C2	2.79	0.44
60:DA:1790:C:OP2	60:DA:1828:G:N1	2.50	0.44
60:DA:2773:C:H2'	60:DA:2774:C:C6	2.53	0.44
2:AC:51:GLY:O	2:AC:71:ALA:N	2.50	0.44
3:AD:79:PHE:CZ	3:AD:207:TYR:HB3	2.53	0.44
4:AE:20:GLN:O	4:AE:22:GLY:N	2.48	0.44
6:AG:101:LEU:O	6:AG:105:VAL:HG23	2.17	0.44
7:AH:104:ARG:HB3	7:AH:107:LEU:HG	1.99	0.44
12:AM:102:ARG:HH21	12:AM:105:THR:HG23	1.82	0.44
18:AS:36:ARG:HH12	18:AS:53:ASN:HA	1.83	0.44
20:AA:192:U:H2'	20:AA:193:C:H6	1.83	0.44
20:AA:234:C:H2'	20:AA:235:C:O4'	2.18	0.44
20:AA:943:U:C4	20:AA:1340:A:N1	2.85	0.44
22:AW:64:G:C6	22:AW:65:U:C4	3.06	0.44
23:AY:27:THR:HG23	61:AY:701:GNP:O2A	2.16	0.44
23:AY:33:LEU:CD2	23:AY:34:TYR:H	2.27	0.44
23:AY:126:GLU:HA	23:AY:130:VAL:HG12	1.98	0.44
23:AY:292:THR:HA	23:AY:298:VAL:HA	2.00	0.44
23:AY:309:LEU:HA	23:AY:333:GLY:HA3	1.99	0.44
23:AY:566:THR:CG2	23:AY:567:LEU:H	2.11	0.44
25:BC:132:LEU:O	25:BC:137:LEU:N	2.46	0.44
25:BC:170:GLY:O	25:BC:172:ILE:N	2.47	0.44
26:BD:13:ARG:HD2	60:BA:729:G:OP2	2.18	0.44
26:BD:35:LYS:HB3	26:BD:35:LYS:HE3	1.52	0.44
26:BD:88:ARG:NE	60:BA:1817:G:OP2	2.51	0.44
27:BE:74:PRO:HB2	27:BE:75:VAL:H	1.32	0.44
27:BE:174:ASP:OD2	27:BE:175:VAL:N	2.51	0.44
34:BP:101:VAL:HG12	34:BP:106:LEU:HB3	2.00	0.44
35:BQ:103:MET:HE2	35:BQ:125:LEU:HD13	1.99	0.44
36:BR:5:LYS:HD2	60:BA:2820:A:H4'	1.99	0.44
38:BT:48:ILE:H	38:BT:48:ILE:HD12	1.82	0.44
38:BT:54:ARG:HH11	38:BT:54:ARG:HB3	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BW:84:ARG:NH2	60:BA:1322:A:H4'	2.32	0.44
43:BY:94:LYS:O	43:BY:102:CYS:HA	2.18	0.44
46:B1:44:PRO:CB	60:BA:396:G:H4'	2.48	0.44
48:BN:27:ALA:O	48:BN:28:THR:C	2.61	0.44
51:B5:18:ALA:HA	51:B5:21:SER:HB3	1.97	0.44
60:BA:270(Q):C:O2'	60:BA:270(R):C:C6	2.70	0.44
60:BA:441:U:H2'	60:BA:442:G:C8	2.53	0.44
60:BA:612:G:H2'	60:BA:613:U:O4'	2.18	0.44
60:BA:1214:A:H3'	60:BA:1215:G:H8	1.83	0.44
60:BA:1470:G:H2'	60:BA:1521:G:N1	2.33	0.44
60:BA:1544:C:O2'	60:BA:1545:A:O5'	2.31	0.44
60:BA:1609:A:O2'	60:BA:1610:A:O5'	2.35	0.44
60:BA:1670:C:H2'	60:BA:1671:U:O4'	2.18	0.44
60:BA:1732:A:H2'	60:BA:1733:G:O4'	2.18	0.44
60:BA:2199:A:H3'	60:BA:2205:C:C6	2.52	0.44
60:BA:2319:G:H21	60:BA:2320:A:H61	1.64	0.44
60:BA:2366:A:H3'	60:BA:2367:G:H8	1.83	0.44
60:BA:2368:C:H2'	60:BA:2369:A:C8	2.53	0.44
60:BA:2592:G:C6	60:BA:2603:G:C6	3.06	0.44
60:BA:2606:C:H2'	60:BA:2607:G:O4'	2.17	0.44
60:BA:2844:G:H2'	60:BA:2845:G:C8	2.53	0.44
1:CB:158:LEU:HA	1:CB:159:PRO:HD3	1.80	0.44
2:CC:110:ASN:HB3	2:CC:141:VAL:HA	2.00	0.44
6:CG:25:ALA:O	6:CG:28:ASN:HB2	2.18	0.44
6:CG:70:LYS:H	6:CG:138:LYS:HE3	1.82	0.44
16:CQ:94:ASN:O	16:CQ:98:LEU:HD12	2.17	0.44
20:CA:477:G:H2'	20:CA:478:A:O4'	2.18	0.44
20:CA:582:U:H2'	20:CA:583:A:O4'	2.17	0.44
20:CA:1238:A:H2	20:CA:1241:G:H21	1.65	0.44
23:CY:122:TRP:CD1	23:CY:122:TRP:C	2.95	0.44
25:DC:53:ARG:C	25:DC:55:SER:N	2.76	0.44
28:DF:8:GLN:CB	28:DF:22:ALA:HB2	2.46	0.44
28:DF:40:GLN:HB3	28:DF:43:LYS:NZ	2.33	0.44
28:DF:172:TRP:CD2	28:DF:173:VAL:HG23	2.53	0.44
30:DH:149:ARG:HD3	30:DH:164:TYR:CE2	2.53	0.44
32:DK:10:LEU:O	32:DK:55:VAL:HG12	2.18	0.44
33:DO:19:ILE:HG22	33:DO:43:VAL:HG13	1.98	0.44
34:DP:42:SER:HA	60:DA:671:C:C5	2.53	0.44
34:DP:63:PRO:HD2	60:DA:2393:A:O3'	2.18	0.44
36:DR:97:VAL:HA	36:DR:113:LEU:O	2.18	0.44
38:DT:84:GLN:HE21	38:DT:84:GLN:HB3	1.57	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DX:13:LEU:HA	42:DX:18:TYR:OH	2.18	0.44
46:D1:76:ARG:NH2	46:D1:95:LEU:HD13	2.32	0.44
48:DN:37:LYS:HE2	48:DN:37:LYS:HB3	1.84	0.44
48:DN:112:LEU:HD23	48:DN:112:LEU:C	2.41	0.44
49:D2:63:VAL:O	49:D2:66:GLU:HG2	2.17	0.44
55:D9:22:ARG:NH2	55:D9:35:ARG:HH22	2.16	0.44
56:De:73:GLU:OE2	56:De:111:ILE:HG13	2.17	0.44
60:DA:308:G:C8	60:DA:501:A:H1'	2.53	0.44
60:DA:391:G:H2'	60:DA:392:C:C6	2.52	0.44
60:DA:646:A:H2'	60:DA:647:G:O4'	2.18	0.44
60:DA:1080:C:H2'	60:DA:1081:U:H6	1.77	0.44
60:DA:2211:G:H2'	60:DA:2211:G:N3	2.33	0.44
60:DA:2397:G:H2'	60:DA:2398:U:H6	1.83	0.44
60:DA:2537:U:H2'	60:DA:2538:C:C6	2.53	0.44
2:AC:54:ARG:HB2	2:AC:69:HIS:HB2	1.99	0.44
3:AD:13:ARG:HH11	3:AD:40:PRO:HB3	1.83	0.44
3:AD:205:GLU:HA	3:AD:208:SER:HB2	2.00	0.44
6:AG:34:GLY:O	20:AA:1372:U:O2'	2.28	0.44
8:AI:121:ARG:NE	20:AA:1350:A:OP1	2.51	0.44
9:AJ:3:LYS:O	9:AJ:101:VAL:N	2.51	0.44
9:AJ:54:PHE:CG	9:AJ:55:LYS:HD2	2.53	0.44
10:AK:16:SER:HA	10:AK:79:SER:O	2.17	0.44
12:AM:2:ALA:N	12:AM:9:ILE:HG23	2.33	0.44
15:AP:1:MET:HB3	20:AA:135:C:N4	2.33	0.44
20:AA:252:U:N3	20:AA:253:U:O4	2.50	0.44
20:AA:298:A:H2'	20:AA:299:G:O4'	2.17	0.44
20:AA:540:G:H2'	20:AA:541:G:O4'	2.17	0.44
20:AA:836:G:C6	20:AA:851:G:C6	3.06	0.44
20:AA:954:G:H2'	20:AA:955:U:O4'	2.17	0.44
20:AA:1006:C:H6	20:AA:1006:C:O5'	2.01	0.44
20:AA:1015:A:C6	20:AA:1016:A:C6	3.05	0.44
23:AY:5:VAL:C	23:AY:7:TYR:H	2.24	0.44
23:AY:496:LYS:HG2	23:AY:498:ILE:HD13	1.99	0.44
26:BD:45:ASN:HA	60:BA:1813:G:H4'	2.00	0.44
26:BD:91:ARG:HH11	26:BD:91:ARG:HG2	1.82	0.44
26:BD:222:ARG:HG2	60:BA:1789:A:OP1	2.17	0.44
31:BJ:111:UNK:C	31:BJ:116:UNK:HA	2.48	0.44
31:BJ:129:UNK:O	31:BJ:131:UNK:N	2.51	0.44
32:BK:62:ASP:N	32:BK:62:ASP:OD2	2.46	0.44
36:BR:15:SER:HB2	60:BA:1275:A:N6	2.32	0.44
36:BR:117:VAL:O	36:BR:118:GLU:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BS:15:ARG:C	37:BS:17:ARG:N	2.75	0.44
38:BT:32:TYR:HA	38:BT:42:ILE:HB	2.00	0.44
40:BV:19:LYS:HB2	40:BV:96:ILE:CG1	2.48	0.44
40:BV:85:LYS:NZ	60:BA:815:C:OP1	2.39	0.44
42:BX:36:LYS:HA	42:BX:39:ILE:HD12	2.00	0.44
43:BY:26:LYS:HD2	43:BY:40:GLU:HG3	2.00	0.44
43:BY:39:VAL:O	43:BY:40:GLU:HG2	2.18	0.44
46:B1:12:PRO:HA	46:B1:44:PRO:HG3	2.00	0.44
48:BN:35:ARG:NH2	48:BN:42:TRP:HH2	2.16	0.44
48:BN:46:VAL:HG13	48:BN:47:ALA:H	1.83	0.44
48:BN:76:SER:CB	60:BA:2641:G:O3'	2.66	0.44
48:BN:76:SER:C	48:BN:78:TYR:H	2.26	0.44
51:B5:40:LYS:O	51:B5:40:LYS:HG3	2.16	0.44
59:BB:89(A):G:N7	59:BB:89(B):A:C6	2.85	0.44
60:BA:83:G:C6	60:BA:102:G:H2'	2.52	0.44
60:BA:384:U:H2'	60:BA:385:C:C6	2.53	0.44
60:BA:405:U:H3'	60:BA:406:G:H5'	1.99	0.44
60:BA:494:G:H2'	60:BA:495:G:H8	1.80	0.44
60:BA:814:C:N4	60:BA:1193:G:H1	2.10	0.44
60:BA:1200:C:H2'	60:BA:1201:C:C6	2.52	0.44
60:BA:1484:G:H2'	60:BA:1485:G:O4'	2.17	0.44
60:BA:1770:G:H1	60:BA:1982:C:N4	2.14	0.44
60:BA:2525:G:H1	60:BA:2538:C:H42	1.66	0.44
3:CD:28:SER:HB2	3:CD:29:PRO:HD3	2.00	0.44
5:CF:87:ARG:CZ	20:CA:673:G:H4'	2.47	0.44
7:CH:4:ASP:OD2	7:CH:6:ILE:HB	2.17	0.44
7:CH:112:LEU:HB3	7:CH:133:LEU:HA	1.99	0.44
10:CK:94:ALA:O	10:CK:98:LEU:HG	2.17	0.44
17:CR:61:LYS:NZ	20:CA:836:G:OP2	2.50	0.44
20:CA:406:G:H1	20:CA:436:C:N4	2.12	0.44
20:CA:998:G:H2'	20:CA:998(A):C:C6	2.53	0.44
20:CA:1056:U:H2'	20:CA:1057:G:C8	2.53	0.44
20:CA:1177:G:H2'	20:CA:1178:G:O4'	2.17	0.44
20:CA:1508:G:H2'	20:CA:1509:C:O4'	2.18	0.44
23:CY:52:MET:HE3	23:CY:54:PHE:HE2	1.83	0.44
23:CY:662:LYS:HZ2	30:DH:175:LYS:HE3	1.82	0.44
26:DD:10:THR:HG23	26:DD:13:ARG:HB3	2.00	0.44
26:DD:68:LYS:O	26:DD:70:TRP:N	2.44	0.44
27:DE:1:MET:N	27:DE:200:GLU:HG2	2.33	0.44
27:DE:110:GLY:N	60:DA:2821:A:H5"	2.30	0.44
27:DE:164:ARG:NH2	60:DA:2773:C:OP1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:41:MET:SD	30:DH:43:VAL:HG13	2.57	0.44
33:DO:28:SER:HB2	60:DA:2566:A:N6	2.19	0.44
35:DQ:14:ARG:NH1	60:DA:956:G:N7	2.41	0.44
35:DQ:134:ARG:HH12	44:DZ:119:GLU:HG3	1.83	0.44
39:DU:25:TRP:CD1	39:DU:26:GLY:N	2.82	0.44
44:DZ:11:GLU:OE2	44:DZ:11:GLU:N	2.47	0.44
53:D7:30:VAL:HG13	53:D7:34:ARG:HH11	1.83	0.44
59:DB:78:A:H2'	59:DB:79:C:O4'	2.17	0.44
60:DA:217:G:H2'	60:DA:218:A:O4'	2.17	0.44
60:DA:275:G:H2'	60:DA:276:A:O4'	2.17	0.44
60:DA:701:G:H2'	60:DA:702:G:H8	1.83	0.44
60:DA:741:G:N2	60:DA:756:C:N3	2.56	0.44
60:DA:1139:G:HO2'	60:DA:1140:C:C1'	2.25	0.44
60:DA:1164:G:H2'	60:DA:1165:U:H6	1.82	0.44
60:DA:1464:C:H2'	60:DA:1465:G:H8	1.83	0.44
60:DA:2585:U:H6	60:DA:2585:U:OP1	2.01	0.44
60:DA:2616:C:H2'	60:DA:2617:C:O4'	2.18	0.44
60:DA:2896:C:H2'	60:DA:2897:U:H6	1.83	0.44
1:AB:17:PHE:N	1:AB:17:PHE:CD2	2.85	0.44
1:AB:189:ASP:OD1	1:AB:189:ASP:N	2.47	0.44
2:AC:34:LEU:O	2:AC:38:ARG:HG3	2.17	0.44
5:AF:97:PHE:HB3	17:AR:31:LEU:HD12	1.99	0.44
7:AH:114:THR:HG22	7:AH:131:GLY:HA3	2.00	0.44
8:AI:70:LYS:O	8:AI:74:ILE:HG13	2.17	0.44
10:AK:82:VAL:HB	10:AK:108:ILE:HA	1.98	0.44
20:AA:219:C:H2'	20:AA:220:G:O4'	2.18	0.44
20:AA:395:C:H2'	20:AA:396:G:C8	2.53	0.44
20:AA:545:C:O2'	20:AA:549:C:H5"	2.18	0.44
20:AA:879:C:H2'	20:AA:880:C:C6	2.53	0.44
20:AA:1440(A):G:H5"	20:AA:1440(B):G:O5'	2.18	0.44
20:AA:1440(O):A:H2'	20:AA:1461:G:O4'	2.18	0.44
20:AA:1492:A:C3'	24:AU:6:5OH:NQ	2.75	0.44
23:AY:227:ILE:O	23:AY:231:TYR:HB3	2.18	0.44
23:AY:247:ARG:HH21	23:AY:282:SER:H	1.66	0.44
23:AY:506:GLN:HA	23:AY:576:ASP:O	2.17	0.44
23:AY:536:LYS:H	23:AY:536:LYS:HG3	1.61	0.44
25:BC:100:ILE:O	25:BC:104:ILE:HG13	2.17	0.44
25:BC:151:GLY:O	25:BC:154:ILE:HB	2.18	0.44
26:BD:245:PRO:HA	26:BD:246:PRO:HD3	1.91	0.44
27:BE:82:ARG:HH22	60:BA:2638:G:P	2.40	0.44
29:BG:4:ASP:HA	29:BG:8:LYS:HD3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:9:ARG:HA	29:BG:12:TYR:CD1	2.53	0.44
31:BJ:54:UNK:HA	31:BJ:78:UNK:O	2.17	0.44
32:BK:16:LYS:HB3	32:BK:16:LYS:HE3	1.72	0.44
32:BK:30:HIS:CD2	32:BK:59:ILE:HB	2.52	0.44
37:BS:34:HIS:NE2	37:BS:54:LEU:HB3	2.33	0.44
59:BB:56:G:H4'	59:BB:57:A:C8	2.52	0.44
60:BA:241:A:C8	60:BA:243:U:H1'	2.53	0.44
60:BA:280:C:H2'	60:BA:281:G:H5'	2.00	0.44
60:BA:531:C:H3'	60:BA:561:G:H21	1.83	0.44
60:BA:783:A:H2'	60:BA:784:A:H4'	1.99	0.44
60:BA:859:G:N2	60:BA:917:A:H5"	2.33	0.44
60:BA:882:G:N1	60:BA:894:C:N4	2.54	0.44
60:BA:1058:G:H2'	60:BA:1059:G:H8	1.81	0.44
60:BA:1137:G:C6	60:BA:1138:G:C5	3.06	0.44
60:BA:1766:U:H2'	60:BA:1767:C:C6	2.52	0.44
60:BA:1785:A:H4'	60:BA:1982:C:O2'	2.18	0.44
60:BA:1799:G:O4'	60:BA:1800:C:H5	2.01	0.44
60:BA:2038:G:C6	60:BA:2039:C:C2	3.06	0.44
60:BA:2038:G:C5	60:BA:2039:C:C6	3.06	0.44
60:BA:2557:G:H2'	60:BA:2558:C:C6	2.52	0.44
60:BA:2663:G:H2'	60:BA:2664:G:O4'	2.17	0.44
2:CC:50:ALA:O	2:CC:71:ALA:HB3	2.17	0.44
3:CD:57:ARG:HG3	3:CD:202:LEU:O	2.18	0.44
4:CE:86:ALA:HB1	4:CE:125:SER:HB3	2.00	0.44
9:CJ:26:ALA:HB1	9:CJ:85:LEU:HD22	1.99	0.44
10:CK:120:ARG:NH1	20:CA:1524:C:H5"	2.31	0.44
11:CL:56:ALA:O	11:CL:58:VAL:HG23	2.17	0.44
13:CN:13:THR:HA	13:CN:14:PRO:HD2	1.91	0.44
19:CT:12:ALA:O	19:CT:15:ARG:HB2	2.18	0.44
19:CT:22:ARG:HB2	20:CA:323:U:H4'	2.00	0.44
20:CA:503:C:O2	20:CA:510:A:H2	2.00	0.44
23:CY:544:LYS:HA	23:CY:547:GLU:HB3	1.99	0.44
25:DC:60:ARG:O	25:DC:61:GLY:O	2.36	0.44
25:DC:65:LEU:HD12	25:DC:160:GLY:CA	2.47	0.44
25:DC:218:THR:HG21	60:DA:2124:G:N3	2.32	0.44
27:DE:25:VAL:HG13	27:DE:183:LEU:CD1	2.48	0.44
28:DF:45:ARG:NH2	60:DA:444:C:OP1	2.51	0.44
33:DO:113:LYS:HA	33:DO:113:LYS:HD2	1.81	0.44
36:DR:15:SER:HB2	60:DA:1275:A:H62	1.82	0.44
37:DS:38:GLN:HG2	37:DS:50:SER:HA	1.99	0.44
37:DS:67:ARG:NH1	37:DS:98:VAL:HB	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DT:121:ILE:O	38:DT:124:ASP:N	2.50	0.44
39:DU:53:ARG:NH2	60:DA:994:C:OP1	2.51	0.44
41:DW:70:TYR:CE2	41:DW:110:LYS:HA	2.52	0.44
44:DZ:29:TYR:O	44:DZ:30:ASN:HB3	2.18	0.44
44:DZ:89:PHE:CE2	59:DB:104:A:H4'	2.53	0.44
46:D1:44:PRO:CB	60:DA:396:G:H4'	2.48	0.44
48:DN:43:THR:HB	48:DN:46:VAL:HG11	1.99	0.44
48:DN:128:HIS:CE1	48:DN:134:ARG:CZ	3.00	0.44
52:D6:43:CYS:O	52:D6:44:ARG:HB2	2.17	0.44
55:D9:1:MET:HE3	60:DA:2477:C:H5'	2.00	0.44
60:DA:19:C:N3	60:DA:521:G:N2	2.49	0.44
60:DA:414:C:C2	60:DA:415:A:C8	3.06	0.44
60:DA:768:G:O5'	60:DA:768:G:H8	2.00	0.44
60:DA:781:A:H5"	60:DA:782:A:N7	2.33	0.44
60:DA:818:G:N1	60:DA:1188:U:OP2	2.44	0.44
60:DA:856:C:H2'	60:DA:857:C:H6	1.81	0.44
60:DA:938:G:H2'	60:DA:939:G:C8	2.52	0.44
60:DA:1020:A:C2	60:DA:1141:U:O2'	2.68	0.44
60:DA:1655:A:C2	60:DA:2049:G:H5"	2.52	0.44
60:DA:2522:U:H3	60:DA:2543:G:H1	1.66	0.44
60:DA:2701:C:N3	60:DA:2706:G:O6	2.51	0.44
1:AB:25:ASN:HA	1:AB:26:PRO:HD3	1.81	0.44
1:AB:237:ALA:O	1:AB:241:GLU:HG2	2.18	0.44
4:AE:127:ASN:HA	4:AE:128:PRO:HD2	1.64	0.44
9:AJ:11:PHE:HD2	9:AJ:11:PHE:HA	1.74	0.44
10:AK:58:PRO:O	10:AK:61:ALA:HB3	2.17	0.44
10:AK:108:ILE:HB	17:AR:87:ARG:HA	1.99	0.44
11:AL:102:ARG:HB3	11:AL:107:ALA:O	2.18	0.44
14:AO:39:LEU:O	14:AO:42:HIS:N	2.51	0.44
18:AS:19:VAL:O	18:AS:23:ASN:HB3	2.17	0.44
18:AS:36:ARG:NH2	18:AS:75:ALA:O	2.51	0.44
18:AS:53:ASN:HB2	18:AS:58:VAL:HG22	1.99	0.44
20:AA:582:U:H3'	20:AA:583:A:C8	2.52	0.44
20:AA:1317:C:H5"	20:AA:1318:A:OP2	2.17	0.44
23:AY:14:ASN:ND2	23:AY:374:LEU:HD13	2.32	0.44
23:AY:613:PRO:O	23:AY:615:GLU:N	2.51	0.44
25:BC:79:ALA:O	25:BC:81:GLY:N	2.50	0.44
25:BC:143:ALA:O	25:BC:145:THR:HG23	2.17	0.44
26:BD:24:ILE:HD11	26:BD:83:GLU:N	2.33	0.44
28:BF:40:GLN:HB3	28:BF:43:LYS:NZ	2.33	0.44
29:BG:15:VAL:HA	29:BG:175:LEU:HD13	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:110:SER:HB2	60:BA:2666:C:H41	1.83	0.44
33:BO:107:ARG:CZ	38:BT:36:GLU:HA	2.47	0.44
35:BQ:56:ARG:NH2	60:BA:2469:A:O3'	2.51	0.44
39:BU:56:ASP:O	39:BU:59:ARG:HB2	2.17	0.44
41:BW:109:GLU:OE1	41:BW:109:GLU:N	2.42	0.44
45:B0:65:GLY:HA2	45:B0:83:PRO:HA	1.99	0.44
45:B0:65:GLY:HA3	45:B0:81:VAL:HG13	2.00	0.44
53:B7:7:PRO:HA	60:BA:686:G:C8	2.53	0.44
60:BA:99:U:OP1	60:BA:99:U:H4'	2.18	0.44
60:BA:215:G:C4'	60:BA:216:A:H4'	2.48	0.44
60:BA:385:C:HO2'	60:BA:388:G:H1	1.65	0.44
60:BA:635:C:O2	60:BA:639:U:H4'	2.18	0.44
60:BA:826:U:C2'	60:BA:827:U:H5'	2.48	0.44
60:BA:826:U:C4	60:BA:828:U:H1'	2.53	0.44
60:BA:864:G:H1'	60:BA:914:C:H42	1.83	0.44
60:BA:1105:U:H2'	60:BA:1106:G:C8	2.53	0.44
60:BA:1312:U:O2	60:BA:1314:C:N4	2.51	0.44
60:BA:1669:A:H5"	60:BA:2550:G:OP1	2.17	0.44
60:BA:1793:C:O2'	60:BA:1900:A:N6	2.50	0.44
60:BA:2025:C:H2'	60:BA:2026:C:C6	2.53	0.44
60:BA:2262:U:H4'	60:BA:2328:A:H2	1.83	0.44
60:BA:2363:C:H2'	60:BA:2364:C:C6	2.53	0.44
60:BA:2438:U:H5"	60:BA:2600:A:H5'	1.99	0.44
60:BA:2505:G:C6	60:BA:2610:C:C2	2.91	0.44
1:CB:162:ILE:HG23	1:CB:184:VAL:HA	2.00	0.44
3:CD:159:ARG:O	3:CD:163:GLU:HB2	2.18	0.44
6:CG:15:ASP:HB3	6:CG:19:GLY:N	2.33	0.44
9:CJ:44:VAL:O	9:CJ:46:ARG:HD3	2.18	0.44
10:CK:34:ASP:OD2	10:CK:38:ASN:N	2.51	0.44
11:CL:57:LYS:HA	11:CL:65:GLU:O	2.18	0.44
14:CO:36:ILE:CD1	14:CO:60:VAL:HG22	2.48	0.44
20:CA:149:A:H2'	20:CA:150:C:H6	1.81	0.44
20:CA:426:G:H2'	20:CA:427:U:O4'	2.18	0.44
20:CA:559:A:H4'	20:CA:560:U:H3'	2.00	0.44
20:CA:709:G:H2'	20:CA:710:G:H8	1.82	0.44
20:CA:1374:A:H2'	20:CA:1375:A:H8	1.82	0.44
23:CY:13:ARG:HD3	23:CY:79:ILE:HG12	2.00	0.44
23:CY:512:ILE:HA	23:CY:567:LEU:HA	1.99	0.44
26:DD:223:GLY:HA3	26:DD:231:HIS:CD2	2.53	0.44
26:DD:227:ASN:HB2	26:DD:228:PRO:HD2	1.98	0.44
27:DE:171:GLU:HG2	27:DE:173:VAL:HG23	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:154:VAL:HG13	28:DF:191:ARG:CB	2.47	0.44
28:DF:156:LEU:O	28:DF:157:VAL:C	2.58	0.44
33:DO:10:VAL:HG22	33:DO:17:ARG:HA	1.99	0.44
33:DO:64:ARG:HA	33:DO:79:PHE:CD1	2.52	0.44
34:DP:6:LEU:HB3	34:DP:9:ASN:HB2	1.99	0.44
35:DQ:27:VAL:HG21	35:DQ:133:ARG:O	2.18	0.44
38:DT:53:ARG:NH2	60:DA:2683:C:H5"	2.33	0.44
38:DT:59:THR:HG23	38:DT:78:LEU:HD23	1.98	0.44
45:D0:31:VAL:HB	45:D0:61:ALA:HB2	1.99	0.44
48:DN:19:GLU:HB3	48:DN:59:LYS:HE3	1.99	0.44
52:D6:6:ARG:HD2	52:D6:6:ARG:H	1.83	0.44
59:DB:104:A:H2'	59:DB:105:G:O4'	2.18	0.44
60:DA:238:C:H2'	60:DA:239:U:C6	2.53	0.44
60:DA:589:C:H42	60:DA:668:G:H1	1.65	0.44
60:DA:1310:G:H2'	60:DA:1311:G:O4'	2.18	0.44
60:DA:1853:A:H2'	60:DA:1854:A:H8	1.83	0.44
60:DA:2114:A:H3'	60:DA:2115:G:C8	2.52	0.44
60:DA:2610:C:C4'	60:DA:2611:U:H5'	2.41	0.44
1:AB:59:GLU:HG3	1:AB:221:LEU:HD13	1.99	0.43
1:AB:97:TRP:CE3	1:AB:172:ILE:HG13	2.53	0.43
3:AD:96:LEU:HG	3:AD:139:ARG:CZ	2.47	0.43
3:AD:98:GLU:HG2	3:AD:194:LEU:HG	1.99	0.43
3:AD:120:LEU:HA	3:AD:123:HIS:HB2	1.99	0.43
20:AA:26:A:H4'	20:AA:508:C:N4	2.33	0.43
20:AA:119:A:H62	20:AA:287:U:H3	1.66	0.43
20:AA:565:U:OP2	20:AA:566:G:O2'	2.30	0.43
20:AA:895:G:H2'	20:AA:896:C:C6	2.53	0.43
20:AA:978:A:H4'	20:AA:1322:C:N3	2.33	0.43
20:AA:1128:C:O2'	20:AA:1130:A:N7	2.40	0.43
20:AA:1356:G:H2'	20:AA:1357:A:C8	2.53	0.43
23:AY:555:LEU:HD21	23:AY:599:PRO:HG2	1.99	0.43
25:BC:27:ALA:HB1	25:BC:183:PRO:HA	2.00	0.43
25:BC:78:ILE:HD11	25:BC:104:ILE:HD11	2.00	0.43
27:BE:11:MET:HE3	27:BE:11:MET:HB3	1.80	0.43
29:BG:45:GLU:C	29:BG:47:LYS:H	2.26	0.43
30:BH:85:LYS:HD3	30:BH:133:VAL:HB	1.99	0.43
30:BH:148:ILE:HA	30:BH:151:ILE:HD12	2.00	0.43
33:BO:9:GLU:HB3	33:BO:18:LYS:HG2	2.00	0.43
33:BO:104:ARG:O	33:BO:107:ARG:HB3	2.18	0.43
40:BV:5:VAL:HG23	40:BV:37:VAL:O	2.18	0.43
45:B0:53:MET:HA	45:B0:58:THR:O	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:B0:56:ASP:OD2	60:BA:2364:C:H4'	2.18	0.43
47:B4:6:HIS:HA	47:B4:7:PRO:HD3	1.69	0.43
50:B3:4:LEU:HD22	50:B3:58:VAL:HG22	1.98	0.43
50:B3:41:PRO:O	50:B3:44:ARG:HB2	2.18	0.43
51:B5:13:LYS:NZ	60:BA:517:C:OP2	2.50	0.43
52:B6:27:LYS:HE2	52:B6:29:ASN:HB3	1.99	0.43
60:BA:300:A:H2'	60:BA:334:C:H1'	1.99	0.43
60:BA:463:G:H21	60:BA:466:A:H62	1.66	0.43
60:BA:616:A:H4'	60:BA:617:G:OP1	2.17	0.43
60:BA:792:G:H2'	60:BA:2440:C:O2	2.17	0.43
60:BA:1000:A:H2'	60:BA:1001:A:C8	2.53	0.43
60:BA:1688:U:H2'	60:BA:1698:A:N6	2.32	0.43
1:CB:187:LEU:HD22	1:CB:188:ALA:N	2.32	0.43
2:CC:33:LEU:HA	2:CC:36:ASP:HB3	1.99	0.43
4:CE:18:ARG:NH2	4:CE:25:ARG:HD2	2.32	0.43
5:CF:12:PRO:HD2	5:CF:86:ARG:HH11	1.83	0.43
7:CH:9:MET:HG3	7:CH:26:VAL:HG11	2.00	0.43
7:CH:120:THR:N	7:CH:123:GLU:HB2	2.33	0.43
11:CL:22:SER:C	11:CL:24:VAL:H	2.23	0.43
11:CL:73:GLU:HA	20:CA:521:G:OP1	2.18	0.43
17:CR:85:LEU:H	17:CR:85:LEU:HD12	1.83	0.43
20:CA:68(S):C:C4	20:CA:68(T):G:N7	2.86	0.43
20:CA:1130:A:N6	20:CA:1131:G:O6	2.50	0.43
22:CW:36:U:C4	22:CW:37:A:C5	3.06	0.43
23:CY:75:LYS:HB3	23:CY:75:LYS:HE3	1.61	0.43
23:CY:139:MET:SD	23:CY:144:ALA:HB1	2.58	0.43
25:DC:176:VAL:HB	25:DC:177:GLY:H	1.33	0.43
26:DD:78:LYS:CD	26:DD:98:VAL:HG22	2.45	0.43
29:DG:44:GLY:H	29:DG:88:ILE:HG23	1.82	0.43
31:DJ:58:UNK:HA	60:DA:1107:G:OP1	2.17	0.43
31:DJ:114:UNK:C	31:DJ:124:UNK:HA	2.47	0.43
38:DT:99:LEU:HA	38:DT:101:PHE:CE1	2.53	0.43
42:DX:7:VAL:HG11	42:DX:42:ALA:HB3	1.99	0.43
48:DN:55:VAL:O	48:DN:56:ASN:C	2.61	0.43
48:DN:76:SER:C	48:DN:78:TYR:H	2.26	0.43
50:D3:17:LYS:HA	50:D3:17:LYS:HD3	1.72	0.43
59:DB:15:A:OP2	59:DB:69:G:N2	2.51	0.43
60:DA:141(A):A:H5"	60:DA:141(B):C:OP2	2.18	0.43
60:DA:259:G:H2'	60:DA:260:G:H8	1.83	0.43
60:DA:443:A:H1'	60:DA:1201:C:O4'	2.18	0.43
60:DA:1129:A:N6	60:DA:2490:G:H5"	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:1790:C:H2'	60:DA:1791:A:C5	2.53	0.43
60:DA:2439:A:C8	60:DA:2586:C:H4'	2.53	0.43
60:DA:2441:C:H2'	60:DA:2442:C:C6	2.53	0.43
1:AB:182:ILE:HA	1:AB:182:ILE:HD13	1.82	0.43
2:AC:39:ILE:O	2:AC:43:LEU:HG	2.18	0.43
2:AC:130:VAL:HG13	2:AC:153:VAL:HG21	2.00	0.43
3:AD:14:ARG:HA	3:AD:40:PRO:HD2	2.00	0.43
3:AD:49:ARG:HB3	3:AD:50:ARG:H	1.72	0.43
4:AE:127:ASN:O	4:AE:131:ILE:HG12	2.18	0.43
6:AG:59:LEU:HD12	6:AG:62:PHE:HB3	2.00	0.43
7:AH:69:ARG:H	7:AH:69:ARG:HG3	1.52	0.43
7:AH:81:HIS:HB2	7:AH:138:TRP:O	2.18	0.43
9:AJ:58:ASP:N	9:AJ:58:ASP:OD1	2.49	0.43
11:AL:7:ILE:O	11:AL:11:VAL:HG23	2.18	0.43
11:AL:102:ARG:CB	11:AL:109:GLY:H	2.24	0.43
12:AM:76:ALA:HA	12:AM:79:LYS:HG3	2.00	0.43
16:AQ:60:ILE:HG12	16:AQ:61:GLU:N	2.32	0.43
20:AA:26:A:H4'	20:AA:508:C:H42	1.82	0.43
20:AA:178:C:H2'	20:AA:179:A:O4'	2.19	0.43
20:AA:396:G:H2'	20:AA:398:C:C5	2.51	0.43
20:AA:1014:A:C5	20:AA:1015:A:C6	3.06	0.43
20:AA:1300:G:OP2	20:AA:1335:C:N4	2.51	0.43
20:AA:1403:C:H6	20:AA:1403:C:O5'	2.01	0.43
23:AY:28:THR:O	23:AY:32:ILE:HG12	2.18	0.43
23:AY:203:GLU:HB3	23:AY:204:GLU:H	1.51	0.43
23:AY:215:LYS:O	23:AY:218:GLU:HB3	2.18	0.43
25:BC:128:LEU:HB2	25:BC:138:LEU:HD21	1.98	0.43
26:BD:273:ARG:HH21	60:BA:1799:G:P	2.41	0.43
27:BE:51:PHE:N	27:BE:74:PRO:HG3	2.33	0.43
27:BE:92:THR:N	27:BE:95:ILE:HD11	2.31	0.43
28:BF:24:LEU:C	28:BF:115:ALA:HB1	2.43	0.43
28:BF:167:ALA:HA	28:BF:170:LEU:HB2	2.00	0.43
29:BG:59:GLU:HA	29:BG:62:LEU:HD22	2.00	0.43
33:BO:77:ILE:HA	38:BT:73:GLU:O	2.18	0.43
33:BO:112:MET:SD	33:BO:112:MET:N	2.72	0.43
34:BP:38:GLN:HB3	60:BA:943:U:OP2	2.18	0.43
34:BP:39:LYS:HB3	34:BP:40:SER:H	1.70	0.43
34:BP:76:LYS:HB3	34:BP:76:LYS:HE3	1.74	0.43
37:BS:92:TYR:HE2	37:BS:94:TYR:HB2	1.80	0.43
38:BT:28:VAL:HG12	38:BT:29:ARG:N	2.33	0.43
38:BT:55:ASN:HB3	38:BT:59:THR:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BU:49:HIS:CG	60:BA:534:U:O2'	2.71	0.43
51:B5:5:PRO:HB2	60:BA:2614:A:O4'	2.17	0.43
59:BB:16:G:N2	59:BB:69:G:H1'	2.34	0.43
60:BA:220:G:H2'	60:BA:427:U:O4	2.18	0.43
60:BA:1178:C:H2'	60:BA:1179:C:C6	2.53	0.43
60:BA:2435:A:C2	60:BA:2436:G:H1'	2.53	0.43
60:BA:2576:G:H8	60:BA:2581:G:N7	2.16	0.43
60:BA:2790:A:N3	60:BA:2791:C:H5"	2.33	0.43
1:CB:22:LYS:C	1:CB:24:TRP:HD1	2.26	0.43
1:CB:182:ILE:O	1:CB:184:VAL:HG23	2.18	0.43
1:CB:185:ILE:HG23	1:CB:199:TYR:HB2	1.99	0.43
7:CH:14:ARG:HH12	20:CA:876:G:H4'	1.82	0.43
12:CM:23:TYR:CE1	12:CM:70:LEU:HD23	2.53	0.43
13:CN:17:LYS:N	20:CA:1317:C:OP1	2.49	0.43
14:CO:8:LYS:O	14:CO:12:ILE:HG13	2.18	0.43
16:CQ:92:ARG:HA	16:CQ:95:TYR:CD2	2.53	0.43
20:CA:120:A:H2'	20:CA:122:G:N7	2.33	0.43
20:CA:328:C:H4'	20:CA:329:A:H5'	2.00	0.43
20:CA:531:U:H4'	20:CA:532:A:O5'	2.18	0.43
20:CA:1363:A:H4'	20:CA:1364:U:H5"	2.00	0.43
23:CY:90:PHE:CD1	23:CY:458:HIS:HB2	2.53	0.43
23:CY:304:ASP:C	23:CY:306:ASN:H	2.26	0.43
23:CY:529:ILE:HD13	23:CY:534:ILE:HB	2.00	0.43
23:CY:683:VAL:O	23:CY:687:LEU:N	2.51	0.43
25:DC:19:LYS:HE3	25:DC:20:VAL:HB	1.99	0.43
26:DD:61:LEU:HD13	60:DA:1569:A:H4'	2.00	0.43
28:DF:154:VAL:CB	28:DF:173:VAL:HG13	2.43	0.43
29:DG:34:LEU:HD23	29:DG:100:TRP:CZ2	2.53	0.43
33:DO:98:VAL:HG11	33:DO:114:ILE:HG22	2.01	0.43
35:DQ:34:LEU:O	35:DQ:103:MET:N	2.50	0.43
36:DR:45:ARG:HB3	36:DR:97:VAL:HG23	2.00	0.43
37:DS:15:ARG:HB3	37:DS:18:ILE:CB	2.47	0.43
37:DS:15:ARG:C	37:DS:17:ARG:N	2.74	0.43
37:DS:74:ALA:HA	37:DS:105:ALA:CB	2.45	0.43
38:DT:19:LEU:HA	38:DT:20:PRO:HD3	1.82	0.43
41:DW:68:ARG:O	41:DW:110:LYS:N	2.51	0.43
42:DX:68:ARG:HH12	60:DA:456:C:HO2'	1.60	0.43
43:DY:44:ILE:HG22	43:DY:45:VAL:H	1.83	0.43
43:DY:62:GLU:CD	43:DY:63:LYS:H	2.27	0.43
48:DN:97:ARG:HH11	48:DN:97:ARG:HG2	1.83	0.43
53:D7:31:LEU:HA	53:D7:34:ARG:CG	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:De:74:VAL:HG21	56:De:86:LEU:HD11	2.00	0.43
60:DA:403:U:H4'	60:DA:404:C:H5'	2.00	0.43
60:DA:565:C:N4	60:DA:576:U:C4	2.84	0.43
60:DA:718:A:H2'	60:DA:719:C:O4'	2.18	0.43
60:DA:1430:C:H2'	60:DA:1431:U:H6	1.83	0.43
60:DA:1540:G:H3'	60:DA:1541:U:H6	1.82	0.43
60:DA:1937:A:H1'	60:DA:1938:A:OP1	2.18	0.43
60:DA:2041:U:H5'	60:DA:2042:A:OP2	2.18	0.43
60:DA:2271:G:H2'	60:DA:2272:U:C6	2.53	0.43
60:DA:2335:A:O2'	60:DA:2336:A:H5"	2.19	0.43
60:DA:2344:U:H4'	60:DA:2345:G:OP1	2.17	0.43
60:DA:2395:C:H2'	60:DA:2396:G:O4'	2.18	0.43
60:DA:2673:G:H2'	60:DA:2674:G:C8	2.53	0.43
60:DA:2792:G:C2	60:DA:2805:G:N1	2.87	0.43
1:AB:169:LYS:HB3	1:AB:170:GLU:H	1.70	0.43
2:AC:35:GLU:O	2:AC:36:ASP:C	2.61	0.43
3:AD:5:ILE:HD13	20:AA:406:G:H4'	2.00	0.43
3:AD:102:ASP:OD1	3:AD:102:ASP:N	2.51	0.43
5:AF:48:LEU:HD22	17:AR:77:GLY:C	2.44	0.43
7:AH:46:LYS:HB3	7:AH:62:TYR:CB	2.48	0.43
8:AI:104:ARG:NH1	20:AA:1117:G:H4'	2.33	0.43
9:AJ:50:ILE:HA	9:AJ:60:ARG:HA	2.00	0.43
12:AM:80:ARG:NH1	18:AS:65:ASN:HB3	2.28	0.43
16:AQ:45:HIS:CB	16:AQ:72:ARG:HA	2.47	0.43
20:AA:123:C:O2'	20:AA:290:C:O2	2.36	0.43
20:AA:154:C:N4	20:AA:167:G:H1	2.16	0.43
20:AA:339:C:H2'	20:AA:340:U:C6	2.52	0.43
20:AA:673:G:O5'	20:AA:673:G:H8	2.02	0.43
20:AA:828:A:H62	20:AA:858:G:N2	2.14	0.43
20:AA:828:A:H2'	20:AA:829:G:O4'	2.18	0.43
23:AY:85:PRO:HB3	23:AY:94:VAL:HG22	1.99	0.43
23:AY:126:GLU:C	23:AY:129:LYS:H	2.25	0.43
23:AY:147:TRP:CD1	23:AY:147:TRP:H	2.36	0.43
23:AY:156:ARG:NH1	23:AY:666:ARG:HD2	2.33	0.43
23:AY:210:ARG:O	23:AY:213:HIS:HB3	2.19	0.43
23:AY:553:GLY:N	23:AY:557:GLY:HA2	2.33	0.43
23:AY:624:LEU:HD21	23:AY:643:ILE:HG21	2.00	0.43
25:BC:4:HIS:CD2	60:BA:2175:C:H5"	2.54	0.43
28:BF:81:PRO:O	28:BF:83:PHE:N	2.51	0.43
33:BO:6:THR:HG22	33:BO:7:TYR:O	2.18	0.43
36:BR:82:GLU:C	36:BR:85:PRO:HD2	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BS:39:ILE:HB	37:BS:49:VAL:HB	1.99	0.43
38:BT:19:LEU:HA	38:BT:20:PRO:HD3	1.89	0.43
40:BV:33:VAL:HG12	40:BV:61:VAL:HG12	2.01	0.43
40:BV:35:LEU:HB2	40:BV:57:VAL:HG13	2.00	0.43
48:BN:91:LEU:O	48:BN:92:ALA:C	2.61	0.43
49:B2:17:SER:O	49:B2:20:GLU:N	2.49	0.43
54:B8:28:GLY:HA2	60:BA:2392:A:H5"	1.98	0.43
60:BA:468:G:H3'	60:BA:469:G:C8	2.53	0.43
60:BA:948:G:N2	60:BA:985:C:OP2	2.52	0.43
60:BA:1077:A:H3'	60:BA:1078:U:O4'	2.18	0.43
60:BA:1214:A:H3'	60:BA:1215:G:C8	2.54	0.43
60:BA:1830:C:N4	60:BA:1975:G:H1	2.15	0.43
60:BA:2070:G:H1	60:BA:2441:C:N4	2.14	0.43
1:CB:24:TRP:HB2	1:CB:25:ASN:H	1.63	0.43
2:CC:167:TRP:HA	2:CC:167:TRP:CE3	2.52	0.43
5:CF:69:GLU:HB2	5:CF:70:ASP:H	1.42	0.43
14:CO:56:LEU:HG	14:CO:57:LEU:N	2.33	0.43
20:CA:50:A:H4'	20:CA:51:A:H5'	2.00	0.43
20:CA:123:C:O2'	20:CA:290:C:H1'	2.19	0.43
20:CA:257:G:H1	20:CA:269:C:H42	1.66	0.43
20:CA:683:G:C6	20:CA:684:A:C6	3.06	0.43
20:CA:910:C:H2'	20:CA:911:U:C6	2.53	0.43
23:CY:128:TYR:CE2	23:CY:130:VAL:HB	2.54	0.43
23:CY:603:GLU:HB2	23:CY:604:PRO:HD2	2.00	0.43
25:DC:115:VAL:HA	25:DC:145:THR:HA	2.00	0.43
25:DC:174:ALA:HA	25:DC:175:PRO:HD3	1.33	0.43
25:DC:176:VAL:HG11	25:DC:189:ASN:ND2	2.33	0.43
28:DF:154:VAL:N	28:DF:173:VAL:HA	2.29	0.43
28:DF:155:LEU:O	28:DF:191:ARG:C	2.61	0.43
29:DG:97:ASP:HB2	29:DG:98:ARG:NH1	2.33	0.43
32:DK:10:LEU:HD22	32:DK:22:PRO:HB2	2.00	0.43
32:DK:63:ARG:H	56:De:79:ARG:HH21	1.66	0.43
35:DQ:7:MET:HE1	35:DQ:10:ARG:HA	1.99	0.43
43:DY:38:ILE:HD13	43:DY:65:ALA:C	2.43	0.43
48:DN:89:LYS:HB3	48:DN:89:LYS:HZ3	1.83	0.43
48:DN:91:LEU:O	48:DN:92:ALA:C	2.61	0.43
50:D3:6:VAL:HB	50:D3:54:VAL:HG13	2.00	0.43
53:D7:7:PRO:HA	60:DA:686:G:N7	2.34	0.43
60:DA:1698:A:H1'	60:DA:1699:G:H3'	2.00	0.43
60:DA:1789:A:H2'	60:DA:1790:C:O4'	2.19	0.43
60:DA:1913:A:H4'	60:DA:1914:C:O5'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2082:A:H3'	60:DA:2083:G:H8	1.84	0.43
60:DA:2425:A:H5"	60:DA:2427:C:O4'	2.19	0.43
1:AB:182:ILE:O	1:AB:184:VAL:HG23	2.18	0.43
2:AC:39:ILE:O	2:AC:40:ARG:C	2.62	0.43
6:AG:74:GLU:O	6:AG:88:PRO:HA	2.19	0.43
6:AG:85:TYR:O	6:AG:87:VAL:HG23	2.18	0.43
11:AL:83:VAL:O	11:AL:83:VAL:CG2	2.66	0.43
12:AM:3:ARG:HE	12:AM:7:VAL:HG13	1.82	0.43
20:AA:1000:A:H2'	20:AA:1001:G:O4'	2.19	0.43
20:AA:1498:U:O3'	20:AA:1499:A:H8	2.01	0.43
24:AU:4:SER:HB3	24:AU:6:5OH:NQ	2.33	0.43
25:BC:96:GLY:HA3	25:BC:100:ILE:HG12	2.00	0.43
25:BC:164:PHE:H	25:BC:164:PHE:HD2	1.64	0.43
26:BD:53:PHE:HE1	26:BD:220:HIS:CD2	2.36	0.43
28:BF:100:THR:O	60:BA:659:C:H4'	2.18	0.43
28:BF:115:ALA:O	28:BF:118:ALA:HB3	2.18	0.43
38:BT:3:ARG:O	38:BT:7:ILE:HG12	2.19	0.43
42:BX:39:ILE:O	42:BX:43:VAL:HG23	2.18	0.43
44:BZ:81:ARG:HE	44:BZ:81:ARG:HB2	1.70	0.43
46:B1:35:THR:HG21	60:BA:2432:A:N7	2.33	0.43
46:B1:45:ASN:ND2	60:BA:2230:G:H1'	2.33	0.43
48:BN:100:GLU:O	48:BN:101:HIS:C	2.60	0.43
49:B2:37:PHE:HD1	49:B2:37:PHE:HA	1.75	0.43
60:BA:176:G:H3'	60:BA:177:G:C2	2.54	0.43
60:BA:324:A:H62	60:BA:338:G:N2	2.12	0.43
60:BA:576:U:H4'	60:BA:2502:G:C8	2.53	0.43
60:BA:630:G:O4'	60:BA:640:C:H4'	2.18	0.43
60:BA:657:U:C4	60:BA:658:C:N4	2.86	0.43
60:BA:895:U:C4	60:BA:897:C:N4	2.87	0.43
60:BA:1030:G:H1	60:BA:1124:C:H42	1.65	0.43
60:BA:1391:U:N3	60:BA:1394:U:H5	2.16	0.43
60:BA:1677:A:H2'	60:BA:1678:G:H8	1.82	0.43
60:BA:1696:G:H2'	60:BA:1697:G:O4'	2.19	0.43
60:BA:1814:G:H2'	60:BA:1815:A:C8	2.53	0.43
60:BA:1917:U:H2'	60:BA:1918:A:O4'	2.19	0.43
60:BA:2012:G:H8	60:BA:2012:G:O5'	2.02	0.43
60:BA:2242:G:H2'	60:BA:2243:U:C6	2.53	0.43
60:BA:2264:C:H3'	60:BA:2265:U:C6	2.54	0.43
60:BA:2386:C:H2'	60:BA:2387:U:C5	2.54	0.43
60:BA:2792:G:H2'	60:BA:2792:G:N3	2.34	0.43
2:CC:3:ASN:ND2	20:CA:1062:U:O4	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:55:ALA:HB2	20:CA:509:A:H5'	2.00	0.43
3:CD:125:HIS:HE1	20:CA:437:U:O3'	2.01	0.43
8:CI:19:LEU:HB3	8:CI:59:PHE:HD2	1.84	0.43
17:CR:68:LYS:HB3	17:CR:72:ARG:HH22	1.82	0.43
19:CT:74:LYS:HD3	19:CT:74:LYS:N	2.32	0.43
20:CA:218:C:H5'	20:CA:458(C):G:N1	2.26	0.43
20:CA:295:C:H2'	20:CA:296:U:O4'	2.18	0.43
20:CA:581:G:N2	20:CA:761:G:O6	2.51	0.43
20:CA:1440(C):G:C6	38:DT:118:ARG:HD3	2.53	0.43
23:CY:330:VAL:O	23:CY:331:TYR:CB	2.66	0.43
32:DK:63:ARG:HH21	56:De:79:ARG:NH1	2.16	0.43
36:DR:53:HIS:O	36:DR:56:LYS:HB3	2.18	0.43
46:D1:21:ARG:HB3	46:D1:38:SER:HB2	1.99	0.43
51:D5:17:ASP:CB	60:DA:16:G:H5"	2.48	0.43
55:D9:2:LYS:NZ	55:D9:35:ARG:HG3	2.34	0.43
59:DB:111:U:H2'	59:DB:112:G:H8	1.83	0.43
60:DA:41:C:C2	60:DA:43:G:C8	3.06	0.43
60:DA:190:A:H3'	60:DA:191:A:C8	2.53	0.43
60:DA:280:C:C2	60:DA:360:G:N2	2.81	0.43
60:DA:521:G:H2'	60:DA:522:G:H8	1.83	0.43
60:DA:574:C:O4'	60:DA:2055:C:H5"	2.19	0.43
60:DA:1259:G:H2'	60:DA:1260:G:H8	1.82	0.43
60:DA:2071:A:H2'	60:DA:2072:G:C8	2.53	0.43
11:AL:10:LEU:HD21	11:AL:15:ARG:HE	1.84	0.43
11:AL:11:VAL:HG13	16:AQ:29:HIS:HD2	1.84	0.43
11:AL:55:VAL:O	11:AL:56:ALA:C	2.62	0.43
12:AM:98:VAL:HB	20:AA:1308:U:H5"	2.01	0.43
15:AP:18:ARG:HG2	15:AP:20:VAL:HG12	1.99	0.43
17:AR:74:ARG:HG2	17:AR:79:LEU:HD22	2.00	0.43
19:AT:74:LYS:HD3	19:AT:74:LYS:N	2.33	0.43
20:AA:603:U:H2'	20:AA:604:G:H8	1.84	0.43
20:AA:713:G:N2	20:AA:777:A:H1'	2.27	0.43
20:AA:1074:G:H2'	20:AA:1075:C:H6	1.83	0.43
20:AA:1194:U:H2'	20:AA:1195:C:O4'	2.18	0.43
20:AA:1436:U:H2'	20:AA:1437:C:C6	2.54	0.43
20:AA:1488:G:H2'	20:AA:1489:G:O4'	2.18	0.43
23:AY:59:ARG:HB3	23:AY:64:THR:HA	2.00	0.43
23:AY:152:THR:HG22	23:AY:156:ARG:HG3	2.00	0.43
23:AY:162:VAL:HB	23:AY:255:ILE:CG1	2.48	0.43
25:BC:30:VAL:CG2	25:BC:33:LEU:HD12	2.49	0.43
25:BC:40:GLU:HB3	25:BC:217:THR:C	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:182:PRO:O	25:BC:186:LEU:HG	2.17	0.43
26:BD:123:ALA:HA	26:BD:124:PRO:HD2	1.93	0.43
27:BE:93:VAL:O	27:BE:95:ILE:N	2.43	0.43
27:BE:120:TRP:CZ2	27:BE:155:LYS:HA	2.53	0.43
27:BE:143:ASN:O	60:BA:2052:G:H4'	2.19	0.43
28:BF:15:SER:O	28:BF:17:ARG:HG2	2.19	0.43
28:BF:191:ARG:C	28:BF:193:VAL:HG23	2.43	0.43
29:BG:55:LYS:HA	29:BG:58:GLN:HG3	2.01	0.43
30:BH:148:ILE:O	30:BH:151:ILE:HB	2.18	0.43
32:BK:84:LEU:HD22	32:BK:96:VAL:HB	2.00	0.43
32:BK:117:THR:HG21	32:BK:122:ALA:HB3	2.00	0.43
33:BO:35:VAL:HG22	33:BO:106:LEU:HD11	2.00	0.43
34:BP:18:ARG:HG3	60:BA:1246:A:OP2	2.18	0.43
34:BP:52:GLU:HG3	34:BP:53:GLY:N	2.34	0.43
37:BS:102:ALA:HA	37:BS:106:ARG:CB	2.49	0.43
38:BT:64:ARG:NH1	38:BT:103:ARG:HA	2.32	0.43
39:BU:64:ARG:HH21	48:BN:42:TRP:N	2.16	0.43
39:BU:80:ILE:O	39:BU:83:LEU:N	2.52	0.43
43:BY:35:TYR:HD1	43:BY:35:TYR:HA	1.75	0.43
44:BZ:48:PHE:HZ	44:BZ:71:VAL:HG11	1.83	0.43
46:B1:89:GLU:OE2	46:B1:89:GLU:N	2.35	0.43
48:BN:17:ASP:CG	48:BN:18:ALA:H	2.27	0.43
48:BN:43:THR:HB	48:BN:46:VAL:HG11	1.99	0.43
48:BN:45:ASN:HB2	60:BA:557:U:O2'	2.17	0.43
48:BN:55:VAL:O	48:BN:56:ASN:C	2.61	0.43
54:B8:63:PRO:O	54:B8:65:GLU:N	2.51	0.43
60:BA:27:G:N2	60:BA:512:G:H1'	2.34	0.43
60:BA:71:A:OP1	60:BA:112:U:H2'	2.19	0.43
60:BA:297:C:H2'	60:BA:298:G:C8	2.53	0.43
60:BA:858:U:C4	60:BA:919:G:O6	2.72	0.43
60:BA:990:A:H5"	60:BA:1157:G:OP1	2.19	0.43
60:BA:1735:U:H2'	60:BA:1741:C:C6	2.52	0.43
60:BA:2001:A:H2'	60:BA:2002:G:C8	2.54	0.43
60:BA:2018:G:H8	60:BA:2018:G:O5'	2.02	0.43
2:CC:70:VAL:O	2:CC:105:GLU:HA	2.17	0.43
3:CD:19:LEU:O	3:CD:20:TYR:C	2.61	0.43
3:CD:41:GLY:HA2	20:CA:542:G:H5'	1.99	0.43
7:CH:69:ARG:NH2	7:CH:73:ASP:O	2.52	0.43
12:CM:111:LYS:NZ	20:CA:1228:C:OP2	2.47	0.43
14:CO:8:LYS:HZ1	14:CO:31:LEU:HD21	1.84	0.43
16:CQ:62:SER:HA	20:CA:186(I):U:O4	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CS:53:ASN:ND2	18:CS:77:THR:HG22	2.33	0.43
19:CT:80:ARG:NH2	20:CA:261:U:OP1	2.51	0.43
20:CA:269:C:H2'	20:CA:270:A:H8	1.82	0.43
20:CA:601:C:H2'	20:CA:602:A:C8	2.50	0.43
20:CA:606:G:H3'	20:CA:607:A:H5'	2.00	0.43
20:CA:1103:C:H2'	20:CA:1104:G:O4'	2.18	0.43
20:CA:1132:C:H2'	20:CA:1133:G:C8	2.54	0.43
20:CA:1296:C:H4'	20:CA:1302:U:C4	2.54	0.43
20:CA:1349:A:H2'	20:CA:1350:A:O4'	2.19	0.43
20:CA:1534:A:H8	20:CA:1534:A:O5'	2.01	0.43
23:CY:528:ALA:HB3	23:CY:568:TYR:HA	2.00	0.43
23:CY:565:VAL:HB	23:CY:566:THR:H	1.55	0.43
24:CU:4:SER:HB3	24:CU:6:5OH:NQ	2.33	0.43
25:DC:16:ASP:OD1	25:DC:16:ASP:N	2.52	0.43
25:DC:20:VAL:CG1	25:DC:226:ASN:HB2	2.48	0.43
26:DD:268:ARG:NH1	26:DD:268:ARG:HB3	2.33	0.43
27:DE:14:ILE:O	27:DE:21:VAL:HG22	2.19	0.43
34:DP:84:ASN:HA	34:DP:115:LEU:O	2.18	0.43
36:DR:8:ARG:HG3	36:DR:43:GLU:OE2	2.17	0.43
36:DR:11:ASN:O	36:DR:12:ARG:HB2	2.18	0.43
46:D1:31:GLY:O	46:D1:32:LYS:C	2.61	0.43
46:D1:37:ILE:HG13	46:D1:38:SER:N	2.34	0.43
59:DB:102:G:H2'	59:DB:103:U:C6	2.53	0.43
60:DA:20:C:C2	60:DA:21:A:C8	3.06	0.43
60:DA:684:G:H3'	60:DA:774:A:H61	1.84	0.43
60:DA:917:A:H3'	60:DA:918:A:H8	1.84	0.43
60:DA:979:G:C4	60:DA:982:C:N4	2.87	0.43
60:DA:1138:G:O2'	60:DA:1139:G:P	2.76	0.43
60:DA:1212:G:O2'	60:DA:1236:G:N1	2.34	0.43
60:DA:2154:G:H2'	60:DA:2155:G:H8	1.84	0.43
1:AB:22:LYS:C	1:AB:24:TRP:HD1	2.26	0.43
1:AB:101:MET:HB3	1:AB:152:PHE:CE1	2.54	0.43
3:AD:41:GLY:HA2	20:AA:542:G:H5'	2.00	0.43
4:AE:76:ILE:HG12	4:AE:78:HIS:H	1.83	0.43
6:AG:12:LEU:HD12	6:AG:21:VAL:HB	1.99	0.43
10:AK:44:SER:OG	20:AA:689:C:OP1	2.33	0.43
10:AK:45:GLY:HA2	10:AK:64:ALA:HB2	2.00	0.43
11:AL:22:SER:C	11:AL:24:VAL:H	2.24	0.43
11:AL:116:SER:C	11:AL:118:SER:H	2.26	0.43
12:AM:102:ARG:HA	20:AA:1225:A:OP1	2.17	0.43
20:AA:879:C:H2'	20:AA:880:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:924:C:N3	20:AA:1392:G:O6	2.51	0.43
20:AA:1305:G:N1	20:AA:1331:G:H2'	2.34	0.43
20:AA:1461:G:H2'	20:AA:1462:G:C8	2.53	0.43
20:AA:1492:A:C5'	24:AU:6:5OH:NP	2.74	0.43
23:AY:323:GLY:O	23:AY:325:LEU:N	2.52	0.43
26:BD:79:VAL:HG12	26:BD:80:ALA:N	2.34	0.43
26:BD:92:ILE:HB	26:BD:105:ILE:O	2.19	0.43
26:BD:95:LEU:HD12	26:BD:103:ARG:O	2.19	0.43
27:BE:82:ARG:NH2	60:BA:2638:G:OP2	2.47	0.43
28:BF:111:ALA:HB2	28:BF:206:ILE:CD1	2.47	0.43
29:BG:16:ARG:H	29:BG:16:ARG:HG2	1.66	0.43
30:BH:97:ARG:HE	30:BH:97:ARG:HB3	1.45	0.43
35:BQ:54:MET:HG2	35:BQ:58:PHE:HE2	1.79	0.43
36:BR:11:ASN:O	36:BR:12:ARG:HB2	2.19	0.43
40:BV:58:VAL:O	40:BV:97:LYS:HB2	2.18	0.43
41:BW:23:LEU:HD21	51:B5:27:PRO:HA	2.00	0.43
41:BW:88:ARG:HB2	41:BW:94:ASP:OD2	2.17	0.43
48:BN:19:GLU:HB3	48:BN:59:LYS:HE3	1.99	0.43
50:B3:43:ILE:O	50:B3:47:VAL:HG23	2.18	0.43
53:B7:34:ARG:HB3	53:B7:39:ARG:HE	1.83	0.43
57:Bf:5:UNK:C	57:Bf:7:UNK:H	2.30	0.43
59:BB:3:C:O5'	59:BB:3:C:H6	2.01	0.43
60:BA:127:A:H8	60:BA:127:A:O5'	2.01	0.43
60:BA:197:A:H2	60:BA:2434:A:H62	1.66	0.43
60:BA:226:G:C2	60:BA:228:A:N6	2.85	0.43
60:BA:607:U:H2'	60:BA:608:A:H8	1.82	0.43
60:BA:628:G:C6	60:BA:629:G:C6	3.07	0.43
60:BA:657:U:H2'	60:BA:658:C:C6	2.54	0.43
60:BA:930:U:H4'	60:BA:931:G:O4'	2.18	0.43
60:BA:1047:G:H1'	60:BA:1110:G:H22	1.83	0.43
60:BA:1074:G:H8	60:BA:1074:G:OP2	2.01	0.43
60:BA:1815:A:H4'	60:BA:1816:G:O5'	2.17	0.43
60:BA:2019:A:H2'	60:BA:2020:A:O4'	2.18	0.43
60:BA:2040:C:C5	60:BA:2040:C:OP2	2.71	0.43
60:BA:2211:G:N3	60:BA:2211:G:H2'	2.34	0.43
60:BA:2639:A:H1'	60:BA:2778:A:C2	2.54	0.43
1:CB:91:PRO:HA	1:CB:151:GLY:O	2.19	0.43
3:CD:60:GLU:HA	3:CD:63:LYS:HB2	2.01	0.43
6:CG:32:ARG:HA	6:CG:32:ARG:HD3	1.70	0.43
8:CI:9:ARG:NH2	20:CA:1149:C:OP1	2.52	0.43
10:CK:18:ARG:HD3	10:CK:35:PRO:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:70:ILE:HD12	11:CL:72:GLY:CA	2.49	0.43
11:CL:113:ARG:NH2	20:CA:538:G:OP2	2.51	0.43
13:CN:26:ARG:O	13:CN:27:CYS:HB3	2.18	0.43
15:CP:28:ARG:HD2	20:CA:389:A:H2	1.84	0.43
19:CT:72:LEU:HD11	19:CT:80:ARG:HD2	2.00	0.43
20:CA:123:C:H5"	20:CA:311:C:O2'	2.17	0.43
20:CA:328:C:H2'	20:CA:328:C:O2	2.18	0.43
20:CA:444:C:N4	20:CA:490:G:H1	2.13	0.43
22:CW:59:A:H2'	22:CW:60:U:O4'	2.19	0.43
25:DC:27:ALA:HB1	25:DC:183:PRO:O	2.19	0.43
27:DE:62:PRO:HB3	60:DA:2786:U:H2'	1.99	0.43
29:DG:105:LYS:NZ	47:D4:31:ILE:HG21	2.26	0.43
32:DK:117:THR:HG21	32:DK:122:ALA:HB3	2.01	0.43
33:DO:87:ILE:HD13	33:DO:91:LEU:HA	1.99	0.43
35:DQ:11:LYS:NZ	60:DA:2277:G:OP1	2.37	0.43
35:DQ:58:PHE:HD1	35:DQ:61:GLY:HA3	1.82	0.43
35:DQ:74:TYR:HB3	35:DQ:91:GLU:O	2.18	0.43
36:DR:2:ARG:HB2	36:DR:5:LYS:HG2	2.01	0.43
38:DT:111:ARG:H	38:DT:111:ARG:HG3	1.48	0.43
39:DU:86:ALA:C	39:DU:88:ILE:H	2.27	0.43
43:DY:9:LYS:HE3	43:DY:11:ASP:HB3	1.99	0.43
45:D0:45:PHE:HA	45:D0:77:ARG:O	2.18	0.43
48:DN:17:ASP:CG	48:DN:18:ALA:N	2.77	0.43
60:DA:572:A:H61	60:DA:2029:G:H1'	1.83	0.43
60:DA:817:C:O2'	60:DA:839:U:OP1	2.24	0.43
60:DA:1236:G:O2'	60:DA:1237:A:OP2	2.29	0.43
60:DA:1665:A:H2	60:DA:1995:U:H3	1.67	0.43
60:DA:1786:A:C8	60:DA:1938:A:C6	3.07	0.43
60:DA:1932:A:H3'	60:DA:1933:G:C8	2.53	0.43
60:DA:2358:G:H2'	60:DA:2359:C:O4'	2.19	0.43
60:DA:2498:C:O2'	60:DA:2499:C:H5'	2.19	0.43
60:DA:2503:A:H3'	60:DA:2503:A:OP2	2.19	0.43
60:DA:2606:C:H2'	60:DA:2607:G:O4'	2.18	0.43
60:DA:2639:A:H1'	60:DA:2778:A:C2	2.53	0.43
1:AB:71:VAL:CB	1:AB:164:VAL:HG13	2.47	0.43
2:AC:56:ASP:OD1	2:AC:56:ASP:N	2.45	0.43
5:AF:43:LEU:HB3	5:AF:60:PHE:O	2.18	0.43
6:AG:32:ARG:HG3	20:AA:1240:U:O2'	2.19	0.43
6:AG:114:ARG:HD3	6:AG:114:ARG:HA	1.83	0.43
10:AK:122:LYS:HG3	20:AA:779:C:H5"	2.00	0.43
11:AL:34:ARG:HB2	20:AA:363:A:OP1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:32:LEU:HD23	14:AO:32:LEU:HA	1.89	0.43
19:AT:54:LYS:O	19:AT:57:ARG:HB3	2.19	0.43
20:AA:507:C:H3'	20:AA:508:C:H2'	2.01	0.43
20:AA:582:U:H2'	20:AA:583:A:O4'	2.19	0.43
20:AA:923:A:H61	20:AA:1393:U:H3	1.67	0.43
20:AA:944:G:O6	20:AA:1337:G:H8	2.01	0.43
20:AA:1497:G:H1'	20:AA:1518:A:C2	2.54	0.43
22:AW:8:U:H3'	22:AW:13:C:N4	2.34	0.43
25:BC:121:MET:HE2	25:BC:146:VAL:HG21	2.00	0.43
25:BC:185:LYS:HB2	25:BC:185:LYS:HE3	1.57	0.43
26:BD:79:VAL:CG1	26:BD:80:ALA:N	2.81	0.43
27:BE:35:GLN:HG2	27:BE:36:ARG:N	2.34	0.43
27:BE:109:LYS:HE3	60:BA:2680:C:OP1	2.19	0.43
27:BE:172:VAL:HA	27:BE:184:VAL:HA	2.01	0.43
28:BF:110:LEU:HB3	28:BF:202:PHE:CE1	2.54	0.43
30:BH:72:ILE:O	30:BH:76:VAL:HG23	2.18	0.43
33:BO:12:ASP:HA	33:BO:97:ARG:O	2.19	0.43
33:BO:29:ASN:OD1	60:BA:2674:G:O2'	2.32	0.43
33:BO:63:VAL:HB	33:BO:106:LEU:HD21	2.01	0.43
34:BP:16:ARG:HA	60:BA:660:G:N2	2.34	0.43
34:BP:66:GLY:HA3	60:BA:631:A:N3	2.34	0.43
43:BY:38:ILE:HD13	43:BY:65:ALA:C	2.44	0.43
44:BZ:110:GLY:HA3	44:BZ:146:ILE:H	1.82	0.43
44:BZ:151:HIS:HA	44:BZ:171:ILE:HG23	1.99	0.43
46:B1:20:ARG:HH22	46:B1:24:ALA:HA	1.84	0.43
48:BN:97:ARG:HH11	48:BN:97:ARG:HG2	1.84	0.43
53:B7:40:TRP:H	53:B7:40:TRP:HD1	1.66	0.43
60:BA:66:C:C4	60:BA:67:U:C5	3.06	0.43
60:BA:526:A:C6	60:BA:2626:C:H4'	2.53	0.43
60:BA:565:C:H2'	60:BA:566:U:O4'	2.19	0.43
60:BA:679:C:H2'	60:BA:680:G:C8	2.52	0.43
60:BA:780:G:H2'	60:BA:782:A:C5	2.54	0.43
60:BA:834:C:H2'	60:BA:835:A:C8	2.53	0.43
60:BA:1025:G:N1	60:BA:1139:G:N1	2.46	0.43
60:BA:2248:C:C2	60:BA:2256:G:N1	2.75	0.43
4:CE:150:ARG:H	4:CE:150:ARG:HG2	1.48	0.43
6:CG:8:GLU:HB2	6:CG:9:VAL:H	1.63	0.43
9:CJ:31:GLY:HA2	9:CJ:78:ASN:CG	2.43	0.43
11:CL:52:LEU:HD21	20:CA:521:G:OP2	2.19	0.43
11:CL:107:ALA:O	11:CL:109:GLY:N	2.51	0.43
19:CT:35:THR:HA	19:CT:38:LYS:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:74:LYS:HG2	19:CT:75:ASN:N	2.30	0.43
20:CA:186(M):G:H2'	20:CA:186(N):U:C6	2.54	0.43
20:CA:259:G:H2'	20:CA:260:G:O4'	2.18	0.43
20:CA:261:U:N3	20:CA:264:U:OP2	2.41	0.43
22:CW:15:G:H3'	22:CW:16:U:C5'	2.48	0.43
23:CY:276:VAL:HG13	23:CY:280:LEU:HG	1.99	0.43
23:CY:428:LEU:HD22	23:CY:440:VAL:HG11	2.01	0.43
23:CY:484:ARG:O	23:CY:602:LEU:N	2.52	0.43
25:DC:67:HIS:HB2	25:DC:189:ASN:ND2	2.34	0.43
26:DD:54:ARG:HA	26:DD:216:GLY:O	2.18	0.43
26:DD:97:TYR:HB2	26:DD:101:GLU:O	2.19	0.43
26:DD:264:LYS:HB3	26:DD:267:SER:OG	2.19	0.43
26:DD:264:LYS:NZ	26:DD:266:SER:OG	2.34	0.43
27:DE:55:ASN:CG	27:DE:75:VAL:HA	2.43	0.43
34:DP:23:PRO:HB3	34:DP:29:LYS:CB	2.45	0.43
35:DQ:53:ALA:HB2	35:DQ:124:LYS:NZ	2.34	0.43
37:DS:11:LYS:HD2	37:DS:13:ARG:NH2	2.33	0.43
42:DX:39:ILE:O	42:DX:43:VAL:HG23	2.18	0.43
43:DY:19:LYS:HB3	43:DY:20:TYR:H	1.48	0.43
48:DN:76:SER:C	48:DN:78:TYR:N	2.76	0.43
48:DN:103:VAL:O	48:DN:104:LYS:C	2.61	0.43
49:D2:2:LYS:O	49:D2:6:VAL:N	2.39	0.43
49:D2:16:LEU:O	49:D2:20:GLU:HB3	2.19	0.43
60:DA:38:A:H2'	60:DA:39:C:H6	1.83	0.43
60:DA:81:G:N2	60:DA:105:C:N3	2.57	0.43
60:DA:1195:G:H2'	60:DA:1196:C:H6	1.82	0.43
60:DA:1279:G:H2'	60:DA:1280:G:O4'	2.18	0.43
60:DA:1299:G:H22	60:DA:1640:C:H5'	1.83	0.43
60:DA:1332:G:C6	60:DA:1609:A:C5	3.07	0.43
60:DA:1637:A:H2'	60:DA:1638:C:C6	2.54	0.43
60:DA:2045:C:H2'	60:DA:2046:G:O4'	2.19	0.43
60:DA:2374:C:H2'	60:DA:2375:G:O4'	2.18	0.43
60:DA:2478:A:O2'	60:DA:2536:G:N2	2.52	0.43
1:AB:23:ARG:HD2	1:AB:23:ARG:HA	1.73	0.43
1:AB:32:ILE:HD13	1:AB:32:ILE:HA	1.78	0.43
2:AC:82:GLU:HA	2:AC:85:ARG:HB2	2.00	0.43
6:AG:15:ASP:HB2	6:AG:20:ASP:O	2.18	0.43
6:AG:111:ARG:HB3	6:AG:113:GLU:HG2	2.01	0.43
10:AK:20:TYR:CB	10:AK:31:THR:HG23	2.49	0.43
11:AL:102:ARG:C	11:AL:104:VAL:H	2.25	0.43
11:AL:114:LYS:HG3	20:AA:539:A:P	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:23:TYR:HE1	12:AM:70:LEU:HD23	1.83	0.43
17:AR:61:LYS:HB2	20:AA:835:U:OP1	2.19	0.43
20:AA:581:G:H2'	20:AA:582:U:H6	1.84	0.43
20:AA:1196:U:OP1	20:AA:1400:C:N4	2.51	0.43
23:AY:164:MET:HB2	23:AY:259:PHE:CE2	2.54	0.43
23:AY:197:ARG:HG3	23:AY:198:GLU:H	1.84	0.43
23:AY:493:VAL:HG21	23:AY:592:GLU:HB3	2.01	0.43
25:BC:37:LYS:HB2	25:BC:38:PHE:CD1	2.54	0.43
25:BC:206:LYS:NZ	60:BA:1884:A:O2'	2.48	0.43
26:BD:68:LYS:C	26:BD:70:TRP:H	2.26	0.43
28:BF:54:ARG:H	28:BF:54:ARG:HG2	1.53	0.43
31:BJ:54:UNK:N	31:BJ:79:UNK:HA	2.34	0.43
35:BQ:38:GLU:OE2	35:BQ:128:LYS:HG2	2.19	0.43
36:BR:4:LEU:C	36:BR:5:LYS:HD3	2.44	0.43
38:BT:83:ILE:HD12	38:BT:84:GLN:HB3	1.99	0.43
39:BU:104:GLN:O	39:BU:108:GLU:HB2	2.18	0.43
50:B3:47:VAL:O	50:B3:51:ALA:N	2.52	0.43
60:BA:576:U:H4'	60:BA:2502:G:C4	2.54	0.43
60:BA:904:C:H2'	60:BA:905:U:O4'	2.18	0.43
60:BA:1615:C:C2	60:BA:1617:C:H5"	2.54	0.43
60:BA:1690:A:H2'	60:BA:1691:C:O4'	2.19	0.43
60:BA:1951:U:H2'	60:BA:1953:A:OP2	2.19	0.43
1:CB:21:ARG:H	1:CB:21:ARG:HG2	1.61	0.43
2:CC:50:ALA:HB3	2:CC:76:VAL:HG11	2.01	0.43
4:CE:122:GLU:HB3	20:CA:9:G:OP1	2.18	0.43
5:CF:12:PRO:HB3	5:CF:58:GLY:HA2	2.01	0.43
10:CK:40:ILE:HG22	10:CK:41:THR:CG2	2.49	0.43
11:CL:8:ASN:ND2	20:CA:880:C:OP1	2.51	0.43
12:CM:14:ARG:HD2	20:CA:1296:C:H5'	2.00	0.43
12:CM:99:ARG:NE	12:CM:99:ARG:HA	2.33	0.43
12:CM:115:LYS:HD2	20:CA:1227:A:H4'	2.00	0.43
13:CN:53:LEU:HA	13:CN:54:PRO:HD3	1.72	0.43
20:CA:68(B):G:H2'	20:CA:68(C):C:O4'	2.18	0.43
20:CA:503:C:H42	20:CA:542:G:H1	1.67	0.43
20:CA:832:C:N4	20:CA:854:G:H1	2.14	0.43
20:CA:1238:A:N7	20:CA:1303:C:H1'	2.34	0.43
20:CA:1390:U:H2'	20:CA:1391:U:O4'	2.18	0.43
22:CW:53:G:H1	22:CW:61:C:H42	1.67	0.43
23:CY:121:VAL:HG23	23:CY:122:TRP:H	1.83	0.43
23:CY:291:GLY:O	23:CY:397:VAL:HB	2.19	0.43
27:DE:80:GLU:N	60:DA:2636:U:OP1	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DS:67:ARG:O	37:DS:71:ARG:NH1	2.52	0.43
38:DT:76:PHE:HA	38:DT:77:PRO:HD3	1.80	0.43
39:DU:114:LYS:HB3	39:DU:114:LYS:HE3	1.39	0.43
45:D0:43:THR:HB	45:D0:57:PHE:CE1	2.54	0.43
49:D2:20:GLU:HA	49:D2:23:LYS:HD2	2.01	0.43
49:D2:48:HIS:CE1	60:DA:95:G:H4'	2.53	0.43
52:D6:47:THR:HG23	52:D6:48:VAL:H	1.83	0.43
54:D8:18:ALA:HB3	60:DA:628:G:H5"	2.01	0.43
54:D8:52:LYS:C	54:D8:54:GLU:H	2.27	0.43
60:DA:539:G:H2'	60:DA:540:G:H8	1.84	0.43
60:DA:1019:U:H2'	60:DA:1020:A:H8	1.84	0.43
60:DA:1055:G:N2	60:DA:1085:A:N3	2.67	0.43
60:DA:2049:G:H1	60:DA:2619:C:H42	1.67	0.43
60:DA:2224:G:H4'	60:DA:2226:C:C2	2.54	0.43
60:DA:2248:C:O2	60:DA:2256:G:N1	2.33	0.43
60:DA:2591:C:H2'	60:DA:2592:G:C8	2.54	0.43
1:AB:184:VAL:O	1:AB:197:VAL:HG12	2.19	0.43
3:AD:17:VAL:O	3:AD:19:LEU:HD12	2.19	0.43
7:AH:24:THR:OG1	7:AH:25:ASP:O	2.27	0.43
8:AI:55:ALA:O	8:AI:57:GLY:N	2.51	0.43
9:AJ:14:LYS:HB2	9:AJ:14:LYS:HE3	1.82	0.43
14:AO:34:LEU:O	14:AO:38:ARG:HG2	2.19	0.43
16:AQ:25:ARG:C	16:AQ:26:GLN:HE21	2.26	0.43
20:AA:31:G:H22	20:AA:48:C:H5"	1.84	0.43
20:AA:62:U:C5'	20:AA:385:C:H1'	2.49	0.43
20:AA:441:A:O5'	20:AA:441:A:H8	2.02	0.43
20:AA:522:C:O4'	20:AA:536:C:H4'	2.19	0.43
20:AA:580:U:H2'	20:AA:581:G:C8	2.54	0.43
20:AA:1113:C:H2'	20:AA:1114:C:O4'	2.18	0.43
20:AA:1145:C:HO2'	20:AA:1146:A:P	2.42	0.43
23:AY:11:ARG:HG3	23:AY:12:LEU:HD22	2.01	0.43
23:AY:117:GLN:O	23:AY:120:THR:OG1	2.37	0.43
23:AY:336:THR:HG22	23:AY:337:SER:H	1.83	0.43
23:AY:514:VAL:HA	23:AY:565:VAL:O	2.19	0.43
23:AY:678:GLU:HG2	23:AY:679:VAL:O	2.19	0.43
25:BC:12:LEU:C	25:BC:14:LYS:N	2.77	0.43
25:BC:185:LYS:O	25:BC:189:ASN:HB2	2.18	0.43
26:BD:78:LYS:O	26:BD:79:VAL:O	2.37	0.43
26:BD:223:GLY:HA3	26:BD:231:HIS:CD2	2.54	0.43
27:BE:93:VAL:HG21	27:BE:180:ASN:HA	2.00	0.43
28:BF:24:LEU:O	28:BF:26:ALA:N	2.52	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:C	2.44	0.43
30:BH:85:LYS:HZ2	30:BH:133:VAL:HG11	1.84	0.43
36:BR:100:LEU:HB3	36:BR:111:LEU:HB2	2.00	0.43
40:BV:35:LEU:HD21	40:BV:59:ALA:HB2	2.01	0.43
45:B0:31:VAL:HB	45:B0:61:ALA:HB2	2.00	0.43
48:BN:76:SER:C	48:BN:78:TYR:N	2.76	0.43
48:BN:96:GLU:CD	48:BN:96:GLU:H	2.26	0.43
49:B2:38:GLN:HA	49:B2:41:ILE:HG12	2.01	0.43
56:Be:101:GLU:C	56:Be:103:VAL:H	2.25	0.43
60:BA:14:A:H5"	60:BA:15:G:OP2	2.19	0.43
60:BA:570:G:H2'	60:BA:2030:A:N6	2.33	0.43
60:BA:840:C:H2'	60:BA:841:A:H8	1.84	0.43
60:BA:1105:U:C2	60:BA:1106:G:C8	3.06	0.43
60:BA:1113:U:H2'	60:BA:1114:G:C8	2.54	0.43
60:BA:2430:A:H5'	60:BA:2431:U:OP2	2.19	0.43
3:CD:9:CYS:O	3:CD:12:CYS:HB2	2.18	0.43
4:CE:127:ASN:HA	4:CE:128:PRO:HD3	1.87	0.43
5:CF:61:LEU:HD22	5:CF:63:TYR:OH	2.18	0.43
6:CG:59:LEU:HD12	6:CG:62:PHE:HB3	2.00	0.43
6:CG:78:ARG:HD3	6:CG:154:TYR:O	2.19	0.43
10:CK:84:VAL:HG22	10:CK:109:VAL:O	2.19	0.43
11:CL:44:THR:HA	11:CL:45:PRO:HD3	1.88	0.43
11:CL:45:PRO:HB2	11:CL:49:ASN:OD1	2.19	0.43
17:CR:61:LYS:HE3	17:CR:61:LYS:HB2	1.85	0.43
19:CT:50:GLU:HG2	19:CT:51:GLU:N	2.33	0.43
19:CT:66:ALA:C	19:CT:68:LYS:H	2.27	0.43
20:CA:59:A:H3'	20:CA:331:G:N2	2.33	0.43
20:CA:823:G:H2'	20:CA:824:C:C6	2.53	0.43
20:CA:1157:A:H4'	20:CA:1158:C:O5'	2.19	0.43
20:CA:1493:A:OP2	24:CU:2:DPP:HB3	2.19	0.43
22:CW:71:C:H2'	22:CW:72:C:H6	1.84	0.43
23:CY:197:ARG:HA	23:CY:197:ARG:NE	2.33	0.43
23:CY:280:LEU:HA	23:CY:281:PRO:HD2	1.80	0.43
26:DD:127:VAL:HG13	26:DD:194:GLY:HA3	2.01	0.43
26:DD:222:ARG:NH1	60:DA:1827:C:O5'	2.52	0.43
28:DF:129:PHE:CD2	28:DF:163:VAL:HG21	2.54	0.43
29:DG:38:VAL:HG22	29:DG:93:THR:HA	2.00	0.43
31:DJ:25:UNK:HA	31:DJ:79:UNK:O	2.19	0.43
32:DK:10:LEU:HD11	32:DK:27:LEU:HD13	2.01	0.43
32:DK:79:ARG:HG2	32:DK:84:LEU:HB2	2.01	0.43
32:DK:91:PRO:HG2	32:DK:92:GLY:H	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:117:THR:HG21	32:DK:122:ALA:CB	2.48	0.43
35:DQ:4:PRO:HD3	35:DQ:69:PHE:CE2	2.54	0.43
38:DT:89:VAL:O	38:DT:91:ARG:N	2.42	0.43
40:DV:59:ALA:CB	40:DV:96:ILE:HA	2.49	0.43
41:DW:72:LYS:HB2	41:DW:106:ILE:HG22	1.99	0.43
44:DZ:99:TYR:HE2	44:DZ:125:LEU:HB2	1.83	0.43
47:D4:6:HIS:HA	47:D4:7:PRO:HD3	1.82	0.43
47:D4:9:LEU:HB3	47:D4:10:VAL:H	1.60	0.43
48:DN:35:ARG:NH2	48:DN:42:TRP:HH2	2.16	0.43
52:D6:26:ASN:CG	52:D6:27:LYS:H	2.27	0.43
53:D7:42:LEU:O	53:D7:44:PRO:HD3	2.19	0.43
60:DA:848:G:N7	60:DA:929:G:N2	2.67	0.43
60:DA:872:A:H2'	60:DA:873:G:H8	1.84	0.43
60:DA:1201:C:H42	60:DA:1244:G:H1	1.65	0.43
60:DA:1335:U:H2'	60:DA:1336:A:H8	1.79	0.43
60:DA:1681:G:N3	60:DA:1762:A:H2'	2.33	0.43
60:DA:1782:C:N4	60:DA:2586:C:H42	2.16	0.43
60:DA:2415:G:H2'	60:DA:2416:C:C6	2.51	0.43
60:DA:2696:U:H2'	60:DA:2697:G:H8	1.82	0.43
60:DA:2790:A:N3	60:DA:2791:C:H5"	2.34	0.43
60:DA:2809:A:C6	60:DA:2810:A:C6	3.06	0.43
3:AD:61:LYS:HA	3:AD:203:VAL:HG22	2.01	0.43
3:AD:141:ARG:O	3:AD:143:GLY:N	2.52	0.43
4:AE:39:GLY:O	4:AE:69:VAL:N	2.46	0.43
4:AE:43:LEU:C	4:AE:62:ALA:HA	2.44	0.43
16:AQ:63:ARG:CZ	20:AA:130:A:H5'	2.49	0.43
16:AQ:71:PHE:HZ	20:AA:235:C:O3'	2.01	0.43
18:AS:30:LEU:HD13	18:AS:32:LYS:HD2	2.01	0.43
18:AS:64:GLU:C	18:AS:66:MET:H	2.26	0.43
20:AA:31:G:H1	20:AA:48:C:H5"	1.84	0.43
20:AA:514:C:H2'	20:AA:515:G:O4'	2.19	0.43
20:AA:567:G:N3	20:AA:568:G:H1'	2.34	0.43
20:AA:939:G:H2'	20:AA:940:C:O4'	2.19	0.43
20:AA:1027:C:O2	20:AA:1034:G:C2	2.71	0.43
20:AA:1162:C:C2	20:AA:1175:G:C2	3.07	0.43
20:AA:1198:G:H2'	20:AA:1199:U:C6	2.54	0.43
20:AA:1440(D):A:H2'	20:AA:1440(D):A:N3	2.33	0.43
23:AY:95:GLU:HG3	23:AY:405:PRO:HG2	1.99	0.43
23:AY:606:MET:CG	23:AY:649:LEU:HG	2.48	0.43
23:AY:679:VAL:O	23:AY:681:LYS:N	2.39	0.43
25:BC:20:VAL:CG1	25:BC:226:ASN:HB2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:168:ARG:HH22	60:BA:321:G:H21	1.65	0.43
33:BO:8:LEU:O	33:BO:19:ILE:HG12	2.19	0.43
40:BV:83:ARG:HD3	40:BV:83:ARG:HA	1.87	0.43
44:BZ:30:ASN:O	44:BZ:32:HIS:N	2.41	0.43
46:B1:7:ILE:HD13	46:B1:62:VAL:HA	2.01	0.43
48:BN:134:ARG:CG	48:BN:134:ARG:O	2.67	0.43
50:B3:22:ALA:O	50:B3:26:LEU:HG	2.18	0.43
51:B5:31:VAL:HB	51:B5:32:PRO:HD2	2.01	0.43
54:B8:4:MET:HE3	54:B8:4:MET:HB2	1.84	0.43
60:BA:338:G:N3	60:BA:338:G:H2'	2.34	0.43
60:BA:548:A:H8	60:BA:548:A:O5'	2.02	0.43
60:BA:688:U:H2'	60:BA:689:A:C8	2.54	0.43
60:BA:736:C:HO2'	60:BA:766:C:HO2'	1.66	0.43
60:BA:937:U:H2'	60:BA:938:G:H8	1.84	0.43
60:BA:1115:G:H2'	60:BA:1116:C:C6	2.54	0.43
60:BA:1403:C:H2'	60:BA:1404:C:H6	1.82	0.43
60:BA:1532:C:H2'	60:BA:1533:C:O4'	2.19	0.43
60:BA:1637:A:O2'	60:BA:2711:A:H1'	2.19	0.43
60:BA:1778:U:C4	60:BA:1784:A:C8	3.07	0.43
60:BA:2025:C:C4	60:BA:2026:C:C4	3.07	0.43
60:BA:2247:A:H2'	60:BA:2248:C:H5'	2.00	0.43
60:BA:2385:C:H2'	60:BA:2386:C:C6	2.54	0.43
60:BA:2439:A:N7	60:BA:2586:C:H4'	2.33	0.43
60:BA:2641:G:H2'	60:BA:2642:G:H8	1.83	0.43
60:BA:2699:C:N4	60:BA:2708:G:N1	2.27	0.43
1:CB:28:PHE:O	1:CB:31:TYR:HB2	2.19	0.43
3:CD:19:LEU:HB3	3:CD:21:LEU:HG	2.01	0.43
4:CE:57:LYS:HB3	4:CE:57:LYS:HZ3	1.84	0.43
4:CE:100:VAL:HA	4:CE:118:ILE:HG22	2.00	0.43
8:CI:83:ARG:O	8:CI:86:VAL:HG12	2.19	0.43
9:CJ:51:ARG:HB2	9:CJ:52:GLY:H	1.59	0.43
20:CA:186(G):C:H3'	20:CA:186(H):U:H6	1.83	0.43
20:CA:429:U:H4'	20:CA:430:A:OP1	2.19	0.43
20:CA:599:C:H2'	20:CA:600:C:C6	2.53	0.43
20:CA:832:C:H1'	20:CA:1538:C:H4'	2.00	0.43
23:CY:457:LEU:O	23:CY:461:ILE:HG12	2.19	0.43
23:CY:459:LEU:O	23:CY:463:VAL:HG23	2.19	0.43
23:CY:488:THR:OG1	23:CY:489:LYS:N	2.52	0.43
25:DC:213:VAL:HG12	25:DC:214:TYR:H	1.84	0.43
25:DC:214:TYR:CD2	25:DC:222:SER:HB2	2.46	0.43
26:DD:90:ALA:C	26:DD:91:ARG:HD3	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:244:ARG:HG3	60:DA:1902:C:O4'	2.18	0.43
26:DD:274:ARG:NH2	60:DA:1798:U:OP2	2.52	0.43
27:DE:176:ILE:HA	27:DE:177:PRO:HD2	1.86	0.43
36:DR:103:ARG:HB3	36:DR:109:ALA:N	2.33	0.43
46:D1:41:ARG:HE	46:D1:41:ARG:HB3	1.44	0.43
48:DN:65:LYS:HZ2	60:DA:1021:A:C5'	2.30	0.43
49:D2:37:PHE:HD1	49:D2:37:PHE:HA	1.74	0.43
54:D8:62:LEU:HD13	60:DA:242:G:H5"	2.00	0.43
59:DB:36:C:O2	59:DB:49:C:O2'	2.37	0.43
60:DA:46:C:P	60:DA:215:G:H2'	2.59	0.43
60:DA:78:A:H2'	60:DA:79:G:H8	1.84	0.43
60:DA:220:G:H2'	60:DA:427:U:O4	2.19	0.43
60:DA:1398:C:H2'	60:DA:1399:C:H6	1.83	0.43
60:DA:1527:G:N2	60:DA:1545:A:H5'	2.34	0.43
60:DA:1689:A:H62	60:DA:1698:A:H2	1.67	0.43
60:DA:1957:C:H2'	60:DA:1958:C:C6	2.54	0.43
60:DA:2137:C:H2'	60:DA:2138:C:C6	2.53	0.43
60:DA:2555:U:H2'	60:DA:2556:C:H5'	2.01	0.43
60:DA:2740:A:H3'	60:DA:2741:A:C8	2.53	0.43
60:DA:2821:A:H2'	60:DA:2822:G:C8	2.52	0.43
2:AC:4:LYS:HZ1	20:AA:1191:A:P	2.42	0.42
2:AC:21:ARG:HG2	2:AC:58:GLU:HG2	2.00	0.42
3:AD:103:ASN:OD1	3:AD:104:VAL:N	2.51	0.42
12:AM:88:ARG:NH1	18:AS:73:GLU:OE2	2.52	0.42
12:AM:108:ARG:HD2	12:AM:108:ARG:N	2.34	0.42
20:AA:131:C:H42	20:AA:231:G:H1	1.66	0.42
20:AA:385:C:H2'	20:AA:386:C:H6	1.83	0.42
20:AA:477:G:H2'	20:AA:478:A:O4'	2.19	0.42
20:AA:834:C:H2'	20:AA:835:U:C6	2.54	0.42
20:AA:860:A:H62	20:AA:869:G:H21	1.67	0.42
20:AA:1266:G:N2	20:AA:1269:A:C8	2.87	0.42
20:AA:1350:A:H2'	20:AA:1351:U:O4'	2.19	0.42
23:AY:58:GLU:CD	23:AY:465:ARG:HG3	2.45	0.42
23:AY:205:TYR:O	23:AY:208:GLN:N	2.52	0.42
23:AY:443:HIS:C	23:AY:445:GLU:H	2.26	0.42
25:BC:78:ILE:HA	25:BC:95:VAL:O	2.18	0.42
26:BD:106:ILE:CD1	26:BD:196:VAL:HG12	2.47	0.42
27:BE:84:PHE:CE1	27:BE:86:PRO:HD3	2.53	0.42
28:BF:72:ARG:NH1	60:BA:1256:G:O3'	2.52	0.42
28:BF:85:GLY:HA2	60:BA:449:A:OP1	2.19	0.42
28:BF:136:THR:HG21	60:BA:320:A:C4	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:86:GLU:HB2	30:BH:131:VAL:O	2.19	0.42
32:BK:112:MET:HE3	32:BK:120:LEU:HD11	2.01	0.42
33:BO:19:ILE:HG22	33:BO:43:VAL:HG13	2.01	0.42
36:BR:86:ARG:C	36:BR:88:ARG:H	2.26	0.42
37:BS:48:LEU:HB3	37:BS:49:VAL:HG23	2.01	0.42
39:BU:90:VAL:HG23	39:BU:91:ASP:N	2.33	0.42
40:BV:77:ALA:O	40:BV:78:LYS:C	2.62	0.42
44:BZ:179:ASP:OD2	44:BZ:181:GLU:HB2	2.18	0.42
49:B2:2:LYS:O	49:B2:6:VAL:HG23	2.19	0.42
55:B9:1:MET:HE3	60:BA:2477:C:H5'	2.01	0.42
59:BB:80:U:H1'	60:BA:918:A:H1'	2.01	0.42
60:BA:1144:G:H2'	60:BA:1145:C:H6	1.83	0.42
60:BA:2162:G:N2	60:BA:2163:C:H1'	2.34	0.42
60:BA:2249:U:C4	60:BA:2252:G:H5"	2.54	0.42
60:BA:2419:U:H2'	60:BA:2420:C:C5	2.54	0.42
1:CB:17:PHE:CD2	1:CB:17:PHE:N	2.88	0.42
1:CB:74:LYS:HB3	1:CB:74:LYS:HE2	1.83	0.42
1:CB:84:GLU:OE1	1:CB:87:ARG:NH1	2.52	0.42
1:CB:138:LEU:HA	1:CB:141:GLU:OE1	2.19	0.42
1:CB:231:GLU:HA	1:CB:232:PRO:HD3	1.73	0.42
3:CD:5:ILE:HD13	20:CA:406:G:H4'	2.01	0.42
6:CG:101:LEU:HD12	6:CG:102:ARG:N	2.34	0.42
6:CG:151:TYR:HA	6:CG:154:TYR:CD1	2.54	0.42
7:CH:79:VAL:O	7:CH:81:HIS:N	2.51	0.42
9:CJ:4:ILE:HB	9:CJ:74:ILE:HG12	2.01	0.42
11:CL:55:VAL:O	11:CL:56:ALA:C	2.62	0.42
11:CL:113:ARG:HE	11:CL:114:LYS:H	1.66	0.42
14:CO:36:ILE:HG12	14:CO:60:VAL:HG22	2.00	0.42
17:CR:79:LEU:HA	17:CR:80:PRO:HD2	1.90	0.42
18:CS:32:LYS:HA	18:CS:50:ALA:O	2.19	0.42
20:CA:159:G:H1'	20:CA:162:A:H61	1.79	0.42
20:CA:328:C:H4'	20:CA:329:A:C5'	2.49	0.42
20:CA:441:A:H3'	20:CA:442:C:H6	1.84	0.42
20:CA:923:A:H2'	20:CA:924:C:O4'	2.18	0.42
22:CW:71:C:OP1	60:DA:1892:C:O2'	2.31	0.42
23:CY:35:TYR:CD1	23:CY:36:THR:N	2.87	0.42
26:DD:83:GLU:OE1	26:DD:94:LEU:HB2	2.19	0.42
26:DD:158:ALA:O	26:DD:196:VAL:HG21	2.19	0.42
27:DE:15:PHE:CE1	38:DT:81:PRO:HD3	2.54	0.42
28:DF:5:ALA:HB3	28:DF:8:GLN:N	2.30	0.42
28:DF:52:LYS:HZ1	60:DA:38:A:H5'	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:103:LYS:O	28:DF:106:ARG:HD2	2.19	0.42
29:DG:100:TRP:CE3	29:DG:100:TRP:HA	2.54	0.42
30:DH:127:GLU:OE2	30:DH:130:ARG:NH2	2.48	0.42
36:DR:87:TYR:CD1	36:DR:94:TYR:HB3	2.54	0.42
38:DT:56:GLY:H	38:DT:59:THR:HB	1.84	0.42
38:DT:107:ASP:OD1	38:DT:107:ASP:N	2.52	0.42
40:DV:68:LYS:O	40:DV:70:ILE:HG12	2.19	0.42
43:DY:84:ARG:HE	43:DY:98:VAL:H	1.67	0.42
44:DZ:141:VAL:HG12	44:DZ:144:LEU:HB3	2.01	0.42
48:DN:27:ALA:O	48:DN:28:THR:C	2.61	0.42
48:DN:96:GLU:CD	48:DN:96:GLU:H	2.26	0.42
53:D7:6:GLN:O	60:DA:686:G:H8	2.01	0.42
55:D9:19:ARG:HG2	60:DA:2756:U:H5"	2.01	0.42
60:DA:604:G:N1	60:DA:624:C:O2	2.43	0.42
60:DA:682:G:H2'	60:DA:683:C:C6	2.54	0.42
60:DA:784:A:O2'	60:DA:785:G:H8	2.02	0.42
60:DA:1213:A:OP2	60:DA:1235:G:N2	2.37	0.42
60:DA:1732:A:H2'	60:DA:1733:G:O4'	2.19	0.42
60:DA:1804:C:H2'	60:DA:1805:U:C6	2.54	0.42
60:DA:1913:A:H4'	60:DA:1914:C:C5'	2.49	0.42
60:DA:2432:A:N3	60:DA:2432:A:H2'	2.33	0.42
2:AC:135:LYS:HA	2:AC:135:LYS:HD2	1.87	0.42
7:AH:94:TYR:HB3	20:AA:598:U:H4'	2.00	0.42
10:AK:85:ARG:HH22	20:AA:708:C:P	2.41	0.42
12:AM:122:LYS:HB2	12:AM:123:ALA:H	1.51	0.42
14:AO:43:LEU:O	14:AO:45:VAL:N	2.51	0.42
16:AQ:13:ASP:OD1	16:AQ:13:ASP:N	2.33	0.42
16:AQ:74:LEU:HD12	16:AQ:75:ARG:HG2	2.01	0.42
20:AA:356:A:H1'	20:AA:368:U:O2'	2.19	0.42
20:AA:436:C:H2'	20:AA:437:U:H6	1.83	0.42
20:AA:1429:C:C2	20:AA:1430:C:C5	3.07	0.42
20:AA:1533:C:N4	21:AV:12:A:C2	2.87	0.42
23:AY:258:VAL:HG12	23:AY:260:LEU:HD12	2.01	0.42
25:BC:42:VAL:O	25:BC:43:GLU:C	2.63	0.42
27:BE:8:LYS:HA	27:BE:26:ILE:HG22	2.00	0.42
27:BE:21:VAL:HA	27:BE:22:PRO:HD2	1.74	0.42
27:BE:63:LEU:HB3	27:BE:65:GLY:H	1.83	0.42
27:BE:169:ASN:C	27:BE:170:LEU:HD12	2.44	0.42
30:BH:67:LEU:HD11	60:BA:2757:A:H61	1.85	0.42
30:BH:147:ASN:OD1	30:BH:147:ASN:C	2.61	0.42
33:BO:77:ILE:HD11	38:BT:72:VAL:HG22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BP:110:TYR:HB3	34:BP:111:ARG:H	1.45	0.42
35:BQ:27:VAL:HG11	35:BQ:134:ARG:HG3	2.00	0.42
37:BS:24:LEU:HD13	37:BS:24:LEU:HA	1.87	0.42
37:BS:99:LYS:O	37:BS:100:ALA:C	2.63	0.42
46:B1:30:VAL:HA	60:BA:2396:G:O2'	2.19	0.42
48:BN:1:MET:O	48:BN:2:LYS:HB2	2.18	0.42
48:BN:28:THR:HA	48:BN:106:MET:CE	2.44	0.42
60:BA:14:A:H2	60:BA:2044:C:O2	2.02	0.42
60:BA:447:A:N1	60:BA:454:A:O2'	2.42	0.42
60:BA:633:A:C5	60:BA:634:C:H1'	2.54	0.42
60:BA:660:G:C5	60:BA:661:C:C6	3.07	0.42
60:BA:1303:G:H2'	60:BA:1304:C:O4'	2.19	0.42
60:BA:1391:U:H3	60:BA:1394:U:H5	1.67	0.42
60:BA:1655:A:H3'	60:BA:1656:C:C6	2.55	0.42
60:BA:1967:C:H2'	60:BA:1968:G:O4'	2.18	0.42
60:BA:1991:U:O2'	60:BA:1992:G:H5'	2.18	0.42
60:BA:2024:G:OP2	60:BA:2034:U:H5'	2.19	0.42
1:CB:124:SER:HB3	1:CB:125:PRO:HD2	1.99	0.42
1:CB:171:ALA:O	1:CB:175:ARG:HB2	2.18	0.42
2:CC:104:GLN:HB3	2:CC:105:GLU:H	1.63	0.42
2:CC:154:SER:O	2:CC:197:GLY:N	2.50	0.42
3:CD:19:LEU:O	3:CD:21:LEU:HB2	2.19	0.42
3:CD:145:GLU:OE1	3:CD:182:LYS:HB3	2.19	0.42
4:CE:11:ILE:HD12	4:CE:105:VAL:HG22	2.02	0.42
6:CG:36:LYS:HB3	20:CA:1373:G:C5'	2.49	0.42
6:CG:46:ALA:O	6:CG:50:ILE:HG13	2.19	0.42
6:CG:78:ARG:N	6:CG:85:TYR:O	2.48	0.42
8:CI:95:LYS:HB2	8:CI:95:LYS:HE2	1.86	0.42
9:CJ:11:PHE:HD2	9:CJ:11:PHE:HA	1.70	0.42
18:CS:34:TRP:HB3	20:CA:1014:A:H1'	2.01	0.42
20:CA:124:G:H4'	20:CA:291:C:O2'	2.19	0.42
20:CA:171:A:H2'	20:CA:172:A:C8	2.54	0.42
20:CA:299:G:C6	20:CA:300:A:C6	3.08	0.42
20:CA:343:U:O2'	20:CA:344:A:H2'	2.19	0.42
20:CA:431:A:C4	20:CA:432:A:C8	3.07	0.42
20:CA:603:U:H2'	20:CA:604:G:H8	1.84	0.42
20:CA:1138:G:C5	20:CA:1140:C:H1'	2.53	0.42
20:CA:1507:A:C2	20:CA:1530:G:H1'	2.54	0.42
22:CW:19:G:H5'	22:CW:20:U:O5'	2.19	0.42
23:CY:348:ARG:HG3	23:CY:349:LYS:N	2.34	0.42
26:DD:62:TYR:OH	60:DA:1816:G:H8	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:62:PRO:O	27:DE:64:LYS:N	2.42	0.42
28:DF:80:ALA:HB3	28:DF:83:PHE:CE1	2.46	0.42
28:DF:111:ALA:HB2	28:DF:206:ILE:HD11	2.02	0.42
32:DK:126:MET:HG3	60:DA:1058:G:N2	2.34	0.42
34:DP:60:MET:O	60:DA:2392:A:O2'	2.30	0.42
35:DQ:53:ALA:HB2	35:DQ:124:LYS:HZ1	1.83	0.42
36:DR:45:ARG:O	36:DR:49:ASP:HB2	2.19	0.42
37:DS:59:LYS:HB3	37:DS:60:GLY:H	1.55	0.42
37:DS:61:ASN:ND2	59:DB:51:G:OP2	2.51	0.42
38:DT:124:ASP:O	38:DT:128:GLU:HB2	2.19	0.42
39:DU:27:LEU:HD23	39:DU:27:LEU:HA	1.77	0.42
43:DY:19:LYS:HG2	60:DA:329:G:O6	2.18	0.42
45:D0:26:TYR:HB3	45:D0:27:GLU:OE2	2.19	0.42
48:DN:65:LYS:NZ	60:DA:1021:A:C5'	2.79	0.42
54:D8:16:ILE:HB	54:D8:22:VAL:HA	2.00	0.42
54:D8:57:ARG:NH1	54:D8:64:TYR:HH	2.16	0.42
59:DB:90:C:H2'	59:DB:91:C:O4'	2.19	0.42
60:DA:67:U:H2'	60:DA:68:G:H8	1.84	0.42
60:DA:481:G:H2'	60:DA:507:A:N1	2.34	0.42
60:DA:852:G:H1	60:DA:925:C:N4	2.17	0.42
60:DA:911:A:O5'	60:DA:912:C:H5"	2.19	0.42
60:DA:1575:C:H2'	60:DA:1576:U:O4'	2.19	0.42
60:DA:1712:C:H2'	60:DA:1716:U:O4'	2.18	0.42
60:DA:1848:A:H2'	60:DA:1849:G:O4'	2.19	0.42
60:DA:2662:A:H8	60:DA:2662:A:O5'	2.01	0.42
1:AB:141:GLU:O	1:AB:145:LEU:HB2	2.19	0.42
2:AC:35:GLU:O	2:AC:39:ILE:HG13	2.19	0.42
4:AE:91:LEU:HA	4:AE:119:LEU:O	2.19	0.42
7:AH:35:ILE:HA	7:AH:38:ILE:HG12	2.00	0.42
7:AH:91:ARG:HG2	11:AL:7:ILE:HD12	2.01	0.42
12:AM:19:LEU:HD12	12:AM:25:ILE:HD12	2.01	0.42
13:AN:17:LYS:N	20:AA:1317:C:OP1	2.50	0.42
19:AT:51:GLU:HA	19:AT:54:LYS:HD2	1.99	0.42
20:AA:195:A:N3	20:AA:222:U:O2'	2.44	0.42
20:AA:352:C:H4'	20:AA:354:G:OP1	2.18	0.42
20:AA:375:U:H3	20:AA:389:A:H61	1.67	0.42
20:AA:855:G:N2	20:AA:1538:C:O2'	2.52	0.42
20:AA:881:G:H2'	20:AA:882:C:H6	1.84	0.42
23:AY:441:SER:O	23:AY:450:ILE:HB	2.18	0.42
25:BC:20:VAL:HG11	25:BC:226:ASN:HB2	2.01	0.42
25:BC:28:ARG:HG3	25:BC:183:PRO:CB	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:201:LYS:HA	25:BC:202:PRO:HD3	1.79	0.42
26:BD:41:GLY:O	26:BD:43:ARG:N	2.42	0.42
26:BD:85:ASP:OD2	26:BD:87:ASN:HB2	2.19	0.42
28:BF:1:MET:CB	28:BF:3:GLU:HG2	2.49	0.42
29:BG:97:ASP:HB2	29:BG:98:ARG:CZ	2.49	0.42
30:BH:89:ILE:HA	30:BH:162:ILE:HA	2.00	0.42
34:BP:24:GLY:HA2	34:BP:30:THR:HA	2.00	0.42
34:BP:112:LEU:HD12	34:BP:127:ALA:HB2	2.01	0.42
35:BQ:99:PRO:HD2	44:BZ:79:ARG:NH1	2.35	0.42
37:BS:15:ARG:O	37:BS:18:ILE:HB	2.19	0.42
38:BT:83:ILE:HD12	38:BT:84:GLN:N	2.34	0.42
41:BW:35:ILE:HG23	51:B5:28:PRO:HG3	2.01	0.42
42:BX:32:PRO:O	42:BX:34:ALA:N	2.52	0.42
52:B6:45:LYS:HB3	60:BA:2371:G:H4'	2.01	0.42
59:BB:88:C:H2'	59:BB:89(A):G:O4'	2.18	0.42
60:BA:443:A:H1'	60:BA:1201:C:C1'	2.48	0.42
60:BA:696:G:H1	60:BA:766:C:N4	2.15	0.42
1:CB:133:LYS:HA	1:CB:133:LYS:HD3	1.78	0.42
2:CC:11:ARG:HB3	2:CC:16:ARG:HB2	2.01	0.42
2:CC:95:THR:O	2:CC:95:THR:OG1	2.26	0.42
3:CD:108:LEU:HD23	3:CD:110:PHE:HD2	1.84	0.42
3:CD:177:ASP:O	3:CD:181:MET:N	2.52	0.42
4:CE:24:ARG:HH12	20:CA:15:G:H4'	1.84	0.42
6:CG:29:LYS:HE2	20:CA:1375:A:H5"	2.01	0.42
7:CH:15:ASN:HD21	20:CA:827:U:C4'	2.33	0.42
8:CI:120:ARG:NH1	20:CA:1345:U:H5"	2.33	0.42
10:CK:51:LYS:H	10:CK:54:ARG:HB2	1.84	0.42
10:CK:58:PRO:O	10:CK:61:ALA:HB3	2.20	0.42
14:CO:25:THR:OG1	14:CO:26:GLU:OE2	2.37	0.42
19:CT:21:LYS:O	19:CT:24:LEU:HB3	2.18	0.42
20:CA:59:A:H2'	20:CA:59:A:N3	2.35	0.42
20:CA:266:G:H5'	20:CA:268:C:H41	1.85	0.42
20:CA:273:A:N6	20:CA:274:A:C6	2.87	0.42
20:CA:603:U:H2'	20:CA:604:G:C8	2.54	0.42
20:CA:687:A:C2	20:CA:704:A:C6	3.07	0.42
20:CA:1171:G:H2'	20:CA:1172:C:H6	1.84	0.42
20:CA:1246:C:N3	20:CA:1291:G:N2	2.63	0.42
22:CW:55:U:O2'	22:CW:57:G:O6	2.35	0.42
26:DD:222:ARG:NH1	60:DA:1828:G:N7	2.67	0.42
28:DF:43:LYS:HG2	28:DF:44:ARG:HG3	2.01	0.42
28:DF:52:LYS:NZ	60:DA:38:A:H5'	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:176:LEU:HD12	28:DF:176:LEU:HA	1.85	0.42
29:DG:126:ASP:HB2	29:DG:130:ASN:HB2	2.01	0.42
34:DP:47:ASP:CG	34:DP:49:ARG:HE	2.26	0.42
36:DR:70:LEU:HB3	36:DR:71:GLN:H	1.66	0.42
36:DR:90:ARG:NH1	60:DA:2880:C:O2'	2.53	0.42
37:DS:15:ARG:C	37:DS:18:ILE:H	2.27	0.42
37:DS:39:ILE:CD1	37:DS:73:LEU:HD11	2.50	0.42
37:DS:71:ARG:HD3	37:DS:71:ARG:N	2.33	0.42
38:DT:30:VAL:HA	38:DT:44:ASP:HA	2.02	0.42
40:DV:6:LYS:HA	40:DV:11:GLN:HA	2.02	0.42
40:DV:96:ILE:CG2	40:DV:97:LYS:N	2.82	0.42
43:DY:63:LYS:HB2	43:DY:64:GLU:H	1.49	0.42
44:DZ:176:PRO:HA	44:DZ:177:PRO:HD3	1.74	0.42
48:DN:38:HIS:CG	48:DN:39:ARG:N	2.88	0.42
48:DN:43:THR:O	48:DN:46:VAL:HG12	2.19	0.42
51:D5:3:LYS:HE2	51:D5:3:LYS:H	1.84	0.42
52:D6:9:LEU:HD23	52:D6:54:ILE:HG22	2.01	0.42
60:DA:199:A:N6	60:DA:2433:A:H2'	2.34	0.42
60:DA:470:A:H2'	60:DA:471:A:O4'	2.19	0.42
60:DA:1215:G:C4	60:DA:1216:G:C8	3.07	0.42
60:DA:1317:A:N1	60:DA:1335:U:O2	2.52	0.42
60:DA:1534:G:H3'	60:DA:1535:U:C5'	2.49	0.42
60:DA:1572:A:H8	60:DA:1572:A:OP2	2.03	0.42
60:DA:1631:A:H2'	60:DA:1632:A:C8	2.54	0.42
60:DA:1683:C:H2'	60:DA:1684:C:C6	2.54	0.42
60:DA:1913:A:H4'	60:DA:1914:C:H5'	2.01	0.42
60:DA:2234:G:H2'	60:DA:2235:G:C8	2.54	0.42
60:DA:2513:G:H2'	60:DA:2514:U:O4'	2.20	0.42
60:DA:2705:A:C6	60:DA:2706:G:C4	3.08	0.42
3:AD:156:GLU:O	3:AD:159:ARG:N	2.52	0.42
5:AF:15:ASP:O	5:AF:19:LEU:HB2	2.20	0.42
7:AH:86:ILE:HB	7:AH:133:LEU:O	2.20	0.42
8:AI:28:VAL:HA	8:AI:63:ILE:O	2.20	0.42
10:AK:126:ARG:O	10:AK:126:ARG:HG3	2.19	0.42
12:AM:3:ARG:NE	12:AM:7:VAL:HG13	2.34	0.42
16:AQ:63:ARG:NE	20:AA:130:A:H5'	2.34	0.42
16:AQ:81:ARG:HD2	16:AQ:81:ARG:N	2.34	0.42
20:AA:216:G:H2'	20:AA:217:C:C6	2.55	0.42
20:AA:741:G:H2'	20:AA:742:G:O4'	2.19	0.42
20:AA:815:A:C2	20:AA:1508:G:N2	2.82	0.42
20:AA:828:A:H2'	20:AA:829:G:C8	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:932:C:H2'	20:AA:933:G:C8	2.54	0.42
20:AA:935:A:H2'	20:AA:936:C:H6	1.83	0.42
20:AA:1176:A:H2'	20:AA:1177:G:O4'	2.19	0.42
20:AA:1404:C:O2	20:AA:1519:A:O2'	2.34	0.42
23:AY:109:ASP:HB3	23:AY:115:GLU:OE2	2.19	0.42
23:AY:232:LEU:HD13	56:Be:90:LYS:HG3	2.01	0.42
25:BC:6:LYS:HB3	60:BA:2132:U:O4	2.19	0.42
27:BE:129:HIS:HE1	60:BA:1993:U:O2'	2.02	0.42
29:BG:7:LEU:HD11	29:BG:104:GLU:HA	2.00	0.42
32:BK:34:ILE:HD13	32:BK:35:MET:HE3	2.01	0.42
32:BK:124:ALA:HB3	32:BK:125:ARG:NH1	2.34	0.42
43:BY:89:PHE:HD1	43:BY:89:PHE:HA	1.70	0.42
44:BZ:10:ARG:HG2	44:BZ:11:GLU:H	1.83	0.42
46:B1:73:LEU:HD21	46:B1:94:LEU:HD23	2.01	0.42
48:BN:43:THR:O	48:BN:46:VAL:HG12	2.19	0.42
49:B2:17:SER:HA	49:B2:18:PRO:HD2	1.65	0.42
60:BA:245:G:H21	60:BA:384:U:H4'	1.84	0.42
60:BA:271(B):C:O2	60:BA:271(B):C:H2'	2.18	0.42
60:BA:873:G:H2'	60:BA:874:G:O4'	2.20	0.42
60:BA:1060:U:H4'	60:BA:1061:U:H2'	2.02	0.42
60:BA:1422:G:H2'	60:BA:1423:G:C8	2.54	0.42
60:BA:1463:C:H2'	60:BA:1464:C:H6	1.83	0.42
60:BA:1627:G:H2'	60:BA:1628:G:C8	2.55	0.42
60:BA:1710:C:O2'	60:BA:2858:C:N4	2.36	0.42
60:BA:1981:A:H5"	60:BA:1982:C:OP2	2.19	0.42
60:BA:2044:C:H2'	60:BA:2045:C:O4'	2.19	0.42
60:BA:2319:G:N2	60:BA:2320:A:H61	2.17	0.42
60:BA:2704:C:H2'	60:BA:2705:A:O4'	2.19	0.42
60:BA:2757:A:H2'	60:BA:2757:A:N3	2.33	0.42
60:BA:2865:U:H5"	60:BA:2866:U:OP2	2.19	0.42
1:CB:49:GLU:O	1:CB:52:GLU:HB3	2.19	0.42
1:CB:71:VAL:O	1:CB:165:VAL:HG23	2.19	0.42
1:CB:166:ASP:O	1:CB:170:GLU:HB2	2.18	0.42
3:CD:105:VAL:HG12	3:CD:110:PHE:HB2	2.00	0.42
5:CF:100:ASN:HB2	17:CR:28:GLU:H	1.85	0.42
6:CG:137:LYS:O	6:CG:140:ASP:HB3	2.19	0.42
11:CL:49:ASN:HB3	20:CA:529:G:O6	2.19	0.42
13:CN:4:LYS:O	13:CN:8:GLU:HG2	2.20	0.42
15:CP:70:ALA:O	15:CP:74:LEU:HG	2.19	0.42
15:CP:81:ARG:NH2	20:CA:474:G:H5'	2.26	0.42
15:CP:83:GLU:HB3	15:CP:84:ALA:H	1.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:333:G:H2'	20:CA:334:C:H6	1.84	0.42
20:CA:689:C:H2'	20:CA:690:G:O4'	2.19	0.42
20:CA:1028:C:N3	20:CA:1033:G:C2	2.85	0.42
20:CA:1319:A:O2'	20:CA:1323:G:N7	2.43	0.42
20:CA:1525:G:C4	20:CA:1526:G:C8	3.08	0.42
23:CY:521:SER:HB2	23:CY:522:GLY:H	1.60	0.42
25:DC:11:LEU:HA	25:DC:14:LYS:HG2	2.02	0.42
30:DH:19:VAL:HG11	30:DH:43:VAL:O	2.20	0.42
30:DH:26:VAL:HG11	30:DH:76:VAL:HA	2.02	0.42
30:DH:39:PRO:HA	30:DH:41:MET:HE2	2.01	0.42
32:DK:30:HIS:CD2	32:DK:59:ILE:HB	2.54	0.42
33:DO:64:ARG:NH1	33:DO:100:GLY:HA3	2.34	0.42
35:DQ:30:GLY:N	35:DQ:105:GLU:OE2	2.38	0.42
35:DQ:116:GLU:O	35:DQ:120:ILE:HD12	2.19	0.42
36:DR:5:LYS:HD2	60:DA:2820:A:H4'	2.01	0.42
37:DS:100:ALA:C	37:DS:102:ALA:H	2.12	0.42
38:DT:132:LYS:C	38:DT:135:ALA:H	2.27	0.42
41:DW:15:ARG:HB2	41:DW:15:ARG:NH1	2.35	0.42
60:DA:67:U:C2	60:DA:68:G:C8	3.08	0.42
60:DA:116:C:O2'	60:DA:126:A:N3	2.52	0.42
60:DA:1018:C:C4	60:DA:1019:U:C5	3.08	0.42
60:DA:1047:G:H1'	60:DA:1110:G:H22	1.85	0.42
60:DA:1613:G:H3'	60:DA:1614:A:C5'	2.47	0.42
60:DA:2024:G:H2'	60:DA:2025:C:C6	2.54	0.42
60:DA:2050:C:N4	60:DA:2051:A:N1	2.67	0.42
60:DA:2275:C:H6	60:DA:2275:C:H2'	1.67	0.42
60:DA:2391:G:C6	60:DA:2427:C:H1'	2.55	0.42
60:DA:2420:C:O5'	60:DA:2420:C:H6	2.03	0.42
60:DA:2873:A:O2'	60:DA:2874:C:H5'	2.20	0.42
3:AD:19:LEU:O	3:AD:21:LEU:HG	2.20	0.42
6:AG:79:ARG:H	6:AG:79:ARG:CD	2.32	0.42
7:AH:30:ARG:H	7:AH:30:ARG:HG3	1.42	0.42
8:AI:41:VAL:O	8:AI:44:VAL:HG22	2.19	0.42
9:AJ:5:ARG:HG3	9:AJ:71:LEU:HD11	2.01	0.42
9:AJ:57:LYS:CB	20:AA:972:C:H4'	2.46	0.42
11:AL:99:HIS:HB3	11:AL:100:ILE:H	1.63	0.42
15:AP:45:THR:C	15:AP:47:ASP:N	2.72	0.42
20:AA:120:A:H2'	20:AA:122:G:C8	2.54	0.42
20:AA:678:U:H1'	20:AA:777:A:O3'	2.19	0.42
20:AA:1121:U:H2'	20:AA:1122:U:C6	2.54	0.42
23:AY:14:ASN:HB3	23:AY:102:ASP:CG	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:411:VAL:HB	23:AY:451:ILE:HG23	2.01	0.42
25:BC:8:TYR:O	25:BC:12:LEU:HB2	2.19	0.42
25:BC:8:TYR:CD1	25:BC:11:LEU:HB2	2.55	0.42
25:BC:43:GLU:O	25:BC:214:TYR:O	2.37	0.42
26:BD:70:TRP:HH2	26:BD:152:GLY:H	1.67	0.42
27:BE:2:LYS:NZ	27:BE:96:PHE:HA	2.35	0.42
27:BE:7:VAL:HG12	27:BE:27:LEU:HB3	2.00	0.42
27:BE:39:PRO:HA	27:BE:43:GLY:H	1.85	0.42
28:BF:67:GLN:NE2	60:BA:675:A:H4'	2.34	0.42
28:BF:90:PHE:CD2	60:BA:588:U:H1'	2.53	0.42
29:BG:55:LYS:O	29:BG:58:GLN:HG3	2.18	0.42
29:BG:139:LEU:HD12	29:BG:139:LEU:O	2.20	0.42
30:BH:85:LYS:NZ	30:BH:133:VAL:HG11	2.34	0.42
32:BK:61:ALA:O	56:Be:79:ARG:NH2	2.47	0.42
32:BK:76:TYR:O	32:BK:80:LYS:HB3	2.20	0.42
34:BP:90:ARG:HD2	34:BP:91:PHE:HD2	1.83	0.42
35:BQ:30:GLY:N	35:BQ:105:GLU:OE2	2.52	0.42
36:BR:28:LEU:HD13	36:BR:29:LEU:HD13	2.02	0.42
42:BX:32:PRO:HA	42:BX:77:LYS:HB2	2.00	0.42
45:B0:24:LYS:HZ1	45:B0:39:ARG:HG3	1.85	0.42
45:B0:25:ARG:HH21	45:B0:35:ASN:HB3	1.84	0.42
45:B0:60:PHE:CZ	60:BA:2365:G:H4'	2.55	0.42
46:B1:26:ARG:HA	46:B1:26:ARG:HD2	1.55	0.42
47:B4:33:VAL:HG12	47:B4:34:GLU:HG3	2.01	0.42
51:B5:4:HIS:H	51:B5:5:PRO:HD2	1.84	0.42
52:B6:39:TYR:OH	60:BA:2345:G:H4'	2.19	0.42
54:B8:40:GLU:O	54:B8:44:LYS:HB2	2.19	0.42
60:BA:25:U:H3'	60:BA:26:G:C8	2.55	0.42
60:BA:542:C:H2'	60:BA:543:C:H6	1.85	0.42
60:BA:572:A:N1	60:BA:2029:G:C2	2.88	0.42
60:BA:794:G:C4	60:BA:795:C:C5	3.07	0.42
60:BA:929:G:H5"	60:BA:930:U:OP2	2.19	0.42
60:BA:970:C:H2'	60:BA:971:C:O4'	2.19	0.42
60:BA:1051:G:H2'	60:BA:1052:C:C6	2.54	0.42
60:BA:1178:C:H2'	60:BA:1179:C:H6	1.84	0.42
60:BA:1348:G:H2'	60:BA:1349:A:H5"	2.01	0.42
60:BA:1539:G:C6	60:BA:1540:G:C5	3.08	0.42
60:BA:1943:U:C4	60:BA:1945:G:H1'	2.54	0.42
60:BA:1957:C:H2'	60:BA:1958:C:C6	2.54	0.42
60:BA:2027:G:C2	60:BA:2037:G:C2	3.07	0.42
60:BA:2441:C:H2'	60:BA:2442:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:2484:G:H2'	60:BA:2485:G:H8	1.84	0.42
60:BA:2525:G:O2'	60:BA:2526:G:H5'	2.19	0.42
60:BA:2805:G:C6	60:BA:2807:G:C6	3.08	0.42
1:CB:51:LEU:O	1:CB:55:PHE:HD2	2.03	0.42
1:CB:208:ILE:O	1:CB:212:GLN:HB2	2.19	0.42
2:CC:22:TRP:HB3	2:CC:59:ARG:N	2.29	0.42
9:CJ:36:GLY:O	9:CJ:38:ILE:N	2.53	0.42
9:CJ:57:LYS:NZ	20:CA:972:C:H5'	2.34	0.42
10:CK:26:ASN:O	10:CK:55:LYS:HE3	2.20	0.42
11:CL:123:LYS:HD2	20:CA:37:U:P	2.59	0.42
12:CM:108:ARG:HB2	20:CA:948:C:OP2	2.18	0.42
18:CS:47:HIS:H	18:CS:62:ILE:HG23	1.84	0.42
20:CA:10:A:N6	20:CA:24:U:H3	2.16	0.42
20:CA:829:G:H2'	20:CA:830:G:C8	2.53	0.42
20:CA:926:G:H21	20:CA:1505:G:H2'	1.83	0.42
20:CA:1087:G:O6	20:CA:1098:C:N3	2.52	0.42
23:CY:60:GLU:H	23:CY:60:GLU:HG2	1.57	0.42
25:DC:109:MET:HB3	25:DC:110:ASP:H	1.63	0.42
27:DE:124:GLY:C	27:DE:126:PRO:HD2	2.44	0.42
30:DH:72:ILE:O	30:DH:76:VAL:HG23	2.19	0.42
32:DK:30:HIS:CG	32:DK:59:ILE:HB	2.54	0.42
34:DP:83:VAL:N	34:DP:113:LYS:O	2.50	0.42
35:DQ:75:THR:HB	35:DQ:88:GLY:HA3	2.00	0.42
36:DR:8:ARG:NH2	60:DA:2873:A:N3	2.67	0.42
36:DR:45:ARG:HB3	36:DR:97:VAL:CG2	2.49	0.42
41:DW:57:ASN:O	41:DW:61:ASN:HB3	2.20	0.42
43:DY:68:HIS:CE1	60:DA:328:U:H4'	2.54	0.42
44:DZ:134:PRO:HG3	44:DZ:161:VAL:HG21	2.01	0.42
45:D0:11:ARG:HH22	60:DA:2278:A:H5"	1.84	0.42
48:DN:71:ILE:HD12	48:DN:71:ILE:N	2.30	0.42
54:D8:61:LEU:HB3	54:D8:62:LEU:H	1.70	0.42
55:D9:18:ARG:HE	55:D9:23:VAL:HG23	1.85	0.42
60:DA:147:U:O2'	60:DA:148:C:H5'	2.20	0.42
60:DA:454:A:H3'	60:DA:455:C:C5	2.54	0.42
60:DA:639:U:H2'	60:DA:640:C:C6	2.54	0.42
60:DA:939:G:H2'	60:DA:940:G:H8	1.84	0.42
60:DA:1043:C:H2'	60:DA:1044:G:H5'	2.00	0.42
60:DA:1530:G:C6	60:DA:1542:G:N2	2.87	0.42
60:DA:2082:A:C2	60:DA:2083:G:H1'	2.54	0.42
60:DA:2263:C:H4'	60:DA:2329:G:H4'	2.01	0.42
60:DA:2650:U:H3	60:DA:2670:A:H2	1.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2731:G:H2'	60:DA:2732:G:C8	2.53	0.42
60:DA:2784:C:H2'	60:DA:2785:C:H6	1.82	0.42
2:AC:23:TYR:CG	2:AC:24:ALA:N	2.87	0.42
4:AE:18:ARG:NH2	4:AE:25:ARG:HD2	2.34	0.42
4:AE:129:ILE:H	4:AE:129:ILE:HG12	1.45	0.42
4:AE:143:ARG:HD2	7:AH:81:HIS:NE2	2.35	0.42
5:AF:2:ARG:HB3	5:AF:92:LYS:CE	2.50	0.42
8:AI:65:VAL:HG21	8:AI:73:GLN:HB3	2.02	0.42
8:AI:112:LYS:NZ	8:AI:113:LYS:O	2.51	0.42
13:AN:16:PHE:HB3	20:AA:1317:C:OP1	2.19	0.42
16:AQ:45:HIS:H	16:AQ:72:ARG:C	2.26	0.42
19:AT:82:SER:HB3	20:AA:186:C:H5"	2.02	0.42
20:AA:186(G):C:H2'	20:AA:186(H):U:O4'	2.20	0.42
20:AA:408:A:H2'	20:AA:409:G:C8	2.55	0.42
20:AA:737:A:H2'	20:AA:738:C:C6	2.54	0.42
20:AA:1492:A:H2'	24:AU:6:5OH:NQ	2.34	0.42
25:BC:7:ARG:CZ	25:BC:7:ARG:HB3	2.48	0.42
25:BC:40:GLU:HB2	25:BC:217:THR:HB	2.02	0.42
26:BD:165:ILE:HG23	26:BD:166:GLN:N	2.34	0.42
26:BD:199:ALA:HB1	60:BA:1820:U:H3	1.84	0.42
28:BF:5:ALA:HB3	28:BF:8:GLN:N	2.32	0.42
30:BH:124:GLU:O	30:BH:126:PRO:HD3	2.20	0.42
33:BO:70:LYS:HE3	33:BO:70:LYS:HB3	1.75	0.42
34:BP:55:ARG:HG2	34:BP:56:SER:O	2.19	0.42
34:BP:115:LEU:HD21	60:BA:636:G:C5	2.54	0.42
38:BT:53:ARG:HB3	38:BT:53:ARG:NH1	2.35	0.42
38:BT:106:SER:HA	38:BT:110:ILE:HG13	2.01	0.42
38:BT:132:LYS:O	38:BT:132:LYS:HD3	2.18	0.42
40:BV:59:ALA:HB1	40:BV:96:ILE:HA	2.00	0.42
44:BZ:53:ILE:HD11	44:BZ:99:TYR:HB2	2.02	0.42
44:BZ:180:VAL:C	44:BZ:182:LYS:H	2.27	0.42
45:B0:29:GLN:O	45:B0:67:VAL:HG23	2.19	0.42
45:B0:65:GLY:HA2	45:B0:83:PRO:CA	2.49	0.42
46:B1:86:SER:O	46:B1:90:ILE:HB	2.20	0.42
48:BN:17:ASP:CG	48:BN:18:ALA:N	2.77	0.42
48:BN:36:GLY:H	48:BN:42:TRP:HE3	1.67	0.42
49:B2:52:ASP:O	49:B2:55:ARG:HB2	2.20	0.42
51:B5:2:ALA:HB3	60:BA:747:U:C2	2.55	0.42
51:B5:56:LYS:HD2	51:B5:56:LYS:HA	1.81	0.42
53:B7:19:ARG:O	53:B7:23:ARG:N	2.52	0.42
60:BA:1006:C:C2	60:BA:1138:G:N2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1859:A:H8	60:BA:1859:A:O5'	2.03	0.42
60:BA:2007:C:H2'	60:BA:2008:C:H6	1.84	0.42
60:BA:2560:C:O2'	60:BA:2561:A:H5'	2.20	0.42
60:BA:2618:G:H2'	60:BA:2619:C:O4'	2.19	0.42
1:CB:111:ARG:NH2	20:CA:1104:G:OP1	2.52	0.42
2:CC:178:LEU:HD23	20:CA:1112:C:N3	2.34	0.42
5:CF:2:ARG:NH1	5:CF:69:GLU:OE2	2.53	0.42
8:CI:48:GLU:HA	8:CI:51:ARG:HB2	2.02	0.42
11:CL:53:ARG:HG2	11:CL:93:LEU:CD2	2.43	0.42
14:CO:42:HIS:HD2	20:CA:739:C:O2'	2.02	0.42
17:CR:74:ARG:CA	17:CR:79:LEU:HB3	2.50	0.42
20:CA:102:G:O2'	20:CA:151:A:N3	2.40	0.42
23:CY:72:CYS:HB3	23:CY:79:ILE:O	2.20	0.42
23:CY:136:ALA:H	23:CY:260:LEU:CB	2.32	0.42
23:CY:416:LYS:HB3	23:CY:417:THR:H	1.65	0.42
23:CY:610:VAL:HG22	23:CY:643:ILE:HG13	2.01	0.42
25:DC:213:VAL:O	25:DC:214:TYR:CB	2.66	0.42
26:DD:38:LYS:HG3	60:DA:1569:A:O2'	2.20	0.42
26:DD:105:ILE:HD13	26:DD:106:ILE:N	2.34	0.42
26:DD:206:LEU:HB3	26:DD:211:ARG:HD3	2.01	0.42
27:DE:11:MET:HB2	27:DE:11:MET:HE3	1.71	0.42
27:DE:27:LEU:O	27:DE:51:PHE:HZ	2.03	0.42
27:DE:57:LYS:N	27:DE:57:LYS:HD2	2.34	0.42
28:DF:9:ILE:HG23	28:DF:10:PRO:N	2.34	0.42
28:DF:63:LYS:HA	28:DF:76:GLY:HA3	2.01	0.42
28:DF:170:LEU:HB3	28:DF:173:VAL:O	2.20	0.42
29:DG:69:ALA:HB1	59:DB:41:U:C5	2.51	0.42
33:DO:67:LYS:NZ	60:DA:1664:A:N3	2.68	0.42
35:DQ:7:MET:HE3	35:DQ:8:LYS:H	1.85	0.42
36:DR:47:PHE:O	36:DR:51:LEU:HD13	2.18	0.42
41:DW:68:ARG:HB3	41:DW:110:LYS:HB2	2.01	0.42
48:DN:13:TRP:CD1	48:DN:13:TRP:N	2.88	0.42
49:D2:48:HIS:ND1	60:DA:95:G:O2'	2.46	0.42
60:DA:17:G:H2'	60:DA:18:C:H6	1.84	0.42
60:DA:270(E):C:H2'	60:DA:270(F):G:H8	1.83	0.42
60:DA:270(L):C:H2'	60:DA:270(M):U:H5"	2.02	0.42
60:DA:539:G:C2	60:DA:556:G:C4	3.07	0.42
60:DA:1028:A:H2'	60:DA:1029:A:H8	1.80	0.42
60:DA:1048:A:C6	60:DA:1111:A:C4	3.08	0.42
60:DA:1129:A:H62	60:DA:2490:G:H5"	1.85	0.42
1:AB:69:LEU:O	1:AB:70:PHE:C	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:20:SER:HB2	13:AN:54:PRO:HG3	2.00	0.42
7:AH:97:VAL:HG13	7:AH:98:LYS:N	2.33	0.42
14:AO:51:HIS:NE2	20:AA:667:G:H4'	2.35	0.42
16:AQ:23:VAL:HG12	16:AQ:24:GLU:N	2.34	0.42
20:AA:114:U:H2'	20:AA:115:G:C8	2.54	0.42
20:AA:559:A:O4'	20:AA:561:U:H2'	2.20	0.42
20:AA:866:C:H4'	20:AA:919:A:H5'	2.02	0.42
20:AA:1060:C:H2'	20:AA:1061:G:C8	2.48	0.42
20:AA:1422:G:C5'	33:BO:48:PRO:HB3	2.50	0.42
23:AY:504:ARG:O	60:BA:1913:A:N6	2.52	0.42
23:AY:512:ILE:HB	23:AY:567:LEU:HA	2.00	0.42
23:AY:542:VAL:O	23:AY:546:ILE:HG13	2.19	0.42
26:BD:162:SER:O	26:BD:178:PRO:HD3	2.19	0.42
27:BE:12:THR:HA	60:BA:2682:U:H1'	2.02	0.42
27:BE:102:VAL:HB	27:BE:199:ARG:O	2.20	0.42
28:BF:189:THR:HB	28:BF:190:GLU:H	1.38	0.42
30:BH:97:ARG:NH2	30:BH:104:GLU:OE1	2.51	0.42
38:BT:1:MET:HG3	38:BT:2:ASN:N	2.34	0.42
38:BT:53:ARG:HH22	38:BT:58:ASN:C	2.28	0.42
40:BV:60:GLU:HB2	40:BV:97:LYS:HE2	2.00	0.42
42:BX:64:LYS:HD2	42:BX:73:ARG:HH21	1.85	0.42
43:BY:19:LYS:HA	43:BY:19:LYS:HD3	1.83	0.42
43:BY:32:PRO:HD3	43:BY:36:ALA:HB3	2.01	0.42
44:BZ:108:PRO:HB3	44:BZ:144:LEU:H	1.85	0.42
44:BZ:121:HIS:HB3	44:BZ:124:ILE:HG22	2.01	0.42
48:BN:112:LEU:HD23	48:BN:113:GLY:H	1.79	0.42
55:B9:22:ARG:HH21	55:B9:35:ARG:HH22	1.66	0.42
60:BA:286:C:H2'	60:BA:287:C:C6	2.54	0.42
60:BA:588:U:H2'	60:BA:589:C:O4'	2.19	0.42
60:BA:921:G:H2'	60:BA:922:U:C6	2.55	0.42
60:BA:1199:U:O4	60:BA:1246:A:N1	2.52	0.42
60:BA:2218:G:H2'	60:BA:2219:G:C8	2.54	0.42
60:BA:2460:U:H2'	60:BA:2461:C:O4'	2.19	0.42
2:CC:32:LEU:HD22	2:CC:59:ARG:NH2	2.33	0.42
2:CC:35:GLU:O	2:CC:36:ASP:C	2.62	0.42
4:CE:107:ARG:HD2	4:CE:107:ARG:C	2.44	0.42
5:CF:86:ARG:H	5:CF:86:ARG:HG2	1.74	0.42
12:CM:54:VAL:O	12:CM:57:ARG:HG2	2.20	0.42
14:CO:59:MET:HE1	20:CA:741:G:H5"	2.01	0.42
16:CQ:91:ARG:NH1	20:CA:584:G:OP1	2.52	0.42
17:CR:37:VAL:HG23	17:CR:38:GLU:H	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:697:U:H3	20:CA:798:G:H1'	1.84	0.42
20:CA:980:C:H5'	20:CA:981:U:C5	2.55	0.42
20:CA:1046:A:H3'	20:CA:1047:G:H8	1.83	0.42
22:CW:5:A:H2'	22:CW:6:C:C6	2.54	0.42
23:CY:309:LEU:HA	23:CY:332:SER:O	2.20	0.42
23:CY:317:MET:HB3	23:CY:325:LEU:HB2	2.02	0.42
23:CY:631:ILE:HG12	23:CY:644:ARG:O	2.18	0.42
23:CY:649:LEU:HA	23:CY:652:MET:HB3	2.00	0.42
25:DC:4:HIS:HA	60:DA:2175:C:OP1	2.20	0.42
25:DC:132:LEU:HD12	25:DC:138:LEU:HD23	2.02	0.42
26:DD:53:PHE:HB3	26:DD:218:ARG:HB2	2.01	0.42
28:DF:139:PHE:HA	28:DF:142:TRP:HB3	2.00	0.42
30:DH:38:SER:HA	30:DH:39:PRO:HD3	1.80	0.42
34:DP:79:ARG:HG3	34:DP:110:TYR:HB2	2.01	0.42
36:DR:28:LEU:HD13	36:DR:29:LEU:HD13	2.01	0.42
37:DS:13:ARG:C	37:DS:15:ARG:H	2.28	0.42
37:DS:85:VAL:C	37:DS:106:ARG:HD3	2.44	0.42
38:DT:33:LYS:HB3	38:DT:34:VAL:H	1.59	0.42
39:DU:106:PHE:O	39:DU:107:ALA:C	2.63	0.42
40:DV:59:ALA:HA	40:DV:97:LYS:N	2.35	0.42
44:DZ:108:PRO:HB2	44:DZ:109:ALA:H	1.66	0.42
45:D0:46:LYS:HA	45:D0:47:PRO:HD3	1.88	0.42
46:D1:3:LYS:HB2	60:DA:1364:G:OP2	2.19	0.42
59:DB:12:C:H4'	59:DB:15:A:H62	1.83	0.42
59:DB:24:G:C6	59:DB:59:A:N6	2.87	0.42
60:DA:214:G:O2'	60:DA:216:A:O2'	2.33	0.42
60:DA:255:A:C6	60:DA:256:A:C6	3.08	0.42
60:DA:620:G:H8	60:DA:622:G:O6	2.02	0.42
60:DA:1581:G:H2'	60:DA:1582:C:C6	2.55	0.42
60:DA:1913:A:HO2'	60:DA:1914:C:P	2.40	0.42
60:DA:2074:U:H2'	60:DA:2075:U:C6	2.55	0.42
60:DA:2207:C:N4	60:DA:2217:G:H1	2.17	0.42
60:DA:2453:A:H4'	60:DA:2572:A:H1'	2.02	0.42
60:DA:2528:U:H3'	60:DA:2530:A:C8	2.54	0.42
60:DA:2585:U:O2'	60:DA:2586:C:H5'	2.20	0.42
1:AB:61:LEU:HD21	1:AB:160:ASP:CB	2.49	0.42
1:AB:238:LEU:HD23	1:AB:238:LEU:HA	1.89	0.42
2:AC:20:SER:HB3	2:AC:57:ILE:HD12	2.02	0.42
3:AD:15:GLU:CD	3:AD:63:LYS:HG3	2.45	0.42
5:AF:33:TYR:CD2	5:AF:75:LEU:HB2	2.55	0.42
7:AH:29:SER:OG	7:AH:32:LYS:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:16:ARG:HB3	8:AI:18:PHE:CE1	2.54	0.42
11:AL:114:LYS:HA	11:AL:117:ARG:HH11	1.85	0.42
14:AO:38:ARG:HB3	20:AA:740:U:OP1	2.20	0.42
19:AT:57:ARG:CZ	19:AT:57:ARG:HB2	2.48	0.42
20:AA:68:G:H22	20:AA:101:A:H2	1.66	0.42
20:AA:68(E):G:C6	20:AA:68(U):U:O2	2.73	0.42
20:AA:1074:G:H2'	20:AA:1075:C:C6	2.54	0.42
20:AA:1288:A:H1'	20:AA:1353:G:H4'	2.02	0.42
20:AA:1316:G:H1'	20:AA:1360:A:H2	1.84	0.42
20:AA:1526:G:H2'	20:AA:1527:C:C6	2.55	0.42
22:AW:9:A:H8	22:AW:12:U:O4	2.03	0.42
23:AY:171:GLU:C	23:AY:173:THR:H	2.27	0.42
26:BD:149:PRO:HG2	60:BA:2218:G:H4'	2.01	0.42
27:BE:132:HIS:HB2	60:BA:744:G:OP1	2.20	0.42
28:BF:37:VAL:O	28:BF:41:LEU:HG	2.19	0.42
28:BF:75:HIS:CD2	28:BF:83:PHE:HE2	2.38	0.42
34:BP:16:ARG:HA	60:BA:660:G:H21	1.85	0.42
34:BP:71:VAL:H	34:BP:72:PRO:CD	2.33	0.42
36:BR:38:VAL:HG23	36:BR:110:PRO:O	2.20	0.42
39:BU:95:LEU:HA	39:BU:97:ASP:OD1	2.19	0.42
40:BV:59:ALA:CB	40:BV:96:ILE:HA	2.49	0.42
43:BY:85:VAL:HA	43:BY:94:LYS:HA	2.01	0.42
44:BZ:19:ARG:HD2	44:BZ:84:GLU:HG2	2.02	0.42
46:B1:22:GLY:HA2	46:B1:38:SER:N	2.34	0.42
52:B6:10:LEU:HA	52:B6:25:LYS:HA	2.01	0.42
54:B8:16:ILE:HD11	54:B8:20:GLY:HA2	2.02	0.42
54:B8:26:LYS:N	54:B8:47:LYS:HB2	2.34	0.42
56:Be:71:LYS:HG3	56:Be:86:LEU:HD13	2.02	0.42
60:BA:81:G:C6	60:BA:82:G:C2	3.08	0.42
60:BA:144:C:H2'	60:BA:145:G:C8	2.54	0.42
60:BA:377:C:H2'	60:BA:378:C:C6	2.54	0.42
60:BA:655:A:H2'	60:BA:656:G:O4'	2.20	0.42
60:BA:749:C:O2'	60:BA:1617:C:O3'	2.38	0.42
60:BA:909:A:H2'	60:BA:912:C:H5	1.84	0.42
60:BA:1073:A:C8	60:BA:1074:G:C8	3.07	0.42
60:BA:1270:C:C5'	60:BA:1271:G:H5"	2.48	0.42
60:BA:1655:A:C2	60:BA:1656:C:H1'	2.54	0.42
60:BA:2432:A:H2'	60:BA:2432:A:N3	2.34	0.42
60:BA:2663:G:H3'	60:BA:2664:G:H8	1.82	0.42
60:BA:2700:C:H2'	60:BA:2701:C:C6	2.55	0.42
60:BA:2747:G:O6	60:BA:2754:U:H2'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:43:LEU:O	2:CC:47:LEU:HB3	2.20	0.42
3:CD:96:LEU:HG	3:CD:139:ARG:CZ	2.50	0.42
6:CG:89:MET:HA	6:CG:155:ARG:HH11	1.85	0.42
7:CH:14:ARG:HH12	20:CA:876:G:C4'	2.32	0.42
7:CH:123:GLU:O	7:CH:126:LYS:HB3	2.19	0.42
8:CI:77:ILE:O	8:CI:81:ILE:HG13	2.20	0.42
11:CL:10:LEU:HD21	11:CL:15:ARG:HH21	1.84	0.42
20:CA:328:C:H1'	20:CA:329:A:OP2	2.20	0.42
20:CA:1018:C:H2'	20:CA:1019:C:H6	1.85	0.42
20:CA:1065:U:H4'	20:CA:1066:C:H5'	2.02	0.42
20:CA:1100:C:N4	20:CA:1103:C:OP1	2.53	0.42
22:CW:25:C:C4	22:CW:26:A:N7	2.88	0.42
23:CY:30:GLU:C	23:CY:32:ILE:N	2.77	0.42
23:CY:526:VAL:HB	23:CY:566:THR:CG2	2.31	0.42
25:DC:84:ILE:HA	25:DC:95:VAL:HG11	2.02	0.42
28:DF:40:GLN:HE21	28:DF:40:GLN:HB2	1.62	0.42
28:DF:106:ARG:HG2	28:DF:107:LYS:N	2.32	0.42
28:DF:185:ASP:O	28:DF:189:THR:OG1	2.33	0.42
29:DG:83:ARG:N	29:DG:83:ARG:HD2	2.35	0.42
32:DK:71:THR:HB	32:DK:72:PRO:HD2	2.02	0.42
35:DQ:89:ASN:O	35:DQ:91:GLU:N	2.52	0.42
40:DV:59:ALA:HA	40:DV:96:ILE:C	2.45	0.42
40:DV:89:GLN:CD	60:DA:1162:G:H21	2.26	0.42
42:DX:12:VAL:HG13	42:DX:27:THR:O	2.19	0.42
43:DY:76:CYS:CB	43:DY:96:ILE:HG13	2.48	0.42
48:DN:46:VAL:HG13	48:DN:47:ALA:H	1.83	0.42
48:DN:131:GLN:NE2	48:DN:132:ALA:CB	2.83	0.42
59:DB:72:G:H1'	59:DB:104:A:N6	2.34	0.42
60:DA:26:G:H8	60:DA:26:G:O5'	2.03	0.42
60:DA:474:G:O2'	60:DA:475:U:H5"	2.20	0.42
60:DA:824:A:H1'	60:DA:2358:G:N7	2.35	0.42
60:DA:846:C:H4'	60:DA:847:U:H5'	2.02	0.42
60:DA:1077:A:H2	60:DA:1088:A:H2'	1.84	0.42
60:DA:1509:A:H4'	60:DA:1510:A:C8	2.54	0.42
60:DA:2163:C:H2'	60:DA:2164:C:C6	2.54	0.42
60:DA:2310:A:C2'	60:DA:2311:A:H5'	2.50	0.42
60:DA:2597:G:H8	60:DA:2597:G:O5'	2.03	0.42
1:AB:99:GLY:O	20:AA:1102:A:O2'	2.25	0.42
3:AD:57:ARG:HH11	3:AD:205:GLU:HB2	1.83	0.42
3:AD:200:GLU:O	3:AD:204:ILE:HG12	2.20	0.42
6:AG:28:ASN:HB3	20:AA:1374:A:O3'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:121:ARG:NH1	20:AA:1343:G:O2'	2.52	0.42
10:AK:108:ILE:HD13	17:AR:87:ARG:HG2	2.01	0.42
20:AA:277:C:H2'	20:AA:278:G:O4'	2.20	0.42
20:AA:630:G:H2'	20:AA:630:G:N3	2.35	0.42
20:AA:891:U:H2'	20:AA:892:A:C8	2.55	0.42
20:AA:944:G:H1'	20:AA:1339:A:N6	2.34	0.42
20:AA:1171:G:H2'	20:AA:1172:C:H6	1.85	0.42
20:AA:1431:C:H5"	38:BT:107:ASP:OD2	2.20	0.42
20:AA:1470:G:H2'	20:AA:1471:G:O4'	2.20	0.42
20:AA:1475:G:C6	20:AA:1476:G:C6	3.08	0.42
21:AV:8:A:HO2'	21:AV:9:G:P	2.41	0.42
23:AY:293:THR:C	23:AY:295:GLU:H	2.27	0.42
23:AY:489:LYS:HA	23:AY:490:PRO:HD3	1.93	0.42
23:AY:555:LEU:HD11	23:AY:599:PRO:HG2	2.02	0.42
23:AY:616:TYR:O	23:AY:620:VAL:HG23	2.20	0.42
25:BC:152:GLU:O	25:BC:155:ARG:HB2	2.20	0.42
26:BD:77:ALA:HA	26:BD:97:TYR:HA	2.01	0.42
27:BE:34:VAL:HG23	27:BE:67:PHE:CG	2.55	0.42
27:BE:134:ILE:HG22	27:BE:137:HIS:CB	2.50	0.42
29:BG:6:ALA:HB3	29:BG:104:GLU:OE1	2.20	0.42
29:BG:118:ARG:NH1	60:BA:888:C:H4'	2.35	0.42
29:BG:141:PHE:HA	29:BG:142:PRO:HD2	1.70	0.42
34:BP:130:PHE:CZ	34:BP:145:PRO:HD2	2.54	0.42
36:BR:67:LEU:HD13	36:BR:70:LEU:HB2	2.02	0.42
37:BS:44:LYS:HB3	37:BS:46:VAL:HG23	2.02	0.42
38:BT:64:ARG:NH1	38:BT:102:ILE:HG13	2.35	0.42
41:BW:69:LEU:HD23	41:BW:108:GLY:C	2.45	0.42
42:BX:92:LEU:HD13	42:BX:92:LEU:HA	1.92	0.42
48:BN:131:GLN:NE2	48:BN:132:ALA:CB	2.83	0.42
51:B5:47:PRO:O	51:B5:57:VAL:HA	2.20	0.42
60:BA:208:C:H2'	60:BA:209:C:H6	1.85	0.42
60:BA:218:A:H2	60:BA:235:U:H4'	1.83	0.42
60:BA:221:A:H4'	60:BA:222:A:O5'	2.20	0.42
60:BA:1174:A:H3'	60:BA:1175:U:C4'	2.47	0.42
60:BA:1529:A:C8	60:BA:1530:G:C8	3.08	0.42
60:BA:2031:A:N3	60:BA:2455:G:H1'	2.35	0.42
60:BA:2447:G:H4'	60:BA:2448:A:O5'	2.20	0.42
60:BA:2661:G:C6	60:BA:2662:A:C2	3.08	0.42
60:BA:2730:C:H2'	60:BA:2731:G:C8	2.55	0.42
2:CC:92:ALA:HB2	2:CC:99:VAL:HG21	2.02	0.42
3:CD:8:VAL:HG23	3:CD:9:CYS:H	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:113:SER:O	3:CD:115:ARG:N	2.52	0.42
6:CG:69:VAL:HG22	6:CG:135:VAL:HG22	2.02	0.42
6:CG:88:PRO:HD3	6:CG:148:ASN:HB3	2.02	0.42
9:CJ:50:ILE:HG13	9:CJ:51:ARG:N	2.34	0.42
10:CK:52:GLY:HA2	20:CA:691:G:O6	2.20	0.42
11:CL:81:SER:OG	11:CL:106:ASP:OD2	2.30	0.42
16:CQ:43:LEU:HD23	16:CQ:43:LEU:HA	1.71	0.42
16:CQ:63:ARG:HH22	20:CA:186(I):U:H1'	1.84	0.42
17:CR:40:LEU:HA	17:CR:43:PHE:HD1	1.85	0.42
19:CT:14:LYS:HG3	19:CT:17:ARG:HH21	1.85	0.42
20:CA:966:G:H1'	22:CW:34:C:H4'	2.02	0.42
20:CA:1092:A:N7	20:CA:1093:A:N6	2.67	0.42
20:CA:1378:C:H6	20:CA:1378:C:O5'	2.02	0.42
23:CY:34:TYR:O	23:CY:35:TYR:HD2	2.03	0.42
23:CY:183:MET:HE3	23:CY:183:MET:HB3	1.95	0.42
26:DD:68:LYS:NZ	60:DA:2209:C:OP1	2.52	0.42
27:DE:36:ARG:NH1	27:DE:85:ASN:OD1	2.53	0.42
29:DG:59:GLU:O	29:DG:63:ILE:HG23	2.20	0.42
32:DK:9:LYS:HA	32:DK:56:GLU:HA	2.02	0.42
36:DR:53:HIS:CD2	60:DA:2840:C:H5"	2.55	0.42
42:DX:36:LYS:NZ	42:DX:54:VAL:O	2.40	0.42
43:DY:11:ASP:O	43:DY:27:VAL:HA	2.20	0.42
44:DZ:49:ARG:HB2	44:DZ:50:GLN:OE1	2.19	0.42
44:DZ:152:ALA:HA	44:DZ:167:PRO:O	2.20	0.42
46:D1:25:LYS:NZ	46:D1:31:GLY:HA3	2.35	0.42
46:D1:77:ALA:HB1	46:D1:82:LEU:HD21	2.02	0.42
48:DN:46:VAL:O	48:DN:47:ALA:CB	2.67	0.42
48:DN:134:ARG:CG	48:DN:134:ARG:O	2.67	0.42
49:D2:2:LYS:HG3	49:D2:6:VAL:HG23	2.02	0.42
49:D2:55:ARG:O	49:D2:59:ARG:HG3	2.19	0.42
50:D3:31:LEU:HD23	50:D3:32:GLN:H	1.85	0.42
50:D3:41:PRO:O	50:D3:44:ARG:HB2	2.20	0.42
52:D6:19:ARG:HB3	52:D6:20:ASN:H	1.49	0.42
60:DA:66:C:C4	60:DA:67:U:C5	3.08	0.42
60:DA:239:U:H4'	60:DA:621:A:H2	1.85	0.42
60:DA:589:C:H2'	60:DA:590:A:H8	1.83	0.42
60:DA:749:C:H2'	60:DA:750:A:O4'	2.20	0.42
60:DA:1061:U:H6	60:DA:1061:U:H2'	1.72	0.42
60:DA:1540:G:H3'	60:DA:1541:U:C6	2.55	0.42
60:DA:1851:U:H2'	60:DA:1852:C:C6	2.55	0.42
60:DA:2015:A:H8	60:DA:2015:A:P	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2069:G:H2'	60:DA:2070:G:O4'	2.20	0.42
60:DA:2645:G:H4'	60:DA:2732:G:H1'	2.00	0.42
60:DA:2828:C:H2'	60:DA:2829:C:H6	1.84	0.42
3:AD:121:VAL:HA	3:AD:126:ILE:CG1	2.50	0.42
4:AE:137:GLU:O	4:AE:140:ARG:HB3	2.20	0.42
5:AF:44:GLY:O	5:AF:59:TYR:HA	2.20	0.42
7:AH:44:PHE:CD2	7:AH:80:ILE:HG13	2.53	0.42
8:AI:126:SER:HB2	8:AI:127:LYS:H	1.62	0.42
9:AJ:54:PHE:CD2	9:AJ:55:LYS:HD2	2.55	0.42
12:AM:64:TRP:HB2	12:AM:65:LYS:H	1.76	0.42
12:AM:79:LYS:O	12:AM:83:ASP:N	2.53	0.42
17:AR:80:PRO:HB2	17:AR:83:GLU:OE1	2.20	0.42
20:AA:1129:C:N4	20:AA:1133:G:N7	2.68	0.42
20:AA:1211:U:H1'	20:AA:1213:A:C2	2.55	0.42
20:AA:1340:A:C2	20:AA:1341:U:N3	2.88	0.42
23:AY:509:HIS:HB3	23:AY:571:SER:OG	2.20	0.42
26:BD:28:GLU:OE1	26:BD:29:PRO:HD3	2.20	0.42
26:BD:227:ASN:HD21	26:BD:230:ASP:HB2	1.85	0.42
28:BF:63:LYS:HA	28:BF:76:GLY:HA3	2.00	0.42
30:BH:65:HIS:CE1	30:BH:69:ARG:HD3	2.55	0.42
30:BH:105:LEU:HG	30:BH:113:VAL:HB	2.02	0.42
33:BO:103:ALA:HA	33:BO:122:LEU:OXT	2.20	0.42
36:BR:103:ARG:HB3	36:BR:109:ALA:N	2.34	0.42
38:BT:80:SER:C	38:BT:82:LEU:H	2.28	0.42
39:BU:64:ARG:CZ	48:BN:41:ASP:HA	2.46	0.42
41:BW:6:ILE:HG23	60:BA:494:G:H4'	2.02	0.42
41:BW:16:LYS:HA	41:BW:19:LEU:HD22	2.02	0.42
44:BZ:70:LEU:HB2	44:BZ:91:LEU:HD21	2.00	0.42
46:B1:18:ILE:HG13	46:B1:40:ARG:N	2.35	0.42
46:B1:35:THR:HG21	60:BA:2432:A:C8	2.54	0.42
54:B8:8:LYS:HE3	60:BA:245:G:O6	2.20	0.42
59:BB:47:C:H2'	59:BB:48:A:O4'	2.20	0.42
60:BA:83:G:O2'	60:BA:84:A:OP2	2.30	0.42
60:BA:408:G:H1	60:BA:419:C:H42	1.68	0.42
60:BA:816:C:H2'	60:BA:817:C:O4'	2.19	0.42
60:BA:821:A:H2'	60:BA:946:G:O4'	2.19	0.42
60:BA:1074:G:H2'	60:BA:1075:C:C6	2.55	0.42
60:BA:1360:A:H62	60:BA:1371:G:H21	1.68	0.42
60:BA:1428:C:C5	60:BA:1569:A:H5"	2.55	0.42
60:BA:1847:A:H4'	60:BA:1848:A:OP2	2.20	0.42
60:BA:2073:C:H2'	60:BA:2074:U:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:2287:A:N1	60:BA:2346:A:H2	2.16	0.42
60:BA:2849:U:H1'	60:BA:2866:U:C6	2.55	0.42
2:CC:13:GLY:HA2	13:CN:57:ARG:HH21	1.85	0.42
4:CE:6:PHE:O	4:CE:7:GLU:HB2	2.20	0.42
7:CH:96:GLY:O	7:CH:100:ILE:HG13	2.20	0.42
8:CI:10:ARG:HG3	8:CI:105:ASP:CB	2.49	0.42
11:CL:90:VAL:HG23	11:CL:92:ASP:OD1	2.20	0.42
12:CM:24:GLY:C	20:CA:1329:A:H4'	2.44	0.42
12:CM:121:LYS:HD3	12:CM:121:LYS:N	2.35	0.42
14:CO:15:PHE:HD2	14:CO:15:PHE:HA	1.68	0.42
14:CO:43:LEU:C	14:CO:45:VAL:H	2.27	0.42
16:CQ:29:HIS:HB3	16:CQ:33:GLY:N	2.35	0.42
18:CS:58:VAL:HG21	18:CS:75:ALA:CB	2.49	0.42
18:CS:71:LEU:O	18:CS:73:GLU:N	2.53	0.42
20:CA:17:U:H2'	20:CA:18:C:O4'	2.20	0.42
20:CA:399:G:H2'	20:CA:400:C:H6	1.83	0.42
20:CA:573:A:H2'	20:CA:574:A:C8	2.55	0.42
20:CA:935:A:H2'	20:CA:936:C:C6	2.54	0.42
23:CY:11:ARG:HD3	23:CY:40:HIS:HE1	1.84	0.42
23:CY:482:ALA:HB1	23:CY:484:ARG:NH1	2.34	0.42
23:CY:605:ILE:O	23:CY:674:ASP:HB3	2.20	0.42
23:CY:681:LYS:O	23:CY:684:GLN:N	2.45	0.42
25:DC:63:VAL:HG11	25:DC:164:PHE:CE2	2.55	0.42
26:DD:11:PRO:C	26:DD:13:ARG:H	2.28	0.42
27:DE:169:ASN:C	27:DE:170:LEU:HD12	2.45	0.42
28:DF:171:PRO:HA	60:DA:1205:U:N3	2.35	0.42
29:DG:42:GLY:O	60:DA:2306:C:N4	2.41	0.42
34:DP:15:ARG:HB2	60:DA:598:G:H5'	2.02	0.42
34:DP:18:ARG:HD2	34:DP:18:ARG:HA	1.92	0.42
34:DP:65:ARG:NH1	60:DA:631:A:H4'	2.35	0.42
35:DQ:74:TYR:C	35:DQ:74:TYR:CD1	2.97	0.42
35:DQ:77:LYS:HB2	60:DA:957:A:OP2	2.20	0.42
35:DQ:82:ARG:H	45:D0:4:LYS:HD3	1.85	0.42
36:DR:2:ARG:NH2	60:DA:2723:C:OP1	2.53	0.42
37:DS:71:ARG:HD2	37:DS:103:GLU:HB3	2.01	0.42
42:DX:12:VAL:HG11	42:DX:21:PHE:CE2	2.55	0.42
46:D1:25:LYS:HG3	46:D1:34:THR:CA	2.41	0.42
51:D5:3:LYS:HG2	51:D5:4:HIS:N	2.27	0.42
59:DB:9:G:N2	59:DB:111:U:O2	2.44	0.42
59:DB:102:G:H2'	59:DB:103:U:H6	1.85	0.42
60:DA:27:G:N2	60:DA:512:G:H1'	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:251:A:H8	60:DA:251:A:O5'	2.03	0.42
60:DA:579:G:C8	60:DA:2017:U:C4	3.08	0.42
60:DA:621:A:N3	60:DA:621:A:H2'	2.34	0.42
60:DA:646:A:H3'	60:DA:646:A:N3	2.34	0.42
60:DA:897:C:H2'	60:DA:898:C:C6	2.55	0.42
60:DA:1119:C:H2'	60:DA:1120:G:H8	1.85	0.42
60:DA:1567:A:H4'	60:DA:1568:G:O4'	2.20	0.42
60:DA:1674:G:N2	60:DA:1677:A:H61	2.09	0.42
60:DA:1821:A:C6	60:DA:1822:G:C6	3.08	0.42
60:DA:2528:U:OP2	60:DA:2530:A:N6	2.53	0.42
60:DA:2559:C:H2'	60:DA:2560:C:C6	2.55	0.42
60:DA:2807:G:N1	60:DA:2893:G:C6	2.88	0.42
1:AB:19:HIS:O	1:AB:20:GLU:HB2	2.20	0.41
1:AB:30:ARG:HH22	1:AB:31:TYR:HE2	1.68	0.41
2:AC:151:VAL:HA	2:AC:199:LYS:O	2.19	0.41
3:AD:59:ARG:O	3:AD:63:LYS:HE3	2.20	0.41
6:AG:80:VAL:HG21	6:AG:85:TYR:CE1	2.55	0.41
9:AJ:31:GLY:HA2	9:AJ:78:ASN:CG	2.45	0.41
9:AJ:40:LEU:HD21	20:AA:1280:A:H5'	2.02	0.41
10:AK:46:GLY:HA3	10:AK:55:LYS:HG2	2.02	0.41
10:AK:120:ARG:O	20:AA:779:C:H4'	2.20	0.41
11:AL:53:ARG:HB3	11:AL:93:LEU:HD13	2.01	0.41
13:AN:48:ALA:HB2	13:AN:53:LEU:HD12	2.01	0.41
15:AP:16:HIS:ND1	15:AP:40:ASP:HB2	2.35	0.41
15:AP:72:ARG:HH11	20:AA:453:A:H1'	1.85	0.41
19:AT:65:LYS:H	19:AT:65:LYS:HG2	1.62	0.41
20:AA:114:U:N3	20:AA:313:A:C2	2.74	0.41
20:AA:132:C:H4'	20:AA:262:A:H1'	2.02	0.41
20:AA:216:G:H2'	20:AA:217:C:H6	1.85	0.41
20:AA:451:A:OP1	20:AA:481:G:N1	2.52	0.41
20:AA:1245:A:H2	20:AA:1292:U:H3	1.58	0.41
22:AW:49:A:C6	22:AW:50:C:N4	2.88	0.41
25:BC:60:ARG:O	25:BC:61:GLY:C	2.63	0.41
27:BE:26:ILE:HG13	27:BE:182:LEU:HB3	2.00	0.41
27:BE:143:ASN:HD21	60:BA:2571:C:H2'	1.85	0.41
29:BG:86:MET:SD	29:BG:86:MET:N	2.93	0.41
33:BO:9:GLU:CD	33:BO:9:GLU:H	2.28	0.41
33:BO:39:ILE:HG21	33:BO:62:VAL:HG13	2.01	0.41
33:BO:40:VAL:HG13	33:BO:59:LYS:HG3	2.01	0.41
34:BP:101:VAL:HG23	34:BP:102:ARG:HG3	2.02	0.41
37:BS:33:LYS:O	37:BS:62:LYS:HE2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BU:85:LYS:HG3	39:BU:117:GLN:CG	2.43	0.41
41:BW:4:LYS:HD3	41:BW:6:ILE:HB	2.01	0.41
41:BW:86:LEU:O	41:BW:94:ASP:N	2.53	0.41
43:BY:26:LYS:H	43:BY:39:VAL:HG12	1.85	0.41
45:B0:46:LYS:HD3	45:B0:78:TYR:CZ	2.55	0.41
46:B1:15:ALA:HA	46:B1:40:ARG:O	2.20	0.41
48:BN:1:MET:HB2	48:BN:2:LYS:H	1.64	0.41
48:BN:63:THR:HB	48:BN:64:GLY:H	1.55	0.41
48:BN:111:PRO:HA	48:BN:114:ARG:HH12	1.79	0.41
52:B6:34:LEU:HD23	52:B6:51:GLU:HB3	2.02	0.41
53:B7:11:LYS:HE2	60:BA:686:G:N3	2.35	0.41
59:BB:24:G:C5	59:BB:56:G:C4	3.08	0.41
60:BA:485:C:H42	60:BA:495:G:H1	1.67	0.41
60:BA:886:C:H2'	60:BA:887:A:C4'	2.50	0.41
60:BA:1691:C:H2'	60:BA:1692:U:O4'	2.20	0.41
60:BA:2115:G:H1	60:BA:2117:A:H3'	1.84	0.41
60:BA:2229:C:H2'	60:BA:2230:G:C8	2.53	0.41
60:BA:2789:C:N3	60:BA:2894:G:N2	2.68	0.41
3:CD:36:ARG:NH2	20:CA:427:U:OP2	2.52	0.41
4:CE:14:ARG:NH2	20:CA:1079:G:O3'	2.53	0.41
8:CI:111:ARG:HH11	20:CA:1368:G:H5"	1.85	0.41
8:CI:126:SER:O	8:CI:128:ARG:HD3	2.20	0.41
11:CL:53:ARG:HE	11:CL:53:ARG:N	2.18	0.41
11:CL:115:LYS:C	11:CL:117:ARG:H	2.26	0.41
16:CQ:42:TYR:C	16:CQ:43:LEU:HD23	2.44	0.41
19:CT:10:LEU:O	19:CT:12:ALA:N	2.52	0.41
20:CA:447:G:C6	20:CA:485:G:H1'	2.55	0.41
20:CA:787:A:H2'	20:CA:788:U:C6	2.54	0.41
20:CA:861:G:H1	20:CA:868:C:N4	2.18	0.41
20:CA:911:U:O2'	20:CA:1490:C:H5'	2.20	0.41
20:CA:960:U:C5	20:CA:1225:A:C8	3.07	0.41
20:CA:1269:A:H1'	20:CA:1326:C:H1'	2.01	0.41
20:CA:1301:U:H3'	20:CA:1302:U:H5"	2.01	0.41
20:CA:1510:U:H2'	20:CA:1511:G:H8	1.81	0.41
22:CW:70:G:N2	60:DA:1851:U:H4'	2.35	0.41
23:CY:342:TYR:HD1	23:CY:349:LYS:HG2	1.85	0.41
23:CY:617:MET:SD	23:CY:618:GLY:N	2.93	0.41
25:DC:27:ALA:O	25:DC:31:LYS:HB2	2.20	0.41
26:DD:63:ARG:HH11	26:DD:87:ASN:HD21	1.68	0.41
29:DG:146:TYR:C	29:DG:148:MET:H	2.28	0.41
31:DJ:23:UNK:HA	31:DJ:111:UNK:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DP:47:ASP:OD2	60:DA:666:G:H4'	2.19	0.41
35:DQ:21:THR:C	35:DQ:23:GLY:H	2.27	0.41
36:DR:86:ARG:C	36:DR:88:ARG:H	2.27	0.41
42:DX:53:LYS:O	42:DX:81:VAL:HA	2.19	0.41
43:DY:32:PRO:HG2	43:DY:34:LYS:HE3	2.02	0.41
48:DN:36:GLY:H	48:DN:42:TRP:HE3	1.67	0.41
48:DN:112:LEU:HD23	48:DN:113:GLY:H	1.79	0.41
49:D2:6:VAL:HG22	49:D2:59:ARG:HH12	1.84	0.41
52:D6:6:ARG:C	52:D6:8:LYS:N	2.77	0.41
56:De:80:ALA:HB1	56:De:84:LEU:HB3	2.02	0.41
59:DB:87:G:N2	59:DB:89(B):A:H62	2.16	0.41
60:DA:219:G:C6	60:DA:220:G:C6	3.08	0.41
60:DA:243:U:C2	60:DA:255:A:N7	2.88	0.41
60:DA:307:G:H21	60:DA:330:A:H62	1.68	0.41
60:DA:465:G:H2'	60:DA:466:A:C5	2.55	0.41
60:DA:529:A:C2	60:DA:2023:G:C8	3.08	0.41
60:DA:714:U:O2	60:DA:717:G:H8	2.03	0.41
60:DA:1567:A:OP2	60:DA:1567:A:H2'	2.20	0.41
60:DA:1844:C:H2'	60:DA:1845:G:O4'	2.20	0.41
60:DA:2012:G:H8	60:DA:2012:G:O5'	2.03	0.41
60:DA:2168:G:N2	60:DA:2170:A:H3'	2.35	0.41
60:DA:2698:U:H2'	60:DA:2699:C:C5	2.55	0.41
60:DA:2862:G:H2'	60:DA:2863:C:H6	1.83	0.41
2:AC:66:VAL:O	2:AC:102:ASN:N	2.53	0.41
2:AC:174:PRO:HA	20:AA:1107:C:O3'	2.20	0.41
3:AD:61:LYS:HE2	3:AD:206:PHE:CE2	2.54	0.41
3:AD:142:PRO:HG3	3:AD:188:LEU:HG	2.02	0.41
6:AG:59:LEU:HA	6:AG:62:PHE:HB2	2.01	0.41
6:AG:67:GLU:O	6:AG:70:LYS:HB2	2.20	0.41
10:AK:26:ASN:ND2	20:AA:692:U:H5	2.18	0.41
11:AL:44:THR:HA	11:AL:45:PRO:HD3	1.75	0.41
13:AN:35:ARG:HG3	20:AA:1358:U:OP1	2.20	0.41
14:AO:8:LYS:NZ	14:AO:31:LEU:HD11	2.35	0.41
17:AR:35:ARG:C	17:AR:37:VAL:H	2.28	0.41
18:AS:67:VAL:C	18:AS:69:HIS:H	2.28	0.41
20:AA:234:C:H2'	20:AA:235:C:H6	1.85	0.41
20:AA:242:C:N4	20:AA:284:G:H1	2.14	0.41
20:AA:367:U:H3	20:AA:393:A:N6	2.17	0.41
20:AA:447:G:H1	20:AA:485:G:H1'	1.85	0.41
20:AA:450:G:C8	20:AA:481:G:C6	3.08	0.41
20:AA:658:G:H1	20:AA:747:C:N4	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:781:A:H4'	20:AA:1522:U:O2'	2.19	0.41
20:AA:1154:G:H2'	20:AA:1155:G:H8	1.85	0.41
22:AW:8:U:H3'	22:AW:13:C:H42	1.85	0.41
23:AY:472:VAL:O	23:AY:474:ALA:N	2.53	0.41
25:BC:172:ILE:HG22	25:BC:193:PHE:HZ	1.85	0.41
26:BD:11:PRO:C	26:BD:13:ARG:H	2.27	0.41
26:BD:31:LYS:HA	26:BD:31:LYS:HD2	1.96	0.41
26:BD:250:TRP:CZ2	60:BA:1805:U:H4'	2.55	0.41
26:BD:264:LYS:HB3	26:BD:267:SER:CB	2.49	0.41
27:BE:61:ARG:HB3	27:BE:62:PRO:HD3	2.03	0.41
28:BF:182:ASN:OD1	28:BF:185:ASP:N	2.38	0.41
40:BV:89:GLN:CD	60:BA:1162:G:H21	2.29	0.41
43:BY:11:ASP:O	43:BY:27:VAL:HA	2.20	0.41
43:BY:44:ILE:HD12	60:BA:480:A:O4'	2.19	0.41
46:B1:18:ILE:HG21	60:BA:380:U:H4'	2.02	0.41
46:B1:25:LYS:NZ	46:B1:26:ARG:O	2.39	0.41
48:BN:38:HIS:CG	48:BN:39:ARG:N	2.88	0.41
49:B2:58:ALA:HA	60:BA:72:U:O4'	2.21	0.41
50:B3:35:ARG:HD2	50:B3:35:ARG:HA	1.86	0.41
52:B6:44:ARG:HB3	52:B6:45:LYS:H	1.58	0.41
53:B7:21:ARG:NH2	60:BA:684:G:OP1	2.53	0.41
53:B7:30:VAL:HG13	53:B7:34:ARG:HH11	1.84	0.41
60:BA:82:G:N1	60:BA:103:A:OP2	2.52	0.41
60:BA:286:C:H2'	60:BA:287:C:H6	1.85	0.41
60:BA:312:G:N3	60:BA:312:G:H2'	2.35	0.41
60:BA:860:U:C5	60:BA:2268:A:C8	3.07	0.41
60:BA:956:G:HO2'	60:BA:959:A:H62	1.67	0.41
60:BA:980:A:H1'	60:BA:1136:G:H1'	2.01	0.41
60:BA:1003:G:O2'	60:BA:1010:A:N6	2.52	0.41
60:BA:1299:G:H1'	60:BA:1641:A:H61	1.84	0.41
60:BA:1362:C:H2'	60:BA:1363:C:O4'	2.20	0.41
60:BA:1841:U:H2'	60:BA:1842:G:C8	2.55	0.41
60:BA:2041:U:OP2	60:BA:2041:U:C5	2.73	0.41
60:BA:2057:A:H2'	60:BA:2058:A:H8	1.85	0.41
60:BA:2773:C:H2'	60:BA:2774:C:C6	2.55	0.41
1:CB:76:GLN:O	1:CB:77:ALA:C	2.63	0.41
2:CC:32:LEU:HD22	2:CC:59:ARG:HH22	1.85	0.41
2:CC:155:GLY:C	2:CC:163:ALA:HB1	2.45	0.41
3:CD:35:ARG:HB3	20:CA:412:A:C2	2.55	0.41
3:CD:172:PRO:C	3:CD:174:LEU:H	2.28	0.41
7:CH:8:ASP:O	7:CH:12:ARG:HG3	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:17:ASP:O	9:CJ:21:GLN:N	2.47	0.41
9:CJ:55:LYS:N	9:CJ:55:LYS:HD2	2.35	0.41
11:CL:36:VAL:HG23	11:CL:58:VAL:O	2.20	0.41
11:CL:53:ARG:N	11:CL:54:LYS:HZ1	2.18	0.41
13:CN:54:PRO:C	13:CN:56:VAL:H	2.27	0.41
14:CO:39:LEU:O	14:CO:42:HIS:N	2.53	0.41
20:CA:153:C:H42	20:CA:168:G:H1	1.67	0.41
20:CA:563:A:O4'	20:CA:566:G:N2	2.53	0.41
20:CA:590:C:H42	20:CA:649:G:H1	1.68	0.41
20:CA:836:G:C6	20:CA:851:G:C6	3.08	0.41
20:CA:1048:G:H1	20:CA:1209:C:H42	1.66	0.41
20:CA:1171:G:H2'	20:CA:1172:C:C6	2.55	0.41
22:CW:4:U:O4	22:CW:69:A:N1	2.54	0.41
22:CW:23:A:C4	22:CW:24:G:C8	3.07	0.41
23:CY:34:TYR:O	23:CY:35:TYR:CD2	2.73	0.41
23:CY:215:LYS:O	23:CY:218:GLU:HB3	2.20	0.41
23:CY:250:THR:HG21	23:CY:279:TYR:HB3	2.01	0.41
23:CY:326:THR:O	23:CY:328:ILE:HG23	2.21	0.41
23:CY:394:ALA:C	23:CY:396:ARG:H	2.28	0.41
23:CY:590:ILE:HD13	23:CY:590:ILE:HA	1.92	0.41
23:CY:606:MET:CG	23:CY:649:LEU:HG	2.48	0.41
24:CU:6:5OH:N	24:CU:6:5OH:CS	2.83	0.41
26:DD:50:THR:OG1	60:DA:1813:G:O2'	2.24	0.41
27:DE:104:VAL:HG13	27:DE:196:VAL:HG23	2.01	0.41
27:DE:150:VAL:HB	60:DA:2618:G:O2'	2.20	0.41
28:DF:74:ARG:O	60:DA:674:G:H4'	2.20	0.41
28:DF:88:VAL:HG22	28:DF:89:VAL:N	2.29	0.41
29:DG:67:LYS:HA	29:DG:68:PRO:HD3	1.89	0.41
35:DQ:3:MET:SD	35:DQ:3:MET:N	2.93	0.41
35:DQ:137:TYR:CD1	35:DQ:137:TYR:N	2.86	0.41
39:DU:36:ARG:O	39:DU:39:LEU:HB3	2.19	0.41
39:DU:85:LYS:HG3	39:DU:117:GLN:HG2	2.01	0.41
41:DW:15:ARG:HG2	60:DA:1266:G:N7	2.35	0.41
41:DW:21:VAL:HG21	41:DW:76:VAL:HB	2.01	0.41
44:DZ:93:ASP:HB2	44:DZ:131:ARG:HG3	2.02	0.41
46:D1:20:ARG:O	46:D1:39:LYS:N	2.52	0.41
46:D1:95:LEU:HD12	46:D1:95:LEU:HA	1.89	0.41
50:D3:17:LYS:CD	50:D3:20:LYS:HD2	2.50	0.41
50:D3:17:LYS:HD2	50:D3:20:LYS:HD2	2.02	0.41
59:DB:89(B):A:H8	59:DB:89(B):A:O5'	2.03	0.41
60:DA:834:C:H1'	60:DA:2358:G:N3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:883:G:C2	60:DA:893:C:O2	2.73	0.41
60:DA:889:C:O2'	60:DA:890:A:P	2.78	0.41
60:DA:904:C:H2'	60:DA:905:U:O4'	2.20	0.41
60:DA:1174:A:C8	60:DA:1175:U:H1'	2.54	0.41
60:DA:1175:U:H5	60:DA:1177:A:C6	2.38	0.41
60:DA:1434:A:H2'	60:DA:1435:G:C8	2.55	0.41
60:DA:144(B):A:OP1	60:DA:144(B):A:H8	2.02	0.41
60:DA:2210:G:N2	60:DA:2211:G:H5'	2.33	0.41
60:DA:2329:G:H2'	60:DA:2330:G:O4'	2.20	0.41
60:DA:2869:G:H2'	60:DA:2870:C:O4'	2.20	0.41
1:AB:46:LYS:O	1:AB:49:GLU:HB2	2.20	0.41
2:AC:83:ARG:O	2:AC:87:LEU:HD23	2.19	0.41
2:AC:113:ALA:H	2:AC:183:ASP:HB3	1.85	0.41
3:AD:206:PHE:HD1	3:AD:209:ARG:HH21	1.68	0.41
11:AL:84:LEU:HD22	11:AL:104:VAL:HG12	2.01	0.41
11:AL:126:LYS:NZ	11:AL:126:LYS:HB3	2.35	0.41
14:AO:26:GLU:H	14:AO:26:GLU:HG2	1.54	0.41
14:AO:27:VAL:O	14:AO:31:LEU:HB2	2.20	0.41
20:AA:740:U:H2'	20:AA:741:G:H8	1.85	0.41
20:AA:858:G:O6	20:AA:869:G:H3'	2.20	0.41
20:AA:936:C:H2'	20:AA:937:A:O4'	2.19	0.41
20:AA:1012:U:H2'	20:AA:1013:G:C8	2.55	0.41
20:AA:1019:C:H2'	20:AA:1020:U:O4'	2.21	0.41
20:AA:1044:A:C4	20:AA:1045:C:H1'	2.55	0.41
22:AW:66:C:C2	22:AW:67:G:C8	3.08	0.41
23:AY:24:GLY:O	23:AY:26:THR:N	2.52	0.41
23:AY:137:ASN:HD21	23:AY:262:SER:HA	1.83	0.41
23:AY:167:PRO:HB3	23:AY:174:PHE:CZ	2.55	0.41
25:BC:115:VAL:H	25:BC:145:THR:HG22	1.85	0.41
27:BE:27:LEU:O	27:BE:51:PHE:HZ	2.03	0.41
28:BF:171:PRO:HG2	28:BF:172:TRP:HD1	1.85	0.41
33:BO:43:VAL:HG12	33:BO:45:GLU:H	1.85	0.41
33:BO:46:ALA:H	33:BO:54:GLU:HG3	1.84	0.41
34:BP:32:THR:OG1	60:BA:1190:G:OP1	2.38	0.41
34:BP:95:VAL:HG23	34:BP:125:VAL:HA	2.01	0.41
38:BT:2:ASN:HB3	38:BT:3:ARG:H	1.59	0.41
38:BT:42:ILE:HG21	38:BT:83:ILE:HG21	2.02	0.41
43:BY:19:LYS:HG3	43:BY:20:TYR:CD1	2.55	0.41
45:B0:45:PHE:HB3	45:B0:79:VAL:HG23	2.03	0.41
48:BN:69:GLN:NE2	60:BA:1022:G:H5"	2.35	0.41
56:Be:62:VAL:HG11	56:Be:92:LEU:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:828:U:H2'	60:BA:829:A:C4	2.55	0.41
60:BA:868:U:H2'	60:BA:869:G:O4'	2.20	0.41
60:BA:1077:A:C2	60:BA:1078:U:H4'	2.55	0.41
60:BA:1472:A:H3'	60:BA:1473:G:H8	1.85	0.41
60:BA:1490:A:N6	5:CF:38:GLU:OE1	2.53	0.41
60:BA:1540:G:H3'	60:BA:1541:U:H6	1.85	0.41
60:BA:1613:G:H3'	60:BA:1617:C:H42	1.85	0.41
60:BA:1788:C:H2'	60:BA:1789:A:C8	2.55	0.41
60:BA:2059:A:O2'	60:BA:2061:G:OP1	2.33	0.41
60:BA:2082:A:H2'	60:BA:2083:G:O4'	2.21	0.41
60:BA:2262:U:H4'	60:BA:2328:A:C2	2.56	0.41
60:BA:2319:G:N2	60:BA:2334:G:OP2	2.53	0.41
60:BA:2405:G:H8	60:BA:2405:G:OP2	2.02	0.41
60:BA:2581:G:H4'	60:BA:2582:G:C8	2.55	0.41
60:BA:2620:C:H2'	60:BA:2621:A:H8	1.84	0.41
2:CC:22:TRP:CZ2	13:CN:54:PRO:HG2	2.56	0.41
5:CF:10:LEU:HG	5:CF:85:VAL:HG22	2.01	0.41
5:CF:46:ARG:HG2	5:CF:47:ARG:N	2.35	0.41
6:CG:87:VAL:HG22	6:CG:151:TYR:CB	2.45	0.41
7:CH:34:GLU:CB	7:CH:118:VAL:HG21	2.44	0.41
7:CH:88:LYS:C	7:CH:90:GLY:H	2.28	0.41
8:CI:75:ASP:O	8:CI:78:LYS:HB3	2.19	0.41
10:CK:40:ILE:C	10:CK:41:THR:HG23	2.46	0.41
15:CP:5:ARG:NH2	15:CP:23:ASP:O	2.53	0.41
16:CQ:32:TYR:HD2	16:CQ:32:TYR:HA	1.74	0.41
18:CS:49:ILE:HG13	18:CS:60:VAL:O	2.21	0.41
20:CA:373:A:H4'	20:CA:480:U:O2'	2.20	0.41
20:CA:853:G:H2'	20:CA:854:G:O4'	2.20	0.41
20:CA:1148:U:H2'	20:CA:1149:C:O4'	2.20	0.41
20:CA:1440(K):G:N2	20:CA:1440(L):G:C5	2.88	0.41
20:CA:1503:A:H61	21:CV:14:A:H2'	1.85	0.41
23:CY:319:ASP:OD2	23:CY:321:TYR:HB2	2.21	0.41
23:CY:326:THR:OG1	23:CY:377:VAL:HG13	2.21	0.41
23:CY:409:ILE:HG13	23:CY:656:ALA:CB	2.43	0.41
23:CY:655:TYR:O	23:CY:659:LEU:N	2.46	0.41
26:DD:24:ILE:HG12	26:DD:25:THR:N	2.35	0.41
27:DE:111:ARG:HA	36:DR:2:ARG:HG3	2.02	0.41
28:DF:136:THR:OG1	60:DA:320:A:H3'	2.20	0.41
28:DF:136:THR:N	60:DA:321:G:OP2	2.53	0.41
31:DJ:82:UNK:C	31:DJ:84:UNK:N	2.83	0.41
33:DO:23:ARG:HG3	33:DO:24:VAL:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DP:39:LYS:C	34:DP:41:ARG:H	2.25	0.41
34:DP:55:ARG:NH1	60:DA:2358:G:H1	2.18	0.41
36:DR:67:LEU:HD11	36:DR:72:ASP:O	2.20	0.41
38:DT:50:ILE:HG22	38:DT:51:ARG:HB2	2.03	0.41
39:DU:5:LYS:HE3	39:DU:7:GLY:H	1.84	0.41
40:DV:19:LYS:HB2	40:DV:96:ILE:CG1	2.50	0.41
41:DW:51:LEU:HD23	41:DW:105:VAL:HG11	2.02	0.41
41:DW:61:ASN:HD21	60:DA:496:G:C1'	2.34	0.41
45:D0:65:GLY:HA3	45:D0:81:VAL:CG1	2.47	0.41
49:D2:55:ARG:NH1	60:DA:75:G:H4'	2.36	0.41
50:D3:11:SER:HB3	60:DA:988:A:P	2.60	0.41
51:D5:5:PRO:HB2	60:DA:2614:A:O4'	2.20	0.41
51:D5:18:ALA:C	51:D5:21:SER:H	2.27	0.41
53:D7:5:TRP:HD1	60:DA:1612:C:O3'	2.04	0.41
59:DB:6:C:H2'	59:DB:7:G:C8	2.55	0.41
59:DB:72:G:H1'	59:DB:104:A:H61	1.85	0.41
60:DA:491:G:H2'	60:DA:492:A:O4'	2.20	0.41
60:DA:526:A:C6	60:DA:2626:C:H4'	2.55	0.41
60:DA:584:C:N4	60:DA:585:G:O6	2.53	0.41
60:DA:671:C:H2'	60:DA:672:C:C6	2.55	0.41
60:DA:898:C:H2'	60:DA:899:A:H8	1.85	0.41
60:DA:1448:G:H2'	60:DA:149(B):A:H8	1.83	0.41
60:DA:1467:C:H6	60:DA:154(B):C:H2'	1.85	0.41
60:DA:1828:G:H4'	60:DA:1829:A:OP1	2.20	0.41
60:DA:2047:U:H2'	60:DA:2048:G:H8	1.85	0.41
60:DA:2804:C:H2'	60:DA:2805:G:C8	2.55	0.41
1:AB:74:LYS:HD2	1:AB:74:LYS:H	1.86	0.41
1:AB:101:MET:HB2	1:AB:102:LEU:H	1.75	0.41
1:AB:183:PRO:HA	1:AB:198:ASP:OD1	2.20	0.41
1:AB:215:LEU:HA	1:AB:215:LEU:HD23	1.82	0.41
4:AE:101:ILE:HD12	20:AA:7:G:H3'	2.02	0.41
5:AF:3:ARG:HH12	5:AF:38:GLU:HG3	1.84	0.41
6:AG:36:LYS:HD2	20:AA:1373:G:H5"	2.03	0.41
6:AG:156:TRP:CH2	20:AA:1378:C:H2'	2.55	0.41
8:AI:96:LEU:HA	8:AI:99:LEU:HB2	2.00	0.41
10:AK:27:ASN:OD1	10:AK:28:THR:N	2.49	0.41
12:AM:107:ALA:C	12:AM:109:THR:H	2.27	0.41
14:AO:24:SER:H	14:AO:27:VAL:HG21	1.85	0.41
14:AO:78:TYR:O	14:AO:82:ILE:HG22	2.19	0.41
15:AP:27:LYS:NZ	20:AA:112:G:OP2	2.49	0.41
19:AT:73:HIS:HB3	19:AT:74:LYS:NZ	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:74:LYS:HG2	19:AT:75:ASN:OD1	2.20	0.41
20:AA:791:G:C6	20:AA:792:A:N6	2.88	0.41
20:AA:926:G:N2	21:AV:17:U:OP1	2.53	0.41
20:AA:973:G:H3'	20:AA:974:A:H5"	2.02	0.41
20:AA:989:C:H2'	20:AA:990:C:C6	2.55	0.41
20:AA:1127:G:H21	20:AA:1147:C:H41	1.68	0.41
20:AA:1223:C:OP2	20:AA:1224:G:H2'	2.20	0.41
20:AA:1471:G:H2'	20:AA:1472:U:O4'	2.20	0.41
20:AA:1483:A:H3'	20:AA:1484:C:C6	2.55	0.41
27:BE:15:PHE:HD2	27:BE:20:ALA:HA	1.84	0.41
27:BE:27:LEU:HG	27:BE:180:ASN:O	2.20	0.41
27:BE:34:VAL:O	27:BE:48:GLN:HB2	2.20	0.41
28:BF:45:ARG:HD3	28:BF:97:TYR:CZ	2.54	0.41
30:BH:23:ARG:HB2	30:BH:34:GLU:OE1	2.20	0.41
30:BH:38:SER:HA	30:BH:39:PRO:HD3	1.71	0.41
34:BP:24:GLY:O	60:BA:811:U:H2'	2.20	0.41
36:BR:14:SER:O	36:BR:18:LEU:HG	2.20	0.41
36:BR:97:VAL:HG12	36:BR:112:ALA:HB1	2.02	0.41
37:BS:66:ALA:O	37:BS:67:ARG:C	2.63	0.41
38:BT:47:GLY:HA2	38:BT:65:LYS:NZ	2.35	0.41
40:BV:8:GLY:O	40:BV:23:GLU:HG3	2.21	0.41
41:BW:12:ILE:CD1	41:BW:42:ARG:HH12	2.33	0.41
41:BW:25:ARG:HB2	41:BW:25:ARG:HH11	1.85	0.41
43:BY:56:PRO:HB2	43:BY:57:GLN:H	1.61	0.41
44:BZ:61:LEU:HB2	44:BZ:63:ASP:OD1	2.20	0.41
44:BZ:156:LYS:NZ	44:BZ:158:PRO:HG3	2.36	0.41
46:B1:18:ILE:HA	46:B1:41:ARG:H	1.84	0.41
48:BN:66:LYS:O	48:BN:68:GLU:N	2.54	0.41
48:BN:69:GLN:O	48:BN:70:LYS:C	2.63	0.41
48:BN:103:VAL:O	48:BN:104:LYS:C	2.61	0.41
52:B6:15:GLU:HG2	52:B6:48:VAL:HG23	2.02	0.41
53:B7:23:ARG:NH2	60:BA:125:G:OP2	2.47	0.41
59:BB:65:C:H2'	59:BB:66:A:H5'	2.01	0.41
60:BA:252:G:H2'	60:BA:253:C:H6	1.85	0.41
60:BA:571:A:N7	60:BA:575:A:N6	2.68	0.41
60:BA:621:A:C2	60:BA:622:G:H1'	2.56	0.41
60:BA:862:G:C2	60:BA:863:A:H1'	2.54	0.41
60:BA:866:A:N3	60:BA:866:A:H2'	2.35	0.41
60:BA:1570:A:H2'	60:BA:1571:A:C8	2.56	0.41
60:BA:1945:G:H2'	60:BA:1946:U:C6	2.56	0.41
60:BA:2185:C:C2	60:BA:2186:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:77:ALA:O	1:CB:78:GLN:C	2.63	0.41
3:CD:15:GLU:CG	3:CD:59:ARG:HH22	2.34	0.41
4:CE:20:GLN:H	4:CE:24:ARG:HA	1.85	0.41
6:CG:26:PHE:HE2	6:CG:30:ILE:HD11	1.86	0.41
6:CG:76:ARG:HD3	6:CG:156:TRP:HE1	1.86	0.41
6:CG:108:ALA:O	6:CG:119:ARG:HB3	2.20	0.41
7:CH:97:VAL:HG12	20:CA:600:C:OP1	2.21	0.41
7:CH:98:LYS:NZ	20:CA:632:A:OP1	2.53	0.41
8:CI:10:ARG:HG3	8:CI:105:ASP:HB2	2.03	0.41
8:CI:47:LEU:HD23	8:CI:56:LEU:HD11	2.01	0.41
8:CI:102:LEU:HD22	20:CA:1179:A:H5"	2.02	0.41
16:CQ:6:LEU:HD23	16:CQ:6:LEU:HA	1.92	0.41
16:CQ:43:LEU:HD12	16:CQ:69:LYS:HA	2.01	0.41
17:CR:53:ARG:HG3	17:CR:58:LEU:O	2.21	0.41
20:CA:1325:C:H2'	20:CA:1326:C:C6	2.56	0.41
20:CA:1416:G:H2'	20:CA:1417:G:O4'	2.20	0.41
23:CY:357:ARG:HH11	23:CY:373:ASP:CG	2.28	0.41
23:CY:406:GLU:O	23:CY:454:MET:HG2	2.20	0.41
23:CY:486:THR:O	23:CY:600:VAL:N	2.53	0.41
23:CY:609:GLU:H	23:CY:670:VAL:HG23	1.86	0.41
23:CY:637:ARG:HG3	23:CY:642:VAL:HG23	2.01	0.41
25:DC:40:GLU:HB2	25:DC:217:THR:HB	2.03	0.41
26:DD:131:LEU:HD11	26:DD:136:ILE:HD11	2.01	0.41
26:DD:233:HIS:NE2	26:DD:246:PRO:HA	2.35	0.41
28:DF:191:ARG:O	28:DF:193:VAL:HG23	2.19	0.41
32:DK:60:TYR:O	32:DK:62:ASP:N	2.53	0.41
34:DP:7:ARG:HG2	60:DA:1203:G:H4'	2.02	0.41
35:DQ:128:LYS:HB3	60:DA:1030:G:P	2.61	0.41
36:DR:4:LEU:HG	60:DA:1653:G:H2'	2.02	0.41
39:DU:24:TYR:O	60:DA:18:C:H4'	2.20	0.41
48:DN:17:ASP:CG	48:DN:18:ALA:H	2.27	0.41
51:D5:19:ARG:HD2	60:DA:1266:G:OP2	2.20	0.41
53:D7:21:ARG:HH22	60:DA:684:G:P	2.43	0.41
60:DA:17:G:H2'	60:DA:18:C:C6	2.55	0.41
60:DA:51:G:H8	60:DA:51:G:O5'	2.02	0.41
60:DA:244:A:H2'	60:DA:245:G:O4'	2.20	0.41
60:DA:273(G):C:H3'	60:DA:274:G:C5'	2.50	0.41
60:DA:317:G:H2'	60:DA:318:C:O4'	2.21	0.41
60:DA:622:G:H2'	60:DA:623:G:H8	1.84	0.41
60:DA:1532:C:C2	60:DA:1540:G:N2	2.89	0.41
60:DA:1558:A:N7	60:DA:1560:G:C8	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2002:G:H2'	60:DA:2003:G:O4'	2.21	0.41
60:DA:2303:G:H1	60:DA:2313:C:N4	2.14	0.41
60:DA:2625:G:H2'	60:DA:2626:C:O4'	2.19	0.41
60:DA:2643:G:H2'	60:DA:2644:G:O4'	2.20	0.41
1:AB:36:ARG:C	1:AB:38:GLY:H	2.29	0.41
1:AB:46:LYS:O	1:AB:50:GLU:HG2	2.20	0.41
2:AC:44:GLU:O	2:AC:48:TYR:HB3	2.20	0.41
6:AG:25:ALA:O	6:AG:28:ASN:HB2	2.19	0.41
7:AH:1:MET:HE3	7:AH:1:MET:HB3	1.86	0.41
8:AI:48:GLU:N	8:AI:49:PRO:HD2	2.35	0.41
8:AI:97:LYS:HD2	8:AI:102:LEU:HD12	2.02	0.41
9:AJ:33:GLN:HB3	9:AJ:75:ILE:HD12	2.01	0.41
10:AK:96:ARG:HA	10:AK:99:GLN:CD	2.46	0.41
12:AM:20:THR:C	12:AM:22:ILE:H	2.28	0.41
14:AO:18:PHE:HZ	20:AA:750:G:H4'	1.86	0.41
20:AA:68(C):C:C2	20:AA:68(D):C:C5	3.08	0.41
20:AA:186(G):C:H1'	20:AA:186(K):G:N1	2.35	0.41
20:AA:588:G:H1	20:AA:651:C:H42	1.69	0.41
20:AA:639:G:H2'	20:AA:640:A:C8	2.56	0.41
20:AA:678:U:H2'	20:AA:679:C:C6	2.55	0.41
20:AA:1102:A:H2'	20:AA:1103:C:C6	2.56	0.41
20:AA:1103:C:H2'	20:AA:1104:G:O4'	2.20	0.41
20:AA:1251:A:H2'	20:AA:1252:A:C8	2.56	0.41
20:AA:1481:U:H2'	20:AA:1482:G:C8	2.55	0.41
22:AW:47:U:H4'	22:AW:48:C:H5"	2.02	0.41
23:AY:37:GLY:O	23:AY:38:ARG:HG3	2.20	0.41
23:AY:92:ILE:HG23	23:AY:93:GLU:N	2.36	0.41
23:AY:132:ARG:NE	23:AY:132:ARG:H	2.18	0.41
23:AY:289:ILE:HG22	23:AY:290:LYS:H	1.85	0.41
23:AY:603:GLU:OE2	23:AY:679:VAL:HG12	2.21	0.41
25:BC:164:PHE:HZ	25:BC:196:ALA:CB	2.30	0.41
26:BD:127:VAL:HA	26:BD:193:VAL:HG13	2.03	0.41
27:BE:54:GLN:HB3	27:BE:75:VAL:HB	2.02	0.41
28:BF:111:ALA:O	28:BF:112:MET:C	2.63	0.41
28:BF:154:VAL:HA	28:BF:191:ARG:H	1.85	0.41
28:BF:170:LEU:HG	28:BF:173:VAL:CB	2.34	0.41
29:BG:57:ALA:O	29:BG:60:LEU:HB3	2.20	0.41
32:BK:53:VAL:HA	32:BK:54:PRO:HD3	1.83	0.41
33:BO:111:PHE:O	33:BO:114:ILE:HG12	2.20	0.41
35:BQ:42:ILE:CD1	35:BQ:95:ALA:HB3	2.50	0.41
36:BR:59:ASP:OD1	36:BR:60:LEU:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BS:95:HIS:O	37:BS:97:ARG:HD3	2.21	0.41
39:BU:25:TRP:CD1	39:BU:26:GLY:N	2.86	0.41
40:BV:4:ILE:HA	40:BV:14:VAL:HG23	2.02	0.41
41:BW:12:ILE:HG21	41:BW:17:VAL:HG13	2.02	0.41
42:BX:35:THR:HG23	42:BX:38:GLU:HB2	2.02	0.41
43:BY:28:LYS:HE2	43:BY:28:LYS:HB3	1.76	0.41
43:BY:51:VAL:HB	43:BY:55:TYR:CD2	2.55	0.41
43:BY:91:GLU:HB3	43:BY:92:ASN:H	1.76	0.41
46:B1:71:TYR:O	46:B1:74:VAL:HB	2.20	0.41
48:BN:43:THR:CG2	48:BN:44:PRO:HD2	2.50	0.41
48:BN:62:VAL:CG2	48:BN:66:LYS:HG3	2.39	0.41
48:BN:99:LEU:HD13	48:BN:99:LEU:C	2.46	0.41
49:B2:59:ARG:HA	60:BA:76:C:O2'	2.20	0.41
54:B8:52:LYS:C	54:B8:54:GLU:N	2.78	0.41
60:BA:30:G:H2'	60:BA:31:C:H6	1.84	0.41
60:BA:214:G:H2'	60:BA:215:G:C8	2.54	0.41
60:BA:273(A):G:C2	60:BA:273(B):G:C8	3.08	0.41
60:BA:303:U:H2'	60:BA:304:G:O4'	2.21	0.41
60:BA:462:C:N4	60:BA:463:G:C6	2.88	0.41
60:BA:501:A:H2'	60:BA:502:A:C8	2.56	0.41
60:BA:943:U:OP2	60:BA:943:U:H6	2.03	0.41
60:BA:1211:U:O2'	60:BA:1212:G:OP1	2.36	0.41
60:BA:1449:G:H2'	60:BA:1450:C:O4'	2.20	0.41
60:BA:1861:G:H1	60:BA:1881:C:H42	1.68	0.41
60:BA:2335:A:O2'	60:BA:2336:A:H5"	2.20	0.41
3:CD:135:LEU:HD22	3:CD:135:LEU:H	1.84	0.41
4:CE:47:LYS:HE2	4:CE:47:LYS:HB2	1.75	0.41
9:CJ:91:PRO:HB2	9:CJ:94:VAL:HB	2.03	0.41
11:CL:17:LYS:HG2	11:CL:19:ARG:H	1.85	0.41
12:CM:74:VAL:C	12:CM:78:ILE:HG12	2.45	0.41
20:CA:715:A:H2'	20:CA:716:A:O4'	2.20	0.41
20:CA:765:G:O2'	20:CA:766:A:H5'	2.21	0.41
20:CA:1215:G:H2'	20:CA:1216:G:H8	1.86	0.41
20:CA:1259:C:H5"	20:CA:1260:C:OP2	2.20	0.41
20:CA:1266:G:H22	20:CA:1268:A:H3'	1.84	0.41
22:CW:7:G:C2	22:CW:49:A:H1'	2.55	0.41
23:CY:612:THR:HA	23:CY:613:PRO:HD3	1.89	0.41
25:DC:53:ARG:HG2	25:DC:54:ARG:N	2.35	0.41
25:DC:60:ARG:HG2	25:DC:142:LYS:HB3	2.03	0.41
25:DC:148:PHE:C	25:DC:150:ILE:N	2.79	0.41
26:DD:69:ARG:HH11	26:DD:130:ALA:H	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:94:LEU:HG	26:DD:104:TYR:HE2	1.86	0.41
26:DD:218:ARG:NH1	60:DA:691:C:H5'	2.35	0.41
26:DD:244:ARG:NH2	60:DA:1841:U:O2	2.54	0.41
27:DE:63:LEU:C	27:DE:65:GLY:H	2.29	0.41
28:DF:36:VAL:O	28:DF:40:GLN:HG3	2.20	0.41
28:DF:155:LEU:CD1	28:DF:176:LEU:HD23	2.51	0.41
33:DO:9:GLU:HA	33:DO:18:LYS:HA	2.01	0.41
40:DV:4:ILE:N	40:DV:39:LEU:O	2.53	0.41
41:DW:32:ALA:O	41:DW:35:ILE:HB	2.20	0.41
43:DY:79:CYS:SG	43:DY:80:GLY:N	2.94	0.41
47:D4:8:LYS:HB3	47:D4:9:LEU:H	1.59	0.41
48:DN:26:LEU:HD23	48:DN:99:LEU:CD2	2.51	0.41
49:D2:23:LYS:O	49:D2:26:ARG:HB2	2.21	0.41
60:DA:76:C:H2'	60:DA:77:C:H6	1.85	0.41
60:DA:401:A:C2	60:DA:402:A:C4	3.08	0.41
60:DA:605:C:C4	60:DA:606:U:C4	3.09	0.41
60:DA:831:G:H8	60:DA:831:G:O5'	2.04	0.41
60:DA:869:G:H2'	60:DA:870:A:O4'	2.20	0.41
60:DA:1022:G:N3	60:DA:1023:U:H5	2.18	0.41
60:DA:1288:U:C4	60:DA:1327:C:H1'	2.56	0.41
60:DA:2115:G:C6	60:DA:2117:A:H5'	2.56	0.41
60:DA:2147:G:H3'	60:DA:2147:G:H8	1.85	0.41
60:DA:2330:G:H2'	60:DA:2331:G:O4'	2.21	0.41
60:DA:2341:G:H2'	60:DA:2342:C:H6	1.83	0.41
60:DA:2465:C:H2'	60:DA:2466:C:H6	1.82	0.41
60:DA:2688:U:H5	60:DA:2719:G:C5	2.38	0.41
1:AB:231:GLU:HA	1:AB:232:PRO:HD3	1.83	0.41
2:AC:41:GLY:HA2	2:AC:44:GLU:CD	2.45	0.41
3:AD:189:PRO:HB2	3:AD:190:ASP:H	1.76	0.41
5:AF:80:ARG:HH21	5:AF:88:VAL:HB	1.85	0.41
6:AG:29:LYS:HD3	20:AA:1375:A:H4'	2.03	0.41
7:AH:6:ILE:H	7:AH:6:ILE:HD12	1.85	0.41
8:AI:111:ARG:HG3	20:AA:1369:C:OP2	2.20	0.41
13:AN:29:ARG:O	13:AN:33:VAL:HG21	2.20	0.41
19:AT:53:LEU:HD21	19:AT:92:LEU:HD11	2.03	0.41
20:AA:154:C:H2'	20:AA:155:C:C6	2.56	0.41
20:AA:814:A:H4'	20:AA:1511:G:H5'	2.01	0.41
20:AA:1171:G:H2'	20:AA:1172:C:C6	2.56	0.41
20:AA:1251:A:H2'	20:AA:1252:A:H8	1.85	0.41
20:AA:1287:A:H2'	20:AA:1288:A:C8	2.55	0.41
23:AY:30:GLU:O	23:AY:33:LEU:CB	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:32:ILE:C	23:AY:34:TYR:N	2.68	0.41
25:BC:41:THR:C	25:BC:43:GLU:N	2.76	0.41
26:BD:111:LEU:HD21	26:BD:117:VAL:HG11	2.02	0.41
26:BD:147:LEU:HB2	26:BD:155:LEU:HD11	2.03	0.41
26:BD:244:ARG:HH22	60:BA:1841:U:H1'	1.86	0.41
27:BE:15:PHE:CD1	38:BT:81:PRO:HD3	2.56	0.41
28:BF:39:TRP:HB2	28:BF:99:TYR:OH	2.20	0.41
28:BF:154:VAL:HG12	28:BF:156:LEU:CA	2.36	0.41
29:BG:41:GLN:HG2	29:BG:155:MET:HA	2.02	0.41
33:BO:64:ARG:NH2	33:BO:101:PRO:HD2	2.36	0.41
34:BP:58:THR:O	34:BP:61:ARG:HG3	2.20	0.41
35:BQ:26:TYR:HB2	35:BQ:27:VAL:H	1.66	0.41
35:BQ:47:ILE:HD12	35:BQ:70:PRO:HG3	2.02	0.41
37:BS:31:SER:O	37:BS:33:LYS:N	2.52	0.41
38:BT:53:ARG:HD3	60:BA:2684:U:OP2	2.20	0.41
38:BT:75:ILE:HD12	60:BA:2684:U:H5"	2.03	0.41
39:BU:45:TYR:O	39:BU:49:HIS:HB2	2.21	0.41
39:BU:93:LYS:NZ	60:BA:997:G:H5"	2.36	0.41
40:BV:19:LYS:HB3	40:BV:94:LEU:O	2.21	0.41
44:BZ:95:PRO:HA	44:BZ:130:PRO:HD3	2.03	0.41
45:B0:24:LYS:NZ	60:BA:2355:C:O2'	2.52	0.41
48:BN:26:LEU:HD23	48:BN:99:LEU:CD2	2.51	0.41
49:B2:61:LEU:HD23	49:B2:61:LEU:HA	1.87	0.41
52:B6:23:THR:HG21	60:BA:2419:U:H5"	2.02	0.41
60:BA:526:A:O2'	60:BA:2043:C:O2	2.37	0.41
60:BA:579:G:H2'	60:BA:580:C:C6	2.56	0.41
60:BA:894:C:H2'	60:BA:895:U:C5	2.56	0.41
60:BA:915:C:H2'	60:BA:916:G:O4'	2.20	0.41
60:BA:1130:U:C2	60:BA:2025:C:H5"	2.56	0.41
60:BA:1580:A:H5"	60:BA:1581:G:OP2	2.20	0.41
60:BA:2366:A:H2'	60:BA:2367:G:O4'	2.21	0.41
60:BA:2564:A:C2	60:BA:2647:U:H4'	2.56	0.41
60:BA:2824:C:H2'	60:BA:2825:U:O4'	2.21	0.41
60:BA:2839:G:H2'	60:BA:2840:C:H6	1.84	0.41
2:CC:24:ALA:HB1	2:CC:29:TYR:HA	2.03	0.41
2:CC:134:ILE:O	2:CC:138:VAL:HG23	2.21	0.41
3:CD:17:VAL:O	3:CD:19:LEU:HD12	2.20	0.41
3:CD:65:ARG:HD3	3:CD:75:PHE:CD2	2.56	0.41
3:CD:156:GLU:HB3	3:CD:157:LEU:H	1.69	0.41
6:CG:80:VAL:HG21	6:CG:85:TYR:CE1	2.55	0.41
7:CH:34:GLU:O	7:CH:38:ILE:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:82:HIS:O	7:CH:137:VAL:HA	2.20	0.41
11:CL:10:LEU:HD23	11:CL:10:LEU:HA	1.93	0.41
12:CM:30:ALA:O	12:CM:34:LEU:HG	2.21	0.41
14:CO:39:LEU:HD22	14:CO:42:HIS:HB3	2.01	0.41
14:CO:54:ARG:NE	20:CA:579:G:HO2'	2.13	0.41
16:CQ:59:ILE:HG23	16:CQ:72:ARG:O	2.21	0.41
17:CR:56:THR:OG1	17:CR:58:LEU:HD22	2.21	0.41
20:CA:171:A:H2'	20:CA:172:A:H8	1.86	0.41
20:CA:367:U:H3	20:CA:393:A:N6	2.17	0.41
20:CA:370:C:H2'	20:CA:371:G:H8	1.85	0.41
20:CA:895:G:H2'	20:CA:896:C:C6	2.56	0.41
20:CA:998:G:H2'	20:CA:998(A):C:H6	1.85	0.41
20:CA:1408:A:C2	20:CA:1494:G:C5	3.09	0.41
22:CW:49:A:N1	22:CW:65:U:O4	2.53	0.41
23:CY:208:GLN:O	23:CY:209:ALA:C	2.64	0.41
23:CY:289:ILE:H	23:CY:289:ILE:CD1	2.20	0.41
23:CY:312:LEU:O	23:CY:328:ILE:HB	2.20	0.41
27:DE:53:PRO:HA	27:DE:74:PRO:HA	2.03	0.41
28:DF:11:VAL:HG21	28:DF:18:ARG:NH1	2.36	0.41
30:DH:118:PRO:HD2	30:DH:121:ILE:HG13	2.03	0.41
31:DJ:58:UNK:C	31:DJ:60:UNK:N	2.82	0.41
32:DK:30:HIS:ND1	32:DK:32:ALA:HB2	2.35	0.41
32:DK:57:ILE:HA	32:DK:66:THR:O	2.20	0.41
35:DQ:128:LYS:HD2	60:DA:1029:A:H5"	2.03	0.41
36:DR:42:LYS:O	36:DR:45:ARG:NE	2.53	0.41
37:DS:11:LYS:HD2	37:DS:13:ARG:CZ	2.51	0.41
38:DT:35:LYS:HD2	38:DT:41:ARG:HD3	2.02	0.41
39:DU:75:ASN:ND2	60:DA:1011:G:H4'	2.35	0.41
46:D1:12:PRO:HA	46:D1:44:PRO:HG3	2.01	0.41
52:D6:27:LYS:HD3	52:D6:27:LYS:HA	1.86	0.41
53:D7:8:ASN:HA	60:DA:1309:G:C5'	2.49	0.41
54:D8:58:ILE:O	54:D8:61:LEU:HG	2.20	0.41
60:DA:718:A:O5'	60:DA:718:A:H8	2.03	0.41
60:DA:761:A:H8	60:DA:761:A:O5'	2.04	0.41
60:DA:821:A:C2	60:DA:946:G:H1'	2.55	0.41
60:DA:872:A:H2'	60:DA:873:G:C8	2.55	0.41
60:DA:1542:G:H4'	60:DA:1543:A:O4'	2.21	0.41
60:DA:1717:G:H2'	60:DA:1718:G:O4'	2.21	0.41
60:DA:2428:G:H5"	60:DA:2429:G:O5'	2.19	0.41
2:AC:19:GLU:O	2:AC:56:ASP:HA	2.21	0.41
2:AC:63:ASN:HA	2:AC:98:ASN:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:135:LEU:HA	3:AD:136:PRO:HD3	1.85	0.41
4:AE:146:ALA:HB1	4:AE:150:ARG:NH2	2.36	0.41
5:AF:12:PRO:HB3	5:AF:58:GLY:HA2	2.03	0.41
6:AG:73:MET:HG2	6:AG:90:GLU:HA	2.03	0.41
6:AG:140:ASP:O	6:AG:144:MET:HG2	2.20	0.41
11:AL:100:ILE:HG22	11:AL:101:VAL:N	2.35	0.41
15:AP:78:GLY:O	15:AP:81:ARG:HB2	2.20	0.41
19:AT:74:LYS:CG	19:AT:75:ASN:H	2.30	0.41
20:AA:560:U:H4'	20:AA:561:U:H5"	2.01	0.41
20:AA:977:A:H8	20:AA:1223:C:C5	2.38	0.41
20:AA:1187:G:H2'	20:AA:1188:A:C8	2.56	0.41
20:AA:1357:A:H61	20:AA:1365:G:H1	1.69	0.41
20:AA:1394:A:N7	20:AA:1501:C:H4'	2.36	0.41
22:AW:43:G:H2'	22:AW:44:G:C8	2.55	0.41
23:AY:350:GLU:HB3	23:AY:380:LEU:HD11	2.02	0.41
23:AY:535:PRO:C	23:AY:536:LYS:HE2	2.45	0.41
25:BC:78:ILE:H	25:BC:116:ALA:HA	1.86	0.41
26:BD:157:ARG:NH2	60:BA:1818:U:H6	2.19	0.41
26:BD:208:LYS:HD2	60:BA:729:G:C8	2.56	0.41
26:BD:253:GLN:HB2	26:BD:257:LEU:HD12	2.02	0.41
27:BE:52:LEU:HA	27:BE:53:PRO:HD3	1.75	0.41
33:BO:30:ALA:HB2	60:BA:2674:G:O2'	2.20	0.41
33:BO:47:ILE:HA	33:BO:48:PRO:HD2	1.61	0.41
36:BR:13:HIS:HB2	36:BR:16:HIS:HB2	2.03	0.41
36:BR:99:LYS:HA	36:BR:112:ALA:HA	2.03	0.41
40:BV:89:GLN:HA	40:BV:90:PRO:HD3	1.75	0.41
41:BW:64:MET:O	41:BW:65:LEU:HB2	2.20	0.41
41:BW:101:SER:O	41:BW:102:HIS:ND1	2.53	0.41
42:BX:47:PHE:CD2	42:BX:89:ILE:HG23	2.55	0.41
44:BZ:118:GLN:HB3	44:BZ:173:ALA:C	2.46	0.41
44:BZ:166:SER:HB2	44:BZ:167:PRO:C	2.46	0.41
45:B0:65:GLY:HA2	45:B0:83:PRO:HB3	2.02	0.41
46:B1:39:LYS:NZ	46:B1:40:ARG:O	2.53	0.41
52:B6:19:ARG:HD3	60:BA:2400:G:H4'	2.02	0.41
54:B8:27:THR:OG1	54:B8:28:GLY:N	2.51	0.41
55:B9:30:PRO:O	60:BA:2527:C:H4'	2.20	0.41
55:B9:30:PRO:HD2	60:BA:2528:U:OP1	2.21	0.41
60:BA:253:C:H2'	60:BA:254:G:O4'	2.20	0.41
60:BA:308:G:H2'	60:BA:309:G:C8	2.56	0.41
60:BA:515:A:H1'	60:BA:581:C:H1'	2.02	0.41
60:BA:533:G:H2'	60:BA:534:U:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:627:A:H61	60:BA:637:A:C5'	2.33	0.41
60:BA:778:G:C5	60:BA:779:U:C4	3.09	0.41
60:BA:779:U:H2'	60:BA:780:G:O4'	2.20	0.41
60:BA:781:A:H2'	60:BA:1777:U:O2'	2.21	0.41
60:BA:841:A:H2'	60:BA:842:G:C8	2.55	0.41
60:BA:864:G:H1'	60:BA:914:C:N4	2.35	0.41
60:BA:1042:G:C6	60:BA:1114:G:C6	3.09	0.41
60:BA:1731:G:O2'	60:BA:1732:A:N7	2.41	0.41
60:BA:1848:A:H2'	60:BA:1849:G:O4'	2.20	0.41
60:BA:2691:C:H5'	60:BA:2872:G:H5"	2.03	0.41
1:CB:111:ARG:HH12	20:CA:1104:G:H4'	1.86	0.41
2:CC:4:LYS:NZ	20:CA:1191:A:H5"	2.36	0.41
3:CD:74:GLN:HA	3:CD:77:ASN:OD1	2.21	0.41
5:CF:44:GLY:HA2	5:CF:59:TYR:CZ	2.55	0.41
5:CF:95:GLU:O	5:CF:97:PHE:N	2.54	0.41
6:CG:3:ARG:HG3	20:CA:1380:U:C5	2.56	0.41
9:CJ:43:ARG:HD3	9:CJ:43:ARG:HA	1.76	0.41
11:CL:21:LYS:HE3	11:CL:23:LYS:HB2	2.02	0.41
12:CM:45:VAL:HA	12:CM:48:LEU:HD12	2.03	0.41
12:CM:119:GLY:N	22:CW:29:U:OP1	2.54	0.41
18:CS:30:LEU:HD13	18:CS:32:LYS:HD2	2.01	0.41
20:CA:68(F):C:H2'	20:CA:68(G):G:H8	1.85	0.41
20:CA:1123:A:N1	20:CA:1150:U:O4	2.54	0.41
20:CA:1521:G:H2'	20:CA:1522:U:O4'	2.20	0.41
25:DC:33:LEU:HD13	25:DC:221:PRO:HG2	2.02	0.41
27:DE:1:MET:H2	27:DE:200:GLU:HG2	1.85	0.41
27:DE:111:ARG:HA	36:DR:2:ARG:CG	2.50	0.41
27:DE:113:PHE:O	60:DA:1654:A:O2'	2.38	0.41
28:DF:3:GLU:HB2	28:DF:22:ALA:O	2.21	0.41
28:DF:60:SER:HB3	28:DF:61:GLY:H	1.52	0.41
28:DF:102:PRO:HG3	60:DA:658:C:O2'	2.21	0.41
29:DG:62:LEU:HD12	47:D4:7:PRO:HB3	2.02	0.41
29:DG:120:LEU:O	29:DG:122:PRO:HD3	2.21	0.41
39:DU:19:LYS:HE2	60:DA:1219:G:OP2	2.21	0.41
42:DX:32:PRO:C	42:DX:34:ALA:H	2.29	0.41
44:DZ:22:GLY:O	44:DZ:41:LEU:HG	2.20	0.41
44:DZ:74:VAL:HG22	44:DZ:86:VAL:HG13	2.03	0.41
45:D0:40:GLN:O	45:D0:41:ARG:NH1	2.53	0.41
54:D8:24:ALA:O	54:D8:46:ARG:NH1	2.53	0.41
60:DA:46:C:H2'	60:DA:47:C:H6	1.83	0.41
60:DA:52:A:C6	60:DA:118:A:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:96:G:H2'	60:DA:97:C:C6	2.56	0.41
60:DA:127:A:O5'	60:DA:127:A:H8	2.04	0.41
60:DA:278:A:H2'	60:DA:279:C:H6	1.84	0.41
60:DA:418:G:H2'	60:DA:419:C:C6	2.56	0.41
60:DA:686:G:H21	60:DA:788:A:H61	1.68	0.41
60:DA:794:G:C6	60:DA:795:C:C4	3.09	0.41
60:DA:1202:C:N4	60:DA:1243:G:H1	2.15	0.41
60:DA:1284:A:N6	60:DA:1285:G:C2	2.89	0.41
60:DA:1788:C:H2'	60:DA:1789:A:C8	2.56	0.41
60:DA:1992:G:O6	60:DA:1997:G:C2	2.74	0.41
60:DA:2345:G:H1'	60:DA:2381:C:H2'	2.03	0.41
60:DA:2671:A:H2'	60:DA:2672:G:H8	1.85	0.41
3:AD:96:LEU:HG	3:AD:139:ARG:NH1	2.36	0.41
3:AD:122:ARG:HB2	3:AD:136:PRO:HG3	2.03	0.41
6:AG:79:ARG:HB2	20:AA:1381:U:C1'	2.51	0.41
8:AI:10:ARG:HD3	8:AI:75:ASP:HB2	2.02	0.41
8:AI:103:THR:OG1	20:AA:1180:A:OP1	2.31	0.41
14:AO:75:PRO:O	14:AO:78:TYR:HB3	2.20	0.41
17:AR:53:ARG:HG3	17:AR:58:LEU:O	2.21	0.41
18:AS:29:ARG:CZ	60:BA:887:A:H8	2.33	0.41
20:AA:241:C:H2'	20:AA:242:C:C6	2.56	0.41
20:AA:401:C:O2'	20:AA:621:A:N3	2.37	0.41
20:AA:588:G:H1'	20:AA:753:A:N1	2.36	0.41
20:AA:693:G:H2'	20:AA:694:A:C8	2.56	0.41
20:AA:1145:C:O2'	20:AA:1146:A:P	2.78	0.41
23:AY:11:ARG:O	23:AY:78:ARG:N	2.41	0.41
25:BC:213:VAL:O	25:BC:213:VAL:CG1	2.68	0.41
26:BD:227:ASN:OD1	26:BD:229:VAL:N	2.49	0.41
26:BD:262:ARG:NH1	60:BA:2085:C:H5"	2.36	0.41
27:BE:63:LEU:C	27:BE:65:GLY:H	2.27	0.41
28:BF:139:PHE:HA	28:BF:142:TRP:HB3	2.02	0.41
32:BK:37:PHE:HA	32:BK:67:PHE:CZ	2.55	0.41
35:BQ:14:ARG:HB3	35:BQ:41:TRP:CZ2	2.43	0.41
35:BQ:31:ASP:HB2	35:BQ:107:ALA:HA	2.03	0.41
35:BQ:137:TYR:CD1	35:BQ:137:TYR:N	2.89	0.41
39:BU:85:LYS:HB3	39:BU:116:ALA:HB1	2.03	0.41
42:BX:44:GLU:HG3	42:BX:51:VAL:HG23	2.03	0.41
48:BN:13:TRP:CD1	48:BN:13:TRP:N	2.88	0.41
56:Be:105:LYS:O	56:Be:108:ALA:N	2.51	0.41
60:BA:59:U:H4'	60:BA:73:A:N7	2.36	0.41
60:BA:775:G:C5	60:BA:794:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:843:G:N2	60:BA:935:C:N3	2.56	0.41
60:BA:1437:C:H2'	60:BA:1438:U:H6	1.85	0.41
60:BA:1496:A:H2'	60:BA:1498:C:H5	1.86	0.41
60:BA:1681:G:H8	60:BA:1681:G:OP2	2.04	0.41
60:BA:1700:A:H3'	60:BA:1701:A:H8	1.85	0.41
60:BA:1839:G:C8	60:BA:1927:A:H1'	2.56	0.41
60:BA:1937:A:O2'	60:BA:1938:A:P	2.79	0.41
60:BA:2046:G:H1	60:BA:2622:C:N4	2.15	0.41
60:BA:2179:C:H2'	60:BA:2180:U:C6	2.55	0.41
60:BA:2574:G:C2	60:BA:2575:C:C2	3.09	0.41
4:CE:127:ASN:HD21	20:CA:18:C:P	2.44	0.41
8:CI:111:ARG:HB3	8:CI:113:LYS:HZ2	1.86	0.41
12:CM:108:ARG:HD2	12:CM:108:ARG:N	2.36	0.41
13:CN:6:LEU:HD11	20:CA:982:U:OP2	2.21	0.41
14:CO:47:LYS:C	14:CO:49:ASP:H	2.29	0.41
17:CR:22:VAL:N	17:CR:56:THR:HA	2.35	0.41
20:CA:33:A:H2'	20:CA:34:C:O4'	2.20	0.41
20:CA:33:A:H4'	20:CA:364:A:H1'	2.02	0.41
20:CA:59:A:O3'	20:CA:387:U:H4'	2.20	0.41
20:CA:406:G:H2'	20:CA:407:G:O4'	2.21	0.41
20:CA:766:A:H2'	20:CA:767:A:O4'	2.21	0.41
20:CA:954:G:H2'	20:CA:955:U:C6	2.55	0.41
20:CA:1250:A:H3'	20:CA:1251:A:C8	2.56	0.41
20:CA:1439:C:H2'	20:CA:1440:C:C6	2.55	0.41
21:CV:13:A:H3'	21:CV:14:A:O4'	2.20	0.41
23:CY:487:ILE:HB	23:CY:597:GLY:O	2.20	0.41
23:CY:615:GLU:H	23:CY:615:GLU:HG3	1.64	0.41
25:DC:65:LEU:HD22	25:DC:176:VAL:CG1	2.44	0.41
27:DE:149:ARG:HH11	60:DA:2024:G:H4'	1.86	0.41
30:DH:35:VAL:HG21	30:DH:75:ALA:HB1	2.03	0.41
32:DK:91:PRO:HG3	60:DA:1062:G:H21	1.82	0.41
36:DR:97:VAL:HG13	36:DR:113:LEU:C	2.45	0.41
40:DV:19:LYS:HB2	40:DV:96:ILE:CD1	2.51	0.41
42:DX:12:VAL:CG1	42:DX:17:ALA:HB1	2.51	0.41
44:DZ:101:PRO:HA	44:DZ:122:ARG:O	2.21	0.41
51:D5:16:ARG:NH1	60:DA:517:C:H5"	2.35	0.41
54:D8:52:LYS:C	54:D8:54:GLU:N	2.79	0.41
54:D8:57:ARG:HH11	54:D8:64:TYR:HH	1.64	0.41
59:DB:20:C:H2'	59:DB:21:G:C8	2.55	0.41
60:DA:81:G:H1	60:DA:105:C:N4	2.17	0.41
60:DA:108:U:H4'	60:DA:347:A:H2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:270(W):G:H2'	60:DA:270(X):G:H8	1.86	0.41
60:DA:271(D):U:H3'	60:DA:271:G:H5'	2.03	0.41
60:DA:402:A:O2'	60:DA:403:U:H5'	2.20	0.41
60:DA:590:A:H2'	60:DA:591:C:C6	2.56	0.41
60:DA:1007:C:C5	60:DA:1008:C:C2	3.09	0.41
60:DA:1050:A:H2'	60:DA:1051:G:C8	2.56	0.41
60:DA:1170:G:H2'	60:DA:1171:G:C8	2.54	0.41
60:DA:1404:C:H2'	60:DA:1405:U:H6	1.86	0.41
60:DA:1628:G:H2'	60:DA:1629:U:C6	2.56	0.41
60:DA:1677:A:H2'	60:DA:1678:G:C8	2.55	0.41
60:DA:1995:U:H3'	60:DA:1996:C:H2'	2.02	0.41
60:DA:2818:G:H2'	60:DA:2819:G:H8	1.86	0.41
60:DA:2846:G:H2'	60:DA:2847:U:C6	2.55	0.41
2:AC:123:GLN:O	2:AC:128:PHE:HB2	2.21	0.41
2:AC:179:ARG:NH2	20:AA:1112:C:H1'	2.36	0.41
2:AC:186:PHE:CD1	2:AC:199:LYS:HG2	2.56	0.41
4:AE:69:VAL:HA	4:AE:70:PRO:HD2	1.93	0.41
5:AF:48:LEU:HB3	5:AF:49:ALA:H	1.58	0.41
6:AG:6:ARG:O	6:AG:7:ALA:C	2.63	0.41
6:AG:31:MET:HE1	20:AA:1374:A:H1'	2.03	0.41
7:AH:14:ARG:HH12	20:AA:876:G:C4'	2.34	0.41
8:AI:96:LEU:HA	8:AI:96:LEU:HD12	1.86	0.41
10:AK:82:VAL:HG21	10:AK:105:VAL:HG12	2.03	0.41
11:AL:90:VAL:HG23	11:AL:92:ASP:OD1	2.20	0.41
16:AQ:68:ARG:C	16:AQ:70:ARG:N	2.79	0.41
18:AS:27:GLU:HB3	18:AS:28:LYS:H	1.61	0.41
18:AS:53:ASN:ND2	18:AS:77:THR:HG22	2.35	0.41
19:AT:79:ARG:HH11	20:AA:263:A:P	2.43	0.41
20:AA:454:C:N4	20:AA:479:C:N3	2.69	0.41
20:AA:531:U:H4'	20:AA:532:A:O5'	2.20	0.41
20:AA:709:G:H2'	20:AA:710:G:H8	1.86	0.41
20:AA:795:C:H1'	20:AA:1506:U:C2	2.56	0.41
20:AA:861:G:O2'	20:AA:874:G:O2'	2.28	0.41
20:AA:960:U:O2'	20:AA:1223:C:H5"	2.21	0.41
20:AA:966:G:C4	22:AW:34:C:H4'	2.56	0.41
20:AA:1514:C:H42	20:AA:1521:G:H1	1.67	0.41
22:AW:19:G:OP1	22:AW:59:A:N6	2.54	0.41
22:AW:20:U:H4'	22:AW:20(A):U:OP1	2.21	0.41
23:AY:12:LEU:HD13	23:AY:12:LEU:HA	1.97	0.41
23:AY:225:GLU:HA	23:AY:228:MET:HB2	2.02	0.41
23:AY:455:GLY:O	23:AY:458:HIS:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:14:LYS:HG3	25:BC:33:LEU:HD22	2.02	0.41
26:BD:91:ARG:HD3	26:BD:91:ARG:HA	1.67	0.41
26:BD:151:LYS:CE	60:BA:2217:G:H21	2.34	0.41
26:BD:255:LYS:NZ	60:BA:1824:G:H21	2.19	0.41
27:BE:32:PRO:HD2	27:BE:51:PHE:N	2.36	0.41
27:BE:153:GLY:H	60:BA:2620:C:P	2.44	0.41
27:BE:161:GLY:O	27:BE:163:GLU:HG2	2.21	0.41
28:BF:6:VAL:HG13	28:BF:121:GLY:O	2.21	0.41
28:BF:64:ILE:HG23	28:BF:65:TRP:H	1.86	0.41
28:BF:66:PRO:HB2	28:BF:67:GLN:H	1.57	0.41
28:BF:90:PHE:HB2	28:BF:91:GLY:H	1.65	0.41
29:BG:107:LEU:HD11	29:BG:178:PHE:CE1	2.56	0.41
30:BH:70:THR:HG21	60:BA:2747:G:O3'	2.21	0.41
30:BH:154:PRO:HB2	30:BH:155:SER:H	1.55	0.41
32:BK:27:LEU:O	32:BK:30:HIS:HB3	2.21	0.41
32:BK:79:ARG:HG2	32:BK:84:LEU:HB2	2.03	0.41
32:BK:106:GLU:O	32:BK:110:GLN:HG2	2.20	0.41
33:BO:64:ARG:HA	33:BO:79:PHE:CG	2.56	0.41
34:BP:12:ALA:O	34:BP:13:ASN:HB3	2.21	0.41
34:BP:95:VAL:HG12	34:BP:100:LEU:HD21	2.02	0.41
34:BP:113:LYS:HE2	34:BP:131:SER:HB2	2.02	0.41
35:BQ:36:ALA:O	35:BQ:37:LEU:HD23	2.20	0.41
35:BQ:101:ARG:O	35:BQ:103:MET:N	2.54	0.41
39:BU:10:ARG:O	39:BU:14:HIS:HB2	2.20	0.41
39:BU:33:ARG:H	39:BU:33:ARG:HG2	1.79	0.41
39:BU:102:GLU:HA	39:BU:103:PRO:HD2	1.75	0.41
40:BV:6:LYS:HB3	40:BV:37:VAL:HG11	2.03	0.41
40:BV:15:GLU:CB	40:BV:16:PRO:HD2	2.46	0.41
40:BV:43:GLU:H	40:BV:43:GLU:HG2	1.48	0.41
41:BW:17:VAL:O	41:BW:21:VAL:HG23	2.20	0.41
42:BX:8:ILE:HA	42:BX:30:VAL:HG12	2.01	0.41
42:BX:18:TYR:O	42:BX:21:PHE:HB2	2.21	0.41
42:BX:65:ARG:C	42:BX:66:LEU:HD12	2.46	0.41
44:BZ:16:SER:HA	44:BZ:19:ARG:HE	1.85	0.41
44:BZ:61:LEU:HA	44:BZ:62:PRO:HD3	1.89	0.41
44:BZ:112:ARG:HH11	44:BZ:112:ARG:C	2.29	0.41
44:BZ:128:VAL:HG21	44:BZ:134:PRO:CD	2.51	0.41
45:B0:43:THR:O	45:B0:43:THR:OG1	2.36	0.41
46:B1:26:ARG:HG3	46:B1:27:GLU:H	1.86	0.41
48:BN:27:ALA:HA	48:BN:30:ILE:HD12	2.03	0.41
51:B5:19:ARG:NH1	60:BA:1264:G:OP1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:21:LYS:HD3	60:BA:651:G:OP1	2.21	0.41
55:B9:3:VAL:H	55:B9:35:ARG:HB2	1.86	0.41
59:BB:89(B):A:H8	59:BB:89(B):A:O5'	2.03	0.41
60:BA:69:C:O2	60:BA:73:A:O2'	2.28	0.41
60:BA:363(F):U:H5"	60:BA:363(G):A:OP2	2.21	0.41
60:BA:680:G:H1	60:BA:797:C:N4	2.15	0.41
60:BA:821:A:H3'	60:BA:946:G:C8	2.56	0.41
60:BA:842:G:H1	60:BA:936:C:H42	1.69	0.41
60:BA:970:C:H1'	60:BA:984:A:O2'	2.21	0.41
60:BA:1032:A:N1	60:BA:1122:G:C6	2.85	0.41
60:BA:1051:G:C4	60:BA:1052:C:C6	3.09	0.41
60:BA:1087:G:O2'	60:BA:1088:A:H4'	2.20	0.41
60:BA:1123:C:H2'	60:BA:1124:C:H6	1.85	0.41
60:BA:1170:G:H2'	60:BA:1171:G:C8	2.56	0.41
60:BA:1267:U:O2	60:BA:1267:U:H2'	2.20	0.41
60:BA:1411:C:H2'	60:BA:1412:A:H8	1.86	0.41
60:BA:1428:C:O2'	60:BA:1569:A:OP2	2.33	0.41
60:BA:1447:G:H1	60:BA:1464:C:N4	2.17	0.41
60:BA:1783:A:C2	60:BA:2588:G:H1'	2.55	0.41
60:BA:1783:A:H2	60:BA:2588:G:H1'	1.86	0.41
60:BA:1787:A:H2'	60:BA:1787:A:N3	2.35	0.41
60:BA:1802:A:O2'	60:BA:1803:A:C8	2.73	0.41
60:BA:1810:A:H8	60:BA:1810:A:O5'	2.03	0.41
60:BA:1858:G:H1'	60:BA:1884:A:H61	1.81	0.41
60:BA:2015:A:P	60:BA:2015:A:H8	2.44	0.41
60:BA:2350:C:H2'	60:BA:2351:G:O4'	2.21	0.41
60:BA:2437:U:H2'	60:BA:2438:U:C6	2.56	0.41
60:BA:2453:A:H4'	60:BA:2572:A:C1'	2.51	0.41
60:BA:2798:C:H5"	60:BA:2799:A:OP2	2.20	0.41
60:BA:2870:C:H2'	60:BA:2871:C:O4'	2.21	0.41
1:CB:111:ARG:HD2	20:CA:1103:C:O2'	2.20	0.41
1:CB:172:ILE:HG12	1:CB:173:ALA:H	1.84	0.41
1:CB:219:VAL:O	1:CB:223:ILE:HG13	2.21	0.41
2:CC:114:PRO:HA	2:CC:185:GLY:HA3	2.03	0.41
4:CE:6:PHE:HB2	4:CE:63:ARG:NH2	2.35	0.41
4:CE:42:GLY:HA3	4:CE:62:ALA:O	2.20	0.41
4:CE:51:VAL:O	4:CE:55:VAL:HG23	2.21	0.41
4:CE:82:VAL:HG21	4:CE:138:ALA:HA	2.02	0.41
7:CH:12:ARG:HD2	7:CH:26:VAL:HG23	2.03	0.41
7:CH:49:GLU:O	7:CH:59:LEU:HD23	2.21	0.41
8:CI:10:ARG:HD3	8:CI:75:ASP:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:28:VAL:HA	8:CI:63:ILE:O	2.21	0.41
8:CI:95:LYS:O	8:CI:99:LEU:HD23	2.20	0.41
8:CI:96:LEU:HD12	8:CI:96:LEU:HA	1.81	0.41
9:CJ:51:ARG:HE	9:CJ:59:SER:HB3	1.86	0.41
9:CJ:63:PHE:C	13:CN:59:ALA:HB2	2.46	0.41
10:CK:90:GLY:HA2	10:CK:93:GLN:HB2	2.01	0.41
12:CM:57:ARG:HE	12:CM:57:ARG:HB3	1.78	0.41
12:CM:125:ARG:O	20:CA:966:G:H5'	2.21	0.41
16:CQ:3:LYS:HE3	20:CA:128:G:O3'	2.21	0.41
16:CQ:25:ARG:NH2	20:CA:238:G:OP1	2.54	0.41
16:CQ:65:ILE:HD13	16:CQ:65:ILE:HA	1.88	0.41
17:CR:45:SER:HB3	17:CR:51:LEU:CD1	2.49	0.41
18:CS:73:GLU:HB3	18:CS:74:PHE:CD2	2.56	0.41
19:CT:42:GLN:O	19:CT:46:GLU:HG2	2.21	0.41
20:CA:116:A:H2'	20:CA:117:G:O4'	2.21	0.41
20:CA:333:G:H2'	20:CA:334:C:C6	2.55	0.41
20:CA:382:A:H2'	20:CA:383:A:C8	2.56	0.41
20:CA:1206:G:H2'	20:CA:1207:G:C8	2.55	0.41
20:CA:1286:A:H3'	20:CA:1286:A:N3	2.35	0.41
20:CA:1290:G:H3'	20:CA:1291:G:H8	1.86	0.41
20:CA:1338:G:C2	20:CA:1339:A:C4	3.08	0.41
20:CA:1410:G:H2'	20:CA:1411:C:H6	1.85	0.41
23:CY:494:GLU:HG2	23:CY:495:GLY:N	2.35	0.41
23:CY:524:GLU:O	23:CY:525:PHE:HB3	2.21	0.41
25:DC:21:TYR:O	25:DC:22:THR:OG1	2.32	0.41
25:DC:28:ARG:NH2	25:DC:187:ALA:HB2	2.36	0.41
25:DC:73:VAL:HG11	25:DC:157:ILE:HG22	2.02	0.41
25:DC:85:LYS:HA	25:DC:88:GLU:HB2	2.03	0.41
25:DC:163:GLU:O	25:DC:164:PHE:O	2.39	0.41
25:DC:216:THR:O	25:DC:217:THR:C	2.63	0.41
26:DD:270:ILE:H	26:DD:270:ILE:HG13	1.58	0.41
28:DF:103:LYS:HA	28:DF:106:ARG:HD2	2.01	0.41
29:DG:141:PHE:HD2	29:DG:141:PHE:HA	1.71	0.41
31:DJ:112:UNK:C	31:DJ:114:UNK:N	2.83	0.41
32:DK:41:PHE:CE1	32:DK:53:VAL:HB	2.56	0.41
33:DO:69:ILE:HA	33:DO:69:ILE:HD12	1.72	0.41
34:DP:11:GLY:HA3	60:DA:1244:G:H4'	2.03	0.41
34:DP:85:LEU:H	34:DP:85:LEU:HG	1.63	0.41
34:DP:97:PRO:O	34:DP:101:VAL:HG13	2.21	0.41
35:DQ:82:ARG:HD2	45:D0:4:LYS:HZ3	1.86	0.41
36:DR:109:ALA:HA	36:DR:110:PRO:HD2	1.92	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DS:85:VAL:HB	37:DS:86:ALA:H	1.72	0.41
37:DS:99:LYS:O	37:DS:100:ALA:C	2.62	0.41
43:DY:6:HIS:HB2	43:DY:7:VAL:H	1.55	0.41
43:DY:55:TYR:HA	43:DY:56:PRO:HD2	1.92	0.41
48:DN:27:ALA:HA	48:DN:30:ILE:HD12	2.03	0.41
48:DN:43:THR:CG2	48:DN:44:PRO:HD2	2.50	0.41
48:DN:46:VAL:HG13	48:DN:48:MET:HG3	2.03	0.41
48:DN:66:LYS:O	48:DN:68:GLU:N	2.54	0.41
48:DN:99:LEU:HD13	48:DN:99:LEU:C	2.46	0.41
49:D2:19:VAL:HG23	49:D2:20:GLU:N	2.36	0.41
49:D2:40:SER:C	49:D2:42:GLY:H	2.29	0.41
52:D6:30:THR:OG1	60:DA:2286:A:OP1	2.30	0.41
54:D8:21:LYS:O	54:D8:23:VAL:HG23	2.21	0.41
54:D8:42:ARG:HH22	60:DA:2382:G:H21	1.68	0.41
60:DA:16:G:N2	60:DA:524:U:O2	2.45	0.41
60:DA:261:G:H1'	60:DA:609(A):A:H2	1.86	0.41
60:DA:414:C:H2'	60:DA:415:A:H8	1.85	0.41
60:DA:464:U:C4	60:DA:465:G:C4	3.08	0.41
60:DA:481:G:H2'	60:DA:507:A:C6	2.56	0.41
60:DA:670:A:H4'	60:DA:671:C:H5'	2.02	0.41
60:DA:786:C:H2'	60:DA:787:U:O4'	2.21	0.41
60:DA:814:C:H2'	60:DA:815:C:H6	1.86	0.41
60:DA:855:G:H2'	60:DA:856:C:C6	2.55	0.41
60:DA:869:G:C6	60:DA:870:A:C5	3.09	0.41
60:DA:899:A:N3	60:DA:899:A:H2'	2.35	0.41
60:DA:1137:G:C6	60:DA:1138:G:C5	3.09	0.41
60:DA:1508:A:O2'	60:DA:1510:A:C4	2.73	0.41
60:DA:1539:G:H2'	60:DA:1540:G:O4'	2.20	0.41
60:DA:1951:U:H2'	60:DA:1953:A:OP2	2.21	0.41
60:DA:2385:C:H2'	60:DA:2386:C:C6	2.56	0.41
60:DA:2743:C:P	60:DA:2755:C:H42	2.43	0.41
1:AB:162:ILE:HG12	1:AB:164:VAL:HG22	2.02	0.41
6:AG:120:ILE:O	6:AG:124:LEU:HG	2.20	0.41
7:AH:6:ILE:HG12	7:AH:31:PHE:CD2	2.56	0.41
8:AI:11:LYS:HE3	20:AA:1371:G:OP1	2.21	0.41
9:AJ:5:ARG:NH1	9:AJ:101:VAL:HG11	2.35	0.41
16:AQ:97:SER:O	16:AQ:97:SER:OG	2.27	0.41
19:AT:36:LEU:HD12	19:AT:59:ALA:HB2	2.03	0.41
20:AA:160:A:P	20:AA:160:A:H8	2.44	0.41
20:AA:285:G:H2'	20:AA:286:G:C8	2.56	0.41
20:AA:582:U:H3'	20:AA:583:A:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:934:C:C2	20:AA:937:A:N6	2.89	0.41
20:AA:1296:C:H4'	20:AA:1302:U:O4	2.21	0.41
23:AY:146:LEU:HB3	23:AY:147:TRP:HD1	1.86	0.41
23:AY:659:LEU:C	23:AY:661:SER:H	2.29	0.41
26:BD:146:GLU:O	26:BD:147:LEU:HB3	2.21	0.41
27:BE:120:TRP:O	27:BE:121:ASN:HB2	2.21	0.41
29:BG:40:ASN:HA	29:BG:90:LEU:O	2.21	0.41
29:BG:111:LEU:N	29:BG:112:PRO:HD3	2.36	0.41
33:BO:64:ARG:CZ	33:BO:101:PRO:HD2	2.51	0.41
34:BP:59:LEU:HG	34:BP:61:ARG:NH1	2.36	0.41
35:BQ:58:PHE:CE2	35:BQ:117:ALA:HB1	2.55	0.41
35:BQ:81:VAL:HG12	45:B0:4:LYS:HG2	2.03	0.41
36:BR:38:VAL:O	36:BR:41:ALA:HB3	2.21	0.41
37:BS:28:VAL:HG22	37:BS:88:ASP:O	2.21	0.41
38:BT:129:ARG:NE	38:BT:129:ARG:HA	2.36	0.41
39:BU:75:ASN:O	39:BU:78:THR:OG1	2.39	0.41
39:BU:76:TYR:CZ	39:BU:80:ILE:HD11	2.56	0.41
42:BX:33:LYS:HB3	42:BX:33:LYS:HE3	1.95	0.41
52:B6:30:THR:C	52:B6:32:ASN:H	2.29	0.41
55:B9:2:LYS:HE3	55:B9:2:LYS:HB3	1.76	0.41
55:B9:30:PRO:CB	60:BA:2527:C:H5"	2.51	0.41
59:BB:22:U:H2'	59:BB:23:G:C8	2.56	0.41
60:BA:20:C:C2	60:BA:21:A:C8	3.09	0.41
60:BA:29:U:H2'	60:BA:30:G:C8	2.56	0.41
60:BA:838:C:C2	60:BA:941:A:C6	3.09	0.41
60:BA:1135:C:N4	60:BA:1138:G:OP2	2.51	0.41
60:BA:1394:U:H4'	60:BA:1603:A:O3'	2.21	0.41
60:BA:1690:A:N6	60:BA:1697:G:O2'	2.54	0.41
60:BA:2064:C:H2'	60:BA:2065:C:C5	2.55	0.41
60:BA:2792:G:C2	60:BA:2805:G:N1	2.88	0.41
60:BA:2850:A:N6	60:BA:2868:A:O2'	2.54	0.41
1:CB:31:TYR:CE1	1:CB:46:LYS:HG2	2.56	0.41
1:CB:68:ILE:HA	1:CB:161:ALA:O	2.20	0.41
1:CB:172:ILE:HG12	1:CB:173:ALA:N	2.36	0.41
6:CG:151:TYR:HA	6:CG:154:TYR:HD1	1.85	0.41
8:CI:50:LEU:HD23	8:CI:50:LEU:HA	1.87	0.41
8:CI:120:ARG:O	20:CA:1344:C:H5'	2.21	0.41
10:CK:52:GLY:N	10:CK:55:LYS:HG3	2.36	0.41
10:CK:63:LEU:HA	10:CK:66:LEU:HD12	2.03	0.41
11:CL:33:ARG:CB	11:CL:60:LEU:HD12	2.34	0.41
12:CM:23:TYR:O	12:CM:66:LEU:HD23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:115:LYS:C	20:CA:1228:C:H5'	2.46	0.41
15:CP:69:THR:O	15:CP:72:ARG:HB3	2.20	0.41
19:CT:22:ARG:HD3	20:CA:323:U:H4'	2.03	0.41
20:CA:922:G:H21	20:CA:1398:A:H2	1.69	0.41
20:CA:1051:C:H2'	20:CA:1052:U:C6	2.55	0.41
20:CA:1163:C:H2'	20:CA:1164:G:H8	1.85	0.41
20:CA:1198:G:H2'	20:CA:1199:U:C6	2.55	0.41
20:CA:1386:G:H2'	20:CA:1387:G:H8	1.86	0.41
23:CY:14:ASN:ND2	23:CY:374:LEU:HD13	2.36	0.41
23:CY:289:ILE:HG22	23:CY:290:LYS:H	1.85	0.41
25:DC:10:ALA:O	25:DC:13:GLU:N	2.54	0.41
25:DC:163:GLU:O	25:DC:164:PHE:C	2.64	0.41
25:DC:210:LEU:HD22	25:DC:227:PRO:HB3	2.02	0.41
26:DD:115:GLN:HE21	26:DD:115:GLN:HB3	1.64	0.41
27:DE:35:GLN:HG2	27:DE:36:ARG:N	2.35	0.41
27:DE:117:MET:HA	27:DE:122:PHE:N	2.30	0.41
27:DE:170:LEU:HB3	27:DE:184:VAL:CG1	2.50	0.41
32:DK:59:ILE:HG13	32:DK:60:TYR:N	2.35	0.41
32:DK:91:PRO:HB2	60:DA:1078:U:OP1	2.22	0.41
34:DP:50:ARG:HB2	34:DP:57:THR:HB	2.02	0.41
34:DP:76:LYS:HE3	34:DP:76:LYS:HB3	1.68	0.41
36:DR:100:LEU:HD21	51:D5:47:PRO:HD3	2.03	0.41
41:DW:64:MET:O	41:DW:65:LEU:HB2	2.19	0.41
41:DW:77:ASP:OD1	41:DW:78:GLU:N	2.54	0.41
46:D1:21:ARG:C	46:D1:21:ARG:HD2	2.46	0.41
52:D6:45:LYS:O	52:D6:47:THR:HG22	2.20	0.41
54:D8:62:LEU:HB2	54:D8:63:PRO:HD3	2.02	0.41
55:D9:2:LYS:HE3	55:D9:2:LYS:HB3	1.83	0.41
55:D9:14:CYS:HB3	55:D9:25:VAL:HG13	2.03	0.41
56:De:99:VAL:HG23	56:De:105:LYS:HA	2.02	0.41
60:DA:13:A:N1	60:DA:525:U:H2'	2.36	0.41
60:DA:41:C:H2'	60:DA:43:G:O4'	2.21	0.41
60:DA:352:G:O2'	60:DA:353:G:N7	2.52	0.41
60:DA:382:G:H1	60:DA:392:C:N4	2.17	0.41
60:DA:429:A:H8	60:DA:429:A:O5'	2.03	0.41
60:DA:1128:A:C5	60:DA:2518:A:N6	2.89	0.41
60:DA:1421:G:H2'	60:DA:1422:G:H8	1.86	0.41
60:DA:1498:C:H2'	60:DA:1499:C:C6	2.55	0.41
60:DA:1858:G:H1'	60:DA:1884:A:H61	1.83	0.41
60:DA:1932:A:H3'	60:DA:1933:G:H8	1.86	0.41
60:DA:1936:A:OP2	60:DA:1962:C:N4	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2068:U:H3	60:DA:2430:A:H2	1.69	0.41
60:DA:2071:A:H2'	60:DA:2072:G:H8	1.86	0.41
60:DA:2118:U:H5"	60:DA:2119:A:OP1	2.21	0.41
60:DA:2134:A:H1'	60:DA:2159:G:N2	2.36	0.41
3:AD:64:LEU:HD22	3:AD:203:VAL:HG11	2.02	0.40
4:AE:63:ARG:O	4:AE:66:MET:HG2	2.20	0.40
7:AH:111:ILE:HB	7:AH:135:CYS:N	2.30	0.40
12:AM:19:LEU:HD12	12:AM:25:ILE:HG21	2.02	0.40
20:AA:49:U:H5	20:AA:365:U:O4	2.04	0.40
20:AA:107:G:OP1	20:AA:325:A:N6	2.53	0.40
20:AA:220:G:H2'	20:AA:220:G:N3	2.37	0.40
20:AA:891:U:H2'	20:AA:892:A:H8	1.86	0.40
20:AA:1127:G:H1'	20:AA:1148:U:C4	2.56	0.40
20:AA:1479:C:C2	20:AA:1480:G:C8	3.09	0.40
22:AW:2:G:H2'	22:AW:3:C:C6	2.55	0.40
22:AW:4:U:C4	22:AW:69:A:N1	2.88	0.40
23:AY:247:ARG:O	23:AY:251:ILE:HG13	2.21	0.40
23:AY:602:LEU:HA	23:AY:677:GLN:O	2.21	0.40
24:AU:6:5OH:N	24:AU:6:5OH:CS	2.83	0.40
25:BC:42:VAL:CG1	25:BC:44:VAL:HG23	2.51	0.40
26:BD:69:ARG:HH22	26:BD:105:ILE:HG13	1.85	0.40
28:BF:10:PRO:HG3	28:BF:19:GLU:HA	2.03	0.40
30:BH:125:VAL:HG22	30:BH:131:VAL:HG13	2.03	0.40
33:BO:64:ARG:NH1	33:BO:100:GLY:HA3	2.36	0.40
35:BQ:31:ASP:HB3	35:BQ:32:TYR:CD1	2.56	0.40
45:B0:53:MET:HG3	45:B0:59:LEU:HD23	2.02	0.40
48:BN:78:TYR:HA	48:BN:79:PRO:HD3	1.85	0.40
54:B8:17:THR:HB	60:BA:650:C:O2'	2.20	0.40
54:B8:30:ARG:HD3	54:B8:30:ARG:HA	1.89	0.40
56:Be:14:UNK:O	58:Bh:8:UNK:HA	2.21	0.40
60:BA:38:A:H2'	60:BA:39:C:H6	1.84	0.40
60:BA:223:A:H1'	60:BA:407:G:N2	2.35	0.40
60:BA:363(G):A:HO2'	60:BA:364:C:H6	1.65	0.40
60:BA:539:G:C2	60:BA:556:G:C4	3.09	0.40
60:BA:577:G:O2'	60:BA:1254:A:H5"	2.21	0.40
60:BA:630:G:H22	60:BA:632:A:H3'	1.86	0.40
60:BA:826:U:H2'	60:BA:827:U:H5'	2.03	0.40
60:BA:974(A):G:C6	60:BA:989:G:C5	3.09	0.40
60:BA:976:C:H4'	60:BA:1156:A:N6	2.35	0.40
60:BA:1179:C:H2'	60:BA:1180:C:H6	1.86	0.40
60:BA:1273:U:OP1	60:BA:1273:U:H3'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1532:C:C2	60:BA:1540:G:N2	2.89	0.40
60:BA:1548:C:H2'	60:BA:1549:C:O4'	2.20	0.40
60:BA:1899:G:H21	60:BA:1902:C:H41	1.69	0.40
60:BA:2199:A:H3'	60:BA:2205:C:H6	1.86	0.40
60:BA:2321:G:N2	60:BA:2322:A:O4'	2.54	0.40
60:BA:2598:A:H8	60:BA:2598:A:O5'	2.04	0.40
60:BA:2619:C:H2'	60:BA:2620:C:C6	2.56	0.40
60:BA:2641:G:H1	60:BA:2773:C:N4	2.15	0.40
1:CB:46:LYS:HD2	1:CB:49:GLU:OE2	2.20	0.40
1:CB:113:HIS:HA	1:CB:116:GLU:CD	2.46	0.40
1:CB:182:ILE:HD13	1:CB:182:ILE:HA	1.88	0.40
2:CC:35:GLU:O	2:CC:39:ILE:HG13	2.20	0.40
2:CC:157:ILE:H	2:CC:157:ILE:HG13	1.56	0.40
4:CE:77:PRO:HG2	4:CE:142:LEU:HD22	2.02	0.40
5:CF:97:PHE:O	17:CR:31:LEU:N	2.52	0.40
6:CG:114:ARG:HD3	6:CG:114:ARG:HA	1.95	0.40
6:CG:121:ALA:O	6:CG:125:MET:HG2	2.21	0.40
7:CH:21:LYS:O	7:CH:23:SER:N	2.55	0.40
7:CH:24:THR:HG23	7:CH:63:LEU:CD1	2.51	0.40
8:CI:37:PHE:CE2	8:CI:70:LYS:HG3	2.56	0.40
8:CI:90:PRO:O	8:CI:93:ARG:HB3	2.21	0.40
9:CJ:57:LYS:CB	20:CA:972:C:H4'	2.45	0.40
12:CM:64:TRP:HB2	12:CM:65:LYS:H	1.74	0.40
15:CP:1:MET:HE3	15:CP:1:MET:HB2	1.87	0.40
19:CT:35:THR:OG1	20:CA:1440(L):G:O3'	2.38	0.40
20:CA:27:G:H2'	20:CA:28:G:C8	2.56	0.40
20:CA:114:U:H2'	20:CA:115:G:C8	2.56	0.40
20:CA:638:G:H2'	20:CA:639:G:O4'	2.21	0.40
20:CA:1068:G:H2'	20:CA:1069:C:C6	2.56	0.40
20:CA:1217:C:H2'	20:CA:1218:C:C6	2.56	0.40
20:CA:1217:C:H2'	20:CA:1218:C:H6	1.86	0.40
20:CA:1288:A:H1'	20:CA:1353:G:H4'	2.03	0.40
20:CA:1316:G:N2	20:CA:1318:A:H3'	2.35	0.40
23:CY:134:ALA:C	23:CY:259:PHE:O	2.64	0.40
25:DC:43:GLU:OE2	60:DA:2123:G:N2	2.47	0.40
25:DC:90:ALA:HA	25:DC:155:ARG:NH2	2.36	0.40
26:DD:94:LEU:HA	26:DD:104:TYR:CD2	2.57	0.40
26:DD:181:GLU:OE2	60:DA:1799:G:O2'	2.27	0.40
27:DE:120:TRP:CZ2	27:DE:155:LYS:HA	2.55	0.40
29:DG:38:VAL:HA	29:DG:92:VAL:O	2.21	0.40
37:DS:30:ARG:NH1	37:DS:62:LYS:HB3	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DU:34:LYS:NZ	60:DA:2018:G:H21	2.20	0.40
39:DU:90:VAL:C	39:DU:92:ARG:N	2.79	0.40
40:DV:4:ILE:HG13	40:DV:13:ARG:HA	2.01	0.40
44:DZ:81:ARG:O	44:DZ:82:ARG:HB2	2.21	0.40
55:D9:18:ARG:NE	55:D9:23:VAL:HG23	2.36	0.40
55:D9:30:PRO:CB	60:DA:2527:C:H5"	2.42	0.40
60:DA:220:G:H22	60:DA:427:U:H2'	1.85	0.40
60:DA:698:C:N4	60:DA:763:G:H1	2.16	0.40
60:DA:1051:G:H2'	60:DA:1052:C:C6	2.56	0.40
60:DA:1243:G:C6	60:DA:1244:G:C5	3.09	0.40
60:DA:1799:G:O4'	60:DA:1800:C:H5	2.03	0.40
60:DA:1872:A:H8	60:DA:1872:A:O5'	2.03	0.40
60:DA:1953:A:O2'	60:DA:2559:C:H1'	2.20	0.40
60:DA:2729:G:H2'	60:DA:2730:C:O4'	2.21	0.40
3:AD:122:ARG:NH2	20:AA:403:C:H4'	2.34	0.40
6:AG:23:VAL:HG12	6:AG:43:PHE:HE2	1.87	0.40
12:AM:67:GLU:OE1	12:AM:68:GLY:N	2.54	0.40
16:AQ:78:GLU:HG3	16:AQ:81:ARG:HD3	2.03	0.40
20:AA:39:G:O6	20:AA:403:C:N3	2.54	0.40
20:AA:154:C:H2'	20:AA:155:C:H6	1.86	0.40
20:AA:549:C:C2	20:AA:550:G:C8	3.09	0.40
20:AA:792:A:H1'	20:AA:794:A:N7	2.36	0.40
20:AA:811:C:H5'	20:AA:812:C:OP2	2.20	0.40
20:AA:950:U:H2'	20:AA:951:G:H8	1.85	0.40
20:AA:1178:G:N2	20:AA:1180:A:H3'	2.35	0.40
20:AA:1250:A:H2	20:AA:1370:G:H1'	1.86	0.40
20:AA:1301:U:H3'	20:AA:1302:U:C5'	2.50	0.40
20:AA:1316:G:H1'	20:AA:1360:A:C2	2.56	0.40
22:AW:16:U:H6	22:AW:16:U:O5'	2.05	0.40
23:AY:139:MET:HB3	23:AY:174:PHE:HE1	1.86	0.40
23:AY:631:ILE:O	23:AY:632:LEU:HG	2.21	0.40
23:AY:664:GLN:HB3	60:BA:2660:A:OP1	2.22	0.40
25:BC:47:LYS:CD	25:BC:169:THR:HG22	2.51	0.40
25:BC:213:VAL:CG1	25:BC:225:ILE:HG12	2.50	0.40
26:BD:91:ARG:HG2	26:BD:91:ARG:NH1	2.35	0.40
26:BD:120:GLY:C	26:BD:122:ASP:H	2.29	0.40
26:BD:172:TYR:HD1	26:BD:184:LYS:C	2.29	0.40
29:BG:77:ILE:HD12	60:BA:2310:A:N3	2.36	0.40
29:BG:135:LEU:HG	29:BG:155:MET:HG2	2.04	0.40
33:BO:17:ARG:HA	33:BO:17:ARG:HD2	1.84	0.40
33:BO:67:LYS:HZ3	60:BA:1664:A:H2'	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BP:30:THR:HG22	34:BP:31:ALA:N	2.35	0.40
34:BP:39:LYS:HD2	34:BP:39:LYS:HA	1.60	0.40
35:BQ:22:LYS:HD3	60:BA:908:C:P	2.61	0.40
38:BT:33:LYS:HG2	38:BT:74:ARG:NH2	2.35	0.40
43:BY:19:LYS:HB3	43:BY:20:TYR:H	1.65	0.40
46:B1:21:ARG:O	46:B1:23:LYS:N	2.45	0.40
48:BN:31:ALA:C	48:BN:33:LEU:N	2.79	0.40
49:B2:32:LEU:HD12	49:B2:53:LEU:HG	2.04	0.40
52:B6:5:VAL:N	60:BA:2283:C:O3'	2.54	0.40
60:BA:13:A:O2'	60:BA:15:G:O6	2.35	0.40
60:BA:240:G:H1'	60:BA:257:A:N6	2.37	0.40
60:BA:477:A:H2'	60:BA:478:A:C8	2.56	0.40
60:BA:679:C:H2'	60:BA:680:G:H8	1.87	0.40
60:BA:773:U:H2'	60:BA:778:G:O2'	2.22	0.40
60:BA:907:U:H2'	60:BA:908:C:C5	2.56	0.40
60:BA:1223:G:C6	60:BA:1227:G:C6	3.10	0.40
60:BA:1271:G:N2	60:BA:1615:C:H42	2.17	0.40
60:BA:1800:C:C2	60:BA:1818:U:N3	2.89	0.40
60:BA:1829:A:H3'	60:BA:1830:C:H6	1.83	0.40
60:BA:2817:G:H21	60:BA:2836:U:H4'	1.87	0.40
60:BA:2839:G:O6	60:BA:2878:U:O2	2.38	0.40
2:CC:123:GLN:O	2:CC:128:PHE:HB2	2.21	0.40
20:CA:14:U:N3	20:CA:17:U:OP2	2.43	0.40
20:CA:556:C:H2'	20:CA:557:G:O4'	2.21	0.40
20:CA:889:A:H61	20:CA:907:A:H3'	1.85	0.40
20:CA:1014:A:H8	20:CA:1014:A:O5'	2.05	0.40
23:CY:637:ARG:HG3	23:CY:642:VAL:CG2	2.51	0.40
25:DC:25:GLU:HB3	25:DC:29:LEU:HD13	2.02	0.40
26:DD:118:VAL:O	26:DD:129:ASN:HA	2.20	0.40
29:DG:87:PRO:HB2	29:DG:88:ILE:H	1.54	0.40
30:DH:97:ARG:HE	30:DH:97:ARG:HB3	1.67	0.40
32:DK:61:ALA:O	56:De:79:ARG:NH2	2.53	0.40
33:DO:88:ASN:C	33:DO:90:GLN:H	2.28	0.40
35:DQ:17:LEU:HD21	60:DA:958:U:O2	2.21	0.40
35:DQ:65:PHE:HB2	35:DQ:105:GLU:HG3	2.03	0.40
36:DR:46:GLY:HA2	60:DA:2838:G:O2'	2.21	0.40
38:DT:102:ILE:HB	38:DT:110:ILE:HD13	2.04	0.40
38:DT:130:ALA:O	38:DT:134:GLU:HB2	2.21	0.40
39:DU:34:LYS:NZ	60:DA:2019:A:H1'	2.36	0.40
41:DW:34:ASN:ND2	51:D5:39:MET:HG3	2.36	0.40
43:DY:76:CYS:O	43:DY:78:ALA:N	2.48	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D0:12:ASN:HB3	60:DA:2277:G:C8	2.56	0.40
48:DN:69:GLN:O	48:DN:70:LYS:C	2.63	0.40
52:D6:5:VAL:HG12	60:DA:2284:C:OP1	2.21	0.40
54:D8:60:LEU:HB3	54:D8:64:TYR:O	2.20	0.40
60:DA:8:A:C2	60:DA:9:U:C2	3.10	0.40
60:DA:26:G:H2'	60:DA:27:G:O4'	2.21	0.40
60:DA:36:G:H4'	60:DA:451:C:C4	2.57	0.40
60:DA:199:A:H61	60:DA:2433:A:H2'	1.87	0.40
60:DA:210:C:H2'	60:DA:211:A:O4'	2.22	0.40
60:DA:250:G:N1	60:DA:251:A:C2	2.89	0.40
60:DA:270(F):G:H2'	60:DA:270(G):U:H6	1.86	0.40
60:DA:270(Z):G:O2'	60:DA:271(A):U:H5'	2.21	0.40
60:DA:500:G:H8	60:DA:500:G:O5'	2.04	0.40
60:DA:542:C:H2'	60:DA:543:C:H6	1.85	0.40
60:DA:786:C:H5"	60:DA:1780:A:C8	2.57	0.40
60:DA:1016:G:H1	60:DA:1146:C:N4	2.16	0.40
60:DA:1091:G:N1	60:DA:1100:C:O2	2.53	0.40
60:DA:1589:C:H2'	60:DA:1590:U:C6	2.56	0.40
60:DA:1859:A:H2'	60:DA:1860:G:O4'	2.21	0.40
60:DA:1906:G:H1	60:DA:1924:C:H42	1.68	0.40
60:DA:1937:A:N7	60:DA:1939:U:H2'	2.37	0.40
60:DA:1969:A:O2'	60:DA:1972:A:H1'	2.21	0.40
60:DA:2138:C:H2'	60:DA:2139:C:C6	2.56	0.40
60:DA:2212:A:O2'	60:DA:2215:G:N7	2.50	0.40
1:AB:61:LEU:HD21	1:AB:160:ASP:HB2	2.03	0.40
4:AE:137:GLU:HA	4:AE:140:ARG:HB3	2.03	0.40
9:AJ:44:VAL:HA	9:AJ:65:LEU:O	2.21	0.40
11:AL:58:VAL:HG21	11:AL:85:ILE:HD11	2.03	0.40
11:AL:97:ARG:HG3	11:AL:98:TYR:CZ	2.56	0.40
12:AM:49:THR:O	12:AM:53:VAL:HG23	2.21	0.40
14:AO:21:ASP:OD1	14:AO:24:SER:HB2	2.21	0.40
16:AQ:45:HIS:H	16:AQ:72:ARG:HA	1.86	0.40
17:AR:26:LEU:HD13	17:AR:39:VAL:HG13	2.04	0.40
18:AS:11:VAL:HG12	18:AS:12:ASP:O	2.21	0.40
18:AS:75:ALA:HA	18:AS:76:PRO:HD2	1.79	0.40
20:AA:68(A):G:C2	20:AA:68(B):G:C5	3.09	0.40
20:AA:370:C:H2'	20:AA:371:G:C8	2.56	0.40
20:AA:687:A:N6	20:AA:703:G:N2	2.36	0.40
20:AA:867:G:H2'	20:AA:868:C:C6	2.57	0.40
20:AA:1014:A:H8	20:AA:1014:A:O5'	2.05	0.40
20:AA:1300:G:H1'	20:AA:1334:G:O6	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1305:G:O2'	20:AA:1331:G:N2	2.54	0.40
23:AY:134:ALA:C	23:AY:259:PHE:O	2.64	0.40
23:AY:216:LEU:HD23	23:AY:217:VAL:HG23	2.03	0.40
25:BC:16:ASP:HA	25:BC:17:PRO:HD2	1.92	0.40
26:BD:186:HIS:ND1	26:BD:187:GLY:N	2.70	0.40
27:BE:110:GLY:N	60:BA:2821:A:OP1	2.54	0.40
33:BO:58:VAL:HG21	33:BO:86:ILE:HD11	2.03	0.40
34:BP:18:ARG:HD2	34:BP:18:ARG:HA	1.80	0.40
35:BQ:77:LYS:HB3	60:BA:957:A:OP1	2.21	0.40
36:BR:20:LEU:HA	36:BR:20:LEU:HD12	1.81	0.40
36:BR:86:ARG:HB3	36:BR:118:GLU:OE2	2.21	0.40
38:BT:20:PRO:HB2	38:BT:85:LYS:NZ	2.36	0.40
38:BT:82:LEU:C	38:BT:83:ILE:HG13	2.46	0.40
41:BW:41:LYS:NZ	60:BA:2010:G:OP2	2.52	0.40
42:BX:36:LYS:CG	42:BX:54:VAL:HB	2.51	0.40
44:BZ:107:THR:HA	44:BZ:108:PRO:HD2	1.96	0.40
48:BN:51:PHE:CZ	48:BN:119:ARG:HD2	2.56	0.40
48:BN:115:ARG:HG2	48:BN:115:ARG:NH1	2.36	0.40
52:B6:12:GLU:HG3	52:B6:23:THR:HG22	2.02	0.40
59:BB:38:C:H42	59:BB:44:G:H1	1.69	0.40
59:BB:45:A:C2	59:BB:46:A:H1'	2.57	0.40
60:BA:11:G:N2	60:BA:2628:C:OP1	2.50	0.40
60:BA:706:A:H3'	60:BA:707:G:H8	1.86	0.40
60:BA:814:C:H2'	60:BA:815:C:H6	1.85	0.40
60:BA:1028:A:H2'	60:BA:1029:A:H8	1.78	0.40
60:BA:1109:C:H6	60:BA:1109:C:O5'	2.03	0.40
60:BA:1144:G:C4	60:BA:1145:C:C5	3.08	0.40
60:BA:1479:G:H2'	60:BA:1480:G:C8	2.56	0.40
60:BA:2014:A:H2'	60:BA:2015:A:C5	2.57	0.40
60:BA:2067:G:H4'	60:BA:2068:U:OP2	2.20	0.40
60:BA:2275:C:H6	60:BA:2275:C:H2'	1.60	0.40
1:CB:34:ALA:O	1:CB:41:ILE:HG13	2.21	0.40
2:CC:95:THR:O	2:CC:97:LYS:N	2.54	0.40
3:CD:43:HIS:O	3:CD:45:GLN:N	2.53	0.40
3:CD:79:PHE:CZ	3:CD:207:TYR:HB3	2.57	0.40
4:CE:103:GLY:C	4:CE:106:PRO:HD2	2.46	0.40
6:CG:79:ARG:HB2	20:CA:1381:U:N1	2.36	0.40
7:CH:96:GLY:HA2	7:CH:130:GLY:HA3	2.03	0.40
9:CJ:5:ARG:NH1	9:CJ:101:VAL:HG11	2.36	0.40
11:CL:92:ASP:O	11:CL:93:LEU:C	2.64	0.40
14:CO:25:THR:O	14:CO:29:VAL:HG23	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:2:PRO:HA	20:CA:128:G:H5'	2.04	0.40
18:CS:73:GLU:HG3	20:CA:1320:C:H1'	2.02	0.40
20:CA:434:U:H2'	20:CA:435:C:H6	1.84	0.40
20:CA:1118:C:H2'	20:CA:1119:C:C6	2.57	0.40
20:CA:1151:A:H1'	20:CA:1152:A:C8	2.55	0.40
20:CA:1347:G:N1	20:CA:1374:A:OP2	2.43	0.40
22:CW:57:G:N3	22:CW:57:G:H2'	2.37	0.40
23:CY:97:SER:O	23:CY:101:LEU:HG	2.20	0.40
23:CY:100:VAL:O	23:CY:329:ARG:NH1	2.55	0.40
25:DC:61:GLY:HA3	25:DC:164:PHE:CD1	2.56	0.40
25:DC:118:PRO:O	25:DC:121:MET:HB3	2.21	0.40
25:DC:121:MET:O	25:DC:122:GLY:C	2.64	0.40
26:DD:88:ARG:HH21	60:DA:1817:G:P	2.44	0.40
26:DD:276:LYS:HD2	26:DD:276:LYS:HA	1.89	0.40
27:DE:48:GLN:HA	27:DE:79:ARG:O	2.21	0.40
28:DF:7:TYR:CE2	28:DF:10:PRO:HD3	2.56	0.40
28:DF:155:LEU:HD22	28:DF:186:ILE:CB	2.41	0.40
29:DG:67:LYS:HG2	47:D4:7:PRO:HD3	2.03	0.40
30:DH:83:TYR:CD1	30:DH:134:SER:HA	2.56	0.40
30:DH:175:LYS:C	30:DH:177:GLY:H	2.30	0.40
35:DQ:8:LYS:HB3	35:DQ:8:LYS:HE2	1.91	0.40
35:DQ:12:GLN:HB3	35:DQ:73:PRO:HG2	2.03	0.40
38:DT:132:LYS:HD3	38:DT:132:LYS:O	2.21	0.40
42:DX:40:LYS:HE2	42:DX:44:GLU:OE1	2.21	0.40
42:DX:50:LYS:C	42:DX:83:VAL:HG13	2.47	0.40
55:D9:1:MET:O	55:D9:34:GLN:HA	2.21	0.40
59:DB:97:G:H2'	59:DB:98:G:H5'	2.03	0.40
60:DA:681:G:H1	60:DA:796:C:H42	1.69	0.40
60:DA:963:U:H2'	60:DA:964:C:C6	2.57	0.40
60:DA:1008:C:H1'	60:DA:1009:A:C8	2.57	0.40
60:DA:1087:G:O2'	60:DA:1088:A:H4'	2.22	0.40
60:DA:1094:U:H2'	60:DA:1096:A:OP2	2.22	0.40
60:DA:1095:A:H8	60:DA:1095:A:P	2.44	0.40
60:DA:1124:C:H2'	60:DA:1125:G:O4'	2.21	0.40
60:DA:1288:U:C2	60:DA:1327:C:O2	2.75	0.40
60:DA:1345:C:H2'	60:DA:1346:G:O4'	2.21	0.40
60:DA:1815:A:H4'	60:DA:1816:G:OP1	2.21	0.40
60:DA:1988:C:H2'	60:DA:1989:G:C8	2.57	0.40
60:DA:2210:G:N2	60:DA:2212:A:OP1	2.54	0.40
60:DA:2447:G:O2'	60:DA:2500:U:H5	2.04	0.40
60:DA:2505:G:N1	60:DA:2610:C:C2	2.82	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:2532:G:O6	60:DA:2533:A:C6	2.74	0.40
60:DA:2685:G:H2'	60:DA:2686:G:H8	1.85	0.40
60:DA:2837:G:C6	60:DA:2838:G:C5	3.09	0.40
1:AB:72:GLY:HA2	1:AB:165:VAL:HG23	2.04	0.40
1:AB:115:LEU:O	1:AB:118:LEU:HB2	2.21	0.40
2:AC:50:ALA:O	2:AC:71:ALA:HB3	2.22	0.40
2:AC:61:ALA:C	2:AC:63:ASN:H	2.29	0.40
7:AH:38:ILE:HD12	7:AH:41:ARG:NH2	2.36	0.40
8:AI:69:GLY:HA3	20:AA:1371:G:O3'	2.21	0.40
10:AK:127:LYS:HD3	10:AK:127:LYS:HA	1.93	0.40
11:AL:9:GLN:HG2	11:AL:12:ARG:NH2	2.37	0.40
12:AM:9:ILE:HG22	12:AM:11:ARG:HG3	2.03	0.40
12:AM:111:LYS:HG2	12:AM:115:LYS:HZ1	1.86	0.40
16:AQ:16:GLN:HE22	20:AA:273:A:H1'	1.86	0.40
16:AQ:90:ILE:HA	16:AQ:93:GLN:HB3	2.04	0.40
17:AR:63:GLN:HA	17:AR:66:LEU:HG	2.03	0.40
20:AA:24:U:H2'	20:AA:25:C:C6	2.57	0.40
20:AA:687:A:C2	20:AA:704:A:C6	3.09	0.40
20:AA:1020:U:H2'	20:AA:1021:G:H8	1.85	0.40
20:AA:1300:G:O6	20:AA:1334:G:H3'	2.21	0.40
23:AY:99:ARG:HD3	23:AY:128:TYR:HB2	2.03	0.40
23:AY:311:ALA:HA	23:AY:330:VAL:HA	2.03	0.40
23:AY:527:ASN:HA	23:AY:567:LEU:HD12	2.04	0.40
23:AY:623:ASP:OD1	23:AY:627:ARG:NE	2.53	0.40
25:BC:48:LEU:CD1	25:BC:50:ILE:HG12	2.51	0.40
25:BC:163:GLU:O	25:BC:163:GLU:HG3	2.20	0.40
28:BF:60:SER:N	60:BA:469:G:OP1	2.54	0.40
29:BG:71:THR:C	29:BG:72:ARG:HG3	2.46	0.40
33:BO:13:ASN:CG	33:BO:14:THR:H	2.30	0.40
34:BP:89:ALA:HA	34:BP:121:LYS:HE3	2.03	0.40
35:BQ:68:ILE:HD11	35:BQ:104:PHE:HD2	1.85	0.40
35:BQ:74:TYR:HB2	35:BQ:92:GLY:N	2.36	0.40
38:BT:129:ARG:HD3	38:BT:132:LYS:HB2	2.03	0.40
39:BU:51:LYS:O	39:BU:54:LYS:HB3	2.21	0.40
42:BX:64:LYS:HB3	42:BX:64:LYS:HE2	1.68	0.40
43:BY:47:LYS:CB	60:BA:482:A:H4'	2.51	0.40
48:BN:76:SER:OG	60:BA:2642:G:P	2.79	0.40
60:BA:296:C:H2'	60:BA:297:C:O4'	2.22	0.40
60:BA:337:C:C2	60:BA:338:G:H1'	2.57	0.40
60:BA:725:G:C6	60:BA:726:G:C2	3.10	0.40
60:BA:851:U:H2'	60:BA:852:G:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BA:1653:G:H8	60:BA:1653:G:OP2	2.04	0.40
60:BA:1830:C:C2	60:BA:1831:G:N7	2.90	0.40
60:BA:1844:C:H2'	60:BA:1845:G:C8	2.56	0.40
60:BA:2011:U:H2'	60:BA:2012:G:O4'	2.21	0.40
60:BA:2031:A:N7	60:BA:2498:C:H1'	2.35	0.40
2:CC:157:ILE:HG12	2:CC:164:ARG:HH21	1.86	0.40
3:CD:57:ARG:HH21	4:CE:107:ARG:NH2	2.06	0.40
5:CF:50:TYR:HA	5:CF:51:PRO:HD2	1.88	0.40
5:CF:67:MET:HB2	5:CF:68:PRO:HD2	2.03	0.40
6:CG:101:LEU:O	6:CG:105:VAL:HG23	2.21	0.40
11:CL:27:LEU:HD23	11:CL:27:LEU:HA	1.89	0.40
11:CL:51:ALA:C	11:CL:52:LEU:HD23	2.47	0.40
11:CL:53:ARG:HG3	11:CL:69:TYR:CD1	2.56	0.40
11:CL:58:VAL:C	11:CL:60:LEU:H	2.28	0.40
12:CM:14:ARG:HG2	12:CM:44:ARG:NH1	2.36	0.40
16:CQ:60:ILE:HG23	16:CQ:61:GLU:O	2.20	0.40
17:CR:76:LEU:C	17:CR:78:LEU:H	2.29	0.40
18:CS:63:THR:OG1	18:CS:64:GLU:N	2.55	0.40
20:CA:162:A:H3'	20:CA:163:C:O4'	2.21	0.40
20:CA:926:G:N2	20:CA:1505:G:H2'	2.37	0.40
20:CA:1184:G:H2'	20:CA:1185:G:H8	1.86	0.40
22:CW:41:A:H2'	22:CW:42:U:H6	1.78	0.40
23:CY:142:THR:HA	23:CY:171:GLU:HG3	2.03	0.40
25:DC:65:LEU:HG	25:DC:162:ILE:HD11	2.03	0.40
26:DD:89:SER:HB2	26:DD:159:ALA:N	2.36	0.40
27:DE:21:VAL:HA	27:DE:22:PRO:HD2	1.71	0.40
27:DE:34:VAL:HG23	27:DE:67:PHE:CD2	2.57	0.40
28:DF:154:VAL:HB	28:DF:156:LEU:HB2	2.02	0.40
29:DG:121:ASN:C	29:DG:123:ASN:H	2.28	0.40
33:DO:18:LYS:H	33:DO:45:GLU:HG3	1.87	0.40
33:DO:64:ARG:CZ	33:DO:101:PRO:HD2	2.51	0.40
34:DP:66:GLY:H	60:DA:631:A:H1'	1.86	0.40
34:DP:84:ASN:ND2	60:DA:627:A:N7	2.70	0.40
34:DP:84:ASN:CG	34:DP:116:GLY:HA3	2.47	0.40
34:DP:85:LEU:HD12	34:DP:118:GLY:N	2.36	0.40
43:DY:11:ASP:CG	43:DY:12:THR:H	2.29	0.40
44:DZ:107:THR:HA	44:DZ:108:PRO:HD2	1.90	0.40
45:D0:27:GLU:HA	45:D0:67:VAL:HB	2.04	0.40
46:D1:57:GLU:HG2	46:D1:58:ILE:N	2.36	0.40
48:DN:51:PHE:CZ	48:DN:119:ARG:HD2	2.56	0.40
54:D8:31:HIS:C	54:D8:32:LEU:HD13	2.47	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:53:A:H62	60:DA:117:G:H21	1.70	0.40
60:DA:58:G:N2	60:DA:73:A:N3	2.55	0.40
60:DA:212:G:H2'	60:DA:213:A:C8	2.55	0.40
60:DA:224:G:N7	60:DA:419:C:O2'	2.55	0.40
60:DA:497:A:H2'	60:DA:498:G:H8	1.86	0.40
60:DA:1023:U:H2'	60:DA:1024:G:H5'	2.04	0.40
60:DA:1344:G:H4'	60:DA:1384:A:N6	2.37	0.40
60:DA:1701:A:H3'	60:DA:1702:G:H8	1.85	0.40
60:DA:1826:G:H21	60:DA:1900:A:H2	1.70	0.40
60:DA:2138:C:H2'	60:DA:2139:C:H6	1.86	0.40
60:DA:2439:A:H2'	60:DA:2439:A:N3	2.36	0.40
60:DA:2780:G:H2'	60:DA:2780:G:OP1	2.21	0.40
60:DA:2795:G:H1'	60:DA:2801:A:N6	2.37	0.40
1:AB:123:ALA:HA	1:AB:127:ILE:HD11	2.03	0.40
2:AC:173:VAL:HG12	2:AC:175:LEU:HD22	2.03	0.40
10:AK:30:VAL:O	10:AK:42:TRP:HA	2.21	0.40
11:AL:58:VAL:C	11:AL:60:LEU:H	2.30	0.40
11:AL:76:ASN:C	11:AL:77:LEU:HD12	2.46	0.40
13:AN:17:LYS:HG2	20:AA:1317:C:OP1	2.20	0.40
16:AQ:9:VAL:HA	16:AQ:56:VAL:HG22	2.04	0.40
19:AT:85:MET:HE3	19:AT:85:MET:HB2	1.98	0.40
20:AA:160:A:H1'	20:AA:344:A:C6	2.57	0.40
20:AA:763:G:H2'	20:AA:764:C:C6	2.57	0.40
20:AA:918:A:H2'	20:AA:919:A:C8	2.57	0.40
20:AA:944:G:C6	20:AA:1337:G:H2'	2.57	0.40
20:AA:1145:C:O2'	20:AA:1146:A:H8	2.05	0.40
23:AY:90:PHE:HD1	23:AY:458:HIS:HB2	1.86	0.40
23:AY:290:LYS:HB3	23:AY:298:VAL:HG22	2.04	0.40
23:AY:428:LEU:HD13	23:AY:440:VAL:HG11	2.03	0.40
25:BC:78:ILE:HG22	25:BC:97:GLY:O	2.22	0.40
26:BD:67:PHE:HD2	26:BD:67:PHE:HA	1.71	0.40
28:BF:4:VAL:H	28:BF:24:LEU:HG	1.87	0.40
28:BF:57:VAL:HG12	28:BF:59:TYR:CD2	2.56	0.40
30:BH:123:PHE:HD1	30:BH:133:VAL:HG22	1.87	0.40
33:BO:6:THR:HG23	60:BA:1666:G:O3'	2.21	0.40
34:BP:6:LEU:HB3	34:BP:9:ASN:HB2	2.03	0.40
35:BQ:25:ASP:HA	35:BQ:102:VAL:H	1.86	0.40
35:BQ:67:ARG:NH2	60:BA:906:G:O2'	2.54	0.40
37:BS:107:GLU:O	37:BS:109:GLY:N	2.48	0.40
38:BT:114:LEU:HA	38:BT:114:LEU:HD23	1.83	0.40
43:BY:63:LYS:HB2	43:BY:64:GLU:H	1.62	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BZ:183:LEU:O	44:BZ:186:GLU:HB3	2.21	0.40
47:B4:12:ALA:HB2	47:B4:28:LYS:O	2.21	0.40
47:B4:16:CYS:HB3	47:B4:34:GLU:C	2.46	0.40
48:BN:27:ALA:CB	48:BN:103:VAL:HG22	2.52	0.40
50:B3:46:ASN:O	50:B3:49:LYS:HB3	2.21	0.40
51:B5:3:LYS:HG3	60:BA:2613:U:OP2	2.21	0.40
55:B9:25:VAL:CG2	55:B9:34:GLN:HB2	2.51	0.40
60:BA:78:A:H2'	60:BA:79:G:H8	1.87	0.40
60:BA:172:C:H2'	60:BA:173:G:O4'	2.21	0.40
60:BA:289:A:N6	60:BA:351:G:N2	2.22	0.40
60:BA:946:G:H1	60:BA:971:C:N4	2.19	0.40
2:CC:19:GLU:O	2:CC:56:ASP:HA	2.21	0.40
2:CC:27:LYS:H	2:CC:27:LYS:HG2	1.56	0.40
2:CC:29:TYR:O	2:CC:32:LEU:HB2	2.22	0.40
2:CC:70:VAL:HG12	2:CC:71:ALA:H	1.87	0.40
3:CD:61:LYS:HG3	3:CD:206:PHE:CD2	2.54	0.40
6:CG:27:ILE:HG21	6:CG:40:ALA:HB2	2.02	0.40
7:CH:27:PRO:HD3	7:CH:58:TYR:CE2	2.57	0.40
7:CH:121:ASP:N	7:CH:121:ASP:OD1	2.54	0.40
8:CI:70:LYS:O	8:CI:74:ILE:HG13	2.21	0.40
12:CM:90:LEU:HD23	12:CM:94:ARG:HE	1.85	0.40
14:CO:11:VAL:HA	14:CO:14:GLU:HB2	2.02	0.40
14:CO:53:HIS:NE2	60:DA:715:G:O6	2.55	0.40
16:CQ:92:ARG:HD2	16:CQ:95:TYR:CD2	2.57	0.40
20:CA:263:A:H2'	20:CA:264:U:C6	2.57	0.40
20:CA:951:G:H1'	20:CA:970:C:O2'	2.22	0.40
20:CA:1308:U:H2'	20:CA:1309:G:H8	1.87	0.40
23:CY:37:GLY:O	23:CY:38:ARG:HG3	2.21	0.40
23:CY:229:LEU:C	23:CY:231:TYR:H	2.28	0.40
23:CY:517:LEU:HD12	23:CY:517:LEU:HA	1.93	0.40
26:DD:48:ARG:NH2	60:DA:777:A:O2'	2.54	0.40
26:DD:75:ILE:O	26:DD:118:VAL:HG23	2.22	0.40
34:DP:14:LYS:HD3	34:DP:14:LYS:HA	1.90	0.40
35:DQ:34:LEU:HD23	35:DQ:103:MET:CE	2.50	0.40
35:DQ:68:ILE:HD12	35:DQ:103:MET:HB3	2.03	0.40
38:DT:55:ASN:N	38:DT:59:THR:HB	2.37	0.40
42:DX:55:ASN:HD22	42:DX:55:ASN:HA	1.59	0.40
48:DN:33:LEU:C	48:DN:35:ARG:N	2.78	0.40
60:DA:239:U:H2'	60:DA:240:G:O4'	2.21	0.40
60:DA:895:U:O5'	60:DA:895:U:H6	2.04	0.40
60:DA:1214:A:H3'	60:DA:1215:G:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DA:1243:G:H2'	60:DA:1244:G:O4'	2.21	0.40
60:DA:1373:A:H2'	60:DA:1374:G:O4'	2.21	0.40
60:DA:1707:G:C5	60:DA:1756:G:C6	3.09	0.40
60:DA:1778:U:O4	60:DA:1784:A:H1'	2.22	0.40
60:DA:1791:A:C2	60:DA:1829:A:H4'	2.56	0.40
60:DA:2037:G:C6	60:DA:2038:G:C6	3.10	0.40
60:DA:2172:U:H5'	60:DA:2173:A:P	2.61	0.40
60:DA:2510:C:H42	60:DA:2578:G:H1	1.68	0.40
60:DA:2721:A:H2'	60:DA:2722:G:H8	1.87	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	AB	233/235 (99%)	154 (66%)	60 (26%)	19 (8%)	0 11
1	CB	233/235 (99%)	164 (70%)	49 (21%)	20 (9%)	0 10
2	AC	205/207 (99%)	140 (68%)	43 (21%)	22 (11%)	0 6
2	CC	205/207 (99%)	136 (66%)	47 (23%)	22 (11%)	0 6
3	AD	206/208 (99%)	146 (71%)	46 (22%)	14 (7%)	1 14
3	CD	206/208 (99%)	140 (68%)	49 (24%)	17 (8%)	0 11
4	AE	149/151 (99%)	118 (79%)	22 (15%)	9 (6%)	1 16
4	CE	149/151 (99%)	125 (84%)	16 (11%)	8 (5%)	1 17
5	AF	99/101 (98%)	82 (83%)	14 (14%)	3 (3%)	3 26
5	CF	99/101 (98%)	81 (82%)	10 (10%)	8 (8%)	1 11
6	AG	153/155 (99%)	113 (74%)	27 (18%)	13 (8%)	0 10
6	CG	153/155 (99%)	116 (76%)	24 (16%)	13 (8%)	0 10
7	AH	136/138 (99%)	98 (72%)	21 (15%)	17 (12%)	0 4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
7	CH	136/138 (99%)	90 (66%)	29 (21%)	17 (12%)	0 4
8	AI	125/127 (98%)	98 (78%)	16 (13%)	11 (9%)	0 10
8	CI	125/127 (98%)	100 (80%)	16 (13%)	9 (7%)	1 13
9	AJ	97/99 (98%)	69 (71%)	22 (23%)	6 (6%)	1 15
9	CJ	97/99 (98%)	71 (73%)	20 (21%)	6 (6%)	1 15
10	AK	117/119 (98%)	81 (69%)	23 (20%)	13 (11%)	0 6
10	CK	117/119 (98%)	82 (70%)	22 (19%)	13 (11%)	0 6
11	AL	123/125 (98%)	55 (45%)	38 (31%)	30 (24%)	0 1
11	CL	123/125 (98%)	54 (44%)	41 (33%)	28 (23%)	0 1
12	AM	123/125 (98%)	85 (69%)	21 (17%)	17 (14%)	0 3
12	CM	123/125 (98%)	85 (69%)	22 (18%)	16 (13%)	0 3
13	AN	58/60 (97%)	46 (79%)	7 (12%)	5 (9%)	0 10
13	CN	58/60 (97%)	45 (78%)	8 (14%)	5 (9%)	0 10
14	AO	86/88 (98%)	59 (69%)	20 (23%)	7 (8%)	1 11
14	CO	86/88 (98%)	60 (70%)	20 (23%)	6 (7%)	1 14
15	AP	82/84 (98%)	61 (74%)	14 (17%)	7 (8%)	0 10
15	CP	82/84 (98%)	59 (72%)	20 (24%)	3 (4%)	2 22
16	AQ	98/100 (98%)	71 (72%)	14 (14%)	13 (13%)	0 3
16	CQ	98/100 (98%)	72 (74%)	17 (17%)	9 (9%)	0 10
17	AR	68/70 (97%)	43 (63%)	17 (25%)	8 (12%)	0 5
17	CR	68/70 (97%)	49 (72%)	16 (24%)	3 (4%)	2 20
18	AS	77/79 (98%)	45 (58%)	21 (27%)	11 (14%)	0 3
18	CS	77/79 (98%)	38 (49%)	29 (38%)	10 (13%)	0 3
19	AT	97/99 (98%)	77 (79%)	16 (16%)	4 (4%)	2 21
19	CT	97/99 (98%)	79 (81%)	14 (14%)	4 (4%)	2 21
23	AY	685/687 (100%)	474 (69%)	144 (21%)	67 (10%)	0 8
23	CY	685/687 (100%)	476 (70%)	143 (21%)	66 (10%)	0 8
24	AU	2/6 (33%)	2 (100%)	0	0	100 100
24	CU	2/6 (33%)	2 (100%)	0	0	100 100
25	BC	226/228 (99%)	109 (48%)	65 (29%)	52 (23%)	0 1
25	DC	226/228 (99%)	108 (48%)	66 (29%)	52 (23%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
26	BD	273/275 (99%)	177 (65%)	66 (24%)	30 (11%)	0 6
26	DD	273/275 (99%)	179 (66%)	57 (21%)	37 (14%)	0 3
27	BE	203/205 (99%)	123 (61%)	50 (25%)	30 (15%)	0 3
27	DE	203/205 (99%)	133 (66%)	41 (20%)	29 (14%)	0 3
28	BF	206/208 (99%)	130 (63%)	47 (23%)	29 (14%)	0 3
28	DF	206/208 (99%)	126 (61%)	55 (27%)	25 (12%)	0 4
29	BG	179/181 (99%)	116 (65%)	45 (25%)	18 (10%)	0 8
29	DG	179/181 (99%)	121 (68%)	43 (24%)	15 (8%)	0 10
30	BH	165/167 (99%)	115 (70%)	35 (21%)	15 (9%)	0 10
30	DH	165/167 (99%)	121 (73%)	26 (16%)	18 (11%)	0 6
32	BK	138/140 (99%)	97 (70%)	28 (20%)	13 (9%)	0 9
32	DK	138/140 (99%)	91 (66%)	35 (25%)	12 (9%)	0 10
33	BO	120/122 (98%)	88 (73%)	25 (21%)	7 (6%)	1 16
33	DO	120/122 (98%)	90 (75%)	22 (18%)	8 (7%)	1 15
34	BP	144/146 (99%)	82 (57%)	41 (28%)	21 (15%)	0 3
34	DP	144/146 (99%)	88 (61%)	35 (24%)	21 (15%)	0 3
35	BQ	139/141 (99%)	93 (67%)	32 (23%)	14 (10%)	0 8
35	DQ	139/141 (99%)	99 (71%)	26 (19%)	14 (10%)	0 8
36	BR	115/117 (98%)	72 (63%)	28 (24%)	15 (13%)	0 3
36	DR	115/117 (98%)	78 (68%)	26 (23%)	11 (10%)	0 8
37	BS	97/99 (98%)	54 (56%)	22 (23%)	21 (22%)	0 1
37	DS	97/99 (98%)	52 (54%)	24 (25%)	21 (22%)	0 1
38	BT	136/138 (99%)	84 (62%)	33 (24%)	19 (14%)	0 3
38	DT	136/138 (99%)	89 (65%)	28 (21%)	19 (14%)	0 3
39	BU	115/117 (98%)	89 (77%)	21 (18%)	5 (4%)	2 20
39	DU	115/117 (98%)	84 (73%)	20 (17%)	11 (10%)	0 8
40	BV	99/101 (98%)	59 (60%)	22 (22%)	18 (18%)	0 2
40	DV	99/101 (98%)	63 (64%)	22 (22%)	14 (14%)	0 3
41	BW	111/113 (98%)	88 (79%)	16 (14%)	7 (6%)	1 15
41	DW	111/113 (98%)	90 (81%)	10 (9%)	11 (10%)	0 8
42	BX	91/93 (98%)	71 (78%)	12 (13%)	8 (9%)	0 10

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
42	DX	91/93 (98%)	69 (76%)	17 (19%)	5 (6%)	1 17
43	BY	105/107 (98%)	48 (46%)	33 (31%)	24 (23%)	0 1
43	DY	105/107 (98%)	50 (48%)	34 (32%)	21 (20%)	0 1
44	BZ	183/185 (99%)	126 (69%)	42 (23%)	15 (8%)	0 11
44	DZ	183/185 (99%)	120 (66%)	45 (25%)	18 (10%)	0 8
45	B0	82/84 (98%)	59 (72%)	15 (18%)	8 (10%)	0 8
45	D0	82/84 (98%)	55 (67%)	20 (24%)	7 (8%)	0 10
46	B1	91/93 (98%)	55 (60%)	19 (21%)	17 (19%)	0 2
46	D1	91/93 (98%)	55 (60%)	17 (19%)	19 (21%)	0 1
47	B4	33/35 (94%)	17 (52%)	13 (39%)	3 (9%)	0 10
47	D4	33/35 (94%)	17 (52%)	11 (33%)	5 (15%)	0 2
48	BN	136/138 (99%)	95 (70%)	25 (18%)	16 (12%)	0 5
48	DN	136/138 (99%)	94 (69%)	26 (19%)	16 (12%)	0 5
49	B2	69/71 (97%)	52 (75%)	13 (19%)	4 (6%)	1 16
49	D2	69/71 (97%)	51 (74%)	14 (20%)	4 (6%)	1 16
50	B3	58/60 (97%)	48 (83%)	7 (12%)	3 (5%)	1 18
50	D3	58/60 (97%)	45 (78%)	10 (17%)	3 (5%)	1 18
51	B5	57/59 (97%)	37 (65%)	10 (18%)	10 (18%)	0 2
51	D5	57/59 (97%)	37 (65%)	13 (23%)	7 (12%)	0 4
52	B6	48/50 (96%)	26 (54%)	11 (23%)	11 (23%)	0 1
52	D6	48/50 (96%)	26 (54%)	11 (23%)	11 (23%)	0 1
53	B7	47/49 (96%)	32 (68%)	11 (23%)	4 (8%)	0 10
53	D7	47/49 (96%)	34 (72%)	9 (19%)	4 (8%)	0 10
54	B8	62/64 (97%)	38 (61%)	18 (29%)	6 (10%)	0 8
54	D8	62/64 (97%)	37 (60%)	17 (27%)	8 (13%)	0 4
55	B9	35/37 (95%)	16 (46%)	14 (40%)	5 (14%)	0 3
55	D9	35/37 (95%)	19 (54%)	12 (34%)	4 (11%)	0 5
56	Be	70/103 (68%)	38 (54%)	25 (36%)	7 (10%)	0 8
56	De	70/103 (68%)	40 (57%)	23 (33%)	7 (10%)	0 8
All	All	13304/13578 (98%)	8936 (67%)	2877 (22%)	1491 (11%)	0 6

All (1491) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	AB	20	GLU
1	AB	67	THR
1	AB	76	GLN
1	AB	103	THR
1	AB	157	ARG
1	AB	237	ALA
2	AC	45	LYS
2	AC	49	SER
2	AC	107	GLN
2	AC	157	ILE
2	AC	161	GLU
2	AC	207	VAL
3	AD	5	ILE
3	AD	21	LEU
4	AE	6	PHE
4	AE	49	PRO
5	AF	69	GLU
6	AG	8	GLU
6	AG	15	ASP
7	AH	22	GLU
7	AH	74	PRO
7	AH	93	VAL
7	AH	99	GLU
7	AH	100	ILE
7	AH	101	PRO
8	AI	54	ASP
8	AI	56	LEU
8	AI	104	ARG
8	AI	119	ALA
9	AJ	51	ARG
9	AJ	57	LYS
9	AJ	83	GLU
10	AK	41	THR
10	AK	42	TRP
10	AK	43	SER
10	AK	91	ARG
10	AK	109	VAL
10	AK	111	ASP
10	AK	122	LYS
11	AL	34	ARG
11	AL	37	CYS
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	81	SER
11	AL	94	PRO
11	AL	96	VAL
11	AL	104	VAL
11	AL	108	ALA
11	AL	123	LYS
12	AM	3	ARG
12	AM	11	ARG
12	AM	12	ASN
12	AM	87	TYR
12	AM	107	ALA
13	AN	14	PRO
15	AP	15	PRO
16	AQ	3	LYS
16	AQ	31	LEU
16	AQ	34	LYS
16	AQ	49	GLU
16	AQ	74	LEU
17	AR	37	VAL
17	AR	81	PHE
18	AS	45	VAL
18	AS	70	LYS
19	AT	74	LYS
23	AY	25	LYS
23	AY	35	TYR
23	AY	39	ILE
23	AY	88	VAL
23	AY	92	ILE
23	AY	146	LEU
23	AY	170	ARG
23	AY	204	GLU
23	AY	324	ARG
23	AY	330	VAL
23	AY	331	TYR
23	AY	400	GLU
23	AY	432	ALA
23	AY	448	GLN
23	AY	472	VAL
23	AY	498	ILE
23	AY	536	LYS

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Mol	Chain	Res	Type
23	AY	564	LYS
23	AY	565	VAL
23	AY	614	GLU
23	AY	631	ILE
23	AY	652	MET
25	BC	17	PRO
25	BC	52	PRO
25	BC	57	GLN
25	BC	66	PRO
25	BC	80	LYS
25	BC	96	GLY
25	BC	114	VAL
25	BC	115	VAL
25	BC	141	PRO
25	BC	162	ILE
25	BC	182	PRO
25	BC	221	PRO
25	BC	222	SER
25	BC	227	PRO
26	BD	36	PRO
26	BD	79	VAL
26	BD	89	SER
26	BD	152	GLY
26	BD	165	ILE
26	BD	231	HIS
26	BD	274	ARG
27	BE	10	GLY
27	BE	12	THR
27	BE	56	PRO
27	BE	60	ASN
27	BE	61	ARG
27	BE	66	HIS
27	BE	67	PHE
27	BE	74	PRO
27	BE	133	LYS
27	BE	134	ILE
28	BF	3	GLU
28	BF	10	PRO
28	BF	15	SER
28	BF	22	ALA
28	BF	69	HIS
28	BF	82	ILE

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Mol	Chain	Res	Type
28	BF	192	LEU
29	BG	12	TYR
29	BG	26	GLN
29	BG	43	LEU
29	BG	96	ARG
29	BG	115	ARG
30	BH	21	PRO
30	BH	41	MET
30	BH	107	VAL
30	BH	164	TYR
32	BK	61	ALA
33	BO	29	ASN
33	BO	48	PRO
34	BP	13	ASN
34	BP	39	LYS
34	BP	51	PHE
34	BP	57	THR
34	BP	65	ARG
34	BP	71	VAL
34	BP	106	LEU
35	BQ	20	ALA
35	BQ	90	VAL
36	BR	3	HIS
36	BR	12	ARG
37	BS	13	ARG
37	BS	14	VAL
37	BS	43	GLU
37	BS	48	LEU
37	BS	98	VAL
37	BS	100	ALA
37	BS	101	LEU
38	BT	28	VAL
38	BT	30	VAL
38	BT	49	VAL
38	BT	50	ILE
38	BT	68	TYR
38	BT	78	LEU
38	BT	83	ILE
40	BV	16	PRO
40	BV	29	PRO
40	BV	46	VAL
40	BV	50	PRO

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Mol	Chain	Res	Type
40	BV	77	ALA
40	BV	78	LYS
40	BV	79	VAL
40	BV	96	ILE
41	BW	73	ALA
41	BW	77	ASP
42	BX	13	LEU
42	BX	32	PRO
43	BY	19	LYS
43	BY	32	PRO
43	BY	40	GLU
43	BY	51	VAL
43	BY	56	PRO
43	BY	97	ARG
43	BY	107	ASP
44	BZ	71	VAL
44	BZ	72	ARG
45	B0	56	ASP
45	B0	73	GLY
46	B1	20	ARG
48	BN	17	ASP
48	BN	18	ALA
48	BN	50	ASP
48	BN	56	ASN
48	BN	63	THR
48	BN	64	GLY
48	BN	130	HIS
48	BN	133	GLN
50	B3	52	HIS
51	B5	23	HIS
51	B5	38	ALA
52	B6	8	LYS
52	B6	13	CYS
52	B6	19	ARG
52	B6	27	LYS
52	B6	44	ARG
53	B7	18	PHE
54	B8	49	VAL
54	B8	62	LEU
55	B9	8	LYS
55	B9	10	ILE
55	B9	18	ARG

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Mol	Chain	Res	Type
56	Be	78	LEU
56	Be	81	ILE
1	CB	20	GLU
1	CB	34	ALA
1	CB	67	THR
1	CB	76	GLN
1	CB	103	THR
1	CB	157	ARG
1	CB	186	ALA
2	CC	36	ASP
2	CC	49	SER
2	CC	60	ALA
2	CC	161	GLU
2	CC	207	VAL
3	CD	5	ILE
3	CD	84	LYS
3	CD	89	THR
3	CD	114	ARG
3	CD	156	GLU
3	CD	166	LYS
4	CE	6	PHE
4	CE	7	GLU
4	CE	21	ALA
5	CF	13	ASN
5	CF	69	GLU
6	CG	6	ARG
6	CG	8	GLU
6	CG	15	ASP
7	CH	22	GLU
7	CH	26	VAL
7	CH	27	PRO
7	CH	93	VAL
7	CH	99	GLU
7	CH	100	ILE
8	CI	54	ASP
8	CI	119	ALA
9	CJ	51	ARG
9	CJ	57	LYS
9	CJ	83	GLU
9	CJ	91	PRO
10	CK	12	ARG
10	CK	42	TRP

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Mol	Chain	Res	Type
10	CK	87	THR
10	CK	91	ARG
10	CK	107	SER
10	CK	109	VAL
10	CK	111	ASP
11	CL	34	ARG
11	CL	37	CYS
11	CL	39	VAL
11	CL	55	VAL
11	CL	66	VAL
11	CL	81	SER
11	CL	104	VAL
11	CL	108	ALA
11	CL	123	LYS
12	CM	12	ASN
12	CM	67	GLU
13	CN	14	PRO
13	CN	27	CYS
16	CQ	53	LEU
16	CQ	74	LEU
17	CR	37	VAL
18	CS	70	LYS
19	CT	74	LYS
23	CY	35	TYR
23	CY	39	ILE
23	CY	88	VAL
23	CY	92	ILE
23	CY	331	TYR
23	CY	347	GLY
23	CY	380	LEU
23	CY	400	GLU
23	CY	431	LEU
23	CY	432	ALA
23	CY	498	ILE
23	CY	536	LYS
23	CY	564	LYS
23	CY	631	ILE
23	CY	671	MET
25	DC	17	PRO
25	DC	43	GLU
25	DC	52	PRO
25	DC	54	ARG

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Mol	Chain	Res	Type
25	DC	59	VAL
25	DC	66	PRO
25	DC	114	VAL
25	DC	115	VAL
25	DC	138	LEU
25	DC	141	PRO
25	DC	162	ILE
25	DC	167	ASP
25	DC	172	ILE
25	DC	175	PRO
25	DC	176	VAL
25	DC	177	GLY
25	DC	182	PRO
25	DC	212	SER
25	DC	213	VAL
25	DC	214	TYR
25	DC	221	PRO
25	DC	222	SER
25	DC	227	PRO
26	DD	3	VAL
26	DD	36	PRO
26	DD	118	VAL
26	DD	166	GLN
26	DD	178	PRO
26	DD	207	GLY
26	DD	231	HIS
27	DE	11	MET
27	DE	12	THR
27	DE	13	ARG
27	DE	56	PRO
27	DE	60	ASN
27	DE	61	ARG
27	DE	72	VAL
27	DE	74	PRO
27	DE	94	GLU
27	DE	126	PRO
27	DE	144	ARG
27	DE	187	ALA
28	DF	3	GLU
28	DF	10	PRO
28	DF	22	ALA
28	DF	90	PHE

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Mol	Chain	Res	Type
28	DF	105	VAL
28	DF	192	LEU
29	DG	12	TYR
29	DG	50	ALA
29	DG	96	ARG
30	DH	13	LYS
30	DH	21	PRO
30	DH	124	GLU
30	DH	164	TYR
30	DH	173	PRO
33	DO	48	PRO
34	DP	38	GLN
34	DP	57	THR
34	DP	65	ARG
34	DP	71	VAL
34	DP	145	PRO
35	DQ	20	ALA
35	DQ	85	LYS
36	DR	57	ARG
37	DS	14	VAL
37	DS	43	GLU
37	DS	47	THR
37	DS	48	LEU
37	DS	98	VAL
37	DS	101	LEU
38	DT	28	VAL
38	DT	30	VAL
38	DT	49	VAL
38	DT	50	ILE
38	DT	68	TYR
38	DT	83	ILE
40	DV	16	PRO
40	DV	46	VAL
40	DV	50	PRO
40	DV	68	LYS
40	DV	77	ALA
40	DV	96	ILE
41	DW	73	ALA
41	DW	77	ASP
41	DW	110	LYS
43	DY	19	LYS
43	DY	32	PRO

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Mol	Chain	Res	Type
43	DY	53	PRO
43	DY	56	PRO
43	DY	66	PRO
43	DY	67	LEU
43	DY	78	ALA
43	DY	97	ARG
44	DZ	71	VAL
44	DZ	72	ARG
44	DZ	168	GLU
44	DZ	169	GLU
45	D0	56	ASP
45	D0	73	GLY
46	D1	26	ARG
46	D1	32	LYS
46	D1	35	THR
46	D1	53	VAL
46	D1	64	ALA
47	D4	14	ILE
48	DN	17	ASP
48	DN	18	ALA
48	DN	50	ASP
48	DN	56	ASN
48	DN	63	THR
48	DN	64	GLY
48	DN	130	HIS
48	DN	133	GLN
52	D6	13	CYS
52	D6	19	ARG
52	D6	44	ARG
52	D6	49	HIS
53	D7	44	PRO
54	D8	49	VAL
54	D8	62	LEU
55	D9	10	ILE
55	D9	18	ARG
56	De	54	ALA
56	De	81	ILE
1	AB	17	PHE
1	AB	165	VAL
1	AB	186	ALA
2	AC	14	ILE
2	AC	36	ASP

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Mol	Chain	Res	Type
2	AC	47	LEU
2	AC	51	GLY
2	AC	60	ALA
2	AC	66	VAL
2	AC	74	GLY
2	AC	178	LEU
3	AD	43	HIS
3	AD	44	GLY
3	AD	114	ARG
4	AE	73	ASN
4	AE	128	PRO
6	AG	57	GLU
6	AG	90	GLU
6	AG	113	GLU
7	AH	27	PRO
8	AI	58	ARG
8	AI	60	ASP
8	AI	87	GLN
10	AK	35	PRO
11	AL	33	ARG
11	AL	36	VAL
12	AM	99	ARG
12	AM	101	GLN
12	AM	119	GLY
12	AM	120	LYS
12	AM	121	LYS
13	AN	27	CYS
14	AO	23	GLY
14	AO	44	LYS
14	AO	48	LYS
15	AP	30	GLY
16	AQ	55	ASP
16	AQ	69	LYS
18	AS	64	GLU
18	AS	67	VAL
18	AS	77	THR
19	AT	49	ALA
19	AT	50	GLU
23	AY	21	ILE
23	AY	36	THR
23	AY	136	ALA
23	AY	161	PRO

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Mol	Chain	Res	Type
23	AY	162	VAL
23	AY	447	GLY
23	AY	471	LYS
23	AY	521	SER
23	AY	527	ASN
23	AY	566	THR
23	AY	568	TYR
23	AY	654	GLY
25	BC	3	LYS
25	BC	35	THR
25	BC	42	VAL
25	BC	43	GLU
25	BC	50	ILE
25	BC	53	ARG
25	BC	55	SER
25	BC	59	VAL
25	BC	60	ARG
25	BC	61	GLY
25	BC	138	LEU
25	BC	142	LYS
25	BC	164	PHE
25	BC	175	PRO
25	BC	176	VAL
25	BC	177	GLY
25	BC	184	GLU
25	BC	218	THR
25	BC	228	HIS
26	BD	3	VAL
26	BD	43	ARG
26	BD	118	VAL
26	BD	123	ALA
26	BD	127	VAL
26	BD	166	GLN
26	BD	178	PRO
26	BD	219	PRO
26	BD	239	ARG
27	BE	13	ARG
27	BE	51	PHE
27	BE	68	ALA
27	BE	72	VAL
27	BE	77	ILE
27	BE	86	PRO

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Mol	Chain	Res	Type
27	BE	94	GLU
27	BE	126	PRO
27	BE	179	GLU
27	BE	187	ALA
28	BF	7	TYR
28	BF	14	PRO
28	BF	73	ALA
28	BF	84	VAL
28	BF	90	PHE
28	BF	92	PRO
28	BF	133	ASN
28	BF	181	LEU
28	BF	194	MET
28	BF	206	ILE
29	BG	27	ASN
29	BG	50	ALA
29	BG	87	PRO
29	BG	147	ASP
29	BG	181	ARG
30	BH	13	LYS
30	BH	100	GLY
30	BH	138	LYS
30	BH	154	PRO
30	BH	173	PRO
32	BK	85	GLU
32	BK	91	PRO
32	BK	114	ASP
32	BK	115	LEU
33	BO	5	GLN
34	BP	14	LYS
34	BP	31	ALA
34	BP	104	GLY
34	BP	145	PRO
35	BQ	78	PRO
35	BQ	92	GLY
35	BQ	102	VAL
35	BQ	126	PRO
35	BQ	127	ILE
35	BQ	140	ALA
36	BR	11	ASN
36	BR	93	GLY
36	BR	108	GLY

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Mol	Chain	Res	Type
37	BS	22	GLY
37	BS	32	LEU
37	BS	96	GLY
38	BT	33	LYS
38	BT	48	ILE
39	BU	88	ILE
40	BV	8	GLY
40	BV	68	LYS
41	BW	11	ARG
43	BY	28	LYS
43	BY	42	VAL
43	BY	53	PRO
43	BY	78	ALA
44	BZ	73	GLN
44	BZ	78	LYS
44	BZ	120	ILE
45	B0	35	ASN
45	B0	75	LEU
45	B0	83	PRO
46	B1	18	ILE
46	B1	34	THR
46	B1	36	GLY
46	B1	53	VAL
46	B1	64	ALA
47	B4	33	VAL
48	BN	2	LYS
49	B2	41	ILE
50	B3	2	PRO
51	B5	3	LYS
51	B5	8	LYS
51	B5	54	GLY
54	B8	18	ALA
55	B9	12	ASP
56	Be	62	VAL
56	Be	79	ARG
56	Be	120	ALA
1	CB	17	PHE
1	CB	95	GLN
1	CB	105	PHE
1	CB	165	VAL
2	CC	14	ILE
2	CC	45	LYS

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Mol	Chain	Res	Type
2	CC	47	LEU
2	CC	66	VAL
2	CC	130	VAL
2	CC	157	ILE
2	CC	178	LEU
3	CD	20	TYR
3	CD	21	LEU
3	CD	44	GLY
3	CD	186	LEU
5	CF	34	GLY
6	CG	4	ARG
6	CG	5	ARG
6	CG	90	GLU
6	CG	120	ILE
7	CH	74	PRO
7	CH	97	VAL
7	CH	134	ILE
8	CI	24	GLY
8	CI	26	VAL
10	CK	43	SER
11	CL	43	VAL
11	CL	94	PRO
11	CL	96	VAL
11	CL	97	ARG
11	CL	99	HIS
11	CL	119	LYS
12	CM	3	ARG
12	CM	6	GLY
12	CM	10	PRO
12	CM	99	ARG
12	CM	101	GLN
12	CM	107	ALA
12	CM	120	LYS
14	CO	19	PRO
16	CQ	49	GLU
16	CQ	55	ASP
16	CQ	69	LYS
16	CQ	73	VAL
17	CR	28	GLU
18	CS	9	VAL
18	CS	42	PRO
18	CS	45	VAL

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Mol	Chain	Res	Type
19	CT	71	THR
19	CT	105	SER
23	CY	21	ILE
23	CY	22	ASP
23	CY	36	THR
23	CY	75	LYS
23	CY	111	SER
23	CY	161	PRO
23	CY	162	VAL
23	CY	292	THR
23	CY	324	ARG
23	CY	330	VAL
23	CY	395	PRO
23	CY	416	LYS
23	CY	447	GLY
23	CY	448	GLN
23	CY	565	VAL
23	CY	566	THR
23	CY	568	TYR
23	CY	614	GLU
23	CY	652	MET
25	DC	36	ALA
25	DC	61	GLY
25	DC	80	LYS
25	DC	94	TYR
25	DC	96	GLY
25	DC	119	ASP
25	DC	142	LYS
25	DC	184	GLU
25	DC	218	THR
25	DC	228	HIS
26	DD	79	VAL
26	DD	127	VAL
26	DD	152	GLY
26	DD	165	ILE
26	DD	200	ASP
26	DD	273	ARG
27	DE	10	GLY
27	DE	18	ASP
27	DE	34	VAL
27	DE	51	PHE
27	DE	68	ALA

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Mol	Chain	Res	Type
27	DE	77	ILE
28	DF	58	ALA
28	DF	73	ALA
28	DF	84	VAL
28	DF	181	LEU
28	DF	194	MET
28	DF	206	ILE
29	DG	82	LEU
29	DG	87	PRO
29	DG	179	PRO
30	DH	41	MET
30	DH	48	GLY
30	DH	92	ILE
30	DH	100	GLY
30	DH	123	PHE
30	DH	154	PRO
33	DO	4	PRO
33	DO	29	ASN
33	DO	96	THR
34	DP	14	LYS
34	DP	70	GLN
35	DQ	7	MET
35	DQ	90	VAL
35	DQ	92	GLY
35	DQ	111	GLU
35	DQ	127	ILE
35	DQ	139	GLU
36	DR	4	LEU
36	DR	12	ARG
36	DR	63	ARG
36	DR	108	GLY
37	DS	13	ARG
37	DS	22	GLY
37	DS	32	LEU
37	DS	59	LYS
37	DS	96	GLY
37	DS	100	ALA
38	DT	33	LYS
38	DT	80	SER
38	DT	86	ILE
38	DT	104	ASN
39	DU	11	ARG

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Mol	Chain	Res	Type
39	DU	90	VAL
40	DV	44	LYS
40	DV	49	THR
41	DW	40	ASN
42	DX	12	VAL
43	DY	39	VAL
43	DY	51	VAL
43	DY	80	GLY
43	DY	101	LYS
44	DZ	52	SER
44	DZ	73	GLN
44	DZ	78	LYS
44	DZ	95	PRO
44	DZ	108	PRO
45	D0	6	GLY
45	D0	11	ARG
45	D0	83	PRO
47	D4	7	PRO
47	D4	9	LEU
47	D4	33	VAL
48	DN	2	LYS
49	D2	48	HIS
49	D2	70	GLN
50	D3	2	PRO
50	D3	52	HIS
51	D5	23	HIS
51	D5	54	GLY
52	D6	27	LYS
52	D6	46	HIS
54	D8	53	PRO
56	De	62	VAL
56	De	114	LYS
56	De	120	ALA
1	AB	229	VAL
1	AB	230	VAL
1	AB	235	SER
2	AC	112	SER
3	AD	20	TYR
3	AD	40	PRO
3	AD	47	ARG
3	AD	156	GLU
3	AD	186	LEU

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Mol	Chain	Res	Type
3	AD	189	PRO
4	AE	7	GLU
4	AE	21	ALA
4	AE	78	HIS
4	AE	153	LYS
5	AF	43	LEU
6	AG	31	MET
6	AG	37	ASN
7	AH	2	LEU
7	AH	107	LEU
8	AI	70	LYS
9	AJ	37	PRO
9	AJ	58	ASP
10	AK	25	TYR
11	AL	56	ALA
11	AL	79	GLU
11	AL	99	HIS
11	AL	117	ARG
11	AL	127	GLU
12	AM	5	ALA
12	AM	86	CYS
12	AM	124	PRO
13	AN	3	ARG
14	AO	19	PRO
14	AO	40	SER
15	AP	28	ARG
15	AP	43	LYS
15	AP	46	PRO
16	AQ	14	LYS
16	AQ	53	LEU
17	AR	34	TYR
17	AR	60	ALA
17	AR	78	LEU
18	AS	55	LYS
18	AS	72	GLY
23	AY	111	SER
23	AY	203	GLU
23	AY	266	ASN
23	AY	381	LYS
23	AY	417	THR
23	AY	497	PHE
23	AY	577	SER

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Mol	Chain	Res	Type
23	AY	653	PHE
25	BC	69	LEU
25	BC	77	ALA
25	BC	119	ASP
26	BD	48	ARG
26	BD	100	GLY
26	BD	110	GLY
26	BD	200	ASP
26	BD	260	ARG
27	BE	18	ASP
27	BE	123	ALA
27	BE	193	GLY
28	BF	52	LYS
28	BF	58	ALA
28	BF	66	PRO
28	BF	105	VAL
29	BG	82	LEU
29	BG	84	LYS
30	BH	92	ILE
30	BH	137	ASP
32	BK	15	GLY
32	BK	89	HIS
33	BO	28	SER
33	BO	91	LEU
34	BP	17	LYS
34	BP	28	GLY
34	BP	148	LEU
35	BQ	2	LEU
35	BQ	101	ARG
35	BQ	111	GLU
35	BQ	134	ARG
37	BS	47	THR
37	BS	94	TYR
38	BT	2	ASN
38	BT	3	ARG
38	BT	29	ARG
38	BT	70	VAL
38	BT	137	LYS
39	BU	30	LYS
40	BV	27	ALA
40	BV	42	GLY
40	BV	44	LYS

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Mol	Chain	Res	Type
41	BW	12	ILE
42	BX	4	ALA
42	BX	12	VAL
42	BX	33	LYS
43	BY	17	SER
43	BY	18	GLY
43	BY	29	GLU
43	BY	60	PHE
43	BY	80	GLY
44	BZ	53	ILE
44	BZ	108	PRO
44	BZ	152	ALA
44	BZ	166	SER
44	BZ	168	GLU
44	BZ	169	GLU
45	B0	33	ALA
46	B1	10	LYS
46	B1	15	ALA
46	B1	19	GLN
46	B1	23	LYS
46	B1	28	GLY
46	B1	40	ARG
46	B1	87	PRO
47	B4	7	PRO
48	BN	67	LEU
48	BN	127	ASP
50	B3	16	PRO
53	B7	45	ALA
54	B8	30	ARG
54	B8	64	TYR
56	Be	114	LYS
1	CB	191	ASP
1	CB	230	VAL
1	CB	235	SER
1	CB	237	ALA
2	CC	85	ARG
2	CC	96	GLY
2	CC	112	SER
2	CC	180	ALA
3	CD	28	SER
4	CE	73	ASN
4	CE	78	HIS

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Mol	Chain	Res	Type
5	CF	70	ASP
5	CF	96	PRO
6	CG	7	ALA
6	CG	19	GLY
6	CG	37	ASN
7	CH	2	LEU
7	CH	72	PRO
7	CH	76	PRO
7	CH	107	LEU
8	CI	35	GLU
8	CI	58	ARG
9	CJ	37	PRO
10	CK	15	ALA
11	CL	23	LYS
11	CL	36	VAL
11	CL	51	ALA
11	CL	56	ALA
11	CL	79	GLU
13	CN	13	THR
14	CO	16	ALA
14	CO	23	GLY
15	CP	28	ARG
15	CP	43	LYS
16	CQ	12	SER
18	CS	15	LEU
18	CS	55	LYS
18	CS	67	VAL
18	CS	80	TYR
23	CY	74	TRP
23	CY	138	LYS
23	CY	204	GLU
23	CY	234	GLY
23	CY	359	HIS
23	CY	417	THR
23	CY	520	GLY
23	CY	521	SER
23	CY	525	PHE
23	CY	632	LEU
23	CY	653	PHE
23	CY	680	PRO
23	CY	681	LYS
25	DC	3	LYS

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Mol	Chain	Res	Type
25	DC	139	PRO
25	DC	164	PHE
26	DD	43	ARG
26	DD	48	ARG
26	DD	89	SER
26	DD	123	ALA
26	DD	147	LEU
26	DD	222	ARG
26	DD	246	PRO
27	DE	67	PHE
27	DE	75	VAL
27	DE	86	PRO
27	DE	122	PHE
27	DE	179	GLU
27	DE	192	ASN
28	DF	7	TYR
28	DF	14	PRO
28	DF	60	SER
28	DF	133	ASN
28	DF	150	GLY
29	DG	27	ASN
29	DG	35	GLU
29	DG	43	LEU
29	DG	66	GLN
29	DG	84	LYS
29	DG	147	ASP
29	DG	166	ASP
30	DH	47	GLU
30	DH	118	PRO
30	DH	155	SER
30	DH	160	LYS
32	DK	116	ASN
33	DO	5	GLN
33	DO	26	LYS
33	DO	64	ARG
34	DP	31	ALA
34	DP	43	GLY
34	DP	49	ARG
35	DQ	2	LEU
35	DQ	102	VAL
35	DQ	135	ASP
36	DR	40	LYS

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Mol	Chain	Res	Type
36	DR	62	ALA
37	DS	24	LEU
37	DS	83	LYS
37	DS	94	TYR
38	DT	3	ARG
38	DT	27	THR
39	DU	23	GLY
40	DV	27	ALA
40	DV	29	PRO
40	DV	78	LYS
41	DW	12	ILE
42	DX	4	ALA
42	DX	32	PRO
42	DX	33	LYS
43	DY	29	GLU
43	DY	88	LYS
44	DZ	29	TYR
44	DZ	166	SER
46	D1	10	LYS
46	D1	20	ARG
46	D1	23	LYS
46	D1	34	THR
46	D1	65	SER
46	D1	87	PRO
47	D4	2	LYS
48	DN	67	LEU
48	DN	127	ASP
49	D2	3	LEU
49	D2	17	SER
51	D5	3	LYS
52	D6	48	VAL
53	D7	9	ARG
53	D7	42	LEU
54	D8	18	ALA
54	D8	30	ARG
54	D8	48	PHE
54	D8	51	ALA
54	D8	64	TYR
56	De	119	GLY
1	AB	66	GLY
1	AB	70	PHE
1	AB	95	GLN

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Mol	Chain	Res	Type
1	AB	158	LEU
1	AB	170	GLU
2	AC	158	GLY
2	AC	160	ALA
3	AD	142	PRO
3	AD	143	GLY
3	AD	149	ALA
5	AF	96	PRO
6	AG	112	PRO
7	AH	80	ILE
7	AH	103	VAL
7	AH	127	LEU
8	AI	35	GLU
8	AI	127	LYS
9	AJ	91	PRO
10	AK	36	ASP
10	AK	102	GLY
10	AK	123	LYS
11	AL	22	SER
11	AL	40	VAL
11	AL	41	ARG
11	AL	69	TYR
11	AL	112	ASP
11	AL	119	LYS
13	AN	13	THR
14	AO	16	ALA
16	AQ	7	THR
16	AQ	12	SER
17	AR	32	ARG
17	AR	59	SER
19	AT	105	SER
23	AY	38	ARG
23	AY	50	ALA
23	AY	89	ASP
23	AY	234	GLY
23	AY	366	VAL
23	AY	519	ARG
23	AY	682	GLN
25	BC	167	ASP
25	BC	202	PRO
25	BC	212	SER
26	BD	24	ILE

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Mol	Chain	Res	Type
26	BD	28	GLU
26	BD	80	ALA
27	BE	17	ASP
27	BE	33	VAL
27	BE	34	VAL
27	BE	69	LYS
28	BF	45	ARG
28	BF	60	SER
28	BF	178	PRO
29	BG	16	ARG
29	BG	35	GLU
29	BG	142	PRO
30	BH	124	GLU
30	BH	155	SER
32	BK	30	HIS
32	BK	109	LYS
33	BO	13	ASN
34	BP	9	ASN
34	BP	43	GLY
35	BQ	54	MET
36	BR	8	ARG
36	BR	10	LEU
36	BR	57	ARG
36	BR	102	GLU
37	BS	24	LEU
37	BS	66	ALA
37	BS	67	ARG
37	BS	83	LYS
37	BS	93	LYS
37	BS	106	ARG
38	BT	80	SER
38	BT	86	ILE
38	BT	107	ASP
39	BU	90	VAL
39	BU	92	ARG
40	BV	53	GLU
40	BV	80	GLN
41	BW	75	TYR
43	BY	35	TYR
43	BY	81	LYS
43	BY	88	LYS
43	BY	101	LYS

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Mol	Chain	Res	Type
44	BZ	23	LYS
44	BZ	30	ASN
46	B1	25	LYS
48	BN	23	LEU
49	B2	18	PRO
51	B5	51	TYR
51	B5	56	LYS
52	B6	31	PRO
52	B6	49	HIS
53	B7	15	THR
54	B8	53	PRO
1	CB	129	GLU
1	CB	229	VAL
2	CC	26	LYS
2	CC	35	GLU
2	CC	51	GLY
3	CD	47	ARG
3	CD	73	ARG
4	CE	70	PRO
8	CI	87	GLN
8	CI	127	LYS
9	CJ	59	SER
10	CK	36	ASP
10	CK	105	VAL
11	CL	22	SER
12	CM	5	ALA
12	CM	11	ARG
12	CM	70	LEU
13	CN	24	CYS
16	CQ	82	MET
17	CR	59	SER
18	CS	40	ILE
19	CT	49	ALA
23	CY	89	ASP
23	CY	181	LEU
23	CY	615	GLU
23	CY	628	ARG
23	CY	648	PRO
23	CY	649	LEU
23	CY	670	VAL
25	DC	37	LYS
25	DC	53	ARG

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Mol	Chain	Res	Type
25	DC	77	ALA
25	DC	143	ALA
25	DC	171	ALA
26	DD	28	GLU
26	DD	44	ASN
26	DD	110	GLY
26	DD	122	ASP
26	DD	260	ARG
27	DE	35	GLN
27	DE	123	ALA
28	DF	52	LYS
28	DF	66	PRO
28	DF	78	ILE
28	DF	92	PRO
30	DH	59	ARG
30	DH	107	VAL
32	DK	30	HIS
32	DK	51	ALA
32	DK	85	GLU
32	DK	122	ALA
33	DO	28	SER
34	DP	46	LYS
34	DP	48	PRO
34	DP	76	LYS
34	DP	97	PRO
34	DP	107	LYS
34	DP	141	ALA
35	DQ	28	ALA
35	DQ	126	PRO
37	DS	58	LEU
37	DS	82	ILE
37	DS	93	LYS
37	DS	106	ARG
38	DT	55	ASN
38	DT	78	LEU
39	DU	24	TYR
39	DU	88	ILE
39	DU	98	LEU
40	DV	53	GLU
41	DW	15	ARG
41	DW	61	ASN
42	DX	24	GLY

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Mol	Chain	Res	Type
43	DY	18	GLY
43	DY	81	LYS
44	DZ	30	ASN
44	DZ	34	ASN
45	D0	35	ASN
46	D1	12	PRO
46	D1	36	GLY
46	D1	40	ARG
46	D1	44	PRO
46	D1	63	ALA
46	D1	94	LEU
48	DN	23	LEU
50	D3	16	PRO
51	D5	7	PRO
51	D5	24	ALA
55	D9	3	VAL
56	De	78	LEU
1	AB	101	MET
2	AC	130	VAL
2	AC	181	ASN
6	AG	4	ARG
6	AG	5	ARG
7	AH	26	VAL
7	AH	72	PRO
7	AH	106	GLY
8	AI	112	LYS
11	AL	8	ASN
11	AL	23	LYS
11	AL	93	LEU
12	AM	10	PRO
12	AM	21	TYR
12	AM	108	ARG
15	AP	16	HIS
15	AP	82	GLN
16	AQ	73	VAL
18	AS	80	TYR
23	AY	145	ASP
23	AY	228	MET
23	AY	379	GLY
23	AY	404	VAL
23	AY	632	LEU
23	AY	660	ARG

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Mol	Chain	Res	Type
23	AY	671	MET
25	BC	71	LYS
25	BC	136	GLY
25	BC	139	PRO
25	BC	180	SER
25	BC	224	ARG
26	BD	233	HIS
26	BD	259	THR
27	BE	122	PHE
28	BF	25	PRO
30	BH	59	ARG
32	BK	51	ALA
32	BK	90	LYS
32	BK	122	ALA
33	BO	34	THR
34	BP	12	ALA
34	BP	38	GLN
34	BP	49	ARG
36	BR	4	LEU
36	BR	32	GLY
36	BR	38	VAL
36	BR	61	HIS
37	BS	82	ILE
38	BT	55	ASN
39	BU	102	GLU
40	BV	48	GLY
40	BV	81	TYR
41	BW	15	ARG
41	BW	65	LEU
42	BX	23	GLU
44	BZ	83	PRO
45	B0	6	GLY
45	B0	11	ARG
46	B1	22	GLY
46	B1	63	ALA
48	BN	3	THR
49	B2	17	SER
49	B2	70	GLN
52	B6	6	ARG
52	B6	20	ASN
1	CB	128	GLU
1	CB	130	ARG

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Mol	Chain	Res	Type
2	CC	61	ALA
4	CE	74	GLY
5	CF	38	GLU
6	CG	31	MET
7	CH	80	ILE
7	CH	103	VAL
7	CH	120	THR
11	CL	12	ARG
11	CL	93	LEU
11	CL	112	ASP
11	CL	127	GLU
12	CM	124	PRO
13	CN	3	ARG
14	CO	6	GLU
14	CO	88	ARG
15	CP	46	PRO
16	CQ	14	LYS
23	CY	14	ASN
23	CY	294	PRO
25	DC	22	THR
25	DC	60	ARG
25	DC	76	LEU
25	DC	122	GLY
25	DC	202	PRO
26	DD	53	PHE
26	DD	90	ALA
26	DD	109	ASP
26	DD	198	ASN
26	DD	225	ALA
26	DD	242	ARG
27	DE	178	GLU
28	DF	24	LEU
32	DK	33	ASN
32	DK	89	HIS
32	DK	90	LYS
34	DP	9	ASN
34	DP	13	ASN
34	DP	17	LYS
36	DR	93	GLY
36	DR	101	ALA
36	DR	103	ARG
37	DS	85	VAL

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Mol	Chain	Res	Type
38	DT	31	SER
38	DT	70	VAL
38	DT	87	ASP
38	DT	90	GLN
39	DU	92	ARG
39	DU	106	PHE
41	DW	65	LEU
43	DY	50	ARG
43	DY	60	PHE
43	DY	91	GLU
44	DZ	31	ARG
44	DZ	82	ARG
44	DZ	83	PRO
45	D0	33	ALA
48	DN	3	THR
51	D5	49	CYS
52	D6	6	ARG
52	D6	20	ASN
52	D6	31	PRO
55	D9	21	GLY
2	AC	46	GLU
4	AE	22	GLY
6	AG	7	ALA
14	AO	88	ARG
16	AQ	64	PRO
17	AR	28	GLU
18	AS	30	LEU
18	AS	40	ILE
23	AY	121	VAL
23	AY	506	GLN
25	BC	13	GLU
25	BC	22	THR
25	BC	122	GLY
25	BC	171	ALA
25	BC	204	GLY
27	BE	155	LYS
28	BF	78	ILE
29	BG	151	ALA
30	BH	48	GLY
36	BR	63	ARG
37	BS	85	VAL
37	BS	108	GLY

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Mol	Chain	Res	Type
38	BT	31	SER
46	B1	12	PRO
48	BN	110	GLY
51	B5	49	CYS
52	B6	26	ASN
55	B9	3	VAL
56	Be	82	THR
3	CD	75	PHE
5	CF	14	LEU
5	CF	43	LEU
6	CG	18	TYR
6	CG	88	PRO
8	CI	89	ASN
11	CL	69	TYR
12	CM	74	VAL
23	CY	296	GLY
23	CY	493	VAL
25	DC	18	ASN
25	DC	150	ILE
26	DD	98	VAL
26	DD	154	LYS
26	DD	232	PRO
32	DK	21	PRO
32	DK	91	PRO
36	DR	10	LEU
39	DU	59	ARG
40	DV	80	GLN
41	DW	63	ASP
41	DW	80	PRO
44	DZ	39	VAL
46	D1	21	ARG
48	DN	110	GLY
51	D5	57	VAL
1	AB	130	ARG
2	AC	96	GLY
6	AG	120	ILE
11	AL	82	VAL
23	AY	257	PRO
23	AY	384	ILE
23	AY	444	PRO
23	AY	487	ILE
25	BC	215	VAL

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Mol	Chain	Res	Type
26	BD	42	GLY
27	BE	14	ILE
32	BK	72	PRO
35	BQ	27	VAL
36	BR	58	GLY
44	BZ	39	VAL
48	BN	77	GLY
51	B5	7	PRO
53	B7	46	VAL
2	CC	74	GLY
3	CD	29	PRO
12	CM	100	GLY
14	CO	27	VAL
23	CY	158	GLY
23	CY	384	ILE
23	CY	535	PRO
25	DC	136	GLY
26	DD	256	GLY
32	DK	72	PRO
34	DP	69	GLY
35	DQ	27	VAL
41	DW	14	PRO
43	DY	42	VAL
48	DN	77	GLY
52	D6	7	ILE
53	D7	46	VAL
7	AH	73	ASP
10	AK	88	GLY
18	AS	68	GLY
23	AY	42	ILE
23	AY	189	GLY
23	AY	520	GLY
26	BD	106	ILE
26	BD	232	PRO
28	BF	24	LEU
40	BV	41	GLY
43	BY	74	PRO
2	CC	80	GLY
3	CD	88	VAL
3	CD	140	VAL
7	CH	75	ARG
12	CM	4	ILE

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Mol	Chain	Res	Type
23	CY	444	PRO
25	DC	42	VAL
25	DC	81	GLY
27	DE	14	ILE
28	DF	88	VAL
29	DG	24	GLY
30	DH	49	VAL
40	DV	48	GLY
2	AC	73	PRO
6	AG	19	GLY
7	AH	97	VAL
23	AY	508	GLY
29	BG	28	VAL
29	BG	85	GLY
43	BY	49	VAL
43	BY	66	PRO
52	B6	48	VAL
1	CB	66	GLY
10	CK	14	VAL
10	CK	35	PRO
18	CS	72	GLY
23	CY	366	VAL
26	DD	244	ARG
26	DD	249	PRO
27	DE	134	ILE
28	DF	178	PRO
32	DK	55	VAL
34	DP	78	PRO
38	DT	34	VAL
39	DU	73	GLY
43	DY	74	PRO
44	DZ	90	VAL
11	AL	58	VAL
12	AM	100	GLY
23	AY	680	PRO
25	BC	49	GLY
25	BC	150	ILE
26	BD	246	PRO
28	BF	61	GLY
28	BF	150	GLY
34	BP	97	PRO
42	BX	7	VAL

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Mol	Chain	Res	Type
42	BX	52	VAL
47	B4	5	ILE
51	B5	57	VAL
4	CE	85	GLY
11	CL	82	VAL
11	CL	83	VAL
23	CY	42	ILE
23	CY	530	VAL
25	DC	20	VAL
28	DF	61	GLY
29	DG	16	ARG
37	DS	60	GLY
39	DU	102	GLU
13	AN	18	VAL
43	BY	98	VAL
23	CY	436	PRO
46	D1	29	GLY
48	BN	126	PRO
48	DN	126	PRO
34	BP	48	PRO

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	AB	203/203 (100%)	158 (78%)	45 (22%)	1 6
1	CB	203/203 (100%)	168 (83%)	35 (17%)	2 12
2	AC	161/161 (100%)	123 (76%)	38 (24%)	1 5
2	CC	161/161 (100%)	120 (74%)	41 (26%)	0 4
3	AD	180/180 (100%)	141 (78%)	39 (22%)	1 6
3	CD	180/180 (100%)	146 (81%)	34 (19%)	1 10
4	AE	116/116 (100%)	91 (78%)	25 (22%)	1 6
4	CE	116/116 (100%)	93 (80%)	23 (20%)	1 9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
5	AF	90/90 (100%)	72 (80%)	18 (20%)	1 9
5	CF	90/90 (100%)	73 (81%)	17 (19%)	1 10
6	AG	126/126 (100%)	110 (87%)	16 (13%)	4 20
6	CG	126/126 (100%)	106 (84%)	20 (16%)	2 14
7	AH	119/119 (100%)	93 (78%)	26 (22%)	1 6
7	CH	119/119 (100%)	99 (83%)	20 (17%)	2 13
8	AI	98/98 (100%)	76 (78%)	22 (22%)	1 6
8	CI	98/98 (100%)	82 (84%)	16 (16%)	2 14
9	AJ	89/89 (100%)	68 (76%)	21 (24%)	1 5
9	CJ	89/89 (100%)	71 (80%)	18 (20%)	1 8
10	AK	90/90 (100%)	72 (80%)	18 (20%)	1 9
10	CK	90/90 (100%)	79 (88%)	11 (12%)	5 21
11	AL	104/104 (100%)	73 (70%)	31 (30%)	0 2
11	CL	104/104 (100%)	77 (74%)	27 (26%)	0 3
12	AM	100/100 (100%)	81 (81%)	19 (19%)	1 10
12	CM	100/100 (100%)	84 (84%)	16 (16%)	2 14
13	AN	49/49 (100%)	39 (80%)	10 (20%)	1 8
13	CN	49/49 (100%)	40 (82%)	9 (18%)	1 11
14	AO	79/79 (100%)	60 (76%)	19 (24%)	1 4
14	CO	79/79 (100%)	62 (78%)	17 (22%)	1 6
15	AP	72/72 (100%)	58 (81%)	14 (19%)	1 9
15	CP	72/72 (100%)	58 (81%)	14 (19%)	1 9
16	AQ	95/95 (100%)	74 (78%)	21 (22%)	1 6
16	CQ	95/95 (100%)	79 (83%)	16 (17%)	2 13
17	AR	61/61 (100%)	49 (80%)	12 (20%)	1 9
17	CR	61/61 (100%)	49 (80%)	12 (20%)	1 9
18	AS	69/69 (100%)	49 (71%)	20 (29%)	0 2
18	CS	69/69 (100%)	52 (75%)	17 (25%)	1 4
19	AT	76/76 (100%)	66 (87%)	10 (13%)	4 19
19	CT	76/76 (100%)	67 (88%)	9 (12%)	5 21
23	AY	579/579 (100%)	460 (79%)	119 (21%)	1 8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
23	CY	579/579 (100%)	453 (78%)	126 (22%)	1 6
24	AU	2/2 (100%)	2 (100%)	0	100 100
24	CU	2/2 (100%)	2 (100%)	0	100 100
25	BC	180/180 (100%)	132 (73%)	48 (27%)	0 3
25	DC	180/180 (100%)	132 (73%)	48 (27%)	0 3
26	BD	217/217 (100%)	161 (74%)	56 (26%)	0 3
26	DD	217/217 (100%)	165 (76%)	52 (24%)	1 4
27	BE	165/165 (100%)	126 (76%)	39 (24%)	1 5
27	DE	165/165 (100%)	130 (79%)	35 (21%)	1 7
28	BF	165/165 (100%)	126 (76%)	39 (24%)	1 5
28	DF	165/165 (100%)	123 (74%)	42 (26%)	0 4
29	BG	155/155 (100%)	117 (76%)	38 (24%)	1 4
29	DG	155/155 (100%)	122 (79%)	33 (21%)	1 6
30	BH	136/136 (100%)	109 (80%)	27 (20%)	1 9
30	DH	136/136 (100%)	112 (82%)	24 (18%)	2 12
32	BK	105/105 (100%)	91 (87%)	14 (13%)	4 19
32	DK	105/105 (100%)	90 (86%)	15 (14%)	3 17
33	BO	100/100 (100%)	78 (78%)	22 (22%)	1 6
33	DO	100/100 (100%)	85 (85%)	15 (15%)	3 16
34	BP	112/112 (100%)	84 (75%)	28 (25%)	0 4
34	DP	112/112 (100%)	92 (82%)	20 (18%)	2 12
35	BQ	111/111 (100%)	83 (75%)	28 (25%)	0 4
35	DQ	111/111 (100%)	87 (78%)	24 (22%)	1 6
36	BR	100/100 (100%)	74 (74%)	26 (26%)	0 3
36	DR	100/100 (100%)	81 (81%)	19 (19%)	1 10
37	BS	77/77 (100%)	52 (68%)	25 (32%)	0 2
37	DS	77/77 (100%)	56 (73%)	21 (27%)	0 3
38	BT	120/120 (100%)	97 (81%)	23 (19%)	1 9
38	DT	120/120 (100%)	95 (79%)	25 (21%)	1 7
39	BU	93/93 (100%)	77 (83%)	16 (17%)	2 12
39	DU	93/93 (100%)	74 (80%)	19 (20%)	1 8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
40	BV	82/82 (100%)	62 (76%)	20 (24%)	1 4
40	DV	82/82 (100%)	61 (74%)	21 (26%)	0 4
41	BW	92/92 (100%)	72 (78%)	20 (22%)	1 6
41	DW	92/92 (100%)	72 (78%)	20 (22%)	1 6
42	BX	75/75 (100%)	59 (79%)	16 (21%)	1 6
42	DX	75/75 (100%)	62 (83%)	13 (17%)	2 12
43	BY	88/88 (100%)	67 (76%)	21 (24%)	1 5
43	DY	88/88 (100%)	69 (78%)	19 (22%)	1 6
44	BZ	162/162 (100%)	132 (82%)	30 (18%)	1 11
44	DZ	162/162 (100%)	123 (76%)	39 (24%)	1 4
45	B0	66/66 (100%)	56 (85%)	10 (15%)	3 15
45	D0	66/66 (100%)	55 (83%)	11 (17%)	2 13
46	B1	78/78 (100%)	62 (80%)	16 (20%)	1 8
46	D1	78/78 (100%)	54 (69%)	24 (31%)	0 2
47	B4	31/31 (100%)	20 (64%)	11 (36%)	0 1
47	D4	31/31 (100%)	24 (77%)	7 (23%)	1 5
48	BN	117/117 (100%)	101 (86%)	16 (14%)	3 18
48	DN	117/117 (100%)	101 (86%)	16 (14%)	3 18
49	B2	66/66 (100%)	55 (83%)	11 (17%)	2 13
49	D2	66/66 (100%)	57 (86%)	9 (14%)	3 18
50	B3	52/52 (100%)	44 (85%)	8 (15%)	2 15
50	D3	52/52 (100%)	42 (81%)	10 (19%)	1 9
51	B5	51/51 (100%)	43 (84%)	8 (16%)	2 15
51	D5	51/51 (100%)	40 (78%)	11 (22%)	1 6
52	B6	49/49 (100%)	35 (71%)	14 (29%)	0 2
52	D6	49/49 (100%)	35 (71%)	14 (29%)	0 2
53	B7	42/42 (100%)	39 (93%)	3 (7%)	13 40
53	D7	42/42 (100%)	36 (86%)	6 (14%)	3 17
54	B8	54/54 (100%)	39 (72%)	15 (28%)	0 3
54	D8	54/54 (100%)	43 (80%)	11 (20%)	1 8
55	B9	34/34 (100%)	27 (79%)	7 (21%)	1 8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
55	D9	34/34 (100%)	25 (74%)	9 (26%)	0 3
56	Be	54/54 (100%)	45 (83%)	9 (17%)	2 13
56	De	54/54 (100%)	46 (85%)	8 (15%)	3 16
All	All	11174/11174 (100%)	8829 (79%)	2345 (21%)	1 7

All (2345) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AB	7	VAL
1	AB	10	LEU
1	AB	12	GLU
1	AB	15	VAL
1	AB	17	PHE
1	AB	21	ARG
1	AB	32	ILE
1	AB	36	ARG
1	AB	40	HIS
1	AB	41	ILE
1	AB	45	GLN
1	AB	49	GLU
1	AB	69	LEU
1	AB	74	LYS
1	AB	79	ASP
1	AB	81	VAL
1	AB	94	ASN
1	AB	101	MET
1	AB	102	LEU
1	AB	104	ASN
1	AB	108	ILE
1	AB	110	GLN
1	AB	134	GLU
1	AB	141	GLU
1	AB	145	LEU
1	AB	154	LEU
1	AB	155	LEU
1	AB	162	ILE
1	AB	165	VAL
1	AB	168	THR
1	AB	169	LYS
1	AB	175	ARG
1	AB	178	ARG

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Mol	Chain	Res	Type
1	AB	185	ILE
1	AB	187	LEU
1	AB	189	ASP
1	AB	197	VAL
1	AB	201	ILE
1	AB	208	ILE
1	AB	212	GLN
1	AB	213	LEU
1	AB	221	LEU
1	AB	222	ILE
1	AB	230	VAL
1	AB	236	TYR
2	AC	4	LYS
2	AC	5	ILE
2	AC	15	THR
2	AC	20	SER
2	AC	21	ARG
2	AC	27	LYS
2	AC	39	ILE
2	AC	47	LEU
2	AC	48	TYR
2	AC	52	LEU
2	AC	55	VAL
2	AC	57	ILE
2	AC	67	THR
2	AC	68	VAL
2	AC	70	VAL
2	AC	76	VAL
2	AC	84	ILE
2	AC	86	VAL
2	AC	101	LEU
2	AC	102	ASN
2	AC	118	GLN
2	AC	119	ARG
2	AC	124	ILE
2	AC	125	GLU
2	AC	134	ILE
2	AC	136	GLN
2	AC	142	MET
2	AC	152	ILE
2	AC	154	SER
2	AC	157	ILE

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Mol	Chain	Res	Type
2	AC	164	ARG
2	AC	165	THR
2	AC	167	TRP
2	AC	176	HIS
2	AC	179	ARG
2	AC	181	ASN
2	AC	188	LEU
2	AC	204	LEU
3	AD	3	ARG
3	AD	5	ILE
3	AD	8	VAL
3	AD	9	CYS
3	AD	13	ARG
3	AD	21	LEU
3	AD	25	ARG
3	AD	28	SER
3	AD	30	LYS
3	AD	49	ARG
3	AD	50	ARG
3	AD	52	SER
3	AD	54	TYR
3	AD	56	VAL
3	AD	57	ARG
3	AD	58	LEU
3	AD	61	LYS
3	AD	63	LYS
3	AD	65	ARG
3	AD	67	ILE
3	AD	72	GLU
3	AD	83	SER
3	AD	86	LYS
3	AD	107	ARG
3	AD	108	LEU
3	AD	123	HIS
3	AD	127	THR
3	AD	134	ASP
3	AD	140	VAL
3	AD	144	ASP
3	AD	150	GLU
3	AD	154	ASN
3	AD	156	GLU
3	AD	165	MET

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Mol	Chain	Res	Type
3	AD	175	SER
3	AD	178	VAL
3	AD	187	ARG
3	AD	196	LEU
3	AD	200	GLU
4	AE	5	ASP
4	AE	10	MET
4	AE	12	LEU
4	AE	31	LEU
4	AE	33	VAL
4	AE	51	VAL
4	AE	53	LEU
4	AE	57	LYS
4	AE	61	TYR
4	AE	64	ARG
4	AE	73	ASN
4	AE	78	HIS
4	AE	80	ILE
4	AE	91	LEU
4	AE	92	LYS
4	AE	101	ILE
4	AE	107	ARG
4	AE	116	THR
4	AE	117	ASP
4	AE	118	ILE
4	AE	125	SER
4	AE	129	ILE
4	AE	139	LEU
4	AE	141	GLN
4	AE	155	GLU
5	AF	7	ASN
5	AF	16	GLN
5	AF	18	GLN
5	AF	22	GLU
5	AF	31	GLU
5	AF	37	VAL
5	AF	60	PHE
5	AF	61	LEU
5	AF	64	GLN
5	AF	65	VAL
5	AF	66	GLU
5	AF	69	GLU

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Mol	Chain	Res	Type
5	AF	74	ASP
5	AF	78	GLU
5	AF	83	ASP
5	AF	91	VAL
5	AF	95	GLU
5	AF	98	LEU
6	AG	11	GLN
6	AG	12	LEU
6	AG	21	VAL
6	AG	23	VAL
6	AG	24	THR
6	AG	32	ARG
6	AG	35	LYS
6	AG	36	LYS
6	AG	51	GLN
6	AG	56	GLN
6	AG	78	ARG
6	AG	80	VAL
6	AG	89	MET
6	AG	94	ARG
6	AG	104	LEU
6	AG	106	GLN
7	AH	3	THR
7	AH	8	ASP
7	AH	9	MET
7	AH	24	THR
7	AH	30	ARG
7	AH	31	PHE
7	AH	35	ILE
7	AH	37	ARG
7	AH	39	LEU
7	AH	49	GLU
7	AH	52	ASP
7	AH	59	LEU
7	AH	63	LEU
7	AH	69	ARG
7	AH	70	GLN
7	AH	73	ASP
7	AH	83	ILE
7	AH	95	VAL
7	AH	102	ARG
7	AH	103	VAL

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Mol	Chain	Res	Type
7	AH	107	LEU
7	AH	120	THR
7	AH	121	ASP
7	AH	133	LEU
7	AH	136	GLU
7	AH	137	VAL
8	AI	7	THR
8	AI	26	VAL
8	AI	28	VAL
8	AI	32	ASP
8	AI	34	ASN
8	AI	40	LEU
8	AI	66	ARG
8	AI	71	SER
8	AI	75	ASP
8	AI	79	LEU
8	AI	85	LEU
8	AI	86	VAL
8	AI	91	ASP
8	AI	93	ARG
8	AI	95	LYS
8	AI	97	LYS
8	AI	99	LEU
8	AI	109	VAL
8	AI	112	LYS
8	AI	121	ARG
8	AI	125	TYR
8	AI	126	SER
9	AJ	3	LYS
9	AJ	5	ARG
9	AJ	6	ILE
9	AJ	7	LYS
9	AJ	11	PHE
9	AJ	16	LEU
9	AJ	22	LYS
9	AJ	29	ARG
9	AJ	40	LEU
9	AJ	44	VAL
9	AJ	47	PHE
9	AJ	48	THR
9	AJ	49	VAL
9	AJ	50	ILE

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Mol	Chain	Res	Type
9	AJ	58	ASP
9	AJ	65	LEU
9	AJ	75	ILE
9	AJ	84	GLN
9	AJ	88	LEU
9	AJ	95	GLU
9	AJ	96	ILE
10	AK	18	ARG
10	AK	22	HIS
10	AK	29	ILE
10	AK	31	THR
10	AK	32	ILE
10	AK	51	LYS
10	AK	57	THR
10	AK	66	LEU
10	AK	75	TYR
10	AK	91	ARG
10	AK	96	ARG
10	AK	103	LEU
10	AK	107	SER
10	AK	108	ILE
10	AK	109	VAL
10	AK	114	VAL
10	AK	123	LYS
10	AK	124	LYS
11	AL	6	THR
11	AL	20	LYS
11	AL	22	SER
11	AL	24	VAL
11	AL	34	ARG
11	AL	38	THR
11	AL	39	VAL
11	AL	40	VAL
11	AL	42	THR
11	AL	44	THR
11	AL	49	ASN
11	AL	52	LEU
11	AL	53	ARG
11	AL	54	LYS
11	AL	55	VAL
11	AL	62	SER
11	AL	66	VAL

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Mol	Chain	Res	Type
11	AL	67	THR
11	AL	70	ILE
11	AL	83	VAL
11	AL	84	LEU
11	AL	86	ARG
11	AL	92	ASP
11	AL	96	VAL
11	AL	97	ARG
11	AL	104	VAL
11	AL	105	TYR
11	AL	110	VAL
11	AL	114	LYS
11	AL	122	THR
11	AL	126	LYS
12	AM	8	GLU
12	AM	17	VAL
12	AM	21	TYR
12	AM	27	LYS
12	AM	43	THR
12	AM	48	LEU
12	AM	50	GLU
12	AM	67	GLU
12	AM	69	GLU
12	AM	70	LEU
12	AM	78	ILE
12	AM	80	ARG
12	AM	82	MET
12	AM	86	CYS
12	AM	103	THR
12	AM	105	THR
12	AM	108	ARG
12	AM	121	LYS
12	AM	125	ARG
13	AN	4	LYS
13	AN	7	ILE
13	AN	21	TYR
13	AN	22	THR
13	AN	35	ARG
13	AN	40	CYS
13	AN	42	ILE
13	AN	56	VAL
13	AN	60	SER

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Mol	Chain	Res	Type
13	AN	61	TRP
14	AO	5	LYS
14	AO	9	GLN
14	AO	12	ILE
14	AO	15	PHE
14	AO	17	ARG
14	AO	26	GLU
14	AO	31	LEU
14	AO	34	LEU
14	AO	38	ARG
14	AO	39	LEU
14	AO	41	GLU
14	AO	43	LEU
14	AO	51	HIS
14	AO	56	LEU
14	AO	58	MET
14	AO	68	ARG
14	AO	74	ASP
14	AO	82	ILE
14	AO	85	LEU
15	AP	2	VAL
15	AP	20	VAL
15	AP	32	TYR
15	AP	36	ILE
15	AP	44	THR
15	AP	45	THR
15	AP	54	GLU
15	AP	68	ASP
15	AP	69	THR
15	AP	71	ARG
15	AP	72	ARG
15	AP	73	LEU
15	AP	75	ARG
15	AP	81	ARG
16	AQ	7	THR
16	AQ	13	ASP
16	AQ	16	GLN
16	AQ	22	LEU
16	AQ	26	GLN
16	AQ	27	PHE
16	AQ	31	LEU
16	AQ	36	ILE

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Mol	Chain	Res	Type
16	AQ	38	ARG
16	AQ	48	GLU
16	AQ	49	GLU
16	AQ	52	LYS
16	AQ	60	ILE
16	AQ	69	LYS
16	AQ	73	VAL
16	AQ	74	LEU
16	AQ	81	ARG
16	AQ	83	ASP
16	AQ	84	LEU
16	AQ	85	VAL
16	AQ	98	LEU
17	AR	26	LEU
17	AR	29	PHE
17	AR	34	TYR
17	AR	37	VAL
17	AR	38	GLU
17	AR	58	LEU
17	AR	72	ARG
17	AR	74	ARG
17	AR	76	LEU
17	AR	83	GLU
17	AR	85	LEU
17	AR	88	LYS
18	AS	5	LEU
18	AS	6	LYS
18	AS	9	VAL
18	AS	14	HIS
18	AS	20	LEU
18	AS	23	ASN
18	AS	30	LEU
18	AS	32	LYS
18	AS	33	THR
18	AS	34	TRP
18	AS	40	ILE
18	AS	44	MET
18	AS	58	VAL
18	AS	61	TYR
18	AS	62	ILE
18	AS	64	GLU
18	AS	66	MET

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Mol	Chain	Res	Type
18	AS	67	VAL
18	AS	77	THR
18	AS	81	ARG
19	AT	13	LEU
19	AT	24	LEU
19	AT	30	LYS
19	AT	36	LEU
19	AT	46	GLU
19	AT	55	ILE
19	AT	72	LEU
19	AT	73	HIS
19	AT	74	LYS
19	AT	93	GLU
23	AY	9	LEU
23	AY	12	LEU
23	AY	20	HIS
23	AY	22	ASP
23	AY	25	LYS
23	AY	26	THR
23	AY	29	THR
23	AY	30	GLU
23	AY	32	ILE
23	AY	33	LEU
23	AY	39	ILE
23	AY	40	HIS
23	AY	42	ILE
23	AY	45	VAL
23	AY	53	ASP
23	AY	60	GLU
23	AY	64	THR
23	AY	65	ILE
23	AY	66	THR
23	AY	72	CYS
23	AY	75	LYS
23	AY	77	HIS
23	AY	92	ILE
23	AY	98	MET
23	AY	106	VAL
23	AY	117	GLN
23	AY	118	SER
23	AY	121	VAL
23	AY	126	GLU

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Mol	Chain	Res	Type
23	AY	130	VAL
23	AY	132	ARG
23	AY	133	ILE
23	AY	137	ASN
23	AY	170	ARG
23	AY	174	PHE
23	AY	178	ILE
23	AY	187	THR
23	AY	197	ARG
23	AY	198	GLU
23	AY	199	ILE
23	AY	203	GLU
23	AY	211	GLU
23	AY	216	LEU
23	AY	224	ASP
23	AY	226	ASN
23	AY	230	LYS
23	AY	231	TYR
23	AY	232	LEU
23	AY	240	GLU
23	AY	250	THR
23	AY	259	PHE
23	AY	260	LEU
23	AY	271	LEU
23	AY	274	ASP
23	AY	277	VAL
23	AY	289	ILE
23	AY	299	VAL
23	AY	302	HIS
23	AY	312	LEU
23	AY	328	ILE
23	AY	330	VAL
23	AY	337	SER
23	AY	340	TYR
23	AY	348	ARG
23	AY	352	VAL
23	AY	355	LEU
23	AY	368	GLU
23	AY	381	LYS
23	AY	385	THR
23	AY	399	LEU
23	AY	404	VAL

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Mol	Chain	Res	Type
23	AY	408	VAL
23	AY	410	ASP
23	AY	413	ILE
23	AY	421	GLN
23	AY	424	LEU
23	AY	428	LEU
23	AY	430	ARG
23	AY	431	LEU
23	AY	437	THR
23	AY	438	PHE
23	AY	448	GLN
23	AY	449	THR
23	AY	451	ILE
23	AY	461	ILE
23	AY	465	ARG
23	AY	476	VAL
23	AY	481	VAL
23	AY	483	TYR
23	AY	492	ASP
23	AY	498	ILE
23	AY	500	GLN
23	AY	504	ARG
23	AY	517	LEU
23	AY	529	ILE
23	AY	530	VAL
23	AY	536	LYS
23	AY	542	VAL
23	AY	560	VAL
23	AY	563	ILE
23	AY	565	VAL
23	AY	567	LEU
23	AY	580	MET
23	AY	600	VAL
23	AY	610	VAL
23	AY	615	GLU
23	AY	624	LEU
23	AY	630	GLN
23	AY	631	ILE
23	AY	634	MET
23	AY	642	VAL
23	AY	647	VAL
23	AY	651	GLU

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Mol	Chain	Res	Type
23	AY	658	ASP
23	AY	669	PHE
23	AY	671	MET
23	AY	675	HIS
23	AY	681	LYS
23	AY	683	VAL
25	BC	6	LYS
25	BC	7	ARG
25	BC	9	ARG
25	BC	12	LEU
25	BC	13	GLU
25	BC	15	VAL
25	BC	19	LYS
25	BC	20	VAL
25	BC	24	ASP
25	BC	28	ARG
25	BC	31	LYS
25	BC	32	GLU
25	BC	37	LYS
25	BC	43	GLU
25	BC	44	VAL
25	BC	45	HIS
25	BC	47	LYS
25	BC	48	LEU
25	BC	53	ARG
25	BC	73	VAL
25	BC	74	ARG
25	BC	75	VAL
25	BC	76	LEU
25	BC	83	LYS
25	BC	85	LYS
25	BC	93	ASP
25	BC	95	VAL
25	BC	105	LEU
25	BC	106	ASP
25	BC	112	ASP
25	BC	115	VAL
25	BC	117	THR
25	BC	131	ILE
25	BC	132	LEU
25	BC	138	LEU
25	BC	150	ILE

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Mol	Chain	Res	Type
25	BC	161	ARG
25	BC	164	PHE
25	BC	167	ASP
25	BC	169	THR
25	BC	172	ILE
25	BC	176	VAL
25	BC	198	GLU
25	BC	210	LEU
25	BC	213	VAL
25	BC	214	TYR
25	BC	215	VAL
25	BC	216	THR
26	BD	4	LYS
26	BD	7	LYS
26	BD	24	ILE
26	BD	25	THR
26	BD	26	LYS
26	BD	28	GLU
26	BD	33	LEU
26	BD	43	ARG
26	BD	44	ASN
26	BD	49	ILE
26	BD	64	ILE
26	BD	65	ILE
26	BD	67	PHE
26	BD	71	ASP
26	BD	73	VAL
26	BD	75	ILE
26	BD	78	LYS
26	BD	82	ILE
26	BD	83	GLU
26	BD	91	ARG
26	BD	92	ILE
26	BD	94	LEU
26	BD	95	LEU
26	BD	96	HIS
26	BD	97	TYR
26	BD	105	ILE
26	BD	106	ILE
26	BD	112	GLN
26	BD	113	VAL
26	BD	115	GLN

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Mol	Chain	Res	Type
26	BD	117	VAL
26	BD	122	ASP
26	BD	131	LEU
26	BD	136	ILE
26	BD	142	VAL
26	BD	165	ILE
26	BD	169	GLU
26	BD	174	ILE
26	BD	177	LEU
26	BD	192	THR
26	BD	193	VAL
26	BD	200	ASP
26	BD	221	VAL
26	BD	226	MET
26	BD	230	ASP
26	BD	233	HIS
26	BD	239	ARG
26	BD	244	ARG
26	BD	252	TRP
26	BD	257	LEU
26	BD	259	THR
26	BD	261	LYS
26	BD	262	ARG
26	BD	263	ARG
26	BD	268	ARG
26	BD	271	ILE
27	BE	4	ILE
27	BE	9	VAL
27	BE	11	MET
27	BE	17	ASP
27	BE	35	GLN
27	BE	38	THR
27	BE	40	GLU
27	BE	44	TYR
27	BE	49	LEU
27	BE	59	VAL
27	BE	67	PHE
27	BE	83	ASP
27	BE	87	GLU
27	BE	89	ASP
27	BE	94	GLU
27	BE	96	PHE

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Mol	Chain	Res	Type
27	BE	101	ARG
27	BE	102	VAL
27	BE	109	LYS
27	BE	116	VAL
27	BE	127	ASP
27	BE	129	HIS
27	BE	132	HIS
27	BE	134	ILE
27	BE	136	ARG
27	BE	137	HIS
27	BE	146	THR
27	BE	154	LYS
27	BE	163	GLU
27	BE	164	ARG
27	BE	165	VAL
27	BE	172	VAL
27	BE	175	VAL
27	BE	184	VAL
27	BE	195	LEU
27	BE	196	VAL
27	BE	197	ILE
27	BE	199	ARG
27	BE	200	GLU
28	BF	4	VAL
28	BF	6	VAL
28	BF	8	GLN
28	BF	9	ILE
28	BF	12	LEU
28	BF	19	GLU
28	BF	24	LEU
28	BF	28	ILE
28	BF	32	LEU
28	BF	33	LEU
28	BF	40	GLN
28	BF	43	LYS
28	BF	45	ARG
28	BF	62	ARG
28	BF	64	ILE
28	BF	65	TRP
28	BF	74	ARG
28	BF	75	HIS
28	BF	82	ILE

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Mol	Chain	Res	Type
28	BF	89	VAL
28	BF	106	ARG
28	BF	125	LEU
28	BF	126	VAL
28	BF	136	THR
28	BF	137	LYS
28	BF	154	VAL
28	BF	155	LEU
28	BF	170	LEU
28	BF	172	TRP
28	BF	175	THR
28	BF	186	ILE
28	BF	188	ARG
28	BF	189	THR
28	BF	190	GLU
28	BF	192	LEU
28	BF	194	MET
28	BF	197	ASP
28	BF	201	VAL
28	BF	205	ARG
29	BG	5	VAL
29	BG	10	LYS
29	BG	11	TYR
29	BG	12	TYR
29	BG	16	ARG
29	BG	31	VAL
29	BG	34	LEU
29	BG	38	VAL
29	BG	39	ILE
29	BG	49	ASP
29	BG	55	LYS
29	BG	60	LEU
29	BG	63	ILE
29	BG	64	THR
29	BG	86	MET
29	BG	88	ILE
29	BG	92	VAL
29	BG	94	LEU
29	BG	98	ARG
29	BG	103	LEU
29	BG	105	LYS
29	BG	106	LEU

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Mol	Chain	Res	Type
29	BG	113	ARG
29	BG	130	ASN
29	BG	139	LEU
29	BG	141	PHE
29	BG	144	ILE
29	BG	145	THR
29	BG	147	ASP
29	BG	150	ASP
29	BG	152	LEU
29	BG	159	VAL
29	BG	164	GLU
29	BG	165	THR
29	BG	167	GLU
29	BG	168	GLU
29	BG	176	LEU
29	BG	181	ARG
30	BH	15	VAL
30	BH	17	VAL
30	BH	27	LYS
30	BH	34	GLU
30	BH	35	VAL
30	BH	37	VAL
30	BH	41	MET
30	BH	43	VAL
30	BH	44	VAL
30	BH	50	VAL
30	BH	51	ARG
30	BH	67	LEU
30	BH	71	LEU
30	BH	85	LYS
30	BH	86	GLU
30	BH	89	ILE
30	BH	97	ARG
30	BH	110	SER
30	BH	119	GLU
30	BH	129	THR
30	BH	138	LYS
30	BH	143	GLN
30	BH	147	ASN
30	BH	162	ILE
30	BH	167	GLU
30	BH	169	VAL

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Mol	Chain	Res	Type
30	BH	175	LYS
32	BK	2	LYS
32	BK	7	VAL
32	BK	34	ILE
32	BK	37	PHE
32	BK	41	PHE
32	BK	53	VAL
32	BK	59	ILE
32	BK	62	ASP
32	BK	78	ILE
32	BK	90	LYS
32	BK	99	ILE
32	BK	112	MET
32	BK	115	LEU
32	BK	126	MET
33	BO	3	GLN
33	BO	9	GLU
33	BO	24	VAL
33	BO	34	THR
33	BO	35	VAL
33	BO	39	ILE
33	BO	54	GLU
33	BO	58	VAL
33	BO	62	VAL
33	BO	67	LYS
33	BO	68	GLU
33	BO	69	ILE
33	BO	77	ILE
33	BO	80	ASP
33	BO	82	ASN
33	BO	88	ASN
33	BO	89	ASN
33	BO	91	LEU
33	BO	107	ARG
33	BO	108	GLU
33	BO	114	ILE
33	BO	117	LEU
34	BP	7	ARG
34	BP	9	ASN
34	BP	15	ARG
34	BP	27	HIS
34	BP	32	THR

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Mol	Chain	Res	Type
34	BP	38	GLN
34	BP	39	LYS
34	BP	42	SER
34	BP	46	LYS
34	BP	55	ARG
34	BP	57	THR
34	BP	60	MET
34	BP	74	GLU
34	BP	77	ARG
34	BP	83	VAL
34	BP	85	LEU
34	BP	86	LYS
34	BP	98	GLU
34	BP	106	LEU
34	BP	107	LYS
34	BP	108	LYS
34	BP	110	TYR
34	BP	111	ARG
34	BP	123	LEU
34	BP	125	VAL
34	BP	135	LEU
34	BP	138	LEU
34	BP	146	VAL
35	BQ	3	MET
35	BQ	6	ARG
35	BQ	7	MET
35	BQ	8	LYS
35	BQ	17	LEU
35	BQ	26	TYR
35	BQ	31	ASP
35	BQ	34	LEU
35	BQ	42	ILE
35	BQ	43	THR
35	BQ	45	GLN
35	BQ	46	GLN
35	BQ	56	ARG
35	BQ	60	ARG
35	BQ	66	ILE
35	BQ	68	ILE
35	BQ	90	VAL
35	BQ	93	TYR
35	BQ	96	VAL

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Mol	Chain	Res	Type
35	BQ	101	ARG
35	BQ	103	MET
35	BQ	115	MET
35	BQ	116	GLU
35	BQ	125	LEU
35	BQ	128	LYS
35	BQ	131	ILE
35	BQ	135	ASP
35	BQ	139	GLU
36	BR	2	ARG
36	BR	3	HIS
36	BR	4	LEU
36	BR	10	LEU
36	BR	15	SER
36	BR	22	ARG
36	BR	23	ASN
36	BR	24	GLN
36	BR	28	LEU
36	BR	29	LEU
36	BR	44	LEU
36	BR	45	ARG
36	BR	60	LEU
36	BR	68	ARG
36	BR	69	ASP
36	BR	71	GLN
36	BR	76	VAL
36	BR	80	PHE
36	BR	81	ASP
36	BR	99	LYS
36	BR	100	LEU
36	BR	102	GLU
36	BR	107	ASP
36	BR	111	LEU
36	BR	113	LEU
36	BR	115	GLU
37	BS	12	PHE
37	BS	13	ARG
37	BS	15	ARG
37	BS	18	ILE
37	BS	20	ARG
37	BS	23	ARG
37	BS	28	VAL

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Mol	Chain	Res	Type
37	BS	35	ILE
37	BS	39	ILE
37	BS	40	ILE
37	BS	42	ASP
37	BS	47	THR
37	BS	48	LEU
37	BS	53	SER
37	BS	54	LEU
37	BS	62	LYS
37	BS	71	ARG
37	BS	82	ILE
37	BS	85	VAL
37	BS	89	ARG
37	BS	98	VAL
37	BS	99	LYS
37	BS	101	LEU
37	BS	103	GLU
37	BS	106	ARG
38	BT	11	GLU
38	BT	13	ARG
38	BT	23	ARG
38	BT	27	THR
38	BT	30	VAL
38	BT	33	LYS
38	BT	34	VAL
38	BT	42	ILE
38	BT	46	GLU
38	BT	50	ILE
38	BT	54	ARG
38	BT	61	PHE
38	BT	63	VAL
38	BT	65	LYS
38	BT	70	VAL
38	BT	74	ARG
38	BT	78	LEU
38	BT	79	HIS
38	BT	82	LEU
38	BT	84	GLN
38	BT	110	ILE
38	BT	114	LEU
38	BT	132	LYS
39	BU	11	ARG

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Mol	Chain	Res	Type
39	BU	14	HIS
39	BU	16	LYS
39	BU	20	LEU
39	BU	28	ARG
39	BU	33	ARG
39	BU	38	THR
39	BU	51	LYS
39	BU	55	ARG
39	BU	74	LEU
39	BU	91	ASP
39	BU	97	ASP
39	BU	101	ARG
39	BU	108	GLU
39	BU	111	GLU
39	BU	114	LYS
40	BV	7	THR
40	BV	10	LYS
40	BV	14	VAL
40	BV	18	LEU
40	BV	19	LYS
40	BV	21	ARG
40	BV	25	LEU
40	BV	26	ASP
40	BV	33	VAL
40	BV	37	VAL
40	BV	39	LEU
40	BV	40	LEU
40	BV	43	GLU
40	BV	57	VAL
40	BV	60	GLU
40	BV	61	VAL
40	BV	74	LYS
40	BV	79	VAL
40	BV	88	ARG
40	BV	99	ILE
41	BW	11	ARG
41	BW	13	SER
41	BW	15	ARG
41	BW	19	LEU
41	BW	25	ARG
41	BW	27	LYS
41	BW	30	GLU

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Mol	Chain	Res	Type
41	BW	40	ASN
41	BW	46	PHE
41	BW	49	LYS
41	BW	51	LEU
41	BW	66	GLU
41	BW	86	LEU
41	BW	94	ASP
41	BW	95	ILE
41	BW	96	ILE
41	BW	100	THR
41	BW	103	ILE
41	BW	107	LEU
41	BW	113	LYS
42	BX	6	ASP
42	BX	8	ILE
42	BX	27	THR
42	BX	28	PHE
42	BX	35	THR
42	BX	55	ASN
42	BX	57	LEU
42	BX	58	HIS
42	BX	63	LYS
42	BX	70	LEU
42	BX	76	ARG
42	BX	82	GLN
42	BX	88	LYS
42	BX	92	LEU
42	BX	93	GLU
42	BX	95	LEU
43	BY	2	ARG
43	BY	5	MET
43	BY	6	HIS
43	BY	9	LYS
43	BY	13	VAL
43	BY	14	LEU
43	BY	19	LYS
43	BY	29	GLU
43	BY	31	LEU
43	BY	33	LYS
43	BY	38	ILE
43	BY	44	ILE
43	BY	45	VAL

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Mol	Chain	Res	Type
43	BY	49	VAL
43	BY	50	ARG
43	BY	75	ILE
43	BY	89	PHE
43	BY	90	LEU
43	BY	91	GLU
43	BY	97	ARG
43	BY	102	CYS
44	BZ	5	LEU
44	BZ	6	LYS
44	BZ	11	GLU
44	BZ	28	MET
44	BZ	29	TYR
44	BZ	35	ARG
44	BZ	42	VAL
44	BZ	46	LYS
44	BZ	59	LEU
44	BZ	61	LEU
44	BZ	71	VAL
44	BZ	81	ARG
44	BZ	86	VAL
44	BZ	97	GLU
44	BZ	100	VAL
44	BZ	120	ILE
44	BZ	123	ASP
44	BZ	124	ILE
44	BZ	126	VAL
44	BZ	127	LYS
44	BZ	133	ILE
44	BZ	141	VAL
44	BZ	144	LEU
44	BZ	145	GLU
44	BZ	148	ASP
44	BZ	150	LEU
44	BZ	156	LYS
44	BZ	162	GLU
44	BZ	175	VAL
44	BZ	181	GLU
45	B0	20	ARG
45	B0	27	GLU
45	B0	37	LEU
45	B0	43	THR

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Mol	Chain	Res	Type
45	B0	57	PHE
45	B0	58	THR
45	B0	59	LEU
45	B0	64	ASP
45	B0	68	GLU
45	B0	81	VAL
46	B1	5	CYS
46	B1	17	SER
46	B1	23	LYS
46	B1	26	ARG
46	B1	32	LYS
46	B1	39	LYS
46	B1	41	ARG
46	B1	42	GLN
46	B1	46	LEU
46	B1	50	ARG
46	B1	57	GLU
46	B1	58	ILE
46	B1	61	ARG
46	B1	82	LEU
46	B1	83	GLU
46	B1	90	ILE
47	B4	6	HIS
47	B4	8	LYS
47	B4	9	LEU
47	B4	10	VAL
47	B4	14	ILE
47	B4	23	GLU
47	B4	28	LYS
47	B4	30	GLU
47	B4	31	ILE
47	B4	32	TYR
47	B4	33	VAL
48	BN	1	MET
48	BN	7	LYS
48	BN	32	THR
48	BN	42	TRP
48	BN	45	ASN
48	BN	48	MET
48	BN	50	ASP
48	BN	71	ILE
48	BN	87	LEU

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Mol	Chain	Res	Type
48	BN	89	LYS
48	BN	99	LEU
48	BN	111	PRO
48	BN	112	LEU
48	BN	131	GLN
48	BN	137	LYS
48	BN	138	LEU
49	B2	8	LYS
49	B2	30	ARG
49	B2	34	GLU
49	B2	35	LEU
49	B2	37	PHE
49	B2	45	SER
49	B2	47	ASN
49	B2	51	ARG
49	B2	53	LEU
49	B2	64	LEU
49	B2	69	ARG
50	B3	8	LEU
50	B3	9	VAL
50	B3	29	ARG
50	B3	31	LEU
50	B3	37	LEU
50	B3	53	LEU
50	B3	54	VAL
50	B3	60	GLU
51	B5	3	LYS
51	B5	4	HIS
51	B5	13	LYS
51	B5	15	ARG
51	B5	23	HIS
51	B5	44	THR
51	B5	55	ARG
51	B5	58	LEU
52	B6	6	ARG
52	B6	9	LEU
52	B6	11	LEU
52	B6	15	GLU
52	B6	18	ARG
52	B6	19	ARG
52	B6	27	LYS
52	B6	29	ASN

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Mol	Chain	Res	Type
52	B6	34	LEU
52	B6	39	TYR
52	B6	47	THR
52	B6	48	VAL
52	B6	49	HIS
52	B6	51	GLU
53	B7	40	TRP
53	B7	42	LEU
53	B7	46	VAL
54	B8	14	VAL
54	B8	15	LYS
54	B8	16	ILE
54	B8	17	THR
54	B8	26	LYS
54	B8	27	THR
54	B8	31	HIS
54	B8	34	TRP
54	B8	36	LYS
54	B8	42	ARG
54	B8	46	ARG
54	B8	52	LYS
54	B8	59	LYS
54	B8	61	LEU
54	B8	62	LEU
55	B9	14	CYS
55	B9	17	ILE
55	B9	19	ARG
55	B9	20	HIS
55	B9	24	TYR
55	B9	28	GLU
55	B9	35	ARG
56	Be	62	VAL
56	Be	77	GLU
56	Be	78	LEU
56	Be	90	LYS
56	Be	91	ASP
56	Be	94	GLU
56	Be	99	VAL
56	Be	106	GLN
56	Be	118	VAL
1	CB	7	VAL
1	CB	15	VAL

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Mol	Chain	Res	Type
1	CB	17	PHE
1	CB	21	ARG
1	CB	32	ILE
1	CB	36	ARG
1	CB	41	ILE
1	CB	49	GLU
1	CB	69	LEU
1	CB	74	LYS
1	CB	81	VAL
1	CB	101	MET
1	CB	102	LEU
1	CB	103	THR
1	CB	104	ASN
1	CB	106	LYS
1	CB	109	SER
1	CB	134	GLU
1	CB	141	GLU
1	CB	145	LEU
1	CB	154	LEU
1	CB	155	LEU
1	CB	162	ILE
1	CB	168	THR
1	CB	172	ILE
1	CB	185	ILE
1	CB	187	LEU
1	CB	189	ASP
1	CB	190	THR
1	CB	208	ILE
1	CB	212	GLN
1	CB	213	LEU
1	CB	221	LEU
1	CB	230	VAL
1	CB	236	TYR
2	CC	4	LYS
2	CC	5	ILE
2	CC	6	HIS
2	CC	15	THR
2	CC	19	GLU
2	CC	39	ILE
2	CC	43	LEU
2	CC	47	LEU
2	CC	48	TYR

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Mol	Chain	Res	Type
2	CC	52	LEU
2	CC	55	VAL
2	CC	56	ASP
2	CC	57	ILE
2	CC	67	THR
2	CC	70	VAL
2	CC	75	VAL
2	CC	84	ILE
2	CC	86	VAL
2	CC	99	VAL
2	CC	101	LEU
2	CC	102	ASN
2	CC	105	GLU
2	CC	110	ASN
2	CC	118	GLN
2	CC	119	ARG
2	CC	123	GLN
2	CC	124	ILE
2	CC	128	PHE
2	CC	134	ILE
2	CC	142	MET
2	CC	152	ILE
2	CC	153	VAL
2	CC	154	SER
2	CC	157	ILE
2	CC	164	ARG
2	CC	167	TRP
2	CC	176	HIS
2	CC	179	ARG
2	CC	184	TYR
2	CC	188	LEU
2	CC	208	ILE
3	CD	3	ARG
3	CD	5	ILE
3	CD	9	CYS
3	CD	13	ARG
3	CD	21	LEU
3	CD	24	GLU
3	CD	28	SER
3	CD	30	LYS
3	CD	49	ARG
3	CD	54	TYR

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Mol	Chain	Res	Type
3	CD	56	VAL
3	CD	57	ARG
3	CD	60	GLU
3	CD	63	LYS
3	CD	67	ILE
3	CD	72	GLU
3	CD	83	SER
3	CD	84	LYS
3	CD	86	LYS
3	CD	88	VAL
3	CD	107	ARG
3	CD	123	HIS
3	CD	127	THR
3	CD	129	ASN
3	CD	134	ASP
3	CD	135	LEU
3	CD	140	VAL
3	CD	148	VAL
3	CD	150	GLU
3	CD	156	GLU
3	CD	160	GLN
3	CD	175	SER
3	CD	178	VAL
3	CD	196	LEU
4	CE	5	ASP
4	CE	10	MET
4	CE	12	LEU
4	CE	31	LEU
4	CE	33	VAL
4	CE	41	VAL
4	CE	47	LYS
4	CE	53	LEU
4	CE	57	LYS
4	CE	61	TYR
4	CE	64	ARG
4	CE	80	ILE
4	CE	91	LEU
4	CE	92	LYS
4	CE	107	ARG
4	CE	117	ASP
4	CE	125	SER
4	CE	129	ILE

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Mol	Chain	Res	Type
4	CE	137	GLU
4	CE	144	THR
4	CE	147	ASP
4	CE	148	VAL
4	CE	150	ARG
5	CF	7	ASN
5	CF	16	GLN
5	CF	18	GLN
5	CF	22	GLU
5	CF	27	GLN
5	CF	30	LEU
5	CF	37	VAL
5	CF	43	LEU
5	CF	46	ARG
5	CF	55	ASP
5	CF	61	LEU
5	CF	66	GLU
5	CF	69	GLU
5	CF	77	ARG
5	CF	78	GLU
5	CF	83	ASP
5	CF	98	LEU
6	CG	10	ARG
6	CG	11	GLN
6	CG	12	LEU
6	CG	18	TYR
6	CG	21	VAL
6	CG	24	THR
6	CG	32	ARG
6	CG	35	LYS
6	CG	36	LYS
6	CG	54	THR
6	CG	67	GLU
6	CG	74	GLU
6	CG	76	ARG
6	CG	80	VAL
6	CG	91	VAL
6	CG	94	ARG
6	CG	97	GLN
6	CG	104	LEU
6	CG	106	GLN
6	CG	115	ARG

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Mol	Chain	Res	Type
7	CH	3	THR
7	CH	11	THR
7	CH	26	VAL
7	CH	29	SER
7	CH	30	ARG
7	CH	49	GLU
7	CH	50	ARG
7	CH	52	ASP
7	CH	63	LEU
7	CH	69	ARG
7	CH	73	ASP
7	CH	88	LYS
7	CH	95	VAL
7	CH	102	ARG
7	CH	104	ARG
7	CH	107	LEU
7	CH	112	LEU
7	CH	133	LEU
7	CH	135	CYS
7	CH	136	GLU
8	CI	12	GLU
8	CI	26	VAL
8	CI	34	ASN
8	CI	40	LEU
8	CI	66	ARG
8	CI	70	LYS
8	CI	75	ASP
8	CI	79	LEU
8	CI	86	VAL
8	CI	91	ASP
8	CI	95	LYS
8	CI	97	LYS
8	CI	109	VAL
8	CI	112	LYS
8	CI	121	ARG
8	CI	125	TYR
9	CJ	3	LYS
9	CJ	6	ILE
9	CJ	7	LYS
9	CJ	11	PHE
9	CJ	12	ASP
9	CJ	16	LEU

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Mol	Chain	Res	Type
9	CJ	22	LYS
9	CJ	30	SER
9	CJ	38	ILE
9	CJ	43	ARG
9	CJ	50	ILE
9	CJ	65	LEU
9	CJ	66	ARG
9	CJ	67	THR
9	CJ	75	ILE
9	CJ	79	ARG
9	CJ	86	MET
9	CJ	96	ILE
10	CK	18	ARG
10	CK	29	ILE
10	CK	30	VAL
10	CK	31	THR
10	CK	41	THR
10	CK	51	LYS
10	CK	87	THR
10	CK	107	SER
10	CK	109	VAL
10	CK	119	CYS
10	CK	124	LYS
11	CL	22	SER
11	CL	24	VAL
11	CL	38	THR
11	CL	44	THR
11	CL	49	ASN
11	CL	52	LEU
11	CL	53	ARG
11	CL	54	LYS
11	CL	55	VAL
11	CL	57	LYS
11	CL	60	LEU
11	CL	65	GLU
11	CL	66	VAL
11	CL	67	THR
11	CL	70	ILE
11	CL	75	HIS
11	CL	77	LEU
11	CL	78	GLN
11	CL	84	LEU

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Mol	Chain	Res	Type
11	CL	90	VAL
11	CL	92	ASP
11	CL	97	ARG
11	CL	110	VAL
11	CL	115	LYS
11	CL	116	SER
11	CL	122	THR
11	CL	126	LYS
12	CM	7	VAL
12	CM	8	GLU
12	CM	15	VAL
12	CM	27	LYS
12	CM	43	THR
12	CM	48	LEU
12	CM	56	LEU
12	CM	67	GLU
12	CM	69	GLU
12	CM	70	LEU
12	CM	82	MET
12	CM	103	THR
12	CM	108	ARG
12	CM	110	ARG
12	CM	115	LYS
12	CM	121	LYS
13	CN	4	LYS
13	CN	7	ILE
13	CN	12	ARG
13	CN	21	TYR
13	CN	35	ARG
13	CN	40	CYS
13	CN	42	ILE
13	CN	57	ARG
13	CN	61	TRP
14	CO	5	LYS
14	CO	8	LYS
14	CO	15	PHE
14	CO	26	GLU
14	CO	28	GLN
14	CO	31	LEU
14	CO	34	LEU
14	CO	41	GLU
14	CO	51	HIS

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Mol	Chain	Res	Type
14	CO	52	SER
14	CO	56	LEU
14	CO	57	LEU
14	CO	58	MET
14	CO	59	MET
14	CO	74	ASP
14	CO	82	ILE
14	CO	85	LEU
15	CP	2	VAL
15	CP	20	VAL
15	CP	23	ASP
15	CP	32	TYR
15	CP	36	ILE
15	CP	44	THR
15	CP	45	THR
15	CP	51	VAL
15	CP	54	GLU
15	CP	68	ASP
15	CP	69	THR
15	CP	71	ARG
15	CP	80	PHE
15	CP	81	ARG
16	CQ	9	VAL
16	CQ	10	VAL
16	CQ	13	ASP
16	CQ	16	GLN
16	CQ	26	GLN
16	CQ	27	PHE
16	CQ	36	ILE
16	CQ	49	GLU
16	CQ	52	LYS
16	CQ	60	ILE
16	CQ	62	SER
16	CQ	69	LYS
16	CQ	74	LEU
16	CQ	83	ASP
16	CQ	91	ARG
16	CQ	93	GLN
17	CR	26	LEU
17	CR	29	PHE
17	CR	34	TYR
17	CR	39	VAL

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Mol	Chain	Res	Type
17	CR	47	THR
17	CR	58	LEU
17	CR	59	SER
17	CR	72	ARG
17	CR	74	ARG
17	CR	76	LEU
17	CR	83	GLU
17	CR	85	LEU
18	CS	5	LEU
18	CS	6	LYS
18	CS	9	VAL
18	CS	13	ASP
18	CS	23	ASN
18	CS	34	TRP
18	CS	41	VAL
18	CS	43	GLU
18	CS	44	MET
18	CS	56	GLN
18	CS	58	VAL
18	CS	61	TYR
18	CS	62	ILE
18	CS	64	GLU
18	CS	67	VAL
18	CS	77	THR
18	CS	81	ARG
19	CT	8	ARG
19	CT	13	LEU
19	CT	24	LEU
19	CT	30	LYS
19	CT	36	LEU
19	CT	54	LYS
19	CT	72	LEU
19	CT	74	LYS
19	CT	93	GLU
23	CY	8	ASP
23	CY	9	LEU
23	CY	20	HIS
23	CY	25	LYS
23	CY	26	THR
23	CY	29	THR
23	CY	30	GLU
23	CY	32	ILE

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Mol	Chain	Res	Type
23	CY	33	LEU
23	CY	39	ILE
23	CY	40	HIS
23	CY	45	VAL
23	CY	55	MET
23	CY	60	GLU
23	CY	64	THR
23	CY	66	THR
23	CY	72	CYS
23	CY	88	VAL
23	CY	92	ILE
23	CY	98	MET
23	CY	100	VAL
23	CY	105	ILE
23	CY	106	VAL
23	CY	111	SER
23	CY	114	VAL
23	CY	118	SER
23	CY	122	TRP
23	CY	126	GLU
23	CY	128	TYR
23	CY	132	ARG
23	CY	133	ILE
23	CY	152	THR
23	CY	170	ARG
23	CY	172	ASP
23	CY	174	PHE
23	CY	178	ILE
23	CY	186	TYR
23	CY	190	ASN
23	CY	198	GLU
23	CY	199	ILE
23	CY	203	GLU
23	CY	224	ASP
23	CY	225	GLU
23	CY	230	LYS
23	CY	231	TYR
23	CY	232	LEU
23	CY	236	GLU
23	CY	240	GLU
23	CY	250	THR
23	CY	259	PHE

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Mol	Chain	Res	Type
23	CY	260	LEU
23	CY	264	LEU
23	CY	277	VAL
23	CY	284	LEU
23	CY	285	ASP
23	CY	289	ILE
23	CY	295	GLU
23	CY	298	VAL
23	CY	299	VAL
23	CY	312	LEU
23	CY	328	ILE
23	CY	330	VAL
23	CY	337	SER
23	CY	344	THR
23	CY	352	VAL
23	CY	355	LEU
23	CY	356	LEU
23	CY	357	ARG
23	CY	367	GLU
23	CY	368	GLU
23	CY	380	LEU
23	CY	381	LYS
23	CY	385	THR
23	CY	399	LEU
23	CY	404	VAL
23	CY	408	VAL
23	CY	409	ILE
23	CY	410	ASP
23	CY	413	ILE
23	CY	421	GLN
23	CY	424	LEU
23	CY	426	GLN
23	CY	428	LEU
23	CY	430	ARG
23	CY	431	LEU
23	CY	438	PHE
23	CY	448	GLN
23	CY	449	THR
23	CY	451	ILE
23	CY	452	SER
23	CY	461	ILE
23	CY	473	ASP

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Mol	Chain	Res	Type
23	CY	476	VAL
23	CY	485	GLU
23	CY	498	ILE
23	CY	500	GLN
23	CY	504	ARG
23	CY	515	GLU
23	CY	517	LEU
23	CY	521	SER
23	CY	530	VAL
23	CY	536	LYS
23	CY	542	VAL
23	CY	562	ASP
23	CY	563	ILE
23	CY	564	LYS
23	CY	565	VAL
23	CY	567	LEU
23	CY	572	TYR
23	CY	574	GLU
23	CY	580	MET
23	CY	591	LYS
23	CY	598	ASP
23	CY	610	VAL
23	CY	615	GLU
23	CY	617	MET
23	CY	619	ASP
23	CY	624	LEU
23	CY	630	GLN
23	CY	631	ILE
23	CY	647	VAL
23	CY	658	ASP
23	CY	661	SER
23	CY	670	VAL
23	CY	675	HIS
23	CY	681	LYS
25	DC	7	ARG
25	DC	12	LEU
25	DC	15	VAL
25	DC	19	LYS
25	DC	20	VAL
25	DC	22	THR
25	DC	24	ASP
25	DC	28	ARG

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Mol	Chain	Res	Type
25	DC	30	VAL
25	DC	31	LYS
25	DC	32	GLU
25	DC	37	LYS
25	DC	42	VAL
25	DC	47	LYS
25	DC	48	LEU
25	DC	53	ARG
25	DC	59	VAL
25	DC	63	VAL
25	DC	73	VAL
25	DC	74	ARG
25	DC	76	LEU
25	DC	83	LYS
25	DC	85	LYS
25	DC	95	VAL
25	DC	105	LEU
25	DC	106	ASP
25	DC	110	ASP
25	DC	115	VAL
25	DC	117	THR
25	DC	120	VAL
25	DC	121	MET
25	DC	131	ILE
25	DC	138	LEU
25	DC	139	PRO
25	DC	145	THR
25	DC	150	ILE
25	DC	162	ILE
25	DC	164	PHE
25	DC	166	ASN
25	DC	167	ASP
25	DC	169	THR
25	DC	172	ILE
25	DC	176	VAL
25	DC	182	PRO
25	DC	185	LYS
25	DC	210	LEU
25	DC	215	VAL
25	DC	216	THR
26	DD	4	LYS
26	DD	7	LYS

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Mol	Chain	Res	Type
26	DD	10	THR
26	DD	20	ASP
26	DD	23	GLU
26	DD	24	ILE
26	DD	25	THR
26	DD	26	LYS
26	DD	33	LEU
26	DD	35	LYS
26	DD	37	LEU
26	DD	43	ARG
26	DD	44	ASN
26	DD	49	ILE
26	DD	64	ILE
26	DD	65	ILE
26	DD	67	PHE
26	DD	73	VAL
26	DD	78	LYS
26	DD	82	ILE
26	DD	83	GLU
26	DD	95	LEU
26	DD	96	HIS
26	DD	98	VAL
26	DD	101	GLU
26	DD	103	ARG
26	DD	105	ILE
26	DD	112	GLN
26	DD	115	GLN
26	DD	116	GLN
26	DD	117	VAL
26	DD	131	LEU
26	DD	136	ILE
26	DD	142	VAL
26	DD	164	GLN
26	DD	165	ILE
26	DD	169	GLU
26	DD	175	LEU
26	DD	196	VAL
26	DD	218	ARG
26	DD	221	VAL
26	DD	229	VAL
26	DD	230	ASP
26	DD	233	HIS

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Mol	Chain	Res	Type
26	DD	239	ARG
26	DD	244	ARG
26	DD	252	TRP
26	DD	257	LEU
26	DD	259	THR
26	DD	269	PHE
26	DD	270	ILE
26	DD	271	ILE
27	DE	4	ILE
27	DE	9	VAL
27	DE	16	ARG
27	DE	17	ASP
27	DE	26	ILE
27	DE	34	VAL
27	DE	35	GLN
27	DE	49	LEU
27	DE	61	ARG
27	DE	67	PHE
27	DE	69	LYS
27	DE	77	ILE
27	DE	80	GLU
27	DE	83	ASP
27	DE	87	GLU
27	DE	89	ASP
27	DE	94	GLU
27	DE	96	PHE
27	DE	104	VAL
27	DE	109	LYS
27	DE	127	ASP
27	DE	129	HIS
27	DE	132	HIS
27	DE	134	ILE
27	DE	146	THR
27	DE	154	LYS
27	DE	164	ARG
27	DE	181	LEU
27	DE	184	VAL
27	DE	192	ASN
27	DE	195	LEU
27	DE	196	VAL
27	DE	197	ILE
27	DE	199	ARG

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Mol	Chain	Res	Type
27	DE	200	GLU
28	DF	2	LYS
28	DF	3	GLU
28	DF	4	VAL
28	DF	6	VAL
28	DF	9	ILE
28	DF	12	LEU
28	DF	19	GLU
28	DF	24	LEU
28	DF	28	ILE
28	DF	29	ASN
28	DF	32	LEU
28	DF	33	LEU
28	DF	35	GLU
28	DF	40	GLN
28	DF	43	LYS
28	DF	45	ARG
28	DF	54	ARG
28	DF	65	TRP
28	DF	67	GLN
28	DF	74	ARG
28	DF	78	ILE
28	DF	89	VAL
28	DF	106	ARG
28	DF	124	LEU
28	DF	126	VAL
28	DF	136	THR
28	DF	149	ASP
28	DF	154	VAL
28	DF	155	LEU
28	DF	156	LEU
28	DF	169	ASN
28	DF	170	LEU
28	DF	172	TRP
28	DF	175	THR
28	DF	186	ILE
28	DF	188	ARG
28	DF	190	GLU
28	DF	191	ARG
28	DF	192	LEU
28	DF	194	MET
28	DF	196	LEU

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Mol	Chain	Res	Type
28	DF	201	VAL
29	DG	5	VAL
29	DG	10	LYS
29	DG	11	TYR
29	DG	12	TYR
29	DG	31	VAL
29	DG	36	LYS
29	DG	49	ASP
29	DG	52	ILE
29	DG	54	GLU
29	DG	60	LEU
29	DG	62	LEU
29	DG	64	THR
29	DG	66	GLN
29	DG	74	LYS
29	DG	86	MET
29	DG	101	ILE
29	DG	103	LEU
29	DG	105	LYS
29	DG	106	LEU
29	DG	109	VAL
29	DG	113	ARG
29	DG	118	ARG
29	DG	128	ARG
29	DG	133	LEU
29	DG	144	ILE
29	DG	147	ASP
29	DG	153	ARG
29	DG	159	VAL
29	DG	164	GLU
29	DG	165	THR
29	DG	167	GLU
29	DG	168	GLU
29	DG	176	LEU
30	DH	15	VAL
30	DH	34	GLU
30	DH	35	VAL
30	DH	37	VAL
30	DH	41	MET
30	DH	43	VAL
30	DH	44	VAL
30	DH	49	VAL

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Mol	Chain	Res	Type
30	DH	50	VAL
30	DH	60	ARG
30	DH	67	LEU
30	DH	71	LEU
30	DH	85	LYS
30	DH	86	GLU
30	DH	89	ILE
30	DH	97	ARG
30	DH	115	VAL
30	DH	127	GLU
30	DH	134	SER
30	DH	136	ILE
30	DH	143	GLN
30	DH	148	ILE
30	DH	160	LYS
30	DH	175	LYS
32	DK	4	VAL
32	DK	34	ILE
32	DK	37	PHE
32	DK	41	PHE
32	DK	50	ASP
32	DK	56	GLU
32	DK	57	ILE
32	DK	59	ILE
32	DK	67	PHE
32	DK	75	SER
32	DK	78	ILE
32	DK	90	LYS
32	DK	95	LYS
32	DK	99	ILE
32	DK	136	VAL
33	DO	2	ILE
33	DO	34	THR
33	DO	35	VAL
33	DO	39	ILE
33	DO	58	VAL
33	DO	67	LYS
33	DO	69	ILE
33	DO	80	ASP
33	DO	82	ASN
33	DO	91	LEU
33	DO	99	PHE

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Mol	Chain	Res	Type
33	DO	107	ARG
33	DO	108	GLU
33	DO	114	ILE
33	DO	117	LEU
34	DP	7	ARG
34	DP	9	ASN
34	DP	14	LYS
34	DP	18	ARG
34	DP	27	HIS
34	DP	32	THR
34	DP	38	GLN
34	DP	39	LYS
34	DP	55	ARG
34	DP	60	MET
34	DP	62	LEU
34	DP	84	ASN
34	DP	85	LEU
34	DP	98	GLU
34	DP	106	LEU
34	DP	107	LYS
34	DP	108	LYS
34	DP	110	TYR
34	DP	117	GLU
34	DP	135	LEU
35	DQ	1	MET
35	DQ	3	MET
35	DQ	6	ARG
35	DQ	7	MET
35	DQ	14	ARG
35	DQ	17	LEU
35	DQ	26	TYR
35	DQ	34	LEU
35	DQ	42	ILE
35	DQ	43	THR
35	DQ	56	ARG
35	DQ	59	ARG
35	DQ	66	ILE
35	DQ	68	ILE
35	DQ	74	TYR
35	DQ	90	VAL
35	DQ	93	TYR
35	DQ	96	VAL

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Mol	Chain	Res	Type
35	DQ	116	GLU
35	DQ	125	LEU
35	DQ	128	LYS
35	DQ	131	ILE
35	DQ	137	TYR
35	DQ	139	GLU
36	DR	2	ARG
36	DR	3	HIS
36	DR	4	LEU
36	DR	10	LEU
36	DR	15	SER
36	DR	23	ASN
36	DR	28	LEU
36	DR	29	LEU
36	DR	34	ILE
36	DR	43	GLU
36	DR	44	LEU
36	DR	45	ARG
36	DR	60	LEU
36	DR	71	GLN
36	DR	75	LEU
36	DR	76	VAL
36	DR	88	ARG
36	DR	99	LYS
36	DR	111	LEU
37	DS	12	PHE
37	DS	13	ARG
37	DS	15	ARG
37	DS	18	ILE
37	DS	20	ARG
37	DS	35	ILE
37	DS	39	ILE
37	DS	40	ILE
37	DS	42	ASP
37	DS	47	THR
37	DS	48	LEU
37	DS	54	LEU
37	DS	64	GLU
37	DS	71	ARG
37	DS	82	ILE
37	DS	85	VAL
37	DS	97	ARG

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Mol	Chain	Res	Type
37	DS	98	VAL
37	DS	99	LYS
37	DS	103	GLU
37	DS	106	ARG
38	DT	11	GLU
38	DT	13	ARG
38	DT	23	ARG
38	DT	27	THR
38	DT	29	ARG
38	DT	33	LYS
38	DT	34	VAL
38	DT	42	ILE
38	DT	49	VAL
38	DT	50	ILE
38	DT	54	ARG
38	DT	65	LYS
38	DT	70	VAL
38	DT	74	ARG
38	DT	82	LEU
38	DT	83	ILE
38	DT	84	GLN
38	DT	85	LYS
38	DT	89	VAL
38	DT	102	ILE
38	DT	108	ARG
38	DT	110	ILE
38	DT	114	LEU
38	DT	115	ARG
38	DT	125	ARG
39	DU	14	HIS
39	DU	16	LYS
39	DU	28	ARG
39	DU	33	ARG
39	DU	34	LYS
39	DU	38	THR
39	DU	39	LEU
39	DU	51	LYS
39	DU	55	ARG
39	DU	60	LEU
39	DU	64	ARG
39	DU	65	ILE
39	DU	74	LEU

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Mol	Chain	Res	Type
39	DU	80	ILE
39	DU	91	ASP
39	DU	98	LEU
39	DU	101	ARG
39	DU	111	GLU
39	DU	114	LYS
40	DV	6	LYS
40	DV	7	THR
40	DV	10	LYS
40	DV	14	VAL
40	DV	18	LEU
40	DV	19	LYS
40	DV	21	ARG
40	DV	26	ASP
40	DV	33	VAL
40	DV	37	VAL
40	DV	39	LEU
40	DV	40	LEU
40	DV	52	VAL
40	DV	57	VAL
40	DV	60	GLU
40	DV	74	LYS
40	DV	79	VAL
40	DV	87	HIS
40	DV	88	ARG
40	DV	95	LEU
40	DV	99	ILE
41	DW	11	ARG
41	DW	17	VAL
41	DW	19	LEU
41	DW	22	ASP
41	DW	24	ILE
41	DW	37	ARG
41	DW	46	PHE
41	DW	49	LYS
41	DW	51	LEU
41	DW	52	GLU
41	DW	66	GLU
41	DW	92	ARG
41	DW	95	ILE
41	DW	96	ILE
41	DW	100	THR

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Mol	Chain	Res	Type
41	DW	103	ILE
41	DW	105	VAL
41	DW	106	ILE
41	DW	107	LEU
41	DW	113	LYS
42	DX	8	ILE
42	DX	15	GLU
42	DX	23	GLU
42	DX	27	THR
42	DX	35	THR
42	DX	36	LYS
42	DX	54	VAL
42	DX	57	LEU
42	DX	68	ARG
42	DX	76	ARG
42	DX	80	ILE
42	DX	88	LYS
42	DX	95	LEU
43	DY	5	MET
43	DY	6	HIS
43	DY	7	VAL
43	DY	9	LYS
43	DY	13	VAL
43	DY	19	LYS
43	DY	29	GLU
43	DY	31	LEU
43	DY	33	LYS
43	DY	44	ILE
43	DY	47	LYS
43	DY	49	VAL
43	DY	50	ARG
43	DY	63	LYS
43	DY	75	ILE
43	DY	84	ARG
43	DY	89	PHE
43	DY	90	LEU
43	DY	97	ARG
44	DZ	5	LEU
44	DZ	11	GLU
44	DZ	20	ARG
44	DZ	27	VAL
44	DZ	28	MET

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Mol	Chain	Res	Type
44	DZ	29	TYR
44	DZ	35	ARG
44	DZ	42	VAL
44	DZ	46	LYS
44	DZ	49	ARG
44	DZ	54	HIS
44	DZ	59	LEU
44	DZ	60	GLU
44	DZ	61	LEU
44	DZ	70	LEU
44	DZ	71	VAL
44	DZ	76	LEU
44	DZ	81	ARG
44	DZ	86	VAL
44	DZ	90	VAL
44	DZ	94	GLU
44	DZ	97	GLU
44	DZ	98	MET
44	DZ	100	VAL
44	DZ	120	ILE
44	DZ	124	ILE
44	DZ	126	VAL
44	DZ	127	LYS
44	DZ	128	VAL
44	DZ	133	ILE
44	DZ	135	GLU
44	DZ	141	VAL
44	DZ	144	LEU
44	DZ	148	ASP
44	DZ	150	LEU
44	DZ	162	GLU
44	DZ	175	VAL
44	DZ	179	ASP
44	DZ	181	GLU
45	D0	4	LYS
45	D0	5	LYS
45	D0	9	SER
45	D0	27	GLU
45	D0	37	LEU
45	D0	50	ASN
45	D0	53	MET
45	D0	57	PHE

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Mol	Chain	Res	Type
45	D0	58	THR
45	D0	64	ASP
45	D0	81	VAL
46	D1	3	LYS
46	D1	4	VAL
46	D1	5	CYS
46	D1	18	ILE
46	D1	21	ARG
46	D1	23	LYS
46	D1	26	ARG
46	D1	27	GLU
46	D1	32	LYS
46	D1	37	ILE
46	D1	39	LYS
46	D1	41	ARG
46	D1	42	GLN
46	D1	43	TYR
46	D1	46	LEU
46	D1	47	GLN
46	D1	50	ARG
46	D1	57	GLU
46	D1	58	ILE
46	D1	59	THR
46	D1	66	HIS
46	D1	73	LEU
46	D1	82	LEU
46	D1	91	LYS
47	D4	1	MET
47	D4	6	HIS
47	D4	9	LEU
47	D4	10	VAL
47	D4	23	GLU
47	D4	32	TYR
47	D4	33	VAL
48	DN	1	MET
48	DN	7	LYS
48	DN	32	THR
48	DN	42	TRP
48	DN	45	ASN
48	DN	48	MET
48	DN	50	ASP
48	DN	71	ILE

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Mol	Chain	Res	Type
48	DN	87	LEU
48	DN	89	LYS
48	DN	99	LEU
48	DN	111	PRO
48	DN	112	LEU
48	DN	131	GLN
48	DN	137	LYS
48	DN	138	LEU
49	D2	4	SER
49	D2	8	LYS
49	D2	37	PHE
49	D2	38	GLN
49	D2	47	ASN
49	D2	51	ARG
49	D2	53	LEU
49	D2	64	LEU
49	D2	66	GLU
50	D3	9	VAL
50	D3	17	LYS
50	D3	29	ARG
50	D3	30	ARG
50	D3	31	LEU
50	D3	37	LEU
50	D3	53	LEU
50	D3	54	VAL
50	D3	59	VAL
50	D3	60	GLU
51	D5	3	LYS
51	D5	4	HIS
51	D5	11	THR
51	D5	15	ARG
51	D5	16	ARG
51	D5	20	ARG
51	D5	23	HIS
51	D5	25	LEU
51	D5	51	TYR
51	D5	57	VAL
51	D5	58	LEU
52	D6	9	LEU
52	D6	10	LEU
52	D6	11	LEU
52	D6	15	GLU

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Mol	Chain	Res	Type
52	D6	18	ARG
52	D6	19	ARG
52	D6	27	LYS
52	D6	34	LEU
52	D6	39	TYR
52	D6	45	LYS
52	D6	47	THR
52	D6	48	VAL
52	D6	49	HIS
52	D6	50	ARG
53	D7	29	LYS
53	D7	30	VAL
53	D7	35	ARG
53	D7	40	TRP
53	D7	42	LEU
53	D7	46	VAL
54	D8	14	VAL
54	D8	16	ILE
54	D8	26	LYS
54	D8	31	HIS
54	D8	32	LEU
54	D8	36	LYS
54	D8	42	ARG
54	D8	46	ARG
54	D8	49	VAL
54	D8	59	LYS
54	D8	62	LEU
55	D9	10	ILE
55	D9	11	CYS
55	D9	12	ASP
55	D9	17	ILE
55	D9	19	ARG
55	D9	20	HIS
55	D9	23	VAL
55	D9	26	ILE
55	D9	28	GLU
56	De	73	GLU
56	De	78	LEU
56	De	90	LYS
56	De	91	ASP
56	De	94	GLU
56	De	99	VAL

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Mol	Chain	Res	Type
56	De	106	GLN
56	De	118	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (164) such sidechains are listed below:

Mol	Chain	Res	Type
1	AB	45	GLN
1	AB	95	GLN
1	AB	113	HIS
1	AB	135	GLN
1	AB	212	GLN
2	AC	98	ASN
2	AC	123	GLN
2	AC	139	GLN
3	AD	74	GLN
3	AD	129	ASN
4	AE	56	GLN
4	AE	141	GLN
5	AF	94	GLN
6	AG	28	ASN
6	AG	68	ASN
6	AG	106	GLN
7	AH	78	GLN
7	AH	82	HIS
8	AI	3	GLN
9	AJ	76	ASN
9	AJ	84	GLN
10	AK	62	GLN
11	AL	8	ASN
11	AL	80	HIS
12	AM	12	ASN
12	AM	101	GLN
14	AO	42	HIS
14	AO	46	HIS
14	AO	71	GLN
15	AP	82	GLN
16	AQ	26	GLN
16	AQ	94	ASN
17	AR	36	ASN
17	AR	63	GLN
18	AS	56	GLN
19	AT	73	HIS

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Mol	Chain	Res	Type
23	AY	14	ASN
23	AY	20	HIS
23	AY	80	ASN
23	AY	137	ASN
23	AY	190	ASN
23	AY	475	ASN
23	AY	595	GLN
25	BC	58	ASN
25	BC	102	GLN
25	BC	149	ASN
26	BD	115	GLN
27	BE	135	HIS
27	BE	143	ASN
28	BF	8	GLN
28	BF	40	GLN
28	BF	67	GLN
28	BF	75	HIS
29	BG	40	ASN
29	BG	66	GLN
29	BG	130	ASN
32	BK	42	ASN
32	BK	110	GLN
34	BP	84	ASN
36	BR	13	HIS
36	BR	23	ASN
38	BT	123	GLN
39	BU	104	GLN
40	BV	11	GLN
41	BW	111	HIS
44	BZ	34	ASN
44	BZ	55	HIS
44	BZ	65	GLN
44	BZ	75	ASN
48	BN	45	ASN
48	BN	69	GLN
48	BN	94	HIS
48	BN	131	GLN
48	BN	133	GLN
49	B2	9	GLN
50	B3	46	ASN
52	B6	20	ASN
53	B7	36	GLN

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Mol	Chain	Res	Type
54	B8	33	ASN
54	B8	43	GLN
55	B9	20	HIS
1	CB	25	ASN
1	CB	146	GLN
2	CC	3	ASN
2	CC	6	HIS
2	CC	123	GLN
2	CC	136	GLN
2	CC	181	ASN
3	CD	119	GLN
3	CD	125	HIS
3	CD	160	GLN
4	CE	56	GLN
4	CE	65	ASN
4	CE	78	HIS
4	CE	127	ASN
5	CF	11	ASN
5	CF	32	ASN
6	CG	37	ASN
6	CG	64	GLN
6	CG	84	ASN
6	CG	106	GLN
6	CG	148	ASN
7	CH	78	GLN
8	CI	31	GLN
8	CI	124	GLN
9	CJ	76	ASN
10	CK	38	ASN
10	CK	62	GLN
14	CO	9	GLN
14	CO	42	HIS
16	CQ	26	GLN
17	CR	36	ASN
17	CR	63	GLN
23	CY	14	ASN
23	CY	40	HIS
23	CY	137	ASN
23	CY	226	ASN
23	CY	266	ASN
23	CY	362	HIS
23	CY	448	GLN

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Mol	Chain	Res	Type
23	CY	475	ASN
23	CY	625	ASN
23	CY	684	GLN
25	DC	58	ASN
26	DD	46	GLN
26	DD	115	GLN
26	DD	198	ASN
27	DE	54	GLN
27	DE	143	ASN
27	DE	159	HIS
27	DE	169	ASN
28	DF	8	GLN
28	DF	67	GLN
29	DG	58	GLN
29	DG	121	ASN
29	DG	123	ASN
29	DG	138	GLN
30	DH	74	ASN
33	DO	82	ASN
34	DP	13	ASN
34	DP	84	ASN
36	DR	23	ASN
36	DR	91	GLN
37	DS	34	HIS
38	DT	38	ASN
38	DT	43	GLN
38	DT	55	ASN
38	DT	58	ASN
38	DT	104	ASN
39	DU	72	HIS
39	DU	81	HIS
40	DV	11	GLN
40	DV	64	HIS
44	DZ	30	ASN
46	D1	45	ASN
48	DN	45	ASN
48	DN	69	GLN
48	DN	94	HIS
48	DN	131	GLN
48	DN	133	GLN
49	D2	9	GLN
50	D3	32	GLN

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Mol	Chain	Res	Type
55	D9	29	ASN
55	D9	36	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
20	AA	1511/1511 (100%)	330 (21%)	21 (1%)
20	CA	1511/1511 (100%)	304 (20%)	18 (1%)
21	AV	17/18 (94%)	8 (47%)	1 (5%)
21	CV	17/18 (94%)	8 (47%)	1 (5%)
22	AW	76/77 (98%)	27 (35%)	2 (2%)
22	CW	76/77 (98%)	22 (28%)	2 (2%)
59	BB	118/119 (99%)	26 (22%)	2 (1%)
59	DB	118/119 (99%)	19 (16%)	1 (0%)
60	BA	2878/2879 (99%)	730 (25%)	26 (0%)
60	DA	2878/2879 (99%)	693 (24%)	22 (0%)
All	All	9200/9208 (99%)	2167 (23%)	96 (1%)

All (2167) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
20	AA	6	G
20	AA	7	G
20	AA	8	A
20	AA	9	G
20	AA	22	G
20	AA	29	G
20	AA	31	G
20	AA	32	A
20	AA	39	G
20	AA	44	G
20	AA	47	C
20	AA	48	C
20	AA	51	A
20	AA	54	C
20	AA	65	U
20	AA	68	G
20	AA	68(H)	G
20	AA	68(M)	U
20	AA	68(P)	C
20	AA	68(V)	G

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Mol	Chain	Res	Type
20	AA	68(W)	G
20	AA	108	G
20	AA	109	A
20	AA	115	G
20	AA	116	A
20	AA	119	A
20	AA	121	C
20	AA	129(A)	G
20	AA	131	C
20	AA	136	C
20	AA	148	G
20	AA	151	A
20	AA	163	C
20	AA	179	A
20	AA	180	U
20	AA	182	U
20	AA	183	G
20	AA	186(G)	C
20	AA	186(I)	U
20	AA	195	A
20	AA	201(C)	U
20	AA	216	G
20	AA	220	G
20	AA	226	G
20	AA	230	G
20	AA	240	C
20	AA	241	C
20	AA	247	G
20	AA	251	G
20	AA	252	U
20	AA	253	U
20	AA	262	A
20	AA	267	C
20	AA	279	A
20	AA	280	C
20	AA	281	G
20	AA	289	G
20	AA	291	C
20	AA	301	G
20	AA	303	A
20	AA	306	G
20	AA	308	C

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Mol	Chain	Res	Type
20	AA	309	G
20	AA	315	A
20	AA	321	A
20	AA	328	C
20	AA	329	A
20	AA	331	G
20	AA	332	G
20	AA	335	C
20	AA	345	C
20	AA	347	G
20	AA	348	G
20	AA	352	C
20	AA	353	A
20	AA	354	G
20	AA	356	A
20	AA	362	G
20	AA	363	A
20	AA	367	U
20	AA	372	C
20	AA	373	A
20	AA	382	A
20	AA	384	G
20	AA	388	G
20	AA	389	A
20	AA	390	C
20	AA	397	A
20	AA	398	C
20	AA	402	G
20	AA	406	G
20	AA	412	A
20	AA	413	G
20	AA	422	C
20	AA	424	G
20	AA	427	U
20	AA	430	A
20	AA	432	A
20	AA	433	C
20	AA	434	U
20	AA	446	G
20	AA	447	G
20	AA	452	A
20	AA	453	A

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Mol	Chain	Res	Type
20	AA	458(B)	A
20	AA	458(C)	G
20	AA	485	G
20	AA	497	A
20	AA	498	U
20	AA	505	G
20	AA	509	A
20	AA	511	C
20	AA	516	U
20	AA	518	C
20	AA	521	G
20	AA	527	G
20	AA	531	U
20	AA	533	A
20	AA	547	A
20	AA	556	C
20	AA	559	A
20	AA	560	U
20	AA	562	C
20	AA	564	C
20	AA	568	G
20	AA	570	G
20	AA	572	A
20	AA	573	A
20	AA	575	G
20	AA	576	G
20	AA	577	G
20	AA	581	G
20	AA	583	A
20	AA	600	C
20	AA	631	G
20	AA	653	A
20	AA	665	A
20	AA	667	G
20	AA	673	G
20	AA	676	A
20	AA	688	G
20	AA	702	A
20	AA	708	C
20	AA	724	G
20	AA	734	G
20	AA	738	C

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Mol	Chain	Res	Type
20	AA	740	U
20	AA	749	C
20	AA	752	G
20	AA	754	C
20	AA	755	G
20	AA	766	A
20	AA	777	A
20	AA	782	A
20	AA	793	U
20	AA	794	A
20	AA	816	A
20	AA	817	C
20	AA	818	G
20	AA	819	A
20	AA	821	G
20	AA	828	A
20	AA	838(A)	U
20	AA	838(B)	C
20	AA	838(C)	U
20	AA	848	C
20	AA	851	G
20	AA	858	G
20	AA	859	A
20	AA	870	U
20	AA	873	A
20	AA	874	G
20	AA	884	U
20	AA	885	G
20	AA	902	G
20	AA	916	G
20	AA	926	G
20	AA	927	G
20	AA	934	C
20	AA	935	A
20	AA	938	A
20	AA	941	G
20	AA	960	U
20	AA	961	U
20	AA	962	C
20	AA	966	G
20	AA	969	A
20	AA	971	G

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Mol	Chain	Res	Type
20	AA	974	A
20	AA	975	A
20	AA	976	G
20	AA	977	A
20	AA	978	A
20	AA	980	C
20	AA	983	A
20	AA	991	U
20	AA	992	U
20	AA	993	G
20	AA	1004	A
20	AA	1022	G
20	AA	1024	G
20	AA	1025	U
20	AA	1026	G
20	AA	1027	C
20	AA	1028(A)	C
20	AA	1038	C
20	AA	1045	C
20	AA	1046	A
20	AA	1054	C
20	AA	1055	A
20	AA	1060	C
20	AA	1064	G
20	AA	1065	U
20	AA	1066	C
20	AA	1070	U
20	AA	1084	G
20	AA	1094	G
20	AA	1095	U
20	AA	1098	C
20	AA	1099	G
20	AA	1101	A
20	AA	1102	A
20	AA	1117	G
20	AA	1124	G
20	AA	1125	U
20	AA	1126	U
20	AA	1129	C
20	AA	1130	A
20	AA	1137	C
20	AA	1138	G

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Mol	Chain	Res	Type
20	AA	1139	G
20	AA	1140	C
20	AA	1146	A
20	AA	1151	A
20	AA	1157	A
20	AA	1159	U
20	AA	1171	G
20	AA	1174	G
20	AA	1181	G
20	AA	1191	A
20	AA	1196	U
20	AA	1197	G
20	AA	1200	C
20	AA	1201	A
20	AA	1212	U
20	AA	1213	A
20	AA	1220	G
20	AA	1227	A
20	AA	1238	A
20	AA	1240	U
20	AA	1241	G
20	AA	1256	A
20	AA	1257	U
20	AA	1260	C
20	AA	1270	C
20	AA	1277	C
20	AA	1278	U
20	AA	1280	A
20	AA	1281	U
20	AA	1286	A
20	AA	1287	A
20	AA	1290	G
20	AA	1291	G
20	AA	1297	C
20	AA	1300	G
20	AA	1301	U
20	AA	1302	U
20	AA	1303	C
20	AA	1305	G
20	AA	1317	C
20	AA	1322	C
20	AA	1331	G

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Mol	Chain	Res	Type
20	AA	1336	C
20	AA	1338	G
20	AA	1340	A
20	AA	1345	U
20	AA	1346	A
20	AA	1347	G
20	AA	1348	U
20	AA	1353	G
20	AA	1360	A
20	AA	1362(A)	C
20	AA	1363	A
20	AA	1364	U
20	AA	1378	C
20	AA	1381	U
20	AA	1382	C
20	AA	1397	C
20	AA	1398	A
20	AA	1401	G
20	AA	1402	C
20	AA	1422	G
20	AA	1425	U
20	AA	1440(B)	G
20	AA	1440(C)	G
20	AA	1440(D)	A
20	AA	1440(E)	G
20	AA	1440(H)	U
20	AA	1440(I)	A
20	AA	1440(J)	C
20	AA	1440(K)	G
20	AA	1440(L)	G
20	AA	1461	G
20	AA	1482	G
20	AA	1483	A
20	AA	1487	G
20	AA	1489	G
20	AA	1492	A
20	AA	1493	A
20	AA	1494	G
20	AA	1499	A
20	AA	1502	A
20	AA	1503	A
20	AA	1504	G

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Mol	Chain	Res	Type
20	AA	1505	G
20	AA	1506	U
20	AA	1507	A
20	AA	1515	C
20	AA	1517	G
20	AA	1519	A
20	AA	1520	G
20	AA	1528	U
20	AA	1529	G
20	AA	1530	G
20	AA	1532	U
20	AA	1533	C
20	AA	1534	A
20	AA	1535	C
20	AA	1536	C
20	AA	1538	C
21	AV	5	A
21	AV	9	G
21	AV	11	U
21	AV	12	A
21	AV	13	A
21	AV	14	A
21	AV	15	A
21	AV	21	A
22	AW	4	U
22	AW	8	U
22	AW	9	A
22	AW	14	A
22	AW	15	G
22	AW	16	U
22	AW	17	U
22	AW	18	G
22	AW	19	G
22	AW	20	U
22	AW	20(A)	U
22	AW	21	A
22	AW	22	G
22	AW	25	C
22	AW	33	U
22	AW	42	U
22	AW	46	G
22	AW	47	U

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Mol	Chain	Res	Type
22	AW	48	C
22	AW	50	C
22	AW	53	G
22	AW	58	A
22	AW	59	A
22	AW	60	U
22	AW	61	C
22	AW	63	C
22	AW	71	C
59	BB	13	A
59	BB	15	A
59	BB	16	G
59	BB	25	A
59	BB	30	C
59	BB	41	U
59	BB	42	C
59	BB	44	G
59	BB	47	C
59	BB	48	A
59	BB	64	C
59	BB	67	G
59	BB	68	C
59	BB	71	C
59	BB	72	G
59	BB	73	A
59	BB	77	U
59	BB	86	G
59	BB	87	G
59	BB	97	G
59	BB	98	G
59	BB	99	A
59	BB	101	A
59	BB	107	U
59	BB	109	G
59	BB	111	U
60	BA	7	G
60	BA	10	G
60	BA	11	G
60	BA	12	U
60	BA	15	G
60	BA	17	G
60	BA	33	U

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Mol	Chain	Res	Type
60	BA	34	C
60	BA	35	G
60	BA	46	C
60	BA	49	A
60	BA	51	G
60	BA	58	G
60	BA	61	G
60	BA	63	U
60	BA	73	A
60	BA	75	G
60	BA	84	A
60	BA	90	U
60	BA	98	G
60	BA	99	U
60	BA	101	G
60	BA	102	G
60	BA	104	U
60	BA	105	C
60	BA	110	G
60	BA	115	C
60	BA	117	G
60	BA	118	A
60	BA	119	A
60	BA	120	U
60	BA	122	G
60	BA	123	G
60	BA	149	A
60	BA	163	U
60	BA	171	G
60	BA	181	A
60	BA	186	G
60	BA	196	A
60	BA	197	A
60	BA	199	A
60	BA	205	G
60	BA	216	A
60	BA	217	G
60	BA	221	A
60	BA	222	A
60	BA	227	A
60	BA	229	A
60	BA	230	U

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Mol	Chain	Res	Type
60	BA	233	A
60	BA	241	A
60	BA	242	G
60	BA	248	G
60	BA	250	G
60	BA	256	A
60	BA	270(B)	A
60	BA	270(D)	C
60	BA	270(M)	U
60	BA	270(N)	U
60	BA	270(O)	G
60	BA	270(P)	U
60	BA	270(Q)	C
60	BA	270(R)	C
60	BA	270(W)	G
60	BA	271(D)	U
60	BA	271	G
60	BA	273(A)	G
60	BA	274	G
60	BA	275	G
60	BA	277	C
60	BA	278	A
60	BA	279	C
60	BA	280	C
60	BA	281	G
60	BA	288	C
60	BA	294	A
60	BA	302	C
60	BA	310	A
60	BA	314	A
60	BA	323	G
60	BA	324	A
60	BA	329	G
60	BA	330	A
60	BA	332	A
60	BA	333	G
60	BA	338	G
60	BA	339	U
60	BA	345	A
60	BA	346	A
60	BA	352	G
60	BA	380	U

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Mol	Chain	Res	Type
60	BA	381	G
60	BA	386	G
60	BA	387	U
60	BA	396	G
60	BA	405	U
60	BA	406	G
60	BA	411	G
60	BA	416	C
60	BA	422	A
60	BA	429	A
60	BA	432	A
60	BA	434	U
60	BA	441	U
60	BA	444	C
60	BA	446	G
60	BA	448	U
60	BA	449	A
60	BA	451	C
60	BA	456	C
60	BA	457	A
60	BA	459	U
60	BA	464	U
60	BA	465	G
60	BA	467	G
60	BA	470	A
60	BA	475	U
60	BA	480	A
60	BA	481	G
60	BA	483	A
60	BA	484	C
60	BA	505	A
60	BA	508	G
60	BA	509	C
60	BA	512	G
60	BA	513	A
60	BA	516	C
60	BA	527	C
60	BA	529	A
60	BA	530	G
60	BA	531	C
60	BA	532	A
60	BA	533	G

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Mol	Chain	Res	Type
60	BA	549	G
60	BA	556	G
60	BA	559	G
60	BA	563	G
60	BA	572	A
60	BA	573	G
60	BA	574	C
60	BA	575	A
60	BA	578	A
60	BA	583	G
60	BA	585	G
60	BA	586	A
60	BA	588	U
60	BA	599	G
60	BA	603	A
60	BA	615	G
60	BA	616	A
60	BA	617	G
60	BA	620	G
60	BA	627	A
60	BA	628	G
60	BA	634	C
60	BA	637	A
60	BA	644	A
60	BA	645	C
60	BA	646	A
60	BA	649	G
60	BA	652	U
60	BA	654	U
60	BA	656	G
60	BA	657	U
60	BA	667	U
60	BA	671	C
60	BA	679	C
60	BA	683	C
60	BA	685	A
60	BA	686	G
60	BA	691	C
60	BA	695	G
60	BA	715	G
60	BA	716	A
60	BA	717	G

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Mol	Chain	Res	Type
60	BA	723	G
60	BA	724	U
60	BA	726	G
60	BA	730	C
60	BA	735	A
60	BA	736	C
60	BA	737	C
60	BA	738	G
60	BA	748	G
60	BA	753	C
60	BA	757	U
60	BA	768	G
60	BA	775	G
60	BA	776	G
60	BA	779	U
60	BA	780	G
60	BA	781	A
60	BA	782	A
60	BA	784	A
60	BA	785	G
60	BA	788	A
60	BA	789	A
60	BA	792	G
60	BA	800	A
60	BA	805	G
60	BA	806	C
60	BA	812	C
60	BA	817	C
60	BA	819	A
60	BA	825	C
60	BA	826	U
60	BA	827	U
60	BA	828	U
60	BA	829	A
60	BA	831	G
60	BA	836	G
60	BA	843	G
60	BA	846	C
60	BA	847	U
60	BA	852	G
60	BA	859	G
60	BA	860	U

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Mol	Chain	Res	Type
60	BA	883	G
60	BA	887	A
60	BA	888	C
60	BA	890	A
60	BA	896	A
60	BA	897	C
60	BA	899	A
60	BA	906	G
60	BA	910	A
60	BA	914	C
60	BA	917	A
60	BA	919	G
60	BA	929	G
60	BA	931	G
60	BA	932	G
60	BA	941	A
60	BA	943	U
60	BA	945	A
60	BA	946	G
60	BA	947	G
60	BA	959	A
60	BA	961	C
60	BA	969	U
60	BA	971	C
60	BA	972	G
60	BA	974(A)	G
60	BA	974(B)	C
60	BA	980	A
60	BA	983	A
60	BA	989	G
60	BA	990	A
60	BA	996	A
60	BA	997	G
60	BA	1005	C
60	BA	1007	C
60	BA	1008	C
60	BA	1009	A
60	BA	1012	U
60	BA	1013	C
60	BA	1022	G
60	BA	1023	U
60	BA	1024	G

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Mol	Chain	Res	Type
60	BA	1025	G
60	BA	1026	U
60	BA	1033	U
60	BA	1039	G
60	BA	1041	C
60	BA	1042	G
60	BA	1046	A
60	BA	1047	G
60	BA	1048	A
60	BA	1054	A
60	BA	1070	A
60	BA	1071	G
60	BA	1072	C
60	BA	1073	A
60	BA	1075	C
60	BA	1077	A
60	BA	1078	U
60	BA	1079	C
60	BA	1085	A
60	BA	1088	A
60	BA	1090	U
60	BA	1096	A
60	BA	1106	G
60	BA	1107	G
60	BA	1112	G
60	BA	1117	G
60	BA	1130	U
60	BA	1132	A
60	BA	1133	U
60	BA	1135	C
60	BA	1136	G
60	BA	1138	G
60	BA	1139	G
60	BA	1140	C
60	BA	114(B)	A
60	BA	1154	G
60	BA	1155	A
60	BA	1157	G
60	BA	1175	U
60	BA	1176	G
60	BA	1185	C
60	BA	1186	G

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Mol	Chain	Res	Type
60	BA	1188	U
60	BA	1199	U
60	BA	1204	A
60	BA	1206	G
60	BA	1210	A
60	BA	1212	G
60	BA	1221	C
60	BA	1240	U
60	BA	1241	A
60	BA	1242	A
60	BA	1244	G
60	BA	1248	G
60	BA	1249	U
60	BA	1253	A
60	BA	1255	U
60	BA	1256	G
60	BA	1257	C
60	BA	1262	A
60	BA	1271	G
60	BA	1272	A
60	BA	1273	U
60	BA	1274	A
60	BA	1284	A
60	BA	1286	A
60	BA	1287	A
60	BA	1288	U
60	BA	1300	U
60	BA	1301	A
60	BA	1302	A
60	BA	1311	G
60	BA	1312	U
60	BA	1314	C
60	BA	1321	A
60	BA	1324	G
60	BA	1325	G
60	BA	1326	U
60	BA	1327	C
60	BA	1329	U
60	BA	1332	G
60	BA	1333	C
60	BA	1341	U
60	BA	1342	A

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Mol	Chain	Res	Type
60	BA	1343	G
60	BA	1344	G
60	BA	1345	C
60	BA	1346	G
60	BA	1349	A
60	BA	1352	U
60	BA	1359	A
60	BA	1360	A
60	BA	1365	A
60	BA	1380	G
60	BA	1382	G
60	BA	1384	A
60	BA	1385	G
60	BA	1396	U
60	BA	1397	U
60	BA	1416	G
60	BA	1420	U
60	BA	1421	G
60	BA	1427	A
60	BA	1428	C
60	BA	1429	G
60	BA	1434	A
60	BA	144(B)	A
60	BA	1445	C
60	BA	1451	C
60	BA	1453	A
60	BA	1454	U
60	BA	1455	G
60	BA	1458	C
60	BA	1460	A
60	BA	1467	C
60	BA	1483	G
60	BA	1485	G
60	BA	1490	A
60	BA	1491	G
60	BA	1493	C
60	BA	1494	A
60	BA	1495	A
60	BA	1497	U
60	BA	1498	C
60	BA	1503	U
60	BA	1522	G

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Mol	Chain	Res	Type
60	BA	1523	U
60	BA	1536	A
60	BA	1538	G
60	BA	1542	G
60	BA	1543	A
60	BA	1544	C
60	BA	1545	A
60	BA	1546	A
60	BA	1547	C
60	BA	1554	A
60	BA	1555	G
60	BA	1558	A
60	BA	1559	G
60	BA	1566	A
60	BA	1567	A
60	BA	1569	A
60	BA	1583	A
60	BA	1585	C
60	BA	1586	A
60	BA	1595	G
60	BA	1598	C
60	BA	1602	U
60	BA	1603	A
60	BA	1608	A
60	BA	1610	A
60	BA	1614	A
60	BA	1615	C
60	BA	1616	A
60	BA	1617	C
60	BA	1618	A
60	BA	1631	A
60	BA	1633	G
60	BA	1640	C
60	BA	1646	C
60	BA	1648	C
60	BA	1653	G
60	BA	1654	A
60	BA	1657	C
60	BA	1664	A
60	BA	1668	A
60	BA	1670	C
60	BA	1674	G

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Mol	Chain	Res	Type
60	BA	1678	G
60	BA	1688	U
60	BA	1694	C
60	BA	1696	G
60	BA	1698	A
60	BA	1699	G
60	BA	1700	A
60	BA	1702	G
60	BA	1729	A
60	BA	1730	U
60	BA	1731	G
60	BA	1732	A
60	BA	1757	U
60	BA	1763	G
60	BA	1764	G
60	BA	1773	A
60	BA	1775	U
60	BA	1780	A
60	BA	1781	C
60	BA	1783	A
60	BA	1784	A
60	BA	1785	A
60	BA	1787	A
60	BA	1790	C
60	BA	1791	A
60	BA	1796	U
60	BA	1799	G
60	BA	1800	C
60	BA	1802	A
60	BA	1803	A
60	BA	1809	A
60	BA	1811	G
60	BA	1815	A
60	BA	1816	G
60	BA	1817	G
60	BA	1820	U
60	BA	1821	A
60	BA	1829	A
60	BA	1847	A
60	BA	1859	A
60	BA	1878	G
60	BA	1888	G

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Mol	Chain	Res	Type
60	BA	1889	A
60	BA	1900	A
60	BA	1902	C
60	BA	1905	C
60	BA	1906	G
60	BA	1912	A
60	BA	1914	C
60	BA	1924	C
60	BA	1929	G
60	BA	1930	G
60	BA	1936	A
60	BA	1937	A
60	BA	1938	A
60	BA	1939	U
60	BA	1944	U
60	BA	1954	G
60	BA	1955	U
60	BA	1963	U
60	BA	1964	G
60	BA	1965	C
60	BA	1966	A
60	BA	1967	C
60	BA	1970	A
60	BA	1971	A
60	BA	1972	A
60	BA	1977	A
60	BA	1978	A
60	BA	1982	C
60	BA	1992	G
60	BA	1993	U
60	BA	1996	C
60	BA	2013	A
60	BA	2020	A
60	BA	2021	C
60	BA	2023	G
60	BA	2027	G
60	BA	2028	U
60	BA	2030	A
60	BA	2031	A
60	BA	2032	G
60	BA	2033	A
60	BA	2034	U

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Mol	Chain	Res	Type
60	BA	2036	C
60	BA	2038	G
60	BA	2039	C
60	BA	2040	C
60	BA	2041	U
60	BA	2042	A
60	BA	2043	C
60	BA	2052	G
60	BA	2055	C
60	BA	2056	G
60	BA	2059	A
60	BA	2060	A
60	BA	2061	G
60	BA	2062	A
60	BA	2064	C
60	BA	2067	G
60	BA	2069	G
60	BA	2070	G
60	BA	2081	C
60	BA	2092	U
60	BA	2093	G
60	BA	2115	G
60	BA	2116	G
60	BA	2117	A
60	BA	2120	G
60	BA	2126	A
60	BA	2130	U
60	BA	2132	U
60	BA	2133	G
60	BA	2136	C
60	BA	2140	C
60	BA	2142	C
60	BA	2144	U
60	BA	2147	G
60	BA	2149	G
60	BA	2154	G
60	BA	2156	G
60	BA	2159	G
60	BA	2162	G
60	BA	2168	G
60	BA	2171	A
60	BA	2172	U

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Mol	Chain	Res	Type
60	BA	2173	A
60	BA	2182	G
60	BA	2190	G
60	BA	2198	A
60	BA	2208	U
60	BA	2211	G
60	BA	2212	A
60	BA	2213	U
60	BA	2224	G
60	BA	2225	A
60	BA	2238	G
60	BA	2239	G
60	BA	2241	A
60	BA	2243	U
60	BA	2249	U
60	BA	2264	C
60	BA	2266	A
60	BA	2269	A
60	BA	2275	C
60	BA	2277	G
60	BA	2278	A
60	BA	2279	G
60	BA	2282	G
60	BA	2283	C
60	BA	2287	A
60	BA	2291	U
60	BA	2305	A
60	BA	2306	C
60	BA	2308	G
60	BA	2310	A
60	BA	2311	A
60	BA	2319	G
60	BA	2320	A
60	BA	2325	G
60	BA	2334	G
60	BA	2336	A
60	BA	2345	G
60	BA	2346	A
60	BA	2347	C
60	BA	2350	C
60	BA	2377	A
60	BA	2383	G

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Mol	Chain	Res	Type
60	BA	2385	C
60	BA	2387	U
60	BA	2388	A
60	BA	2390	U
60	BA	2391	G
60	BA	2394	C
60	BA	2395	C
60	BA	2402	C
60	BA	2403	C
60	BA	2405	G
60	BA	2406	U
60	BA	2407	G
60	BA	2411	A
60	BA	2422	A
60	BA	2423	U
60	BA	2425	A
60	BA	2427	C
60	BA	2428	G
60	BA	2429	G
60	BA	2430	A
60	BA	2432	A
60	BA	2433	A
60	BA	2435	A
60	BA	2436	G
60	BA	2439	A
60	BA	2440	C
60	BA	2441	C
60	BA	2446	G
60	BA	2447	G
60	BA	2448	A
60	BA	2449	U
60	BA	2450	A
60	BA	2451	A
60	BA	2452	C
60	BA	2463	C
60	BA	2469	A
60	BA	2470	G
60	BA	2474	C
60	BA	2476	A
60	BA	2477	C
60	BA	2478	A
60	BA	2479	G

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Mol	Chain	Res	Type
60	BA	2480	C
60	BA	2499	C
60	BA	2502	G
60	BA	2503	A
60	BA	2504	U
60	BA	2505	G
60	BA	2507	C
60	BA	2508	G
60	BA	2518	A
60	BA	2519	U
60	BA	2520	C
60	BA	2530	A
60	BA	2531	A
60	BA	2534	A
60	BA	2542	A
60	BA	2543	G
60	BA	2553	G
60	BA	2554	U
60	BA	2556	C
60	BA	2561	A
60	BA	2564	A
60	BA	2566	A
60	BA	2567	G
60	BA	2572	A
60	BA	2573	C
60	BA	2574	G
60	BA	2577	A
60	BA	2583	G
60	BA	2584	U
60	BA	2598	A
60	BA	2602	A
60	BA	2609	U
60	BA	2610	C
60	BA	2611	U
60	BA	2612	C
60	BA	2615	U
60	BA	2620	C
60	BA	2621	A
60	BA	2630	G
60	BA	2634	G
60	BA	2646	C
60	BA	2663	G

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Mol	Chain	Res	Type
60	BA	2665	A
60	BA	2677	G
60	BA	2682	U
60	BA	2683	C
60	BA	2687	U
60	BA	2689	U
60	BA	2691	C
60	BA	2702	U
60	BA	2703	C
60	BA	2712	U
60	BA	2713	A
60	BA	2715	C
60	BA	2726	U
60	BA	2732	G
60	BA	2733	A
60	BA	2746	U
60	BA	2755	C
60	BA	2764	A
60	BA	2765	A
60	BA	2768	C
60	BA	2772	C
60	BA	2777	G
60	BA	2778	A
60	BA	2779	U
60	BA	2780	G
60	BA	2781	A
60	BA	2782	G
60	BA	2790	A
60	BA	2791	C
60	BA	2792	G
60	BA	2797	U
60	BA	2798	C
60	BA	2801	A
60	BA	2805	G
60	BA	2811	G
60	BA	2818	G
60	BA	2820	A
60	BA	2821	A
60	BA	2833	G
60	BA	2834	G
60	BA	2835	A
60	BA	2842	G

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Mol	Chain	Res	Type
60	BA	2849	U
60	BA	2851	A
60	BA	2857	G
60	BA	2866	U
60	BA	2872	G
60	BA	2880	C
60	BA	2881	C
60	BA	2886	G
60	BA	2894	G
20	CA	6	G
20	CA	7	G
20	CA	9	G
20	CA	22	G
20	CA	29	G
20	CA	32	A
20	CA	39	G
20	CA	47	C
20	CA	48	C
20	CA	51	A
20	CA	54	C
20	CA	59	A
20	CA	68	G
20	CA	68(H)	G
20	CA	68(I)	G
20	CA	68(L)	U
20	CA	68(M)	U
20	CA	68(P)	C
20	CA	68(V)	G
20	CA	109	A
20	CA	115	G
20	CA	116	A
20	CA	119	A
20	CA	121	C
20	CA	129(A)	G
20	CA	131	C
20	CA	136	C
20	CA	144	G
20	CA	147	G
20	CA	163	C
20	CA	182	U
20	CA	183	G
20	CA	186(G)	C

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Mol	Chain	Res	Type
20	CA	186(I)	U
20	CA	195	A
20	CA	201(C)	U
20	CA	216	G
20	CA	220	G
20	CA	224	C
20	CA	230	G
20	CA	247	G
20	CA	251	G
20	CA	252	U
20	CA	253	U
20	CA	267	C
20	CA	279	A
20	CA	280	C
20	CA	281	G
20	CA	289	G
20	CA	297	G
20	CA	301	G
20	CA	309	G
20	CA	312	C
20	CA	321	A
20	CA	328	C
20	CA	329	A
20	CA	331	G
20	CA	332	G
20	CA	335	C
20	CA	341	C
20	CA	345	C
20	CA	346	G
20	CA	347	G
20	CA	352	C
20	CA	353	A
20	CA	354	G
20	CA	357	G
20	CA	367	U
20	CA	372	C
20	CA	373	A
20	CA	382	A
20	CA	384	G
20	CA	388	G
20	CA	390	C
20	CA	393	A

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Mol	Chain	Res	Type
20	CA	397	A
20	CA	398	C
20	CA	412	A
20	CA	413	G
20	CA	414	A
20	CA	422	C
20	CA	424	G
20	CA	427	U
20	CA	430	A
20	CA	433	C
20	CA	440	A
20	CA	452	A
20	CA	453	A
20	CA	455	C
20	CA	458	C
20	CA	458(B)	A
20	CA	458(D)	G
20	CA	481	G
20	CA	485	G
20	CA	486	U
20	CA	497	A
20	CA	498	U
20	CA	505	G
20	CA	511	C
20	CA	516	U
20	CA	518	C
20	CA	521	G
20	CA	527	G
20	CA	531	U
20	CA	532	A
20	CA	533	A
20	CA	547	A
20	CA	562	C
20	CA	568	G
20	CA	569	C
20	CA	572	A
20	CA	573	A
20	CA	575	G
20	CA	576	G
20	CA	577	G
20	CA	581	G
20	CA	589	C

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Mol	Chain	Res	Type
20	CA	600	C
20	CA	616	G
20	CA	653	A
20	CA	664	G
20	CA	665	A
20	CA	667	G
20	CA	673	G
20	CA	687	A
20	CA	688	G
20	CA	724	G
20	CA	734	G
20	CA	749	C
20	CA	752	G
20	CA	755	G
20	CA	766	A
20	CA	782	A
20	CA	793	U
20	CA	794	A
20	CA	799	G
20	CA	816	A
20	CA	817	C
20	CA	818	G
20	CA	819	A
20	CA	820	U
20	CA	828	A
20	CA	838(A)	U
20	CA	838(B)	C
20	CA	838(C)	U
20	CA	848	C
20	CA	857	C
20	CA	859	A
20	CA	867	G
20	CA	870	U
20	CA	873	A
20	CA	882	C
20	CA	884	U
20	CA	888	G
20	CA	926	G
20	CA	927	G
20	CA	934	C
20	CA	935	A
20	CA	938	A

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Mol	Chain	Res	Type
20	CA	945	G
20	CA	960	U
20	CA	961	U
20	CA	969	A
20	CA	971	G
20	CA	974	A
20	CA	976	G
20	CA	977	A
20	CA	978	A
20	CA	980	C
20	CA	981	U
20	CA	983	A
20	CA	991	U
20	CA	992	U
20	CA	993	G
20	CA	1004	A
20	CA	1006	C
20	CA	1017	G
20	CA	1022	G
20	CA	1024	G
20	CA	1025	U
20	CA	1026	G
20	CA	1028	C
20	CA	1028(A)	C
20	CA	1036	G
20	CA	1038	C
20	CA	1041	A
20	CA	1045	C
20	CA	1053	G
20	CA	1054	C
20	CA	1055	A
20	CA	1060	C
20	CA	1064	G
20	CA	1065	U
20	CA	1066	C
20	CA	1070	U
20	CA	1093	A
20	CA	1094	G
20	CA	1095	U
20	CA	1098	C
20	CA	1101	A
20	CA	1102	A

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Mol	Chain	Res	Type
20	CA	1117	G
20	CA	1124	G
20	CA	1125	U
20	CA	1126	U
20	CA	1129	C
20	CA	1130	A
20	CA	1137	C
20	CA	1138	G
20	CA	1139	G
20	CA	1145	C
20	CA	1146	A
20	CA	1151	A
20	CA	1157	A
20	CA	1159	U
20	CA	1165	C
20	CA	1171	G
20	CA	1174	G
20	CA	1181	G
20	CA	1183	A
20	CA	1184	G
20	CA	1190	G
20	CA	1196	U
20	CA	1197	G
20	CA	1200	C
20	CA	1201	A
20	CA	1212	U
20	CA	1213	A
20	CA	1220	G
20	CA	1221	G
20	CA	1227	A
20	CA	1236	A
20	CA	1238	A
20	CA	1240	U
20	CA	1250	A
20	CA	1256	A
20	CA	1257	U
20	CA	1260	C
20	CA	1262	C
20	CA	1266	G
20	CA	1277	C
20	CA	1280	A
20	CA	1281	U

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Mol	Chain	Res	Type
20	CA	1286	A
20	CA	1287	A
20	CA	1300	G
20	CA	1301	U
20	CA	1302	U
20	CA	1303	C
20	CA	1305	G
20	CA	1317	C
20	CA	1320	C
20	CA	1322	C
20	CA	1331	G
20	CA	1336	C
20	CA	1338	G
20	CA	1340	A
20	CA	1347	G
20	CA	1353	G
20	CA	1360	A
20	CA	1363	A
20	CA	1364	U
20	CA	1368	G
20	CA	1377	A
20	CA	1378	C
20	CA	1381	U
20	CA	1382	C
20	CA	1397	C
20	CA	1398	A
20	CA	1401	G
20	CA	1422	G
20	CA	1425	U
20	CA	1440(B)	G
20	CA	1440(C)	G
20	CA	1440(D)	A
20	CA	1440(E)	G
20	CA	1440(I)	A
20	CA	1440(J)	C
20	CA	1440(K)	G
20	CA	1440(L)	G
20	CA	1481	U
20	CA	1492	A
20	CA	1493	A
20	CA	1494	G
20	CA	1497	G

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Mol	Chain	Res	Type
20	CA	1499	A
20	CA	1502	A
20	CA	1503	A
20	CA	1504	G
20	CA	1505	G
20	CA	1506	U
20	CA	1507	A
20	CA	1517	G
20	CA	1519	A
20	CA	1520	G
20	CA	1529	G
20	CA	1530	G
20	CA	1532	U
20	CA	1533	C
20	CA	1534	A
20	CA	1535	C
20	CA	1536	C
20	CA	1537	U
20	CA	1538	C
21	CV	5	A
21	CV	9	G
21	CV	11	U
21	CV	12	A
21	CV	13	A
21	CV	14	A
21	CV	15	A
21	CV	21	A
22	CW	4	U
22	CW	9	A
22	CW	14	A
22	CW	15	G
22	CW	16	U
22	CW	17	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	25	C
22	CW	42	U
22	CW	46	G

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Mol	Chain	Res	Type
22	CW	47	U
22	CW	48	C
22	CW	50	C
22	CW	53	G
22	CW	58	A
22	CW	60	U
22	CW	61	C
59	DB	2	C
59	DB	13	A
59	DB	15	A
59	DB	16	G
59	DB	25	A
59	DB	30	C
59	DB	41	U
59	DB	44	G
59	DB	47	C
59	DB	48	A
59	DB	67	G
59	DB	71	C
59	DB	72	G
59	DB	73	A
59	DB	94	C
59	DB	99	A
59	DB	107	U
59	DB	109	G
59	DB	117	G
60	DA	7	G
60	DA	11	G
60	DA	15	G
60	DA	17	G
60	DA	33	U
60	DA	34	C
60	DA	35	G
60	DA	36	G
60	DA	46	C
60	DA	60	G
60	DA	63	U
60	DA	67	U
60	DA	73	A
60	DA	75	G
60	DA	90	U
60	DA	98	G

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Mol	Chain	Res	Type
60	DA	99	U
60	DA	101	G
60	DA	102	G
60	DA	104	U
60	DA	110	G
60	DA	115	C
60	DA	116	C
60	DA	119	A
60	DA	120	U
60	DA	128	C
60	DA	141(A)	A
60	DA	148	C
60	DA	149	A
60	DA	175	G
60	DA	181	A
60	DA	186	G
60	DA	196	A
60	DA	197	A
60	DA	199	A
60	DA	205	G
60	DA	216	A
60	DA	221	A
60	DA	222	A
60	DA	223	A
60	DA	227	A
60	DA	229	A
60	DA	230	U
60	DA	233	A
60	DA	239	U
60	DA	241	A
60	DA	248	G
60	DA	250	G
60	DA	252	G
60	DA	256	A
60	DA	265	A
60	DA	270(M)	U
60	DA	270(N)	U
60	DA	270(O)	G
60	DA	270(P)	U
60	DA	270(Q)	C
60	DA	270(R)	C
60	DA	271(B)	C

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Mol	Chain	Res	Type
60	DA	271(D)	U
60	DA	271	G
60	DA	274	G
60	DA	275	G
60	DA	277	C
60	DA	279	C
60	DA	282	A
60	DA	290	G
60	DA	294	A
60	DA	295	G
60	DA	297	C
60	DA	299	A
60	DA	300	A
60	DA	302	C
60	DA	304	G
60	DA	310	A
60	DA	323	G
60	DA	329	G
60	DA	330	A
60	DA	332	A
60	DA	345	A
60	DA	346	A
60	DA	352	G
60	DA	353	G
60	DA	363(G)	A
60	DA	370	G
60	DA	381	G
60	DA	386	G
60	DA	387	U
60	DA	396	G
60	DA	405	U
60	DA	406	G
60	DA	407	G
60	DA	411	G
60	DA	416	C
60	DA	432	A
60	DA	434	U
60	DA	435	C
60	DA	443	A
60	DA	444	C
60	DA	448	U
60	DA	449	A

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Mol	Chain	Res	Type
60	DA	451	C
60	DA	456	C
60	DA	457	A
60	DA	459	U
60	DA	464	U
60	DA	465	G
60	DA	469	G
60	DA	470	A
60	DA	474	G
60	DA	475	U
60	DA	480	A
60	DA	481	G
60	DA	484	C
60	DA	505	A
60	DA	508	G
60	DA	509	C
60	DA	511	U
60	DA	512	G
60	DA	513	A
60	DA	516	C
60	DA	518	G
60	DA	527	C
60	DA	531	C
60	DA	532	A
60	DA	549	G
60	DA	556	G
60	DA	561	G
60	DA	563	G
60	DA	572	A
60	DA	573	G
60	DA	574	C
60	DA	575	A
60	DA	585	G
60	DA	599	G
60	DA	603	A
60	DA	615	G
60	DA	616	A
60	DA	617	G
60	DA	618(A)	G
60	DA	620	G
60	DA	621	A
60	DA	627	A

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Mol	Chain	Res	Type
60	DA	628	G
60	DA	637	A
60	DA	645	C
60	DA	646	A
60	DA	652	U
60	DA	654	U
60	DA	655	A
60	DA	657	U
60	DA	662	G
60	DA	667	U
60	DA	671	C
60	DA	682	G
60	DA	685	A
60	DA	686	G
60	DA	709	U
60	DA	716	A
60	DA	719	C
60	DA	728	G
60	DA	730	C
60	DA	735	A
60	DA	736	C
60	DA	737	C
60	DA	738	G
60	DA	747	U
60	DA	748	G
60	DA	753	C
60	DA	755	C
60	DA	757	U
60	DA	764	A
60	DA	767	U
60	DA	768	G
60	DA	776	G
60	DA	781	A
60	DA	782	A
60	DA	784	A
60	DA	785	G
60	DA	788	A
60	DA	792	G
60	DA	800	A
60	DA	805	G
60	DA	806	C
60	DA	810	U

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Mol	Chain	Res	Type
60	DA	812	C
60	DA	817	C
60	DA	819	A
60	DA	821	A
60	DA	825	C
60	DA	827	U
60	DA	829	A
60	DA	831	G
60	DA	835	A
60	DA	846	C
60	DA	847	U
60	DA	852	G
60	DA	869	G
60	DA	887	A
60	DA	890	A
60	DA	896	A
60	DA	897	C
60	DA	898	C
60	DA	906	G
60	DA	910	A
60	DA	911	A
60	DA	917	A
60	DA	919	G
60	DA	929	G
60	DA	932	G
60	DA	941	A
60	DA	942	G
60	DA	943	U
60	DA	946	G
60	DA	947	G
60	DA	961	C
60	DA	971	C
60	DA	974(A)	G
60	DA	974(B)	C
60	DA	977	G
60	DA	980	A
60	DA	982	C
60	DA	983	A
60	DA	990	A
60	DA	996	A
60	DA	1005	C
60	DA	1008	C

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Mol	Chain	Res	Type
60	DA	1009	A
60	DA	1012	U
60	DA	1013	C
60	DA	1022	G
60	DA	1023	U
60	DA	1025	G
60	DA	1026	U
60	DA	1030	G
60	DA	1033	U
60	DA	1034	G
60	DA	1042	G
60	DA	1045	A
60	DA	1046	A
60	DA	1047	G
60	DA	1048	A
60	DA	1070	A
60	DA	1071	G
60	DA	1072	C
60	DA	1073	A
60	DA	1075	C
60	DA	1077	A
60	DA	1078	U
60	DA	1079	C
60	DA	1082	U
60	DA	1085	A
60	DA	1087	G
60	DA	1088	A
60	DA	1090	U
60	DA	1095	A
60	DA	1096	A
60	DA	1102	C
60	DA	1106	G
60	DA	1110	G
60	DA	1111	A
60	DA	1112	G
60	DA	1119	C
60	DA	1127	A
60	DA	1130	U
60	DA	1132	A
60	DA	1135	C
60	DA	1136	G
60	DA	1138	G

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Mol	Chain	Res	Type
60	DA	1139	G
60	DA	1141	U
60	DA	114(B)	A
60	DA	1148	A
60	DA	1157	G
60	DA	1175	U
60	DA	1176	G
60	DA	1186	G
60	DA	1199	U
60	DA	1204	A
60	DA	1210	A
60	DA	1211	U
60	DA	1212	G
60	DA	1221	C
60	DA	1224	C
60	DA	1237	A
60	DA	1241	A
60	DA	1244	G
60	DA	1248	G
60	DA	1249	U
60	DA	1253	A
60	DA	1255	U
60	DA	1256	G
60	DA	1257	C
60	DA	1262	A
60	DA	1271	G
60	DA	1272	A
60	DA	1273	U
60	DA	1274	A
60	DA	1286	A
60	DA	1288	U
60	DA	1300	U
60	DA	1301	A
60	DA	1302	A
60	DA	1311	G
60	DA	1312	U
60	DA	1314	C
60	DA	1321	A
60	DA	1324	G
60	DA	1325	G
60	DA	1329	U
60	DA	1332	G

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Mol	Chain	Res	Type
60	DA	1333	C
60	DA	1341	U
60	DA	1342	A
60	DA	1345	C
60	DA	1346	G
60	DA	1349	A
60	DA	1350	C
60	DA	1352	U
60	DA	1359	A
60	DA	1365	A
60	DA	1366	A
60	DA	1371	G
60	DA	1380	G
60	DA	1384	A
60	DA	1385	G
60	DA	1392	A
60	DA	1395	A
60	DA	1396	U
60	DA	1400	G
60	DA	1416	G
60	DA	1420	U
60	DA	1421	G
60	DA	1427	A
60	DA	1428	C
60	DA	1435	G
60	DA	144(B)	A
60	DA	1445	C
60	DA	149(B)	A
60	DA	1453	A
60	DA	1454	U
60	DA	1455	G
60	DA	1459	G
60	DA	1460	A
60	DA	1467	C
60	DA	1483	G
60	DA	1486	A
60	DA	1490	A
60	DA	1491	G
60	DA	1493	C
60	DA	1494	A
60	DA	1495	A
60	DA	1497	U

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Mol	Chain	Res	Type
60	DA	1498	C
60	DA	1501	C
60	DA	1503	U
60	DA	1522	G
60	DA	1523	U
60	DA	1536	A
60	DA	1538	G
60	DA	1542	G
60	DA	1543	A
60	DA	1544	C
60	DA	1545	A
60	DA	1546	A
60	DA	1554	A
60	DA	1557	C
60	DA	1558	A
60	DA	1559	G
60	DA	1565	C
60	DA	1566	A
60	DA	1567	A
60	DA	1569	A
60	DA	1572	A
60	DA	1583	A
60	DA	1585	C
60	DA	1595	G
60	DA	1602	U
60	DA	1603	A
60	DA	1608	A
60	DA	1610	A
60	DA	1614	A
60	DA	1615	C
60	DA	1616	A
60	DA	1617	C
60	DA	1618	A
60	DA	1631	A
60	DA	1640	C
60	DA	1648	C
60	DA	1650	G
60	DA	1651	G
60	DA	1653	G
60	DA	1654	A
60	DA	1668	A
60	DA	1669	A

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Mol	Chain	Res	Type
60	DA	1670	C
60	DA	1674	G
60	DA	1681	G
60	DA	1694	C
60	DA	1695	G
60	DA	1696	G
60	DA	1697	G
60	DA	1698	A
60	DA	1699	G
60	DA	1700	A
60	DA	1707	G
60	DA	1729	A
60	DA	1732	A
60	DA	1750	G
60	DA	1758	G
60	DA	1759	A
60	DA	1763	G
60	DA	1764	G
60	DA	1773	A
60	DA	1780	A
60	DA	1781	C
60	DA	1783	A
60	DA	1784	A
60	DA	1787	A
60	DA	1791	A
60	DA	1796	U
60	DA	1799	G
60	DA	1800	C
60	DA	1801	G
60	DA	1802	A
60	DA	1803	A
60	DA	1809	A
60	DA	1812	A
60	DA	1815	A
60	DA	1816	G
60	DA	1817	G
60	DA	1820	U
60	DA	1821	A
60	DA	1829	A
60	DA	1839	G
60	DA	1847	A
60	DA	1878	G

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Mol	Chain	Res	Type
60	DA	1881	C
60	DA	1888	G
60	DA	1889	A
60	DA	1894	C
60	DA	1900	A
60	DA	1905	C
60	DA	1906	G
60	DA	1913	A
60	DA	1914	C
60	DA	1929	G
60	DA	1930	G
60	DA	1936	A
60	DA	1938	A
60	DA	1939	U
60	DA	1944	U
60	DA	1955	U
60	DA	1963	U
60	DA	1965	C
60	DA	1966	A
60	DA	1967	C
60	DA	1970	A
60	DA	1971	A
60	DA	1972	A
60	DA	1975	G
60	DA	1977	A
60	DA	1979	C
60	DA	1982	C
60	DA	1983	C
60	DA	1992	G
60	DA	1993	U
60	DA	1996	C
60	DA	2006	C
60	DA	2013	A
60	DA	2020	A
60	DA	2021	C
60	DA	2023	G
60	DA	2026	C
60	DA	2027	G
60	DA	2031	A
60	DA	2032	G
60	DA	2033	A
60	DA	2034	U

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Mol	Chain	Res	Type
60	DA	2036	C
60	DA	2039	C
60	DA	2040	C
60	DA	2041	U
60	DA	2042	A
60	DA	2043	C
60	DA	2052	G
60	DA	2055	C
60	DA	2056	G
60	DA	2060	A
60	DA	2061	G
60	DA	2062	A
60	DA	2063	C
60	DA	2065	C
60	DA	2067	G
60	DA	2069	G
60	DA	2091	U
60	DA	2093	G
60	DA	2107	C
60	DA	2115	G
60	DA	2116	G
60	DA	2117	A
60	DA	2120	G
60	DA	2126	A
60	DA	2128	C
60	DA	2130	U
60	DA	2132	U
60	DA	2133	G
60	DA	2138	C
60	DA	2144	U
60	DA	2145	C
60	DA	2156	G
60	DA	2158	A
60	DA	2159	G
60	DA	2168	G
60	DA	2171	A
60	DA	2173	A
60	DA	2198	A
60	DA	2210	G
60	DA	2211	G
60	DA	2212	A
60	DA	2213	U

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Mol	Chain	Res	Type
60	DA	2224	G
60	DA	2225	A
60	DA	2238	G
60	DA	2239	G
60	DA	2241	A
60	DA	2249	U
60	DA	2255	G
60	DA	2264	C
60	DA	2266	A
60	DA	2267	A
60	DA	2269	A
60	DA	2273	A
60	DA	2275	C
60	DA	2277	G
60	DA	2278	A
60	DA	2279	G
60	DA	2282	G
60	DA	2283	C
60	DA	2284	C
60	DA	2287	A
60	DA	2288	A
60	DA	2305	A
60	DA	2306	C
60	DA	2307	G
60	DA	2308	G
60	DA	2309	A
60	DA	2310	A
60	DA	2311	A
60	DA	2312	U
60	DA	2319	G
60	DA	2320	A
60	DA	2325	G
60	DA	2333	A
60	DA	2334	G
60	DA	2336	A
60	DA	2340	G
60	DA	2343	C
60	DA	2345	G
60	DA	2346	A
60	DA	2347	C
60	DA	2350	C
60	DA	2371	G

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Mol	Chain	Res	Type
60	DA	2377	A
60	DA	2381	C
60	DA	2383	G
60	DA	2385	C
60	DA	2387	U
60	DA	2390	U
60	DA	2394	C
60	DA	2400	G
60	DA	2402	C
60	DA	2403	C
60	DA	2406	U
60	DA	2411	A
60	DA	2422	A
60	DA	2423	U
60	DA	2425	A
60	DA	2427	C
60	DA	2428	G
60	DA	2429	G
60	DA	2430	A
60	DA	2433	A
60	DA	2434	A
60	DA	2435	A
60	DA	2439	A
60	DA	2440	C
60	DA	2441	C
60	DA	2447	G
60	DA	2448	A
60	DA	2449	U
60	DA	2451	A
60	DA	2456	C
60	DA	2460	U
60	DA	2469	A
60	DA	2470	G
60	DA	2476	A
60	DA	2477	C
60	DA	2478	A
60	DA	2479	G
60	DA	2480	C
60	DA	2483	C
60	DA	2499	C
60	DA	2501	C
60	DA	2502	G

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Mol	Chain	Res	Type
60	DA	2504	U
60	DA	2505	G
60	DA	2508	G
60	DA	2513	G
60	DA	2518	A
60	DA	2519	U
60	DA	2529	G
60	DA	2530	A
60	DA	2531	A
60	DA	2542	A
60	DA	2543	G
60	DA	2554	U
60	DA	2556	C
60	DA	2561	A
60	DA	2566	A
60	DA	2567	G
60	DA	2572	A
60	DA	2573	C
60	DA	2576	G
60	DA	2577	A
60	DA	2583	G
60	DA	2584	U
60	DA	2585	U
60	DA	2586	C
60	DA	2592	G
60	DA	2602	A
60	DA	2609	U
60	DA	2610	C
60	DA	2611	U
60	DA	2612	C
60	DA	2614	A
60	DA	2620	C
60	DA	2621	A
60	DA	2630	G
60	DA	2636	U
60	DA	2646	C
60	DA	2657	A
60	DA	2663	G
60	DA	2665	A
60	DA	2680	C
60	DA	2689	U
60	DA	2691	C

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Mol	Chain	Res	Type
60	DA	2701	C
60	DA	2702	U
60	DA	2703	C
60	DA	2712	U
60	DA	2713	A
60	DA	2715	C
60	DA	2730	C
60	DA	2732	G
60	DA	2733	A
60	DA	2735	G
60	DA	2746	U
60	DA	2748	A
60	DA	2764	A
60	DA	2765	A
60	DA	2772	C
60	DA	2777	G
60	DA	2778	A
60	DA	2779	U
60	DA	2780	G
60	DA	2781	A
60	DA	2782	G
60	DA	2783	G
60	DA	2790	A
60	DA	2791	C
60	DA	2792	G
60	DA	2797	U
60	DA	2798	C
60	DA	2801	A
60	DA	2805	G
60	DA	2811	G
60	DA	2818	G
60	DA	2820	A
60	DA	2821	A
60	DA	2833	G
60	DA	2834	G
60	DA	2835	A
60	DA	2849	U
60	DA	2851	A
60	DA	2857	G
60	DA	2861	G
60	DA	2866	U
60	DA	2872	G

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Mol	Chain	Res	Type
60	DA	2877	G
60	DA	2879	C
60	DA	2880	C
60	DA	2886	G
60	DA	2894	G

All (96) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
20	AA	5	U
20	AA	115	G
20	AA	181	G
20	AA	251	G
20	AA	266	G
20	AA	328	C
20	AA	429	U
20	AA	484	G
20	AA	672	U
20	AA	687	A
20	AA	748	C
20	AA	792	A
20	AA	992	U
20	AA	1064	G
20	AA	1101	A
20	AA	1145	C
20	AA	1286	A
20	AA	1504	G
20	AA	1532	U
20	AA	1535	C
20	AA	1537	U
21	AV	8	A
22	AW	20(A)	U
22	AW	41	A
59	BB	66	A
59	BB	98	G
60	BA	221	A
60	BA	271(C)	G
60	BA	278	A
60	BA	474	G
60	BA	479	A
60	BA	616	A
60	BA	735	A

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Mol	Chain	Res	Type
60	BA	830	G
60	BA	1022	G
60	BA	1139	G
60	BA	1154	G
60	BA	1185	C
60	BA	1240	U
60	BA	1542	G
60	BA	1558	A
60	BA	1783	A
60	BA	1858	G
60	BA	1913	A
60	BA	1937	A
60	BA	1992	G
60	BA	2040	C
60	BA	2092	U
60	BA	2158	A
60	BA	2171	A
60	BA	2447	G
60	BA	2791	C
20	CA	5	U
20	CA	115	G
20	CA	251	G
20	CA	266	G
20	CA	328	C
20	CA	429	U
20	CA	484	G
20	CA	531	U
20	CA	687	A
20	CA	748	C
20	CA	992	U
20	CA	1064	G
20	CA	1101	A
20	CA	1145	C
20	CA	1200	C
20	CA	1504	G
20	CA	1532	U
20	CA	1537	U
21	CV	8	A
22	CW	20(A)	U
22	CW	41	A
59	DB	66	A
60	DA	221	A

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Mol	Chain	Res	Type
60	DA	271(C)	G
60	DA	278	A
60	DA	474	G
60	DA	830	G
60	DA	1022	G
60	DA	1110	G
60	DA	1137	G
60	DA	1240	U
60	DA	1420	U
60	DA	1542	G
60	DA	1558	A
60	DA	1815	A
60	DA	1913	A
60	DA	1937	A
60	DA	1992	G
60	DA	2158	A
60	DA	2212	A
60	DA	2447	G
60	DA	2518	A
60	DA	2780	G
60	DA	2791	C

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
24	KBE	AU	1	24	8,8,9	1.04	0	6,8,10	2.15	1 (16%)
24	DPP	CU	2	24	4,5,6	0.65	0	1,5,7	0.27	0
24	UAL	AU	5	24	6,8,9	2.79	3 (50%)	4,9,11	2.19	1 (25%)
24	5OH	AU	6	24	7,12,13	0.75	0	4,16,18	0.94	0
24	KBE	CU	1	24	8,8,9	1.05	0	6,8,10	2.16	1 (16%)
24	5OH	CU	6	24	7,12,13	0.75	0	4,16,18	0.94	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
24	DPP	AU	2	24	4,5,6	0.65	0	1,5,7	0.28	0
24	UAL	CU	5	24	6,8,9	2.78	3 (50%)	4,9,11	2.20	1 (25%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	KBE	AU	1	24	-	3/7/7/8	-
24	DPP	CU	2	24	-	2/2/4/6	-
24	UAL	AU	5	24	-	0/3/7/9	-
24	5OH	AU	6	24	-	0/2/18/20	0/1/1/1
24	KBE	CU	1	24	-	3/7/7/8	-
24	5OH	CU	6	24	-	0/2/18/20	0/1/1/1
24	DPP	AU	2	24	-	2/2/4/6	-
24	UAL	CU	5	24	-	0/3/7/9	-

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	AU	5	UAL	C-CA	5.31	1.54	1.45
24	CU	5	UAL	C-CA	5.28	1.54	1.45
24	AU	5	UAL	C1-N1	-3.51	1.34	1.40
24	CU	5	UAL	C1-N1	-3.48	1.35	1.40
24	AU	5	UAL	CB-N1	-2.29	1.30	1.35
24	CU	5	UAL	CB-N1	-2.29	1.30	1.35

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	CU	1	KBE	CB-CA-C	4.95	120.16	112.17
24	AU	1	KBE	CB-CA-C	4.94	120.14	112.17
24	CU	5	UAL	O-C-CA	-4.27	120.03	125.39
24	AU	5	UAL	O-C-CA	-4.25	120.06	125.39

There are no chirality outliers.

All (10) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	AU	1	KBE	C-CA-CB-N
24	AU	1	KBE	C-CA-CB-CG
24	CU	1	KBE	C-CA-CB-N
24	CU	1	KBE	C-CA-CB-CG
24	AU	2	DPP	N-CA-CB-NG
24	CU	2	DPP	N-CA-CB-NG
24	AU	2	DPP	C-CA-CB-NG
24	CU	2	DPP	C-CA-CB-NG
24	AU	1	KBE	CG-CD-CE-NZ
24	CU	1	KBE	CG-CD-CE-NZ

There are no ring outliers.

6 monomers are involved in 53 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	CU	2	DPP	2	0
24	AU	5	UAL	1	0
24	AU	6	5OH	27	0
24	CU	6	5OH	12	0
24	AU	2	DPP	12	0
24	CU	5	UAL	1	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 4 ligands modelled in this entry, 2 are monoatomic - leaving 2 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	$\#\|Z\| > 2$
61	GNP	AY	701	62	34,34,34	1.47	4 (11%)	47,54,54	1.36	8 (17%)
61	GNP	CY	702	62	34,34,34	1.47	4 (11%)	47,54,54	1.36	8 (17%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
61	GNP	AY	701	62	-	7/18/38/38	0/3/3/3
61	GNP	CY	702	62	-	7/18/38/38	0/3/3/3

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	CY	702	GNP	PG-O1G	5.00	1.53	1.46
61	AY	701	GNP	PG-O1G	4.98	1.53	1.46
61	AY	701	GNP	PA-O3A	-4.14	1.55	1.59
61	CY	702	GNP	PA-O3A	-4.13	1.55	1.59
61	AY	701	GNP	PB-O3A	-2.57	1.55	1.59
61	CY	702	GNP	PB-O3A	-2.56	1.55	1.59
61	AY	701	GNP	PA-O2A	-2.15	1.45	1.55
61	CY	702	GNP	PA-O2A	-2.14	1.45	1.55

All (16) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
61	CY	702	GNP	O2B-PB-O1B	3.42	117.21	109.87
61	AY	701	GNP	O2B-PB-O1B	3.41	117.18	109.87
61	AY	701	GNP	O2G-PG-O3G	3.30	116.47	107.59
61	CY	702	GNP	O2G-PG-O3G	3.30	116.45	107.59
61	CY	702	GNP	O3G-PG-O1G	-2.99	105.95	113.45
61	AY	701	GNP	O3G-PG-O1G	-2.98	105.98	113.45
61	AY	701	GNP	O1B-PB-N3B	2.85	115.97	111.77
61	CY	702	GNP	O1B-PB-N3B	2.84	115.95	111.77
61	CY	702	GNP	C5'-C4'-C3'	-2.33	106.82	115.21
61	AY	701	GNP	C5'-C4'-C3'	-2.32	106.87	115.21
61	AY	701	GNP	O3A-PA-O1A	-2.26	103.91	110.70
61	CY	702	GNP	O3A-PA-O1A	-2.26	103.91	110.70
61	AY	701	GNP	O2A-PA-O3A	2.25	113.36	107.27
61	CY	702	GNP	O2A-PA-O3A	2.24	113.34	107.27
61	CY	702	GNP	O1G-PG-N3B	-2.17	108.57	111.77
61	AY	701	GNP	O1G-PG-N3B	-2.16	108.59	111.77

There are no chirality outliers.

All (14) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
61	AY	701	GNP	PG-N3B-PB-O1B
61	AY	701	GNP	PG-N3B-PB-O3A
61	AY	701	GNP	PA-O3A-PB-O2B
61	AY	701	GNP	C5'-O5'-PA-O3A
61	AY	701	GNP	C5'-O5'-PA-O1A
61	CY	702	GNP	PG-N3B-PB-O1B
61	CY	702	GNP	PG-N3B-PB-O3A
61	CY	702	GNP	PA-O3A-PB-O2B
61	CY	702	GNP	C5'-O5'-PA-O3A
61	CY	702	GNP	C5'-O5'-PA-O1A
61	AY	701	GNP	C3'-C4'-C5'-O5'
61	CY	702	GNP	C3'-C4'-C5'-O5'
61	AY	701	GNP	PA-O3A-PB-O1B
61	CY	702	GNP	PA-O3A-PB-O1B

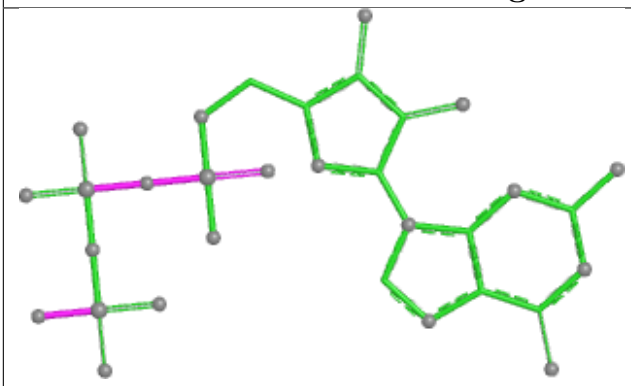
There are no ring outliers.

2 monomers are involved in 26 short contacts:

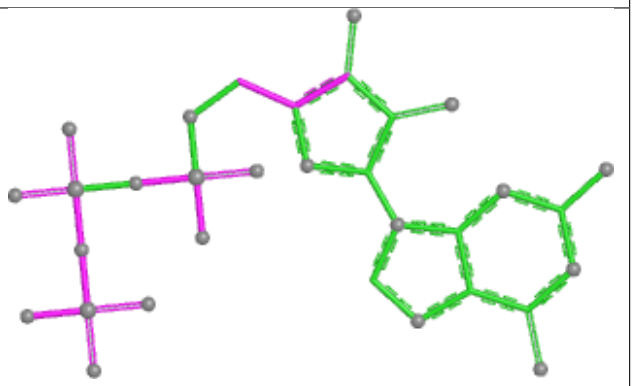
Mol	Chain	Res	Type	Clashes	Symm-Clashes
61	AY	701	GNP	8	0
61	CY	702	GNP	18	0

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

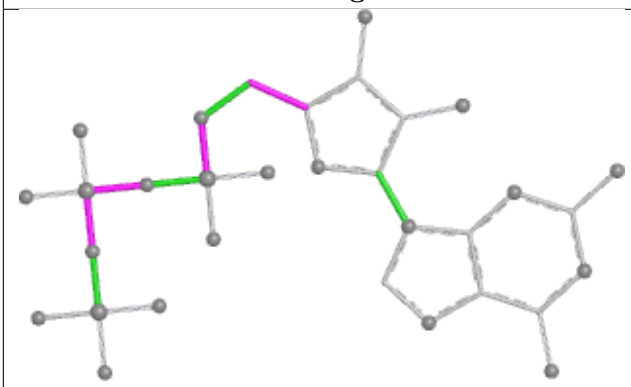
Ligand GNP AY 701



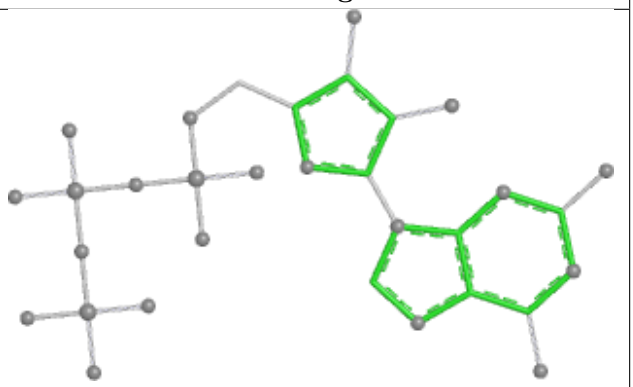
Bond lengths



Bond angles

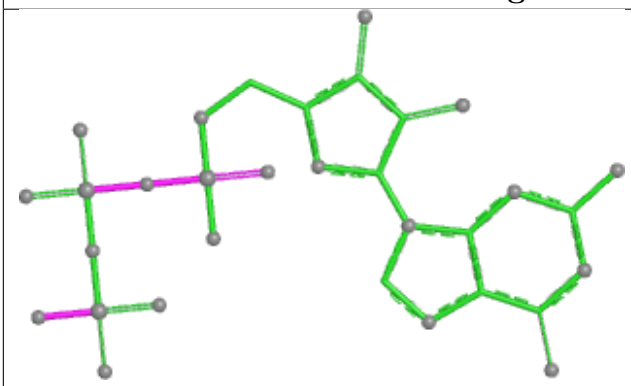


Torsions

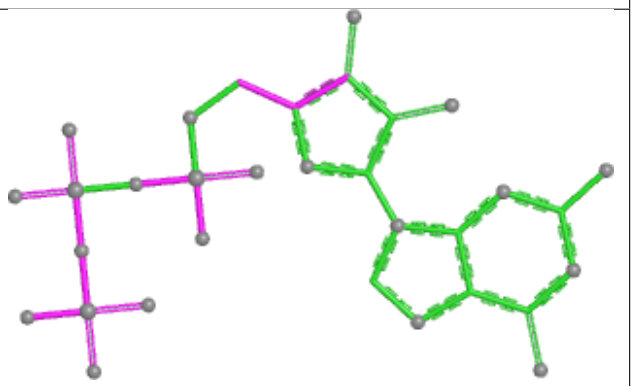


Rings

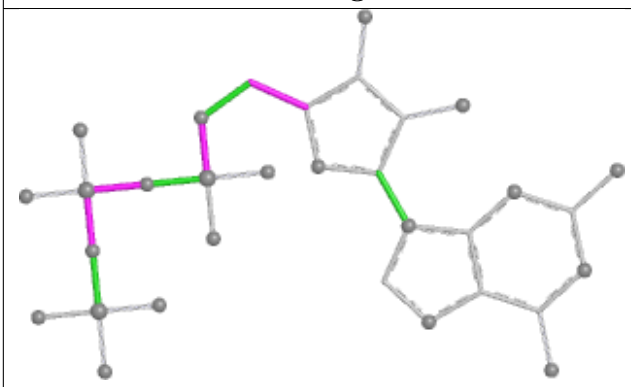
Ligand GNP CY 702



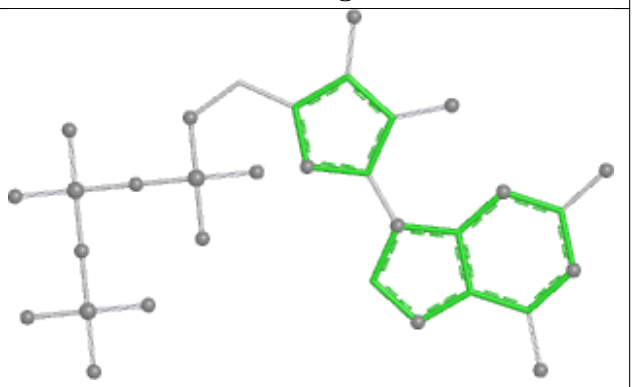
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AB	235/235 (100%)	0.27	19 (8%) 18 18	13, 75, 147, 218	0
1	CB	235/235 (100%)	0.13	11 (4%) 36 27	26, 78, 150, 182	0
2	AC	207/207 (100%)	-0.05	7 (3%) 48 34	21, 64, 129, 194	0
2	CC	207/207 (100%)	-0.07	8 (3%) 43 31	33, 66, 122, 164	0
3	AD	208/208 (100%)	0.68	36 (17%) 4 6	24, 71, 131, 187	0
3	CD	208/208 (100%)	0.68	35 (16%) 4 7	16, 79, 141, 186	0
4	AE	151/151 (100%)	-0.04	4 (2%) 57 39	10, 57, 124, 176	0
4	CE	151/151 (100%)	0.09	6 (3%) 42 31	23, 71, 126, 185	0
5	AF	101/101 (100%)	0.08	4 (3%) 42 31	36, 69, 131, 173	0
5	CF	101/101 (100%)	0.22	7 (6%) 23 20	29, 64, 127, 176	0
6	AG	155/155 (100%)	-0.21	4 (2%) 57 39	20, 84, 135, 192	0
6	CG	155/155 (100%)	-0.16	6 (3%) 43 31	39, 86, 144, 209	0
7	AH	138/138 (100%)	-0.06	6 (4%) 40 29	21, 64, 118, 145	0
7	CH	138/138 (100%)	-0.04	3 (2%) 62 44	33, 67, 126, 179	0
8	AI	127/127 (100%)	0.43	13 (10%) 12 15	13, 74, 122, 146	0
8	CI	127/127 (100%)	0.31	14 (11%) 10 13	16, 69, 128, 177	0
9	AJ	99/99 (100%)	0.38	11 (11%) 10 13	34, 74, 129, 147	0
9	CJ	99/99 (100%)	0.67	12 (12%) 8 12	24, 81, 132, 167	0
10	AK	119/119 (100%)	0.25	8 (6%) 24 21	17, 68, 129, 145	0
10	CK	119/119 (100%)	0.39	11 (9%) 14 16	37, 83, 128, 165	0
11	AL	125/125 (100%)	0.77	21 (16%) 4 7	22, 64, 128, 177	0
11	CL	125/125 (100%)	1.19	24 (19%) 3 5	21, 72, 139, 179	0
12	AM	125/125 (100%)	0.41	16 (12%) 7 11	54, 96, 167, 207	0
12	CM	125/125 (100%)	0.22	11 (8%) 15 16	58, 97, 159, 195	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AN	60/60 (100%)	0.56	5 (8%) 17 17	3, 48, 113, 131	0
13	CN	60/60 (100%)	0.82	9 (15%) 5 9	30, 54, 113, 147	0
14	AO	88/88 (100%)	0.36	5 (5%) 29 23	24, 64, 113, 158	0
14	CO	88/88 (100%)	0.25	7 (7%) 18 18	32, 73, 127, 165	0
15	AP	84/84 (100%)	1.00	15 (17%) 3 6	35, 82, 143, 179	0
15	CP	84/84 (100%)	0.69	18 (21%) 2 5	29, 73, 132, 175	0
16	AQ	100/100 (100%)	0.48	11 (11%) 10 13	24, 66, 120, 137	0
16	CQ	100/100 (100%)	0.51	13 (13%) 7 10	42, 74, 130, 159	0
17	AR	70/70 (100%)	-0.16	1 (1%) 73 52	28, 54, 107, 143	0
17	CR	70/70 (100%)	0.02	1 (1%) 73 52	26, 69, 132, 198	0
18	AS	79/79 (100%)	0.38	6 (7%) 20 18	25, 95, 172, 193	0
18	CS	79/79 (100%)	0.42	9 (11%) 10 13	26, 89, 165, 199	0
19	AT	99/99 (100%)	0.42	5 (5%) 33 26	16, 66, 130, 188	0
19	CT	99/99 (100%)	0.52	15 (15%) 5 8	27, 80, 144, 169	0
20	AA	1511/1511 (100%)	-0.03	70 (4%) 37 28	11, 79, 165, 273	0
20	CA	1511/1511 (100%)	0.01	56 (3%) 45 32	6, 84, 166, 265	0
21	AV	18/18 (100%)	0.36	1 (5%) 30 24	41, 113, 170, 197	0
21	CV	18/18 (100%)	0.52	1 (5%) 30 24	33, 135, 179, 181	0
22	AW	77/77 (100%)	-0.08	3 (3%) 43 31	24, 109, 168, 243	0
22	CW	77/77 (100%)	-0.09	5 (6%) 25 21	43, 116, 183, 208	0
23	AY	687/687 (100%)	0.16	43 (6%) 26 22	26, 80, 149, 224	0
23	CY	687/687 (100%)	0.22	61 (8%) 15 16	25, 86, 158, 217	0
24	AU	2/6 (33%)	0.28	0 100 100	66, 66, 66, 66	0
24	CU	2/6 (33%)	-0.53	0 100 100	66, 66, 66, 66	0
25	BC	228/228 (100%)	0.81	42 (18%) 3 6	77, 137, 202, 235	0
25	DC	228/228 (100%)	0.93	35 (15%) 5 8	73, 140, 196, 228	0
26	BD	275/275 (100%)	0.84	51 (18%) 3 6	12, 58, 126, 156	0
26	DD	275/275 (100%)	0.92	55 (20%) 3 5	18, 59, 122, 191	0
27	BE	205/205 (100%)	0.83	53 (25%) 1 4	16, 58, 123, 159	0
27	DE	205/205 (100%)	0.97	40 (19%) 3 5	20, 74, 138, 209	0
28	BF	208/208 (100%)	0.82	37 (17%) 4 6	41, 78, 145, 195	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DF	208/208 (100%)	0.81	29 (13%) 6 10	26, 76, 155, 199	0
29	BG	181/181 (100%)	0.18	8 (4%) 39 29	24, 87, 153, 191	0
29	DG	181/181 (100%)	0.15	10 (5%) 30 24	40, 94, 165, 199	0
30	BH	167/167 (100%)	0.11	8 (4%) 35 27	7, 68, 133, 171	0
30	DH	167/167 (100%)	0.20	11 (6%) 24 21	11, 67, 139, 168	0
31	BJ	0/170	-	-	-	-
31	DJ	0/170	-	-	-	-
32	BK	140/140 (100%)	0.03	8 (5%) 29 23	24, 91, 182, 225	0
32	DK	140/140 (100%)	0.19	13 (9%) 14 16	30, 110, 178, 234	0
33	BO	122/122 (100%)	-0.07	3 (2%) 58 41	24, 45, 123, 162	0
33	DO	122/122 (100%)	-0.00	4 (3%) 49 34	20, 58, 106, 159	0
34	BP	146/146 (100%)	0.58	16 (10%) 10 13	22, 76, 132, 175	0
34	DP	146/146 (100%)	0.46	15 (10%) 12 14	28, 78, 141, 189	0
35	BQ	141/141 (100%)	0.68	20 (14%) 6 9	17, 63, 130, 200	0
35	DQ	141/141 (100%)	0.84	28 (19%) 3 5	22, 68, 140, 174	0
36	BR	117/117 (100%)	0.47	12 (10%) 12 14	15, 57, 119, 178	0
36	DR	117/117 (100%)	0.53	12 (10%) 12 14	18, 69, 143, 195	0
37	BS	99/99 (100%)	0.82	15 (15%) 5 8	22, 104, 172, 208	0
37	DS	99/99 (100%)	0.79	18 (18%) 3 6	18, 106, 167, 216	0
38	BT	138/138 (100%)	0.06	11 (7%) 18 18	22, 71, 133, 179	0
38	DT	138/138 (100%)	0.18	7 (5%) 33 26	19, 75, 153, 238	0
39	BU	117/117 (100%)	0.96	18 (15%) 5 8	40, 57, 131, 184	0
39	DU	117/117 (100%)	0.89	22 (18%) 3 6	24, 61, 118, 158	0
40	BV	101/101 (100%)	0.47	9 (8%) 15 16	13, 54, 114, 146	0
40	DV	101/101 (100%)	0.39	7 (6%) 23 20	20, 72, 127, 200	0
41	BW	113/113 (100%)	0.46	13 (11%) 9 13	16, 55, 121, 147	0
41	DW	113/113 (100%)	0.86	19 (16%) 4 7	5, 65, 136, 178	0
42	BX	93/93 (100%)	0.37	9 (9%) 13 15	18, 60, 114, 149	0
42	DX	93/93 (100%)	0.41	9 (9%) 13 15	34, 63, 128, 170	0
43	BY	107/107 (100%)	0.36	9 (8%) 17 17	8, 86, 151, 180	0
43	DY	107/107 (100%)	0.47	12 (11%) 10 13	35, 76, 151, 176	0
44	BZ	185/185 (100%)	-0.01	10 (5%) 31 25	30, 76, 142, 176	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	DZ	185/185 (100%)	0.18	14 (7%) 20 18	36, 82, 147, 226	0
45	B0	84/84 (100%)	0.80	19 (22%) 2 4	18, 92, 159, 181	0
45	D0	84/84 (100%)	0.77	15 (17%) 3 6	19, 85, 145, 160	0
46	B1	93/93 (100%)	1.03	20 (21%) 2 4	26, 91, 161, 204	0
46	D1	93/93 (100%)	1.55	31 (33%) 1 2	38, 92, 166, 194	0
47	B4	35/35 (100%)	0.01	1 (2%) 53 37	49, 106, 171, 203	0
47	D4	35/35 (100%)	-0.06	1 (2%) 53 37	82, 115, 164, 187	0
48	BN	138/138 (100%)	1.56	47 (34%) 1 2	59, 83, 108, 111	0
48	DN	138/138 (100%)	1.48	49 (35%) 1 2	58, 84, 107, 116	0
49	B2	71/71 (100%)	0.15	2 (2%) 55 38	38, 79, 143, 185	0
49	D2	71/71 (100%)	0.05	2 (2%) 55 38	42, 70, 130, 187	0
50	B3	60/60 (100%)	0.44	6 (10%) 12 15	34, 62, 117, 150	0
50	D3	60/60 (100%)	0.64	5 (8%) 17 17	53, 68, 130, 150	0
51	B5	59/59 (100%)	1.04	9 (15%) 5 8	26, 56, 131, 149	0
51	D5	59/59 (100%)	0.91	9 (15%) 5 8	16, 83, 166, 185	0
52	B6	50/50 (100%)	0.76	9 (18%) 3 6	63, 99, 159, 175	0
52	D6	50/50 (100%)	1.25	13 (26%) 1 4	61, 118, 161, 188	0
53	B7	49/49 (100%)	1.79	19 (38%) 1 2	18, 47, 122, 156	0
53	D7	49/49 (100%)	1.27	11 (22%) 2 4	33, 61, 140, 186	0
54	B8	64/64 (100%)	1.15	18 (28%) 1 3	29, 63, 152, 160	0
54	D8	64/64 (100%)	1.44	17 (26%) 1 4	28, 75, 142, 191	0
55	B9	37/37 (100%)	3.67	26 (70%) 0 0	71, 109, 177, 183	0
55	D9	37/37 (100%)	4.11	28 (75%) 0 0	102, 132, 185, 210	0
56	Be	72/103 (69%)	0.19	5 (6%) 23 20	40, 109, 188, 239	0
56	De	72/103 (69%)	0.16	4 (5%) 30 24	46, 118, 183, 199	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	BB	119/119 (100%)	-0.04	6 (5%) 34 26	27, 111, 173, 186	0
59	DB	119/119 (100%)	-0.07	6 (5%) 34 26	35, 118, 182, 220	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
60	BA	2879/2879 (100%)	0.18	227 (7%)	18	18	7, 78, 171, 308	0
60	DA	2879/2879 (100%)	0.15	201 (6%)	22	20	5, 79, 177, 310	0
All	All	22716/23310 (97%)	0.32	2175 (9%)	13	15	3, 79, 161, 310	0

All (2175) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
60	BA	2250	G	20.1
60	DA	2250	G	16.2
55	D9	15	LYS	15.3
60	DA	2573	C	12.9
60	DA	2581	G	12.8
28	BF	76	GLY	12.6
60	DA	2062	A	12.6
51	B5	17	ASP	12.5
60	BA	2062	A	12.3
10	CK	129	SER	11.6
15	AP	8	ARG	11.4
28	DF	125	LEU	11.0
55	D9	17	ILE	10.9
28	DF	124	LEU	10.4
60	DA	2506	U	10.4
27	BE	127	ASP	10.4
41	DW	3	ALA	10.0
53	B7	41	ARG	9.8
27	BE	126	PRO	9.7
55	D9	12	ASP	9.7
11	CL	68	ALA	9.5
30	BH	150	ALA	9.5
10	CK	128	ALA	9.4
35	DQ	140	ALA	9.4
54	D8	15	LYS	9.4
60	DA	2251	G	9.4
55	D9	11	CYS	9.3
25	BC	52	PRO	9.3
23	CY	51	THR	9.3
55	B9	13	LYS	9.2
55	B9	14	CYS	8.6
41	DW	4	LYS	8.6
26	DD	276	LYS	8.6
30	BH	153	LYS	8.6

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Mol	Chain	Res	Type	RSRZ
28	DF	76	GLY	8.5
35	DQ	89	ASN	8.5
35	BQ	140	ALA	8.4
38	BT	93	ARG	8.4
60	BA	2060	A	8.4
25	DC	2	PRO	8.3
60	BA	1938	A	8.3
60	BA	2573	C	8.3
55	B9	23	VAL	8.3
50	D3	27	GLY	8.2
55	B9	12	ASP	8.1
27	DE	127	ASP	8.1
60	DA	2502	G	8.1
28	DF	155	LEU	8.0
60	BA	2032	G	7.9
60	BA	2581	G	7.9
53	D7	41	ARG	7.7
28	DF	77	ASP	7.6
37	BS	30	ARG	7.6
51	D5	17	ASP	7.6
46	B1	19	GLN	7.5
60	BA	1980	G	7.5
60	DA	2160	G	7.5
28	BF	125	LEU	7.5
30	DH	150	ALA	7.5
55	D9	9	ARG	7.5
26	BD	276	LYS	7.4
25	BC	168	LYS	7.4
26	DD	230	ASP	7.4
25	BC	167	ASP	7.3
28	DF	194	MET	7.3
35	BQ	141	GLN	7.3
28	BF	69	HIS	7.3
11	CL	83	VAL	7.3
12	AM	124	PRO	7.2
60	DA	2060	A	7.2
60	BA	2275	C	7.2
12	AM	122	LYS	7.2
19	AT	9	ASN	7.2
27	DE	55	ASN	7.1
51	B5	21	SER	7.1
11	CL	56	ALA	7.0

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Mol	Chain	Res	Type	RSRZ
48	DN	41	ASP	7.0
27	DE	107	THR	6.9
23	CY	609	GLU	6.9
41	BW	93	ALA	6.9
55	D9	10	ILE	6.9
37	DS	12	PHE	6.9
36	DR	58	GLY	6.8
23	AY	19	ALA	6.8
55	B9	17	ILE	6.8
26	BD	34	VAL	6.7
23	AY	16	GLY	6.7
12	AM	123	ALA	6.7
60	BA	2251	G	6.7
60	BA	2252	G	6.7
26	DD	243	GLY	6.7
48	DN	40	PRO	6.7
60	BA	989	G	6.6
38	DT	24	PRO	6.6
34	BP	31	ALA	6.5
35	DQ	90	VAL	6.5
55	D9	22	ARG	6.5
26	BD	246	PRO	6.5
27	DE	126	PRO	6.5
28	DF	193	VAL	6.5
41	BW	3	ALA	6.4
1	AB	77	ALA	6.4
28	BF	124	LEU	6.4
10	CK	127	LYS	6.3
11	CL	35	GLY	6.3
60	DA	271(D)	U	6.3
27	DE	130	GLY	6.3
60	DA	2161	C	6.3
48	BN	115	ARG	6.3
3	AD	161	ASN	6.2
60	BA	2121	G	6.2
52	D6	40	CYS	6.2
36	DR	9	LYS	6.2
27	BE	130	GLY	6.2
27	BE	55	ASN	6.2
38	DT	93	ARG	6.2
23	AY	85	PRO	6.2
52	D6	25	LYS	6.2

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Mol	Chain	Res	Type	RSRZ
27	DE	9	VAL	6.1
26	DD	241	PRO	6.1
8	AI	118	LYS	6.1
30	BH	149	ARG	6.1
35	DQ	88	GLY	6.1
27	DE	157	ALA	6.1
45	B0	17	GLN	6.1
60	BA	2120	G	6.0
60	BA	1971	A	6.0
27	DE	76	ARG	6.0
55	B9	15	LYS	6.0
60	BA	2449	U	6.0
60	BA	574	C	6.0
11	AL	49	ASN	6.0
48	BN	109	LYS	5.9
48	DN	84	LYS	5.9
55	B9	16	VAL	5.9
30	DH	149	ARG	5.9
39	DU	7	GLY	5.9
39	DU	68	ALA	5.8
26	BD	49	ILE	5.8
28	DF	10	PRO	5.8
60	DA	2575	C	5.8
48	BN	41	ASP	5.8
60	BA	2178	C	5.8
45	D0	13	GLY	5.7
41	DW	9	TYR	5.7
53	B7	36	GLN	5.7
39	BU	99	ALA	5.7
9	CJ	6	ILE	5.7
45	D0	41	ARG	5.7
55	D9	25	VAL	5.7
48	BN	101	HIS	5.7
39	BU	106	PHE	5.7
1	AB	211	ILE	5.7
3	AD	157	LEU	5.7
30	DH	153	LYS	5.7
20	AA	5	U	5.7
60	DA	1033	U	5.7
55	B9	27	CYS	5.7
35	DQ	64	ILE	5.6
20	CA	1538	C	5.6

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Mol	Chain	Res	Type	RSRZ
11	CL	19	ARG	5.6
55	D9	14	CYS	5.6
39	BU	14	HIS	5.6
34	BP	27	HIS	5.6
60	BA	2582	G	5.6
25	DC	111	PHE	5.5
36	DR	84	ALA	5.5
2	AC	10	PHE	5.5
25	DC	168	LYS	5.5
29	DG	6	ALA	5.5
60	BA	2041	U	5.5
60	BA	2448	A	5.5
45	B0	40	GLN	5.5
45	B0	2	ALA	5.5
26	BD	155	LEU	5.5
42	BX	16	LYS	5.5
25	BC	213	VAL	5.4
11	AL	16	GLU	5.4
60	BA	124	G	5.4
60	BA	1963	U	5.4
23	CY	16	GLY	5.4
54	D8	29	LYS	5.4
46	D1	19	GLN	5.4
54	B8	5	LYS	5.4
8	CI	128	ARG	5.4
60	BA	2590	A	5.4
37	BS	12	PHE	5.4
11	CL	87	GLY	5.4
46	D1	40	ARG	5.4
23	CY	105	ILE	5.4
20	AA	933	G	5.4
26	BD	35	LYS	5.4
41	DW	97	LYS	5.4
60	DA	2579	C	5.4
28	DF	78	ILE	5.4
4	AE	81	GLU	5.3
28	DF	202	PHE	5.3
60	DA	1963	U	5.3
20	AA	761	G	5.3
52	B6	42	TRP	5.3
34	DP	110	TYR	5.3
26	DD	223	GLY	5.3

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Mol	Chain	Res	Type	RSRZ
55	D9	21	GLY	5.3
23	AY	20	HIS	5.3
26	BD	271	ILE	5.3
54	D8	16	ILE	5.3
54	B8	6	THR	5.3
40	BV	101	GLY	5.2
41	BW	94	ASP	5.2
26	BD	228	PRO	5.2
8	AI	25	LYS	5.2
27	DE	128	SER	5.2
54	B8	29	LYS	5.2
11	AL	68	ALA	5.2
60	DA	2245	U	5.2
60	DA	2582	G	5.2
23	AY	105	ILE	5.2
46	B1	48	LYS	5.2
27	DE	131	ALA	5.2
28	DF	176	LEU	5.2
27	DE	106	GLY	5.2
48	DN	105	GLY	5.2
46	D1	28	GLY	5.1
36	BR	9	LYS	5.1
4	CE	29	GLY	5.1
60	BA	1607	C	5.1
12	AM	126	LYS	5.1
20	AA	873	A	5.1
60	DA	2061	G	5.1
23	CY	392	GLU	5.1
27	DE	10	GLY	5.1
43	DY	107	ASP	5.1
45	B0	55	ARG	5.1
1	AB	170	GLU	5.1
26	DD	246	PRO	5.0
26	BD	239	ARG	5.0
20	CA	823	G	5.0
25	DC	30	VAL	5.0
48	BN	44	PRO	5.0
16	CQ	86	GLU	5.0
60	DA	224	G	5.0
28	BF	155	LEU	5.0
28	BF	78	ILE	5.0
1	AB	167	PRO	5.0

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Mol	Chain	Res	Type	RSRZ
11	CL	67	THR	5.0
60	BA	2805	G	5.0
48	BN	69	GLN	5.0
39	BU	6	THR	4.9
39	DU	106	PHE	4.9
45	B0	22	GLY	4.9
60	BA	196	A	4.9
27	DE	25	VAL	4.9
2	CC	10	PHE	4.9
25	DC	12	LEU	4.9
54	D8	14	VAL	4.9
60	BA	2591	C	4.9
25	DC	52	PRO	4.9
28	DF	189	THR	4.9
15	AP	49	LEU	4.9
55	D9	35	ARG	4.9
60	DA	2507	C	4.9
39	BU	25	TRP	4.9
55	B9	26	ILE	4.9
46	D1	16	ASN	4.9
55	B9	28	GLU	4.8
16	CQ	37	LYS	4.8
19	CT	81	LYS	4.8
25	DC	3	LYS	4.8
46	D1	15	ALA	4.8
3	CD	40	PRO	4.8
11	AL	50	SER	4.8
60	BA	2249	U	4.8
16	CQ	62	SER	4.8
26	BD	33	LEU	4.8
60	DA	196	A	4.7
60	DA	2135	A	4.7
37	BS	63	THR	4.7
60	BA	974(B)	C	4.7
60	DA	2795	G	4.7
16	AQ	86	GLU	4.7
55	D9	18	ARG	4.7
26	DD	35	LYS	4.7
7	CH	2	LEU	4.7
60	DA	2896	C	4.7
1	AB	79	ASP	4.7
37	BS	91	PRO	4.7

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Mol	Chain	Res	Type	RSRZ
48	DN	44	PRO	4.7
50	D3	10	LYS	4.7
60	BA	830	G	4.7
23	CY	538	TYR	4.7
38	DT	98	LYS	4.7
59	BB	88	C	4.7
29	DG	158	ALA	4.7
46	B1	40	ARG	4.7
55	D9	16	VAL	4.7
54	B8	62	LEU	4.7
55	B9	24	TYR	4.7
23	CY	59	ARG	4.6
23	CY	21	ILE	4.6
37	BS	51	ALA	4.6
53	B7	19	ARG	4.6
60	BA	1217	C	4.6
23	AY	667	GLY	4.6
3	CD	7	PRO	4.6
60	DA	225	A	4.6
50	B3	40	THR	4.6
23	AY	25	LYS	4.6
46	D1	13	ILE	4.6
60	BA	2454	G	4.6
15	AP	51	VAL	4.6
23	AY	497	PHE	4.6
14	CO	6	GLU	4.6
48	BN	45	ASN	4.6
54	D8	38	GLY	4.6
36	BR	12	ARG	4.6
23	CY	647	VAL	4.5
53	B7	48	LYS	4.5
25	DC	140	ASN	4.5
26	BD	232	PRO	4.5
3	AD	160	GLN	4.5
36	DR	43	GLU	4.5
45	B0	44	ARG	4.5
26	BD	154	LYS	4.5
48	BN	102	ALA	4.5
51	B5	16	ARG	4.5
48	BN	112	LEU	4.5
20	AA	177	C	4.5
23	AY	17	ILE	4.5

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Mol	Chain	Res	Type	RSRZ
55	B9	9	ARG	4.5
18	CS	36	ARG	4.5
60	DA	2058	A	4.5
12	CM	126	LYS	4.4
23	AY	612	THR	4.4
9	CJ	72	VAL	4.4
51	D5	2	ALA	4.4
60	BA	125	G	4.4
28	BF	63	LYS	4.4
27	DE	73	GLU	4.4
39	DU	102	GLU	4.4
46	D1	71	TYR	4.4
41	BW	92	ARG	4.4
26	DD	36	PRO	4.4
60	BA	785	G	4.4
10	CK	123	LYS	4.4
1	CB	206	ASP	4.4
48	DN	101	HIS	4.4
26	DD	269	PHE	4.4
37	DS	35	ILE	4.4
28	BF	193	VAL	4.4
12	AM	99	ARG	4.4
27	BE	119	ARG	4.4
26	BD	147	LEU	4.4
32	DK	12	LEU	4.4
41	DW	7	ALA	4.4
11	AL	94	PRO	4.4
53	D7	49	ARG	4.4
41	DW	93	ALA	4.4
48	BN	42	TRP	4.4
26	BD	253	GLN	4.4
36	BR	43	GLU	4.3
38	BT	2	ASN	4.3
11	CL	47	LYS	4.3
26	DD	265	PRO	4.3
28	BF	8	GLN	4.3
11	CL	91	LYS	4.3
14	CO	64	ARG	4.3
25	BC	3	LYS	4.3
32	DK	99	ILE	4.3
26	DD	170	GLY	4.3
1	AB	205	ASP	4.3

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Mol	Chain	Res	Type	RSRZ
48	DN	72	TYR	4.3
51	D5	8	LYS	4.3
60	BA	1033	U	4.3
27	DE	119	ARG	4.3
60	BA	712(B)	A	4.3
39	BU	4	ALA	4.3
41	BW	45	TYR	4.3
60	BA	2253	G	4.3
9	AJ	52	GLY	4.3
52	D6	23	THR	4.3
3	AD	40	PRO	4.3
3	CD	203	VAL	4.3
1	CB	77	ALA	4.3
20	AA	1086	U	4.3
25	DC	112	ASP	4.3
28	DF	192	LEU	4.3
5	CF	67	MET	4.2
23	CY	23	ALA	4.2
26	DD	226	MET	4.2
60	DA	1971	A	4.2
54	B8	64	TYR	4.2
35	BQ	89	ASN	4.2
54	D8	42	ARG	4.2
55	B9	31	LYS	4.2
3	CD	93	PHE	4.2
25	DC	11	LEU	4.2
3	AD	209	ARG	4.2
35	DQ	141	GLN	4.2
45	D0	40	GLN	4.2
48	DN	45	ASN	4.2
60	BA	2676	C	4.2
60	BA	2453	A	4.2
60	DA	2602	A	4.2
9	CJ	86	MET	4.2
55	B9	33	LYS	4.2
3	CD	204	ILE	4.2
23	AY	86	GLY	4.2
2	CC	55	VAL	4.2
60	DA	2253	G	4.2
60	BA	1026	U	4.2
20	AA	967	C	4.2
20	CA	980	C	4.2

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Mol	Chain	Res	Type	RSRZ
46	D1	75	GLU	4.2
55	B9	32	HIS	4.2
23	AY	143	GLY	4.1
23	AY	84	THR	4.1
46	B1	14	VAL	4.1
60	BA	2703	C	4.1
60	DA	645	C	4.1
35	DQ	85	LYS	4.1
60	BA	1781	C	4.1
60	BA	2143	C	4.1
28	BF	194	MET	4.1
1	AB	184	VAL	4.1
44	BZ	71	VAL	4.1
27	BE	135	HIS	4.1
45	D0	15	ASP	4.1
23	AY	580	MET	4.1
26	BD	184	LYS	4.1
26	BD	223	GLY	4.1
30	BH	154	PRO	4.1
60	DA	1983	C	4.1
20	CA	945	G	4.1
10	AK	128	ALA	4.1
26	BD	247	ALA	4.1
11	CL	85	ILE	4.1
3	AD	69	GLY	4.0
20	AA	1395	C	4.0
27	BE	106	GLY	4.0
59	DB	88	C	4.0
60	DA	2452	C	4.0
60	DA	421	U	4.0
18	CS	75	ALA	4.0
11	AL	83	VAL	4.0
26	BD	183	ARG	4.0
52	D6	21	TYR	4.0
11	AL	87	GLY	4.0
20	CA	818	G	4.0
60	BA	2029	G	4.0
23	AY	23	ALA	4.0
20	CA	1086	U	4.0
60	BA	2122	U	4.0
34	BP	110	TYR	4.0
35	DQ	91	GLU	4.0

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Mol	Chain	Res	Type	RSRZ
48	BN	104	LYS	4.0
60	BA	2170	A	4.0
60	BA	2497	A	4.0
60	DA	1513	C	4.0
55	D9	20	HIS	4.0
60	BA	1530	G	4.0
1	AB	166	ASP	4.0
60	BA	2585	U	4.0
12	CM	118	ALA	4.0
15	AP	14	ASN	4.0
55	D9	30	PRO	4.0
3	AD	131	ARG	4.0
37	DS	30	ARG	4.0
39	DU	14	HIS	4.0
46	B1	76	ARG	4.0
23	AY	21	ILE	3.9
60	BA	910	A	3.9
60	BA	1780	A	3.9
23	CY	403	GLU	3.9
11	AL	56	ALA	3.9
48	BN	37	LYS	3.9
48	BN	72	TYR	3.9
48	DN	53	VAL	3.9
26	DD	23	GLU	3.9
5	CF	2	ARG	3.9
23	CY	631	ILE	3.9
60	BA	2780	G	3.9
25	BC	44	VAL	3.9
3	AD	115	ARG	3.9
37	BS	35	ILE	3.9
55	B9	19	ARG	3.9
60	DA	961	C	3.9
16	CQ	21	VAL	3.9
4	CE	14	ARG	3.9
9	AJ	38	ILE	3.9
27	BE	76	ARG	3.9
59	DB	118	G	3.9
9	AJ	54	PHE	3.9
23	AY	629	GLY	3.9
26	DD	94	LEU	3.8
25	BC	2	PRO	3.8
41	DW	5	ALA	3.8

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Mol	Chain	Res	Type	RSRZ
60	BA	631	A	3.8
59	BB	6	C	3.8
60	DA	1205	U	3.8
48	BN	119	ARG	3.8
48	BN	117	PHE	3.8
56	Be	73	GLU	3.8
39	BU	52	ARG	3.8
43	DY	108	THR	3.8
14	AO	6	GLU	3.8
20	AA	980	C	3.8
34	DP	27	HIS	3.8
60	DA	2591	C	3.8
27	BE	138	PRO	3.8
46	D1	38	SER	3.8
9	AJ	85	LEU	3.8
10	CK	40	ILE	3.8
26	DD	42	GLY	3.8
28	DF	185	ASP	3.8
45	D0	17	GLN	3.8
3	CD	5	ILE	3.8
10	AK	129	SER	3.8
20	AA	1117	G	3.8
60	BA	352	G	3.8
60	BA	420	C	3.8
60	DA	2492	U	3.8
34	BP	53	GLY	3.7
60	DA	2589	A	3.7
48	BN	100	GLU	3.7
5	AF	67	MET	3.7
48	BN	28	THR	3.7
52	B6	47	THR	3.7
3	CD	202	LEU	3.7
25	BC	12	LEU	3.7
23	CY	89	ASP	3.7
25	DC	157	ILE	3.7
26	BD	73	VAL	3.7
3	AD	74	GLN	3.7
39	BU	3	ARG	3.7
3	AD	93	PHE	3.7
60	DA	572	A	3.7
16	CQ	44	ALA	3.7
48	BN	105	GLY	3.7

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Mol	Chain	Res	Type	RSRZ
60	BA	2702	U	3.7
20	CA	825	G	3.7
60	BA	2718	G	3.7
60	DA	2714	G	3.7
20	CA	504	C	3.7
60	BA	1305	C	3.7
11	CL	16	GLU	3.7
13	CN	9	LYS	3.7
37	BS	11	LYS	3.7
54	B8	44	LYS	3.7
28	BF	92	PRO	3.7
55	B9	18	ARG	3.7
60	BA	2611	U	3.7
45	B0	21	LEU	3.7
60	BA	2254	C	3.7
60	BA	2690	C	3.7
60	DA	2121	G	3.7
60	DA	2574	G	3.7
55	D9	37	GLY	3.7
16	AQ	9	VAL	3.7
37	DS	11	LYS	3.7
55	D9	28	GLU	3.7
20	AA	393	A	3.6
38	DT	97	ALA	3.6
60	BA	572	A	3.6
19	CT	69	GLY	3.6
27	BE	105	THR	3.6
45	B0	43	THR	3.6
28	DF	11	VAL	3.6
53	B7	40	TRP	3.6
60	BA	1983	C	3.6
45	B0	56	ASP	3.6
11	CL	49	ASN	3.6
12	CM	102	ARG	3.6
26	DD	239	ARG	3.6
36	BR	2	ARG	3.6
35	DQ	76	LYS	3.6
41	BW	85	VAL	3.6
52	D6	37	ARG	3.6
23	CY	662	LYS	3.6
2	AC	167	TRP	3.6
8	CI	73	GLN	3.6

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Mol	Chain	Res	Type	RSRZ
29	DG	7	LEU	3.6
60	BA	2117	A	3.6
33	DO	84	ALA	3.6
25	BC	177	GLY	3.6
11	AL	21	LYS	3.6
11	CL	12	ARG	3.6
43	BY	71	LYS	3.6
50	B3	10	LYS	3.6
55	D9	36	GLN	3.6
9	CJ	39	PRO	3.6
60	DA	2069	G	3.6
38	BT	50	ILE	3.6
41	DW	24	ILE	3.6
25	DC	179	ALA	3.6
27	BE	107	THR	3.6
27	DE	148	GLY	3.6
28	BF	189	THR	3.6
60	BA	764	A	3.6
60	DA	2453	A	3.6
18	CS	53	ASN	3.6
41	BW	86	LEU	3.6
41	DW	20	VAL	3.6
25	BC	212	SER	3.6
3	AD	70	ILE	3.6
25	BC	50	ILE	3.6
25	DC	8	TYR	3.6
44	BZ	99	TYR	3.6
20	CA	330	C	3.6
41	BW	7	ALA	3.6
36	BR	58	GLY	3.6
26	BD	229	VAL	3.6
35	BQ	96	VAL	3.6
48	BN	46	VAL	3.6
3	CD	62	GLN	3.6
34	BP	78	PRO	3.6
60	DA	12	U	3.6
25	BC	46	ALA	3.6
37	DS	49	VAL	3.6
43	DY	30	VAL	3.6
28	DF	69	HIS	3.6
14	AO	48	LYS	3.5
53	B7	47	ARG	3.5

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Mol	Chain	Res	Type	RSRZ
45	B0	13	GLY	3.5
10	AK	84	VAL	3.5
27	BE	192	ASN	3.5
60	BA	2232	U	3.5
60	DA	2895	U	3.5
40	BV	85	LYS	3.5
8	AI	82	ALA	3.5
27	BE	51	PHE	3.5
1	AB	54	THR	3.5
48	BN	77	GLY	3.5
20	CA	1327	C	3.5
6	AG	37	ASN	3.5
36	BR	69	ASP	3.5
28	BF	176	LEU	3.5
26	BD	269	PHE	3.5
41	DW	11	ARG	3.5
20	AA	818	G	3.5
60	BA	2035	G	3.5
60	DA	832	G	3.5
13	CN	55	GLY	3.5
25	BC	114	VAL	3.5
48	BN	24	GLY	3.5
8	CI	117	HIS	3.5
8	CI	124	GLN	3.5
25	BC	111	PHE	3.5
46	D1	76	ARG	3.5
20	AA	762	C	3.5
60	DA	2275	C	3.5
26	BD	145	VAL	3.5
12	AM	121	LYS	3.5
27	DE	105	THR	3.5
20	CA	873	A	3.5
45	B0	14	ARG	3.5
28	BF	23	ASP	3.5
20	AA	126	G	3.5
35	BQ	28	ALA	3.5
39	BU	68	ALA	3.5
60	DA	88	G	3.5
60	DA	2576	G	3.5
32	BK	11	GLN	3.5
35	BQ	5	ARG	3.5
37	DS	13	ARG	3.5

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Mol	Chain	Res	Type	RSRZ
20	CA	824	C	3.5
60	DA	1962	C	3.5
32	DK	78	ILE	3.4
26	DD	79	VAL	3.4
43	BY	39	VAL	3.4
2	AC	47	LEU	3.4
23	AY	146	LEU	3.4
44	DZ	28	MET	3.4
48	DN	82	LEU	3.4
60	DA	1127	A	3.4
53	D7	47	ARG	3.4
20	AA	760	G	3.4
60	DA	2035	G	3.4
60	DA	2383	G	3.4
3	AD	82	ALA	3.4
43	DY	16	ALA	3.4
36	DR	69	ASP	3.4
46	D1	14	VAL	3.4
14	CO	20	GLY	3.4
20	AA	330	C	3.4
15	AP	26	ARG	3.4
14	AO	19	PRO	3.4
55	B9	2	LYS	3.4
60	BA	1966	A	3.4
60	DA	2518	A	3.4
26	DD	95	LEU	3.4
48	BN	52	VAL	3.4
11	CL	37	CYS	3.4
46	D1	17	SER	3.4
48	BN	96	GLU	3.4
55	B9	11	CYS	3.4
53	D7	28	ARG	3.4
20	CA	391	G	3.4
60	DA	748	G	3.4
46	D1	69	LYS	3.4
20	AA	135	C	3.4
60	BA	1531	C	3.4
16	AQ	62	SER	3.4
45	B0	42	GLY	3.4
60	DA	2611	U	3.4
27	BE	122	PHE	3.4
44	DZ	88	PHE	3.4

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Mol	Chain	Res	Type	RSRZ
43	BY	28	LYS	3.4
60	DA	1938	A	3.4
37	DS	51	ALA	3.4
23	AY	575	VAL	3.4
26	BD	185	VAL	3.4
42	BX	52	VAL	3.4
21	CV	19	G	3.4
25	DC	35	THR	3.4
60	BA	271(C)	G	3.4
25	DC	167	ASP	3.4
28	BF	192	LEU	3.4
60	BA	659	C	3.4
60	BA	2179	C	3.4
20	AA	1528	U	3.4
45	B0	16	SER	3.4
7	AH	58	TYR	3.4
10	CK	122	LYS	3.4
14	AO	68	ARG	3.4
39	BU	5	LYS	3.4
12	AM	102	ARG	3.3
20	AA	823	G	3.3
26	BD	261	LYS	3.3
3	AD	130	GLY	3.3
16	CQ	45	HIS	3.3
43	DY	6	HIS	3.3
60	BA	1982	C	3.3
60	DA	2254	C	3.3
48	DN	69	GLN	3.3
18	AS	59	PRO	3.3
26	BD	36	PRO	3.3
39	BU	80	ILE	3.3
38	DT	92	GLY	3.3
55	D9	34	GLN	3.3
25	DC	221	PRO	3.3
28	BF	66	PRO	3.3
46	D1	44	PRO	3.3
23	AY	582	PHE	3.3
60	BA	573	G	3.3
46	B1	17	SER	3.3
19	CT	9	ASN	3.3
23	CY	143	GLY	3.3
27	BE	148	GLY	3.3

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Mol	Chain	Res	Type	RSRZ
60	DA	2117	A	3.3
16	AQ	24	GLU	3.3
3	CD	22	LYS	3.3
12	AM	16	ASP	3.3
23	CY	19	ALA	3.3
53	B7	23	ARG	3.3
53	B7	46	VAL	3.3
12	AM	100	GLY	3.3
60	DA	1939	U	3.3
20	AA	1354	C	3.3
20	AA	1538	C	3.3
60	BA	790	C	3.3
60	BA	1257	C	3.3
60	BA	11	G	3.3
60	DA	1239	G	3.3
16	AQ	89	LEU	3.3
20	AA	814	A	3.3
33	DO	41	ALA	3.3
35	BQ	14	ARG	3.3
60	BA	1419	A	3.3
60	BA	2572	A	3.3
16	CQ	39	SER	3.3
34	DP	14	LYS	3.3
55	D9	13	LYS	3.3
18	AS	74	PHE	3.2
44	BZ	70	LEU	3.2
46	D1	41	ARG	3.2
25	BC	134	PRO	3.2
51	D5	7	PRO	3.2
29	DG	99	MET	3.2
53	B7	22	MET	3.2
5	CF	54	LYS	3.2
48	DN	24	GLY	3.2
8	CI	110	GLU	3.2
20	CA	351	G	3.2
23	CY	146	LEU	3.2
60	DA	785	G	3.2
60	DA	1311	G	3.2
60	DA	2805	G	3.2
26	BD	233	HIS	3.2
45	B0	77	ARG	3.2
44	DZ	164	ALA	3.2

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Mol	Chain	Res	Type	RSRZ
23	CY	530	VAL	3.2
28	BF	174	VAL	3.2
48	DN	108	PRO	3.2
11	CL	119	LYS	3.2
45	D0	42	GLY	3.2
15	CP	69	THR	3.2
28	BF	70	THR	3.2
48	DN	75	TYR	3.2
3	AD	62	GLN	3.2
28	BF	202	PHE	3.2
20	CA	571	U	3.2
32	DK	52	ILE	3.2
5	CF	88	VAL	3.2
48	DN	102	ALA	3.2
36	DR	85	PRO	3.2
48	BN	40	PRO	3.2
60	DA	985	C	3.2
60	DA	2036	C	3.2
36	BR	99	LYS	3.2
3	CD	176	LEU	3.2
19	CT	104	LEU	3.2
60	DA	2802	G	3.2
8	AI	62	TYR	3.2
48	DN	78	TYR	3.2
3	AD	114	ARG	3.2
15	CP	8	ARG	3.2
37	DS	89	ARG	3.2
39	DU	33	ARG	3.2
54	B8	65	GLU	3.2
12	AM	15	VAL	3.2
15	AP	7	ALA	3.2
27	BE	25	VAL	3.2
32	BK	52	ILE	3.2
1	CB	195	ASP	3.2
9	CJ	66	ARG	3.2
37	DS	97	ARG	3.2
39	DU	59	ARG	3.2
40	BV	80	GLN	3.2
55	B9	22	ARG	3.2
60	BA	2451	A	3.2
37	BS	37	ALA	3.2
45	D0	16	SER	3.2

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Mol	Chain	Res	Type	RSRZ
55	D9	31	LYS	3.2
9	CJ	71	LEU	3.2
41	DW	36	LEU	3.2
20	AA	230	G	3.2
27	BE	120	TRP	3.2
28	DF	159	GLY	3.2
46	B1	13	ILE	3.2
46	B1	28	GLY	3.2
37	DS	16	ASN	3.2
44	DZ	70	LEU	3.2
26	DD	231	HIS	3.2
10	AK	40	ILE	3.1
20	AA	67	C	3.1
26	DD	211	ARG	3.1
28	BF	95	ARG	3.1
28	DF	71	GLY	3.1
60	BA	2820	A	3.1
40	BV	83	ARG	3.1
13	CN	11	LYS	3.1
52	B6	21	TYR	3.1
16	AQ	61	GLU	3.1
27	BE	9	VAL	3.1
8	AI	123	PRO	3.1
60	DA	1131	G	3.1
8	AI	83	ARG	3.1
43	DY	2	ARG	3.1
60	DA	269	U	3.1
60	DA	2585	U	3.1
2	CC	27	LYS	3.1
3	CD	42	GLN	3.1
11	AL	47	LYS	3.1
26	DD	9	TYR	3.1
20	AA	819	A	3.1
25	BC	175	PRO	3.1
60	BA	2040	C	3.1
3	AD	110	PHE	3.1
34	BP	51	PHE	3.1
26	BD	231	HIS	3.1
36	DR	2	ARG	3.1
55	B9	37	GLY	3.1
25	DC	169	THR	3.1
51	B5	12	SER	3.1

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Mol	Chain	Res	Type	RSRZ
60	DA	561	G	3.1
60	DA	1051	G	3.1
54	B8	16	ILE	3.1
60	DA	2172	U	3.1
1	AB	152	PHE	3.1
7	AH	105	ARG	3.1
23	AY	583	LYS	3.1
28	BF	54	ARG	3.1
46	D1	21	ARG	3.1
52	D6	38	LYS	3.1
53	B7	28	ARG	3.1
54	B8	15	LYS	3.1
48	DN	106	MET	3.1
25	BC	70	GLY	3.1
35	DQ	23	GLY	3.1
25	DC	69	LEU	3.1
48	DN	28	THR	3.1
20	CA	977	A	3.1
55	B9	34	GLN	3.1
60	BA	2058	A	3.1
60	DA	783	A	3.1
25	BC	215	VAL	3.1
30	DH	52	VAL	3.1
39	DU	4	ALA	3.1
60	BA	961	C	3.1
60	DA	1648	C	3.1
26	DD	271	ILE	3.1
25	BC	165	ARG	3.1
38	DT	91	ARG	3.1
46	D1	36	GLY	3.1
48	BN	67	LEU	3.1
60	BA	2233	U	3.1
60	DA	1834	U	3.1
60	DA	2449	U	3.1
20	CA	392	G	3.1
60	DA	1635	G	3.1
23	CY	534	ILE	3.1
26	BD	252	TRP	3.1
36	BR	84	ALA	3.1
48	BN	27	ALA	3.1
8	AI	78	LYS	3.1
40	DV	82	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
51	D5	19	ARG	3.1
23	CY	580	MET	3.1
1	AB	215	LEU	3.1
23	AY	22	ASP	3.1
35	BQ	17	LEU	3.1
44	DZ	154	ASP	3.1
60	BA	1566	A	3.1
60	DA	2503	A	3.1
34	BP	28	GLY	3.1
60	BA	2036	C	3.1
23	CY	165	GLN	3.0
50	B3	43	ILE	3.0
23	CY	50	ALA	3.0
26	DD	247	ALA	3.0
3	AD	68	TYR	3.0
35	DQ	98	LYS	3.0
41	BW	9	TYR	3.0
6	CG	6	ARG	3.0
29	DG	33	ARG	3.0
48	DN	35	ARG	3.0
52	D6	24	GLU	3.0
60	DA	2406	U	3.0
26	DD	232	PRO	3.0
48	BN	34	LEU	3.0
23	CY	53	ASP	3.0
44	DZ	87	ASP	3.0
55	B9	21	GLY	3.0
60	DA	2032	G	3.0
60	DA	2722	G	3.0
19	AT	11	SER	3.0
41	DW	105	VAL	3.0
12	CM	121	LYS	3.0
27	BE	157	ALA	3.0
60	BA	2713	A	3.0
30	BH	152	ARG	3.0
43	DY	20	TYR	3.0
8	AI	96	LEU	3.0
46	D1	27	GLU	3.0
20	CA	322	C	3.0
3	CD	69	GLY	3.0
39	BU	73	GLY	3.0
20	AA	125	U	3.0

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Mol	Chain	Res	Type	RSRZ
43	DY	4	LYS	3.0
48	BN	98	VAL	3.0
60	DA	562	U	3.0
60	DA	1065	U	3.0
60	DA	1779	U	3.0
17	AR	51	LEU	3.0
27	BE	52	LEU	3.0
54	D8	56	GLU	3.0
60	BA	51	G	3.0
60	BA	2714	G	3.0
60	DA	75	G	3.0
60	DA	2595	G	3.0
13	CN	51	GLY	3.0
35	BQ	18	LYS	3.0
39	BU	54	LYS	3.0
28	BF	77	ASP	3.0
39	DU	6	THR	3.0
3	CD	8	VAL	3.0
26	DD	12	SER	3.0
44	BZ	165	VAL	3.0
20	AA	1527	C	3.0
41	DW	74	ALA	3.0
49	D2	13	ALA	3.0
60	BA	1675	C	3.0
60	DA	2261	C	3.0
26	DD	104	TYR	3.0
44	DZ	178	GLU	3.0
23	CY	680	PRO	3.0
41	BW	87	PRO	3.0
19	CT	68	LYS	3.0
25	BC	131	ILE	3.0
46	B1	69	LYS	3.0
28	BF	55	GLY	3.0
1	AB	76	GLN	3.0
23	CY	114	VAL	3.0
27	BE	128	SER	3.0
48	BN	43	THR	3.0
3	CD	102	ASP	3.0
37	BS	88	ASP	3.0
39	DU	60	LEU	3.0
11	CL	53	ARG	3.0
44	DZ	72	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
43	BY	43	ASN	3.0
60	BA	1095	A	3.0
46	B1	78	LYS	3.0
15	AP	9	PHE	3.0
20	CA	178	C	3.0
39	BU	7	GLY	3.0
60	BA	1548	C	3.0
60	DA	1781	C	3.0
15	AP	44	THR	3.0
23	AY	51	THR	3.0
23	AY	66	THR	3.0
54	D8	60	LEU	3.0
26	DD	229	VAL	3.0
44	DZ	71	VAL	3.0
4	AE	15	ARG	3.0
39	DU	3	ARG	3.0
35	DQ	40	ALA	3.0
10	AK	110	ASP	3.0
8	CI	29	ASN	2.9
23	AY	138	LYS	2.9
26	BD	255	LYS	2.9
46	D1	23	LYS	2.9
48	DN	104	LYS	2.9
55	D9	29	ASN	2.9
8	CI	40	LEU	2.9
29	BG	65	GLY	2.9
26	DD	218	ARG	2.9
46	B1	4	VAL	2.9
60	BA	608	A	2.9
60	BA	646	A	2.9
60	DA	2572	A	2.9
2	AC	169	ALA	2.9
28	DF	58	ALA	2.9
15	AP	29	ASP	2.9
29	DG	156	ASP	2.9
11	CL	98	TYR	2.9
23	CY	20	HIS	2.9
27	BE	141	ILE	2.9
42	DX	25	LYS	2.9
45	B0	12	ASN	2.9
25	DC	165	ARG	2.9
3	CD	82	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
3	CD	43	HIS	2.9
15	CP	49	LEU	2.9
27	DE	151	TYR	2.9
40	DV	71	LEU	2.9
45	D0	21	LEU	2.9
3	AD	60	GLU	2.9
27	DE	138	PRO	2.9
28	BF	10	PRO	2.9
34	DP	51	PHE	2.9
42	DX	11	PRO	2.9
48	DN	79	PRO	2.9
60	DA	988	A	2.9
3	CD	208	SER	2.9
27	BE	124	GLY	2.9
28	BF	61	GLY	2.9
36	DR	68	ARG	2.9
54	B8	42	ARG	2.9
48	DN	122	VAL	2.9
41	DW	39	THR	2.9
60	BA	2382	G	2.9
60	BA	2795	G	2.9
60	DA	2157	G	2.9
20	AA	328	C	2.9
20	AA	504	C	2.9
26	DD	4	LYS	2.9
53	D7	48	LYS	2.9
60	BA	115	C	2.9
60	BA	786	C	2.9
25	BC	166	ASN	2.9
48	DN	1	MET	2.9
40	BV	82	ARG	2.9
6	AG	36	LYS	2.9
44	DZ	150	LEU	2.9
48	BN	106	MET	2.9
26	BD	188	GLU	2.9
27	DE	137	HIS	2.9
51	D5	23	HIS	2.9
20	CA	1537	U	2.9
60	BA	691	C	2.9
60	DA	46	C	2.9
60	BA	2717	G	2.9
60	DA	831	G	2.9

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Mol	Chain	Res	Type	RSRZ
60	DA	907	U	2.9
39	DU	34	LYS	2.9
42	DX	16	LYS	2.9
45	D0	46	LYS	2.9
60	DA	2029	G	2.9
26	DD	250	TRP	2.9
7	AH	2	LEU	2.9
23	AY	457	LEU	2.9
25	BC	11	LEU	2.9
39	DU	20	LEU	2.9
26	BD	242	ARG	2.9
3	AD	22	LYS	2.9
18	CS	32	LYS	2.9
35	BQ	19	GLY	2.8
48	DN	98	VAL	2.8
60	BA	2059	A	2.8
46	D1	18	ILE	2.8
26	DD	33	LEU	2.8
28	BF	65	TRP	2.8
32	BK	12	LEU	2.8
41	DW	107	LEU	2.8
35	DQ	104	PHE	2.8
60	BA	271(D)	U	2.8
20	AA	934	C	2.8
60	DA	1008	C	2.8
60	DA	1270	C	2.8
60	DA	2612	C	2.8
26	DD	48	ARG	2.8
20	CA	635	G	2.8
27	DE	203	LYS	2.8
48	DN	83	LYS	2.8
60	BA	270(T)	G	2.8
60	BA	836	G	2.8
60	BA	1139	G	2.8
1	AB	78	GLN	2.8
7	CH	90	GLY	2.8
23	CY	500	GLN	2.8
27	DE	193	GLY	2.8
60	BA	1073	A	2.8
60	DA	631	A	2.8
8	CI	66	ARG	2.8
12	AM	125	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
53	B7	9	ARG	2.8
25	BC	8	TYR	2.8
14	CO	43	LEU	2.8
29	BG	88	ILE	2.8
46	D1	70	VAL	2.8
22	CW	17	U	2.8
60	BA	1078	U	2.8
60	BA	2506	U	2.8
60	BA	2797	U	2.8
60	DA	1026	U	2.8
13	CN	10	ALA	2.8
51	B5	24	ALA	2.8
22	CW	32	C	2.8
28	BF	83	PHE	2.8
60	DA	62	C	2.8
60	DA	267	C	2.8
20	CA	117	G	2.8
36	DR	12	ARG	2.8
48	BN	35	ARG	2.8
50	B3	44	ARG	2.8
59	BB	92	G	2.8
60	BA	2553	G	2.8
60	BA	2583	G	2.8
60	DA	1252	G	2.8
23	CY	405	PRO	2.8
3	AD	41	GLY	2.8
15	CP	83	GLU	2.8
23	CY	579	GLU	2.8
26	BD	237	GLU	2.8
20	CA	994	A	2.8
23	AY	581	ALA	2.8
34	BP	32	THR	2.8
60	DA	2346	A	2.8
60	BA	810	U	2.8
60	BA	2245	U	2.8
20	AA	121	C	2.8
20	AA	1028(B)	C	2.8
60	BA	267	C	2.8
60	BA	2161	C	2.8
60	BA	2248	C	2.8
27	BE	54	GLN	2.8
27	DE	60	ASN	2.8

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Mol	Chain	Res	Type	RSRZ
23	CY	645	ALA	2.8
23	CY	669	PHE	2.8
25	DC	36	ALA	2.8
42	BX	34	ALA	2.8
48	DN	27	ALA	2.8
42	DX	40	LYS	2.8
1	CB	144	ARG	2.8
27	DE	13	ARG	2.8
30	DH	152	ARG	2.8
60	BA	2894	G	2.8
60	DA	2505	G	2.8
48	BN	116	LEU	2.8
4	AE	87	SER	2.8
20	AA	977	A	2.8
60	DA	2590	A	2.8
55	B9	7	VAL	2.8
32	DK	76	TYR	2.8
48	BN	78	TYR	2.8
11	CL	29	GLY	2.8
19	CT	85	MET	2.8
27	BE	117	MET	2.8
27	BE	194	GLY	2.8
27	DE	115	GLY	2.8
34	DP	53	GLY	2.8
38	BT	1	MET	2.8
48	BN	113	GLY	2.8
53	B7	27	GLY	2.8
54	D8	65	GLU	2.8
53	B7	14	LYS	2.8
60	BA	562	U	2.8
34	BP	21	ARG	2.7
39	BU	72	HIS	2.7
42	BX	76	ARG	2.7
12	CM	16	ASP	2.7
60	BA	1018	C	2.7
60	BA	1934	C	2.7
60	DA	970	C	2.7
60	DA	2136	C	2.7
23	AY	114	VAL	2.7
35	BQ	132	VAL	2.7
54	B8	2	PRO	2.7
54	B8	63	PRO	2.7

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Mol	Chain	Res	Type	RSRZ
26	BD	226	MET	2.7
5	CF	94	GLN	2.7
8	CI	127	LYS	2.7
37	DS	33	LYS	2.7
41	DW	75	TYR	2.7
23	AY	93	GLU	2.7
26	BD	2	ALA	2.7
35	BQ	43	THR	2.7
37	BS	16	ASN	2.7
50	D3	40	THR	2.7
60	BA	2238	G	2.7
15	CP	6	LEU	2.7
23	CY	363	ARG	2.7
60	BA	2274	A	2.7
60	DA	1597	A	2.7
6	CG	33	ASP	2.7
60	DA	2546	U	2.7
60	DA	2555	U	2.7
44	DZ	90	VAL	2.7
27	BE	56	PRO	2.7
41	BW	4	LYS	2.7
18	CS	43	GLU	2.7
23	CY	541	ALA	2.7
6	CG	37	ASN	2.7
20	CA	990	C	2.7
60	BA	2579	C	2.7
48	DN	85	ILE	2.7
9	AJ	86	MET	2.7
26	BD	230	ASP	2.7
27	BE	145	LYS	2.7
30	BH	26	VAL	2.7
46	D1	78	LYS	2.7
55	D9	2	LYS	2.7
18	CS	76	PRO	2.7
25	DC	33	LEU	2.7
60	BA	283	A	2.7
60	DA	61	G	2.7
60	DA	2059	A	2.7
26	BD	225	ALA	2.7
30	DH	151	ILE	2.7
52	D6	47	THR	2.7
25	DC	209	PHE	2.7

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Mol	Chain	Res	Type	RSRZ
8	AI	128	ARG	2.7
11	AL	12	ARG	2.7
15	CP	65	GLN	2.7
26	DD	103	ARG	2.7
26	DD	268	ARG	2.7
27	BE	190	GLY	2.7
35	DQ	53	ALA	2.7
36	BR	19	ALA	2.7
46	B1	11	ARG	2.7
48	DN	110	GLY	2.7
3	AD	158	ILE	2.7
46	B1	93	GLU	2.7
3	AD	63	LYS	2.7
15	AP	12	LYS	2.7
20	AA	572	A	2.7
60	BA	2589	A	2.7
27	DE	113	PHE	2.7
26	DD	37	LEU	2.7
27	BE	75	VAL	2.7
28	BF	88	VAL	2.7
49	B2	32	LEU	2.7
10	CK	121	PRO	2.7
27	BE	189	PRO	2.7
32	BK	13	PRO	2.7
56	De	98	PRO	2.7
60	BA	1775	U	2.7
46	D1	7	ILE	2.7
48	BN	124	ALA	2.7
23	CY	36	THR	2.7
11	CL	17	LYS	2.7
15	CP	12	LYS	2.7
27	BE	8	LYS	2.7
60	BA	130	C	2.7
60	BA	888	C	2.7
60	DA	1104	C	2.7
32	DK	77	LEU	2.7
46	D1	80	LEU	2.7
42	BX	54	VAL	2.6
44	BZ	96	VAL	2.6
6	CG	10	ARG	2.6
15	CP	25	ARG	2.6
7	AH	70	GLN	2.6

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Mol	Chain	Res	Type	RSRZ
23	AY	246	ILE	2.6
36	DR	63	ARG	2.6
8	CI	75	ASP	2.6
54	D8	64	TYR	2.6
19	CT	27	LYS	2.6
32	DK	16	LYS	2.6
60	BA	222	A	2.6
1	CB	170	GLU	2.6
29	BG	59	GLU	2.6
46	B1	75	GLU	2.6
20	CA	5	U	2.6
22	CW	16	U	2.6
16	CQ	22	LEU	2.6
48	DN	116	LEU	2.6
13	CN	60	SER	2.6
16	AQ	39	SER	2.6
20	AA	392	G	2.6
20	AA	953	G	2.6
20	AA	1184	G	2.6
60	BA	270(S)	G	2.6
60	DA	989	G	2.6
60	DA	2578	G	2.6
10	CK	84	VAL	2.6
11	CL	18	VAL	2.6
51	D5	15	ARG	2.6
19	AT	98	PRO	2.6
25	DC	17	PRO	2.6
54	D8	24	ALA	2.6
53	B7	32	LYS	2.6
15	AP	69	THR	2.6
38	BT	62	THR	2.6
60	BA	1549	C	2.6
60	BA	2704	C	2.6
3	AD	156	GLU	2.6
3	CD	60	GLU	2.6
48	DN	96	GLU	2.6
53	B7	31	LEU	2.6
23	CY	17	ILE	2.6
41	DW	84	ARG	2.6
20	CA	1364	U	2.6
23	AY	57	GLN	2.6
34	BP	36	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
54	D8	35	GLN	2.6
60	BA	2716	U	2.6
25	BC	159	ALA	2.6
25	DC	77	ALA	2.6
33	BO	84	ALA	2.6
35	DQ	44	ALA	2.6
43	BY	105	ALA	2.6
13	AN	21	TYR	2.6
34	BP	80	TYR	2.6
23	CY	537	GLU	2.6
60	DA	952	G	2.6
60	DA	1573	G	2.6
60	DA	1801	G	2.6
37	DS	31	SER	2.6
11	CL	66	VAL	2.6
35	BQ	133	ARG	2.6
53	B7	3	ARG	2.6
37	BS	93	LYS	2.6
46	D1	25	LYS	2.6
3	CD	39	PRO	2.6
4	AE	49	PRO	2.6
20	CA	177	C	2.6
48	BN	108	PRO	2.6
60	DA	1432	C	2.6
23	CY	505	GLY	2.6
25	BC	170	GLY	2.6
48	DN	23	LEU	2.6
15	CP	48	TRP	2.6
26	BD	84	TYR	2.6
26	BD	172	TYR	2.6
26	BD	254	THR	2.6
44	BZ	89	PHE	2.6
22	AW	73	A	2.6
29	DG	150	ASP	2.6
59	BB	1	U	2.6
27	DE	116	VAL	2.6
28	DF	126	VAL	2.6
6	CG	2	ALA	2.6
23	CY	52	MET	2.6
53	B7	20	ALA	2.6
45	D0	22	GLY	2.6
15	CP	9	PHE	2.6

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Mol	Chain	Res	Type	RSRZ
60	BA	954	G	2.6
60	BA	1542	G	2.6
60	BA	2502	G	2.6
60	DA	271	G	2.6
60	DA	2246	G	2.6
40	BV	81	TYR	2.6
46	D1	93	GLU	2.6
20	AA	805	C	2.6
20	AA	932	C	2.6
23	CY	266	ASN	2.6
37	DS	17	ARG	2.6
43	BY	30	VAL	2.6
60	BA	2381	C	2.6
60	BA	2507	C	2.6
60	BA	2692	C	2.6
60	DA	31	C	2.6
9	CJ	85	LEU	2.6
29	BG	99	MET	2.6
19	CT	77	ALA	2.6
20	AA	1251	A	2.6
60	BA	324	A	2.6
60	BA	2705	A	2.6
60	DA	2198	A	2.6
60	DA	2497	A	2.6
20	AA	1148	U	2.6
25	DC	170	GLY	2.6
27	BE	125	GLY	2.6
60	BA	2438	U	2.6
3	CD	31	CYS	2.5
39	DU	25	TRP	2.5
26	DD	274	ARG	2.5
30	BH	175	LYS	2.5
45	D0	24	LYS	2.5
23	CY	22	ASP	2.5
23	CY	393	ASP	2.5
35	BQ	79	LEU	2.5
3	CD	181	MET	2.5
14	CO	19	PRO	2.5
25	BC	171	ALA	2.5
60	BA	832	G	2.5
60	BA	2004	G	2.5
60	BA	2495	G	2.5

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Mol	Chain	Res	Type	RSRZ
60	BA	2576	G	2.5
9	CJ	100	THR	2.5
20	CA	979	C	2.5
20	CA	1322	C	2.5
27	BE	132	HIS	2.5
55	B9	10	ILE	2.5
60	DA	2143	C	2.5
60	DA	2517	C	2.5
60	DA	2814	C	2.5
15	CP	28	ARG	2.5
54	D8	30	ARG	2.5
48	DN	34	LEU	2.5
60	BA	1786	A	2.5
60	BA	2118	U	2.5
60	DA	1272	A	2.5
60	DA	2801	A	2.5
34	DP	70	GLN	2.5
38	BT	57	PHE	2.5
11	AL	125	PRO	2.5
9	CJ	98	ILE	2.5
16	AQ	37	LYS	2.5
25	DC	71	LYS	2.5
26	BD	39	LYS	2.5
30	BH	151	ILE	2.5
35	DQ	131	ILE	2.5
10	AK	18	ARG	2.5
13	AN	31	ARG	2.5
27	BE	151	TYR	2.5
3	CD	178	VAL	2.5
27	BE	5	LEU	2.5
28	DF	114	VAL	2.5
30	DH	87	LEU	2.5
48	BN	88	GLU	2.5
53	D7	42	LEU	2.5
54	B8	56	GLU	2.5
48	DN	17	ASP	2.5
59	DB	60	C	2.5
60	BA	2177	C	2.5
60	BA	2380	C	2.5
60	DA	268	C	2.5
60	DA	1218	C	2.5
11	AL	108	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
12	CM	124	PRO	2.5
37	BS	62	LYS	2.5
43	DY	28	LYS	2.5
52	B6	17	LYS	2.5
60	BA	12	U	2.5
26	DD	259	THR	2.5
48	BN	73	THR	2.5
60	DA	1936	A	2.5
16	AQ	22	LEU	2.5
39	BU	60	LEU	2.5
16	CQ	9	VAL	2.5
23	CY	434	GLU	2.5
48	DN	100	GLU	2.5
36	BR	11	ASN	2.5
9	AJ	50	ILE	2.5
15	AP	70	ALA	2.5
39	DU	65	ILE	2.5
43	BY	107	ASP	2.5
14	CO	57	LEU	2.5
15	CP	71	ARG	2.5
45	D0	39	ARG	2.5
46	B1	41	ARG	2.5
26	DD	254	THR	2.5
35	DQ	21	THR	2.5
53	B7	42	LEU	2.5
28	BF	75	HIS	2.5
60	DA	2676	C	2.5
20	AA	1124	G	2.5
29	DG	35	GLU	2.5
60	BA	780	G	2.5
60	BA	1479	G	2.5
1	CB	152	PHE	2.5
52	D6	42	TRP	2.5
60	BA	2897	U	2.5
60	DA	50	U	2.5
8	CI	118	LYS	2.5
20	CA	611	A	2.5
45	B0	4	LYS	2.5
60	BA	227	A	2.5
60	BA	2169	A	2.5
60	DA	1572	A	2.5
1	CB	207	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
27	BE	123	ALA	2.5
3	AD	7	PRO	2.5
23	CY	356	LEU	2.5
39	BU	33	ARG	2.5
44	BZ	79	ARG	2.5
48	DN	87	LEU	2.5
3	AD	89	THR	2.5
51	B5	11	THR	2.5
11	AL	18	VAL	2.5
25	BC	30	VAL	2.5
28	BF	57	VAL	2.5
28	DF	157	VAL	2.5
23	CY	54	PHE	2.4
25	BC	4	HIS	2.4
25	BC	193	PHE	2.4
52	D6	45	LYS	2.4
19	AT	55	ILE	2.4
26	BD	209	ALA	2.4
23	CY	260	LEU	2.4
5	CF	3	ARG	2.4
27	DE	147	PRO	2.4
28	BF	208	GLY	2.4
18	CS	77	THR	2.4
27	BE	1	MET	2.4
60	DA	1006	C	2.4
60	DA	1007	C	2.4
60	DA	2804	C	2.4
27	BE	12	THR	2.4
42	BX	35	THR	2.4
60	DA	654	U	2.4
60	DA	2491	U	2.4
4	CE	105	VAL	2.4
20	AA	966	G	2.4
20	CA	933	G	2.4
29	BG	28	VAL	2.4
52	D6	48	VAL	2.4
60	BA	2697	G	2.4
60	DA	954	G	2.4
60	DA	1566	A	2.4
60	DA	2165	G	2.4
11	AL	111	LYS	2.4
26	DD	6	PHE	2.4

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Mol	Chain	Res	Type	RSRZ
26	DD	101	GLU	2.4
48	DN	68	GLU	2.4
23	CY	104	ALA	2.4
35	BQ	40	ALA	2.4
41	BW	107	LEU	2.4
23	CY	160	ARG	2.4
35	DQ	119	ARG	2.4
38	BT	95	ARG	2.4
42	DX	60	ARG	2.4
16	CQ	33	GLY	2.4
25	BC	49	GLY	2.4
32	DK	134	MET	2.4
1	AB	195	ASP	2.4
15	CP	47	ASP	2.4
27	BE	167	VAL	2.4
34	BP	39	LYS	2.4
38	BT	49	VAL	2.4
48	DN	52	VAL	2.4
53	B7	30	VAL	2.4
3	AD	31	CYS	2.4
30	DH	148	ILE	2.4
30	DH	164	TYR	2.4
35	DQ	26	TYR	2.4
55	D9	26	ILE	2.4
42	BX	70	LEU	2.4
12	AM	104	ARG	2.4
20	AA	1125	U	2.4
20	CA	201(A)	U	2.4
20	CA	586	C	2.4
22	AW	6	C	2.4
22	AW	75	C	2.4
35	BQ	44	ALA	2.4
37	DS	37	ALA	2.4
60	BA	1007	C	2.4
60	BA	1621	U	2.4
60	BA	2142	C	2.4
60	BA	2605	U	2.4
60	BA	2689	U	2.4
4	CE	106	PRO	2.4
20	AA	57	G	2.4
20	CA	1222	G	2.4
60	BA	1666	G	2.4

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Mol	Chain	Res	Type	RSRZ
60	BA	2131	G	2.4
60	BA	2694	G	2.4
33	DO	18	LYS	2.4
54	B8	12	LYS	2.4
42	DX	28	PHE	2.4
23	AY	659	LEU	2.4
11	AL	127	GLU	2.4
52	B6	24	GLU	2.4
34	BP	65	ARG	2.4
38	BT	51	ARG	2.4
28	DF	8	GLN	2.4
8	CI	78	LYS	2.4
32	DK	130	SER	2.4
23	CY	66	THR	2.4
26	DD	34	VAL	2.4
22	CW	20	U	2.4
30	DH	162	ILE	2.4
60	DA	387	U	2.4
60	DA	1406	U	2.4
14	AO	32	LEU	2.4
42	BX	9	LEU	2.4
48	DN	107	LEU	2.4
20	CA	832	C	2.4
21	AV	8	A	2.4
60	DA	802	A	2.4
3	CD	115	ARG	2.4
3	CD	209	ARG	2.4
32	DK	51	ALA	2.4
52	B6	13	CYS	2.4
20	CA	838	G	2.4
59	DB	102	G	2.4
60	BA	1138	G	2.4
60	BA	1855	G	2.4
60	DA	2230	G	2.4
60	DA	2597	G	2.4
8	AI	24	GLY	2.4
17	CR	80	PRO	2.4
29	BG	100	TRP	2.4
41	DW	43	GLY	2.4
28	DF	83	PHE	2.4
46	B1	38	SER	2.4
18	AS	33	THR	2.4

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Mol	Chain	Res	Type	RSRZ
27	BE	116	VAL	2.4
44	DZ	56	VAL	2.4
48	BN	23	LEU	2.4
26	BD	211	ARG	2.4
35	DQ	25	ASP	2.4
23	AY	412	ALA	2.4
26	BD	240	ALA	2.4
32	DK	61	ALA	2.4
1	AB	163	PHE	2.3
4	CE	84	PHE	2.3
23	CY	535	PRO	2.3
27	BE	193	GLY	2.3
54	B8	45	GLY	2.3
3	AD	108	LEU	2.3
27	DE	183	LEU	2.3
35	DQ	118	LEU	2.3
56	De	75	ILE	2.3
60	BA	44	A	2.3
60	BA	1135	C	2.3
60	BA	1306	C	2.3
60	DA	1217	C	2.3
60	DA	1257	C	2.3
3	AD	203	VAL	2.3
23	CY	322	VAL	2.3
35	DQ	43	THR	2.3
48	DN	5	VAL	2.3
13	AN	57	ARG	2.3
37	BS	89	ARG	2.3
5	AF	63	TYR	2.3
6	CG	35	LYS	2.3
12	AM	111	LYS	2.3
13	CN	20	ALA	2.3
20	AA	542	G	2.3
20	AA	1224	G	2.3
35	DQ	117	ALA	2.3
60	DA	125	G	2.3
60	DA	271(C)	G	2.3
60	DA	2583	G	2.3
19	CT	60	GLU	2.3
26	DD	237	GLU	2.3
1	AB	151	GLY	2.3
2	CC	47	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
26	BD	175	LEU	2.3
27	BE	139	GLY	2.3
40	BV	38	LEU	2.3
46	B1	12	PRO	2.3
23	CY	612	THR	2.3
39	DU	28	ARG	2.3
39	DU	58	ARG	2.3
60	BA	1673	U	2.3
60	DA	576	U	2.3
60	DA	930	U	2.3
48	BN	1	MET	2.3
9	CJ	7	LYS	2.3
44	DZ	99	TYR	2.3
20	AA	1252	A	2.3
12	AM	101	GLN	2.3
20	CA	817	C	2.3
20	CA	1066	C	2.3
60	BA	837	C	2.3
60	BA	1008	C	2.3
60	BA	2798	C	2.3
60	DA	422	A	2.3
60	DA	933	A	2.3
23	AY	434	GLU	2.3
10	AK	48	ILE	2.3
32	BK	22	PRO	2.3
48	DN	113	GLY	2.3
53	D7	17	GLY	2.3
54	B8	7	HIS	2.3
7	CH	3	THR	2.3
56	Be	82	THR	2.3
35	DQ	101	ARG	2.3
45	D0	4	LYS	2.3
48	DN	2	LYS	2.3
52	B6	45	LYS	2.3
20	CA	666	G	2.3
20	CA	1047	G	2.3
20	CA	1304	G	2.3
20	CA	1305	G	2.3
60	BA	2160	G	2.3
60	DA	1296	G	2.3
23	AY	34	TYR	2.3
28	DF	184	TYR	2.3

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Mol	Chain	Res	Type	RSRZ
32	BK	51	ALA	2.3
32	BK	131	ALA	2.3
40	DV	38	LEU	2.3
42	DX	34	ALA	2.3
2	AC	46	GLU	2.3
3	AD	204	ILE	2.3
8	AI	60	ASP	2.3
23	CY	93	GLU	2.3
28	DF	35	GLU	2.3
36	DR	115	GLU	2.3
60	BA	1394	U	2.3
60	DA	762	U	2.3
48	DN	77	GLY	2.3
42	DX	54	VAL	2.3
56	De	82	THR	2.3
22	CW	73	A	2.3
34	DP	39	LYS	2.3
50	D3	29	ARG	2.3
60	BA	988	A	2.3
20	AA	1147	C	2.3
20	AA	1420	C	2.3
60	BA	1350	C	2.3
60	DA	693	C	2.3
60	DA	955	C	2.3
60	DA	1202	C	2.3
18	AS	5	LEU	2.3
25	DC	138	LEU	2.3
3	CD	207	TYR	2.3
45	D0	60	PHE	2.3
15	AP	76	GLN	2.3
40	DV	80	GLN	2.3
39	DU	9	VAL	2.3
6	AG	48	LYS	2.3
3	AD	3	ARG	2.3
12	CM	88	ARG	2.3
16	CQ	72	ARG	2.3
18	CS	33	THR	2.3
26	BD	13	ARG	2.3
27	DE	164	ARG	2.3
35	BQ	75	THR	2.3
45	B0	20	ARG	2.3
55	D9	32	HIS	2.3

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Mol	Chain	Res	Type	RSRZ
60	BA	45	G	2.3
60	BA	425	G	2.3
60	BA	2149	G	2.3
29	BG	152	LEU	2.3
20	AA	56	U	2.3
59	DB	1	U	2.3
60	DA	2897	U	2.3
10	AK	83	ILE	2.3
23	AY	255	ILE	2.3
34	DP	75	ILE	2.3
37	DS	40	ILE	2.3
3	AD	32	ALA	2.3
39	DU	99	ALA	2.3
48	DN	132	ALA	2.3
19	CT	45	GLN	2.3
2	CC	46	GLU	2.3
20	AA	60	A	2.3
37	BS	52	SER	2.3
60	BA	1558	A	2.3
60	DA	2170	A	2.3
13	CN	17	LYS	2.3
27	BE	158	GLY	2.3
34	BP	107	LYS	2.3
42	DX	33	LYS	2.3
60	BA	1006	C	2.3
60	DA	2794	C	2.3
41	DW	92	ARG	2.3
19	CT	75	ASN	2.2
28	BF	175	THR	2.2
35	BQ	57	HIS	2.2
13	AN	47	LEU	2.2
16	AQ	43	LEU	2.2
25	BC	69	LEU	2.2
35	DQ	17	LEU	2.2
45	D0	62	LEU	2.2
27	BE	131	ALA	2.2
51	B5	2	ALA	2.2
1	CB	31	TYR	2.2
43	DY	35	TYR	2.2
26	DD	275	LYS	2.2
23	AY	162	VAL	2.2
28	BF	112	MET	2.2

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Mol	Chain	Res	Type	RSRZ
3	AD	14	ARG	2.2
20	AA	201(A)	U	2.2
20	AA	820	U	2.2
20	AA	1310	G	2.2
26	DD	262	ARG	2.2
28	DF	171	PRO	2.2
34	DP	71	VAL	2.2
35	BQ	55	VAL	2.2
40	DV	1	MET	2.2
47	B4	35	VAL	2.2
60	BA	630	G	2.2
60	BA	1183	G	2.2
60	BA	1238	G	2.2
60	BA	1356	G	2.2
60	BA	2265	U	2.2
60	DA	822	U	2.2
60	DA	1647	G	2.2
1	CB	145	LEU	2.2
19	CT	91	LEU	2.2
34	DP	57	THR	2.2
40	BV	94	LEU	2.2
48	DN	99	LEU	2.2
27	BE	137	HIS	2.2
38	BT	79	HIS	2.2
9	AJ	6	ILE	2.2
23	CY	65	ILE	2.2
27	BE	113	PHE	2.2
29	DG	157	ILE	2.2
50	D3	43	ILE	2.2
20	AA	1130	A	2.2
20	CA	946	A	2.2
60	BA	2198	A	2.2
1	CB	76	GLN	2.2
20	AA	178	C	2.2
20	AA	596	C	2.2
20	CA	390	C	2.2
25	BC	158	LYS	2.2
26	BD	4	LYS	2.2
26	DD	72	LYS	2.2
60	BA	1771	C	2.2
60	BA	2108	C	2.2
60	BA	2188	C	2.2

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Mol	Chain	Res	Type	RSRZ
60	BA	2260	C	2.2
60	BA	2715	C	2.2
60	DA	825	C	2.2
60	DA	2496	C	2.2
3	CD	165	MET	2.2
35	DQ	54	MET	2.2
7	AH	90	GLY	2.2
9	CJ	93	GLY	2.2
27	DE	167	VAL	2.2
51	D5	55	ARG	2.2
27	BE	195	LEU	2.2
51	B5	7	PRO	2.2
6	AG	33	ASP	2.2
14	CO	50	HIS	2.2
2	CC	18	TRP	2.2
2	CC	167	TRP	2.2
11	CL	46	LYS	2.2
15	CP	70	ALA	2.2
20	CA	125	U	2.2
43	BY	36	ALA	2.2
59	DB	41	U	2.2
60	BA	2028	U	2.2
60	DA	2596	U	2.2
11	CL	50	SER	2.2
2	CC	43	LEU	2.2
5	AF	77	ARG	2.2
18	AS	9	VAL	2.2
18	CS	41	VAL	2.2
25	BC	53	ARG	2.2
39	BU	53	ARG	2.2
55	B9	4	ARG	2.2
60	BA	85	G	2.2
60	BA	88	G	2.2
60	BA	1239	G	2.2
60	BA	1416	G	2.2
39	DU	8	VAL	2.2
48	BN	87	LEU	2.2
56	Be	84	LEU	2.2
25	BC	86	GLU	2.2
26	DD	207	GLY	2.2
20	CA	819	A	2.2
48	BN	95	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
56	Be	98	PRO	2.2
60	BA	2135	A	2.2
60	BA	2336	A	2.2
60	DA	1032	A	2.2
60	DA	2820	A	2.2
25	DC	181	PHE	2.2
60	BA	1218	C	2.2
60	BA	1962	C	2.2
60	DA	2006	C	2.2
26	BD	72	LYS	2.2
36	BR	16	HIS	2.2
37	DS	62	LYS	2.2
27	DE	162	ALA	2.2
32	DK	131	ALA	2.2
3	AD	42	GLN	2.2
23	CY	55	MET	2.2
35	DQ	83	MET	2.2
9	AJ	40	LEU	2.2
34	DP	40	SER	2.2
49	D2	24	LEU	2.2
51	D5	21	SER	2.2
53	D7	36	GLN	2.2
36	BR	65	LEU	2.2
51	B5	19	ARG	2.2
1	AB	174	VAL	2.2
11	AL	88	GLY	2.2
23	AY	460	GLU	2.2
25	BC	202	PRO	2.2
27	BE	142	GLY	2.2
10	CK	125	PHE	2.2
11	AL	67	THR	2.2
26	BD	102	LYS	2.2
34	DP	107	LYS	2.2
40	DV	85	LYS	2.2
23	CY	83	ASP	2.2
37	DS	88	ASP	2.2
44	BZ	85	HIS	2.2
54	D8	25	MET	2.2
20	CA	1238	A	2.2
27	DE	63	LEU	2.2
27	DE	120	TRP	2.2
27	DE	195	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
44	BZ	73	GLN	2.2
59	BB	29	A	2.2
60	BA	75	G	2.2
60	DA	1332	G	2.2
3	CD	10	ARG	2.2
52	B6	44	ARG	2.2
52	D6	44	ARG	2.2
3	CD	198	VAL	2.2
8	AI	101	PHE	2.2
8	CI	101	PHE	2.2
12	AM	113	PRO	2.2
20	AA	366	C	2.2
20	AA	1327	C	2.2
28	BF	207	GLY	2.2
52	D6	31	PRO	2.2
60	DA	755	C	2.2
19	AT	81	LYS	2.2
23	CY	349	LYS	2.2
23	CY	49	ALA	2.1
26	DD	225	ALA	2.1
33	BO	41	ALA	2.1
8	AI	117	HIS	2.1
15	CP	29	ASP	2.1
20	AA	65	U	2.1
20	AA	1537	U	2.1
27	BE	31	CYS	2.1
28	DF	54	ARG	2.1
34	DP	41	ARG	2.1
35	DQ	10	ARG	2.1
60	BA	511	U	2.1
32	BK	78	ILE	2.1
47	D4	14	ILE	2.1
1	CB	227	GLY	2.1
3	AD	163	GLU	2.1
12	CM	97	PRO	2.1
12	CM	111	LYS	2.1
25	BC	17	PRO	2.1
26	BD	243	GLY	2.1
40	BV	54	GLY	2.1
46	D1	48	LYS	2.1
48	DN	129	PRO	2.1
54	D8	39	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
34	DP	58	THR	2.1
60	BA	1182	A	2.1
60	DA	2014	A	2.1
60	DA	2451	A	2.1
20	AA	112	G	2.1
20	CA	944	G	2.1
52	B6	10	LEU	2.1
55	D9	1	MET	2.1
60	BA	831	G	2.1
60	BA	2807	G	2.1
60	DA	979	G	2.1
60	DA	1154	G	2.1
60	DA	2697	G	2.1
60	DA	2864	G	2.1
5	AF	2	ARG	2.1
8	CI	9	ARG	2.1
12	CM	91	ARG	2.1
15	AP	71	ARG	2.1
19	CT	80	ARG	2.1
39	DU	10	ARG	2.1
3	CD	45	GLN	2.1
9	CJ	35	SER	2.1
20	AA	748	C	2.1
20	AA	848	C	2.1
20	CA	795	C	2.1
60	BA	1104	C	2.1
25	BC	59	VAL	2.1
25	BC	157	ILE	2.1
28	DF	23	ASP	2.1
3	CD	9	CYS	2.1
25	DC	94	TYR	2.1
27	DE	109	LYS	2.1
36	DR	42	LYS	2.1
38	BT	8	LYS	2.1
42	BX	78	LYS	2.1
45	B0	45	PHE	2.1
46	D1	43	TYR	2.1
27	BE	10	GLY	2.1
23	AY	60	GLU	2.1
39	DU	89	GLU	2.1
48	BN	68	GLU	2.1
25	BC	169	THR	2.1

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Mol	Chain	Res	Type	RSRZ
48	DN	73	THR	2.1
16	AQ	6	LEU	2.1
40	DV	94	LEU	2.1
54	D8	4	MET	2.1
3	AD	107	ARG	2.1
16	CQ	38	ARG	2.1
23	AY	18	ALA	2.1
28	BF	169	ASN	2.1
49	B2	13	ALA	2.1
13	AN	60	SER	2.1
15	AP	65	GLN	2.1
29	BG	41	GLN	2.1
3	CD	134	ASP	2.1
13	CN	49	HIS	2.1
19	CT	29	LYS	2.1
27	BE	72	VAL	2.1
30	DH	50	VAL	2.1
46	D1	39	LYS	2.1
20	AA	815	A	2.1
26	DD	234	GLY	2.1
25	DC	134	PRO	2.1
55	D9	27	CYS	2.1
25	DC	48	LEU	2.1
18	AS	44	MET	2.1
20	AA	1385	G	2.1
60	BA	2719	G	2.1
20	AA	269	C	2.1
60	DA	1982	C	2.1
9	AJ	51	ARG	2.1
3	AD	208	SER	2.1
35	BQ	85	LYS	2.1
20	CA	1148	U	2.1
44	DZ	165	VAL	2.1
45	B0	69	PHE	2.1
54	D8	22	VAL	2.1
60	DA	2519	U	2.1
23	AY	113	GLY	2.1
27	DE	158	GLY	2.1
43	DY	106	LEU	2.1
48	DN	111	PRO	2.1
26	BD	259	THR	2.1
44	BZ	181	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
2	AC	172	ARG	2.1
12	CM	108	ARG	2.1
48	BN	114	ARG	2.1
10	CK	48	ILE	2.1
25	BC	174	ALA	2.1
26	DD	209	ALA	2.1
46	D1	54	ALA	2.1
60	BA	1021	A	2.1
60	BA	2602	A	2.1
60	DA	1562	A	2.1
37	DS	50	SER	2.1
48	BN	70	LYS	2.1
48	DN	117	PHE	2.1
23	AY	322	VAL	2.1
48	BN	103	VAL	2.1
25	DC	137	LEU	2.1
1	AB	48	MET	2.1
11	CL	64	TYR	2.1
20	CA	1124	G	2.1
25	BC	109	MET	2.1
60	BA	645	C	2.1
60	BA	2601	C	2.1
60	BA	2610	C	2.1
60	DA	1662	C	2.1
53	D7	40	TRP	2.1
60	DA	30	G	2.1
60	DA	1122	G	2.1
60	DA	1138	G	2.1
60	DA	1325	G	2.1
60	DA	1666	G	2.1
60	DA	1763	G	2.1
60	DA	2116	G	2.1
60	DA	2191	G	2.1
60	DA	2252	G	2.1
26	BD	245	PRO	2.1
37	BS	47	THR	2.1
43	BY	108	THR	2.1
23	AY	96	ARG	2.1
26	DD	244	ARG	2.1
41	BW	11	ARG	2.1
2	AC	5	ILE	2.1
11	AL	91	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
33	BO	18	LYS	2.1
34	BP	14	LYS	2.1
46	B1	23	LYS	2.1
60	BA	2584	U	2.1
60	DA	1535	U	2.1
1	AB	188	ALA	2.1
28	BF	128	ALA	2.1
56	De	67	ALA	2.1
46	B1	16	ASN	2.1
33	DO	1	MET	2.1
3	CD	130	GLY	2.0
11	AL	35	GLY	2.0
27	DE	129	HIS	2.0
29	DG	100	TRP	2.0
3	CD	72	GLU	2.0
25	DC	88	GLU	2.0
34	BP	41	ARG	2.0
43	DY	73	ARG	2.0
46	B1	35	THR	2.0
11	AL	28	LYS	2.0
15	CP	35	LYS	2.0
26	DD	38	LYS	2.0
46	D1	3	LYS	2.0
15	CP	24	ALA	2.0
19	CT	11	SER	2.0
25	DC	26	ALA	2.0
54	B8	24	ALA	2.0
28	BF	129	PHE	2.0
20	AA	1397	C	2.0
20	CA	225	C	2.0
25	BC	42	VAL	2.0
27	BE	91	VAL	2.0
50	B3	54	VAL	2.0
54	B8	14	VAL	2.0
60	BA	32	C	2.0
60	BA	1752	C	2.0
60	BA	1994	C	2.0
60	BA	2136	C	2.0
4	CE	130	ASN	2.0
20	CA	484	G	2.0
27	DE	156	MET	2.0
59	BB	72	G	2.0

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Mol	Chain	Res	Type	RSRZ
60	BA	2239	G	2.0
60	BA	2707	G	2.0
60	DA	1256	G	2.0
20	CA	820	U	2.0
5	CF	87	ARG	2.0
9	AJ	56	HIS	2.0
10	CK	83	ILE	2.0
12	AM	91	ARG	2.0
15	CP	26	ARG	2.0
23	CY	430	ARG	2.0
23	CY	529	ILE	2.0
23	CY	583	LYS	2.0
26	DD	14	ARG	2.0
26	DD	220	HIS	2.0
26	DD	245	PRO	2.0
25	DC	162	ILE	2.0
53	D7	29	LYS	2.0
27	DE	48	GLN	2.0
48	BN	5	VAL	2.0
50	B3	19	GLN	2.0
53	D7	30	VAL	2.0
60	BA	945	A	2.0
60	DA	1073	A	2.0
3	CD	70	ILE	2.0
7	AH	30	ARG	2.0
38	DT	96	ARG	2.0
48	DN	118	LYS	2.0
9	AJ	37	PRO	2.0
16	CQ	64	PRO	2.0
55	D9	19	ARG	2.0
56	Be	75	ILE	2.0
23	CY	142	THR	2.0
20	AA	1320	C	2.0
20	CA	23	C	2.0
20	CA	381	C	2.0
60	BA	1887	C	2.0
60	BA	2175	C	2.0
3	CD	21	LEU	2.0
26	DD	240	ALA	2.0
32	DK	62	ASP	2.0
34	DP	12	ALA	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
24	KBE	AU	1	9/10	0.44	0.42	65,65,65,65	0
24	UAL	AU	5	9/10	0.61	0.13	65,65,65,65	0
24	5OH	AU	6	12/13	0.71	0.13	99,101,102,102	0
24	KBE	CU	1	9/10	0.80	0.22	65,65,65,65	0
24	DPP	CU	2	6/7	0.82	0.10	65,65,65,65	0
24	DPP	AU	2	6/7	0.84	0.08	65,65,65,65	0
24	UAL	CU	5	9/10	0.85	0.09	65,65,65,65	0
24	5OH	CU	6	12/13	0.92	0.11	99,101,102,102	0

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

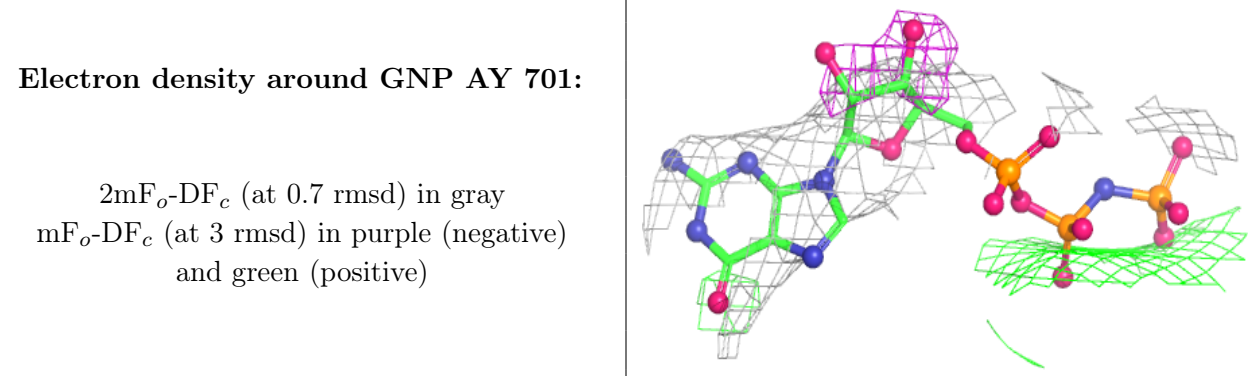
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9'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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
61	GNP	AY	701	32/32	0.78	0.13	58,71,81,83	0
62	MG	AY	702	1/1	0.81	0.10	124,124,124,124	0
61	GNP	CY	702	32/32	0.91	0.10	58,71,81,83	0
62	MG	CY	701	1/1	0.95	0.07	104,104,104,104	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.

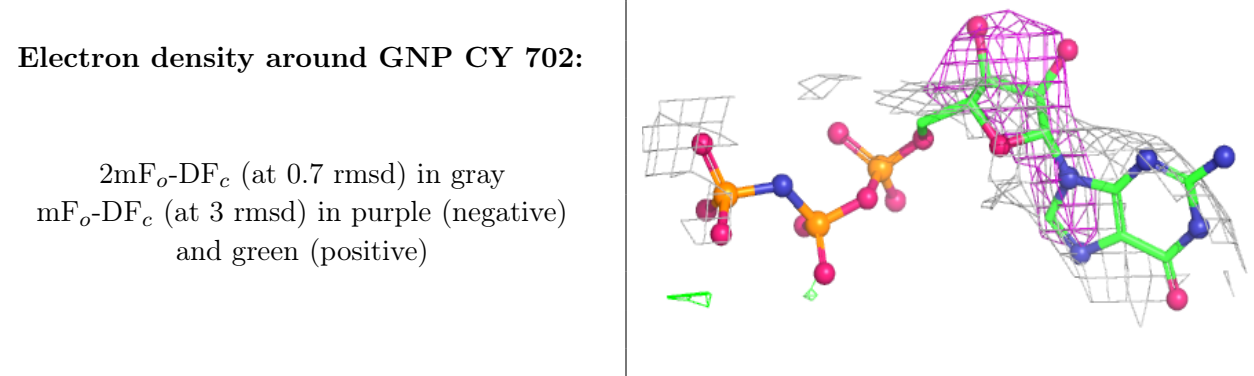
Electron density around GNP AY 701:

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



Electron density around GNP 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)



6.5 Other polymers (i)

There are no such residues in this entry.