Full wwPDB X-ray Structure Validation Report ⓘ

Mar 18, 2026 – 12:03 AM UTC

PDB ID	:	4V9M / pdb_00004v9m
Title	:	70S Ribosome translocation intermediate FA-4.2A containing elongation factor EFG/FUSIDIC ACID/GDP, mRNA, and tRNA bound in the pe*/E state.
Authors	:	Zhou, J.; Lancaster, L.; Donohue, J.P.; Noller, H.F.
Deposited on	:	2013-04-25
Resolution	:	4.00 Å(reported)

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

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

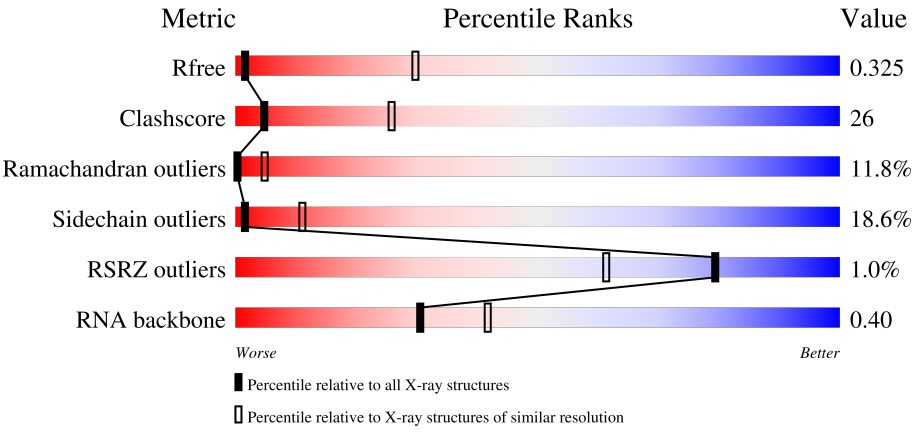
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal 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 4.00 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1082 (4.20-3.80)
Clashscore	190562	1129 (4.20-3.80)
Ramachandran outliers	187476	1064 (4.20-3.80)
Sidechain outliers	187428	1055 (4.20-3.80)
RSRZ outliers	180081	1082 (4.20-3.80)
RNA backbone	3983	1017 (4.84-3.10)

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	36% 41% 20% .
1	CB	235	35% 44% 17% .
2	AC	207	2% 41% 47% 12%
2	CC	207	2% 46% 42% 12%

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Mol	Chain	Length	Quality of chain
3	AD	208	2% 30% 52% 15%
3	CD	208	2% 33% 49% 15%
4	AE	151	3% 39% 50% 11%
4	CE	151	3% 39% 48% 13%
5	AF	101	48% 43% 10%
5	CF	101	% 42% 51% 6%
6	AG	155	% 52% 42% 6%
6	CG	155	50% 43% 7%
7	AH	138	38% 43% 19%
7	CH	138	39% 48% 12%
8	AI	127	45% 50% 5%
8	CI	127	2% 50% 41% 8%
9	AJ	99	2% 34% 45% 19%
9	CJ	99	7% 38% 43% 18%
10	AK	119	2% 40% 41% 18%
10	CK	119	2% 34% 41% 24%
11	AL	125	4% 22% 43% 22% 13%
11	CL	125	8% 17% 46% 26% 11%
12	AM	125	2% 41% 38% 20%
12	CM	125	2% 41% 46% 13%
13	AN	60	2% 43% 33% 22%
13	CN	60	42% 50% 8%
14	AO	88	% 35% 51% 10%
14	CO	88	2% 47% 45% 7%
15	AP	84	% 38% 48% 14%

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Mol	Chain	Length	Quality of chain
15	CP	84	50% 44% 6%
16	AQ	100	26% 53% 19%
16	CQ	100	38% 41% 19%
17	AR	70	46% 41% 10%
17	CR	70	34% 57% 7%
18	AS	79	29% 52% 18%
18	CS	79	34% 33% 30%
19	AT	99	44% 45% 9%
19	CT	99	42% 51% 7%
20	AA	1511	29% 58% 12%
20	CA	1511	31% 55% 13%
21	AW	77	25% 56% 19%
21	CW	77	32% 45% 22%
22	AV	23	35% 43% 22%
22	CV	23	4% 26% 52% 22%
23	AY	687	35% 45% 15%
23	CY	687	38% 43% 14%
24	BC	228	24% 41% 29% 6%
24	DC	228	25% 44% 22% 9%
25	BD	275	28% 47% 22%
25	DD	275	29% 48% 21%
26	BE	205	29% 48% 20%
26	DE	205	29% 46% 21%
27	BF	208	4% 29% 47% 21%
27	DF	208	6% 30% 49% 19%

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Mol	Chain	Length	Quality of chain
28	BG	181	2% 34% 50% 15%
28	DG	181	47% 40% 11%
29	BH	167	32% 51% 14%
29	DH	167	41% 46% 12%
30	BJ	170	78% 22%
30	DJ	170	71% 28%
31	BK	140	% 46% 39% 13%
31	DK	140	% 54% 35% 11%
32	BN	138	2% 20% 56% 25%
32	DN	138	% 20% 54% 25%
33	BO	122	31% 52% 16%
33	DO	122	40% 45% 12%
34	BP	146	4% 33% 46% 18%
34	DP	146	3% 32% 45% 20%
35	BQ	141	% 31% 54% 13%
35	DQ	141	% 37% 48% 13%
36	BR	117	32% 50% 17%
36	DR	117	36% 46% 15%
37	BS	99	23% 40% 29% 7%
37	DS	99	26% 41% 25% 7%
38	BT	138	24% 47% 23% 6%
38	DT	138	33% 38% 25%
39	BU	117	% 40% 44% 14%
39	DU	117	% 38% 49% 13%
40	BV	101	32% 45% 19% 5%

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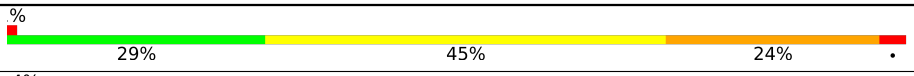
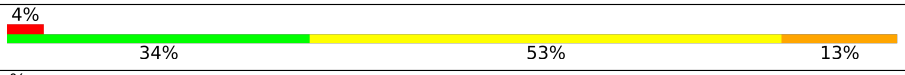
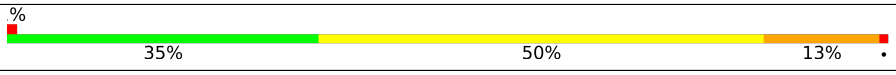
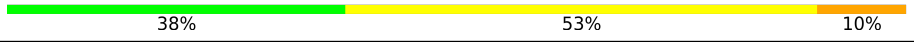
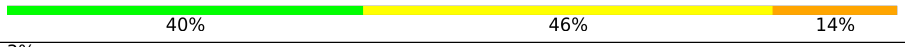
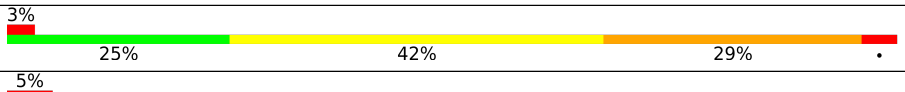
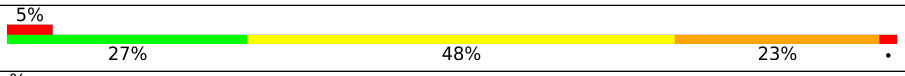
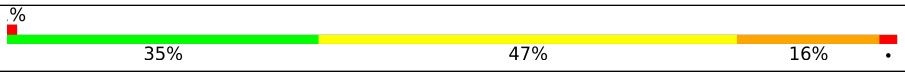
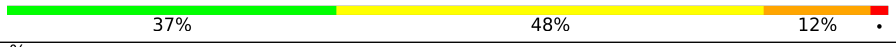
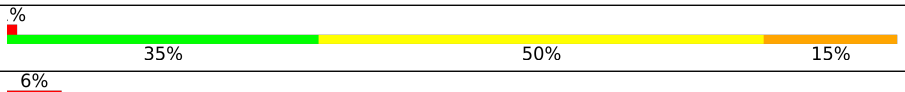
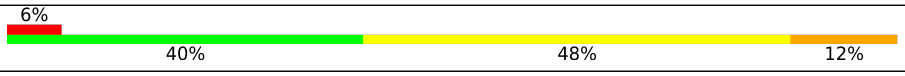
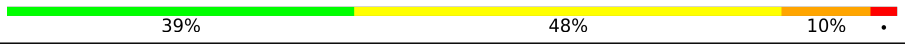
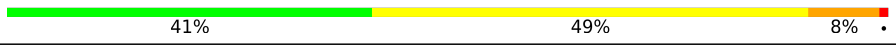
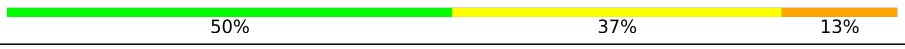
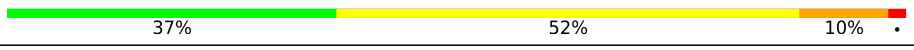
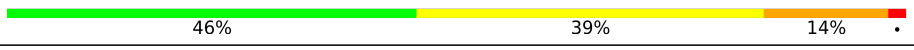
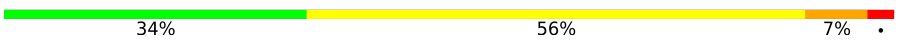
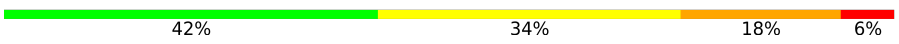
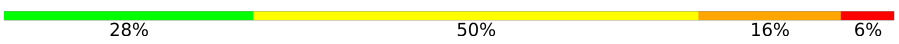
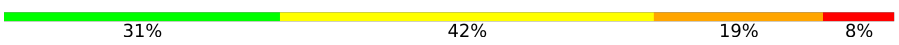
Mol	Chain	Length	Quality of chain
40	DV	101	
41	BW	113	
41	DW	113	
42	BX	93	
42	DX	93	
43	BY	107	
43	DY	107	
44	BZ	185	
44	DZ	185	
45	B0	84	
45	D0	84	
46	B2	71	
46	D2	71	
47	B3	60	
47	D3	60	
48	B5	59	
48	D5	59	
49	B6	50	
49	D6	50	
50	B7	49	
50	D7	49	
51	B8	64	
51	D8	64	
52	B9	37	
52	D9	37	

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Mol	Chain	Length	Quality of chain
53	Be	102	2% 67% 26% 5%
53	De	102	68% 26% 5%
54	Bf	31	100%
54	Bg	31	100%
54	Df	31	90% 10%
54	Dg	31	97%
55	Bh	30	100%
55	Dh	30	100%
56	B1	93	8% 25% 46% 24% 5%
56	D1	93	3% 19% 49% 22% 10%
57	B4	35	37% 46% 14%
57	D4	35	37% 46% 17%
58	BA	2879	28% 57% 15%
58	DA	2879	27% 57% 16%
59	BB	119	32% 57% 11%
59	DB	119	26% 66% 8%

2 Entry composition (i)

There are 61 unique types of molecules in this entry. The entry contains 308068 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called 30S ribosomal protein S2.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AI	58	HIS	ARG	conflict	UNP P62669
CI	58	HIS	ARG	conflict	UNP P62669

- 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			
10	CK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

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

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

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

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

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

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

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

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

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

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

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

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

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AQ	96	GLU	GLN	conflict	UNP P62658
CQ	96	GLU	GLN	conflict	UNP P62658

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

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

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

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

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

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

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AT	41	ILE	VAL	conflict	UNP P62661
CT	41	ILE	VAL	conflict	UNP P62661

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

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 transfer RNA.

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

- Molecule 22 is a RNA chain called messenger RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	23	Total	C	N	O	P	0	0	0
			503	227	106	148	22			
22	CV	23	Total	C	N	O	P	0	0	0
			503	227	106	148	22			

- Molecule 23 is a protein called Elongation factor G.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AY	667	Total	C	N	O	S	0	0	0
			5219	3318	893	990	18			
23	CY	667	Total	C	N	O	S	0	0	0
			5219	3318	893	990	18			

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

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

- Molecule 24 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BC	228	Total	C	N	O	S	0	0	0
			1742	1101	319	319	3			
24	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 25 is a protein called 50S ribosomal protein L2.

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

- Molecule 26 is a protein called 50S ribosomal protein L3.

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

- Molecule 27 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BF	208	Total	C	N	O	S	0	0	0
			1628	1037	304	284	3			
27	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
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 28 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			
28	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 29 is a protein called 50S ribosomal protein L6.

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

- Molecule 30 is a protein called 50S ribosomal protein L10.

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

- Molecule 31 is a protein called 50S ribosomal protein L11.

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

- Molecule 32 is a protein called 50S ribosomal protein L13.

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

- 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			

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

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

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

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

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

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	C	N	O	S	0	0	0
			964	610	202	151	1			
39	DU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			

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

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

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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 L29.

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

- Molecule 47 is a protein called 50S ribosomal protein L30.

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

- Molecule 48 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	B5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
48	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 49 is a protein called 50S ribosomal protein L33.

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

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

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

- Molecule 51 is a protein called 50S ribosomal protein L35.

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

- Molecule 52 is a protein called 50S ribosomal protein L36.

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

- Molecule 53 is a protein called 50S ribosomal protein L7/L12.

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

- Molecule 54 is a protein called 50S ribosomal protein L7/L12.

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

- Molecule 55 is a protein called 50S ribosomal protein L7/L12.

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

- Molecule 56 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	B1	93	Total	C	N	O	S	0	0	0
			732	460	145	126	1			
56	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 57 is a protein called 50S ribosomal protein L31.

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

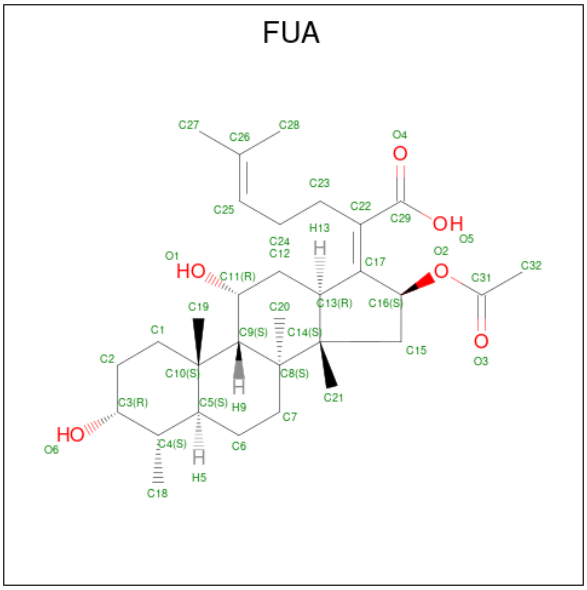
- Molecule 58 is a RNA chain called 23S ribosomal RNA.

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

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

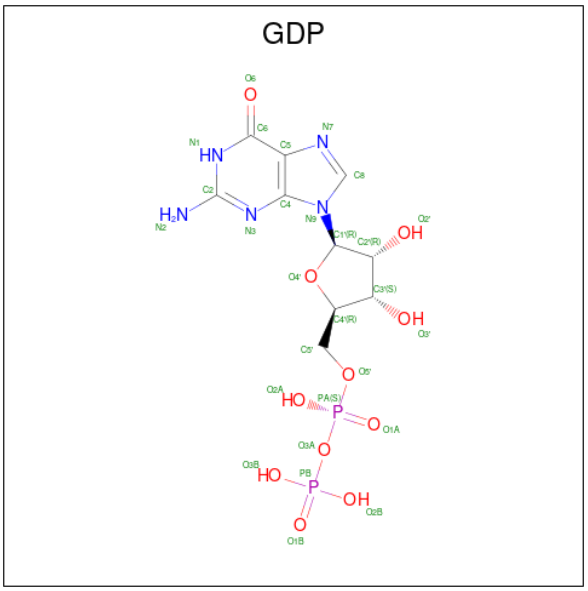
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
59	BB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			
59	DB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 60 is FUSIDIC ACID (CCD ID: FUA) (formula: $C_{31}H_{48}O_6$).



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

- Molecule 61 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).



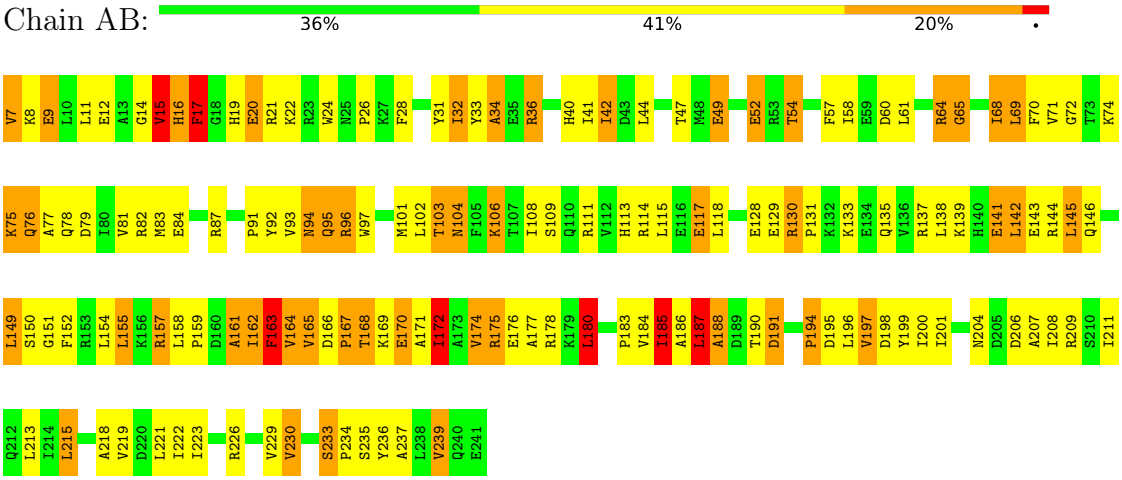
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
61	AY	1	Total	C	N	O	P	0	0
			28	10	5	11	2		
61	CY	1	Total	C	N	O	P	0	0
			28	10	5	11	2		

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.

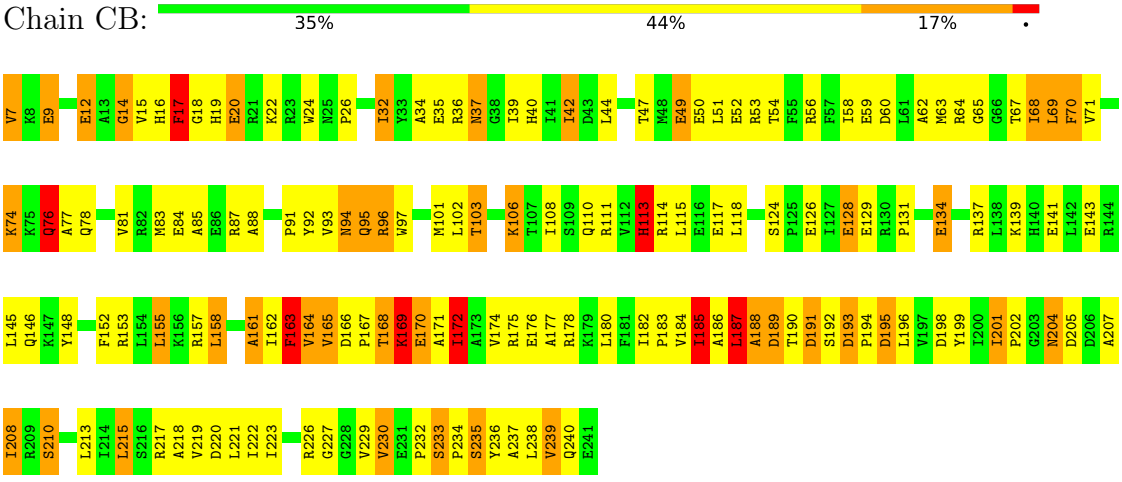
• Molecule 1: 30S ribosomal protein S2

Chain AB:



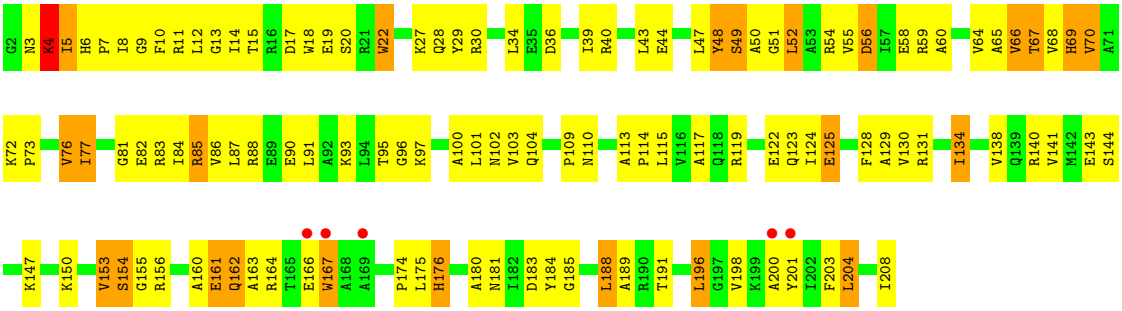
• Molecule 1: 30S ribosomal protein S2

Chain CB:



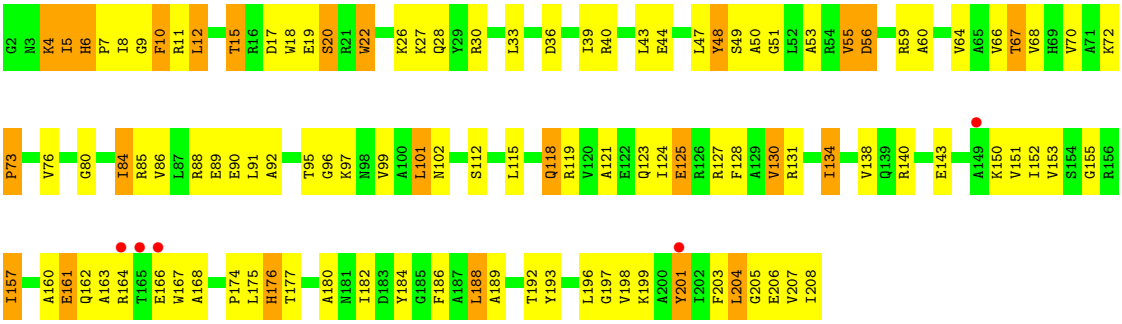
• Molecule 2: 30S ribosomal protein S3

Chain AC:



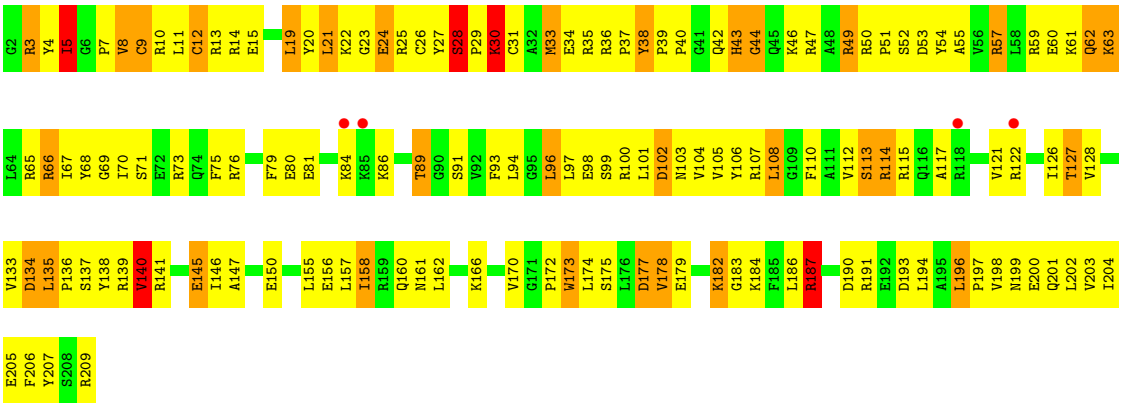
• Molecule 2: 30S ribosomal protein S3

Chain CC:



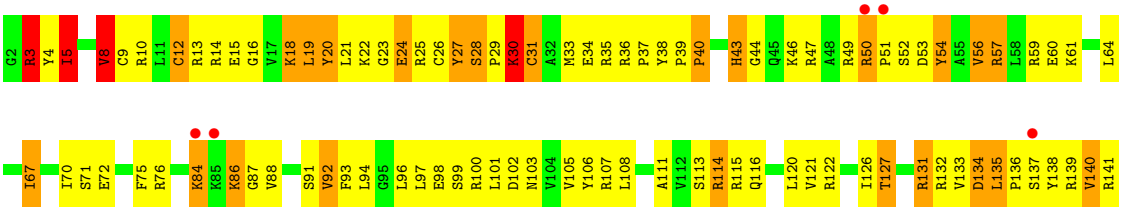
• Molecule 3: 30S ribosomal protein S4

Chain AD:

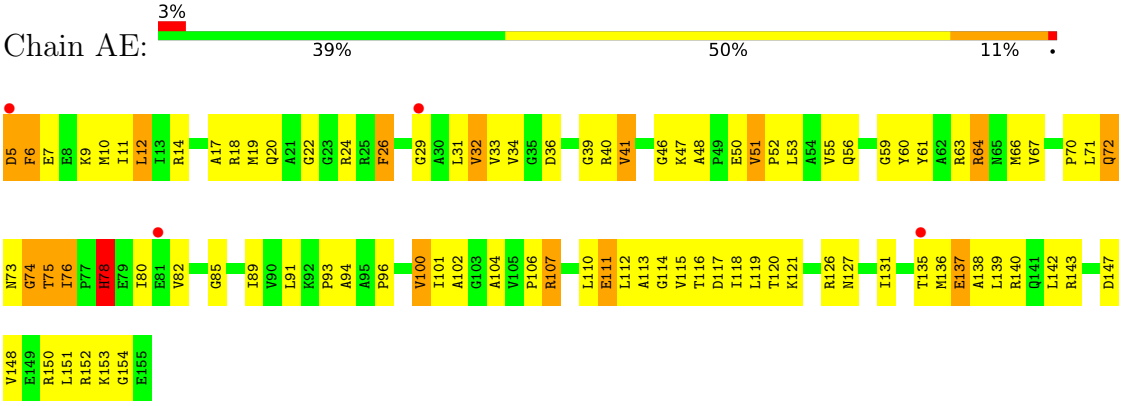


• Molecule 3: 30S ribosomal protein S4

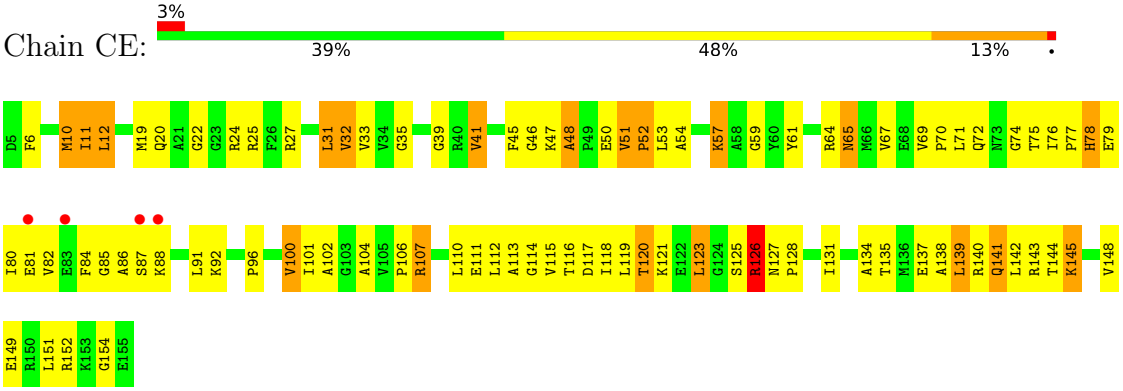
Chain CD:



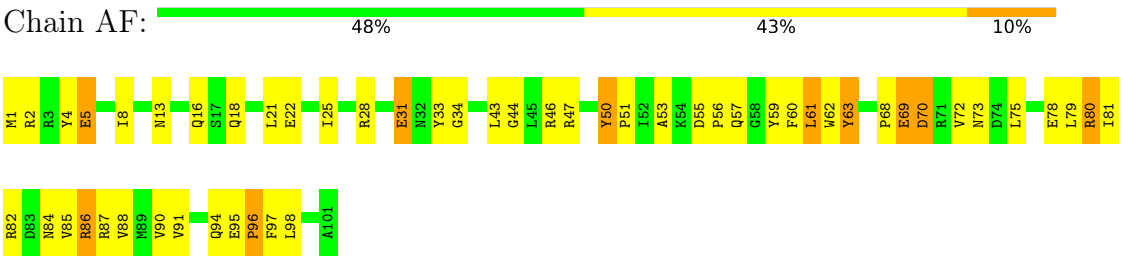
• Molecule 4: 30S ribosomal protein S5



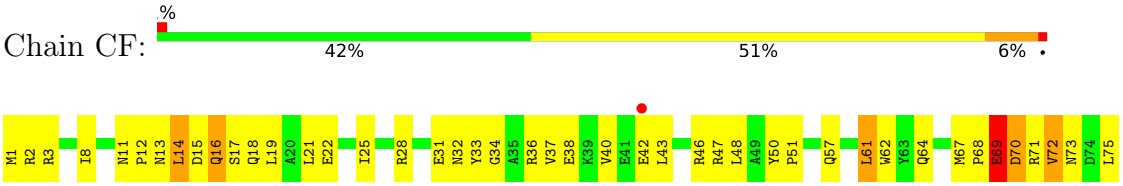
• Molecule 4: 30S ribosomal protein S5



• Molecule 5: 30S ribosomal protein S6

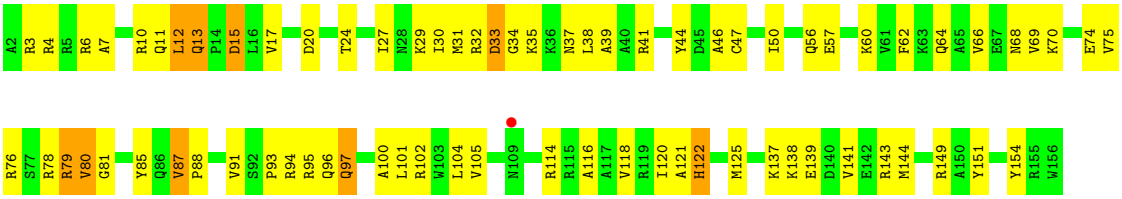


• Molecule 5: 30S ribosomal protein S6



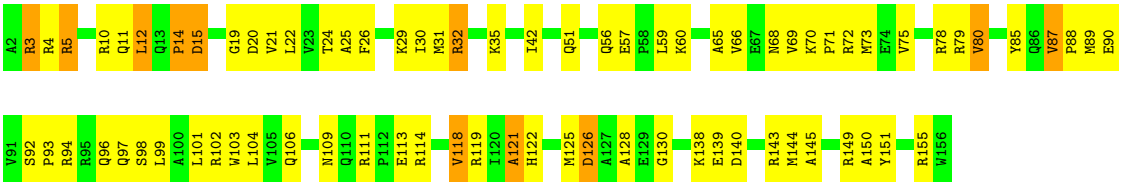
• Molecule 6: 30S ribosomal protein S7

Chain AG:



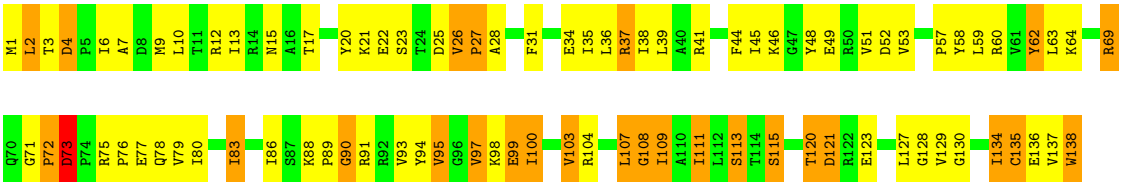
• Molecule 6: 30S ribosomal protein S7

Chain CG:



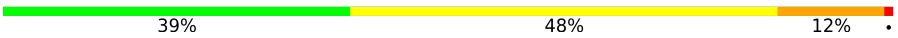
• Molecule 7: 30S ribosomal protein S8

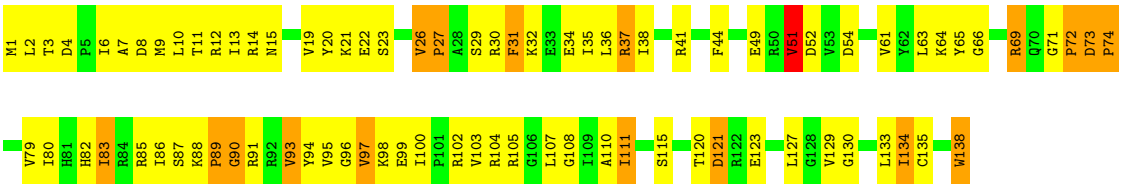
Chain AH:



• Molecule 7: 30S ribosomal protein S8

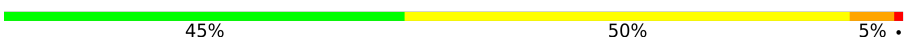
Chain CH:

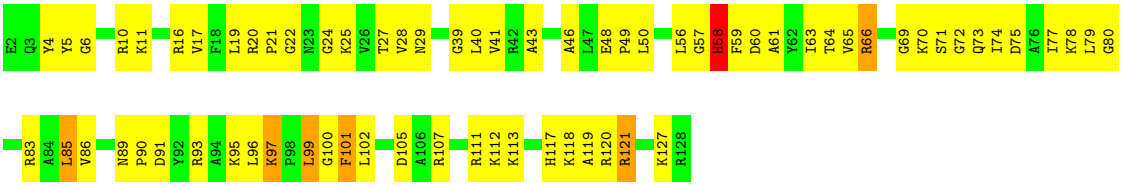




• Molecule 8: 30S ribosomal protein S9

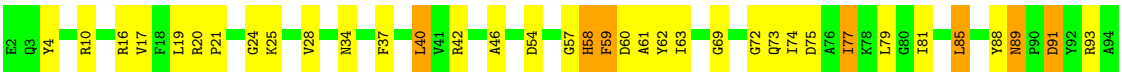
Chain AI:

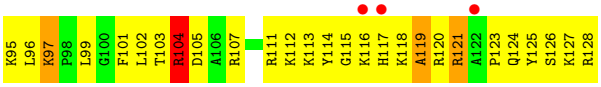




• Molecule 8: 30S ribosomal protein S9

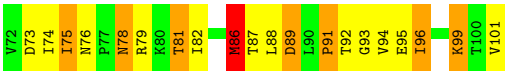
Chain CI:





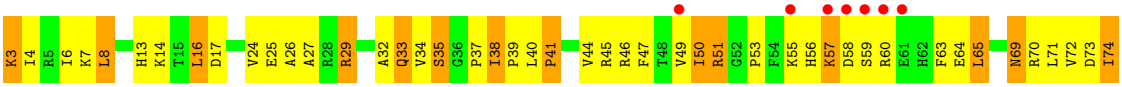
• Molecule 9: 30S ribosomal protein S10

Chain AJ:



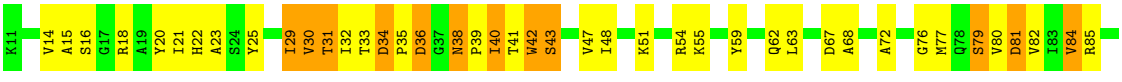
• Molecule 9: 30S ribosomal protein S10

Chain CJ:



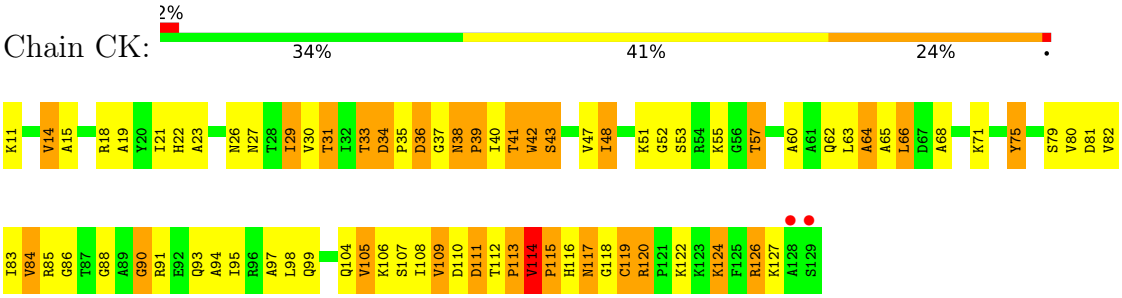
• Molecule 10: 30S ribosomal protein S11

Chain AK:



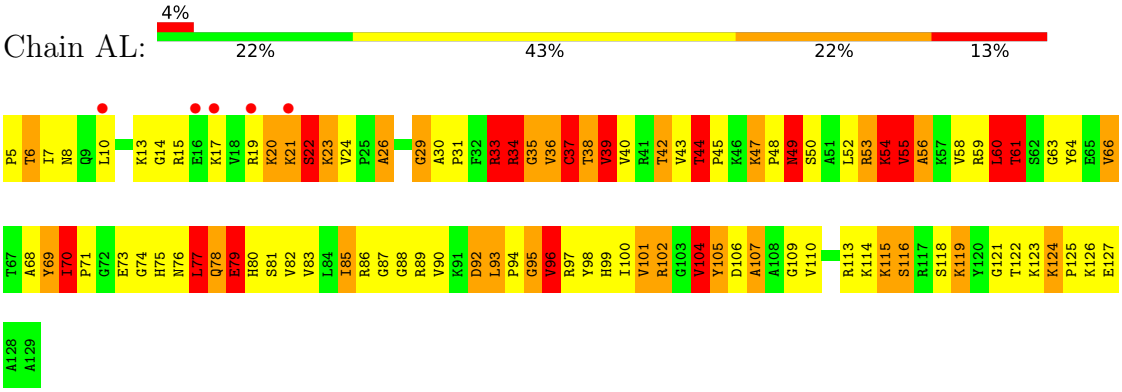
• Molecule 10: 30S ribosomal protein S11

Chain CK:



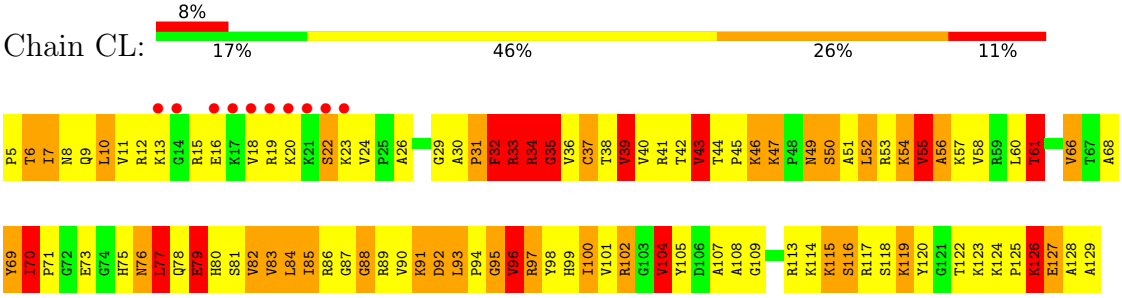
• Molecule 11: 30S ribosomal protein S12

Chain AL:



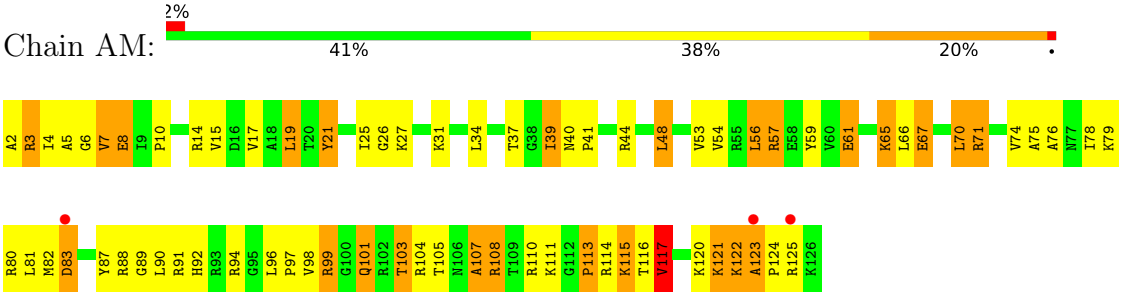
• Molecule 11: 30S ribosomal protein S12

Chain CL:



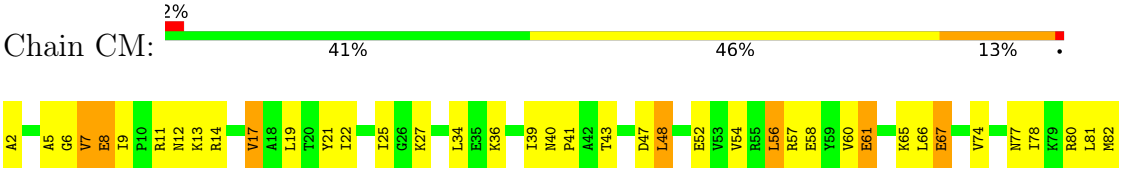
• Molecule 12: 30S ribosomal protein S13

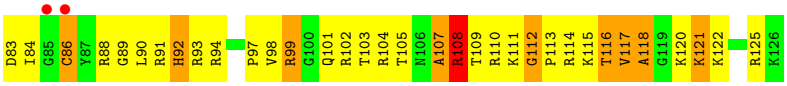
Chain AM:



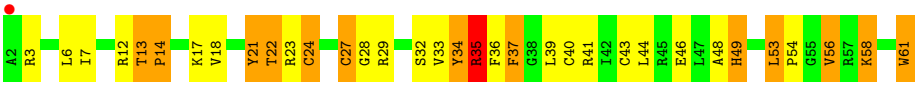
• Molecule 12: 30S ribosomal protein S13

Chain CM:

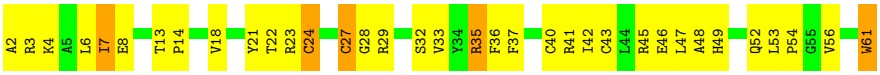




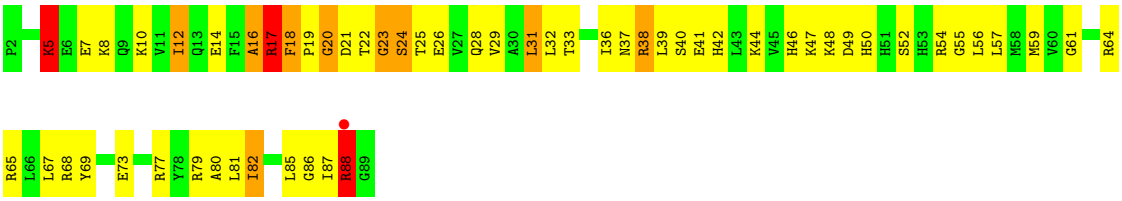
• Molecule 13: 30S ribosomal protein S14 type Z



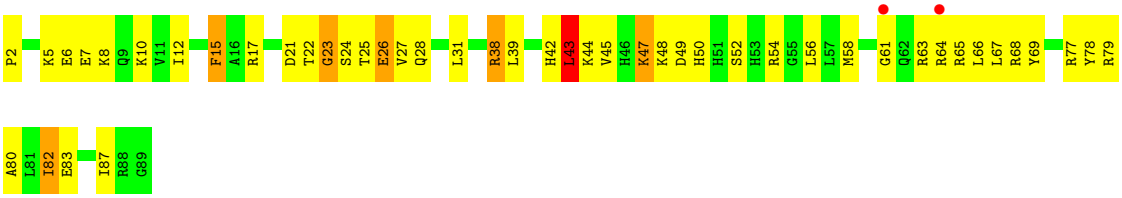
• Molecule 13: 30S ribosomal protein S14 type Z



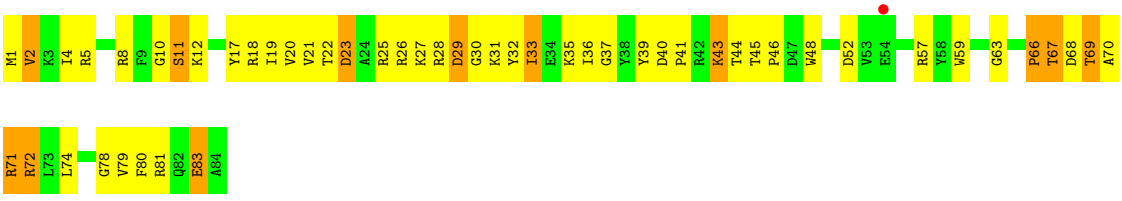
• Molecule 14: 30S ribosomal protein S15



• Molecule 14: 30S ribosomal protein S15

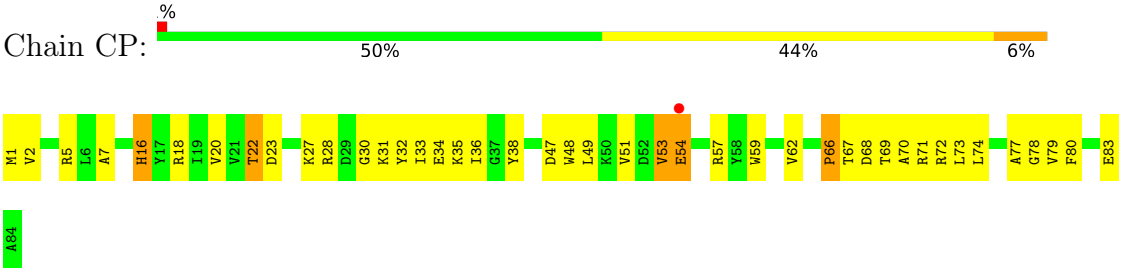


• Molecule 15: 30S ribosomal protein S16



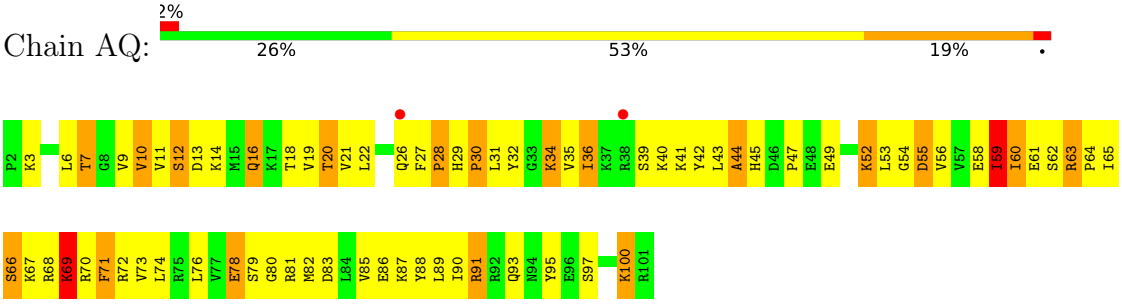
• Molecule 15: 30S ribosomal protein S16

Chain CP:



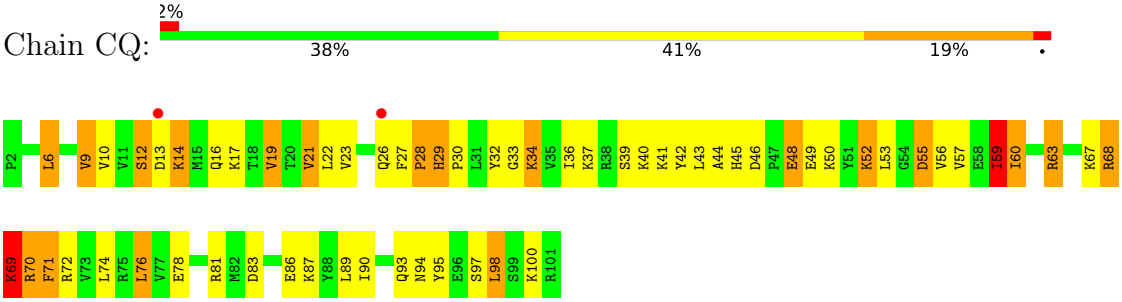
• Molecule 16: 30S ribosomal protein S17

Chain AQ:



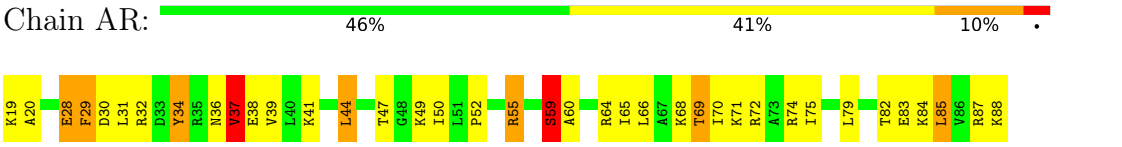
• Molecule 16: 30S ribosomal protein S17

Chain CQ:



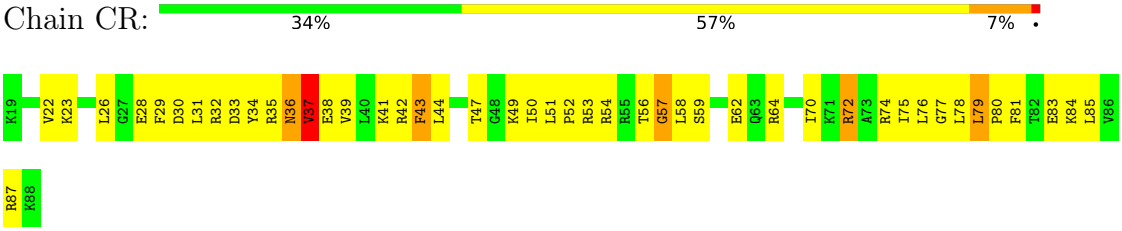
• Molecule 17: 30S ribosomal protein S18

Chain AR:



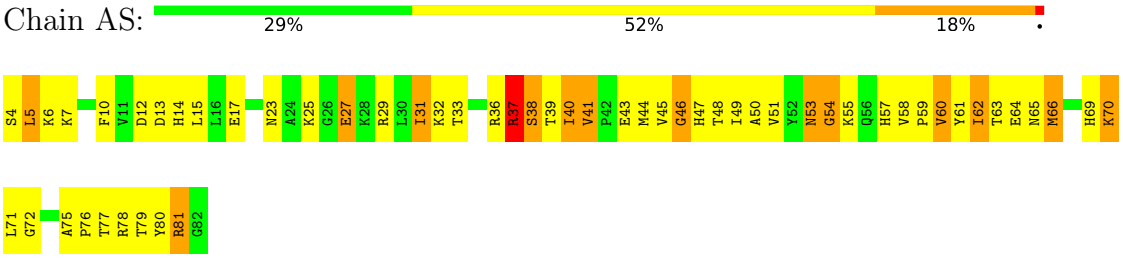
• Molecule 17: 30S ribosomal protein S18

Chain CR:



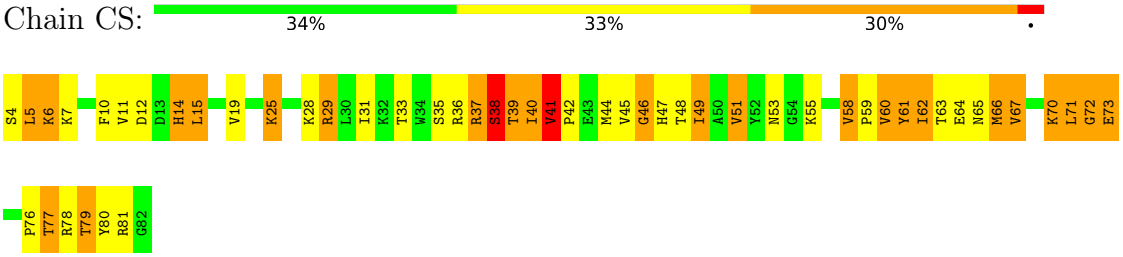
• Molecule 18: 30S ribosomal protein S19

Chain AS:



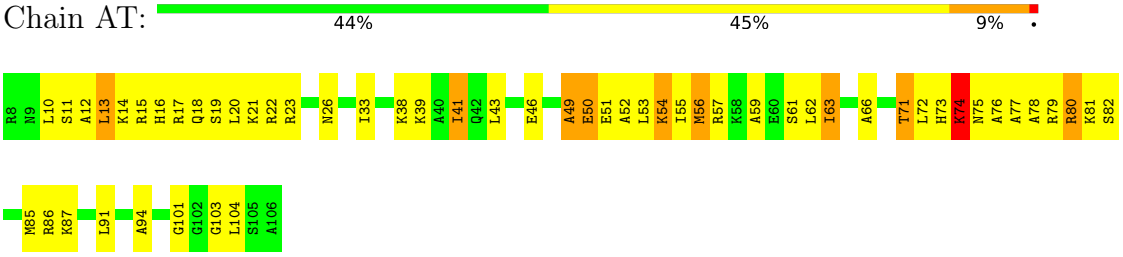
• Molecule 18: 30S ribosomal protein S19

Chain CS:



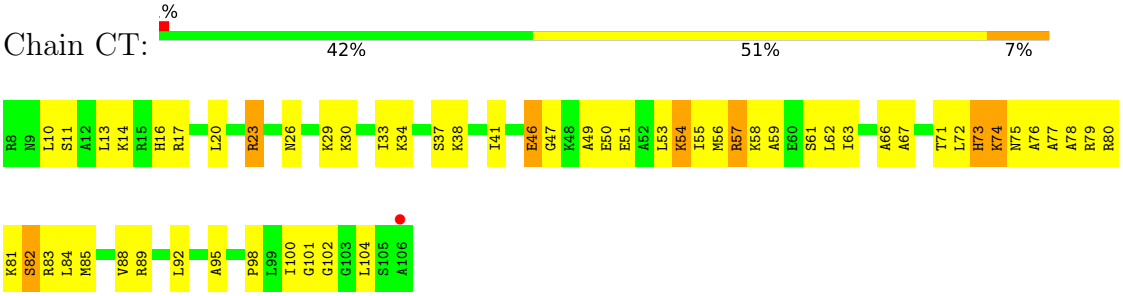
• Molecule 19: 30S ribosomal protein S20

Chain AT:



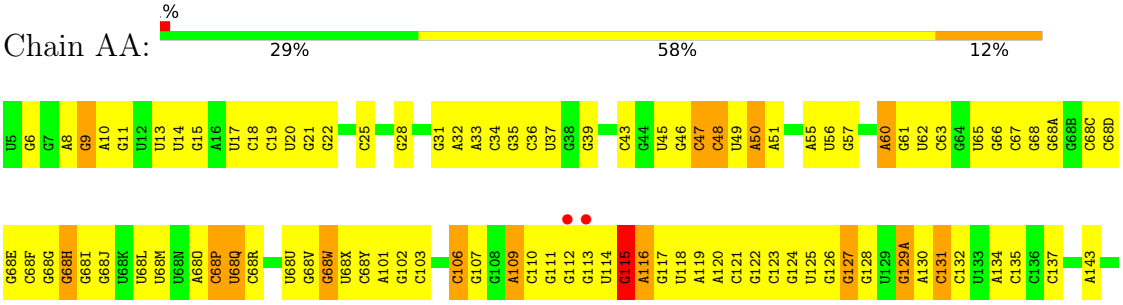
• Molecule 19: 30S ribosomal protein S20

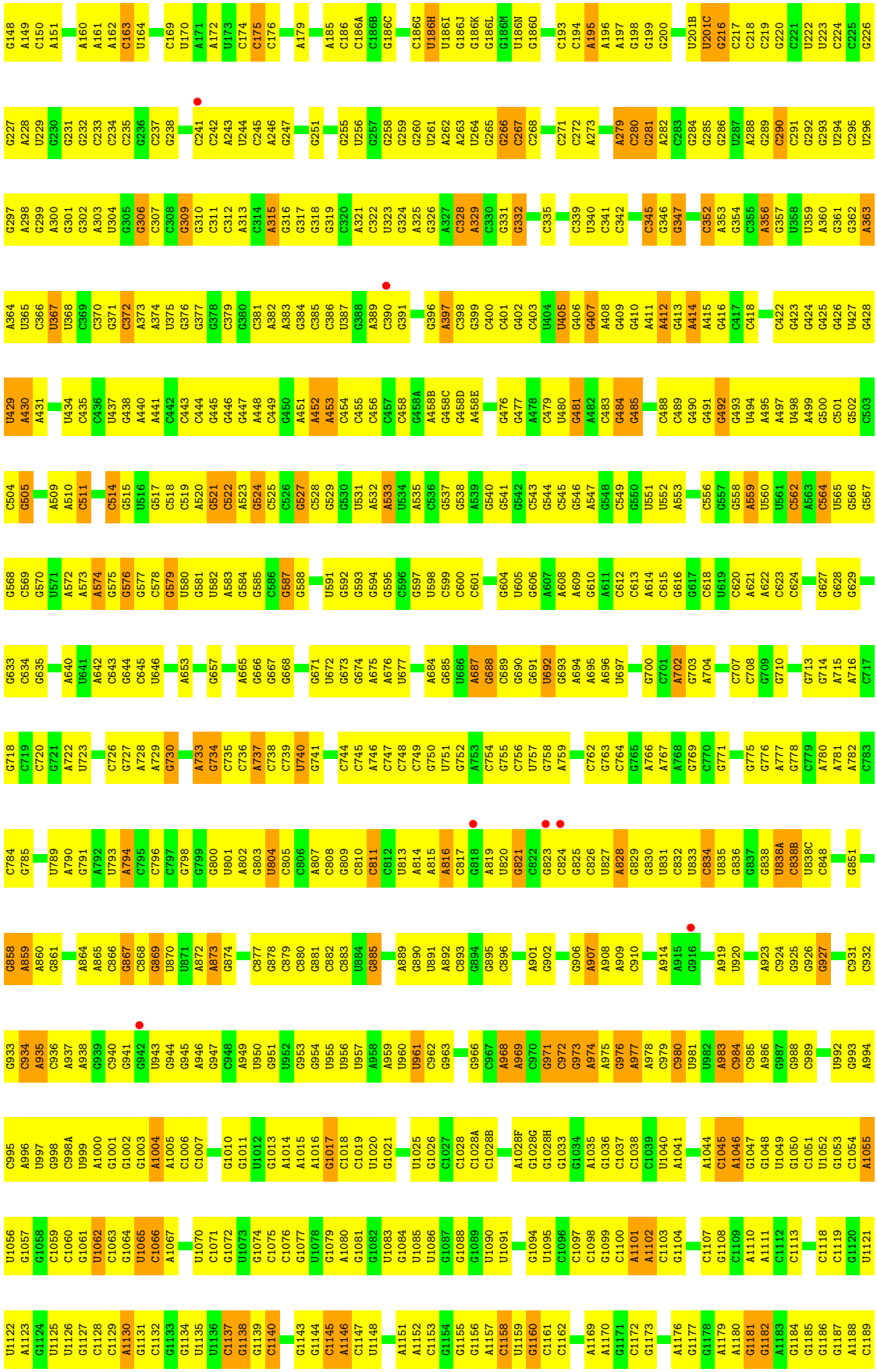
Chain CT:

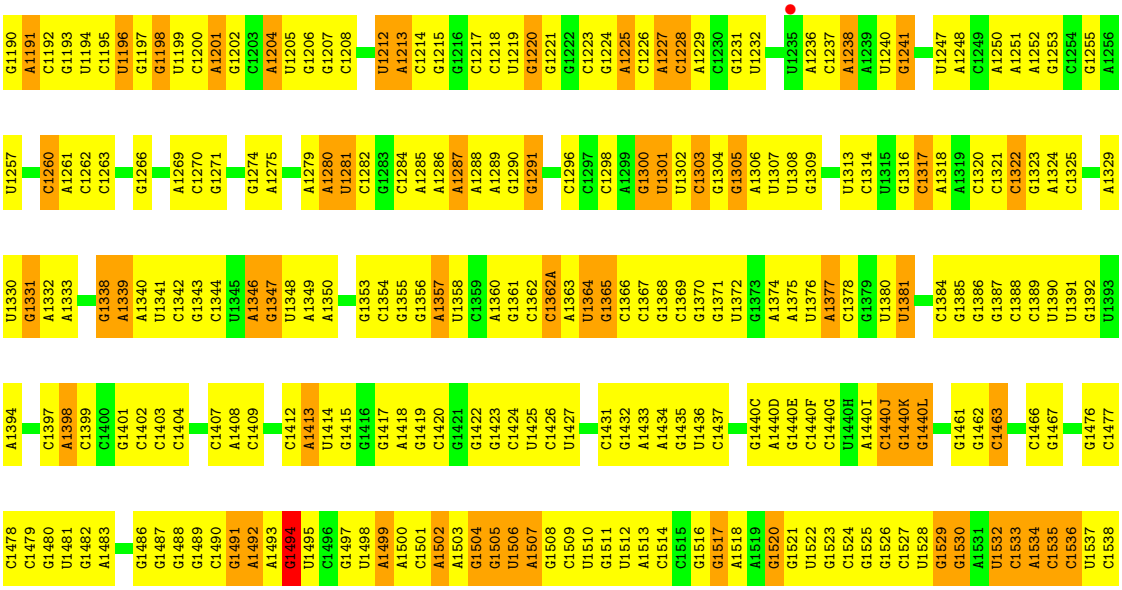


• Molecule 20: ribosomal RNA 16S

Chain AA:

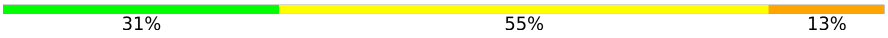


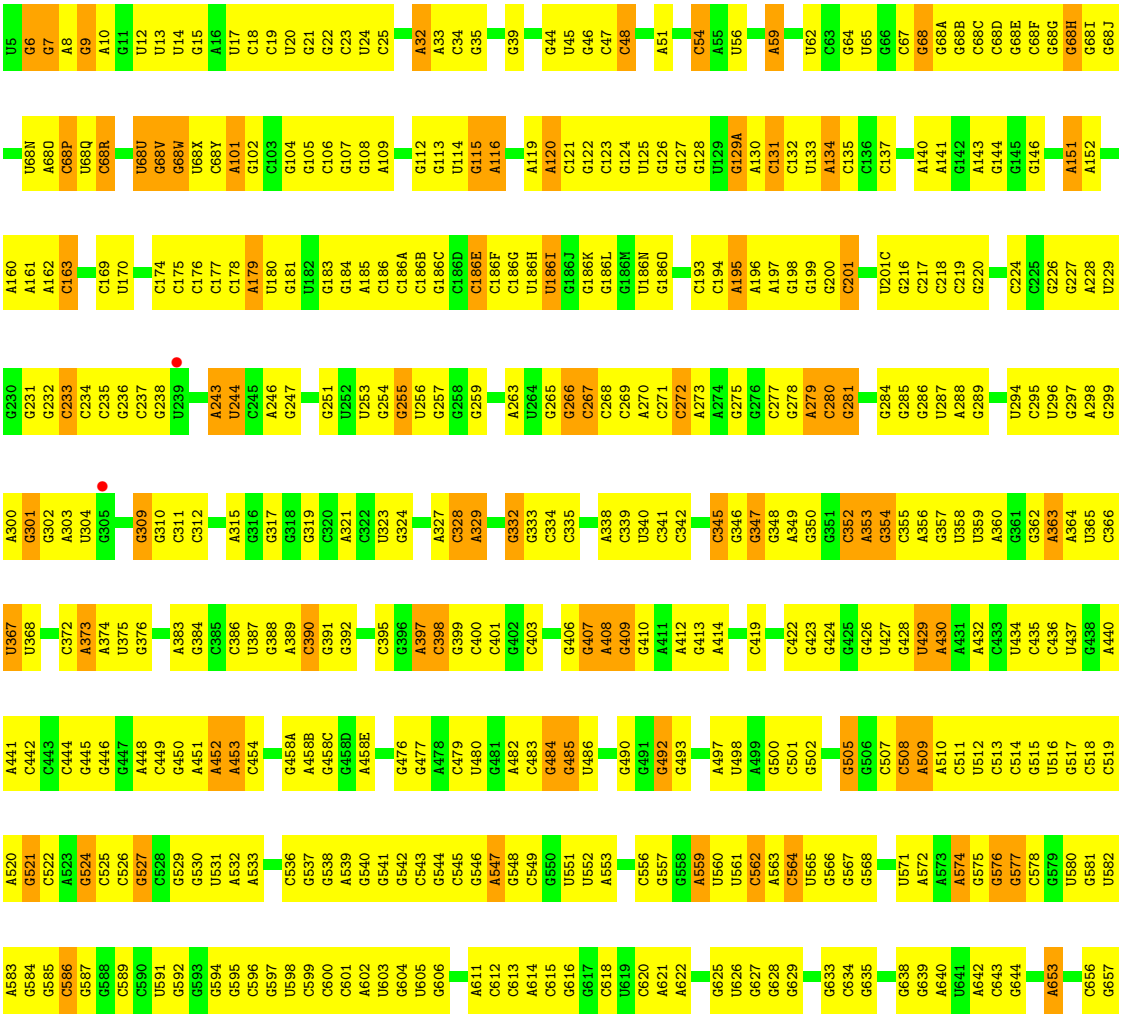


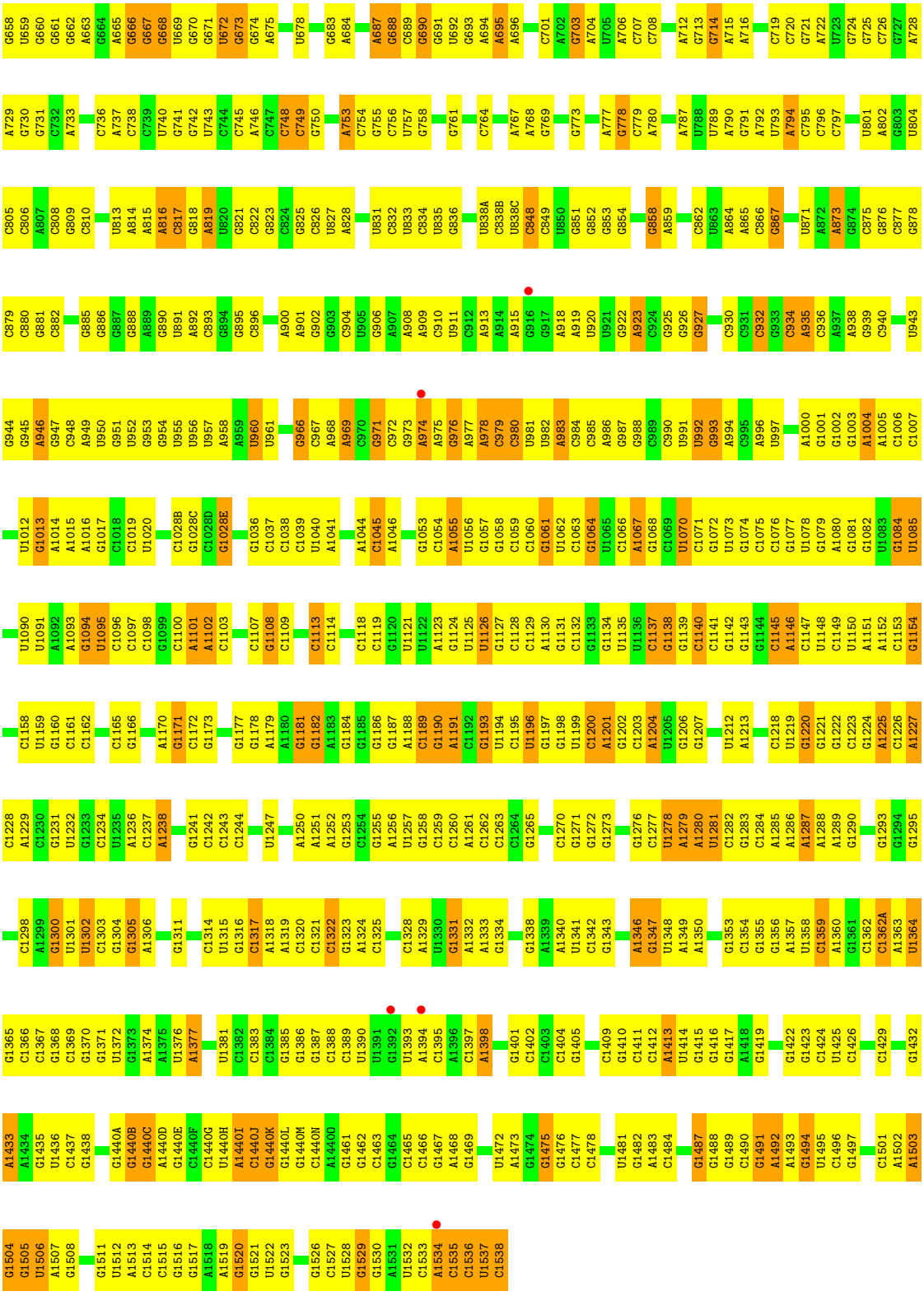


• Molecule 20: ribosomal RNA 16S

Chain CA:

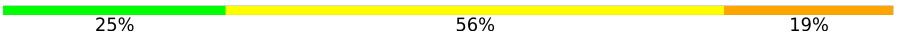


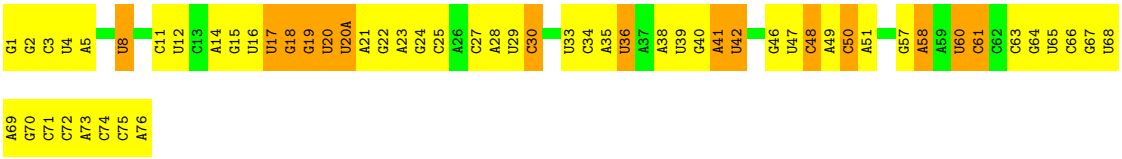




• Molecule 21: transfer RNA

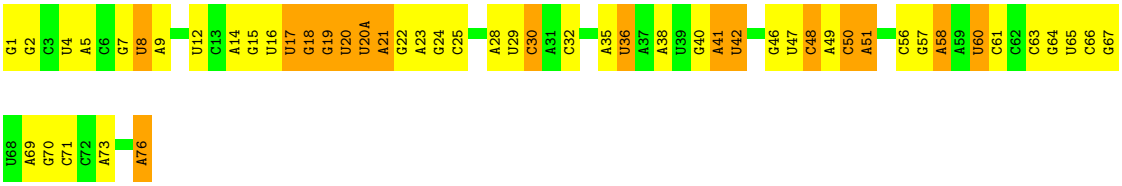
Chain AW:





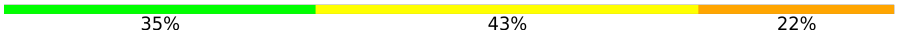
• Molecule 21: transfer RNA

Chain CW:



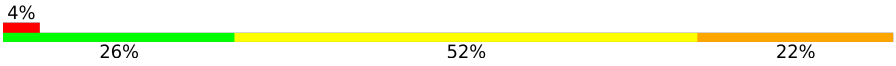
• Molecule 22: messenger RNA

Chain AV:



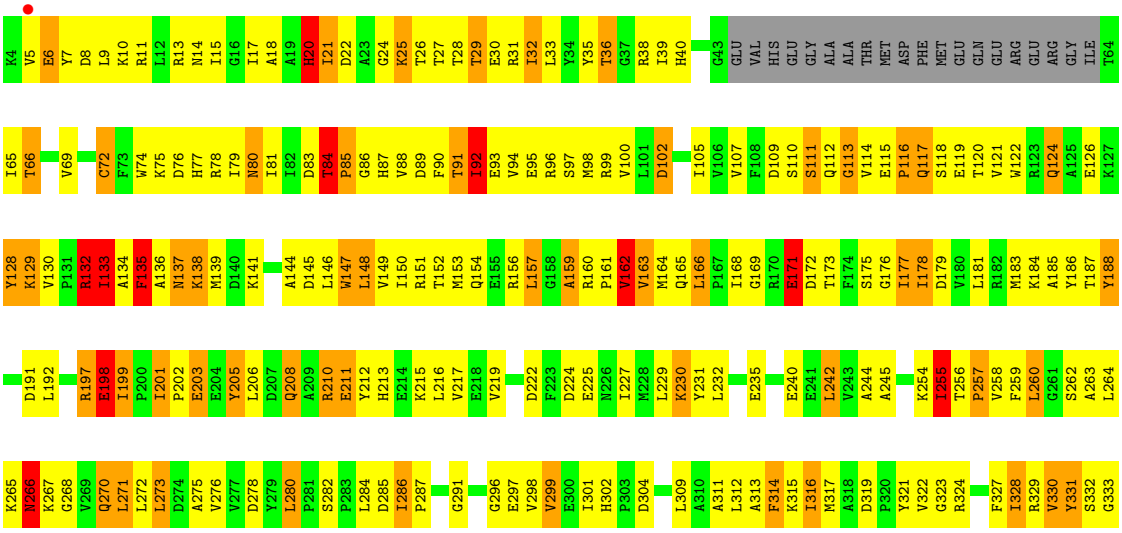
• Molecule 22: messenger RNA

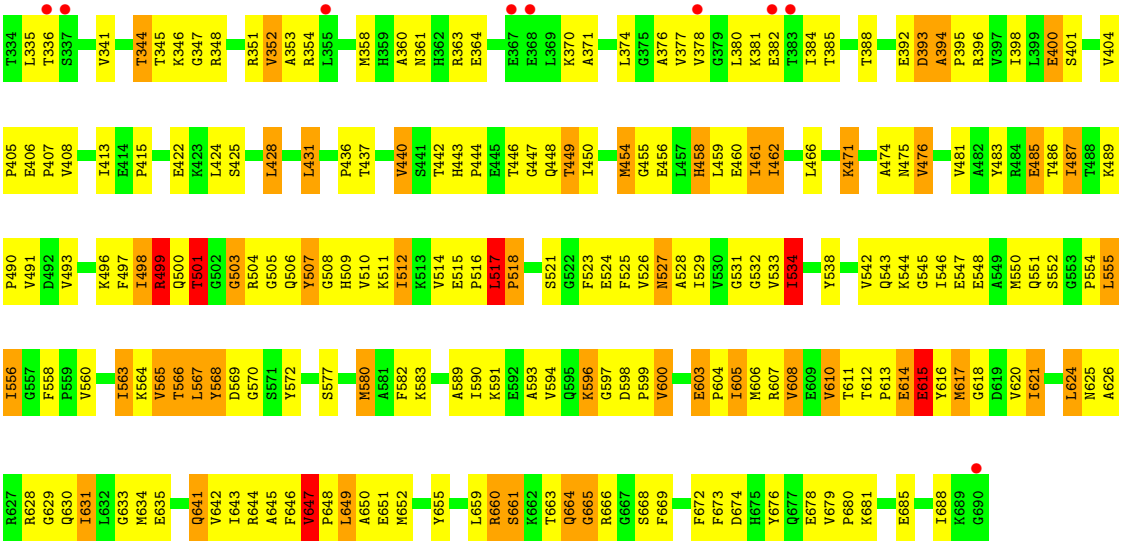
Chain CV:



• Molecule 23: Elongation factor G

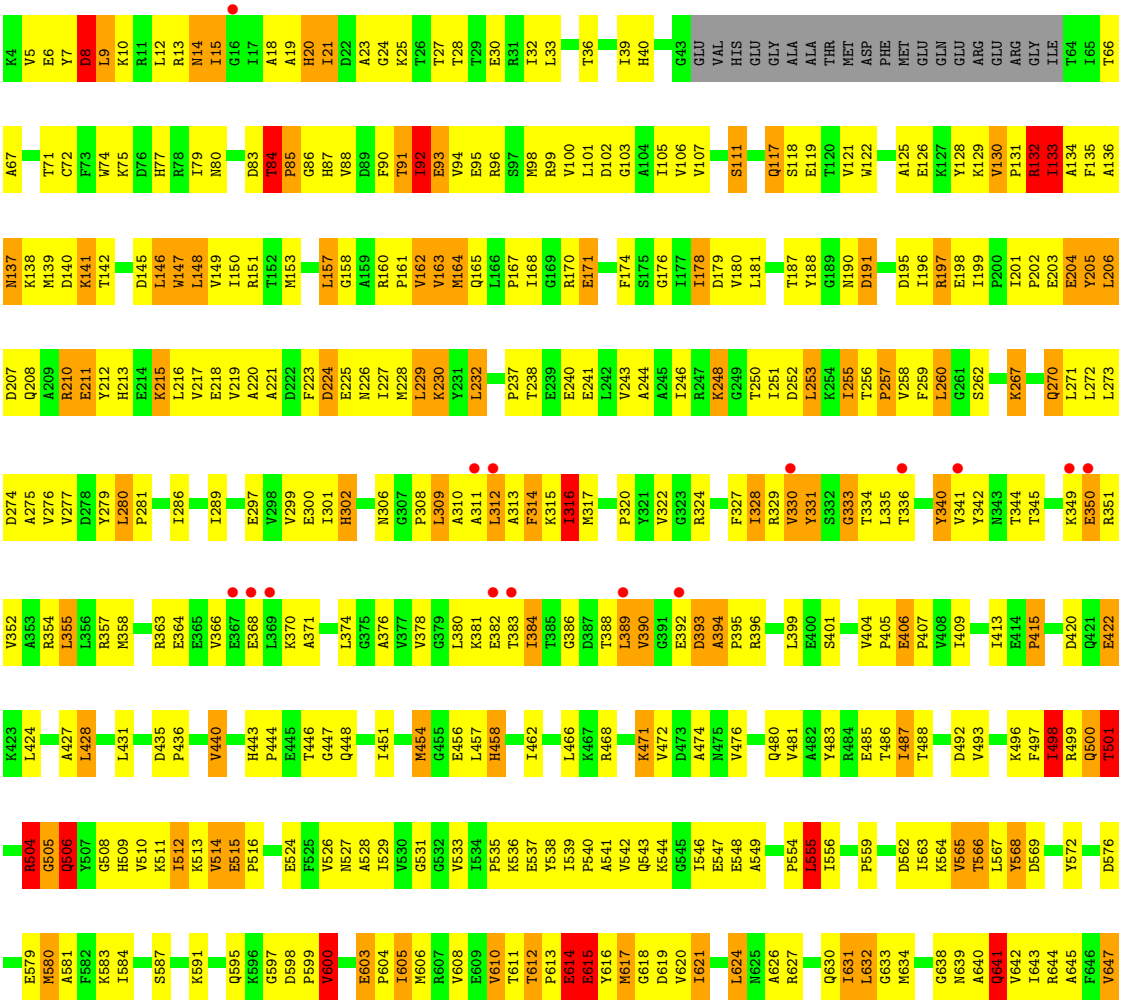
Chain AY:

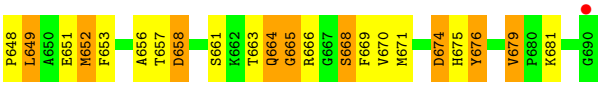




• Molecule 23: Elongation factor G

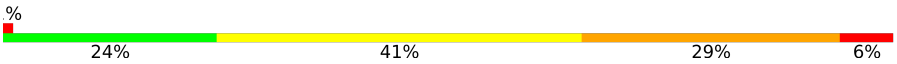
Chain CY:

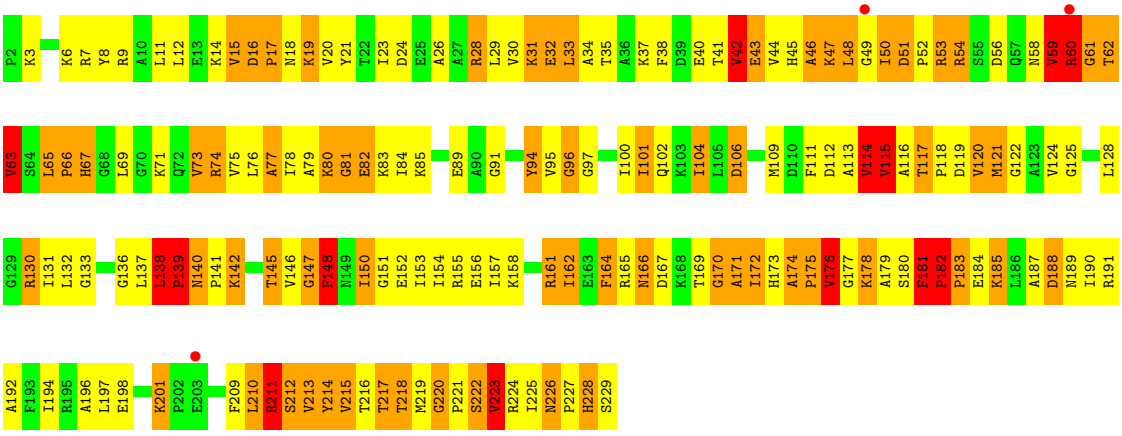




• Molecule 24: 50S ribosomal protein L1

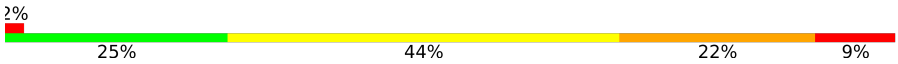
Chain BC:

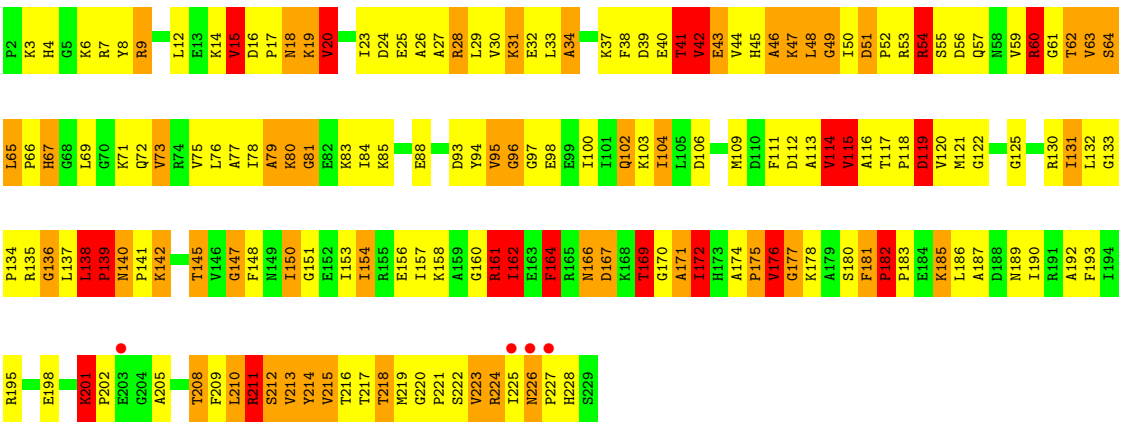




• Molecule 24: 50S ribosomal protein L1

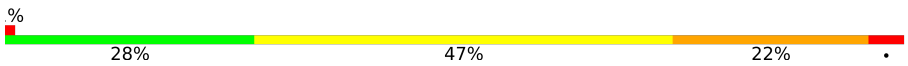
Chain DC:

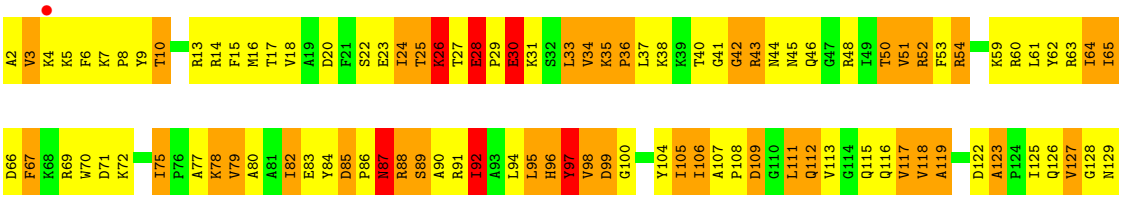


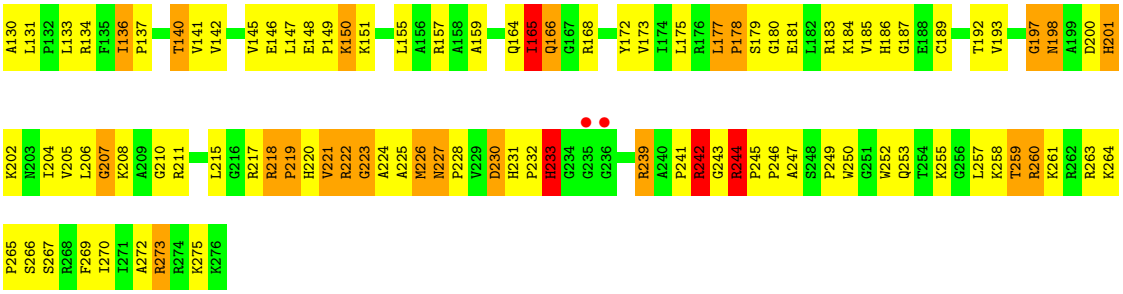


• Molecule 25: 50S ribosomal protein L2

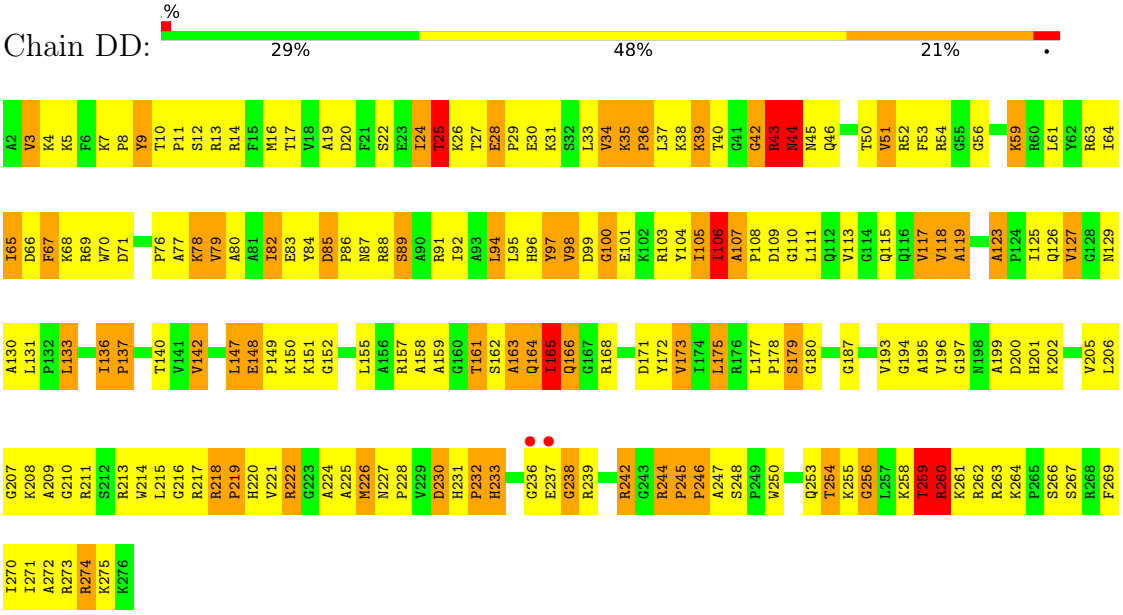
Chain BD:



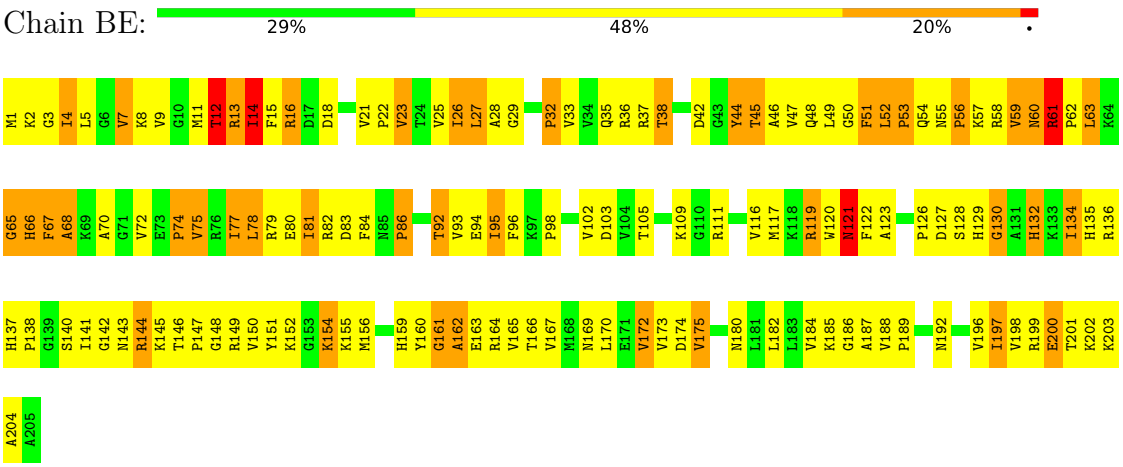




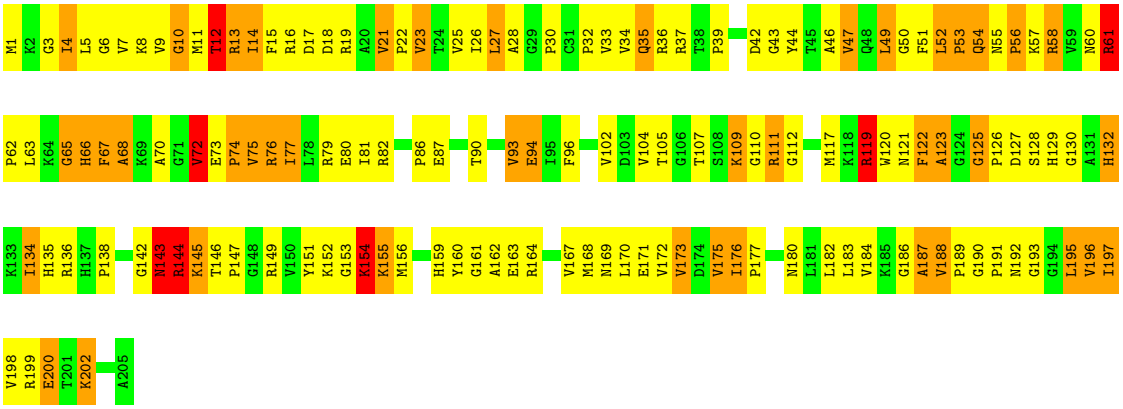
• Molecule 25: 50S ribosomal protein L2



• Molecule 26: 50S ribosomal protein L3

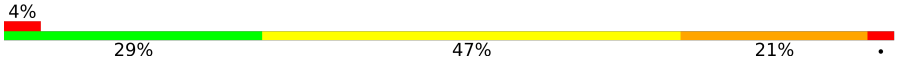


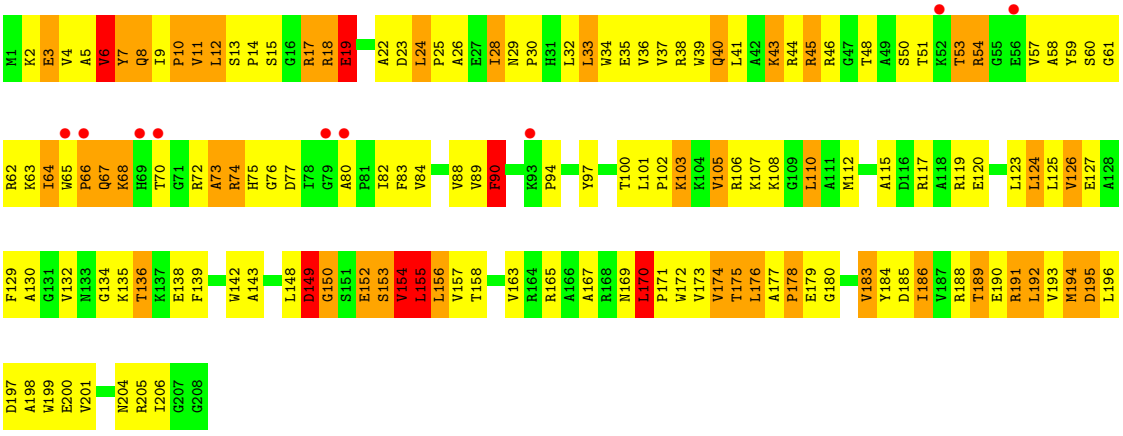
• Molecule 26: 50S ribosomal protein L3



• Molecule 27: 50S ribosomal protein L4

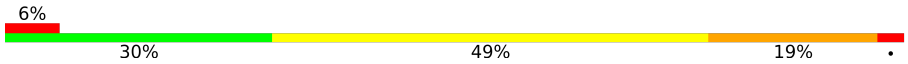
Chain BF:

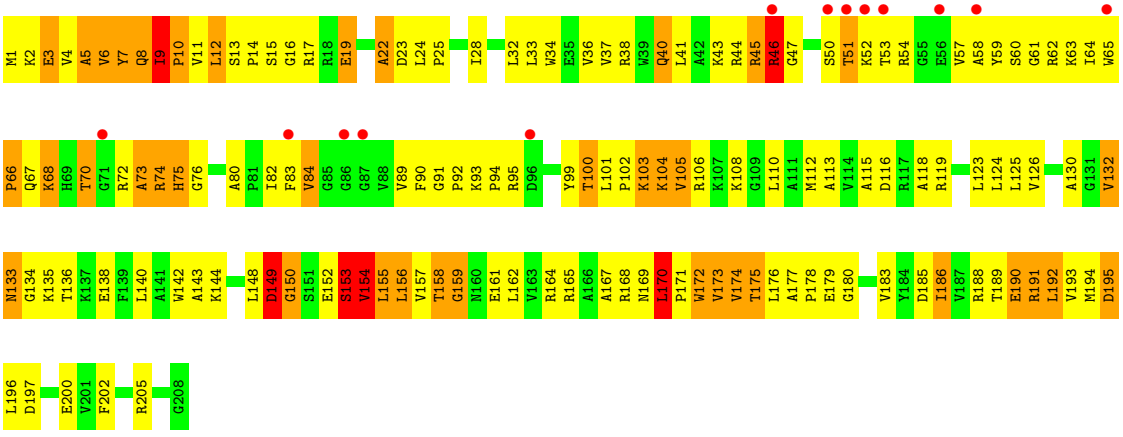




• Molecule 27: 50S ribosomal protein L4

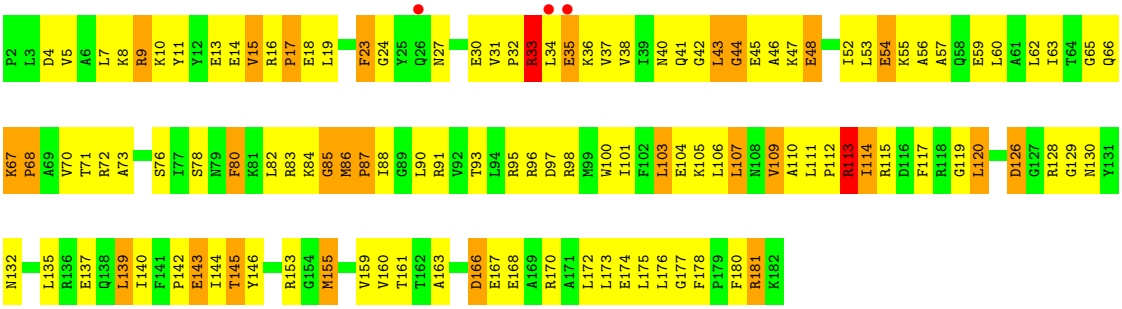
Chain DF:





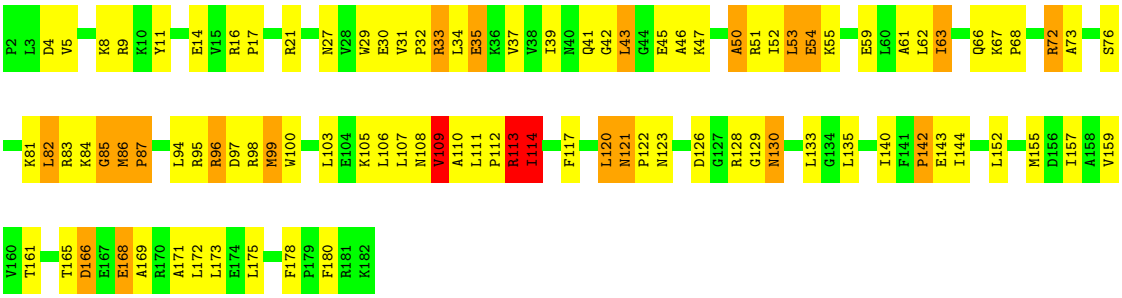
• Molecule 28: 50S ribosomal protein L5

Chain BG:



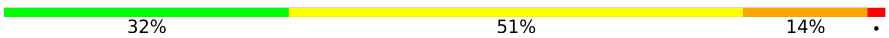
• Molecule 28: 50S ribosomal protein L5

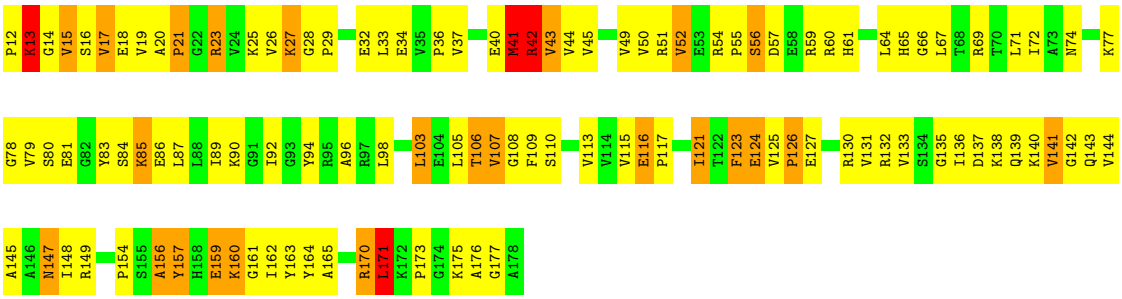
Chain DG:



• Molecule 29: 50S ribosomal protein L6

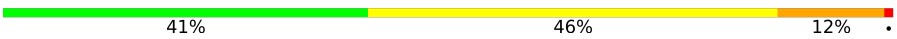
Chain BH:

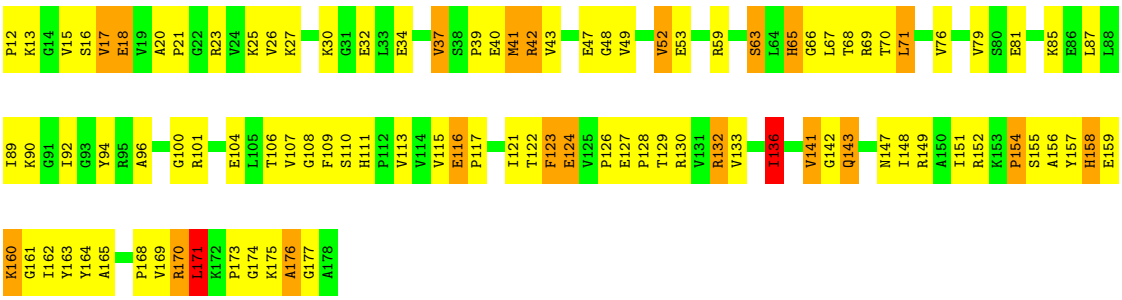




• Molecule 29: 50S ribosomal protein L6

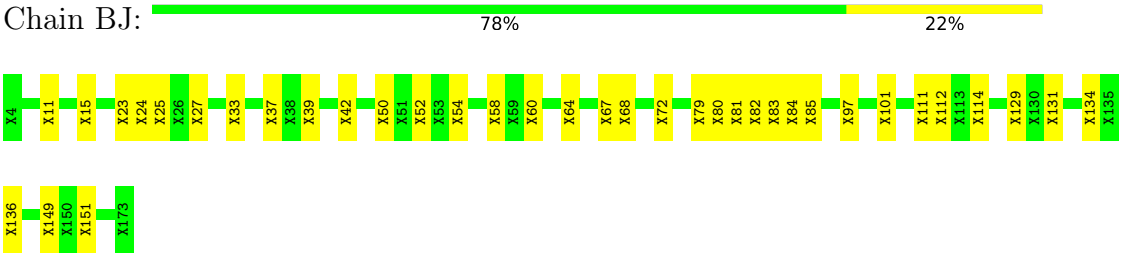
Chain DH:





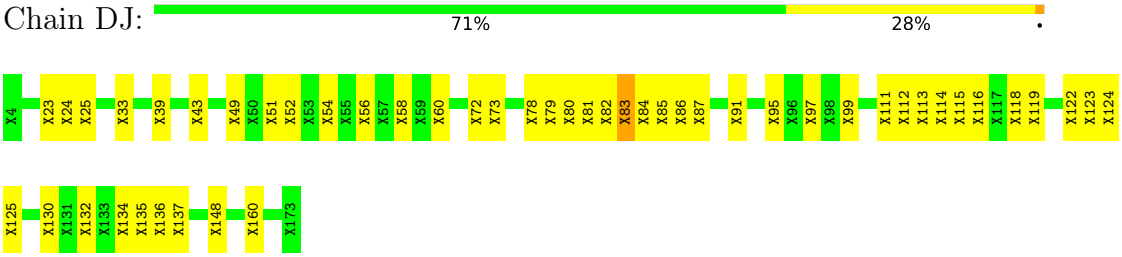
• Molecule 30: 50S ribosomal protein L10

Chain BJ:



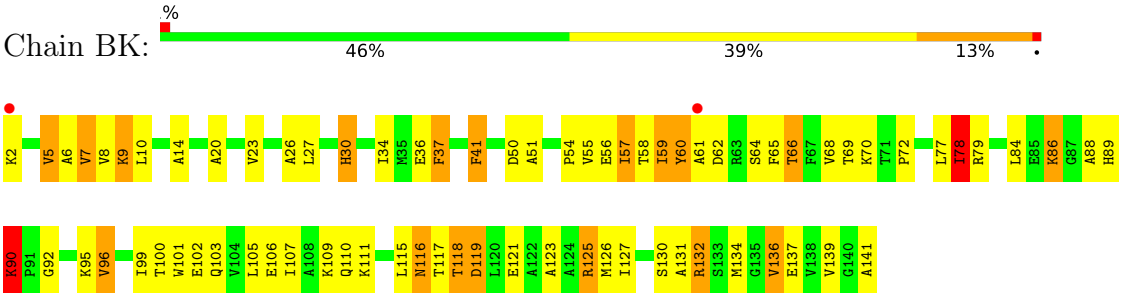
• Molecule 30: 50S ribosomal protein L10

Chain DJ:



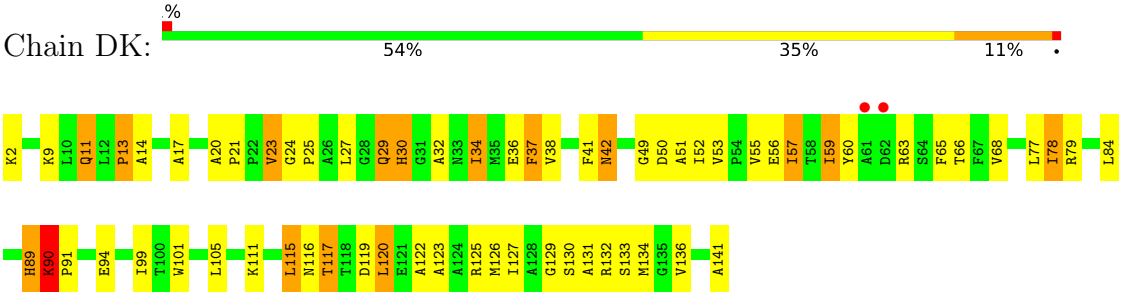
• Molecule 31: 50S ribosomal protein L11

Chain BK:



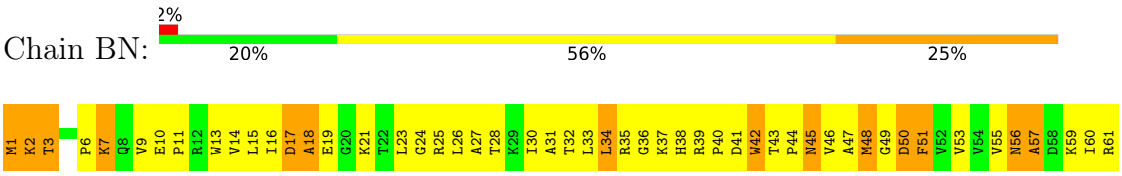
• Molecule 31: 50S ribosomal protein L11

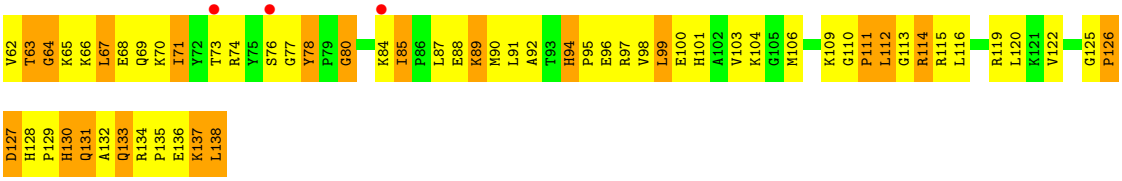
Chain DK:



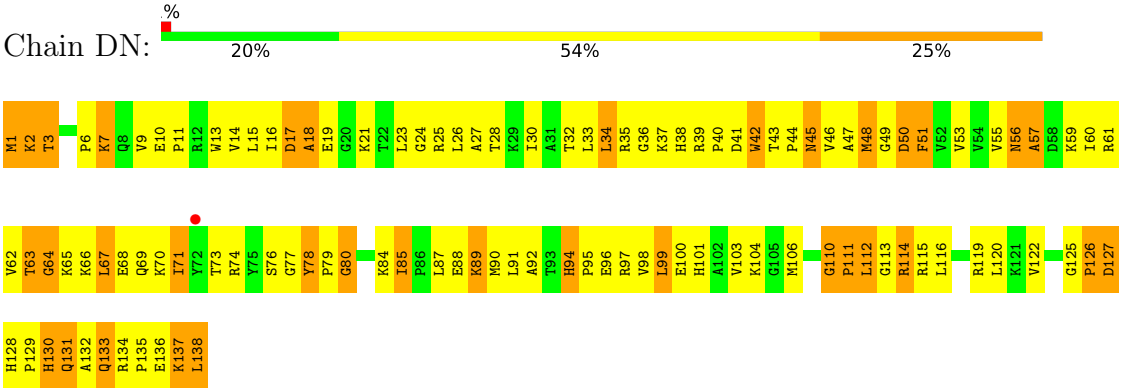
• Molecule 32: 50S ribosomal protein L13

Chain BN:

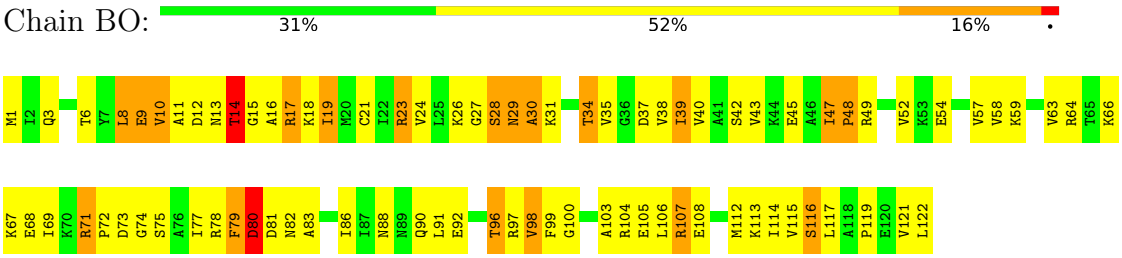




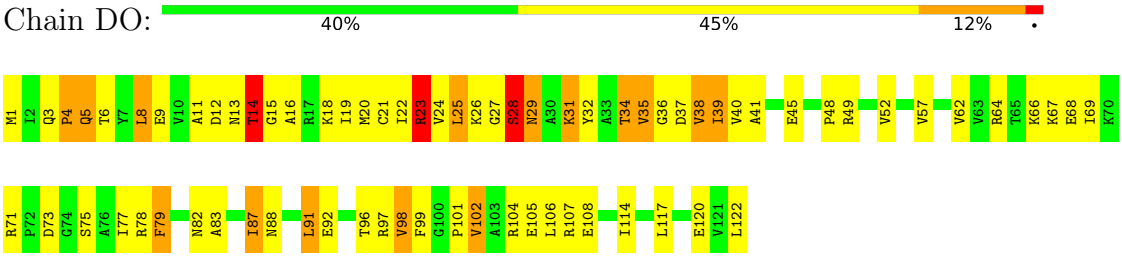
• Molecule 32: 50S ribosomal protein L13



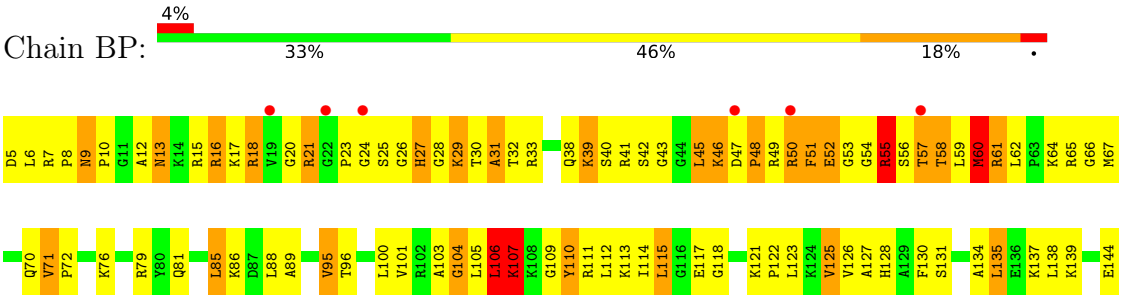
• Molecule 33: 50S ribosomal protein L14



• Molecule 33: 50S ribosomal protein L14

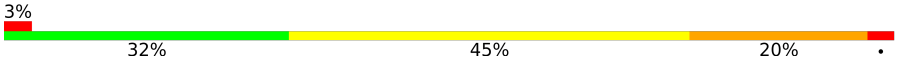


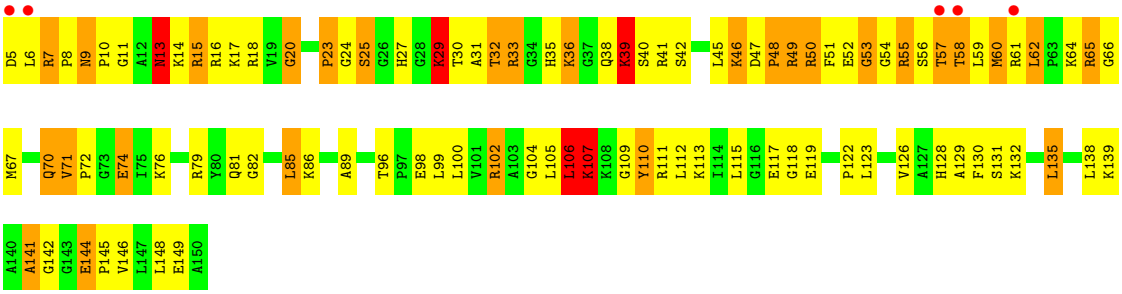
• Molecule 34: 50S ribosomal protein L15



• Molecule 34: 50S ribosomal protein L15

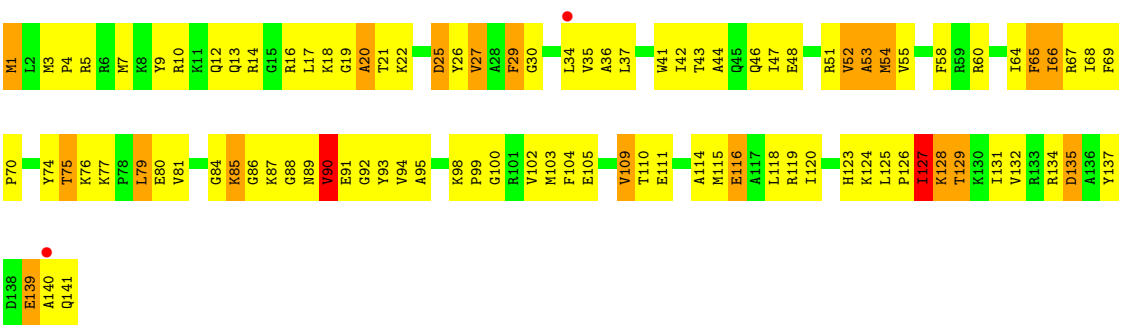
Chain DP:





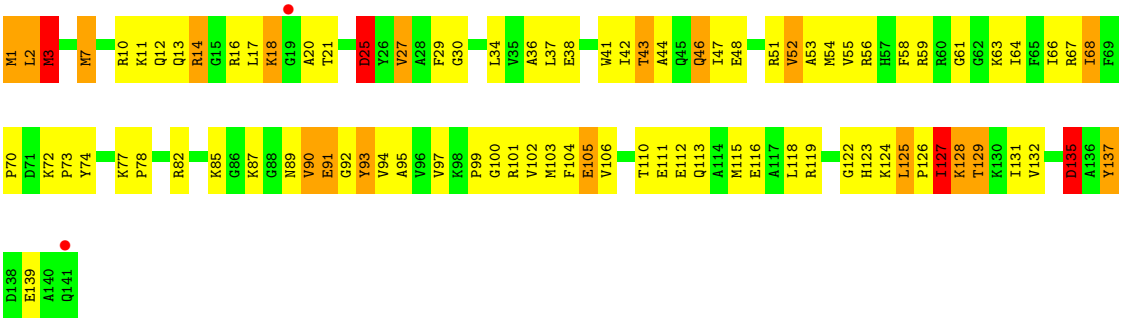
• Molecule 35: 50S ribosomal protein L16

Chain BQ:



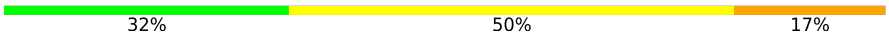
• Molecule 35: 50S ribosomal protein L16

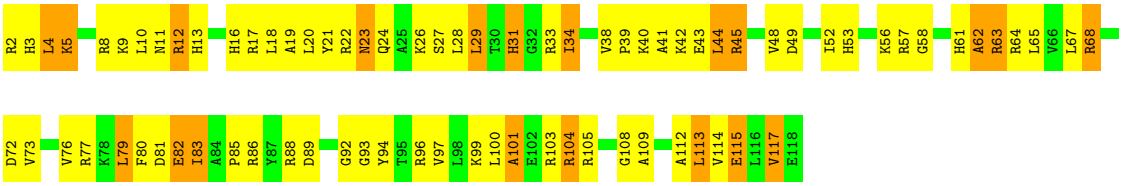
Chain DQ:



• Molecule 36: 50S ribosomal protein L17

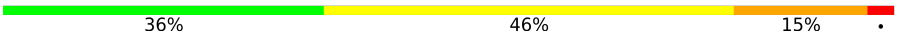
Chain BR:

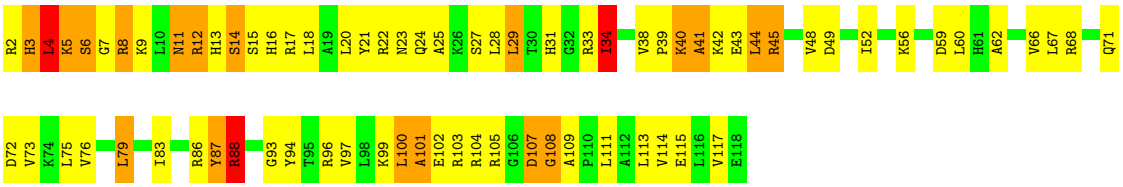




• Molecule 36: 50S ribosomal protein L17

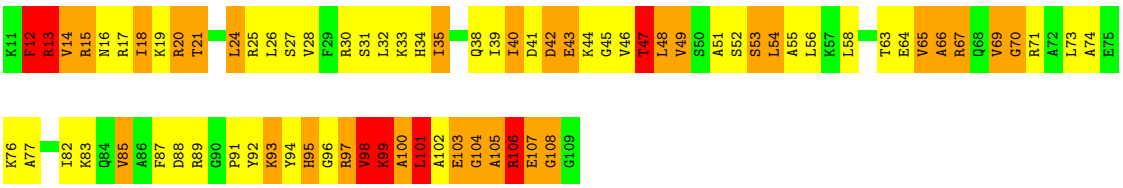
Chain DR:





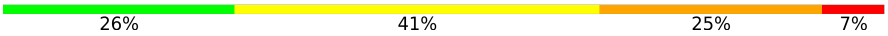
• Molecule 37: 50S ribosomal protein L18

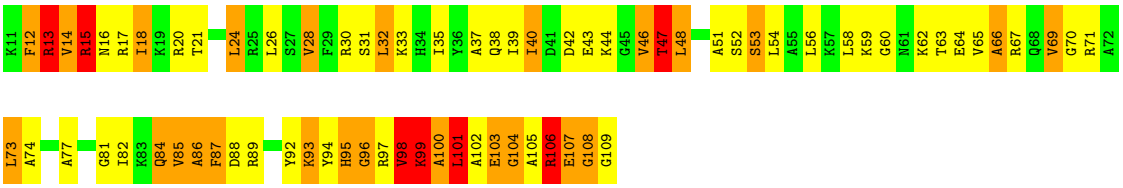
Chain BS:



• Molecule 37: 50S ribosomal protein L18

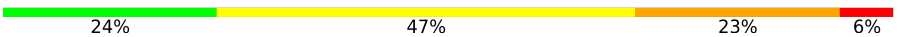
Chain DS:

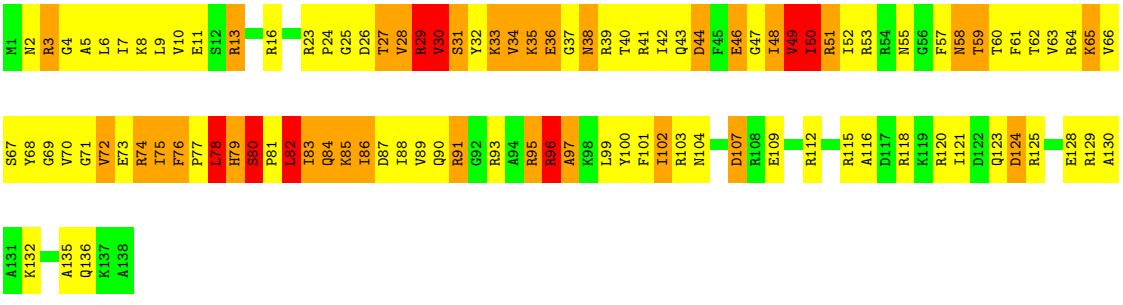




• Molecule 38: 50S ribosomal protein L19

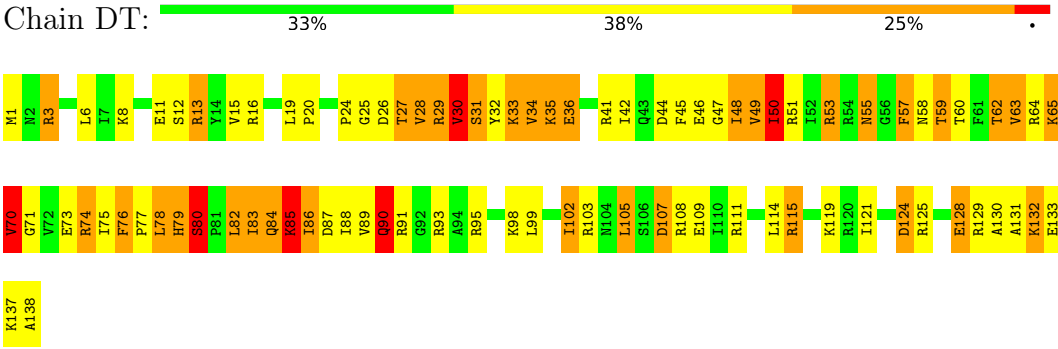
Chain BT:





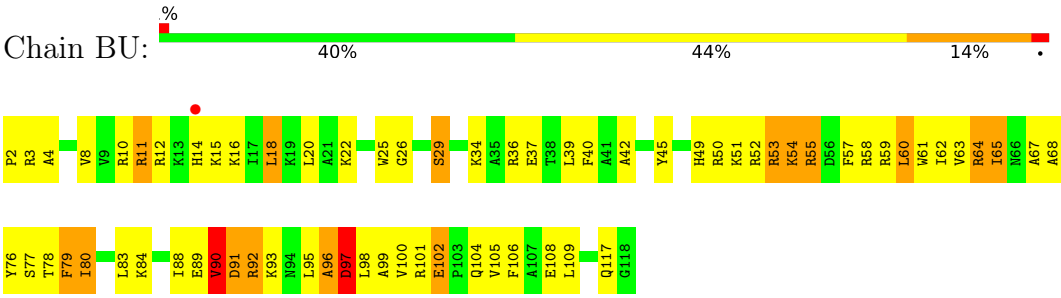
• Molecule 38: 50S ribosomal protein L19

Chain DT:



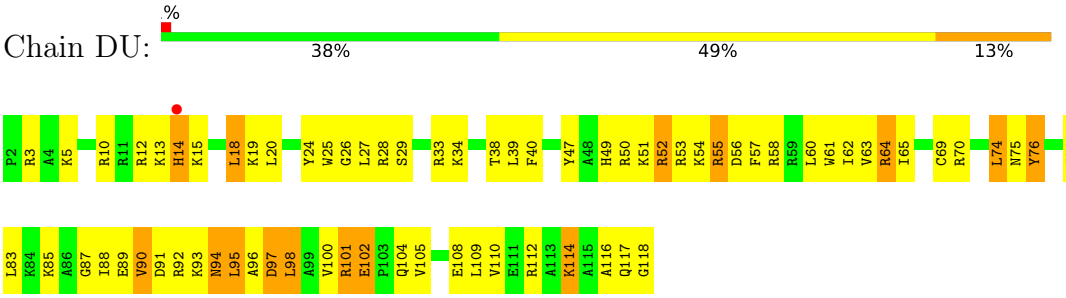
• Molecule 39: 50S ribosomal protein L20

Chain BU:



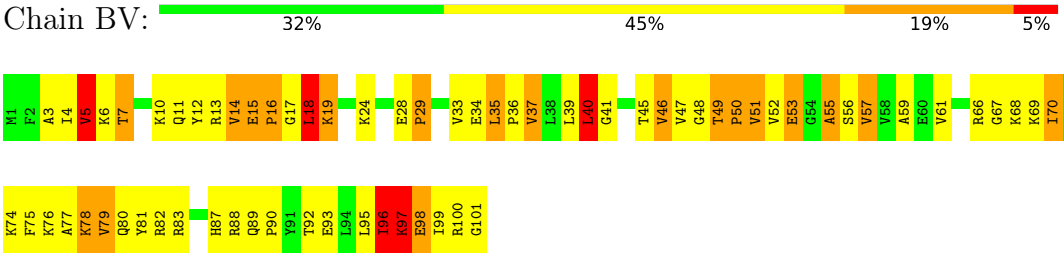
• Molecule 39: 50S ribosomal protein L20

Chain DU:



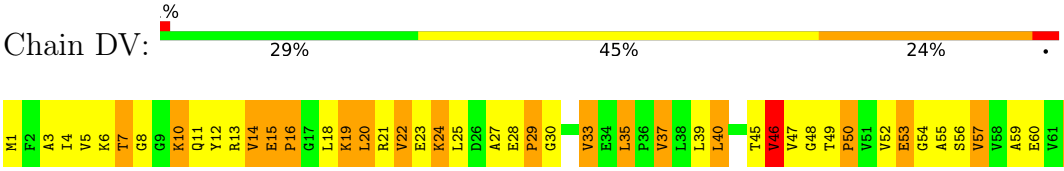
• Molecule 40: 50S ribosomal protein L21

Chain BV:

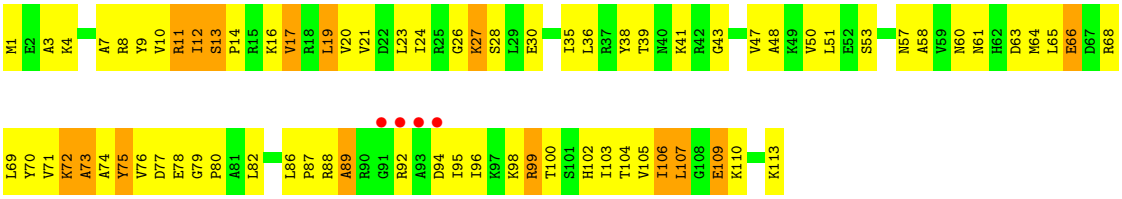


• Molecule 40: 50S ribosomal protein L21

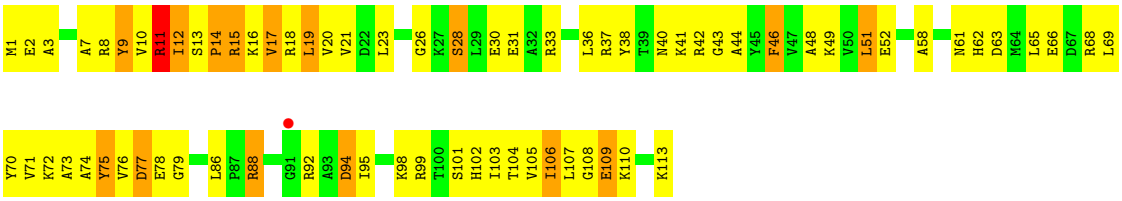
Chain DV:



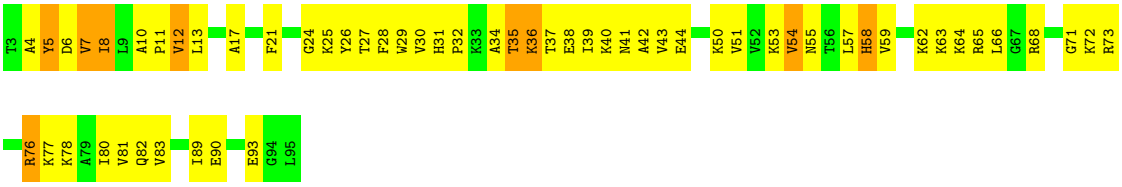
• Molecule 41: 50S ribosomal protein L22



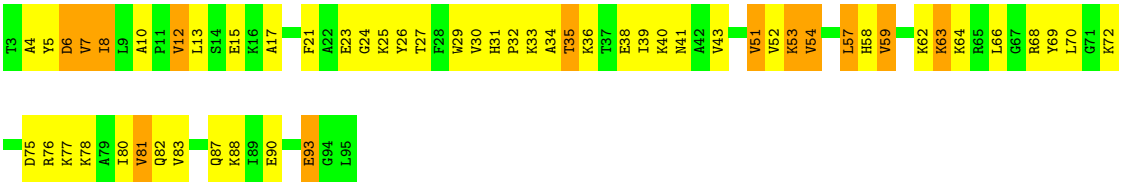
• Molecule 41: 50S ribosomal protein L22



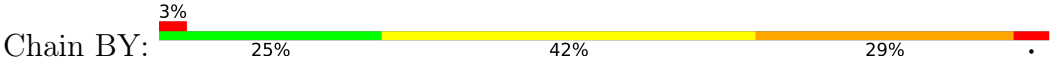
• Molecule 42: 50S ribosomal protein L23

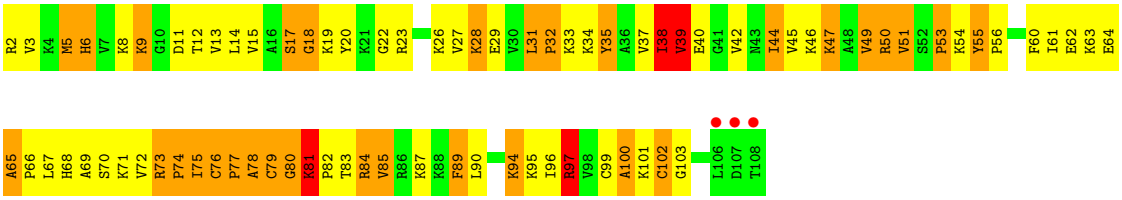


• Molecule 42: 50S ribosomal protein L23



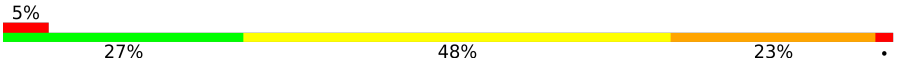
• Molecule 43: 50S ribosomal protein L24

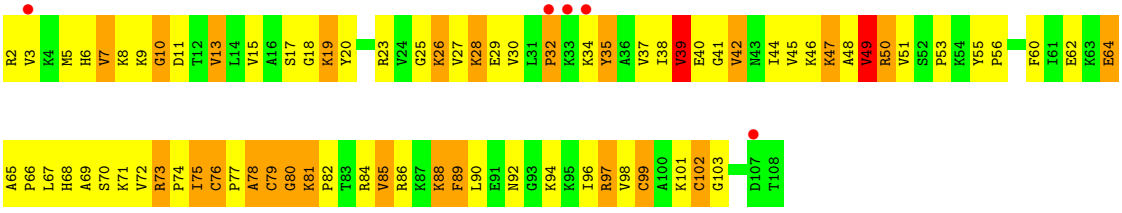




• Molecule 43: 50S ribosomal protein L24

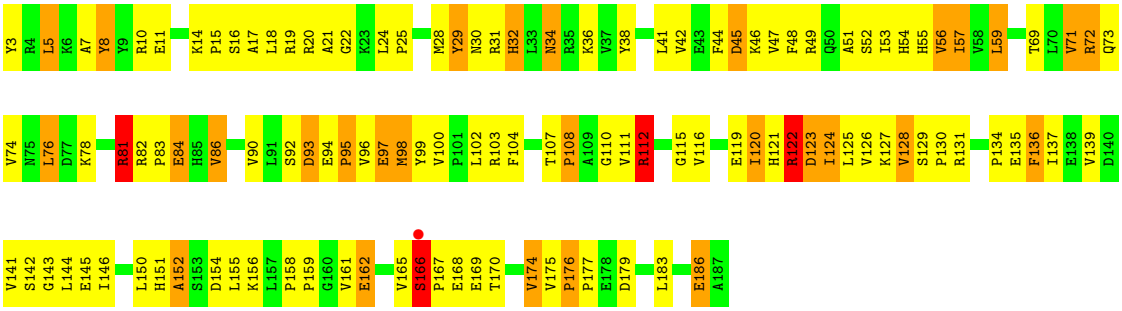
Chain DY:





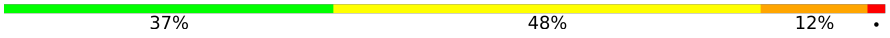
• Molecule 44: 50S ribosomal protein L25

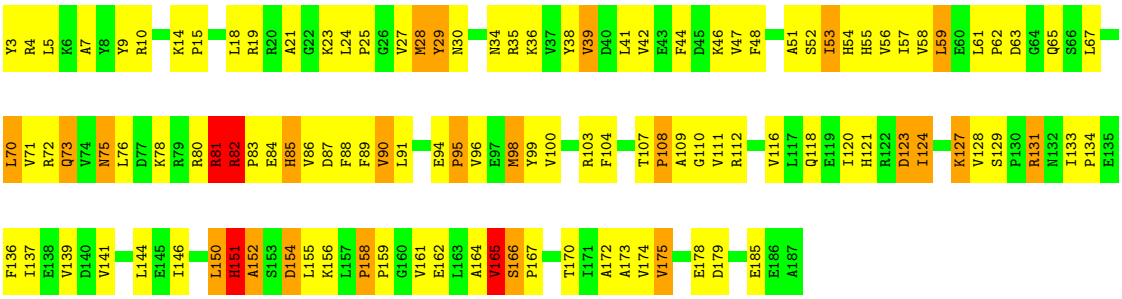
Chain BZ:



• Molecule 44: 50S ribosomal protein L25

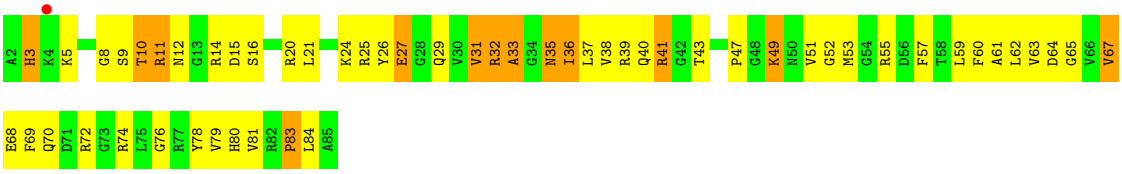
Chain DZ:



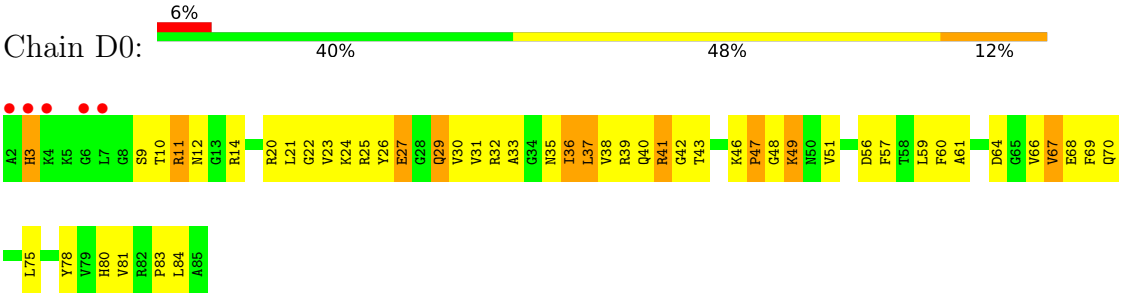


• Molecule 45: 50S ribosomal protein L27

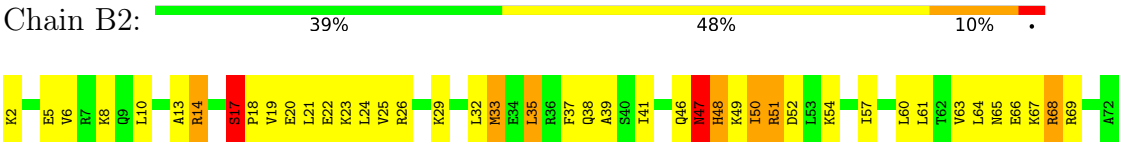
Chain B0:



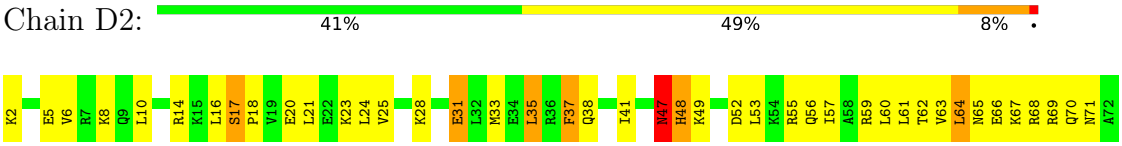
• Molecule 45: 50S ribosomal protein L27



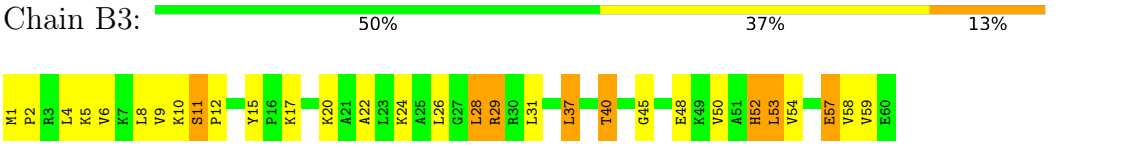
• Molecule 46: 50S ribosomal protein L29



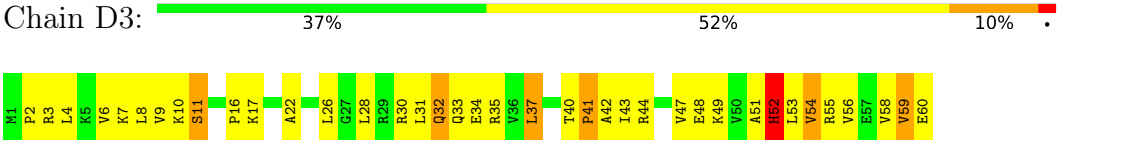
• Molecule 46: 50S ribosomal protein L29



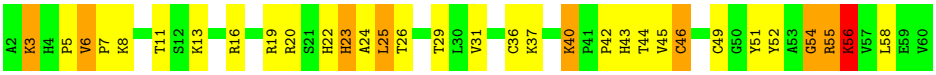
• Molecule 47: 50S ribosomal protein L30



• Molecule 47: 50S ribosomal protein L30

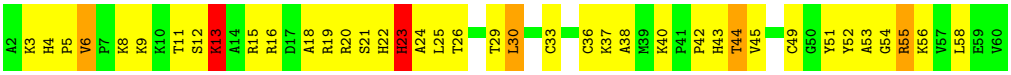


• Molecule 48: 50S ribosomal protein L32



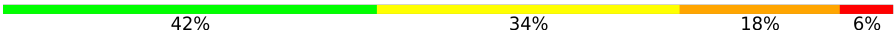
• Molecule 48: 50S ribosomal protein L32

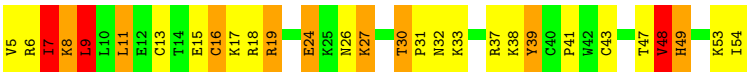
Chain D5:



• Molecule 49: 50S ribosomal protein L33

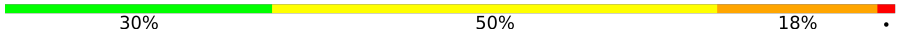
Chain B6:

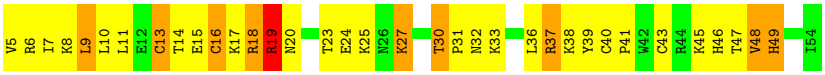




• Molecule 49: 50S ribosomal protein L33

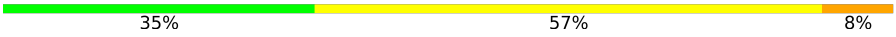
Chain D6:

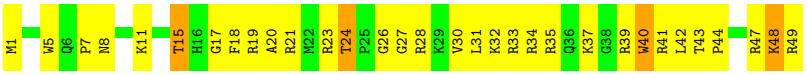




• Molecule 50: 50S ribosomal protein L34

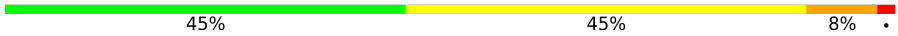
Chain B7:





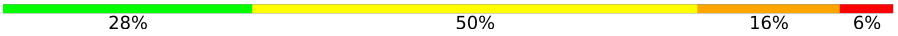
• Molecule 50: 50S ribosomal protein L34

Chain D7:



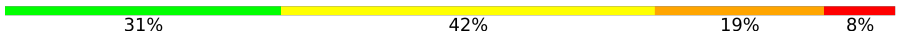
• Molecule 51: 50S ribosomal protein L35

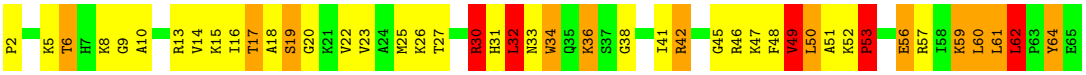
Chain B8:



• Molecule 51: 50S ribosomal protein L35

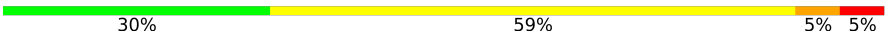
Chain D8:

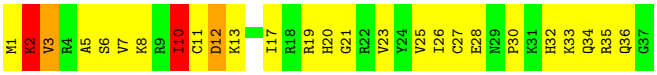




• Molecule 52: 50S ribosomal protein L36

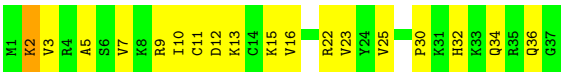
Chain B9:





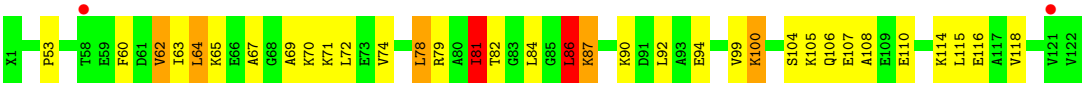
• Molecule 52: 50S ribosomal protein L36

Chain D9:



• Molecule 53: 50S ribosomal protein L7/L12

Chain Be:

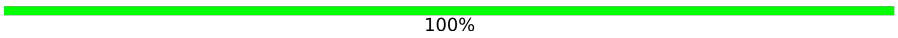


• Molecule 53: 50S ribosomal protein L7/L12

Chain De:

• Molecule 54: 50S ribosomal protein L7/L12

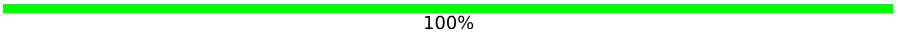
Chain Bf:



There are no outlier residues recorded for this chain.

• Molecule 54: 50S ribosomal protein L7/L12

Chain Bg:



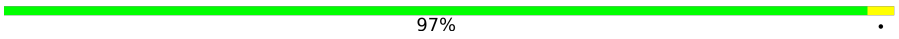
There are no outlier residues recorded for this chain.

• Molecule 54: 50S ribosomal protein L7/L12

Chain Df:

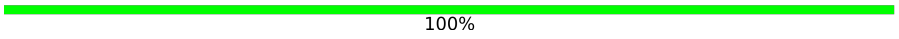
• Molecule 54: 50S ribosomal protein L7/L12

Chain Dg:



• Molecule 55: 50S ribosomal protein L7/L12

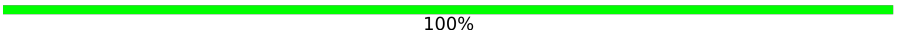
Chain Bh:



There are no outlier residues recorded for this chain.

• Molecule 55: 50S ribosomal protein L7/L12

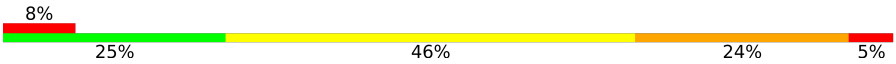
Chain Dh:

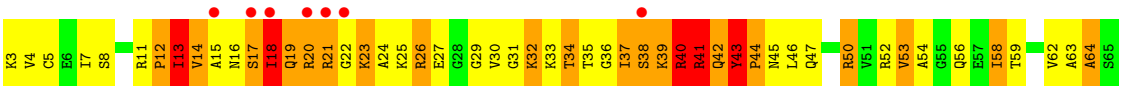


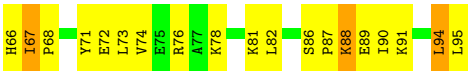
There are no outlier residues recorded for this chain.

• Molecule 56: 50S ribosomal protein L28

Chain B1:

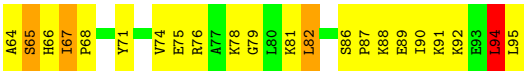






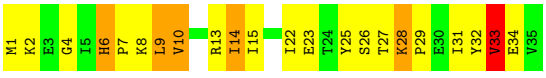
• Molecule 56: 50S ribosomal protein L28

Chain D1:



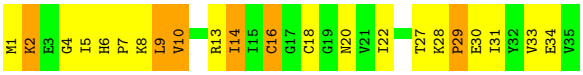
• Molecule 57: 50S ribosomal protein L31

Chain B4:



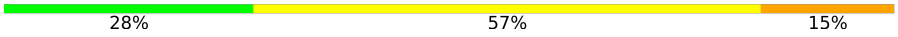
• Molecule 57: 50S ribosomal protein L31

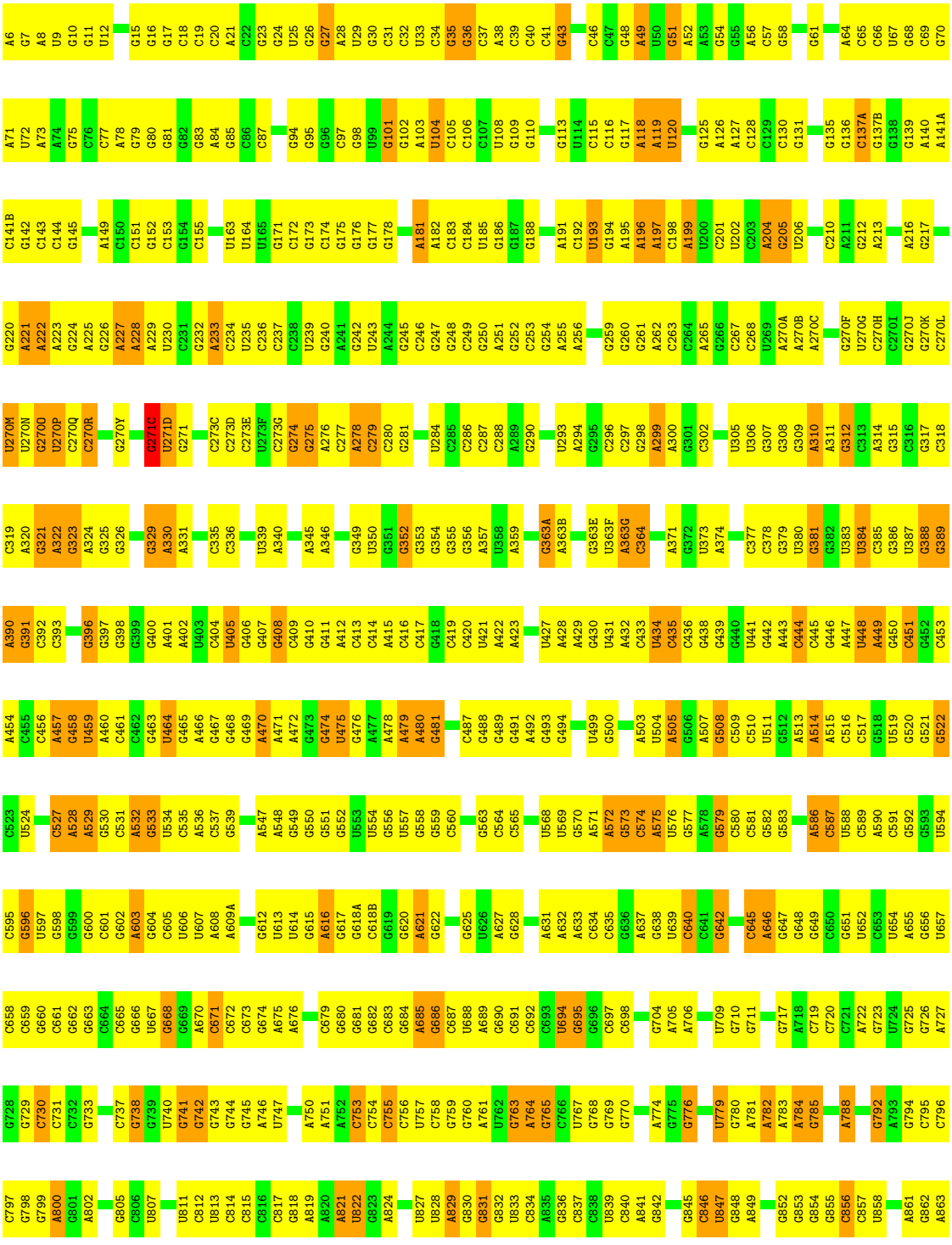
Chain D4:

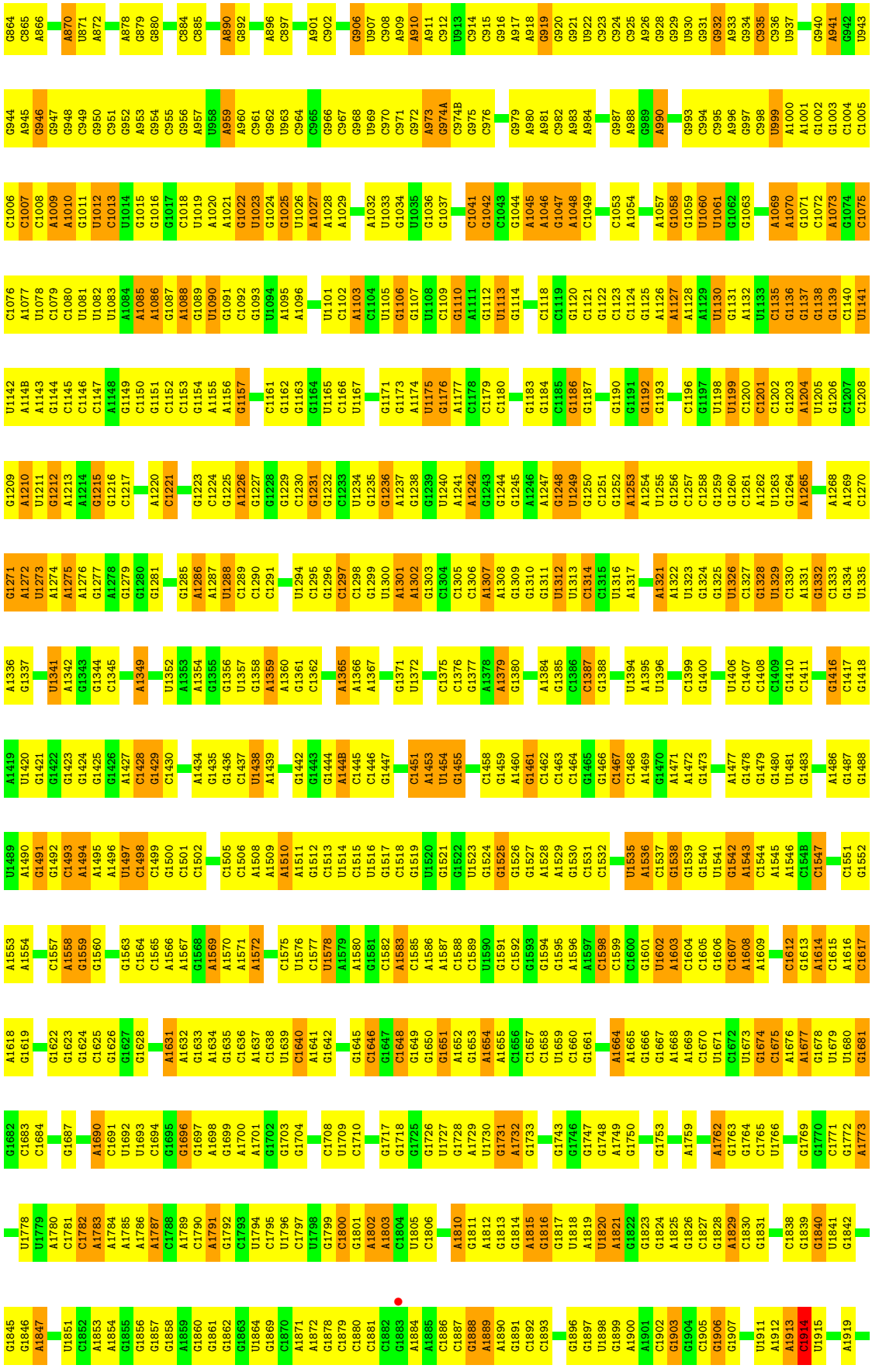


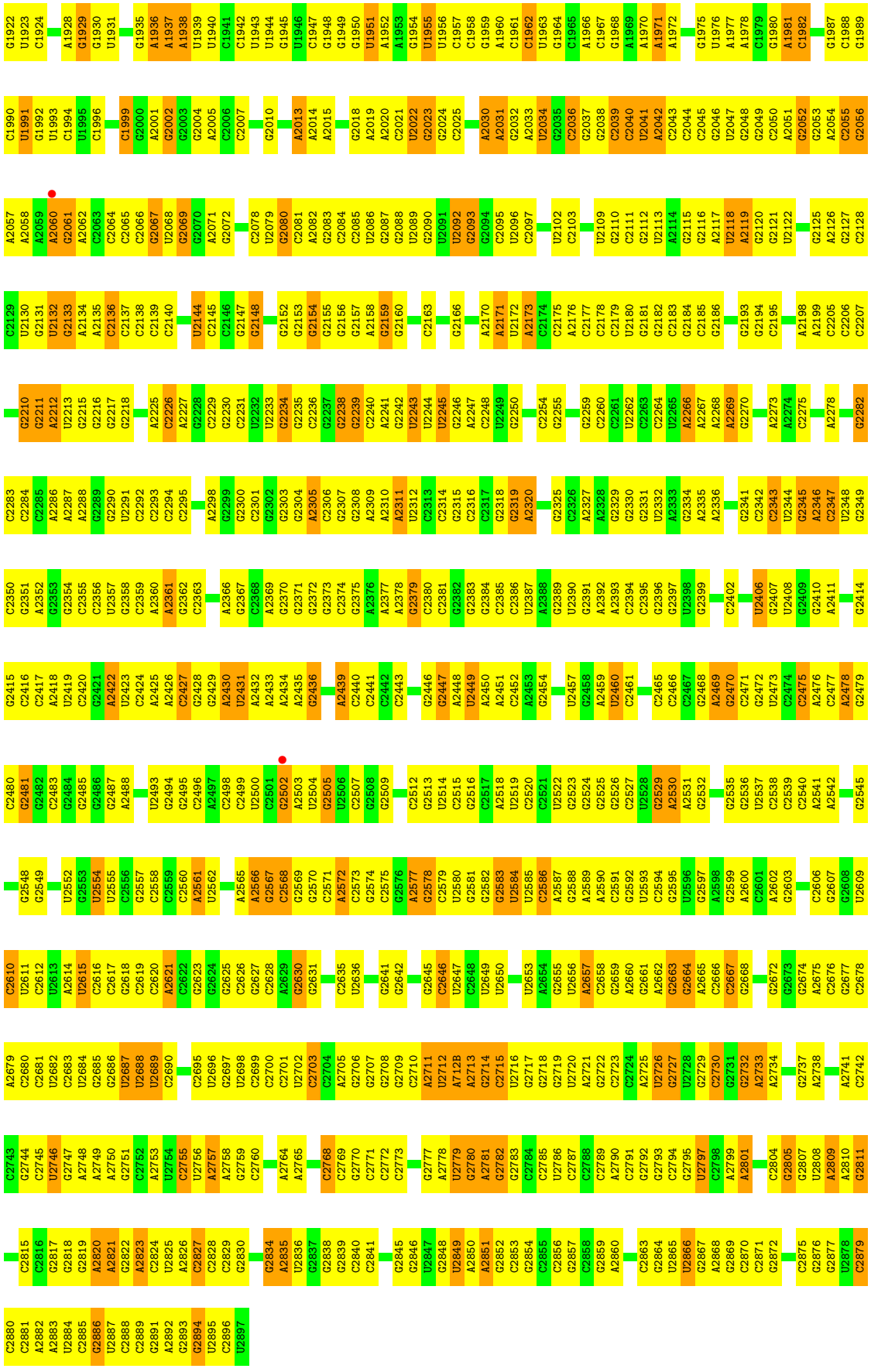
• Molecule 58: 23S ribosomal RNA

Chain BA:



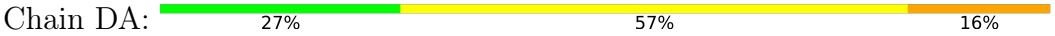


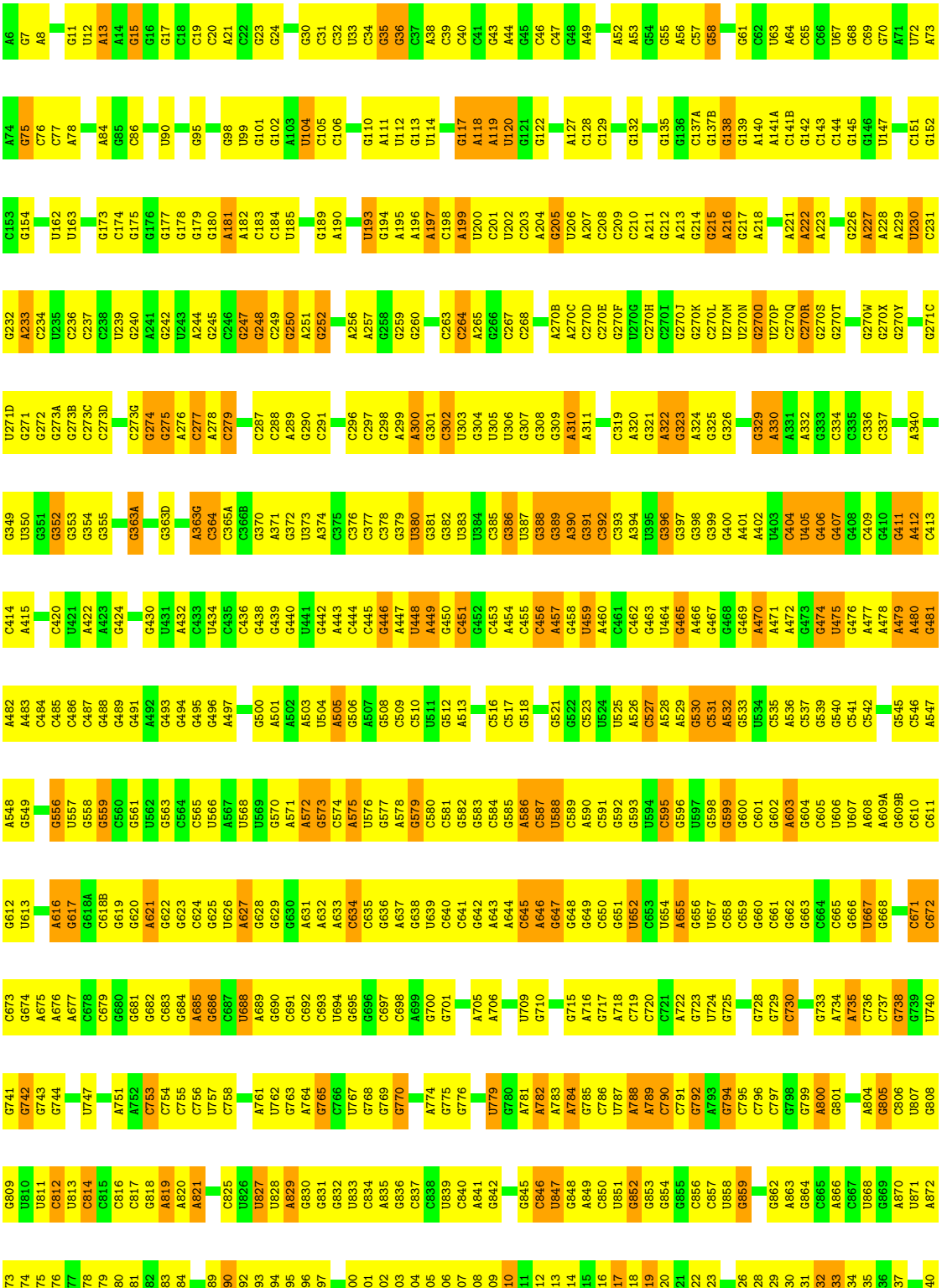


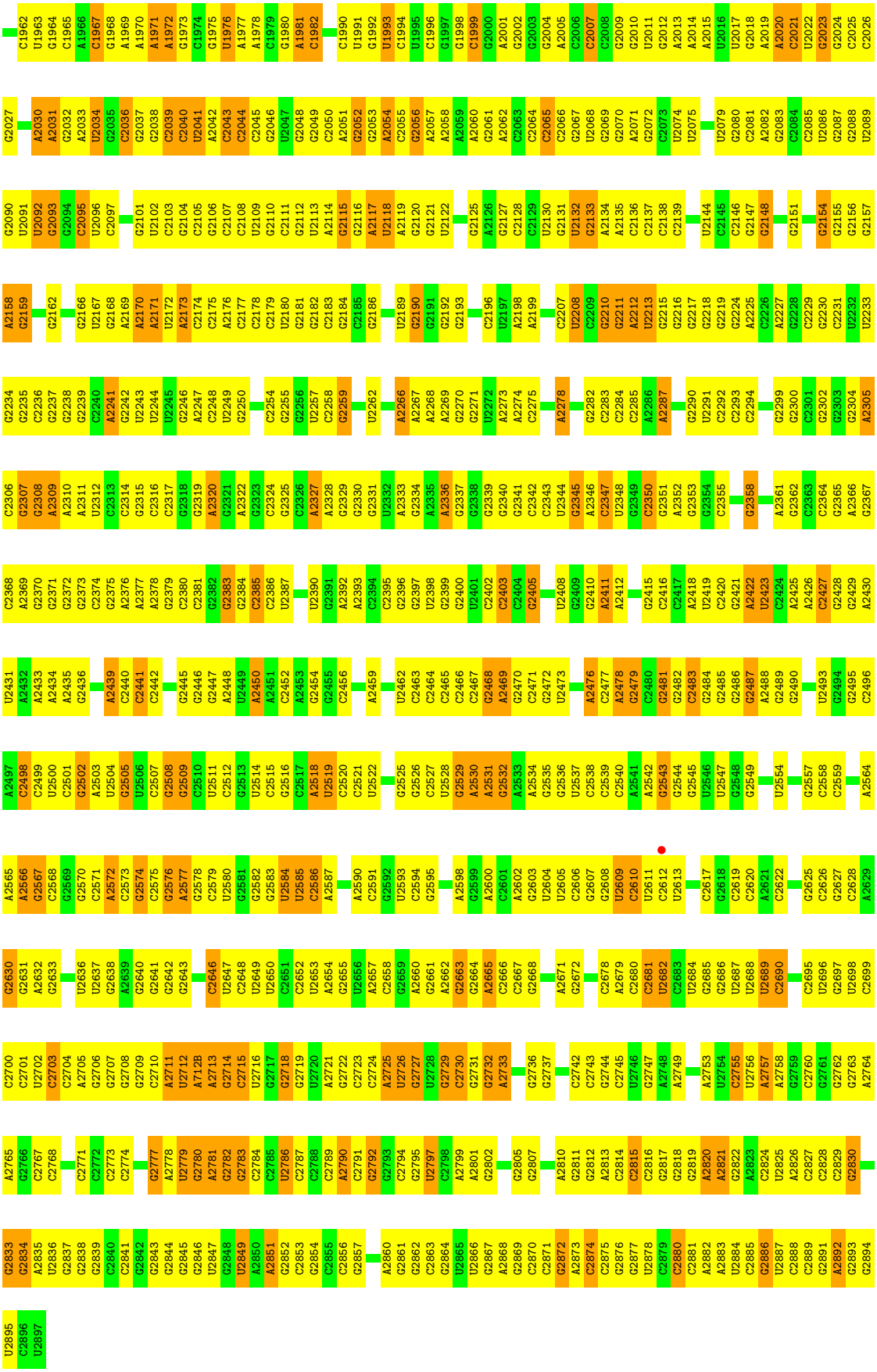


• Molecule 58: 23S ribosomal RNA

Chain DA:

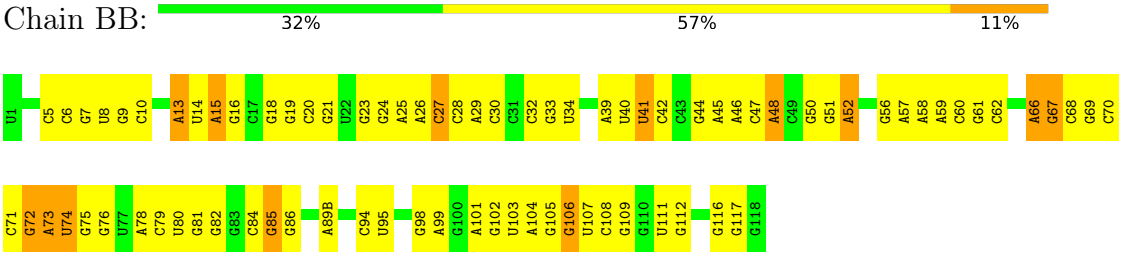






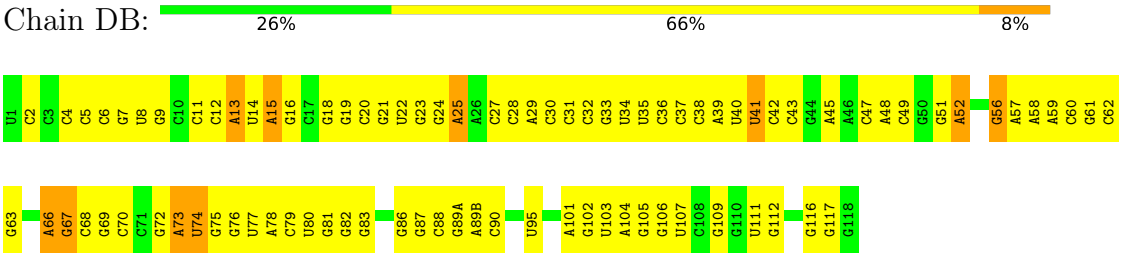
• Molecule 59: 5S ribosomal RNA

Chain BB:



• Molecule 59: 5S ribosomal RNA

Chain DB:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	307.21Å 670.44Å 350.40Å 90.00° 92.37° 90.00°	Depositor
Resolution (Å)	40.00 – 4.00 40.00 – 4.00	Depositor EDS
% Data completeness (in resolution range)	(Not available) (40.00-4.00) 77.7 (40.00-4.00)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.16 (at 4.01Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.281 , 0.329 0.286 , 0.325	Depositor DCC
R_{free} test set	25982 reflections (4.33%)	wwPDB-VP
Wilson B-factor (Å^2)	74.5	Xtriage
Anisotropy	0.337	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.17 , 53.9	EDS
L-test for twinning[2]	$< \|L\| > = 0.24$, $< L^2 > = 0.09$	Xtriage
Estimated twinning fraction	0.249 for h,-k,-l	Xtriage
F_o,F_c correlation	0.87	EDS
Total number of atoms	308068	wwPDB-VP
Average B, all atoms (Å^2)	82.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.79% 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: FUA, GDP

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	0.56	1/1945 (0.1%)	1.11	16/2621 (0.6%)
1	CB	0.54	0/1945	1.09	18/2621 (0.7%)
2	AC	0.38	0/1645	0.87	3/2216 (0.1%)
2	CC	0.38	0/1645	0.93	5/2216 (0.2%)
3	AD	0.38	0/1733	0.93	5/2318 (0.2%)
3	CD	0.38	0/1733	0.94	10/2318 (0.4%)
4	AE	0.41	0/1172	0.97	5/1576 (0.3%)
4	CE	0.45	1/1172 (0.1%)	0.93	2/1576 (0.1%)
5	AF	0.38	0/856	0.90	2/1154 (0.2%)
5	CF	0.38	0/856	0.87	0/1154
6	AG	0.36	0/1276	0.89	1/1709 (0.1%)
6	CG	0.37	0/1276	0.91	3/1709 (0.2%)
7	AH	0.41	0/1136	0.98	3/1527 (0.2%)
7	CH	0.40	0/1136	0.97	4/1527 (0.3%)
8	AI	0.39	0/1029	0.84	0/1379
8	CI	0.35	0/1029	0.84	1/1379 (0.1%)
9	AJ	0.36	0/815	0.86	1/1095 (0.1%)
9	CJ	0.40	0/815	0.92	0/1095
10	AK	0.48	0/900	1.06	6/1213 (0.5%)
10	CK	0.50	0/900	1.08	8/1213 (0.7%)
11	AL	0.57	0/992	1.36	19/1327 (1.4%)
11	CL	0.53	0/992	1.24	10/1327 (0.8%)
12	AM	0.40	0/1008	1.00	5/1347 (0.4%)
12	CM	0.36	0/1008	0.92	3/1347 (0.2%)
13	AN	0.34	0/501	0.92	3/664 (0.5%)
13	CN	0.35	0/501	0.80	0/664
14	AO	0.41	0/745	0.90	2/992 (0.2%)
14	CO	0.36	0/745	0.85	0/992
15	AP	0.37	0/722	0.89	2/970 (0.2%)
15	CP	0.34	0/722	0.86	2/970 (0.2%)
16	AQ	0.53	0/848	1.18	7/1131 (0.6%)
16	CQ	0.49	0/848	1.18	11/1131 (1.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AR	0.38	0/579	0.92	1/768 (0.1%)
17	CR	0.36	0/579	0.88	1/768 (0.1%)
18	AS	0.39	0/647	0.91	3/870 (0.3%)
18	CS	0.41	0/647	1.11	6/870 (0.7%)
19	AT	0.41	0/765	0.91	1/1007 (0.1%)
19	CT	0.40	0/765	0.90	0/1007
20	AA	0.19	0/36351	0.43	3/56736 (0.0%)
20	CA	0.18	0/36351	0.41	2/56736 (0.0%)
21	AW	0.19	0/1827	0.45	0/2845
21	CW	0.19	0/1827	0.45	0/2845
22	AV	0.15	0/568	0.35	0/886
22	CV	0.15	0/568	0.38	0/886
23	AY	0.49	4/5317 (0.1%)	1.14	41/7198 (0.6%)
23	CY	0.49	2/5317 (0.0%)	1.12	35/7198 (0.5%)
24	BC	0.59	0/1774	1.25	28/2391 (1.2%)
24	DC	0.61	0/1774	1.25	30/2391 (1.3%)
25	BD	0.46	0/2195	1.09	17/2955 (0.6%)
25	DD	0.46	0/2195	1.04	9/2955 (0.3%)
26	BE	0.47	0/1602	1.11	12/2160 (0.6%)
26	DE	0.44	0/1602	1.08	13/2160 (0.6%)
27	BF	0.48	1/1663 (0.1%)	1.17	18/2249 (0.8%)
27	DF	0.48	0/1663	1.15	13/2249 (0.6%)
28	BG	0.37	0/1499	0.89	2/2016 (0.1%)
28	DG	0.50	3/1499 (0.2%)	1.10	11/2016 (0.5%)
29	BH	0.42	0/1298	0.98	1/1751 (0.1%)
29	DH	0.45	0/1298	0.95	2/1751 (0.1%)
31	BK	0.41	0/1054	0.95	6/1427 (0.4%)
31	DK	0.41	0/1054	0.94	4/1427 (0.3%)
32	BN	0.43	0/1131	1.07	9/1525 (0.6%)
32	DN	0.43	0/1131	1.07	9/1525 (0.6%)
33	BO	0.39	0/943	1.00	6/1269 (0.5%)
33	DO	0.38	0/943	0.93	1/1269 (0.1%)
34	BP	0.44	0/1131	0.99	1/1504 (0.1%)
34	DP	0.41	0/1131	1.03	5/1504 (0.3%)
35	BQ	0.42	0/1143	1.00	2/1527 (0.1%)
35	DQ	0.41	0/1143	1.02	3/1527 (0.2%)
36	BR	0.46	0/974	0.93	1/1302 (0.1%)
36	DR	0.43	0/974	0.96	1/1302 (0.1%)
37	BS	0.47	0/783	1.16	10/1041 (1.0%)
37	DS	0.50	0/783	1.16	8/1041 (0.8%)
38	BT	0.49	0/1161	1.07	7/1549 (0.5%)
38	DT	0.49	0/1161	1.05	8/1549 (0.5%)
39	BU	0.48	0/982	0.91	1/1306 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
39	DU	0.49	0/982	0.91	0/1306
40	BV	0.49	0/790	1.10	5/1057 (0.5%)
40	DV	0.48	0/790	1.05	4/1057 (0.4%)
41	BW	0.44	0/911	0.99	3/1220 (0.2%)
41	DW	0.44	0/911	1.05	2/1220 (0.2%)
42	BX	0.34	0/748	0.87	0/1004
42	DX	0.37	0/748	0.88	1/1004 (0.1%)
43	BY	0.44	0/831	1.13	12/1108 (1.1%)
43	DY	0.43	0/831	1.12	8/1108 (0.7%)
44	BZ	0.39	0/1505	0.99	7/2042 (0.3%)
44	DZ	0.38	0/1505	1.01	11/2042 (0.5%)
45	B0	0.33	0/671	0.79	0/892
45	D0	0.38	0/671	0.83	0/892
46	B2	0.42	0/600	0.99	3/793 (0.4%)
46	D2	0.40	0/600	0.96	2/793 (0.3%)
47	B3	0.37	0/482	1.02	3/646 (0.5%)
47	D3	0.36	0/482	0.98	4/646 (0.6%)
48	B5	0.40	0/473	0.93	2/639 (0.3%)
48	D5	0.39	0/473	1.01	2/639 (0.3%)
49	B6	0.42	0/440	1.04	4/586 (0.7%)
49	D6	0.40	0/440	0.95	2/586 (0.3%)
50	B7	0.41	0/438	0.93	0/575
50	D7	0.38	0/438	0.98	0/575
51	B8	0.44	0/525	1.01	2/691 (0.3%)
51	D8	0.41	0/525	1.06	3/691 (0.4%)
52	B9	0.38	0/310	0.87	0/407
52	D9	0.33	0/310	0.92	0/407
53	Be	0.82	1/538 (0.2%)	1.02	2/715 (0.3%)
53	De	0.38	0/538	0.91	1/715 (0.1%)
56	B1	0.71	1/739 (0.1%)	1.36	15/981 (1.5%)
56	D1	0.75	1/739 (0.1%)	1.48	15/981 (1.5%)
57	B4	0.52	0/276	1.11	2/372 (0.5%)
57	D4	0.51	0/276	1.00	0/372
58	BA	0.20	2/69437 (0.0%)	0.44	5/108401 (0.0%)
58	DA	0.19	0/69437	0.43	0/108401
59	BB	0.18	0/2853	0.41	0/4451
59	DB	0.17	0/2853	0.39	0/4451
All	All	0.30	17/330554 (0.0%)	0.67	608/492202 (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	2
1	CB	0	3
11	CL	0	1
23	AY	0	5
23	CY	0	1
24	BC	0	2
24	DC	0	3
25	BD	0	2
27	BF	0	2
27	DF	0	2
30	BJ	0	1
30	DJ	0	1
37	BS	0	2
37	DS	0	4
41	BW	0	1
41	DW	0	1
56	B1	0	1
56	D1	0	2
All	All	0	36

All (17) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	Be	87	LYS	C-N	17.11	1.53	1.33
23	CY	500	GLN	C-N	-8.46	1.21	1.33
58	BA	1914	C	O3'-P	-8.40	1.48	1.61
28	DG	109	VAL	N-CA	-8.09	1.36	1.45
23	AY	503	GLY	C-N	-7.92	1.22	1.33
23	CY	506	GLN	N-CA	7.88	1.56	1.46
23	AY	135	PHE	C-N	7.86	1.42	1.33
23	AY	138	LYS	C-N	-6.77	1.23	1.33
28	DG	109	VAL	CA-CB	-6.65	1.46	1.54
1	AB	172	ILE	CA-CB	6.55	1.62	1.54
23	AY	499	ARG	C-N	6.33	1.42	1.33
4	CE	51	VAL	CA-CB	6.25	1.57	1.54
28	DG	108	ASN	C-N	-5.82	1.26	1.33
27	BF	156	LEU	CA-C	-5.21	1.46	1.53
58	BA	1911	U	O3'-P	-5.14	1.53	1.61
56	B1	38	SER	CA-C	5.07	1.59	1.52
56	D1	39	LYS	CA-C	5.05	1.58	1.52

All (608) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	CY	500	GLN	CA-C-N	19.32	158.44	121.54
23	CY	500	GLN	C-N-CA	19.32	158.44	121.54
23	AY	503	GLY	O-C-N	-15.78	102.18	122.70
58	BA	1914	C	C4'-C3'-O3'	-15.68	89.48	113.00
23	CY	500	GLN	CA-C-O	-14.33	101.03	122.38
23	AY	138	LYS	CA-C-N	-13.58	100.91	122.23
23	AY	138	LYS	C-N-CA	-13.58	100.91	122.23
23	CY	500	GLN	O-C-N	-13.57	103.95	122.68
28	DG	109	VAL	N-CA-C	-12.83	100.13	112.96
1	AB	172	ILE	N-CA-C	-12.80	98.13	110.42
28	DG	114	ILE	CA-C-N	12.69	138.56	120.28
28	DG	114	ILE	C-N-CA	12.69	138.56	120.28
23	AY	138	LYS	O-C-N	12.39	139.07	122.59
11	AL	47	LYS	CA-C-N	-12.22	104.56	119.84
11	AL	47	LYS	C-N-CA	-12.22	104.56	119.84
56	D1	18	ILE	N-CA-C	11.35	121.54	107.70
51	D8	62	LEU	CA-C-N	-11.20	109.41	120.83
51	D8	62	LEU	C-N-CA	-11.20	109.41	120.83
23	AY	499	ARG	O-C-N	-10.82	106.54	122.99
11	CL	33	ARG	N-CA-C	10.73	125.17	110.35
58	BA	1914	C	C2'-C3'-O3'	10.32	129.19	113.70
26	BE	52	LEU	CA-C-N	10.30	132.72	119.84
26	BE	52	LEU	C-N-CA	10.30	132.72	119.84
40	BV	49	THR	CA-C-N	-10.29	106.98	119.84
40	BV	49	THR	C-N-CA	-10.29	106.98	119.84
27	DF	174	VAL	N-CA-C	-10.29	96.12	109.80
1	AB	185	ILE	N-CA-C	-10.10	96.55	109.58
23	AY	499	ARG	CA-C-N	9.95	136.44	122.41
23	AY	499	ARG	C-N-CA	9.95	136.44	122.41
28	DG	109	VAL	CA-C-O	-9.91	110.97	119.29
23	AY	503	GLY	CA-C-N	9.63	137.99	121.14
23	AY	503	GLY	C-N-CA	9.63	137.99	121.14
37	DS	12	PHE	N-CA-C	-9.47	99.95	113.21
20	AA	1490	C	C4'-C3'-O3'	-9.31	99.03	113.00
43	BY	17	SER	N-CA-C	9.20	117.58	108.75
1	CB	172	ILE	N-CA-C	-9.18	101.45	110.72
33	BO	47	ILE	CA-C-N	9.18	131.31	119.84
33	BO	47	ILE	C-N-CA	9.18	131.31	119.84
12	AM	122	LYS	N-CA-C	9.17	119.03	108.49
38	DT	76	PHE	CA-C-N	9.14	131.27	119.84
38	DT	76	PHE	C-N-CA	9.14	131.27	119.84
10	CK	38	ASN	CA-C-N	9.12	129.16	119.76
10	CK	38	ASN	C-N-CA	9.12	129.16	119.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	CY	316	ILE	CB-CA-C	-9.12	103.01	113.22
27	BF	170	LEU	CA-C-N	9.02	129.06	119.05
27	BF	170	LEU	C-N-CA	9.02	129.06	119.05
56	B1	11	ARG	CA-C-N	8.98	131.07	119.84
56	B1	11	ARG	C-N-CA	8.98	131.07	119.84
24	BC	63	VAL	N-CA-C	8.97	122.67	108.85
16	AQ	60	ILE	N-CA-C	8.97	120.84	107.75
23	AY	394	ALA	CA-C-N	8.94	131.02	119.84
23	AY	394	ALA	C-N-CA	8.94	131.02	119.84
11	AL	33	ARG	N-CA-C	8.93	123.68	110.46
53	Be	86	LEU	CA-C-N	8.92	132.43	120.65
53	Be	86	LEU	C-N-CA	8.92	132.43	120.65
56	D1	11	ARG	CA-C-N	8.90	130.96	119.84
56	D1	11	ARG	C-N-CA	8.90	130.96	119.84
23	AY	255	ILE	CA-C-N	-8.87	112.95	122.89
23	AY	255	ILE	C-N-CA	-8.87	112.95	122.89
3	CD	28	SER	CA-C-N	-8.84	109.98	121.91
3	CD	28	SER	C-N-CA	-8.84	109.98	121.91
23	AY	162	VAL	CA-C-N	8.83	132.45	122.48
23	AY	162	VAL	C-N-CA	8.83	132.45	122.48
56	D1	19	GLN	N-CA-C	-8.79	101.16	114.16
43	DY	73	ARG	CA-C-N	8.77	130.81	119.84
43	DY	73	ARG	C-N-CA	8.77	130.81	119.84
24	DC	211	ARG	N-CA-C	-8.75	92.17	110.80
28	DG	108	ASN	CA-C-N	-8.51	112.23	121.84
28	DG	108	ASN	C-N-CA	-8.51	112.23	121.84
53	De	72	LEU	N-CA-C	-8.49	104.06	114.75
27	BF	155	LEU	N-CA-C	-8.39	92.94	110.80
3	AD	28	SER	CA-C-N	-8.38	109.36	119.84
3	AD	28	SER	C-N-CA	-8.38	109.36	119.84
18	CS	73	GLU	N-CA-C	-8.33	102.54	114.12
23	AY	135	PHE	CA-C-N	-8.31	111.66	122.79
23	AY	135	PHE	C-N-CA	-8.31	111.66	122.79
56	D1	17	SER	CA-C-N	-8.30	113.67	121.97
56	D1	17	SER	C-N-CA	-8.30	113.67	121.97
7	AH	26	VAL	CA-C-N	8.29	130.20	119.84
7	AH	26	VAL	C-N-CA	8.29	130.20	119.84
24	BC	51	ASP	CA-C-N	8.26	130.17	119.84
24	BC	51	ASP	C-N-CA	8.26	130.17	119.84
1	AB	188	ALA	N-CA-C	8.21	119.07	108.24
43	BY	73	ARG	CA-C-N	8.19	130.07	119.84
43	BY	73	ARG	C-N-CA	8.19	130.07	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	B8	62	LEU	CA-C-N	-8.18	109.62	119.84
51	B8	62	LEU	C-N-CA	-8.18	109.62	119.84
23	CY	394	ALA	CA-C-N	8.18	130.06	119.84
23	CY	394	ALA	C-N-CA	8.18	130.06	119.84
37	DS	16	ASN	N-CA-C	-8.16	102.38	111.28
23	CY	255	ILE	CA-C-N	-8.15	114.10	122.74
23	CY	255	ILE	C-N-CA	-8.15	114.10	122.74
27	DF	155	LEU	N-CA-C	-8.15	93.44	110.80
27	BF	19	GLU	N-CA-C	8.13	121.26	110.53
26	DE	76	ARG	N-CA-C	-8.11	103.85	112.93
23	AY	515	GLU	CA-C-N	8.09	129.96	119.84
23	AY	515	GLU	C-N-CA	8.09	129.96	119.84
27	BF	174	VAL	N-CA-C	-8.09	97.00	109.78
23	AY	286	ILE	CA-C-N	8.02	128.64	120.38
23	AY	286	ILE	C-N-CA	8.02	128.64	120.38
43	DY	55	TYR	CA-C-N	8.00	129.84	119.84
43	DY	55	TYR	C-N-CA	8.00	129.84	119.84
34	DP	144	GLU	CA-C-N	8.00	129.83	119.84
34	DP	144	GLU	C-N-CA	8.00	129.83	119.84
1	CB	185	ILE	N-CA-C	-7.99	99.28	109.58
26	DE	52	LEU	CA-C-N	7.98	129.82	119.84
26	DE	52	LEU	C-N-CA	7.98	129.82	119.84
24	DC	65	LEU	CA-C-N	7.93	129.75	119.84
24	DC	65	LEU	C-N-CA	7.93	129.75	119.84
24	BC	65	LEU	CA-C-N	7.88	129.69	119.84
24	BC	65	LEU	C-N-CA	7.88	129.69	119.84
23	CY	286	ILE	CA-C-N	7.88	128.49	120.38
23	CY	286	ILE	C-N-CA	7.88	128.49	120.38
24	DC	140	ASN	CA-C-N	7.87	129.68	119.84
24	DC	140	ASN	C-N-CA	7.87	129.68	119.84
23	CY	515	GLU	CA-C-N	7.87	129.67	119.84
23	CY	515	GLU	C-N-CA	7.87	129.67	119.84
25	DD	179	SER	N-CA-C	-7.86	103.69	113.28
32	DN	114	ARG	N-CA-C	-7.84	103.85	113.41
38	DT	79	HIS	N-CA-C	7.83	123.89	113.72
27	DF	170	LEU	CA-C-N	7.81	129.60	119.84
27	DF	170	LEU	C-N-CA	7.81	129.60	119.84
26	BE	65	GLY	N-CA-C	-7.78	103.05	113.24
1	AB	68	ILE	CA-C-N	-7.76	112.49	123.20
1	AB	68	ILE	C-N-CA	-7.76	112.49	123.20
32	BN	114	ARG	N-CA-C	-7.76	103.94	113.41
24	BC	220	GLY	CA-C-N	7.73	129.50	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	BC	220	GLY	C-N-CA	7.73	129.50	119.84
27	BF	189	THR	CB-CA-C	-7.70	104.78	114.40
36	DR	34	ILE	N-CA-C	7.70	119.20	108.12
25	DD	218	ARG	CA-C-N	7.66	129.42	119.84
25	DD	218	ARG	C-N-CA	7.66	129.42	119.84
11	CL	18	VAL	N-CA-C	7.63	117.59	110.42
16	CQ	60	ILE	N-CA-C	7.60	119.07	108.12
33	DO	15	GLY	N-CA-C	-7.57	104.27	114.95
12	CM	112	GLY	CA-C-N	7.55	129.28	119.84
12	CM	112	GLY	C-N-CA	7.55	129.28	119.84
24	BC	211	ARG	N-CA-C	-7.53	98.67	109.29
12	AM	123	ALA	CA-C-N	7.52	129.24	119.84
12	AM	123	ALA	C-N-CA	7.52	129.24	119.84
18	CS	41	VAL	CA-C-N	7.51	129.22	119.84
18	CS	41	VAL	C-N-CA	7.51	129.22	119.84
2	CC	6	HIS	CA-C-N	7.50	127.37	119.05
2	CC	6	HIS	C-N-CA	7.50	127.37	119.05
26	DE	65	GLY	N-CA-C	-7.49	103.43	113.24
56	D1	17	SER	N-CA-C	-7.48	99.96	110.50
24	DC	46	ALA	N-CA-C	7.47	121.10	109.07
24	DC	51	ASP	CA-C-N	7.47	129.18	119.84
24	DC	51	ASP	C-N-CA	7.47	129.18	119.84
38	BT	79	HIS	N-CA-C	7.45	125.64	114.09
56	B1	43	TYR	CA-C-N	7.44	129.14	119.84
56	B1	43	TYR	C-N-CA	7.44	129.14	119.84
24	BC	182	PRO	N-CA-C	7.43	119.76	110.70
24	DC	63	VAL	N-CA-C	7.42	120.17	108.89
17	AR	44	LEU	N-CA-C	7.41	121.79	111.56
25	DD	35	LYS	CA-C-N	7.41	129.10	119.84
25	DD	35	LYS	C-N-CA	7.41	129.10	119.84
2	CC	10	PHE	N-CA-C	-7.40	104.78	113.88
40	BV	35	LEU	CA-C-N	7.40	129.09	119.84
40	BV	35	LEU	C-N-CA	7.40	129.09	119.84
25	BD	177	LEU	CA-C-N	7.36	129.04	119.84
25	BD	177	LEU	C-N-CA	7.36	129.04	119.84
7	CH	26	VAL	CA-C-N	7.32	129.00	119.84
7	CH	26	VAL	C-N-CA	7.32	129.00	119.84
44	DZ	107	THR	CA-C-N	7.28	128.94	119.84
44	DZ	107	THR	C-N-CA	7.28	128.94	119.84
37	DS	95	HIS	N-CA-C	-7.27	104.43	112.72
20	AA	1494	G	C3'-C2'-O2'	7.27	121.60	110.70
24	DC	154	ILE	N-CA-C	-7.25	103.40	110.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
43	BY	65	ALA	CA-C-N	7.24	128.89	119.84
43	BY	65	ALA	C-N-CA	7.24	128.89	119.84
31	BK	90	LYS	CA-C-N	7.22	127.38	119.87
31	BK	90	LYS	C-N-CA	7.22	127.38	119.87
27	DF	195	ASP	N-CA-C	-7.19	99.84	110.48
37	BS	95	HIS	N-CA-C	-7.18	104.89	112.93
24	BC	138	LEU	CA-C-N	7.17	128.80	119.84
24	BC	138	LEU	C-N-CA	7.17	128.80	119.84
25	BD	85	ASP	CA-C-N	7.14	126.39	118.97
25	BD	85	ASP	C-N-CA	7.14	126.39	118.97
27	BF	191	ARG	N-CA-C	7.14	123.82	107.48
27	DF	191	ARG	N-CA-C	7.14	123.82	107.48
37	BS	12	PHE	N-CA-C	-7.11	103.17	112.41
38	BT	76	PHE	CA-C-N	7.11	128.73	119.84
38	BT	76	PHE	C-N-CA	7.11	128.73	119.84
10	AK	112	THR	CA-C-N	7.06	128.67	119.84
10	AK	112	THR	C-N-CA	7.06	128.67	119.84
31	DK	20	ALA	CA-C-N	7.02	127.61	120.38
31	DK	20	ALA	C-N-CA	7.02	127.61	120.38
1	CB	169	LYS	N-CA-C	-7.00	102.71	111.11
35	BQ	104	PHE	N-CA-C	7.00	119.70	109.07
57	B4	28	LYS	CA-C-N	6.98	126.50	119.24
57	B4	28	LYS	C-N-CA	6.98	126.50	119.24
10	CK	86	GLY	N-CA-C	6.95	118.44	111.21
27	BF	156	LEU	N-CA-C	-6.93	98.77	108.54
10	CK	39	PRO	N-CA-C	6.93	121.95	111.14
10	AK	38	ASN	CA-C-N	6.92	126.96	119.90
10	AK	38	ASN	C-N-CA	6.92	126.96	119.90
16	AQ	59	ILE	CA-C-N	-6.92	113.89	123.10
16	AQ	59	ILE	C-N-CA	-6.92	113.89	123.10
1	CB	188	ALA	N-CA-C	6.88	117.73	108.23
24	BC	174	ALA	CA-C-N	6.88	128.44	119.84
24	BC	174	ALA	C-N-CA	6.88	128.44	119.84
28	DG	114	ILE	O-C-N	-6.85	114.00	122.57
20	CA	1491	G	C4'-C3'-O3'	6.82	123.23	113.00
47	D3	40	THR	CA-C-N	6.82	128.37	119.84
47	D3	40	THR	C-N-CA	6.82	128.37	119.84
23	AY	517	LEU	CA-C-N	6.80	128.35	119.84
23	AY	517	LEU	C-N-CA	6.80	128.35	119.84
6	CG	150	ALA	N-CA-C	-6.80	104.45	112.89
37	DS	103	GLU	N-CA-C	-6.79	103.57	110.97
11	AL	44	THR	CA-C-N	6.79	128.32	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	AL	44	THR	C-N-CA	6.79	128.32	119.84
26	BE	61	ARG	CA-C-N	-6.78	111.37	119.84
26	BE	61	ARG	C-N-CA	-6.78	111.37	119.84
3	CD	27	TYR	N-CA-C	-6.74	104.62	114.39
23	CY	130	VAL	CA-C-N	6.74	127.74	120.13
23	CY	130	VAL	C-N-CA	6.74	127.74	120.13
26	BE	23	VAL	N-CA-C	6.72	117.15	106.32
56	D1	42	GLN	N-CA-C	6.72	118.73	108.52
44	BZ	94	GLU	CA-C-N	6.72	128.24	119.84
44	BZ	94	GLU	C-N-CA	6.72	128.24	119.84
37	BS	97	ARG	N-CA-C	-6.70	102.64	111.02
41	DW	13	SER	CA-C-N	6.70	128.21	119.84
41	DW	13	SER	C-N-CA	6.70	128.21	119.84
49	D6	24	GLU	N-CA-C	6.67	116.86	108.45
32	DN	51	PHE	N-CA-C	-6.67	100.61	110.48
37	BS	16	ASN	N-CA-C	-6.67	104.25	112.38
11	AL	60	LEU	CB-CA-C	-6.66	108.88	116.54
37	BS	49	VAL	N-CA-C	6.66	116.31	106.85
56	D1	39	LYS	N-CA-C	6.66	119.20	109.07
56	D1	33	LYS	N-CA-C	-6.66	102.49	112.54
32	BN	51	PHE	N-CA-C	-6.65	100.64	110.48
1	AB	16	HIS	N-CA-C	6.61	119.11	109.07
13	AN	53	LEU	CA-C-N	6.60	128.82	120.51
13	AN	53	LEU	C-N-CA	6.60	128.82	120.51
26	DE	125	GLY	CA-C-N	6.60	128.09	119.84
26	DE	125	GLY	C-N-CA	6.60	128.09	119.84
27	BF	6	VAL	N-CA-C	-6.59	104.09	110.42
5	AF	50	TYR	CA-C-N	6.59	128.08	119.84
5	AF	50	TYR	C-N-CA	6.59	128.08	119.84
11	CL	66	VAL	N-CA-C	6.59	123.04	109.34
34	DP	142	GLY	N-CA-C	6.55	118.97	110.45
1	AB	187	LEU	N-CA-C	6.54	119.81	108.76
2	CC	76	VAL	N-CA-C	-6.54	106.93	113.20
27	BF	156	LEU	CA-C-N	-6.53	112.10	120.98
27	BF	156	LEU	C-N-CA	-6.53	112.10	120.98
24	DC	220	GLY	CA-C-N	6.52	127.99	119.84
24	DC	220	GLY	C-N-CA	6.52	127.99	119.84
31	BK	86	LYS	N-CA-C	-6.52	105.86	113.88
35	DQ	104	PHE	N-CA-C	6.51	118.97	109.07
46	D2	17	SER	CA-C-N	6.51	127.97	119.84
46	D2	17	SER	C-N-CA	6.51	127.97	119.84
34	DP	53	GLY	N-CA-C	-6.50	105.94	115.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AE	48	ALA	N-CA-C	6.49	116.48	108.11
24	BC	140	ASN	CA-C-N	6.49	127.95	119.84
24	BC	140	ASN	C-N-CA	6.49	127.95	119.84
38	BT	130	ALA	N-CA-C	-6.48	105.34	113.18
1	CB	161	ALA	CA-C-N	-6.47	110.32	121.97
1	CB	161	ALA	C-N-CA	-6.47	110.32	121.97
37	BS	99	LYS	N-CA-C	-6.46	103.36	111.11
43	BY	17	SER	CA-C-O	6.45	122.39	118.33
36	BR	34	ILE	N-CA-C	6.43	117.55	108.17
29	DH	116	GLU	CA-C-N	6.42	127.00	120.38
29	DH	116	GLU	C-N-CA	6.42	127.00	120.38
46	B2	17	SER	CA-C-N	6.42	127.87	119.84
46	B2	17	SER	C-N-CA	6.42	127.87	119.84
18	CS	49	ILE	CB-CA-C	-6.42	104.99	111.80
23	AY	534	ILE	CA-C-N	6.41	126.43	119.89
23	AY	534	ILE	C-N-CA	6.41	126.43	119.89
27	DF	156	LEU	N-CA-C	-6.41	102.14	111.30
11	AL	105	TYR	N-CA-C	-6.41	105.39	113.72
41	BW	13	SER	CA-C-N	6.40	127.84	119.84
41	BW	13	SER	C-N-CA	6.40	127.84	119.84
11	CL	93	LEU	CA-C-N	6.40	127.83	119.84
11	CL	93	LEU	C-N-CA	6.40	127.83	119.84
43	DY	40	GLU	N-CA-C	-6.39	103.66	112.03
33	BO	71	ARG	CA-C-N	6.33	127.76	119.84
33	BO	71	ARG	C-N-CA	6.33	127.76	119.84
26	DE	23	VAL	N-CA-C	6.33	117.14	107.77
28	DG	52	ILE	N-CA-C	-6.33	103.73	113.16
56	B1	14	VAL	N-CA-C	6.32	117.58	108.48
43	BY	17	SER	CB-CA-C	-6.32	107.25	116.53
23	AY	551	GLN	N-CA-C	-6.30	105.73	113.41
37	DS	107	GLU	N-CA-C	-6.30	105.18	112.86
23	AY	132	ARG	N-CA-C	6.28	118.73	109.24
25	BD	88	ARG	N-CA-C	6.28	115.72	108.49
23	CY	612	THR	CA-C-N	6.28	126.23	119.76
23	CY	612	THR	C-N-CA	6.28	126.23	119.76
23	AY	614	GLU	N-CA-C	6.28	117.79	111.07
44	DZ	158	PRO	CA-C-N	6.26	127.67	119.84
44	DZ	158	PRO	C-N-CA	6.26	127.67	119.84
1	AB	161	ALA	CA-C-N	-6.25	110.71	121.97
1	AB	161	ALA	C-N-CA	-6.25	110.71	121.97
1	CB	187	LEU	N-CA-C	6.25	119.76	108.69
27	BF	29	ASN	CA-C-N	6.24	125.73	119.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	BF	29	ASN	C-N-CA	6.24	125.73	119.24
56	B1	41	ARG	N-CA-C	6.24	117.89	108.46
24	DC	15	VAL	N-CA-C	6.24	117.02	110.72
25	DD	85	ASP	CA-C-N	6.20	126.10	119.28
25	DD	85	ASP	C-N-CA	6.20	126.10	119.28
44	DZ	14	LYS	CA-C-N	6.20	125.69	119.24
44	DZ	14	LYS	C-N-CA	6.20	125.69	119.24
23	CY	280	LEU	CA-C-N	6.18	126.53	119.92
23	CY	280	LEU	C-N-CA	6.18	126.53	119.92
33	BO	100	GLY	CA-C-N	6.17	126.12	119.76
33	BO	100	GLY	C-N-CA	6.17	126.12	119.76
56	B1	42	GLN	N-CA-C	6.17	118.12	107.93
16	AQ	44	ALA	CA-C-N	-6.16	114.58	122.77
16	AQ	44	ALA	C-N-CA	-6.16	114.58	122.77
24	BC	62	THR	CB-CA-C	-6.14	102.98	112.07
8	CI	59	PHE	N-CA-C	6.13	119.55	108.69
24	DC	147	GLY	N-CA-C	6.13	118.42	110.45
31	BK	78	ILE	N-CA-C	-6.11	107.55	113.53
38	DT	130	ALA	N-CA-C	-6.10	105.84	113.28
24	DC	150	ILE	N-CA-C	-6.10	106.78	113.43
25	BD	227	ASN	N-CA-C	6.09	113.49	108.07
48	B5	40	LYS	CA-C-N	-6.07	114.13	120.38
48	B5	40	LYS	C-N-CA	-6.07	114.13	120.38
43	BY	55	TYR	CA-C-N	6.06	127.41	119.84
43	BY	55	TYR	C-N-CA	6.06	127.41	119.84
23	AY	647	VAL	CA-C-N	6.04	127.39	119.84
23	AY	647	VAL	C-N-CA	6.04	127.39	119.84
32	BN	80	GLY	N-CA-C	-6.03	105.79	115.08
25	BD	35	LYS	CA-C-N	6.01	127.35	119.84
25	BD	35	LYS	C-N-CA	6.01	127.35	119.84
25	BD	218	ARG	CA-C-N	6.01	127.35	119.84
25	BD	218	ARG	C-N-CA	6.01	127.35	119.84
31	DK	23	VAL	N-CA-C	-6.01	106.64	112.29
32	DN	80	GLY	N-CA-C	-6.00	105.83	115.08
25	BD	75	ILE	CA-C-N	6.00	126.02	119.90
25	BD	75	ILE	C-N-CA	6.00	126.02	119.90
18	AS	41	VAL	CA-C-N	6.00	127.33	119.84
18	AS	41	VAL	C-N-CA	6.00	127.33	119.84
16	CQ	13	ASP	N-CA-C	-5.97	106.03	113.55
11	CL	61	THR	N-CA-C	-5.96	103.39	112.99
6	CG	5	ARG	N-CA-C	5.95	116.14	108.34
11	AL	29	GLY	N-CA-C	-5.95	105.33	115.08

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	DS	99	LYS	N-CA-C	-5.94	103.77	111.02
1	CB	185	ILE	O-C-N	5.93	129.07	122.61
24	DC	182	PRO	N-CA-C	5.92	117.92	110.70
29	BH	56	SER	N-CA-C	5.91	115.65	107.73
38	BT	13	ARG	N-CA-C	-5.91	105.65	112.92
16	CQ	29	HIS	CA-C-N	5.90	127.22	119.84
16	CQ	29	HIS	C-N-CA	5.90	127.22	119.84
18	CS	25	LYS	N-CA-C	-5.89	107.90	114.62
1	AB	180	LEU	N-CA-C	5.89	119.94	112.87
13	AN	37	PHE	N-CA-C	-5.89	106.43	113.97
3	AD	158	ILE	N-CA-C	-5.88	104.89	110.42
49	B6	19	ARG	N-CA-C	5.88	116.70	108.00
25	BD	50	THR	N-CA-C	-5.87	104.61	113.89
15	AP	44	THR	N-CA-C	-5.87	107.11	114.56
56	B1	40	ARG	N-CA-C	5.87	123.30	110.80
6	AG	87	VAL	N-CA-C	5.86	114.58	107.61
18	CS	41	VAL	N-CA-C	5.85	121.52	108.88
24	BC	226	ASN	CA-C-N	5.85	127.16	119.84
24	BC	226	ASN	C-N-CA	5.85	127.16	119.84
26	BE	137	HIS	CA-C-N	5.85	125.47	119.56
26	BE	137	HIS	C-N-CA	5.85	125.47	119.56
4	AE	153	LYS	N-CA-C	-5.84	106.28	113.41
1	AB	185	ILE	O-C-N	5.84	128.97	122.61
26	BE	38	THR	CA-C-N	5.84	127.14	119.84
26	BE	38	THR	C-N-CA	5.84	127.14	119.84
56	D1	43	TYR	CA-C-N	5.79	127.07	119.84
56	D1	43	TYR	C-N-CA	5.79	127.07	119.84
3	CD	171	GLY	CA-C-N	5.76	126.16	119.47
3	CD	171	GLY	C-N-CA	5.76	126.16	119.47
16	CQ	59	ILE	CA-C-N	-5.76	114.98	122.99
16	CQ	59	ILE	C-N-CA	-5.76	114.98	122.99
32	DN	94	HIS	CA-C-N	5.76	125.46	119.64
32	DN	94	HIS	C-N-CA	5.76	125.46	119.64
43	DY	65	ALA	CA-C-N	5.75	127.02	119.84
43	DY	65	ALA	C-N-CA	5.75	127.02	119.84
10	CK	30	VAL	N-CA-C	5.73	116.81	106.61
18	AS	54	GLY	N-CA-C	-5.72	99.62	113.18
23	CY	133	ILE	CA-C-N	-5.72	114.64	122.87
23	CY	133	ILE	C-N-CA	-5.72	114.64	122.87
23	AY	133	ILE	CA-C-N	-5.72	114.64	122.87
23	AY	133	ILE	C-N-CA	-5.72	114.64	122.87
10	CK	64	ALA	N-CA-C	-5.72	105.05	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	BN	94	HIS	CA-C-N	5.71	125.41	119.64
32	BN	94	HIS	C-N-CA	5.71	125.41	119.64
11	AL	36	VAL	CB-CA-C	-5.70	104.55	112.02
38	BT	29	ARG	N-CA-C	5.70	122.95	110.80
24	DC	138	LEU	CA-C-N	5.70	126.96	119.84
24	DC	138	LEU	C-N-CA	5.70	126.96	119.84
3	AD	114	ARG	N-CA-C	5.69	117.96	111.02
24	BC	133	GLY	CA-C-N	5.68	125.80	119.32
24	BC	133	GLY	C-N-CA	5.68	125.80	119.32
14	AO	18	PHE	CA-C-N	5.67	126.93	119.84
14	AO	18	PHE	C-N-CA	5.67	126.93	119.84
56	D1	13	ILE	N-CA-C	5.67	115.84	108.35
1	AB	163	PHE	N-CA-C	-5.67	102.25	110.24
35	DQ	3	MET	N-CA-C	5.67	113.23	108.13
31	DK	115	LEU	CB-CA-C	-5.66	110.03	116.54
2	AC	77	ILE	N-CA-C	-5.66	107.31	112.96
23	CY	204	GLU	N-CA-C	5.64	117.51	111.36
23	CY	132	ARG	N-CA-C	5.64	117.76	109.24
24	DC	181	PHE	CA-C-N	5.63	126.18	120.38
24	DC	181	PHE	C-N-CA	5.63	126.18	120.38
16	CQ	21	VAL	N-CA-C	5.62	116.09	107.77
26	DE	61	ARG	CA-C-N	-5.62	112.72	118.85
26	DE	61	ARG	C-N-CA	-5.62	112.72	118.85
23	AY	162	VAL	O-C-N	5.62	129.04	122.81
23	AY	117	GLN	N-CA-C	-5.61	106.32	114.12
11	AL	49	ASN	N-CA-C	5.61	115.69	108.34
40	DV	15	GLU	CA-C-N	5.60	126.84	119.84
40	DV	15	GLU	C-N-CA	5.60	126.84	119.84
51	D8	32	LEU	CB-CA-C	-5.60	108.36	116.54
24	DC	223	VAL	N-CA-C	5.60	120.98	109.34
20	CA	1491	G	C2'-C3'-O3'	-5.59	105.31	113.70
11	AL	66	VAL	N-CA-C	5.58	120.94	109.34
56	B1	43	TYR	CB-CA-C	5.58	118.11	108.91
10	AK	23	ALA	N-CA-C	5.58	118.31	109.50
24	BC	121	MET	N-CA-C	-5.57	104.22	111.02
12	CM	116	THR	N-CA-C	5.57	118.15	110.35
27	DF	190	GLU	N-CA-C	5.57	122.66	110.80
25	BD	46	GLN	N-CA-C	-5.57	107.49	114.56
48	D5	40	LYS	CA-C-N	-5.56	114.65	120.38
48	D5	40	LYS	C-N-CA	-5.56	114.65	120.38
4	AE	48	ALA	CA-C-N	5.56	126.79	119.84
4	AE	48	ALA	C-N-CA	5.56	126.79	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	CY	614	GLU	N-CA-C	5.55	122.63	110.80
1	CB	163	PHE	CA-C-N	5.55	131.96	121.97
1	CB	163	PHE	C-N-CA	5.55	131.96	121.97
47	D3	11	SER	CA-C-N	5.54	124.89	118.85
47	D3	11	SER	C-N-CA	5.54	124.89	118.85
37	BS	103	GLU	N-CA-C	-5.53	105.16	111.07
24	DC	31	LYS	N-CA-C	-5.52	105.34	111.36
41	BW	73	ALA	N-CA-C	5.52	122.56	110.80
11	AL	26	ALA	N-CA-C	-5.51	105.43	111.82
56	B1	56	GLN	N-CA-C	5.51	115.30	108.19
44	BZ	122	ARG	N-CA-C	-5.50	104.97	110.97
4	CE	48	ALA	CA-C-N	5.50	125.85	119.47
4	CE	48	ALA	C-N-CA	5.50	125.85	119.47
56	B1	13	ILE	CB-CA-C	5.49	120.21	110.71
38	DT	132	LYS	N-CA-C	-5.49	105.37	111.36
12	AM	40	ASN	CA-C-N	5.49	124.68	118.97
12	AM	40	ASN	C-N-CA	5.49	124.68	118.97
44	DZ	94	GLU	CA-C-N	5.49	126.70	119.84
44	DZ	94	GLU	C-N-CA	5.49	126.70	119.84
16	AQ	78	GLU	N-CA-C	5.48	115.78	108.38
23	AY	280	LEU	CA-C-N	5.48	125.75	119.83
23	AY	280	LEU	C-N-CA	5.48	125.75	119.83
17	CR	57	GLY	N-CA-C	-5.47	108.18	114.69
27	BF	153	SER	N-CA-C	5.47	117.79	110.35
23	AY	163	VAL	CB-CA-C	-5.47	104.26	111.70
27	DF	190	GLU	CA-C-N	-5.47	114.81	123.23
27	DF	190	GLU	C-N-CA	-5.47	114.81	123.23
40	BV	5	VAL	N-CA-C	5.46	115.75	108.27
7	CH	66	GLY	CA-C-N	5.46	125.22	119.76
7	CH	66	GLY	C-N-CA	5.46	125.22	119.76
40	DV	96	ILE	N-CA-C	5.45	120.67	109.34
27	BF	190	GLU	CA-C-N	-5.45	114.84	123.23
27	BF	190	GLU	C-N-CA	-5.45	114.84	123.23
10	CK	114	VAL	N-CA-C	5.45	112.52	107.56
28	DG	109	VAL	N-CA-CB	-5.44	101.86	112.75
27	DF	6	VAL	N-CA-C	-5.44	105.67	113.07
23	CY	621	ILE	N-CA-C	-5.44	105.20	110.42
24	DC	41	THR	N-CA-C	5.41	119.43	113.21
38	BT	30	VAL	N-CA-C	5.41	120.59	109.34
39	BU	96	ALA	N-CA-C	-5.39	105.97	112.54
24	BC	148	PHE	N-CA-C	-5.37	107.10	113.97
37	BS	21	THR	N-CA-C	-5.37	106.57	113.01

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	BD	112	GLN	N-CA-C	5.36	116.14	108.74
24	BC	152	GLU	N-CA-C	-5.36	104.85	111.33
23	CY	506	GLN	N-CA-C	5.36	122.20	110.80
2	CC	143	GLU	N-CA-C	-5.35	106.91	113.50
23	AY	166	LEU	CA-C-N	5.35	125.29	119.78
23	AY	166	LEU	C-N-CA	5.35	125.29	119.78
38	DT	30	VAL	N-CA-C	5.34	120.46	109.34
25	BD	97	TYR	N-CA-C	-5.34	100.99	109.96
1	CB	233	SER	CA-C-N	-5.34	114.22	119.99
1	CB	233	SER	C-N-CA	-5.34	114.22	119.99
26	BE	53	PRO	N-CA-C	5.33	123.46	112.47
58	BA	1914	C	N1-C1'-C2'	5.33	120.00	112.00
1	CB	163	PHE	O-C-N	5.33	129.65	122.82
24	BC	147	GLY	N-CA-C	5.33	118.25	110.63
28	BG	52	ILE	N-CA-C	-5.33	105.09	112.50
11	CL	32	PHE	N-CA-C	5.33	122.35	114.09
27	BF	7	TYR	N-CA-C	-5.33	99.45	110.80
34	BP	95	VAL	N-CA-C	5.33	114.46	106.42
23	CY	350	GLU	N-CA-C	5.33	117.58	108.90
58	BA	271(C)	G	P-O3'-C3'	5.32	126.09	119.70
11	CL	29	GLY	N-CA-C	-5.32	106.06	114.10
11	AL	55	VAL	CB-CA-C	-5.31	102.58	111.29
56	B1	19	GLN	N-CA-C	-5.31	99.49	110.80
6	CG	87	VAL	N-CA-C	5.30	113.92	107.61
47	B3	40	THR	CA-C-N	5.29	126.45	119.84
47	B3	40	THR	C-N-CA	5.29	126.45	119.84
23	AY	242	LEU	N-CA-C	-5.29	105.20	110.97
23	CY	163	VAL	CB-CA-C	-5.29	103.28	110.90
56	D1	40	ARG	N-CA-C	5.29	122.07	110.80
2	AC	164	ARG	CA-C-O	5.28	121.00	117.94
38	DT	63	VAL	N-CA-C	5.28	115.46	107.80
3	CD	8	VAL	N-CA-C	5.28	115.55	110.74
15	CP	53	VAL	N-CA-C	5.28	117.65	111.05
32	DN	57	ALA	N-CA-C	-5.28	106.79	113.18
44	DZ	175	VAL	CA-C-N	5.28	125.81	120.38
44	DZ	175	VAL	C-N-CA	5.28	125.81	120.38
23	CY	618	GLY	N-CA-C	-5.27	106.39	112.50
58	BA	1937	A	P-O3'-C3'	5.27	128.10	120.20
37	DS	86	ALA	N-CA-C	5.26	116.62	107.93
25	BD	92	ILE	N-CA-C	5.25	116.87	108.89
40	DV	46	VAL	N-CA-C	5.25	120.26	109.34
4	AE	113	ALA	N-CA-C	-5.25	107.05	113.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	DG	14	GLU	N-CA-C	5.24	117.00	111.28
23	CY	505	GLY	O-C-N	-5.23	115.90	122.70
16	CQ	44	ALA	CA-C-N	-5.22	115.82	122.77
16	CQ	44	ALA	C-N-CA	-5.22	115.82	122.77
32	BN	57	ALA	N-CA-C	-5.22	106.86	113.18
9	AJ	86	MET	N-CA-C	-5.22	107.46	113.88
24	DC	226	ASN	CA-C-N	5.22	126.36	119.84
24	DC	226	ASN	C-N-CA	5.22	126.36	119.84
43	DY	25	GLY	N-CA-C	5.22	119.22	111.18
47	B3	11	SER	N-CA-C	5.21	116.26	109.64
1	CB	185	ILE	CA-C-O	-5.21	115.65	121.23
11	AL	61	THR	N-CA-C	-5.21	104.21	110.88
49	B6	7	ILE	N-CA-C	-5.21	98.51	109.34
24	BC	181	PHE	CA-C-N	5.20	125.74	120.38
24	BC	181	PHE	C-N-CA	5.20	125.74	120.38
25	DD	59	LYS	N-CA-C	5.20	118.01	110.42
43	BY	54	LYS	N-CA-C	5.20	117.03	111.36
11	CL	26	ALA	N-CA-C	-5.20	106.89	113.18
3	CD	196	LEU	CA-C-N	5.19	126.33	119.84
3	CD	196	LEU	C-N-CA	5.19	126.33	119.84
25	DD	274	ARG	N-CA-C	5.19	116.98	110.24
15	CP	83	GLU	CB-CA-C	-5.19	110.61	116.63
24	DC	201	LYS	CA-C-N	5.18	125.19	120.21
24	DC	201	LYS	C-N-CA	5.18	125.19	120.21
23	CY	267	LYS	N-CA-C	5.18	116.85	108.41
23	AY	84	THR	N-CA-C	5.18	121.25	109.81
26	DE	12	THR	N-CA-C	5.18	121.83	110.80
11	AL	54	LYS	CB-CA-C	-5.17	109.06	115.89
49	D6	19	ARG	N-CA-C	5.17	115.66	108.00
1	AB	185	ILE	CA-C-O	-5.17	115.70	121.23
43	BY	81	LYS	CA-C-N	5.17	125.17	119.89
43	BY	81	LYS	C-N-CA	5.17	125.17	119.89
10	CK	23	ALA	N-CA-C	5.17	117.67	109.50
11	CL	35	GLY	N-CA-C	5.16	125.41	113.18
46	B2	68	ARG	N-CA-C	-5.16	106.94	113.18
1	AB	163	PHE	CA-C-N	5.16	131.25	121.97
1	AB	163	PHE	C-N-CA	5.16	131.25	121.97
37	BS	70	GLY	N-CA-C	-5.16	106.52	112.50
2	AC	113	ALA	N-CA-C	5.16	119.95	113.25
24	DC	166	ASN	N-CA-C	5.15	120.43	113.21
31	BK	20	ALA	CA-C-N	5.15	125.68	120.38
31	BK	20	ALA	C-N-CA	5.15	125.68	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	D1	43	TYR	N-CA-C	5.14	116.56	108.23
32	BN	34	LEU	N-CA-C	-5.14	106.11	112.38
35	BQ	90	VAL	N-CA-C	5.14	120.03	109.34
37	BS	40	ILE	N-CA-C	5.13	115.37	107.77
49	B6	8	LYS	N-CA-C	-5.13	106.18	112.90
38	DT	80	SER	N-CA-C	5.12	121.13	109.81
10	AK	30	VAL	N-CA-C	5.12	115.84	107.24
1	CB	158	LEU	CA-C-N	5.12	126.24	119.84
1	CB	158	LEU	C-N-CA	5.12	126.24	119.84
26	DE	176	ILE	CA-C-N	5.12	124.73	119.05
26	DE	176	ILE	C-N-CA	5.12	124.73	119.05
32	DN	78	TYR	N-CA-C	5.11	117.14	110.08
32	DN	34	LEU	N-CA-C	-5.11	106.14	112.38
28	DG	109	VAL	CB-CA-C	5.11	115.56	111.06
16	AQ	27	PHE	N-CA-C	5.10	112.81	108.22
3	CD	16	GLY	N-CA-C	-5.10	109.02	115.08
23	CY	315	LYS	N-CA-C	5.10	118.25	110.20
11	AL	30	ALA	CA-C-N	5.09	126.21	119.84
11	AL	30	ALA	C-N-CA	5.09	126.21	119.84
26	BE	12	THR	N-CA-C	5.09	121.65	110.80
7	AH	3	THR	N-CA-C	-5.09	107.74	114.31
56	B1	54	ALA	CB-CA-C	-5.09	110.69	116.54
1	CB	32	ILE	N-CA-C	5.09	115.29	108.17
3	CD	31	CYS	N-CA-C	-5.09	102.54	109.71
49	B6	24	GLU	N-CA-C	5.08	116.03	108.86
27	BF	195	ASP	N-CA-C	-5.08	103.00	110.52
32	BN	78	TYR	N-CA-C	5.08	117.09	110.08
37	DS	106	ARG	N-CA-C	5.08	121.61	110.80
19	AT	103	GLY	N-CA-C	-5.07	107.66	115.73
27	DF	153	SER	CA-C-N	-5.07	112.84	121.97
27	DF	153	SER	C-N-CA	-5.07	112.84	121.97
16	CQ	6	LEU	N-CA-C	5.07	116.22	108.42
32	DN	85	ILE	N-CA-C	5.07	113.64	107.61
15	AP	83	GLU	CB-CA-C	-5.06	110.34	117.23
24	BC	223	VAL	N-CA-C	5.06	119.87	109.34
44	BZ	176	PRO	CA-C-N	5.06	125.27	120.31
44	BZ	176	PRO	C-N-CA	5.06	125.27	120.31
44	DZ	110	GLY	N-CA-C	-5.06	106.63	112.50
23	CY	162	VAL	CA-C-N	5.05	130.91	122.57
23	CY	162	VAL	C-N-CA	5.05	130.91	122.57
24	BC	46	ALA	CA-C-O	-5.05	114.77	120.32
23	CY	499	ARG	N-CA-C	5.05	117.19	107.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	AA	115	G	C2'-C3'-O3'	5.05	117.07	109.50
32	BN	85	ILE	N-CA-C	5.04	113.61	107.61
11	AL	124	LYS	CA-C-N	5.04	126.14	119.84
11	AL	124	LYS	C-N-CA	5.04	126.14	119.84
56	B1	16	ASN	N-CA-C	-5.04	106.44	112.59
44	BZ	14	LYS	CA-C-N	5.03	125.31	119.47
44	BZ	14	LYS	C-N-CA	5.03	125.31	119.47
26	DE	188	VAL	N-CA-C	5.03	114.45	108.96
1	CB	164	VAL	CB-CA-C	-5.03	103.04	111.29
42	DX	81	VAL	N-CA-C	5.03	115.15	108.11
16	CQ	34	LYS	N-CA-C	5.03	117.76	110.42
34	DP	15	ARG	N-CA-C	5.02	117.13	107.44
3	AD	145	GLU	N-CA-C	5.02	116.21	107.93
28	BG	33	ARG	CB-CA-C	-5.02	109.16	116.53
1	AB	163	PHE	O-C-N	5.01	129.08	122.97
24	DC	62	THR	CB-CA-C	-5.01	104.44	112.05
24	DC	164	PHE	N-CA-C	5.01	117.81	110.30
56	B1	18	ILE	N-CA-C	5.00	119.74	109.34
35	DQ	97	VAL	N-CA-C	5.00	115.51	108.36

There are no chirality outliers.

All (36) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AB	163	PHE	Peptide
1	AB	170	GLU	Peptide
23	AY	133	ILE	Peptide
23	AY	135	PHE	Mainchain
23	AY	499	ARG	Mainchain
23	AY	503	GLY	Mainchain
23	AY	630	GLN	Peptide
56	B1	18	ILE	Peptide
24	BC	171	ALA	Peptide
24	BC	211	ARG	Peptide
25	BD	164	GLN	Peptide
25	BD	95	LEU	Peptide
27	BF	154	VAL	Peptide
27	BF	6	VAL	Peptide
30	BJ	83	UNK	Peptide
37	BS	14	VAL	Peptide
37	BS	98	VAL	Peptide
41	BW	75	TYR	Peptide

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Mol	Chain	Res	Type	Group
1	CB	163	PHE	Peptide
1	CB	170	GLU	Peptide
1	CB	68	ILE	Peptide
11	CL	32	PHE	Peptide
23	CY	133	ILE	Peptide
56	D1	16	ASN	Peptide
56	D1	17	SER	Peptide
24	DC	161	ARG	Peptide
24	DC	171	ALA	Peptide
24	DC	211	ARG	Peptide
27	DF	154	VAL	Peptide
27	DF	173	VAL	Peptide
30	DJ	83	UNK	Peptide
37	DS	14	VAL	Peptide
37	DS	46	VAL	Peptide
37	DS	96	GLY	Peptide
37	DS	98	VAL	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	140	0
1	CB	1910	0	1957	135	0
2	AC	1621	0	1688	89	0
2	CC	1621	0	1688	72	0
3	AD	1703	0	1763	141	0
3	CD	1703	0	1763	109	0
4	AE	1156	0	1213	69	0
4	CE	1156	0	1213	71	0
5	AF	843	0	857	46	0
5	CF	843	0	857	47	0
6	AG	1257	0	1296	49	0
6	CG	1257	0	1296	53	0
7	AH	1116	0	1177	74	0
7	CH	1116	0	1177	73	0
8	AI	1010	0	1037	59	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
8	CI	1010	0	1037	61	0
9	AJ	802	0	849	54	0
9	CJ	802	0	849	50	0
10	AK	885	0	904	56	0
10	CK	885	0	904	55	0
11	AL	976	0	1062	100	0
11	CL	976	0	1062	112	0
12	AM	997	0	1072	56	0
12	CM	997	0	1072	57	0
13	AN	492	0	529	40	0
13	CN	492	0	529	29	0
14	AO	734	0	771	52	0
14	CO	734	0	771	42	0
15	AP	706	0	725	43	0
15	CP	706	0	725	37	0
16	AQ	835	0	904	63	0
16	CQ	835	0	904	66	0
17	AR	574	0	644	35	0
17	CR	574	0	644	44	0
18	AS	634	0	655	38	0
18	CS	634	0	655	47	0
19	AT	763	0	861	44	0
19	CT	763	0	861	44	0
20	AA	32474	0	16393	1065	0
20	CA	32474	0	16393	1060	0
21	AW	1635	0	831	69	0
21	CW	1635	0	831	50	0
22	AV	503	0	252	13	0
22	CV	503	0	252	16	0
23	AY	5219	0	5290	348	0
23	CY	5219	0	5290	333	0
24	BC	1742	0	1798	168	0
24	DC	1742	0	1798	179	0
25	BD	2145	0	2234	220	0
25	DD	2145	0	2234	214	0
26	BE	1569	0	1634	136	0
26	DE	1569	0	1634	145	0
27	BF	1628	0	1680	144	0
27	DF	1628	0	1680	145	0
28	BG	1474	0	1535	99	0
28	DG	1474	0	1535	83	0
29	BH	1274	0	1342	81	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
29	DH	1274	0	1342	70	0
30	BJ	851	0	196	31	0
30	DJ	851	0	196	43	0
31	BK	1035	0	1082	56	0
31	DK	1035	0	1082	54	0
32	BN	1104	0	1179	222	0
32	DN	1104	0	1180	232	0
33	BO	933	0	996	65	0
33	DO	933	0	996	69	0
34	BP	1114	0	1187	95	0
34	DP	1114	0	1187	100	0
35	BQ	1122	0	1179	72	0
35	DQ	1122	0	1179	71	0
36	BR	960	0	1021	76	0
36	DR	960	0	1021	80	0
37	BS	775	0	835	83	0
37	DS	775	0	835	74	0
38	BT	1147	0	1207	109	0
38	DT	1147	0	1207	92	0
39	BU	964	0	1020	95	0
39	DU	964	0	1022	104	1
40	BV	779	0	852	70	0
40	DV	779	0	852	70	0
41	BW	900	0	964	54	0
41	DW	900	0	964	59	0
42	BX	734	0	789	44	0
42	DX	734	0	789	52	0
43	BY	818	0	908	62	0
43	DY	818	0	908	53	0
44	BZ	1473	0	1497	85	0
44	DZ	1473	0	1497	80	0
45	B0	662	0	688	44	0
45	D0	662	0	688	42	0
46	B2	598	0	653	32	0
46	D2	598	0	653	39	0
47	B3	477	0	529	21	0
47	D3	477	0	529	30	0
48	B5	459	0	477	29	0
48	D5	459	0	477	45	0
49	B6	433	0	461	26	0
49	D6	433	0	461	27	0
50	B7	430	0	480	39	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
50	D7	430	0	480	30	0
51	B8	517	0	582	50	0
51	D8	517	0	582	46	0
52	B9	307	0	338	22	0
52	D9	307	0	335	14	0
53	Be	686	0	617	28	0
53	De	686	0	615	15	0
54	Bf	156	0	41	0	0
54	Bg	156	0	38	0	0
54	Df	156	0	42	2	0
54	Dg	156	0	40	1	0
55	Bh	151	0	41	0	0
55	Dh	151	0	40	0	0
56	B1	732	0	808	76	0
56	D1	732	0	808	82	0
57	B4	271	0	284	17	0
57	D4	271	0	284	15	0
58	BA	61997	0	31250	2049	1
58	DA	61997	0	31250	2315	0
59	BB	2551	0	1295	94	0
59	DB	2551	0	1295	96	0
60	AY	37	0	47	13	0
60	CY	37	0	47	10	0
61	AY	28	0	12	6	0
61	CY	28	0	12	5	0
All	All	308068	0	213012	13186	1

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 (13186) 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)
20:CA:1494:G:C5'	58:DA:1913:A:N6	1.79	1.45
32:BN:1:MET:HG2	40:BV:13:ARG:NH1	1.30	1.39
58:BA:2681:C:N4	58:BA:2725:A:H62	1.22	1.35
23:AY:580:MET:CE	58:BA:1913:A:N1	1.91	1.34
32:DN:66:LYS:NZ	58:DA:1140:C:OP2	1.62	1.32
23:AY:580:MET:HE1	58:BA:1913:A:N1	1.43	1.30
23:AY:580:MET:HE1	58:BA:1913:A:C2	1.68	1.27
32:DN:41:ASP:HA	39:DU:64:ARG:NE	1.46	1.27

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DN:41:ASP:CA	39:DU:64:ARG:HE	1.46	1.26
20:CA:1494:G:H5'	58:DA:1913:A:N6	0.93	1.25
58:DA:2681:C:C5	58:DA:2725:A:N6	2.05	1.24
58:BA:2747:G:N2	58:BA:2757:A:H62	1.40	1.19
58:DA:2747:G:N2	58:DA:2757:A:H62	1.39	1.18
58:BA:2681:C:C5	58:BA:2725:A:N6	2.11	1.18
23:CY:504:ARG:HG2	23:CY:505:GLY:H	1.02	1.18
58:DA:1354:A:H62	58:DA:1377:G:N2	1.41	1.17
58:BA:2749:A:H62	58:BA:2753:A:N6	1.43	1.16
58:DA:2747:G:H21	58:DA:2757:A:N6	1.44	1.15
20:CA:815:A:N1	20:CA:1508:G:N2	1.94	1.14
58:DA:1354:A:N6	58:DA:1377:G:H21	1.43	1.14
53:Be:84:LEU:O	53:Be:87:LYS:HG3	1.48	1.14
20:AA:815:A:H2	20:AA:1527:C:O2	1.30	1.13
58:BA:2747:G:H21	58:BA:2757:A:N6	1.44	1.13
32:DN:111:PRO:HD2	58:DA:558:G:P	1.89	1.12
58:BA:2681:C:H41	58:BA:2725:A:N6	1.46	1.12
58:BA:1354:A:H62	58:BA:1377:G:N2	1.48	1.11
32:BN:69:GLN:HE21	58:BA:1022:G:H5"	1.15	1.11
58:BA:2505:G:N2	58:BA:2610:C:H42	1.48	1.09
58:BA:1914:C:C5	58:BA:1915:U:C2	2.40	1.09
58:DA:2681:C:N4	58:DA:2725:A:H62	1.51	1.08
32:BN:39:ARG:HH21	32:BN:41:ASP:HB2	1.13	1.07
23:AY:137:ASN:ND2	23:AY:263:ALA:H	1.52	1.07
58:BA:2749:A:N6	58:BA:2753:A:H61	1.49	1.07
58:DA:1311:G:N2	58:DA:1603:A:H62	1.53	1.07
20:CA:815:A:N6	20:CA:1508:G:H21	1.51	1.07
32:DN:39:ARG:HH21	32:DN:41:ASP:HB2	1.13	1.07
58:DA:1166:C:N4	58:DA:1183:G:H1	1.53	1.06
58:BA:226:G:N2	58:BA:228:A:H62	1.51	1.06
32:BN:1:MET:CG	40:BV:13:ARG:NH1	2.19	1.06
32:BN:69:GLN:NE2	58:BA:1022:G:H5"	1.71	1.06
32:DN:131:GLN:HG3	58:DA:7:G:O2'	1.54	1.06
20:AA:815:A:C2	20:AA:1527:C:O2	2.08	1.05
38:DT:49:VAL:HA	38:DT:63:VAL:HA	1.37	1.05
20:CA:657:G:H1	20:CA:749:C:N4	1.54	1.05
20:CA:612:C:N4	20:CA:628:G:H1	1.55	1.04
58:BA:2681:C:N4	58:BA:2725:A:N6	2.04	1.04
58:BA:2505:G:H22	58:BA:2610:C:N4	1.57	1.03
58:BA:1354:A:N6	58:BA:1377:G:H21	1.55	1.03
20:CA:1494:G:C5'	58:DA:1913:A:H61	1.54	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:2405:G:H21	58:DA:2412:A:N6	1.57	1.02
21:AW:15:G:N2	21:AW:48:C:H42	1.56	1.02
23:CY:504:ARG:CG	23:CY:505:GLY:H	1.73	1.02
58:DA:2023:G:N1	58:DA:2040:C:O2	1.89	1.02
58:DA:1311:G:H21	58:DA:1603:A:N6	1.57	1.02
32:BN:111:PRO:HD2	58:BA:558:G:OP1	1.59	1.01
32:BN:66:LYS:NZ	58:BA:1140:C:OP2	1.93	1.01
32:DN:131:GLN:CG	58:DA:7:G:O2'	2.07	1.01
58:DA:1906:G:H1	58:DA:1924:C:H42	1.07	1.01
32:DN:41:ASP:HA	39:DU:64:ARG:HE	0.97	1.01
58:DA:1345:C:H42	58:DA:1601:G:H1	1.04	1.01
58:DA:2405:G:N2	58:DA:2412:A:H62	1.57	1.01
32:DN:41:ASP:C	39:DU:64:ARG:HE	1.68	1.01
58:DA:2107:C:H42	58:DA:2182:G:H1	1.01	1.00
32:DN:41:ASP:C	39:DU:64:ARG:NE	2.19	1.00
58:DA:1478:G:H1	58:DA:1515:C:N4	1.58	1.00
58:DA:2454:G:H1	58:DA:2498:C:N4	1.59	1.00
20:CA:184:G:H1	20:CA:193:C:N4	1.60	0.99
58:DA:814:C:H42	58:DA:1193:G:H1	1.05	0.99
20:CA:137:C:H42	20:CA:226:G:H1	1.10	0.99
20:CA:522:C:N4	20:CA:527:G:H1	1.59	0.99
58:DA:2065:C:N4	58:DA:2445:G:H1	1.59	0.99
58:DA:2109:U:H3	58:DA:2180:U:H3	1.02	0.99
27:DF:170:LEU:HB3	27:DF:173:VAL:HB	1.44	0.99
58:DA:2699:C:N4	58:DA:2708:G:H1	1.61	0.99
28:DG:113:ARG:O	28:DG:114:ILE:O	1.79	0.99
21:AW:15:G:H22	21:AW:48:C:N4	1.61	0.98
28:BG:113:ARG:O	28:BG:114:ILE:O	1.79	0.98
58:DA:380:U:H3	58:DA:394:A:H61	1.10	0.98
32:DN:42:TRP:H	39:DU:64:ARG:HD2	1.26	0.98
58:DA:946:G:H1	58:DA:971:C:H42	1.04	0.98
58:BA:1019:U:O2	58:BA:1020:A:N7	1.97	0.98
58:DA:459:U:C4	58:DA:470:A:N7	2.32	0.98
58:DA:817:C:N4	58:DA:1190:G:H1	1.60	0.98
58:DA:1039:G:H1	58:DA:1116:C:H42	1.01	0.98
23:AY:137:ASN:HD21	23:AY:263:ALA:N	1.62	0.98
32:DN:69:GLN:HE21	58:DA:1022:G:H5"	1.28	0.98
58:DA:2452:C:N4	58:DA:2504:U:H3	1.61	0.98
58:DA:2459:A:H61	58:DA:2493:U:H3	0.98	0.98
20:CA:1515:C:H42	20:CA:1520:G:H1	1.11	0.97
58:BA:226:G:H21	58:BA:228:A:H62	1.12	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:922:G:H1	20:CA:1395:C:N4	1.63	0.97
20:CA:815:A:H2	20:CA:1527:C:O2	1.46	0.97
32:DN:133:GLN:HG2	32:DN:135:PRO:HD3	1.45	0.97
58:DA:2520:C:H42	58:DA:2545:G:H1	0.98	0.97
58:BA:858:U:H3	58:BA:919:G:H1	1.11	0.97
20:AA:782:A:H62	20:AA:800:G:H21	1.00	0.97
21:AW:50:C:H42	21:AW:64:G:H1	1.04	0.97
30:BJ:54:UNK:HA	30:BJ:79:UNK:HA	1.46	0.97
20:CA:1063:C:N4	20:CA:1193:G:H1	1.63	0.97
58:DA:854:G:H1	58:DA:923:C:H42	1.10	0.96
58:DA:8:A:N1	58:DA:2895:U:O4	1.97	0.96
58:DA:850:C:H42	58:DA:928:G:H1	0.97	0.96
27:BF:170:LEU:HB3	27:BF:173:VAL:HB	1.46	0.96
58:DA:1310:G:H1	58:DA:1604:C:H42	1.09	0.96
58:DA:2681:C:H5	58:DA:2725:A:H61	1.04	0.96
58:BA:2133:G:H21	58:BA:2158:A:H62	1.14	0.96
58:DA:592:G:H1	58:DA:665:C:H42	1.06	0.96
20:CA:68(A):G:H1	20:CA:68(Y):C:H42	1.10	0.96
20:CA:341:C:H42	20:CA:348:G:H1	1.13	0.96
38:BT:49:VAL:HA	38:BT:63:VAL:HA	1.47	0.95
58:BA:2125:G:H21	58:BA:2173:A:H62	1.14	0.95
32:DN:70:LYS:NZ	58:DA:1139:G:P	2.39	0.95
32:BN:133:GLN:HG2	32:BN:135:PRO:HD3	1.45	0.95
58:DA:846:C:H42	58:DA:931:G:H1	0.98	0.95
20:CA:815:A:C2	20:CA:1527:C:O2	2.18	0.95
58:DA:2681:C:H5	58:DA:2725:A:N6	1.51	0.95
58:BA:2681:C:C4	58:BA:2725:A:N6	2.30	0.95
58:DA:57:C:N4	58:DA:70:G:H1	1.64	0.95
32:BN:73:THR:HG22	32:BN:84:LYS:HB3	1.49	0.95
58:BA:1914:C:H2'	58:BA:1915:U:O4'	1.67	0.95
20:AA:612:C:H42	20:AA:628:G:H1	1.15	0.95
30:BJ:25:UNK:HA	30:BJ:80:UNK:HA	1.47	0.95
58:DA:272:G:H1	58:DA:365(A):C:H42	1.09	0.95
58:DA:1442:G:H1	58:DA:1549:C:H42	1.01	0.95
58:DA:1796:U:H3	58:DA:1823:G:H1	1.10	0.95
21:AW:50:C:N4	21:AW:64:G:H1	1.65	0.95
58:BA:1345:C:H42	58:BA:1601:G:H1	1.11	0.95
20:CA:408:A:H2	20:CA:434:U:H3	0.98	0.94
58:DA:1387:C:H42	58:DA:1400:G:H1	1.11	0.94
58:DA:2290:G:H1	58:DA:2342:C:H42	1.06	0.94
58:BA:2459:A:H61	58:BA:2493:U:H3	0.97	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1134:G:H1	20:CA:1140:C:H42	1.13	0.94
32:DN:73:THR:HG22	32:DN:84:LYS:HB3	1.49	0.94
58:BA:1664:A:H61	58:BA:1996:C:N4	1.66	0.94
58:BA:8:A:N1	58:BA:2895:U:O4	1.99	0.94
58:DA:273(G):C:H42	58:DA:363(A):G:H1	1.04	0.94
58:DA:1467:C:H42	58:DA:1525:G:H1	0.95	0.94
58:BA:1782:C:H42	58:BA:2586:C:H42	1.08	0.94
58:BA:582:G:H1	58:BA:1258:C:H42	1.05	0.94
58:BA:2459:A:N6	58:BA:2493:U:H3	1.66	0.94
58:BA:2681:C:H5	58:BA:2725:A:N6	1.58	0.94
20:CA:257:G:H1	20:CA:269:C:H42	1.15	0.94
32:DN:41:ASP:HA	39:DU:64:ARG:CD	1.98	0.94
58:DA:1316:U:H3	58:DA:1336:A:H61	1.08	0.94
58:DA:812:C:H42	58:DA:1195:G:H1	1.11	0.94
32:DN:65:LYS:HZ2	58:DA:1021:A:H5”	1.32	0.94
32:DN:42:TRP:N	39:DU:64:ARG:CD	2.31	0.93
58:DA:599:G:H1	58:DA:658:C:H42	1.10	0.93
20:AA:1413:A:H61	20:AA:1487:G:H1	1.15	0.93
58:BA:1019:U:H3	58:BA:1020:A:N6	1.64	0.93
20:CA:1411:C:H42	20:CA:1489:G:H1	0.97	0.93
58:DA:1305:C:H42	58:DA:1623:G:H1	0.94	0.93
32:DN:41:ASP:OD2	39:DU:100:VAL:HG13	1.68	0.93
32:DN:70:LYS:HZ1	58:DA:1139:G:P	1.91	0.93
58:BA:193:U:H3	58:BA:202:U:H3	1.16	0.93
20:CA:1412:C:H42	20:CA:1488:G:H1	1.05	0.93
58:DA:1487:G:H1	58:DA:1502:C:H42	1.15	0.93
23:AY:580:MET:CE	58:BA:1913:A:C2	2.44	0.93
20:AA:687:A:H62	20:AA:703:G:N2	1.67	0.93
20:AA:815:A:N1	20:AA:1508:G:N2	2.16	0.92
58:BA:226:G:N2	58:BA:228:A:N6	2.16	0.92
58:BA:2505:G:N1	58:BA:2610:C:N3	2.16	0.92
20:CA:68(C):C:N4	20:CA:68(W):G:H1	1.67	0.92
32:DN:42:TRP:H	39:DU:64:ARG:CD	1.82	0.92
32:DN:131:GLN:HG3	58:DA:7:G:HO2’	1.27	0.92
58:DA:2355:C:H42	58:DA:2362:G:H1	1.11	0.92
58:BA:529:A:N6	58:BA:2041:U:H3	1.67	0.92
20:CA:984:C:N4	20:CA:1221:G:H1	1.67	0.92
20:AA:722:A:H61	20:AA:733:A:H61	1.18	0.92
32:DN:91:LEU:HA	32:DN:95:PRO:HB3	1.51	0.92
32:DN:111:PRO:HD2	58:DA:558:G:OP2	1.67	0.92
58:DA:76:C:H42	58:DA:110:G:H1	1.13	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:1664:A:N6	58:BA:1996:C:H42	1.67	0.92
20:CA:406:G:H1	20:CA:436:C:H42	0.99	0.92
20:CA:922:G:H1	20:CA:1395:C:H42	0.97	0.92
58:DA:273(A):G:H1	58:DA:364:C:H42	1.16	0.92
58:DA:1305:C:N4	58:DA:1623:G:H1	1.67	0.92
58:DA:2125:G:H21	58:DA:2173:A:H62	0.94	0.92
21:AW:12:U:H3	21:AW:23:A:H61	1.11	0.92
58:DA:460:A:H62	58:DA:469:G:H21	0.97	0.92
58:DA:1416:G:H1	58:DA:1582:C:H42	1.10	0.92
58:DA:2466:C:N4	58:DA:2484:G:H1	1.68	0.92
58:DA:2699:C:N3	58:DA:2708:G:N2	2.17	0.92
58:BA:1005:C:H42	58:BA:1138:G:H1	0.93	0.92
58:BA:1311:G:N2	58:BA:1603:A:H62	1.68	0.92
59:BB:21:G:H1	59:BB:62:C:H42	1.10	0.92
28:DG:106:LEU:HA	28:DG:110:ALA:HB3	1.51	0.92
32:DN:41:ASP:CA	39:DU:64:ARG:NE	2.14	0.91
27:BF:157:VAL:HG12	27:BF:192:LEU:HA	1.52	0.91
32:BN:15:LEU:HG	32:BN:134:ARG:HE	1.33	0.91
32:DN:15:LEU:HG	32:DN:134:ARG:HE	1.33	0.91
58:BA:460:A:H62	58:BA:469:G:H21	0.92	0.91
37:DS:26:LEU:HD22	37:DS:87:PHE:HA	1.51	0.91
32:BN:41:ASP:HA	39:BU:64:ARG:CG	1.98	0.91
58:DA:47:C:H42	58:DA:178:G:H1	1.01	0.91
58:DA:1855:G:H1	58:DA:1887:C:H42	1.10	0.91
58:DA:1913:A:O2'	58:DA:1914:C:H5'	1.69	0.91
20:AA:1422:G:H5"	33:BO:48:PRO:HB3	1.49	0.91
32:BN:39:ARG:NH2	32:BN:41:ASP:HB2	1.85	0.91
58:DA:1467:C:N4	58:DA:1525:G:H1	1.69	0.91
32:BN:91:LEU:HA	32:BN:95:PRO:HB3	1.50	0.91
20:CA:68(C):C:H42	20:CA:68(W):G:H1	0.95	0.91
3:CD:15:GLU:HA	3:CD:59:ARG:HH22	1.34	0.91
58:DA:1005:C:H42	58:DA:1138:G:H1	1.14	0.91
58:DA:2744:G:H1	58:DA:2760:C:H42	1.17	0.91
33:BO:66:LYS:HG3	58:BA:1665:A:H5"	1.53	0.90
58:DA:2287:A:H62	58:DA:2344:U:H3	0.92	0.90
20:AA:376:G:H1	20:AA:387:U:H3	1.14	0.90
32:BN:15:LEU:HB2	32:BN:134:ARG:HG2	1.53	0.90
50:D7:3:ARG:HG3	58:DA:1613:G:H1'	1.54	0.90
58:DA:401:A:H61	58:DA:422:A:H61	1.17	0.90
20:AA:687:A:N6	20:AA:703:G:H21	1.70	0.90
32:DN:39:ARG:NH2	32:DN:41:ASP:HB2	1.85	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:68(E):G:O6	20:AA:68(U):U:O2	1.88	0.90
58:BA:2284:C:H42	58:BA:2384:G:H1	1.12	0.90
20:CA:947:G:H1	20:CA:1234:C:H42	1.14	0.90
20:CA:406:G:H1	20:CA:436:C:N4	1.70	0.90
58:DA:57:C:H42	58:DA:70:G:H1	0.90	0.90
20:AA:722:A:N6	20:AA:733:A:H61	1.68	0.90
58:BA:1005:C:N4	58:BA:1138:G:H1	1.70	0.90
17:AR:52:PRO:HB3	20:AA:720:C:H5"	1.52	0.89
20:AA:722:A:H61	20:AA:733:A:N6	1.70	0.89
58:BA:1418:G:N2	58:BA:1580:A:H62	1.70	0.89
20:CA:1411:C:N4	20:CA:1489:G:H1	1.70	0.89
32:DN:111:PRO:N	58:DA:558:G:OP1	2.04	0.89
8:AI:4:TYR:HB2	8:AI:19:LEU:HB2	1.53	0.89
58:BA:460:A:H62	58:BA:469:G:N2	1.69	0.89
23:CY:504:ARG:HG2	23:CY:505:GLY:N	1.79	0.89
58:DA:850:C:N4	58:DA:928:G:H1	1.69	0.89
32:BN:41:ASP:HA	39:BU:64:ARG:HG2	1.55	0.89
58:DA:2459:A:N6	58:DA:2493:U:H3	1.71	0.89
20:CA:984:C:H42	20:CA:1221:G:H1	0.93	0.89
58:DA:1417:C:H42	58:DA:1581:G:H1	1.12	0.89
58:BA:2440:C:H5"	58:BA:2587:A:H4'	1.54	0.89
58:BA:2681:C:H5	58:BA:2725:A:H61	0.90	0.89
32:BN:1:MET:CG	40:BV:13:ARG:HH12	1.81	0.89
58:BA:390:A:H4'	58:BA:391:G:H5'	1.55	0.89
58:BA:1418:G:H21	58:BA:1580:A:H62	1.17	0.89
20:CA:1405:G:H1	20:CA:1496:C:H42	1.21	0.89
58:DA:604:G:H1	58:DA:624:C:H42	1.21	0.89
58:DA:1007:C:N3	58:DA:1136:G:O6	2.06	0.89
20:CA:815:A:H61	20:CA:1508:G:H21	0.95	0.89
11:AL:58:VAL:HG12	11:AL:60:LEU:H	1.35	0.88
21:AW:15:G:H22	21:AW:48:C:H42	0.96	0.88
15:CP:80:PHE:HB3	20:CA:458(E):A:H5"	1.54	0.88
32:DN:15:LEU:HB2	32:DN:134:ARG:HG2	1.53	0.88
32:DN:70:LYS:NZ	58:DA:1139:G:OP2	2.06	0.88
25:BD:27:THR:HG23	25:BD:83:GLU:HB3	1.54	0.88
20:CA:200:G:H1	20:CA:217:C:H42	1.22	0.88
60:CY:701:FUA:H201	60:CY:701:FUA:O1	1.71	0.88
32:DN:42:TRP:N	39:DU:64:ARG:HD2	1.88	0.88
20:CA:1124:G:H1	20:CA:1149:C:H42	1.16	0.88
58:BA:686:G:H21	58:BA:788:A:H61	1.14	0.88
20:CA:62:U:H3	20:CA:105:G:H1	1.20	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DN:62:VAL:HG22	32:DN:66:LYS:HG3	1.55	0.88
9:AJ:40:LEU:HD22	9:AJ:41:PRO:HD2	1.56	0.88
58:DA:307:G:N2	58:DA:310:A:OP2	2.05	0.88
58:DA:1309:G:H1	58:DA:1605:C:H42	1.17	0.88
23:AY:580:MET:HE2	58:BA:1913:A:N1	1.89	0.88
58:BA:1019:U:H3	58:BA:1020:A:H62	0.90	0.88
58:DA:2466:C:H42	58:DA:2484:G:H1	0.92	0.88
14:AO:39:LEU:HD12	14:AO:56:LEU:HB2	1.56	0.88
24:DC:46:ALA:HA	24:DC:212:SER:O	1.74	0.88
58:DA:382:G:H1	58:DA:392:C:H42	1.16	0.88
20:CA:1063:C:H42	20:CA:1193:G:H1	0.88	0.87
58:DA:946:G:H1	58:DA:971:C:N4	1.71	0.87
58:DA:1221:C:H42	58:DA:1229:G:H1	1.14	0.87
25:BD:67:PHE:HE1	25:BD:157:ARG:HH11	1.19	0.87
32:BN:42:TRP:CD1	39:BU:63:VAL:HG11	2.08	0.87
32:BN:64:GLY:HA3	58:BA:1141:U:C5	2.09	0.87
58:BA:226:G:C2	58:BA:228:A:N6	2.42	0.87
20:AA:1422:G:H1	20:AA:1478:C:H42	1.21	0.87
24:BC:115:VAL:HA	24:BC:145:THR:HA	1.56	0.87
58:BA:371:A:H61	58:BA:401:A:H3'	1.40	0.87
58:BA:1311:G:H21	58:BA:1603:A:N6	1.72	0.87
58:BA:1664:A:H61	58:BA:1996:C:H42	0.88	0.87
52:D9:30:PRO:HB2	58:DA:2527:C:H5"	1.54	0.87
58:DA:2520:C:N4	58:DA:2545:G:H1	1.72	0.87
42:BX:53:LYS:HB3	42:BX:82:GLN:HB3	1.54	0.87
20:CA:1413:A:H61	20:CA:1487:G:H1	1.22	0.87
9:AJ:51:ARG:HB3	20:AA:1060:C:H4'	1.55	0.87
32:BN:111:PRO:CD	58:BA:558:G:OP1	2.23	0.87
48:B5:3:LYS:HG2	48:B5:5:PRO:HD2	1.55	0.87
58:BA:2520:C:H42	58:BA:2545:G:H1	1.21	0.87
20:CA:198:G:H1	20:CA:219:C:H42	1.20	0.87
58:DA:2023:G:O6	58:DA:2040:C:N3	2.08	0.87
4:CE:50:GLU:HG3	4:CE:52:PRO:HD2	1.55	0.87
20:CA:186(E):C:H42	20:CA:186(L):G:H1	1.22	0.87
20:AA:687:A:H62	20:AA:703:G:H21	0.87	0.87
59:BB:51:G:H21	59:BB:52:A:H62	1.22	0.87
32:DN:111:PRO:CD	58:DA:558:G:OP1	2.22	0.87
38:BT:88:ILE:HG22	38:BT:89:VAL:HG23	1.57	0.86
43:BY:76:CYS:HB3	43:BY:96:ILE:HG13	1.57	0.86
58:BA:1019:U:C2	58:BA:1020:A:N7	2.43	0.86
3:AD:102:ASP:HA	3:AD:121:VAL:HG21	1.58	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BN:1:MET:HG2	40:BV:13:ARG:HH11	1.39	0.86
32:BN:62:VAL:HG22	32:BN:66:LYS:HG3	1.55	0.86
58:BA:1782:C:N4	58:BA:2586:C:H42	1.72	0.86
20:CA:815:A:C6	20:CA:1508:G:N2	2.42	0.86
32:BN:42:TRP:HA	32:BN:48:MET:HE1	1.58	0.86
3:CD:102:ASP:HA	3:CD:121:VAL:HG21	1.56	0.86
11:CL:54:LYS:HD2	11:CL:70:ILE:HG12	1.57	0.86
39:DU:92:ARG:HD2	40:DV:11:GLN:HB2	1.58	0.86
20:CA:184:G:H1	20:CA:193:C:H42	0.86	0.86
23:AY:315:LYS:HB3	23:AY:327:PHE:HD2	1.38	0.86
20:CA:345:C:H3'	38:DT:35:LYS:HZ1	1.39	0.86
58:DA:2699:C:H42	58:DA:2708:G:H1	0.87	0.86
52:B9:30:PRO:HB2	58:BA:2527:C:H5"	1.58	0.86
26:DE:13:ARG:HA	26:DE:21:VAL:O	1.76	0.86
58:BA:2681:C:H41	58:BA:2725:A:H62	0.86	0.86
23:CY:566:THR:HG22	23:CY:567:LEU:H	1.40	0.86
20:AA:815:A:H61	20:AA:1508:G:H21	1.23	0.85
58:BA:141(A):A:H8	58:BA:1595:G:H21	1.20	0.85
58:BA:1429:G:H1	58:BA:1564:C:H42	1.15	0.85
20:CA:1363:A:H4'	20:CA:1364:U:H5"	1.57	0.85
20:AA:520:A:H62	20:AA:529:G:H21	1.24	0.85
58:BA:226:G:H21	58:BA:228:A:N6	1.71	0.85
20:CA:1414:U:H2'	20:CA:1415:G:H8	1.40	0.85
26:DE:111:ARG:H	26:DE:161:GLY:HA3	1.42	0.85
58:DA:1442:G:H1	58:DA:1549:C:N4	1.74	0.85
58:DA:2452:C:H42	58:DA:2504:U:H3	0.86	0.85
43:BY:37:VAL:HG13	43:BY:69:ALA:HA	1.57	0.85
20:CA:611:A:H61	20:CA:629:G:H1	1.19	0.85
24:BC:213:VAL:HG11	24:BC:225:ILE:HG12	1.56	0.85
58:DA:2247:A:H61	58:DA:2257:U:H3	1.24	0.85
20:CA:923:A:H61	20:CA:1393:U:H3	1.25	0.85
58:BA:582:G:H1	58:BA:1258:C:N4	1.75	0.85
58:BA:2080:G:H1	58:BA:2240:C:H42	1.24	0.85
32:DN:41:ASP:CA	39:DU:64:ARG:CD	2.54	0.85
58:DA:460:A:H62	58:DA:469:G:N2	1.74	0.85
58:DA:846:C:N4	58:DA:931:G:H1	1.73	0.85
20:AA:112:G:H1	20:AA:315:A:H61	1.22	0.85
19:CT:74:LYS:HG2	19:CT:75:ASN:H	1.41	0.85
51:D8:53:PRO:HA	51:D8:56:GLU:HB2	1.59	0.85
58:DA:47:C:N4	58:DA:178:G:H1	1.74	0.85
58:DA:1019:U:O2	58:DA:1020:A:N7	2.09	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:2065:C:H42	58:DA:2445:G:H1	0.87	0.85
3:CD:8:VAL:HG11	3:CD:115:ARG:HD3	1.56	0.85
35:BQ:27:VAL:HG12	35:BQ:29:PHE:H	1.40	0.85
28:DG:114:ILE:HG12	28:DG:140:ILE:HD12	1.59	0.85
32:DN:42:TRP:HA	32:DN:48:MET:HE1	1.58	0.85
58:DA:817:C:H42	58:DA:1190:G:H1	0.87	0.85
20:CA:815:A:N6	20:CA:1508:G:N2	2.25	0.84
34:DP:56:SER:HB2	34:DP:59:LEU:HB3	1.57	0.84
38:DT:53:ARG:NH2	38:DT:60:THR:OG1	2.09	0.84
58:BA:1311:G:H21	58:BA:1603:A:H62	0.87	0.84
58:BA:1782:C:H42	58:BA:2586:C:N4	1.75	0.84
32:DN:80:GLY:N	58:DA:1131:G:OP1	2.09	0.84
58:DA:1851:U:H3	58:DA:1891:G:H1	1.25	0.84
58:BA:1541:U:H3'	58:BA:1542:G:H3'	1.60	0.84
20:CA:657:G:N2	20:CA:749:C:N3	2.25	0.84
20:CA:1063:C:N3	20:CA:1193:G:N2	2.26	0.84
58:DA:1462:C:H4'	58:DA:2703:C:H5'	1.56	0.84
58:DA:2125:G:N2	58:DA:2173:A:H62	1.74	0.84
24:BC:138:LEU:HD22	24:BC:139:PRO:HD2	1.59	0.84
58:BA:2744:G:H1	58:BA:2760:C:H42	1.24	0.84
58:DA:1019:U:C2	58:DA:1020:A:N7	2.44	0.84
7:AH:89:PRO:HG2	20:AA:878:G:H5'	1.58	0.84
20:AA:782:A:H62	20:AA:800:G:N2	1.75	0.84
20:AA:1338:G:H21	21:AW:41:A:H1'	1.43	0.84
23:AY:137:ASN:ND2	23:AY:263:ALA:N	2.24	0.84
58:DA:1039:G:H1	58:DA:1116:C:N4	1.74	0.84
58:BA:2396:G:H2'	58:BA:2397:G:H8	1.43	0.84
1:CB:171:ALA:HA	1:CB:174:VAL:HB	1.58	0.84
58:DA:2454:G:N2	58:DA:2498:C:N3	2.23	0.84
37:BS:106:ARG:HE	37:BS:108:GLY:HA2	1.42	0.84
58:DA:1324:G:H1	58:DA:1330:C:H42	1.23	0.84
58:DA:2092:U:OP1	58:DA:2199:A:O2'	1.96	0.84
58:DA:2681:C:N4	58:DA:2725:A:N6	2.26	0.84
58:DA:2838:G:H1	58:DA:2880:C:H42	1.24	0.84
2:AC:154:SER:HB2	20:AA:1057:G:H5"	1.59	0.84
35:BQ:12:GLN:HA	58:BA:910:A:H62	1.42	0.84
20:CA:296:U:H3	20:CA:301:G:H1	1.23	0.84
58:DA:460:A:N6	58:DA:469:G:H21	1.75	0.84
58:DA:1166:C:N3	58:DA:1183:G:N2	2.23	0.84
20:AA:1414:U:H2'	20:AA:1415:G:H8	1.43	0.84
29:DH:109:PHE:HA	58:DA:2666:C:H42	1.42	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:814:C:N4	58:DA:1193:G:H1	1.76	0.84
24:DC:83:LYS:HG3	24:DC:117:THR:HG21	1.60	0.83
58:DA:592:G:H1	58:DA:665:C:N4	1.76	0.83
58:DA:884:C:H42	58:DA:892:G:H1	1.22	0.83
23:AY:608:VAL:HG21	23:AY:652:MET:HE2	1.59	0.83
58:BA:460:A:N6	58:BA:469:G:H21	1.75	0.83
58:DA:1411:C:H42	58:DA:1591:G:H1	1.22	0.83
58:DA:2065:C:N3	58:DA:2445:G:N2	2.25	0.83
20:AA:441:A:H62	20:AA:493:G:H21	1.22	0.83
14:CO:38:ARG:HA	14:CO:38:ARG:HH11	1.43	0.83
24:DC:44:VAL:HB	24:DC:174:ALA:HB3	1.59	0.83
40:BV:24:LYS:HB2	58:BA:1162:G:H4'	1.57	0.83
58:BA:529:A:N7	58:BA:2041:U:O4	2.11	0.83
58:BA:1137:G:N2	58:BA:1138:G:H1'	1.93	0.83
25:DD:164:GLN:O	25:DD:164:GLN:NE2	2.10	0.83
58:DA:2103:C:H42	58:DA:2186:G:H1	1.27	0.83
58:BA:1007:C:H5"	58:BA:1008:C:H2'	1.59	0.83
16:CQ:69:LYS:HG3	20:CA:254:G:H5"	1.61	0.83
29:BH:85:LYS:HD2	29:BH:141:VAL:HG13	1.60	0.83
52:B9:6:SER:HB3	58:BA:2466:C:H5"	1.61	0.83
58:BA:1139:G:O2'	58:BA:1140:C:O4'	1.96	0.83
58:DA:1347:G:H1	58:DA:1599:C:H42	1.23	0.83
23:CY:132:ARG:HH22	23:CY:253:LEU:HA	1.44	0.83
58:DA:858:U:H3	58:DA:919:G:H1	1.26	0.83
58:DA:2464:C:H42	58:DA:2486:G:H1	1.23	0.83
20:CA:128:G:H1	20:CA:233:C:H42	1.26	0.83
34:BP:7:ARG:HG2	58:BA:1203:G:H4'	1.60	0.83
20:CA:68(C):C:N3	20:CA:68(W):G:N2	2.26	0.83
23:CY:88:VAL:HG11	60:CY:701:FUA:H242	1.61	0.83
58:DA:1674:G:H1'	58:DA:1676:A:H62	1.44	0.83
51:B8:22:VAL:HB	51:B8:53:PRO:HB3	1.61	0.82
21:CW:66:C:H2'	21:CW:67:G:H8	1.44	0.82
58:DA:2593:U:H3	58:DA:2600:A:H61	1.25	0.82
23:AY:105:ILE:HD13	23:AY:133:ILE:HD11	1.61	0.82
58:BA:529:A:H62	58:BA:2041:U:H3	0.87	0.82
58:DA:2681:C:H41	58:DA:2725:A:H62	1.27	0.82
25:DD:244:ARG:HA	25:DD:246:PRO:HD3	1.62	0.82
16:CQ:63:ARG:HH21	20:CA:130:A:H5'	1.43	0.82
58:DA:2107:C:N4	58:DA:2182:G:H1	1.77	0.82
58:DA:2293:C:H42	58:DA:2339:G:H1	1.26	0.82
58:DA:2681:C:C4	58:DA:2725:A:N6	2.38	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:104:ARG:O	20:CA:1228:C:N4	2.12	0.82
20:AA:973:G:H3'	20:AA:974:A:H5"	1.60	0.82
20:CA:815:A:H61	20:CA:1508:G:N2	1.76	0.82
20:CA:1414:U:H2'	20:CA:1415:G:C8	2.15	0.82
23:CY:133:ILE:HD12	23:CY:280:LEU:HD21	1.61	0.82
25:DD:9:TYR:HD1	25:DD:10:THR:H	1.27	0.82
26:DE:189:PRO:HA	58:DA:2680:C:H5'	1.61	0.82
32:DN:63:THR:HG21	58:DA:1141:U:OP2	1.78	0.82
58:DA:2287:A:N6	58:DA:2344:U:H3	1.75	0.82
20:CA:862:C:H42	20:CA:867:G:H1	1.28	0.82
58:BA:1028:A:H2'	58:BA:1029:A:C8	2.15	0.82
18:CS:36:ARG:HB2	18:CS:72:GLY:HA3	1.58	0.82
20:CA:1412:C:N4	20:CA:1488:G:H1	1.78	0.82
1:CB:58:ILE:HD11	1:CB:185:ILE:HG21	1.60	0.82
24:DC:138:LEU:HD22	24:DC:139:PRO:HD2	1.61	0.82
27:DF:105:VAL:HG22	58:DA:600:G:H1'	1.62	0.82
58:DA:681:G:H1	58:DA:796:C:H42	1.27	0.82
58:DA:1478:G:H1	58:DA:1515:C:H42	0.83	0.82
25:DD:157:ARG:HH21	58:DA:1818:U:H6	1.26	0.81
28:DG:73:ALA:H	28:DG:87:PRO:HD2	1.45	0.81
2:AC:54:ARG:HB2	2:AC:69:HIS:HB2	1.63	0.81
58:BA:392:C:H5"	58:BA:409:C:H5"	1.61	0.81
23:CY:163:VAL:HG13	23:CY:258:VAL:HB	1.62	0.81
30:DJ:25:UNK:HA	30:DJ:80:UNK:HA	1.60	0.81
58:DA:381:G:H1	58:DA:393:C:H42	1.25	0.81
58:DA:1613:G:H3'	58:DA:1614:A:H5'	1.62	0.81
3:AD:175:SER:HB3	3:AD:184:LYS:HB2	1.63	0.81
6:AG:78:ARG:HB3	6:AG:85:TYR:HB2	1.60	0.81
18:AS:39:THR:HA	18:AS:70:LYS:HA	1.62	0.81
58:BA:863:A:H2'	58:BA:864:G:H8	1.45	0.81
58:BA:1136:G:O2'	58:BA:2038:G:O2'	1.97	0.81
58:BA:2472:G:H21	58:BA:2478:A:H62	1.25	0.81
58:BA:2599:G:H2'	58:BA:2600:A:H8	1.45	0.81
20:CA:657:G:H1	20:CA:749:C:H42	0.86	0.81
58:DA:270(C):A:O2'	58:DA:364:C:O2	1.98	0.81
15:AP:80:PHE:HB3	20:AA:458(E):A:H5"	1.60	0.81
26:BE:63:LEU:HB2	26:BE:65:GLY:H	1.43	0.81
32:BN:125:GLY:HA3	32:BN:126:PRO:O	1.80	0.81
20:CA:1123:A:H2	20:CA:1150:U:H3	1.21	0.81
23:CY:276:VAL:HA	23:CY:280:LEU:HD23	1.62	0.81
28:DG:113:ARG:HA	28:DG:113:ARG:HE	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:Be:63:ILE:HG13	53:Be:70:LYS:HA	1.62	0.81
58:BA:1948:G:H1	58:BA:1958:C:H42	1.26	0.81
23:CY:25:LYS:HB2	61:CY:702:GDP:O2B	1.80	0.81
58:DA:1022:G:O2'	58:DA:1023:U:OP2	1.98	0.81
26:BE:65:GLY:HA2	26:BE:70:ALA:HA	1.61	0.81
28:BG:113:ARG:HA	28:BG:113:ARG:HE	1.45	0.81
20:CA:1255:G:H1	20:CA:1282:C:H42	1.28	0.81
20:CA:1494:G:C4'	58:DA:1913:A:N6	2.44	0.81
36:DR:41:ALA:HB1	36:DR:97:VAL:HG11	1.61	0.81
58:DA:1650:G:H1	58:DA:2007:C:H42	1.26	0.81
3:CD:25:ARG:HG3	3:CD:30:LYS:HE3	1.63	0.81
25:DD:43:ARG:HD3	25:DD:44:ASN:HB3	1.61	0.81
16:AQ:45:HIS:HB3	16:AQ:72:ARG:HA	1.63	0.81
58:BA:612:G:N2	58:BA:616:A:O2'	2.13	0.81
1:AB:184:VAL:H	1:AB:198:ASP:HB2	1.44	0.81
58:BA:1018:C:H2'	58:BA:1019:U:H6	1.44	0.81
58:DA:1914:C:H5	58:DA:1915:U:C2	1.99	0.81
58:DA:2454:G:H1	58:DA:2498:C:H42	0.84	0.81
58:BA:2502:G:H5'	58:BA:2503:A:H5"	1.63	0.80
32:DN:111:PRO:HD2	58:DA:558:G:OP1	1.77	0.80
32:DN:125:GLY:HA3	32:DN:126:PRO:O	1.80	0.80
42:DX:36:LYS:HD3	42:DX:54:VAL:HB	1.62	0.80
58:DA:1914:C:C5	58:DA:1915:U:C2	2.68	0.80
6:AG:57:GLU:HB2	6:AG:60:LYS:HB2	1.63	0.80
60:AY:701:FUA:H201	60:AY:701:FUA:O1	1.80	0.80
56:D1:12:PRO:HA	56:D1:43:TYR:HB2	1.61	0.80
58:DA:599:G:H1	58:DA:658:C:N4	1.79	0.80
26:DE:119:ARG:NH1	26:DE:156:MET:O	2.14	0.80
32:DN:112:LEU:HD23	32:DN:113:GLY:N	1.96	0.80
58:DA:1906:G:H1	58:DA:1924:C:N4	1.79	0.80
20:CA:522:C:H42	20:CA:527:G:H1	0.85	0.80
24:DC:216:THR:HB	24:DC:222:SER:HB3	1.62	0.80
31:DK:130:SER:OG	58:DA:1059:G:N2	2.15	0.80
32:DN:65:LYS:NZ	58:DA:1021:A:C5'	2.45	0.80
58:DA:2681:C:H41	58:DA:2725:A:N6	1.78	0.80
32:BN:39:ARG:HH21	32:BN:41:ASP:CB	1.93	0.80
32:BN:111:PRO:HA	32:BN:114:ARG:NH1	1.97	0.80
11:CL:56:ALA:HB3	11:CL:68:ALA:HB3	1.62	0.80
20:CA:1338:G:H21	21:CW:41:A:H1'	1.46	0.80
38:DT:50:ILE:HG12	38:DT:99:LEU:HB2	1.63	0.80
3:AD:23:GLY:HA3	3:AD:112:VAL:HG22	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DN:76:SER:HB3	58:DA:2641:G:H5"	1.64	0.80
44:DZ:151:HIS:HB3	44:DZ:170:THR:HA	1.63	0.80
58:DA:273(G):C:N4	58:DA:363(A):G:H1	1.79	0.80
58:DA:1416:G:H1	58:DA:1582:C:N4	1.80	0.80
58:BA:83:G:H21	58:BA:103:A:H62	1.28	0.80
20:CA:1493:A:C6	23:CY:580:MET:SD	2.75	0.80
37:DS:106:ARG:HE	37:DS:108:GLY:HA2	1.46	0.80
58:DA:2110:G:H1	58:DA:2179:C:H42	1.25	0.80
16:CQ:22:LEU:HD11	16:CQ:39:SER:HB2	1.64	0.80
23:CY:504:ARG:CG	23:CY:505:GLY:N	2.35	0.80
33:DO:88:ASN:HD21	33:DO:92:GLU:HB2	1.47	0.80
24:BC:79:ALA:HB1	24:BC:83:LYS:HB2	1.62	0.80
25:BD:264:LYS:HD3	25:BD:266:SER:H	1.47	0.80
33:BO:68:GLU:HB3	33:BO:78:ARG:HB2	1.64	0.80
58:BA:2096:U:H3	58:BA:2193:G:H1	1.30	0.80
10:CK:111:ASP:HA	17:CR:84:LYS:HG3	1.64	0.80
56:D1:12:PRO:HA	56:D1:44:PRO:HD2	1.63	0.80
32:BN:112:LEU:HD23	32:BN:113:GLY:N	1.96	0.79
11:CL:80:HIS:O	11:CL:82:VAL:N	2.14	0.79
58:DA:392:C:H5"	58:DA:409:C:H5"	1.64	0.79
58:DA:1270:C:H42	58:DA:2010:G:H1	1.28	0.79
11:AL:35:GLY:HA2	11:AL:58:VAL:HG13	1.63	0.79
58:BA:57:C:H42	58:BA:70:G:H1	1.30	0.79
58:BA:711:G:H1	58:BA:720:C:H42	1.28	0.79
58:BA:2290:G:H1	58:BA:2342:C:H42	1.28	0.79
3:CD:30:LYS:HD3	3:CD:35:ARG:HH11	1.48	0.79
15:CP:5:ARG:HB2	20:CA:376:G:H5"	1.62	0.79
20:CA:726:C:H42	20:CA:731:G:H1	1.29	0.79
8:CI:4:TYR:HB2	8:CI:19:LEU:HB2	1.65	0.79
20:CA:408:A:N1	20:CA:434:U:O4	2.15	0.79
25:DD:3:VAL:H	25:DD:20:ASP:HB2	1.47	0.79
32:DN:55:VAL:HB	32:DN:126:PRO:HB3	1.65	0.79
44:DZ:10:ARG:HD2	44:DZ:36:LYS:HB2	1.65	0.79
53:De:63:ILE:HG22	53:De:64:LEU:H	1.45	0.79
58:DA:558:G:H2'	58:DA:559:G:H8	1.47	0.79
23:AY:25:LYS:HB2	61:AY:702:GDP:O2B	1.82	0.79
25:BD:31:LYS:HE3	25:BD:33:LEU:HB2	1.61	0.79
28:DG:105:LYS:HE3	28:DG:142:PRO:HG2	1.63	0.79
58:DA:2096:U:H3	58:DA:2193:G:H1	1.30	0.79
28:BG:73:ALA:HA	58:BA:2312:U:H5"	1.64	0.79
38:BT:53:ARG:HH22	38:BT:60:THR:HG23	1.47	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:1418:G:H21	58:BA:1580:A:N6	1.79	0.79
25:DD:88:ARG:HE	58:DA:1817:G:H5"	1.48	0.79
58:DA:1047:G:O2'	58:DA:1109:C:N4	2.15	0.79
58:DA:1345:C:N4	58:DA:1601:G:H1	1.78	0.79
27:BF:101:LEU:HD12	27:BF:102:PRO:HD2	1.65	0.79
38:BT:27:THR:HG23	38:BT:28:VAL:H	1.46	0.79
23:CY:190:ASN:HD21	23:CY:195:ASP:H	1.28	0.79
32:DN:65:LYS:HD2	58:DA:1022:G:OP2	1.82	0.79
32:DN:111:PRO:HA	32:DN:114:ARG:NH1	1.97	0.79
34:DP:115:LEU:HD13	58:DA:627:A:H62	1.45	0.79
58:BA:2505:G:H22	58:BA:2610:C:H42	0.81	0.79
40:DV:10:LYS:HZ2	58:DA:994:C:H1'	1.46	0.79
28:BG:76:SER:HA	28:BG:83:ARG:HA	1.65	0.79
31:BK:115:LEU:O	58:BA:1058:G:O2'	2.01	0.79
37:BS:24:LEU:HB3	37:BS:85:VAL:HG12	1.63	0.79
58:BA:307:G:H21	58:BA:330:A:H62	1.31	0.79
34:DP:6:LEU:HG	34:DP:8:PRO:HD2	1.62	0.79
32:DN:120:LEU:HD21	32:DN:122:VAL:HG23	1.64	0.78
20:AA:199:G:H1	20:AA:218:C:H42	1.30	0.78
20:CA:522:C:N3	20:CA:527:G:N2	2.28	0.78
56:D1:86:SER:HB2	56:D1:89:GLU:HB2	1.63	0.78
58:DA:223:A:O2'	58:DA:420:C:O2	1.99	0.78
58:DA:854:G:H1	58:DA:923:C:N4	1.81	0.78
58:DA:1275:A:OP2	58:DA:1646:C:N4	2.16	0.78
20:AA:1495:U:OP2	23:AY:504:ARG:NH1	2.16	0.78
34:BP:64:LYS:HG2	51:B8:25:MET:HE2	1.64	0.78
21:CW:51:A:H61	21:CW:63:C:H42	1.29	0.78
28:DG:42:GLY:O	58:DA:2306:C:N4	2.16	0.78
35:DQ:46:GLN:HG2	35:DQ:126:PRO:HD3	1.66	0.78
20:AA:520:A:N6	20:AA:529:G:H21	1.81	0.78
32:BN:1:MET:HG2	40:BV:13:ARG:HH12	0.95	0.78
58:BA:1614:A:OP1	58:BA:1617:C:N4	2.16	0.78
20:CA:68(A):G:H1	20:CA:68(Y):C:N4	1.81	0.78
23:CY:20:HIS:HB2	23:CY:117:GLN:HB3	1.64	0.78
30:DJ:23:UNK:O	30:DJ:85:UNK:N	2.16	0.78
58:DA:1913:A:O2'	58:DA:1914:C:C5'	2.30	0.78
20:AA:1363:A:H4'	20:AA:1364:U:H5"	1.65	0.78
44:BZ:151:HIS:HB3	44:BZ:170:THR:HA	1.66	0.78
25:DD:147:LEU:HD12	25:DD:155:LEU:HD21	1.64	0.78
37:DS:28:VAL:HG12	37:DS:38:GLN:H	1.48	0.78
58:DA:141(A):A:H8	58:DA:1595:G:H21	1.32	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:169:LYS:O	1:AB:172:ILE:N	2.17	0.78
20:AA:520:A:H62	20:AA:529:G:N2	1.81	0.78
48:B5:36:CYS:SG	48:B5:37:LYS:N	2.56	0.78
51:B8:23:VAL:HG13	51:B8:48:PHE:HA	1.65	0.78
10:CK:62:GLN:HG3	10:CK:97:ALA:HB2	1.65	0.78
45:D0:10:THR:HG22	45:D0:11:ARG:H	1.47	0.78
12:AM:105:THR:O	12:AM:108:ARG:NH2	2.16	0.78
20:AA:1495:U:OP1	23:AY:501:THR:HG21	1.83	0.78
25:BD:136:ILE:O	25:BD:168:ARG:NH2	2.17	0.78
32:BN:55:VAL:HB	32:BN:126:PRO:HB3	1.65	0.78
50:B7:11:LYS:O	50:B7:15:THR:OG1	2.01	0.78
11:AL:89:ARG:HA	11:AL:96:VAL:HB	1.66	0.78
58:BA:1136:G:HO2'	58:BA:2038:G:HO2'	1.24	0.78
38:DT:53:ARG:HH12	38:DT:60:THR:H	1.32	0.78
56:D1:18:ILE:HG12	56:D1:20:ARG:H	1.49	0.78
58:DA:380:U:H3	58:DA:394:A:N6	1.81	0.78
1:AB:178:ARG:NH1	7:AH:71:GLY:O	2.16	0.78
20:AA:33:A:H2	20:AA:551:U:H3	1.30	0.78
23:AY:6:GLU:O	23:AY:11:ARG:NH1	2.17	0.78
2:CC:67:THR:HA	2:CC:102:ASN:HB3	1.66	0.78
11:CL:113:ARG:HE	11:CL:116:SER:H	1.31	0.78
16:CQ:45:HIS:HB3	16:CQ:72:ARG:HG2	1.65	0.78
38:DT:64:ARG:HG2	38:DT:102:ILE:HD11	1.65	0.78
16:AQ:22:LEU:HD11	16:AQ:39:SER:HB2	1.65	0.78
20:AA:1065:U:H4'	20:AA:1066:C:H5"	1.64	0.78
56:B1:14:VAL:HG13	56:B1:41:ARG:HD2	1.66	0.78
58:BA:1511:A:H2'	58:BA:1512:G:C8	2.18	0.78
58:BA:2037:G:H2'	58:BA:2038:G:C8	2.19	0.78
51:B8:62:LEU:HD13	58:BA:242:G:H5"	1.66	0.77
58:DA:19:C:H42	58:DA:521:G:H1	1.31	0.77
10:AK:32:ILE:HD13	10:AK:72:ALA:HB2	1.65	0.77
12:AM:114:ARG:HB3	20:AA:1228:C:H5"	1.64	0.77
58:BA:863:A:H2'	58:BA:864:G:C8	2.19	0.77
20:CA:612:C:H42	20:CA:628:G:H1	0.81	0.77
41:DW:76:VAL:HG23	41:DW:103:ILE:HG13	1.65	0.77
3:AD:145:GLU:HG2	3:AD:182:LYS:HG2	1.64	0.77
10:AK:118:GLY:HA2	20:AA:716:A:H1'	1.66	0.77
20:AA:1321:C:H3'	20:AA:1322:C:H5"	1.66	0.77
58:BA:840:C:OP2	58:BA:932:G:N2	2.17	0.77
20:CA:1100:C:N4	20:CA:1103:C:OP1	2.17	0.77
39:DU:10:ARG:NH1	58:DA:583:G:OP2	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1614:A:OP1	58:DA:1617:C:N4	2.18	0.77
3:AD:108:LEU:HD21	3:AD:183:GLY:HA3	1.67	0.77
20:AA:483:C:H3'	20:AA:484:G:H2'	1.66	0.77
32:BN:120:LEU:HD21	32:BN:122:VAL:HG23	1.64	0.77
34:BP:6:LEU:HG	34:BP:8:PRO:HD2	1.65	0.77
11:CL:89:ARG:HA	11:CL:96:VAL:HB	1.66	0.77
24:DC:79:ALA:HB1	24:DC:83:LYS:HB2	1.65	0.77
32:DN:28:THR:HA	32:DN:106:MET:HE1	1.66	0.77
34:DP:50:ARG:HB2	34:DP:57:THR:HB	1.65	0.77
58:DA:2290:G:H1	58:DA:2342:C:N4	1.81	0.77
36:BR:41:ALA:HB1	36:BR:97:VAL:HG11	1.65	0.77
58:BA:1650:G:H1	58:BA:2007:C:H42	1.29	0.77
20:CA:930:C:H42	20:CA:1387:G:H1	1.32	0.77
25:DD:180:GLY:HA3	25:DD:275:LYS:HB3	1.65	0.77
32:DN:39:ARG:HH21	32:DN:41:ASP:CB	1.93	0.77
32:BN:28:THR:HA	32:BN:106:MET:HE1	1.66	0.77
58:BA:1792:G:H1	58:BA:1827:C:H42	1.32	0.77
24:DC:37:LYS:HE3	58:DA:2127:G:H4'	1.66	0.77
37:DS:70:GLY:HA3	37:DS:99:LYS:HG3	1.65	0.77
58:DA:273(A):G:H1	58:DA:364:C:N4	1.82	0.77
58:DA:1443:G:H1	58:DA:1548:C:H42	1.30	0.77
3:AD:136:PRO:HD2	20:AA:403:C:H5"	1.65	0.77
58:BA:1802:A:C8	58:BA:1815:A:N6	2.53	0.77
32:DN:65:LYS:HZ2	58:DA:1021:A:C5'	1.97	0.77
56:D1:63:ALA:HB3	56:D1:66:HIS:HB2	1.64	0.77
58:DA:1801:G:N2	58:DA:2207:C:O2'	2.16	0.77
21:AW:12:U:H3	21:AW:23:A:N6	1.82	0.77
8:AI:113:LYS:H	8:AI:119:ALA:HA	1.49	0.77
23:AY:605:ILE:HG13	23:AY:648:PRO:HA	1.65	0.77
36:BR:68:ARG:HH21	58:BA:2707:G:H5"	1.50	0.77
58:BA:307:G:N2	58:BA:310:A:OP2	2.18	0.77
2:CC:19:GLU:O	2:CC:40:ARG:NH2	2.17	0.77
11:CL:58:VAL:HG12	11:CL:60:LEU:H	1.50	0.77
11:CL:85:ILE:HG23	11:CL:98:TYR:HB3	1.67	0.77
58:DA:193:U:H3	58:DA:202:U:H3	1.33	0.77
43:BY:79:CYS:SG	43:BY:80:GLY:N	2.58	0.77
20:CA:587:G:N2	20:CA:754:C:OP2	2.17	0.77
58:DA:859:G:N2	58:DA:917:A:OP2	2.14	0.77
58:DA:1980:G:O2'	58:DA:1982:C:OP2	2.03	0.77
23:AY:139:MET:HB2	23:AY:262:SER:HB2	1.67	0.76
40:BV:19:LYS:HB3	40:BV:96:ILE:HD11	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:43:LEU:HB3	16:CQ:69:LYS:HE3	1.65	0.76
20:CA:137:C:N4	20:CA:226:G:H1	1.82	0.76
26:DE:61:ARG:HB2	26:DE:62:PRO:HD3	1.65	0.76
58:DA:1416:G:N2	58:DA:1582:C:N3	2.32	0.76
58:DA:1417:C:N4	58:DA:1581:G:H1	1.82	0.76
40:BV:96:ILE:HG22	40:BV:97:LYS:H	1.51	0.76
57:B4:15:ILE:H	57:B4:32:TYR:HB3	1.51	0.76
58:BA:404:C:H4'	58:BA:405:U:H5'	1.65	0.76
20:CA:816:A:H5'	20:CA:817:C:H2'	1.66	0.76
20:CA:956:U:O2	20:CA:960:U:O2	2.04	0.76
58:DA:1310:G:H1	58:DA:1604:C:N4	1.82	0.76
58:DA:1540:G:C2	58:DA:1541:U:H1'	2.21	0.76
11:AL:93:LEU:O	11:AL:95:GLY:N	2.19	0.76
27:BF:171:PRO:HB3	58:BA:323:G:C8	2.20	0.76
25:DD:244:ARG:HG2	25:DD:245:PRO:HA	1.66	0.76
41:DW:20:VAL:HG21	41:DW:43:GLY:HA3	1.65	0.76
58:DA:1083:U:O2'	58:DA:1085:A:N7	2.17	0.76
23:AY:231:TYR:OH	53:Be:87:LYS:O	2.00	0.76
23:AY:314:PHE:HZ	23:AY:329:ARG:HB3	1.50	0.76
27:BF:62:ARG:HH21	27:BF:64:ILE:HA	1.48	0.76
30:BJ:52:UNK:HA	30:BJ:81:UNK:HA	1.67	0.76
40:BV:39:LEU:HD12	40:BV:47:VAL:HG21	1.66	0.76
51:B8:53:PRO:HA	51:B8:56:GLU:HB2	1.67	0.76
58:DA:1019:U:H3	58:DA:1020:A:H62	1.30	0.76
40:BV:55:ALA:HB1	40:BV:101:GLY:HA2	1.67	0.76
23:CY:606:MET:HG3	23:CY:649:LEU:HD21	1.68	0.76
26:DE:65:GLY:HA2	26:DE:70:ALA:HA	1.66	0.76
58:DA:659:C:H2'	58:DA:660:G:H8	1.49	0.76
58:DA:1939:U:OP1	58:DA:2604:U:O2'	2.04	0.76
58:DA:2520:C:N3	58:DA:2545:G:N2	2.31	0.76
2:AC:82:GLU:HG3	2:AC:85:ARG:HH21	1.51	0.76
23:AY:517:LEU:HG	23:AY:518:PRO:HD2	1.67	0.76
26:BE:119:ARG:NH1	26:BE:156:MET:O	2.18	0.76
27:BF:154:VAL:HG23	27:BF:173:VAL:HG22	1.66	0.76
58:BA:2133:G:N2	58:BA:2158:A:H62	1.83	0.76
48:D5:36:CYS:SG	48:D5:37:LYS:N	2.57	0.76
1:AB:204:ASN:HD21	1:AB:206:ASP:HB2	1.48	0.76
3:AD:19:LEU:HB3	3:AD:67:ILE:HD13	1.67	0.76
11:AL:56:ALA:HB3	11:AL:68:ALA:HB3	1.66	0.76
20:CA:299:G:N2	20:CA:566:G:O6	2.18	0.76
37:DS:105:ALA:O	37:DS:107:GLU:N	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:558:G:H2'	58:DA:559:G:C8	2.21	0.76
58:DA:673:C:H42	58:DA:807:U:H3	1.34	0.76
58:DA:2355:C:N4	58:DA:2362:G:H1	1.83	0.76
23:CY:230:LYS:HD3	23:CY:237:PRO:HA	1.67	0.76
40:DV:77:ALA:O	40:DV:79:VAL:N	2.19	0.76
32:BN:15:LEU:HD12	32:BN:136:GLU:HG3	1.68	0.76
35:BQ:5:ARG:NH2	58:BA:871:U:OP1	2.19	0.76
24:DC:115:VAL:HA	24:DC:145:THR:HA	1.66	0.76
32:DN:19:GLU:HA	32:DN:59:LYS:O	1.86	0.76
45:D0:38:VAL:HB	45:D0:59:LEU:HB2	1.67	0.76
58:DA:479:A:H1'	58:DA:481:G:H5"	1.68	0.76
9:AJ:55:LYS:HG2	20:AA:963:G:H21	1.49	0.76
34:BP:66:GLY:HA2	58:BA:2415:G:H4'	1.68	0.76
25:DD:218:ARG:NH2	58:DA:690:G:O3'	2.19	0.76
58:DA:781:A:H2'	58:DA:1777:U:H1'	1.68	0.76
1:AB:19:HIS:HB2	1:AB:204:ASN:HD22	1.52	0.75
3:AD:157:LEU:HA	3:AD:160:GLN:HB2	1.68	0.75
32:BN:19:GLU:HA	32:BN:59:LYS:O	1.86	0.75
39:BU:3:ARG:HB2	58:BA:445:C:H5"	1.69	0.75
39:BU:49:HIS:HA	39:BU:52:ARG:HG2	1.66	0.75
51:B8:5:LYS:NZ	58:BA:253:C:OP2	2.16	0.75
9:CJ:40:LEU:HB3	9:CJ:69:ASN:HB3	1.68	0.75
20:CA:127:G:H1	20:CA:234:C:H42	1.34	0.75
24:DC:40:GLU:HG3	24:DC:218:THR:HB	1.66	0.75
58:DA:871:U:O2	58:DA:906:G:O6	2.04	0.75
58:DA:873:G:H1	58:DA:904:C:H42	1.31	0.75
58:DA:1777:U:O4	58:DA:1787:A:N1	2.18	0.75
11:CL:37:CYS:SG	11:CL:38:THR:N	2.59	0.75
58:DA:404:C:H4'	58:DA:405:U:H5'	1.67	0.75
20:AA:1403:C:O2	20:AA:1499:A:N6	2.19	0.75
23:CY:415:PRO:HA	23:CY:474:ALA:HA	1.67	0.75
58:DA:272:G:H1	58:DA:365(A):C:N4	1.82	0.75
58:DA:1792:G:H1	58:DA:1827:C:H42	1.35	0.75
25:BD:244:ARG:HG2	25:BD:245:PRO:HA	1.68	0.75
38:BT:33:LYS:HB2	38:BT:43:GLN:H	1.49	0.75
20:CA:687:A:H62	20:CA:703:G:H21	1.31	0.75
43:DY:97:ARG:NH2	58:DA:300:A:OP1	2.18	0.75
43:DY:102:CYS:SG	43:DY:103:GLY:N	2.60	0.75
56:D1:18:ILE:HG21	58:DA:380:U:H4'	1.69	0.75
58:DA:812:C:N4	58:DA:1195:G:H1	1.84	0.75
59:DB:86:G:H1	59:DB:90:C:H42	1.32	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:497:PHE:HB3	23:AY:508:GLY:H	1.50	0.75
58:BA:1025:G:H1	58:BA:1139:G:H1	1.35	0.75
58:BA:1429:G:H2'	58:BA:1430:C:C6	2.21	0.75
25:BD:51:VAL:HG13	25:BD:52:ARG:H	1.52	0.75
51:B8:2:PRO:HA	58:BA:591:C:H1'	1.67	0.75
58:BA:2284:C:N4	58:BA:2384:G:H1	1.85	0.75
20:CA:987:G:H1	20:CA:1218:C:H42	1.33	0.75
40:DV:7:THR:OG1	40:DV:8:GLY:N	2.18	0.75
58:DA:1279:G:H1	58:DA:1291:C:H42	1.33	0.75
58:DA:1530:G:O6	58:DA:1541:U:O2	2.05	0.75
20:AA:934:C:N3	20:AA:938:A:N1	2.35	0.75
8:CI:96:LEU:HG	8:CI:101:PHE:HB2	1.67	0.75
10:CK:52:GLY:H	10:CK:55:LYS:HE2	1.50	0.75
20:CA:908:A:H2'	20:CA:909:A:H8	1.50	0.75
58:DA:273(G):C:N3	58:DA:363(A):G:N2	2.33	0.75
23:AY:443:HIS:HB2	23:AY:450:ILE:HD11	1.69	0.75
28:BG:42:GLY:O	58:BA:2306:C:N4	2.20	0.75
7:CH:94:TYR:OH	20:CA:597:G:N2	2.20	0.75
56:D1:79:GLY:HA3	58:DA:270(S):G:H1'	1.67	0.75
58:DA:1855:G:H1	58:DA:1887:C:N4	1.83	0.75
58:DA:2024:G:C2	58:DA:2040:C:H1'	2.21	0.75
58:DA:2125:G:H21	58:DA:2173:A:N6	1.78	0.75
11:AL:34:ARG:HG3	11:AL:82:VAL:HG13	1.67	0.75
18:AS:78:ARG:O	18:AS:81:ARG:NH1	2.19	0.75
20:AA:34:C:H2'	20:AA:35:G:C8	2.21	0.75
20:AA:1488:G:H2'	20:AA:1489:G:H8	1.52	0.75
58:BA:19:C:H42	58:BA:521:G:H1	1.32	0.75
20:CA:1003:G:N1	20:CA:1037:C:O2	2.20	0.75
20:CA:1221:G:OP1	20:CA:1320:C:N4	2.19	0.75
25:DD:35:LYS:O	25:DD:37:LEU:N	2.19	0.75
58:DA:1969:A:O2'	58:DA:1972:A:N3	2.20	0.75
58:BA:2505:G:O6	58:BA:2610:C:O2	2.05	0.74
15:CP:72:ARG:NH1	20:CA:452:A:N3	2.34	0.74
20:CA:947:G:H1	20:CA:1234:C:N4	1.84	0.74
25:DD:115:GLN:HE22	25:DD:117:VAL:HG22	1.51	0.74
27:DF:154:VAL:HG23	27:DF:173:VAL:HG22	1.69	0.74
56:D1:81:LYS:HG2	58:DA:270(J):G:H4'	1.69	0.74
10:AK:113:PRO:HB3	20:AA:676:A:H5"	1.67	0.74
20:AA:961:U:O2	20:AA:1201:A:N1	2.20	0.74
58:BA:37:C:H2'	58:BA:38:A:C8	2.22	0.74
20:CA:151:A:H62	20:CA:170:U:H3	1.35	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DK:27:LEU:HD21	31:DK:57:ILE:HD13	1.66	0.74
42:DX:12:VAL:HG11	42:DX:21:PHE:HZ	1.52	0.74
58:DA:390:A:H4'	58:DA:391:G:H5'	1.67	0.74
58:BA:390:A:H5'	58:BA:412:A:H4'	1.69	0.74
59:BB:21:G:H1	59:BB:62:C:N4	1.83	0.74
27:BF:3:GLU:HA	27:BF:24:LEU:H	1.50	0.74
58:BA:2348:U:H3	58:BA:2369:A:H2	1.34	0.74
19:CT:29:LYS:NZ	20:CA:176:C:OP1	2.20	0.74
20:CA:1515:C:N4	20:CA:1520:G:H1	1.85	0.74
42:DX:53:LYS:HB3	42:DX:82:GLN:HB3	1.68	0.74
58:DA:1136:G:O2'	58:DA:2038:G:O2'	2.02	0.74
58:DA:1487:G:H1	58:DA:1502:C:N4	1.85	0.74
58:DA:2653:U:H3'	58:DA:2654:A:H2'	1.68	0.74
31:BK:126:MET:HE3	58:BA:1058:G:H21	1.52	0.74
1:CB:60:ASP:HB3	1:CB:64:ARG:HH22	1.53	0.74
32:DN:42:TRP:CD1	39:DU:63:VAL:HG11	2.21	0.74
45:D0:11:ARG:HH22	58:DA:2278:A:H3'	1.51	0.74
11:AL:15:ARG:HB3	20:AA:562:C:H1'	1.69	0.74
13:AN:41:ARG:HH22	20:AA:973:G:H4'	1.50	0.74
11:CL:35:GLY:HA2	11:CL:58:VAL:HG13	1.67	0.74
20:CA:816:A:OP2	20:CA:1526:G:O2'	2.05	0.74
20:CA:1321:C:H3'	20:CA:1322:C:H5"	1.68	0.74
23:CY:72:CYS:HB3	23:CY:79:ILE:HB	1.69	0.74
32:DN:65:LYS:NZ	58:DA:1021:A:H5"	2.02	0.74
35:DQ:14:ARG:NH1	58:DA:956:G:N7	2.34	0.74
52:D9:25:VAL:HB	52:D9:34:GLN:HB2	1.68	0.74
10:CK:118:GLY:HA2	20:CA:716:A:H1'	1.67	0.74
20:CA:335:C:O2'	20:CA:1433:A:N3	2.21	0.74
20:CA:908:A:H2'	20:CA:909:A:C8	2.23	0.74
23:CY:443:HIS:HD2	23:CY:446:THR:H	1.34	0.74
20:AA:148:G:H1	20:AA:174:C:H42	1.34	0.74
38:BT:47:GLY:HA2	38:BT:65:LYS:HB2	1.69	0.74
12:CM:116:THR:HA	20:CA:1228:C:H4'	1.70	0.74
37:DS:40:ILE:HA	37:DS:47:THR:HA	1.69	0.74
51:D8:42:ARG:HG3	58:DA:2350:C:H5"	1.69	0.74
9:AJ:16:LEU:HD11	9:AJ:70:ARG:HD3	1.67	0.74
14:AO:64:ARG:HH21	20:AA:581:G:H4'	1.52	0.74
24:BC:164:PHE:HA	24:BC:172:ILE:HG13	1.70	0.74
31:BK:72:PRO:O	31:BK:111:LYS:NZ	2.17	0.74
45:B0:11:ARG:HH22	58:BA:2278:A:H3'	1.53	0.74
45:B0:70:GLN:HB3	45:B0:78:TYR:HB2	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BB:24:G:C6	59:BB:56:G:N3	2.56	0.74
25:DD:3:VAL:HG22	25:DD:19:ALA:HA	1.69	0.74
25:DD:136:ILE:O	25:DD:168:ARG:NH2	2.21	0.74
32:DN:15:LEU:HD12	32:DN:136:GLU:HG3	1.68	0.74
34:DP:16:ARG:O	58:DA:661:C:O2'	2.04	0.74
58:DA:291:C:H42	58:DA:349:G:H1	1.36	0.74
58:DA:575:A:OP2	58:DA:2499:C:O2'	2.06	0.74
58:DA:2818:G:H1	58:DA:2828:C:H42	1.34	0.74
14:AO:82:ILE:HB	14:AO:87:ILE:HG12	1.70	0.74
18:AS:36:ARG:HH22	18:AS:75:ALA:HB3	1.51	0.74
23:AY:110:SER:HB3	23:AY:144:ALA:HA	1.69	0.74
24:BC:16:ASP:O	24:BC:18:ASN:N	2.20	0.74
24:BC:120:VAL:O	24:BC:124:VAL:N	2.14	0.74
28:BG:43:LEU:HD13	58:BA:2305:A:H61	1.53	0.74
44:BZ:5:LEU:HD11	44:BZ:44:PHE:HA	1.68	0.74
58:BA:2469:A:H61	58:BA:2481:G:H1'	1.51	0.74
20:CA:1134:G:H1	20:CA:1140:C:N4	1.86	0.74
33:DO:66:LYS:HG3	58:DA:1665:A:H5"	1.69	0.74
17:AR:68:LYS:HB3	17:AR:72:ARG:HH21	1.53	0.73
44:BZ:99:TYR:HB3	44:BZ:123:ASP:HB2	1.70	0.73
47:B3:15:TYR:OH	58:BA:987:G:OP1	2.06	0.73
20:CA:1494:G:H5'	58:DA:1913:A:H62	0.93	0.73
23:CY:18:ALA:HB2	23:CY:85:PRO:HD2	1.70	0.73
32:DN:45:ASN:HD22	32:DN:45:ASN:H	1.35	0.73
58:DA:568:U:N3	58:DA:571:A:OP2	2.21	0.73
58:DA:685:A:H5"	58:DA:774:A:H61	1.52	0.73
1:AB:108:ILE:HA	1:AB:111:ARG:HG3	1.69	0.73
3:AD:26:CYS:HA	3:AD:31:CYS:HA	1.70	0.73
32:BN:41:ASP:N	39:BU:64:ARG:HD2	1.74	0.73
41:BW:27:LYS:H	41:BW:71:VAL:HB	1.52	0.73
56:B1:17:SER:O	56:B1:18:ILE:HB	1.88	0.73
58:BA:479:A:H1'	58:BA:481:G:H5"	1.70	0.73
58:BA:1270:C:H5"	58:BA:1271:G:H5"	1.70	0.73
1:CB:69:LEU:HB3	1:CB:162:ILE:HG13	1.70	0.73
20:CA:501:C:H2'	20:CA:502:G:H8	1.52	0.73
58:DA:2130:U:O2'	58:DA:2158:A:N1	2.20	0.73
20:AA:815:A:N6	20:AA:1508:G:H21	1.86	0.73
60:AY:701:FUA:H202	60:AY:701:FUA:H5	1.69	0.73
25:BD:258:LYS:HG3	58:BA:1797:C:H5"	1.70	0.73
39:BU:92:ARG:HD2	40:BV:11:GLN:HB2	1.70	0.73
41:BW:68:ARG:HB3	41:BW:110:LYS:H	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:B4:13:ARG:O	57:B4:14:ILE:HG13	1.87	0.73
58:BA:659:C:H2'	58:BA:660:G:H8	1.54	0.73
58:BA:1345:C:N4	58:BA:1601:G:H1	1.85	0.73
58:BA:2185:C:H2'	58:BA:2186:G:C8	2.23	0.73
11:CL:8:ASN:ND2	20:CA:880:C:OP1	2.21	0.73
20:CA:922:G:N2	20:CA:1395:C:N3	2.34	0.73
32:DN:41:ASP:CA	39:DU:64:ARG:HD2	2.18	0.73
40:DV:35:LEU:HB2	40:DV:57:VAL:HG13	1.67	0.73
58:DA:448:U:O4	58:DA:582:G:N2	2.19	0.73
58:DA:1231:G:H2'	58:DA:1232:G:C8	2.23	0.73
58:DA:1316:U:H3	58:DA:1336:A:N6	1.85	0.73
58:DA:1387:C:N4	58:DA:1400:G:H1	1.84	0.73
23:AY:276:VAL:HA	23:AY:280:LEU:HD23	1.70	0.73
24:BC:51:ASP:O	24:BC:53:ARG:N	2.20	0.73
32:BN:45:ASN:HD22	32:BN:45:ASN:H	1.35	0.73
58:BA:528:A:N1	58:BA:2042:A:H2'	2.04	0.73
58:BA:1231:G:H2'	58:BA:1232:G:H8	1.52	0.73
15:CP:30:GLY:HA2	20:CA:309:G:H5"	1.71	0.73
32:DN:69:GLN:NE2	58:DA:1022:G:H5"	2.03	0.73
20:AA:955:U:O2'	20:AA:1227:A:N6	2.20	0.73
32:BN:65:LYS:NZ	58:BA:1021:A:H5'	2.03	0.73
58:BA:2024:G:N2	58:BA:2040:C:H1'	2.03	0.73
8:CI:124:GLN:HE22	20:CA:943:U:H1'	1.52	0.73
20:CA:1537:U:O4	22:CV:8:A:N1	2.21	0.73
58:DA:1478:G:H2'	58:DA:1479:G:H8	1.52	0.73
58:DA:2469:A:H2	58:DA:2481:G:H21	1.34	0.73
19:AT:43:LEU:HB2	19:AT:52:ALA:HB2	1.70	0.73
58:BA:704:G:O2'	58:BA:726:G:N2	2.20	0.73
20:CA:1224:G:O2'	20:CA:1322:C:OP2	2.05	0.73
24:DC:47:LYS:HB3	24:DC:212:SER:HB2	1.71	0.73
32:DN:70:LYS:NZ	58:DA:1139:G:OP1	2.18	0.73
58:DA:1525:G:H2'	58:DA:1526:G:C8	2.22	0.73
20:AA:1290:G:H3'	20:AA:1291:G:H8	1.53	0.73
20:AA:1495:U:P	23:AY:504:ARG:HH11	2.12	0.73
24:BC:132:LEU:HB3	24:BC:137:LEU:HB2	1.71	0.73
44:BZ:15:PRO:HG3	59:BB:76:G:H5"	1.69	0.73
58:BA:2041:U:H2'	58:BA:2042:A:O4'	1.89	0.73
27:DF:171:PRO:HB3	58:DA:323:G:C8	2.24	0.73
42:DX:66:LEU:HB2	42:DX:69:TYR:HB2	1.71	0.73
23:AY:428:LEU:HA	23:AY:431:LEU:HB2	1.68	0.73
38:BT:33:LYS:HD3	38:BT:34:VAL:H	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B6:8:LYS:HA	49:B6:27:LYS:HA	1.68	0.73
53:Be:74:VAL:HG13	53:Be:78:LEU:HD12	1.70	0.73
20:CA:257:G:H1	20:CA:269:C:N4	1.87	0.73
48:D5:20:ARG:HA	48:D5:23:HIS:HB2	1.70	0.73
1:AB:171:ALA:HA	1:AB:174:VAL:HB	1.70	0.73
3:AD:122:ARG:HE	20:AA:403:C:H4'	1.54	0.73
3:AD:187:ARG:NH2	3:AD:193:ASP:OD2	2.21	0.73
23:AY:580:MET:HE1	58:BA:1913:A:H2	1.47	0.73
23:AY:580:MET:SD	58:BA:1913:A:C2	2.82	0.73
37:BS:28:VAL:HG12	37:BS:38:GLN:H	1.54	0.73
56:B1:12:PRO:HA	56:B1:44:PRO:HD2	1.71	0.73
58:BA:2092:U:OP1	58:BA:2199:A:O2'	2.07	0.73
20:CA:1494:G:H5'	58:DA:1913:A:H61	0.92	0.73
49:D6:45:LYS:HB2	58:DA:2371:G:H4'	1.71	0.73
58:DA:612:G:N2	58:DA:616:A:O2'	2.22	0.73
58:DA:1752:C:H42	58:DA:1756:G:H1	1.35	0.73
4:AE:18:ARG:NH2	20:AA:1070:U:OP1	2.21	0.73
7:AH:46:LYS:HB3	7:AH:62:TYR:HB2	1.71	0.73
49:B6:27:LYS:HG3	49:B6:30:THR:HB	1.71	0.73
1:CB:184:VAL:H	1:CB:198:ASP:HB2	1.52	0.73
58:DA:177:G:N2	58:DA:177:G:OP2	2.22	0.73
25:BD:244:ARG:NH1	58:BA:1841:U:O2'	2.17	0.72
29:BH:41:MET:HE1	29:BH:43:VAL:HG13	1.70	0.72
41:BW:20:VAL:HG21	41:BW:43:GLY:HA3	1.69	0.72
11:CL:39:VAL:HG12	11:CL:40:VAL:H	1.53	0.72
20:CA:1281:U:H5"	20:CA:1282:C:H5	1.54	0.72
32:DN:15:LEU:HG	32:DN:134:ARG:NE	2.03	0.72
58:DA:2208:U:H3	58:DA:2216:G:H1	0.78	0.72
24:BC:11:LEU:HD23	24:BC:14:LYS:HD2	1.70	0.72
34:BP:56:SER:HB2	34:BP:59:LEU:HB3	1.70	0.72
39:BU:50:ARG:HH12	40:BV:72:VAL:HA	1.54	0.72
40:BV:40:LEU:HD12	40:BV:46:VAL:HA	1.71	0.72
58:BA:2698:U:H2'	58:BA:2699:C:C6	2.24	0.72
58:DA:2107:C:N3	58:DA:2182:G:N2	2.30	0.72
20:AA:198:G:H1	20:AA:219:C:H42	1.35	0.72
20:AA:584:G:H1	20:AA:757:U:H3	1.36	0.72
26:BE:117:MET:HE3	26:BE:136:ARG:HA	1.70	0.72
33:BO:18:LYS:HB2	33:BO:45:GLU:HB3	1.70	0.72
33:BO:71:ARG:NH2	33:BO:122:LEU:O	2.22	0.72
44:BZ:119:GLU:HB2	44:BZ:122:ARG:HH12	1.55	0.72
58:BA:1660:C:O2'	58:BA:2712:U:O4	2.07	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:D1:19:GLN:NE2	58:DA:2233:U:OP2	2.22	0.72
20:AA:408:A:H2	20:AA:434:U:H3	1.33	0.72
20:AA:1084:G:H3'	20:AA:1085:U:H2'	1.72	0.72
23:AY:408:VAL:HG22	23:AY:454:MET:HA	1.71	0.72
24:BC:169:THR:HG23	24:BC:171:ALA:HB2	1.71	0.72
36:BR:29:LEU:HD12	36:BR:83:ILE:HD13	1.72	0.72
36:BR:31:HIS:HB2	36:BR:34:ILE:HD11	1.70	0.72
42:BX:90:GLU:HA	42:BX:93:GLU:HB2	1.71	0.72
58:BA:2848:G:O2'	58:BA:2867:G:N2	2.21	0.72
1:CB:108:ILE:HA	1:CB:111:ARG:HG3	1.71	0.72
24:DC:51:ASP:O	24:DC:53:ARG:N	2.14	0.72
8:AI:96:LEU:HG	8:AI:101:PHE:HB2	1.70	0.72
10:AK:20:TYR:HB2	10:AK:31:THR:HG23	1.71	0.72
20:AA:1488:G:H2'	20:AA:1489:G:C8	2.24	0.72
58:BA:575:A:OP2	58:BA:2499:C:O2'	2.07	0.72
58:BA:1638:C:H5"	58:BA:2710:C:O2'	1.89	0.72
58:BA:2676:C:H2'	58:BA:2677:G:H8	1.54	0.72
58:DA:1221:C:N4	58:DA:1229:G:H1	1.86	0.72
58:DA:2043:C:OP1	58:DA:2777:G:O2'	2.06	0.72
58:DA:2514:U:H3	58:DA:2570:G:H1	1.36	0.72
7:AH:21:LYS:O	7:AH:23:SER:N	2.22	0.72
20:AA:438:G:O2'	20:AA:494:U:O4	2.06	0.72
24:BC:44:VAL:HB	24:BC:174:ALA:HB3	1.69	0.72
35:BQ:89:ASN:O	35:BQ:91:GLU:N	2.22	0.72
41:BW:76:VAL:HG23	41:BW:103:ILE:HG13	1.69	0.72
18:CS:49:ILE:HB	18:CS:60:VAL:HG13	1.71	0.72
24:DC:33:LEU:HD13	24:DC:221:PRO:HB2	1.71	0.72
25:DD:24:ILE:HG13	25:DD:82:ILE:HB	1.71	0.72
44:DZ:76:LEU:HD22	44:DZ:83:PRO:HA	1.69	0.72
58:DA:2628:C:H1'	58:DA:2781:A:H2'	1.70	0.72
20:AA:1512:U:H2'	20:AA:1513:A:C8	2.25	0.72
58:BA:1005:C:N3	58:BA:1138:G:N2	2.35	0.72
20:CA:890:G:O2'	20:CA:906:G:O6	2.07	0.72
20:CA:1405:G:H1	20:CA:1496:C:N4	1.88	0.72
23:CY:633:GLY:HA3	23:CY:644:ARG:HB2	1.71	0.72
32:DN:63:THR:CG2	58:DA:1141:U:OP2	2.37	0.72
58:DA:2749:A:H62	58:DA:2753:A:H61	1.34	0.72
58:BA:2876:G:H2'	58:BA:2877:G:H8	1.55	0.72
16:CQ:94:ASN:HA	16:CQ:97:SER:HB3	1.72	0.72
29:DH:12:PRO:HG2	29:DH:49:VAL:HG13	1.70	0.72
39:DU:3:ARG:HB2	58:DA:445:C:H5"	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D8:30:ARG:H	51:D8:32:LEU:HD23	1.55	0.72
58:DA:651:G:H2'	58:DA:652:U:H5"	1.71	0.72
58:DA:2284:C:H42	58:DA:2384:G:H1	1.35	0.72
59:DB:40:U:H3'	59:DB:41:U:H5"	1.72	0.72
35:BQ:54:MET:HG2	35:BQ:58:PHE:HE2	1.53	0.72
36:BR:24:GLN:HB2	36:BR:44:LEU:HD11	1.72	0.72
58:BA:1429:G:H1	58:BA:1564:C:N4	1.88	0.72
1:CB:167:PRO:O	1:CB:171:ALA:HB2	1.88	0.72
20:CA:1244:C:H42	20:CA:1293:G:H1	1.38	0.72
33:DO:64:ARG:HB2	33:DO:83:ALA:HB3	1.71	0.72
36:DR:67:LEU:HD21	36:DR:76:VAL:HG11	1.72	0.72
42:DX:40:LYS:HG2	42:DX:51:VAL:HB	1.70	0.72
21:AW:18:G:N2	21:AW:58:A:OP1	2.23	0.72
28:BG:35:GLU:HB2	28:BG:161:THR:HA	1.72	0.72
56:B1:13:ILE:HG13	56:B1:17:SER:HB3	1.72	0.72
30:DJ:52:UNK:HA	30:DJ:81:UNK:HA	1.71	0.72
37:DS:24:LEU:HB3	37:DS:85:VAL:HG12	1.70	0.72
58:DA:733:G:OP2	58:DA:761:A:N6	2.21	0.72
58:DA:817:C:N3	58:DA:1190:G:N2	2.32	0.72
58:DA:883:G:N1	58:DA:893:C:O2	2.18	0.72
20:AA:628:G:H2'	20:AA:629:G:C8	2.25	0.71
37:BS:71:ARG:HE	37:BS:103:GLU:HB3	1.54	0.71
52:B9:23:VAL:HB	52:B9:36:GLN:HG3	1.71	0.71
58:BA:2243:U:H2'	58:BA:2244:U:H6	1.54	0.71
58:BA:2599:G:H2'	58:BA:2600:A:C8	2.25	0.71
20:CA:442:C:H42	20:CA:492:G:H1	1.38	0.71
52:D9:12:ASP:OD1	52:D9:13:LYS:NZ	2.22	0.71
58:DA:2712:U:OP1	58:DA:2714:G:O2'	2.06	0.71
26:BE:8:LYS:HD3	26:BE:192:ASN:HA	1.71	0.71
58:BA:401:A:H61	58:BA:422:A:H61	1.37	0.71
58:BA:2037:G:H2'	58:BA:2038:G:H8	1.54	0.71
8:CI:10:ARG:HD3	8:CI:75:ASP:HB3	1.71	0.71
20:CA:895:G:H1	20:CA:904:C:H42	1.38	0.71
58:DA:1054:A:H2'	58:DA:1055:G:H8	1.54	0.71
58:DA:1628:G:H1	58:DA:1638:C:H42	1.36	0.71
4:AE:82:VAL:HG21	4:AE:138:ALA:HA	1.72	0.71
23:AY:29:THR:HA	23:AY:32:ILE:HB	1.70	0.71
32:BN:35:ARG:HB3	32:BN:42:TRP:HZ3	1.54	0.71
38:BT:65:LYS:HZ2	38:BT:66:VAL:H	1.35	0.71
23:CY:103:GLY:HA3	23:CY:280:LEU:HD12	1.72	0.71
27:DF:154:VAL:HG12	27:DF:156:LEU:HA	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DV:39:LEU:HD12	40:DV:47:VAL:HG21	1.73	0.71
58:DA:1028:A:H2'	58:DA:1029:A:C8	2.25	0.71
38:BT:64:ARG:HD3	38:BT:73:GLU:HG3	1.72	0.71
38:BT:93:ARG:NH2	58:BA:2863:C:OP1	2.23	0.71
1:CB:95:GLN:OE1	1:CB:96:ARG:NH1	2.23	0.71
16:CQ:21:VAL:HB	16:CQ:59:ILE:HD11	1.70	0.71
23:CY:14:ASN:HB3	23:CY:102:ASP:H	1.56	0.71
56:D1:21:ARG:HB3	56:D1:38:SER:HB2	1.73	0.71
58:DA:1441:G:H1	58:DA:1550:C:H42	1.36	0.71
21:AW:66:C:H2'	21:AW:67:G:H8	1.54	0.71
23:AY:137:ASN:HD21	23:AY:263:ALA:H	0.79	0.71
58:BA:2023:G:N1	58:BA:2040:C:O2	2.21	0.71
20:CA:1124:G:H1	20:CA:1149:C:N4	1.89	0.71
23:CY:500:GLN:NE2	23:CY:576:ASP:OD1	2.23	0.71
32:DN:63:THR:HG21	58:DA:1141:U:P	2.29	0.71
35:DQ:11:LYS:HD3	35:DQ:87:LYS:HD3	1.70	0.71
56:D1:37:ILE:HG12	58:DA:200:U:H4'	1.73	0.71
58:DA:1005:C:H2'	58:DA:1006:C:O4'	1.91	0.71
58:DA:1358:G:N1	58:DA:1372:U:OP2	2.23	0.71
58:DA:1511:A:H2'	58:DA:1512:G:C8	2.25	0.71
2:AC:58:GLU:H	2:AC:65:ALA:HB3	1.56	0.71
3:AD:98:GLU:OE2	3:AD:103:ASN:ND2	2.23	0.71
11:AL:6:THR:O	11:AL:8:ASN:N	2.23	0.71
12:AM:122:LYS:HA	20:AA:954:G:H5'	1.72	0.71
58:BA:1914:C:H5	58:BA:1915:U:C2	2.07	0.71
10:CK:57:THR:HG22	10:CK:60:ALA:H	1.54	0.71
11:CL:5:PRO:HG2	11:CL:15:ARG:HH21	1.55	0.71
20:CA:1276:G:N2	20:CA:1282:C:O2	2.20	0.71
20:CA:1411:C:N3	20:CA:1489:G:N2	2.36	0.71
23:CY:90:PHE:HZ	60:CY:701:FUA:H122	1.54	0.71
42:DX:12:VAL:HG11	42:DX:21:PHE:CZ	2.26	0.71
58:DA:273(G):C:H3'	58:DA:274:G:H5"	1.73	0.71
58:DA:2395:C:H42	58:DA:2421:G:H1	1.39	0.71
58:DA:2476:A:H8	58:DA:2481:G:H22	1.36	0.71
1:AB:175:ARG:NH2	20:AA:1075:C:O2'	2.23	0.71
7:AH:64:LYS:HD2	7:AH:79:VAL:HG11	1.73	0.71
36:BR:26:LYS:HZ3	58:BA:1294:U:H5"	1.55	0.71
58:BA:380:U:H2'	58:BA:381:G:C8	2.26	0.71
58:BA:2144:U:H2'	58:BA:2147:G:H1	1.56	0.71
13:CN:41:ARG:HH22	20:CA:973:G:H4'	1.54	0.71
20:CA:1493:A:N6	23:CY:580:MET:SD	2.64	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1512:U:H2'	20:CA:1513:A:C8	2.26	0.71
34:DP:7:ARG:HG2	58:DA:1203:G:H4'	1.71	0.71
27:BF:117:ARG:NH2	27:BF:186:ILE:O	2.24	0.71
34:BP:71:VAL:HG12	58:BA:389:G:H1	1.56	0.71
58:BA:852:G:H2'	58:BA:853:G:C8	2.26	0.71
58:BA:1354:A:H62	58:BA:1377:G:H21	0.75	0.71
20:CA:668:G:H1	20:CA:738:C:H42	1.38	0.71
25:DD:88:ARG:NH2	58:DA:1817:G:OP1	2.23	0.71
26:DE:117:MET:HE3	26:DE:136:ARG:HG3	1.72	0.71
27:DF:40:GLN:HA	27:DF:43:LYS:HG2	1.73	0.71
28:DG:109:VAL:HG11	57:D4:14:ILE:HD13	1.71	0.71
32:DN:74:ARG:NH2	58:DA:2640:G:H5"	2.06	0.71
3:AD:172:PRO:HB2	3:AD:187:ARG:HH12	1.54	0.71
19:AT:66:ALA:HB1	19:AT:72:LEU:HB2	1.72	0.71
37:BS:85:VAL:H	37:BS:106:ARG:HD3	1.56	0.71
20:CA:611:A:N6	20:CA:629:G:H1	1.89	0.71
20:CA:922:G:H2'	20:CA:923:A:C8	2.26	0.71
38:DT:64:ARG:HH12	38:DT:103:ARG:HG2	1.55	0.71
39:DU:53:ARG:NH2	58:DA:994:C:OP1	2.24	0.71
9:AJ:39:PRO:HA	9:AJ:70:ARG:HG3	1.72	0.71
15:AP:22:THR:HA	15:AP:33:ILE:HG13	1.73	0.71
23:AY:96:ARG:HA	23:AY:99:ARG:HB2	1.73	0.71
24:BC:216:THR:HB	24:BC:222:SER:HB3	1.72	0.71
40:BV:6:LYS:HA	40:BV:11:GLN:HA	1.72	0.71
58:BA:52:A:OP2	58:BA:117:G:N1	2.22	0.71
58:BA:2185:C:H2'	58:BA:2186:G:H8	1.56	0.71
3:CD:86:LYS:HD3	3:CD:87:GLY:H	1.55	0.71
4:CE:137:GLU:O	4:CE:141:GLN:NE2	2.22	0.71
20:CA:112:G:H1	20:CA:315:A:H61	1.38	0.71
58:DA:1913:A:C2'	58:DA:1914:C:OP2	2.38	0.71
11:AL:33:ARG:H	11:AL:85:ILE:HB	1.56	0.70
19:AT:53:LEU:HA	19:AT:56:MET:HB2	1.73	0.70
27:BF:105:VAL:HG22	58:BA:600:G:H1'	1.72	0.70
32:BN:15:LEU:HG	32:BN:134:ARG:NE	2.03	0.70
34:BP:56:SER:O	34:BP:58:THR:N	2.23	0.70
58:BA:1342:A:O2'	58:BA:1344:G:OP2	2.08	0.70
28:DG:103:LEU:HA	28:DG:106:LEU:HB3	1.71	0.70
28:DG:114:ILE:CG1	28:DG:140:ILE:HD12	2.20	0.70
52:D9:23:VAL:HB	52:D9:36:GLN:HG3	1.71	0.70
6:AG:87:VAL:HG22	6:AG:151:TYR:HB3	1.73	0.70
20:AA:244:U:O4	20:AA:893:C:N3	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:618:C:H42	20:AA:622:A:H62	1.40	0.70
23:AY:566:THR:HG22	23:AY:567:LEU:H	1.56	0.70
23:AY:603:GLU:OE2	23:AY:628:ARG:NH2	2.24	0.70
30:BJ:23:UNK:O	30:BJ:85:UNK:N	2.23	0.70
40:BV:89:GLN:NE2	58:BA:993:G:N3	2.39	0.70
43:BY:14:LEU:HD21	43:BY:79:CYS:HB2	1.74	0.70
19:CT:30:LYS:HG2	19:CT:34:LYS:HE3	1.73	0.70
20:CA:54:C:H42	20:CA:357:G:H1	1.36	0.70
23:CY:330:VAL:HG13	23:CY:331:TYR:H	1.56	0.70
25:DD:158:ALA:HB2	58:DA:1819:A:H5"	1.72	0.70
25:DD:165:ILE:O	25:DD:166:GLN:HB2	1.90	0.70
33:DO:27:GLY:O	33:DO:29:ASN:N	2.23	0.70
58:DA:1309:G:H1	58:DA:1605:C:N4	1.89	0.70
31:BK:60:TYR:HB2	31:BK:64:SER:HB3	1.73	0.70
32:BN:15:LEU:HB2	32:BN:134:ARG:CG	2.21	0.70
32:BN:16:ILE:CD1	32:BN:137:LYS:HB2	2.21	0.70
56:B1:76:ARG:NH2	56:B1:94:LEU:O	2.24	0.70
58:BA:642:G:N2	58:BA:645:C:OP2	2.24	0.70
20:CA:14:U:N3	20:CA:17:U:OP2	2.24	0.70
32:DN:65:LYS:NZ	58:DA:1021:A:H5'	2.06	0.70
32:DN:111:PRO:CD	58:DA:558:G:P	2.74	0.70
34:DP:45:LEU:HG	34:DP:46:LYS:HD2	1.71	0.70
39:DU:28:ARG:NH1	39:DU:38:THR:OG1	2.25	0.70
58:DA:76:C:N4	58:DA:110:G:H1	1.85	0.70
20:AA:612:C:N4	20:AA:628:G:H1	1.87	0.70
20:AA:975:A:H4'	20:AA:976:G:H5"	1.73	0.70
24:BC:132:LEU:HD22	24:BC:137:LEU:HD12	1.73	0.70
25:BD:2:ALA:N	25:BD:200:ASP:OD2	2.25	0.70
26:BE:1:MET:HA	26:BE:200:GLU:HG2	1.72	0.70
27:BF:200:GLU:O	27:BF:204:ASN:ND2	2.21	0.70
36:BR:24:GLN:HG3	36:BR:44:LEU:HD21	1.71	0.70
58:BA:864:G:H1'	58:BA:914:C:H42	1.56	0.70
58:BA:1281:G:H1	58:BA:1289:C:H42	1.39	0.70
1:CB:71:VAL:HA	1:CB:93:VAL:HB	1.73	0.70
16:CQ:56:VAL:HB	16:CQ:78:GLU:HG2	1.73	0.70
25:DD:54:ARG:HH21	58:DA:1822:G:H5"	1.56	0.70
58:DA:234:C:H42	58:DA:430:G:H22	1.39	0.70
20:AA:1253:G:H1	20:AA:1284:C:H42	1.37	0.70
23:AY:137:ASN:HD22	23:AY:262:SER:HA	1.55	0.70
26:BE:13:ARG:HA	26:BE:21:VAL:O	1.91	0.70
58:BA:1516:U:H2'	58:BA:1517:G:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CR:52:PRO:HB3	20:CA:720:C:H5”	1.72	0.70
32:DN:76:SER:HB3	58:DA:2641:G:C5’	2.20	0.70
58:DA:382:G:H1	58:DA:392:C:N4	1.89	0.70
58:DA:1674:G:H1’	58:DA:1676:A:N6	2.06	0.70
58:DA:2037:G:H2’	58:DA:2038:G:C8	2.27	0.70
58:DA:2456:C:H42	58:DA:2495:G:H1	1.39	0.70
58:DA:2876:G:H2’	58:DA:2877:G:H8	1.57	0.70
11:AL:85:ILE:HG23	11:AL:98:TYR:HB3	1.73	0.70
14:AO:18:PHE:O	14:AO:20:GLY:N	2.24	0.70
20:AA:1060:C:H2’	20:AA:1061:G:H8	1.56	0.70
20:AA:1440(J):C:O2’	20:AA:1440(K):G:N3	2.24	0.70
8:CI:116:LYS:HA	8:CI:123:PRO:HD3	1.73	0.70
20:CA:317:G:OP1	20:CA:353:A:N6	2.25	0.70
23:CY:541:ALA:HB2	23:CY:579:GLU:HG2	1.74	0.70
32:DN:16:ILE:CD1	32:DN:137:LYS:HB2	2.21	0.70
32:DN:35:ARG:HB3	32:DN:42:TRP:HZ3	1.54	0.70
40:DV:40:LEU:HD12	40:DV:46:VAL:HA	1.72	0.70
40:DV:62:LEU:HD12	40:DV:95:LEU:HB2	1.73	0.70
1:AB:87:ARG:HH22	1:AB:233:SER:H	1.39	0.70
24:BC:157:ILE:HG12	24:BC:161:ARG:HG2	1.72	0.70
26:BE:2:LYS:HD2	26:BE:95:ILE:HG22	1.72	0.70
44:BZ:137:ILE:HG23	44:BZ:156:LYS:HB3	1.74	0.70
58:BA:682:G:H1	58:BA:795:C:H42	1.40	0.70
58:BA:964:C:O2’	58:BA:2273:A:N3	2.23	0.70
58:BA:1230:C:H2’	58:BA:1231:G:C8	2.26	0.70
1:CB:161:ALA:HB1	1:CB:185:ILE:HD11	1.73	0.70
18:CS:78:ARG:O	18:CS:81:ARG:NH1	2.25	0.70
23:CY:614:GLU:HA	23:CY:617:MET:HB3	1.73	0.70
60:CY:701:FUA:H5	60:CY:701:FUA:H202	1.73	0.70
32:DN:68:GLU:HG2	32:DN:88:GLU:OE1	1.92	0.70
43:DY:76:CYS:O	43:DY:78:ALA:N	2.25	0.70
58:DA:407:G:H1	58:DA:420:C:H42	1.37	0.70
58:DA:1270:C:H5”	58:DA:1271:G:H5’	1.74	0.70
58:DA:1387:C:N3	58:DA:1400:G:N2	2.35	0.70
58:DA:2439:A:H1’	58:DA:2587:A:H5’	1.73	0.70
44:BZ:19:ARG:NH1	44:BZ:84:GLU:O	2.23	0.70
45:B0:24:LYS:HB2	45:B0:37:LEU:HA	1.74	0.70
24:DC:213:VAL:HG11	24:DC:225:ILE:HG12	1.74	0.70
31:DK:17:ALA:HA	31:DK:38:VAL:HG21	1.72	0.70
32:DN:15:LEU:HB2	32:DN:134:ARG:CG	2.21	0.70
43:DY:32:PRO:HD2	43:DY:34:LYS:H	1.55	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DZ:28:MET:HB3	44:DZ:88:PHE:HB2	1.74	0.70
58:DA:836:G:H1	58:DA:943:U:H3	1.40	0.70
58:DA:1510:A:H2'	58:DA:1511:A:O4'	1.92	0.70
26:BE:8:LYS:HG3	26:BE:188:VAL:HG21	1.73	0.70
32:BN:68:GLU:HG2	32:BN:88:GLU:OE1	1.92	0.70
38:BT:33:LYS:HG3	38:BT:43:GLN:HB3	1.74	0.70
39:BU:49:HIS:CD2	58:BA:559:G:H22	2.08	0.70
59:BB:66:A:H61	59:BB:107:U:H2'	1.57	0.70
1:CB:174:VAL:HG22	1:CB:184:VAL:HG11	1.74	0.70
21:CW:66:C:H2'	21:CW:67:G:C8	2.25	0.70
31:DK:126:MET:HE3	58:DA:1058:G:H21	1.56	0.70
58:DA:1005:C:N4	58:DA:1138:G:H1	1.89	0.70
1:AB:204:ASN:OD1	1:AB:207:ALA:N	2.22	0.70
20:AA:1065:U:OP2	20:AA:1190:G:N2	2.16	0.70
23:AY:230:LYS:HG3	23:AY:235:GLU:HB3	1.73	0.70
25:BD:109:ASP:HB3	25:BD:197:GLY:HA2	1.74	0.70
40:BV:59:ALA:HA	40:BV:97:LYS:HB2	1.73	0.70
56:B1:50:ARG:HA	56:B1:59:THR:HA	1.73	0.70
58:BA:224:G:OP2	58:BA:408:G:N2	2.25	0.70
4:CE:92:LYS:HG2	4:CE:119:LEU:HD12	1.74	0.70
20:CA:341:C:N4	20:CA:348:G:H1	1.87	0.70
32:DN:42:TRP:N	39:DU:64:ARG:NE	2.39	0.70
43:DY:28:LYS:HB2	43:DY:39:VAL:HG13	1.74	0.70
53:De:110:GLU:HB3	53:De:114:LYS:HE3	1.73	0.70
8:AI:57:GLY:O	8:AI:59:PHE:N	2.24	0.69
58:BA:2454:G:H1	58:BA:2498:C:H42	1.40	0.69
3:CD:134:ASP:OD2	3:CD:134:ASP:N	2.24	0.69
25:DD:239:ARG:HD3	58:DA:2590:A:H5"	1.72	0.69
33:DO:68:GLU:HB3	33:DO:78:ARG:HB2	1.73	0.69
36:DR:31:HIS:HB2	36:DR:34:ILE:HD11	1.73	0.69
59:DB:32:C:H2'	59:DB:33:G:C8	2.27	0.69
20:AA:114:U:O4	20:AA:313:A:N1	2.25	0.69
32:BN:67:LEU:O	32:BN:88:GLU:HB2	1.93	0.69
56:B1:19:GLN:HB3	56:B1:40:ARG:HD3	1.74	0.69
3:CD:122:ARG:HD3	3:CD:136:PRO:HD3	1.75	0.69
20:CA:1494:G:N2	58:DA:1912:A:N3	2.40	0.69
40:DV:59:ALA:HB1	40:DV:96:ILE:HA	1.74	0.69
58:DA:1674:G:H21	58:DA:1677:A:H61	1.36	0.69
58:DA:2396:G:H2'	58:DA:2397:G:H8	1.57	0.69
13:AN:17:LYS:HD2	20:AA:1316:G:H5"	1.74	0.69
20:AA:312:C:H2'	20:AA:313:A:C8	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:263:ALA:HB3	61:AY:702:GDP:O6	1.93	0.69
32:BN:42:TRP:CD1	39:BU:63:VAL:CG1	2.75	0.69
10:CK:53:SER:HB2	20:CA:694:A:H5"	1.73	0.69
27:DF:191:ARG:HB3	27:DF:193:VAL:HG23	1.73	0.69
58:DA:1003:G:H1	58:DA:1152:C:H42	1.39	0.69
23:AY:201:ILE:HG12	23:AY:206:LEU:H	1.58	0.69
58:BA:137(B):G:H1	58:BA:141(B):C:H42	1.38	0.69
58:BA:236:C:H42	58:BA:261:G:H1	1.37	0.69
58:BA:811:U:N3	58:BA:1250:G:OP1	2.25	0.69
58:BA:1854:A:H62	58:BA:1888:G:H8	1.39	0.69
59:BB:51:G:N2	59:BB:52:A:H62	1.89	0.69
33:DO:31:LYS:NZ	58:DA:2547:U:O2'	2.25	0.69
58:DA:459:U:H6	58:DA:460:A:C8	2.09	0.69
58:DA:1039:G:N2	58:DA:1116:C:N3	2.36	0.69
58:DA:1474:C:H42	58:DA:1519:G:H1	1.40	0.69
1:AB:95:GLN:OE1	1:AB:96:ARG:NH1	2.25	0.69
20:AA:68(E):G:C6	20:AA:68(U):U:O2	2.44	0.69
20:AA:294:U:OP1	20:AA:610:G:O2'	2.09	0.69
32:BN:112:LEU:HA	32:BN:115:ARG:HB2	1.73	0.69
11:CL:13:LYS:NZ	20:CA:882:C:OP2	2.26	0.69
20:CA:408:A:C2	20:CA:434:U:N3	2.56	0.69
24:DC:30:VAL:HA	24:DC:33:LEU:HG	1.74	0.69
26:DE:109:LYS:NZ	58:DA:2681:C:OP2	2.24	0.69
58:DA:1430:C:H42	58:DA:1563:G:H1	1.40	0.69
21:AW:17:U:H5'	21:AW:18:G:O4'	1.93	0.69
34:BP:101:VAL:HG12	34:BP:106:LEU:HB3	1.74	0.69
59:BB:14:U:H2'	59:BB:15:A:H2	1.56	0.69
6:CG:113:GLU:HB2	6:CG:119:ARG:HG2	1.73	0.69
8:CI:107:ARG:HE	20:CA:1347:G:H5"	1.58	0.69
58:DA:1054:A:H2'	58:DA:1055:G:C8	2.28	0.69
58:DA:2046:G:H1	58:DA:2622:C:H42	1.41	0.69
20:AA:1135:U:O2	20:AA:1138:G:N2	2.21	0.69
24:BC:65:LEU:O	24:BC:67:HIS:N	2.26	0.69
26:BE:189:PRO:HA	58:BA:2680:C:H5'	1.73	0.69
58:BA:33:U:O4	58:BA:446:G:O2'	2.11	0.69
58:BA:1430:C:H42	58:BA:1563:G:H1	1.40	0.69
10:CK:114:VAL:O	20:CA:675:A:O2'	2.08	0.69
20:CA:146:G:H1	20:CA:176:C:H42	1.39	0.69
26:DE:15:PHE:HD1	38:DT:80:SER:HB2	1.56	0.69
32:DN:15:LEU:CG	32:DN:134:ARG:HE	2.05	0.69
38:DT:32:TYR:HB3	38:DT:82:LEU:HA	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DZ:15:PRO:HB2	44:DZ:19:ARG:HE	1.58	0.69
58:DA:604:G:H1	58:DA:624:C:N4	1.90	0.69
58:DA:1912:A:C5	58:DA:1918:A:C2	2.81	0.69
58:DA:2737:G:H1	58:DA:2767:C:H42	1.40	0.69
2:AC:88:ARG:HH21	2:AC:100:ALA:HA	1.56	0.69
16:AQ:10:VAL:HG12	16:AQ:54:GLY:H	1.58	0.69
20:AA:1380:U:H4'	20:AA:1381:U:H5"	1.75	0.69
24:BC:139:PRO:HA	24:BC:145:THR:HB	1.73	0.69
29:BH:144:VAL:HA	29:BH:147:ASN:HB2	1.74	0.69
35:BQ:134:ARG:HH12	44:BZ:119:GLU:HG3	1.58	0.69
58:BA:278:A:O2'	58:BA:279:C:O5'	2.11	0.69
58:BA:1864:U:OP1	58:BA:2410:G:O2'	2.09	0.69
58:BA:2520:C:N4	58:BA:2545:G:H1	1.91	0.69
58:BA:2646:C:OP2	58:BA:2732:G:O2'	2.11	0.69
58:BA:2820:A:O2'	58:BA:2821:A:OP1	2.08	0.69
3:CD:36:ARG:NH2	20:CA:428:G:O2'	2.26	0.69
8:CI:113:LYS:H	8:CI:119:ALA:HA	1.57	0.69
18:CS:6:LYS:H	18:CS:6:LYS:HD3	1.57	0.69
19:CT:50:GLU:HA	19:CT:100:ILE:HG21	1.74	0.69
20:CA:566:G:H4'	20:CA:567:G:H5'	1.74	0.69
23:CY:486:THR:H	23:CY:600:VAL:HG12	1.58	0.69
24:DC:14:LYS:HD3	24:DC:33:LEU:HD22	1.75	0.69
25:DD:13:ARG:NH1	58:DA:729:G:OP2	2.26	0.69
32:DN:16:ILE:HD13	32:DN:137:LYS:HB2	1.75	0.69
36:DR:4:LEU:HG	58:DA:1653:G:H5"	1.75	0.69
51:D8:2:PRO:HA	58:DA:591:C:H1'	1.74	0.69
58:DA:527:C:H42	58:DA:2779:U:H5'	1.56	0.69
58:DA:1301:A:H1'	58:DA:1302:A:H2'	1.73	0.69
58:DA:1418:G:N2	58:DA:1579:A:OP2	2.25	0.69
58:DA:1626:G:H5"	58:DA:1627:G:H5'	1.75	0.69
58:DA:2241:A:H2'	58:DA:2242:G:C8	2.28	0.69
59:DB:18:G:H2'	59:DB:19:G:H8	1.57	0.69
20:AA:587:G:N2	20:AA:754:C:OP2	2.22	0.69
20:AA:713:G:H2'	20:AA:714:G:C8	2.28	0.69
20:AA:782:A:N6	20:AA:800:G:H21	1.84	0.69
33:BO:112:MET:N	33:BO:112:MET:SD	2.65	0.69
41:BW:78:GLU:O	58:BA:24:G:O2'	2.11	0.69
44:BZ:76:LEU:HD22	44:BZ:83:PRO:HA	1.74	0.69
58:BA:1279:G:H1	58:BA:1291:C:H42	1.41	0.69
20:CA:501:C:H2'	20:CA:502:G:C8	2.27	0.69
23:CY:428:LEU:HA	23:CY:431:LEU:HB2	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DS:26:LEU:HD11	37:DS:101:LEU:HD13	1.75	0.69
2:AC:4:LYS:HE3	20:AA:1191:A:H5'	1.73	0.69
12:AM:96:LEU:HD13	12:AM:103:THR:HG21	1.74	0.69
16:AQ:28:PRO:HA	16:AQ:35:VAL:HA	1.75	0.69
24:BC:46:ALA:HA	24:BC:212:SER:O	1.93	0.69
27:BF:154:VAL:HB	27:BF:173:VAL:HG13	1.74	0.69
32:BN:111:PRO:HD2	58:BA:558:G:P	2.33	0.69
34:BP:96:THR:HA	34:BP:126:VAL:HB	1.74	0.69
5:CF:3:ARG:NH1	5:CF:64:GLN:OE1	2.25	0.69
6:CG:57:GLU:HB2	6:CG:60:LYS:HB2	1.74	0.69
8:CI:61:ALA:HB1	8:CI:63:ILE:HD11	1.75	0.69
32:DN:112:LEU:HA	32:DN:115:ARG:HB2	1.73	0.69
58:DA:689:A:H2'	58:DA:690:G:C8	2.27	0.69
58:DA:1957:C:H2'	58:DA:1958:C:C6	2.28	0.69
58:DA:2500:U:O2'	58:DA:2504:U:OP1	2.10	0.69
58:DA:2744:G:H1	58:DA:2760:C:N4	1.89	0.69
59:DB:60:C:H2'	59:DB:61:G:C8	2.28	0.69
10:AK:82:VAL:HG21	10:AK:105:VAL:HG12	1.74	0.68
23:AY:564:LYS:HG2	23:AY:565:VAL:H	1.57	0.68
32:BN:16:ILE:HD13	32:BN:137:LYS:HB2	1.74	0.68
51:B8:19:SER:OG	58:BA:651:G:OP1	2.11	0.68
6:CG:75:VAL:HG22	6:CG:88:PRO:HB3	1.75	0.68
24:DC:27:ALA:HB3	24:DC:28:ARG:HE	1.57	0.68
35:DQ:27:VAL:HG12	35:DQ:29:PHE:H	1.58	0.68
58:DA:1213:A:N3	58:DA:1238:G:O2'	2.26	0.68
58:DA:1264:G:H3'	58:DA:1265:A:H2'	1.75	0.68
10:AK:62:GLN:HG3	10:AK:97:ALA:HB2	1.73	0.68
15:AP:57:ARG:NH2	15:AP:78:GLY:O	2.27	0.68
25:BD:88:ARG:NH2	58:BA:1817:G:OP1	2.23	0.68
35:BQ:135:ASP:OD1	35:BQ:135:ASP:N	2.27	0.68
58:BA:862:G:H2'	58:BA:863:A:O4'	1.92	0.68
58:BA:1516:U:H2'	58:BA:1517:G:H8	1.58	0.68
20:CA:367:U:H4'	23:CY:351:ARG:HE	1.56	0.68
24:DC:164:PHE:HB3	24:DC:172:ILE:HG21	1.75	0.68
37:DS:99:LYS:HG2	37:DS:101:LEU:H	1.58	0.68
56:D1:15:ALA:H	56:D1:41:ARG:HG2	1.57	0.68
58:DA:1286:A:O2'	58:DA:1288:U:OP2	2.10	0.68
11:AL:29:GLY:O	20:AA:363:A:N6	2.26	0.68
23:AY:621:ILE:O	23:AY:625:ASN:ND2	2.25	0.68
27:BF:9:ILE:HG21	27:BF:124:LEU:HB2	1.75	0.68
40:BV:15:GLU:HB2	40:BV:18:LEU:HD21	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1841:U:H2'	58:DA:1842:G:H8	1.59	0.68
58:DA:2250:G:O2'	58:DA:2496:C:OP1	2.09	0.68
1:AB:70:PHE:HD2	1:AB:81:VAL:HB	1.58	0.68
18:AS:36:ARG:HB2	18:AS:72:GLY:HA3	1.74	0.68
25:BD:149:PRO:O	25:BD:151:LYS:NZ	2.20	0.68
25:BD:260:ARG:NH2	25:BD:266:SER:OG	2.26	0.68
26:BE:187:ALA:HB2	58:BA:2729:G:H1'	1.73	0.68
58:BA:442:G:H4'	58:BA:615:G:H22	1.58	0.68
58:BA:1791:A:N6	58:BA:1828:G:O2'	2.24	0.68
7:CH:85:ARG:NH1	7:CH:134:ILE:O	2.27	0.68
13:CN:42:ILE:HG23	13:CN:45:ARG:HD3	1.76	0.68
20:CA:68(E):G:O6	20:CA:68(U):U:O2	2.12	0.68
20:CA:408:A:H2	20:CA:434:U:N3	1.83	0.68
24:DC:169:THR:HG23	24:DC:171:ALA:HB2	1.75	0.68
27:DF:93:LYS:HD3	27:DF:94:PRO:HD2	1.74	0.68
39:DU:64:ARG:HB2	39:DU:64:ARG:HH21	1.58	0.68
56:D1:13:ILE:HG12	56:D1:17:SER:HB3	1.76	0.68
14:AO:48:LYS:HB3	20:AA:668:G:H4'	1.74	0.68
23:AY:497:PHE:HD2	23:AY:507:TYR:HA	1.58	0.68
58:BA:1037:G:H1	58:BA:1118:C:H42	1.39	0.68
58:BA:1462:C:H4'	58:BA:2703:C:H5'	1.74	0.68
58:BA:2001:A:H4'	58:BA:2689:U:C2	2.27	0.68
58:BA:2780:G:O2'	58:BA:2781:A:OP1	2.11	0.68
4:CE:148:VAL:HG13	4:CE:152:ARG:HD2	1.76	0.68
8:CI:16:ARG:HH12	20:CA:1128:C:H4'	1.58	0.68
13:CN:45:ARG:NH2	20:CA:1059:C:O3'	2.26	0.68
16:CQ:63:ARG:NH2	20:CA:186(I):U:O2'	2.26	0.68
20:CA:25:C:H5'	20:CA:524:G:H1'	1.75	0.68
20:CA:296:U:O2'	20:CA:556:C:O2	2.12	0.68
23:CY:610:VAL:HG22	23:CY:643:ILE:HB	1.73	0.68
25:DD:274:ARG:NH2	58:DA:1798:U:OP2	2.27	0.68
34:DP:67:MET:HE1	34:DP:70:GLN:HG2	1.75	0.68
36:DR:93:GLY:H	58:DA:2839:G:H1'	1.58	0.68
43:DY:81:LYS:HB3	43:DY:97:ARG:HB2	1.75	0.68
58:DA:1525:G:H2'	58:DA:1526:G:H8	1.56	0.68
58:DA:2466:C:N3	58:DA:2484:G:N2	2.36	0.68
4:AE:70:PRO:HD2	4:AE:142:LEU:HD13	1.75	0.68
19:AT:86:ARG:NH2	20:AA:258:G:OP1	2.21	0.68
20:AA:137:C:H42	20:AA:226:G:H1	1.42	0.68
25:BD:13:ARG:NH1	58:BA:729:G:OP2	2.25	0.68
25:BD:118:VAL:HG22	25:BD:119:ALA:H	1.56	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:69:THR:HG21	20:CA:375:U:H5”	1.75	0.68
20:CA:444:C:H42	20:CA:490:G:H1	1.42	0.68
20:CA:578:C:O2’	20:CA:728:A:N3	2.24	0.68
20:CA:1172:C:H2’	20:CA:1173:G:H8	1.59	0.68
20:CA:1413:A:N6	20:CA:1487:G:H1	1.90	0.68
35:DQ:43:THR:HA	35:DQ:94:VAL:HG12	1.76	0.68
58:DA:1516:U:H2’	58:DA:1517:G:H8	1.57	0.68
58:DA:1604:C:H2’	58:DA:1605:C:C6	2.28	0.68
20:AA:1528:U:H4’	20:AA:1529:G:H21	1.57	0.68
27:BF:153:SER:HA	27:BF:172:TRP:O	1.94	0.68
32:BN:15:LEU:CG	32:BN:134:ARG:HE	2.05	0.68
58:BA:220:G:N1	58:BA:428:A:OP2	2.26	0.68
58:BA:374:A:H62	58:BA:400:G:H21	1.39	0.68
58:BA:2089:U:H2’	58:BA:2090:G:C8	2.28	0.68
59:BB:15:A:OP2	59:BB:69:G:N2	2.27	0.68
7:CH:120:THR:H	7:CH:123:GLU:HB2	1.59	0.68
11:CL:107:ALA:O	11:CL:109:GLY:N	2.26	0.68
27:DF:175:THR:O	27:DF:175:THR:OG1	2.07	0.68
28:DG:47:LYS:HD3	28:DG:81:LYS:HD2	1.75	0.68
31:DK:14:ALA:HB3	31:DK:50:ASP:HA	1.74	0.68
32:DN:18:ALA:O	32:DN:21:LYS:HB2	1.93	0.68
58:DA:850:C:N3	58:DA:928:G:N2	2.39	0.68
58:DA:1538:G:H2’	58:DA:1539:G:H8	1.58	0.68
20:AA:67:C:H2’	20:AA:68:G:C8	2.28	0.68
23:AY:552:SER:O	23:AY:591:LYS:NZ	2.26	0.68
29:BH:41:MET:SD	29:BH:42:ARG:N	2.67	0.68
4:CE:102:ALA:HB3	4:CE:107:ARG:HB2	1.76	0.68
9:CJ:60:ARG:NH1	20:CA:1366:C:O2’	2.18	0.68
20:CA:476:G:H2’	20:CA:477:G:C8	2.29	0.68
28:DG:35:GLU:HB2	28:DG:161:THR:HA	1.74	0.68
32:DN:55:VAL:HB	32:DN:126:PRO:CB	2.24	0.68
35:DQ:21:THR:OG1	35:DQ:99:PRO:O	2.11	0.68
40:DV:4:ILE:HG13	40:DV:13:ARG:HG3	1.76	0.68
51:D8:26:LYS:HG2	51:D8:47:LYS:HG3	1.74	0.68
58:DA:582:G:H2’	58:DA:583:G:H8	1.58	0.68
7:AH:115:SER:HB2	20:AA:640:A:H1’	1.75	0.68
8:AI:16:ARG:HH12	20:AA:1128:C:H4’	1.59	0.68
10:AK:33:THR:HA	10:AK:39:PRO:HA	1.75	0.68
10:AK:97:ALA:O	10:AK:101:SER:OG	2.12	0.68
23:AY:119:GLU:OE2	23:AY:666:ARG:NH2	2.26	0.68
26:BE:16:ARG:HH21	26:BE:21:VAL:HG11	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:85:LYS:HD3	29:BH:133:VAL:HB	1.73	0.68
37:BS:53:SER:HA	37:BS:65:VAL:HG11	1.76	0.68
58:BA:2047:U:O2'	58:BA:2823:A:N1	2.25	0.68
58:BA:2514:U:H3	58:BA:2570:G:H1	1.39	0.68
20:CA:184:G:N2	20:CA:193:C:N3	2.33	0.68
23:CY:506:GLN:HG3	23:CY:581:ALA:HB2	1.76	0.68
58:DA:1287:A:C2	58:DA:1649:G:H4'	2.29	0.68
58:DA:1324:G:H1	58:DA:1330:C:N4	1.91	0.68
6:AG:79:ARG:HB3	20:AA:1381:U:H1'	1.76	0.68
20:AA:1270:C:H2'	20:AA:1271:G:H8	1.59	0.68
23:AY:309:LEU:HA	23:AY:333:GLY:HA3	1.75	0.68
28:BG:129:GLY:O	28:BG:161:THR:OG1	2.10	0.68
32:BN:18:ALA:O	32:BN:21:LYS:HB2	1.93	0.68
33:BO:28:SER:HB2	58:BA:2566:A:H61	1.59	0.68
39:BU:52:ARG:HA	39:BU:55:ARG:HG2	1.76	0.68
56:B1:50:ARG:NH2	58:BA:2206:C:OP2	2.27	0.68
58:BA:1494:A:H2'	58:BA:1494:A:N3	2.09	0.68
20:CA:1522:U:H2'	20:CA:1523:G:C8	2.29	0.68
23:CY:131:PRO:HG2	23:CY:281:PRO:HG3	1.74	0.68
25:DD:149:PRO:O	25:DD:151:LYS:NZ	2.26	0.68
31:DK:89:HIS:HA	58:DA:1064:C:H4'	1.75	0.68
31:DK:125:ARG:H	31:DK:125:ARG:HD2	1.58	0.68
32:DN:67:LEU:O	32:DN:88:GLU:HB2	1.93	0.68
33:DO:14:THR:HB	33:DO:16:ALA:H	1.59	0.68
58:DA:1467:C:N3	58:DA:1525:G:N2	2.34	0.68
58:DA:1569:A:H2'	58:DA:1570:A:C8	2.29	0.68
58:DA:2030:A:H4'	58:DA:2031:A:H8	1.58	0.68
1:AB:167:PRO:O	1:AB:171:ALA:HB2	1.93	0.67
11:AL:52:LEU:H	11:AL:53:ARG:HD2	1.59	0.67
44:BZ:121:HIS:HB3	44:BZ:124:ILE:HG22	1.75	0.67
49:B6:30:THR:O	49:B6:32:ASN:N	2.26	0.67
58:BA:966:G:H2'	58:BA:967:C:C6	2.29	0.67
58:BA:979:G:H2'	58:BA:982:C:N4	2.08	0.67
2:CC:66:VAL:HB	2:CC:101:LEU:HA	1.75	0.67
3:CD:13:ARG:NH2	3:CD:36:ARG:O	2.27	0.67
11:CL:58:VAL:HG11	11:CL:85:ILE:HG12	1.76	0.67
24:DC:15:VAL:HG13	24:DC:221:PRO:HB3	1.75	0.67
27:DF:113:ALA:HB1	27:DF:186:ILE:HG21	1.75	0.67
50:D7:33:ARG:NH1	58:DA:467:G:OP1	2.28	0.67
58:DA:33:U:O4	58:DA:446:G:O2'	2.11	0.67
58:DA:1166:C:H42	58:DA:1183:G:H1	0.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:36:ARG:NH2	18:AS:72:GLY:O	2.27	0.67
20:AA:56:U:H2'	20:AA:57:G:H8	1.60	0.67
24:BC:58:ASN:ND2	24:BC:166:ASN:OD1	2.26	0.67
25:BD:165:ILE:O	25:BD:166:GLN:HB2	1.94	0.67
2:CC:88:ARG:HA	2:CC:91:LEU:HD12	1.76	0.67
20:CA:673:G:H2'	20:CA:674:G:C8	2.29	0.67
32:DN:14:VAL:HG11	32:DN:137:LYS:HG3	1.75	0.67
32:DN:30:ILE:HG22	32:DN:34:LEU:CD2	2.24	0.67
58:DA:1194:A:H2'	58:DA:1195:G:C8	2.29	0.67
58:DA:1935:G:H3'	58:DA:1962:C:H42	1.57	0.67
58:DA:2037:G:H2'	58:DA:2038:G:H8	1.58	0.67
58:DA:2632:A:H2'	58:DA:2633:G:C8	2.28	0.67
2:AC:67:THR:HA	2:AC:102:ASN:HB3	1.76	0.67
4:AE:151:LEU:HB3	7:AH:79:VAL:HG22	1.76	0.67
10:AK:99:GLN:HG2	10:AK:105:VAL:HG21	1.75	0.67
24:BC:121:MET:O	24:BC:125:GLY:N	2.25	0.67
27:BF:106:ARG:NH1	58:BA:618(A):G:OP1	2.27	0.67
27:BF:170:LEU:HD13	27:BF:171:PRO:HD2	1.76	0.67
36:BR:20:LEU:HD11	58:BA:1277:G:H5'	1.76	0.67
58:BA:309:G:O6	58:BA:1210:A:O2'	2.12	0.67
13:CN:42:ILE:HA	13:CN:45:ARG:HB3	1.76	0.67
35:DQ:16:ARG:NH1	59:DB:90:C:OP2	2.24	0.67
35:DQ:54:MET:HG2	35:DQ:58:PHE:HE2	1.59	0.67
39:DU:52:ARG:HD3	58:DA:559:G:H21	1.59	0.67
58:DA:1853:A:N3	58:DA:2233:U:O2'	2.26	0.67
9:AJ:40:LEU:HD21	20:AA:1280:A:H5'	1.75	0.67
20:AA:801:U:H2'	20:AA:802:A:H8	1.57	0.67
20:AA:950:U:H2'	20:AA:951:G:C8	2.29	0.67
20:AA:1391:U:H2'	20:AA:1392:G:C8	2.30	0.67
20:AA:1414:U:H2'	20:AA:1415:G:C8	2.29	0.67
24:BC:114:VAL:O	24:BC:116:ALA:N	2.27	0.67
25:BD:95:LEU:HD11	25:BD:105:ILE:HG22	1.74	0.67
25:BD:165:ILE:HA	25:BD:175:LEU:HA	1.77	0.67
32:BN:55:VAL:HB	32:BN:126:PRO:CB	2.24	0.67
58:BA:1478:G:H2'	58:BA:1479:G:H8	1.58	0.67
10:CK:84:VAL:HG21	10:CK:91:ARG:HD3	1.76	0.67
24:DC:121:MET:O	24:DC:125:GLY:N	2.27	0.67
43:DY:2:ARG:HH11	43:DY:3:VAL:H	1.43	0.67
58:DA:884:C:N4	58:DA:892:G:H1	1.91	0.67
58:DA:1468:C:H2'	58:DA:1469:A:H8	1.58	0.67
58:DA:2089:U:H2'	58:DA:2090:G:C8	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:2472:G:H21	58:DA:2478:A:H62	1.41	0.67
58:DA:2707:G:H2'	58:DA:2708:G:H8	1.59	0.67
25:BD:52:ARG:HH12	25:BD:249:PRO:HG3	1.60	0.67
32:BN:1:MET:HE2	32:BN:2:LYS:H	1.58	0.67
32:BN:17:ASP:O	32:BN:18:ALA:HB2	1.95	0.67
32:BN:30:ILE:HG22	32:BN:34:LEU:CD2	2.24	0.67
38:BT:51:ARG:NH2	38:BT:100:TYR:OH	2.27	0.67
58:BA:784:A:N6	58:BA:2072:G:O2'	2.22	0.67
58:BA:871:U:H2'	58:BA:872:A:C8	2.30	0.67
58:BA:1285:G:H21	58:BA:1328:G:H5"	1.59	0.67
58:BA:2243:U:H2'	58:BA:2244:U:C6	2.28	0.67
59:BB:104:A:H2'	59:BB:105:G:O4'	1.94	0.67
11:CL:45:PRO:HD2	11:CL:49:ASN:HB2	1.77	0.67
23:CY:512:ILE:H	23:CY:512:ILE:HD13	1.60	0.67
50:D7:28:ARG:NH2	58:DA:1368:G:OP1	2.27	0.67
58:DA:459:U:O4	58:DA:470:A:N7	2.26	0.67
58:DA:1310:G:N2	58:DA:1604:C:N3	2.34	0.67
58:DA:2345:G:O2'	58:DA:2381:C:O2	2.13	0.67
1:AB:161:ALA:HA	1:AB:183:PRO:HB2	1.77	0.67
2:AC:50:ALA:HB1	2:AC:72:LYS:HB3	1.76	0.67
18:AS:6:LYS:HG2	18:AS:7:LYS:H	1.59	0.67
20:AA:1391:U:H2'	20:AA:1392:G:H8	1.59	0.67
23:AY:141:LYS:HE2	58:BA:2656:U:H4'	1.77	0.67
26:BE:37:ARG:NH1	26:BE:44:TYR:OH	2.27	0.67
38:BT:53:ARG:NH1	38:BT:60:THR:OG1	2.14	0.67
9:CJ:60:ARG:HH12	20:CA:1366:C:HO2'	1.43	0.67
18:CS:51:VAL:HG23	18:CS:58:VAL:HG23	1.76	0.67
18:CS:71:LEU:O	18:CS:73:GLU:N	2.23	0.67
36:DR:33:ARG:HG3	36:DR:115:GLU:HG2	1.77	0.67
44:DZ:82:ARG:HG2	44:DZ:83:PRO:HD2	1.77	0.67
56:D1:40:ARG:NH2	58:DA:2082:A:OP2	2.27	0.67
2:AC:131:ARG:NH2	2:AC:166:GLU:OE2	2.27	0.67
8:AI:19:LEU:HD23	8:AI:61:ALA:HB2	1.77	0.67
26:BE:15:PHE:HD1	38:BT:80:SER:HB2	1.60	0.67
33:BO:104:ARG:NH2	33:BO:121:VAL:O	2.28	0.67
48:B5:11:THR:OG1	58:BA:1263:U:O3'	2.12	0.67
58:BA:401:A:H2'	58:BA:402:A:H8	1.60	0.67
5:CF:1:MET:HA	5:CF:68:PRO:HA	1.77	0.67
23:CY:111:SER:HB2	23:CY:141:LYS:HG2	1.76	0.67
24:DC:139:PRO:HA	24:DC:145:THR:HB	1.76	0.67
27:DF:133:ASN:HA	27:DF:162:LEU:HD23	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:137(B):G:H1	58:DA:141(B):C:H42	1.42	0.67
4:AE:11:ILE:HG22	4:AE:12:LEU:HD12	1.75	0.67
6:AG:31:MET:HE1	20:AA:1374:A:H1'	1.76	0.67
20:AA:112:G:H1	20:AA:315:A:N6	1.93	0.67
23:AY:315:LYS:HB3	23:AY:327:PHE:CD2	2.28	0.67
28:BG:66:GLN:NE2	57:B4:1:MET:SD	2.68	0.67
28:BG:109:VAL:C	28:BG:112:PRO:HD2	2.20	0.67
32:BN:35:ARG:HB3	32:BN:42:TRP:CZ3	2.30	0.67
41:BW:92:ARG:HH22	58:BA:2015:A:P	2.18	0.67
58:BA:1416:G:H2'	58:BA:1417:C:C6	2.30	0.67
20:CA:601:C:H2'	20:CA:602:A:H8	1.59	0.67
26:DE:119:ARG:NH2	26:DE:159:HIS:O	2.27	0.67
28:DG:109:VAL:O	28:DG:112:PRO:HD2	1.95	0.67
32:DN:71:ILE:HD12	32:DN:71:ILE:H	1.60	0.67
45:D0:35:ASN:H	45:D0:61:ALA:HB3	1.59	0.67
58:DA:805:G:N2	58:DA:829:A:OP1	2.28	0.67
9:AJ:35:SER:HB2	9:AJ:73:ASP:HB2	1.76	0.67
11:AL:124:LYS:O	11:AL:126:LYS:N	2.28	0.67
14:AO:56:LEU:HA	14:AO:59:MET:HE2	1.76	0.67
18:AS:53:ASN:HB3	18:AS:55:LYS:H	1.59	0.67
25:BD:145:VAL:HB	25:BD:155:LEU:HB2	1.76	0.67
29:BH:108:GLY:O	58:BA:2666:C:N4	2.20	0.67
36:BR:9:LYS:HZ2	36:BR:42:LYS:HD2	1.58	0.67
41:BW:1:MET:N	41:BW:109:GLU:OE2	2.28	0.67
58:BA:401:A:H2'	58:BA:402:A:C8	2.30	0.67
11:CL:34:ARG:HB2	20:CA:363:A:OP1	1.94	0.67
58:DA:415:A:H61	58:DA:2408:U:H3	1.41	0.67
12:AM:122:LYS:HB3	20:AA:953:G:O2'	1.94	0.67
20:AA:68(F):C:H2'	20:AA:68(G):G:C8	2.29	0.67
20:AA:697:U:O2	20:AA:785:G:N2	2.28	0.67
20:AA:950:U:H2'	20:AA:951:G:H8	1.58	0.67
23:AY:133:ILE:HD12	23:AY:280:LEU:HD21	1.75	0.67
20:CA:200:G:H1	20:CA:217:C:N4	1.93	0.67
20:CA:500:G:O6	20:CA:545:C:N3	2.27	0.67
21:CW:18:G:N2	21:CW:58:A:OP1	2.26	0.67
32:DN:35:ARG:HB3	32:DN:42:TRP:CZ3	2.30	0.67
35:DQ:123:HIS:NE2	58:DA:2466:C:O2'	2.26	0.67
43:DY:2:ARG:HD3	43:DY:3:VAL:HG23	1.77	0.67
58:DA:1105:U:H2'	58:DA:1106:G:C8	2.30	0.67
1:AB:174:VAL:HG22	1:AB:184:VAL:HG11	1.76	0.66
31:BK:27:LEU:HD21	31:BK:57:ILE:HD13	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B3:6:VAL:HG22	47:B3:37:LEU:HD11	1.77	0.66
58:BA:537:C:OP1	58:BA:995:C:N4	2.28	0.66
13:CN:41:ARG:HG3	13:CN:42:ILE:HG12	1.76	0.66
20:CA:198:G:H1	20:CA:219:C:N4	1.91	0.66
27:DF:157:VAL:HG12	27:DF:192:LEU:HA	1.76	0.66
35:DQ:137:TYR:HD1	35:DQ:137:TYR:H	1.40	0.66
58:DA:2176:A:H2'	58:DA:2177:C:C6	2.30	0.66
58:DA:2698:U:H2'	58:DA:2699:C:C6	2.30	0.66
12:AM:125:ARG:HH12	20:AA:953:G:H5'	1.60	0.66
20:AA:559:A:H4'	20:AA:560:U:H5"	1.75	0.66
20:AA:977:A:HO2'	20:AA:981:U:H3	1.41	0.66
60:AY:701:FUA:H231	60:AY:701:FUA:H122	1.76	0.66
47:B3:4:LEU:HB2	47:B3:37:LEU:HB2	1.78	0.66
50:B7:40:TRP:CD1	50:B7:40:TRP:H	2.13	0.66
58:BA:69:C:H2'	58:BA:70:G:C8	2.30	0.66
58:BA:597:U:H2'	58:BA:598:G:C8	2.29	0.66
58:BA:1437:C:O2'	58:BA:1518:C:O2'	2.12	0.66
58:BA:2733:A:H3'	58:BA:2734:A:H8	1.61	0.66
20:CA:259:G:H1	20:CA:267:C:H42	1.42	0.66
31:DK:132:ARG:NH1	31:DK:136:VAL:O	2.27	0.66
58:DA:2041:U:OP2	58:DA:2041:U:H6	1.77	0.66
1:AB:166:ASP:HA	1:AB:188:ALA:HB2	1.76	0.66
14:AO:39:LEU:HD23	20:AA:740:U:H4'	1.75	0.66
26:BE:56:PRO:HB2	26:BE:57:LYS:HD2	1.76	0.66
28:BG:109:VAL:O	28:BG:112:PRO:HD2	1.95	0.66
40:BV:83:ARG:NH1	58:BA:815:C:OP2	2.27	0.66
46:B2:20:GLU:HA	46:B2:23:LYS:HD2	1.78	0.66
58:BA:1223:G:N2	58:BA:1226:A:OP2	2.28	0.66
58:BA:1638:C:H2'	58:BA:1639:U:O4'	1.95	0.66
58:BA:2876:G:H2'	58:BA:2877:G:C8	2.30	0.66
7:CH:97:VAL:HG13	7:CH:98:LYS:H	1.61	0.66
9:CJ:40:LEU:HD22	9:CJ:41:PRO:HD2	1.77	0.66
15:CP:51:VAL:HG11	15:CP:77:ALA:HB1	1.77	0.66
27:DF:154:VAL:HB	27:DF:173:VAL:HG13	1.74	0.66
47:D3:10:LYS:HB3	47:D3:53:LEU:HA	1.77	0.66
51:D8:19:SER:OG	58:DA:651:G:OP1	2.13	0.66
58:DA:1231:G:H2'	58:DA:1232:G:H8	1.60	0.66
58:DA:2857:G:N2	58:DA:2860:A:OP2	2.29	0.66
20:AA:820:U:H3'	20:AA:821:G:H5'	1.78	0.66
20:AA:1060:C:H2'	20:AA:1061:G:C8	2.30	0.66
20:AA:1502:A:H8	20:AA:1505:G:H22	1.44	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AW:66:C:H2'	21:AW:67:G:C8	2.30	0.66
37:BS:102:ALA:HA	37:BS:108:GLY:HA3	1.78	0.66
38:BT:58:ASN:HD22	38:BT:58:ASN:H	1.42	0.66
38:BT:95:ARG:O	58:BA:2848:G:H2'	1.95	0.66
58:BA:391:G:O2'	58:BA:410:G:OP1	2.12	0.66
58:BA:1914:C:C6	58:BA:1915:U:N1	2.63	0.66
23:CY:535:PRO:HB2	23:CY:537:GLU:HG2	1.76	0.66
28:DG:173:LEU:HB3	28:DG:178:PHE:HB2	1.77	0.66
32:DN:1:MET:HE2	32:DN:2:LYS:H	1.58	0.66
56:D1:18:ILE:HG12	56:D1:20:ARG:N	2.11	0.66
58:DA:380:U:H2'	58:DA:381:G:C8	2.31	0.66
58:DA:582:G:H2'	58:DA:583:G:C8	2.29	0.66
58:DA:1222:C:H42	58:DA:1227:G:H1	1.43	0.66
7:AH:31:PHE:HE1	20:AA:642:A:HO2'	1.43	0.66
23:AY:162:VAL:HB	23:AY:255:ILE:HG13	1.77	0.66
26:BE:103:ASP:HB2	26:BE:199:ARG:HG3	1.78	0.66
26:BE:109:LYS:NZ	58:BA:2681:C:OP2	2.24	0.66
31:BK:56:GLU:HB3	31:BK:68:VAL:HB	1.75	0.66
32:BN:14:VAL:HG11	32:BN:137:LYS:HG3	1.76	0.66
38:BT:3:ARG:HB3	38:BT:6:LEU:HB2	1.77	0.66
58:BA:8:A:N1	58:BA:2895:U:C4	2.63	0.66
2:CC:161:GLU:HG3	20:CA:1055:A:H4'	1.78	0.66
16:CQ:45:HIS:HB3	16:CQ:72:ARG:HA	1.78	0.66
17:CR:74:ARG:NH2	17:CR:81:PHE:O	2.28	0.66
20:CA:68(E):G:C6	20:CA:68(U):U:O2	2.48	0.66
20:CA:740:U:O2'	20:CA:741:G:O4'	2.11	0.66
20:CA:1231:G:H2'	20:CA:1232:U:O4'	1.95	0.66
24:DC:114:VAL:O	24:DC:116:ALA:N	2.29	0.66
32:DN:25:ARG:NH2	58:DA:1140:C:O3'	2.24	0.66
36:DR:29:LEU:HG	36:DR:79:LEU:HD21	1.76	0.66
42:DX:68:ARG:NH1	58:DA:456:C:O2'	2.28	0.66
47:D3:6:VAL:HG22	47:D3:37:LEU:HD11	1.77	0.66
58:DA:2110:G:H1	58:DA:2179:C:N4	1.94	0.66
58:DA:2525:G:HO2'	58:DA:2742:C:HO2'	1.41	0.66
9:AJ:4:ILE:HD13	9:AJ:74:ILE:HG13	1.76	0.66
15:AP:5:ARG:HB2	20:AA:376:G:H5"	1.76	0.66
20:AA:1413:A:N6	20:AA:1487:G:H1	1.89	0.66
26:BE:28:ALA:HB3	26:BE:93:VAL:HG22	1.77	0.66
27:BF:175:THR:O	27:BF:175:THR:OG1	2.10	0.66
28:BG:173:LEU:HB3	28:BG:178:PHE:HB2	1.77	0.66
39:BU:55:ARG:NH1	58:BA:1155:A:OP1	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:2343:C:HO2'	58:BA:2373:G:HO2'	1.37	0.66
59:BB:18:G:H2'	59:BB:19:G:H8	1.60	0.66
59:BB:21:G:N2	59:BB:62:C:N3	2.35	0.66
2:CC:4:LYS:HE2	20:CA:1190:G:H5'	1.77	0.66
2:CC:11:ARG:HB3	2:CC:15:THR:HB	1.78	0.66
25:DD:100:GLY:HA3	58:DA:1500:G:H21	1.61	0.66
26:DE:10:GLY:HA2	38:DT:8:LYS:HE2	1.76	0.66
3:AD:20:TYR:O	3:AD:22:LYS:N	2.28	0.66
32:BN:64:GLY:HA3	58:BA:1141:U:H5	1.61	0.66
35:BQ:76:LYS:NZ	35:BQ:77:LYS:O	2.26	0.66
36:BR:29:LEU:HD21	36:BR:52:ILE:HD11	1.77	0.66
38:BT:67:SER:O	38:BT:69:GLY:N	2.28	0.66
58:BA:204:A:O3'	58:BA:205:G:H4'	1.96	0.66
20:CA:34:C:H2'	20:CA:35:G:C8	2.31	0.66
23:CY:317:MET:HB3	23:CY:327:PHE:HE2	1.61	0.66
25:DD:8:PRO:HA	25:DD:14:ARG:HG3	1.78	0.66
58:DA:277:C:H3'	58:DA:278:A:H8	1.60	0.66
58:DA:1018:C:H2'	58:DA:1019:U:H6	1.61	0.66
58:DA:1057:A:N6	58:DA:1087:G:OP1	2.26	0.66
58:DA:2686:G:H1	58:DA:2723:C:H42	1.43	0.66
21:AW:69:A:H2'	21:AW:70:G:H8	1.61	0.66
24:BC:151:GLY:HA2	24:BC:154:ILE:HG13	1.77	0.66
43:BY:9:LYS:HD2	43:BY:94:LYS:HZ1	1.61	0.66
58:BA:1613:G:H3'	58:BA:1614:A:H5'	1.78	0.66
58:BA:2125:G:N2	58:BA:2173:A:H62	1.91	0.66
58:BA:2744:G:H1	58:BA:2760:C:N4	1.93	0.66
21:CW:8:U:H3	21:CW:14:A:H62	1.42	0.66
28:DG:96:ARG:NH1	59:DB:34:U:OP2	2.22	0.66
28:DG:109:VAL:C	28:DG:112:PRO:HD2	2.20	0.66
32:DN:131:GLN:HG2	58:DA:7:G:O2'	1.94	0.66
46:D2:2:LYS:HD2	46:D2:5:GLU:HB2	1.77	0.66
58:DA:918:A:N3	59:DB:80:U:O2'	2.26	0.66
58:DA:1076:C:H2'	58:DA:1077:A:H4'	1.78	0.66
58:DA:1636:C:H2'	58:DA:1637:A:C8	2.30	0.66
58:DA:2291:U:OP1	58:DA:2380:C:O2'	2.14	0.66
20:AA:892:A:O2'	20:AA:1415:G:O2'	2.14	0.66
24:BC:78:ILE:HG21	24:BC:124:VAL:HG21	1.78	0.66
28:BG:15:VAL:HG13	28:BG:19:LEU:HD12	1.78	0.66
32:BN:71:ILE:H	32:BN:71:ILE:HD12	1.60	0.66
36:BR:65:LEU:HA	36:BR:68:ARG:HD2	1.77	0.66
44:BZ:156:LYS:HE3	44:BZ:158:PRO:HG3	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:481:G:H4'	58:BA:481:G:OP1	1.95	0.66
20:CA:993:G:O6	20:CA:1045:C:N3	2.29	0.66
23:CY:133:ILE:HG13	23:CY:272:LEU:HD11	1.78	0.66
50:D7:40:TRP:NE1	58:DA:458:G:O2'	2.27	0.66
58:DA:846:C:N3	58:DA:931:G:N2	2.37	0.66
3:AD:147:ALA:HB2	3:AD:182:LYS:HG3	1.78	0.66
11:AL:92:ASP:OD1	11:AL:92:ASP:N	2.29	0.66
24:BC:61:GLY:HA3	24:BC:164:PHE:CD1	2.31	0.66
24:BC:115:VAL:H	24:BC:145:THR:HG22	1.61	0.66
25:BD:147:LEU:HD12	25:BD:155:LEU:HD21	1.76	0.66
25:BD:233:HIS:HE2	25:BD:242:ARG:HG2	1.61	0.66
58:BA:2086:U:H2'	58:BA:2087:G:C8	2.31	0.66
35:DQ:89:ASN:O	35:DQ:91:GLU:N	2.27	0.66
58:DA:1045:A:OP1	58:DA:1046:A:O2'	2.13	0.66
58:DA:2834:G:H1'	58:DA:2883:A:N6	2.11	0.66
7:AH:94:TYR:OH	20:AA:597:G:N2	2.28	0.65
11:AL:87:GLY:H	11:AL:99:HIS:H	1.44	0.65
12:AM:116:THR:HA	20:AA:1228:C:H4'	1.78	0.65
34:BP:110:TYR:HD2	34:BP:111:ARG:HG3	1.61	0.65
40:BV:35:LEU:HB2	40:BV:57:VAL:HG13	1.77	0.65
50:B7:32:LYS:HA	50:B7:35:ARG:HG3	1.76	0.65
50:B7:39:ARG:HH12	50:B7:40:TRP:CD1	2.14	0.65
58:BA:857:C:H42	58:BA:920:G:H1	1.44	0.65
2:CC:189:ALA:HB3	2:CC:196:LEU:HB2	1.77	0.65
20:CA:892:A:O2'	20:CA:1415:G:O2'	2.07	0.65
20:CA:1165:C:H42	20:CA:1171:G:H1	1.43	0.65
21:CW:63:C:H2'	21:CW:64:G:H8	1.60	0.65
25:DD:222:ARG:N	58:DA:1789:A:OP1	2.22	0.65
44:DZ:144:LEU:HG	44:DZ:150:LEU:HD22	1.77	0.65
56:D1:48:LYS:NZ	56:D1:59:THR:OG1	2.28	0.65
3:AD:25:ARG:NH2	20:AA:411:A:OP2	2.29	0.65
20:AA:576:G:N7	20:AA:881:G:H1'	2.12	0.65
23:AY:206:LEU:HA	23:AY:210:ARG:HH21	1.60	0.65
38:BT:46:GLU:HG3	38:BT:65:LYS:HD3	1.78	0.65
58:BA:783:A:H4'	58:BA:2588:G:H4'	1.79	0.65
58:BA:2083:G:H2'	58:BA:2084:C:C6	2.31	0.65
12:CM:98:VAL:O	12:CM:99:ARG:NE	2.28	0.65
20:CA:976:G:OP2	20:CA:1358:U:O2'	2.12	0.65
23:CY:605:ILE:HG13	23:CY:648:PRO:HA	1.77	0.65
27:DF:41:LEU:HD22	27:DF:44:ARG:HH21	1.60	0.65
32:DN:55:VAL:HG23	32:DN:56:ASN:OD1	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DT:66:VAL:HG22	38:DT:71:GLY:HA2	1.77	0.65
58:DA:127:A:H5"	58:DA:128:C:C6	2.30	0.65
59:DB:6:C:H2'	59:DB:7:G:H8	1.61	0.65
2:AC:5:ILE:HG21	20:AA:1189:C:H5"	1.78	0.65
20:AA:891:U:H3	20:AA:907:A:H62	1.43	0.65
20:AA:1015:A:H2'	20:AA:1016:A:C8	2.32	0.65
34:BP:26:GLY:N	34:BP:30:THR:OG1	2.29	0.65
39:BU:45:TYR:O	39:BU:49:HIS:ND1	2.29	0.65
58:BA:177:G:OP2	58:BA:177:G:N2	2.27	0.65
58:BA:1802:A:H8	58:BA:1815:A:H62	1.41	0.65
58:BA:2829:C:H2'	58:BA:2830:G:H8	1.61	0.65
59:BB:29:A:H2'	59:BB:30:C:C6	2.31	0.65
17:CR:44:LEU:HD21	17:CR:50:ILE:HG12	1.76	0.65
20:CA:923:A:N6	20:CA:1393:U:H3	1.92	0.65
20:CA:1507:A:H2'	20:CA:1508:G:H8	1.62	0.65
26:DE:132:HIS:HB3	58:DA:1658:C:OP1	1.96	0.65
32:DN:17:ASP:O	32:DN:18:ALA:HB2	1.95	0.65
58:DA:848:G:H2'	58:DA:849:A:C8	2.31	0.65
58:DA:1197:G:H2'	58:DA:1198:U:H6	1.60	0.65
58:DA:1972:A:H2'	58:DA:1973:G:H8	1.61	0.65
2:AC:191:THR:HG23	2:AC:196:LEU:HD21	1.78	0.65
9:AJ:65:LEU:HA	13:AN:56:VAL:HA	1.77	0.65
11:AL:54:LYS:HD2	11:AL:70:ILE:HG12	1.78	0.65
29:BH:20:ALA:HB1	29:BH:21:PRO:HD2	1.78	0.65
31:BK:90:LYS:HG3	58:BA:1063:G:H21	1.61	0.65
32:BN:65:LYS:NZ	58:BA:1021:A:OP2	2.26	0.65
34:BP:13:ASN:ND2	58:BA:598:G:O2'	2.26	0.65
41:BW:82:LEU:HB2	41:BW:98:LYS:HB2	1.79	0.65
58:BA:69:C:H2'	58:BA:70:G:H8	1.62	0.65
58:BA:1287:A:C2	58:BA:1649:G:H4'	2.31	0.65
2:CC:95:THR:O	2:CC:97:LYS:N	2.29	0.65
20:CA:1066:C:H42	20:CA:1191:A:H62	1.41	0.65
58:DA:2464:C:N4	58:DA:2486:G:H1	1.94	0.65
14:AO:39:LEU:HD21	14:AO:52:SER:HB3	1.77	0.65
20:AA:1422:G:H1	20:AA:1478:C:N4	1.94	0.65
26:BE:199:ARG:NH2	58:BA:2772:C:OP1	2.28	0.65
26:BE:202:LYS:NZ	58:BA:2771:C:OP1	2.30	0.65
36:BR:64:ARG:HH12	58:BA:2852:G:H5'	1.61	0.65
1:CB:101:MET:HB2	1:CB:102:LEU:HD12	1.79	0.65
8:CI:102:LEU:HB3	20:CA:1179:A:H5"	1.79	0.65
20:CA:1127:G:N2	20:CA:1147:C:H41	1.94	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:176:GLY:HA3	23:CY:187:THR:HA	1.76	0.65
56:D1:44:PRO:HD3	58:DA:396:G:H4'	1.78	0.65
58:DA:998:C:H42	58:DA:1157:G:H1	1.44	0.65
8:AI:64:THR:HG22	8:AI:66:ARG:HD2	1.79	0.65
20:AA:672:U:H3	20:AA:734:G:H1	1.44	0.65
23:AY:27:THR:HA	23:AY:30:GLU:HB3	1.78	0.65
29:BH:67:LEU:HD13	58:BA:2757:A:H61	1.61	0.65
32:BN:40:PRO:HB3	39:BU:68:ALA:HB2	1.78	0.65
48:B5:20:ARG:HA	48:B5:23:HIS:HB2	1.78	0.65
53:Be:71:LYS:HA	53:Be:74:VAL:HB	1.77	0.65
58:BA:1312:U:H1'	58:BA:1314:C:H41	1.62	0.65
20:CA:1494:G:C5'	58:DA:1913:A:H62	1.76	0.65
27:DF:59:TYR:OH	58:DA:470:A:OP1	2.10	0.65
36:DR:104:ARG:HB3	36:DR:109:ALA:HB3	1.79	0.65
39:DU:49:HIS:CD2	58:DA:559:G:H22	2.14	0.65
59:DB:14:U:H2'	59:DB:15:A:H2	1.62	0.65
3:AD:15:GLU:HG2	3:AD:59:ARG:HH22	1.62	0.65
9:AJ:55:LYS:HG2	20:AA:963:G:N2	2.11	0.65
10:AK:40:ILE:HA	20:AA:685:G:H4'	1.77	0.65
11:AL:93:LEU:HD21	11:AL:96:VAL:HG13	1.78	0.65
23:AY:546:ILE:HA	23:AY:590:ILE:HG13	1.77	0.65
41:BW:76:VAL:HA	41:BW:102:HIS:O	1.96	0.65
58:BA:1623:G:H2'	58:BA:1624:G:H8	1.62	0.65
58:BA:1847:A:H8	58:BA:1847:A:OP1	1.79	0.65
58:BA:2023:G:O6	58:BA:2040:C:N3	2.30	0.65
58:BA:2475:C:H42	58:BA:2529:G:H22	1.44	0.65
11:CL:15:ARG:HB3	20:CA:562:C:H1'	1.79	0.65
14:CO:39:LEU:HD23	20:CA:740:U:H4'	1.79	0.65
20:CA:801:U:H2'	20:CA:802:A:C8	2.31	0.65
24:DC:69:LEU:HD22	24:DC:71:LYS:HB2	1.78	0.65
24:DC:132:LEU:HD12	24:DC:138:LEU:HD23	1.77	0.65
34:DP:66:GLY:HA2	58:DA:2415:G:H4'	1.79	0.65
42:DX:34:ALA:O	42:DX:77:LYS:NZ	2.23	0.65
45:D0:70:GLN:HB3	45:D0:78:TYR:HB2	1.78	0.65
58:DA:1347:G:H1	58:DA:1599:C:N4	1.94	0.65
58:DA:1411:C:N4	58:DA:1591:G:H1	1.93	0.65
58:DA:2212:A:H1'	58:DA:2215:G:C5	2.31	0.65
58:DA:2243:U:H2'	58:DA:2244:U:C6	2.31	0.65
19:AT:82:SER:HB3	20:AA:186:C:H4'	1.77	0.65
20:AA:740:U:O2'	20:AA:741:G:O4'	2.14	0.65
20:AA:1288:A:H2'	20:AA:1289:A:O4'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:330:VAL:HG13	23:AY:331:TYR:H	1.61	0.65
23:AY:394:ALA:O	23:AY:396:ARG:N	2.29	0.65
29:BH:60:ARG:O	29:BH:64:LEU:HG	1.97	0.65
29:BH:103:LEU:HD13	29:BH:125:VAL:HG21	1.77	0.65
35:BQ:70:PRO:HA	35:BQ:95:ALA:HB2	1.79	0.65
36:BR:29:LEU:HG	36:BR:79:LEU:HD21	1.78	0.65
37:BS:85:VAL:HG23	37:BS:106:ARG:HH11	1.61	0.65
40:BV:17:GLY:HA2	40:BV:96:ILE:HB	1.79	0.65
56:B1:64:ALA:HB1	58:BA:398:G:P	2.37	0.65
1:CB:19:HIS:CG	1:CB:20:GLU:H	2.15	0.65
20:CA:953:G:O6	20:CA:1228:C:N3	2.29	0.65
20:CA:1265:G:O6	20:CA:1270:C:N3	2.30	0.65
25:DD:220:HIS:N	58:DA:1790:C:OP1	2.29	0.65
39:DU:101:ARG:NH1	39:DU:101:ARG:O	2.30	0.65
58:DA:19:C:H2'	58:DA:20:C:C6	2.30	0.65
58:DA:1671:U:N3	58:DA:1674:G:OP2	2.25	0.65
11:CL:49:ASN:ND2	20:CA:521:G:O6	2.28	0.65
20:CA:186(N):U:H2'	20:CA:186(O):G:H8	1.62	0.65
33:DO:21:CYS:HA	33:DO:39:ILE:HD11	1.79	0.65
58:DA:1538:G:H2'	58:DA:1539:G:C8	2.31	0.65
58:DA:1913:A:O2'	58:DA:1914:C:P	2.55	0.65
59:DB:31:C:H42	59:DB:51:G:H1	1.45	0.65
11:AL:81:SER:HA	11:AL:106:ASP:HB3	1.78	0.65
12:AM:37:THR:HG22	12:AM:59:TYR:HB3	1.79	0.65
20:AA:14:U:N3	20:AA:17:U:OP2	2.25	0.65
20:AA:824:C:H2'	20:AA:825:G:H8	1.62	0.65
23:AY:138:LYS:O	23:AY:144:ALA:HB2	1.97	0.65
24:BC:84:ILE:HG23	24:BC:95:VAL:HB	1.78	0.65
25:BD:244:ARG:HH22	58:BA:1841:U:H1'	1.62	0.65
58:BA:1428:C:N4	58:BA:1570:A:OP2	2.24	0.65
20:CA:10:A:H2	20:CA:24:U:H3	1.45	0.65
60:CY:701:FUA:O1	60:CY:701:FUA:C20	2.40	0.65
25:DD:27:THR:HG23	25:DD:83:GLU:HB3	1.78	0.65
26:DE:151:TYR:HB2	26:DE:154:LYS:HB2	1.77	0.65
31:DK:78:ILE:HD11	31:DK:99:ILE:HD11	1.79	0.65
34:DP:60:MET:O	58:DA:2392:A:O2'	2.14	0.65
35:DQ:63:LYS:HZ1	58:DA:873:G:H5"	1.62	0.65
3:AD:33:MET:O	3:AD:35:ARG:N	2.30	0.64
11:AL:33:ARG:NH1	11:AL:61:THR:OG1	2.31	0.64
19:AT:51:GLU:HA	19:AT:54:LYS:HD2	1.79	0.64
20:AA:702:A:N1	58:BA:1846:G:N2	2.44	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1198:G:H2'	20:AA:1199:U:C6	2.32	0.64
20:AA:1513:A:H2'	20:AA:1514:C:C6	2.32	0.64
23:AY:136:ALA:H	23:AY:260:LEU:HA	1.62	0.64
32:BN:120:LEU:HD23	32:BN:120:LEU:C	2.22	0.64
58:BA:745:G:O6	58:BA:746:A:N6	2.30	0.64
1:CB:169:LYS:O	1:CB:172:ILE:N	2.27	0.64
20:CA:501:C:H1'	20:CA:549:C:H1'	1.79	0.64
20:CA:973:G:H3'	20:CA:974:A:H5"	1.79	0.64
20:CA:1002:G:H2'	20:CA:1003:G:C8	2.33	0.64
20:CA:1060:C:H2'	20:CA:1061:G:C8	2.32	0.64
27:DF:104:LYS:NZ	58:DA:605:C:OP1	2.30	0.64
38:DT:30:VAL:HG22	38:DT:31:SER:H	1.61	0.64
44:DZ:127:LYS:HG2	44:DZ:164:ALA:HB2	1.79	0.64
46:D2:47:ASN:OD1	46:D2:47:ASN:N	2.29	0.64
58:DA:209:C:H5'	58:DA:681:G:H4'	1.79	0.64
58:DA:689:A:H2'	58:DA:690:G:H8	1.61	0.64
58:DA:1792:G:N2	58:DA:1827:C:N3	2.41	0.64
58:DA:2707:G:H2'	58:DA:2708:G:C8	2.33	0.64
4:AE:29:GLY:HA2	4:AE:46:GLY:O	1.97	0.64
20:AA:673:G:H2'	20:AA:674:G:C8	2.32	0.64
20:AA:1412:C:H42	20:AA:1488:G:H1	1.43	0.64
24:BC:104:ILE:HG23	24:BC:111:PHE:CZ	2.31	0.64
28:BG:37:VAL:HG22	28:BG:159:VAL:HG23	1.79	0.64
32:BN:55:VAL:HG23	32:BN:56:ASN:OD1	1.97	0.64
34:BP:56:SER:OG	34:BP:60:MET:SD	2.54	0.64
58:BA:659:C:H2'	58:BA:660:G:C8	2.31	0.64
58:BA:1047:G:H1'	58:BA:1110:G:H22	1.62	0.64
58:BA:1459:G:H2'	58:BA:1461:G:H5'	1.76	0.64
10:CK:43:SER:HB2	10:CK:71:LYS:HZ1	1.63	0.64
20:CA:600:C:H2'	20:CA:601:C:C6	2.32	0.64
23:CY:28:THR:O	23:CY:32:ILE:HG12	1.98	0.64
25:DD:51:VAL:HG13	25:DD:52:ARG:H	1.63	0.64
58:DA:698:C:OP1	58:DA:1634:A:N6	2.26	0.64
58:DA:1137:G:N2	58:DA:1138:G:C4	2.65	0.64
58:DA:1494:A:H2'	58:DA:1494:A:N3	2.13	0.64
58:DA:2398:U:H2'	58:DA:2399:G:C8	2.33	0.64
6:AG:75:VAL:HA	6:AG:88:PRO:HA	1.78	0.64
20:AA:925:G:O2'	20:AA:927:G:OP1	2.13	0.64
20:AA:1255:G:H1	20:AA:1282:C:H42	1.44	0.64
25:BD:9:TYR:HD1	25:BD:10:THR:H	1.45	0.64
35:BQ:16:ARG:HG3	35:BQ:18:LYS:HD3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:137:ASN:ND2	23:CY:262:SER:HA	2.11	0.64
24:DC:28:ARG:HG3	24:DC:183:PRO:HG3	1.79	0.64
24:DC:164:PHE:HA	24:DC:172:ILE:HG13	1.78	0.64
28:DG:43:LEU:HD13	58:DA:2305:A:H61	1.62	0.64
32:DN:126:PRO:O	32:DN:127:ASP:HB2	1.98	0.64
35:DQ:74:TYR:HB3	35:DQ:91:GLU:O	1.97	0.64
42:DX:5:TYR:HA	42:DX:7:VAL:HG23	1.79	0.64
48:D5:3:LYS:HG2	48:D5:5:PRO:HD2	1.79	0.64
50:D7:40:TRP:HZ3	58:DA:459:U:C6	2.15	0.64
58:DA:539:G:H2'	58:DA:540:G:C8	2.32	0.64
58:DA:1687:G:N1	58:DA:1700:A:OP1	2.28	0.64
58:DA:1802:A:C8	58:DA:1815:A:N6	2.63	0.64
23:AY:268:GLY:HA2	23:AY:271:LEU:HD21	1.79	0.64
25:BD:9:TYR:HD2	58:BA:705:A:H1'	1.60	0.64
32:BN:126:PRO:O	32:BN:127:ASP:HB2	1.97	0.64
3:CD:33:MET:O	3:CD:35:ARG:N	2.31	0.64
5:CF:100:ASN:HB2	17:CR:28:GLU:HA	1.80	0.64
18:CS:12:ASP:H	18:CS:38:SER:HB3	1.62	0.64
20:CA:106:C:H2'	20:CA:107:G:H8	1.63	0.64
23:CY:505:GLY:O	23:CY:506:GLN:HB2	1.97	0.64
23:CY:627:ARG:NH2	23:CY:658:ASP:OD1	2.30	0.64
25:DD:24:ILE:HA	25:DD:82:ILE:HD13	1.80	0.64
34:DP:96:THR:HA	34:DP:126:VAL:HB	1.79	0.64
49:D6:30:THR:O	49:D6:32:ASN:N	2.29	0.64
58:DA:32:C:N4	58:DA:447:A:OP2	2.29	0.64
58:DA:181:A:H2'	58:DA:182:A:C8	2.33	0.64
58:DA:193:U:H2'	58:DA:194:G:H8	1.63	0.64
58:DA:1429:G:H2'	58:DA:1430:C:C6	2.33	0.64
58:DA:2745:C:H41	58:DA:2755:C:H4'	1.62	0.64
9:AJ:13:HIS:HA	9:AJ:16:LEU:HD12	1.80	0.64
20:AA:867:G:O2'	20:AA:873:A:N1	2.31	0.64
23:AY:8:ASP:HB3	23:AY:11:ARG:HG2	1.79	0.64
34:BP:115:LEU:HA	34:BP:134:ALA:HB2	1.78	0.64
38:BT:29:ARG:HG2	38:BT:30:VAL:HB	1.80	0.64
20:CA:1507:A:H2'	20:CA:1508:G:C8	2.31	0.64
23:CY:25:LYS:CB	61:CY:702:GDP:O2B	2.46	0.64
23:CY:99:ARG:HD3	23:CY:128:TYR:HB2	1.79	0.64
23:CY:524:GLU:HB2	23:CY:564:LYS:HA	1.78	0.64
28:DG:126:ASP:HB2	28:DG:130:ASN:HD22	1.61	0.64
37:DS:89:ARG:HB3	37:DS:92:TYR:HB3	1.79	0.64
58:DA:414:C:H2'	58:DA:415:A:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:481:G:H4'	58:DA:481:G:OP1	1.97	0.64
58:DA:528:A:H61	58:DA:2042:A:H3'	1.63	0.64
58:DA:856:C:H2'	58:DA:857:C:C6	2.32	0.64
58:DA:868:U:H3	58:DA:909:A:H61	1.45	0.64
3:AD:155:LEU:HB3	3:AD:158:ILE:HD13	1.77	0.64
24:BC:73:VAL:HG11	24:BC:157:ILE:HG22	1.78	0.64
41:BW:3:ALA:HB2	41:BW:58:ALA:HB2	1.79	0.64
58:BA:2176:A:H2'	58:BA:2177:C:C6	2.32	0.64
8:CI:97:LYS:HD2	8:CI:102:LEU:HB2	1.80	0.64
17:CR:72:ARG:HA	17:CR:75:ILE:HD12	1.80	0.64
23:CY:272:LEU:HA	23:CY:275:ALA:HB3	1.79	0.64
26:DE:74:PRO:HG2	26:DE:77:ILE:HA	1.80	0.64
45:D0:21:LEU:HD13	45:D0:41:ARG:HD3	1.78	0.64
47:D3:26:LEU:HB2	47:D3:28:LEU:HD23	1.79	0.64
58:DA:965:C:H4'	58:DA:2273:A:H1'	1.80	0.64
58:DA:966:G:H2'	58:DA:967:C:C6	2.33	0.64
58:DA:1003:G:HO2'	58:DA:1010:A:N6	1.96	0.64
58:DA:1913:A:H2'	58:DA:1914:C:OP2	1.97	0.64
11:AL:52:LEU:HG	11:AL:53:ARG:H	1.63	0.64
16:AQ:43:LEU:HD12	16:AQ:69:LYS:HA	1.79	0.64
20:AA:21:G:H21	20:AA:914:A:H62	1.45	0.64
21:AW:8:U:H5'	21:AW:49:A:H5"	1.80	0.64
23:AY:161:PRO:HA	23:AY:256:THR:HB	1.80	0.64
50:B7:8:ASN:HB3	50:B7:11:LYS:HB3	1.77	0.64
53:Be:84:LEU:C	53:Be:87:LYS:HG3	2.21	0.64
58:BA:2178:C:H2'	58:BA:2179:C:H6	1.61	0.64
16:CQ:12:SER:HB2	16:CQ:14:LYS:HG3	1.79	0.64
21:CW:23:A:H2'	21:CW:24:G:C8	2.32	0.64
23:CY:626:ALA:HB2	58:DA:2473:U:H6	1.62	0.64
32:DN:137:LYS:HZ3	32:DN:137:LYS:HA	1.62	0.64
39:DU:62:ILE:HD11	39:DU:93:LYS:HD3	1.80	0.64
58:DA:30:G:H2'	58:DA:31:C:H6	1.62	0.64
58:DA:874:G:H1	58:DA:903:C:H42	1.45	0.64
58:DA:956:G:N2	58:DA:960:A:OP2	2.31	0.64
58:DA:1516:U:H2'	58:DA:1517:G:C8	2.33	0.64
58:DA:1814:G:H2'	58:DA:1815:A:C8	2.33	0.64
58:DA:2671:A:H2'	58:DA:2672:G:C8	2.32	0.64
11:AL:37:CYS:SG	11:AL:38:THR:N	2.71	0.64
13:AN:61:TRP:HZ2	20:AA:1368:G:H4'	1.62	0.64
20:AA:977:A:O2'	20:AA:981:U:N3	2.27	0.64
21:AW:23:A:H2'	21:AW:24:G:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:9:ILE:HG23	27:BF:12:LEU:HD23	1.78	0.64
28:BG:72:ARG:HB3	28:BG:87:PRO:HD2	1.79	0.64
58:BA:223:A:O2'	58:BA:420:C:O2	2.16	0.64
12:CM:91:ARG:HH22	12:CM:103:THR:HG21	1.62	0.64
20:CA:1412:C:N3	20:CA:1488:G:N2	2.37	0.64
24:DC:61:GLY:HA3	24:DC:164:PHE:CE1	2.33	0.64
24:DC:62:THR:O	24:DC:62:THR:OG1	2.15	0.64
27:DF:101:LEU:HD12	27:DF:102:PRO:HD2	1.79	0.64
32:DN:120:LEU:HD23	32:DN:120:LEU:C	2.21	0.64
42:DX:53:LYS:O	42:DX:81:VAL:HA	1.98	0.64
58:DA:1915:U:H2'	58:DA:1916:A:C8	2.33	0.64
58:DA:2020:A:N1	58:DA:2034:U:O4	2.30	0.64
20:AA:266:G:O2'	20:AA:268:C:OP2	2.13	0.64
23:AY:544:LYS:HB3	23:AY:583:LYS:HE3	1.80	0.64
38:BT:109:GLU:HA	38:BT:112:ARG:HB3	1.80	0.64
45:B0:51:VAL:HG22	45:B0:81:VAL:HG23	1.79	0.64
3:CD:26:CYS:HA	3:CD:31:CYS:HA	1.78	0.64
3:CD:190:ASP:H	3:CD:193:ASP:HB2	1.61	0.64
20:CA:1071:C:H2'	20:CA:1072:G:H8	1.63	0.64
24:DC:104:ILE:HG21	24:DC:132:LEU:HD11	1.79	0.64
46:D2:48:HIS:HD2	46:D2:49:LYS:HG2	1.62	0.64
56:D1:7:ILE:HD11	56:D1:62:VAL:HA	1.79	0.64
58:DA:414:C:H2'	58:DA:415:A:H8	1.59	0.64
58:DA:692:C:H42	58:DA:770:G:H1	1.46	0.64
58:DA:1019:U:H3	58:DA:1020:A:N6	1.96	0.64
17:AR:44:LEU:HG	17:AR:50:ILE:HA	1.79	0.64
20:AA:976:G:N2	20:AA:1362(A):C:OP2	2.19	0.64
25:BD:50:THR:HB	58:BA:1805:U:H1'	1.80	0.64
32:BN:137:LYS:HZ3	32:BN:137:LYS:HA	1.62	0.64
38:BT:129:ARG:HD3	38:BT:132:LYS:HB2	1.80	0.64
44:BZ:98:MET:HE1	44:BZ:100:VAL:HG23	1.80	0.64
58:BA:2716:U:H2'	58:BA:2717:G:H8	1.62	0.64
20:CA:603:U:H2'	20:CA:604:G:C8	2.33	0.64
23:CY:617:MET:HA	23:CY:620:VAL:HG22	1.80	0.64
24:DC:57:GLN:HG2	24:DC:202:PRO:HB3	1.80	0.64
27:DF:157:VAL:O	27:DF:194:MET:HA	1.98	0.64
28:DG:106:LEU:HA	28:DG:110:ALA:CB	2.28	0.64
43:DY:49:VAL:HA	58:DA:483:A:H4'	1.78	0.64
47:D3:4:LEU:HB2	47:D3:37:LEU:HB2	1.80	0.64
20:AA:1270:C:H2'	20:AA:1271:G:C8	2.33	0.63
27:BF:4:VAL:H	27:BF:24:LEU:HG	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BN:120:LEU:HD23	32:BN:120:LEU:O	1.98	0.63
34:BP:67:MET:HE1	34:BP:70:GLN:HG2	1.80	0.63
37:BS:25:ARG:HB3	37:BS:40:ILE:HG23	1.80	0.63
42:BX:63:LYS:HE3	42:BX:72:LYS:HE3	1.78	0.63
47:B3:17:LYS:HD3	47:B3:20:LYS:HD3	1.79	0.63
56:B1:5:CYS:SG	56:B1:8:SER:N	2.71	0.63
58:BA:1287:A:H2	58:BA:1649:G:H4'	1.63	0.63
58:BA:1538:G:H2'	58:BA:1539:G:C8	2.33	0.63
58:BA:1889:A:H2'	58:BA:1890:A:C8	2.33	0.63
59:BB:40:U:H3'	59:BB:41:U:H5"	1.80	0.63
6:CG:75:VAL:HA	6:CG:88:PRO:HA	1.80	0.63
12:CM:91:ARG:NH1	12:CM:97:PRO:O	2.31	0.63
20:CA:107:G:O5'	20:CA:108:G:N2	2.31	0.63
20:CA:114:U:H2'	20:CA:115:G:C8	2.33	0.63
20:CA:815:A:C2	20:CA:1527:C:H1'	2.33	0.63
23:CY:174:PHE:O	23:CY:267:LYS:NZ	2.27	0.63
23:CY:526:VAL:HG22	23:CY:566:THR:HG23	1.80	0.63
24:DC:115:VAL:HB	24:DC:150:ILE:HG23	1.79	0.63
44:DZ:29:TYR:HE1	59:DB:73:A:H61	1.43	0.63
47:D3:30:ARG:HD3	58:DA:1158:C:H5"	1.80	0.63
58:DA:1275:A:H3'	58:DA:1645:G:O2'	1.98	0.63
58:DA:1438:U:H2'	58:DA:1439:A:C8	2.32	0.63
59:DB:104:A:H2'	59:DB:105:G:O4'	1.98	0.63
1:AB:81:VAL:HG12	1:AB:215:LEU:HD11	1.79	0.63
23:AY:256:THR:O	23:AY:258:VAL:N	2.30	0.63
25:BD:172:TYR:HA	25:BD:186:HIS:HA	1.79	0.63
40:BV:66:ARG:HG2	40:BV:88:ARG:HD2	1.81	0.63
58:BA:2080:G:H1	58:BA:2240:C:N4	1.94	0.63
58:BA:2734:A:H62	58:BA:2770:G:H21	1.46	0.63
2:CC:177:THR:HB	2:CC:180:ALA:HB2	1.79	0.63
3:CD:20:TYR:O	3:CD:22:LYS:N	2.31	0.63
9:CJ:39:PRO:HA	9:CJ:70:ARG:HG3	1.79	0.63
19:CT:20:LEU:HD22	19:CT:23:ARG:HH11	1.63	0.63
20:CA:745:C:H2'	20:CA:746:A:C8	2.33	0.63
23:CY:443:HIS:CD2	23:CY:446:THR:H	2.15	0.63
34:DP:81:GLN:HG2	34:DP:106:LEU:HA	1.81	0.63
36:DR:4:LEU:O	36:DR:6:SER:N	2.29	0.63
58:DA:2103:C:N4	58:DA:2186:G:H1	1.96	0.63
58:DA:2570:G:H2'	58:DA:2571:C:C6	2.34	0.63
58:DA:2701:C:H42	58:DA:2706:G:H1	1.45	0.63
11:AL:58:VAL:HG12	11:AL:60:LEU:N	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1324:A:H2'	20:AA:1325:C:C6	2.33	0.63
20:AA:1505:G:H5"	20:AA:1506:U:H5"	1.81	0.63
21:AW:64:G:C6	21:AW:65:U:O4	2.50	0.63
25:BD:77:ALA:O	25:BD:117:VAL:N	2.31	0.63
56:B1:88:LYS:HA	56:B1:91:LYS:HB3	1.79	0.63
58:BA:2715:C:H2'	58:BA:2716:U:C6	2.33	0.63
16:CQ:9:VAL:HA	16:CQ:56:VAL:HG22	1.80	0.63
20:CA:1255:G:H1	20:CA:1282:C:N4	1.97	0.63
36:DR:7:GLY:O	36:DR:8:ARG:HB2	1.99	0.63
39:DU:92:ARG:O	39:DU:96:ALA:N	2.31	0.63
58:DA:212:G:H2'	58:DA:213:A:C8	2.33	0.63
58:DA:681:G:H1	58:DA:796:C:N4	1.94	0.63
58:DA:2030:A:H4'	58:DA:2031:A:C8	2.32	0.63
58:DA:2081:C:H2'	58:DA:2082:A:H8	1.64	0.63
15:AP:2:VAL:HA	15:AP:23:ASP:HA	1.80	0.63
26:BE:150:VAL:HG21	58:BA:2618:G:H21	1.63	0.63
26:BE:188:VAL:O	58:BA:2680:C:H4'	1.99	0.63
38:BT:26:ASP:CG	38:BT:27:THR:H	2.07	0.63
39:BU:18:LEU:HD21	39:BU:22:LYS:HE2	1.79	0.63
58:BA:1538:G:H2'	58:BA:1539:G:H8	1.63	0.63
58:BA:2207:C:H42	58:BA:2217:G:H1	1.43	0.63
32:DN:120:LEU:HD23	32:DN:120:LEU:O	1.98	0.63
56:D1:91:LYS:HA	56:D1:94:LEU:HD22	1.79	0.63
12:AM:31:LYS:HA	12:AM:34:LEU:HB2	1.80	0.63
20:AA:600:C:H2'	20:AA:601:C:C6	2.33	0.63
25:BD:3:VAL:HG23	25:BD:200:ASP:HB3	1.80	0.63
27:BF:63:LYS:HG3	27:BF:76:GLY:HA2	1.81	0.63
28:BG:114:ILE:HB	28:BG:117:PHE:HB2	1.81	0.63
44:BZ:96:VAL:H	44:BZ:130:PRO:HD3	1.63	0.63
58:BA:839:U:H2'	58:BA:840:C:C6	2.34	0.63
58:BA:2676:C:H2'	58:BA:2677:G:C8	2.33	0.63
9:CJ:50:ILE:HB	9:CJ:60:ARG:HG2	1.81	0.63
24:DC:214:TYR:HB3	24:DC:222:SER:HB2	1.81	0.63
29:DH:41:MET:SD	29:DH:42:ARG:N	2.71	0.63
48:D5:12:SER:HB2	58:DA:2020:A:H5'	1.79	0.63
58:DA:2048:G:H1	58:DA:2620:C:H42	1.46	0.63
8:AI:10:ARG:HD3	8:AI:75:ASP:HB3	1.80	0.63
23:AY:168:ILE:HG23	23:AY:205:TYR:HE2	1.63	0.63
23:AY:335:LEU:HD11	23:AY:352:VAL:HG11	1.81	0.63
25:BD:79:VAL:O	25:BD:96:HIS:HB2	1.99	0.63
31:BK:54:PRO:HB2	31:BK:70:LYS:HD3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BY:11:ASP:CG	43:BY:12:THR:H	2.07	0.63
58:BA:1604:C:H2'	58:BA:1605:C:C6	2.33	0.63
58:BA:1802:A:H8	58:BA:1815:A:N6	1.96	0.63
20:CA:128:G:H1	20:CA:233:C:N4	1.95	0.63
20:CA:978:A:OP2	20:CA:1362(A):C:N4	2.32	0.63
20:CA:1040:U:H2'	20:CA:1041:A:C8	2.34	0.63
25:DD:125:ILE:HG12	25:DD:137:PRO:HG2	1.80	0.63
28:DG:37:VAL:HG22	28:DG:159:VAL:HG23	1.80	0.63
38:DT:35:LYS:O	38:DT:36:GLU:HB2	1.98	0.63
56:D1:76:ARG:NH2	56:D1:94:LEU:O	2.31	0.63
58:DA:439:G:H2'	58:DA:440:G:C8	2.34	0.63
58:DA:1569:A:H2'	58:DA:1570:A:H8	1.62	0.63
1:AB:91:PRO:HG2	1:AB:155:LEU:HD23	1.80	0.63
11:AL:58:VAL:HG21	11:AL:85:ILE:HD11	1.80	0.63
20:AA:373:A:N3	20:AA:481:G:N2	2.39	0.63
25:BD:149:PRO:HG2	58:BA:2218:G:H4'	1.81	0.63
26:BE:26:ILE:HG13	26:BE:182:LEU:HB3	1.79	0.63
26:BE:52:LEU:HD12	26:BE:53:PRO:HD2	1.81	0.63
26:BE:143:ASN:HB3	26:BE:147:PRO:HD2	1.81	0.63
27:BF:45:ARG:NH2	58:BA:444:C:OP1	2.29	0.63
36:BR:10:LEU:HB3	36:BR:17:ARG:HH21	1.62	0.63
40:BV:56:SER:H	40:BV:100:ARG:HG3	1.64	0.63
41:BW:92:ARG:NH2	58:BA:2015:A:OP1	2.32	0.63
58:BA:1288:U:H3	58:BA:1326:U:H3	1.47	0.63
58:BA:2038:G:C2'	58:BA:2039:C:H5'	2.28	0.63
5:CF:28:ARG:O	5:CF:32:ASN:ND2	2.25	0.63
8:CI:127:LYS:HA	20:CA:967:C:H5'	1.79	0.63
10:CK:11:LYS:N	10:CK:75:TYR:HH	1.97	0.63
20:CA:950:U:H2'	20:CA:951:G:H8	1.63	0.63
20:CA:1113:C:H42	20:CA:1187:G:H1	1.46	0.63
20:CA:1385:G:H2'	20:CA:1386:G:H8	1.62	0.63
32:DN:76:SER:CB	58:DA:2641:G:H4'	2.28	0.63
36:DR:5:LYS:HG3	58:DA:2820:A:H4'	1.80	0.63
58:DA:381:G:H1	58:DA:393:C:N4	1.94	0.63
58:DA:1196:C:HO2'	58:DA:1227:G:HO2'	1.39	0.63
58:DA:2105:C:H2'	58:DA:2106:G:C8	2.34	0.63
58:DA:2870:C:H2'	58:DA:2871:C:O4'	1.99	0.63
1:AB:209:ARG:HH11	1:AB:239:VAL:HG13	1.63	0.63
4:AE:70:PRO:HG2	4:AE:142:LEU:HD22	1.81	0.63
12:AM:115:LYS:H	20:AA:1228:C:H5'	1.64	0.63
23:AY:319:ASP:OD2	23:AY:322:VAL:N	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BK:88:ALA:HB2	31:BK:96:VAL:HG23	1.81	0.63
35:BQ:76:LYS:N	35:BQ:89:ASN:H	1.96	0.63
36:BR:5:LYS:HG3	58:BA:2820:A:H4'	1.81	0.63
53:Be:63:ILE:HG22	53:Be:64:LEU:H	1.64	0.63
58:BA:814:C:O2'	58:BA:1224:C:N3	2.32	0.63
58:BA:1203:G:H2'	58:BA:1204:A:C2	2.34	0.63
20:CA:183:G:HO2'	20:CA:224:C:HO2'	1.45	0.63
20:CA:186(N):U:H2'	20:CA:186(O):G:C8	2.33	0.63
20:CA:1040:U:H2'	20:CA:1041:A:H8	1.62	0.63
23:CY:462:ILE:HD11	60:CY:701:FUA:H21	1.81	0.63
25:DD:89:SER:HB2	25:DD:159:ALA:HB2	1.80	0.63
25:DD:260:ARG:NH2	25:DD:266:SER:OG	2.31	0.63
58:DA:909:A:H2'	58:DA:912:C:C5	2.33	0.63
8:AI:5:TYR:HE2	8:AI:16:ARG:HG2	1.64	0.63
20:AA:66:G:N2	20:AA:172:A:N3	2.47	0.63
20:AA:955:U:H2'	20:AA:956:U:C6	2.33	0.63
21:AW:72:C:H2'	21:AW:73:A:O4'	1.99	0.63
24:BC:34:ALA:HB2	24:BC:217:THR:HG21	1.81	0.63
34:BP:24:GLY:HA2	34:BP:30:THR:HA	1.81	0.63
35:BQ:25:ASP:HA	35:BQ:102:VAL:HG23	1.81	0.63
37:BS:63:THR:OG1	59:BB:50:G:OP1	2.15	0.63
45:B0:35:ASN:H	45:B0:61:ALA:HB3	1.64	0.63
47:B3:5:LYS:HD3	47:B3:57:GLU:HG2	1.81	0.63
58:BA:373:U:H2'	58:BA:374:A:C8	2.34	0.63
58:BA:1010:A:N3	58:BA:1153:C:H1'	2.13	0.63
58:BA:1375:C:H2'	58:BA:1376:C:C6	2.34	0.63
58:BA:1530:G:O6	58:BA:1541:U:O2	2.16	0.63
58:BA:2535:G:H2'	58:BA:2536:G:H8	1.63	0.63
18:CS:12:ASP:HB2	18:CS:15:LEU:HG	1.80	0.63
23:CY:74:TRP:CG	23:CY:75:LYS:H	2.15	0.63
25:DD:157:ARG:N	58:DA:1819:A:OP1	2.32	0.63
26:DE:53:PRO:HA	26:DE:74:PRO:HA	1.80	0.63
56:D1:39:LYS:NZ	56:D1:40:ARG:O	2.32	0.63
58:DA:740:U:H2'	58:DA:741:G:C8	2.34	0.63
58:DA:991:C:H5'	58:DA:1185:C:H2'	1.81	0.63
2:AC:22:TRP:HA	9:AJ:93:GLY:HA2	1.81	0.62
5:AF:51:PRO:HA	5:AF:56:PRO:HA	1.80	0.62
5:AF:82:ARG:NH2	5:AF:84:ASN:OD1	2.32	0.62
10:AK:85:ARG:NH1	20:AA:707:C:OP1	2.32	0.62
20:AA:114:U:H3	20:AA:313:A:H2	1.47	0.62
23:AY:317:MET:HB2	23:AY:327:PHE:CE2	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:500:GLN:O	23:AY:501:THR:O	2.17	0.62
28:BG:41:GLN:HE21	28:BG:155:MET:HB3	1.63	0.62
29:BH:23:ARG:HA	29:BH:36:PRO:HA	1.81	0.62
43:BY:68:HIS:HB3	43:BY:71:LYS:HE2	1.79	0.62
53:Be:63:ILE:HB	53:Be:70:LYS:HG2	1.80	0.62
58:BA:603:A:N1	58:BA:656:G:H1'	2.14	0.62
58:BA:1149:G:H2'	58:BA:1150:C:C6	2.33	0.62
58:BA:1541:U:H3'	58:BA:1542:G:C3'	2.27	0.62
1:CB:193:ASP:HB3	1:CB:196:LEU:HD23	1.81	0.62
3:CD:205:GLU:O	20:CA:8:A:N6	2.32	0.62
10:CK:81:ASP:HA	10:CK:106:LYS:O	1.99	0.62
20:CA:253:U:O2	20:CA:275:G:O2'	2.17	0.62
24:DC:42:VAL:HB	24:DC:177:GLY:HA3	1.81	0.62
24:DC:71:LYS:HG3	24:DC:72:GLN:H	1.64	0.62
25:DD:110:GLY:HA3	25:DD:127:VAL:HG11	1.81	0.62
27:DF:2:LYS:O	27:DF:4:VAL:N	2.32	0.62
43:DY:38:ILE:HD11	43:DY:64:GLU:HB3	1.79	0.62
44:DZ:18:LEU:HD12	44:DZ:18:LEU:H	1.65	0.62
45:D0:68:GLU:HG3	45:D0:80:HIS:HB2	1.80	0.62
47:D3:22:ALA:HB2	47:D3:49:LYS:HD3	1.81	0.62
58:DA:39:C:H2'	58:DA:40:C:C6	2.34	0.62
58:DA:1021:A:H2'	58:DA:1022:G:H4'	1.80	0.62
58:DA:1541:U:H3'	58:DA:1542:G:H3'	1.81	0.62
58:DA:2886:G:H2'	58:DA:2887:U:C6	2.34	0.62
7:AH:108:GLY:HA2	7:AH:138:TRP:HB3	1.80	0.62
23:AY:493:VAL:HG23	23:AY:512:ILE:HD11	1.80	0.62
29:BH:154:PRO:HA	29:BH:161:GLY:HA3	1.79	0.62
32:BN:37:LYS:O	39:BU:67:ALA:HB2	1.98	0.62
36:BR:11:ASN:HB2	58:BA:1653:G:O6	1.99	0.62
51:B8:28:GLY:HA2	58:BA:2392:A:H5"	1.81	0.62
58:BA:779:U:H2'	58:BA:780:G:O4'	1.99	0.62
58:BA:2396:G:H2'	58:BA:2397:G:C8	2.31	0.62
20:CA:21:G:H2'	20:CA:22:G:C8	2.33	0.62
20:CA:22:G:H4'	20:CA:885:G:C8	2.35	0.62
20:CA:408:A:H2'	20:CA:409:G:C8	2.34	0.62
20:CA:757:U:OP1	20:CA:822:C:O2'	2.15	0.62
25:DD:17:THR:HG1	25:DD:205:VAL:H	1.45	0.62
41:DW:21:VAL:HG13	41:DW:74:ALA:HB3	1.81	0.62
58:DA:305:U:H2'	58:DA:306:U:C6	2.33	0.62
58:DA:2285:C:H42	58:DA:2383:G:H1	1.47	0.62
58:DA:2838:G:H1	58:DA:2880:C:N4	1.95	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:174:VAL:O	1:AB:177:ALA:N	2.33	0.62
6:AG:75:VAL:HG22	6:AG:88:PRO:HB3	1.81	0.62
20:AA:584:G:H2'	20:AA:585:G:C8	2.34	0.62
23:AY:291:GLY:HA2	23:AY:400:GLU:HB2	1.81	0.62
24:BC:43:GLU:HB2	24:BC:216:THR:HG23	1.80	0.62
25:BD:98:VAL:O	58:BA:1501:C:O2'	2.17	0.62
36:BR:20:LEU:O	36:BR:24:GLN:HG2	2.00	0.62
36:BR:100:LEU:HD22	36:BR:101:ALA:H	1.63	0.62
52:B9:7:VAL:HG12	52:B9:34:GLN:HB3	1.81	0.62
58:BA:2567:G:H2'	58:BA:2568:C:C6	2.33	0.62
17:CR:44:LEU:HG	17:CR:50:ILE:HA	1.80	0.62
23:CY:567:LEU:HG	23:CY:568:TYR:H	1.64	0.62
34:DP:25:SER:H	34:DP:30:THR:HG22	1.64	0.62
41:DW:76:VAL:HA	41:DW:102:HIS:O	1.98	0.62
44:DZ:108:PRO:HB3	44:DZ:144:LEU:H	1.65	0.62
58:DA:1128:A:O2'	58:DA:2490:G:OP1	2.14	0.62
58:DA:2398:U:H2'	58:DA:2399:G:H8	1.63	0.62
58:DA:2549:G:H1	58:DA:2559:C:H42	1.47	0.62
9:AJ:51:ARG:HG2	9:AJ:59:SER:O	1.99	0.62
11:AL:45:PRO:HD2	11:AL:49:ASN:HB2	1.82	0.62
11:AL:88:GLY:O	11:AL:99:HIS:NE2	2.32	0.62
16:AQ:100:LYS:HB2	20:AA:246:A:H3'	1.79	0.62
20:AA:976:G:OP2	20:AA:1358:U:O2'	2.17	0.62
23:AY:20:HIS:CG	23:AY:21:ILE:H	2.15	0.62
35:BQ:139:GLU:OE1	35:BQ:141:GLN:NE2	2.33	0.62
58:BA:1139:G:H2'	58:BA:1140:C:C6	2.34	0.62
7:CH:44:PHE:HD2	7:CH:80:ILE:HG13	1.64	0.62
9:CJ:7:LYS:HB3	9:CJ:97:GLU:HB2	1.82	0.62
11:CL:100:ILE:HG22	11:CL:101:VAL:H	1.65	0.62
11:CL:124:LYS:O	11:CL:126:LYS:N	2.29	0.62
20:CA:584:G:H2'	20:CA:585:G:C8	2.34	0.62
24:DC:47:LYS:CB	24:DC:212:SER:HB2	2.30	0.62
29:DH:107:VAL:O	29:DH:109:PHE:N	2.32	0.62
32:DN:69:GLN:HE21	58:DA:1022:G:C5'	2.08	0.62
39:DU:25:TRP:HD1	39:DU:26:GLY:N	1.97	0.62
58:DA:529:A:N7	58:DA:2041:U:O4	2.32	0.62
58:DA:2243:U:H2'	58:DA:2244:U:H6	1.64	0.62
58:DA:2405:G:H21	58:DA:2412:A:H62	0.76	0.62
2:AC:114:PRO:HA	2:AC:185:GLY:HA3	1.81	0.62
7:AH:111:ILE:HD11	7:AH:137:VAL:HG23	1.80	0.62
18:AS:46:GLY:HA2	18:AS:62:ILE:HG23	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:14:ILE:HG13	26:BE:23:VAL:HG21	1.81	0.62
32:BN:30:ILE:HG22	32:BN:34:LEU:HD21	1.82	0.62
35:BQ:44:ALA:HA	35:BQ:47:ILE:HB	1.81	0.62
56:B1:45:ASN:HB3	56:B1:64:ALA:HB2	1.80	0.62
58:BA:1394:U:H4'	58:BA:1603:A:H4'	1.80	0.62
1:CB:166:ASP:HA	1:CB:188:ALA:HB2	1.80	0.62
11:CL:86:ARG:HD3	11:CL:101:VAL:HG22	1.82	0.62
14:CO:28:GLN:NE2	20:CA:656:C:O2	2.32	0.62
24:DC:151:GLY:HA2	24:DC:154:ILE:HG13	1.81	0.62
26:DE:80:GLU:N	58:DA:2636:U:OP1	2.33	0.62
28:DG:166:ASP:OD2	28:DG:166:ASP:N	2.25	0.62
32:DN:56:ASN:H	32:DN:126:PRO:HA	1.64	0.62
58:DA:459:U:C5	58:DA:470:A:N7	2.66	0.62
58:DA:836:G:H2'	58:DA:837:C:C6	2.34	0.62
58:DA:1582:C:H2'	58:DA:1583:A:O4'	1.98	0.62
59:DB:102:G:H2'	59:DB:103:U:C6	2.35	0.62
20:AA:299:G:H2'	20:AA:300:A:C8	2.35	0.62
25:BD:79:VAL:HG12	25:BD:80:ALA:H	1.62	0.62
27:BF:154:VAL:HG12	27:BF:156:LEU:HA	1.80	0.62
32:BN:7:LYS:N	32:BN:7:LYS:HZ3	1.97	0.62
34:BP:66:GLY:HA3	58:BA:631:A:H1'	1.80	0.62
39:BU:90:VAL:C	39:BU:92:ARG:H	2.07	0.62
56:B1:30:VAL:HA	58:BA:2396:G:O2'	2.00	0.62
58:BA:57:C:N4	58:BA:70:G:H1	1.97	0.62
58:BA:325:G:H2'	58:BA:326:G:H8	1.65	0.62
58:BA:474:G:OP2	58:BA:508:G:N2	2.29	0.62
58:BA:2290:G:H1	58:BA:2342:C:N4	1.97	0.62
6:CG:12:LEU:HD13	6:CG:25:ALA:HB2	1.82	0.62
20:CA:10:A:N1	20:CA:24:U:O4	2.33	0.62
20:CA:1488:G:H2'	20:CA:1489:G:C8	2.34	0.62
20:CA:1494:G:O2'	20:CA:1495:U:H5'	2.00	0.62
23:CY:661:SER:OG	58:DA:2660:A:N6	2.33	0.62
24:DC:157:ILE:HG12	24:DC:161:ARG:HG2	1.81	0.62
50:D7:40:TRP:CZ2	58:DA:458:G:H1'	2.35	0.62
58:DA:184:C:H2'	58:DA:185:U:C6	2.34	0.62
58:DA:193:U:H2'	58:DA:194:G:C8	2.35	0.62
58:DA:290:G:O6	58:DA:350:U:O2	2.17	0.62
58:DA:2373:G:H1	58:DA:2380:C:H42	1.46	0.62
59:DB:59:A:H2'	59:DB:60:C:O4'	2.00	0.62
17:AR:68:LYS:HG3	20:AA:735:C:H5"	1.82	0.62
27:BF:90:PHE:HB2	58:BA:588:U:H1'	1.79	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BK:78:ILE:HD11	31:BK:99:ILE:HD11	1.80	0.62
32:BN:56:ASN:H	32:BN:126:PRO:HA	1.64	0.62
34:BP:53:GLY:O	34:BP:55:ARG:N	2.33	0.62
37:BS:89:ARG:HB3	37:BS:92:TYR:HB3	1.81	0.62
1:CB:131:PRO:HG2	1:CB:134:GLU:HB2	1.80	0.62
5:CF:98:LEU:HB3	17:CR:30:ASP:HA	1.80	0.62
8:CI:40:LEU:HD22	8:CI:42:ARG:H	1.65	0.62
25:DD:147:LEU:HB2	25:DD:155:LEU:HD11	1.81	0.62
38:DT:55:ASN:H	38:DT:59:THR:HB	1.65	0.62
44:DZ:103:ARG:HD3	44:DZ:136:PHE:HD2	1.65	0.62
56:D1:26:ARG:HB3	56:D1:32:LYS:HB2	1.81	0.62
58:DA:443:A:H1'	58:DA:1201:C:H1'	1.82	0.62
58:DA:883:G:O6	58:DA:893:C:N3	2.33	0.62
58:DA:1044:G:H4'	58:DA:1047:G:H4'	1.82	0.62
58:DA:1311:G:H21	58:DA:1603:A:H62	0.74	0.62
59:DB:22:U:H2'	59:DB:23:G:C8	2.35	0.62
1:AB:87:ARG:NH2	1:AB:233:SER:OG	2.32	0.62
1:AB:162:ILE:HG13	1:AB:184:VAL:HA	1.81	0.62
10:AK:21:ILE:HD11	10:AK:98:LEU:HD11	1.80	0.62
15:AP:74:LEU:HD22	15:AP:79:VAL:HG11	1.80	0.62
20:AA:216:G:H2'	20:AA:217:C:C6	2.34	0.62
33:BO:30:ALA:HB2	58:BA:2674:G:H4'	1.82	0.62
38:BT:76:PHE:HB3	38:BT:82:LEU:HD23	1.81	0.62
42:BX:8:ILE:HA	42:BX:30:VAL:HG12	1.80	0.62
43:BY:42:VAL:HG12	43:BY:44:ILE:HG13	1.82	0.62
58:BA:355:G:H2'	58:BA:356:G:H8	1.65	0.62
9:CJ:38:ILE:HG23	9:CJ:71:LEU:HB3	1.82	0.62
25:DD:256:GLY:O	58:DA:1843:C:O2'	2.13	0.62
36:DR:104:ARG:HB2	36:DR:111:LEU:HD21	1.81	0.62
44:DZ:72:ARG:NH1	59:DB:103:U:O3'	2.32	0.62
58:DA:591:C:H2'	58:DA:592:G:C8	2.35	0.62
58:DA:1438:U:H2'	58:DA:1439:A:H8	1.65	0.62
58:DA:1478:G:H2'	58:DA:1479:G:C8	2.34	0.62
58:DA:2293:C:N4	58:DA:2339:G:H1	1.96	0.62
58:DA:2567:G:H2'	58:DA:2568:C:C6	2.35	0.62
15:AP:36:ILE:HB	15:AP:52:ASP:HB3	1.81	0.62
20:AA:255:G:H2'	20:AA:256:U:H6	1.65	0.62
24:BC:15:VAL:HG22	24:BC:221:PRO:HB3	1.80	0.62
24:BC:115:VAL:HG11	24:BC:154:ILE:HG12	1.82	0.62
36:BR:49:ASP:HB3	58:BA:2839:G:H4'	1.81	0.62
39:BU:10:ARG:NH1	58:BA:583:G:OP2	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BU:25:TRP:HD1	39:BU:26:GLY:N	1.98	0.62
40:BV:35:LEU:HD23	40:BV:57:VAL:HG22	1.80	0.62
58:BA:415:A:H61	58:BA:2408:U:H3	1.46	0.62
58:BA:527:C:C4	58:BA:2779:U:H2'	2.35	0.62
58:BA:828:U:H4'	58:BA:831:G:N1	2.14	0.62
58:BA:1105:U:H2'	58:BA:1106:G:C8	2.34	0.62
58:BA:2092:U:O2'	58:BA:2093:G:OP2	2.18	0.62
58:BA:2856:C:N4	58:BA:2857:G:O6	2.33	0.62
3:CD:33:MET:O	3:CD:36:ARG:N	2.33	0.62
16:CQ:16:GLN:NE2	20:CA:254:G:N3	2.42	0.62
17:CR:70:ILE:HG23	17:CR:79:LEU:HD11	1.82	0.62
20:CA:1128:C:H42	20:CA:1143:G:H1	1.48	0.62
20:CA:1492:A:N3	20:CA:1492:A:H2'	2.14	0.62
34:DP:38:GLN:NE2	58:DA:832:G:OP1	2.33	0.62
38:DT:49:VAL:HG22	38:DT:50:ILE:H	1.64	0.62
58:DA:319:C:H42	58:DA:323:G:H1	1.46	0.62
58:DA:681:G:N2	58:DA:796:C:N3	2.42	0.62
58:DA:2115:G:H1	58:DA:2118:U:P	2.22	0.62
58:DA:2370:G:H2'	58:DA:2371:G:O4'	2.00	0.62
20:AA:989:C:HO2'	20:AA:1017:G:HO2'	1.46	0.62
56:B1:25:LYS:HG2	56:B1:34:THR:HA	1.81	0.62
58:BA:1326:U:H2'	58:BA:1327:C:O4'	2.00	0.62
11:CL:6:THR:O	11:CL:8:ASN:N	2.33	0.62
20:CA:186(E):C:N4	20:CA:186(L):G:H1	1.93	0.62
24:DC:177:GLY:HA2	24:DC:186:LEU:HD21	1.82	0.62
27:DF:188:ARG:HB3	34:DP:7:ARG:HH21	1.64	0.62
31:DK:56:GLU:HB3	31:DK:68:VAL:HB	1.81	0.62
35:DQ:59:ARG:NH2	58:DA:1075:C:OP1	2.33	0.62
36:DR:20:LEU:HD11	58:DA:1277:G:H5'	1.82	0.62
58:DA:1183:G:H2'	58:DA:1184:G:H8	1.64	0.62
1:AB:60:ASP:HB3	1:AB:64:ARG:NH2	2.15	0.61
8:AI:21:PRO:HA	8:AI:59:PHE:HA	1.82	0.61
20:AA:68(V):G:C2	20:AA:68(W):G:H1'	2.35	0.61
25:BD:129:ASN:O	25:BD:193:VAL:HG12	2.00	0.61
47:B3:10:LYS:NZ	59:BB:84:C:OP1	2.33	0.61
53:Be:84:LEU:HA	53:Be:87:LYS:CG	2.30	0.61
58:BA:222:A:N6	58:BA:232:G:H1'	2.14	0.61
58:BA:711:G:H1	58:BA:720:C:N4	1.98	0.61
58:BA:1083:U:O2'	58:BA:1085:A:N7	2.24	0.61
58:BA:1101:U:H2'	58:BA:1102:C:C6	2.34	0.61
58:BA:1136:G:H2'	58:BA:1137:G:O4'	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:2001:A:H2'	58:BA:2002:G:C8	2.35	0.61
58:BA:2446:G:N2	58:BA:2449:U:O2	2.33	0.61
5:CF:47:ARG:HA	5:CF:57:GLN:HA	1.82	0.61
34:DP:112:LEU:HD22	34:DP:113:LYS:H	1.65	0.61
58:DA:274:G:H2'	58:DA:275:G:O4'	1.99	0.61
58:DA:964:C:O2'	58:DA:2273:A:N3	2.33	0.61
58:DA:1305:C:N3	58:DA:1623:G:N2	2.40	0.61
20:AA:1225:A:H2'	20:AA:1226:C:C5	2.34	0.61
21:AW:20:U:H1'	21:AW:20(A):U:H2'	1.82	0.61
23:AY:31:ARG:NH2	23:AY:266:ASN:OD1	2.30	0.61
25:BD:260:ARG:NH1	58:BA:1799:G:OP1	2.34	0.61
3:CD:43:HIS:HA	3:CD:46:LYS:HD3	1.81	0.61
11:CL:83:VAL:HB	11:CL:100:ILE:HG23	1.82	0.61
20:CA:62:U:O2	20:CA:105:G:N2	2.26	0.61
23:CY:616:TYR:HA	23:CY:619:ASP:HB2	1.82	0.61
25:DD:24:ILE:HG12	25:DD:25:THR:H	1.64	0.61
26:DE:147:PRO:HB2	26:DE:149:ARG:HG2	1.82	0.61
58:DA:56:A:H2'	58:DA:57:C:C6	2.36	0.61
58:DA:234:C:H42	58:DA:430:G:N2	1.98	0.61
20:AA:1401:G:H2'	20:AA:1402:C:O4'	2.01	0.61
23:AY:130:VAL:O	23:AY:132:ARG:NH1	2.33	0.61
23:AY:133:ILE:HG22	23:AY:257:PRO:HB2	1.81	0.61
50:B7:30:VAL:O	50:B7:34:ARG:NH1	2.33	0.61
58:BA:822:U:H5	58:BA:944:G:H1'	1.65	0.61
58:BA:1948:G:H1	58:BA:1958:C:N4	1.97	0.61
1:CB:175:ARG:NH2	20:CA:1075:C:O3'	2.33	0.61
5:CF:43:LEU:HD21	5:CF:46:ARG:HD2	1.80	0.61
9:CJ:49:VAL:HG22	9:CJ:50:ILE:H	1.65	0.61
12:CM:89:GLY:O	12:CM:93:ARG:HG3	1.99	0.61
12:CM:122:LYS:HA	20:CA:954:G:H5'	1.81	0.61
20:CA:17:U:H2'	20:CA:18:C:C6	2.35	0.61
20:CA:269:C:H2'	20:CA:270:A:C8	2.34	0.61
34:DP:55:ARG:HH11	58:DA:825:C:H1'	1.65	0.61
40:DV:19:LYS:NZ	40:DV:21:ARG:O	2.33	0.61
44:DZ:75:ASN:OD1	44:DZ:75:ASN:N	2.32	0.61
45:D0:22:GLY:H	45:D0:39:ARG:HB2	1.63	0.61
58:DA:827:U:O2'	58:DA:2068:U:N3	2.33	0.61
58:DA:1557:C:H2'	58:DA:1558:A:H2	1.65	0.61
58:DA:1558:A:O2'	58:DA:1559:G:OP2	2.15	0.61
11:AL:53:ARG:HG2	11:AL:93:LEU:HD22	1.80	0.61
20:AA:1503:A:O2'	22:AV:15:A:N6	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:316:ILE:HD11	23:AY:385:THR:HB	1.83	0.61
24:BC:140:ASN:O	24:BC:142:LYS:N	2.33	0.61
34:BP:51:PHE:CD1	34:BP:52:GLU:HB2	2.36	0.61
52:B9:1:MET:HB3	52:B9:34:GLN:HG3	1.83	0.61
56:B1:12:PRO:HA	56:B1:43:TYR:HB2	1.83	0.61
56:B1:58:ILE:HG13	56:B1:91:LYS:HB2	1.82	0.61
58:BA:1045:A:OP1	58:BA:1046:A:O2'	2.16	0.61
58:BA:1650:G:H1	58:BA:2007:C:N4	1.98	0.61
58:BA:1942:C:OP2	58:BA:1943:U:O2'	2.18	0.61
2:CC:153:VAL:HG23	2:CC:166:GLU:HB3	1.83	0.61
14:CO:82:ILE:HB	14:CO:87:ILE:HG12	1.82	0.61
20:CA:101:A:H2'	20:CA:102:G:H8	1.66	0.61
20:CA:356:A:N3	20:CA:368:U:O2'	2.28	0.61
29:DH:143:GLN:HG2	58:DA:2745:C:H1'	1.83	0.61
32:DN:9:VAL:HG11	32:DN:39:ARG:HH12	1.65	0.61
32:DN:13:TRP:O	32:DN:135:PRO:HD2	2.00	0.61
34:DP:53:GLY:O	34:DP:55:ARG:N	2.33	0.61
58:DA:503:A:H4'	58:DA:504:U:H5"	1.81	0.61
58:DA:618(B):C:H2'	58:DA:619:G:O4'	2.01	0.61
58:DA:661:C:H2'	58:DA:662:G:C8	2.35	0.61
58:DA:2154:G:H2'	58:DA:2155:G:H8	1.65	0.61
58:DA:2811:G:H1	58:DA:2889:C:H42	1.46	0.61
4:AE:19:MET:SD	20:AA:15:G:H1'	2.41	0.61
4:AE:20:GLN:HG2	4:AE:22:GLY:H	1.65	0.61
20:AA:612:C:H2'	20:AA:613:C:C6	2.35	0.61
20:AA:714:G:H2'	20:AA:715:A:C8	2.36	0.61
23:AY:569:ASP:OD1	23:AY:570:GLY:N	2.27	0.61
25:BD:177:LEU:HD23	25:BD:178:PRO:HD2	1.82	0.61
32:BN:13:TRP:O	32:BN:135:PRO:HD2	2.00	0.61
40:BV:69:LYS:NZ	58:BA:1225:G:OP1	2.30	0.61
56:B1:18:ILE:HG21	58:BA:380:U:H4'	1.82	0.61
58:BA:105:C:H2'	58:BA:106:C:C6	2.35	0.61
58:BA:2071:A:H2'	58:BA:2072:G:H8	1.64	0.61
58:BA:2147:G:H2'	58:BA:2148:G:O4'	2.00	0.61
58:BA:2893:G:H5"	58:BA:2894:G:O4'	1.99	0.61
1:CB:84:GLU:HB3	1:CB:219:VAL:HG21	1.81	0.61
3:CD:25:ARG:C	3:CD:27:TYR:H	2.09	0.61
8:CI:37:PHE:HE1	8:CI:77:ILE:HD12	1.65	0.61
8:CI:93:ARG:HH21	20:CA:1178:G:H5"	1.65	0.61
24:DC:29:LEU:O	24:DC:32:GLU:HG3	2.00	0.61
26:DE:117:MET:O	26:DE:121:ASN:ND2	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DK:27:LEU:HD23	31:DK:34:ILE:HG12	1.81	0.61
32:DN:128:HIS:NE2	32:DN:134:ARG:HD2	2.16	0.61
39:DU:19:LYS:NZ	58:DA:1219:G:OP2	2.32	0.61
39:DU:53:ARG:HD2	58:DA:536:A:H5'	1.81	0.61
58:DA:325:G:H2'	58:DA:326:G:C8	2.35	0.61
58:DA:2154:G:H2'	58:DA:2155:G:C8	2.35	0.61
20:AA:21:G:H2'	20:AA:22:G:C8	2.35	0.61
20:AA:801:U:H2'	20:AA:802:A:C8	2.35	0.61
23:AY:314:PHE:CZ	23:AY:329:ARG:HB3	2.34	0.61
32:BN:45:ASN:HD22	32:BN:45:ASN:N	1.96	0.61
56:B1:15:ALA:HA	56:B1:40:ARG:O	2.01	0.61
58:BA:688:U:H2'	58:BA:689:A:C8	2.36	0.61
58:BA:1509:A:H4'	58:BA:1510:A:C8	2.35	0.61
58:BA:1674:G:H1'	58:BA:1676:A:H62	1.65	0.61
58:BA:2879:C:O2	58:BA:2881:C:N4	2.34	0.61
11:CL:90:VAL:HG22	11:CL:96:VAL:HG11	1.83	0.61
20:CA:565:U:OP2	20:CA:566:G:O2'	2.18	0.61
20:CA:1218:C:H2'	20:CA:1219:U:C6	2.35	0.61
24:DC:140:ASN:O	24:DC:142:LYS:N	2.34	0.61
30:DJ:25:UNK:CA	30:DJ:80:UNK:HA	2.29	0.61
34:DP:98:GLU:O	34:DP:102:ARG:NH2	2.33	0.61
39:DU:76:TYR:CZ	39:DU:80:ILE:HD11	2.36	0.61
40:DV:24:LYS:NZ	58:DA:1162:G:O2'	2.32	0.61
41:DW:36:LEU:HD13	41:DW:48:ALA:HA	1.81	0.61
41:DW:86:LEU:HB3	41:DW:94:ASP:HB2	1.80	0.61
49:D6:13:CYS:SG	49:D6:14:THR:N	2.73	0.61
58:DA:137(A):C:H2'	58:DA:137(B):G:H8	1.65	0.61
58:DA:1003:G:O2'	58:DA:1010:A:N6	2.32	0.61
58:DA:1441:G:H2'	58:DA:1442:G:C8	2.36	0.61
58:DA:1912:A:N7	58:DA:1918:A:C2	2.68	0.61
5:AF:61:LEU:HB2	5:AF:63:TYR:HE2	1.66	0.61
8:AI:29:ASN:HB2	8:AI:65:VAL:H	1.65	0.61
10:AK:85:ARG:HA	10:AK:110:ASP:O	1.99	0.61
20:AA:107:G:OP1	20:AA:325:A:N6	2.34	0.61
20:AA:116:A:H2'	20:AA:117:G:O4'	2.01	0.61
24:BC:77:ALA:HA	24:BC:114:VAL:O	2.00	0.61
25:BD:165:ILE:HG22	25:BD:166:GLN:H	1.64	0.61
37:BS:97:ARG:O	37:BS:100:ALA:N	2.27	0.61
58:BA:325:G:H2'	58:BA:326:G:C8	2.36	0.61
58:BA:488:G:H1'	58:BA:492:A:N6	2.15	0.61
58:BA:1087:G:O2'	58:BA:1088:A:H4'	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:1268:A:H2'	58:BA:1269:A:O4'	2.01	0.61
58:BA:1273:U:H4'	58:BA:1275:A:OP2	2.00	0.61
58:BA:2348:U:O4	58:BA:2369:A:N1	2.33	0.61
11:CL:83:VAL:HB	11:CL:100:ILE:HD13	1.82	0.61
11:CL:114:LYS:HB2	20:CA:538:G:H5"	1.83	0.61
15:CP:49:LEU:HD11	15:CP:73:LEU:HD11	1.83	0.61
20:CA:726:C:N4	20:CA:731:G:H1	1.97	0.61
20:CA:922:G:H2'	20:CA:923:A:H8	1.64	0.61
24:DC:27:ALA:O	24:DC:31:LYS:HB2	2.01	0.61
24:DC:153:ILE:HA	24:DC:156:GLU:HB2	1.82	0.61
25:DD:258:LYS:NZ	58:DA:1844:C:O3'	2.34	0.61
36:DR:2:ARG:HB2	58:DA:2723:C:H5"	1.82	0.61
38:DT:105:LEU:HB3	38:DT:109:GLU:OE1	2.01	0.61
39:DU:54:LYS:HG2	39:DU:58:ARG:HH21	1.65	0.61
58:DA:659:C:H2'	58:DA:660:G:C8	2.33	0.61
58:DA:1030:G:H1	58:DA:1124:C:H42	1.46	0.61
58:DA:2110:G:N2	58:DA:2179:C:N3	2.43	0.61
58:DA:2133:G:H2'	58:DA:2157:G:H22	1.65	0.61
4:AE:148:VAL:HG13	4:AE:152:ARG:HD2	1.81	0.61
6:AG:38:LEU:HD12	6:AG:41:ARG:HD3	1.83	0.61
12:AM:99:ARG:HB3	12:AM:101:GLN:HG3	1.81	0.61
20:AA:241:C:H42	20:AA:285:G:H1	1.49	0.61
20:AA:867:G:H2'	20:AA:868:C:H6	1.66	0.61
29:BH:86:GLU:HB2	29:BH:132:ARG:HA	1.83	0.61
31:BK:10:LEU:HD13	31:BK:23:VAL:HG22	1.83	0.61
32:BN:57:ALA:O	32:BN:60:ILE:HG13	2.01	0.61
37:BS:97:ARG:O	37:BS:99:LYS:N	2.34	0.61
58:BA:1558:A:O2'	58:BA:1559:G:OP2	2.17	0.61
58:BA:1880:C:H2'	58:BA:1881:C:C6	2.35	0.61
58:BA:2055:C:H2'	58:BA:2504:U:H5'	1.81	0.61
59:BB:14:U:OP2	59:BB:70:C:O2'	2.18	0.61
3:CD:15:GLU:HA	3:CD:59:ARG:NH2	2.12	0.61
6:CG:12:LEU:HD12	6:CG:21:VAL:HB	1.82	0.61
20:CA:634:C:H2'	20:CA:635:G:H8	1.65	0.61
20:CA:669:U:H2'	20:CA:670:G:C8	2.36	0.61
20:CA:1494:G:H5"	58:DA:1913:A:H61	1.58	0.61
25:DD:63:ARG:NH2	58:DA:1568:G:OP2	2.34	0.61
46:D2:18:PRO:HA	46:D2:21:LEU:HD12	1.83	0.61
58:DA:585:G:H21	58:DA:1254:A:H62	1.49	0.61
58:DA:1194:A:H2'	58:DA:1195:G:H8	1.65	0.61
1:AB:184:VAL:N	1:AB:198:ASP:HB2	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:40:ILE:HG12	18:AS:71:LEU:HD23	1.83	0.61
20:AA:148:G:H1	20:AA:174:C:N4	1.99	0.61
23:AY:91:THR:O	23:AY:93:GLU:N	2.34	0.61
24:BC:62:THR:O	24:BC:62:THR:OG1	2.13	0.61
32:BN:131:GLN:CG	58:BA:7:G:O2'	2.49	0.61
33:BO:27:GLY:O	33:BO:29:ASN:N	2.33	0.61
42:BX:29:TRP:HZ3	42:BX:76:ARG:HE	1.48	0.61
58:BA:31:C:H2'	58:BA:32:C:H6	1.65	0.61
58:BA:422:A:H2'	58:BA:423:A:C8	2.35	0.61
58:BA:1139:G:OP2	58:BA:1139:G:H8	1.84	0.61
58:BA:1144:G:H2'	58:BA:1145:C:H6	1.66	0.61
20:CA:980:C:H5'	20:CA:981:U:C5	2.36	0.61
20:CA:1074:G:O2'	20:CA:1101:A:N6	2.34	0.61
21:CW:76:A:H1'	58:DA:2395:C:C2	2.36	0.61
23:CY:86:GLY:O	23:CY:88:VAL:N	2.33	0.61
23:CY:212:TYR:HA	23:CY:215:LYS:HB2	1.82	0.61
26:DE:12:THR:HG21	38:DT:57:PHE:HD1	1.64	0.61
27:DF:24:LEU:HD13	27:DF:119:ARG:HH21	1.65	0.61
27:DF:125:LEU:HD22	27:DF:196:LEU:HA	1.82	0.61
28:DG:126:ASP:OD1	58:DA:2302:G:N2	2.34	0.61
32:DN:41:ASP:C	39:DU:64:ARG:CD	2.72	0.61
38:DT:53:ARG:NH2	58:DA:2684:U:OP1	2.32	0.61
58:DA:1270:C:N4	58:DA:2010:G:H1	1.98	0.61
58:DA:1667:G:O2'	58:DA:1991:U:O4	2.19	0.61
58:DA:1771:C:H2'	58:DA:1772:G:C8	2.36	0.61
58:DA:2057:A:H2'	58:DA:2058:A:C8	2.36	0.61
28:BG:41:GLN:HG2	28:BG:155:MET:HB3	1.82	0.61
33:BO:104:ARG:HH21	33:BO:122:LEU:HD23	1.65	0.61
34:BP:47:ASP:OD1	34:BP:50:ARG:NH2	2.34	0.61
35:BQ:34:LEU:HD13	35:BQ:118:LEU:HB3	1.82	0.61
50:B7:30:VAL:O	50:B7:34:ARG:HG2	2.00	0.61
58:BA:550:G:O2'	58:BA:1220:A:N3	2.34	0.61
58:BA:582:G:N2	58:BA:1258:C:N3	2.45	0.61
4:CE:118:ILE:HG13	4:CE:120:THR:HG22	1.80	0.61
19:CT:53:LEU:HD12	19:CT:100:ILE:HG23	1.83	0.61
21:CW:64:G:C6	21:CW:65:U:C4	2.88	0.61
23:CY:634:MET:N	23:CY:634:MET:SD	2.74	0.61
24:DC:47:LYS:HG3	24:DC:47:LYS:O	2.01	0.61
25:DD:65:ILE:HA	25:DD:104:TYR:HB2	1.83	0.61
37:DS:97:ARG:O	37:DS:99:LYS:N	2.34	0.61
50:D7:30:VAL:O	50:D7:34:ARG:HG2	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:796:C:H2'	58:DA:797:C:C6	2.36	0.61
10:AK:91:ARG:HH12	17:AR:88:LYS:HD2	1.65	0.60
11:AL:42:THR:HA	11:AL:52:LEU:HA	1.82	0.60
20:AA:315:A:H4'	20:AA:317:G:OP2	2.00	0.60
20:AA:634:C:H2'	20:AA:635:G:H8	1.65	0.60
23:AY:216:LEU:HD21	23:AY:242:LEU:HD22	1.83	0.60
29:BH:170:ARG:O	29:BH:171:LEU:HB2	1.99	0.60
44:BZ:158:PRO:O	44:BZ:161:VAL:N	2.34	0.60
58:BA:184:C:H2'	58:BA:185:U:C6	2.36	0.60
58:BA:661:C:H2'	58:BA:662:G:C8	2.35	0.60
58:BA:686:G:N2	58:BA:788:A:H61	1.93	0.60
58:BA:848:G:C2	58:BA:933:A:H1'	2.36	0.60
58:BA:970:C:O2	58:BA:984:A:O2'	2.11	0.60
58:BA:1542:G:H4'	58:BA:1543:A:O5'	2.01	0.60
3:CD:3:ARG:HH22	3:CD:5:ILE:HD12	1.66	0.60
20:CA:67:C:H2'	20:CA:68:G:C8	2.36	0.60
23:CY:514:VAL:HA	23:CY:565:VAL:O	2.00	0.60
25:DD:35:LYS:N	25:DD:36:PRO:HD2	2.16	0.60
32:DN:30:ILE:HG22	32:DN:34:LEU:HD21	1.82	0.60
32:DN:137:LYS:HZ3	32:DN:138:LEU:HD23	1.66	0.60
37:DS:51:ALA:HB1	37:DS:69:VAL:HG22	1.83	0.60
50:D7:8:ASN:HB3	50:D7:11:LYS:HB3	1.83	0.60
53:De:78:LEU:HD22	53:De:80:ALA:H	1.65	0.60
58:DA:2522:U:H3	58:DA:2543:G:H1	1.48	0.60
24:BC:21:TYR:HE2	24:BC:29:LEU:HD22	1.66	0.60
27:BF:54:ARG:NH2	27:BF:77:ASP:OD2	2.33	0.60
29:BH:149:ARG:HH21	29:BH:163:TYR:HA	1.66	0.60
32:BN:38:HIS:ND1	32:BN:39:ARG:N	2.49	0.60
32:BN:89:LYS:NZ	32:BN:89:LYS:HB3	2.16	0.60
34:BP:65:ARG:NH2	51:B8:14:VAL:O	2.34	0.60
58:BA:174:C:H2'	58:BA:175:G:O4'	2.00	0.60
58:BA:449:A:H2'	58:BA:450:G:O4'	2.01	0.60
58:BA:1429:G:H2'	58:BA:1430:C:H6	1.66	0.60
3:CD:91:SER:HA	3:CD:94:LEU:HD12	1.83	0.60
4:CE:32:VAL:HG11	4:CE:59:GLY:HA2	1.82	0.60
5:CF:1:MET:HE2	5:CF:68:PRO:HG3	1.82	0.60
20:CA:113:G:H2'	20:CA:114:U:C6	2.35	0.60
20:CA:1513:A:H2'	20:CA:1514:C:C6	2.36	0.60
23:CY:132:ARG:NH2	23:CY:253:LEU:HA	2.16	0.60
41:DW:12:ILE:HD11	41:DW:42:ARG:HH22	1.66	0.60
42:DX:8:ILE:HA	42:DX:30:VAL:HG12	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D6:6:ARG:H	49:D6:6:ARG:HD2	1.65	0.60
58:DA:1142:U:H5"	58:DA:114(B):A:C8	2.37	0.60
58:DA:2632:A:N1	58:DA:2786:U:O4	2.33	0.60
23:AY:175:SER:O	23:AY:187:THR:OG1	2.19	0.60
24:BC:115:VAL:HG21	24:BC:154:ILE:HD11	1.82	0.60
32:BN:9:VAL:HG11	32:BN:39:ARG:HH12	1.65	0.60
43:BY:38:ILE:HD11	43:BY:64:GLU:HB3	1.83	0.60
43:BY:69:ALA:O	43:BY:71:LYS:N	2.27	0.60
58:BA:602:G:HO2'	58:BA:604:G:HO2'	1.49	0.60
59:BB:81:G:O6	59:BB:95:U:O2	2.19	0.60
1:CB:83:MET:HB2	1:CB:234:PRO:HG3	1.83	0.60
11:CL:95:GLY:C	11:CL:97:ARG:H	2.08	0.60
20:CA:68(B):G:H2'	20:CA:68(C):C:C6	2.36	0.60
25:DD:14:ARG:HH22	58:DA:1693:U:H1'	1.66	0.60
32:DN:57:ALA:O	32:DN:60:ILE:HG13	2.01	0.60
39:DU:40:PHE:HB3	40:DV:75:PHE:CE1	2.35	0.60
49:D6:47:THR:OG1	49:D6:48:VAL:N	2.34	0.60
58:DA:1203:G:H2'	58:DA:1204:A:C2	2.37	0.60
20:AA:1238:A:H2	20:AA:1241:G:N3	2.00	0.60
23:AY:160:ARG:HH22	23:AY:222:ASP:HB3	1.65	0.60
24:BC:30:VAL:HG22	24:BC:33:LEU:HD12	1.83	0.60
25:BD:201:HIS:HA	25:BD:204:ILE:HD12	1.82	0.60
33:BO:10:VAL:HG22	33:BO:17:ARG:HA	1.82	0.60
34:BP:15:ARG:HB2	58:BA:598:G:H5'	1.82	0.60
43:BY:85:VAL:HG13	43:BY:94:LYS:HB3	1.82	0.60
57:B4:14:ILE:HA	57:B4:32:TYR:HA	1.84	0.60
58:BA:824:A:H1'	58:BA:2358:G:N7	2.16	0.60
1:CB:189:ASP:HB3	1:CB:204:ASN:HA	1.83	0.60
12:CM:108:ARG:H	12:CM:108:ARG:HD2	1.65	0.60
20:CA:713:G:H2'	20:CA:714:G:C8	2.36	0.60
29:DH:149:ARG:HH21	29:DH:163:TYR:HA	1.67	0.60
35:DQ:68:ILE:HG23	35:DQ:103:MET:HA	1.83	0.60
38:DT:51:ARG:HB3	38:DT:62:THR:HG23	1.82	0.60
58:DA:1080:C:H2'	58:DA:1081:U:H6	1.66	0.60
58:DA:1090:U:H2'	58:DA:1091:G:C8	2.35	0.60
58:DA:1646:C:H5"	58:DA:1647:G:H5"	1.84	0.60
58:DA:2133:G:H2'	58:DA:2157:G:N2	2.16	0.60
58:DA:2593:U:H3	58:DA:2600:A:N6	1.97	0.60
3:AD:43:HIS:HA	3:AD:46:LYS:HD3	1.84	0.60
9:AJ:49:VAL:HG22	9:AJ:50:ILE:H	1.66	0.60
12:AM:3:ARG:HH21	12:AM:7:VAL:HG22	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:62:U:H5”	20:AA:385:C:H1’	1.82	0.60
20:AA:1018:C:H2’	20:AA:1019:C:C6	2.37	0.60
20:AA:1308:U:H2’	20:AA:1309:G:C8	2.36	0.60
25:BD:54:ARG:NH2	58:BA:1815:A:OP2	2.34	0.60
32:BN:128:HIS:NE2	32:BN:134:ARG:HD2	2.16	0.60
48:B5:3:LYS:NZ	58:BA:747:U:O4	2.32	0.60
58:BA:1135:C:H42	58:BA:1138:G:H8	1.49	0.60
12:CM:89:GLY:HA2	12:CM:92:HIS:HB2	1.84	0.60
16:CQ:34:LYS:NZ	20:CA:879:C:OP1	2.34	0.60
17:CR:79:LEU:HD23	17:CR:80:PRO:HD2	1.84	0.60
23:CY:201:ILE:HD13	23:CY:206:LEU:HD12	1.84	0.60
46:D2:61:LEU:O	46:D2:65:ASN:N	2.20	0.60
53:De:64:LEU:O	53:De:66:GLU:N	2.35	0.60
56:D1:13:ILE:HG23	56:D1:17:SER:HB2	1.84	0.60
58:DA:947:G:H2’	58:DA:948:G:H8	1.66	0.60
58:DA:1435:G:H2’	58:DA:1436:G:C8	2.37	0.60
58:DA:1536:A:OP2	58:DA:1537:C:N4	2.34	0.60
58:DA:1821:A:H2’	58:DA:1822:G:C8	2.37	0.60
1:AB:170:GLU:O	1:AB:174:VAL:HG23	2.02	0.60
2:AC:56:ASP:OD1	2:AC:56:ASP:N	2.34	0.60
3:AD:134:ASP:OD2	3:AD:134:ASP:N	2.34	0.60
24:BC:101:ILE:HD13	24:BC:124:VAL:HG22	1.84	0.60
26:BE:111:ARG:NH2	58:BA:2680:C:OP2	2.35	0.60
29:BH:123:PHE:O	29:BH:124:GLU:HB3	2.00	0.60
58:BA:670:A:H4’	58:BA:671:C:H5’	1.83	0.60
58:BA:1005:C:H2’	58:BA:1006:C:O4’	2.01	0.60
58:BA:2136:C:H2’	58:BA:2137:C:C6	2.36	0.60
58:BA:2626:C:H2’	58:BA:2627:G:O4’	2.02	0.60
2:CC:66:VAL:HG21	2:CC:91:LEU:HD13	1.84	0.60
3:CD:115:ARG:HB3	20:CA:407:G:H5”	1.83	0.60
3:CD:138:TYR:HB2	20:CA:620:C:H1’	1.83	0.60
10:CK:26:ASN:ND2	20:CA:691:G:OP2	2.34	0.60
14:CO:63:ARG:O	14:CO:67:LEU:HG	2.02	0.60
26:DE:13:ARG:HA	26:DE:21:VAL:C	2.27	0.60
26:DE:143:ASN:ND2	26:DE:144:ARG:H	2.00	0.60
27:DF:110:LEU:HD23	27:DF:183:VAL:HG13	1.82	0.60
33:DO:18:LYS:HB2	33:DO:45:GLU:HB3	1.83	0.60
38:DT:98:LYS:HE2	58:DA:2719:G:H5’	1.84	0.60
38:DT:115:ARG:H	38:DT:115:ARG:HD2	1.66	0.60
46:D2:64:LEU:O	46:D2:68:ARG:N	2.35	0.60
51:D8:50:LEU:HA	51:D8:53:PRO:HG2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:922:U:H2'	58:DA:923:C:C6	2.36	0.60
58:DA:979:G:H2'	58:DA:982:C:H41	1.66	0.60
58:DA:1345:C:N3	58:DA:1601:G:N2	2.39	0.60
58:DA:1405:U:H2'	58:DA:1406:U:H6	1.67	0.60
2:AC:22:TRP:HB3	2:AC:59:ARG:H	1.65	0.60
8:AI:10:ARG:HG2	8:AI:105:ASP:HB2	1.83	0.60
9:AJ:26:ALA:HA	9:AJ:29:ARG:HB2	1.84	0.60
25:BD:24:ILE:HG13	25:BD:82:ILE:HB	1.84	0.60
33:BO:19:ILE:HG22	33:BO:43:VAL:HA	1.84	0.60
37:BS:35:ILE:H	37:BS:53:SER:HB2	1.66	0.60
44:BZ:8:TYR:HB2	44:BZ:38:TYR:CE1	2.36	0.60
50:B7:39:ARG:HH12	50:B7:40:TRP:HD1	1.48	0.60
52:B9:11:CYS:O	52:B9:13:LYS:N	2.34	0.60
58:BA:1076:C:H2'	58:BA:1077:A:H4'	1.83	0.60
58:BA:1468:C:H2'	58:BA:1469:A:C8	2.37	0.60
58:BA:2503:A:O2'	58:BA:2505:G:OP2	2.19	0.60
14:CO:12:ILE:HG22	14:CO:27:VAL:HG13	1.84	0.60
23:CY:180:VAL:HB	23:CY:213:HIS:HB2	1.84	0.60
23:CY:663:THR:O	23:CY:665:GLY:N	2.34	0.60
32:DN:36:GLY:C	32:DN:42:TRP:HB2	2.27	0.60
32:DN:80:GLY:CA	58:DA:1131:G:OP1	2.49	0.60
38:DT:64:ARG:HD3	38:DT:73:GLU:HG2	1.84	0.60
46:D2:49:LYS:HA	46:D2:52:ASP:HB3	1.84	0.60
58:DA:1139:G:H1'	58:DA:1143:A:C2	2.37	0.60
58:DA:1536:A:H5"	58:DA:1537:C:OP2	2.01	0.60
58:DA:1847:A:H8	58:DA:1847:A:OP1	1.84	0.60
2:AC:176:HIS:NE2	20:AA:1189:C:O2	2.35	0.60
10:AK:55:LYS:NZ	20:AA:690:G:N7	2.50	0.60
20:AA:259:G:H1	20:AA:267:C:H42	1.48	0.60
20:AA:813:U:H2'	20:AA:814:A:H8	1.67	0.60
23:AY:514:VAL:HA	23:AY:565:VAL:O	2.02	0.60
24:BC:77:ALA:HB3	24:BC:95:VAL:HG13	1.83	0.60
27:BF:2:LYS:O	27:BF:4:VAL:N	2.34	0.60
36:BR:96:ARG:HG3	58:BA:2882:A:H5'	1.84	0.60
39:BU:92:ARG:HG2	39:BU:95:LEU:H	1.66	0.60
58:BA:981:A:H1'	58:BA:2037:G:H1'	1.83	0.60
58:BA:1529:A:H62	58:BA:1542:G:H21	1.50	0.60
58:BA:2229:C:H2'	58:BA:2230:G:H8	1.67	0.60
5:CF:98:LEU:HB2	17:CR:29:PHE:O	2.02	0.60
14:CO:64:ARG:HH21	20:CA:581:G:H4'	1.66	0.60
20:CA:186(E):C:N3	20:CA:186(L):G:N2	2.42	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:576:G:N7	20:CA:881:G:H1'	2.16	0.60
20:CA:745:C:H2'	20:CA:746:A:H8	1.67	0.60
20:CA:1062:U:H2'	20:CA:1063:C:C6	2.37	0.60
26:DE:168:MET:O	58:DA:2730:C:O2'	2.19	0.60
27:DF:179:GLU:O	27:DF:205:ARG:NH2	2.35	0.60
32:DN:99:LEU:O	32:DN:103:VAL:HG23	2.02	0.60
34:DP:61:ARG:HD3	51:D8:13:ARG:HD2	1.83	0.60
41:DW:3:ALA:HB2	41:DW:58:ALA:HB2	1.81	0.60
58:DA:35:G:H2'	58:DA:36:G:O4'	2.01	0.60
58:DA:862:G:H2'	58:DA:863:A:O4'	2.02	0.60
58:DA:1980:G:H3'	58:DA:1981:A:H5"	1.84	0.60
58:DA:2415:G:H2'	58:DA:2416:C:C6	2.36	0.60
20:AA:1422:G:O2'	33:BO:49:ARG:NH2	2.33	0.60
24:BC:58:ASN:HA	24:BC:166:ASN:HB3	1.84	0.60
36:BR:64:ARG:O	36:BR:68:ARG:N	2.30	0.60
46:B2:25:VAL:HG11	46:B2:61:LEU:HD21	1.84	0.60
58:BA:848:G:H2'	58:BA:849:A:C8	2.36	0.60
58:BA:1486:A:H2'	58:BA:1487:G:H8	1.67	0.60
58:BA:2030:A:H4'	58:BA:2031:A:C8	2.37	0.60
58:BA:2216:G:H2'	58:BA:2217:G:H8	1.66	0.60
58:BA:2241:A:H2'	58:BA:2242:G:C8	2.36	0.60
58:BA:2881:C:H2'	58:BA:2882:A:H8	1.66	0.60
59:BB:59:A:H2'	59:BB:60:C:O4'	2.01	0.60
8:CI:17:VAL:HG13	8:CI:63:ILE:HD12	1.83	0.60
11:CL:127:GLU:O	11:CL:129:ALA:N	2.35	0.60
20:CA:269:C:H2'	20:CA:270:A:H8	1.66	0.60
20:CA:354:G:N2	20:CA:388:G:O2'	2.32	0.60
20:CA:595:G:H1'	20:CA:596:C:H5	1.67	0.60
20:CA:1537:U:H3	22:CV:8:A:H2	1.46	0.60
23:CY:83:ASP:C	23:CY:85:PRO:HD3	2.26	0.60
23:CY:368:GLU:O	23:CY:370:LYS:NZ	2.35	0.60
25:DD:79:VAL:O	25:DD:96:HIS:HB2	2.02	0.60
36:DR:40:LYS:O	36:DR:44:LEU:HB2	2.02	0.60
39:DU:47:TYR:HA	39:DU:50:ARG:HD2	1.82	0.60
42:DX:59:VAL:O	42:DX:76:ARG:NH1	2.35	0.60
46:D2:20:GLU:HA	46:D2:23:LYS:HD2	1.84	0.60
51:D8:20:GLY:O	51:D8:57:ARG:NH2	2.35	0.60
58:DA:378:C:H2'	58:DA:379:G:C8	2.36	0.60
58:DA:527:C:N3	58:DA:2779:U:H2'	2.15	0.60
58:DA:1272:A:O2'	58:DA:1273:U:OP1	2.18	0.60
58:DA:1468:C:H2'	58:DA:1469:A:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1473:G:H2'	58:DA:1474:C:H6	1.66	0.60
58:DA:2247:A:N6	58:DA:2257:U:H3	1.96	0.60
58:DA:2400:G:H1	58:DA:2416:C:H42	1.49	0.60
11:AL:60:LEU:HD23	11:AL:63:GLY:O	2.01	0.60
16:AQ:59:ILE:HG12	16:AQ:73:VAL:HG22	1.84	0.60
20:AA:199:G:H1	20:AA:218:C:N4	1.99	0.60
23:AY:425:SER:HA	23:AY:428:LEU:HD23	1.83	0.60
24:BC:63:VAL:N	24:BC:161:ARG:O	2.34	0.60
25:BD:20:ASP:OD2	25:BD:22:SER:OG	2.20	0.60
25:BD:173:VAL:HG22	25:BD:185:VAL:O	2.02	0.60
31:BK:125:ARG:H	31:BK:125:ARG:HD3	1.66	0.60
32:BN:24:GLY:CA	58:BA:1139:G:C5'	2.79	0.60
32:BN:137:LYS:HZ3	32:BN:138:LEU:HD23	1.67	0.60
33:BO:8:LEU:HD21	33:BO:21:CYS:HB2	1.83	0.60
37:BS:25:ARG:HH21	37:BS:40:ILE:HD13	1.66	0.60
58:BA:322:A:O4'	58:BA:340:A:H1'	2.00	0.60
58:BA:969:U:H2'	58:BA:970:C:C6	2.36	0.60
58:BA:2306:C:H5"	58:BA:2307:G:C8	2.37	0.60
3:CD:25:ARG:HB2	20:CA:410:G:OP2	2.01	0.60
23:CY:135:PHE:HA	23:CY:260:LEU:HA	1.84	0.60
23:CY:611:THR:HA	23:CY:642:VAL:HG22	1.83	0.60
33:DO:4:PRO:HB3	33:DO:23:ARG:H	1.67	0.60
34:DP:74:GLU:HG2	58:DA:244:A:O3'	2.01	0.60
37:DS:92:TYR:OH	58:DA:2293:C:OP1	2.18	0.60
43:DY:69:ALA:O	43:DY:71:LYS:N	2.35	0.60
58:DA:383:U:H2'	58:DA:385:C:H5	1.67	0.60
58:DA:1638:C:H5"	58:DA:2710:C:O2'	2.01	0.60
58:DA:1750:G:O2'	58:DA:2860:A:N1	2.33	0.60
7:AH:78:GLN:HE21	7:AH:80:ILE:H	1.50	0.59
20:AA:285:G:H2'	20:AA:286:G:H8	1.67	0.59
20:AA:454:C:N4	20:AA:479:C:N3	2.50	0.59
20:AA:501:C:H1'	20:AA:549:C:H1'	1.83	0.59
24:BC:47:LYS:HB2	24:BC:169:THR:O	2.02	0.59
27:BF:102:PRO:HB3	58:BA:606:U:H5"	1.82	0.59
32:BN:80:GLY:N	58:BA:1131:G:OP1	2.34	0.59
44:BZ:24:LEU:HB2	44:BZ:41:LEU:HD23	1.82	0.59
58:BA:551:G:H2'	58:BA:552:G:C8	2.37	0.59
58:BA:1636:C:H2'	58:BA:1637:A:C8	2.37	0.59
58:BA:2410:G:H2'	58:BA:2411:A:O4'	2.02	0.59
58:BA:2522:U:O2'	58:BA:2647:U:OP1	2.18	0.59
6:CG:3:ARG:HD2	20:CA:932:C:H3'	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:21:ILE:HB	10:CK:84:VAL:HA	1.84	0.59
20:CA:33:A:N1	20:CA:551:U:O4	2.35	0.59
20:CA:68(P):C:H2'	20:CA:68(Q):U:O4'	2.02	0.59
20:CA:1316:G:N1	20:CA:1319:A:OP2	2.35	0.59
23:CY:394:ALA:O	23:CY:396:ARG:N	2.35	0.59
30:DJ:54:UNK:O	58:DA:1106:G:O2'	2.14	0.59
30:DJ:97:UNK:C	30:DJ:99:UNK:H	2.15	0.59
32:DN:74:ARG:HH12	32:DN:85:ILE:HD11	1.67	0.59
45:D0:37:LEU:HD12	45:D0:38:VAL:HG23	1.84	0.59
50:D7:40:TRP:N	50:D7:40:TRP:CD1	2.70	0.59
58:DA:476:G:N1	58:DA:479:A:OP2	2.26	0.59
58:DA:1498:C:H2'	58:DA:1499:C:C6	2.37	0.59
58:DA:1509:A:H4'	58:DA:1510:A:C8	2.37	0.59
1:AB:141:GLU:O	1:AB:145:LEU:HB2	2.01	0.59
16:AQ:60:ILE:HG23	16:AQ:72:ARG:HB2	1.84	0.59
23:AY:313:ALA:HA	23:AY:328:ILE:HA	1.84	0.59
24:BC:47:LYS:HB3	24:BC:212:SER:HB2	1.84	0.59
25:BD:264:LYS:HG2	25:BD:265:PRO:HD2	1.84	0.59
26:BE:58:ARG:HH12	26:BE:75:VAL:HG23	1.67	0.59
31:BK:106:GLU:HA	31:BK:109:LYS:HB2	1.83	0.59
32:BN:36:GLY:C	32:BN:42:TRP:HB2	2.27	0.59
35:BQ:109:VAL:HG21	35:BQ:114:ALA:HB2	1.84	0.59
58:BA:679:C:H2'	58:BA:680:G:H8	1.67	0.59
58:BA:2024:G:C2	58:BA:2040:C:H1'	2.37	0.59
1:CB:162:ILE:O	1:CB:164:VAL:HG23	2.02	0.59
7:CH:121:ASP:OD1	7:CH:121:ASP:N	2.34	0.59
20:CA:1102:A:H2'	20:CA:1103:C:C6	2.36	0.59
23:CY:92:ILE:HG23	23:CY:93:GLU:H	1.67	0.59
23:CY:309:LEU:HA	23:CY:333:GLY:HA3	1.84	0.59
23:CY:613:PRO:HD2	23:CY:666:ARG:HB3	1.84	0.59
32:DN:38:HIS:ND1	32:DN:39:ARG:N	2.49	0.59
33:DO:71:ARG:NH2	33:DO:122:LEU:O	2.34	0.59
35:DQ:124:LYS:HE3	58:DA:2483:C:N3	2.17	0.59
39:DU:104:GLN:HE21	39:DU:105:VAL:HG23	1.67	0.59
43:DY:8:LYS:H	43:DY:8:LYS:HD2	1.67	0.59
43:DY:79:CYS:SG	43:DY:80:GLY:N	2.74	0.59
44:DZ:29:TYR:HE1	59:DB:73:A:N6	2.00	0.59
48:D5:9:LYS:HZ1	58:DA:2018:G:H3'	1.68	0.59
58:DA:578:A:OP1	58:DA:1255:U:O2'	2.20	0.59
58:DA:854:G:N2	58:DA:923:C:N3	2.41	0.59
58:DA:1459:G:H2'	58:DA:1461:G:H5'	1.81	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1638:C:H2'	58:DA:1639:U:O4'	2.02	0.59
58:DA:1748:G:H2'	58:DA:1749:A:C8	2.37	0.59
58:DA:2521:C:H42	58:DA:2544:G:H1	1.48	0.59
59:DB:66:A:N6	59:DB:107:U:H2'	2.16	0.59
12:AM:48:LEU:HD13	12:AM:53:VAL:HG22	1.84	0.59
14:AO:23:GLY:O	20:AA:750:G:N2	2.28	0.59
20:AA:1158:C:O2'	20:AA:1160:G:OP1	2.20	0.59
23:AY:580:MET:SD	58:BA:1913:A:N1	2.75	0.59
23:AY:610:VAL:HG22	23:AY:643:ILE:HB	1.82	0.59
24:BC:115:VAL:N	24:BC:145:THR:HG22	2.17	0.59
32:BN:25:ARG:NH2	58:BA:1140:C:O3'	2.32	0.59
32:BN:99:LEU:O	32:BN:103:VAL:HG23	2.02	0.59
32:BN:111:PRO:HA	32:BN:114:ARG:CZ	2.33	0.59
36:BR:40:LYS:O	36:BR:44:LEU:HB2	2.03	0.59
40:BV:70:ILE:HG12	40:BV:87:HIS:HB3	1.83	0.59
41:BW:35:ILE:O	41:BW:39:THR:OG1	2.19	0.59
44:BZ:72:ARG:NH1	59:BB:103:U:O3'	2.36	0.59
45:B0:65:GLY:HA3	45:B0:83:PRO:HA	1.83	0.59
58:BA:2158:A:H4'	58:BA:2159:G:H5'	1.84	0.59
4:CE:25:ARG:HH11	20:CA:1070:U:H5'	1.67	0.59
18:CS:6:LYS:HG2	18:CS:7:LYS:H	1.66	0.59
21:CW:15:G:H22	21:CW:48:C:H42	1.48	0.59
24:DC:40:GLU:HB3	24:DC:217:THR:HB	1.84	0.59
24:DC:153:ILE:HG23	24:DC:156:GLU:HB2	1.84	0.59
32:DN:7:LYS:N	32:DN:7:LYS:HZ3	1.99	0.59
58:DA:2386:C:H2'	58:DA:2387:U:C6	2.37	0.59
59:DB:22:U:H2'	59:DB:23:G:H8	1.66	0.59
1:AB:194:PRO:O	1:AB:196:LEU:N	2.34	0.59
20:AA:1499:A:H1'	20:AA:1520:G:H5'	1.84	0.59
23:AY:13:ARG:HB2	23:AY:79:ILE:HG12	1.84	0.59
24:BC:11:LEU:HA	24:BC:14:LYS:HG2	1.85	0.59
24:BC:153:ILE:O	24:BC:157:ILE:HG13	2.02	0.59
29:BH:55:PRO:HG2	29:BH:61:HIS:CE1	2.37	0.59
35:BQ:54:MET:HG2	35:BQ:58:PHE:CE2	2.35	0.59
37:BS:39:ILE:HD13	37:BS:73:LEU:HD21	1.84	0.59
56:B1:42:GLN:OE1	58:BA:379:G:N2	2.32	0.59
58:BA:1162:G:H2'	58:BA:1163:G:C8	2.37	0.59
4:CE:126:ARG:HH21	20:CA:9:G:H8	1.51	0.59
9:CJ:34:VAL:HG13	9:CJ:74:ILE:HG22	1.84	0.59
20:CA:231:G:H2'	20:CA:232:G:H8	1.68	0.59
20:CA:944:G:N1	20:CA:1338:G:OP2	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1262:C:H2'	20:CA:1263:C:C6	2.36	0.59
23:CY:496:LYS:HA	23:CY:509:HIS:HA	1.83	0.59
32:DN:111:PRO:HA	32:DN:114:ARG:CZ	2.32	0.59
39:DU:92:ARG:HG2	39:DU:95:LEU:H	1.68	0.59
48:D5:18:ALA:C	48:D5:21:SER:H	2.09	0.59
58:DA:1499:C:H2'	58:DA:1500:G:H8	1.66	0.59
58:DA:1650:G:H1	58:DA:2007:C:N4	1.97	0.59
10:AK:109:VAL:HA	17:AR:85:LEU:O	2.02	0.59
20:AA:1145:C:O2'	20:AA:1146:A:O5'	2.21	0.59
20:AA:1201:A:H4'	20:AA:1202:G:H5"	1.84	0.59
23:AY:202:PRO:O	23:AY:203:GLU:HB2	2.02	0.59
27:BF:158:THR:O	27:BF:178:PRO:HD3	2.01	0.59
58:BA:85:G:N1	58:BA:97:C:O2	2.36	0.59
58:BA:249:C:OP2	58:BA:2394:C:O2'	2.20	0.59
58:BA:383:U:H2'	58:BA:385:C:H5	1.67	0.59
58:BA:463:G:H2'	58:BA:464:U:H5"	1.84	0.59
58:BA:551:G:H2'	58:BA:552:G:H8	1.68	0.59
58:BA:579:G:O2'	58:BA:2019:A:OP1	2.21	0.59
58:BA:2662:A:H8	58:BA:2662:A:O5'	1.85	0.59
1:CB:208:ILE:H	1:CB:208:ILE:HD12	1.67	0.59
20:CA:815:A:N3	20:CA:1527:C:H1'	2.16	0.59
20:CA:1172:C:H2'	20:CA:1173:G:C8	2.37	0.59
20:CA:1432:G:OP1	38:DT:107:ASP:HB2	2.02	0.59
23:CY:580:MET:HA	23:CY:583:LYS:HB3	1.84	0.59
29:DH:85:LYS:HZ2	29:DH:141:VAL:HG22	1.67	0.59
37:DS:74:ALA:HA	37:DS:105:ALA:HB2	1.84	0.59
40:DV:56:SER:H	40:DV:100:ARG:HG2	1.67	0.59
58:DA:848:G:H2'	58:DA:849:A:H8	1.66	0.59
58:DA:1207:C:H42	58:DA:1239:G:H1	1.51	0.59
58:DA:1317:A:H61	58:DA:1335:U:H3	1.49	0.59
58:DA:1853:A:H2'	58:DA:1854:A:C8	2.37	0.59
58:DA:2557:G:H2'	58:DA:2558:C:C6	2.38	0.59
58:DA:2678:C:H2'	58:DA:2679:A:C8	2.37	0.59
58:DA:2698:U:H3	58:DA:2709:G:H1	1.49	0.59
58:DA:2876:G:H2'	58:DA:2877:G:C8	2.38	0.59
3:AD:107:ARG:HB3	3:AD:174:LEU:HD11	1.85	0.59
9:AJ:38:ILE:HG23	9:AJ:71:LEU:HB3	1.83	0.59
33:BO:63:VAL:HA	33:BO:106:LEU:HD11	1.84	0.59
38:BT:3:ARG:HG3	58:BA:2876:G:H4'	1.85	0.59
1:CB:22:LYS:HA	1:CB:40:HIS:HE1	1.67	0.59
27:DF:63:LYS:NZ	27:DF:66:PRO:O	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:126:VAL:HG21	27:DF:142:TRP:HZ2	1.66	0.59
32:DN:46:VAL:O	32:DN:47:ALA:HB3	2.02	0.59
56:D1:68:PRO:HG3	58:DA:372:G:N7	2.16	0.59
56:D1:88:LYS:HA	56:D1:91:LYS:HB3	1.83	0.59
58:DA:1165:U:H2'	58:DA:1166:C:H6	1.67	0.59
58:DA:1677:A:H2'	58:DA:1678:G:C8	2.37	0.59
58:DA:1841:U:H2'	58:DA:1842:G:C8	2.38	0.59
58:DA:2440:C:H5"	58:DA:2587:A:H4'	1.83	0.59
4:AE:78:HIS:HB2	7:AH:104:ARG:HG3	1.84	0.59
5:AF:5:GLU:HG3	5:AF:91:VAL:HG13	1.84	0.59
10:AK:116:HIS:CD2	20:AA:674:G:H21	2.21	0.59
11:AL:39:VAL:HG12	11:AL:40:VAL:H	1.67	0.59
11:AL:71:PRO:HD3	11:AL:100:ILE:HB	1.84	0.59
15:AP:8:ARG:HA	15:AP:17:TYR:HA	1.84	0.59
20:AA:781:A:N6	20:AA:802:A:H1'	2.18	0.59
23:AY:443:HIS:CD2	23:AY:446:THR:HG22	2.38	0.59
36:BR:28:LEU:HA	36:BR:34:ILE:HD13	1.85	0.59
38:BT:59:THR:HG23	38:BT:78:LEU:HD22	1.84	0.59
42:BX:10:ALA:HB3	42:BX:29:TRP:HB2	1.85	0.59
43:BY:28:LYS:HA	43:BY:39:VAL:HA	1.85	0.59
56:B1:50:ARG:NH1	58:BA:2205:C:OP2	2.35	0.59
58:BA:438:G:H2'	58:BA:439:G:H8	1.67	0.59
58:BA:1438:U:H2'	58:BA:1439:A:H8	1.68	0.59
58:BA:1980:G:O2'	58:BA:1982:C:OP2	2.20	0.59
58:BA:2023:G:O2'	58:BA:2618:G:H5"	2.03	0.59
58:BA:2229:C:H2'	58:BA:2230:G:C8	2.38	0.59
20:CA:971:G:P	20:CA:1231:G:H21	2.26	0.59
20:CA:1505:G:H5"	20:CA:1506:U:H5"	1.85	0.59
22:CV:6:G:H2'	22:CV:7:G:C8	2.37	0.59
23:CY:342:TYR:HA	23:CY:349:LYS:HA	1.83	0.59
27:DF:156:LEU:HD23	27:DF:164:ARG:HG2	1.84	0.59
41:DW:74:ALA:HA	41:DW:104:THR:O	2.02	0.59
58:DA:270(J):G:H2'	58:DA:270(K):G:O4'	2.02	0.59
58:DA:1271:G:O3'	58:DA:1272:A:H4'	2.02	0.59
58:DA:2696:U:H2'	58:DA:2697:G:C8	2.37	0.59
1:AB:236:TYR:HA	1:AB:239:VAL:HB	1.85	0.59
4:AE:143:ARG:NH1	7:AH:77:GLU:OE1	2.36	0.59
20:AA:34:C:H2'	20:AA:35:G:H8	1.65	0.59
20:AA:1261:A:H62	20:AA:1274:G:H21	1.51	0.59
26:BE:92:THR:OG1	26:BE:94:GLU:OE2	2.17	0.59
26:BE:134:ILE:HD12	58:BA:2579:C:H4'	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:143:ASN:ND2	26:BE:146:THR:O	2.36	0.59
26:BE:151:TYR:HB2	26:BE:154:LYS:HB2	1.83	0.59
32:BN:46:VAL:O	32:BN:47:ALA:HB3	2.02	0.59
41:BW:27:LYS:O	41:BW:71:VAL:N	2.35	0.59
42:BX:51:VAL:HG22	42:BX:83:VAL:HG22	1.85	0.59
53:Be:64:LEU:HD12	53:Be:115:LEU:HB3	1.84	0.59
58:BA:1914:C:C6	58:BA:1915:U:C2	2.91	0.59
59:BB:60:C:H2'	59:BB:61:G:C8	2.37	0.59
12:CM:91:ARG:NH2	20:CA:1226:C:OP2	2.35	0.59
19:CT:73:HIS:C	19:CT:74:LYS:HD3	2.28	0.59
20:CA:479:C:H2'	20:CA:480:U:C6	2.38	0.59
20:CA:627:G:H2'	20:CA:628:G:C8	2.38	0.59
20:CA:674:G:H2'	20:CA:675:A:C8	2.37	0.59
23:CY:668:SER:OG	23:CY:669:PHE:N	2.36	0.59
25:DD:66:ASP:N	25:DD:104:TYR:O	2.32	0.59
26:DE:25:VAL:HG22	26:DE:183:LEU:HG	1.84	0.59
26:DE:149:ARG:NH1	58:DA:2024:G:O3'	2.34	0.59
27:DF:72:ARG:HD2	27:DF:73:ALA:H	1.68	0.59
58:DA:86:C:H4'	58:DA:104:U:H1'	1.84	0.59
58:DA:1316:U:H2'	58:DA:1317:A:C8	2.38	0.59
58:DA:2138:C:H2'	58:DA:2139:C:C6	2.38	0.59
6:AG:66:VAL:HG12	6:AG:70:LYS:HE2	1.85	0.59
20:AA:890:G:O2'	20:AA:906:G:O6	2.20	0.59
24:BC:41:THR:C	24:BC:43:GLU:H	2.11	0.59
27:BF:125:LEU:HD23	27:BF:194:MET:HB2	1.85	0.59
30:BJ:60:UNK:O	30:BJ:64:UNK:N	2.36	0.59
58:BA:1305:C:H42	58:BA:1623:G:H1	1.51	0.59
58:BA:2707:G:H2'	58:BA:2708:G:C8	2.38	0.59
8:CI:97:LYS:NZ	20:CA:1178:G:O6	2.35	0.59
20:CA:319:G:H1	20:CA:334:C:H42	1.48	0.59
20:CA:768:A:OP1	20:CA:804:U:H4'	2.02	0.59
20:CA:996:A:H2'	20:CA:997:U:C6	2.38	0.59
20:CA:1077:G:N2	20:CA:1080:A:OP2	2.32	0.59
20:CA:1124:G:O2'	20:CA:1145:C:N4	2.36	0.59
24:DC:65:LEU:O	24:DC:67:HIS:N	2.35	0.59
27:DF:102:PRO:HB2	27:DF:105:VAL:HG23	1.84	0.59
27:DF:185:ASP:O	27:DF:189:THR:OG1	2.14	0.59
34:DP:45:LEU:HG	34:DP:46:LYS:H	1.67	0.59
44:DZ:158:PRO:O	44:DZ:161:VAL:N	2.35	0.59
56:D1:12:PRO:CA	56:D1:43:TYR:HB2	2.33	0.59
58:DA:179:G:H2'	58:DA:180:G:O4'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:272:G:H2'	58:DA:273(A):G:H8	1.67	0.59
58:DA:481:G:H1'	58:DA:506:G:N2	2.18	0.59
58:DA:557:U:H2'	58:DA:558:G:C8	2.37	0.59
58:DA:863:A:H2'	58:DA:864:G:H8	1.68	0.59
58:DA:1135:C:H42	58:DA:1138:G:H8	1.50	0.59
58:DA:2011:U:H2'	58:DA:2012:G:O4'	2.03	0.59
2:AC:147:LYS:HB2	2:AC:203:PHE:CD2	2.38	0.59
3:AD:122:ARG:HD3	3:AD:136:PRO:HD3	1.85	0.59
20:AA:149:A:H2'	20:AA:150:C:C6	2.37	0.59
39:BU:49:HIS:O	39:BU:53:ARG:HB2	2.03	0.59
42:BX:7:VAL:HG11	42:BX:42:ALA:HB3	1.84	0.59
58:BA:130:C:H4'	58:BA:1349:A:H1'	1.85	0.59
58:BA:1726:G:H2'	58:BA:1727:U:C6	2.37	0.59
58:BA:2342:C:H2'	58:BA:2343:C:O4'	2.02	0.59
3:CD:147:ALA:HA	3:CD:182:LYS:HG2	1.84	0.59
9:CJ:53:PRO:O	13:CN:41:ARG:NH2	2.36	0.59
11:CL:76:ASN:N	11:CL:76:ASN:OD1	2.35	0.59
15:CP:7:ALA:HB3	15:CP:18:ARG:HB3	1.84	0.59
17:CR:54:ARG:NH1	20:CA:1536:C:O3'	2.36	0.59
23:CY:603:GLU:HG2	23:CY:679:VAL:HG13	1.84	0.59
24:DC:47:LYS:HB2	24:DC:169:THR:OG1	2.03	0.59
32:DN:36:GLY:O	32:DN:42:TRP:HB2	2.03	0.59
32:DN:89:LYS:NZ	32:DN:89:LYS:HB3	2.17	0.59
37:DS:74:ALA:HB2	37:DS:104:GLY:HA2	1.85	0.59
39:DU:3:ARG:NH1	58:DA:446:G:H5'	2.18	0.59
58:DA:881:G:H1	58:DA:895:U:H3	1.51	0.59
58:DA:1668:A:H4'	58:DA:1669:A:H5'	1.84	0.59
58:DA:1891:G:H2'	58:DA:1892:C:C6	2.38	0.59
58:DA:2726:U:O2'	58:DA:2727:G:O5'	2.18	0.59
20:AA:810:C:H2'	20:AA:811:C:C6	2.38	0.58
20:AA:1412:C:H2'	20:AA:1413:A:C8	2.38	0.58
32:BN:14:VAL:CG1	32:BN:137:LYS:HG3	2.33	0.58
32:BN:36:GLY:O	32:BN:42:TRP:HB2	2.03	0.58
58:BA:1047:G:O2'	58:BA:1109:C:N4	2.35	0.58
58:BA:1684:C:H42	58:BA:1704:G:H1	1.51	0.58
58:BA:1796:U:H3	58:BA:1823:G:H1	1.51	0.58
58:BA:2131:G:H5'	58:BA:2133:G:O4'	2.03	0.58
58:BA:2514:U:H2'	58:BA:2515:C:C6	2.38	0.58
7:CH:96:GLY:HA2	7:CH:130:GLY:HA3	1.85	0.58
20:CA:227:G:H2'	20:CA:228:A:H8	1.68	0.58
20:CA:862:C:N4	20:CA:867:G:H1	1.97	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:42:VAL:O	24:DC:43:GLU:C	2.45	0.58
28:DG:61:ALA:HB1	28:DG:66:GLN:O	2.03	0.58
35:DQ:37:LEU:HG	35:DQ:129:THR:HA	1.85	0.58
42:DX:36:LYS:HG2	58:DA:1598:C:H5'	1.85	0.58
45:D0:67:VAL:HG12	45:D0:68:GLU:H	1.67	0.58
47:D3:8:LEU:HD22	47:D3:31:LEU:HA	1.84	0.58
56:D1:25:LYS:HG2	56:D1:34:THR:HA	1.84	0.58
58:DA:35:G:O6	58:DA:445:C:N3	2.35	0.58
58:DA:276:A:H2'	58:DA:277:C:C6	2.38	0.58
58:DA:2626:C:H2'	58:DA:2627:G:O4'	2.01	0.58
2:AC:52:LEU:HB3	2:AC:70:VAL:HG13	1.85	0.58
3:AD:110:PHE:O	3:AD:161:ASN:ND2	2.36	0.58
10:AK:88:GLY:O	10:AK:91:ARG:HB2	2.03	0.58
10:AK:111:ASP:HA	17:AR:84:LYS:HG3	1.83	0.58
25:BD:35:LYS:N	25:BD:36:PRO:HD2	2.18	0.58
27:BF:188:ARG:HB3	34:BP:7:ARG:HH22	1.66	0.58
30:BJ:25:UNK:CA	30:BJ:80:UNK:HA	2.28	0.58
31:BK:60:TYR:O	31:BK:62:ASP:N	2.35	0.58
32:BN:24:GLY:HA2	58:BA:1139:G:H5"	1.85	0.58
37:BS:67:ARG:HA	37:BS:99:LYS:HB2	1.85	0.58
53:Be:74:VAL:HA	53:Be:78:LEU:HB2	1.84	0.58
58:BA:270(J):G:H1	58:BA:270(R):C:H42	1.50	0.58
58:BA:997:G:H2'	58:BA:998:C:H6	1.68	0.58
58:BA:1335:U:H2'	58:BA:1336:A:C8	2.37	0.58
58:BA:1491:G:H2'	58:BA:1492:G:O4'	2.03	0.58
59:BB:47:C:H2'	59:BB:48:A:O4'	2.03	0.58
1:CB:91:PRO:HG2	1:CB:155:LEU:HD23	1.85	0.58
18:CS:62:ILE:HG13	18:CS:66:MET:HG3	1.85	0.58
19:CT:53:LEU:HA	19:CT:56:MET:HB2	1.85	0.58
20:CA:34:C:H2'	20:CA:35:G:H8	1.67	0.58
20:CA:563:A:H5"	20:CA:564:C:C5	2.38	0.58
20:CA:615:C:N3	20:CA:625:G:O6	2.35	0.58
21:CW:70:G:H2'	21:CW:71:C:C6	2.38	0.58
23:CY:136:ALA:HB3	23:CY:260:LEU:HB2	1.85	0.58
24:DC:170:GLY:O	24:DC:172:ILE:N	2.36	0.58
25:DD:54:ARG:NH2	58:DA:1815:A:OP2	2.36	0.58
27:DF:64:ILE:H	27:DF:76:GLY:HA2	1.68	0.58
32:DN:15:LEU:HD13	32:DN:16:ILE:N	2.17	0.58
38:DT:48:ILE:N	38:DT:64:ARG:O	2.29	0.58
39:DU:12:ARG:HH21	58:DA:1216:G:P	2.26	0.58
47:D3:41:PRO:HA	47:D3:44:ARG:HD3	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D5:4:HIS:O	58:DA:2056:G:N2	2.36	0.58
58:DA:536:A:H2'	58:DA:537:C:C6	2.39	0.58
58:DA:2118:U:O2	58:DA:2148:G:O2'	2.19	0.58
58:DA:2210:G:H21	58:DA:2211:G:H5'	1.66	0.58
2:AC:160:ALA:O	2:AC:162:GLN:N	2.36	0.58
20:AA:578:C:H2'	20:AA:579:G:C8	2.38	0.58
20:AA:1500:A:H5"	20:AA:1508:G:H5"	1.85	0.58
24:BC:48:LEU:HD13	24:BC:50:ILE:HG13	1.85	0.58
28:BG:67:LYS:HD3	28:BG:68:PRO:HD2	1.84	0.58
32:BN:63:THR:HG21	58:BA:1141:U:P	2.43	0.58
38:BT:60:THR:HG22	38:BT:77:PRO:HA	1.86	0.58
41:BW:86:LEU:HD12	41:BW:87:PRO:HD2	1.85	0.58
44:BZ:95:PRO:HA	44:BZ:129:SER:HA	1.85	0.58
45:B0:32:ARG:HA	45:B0:64:ASP:HA	1.85	0.58
49:B6:19:ARG:NH2	58:BA:2399:G:O2'	2.34	0.58
58:BA:740:U:H2'	58:BA:741:G:C8	2.38	0.58
58:BA:2678:C:H2'	58:BA:2679:A:C8	2.38	0.58
2:CC:40:ARG:NH1	13:CN:52:GLN:HB3	2.17	0.58
4:CE:20:GLN:HG2	4:CE:22:GLY:H	1.67	0.58
17:CR:33:ASP:OD2	17:CR:35:ARG:NH2	2.36	0.58
20:CA:614:A:H2'	20:CA:615:C:C6	2.38	0.58
27:DF:202:PHE:HA	27:DF:205:ARG:HB2	1.86	0.58
34:DP:106:LEU:HG	34:DP:112:LEU:HD23	1.85	0.58
39:DU:75:ASN:HB2	58:DA:1011:G:OP1	2.03	0.58
58:DA:436:C:H2'	58:DA:438:G:C8	2.38	0.58
58:DA:2137:C:H2'	58:DA:2138:C:C6	2.38	0.58
3:AD:73:ARG:HB2	20:AA:546:G:OP1	2.03	0.58
9:AJ:51:ARG:NH1	9:AJ:61:GLU:OE2	2.37	0.58
15:AP:27:LYS:HG3	15:AP:30:GLY:HA3	1.85	0.58
15:AP:30:GLY:HA2	20:AA:309:G:H5"	1.84	0.58
17:AR:59:SER:OG	17:AR:60:ALA:N	2.33	0.58
20:AA:68(F):C:H2'	20:AA:68(G):G:H8	1.68	0.58
24:BC:139:PRO:HB3	24:BC:146:VAL:HG22	1.85	0.58
25:BD:219:PRO:HB2	58:BA:1789:A:O3'	2.03	0.58
26:BE:109:LYS:HB2	36:BR:2:ARG:NE	2.19	0.58
40:BV:41:GLY:H	40:BV:45:THR:HB	1.69	0.58
58:BA:19:C:H2'	58:BA:20:C:C6	2.38	0.58
58:BA:31:C:H2'	58:BA:32:C:C6	2.39	0.58
58:BA:438:G:H2'	58:BA:439:G:C8	2.38	0.58
58:BA:1291:C:H4'	58:BA:1535:U:O2'	2.03	0.58
58:BA:2294:C:H2'	58:BA:2295:C:C6	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:42:ILE:HG23	1:CB:44:LEU:HG	1.85	0.58
4:CE:35:GLY:HA3	4:CE:112:LEU:HB3	1.84	0.58
7:CH:110:ALA:HB3	7:CH:121:ASP:HB3	1.84	0.58
18:CS:36:ARG:HH11	18:CS:53:ASN:HA	1.68	0.58
19:CT:51:GLU:O	19:CT:55:ILE:HG12	2.04	0.58
20:CA:1278:U:H5"	20:CA:1279:A:H5'	1.84	0.58
25:DD:95:LEU:HD11	25:DD:105:ILE:HG22	1.85	0.58
26:DE:128:SER:HG	26:DE:129:HIS:HD1	1.48	0.58
29:DH:111:HIS:CE1	58:DA:2668:G:H1'	2.37	0.58
30:DJ:123:UNK:C	30:DJ:125:UNK:H	2.15	0.58
34:DP:105:LEU:O	34:DP:107:LYS:N	2.35	0.58
38:DT:16:ARG:HH11	38:DT:19:LEU:HD11	1.68	0.58
38:DT:133:GLU:O	38:DT:137:LYS:N	2.35	0.58
45:D0:27:GLU:HB3	45:D0:68:GLU:HA	1.86	0.58
58:DA:137(A):C:H42	58:DA:142:G:H1	1.52	0.58
3:AD:14:ARG:HA	3:AD:39:PRO:HA	1.85	0.58
8:AI:120:ARG:HD2	20:AA:1348:U:H4'	1.84	0.58
20:AA:33:A:N1	20:AA:551:U:O4	2.37	0.58
20:AA:940:C:H2'	20:AA:941:G:C8	2.39	0.58
26:BE:130:GLY:HA2	58:BA:2580:U:H4'	1.85	0.58
37:BS:77:ALA:HA	37:BS:82:ILE:HD12	1.86	0.58
43:BY:51:VAL:HB	43:BY:55:TYR:HB2	1.85	0.58
48:B5:31:VAL:HG23	48:B5:40:LYS:HG3	1.84	0.58
56:B1:15:ALA:H	56:B1:41:ARG:HG2	1.67	0.58
58:BA:2715:C:H2'	58:BA:2716:U:H6	1.67	0.58
3:CD:108:LEU:HD21	3:CD:183:GLY:HA3	1.86	0.58
4:CE:152:ARG:HH22	7:CH:108:GLY:HA2	1.68	0.58
6:CG:87:VAL:HG22	6:CG:151:TYR:HB3	1.84	0.58
16:CQ:40:LYS:NZ	16:CQ:42:TYR:OH	2.36	0.58
16:CQ:100:LYS:HZ3	20:CA:246:A:H2'	1.69	0.58
20:CA:1343:G:N2	20:CA:1349:A:O2'	2.35	0.58
24:DC:65:LEU:HD21	24:DC:193:PHE:HB2	1.86	0.58
25:DD:157:ARG:NH2	58:DA:1818:U:H6	1.99	0.58
26:DE:72:VAL:HG12	26:DE:73:GLU:H	1.67	0.58
28:DG:113:ARG:HA	28:DG:113:ARG:NE	2.17	0.58
29:DH:176:ALA:HB1	58:DA:2529:G:H5"	1.84	0.58
34:DP:85:LEU:HG	34:DP:118:GLY:HA3	1.84	0.58
38:DT:33:LYS:HD3	38:DT:34:VAL:H	1.69	0.58
42:DX:29:TRP:HZ3	42:DX:76:ARG:HE	1.51	0.58
43:DY:20:TYR:HB3	43:DY:23:ARG:HG3	1.86	0.58
58:DA:969:U:H2'	58:DA:970:C:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1025:G:OP1	58:DA:1025:G:H8	1.85	0.58
58:DA:1914:C:C5	58:DA:1915:U:N3	2.71	0.58
58:DA:2632:A:H2'	58:DA:2633:G:H8	1.67	0.58
59:DB:102:G:H2'	59:DB:103:U:H6	1.68	0.58
11:AL:76:ASN:O	11:AL:78:GLN:N	2.28	0.58
20:AA:35:G:H2'	20:AA:36:C:C6	2.38	0.58
20:AA:1281:U:H5'	20:AA:1282:C:H5	1.67	0.58
23:AY:20:HIS:HB2	23:AY:117:GLN:HB3	1.84	0.58
23:AY:266:ASN:OD1	23:AY:266:ASN:N	2.36	0.58
24:BC:118:PRO:HD3	24:BC:147:GLY:HA2	1.84	0.58
24:BC:170:GLY:O	24:BC:172:ILE:N	2.36	0.58
28:BG:73:ALA:H	28:BG:87:PRO:HD2	1.68	0.58
34:BP:38:GLN:HE22	58:BA:832:G:P	2.25	0.58
41:BW:69:LEU:HD22	41:BW:107:LEU:HD23	1.85	0.58
58:BA:37:C:H2'	58:BA:38:A:H8	1.66	0.58
58:BA:109:G:H2'	58:BA:110:G:O4'	2.04	0.58
58:BA:1090:U:H2'	58:BA:1091:G:C8	2.38	0.58
58:BA:2110:G:H1	58:BA:2179:C:H42	1.51	0.58
2:CC:167:TRP:HE3	2:CC:168:ALA:H	1.50	0.58
3:CD:115:ARG:NH1	20:CA:407:G:OP1	2.37	0.58
20:CA:801:U:H2'	20:CA:802:A:H8	1.68	0.58
23:CY:604:PRO:HG2	23:CY:649:LEU:HD12	1.85	0.58
25:DD:206:LEU:HB2	58:DA:1791:A:H4'	1.86	0.58
26:DE:102:VAL:HG12	26:DE:200:GLU:HA	1.86	0.58
29:DH:87:LEU:HD22	29:DH:162:ILE:HG22	1.86	0.58
47:D3:8:LEU:HB2	47:D3:28:LEU:HD12	1.85	0.58
58:DA:47:C:N3	58:DA:178:G:N2	2.40	0.58
58:DA:137(A):C:H2'	58:DA:137(B):G:C8	2.39	0.58
58:DA:2071:A:H2'	58:DA:2072:G:C8	2.38	0.58
58:DA:2518:A:O2'	58:DA:2519:U:OP1	2.15	0.58
20:AA:370:C:H2'	20:AA:371:G:H8	1.67	0.58
20:AA:824:C:H2'	20:AA:825:G:C8	2.38	0.58
24:BC:182:PRO:HB3	24:BC:183:PRO:HD2	1.86	0.58
25:BD:115:GLN:HE22	25:BD:117:VAL:HG22	1.68	0.58
28:BG:4:ASP:HA	28:BG:8:LYS:HD3	1.86	0.58
32:BN:24:GLY:HA2	58:BA:1139:G:C5'	2.33	0.58
41:BW:72:LYS:HD3	41:BW:106:ILE:HG22	1.86	0.58
43:BY:20:TYR:HB3	43:BY:23:ARG:HG3	1.86	0.58
49:B6:11:LEU:HD12	49:B6:26:ASN:HB2	1.84	0.58
58:BA:2038:G:H2'	58:BA:2039:C:H5'	1.83	0.58
1:CB:162:ILE:HG12	1:CB:164:VAL:HG23	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:109:GLY:HA3	11:CL:120:TYR:C	2.28	0.58
19:CT:26:ASN:ND2	20:CA:323:U:OP1	2.36	0.58
20:CA:1015:A:N3	20:CA:1218:C:O2'	2.29	0.58
20:CA:1492:A:N3	20:CA:1493:A:C8	2.72	0.58
21:CW:28:A:H2'	21:CW:29:U:C6	2.39	0.58
23:CY:117:GLN:HE22	23:CY:664:GLN:HB3	1.69	0.58
27:DF:70:THR:HG22	27:DF:72:ARG:H	1.69	0.58
29:DH:16:SER:HB3	29:DH:27:LYS:HB3	1.86	0.58
34:DP:110:TYR:CD2	34:DP:111:ARG:HG3	2.38	0.58
39:DU:49:HIS:O	39:DU:53:ARG:HB2	2.04	0.58
42:DX:25:LYS:HE3	42:DX:82:GLN:HB2	1.84	0.58
46:D2:48:HIS:CD2	46:D2:49:LYS:H	2.22	0.58
48:D5:45:VAL:HG22	48:D5:51:TYR:HB2	1.85	0.58
58:DA:222:A:N6	58:DA:232:G:H1'	2.19	0.58
58:DA:319:C:H2'	58:DA:320:A:O4'	2.04	0.58
1:AB:92:TYR:HE1	1:AB:94:ASN:HB2	1.68	0.58
3:AD:61:LYS:HE2	3:AD:206:PHE:HE2	1.69	0.58
20:AA:362:G:H2'	20:AA:364:A:OP2	2.04	0.58
20:AA:551:U:H2'	20:AA:552:U:C6	2.39	0.58
20:AA:1002:G:H2'	20:AA:1003:G:C8	2.38	0.58
23:AY:455:GLY:HA3	23:AY:458:HIS:HB3	1.86	0.58
23:AY:661:SER:OG	58:BA:2660:A:N6	2.37	0.58
23:AY:685:GLU:HA	23:AY:688:ILE:HG12	1.86	0.58
25:BD:41:GLY:O	25:BD:43:ARG:N	2.36	0.58
25:BD:180:GLY:HA3	25:BD:275:LYS:HB3	1.86	0.58
33:BO:64:ARG:HB3	33:BO:79:PHE:HB2	1.84	0.58
58:BA:144:C:H2'	58:BA:145:G:C8	2.39	0.58
58:BA:306:U:H3	58:BA:310:A:H62	1.52	0.58
58:BA:679:C:H2'	58:BA:680:G:C8	2.39	0.58
58:BA:1286:A:O2'	58:BA:1288:U:OP2	2.22	0.58
58:BA:2686:G:H2'	58:BA:2687:U:O4'	2.04	0.58
7:CH:88:LYS:NZ	20:CA:877:C:OP1	2.32	0.58
11:CL:34:ARG:HG3	11:CL:82:VAL:HG13	1.84	0.58
16:CQ:57:VAL:HG12	16:CQ:76:LEU:HA	1.84	0.58
20:CA:131:C:H2'	20:CA:132:C:C6	2.39	0.58
20:CA:935:A:H2'	20:CA:936:C:H6	1.69	0.58
21:CW:41:A:H2'	21:CW:42:U:C6	2.37	0.58
58:DA:657:U:H2'	58:DA:658:C:C6	2.39	0.58
58:DA:871:U:H2'	58:DA:872:A:C8	2.38	0.58
58:DA:2208:U:O4	58:DA:2216:G:O6	2.21	0.58
4:AE:9:LYS:HB3	4:AE:112:LEU:HD11	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:33:VAL:HG12	4:AE:112:LEU:HD12	1.86	0.58
7:AH:97:VAL:HG13	7:AH:98:LYS:H	1.69	0.58
8:AI:69:GLY:O	8:AI:73:GLN:N	2.34	0.58
14:AO:7:GLU:O	14:AO:10:LYS:HG3	2.04	0.58
20:AA:1250:A:H2	20:AA:1353:G:H21	1.51	0.58
21:AW:60:U:H5'	21:AW:61:C:H5	1.69	0.58
24:BC:67:HIS:NE2	24:BC:188:ASP:HB2	2.18	0.58
28:BG:41:GLN:HB2	28:BG:90:LEU:HD23	1.86	0.58
32:BN:24:GLY:CA	58:BA:1139:G:H5"	2.33	0.58
36:BR:33:ARG:HA	36:BR:114:VAL:O	2.04	0.58
56:B1:21:ARG:NH2	56:B1:38:SER:OG	2.36	0.58
58:BA:503:A:H4'	58:BA:504:U:H5"	1.85	0.58
1:CB:50:GLU:O	1:CB:53:ARG:N	2.37	0.58
3:CD:162:LEU:HD22	3:CD:178:VAL:HG13	1.86	0.58
10:CK:109:VAL:HA	17:CR:85:LEU:O	2.04	0.58
20:CA:17:U:H2'	20:CA:18:C:H6	1.68	0.58
20:CA:1404:C:O2	20:CA:1519:A:O2'	2.21	0.58
26:DE:37:ARG:NH1	26:DE:44:TYR:OH	2.37	0.58
32:DN:65:LYS:CD	58:DA:1022:G:OP2	2.50	0.58
58:DA:2525:G:H2'	58:DA:2526:G:H8	1.69	0.58
1:AB:142:LEU:O	1:AB:146:GLN:HG2	2.03	0.58
3:AD:108:LEU:HD12	3:AD:174:LEU:HD22	1.86	0.58
4:AE:24:ARG:HD2	22:AV:26:A:H2	1.69	0.58
15:AP:12:LYS:HB3	20:AA:43:C:H5"	1.86	0.58
20:AA:68(G):G:C4	20:AA:68(H):G:H1'	2.38	0.58
20:AA:237:C:H2'	20:AA:238:G:H8	1.68	0.58
25:BD:79:VAL:HG12	25:BD:80:ALA:N	2.19	0.58
32:BN:15:LEU:HD13	32:BN:16:ILE:N	2.17	0.58
44:BZ:7:ALA:HB2	44:BZ:59:LEU:HB2	1.86	0.58
58:BA:1410:G:H2'	58:BA:1411:C:C6	2.38	0.58
58:BA:2505:G:C6	58:BA:2610:C:O2	2.57	0.58
1:CB:71:VAL:HB	1:CB:164:VAL:HA	1.86	0.58
1:CB:115:LEU:HD13	1:CB:145:LEU:HB3	1.86	0.58
5:CF:8:ILE:HG23	5:CF:88:VAL:HG22	1.85	0.58
12:CM:125:ARG:NH2	20:CA:969:A:N1	2.52	0.58
16:CQ:14:LYS:HD3	20:CA:275:G:H5'	1.85	0.58
16:CQ:17:LYS:HZ2	20:CA:255:G:HO2'	1.49	0.58
20:CA:33:A:H2	20:CA:551:U:H3	1.48	0.58
20:CA:935:A:H2'	20:CA:936:C:C6	2.39	0.58
24:DC:28:ARG:CZ	24:DC:183:PRO:HB3	2.33	0.58
25:DD:7:LYS:HG3	58:DA:706:A:H5'	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DY:47:LYS:NZ	58:DA:480:A:O2'	2.37	0.58
58:DA:234:C:N4	58:DA:430:G:H22	2.01	0.58
58:DA:557:U:H2'	58:DA:558:G:H8	1.69	0.58
58:DA:600:G:H2'	58:DA:601:C:C6	2.39	0.58
58:DA:1531:C:H2'	58:DA:1532:C:C6	2.38	0.58
58:DA:2396:G:H2'	58:DA:2397:G:C8	2.38	0.58
2:AC:163:ALA:HB3	20:AA:1056:U:H4'	1.84	0.57
3:AD:81:GLU:HA	3:AD:84:LYS:HE2	1.84	0.57
7:AH:91:ARG:NH2	20:AA:564:C:O2'	2.34	0.57
8:AI:107:ARG:HH22	20:AA:1346:A:H1'	1.68	0.57
10:AK:119:CYS:SG	20:AA:778:G:O2'	2.60	0.57
11:AL:34:ARG:HB2	20:AA:363:A:OP1	2.04	0.57
20:AA:1224:G:O2'	20:AA:1322:C:OP2	2.22	0.57
24:BC:96:GLY:HA3	24:BC:100:ILE:HG12	1.86	0.57
24:BC:115:VAL:HB	24:BC:150:ILE:HG23	1.86	0.57
26:BE:146:THR:O	58:BA:2571:C:O2'	2.21	0.57
27:BF:13:SER:O	27:BF:15:SER:N	2.37	0.57
29:BH:40:GLU:O	29:BH:41:MET:HG3	2.04	0.57
29:BH:127:GLU:OE2	29:BH:130:ARG:NH2	2.37	0.57
32:BN:131:GLN:HG3	58:BA:7:G:O2'	2.04	0.57
40:BV:76:LYS:HB2	40:BV:81:TYR:HB3	1.84	0.57
52:B9:3:VAL:HG11	58:BA:2539:C:H5'	1.86	0.57
53:Be:74:VAL:HG11	53:Be:86:LEU:HD11	1.86	0.57
58:BA:922:U:H2'	58:BA:923:C:C6	2.39	0.57
58:BA:1438:U:H2'	58:BA:1439:A:C8	2.39	0.57
58:BA:1880:C:H2'	58:BA:1881:C:H6	1.69	0.57
58:BA:2131:G:H5"	58:BA:2132:U:O5'	2.03	0.57
59:BB:74:U:H2'	59:BB:75:G:H8	1.69	0.57
4:CE:11:ILE:HB	4:CE:31:LEU:HD12	1.85	0.57
8:CI:46:ALA:HB2	8:CI:74:ILE:HG23	1.85	0.57
11:CL:45:PRO:HA	11:CL:92:ASP:HB3	1.86	0.57
16:CQ:68:ARG:O	16:CQ:70:ARG:N	2.34	0.57
17:CR:44:LEU:HD22	17:CR:79:LEU:HD21	1.85	0.57
20:CA:68(Y):C:H2'	20:CA:101:A:C8	2.38	0.57
20:CA:120:A:H2'	20:CA:122:G:N7	2.19	0.57
20:CA:125:U:O2	20:CA:236:G:O6	2.21	0.57
20:CA:955:U:O2'	20:CA:1227:A:N6	2.37	0.57
23:CY:358:MET:HG2	23:CY:363:ARG:HG2	1.86	0.57
44:DZ:72:ARG:HH12	59:DB:104:A:P	2.27	0.57
58:DA:325:G:H2'	58:DA:326:G:H8	1.69	0.57
58:DA:372:G:O2'	58:DA:400:G:O6	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1429:G:H2'	58:DA:1430:C:H6	1.69	0.57
58:DA:1771:C:H2'	58:DA:1772:G:H8	1.69	0.57
5:AF:2:ARG:NH1	5:AF:69:GLU:OE1	2.37	0.57
7:AH:127:LEU:HB3	7:AH:129:VAL:HG22	1.86	0.57
20:AA:265:G:H2'	20:AA:266:G:H5"	1.86	0.57
20:AA:757:U:H2'	20:AA:758:G:O4'	2.02	0.57
20:AA:1020:U:H2'	20:AA:1021:G:H8	1.69	0.57
20:AA:1137:C:H4'	20:AA:1138:G:C2	2.39	0.57
20:AA:1206:G:H2'	20:AA:1207:G:O4'	2.03	0.57
20:AA:1413:A:N1	20:AA:1487:G:N2	2.45	0.57
26:BE:204:ALA:HA	58:BA:2734:A:N3	2.19	0.57
27:BF:90:PHE:HZ	58:BA:672:C:H5'	1.68	0.57
38:BT:50:ILE:HG12	38:BT:99:LEU:HB2	1.86	0.57
41:BW:70:TYR:CZ	41:BW:72:LYS:HG2	2.39	0.57
58:BA:558:G:H2'	58:BA:559:G:C8	2.40	0.57
58:BA:597:U:H2'	58:BA:598:G:H8	1.69	0.57
10:CK:19:ALA:HB3	10:CK:82:VAL:HA	1.87	0.57
19:CT:66:ALA:HB1	19:CT:72:LEU:HB2	1.86	0.57
20:CA:217:C:H2'	20:CA:218:C:H6	1.69	0.57
20:CA:688:G:H2'	20:CA:689:C:C6	2.40	0.57
23:CY:66:THR:O	23:CY:363:ARG:NH2	2.37	0.57
23:CY:213:HIS:O	23:CY:216:LEU:HB3	2.03	0.57
23:CY:354:ARG:HH22	23:CY:378:VAL:HG21	1.69	0.57
24:DC:104:ILE:HG23	24:DC:111:PHE:CZ	2.39	0.57
25:DD:115:GLN:OE1	25:DD:117:VAL:HG13	2.04	0.57
26:DE:175:VAL:HB	26:DE:182:LEU:HD12	1.87	0.57
28:DG:97:ASP:HA	28:DG:100:TRP:HD1	1.69	0.57
56:D1:20:ARG:HH22	56:D1:24:ALA:HB2	1.69	0.57
58:DA:535:C:H2'	58:DA:536:A:C8	2.39	0.57
58:DA:1136:G:H2'	58:DA:1137:G:O4'	2.04	0.57
58:DA:1279:G:H1	58:DA:1291:C:N4	2.01	0.57
59:DB:24:G:C6	59:DB:56:G:N3	2.73	0.57
59:DB:66:A:H61	59:DB:107:U:H2'	1.69	0.57
7:AH:121:ASP:N	7:AH:121:ASP:OD1	2.36	0.57
18:AS:4:SER:O	20:AA:1314:C:N4	2.36	0.57
20:AA:217:C:H2'	20:AA:218:C:H6	1.69	0.57
20:AA:1433:A:H2'	20:AA:1434:A:O4'	2.03	0.57
60:AY:701:FUA:O1	60:AY:701:FUA:C20	2.51	0.57
24:BC:81:GLY:O	24:BC:84:ILE:HB	2.04	0.57
25:BD:241:PRO:HA	58:BA:1971:A:H1'	1.85	0.57
30:BJ:24:UNK:HA	30:BJ:84:UNK:C	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BN:74:ARG:HH12	32:BN:85:ILE:HD11	1.67	0.57
34:BP:57:THR:O	34:BP:57:THR:OG1	2.22	0.57
36:BR:4:LEU:HB2	58:BA:1653:G:H3'	1.86	0.57
36:BR:77:ARG:NH1	58:BA:1454:U:OP1	2.38	0.57
39:BU:50:ARG:HB3	58:BA:994:C:OP2	2.04	0.57
41:BW:86:LEU:HB3	41:BW:94:ASP:HB2	1.85	0.57
45:B0:38:VAL:HB	45:B0:59:LEU:HB2	1.85	0.57
56:B1:21:ARG:NH1	56:B1:22:GLY:O	2.37	0.57
58:BA:997:G:H2'	58:BA:998:C:C6	2.39	0.57
1:CB:32:ILE:HD13	1:CB:42:ILE:HA	1.86	0.57
1:CB:96:ARG:HB2	1:CB:148:TYR:HE1	1.68	0.57
4:CE:91:LEU:HB3	4:CE:118:ILE:HD11	1.86	0.57
16:CQ:45:HIS:HB2	16:CQ:69:LYS:HZ3	1.69	0.57
16:CQ:83:ASP:N	16:CQ:83:ASP:OD1	2.36	0.57
21:CW:63:C:H2'	21:CW:64:G:C8	2.39	0.57
27:DF:37:VAL:O	27:DF:40:GLN:NE2	2.37	0.57
30:DJ:54:UNK:HA	30:DJ:79:UNK:HA	1.87	0.57
31:DK:11:GLN:NE2	58:DA:1061:U:O4	2.34	0.57
32:DN:14:VAL:CG1	32:DN:137:LYS:HG3	2.33	0.57
40:DV:28:GLU:HB3	40:DV:29:PRO:HD2	1.84	0.57
40:DV:96:ILE:HG22	40:DV:97:LYS:H	1.69	0.57
44:DZ:65:GLN:HB3	44:DZ:67:LEU:HD13	1.86	0.57
47:D3:4:LEU:HD23	47:D3:58:VAL:HG13	1.86	0.57
58:DA:19:C:N4	58:DA:521:G:H1	2.00	0.57
5:AF:70:ASP:O	5:AF:73:ASN:ND2	2.38	0.57
11:AL:113:ARG:HH21	11:AL:115:LYS:HB3	1.69	0.57
20:AA:434:U:H2'	20:AA:435:C:C6	2.40	0.57
23:AY:633:GLY:HA3	23:AY:644:ARG:HB2	1.85	0.57
25:BD:9:TYR:HD1	25:BD:10:THR:HG23	1.69	0.57
25:BD:25:THR:O	25:BD:26:LYS:HB2	2.03	0.57
27:BF:123:LEU:HB2	27:BF:192:LEU:HB2	1.87	0.57
32:BN:45:ASN:H	32:BN:45:ASN:ND2	2.02	0.57
38:BT:30:VAL:HG22	38:BT:31:SER:H	1.68	0.57
50:B7:19:ARG:HB2	58:BA:125:G:H5"	1.86	0.57
58:BA:573:G:O2'	58:BA:574:C:H3'	2.04	0.57
58:BA:836:G:H2'	58:BA:837:C:C6	2.40	0.57
58:BA:2216:G:H2'	58:BA:2217:G:C8	2.39	0.57
8:CI:104:ARG:HH21	8:CI:105:ASP:HB3	1.69	0.57
18:CS:55:LYS:HG3	20:CA:986:A:H4'	1.85	0.57
23:CY:392:GLU:CD	23:CY:392:GLU:H	2.12	0.57
35:DQ:58:PHE:HD1	35:DQ:61:GLY:HA3	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D8:47:LYS:HE3	51:D8:49:VAL:HG12	1.86	0.57
58:DA:688:U:H2'	58:DA:689:A:C8	2.39	0.57
58:DA:1446:C:H42	58:DA:1465:G:H1	1.53	0.57
59:DB:89(B):A:H8	59:DB:89(B):A:O5'	1.87	0.57
2:AC:167:TRP:HZ2	20:AA:1192:C:H5"	1.70	0.57
4:AE:126:ARG:HE	20:AA:9:G:H5"	1.70	0.57
23:AY:442:THR:HA	23:AY:449:THR:HA	1.87	0.57
26:BE:61:ARG:HD3	26:BE:62:PRO:HD3	1.87	0.57
26:BE:167:VAL:HG13	26:BE:170:LEU:HD11	1.87	0.57
27:BF:179:GLU:O	27:BF:205:ARG:NH2	2.37	0.57
31:BK:116:ASN:HD22	58:BA:1058:G:H1'	1.68	0.57
33:BO:88:ASN:HD21	33:BO:92:GLU:HB2	1.69	0.57
49:B6:16:CYS:HB2	49:B6:17:LYS:HD2	1.86	0.57
58:BA:270(K):G:H2'	58:BA:270(L):C:O4'	2.03	0.57
1:CB:88:ALA:HB2	1:CB:219:VAL:HG13	1.85	0.57
5:CF:70:ASP:OD2	5:CF:71:ARG:N	2.36	0.57
9:CJ:91:PRO:HB2	9:CJ:94:VAL:HB	1.86	0.57
20:CA:867:G:O2'	20:CA:873:A:N1	2.36	0.57
26:DE:202:LYS:HE3	58:DA:2771:C:H4'	1.87	0.57
27:DF:90:PHE:HB2	58:DA:588:U:H1'	1.86	0.57
28:DG:4:ASP:HA	28:DG:8:LYS:HD3	1.85	0.57
33:DO:12:ASP:OD2	33:DO:12:ASP:N	2.38	0.57
50:D7:40:TRP:HZ2	58:DA:458:G:H1'	1.68	0.57
58:DA:272:G:H2'	58:DA:273(A):G:C8	2.39	0.57
58:DA:909:A:H2'	58:DA:912:C:H5	1.70	0.57
58:DA:1007:C:H5"	58:DA:1008:C:H2'	1.86	0.57
58:DA:1364:G:HO2'	58:DA:1808:U:H3	1.52	0.57
58:DA:2308:G:O2'	58:DA:2310:A:OP2	2.22	0.57
58:DA:2314:C:H2'	58:DA:2315:G:C8	2.39	0.57
58:DA:2393:A:H62	58:DA:2422:A:H61	1.51	0.57
58:DA:2715:C:H2'	58:DA:2716:U:C6	2.39	0.57
6:AG:15:ASP:HB3	6:AG:20:ASP:H	1.69	0.57
8:AI:29:ASN:N	8:AI:63:ILE:O	2.29	0.57
10:AK:40:ILE:HD13	20:AA:685:G:H5'	1.86	0.57
20:AA:61:G:O6	20:AA:106:C:N3	2.38	0.57
20:AA:62:U:O2'	20:AA:379:C:O2	2.22	0.57
20:AA:255:G:H2'	20:AA:256:U:C6	2.40	0.57
20:AA:695:A:H2'	20:AA:696:A:C8	2.39	0.57
20:AA:984:C:H42	20:AA:1221:G:H1	1.52	0.57
20:AA:1103:C:H2'	20:AA:1104:G:O4'	2.04	0.57
23:AY:428:LEU:HD13	23:AY:440:VAL:HG21	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:226:MET:HE2	25:BD:230:ASP:HB3	1.87	0.57
26:BE:94:GLU:H	26:BE:94:GLU:CD	2.13	0.57
30:BJ:25:UNK:C	30:BJ:111:UNK:HA	2.34	0.57
31:BK:30:HIS:NE2	31:BK:58:THR:O	2.37	0.57
40:BV:3:ALA:C	40:BV:14:VAL:HG23	2.29	0.57
58:BA:2863:C:H2'	58:BA:2864:G:O4'	2.03	0.57
59:BB:23:G:H2'	59:BB:24:G:C8	2.39	0.57
2:CC:157:ILE:HD11	2:CC:164:ARG:H	1.69	0.57
15:CP:20:VAL:HG23	15:CP:35:LYS:HA	1.87	0.57
20:CA:1161:C:H2'	20:CA:1162:C:C6	2.40	0.57
21:CW:18:G:O2'	21:CW:57:G:N2	2.37	0.57
23:CY:149:VAL:O	23:CY:153:MET:HG3	2.04	0.57
24:DC:69:LEU:HG	24:DC:178:LYS:HD3	1.86	0.57
26:DE:12:THR:O	58:DA:2682:U:H1'	2.03	0.57
32:DN:91:LEU:CA	32:DN:95:PRO:HB3	2.30	0.57
37:DS:92:TYR:C	37:DS:94:TYR:H	2.12	0.57
58:DA:591:C:H2'	58:DA:592:G:H8	1.70	0.57
7:AH:9:MET:HG3	7:AH:26:VAL:HG11	1.85	0.57
20:AA:759:A:H4'	20:AA:881:G:H5'	1.87	0.57
20:AA:1074:G:O2'	20:AA:1101:A:N6	2.37	0.57
23:AY:20:HIS:H	23:AY:20:HIS:CD2	2.23	0.57
23:AY:392:GLU:H	23:AY:392:GLU:CD	2.13	0.57
43:BY:73:ARG:HD2	58:BA:335:C:H4'	1.87	0.57
51:B8:55:ALA:O	51:B8:59:LYS:NZ	2.37	0.57
58:BA:24:G:H2'	58:BA:25:U:C6	2.39	0.57
58:BA:861:A:H2'	58:BA:862:G:O4'	2.04	0.57
58:BA:1732:A:H2'	58:BA:1733:G:O4'	2.04	0.57
58:BA:1854:A:H1'	58:BA:2233:U:H4'	1.85	0.57
58:BA:2300:G:H2'	58:BA:2301:C:C6	2.39	0.57
58:BA:2359:C:H2'	58:BA:2360:A:O4'	2.04	0.57
58:BA:2674:G:H2'	58:BA:2675:A:C8	2.40	0.57
7:CH:12:ARG:HH11	7:CH:26:VAL:HG23	1.70	0.57
20:CA:813:U:H2'	20:CA:814:A:H8	1.69	0.57
23:CY:334:THR:HG22	23:CY:370:LYS:HA	1.85	0.57
23:CY:526:VAL:HG23	23:CY:528:ALA:HB2	1.85	0.57
23:CY:631:ILE:HA	23:CY:645:ALA:HA	1.86	0.57
25:DD:28:GLU:H	25:DD:29:PRO:HD2	1.70	0.57
27:DF:135:LYS:HB3	27:DF:138:GLU:HG3	1.86	0.57
29:DH:111:HIS:HE1	58:DA:2668:G:H1'	1.70	0.57
31:DK:78:ILE:HD11	31:DK:136:VAL:HG11	1.87	0.57
39:DU:92:ARG:HG2	39:DU:94:ASN:HB3	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D0:23:VAL:HG12	45:D0:38:VAL:HG22	1.86	0.57
51:D8:61:LEU:O	51:D8:64:TYR:N	2.35	0.57
58:DA:1022:G:H21	58:DA:1023:U:H5	1.53	0.57
58:DA:1443:G:H1	58:DA:1548:C:N4	1.99	0.57
58:DA:1708:C:H2'	58:DA:1709:U:H6	1.69	0.57
3:AD:22:LYS:O	3:AD:26:CYS:HB3	2.04	0.57
11:AL:53:ARG:HG3	11:AL:69:TYR:CE1	2.39	0.57
14:AO:82:ILE:HG12	14:AO:87:ILE:H	1.69	0.57
20:AA:234:C:H2'	20:AA:235:C:C6	2.39	0.57
20:AA:296:U:H3	20:AA:301:G:H1	1.51	0.57
20:AA:328:C:H4'	20:AA:329:A:H5'	1.87	0.57
20:AA:1387:G:H2'	20:AA:1388:C:C6	2.40	0.57
25:BD:219:PRO:HG3	58:BA:764:A:H2	1.69	0.57
30:BJ:64:UNK:O	30:BJ:68:UNK:N	2.37	0.57
44:BZ:3:TYR:N	44:BZ:56:VAL:O	2.38	0.57
45:B0:31:VAL:HB	45:B0:61:ALA:HB2	1.87	0.57
58:BA:527:C:C5	58:BA:2779:U:H2'	2.40	0.57
58:BA:1231:G:H2'	58:BA:1232:G:C8	2.37	0.57
58:BA:2102:U:H2'	58:BA:2103:C:C6	2.39	0.57
9:CJ:57:LYS:NZ	20:CA:975:A:OP1	2.27	0.57
11:CL:53:ARG:HA	11:CL:69:TYR:CE1	2.40	0.57
15:CP:5:ARG:NH2	20:CA:376:G:O2'	2.38	0.57
20:CA:346:G:H4'	38:DT:41:ARG:HH22	1.68	0.57
20:CA:407:G:O6	20:CA:435:C:N3	2.38	0.57
20:CA:987:G:H1	20:CA:1218:C:N4	2.03	0.57
20:CA:1317:C:H3'	20:CA:1318:A:H8	1.69	0.57
23:CY:512:ILE:HA	23:CY:567:LEU:HA	1.86	0.57
26:DE:51:PHE:HB3	26:DE:76:ARG:HB2	1.85	0.57
27:DF:125:LEU:HD23	27:DF:194:MET:HB2	1.86	0.57
28:DG:135:LEU:HD22	28:DG:140:ILE:HD11	1.85	0.57
31:DK:131:ALA:HB1	31:DK:136:VAL:HG13	1.87	0.57
45:D0:67:VAL:HG13	45:D0:81:VAL:HG22	1.87	0.57
58:DA:587:C:C2	58:DA:671:C:H1'	2.40	0.57
58:DA:697:C:H2'	58:DA:698:C:C6	2.39	0.57
58:DA:873:G:H1	58:DA:904:C:N4	2.02	0.57
58:DA:946:G:N2	58:DA:971:C:N3	2.45	0.57
1:AB:34:ALA:HB1	1:AB:36:ARG:HD2	1.86	0.57
1:AB:68:ILE:HG12	1:AB:161:ALA:HB3	1.85	0.57
1:AB:101:MET:HB3	1:AB:152:PHE:CE1	2.39	0.57
2:AC:155:GLY:HA3	2:AC:196:LEU:HA	1.86	0.57
3:AD:3:ARG:HH22	3:AD:5:ILE:HD12	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:133:VAL:HG13	3:AD:135:LEU:HD22	1.87	0.57
3:AD:173:TRP:CH2	3:AD:194:LEU:HD21	2.40	0.57
4:AE:101:ILE:HD11	4:AE:119:LEU:HD23	1.87	0.57
20:AA:1492:A:H5'	20:AA:1492:A:C8	2.40	0.57
21:AW:18:G:H2'	21:AW:19:G:C8	2.40	0.57
23:AY:188:TYR:HE1	23:AY:270:GLN:HE21	1.53	0.57
25:BD:3:VAL:H	25:BD:20:ASP:HB2	1.70	0.57
25:BD:148:GLU:OE2	58:BA:2218:G:O2'	2.23	0.57
25:BD:242:ARG:NH1	58:BA:1971:A:OP2	2.38	0.57
44:BZ:99:TYR:HA	44:BZ:124:ILE:O	2.05	0.57
56:B1:74:VAL:HG12	56:B1:78:LYS:HE3	1.86	0.57
58:BA:118:A:OP2	58:BA:119:A:H2'	2.05	0.57
58:BA:744:G:H2'	58:BA:745:G:O4'	2.05	0.57
58:BA:761:A:H8	58:BA:761:A:O5'	1.88	0.57
58:BA:1326:U:O2'	58:BA:2010:G:O2'	2.23	0.57
58:BA:1434:A:H2'	58:BA:1435:G:C8	2.39	0.57
58:BA:2505:G:N2	58:BA:2610:C:N4	2.31	0.57
58:BA:2655:G:H22	58:BA:2664:G:H2'	1.70	0.57
58:BA:2834:G:H1'	58:BA:2883:A:N6	2.20	0.57
20:CA:1394:A:N7	20:CA:1501:C:H4'	2.20	0.57
20:CA:1412:C:H2'	20:CA:1413:A:C8	2.40	0.57
20:CA:1412:C:H2'	20:CA:1413:A:H8	1.68	0.57
20:CA:1503:A:N6	22:CV:14:A:H2'	2.18	0.57
24:DC:78:ILE:HD11	24:DC:104:ILE:HD11	1.86	0.57
26:DE:75:VAL:C	26:DE:77:ILE:H	2.11	0.57
27:DF:8:GLN:HB2	27:DF:22:ALA:HB2	1.85	0.57
28:DG:82:LEU:HD13	28:DG:87:PRO:HB3	1.87	0.57
32:DN:24:GLY:HA3	58:DA:1139:G:H4'	1.86	0.57
40:DV:18:LEU:HA	40:DV:95:LEU:HD22	1.87	0.57
48:D5:9:LYS:NZ	58:DA:2018:G:H3'	2.19	0.57
58:DA:273(C):C:H2'	58:DA:273(D):C:C6	2.40	0.57
58:DA:1024:G:H3'	58:DA:1025:G:H5"	1.86	0.57
58:DA:1549:C:H2'	58:DA:1550:C:O4'	2.05	0.57
4:AE:14:ARG:NH2	20:AA:1079:G:O3'	2.38	0.57
4:AE:75:THR:OG1	4:AE:76:ILE:N	2.37	0.57
7:AH:113:SER:OG	20:AA:642:A:N3	2.35	0.57
9:AJ:49:VAL:HG23	13:AN:41:ARG:HB2	1.87	0.57
19:AT:101:GLY:HA2	19:AT:104:LEU:HB3	1.87	0.57
20:AA:112:G:N2	20:AA:315:A:N1	2.44	0.57
21:AW:12:U:O2	21:AW:23:A:N1	2.38	0.57
23:AY:26:THR:HG23	23:AY:65:ILE:HD11	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:99:ASP:O	58:BA:1500:G:N2	2.38	0.57
26:BE:66:HIS:O	26:BE:68:ALA:N	2.38	0.57
48:B5:43:HIS:HE2	58:BA:2884:U:P	2.28	0.57
58:BA:2870:C:H2'	58:BA:2871:C:O4'	2.05	0.57
1:CB:62:ALA:HB2	1:CB:222:ILE:HG22	1.86	0.57
1:CB:167:PRO:HD2	1:CB:188:ALA:HB3	1.87	0.57
4:CE:131:ILE:O	4:CE:135:THR:OG1	2.21	0.57
9:CJ:55:LYS:HG3	20:CA:973:G:O4'	2.05	0.57
10:CK:48:ILE:HD11	10:CK:64:ALA:HA	1.87	0.57
20:CA:68(V):G:C2	20:CA:68(W):G:H1'	2.40	0.57
21:CW:8:U:O4	21:CW:14:A:N7	2.38	0.57
26:DE:58:ARG:HH22	26:DE:75:VAL:HG23	1.68	0.57
38:DT:29:ARG:HG2	38:DT:30:VAL:HB	1.86	0.57
44:DZ:5:LEU:HD12	44:DZ:47:VAL:HG11	1.87	0.57
58:DA:8:A:N1	58:DA:2895:U:C4	2.70	0.57
1:AB:58:ILE:HD11	1:AB:185:ILE:HG21	1.86	0.56
6:AG:114:ARG:NH2	20:AA:1298:C:OP2	2.34	0.56
20:AA:1440(J):C:H1'	20:AA:1440(K):G:N2	2.20	0.56
23:AY:485:GLU:HG3	23:AY:560:VAL:HG22	1.86	0.56
25:BD:52:ARG:HG3	58:BA:1824:G:OP1	2.05	0.56
58:BA:19:C:N4	58:BA:521:G:H1	2.02	0.56
58:BA:1435:G:N2	58:BA:1477:A:O2'	2.38	0.56
58:BA:1914:C:C5	58:BA:1915:U:N3	2.72	0.56
59:BB:74:U:H2'	59:BB:75:G:C8	2.40	0.56
20:CA:1044:A:H2'	20:CA:1045:C:H4'	1.85	0.56
20:CA:1056:U:H3	20:CA:1204:A:H61	1.52	0.56
25:DD:219:PRO:HB3	58:DA:1790:C:H5'	1.87	0.56
30:DJ:58:UNK:HA	58:DA:1107:G:P	2.45	0.56
42:DX:82:GLN:HE21	42:DX:83:VAL:H	1.51	0.56
58:DA:173:G:H2'	58:DA:174:C:C6	2.40	0.56
58:DA:528:A:N1	58:DA:2042:A:H2'	2.21	0.56
58:DA:1139:G:H8	58:DA:1139:G:O5'	1.88	0.56
58:DA:2795:G:H3'	58:DA:2797:U:H5"	1.86	0.56
59:DB:57:A:H2'	59:DB:58:A:C8	2.39	0.56
5:AF:4:TYR:OH	20:AA:738:C:OP1	2.24	0.56
10:AK:30:VAL:HG22	10:AK:43:SER:O	2.05	0.56
10:AK:122:LYS:NZ	20:AA:780:A:OP2	2.32	0.56
11:AL:70:ILE:HG23	11:AL:100:ILE:HD12	1.87	0.56
20:AA:10:A:H2'	20:AA:11:G:H8	1.71	0.56
23:AY:136:ALA:HB3	23:AY:260:LEU:HB2	1.86	0.56
26:BE:105:THR:HB	26:BE:197:ILE:HG23	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:147:PRO:HB2	26:BE:149:ARG:HG2	1.86	0.56
27:BF:125:LEU:HD21	27:BF:199:TRP:HB2	1.86	0.56
29:BH:87:LEU:HD22	29:BH:162:ILE:HG22	1.87	0.56
32:BN:94:HIS:HB2	32:BN:96:GLU:OE2	2.05	0.56
38:BT:32:TYR:CE1	38:BT:81:PRO:HB2	2.40	0.56
38:BT:74:ARG:HD2	38:BT:76:PHE:CZ	2.40	0.56
41:BW:64:MET:HB3	41:BW:109:GLU:HB3	1.86	0.56
58:BA:83:G:H21	58:BA:103:A:N6	1.99	0.56
58:BA:769:G:H4'	58:BA:1379:A:N6	2.20	0.56
58:BA:2133:G:H21	58:BA:2158:A:N6	1.94	0.56
58:BA:2345:G:N3	58:BA:2381:C:H2'	2.20	0.56
58:BA:2649:U:H2'	58:BA:2650:U:H6	1.69	0.56
3:CD:86:LYS:HA	3:CD:86:LYS:HE2	1.86	0.56
3:CD:194:LEU:HB3	3:CD:196:LEU:HD11	1.86	0.56
4:CE:151:LEU:HB3	7:CH:79:VAL:HG22	1.86	0.56
12:CM:80:ARG:HH11	18:CS:65:ASN:HB3	1.69	0.56
18:CS:46:GLY:HA2	18:CS:62:ILE:HG23	1.86	0.56
20:CA:808:C:H2'	20:CA:809:G:C8	2.40	0.56
26:DE:11:MET:HG3	58:DA:2681:C:H5'	1.86	0.56
26:DE:12:THR:O	26:DE:22:PRO:HA	2.05	0.56
32:DN:74:ARG:HH12	32:DN:85:ILE:CD1	2.18	0.56
36:DR:79:LEU:HA	36:DR:83:ILE:HD12	1.87	0.56
42:DX:36:LYS:HA	42:DX:39:ILE:HD12	1.85	0.56
46:D2:49:LYS:O	46:D2:53:LEU:N	2.26	0.56
56:D1:75:GLU:HA	56:D1:78:LYS:HE2	1.86	0.56
58:DA:36:G:H4'	58:DA:451:C:C2	2.40	0.56
58:DA:119:A:H4'	58:DA:120:U:H5'	1.88	0.56
58:DA:291:C:N3	58:DA:349:G:N2	2.47	0.56
58:DA:922:U:H2'	58:DA:923:C:H6	1.69	0.56
58:DA:1248:G:H3'	58:DA:1249:U:H5"	1.87	0.56
58:DA:1542:G:H4'	58:DA:1543:A:O5'	2.04	0.56
58:DA:1810:A:O5'	58:DA:1810:A:H8	1.87	0.56
58:DA:2459:A:N1	58:DA:2493:U:O2	2.37	0.56
58:DA:2889:C:H2'	58:DA:2891:G:O4'	2.05	0.56
1:AB:106:LYS:H	1:AB:106:LYS:HD2	1.69	0.56
1:AB:167:PRO:HD2	1:AB:188:ALA:HB3	1.88	0.56
3:AD:122:ARG:NE	20:AA:403:C:H4'	2.19	0.56
5:AF:82:ARG:HB2	5:AF:85:VAL:HG23	1.86	0.56
9:AJ:16:LEU:O	9:AJ:19:SER:OG	2.19	0.56
9:AJ:19:SER:OG	9:AJ:20:ALA:N	2.39	0.56
12:AM:26:GLY:H	20:AA:1329:A:H5"	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:22:THR:O	20:AA:657:G:N2	2.29	0.56
15:AP:25:ARG:HH12	20:AA:134:A:H61	1.53	0.56
16:AQ:56:VAL:HG23	16:AQ:81:ARG:HG3	1.87	0.56
19:AT:74:LYS:HG2	19:AT:75:ASN:H	1.70	0.56
20:AA:356:A:N3	20:AA:368:U:O2'	2.27	0.56
25:BD:253:GLN:OE1	58:BA:1842:G:O2'	2.21	0.56
26:BE:15:PHE:CD1	38:BT:80:SER:HB2	2.39	0.56
28:BG:91:ARG:NH1	58:BA:2314:C:OP1	2.38	0.56
35:BQ:41:TRP:HB3	35:BQ:94:VAL:HG21	1.87	0.56
37:BS:103:GLU:O	37:BS:105:ALA:N	2.38	0.56
43:BY:32:PRO:HD2	43:BY:34:LYS:H	1.70	0.56
50:B7:39:ARG:HA	50:B7:39:ARG:NH1	2.20	0.56
56:B1:13:ILE:C	56:B1:17:SER:HB3	2.30	0.56
58:BA:115:C:O2'	58:BA:127:A:O2'	2.21	0.56
58:BA:137(B):G:H1	58:BA:141(B):C:N4	2.04	0.56
58:BA:608:A:H2'	58:BA:609(A):A:C8	2.40	0.56
2:CC:119:ARG:O	2:CC:123:GLN:HG2	2.05	0.56
20:CA:266:G:O2'	20:CA:268:C:OP2	2.18	0.56
20:CA:792:A:O2'	20:CA:794:A:N7	2.32	0.56
20:CA:974:A:H4'	20:CA:975:A:H3'	1.88	0.56
20:CA:1228:C:H2'	20:CA:1229:A:C8	2.40	0.56
20:CA:1228:C:H2'	20:CA:1229:A:H8	1.71	0.56
23:CY:174:PHE:HD2	23:CY:267:LYS:HD3	1.71	0.56
24:DC:47:LYS:HB2	24:DC:169:THR:O	2.05	0.56
28:DG:120:LEU:HD21	28:DG:133:LEU:HD22	1.87	0.56
29:DH:17:VAL:HG12	29:DH:26:VAL:HG22	1.87	0.56
32:DN:25:ARG:HA	58:DA:1012:U:O4	2.05	0.56
33:DO:102:VAL:HG11	33:DO:114:ILE:HG22	1.87	0.56
38:DT:27:THR:O	38:DT:87:ASP:HB2	2.06	0.56
43:DY:28:LYS:HA	43:DY:39:VAL:HA	1.87	0.56
58:DA:374:A:H1'	58:DA:401:A:N6	2.21	0.56
58:DA:389:G:H1'	58:DA:2412:A:N3	2.20	0.56
58:DA:476:G:N2	58:DA:479:A:O5'	2.37	0.56
58:DA:589:C:H42	58:DA:668:G:H1	1.53	0.56
58:DA:992:C:H42	58:DA:1162:G:H1	1.53	0.56
58:DA:1017:G:O6	58:DA:1145:C:N3	2.37	0.56
58:DA:1417:C:N3	58:DA:1581:G:N2	2.46	0.56
58:DA:1530:G:C6	58:DA:1541:U:O2	2.58	0.56
58:DA:1780:A:H3'	58:DA:1781:C:H2'	1.88	0.56
58:DA:2070:G:H2'	58:DA:2071:A:C8	2.40	0.56
58:DA:2210:G:N2	58:DA:2211:G:H5'	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:2853:C:H2'	58:DA:2854:G:C8	2.40	0.56
3:AD:13:ARG:HD3	3:AD:40:PRO:HB3	1.86	0.56
20:AA:60:A:H62	20:AA:110:C:H42	1.52	0.56
20:AA:441:A:H62	20:AA:493:G:N2	1.97	0.56
20:AA:1102:A:H2'	20:AA:1103:C:C6	2.41	0.56
20:AA:1338:G:N2	21:AW:41:A:H1'	2.18	0.56
27:BF:185:ASP:HA	27:BF:188:ARG:HG2	1.87	0.56
28:BG:11:TYR:O	28:BG:15:VAL:HB	2.04	0.56
29:BH:74:ASN:ND2	58:BA:2747:G:OP1	2.37	0.56
38:BT:49:VAL:O	38:BT:50:ILE:HG13	2.06	0.56
47:B3:10:LYS:HB3	47:B3:53:LEU:HA	1.86	0.56
58:BA:1569:A:H2'	58:BA:1570:A:C8	2.40	0.56
58:BA:2554:U:H2'	58:BA:2555:U:C5	2.40	0.56
59:BB:89(B):A:H8	59:BB:89(B):A:O5'	1.88	0.56
8:CI:10:ARG:NH2	8:CI:105:ASP:OD1	2.38	0.56
11:CL:92:ASP:OD1	11:CL:92:ASP:N	2.38	0.56
20:CA:68(F):C:H2'	20:CA:68(G):G:C8	2.40	0.56
20:CA:227:G:H2'	20:CA:228:A:C8	2.41	0.56
20:CA:689:C:H2'	20:CA:690:G:O4'	2.05	0.56
23:CY:20:HIS:HB3	23:CY:118:SER:N	2.21	0.56
24:DC:19:LYS:O	24:DC:224:ARG:NH2	2.39	0.56
25:DD:92:ILE:HD12	25:DD:104:TYR:HB3	1.87	0.56
27:DF:32:LEU:HD23	27:DF:112:MET:HE1	1.87	0.56
38:DT:3:ARG:NE	58:DA:2876:G:O2'	2.38	0.56
41:DW:36:LEU:HB3	41:DW:48:ALA:HB2	1.88	0.56
48:D5:18:ALA:HA	48:D5:21:SER:HB3	1.88	0.56
56:D1:18:ILE:CG2	58:DA:380:U:H4'	2.35	0.56
58:DA:474:G:O2'	58:DA:475:U:OP1	2.22	0.56
58:DA:767:U:H2'	58:DA:768:G:H8	1.70	0.56
58:DA:1499:C:H2'	58:DA:1500:G:C8	2.39	0.56
58:DA:1752:C:N4	58:DA:1756:G:H1	2.03	0.56
58:DA:2591:C:H42	58:DA:2603:G:H1	1.54	0.56
3:AD:196:LEU:O	3:AD:198:VAL:N	2.39	0.56
5:AF:28:ARG:HH21	5:CF:28:ARG:HG3	1.70	0.56
11:AL:22:SER:C	11:AL:24:VAL:H	2.12	0.56
20:AA:736:C:H2'	20:AA:737:A:C8	2.40	0.56
20:AA:1356:G:H2'	20:AA:1357:A:C8	2.40	0.56
21:AW:71:C:O2	58:BA:1851:U:O2'	2.23	0.56
24:BC:63:VAL:HG12	24:BC:162:ILE:HD12	1.87	0.56
27:BF:37:VAL:O	27:BF:41:LEU:HG	2.05	0.56
27:BF:183:VAL:O	27:BF:186:ILE:HG22	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BV:81:TYR:CE2	58:BA:1187:G:H5”	2.41	0.56
58:BA:35:G:H2’	58:BA:36:G:O4’	2.05	0.56
58:BA:918:A:N3	59:BB:80:U:O2’	2.39	0.56
58:BA:1019:U:H2’	58:BA:1020:A:C8	2.40	0.56
58:BA:1661:G:H1	58:BA:1999:C:H42	1.54	0.56
58:BA:2366:A:H2’	58:BA:2367:G:O4’	2.05	0.56
3:CD:175:SER:HB3	3:CD:184:LYS:HB2	1.86	0.56
6:CG:139:GLU:O	6:CG:143:ARG:HG3	2.05	0.56
20:CA:373:A:O2’	20:CA:451:A:N7	2.39	0.56
20:CA:1522:U:H2’	20:CA:1523:G:H8	1.68	0.56
24:DC:6:LYS:O	24:DC:9:ARG:HG3	2.05	0.56
32:DN:94:HIS:HB2	32:DN:96:GLU:OE2	2.05	0.56
33:DO:11:ALA:HB1	33:DO:99:PHE:HB2	1.86	0.56
34:DP:24:GLY:HA2	34:DP:30:THR:HA	1.88	0.56
34:DP:99:LEU:HA	34:DP:102:ARG:HH22	1.71	0.56
36:DR:107:ASP:HB2	58:DA:1649:G:H21	1.70	0.56
58:DA:236:C:H2’	58:DA:237:C:C6	2.41	0.56
58:DA:1309:G:N2	58:DA:1605:C:N3	2.52	0.56
1:AB:68:ILE:HG23	1:AB:163:PHE:H	1.70	0.56
1:AB:111:ARG:HD2	20:AA:1103:C:O2’	2.05	0.56
3:AD:10:ARG:HA	3:AD:13:ARG:HD2	1.87	0.56
12:AM:80:ARG:HA	12:AM:83:ASP:HB3	1.86	0.56
14:AO:54:ARG:NH1	20:AA:728:A:OP1	2.38	0.56
20:AA:17:U:H2’	20:AA:18:C:C6	2.41	0.56
20:AA:627:G:H2’	20:AA:628:G:C8	2.41	0.56
20:AA:1028:C:H42	20:AA:1033:G:H1	1.53	0.56
21:AW:68:U:H2’	21:AW:69:A:C8	2.41	0.56
32:BN:74:ARG:HH12	32:BN:85:ILE:CD1	2.18	0.56
34:BP:104:GLY:O	58:BA:625:G:N2	2.38	0.56
51:B8:9:GLY:O	51:B8:13:ARG:HG2	2.05	0.56
52:B9:2:LYS:HD3	58:BA:2526:G:H21	1.71	0.56
58:BA:307:G:N2	58:BA:309:G:H3’	2.21	0.56
58:BA:1540:G:C2	58:BA:1541:U:H1’	2.41	0.56
58:BA:2817:G:O2’	58:BA:2836:U:O2	2.23	0.56
4:CE:102:ALA:HB1	4:CE:106:PRO:HB2	1.87	0.56
7:CH:129:VAL:HA	20:CA:600:C:H5’	1.87	0.56
19:CT:61:SER:HA	20:CA:193:C:O2’	2.05	0.56
20:CA:12:U:H3	20:CA:22:G:H1	1.53	0.56
20:CA:219:C:H2’	20:CA:220:G:O4’	2.05	0.56
20:CA:910:C:H2’	20:CA:911:U:H6	1.70	0.56
20:CA:1376:U:H2’	20:CA:1377:A:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1465:C:H2'	20:CA:1466:C:C6	2.40	0.56
26:DE:188:VAL:O	58:DA:2680:C:H4'	2.06	0.56
37:DS:85:VAL:H	37:DS:106:ARG:HD3	1.71	0.56
45:D0:32:ARG:HA	45:D0:64:ASP:HA	1.86	0.56
48:D5:15:ARG:HH11	48:D5:15:ARG:HA	1.69	0.56
58:DA:373:U:H2'	58:DA:374:A:H8	1.69	0.56
58:DA:1165:U:H2'	58:DA:1166:C:C6	2.40	0.56
58:DA:2131:G:H5"	58:DA:2132:U:O5'	2.05	0.56
4:AE:110:LEU:O	4:AE:114:GLY:N	2.38	0.56
5:AF:46:ARG:HH22	17:AR:37:VAL:HG21	1.70	0.56
6:AG:34:GLY:HA3	20:AA:1350:A:H2	1.71	0.56
10:AK:34:ASP:O	10:AK:36:ASP:N	2.37	0.56
14:AO:67:LEU:HD13	14:AO:87:ILE:HD12	1.87	0.56
20:AA:68(P):C:H2'	20:AA:68(Q):U:H6	1.71	0.56
20:AA:1324:A:H2'	20:AA:1325:C:H6	1.70	0.56
23:AY:611:THR:HA	23:AY:642:VAL:HG22	1.88	0.56
23:AY:631:ILE:HA	23:AY:645:ALA:HA	1.88	0.56
31:BK:130:SER:OG	58:BA:1059:G:N2	2.26	0.56
41:BW:89:ALA:HB1	58:BA:751:A:OP2	2.06	0.56
10:CK:115:PRO:O	10:CK:117:ASN:N	2.36	0.56
11:CL:33:ARG:CB	11:CL:60:LEU:HD12	2.35	0.56
20:CA:662:G:H2'	20:CA:663:A:C8	2.40	0.56
24:DC:43:GLU:OE2	24:DC:218:THR:HA	2.06	0.56
25:DD:133:LEU:HB2	25:DD:173:VAL:HG11	1.87	0.56
34:DP:66:GLY:HA3	58:DA:631:A:H1'	1.88	0.56
40:DV:78:LYS:N	58:DA:565:C:OP2	2.34	0.56
58:DA:622:G:H2'	58:DA:623:G:H8	1.70	0.56
58:DA:1636:C:H2'	58:DA:1637:A:H8	1.70	0.56
58:DA:2718:G:O2'	58:DA:2847:U:OP1	2.17	0.56
58:DA:2736:G:H2'	58:DA:2737:G:H8	1.71	0.56
59:DB:18:G:H2'	59:DB:19:G:C8	2.38	0.56
59:DB:28:C:H2'	59:DB:29:A:C8	2.40	0.56
19:AT:49:ALA:O	19:AT:52:ALA:N	2.39	0.56
20:AA:983:A:H2	20:AA:984:C:H5	1.52	0.56
27:BF:46:ARG:HB3	27:BF:48:THR:HG23	1.88	0.56
27:BF:157:VAL:O	27:BF:194:MET:HA	2.05	0.56
30:BJ:25:UNK:N	30:BJ:112:UNK:N	2.53	0.56
39:BU:40:PHE:HB3	40:BV:75:PHE:CE1	2.41	0.56
43:BY:45:VAL:HG13	43:BY:61:ILE:HA	1.86	0.56
44:BZ:102:LEU:HD21	44:BZ:124:ILE:HD12	1.87	0.56
58:BA:270(A):A:H2'	58:BA:270(B):A:H8	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:355:G:H2'	58:BA:356:G:C8	2.40	0.56
58:BA:852:G:H2'	58:BA:853:G:H8	1.69	0.56
58:BA:2853:C:H2'	58:BA:2854:G:C8	2.41	0.56
59:BB:18:G:H2'	59:BB:19:G:C8	2.39	0.56
2:CC:5:ILE:HG21	20:CA:1189:C:H5"	1.88	0.56
12:CM:8:GLU:HG2	12:CM:22:ILE:HG12	1.87	0.56
20:CA:715:A:H2'	20:CA:716:A:C8	2.41	0.56
20:CA:1237:C:O2'	20:CA:1300:G:N2	2.39	0.56
25:DD:157:ARG:NH2	58:DA:1817:G:H3'	2.20	0.56
25:DD:202:LYS:HB3	58:DA:1820:U:H1'	1.87	0.56
26:DE:111:ARG:NH2	58:DA:2680:C:OP2	2.39	0.56
27:DF:8:GLN:O	27:DF:9:ILE:HB	2.04	0.56
29:DH:26:VAL:HG11	29:DH:76:VAL:HA	1.86	0.56
29:DH:37:VAL:HG21	29:DH:68:THR:HG23	1.87	0.56
34:DP:56:SER:O	34:DP:58:THR:N	2.38	0.56
34:DP:59:LEU:HA	34:DP:61:ARG:CZ	2.36	0.56
58:DA:443:A:H1'	58:DA:1201:C:C1'	2.36	0.56
58:DA:945:A:O2'	58:DA:946:G:H4'	2.05	0.56
58:DA:1203:G:N1	58:DA:1241:A:OP2	2.34	0.56
58:DA:1540:G:H3'	58:DA:1541:U:H6	1.70	0.56
1:AB:71:VAL:HB	1:AB:164:VAL:HG22	1.86	0.56
1:AB:114:ARG:O	1:AB:118:LEU:HG	2.06	0.56
4:AE:32:VAL:HG11	4:AE:59:GLY:HA2	1.88	0.56
4:AE:63:ARG:HB3	4:AE:63:ARG:HH11	1.69	0.56
7:AH:37:ARG:O	7:AH:41:ARG:HB2	2.06	0.56
20:AA:302:G:O2'	20:AA:556:C:H5"	2.05	0.56
20:AA:1479:C:H2'	20:AA:1480:G:H8	1.70	0.56
25:BD:78:LYS:NZ	25:BD:98:VAL:HA	2.20	0.56
26:BE:62:PRO:HA	58:BA:2787:C:H5'	1.87	0.56
32:BN:99:LEU:O	32:BN:99:LEU:HD13	2.06	0.56
32:BN:128:HIS:HE2	32:BN:134:ARG:HD2	1.70	0.56
39:BU:12:ARG:HH21	58:BA:1215:G:H5'	1.70	0.56
39:BU:26:GLY:O	39:BU:29:SER:OG	2.23	0.56
42:BX:34:ALA:O	42:BX:77:LYS:NZ	2.35	0.56
58:BA:242:G:N2	58:BA:255:A:OP2	2.38	0.56
58:BA:392:C:H2'	58:BA:393:C:H6	1.71	0.56
58:BA:1571:A:H2'	58:BA:1572:A:C8	2.41	0.56
58:BA:1700:A:H3'	58:BA:1701:A:H8	1.71	0.56
58:BA:2269:A:H2'	58:BA:2270:G:O4'	2.06	0.56
3:CD:19:LEU:HD23	3:CD:67:ILE:HA	1.88	0.56
3:CD:54:TYR:HA	3:CD:57:ARG:HE	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:157:LEU:HA	3:CD:160:GLN:HB2	1.88	0.56
7:CH:89:PRO:HG2	20:CA:878:G:H5'	1.88	0.56
11:CL:88:GLY:O	11:CL:99:HIS:NE2	2.38	0.56
20:CA:287:U:H2'	20:CA:288:A:C8	2.41	0.56
20:CA:537:G:H2'	20:CA:538:G:C8	2.41	0.56
20:CA:950:U:H2'	20:CA:951:G:C8	2.40	0.56
20:CA:1134:G:N2	20:CA:1140:C:N3	2.45	0.56
28:DG:62:LEU:HA	57:D4:7:PRO:HG2	1.88	0.56
28:DG:63:ILE:HA	57:D4:27:THR:HG21	1.86	0.56
32:DN:45:ASN:HD22	32:DN:45:ASN:N	1.96	0.56
33:DO:23:ARG:HH12	33:DO:31:LYS:HE2	1.70	0.56
45:D0:51:VAL:HG22	45:D0:81:VAL:HG23	1.87	0.56
47:D3:30:ARG:NH2	58:DA:1159:U:OP1	2.39	0.56
58:DA:370:G:O2'	58:DA:424:G:OP1	2.23	0.56
58:DA:839:U:H2'	58:DA:840:C:C6	2.41	0.56
58:DA:1400:G:H2'	58:DA:1401:G:C8	2.40	0.56
3:AD:99:SER:HB3	3:AD:139:ARG:HE	1.71	0.56
5:AF:8:ILE:HG23	5:AF:88:VAL:HG22	1.87	0.56
20:AA:198:G:H1	20:AA:219:C:N4	2.03	0.56
20:AA:784:C:H2'	20:AA:785:G:H8	1.70	0.56
20:AA:1003:G:N1	20:AA:1037:C:O2	2.36	0.56
23:AY:604:PRO:HB2	23:AY:649:LEU:HD12	1.87	0.56
32:BN:41:ASP:O	39:BU:64:ARG:NH1	2.35	0.56
35:BQ:21:THR:OG1	35:BQ:99:PRO:O	2.23	0.56
36:BR:64:ARG:NH2	58:BA:2706:G:O2'	2.38	0.56
39:BU:88:ILE:C	39:BU:90:VAL:H	2.13	0.56
42:BX:64:LYS:HD2	42:BX:73:ARG:HH21	1.70	0.56
58:BA:817:C:H2'	58:BA:818:G:O4'	2.06	0.56
58:BA:1137:G:H21	58:BA:1138:G:H1'	1.70	0.56
1:CB:168:THR:C	1:CB:171:ALA:H	2.13	0.56
2:CC:92:ALA:HB2	2:CC:99:VAL:HG21	1.88	0.56
9:CJ:55:LYS:O	9:CJ:56:HIS:ND1	2.39	0.56
10:CK:55:LYS:NZ	20:CA:690:G:N7	2.52	0.56
16:CQ:29:HIS:CD2	16:CQ:32:TYR:HB2	2.41	0.56
18:CS:39:THR:HA	18:CS:70:LYS:HA	1.87	0.56
20:CA:1340:A:C2	20:CA:1341:U:C2	2.94	0.56
29:DH:76:VAL:O	29:DH:79:VAL:HG22	2.06	0.56
30:DJ:25:UNK:N	30:DJ:112:UNK:N	2.54	0.56
32:DN:41:ASP:N	39:DU:64:ARG:HD2	2.10	0.56
58:DA:135:G:H1	58:DA:144:C:H42	1.54	0.56
58:DA:548:A:H2'	58:DA:549:G:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1105:U:H2'	58:DA:1106:G:H8	1.69	0.56
58:DA:2057:A:H2'	58:DA:2058:A:H8	1.70	0.56
58:DA:2686:G:H2'	58:DA:2687:U:O4'	2.06	0.56
6:AG:69:VAL:HA	6:AG:138:LYS:HD2	1.87	0.55
20:AA:243:A:H4'	20:AA:244:U:H3'	1.87	0.55
20:AA:677:U:O2	20:AA:777:A:O2'	2.21	0.55
21:AW:76:A:H1'	58:BA:2395:C:C2	2.41	0.55
24:BC:150:ILE:HA	24:BC:153:ILE:HB	1.87	0.55
25:BD:226:MET:HG2	58:BA:782:A:N3	2.21	0.55
33:BO:42:SER:OG	58:BA:1952:A:OP1	2.22	0.55
36:BR:92:GLY:O	36:BR:94:TYR:N	2.39	0.55
58:BA:646:A:H2'	58:BA:647:G:O4'	2.06	0.55
4:CE:84:PHE:HB3	4:CE:134:ALA:HB2	1.88	0.55
5:CF:73:ASN:OD1	20:CA:737:A:O2'	2.19	0.55
5:CF:75:LEU:O	5:CF:79:LEU:N	2.34	0.55
7:CH:96:GLY:H	7:CH:99:GLU:HB2	1.69	0.55
20:CA:237:C:H2'	20:CA:238:G:C8	2.41	0.55
20:CA:426:G:H2'	20:CA:427:U:O4'	2.06	0.55
20:CA:1066:C:H3'	20:CA:1067:A:C8	2.40	0.55
23:CY:314:PHE:N	23:CY:327:PHE:O	2.29	0.55
24:DC:100:ILE:HG23	24:DC:103:LYS:HD2	1.86	0.55
27:DF:170:LEU:HD13	27:DF:171:PRO:HD2	1.87	0.55
35:DQ:1:MET:SD	35:DQ:2:LEU:N	2.79	0.55
58:DA:270(H):C:H42	58:DA:270(T):G:H1	1.52	0.55
58:DA:602:G:O2'	58:DA:604:G:O2'	2.15	0.55
58:DA:1221:C:H2'	58:DA:122(A):C:H6	1.70	0.55
58:DA:1287:A:H2	58:DA:1649:G:H4'	1.71	0.55
4:AE:5:ASP:N	4:AE:5:ASP:OD1	2.39	0.55
8:AI:16:ARG:NH1	20:AA:1147:C:O2	2.40	0.55
8:AI:20:ARG:O	8:AI:60:ASP:N	2.39	0.55
10:AK:120:ARG:HG3	20:AA:778:G:H21	1.71	0.55
18:AS:76:PRO:O	18:AS:78:ARG:N	2.39	0.55
20:AA:131:C:H2'	20:AA:132:C:C6	2.41	0.55
20:AA:232:G:H1'	20:AA:262:A:N1	2.21	0.55
25:BD:78:LYS:O	25:BD:79:VAL:O	2.23	0.55
32:BN:63:THR:HG21	58:BA:1141:U:OP2	2.06	0.55
38:BT:28:VAL:HB	38:BT:88:ILE:HB	1.87	0.55
41:BW:24:ILE:HD13	41:BW:36:LEU:HD21	1.87	0.55
47:B3:4:LEU:HD23	47:B3:58:VAL:HG13	1.87	0.55
58:BA:582:G:H2'	58:BA:583:G:C8	2.41	0.55
58:BA:846:C:H4'	58:BA:847:U:H5"	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:962:G:H2'	58:BA:963:U:C6	2.42	0.55
7:CH:69:ARG:NH2	7:CH:72:PRO:O	2.38	0.55
11:CL:32:PHE:HA	11:CL:85:ILE:O	2.06	0.55
14:CO:8:LYS:HE3	14:CO:31:LEU:HD21	1.88	0.55
20:CA:865:A:H2'	20:CA:866:C:C6	2.41	0.55
20:CA:1064:G:H22	20:CA:1190:G:H2'	1.71	0.55
20:CA:1511:G:H2'	20:CA:1512:U:O4'	2.06	0.55
23:CY:511:LYS:HB2	23:CY:569:ASP:HB3	1.89	0.55
24:DC:115:VAL:N	24:DC:145:THR:HG22	2.21	0.55
29:DH:20:ALA:HB1	29:DH:21:PRO:HD2	1.87	0.55
47:D3:30:ARG:NH1	47:D3:32:GLN:O	2.38	0.55
58:DA:376:C:H2'	58:DA:377:C:C6	2.42	0.55
58:DA:1316:U:H2'	58:DA:1317:A:H8	1.70	0.55
58:DA:2023:G:H4'	58:DA:2617:C:O3'	2.06	0.55
58:DA:2087:G:H2'	58:DA:2088:G:O4'	2.07	0.55
58:DA:2270:G:H3'	58:DA:2271:G:H8	1.70	0.55
58:DA:2304:G:H1	58:DA:2312:U:H3	1.54	0.55
11:AL:100:ILE:HG22	11:AL:101:VAL:H	1.71	0.55
12:AM:96:LEU:HD11	20:AA:1226:C:H3'	1.89	0.55
20:AA:56:U:H2'	20:AA:57:G:C8	2.40	0.55
23:AY:154:GLN:OE1	23:AY:161:PRO:HG3	2.05	0.55
24:BC:30:VAL:HA	24:BC:33:LEU:HG	1.88	0.55
27:BF:10:PRO:HG3	27:BF:19:GLU:HA	1.88	0.55
29:BH:41:MET:O	29:BH:42:ARG:HB2	2.06	0.55
35:BQ:87:LYS:NZ	58:BA:955:C:OP1	2.33	0.55
40:BV:4:ILE:HG13	40:BV:13:ARG:HG3	1.89	0.55
42:BX:36:LYS:HB3	58:BA:1599:C:OP1	2.06	0.55
45:B0:20:ARG:HB2	58:BA:2356:C:H5"	1.88	0.55
49:B6:6:ARG:H	49:B6:6:ARG:HD2	1.71	0.55
58:BA:270(J):G:H2'	58:BA:270(K):G:O4'	2.06	0.55
58:BA:287:C:H2'	58:BA:288:C:C6	2.41	0.55
58:BA:621:A:C2	58:BA:622:G:H1'	2.41	0.55
58:BA:1007:C:H5"	58:BA:1008:C:C2'	2.35	0.55
2:CC:182:ILE:HG12	2:CC:203:PHE:HA	1.88	0.55
3:CD:13:ARG:NH1	3:CD:38:TYR:O	2.39	0.55
4:CE:71:LEU:HD22	4:CE:74:GLY:HA2	1.89	0.55
5:CF:95:GLU:O	5:CF:97:PHE:N	2.37	0.55
6:CG:79:ARG:H	6:CG:79:ARG:HD3	1.71	0.55
16:CQ:21:VAL:HG12	16:CQ:23:VAL:HG22	1.88	0.55
20:CA:390:C:H2'	20:CA:391:G:C8	2.42	0.55
20:CA:574:A:HO2'	20:CA:882:C:HO2'	1.50	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:990:C:H2'	20:CA:991:U:O4'	2.07	0.55
20:CA:1356:G:H2'	20:CA:1357:A:C8	2.41	0.55
21:CW:64:G:C6	21:CW:65:U:O4	2.59	0.55
28:DG:72:ARG:HB3	28:DG:86:MET:HA	1.88	0.55
35:DQ:77:LYS:HG2	35:DQ:78:PRO:HD2	1.88	0.55
58:DA:247:G:H4'	58:DA:386:G:C5	2.41	0.55
58:DA:883:G:H2'	58:DA:884:C:C6	2.41	0.55
58:DA:1830:C:H2'	58:DA:1831:G:H8	1.71	0.55
59:DB:60:C:H2'	59:DB:61:G:H8	1.71	0.55
1:AB:24:TRP:CZ3	1:AB:26:PRO:HA	2.41	0.55
12:AM:88:ARG:HA	12:AM:98:VAL:HG13	1.89	0.55
20:AA:294:U:H2'	20:AA:295:C:C6	2.41	0.55
20:AA:410:G:H2'	20:AA:429:U:C5	2.41	0.55
20:AA:584:G:H2'	20:AA:585:G:H8	1.70	0.55
20:AA:1262:C:H2'	20:AA:1263:C:C6	2.41	0.55
23:AY:272:LEU:HA	23:AY:275:ALA:HB3	1.88	0.55
24:BC:117:THR:O	24:BC:121:MET:HB2	2.06	0.55
26:BE:3:GLY:HA3	26:BE:81:ILE:HD12	1.88	0.55
58:BA:1199:U:H2'	58:BA:1200:C:H6	1.71	0.55
59:BB:29:A:H2'	59:BB:30:C:H6	1.69	0.55
1:CB:111:ARG:HD2	20:CA:1103:C:O2'	2.06	0.55
2:CC:127:ARG:NH2	2:CC:192:THR:OG1	2.38	0.55
15:CP:57:ARG:NH2	15:CP:78:GLY:O	2.40	0.55
20:CA:1123:A:N1	20:CA:1150:U:O4	2.40	0.55
20:CA:1137:C:H4'	20:CA:1138:G:C2	2.41	0.55
25:DD:11:PRO:HA	25:DD:14:ARG:HB2	1.88	0.55
25:DD:118:VAL:HG22	25:DD:119:ALA:N	2.22	0.55
28:DG:109:VAL:HG11	57:D4:14:ILE:HG21	1.88	0.55
31:DK:32:ALA:HB1	31:DK:34:ILE:HG13	1.87	0.55
31:DK:90:LYS:HG2	58:DA:1076:C:H1'	1.88	0.55
33:DO:71:ARG:HD2	38:DT:74:ARG:NH2	2.21	0.55
33:DO:73:ASP:OD1	33:DO:75:SER:OG	2.22	0.55
34:DP:122:PRO:HG3	34:DP:141:ALA:HB1	1.88	0.55
56:D1:88:LYS:O	56:D1:92:LYS:N	2.40	0.55
58:DA:1389:G:H2'	58:DA:1390:U:O4'	2.07	0.55
58:DA:2392:A:H2'	58:DA:2393:A:O4'	2.06	0.55
58:DA:2649:U:H2'	58:DA:2650:U:H6	1.71	0.55
58:DA:2688:U:C5	58:DA:2719:G:H2'	2.41	0.55
58:DA:2846:G:H1	58:DA:2870:C:H42	1.52	0.55
58:DA:2884:U:H2'	58:DA:2885:C:O4'	2.06	0.55
1:AB:69:LEU:HD23	1:AB:159:PRO:HG2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:113:LYS:NZ	20:AA:1186:G:O2'	2.39	0.55
16:AQ:40:LYS:NZ	16:AQ:42:TYR:OH	2.25	0.55
20:AA:643:C:H2'	20:AA:644:G:H8	1.72	0.55
20:AA:1088:G:H1	20:AA:1097:C:H42	1.53	0.55
20:AA:1284:C:OP2	20:AA:1285:A:O2'	2.21	0.55
20:AA:1479:C:H2'	20:AA:1480:G:C8	2.41	0.55
21:AW:39:U:H2'	21:AW:40:G:H8	1.72	0.55
24:BC:139:PRO:O	24:BC:145:THR:OG1	2.21	0.55
32:BN:91:LEU:CA	32:BN:95:PRO:HB3	2.30	0.55
37:BS:94:TYR:C	37:BS:96:GLY:H	2.14	0.55
43:BY:62:GLU:CD	43:BY:63:LYS:H	2.15	0.55
44:BZ:82:ARG:HG2	44:BZ:83:PRO:HD2	1.89	0.55
46:B2:26:ARG:O	46:B2:29:LYS:HB2	2.07	0.55
58:BA:1024:G:H3'	58:BA:1025:G:H5"	1.87	0.55
58:BA:1891:G:H2'	58:BA:1892:C:C6	2.41	0.55
58:BA:2674:G:H2'	58:BA:2675:A:H8	1.69	0.55
58:BA:2840:C:H2'	58:BA:2841:C:C6	2.40	0.55
1:CB:12:GLU:HB3	1:CB:44:LEU:HD22	1.88	0.55
1:CB:68:ILE:HG23	1:CB:163:PHE:H	1.71	0.55
1:CB:70:PHE:O	1:CB:93:VAL:N	2.36	0.55
2:CC:186:PHE:CZ	20:CA:1058:G:H5'	2.41	0.55
3:CD:122:ARG:NE	20:CA:403:C:H4'	2.22	0.55
7:CH:21:LYS:N	7:CH:65:TYR:OH	2.39	0.55
7:CH:44:PHE:CD2	7:CH:80:ILE:HG13	2.41	0.55
12:CM:81:LEU:HB3	12:CM:89:GLY:HA3	1.88	0.55
16:CQ:32:TYR:O	16:CQ:34:LYS:N	2.34	0.55
20:CA:216:G:H2'	20:CA:217:C:C6	2.42	0.55
20:CA:1362:C:HO2'	20:CA:1362(A):C:H6	1.53	0.55
27:DF:80:ALA:HB3	27:DF:83:PHE:CD1	2.42	0.55
28:DG:99:MET:HE2	28:DG:103:LEU:HD21	1.89	0.55
32:DN:24:GLY:CA	58:DA:1139:G:H4'	2.37	0.55
32:DN:49:GLY:O	32:DN:119:ARG:NH1	2.39	0.55
44:DZ:61:LEU:HD22	44:DZ:63:ASP:HB3	1.88	0.55
51:D8:31:HIS:NE2	58:DA:2422:A:N7	2.55	0.55
58:DA:859:G:O2'	58:DA:916:G:O6	2.16	0.55
58:DA:1000:A:H2'	58:DA:1001:A:C8	2.41	0.55
58:DA:1872:A:H8	58:DA:1872:A:O5'	1.89	0.55
58:DA:2038:G:C2'	58:DA:2039:C:H5'	2.36	0.55
58:DA:2715:C:H2'	58:DA:2716:U:H6	1.71	0.55
58:DA:2829:C:H2'	58:DA:2830:G:C8	2.40	0.55
59:DB:86:G:H1	59:DB:90:C:N4	2.01	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:10:LYS:O	14:AO:14:GLU:HB2	2.07	0.55
20:AA:62:U:OP1	20:AA:385:C:O2'	2.23	0.55
20:AA:1016:A:H8	20:AA:1016:A:O5'	1.88	0.55
23:AY:25:LYS:HE3	61:AY:702:GDP:PB	2.46	0.55
24:BC:41:THR:O	24:BC:43:GLU:N	2.39	0.55
25:BD:227:ASN:HB2	25:BD:228:PRO:HD2	1.89	0.55
26:BE:172:VAL:HA	26:BE:184:VAL:HA	1.89	0.55
28:BG:107:LEU:HD13	28:BG:177:GLY:HA3	1.89	0.55
38:BT:77:PRO:O	38:BT:79:HIS:N	2.40	0.55
58:BA:742:G:H2'	58:BA:743:G:C8	2.42	0.55
58:BA:1008:C:H1'	58:BA:1009:A:N7	2.21	0.55
58:BA:1024:G:N2	58:BA:1144:G:O4'	2.29	0.55
58:BA:1792:G:H1	58:BA:1827:C:N4	2.03	0.55
59:BB:14:U:H2'	59:BB:15:A:C2	2.41	0.55
5:CF:62:TRP:CH2	5:CF:64:GLN:HB2	2.41	0.55
8:CI:25:LYS:HE3	8:CI:60:ASP:HB3	1.87	0.55
9:CJ:60:ARG:NH2	20:CA:1366:C:O3'	2.36	0.55
10:CK:85:ARG:HA	10:CK:110:ASP:O	2.07	0.55
12:CM:34:LEU:HD13	12:CM:41:PRO:HA	1.88	0.55
15:CP:27:LYS:NZ	20:CA:309:G:OP1	2.27	0.55
20:CA:151:A:N7	20:CA:170:U:O4	2.39	0.55
20:CA:271:C:H2'	20:CA:272:C:O4'	2.07	0.55
28:DG:76:SER:HA	28:DG:83:ARG:HA	1.89	0.55
28:DG:121:ASN:HD22	28:DG:123:ASN:H	1.52	0.55
41:DW:9:TYR:H	41:DW:102:HIS:CE1	2.25	0.55
41:DW:88:ARG:HB2	41:DW:94:ASP:OD2	2.07	0.55
42:DX:90:GLU:HA	42:DX:93:GLU:HB2	1.88	0.55
48:D5:43:HIS:NE2	58:DA:2883:A:O3'	2.40	0.55
58:DA:789:A:H3'	58:DA:790:C:C5'	2.36	0.55
58:DA:1672:C:N4	58:DA:1673:U:O4	2.39	0.55
58:DA:1709:U:H1'	58:DA:2860:A:N3	2.21	0.55
3:AD:31:CYS:HB3	3:AD:33:MET:HG2	1.87	0.55
5:AF:46:ARG:NH2	17:AR:37:VAL:HG21	2.21	0.55
16:AQ:91:ARG:NH1	20:AA:584:G:OP1	2.39	0.55
38:BT:29:ARG:H	38:BT:88:ILE:HG13	1.72	0.55
39:BU:53:ARG:HD2	58:BA:536:A:H5'	1.89	0.55
40:BV:7:THR:HG23	40:BV:12:TYR:HD2	1.71	0.55
44:BZ:30:ASN:HD22	44:BZ:31:ARG:HG3	1.71	0.55
52:B9:27:CYS:SG	52:B9:28:GLU:N	2.79	0.55
56:B1:25:LYS:HB3	58:BA:388:G:P	2.47	0.55
58:BA:1196:C:HO2'	58:BA:1227:G:HO2'	1.48	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:69:LEU:O	1:CB:71:VAL:HG23	2.06	0.55
3:CD:15:GLU:CD	3:CD:19:LEU:HD11	2.32	0.55
5:CF:100:ASN:ND2	17:CR:23:LYS:O	2.29	0.55
9:CJ:24:VAL:HG21	9:CJ:37:PRO:HD3	1.88	0.55
19:CT:14:LYS:HG3	19:CT:17:ARG:HH21	1.71	0.55
20:CA:54:C:N4	20:CA:357:G:H1	2.03	0.55
20:CA:1359:C:H1'	20:CA:1362:C:H41	1.70	0.55
23:CY:313:ALA:HA	23:CY:328:ILE:HA	1.88	0.55
27:DF:15:SER:O	27:DF:17:ARG:N	2.40	0.55
39:DU:28:ARG:HH21	58:DA:532:A:H2'	1.72	0.55
40:DV:4:ILE:HD13	40:DV:40:LEU:HB2	1.89	0.55
40:DV:76:LYS:HB2	40:DV:81:TYR:HD1	1.72	0.55
41:DW:18:ARG:HH22	41:DW:77:ASP:HA	1.70	0.55
48:D5:4:HIS:HA	58:DA:2056:G:H22	1.71	0.55
58:DA:1035:U:H2'	58:DA:1036:G:H8	1.71	0.55
58:DA:1113:U:H2'	58:DA:1114:G:C8	2.42	0.55
58:DA:1297:C:H2'	58:DA:1298:C:C6	2.42	0.55
58:DA:2287:A:N6	58:DA:2344:U:C2	2.75	0.55
58:DA:2336:A:H3'	58:DA:2337:G:C8	2.42	0.55
58:DA:2893:G:H5"	58:DA:2894:G:O4'	2.06	0.55
59:DB:23:G:H2'	59:DB:24:G:C8	2.42	0.55
4:AE:115:VAL:HG12	4:AE:116:THR:H	1.72	0.55
6:AG:141:VAL:HA	6:AG:144:MET:HG2	1.88	0.55
8:AI:117:HIS:HB2	8:AI:121:ARG:HB3	1.89	0.55
11:AL:34:ARG:HA	11:AL:82:VAL:HG13	1.89	0.55
11:AL:74:GLY:O	11:AL:102:ARG:NH2	2.40	0.55
12:AM:120:LYS:HG2	20:AA:955:U:H5'	1.89	0.55
15:AP:70:ALA:O	15:AP:74:LEU:HG	2.07	0.55
20:AA:1306:A:H1'	20:AA:1332:A:N1	2.22	0.55
24:BC:42:VAL:O	24:BC:43:GLU:C	2.49	0.55
26:BE:132:HIS:HB3	58:BA:1658:C:OP1	2.07	0.55
29:BH:56:SER:OG	29:BH:57:ASP:N	2.39	0.55
32:BN:109:LYS:NZ	58:BA:2040:C:OP1	2.30	0.55
43:BY:47:LYS:HZ3	58:BA:480:A:HO2'	1.49	0.55
58:BA:1530:G:C6	58:BA:1541:U:O2	2.60	0.55
1:CB:185:ILE:HD13	1:CB:199:TYR:HD1	1.72	0.55
19:CT:59:ALA:O	19:CT:63:ILE:HG13	2.07	0.55
25:DD:11:PRO:O	25:DD:13:ARG:N	2.38	0.55
26:DE:49:LEU:HD11	26:DE:81:ILE:HG12	1.88	0.55
32:DN:45:ASN:H	32:DN:45:ASN:ND2	2.02	0.55
32:DN:73:THR:CG2	32:DN:84:LYS:HB3	2.30	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DR:42:LYS:O	36:DR:45:ARG:HG3	2.07	0.55
51:D8:19:SER:HB3	58:DA:651:G:H5"	1.89	0.55
58:DA:310:A:O2'	58:DA:311:A:H2'	2.07	0.55
58:DA:1718:G:H1	58:DA:1741:C:H42	1.55	0.55
9:AJ:78:ASN:OD1	9:AJ:78:ASN:N	2.38	0.55
15:AP:21:VAL:HG11	15:AP:59:TRP:NE1	2.22	0.55
17:AR:65:ILE:O	17:AR:69:THR:OG1	2.24	0.55
20:AA:399:G:H2'	20:AA:400:C:C6	2.41	0.55
20:AA:552:U:H2'	20:AA:553:A:H8	1.72	0.55
20:AA:1040:U:H2'	20:AA:1041:A:C8	2.42	0.55
25:BD:70:TRP:HE1	25:BD:150:LYS:HZ1	1.53	0.55
27:BF:10:PRO:O	27:BF:12:LEU:N	2.40	0.55
50:B7:33:ARG:HB2	50:B7:34:ARG:HH12	1.72	0.55
56:B1:26:ARG:HB3	56:B1:32:LYS:HB2	1.89	0.55
58:BA:632:A:H2'	58:BA:633:A:C8	2.42	0.55
58:BA:2688:U:C5	58:BA:2719:G:H2'	2.42	0.55
58:BA:2696:U:H2'	58:BA:2697:G:C8	2.42	0.55
6:CG:87:VAL:HG12	6:CG:88:PRO:O	2.06	0.55
9:CJ:16:LEU:HD11	9:CJ:70:ARG:HD3	1.87	0.55
18:CS:6:LYS:HB3	20:CA:1314:C:H5	1.71	0.55
20:CA:160:A:N6	20:CA:347:G:H1'	2.22	0.55
20:CA:559:A:H4'	20:CA:560:U:H5"	1.89	0.55
20:CA:934:C:N3	20:CA:938:A:N1	2.55	0.55
20:CA:1276:G:H2'	20:CA:1277:C:C6	2.42	0.55
24:DC:118:PRO:HD3	24:DC:147:GLY:HA2	1.87	0.55
27:DF:188:ARG:HG3	27:DF:189:THR:HG23	1.88	0.55
28:DG:43:LEU:HB3	28:DG:45:GLU:HG2	1.89	0.55
58:DA:2119:A:C2	58:DA:2170:A:H2'	2.42	0.55
6:AG:50:ILE:HG23	6:AG:125:MET:HE1	1.88	0.55
20:AA:445:G:H2'	20:AA:446:G:C8	2.42	0.55
20:AA:445:G:H2'	20:AA:446:G:H8	1.72	0.55
20:AA:620:C:H2'	20:AA:621:A:O4'	2.06	0.55
20:AA:834:C:H2'	20:AA:835:U:C6	2.42	0.55
23:AY:556:ILE:HD13	23:AY:556:ILE:H	1.72	0.55
28:BG:113:ARG:HA	28:BG:113:ARG:NE	2.17	0.55
37:BS:74:ALA:HB2	37:BS:104:GLY:HA2	1.88	0.55
43:BY:6:HIS:HB2	43:BY:8:LYS:HD2	1.88	0.55
44:BZ:146:ILE:HA	44:BZ:174:VAL:HB	1.89	0.55
58:BA:65:C:H2'	58:BA:66:C:O4'	2.07	0.55
58:BA:558:G:H2'	58:BA:559:G:H8	1.70	0.55
58:BA:2700:C:H2'	58:BA:2701:C:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:139:LYS:O	1:CB:143:GLU:HG2	2.06	0.55
12:CM:91:ARG:NH2	12:CM:103:THR:HG21	2.22	0.55
20:CA:910:C:H2'	20:CA:911:U:C6	2.42	0.55
20:CA:1537:U:O2'	20:CA:1538:C:OP1	2.21	0.55
23:CY:164:MET:O	23:CY:180:VAL:HG22	2.07	0.55
24:DC:169:THR:OG1	24:DC:169:THR:O	2.25	0.55
25:DD:231:HIS:C	25:DD:233:HIS:H	2.15	0.55
29:DH:163:TYR:HE2	29:DH:168:PRO:HB3	1.71	0.55
31:DK:77:LEU:HD12	31:DK:111:LYS:HD2	1.89	0.55
34:DP:18:ARG:NH1	58:DA:662:G:OP1	2.40	0.55
34:DP:111:ARG:HB3	34:DP:128:HIS:HB2	1.89	0.55
35:DQ:132:VAL:HB	35:DQ:137:TYR:OH	2.07	0.55
40:DV:60:GLU:HB2	40:DV:95:LEU:O	2.06	0.55
56:D1:21:ARG:HG3	58:DA:2080:G:H5"	1.89	0.55
56:D1:45:ASN:OD1	56:D1:46:LEU:N	2.40	0.55
58:DA:622:G:H2'	58:DA:623:G:C8	2.41	0.55
58:DA:979:G:H2'	58:DA:982:C:N4	2.20	0.55
58:DA:1792:G:H1	58:DA:1827:C:N4	2.03	0.55
58:DA:2829:C:H2'	58:DA:2830:G:H8	1.72	0.55
7:AH:103:VAL:HG11	7:AH:109:ILE:H	1.73	0.54
12:AM:75:ALA:HA	12:AM:78:ILE:HB	1.89	0.54
20:AA:143:A:H2	20:AA:220:G:H22	1.54	0.54
21:AW:17:U:H5'	21:AW:18:G:C4'	2.37	0.54
23:AY:183:MET:HE1	23:AY:210:ARG:HH11	1.72	0.54
24:BC:214:TYR:HB3	24:BC:222:SER:HB2	1.89	0.54
25:BD:33:LEU:HD11	58:BA:1423:G:H5"	1.88	0.54
26:BE:143:ASN:OD1	58:BA:2571:C:H2'	2.06	0.54
32:BN:73:THR:CG2	32:BN:84:LYS:HB3	2.30	0.54
32:BN:78:TYR:CD2	58:BA:2642:G:H4'	2.42	0.54
43:BY:102:CYS:SG	43:BY:103:GLY:N	2.79	0.54
44:BZ:119:GLU:HB2	44:BZ:122:ARG:NH1	2.21	0.54
49:B6:37:ARG:NE	58:BA:2344:U:O2'	2.40	0.54
58:BA:141(A):A:H5'	58:BA:141(B):C:OP2	2.06	0.54
58:BA:569:U:H5"	58:BA:821:A:C2	2.42	0.54
58:BA:1316:U:H2'	58:BA:1317:A:H8	1.72	0.54
58:BA:1655:A:C2	58:BA:2049:G:H5"	2.41	0.54
58:BA:1674:G:H1'	58:BA:1676:A:N6	2.22	0.54
3:CD:22:LYS:HB3	3:CD:26:CYS:HB2	1.88	0.54
8:CI:103:THR:HA	20:CA:1179:A:O3'	2.07	0.54
11:CL:52:LEU:HB2	11:CL:54:LYS:HZ1	1.70	0.54
20:CA:246:A:N1	20:CA:278:G:O2'	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1306:A:N6	20:CA:1331:G:O2'	2.40	0.54
21:CW:19:G:N2	21:CW:56:C:N3	2.55	0.54
26:DE:145:LYS:NZ	58:DA:2054:A:OP1	2.29	0.54
34:DP:33:ARG:HH12	58:DA:811:U:H6	1.54	0.54
37:DS:77:ALA:HA	37:DS:82:ILE:HD12	1.89	0.54
38:DT:16:ARG:NH2	38:DT:82:LEU:O	2.34	0.54
44:DZ:154:ASP:OD2	44:DZ:154:ASP:N	2.40	0.54
48:D5:55:ARG:HH21	48:D5:56:LYS:HE3	1.71	0.54
56:D1:52:ARG:HA	56:D1:57:GLU:HA	1.88	0.54
57:D4:14:ILE:HD12	57:D4:22:ILE:HD12	1.89	0.54
58:DA:195:A:H4'	58:DA:251:A:H4'	1.89	0.54
58:DA:539:G:H2'	58:DA:540:G:H8	1.72	0.54
59:DB:14:U:OP2	59:DB:70:C:O2'	2.24	0.54
1:AB:104:ASN:N	1:AB:104:ASN:OD1	2.40	0.54
1:AB:165:VAL:N	1:AB:170:GLU:OE1	2.37	0.54
17:AR:38:GLU:HA	17:AR:41:LYS:HB3	1.89	0.54
20:AA:300:A:H8	20:AA:300:A:O5'	1.90	0.54
21:AW:1:G:O6	21:AW:72:C:N4	2.37	0.54
21:AW:64:G:N1	21:AW:65:U:C4	2.75	0.54
23:AY:512:ILE:HA	23:AY:567:LEU:HA	1.87	0.54
26:BE:7:VAL:HG13	26:BE:27:LEU:HB3	1.89	0.54
32:BN:25:ARG:HH21	58:BA:1141:U:P	2.30	0.54
32:BN:60:ILE:HD13	32:BN:99:LEU:HD23	1.89	0.54
33:BO:68:GLU:N	33:BO:68:GLU:OE2	2.37	0.54
44:BZ:52:SER:OG	44:BZ:53:ILE:N	2.40	0.54
48:B5:6:VAL:HG13	58:BA:2015:A:N3	2.22	0.54
56:B1:63:ALA:HB3	56:B1:66:HIS:HB2	1.88	0.54
58:BA:54:G:H1	58:BA:116:C:H42	1.54	0.54
58:BA:409:C:H2'	58:BA:410:G:C8	2.43	0.54
58:BA:975:G:H1'	58:BA:990:A:C2	2.43	0.54
58:BA:1139:G:H1'	58:BA:1143:A:H2	1.72	0.54
58:BA:1321:A:H2'	58:BA:1322:A:H8	1.72	0.54
3:CD:30:LYS:HD3	3:CD:35:ARG:NH1	2.20	0.54
7:CH:64:LYS:HG2	7:CH:79:VAL:HG21	1.89	0.54
20:CA:46:G:H1	20:CA:395:C:H42	1.55	0.54
20:CA:186(E):C:H2'	20:CA:186(F):C:H6	1.73	0.54
20:CA:458(A):G:O6	20:CA:458(C):G:H5"	2.08	0.54
20:CA:476:G:H2'	20:CA:477:G:H8	1.72	0.54
20:CA:585:G:H1	20:CA:756:C:H42	1.54	0.54
20:CA:1060:C:H2'	20:CA:1061:G:H8	1.69	0.54
20:CA:1238:A:H2	20:CA:1241:G:N3	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1410:G:H2'	20:CA:1411:C:C6	2.42	0.54
23:CY:150:ILE:HG23	23:CY:161:PRO:HB2	1.89	0.54
23:CY:207:ASP:HA	23:CY:210:ARG:HG2	1.87	0.54
23:CY:300:GLU:O	23:CY:302:HIS:N	2.40	0.54
25:DD:205:VAL:HG12	25:DD:207:GLY:H	1.71	0.54
32:DN:99:LEU:O	32:DN:99:LEU:HD13	2.06	0.54
38:DT:47:GLY:HA2	38:DT:65:LYS:HD2	1.88	0.54
49:D6:41:PRO:HG2	49:D6:43:CYS:O	2.07	0.54
58:DA:1473:G:H2'	58:DA:1474:C:C6	2.42	0.54
58:DA:1853:A:H2'	58:DA:1854:A:H8	1.72	0.54
58:DA:2708:G:H2'	58:DA:2709:G:C8	2.42	0.54
2:AC:189:ALA:HB3	2:AC:196:LEU:HB2	1.89	0.54
20:AA:227:G:H2'	20:AA:228:A:C8	2.43	0.54
20:AA:299:G:N2	20:AA:566:G:O6	2.37	0.54
20:AA:591:U:H2'	20:AA:592:G:C8	2.42	0.54
20:AA:919:A:O2'	20:AA:1080:A:N1	2.37	0.54
20:AA:1070:U:H2'	20:AA:1071:C:C6	2.42	0.54
25:BD:140:THR:HG22	25:BD:141:VAL:H	1.72	0.54
27:BF:57:VAL:C	27:BF:59:TYR:H	2.15	0.54
32:BN:24:GLY:HA3	58:BA:1139:G:C5'	2.37	0.54
34:BP:24:GLY:HA3	34:BP:33:ARG:HD2	1.88	0.54
38:BT:121:ILE:O	38:BT:125:ARG:HG2	2.08	0.54
43:BY:15:VAL:O	43:BY:22:GLY:N	2.40	0.54
44:BZ:30:ASN:ND2	44:BZ:31:ARG:HG3	2.23	0.54
45:B0:24:LYS:N	45:B0:37:LEU:O	2.27	0.54
58:BA:1208:C:H2'	58:BA:1209:G:H8	1.72	0.54
58:BA:1658:C:H2'	58:BA:1659:U:C6	2.42	0.54
58:BA:2244:U:H1'	58:BA:2434:A:C4	2.42	0.54
58:BA:2459:A:N1	58:BA:2493:U:O2	2.40	0.54
58:BA:2520:C:N3	58:BA:2545:G:N2	2.46	0.54
58:BA:2712:U:O2'	58:BA:2713:A:H5'	2.07	0.54
58:BA:2857:G:N2	58:BA:2860:A:OP2	2.35	0.54
1:CB:68:ILE:HG12	1:CB:161:ALA:HB3	1.89	0.54
2:CC:56:ASP:OD1	2:CC:56:ASP:N	2.39	0.54
2:CC:153:VAL:HG12	2:CC:198:VAL:HA	1.87	0.54
3:CD:51:PRO:HB2	3:CD:56:VAL:HG13	1.89	0.54
20:CA:1253:G:H1	20:CA:1284:C:H42	1.55	0.54
23:CY:201:ILE:H	23:CY:201:ILE:HD12	1.72	0.54
26:DE:57:LYS:H	26:DE:57:LYS:HD2	1.72	0.54
27:DF:1:MET:HB3	27:DF:3:GLU:HG2	1.90	0.54
27:DF:171:PRO:HG2	27:DF:172:TRP:HD1	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DN:98:VAL:HG23	32:DN:99:LEU:N	2.23	0.54
45:D0:11:ARG:NH2	58:DA:2278:A:H5"	2.22	0.54
56:D1:30:VAL:HA	58:DA:2396:G:O2'	2.07	0.54
58:DA:1007:C:H3'	58:DA:1008:C:H2'	1.90	0.54
58:DA:1121:C:H2'	58:DA:1122:G:O4'	2.07	0.54
58:DA:2606:C:H2'	58:DA:2607:G:C8	2.43	0.54
7:AH:120:THR:HG23	7:AH:123:GLU:HG3	1.89	0.54
10:AK:29:ILE:HG12	10:AK:42:TRP:O	2.07	0.54
12:AM:37:THR:HB	12:AM:56:LEU:HA	1.90	0.54
20:AA:335:C:O2'	20:AA:1433:A:N3	2.31	0.54
20:AA:1062:U:H2'	20:AA:1063:C:C6	2.42	0.54
24:BC:8:TYR:O	24:BC:12:LEU:HB2	2.08	0.54
24:BC:165:ARG:H	24:BC:172:ILE:HG13	1.73	0.54
30:BJ:11:UNK:O	30:BJ:15:UNK:N	2.41	0.54
33:BO:9:GLU:HA	33:BO:18:LYS:HA	1.89	0.54
44:BZ:69:THR:HG22	44:BZ:90:VAL:HA	1.89	0.54
46:B2:66:GLU:HA	46:B2:69:ARG:HH21	1.72	0.54
56:B1:44:PRO:HD3	58:BA:396:G:H4'	1.88	0.54
58:BA:536:A:H2'	58:BA:537:C:C6	2.42	0.54
58:BA:987:G:O2'	58:BA:1000:A:N3	2.38	0.54
58:BA:1047:G:O3'	58:BA:1048:A:H8	1.91	0.54
58:BA:1582:C:H2'	58:BA:1583:A:O4'	2.07	0.54
58:BA:1923:U:H2'	58:BA:1924:C:C6	2.43	0.54
4:CE:69:VAL:HG21	4:CE:113:ALA:HB1	1.90	0.54
5:CF:69:GLU:O	5:CF:71:ARG:N	2.40	0.54
11:CL:124:LYS:NZ	20:CA:501:C:OP2	2.34	0.54
21:CW:41:A:O2'	21:CW:42:U:OP1	2.22	0.54
25:DD:123:ALA:HB3	25:DD:131:LEU:HG	1.89	0.54
27:DF:156:LEU:HG	27:DF:156:LEU:O	2.08	0.54
29:DH:41:MET:SD	29:DH:52:VAL:HG13	2.47	0.54
37:DS:47:THR:O	37:DS:48:LEU:HB2	2.08	0.54
41:DW:68:ARG:HB3	41:DW:110:LYS:HB2	1.88	0.54
44:DZ:134:PRO:HB3	44:DZ:161:VAL:HG21	1.89	0.54
58:DA:236:C:H2'	58:DA:237:C:H6	1.72	0.54
58:DA:291:C:N4	58:DA:349:G:H1	2.04	0.54
58:DA:531:C:H3'	58:DA:561:G:H21	1.73	0.54
58:DA:1115:G:H2'	58:DA:1116:C:C6	2.42	0.54
58:DA:1864:U:OP1	58:DA:2410:G:O2'	2.26	0.54
58:DA:2655:G:O2'	58:DA:2664:G:O6	2.25	0.54
3:AD:55:ALA:HB2	20:AA:509:A:H5'	1.88	0.54
6:AG:4:ARG:HG2	20:AA:932:C:H5"	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:128:GLY:O	20:AA:600:C:H4'	2.07	0.54
10:AK:115:PRO:O	10:AK:117:ASN:N	2.36	0.54
15:AP:72:ARG:NH1	20:AA:452:A:N3	2.56	0.54
19:AT:78:ALA:HA	19:AT:81:LYS:HD3	1.88	0.54
20:AA:949:A:O2'	20:AA:971:G:O6	2.13	0.54
23:AY:566:THR:HG22	23:AY:567:LEU:N	2.22	0.54
32:BN:46:VAL:HG13	32:BN:47:ALA:N	2.23	0.54
35:BQ:20:ALA:C	35:BQ:22:LYS:H	2.14	0.54
58:BA:80:G:H2'	58:BA:81:G:O4'	2.08	0.54
58:BA:413:C:H2'	58:BA:414:C:C6	2.42	0.54
58:BA:589:C:H2'	58:BA:590:A:C8	2.41	0.54
58:BA:1071:G:H1'	58:BA:1089:G:C5	2.42	0.54
58:BA:1510:A:H2'	58:BA:1511:A:O4'	2.06	0.54
58:BA:1802:A:P	58:BA:1815:A:H61	2.31	0.54
58:BA:2284:C:N3	58:BA:2384:G:N2	2.46	0.54
58:BA:2535:G:H2'	58:BA:2536:G:C8	2.43	0.54
9:CJ:7:LYS:HE2	9:CJ:97:GLU:HG3	1.89	0.54
20:CA:408:A:H2'	20:CA:409:G:H8	1.73	0.54
20:CA:1119:C:N3	20:CA:1154:G:O6	2.41	0.54
20:CA:1206:G:H2'	20:CA:1207:G:O4'	2.08	0.54
23:CY:121:VAL:O	23:CY:125:ALA:HB2	2.08	0.54
24:DC:47:LYS:HD2	58:DA:2178:C:H5'	1.90	0.54
25:DD:222:ARG:HG3	58:DA:1789:A:OP1	2.07	0.54
27:DF:7:TYR:CZ	27:DF:9:ILE:HA	2.43	0.54
36:DR:97:VAL:HG22	36:DR:114:VAL:HA	1.89	0.54
42:DX:51:VAL:HA	42:DX:83:VAL:HG22	1.88	0.54
45:D0:42:GLY:HA3	58:DA:2331:G:O4'	2.08	0.54
58:DA:270(K):G:H2'	58:DA:270(L):C:H6	1.72	0.54
58:DA:541:C:H2'	58:DA:542:C:C6	2.43	0.54
58:DA:1025:G:C4	58:DA:1135:C:H1'	2.42	0.54
58:DA:1428:C:C5	58:DA:1569:A:H5"	2.42	0.54
58:DA:1655:A:H3'	58:DA:1656:C:H6	1.73	0.54
58:DA:2646:C:H2'	58:DA:2647:U:O4'	2.08	0.54
58:DA:2795:G:O2'	58:DA:2801:A:N6	2.39	0.54
59:DB:24:G:N1	59:DB:56:G:N2	2.55	0.54
1:AB:22:LYS:HA	1:AB:24:TRP:HD1	1.72	0.54
3:AD:23:GLY:O	3:AD:25:ARG:N	2.40	0.54
7:AH:48:TYR:HD1	7:AH:59:LEU:HD21	1.73	0.54
13:AN:61:TRP:CZ2	20:AA:1368:G:H4'	2.43	0.54
20:AA:1252:A:H2'	20:AA:1253:G:C8	2.42	0.54
23:AY:90:PHE:HZ	60:AY:701:FUA:C12	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:135:PHE:HD1	23:AY:272:LEU:HD23	1.72	0.54
29:BH:138:LYS:HG2	58:BA:2746:U:H4'	1.88	0.54
34:BP:81:GLN:HG2	34:BP:106:LEU:HA	1.90	0.54
40:BV:96:ILE:HG22	40:BV:97:LYS:N	2.21	0.54
58:BA:271(C):G:O2'	58:BA:271(D):U:OP2	2.25	0.54
58:BA:1332:G:H5'	58:BA:1333:C:H5	1.72	0.54
58:BA:2065:C:H2'	58:BA:2066:C:H6	1.73	0.54
58:BA:2716:U:H2'	58:BA:2717:G:C8	2.43	0.54
14:CO:21:ASP:OD2	20:CA:750:G:O2'	2.25	0.54
16:CQ:45:HIS:H	16:CQ:72:ARG:HA	1.72	0.54
18:CS:6:LYS:NZ	20:CA:1316:G:O6	2.38	0.54
20:CA:992:U:O2'	20:CA:993:G:OP2	2.17	0.54
20:CA:1114:C:H42	20:CA:1186:G:H1	1.53	0.54
23:CY:255:ILE:HG23	23:CY:257:PRO:HD3	1.89	0.54
25:DD:260:ARG:NH1	58:DA:1799:G:OP1	2.41	0.54
27:DF:75:HIS:HA	58:DA:674:G:H4'	1.89	0.54
30:DJ:160:UNK:HA	54:Dg:19:UNK:HA	1.89	0.54
35:DQ:25:ASP:HA	35:DQ:102:VAL:HG23	1.88	0.54
36:DR:2:ARG:HG2	36:DR:5:LYS:HE2	1.90	0.54
39:DU:92:ARG:CZ	39:DU:95:LEU:HG	2.37	0.54
41:DW:26:GLY:H	41:DW:71:VAL:HG12	1.73	0.54
58:DA:586:A:N1	58:DA:809:G:O2'	2.35	0.54
58:DA:767:U:H2'	58:DA:768:G:C8	2.43	0.54
58:DA:814:C:O2'	58:DA:1224:C:N3	2.40	0.54
58:DA:1032:A:N1	58:DA:1122:G:O6	2.40	0.54
58:DA:1139:G:H1'	58:DA:1143:A:H2	1.70	0.54
58:DA:1441:G:H1	58:DA:1550:C:N4	2.04	0.54
58:DA:1685:C:H42	58:DA:1703:G:H1	1.56	0.54
58:DA:2737:G:H1	58:DA:2767:C:N4	2.06	0.54
6:AG:139:GLU:O	6:AG:143:ARG:HG3	2.08	0.54
20:AA:955:U:H2'	20:AA:956:U:H6	1.73	0.54
20:AA:968:A:H3'	20:AA:969:A:C5'	2.37	0.54
20:AA:1253:G:H1	20:AA:1284:C:N4	2.04	0.54
27:BF:11:VAL:HB	27:BF:18:ARG:HB3	1.90	0.54
32:BN:49:GLY:O	32:BN:119:ARG:NH1	2.39	0.54
38:BT:34:VAL:HG13	38:BT:39:ARG:HG2	1.89	0.54
58:BA:371:A:N6	58:BA:401:A:H3'	2.18	0.54
58:BA:573:G:N1	58:BA:2031:A:OP2	2.39	0.54
58:BA:639:U:H2'	58:BA:640:C:C6	2.43	0.54
58:BA:2824:C:H2'	58:BA:2825:U:O4'	2.06	0.54
6:CG:78:ARG:HG2	6:CG:85:TYR:HD1	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:11:THR:HG21	20:CA:876:G:H1'	1.90	0.54
20:CA:367:U:H4'	23:CY:351:ARG:HH11	1.73	0.54
20:CA:628:G:H2'	20:CA:629:G:C8	2.43	0.54
20:CA:794:A:H4'	20:CA:1521:G:O2'	2.08	0.54
21:CW:69:A:H2'	21:CW:70:G:H8	1.73	0.54
23:CY:13:ARG:O	23:CY:80:ASN:N	2.34	0.54
23:CY:90:PHE:HZ	60:CY:701:FUA:C12	2.21	0.54
23:CY:624:LEU:HD23	23:CY:631:ILE:HG12	1.89	0.54
24:DC:125:GLY:HA2	24:DC:138:LEU:HD11	1.90	0.54
25:DD:165:ILE:HA	25:DD:175:LEU:HA	1.90	0.54
27:DF:191:ARG:O	27:DF:193:VAL:N	2.41	0.54
32:DN:60:ILE:HD13	32:DN:99:LEU:HD23	1.89	0.54
44:DZ:166:SER:H	44:DZ:167:PRO:HA	1.72	0.54
51:D8:30:ARG:HD3	58:DA:2420:C:H41	1.71	0.54
58:DA:30:G:H2'	58:DA:31:C:C6	2.42	0.54
58:DA:184:C:H2'	58:DA:185:U:H6	1.71	0.54
58:DA:516:C:H2'	58:DA:517:C:C6	2.42	0.54
58:DA:900:A:H2'	58:DA:901:A:O4'	2.07	0.54
58:DA:1131:G:C8	58:DA:2025:C:H4'	2.43	0.54
58:DA:1183:G:H2'	58:DA:1184:G:C8	2.41	0.54
58:DA:1197:G:H2'	58:DA:1198:U:C6	2.42	0.54
58:DA:1603:A:H5'	58:DA:1604:C:OP2	2.08	0.54
58:DA:2235:G:H2'	58:DA:2236:C:C6	2.43	0.54
58:DA:2528:U:OP2	58:DA:2530:A:N6	2.41	0.54
59:DB:14:U:O3'	59:DB:107:U:O2'	2.21	0.54
2:AC:48:TYR:O	2:AC:50:ALA:N	2.41	0.54
3:AD:68:TYR:O	3:AD:70:ILE:N	2.40	0.54
8:AI:39:GLY:HA3	20:AA:1291:G:H4'	1.88	0.54
9:AJ:87:THR:O	9:AJ:89:ASP:N	2.41	0.54
17:AR:75:ILE:HD11	20:AA:735:C:H1'	1.88	0.54
18:AS:37:ARG:HD2	20:AA:1220:G:OP1	2.08	0.54
20:AA:219:C:H2'	20:AA:220:G:O4'	2.08	0.54
20:AA:373:A:H4'	20:AA:480:U:O2'	2.07	0.54
20:AA:428:G:H1'	20:AA:430:A:C8	2.43	0.54
20:AA:744:C:O2'	20:AA:851:G:N2	2.37	0.54
20:AA:744:C:H2'	20:AA:745:C:C6	2.43	0.54
22:AV:6:G:H2'	22:AV:7:G:C8	2.42	0.54
25:BD:9:TYR:CD2	58:BA:705:A:H1'	2.42	0.54
25:BD:125:ILE:HG21	25:BD:137:PRO:HG2	1.88	0.54
29:BH:98:LEU:HD22	29:BH:125:VAL:H	1.73	0.54
34:BP:65:ARG:HG2	51:B8:12:LYS:HA	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BR:73:VAL:O	36:BR:76:VAL:HG12	2.07	0.54
51:B8:32:LEU:HD11	58:BA:2391:G:OP1	2.08	0.54
56:B1:18:ILE:HG13	56:B1:20:ARG:N	2.22	0.54
58:BA:648:G:H2'	58:BA:649:G:H8	1.73	0.54
58:BA:1303:G:HO2'	58:BA:1642:G:HO2'	1.54	0.54
58:BA:1654:A:H2'	58:BA:1655:A:H8	1.72	0.54
1:CB:74:LYS:NZ	1:CB:205:ASP:OD2	2.40	0.54
3:CD:70:ILE:HG12	3:CD:71:SER:H	1.73	0.54
9:CJ:57:LYS:O	9:CJ:60:ARG:NE	2.41	0.54
12:CM:86:CYS:O	12:CM:89:GLY:N	2.41	0.54
18:CS:78:ARG:NH2	20:CA:1223:C:OP2	2.41	0.54
23:CY:201:ILE:O	23:CY:203:GLU:N	2.31	0.54
25:DD:77:ALA:HA	25:DD:97:TYR:HA	1.89	0.54
25:DD:260:ARG:HH12	58:DA:1799:G:H5"	1.71	0.54
26:DE:187:ALA:HB2	58:DA:2729:G:H1'	1.90	0.54
27:DF:5:ALA:HB2	27:DF:118:ALA:HB1	1.90	0.54
34:DP:23:PRO:HD2	34:DP:33:ARG:HE	1.73	0.54
34:DP:58:THR:O	34:DP:61:ARG:HG3	2.08	0.54
58:DA:332:A:H1'	58:DA:334:C:OP2	2.08	0.54
58:DA:715:G:H2'	58:DA:716:A:C8	2.43	0.54
58:DA:1019:U:H2'	58:DA:1020:A:C8	2.43	0.54
58:DA:2315:G:H2'	58:DA:2316:C:C6	2.43	0.54
58:DA:2647:U:H2'	58:DA:2648:C:C6	2.43	0.54
59:DB:8:U:H2'	59:DB:9:G:C8	2.43	0.54
1:AB:84:GLU:HB3	1:AB:219:VAL:HG21	1.90	0.54
3:AD:49:ARG:NE	3:AD:49:ARG:HA	2.23	0.54
4:AE:72:GLN:O	4:AE:74:GLY:N	2.41	0.54
10:AK:109:VAL:HG12	10:AK:110:ASP:H	1.72	0.54
19:AT:61:SER:HA	20:AA:193:C:O2'	2.08	0.54
20:AA:585:G:H1	20:AA:756:C:H42	1.56	0.54
20:AA:1251:A:N3	20:AA:1369:C:O2'	2.38	0.54
23:AY:197:ARG:HH21	23:AY:198:GLU:HG2	1.73	0.54
24:BC:153:ILE:HA	24:BC:156:GLU:HB2	1.90	0.54
28:BG:11:TYR:HB2	28:BG:176:LEU:HD21	1.90	0.54
35:BQ:19:GLY:HA2	35:BQ:98:LYS:HD3	1.90	0.54
35:BQ:132:VAL:HB	35:BQ:137:TYR:OH	2.08	0.54
37:BS:40:ILE:HA	37:BS:47:THR:HA	1.90	0.54
39:BU:54:LYS:HG2	39:BU:58:ARG:NH2	2.22	0.54
47:B3:29:ARG:HG2	58:BA:1184:G:OP1	2.08	0.54
56:B1:86:SER:OG	56:B1:90:ILE:HG13	2.08	0.54
58:BA:273(C):C:H2'	58:BA:273(D):C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:273(D):C:H2'	58:BA:273(E):C:H6	1.73	0.54
58:BA:1254:A:H5"	58:BA:1255:U:H5"	1.90	0.54
58:BA:1272:A:O2'	58:BA:1273:U:OP1	2.24	0.54
58:BA:1771:C:H2'	58:BA:1772:G:C8	2.43	0.54
58:BA:2379:G:H2'	58:BA:2380:C:C6	2.43	0.54
58:BA:2406:U:H4'	58:BA:2407:G:O5'	2.07	0.54
58:BA:2726:U:O2'	58:BA:2727:G:H8	1.91	0.54
58:BA:2889:C:H2'	58:BA:2891:G:O4'	2.08	0.54
3:CD:29:PRO:O	3:CD:30:LYS:HB3	2.08	0.54
3:CD:170:VAL:HG11	3:CD:176:LEU:HB2	1.89	0.54
20:CA:1057:G:H2'	20:CA:1058:G:O4'	2.06	0.54
21:CW:15:G:N2	21:CW:48:C:H42	2.05	0.54
24:DC:50:ILE:HG21	24:DC:202:PRO:HG2	1.89	0.54
24:DC:115:VAL:HG11	24:DC:154:ILE:HG12	1.90	0.54
24:DC:150:ILE:HD12	24:DC:153:ILE:HD12	1.90	0.54
26:DE:62:PRO:HA	58:DA:2787:C:H5'	1.89	0.54
27:DF:3:GLU:HB2	27:DF:23:ASP:HA	1.89	0.54
31:DK:115:LEU:O	58:DA:1058:G:O2'	2.25	0.54
32:DN:46:VAL:HG13	32:DN:47:ALA:N	2.23	0.54
36:DR:86:ARG:NH2	36:DR:87:TYR:OH	2.41	0.54
36:DR:100:LEU:HD22	36:DR:101:ALA:H	1.73	0.54
58:DA:2071:A:H2'	58:DA:2072:G:H8	1.71	0.54
20:AA:488:C:H2'	20:AA:489:C:C6	2.43	0.54
20:AA:1536:C:H42	22:AV:9:G:H1	1.56	0.54
23:AY:72:CYS:HB3	23:AY:79:ILE:HB	1.89	0.54
23:AY:413:ILE:HD12	23:AY:476:VAL:HA	1.89	0.54
24:BC:181:PHE:HB3	24:BC:185:LYS:HB3	1.90	0.54
26:BE:8:LYS:HE3	26:BE:188:VAL:HG11	1.89	0.54
26:BE:60:ASN:C	26:BE:61:ARG:HG3	2.32	0.54
26:BE:61:ARG:HG2	58:BA:2811:G:OP1	2.07	0.54
26:BE:161:GLY:O	26:BE:163:GLU:N	2.41	0.54
28:BG:126:ASP:OD2	28:BG:126:ASP:N	2.41	0.54
32:BN:30:ILE:CD1	32:BN:99:LEU:HD11	2.38	0.54
32:BN:40:PRO:CB	39:BU:68:ALA:HB2	2.37	0.54
38:BT:33:LYS:HB2	38:BT:43:GLN:N	2.21	0.54
46:B2:2:LYS:HD2	46:B2:5:GLU:HB2	1.90	0.54
56:B1:18:ILE:HG13	56:B1:20:ARG:H	1.73	0.54
58:BA:29:U:H2'	58:BA:30:G:C8	2.42	0.54
58:BA:681:G:H2'	58:BA:682:G:C8	2.43	0.54
58:BA:854:G:H1	58:BA:923:C:H42	1.56	0.54
58:BA:1358:G:N1	58:BA:1372:U:OP2	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:1514:U:H2'	58:BA:1515:C:C6	2.43	0.54
8:CI:111:ARG:HG3	20:CA:1369:C:P	2.48	0.54
11:CL:87:GLY:H	11:CL:99:HIS:H	1.56	0.54
11:CL:95:GLY:O	11:CL:97:ARG:N	2.41	0.54
20:CA:1385:G:H2'	20:CA:1386:G:C8	2.41	0.54
23:CY:91:THR:O	23:CY:93:GLU:N	2.41	0.54
24:DC:148:PHE:C	24:DC:150:ILE:H	2.16	0.54
26:DE:167:VAL:HG13	26:DE:170:LEU:HD11	1.88	0.54
32:DN:42:TRP:O	39:DU:64:ARG:CZ	2.56	0.54
35:DQ:7:MET:H	35:DQ:7:MET:HE3	1.73	0.54
44:DZ:81:ARG:O	44:DZ:82:ARG:HB2	2.08	0.54
58:DA:237:C:O2	58:DA:609(A):A:O2'	2.24	0.54
58:DA:122(A):C:H42	58:DA:1228:G:H1	1.56	0.54
58:DA:1627:G:H1	58:DA:1639:U:H3	1.54	0.54
58:DA:2258:C:H4'	58:DA:2259:G:OP2	2.07	0.54
58:DA:2330:G:H2'	58:DA:2331:G:O4'	2.07	0.54
58:DA:2678:C:H2'	58:DA:2679:A:H8	1.73	0.54
4:AE:19:MET:HE1	4:AE:24:ARG:HE	1.73	0.53
7:AH:104:ARG:HB3	7:AH:107:LEU:HG	1.89	0.53
11:AL:85:ILE:HD12	11:AL:98:TYR:CB	2.38	0.53
11:AL:124:LYS:NZ	20:AA:500:G:H5'	2.24	0.53
13:AN:18:VAL:HG21	20:AA:1316:G:O2'	2.08	0.53
15:AP:69:THR:HG21	20:AA:375:U:H5"	1.90	0.53
16:AQ:43:LEU:HB3	16:AQ:69:LYS:HE2	1.90	0.53
20:AA:1236:A:H4'	20:AA:1304:G:H4'	1.89	0.53
20:AA:1323:G:H2'	20:AA:1324:A:C8	2.43	0.53
23:AY:178:ILE:HA	23:AY:185:ALA:HA	1.89	0.53
23:AY:388:THR:HG21	23:AY:398:ILE:HA	1.90	0.53
27:BF:155:LEU:HD22	27:BF:186:ILE:HA	1.90	0.53
28:BG:80:PHE:HB3	58:BA:2311:A:H2	1.72	0.53
37:BS:99:LYS:HG2	37:BS:101:LEU:H	1.73	0.53
39:BU:77:SER:OG	58:BA:1010:A:O2'	2.23	0.53
43:BY:47:LYS:NZ	58:BA:480:A:O2'	2.28	0.53
58:BA:780:G:H21	58:BA:783:A:H62	1.55	0.53
58:BA:807:U:OP1	58:BA:830:G:N2	2.40	0.53
58:BA:930:U:H4'	58:BA:931:G:O4'	2.08	0.53
58:BA:1496:A:H2'	58:BA:1498:C:H5	1.73	0.53
58:BA:1501:C:H2'	58:BA:1502:C:C6	2.43	0.53
58:BA:1869:G:N2	58:BA:1872:A:OP2	2.39	0.53
58:BA:1999:C:H5'	58:BA:2723:C:O2'	2.08	0.53
4:CE:76:ILE:HG12	4:CE:78:HIS:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:87:SER:HB3	4:CE:131:ILE:HD13	1.90	0.53
20:CA:403:C:N4	20:CA:547:A:H5'	2.22	0.53
20:CA:1037:C:H2'	20:CA:1038:C:C6	2.44	0.53
25:DD:43:ARG:HG2	58:DA:692:C:H5'	1.91	0.53
30:DJ:39:UNK:O	30:DJ:43:UNK:N	2.41	0.53
31:DK:79:ARG:HA	31:DK:84:LEU:HB2	1.90	0.53
32:DN:126:PRO:O	32:DN:127:ASP:CB	2.56	0.53
34:DP:16:ARG:NH2	58:DA:1246:A:OP1	2.41	0.53
36:DR:33:ARG:HA	36:DR:114:VAL:O	2.08	0.53
37:DS:47:THR:HG22	37:DS:48:LEU:H	1.74	0.53
40:DV:33:VAL:HG22	40:DV:59:ALA:HB3	1.88	0.53
46:D2:66:GLU:O	46:D2:69:ARG:HG2	2.08	0.53
47:D3:17:LYS:HD3	58:DA:969:U:OP1	2.08	0.53
51:D8:23:VAL:HG12	51:D8:46:ARG:HH11	1.73	0.53
58:DA:278:A:H2'	58:DA:279:C:C6	2.43	0.53
58:DA:1428:C:O2'	58:DA:1569:A:OP2	2.21	0.53
58:DA:1503:U:H2'	58:DA:1504:C:C6	2.43	0.53
58:DA:2810:A:H62	58:DA:2891:G:H21	1.55	0.53
3:AD:8:VAL:HG11	3:AD:115:ARG:HD3	1.89	0.53
20:AA:1486:G:H2'	20:AA:1487:G:O4'	2.08	0.53
20:AA:1510:U:H3	20:AA:1525:G:H1	1.55	0.53
23:AY:85:PRO:HB3	23:AY:94:VAL:HA	1.90	0.53
23:AY:135:PHE:HA	23:AY:260:LEU:HA	1.89	0.53
32:BN:126:PRO:O	32:BN:127:ASP:CB	2.56	0.53
37:BS:31:SER:OG	59:BB:28:C:OP1	2.23	0.53
49:B6:48:VAL:O	49:B6:49:HIS:HB2	2.07	0.53
50:B7:19:ARG:N	58:BA:126:A:OP2	2.33	0.53
58:BA:36:G:H4'	58:BA:451:C:C2	2.43	0.53
58:BA:1316:U:H2'	58:BA:1317:A:C8	2.43	0.53
58:BA:1478:G:H2'	58:BA:1479:G:C8	2.42	0.53
58:BA:1491:G:P	58:BA:1494:A:H62	2.31	0.53
58:BA:2378:A:O5'	58:BA:2378:A:H8	1.90	0.53
58:BA:2642:G:H1	58:BA:2772:C:H42	1.56	0.53
58:BA:2852:G:H1	58:BA:2865:U:H3	1.54	0.53
3:CD:57:ARG:NH1	3:CD:205:GLU:HB2	2.23	0.53
7:CH:104:ARG:HB2	7:CH:138:TRP:HD1	1.73	0.53
9:CJ:13:HIS:HA	9:CJ:16:LEU:HD12	1.89	0.53
11:CL:115:LYS:O	11:CL:117:ARG:N	2.34	0.53
20:CA:1161:C:H2'	20:CA:1162:C:H6	1.74	0.53
23:CY:91:THR:HG22	23:CY:94:VAL:HB	1.89	0.53
23:CY:208:GLN:O	23:CY:211:GLU:HG2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:41:THR:HB	24:DC:175:PRO:HA	1.89	0.53
27:DF:46:ARG:HD3	58:DA:442:G:H4'	1.88	0.53
30:DJ:24:UNK:HA	30:DJ:84:UNK:C	2.38	0.53
33:DO:13:ASN:HB3	33:DO:97:ARG:HG3	1.89	0.53
35:DQ:2:LEU:HD12	35:DQ:3:MET:H	1.74	0.53
35:DQ:36:ALA:HB2	35:DQ:103:MET:HE3	1.90	0.53
38:DT:129:ARG:HD3	38:DT:132:LYS:HB2	1.90	0.53
42:DX:10:ALA:HB3	42:DX:29:TRP:HB2	1.90	0.53
48:D5:22:HIS:NE2	58:DA:2045:C:O2	2.41	0.53
58:DA:453:C:H4'	58:DA:472:A:H61	1.73	0.53
58:DA:579:G:O2'	58:DA:2019:A:OP1	2.24	0.53
58:DA:690:G:H2'	58:DA:691:C:O4'	2.08	0.53
1:AB:155:LEU:HD21	1:AB:159:PRO:HG3	1.90	0.53
3:AD:22:LYS:HB3	3:AD:26:CYS:HB2	1.90	0.53
9:AJ:15:THR:HA	9:AJ:18:ALA:HB3	1.90	0.53
20:AA:113:G:H2'	20:AA:114:U:H6	1.73	0.53
20:AA:118:U:H3'	20:AA:288:A:H61	1.73	0.53
20:AA:427:U:H4'	20:AA:541:G:H5"	1.91	0.53
20:AA:946:A:H2'	20:AA:947:G:C8	2.43	0.53
20:AA:1304:G:N1	20:AA:1332:A:OP2	2.41	0.53
21:AW:35:A:N6	22:AV:18:G:O6	2.41	0.53
29:BH:85:LYS:HE3	29:BH:145:ALA:HB2	1.89	0.53
29:BH:149:ARG:HD2	29:BH:164:TYR:CZ	2.43	0.53
31:BK:90:LYS:NZ	58:BA:1076:C:O2'	2.42	0.53
37:BS:66:ALA:HB1	37:BS:99:LYS:HD2	1.90	0.53
58:BA:638:G:H2'	58:BA:639:U:C6	2.43	0.53
58:BA:667:U:H2'	58:BA:668:G:O4'	2.09	0.53
58:BA:1105:U:H2'	58:BA:1106:G:H8	1.72	0.53
58:BA:1670:C:H2'	58:BA:1671:U:O4'	2.09	0.53
58:BA:1677:A:H2'	58:BA:1678:G:C8	2.42	0.53
1:CB:87:ARG:HG2	1:CB:223:ILE:HD11	1.91	0.53
3:CD:31:CYS:HB3	3:CD:33:MET:HG2	1.90	0.53
20:CA:1158:C:O2'	20:CA:1160:G:OP1	2.23	0.53
23:CY:604:PRO:HA	23:CY:676:TYR:HB3	1.90	0.53
24:DC:135:ARG:NH1	58:DA:2170:A:OP1	2.41	0.53
25:DD:101:GLU:HG2	58:DA:1491:G:O2'	2.08	0.53
25:DD:149:PRO:HG2	58:DA:2218:G:H4'	1.90	0.53
32:DN:30:ILE:CD1	32:DN:99:LEU:HD11	2.38	0.53
32:DN:80:GLY:HA2	58:DA:1131:G:OP1	2.08	0.53
32:DN:111:PRO:CD	58:DA:558:G:OP2	2.50	0.53
34:DP:23:PRO:HG2	34:DP:33:ARG:HG3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DQ:116:GLU:HG3	35:DQ:119:ARG:HH21	1.73	0.53
56:D1:27:GLU:HA	56:D1:31:GLY:HA2	1.91	0.53
58:DA:380:U:O2	58:DA:394:A:N1	2.41	0.53
58:DA:828:U:H4'	58:DA:831:G:N1	2.23	0.53
58:DA:1000:A:OP2	58:DA:1154:G:N1	2.39	0.53
58:DA:2749:A:H62	58:DA:2753:A:N6	2.04	0.53
4:AE:59:GLY:O	4:AE:63:ARG:HG3	2.08	0.53
10:AK:119:CYS:SG	10:AK:120:ARG:N	2.81	0.53
16:AQ:45:HIS:HB3	16:AQ:72:ARG:HG2	1.91	0.53
20:AA:543:C:H2'	20:AA:544:G:O4'	2.09	0.53
23:AY:137:ASN:ND2	23:AY:262:SER:HA	2.23	0.53
25:BD:222:ARG:N	58:BA:1789:A:OP1	2.34	0.53
26:BE:119:ARG:HD2	26:BE:120:TRP:CD1	2.43	0.53
26:BE:129:HIS:HD1	26:BE:129:HIS:H	1.55	0.53
27:BF:125:LEU:HA	27:BF:194:MET:O	2.07	0.53
30:BJ:33:UNK:O	30:BJ:37:UNK:N	2.41	0.53
33:BO:6:THR:HG23	58:BA:1666:G:O3'	2.08	0.53
41:BW:23:LEU:HB2	48:B5:25:LEU:HD13	1.89	0.53
44:BZ:10:ARG:HA	44:BZ:38:TYR:HE2	1.74	0.53
56:B1:25:LYS:HG2	56:B1:34:THR:C	2.34	0.53
58:BA:1213:A:N6	58:BA:1236:G:H1'	2.23	0.53
58:BA:1708:C:H2'	58:BA:1709:U:H6	1.72	0.53
58:BA:1802:A:H2'	58:BA:1803:A:C8	2.44	0.53
58:BA:1930:G:H22	58:BA:1968:G:H2'	1.73	0.53
58:BA:2109:U:H2'	58:BA:2110:G:O4'	2.07	0.53
58:BA:2415:G:H2'	58:BA:2416:C:H6	1.73	0.53
59:BB:24:G:N1	59:BB:56:G:C2	2.77	0.53
1:CB:192:SER:OG	1:CB:193:ASP:N	2.35	0.53
12:CM:11:ARG:O	12:CM:13:LYS:N	2.41	0.53
13:CN:2:ALA:O	13:CN:4:LYS:N	2.41	0.53
16:CQ:10:VAL:HA	16:CQ:21:VAL:HG22	1.90	0.53
20:CA:1006:C:H2'	20:CA:1007:C:C6	2.43	0.53
23:CY:344:THR:OG1	23:CY:388:THR:O	2.19	0.53
25:DD:69:ARG:HH21	25:DD:105:ILE:HG13	1.72	0.53
25:DD:269:PHE:HE2	58:DA:2219:G:H5"	1.74	0.53
31:DK:13:PRO:HG3	31:DK:52:ILE:HG23	1.89	0.53
38:DT:93:ARG:NH2	58:DA:2863:C:OP1	2.41	0.53
43:DY:85:VAL:HG13	43:DY:94:LYS:HB3	1.90	0.53
44:DZ:95:PRO:HA	44:DZ:129:SER:HA	1.89	0.53
46:D2:57:ILE:HA	46:D2:60:LEU:HD12	1.90	0.53
51:D8:61:LEU:HG	58:DA:593:G:H4'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:D1:67:ILE:N	56:D1:68:PRO:HD2	2.24	0.53
58:DA:459:U:C6	58:DA:470:A:N6	2.76	0.53
58:DA:565:C:H2'	58:DA:566:U:O4'	2.09	0.53
58:DA:641:C:H2'	58:DA:642:G:O4'	2.07	0.53
58:DA:1115:G:H2'	58:DA:1116:C:H6	1.73	0.53
58:DA:1294:U:H2'	58:DA:1295:C:H6	1.74	0.53
58:DA:149(B):A:H2'	58:DA:1449:G:O4'	2.08	0.53
58:DA:1541:U:H3'	58:DA:1542:G:O3'	2.06	0.53
58:DA:1935:G:H1'	58:DA:1964:G:N2	2.24	0.53
58:DA:2001:A:H2'	58:DA:2002:G:C8	2.42	0.53
58:DA:2023:G:C6	58:DA:2040:C:N3	2.76	0.53
58:DA:2023:G:C2	58:DA:2040:C:O2	2.61	0.53
58:DA:2726:U:O2'	58:DA:2727:G:H8	1.91	0.53
59:DB:24:G:C6	59:DB:56:G:C2	2.96	0.53
9:AJ:35:SER:N	9:AJ:73:ASP:O	2.40	0.53
14:AO:8:LYS:HE3	14:AO:31:LEU:HD11	1.90	0.53
16:AQ:83:ASP:OD1	16:AQ:83:ASP:N	2.40	0.53
20:AA:881:G:H2'	20:AA:882:C:H6	1.72	0.53
21:AW:41:A:H2'	21:AW:42:U:C6	2.43	0.53
24:BC:40:GLU:HB3	24:BC:217:THR:C	2.33	0.53
24:BC:83:LYS:HG3	24:BC:117:THR:HG21	1.89	0.53
27:BF:197:ASP:OD2	27:BF:198:ALA:N	2.42	0.53
33:BO:98:VAL:HG22	33:BO:117:LEU:HD22	1.90	0.53
36:BR:96:ARG:HH21	58:BA:2881:C:H5"	1.73	0.53
37:BS:15:ARG:HB2	37:BS:18:ILE:HB	1.90	0.53
58:BA:605:C:H1'	58:BA:657:U:O2'	2.09	0.53
58:BA:2655:G:N2	58:BA:2664:G:H2'	2.23	0.53
58:BA:2850:A:H2'	58:BA:2851:A:C8	2.44	0.53
20:CA:127:G:H1	20:CA:234:C:N4	2.03	0.53
20:CA:339:C:H2'	20:CA:340:U:C6	2.43	0.53
24:DC:20:VAL:HG13	24:DC:226:ASN:HB2	1.91	0.53
24:DC:67:HIS:CE1	24:DC:185:LYS:HG3	2.44	0.53
24:DC:176:VAL:O	24:DC:178:LYS:N	2.41	0.53
25:DD:260:ARG:NE	25:DD:267:SER:OG	2.40	0.53
27:DF:155:LEU:HB2	27:DF:189:THR:OG1	2.09	0.53
32:DN:56:ASN:HB3	32:DN:125:GLY:C	2.34	0.53
32:DN:120:LEU:CD2	32:DN:122:VAL:HG23	2.38	0.53
36:DR:17:ARG:NH2	58:DA:2002:G:OP1	2.30	0.53
37:DS:53:SER:HA	37:DS:65:VAL:HG11	1.89	0.53
47:D3:33:GLN:HG3	47:D3:35:ARG:HD3	1.89	0.53
49:D6:27:LYS:O	49:D6:32:ASN:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:2081:C:H2'	58:DA:2082:A:C8	2.44	0.53
58:DA:2247:A:H2'	58:DA:2248:C:O4'	2.08	0.53
58:DA:2328:A:H2'	58:DA:2329:G:C8	2.44	0.53
58:DA:2780:G:H1'	58:DA:2781:A:OP1	2.07	0.53
4:AE:154:GLY:HA2	7:AH:64:LYS:HD3	1.89	0.53
6:AG:46:ALA:O	6:AG:50:ILE:HG13	2.08	0.53
6:AG:78:ARG:HD2	6:AG:79:ARG:HD3	1.91	0.53
12:AM:34:LEU:HD13	12:AM:41:PRO:HG3	1.91	0.53
20:AA:552:U:H2'	20:AA:553:A:C8	2.44	0.53
20:AA:867:G:H2'	20:AA:868:C:C6	2.44	0.53
26:BE:111:ARG:H	26:BE:161:GLY:HA3	1.73	0.53
27:BF:6:VAL:HG23	27:BF:7:TYR:H	1.74	0.53
27:BF:59:TYR:OH	58:BA:470:A:OP1	2.24	0.53
32:BN:115:ARG:HG2	32:BN:115:ARG:HH11	1.73	0.53
34:BP:42:SER:HA	58:BA:671:C:C5	2.43	0.53
34:BP:60:MET:HB3	58:BA:2392:A:H1'	1.89	0.53
36:BR:24:GLN:OE1	58:BA:1277:G:O2'	2.26	0.53
37:BS:71:ARG:O	37:BS:74:ALA:HB3	2.09	0.53
44:BZ:74:VAL:HG22	44:BZ:86:VAL:HG13	1.89	0.53
47:B3:12:PRO:HB2	47:B3:20:LYS:HE2	1.90	0.53
50:B7:28:ARG:HA	50:B7:31:LEU:HG	1.90	0.53
51:B8:30:ARG:H	51:B8:32:LEU:HD23	1.74	0.53
58:BA:1199:U:H2'	58:BA:1200:C:C6	2.43	0.53
58:BA:2144:U:C2'	58:BA:2147:G:H1	2.20	0.53
58:BA:2688:U:H5	58:BA:2719:G:H2'	1.74	0.53
1:CB:175:ARG:NH2	20:CA:1075:C:O2'	2.40	0.53
7:CH:7:ALA:O	7:CH:11:THR:HG23	2.09	0.53
8:CI:19:LEU:HB3	8:CI:59:PHE:CE2	2.44	0.53
20:CA:730:G:C5	20:CA:731:G:H1'	2.43	0.53
20:CA:930:C:N4	20:CA:1387:G:H1	2.03	0.53
23:CY:324:ARG:NH2	23:CY:383:THR:O	2.36	0.53
26:DE:93:VAL:HG21	26:DE:180:ASN:HA	1.90	0.53
36:DR:40:LYS:NZ	58:DA:1278:A:OP1	2.41	0.53
41:DW:33:ARG:NH2	41:DW:52:GLU:OE1	2.42	0.53
58:DA:493:G:H2'	58:DA:494:G:O4'	2.09	0.53
58:DA:575:A:H4'	58:DA:2500:U:H4'	1.90	0.53
58:DA:589:C:H2'	58:DA:590:A:C8	2.43	0.53
58:DA:784:A:N6	58:DA:2072:G:O2'	2.34	0.53
58:DA:919:G:H2'	58:DA:920:G:C8	2.44	0.53
58:DA:1674:G:H21	58:DA:1677:A:N6	2.04	0.53
58:DA:2038:G:H2'	58:DA:2039:C:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:2102:U:H2'	58:DA:2103:C:C6	2.43	0.53
58:DA:2134:A:N6	58:DA:2157:G:H1'	2.24	0.53
58:DA:2456:C:N4	58:DA:2495:G:H1	2.07	0.53
7:AH:13:ILE:O	7:AH:17:THR:HG23	2.09	0.53
9:AJ:82:ILE:O	9:AJ:86:MET:HB3	2.09	0.53
18:AS:50:ALA:HB1	18:AS:57:HIS:HB3	1.91	0.53
20:AA:565:U:OP2	20:AA:566:G:O2'	2.26	0.53
20:AA:1418:A:H8	20:AA:1418:A:O5'	1.91	0.53
25:BD:52:ARG:HH21	25:BD:220:HIS:CE1	2.27	0.53
32:BN:17:ASP:O	32:BN:18:ALA:CB	2.57	0.53
32:BN:69:GLN:HE21	58:BA:1022:G:C5'	2.05	0.53
32:BN:98:VAL:HG23	32:BN:99:LEU:N	2.23	0.53
37:BS:106:ARG:NE	37:BS:108:GLY:HA2	2.20	0.53
38:BT:47:GLY:HA2	38:BT:65:LYS:HD2	1.91	0.53
39:BU:95:LEU:HD21	40:BV:13:ARG:HD3	1.90	0.53
39:BU:105:VAL:O	39:BU:109:LEU:HG	2.09	0.53
40:BV:4:ILE:HB	40:BV:39:LEU:O	2.08	0.53
40:BV:18:LEU:H	40:BV:96:ILE:HD12	1.74	0.53
58:BA:504:U:H4'	58:BA:505:A:H5'	1.91	0.53
58:BA:722:A:H2'	58:BA:723:G:C8	2.44	0.53
58:BA:817:C:H42	58:BA:1190:G:H1	1.56	0.53
58:BA:1438:U:O2	58:BA:1553:A:N7	2.41	0.53
58:BA:1899:G:H21	58:BA:1902:C:H41	1.57	0.53
58:BA:2126:A:N3	58:BA:2127:G:H1'	2.24	0.53
58:BA:2361:A:H2'	58:BA:2362:G:H8	1.74	0.53
58:BA:2591:C:N4	58:BA:2592:G:O6	2.42	0.53
10:CK:91:ARG:O	10:CK:95:ILE:HG13	2.08	0.53
20:CA:687:A:H62	20:CA:703:G:N2	2.04	0.53
20:CA:1127:G:H21	20:CA:1147:C:H41	1.56	0.53
20:CA:1423:G:H2'	20:CA:1424:C:C6	2.44	0.53
33:DO:71:ARG:HD2	38:DT:74:ARG:HH22	1.74	0.53
37:DS:95:HIS:NE2	59:DB:48:A:H4'	2.23	0.53
40:DV:96:ILE:HG22	40:DV:97:LYS:N	2.23	0.53
41:DW:51:LEU:HA	41:DW:105:VAL:HG11	1.90	0.53
53:De:62:VAL:HG11	53:De:92:LEU:HD22	1.90	0.53
58:DA:122:G:H1	58:DA:129:C:H42	1.57	0.53
58:DA:852:G:H2'	58:DA:853:G:C8	2.43	0.53
58:DA:913:U:H1'	58:DA:914:C:H5	1.74	0.53
58:DA:2886:G:H2'	58:DA:2887:U:H6	1.73	0.53
1:AB:168:THR:C	1:AB:171:ALA:H	2.17	0.53
19:AT:10:LEU:HD12	19:AT:11:SER:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:16:HIS:O	19:AT:20:LEU:HG	2.09	0.53
20:AA:33:A:H2'	20:AA:34:C:C6	2.44	0.53
20:AA:414:A:H62	20:AA:430:A:H61	1.55	0.53
23:AY:201:ILE:HD13	23:AY:206:LEU:HD12	1.91	0.53
24:BC:24:ASP:OD1	24:BC:191:ARG:NH2	2.40	0.53
29:BH:125:VAL:HG22	29:BH:131:VAL:HG13	1.91	0.53
31:BK:36:GLU:HG2	31:BK:65:PHE:HZ	1.74	0.53
34:BP:46:LYS:HG2	34:BP:51:PHE:CD1	2.43	0.53
38:BT:95:ARG:HE	58:BA:1753:G:H5"	1.74	0.53
42:BX:26:TYR:CE2	42:BX:89:ILE:HB	2.44	0.53
50:B7:34:ARG:NH1	58:BA:467:G:OP1	2.38	0.53
56:B1:17:SER:OG	56:B1:41:ARG:HA	2.08	0.53
58:BA:453:C:H4'	58:BA:472:A:N6	2.23	0.53
58:BA:1080:C:H2'	58:BA:1081:U:H6	1.74	0.53
58:BA:1174:A:H3'	58:BA:1175:U:H4'	1.91	0.53
58:BA:2294:C:H2'	58:BA:2295:C:H6	1.74	0.53
1:CB:24:TRP:CZ3	1:CB:26:PRO:HA	2.44	0.53
20:CA:341:C:H2'	20:CA:342:C:H6	1.73	0.53
20:CA:445:G:H2'	20:CA:446:G:C8	2.44	0.53
20:CA:947:G:H4'	20:CA:1332:A:H2	1.74	0.53
21:CW:35:A:H2'	21:CW:36:U:C6	2.44	0.53
23:CY:205:TYR:O	23:CY:207:ASP:N	2.42	0.53
24:DC:64:SER:HA	24:DC:160:GLY:O	2.09	0.53
31:DK:9:LYS:HB2	31:DK:55:VAL:O	2.09	0.53
40:DV:15:GLU:HB3	40:DV:16:PRO:HD2	1.91	0.53
49:D6:46:HIS:ND1	58:DA:2371:G:O2'	2.41	0.53
56:D1:5:CYS:SG	56:D1:8:SER:N	2.79	0.53
58:DA:259:G:H2'	58:DA:260:G:C8	2.44	0.53
58:DA:662:G:H2'	58:DA:663:G:H8	1.74	0.53
58:DA:1139:G:H2'	58:DA:1140:C:C6	2.44	0.53
58:DA:2115:G:C6	58:DA:2117:A:H5"	2.44	0.53
58:DA:2284:C:N4	58:DA:2384:G:H1	2.05	0.53
58:DA:2625:G:H2'	58:DA:2626:C:O4'	2.08	0.53
23:AY:554:PRO:HG3	23:AY:594:VAL:HG12	1.89	0.53
24:BC:6:LYS:HA	24:BC:9:ARG:HG2	1.90	0.53
27:BF:126:VAL:HG21	27:BF:142:TRP:HZ2	1.74	0.53
32:BN:30:ILE:HG22	32:BN:34:LEU:HD23	1.90	0.53
32:BN:137:LYS:NZ	32:BN:138:LEU:HD23	2.24	0.53
38:BT:48:ILE:N	38:BT:64:ARG:O	2.38	0.53
45:B0:74:ARG:HH22	59:BB:13:A:H8	1.57	0.53
51:B8:23:VAL:HA	51:B8:48:PHE:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:B4:1:MET:HB3	57:B4:6:HIS:CD2	2.44	0.53
58:BA:6:A:H2'	58:BA:7:G:H8	1.74	0.53
58:BA:634:C:H2'	58:BA:635:C:H6	1.74	0.53
58:BA:1020:A:N1	58:BA:1141:U:H1'	2.24	0.53
58:BA:2081:C:H2'	58:BA:2082:A:H8	1.73	0.53
58:BA:2121:G:H2'	58:BA:2122:U:C6	2.44	0.53
59:BB:13:A:N6	59:BB:69:G:O2'	2.40	0.53
3:CD:164:ALA:O	3:CD:168:ARG:NH1	2.41	0.53
8:CI:28:VAL:HG12	8:CI:63:ILE:HB	1.90	0.53
20:CA:193:C:H2'	20:CA:194:C:H6	1.73	0.53
20:CA:428:G:H1'	20:CA:430:A:C8	2.44	0.53
20:CA:683:G:H2'	20:CA:684:A:C8	2.43	0.53
20:CA:757:U:H2'	20:CA:758:G:O4'	2.08	0.53
20:CA:895:G:H1	20:CA:904:C:N4	2.06	0.53
20:CA:1271:G:H2'	20:CA:1272:G:H8	1.73	0.53
23:CY:67:ALA:HB2	23:CY:363:ARG:HH21	1.72	0.53
23:CY:546:ILE:HG21	23:CY:565:VAL:HG11	1.90	0.53
24:DC:45:HIS:ND1	24:DC:171:ALA:O	2.42	0.53
25:DD:85:ASP:OD1	25:DD:88:ARG:NH1	2.42	0.53
27:DF:102:PRO:HA	58:DA:607:U:P	2.48	0.53
27:DF:158:THR:OG1	27:DF:159:GLY:N	2.42	0.53
32:DN:115:ARG:HG2	32:DN:115:ARG:HH11	1.73	0.53
34:DP:61:ARG:HH11	51:D8:13:ARG:HD2	1.74	0.53
38:DT:77:PRO:O	38:DT:79:HIS:N	2.41	0.53
40:DV:95:LEU:O	40:DV:96:ILE:O	2.26	0.53
44:DZ:104:PHE:HA	44:DZ:139:VAL:HG23	1.91	0.53
58:DA:685:A:H5"	58:DA:774:A:N6	2.22	0.53
58:DA:2538:C:H2'	58:DA:2539:C:C6	2.44	0.53
58:DA:2662:A:H8	58:DA:2662:A:O5'	1.91	0.53
58:DA:2834:G:H1'	58:DA:2883:A:H61	1.72	0.53
58:DA:2851:A:H2'	58:DA:2852:G:O4'	2.08	0.53
1:AB:60:ASP:HB3	1:AB:64:ARG:HH21	1.74	0.53
18:AS:15:LEU:HD21	18:AS:33:THR:HG22	1.91	0.53
20:AA:124:G:H4'	20:AA:291:C:O2'	2.09	0.53
20:AA:227:G:H2'	20:AA:228:A:H8	1.74	0.53
20:AA:1127:G:N2	20:AA:1147:C:H41	2.07	0.53
20:AA:1287:A:H2'	20:AA:1288:A:C8	2.43	0.53
20:AA:1332:A:H2'	20:AA:1333:A:O4'	2.09	0.53
30:BJ:50:UNK:O	30:BJ:52:UNK:N	2.42	0.53
31:BK:30:HIS:CD2	31:BK:59:ILE:HB	2.44	0.53
31:BK:131:ALA:HA	31:BK:134:MET:HE2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BN:11:PRO:HB2	32:BN:51:PHE:HE1	1.74	0.53
33:BO:34:THR:H	33:BO:37:ASP:CG	2.16	0.53
35:BQ:134:ARG:NH1	44:BZ:119:GLU:HG3	2.24	0.53
58:BA:591:C:H2'	58:BA:592:G:C8	2.43	0.53
1:CB:54:THR:O	1:CB:58:ILE:HG12	2.07	0.53
4:CE:115:VAL:HG11	4:CE:118:ILE:HB	1.89	0.53
20:CA:983:A:H2	20:CA:984:C:C5	2.27	0.53
20:CA:1288:A:H2'	20:CA:1289:A:O4'	2.09	0.53
21:CW:12:U:H3	21:CW:23:A:H61	1.56	0.53
23:CY:107:VAL:HG22	23:CY:135:PHE:HB3	1.91	0.53
32:DN:30:ILE:O	32:DN:34:LEU:HD23	2.09	0.53
34:DP:79:ARG:HH21	34:DP:109:GLY:HA2	1.73	0.53
38:DT:98:LYS:HG2	58:DA:2718:G:O3'	2.08	0.53
41:DW:101:SER:O	41:DW:102:HIS:ND1	2.42	0.53
43:DY:86:ARG:HG2	43:DY:88:LYS:H	1.73	0.53
58:DA:307:G:H21	58:DA:330:A:N6	2.07	0.53
58:DA:890:A:H2'	58:DA:892:G:O4'	2.09	0.53
58:DA:919:G:H2'	58:DA:920:G:H8	1.74	0.53
58:DA:1010:A:N3	58:DA:1153:C:H1'	2.23	0.53
1:AB:71:VAL:O	1:AB:165:VAL:HG23	2.08	0.52
3:AD:162:LEU:O	3:AD:166:LYS:HG3	2.09	0.52
20:AA:794:A:H4'	20:AA:1521:G:O2'	2.08	0.52
20:AA:983:A:C2	20:AA:984:C:H5	2.27	0.52
21:AW:41:A:O2'	21:AW:42:U:OP1	2.22	0.52
25:BD:24:ILE:HG23	25:BD:25:THR:H	1.74	0.52
26:BE:141:ILE:HG13	26:BE:142:GLY:H	1.75	0.52
27:BF:191:ARG:HB3	27:BF:193:VAL:HG23	1.92	0.52
32:BN:30:ILE:O	32:BN:34:LEU:HD23	2.09	0.52
32:BN:120:LEU:CD2	32:BN:122:VAL:HG23	2.38	0.52
37:BS:105:ALA:O	37:BS:107:GLU:N	2.42	0.52
41:BW:26:GLY:HA2	41:BW:71:VAL:O	2.09	0.52
46:B2:32:LEU:HD11	46:B2:54:LYS:HG2	1.90	0.52
49:B6:27:LYS:HZ2	49:B6:30:THR:H	1.58	0.52
58:BA:193:U:H2'	58:BA:194:G:H8	1.74	0.52
58:BA:373:U:H2'	58:BA:374:A:H8	1.74	0.52
58:BA:476:G:N1	58:BA:479:A:OP2	2.38	0.52
58:BA:1044:G:O3'	58:BA:1047:G:H5'	2.09	0.52
58:BA:2881:C:H2'	58:BA:2882:A:C8	2.44	0.52
7:CH:111:ILE:HG13	7:CH:135:CYS:SG	2.48	0.52
7:CH:127:LEU:HB3	7:CH:129:VAL:HG22	1.91	0.52
10:CK:99:GLN:HG2	10:CK:105:VAL:HG11	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:78:TYR:O	14:CO:82:ILE:HG22	2.09	0.52
16:CQ:45:HIS:CB	16:CQ:72:ARG:HA	2.39	0.52
19:CT:102:GLY:C	19:CT:104:LEU:H	2.17	0.52
20:CA:59:A:H1'	20:CA:354:G:N2	2.24	0.52
20:CA:695:A:H2'	20:CA:696:A:C8	2.44	0.52
20:CA:834:C:H42	20:CA:852:G:H1	1.57	0.52
20:CA:1401:G:H5"	22:CV:22:A:N6	2.24	0.52
23:CY:164:MET:HG3	23:CY:259:PHE:CE2	2.45	0.52
28:DG:30:GLU:HA	59:DB:57:A:H1'	1.92	0.52
33:DO:104:ARG:O	33:DO:107:ARG:HB3	2.08	0.52
38:DT:49:VAL:H	38:DT:63:VAL:HG13	1.74	0.52
42:DX:6:ASP:N	42:DX:6:ASP:OD1	2.42	0.52
58:DA:401:A:H61	58:DA:422:A:N6	1.96	0.52
58:DA:1408:C:H42	58:DA:1594:G:H1	1.57	0.52
58:DA:1474:C:N4	58:DA:1519:G:H1	2.07	0.52
58:DA:1576:U:H2'	58:DA:1577:C:C6	2.44	0.52
58:DA:2178:C:H2'	58:DA:2179:C:C6	2.44	0.52
58:DA:2342:C:H2'	58:DA:2343:C:O4'	2.09	0.52
2:AC:6:HIS:CG	13:AN:49:HIS:HB3	2.44	0.52
3:AD:12:CYS:HB3	3:AD:33:MET:SD	2.49	0.52
5:AF:96:PRO:HB3	17:AR:32:ARG:HB3	1.92	0.52
13:AN:17:LYS:HG3	13:AN:18:VAL:HG13	1.90	0.52
14:AO:16:ALA:HB1	14:AO:21:ASP:HB3	1.91	0.52
20:AA:370:C:H2'	20:AA:371:G:C8	2.43	0.52
20:AA:762:C:H2'	20:AA:763:G:C8	2.45	0.52
20:AA:1134:G:H2'	20:AA:1135:U:O4'	2.09	0.52
23:AY:607:ARG:HG3	23:AY:674:ASP:HB2	1.92	0.52
26:BE:67:PHE:CG	26:BE:68:ALA:N	2.78	0.52
30:BJ:112:UNK:O	30:BJ:114:UNK:N	2.41	0.52
32:BN:56:ASN:HB3	32:BN:125:GLY:C	2.34	0.52
32:BN:64:GLY:CA	58:BA:1141:U:C5	2.87	0.52
56:B1:25:LYS:HD3	56:B1:26:ARG:N	2.23	0.52
58:BA:163:U:H2'	58:BA:164:U:H5'	1.90	0.52
58:BA:1077:A:H3'	58:BA:1078:U:O4'	2.09	0.52
58:BA:1288:U:C4	58:BA:1327:C:H1'	2.43	0.52
58:BA:2135:A:H4'	58:BA:2160:G:H4'	1.90	0.52
58:BA:2259:G:H2'	58:BA:2260:C:H6	1.75	0.52
58:BA:2820:A:HO2'	58:BA:2821:A:P	2.30	0.52
1:CB:97:TRP:CE3	1:CB:172:ILE:HG13	2.44	0.52
1:CB:106:LYS:H	1:CB:106:LYS:HD2	1.74	0.52
4:CE:25:ARG:NH1	20:CA:1070:U:H5'	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:76:ILE:HG13	4:CE:142:LEU:HD21	1.91	0.52
6:CG:85:TYR:O	6:CG:87:VAL:HG23	2.08	0.52
7:CH:10:LEU:HD22	7:CH:83:ILE:HD11	1.90	0.52
11:CL:15:ARG:NH2	20:CA:567:G:O6	2.42	0.52
15:CP:22:THR:OG1	15:CP:23:ASP:N	2.38	0.52
16:CQ:56:VAL:HG23	16:CQ:81:ARG:HG3	1.91	0.52
20:CA:638:G:H2'	20:CA:639:G:O4'	2.08	0.52
20:CA:1094:G:O2'	20:CA:1095:U:OP2	2.25	0.52
20:CA:1387:G:H2'	20:CA:1388:C:C6	2.45	0.52
20:CA:1468:A:H2'	20:CA:1469:G:O4'	2.09	0.52
23:CY:219:VAL:C	23:CY:221:ALA:H	2.15	0.52
26:DE:15:PHE:CD1	38:DT:80:SER:HB2	2.43	0.52
26:DE:37:ARG:HB2	26:DE:46:ALA:HB3	1.91	0.52
36:DR:76:VAL:HA	36:DR:79:LEU:HB2	1.90	0.52
45:D0:38:VAL:HG21	45:D0:59:LEU:HD12	1.92	0.52
53:De:71:LYS:HD2	53:De:71:LYS:N	2.23	0.52
58:DA:307:G:H21	58:DA:330:A:H62	1.56	0.52
58:DA:608:A:H2'	58:DA:609(A):A:C8	2.44	0.52
58:DA:675:A:H3'	58:DA:676:A:C2	2.44	0.52
58:DA:1066:U:O2'	58:DA:1068:G:N7	2.42	0.52
58:DA:2088:G:H1	58:DA:2231:C:H42	1.57	0.52
58:DA:2212:A:H4'	58:DA:2213:U:C5	2.44	0.52
58:DA:2329:G:H2'	58:DA:2330:G:C8	2.44	0.52
58:DA:2587:A:H62	58:DA:2608:G:H21	1.57	0.52
11:AL:85:ILE:HD12	11:AL:98:TYR:HB2	1.92	0.52
11:AL:124:LYS:NZ	20:AA:501:C:OP2	2.42	0.52
12:AM:67:GLU:HB2	12:AM:71:ARG:HH21	1.72	0.52
14:AO:40:SER:O	14:AO:44:LYS:HG2	2.09	0.52
16:AQ:45:HIS:CE1	16:AQ:47:PRO:HG3	2.44	0.52
20:AA:272:C:H2'	20:AA:273:A:C8	2.45	0.52
20:AA:370:C:H42	20:AA:391:G:H1	1.57	0.52
20:AA:505:G:OP2	20:AA:535:A:H5'	2.09	0.52
20:AA:834:C:H2'	20:AA:835:U:H6	1.74	0.52
20:AA:962:C:H2'	20:AA:963:G:C8	2.44	0.52
20:AA:1066:C:H3'	20:AA:1067:A:C8	2.44	0.52
23:AY:197:ARG:HG3	23:AY:198:GLU:H	1.73	0.52
23:AY:309:LEU:HD21	23:AY:335:LEU:HD13	1.90	0.52
24:BC:151:GLY:C	24:BC:154:ILE:H	2.17	0.52
25:BD:35:LYS:O	25:BD:37:LEU:N	2.43	0.52
25:BD:148:GLU:HB3	25:BD:151:LYS:HG3	1.91	0.52
25:BD:264:LYS:H	25:BD:267:SER:HB2	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:170:LEU:CB	27:BF:173:VAL:HB	2.28	0.52
28:BG:128:ARG:NH1	58:BA:2316:C:H1'	2.24	0.52
29:BH:105:LEU:HG	29:BH:113:VAL:HB	1.90	0.52
29:BH:121:ILE:HG22	29:BH:136:ILE:H	1.74	0.52
35:BQ:69:PHE:HE1	58:BA:872:A:H5'	1.73	0.52
39:BU:59:ARG:NH1	58:BA:1009:A:O4'	2.43	0.52
40:BV:47:VAL:HB	40:BV:50:PRO:O	2.09	0.52
45:B0:29:GLN:NE2	58:BA:923:C:H1'	2.24	0.52
46:B2:10:LEU:O	46:B2:14:ARG:HB2	2.10	0.52
58:BA:945:A:O2'	58:BA:946:G:H4'	2.09	0.52
8:CI:125:TYR:HE2	20:CA:967:C:H4'	1.75	0.52
16:CQ:67:LYS:C	16:CQ:69:LYS:H	2.16	0.52
20:CA:193:C:H2'	20:CA:194:C:C6	2.44	0.52
20:CA:328:C:H4'	20:CA:329:A:H5'	1.90	0.52
27:DF:155:LEU:O	27:DF:191:ARG:O	2.27	0.52
32:DN:137:LYS:NZ	32:DN:138:LEU:HD23	2.24	0.52
34:DP:41:ARG:HH11	58:DA:832:G:H5'	1.73	0.52
36:DR:18:LEU:O	36:DR:22:ARG:HG3	2.09	0.52
37:DS:13:ARG:C	37:DS:15:ARG:N	2.67	0.52
38:DT:107:ASP:OD1	38:DT:108:ARG:N	2.42	0.52
39:DU:10:ARG:O	39:DU:14:HIS:HB2	2.09	0.52
40:DV:20:LEU:HG	40:DV:93:GLU:HG3	1.91	0.52
42:DX:64:LYS:HD3	58:DA:64:A:H5'	1.90	0.52
45:D0:23:VAL:HA	45:D0:38:VAL:HA	1.90	0.52
48:D5:19:ARG:HA	58:DA:2046:G:H5'	1.92	0.52
51:D8:27:THR:OG1	58:DA:2361:A:O5'	2.26	0.52
58:DA:580:C:H2'	58:DA:581:C:C6	2.45	0.52
58:DA:1102:C:C2	58:DA:1103:A:C8	2.97	0.52
58:DA:1670:C:H2'	58:DA:1671:U:O4'	2.09	0.52
58:DA:2080:G:H2'	58:DA:2081:C:C6	2.45	0.52
58:DA:2468:G:O2'	58:DA:2469:A:H5"	2.10	0.52
58:DA:2819:G:H1	58:DA:2827:C:H42	1.57	0.52
9:AJ:52:GLY:HA2	20:AA:1059:C:O2'	2.09	0.52
11:AL:93:LEU:HG	11:AL:96:VAL:HG22	1.91	0.52
12:AM:104:ARG:O	20:AA:1228:C:N4	2.43	0.52
16:AQ:95:TYR:OH	20:AA:279:A:OP2	2.19	0.52
20:AA:62:U:H2'	20:AA:63:C:C6	2.45	0.52
20:AA:68(E):G:H2'	20:AA:68(F):C:C6	2.45	0.52
20:AA:162:A:H3'	20:AA:163:C:O4'	2.08	0.52
20:AA:401:C:H2'	20:AA:402:G:C8	2.44	0.52
20:AA:558:G:C8	20:AA:559:A:H2'	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:745:C:H5”	20:AA:851:G:O2’	2.09	0.52
20:AA:1237:C:OP1	20:AA:1303:C:O2’	2.24	0.52
20:AA:1375:A:H2’	20:AA:1376:U:O4’	2.09	0.52
21:AW:57:G:H2’	21:AW:57:G:N3	2.24	0.52
23:AY:100:VAL:HG11	23:AY:314:PHE:CZ	2.44	0.52
23:AY:178:ILE:HG12	23:AY:185:ALA:HB2	1.91	0.52
27:BF:169:ASN:HD21	58:BA:322:A:H2’	1.74	0.52
28:BG:137:GLU:HB2	28:BG:140:ILE:HG23	1.91	0.52
32:BN:26:LEU:HD23	32:BN:99:LEU:HD21	1.92	0.52
44:BZ:110:GLY:HA3	44:BZ:174:VAL:HG11	1.92	0.52
58:BA:527:C:N4	58:BA:2779:U:H5’	2.25	0.52
58:BA:607:U:O2	58:BA:621:A:N7	2.42	0.52
58:BA:645:C:H5’	58:BA:646:A:H2	1.74	0.52
58:BA:1638:C:H4’	58:BA:2710:C:O2	2.09	0.52
58:BA:1778:U:O4	58:BA:1785:A:N7	2.43	0.52
58:BA:1948:G:H2’	58:BA:1949:G:C8	2.44	0.52
58:BA:2037:G:C6	58:BA:2038:G:C6	2.97	0.52
58:BA:2348:U:H2’	58:BA:2349:G:C8	2.44	0.52
58:BA:2593:U:H2’	58:BA:2594:C:C6	2.44	0.52
58:BA:2737:G:H2’	58:BA:2738:A:H8	1.74	0.52
2:CC:121:ALA:O	2:CC:125:GLU:HB2	2.10	0.52
20:CA:22:G:H2’	20:CA:23:C:C6	2.45	0.52
20:CA:119:A:H4’	20:CA:120:A:C8	2.45	0.52
20:CA:892:A:H2’	20:CA:893:C:H6	1.74	0.52
20:CA:1440(J):C:H1’	20:CA:1440(K):G:N2	2.24	0.52
24:DC:45:HIS:CD2	58:DA:2177:C:H1’	2.43	0.52
25:DD:118:VAL:HG22	25:DD:119:ALA:H	1.73	0.52
26:DE:143:ASN:O	58:DA:2052:G:H4’	2.09	0.52
27:DF:99:TYR:CD2	58:DA:660:G:H5’	2.44	0.52
31:DK:30:HIS:HA	31:DK:59:ILE:HD12	1.90	0.52
31:DK:131:ALA:HA	31:DK:134:MET:HE2	1.90	0.52
32:DN:17:ASP:O	32:DN:18:ALA:CB	2.57	0.52
34:DP:27:HIS:NE2	58:DA:814:C:O5’	2.41	0.52
36:DR:49:ASP:HB3	58:DA:2839:G:H4’	1.90	0.52
48:D5:42:PRO:O	48:D5:44:THR:OG1	2.27	0.52
58:DA:966:G:O4’	58:DA:2267:A:N6	2.43	0.52
58:DA:1479:G:H2’	58:DA:1480:G:H8	1.73	0.52
58:DA:1932:A:H2’	58:DA:1933:G:O4’	2.10	0.52
58:DA:1990:C:H2’	58:DA:1991:U:C6	2.45	0.52
59:DB:101:A:H2’	59:DB:102:G:O4’	2.08	0.52
3:AD:11:LEU:HD13	3:AD:66:ARG:HD2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:24:GLU:HB2	20:AA:409:G:OP1	2.09	0.52
3:AD:96:LEU:HD12	3:AD:139:ARG:NH2	2.25	0.52
9:AJ:89:ASP:HB3	9:AJ:91:PRO:HD3	1.92	0.52
11:AL:82:VAL:O	11:AL:104:VAL:HG11	2.10	0.52
20:AA:745:C:H1'	20:AA:836:G:O2'	2.10	0.52
20:AA:813:U:H2'	20:AA:814:A:C8	2.43	0.52
20:AA:1037:C:H2'	20:AA:1038:C:C6	2.44	0.52
20:AA:1533:C:N4	22:AV:12:A:N1	2.56	0.52
23:AY:118:SER:C	23:AY:120:THR:H	2.16	0.52
23:AY:178:ILE:HD13	23:AY:179:ASP:H	1.74	0.52
23:AY:610:VAL:O	23:AY:642:VAL:HA	2.09	0.52
24:BC:194:ILE:HA	24:BC:197:LEU:HD12	1.90	0.52
25:BD:67:PHE:HE1	25:BD:157:ARG:NH1	1.99	0.52
25:BD:105:ILE:HG23	25:BD:106:ILE:O	2.09	0.52
25:BD:233:HIS:HD2	25:BD:242:ARG:HA	1.75	0.52
29:BH:74:ASN:O	29:BH:78:GLY:N	2.43	0.52
38:BT:53:ARG:NH1	58:BA:2684:U:OP1	2.43	0.52
51:B8:13:ARG:NH2	58:BA:249:C:O2'	2.42	0.52
58:BA:223:A:H4'	58:BA:420:C:O2'	2.09	0.52
58:BA:470:A:H2'	58:BA:471:A:O4'	2.09	0.52
58:BA:924:C:H2'	58:BA:925:C:C6	2.44	0.52
58:BA:1011:G:H1'	58:BA:1013:C:O4'	2.09	0.52
58:BA:1430:C:N4	58:BA:1563:G:H1	2.06	0.52
58:BA:2125:G:H21	58:BA:2173:A:N6	1.96	0.52
58:BA:2666:C:H5"	58:BA:2667:C:H5	1.75	0.52
58:BA:2829:C:H2'	58:BA:2830:G:C8	2.43	0.52
3:CD:60:GLU:HG3	3:CD:198:VAL:HG22	1.91	0.52
7:CH:91:ARG:NH2	20:CA:564:C:O3'	2.42	0.52
8:CI:114:TYR:HB2	20:CA:1367:C:H5"	1.92	0.52
10:CK:108:ILE:HB	17:CR:87:ARG:HA	1.91	0.52
15:CP:70:ALA:O	15:CP:74:LEU:HG	2.08	0.52
16:CQ:43:LEU:HD12	16:CQ:69:LYS:HA	1.91	0.52
20:CA:748:C:O2'	20:CA:749:C:OP2	2.24	0.52
24:DC:16:ASP:O	24:DC:18:ASN:N	2.42	0.52
25:DD:161:THR:OG1	25:DD:162:SER:N	2.41	0.52
27:DF:57:VAL:C	27:DF:59:TYR:H	2.16	0.52
28:DG:128:ARG:NH1	58:DA:2316:C:H1'	2.23	0.52
37:DS:93:LYS:HG2	59:DB:47:C:O2'	2.09	0.52
39:DU:102:GLU:HB3	39:DU:104:GLN:HE22	1.74	0.52
56:D1:11:ARG:NH2	58:DA:1365:A:O2'	2.42	0.52
58:DA:415:A:N6	58:DA:2408:U:H3	2.07	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1019:U:O2	58:DA:1020:A:C8	2.62	0.52
58:DA:1430:C:N4	58:DA:1563:G:H1	2.07	0.52
58:DA:1915:U:H2'	58:DA:1916:A:O4'	2.09	0.52
2:AC:5:ILE:HG22	20:AA:1190:G:OP1	2.10	0.52
2:AC:180:ALA:HB1	2:AC:203:PHE:HE1	1.75	0.52
3:AD:13:ARG:NH2	3:AD:36:ARG:O	2.43	0.52
3:AD:62:GLN:O	3:AD:65:ARG:N	2.42	0.52
6:AG:3:ARG:NH1	20:AA:1380:U:O2'	2.42	0.52
10:AK:22:HIS:HB3	10:AK:29:ILE:HG22	1.89	0.52
12:AM:44:ARG:NH1	20:AA:1296:C:OP1	2.42	0.52
18:AS:37:ARG:O	18:AS:70:LYS:HD2	2.10	0.52
19:AT:39:LYS:HE2	19:AT:43:LEU:HD11	1.92	0.52
20:AA:501:C:H2'	20:AA:502:G:H8	1.75	0.52
20:AA:1231:G:H2'	20:AA:1232:U:O4'	2.10	0.52
20:AA:1376:U:H2'	20:AA:1377:A:C8	2.45	0.52
25:BD:6:PHE:HE1	25:BD:18:VAL:HB	1.74	0.52
32:BN:76:SER:HB3	58:BA:2641:G:C5'	2.39	0.52
35:BQ:135:ASP:H	35:BQ:137:TYR:HD1	1.55	0.52
40:BV:24:LYS:HA	40:BV:92:THR:HG23	1.91	0.52
56:B1:76:ARG:HH12	56:B1:95:LEU:HD13	1.73	0.52
58:BA:1003:G:H2'	58:BA:1004:C:C6	2.45	0.52
58:BA:1466:G:H2'	58:BA:1547:C:H41	1.74	0.52
58:BA:1498:C:H2'	58:BA:1499:C:C6	2.44	0.52
6:CG:15:ASP:HB3	6:CG:19:GLY:H	1.74	0.52
12:CM:114:ARG:NE	20:CA:1229:A:OP2	2.42	0.52
18:CS:10:PHE:O	18:CS:39:THR:OG1	2.27	0.52
20:CA:410:G:H2'	20:CA:429:U:C5	2.44	0.52
20:CA:522:C:H1'	20:CA:536:C:H5"	1.91	0.52
20:CA:909:A:H2'	20:CA:910:C:O4'	2.10	0.52
21:CW:64:G:N1	21:CW:65:U:C4	2.77	0.52
25:DD:53:PHE:HE1	25:DD:220:HIS:CG	2.26	0.52
25:DD:76:PRO:HA	25:DD:118:VAL:HB	1.91	0.52
27:DF:13:SER:O	27:DF:15:SER:N	2.43	0.52
28:DG:113:ARG:O	28:DG:114:ILE:C	2.49	0.52
28:DG:114:ILE:HG12	28:DG:140:ILE:CD1	2.35	0.52
32:DN:129:PRO:O	32:DN:131:GLN:N	2.43	0.52
33:DO:28:SER:HB2	58:DA:2566:A:H61	1.75	0.52
58:DA:105:C:H2'	58:DA:106:C:C6	2.45	0.52
58:DA:198:C:H4'	58:DA:2243:U:H4'	1.92	0.52
58:DA:800:A:H8	58:DA:800:A:OP1	1.92	0.52
58:DA:1288:U:C4	58:DA:1327:C:H1'	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1441:G:H2'	58:DA:1442:G:H8	1.75	0.52
58:DA:1453:A:H3'	58:DA:1454:U:H2'	1.92	0.52
3:AD:57:ARG:HH21	4:AE:107:ARG:HH21	1.58	0.52
10:AK:72:ALA:HB1	10:AK:77:MET:HG2	1.90	0.52
13:AN:24:CYS:HB3	13:AN:29:ARG:H	1.74	0.52
15:AP:4:ILE:HG12	15:AP:21:VAL:HG23	1.91	0.52
16:AQ:9:VAL:HA	16:AQ:56:VAL:HG22	1.92	0.52
20:AA:1354:C:H2'	20:AA:1355:G:C8	2.45	0.52
20:AA:1407:C:H2'	20:AA:1408:A:H5'	1.91	0.52
23:AY:66:THR:OG1	23:AY:363:ARG:NH2	2.40	0.52
23:AY:109:ASP:OD1	23:AY:138:LYS:HD2	2.09	0.52
27:BF:68:LYS:C	27:BF:70:THR:H	2.17	0.52
33:BO:71:ARG:O	33:BO:74:GLY:N	2.37	0.52
34:BP:105:LEU:O	34:BP:107:LYS:N	2.43	0.52
38:BT:61:PHE:CD2	38:BT:78:LEU:HD12	2.45	0.52
40:BV:15:GLU:HB3	40:BV:16:PRO:HD2	1.91	0.52
40:BV:75:PHE:HB2	40:BV:82:ARG:HG3	1.91	0.52
42:BX:36:LYS:HD2	58:BA:1598:C:H5'	1.92	0.52
44:BZ:34:ASN:OD1	44:BZ:34:ASN:N	2.43	0.52
45:B0:67:VAL:HG13	45:B0:81:VAL:HG22	1.92	0.52
49:B6:15:GLU:HA	49:B6:49:HIS:HA	1.91	0.52
58:BA:1281:G:H1	58:BA:1289:C:N4	2.07	0.52
58:BA:1681:G:O2'	58:BA:1762:A:H1'	2.09	0.52
58:BA:2737:G:H2'	58:BA:2738:A:C8	2.44	0.52
1:CB:9:GLU:HA	1:CB:12:GLU:HB2	1.91	0.52
7:CH:95:VAL:HG21	7:CH:133:LEU:HD13	1.91	0.52
8:CI:4:TYR:HE1	8:CI:21:PRO:HD3	1.75	0.52
14:CO:7:GLU:O	14:CO:10:LYS:HG3	2.10	0.52
20:CA:243:A:H4'	20:CA:244:U:O5'	2.10	0.52
20:CA:1148:U:H2'	20:CA:1149:C:O4'	2.10	0.52
20:CA:1401:G:H2'	20:CA:1402:C:O4'	2.10	0.52
20:CA:1440(A):G:H5"	20:CA:1440(B):G:O5'	2.10	0.52
25:DD:244:ARG:NH1	58:DA:1841:U:O2'	2.43	0.52
26:DE:63:LEU:CB	26:DE:65:GLY:H	2.23	0.52
27:DF:156:LEU:O	27:DF:157:VAL:C	2.52	0.52
32:DN:64:GLY:HA3	58:DA:1141:U:C5	2.44	0.52
35:DQ:67:ARG:NH2	58:DA:906:G:O3'	2.41	0.52
36:DR:3:HIS:HB2	58:DA:1654:A:OP2	2.10	0.52
40:DV:67:GLY:HA3	40:DV:89:GLN:O	2.09	0.52
45:D0:11:ARG:O	45:D0:14:ARG:NH2	2.43	0.52
56:D1:25:LYS:HD3	56:D1:26:ARG:H	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:D1:45:ASN:HB3	56:D1:64:ALA:HB2	1.91	0.52
58:DA:1169:G:H1	58:DA:1180:C:H42	1.57	0.52
58:DA:1378:A:O2'	58:DA:1380:G:N7	2.42	0.52
58:DA:1583:A:H4'	58:DA:1586:A:C4	2.45	0.52
58:DA:1700:A:H3'	58:DA:1701:A:H8	1.73	0.52
58:DA:1957:C:H2'	58:DA:1958:C:H6	1.75	0.52
2:AC:90:GLU:HA	2:AC:93:LYS:HE3	1.92	0.52
9:AJ:8:LEU:HA	9:AJ:96:ILE:HG22	1.92	0.52
11:AL:69:TYR:CG	11:AL:70:ILE:N	2.78	0.52
12:AM:15:VAL:HG22	12:AM:41:PRO:HA	1.91	0.52
20:AA:186(C):G:O6	20:AA:186(N):U:O2	2.27	0.52
20:AA:645:C:H2'	20:AA:646:U:H6	1.74	0.52
21:AW:64:G:C2	21:AW:65:U:N3	2.77	0.52
23:AY:133:ILE:HG13	23:AY:272:LEU:HD11	1.92	0.52
23:AY:352:VAL:HG23	23:AY:377:VAL:HG21	1.92	0.52
24:BC:40:GLU:HG2	24:BC:219:MET:HG2	1.91	0.52
24:BC:169:THR:O	24:BC:171:ALA:N	2.38	0.52
26:BE:32:PRO:HD2	26:BE:50:GLY:C	2.35	0.52
28:BG:43:LEU:HB3	28:BG:45:GLU:HG2	1.91	0.52
28:BG:120:LEU:HB2	28:BG:180:PHE:HA	1.91	0.52
31:BK:27:LEU:O	31:BK:30:HIS:HB3	2.09	0.52
32:BN:11:PRO:HB2	32:BN:51:PHE:CE1	2.45	0.52
32:BN:129:PRO:O	32:BN:131:GLN:N	2.43	0.52
34:BP:81:GLN:HG2	34:BP:106:LEU:HD23	1.92	0.52
47:B3:24:LYS:HZ2	58:BA:931:G:H4'	1.75	0.52
56:B1:22:GLY:O	56:B1:37:ILE:N	2.42	0.52
58:BA:185:U:H2'	58:BA:186:G:C8	2.45	0.52
58:BA:754:C:H2'	58:BA:755:C:C6	2.45	0.52
58:BA:864:G:H2'	58:BA:865:C:C6	2.44	0.52
58:BA:1493:C:N3	58:BA:2210:G:O2'	2.43	0.52
58:BA:1957:C:H2'	58:BA:1958:C:C6	2.45	0.52
3:CD:122:ARG:HE	20:CA:403:C:H4'	1.75	0.52
7:CH:88:LYS:C	7:CH:90:GLY:H	2.18	0.52
8:CI:17:VAL:HG22	8:CI:63:ILE:HG23	1.92	0.52
11:CL:61:THR:HB	20:CA:362:G:H5"	1.92	0.52
12:CM:102:ARG:HH21	12:CM:105:THR:HG23	1.74	0.52
20:CA:591:U:H2'	20:CA:592:G:C8	2.44	0.52
20:CA:668:G:H1	20:CA:738:C:N4	2.06	0.52
26:DE:122:PHE:HD2	26:DE:138:PRO:HA	1.75	0.52
31:DK:42:ASN:ND2	31:DK:49:GLY:O	2.43	0.52
35:DQ:110:THR:HB	35:DQ:113:GLN:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DS:102:ALA:HB1	37:DS:109:GLY:H	1.75	0.52
58:DA:956:G:O2'	58:DA:959:A:N6	2.35	0.52
58:DA:1179:C:H2'	58:DA:1180:C:H6	1.75	0.52
58:DA:1335:U:H2'	58:DA:1336:A:C8	2.44	0.52
58:DA:1351:C:H2'	58:DA:1352:U:C6	2.45	0.52
58:DA:1403:C:H5"	58:DA:1471:A:H1'	1.91	0.52
58:DA:1446:C:O2	58:DA:1546:A:O2'	2.21	0.52
58:DA:1577:C:H2'	58:DA:1578:U:C6	2.44	0.52
58:DA:1972:A:H2'	58:DA:1973:G:C8	2.41	0.52
58:DA:2535:G:H2'	58:DA:2536:G:H8	1.74	0.52
1:AB:149:LEU:HD23	1:AB:152:PHE:HB3	1.91	0.52
7:AH:39:LEU:HB3	7:AH:45:ILE:HG23	1.91	0.52
8:AI:73:GLN:O	8:AI:77:ILE:HG13	2.10	0.52
20:AA:244:U:N3	20:AA:893:C:O2	2.33	0.52
20:AA:582:U:OP2	20:AA:758:G:N2	2.36	0.52
20:AA:923:A:H2'	20:AA:924:C:C6	2.45	0.52
20:AA:980:C:H5'	20:AA:981:U:C5	2.45	0.52
20:AA:1063:C:H42	20:AA:1193:G:H1	1.58	0.52
20:AA:1440(J):C:H1'	20:AA:1440(K):G:C2	2.44	0.52
23:AY:148:LEU:O	23:AY:152:THR:HG23	2.10	0.52
23:AY:329:ARG:HD3	23:AY:374:LEU:HG	1.92	0.52
23:AY:524:GLU:HB2	23:AY:564:LYS:HA	1.91	0.52
25:BD:89:SER:OG	25:BD:90:ALA:N	2.39	0.52
31:BK:131:ALA:HB1	31:BK:136:VAL:HG13	1.92	0.52
33:BO:14:THR:HB	33:BO:16:ALA:H	1.75	0.52
36:BR:48:VAL:O	36:BR:52:ILE:HG12	2.10	0.52
36:BR:79:LEU:HB3	36:BR:80:PHE:HD2	1.74	0.52
40:BV:67:GLY:H	40:BV:90:PRO:HA	1.74	0.52
41:BW:4:LYS:O	41:BW:57:ASN:ND2	2.42	0.52
41:BW:14:PRO:O	41:BW:17:VAL:N	2.43	0.52
52:B9:12:ASP:OD1	52:B9:12:ASP:N	2.42	0.52
52:B9:19:ARG:HH11	52:B9:26:ILE:HD11	1.73	0.52
58:BA:270(O):G:O2'	58:BA:270(P):U:H5"	2.10	0.52
58:BA:557:U:H2'	58:BA:558:G:C8	2.44	0.52
58:BA:1306:C:H2'	58:BA:1307:A:C8	2.45	0.52
58:BA:1321:A:H2'	58:BA:1322:A:C8	2.44	0.52
58:BA:1791:A:H61	58:BA:1828:G:HO2'	1.54	0.52
58:BA:2133:G:H2'	58:BA:2157:G:H22	1.75	0.52
58:BA:2557:G:H2'	58:BA:2558:C:C6	2.44	0.52
59:BB:71:C:H42	59:BB:105:G:H1	1.55	0.52
2:CC:160:ALA:O	2:CC:162:GLN:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:112:LYS:HG2	8:CI:119:ALA:H	1.74	0.52
10:CK:99:GLN:HG2	10:CK:105:VAL:HG21	1.92	0.52
13:CN:29:ARG:O	13:CN:33:VAL:HG21	2.10	0.52
20:CA:589:C:O2'	20:CA:653:A:N6	2.41	0.52
20:CA:1003:G:O6	20:CA:1037:C:N3	2.43	0.52
20:CA:1389:C:H2'	20:CA:1390:U:O4'	2.09	0.52
31:DK:133:SER:HB2	58:DA:1088:A:N6	2.25	0.52
32:DN:11:PRO:HB2	32:DN:51:PHE:CE1	2.45	0.52
41:DW:18:ARG:HA	41:DW:76:VAL:HG11	1.92	0.52
42:DX:57:LEU:HD21	42:DX:78:LYS:HE3	1.91	0.52
44:DZ:52:SER:OG	44:DZ:53:ILE:N	2.43	0.52
52:D9:10:ILE:HG13	52:D9:11:CYS:H	1.75	0.52
56:D1:90:ILE:O	56:D1:94:LEU:HD13	2.09	0.52
58:DA:67:U:H2'	58:DA:68:G:H8	1.75	0.52
58:DA:398:G:H2'	58:DA:399:G:H8	1.74	0.52
58:DA:988:A:H4'	58:DA:1155:A:H2	1.75	0.52
58:DA:1101:U:H2'	58:DA:1102:C:C6	2.45	0.52
58:DA:1999:C:H5'	58:DA:2723:C:O2'	2.09	0.52
3:AD:145:GLU:HG3	3:AD:184:LYS:HA	1.93	0.52
4:AE:24:ARG:NH2	20:AA:15:G:H4'	2.25	0.52
7:AH:36:LEU:HA	7:AH:39:LEU:HB2	1.92	0.52
11:AL:77:LEU:O	11:AL:79:GLU:N	2.43	0.52
20:AA:35:G:H2'	20:AA:36:C:H6	1.74	0.52
20:AA:115:G:HO2'	20:AA:116:A:H8	1.58	0.52
20:AA:237:C:H2'	20:AA:238:G:C8	2.45	0.52
20:AA:405:U:H5"	20:AA:406:G:O4'	2.09	0.52
20:AA:947:G:H4'	20:AA:1332:A:H2	1.75	0.52
24:BC:78:ILE:H	24:BC:116:ALA:HA	1.74	0.52
26:BE:103:ASP:CG	26:BE:201:THR:HA	2.35	0.52
29:BH:41:MET:SD	29:BH:52:VAL:HG13	2.50	0.52
32:BN:132:ALA:O	32:BN:133:GLN:C	2.53	0.52
35:BQ:36:ALA:HB2	35:BQ:103:MET:HE3	1.92	0.52
50:B7:40:TRP:CZ2	58:BA:469:G:N1	2.78	0.52
53:Be:63:ILE:HG23	53:Be:116:GLU:HG2	1.90	0.52
58:BA:234:C:H42	58:BA:430:G:H22	1.58	0.52
58:BA:307:G:H21	58:BA:330:A:N6	2.04	0.52
58:BA:797:C:H2'	58:BA:798:G:C8	2.45	0.52
58:BA:2163:C:H5"	58:BA:2172:U:OP2	2.09	0.52
58:BA:2415:G:H2'	58:BA:2416:C:C6	2.45	0.52
59:BB:71:C:H2'	59:BB:72:G:H5'	1.92	0.52
2:CC:22:TRP:CD1	2:CC:59:ARG:HB2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:61:TYR:O	4:CE:65:ASN:HB2	2.09	0.52
14:CO:58:MET:HG3	20:CA:580:U:H5"	1.92	0.52
16:CQ:95:TYR:HE1	20:CA:279:A:H2'	1.74	0.52
18:CS:15:LEU:HD11	18:CS:71:LEU:HD11	1.92	0.52
18:CS:49:ILE:O	18:CS:59:PRO:HA	2.10	0.52
20:CA:707:C:H2'	20:CA:708:C:H6	1.76	0.52
20:CA:1074:G:H2'	20:CA:1075:C:H6	1.74	0.52
26:DE:4:ILE:HD13	26:DE:5:LEU:H	1.75	0.52
27:DF:125:LEU:HA	27:DF:194:MET:O	2.10	0.52
29:DH:147:ASN:O	29:DH:151:ILE:HG13	2.10	0.52
32:DN:26:LEU:HD23	32:DN:99:LEU:HD21	1.92	0.52
32:DN:30:ILE:HG22	32:DN:34:LEU:HD23	1.90	0.52
38:DT:108:ARG:HA	38:DT:111:ARG:HG3	1.91	0.52
39:DU:87:GLY:O	39:DU:89:GLU:N	2.41	0.52
40:DV:40:LEU:HD13	40:DV:47:VAL:HG22	1.92	0.52
58:DA:226:G:HO2'	58:DA:227:A:H8	1.56	0.52
58:DA:398:G:H2'	58:DA:399:G:C8	2.44	0.52
58:DA:459:U:O4	58:DA:470:A:C8	2.63	0.52
58:DA:686:G:N2	58:DA:788:A:H61	2.07	0.52
58:DA:848:G:N3	58:DA:933:A:O2'	2.28	0.52
58:DA:1034:G:H1	58:DA:1121:C:H42	1.57	0.52
58:DA:1912:A:N6	58:DA:1918:A:C4	2.78	0.52
58:DA:2023:G:N1	58:DA:2040:C:C2	2.61	0.52
58:DA:2093:G:H1	58:DA:2196:C:H42	1.55	0.52
58:DA:2171:A:O2'	58:DA:2172:U:O5'	2.28	0.52
58:DA:2306:C:H5"	58:DA:2307:G:N7	2.24	0.52
2:AC:52:LEU:HD22	2:AC:68:VAL:HG11	1.93	0.51
9:AJ:36:GLY:HA3	20:AA:1123:A:H4'	1.90	0.51
16:AQ:45:HIS:CB	16:AQ:72:ARG:HA	2.38	0.51
18:AS:62:ILE:HG12	18:AS:63:THR:N	2.24	0.51
20:AA:447:G:H2'	20:AA:485:G:N2	2.24	0.51
23:AY:83:ASP:C	23:AY:85:PRO:HD3	2.36	0.51
23:AY:88:VAL:HG11	60:AY:701:FUA:H242	1.92	0.51
24:BC:176:VAL:O	24:BC:178:LYS:N	2.41	0.51
25:BD:140:THR:H	25:BD:165:ILE:HD12	1.74	0.51
33:BO:34:THR:OG1	33:BO:35:VAL:N	2.42	0.51
36:BR:53:HIS:CG	58:BA:2840:C:H5"	2.45	0.51
44:BZ:135:GLU:HB3	44:BZ:136:PHE:HD1	1.75	0.51
58:BA:755:C:H2'	58:BA:756:C:H6	1.75	0.51
58:BA:1376:C:H2'	58:BA:1377:G:H8	1.74	0.51
58:BA:2183:C:H2'	58:BA:2184:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:2888:C:H2'	58:BA:2889:C:C6	2.45	0.51
1:CB:166:ASP:O	1:CB:170:GLU:HB2	2.09	0.51
10:CK:94:ALA:O	10:CK:98:LEU:HG	2.09	0.51
12:CM:105:THR:HG22	20:CA:1229:A:N6	2.26	0.51
20:CA:266:G:O2'	20:CA:267:C:O5'	2.28	0.51
20:CA:376:G:H1	20:CA:387:U:H3	1.56	0.51
23:CY:188:TYR:HA	23:CY:196:ILE:HB	1.90	0.51
24:DC:34:ALA:HB2	24:DC:217:THR:HG21	1.91	0.51
25:DD:244:ARG:HG3	58:DA:1902:C:O4'	2.09	0.51
30:DJ:111:UNK:O	30:DJ:116:UNK:HA	2.09	0.51
58:DA:1542:G:H1'	58:DA:1543:A:C5	2.45	0.51
1:AB:68:ILE:HA	1:AB:161:ALA:O	2.09	0.51
4:AE:126:ARG:HA	4:AE:131:ILE:HD11	1.91	0.51
7:AH:83:ILE:HB	7:AH:137:VAL:HG22	1.92	0.51
11:AL:69:TYR:CD1	11:AL:70:ILE:HG13	2.44	0.51
16:AQ:67:LYS:C	16:AQ:69:LYS:H	2.16	0.51
18:AS:54:GLY:O	20:AA:986:A:H1'	2.10	0.51
20:AA:524:G:H2'	20:AA:525:C:C6	2.46	0.51
20:AA:1342:C:H2'	20:AA:1343:G:C8	2.45	0.51
20:AA:1491:G:H21	20:AA:1492:A:N6	2.09	0.51
21:AW:70:G:H2'	21:AW:71:C:C6	2.45	0.51
23:AY:512:ILE:H	23:AY:512:ILE:HD13	1.75	0.51
24:BC:45:HIS:CE1	58:BA:2177:C:H1'	2.46	0.51
24:BC:84:ILE:HD11	24:BC:97:GLY:N	2.24	0.51
25:BD:34:VAL:HB	25:BD:104:TYR:CE1	2.45	0.51
25:BD:45:ASN:HB3	58:BA:1813:G:O4'	2.10	0.51
37:BS:26:LEU:O	37:BS:88:ASP:HB3	2.09	0.51
37:BS:42:ASP:N	37:BS:42:ASP:OD1	2.42	0.51
39:BU:54:LYS:HG2	39:BU:58:ARG:HH21	1.75	0.51
43:BY:96:ILE:HB	43:BY:99:CYS:O	2.11	0.51
44:BZ:145:GLU:OE1	44:BZ:146:ILE:N	2.41	0.51
48:B5:3:LYS:HE3	48:B5:5:PRO:HG2	1.93	0.51
58:BA:730:C:H2'	58:BA:731:C:H6	1.75	0.51
58:BA:907:U:H2'	58:BA:908:C:C6	2.44	0.51
58:BA:1478:G:H1	58:BA:1515:C:H42	1.57	0.51
58:BA:2630:G:H2'	58:BA:2631:G:C8	2.45	0.51
58:BA:2868:A:H2'	58:BA:2869:G:C8	2.44	0.51
2:CC:4:LYS:HD3	2:CC:175:LEU:HD11	1.92	0.51
4:CE:12:LEU:H	4:CE:31:LEU:HB3	1.74	0.51
11:CL:93:LEU:HG	11:CL:96:VAL:HG22	1.92	0.51
20:CA:131:C:H2'	20:CA:132:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1466:C:H2'	20:CA:1467:G:O4'	2.10	0.51
23:CY:18:ALA:HA	23:CY:25:LYS:HG2	1.93	0.51
23:CY:74:TRP:CG	23:CY:75:LYS:N	2.78	0.51
23:CY:201:ILE:HG21	23:CY:206:LEU:N	2.25	0.51
23:CY:308:PRO:O	23:CY:310:ALA:N	2.43	0.51
23:CY:486:THR:OG1	23:CY:487:ILE:N	2.43	0.51
24:DC:131:ILE:HG12	24:DC:132:LEU:H	1.74	0.51
26:DE:109:LYS:HZ2	58:DA:2680:C:H5"	1.73	0.51
26:DE:129:HIS:HD1	26:DE:129:HIS:H	1.57	0.51
30:DJ:58:UNK:N	58:DA:1106:G:H5"	2.25	0.51
35:DQ:1:MET:H3	35:DQ:48:GLU:HB2	1.76	0.51
36:DR:62:ALA:O	36:DR:66:VAL:HG23	2.09	0.51
37:DS:52:SER:H	37:DS:56:LEU:HB2	1.75	0.51
40:DV:1:MET:SD	40:DV:99:ILE:HG13	2.50	0.51
46:D2:18:PRO:O	46:D2:21:LEU:HB2	2.10	0.51
56:D1:15:ALA:HA	56:D1:40:ARG:O	2.09	0.51
58:DA:453:C:O2	58:DA:457:A:O2'	2.20	0.51
58:DA:863:A:H2'	58:DA:864:G:C8	2.45	0.51
58:DA:1113:U:H2'	58:DA:1114:G:H8	1.75	0.51
58:DA:1213:A:N6	58:DA:1236:G:H1'	2.25	0.51
58:DA:1341:U:H5'	58:DA:1602:U:C4	2.45	0.51
58:DA:2726:U:HO2'	58:DA:2727:G:P	2.33	0.51
59:DB:78:A:H2'	59:DB:79:C:O4'	2.09	0.51
1:AB:135:GLN:HA	1:AB:138:LEU:HB2	1.92	0.51
14:AO:17:ARG:CZ	14:AO:17:ARG:HA	2.40	0.51
20:AA:68(P):C:H2'	20:AA:68(Q):U:C6	2.45	0.51
20:AA:127:G:H1	20:AA:234:C:H42	1.58	0.51
20:AA:401:C:O2'	20:AA:621:A:N3	2.34	0.51
20:AA:504:C:H2'	20:AA:511:C:H5	1.75	0.51
20:AA:1408:A:H2'	20:AA:1409:C:C6	2.46	0.51
24:BC:37:LYS:HE3	58:BA:2127:G:H4'	1.92	0.51
24:BC:60:ARG:NE	24:BC:142:LYS:HB3	2.25	0.51
26:BE:13:ARG:HA	26:BE:21:VAL:C	2.34	0.51
27:BF:9:ILE:HG22	27:BF:125:LEU:H	1.74	0.51
27:BF:180:GLY:HA3	58:BA:616:A:C4	2.46	0.51
34:BP:7:ARG:HB3	34:BP:8:PRO:HD3	1.92	0.51
36:BR:42:LYS:O	36:BR:45:ARG:HG3	2.09	0.51
37:BS:92:TYR:C	37:BS:94:TYR:H	2.18	0.51
43:BY:95:LYS:HB3	43:BY:100:ALA:HA	1.93	0.51
44:BZ:10:ARG:HA	44:BZ:38:TYR:CE2	2.45	0.51
58:BA:137(B):G:H2'	58:BA:139:G:N7	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:1049:C:H1'	58:BA:1113:U:H4'	1.91	0.51
58:BA:1297:C:H2'	58:BA:1298:C:H6	1.75	0.51
58:BA:1310:G:H2'	58:BA:1311:G:O4'	2.11	0.51
58:BA:1583:A:H4'	58:BA:1586:A:C4	2.46	0.51
58:BA:1935:G:H3'	58:BA:1962:C:H42	1.74	0.51
58:BA:2078:C:H2'	58:BA:2079:U:C6	2.44	0.51
1:CB:162:ILE:O	1:CB:185:ILE:O	2.27	0.51
7:CH:86:ILE:HG21	7:CH:133:LEU:HD23	1.91	0.51
9:CJ:29:ARG:NH2	9:CJ:84:GLN:OE1	2.44	0.51
11:CL:5:PRO:HB2	11:CL:10:LEU:HG	1.93	0.51
14:CO:50:HIS:ND1	20:CA:764:C:H5"	2.25	0.51
20:CA:68(X):U:H2'	20:CA:68(Y):C:C6	2.45	0.51
20:CA:1149:C:O2'	20:CA:1280:A:N1	2.34	0.51
20:CA:1425:U:H2'	20:CA:1426:C:H6	1.75	0.51
23:CY:98:MET:SD	23:CY:125:ALA:HA	2.49	0.51
24:DC:132:LEU:HD22	24:DC:137:LEU:HD12	1.92	0.51
25:DD:161:THR:H	25:DD:196:VAL:CG2	2.23	0.51
26:DE:4:ILE:HB	26:DE:96:PHE:HE2	1.75	0.51
27:DF:5:ALA:HB3	27:DF:8:GLN:HA	1.92	0.51
28:DG:111:LEU:N	28:DG:112:PRO:CD	2.73	0.51
29:DH:109:PHE:HA	58:DA:2666:C:N4	2.21	0.51
31:DK:21:PRO:HA	31:DK:23:VAL:H	1.76	0.51
34:DP:89:ALA:HB1	34:DP:119:GLU:HG2	1.92	0.51
39:DU:96:ALA:C	39:DU:98:LEU:H	2.18	0.51
41:DW:72:LYS:HB2	41:DW:106:ILE:HG22	1.91	0.51
56:D1:25:LYS:HB3	58:DA:388:G:OP2	2.09	0.51
58:DA:808:G:H2'	58:DA:809:G:C8	2.45	0.51
58:DA:1670:C:OP1	58:DA:2549:G:H5'	2.11	0.51
58:DA:1674:G:N2	58:DA:1677:A:H61	2.06	0.51
58:DA:2287:A:N6	58:DA:2344:U:N3	2.43	0.51
8:AI:71:SER:HB3	20:AA:1372:U:H5"	1.93	0.51
11:AL:109:GLY:HA3	11:AL:121:GLY:HA3	1.92	0.51
20:AA:574:A:N3	20:AA:883:C:H1'	2.25	0.51
23:AY:35:TYR:OH	23:AY:192:LEU:O	2.27	0.51
23:AY:608:VAL:HG13	23:AY:669:PHE:HB2	1.92	0.51
25:BD:220:HIS:N	58:BA:1790:C:OP1	2.44	0.51
26:BE:12:THR:O	26:BE:22:PRO:HA	2.10	0.51
28:BG:18:GLU:HB3	28:BG:175:LEU:HD11	1.92	0.51
32:BN:65:LYS:HZ2	58:BA:1021:A:C5'	2.24	0.51
36:BR:97:VAL:HG22	36:BR:114:VAL:HA	1.93	0.51
44:BZ:45:ASP:O	44:BZ:49:ARG:HG2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:236:C:N4	58:BA:261:G:H1	2.06	0.51
58:BA:733:G:OP2	58:BA:761:A:N6	2.25	0.51
58:BA:1792:G:N2	58:BA:1827:C:N3	2.48	0.51
4:CE:67:VAL:HB	4:CE:140:ARG:HH21	1.74	0.51
6:CG:79:ARG:HG3	20:CA:1381:U:H1'	1.92	0.51
6:CG:94:ARG:O	6:CG:97:GLN:HB3	2.10	0.51
6:CG:103:TRP:HZ3	6:CG:138:LYS:HA	1.75	0.51
13:CN:24:CYS:O	13:CN:28:GLY:N	2.43	0.51
20:CA:1218:C:H2'	20:CA:1219:U:H6	1.75	0.51
20:CA:1306:A:H1'	20:CA:1332:A:N1	2.25	0.51
24:DC:213:VAL:HG11	24:DC:225:ILE:CG1	2.40	0.51
29:DH:59:ARG:O	29:DH:63:SER:OG	2.28	0.51
32:DN:132:ALA:O	32:DN:133:GLN:C	2.53	0.51
33:DO:34:THR:OG1	33:DO:35:VAL:N	2.43	0.51
38:DT:125:ARG:O	38:DT:128:GLU:HB3	2.11	0.51
50:D7:1:MET:N	58:DA:1619:G:O2'	2.43	0.51
56:D1:25:LYS:HB3	58:DA:388:G:P	2.50	0.51
56:D1:61:ARG:HB3	56:D1:61:ARG:HH11	1.75	0.51
58:DA:39:C:H2'	58:DA:40:C:H6	1.75	0.51
58:DA:230:U:H2'	58:DA:231:C:C6	2.46	0.51
58:DA:609(B):G:O6	58:DA:618(B):C:N3	2.44	0.51
58:DA:1201:C:H42	58:DA:1244:G:H1	1.59	0.51
58:DA:1628:G:H1	58:DA:1638:C:N4	2.04	0.51
58:DA:1676:A:H2'	58:DA:1677:A:C8	2.46	0.51
58:DA:2095:C:H2'	58:DA:2096:U:H6	1.75	0.51
58:DA:2114:A:H3'	58:DA:2115:G:C8	2.45	0.51
58:DA:2134:A:C2	58:DA:2159:G:H1'	2.46	0.51
58:DA:2175:C:H2'	58:DA:2176:A:C8	2.44	0.51
58:DA:2189:U:H2'	58:DA:2190:G:C8	2.46	0.51
1:AB:175:ARG:HH22	20:AA:1076:C:H5'	1.75	0.51
2:AC:153:VAL:HG12	2:AC:198:VAL:HG22	1.92	0.51
4:AE:17:ALA:HA	4:AE:26:PHE:HA	1.92	0.51
7:AH:1:MET:SD	7:AH:2:LEU:N	2.84	0.51
12:AM:2:ALA:O	12:AM:4:ILE:N	2.42	0.51
17:AR:47:THR:HG23	17:AR:49:LYS:H	1.74	0.51
20:AA:285:G:H2'	20:AA:286:G:C8	2.44	0.51
20:AA:364:A:H2'	20:AA:365:U:O2	2.10	0.51
20:AA:1522:U:H2'	20:AA:1523:G:H8	1.76	0.51
23:AY:20:HIS:HB3	23:AY:118:SER:N	2.26	0.51
24:BC:29:LEU:O	24:BC:33:LEU:HG	2.10	0.51
27:BF:136:THR:HG21	58:BA:320:A:C4	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:155:LEU:HA	27:BF:176:LEU:HB3	1.92	0.51
28:BG:41:GLN:CD	28:BG:60:LEU:HG	2.35	0.51
31:BK:125:ARG:H	31:BK:125:ARG:CD	2.23	0.51
32:BN:138:LEU:HD23	32:BN:138:LEU:N	2.26	0.51
33:BO:8:LEU:O	33:BO:19:ILE:N	2.34	0.51
36:BR:104:ARG:HB3	36:BR:109:ALA:HB3	1.92	0.51
37:BS:27:SER:H	37:BS:40:ILE:HG22	1.74	0.51
40:BV:37:VAL:HA	40:BV:51:VAL:HG11	1.91	0.51
44:BZ:10:ARG:HD2	44:BZ:36:LYS:HD2	1.91	0.51
45:B0:11:ARG:NH2	58:BA:2278:A:H3'	2.21	0.51
46:B2:57:ILE:HA	46:B2:60:LEU:HD12	1.93	0.51
50:B7:39:ARG:HD3	50:B7:42:LEU:HB3	1.91	0.51
58:BA:172:C:H2'	58:BA:173:G:O4'	2.11	0.51
58:BA:384:U:H2'	58:BA:385:C:C6	2.46	0.51
58:BA:481:G:H2'	58:BA:507:A:N1	2.25	0.51
58:BA:533:G:H2'	58:BA:534:U:C6	2.46	0.51
58:BA:1127:A:N7	58:BA:2488:A:O2'	2.42	0.51
58:BA:1171:G:H2'	58:BA:1173:G:O4'	2.11	0.51
58:BA:1279:G:H1	58:BA:1291:C:N4	2.06	0.51
58:BA:2525:G:H2'	58:BA:2526:G:H8	1.76	0.51
5:CF:18:GLN:O	5:CF:21:LEU:N	2.44	0.51
17:CR:30:ASP:OD2	17:CR:33:ASP:HB2	2.10	0.51
20:CA:287:U:H2'	20:CA:288:A:H8	1.75	0.51
20:CA:670:G:H1	20:CA:736:C:H42	1.59	0.51
25:DD:9:TYR:CD2	58:DA:705:A:H1'	2.46	0.51
25:DD:227:ASN:HB2	25:DD:228:PRO:HD2	1.92	0.51
27:DF:102:PRO:HB3	58:DA:606:U:H5"	1.93	0.51
32:DN:76:SER:HB2	58:DA:2641:G:H4'	1.92	0.51
36:DR:29:LEU:HB3	36:DR:75:LEU:HD12	1.92	0.51
48:D5:45:VAL:HG13	48:D5:51:TYR:H	1.75	0.51
58:DA:2118:U:H5"	58:DA:2119:A:OP1	2.11	0.51
58:DA:2147:G:H2'	58:DA:2148:G:O4'	2.10	0.51
58:DA:2814:C:H42	58:DA:2886:G:H1	1.57	0.51
1:AB:69:LEU:O	1:AB:71:VAL:HG23	2.10	0.51
2:AC:49:SER:OG	2:AC:83:ARG:NH2	2.44	0.51
3:AD:61:LYS:HG2	3:AD:75:PHE:HE2	1.75	0.51
4:AE:94:ALA:HB2	4:AE:119:LEU:HG	1.92	0.51
12:AM:76:ALA:HA	12:AM:79:LYS:HG3	1.91	0.51
14:AO:8:LYS:O	14:AO:12:ILE:HG13	2.10	0.51
15:AP:26:ARG:NH2	20:AA:310:G:OP1	2.44	0.51
16:AQ:22:LEU:HD13	16:AQ:41:LYS:HG2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:696:A:H2'	20:AA:697:U:C6	2.46	0.51
20:AA:908:A:H2'	20:AA:909:A:C8	2.46	0.51
20:AA:1288:A:N1	20:AA:1371:G:H1'	2.26	0.51
23:AY:8:ASP:O	23:AY:9:LEU:HB2	2.10	0.51
23:AY:146:LEU:O	23:AY:150:ILE:HG12	2.10	0.51
23:AY:298:VAL:HG22	23:AY:299:VAL:H	1.76	0.51
23:AY:661:SER:HG	58:BA:2660:A:N6	2.07	0.51
24:BC:209:PHE:O	24:BC:210:LEU:HB2	2.10	0.51
26:BE:66:HIS:CD2	58:BA:2786:U:H4'	2.45	0.51
26:BE:120:TRP:O	26:BE:121:ASN:HB2	2.10	0.51
26:BE:134:ILE:HD13	26:BE:134:ILE:H	1.75	0.51
27:BF:40:GLN:HA	27:BF:43:LYS:HG2	1.92	0.51
27:BF:150:GLY:HA2	27:BF:172:TRP:CZ2	2.45	0.51
35:BQ:16:ARG:NH2	58:BA:952:G:OP2	2.43	0.51
36:BR:39:PRO:HG2	58:BA:1651:G:H5'	1.92	0.51
37:BS:20:ARG:HD3	37:BS:88:ASP:HB2	1.93	0.51
38:BT:83:ILE:HD12	38:BT:84:GLN:HE22	1.76	0.51
38:BT:89:VAL:O	38:BT:91:ARG:N	2.43	0.51
40:BV:4:ILE:HD13	40:BV:40:LEU:HB2	1.91	0.51
41:BW:66:GLU:HA	41:BW:69:LEU:HG	1.92	0.51
49:B6:39:TYR:OH	58:BA:2346:A:H3'	2.11	0.51
58:BA:314:A:H2'	58:BA:315:G:C8	2.45	0.51
58:BA:363(E):G:H2'	58:BA:363(F):U:O4'	2.10	0.51
58:BA:414:C:O2'	58:BA:1878:G:N2	2.43	0.51
58:BA:464:U:H2'	58:BA:465:G:O4'	2.11	0.51
58:BA:1135:C:H41	58:BA:1138:G:P	2.33	0.51
58:BA:1149:G:H2'	58:BA:1150:C:H6	1.74	0.51
59:BB:5:C:H2'	59:BB:6:C:H6	1.75	0.51
1:CB:53:ARG:O	1:CB:56:ARG:HB2	2.10	0.51
8:CI:118:LYS:C	8:CI:120:ARG:H	2.19	0.51
11:CL:44:THR:HG22	11:CL:50:SER:HA	1.92	0.51
19:CT:85:MET:SD	20:CA:186:C:O2'	2.61	0.51
23:CY:134:ALA:HB3	23:CY:258:VAL:HA	1.93	0.51
23:CY:606:MET:HE1	23:CY:671:MET:HG2	1.93	0.51
25:DD:98:VAL:O	58:DA:1501:C:O2'	2.28	0.51
34:DP:32:THR:OG1	58:DA:1190:G:OP1	2.29	0.51
36:DR:39:PRO:HG2	58:DA:1651:G:H4'	1.93	0.51
51:D8:8:LYS:HG3	58:DA:252:G:O6	2.11	0.51
58:DA:385:C:O2'	58:DA:388:G:N2	2.44	0.51
58:DA:1999:C:H4'	58:DA:2723:C:H1'	1.92	0.51
58:DA:2352:A:H2'	58:DA:2353:G:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:169:LYS:O	1:AB:172:ILE:HG12	2.11	0.51
7:AH:25:ASP:OD2	7:AH:26:VAL:N	2.43	0.51
12:AM:14:ARG:HB2	12:AM:17:VAL:HG23	1.92	0.51
20:AA:115:G:H1'	20:AA:116:A:N7	2.25	0.51
20:AA:492:G:H2'	20:AA:493:G:O4'	2.10	0.51
21:AW:60:U:H5'	21:AW:61:C:C5	2.46	0.51
23:AY:145:ASP:CG	23:AY:146:LEU:H	2.18	0.51
23:AY:272:LEU:O	23:AY:276:VAL:HG23	2.11	0.51
26:BE:55:ASN:HB2	26:BE:74:PRO:O	2.10	0.51
29:BH:90:LYS:HB2	29:BH:163:TYR:CE1	2.46	0.51
32:BN:42:TRP:NE1	39:BU:63:VAL:HG11	2.26	0.51
35:BQ:13:GLN:HG3	58:BA:910:A:C6	2.45	0.51
35:BQ:51:ARG:O	35:BQ:55:VAL:HG12	2.10	0.51
35:BQ:65:PHE:HD2	35:BQ:105:GLU:HG3	1.75	0.51
38:BT:5:ALA:O	38:BT:9:LEU:HG	2.11	0.51
38:BT:66:VAL:HA	38:BT:71:GLY:HA2	1.92	0.51
43:BY:44:ILE:O	43:BY:62:GLU:HB3	2.10	0.51
58:BA:297:C:H2'	58:BA:298:G:O4'	2.09	0.51
58:BA:780:G:H2'	58:BA:782:A:C5	2.45	0.51
58:BA:1201:C:H2'	58:BA:1202:C:H6	1.76	0.51
58:BA:2134:A:C2	58:BA:2159:G:H1'	2.45	0.51
58:BA:2395:C:H2'	58:BA:2396:G:O4'	2.10	0.51
58:BA:2419:U:H2'	58:BA:2420:C:C6	2.45	0.51
58:BA:2745:C:H41	58:BA:2755:C:H4'	1.76	0.51
59:BB:73:A:H3'	59:BB:74:U:C5	2.46	0.51
2:CC:86:VAL:O	2:CC:90:GLU:HG3	2.11	0.51
5:CF:69:GLU:O	5:CF:72:VAL:HG12	2.11	0.51
7:CH:3:THR:OG1	7:CH:4:ASP:N	2.44	0.51
8:CI:115:GLY:N	20:CA:1367:C:OP1	2.26	0.51
11:CL:40:VAL:HG13	11:CL:54:LYS:HE3	1.92	0.51
14:CO:68:ARG:HH22	20:CA:582:U:H5"	1.76	0.51
15:CP:1:MET:HB3	20:CA:135:C:N3	2.26	0.51
20:CA:68(N):U:H5"	20:CA:68(O):A:OP2	2.11	0.51
20:CA:143:A:H2	20:CA:220:G:H22	1.58	0.51
20:CA:255:G:H2'	20:CA:256:U:H6	1.76	0.51
20:CA:399:G:H2'	20:CA:400:C:C6	2.46	0.51
24:DC:31:LYS:HG3	24:DC:182:PRO:HA	1.91	0.51
25:DD:269:PHE:CE2	58:DA:2219:G:H5"	2.46	0.51
26:DE:107:THR:HG23	26:DE:195:LEU:HD11	1.93	0.51
27:DF:34:TRP:HB2	34:DP:10:PRO:HB2	1.92	0.51
32:DN:11:PRO:HB2	32:DN:51:PHE:HE1	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DS:13:ARG:O	37:DS:15:ARG:N	2.44	0.51
39:DU:94:ASN:HB2	58:DA:996:A:H5'	1.93	0.51
45:D0:10:THR:HG22	45:D0:12:ASN:H	1.75	0.51
49:D6:40:CYS:SG	58:DA:2370:G:N2	2.84	0.51
53:De:107:GLU:HB3	53:De:111:ILE:HD13	1.92	0.51
56:D1:3:LYS:HG3	56:D1:4:VAL:HG12	1.92	0.51
58:DA:118:A:OP2	58:DA:119:A:H2'	2.11	0.51
58:DA:352:G:N2	58:DA:355:G:OP2	2.44	0.51
58:DA:592:G:N2	58:DA:665:C:N3	2.52	0.51
58:DA:1102:C:H2'	58:DA:1103:A:O4'	2.09	0.51
58:DA:2308:G:OP1	58:DA:2310:A:N6	2.43	0.51
3:AD:201:GLN:OE1	4:AE:116:THR:HG23	2.10	0.51
7:AH:86:ILE:HG22	7:AH:93:VAL:HG21	1.93	0.51
14:AO:42:HIS:HB2	20:AA:740:U:H5'	1.92	0.51
16:AQ:29:HIS:C	16:AQ:31:LEU:H	2.19	0.51
23:AY:542:VAL:HG23	23:AY:582:PHE:O	2.11	0.51
23:AY:659:LEU:O	23:AY:661:SER:N	2.43	0.51
27:BF:100:THR:O	58:BA:659:C:H4'	2.11	0.51
28:BG:59:GLU:HA	28:BG:62:LEU:HD22	1.93	0.51
34:BP:112:LEU:HB3	34:BP:127:ALA:HB1	1.93	0.51
35:BQ:13:GLN:HB3	58:BA:954:G:H5"	1.91	0.51
41:BW:107:LEU:H	41:BW:107:LEU:HD13	1.76	0.51
58:BA:432:A:H2'	58:BA:433:C:C6	2.45	0.51
58:BA:445:C:H2'	58:BA:446:G:O4'	2.10	0.51
58:BA:1681:G:N3	58:BA:1762:A:H2'	2.26	0.51
58:BA:2771:C:H2'	58:BA:2772:C:C6	2.46	0.51
1:CB:223:ILE:O	1:CB:227:GLY:N	2.44	0.51
10:CK:47:VAL:HG13	20:CA:687:A:H4'	1.93	0.51
18:CS:70:LYS:O	18:CS:73:GLU:HB3	2.11	0.51
20:CA:160:A:H61	20:CA:347:G:H1'	1.76	0.51
20:CA:383:A:H8	20:CA:383:A:O5'	1.93	0.51
20:CA:442:C:N4	20:CA:492:G:H1	2.08	0.51
20:CA:1255:G:H3'	20:CA:1279:A:H61	1.75	0.51
27:DF:176:LEU:HG	27:DF:177:ALA:H	1.75	0.51
28:DG:41:GLN:HG2	28:DG:155:MET:HB3	1.92	0.51
58:DA:1144:G:H2'	58:DA:1145:C:H6	1.75	0.51
58:DA:1655:A:H3'	58:DA:1656:C:C6	2.46	0.51
58:DA:2004:G:H2'	58:DA:2005:A:O4'	2.11	0.51
58:DA:2721:A:H2'	58:DA:2722:G:H8	1.76	0.51
20:AA:175:C:H2'	20:AA:176:C:H6	1.75	0.51
20:AA:909:A:H2'	20:AA:910:C:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1422:G:H2'	20:AA:1423:G:C8	2.46	0.51
23:AY:137:ASN:ND2	23:AY:138:LYS:H	2.09	0.51
25:BD:147:LEU:HD21	25:BD:183:ARG:NH1	2.26	0.51
25:BD:221:VAL:O	25:BD:223:GLY:N	2.44	0.51
26:BE:197:ILE:HG12	26:BE:198:VAL:N	2.26	0.51
29:BH:28:GLY:HA3	29:BH:79:VAL:HB	1.93	0.51
31:BK:126:MET:HE3	58:BA:1058:G:N2	2.23	0.51
41:BW:16:LYS:O	41:BW:20:VAL:HG23	2.10	0.51
41:BW:21:VAL:HG13	41:BW:74:ALA:HB3	1.93	0.51
45:B0:40:GLN:HG3	45:B0:57:PHE:HB3	1.93	0.51
51:B8:60:LEU:HB3	51:B8:64:TYR:O	2.10	0.51
58:BA:513:A:H2'	58:BA:514:A:O4'	2.11	0.51
58:BA:529:A:N6	58:BA:2041:U:C2	2.77	0.51
58:BA:1123:C:H2'	58:BA:1124:C:H6	1.76	0.51
58:BA:1271:G:C2	58:BA:1617:C:H4'	2.46	0.51
58:BA:1930:G:N2	58:BA:1968:G:H2'	2.26	0.51
58:BA:2304:G:H1	58:BA:2312:U:H3	1.59	0.51
58:BA:2329:G:H2'	58:BA:2330:G:C8	2.46	0.51
58:BA:2590:A:H2'	58:BA:2591:C:C6	2.46	0.51
58:BA:2712:U:O2'	58:BA:712(B):A:H3'	2.11	0.51
58:BA:2732:G:H3'	58:BA:2733:A:O4'	2.11	0.51
58:BA:2749:A:H62	58:BA:2753:A:H61	0.68	0.51
2:CC:6:HIS:CG	13:CN:49:HIS:HB3	2.45	0.51
3:CD:106:TYR:HA	3:CD:111:ALA:HB3	1.91	0.51
6:CG:11:GLN:HE22	6:CG:14:PRO:HD3	1.75	0.51
11:CL:113:ARG:HE	11:CL:116:SER:N	2.02	0.51
20:CA:33:A:H5"	20:CA:364:A:H1'	1.92	0.51
20:CA:162:A:C8	20:CA:163:C:H1'	2.46	0.51
24:DC:65:LEU:CD1	24:DC:162:ILE:HD11	2.40	0.51
28:DG:97:ASP:HB2	28:DG:98:ARG:NH1	2.26	0.51
29:DH:52:VAL:HG11	29:DH:69:ARG:HB3	1.92	0.51
30:DJ:23:UNK:O	30:DJ:84:UNK:C	2.59	0.51
35:DQ:137:TYR:CD1	35:DQ:137:TYR:N	2.77	0.51
36:DR:24:GLN:HB3	36:DR:44:LEU:HD11	1.93	0.51
43:DY:46:LYS:HB2	43:DY:62:GLU:HB2	1.92	0.51
45:D0:49:LYS:HB2	45:D0:80:HIS:HB3	1.93	0.51
58:DA:463:G:N2	58:DA:466:A:OP2	2.42	0.51
58:DA:579:G:H2'	58:DA:580:C:C6	2.45	0.51
58:DA:722:A:H2'	58:DA:723:G:C8	2.46	0.51
58:DA:1575:C:H2'	58:DA:1576:U:O4'	2.10	0.51
58:DA:2306:C:H5"	58:DA:2307:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:2415:G:H2'	58:DA:2416:C:H6	1.73	0.51
3:AD:76:ARG:O	3:AD:80:GLU:HG2	2.11	0.51
11:AL:124:LYS:HB2	20:AA:37:U:H5"	1.92	0.51
14:AO:46:HIS:HB3	20:AA:668:G:H1'	1.93	0.51
17:AR:36:ASN:HB3	17:AR:39:VAL:HB	1.93	0.51
20:AA:1340:A:C2	20:AA:1341:U:C2	2.99	0.51
24:BC:216:THR:HG21	58:BA:2176:A:O4'	2.11	0.51
25:BD:53:PHE:O	25:BD:218:ARG:HG2	2.10	0.51
25:BD:208:LYS:HG3	25:BD:210:GLY:H	1.76	0.51
26:BE:45:THR:O	26:BE:83:ASP:N	2.43	0.51
31:BK:8:VAL:HG11	31:BK:26:ALA:HB1	1.92	0.51
32:BN:103:VAL:O	32:BN:106:MET:N	2.36	0.51
33:BO:8:LEU:HD12	33:BO:82:ASN:HB2	1.92	0.51
33:BO:67:LYS:HZ1	58:BA:2685:G:H4'	1.76	0.51
38:BT:84:GLN:O	38:BT:86:ILE:N	2.33	0.51
42:BX:68:ARG:NH1	58:BA:456:C:O2'	2.43	0.51
44:BZ:93:ASP:N	44:BZ:93:ASP:OD1	2.44	0.51
58:BA:135:G:H2'	58:BA:136:G:H8	1.76	0.51
58:BA:144:C:H2'	58:BA:145:G:H8	1.76	0.51
58:BA:537:C:H2'	58:BA:539:G:C8	2.46	0.51
58:BA:1121:C:H2'	58:BA:1122:G:O4'	2.11	0.51
58:BA:1213:A:N3	58:BA:1238:G:H1'	2.26	0.51
58:BA:1302:A:H5'	58:BA:1608:A:OP1	2.11	0.51
58:BA:1778:U:H3	58:BA:1785:A:H62	1.58	0.51
58:BA:2845:G:H2'	58:BA:2846:G:C8	2.46	0.51
59:BB:24:G:C2	59:BB:56:G:C2	2.99	0.51
1:CB:49:GLU:O	1:CB:52:GLU:HB3	2.11	0.51
11:CL:33:ARG:HB2	11:CL:60:LEU:HD12	1.93	0.51
11:CL:115:LYS:C	11:CL:117:ARG:H	2.18	0.51
14:CO:23:GLY:O	20:CA:750:G:N2	2.39	0.51
20:CA:519:C:H2'	20:CA:520:A:O4'	2.11	0.51
20:CA:707:C:H2'	20:CA:708:C:C6	2.45	0.51
20:CA:946:A:H2'	20:CA:947:G:C8	2.46	0.51
23:CY:394:ALA:C	23:CY:396:ARG:H	2.19	0.51
24:DC:118:PRO:O	24:DC:121:MET:HB3	2.10	0.51
25:DD:226:MET:HE2	25:DD:230:ASP:HB3	1.93	0.51
27:DF:176:LEU:HG	27:DF:177:ALA:N	2.26	0.51
29:DH:159:GLU:HB3	29:DH:160:LYS:HD2	1.93	0.51
37:DS:17:ARG:O	37:DS:21:THR:N	2.44	0.51
37:DS:30:ARG:NH1	37:DS:32:LEU:O	2.44	0.51
47:D3:42:ALA:O	58:DA:851:U:O2'	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D5:3:LYS:HE3	58:DA:2613:U:H2'	1.92	0.51
58:DA:454:A:H3'	58:DA:455:C:C6	2.45	0.51
58:DA:548:A:H8	58:DA:548:A:O5'	1.94	0.51
58:DA:629:G:H1	58:DA:634:C:H42	1.58	0.51
58:DA:647:G:H2'	58:DA:648:G:O4'	2.11	0.51
58:DA:874:G:H2'	58:DA:875:G:C8	2.46	0.51
58:DA:1542:G:O2'	58:DA:1543:A:OP2	2.25	0.51
58:DA:2178:C:H2'	58:DA:2179:C:H6	1.76	0.51
58:DA:2180:U:H2'	58:DA:2181:G:C8	2.46	0.51
59:DB:111:U:H2'	59:DB:112:G:C8	2.45	0.51
1:AB:24:TRP:CD1	1:AB:24:TRP:H	2.28	0.50
2:AC:119:ARG:O	2:AC:123:GLN:HG2	2.12	0.50
8:AI:107:ARG:NH2	20:AA:1346:A:H1'	2.25	0.50
9:AJ:55:LYS:HG3	20:AA:973:G:C1'	2.41	0.50
11:AL:118:SER:O	20:AA:35:G:H1'	2.11	0.50
18:AS:25:LYS:HG2	18:AS:27:GLU:HG3	1.92	0.50
20:AA:880:C:H2'	20:AA:881:G:C8	2.45	0.50
23:AY:13:ARG:O	23:AY:80:ASN:ND2	2.44	0.50
23:AY:14:ASN:N	23:AY:102:ASP:OD2	2.44	0.50
23:AY:613:PRO:HG2	23:AY:666:ARG:HD3	1.92	0.50
25:BD:7:LYS:HG3	58:BA:706:A:H5'	1.94	0.50
25:BD:165:ILE:HG22	25:BD:166:GLN:N	2.27	0.50
25:BD:218:ARG:NH2	58:BA:690:G:O3'	2.44	0.50
28:BG:38:VAL:HG22	28:BG:93:THR:HA	1.92	0.50
28:BG:54:GLU:HG3	28:BG:70:VAL:HG21	1.93	0.50
35:BQ:27:VAL:HG11	35:BQ:30:GLY:O	2.11	0.50
44:BZ:102:LEU:HD13	44:BZ:139:VAL:HG11	1.93	0.50
58:BA:11:G:N1	58:BA:2628:C:OP1	2.38	0.50
58:BA:354:G:H2'	58:BA:355:G:H8	1.77	0.50
58:BA:740:U:H2'	58:BA:741:G:H8	1.75	0.50
58:BA:1878:G:H2'	58:BA:1879:C:C6	2.46	0.50
1:CB:20:GLU:HG3	1:CB:191:ASP:HB2	1.93	0.50
1:CB:71:VAL:HB	1:CB:164:VAL:HG22	1.93	0.50
3:CD:135:LEU:HG	20:CA:620:C:C4	2.46	0.50
5:CF:46:ARG:HH22	17:CR:37:VAL:HG21	1.75	0.50
6:CG:31:MET:HE1	20:CA:1374:A:H1'	1.92	0.50
19:CT:54:LYS:HA	19:CT:57:ARG:HE	1.77	0.50
19:CT:63:ILE:HG22	19:CT:77:ALA:HB1	1.91	0.50
20:CA:540:G:H2'	20:CA:541:G:O4'	2.10	0.50
20:CA:935:A:O2'	20:CA:1383:C:N3	2.39	0.50
20:CA:984:C:N3	20:CA:1221:G:N2	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1126:U:H1'	20:CA:1280:A:C5	2.46	0.50
20:CA:1181:G:O2'	20:CA:1182:G:C8	2.64	0.50
24:DC:62:THR:HA	24:DC:162:ILE:O	2.11	0.50
26:DE:169:ASN:HB3	58:DA:2730:C:O3'	2.11	0.50
27:DF:143:ALA:HB1	27:DF:148:LEU:HB2	1.92	0.50
28:DG:37:VAL:HG21	28:DG:99:MET:HG3	1.92	0.50
32:DN:129:PRO:O	32:DN:130:HIS:C	2.54	0.50
32:DN:138:LEU:HD23	32:DN:138:LEU:N	2.26	0.50
34:DP:81:GLN:O	34:DP:113:LYS:N	2.43	0.50
37:DS:35:ILE:H	37:DS:53:SER:HB2	1.76	0.50
37:DS:97:ARG:O	37:DS:100:ALA:N	2.36	0.50
40:DV:47:VAL:HG12	40:DV:52:VAL:N	2.26	0.50
45:D0:24:LYS:HB3	45:D0:25:ARG:NH1	2.26	0.50
48:D5:13:LYS:O	48:D5:16:ARG:NE	2.44	0.50
51:D8:34:TRP:HB3	58:DA:2420:C:OP1	2.11	0.50
56:D1:22:GLY:HA2	56:D1:37:ILE:HA	1.92	0.50
58:DA:1094:U:H1'	58:DA:1097:U:H5	1.76	0.50
58:DA:1493:C:O2	58:DA:1493:C:H2'	2.11	0.50
58:DA:1614:A:H5"	58:DA:1617:C:H41	1.76	0.50
58:DA:2168:G:N2	58:DA:2170:A:H3'	2.26	0.50
59:DB:105:G:H2'	59:DB:106:G:H8	1.76	0.50
1:AB:49:GLU:O	1:AB:52:GLU:HB3	2.11	0.50
1:AB:97:TRP:CZ2	1:AB:176:GLU:HG3	2.47	0.50
3:AD:127:THR:HG23	3:AD:147:ALA:HB3	1.93	0.50
18:AS:78:ARG:NH1	20:AA:1223:C:OP1	2.45	0.50
20:AA:232:G:H21	20:AA:263:A:H2	1.57	0.50
20:AA:510:A:H5"	20:AA:511:C:OP2	2.11	0.50
20:AA:1462:G:H2'	20:AA:1463:C:C6	2.46	0.50
23:AY:36:THR:HG23	23:AY:273:LEU:HD11	1.93	0.50
27:BF:83:PHE:CD2	58:BA:1257:C:H4'	2.46	0.50
28:BG:111:LEU:N	28:BG:112:PRO:CD	2.73	0.50
36:BR:12:ARG:HG2	36:BR:16:HIS:ND1	2.27	0.50
38:BT:53:ARG:HH12	38:BT:60:THR:HG1	1.53	0.50
39:BU:54:LYS:NZ	58:BA:995:C:H5"	2.26	0.50
42:BX:7:VAL:HB	46:B2:33:MET:HE1	1.92	0.50
58:BA:52:A:H62	58:BA:119:A:H62	1.58	0.50
58:BA:224:G:H2'	58:BA:225:A:O4'	2.11	0.50
58:BA:251:A:O5'	58:BA:251:A:H8	1.94	0.50
58:BA:319:C:H2'	58:BA:320:A:C8	2.47	0.50
58:BA:569:U:H2'	58:BA:570:G:O4'	2.11	0.50
58:BA:1454:U:O2'	58:BA:1455:G:N7	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:219:VAL:O	1:CB:222:ILE:HG13	2.11	0.50
6:CG:98:SER:OG	20:CA:1376:U:OP1	2.18	0.50
7:CH:10:LEU:O	7:CH:13:ILE:HB	2.12	0.50
7:CH:37:ARG:O	7:CH:41:ARG:HB2	2.12	0.50
10:CK:112:THR:H	17:CR:84:LYS:HE3	1.76	0.50
12:CM:90:LEU:HD21	12:CM:94:ARG:HH21	1.76	0.50
12:CM:94:ARG:NH2	18:CS:81:ARG:HG3	2.27	0.50
20:CA:302:G:O2'	20:CA:556:C:H5"	2.11	0.50
20:CA:715:A:H2'	20:CA:716:A:H8	1.76	0.50
20:CA:1013:G:N2	20:CA:1016:A:OP2	2.42	0.50
20:CA:1424:C:H2'	20:CA:1425:U:C6	2.47	0.50
21:CW:56:C:C6	58:DA:2169:A:H1'	2.46	0.50
23:CY:327:PHE:CD1	23:CY:376:ALA:HB2	2.45	0.50
25:DD:248:SER:C	25:DD:250:TRP:H	2.18	0.50
27:DF:50:SER:HA	27:DF:92:PRO:HB2	1.92	0.50
27:DF:162:LEU:HA	27:DF:165:ARG:HG3	1.93	0.50
34:DP:82:GLY:HA3	34:DP:115:LEU:HD21	1.93	0.50
41:DW:41:LYS:HD3	58:DA:2010:G:OP1	2.12	0.50
47:D3:6:VAL:HB	47:D3:54:VAL:HG13	1.93	0.50
50:D7:23:ARG:O	50:D7:28:ARG:NH1	2.44	0.50
51:D8:33:ASN:H	51:D8:36:LYS:HG3	1.76	0.50
58:DA:197:A:H61	58:DA:2431:U:H5'	1.76	0.50
58:DA:407:G:H1	58:DA:420:C:N4	2.07	0.50
58:DA:565:C:H4'	58:DA:1253:A:N6	2.27	0.50
58:DA:764:A:O2'	58:DA:765:G:H5'	2.10	0.50
58:DA:819:A:OP2	58:DA:1187:G:N2	2.33	0.50
58:DA:1016:G:H1	58:DA:1146:C:H42	1.57	0.50
58:DA:2593:U:H2'	58:DA:2594:C:C6	2.47	0.50
58:DA:2780:G:H4'	58:DA:2781:A:OP2	2.10	0.50
1:AB:114:ARG:O	1:AB:117:GLU:HB2	2.12	0.50
3:AD:190:ASP:OD1	3:AD:191:ARG:N	2.44	0.50
5:AF:46:ARG:HB3	5:AF:60:PHE:CE1	2.46	0.50
5:AF:95:GLU:O	5:AF:97:PHE:N	2.44	0.50
6:AG:78:ARG:HD3	6:AG:154:TYR:O	2.11	0.50
20:AA:1228:C:H2'	20:AA:1229:A:H8	1.77	0.50
24:BC:32:GLU:O	24:BC:34:ALA:N	2.43	0.50
24:BC:139:PRO:HA	24:BC:145:THR:CB	2.40	0.50
25:BD:245:PRO:O	25:BD:247:ALA:N	2.45	0.50
29:BH:17:VAL:HG11	29:BH:50:VAL:HG21	1.92	0.50
32:BN:65:LYS:O	32:BN:66:LYS:C	2.54	0.50
38:BT:95:ARG:H	38:BT:95:ARG:HD2	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BT:116:ALA:O	38:BT:118:ARG:NH1	2.42	0.50
39:BU:58:ARG:HA	39:BU:61:TRP:CE3	2.46	0.50
52:B9:10:ILE:HD11	52:B9:32:HIS:HB3	1.94	0.50
56:B1:19:GLN:O	56:B1:21:ARG:N	2.39	0.50
57:B4:14:ILE:HB	57:B4:22:ILE:HB	1.93	0.50
58:BA:529:A:N7	58:BA:2041:U:C4	2.79	0.50
58:BA:840:C:P	58:BA:932:G:H22	2.34	0.50
58:BA:1141:U:H4'	58:BA:114(B):A:C8	2.47	0.50
58:BA:1451:C:H4'	58:BA:1453:A:O4'	2.12	0.50
2:CC:48:TYR:O	2:CC:50:ALA:N	2.44	0.50
9:CJ:37:PRO:HA	9:CJ:71:LEU:O	2.10	0.50
11:CL:69:TYR:O	11:CL:70:ILE:HG23	2.11	0.50
13:CN:35:ARG:HG3	20:CA:1358:U:OP1	2.11	0.50
20:CA:112:G:H1	20:CA:315:A:N6	2.07	0.50
20:CA:979:C:H3'	20:CA:980:C:H5"	1.94	0.50
24:DC:73:VAL:HG23	24:DC:112:ASP:HB2	1.93	0.50
25:DD:43:ARG:HE	58:DA:691:C:H4'	1.76	0.50
27:DF:195:ASP:HB3	27:DF:197:ASP:OD2	2.12	0.50
34:DP:135:LEU:O	34:DP:139:LYS:HG2	2.11	0.50
45:D0:46:LYS:HD3	45:D0:78:TYR:CZ	2.46	0.50
58:DA:1174:A:N7	58:DA:1175:U:H1'	2.26	0.50
58:DA:1993:U:H2'	58:DA:1994:C:O4'	2.11	0.50
58:DA:2114:A:H2	58:DA:2168:G:H1'	1.75	0.50
58:DA:2821:A:H2'	58:DA:2822:G:C8	2.45	0.50
59:DB:40:U:H3'	59:DB:41:U:C5'	2.40	0.50
1:AB:102:LEU:O	1:AB:180:LEU:HD11	2.12	0.50
3:AD:103:ASN:HB2	3:AD:114:ARG:HH22	1.76	0.50
5:AF:75:LEU:O	5:AF:79:LEU:HG	2.12	0.50
8:AI:99:LEU:HD12	8:AI:101:PHE:HE1	1.76	0.50
9:AJ:34:VAL:HG22	9:AJ:74:ILE:HG22	1.94	0.50
11:AL:24:VAL:O	11:AL:26:ALA:N	2.42	0.50
20:AA:373:A:O2'	20:AA:451:A:N7	2.44	0.50
20:AA:376:G:O6	20:AA:387:U:O4	2.29	0.50
20:AA:448:A:H2'	20:AA:449:C:C6	2.46	0.50
20:AA:808:C:H2'	20:AA:809:G:O4'	2.11	0.50
20:AA:1004:A:H8	20:AA:1036:G:H1	1.55	0.50
23:AY:213:HIS:O	23:AY:216:LEU:HB3	2.10	0.50
23:AY:523:PHE:HE2	23:AY:547:GLU:HG2	1.76	0.50
23:AY:621:ILE:HD11	23:AY:643:ILE:HG12	1.92	0.50
24:BC:46:ALA:O	24:BC:171:ALA:N	2.45	0.50
25:BD:206:LEU:O	25:BD:208:LYS:N	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BP:58:THR:O	34:BP:61:ARG:HG3	2.10	0.50
41:BW:103:ILE:H	41:BW:103:ILE:HD12	1.76	0.50
46:B2:64:LEU:O	46:B2:68:ARG:N	2.44	0.50
51:B8:30:ARG:NH1	58:BA:2419:U:O4	2.44	0.50
58:BA:306:U:O4	58:BA:310:A:N7	2.45	0.50
58:BA:769:G:H2'	58:BA:770:G:C8	2.46	0.50
58:BA:799:G:H3'	58:BA:800:A:H5"	1.94	0.50
58:BA:1957:C:H2'	58:BA:1958:C:H6	1.76	0.50
58:BA:2171:A:O2'	58:BA:2172:U:O4'	2.29	0.50
58:BA:2849:U:H1'	58:BA:2866:U:H6	1.76	0.50
7:CH:6:ILE:H	7:CH:6:ILE:HD12	1.77	0.50
17:CR:64:ARG:NH2	20:CA:835:U:OP1	2.36	0.50
20:CA:612:C:N3	20:CA:628:G:N2	2.43	0.50
20:CA:975:A:H4'	20:CA:976:G:H5"	1.92	0.50
20:CA:1131:G:H2'	20:CA:1132:C:C6	2.46	0.50
20:CA:1354:C:H2'	20:CA:1355:G:C8	2.46	0.50
20:CA:1472:U:H2'	20:CA:1473:A:C8	2.47	0.50
20:CA:1516:G:N1	20:CA:1519:A:OP2	2.44	0.50
25:DD:179:SER:HB3	58:DA:1799:G:O6	2.11	0.50
25:DD:231:HIS:O	25:DD:233:HIS:N	2.42	0.50
26:DE:3:GLY:HA2	26:DE:199:ARG:HA	1.94	0.50
26:DE:197:ILE:HG12	26:DE:198:VAL:N	2.26	0.50
27:DF:64:ILE:HG22	27:DF:76:GLY:HA2	1.93	0.50
28:DG:106:LEU:CA	28:DG:110:ALA:HB3	2.34	0.50
29:DH:158:HIS:CG	29:DH:159:GLU:H	2.30	0.50
31:DK:24:GLY:H	31:DK:25:PRO:HD2	1.76	0.50
40:DV:69:LYS:NZ	58:DA:1225:G:OP1	2.40	0.50
42:DX:26:TYR:O	42:DX:81:VAL:HG22	2.12	0.50
48:D5:18:ALA:O	48:D5:21:SER:N	2.40	0.50
49:D6:41:PRO:HD3	49:D6:47:THR:HG22	1.92	0.50
53:De:99:VAL:HG21	53:De:122:VAL:HB	1.93	0.50
58:DA:52:A:H62	58:DA:119:A:H62	1.59	0.50
58:DA:215:G:H21	58:DA:432:A:H2	1.57	0.50
58:DA:757:U:H2'	58:DA:758:C:H6	1.76	0.50
58:DA:1292:U:H2'	58:DA:1293:C:C6	2.46	0.50
58:DA:1812:A:H2'	58:DA:1813:G:C8	2.47	0.50
2:AC:102:ASN:HD21	2:AC:104:GLN:HG2	1.75	0.50
3:AD:96:LEU:HD12	3:AD:139:ARG:HH22	1.76	0.50
5:AF:18:GLN:O	5:AF:21:LEU:HB3	2.11	0.50
20:AA:1179:A:H2'	20:AA:1180:A:O4'	2.11	0.50
25:BD:250:TRP:CE2	58:BA:1805:U:H5"	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:108:LYS:NZ	58:BA:601:C:H5'	2.27	0.50
28:BG:139:LEU:HA	28:BG:144:ILE:HG23	1.94	0.50
49:B6:47:THR:OG1	49:B6:48:VAL:N	2.36	0.50
58:BA:236:C:O2'	58:BA:431:U:H4'	2.12	0.50
58:BA:684:G:O2'	58:BA:788:A:N7	2.43	0.50
58:BA:948:G:H2'	58:BA:949:C:C6	2.47	0.50
58:BA:1308:A:H2'	58:BA:1309:G:O4'	2.10	0.50
58:BA:1317:A:H61	58:BA:1335:U:H3	1.60	0.50
58:BA:1359:A:H62	58:BA:1372:U:H3	1.60	0.50
58:BA:1531:C:H2'	58:BA:1532:C:H6	1.77	0.50
58:BA:2023:G:P	58:BA:2023:G:H8	2.35	0.50
58:BA:2081:C:H2'	58:BA:2082:A:C8	2.47	0.50
1:CB:71:VAL:HG22	1:CB:93:VAL:HG21	1.93	0.50
6:CG:121:ALA:O	6:CG:125:MET:HG2	2.11	0.50
9:CJ:13:HIS:HA	9:CJ:16:LEU:HB3	1.93	0.50
10:CK:126:ARG:O	10:CK:126:ARG:HG3	2.09	0.50
20:CA:449:C:H2'	20:CA:450:G:O4'	2.11	0.50
20:CA:1090:U:H2'	20:CA:1091:U:C6	2.46	0.50
20:CA:1165:C:N4	20:CA:1171:G:H1	2.09	0.50
20:CA:1410:G:H2'	20:CA:1411:C:H6	1.77	0.50
23:CY:626:ALA:HB2	58:DA:2473:U:C6	2.43	0.50
23:CY:631:ILE:HG22	23:CY:632:LEU:N	2.26	0.50
24:DC:81:GLY:O	24:DC:84:ILE:HB	2.11	0.50
25:DD:38:LYS:HD3	25:DD:59:LYS:NZ	2.27	0.50
26:DE:110:GLY:HA2	26:DE:162:ALA:N	2.25	0.50
27:DF:183:VAL:O	27:DF:186:ILE:HG22	2.11	0.50
30:DJ:33:UNK:HA	58:DA:1055:G:H5"	1.93	0.50
38:DT:85:LYS:C	38:DT:85:LYS:HE2	2.37	0.50
49:D6:23:THR:HG21	58:DA:2419:U:OP1	2.11	0.50
56:D1:25:LYS:O	56:D1:26:ARG:HB2	2.11	0.50
58:DA:462:C:N4	58:DA:463:G:O6	2.45	0.50
58:DA:599:G:N2	58:DA:658:C:N3	2.50	0.50
58:DA:684:G:H21	58:DA:788:A:P	2.34	0.50
58:DA:723:G:H2'	58:DA:724:U:C6	2.45	0.50
58:DA:825:C:H42	58:DA:832:G:H1	1.59	0.50
58:DA:1204:A:H1'	58:DA:1206:G:C5	2.47	0.50
58:DA:1819:A:H4'	58:DA:1820:U:C5'	2.42	0.50
58:DA:2598:A:O5'	58:DA:2598:A:H8	1.95	0.50
4:AE:60:TYR:O	4:AE:63:ARG:HB2	2.12	0.50
20:AA:160:A:N6	20:AA:347:G:H1'	2.26	0.50
20:AA:455:C:H2'	20:AA:456:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:707:C:H2'	20:AA:708:C:H6	1.76	0.50
20:AA:859:A:H2'	20:AA:860:A:O4'	2.12	0.50
20:AA:1436:U:H2'	20:AA:1437:C:O4'	2.11	0.50
23:AY:25:LYS:CB	61:AY:702:GDP:O2B	2.58	0.50
24:BC:47:LYS:HB2	24:BC:169:THR:OG1	2.11	0.50
25:BD:69:ARG:HH21	25:BD:105:ILE:HG13	1.76	0.50
25:BD:79:VAL:HG23	25:BD:115:GLN:O	2.12	0.50
28:BG:113:ARG:O	28:BG:114:ILE:C	2.49	0.50
36:BR:2:ARG:HD2	58:BA:2723:C:OP1	2.11	0.50
41:BW:36:LEU:HD13	41:BW:48:ALA:HA	1.92	0.50
50:B7:26:GLY:HA2	58:BA:682:G:H5"	1.93	0.50
58:BA:464:U:O2	58:BA:686:G:N2	2.45	0.50
58:BA:1264:G:H2'	58:BA:1265:A:C8	2.46	0.50
1:CB:59:GLU:HG3	1:CB:221:LEU:HD11	1.93	0.50
3:CD:30:LYS:N	3:CD:30:LYS:HE2	2.26	0.50
9:CJ:45:ARG:NH2	20:CA:1255:G:OP1	2.42	0.50
15:CP:67:THR:H	15:CP:70:ALA:HB3	1.75	0.50
20:CA:146:G:H1	20:CA:176:C:N4	2.08	0.50
20:CA:484:G:O2'	20:CA:485:G:OP2	2.24	0.50
20:CA:948:C:H2'	20:CA:949:A:H8	1.77	0.50
20:CA:1409:C:H5"	58:DA:1916:A:N1	2.26	0.50
24:DC:77:ALA:HA	24:DC:114:VAL:O	2.12	0.50
24:DC:83:LYS:HD2	24:DC:148:PHE:CD1	2.46	0.50
24:DC:119:ASP:OD2	24:DC:119:ASP:N	2.42	0.50
26:DE:153:GLY:O	26:DE:155:LYS:N	2.37	0.50
27:DF:154:VAL:O	27:DF:175:THR:HA	2.12	0.50
30:DJ:122:UNK:O	30:DJ:124:UNK:N	2.45	0.50
33:DO:68:GLU:N	33:DO:68:GLU:OE2	2.44	0.50
39:DU:98:LEU:HA	39:DU:101:ARG:HH12	1.76	0.50
40:DV:24:LYS:NZ	58:DA:1163:G:H5'	2.27	0.50
40:DV:64:HIS:CE1	40:DV:92:THR:HG23	2.46	0.50
51:D8:23:VAL:HG13	51:D8:48:PHE:HA	1.94	0.50
51:D8:23:VAL:HA	51:D8:48:PHE:O	2.12	0.50
58:DA:856:C:H2'	58:DA:857:C:H6	1.72	0.50
58:DA:1200:C:H2'	58:DA:1201:C:H6	1.77	0.50
58:DA:1708:C:H2'	58:DA:1709:U:C6	2.45	0.50
58:DA:2116:G:N7	58:DA:2166:G:N2	2.60	0.50
1:AB:70:PHE:CD2	1:AB:81:VAL:HB	2.42	0.50
1:AB:97:TRP:CE3	1:AB:172:ILE:HG13	2.46	0.50
3:AD:12:CYS:HA	3:AD:19:LEU:HD13	1.93	0.50
3:AD:60:GLU:OE2	3:AD:199:ASN:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:61:ALA:HB1	8:AI:63:ILE:HD11	1.93	0.50
8:AI:72:GLY:N	20:AA:1372:U:OP1	2.44	0.50
10:AK:79:SER:HA	10:AK:104:GLN:HB3	1.93	0.50
11:AL:80:HIS:O	11:AL:82:VAL:N	2.40	0.50
20:AA:488:C:H2'	20:AA:489:C:H6	1.76	0.50
20:AA:522:C:H42	20:AA:527:G:H1	1.58	0.50
20:AA:864:A:H2'	20:AA:865:A:C8	2.47	0.50
20:AA:1110:A:H2'	20:AA:1111:A:O4'	2.12	0.50
20:AA:1494:G:C6	20:AA:1495:U:O4	2.65	0.50
20:AA:1494:G:H5'	58:BA:1913:A:H62	1.76	0.50
23:AY:74:TRP:CG	23:AY:75:LYS:H	2.30	0.50
23:AY:545:GLY:HA3	23:AY:583:LYS:O	2.12	0.50
33:BO:80:ASP:OD1	33:BO:80:ASP:N	2.43	0.50
37:BS:13:ARG:C	37:BS:15:ARG:N	2.69	0.50
38:BT:64:ARG:HH21	38:BT:71:GLY:HA3	1.77	0.50
41:BW:7:ALA:HB1	41:BW:10:VAL:HG21	1.94	0.50
42:BX:35:THR:HG21	58:BA:143:C:H5'	1.93	0.50
43:BY:83:THR:HG22	43:BY:96:ILE:HD13	1.93	0.50
58:BA:1234:U:H2'	58:BA:1235:G:O4'	2.12	0.50
58:BA:1418:G:N2	58:BA:1580:A:N6	2.45	0.50
7:CH:41:ARG:HH22	7:CH:123:GLU:CD	2.20	0.50
10:CK:84:VAL:HG22	10:CK:109:VAL:O	2.11	0.50
20:CA:272:C:H2'	20:CA:273:A:C8	2.46	0.50
20:CA:955:U:H1'	20:CA:1227:A:H61	1.77	0.50
20:CA:1244:C:N4	20:CA:1293:G:H1	2.07	0.50
25:DD:261:LYS:HE3	58:DA:2227:A:H5"	1.94	0.50
26:DE:11:MET:HG2	26:DE:192:ASN:HD21	1.77	0.50
26:DE:14:ILE:HG13	26:DE:23:VAL:HG21	1.92	0.50
26:DE:56:PRO:HB2	26:DE:57:LYS:HD2	1.93	0.50
28:DG:103:LEU:O	28:DG:107:LEU:HG	2.11	0.50
32:DN:90:MET:HE2	32:DN:90:MET:HA	1.94	0.50
32:DN:103:VAL:O	32:DN:106:MET:N	2.36	0.50
37:DS:26:LEU:O	37:DS:88:ASP:HB3	2.11	0.50
37:DS:40:ILE:CA	37:DS:47:THR:HA	2.41	0.50
38:DT:49:VAL:HA	38:DT:63:VAL:CA	2.27	0.50
38:DT:121:ILE:HA	38:DT:124:ASP:HB2	1.93	0.50
41:DW:9:TYR:H	41:DW:102:HIS:HE1	1.59	0.50
41:DW:18:ARG:NH1	58:DA:518:G:O2'	2.45	0.50
44:DZ:137:ILE:HG21	44:DZ:155:LEU:HD12	1.94	0.50
58:DA:137(B):G:H5"	58:DA:138:G:OP2	2.12	0.50
58:DA:373:U:H2'	58:DA:374:A:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:681:G:H2'	58:DA:682:G:C8	2.47	0.50
58:DA:1034:G:H2'	58:DA:1035:U:C6	2.47	0.50
58:DA:1137:G:O2'	58:DA:1138:G:H5'	2.12	0.50
58:DA:1280:G:H1	58:DA:1290:C:H42	1.60	0.50
58:DA:1912:A:C6	58:DA:1918:A:N3	2.79	0.50
58:DA:1913:A:O2'	58:DA:1914:C:OP2	2.30	0.50
58:DA:2210:G:N2	58:DA:2212:A:N1	2.59	0.50
58:DA:2642:G:H2'	58:DA:2643:G:H8	1.76	0.50
1:AB:72:GLY:HA3	1:AB:81:VAL:HG21	1.94	0.50
3:AD:15:GLU:HA	3:AD:59:ARG:HH21	1.75	0.50
3:AD:57:ARG:HG3	3:AD:206:PHE:HB2	1.92	0.50
4:AE:41:VAL:HG23	4:AE:67:VAL:HG13	1.93	0.50
7:AH:62:TYR:CD2	7:AH:62:TYR:N	2.80	0.50
19:AT:79:ARG:O	19:AT:82:SER:OG	2.26	0.50
20:AA:55:A:H1'	23:AY:321:TYR:CD1	2.47	0.50
20:AA:68(X):U:H2'	20:AA:68(Y):C:C6	2.47	0.50
20:AA:137:C:N4	20:AA:226:G:H1	2.09	0.50
20:AA:186(N):U:H2'	20:AA:186(O):G:C8	2.47	0.50
20:AA:979:C:H3'	20:AA:980:C:H5"	1.93	0.50
20:AA:1152:A:H2'	20:AA:1153:C:C6	2.46	0.50
23:AY:163:VAL:HG13	23:AY:258:VAL:HB	1.94	0.50
23:AY:493:VAL:HG21	23:AY:593:ALA:HB2	1.94	0.50
25:BD:210:GLY:HA2	58:BA:764:A:H5'	1.94	0.50
27:BF:155:LEU:HB2	27:BF:189:THR:OG1	2.11	0.50
28:BG:46:ALA:HA	28:BG:53:LEU:HD23	1.93	0.50
36:BR:101:ALA:HB1	41:BW:38:TYR:HE1	1.76	0.50
37:BS:58:LEU:HD23	37:BS:69:VAL:HG23	1.94	0.50
39:BU:92:ARG:O	39:BU:95:LEU:N	2.45	0.50
42:BX:54:VAL:HG13	42:BX:81:VAL:HG12	1.94	0.50
46:B2:48:HIS:CD2	46:B2:49:LYS:H	2.30	0.50
48:B5:8:LYS:HD3	58:BA:2054:A:C2	2.47	0.50
49:B6:11:LEU:HA	49:B6:54:ILE:O	2.12	0.50
58:BA:920:G:H2'	58:BA:921:G:H8	1.77	0.50
58:BA:2469:A:H2	58:BA:2481:G:H21	1.58	0.50
1:CB:220:ASP:HA	1:CB:223:ILE:HD12	1.94	0.50
2:CC:7:PRO:HG2	2:CC:184:TYR:CG	2.47	0.50
2:CC:150:LYS:HB3	2:CC:201:TYR:HB2	1.92	0.50
5:CF:14:LEU:HD21	5:CF:22:GLU:OE1	2.12	0.50
9:CJ:27:ALA:HA	9:CJ:85:LEU:HD11	1.93	0.50
19:CT:10:LEU:HD12	19:CT:11:SER:H	1.77	0.50
20:CA:169:C:H2'	20:CA:170:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:583:A:H2'	20:CA:584:G:O4'	2.12	0.50
21:CW:56:C:H5'	24:DC:134:PRO:HG3	1.93	0.50
23:CY:566:THR:CG2	23:CY:567:LEU:H	2.19	0.50
25:DD:9:TYR:HD2	58:DA:705:A:H1'	1.75	0.50
31:DK:90:LYS:HG3	58:DA:1063:G:H21	1.77	0.50
39:DU:50:ARG:NH2	40:DV:72:VAL:HG12	2.27	0.50
58:DA:31:C:H42	58:DA:474:G:H1	1.58	0.50
58:DA:504:U:H4'	58:DA:505:A:H5'	1.93	0.50
58:DA:1007:C:H5"	58:DA:1008:C:C2'	2.41	0.50
58:DA:1080:C:H2'	58:DA:1081:U:C6	2.44	0.50
10:AK:120:ARG:NH1	10:AK:126:ARG:HH12	2.09	0.50
17:AR:44:LEU:HD22	17:AR:79:LEU:HD21	1.93	0.50
20:AA:266:G:O2'	20:AA:267:C:O5'	2.30	0.50
20:AA:975:A:H8	20:AA:1365:G:N2	2.10	0.50
20:AA:1097:C:H2'	20:AA:1098:C:H6	1.75	0.50
23:AY:165:GLN:NE2	23:AY:271:LEU:HB2	2.27	0.50
23:AY:534:ILE:HG23	23:AY:538:TYR:HD2	1.76	0.50
24:BC:213:VAL:HG11	24:BC:225:ILE:CG1	2.35	0.50
27:BF:157:VAL:HG11	27:BF:194:MET:HE3	1.93	0.50
29:BH:60:ARG:HG3	29:BH:61:HIS:N	2.27	0.50
34:BP:21:ARG:NH2	58:BA:1192:G:OP2	2.43	0.50
43:BY:17:SER:OG	43:BY:18:GLY:N	2.44	0.50
44:BZ:10:ARG:HB3	44:BZ:36:LYS:HG3	1.93	0.50
58:BA:780:G:H5"	58:BA:781:A:OP2	2.12	0.50
58:BA:1069:A:O2'	58:BA:1073:A:N6	2.41	0.50
58:BA:1200:C:H2'	58:BA:1201:C:C6	2.47	0.50
58:BA:1287:A:H2'	58:BA:1288:U:H5'	1.94	0.50
58:BA:1376:C:H2'	58:BA:1377:G:C8	2.47	0.50
58:BA:1886:C:H2'	58:BA:1887:C:H6	1.77	0.50
58:BA:2244:U:H2'	58:BA:2245:U:H5'	1.94	0.50
58:BA:2560:C:H2'	58:BA:2561:A:H8	1.77	0.50
58:BA:2708:G:H2'	58:BA:2709:G:C8	2.47	0.50
1:CB:110:GLN:HA	1:CB:113:HIS:HB2	1.94	0.50
3:CD:24:GLU:HB2	20:CA:409:G:OP1	2.12	0.50
16:CQ:86:GLU:O	16:CQ:90:ILE:HG13	2.12	0.50
18:CS:53:ASN:HB2	18:CS:58:VAL:HG22	1.94	0.50
20:CA:46:G:O2'	20:CA:365:U:O2'	2.25	0.50
20:CA:505:G:H1	20:CA:526:C:H42	1.58	0.50
23:CY:188:TYR:OH	23:CY:270:GLN:HG2	2.12	0.50
24:DC:216:THR:HG21	58:DA:2176:A:O4'	2.11	0.50
25:DD:254:THR:HG21	58:DA:1824:G:H1'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:66:PRO:HD2	27:DF:70:THR:HG23	1.93	0.50
29:DH:18:GLU:HB3	29:DH:25:LYS:HB2	1.94	0.50
35:DQ:17:LEU:N	59:DB:90:C:OP1	2.41	0.50
42:DX:62:LYS:HE2	58:DA:1339:G:O6	2.12	0.50
43:DY:7:VAL:HG21	58:DA:336:C:H5"	1.94	0.50
43:DY:47:LYS:HG2	58:DA:482:A:H4'	1.94	0.50
58:DA:8:A:C6	58:DA:2895:U:O4	2.65	0.50
58:DA:297:C:H2'	58:DA:298:G:O4'	2.12	0.50
58:DA:1062:G:H2'	58:DA:1063:G:C8	2.47	0.50
58:DA:1077:A:N1	58:DA:1088:A:H2'	2.27	0.50
58:DA:2001:A:H4'	58:DA:2689:U:C2	2.46	0.50
58:DA:2507:C:N4	58:DA:2508:G:O6	2.45	0.50
58:DA:2712:U:O2'	58:DA:712(B):A:H3'	2.12	0.50
1:AB:176:GLU:O	1:AB:180:LEU:HD12	2.12	0.49
3:AD:15:GLU:HA	3:AD:59:ARG:NH2	2.27	0.49
10:AK:120:ARG:HH22	20:AA:1525:G:P	2.35	0.49
16:AQ:82:MET:O	16:AQ:86:GLU:HB2	2.11	0.49
20:AA:68(P):C:H2'	20:AA:68(Q):U:O4'	2.12	0.49
20:AA:113:G:H2'	20:AA:114:U:C6	2.46	0.49
20:AA:437:U:H2'	20:AA:438:G:O4'	2.12	0.49
20:AA:1071:C:H2'	20:AA:1072:G:H8	1.77	0.49
20:AA:1503:A:H61	22:AV:14:A:H3'	1.76	0.49
20:AA:1533:C:H5	22:AV:12:A:H61	1.59	0.49
23:AY:311:ALA:HB1	23:AY:330:VAL:HA	1.93	0.49
25:BD:177:LEU:HD23	25:BD:178:PRO:CD	2.42	0.49
25:BD:177:LEU:O	25:BD:179:SER:N	2.45	0.49
27:BF:194:MET:SD	27:BF:199:TRP:HD1	2.35	0.49
28:BG:60:LEU:O	28:BG:63:ILE:HG12	2.12	0.49
32:BN:90:MET:HE2	32:BN:90:MET:HA	1.94	0.49
36:BR:53:HIS:CD2	58:BA:2840:C:H5"	2.47	0.49
37:BS:18:ILE:HA	37:BS:21:THR:OG1	2.12	0.49
43:BY:9:LYS:O	43:BY:28:LYS:NZ	2.42	0.49
46:B2:47:ASN:OD1	58:BA:94:G:O2'	2.30	0.49
46:B2:48:HIS:CE1	58:BA:95:G:H4'	2.47	0.49
51:B8:61:LEU:O	51:B8:64:TYR:N	2.44	0.49
58:BA:191:A:H2'	58:BA:192:C:C6	2.47	0.49
58:BA:212:G:H2'	58:BA:213:A:C8	2.47	0.49
58:BA:290:G:O6	58:BA:350:U:O2	2.30	0.49
58:BA:363(G):A:HO2'	58:BA:364:C:H6	1.56	0.49
58:BA:377:C:H2'	58:BA:378:C:C6	2.47	0.49
58:BA:1625:C:H2'	58:BA:1626:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:1948:G:H2'	58:BA:1949:G:H8	1.76	0.49
58:BA:2768:C:H2'	58:BA:2769:C:O4'	2.12	0.49
59:BB:81:G:H1	59:BB:95:U:H3	1.60	0.49
1:CB:113:HIS:O	1:CB:117:GLU:HG2	2.11	0.49
4:CE:10:MET:SD	4:CE:10:MET:N	2.79	0.49
15:CP:5:ARG:CB	20:CA:376:G:H5"	2.37	0.49
15:CP:53:VAL:HG12	15:CP:79:VAL:HG22	1.94	0.49
20:CA:563:A:H5"	20:CA:564:C:H5	1.77	0.49
20:CA:745:C:H1'	20:CA:836:G:O2'	2.11	0.49
20:CA:880:C:H2'	20:CA:881:G:C8	2.47	0.49
20:CA:982:U:H3	20:CA:1222:G:H1	1.59	0.49
20:CA:1073:U:H2'	20:CA:1074:G:C8	2.46	0.49
20:CA:1253:G:H1'	20:CA:1355:G:O2'	2.12	0.49
23:CY:481:VAL:HB	23:CY:483:TYR:CZ	2.47	0.49
23:CY:526:VAL:O	23:CY:528:ALA:N	2.45	0.49
23:CY:599:PRO:O	23:CY:600:VAL:HB	2.12	0.49
25:DD:8:PRO:HG3	58:DA:1694:C:H5'	1.93	0.49
32:DN:15:LEU:HD13	32:DN:15:LEU:C	2.37	0.49
32:DN:65:LYS:O	32:DN:66:LYS:C	2.54	0.49
58:DA:1400:G:H2'	58:DA:1401:G:H8	1.76	0.49
3:AD:35:ARG:HD3	20:AA:412:A:H2	1.77	0.49
3:AD:173:TRP:HB3	3:AD:187:ARG:CZ	2.42	0.49
5:AF:5:GLU:HB3	5:AF:62:TRP:HZ2	1.78	0.49
7:AH:94:TYR:CG	20:AA:598:U:H4'	2.47	0.49
10:AK:16:SER:HA	10:AK:79:SER:O	2.11	0.49
10:AK:59:TYR:O	10:AK:63:LEU:HG	2.12	0.49
10:AK:114:VAL:HG11	17:AR:82:THR:HG21	1.94	0.49
18:AS:6:LYS:HD2	20:AA:1314:C:C5	2.46	0.49
18:AS:6:LYS:HD3	18:AS:6:LYS:H	1.76	0.49
19:AT:15:ARG:O	19:AT:19:SER:HB2	2.11	0.49
20:AA:514:C:H2'	20:AA:515:G:O4'	2.11	0.49
20:AA:707:C:H2'	20:AA:708:C:C6	2.46	0.49
20:AA:881:G:H2'	20:AA:882:C:C6	2.46	0.49
20:AA:927:G:O6	20:AA:1390:U:O2	2.30	0.49
23:AY:80:ASN:CG	23:AY:374:LEU:HD13	2.37	0.49
23:AY:415:PRO:HA	23:AY:474:ALA:HA	1.93	0.49
26:BE:61:ARG:HB2	26:BE:62:PRO:HD3	1.93	0.49
26:BE:152:LYS:HG2	32:BN:78:TYR:CD1	2.47	0.49
27:BF:88:VAL:HG22	27:BF:89:VAL:H	1.77	0.49
27:BF:102:PRO:O	27:BF:106:ARG:HG2	2.12	0.49
29:BH:79:VAL:C	29:BH:81:GLU:H	2.21	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BN:129:PRO:O	32:BN:130:HIS:C	2.54	0.49
39:BU:3:ARG:NH1	58:BA:445:C:O2'	2.45	0.49
42:BX:12:VAL:HG12	42:BX:17:ALA:HB1	1.94	0.49
56:B1:12:PRO:HB3	56:B1:43:TYR:CD1	2.47	0.49
56:B1:13:ILE:HG23	56:B1:42:GLN:O	2.13	0.49
56:B1:26:ARG:HG3	56:B1:27:GLU:H	1.76	0.49
58:BA:329:G:H4'	58:BA:330:A:OP2	2.12	0.49
58:BA:441:U:H2'	58:BA:442:G:C8	2.46	0.49
58:BA:499:U:O2	58:BA:503:A:N7	2.45	0.49
58:BA:514:A:H2'	58:BA:515:A:C8	2.47	0.49
58:BA:602:G:N2	58:BA:655:A:N7	2.60	0.49
58:BA:1025:G:C5	58:BA:1135:C:H1'	2.48	0.49
58:BA:1130:U:N3	58:BA:2025:C:H5"	2.26	0.49
58:BA:2649:U:H2'	58:BA:2650:U:C6	2.47	0.49
2:CC:9:GLY:HA2	2:CC:12:LEU:HG	1.93	0.49
2:CC:40:ARG:HH12	13:CN:52:GLN:HB3	1.76	0.49
11:CL:53:ARG:N	11:CL:53:ARG:HD2	2.27	0.49
11:CL:95:GLY:C	11:CL:97:ARG:N	2.70	0.49
20:CA:604:G:H2'	20:CA:605:U:C6	2.47	0.49
20:CA:892:A:H2'	20:CA:893:C:C6	2.47	0.49
20:CA:1306:A:H61	20:CA:1331:G:H1'	1.76	0.49
24:DC:53:ARG:O	24:DC:55:SER:N	2.45	0.49
24:DC:80:LYS:HB2	24:DC:120:VAL:HG13	1.93	0.49
25:DD:14:ARG:NH2	58:DA:1693:U:O2	2.45	0.49
25:DD:44:ASN:OD1	25:DD:45:ASN:N	2.44	0.49
25:DD:50:THR:OG1	58:DA:1813:G:N3	2.32	0.49
26:DE:16:ARG:CZ	26:DE:173:VAL:HG11	2.42	0.49
30:DJ:58:UNK:C	30:DJ:60:UNK:N	2.75	0.49
33:DO:6:THR:O	33:DO:21:CYS:N	2.39	0.49
50:D7:42:LEU:HD11	58:DA:467:G:OP2	2.12	0.49
58:DA:820:A:O2'	58:DA:943:U:H1'	2.12	0.49
58:DA:1050:A:H2'	58:DA:1051:G:C8	2.47	0.49
58:DA:1175:U:H2'	58:DA:1176:G:N7	2.28	0.49
58:DA:1306:C:H2'	58:DA:1307:A:O4'	2.12	0.49
58:DA:1448:G:H21	58:DA:1529:A:H2	1.60	0.49
58:DA:2146:C:H4'	58:DA:2147:G:C8	2.47	0.49
58:DA:2794:C:N3	58:DA:2802:G:O6	2.45	0.49
58:DA:2817:G:O2'	58:DA:2836:U:O2	2.29	0.49
59:DB:20:C:H2'	59:DB:21:G:C8	2.48	0.49
1:AB:187:LEU:HD23	1:AB:201:ILE:HG22	1.94	0.49
4:AE:6:PHE:HB3	4:AE:34:VAL:HG22	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:89:ILE:HD13	4:AE:135:THR:HA	1.92	0.49
7:AH:9:MET:HB2	7:AH:26:VAL:HG21	1.94	0.49
7:AH:34:GLU:O	7:AH:37:ARG:HB3	2.11	0.49
9:AJ:56:HIS:O	9:AJ:58:ASP:N	2.45	0.49
16:AQ:16:GLN:NE2	16:AQ:16:GLN:H	2.11	0.49
16:AQ:64:PRO:O	20:AA:264:U:O2'	2.27	0.49
16:AQ:65:ILE:HG22	20:AA:255:G:OP1	2.12	0.49
20:AA:109:A:C8	20:AA:326:G:H2'	2.46	0.49
20:AA:615:C:H2'	20:AA:616:G:O4'	2.12	0.49
20:AA:618:C:N4	20:AA:622:A:H62	2.07	0.49
20:AA:1407:C:N4	20:AA:1494:G:O6	2.39	0.49
23:AY:461:ILE:CD1	60:AY:701:FUA:O6	2.60	0.49
23:AY:629:GLY:HA3	23:AY:648:PRO:HD3	1.93	0.49
25:BD:6:PHE:CE1	25:BD:18:VAL:HB	2.48	0.49
25:BD:66:ASP:N	25:BD:104:TYR:O	2.25	0.49
27:BF:62:ARG:NH2	27:BF:64:ILE:HA	2.23	0.49
31:BK:72:PRO:HG2	31:BK:77:LEU:HD11	1.93	0.49
36:BR:24:GLN:HE22	58:BA:1277:G:H4'	1.77	0.49
38:BT:121:ILE:HA	38:BT:124:ASP:HB2	1.93	0.49
39:BU:102:GLU:OE1	39:BU:104:GLN:NE2	2.44	0.49
51:B8:16:ILE:HA	51:B8:22:VAL:HA	1.95	0.49
58:BA:305:U:H2'	58:BA:306:U:C6	2.47	0.49
58:BA:919:G:H5'	59:BB:81:G:H1'	1.93	0.49
58:BA:2618:G:H2'	58:BA:2619:C:C6	2.47	0.49
58:BA:2749:A:N6	58:BA:2753:A:N6	2.29	0.49
58:BA:2780:G:H3'	58:BA:2781:A:C8	2.46	0.49
2:CC:84:ILE:O	2:CC:88:ARG:HB2	2.12	0.49
6:CG:89:MET:HA	6:CG:155:ARG:HD2	1.93	0.49
10:CK:29:ILE:HD12	20:CA:706:A:H1'	1.94	0.49
12:CM:74:VAL:O	12:CM:78:ILE:HG12	2.12	0.49
20:CA:294:U:H2'	20:CA:295:C:C6	2.46	0.49
20:CA:834:C:H2'	20:CA:835:U:C6	2.47	0.49
20:CA:1252:A:H2'	20:CA:1253:G:C8	2.47	0.49
20:CA:1435:G:H2'	20:CA:1436:U:C6	2.47	0.49
20:CA:1483:A:O2'	58:DA:1947:C:O2'	2.24	0.49
23:CY:98:MET:SD	23:CY:130:VAL:HG11	2.52	0.49
24:DC:115:VAL:H	24:DC:145:THR:HG22	1.76	0.49
27:DF:191:ARG:HB3	27:DF:193:VAL:CG2	2.41	0.49
31:DK:78:ILE:HG13	31:DK:134:MET:HE1	1.95	0.49
32:DN:76:SER:HB3	58:DA:2641:G:H4'	1.92	0.49
41:DW:12:ILE:HD11	41:DW:42:ARG:NH2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DW:28:SER:N	41:DW:31:GLU:OE1	2.46	0.49
58:DA:588:U:H2'	58:DA:589:C:O4'	2.12	0.49
58:DA:1655:A:C2	58:DA:2049:G:H5"	2.48	0.49
58:DA:1687:G:H2'	58:DA:1688:U:H6	1.77	0.49
58:DA:2314:C:H2'	58:DA:2315:G:H8	1.76	0.49
58:DA:2805:G:H2'	58:DA:2807:G:C8	2.47	0.49
20:AA:971:G:N9	20:AA:1365:G:H4'	2.27	0.49
24:BC:19:LYS:HE3	24:BC:20:VAL:H	1.76	0.49
24:BC:60:ARG:HB2	24:BC:60:ARG:HH11	1.77	0.49
26:BE:22:PRO:HG2	58:BA:2729:G:H5'	1.94	0.49
27:BF:125:LEU:CD2	27:BF:194:MET:HB2	2.42	0.49
32:BN:15:LEU:HD13	32:BN:15:LEU:C	2.37	0.49
35:BQ:79:LEU:HD23	35:BQ:80:GLU:HG3	1.94	0.49
36:BR:19:ALA:HA	36:BR:22:ARG:HD2	1.95	0.49
37:BS:49:VAL:HG12	37:BS:73:LEU:HG	1.94	0.49
44:BZ:16:SER:O	44:BZ:20:ARG:HB3	2.13	0.49
46:B2:63:VAL:O	46:B2:66:GLU:HG2	2.12	0.49
47:B3:24:LYS:HD3	58:BA:848:G:H22	1.78	0.49
51:B8:30:ARG:O	51:B8:32:LEU:N	2.46	0.49
52:B9:6:SER:HB3	58:BA:2466:C:C5'	2.39	0.49
58:BA:730:C:H2'	58:BA:731:C:C6	2.47	0.49
58:BA:953:A:H61	58:BA:964:C:H42	1.59	0.49
58:BA:1297:C:H2'	58:BA:1298:C:C6	2.48	0.49
58:BA:1345:C:N3	58:BA:1601:G:N2	2.46	0.49
58:BA:1486:A:H2'	58:BA:1487:G:C8	2.46	0.49
58:BA:1632:A:H2'	58:BA:1633:G:C8	2.48	0.49
58:BA:1675:C:C2	58:BA:1676:A:C8	3.00	0.49
58:BA:2246:G:H2'	58:BA:2247:A:C8	2.47	0.49
58:BA:2771:C:H2'	58:BA:2772:C:H6	1.76	0.49
59:BB:56:G:H4'	59:BB:57:A:C8	2.46	0.49
3:CD:99:SER:HB3	3:CD:139:ARG:HH21	1.76	0.49
5:CF:42:GLU:HA	5:CF:61:LEU:HA	1.94	0.49
15:CP:5:ARG:HH21	15:CP:28:ARG:HB2	1.77	0.49
20:CA:140:A:H2'	20:CA:141:A:C8	2.47	0.49
20:CA:666:G:H5'	20:CA:725:G:N2	2.27	0.49
20:CA:1225:A:H2'	20:CA:1226:C:C5	2.47	0.49
21:CW:20(A):U:O2'	21:CW:21:A:O5'	2.24	0.49
23:CY:146:LEU:HD21	23:CY:167:PRO:HD2	1.95	0.49
23:CY:610:VAL:HG21	23:CY:620:VAL:HG21	1.94	0.49
25:DD:242:ARG:NH2	58:DA:1971:A:OP2	2.45	0.49
33:DO:36:GLY:HA2	33:DO:106:LEU:HG	1.92	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DQ:44:ALA:HA	35:DQ:47:ILE:HD12	1.93	0.49
43:DY:7:VAL:HG13	58:DA:337:C:OP1	2.13	0.49
43:DY:11:ASP:O	43:DY:27:VAL:HA	2.11	0.49
57:D4:2:LYS:HG3	59:DB:39:A:N6	2.27	0.49
58:DA:377:C:H2'	58:DA:378:C:O4'	2.12	0.49
58:DA:1035:U:H2'	58:DA:1036:G:C8	2.47	0.49
58:DA:1222:C:N4	58:DA:1227:G:H1	2.09	0.49
58:DA:1664:A:H3'	58:DA:1665:A:H8	1.78	0.49
58:DA:1712:C:H2'	58:DA:1716:U:C6	2.47	0.49
58:DA:1726:G:H2'	58:DA:1727:U:C6	2.48	0.49
58:DA:2023:G:H5'	58:DA:2617:C:H4'	1.95	0.49
58:DA:2395:C:N4	58:DA:2421:G:H1	2.08	0.49
2:AC:181:ASN:O	2:AC:204:LEU:HB2	2.13	0.49
8:AI:5:TYR:CE2	8:AI:16:ARG:HG2	2.47	0.49
12:AM:74:VAL:O	12:AM:78:ILE:HG12	2.12	0.49
16:AQ:29:HIS:CG	16:AQ:32:TYR:HB2	2.48	0.49
20:AA:974:A:H8	20:AA:974:A:OP1	1.95	0.49
20:AA:999:U:O4	20:AA:1000:A:N6	2.45	0.49
20:AA:1483:A:O2'	58:BA:1947:C:O2	2.26	0.49
23:AY:197:ARG:NH2	23:AY:198:GLU:HG2	2.27	0.49
23:AY:538:TYR:OH	23:AY:577:SER:HB3	2.11	0.49
24:BC:31:LYS:HG3	24:BC:182:PRO:HA	1.93	0.49
25:BD:43:ARG:HB2	25:BD:54:ARG:O	2.12	0.49
25:BD:244:ARG:HG3	58:BA:1902:C:O4'	2.12	0.49
27:BF:143:ALA:HB1	27:BF:148:LEU:HB2	1.94	0.49
37:BS:95:HIS:CE1	59:BB:48:A:H4'	2.47	0.49
39:BU:12:ARG:NH2	58:BA:1215:G:H5'	2.26	0.49
58:BA:181:A:H2'	58:BA:182:A:C8	2.48	0.49
58:BA:193:U:H2'	58:BA:194:G:C8	2.48	0.49
58:BA:199:A:N6	58:BA:2433:A:H2'	2.27	0.49
58:BA:1424:G:H2'	58:BA:1425:G:O4'	2.12	0.49
58:BA:1818:U:H4'	58:BA:1821:A:H1'	1.93	0.49
58:BA:2119:A:C2	58:BA:2170:A:H2'	2.48	0.49
58:BA:2370:G:H2'	58:BA:2371:G:O4'	2.13	0.49
58:BA:2705:A:H2'	58:BA:2706:G:O4'	2.12	0.49
3:CD:20:TYR:O	3:CD:26:CYS:HB3	2.12	0.49
4:CE:75:THR:HA	4:CE:115:VAL:HG13	1.94	0.49
5:CF:98:LEU:CB	17:CR:30:ASP:HA	2.43	0.49
14:CO:17:ARG:HA	14:CO:17:ARG:CZ	2.42	0.49
15:CP:62:VAL:O	20:CA:227:G:N2	2.31	0.49
19:CT:101:GLY:HA2	19:CT:104:LEU:HB3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:543:C:H2'	20:CA:544:G:O4'	2.13	0.49
21:CW:1:G:H2'	21:CW:2:G:H8	1.78	0.49
21:CW:15:G:H22	21:CW:48:C:N4	2.09	0.49
23:CY:130:VAL:O	23:CY:132:ARG:NH1	2.45	0.49
24:DC:42:VAL:HB	24:DC:177:GLY:CA	2.41	0.49
24:DC:164:PHE:CA	24:DC:172:ILE:HG13	2.42	0.49
26:DE:28:ALA:HB3	26:DE:93:VAL:HG22	1.93	0.49
27:DF:10:PRO:HD2	27:DF:12:LEU:HD23	1.94	0.49
29:DH:41:MET:HB2	29:DH:53:GLU:O	2.12	0.49
36:DR:39:PRO:HG2	58:DA:1651:G:H5'	1.95	0.49
40:DV:6:LYS:HE2	40:DV:6:LYS:O	2.13	0.49
50:D7:40:TRP:H	50:D7:40:TRP:HD1	1.60	0.49
58:DA:363(G):A:H8	58:DA:363(G):A:O5'	1.95	0.49
58:DA:439:G:H2'	58:DA:440:G:H8	1.76	0.49
58:DA:454:A:H3'	58:DA:455:C:H6	1.76	0.49
58:DA:903:C:H2'	58:DA:904:C:O4'	2.12	0.49
58:DA:1290:C:H2'	58:DA:1291:C:H6	1.77	0.49
58:DA:2812:G:H2'	58:DA:2813:A:H8	1.78	0.49
58:DA:2813:A:H2'	58:DA:2814:C:O4'	2.13	0.49
58:DA:2881:C:H2'	58:DA:2882:A:H8	1.77	0.49
6:AG:69:VAL:HG13	6:AG:138:LYS:HB2	1.94	0.49
8:AI:70:LYS:O	8:AI:73:GLN:HB2	2.11	0.49
11:AL:76:ASN:H	11:AL:77:LEU:HG	1.77	0.49
19:AT:77:ALA:O	19:AT:81:LYS:HG3	2.12	0.49
20:AA:816:A:OP2	20:AA:1526:G:O2'	2.30	0.49
23:AY:28:THR:HG21	23:AY:107:VAL:HG21	1.94	0.49
23:AY:111:SER:C	23:AY:113:GLY:H	2.20	0.49
23:AY:179:ASP:N	23:AY:184:LYS:O	2.46	0.49
23:AY:188:TYR:OH	23:AY:270:GLN:HG2	2.13	0.49
26:BE:22:PRO:O	26:BE:186:GLY:N	2.40	0.49
26:BE:144:ARG:NH1	58:BA:2053:G:OP1	2.46	0.49
26:BE:154:LYS:NZ	58:BA:2513:G:O3'	2.46	0.49
33:BO:107:ARG:NH1	38:BT:36:GLU:HA	2.27	0.49
34:BP:38:GLN:NE2	58:BA:832:G:OP1	2.39	0.49
35:BQ:37:LEU:HG	35:BQ:129:THR:HA	1.95	0.49
49:B6:13:CYS:SG	49:B6:49:HIS:HB3	2.52	0.49
58:BA:471:A:H2'	58:BA:472:A:O4'	2.13	0.49
58:BA:564:C:O2'	58:BA:1252:G:O6	2.31	0.49
58:BA:602:G:O2'	58:BA:604:G:O2'	2.23	0.49
58:BA:1090:U:H2'	58:BA:1091:G:H8	1.75	0.49
58:BA:1275:A:OP2	58:BA:1646:C:N4	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:1631:A:C6	58:BA:1683:C:H5'	2.48	0.49
58:BA:2086:U:H2'	58:BA:2087:G:H8	1.75	0.49
58:BA:2810:A:H8	58:BA:2810:A:O5'	1.96	0.49
59:BB:5:C:H2'	59:BB:6:C:C6	2.48	0.49
59:BB:68:C:H2'	59:BB:69:G:O4'	2.12	0.49
1:CB:71:VAL:HG22	1:CB:93:VAL:CG2	2.43	0.49
1:CB:204:ASN:HD21	1:CB:207:ALA:HB3	1.77	0.49
1:CB:208:ILE:HD13	1:CB:239:VAL:O	2.13	0.49
4:CE:82:VAL:HG21	4:CE:138:ALA:HA	1.94	0.49
8:CI:125:TYR:CE2	20:CA:967:C:H4'	2.47	0.49
11:CL:69:TYR:CG	11:CL:70:ILE:N	2.80	0.49
12:CM:107:ALA:H	12:CM:108:ARG:HD2	1.78	0.49
14:CO:48:LYS:HB3	20:CA:668:G:H4'	1.95	0.49
17:CR:56:THR:OG1	17:CR:57:GLY:N	2.44	0.49
20:CA:444:C:N4	20:CA:490:G:H1	2.09	0.49
20:CA:1241:G:H2'	20:CA:1242:C:C6	2.47	0.49
20:CA:1425:U:H2'	20:CA:1426:C:C6	2.47	0.49
20:CA:1436:U:H2'	20:CA:1437:C:O4'	2.13	0.49
23:CY:105:ILE:HD13	23:CY:133:ILE:HD11	1.95	0.49
23:CY:317:MET:CB	23:CY:327:PHE:HE2	2.23	0.49
24:DC:84:ILE:HG23	24:DC:95:VAL:HB	1.94	0.49
29:DH:90:LYS:HB2	29:DH:163:TYR:CE1	2.48	0.49
32:DN:74:ARG:HH21	58:DA:2640:G:H5"	1.77	0.49
35:DQ:125:LEU:C	35:DQ:127:ILE:H	2.21	0.49
37:DS:106:ARG:NE	37:DS:108:GLY:HA2	2.21	0.49
41:DW:14:PRO:O	41:DW:17:VAL:N	2.46	0.49
41:DW:17:VAL:HB	41:DW:76:VAL:HG21	1.94	0.49
47:D3:16:PRO:HA	58:DA:969:U:H5'	1.94	0.49
56:D1:71:TYR:O	56:D1:74:VAL:HB	2.13	0.49
58:DA:600:G:N2	58:DA:605:C:O3'	2.45	0.49
58:DA:660:G:H2'	58:DA:661:C:O4'	2.13	0.49
58:DA:743:G:H2'	58:DA:744:G:O4'	2.12	0.49
58:DA:940:G:H2'	58:DA:941:A:O4'	2.13	0.49
58:DA:1460:A:O2'	58:DA:1461:G:H5"	2.12	0.49
58:DA:1534:G:N2	58:DA:1536:A:OP1	2.45	0.49
58:DA:1540:G:H3'	58:DA:1541:U:C6	2.47	0.49
58:DA:1541:U:H3'	58:DA:1542:G:C3'	2.41	0.49
58:DA:1608:A:O2'	58:DA:1611:C:N4	2.42	0.49
58:DA:2545:G:O2'	58:DA:2565:A:N1	2.42	0.49
7:AH:6:ILE:O	7:AH:10:LEU:HG	2.12	0.49
7:AH:103:VAL:HG12	7:AH:138:TRP:HD1	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:24:VAL:HG21	9:AJ:37:PRO:HD3	1.93	0.49
14:AO:29:VAL:HG11	14:AO:81:LEU:HD11	1.95	0.49
16:AQ:97:SER:O	16:AQ:97:SER:OG	2.29	0.49
18:AS:36:ARG:HD3	20:AA:1221:G:H5'	1.93	0.49
20:AA:576:G:OP2	20:AA:577:G:H5"	2.13	0.49
20:AA:689:C:H2'	20:AA:690:G:O4'	2.12	0.49
23:AY:265:LYS:O	23:AY:267:LYS:N	2.46	0.49
23:AY:626:ALA:HB2	58:BA:2473:U:C6	2.47	0.49
24:BC:33:LEU:HD13	24:BC:221:PRO:HB2	1.93	0.49
25:BD:43:ARG:HH21	58:BA:691:C:H1'	1.77	0.49
25:BD:100:GLY:HA3	58:BA:1500:G:N3	2.28	0.49
28:BG:168:GLU:O	28:BG:172:LEU:HB2	2.12	0.49
29:BH:123:PHE:HA	29:BH:133:VAL:HG13	1.95	0.49
32:BN:112:LEU:HA	32:BN:115:ARG:CB	2.42	0.49
33:BO:73:ASP:OD1	33:BO:75:SER:OG	2.27	0.49
34:BP:49:ARG:HD2	51:B8:59:LYS:HE2	1.95	0.49
44:BZ:103:ARG:HD3	44:BZ:136:PHE:HD2	1.77	0.49
58:BA:657:U:H2'	58:BA:658:C:C6	2.48	0.49
58:BA:1161:C:H2'	58:BA:1162:G:H8	1.77	0.49
58:BA:1858:G:H1'	58:BA:1884:A:H61	1.77	0.49
58:BA:2048:G:H1	58:BA:2620:C:H42	1.61	0.49
58:BA:2137:C:H2'	58:BA:2138:C:C6	2.48	0.49
1:CB:101:MET:HA	1:CB:108:ILE:HG12	1.93	0.49
7:CH:36:LEU:HD22	7:CH:61:VAL:HG21	1.94	0.49
11:CL:12:ARG:HH22	20:CA:881:G:P	2.36	0.49
11:CL:22:SER:C	11:CL:24:VAL:H	2.20	0.49
20:CA:56:U:O4	20:CA:356:A:N1	2.46	0.49
20:CA:1324:A:H2'	20:CA:1325:C:C6	2.47	0.49
25:DD:78:LYS:HZ2	25:DD:98:VAL:HA	1.77	0.49
25:DD:211:ARG:HA	25:DD:214:TRP:CD2	2.48	0.49
26:DE:82:ARG:HH21	58:DA:2637:U:H5"	1.78	0.49
30:DJ:52:UNK:N	30:DJ:80:UNK:O	2.46	0.49
33:DO:104:ARG:NE	38:DT:33:LYS:HD2	2.28	0.49
43:DY:15:VAL:N	43:DY:23:ARG:O	2.45	0.49
44:DZ:18:LEU:HD22	44:DZ:25:PRO:HB3	1.94	0.49
58:DA:144:C:H2'	58:DA:145:G:C8	2.47	0.49
58:DA:1487:G:H2'	58:DA:1488:G:C8	2.46	0.49
58:DA:2713:A:H5"	58:DA:2713:A:H8	1.77	0.49
58:DA:2724:C:H2'	58:DA:2725:A:C8	2.46	0.49
1:AB:7:VAL:HA	1:AB:11:LEU:HD12	1.93	0.49
1:AB:57:PHE:HE2	1:AB:161:ALA:HB2	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:87:ARG:NH2	1:AB:233:SER:H	2.07	0.49
2:AC:95:THR:O	2:AC:97:LYS:N	2.46	0.49
9:AJ:42:THR:H	20:AA:1151:A:H5"	1.78	0.49
18:AS:13:ASP:O	18:AS:17:GLU:HG2	2.13	0.49
20:AA:114:U:H2'	20:AA:115:G:C8	2.48	0.49
20:AA:612:C:H2'	20:AA:613:C:H6	1.75	0.49
20:AA:985:C:H2'	20:AA:986:A:C8	2.47	0.49
25:BD:79:VAL:C	25:BD:96:HIS:H	2.21	0.49
25:BD:179:SER:OG	58:BA:1799:G:N7	2.39	0.49
27:BF:63:LYS:HZ3	27:BF:65:TRP:HB2	1.77	0.49
28:BG:43:LEU:HB2	28:BG:88:ILE:HG21	1.94	0.49
29:BH:41:MET:HB2	29:BH:54:ARG:HA	1.94	0.49
29:BH:175:LYS:HG2	29:BH:176:ALA:H	1.76	0.49
35:BQ:54:MET:SD	35:BQ:64:ILE:HG21	2.53	0.49
36:BR:97:VAL:HG13	36:BR:113:LEU:C	2.38	0.49
38:BT:51:ARG:HB3	38:BT:62:THR:HG22	1.95	0.49
58:BA:173:G:H2'	58:BA:174:C:C6	2.46	0.49
58:BA:380:U:H2'	58:BA:381:G:H8	1.76	0.49
58:BA:548:A:H8	58:BA:548:A:O5'	1.96	0.49
58:BA:998:C:H42	58:BA:1157:G:H1	1.60	0.49
58:BA:1551:C:H2'	58:BA:1552:G:O4'	2.13	0.49
58:BA:2663:G:H2'	58:BA:2664:G:O4'	2.12	0.49
58:BA:2707:G:H2'	58:BA:2708:G:H8	1.76	0.49
2:CC:5:ILE:HG13	20:CA:1189:C:OP1	2.13	0.49
3:CD:13:ARG:HH21	3:CD:36:ARG:HG3	1.78	0.49
20:CA:68(F):C:H2'	20:CA:68(G):G:H8	1.77	0.49
20:CA:510:A:O2'	20:CA:542:G:O2'	2.24	0.49
20:CA:674:G:H2'	20:CA:675:A:H8	1.76	0.49
25:DD:92:ILE:HA	25:DD:107:ALA:H	1.78	0.49
25:DD:133:LEU:N	25:DD:187:GLY:O	2.46	0.49
35:DQ:70:PRO:HA	35:DQ:95:ALA:HB2	1.93	0.49
46:D2:2:LYS:O	46:D2:6:VAL:HG23	2.12	0.49
58:DA:139:G:H4'	58:DA:140:A:H2	1.78	0.49
58:DA:988:A:H4'	58:DA:1155:A:C2	2.48	0.49
58:DA:1170:G:H2'	58:DA:1171:G:H8	1.76	0.49
58:DA:1717:G:H2'	58:DA:1718:G:C8	2.48	0.49
58:DA:1727:U:H2'	58:DA:1728:G:O4'	2.13	0.49
6:AG:62:PHE:O	6:AG:66:VAL:HG23	2.13	0.49
6:AG:64:GLN:O	6:AG:68:ASN:HB2	2.12	0.49
7:AH:12:ARG:O	7:AH:15:ASN:HB2	2.13	0.49
15:AP:32:TYR:OH	20:AA:608:A:H4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:175:C:H2'	20:AA:176:C:C6	2.48	0.49
20:AA:1130:A:H61	20:AA:1143:G:N2	2.11	0.49
20:AA:1476:G:H2'	20:AA:1477:C:C6	2.48	0.49
23:AY:92:ILE:HG23	23:AY:93:GLU:H	1.77	0.49
23:AY:614:GLU:HA	23:AY:617:MET:HB3	1.94	0.49
25:BD:92:ILE:HB	25:BD:105:ILE:O	2.12	0.49
27:BF:155:LEU:HD11	27:BF:176:LEU:HD22	1.95	0.49
28:BG:10:LYS:HE2	28:BG:14:GLU:HB2	1.94	0.49
29:BH:110:SER:HB3	58:BA:2667:C:C2	2.47	0.49
32:BN:21:LYS:O	32:BN:61:ARG:N	2.42	0.49
32:BN:43:THR:OG1	39:BU:64:ARG:NH1	2.46	0.49
32:BN:51:PHE:CE2	32:BN:119:ARG:HD2	2.48	0.49
32:BN:76:SER:O	32:BN:78:TYR:N	2.46	0.49
37:BS:83:LYS:O	37:BS:106:ARG:HA	2.12	0.49
42:BX:8:ILE:HB	46:B2:37:PHE:HZ	1.76	0.49
50:B7:39:ARG:HA	50:B7:39:ARG:CZ	2.42	0.49
58:BA:354:G:H2'	58:BA:355:G:C8	2.47	0.49
58:BA:697:C:H2'	58:BA:698:C:C6	2.48	0.49
58:BA:796:C:H2'	58:BA:797:C:C6	2.47	0.49
58:BA:1139:G:H4'	58:BA:1143:A:N1	2.27	0.49
58:BA:1165:U:H2'	58:BA:1166:C:C6	2.48	0.49
58:BA:1175:U:H5	58:BA:1177:A:N1	2.10	0.49
58:BA:1631:A:C5	58:BA:1683:C:H5'	2.47	0.49
58:BA:2475:C:N4	58:BA:2529:G:H22	2.11	0.49
58:BA:2696:U:H3	58:BA:2711:A:H61	1.61	0.49
59:BB:57:A:H2'	59:BB:58:A:H8	1.77	0.49
1:CB:58:ILE:HG22	1:CB:222:ILE:CG2	2.41	0.49
3:CD:173:TRP:HB2	3:CD:187:ARG:HG2	1.95	0.49
13:CN:43:CYS:O	13:CN:46:GLU:HG2	2.12	0.49
18:CS:39:THR:HB	18:CS:41:VAL:HG13	1.94	0.49
19:CT:67:ALA:HB2	19:CT:77:ALA:HB3	1.95	0.49
20:CA:1118:C:H1'	20:CA:1179:A:C4	2.48	0.49
36:DR:5:LYS:HG3	58:DA:2820:A:C4'	2.43	0.49
40:DV:14:VAL:HG12	40:DV:96:ILE:HD13	1.93	0.49
40:DV:35:LEU:HD23	40:DV:57:VAL:HG22	1.94	0.49
46:D2:25:VAL:HG22	46:D2:60:LEU:HB3	1.95	0.49
56:D1:58:ILE:HG13	56:D1:91:LYS:HB2	1.94	0.49
58:DA:724:U:H2'	58:DA:725:G:O4'	2.12	0.49
58:DA:1297:C:H2'	58:DA:1298:C:H6	1.78	0.49
58:DA:1338:G:H2'	58:DA:1339:G:O4'	2.13	0.49
58:DA:1431:U:H2'	58:DA:1432:C:H6	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1777:U:H3	58:DA:1787:A:H2	1.60	0.49
58:DA:1913:A:O2'	58:DA:1914:C:O5'	2.30	0.49
58:DA:2014:A:H2'	58:DA:2015:A:C8	2.48	0.49
59:DB:88:C:H2'	59:DB:89(A):G:C8	2.48	0.49
59:DB:116:G:H2'	59:DB:117:G:H8	1.78	0.49
2:AC:10:PHE:HB3	2:AC:11:ARG:NH1	2.28	0.49
2:AC:176:HIS:HB2	20:AA:1108:G:P	2.53	0.49
5:AF:94:GLN:O	5:AF:96:PRO:HD3	2.13	0.49
11:AL:39:VAL:HB	11:AL:55:VAL:HG21	1.95	0.49
20:AA:697:U:O2	20:AA:798:G:H1'	2.12	0.49
20:AA:766:A:H2'	20:AA:767:A:O4'	2.13	0.49
20:AA:1306:A:N6	20:AA:1331:G:O2'	2.46	0.49
24:BC:8:TYR:HA	24:BC:11:LEU:HB2	1.93	0.49
24:BC:84:ILE:HA	24:BC:95:VAL:HG11	1.95	0.49
25:BD:219:PRO:HG3	58:BA:764:A:C2	2.48	0.49
27:BF:6:VAL:HG23	27:BF:8:GLN:H	1.78	0.49
30:BJ:82:UNK:O	30:BJ:84:UNK:N	2.46	0.49
33:BO:104:ARG:CZ	38:BT:33:LYS:HD2	2.43	0.49
37:BS:87:PHE:HE2	37:BS:92:TYR:HB2	1.76	0.49
43:BY:19:LYS:HB2	58:BA:329:G:O6	2.12	0.49
52:B9:19:ARG:HA	58:BA:2756:U:H5"	1.94	0.49
58:BA:245:G:O2'	58:BA:384:U:O2	2.28	0.49
58:BA:648:G:H4'	58:BA:2351:G:H5"	1.94	0.49
58:BA:841:A:H2'	58:BA:842:G:C8	2.48	0.49
58:BA:1312:U:H4'	58:BA:1313:U:O5'	2.12	0.49
58:BA:1467:C:H42	58:BA:1525:G:H1	1.61	0.49
58:BA:1853:A:H2'	58:BA:1854:A:C8	2.48	0.49
58:BA:1943:U:H4'	58:BA:1944:U:H3'	1.95	0.49
58:BA:2590:A:H2'	58:BA:2591:C:H6	1.78	0.49
58:BA:2661:G:C6	58:BA:2662:A:C2	3.00	0.49
3:CD:72:GLU:HA	3:CD:75:PHE:HB3	1.94	0.49
4:CE:77:PRO:HG3	4:CE:143:ARG:O	2.13	0.49
20:CA:756:C:H2'	20:CA:757:U:O4'	2.13	0.49
20:CA:1349:A:H3'	20:CA:1350:A:H8	1.76	0.49
20:CA:1481:U:H2'	20:CA:1482:G:C8	2.48	0.49
23:CY:13:ARG:HB2	23:CY:79:ILE:HG13	1.95	0.49
23:CY:409:ILE:HD13	23:CY:656:ALA:HB3	1.95	0.49
23:CY:457:LEU:HD23	23:CY:458:HIS:H	1.77	0.49
23:CY:496:LYS:HG2	23:CY:498:ILE:HG23	1.94	0.49
32:DN:21:LYS:O	32:DN:61:ARG:N	2.42	0.49
34:DP:55:ARG:NH1	58:DA:825:C:H1'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DR:48:VAL:O	36:DR:52:ILE:HG12	2.13	0.49
36:DR:87:TYR:H	36:DR:87:TYR:HD2	1.61	0.49
38:DT:84:GLN:O	38:DT:86:ILE:N	2.37	0.49
40:DV:5:VAL:HG21	40:DV:35:LEU:HG	1.95	0.49
43:DY:97:ARG:HA	43:DY:97:ARG:HH11	1.77	0.49
58:DA:598:G:H2'	58:DA:599:G:O4'	2.13	0.49
58:DA:834:C:H2'	58:DA:835:A:C8	2.48	0.49
58:DA:1081:U:H2'	58:DA:1082:U:C6	2.48	0.49
58:DA:1129:A:H1'	58:DA:2516:G:H1'	1.95	0.49
58:DA:1490:A:O3'	58:DA:1494:A:N6	2.45	0.49
58:DA:1975:G:O2'	58:DA:1976:U:O5'	2.30	0.49
58:DA:2134:A:H61	58:DA:2157:G:H1'	1.77	0.49
58:DA:2183:C:H2'	58:DA:2184:G:C8	2.48	0.49
58:DA:2299:G:H2'	58:DA:2300:G:H8	1.76	0.49
4:AE:51:VAL:O	4:AE:55:VAL:HG23	2.12	0.48
13:AN:34:TYR:C	13:AN:36:PHE:H	2.21	0.48
20:AA:68(H):G:H2'	20:AA:68(I):G:N7	2.28	0.48
20:AA:318:G:H2'	20:AA:319:G:C8	2.47	0.48
20:AA:366:C:O2'	20:AA:367:U:O5'	2.28	0.48
20:AA:959:A:O2'	20:AA:984:C:O2	2.27	0.48
23:AY:137:ASN:OD1	61:AY:702:GDP:O6	2.31	0.48
23:AY:188:TYR:HB2	23:AY:267:LYS:HG2	1.94	0.48
23:AY:615:GLU:HG3	23:AY:616:TYR:H	1.78	0.48
25:BD:53:PHE:HE1	25:BD:220:HIS:CG	2.31	0.48
36:BR:33:ARG:HG3	36:BR:115:GLU:HG2	1.94	0.48
38:BT:65:LYS:HZ2	38:BT:66:VAL:N	2.08	0.48
45:B0:25:ARG:HG2	45:B0:37:LEU:HB3	1.94	0.48
50:B7:21:ARG:NH2	58:BA:684:G:OP1	2.46	0.48
56:B1:67:ILE:N	56:B1:68:PRO:HD2	2.27	0.48
58:BA:141(B):C:H2'	58:BA:142:G:O4'	2.13	0.48
58:BA:409:C:H2'	58:BA:410:G:H8	1.77	0.48
58:BA:415:A:N6	58:BA:2408:U:H3	2.11	0.48
58:BA:1359:A:N7	58:BA:1372:U:O4	2.46	0.48
58:BA:1633:G:O6	58:BA:1635:G:N1	2.45	0.48
58:BA:1947:C:H42	58:BA:1959:G:H1	1.61	0.48
58:BA:1950:G:C5	58:BA:1951:U:H5	2.30	0.48
7:CH:21:LYS:O	7:CH:23:SER:N	2.46	0.48
13:CN:48:ALA:HA	13:CN:53:LEU:HB2	1.94	0.48
14:CO:42:HIS:HD2	20:CA:740:U:H5'	1.78	0.48
16:CQ:48:GLU:O	16:CQ:50:LYS:N	2.46	0.48
18:CS:76:PRO:O	18:CS:78:ARG:N	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:259:G:H1	20:CA:267:C:N4	2.10	0.48
20:CA:660:G:H2'	20:CA:661:G:O4'	2.13	0.48
20:CA:1461:G:H2'	20:CA:1462:G:H8	1.78	0.48
20:CA:1505:G:H4'	22:CV:15:A:C6	2.48	0.48
23:CY:329:ARG:HD3	23:CY:374:LEU:HG	1.95	0.48
23:CY:656:ALA:HB2	23:CY:669:PHE:CZ	2.49	0.48
26:DE:122:PHE:CZ	58:DA:2512:C:H4'	2.48	0.48
27:DF:154:VAL:HG12	27:DF:156:LEU:CA	2.42	0.48
28:DG:109:VAL:CG1	57:D4:14:ILE:HD13	2.41	0.48
32:DN:76:SER:O	32:DN:78:TYR:N	2.46	0.48
33:DO:71:ARG:HH11	38:DT:74:ARG:HH22	1.61	0.48
35:DQ:112:GLU:HA	35:DQ:115:MET:HG2	1.94	0.48
39:DU:91:ASP:O	39:DU:92:ARG:HB3	2.13	0.48
41:DW:94:ASP:OD2	41:DW:94:ASP:N	2.44	0.48
43:DY:38:ILE:HD11	43:DY:64:GLU:CB	2.43	0.48
44:DZ:48:PHE:HA	44:DZ:51:ALA:HB3	1.95	0.48
48:D5:11:THR:OG1	58:DA:1263:U:O3'	2.31	0.48
51:D8:60:LEU:HB3	51:D8:64:TYR:O	2.13	0.48
58:DA:182:A:H2'	58:DA:183:C:H6	1.78	0.48
58:DA:742:G:H5'	58:DA:1675:C:O2'	2.13	0.48
58:DA:753:C:H2'	58:DA:754:C:C6	2.49	0.48
58:DA:1631:A:C5	58:DA:1683:C:H5'	2.48	0.48
58:DA:2065:C:H2'	58:DA:2066:C:H6	1.78	0.48
2:AC:114:PRO:HB2	2:AC:115:LEU:HD12	1.94	0.48
7:AH:104:ARG:HG2	7:AH:107:LEU:HD11	1.95	0.48
11:AL:10:LEU:HB3	16:AQ:32:TYR:CE1	2.48	0.48
12:AM:105:THR:HG22	20:AA:1229:A:N6	2.28	0.48
14:AO:77:ARG:HA	14:AO:80:ALA:HB3	1.95	0.48
16:AQ:7:THR:HA	16:AQ:58:GLU:HA	1.94	0.48
17:AR:44:LEU:HD21	17:AR:50:ILE:HG12	1.94	0.48
19:AT:22:ARG:HB3	20:AA:324:G:OP1	2.13	0.48
19:AT:73:HIS:C	19:AT:74:LYS:HD3	2.38	0.48
20:AA:216:G:H2'	20:AA:217:C:H6	1.76	0.48
20:AA:383:A:O5'	20:AA:383:A:H8	1.96	0.48
20:AA:901:A:H8	20:AA:901:A:O5'	1.95	0.48
20:AA:1131:G:H2'	20:AA:1132:C:C6	2.48	0.48
23:AY:149:VAL:O	23:AY:153:MET:HG3	2.13	0.48
25:BD:23:GLU:O	25:BD:24:ILE:HB	2.13	0.48
28:BG:119:GLY:HA3	28:BG:181:ARG:HA	1.95	0.48
29:BH:19:VAL:HG23	29:BH:45:VAL:HG23	1.95	0.48
39:BU:50:ARG:NH2	40:BV:72:VAL:HG12	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BX:36:LYS:HD3	42:BX:54:VAL:HB	1.95	0.48
46:B2:20:GLU:O	46:B2:24:LEU:HG	2.14	0.48
51:B8:30:ARG:HA	51:B8:30:ARG:HD3	1.50	0.48
56:B1:25:LYS:HD3	56:B1:26:ARG:H	1.79	0.48
58:BA:270(G):U:H2'	58:BA:270(H):C:C6	2.47	0.48
58:BA:547:A:H3'	58:BA:548:A:C8	2.48	0.48
58:BA:1583:A:H4'	58:BA:1586:A:C5	2.47	0.48
58:BA:2175:C:H2'	58:BA:2176:A:H8	1.77	0.48
58:BA:2581:G:H2'	58:BA:2581:G:N3	2.28	0.48
59:BB:24:G:C2	59:BB:56:G:N2	2.81	0.48
1:CB:87:ARG:HH22	1:CB:234:PRO:HD2	1.77	0.48
6:CG:65:ALA:HA	6:CG:128:ALA:HA	1.95	0.48
8:CI:4:TYR:CE1	8:CI:21:PRO:HD3	2.49	0.48
10:CK:124:LYS:C	10:CK:126:ARG:H	2.21	0.48
20:CA:279:A:H4'	20:CA:280:C:H5'	1.95	0.48
20:CA:825:G:H2'	20:CA:826:C:C6	2.47	0.48
23:CY:567:LEU:HG	23:CY:568:TYR:N	2.27	0.48
24:DC:46:ALA:CA	24:DC:212:SER:O	2.55	0.48
25:DD:3:VAL:N	25:DD:20:ASP:HB2	2.23	0.48
25:DD:157:ARG:HE	58:DA:1818:U:H2'	1.77	0.48
26:DE:151:TYR:O	58:DA:2619:C:H4'	2.12	0.48
30:DJ:148:UNK:HA	54:Df:31:UNK:O	2.13	0.48
34:DP:47:ASP:CG	34:DP:49:ARG:HE	2.22	0.48
39:DU:24:TYR:HB3	39:DU:28:ARG:HD2	1.94	0.48
40:DV:3:ALA:O	40:DV:14:VAL:N	2.46	0.48
40:DV:3:ALA:C	40:DV:14:VAL:HG23	2.38	0.48
46:D2:18:PRO:HG3	46:D2:67:LYS:HB3	1.94	0.48
58:DA:1342:A:O2'	58:DA:1344:G:OP2	2.27	0.48
58:DA:1800:C:O2'	58:DA:1818:U:O4	2.31	0.48
58:DA:2395:C:H2'	58:DA:2396:G:O4'	2.13	0.48
2:AC:153:VAL:HG23	2:AC:166:GLU:HB3	1.94	0.48
7:AH:83:ILE:HA	7:AH:136:GLU:O	2.13	0.48
8:AI:50:LEU:HB3	8:AI:56:LEU:HA	1.94	0.48
14:AO:68:ARG:HH12	20:AA:582:U:H5"	1.79	0.48
20:AA:111:G:N2	20:AA:331:G:O6	2.30	0.48
20:AA:195:A:N3	20:AA:222:U:O2'	2.40	0.48
23:AY:100:VAL:HG11	23:AY:314:PHE:CE2	2.48	0.48
23:AY:526:VAL:CG2	23:AY:566:THR:HG23	2.43	0.48
24:BC:33:LEU:HB3	24:BC:221:PRO:HG2	1.95	0.48
24:BC:41:THR:O	24:BC:175:PRO:HA	2.13	0.48
24:BC:102:GLN:HG3	24:BC:106:ASP:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:78:LYS:HA	25:BD:116:GLN:HA	1.95	0.48
25:BD:173:VAL:O	25:BD:184:LYS:HA	2.13	0.48
27:BF:154:VAL:H	27:BF:173:VAL:HA	1.78	0.48
28:BG:145:THR:OG1	28:BG:146:TYR:N	2.46	0.48
30:BJ:54:UNK:O	58:BA:1107:G:H5'	2.13	0.48
34:BP:66:GLY:O	58:BA:631:A:O2'	2.31	0.48
58:BA:8:A:C6	58:BA:2895:U:O4	2.66	0.48
58:BA:433:C:H2'	58:BA:434:U:C6	2.47	0.48
58:BA:658:C:H2'	58:BA:659:C:O4'	2.13	0.48
58:BA:1125:G:OP2	58:BA:1126:A:O2'	2.28	0.48
58:BA:2071:A:H8	58:BA:2071:A:O5'	1.97	0.48
3:CD:148:VAL:HG23	3:CD:181:MET:O	2.13	0.48
4:CE:79:GLU:HA	4:CE:91:LEU:O	2.13	0.48
17:CR:26:LEU:HD21	17:CR:42:ARG:HD2	1.95	0.48
20:CA:374:A:H5"	20:CA:452:A:H61	1.78	0.48
20:CA:643:C:H2'	20:CA:644:G:H8	1.76	0.48
20:CA:769:G:H4'	20:CA:1513:A:H4'	1.95	0.48
20:CA:1073:U:H2'	20:CA:1074:G:H8	1.78	0.48
20:CA:1323:G:H2'	20:CA:1324:A:C8	2.48	0.48
23:CY:178:ILE:HD11	23:CY:201:ILE:HD11	1.95	0.48
23:CY:383:THR:HG21	23:CY:389:LEU:HD21	1.94	0.48
25:DD:244:ARG:NH2	58:DA:1841:U:H1'	2.28	0.48
26:DE:128:SER:OG	26:DE:129:HIS:ND1	2.38	0.48
26:DE:134:ILE:HG13	58:DA:2579:C:H4'	1.95	0.48
28:DG:83:ARG:O	28:DG:85:GLY:N	2.46	0.48
28:DG:165:THR:OG1	28:DG:168:GLU:HG2	2.12	0.48
32:DN:69:GLN:HE22	58:DA:1022:G:H8	1.59	0.48
43:DY:28:LYS:HD3	43:DY:37:VAL:HG12	1.94	0.48
47:D3:9:VAL:HG11	47:D3:55:ARG:HB2	1.94	0.48
58:DA:77:C:H2'	58:DA:78:A:C8	2.49	0.48
58:DA:141(A):A:H5'	58:DA:141(B):C:OP2	2.13	0.48
58:DA:650:C:H2'	58:DA:651:G:C8	2.48	0.48
58:DA:1189:A:H3'	58:DA:1190:G:H8	1.78	0.48
58:DA:1403:C:H5"	58:DA:1471:A:C1'	2.43	0.48
58:DA:1414:G:H1	58:DA:1588:C:H42	1.61	0.48
58:DA:1652:A:H2'	58:DA:1653:G:O4'	2.13	0.48
58:DA:1902:C:H2'	58:DA:1903:G:O4'	2.13	0.48
58:DA:2257:U:H2'	58:DA:2258:C:C6	2.49	0.48
58:DA:2503:A:H3'	58:DA:2503:A:OP2	2.13	0.48
58:DA:2585:U:O2'	58:DA:2586:C:H5'	2.12	0.48
58:DA:2795:G:H3'	58:DA:2797:U:C5'	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:175:ARG:NH2	20:AA:1075:C:O3'	2.46	0.48
6:AG:6:ARG:HE	20:AA:1378:C:H5"	1.78	0.48
11:AL:124:LYS:HZ1	20:AA:500:G:H5'	1.78	0.48
15:AP:33:ILE:HD13	20:AA:229:U:H5"	1.93	0.48
20:AA:418:C:H42	20:AA:425:G:H1	1.61	0.48
20:AA:1195:C:H5"	20:AA:1196:U:OP2	2.13	0.48
20:AA:1512:U:H2'	20:AA:1513:A:H8	1.78	0.48
20:AA:1522:U:H2'	20:AA:1523:G:C8	2.48	0.48
23:AY:344:THR:HG1	23:AY:388:THR:C	2.21	0.48
24:BC:128:LEU:C	24:BC:130:ARG:H	2.21	0.48
25:BD:88:ARG:HE	58:BA:1817:G:H5"	1.76	0.48
27:BF:103:LYS:O	27:BF:107:LYS:HG2	2.13	0.48
29:BH:45:VAL:HG22	29:BH:50:VAL:HG22	1.94	0.48
32:BN:65:LYS:NZ	58:BA:1021:A:C5'	2.75	0.48
33:BO:13:ASN:O	33:BO:15:GLY:N	2.46	0.48
34:BP:18:ARG:HD2	34:BP:18:ARG:HA	1.59	0.48
37:BS:20:ARG:CZ	37:BS:88:ASP:HA	2.43	0.48
40:BV:77:ALA:O	40:BV:79:VAL:N	2.43	0.48
44:BZ:152:ALA:HA	44:BZ:167:PRO:HB2	1.95	0.48
45:B0:35:ASN:OD1	45:B0:35:ASN:N	2.46	0.48
58:BA:210:C:H4'	58:BA:1367:A:H1'	1.95	0.48
58:BA:281:G:H1'	58:BA:359:A:H61	1.77	0.48
58:BA:634:C:H2'	58:BA:635:C:C6	2.49	0.48
58:BA:2112:G:H2'	58:BA:2113:U:C6	2.48	0.48
58:BA:2152:G:H2'	58:BA:2153:G:H8	1.78	0.48
58:BA:2838:G:H2'	58:BA:2839:G:H8	1.78	0.48
1:CB:59:GLU:O	1:CB:63:MET:HG2	2.13	0.48
1:CB:178:ARG:HD3	7:CH:73:ASP:HA	1.96	0.48
3:CD:155:LEU:O	3:CD:159:ARG:HG3	2.13	0.48
11:CL:42:THR:HA	11:CL:52:LEU:O	2.14	0.48
12:CM:19:LEU:HD12	12:CM:25:ILE:HD13	1.94	0.48
16:CQ:40:LYS:HG2	16:CQ:42:TYR:CE1	2.48	0.48
20:CA:177:C:H2'	20:CA:178:C:C6	2.48	0.48
20:CA:745:C:OP1	20:CA:851:G:O2'	2.28	0.48
20:CA:1019:C:H2'	20:CA:1020:U:O4'	2.13	0.48
20:CA:1198:G:H2'	20:CA:1199:U:C6	2.48	0.48
21:CW:38:A:C4	22:CV:16:A:H2	2.32	0.48
23:CY:405:PRO:HB2	23:CY:454:MET:SD	2.53	0.48
23:CY:510:VAL:HG12	23:CY:512:ILE:HG23	1.96	0.48
23:CY:544:LYS:HB3	23:CY:583:LYS:HE3	1.94	0.48
32:DN:41:ASP:C	39:DU:64:ARG:HD2	2.35	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DS:99:LYS:HE3	37:DS:101:LEU:HG	1.95	0.48
38:DT:30:VAL:HG23	38:DT:44:ASP:CG	2.38	0.48
44:DZ:99:TYR:HA	44:DZ:124:ILE:O	2.13	0.48
46:D2:48:HIS:ND1	58:DA:95:G:H4'	2.27	0.48
50:D7:49:ARG:HB2	58:DA:1602:U:OP1	2.13	0.48
56:D1:20:ARG:NH1	56:D1:22:GLY:HA3	2.28	0.48
58:DA:512:G:OP1	58:DA:1234:U:O2'	2.31	0.48
58:DA:804:A:H5"	58:DA:805:G:OP1	2.14	0.48
58:DA:1294:U:H2'	58:DA:1295:C:C6	2.49	0.48
58:DA:1310:G:H2'	58:DA:1311:G:O4'	2.12	0.48
58:DA:1491:G:H2'	58:DA:1492:G:O4'	2.13	0.48
58:DA:1914:C:C6	58:DA:1915:U:C6	3.01	0.48
58:DA:1923:U:H2'	58:DA:1924:C:C6	2.47	0.48
58:DA:2212:A:H1'	58:DA:2215:G:C6	2.49	0.48
58:DA:2526:G:H1	58:DA:2537:U:H3	1.60	0.48
58:DA:2535:G:H2'	58:DA:2536:G:C8	2.48	0.48
2:AC:52:LEU:C	2:AC:115:LEU:HD11	2.38	0.48
3:AD:101:LEU:O	3:AD:105:VAL:HG23	2.14	0.48
9:AJ:70:ARG:HH21	20:AA:1151:A:H4'	1.79	0.48
19:AT:18:GLN:O	19:AT:22:ARG:HG3	2.14	0.48
20:AA:889:A:H4'	20:AA:890:G:H4'	1.94	0.48
20:AA:1019:C:H2'	20:AA:1020:U:O4'	2.14	0.48
20:AA:1176:A:H2'	20:AA:1177:G:C8	2.48	0.48
23:AY:259:PHE:CE1	23:AY:275:ALA:HB1	2.47	0.48
23:AY:348:ARG:HG2	23:AY:382:GLU:HG3	1.94	0.48
23:AY:648:PRO:O	23:AY:651:GLU:N	2.47	0.48
24:BC:201:LYS:HE2	24:BC:209:PHE:CD1	2.48	0.48
25:BD:14:ARG:HE	25:BD:15:PHE:HE2	1.60	0.48
25:BD:130:ALA:HA	25:BD:192:THR:HA	1.96	0.48
27:BF:37:VAL:HG13	27:BF:184:TYR:HD1	1.78	0.48
28:BG:23:PHE:N	28:BG:23:PHE:CD1	2.81	0.48
29:BH:135:GLY:HA3	29:BH:141:VAL:HG22	1.95	0.48
32:BN:15:LEU:HD22	32:BN:53:VAL:O	2.14	0.48
39:BU:83:LEU:HG	39:BU:88:ILE:HD12	1.93	0.48
48:B5:19:ARG:NH2	58:BA:1264:G:H5"	2.28	0.48
50:B7:33:ARG:HB2	50:B7:34:ARG:NH1	2.28	0.48
58:BA:769:G:H2'	58:BA:770:G:H8	1.79	0.48
58:BA:813:U:H2'	58:BA:814:C:H6	1.77	0.48
58:BA:1081:U:H2'	58:BA:1082:U:C6	2.48	0.48
58:BA:1727:U:C4	58:BA:1728:G:C6	3.02	0.48
58:BA:1871:A:H2'	58:BA:1872:A:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:2013:A:H2'	58:BA:2014:A:C8	2.48	0.48
58:BA:2361:A:H2'	58:BA:2362:G:C8	2.48	0.48
58:BA:2439:A:N3	58:BA:2439:A:H5'	2.28	0.48
1:CB:68:ILE:HA	1:CB:161:ALA:O	2.14	0.48
1:CB:162:ILE:HG23	1:CB:184:VAL:HG13	1.96	0.48
20:CA:68(X):U:H2'	20:CA:68(Y):C:H6	1.78	0.48
20:CA:226:G:H2'	20:CA:227:G:H8	1.78	0.48
20:CA:265:G:H2'	20:CA:266:G:H5"	1.94	0.48
20:CA:967:C:H3'	20:CA:968:A:H8	1.78	0.48
20:CA:1126:U:H2'	20:CA:1127:G:O4'	2.14	0.48
23:CY:674:ASP:OD1	23:CY:675:HIS:ND1	2.46	0.48
24:DC:40:GLU:CB	24:DC:217:THR:HB	2.43	0.48
25:DD:206:LEU:O	25:DD:211:ARG:HD3	2.14	0.48
33:DO:87:ILE:HD13	33:DO:91:LEU:HD23	1.96	0.48
37:DS:31:SER:OG	59:DB:28:C:OP1	2.25	0.48
39:DU:54:LYS:O	39:DU:58:ARG:HG3	2.13	0.48
40:DV:59:ALA:HA	40:DV:97:LYS:HB2	1.95	0.48
43:DY:69:ALA:C	43:DY:71:LYS:H	2.21	0.48
58:DA:273(G):C:H3'	58:DA:274:G:C5'	2.42	0.48
58:DA:1375:C:H2'	58:DA:1376:C:C6	2.48	0.48
58:DA:1748:G:H2'	58:DA:1749:A:H8	1.79	0.48
58:DA:2564:A:N1	58:DA:2647:U:H4'	2.29	0.48
58:DA:2873:A:O2'	58:DA:2874:C:H5'	2.14	0.48
2:AC:7:PRO:HG2	2:AC:201:TYR:CE2	2.48	0.48
2:AC:8:ILE:HD11	2:AC:184:TYR:HB3	1.95	0.48
2:AC:27:LYS:HG3	2:AC:28:GLN:H	1.78	0.48
8:AI:112:LYS:HE2	8:AI:117:HIS:O	2.13	0.48
20:AA:569:C:H42	20:AA:881:G:H1	1.61	0.48
20:AA:692:U:H2'	20:AA:694:A:OP2	2.12	0.48
20:AA:919:A:H2'	20:AA:920:U:C6	2.47	0.48
20:AA:1028(F):A:H2'	20:AA:1028(G):G:O4'	2.13	0.48
20:AA:1040:U:H2'	20:AA:1041:A:H8	1.79	0.48
20:AA:1308:U:H3	20:AA:1329:A:H61	1.62	0.48
23:AY:93:GLU:OE1	23:AY:97:SER:OG	2.31	0.48
23:AY:301:ILE:HG21	23:AY:331:TYR:HB3	1.96	0.48
25:BD:45:ASN:HB2	58:BA:1812:A:O2'	2.13	0.48
25:BD:52:ARG:HH12	25:BD:249:PRO:CG	2.26	0.48
25:BD:117:VAL:HG11	25:BD:128:GLY:HA3	1.95	0.48
26:BE:122:PHE:HD2	26:BE:138:PRO:HA	1.79	0.48
27:BF:75:HIS:HA	58:BA:674:G:H4'	1.96	0.48
29:BH:77:LYS:HA	29:BH:80:SER:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BK:95:LYS:HG2	31:BK:137:GLU:HB3	1.95	0.48
35:BQ:74:TYR:OH	58:BA:957:A:H4'	2.13	0.48
36:BR:97:VAL:HA	36:BR:113:LEU:O	2.12	0.48
41:BW:102:HIS:HD2	58:BA:24:G:H4'	1.79	0.48
44:BZ:103:ARG:HD3	44:BZ:136:PHE:HB2	1.95	0.48
48:B5:6:VAL:HG13	58:BA:2015:A:C2	2.49	0.48
52:B9:2:LYS:HG2	52:B9:33:LYS:O	2.14	0.48
58:BA:532:A:H4'	58:BA:533:G:O4'	2.13	0.48
58:BA:680:G:H2'	58:BA:681:G:C8	2.48	0.48
58:BA:689:A:H2'	58:BA:690:G:C8	2.49	0.48
58:BA:915:C:H2'	58:BA:916:G:O4'	2.14	0.48
58:BA:926:A:H2'	58:BA:928:G:C8	2.47	0.48
58:BA:1783:A:OP2	58:BA:1783:A:H8	1.96	0.48
58:BA:2454:G:H1	58:BA:2498:C:N4	2.08	0.48
58:BA:2733:A:H3'	58:BA:2734:A:C8	2.45	0.48
1:CB:20:GLU:HB2	1:CB:190:THR:OG1	2.13	0.48
1:CB:187:LEU:HB2	1:CB:201:ILE:HB	1.95	0.48
2:CC:4:LYS:HD2	20:CA:1191:A:H5"	1.95	0.48
3:CD:98:GLU:HG2	3:CD:194:LEU:HD21	1.95	0.48
6:CG:118:VAL:HG12	6:CG:122:HIS:CE1	2.48	0.48
7:CH:11:THR:CG2	20:CA:876:G:H1'	2.44	0.48
7:CH:32:LYS:O	7:CH:36:LEU:HG	2.14	0.48
8:CI:89:ASN:ND2	8:CI:91:ASP:OD2	2.46	0.48
11:CL:84:LEU:HD13	11:CL:104:VAL:HG13	1.95	0.48
20:CA:19:C:H2'	20:CA:20:U:C6	2.48	0.48
20:CA:46:G:HO2'	20:CA:365:U:HO2'	1.54	0.48
20:CA:180:U:O2	20:CA:195:A:N7	2.47	0.48
20:CA:284:G:H2'	20:CA:285:G:C8	2.48	0.48
20:CA:1121:U:O4	20:CA:1152:A:N1	2.47	0.48
23:CY:168:ILE:HG23	23:CY:205:TYR:HE2	1.79	0.48
23:CY:218:GLU:HB3	53:De:83:GLY:HA2	1.94	0.48
30:DJ:49:UNK:H	30:DJ:82:UNK:HA	1.79	0.48
30:DJ:134:UNK:O	30:DJ:136:UNK:N	2.46	0.48
32:DN:66:LYS:O	32:DN:67:LEU:C	2.56	0.48
33:DO:6:THR:HG23	58:DA:1666:G:O3'	2.12	0.48
35:DQ:78:PRO:HD3	35:DQ:89:ASN:OD1	2.13	0.48
37:DS:15:ARG:O	37:DS:18:ILE:HB	2.14	0.48
44:DZ:5:LEU:HB2	44:DZ:57:ILE:HD11	1.94	0.48
45:D0:11:ARG:HH21	58:DA:2278:A:H5"	1.77	0.48
45:D0:42:GLY:HA2	45:D0:57:PHE:HD1	1.78	0.48
46:D2:48:HIS:HB3	58:DA:95:G:O2'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D5:4:HIS:HA	58:DA:2056:G:N2	2.29	0.48
50:D7:40:TRP:CD1	50:D7:40:TRP:H	2.30	0.48
58:DA:301:G:O2'	58:DA:302:C:O5'	2.32	0.48
58:DA:573:G:O2'	58:DA:574:C:H3'	2.13	0.48
58:DA:1128:A:C5	58:DA:2518:A:N6	2.82	0.48
58:DA:1312:U:H5'	58:DA:1313:U:C6	2.48	0.48
58:DA:1437:C:HO2'	58:DA:1518:C:HO2'	1.57	0.48
58:DA:2037:G:C6	58:DA:2038:G:C6	3.02	0.48
58:DA:2089:U:H2'	58:DA:2090:G:H8	1.78	0.48
58:DA:2818:G:H1	58:DA:2828:C:N4	2.05	0.48
8:AI:70:LYS:NZ	20:AA:1248:A:O2'	2.45	0.48
8:AI:97:LYS:HD2	8:AI:102:LEU:HD12	1.94	0.48
20:AA:397:A:H3'	20:AA:397:A:N3	2.28	0.48
23:AY:443:HIS:HD2	23:AY:446:THR:H	1.62	0.48
25:BD:62:TYR:HE2	25:BD:88:ARG:HH22	1.62	0.48
26:BE:8:LYS:HG2	26:BE:9:VAL:N	2.27	0.48
27:BF:72:ARG:HD2	27:BF:73:ALA:H	1.79	0.48
32:BN:111:PRO:N	58:BA:558:G:OP1	2.45	0.48
37:BS:52:SER:H	37:BS:56:LEU:HD22	1.79	0.48
39:BU:62:ILE:HD11	39:BU:93:LYS:CG	2.44	0.48
44:BZ:158:PRO:HD2	44:BZ:161:VAL:HB	1.96	0.48
45:B0:31:VAL:HG12	45:B0:35:ASN:HB2	1.96	0.48
53:Be:74:VAL:HG21	53:Be:86:LEU:HD21	1.94	0.48
53:Be:84:LEU:HA	53:Be:87:LYS:HG3	1.95	0.48
57:B4:26:SER:OG	57:B4:27:THR:N	2.46	0.48
58:BA:41:C:H2'	58:BA:43:G:C8	2.48	0.48
58:BA:979:G:H2'	58:BA:982:C:H41	1.75	0.48
58:BA:1088:A:N3	58:BA:1088:A:H2'	2.29	0.48
58:BA:2207:C:N4	58:BA:2217:G:H1	2.12	0.48
58:BA:2662:A:H2'	58:BA:2663:G:O4'	2.14	0.48
1:CB:114:ARG:O	1:CB:118:LEU:HG	2.13	0.48
2:CC:53:ALA:HB2	2:CC:115:LEU:HD11	1.95	0.48
8:CI:112:LYS:HD2	20:CA:1368:G:OP2	2.13	0.48
16:CQ:45:HIS:H	16:CQ:72:ARG:CA	2.27	0.48
20:CA:448:A:H2'	20:CA:449:C:C6	2.48	0.48
20:CA:943:U:C2	20:CA:1341:U:O2	2.67	0.48
20:CA:1005:A:H4'	20:CA:1037:C:H1'	1.95	0.48
20:CA:1012:U:O2	20:CA:1017:G:O6	2.32	0.48
20:CA:1342:C:H2'	20:CA:1343:G:H8	1.78	0.48
23:CY:427:ALA:HB1	23:CY:466:LEU:HD11	1.96	0.48
25:DD:31:LYS:HE3	25:DD:33:LEU:HB2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:109:LYS:HB2	36:DR:2:ARG:HH21	1.79	0.48
28:DG:97:ASP:HA	28:DG:100:TRP:CD1	2.49	0.48
32:DN:15:LEU:HD21	32:DN:55:VAL:HG13	1.95	0.48
32:DN:134:ARG:HG2	32:DN:134:ARG:O	2.14	0.48
33:DO:101:PRO:HD2	38:DT:69:GLY:HA3	1.95	0.48
34:DP:41:ARG:CZ	34:DP:45:LEU:HD22	2.43	0.48
39:DU:64:ARG:HB2	39:DU:64:ARG:NH2	2.25	0.48
39:DU:97:ASP:OD1	39:DU:101:ARG:NH2	2.47	0.48
50:D7:6:GLN:O	58:DA:686:G:H8	1.96	0.48
58:DA:53:A:H61	58:DA:117:G:H1'	1.78	0.48
58:DA:67:U:C2	58:DA:68:G:C8	3.02	0.48
58:DA:595:C:H2'	58:DA:596:G:O4'	2.14	0.48
58:DA:709:U:H2'	58:DA:710:G:C8	2.49	0.48
58:DA:719:C:H2'	58:DA:720:C:H6	1.78	0.48
58:DA:805:G:H1'	58:DA:831:G:H4'	1.96	0.48
58:DA:806:C:O2'	58:DA:2445:G:H4'	2.13	0.48
58:DA:834:C:O2'	58:DA:2358:G:H1'	2.14	0.48
58:DA:1423:G:C2	58:DA:1424:G:C8	3.02	0.48
58:DA:2026:C:H2'	58:DA:2027:G:C8	2.48	0.48
58:DA:2336:A:H3'	58:DA:2337:G:H8	1.78	0.48
58:DA:2531:A:H2'	58:DA:2532:G:O4'	2.14	0.48
58:DA:2725:A:OP2	58:DA:2725:A:H8	1.97	0.48
1:AB:162:ILE:HD11	1:AB:184:VAL:HG22	1.94	0.48
3:AD:128:VAL:HG22	3:AD:146:ILE:HA	1.95	0.48
9:AJ:30:SER:HB2	9:AJ:81:THR:HA	1.96	0.48
10:AK:47:VAL:HG13	20:AA:687:A:H4'	1.95	0.48
14:AO:5:LYS:H	14:AO:5:LYS:HD3	1.78	0.48
15:AP:43:LYS:NZ	20:AA:452:A:OP1	2.46	0.48
19:AT:74:LYS:HG2	19:AT:75:ASN:N	2.29	0.48
20:AA:1100:C:O5'	20:AA:1100:C:H6	1.96	0.48
20:AA:1172:C:H2'	20:AA:1173:G:C8	2.48	0.48
20:AA:1504:G:H4'	20:AA:1505:G:C5'	2.43	0.48
21:AW:64:G:C2	21:AW:65:U:C4	3.01	0.48
23:AY:191:ASP:HA	23:AY:267:LYS:HE3	1.95	0.48
23:AY:486:THR:OG1	23:AY:487:ILE:N	2.43	0.48
25:BD:16:MET:SD	25:BD:211:ARG:HD2	2.53	0.48
27:BF:178:PRO:HB2	27:BF:201:VAL:HG11	1.96	0.48
32:BN:63:THR:O	32:BN:64:GLY:O	2.32	0.48
32:BN:66:LYS:O	32:BN:67:LEU:C	2.56	0.48
34:BP:48:PRO:O	34:BP:50:ARG:HG2	2.14	0.48
43:BY:69:ALA:C	43:BY:71:LYS:H	2.21	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BY:74:PRO:HG3	43:BY:82:PRO:HA	1.95	0.48
57:B4:6:HIS:C	57:B4:8:LYS:H	2.21	0.48
58:BA:1497:U:O2'	58:BA:1498:C:OP1	2.32	0.48
58:BA:1537:C:H2'	58:BA:1538:G:H4'	1.96	0.48
58:BA:1759:A:H4'	58:BA:2715:C:O4'	2.14	0.48
58:BA:2152:G:H2'	58:BA:2153:G:C8	2.48	0.48
59:BB:39:A:H2	59:BB:46:A:H61	1.60	0.48
3:CD:133:VAL:HG11	3:CD:138:TYR:CD2	2.48	0.48
7:CH:88:LYS:O	7:CH:90:GLY:N	2.41	0.48
9:CJ:24:VAL:HA	9:CJ:34:VAL:HG11	1.95	0.48
16:CQ:94:ASN:O	16:CQ:98:LEU:HG	2.14	0.48
18:CS:77:THR:OG1	18:CS:78:ARG:N	2.47	0.48
20:CA:773:G:H1	20:CA:806:C:H42	1.62	0.48
23:CY:77:HIS:CD2	23:CY:277:VAL:HG23	2.49	0.48
24:DC:157:ILE:HG12	24:DC:161:ARG:CG	2.44	0.48
25:DD:219:PRO:HG3	58:DA:764:A:H2	1.79	0.48
26:DE:105:THR:HB	26:DE:197:ILE:HG23	1.95	0.48
28:DG:39:ILE:HG22	28:DG:157:ILE:HG23	1.95	0.48
32:DN:15:LEU:HD22	32:DN:53:VAL:O	2.14	0.48
35:DQ:30:GLY:HA3	35:DQ:105:GLU:HB2	1.95	0.48
35:DQ:92:GLY:O	35:DQ:94:VAL:HG13	2.13	0.48
41:DW:62:HIS:NE2	58:DA:495:G:O2'	2.43	0.48
42:DX:52:VAL:N	42:DX:82:GLN:O	2.37	0.48
44:DZ:24:LEU:HB2	44:DZ:41:LEU:HD23	1.95	0.48
58:DA:527:C:C4	58:DA:2779:U:H2'	2.49	0.48
58:DA:998:C:N4	58:DA:1157:G:H1	2.10	0.48
58:DA:1388:G:O2'	58:DA:1526:G:H5'	2.13	0.48
58:DA:1664:A:H61	58:DA:1996:C:H42	1.60	0.48
58:DA:1955:U:O2'	58:DA:1956:U:H5'	2.14	0.48
58:DA:2229:C:H2'	58:DA:2230:G:C8	2.49	0.48
58:DA:2701:C:N4	58:DA:2706:G:H1	2.12	0.48
1:AB:184:VAL:HB	1:AB:198:ASP:H	1.78	0.48
2:AC:39:ILE:O	2:AC:43:LEU:HG	2.14	0.48
3:AD:3:ARG:NE	3:AD:3:ARG:H	2.12	0.48
4:AE:102:ALA:HB1	4:AE:106:PRO:HB2	1.96	0.48
7:AH:20:TYR:OH	7:AH:76:PRO:O	2.28	0.48
7:AH:71:GLY:O	7:AH:73:ASP:N	2.46	0.48
8:AI:118:LYS:C	8:AI:120:ARG:H	2.22	0.48
12:AM:78:ILE:HA	12:AM:81:LEU:HB2	1.96	0.48
13:AN:48:ALA:HB2	13:AN:53:LEU:HD12	1.95	0.48
20:AA:614:A:H2'	20:AA:615:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1121:U:H2'	20:AA:1122:U:C6	2.48	0.48
20:AA:1138:G:C5	20:AA:1140:C:H1'	2.48	0.48
23:AY:25:LYS:HE3	61:AY:702:GDP:O2B	2.14	0.48
23:AY:481:VAL:HB	23:AY:483:TYR:CE2	2.49	0.48
24:BC:23:ILE:HD11	24:BC:194:ILE:HG13	1.96	0.48
24:BC:56:ASP:OD2	24:BC:56:ASP:N	2.46	0.48
25:BD:83:GLU:O	25:BD:91:ARG:HB3	2.14	0.48
25:BD:244:ARG:HG2	25:BD:245:PRO:CA	2.41	0.48
27:BF:2:LYS:HB2	27:BF:24:LEU:HD12	1.95	0.48
30:BJ:58:UNK:HA	58:BA:1107:G:P	2.53	0.48
33:BO:71:ARG:O	33:BO:73:ASP:N	2.47	0.48
35:BQ:43:THR:HA	35:BQ:94:VAL:HG12	1.96	0.48
37:BS:17:ARG:HA	37:BS:20:ARG:HB3	1.96	0.48
38:BT:83:ILE:HG13	38:BT:84:GLN:H	1.79	0.48
38:BT:102:ILE:HG13	38:BT:103:ARG:N	2.28	0.48
39:BU:12:ARG:HA	39:BU:15:LYS:HD2	1.95	0.48
45:B0:72:ARG:O	45:B0:76:GLY:N	2.32	0.48
47:B3:45:GLY:O	47:B3:48:GLU:HG2	2.14	0.48
50:B7:40:TRP:HZ3	58:BA:459:U:C6	2.32	0.48
58:BA:1144:G:H2'	58:BA:1145:C:C6	2.49	0.48
58:BA:1410:G:H2'	58:BA:1411:C:H6	1.78	0.48
58:BA:1487:G:H2'	58:BA:1488:G:C8	2.49	0.48
58:BA:1603:A:H5'	58:BA:1604:C:OP2	2.14	0.48
58:BA:2238:G:H2'	58:BA:2238:G:N3	2.29	0.48
58:BA:2472:G:H21	58:BA:2478:A:N6	2.04	0.48
58:BA:2618:G:H2'	58:BA:2619:C:H6	1.78	0.48
2:CC:22:TRP:CZ2	13:CN:54:PRO:HG2	2.47	0.48
2:CC:27:LYS:HG3	2:CC:28:GLN:H	1.79	0.48
11:CL:118:SER:HB3	20:CA:35:G:H21	1.78	0.48
12:CM:14:ARG:HB2	12:CM:17:VAL:HG23	1.96	0.48
15:CP:1:MET:HE3	15:CP:1:MET:HB2	1.75	0.48
15:CP:28:ARG:HD2	20:CA:375:U:O2'	2.14	0.48
20:CA:346:G:H4'	38:DT:41:ARG:NH2	2.28	0.48
20:CA:556:C:H2'	20:CA:557:G:O4'	2.14	0.48
20:CA:833:U:H3	20:CA:853:G:H1	1.60	0.48
20:CA:954:G:H2'	20:CA:955:U:O4'	2.13	0.48
20:CA:1016:A:O5'	20:CA:1016:A:H8	1.96	0.48
24:DC:40:GLU:HB3	24:DC:217:THR:C	2.38	0.48
24:DC:41:THR:HA	24:DC:176:VAL:O	2.14	0.48
26:DE:132:HIS:HB2	58:DA:744:G:OP1	2.14	0.48
29:DH:142:GLY:HA3	58:DA:2745:C:O3'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DO:64:ARG:NH2	38:DT:70:VAL:HG23	2.29	0.48
33:DO:98:VAL:HG22	33:DO:117:LEU:HD22	1.95	0.48
34:DP:48:PRO:C	34:DP:50:ARG:H	2.22	0.48
36:DR:2:ARG:HB3	36:DR:5:LYS:HG2	1.96	0.48
41:DW:12:ILE:O	41:DW:101:SER:OG	2.31	0.48
58:DA:181:A:H2'	58:DA:182:A:H8	1.77	0.48
58:DA:319:C:N4	58:DA:323:G:H1	2.11	0.48
58:DA:479:A:H4'	58:DA:480:A:H5'	1.96	0.48
58:DA:576:U:H5"	58:DA:2503:A:OP1	2.13	0.48
58:DA:577:G:H2'	58:DA:578:A:C8	2.48	0.48
58:DA:934:G:H2'	58:DA:935:C:H6	1.78	0.48
58:DA:1230:C:H2'	58:DA:1231:G:C8	2.48	0.48
58:DA:2096:U:H2'	58:DA:2097:C:C6	2.48	0.48
1:AB:157:ARG:HH22	1:AB:158:LEU:HG	1.79	0.48
8:AI:121:ARG:NH1	20:AA:1343:G:O2'	2.47	0.48
11:AL:124:LYS:HZ3	20:AA:501:C:P	2.36	0.48
16:AQ:10:VAL:HA	16:AQ:21:VAL:HG22	1.96	0.48
16:AQ:63:ARG:NH1	20:AA:186(I):U:O2	2.47	0.48
19:AT:72:LEU:HD13	19:AT:77:ALA:HA	1.95	0.48
20:AA:68(H):G:H2'	20:AA:68(H):G:N3	2.28	0.48
20:AA:299:G:C6	20:AA:300:A:C6	3.02	0.48
20:AA:995:C:N3	20:AA:1046:A:O2'	2.45	0.48
20:AA:1349:A:H2'	20:AA:1350:A:O4'	2.14	0.48
20:AA:1404:C:H1'	20:AA:1499:A:C2	2.49	0.48
20:AA:1412:C:N4	20:AA:1488:G:H1	2.11	0.48
23:AY:634:MET:SD	23:AY:634:MET:N	2.87	0.48
24:BC:28:ARG:CZ	24:BC:183:PRO:HB3	2.43	0.48
25:BD:115:GLN:HE22	25:BD:117:VAL:HG13	1.78	0.48
26:BE:12:THR:O	58:BA:2682:U:H1'	2.13	0.48
32:BN:131:GLN:HG2	58:BA:7:G:O2'	2.13	0.48
34:BP:138:LEU:HD21	34:BP:144:GLU:HB2	1.95	0.48
35:BQ:46:GLN:HG2	35:BQ:126:PRO:HD3	1.95	0.48
37:BS:12:PHE:CD1	37:BS:91:PRO:HD3	2.49	0.48
37:BS:93:LYS:HG2	59:BB:47:C:O2'	2.13	0.48
39:BU:42:ALA:O	39:BU:45:TYR:HB2	2.14	0.48
46:B2:21:LEU:O	46:B2:25:VAL:HG23	2.14	0.48
58:BA:1028:A:OP2	58:BA:1126:A:N6	2.41	0.48
58:BA:2615:U:H2'	58:BA:2616:C:H6	1.78	0.48
58:BA:2663:G:H3'	58:BA:2664:G:H8	1.79	0.48
1:CB:7:VAL:HG13	1:CB:217:ARG:CZ	2.44	0.48
1:CB:161:ALA:HA	1:CB:183:PRO:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:10:ARG:HA	3:CD:13:ARG:HD2	1.95	0.48
6:CG:71:PRO:C	6:CG:96:GLN:HE21	2.22	0.48
9:CJ:82:ILE:O	9:CJ:86:MET:HB3	2.14	0.48
10:CK:33:THR:HA	10:CK:39:PRO:HA	1.95	0.48
16:CQ:59:ILE:HG23	16:CQ:71:PHE:HB3	1.96	0.48
18:CS:40:ILE:HG12	18:CS:71:LEU:HD23	1.95	0.48
20:CA:22:G:O2'	20:CA:913:A:N1	2.42	0.48
20:CA:492:G:H2'	20:CA:493:G:C8	2.49	0.48
20:CA:628:G:H2'	20:CA:629:G:H8	1.77	0.48
20:CA:1097:C:H2'	20:CA:1098:C:C6	2.48	0.48
23:CY:413:ILE:HD11	23:CY:474:ALA:HB1	1.96	0.48
23:CY:458:HIS:O	23:CY:462:ILE:HG12	2.14	0.48
29:DH:67:LEU:O	29:DH:71:LEU:HB2	2.14	0.48
33:DO:8:LEU:O	33:DO:19:ILE:HG13	2.14	0.48
44:DZ:54:HIS:NE2	44:DZ:123:ASP:HB3	2.29	0.48
56:D1:42:GLN:HG2	56:D1:43:TYR:N	2.28	0.48
58:DA:19:C:H2'	58:DA:20:C:H6	1.75	0.48
58:DA:694:U:H4'	58:DA:1378:A:C2	2.48	0.48
58:DA:1434:A:H2'	58:DA:1435:G:C8	2.49	0.48
58:DA:1732:A:H2'	58:DA:1733:G:O4'	2.14	0.48
58:DA:1792:G:N2	58:DA:1827:C:C2	2.82	0.48
58:DA:1952:A:C6	58:DA:1953:A:N1	2.82	0.48
58:DA:2023:G:P	58:DA:2023:G:H8	2.37	0.48
58:DA:2291:U:H3	58:DA:2341:G:H1	1.61	0.48
58:DA:2316:C:H2'	58:DA:2317:C:O4'	2.14	0.48
58:DA:2508:G:H1	58:DA:2580:U:H3	1.62	0.48
58:DA:2845:G:N2	58:DA:2871:C:O2	2.23	0.48
59:DB:37:C:H2'	59:DB:38:C:O4'	2.14	0.48
1:AB:152:PHE:HE2	1:AB:155:LEU:HD12	1.79	0.47
2:AC:7:PRO:O	2:AC:11:ARG:HG2	2.14	0.47
2:AC:56:ASP:O	2:AC:67:THR:OG1	2.32	0.47
2:AC:119:ARG:O	2:AC:122:GLU:HB2	2.14	0.47
8:AI:16:ARG:HH22	20:AA:1128:C:H5'	1.79	0.47
18:AS:63:THR:OG1	18:AS:64:GLU:N	2.46	0.47
19:AT:87:LYS:HE3	19:AT:91:LEU:HD11	1.96	0.47
20:AA:10:A:H2'	20:AA:11:G:C8	2.49	0.47
20:AA:730:G:H5'	20:AA:816:A:O2'	2.14	0.47
20:AA:1187:G:H2'	20:AA:1188:A:C8	2.49	0.47
20:AA:1255:G:H1	20:AA:1282:C:N4	2.11	0.47
20:AA:1344:C:HO2'	20:AA:1348:U:HO2'	1.62	0.47
20:AA:1435:G:H2'	20:AA:1436:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AW:29:U:H2'	21:AW:30:C:O4'	2.14	0.47
25:BD:8:PRO:HA	25:BD:14:ARG:HB2	1.96	0.47
25:BD:126:GLN:OE1	25:BD:126:GLN:N	2.47	0.47
27:BF:17:ARG:NH2	27:BF:19:GLU:OE2	2.46	0.47
27:BF:120:GLU:OE2	34:BP:5:ASP:N	2.47	0.47
28:BG:27:ASN:ND2	59:BB:57:A:O4'	2.47	0.47
28:BG:103:LEU:HA	28:BG:106:LEU:HB3	1.96	0.47
32:BN:7:LYS:HZ3	32:BN:7:LYS:CA	2.27	0.47
32:BN:137:LYS:HZ3	32:BN:137:LYS:CA	2.27	0.47
35:BQ:25:ASP:OD1	35:BQ:25:ASP:N	2.47	0.47
39:BU:37:GLU:HA	39:BU:40:PHE:HD1	1.79	0.47
42:BX:55:ASN:HB2	42:BX:80:ILE:HG22	1.96	0.47
45:B0:33:ALA:HB1	58:BA:2352:A:H2	1.78	0.47
56:B1:20:ARG:HB2	56:B1:38:SER:O	2.13	0.47
58:BA:79:G:O2'	58:BA:346:A:N3	2.41	0.47
58:BA:1028:A:H2'	58:BA:1029:A:H8	1.75	0.47
58:BA:1173:G:C4	58:BA:1175:U:H5'	2.49	0.47
58:BA:1565:C:H1'	58:BA:1566:A:H8	1.78	0.47
58:BA:1773:A:C5	58:BA:1829:A:H1'	2.49	0.47
58:BA:2620:C:O2'	58:BA:2621:A:H8	1.96	0.47
58:BA:2695:C:H2'	58:BA:2696:U:C6	2.49	0.47
1:CB:20:GLU:HG3	1:CB:191:ASP:H	1.78	0.47
14:CO:43:LEU:O	14:CO:47:LYS:N	2.47	0.47
20:CA:68:G:H2'	20:CA:68(A):G:O4'	2.14	0.47
20:CA:390:C:H2'	20:CA:391:G:H8	1.79	0.47
20:CA:987:G:H2'	20:CA:988:G:H8	1.79	0.47
20:CA:1079:G:H2'	20:CA:1080:A:C8	2.49	0.47
24:DC:65:LEU:HD11	24:DC:162:ILE:HD11	1.96	0.47
26:DE:112:GLY:HA2	26:DE:159:HIS:CD2	2.49	0.47
32:DN:6:PRO:C	32:DN:7:LYS:HZ3	2.22	0.47
32:DN:9:VAL:HG11	32:DN:39:ARG:NH1	2.29	0.47
34:DP:16:ARG:O	34:DP:16:ARG:NH1	2.47	0.47
39:DU:3:ARG:HH12	58:DA:446:G:H5'	1.79	0.47
45:D0:70:GLN:HB3	45:D0:78:TYR:CB	2.44	0.47
48:D5:20:ARG:CA	48:D5:23:HIS:HB2	2.43	0.47
49:D6:45:LYS:CB	58:DA:2371:G:H4'	2.41	0.47
58:DA:612:G:N2	58:DA:616:A:HO2'	2.10	0.47
58:DA:975:G:H1'	58:DA:990:A:C2	2.49	0.47
58:DA:1128:A:O4'	58:DA:2516:G:O2'	2.31	0.47
58:DA:1221:C:H2'	58:DA:122(A):C:C6	2.49	0.47
58:DA:1951:U:O2	58:DA:1953:A:H8	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:2036:C:H2'	58:DA:2037:G:H8	1.79	0.47
58:DA:2779:U:H4'	58:DA:2780:G:H3'	1.95	0.47
8:AI:70:LYS:O	8:AI:74:ILE:HG13	2.14	0.47
14:AO:50:HIS:ND1	20:AA:764:C:H5"	2.29	0.47
19:AT:53:LEU:O	19:AT:57:ARG:NE	2.33	0.47
20:AA:775:G:H2'	20:AA:776:G:C8	2.48	0.47
20:AA:1118:C:H2'	20:AA:1119:C:H6	1.78	0.47
20:AA:1440(J):C:O2'	20:AA:1440(K):G:H5"	2.14	0.47
29:BH:20:ALA:HB3	29:BH:23:ARG:HG3	1.95	0.47
32:BN:42:TRP:CD1	39:BU:64:ARG:NH2	2.82	0.47
34:BP:51:PHE:CE1	34:BP:52:GLU:HB2	2.50	0.47
35:BQ:123:HIS:HE1	58:BA:2466:C:O2	1.97	0.47
38:BT:44:ASP:OD1	38:BT:44:ASP:N	2.47	0.47
40:BV:33:VAL:HG13	40:BV:59:ALA:HB3	1.95	0.47
41:BW:3:ALA:O	41:BW:106:ILE:HA	2.15	0.47
44:BZ:104:PHE:HA	44:BZ:139:VAL:HG22	1.96	0.47
45:B0:35:ASN:HA	58:BA:2354:G:H1'	1.96	0.47
46:B2:35:LEU:HD11	46:B2:50:ILE:HA	1.97	0.47
49:B6:53:LYS:HG3	49:B6:54:ILE:H	1.78	0.47
53:Be:69:ALA:HA	53:Be:72:LEU:HG	1.96	0.47
56:B1:27:GLU:HA	56:B1:31:GLY:HA2	1.96	0.47
57:B4:2:LYS:NZ	59:BB:44:G:O6	2.47	0.47
58:BA:185:U:H2'	58:BA:186:G:H8	1.77	0.47
58:BA:273(D):C:H2'	58:BA:273(E):C:C6	2.49	0.47
58:BA:579:G:H5"	58:BA:2018:G:H5"	1.94	0.47
58:BA:592:G:H1	58:BA:665:C:H42	1.61	0.47
58:BA:608:A:H2'	58:BA:609(A):A:H8	1.79	0.47
58:BA:760:G:H2'	58:BA:761:A:O4'	2.13	0.47
58:BA:848:G:H2'	58:BA:849:A:H8	1.79	0.47
58:BA:976:C:H4'	58:BA:1156:A:C6	2.49	0.47
58:BA:1270:C:O2'	58:BA:1648:C:OP2	2.22	0.47
58:BA:2023:G:H4'	58:BA:2617:C:O3'	2.13	0.47
58:BA:2030:A:H4'	58:BA:2031:A:N7	2.29	0.47
58:BA:2155:G:H3'	58:BA:2156:G:H8	1.79	0.47
58:BA:2500:U:O2'	58:BA:2504:U:OP1	2.19	0.47
58:BA:2756:U:H4'	58:BA:2757:A:OP1	2.14	0.47
59:BB:6:C:H2'	59:BB:7:G:H8	1.79	0.47
7:CH:14:ARG:HD3	7:CH:82:HIS:HE1	1.79	0.47
8:CI:118:LYS:HB3	20:CA:1349:A:OP1	2.15	0.47
10:CK:29:ILE:HD11	10:CK:42:TRP:HB2	1.95	0.47
20:CA:226:G:H2'	20:CA:227:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:300:A:O5'	20:CA:300:A:H8	1.97	0.47
20:CA:1506:U:O2'	20:CA:1507:A:H5'	2.14	0.47
23:CY:137:ASN:ND2	61:CY:702:GDP:O6	2.46	0.47
23:CY:238:THR:HG22	23:CY:241:GLU:HG2	1.96	0.47
31:DK:36:GLU:HG2	31:DK:65:PHE:CZ	2.49	0.47
32:DN:51:PHE:CE2	32:DN:119:ARG:HD2	2.48	0.47
42:DX:39:ILE:O	42:DX:43:VAL:HG23	2.14	0.47
42:DX:53:LYS:CB	42:DX:82:GLN:HB3	2.42	0.47
58:DA:1326:U:H2'	58:DA:1327:C:O4'	2.14	0.47
58:DA:1405:U:H2'	58:DA:1406:U:C6	2.47	0.47
58:DA:1498:C:H2'	58:DA:1499:C:H6	1.79	0.47
58:DA:1504:C:H2'	58:DA:1505:C:C6	2.50	0.47
58:DA:1833:U:H2'	58:DA:1834:U:C6	2.49	0.47
58:DA:2095:C:H2'	58:DA:2096:U:C6	2.49	0.47
59:DB:51:G:H21	59:DB:52:A:H62	1.60	0.47
3:AD:37:PRO:O	3:AD:38:TYR:HB3	2.15	0.47
4:AE:22:GLY:HA2	20:AA:1194:U:H5'	1.96	0.47
10:AK:30:VAL:HG23	10:AK:68:ALA:HB2	1.95	0.47
10:AK:81:ASP:HA	10:AK:106:LYS:O	2.13	0.47
18:AS:64:GLU:O	18:AS:66:MET:N	2.46	0.47
20:AA:68(O):A:C8	20:AA:68(P):C:H1'	2.49	0.47
20:AA:101:A:H2'	20:AA:102:G:H8	1.79	0.47
20:AA:415:A:H2'	20:AA:416:G:H8	1.77	0.47
20:AA:838(A):U:O2'	20:AA:838(B):C:H5"	2.13	0.47
20:AA:975:A:C8	20:AA:1365:G:N2	2.82	0.47
20:AA:1354:C:H2'	20:AA:1355:G:H8	1.79	0.47
21:AW:38:A:H2'	21:AW:39:U:O4'	2.14	0.47
23:AY:663:THR:O	23:AY:665:GLY:N	2.46	0.47
24:BC:43:GLU:HB2	24:BC:216:THR:O	2.15	0.47
27:BF:135:LYS:HB3	27:BF:138:GLU:HG3	1.95	0.47
31:BK:103:GLN:O	31:BK:107:ILE:HG12	2.15	0.47
35:BQ:27:VAL:HG12	35:BQ:29:PHE:N	2.18	0.47
39:BU:25:TRP:CD1	39:BU:26:GLY:N	2.81	0.47
51:B8:31:HIS:NE2	58:BA:2392:A:OP2	2.48	0.47
58:BA:56:A:H2'	58:BA:57:C:C6	2.49	0.47
58:BA:205:G:O2'	58:BA:206:U:OP2	2.30	0.47
58:BA:296:C:H2'	58:BA:297:C:C6	2.50	0.47
58:BA:298:G:N1	58:BA:339:U:OP2	2.34	0.47
58:BA:363(A):G:H2'	58:BA:363(B):A:H8	1.79	0.47
58:BA:673:C:H2'	58:BA:674:G:C8	2.49	0.47
58:BA:1047:G:N3	58:BA:1110:G:N1	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:1123:C:H2'	58:BA:1124:C:C6	2.49	0.47
58:BA:1324:G:H1	58:BA:1330:C:H42	1.61	0.47
58:BA:1914:C:C6	58:BA:1915:U:C6	3.02	0.47
1:CB:184:VAL:H	1:CB:198:ASP:CB	2.22	0.47
2:CC:59:ARG:HD3	2:CC:64:VAL:HA	1.95	0.47
3:CD:64:LEU:HB2	3:CD:198:VAL:HG21	1.95	0.47
3:CD:107:ARG:HA	3:CD:107:ARG:HD3	1.66	0.47
6:CG:69:VAL:HA	6:CG:138:LYS:HD2	1.95	0.47
7:CH:94:TYR:CD2	20:CA:598:U:H4'	2.49	0.47
12:CM:39:ILE:HD13	12:CM:48:LEU:HD11	1.97	0.47
12:CM:39:ILE:HG12	12:CM:52:GLU:HB3	1.96	0.47
19:CT:37:SER:O	19:CT:41:ILE:HG23	2.14	0.47
20:CA:1152:A:H2'	20:CA:1153:C:C6	2.49	0.47
20:CA:1177:G:O6	20:CA:1181:G:N7	2.47	0.47
24:DC:177:GLY:HA2	24:DC:186:LEU:CD2	2.44	0.47
25:DD:35:LYS:HD3	25:DD:61:LEU:HD21	1.96	0.47
25:DD:43:ARG:HD3	25:DD:43:ARG:C	2.40	0.47
26:DE:7:VAL:CG1	26:DE:27:LEU:HB3	2.44	0.47
26:DE:128:SER:OG	26:DE:129:HIS:N	2.46	0.47
33:DO:12:ASP:HA	33:DO:97:ARG:O	2.15	0.47
36:DR:14:SER:HB2	58:DA:2690:C:OP2	2.15	0.47
38:DT:131:ALA:O	38:DT:135:ALA:N	2.47	0.47
39:DU:13:LYS:HZ3	58:DA:812:C:H4'	1.79	0.47
40:DV:8:GLY:O	40:DV:23:GLU:HB2	2.13	0.47
41:DW:19:LEU:HD13	41:DW:19:LEU:HA	1.71	0.47
45:D0:27:GLU:HG3	45:D0:69:PHE:HE1	1.79	0.47
46:D2:47:ASN:HB2	46:D2:48:HIS:H	1.53	0.47
49:D6:37:ARG:NE	58:DA:2344:U:O2'	2.46	0.47
58:DA:142:G:H2'	58:DA:143:C:C6	2.49	0.47
58:DA:322:A:O4'	58:DA:340:A:H1'	2.12	0.47
58:DA:603:A:N6	58:DA:655:A:O2'	2.47	0.47
58:DA:632:A:N3	58:DA:2403:C:O2'	2.46	0.47
58:DA:1139:G:O5'	58:DA:1139:G:C8	2.67	0.47
58:DA:1347:G:N2	58:DA:1599:C:N3	2.51	0.47
58:DA:1666:G:H2'	58:DA:1667:G:O4'	2.14	0.47
58:DA:1743:G:H2'	58:DA:1746:G:H8	1.79	0.47
58:DA:1774:C:O2	58:DA:1774:C:H2'	2.14	0.47
58:DA:1889:A:H2'	58:DA:1890:A:O4'	2.13	0.47
58:DA:2037:G:C4	58:DA:2038:G:C8	3.02	0.47
58:DA:2712:U:H6	58:DA:712(B):A:C5	2.32	0.47
58:DA:2736:G:H2'	58:DA:2737:G:C8	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:28:PHE:CD1	1:AB:190:THR:HG22	2.50	0.47
1:AB:79:ASP:O	1:AB:82:ARG:HG2	2.15	0.47
2:AC:8:ILE:HG12	2:AC:184:TYR:HD2	1.78	0.47
2:AC:128:PHE:HD1	2:AC:129:ALA:H	1.62	0.47
2:AC:156:ARG:HG2	2:AC:163:ALA:HB2	1.95	0.47
3:AD:105:VAL:HG21	3:AD:126:ILE:HG13	1.96	0.47
3:AD:126:ILE:HG23	3:AD:146:ILE:HG23	1.95	0.47
3:AD:172:PRO:HB2	3:AD:187:ARG:HH22	1.80	0.47
13:AN:12:ARG:HH12	20:AA:994:A:H4'	1.79	0.47
14:AO:24:SER:OG	14:AO:25:THR:N	2.46	0.47
16:AQ:45:HIS:H	16:AQ:72:ARG:HA	1.78	0.47
20:AA:865:A:H2'	20:AA:866:C:C6	2.49	0.47
20:AA:1010:G:H2'	20:AA:1011:G:O4'	2.14	0.47
20:AA:1285:A:H4'	20:AA:1286:A:C5'	2.43	0.47
20:AA:1516:G:H2'	20:AA:1518:A:OP2	2.15	0.47
23:AY:311:ALA:CB	23:AY:330:VAL:HA	2.44	0.47
25:BD:151:LYS:HZ1	58:BA:2217:G:H21	1.62	0.47
25:BD:255:LYS:HD3	25:BD:255:LYS:HA	1.64	0.47
26:BE:98:PRO:HG3	26:BE:175:VAL:HG12	1.96	0.47
26:BE:166:THR:HG21	26:BE:199:ARG:HH21	1.79	0.47
27:BF:80:ALA:HB3	27:BF:83:PHE:CD1	2.49	0.47
29:BH:12:PRO:HG2	29:BH:49:VAL:HG13	1.95	0.47
35:BQ:76:LYS:H	35:BQ:89:ASN:H	1.63	0.47
46:B2:18:PRO:HA	46:B2:21:LEU:HG	1.97	0.47
50:B7:37:LYS:HD2	50:B7:39:ARG:HH21	1.79	0.47
58:BA:19:C:H2'	58:BA:20:C:H6	1.77	0.47
58:BA:381:G:H8	58:BA:381:G:O5'	1.97	0.47
58:BA:432:A:H2'	58:BA:433:C:H6	1.80	0.47
58:BA:513:A:H2	58:BA:582:G:H4'	1.78	0.47
58:BA:890:A:H2'	58:BA:892:G:C8	2.49	0.47
58:BA:1406:U:H2'	58:BA:1407:C:C6	2.49	0.47
58:BA:2291:U:H2'	58:BA:2292:C:C6	2.50	0.47
58:BA:2512:C:H2'	58:BA:2513:G:O4'	2.14	0.47
11:CL:35:GLY:HA3	11:CL:83:VAL:O	2.15	0.47
12:CM:78:ILE:O	12:CM:82:MET:HG2	2.14	0.47
18:CS:31:ILE:HG12	18:CS:48:THR:O	2.14	0.47
18:CS:40:ILE:HG21	18:CS:66:MET:HB2	1.97	0.47
20:CA:33:A:H4'	20:CA:364:A:H1'	1.96	0.47
20:CA:44:G:H2'	20:CA:45:U:O4'	2.14	0.47
20:CA:68(H):G:H2'	20:CA:68(I):G:C8	2.50	0.47
20:CA:68(H):G:H2'	20:CA:68(I):G:N7	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:285:G:H2'	20:CA:286:G:H8	1.78	0.47
20:CA:1166:G:N2	20:CA:1170:A:OP2	2.23	0.47
20:CA:1286:A:H3'	20:CA:1286:A:N3	2.29	0.47
20:CA:1504:G:H4'	20:CA:1505:G:C5'	2.44	0.47
23:CY:251:ILE:HG12	23:CY:281:PRO:HB3	1.95	0.47
23:CY:528:ALA:HB3	23:CY:567:LEU:HB3	1.97	0.47
24:DC:19:LYS:HB3	24:DC:20:VAL:H	1.53	0.47
25:DD:13:ARG:HA	25:DD:16:MET:HB2	1.97	0.47
25:DD:208:LYS:HB2	58:DA:729:G:C6	2.49	0.47
29:DH:89:ILE:HG22	29:DH:162:ILE:HG23	1.96	0.47
34:DP:64:LYS:HG3	58:DA:2416:C:OP1	2.14	0.47
35:DQ:1:MET:HA	35:DQ:44:ALA:HB1	1.96	0.47
35:DQ:82:ARG:HG3	58:DA:2495:G:OP1	2.14	0.47
39:DU:105:VAL:O	39:DU:109:LEU:HG	2.14	0.47
41:DW:11:ARG:HB3	41:DW:12:ILE:HD12	1.96	0.47
44:DZ:116:VAL:O	44:DZ:174:VAL:HA	2.15	0.47
44:DZ:121:HIS:HB3	44:DZ:124:ILE:HG22	1.96	0.47
49:D6:8:LYS:HD2	49:D6:27:LYS:HG2	1.96	0.47
50:D7:48:LYS:HB3	50:D7:48:LYS:HE2	1.68	0.47
52:D9:7:VAL:CG1	52:D9:34:GLN:HB3	2.45	0.47
58:DA:30:G:H1	58:DA:510:C:H42	1.62	0.47
58:DA:401:A:N6	58:DA:422:A:H61	1.99	0.47
58:DA:840:C:P	58:DA:932:G:H22	2.36	0.47
58:DA:1136:G:C4	58:DA:1137:G:C8	3.03	0.47
58:DA:1696:G:H2'	58:DA:1697:G:O4'	2.14	0.47
58:DA:2109:U:O4	58:DA:2180:U:O4	2.32	0.47
1:AB:54:THR:O	1:AB:58:ILE:HG12	2.13	0.47
1:AB:71:VAL:HB	1:AB:164:VAL:HA	1.96	0.47
1:AB:208:ILE:HD12	1:AB:208:ILE:H	1.79	0.47
3:AD:115:ARG:HB3	20:AA:407:G:H5"	1.97	0.47
4:AE:78:HIS:O	4:AE:93:PRO:HD3	2.15	0.47
6:AG:32:ARG:HG2	20:AA:1240:U:C2	2.49	0.47
13:AN:53:LEU:HA	13:AN:54:PRO:HD3	1.55	0.47
19:AT:38:LYS:HZ2	19:AT:41:ILE:HD13	1.79	0.47
20:AA:123:C:O2'	20:AA:290:C:O2	2.30	0.47
20:AA:186(J):G:O6	20:AA:264:U:H5"	2.15	0.47
20:AA:339:C:H2'	20:AA:340:U:C6	2.49	0.47
20:AA:591:U:H2'	20:AA:592:G:H8	1.78	0.47
20:AA:1077:G:N2	20:AA:1080:A:OP2	2.21	0.47
20:AA:1098:C:H2'	20:AA:1099:G:C8	2.49	0.47
25:BD:100:GLY:HA3	58:BA:1500:G:N2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:40:ASN:HA	28:BG:90:LEU:O	2.15	0.47
28:BG:73:ALA:HB3	28:BG:85:GLY:HA2	1.96	0.47
28:BG:126:ASP:CG	28:BG:130:ASN:HB2	2.39	0.47
34:BP:16:ARG:HD2	34:BP:18:ARG:HG2	1.96	0.47
38:BT:16:ARG:NH1	38:BT:82:LEU:O	2.38	0.47
40:BV:34:GLU:O	40:BV:36:PRO:HD3	2.14	0.47
40:BV:39:LEU:HA	40:BV:47:VAL:HG11	1.96	0.47
50:B7:42:LEU:C	50:B7:44:PRO:HD3	2.40	0.47
58:BA:856:C:H2'	58:BA:857:C:C6	2.49	0.47
58:BA:950:G:H2'	58:BA:951:C:C6	2.49	0.47
58:BA:1131:G:OP2	58:BA:2515:C:H4'	2.15	0.47
58:BA:2119:A:C2	58:BA:2171:A:H1'	2.49	0.47
58:BA:2238:G:H4'	58:BA:2239:G:C8	2.50	0.47
59:BB:19:G:H2'	59:BB:20:C:O4'	2.14	0.47
1:CB:71:VAL:O	1:CB:165:VAL:HG23	2.13	0.47
2:CC:175:LEU:HD23	2:CC:175:LEU:H	1.79	0.47
20:CA:297:G:H4'	20:CA:557:G:O2'	2.15	0.47
20:CA:1145:C:O2'	20:CA:1146:A:O5'	2.30	0.47
23:CY:187:THR:HG22	23:CY:198:GLU:HA	1.96	0.47
23:CY:413:ILE:HD13	23:CY:476:VAL:HG22	1.95	0.47
24:DC:182:PRO:HB3	24:DC:183:PRO:HD2	1.95	0.47
25:DD:151:LYS:NZ	58:DA:2217:G:H21	2.13	0.47
26:DE:7:VAL:HG12	26:DE:27:LEU:HB3	1.96	0.47
26:DE:42:ASP:HB3	26:DE:44:TYR:CZ	2.49	0.47
26:DE:93:VAL:HG12	26:DE:182:LEU:HD13	1.95	0.47
27:DF:153:SER:HA	27:DF:172:TRP:O	2.15	0.47
28:DG:17:PRO:O	28:DG:21:ARG:HG2	2.14	0.47
29:DH:79:VAL:C	29:DH:81:GLU:H	2.23	0.47
30:DJ:58:UNK:O	30:DJ:60:UNK:N	2.47	0.47
34:DP:9:ASN:H	34:DP:10:PRO:HD2	1.78	0.47
39:DU:62:ILE:HD11	39:DU:93:LYS:CD	2.42	0.47
40:DV:6:LYS:HA	40:DV:11:GLN:HA	1.95	0.47
41:DW:103:ILE:HD12	41:DW:103:ILE:H	1.80	0.47
43:DY:15:VAL:HG22	43:DY:72:VAL:HG12	1.96	0.47
43:DY:19:LYS:HB2	58:DA:329:G:O6	2.15	0.47
56:D1:43:TYR:HD2	56:D1:43:TYR:C	2.23	0.47
58:DA:354:G:H2'	58:DA:355:G:H8	1.79	0.47
58:DA:371:A:N6	58:DA:401:A:H3'	2.30	0.47
58:DA:447:A:H4'	58:DA:448:U:C5'	2.45	0.47
58:DA:541:C:H2'	58:DA:542:C:H6	1.78	0.47
58:DA:609(B):G:H2'	58:DA:610:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:643:A:H2'	58:DA:644:A:C8	2.50	0.47
58:DA:1019:U:H2'	58:DA:1020:A:H8	1.79	0.47
58:DA:1161:C:H2'	58:DA:1162:G:C8	2.49	0.47
58:DA:1913:A:H4'	58:DA:1914:C:H5"	1.96	0.47
58:DA:2064:C:H2'	58:DA:2065:C:C6	2.50	0.47
59:DB:66:A:O2'	59:DB:67:G:OP2	2.30	0.47
1:AB:174:VAL:O	1:AB:175:ARG:C	2.56	0.47
5:AF:90:VAL:O	20:AA:736:C:O2'	2.20	0.47
14:AO:33:THR:HA	14:AO:36:ILE:HD12	1.96	0.47
18:AS:78:ARG:NH2	20:AA:1223:C:OP2	2.48	0.47
20:AA:161:A:H61	20:AA:347:G:HO2'	1.60	0.47
20:AA:367:U:H4'	23:AY:351:ARG:HE	1.80	0.47
20:AA:517:G:H5'	20:AA:519:C:C2	2.49	0.47
20:AA:1144:G:N2	20:AA:1146:A:H62	2.11	0.47
23:AY:165:GLN:HB3	23:AY:177:ILE:HG21	1.95	0.47
26:BE:29:GLY:HA2	26:BE:180:ASN:HB3	1.95	0.47
26:BE:46:ALA:HB1	26:BE:80:GLU:HG2	1.95	0.47
27:BF:18:ARG:NE	27:BF:18:ARG:O	2.48	0.47
31:BK:101:TRP:HZ2	31:BK:141:ALA:H	1.63	0.47
31:BK:118:THR:O	31:BK:118:THR:OG1	2.28	0.47
34:BP:41:ARG:NH1	34:BP:45:LEU:HD22	2.29	0.47
34:BP:64:LYS:HE3	58:BA:2416:C:H5"	1.96	0.47
36:BR:10:LEU:HB3	36:BR:17:ARG:NH2	2.28	0.47
36:BR:104:ARG:NH2	58:BA:1287:A:H1'	2.30	0.47
38:BT:96:ARG:HB2	38:BT:97:ALA:H	1.48	0.47
39:BU:92:ARG:HD3	39:BU:95:LEU:HB2	1.97	0.47
40:BV:79:VAL:HG21	58:BA:973:A:H5'	1.96	0.47
50:B7:5:TRP:HD1	58:BA:1612:C:H4'	1.80	0.47
52:B9:2:LYS:HA	52:B9:33:LYS:O	2.14	0.47
56:B1:25:LYS:HG2	56:B1:34:THR:CA	2.43	0.47
58:BA:221:A:C4	58:BA:233:A:H1'	2.50	0.47
58:BA:259:G:H2'	58:BA:260:G:C8	2.50	0.47
58:BA:443:A:H2	58:BA:1245:G:N3	2.13	0.47
58:BA:570:G:H5'	58:BA:972:G:H4'	1.95	0.47
58:BA:797:C:H2'	58:BA:798:G:H8	1.79	0.47
58:BA:1446:C:H2'	58:BA:1447:G:H8	1.79	0.47
58:BA:2282:G:O2'	58:BA:2390:U:O4	2.26	0.47
58:BA:2661:G:H2'	58:BA:2662:A:C8	2.49	0.47
58:BA:2804:C:H2'	58:BA:2805:G:C8	2.49	0.47
4:CE:145:LYS:O	4:CE:149:GLU:HG2	2.14	0.47
11:CL:92:ASP:HB2	11:CL:93:LEU:HD23	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:74:LYS:HG2	19:CT:75:ASN:N	2.21	0.47
20:CA:408:A:N1	20:CA:434:U:C4	2.82	0.47
20:CA:454:C:N4	20:CA:479:C:C4	2.82	0.47
20:CA:790:A:H2'	20:CA:791:G:C8	2.49	0.47
20:CA:1000:A:H2'	20:CA:1001:G:C8	2.49	0.47
20:CA:1252:A:H2'	20:CA:1253:G:H8	1.79	0.47
24:DC:139:PRO:HA	24:DC:145:THR:CB	2.44	0.47
24:DC:186:LEU:O	24:DC:190:ILE:HG12	2.13	0.47
27:DF:6:VAL:HG23	27:DF:7:TYR:CD1	2.49	0.47
29:DH:41:MET:HE1	29:DH:52:VAL:HG22	1.96	0.47
29:DH:121:ILE:HG22	29:DH:136:ILE:N	2.30	0.47
30:DJ:135:UNK:C	30:DJ:137:UNK:H	2.28	0.47
31:DK:57:ILE:H	31:DK:57:ILE:HD12	1.78	0.47
37:DS:15:ARG:C	37:DS:18:ILE:H	2.22	0.47
39:DU:3:ARG:NH2	39:DU:5:LYS:HD2	2.30	0.47
58:DA:222:A:N1	58:DA:233:A:H5'	2.29	0.47
58:DA:477:A:H2'	58:DA:478:A:C8	2.49	0.47
58:DA:966:G:H2'	58:DA:967:C:H6	1.76	0.47
58:DA:1545:A:H2'	58:DA:1546:A:C8	2.49	0.47
58:DA:2781:A:H5'	58:DA:2782:G:O5'	2.15	0.47
58:DA:2875:C:H2'	58:DA:2876:G:O4'	2.14	0.47
1:AB:83:MET:SD	1:AB:234:PRO:HB3	2.55	0.47
2:AC:87:LEU:O	2:AC:91:LEU:HG	2.15	0.47
2:AC:114:PRO:HD3	2:AC:183:ASP:OD2	2.15	0.47
2:AC:189:ALA:HB1	2:AC:196:LEU:HD23	1.97	0.47
3:AD:61:LYS:HA	3:AD:203:VAL:HG22	1.96	0.47
3:AD:115:ARG:CB	20:AA:407:G:H5"	2.44	0.47
5:AF:44:GLY:HA2	5:AF:59:TYR:CZ	2.50	0.47
5:AF:98:LEU:HB2	17:AR:29:PHE:O	2.15	0.47
8:AI:22:GLY:HA3	8:AI:60:ASP:CG	2.40	0.47
11:AL:102:ARG:HB3	11:AL:109:GLY:H	1.79	0.47
12:AM:4:ILE:HG12	12:AM:57:ARG:HE	1.79	0.47
13:AN:22:THR:HB	13:AN:33:VAL:HB	1.96	0.47
14:AO:33:THR:O	14:AO:36:ILE:HB	2.14	0.47
16:AQ:26:GLN:HG3	16:AQ:36:ILE:O	2.15	0.47
16:AQ:90:ILE:HG21	20:AA:583:A:H5'	1.97	0.47
17:AR:19:LYS:HB3	17:AR:20:ALA:H	1.51	0.47
20:AA:119:A:H4'	20:AA:120:A:C8	2.50	0.47
20:AA:298:A:H2'	20:AA:299:G:O4'	2.14	0.47
20:AA:352:C:H42	20:AA:357:G:N2	2.12	0.47
20:AA:408:A:H2	20:AA:434:U:N3	2.08	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:599:C:H2'	20:AA:600:C:H6	1.79	0.47
20:AA:895:G:H2'	20:AA:896:C:C6	2.49	0.47
20:AA:1044:A:C5	20:AA:1045:C:H1'	2.49	0.47
20:AA:1098:C:H2'	20:AA:1099:G:H8	1.80	0.47
22:AV:18:G:H5'	22:AV:19:G:OP1	2.13	0.47
23:AY:150:ILE:HG22	23:AY:154:GLN:HE22	1.80	0.47
23:AY:459:LEU:O	23:AY:462:ILE:HB	2.14	0.47
24:BC:7:ARG:NH2	58:BA:2128:C:H5"	2.29	0.47
24:BC:23:ILE:HG21	24:BC:191:ARG:HG3	1.95	0.47
24:BC:45:HIS:ND1	24:BC:171:ALA:O	2.48	0.47
25:BD:9:TYR:CD1	25:BD:10:THR:HG23	2.50	0.47
25:BD:60:ARG:NE	58:BA:1567:A:OP1	2.31	0.47
26:BE:37:ARG:HD2	26:BE:42:ASP:OD1	2.14	0.47
26:BE:166:THR:OG1	58:BA:2773:C:OP1	2.29	0.47
28:BG:166:ASP:OD2	28:BG:166:ASP:N	2.27	0.47
32:BN:6:PRO:C	32:BN:7:LYS:HZ3	2.22	0.47
32:BN:15:LEU:HD21	32:BN:55:VAL:HG13	1.96	0.47
32:BN:34:LEU:HD12	32:BN:116:LEU:O	2.15	0.47
32:BN:39:ARG:HG2	32:BN:40:PRO:HD2	1.96	0.47
32:BN:134:ARG:HG2	32:BN:134:ARG:O	2.14	0.47
33:BO:13:ASN:OD1	33:BO:96:THR:N	2.42	0.47
33:BO:112:MET:O	33:BO:116:SER:OG	2.30	0.47
34:BP:114:ILE:HG12	34:BP:130:PHE:HD1	1.80	0.47
36:BR:62:ALA:O	36:BR:65:LEU:N	2.48	0.47
42:BX:26:TYR:O	42:BX:81:VAL:HG22	2.14	0.47
42:BX:27:THR:HG22	42:BX:80:ILE:HG13	1.97	0.47
42:BX:64:LYS:HE2	42:BX:66:LEU:HD11	1.97	0.47
44:BZ:82:ARG:NH2	44:BZ:83:PRO:O	2.48	0.47
45:B0:16:SER:HB3	58:BA:2262:U:H5	1.80	0.47
49:B6:5:VAL:HG13	49:B6:7:ILE:HB	1.97	0.47
49:B6:24:GLU:OE2	49:B6:37:ARG:NH1	2.48	0.47
58:BA:682:G:H1	58:BA:795:C:N4	2.10	0.47
58:BA:694:U:H2'	58:BA:695:G:C8	2.50	0.47
58:BA:962:G:H4'	58:BA:2496:C:O2'	2.15	0.47
58:BA:1151:G:H2'	58:BA:1152:C:C6	2.49	0.47
58:BA:1198:U:H2'	58:BA:1199:U:C6	2.50	0.47
58:BA:1515:C:H2'	58:BA:1516:U:O4'	2.14	0.47
58:BA:1819:A:H4'	58:BA:1820:U:C5'	2.45	0.47
58:BA:1878:G:H2'	58:BA:1879:C:H6	1.80	0.47
58:BA:1902:C:H2'	58:BA:1903:G:O4'	2.15	0.47
58:BA:1981:A:H3'	58:BA:1981:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:2058:A:H8	58:BA:2058:A:O5'	1.97	0.47
58:BA:2084:C:H2'	58:BA:2085:C:C6	2.50	0.47
58:BA:2599:G:H8	58:BA:2599:G:OP2	1.96	0.47
58:BA:2801:A:H8	58:BA:2801:A:H3'	1.79	0.47
59:BB:8:U:H2'	59:BB:9:G:H8	1.79	0.47
59:BB:24:G:N1	59:BB:56:G:N2	2.62	0.47
2:CC:18:TRP:C	2:CC:20:SER:H	2.23	0.47
2:CC:30:ARG:NH1	13:CN:35:ARG:O	2.47	0.47
4:CE:110:LEU:O	4:CE:115:VAL:HG23	2.15	0.47
5:CF:12:PRO:HB2	5:CF:57:GLN:HB2	1.95	0.47
9:CJ:33:GLN:HB2	9:CJ:75:ILE:HD12	1.97	0.47
10:CK:22:HIS:HB3	10:CK:29:ILE:HG22	1.95	0.47
11:CL:52:LEU:HD21	20:CA:521:G:OP2	2.14	0.47
12:CM:91:ARG:HA	12:CM:94:ARG:HG2	1.96	0.47
12:CM:125:ARG:O	20:CA:966:G:H5'	2.15	0.47
13:CN:23:ARG:HA	13:CN:29:ARG:O	2.15	0.47
19:CT:79:ARG:HD2	19:CT:83:ARG:HH21	1.80	0.47
20:CA:126:G:O2'	20:CA:635:G:O4'	2.31	0.47
20:CA:217:C:H2'	20:CA:218:C:C6	2.49	0.47
20:CA:441:A:H62	20:CA:493:G:H21	1.62	0.47
20:CA:621:A:H2'	20:CA:622:A:C8	2.50	0.47
20:CA:693:G:H2'	20:CA:694:A:C8	2.49	0.47
20:CA:831:U:H2'	20:CA:832:C:H6	1.79	0.47
20:CA:1038:C:H2'	20:CA:1039:C:C6	2.50	0.47
20:CA:1113:C:H2'	20:CA:1114:C:O4'	2.15	0.47
20:CA:1123:A:H2	20:CA:1150:U:N3	2.02	0.47
20:CA:1422:G:H1	20:CA:1478:C:H42	1.62	0.47
20:CA:1496:C:P	23:CY:501:THR:CG2	3.03	0.47
23:CY:10:LYS:O	23:CY:13:ARG:NH1	2.47	0.47
23:CY:20:HIS:CE1	23:CY:21:ILE:HG12	2.50	0.47
23:CY:25:LYS:HD3	61:CY:702:GDP:O2B	2.14	0.47
23:CY:162:VAL:HB	23:CY:255:ILE:HD11	1.97	0.47
23:CY:535:PRO:HD2	23:CY:538:TYR:CD2	2.50	0.47
23:CY:615:GLU:H	23:CY:615:GLU:HG3	1.32	0.47
23:CY:620:VAL:O	23:CY:624:LEU:HB2	2.15	0.47
24:DC:45:HIS:N	24:DC:213:VAL:O	2.48	0.47
25:DD:165:ILE:HG23	25:DD:175:LEU:HD22	1.96	0.47
25:DD:215:LEU:HB2	25:DD:217:ARG:HG3	1.96	0.47
26:DE:66:HIS:O	26:DE:68:ALA:N	2.48	0.47
26:DE:109:LYS:HE3	58:DA:2680:C:H5"	1.97	0.47
29:DH:39:PRO:O	29:DH:41:MET:N	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DJ:116:UNK:O	30:DJ:118:UNK:N	2.46	0.47
32:DN:63:THR:O	32:DN:64:GLY:O	2.32	0.47
33:DO:71:ARG:NE	33:DO:105:GLU:OE2	2.36	0.47
35:DQ:16:ARG:HD3	59:DB:90:C:OP1	2.15	0.47
36:DR:9:LYS:NZ	58:DA:1652:A:OP1	2.36	0.47
36:DR:15:SER:OG	36:DR:16:HIS:N	2.48	0.47
36:DR:28:LEU:HA	36:DR:34:ILE:HD13	1.96	0.47
37:DS:103:GLU:O	37:DS:105:ALA:N	2.48	0.47
39:DU:27:LEU:HD21	48:D5:13:LYS:HD3	1.95	0.47
40:DV:18:LEU:O	40:DV:96:ILE:HG13	2.14	0.47
40:DV:59:ALA:CB	40:DV:96:ILE:HA	2.43	0.47
42:DX:29:TRP:HA	42:DX:78:LYS:HA	1.97	0.47
43:DY:26:LYS:HB3	43:DY:27:VAL:H	1.43	0.47
44:DZ:7:ALA:HA	44:DZ:39:VAL:HG12	1.97	0.47
44:DZ:82:ARG:CZ	44:DZ:82:ARG:HB3	2.44	0.47
47:D3:17:LYS:NZ	58:DA:970:C:OP1	2.48	0.47
58:DA:68:G:H2'	58:DA:69:C:O4'	2.15	0.47
58:DA:69:C:H4'	58:DA:75:G:N7	2.29	0.47
58:DA:77:C:H2'	58:DA:78:A:H8	1.80	0.47
58:DA:392:C:H2'	58:DA:393:C:H6	1.79	0.47
58:DA:457:A:O4'	58:DA:459:U:O2	2.32	0.47
58:DA:742:G:H1	58:DA:755:C:H42	1.62	0.47
58:DA:799:G:H3'	58:DA:800:A:H5"	1.97	0.47
58:DA:884:C:N3	58:DA:892:G:N2	2.48	0.47
58:DA:894:C:H2'	58:DA:895:U:C6	2.50	0.47
58:DA:1203:G:H5"	58:DA:1204:A:OP2	2.14	0.47
58:DA:1492:G:H1	58:DA:1498:C:H42	1.61	0.47
58:DA:1578:U:O2'	58:DA:1579:A:H5'	2.15	0.47
58:DA:1758:G:N7	58:DA:2695:C:H4'	2.30	0.47
58:DA:1782:C:H42	58:DA:2586:C:H42	1.61	0.47
58:DA:2183:C:H2'	58:DA:2184:G:H8	1.78	0.47
58:DA:2661:G:C6	58:DA:2662:A:C2	3.03	0.47
58:DA:2782:G:H3'	58:DA:2783:G:H8	1.80	0.47
59:DB:14:U:H1'	59:DB:107:U:H1'	1.96	0.47
59:DB:87:G:H21	59:DB:89(B):A:H62	1.62	0.47
1:AB:167:PRO:HD2	1:AB:188:ALA:CB	2.43	0.47
3:AD:5:ILE:HG21	20:AA:406:G:H5"	1.95	0.47
5:AF:5:GLU:HB3	5:AF:62:TRP:CZ2	2.50	0.47
7:AH:104:ARG:HB2	7:AH:138:TRP:CD1	2.50	0.47
10:AK:47:VAL:HG22	20:AA:688:G:H4'	1.97	0.47
16:AQ:67:LYS:HE2	20:AA:266:G:H2'	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:339:C:H6	33:BO:97:ARG:HH12	1.62	0.47
20:AA:860:A:H2'	20:AA:861:G:O4'	2.14	0.47
20:AA:1028(A):C:H42	20:AA:1028(H):G:H1	1.62	0.47
20:AA:1181:G:O2'	20:AA:1182:G:C8	2.68	0.47
20:AA:1260:C:N4	20:AA:1274:G:H1	2.12	0.47
20:AA:1260:C:H42	20:AA:1274:G:H1	1.63	0.47
20:AA:1432:G:OP1	38:BT:107:ASP:HB2	2.15	0.47
20:AA:1511:G:H2'	20:AA:1512:U:O4'	2.14	0.47
24:BC:118:PRO:O	24:BC:121:MET:HB3	2.15	0.47
25:BD:27:THR:HG21	25:BD:94:LEU:HD12	1.96	0.47
27:BF:63:LYS:NZ	27:BF:65:TRP:HB2	2.29	0.47
27:BF:124:LEU:O	27:BF:194:MET:HG3	2.15	0.47
31:BK:57:ILE:HA	31:BK:66:THR:O	2.14	0.47
48:B5:6:VAL:HG21	58:BA:2057:A:O2'	2.14	0.47
50:B7:37:LYS:NZ	58:BA:468:G:OP2	2.44	0.47
58:BA:1290:C:H2'	58:BA:1291:C:C6	2.50	0.47
58:BA:1331:A:O2'	58:BA:1332:G:C8	2.67	0.47
58:BA:1540:G:N2	58:BA:1541:U:H1'	2.30	0.47
58:BA:1988:C:H2'	58:BA:1989:G:C8	2.50	0.47
58:BA:2095:C:H2'	58:BA:2096:U:H6	1.80	0.47
58:BA:2537:U:H2'	58:BA:2538:C:C6	2.50	0.47
58:BA:2849:U:H1'	58:BA:2866:U:C6	2.49	0.47
59:BB:57:A:H2'	59:BB:58:A:C8	2.50	0.47
1:CB:77:ALA:HB1	1:CB:165:VAL:HG21	1.97	0.47
2:CC:39:ILE:O	2:CC:43:LEU:HG	2.15	0.47
4:CE:24:ARG:HD2	22:CV:26:A:H2	1.79	0.47
9:CJ:26:ALA:HA	9:CJ:29:ARG:HB2	1.96	0.47
10:CK:124:LYS:HB3	10:CK:124:LYS:NZ	2.29	0.47
17:CR:59:SER:H	17:CR:62:GLU:CD	2.23	0.47
20:CA:129(A):G:H4'	20:CA:130:A:H5"	1.97	0.47
20:CA:615:C:H2'	20:CA:616:G:O4'	2.15	0.47
20:CA:854:G:H3'	20:CA:871:U:O4	2.14	0.47
20:CA:1203:C:H2'	20:CA:1204:A:O4'	2.15	0.47
23:CY:191:ASP:OD1	23:CY:191:ASP:N	2.46	0.47
25:DD:67:PHE:HZ	25:DD:157:ARG:HH11	1.63	0.47
25:DD:70:TRP:HH2	25:DD:152:GLY:H	1.63	0.47
29:DH:127:GLU:OE2	29:DH:130:ARG:NH2	2.48	0.47
34:DP:52:GLU:CG	34:DP:53:GLY:H	2.27	0.47
34:DP:65:ARG:NH2	51:D8:14:VAL:O	2.48	0.47
34:DP:130:PHE:HB3	34:DP:135:LEU:HD23	1.97	0.47
38:DT:121:ILE:O	38:DT:125:ARG:HG2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DV:24:LYS:HB3	58:DA:1162:G:H4'	1.95	0.47
41:DW:1:MET:HG3	41:DW:2:GLU:H	1.79	0.47
44:DZ:128:VAL:HG21	44:DZ:134:PRO:HD3	1.96	0.47
44:DZ:146:ILE:HG12	44:DZ:174:VAL:HG12	1.96	0.47
47:D3:48:GLU:HA	47:D3:51:ALA:HB2	1.95	0.47
58:DA:529:A:H62	58:DA:2041:U:H3	1.63	0.47
58:DA:753:C:H2'	58:DA:754:C:H6	1.80	0.47
58:DA:1092:C:H2'	58:DA:1093:G:O4'	2.15	0.47
58:DA:1120:G:H2'	58:DA:1121:C:C6	2.50	0.47
58:DA:1199:U:H2'	58:DA:1200:C:C6	2.50	0.47
58:DA:1856:G:H1	58:DA:1886:C:H42	1.62	0.47
58:DA:1863:G:H4'	58:DA:2411:A:H4'	1.95	0.47
58:DA:2040:C:OP2	58:DA:2040:C:C6	2.68	0.47
58:DA:2285:C:N4	58:DA:2383:G:H1	2.12	0.47
58:DA:2473:U:O2	58:DA:2473:U:H2'	2.15	0.47
58:DA:2527:C:H2'	58:DA:2528:U:O4'	2.15	0.47
58:DA:2643:G:H1	58:DA:2771:C:H42	1.63	0.47
59:DB:105:G:H2'	59:DB:106:G:C8	2.50	0.47
6:AG:29:LYS:HE2	20:AA:1375:A:H4'	1.97	0.47
6:AG:57:GLU:H	6:AG:57:GLU:CD	2.22	0.47
12:AM:39:ILE:HD12	12:AM:56:LEU:HG	1.97	0.47
19:AT:33:ILE:HD11	19:AT:62:LEU:HB3	1.97	0.47
20:AA:160:A:H61	20:AA:347:G:H1'	1.79	0.47
20:AA:529:G:H1'	20:AA:533:A:C2	2.50	0.47
20:AA:966:G:H1'	21:AW:34:C:H4'	1.96	0.47
20:AA:1161:C:H2'	20:AA:1162:C:H6	1.78	0.47
21:AW:58:A:C2	21:AW:60:U:H2'	2.50	0.47
24:BC:125:GLY:HA2	24:BC:138:LEU:HD11	1.96	0.47
25:BD:35:LYS:HD3	25:BD:61:LEU:HG	1.97	0.47
26:BE:14:ILE:HG12	38:BT:57:PHE:CZ	2.50	0.47
26:BE:77:ILE:HG22	26:BE:78:LEU:H	1.79	0.47
32:BN:44:PRO:HD3	39:BU:60:LEU:HD21	1.96	0.47
32:BN:95:PRO:C	32:BN:97:ARG:N	2.70	0.47
33:BO:23:ARG:HG3	33:BO:24:VAL:H	1.79	0.47
34:BP:38:GLN:HG2	58:BA:943:U:OP2	2.14	0.47
34:BP:61:ARG:HA	51:B8:27:THR:HG21	1.97	0.47
34:BP:86:LYS:N	34:BP:117:GLU:O	2.47	0.47
34:BP:89:ALA:HA	34:BP:121:LYS:HD2	1.96	0.47
38:BT:48:ILE:O	38:BT:49:VAL:HG12	2.15	0.47
39:BU:42:ALA:HB1	58:BA:534:U:H5'	1.96	0.47
43:BY:18:GLY:HA2	58:BA:310:A:OP1	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:B0:9:SER:HB2	58:BA:2255:G:H21	1.79	0.47
53:Be:99:VAL:HG23	53:Be:108:ALA:HB2	1.97	0.47
58:BA:105:C:H2'	58:BA:106:C:H6	1.80	0.47
58:BA:754:C:H2'	58:BA:755:C:H6	1.80	0.47
58:BA:960:A:H8	58:BA:960:A:O5'	1.98	0.47
58:BA:1142:U:H5"	58:BA:114(B):A:C8	2.50	0.47
58:BA:1595:G:H2'	58:BA:1596:A:C8	2.50	0.47
58:BA:1690:A:H62	58:BA:1697:G:H21	1.61	0.47
58:BA:1826:G:O2'	58:BA:1971:A:O5'	2.32	0.47
58:BA:1987:G:H2'	58:BA:1988:C:C6	2.50	0.47
58:BA:2505:G:N1	58:BA:2610:C:C2	2.83	0.47
59:BB:14:U:H1'	59:BB:107:U:H1'	1.96	0.47
59:BB:33:G:H2'	59:BB:34:U:O4'	2.15	0.47
6:CG:111:ARG:HB3	6:CG:113:GLU:HG3	1.97	0.47
11:CL:5:PRO:HG2	11:CL:15:ARG:NH2	2.27	0.47
21:CW:35:A:N6	22:CV:18:G:O6	2.47	0.47
23:CY:25:LYS:N	61:CY:702:GDP:O2B	2.48	0.47
25:DD:262:ARG:NH1	58:DA:2085:C:O2'	2.44	0.47
26:DE:160:TYR:OH	58:DA:2679:A:OP1	2.31	0.47
27:DF:80:ALA:HB3	27:DF:83:PHE:CE1	2.50	0.47
36:DR:97:VAL:HA	36:DR:113:LEU:O	2.14	0.47
39:DU:34:LYS:NZ	58:DA:2018:G:N3	2.62	0.47
41:DW:78:GLU:O	58:DA:24:G:O2'	2.26	0.47
44:DZ:44:PHE:CZ	44:DZ:86:VAL:HG21	2.50	0.47
51:D8:9:GLY:O	51:D8:13:ARG:HG2	2.15	0.47
56:D1:39:LYS:HG2	56:D1:40:ARG:N	2.29	0.47
58:DA:308:G:H2'	58:DA:309:G:O4'	2.15	0.47
58:DA:1011:G:H1'	58:DA:1013:C:O4'	2.14	0.47
58:DA:1487:G:N2	58:DA:1502:C:N3	2.47	0.47
58:DA:1495:A:H8	58:DA:1495:A:OP1	1.98	0.47
58:DA:2385:C:H2'	58:DA:2386:C:C6	2.50	0.47
1:AB:75:LYS:O	1:AB:78:GLN:HB3	2.15	0.47
1:AB:109:SER:O	1:AB:113:HIS:ND1	2.41	0.47
2:AC:175:LEU:HD23	2:AC:175:LEU:H	1.78	0.47
3:AD:101:LEU:HD22	3:AD:138:TYR:HD2	1.80	0.47
4:AE:51:VAL:HG23	4:AE:52:PRO:HD3	1.97	0.47
4:AE:78:HIS:CB	7:AH:104:ARG:HG3	2.44	0.47
4:AE:112:LEU:HD23	4:AE:112:LEU:HA	1.77	0.47
6:AG:78:ARG:HB2	6:AG:87:VAL:HG21	1.95	0.47
7:AH:111:ILE:HG13	7:AH:135:CYS:SG	2.55	0.47
14:AO:64:ARG:HD3	14:AO:68:ARG:NH2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:81:ARG:HG2	15:AP:83:GLU:H	1.80	0.47
20:AA:68(J):G:N2	20:AA:68(Q):U:H1'	2.30	0.47
20:AA:169:C:H2'	20:AA:170:U:C6	2.50	0.47
20:AA:1170:A:H8	20:AA:1170:A:O5'	1.98	0.47
20:AA:1503:A:H61	22:AV:14:A:C3'	2.27	0.47
23:AY:134:ALA:HB3	23:AY:258:VAL:HG22	1.97	0.47
24:BC:194:ILE:O	24:BC:197:LEU:HB2	2.15	0.47
25:BD:17:THR:HG1	25:BD:205:VAL:H	1.62	0.47
25:BD:118:VAL:N	25:BD:129:ASN:OD1	2.47	0.47
26:BE:21:VAL:O	26:BE:23:VAL:HG13	2.15	0.47
26:BE:128:SER:OG	26:BE:129:HIS:N	2.48	0.47
27:BF:185:ASP:OD2	27:BF:188:ARG:NH2	2.47	0.47
28:BG:106:LEU:HA	28:BG:110:ALA:HB3	1.97	0.47
29:BH:124:GLU:O	29:BH:126:PRO:HD3	2.14	0.47
29:BH:177:GLY:HA3	58:BA:2531:A:OP1	2.14	0.47
32:BN:78:TYR:CD2	58:BA:2642:G:C5'	2.98	0.47
37:BS:92:TYR:OH	58:BA:2293:C:OP1	2.32	0.47
41:BW:70:TYR:OH	41:BW:72:LYS:HG2	2.15	0.47
43:BY:9:LYS:HE2	43:BY:103:GLY:HA3	1.96	0.47
48:B5:22:HIS:CE1	58:BA:2045:C:H1'	2.50	0.47
51:B8:63:PRO:O	51:B8:65:GLU:N	2.48	0.47
56:B1:81:LYS:HE2	58:BA:270(J):G:H5"	1.96	0.47
58:BA:71:A:H5"	58:BA:72:U:H2'	1.96	0.47
58:BA:77:C:H2'	58:BA:78:A:H8	1.79	0.47
58:BA:181:A:C6	58:BA:182:A:C6	3.03	0.47
58:BA:474:G:O2'	58:BA:475:U:OP1	2.31	0.47
58:BA:479:A:C4	58:BA:481:G:O4'	2.68	0.47
58:BA:591:C:H2'	58:BA:592:G:H8	1.79	0.47
58:BA:2741:A:H2'	58:BA:2742:C:O4'	2.15	0.47
17:CR:59:SER:OG	17:CR:62:GLU:OE2	2.26	0.47
18:CS:41:VAL:N	18:CS:67:VAL:O	2.48	0.47
20:CA:19:C:H2'	20:CA:20:U:H6	1.80	0.47
20:CA:767:A:H2'	20:CA:768:A:O4'	2.14	0.47
20:CA:901:A:H8	20:CA:901:A:O5'	1.98	0.47
20:CA:919:A:HO2'	20:CA:1080:A:H61	1.63	0.47
20:CA:1015:A:H2'	20:CA:1016:A:C8	2.50	0.47
20:CA:1187:G:H2'	20:CA:1188:A:C8	2.49	0.47
24:DC:76:LEU:HA	24:DC:93:ASP:O	2.15	0.47
24:DC:85:LYS:O	24:DC:88:GLU:HB2	2.15	0.47
25:DD:53:PHE:CD2	25:DD:53:PHE:N	2.83	0.47
26:DE:19:ARG:HE	26:DE:19:ARG:HB3	1.58	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:119:ARG:NE	26:DE:160:TYR:HB2	2.30	0.47
26:DE:125:GLY:O	26:DE:127:ASP:N	2.48	0.47
33:DO:19:ILE:HD13	33:DO:41:ALA:HB1	1.97	0.47
34:DP:64:LYS:O	34:DP:66:GLY:N	2.48	0.47
36:DR:2:ARG:HD2	58:DA:2723:C:OP1	2.15	0.47
36:DR:29:LEU:HD21	36:DR:52:ILE:HD11	1.96	0.47
38:DT:84:GLN:C	38:DT:86:ILE:H	2.22	0.47
42:DX:12:VAL:HG12	42:DX:17:ALA:HB1	1.97	0.47
48:D5:8:LYS:HE2	58:DA:2054:A:H2'	1.96	0.47
58:DA:385:C:HO2'	58:DA:388:G:N2	2.13	0.47
58:DA:401:A:H2'	58:DA:402:A:C8	2.50	0.47
58:DA:926:A:H2'	58:DA:928:G:C8	2.50	0.47
58:DA:1321:A:H2'	58:DA:1322:A:O4'	2.15	0.47
58:DA:1410:G:H2'	58:DA:1411:C:H6	1.80	0.47
58:DA:1844:C:H2'	58:DA:1845:G:O4'	2.15	0.47
58:DA:2208:U:O2	58:DA:2216:G:N2	2.30	0.47
58:DA:2373:G:H1	58:DA:2380:C:N4	2.12	0.47
58:DA:2688:U:H5	58:DA:2719:G:H2'	1.78	0.47
58:DA:2712:U:O2'	58:DA:2713:A:H5'	2.15	0.47
58:DA:2812:G:H2'	58:DA:2813:A:C8	2.49	0.47
59:DB:116:G:H2'	59:DB:117:G:C8	2.49	0.47
2:AC:66:VAL:HB	2:AC:101:LEU:HA	1.97	0.46
3:AD:79:PHE:CE1	3:AD:204:ILE:HD13	2.50	0.46
3:AD:128:VAL:HA	3:AD:145:GLU:O	2.15	0.46
4:AE:64:ARG:HA	4:AE:64:ARG:HE	1.79	0.46
7:AH:9:MET:O	7:AH:13:ILE:HG12	2.15	0.46
7:AH:34:GLU:O	7:AH:38:ILE:HG12	2.15	0.46
8:AI:113:LYS:HE3	20:AA:1187:G:H5'	1.97	0.46
9:AJ:91:PRO:HB2	9:AJ:94:VAL:O	2.15	0.46
10:AK:116:HIS:HD2	20:AA:674:G:H21	1.61	0.46
18:AS:10:PHE:CD2	20:AA:1318:A:H4'	2.50	0.46
20:AA:129(A):G:H4'	20:AA:130:A:H5"	1.96	0.46
20:AA:296:U:O2'	20:AA:556:C:O2	2.33	0.46
20:AA:971:G:P	20:AA:1231:G:H21	2.37	0.46
20:AA:1015:A:C6	20:AA:1016:A:C6	3.02	0.46
20:AA:1135:U:H2'	20:AA:1137:C:O4'	2.15	0.46
23:AY:154:GLN:OE1	23:AY:154:GLN:N	2.39	0.46
23:AY:406:GLU:HG3	23:AY:407:PRO:HD2	1.96	0.46
23:AY:546:ILE:O	23:AY:550:MET:HB2	2.15	0.46
24:BC:47:LYS:CB	24:BC:212:SER:HB2	2.45	0.46
24:BC:104:ILE:HG21	24:BC:132:LEU:HD11	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:127:VAL:HA	25:BD:193:VAL:HG13	1.96	0.46
28:BG:113:ARG:HB3	28:BG:114:ILE:H	1.65	0.46
32:BN:30:ILE:CG2	32:BN:34:LEU:HD21	2.44	0.46
33:BO:12:ASP:HA	33:BO:97:ARG:O	2.15	0.46
35:BQ:111:GLU:O	35:BQ:115:MET:HG2	2.15	0.46
37:BS:25:ARG:HH22	59:BB:9:G:H5'	1.80	0.46
38:BT:132:LYS:O	38:BT:132:LYS:HD3	2.14	0.46
51:B8:17:THR:OG1	58:BA:651:G:OP1	2.29	0.46
56:B1:68:PRO:O	56:B1:72:GLU:HG2	2.15	0.46
58:BA:227:A:H5'	58:BA:228:A:C2	2.50	0.46
58:BA:1010:A:H2	58:BA:1153:C:O2	1.98	0.46
58:BA:1496:A:H2'	58:BA:1498:C:C5	2.50	0.46
58:BA:1529:A:H62	58:BA:1542:G:N2	2.12	0.46
58:BA:1687:G:N1	58:BA:1700:A:OP1	2.32	0.46
58:BA:1830:C:H2'	58:BA:1831:G:H8	1.80	0.46
4:CE:128:PRO:HA	4:CE:131:ILE:HB	1.97	0.46
10:CK:34:ASP:O	10:CK:36:ASP:N	2.48	0.46
11:CL:102:ARG:HB2	11:CL:119:LYS:O	2.15	0.46
12:CM:2:ALA:HB3	12:CM:9:ILE:HG23	1.98	0.46
15:CP:28:ARG:HG3	20:CA:376:G:H4'	1.95	0.46
19:CT:79:ARG:NH1	20:CA:263:A:OP1	2.47	0.46
20:CA:64:G:H4'	20:CA:65:U:H3'	1.97	0.46
20:CA:134:A:H2'	20:CA:135:C:C6	2.50	0.46
20:CA:185:A:H2'	20:CA:186:C:C6	2.50	0.46
20:CA:794:A:H2'	20:CA:795:C:H6	1.80	0.46
20:CA:1219:U:H2'	20:CA:1220:G:C8	2.50	0.46
20:CA:1354:C:H2'	20:CA:1355:G:H8	1.80	0.46
20:CA:1512:U:H3	20:CA:1523:G:H1	1.63	0.46
23:CY:210:ARG:O	23:CY:213:HIS:HB3	2.14	0.46
23:CY:567:LEU:O	23:CY:568:TYR:HB3	2.15	0.46
25:DD:142:VAL:HG23	25:DD:193:VAL:HA	1.95	0.46
26:DE:5:LEU:HD12	26:DE:50:GLY:O	2.15	0.46
32:DN:39:ARG:HG2	32:DN:40:PRO:HD2	1.96	0.46
41:DW:28:SER:HA	41:DW:70:TYR:HA	1.96	0.46
43:DY:67:LEU:HD11	43:DY:71:LYS:NZ	2.30	0.46
49:D6:13:CYS:SG	49:D6:49:HIS:HB3	2.55	0.46
56:D1:41:ARG:HE	56:D1:41:ARG:HB3	1.36	0.46
58:DA:1025:G:C5	58:DA:1135:C:H1'	2.50	0.46
58:DA:1491:G:H5"	58:DA:1494:A:N6	2.31	0.46
58:DA:1811:G:H2'	58:DA:1812:A:C8	2.50	0.46
59:DB:22:U:H3	59:DB:61:G:H1	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:62:GLN:O	3:AD:65:ARG:HG3	2.15	0.46
3:AD:209:ARG:HG3	20:AA:8:A:N7	2.30	0.46
4:AE:118:ILE:HG13	4:AE:120:THR:HG22	1.97	0.46
12:AM:21:TYR:OH	20:AA:1301:U:H4'	2.15	0.46
15:AP:1:MET:HB3	20:AA:135:C:N3	2.30	0.46
18:AS:39:THR:HB	18:AS:41:VAL:HG13	1.96	0.46
19:AT:22:ARG:NE	20:AA:324:G:OP1	2.43	0.46
20:AA:45:U:H2'	20:AA:46:G:C8	2.49	0.46
20:AA:124:G:P	20:AA:310:G:H21	2.38	0.46
20:AA:1304:G:N2	20:AA:1332:A:OP2	2.48	0.46
20:AA:1480:G:H2'	20:AA:1481:U:O4'	2.15	0.46
21:AW:27:C:H2'	21:AW:28:A:H8	1.80	0.46
23:AY:141:LYS:CE	58:BA:2656:U:H4'	2.44	0.46
23:AY:157:LEU:HD11	23:AY:159:ALA:HB2	1.97	0.46
23:AY:322:VAL:HG11	23:AY:354:ARG:HH22	1.80	0.46
24:BC:26:ALA:HA	24:BC:30:VAL:HG23	1.97	0.46
26:BE:144:ARG:O	58:BA:2052:G:O2'	2.31	0.46
26:BE:146:THR:HA	26:BE:147:PRO:C	2.41	0.46
27:BF:68:LYS:NZ	58:BA:2060:A:H3'	2.30	0.46
29:BH:105:LEU:O	29:BH:113:VAL:N	2.38	0.46
32:BN:9:VAL:HG11	32:BN:39:ARG:NH1	2.29	0.46
39:BU:4:ALA:HB3	58:BA:1248:G:H2'	1.97	0.46
42:BX:39:ILE:O	42:BX:43:VAL:HG23	2.14	0.46
42:BX:58:HIS:HB2	58:BA:1601:G:OP1	2.15	0.46
43:BY:8:LYS:HZ1	58:BA:336:C:H4'	1.80	0.46
44:BZ:110:GLY:HA2	44:BZ:146:ILE:HG13	1.98	0.46
50:B7:42:LEU:O	50:B7:44:PRO:HD3	2.16	0.46
58:BA:466:A:O5'	58:BA:466:A:H8	1.97	0.46
58:BA:940:G:H2'	58:BA:941:A:O4'	2.15	0.46
58:BA:1259:G:H2'	58:BA:1260:G:H8	1.79	0.46
58:BA:1418:G:C2	58:BA:1580:A:N6	2.82	0.46
58:BA:1446:C:H2'	58:BA:1447:G:C8	2.50	0.46
58:BA:1446:C:O2	58:BA:1546:A:O2'	2.31	0.46
58:BA:1914:C:C6	58:BA:1915:U:C1'	2.98	0.46
58:BA:2036:C:H2'	58:BA:2037:G:H8	1.80	0.46
58:BA:2182:G:H2'	58:BA:2183:C:C6	2.51	0.46
58:BA:2620:C:C2	58:BA:2621:A:C8	3.03	0.46
1:CB:215:LEU:O	1:CB:218:ALA:N	2.48	0.46
7:CH:30:ARG:O	7:CH:34:GLU:HG2	2.15	0.46
8:CI:104:ARG:CD	20:CA:1118:C:H5'	2.45	0.46
14:CO:22:THR:HB	20:CA:658:G:H4'	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:119:A:H4'	20:CA:120:A:N9	2.30	0.46
20:CA:1432:G:H1'	20:CA:1468:A:N6	2.30	0.46
24:DC:213:VAL:O	24:DC:214:TYR:C	2.58	0.46
25:DD:56:GLY:N	58:DA:692:C:OP1	2.47	0.46
25:DD:105:ILE:HD13	25:DD:106:ILE:H	1.80	0.46
26:DE:123:ALA:HB3	58:DA:2511:U:H4'	1.97	0.46
29:DH:126:PRO:HG2	29:DH:130:ARG:HH12	1.81	0.46
32:DN:34:LEU:HD12	32:DN:116:LEU:O	2.15	0.46
39:DU:20:LEU:HD12	39:DU:39:LEU:HD21	1.98	0.46
40:DV:39:LEU:HA	40:DV:47:VAL:HG11	1.98	0.46
41:DW:12:ILE:HG22	41:DW:17:VAL:HG22	1.97	0.46
43:DY:75:ILE:HG12	43:DY:76:CYS:H	1.80	0.46
45:D0:24:LYS:N	45:D0:37:LEU:O	2.49	0.46
50:D7:40:TRP:CZ2	58:DA:469:G:N1	2.82	0.46
58:DA:76:C:N3	58:DA:110:G:N2	2.52	0.46
58:DA:247:G:H4'	58:DA:386:G:C4	2.50	0.46
58:DA:470:A:H2'	58:DA:471:A:H8	1.80	0.46
58:DA:1081:U:H2'	58:DA:1082:U:C5	2.51	0.46
58:DA:1503:U:H2'	58:DA:1504:C:H6	1.80	0.46
58:DA:1817:G:H2'	58:DA:1818:U:H5'	1.97	0.46
58:DA:2258:C:H3'	58:DA:2259:G:H8	1.80	0.46
58:DA:2309:A:H2'	58:DA:2310:A:H8	1.80	0.46
59:DB:81:G:H1	59:DB:95:U:H3	1.63	0.46
3:AD:65:ARG:HB3	3:AD:75:PHE:CD2	2.51	0.46
4:AE:50:GLU:HB3	4:AE:53:LEU:HD23	1.96	0.46
5:AF:43:LEU:HD21	5:AF:46:ARG:HD2	1.97	0.46
8:AI:46:ALA:HB2	8:AI:74:ILE:HG22	1.97	0.46
9:AJ:20:ALA:HB1	9:AJ:37:PRO:HB3	1.97	0.46
9:AJ:48:THR:HG21	20:AA:1367:C:O2'	2.15	0.46
13:AN:3:ARG:HA	13:AN:6:LEU:HD12	1.97	0.46
15:AP:19:ILE:HB	15:AP:37:GLY:C	2.40	0.46
16:AQ:62:SER:HB2	16:AQ:72:ARG:HG3	1.98	0.46
17:AR:70:ILE:O	17:AR:74:ARG:HG3	2.15	0.46
20:AA:60:A:H4'	20:AA:61:G:O5'	2.15	0.46
20:AA:67:C:H2'	20:AA:68:G:H8	1.73	0.46
20:AA:242:C:H2'	20:AA:245:C:H5	1.79	0.46
20:AA:540:G:H2'	20:AA:541:G:O4'	2.15	0.46
20:AA:1097:C:H2'	20:AA:1098:C:C6	2.51	0.46
20:AA:1534:A:H8	20:AA:1534:A:O5'	1.97	0.46
24:BC:164:PHE:HB3	24:BC:172:ILE:HG21	1.97	0.46
25:BD:215:LEU:HB2	25:BD:217:ARG:HG3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BP:9:ASN:H	34:BP:10:PRO:HD2	1.80	0.46
34:BP:85:LEU:HG	34:BP:118:GLY:HA3	1.96	0.46
46:B2:2:LYS:O	46:B2:6:VAL:N	2.49	0.46
58:BA:481:G:N1	58:BA:507:A:H1'	2.30	0.46
58:BA:528:A:H61	58:BA:2042:A:H3'	1.79	0.46
58:BA:594:U:H2'	58:BA:595:C:C6	2.50	0.46
58:BA:822:U:C5	58:BA:944:G:H1'	2.48	0.46
58:BA:878:A:H3'	58:BA:879:G:H8	1.80	0.46
58:BA:2244:U:C2'	58:BA:2245:U:H5'	2.45	0.46
58:BA:2641:G:H2'	58:BA:2642:G:H8	1.80	0.46
58:BA:2667:C:H2'	58:BA:2668:G:C8	2.50	0.46
1:CB:37:ASN:N	1:CB:37:ASN:OD1	2.49	0.46
4:CE:19:MET:SD	4:CE:24:ARG:HB3	2.55	0.46
4:CE:145:LYS:HD3	4:CE:145:LYS:HA	1.79	0.46
10:CK:21:ILE:HD11	10:CK:98:LEU:HD11	1.97	0.46
10:CK:53:SER:H	20:CA:695:A:P	2.37	0.46
10:CK:120:ARG:O	20:CA:779:C:H4'	2.15	0.46
11:CL:71:PRO:O	11:CL:102:ARG:NH1	2.48	0.46
11:CL:93:LEU:O	11:CL:95:GLY:N	2.48	0.46
12:CM:101:GLN:HB2	12:CM:102:ARG:H	1.46	0.46
19:CT:63:ILE:HG21	19:CT:81:LYS:HG3	1.97	0.46
20:CA:216:G:H2'	20:CA:217:C:H6	1.78	0.46
20:CA:347:G:H2'	20:CA:348:G:O4'	2.15	0.46
20:CA:410:G:H21	20:CA:432:A:H62	1.64	0.46
20:CA:584:G:H2'	20:CA:585:G:H8	1.76	0.46
20:CA:728:A:H2'	20:CA:729:A:H8	1.80	0.46
20:CA:1488:G:H2'	20:CA:1489:G:H8	1.79	0.46
23:CY:528:ALA:HB1	23:CY:568:TYR:HA	1.97	0.46
23:CY:641:GLN:OE1	23:CY:642:VAL:N	2.48	0.46
24:DC:23:ILE:HG12	24:DC:225:ILE:HD12	1.97	0.46
27:DF:45:ARG:HG2	58:DA:443:A:N7	2.31	0.46
32:DN:30:ILE:CG2	32:DN:34:LEU:HD21	2.44	0.46
40:DV:66:ARG:HA	40:DV:90:PRO:HA	1.98	0.46
43:DY:28:LYS:HE2	43:DY:28:LYS:HB3	1.64	0.46
44:DZ:30:ASN:HA	44:DZ:89:PHE:HE2	1.81	0.46
58:DA:270(R):C:H2'	58:DA:270(S):G:H8	1.80	0.46
58:DA:754:C:H2'	58:DA:755:C:H6	1.79	0.46
58:DA:874:G:H1	58:DA:903:C:N4	2.13	0.46
58:DA:1129:A:H62	58:DA:2490:G:H5"	1.81	0.46
58:DA:1886:C:O2'	58:DA:2101:G:O2'	2.33	0.46
58:DA:2328:A:H2'	58:DA:2329:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:12:GLU:C	1:AB:14:GLY:H	2.23	0.46
1:AB:162:ILE:O	1:AB:185:ILE:O	2.34	0.46
2:AC:39:ILE:HD11	2:AC:95:THR:HG21	1.96	0.46
2:AC:125:GLU:OE2	2:AC:189:ALA:HA	2.15	0.46
7:AH:90:GLY:O	16:AQ:34:LYS:HB2	2.15	0.46
8:AI:127:LYS:NZ	21:AW:33:U:OP2	2.40	0.46
12:AM:54:VAL:O	12:AM:57:ARG:HG2	2.16	0.46
12:AM:87:TYR:HA	12:AM:90:LEU:HB3	1.98	0.46
12:AM:90:LEU:O	12:AM:94:ARG:HG2	2.16	0.46
16:AQ:11:VAL:HG23	16:AQ:20:THR:HB	1.97	0.46
16:AQ:12:SER:OG	16:AQ:20:THR:OG1	2.29	0.46
16:AQ:65:ILE:HB	16:AQ:69:LYS:HB3	1.96	0.46
16:AQ:81:ARG:NH2	16:AQ:83:ASP:OD2	2.49	0.46
20:AA:115:G:H1'	20:AA:116:A:C8	2.51	0.46
20:AA:386:C:H2'	20:AA:387:U:O4'	2.15	0.46
20:AA:1313:U:H2'	20:AA:1314:C:C6	2.51	0.46
21:AW:39:U:H2'	21:AW:40:G:C8	2.48	0.46
23:AY:5:VAL:O	23:AY:7:TYR:N	2.49	0.46
23:AY:333:GLY:H	23:AY:371:ALA:HB2	1.81	0.46
24:BC:42:VAL:HG11	24:BC:176:VAL:HG23	1.98	0.46
24:BC:91:GLY:HA3	24:BC:158:LYS:HD2	1.96	0.46
24:BC:162:ILE:HD13	24:BC:175:PRO:HD2	1.97	0.46
25:BD:147:LEU:HD11	25:BD:183:ARG:HG2	1.98	0.46
27:BF:25:PRO:HD3	27:BF:115:ALA:O	2.16	0.46
28:BG:45:GLU:C	28:BG:47:LYS:H	2.24	0.46
28:BG:63:ILE:HB	28:BG:143:GLU:CD	2.40	0.46
29:BH:142:GLY:C	58:BA:2745:C:H4'	2.40	0.46
30:BJ:52:UNK:N	30:BJ:80:UNK:O	2.49	0.46
31:BK:14:ALA:HB3	31:BK:50:ASP:HA	1.96	0.46
31:BK:36:GLU:HG2	31:BK:65:PHE:CZ	2.49	0.46
34:BP:111:ARG:HG2	34:BP:128:HIS:ND1	2.31	0.46
35:BQ:10:ARG:HG3	35:BQ:90:VAL:HG13	1.98	0.46
35:BQ:92:GLY:O	35:BQ:94:VAL:HG13	2.16	0.46
38:BT:50:ILE:HG23	38:BT:99:LEU:H	1.81	0.46
38:BT:100:TYR:HB3	38:BT:103:ARG:HH21	1.80	0.46
48:B5:45:VAL:HG22	48:B5:51:TYR:HB2	1.97	0.46
58:BA:136:G:H1	58:BA:143:C:H42	1.64	0.46
58:BA:270(A):A:H2'	58:BA:270(B):A:C8	2.49	0.46
58:BA:324:A:H2'	58:BA:325:G:O4'	2.14	0.46
58:BA:687:C:H2'	58:BA:688:U:O4'	2.15	0.46
58:BA:1535:U:O5'	58:BA:1535:U:H6	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:1731:G:HO2'	58:BA:1732:A:H8	1.64	0.46
58:BA:1858:G:H1'	58:BA:1884:A:N6	2.29	0.46
58:BA:2071:A:H2'	58:BA:2072:G:C8	2.49	0.46
58:BA:2371:G:H2'	58:BA:2372:G:H8	1.79	0.46
58:BA:2451:A:C8	58:BA:2452:C:C5	3.04	0.46
58:BA:2560:C:H2'	58:BA:2561:A:C8	2.49	0.46
58:BA:2744:G:N2	58:BA:2760:C:N3	2.51	0.46
59:BB:14:U:HO2'	59:BB:107:U:HO2'	1.63	0.46
4:CE:115:VAL:HG12	4:CE:116:THR:H	1.80	0.46
7:CH:9:MET:O	7:CH:13:ILE:HG12	2.15	0.46
10:CK:68:ALA:HA	10:CK:71:LYS:HD2	1.98	0.46
20:CA:659:U:H2'	20:CA:660:G:C8	2.50	0.46
20:CA:895:G:H2'	20:CA:896:C:C6	2.51	0.46
20:CA:939:G:H2'	20:CA:940:C:C6	2.51	0.46
24:DC:117:THR:OG1	24:DC:120:VAL:HG22	2.16	0.46
25:DD:35:LYS:HB3	25:DD:35:LYS:HE3	1.61	0.46
25:DD:263:ARG:NH1	58:DA:2227:A:OP1	2.48	0.46
26:DE:13:ARG:HG2	38:DT:58:ASN:HD22	1.80	0.46
27:DF:74:ARG:HE	58:DA:674:G:H1'	1.80	0.46
28:DG:50:ALA:C	28:DG:51:ARG:HE	2.23	0.46
29:DH:96:ALA:HB3	29:DH:128:PRO:HA	1.96	0.46
32:DN:27:ALA:HB1	32:DN:103:VAL:HG22	1.96	0.46
32:DN:95:PRO:C	32:DN:97:ARG:N	2.70	0.46
33:DO:1:MET:HB2	33:DO:32:TYR:CD2	2.51	0.46
35:DQ:1:MET:N	35:DQ:48:GLU:HB2	2.30	0.46
35:DQ:34:LEU:HD13	35:DQ:118:LEU:HB3	1.98	0.46
36:DR:87:TYR:CD2	36:DR:87:TYR:N	2.83	0.46
39:DU:25:TRP:CD1	39:DU:26:GLY:N	2.81	0.46
53:De:63:ILE:HG13	53:De:70:LYS:HA	1.97	0.46
58:DA:216:A:H2'	58:DA:217:G:O4'	2.15	0.46
58:DA:775:G:C5	58:DA:794:G:C8	3.04	0.46
58:DA:1048:A:C6	58:DA:1111:A:C2	3.04	0.46
58:DA:1430:C:H2'	58:DA:1431:U:O4'	2.15	0.46
58:DA:1444:G:H2'	58:DA:1445:C:C5	2.51	0.46
58:DA:1731:G:HO2'	58:DA:1732:A:H8	1.60	0.46
58:DA:1949:G:H1	58:DA:1957:C:H42	1.63	0.46
58:DA:2299:G:H2'	58:DA:2300:G:C8	2.50	0.46
58:DA:2347:C:H2'	58:DA:2348:U:C6	2.51	0.46
58:DA:2374:C:H2'	58:DA:2375:G:O4'	2.15	0.46
58:DA:2564:A:OP1	58:DA:2648:C:H4'	2.15	0.46
58:DA:2698:U:H2'	58:DA:2699:C:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:42:GLN:CD	20:AA:540:G:H21	2.24	0.46
12:AM:70:LEU:O	12:AM:74:VAL:HG23	2.15	0.46
14:AO:50:HIS:CG	20:AA:764:C:H5"	2.51	0.46
15:AP:31:LYS:HG2	15:AP:32:TYR:N	2.30	0.46
16:AQ:29:HIS:HA	16:AQ:30:PRO:HD2	1.82	0.46
20:AA:60:A:H62	20:AA:110:C:N4	2.14	0.46
20:AA:479:C:H2'	20:AA:480:U:C6	2.50	0.46
20:AA:691:G:H1'	20:AA:696:A:N6	2.30	0.46
20:AA:1028:C:N4	20:AA:1033:G:H1	2.13	0.46
20:AA:1130:A:N6	20:AA:1131:G:O6	2.49	0.46
20:AA:1152:A:H2'	20:AA:1153:C:H6	1.79	0.46
23:AY:428:LEU:HD22	23:AY:440:VAL:HG11	1.97	0.46
23:AY:512:ILE:HD12	23:AY:589:ALA:HB1	1.97	0.46
27:BF:195:ASP:HB3	27:BF:197:ASP:OD2	2.15	0.46
28:BG:98:ARG:HG3	57:B4:1:MET:SD	2.56	0.46
29:BH:41:MET:HB3	29:BH:55:PRO:HD3	1.96	0.46
29:BH:105:LEU:H	29:BH:105:LEU:HD23	1.80	0.46
30:BJ:67:UNK:HA	30:BJ:72:UNK:HA	1.98	0.46
31:BK:30:HIS:HA	31:BK:59:ILE:HD12	1.97	0.46
32:BN:10:GLU:OE2	32:BN:11:PRO:HD2	2.16	0.46
32:BN:95:PRO:C	32:BN:97:ARG:H	2.24	0.46
37:BS:95:HIS:NE2	59:BB:48:A:H4'	2.31	0.46
44:BZ:156:LYS:O	44:BZ:158:PRO:HD3	2.14	0.46
47:B3:11:SER:HB3	58:BA:988:A:P	2.56	0.46
53:Be:60:PHE:C	53:Be:62:VAL:H	2.24	0.46
56:B1:86:SER:HB2	56:B1:89:GLU:HB2	1.98	0.46
58:BA:829:A:C8	58:BA:2248:C:H5'	2.51	0.46
58:BA:920:G:H2'	58:BA:921:G:C8	2.50	0.46
58:BA:1186:G:H3'	58:BA:1187:G:H8	1.80	0.46
58:BA:1955:U:O2'	58:BA:1956:U:H5'	2.15	0.46
58:BA:1981:A:H3'	58:BA:1981:A:H8	1.81	0.46
58:BA:1990:C:H2'	58:BA:1991:U:C6	2.50	0.46
58:BA:2080:G:H2'	58:BA:2081:C:C6	2.50	0.46
58:BA:2235:G:H2'	58:BA:2236:C:C6	2.51	0.46
59:BB:102:G:H2'	59:BB:103:U:C6	2.49	0.46
1:CB:69:LEU:HD22	1:CB:91:PRO:O	2.16	0.46
2:CC:6:HIS:HA	2:CC:7:PRO:HD3	1.63	0.46
3:CD:100:ARG:HD2	3:CD:137:SER:HA	1.98	0.46
7:CH:104:ARG:HD3	7:CH:138:TRP:NE1	2.30	0.46
11:CL:33:ARG:NH1	11:CL:61:THR:OG1	2.49	0.46
11:CL:43:VAL:HG12	11:CL:44:THR:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:82:ILE:HG13	14:CO:87:ILE:H	1.80	0.46
15:CP:28:ARG:HG3	20:CA:376:G:C4'	2.45	0.46
16:CQ:43:LEU:HD13	16:CQ:69:LYS:HG2	1.97	0.46
20:CA:143:A:H5'	20:CA:196:A:N1	2.31	0.46
20:CA:582:U:OP2	20:CA:758:G:N1	2.38	0.46
20:CA:1258:G:H2'	20:CA:1259:C:C6	2.50	0.46
20:CA:1513:A:H2'	20:CA:1514:C:H6	1.79	0.46
21:CW:20:U:H1'	21:CW:20(A):U:H2'	1.96	0.46
24:DC:75:VAL:HG21	24:DC:154:ILE:HG12	1.98	0.46
24:DC:130:ARG:C	24:DC:134:PRO:HG2	2.40	0.46
25:DD:24:ILE:HG12	25:DD:25:THR:N	2.30	0.46
27:DF:74:ARG:NE	58:DA:674:G:H1'	2.31	0.46
28:DG:169:ALA:O	28:DG:172:LEU:HB3	2.15	0.46
31:DK:117:THR:C	31:DK:119:ASP:H	2.22	0.46
32:DN:56:ASN:HB3	32:DN:126:PRO:N	2.30	0.46
33:DO:64:ARG:HH22	38:DT:70:VAL:N	2.12	0.46
34:DP:16:ARG:NH1	58:DA:661:C:H4'	2.29	0.46
37:DS:42:ASP:O	37:DS:44:LYS:N	2.41	0.46
40:DV:19:LYS:HE2	40:DV:19:LYS:HB2	1.64	0.46
41:DW:76:VAL:HA	41:DW:102:HIS:C	2.41	0.46
43:DY:28:LYS:HG2	43:DY:37:VAL:HB	1.97	0.46
44:DZ:70:LEU:HB2	44:DZ:91:LEU:HD21	1.97	0.46
44:DZ:118:GLN:O	44:DZ:172:ALA:HA	2.15	0.46
46:D2:25:VAL:HG11	46:D2:61:LEU:HD21	1.97	0.46
58:DA:638:G:H2'	58:DA:639:U:C6	2.50	0.46
58:DA:723:G:H2'	58:DA:724:U:H6	1.81	0.46
58:DA:874:G:H2'	58:DA:875:G:H8	1.79	0.46
58:DA:1047:G:HO2'	58:DA:1109:C:H42	1.63	0.46
58:DA:1303:G:H1'	58:DA:1641:A:N1	2.30	0.46
58:DA:1589:C:H2'	58:DA:1590:U:H6	1.81	0.46
58:DA:1786:A:H2'	58:DA:1786:A:N3	2.30	0.46
58:DA:1904:G:C2	58:DA:1905:C:H1'	2.50	0.46
58:DA:2825:U:H2'	58:DA:2826:A:O4'	2.16	0.46
3:AD:173:TRP:HB2	3:AD:187:ARG:HG3	1.98	0.46
6:AG:121:ALA:O	6:AG:125:MET:HG2	2.16	0.46
7:AH:31:PHE:O	7:AH:35:ILE:HG12	2.16	0.46
10:AK:51:LYS:H	10:AK:54:ARG:HB2	1.80	0.46
11:AL:115:LYS:HA	11:AL:115:LYS:HD2	1.74	0.46
15:AP:68:ASP:O	15:AP:71:ARG:HB3	2.15	0.46
16:AQ:68:ARG:O	16:AQ:70:ARG:N	2.49	0.46
19:AT:81:LYS:HB3	19:AT:85:MET:HE3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:217:C:H2'	20:AA:218:C:C6	2.47	0.46
20:AA:302:G:N3	20:AA:556:C:H4'	2.30	0.46
20:AA:522:C:H2'	20:AA:523:A:O4'	2.15	0.46
23:AY:114:VAL:HB	23:AY:116:PRO:HD3	1.98	0.46
23:AY:301:ILE:CG2	23:AY:331:TYR:HB3	2.46	0.46
23:AY:393:ASP:HB2	23:AY:394:ALA:H	1.55	0.46
23:AY:443:HIS:HD2	23:AY:446:THR:N	2.14	0.46
24:BC:45:HIS:N	24:BC:213:VAL:O	2.49	0.46
25:BD:111:LEU:HD11	25:BD:117:VAL:HG11	1.97	0.46
25:BD:123:ALA:HB3	25:BD:131:LEU:HG	1.98	0.46
26:BE:160:TYR:OH	58:BA:2679:A:OP2	2.32	0.46
27:BF:191:ARG:HB3	27:BF:193:VAL:CG2	2.46	0.46
27:BF:191:ARG:O	27:BF:193:VAL:HG23	2.16	0.46
29:BH:107:VAL:HG23	29:BH:109:PHE:H	1.81	0.46
32:BN:19:GLU:C	32:BN:21:LYS:H	2.24	0.46
32:BN:25:ARG:HA	58:BA:1012:U:O4	2.16	0.46
32:BN:89:LYS:HB3	32:BN:89:LYS:HZ3	1.80	0.46
33:BO:64:ARG:HD3	33:BO:83:ALA:HB3	1.96	0.46
36:BR:67:LEU:HG	36:BR:76:VAL:HB	1.97	0.46
43:BY:49:VAL:HG12	43:BY:50:ARG:H	1.80	0.46
43:BY:73:ARG:HH21	43:BY:82:PRO:HD3	1.81	0.46
45:B0:41:ARG:NE	45:B0:41:ARG:HA	2.30	0.46
48:B5:55:ARG:HH21	48:B5:56:LYS:HE3	1.80	0.46
51:B8:32:LEU:HB3	51:B8:33:ASN:H	1.56	0.46
58:BA:527:C:H2'	58:BA:2779:U:C2	2.51	0.46
58:BA:600:G:H2'	58:BA:601:C:C6	2.50	0.46
58:BA:638:G:H2'	58:BA:639:U:H6	1.79	0.46
58:BA:1541:U:H3'	58:BA:1542:G:O3'	2.15	0.46
58:BA:1728:G:O6	58:BA:1730:U:H5"	2.16	0.46
58:BA:1801:G:N2	58:BA:2207:C:O2'	2.47	0.46
58:BA:2036:C:H2'	58:BA:2037:G:C8	2.51	0.46
58:BA:2155:G:H3'	58:BA:2156:G:C8	2.51	0.46
58:BA:2712:U:O2'	58:BA:712(B):A:O5'	2.33	0.46
2:CC:174:PRO:HB3	20:CA:1107:C:OP1	2.16	0.46
6:CG:51:GLN:NE2	6:CG:56:GLN:O	2.39	0.46
7:CH:26:VAL:HA	7:CH:27:PRO:HD3	1.82	0.46
11:CL:124:LYS:HD2	11:CL:124:LYS:HA	1.73	0.46
12:CM:91:ARG:HA	12:CM:94:ARG:CG	2.46	0.46
18:CS:29:ARG:HD2	18:CS:48:THR:HG21	1.98	0.46
20:CA:68(D):C:N3	20:CA:68(V):G:O6	2.49	0.46
20:CA:434:U:H2'	20:CA:435:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:519:C:N4	20:CA:520:A:N1	2.64	0.46
20:CA:1004:A:H8	20:CA:1036:G:H1	1.61	0.46
20:CA:1006:C:H2'	20:CA:1007:C:H6	1.78	0.46
20:CA:1440(H):U:O3'	20:CA:1440(I):A:H3'	2.15	0.46
23:CY:544:LYS:O	23:CY:548:GLU:N	2.42	0.46
23:CY:591:LYS:HD3	23:CY:591:LYS:HA	1.58	0.46
25:DD:105:ILE:HD13	25:DD:106:ILE:N	2.30	0.46
25:DD:161:THR:O	25:DD:196:VAL:HG22	2.15	0.46
26:DE:22:PRO:O	26:DE:186:GLY:N	2.49	0.46
30:DJ:91:UNK:O	30:DJ:95:UNK:N	2.49	0.46
31:DK:30:HIS:CD2	31:DK:59:ILE:HB	2.51	0.46
32:DN:10:GLU:OE2	32:DN:11:PRO:HD2	2.15	0.46
34:DP:86:LYS:N	34:DP:117:GLU:O	2.48	0.46
36:DR:11:ASN:O	36:DR:12:ARG:HB2	2.15	0.46
36:DR:73:VAL:O	36:DR:76:VAL:HG12	2.16	0.46
37:DS:26:LEU:HD13	37:DS:106:ARG:HH12	1.80	0.46
38:DT:49:VAL:HG23	38:DT:63:VAL:HG22	1.98	0.46
39:DU:53:ARG:O	39:DU:56:ASP:HB2	2.15	0.46
44:DZ:165:VAL:HB	44:DZ:166:SER:H	1.57	0.46
47:D3:43:ILE:O	47:D3:47:VAL:HG23	2.16	0.46
58:DA:137(B):G:H1	58:DA:141(B):C:N4	2.09	0.46
58:DA:201:C:H1'	58:DA:251:A:H2	1.79	0.46
58:DA:609(B):G:H2'	58:DA:610:C:H6	1.80	0.46
58:DA:635:C:O2'	58:DA:639:U:OP1	2.33	0.46
58:DA:817:C:H2'	58:DA:818:G:O4'	2.16	0.46
58:DA:1170:G:H1	58:DA:1179:C:H42	1.64	0.46
58:DA:1364:G:H2'	58:DA:1366:A:OP2	2.15	0.46
58:DA:1790:C:H2'	58:DA:1791:A:C5	2.50	0.46
58:DA:2660:A:H2'	58:DA:2661:G:O4'	2.15	0.46
59:DB:13:A:H4'	59:DB:15:A:C5	2.51	0.46
59:DB:15:A:H1'	59:DB:109:G:C6	2.50	0.46
1:AB:185:ILE:HD13	1:AB:199:TYR:HB2	1.97	0.46
5:AF:28:ARG:O	5:AF:31:GLU:HB3	2.15	0.46
5:AF:47:ARG:HA	5:AF:57:GLN:HA	1.98	0.46
9:AJ:16:LEU:HD21	9:AJ:70:ARG:HD3	1.97	0.46
14:AO:46:HIS:O	14:AO:48:LYS:N	2.49	0.46
20:AA:49:U:H3	20:AA:362:G:H1'	1.81	0.46
20:AA:109:A:N7	20:AA:326:G:H2'	2.31	0.46
20:AA:186:C:H2'	20:AA:186(A):C:C6	2.51	0.46
20:AA:509:A:H2	20:AA:543:C:O2	1.98	0.46
20:AA:828:A:N6	20:AA:858:G:O2'	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:7:TYR:CZ	27:BF:9:ILE:HA	2.51	0.46
27:BF:67:GLN:NE2	58:BA:675:A:H4'	2.30	0.46
27:BF:154:VAL:O	27:BF:174:VAL:O	2.32	0.46
30:BJ:24:UNK:HA	30:BJ:84:UNK:O	2.16	0.46
32:BN:45:ASN:HB2	58:BA:557:U:O2'	2.16	0.46
34:BP:113:LYS:HE2	34:BP:131:SER:HB2	1.98	0.46
38:BT:62:THR:HA	38:BT:75:ILE:HA	1.98	0.46
39:BU:57:PHE:CE1	58:BA:536:A:H4'	2.51	0.46
39:BU:80:ILE:O	39:BU:83:LEU:N	2.49	0.46
40:BV:52:VAL:HG13	40:BV:55:ALA:HB3	1.98	0.46
42:BX:37:THR:O	42:BX:41:ASN:ND2	2.48	0.46
44:BZ:19:ARG:NH2	59:BB:76:G:O3'	2.49	0.46
58:BA:182:A:H2'	58:BA:183:C:C6	2.50	0.46
58:BA:232:G:H22	58:BA:420:C:H5"	1.80	0.46
58:BA:310:A:O2'	58:BA:311:A:H2'	2.15	0.46
58:BA:422:A:H2'	58:BA:423:A:H8	1.78	0.46
58:BA:684:G:H21	58:BA:788:A:P	2.39	0.46
58:BA:968:G:H2'	58:BA:969:U:C6	2.50	0.46
58:BA:1275:A:H3'	58:BA:1645:G:O2'	2.15	0.46
58:BA:2298:A:H62	58:BA:2318:G:H21	1.62	0.46
58:BA:2529:G:OP2	58:BA:2530:A:H8	1.99	0.46
58:BA:2570:G:H2'	58:BA:2571:C:C6	2.50	0.46
58:BA:2660:A:H2'	58:BA:2661:G:O4'	2.16	0.46
5:CF:82:ARG:HB2	5:CF:85:VAL:HG23	1.97	0.46
10:CK:108:ILE:HD13	17:CR:87:ARG:HA	1.98	0.46
20:CA:280:C:H3'	20:CA:281:G:H5'	1.98	0.46
20:CA:1316:G:H1'	20:CA:1360:A:H2	1.81	0.46
20:CA:1462:G:H2'	20:CA:1463:C:C6	2.50	0.46
20:CA:1472:U:H2'	20:CA:1473:A:H8	1.80	0.46
21:CW:1:G:N2	21:CW:73:A:O2'	2.48	0.46
23:CY:435:ASP:OD1	60:CY:701:FUA:H22	2.16	0.46
25:DD:16:MET:HG3	25:DD:207:GLY:HA3	1.98	0.46
26:DE:122:PHE:CE2	58:DA:2512:C:H4'	2.50	0.46
29:DH:148:ILE:O	29:DH:151:ILE:HB	2.16	0.46
31:DK:34:ILE:HA	31:DK:37:PHE:HB3	1.98	0.46
34:DP:113:LYS:HB2	34:DP:129:ALA:HB3	1.98	0.46
35:DQ:25:ASP:HB3	35:DQ:100:GLY:O	2.16	0.46
39:DU:92:ARG:HB2	40:DV:11:GLN:OE1	2.16	0.46
40:DV:4:ILE:O	40:DV:39:LEU:N	2.33	0.46
40:DV:76:LYS:HB2	40:DV:81:TYR:CD1	2.49	0.46
44:DZ:51:ALA:HA	44:DZ:55:HIS:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:De:75:ILE:HG22	53:De:76:LYS:HG2	1.98	0.46
58:DA:270(X):G:H2'	58:DA:270(Y):G:O4'	2.15	0.46
58:DA:572:A:H3'	58:DA:573:G:H8	1.80	0.46
58:DA:681:G:H2'	58:DA:682:G:H8	1.80	0.46
58:DA:684:G:O2'	58:DA:788:A:N7	2.49	0.46
58:DA:692:C:N4	58:DA:770:G:H1	2.12	0.46
58:DA:693:C:H42	58:DA:769:G:H1	1.62	0.46
58:DA:1283:G:O2'	58:DA:1285:G:N7	2.44	0.46
58:DA:1536:A:H3'	58:DA:1537:C:C6	2.51	0.46
58:DA:1938:A:O2'	58:DA:2591:C:H1'	2.16	0.46
58:DA:2262:U:H4'	58:DA:2328:A:H2	1.80	0.46
58:DA:2353:G:H1	58:DA:2364:C:H42	1.63	0.46
58:DA:2756:U:H4'	58:DA:2757:A:OP1	2.15	0.46
2:AC:176:HIS:N	20:AA:1108:G:OP1	2.46	0.46
4:AE:137:GLU:HA	4:AE:140:ARG:HB3	1.97	0.46
6:AG:87:VAL:HG11	6:AG:154:TYR:O	2.15	0.46
8:AI:69:GLY:HA3	20:AA:1371:G:O3'	2.16	0.46
9:AJ:99:LYS:HD2	9:AJ:99:LYS:HA	1.58	0.46
11:AL:10:LEU:HB3	16:AQ:32:TYR:HE1	1.81	0.46
11:AL:100:ILE:HG22	11:AL:101:VAL:N	2.31	0.46
14:AO:82:ILE:O	14:AO:86:GLY:N	2.46	0.46
15:AP:72:ARG:HB2	20:AA:453:A:H4'	1.98	0.46
23:AY:76:ASP:O	23:AY:77:HIS:ND1	2.48	0.46
23:AY:163:VAL:HA	23:AY:258:VAL:HB	1.98	0.46
26:BE:148:GLY:HA2	58:BA:2052:G:O2'	2.16	0.46
29:BH:17:VAL:HG13	29:BH:26:VAL:HG22	1.97	0.46
32:BN:112:LEU:HD23	32:BN:112:LEU:C	2.41	0.46
34:BP:25:SER:OG	34:BP:27:HIS:O	2.34	0.46
34:BP:71:VAL:HG12	58:BA:389:G:N1	2.26	0.46
35:BQ:126:PRO:HA	58:BA:2485:G:H4'	1.98	0.46
38:BT:89:VAL:O	38:BT:91:ARG:HG3	2.16	0.46
56:B1:43:TYR:HB2	56:B1:44:PRO:HD2	1.98	0.46
58:BA:25:U:H2'	58:BA:26:G:O4'	2.15	0.46
58:BA:857:C:N4	58:BA:920:G:H1	2.12	0.46
58:BA:1128:A:O4'	58:BA:2516:G:O2'	2.33	0.46
58:BA:2247:A:H2'	58:BA:2248:C:O4'	2.15	0.46
58:BA:2331:G:H2'	58:BA:2332:U:C6	2.50	0.46
58:BA:2658:C:H2'	58:BA:2659:G:O4'	2.16	0.46
58:BA:2821:A:H2'	58:BA:2822:G:C8	2.51	0.46
59:BB:8:U:H2'	59:BB:9:G:C8	2.51	0.46
2:CC:150:LYS:HG3	2:CC:167:TRP:HZ3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:154:GLY:CA	7:CH:64:LYS:HZ3	2.29	0.46
11:CL:58:VAL:C	11:CL:60:LEU:H	2.24	0.46
11:CL:87:GLY:HA2	11:CL:98:TYR:H	1.81	0.46
14:CO:61:GLY:O	14:CO:65:ARG:HG3	2.15	0.46
20:CA:355:C:O2'	20:CA:388:G:N3	2.48	0.46
20:CA:419:C:OP1	20:CA:513:C:O2'	2.27	0.46
20:CA:943:U:O2	20:CA:1341:U:O2	2.34	0.46
20:CA:1142:G:H2'	20:CA:1143:G:O4'	2.16	0.46
20:CA:1338:G:N2	21:CW:41:A:H1'	2.23	0.46
23:CY:137:ASN:HD22	23:CY:138:LYS:H	1.64	0.46
24:DC:48:LEU:HB2	24:DC:49:GLY:H	1.55	0.46
26:DE:6:GLY:C	26:DE:196:VAL:HG12	2.41	0.46
28:DG:51:ARG:HA	28:DG:54:GLU:HB3	1.97	0.46
29:DH:104:GLU:HA	29:DH:113:VAL:O	2.16	0.46
37:DS:33:LYS:HB2	59:DB:28:C:OP2	2.15	0.46
39:DU:58:ARG:HA	39:DU:61:TRP:CE3	2.51	0.46
50:D7:34:ARG:HD2	50:D7:42:LEU:HD22	1.98	0.46
58:DA:199:A:N6	58:DA:2433:A:H2'	2.31	0.46
58:DA:251:A:H8	58:DA:251:A:O5'	1.99	0.46
58:DA:598:G:O6	58:DA:659:C:N3	2.48	0.46
58:DA:648:G:H4'	58:DA:2351:G:H5"	1.96	0.46
58:DA:682:G:H1	58:DA:795:C:H42	1.63	0.46
58:DA:848:G:C2	58:DA:933:A:H1'	2.51	0.46
58:DA:1131:G:H4'	58:DA:1132:A:OP1	2.16	0.46
58:DA:1218:C:H2'	58:DA:1219:G:C8	2.51	0.46
58:DA:1355:G:H1	58:DA:1376:C:H42	1.64	0.46
58:DA:1638:C:H4'	58:DA:2710:C:O2	2.16	0.46
58:DA:1830:C:H42	58:DA:1975:G:H1	1.62	0.46
58:DA:1916:A:H8	58:DA:1916:A:O5'	1.98	0.46
58:DA:2007:C:H5'	58:DA:2824:C:H1'	1.97	0.46
59:DB:36:C:N4	59:DB:49:C:O2	2.32	0.46
59:DB:48:A:H2'	59:DB:49:C:C6	2.50	0.46
2:AC:40:ARG:O	2:AC:44:GLU:HG3	2.15	0.46
3:AD:158:ILE:O	3:AD:162:LEU:HG	2.16	0.46
15:AP:20:VAL:HG23	15:AP:35:LYS:HA	1.98	0.46
19:AT:10:LEU:HD12	19:AT:11:SER:N	2.30	0.46
20:AA:185:A:H2'	20:AA:186:C:C6	2.51	0.46
20:AA:722:A:H4'	20:AA:723:U:H5	1.81	0.46
20:AA:794:A:O2'	20:AA:1521:G:O3'	2.32	0.46
20:AA:892:A:H2'	20:AA:893:C:H6	1.80	0.46
20:AA:1503:A:N6	22:AV:15:A:H5'	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1506:U:O2'	20:AA:1507:A:H5'	2.16	0.46
25:BD:38:LYS:HB3	25:BD:38:LYS:HE3	1.79	0.46
25:BD:78:LYS:HZ1	25:BD:98:VAL:HA	1.81	0.46
31:BK:117:THR:HB	58:BA:1082:U:H5'	1.98	0.46
47:B3:6:VAL:HB	47:B3:54:VAL:HG13	1.98	0.46
56:B1:62:VAL:HG11	56:B1:67:ILE:HG23	1.97	0.46
58:BA:52:A:C6	58:BA:118:A:C2	3.04	0.46
58:BA:222:A:H5"	58:BA:421:U:OP1	2.16	0.46
58:BA:580:C:H2'	58:BA:581:C:C6	2.51	0.46
58:BA:1954:G:N3	58:BA:1956:U:N3	2.64	0.46
58:BA:2234:G:H2'	58:BA:2235:G:H8	1.81	0.46
58:BA:2245:U:O2	58:BA:2436:G:H8	1.99	0.46
58:BA:2250:G:O2'	58:BA:2496:C:OP1	2.21	0.46
1:CB:238:LEU:O	1:CB:240:GLN:N	2.49	0.46
2:CC:36:ASP:O	2:CC:40:ARG:HG3	2.15	0.46
8:CI:72:GLY:N	20:CA:1372:U:OP1	2.49	0.46
10:CK:83:ILE:HA	10:CK:109:VAL:HB	1.96	0.46
16:CQ:60:ILE:HG23	16:CQ:72:ARG:HB2	1.97	0.46
19:CT:16:HIS:CE1	20:CA:333:G:H4'	2.50	0.46
20:CA:349:A:H2'	20:CA:350:G:C8	2.50	0.46
20:CA:595:G:H21	20:CA:596:C:N4	2.14	0.46
23:CY:311:ALA:HB3	23:CY:389:LEU:O	2.16	0.46
24:DC:47:LYS:HB2	24:DC:47:LYS:HE3	1.78	0.46
25:DD:213:ARG:C	25:DD:215:LEU:H	2.24	0.46
26:DE:4:ILE:HD13	26:DE:5:LEU:N	2.30	0.46
26:DE:32:PRO:HD2	26:DE:50:GLY:C	2.41	0.46
26:DE:152:LYS:HG2	32:DN:78:TYR:CD1	2.51	0.46
27:DF:103:LYS:O	27:DF:106:ARG:HD3	2.16	0.46
27:DF:154:VAL:O	27:DF:174:VAL:O	2.33	0.46
27:DF:162:LEU:H	27:DF:162:LEU:HD12	1.81	0.46
32:DN:98:VAL:CG2	32:DN:99:LEU:N	2.78	0.46
33:DO:23:ARG:HG3	33:DO:24:VAL:H	1.81	0.46
36:DR:14:SER:O	36:DR:18:LEU:HG	2.16	0.46
46:D2:56:GLN:O	46:D2:60:LEU:HG	2.16	0.46
47:D3:6:VAL:HG12	47:D3:56:VAL:HA	1.98	0.46
47:D3:34:GLU:O	47:D3:35:ARG:NH1	2.49	0.46
56:D1:22:GLY:HA2	56:D1:38:SER:N	2.30	0.46
58:DA:141(B):C:H2'	58:DA:142:G:O4'	2.16	0.46
58:DA:326:G:H1	58:DA:336:C:H42	1.62	0.46
58:DA:611:C:N3	58:DA:617:G:O6	2.49	0.46
58:DA:667:U:H2'	58:DA:668:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:672:C:H42	58:DA:808:G:H1	1.63	0.46
58:DA:1056:G:H5"	58:DA:1057:A:H5'	1.98	0.46
58:DA:1095:A:H2'	58:DA:1096:A:C8	2.51	0.46
58:DA:1299:G:O2'	58:DA:1640:C:N4	2.48	0.46
58:DA:1906:G:N2	58:DA:1924:C:N3	2.52	0.46
58:DA:2590:A:H2'	58:DA:2591:C:H6	1.80	0.46
58:DA:2863:C:H2'	58:DA:2864:G:O4'	2.15	0.46
1:AB:64:ARG:HE	1:AB:64:ARG:HB2	1.34	0.46
2:AC:43:LEU:O	2:AC:47:LEU:HB3	2.15	0.46
2:AC:163:ALA:CB	20:AA:1056:U:H4'	2.45	0.46
4:AE:127:ASN:O	4:AE:131:ILE:HG12	2.16	0.46
7:AH:4:ASP:HB3	7:AH:7:ALA:HB3	1.98	0.46
8:AI:11:LYS:HE3	20:AA:1371:G:OP2	2.16	0.46
9:AJ:63:PHE:HD1	13:AN:58:LYS:HA	1.81	0.46
10:AK:29:ILE:HD11	10:AK:42:TRP:HB2	1.98	0.46
16:AQ:52:LYS:HB3	16:AQ:52:LYS:HE3	1.72	0.46
18:AS:31:ILE:HG12	18:AS:48:THR:O	2.15	0.46
20:AA:490:G:H2'	20:AA:491:G:C8	2.50	0.46
20:AA:501:C:H2'	20:AA:502:G:C8	2.51	0.46
20:AA:628:G:H2'	20:AA:629:G:H8	1.78	0.46
20:AA:1440(K):G:H2'	20:AA:1440(L):G:O4'	2.15	0.46
23:AY:333:GLY:H	23:AY:371:ALA:CB	2.29	0.46
23:AY:600:VAL:HG22	23:AY:678:GLU:HG3	1.98	0.46
23:AY:610:VAL:HG23	23:AY:612:THR:HG22	1.97	0.46
25:BD:65:ILE:HA	25:BD:104:TYR:HB2	1.97	0.46
25:BD:86:PRO:HB3	58:BA:1567:A:P	2.56	0.46
25:BD:147:LEU:HA	25:BD:185:VAL:HG13	1.97	0.46
26:BE:120:TRP:CD1	26:BE:120:TRP:H	2.34	0.46
29:BH:67:LEU:HD12	58:BA:2747:G:O2'	2.15	0.46
31:BK:132:ARG:HD3	31:BK:132:ARG:HA	1.61	0.46
32:BN:98:VAL:CG2	32:BN:99:LEU:N	2.78	0.46
38:BT:51:ARG:NH2	38:BT:100:TYR:HH	2.13	0.46
42:BX:36:LYS:HA	42:BX:39:ILE:HD12	1.98	0.46
43:BY:75:ILE:HA	43:BY:79:CYS:O	2.16	0.46
44:BZ:17:ALA:O	44:BZ:20:ARG:HG2	2.16	0.46
51:B8:26:LYS:NZ	58:BA:2361:A:H5"	2.31	0.46
51:B8:46:ARG:HG3	51:B8:47:LYS:H	1.81	0.46
56:B1:20:ARG:HG2	58:BA:380:U:OP1	2.16	0.46
58:BA:220:G:O2'	58:BA:233:A:N3	2.47	0.46
58:BA:314:A:H2'	58:BA:315:G:H8	1.80	0.46
58:BA:377:C:H2'	58:BA:378:C:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:595:C:H2'	58:BA:596:G:O4'	2.16	0.46
58:BA:722:A:H2'	58:BA:723:G:H8	1.80	0.46
58:BA:1000:A:OP2	58:BA:1154:G:N1	2.44	0.46
58:BA:1102:C:H2'	58:BA:1103:A:O4'	2.15	0.46
58:BA:1546:A:O5'	58:BA:1546:A:H8	1.99	0.46
58:BA:2471:C:H2'	58:BA:2472:G:O4'	2.15	0.46
58:BA:2653:U:H3	58:BA:2667:C:H42	1.63	0.46
1:CB:58:ILE:HG22	1:CB:222:ILE:HG23	1.97	0.46
1:CB:78:GLN:NE2	1:CB:95:GLN:O	2.49	0.46
1:CB:88:ALA:HA	1:CB:222:ILE:HD11	1.98	0.46
3:CD:116:GLN:O	3:CD:120:LEU:HG	2.16	0.46
4:CE:46:GLY:HA3	4:CE:54:ALA:O	2.16	0.46
7:CH:130:GLY:C	20:CA:599:C:H4'	2.41	0.46
11:CL:85:ILE:HD12	11:CL:98:TYR:O	2.16	0.46
11:CL:101:VAL:HB	11:CL:104:VAL:HG22	1.97	0.46
20:CA:298:A:H2'	20:CA:299:G:O4'	2.16	0.46
20:CA:865:A:H5'	20:CA:1078:U:C5	2.51	0.46
20:CA:1284:C:OP2	20:CA:1285:A:O2'	2.29	0.46
21:CW:17:U:O5'	21:CW:60:U:O2'	2.34	0.46
23:CY:228:MET:HE2	23:CY:229:LEU:HD22	1.97	0.46
24:DC:54:ARG:C	24:DC:56:ASP:H	2.24	0.46
25:DD:164:GLN:HE21	25:DD:164:GLN:C	2.16	0.46
25:DD:220:HIS:NE2	58:DA:1825:A:OP2	2.49	0.46
27:DF:25:PRO:HD3	27:DF:115:ALA:O	2.16	0.46
27:DF:144:LYS:O	27:DF:144:LYS:HD3	2.16	0.46
30:DJ:54:UNK:N	30:DJ:79:UNK:HA	2.30	0.46
33:DO:6:THR:H	33:DO:21:CYS:HB3	1.81	0.46
33:DO:67:LYS:NZ	58:DA:1664:A:O2'	2.45	0.46
33:DO:107:ARG:NH1	38:DT:36:GLU:HA	2.31	0.46
34:DP:48:PRO:O	34:DP:50:ARG:N	2.49	0.46
43:DY:10:GLY:HA2	43:DY:27:VAL:O	2.16	0.46
44:DZ:28:MET:N	44:DZ:28:MET:SD	2.89	0.46
46:D2:21:LEU:HD23	46:D2:24:LEU:HD12	1.98	0.46
53:De:67:ALA:H	53:De:70:LYS:HE3	1.81	0.46
58:DA:289:A:H2'	58:DA:290:G:O4'	2.15	0.46
58:DA:632:A:H2'	58:DA:633:A:C8	2.51	0.46
58:DA:812:C:N3	58:DA:1195:G:N2	2.55	0.46
58:DA:904:C:H2'	58:DA:905:U:C6	2.51	0.46
58:DA:1175:U:H5	58:DA:1177:A:N1	2.14	0.46
58:DA:1802:A:H8	58:DA:1815:A:N6	2.10	0.46
58:DA:1937:A:O2'	58:DA:1939:U:OP2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:2210:G:N2	58:DA:2212:A:C2	2.84	0.46
58:DA:2230:G:H2'	58:DA:2231:C:C6	2.51	0.46
59:DB:62:C:H2'	59:DB:63:G:H8	1.80	0.46
1:AB:161:ALA:HA	1:AB:183:PRO:O	2.14	0.45
16:AQ:79:SER:OG	16:AQ:80:GLY:N	2.48	0.45
17:AR:71:LYS:O	17:AR:75:ILE:HG13	2.16	0.45
20:AA:1461:G:H2'	20:AA:1462:G:H8	1.81	0.45
20:AA:1466:C:H2'	20:AA:1467:G:O4'	2.15	0.45
23:AY:10:LYS:HG2	23:AY:284:LEU:HD22	1.97	0.45
23:AY:162:VAL:HB	23:AY:255:ILE:CG1	2.45	0.45
23:AY:255:ILE:HD12	23:AY:255:ILE:HA	1.72	0.45
23:AY:606:MET:HG3	23:AY:649:LEU:HD21	1.98	0.45
24:BC:33:LEU:HD13	24:BC:221:PRO:HG2	1.97	0.45
27:BF:66:PRO:O	27:BF:67:GLN:HB2	2.17	0.45
28:BG:132:ASN:ND2	58:BA:2303:G:N3	2.54	0.45
29:BH:66:GLY:O	29:BH:69:ARG:HG2	2.16	0.45
32:BN:56:ASN:HB3	32:BN:126:PRO:N	2.30	0.45
37:BS:89:ARG:NH1	37:BS:91:PRO:O	2.50	0.45
39:BU:50:ARG:HD3	58:BA:993:G:H5"	1.98	0.45
39:BU:95:LEU:CD1	40:BV:4:ILE:HG12	2.46	0.45
40:BV:28:GLU:HB3	40:BV:29:PRO:HD2	1.98	0.45
48:B5:8:LYS:HZ2	58:BA:2056:G:H4'	1.81	0.45
58:BA:510:C:H2'	58:BA:511:U:O4'	2.16	0.45
58:BA:733:G:O6	58:BA:761:A:H2'	2.16	0.45
58:BA:1037:G:H1	58:BA:1118:C:N4	2.08	0.45
58:BA:1053:C:H2'	58:BA:1054:A:O4'	2.15	0.45
58:BA:2088:G:H1	58:BA:2231:C:H42	1.65	0.45
1:CB:87:ARG:NH1	1:CB:232:PRO:HA	2.30	0.45
4:CE:88:LYS:HG2	4:CE:123:LEU:HD12	1.98	0.45
7:CH:87:SER:HB2	7:CH:93:VAL:HB	1.98	0.45
7:CH:115:SER:HA	20:CA:642:A:C5	2.51	0.45
8:CI:118:LYS:O	8:CI:120:ARG:N	2.49	0.45
12:CM:56:LEU:O	12:CM:60:VAL:HG23	2.15	0.45
15:CP:47:ASP:O	15:CP:49:LEU:N	2.50	0.45
16:CQ:97:SER:O	16:CQ:97:SER:OG	2.26	0.45
20:CA:891:U:H2'	20:CA:892:A:C8	2.51	0.45
20:CA:900:A:H2'	20:CA:901:A:C8	2.51	0.45
20:CA:1323:G:H2'	20:CA:1324:A:H8	1.79	0.45
23:CY:146:LEU:O	23:CY:150:ILE:HG12	2.14	0.45
23:CY:428:LEU:HD13	23:CY:440:VAL:HG21	1.97	0.45
23:CY:487:ILE:HG12	23:CY:516:PRO:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:20:ASP:C	25:DD:22:SER:H	2.24	0.45
25:DD:78:LYS:O	25:DD:79:VAL:O	2.34	0.45
25:DD:211:ARG:HG2	25:DD:214:TRP:CZ3	2.50	0.45
25:DD:224:ALA:HB2	25:DD:233:HIS:ND1	2.31	0.45
26:DE:109:LYS:HB2	36:DR:2:ARG:NH2	2.31	0.45
26:DE:143:ASN:HD22	26:DE:144:ARG:H	1.63	0.45
27:DF:25:PRO:HG3	27:DF:116:ASP:HA	1.99	0.45
29:DH:16:SER:HB3	29:DH:27:LYS:HE2	1.97	0.45
43:DY:76:CYS:HB3	43:DY:96:ILE:HG13	1.98	0.45
45:D0:10:THR:HG22	45:D0:11:ARG:N	2.25	0.45
45:D0:36:ILE:HA	45:D0:60:PHE:HA	1.98	0.45
58:DA:52:A:C6	58:DA:118:A:C2	3.04	0.45
58:DA:390:A:H4'	58:DA:391:G:C5'	2.41	0.45
58:DA:751:A:O5'	58:DA:751:A:H8	1.99	0.45
58:DA:857:C:N4	58:DA:858:U:O4	2.49	0.45
58:DA:893:C:H2'	58:DA:894:C:C6	2.52	0.45
58:DA:1170:G:H2'	58:DA:1171:G:C8	2.50	0.45
58:DA:1408:C:H2'	58:DA:1409:C:C6	2.51	0.45
58:DA:1410:G:H2'	58:DA:1411:C:C6	2.51	0.45
58:DA:2162:G:H4'	58:DA:2173:A:OP2	2.16	0.45
58:DA:2327:A:H2'	58:DA:2328:A:C8	2.51	0.45
59:DB:82:G:H2'	59:DB:83:G:H8	1.81	0.45
1:AB:77:ALA:O	1:AB:81:VAL:HG13	2.16	0.45
2:AC:77:ILE:C	2:AC:83:ARG:HB3	2.41	0.45
4:AE:127:ASN:HD22	20:AA:19:C:P	2.39	0.45
7:AH:9:MET:HE3	7:AH:10:LEU:HD23	1.98	0.45
10:AK:39:PRO:O	20:AA:684:A:O2'	2.28	0.45
10:AK:113:PRO:CB	20:AA:676:A:H5"	2.41	0.45
20:AA:246:A:C2	20:AA:282:A:C4	3.04	0.45
23:AY:18:ALA:HA	23:AY:25:LYS:HD3	1.98	0.45
25:BD:159:ALA:HB1	25:BD:198:ASN:O	2.16	0.45
27:BF:3:GLU:HB2	27:BF:23:ASP:HA	1.99	0.45
27:BF:28:ILE:O	27:BF:30:PRO:HD3	2.17	0.45
27:BF:74:ARG:HH21	58:BA:674:G:H1'	1.81	0.45
27:BF:154:VAL:HG12	27:BF:156:LEU:CA	2.44	0.45
28:BG:13:GLU:O	28:BG:17:PRO:HD2	2.16	0.45
28:BG:95:ARG:HH21	59:BB:45:A:H1'	1.81	0.45
37:BS:73:LEU:HA	37:BS:76:LYS:HE2	1.99	0.45
38:BT:26:ASP:OD2	38:BT:48:ILE:HG23	2.15	0.45
38:BT:28:VAL:HG12	38:BT:29:ARG:N	2.32	0.45
40:BV:10:LYS:HD3	58:BA:994:C:O2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BV:18:LEU:O	40:BV:96:ILE:HG13	2.16	0.45
58:BA:388:G:H5'	58:BA:389:G:OP2	2.17	0.45
58:BA:855:G:H1	58:BA:922:U:H3	1.63	0.45
58:BA:1607:C:H4'	58:BA:1608:A:O5'	2.16	0.45
58:BA:1639:U:H2'	58:BA:1640:C:H5"	1.99	0.45
58:BA:2711:A:C4	58:BA:2714:G:H1'	2.51	0.45
59:BB:26:A:C2	59:BB:27:C:H1'	2.51	0.45
1:CB:42:ILE:HD11	1:CB:202:PRO:HB2	1.98	0.45
11:CL:85:ILE:HD12	11:CL:85:ILE:HA	1.67	0.45
14:CO:48:LYS:NZ	20:CA:808:C:OP2	2.29	0.45
17:CR:74:ARG:HA	17:CR:79:LEU:HB3	1.99	0.45
20:CA:124:G:H2'	20:CA:125:U:O4'	2.16	0.45
20:CA:520:A:H62	20:CA:529:G:H21	1.62	0.45
20:CA:1251:A:H2'	20:CA:1252:A:H8	1.80	0.45
20:CA:1429:C:H4'	58:DA:1704:G:H5'	1.97	0.45
23:CY:163:VAL:HG22	23:CY:258:VAL:HG21	1.97	0.45
25:DD:202:LYS:HB3	58:DA:1820:U:C1'	2.46	0.45
27:DF:143:ALA:HA	27:DF:148:LEU:HD12	1.98	0.45
27:DF:193:VAL:O	27:DF:193:VAL:HG12	2.15	0.45
32:DN:112:LEU:HD22	58:DA:558:G:H5"	1.98	0.45
41:DW:7:ALA:HB1	41:DW:10:VAL:HG21	1.97	0.45
44:DZ:30:ASN:HA	44:DZ:89:PHE:CE2	2.51	0.45
46:D2:67:LYS:HA	46:D2:67:LYS:HD3	1.51	0.45
48:D5:55:ARG:NH2	48:D5:56:LYS:HE3	2.31	0.45
58:DA:459:U:C6	58:DA:460:A:C8	2.98	0.45
58:DA:613:U:O2'	58:DA:616:A:OP1	2.28	0.45
58:DA:706:A:H61	58:DA:725:G:H1'	1.80	0.45
58:DA:741:G:O2'	58:DA:1675:C:O3'	2.33	0.45
58:DA:828:U:H2'	58:DA:829:A:N7	2.31	0.45
58:DA:943:U:H2'	58:DA:944:G:O4'	2.15	0.45
58:DA:1139:G:H2'	58:DA:1140:C:H6	1.80	0.45
58:DA:1495:A:H2'	58:DA:1496:A:N3	2.30	0.45
58:DA:1542:G:H4'	58:DA:1543:A:O4'	2.16	0.45
58:DA:1690:A:H2'	58:DA:1691:C:O4'	2.16	0.45
58:DA:2086:U:H2'	58:DA:2087:G:C8	2.52	0.45
58:DA:2379:G:H2'	58:DA:2380:C:C6	2.51	0.45
58:DA:2887:U:H2'	58:DA:2888:C:C6	2.52	0.45
1:AB:15:VAL:HG11	1:AB:209:ARG:HE	1.82	0.45
5:AF:69:GLU:O	5:AF:72:VAL:HG12	2.17	0.45
7:AH:27:PRO:HA	7:AH:58:TYR:HA	1.98	0.45
10:AK:120:ARG:NH2	20:AA:1525:G:OP1	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:6:LYS:HD3	18:AS:6:LYS:N	2.31	0.45
18:AS:12:ASP:O	18:AS:15:LEU:HB2	2.16	0.45
20:AA:28:G:O2'	20:AA:296:U:H5"	2.16	0.45
20:AA:266:G:H4'	20:AA:267:C:C5	2.52	0.45
20:AA:1386:G:H2'	20:AA:1387:G:H8	1.82	0.45
23:AY:135:PHE:CD1	23:AY:272:LEU:HD23	2.50	0.45
27:BF:4:VAL:HG13	27:BF:7:TYR:HA	1.98	0.45
27:BF:7:TYR:CE2	27:BF:10:PRO:HD3	2.52	0.45
32:BN:63:THR:CG2	58:BA:1141:U:OP2	2.65	0.45
37:BS:44:LYS:HB2	37:BS:46:VAL:HG23	1.99	0.45
39:BU:2:PRO:HG3	58:BA:444:C:OP2	2.17	0.45
39:BU:62:ILE:HD11	39:BU:93:LYS:HG2	1.98	0.45
44:BZ:18:LEU:HD23	44:BZ:25:PRO:HB3	1.98	0.45
46:B2:38:GLN:O	46:B2:41:ILE:HG12	2.16	0.45
58:BA:30:G:H2'	58:BA:31:C:C6	2.51	0.45
58:BA:521:G:H2'	58:BA:522:G:C8	2.51	0.45
58:BA:1092:C:H2'	58:BA:1093:G:O4'	2.16	0.45
58:BA:1999:C:H4'	58:BA:2723:C:H1'	1.98	0.45
58:BA:2171:A:H2'	58:BA:2172:U:C6	2.51	0.45
58:BA:2575:C:H2'	58:BA:2578:G:O6	2.16	0.45
3:CD:76:ARG:HD2	3:CD:76:ARG:HA	1.72	0.45
3:CD:103:ASN:HB2	3:CD:114:ARG:HH22	1.81	0.45
4:CE:80:ILE:HD11	4:CE:91:LEU:HD23	1.97	0.45
4:CE:127:ASN:HD21	20:CA:18:C:P	2.40	0.45
6:CG:73:MET:HG2	6:CG:90:GLU:HA	1.98	0.45
6:CG:73:MET:HE3	6:CG:145:ALA:HB1	1.98	0.45
12:CM:54:VAL:O	12:CM:57:ARG:HG2	2.16	0.45
16:CQ:27:PHE:HB2	16:CQ:28:PRO:HD2	1.98	0.45
19:CT:10:LEU:HD23	20:CA:332:G:OP2	2.16	0.45
20:CA:327:A:O2'	20:CA:328:C:O4'	2.30	0.45
20:CA:692:U:H2'	20:CA:694:A:OP2	2.17	0.45
25:DD:42:GLY:O	25:DD:44:ASN:N	2.50	0.45
27:DF:45:ARG:CZ	58:DA:443:A:H3'	2.46	0.45
27:DF:196:LEU:O	27:DF:200:GLU:HG2	2.16	0.45
34:DP:62:LEU:HD22	51:D8:27:THR:HG22	1.99	0.45
34:DP:132:LYS:HD2	58:DA:636:G:OP1	2.16	0.45
36:DR:23:ASN:HD22	58:DA:1294:U:H1'	1.81	0.45
40:DV:53:GLU:O	40:DV:55:ALA:N	2.40	0.45
41:DW:92:ARG:C	58:DA:1614:A:H61	2.24	0.45
45:D0:30:VAL:HA	45:D0:66:VAL:HG22	1.99	0.45
51:D8:62:LEU:HD13	58:DA:242:G:H5"	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:D1:16:ASN:O	56:D1:18:ILE:HB	2.16	0.45
58:DA:137(B):G:H2'	58:DA:139:G:N7	2.32	0.45
58:DA:287:C:H2'	58:DA:288:C:O4'	2.17	0.45
58:DA:997:G:H2'	58:DA:998:C:C6	2.51	0.45
58:DA:1175:U:H5	58:DA:1177:A:C6	2.34	0.45
58:DA:1678:G:H2'	58:DA:1679:U:C6	2.52	0.45
58:DA:2091:U:OP2	58:DA:2092:U:O2'	2.25	0.45
58:DA:2105:C:H2'	58:DA:2106:G:H8	1.81	0.45
58:DA:2246:G:H2'	58:DA:2247:A:H8	1.80	0.45
58:DA:2605:U:H2'	58:DA:2606:C:C6	2.51	0.45
1:AB:222:ILE:HG13	1:AB:223:ILE:N	2.30	0.45
3:AD:43:HIS:HB2	3:AD:44:GLY:H	1.61	0.45
7:AH:69:ARG:NH2	7:AH:72:PRO:O	2.46	0.45
19:AT:38:LYS:HA	19:AT:41:ILE:HG23	1.98	0.45
20:AA:150:C:H2'	20:AA:151:A:O4'	2.16	0.45
20:AA:306:G:H2'	20:AA:307:C:H6	1.81	0.45
20:AA:443:C:H2'	20:AA:444:C:H6	1.81	0.45
20:AA:583:A:H2'	20:AA:584:G:O4'	2.17	0.45
20:AA:745:C:H2'	20:AA:746:A:O4'	2.17	0.45
20:AA:974:A:H4'	20:AA:975:A:H3'	1.97	0.45
20:AA:1307:U:H2'	20:AA:1308:U:O4'	2.17	0.45
21:AW:1:G:H22	21:AW:73:A:H1'	1.81	0.45
23:AY:197:ARG:CZ	23:AY:197:ARG:HA	2.47	0.45
24:BC:113:ALA:O	24:BC:114:VAL:HB	2.16	0.45
24:BC:176:VAL:HG21	24:BC:189:ASN:HB3	1.99	0.45
27:BF:5:ALA:HB3	27:BF:8:GLN:HA	1.98	0.45
27:BF:50:SER:HB2	27:BF:94:PRO:HD3	1.98	0.45
29:BH:87:LEU:CD1	29:BH:148:ILE:HB	2.47	0.45
30:BJ:23:UNK:HA	30:BJ:111:UNK:O	2.17	0.45
33:BO:47:ILE:HA	33:BO:48:PRO:HD2	1.58	0.45
35:BQ:119:ARG:NH2	58:BA:2468:G:OP1	2.43	0.45
36:BR:38:VAL:O	36:BR:42:LYS:HG3	2.15	0.45
38:BT:24:PRO:HG3	38:BT:52:ILE:HG12	1.97	0.45
44:BZ:166:SER:H	44:BZ:167:PRO:HA	1.81	0.45
45:B0:27:GLU:O	45:B0:29:GLN:NE2	2.49	0.45
48:B5:55:ARG:HD3	48:B5:56:LYS:H	1.81	0.45
50:B7:34:ARG:HD3	50:B7:39:ARG:HD2	1.97	0.45
50:B7:34:ARG:HD3	50:B7:43:THR:HG23	1.98	0.45
58:BA:719:C:H2'	58:BA:720:C:C6	2.51	0.45
58:BA:729:G:O2'	58:BA:763:G:H4'	2.17	0.45
58:BA:878:A:H2'	58:BA:879:G:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:1435:G:H2'	58:BA:1436:G:C8	2.52	0.45
58:BA:1463:C:H2'	58:BA:1464:C:C6	2.52	0.45
58:BA:1575:C:H2'	58:BA:1576:U:O4'	2.16	0.45
58:BA:2569:G:H2'	58:BA:2570:G:H8	1.80	0.45
58:BA:2582:G:H2'	58:BA:2583:G:H8	1.81	0.45
58:BA:2726:U:O2'	58:BA:2727:G:O5'	2.34	0.45
1:CB:87:ARG:NH2	1:CB:233:SER:H	2.14	0.45
1:CB:217:ARG:HD3	1:CB:217:ARG:HA	1.74	0.45
4:CE:20:GLN:H	4:CE:24:ARG:HA	1.82	0.45
6:CG:72:ARG:HA	6:CG:96:GLN:NE2	2.32	0.45
9:CJ:35:SER:N	9:CJ:73:ASP:O	2.49	0.45
11:CL:69:TYR:CD1	11:CL:70:ILE:HG13	2.51	0.45
12:CM:107:ALA:O	12:CM:109:THR:N	2.40	0.45
20:CA:67:C:H2'	20:CA:68:G:H8	1.80	0.45
20:CA:482:A:H2'	20:CA:483:C:O4'	2.16	0.45
20:CA:1247:U:O4	20:CA:1290:G:O6	2.34	0.45
20:CA:1440(G):C:H2'	20:CA:1440(H):U:O4'	2.17	0.45
21:CW:19:G:H1	21:CW:56:C:H42	1.62	0.45
21:CW:30:C:H42	21:CW:40:G:H1	1.63	0.45
23:CY:98:MET:HE3	23:CY:98:MET:HB2	1.83	0.45
23:CY:616:TYR:O	23:CY:620:VAL:HG13	2.17	0.45
24:DC:37:LYS:HB2	24:DC:38:PHE:CD1	2.51	0.45
24:DC:69:LEU:O	24:DC:178:LYS:HE2	2.15	0.45
24:DC:102:GLN:HG3	24:DC:106:ASP:HB2	1.99	0.45
25:DD:127:VAL:HG13	25:DD:194:GLY:HA3	1.97	0.45
26:DE:79:ARG:HG3	58:DA:2636:U:OP1	2.16	0.45
26:DE:104:VAL:HG22	26:DE:198:VAL:HA	1.99	0.45
26:DE:111:ARG:HB2	26:DE:160:TYR:O	2.15	0.45
27:DF:157:VAL:HA	27:DF:176:LEU:O	2.16	0.45
27:DF:177:ALA:HB1	27:DF:178:PRO:HD2	1.99	0.45
28:DG:122:PRO:HB3	28:DG:180:PHE:HB3	1.98	0.45
32:DN:53:VAL:HG11	32:DN:128:HIS:CB	2.47	0.45
35:DQ:27:VAL:HG23	35:DQ:137:TYR:CD2	2.51	0.45
42:DX:8:ILE:H	46:D2:33:MET:HE1	1.81	0.45
56:D1:16:ASN:O	58:DA:381:G:H5'	2.16	0.45
56:D1:56:GLN:HB3	56:D1:57:GLU:H	1.58	0.45
56:D1:61:ARG:HB3	56:D1:61:ARG:NH1	2.32	0.45
58:DA:201:C:O4'	58:DA:386:G:N2	2.49	0.45
58:DA:513:A:H4'	58:DA:1217:C:OP1	2.17	0.45
58:DA:600:G:H2'	58:DA:601:C:H6	1.81	0.45
58:DA:817:C:H4'	58:DA:932:G:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1152:C:H2'	58:DA:1153:C:O4'	2.16	0.45
58:DA:2065:C:H2'	58:DA:2066:C:C6	2.51	0.45
58:DA:2114:A:C2	58:DA:2168:G:H1'	2.50	0.45
58:DA:2508:G:H2'	58:DA:2509:G:H8	1.80	0.45
58:DA:2790:A:O2'	58:DA:2893:G:N3	2.45	0.45
59:DB:47:C:H2'	59:DB:48:A:O4'	2.16	0.45
1:AB:102:LEU:HD12	1:AB:102:LEU:H	1.81	0.45
2:AC:29:TYR:HE2	13:AN:37:PHE:CD2	2.35	0.45
3:AD:9:CYS:O	3:AD:12:CYS:HB2	2.17	0.45
5:AF:98:LEU:HB3	17:AR:30:ASP:HA	1.98	0.45
9:AJ:44:VAL:HA	9:AJ:65:LEU:O	2.17	0.45
9:AJ:63:PHE:CD1	13:AN:58:LYS:HA	2.51	0.45
18:AS:29:ARG:HD2	18:AS:48:THR:HG21	1.98	0.45
20:AA:234:C:H2'	20:AA:235:C:H6	1.80	0.45
20:AA:988:G:N2	20:AA:1016:A:H1'	2.32	0.45
20:AA:1212:U:H5'	20:AA:1213:A:OP1	2.17	0.45
20:AA:1498:U:O3'	20:AA:1499:A:H8	2.00	0.45
21:AW:76:A:P	58:BA:2432:A:H4'	2.57	0.45
23:AY:85:PRO:HB3	23:AY:94:VAL:HG22	1.97	0.45
23:AY:85:PRO:HB2	23:AY:86:GLY:H	1.61	0.45
23:AY:91:THR:HG22	23:AY:95:GLU:HG2	1.99	0.45
23:AY:259:PHE:HB2	23:AY:272:LEU:HD22	1.99	0.45
25:BD:88:ARG:HB3	58:BA:1817:G:H5"	1.98	0.45
25:BD:149:PRO:HG3	25:BD:189:CYS:SG	2.57	0.45
25:BD:260:ARG:HH21	25:BD:267:SER:HA	1.81	0.45
27:BF:154:VAL:O	27:BF:156:LEU:N	2.49	0.45
28:BG:97:ASP:O	28:BG:101:ILE:HD12	2.17	0.45
32:BN:27:ALA:HB1	32:BN:103:VAL:HG22	1.97	0.45
35:BQ:127:ILE:HB	35:BQ:128:LYS:H	1.40	0.45
38:BT:35:LYS:O	38:BT:36:GLU:HB2	2.15	0.45
38:BT:62:THR:OG1	38:BT:75:ILE:HG12	2.15	0.45
41:BW:20:VAL:HG11	41:BW:43:GLY:C	2.41	0.45
58:BA:267:C:H2'	58:BA:268:C:C6	2.52	0.45
58:BA:450:G:N1	58:BA:454:A:OP2	2.46	0.45
58:BA:492:A:H2'	58:BA:493:G:O4'	2.15	0.45
58:BA:576:U:H2'	58:BA:577:G:C8	2.52	0.45
58:BA:834:C:H1'	58:BA:2358:G:N3	2.30	0.45
58:BA:1162:G:H2'	58:BA:1163:G:H8	1.81	0.45
58:BA:1259:G:H2'	58:BA:1260:G:C8	2.51	0.45
59:BB:102:G:H2'	59:BB:103:U:H6	1.82	0.45
1:CB:177:ALA:HA	1:CB:180:LEU:HD12	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:102:ALA:HB2	4:CE:120:THR:HG21	1.98	0.45
6:CG:26:PHE:CE2	6:CG:30:ILE:HD11	2.51	0.45
7:CH:44:PHE:O	7:CH:64:LYS:HE3	2.17	0.45
12:CM:40:ASN:HB3	12:CM:43:THR:OG1	2.17	0.45
13:CN:29:ARG:NH2	13:CN:41:ARG:HG2	2.32	0.45
13:CN:36:PHE:C	13:CN:37:PHE:HD2	2.25	0.45
16:CQ:46:ASP:OD2	16:CQ:50:LYS:HG2	2.16	0.45
19:CT:76:ALA:HA	19:CT:79:ARG:NH1	2.31	0.45
19:CT:79:ARG:HD3	20:CA:263:A:OP1	2.16	0.45
20:CA:956:U:O2	20:CA:960:U:C2	2.68	0.45
20:CA:974:A:H8	20:CA:974:A:OP1	2.00	0.45
23:CY:497:PHE:HB3	23:CY:508:GLY:H	1.82	0.45
23:CY:549:ALA:HB2	23:CY:587:SER:HA	1.99	0.45
24:DC:117:THR:O	24:DC:121:MET:HB2	2.17	0.45
24:DC:132:LEU:HB3	24:DC:138:LEU:H	1.81	0.45
27:DF:161:GLU:O	27:DF:165:ARG:HG2	2.16	0.45
30:DJ:24:UNK:HA	30:DJ:84:UNK:O	2.17	0.45
31:DK:89:HIS:HB2	31:DK:94:GLU:OE1	2.17	0.45
37:DS:59:LYS:HG2	37:DS:60:GLY:H	1.81	0.45
38:DT:28:VAL:O	38:DT:46:GLU:HA	2.17	0.45
45:D0:9:SER:OG	45:D0:10:THR:N	2.48	0.45
58:DA:454:A:O5’	58:DA:455:C:H5	2.00	0.45
58:DA:968:G:H2’	58:DA:969:U:C6	2.51	0.45
58:DA:1401:G:H4’	58:DA:1524:G:H4’	1.98	0.45
58:DA:1783:A:OP2	58:DA:1783:A:H8	1.99	0.45
58:DA:2048:G:H1	58:DA:2620:C:N4	2.13	0.45
58:DA:2138:C:H2’	58:DA:2139:C:H6	1.78	0.45
58:DA:2293:C:H2’	58:DA:2294:C:O4’	2.17	0.45
58:DA:2515:C:H2’	58:DA:2516:G:H8	1.81	0.45
59:DB:4:C:H2’	59:DB:5:C:C6	2.51	0.45
59:DB:72:G:H1’	59:DB:104:A:N6	2.32	0.45
59:DB:76:G:H2’	59:DB:77:U:H6	1.81	0.45
1:AB:22:LYS:HA	1:AB:24:TRP:CD1	2.50	0.45
1:AB:162:ILE:O	1:AB:163:PHE:C	2.58	0.45
3:AD:15:GLU:HB3	3:AD:63:LYS:HE2	1.99	0.45
3:AD:70:ILE:HG12	3:AD:71:SER:H	1.81	0.45
13:AN:27:CYS:SG	13:AN:28:GLY:N	2.90	0.45
17:AR:68:LYS:HB3	17:AR:72:ARG:NH2	2.25	0.45
19:AT:63:ILE:HD12	19:AT:81:LYS:HG2	1.98	0.45
20:AA:49:U:O2’	20:AA:50:A:H2’	2.16	0.45
20:AA:291:C:H2’	20:AA:292:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:804:U:H5"	20:AA:805:C:OP2	2.16	0.45
20:AA:823:G:H1	20:AA:877:C:H42	1.64	0.45
20:AA:983:A:C2	20:AA:984:C:C5	3.05	0.45
20:AA:1006:C:H2'	20:AA:1007:C:C6	2.52	0.45
21:AW:74:C:OP1	56:B1:33:LYS:HG3	2.17	0.45
32:BN:120:LEU:HD21	32:BN:122:VAL:CG2	2.40	0.45
33:BO:107:ARG:HG2	33:BO:108:GLU:N	2.30	0.45
36:BR:12:ARG:NH2	58:BA:1276:A:O3'	2.50	0.45
36:BR:17:ARG:O	36:BR:21:TYR:HD2	1.99	0.45
38:BT:39:ARG:O	38:BT:40:THR:OG1	2.29	0.45
39:BU:90:VAL:C	39:BU:92:ARG:N	2.75	0.45
39:BU:92:ARG:HH12	40:BV:13:ARG:N	2.15	0.45
41:BW:11:ARG:NH1	41:BW:12:ILE:H	2.14	0.45
43:BY:6:HIS:HB3	43:BY:35:TYR:CE1	2.52	0.45
48:B5:19:ARG:HA	58:BA:2046:G:H5'	1.98	0.45
49:B6:8:LYS:HD2	49:B6:27:LYS:HD3	1.98	0.45
58:BA:234:C:H2'	58:BA:235:U:C6	2.52	0.45
58:BA:275:G:O2'	58:BA:276:A:O5'	2.35	0.45
58:BA:800:A:H8	58:BA:800:A:OP1	1.99	0.45
58:BA:1468:C:H2'	58:BA:1469:A:H8	1.81	0.45
58:BA:1800:C:O2'	58:BA:1818:U:O4	2.32	0.45
58:BA:1830:C:H42	58:BA:1975:G:H1	1.63	0.45
58:BA:2134:A:H2'	58:BA:2134:A:N3	2.31	0.45
58:BA:2801:A:H3'	58:BA:2801:A:C8	2.52	0.45
4:CE:84:PHE:O	4:CE:86:ALA:N	2.49	0.45
5:CF:33:TYR:CG	5:CF:75:LEU:HD13	2.52	0.45
7:CH:115:SER:HB2	20:CA:640:A:N3	2.32	0.45
10:CK:79:SER:HA	10:CK:104:GLN:HB3	1.99	0.45
11:CL:83:VAL:CB	11:CL:100:ILE:HD13	2.44	0.45
11:CL:91:LYS:HE2	20:CA:526:C:OP2	2.16	0.45
12:CM:88:ARG:HA	12:CM:98:VAL:HG13	1.98	0.45
14:CO:24:SER:O	14:CO:28:GLN:HG3	2.17	0.45
15:CP:16:HIS:ND1	20:CA:625:G:H4'	2.31	0.45
20:CA:112:G:N2	20:CA:315:A:N1	2.55	0.45
20:CA:1324:A:H2'	20:CA:1325:C:H6	1.81	0.45
20:CA:1349:A:H2'	20:CA:1350:A:O4'	2.17	0.45
20:CA:1440(C):G:N2	38:DT:119:LYS:HB2	2.31	0.45
23:CY:90:PHE:CZ	60:CY:701:FUA:C12	2.99	0.45
23:CY:148:LEU:HD23	23:CY:149:VAL:HG23	1.99	0.45
23:CY:246:ILE:O	23:CY:250:THR:OG1	2.29	0.45
23:CY:526:VAL:CG2	23:CY:566:THR:HG23	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:122:PHE:CD2	26:DE:138:PRO:HA	2.52	0.45
26:DE:143:ASN:HD21	58:DA:2571:C:H2'	1.81	0.45
40:DV:6:LYS:O	40:DV:37:VAL:HG21	2.17	0.45
41:DW:14:PRO:O	41:DW:17:VAL:HG23	2.17	0.45
43:DY:35:TYR:HB3	43:DY:68:HIS:NE2	2.31	0.45
44:DZ:29:TYR:OH	59:DB:103:U:O2	2.32	0.45
44:DZ:118:GLN:O	44:DZ:120:ILE:N	2.48	0.45
46:D2:20:GLU:O	46:D2:24:LEU:HG	2.17	0.45
46:D2:38:GLN:O	46:D2:41:ILE:HG12	2.16	0.45
47:D3:51:ALA:O	47:D3:52:HIS:ND1	2.50	0.45
53:De:63:ILE:HG22	53:De:64:LEU:N	2.24	0.45
58:DA:137(B):G:O6	58:DA:139:G:O2'	2.29	0.45
58:DA:259:G:O2'	58:DA:621:A:O2'	2.33	0.45
58:DA:531:C:P	58:DA:561:G:H22	2.39	0.45
58:DA:907:U:H2'	58:DA:908:C:C6	2.52	0.45
58:DA:1487:G:H2'	58:DA:1488:G:H8	1.81	0.45
58:DA:1858:G:H1'	58:DA:1884:A:N6	2.30	0.45
58:DA:2292:C:H4'	58:DA:2375:G:O2'	2.16	0.45
58:DA:2400:G:H1	58:DA:2416:C:N4	2.14	0.45
58:DA:2487:G:H2'	58:DA:2488:A:C8	2.51	0.45
58:DA:2718:G:H21	58:DA:2847:U:H5'	1.81	0.45
58:DA:2849:U:N3	58:DA:2867:G:O4'	2.50	0.45
6:AG:93:PRO:HA	6:AG:96:GLN:HB2	1.98	0.45
7:AH:10:LEU:O	7:AH:13:ILE:HB	2.16	0.45
11:AL:90:VAL:HG22	11:AL:96:VAL:HG11	1.99	0.45
15:AP:19:ILE:HD11	15:AP:39:TYR:HB3	1.98	0.45
15:AP:29:ASP:OD2	15:AP:29:ASP:N	2.49	0.45
20:AA:599:C:H2'	20:AA:600:C:C6	2.51	0.45
20:AA:1339:A:H4'	21:AW:40:G:O2'	2.17	0.45
20:AA:1494:G:N2	58:BA:1912:A:N3	2.63	0.45
21:AW:11:C:H2'	21:AW:12:U:O4'	2.16	0.45
21:AW:50:C:N3	21:AW:64:G:N2	2.54	0.45
23:AY:422:GLU:O	23:AY:425:SER:HB2	2.17	0.45
23:AY:462:ILE:O	23:AY:466:LEU:HD13	2.16	0.45
25:BD:52:ARG:HH21	25:BD:220:HIS:HE2	1.63	0.45
32:BN:41:ASP:OD2	39:BU:100:VAL:HG13	2.15	0.45
32:BN:128:HIS:CE1	32:BN:134:ARG:CZ	3.00	0.45
37:BS:52:SER:HB2	37:BS:56:LEU:HB2	1.99	0.45
40:BV:97:LYS:HB3	40:BV:98:GLU:H	1.58	0.45
42:BX:31:HIS:ND1	42:BX:32:PRO:HD2	2.32	0.45
43:BY:6:HIS:HB3	43:BY:35:TYR:HE1	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B8:26:LYS:N	51:B8:47:LYS:HB2	2.31	0.45
58:BA:30:G:H2'	58:BA:31:C:H6	1.82	0.45
58:BA:108:U:P	58:BA:293:U:HO2'	2.40	0.45
58:BA:537:C:H2'	58:BA:539:G:H8	1.80	0.45
58:BA:589:C:H2'	58:BA:590:A:H8	1.81	0.45
58:BA:884:C:H2'	58:BA:885:C:O4'	2.17	0.45
58:BA:1028:A:N6	58:BA:1125:G:H2'	2.31	0.45
58:BA:2022:U:H1'	58:BA:2034:U:C4	2.51	0.45
58:BA:2513:G:H2'	58:BA:2514:U:C6	2.52	0.45
58:BA:2628:C:H1'	58:BA:2781:A:H2'	1.98	0.45
59:BB:13:A:H61	59:BB:69:G:HO2'	1.63	0.45
2:CC:7:PRO:O	2:CC:11:ARG:HG2	2.16	0.45
2:CC:43:LEU:HB3	2:CC:47:LEU:HD23	1.97	0.45
11:CL:114:LYS:O	11:CL:115:LYS:HB2	2.16	0.45
19:CT:84:LEU:O	19:CT:88:VAL:HG23	2.17	0.45
20:CA:612:C:H2'	20:CA:613:C:C6	2.52	0.45
20:CA:728:A:H2'	20:CA:729:A:C8	2.51	0.45
20:CA:951:G:H2'	20:CA:952:U:H6	1.81	0.45
20:CA:1422:G:H2'	20:CA:1423:G:H8	1.82	0.45
23:CY:201:ILE:HG12	23:CY:206:LEU:H	1.81	0.45
25:DD:106:ILE:O	25:DD:108:PRO:HD3	2.16	0.45
27:DF:38:ARG:NH2	58:DA:660:G:O3'	2.49	0.45
30:DJ:25:UNK:C	30:DJ:111:UNK:HA	2.46	0.45
31:DK:9:LYS:HD3	31:DK:9:LYS:H	1.82	0.45
33:DO:98:VAL:HG13	33:DO:117:LEU:HD13	1.99	0.45
34:DP:47:ASP:OD2	34:DP:49:ARG:NE	2.50	0.45
50:D7:20:ALA:O	50:D7:24:THR:HG22	2.16	0.45
51:D8:5:LYS:HA	58:DA:242:G:C8	2.51	0.45
56:D1:11:ARG:HB2	56:D1:12:PRO:HD2	1.99	0.45
58:DA:181:A:C6	58:DA:182:A:C6	3.04	0.45
58:DA:470:A:H2'	58:DA:471:A:O4'	2.16	0.45
58:DA:1363:C:H2'	58:DA:1364:G:C8	2.52	0.45
58:DA:2329:G:H2'	58:DA:2330:G:H8	1.81	0.45
58:DA:2704:C:H2'	58:DA:2705:A:O4'	2.16	0.45
2:AC:86:VAL:O	2:AC:90:GLU:HG3	2.17	0.45
2:AC:180:ALA:HB1	2:AC:203:PHE:CE1	2.52	0.45
4:AE:40:ARG:HH21	4:AE:66:MET:HG3	1.81	0.45
5:AF:50:TYR:OH	17:AR:74:ARG:O	2.29	0.45
12:AM:5:ALA:HB3	12:AM:8:GLU:HB2	1.99	0.45
14:AO:49:ASP:OD2	14:AO:52:SER:OG	2.31	0.45
17:AR:31:LEU:O	17:AR:69:THR:HG21	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:74:ARG:HG2	17:AR:79:LEU:HB3	1.98	0.45
20:AA:280:C:H3'	20:AA:281:G:H5'	1.98	0.45
20:AA:341:C:H2'	20:AA:342:C:H6	1.82	0.45
20:AA:1238:A:H2'	20:AA:1238:A:N3	2.31	0.45
20:AA:1422:G:N2	20:AA:1478:C:N3	2.51	0.45
23:AY:134:ALA:HB3	23:AY:258:VAL:HA	1.98	0.45
23:AY:380:LEU:C	23:AY:382:GLU:H	2.25	0.45
23:AY:550:MET:SD	23:AY:563:ILE:HD11	2.57	0.45
25:BD:84:TYR:CE2	25:BD:86:PRO:HD3	2.52	0.45
25:BD:86:PRO:HG3	58:BA:1567:A:H3'	1.98	0.45
26:BE:109:LYS:H	26:BE:109:LYS:HG3	1.59	0.45
27:BF:45:ARG:HB3	27:BF:97:TYR:CD2	2.51	0.45
28:BG:142:PRO:HB3	57:B4:33:VAL:HG21	1.98	0.45
34:BP:47:ASP:CG	34:BP:49:ARG:HE	2.25	0.45
35:BQ:4:PRO:HB3	58:BA:870:A:H4'	1.99	0.45
35:BQ:48:GLU:O	35:BQ:52:VAL:HG23	2.17	0.45
35:BQ:54:MET:HE2	35:BQ:54:MET:HB3	1.60	0.45
39:BU:53:ARG:NH1	58:BA:535:C:H4'	2.32	0.45
39:BU:79:PHE:C	39:BU:79:PHE:CD2	2.94	0.45
39:BU:99:ALA:HB2	39:BU:106:PHE:CE1	2.52	0.45
51:B8:56:GLU:O	51:B8:60:LEU:HG	2.16	0.45
52:B9:19:ARG:O	52:B9:21:GLY:N	2.50	0.45
58:BA:20:C:C2	58:BA:21:A:C8	3.05	0.45
58:BA:23:G:H1	58:BA:517:C:H42	1.63	0.45
58:BA:182:A:H2'	58:BA:183:C:H6	1.81	0.45
58:BA:1057:A:N7	58:BA:1086:A:H2'	2.32	0.45
3:CD:57:ARG:HG3	3:CD:206:PHE:HB2	1.99	0.45
4:CE:96:PRO:HA	4:CE:117:ASP:OD1	2.17	0.45
5:CF:14:LEU:HD23	5:CF:15:ASP:H	1.81	0.45
6:CG:22:LEU:HD21	6:CG:66:VAL:HG21	1.98	0.45
6:CG:78:ARG:HB3	6:CG:85:TYR:HB2	1.98	0.45
7:CH:15:ASN:O	7:CH:19:VAL:HG23	2.17	0.45
11:CL:45:PRO:CA	11:CL:92:ASP:HB3	2.47	0.45
11:CL:84:LEU:HD13	11:CL:104:VAL:CG1	2.47	0.45
12:CM:14:ARG:NH1	20:CA:1302:U:O4	2.49	0.45
14:CO:43:LEU:C	14:CO:45:VAL:H	2.24	0.45
20:CA:257:G:N2	20:CA:269:C:N3	2.52	0.45
23:CY:354:ARG:HB2	23:CY:354:ARG:NH2	2.31	0.45
24:DC:151:GLY:C	24:DC:154:ILE:H	2.25	0.45
26:DE:8:LYS:HA	26:DE:26:ILE:HG22	1.99	0.45
26:DE:119:ARG:HD2	26:DE:120:TRP:CD1	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:10:PRO:HG3	27:DF:19:GLU:HA	1.98	0.45
27:DF:51:THR:HG22	27:DF:52:LYS:O	2.17	0.45
27:DF:60:SER:HB3	27:DF:62:ARG:HG2	1.98	0.45
38:DT:49:VAL:O	38:DT:50:ILE:HG13	2.17	0.45
39:DU:65:ILE:HD11	39:DU:96:ALA:C	2.42	0.45
42:DX:64:LYS:HE2	42:DX:66:LEU:HD11	1.99	0.45
52:D9:10:ILE:HD11	52:D9:32:HIS:HB3	1.98	0.45
53:De:84:LEU:O	53:De:87:LYS:HG3	2.16	0.45
58:DA:971:C:H5"	58:DA:974(A):G:O2'	2.17	0.45
58:DA:1344:G:H4'	58:DA:1384:A:C5	2.51	0.45
58:DA:1434:A:H61	58:DA:1558:A:H61	1.65	0.45
58:DA:2079:U:H2'	58:DA:2080:G:O4'	2.16	0.45
1:AB:204:ASN:ND2	1:AB:206:ASP:HB2	2.25	0.45
3:AD:11:LEU:HB3	3:AD:66:ARG:NH1	2.31	0.45
3:AD:193:ASP:OD1	3:AD:193:ASP:N	2.50	0.45
8:AI:100:GLY:C	8:AI:102:LEU:H	2.25	0.45
20:AA:443:C:H2'	20:AA:444:C:C6	2.52	0.45
23:AY:83:ASP:O	23:AY:84:THR:HB	2.16	0.45
23:AY:110:SER:HB2	23:AY:138:LYS:HB2	1.99	0.45
24:BC:120:VAL:O	24:BC:121:MET:C	2.59	0.45
25:BD:115:GLN:NE2	25:BD:117:VAL:HG13	2.32	0.45
25:BD:147:LEU:HA	25:BD:185:VAL:CG1	2.47	0.45
26:BE:109:LYS:HE3	58:BA:2680:C:H5"	1.99	0.45
27:BF:34:TRP:O	27:BF:37:VAL:HB	2.16	0.45
27:BF:149:ASP:OD1	27:BF:152:GLU:HG2	2.17	0.45
28:BG:32:PRO:HB2	28:BG:163:ALA:HA	1.99	0.45
28:BG:86:MET:HE2	28:BG:86:MET:H	1.81	0.45
32:BN:2:LYS:O	32:BN:3:THR:C	2.60	0.45
46:B2:47:ASN:HB2	46:B2:48:HIS:H	1.56	0.45
49:B6:41:PRO:HG2	49:B6:43:CYS:O	2.16	0.45
53:Be:62:VAL:HG11	53:Be:92:LEU:HD22	1.98	0.45
58:BA:1418:G:OP1	58:BA:1588:C:O2'	2.35	0.45
58:BA:1692:U:O2'	58:BA:1693:U:H2'	2.17	0.45
58:BA:2118:U:H5"	58:BA:2119:A:OP1	2.17	0.45
58:BA:2795:G:H3'	58:BA:2797:U:C5'	2.47	0.45
7:CH:94:TYR:CG	20:CA:598:U:H4'	2.52	0.45
9:CJ:27:ALA:HB3	9:CJ:34:VAL:HG21	1.98	0.45
16:CQ:55:ASP:O	16:CQ:57:VAL:HG13	2.17	0.45
20:CA:620:C:H2'	20:CA:621:A:O4'	2.17	0.45
23:CY:5:VAL:O	23:CY:7:TYR:N	2.50	0.45
23:CY:380:LEU:HD23	23:CY:383:THR:HB	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:540:PRO:O	23:CY:544:LYS:HD3	2.16	0.45
27:DF:9:ILE:HG23	27:DF:10:PRO:N	2.32	0.45
27:DF:154:VAL:O	27:DF:156:LEU:N	2.50	0.45
27:DF:154:VAL:C	27:DF:174:VAL:O	2.60	0.45
30:DJ:23:UNK:N	30:DJ:119:UNK:HA	2.32	0.45
32:DN:19:GLU:C	32:DN:21:LYS:H	2.24	0.45
32:DN:95:PRO:C	32:DN:97:ARG:H	2.24	0.45
33:DO:64:ARG:HH12	38:DT:69:GLY:HA3	1.81	0.45
37:DS:37:ALA:HB1	37:DS:101:LEU:HD21	1.99	0.45
38:DT:51:ARG:HB3	38:DT:62:THR:CG2	2.47	0.45
41:DW:99:ARG:NH1	58:DA:1262:A:OP1	2.50	0.45
42:DX:25:LYS:HG2	42:DX:82:GLN:HB2	1.99	0.45
43:DY:47:LYS:HD2	58:DA:481:G:OP2	2.17	0.45
44:DZ:85:HIS:NE2	59:DB:75:G:O2'	2.34	0.45
49:D6:48:VAL:O	49:D6:49:HIS:HB2	2.17	0.45
51:D8:18:ALA:HB3	58:DA:628:G:H5"	1.99	0.45
58:DA:189:G:H2'	58:DA:205:G:N2	2.32	0.45
58:DA:239:U:H4'	58:DA:621:A:C2	2.52	0.45
58:DA:259:G:H2'	58:DA:260:G:H8	1.81	0.45
58:DA:304:G:H2'	58:DA:305:U:O4'	2.16	0.45
58:DA:415:A:N1	58:DA:2408:U:O2	2.50	0.45
58:DA:568:U:H2'	58:DA:570:G:C8	2.52	0.45
58:DA:1127:A:N7	58:DA:2489:G:H5'	2.32	0.45
58:DA:1139:G:O2'	58:DA:1143:A:N1	2.28	0.45
58:DA:1530:G:N2	58:DA:1542:G:OP1	2.49	0.45
58:DA:1588:C:H2'	58:DA:1589:C:H6	1.81	0.45
58:DA:2052:G:O6	58:DA:2617:C:N3	2.50	0.45
58:DA:2583:G:N1	58:DA:2584:U:O2	2.50	0.45
58:DA:2706:G:H5'	58:DA:2852:G:P	2.57	0.45
59:DB:57:A:H2'	59:DB:58:A:H8	1.82	0.45
1:AB:166:ASP:O	1:AB:168:THR:N	2.50	0.45
2:AC:77:ILE:HG22	2:AC:81:GLY:HA2	1.99	0.45
5:AF:53:ALA:C	5:AF:55:ASP:H	2.24	0.45
10:AK:47:VAL:HA	20:AA:688:G:H5'	1.98	0.45
11:AL:76:ASN:HD21	11:AL:107:ALA:HA	1.82	0.45
15:AP:67:THR:H	15:AP:70:ALA:HB3	1.82	0.45
20:AA:259:G:H2'	20:AA:260:G:O4'	2.15	0.45
23:AY:603:GLU:HG2	23:AY:679:VAL:HG13	1.99	0.45
23:AY:604:PRO:HA	23:AY:676:TYR:HB3	1.98	0.45
25:BD:62:TYR:HE1	58:BA:1816:G:N7	2.14	0.45
25:BD:227:ASN:CG	25:BD:230:ASP:HB2	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:231:HIS:O	25:BD:233:HIS:N	2.50	0.45
26:BE:13:ARG:N	26:BE:23:VAL:HG22	2.32	0.45
29:BH:33:LEU:HD22	29:BH:79:VAL:HG13	1.99	0.45
30:BJ:39:UNK:O	30:BJ:42:UNK:N	2.50	0.45
32:BN:25:ARG:O	32:BN:28:THR:HB	2.17	0.45
32:BN:65:LYS:HZ3	58:BA:1021:A:H5'	1.80	0.45
34:BP:41:ARG:HH11	34:BP:45:LEU:HD22	1.82	0.45
34:BP:67:MET:H	58:BA:2415:G:H4'	1.81	0.45
37:BS:71:ARG:HG3	37:BS:103:GLU:OE2	2.17	0.45
44:BZ:183:LEU:O	44:BZ:186:GLU:HB3	2.17	0.45
48:B5:25:LEU:HD22	48:B5:26:THR:H	1.82	0.45
49:B6:7:ILE:HD13	49:B6:7:ILE:HA	1.77	0.45
56:B1:13:ILE:HG13	56:B1:17:SER:CB	2.46	0.45
58:BA:151:C:H42	58:BA:175:G:H1	1.63	0.45
58:BA:463:G:N2	58:BA:466:A:OP2	2.50	0.45
58:BA:755:C:H2'	58:BA:756:C:C6	2.51	0.45
58:BA:839:U:H2'	58:BA:840:C:H6	1.80	0.45
58:BA:909:A:H2'	58:BA:912:C:C5	2.52	0.45
58:BA:1375:C:H2'	58:BA:1376:C:H6	1.78	0.45
58:BA:2292:C:H4'	58:BA:2375:G:O2'	2.17	0.45
58:BA:2319:G:H4'	58:BA:2320:A:OP1	2.17	0.45
59:BB:28:C:H42	59:BB:56:G:H1	1.65	0.45
1:CB:163:PHE:HD2	1:CB:163:PHE:HA	1.60	0.45
2:CC:7:PRO:CG	2:CC:201:TYR:HE2	2.30	0.45
6:CG:4:ARG:HG2	20:CA:932:C:OP1	2.17	0.45
7:CH:96:GLY:O	7:CH:100:ILE:HG13	2.17	0.45
9:CJ:16:LEU:HD13	9:CJ:17:ASP:N	2.32	0.45
10:CK:31:THR:HA	10:CK:42:TRP:HA	1.98	0.45
14:CO:26:GLU:H	14:CO:26:GLU:HG2	1.50	0.45
15:CP:28:ARG:O	15:CP:28:ARG:NE	2.40	0.45
16:CQ:67:LYS:HE2	20:CA:266:G:C8	2.52	0.45
18:CS:49:ILE:HD11	18:CS:62:ILE:HB	1.99	0.45
18:CS:71:LEU:C	18:CS:73:GLU:H	2.20	0.45
20:CA:101:A:H2'	20:CA:102:G:C8	2.47	0.45
20:CA:358:U:H5"	23:CY:381:LYS:HZ1	1.83	0.45
20:CA:946:A:O2'	20:CA:1333:A:N3	2.42	0.45
20:CA:949:A:H2'	20:CA:950:U:C6	2.52	0.45
20:CA:955:U:H2'	20:CA:956:U:O4'	2.16	0.45
24:DC:4:HIS:HB3	58:DA:2175:C:OP1	2.17	0.45
25:DD:63:ARG:CZ	25:DD:86:PRO:HD2	2.47	0.45
25:DD:78:LYS:CE	58:DA:1502:C:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:102:VAL:HB	26:DE:199:ARG:O	2.17	0.45
29:DH:101:ARG:HG3	29:DH:117:PRO:HG2	1.99	0.45
32:DN:25:ARG:O	32:DN:28:THR:HB	2.17	0.45
32:DN:100:GLU:O	32:DN:101:HIS:C	2.60	0.45
33:DO:25:LEU:HB3	33:DO:38:VAL:HG21	1.99	0.45
36:DR:103:ARG:HB3	36:DR:108:GLY:HA2	1.99	0.45
36:DR:105:ARG:HD3	36:DR:105:ARG:HA	1.79	0.45
41:DW:40:ASN:O	41:DW:41:LYS:HG2	2.17	0.45
46:D2:21:LEU:O	46:D2:25:VAL:HG23	2.16	0.45
48:D5:6:VAL:HG13	58:DA:2015:A:N3	2.32	0.45
56:D1:20:ARG:O	56:D1:21:ARG:HB2	2.17	0.45
58:DA:388:G:H5'	58:DA:389:G:OP2	2.17	0.45
58:DA:449:A:H2'	58:DA:450:G:O4'	2.17	0.45
58:DA:475:U:O2'	58:DA:505:A:O2'	2.33	0.45
58:DA:487:C:H2'	58:DA:488:G:O4'	2.17	0.45
58:DA:531:C:H4'	58:DA:532:A:O5'	2.17	0.45
58:DA:756:C:C4	58:DA:757:U:C4	3.05	0.45
58:DA:1007:C:O2	58:DA:1136:G:N1	2.35	0.45
58:DA:1210:A:O5'	58:DA:1212:G:H5'	2.17	0.45
58:DA:1363:C:H2'	58:DA:1364:G:H8	1.81	0.45
58:DA:1871:A:H2'	58:DA:1872:A:C8	2.52	0.45
58:DA:2426:A:H3'	58:DA:2427:C:H5"	1.97	0.45
58:DA:2503:A:O2'	58:DA:2505:G:OP2	2.33	0.45
58:DA:2789:C:H1'	58:DA:2892:A:H2	1.82	0.45
6:AG:15:ASP:HB2	6:AG:20:ASP:O	2.17	0.44
7:AH:95:VAL:HG12	7:AH:99:GLU:HB3	1.98	0.44
11:AL:82:VAL:O	11:AL:82:VAL:HG12	2.16	0.44
11:AL:104:VAL:HG12	11:AL:105:TYR:HD1	1.82	0.44
12:AM:19:LEU:HD12	12:AM:25:ILE:HD13	1.98	0.44
14:AO:39:LEU:HD22	14:AO:42:HIS:HB3	1.98	0.44
20:AA:451:A:C6	20:AA:480:U:H2'	2.52	0.44
20:AA:751:U:H3'	20:AA:752:G:C8	2.52	0.44
20:AA:1424:C:H2'	20:AA:1425:U:C6	2.52	0.44
23:AY:319:ASP:HB3	23:AY:323:GLY:O	2.17	0.44
23:AY:487:ILE:HB	23:AY:597:GLY:O	2.17	0.44
24:BC:169:THR:C	24:BC:171:ALA:N	2.74	0.44
25:BD:148:GLU:O	25:BD:151:LYS:HG2	2.18	0.44
27:BF:154:VAL:HG13	27:BF:191:ARG:HB2	1.99	0.44
28:BG:101:ILE:HG21	57:B4:25:TYR:O	2.17	0.44
28:BG:113:ARG:NE	28:BG:113:ARG:CA	2.80	0.44
29:BH:27:LYS:HG2	29:BH:28:GLY:N	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BP:40:SER:O	34:BP:40:SER:OG	2.30	0.44
34:BP:59:LEU:HA	34:BP:61:ARG:CZ	2.47	0.44
35:BQ:110:THR:HG22	35:BQ:111:GLU:H	1.82	0.44
46:B2:17:SER:HA	46:B2:18:PRO:HD2	1.71	0.44
48:B5:23:HIS:HB3	48:B5:24:ALA:H	1.51	0.44
58:BA:317:G:H2'	58:BA:318:C:H6	1.82	0.44
58:BA:682:G:H2'	58:BA:683:C:C6	2.51	0.44
58:BA:776:G:H1	58:BA:2072:G:H5"	1.82	0.44
58:BA:832:G:H2'	58:BA:833:U:C5	2.52	0.44
58:BA:934:G:H2'	58:BA:935:C:H6	1.82	0.44
58:BA:1016:G:H1	58:BA:1146:C:H42	1.65	0.44
58:BA:1586:A:H3'	58:BA:1587:A:H8	1.82	0.44
58:BA:1811:G:H2'	58:BA:1812:A:C8	2.51	0.44
58:BA:2055:C:H4'	58:BA:2056:G:H5"	1.99	0.44
58:BA:2096:U:H2'	58:BA:2097:C:H6	1.82	0.44
58:BA:2869:G:H2'	58:BA:2870:C:C6	2.52	0.44
58:BA:2886:G:H2'	58:BA:2887:U:C6	2.52	0.44
59:BB:105:G:H2'	59:BB:106:G:H8	1.80	0.44
1:CB:71:VAL:CG2	1:CB:164:VAL:HG22	2.48	0.44
1:CB:134:GLU:OE2	1:CB:137:ARG:NH2	2.50	0.44
1:CB:218:ALA:O	1:CB:221:LEU:HB3	2.17	0.44
3:CD:165:MET:HE1	3:CD:178:VAL:HG22	1.99	0.44
4:CE:101:ILE:HD11	4:CE:119:LEU:HD22	1.99	0.44
6:CG:29:LYS:HE3	6:CG:101:LEU:HD11	1.99	0.44
7:CH:6:ILE:O	7:CH:10:LEU:HG	2.18	0.44
8:CI:126:SER:O	8:CI:127:LYS:HB3	2.17	0.44
11:CL:58:VAL:HG21	11:CL:85:ILE:HD11	1.98	0.44
13:CN:6:LEU:HB3	13:CN:23:ARG:NH2	2.32	0.44
15:CP:54:GLU:H	15:CP:54:GLU:HG2	1.40	0.44
20:CA:669:U:H2'	20:CA:670:G:H8	1.77	0.44
20:CA:993:G:C5	20:CA:1046:A:C2	3.05	0.44
20:CA:1295:G:O2'	20:CA:1302:U:O4	2.31	0.44
20:CA:1362:C:O2'	20:CA:1362(A):C:O4'	2.34	0.44
20:CA:1423:G:H2'	20:CA:1424:C:H6	1.81	0.44
23:CY:219:VAL:C	23:CY:221:ALA:N	2.75	0.44
23:CY:274:ASP:HA	23:CY:277:VAL:HG12	1.98	0.44
25:DD:44:ASN:CG	25:DD:45:ASN:N	2.74	0.44
26:DE:32:PRO:O	26:DE:49:LEU:HA	2.16	0.44
26:DE:119:ARG:HB3	26:DE:120:TRP:H	1.53	0.44
27:DF:132:VAL:O	27:DF:133:ASN:HB2	2.17	0.44
32:DN:37:LYS:HE2	32:DN:37:LYS:HB3	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DN:137:LYS:HZ3	32:DN:137:LYS:CA	2.28	0.44
36:DR:5:LYS:HE3	58:DA:2820:A:O3'	2.18	0.44
39:DU:83:LEU:HD21	39:DU:91:ASP:OD2	2.16	0.44
39:DU:102:GLU:HB3	39:DU:104:GLN:NE2	2.31	0.44
41:DW:11:ARG:NH2	41:DW:98:LYS:HB3	2.32	0.44
41:DW:12:ILE:HD12	41:DW:12:ILE:H	1.82	0.44
44:DZ:151:HIS:HB2	44:DZ:152:ALA:H	1.42	0.44
46:D2:28:LYS:HD2	46:D2:53:LEU:HD11	1.98	0.44
46:D2:55:ARG:O	46:D2:59:ARG:HG3	2.17	0.44
52:D9:16:VAL:HG13	52:D9:23:VAL:HG13	1.99	0.44
58:DA:270(C):A:H3'	58:DA:270(D):C:C6	2.52	0.44
58:DA:547:A:H3'	58:DA:548:A:C8	2.52	0.44
58:DA:573:G:N1	58:DA:2031:A:OP2	2.44	0.44
58:DA:767:U:O2'	58:DA:1622:G:H4'	2.17	0.44
58:DA:868:U:H3	58:DA:909:A:N6	2.13	0.44
58:DA:1003:G:H1	58:DA:1152:C:N4	2.10	0.44
58:DA:1497:U:O2'	58:DA:1498:C:OP1	2.32	0.44
58:DA:1539:G:C6	58:DA:1540:G:C5	3.05	0.44
58:DA:1700:A:H3'	58:DA:1701:A:C8	2.52	0.44
58:DA:2254:C:H2'	58:DA:2255:G:C8	2.52	0.44
58:DA:2347:C:N3	58:DA:2370:G:O6	2.50	0.44
58:DA:2655:G:N2	58:DA:2665:A:OP2	2.48	0.44
58:DA:2731:G:H2'	58:DA:2732:G:C8	2.52	0.44
2:AC:22:TRP:CH2	13:AN:54:PRO:HG2	2.52	0.44
10:AK:114:VAL:HG13	20:AA:675:A:O2'	2.17	0.44
11:AL:95:GLY:HA2	11:AL:97:ARG:HD2	1.98	0.44
20:AA:310:G:H2'	20:AA:311:C:H6	1.81	0.44
20:AA:1307:U:H3	20:AA:1330:U:H3	1.65	0.44
20:AA:1528:U:O2'	20:AA:1530:G:H5'	2.17	0.44
23:AY:92:ILE:HG22	23:AY:454:MET:HE1	1.99	0.44
25:BD:59:LYS:HA	25:BD:59:LYS:HD2	1.86	0.44
25:BD:218:ARG:NH1	58:BA:691:C:H5'	2.33	0.44
26:BE:4:ILE:HG12	26:BE:95:ILE:HG13	1.99	0.44
26:BE:21:VAL:HG12	26:BE:185:LYS:HE2	1.99	0.44
26:BE:120:TRP:CD2	26:BE:155:LYS:HB3	2.53	0.44
26:BE:144:ARG:HD2	58:BA:2572:A:C8	2.52	0.44
28:BG:56:ALA:O	28:BG:59:GLU:HG2	2.16	0.44
33:BO:103:ALA:HB1	33:BO:105:GLU:OE1	2.17	0.44
34:BP:88:LEU:HD21	34:BP:123:LEU:HD21	1.99	0.44
35:BQ:25:ASP:HB3	35:BQ:100:GLY:O	2.18	0.44
37:BS:42:ASP:C	37:BS:45:GLY:H	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BV:97:LYS:HD3	40:BV:97:LYS:HA	1.61	0.44
41:BW:17:VAL:HB	41:BW:76:VAL:HG21	1.98	0.44
42:BX:38:GLU:O	42:BX:41:ASN:HB2	2.16	0.44
42:BX:55:ASN:HB3	58:BA:1341:U:H1'	2.00	0.44
58:BA:184:C:O3'	58:BA:217:G:N2	2.46	0.44
58:BA:198:C:O5'	58:BA:198:C:H6	2.00	0.44
58:BA:419:C:H2'	58:BA:420:C:C6	2.52	0.44
58:BA:757:U:H2'	58:BA:758:C:O4'	2.17	0.44
58:BA:1439:A:H62	58:BA:1552:G:H21	1.66	0.44
58:BA:2808:U:N3	58:BA:2809:A:N7	2.66	0.44
11:CL:38:THR:HG22	11:CL:57:LYS:HB2	1.97	0.44
13:CN:47:LEU:HD23	13:CN:47:LEU:HA	1.81	0.44
14:CO:43:LEU:O	14:CO:45:VAL:N	2.49	0.44
19:CT:78:ALA:O	19:CT:82:SER:OG	2.34	0.44
19:CT:89:ARG:HD3	20:CA:186(B):C:H5'	1.99	0.44
20:CA:234:C:H2'	20:CA:235:C:O4'	2.17	0.44
20:CA:923:A:H1'	20:CA:1398:A:C2	2.53	0.44
20:CA:1243:C:H2'	20:CA:1244:C:H6	1.82	0.44
22:CV:6:G:H2'	22:CV:7:G:H8	1.80	0.44
23:CY:30:GLU:O	23:CY:33:LEU:HB2	2.17	0.44
23:CY:178:ILE:HD13	23:CY:179:ASP:H	1.81	0.44
23:CY:487:ILE:HB	23:CY:597:GLY:O	2.17	0.44
25:DD:68:LYS:C	25:DD:70:TRP:H	2.25	0.44
26:DE:63:LEU:HB2	26:DE:65:GLY:H	1.81	0.44
26:DE:94:GLU:OE1	26:DE:177:PRO:HB3	2.17	0.44
28:DG:4:ASP:OD1	28:DG:9:ARG:HB2	2.17	0.44
32:DN:1:MET:O	32:DN:2:LYS:HB2	2.18	0.44
32:DN:78:TYR:HA	32:DN:79:PRO:HD3	1.85	0.44
42:DX:62:LYS:NZ	58:DA:1338:G:O6	2.46	0.44
46:D2:48:HIS:CG	46:D2:49:LYS:H	2.35	0.44
56:D1:54:ALA:HB2	56:D1:82:LEU:HD22	1.99	0.44
58:DA:13:A:O4'	58:DA:526:A:N6	2.50	0.44
58:DA:207:A:H2'	58:DA:208:C:O4'	2.17	0.44
58:DA:239:U:H2'	58:DA:240:G:O4'	2.17	0.44
58:DA:270(D):C:H2'	58:DA:270(E):C:H6	1.82	0.44
58:DA:565:C:H4'	58:DA:1253:A:C6	2.53	0.44
58:DA:645:C:H5'	58:DA:646:A:H2	1.82	0.44
58:DA:878:A:H3'	58:DA:879:G:H8	1.81	0.44
58:DA:950:G:H2'	58:DA:951:C:C6	2.51	0.44
58:DA:1632:A:C6	58:DA:1633:G:C6	3.06	0.44
58:DA:1848:A:H2'	58:DA:1849:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1858:G:H1'	58:DA:1884:A:H61	1.81	0.44
58:DA:2572:A:OP1	58:DA:2574:G:H4'	2.16	0.44
58:DA:2630:G:H2'	58:DA:2631:G:C8	2.52	0.44
1:AB:118:LEU:HB3	1:AB:142:LEU:HG	1.99	0.44
3:AD:59:ARG:HH11	3:AD:59:ARG:HA	1.81	0.44
4:AE:110:LEU:O	4:AE:115:VAL:HG23	2.18	0.44
4:AE:147:ASP:HA	4:AE:150:ARG:HG3	1.99	0.44
20:AA:22:G:H4'	20:AA:885:G:C8	2.53	0.44
20:AA:134:A:H2'	20:AA:135:C:C6	2.52	0.44
20:AA:537:G:H2'	20:AA:538:G:C8	2.53	0.44
20:AA:752:G:H1'	20:AA:754:C:H41	1.81	0.44
20:AA:836:G:C6	20:AA:851:G:C5	3.05	0.44
20:AA:971:G:OP1	20:AA:971:G:H3'	2.17	0.44
20:AA:1050:G:O6	20:AA:1208:C:N3	2.50	0.44
20:AA:1204:A:H3'	20:AA:1205:U:C6	2.53	0.44
24:BC:65:LEU:HA	24:BC:66:PRO:HD2	1.76	0.44
25:BD:22:SER:C	25:BD:24:ILE:H	2.25	0.44
25:BD:77:ALA:HA	25:BD:97:TYR:HA	2.00	0.44
25:BD:177:LEU:HD22	58:BA:1799:G:C6	2.52	0.44
26:BE:47:VAL:O	26:BE:80:GLU:HA	2.17	0.44
26:BE:74:PRO:HB2	26:BE:75:VAL:H	1.49	0.44
27:BF:126:VAL:HG21	27:BF:142:TRP:CZ2	2.51	0.44
27:BF:155:LEU:HG	27:BF:176:LEU:HB3	2.00	0.44
29:BH:116:GLU:HA	29:BH:117:PRO:HD2	1.86	0.44
33:BO:12:ASP:N	33:BO:12:ASP:OD2	2.50	0.44
33:BO:31:LYS:HD3	58:BA:2548:G:H4'	1.99	0.44
34:BP:64:LYS:HD2	34:BP:64:LYS:HA	1.71	0.44
36:BR:13:HIS:H	36:BR:16:HIS:HB3	1.83	0.44
36:BR:61:HIS:NE2	58:BA:2870:C:H5'	2.32	0.44
37:BS:15:ARG:HA	37:BS:15:ARG:HD3	1.84	0.44
37:BS:39:ILE:HD13	37:BS:73:LEU:HD11	1.99	0.44
37:BS:47:THR:O	37:BS:48:LEU:HB2	2.16	0.44
38:BT:58:ASN:HD22	38:BT:58:ASN:N	2.06	0.44
41:BW:53:SER:OG	58:BA:487:C:O2	2.20	0.44
41:BW:79:GLY:C	58:BA:25:U:H4'	2.42	0.44
45:B0:52:GLY:O	45:B0:59:LEU:HA	2.18	0.44
47:B3:8:LEU:HB2	47:B3:28:LEU:HD12	1.99	0.44
51:B8:38:GLY:O	51:B8:42:ARG:HD2	2.17	0.44
58:BA:198:C:H2'	58:BA:199:A:H5"	2.00	0.44
58:BA:514:A:H2'	58:BA:515:A:H8	1.82	0.44
58:BA:690:G:O2'	58:BA:780:G:OP1	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:692:C:H42	58:BA:770:G:H1	1.64	0.44
58:BA:947:G:H1	58:BA:970:C:H42	1.65	0.44
58:BA:1025:G:H8	58:BA:1025:G:OP1	2.00	0.44
58:BA:1914:C:H5	58:BA:1915:U:O2	1.99	0.44
58:BA:2183:C:H2'	58:BA:2184:G:H8	1.82	0.44
58:BA:2314:C:H2'	58:BA:2315:G:C8	2.52	0.44
58:BA:2386:C:H2'	58:BA:2387:U:C6	2.52	0.44
58:BA:2657:A:H2'	58:BA:2658:C:O4'	2.17	0.44
1:CB:52:GLU:O	1:CB:56:ARG:HG2	2.18	0.44
1:CB:175:ARG:NH2	20:CA:1076:C:H5'	2.31	0.44
3:CD:105:VAL:HG21	3:CD:126:ILE:HG13	1.98	0.44
4:CE:81:GLU:OE1	4:CE:81:GLU:N	2.49	0.44
8:CI:93:ARG:HD2	8:CI:102:LEU:HD11	1.99	0.44
9:CJ:64:GLU:O	13:CN:56:VAL:HA	2.17	0.44
10:CK:57:THR:O	10:CK:60:ALA:HB3	2.18	0.44
19:CT:14:LYS:HA	19:CT:17:ARG:HE	1.82	0.44
20:CA:186:C:H2'	20:CA:186(A):C:C6	2.52	0.44
20:CA:919:A:HO2'	20:CA:1080:A:N6	2.14	0.44
24:DC:113:ALA:H	24:DC:137:LEU:HD22	1.81	0.44
24:DC:139:PRO:O	24:DC:145:THR:OG1	2.28	0.44
26:DE:21:VAL:HA	26:DE:22:PRO:HD2	1.73	0.44
26:DE:52:LEU:O	26:DE:75:VAL:HG12	2.17	0.44
27:DF:180:GLY:HA3	58:DA:616:A:C4	2.53	0.44
28:DG:62:LEU:HD12	57:D4:7:PRO:HG3	1.99	0.44
29:DH:85:LYS:HE3	29:DH:141:VAL:HG13	1.97	0.44
37:DS:35:ILE:HG22	37:DS:53:SER:N	2.32	0.44
37:DS:71:ARG:O	37:DS:74:ALA:HB3	2.18	0.44
37:DS:84:GLN:HA	37:DS:106:ARG:HG2	1.99	0.44
39:DU:26:GLY:O	39:DU:29:SER:OG	2.35	0.44
42:DX:88:LYS:HE2	42:DX:88:LYS:HB3	1.80	0.44
44:DZ:23:LYS:HD3	44:DZ:38:TYR:CE1	2.52	0.44
58:DA:132:G:H1	58:DA:147:U:H3	1.65	0.44
58:DA:786:C:H5"	58:DA:1780:A:N7	2.33	0.44
58:DA:841:A:H61	58:DA:937:U:H3	1.65	0.44
58:DA:1299:G:H2'	58:DA:1640:C:H41	1.83	0.44
58:DA:1299:G:H5'	58:DA:1301:A:O4'	2.17	0.44
58:DA:1678:G:H2'	58:DA:1679:U:H6	1.81	0.44
58:DA:1788:C:H2'	58:DA:1789:A:O4'	2.18	0.44
58:DA:1878:G:H2'	58:DA:1879:C:C6	2.53	0.44
58:DA:2038:G:H2'	58:DA:2039:C:H5'	2.00	0.44
58:DA:2467:C:H2'	58:DA:2468:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:2478:A:H2'	58:DA:2479:G:H5'	1.99	0.44
58:DA:2557:G:H2'	58:DA:2558:C:H6	1.81	0.44
58:DA:2712:U:H1'	58:DA:712(B):A:C8	2.52	0.44
1:AB:76:GLN:CD	1:AB:76:GLN:H	2.25	0.44
3:AD:31:CYS:C	3:AD:33:MET:H	2.24	0.44
3:AD:49:ARG:HB3	3:AD:50:ARG:H	1.61	0.44
20:AA:25:C:H5'	20:AA:524:G:H1'	1.99	0.44
20:AA:163:C:H2'	20:AA:164:U:H6	1.83	0.44
20:AA:242:C:H2'	20:AA:245:C:C5	2.52	0.44
20:AA:264:U:H2'	20:AA:265:G:O4'	2.17	0.44
20:AA:293:G:H4'	20:AA:609:A:N1	2.33	0.44
20:AA:729:A:H2'	20:AA:730:G:C8	2.52	0.44
20:AA:1056:U:H3	20:AA:1204:A:H61	1.65	0.44
20:AA:1346:A:H61	20:AA:1374:A:H3'	1.82	0.44
20:AA:1394:A:N7	20:AA:1501:C:H4'	2.32	0.44
20:AA:1435:G:H2'	20:AA:1436:U:H6	1.83	0.44
23:AY:95:GLU:HB3	23:AY:99:ARG:HH21	1.81	0.44
25:BD:206:LEU:O	25:BD:211:ARG:HD3	2.18	0.44
27:BF:60:SER:OG	58:BA:469:G:OP1	2.29	0.44
33:BO:88:ASN:C	33:BO:90:GLN:H	2.26	0.44
37:BS:87:PHE:CE2	37:BS:92:TYR:HB2	2.52	0.44
44:BZ:15:PRO:O	44:BZ:19:ARG:HG3	2.17	0.44
44:BZ:120:ILE:HD12	44:BZ:170:THR:O	2.18	0.44
44:BZ:128:VAL:HG21	44:BZ:134:PRO:HD3	1.99	0.44
51:B8:6:THR:HG21	58:BA:243:U:OP1	2.17	0.44
56:B1:20:ARG:HG3	56:B1:21:ARG:N	2.32	0.44
58:BA:49:A:H5"	58:BA:51:G:O4'	2.17	0.44
58:BA:435:C:H2'	58:BA:436:C:H5'	1.98	0.44
58:BA:1156:A:H8	58:BA:1156:A:OP1	2.00	0.44
58:BA:1175:U:H2'	58:BA:1176:G:N7	2.32	0.44
58:BA:1208:C:H2'	58:BA:1209:G:C8	2.52	0.44
58:BA:1260:G:H2'	58:BA:1261:C:C6	2.52	0.44
58:BA:1308:A:N6	58:BA:1606:G:H1'	2.32	0.44
58:BA:1696:G:H2'	58:BA:1697:G:O4'	2.17	0.44
58:BA:2460:U:H2'	58:BA:2461:C:O4'	2.17	0.44
58:BA:2472:G:N2	58:BA:2478:A:H62	2.02	0.44
58:BA:2540:C:H2'	58:BA:2541:A:O4'	2.17	0.44
58:BA:2819:G:H2'	58:BA:2821:A:N7	2.32	0.44
59:BB:78:A:H2'	59:BB:79:C:O4'	2.17	0.44
3:CD:103:ASN:HA	3:CD:106:TYR:HB3	2.00	0.44
4:CE:57:LYS:NZ	4:CE:57:LYS:HB3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:37:ARG:HG2	7:CH:38:ILE:N	2.32	0.44
15:CP:71:ARG:NH1	15:CP:71:ARG:HB2	2.31	0.44
18:CS:29:ARG:HH11	18:CS:48:THR:HG21	1.82	0.44
18:CS:79:THR:HB	20:CA:957:U:H5"	1.99	0.44
20:CA:132:C:H2'	20:CA:133:U:H6	1.83	0.44
20:CA:864:A:H2'	20:CA:865:A:C8	2.53	0.44
26:DE:119:ARG:HD2	26:DE:120:TRP:NE1	2.32	0.44
26:DE:153:GLY:C	26:DE:155:LYS:H	2.25	0.44
27:DF:172:TRP:CD2	27:DF:173:VAL:HG23	2.53	0.44
29:DH:87:LEU:HD13	29:DH:148:ILE:HB	1.99	0.44
37:DS:18:ILE:C	37:DS:20:ARG:H	2.26	0.44
58:DA:381:G:O5'	58:DA:381:G:H8	1.99	0.44
58:DA:677:A:O2'	58:DA:2071:A:H5'	2.16	0.44
58:DA:729:G:O2'	58:DA:763:G:H4'	2.18	0.44
58:DA:761:A:O5'	58:DA:761:A:H8	2.00	0.44
58:DA:1299:G:C2'	58:DA:1640:C:H41	2.30	0.44
58:DA:1850:G:H2'	58:DA:1851:U:O4'	2.18	0.44
58:DA:2642:G:H2'	58:DA:2643:G:C8	2.52	0.44
1:AB:77:ALA:HA	1:AB:211:ILE:HG21	2.00	0.44
3:AD:5:ILE:HG13	3:AD:115:ARG:HH11	1.83	0.44
3:AD:14:ARG:O	3:AD:39:PRO:HG3	2.18	0.44
3:AD:19:LEU:O	3:AD:20:TYR:C	2.59	0.44
3:AD:29:PRO:O	3:AD:30:LYS:HB3	2.18	0.44
5:AF:87:ARG:CZ	20:AA:673:G:H4'	2.48	0.44
5:AF:98:LEU:CB	17:AR:30:ASP:HA	2.47	0.44
8:AI:69:GLY:O	8:AI:73:GLN:HG3	2.17	0.44
8:AI:75:ASP:O	8:AI:78:LYS:HB3	2.18	0.44
9:AJ:13:HIS:HA	9:AJ:16:LEU:HB3	2.00	0.44
10:AK:91:ARG:O	10:AK:95:ILE:HG13	2.18	0.44
14:AO:57:LEU:HD11	20:AA:580:U:O2'	2.17	0.44
17:AR:60:ALA:HB2	20:AA:834:C:H5"	1.99	0.44
19:AT:59:ALA:O	19:AT:63:ILE:HG13	2.17	0.44
20:AA:359:U:OP1	23:AY:324:ARG:N	2.34	0.44
20:AA:633:G:H2'	20:AA:634:C:C6	2.52	0.44
20:AA:1107:C:C4	20:AA:1108:G:C8	3.05	0.44
24:BC:80:LYS:O	24:BC:82:GLU:N	2.51	0.44
25:BD:133:LEU:HB2	25:BD:187:GLY:HA2	1.99	0.44
25:BD:157:ARG:NH2	58:BA:1817:G:H3'	2.33	0.44
25:BD:261:LYS:HG2	25:BD:263:ARG:H	1.82	0.44
26:BE:25:VAL:HA	26:BE:182:LEU:O	2.18	0.44
26:BE:59:VAL:HG13	26:BE:60:ASN:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BK:77:LEU:HD12	31:BK:111:LYS:HD2	2.00	0.44
32:BN:53:VAL:HG11	32:BN:128:HIS:CB	2.47	0.44
38:BT:49:VAL:HG23	38:BT:63:VAL:HG22	1.99	0.44
41:BW:11:ARG:CZ	41:BW:12:ILE:H	2.31	0.44
58:BA:758:C:H2'	58:BA:759:G:H8	1.83	0.44
58:BA:1036:G:H2'	58:BA:1037:G:C8	2.53	0.44
58:BA:1136:G:C4	58:BA:1137:G:C8	3.05	0.44
58:BA:1179:C:H2'	58:BA:1180:C:H6	1.82	0.44
58:BA:1264:G:H3'	58:BA:1265:A:H2'	1.99	0.44
58:BA:1357:U:H2'	58:BA:1358:G:O4'	2.17	0.44
58:BA:1523:U:H2'	58:BA:1524:G:C8	2.52	0.44
58:BA:1709:U:H1'	58:BA:2860:A:N3	2.32	0.44
58:BA:1810:A:H2'	58:BA:1811:G:O4'	2.18	0.44
58:BA:1811:G:H2'	58:BA:1812:A:H8	1.81	0.44
58:BA:2345:G:H5"	58:BA:2347:C:O4'	2.17	0.44
58:BA:2625:G:H2'	58:BA:2626:C:O4'	2.18	0.44
1:CB:87:ARG:HH22	1:CB:234:PRO:CD	2.31	0.44
3:CD:31:CYS:H	3:CD:33:MET:HG2	1.82	0.44
3:CD:52:SER:O	3:CD:56:VAL:HG22	2.17	0.44
4:CE:72:GLN:O	4:CE:75:THR:HG22	2.17	0.44
4:CE:135:THR:HG22	4:CE:139:LEU:HD21	2.00	0.44
11:CL:39:VAL:HB	11:CL:55:VAL:HG21	1.99	0.44
15:CP:31:LYS:HG2	15:CP:32:TYR:N	2.32	0.44
16:CQ:29:HIS:HA	16:CQ:30:PRO:HD2	1.67	0.44
16:CQ:46:ASP:OD1	16:CQ:50:LYS:N	2.50	0.44
19:CT:98:PRO:HB2	19:CT:104:LEU:HD11	2.00	0.44
20:CA:46:G:H1	20:CA:395:C:N4	2.15	0.44
20:CA:152:A:N6	20:CA:169:C:O2	2.50	0.44
20:CA:671:G:H2'	20:CA:672:U:C6	2.53	0.44
20:CA:789:U:O2'	20:CA:791:G:N7	2.44	0.44
20:CA:825:G:H2'	20:CA:826:C:H6	1.83	0.44
20:CA:1234:C:H1'	20:CA:1364:U:C2	2.53	0.44
24:DC:76:LEU:HD22	24:DC:111:PHE:CD2	2.53	0.44
24:DC:185:LYS:O	24:DC:189:ASN:HB2	2.18	0.44
25:DD:239:ARG:HB2	58:DA:2590:A:H5"	2.00	0.44
26:DE:146:THR:O	58:DA:2571:C:O2'	2.35	0.44
32:DN:2:LYS:O	32:DN:3:THR:C	2.60	0.44
32:DN:112:LEU:HD23	32:DN:112:LEU:C	2.41	0.44
33:DO:101:PRO:HA	33:DO:120:GLU:O	2.17	0.44
35:DQ:41:TRP:HB3	35:DQ:94:VAL:HG21	1.99	0.44
37:DS:67:ARG:HA	37:DS:99:LYS:HB2	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DT:88:ILE:HG22	38:DT:89:VAL:HG23	2.00	0.44
39:DU:15:LYS:HA	39:DU:18:LEU:HB3	1.99	0.44
39:DU:94:ASN:HB2	58:DA:996:A:C5'	2.48	0.44
41:DW:8:ARG:HA	41:DW:102:HIS:ND1	2.31	0.44
46:D2:69:ARG:HG3	46:D2:71:ASN:CG	2.42	0.44
48:D5:52:TYR:CG	48:D5:53:ALA:N	2.86	0.44
52:D9:2:LYS:HB3	52:D9:2:LYS:HE3	1.75	0.44
58:DA:500:G:N1	58:DA:503:A:OP2	2.42	0.44
58:DA:1007:C:N3	58:DA:1136:G:C6	2.83	0.44
58:DA:1050:A:H2'	58:DA:1051:G:H8	1.82	0.44
58:DA:1802:A:H3'	58:DA:1803:A:C8	2.52	0.44
58:DA:2050:C:H2'	58:DA:2051:A:C8	2.52	0.44
58:DA:2173:A:H2'	58:DA:2174:C:O4'	2.17	0.44
1:AB:157:ARG:NH1	1:AB:157:ARG:HB3	2.32	0.44
2:AC:150:LYS:HB3	2:AC:201:TYR:HB2	1.99	0.44
3:AD:31:CYS:H	3:AD:33:MET:HG2	1.81	0.44
3:AD:91:SER:HA	3:AD:94:LEU:HD12	1.98	0.44
4:AE:52:PRO:O	4:AE:56:GLN:HG2	2.17	0.44
7:AH:28:ALA:HB2	7:AH:57:PRO:HB2	2.00	0.44
10:AK:119:CYS:HG	20:AA:778:G:HO2'	1.65	0.44
14:AO:79:ARG:HA	14:AO:82:ILE:HG22	2.00	0.44
16:AQ:64:PRO:HB3	16:AQ:70:ARG:NH1	2.32	0.44
20:AA:243:A:C2	20:AA:245:C:H2'	2.52	0.44
20:AA:514:C:C2	20:AA:515:G:C8	3.06	0.44
20:AA:1015:A:H1'	20:AA:1218:C:O2'	2.17	0.44
20:AA:1477:C:H2'	20:AA:1478:C:C6	2.53	0.44
20:AA:1532:U:O2'	20:AA:1533:C:OP1	2.35	0.44
23:AY:191:ASP:O	23:AY:266:ASN:N	2.51	0.44
23:AY:461:ILE:HD11	60:AY:701:FUA:O6	2.17	0.44
23:AY:634:MET:O	23:AY:641:GLN:NE2	2.48	0.44
26:BE:11:MET:HE2	58:BA:2682:U:C6	2.53	0.44
29:BH:89:ILE:HG22	29:BH:162:ILE:HG23	2.00	0.44
31:BK:117:THR:C	31:BK:119:ASP:H	2.26	0.44
32:BN:27:ALA:O	32:BN:28:THR:C	2.61	0.44
32:BN:76:SER:C	32:BN:78:TYR:H	2.26	0.44
33:BO:59:LYS:N	33:BO:59:LYS:HD2	2.33	0.44
37:BS:51:ALA:HB3	37:BS:73:LEU:HD12	2.00	0.44
38:BT:29:ARG:HG2	38:BT:30:VAL:N	2.31	0.44
45:B0:21:LEU:HD23	45:B0:39:ARG:HB3	2.00	0.44
53:Be:79:ARG:C	53:Be:81:ILE:H	2.26	0.44
56:B1:45:ASN:HB2	58:BA:397:G:H5"	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:600:G:H2'	58:BA:601:C:H6	1.83	0.44
58:BA:767:U:O2'	58:BA:1622:G:H4'	2.18	0.44
58:BA:1301:A:H1'	58:BA:1302:A:H2'	1.99	0.44
58:BA:1313:U:H4'	58:BA:1332:G:H4'	1.99	0.44
58:BA:1505:C:H2'	58:BA:1506:C:O4'	2.18	0.44
58:BA:1591:G:H2'	58:BA:1592:C:C6	2.52	0.44
58:BA:2494:G:H2'	58:BA:2495:G:H8	1.82	0.44
58:BA:2636:U:H1'	58:BA:2783:G:N2	2.33	0.44
58:BA:2888:C:H2'	58:BA:2889:C:H6	1.81	0.44
1:CB:102:LEU:HB2	1:CB:176:GLU:OE2	2.18	0.44
3:CD:201:GLN:O	3:CD:204:ILE:HB	2.17	0.44
4:CE:70:PRO:HG2	4:CE:142:LEU:HD13	1.99	0.44
5:CF:11:ASN:HA	5:CF:12:PRO:HD2	1.90	0.44
12:CM:91:ARG:HH21	20:CA:1226:C:P	2.39	0.44
14:CO:43:LEU:O	14:CO:47:LYS:HD3	2.16	0.44
15:CP:49:LEU:HA	15:CP:49:LEU:HD12	1.74	0.44
16:CQ:83:ASP:O	16:CQ:87:LYS:HG3	2.18	0.44
20:CA:20:U:H2'	20:CA:21:G:O4'	2.18	0.44
20:CA:367:U:H4'	23:CY:351:ARG:NE	2.29	0.44
20:CA:973:G:C3'	20:CA:974:A:H5"	2.47	0.44
20:CA:985:C:H2'	20:CA:986:A:C8	2.53	0.44
23:CY:230:LYS:HD3	23:CY:237:PRO:CA	2.43	0.44
23:CY:330:VAL:O	23:CY:331:TYR:HB2	2.17	0.44
23:CY:354:ARG:HB2	23:CY:354:ARG:HH21	1.81	0.44
24:DC:174:ALA:HB2	24:DC:193:PHE:CZ	2.52	0.44
25:DD:53:PHE:N	25:DD:53:PHE:HD2	2.16	0.44
25:DD:69:ARG:HH11	25:DD:130:ALA:HB2	1.82	0.44
26:DE:146:THR:HA	26:DE:147:PRO:C	2.42	0.44
27:DF:178:PRO:HG2	27:DF:179:GLU:OE1	2.18	0.44
29:DH:20:ALA:HB3	29:DH:23:ARG:O	2.18	0.44
29:DH:85:LYS:CE	29:DH:141:VAL:HG13	2.48	0.44
30:DJ:113:UNK:C	30:DJ:115:UNK:H	2.31	0.44
31:DK:79:ARG:HG3	31:DK:84:LEU:HB2	1.99	0.44
32:DN:19:GLU:HB3	32:DN:59:LYS:HE3	1.99	0.44
32:DN:43:THR:HB	32:DN:46:VAL:HG11	1.99	0.44
32:DN:112:LEU:HA	32:DN:115:ARG:CB	2.43	0.44
32:DN:120:LEU:HD21	32:DN:122:VAL:CG2	2.40	0.44
35:DQ:12:GLN:HG2	35:DQ:73:PRO:HD2	2.00	0.44
35:DQ:54:MET:HG2	35:DQ:58:PHE:CE2	2.46	0.44
35:DQ:127:ILE:HB	35:DQ:128:LYS:H	1.52	0.44
40:DV:78:LYS:HG3	40:DV:79:VAL:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DW:38:TYR:HD2	48:D5:30:LEU:HD22	1.81	0.44
41:DW:78:GLU:HG2	41:DW:79:GLY:N	2.32	0.44
43:DY:76:CYS:SG	43:DY:99:CYS:HB3	2.58	0.44
51:D8:17:THR:OG1	58:DA:651:G:OP1	2.31	0.44
56:D1:14:VAL:HG13	56:D1:41:ARG:CD	2.48	0.44
57:D4:6:HIS:HA	57:D4:7:PRO:HD3	1.82	0.44
58:DA:412:A:H3'	58:DA:413:C:C6	2.53	0.44
58:DA:819:A:N7	58:DA:1188:U:O4	2.50	0.44
58:DA:1312:U:H4'	58:DA:1313:U:O5'	2.16	0.44
58:DA:1504:C:H2'	58:DA:1505:C:H6	1.82	0.44
58:DA:1782:C:H1'	58:DA:2609:U:H5'	1.99	0.44
58:DA:1928:A:H2'	58:DA:1929:G:O4'	2.18	0.44
58:DA:2450:A:N3	58:DA:2450:A:H2'	2.31	0.44
58:DA:2695:C:H2'	58:DA:2696:U:C6	2.52	0.44
59:DB:42:C:H2'	59:DB:43:C:C6	2.53	0.44
1:AB:32:ILE:HD13	1:AB:32:ILE:HA	1.74	0.44
2:AC:161:GLU:HG3	20:AA:1055:A:H4'	2.00	0.44
7:AH:12:ARG:HG2	20:AA:826:C:H4'	1.99	0.44
8:AI:97:LYS:HB2	8:AI:102:LEU:HD12	1.99	0.44
9:AJ:60:ARG:NH1	20:AA:1366:C:O2'	2.42	0.44
20:AA:6:G:H4'	20:AA:298:A:H4'	2.00	0.44
20:AA:33:A:H5"	20:AA:364:A:O2'	2.17	0.44
20:AA:245:C:H1'	20:AA:284:G:C2	2.53	0.44
20:AA:280:C:H3'	20:AA:281:G:C5'	2.48	0.44
20:AA:594:G:H2'	20:AA:595:G:O4'	2.18	0.44
20:AA:622:A:H3'	20:AA:623:C:H6	1.82	0.44
20:AA:934:C:H42	20:AA:938:A:H2	1.66	0.44
20:AA:1324:A:H4'	20:AA:1362:C:H4'	1.99	0.44
20:AA:1407:C:O2	58:BA:1912:A:C2	2.70	0.44
23:AY:165:GLN:OE1	23:AY:271:LEU:HD13	2.17	0.44
24:BC:211:ARG:O	24:BC:212:SER:O	2.36	0.44
25:BD:42:GLY:C	25:BD:44:ASN:H	2.26	0.44
25:BD:183:ARG:CZ	25:BD:269:PHE:HB3	2.48	0.44
26:BE:129:HIS:CE1	58:BA:1675:C:N4	2.86	0.44
29:BH:55:PRO:HG2	29:BH:61:HIS:NE2	2.33	0.44
29:BH:94:TYR:HA	29:BH:106:THR:O	2.17	0.44
32:BN:76:SER:HB3	58:BA:2641:G:H4'	1.99	0.44
35:BQ:67:ARG:NH2	58:BA:906:G:O2'	2.51	0.44
45:B0:36:ILE:HA	45:B0:60:PHE:HA	1.99	0.44
50:B7:27:GLY:O	50:B7:30:VAL:HB	2.18	0.44
58:BA:195:A:O5'	58:BA:196:A:H4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:533:G:H1	58:BA:560:C:H42	1.66	0.44
58:BA:1075:C:H2'	58:BA:1076:C:C6	2.52	0.44
58:BA:2110:G:N2	58:BA:2179:C:N3	2.62	0.44
1:CB:17:PHE:HB2	1:CB:18:GLY:H	1.50	0.44
3:CD:54:TYR:HA	3:CD:57:ARG:NE	2.32	0.44
9:CJ:39:PRO:O	20:CA:1150:U:O2'	2.27	0.44
11:CL:53:ARG:HA	11:CL:69:TYR:HE1	1.83	0.44
18:CS:36:ARG:NH1	18:CS:53:ASN:HA	2.31	0.44
18:CS:48:THR:HG22	18:CS:61:TYR:HE2	1.83	0.44
20:CA:255:G:H2'	20:CA:256:U:C6	2.53	0.44
20:CA:309:G:H2'	20:CA:310:G:H8	1.82	0.44
20:CA:525:C:H2'	20:CA:526:C:C6	2.53	0.44
20:CA:1107:C:C4	20:CA:1108:G:C8	3.06	0.44
20:CA:1534:A:H2'	20:CA:1535:C:C6	2.53	0.44
23:CY:443:HIS:ND1	23:CY:444:PRO:HD2	2.32	0.44
24:DC:26:ALA:O	24:DC:30:VAL:HB	2.18	0.44
24:DC:213:VAL:HG21	24:DC:225:ILE:HG12	1.98	0.44
25:DD:148:GLU:HB3	25:DD:151:LYS:HG3	1.99	0.44
27:DF:4:VAL:HG13	27:DF:7:TYR:HA	1.98	0.44
33:DO:34:THR:O	33:DO:62:VAL:HB	2.17	0.44
35:DQ:126:PRO:HA	58:DA:2485:G:H4'	1.99	0.44
36:DR:115:GLU:CD	36:DR:117:VAL:H	2.25	0.44
44:DZ:48:PHE:HZ	44:DZ:71:VAL:HG11	1.81	0.44
46:D2:16:LEU:HD12	46:D2:24:LEU:HD11	2.00	0.44
48:D5:13:LYS:HE3	48:D5:13:LYS:HB3	1.86	0.44
50:D7:1:MET:HG3	58:DA:753:C:OP1	2.18	0.44
58:DA:529:A:C8	58:DA:2041:U:O4	2.71	0.44
58:DA:639:U:H2'	58:DA:640:C:C6	2.52	0.44
58:DA:799:G:C3'	58:DA:800:A:H5"	2.48	0.44
58:DA:821:A:H3'	58:DA:946:G:C8	2.52	0.44
58:DA:1141:U:H4'	58:DA:114(B):A:C8	2.53	0.44
58:DA:1151:G:H2'	58:DA:1152:C:C6	2.53	0.44
58:DA:1394:U:H4'	58:DA:1603:A:H4'	1.99	0.44
58:DA:1579:A:H2'	58:DA:1580:A:O4'	2.17	0.44
58:DA:2111:C:O2	58:DA:2118:U:O2'	2.29	0.44
58:DA:2320:A:N6	58:DA:2333:A:H2'	2.33	0.44
58:DA:2689:U:OP2	58:DA:2872:G:N2	2.48	0.44
58:DA:2745:C:N4	58:DA:2755:C:H4'	2.31	0.44
1:AB:194:PRO:O	1:AB:197:VAL:HG23	2.18	0.44
2:AC:3:ASN:O	2:AC:4:LYS:HB2	2.17	0.44
3:AD:138:TYR:CE2	3:AD:140:VAL:HG13	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:111:ILE:HG12	7:AH:135:CYS:O	2.18	0.44
11:AL:102:ARG:HA	11:AL:107:ALA:HB3	1.99	0.44
11:AL:110:VAL:HB	11:AL:113:ARG:HB2	1.99	0.44
15:AP:10:GLY:HA2	20:AA:624:C:O2'	2.17	0.44
16:AQ:63:ARG:HB2	20:AA:130:A:C8	2.53	0.44
20:AA:125:U:H2'	20:AA:126:G:C8	2.53	0.44
20:AA:329:A:C5	20:AA:332:G:C6	3.06	0.44
20:AA:1161:C:H2'	20:AA:1162:C:C6	2.53	0.44
24:BC:172:ILE:HD13	24:BC:173:HIS:H	1.82	0.44
25:BD:106:ILE:O	25:BD:108:PRO:HD3	2.17	0.44
25:BD:177:LEU:HD22	58:BA:1799:G:O6	2.18	0.44
26:BE:51:PHE:C	26:BE:74:PRO:HB3	2.42	0.44
27:BF:32:LEU:O	27:BF:36:VAL:HG23	2.18	0.44
27:BF:74:ARG:NH2	58:BA:674:G:H1'	2.32	0.44
34:BP:126:VAL:HA	34:BP:145:PRO:HG2	2.00	0.44
37:BS:15:ARG:C	37:BS:18:ILE:H	2.24	0.44
39:BU:51:LYS:O	39:BU:54:LYS:HB2	2.17	0.44
39:BU:79:PHE:HE1	39:BU:106:PHE:CZ	2.36	0.44
40:BV:24:LYS:CB	58:BA:1162:G:H4'	2.39	0.44
43:BY:84:ARG:HD2	43:BY:97:ARG:HA	1.99	0.44
51:B8:18:ALA:HB1	58:BA:628:G:H5"	2.00	0.44
52:B9:3:VAL:HG22	52:B9:35:ARG:HD3	2.00	0.44
58:BA:184:C:H2'	58:BA:185:U:H6	1.82	0.44
58:BA:245:G:H2'	58:BA:246:C:C6	2.53	0.44
58:BA:413:C:H2'	58:BA:414:C:H6	1.82	0.44
58:BA:1536:A:H5"	58:BA:1537:C:OP2	2.17	0.44
58:BA:1671:U:O2'	58:BA:1673:U:H5	2.01	0.44
58:BA:1825:A:H2'	58:BA:1826:G:H8	1.83	0.44
3:CD:18:LYS:C	3:CD:19:LEU:HD12	2.43	0.44
3:CD:132:ARG:NH2	20:CA:490:G:OP2	2.51	0.44
3:CD:199:ASN:CG	3:CD:202:LEU:HG	2.43	0.44
7:CH:8:ASP:O	7:CH:11:THR:OG1	2.30	0.44
7:CH:97:VAL:HG12	20:CA:600:C:OP1	2.18	0.44
9:CJ:47:PHE:N	9:CJ:63:PHE:O	2.28	0.44
11:CL:41:ARG:HH12	11:CL:55:VAL:HG11	1.83	0.44
13:CN:4:LYS:O	13:CN:8:GLU:HG2	2.17	0.44
15:CP:38:TYR:CE2	20:CA:626:U:H5"	2.53	0.44
16:CQ:29:HIS:CG	16:CQ:32:TYR:HB2	2.53	0.44
16:CQ:52:LYS:HB3	16:CQ:52:LYS:HE3	1.80	0.44
19:CT:23:ARG:HA	20:CA:323:U:OP1	2.18	0.44
20:CA:794:A:H2'	20:CA:795:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:122:TRP:HH2	23:CY:256:THR:HG21	1.83	0.44
24:DC:3:LYS:NZ	58:DA:2151:G:OP1	2.37	0.44
24:DC:41:THR:O	24:DC:42:VAL:HG12	2.18	0.44
25:DD:31:LYS:HA	25:DD:31:LYS:HD2	1.79	0.44
27:DF:37:VAL:O	27:DF:41:LEU:HG	2.17	0.44
27:DF:45:ARG:NH2	58:DA:443:A:H3'	2.32	0.44
28:DG:37:VAL:HB	28:DG:94:LEU:HB2	2.00	0.44
30:DJ:83:UNK:C	30:DJ:85:UNK:N	2.81	0.44
30:DJ:112:UNK:O	30:DJ:114:UNK:N	2.51	0.44
32:DN:1:MET:SD	39:DU:94:ASN:ND2	2.91	0.44
32:DN:55:VAL:O	32:DN:56:ASN:C	2.61	0.44
33:DO:5:GLN:NE2	58:DA:1669:A:O4'	2.51	0.44
33:DO:39:ILE:HG12	33:DO:40:VAL:N	2.31	0.44
34:DP:76:LYS:HE3	34:DP:76:LYS:HB3	1.60	0.44
35:DQ:54:MET:HE1	35:DQ:64:ILE:HG21	2.00	0.44
36:DR:29:LEU:HD13	36:DR:29:LEU:HA	1.74	0.44
36:DR:100:LEU:N	36:DR:111:LEU:O	2.43	0.44
37:DS:44:LYS:HB3	37:DS:46:VAL:HG23	1.99	0.44
37:DS:95:HIS:C	37:DS:97:ARG:H	2.25	0.44
38:DT:137:LYS:HD3	38:DT:138:ALA:N	2.33	0.44
40:DV:20:LEU:HB3	40:DV:21:ARG:H	1.53	0.44
42:DX:35:THR:HG23	42:DX:38:GLU:HB2	1.99	0.44
45:D0:27:GLU:HG3	45:D0:69:PHE:CE1	2.53	0.44
58:DA:15:G:H1	58:DA:525:U:H3	1.66	0.44
58:DA:523:C:H5"	58:DA:541:C:O2'	2.17	0.44
58:DA:682:G:H2'	58:DA:683:C:C6	2.53	0.44
58:DA:754:C:H2'	58:DA:755:C:C6	2.52	0.44
58:DA:841:A:H2'	58:DA:842:G:H8	1.82	0.44
58:DA:1034:G:C5	58:DA:1035:U:C4	3.06	0.44
58:DA:1288:U:C2	58:DA:1327:C:C2	3.06	0.44
58:DA:1346:G:H1	58:DA:1600:C:H42	1.65	0.44
58:DA:1423:G:OP1	58:DA:1492:G:O2'	2.29	0.44
58:DA:2508:G:H2'	58:DA:2509:G:C8	2.52	0.44
58:DA:2582:G:H2'	58:DA:2582:G:N3	2.33	0.44
2:AC:91:LEU:O	2:AC:95:THR:N	2.51	0.44
3:AD:19:LEU:HD23	3:AD:67:ILE:HB	2.00	0.44
3:AD:199:ASN:OD1	3:AD:202:LEU:N	2.39	0.44
7:AH:130:GLY:N	20:AA:599:C:O2'	2.42	0.44
11:AL:54:LYS:HB3	11:AL:55:VAL:H	1.58	0.44
13:AN:35:ARG:H	13:AN:35:ARG:HG3	1.58	0.44
13:AN:54:PRO:C	13:AN:56:VAL:H	2.25	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:14:LYS:HG2	19:AT:17:ARG:HH21	1.83	0.44
19:AT:76:ALA:HA	19:AT:79:ARG:NH1	2.32	0.44
19:AT:85:MET:SD	20:AA:186:C:O2'	2.62	0.44
20:AA:68:G:H2'	20:AA:68(A):G:O4'	2.17	0.44
20:AA:193:C:H2'	20:AA:194:C:C6	2.53	0.44
20:AA:953:G:H2'	20:AA:954:G:O4'	2.18	0.44
20:AA:1362:C:H2'	20:AA:1362(A):C:H5"	2.00	0.44
20:AA:1398:A:N3	20:AA:1398:A:H2'	2.33	0.44
23:AY:255:ILE:HG23	23:AY:257:PRO:HD3	2.00	0.44
23:AY:550:MET:HE2	23:AY:550:MET:HB3	1.92	0.44
23:AY:648:PRO:O	23:AY:650:ALA:N	2.51	0.44
60:AY:701:FUA:H231	60:AY:701:FUA:C12	2.47	0.44
27:BF:68:LYS:HG2	58:BA:2443:C:OP1	2.17	0.44
27:BF:155:LEU:O	27:BF:191:ARG:O	2.36	0.44
32:BN:35:ARG:NH2	32:BN:42:TRP:HH2	2.16	0.44
34:BP:7:ARG:O	34:BP:10:PRO:HD2	2.18	0.44
34:BP:126:VAL:HA	34:BP:145:PRO:CG	2.47	0.44
38:BT:61:PHE:CZ	38:BT:76:PHE:HB2	2.51	0.44
40:BV:39:LEU:HA	40:BV:47:VAL:CG1	2.48	0.44
42:BX:41:ASN:HD22	42:BX:41:ASN:N	2.14	0.44
43:BY:81:LYS:O	43:BY:96:ILE:HG23	2.17	0.44
44:BZ:54:HIS:NE2	44:BZ:123:ASP:HB3	2.32	0.44
44:BZ:57:ILE:HD12	44:BZ:57:ILE:HA	1.83	0.44
47:B3:29:ARG:HH21	58:BA:1183:G:H4'	1.83	0.44
58:BA:220:G:N2	58:BA:427:U:H2'	2.32	0.44
58:BA:270(L):C:H2'	58:BA:270(M):U:H5"	2.00	0.44
58:BA:520:G:H2'	58:BA:521:G:O4'	2.18	0.44
58:BA:685:A:C5'	58:BA:774:A:H61	2.30	0.44
58:BA:1141:U:H5"	58:BA:114(B):A:O4'	2.17	0.44
58:BA:1408:C:H42	58:BA:1594:G:H1	1.65	0.44
58:BA:1601:G:H3'	58:BA:1602:U:C6	2.53	0.44
58:BA:1819:A:H4'	58:BA:1820:U:H5'	2.00	0.44
58:BA:1872:A:H8	58:BA:1872:A:O5'	2.01	0.44
58:BA:2038:G:C5	58:BA:2039:C:C6	3.06	0.44
58:BA:2139:C:H2'	58:BA:2140:C:C6	2.53	0.44
58:BA:2244:U:H1'	58:BA:2434:A:C5	2.53	0.44
58:BA:2371:G:H2'	58:BA:2372:G:C8	2.53	0.44
58:BA:2426:A:H3'	58:BA:2427:C:H5"	2.00	0.44
58:BA:2606:C:H2'	58:BA:2607:G:C8	2.52	0.44
1:CB:169:LYS:O	1:CB:172:ILE:HG12	2.18	0.44
1:CB:219:VAL:O	1:CB:223:ILE:HG13	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:108:LEU:HD11	3:CD:183:GLY:HA3	2.00	0.44
10:CK:51:LYS:HA	10:CK:55:LYS:HG3	1.99	0.44
20:CA:359:U:H2'	20:CA:360:A:H8	1.83	0.44
20:CA:397:A:H5"	20:CA:398:C:OP1	2.18	0.44
20:CA:436:C:H2'	20:CA:437:U:O4'	2.17	0.44
20:CA:1084:G:H3'	20:CA:1085:U:H2'	2.00	0.44
20:CA:1090:U:H2'	20:CA:1091:U:H6	1.83	0.44
20:CA:1220:G:H2'	20:CA:1221:G:H8	1.83	0.44
20:CA:1287:A:H2'	20:CA:1288:A:C8	2.53	0.44
20:CA:1342:C:H2'	20:CA:1343:G:C8	2.52	0.44
23:CY:15:ILE:HG13	23:CY:80:ASN:O	2.18	0.44
25:DD:244:ARG:HG2	25:DD:245:PRO:CA	2.43	0.44
27:DF:100:THR:O	58:DA:659:C:H4'	2.17	0.44
28:DG:113:ARG:NE	28:DG:113:ARG:CA	2.80	0.44
29:DH:157:TYR:CE2	58:DA:2531:A:H5"	2.53	0.44
31:DK:123:ALA:O	31:DK:126:MET:HB3	2.18	0.44
32:DN:128:HIS:CE1	32:DN:134:ARG:CZ	3.00	0.44
36:DR:68:ARG:NE	58:DA:2707:G:O3'	2.50	0.44
37:DS:95:HIS:O	37:DS:97:ARG:N	2.46	0.44
39:DU:108:GLU:OE1	39:DU:112:ARG:HG2	2.18	0.44
47:D3:11:SER:HB3	58:DA:988:A:P	2.58	0.44
48:D5:8:LYS:HD2	58:DA:2054:A:C2	2.52	0.44
54:Df:25:UNK:C	54:Df:27:UNK:H	2.31	0.44
56:D1:43:TYR:C	56:D1:43:TYR:CD2	2.95	0.44
58:DA:934:G:H2'	58:DA:935:C:C6	2.52	0.44
58:DA:1159:U:H2'	58:DA:1160:G:O4'	2.18	0.44
58:DA:2137:C:H2'	58:DA:2138:C:H6	1.82	0.44
58:DA:2246:G:H2'	58:DA:2247:A:C8	2.53	0.44
58:DA:2324:C:O2'	58:DA:2337:G:H5'	2.18	0.44
58:DA:2439:A:H8	58:DA:2587:A:OP1	2.00	0.44
58:DA:2696:U:H2'	58:DA:2697:G:H8	1.83	0.44
1:AB:163:PHE:HD2	1:AB:163:PHE:HA	1.69	0.43
1:AB:175:ARG:NH2	20:AA:1076:C:H5'	2.32	0.43
2:AC:117:ALA:HB2	2:AC:200:ALA:HB3	2.00	0.43
11:AL:44:THR:HA	11:AL:45:PRO:HD3	1.72	0.43
11:AL:113:ARG:NH2	11:AL:116:SER:OG	2.51	0.43
14:AO:28:GLN:HG2	20:AA:657:G:H4'	1.99	0.43
15:AP:71:ARG:NH1	15:AP:71:ARG:HB2	2.33	0.43
20:AA:360:A:H2'	20:AA:361:G:O4'	2.18	0.43
20:AA:376:G:H2'	20:AA:377:G:H8	1.82	0.43
20:AA:643:C:H2'	20:AA:644:G:C8	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1000:A:H2'	20:AA:1001:G:O4'	2.18	0.43
20:AA:1074:G:H2'	20:AA:1075:C:C6	2.53	0.43
21:AW:27:C:H2'	21:AW:28:A:C8	2.54	0.43
23:AY:538:TYR:O	23:AY:542:VAL:N	2.47	0.43
23:AY:647:VAL:HA	23:AY:648:PRO:HD3	1.74	0.43
24:BC:213:VAL:HG21	24:BC:225:ILE:HG12	2.00	0.43
25:BD:7:LYS:HE3	25:BD:8:PRO:HD2	1.99	0.43
25:BD:62:TYR:HE1	58:BA:1816:G:C8	2.36	0.43
32:BN:43:THR:HB	32:BN:46:VAL:HG11	1.99	0.43
33:BO:6:THR:HA	58:BA:1667:G:H5'	2.00	0.43
35:BQ:87:LYS:HG2	35:BQ:88:GLY:H	1.83	0.43
35:BQ:109:VAL:HB	35:BQ:110:THR:H	1.66	0.43
36:BR:23:ASN:OD1	58:BA:1277:G:H1'	2.18	0.43
37:BS:31:SER:O	37:BS:33:LYS:N	2.51	0.43
43:BY:28:LYS:HG2	43:BY:37:VAL:HB	2.00	0.43
45:B0:12:ASN:C	45:B0:14:ARG:H	2.26	0.43
45:B0:51:VAL:HG21	45:B0:79:VAL:O	2.17	0.43
58:BA:81:G:H1	58:BA:105:C:H42	1.66	0.43
58:BA:270(K):G:H2'	58:BA:270(L):C:H6	1.82	0.43
58:BA:1102:C:C2	58:BA:1103:A:C8	3.06	0.43
58:BA:1212:G:O2'	58:BA:1236:G:N2	2.35	0.43
58:BA:2569:G:H2'	58:BA:2570:G:C8	2.52	0.43
58:BA:2578:G:OP1	58:BA:2614:A:N6	2.47	0.43
58:BA:2721:A:H3'	58:BA:2722:G:H8	1.83	0.43
58:BA:2781:A:H5'	58:BA:2782:G:C5'	2.47	0.43
58:BA:2807:G:N1	58:BA:2893:G:C6	2.86	0.43
59:BB:60:C:H2'	59:BB:61:G:H8	1.79	0.43
4:CE:125:SER:C	4:CE:127:ASN:H	2.26	0.43
8:CI:120:ARG:HD2	20:CA:1348:U:H4'	1.99	0.43
10:CK:108:ILE:HD13	17:CR:87:ARG:HG2	2.00	0.43
14:CO:39:LEU:HD22	14:CO:42:HIS:HB3	1.99	0.43
20:CA:179:A:N6	20:CA:196:A:OP2	2.50	0.43
20:CA:815:A:O4'	20:CA:817:C:N4	2.50	0.43
20:CA:1081:G:H2'	20:CA:1082:G:O4'	2.18	0.43
20:CA:1265:G:N1	20:CA:1270:C:O2	2.36	0.43
20:CA:1362:C:H2'	20:CA:1362(A):C:H5"	2.01	0.43
24:DC:14:LYS:HB3	24:DC:14:LYS:HE2	1.56	0.43
25:DD:78:LYS:NZ	25:DD:98:VAL:HA	2.33	0.43
26:DE:4:ILE:HD12	26:DE:28:ALA:HB1	1.99	0.43
27:DF:51:THR:HB	27:DF:92:PRO:CG	2.48	0.43
34:DP:20:GLY:HA2	58:DA:662:G:O3'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DR:23:ASN:ND2	58:DA:1294:U:H1'	2.32	0.43
38:DT:78:LEU:HD23	38:DT:79:HIS:NE2	2.33	0.43
39:DU:93:LYS:HD2	58:DA:997:G:OP2	2.18	0.43
39:DU:110:VAL:O	39:DU:114:LYS:HD2	2.18	0.43
44:DZ:61:LEU:O	44:DZ:63:ASP:N	2.51	0.43
44:DZ:108:PRO:HB2	44:DZ:109:ALA:H	1.53	0.43
47:D3:10:LYS:HD3	47:D3:53:LEU:HD23	2.00	0.43
48:D5:3:LYS:HG3	58:DA:2613:U:OP2	2.18	0.43
51:D8:52:LYS:N	51:D8:53:PRO:HD2	2.33	0.43
56:D1:20:ARG:HA	56:D1:39:LYS:C	2.43	0.43
58:DA:217:G:H3'	58:DA:218:A:C8	2.52	0.43
58:DA:586:A:H2	58:DA:809:G:N3	2.16	0.43
58:DA:871:U:O2	58:DA:906:G:C6	2.71	0.43
58:DA:1126:A:H4'	58:DA:1127:A:O5'	2.17	0.43
58:DA:1207:C:N3	58:DA:1239:G:N2	2.63	0.43
58:DA:1317:A:N6	58:DA:1335:U:H3	2.16	0.43
58:DA:1801:G:O2'	58:DA:1802:A:H5'	2.18	0.43
58:DA:1823:G:H2'	58:DA:1824:G:H8	1.83	0.43
58:DA:1913:A:HO2'	58:DA:1914:C:P	2.39	0.43
58:DA:2046:G:H1	58:DA:2622:C:N4	2.10	0.43
58:DA:2464:C:H2'	58:DA:2465:C:O4'	2.18	0.43
58:DA:2549:G:H1	58:DA:2559:C:N4	2.15	0.43
58:DA:2586:C:H2'	58:DA:2587:A:C8	2.53	0.43
58:DA:2747:G:H21	58:DA:2757:A:H62	0.61	0.43
59:DB:6:C:H2'	59:DB:7:G:C8	2.47	0.43
7:AH:2:LEU:HA	7:AH:2:LEU:HD23	1.66	0.43
9:AJ:8:LEU:O	9:AJ:69:ASN:HA	2.18	0.43
12:AM:96:LEU:HB3	12:AM:97:PRO:HD2	2.00	0.43
15:AP:63:GLY:HA3	20:AA:227:G:N2	2.33	0.43
16:AQ:3:LYS:NZ	20:AA:128:G:O3'	2.47	0.43
20:AA:115:G:O2'	20:AA:116:A:P	2.76	0.43
20:AA:833:U:O2'	20:AA:834:C:O5'	2.29	0.43
20:AA:919:A:H2'	20:AA:920:U:H6	1.83	0.43
21:AW:2:G:H2'	21:AW:3:C:O4'	2.17	0.43
23:AY:20:HIS:H	23:AY:20:HIS:HD2	1.63	0.43
24:BC:169:THR:O	24:BC:169:THR:OG1	2.34	0.43
25:BD:100:GLY:HA3	58:BA:1500:G:C2	2.52	0.43
27:BF:165:ARG:HB3	58:BA:321:G:H5'	2.01	0.43
28:BG:97:ASP:O	28:BG:100:TRP:HB2	2.18	0.43
29:BH:87:LEU:HD23	29:BH:164:TYR:HA	2.00	0.43
32:BN:19:GLU:HB3	32:BN:59:LYS:HE3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BR:10:LEU:HB2	58:BA:1653:G:C6	2.53	0.43
36:BR:115:GLU:CD	36:BR:117:VAL:H	2.25	0.43
37:BS:85:VAL:H	37:BS:106:ARG:CD	2.27	0.43
42:BX:58:HIS:CE1	42:BX:77:LYS:HB2	2.53	0.43
42:BX:71:GLY:HA3	58:BA:64:A:H4'	2.00	0.43
44:BZ:51:ALA:HA	44:BZ:55:HIS:HB2	2.00	0.43
53:Be:63:ILE:HG22	53:Be:64:LEU:N	2.33	0.43
58:BA:519:U:H2'	58:BA:520:G:C8	2.53	0.43
58:BA:565:C:H4'	58:BA:1253:A:N6	2.32	0.43
58:BA:604:G:C6	58:BA:625:G:C2	3.06	0.43
58:BA:817:C:H4'	58:BA:932:G:C6	2.53	0.43
58:BA:971:C:H5"	58:BA:974(A):G:O2'	2.19	0.43
58:BA:999:U:H3'	58:BA:1154:G:H1	1.82	0.43
58:BA:1027:A:C6	58:BA:1126:A:C4	3.06	0.43
58:BA:1914:C:H3'	58:BA:1915:U:H6	1.82	0.43
58:BA:2391:G:O2'	58:BA:2424:C:N4	2.43	0.43
58:BA:2475:C:H42	58:BA:2529:G:N2	2.12	0.43
59:BB:73:A:H3'	59:BB:74:U:C6	2.53	0.43
59:BB:85:G:C4	59:BB:86:G:C8	3.06	0.43
1:CB:185:ILE:HA	1:CB:199:TYR:HB2	1.99	0.43
2:CC:10:PHE:CZ	20:CA:1189:C:H4'	2.53	0.43
5:CF:97:PHE:O	17:CR:31:LEU:HB2	2.18	0.43
6:CG:93:PRO:HA	6:CG:96:GLN:OE1	2.18	0.43
10:CK:38:ASN:HA	10:CK:39:PRO:HD3	1.66	0.43
20:CA:186(C):G:C6	20:CA:186(O):G:C6	3.06	0.43
20:CA:341:C:H2'	20:CA:342:C:C6	2.51	0.43
23:CY:20:HIS:HB3	23:CY:118:SER:HB3	1.99	0.43
24:DC:47:LYS:HD2	58:DA:2178:C:C5'	2.48	0.43
25:DD:33:LEU:HD11	58:DA:1423:G:H5"	1.99	0.43
25:DD:253:GLN:NE2	58:DA:1842:G:O2'	2.51	0.43
26:DE:80:GLU:HB3	58:DA:2636:U:O5'	2.18	0.43
27:DF:47:GLY:O	27:DF:94:PRO:HA	2.18	0.43
28:DG:112:PRO:O	28:DG:113:ARG:O	2.36	0.43
31:DK:34:ILE:O	31:DK:38:VAL:HG23	2.17	0.43
32:DN:76:SER:C	32:DN:78:TYR:H	2.26	0.43
33:DO:8:LEU:HD12	33:DO:82:ASN:HB2	1.99	0.43
35:DQ:3:MET:HB2	35:DQ:93:TYR:CD2	2.53	0.43
37:DS:92:TYR:CD2	37:DS:94:TYR:HB2	2.53	0.43
42:DX:57:LEU:HB3	58:DA:1341:U:H4'	1.99	0.43
49:D6:25:LYS:NZ	58:DA:2285:C:H41	2.16	0.43
51:D8:5:LYS:HA	58:DA:242:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:D1:6:GLU:CD	56:D1:61:ARG:HG3	2.43	0.43
58:DA:43:G:H2'	58:DA:44:A:O4'	2.18	0.43
58:DA:203:C:OP2	58:DA:204:A:O2'	2.30	0.43
58:DA:371:A:H61	58:DA:401:A:H3'	1.83	0.43
58:DA:376:C:H2'	58:DA:377:C:H6	1.80	0.43
58:DA:586:A:H5"	58:DA:587:C:P	2.58	0.43
58:DA:621:A:H2'	58:DA:621:A:N3	2.34	0.43
58:DA:715:G:C6	58:DA:716:A:C6	3.07	0.43
58:DA:904:C:C2	58:DA:905:U:C5	3.06	0.43
58:DA:1125:G:H3'	58:DA:1126:A:H2'	2.00	0.43
58:DA:1207:C:N4	58:DA:1239:G:H1	2.16	0.43
58:DA:1466:G:H2'	58:DA:1547:C:H41	1.83	0.43
58:DA:1571:A:H8	58:DA:1571:A:O5'	2.01	0.43
58:DA:2031:A:C5	58:DA:2498:C:H1'	2.53	0.43
59:DB:31:C:N4	59:DB:51:G:H1	2.14	0.43
59:DB:72:G:H1'	59:DB:104:A:H61	1.82	0.43
59:DB:81:G:O6	59:DB:95:U:O2	2.35	0.43
6:AG:118:VAL:HG13	6:AG:122:HIS:CE1	2.53	0.43
13:AN:33:VAL:HG13	13:AN:39:LEU:C	2.43	0.43
15:AP:21:VAL:HG11	15:AP:59:TRP:CE2	2.53	0.43
17:AR:34:TYR:HB3	17:AR:69:THR:HG22	2.01	0.43
18:AS:5:LEU:HD21	20:AA:1318:A:H5"	2.00	0.43
20:AA:109:A:H62	20:AA:324:G:H21	1.66	0.43
20:AA:130:A:H2	20:AA:263:A:C2	2.36	0.43
20:AA:223:U:H2'	20:AA:224:C:O4'	2.17	0.43
20:AA:405:U:H4'	20:AA:495:A:H2	1.83	0.43
20:AA:671:G:H2'	20:AA:672:U:C6	2.53	0.43
20:AA:1440(F):C:H2'	20:AA:1440(G):C:C6	2.53	0.43
20:AA:1494:G:N2	58:BA:1912:A:C2	2.86	0.43
21:AW:69:A:H2'	21:AW:70:G:C8	2.47	0.43
23:AY:93:GLU:O	23:AY:97:SER:OG	2.26	0.43
24:BC:74:ARG:O	24:BC:76:LEU:N	2.42	0.43
26:BE:48:GLN:HA	26:BE:79:ARG:O	2.18	0.43
26:BE:95:ILE:H	26:BE:95:ILE:HG12	1.55	0.43
26:BE:152:LYS:CG	32:BN:78:TYR:CD1	3.02	0.43
26:BE:175:VAL:HB	26:BE:182:LEU:HD12	2.00	0.43
27:BF:130:ALA:C	27:BF:132:VAL:H	2.27	0.43
29:BH:139:GLN:OE1	58:BA:2759:G:N2	2.51	0.43
31:BK:100:THR:HG22	31:BK:139:VAL:HB	2.00	0.43
32:BN:91:LEU:O	32:BN:92:ALA:C	2.61	0.43
33:BO:77:ILE:HB	38:BT:74:ARG:HG2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BP:21:ARG:HB2	58:BA:663:G:OP1	2.18	0.43
36:BR:86:ARG:C	36:BR:88:ARG:H	2.27	0.43
37:BS:40:ILE:HA	37:BS:47:THR:O	2.17	0.43
37:BS:42:ASP:O	37:BS:44:LYS:N	2.52	0.43
37:BS:85:VAL:HG23	37:BS:106:ARG:NH1	2.32	0.43
38:BT:41:ARG:HG2	38:BT:42:ILE:N	2.33	0.43
40:BV:53:GLU:O	40:BV:55:ALA:N	2.41	0.43
42:BX:6:ASP:OD1	46:B2:29:LYS:NZ	2.51	0.43
43:BY:94:LYS:HG3	43:BY:102:CYS:SG	2.58	0.43
50:B7:24:THR:O	50:B7:28:ARG:HG3	2.18	0.43
51:B8:27:THR:HB	58:BA:2392:A:O2'	2.18	0.43
56:B1:43:TYR:HD2	56:B1:43:TYR:C	2.26	0.43
58:BA:137(A):C:H2'	58:BA:137(B):G:C8	2.53	0.43
58:BA:673:C:H2'	58:BA:674:G:O4'	2.18	0.43
58:BA:1080:C:H2'	58:BA:1081:U:C6	2.52	0.43
58:BA:1174:A:N7	58:BA:1175:U:H1'	2.32	0.43
58:BA:1416:G:H2'	58:BA:1417:C:H6	1.79	0.43
58:BA:1463:C:H2'	58:BA:1464:C:H6	1.83	0.43
58:BA:1542:G:H5'	58:BA:1542:G:N3	2.33	0.43
58:BA:1748:G:H2'	58:BA:1749:A:C8	2.53	0.43
58:BA:1869:G:N2	58:BA:1872:A:C8	2.84	0.43
58:BA:2096:U:O4	58:BA:2193:G:O6	2.36	0.43
58:BA:2886:G:H2'	58:BA:2887:U:H6	1.82	0.43
2:CC:155:GLY:C	2:CC:163:ALA:HB1	2.42	0.43
4:CE:112:LEU:HD23	4:CE:112:LEU:HA	1.87	0.43
6:CG:32:ARG:HD3	6:CG:32:ARG:HA	1.82	0.43
7:CH:12:ARG:HG2	20:CA:826:C:H4'	2.00	0.43
14:CO:42:HIS:CD2	20:CA:740:U:H5'	2.52	0.43
20:CA:33:A:C5'	20:CA:364:A:H1'	2.48	0.43
20:CA:68(A):G:N2	20:CA:68(Y):C:N3	2.49	0.43
20:CA:834:C:H2'	20:CA:835:U:H6	1.82	0.43
20:CA:971:G:OP1	20:CA:971:G:H3'	2.18	0.43
20:CA:981:U:C4	20:CA:982:U:C4	3.06	0.43
20:CA:1056:U:H3	20:CA:1204:A:N6	2.16	0.43
20:CA:1355:G:H2'	20:CA:1356:G:C8	2.53	0.43
23:CY:197:ARG:HG3	23:CY:198:GLU:H	1.83	0.43
23:CY:431:LEU:HD21	23:CY:466:LEU:HD13	2.00	0.43
24:DC:60:ARG:HH21	24:DC:140:ASN:C	2.27	0.43
25:DD:100:GLY:HA3	58:DA:1500:G:N2	2.32	0.43
25:DD:201:HIS:HB3	58:DA:1820:U:O2	2.18	0.43
25:DD:264:LYS:HD3	25:DD:266:SER:H	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:8:LYS:NZ	26:DE:190:GLY:O	2.25	0.43
26:DE:50:GLY:HA2	26:DE:77:ILE:O	2.19	0.43
26:DE:152:LYS:HA	58:DA:2619:C:H5"	2.00	0.43
26:DE:202:LYS:HG3	58:DA:2733:A:H61	1.83	0.43
27:DF:38:ARG:HA	27:DF:41:LEU:HB2	2.00	0.43
30:DJ:82:UNK:O	30:DJ:84:UNK:N	2.51	0.43
31:DK:101:TRP:HE1	31:DK:141:ALA:H	1.64	0.43
31:DK:129:GLY:HA3	58:DA:1079:C:O2'	2.18	0.43
32:DN:66:LYS:NZ	58:DA:1140:C:P	2.82	0.43
32:DN:97:ARG:HG2	32:DN:97:ARG:HH11	1.84	0.43
32:DN:103:VAL:O	32:DN:104:LYS:C	2.61	0.43
33:DO:25:LEU:HB3	33:DO:38:VAL:CG2	2.48	0.43
41:DW:68:ARG:HB3	41:DW:110:LYS:N	2.33	0.43
41:DW:75:TYR:O	41:DW:104:THR:N	2.51	0.43
42:DX:75:ASP:N	58:DA:58:G:OP2	2.52	0.43
44:DZ:30:ASN:ND2	44:DZ:90:VAL:O	2.52	0.43
44:DZ:81:ARG:HE	44:DZ:81:ARG:HB2	1.46	0.43
56:D1:13:ILE:O	56:D1:17:SER:OG	2.33	0.43
58:DA:1036:G:C6	58:DA:1120:G:C6	3.06	0.43
58:DA:1496:A:H2'	58:DA:1498:C:C5	2.53	0.43
58:DA:2113:U:H2'	58:DA:2114:A:O4'	2.17	0.43
58:DA:2291:U:O2'	58:DA:2374:C:O2	2.35	0.43
58:DA:2868:A:H2'	58:DA:2869:G:C8	2.52	0.43
1:AB:22:LYS:H	1:AB:40:HIS:HE1	1.66	0.43
2:AC:6:HIS:HB3	2:AC:9:GLY:H	1.83	0.43
6:AG:30:ILE:HG22	6:AG:39:ALA:HB1	1.99	0.43
8:AI:89:ASN:O	8:AI:91:ASP:N	2.52	0.43
12:AM:111:LYS:HB3	12:AM:111:LYS:HE2	1.79	0.43
20:AA:971:G:H4'	20:AA:972:C:H5"	2.01	0.43
23:AY:92:ILE:HG23	23:AY:93:GLU:N	2.33	0.43
23:AY:511:LYS:HB3	23:AY:568:TYR:CZ	2.53	0.43
24:BC:23:ILE:HG23	24:BC:190:ILE:HB	2.00	0.43
24:BC:61:GLY:HA3	24:BC:164:PHE:CE1	2.54	0.43
29:BH:123:PHE:HD1	29:BH:133:VAL:HG22	1.83	0.43
29:BH:159:GLU:HB3	29:BH:160:LYS:HD2	2.00	0.43
32:BN:46:VAL:O	32:BN:47:ALA:CB	2.67	0.43
33:BO:1:MET:HE2	33:BO:1:MET:HA	2.00	0.43
34:BP:42:SER:HA	58:BA:671:C:H5	1.81	0.43
34:BP:135:LEU:O	34:BP:139:LYS:HG2	2.17	0.43
38:BT:33:LYS:HZ2	38:BT:34:VAL:HG23	1.82	0.43
38:BT:83:ILE:HD12	38:BT:84:GLN:NE2	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B8:30:ARG:HB3	51:B8:31:HIS:H	1.59	0.43
51:B8:48:PHE:HB3	51:B8:49:VAL:H	1.63	0.43
58:BA:270(F):G:H2'	58:BA:270(G):U:O4'	2.18	0.43
58:BA:274:G:H2'	58:BA:275:G:O4'	2.18	0.43
58:BA:363(G):A:O2'	58:BA:364:C:H6	2.02	0.43
58:BA:536:A:H2'	58:BA:537:C:H6	1.83	0.43
58:BA:781:A:H5"	58:BA:782:A:N7	2.34	0.43
58:BA:1008:C:OP1	58:BA:1008:C:H6	2.01	0.43
58:BA:1914:C:O2	58:BA:1914:C:O4'	2.37	0.43
58:BA:2210:G:H3'	58:BA:2210:G:N3	2.33	0.43
58:BA:2226:C:H2'	58:BA:2227:A:O4'	2.18	0.43
58:BA:2769:C:H2'	58:BA:2770:G:C8	2.53	0.43
59:BB:13:A:H2'	59:BB:14:U:H5"	2.00	0.43
59:BB:24:G:H1	59:BB:59:A:H61	1.67	0.43
3:CD:166:LYS:HE3	3:CD:178:VAL:HB	2.00	0.43
4:CE:33:VAL:HG12	4:CE:112:LEU:HD12	2.01	0.43
6:CG:70:LYS:H	6:CG:138:LYS:HE3	1.83	0.43
8:CI:104:ARG:HB3	8:CI:105:ASP:H	1.57	0.43
14:CO:2:PRO:HA	20:CA:740:U:OP2	2.19	0.43
14:CO:54:ARG:HH21	14:CO:58:MET:HE1	1.83	0.43
18:CS:14:HIS:CE1	20:CA:1014:A:H4'	2.53	0.43
20:CA:115:G:H1'	20:CA:116:A:N7	2.33	0.43
20:CA:559:A:H4'	20:CA:560:U:C5'	2.48	0.43
20:CA:920:U:HO2'	20:CA:1081:G:HO2'	1.66	0.43
23:CY:512:ILE:HG22	23:CY:567:LEU:HD12	1.98	0.43
23:CY:613:PRO:HG2	23:CY:666:ARG:HD3	2.01	0.43
24:DC:120:VAL:O	24:DC:121:MET:C	2.62	0.43
25:DD:54:ARG:NH2	58:DA:1822:G:H5"	2.29	0.43
25:DD:92:ILE:HA	25:DD:107:ALA:N	2.33	0.43
25:DD:109:ASP:HB3	25:DD:195:ALA:HB3	1.99	0.43
25:DD:111:LEU:HD13	25:DD:115:GLN:NE2	2.33	0.43
25:DD:171:ASP:HB2	25:DD:172:TYR:HD2	1.83	0.43
26:DE:49:LEU:HD11	26:DE:81:ILE:CG1	2.48	0.43
27:DF:191:ARG:O	27:DF:193:VAL:HG23	2.19	0.43
32:DN:91:LEU:O	32:DN:92:ALA:C	2.61	0.43
35:DQ:87:LYS:HE2	58:DA:955:C:H5"	1.99	0.43
42:DX:21:PHE:HE2	42:DX:26:TYR:HA	1.82	0.43
51:D8:22:VAL:HB	51:D8:53:PRO:HB3	2.00	0.43
58:DA:31:C:H5"	58:DA:1239:G:OP1	2.18	0.43
58:DA:525:U:H5'	58:DA:556:G:OP1	2.19	0.43
58:DA:572:A:H5"	58:DA:573:G:OP2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:576:U:H4'	58:DA:2502:G:C8	2.53	0.43
58:DA:604:G:N2	58:DA:624:C:N3	2.58	0.43
58:DA:789:A:H3'	58:DA:790:C:H5"	1.99	0.43
58:DA:1027:A:H8	58:DA:1027:A:O5'	2.02	0.43
58:DA:1478:G:N2	58:DA:1515:C:N3	2.48	0.43
58:DA:2575:C:H2'	58:DA:2578:G:O6	2.17	0.43
1:AB:42:ILE:HG23	1:AB:44:LEU:HG	2.00	0.43
3:AD:30:LYS:HB2	3:AD:33:MET:N	2.33	0.43
6:AG:27:ILE:HA	6:AG:30:ILE:HD12	2.01	0.43
9:AJ:75:ILE:HG12	9:AJ:76:ASN:CG	2.44	0.43
12:AM:115:LYS:N	20:AA:1228:C:H5'	2.30	0.43
14:AO:69:TYR:O	14:AO:73:GLU:HG2	2.18	0.43
20:AA:241:C:N4	20:AA:285:G:H1	2.16	0.43
20:AA:691:G:H1'	20:AA:696:A:H61	1.83	0.43
20:AA:1097:C:H1'	20:AA:1170:A:H1'	2.01	0.43
20:AA:1281:U:C5'	20:AA:1282:C:H5	2.32	0.43
20:AA:1412:C:H2'	20:AA:1413:A:H8	1.83	0.43
20:AA:1491:G:H21	20:AA:1492:A:H61	1.67	0.43
20:AA:1536:C:N4	22:AV:9:G:H1	2.16	0.43
21:AW:72:C:H3'	21:AW:73:A:H8	1.83	0.43
23:AY:110:SER:OG	23:AY:137:ASN:O	2.29	0.43
24:BC:17:PRO:HA	24:BC:223:VAL:HG11	2.00	0.43
24:BC:54:ARG:HA	24:BC:54:ARG:HD2	1.79	0.43
26:BE:44:TYR:O	26:BE:45:THR:OG1	2.29	0.43
28:BG:129:GLY:HA3	28:BG:163:ALA:C	2.43	0.43
29:BH:140:LYS:O	29:BH:144:VAL:HG23	2.19	0.43
31:BK:37:PHE:O	31:BK:41:PHE:HB3	2.19	0.43
32:BN:17:ASP:CG	32:BN:18:ALA:H	2.27	0.43
32:BN:24:GLY:HA2	58:BA:1139:G:H5'	1.99	0.43
33:BO:88:ASN:OD1	33:BO:92:GLU:N	2.50	0.43
36:BR:38:VAL:O	36:BR:41:ALA:HB3	2.18	0.43
36:BR:96:ARG:HB3	36:BR:117:VAL:HG21	2.00	0.43
39:BU:91:ASP:O	39:BU:92:ARG:HB3	2.17	0.43
42:BX:5:TYR:HA	42:BX:7:VAL:HG23	2.00	0.43
43:BY:5:MET:N	43:BY:5:MET:SD	2.90	0.43
44:BZ:141:VAL:O	44:BZ:143:GLY:N	2.52	0.43
45:B0:26:TYR:HB3	45:B0:27:GLU:OE2	2.18	0.43
50:B7:39:ARG:NH1	50:B7:40:TRP:CD1	2.83	0.43
58:BA:18:C:H1'	58:BA:554:U:OP1	2.18	0.43
58:BA:280:C:H2'	58:BA:281:G:H5'	2.01	0.43
58:BA:586:A:H5"	58:BA:587:C:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:1341:U:H5'	58:BA:1602:U:C4	2.54	0.43
58:BA:144(B):A:O2'	58:BA:1445:C:H5'	2.19	0.43
58:BA:1618:A:O2'	58:BA:1619:G:H5'	2.18	0.43
58:BA:1938:A:N7	58:BA:2590:A:O2'	2.49	0.43
58:BA:2181:G:H2'	58:BA:2182:G:O4'	2.18	0.43
1:CB:19:HIS:CG	1:CB:20:GLU:N	2.85	0.43
2:CC:19:GLU:OE1	2:CC:55:VAL:N	2.35	0.43
3:CD:127:THR:HA	3:CD:131:ARG:O	2.19	0.43
5:CF:70:ASP:O	5:CF:73:ASN:ND2	2.52	0.43
6:CG:126:ASP:OD2	6:CG:126:ASP:N	2.50	0.43
9:CJ:44:VAL:HA	9:CJ:65:LEU:O	2.19	0.43
11:CL:73:GLU:HA	20:CA:521:G:OP1	2.18	0.43
11:CL:114:LYS:N	20:CA:538:G:OP1	2.44	0.43
20:CA:359:U:H2'	20:CA:360:A:C8	2.54	0.43
20:CA:831:U:H2'	20:CA:832:C:C6	2.52	0.43
23:CY:355:LEU:HD23	23:CY:368:GLU:HA	2.00	0.43
24:DC:133:GLY:N	24:DC:138:LEU:HB2	2.33	0.43
26:DE:120:TRP:CD1	26:DE:120:TRP:H	2.36	0.43
27:DF:65:TRP:HZ3	27:DF:75:HIS:CE1	2.36	0.43
27:DF:154:VAL:H	27:DF:173:VAL:HA	1.84	0.43
27:DF:156:LEU:O	27:DF:158:THR:HG22	2.18	0.43
27:DF:168:ARG:HB3	58:DA:322:A:OP1	2.18	0.43
28:DG:111:LEU:N	28:DG:112:PRO:HD2	2.34	0.43
32:DN:35:ARG:NH2	32:DN:42:TRP:HH2	2.16	0.43
38:DT:48:ILE:HD11	38:DT:65:LYS:NZ	2.34	0.43
39:DU:54:LYS:HG2	39:DU:58:ARG:NH2	2.33	0.43
41:DW:14:PRO:O	41:DW:15:ARG:C	2.62	0.43
43:DY:67:LEU:HD11	43:DY:71:LYS:HZ1	1.84	0.43
43:DY:88:LYS:HB3	43:DY:89:PHE:H	1.55	0.43
44:DZ:3:TYR:N	44:DZ:56:VAL:O	2.52	0.43
44:DZ:120:ILE:HG22	44:DZ:121:HIS:ND1	2.33	0.43
48:D5:23:HIS:HB3	48:D5:24:ALA:H	1.28	0.43
49:D6:15:GLU:HG2	49:D6:16:CYS:N	2.34	0.43
51:D8:13:ARG:NH2	58:DA:250:G:OP2	2.52	0.43
58:DA:930:U:H4'	58:DA:931:G:O4'	2.19	0.43
58:DA:1142:U:H5"	58:DA:114(B):A:H8	1.80	0.43
58:DA:1339:G:C6	58:DA:1340:U:H5	2.36	0.43
58:DA:1424:G:C2	58:DA:1575:C:C2	3.06	0.43
58:DA:1497:U:H5'	58:DA:1498:C:C5	2.53	0.43
58:DA:1801:G:C2	58:DA:2207:C:H4'	2.53	0.43
1:AB:218:ALA:O	1:AB:221:LEU:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:19:GLU:OE1	2:AC:54:ARG:HA	2.19	0.43
3:AD:26:CYS:CA	3:AD:31:CYS:HA	2.42	0.43
3:AD:62:GLN:NE2	20:AA:544:G:OP1	2.51	0.43
3:AD:93:PHE:O	3:AD:97:LEU:HG	2.18	0.43
3:AD:177:ASP:C	3:AD:179:GLU:H	2.25	0.43
4:AE:7:GLU:O	4:AE:34:VAL:HA	2.19	0.43
5:AF:1:MET:HG2	5:AF:68:PRO:HB3	2.00	0.43
7:AH:48:TYR:CD1	7:AH:59:LEU:HD21	2.54	0.43
9:AJ:15:THR:O	9:AJ:19:SER:N	2.48	0.43
11:AL:113:ARG:HH21	11:AL:116:SER:H	1.64	0.43
19:AT:13:LEU:HD12	19:AT:14:LYS:N	2.34	0.43
20:AA:68(I):G:N2	20:AA:68(R):C:H1'	2.34	0.43
20:AA:106:C:H2'	20:AA:107:G:H8	1.82	0.43
20:AA:217:C:O2'	20:AA:458(C):G:O6	2.30	0.43
20:AA:756:C:H2'	20:AA:757:U:O4'	2.18	0.43
20:AA:815:A:N6	20:AA:1509:C:H1'	2.34	0.43
20:AA:831:U:H2'	20:AA:832:C:C6	2.53	0.43
20:AA:1320:C:H2'	20:AA:1321:C:C6	2.53	0.43
23:AY:147:TRP:O	23:AY:151:ARG:HB2	2.18	0.43
23:AY:212:TYR:HD1	23:AY:212:TYR:HA	1.72	0.43
23:AY:302:HIS:C	23:AY:304:ASP:H	2.27	0.43
24:BC:28:ARG:O	24:BC:31:LYS:HB3	2.18	0.43
24:BC:66:PRO:HD2	24:BC:192:ALA:HB1	2.00	0.43
25:BD:30:GLU:HB3	25:BD:83:GLU:OE2	2.18	0.43
25:BD:92:ILE:C	25:BD:107:ALA:HB2	2.43	0.43
27:BF:24:LEU:HD13	27:BF:119:ARG:HE	1.84	0.43
28:BG:111:LEU:O	28:BG:112:PRO:C	2.61	0.43
28:BG:112:PRO:O	28:BG:113:ARG:O	2.36	0.43
28:BG:113:ARG:HE	28:BG:113:ARG:CA	2.25	0.43
29:BH:13:LYS:HB3	29:BH:14:GLY:H	1.61	0.43
34:BP:85:LEU:HD21	34:BP:137:LYS:HG3	2.00	0.43
35:BQ:9:TYR:OH	58:BA:911:A:H2'	2.18	0.43
37:BS:13:ARG:O	37:BS:15:ARG:N	2.52	0.43
37:BS:41:ASP:O	37:BS:46:VAL:N	2.52	0.43
38:BT:53:ARG:NH2	38:BT:58:ASN:O	2.51	0.43
41:BW:11:ARG:NH2	41:BW:98:LYS:HB3	2.33	0.43
41:BW:16:LYS:HA	41:BW:19:LEU:HD22	2.00	0.43
42:BX:25:LYS:HA	42:BX:81:VAL:O	2.18	0.43
46:B2:51:ARG:HG3	46:B2:52:ASP:N	2.33	0.43
50:B7:1:MET:HG3	58:BA:753:C:OP1	2.18	0.43
56:B1:21:ARG:HB3	56:B1:38:SER:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:245:G:H2'	58:BA:246:C:H6	1.84	0.43
58:BA:447:A:H4'	58:BA:448:U:H5"	2.00	0.43
58:BA:1295:C:H2'	58:BA:1296:G:O4'	2.18	0.43
58:BA:1444:G:H2'	58:BA:1445:C:C5	2.53	0.43
58:BA:1641:A:H2'	58:BA:1642:G:O4'	2.18	0.43
58:BA:1690:A:H2'	58:BA:1691:C:O4'	2.18	0.43
58:BA:1935:G:H1'	58:BA:1964:G:N2	2.34	0.43
58:BA:2154:G:H2'	58:BA:2155:G:C8	2.53	0.43
58:BA:2179:C:H2'	58:BA:2180:U:H6	1.84	0.43
58:BA:2630:G:H2'	58:BA:2631:G:H8	1.81	0.43
58:BA:2697:G:H2'	58:BA:2698:U:O4'	2.19	0.43
3:CD:49:ARG:HB3	3:CD:50:ARG:H	1.69	0.43
8:CI:20:ARG:HH12	8:CI:62:TYR:HB2	1.83	0.43
11:CL:49:ASN:ND2	20:CA:529:G:O6	2.51	0.43
19:CT:72:LEU:HD11	19:CT:80:ARG:HH11	1.84	0.43
20:CA:256:U:O4	20:CA:270:A:N1	2.51	0.43
20:CA:858:G:H8	20:CA:858:G:OP2	2.01	0.43
20:CA:1194:U:H2'	20:CA:1195:C:O4'	2.17	0.43
20:CA:1200:C:HO2'	20:CA:1201:A:P	2.41	0.43
20:CA:1315:U:H2'	20:CA:1316:G:O4'	2.18	0.43
20:CA:1328:C:H2'	20:CA:1329:A:O4'	2.18	0.43
20:CA:1362:C:C2'	20:CA:1362(A):C:H5"	2.48	0.43
20:CA:1461:G:H2'	20:CA:1462:G:C8	2.54	0.43
24:DC:19:LYS:HE3	24:DC:20:VAL:N	2.33	0.43
24:DC:20:VAL:O	24:DC:225:ILE:HA	2.19	0.43
25:DD:118:VAL:HG13	25:DD:119:ALA:H	1.83	0.43
26:DE:161:GLY:O	26:DE:163:GLU:N	2.49	0.43
28:DG:111:LEU:O	28:DG:112:PRO:C	2.61	0.43
29:DH:20:ALA:HB3	29:DH:23:ARG:HG3	2.00	0.43
31:DK:115:LEU:HB3	31:DK:116:ASN:H	1.60	0.43
33:DO:8:LEU:HD23	33:DO:19:ILE:HD12	1.99	0.43
35:DQ:38:GLU:OE1	35:DQ:128:LYS:HG2	2.18	0.43
35:DQ:137:TYR:CZ	44:DZ:81:ARG:NH2	2.87	0.43
40:DV:40:LEU:C	40:DV:45:THR:HB	2.44	0.43
40:DV:60:GLU:HG2	40:DV:97:LYS:HE2	2.01	0.43
51:D8:61:LEU:HD23	51:D8:62:LEU:HG	2.01	0.43
58:DA:30:G:C5	58:DA:31:C:C5	3.06	0.43
58:DA:1299:G:H4'	58:DA:1301:A:C4	2.54	0.43
58:DA:1675:C:H3'	58:DA:1676:A:H8	1.84	0.43
58:DA:2080:G:H2'	58:DA:2081:C:H6	1.80	0.43
58:DA:2345:G:H1'	58:DA:2381:C:H2'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:2366:A:H3'	58:DA:2367:G:H8	1.83	0.43
58:DA:2662:A:H2'	58:DA:2663:G:O4'	2.19	0.43
59:DB:61:G:H2'	59:DB:62:C:C6	2.54	0.43
2:AC:176:HIS:HD2	20:AA:1111:A:H62	1.67	0.43
3:AD:59:ARG:HA	3:AD:59:ARG:HD2	1.86	0.43
6:AG:101:LEU:O	6:AG:105:VAL:HG23	2.19	0.43
11:AL:23:LYS:HE3	11:AL:89:ARG:HD2	2.00	0.43
11:AL:95:GLY:C	11:AL:97:ARG:N	2.77	0.43
16:AQ:62:SER:HB3	20:AA:186(I):U:H3	1.83	0.43
20:AA:372:C:H4'	20:AA:373:A:OP1	2.19	0.43
20:AA:592:G:C2	20:AA:593:G:C8	3.07	0.43
20:AA:1074:G:H2'	20:AA:1075:C:H6	1.83	0.43
20:AA:1097:C:O2'	20:AA:1169:A:N3	2.48	0.43
20:AA:1340:A:C6	20:AA:1341:U:C4	3.07	0.43
20:AA:1503:A:N6	22:AV:14:A:H2'	2.34	0.43
21:AW:63:C:H2'	21:AW:64:G:C8	2.54	0.43
21:AW:64:G:C6	21:AW:65:U:C4	3.06	0.43
23:AY:112:GLN:NE2	58:BA:2659:G:O6	2.52	0.43
23:AY:122:TRP:CD1	23:AY:122:TRP:C	2.97	0.43
23:AY:259:PHE:CD1	23:AY:272:LEU:HD13	2.53	0.43
23:AY:526:VAL:O	23:AY:528:ALA:N	2.49	0.43
23:AY:606:MET:HG2	23:AY:673:PHE:HA	1.99	0.43
24:BC:73:VAL:C	24:BC:75:VAL:H	2.26	0.43
24:BC:217:THR:O	24:BC:218:THR:OG1	2.30	0.43
25:BD:134:ARG:HB3	25:BD:187:GLY:HA3	2.01	0.43
26:BE:52:LEU:HA	26:BE:53:PRO:HD3	1.76	0.43
28:BG:43:LEU:HB3	28:BG:44:GLY:H	1.52	0.43
29:BH:18:GLU:HB3	29:BH:25:LYS:O	2.19	0.43
29:BH:83:TYR:O	29:BH:85:LYS:N	2.52	0.43
32:BN:55:VAL:O	32:BN:56:ASN:C	2.61	0.43
32:BN:63:THR:HB	32:BN:64:GLY:H	1.55	0.43
39:BU:36:ARG:HG2	39:BU:40:PHE:CE1	2.54	0.43
51:B8:59:LYS:HD3	51:B8:59:LYS:HA	1.83	0.43
58:BA:41:C:H2'	58:BA:43:G:H8	1.84	0.43
58:BA:234:C:H2'	58:BA:235:U:H6	1.83	0.43
58:BA:468:G:H3'	58:BA:469:G:C8	2.53	0.43
58:BA:613:U:H4'	58:BA:616:A:C6	2.54	0.43
58:BA:758:C:H2'	58:BA:759:G:C8	2.53	0.43
58:BA:979:G:O5'	58:BA:979:G:H8	2.01	0.43
58:BA:1022:G:N3	58:BA:1023:U:H5	2.15	0.43
58:BA:1664:A:H3'	58:BA:1665:A:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:1827:C:H2'	58:BA:1828:G:O4'	2.18	0.43
58:BA:2210:G:H21	58:BA:2211:G:H5'	1.83	0.43
58:BA:2254:C:H2'	58:BA:2255:G:O4'	2.19	0.43
58:BA:2584:U:H2'	58:BA:2585:U:C2	2.53	0.43
59:BB:82:G:H1	59:BB:94:C:H42	1.67	0.43
1:CB:44:LEU:O	1:CB:47:THR:HB	2.19	0.43
1:CB:195:ASP:O	7:CH:74:PRO:HG3	2.19	0.43
3:CD:57:ARG:HD3	3:CD:206:PHE:HA	1.99	0.43
5:CF:69:GLU:C	5:CF:72:VAL:HG12	2.43	0.43
6:CG:29:LYS:HG3	6:CG:101:LEU:CD1	2.49	0.43
7:CH:51:VAL:HB	7:CH:52:ASP:H	1.74	0.43
10:CK:113:PRO:O	10:CK:115:PRO:HD3	2.18	0.43
14:CO:79:ARG:O	14:CO:83:GLU:HB2	2.19	0.43
20:CA:68(J):G:N2	20:CA:68(Q):U:H1'	2.33	0.43
20:CA:352:C:N3	20:CA:356:A:N6	2.66	0.43
23:CY:15:ILE:HG22	23:CY:103:GLY:C	2.43	0.43
23:CY:67:ALA:H	23:CY:358:MET:HE2	1.84	0.43
23:CY:311:ALA:HB1	23:CY:330:VAL:HA	2.01	0.43
25:DD:67:PHE:HD2	25:DD:67:PHE:HA	1.66	0.43
26:DE:132:HIS:HA	26:DE:135:HIS:NE2	2.34	0.43
32:DN:17:ASP:CG	32:DN:18:ALA:N	2.77	0.43
34:DP:71:VAL:HA	58:DA:245:G:H4'	2.01	0.43
38:DT:53:ARG:NH1	38:DT:60:THR:H	2.07	0.43
39:DU:70:ARG:HH21	58:DA:1011:G:P	2.42	0.43
39:DU:95:LEU:HD23	39:DU:95:LEU:HA	1.81	0.43
42:DX:33:LYS:HA	42:DX:33:LYS:HD2	1.81	0.43
43:DY:85:VAL:HG22	43:DY:94:LYS:HB3	1.99	0.43
44:DZ:52:SER:C	44:DZ:54:HIS:H	2.27	0.43
48:D5:56:LYS:HD2	48:D5:56:LYS:N	2.34	0.43
57:D4:28:LYS:HA	57:D4:29:PRO:HD3	1.88	0.43
58:DA:38:A:H2'	58:DA:39:C:C6	2.53	0.43
58:DA:180:G:O2'	58:DA:181:A:N7	2.47	0.43
58:DA:223:A:C2	58:DA:422:A:C8	3.06	0.43
58:DA:476:G:H1'	58:DA:480:A:N6	2.34	0.43
58:DA:698:C:O2'	58:DA:734:A:N6	2.52	0.43
58:DA:722:A:H2'	58:DA:723:G:H8	1.83	0.43
58:DA:1028:A:H2'	58:DA:1029:A:H8	1.80	0.43
58:DA:1697:G:O2'	58:DA:1978:A:OP1	2.26	0.43
58:DA:2248:C:H3'	58:DA:2249:U:C6	2.54	0.43
58:DA:2372:G:H2'	58:DA:2373:G:C8	2.53	0.43
58:DA:2378:A:H8	58:DA:2378:A:O5'	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:2479:G:OP1	58:DA:2537:U:H1'	2.19	0.43
58:DA:2590:A:H2'	58:DA:2591:C:C6	2.54	0.43
58:DA:2781:A:H5'	58:DA:2782:G:C5'	2.49	0.43
1:AB:76:GLN:HB2	1:AB:77:ALA:H	1.62	0.43
1:AB:78:GLN:O	1:AB:81:VAL:HG22	2.19	0.43
3:AD:61:LYS:HE3	3:AD:61:LYS:HB3	1.80	0.43
6:AG:91:VAL:HB	6:AG:96:GLN:HG3	2.00	0.43
8:AI:22:GLY:H	8:AI:58:HIS:C	2.27	0.43
11:AL:36:VAL:O	11:AL:80:HIS:HA	2.18	0.43
12:AM:122:LYS:HB2	12:AM:123:ALA:H	1.41	0.43
16:AQ:55:ASP:HA	16:AQ:78:GLU:O	2.19	0.43
20:AA:19:C:H2'	20:AA:20:U:C6	2.53	0.43
20:AA:815:A:C6	20:AA:1508:G:N2	2.85	0.43
20:AA:869:G:H5'	20:AA:872:A:O4'	2.19	0.43
20:AA:891:U:O4	20:AA:907:A:N7	2.52	0.43
20:AA:1331:G:OP1	20:AA:1331:G:H4'	2.19	0.43
21:AW:14:A:H2'	21:AW:15:G:O4'	2.19	0.43
23:AY:69:VAL:HA	23:AY:81:ILE:O	2.19	0.43
23:AY:201:ILE:HG22	23:AY:203:GLU:H	1.83	0.43
23:AY:271:LEU:HD12	23:AY:272:LEU:N	2.33	0.43
24:BC:89:GLU:O	24:BC:155:ARG:NH2	2.51	0.43
25:BD:80:ALA:HB3	25:BD:94:LEU:HD22	2.01	0.43
25:BD:111:LEU:HG	25:BD:127:VAL:HG12	2.01	0.43
28:BG:33:ARG:HB2	28:BG:34:LEU:H	1.44	0.43
29:BH:142:GLY:HA3	58:BA:2745:C:O3'	2.19	0.43
30:BJ:25:UNK:O	30:BJ:27:UNK:N	2.52	0.43
31:BK:131:ALA:HA	31:BK:134:MET:CE	2.48	0.43
32:BN:96:GLU:CD	32:BN:96:GLU:H	2.26	0.43
32:BN:100:GLU:O	32:BN:101:HIS:C	2.60	0.43
34:BP:60:MET:H	34:BP:60:MET:HG2	1.33	0.43
37:BS:92:TYR:CE2	37:BS:94:TYR:HB2	2.53	0.43
39:BU:95:LEU:HD11	40:BV:13:ARG:HB2	2.01	0.43
43:BY:28:LYS:HB3	43:BY:28:LYS:HE2	1.43	0.43
43:BY:39:VAL:HB	43:BY:40:GLU:H	1.56	0.43
46:B2:19:VAL:O	46:B2:22:GLU:HB3	2.19	0.43
47:B3:1:MET:HA	47:B3:2:PRO:HD2	1.91	0.43
56:B1:22:GLY:HA2	56:B1:37:ILE:HA	2.01	0.43
58:BA:310:A:H2'	58:BA:312:G:N7	2.33	0.43
58:BA:500:G:N1	58:BA:503:A:OP2	2.52	0.43
58:BA:1166:C:H2'	58:BA:1167:U:C6	2.53	0.43
58:BA:1211:U:H5"	58:BA:1212:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:1249:U:O2	58:BA:1249:U:H2'	2.19	0.43
58:BA:1305:C:N4	58:BA:1623:G:H1	2.16	0.43
58:BA:1356:G:H2'	58:BA:1357:U:O4'	2.18	0.43
58:BA:1359:A:OP2	58:BA:1371:G:N1	2.49	0.43
58:BA:1531:C:H2'	58:BA:1532:C:C6	2.53	0.43
58:BA:1856:G:H2'	58:BA:1857:G:O4'	2.19	0.43
58:BA:2175:C:H2'	58:BA:2176:A:C8	2.54	0.43
58:BA:2211:G:C2'	58:BA:2212:A:H5"	2.49	0.43
58:BA:2414:G:H2'	58:BA:2415:G:O4'	2.19	0.43
58:BA:2711:A:H3'	58:BA:2712:U:H5'	2.01	0.43
58:BA:2721:A:H3'	58:BA:2722:G:C8	2.54	0.43
58:BA:2822:G:N2	58:BA:2824:C:OP1	2.48	0.43
59:BB:39:A:H2'	59:BB:40:U:C6	2.54	0.43
1:CB:15:VAL:HG23	1:CB:16:HIS:CE1	2.53	0.43
3:CD:92:VAL:HG13	3:CD:96:LEU:HD22	1.99	0.43
3:CD:209:ARG:NH1	20:CA:8:A:N1	2.66	0.43
4:CE:41:VAL:HG23	4:CE:67:VAL:HG13	2.00	0.43
12:CM:77:ASN:HA	12:CM:80:ARG:HG3	2.00	0.43
20:CA:68(V):G:H2'	20:CA:68(W):G:O4'	2.19	0.43
20:CA:742:G:H2'	20:CA:743:U:C6	2.54	0.43
20:CA:1422:G:H4'	33:DO:49:ARG:CZ	2.49	0.43
23:CY:163:VAL:HG22	23:CY:258:VAL:CG2	2.48	0.43
23:CY:538:TYR:O	23:CY:542:VAL:HG12	2.19	0.43
24:DC:208:THR:C	24:DC:210:LEU:H	2.26	0.43
25:DD:148:GLU:OE1	25:DD:151:LYS:HE2	2.19	0.43
26:DE:61:ARG:HB2	26:DE:62:PRO:CD	2.42	0.43
27:DF:68:LYS:C	27:DF:70:THR:H	2.26	0.43
27:DF:158:THR:HA	27:DF:195:ASP:H	1.83	0.43
28:DG:33:ARG:HE	28:DG:33:ARG:HB2	1.58	0.43
28:DG:98:ARG:HA	28:DG:98:ARG:HD3	1.78	0.43
32:DN:76:SER:C	32:DN:78:TYR:N	2.76	0.43
32:DN:96:GLU:H	32:DN:96:GLU:CD	2.26	0.43
38:DT:20:PRO:HG2	38:DT:86:ILE:HA	2.00	0.43
40:DV:55:ALA:HB1	40:DV:101:GLY:HA2	2.00	0.43
41:DW:23:LEU:HD22	48:D5:25:LEU:HD13	2.01	0.43
44:DZ:178:GLU:OE1	44:DZ:178:GLU:N	2.52	0.43
50:D7:4:THR:OG1	58:DA:788:A:N3	2.51	0.43
56:D1:26:ARG:HD2	56:D1:26:ARG:HA	1.71	0.43
58:DA:57:C:N3	58:DA:70:G:N2	2.52	0.43
58:DA:248:G:H21	58:DA:2433:A:H62	1.67	0.43
58:DA:270(D):C:H2'	58:DA:270(E):C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:270(O):G:O2'	58:DA:270(P):U:H5"	2.18	0.43
58:DA:308:G:C8	58:DA:501:A:H1'	2.53	0.43
58:DA:545:G:H2'	58:DA:547:A:OP2	2.18	0.43
58:DA:729:G:H5'	58:DA:730:C:H5"	2.01	0.43
58:DA:813:U:H2'	58:DA:814:C:C6	2.53	0.43
58:DA:820:A:N3	58:DA:943:U:H4'	2.34	0.43
58:DA:1183:G:C2	58:DA:1184:G:C5	3.06	0.43
58:DA:1431:U:H2'	58:DA:1432:C:C6	2.53	0.43
58:DA:1889:A:H2'	58:DA:1890:A:C8	2.54	0.43
58:DA:2135:A:N6	58:DA:2156:G:O2'	2.36	0.43
58:DA:2636:U:H2'	58:DA:2637:U:C6	2.53	0.43
58:DA:2684:U:H2'	58:DA:2685:G:C8	2.54	0.43
58:DA:2713:A:C3'	58:DA:2714:G:H5'	2.49	0.43
58:DA:2745:C:H41	58:DA:2755:C:C4'	2.29	0.43
2:AC:59:ARG:HD3	2:AC:64:VAL:HG13	2.01	0.43
20:AA:31:G:N1	20:AA:48:C:H5"	2.34	0.43
20:AA:979:C:N4	20:AA:980:C:O2	2.52	0.43
20:AA:1016:A:O2'	20:AA:1217:C:O2	2.29	0.43
23:AY:20:HIS:CG	23:AY:21:ILE:N	2.85	0.43
23:AY:370:LYS:H	23:AY:370:LYS:HD2	1.83	0.43
25:BD:69:ARG:C	25:BD:71:ASP:N	2.76	0.43
25:BD:165:ILE:CG2	25:BD:166:GLN:H	2.26	0.43
26:BE:51:PHE:H	26:BE:74:PRO:HG3	1.84	0.43
26:BE:132:HIS:HB2	58:BA:744:G:OP1	2.19	0.43
27:BF:196:LEU:O	27:BF:200:GLU:HG2	2.19	0.43
28:BG:111:LEU:N	28:BG:112:PRO:HD2	2.34	0.43
28:BG:170:ARG:NH1	28:BG:174:GLU:OE1	2.52	0.43
31:BK:14:ALA:HB2	31:BK:41:PHE:CZ	2.54	0.43
32:BN:24:GLY:CA	58:BA:1139:G:H5'	2.48	0.43
32:BN:97:ARG:HH11	32:BN:97:ARG:HG2	1.84	0.43
34:BP:86:LYS:HA	34:BP:86:LYS:HD2	1.74	0.43
35:BQ:69:PHE:CE1	58:BA:872:A:H5'	2.51	0.43
36:BR:63:ARG:HG3	36:BR:76:VAL:HG21	2.01	0.43
41:BW:19:LEU:O	48:B5:25:LEU:HD12	2.18	0.43
44:BZ:47:VAL:HG12	44:BZ:57:ILE:HD11	2.00	0.43
56:B1:86:SER:HB2	56:B1:89:GLU:CD	2.44	0.43
58:BA:270(C):A:H62	58:BA:270(Y):G:H21	1.65	0.43
58:BA:1577:C:H2'	58:BA:1578:U:C6	2.53	0.43
58:BA:1966:A:N3	58:BA:2593:U:H5'	2.33	0.43
58:BA:2179:C:H2'	58:BA:2180:U:C6	2.54	0.43
1:CB:69:LEU:HD22	1:CB:69:LEU:HA	1.93	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:88:LYS:HB3	4:CE:123:LEU:HB2	2.00	0.43
4:CE:121:LYS:HG2	20:CA:7:G:N2	2.33	0.43
5:CF:80:ARG:HA	5:CF:85:VAL:HG11	2.00	0.43
20:CA:524:G:H2'	20:CA:525:C:C6	2.54	0.43
20:CA:1288:A:N1	20:CA:1371:G:H1'	2.34	0.43
20:CA:1340:A:C6	20:CA:1341:U:C4	3.06	0.43
20:CA:1370:G:C2	20:CA:1371:G:N7	2.87	0.43
20:CA:1489:G:H2'	20:CA:1490:C:C6	2.53	0.43
23:CY:160:ARG:HB3	23:CY:255:ILE:HA	1.99	0.43
23:CY:422:GLU:H	23:CY:422:GLU:HG2	1.68	0.43
24:DC:201:LYS:HG2	24:DC:209:PHE:CE2	2.53	0.43
25:DD:10:THR:HG21	58:DA:728:G:H1'	2.01	0.43
25:DD:221:VAL:HA	58:DA:1789:A:H5"	2.01	0.43
28:DG:32:PRO:HG2	28:DG:168:GLU:OE1	2.19	0.43
33:DO:64:ARG:HH22	38:DT:69:GLY:HA3	1.84	0.43
33:DO:64:ARG:HA	33:DO:79:PHE:CD1	2.54	0.43
35:DQ:139:GLU:HG3	44:DZ:53:ILE:HD11	2.01	0.43
39:DU:62:ILE:HD11	39:DU:93:LYS:CG	2.49	0.43
40:DV:12:TYR:CE2	40:DV:22:VAL:HG12	2.54	0.43
42:DX:12:VAL:HG13	42:DX:27:THR:O	2.19	0.43
43:DY:27:VAL:O	43:DY:28:LYS:HB3	2.19	0.43
43:DY:81:LYS:HA	43:DY:82:PRO:HD3	1.89	0.43
44:DZ:80:ARG:O	44:DZ:81:ARG:HG3	2.19	0.43
56:D1:26:ARG:O	56:D1:31:GLY:HA2	2.19	0.43
58:DA:584:C:H42	58:DA:1256:G:H1	1.65	0.43
58:DA:718:A:H3'	58:DA:719:C:H6	1.84	0.43
58:DA:1601:G:H3'	58:DA:1602:U:C6	2.54	0.43
58:DA:1668:A:O2'	58:DA:1670:C:N4	2.52	0.43
58:DA:2115:G:H8	58:DA:2115:G:OP2	2.01	0.43
58:DA:2121:G:H2'	58:DA:2122:U:C6	2.54	0.43
58:DA:2236:C:H2'	58:DA:2237:G:O4'	2.19	0.43
58:DA:2365:G:HO2'	58:DA:2366:A:H8	1.62	0.43
58:DA:2522:U:O2'	58:DA:2647:U:OP1	2.31	0.43
59:DB:11:C:H2'	59:DB:12:C:O4'	2.18	0.43
59:DB:68:C:H2'	59:DB:69:G:O4'	2.18	0.43
59:DB:82:G:H2'	59:DB:83:G:C8	2.54	0.43
2:AC:12:LEU:HD12	13:AN:58:LYS:HB2	2.01	0.43
3:AD:24:GLU:O	3:AD:28:SER:HB3	2.18	0.43
3:AD:33:MET:HA	3:AD:37:PRO:HB3	2.00	0.43
6:AG:34:GLY:HA3	20:AA:1350:A:C2	2.52	0.43
8:AI:99:LEU:HB3	8:AI:101:PHE:CD1	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:76:ASN:ND2	11:AL:77:LEU:H	2.17	0.43
11:AL:87:GLY:HA2	11:AL:98:TYR:H	1.83	0.43
13:AN:3:ARG:O	13:AN:6:LEU:HB2	2.19	0.43
15:AP:18:ARG:HD3	15:AP:35:LYS:HD2	1.99	0.43
18:AS:40:ILE:HG13	18:AS:69:HIS:O	2.19	0.43
19:AT:80:ARG:NH2	20:AA:261:U:OP2	2.52	0.43
20:AA:47:C:H42	20:AA:361:G:H1	1.67	0.43
20:AA:124:G:H2'	20:AA:125:U:O4'	2.19	0.43
20:AA:859:A:H3'	20:AA:860:A:H8	1.83	0.43
20:AA:973:G:C3'	20:AA:974:A:H5"	2.41	0.43
20:AA:1417:G:H2'	20:AA:1482:G:N2	2.33	0.43
20:AA:1513:A:H2'	20:AA:1514:C:H6	1.79	0.43
21:AW:70:G:H4'	58:BA:1893:C:O2'	2.18	0.43
23:AY:134:ALA:HB3	23:AY:258:VAL:HG13	2.00	0.43
23:AY:176:GLY:HA3	23:AY:187:THR:HA	2.00	0.43
24:BC:161:ARG:C	24:BC:161:ARG:HD3	2.44	0.43
25:BD:100:GLY:HA3	58:BA:1500:G:H21	1.84	0.43
25:BD:105:ILE:HG12	25:BD:106:ILE:H	1.83	0.43
26:BE:128:SER:OG	26:BE:129:HIS:ND1	2.51	0.43
31:BK:79:ARG:HG3	31:BK:84:LEU:HB2	2.01	0.43
32:BN:1:MET:O	32:BN:2:LYS:HB2	2.18	0.43
33:BO:11:ALA:HB1	33:BO:99:PHE:HB2	2.00	0.43
39:BU:95:LEU:HD21	40:BV:13:ARG:HH11	1.84	0.43
41:BW:74:ALA:HA	41:BW:104:THR:O	2.19	0.43
42:BX:12:VAL:HG11	42:BX:21:PHE:CE2	2.54	0.43
43:BY:28:LYS:HB2	43:BY:39:VAL:HG13	2.00	0.43
45:B0:27:GLU:CD	45:B0:27:GLU:H	2.25	0.43
48:B5:31:VAL:HG21	48:B5:42:PRO:HA	2.01	0.43
48:B5:55:ARG:O	48:B5:56:LYS:HB2	2.17	0.43
49:B6:7:ILE:H	49:B6:9:LEU:H	1.65	0.43
58:BA:27:G:H2'	58:BA:28:A:C8	2.53	0.43
58:BA:373:U:H1'	58:BA:423:A:C2	2.54	0.43
58:BA:479:A:C2	58:BA:480:A:C4	3.07	0.43
58:BA:890:A:H2'	58:BA:892:G:O4'	2.18	0.43
58:BA:1047:G:HO2'	58:BA:1109:C:H42	1.63	0.43
58:BA:1081:U:H2'	58:BA:1082:U:C5	2.54	0.43
58:BA:1676:A:H2'	58:BA:1677:A:C8	2.54	0.43
58:BA:1710:C:H1'	58:BA:2859:G:H21	1.84	0.43
58:BA:2623:G:O5'	58:BA:2826:A:H1'	2.19	0.43
58:BA:2712:U:O2	58:BA:2712:U:H2'	2.19	0.43
58:BA:2838:G:H2'	58:BA:2839:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:2884:U:H2'	58:BA:2885:C:O4'	2.19	0.43
1:CB:15:VAL:HG23	1:CB:16:HIS:ND1	2.33	0.43
1:CB:85:ALA:HB3	1:CB:92:TYR:HD2	1.84	0.43
1:CB:166:ASP:OD1	1:CB:168:THR:OG1	2.36	0.43
3:CD:12:CYS:HA	3:CD:19:LEU:HD13	1.99	0.43
3:CD:33:MET:HB3	3:CD:37:PRO:HB3	2.01	0.43
3:CD:92:VAL:O	3:CD:96:LEU:HB2	2.19	0.43
6:CG:20:ASP:OD2	6:CG:59:LEU:HD21	2.18	0.43
6:CG:69:VAL:HG13	6:CG:138:LYS:HB2	2.01	0.43
8:CI:69:GLY:O	8:CI:73:GLN:N	2.38	0.43
8:CI:85:LEU:H	8:CI:85:LEU:HG	1.61	0.43
8:CI:104:ARG:HE	8:CI:105:ASP:N	2.17	0.43
20:CA:299:G:C6	20:CA:300:A:C6	3.07	0.43
20:CA:319:G:H1	20:CA:334:C:N4	2.15	0.43
20:CA:386:C:H2'	20:CA:387:U:O4'	2.19	0.43
20:CA:626:U:H2'	20:CA:627:G:C8	2.54	0.43
20:CA:886:G:H4'	20:CA:915:A:H1'	2.00	0.43
20:CA:1432:G:H1'	20:CA:1468:A:H61	1.84	0.43
20:CA:1490:C:H2'	20:CA:1491:G:O5'	2.19	0.43
23:CY:117:GLN:HE21	58:DA:2660:A:C4'	2.31	0.43
23:CY:131:PRO:HB3	23:CY:251:ILE:HA	2.00	0.43
23:CY:443:HIS:CD2	23:CY:446:THR:HG22	2.54	0.43
24:DC:47:LYS:HG2	24:DC:212:SER:OG	2.19	0.43
25:DD:38:LYS:HD2	25:DD:39:LYS:O	2.18	0.43
25:DD:111:LEU:HD22	25:DD:115:GLN:HG3	1.99	0.43
25:DD:129:ASN:O	25:DD:193:VAL:HG12	2.19	0.43
27:DF:170:LEU:CB	27:DF:173:VAL:HB	2.32	0.43
31:DK:13:PRO:HA	31:DK:53:VAL:H	1.83	0.43
32:DN:42:TRP:CD1	39:DU:63:VAL:CG1	2.99	0.43
33:DO:24:VAL:HG12	33:DO:25:LEU:H	1.84	0.43
33:DO:91:LEU:O	33:DO:92:GLU:HG3	2.19	0.43
38:DT:114:LEU:HA	38:DT:114:LEU:HD23	1.75	0.43
41:DW:1:MET:N	41:DW:109:GLU:OE2	2.51	0.43
42:DX:31:HIS:ND1	42:DX:32:PRO:HD2	2.33	0.43
57:D4:16:CYS:HB3	57:D4:34:GLU:O	2.19	0.43
58:DA:174:C:H2'	58:DA:175:G:O4'	2.19	0.43
58:DA:270(F):G:C6	58:DA:270(W):G:C6	3.07	0.43
58:DA:1001:A:H3'	58:DA:1002:G:H8	1.83	0.43
58:DA:1200:C:H2'	58:DA:1201:C:C6	2.54	0.43
58:DA:1303:G:O2'	58:DA:1642:G:H1'	2.18	0.43
58:DA:1912:A:N7	58:DA:1918:A:N1	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1948:G:H2'	58:DA:1949:G:C8	2.53	0.43
58:DA:2038:G:C5	58:DA:2039:C:C6	3.07	0.43
58:DA:2199:A:N6	58:DA:2224:G:O2'	2.50	0.43
58:DA:2361:A:H8	58:DA:2361:A:OP2	2.02	0.43
58:DA:2419:U:H2'	58:DA:2420:C:C6	2.54	0.43
58:DA:2426:A:H3'	58:DA:2427:C:C5'	2.49	0.43
1:AB:91:PRO:HG3	1:AB:154:LEU:HD12	2.01	0.42
1:AB:92:TYR:CE2	1:AB:151:GLY:HA3	2.53	0.42
3:AD:14:ARG:NE	3:AD:40:PRO:HD2	2.34	0.42
8:AI:6:GLY:HA3	8:AI:80:GLY:O	2.19	0.42
13:AN:17:LYS:HG2	20:AA:1317:C:OP1	2.19	0.42
16:AQ:66:SER:HA	20:AA:265:G:O3'	2.19	0.42
17:AR:74:ARG:HG2	17:AR:79:LEU:HD22	2.01	0.42
20:AA:345:C:O2'	33:BO:116:SER:HA	2.18	0.42
20:AA:829:G:H2'	20:AA:830:G:H8	1.84	0.42
20:AA:973:G:C8	20:AA:974:A:H2'	2.54	0.42
20:AA:984:C:N4	20:AA:1221:G:H1	2.15	0.42
20:AA:1071:C:H2'	20:AA:1072:G:C8	2.54	0.42
20:AA:1386:G:H2'	20:AA:1387:G:C8	2.54	0.42
23:AY:259:PHE:HB2	23:AY:272:LEU:HD13	2.01	0.42
24:BC:162:ILE:CD1	24:BC:175:PRO:HD2	2.49	0.42
25:BD:24:ILE:HD13	25:BD:91:ARG:HB2	1.99	0.42
25:BD:264:LYS:HD3	25:BD:266:SER:N	2.25	0.42
27:BF:45:ARG:CZ	58:BA:443:A:H3'	2.49	0.42
27:BF:155:LEU:HD13	27:BF:185:ASP:C	2.43	0.42
28:BG:59:GLU:O	28:BG:63:ILE:HG23	2.18	0.42
32:BN:46:VAL:HG13	32:BN:47:ALA:H	1.82	0.42
37:BS:54:LEU:C	37:BS:56:LEU:H	2.27	0.42
38:BT:6:LEU:O	38:BT:10:VAL:HG23	2.19	0.42
58:BA:527:C:H4'	58:BA:528:A:O5'	2.18	0.42
58:BA:568:U:H2'	58:BA:570:G:N7	2.34	0.42
58:BA:1061:U:H4'	58:BA:1070:A:O3'	2.18	0.42
58:BA:1531:C:H42	58:BA:1540:G:H1	1.66	0.42
58:BA:1829:A:H2'	58:BA:1830:C:O4'	2.19	0.42
58:BA:1831:G:C6	58:BA:1975:G:C2	3.07	0.42
58:BA:2110:G:H1	58:BA:2179:C:N4	2.15	0.42
58:BA:2178:C:H2'	58:BA:2179:C:C6	2.48	0.42
58:BA:2307:G:N2	58:BA:2312:U:O4	2.52	0.42
58:BA:2541:A:H8	58:BA:2541:A:O5'	2.02	0.42
58:BA:2688:U:O2'	58:BA:2689:U:P	2.76	0.42
6:CG:26:PHE:O	6:CG:30:ILE:HG13	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:78:ARG:HG3	6:CG:79:ARG:N	2.33	0.42
11:CL:15:ARG:NH1	20:CA:563:A:N3	2.66	0.42
14:CO:39:LEU:HD21	14:CO:52:SER:HB3	2.00	0.42
16:CQ:43:LEU:HA	16:CQ:43:LEU:HD23	1.74	0.42
18:CS:6:LYS:HG2	18:CS:7:LYS:N	2.32	0.42
20:CA:599:C:H2'	20:CA:600:C:C6	2.54	0.42
20:CA:925:G:O2'	20:CA:927:G:OP1	2.26	0.42
20:CA:960:U:O2'	20:CA:1223:C:H5"	2.19	0.42
20:CA:1188:A:H2'	20:CA:1189:C:H5'	2.01	0.42
21:CW:23:A:H2'	21:CW:24:G:H8	1.80	0.42
23:CY:141:LYS:HG3	23:CY:142:THR:N	2.33	0.42
23:CY:259:PHE:CZ	23:CY:275:ALA:HB1	2.54	0.42
25:DD:69:ARG:NH1	25:DD:130:ALA:HB2	2.34	0.42
25:DD:84:TYR:CD1	25:DD:91:ARG:HD2	2.54	0.42
26:DE:117:MET:HA	26:DE:121:ASN:HA	2.00	0.42
26:DE:143:ASN:ND2	26:DE:146:THR:O	2.52	0.42
31:DK:29:GLN:HE21	31:DK:29:GLN:HB2	1.73	0.42
32:DN:71:ILE:HD12	32:DN:71:ILE:N	2.30	0.42
34:DP:13:ASN:O	34:DP:14:LYS:HB2	2.18	0.42
34:DP:18:ARG:HA	34:DP:18:ARG:HD2	1.50	0.42
34:DP:24:GLY:HA3	34:DP:33:ARG:NH1	2.34	0.42
39:DU:85:LYS:O	39:DU:116:ALA:HB1	2.19	0.42
41:DW:49:LYS:HE2	58:DA:488:G:H4'	2.01	0.42
44:DZ:29:TYR:HB3	44:DZ:34:ASN:HA	2.01	0.42
52:D9:5:ALA:HB3	58:DA:2465:C:O3'	2.19	0.42
52:D9:9:ARG:NH2	58:DA:1033:U:OP1	2.35	0.42
58:DA:689:A:H2	58:DA:779:U:H4'	1.84	0.42
58:DA:974(B):C:OP2	58:DA:974(B):C:H4'	2.18	0.42
58:DA:1166:C:H2'	58:DA:1167:U:C6	2.53	0.42
58:DA:1173:G:H21	58:DA:1177:A:H62	1.67	0.42
58:DA:1204:A:C4	58:DA:1206:G:C2	3.07	0.42
58:DA:2340:G:H2'	58:DA:2341:G:H8	1.83	0.42
58:DA:2462:U:H2'	58:DA:2463:C:O4'	2.18	0.42
58:DA:2576:G:H4'	58:DA:2579:C:OP2	2.19	0.42
4:AE:76:ILE:HD13	4:AE:78:HIS:O	2.20	0.42
4:AE:154:GLY:CA	7:AH:64:LYS:HZ3	2.32	0.42
5:AF:80:ARG:HE	5:AF:80:ARG:HB2	1.72	0.42
7:AH:73:ASP:CG	7:AH:75:ARG:H	2.27	0.42
8:AI:83:ARG:O	8:AI:86:VAL:HG12	2.19	0.42
9:AJ:69:ASN:C	9:AJ:70:ARG:HD2	2.44	0.42
11:AL:69:TYR:O	11:AL:70:ILE:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:101:A:H2'	20:AA:102:G:C8	2.53	0.42
20:AA:193:C:O2'	20:AA:194:C:H5'	2.20	0.42
20:AA:271:C:H2'	20:AA:272:C:O4'	2.19	0.42
20:AA:527:G:H2'	20:AA:528:C:C6	2.54	0.42
20:AA:858:G:H8	20:AA:858:G:OP2	2.01	0.42
20:AA:935:A:H2'	20:AA:936:C:H6	1.84	0.42
20:AA:1044:A:H2'	20:AA:1045:C:H4'	2.02	0.42
23:AY:354:ARG:NH2	23:AY:378:VAL:HG21	2.34	0.42
28:BG:111:LEU:HB3	28:BG:117:PHE:CZ	2.54	0.42
30:BJ:23:UNK:O	30:BJ:84:UNK:C	2.67	0.42
32:BN:28:THR:HA	32:BN:106:MET:CE	2.44	0.42
32:BN:76:SER:C	32:BN:78:TYR:N	2.76	0.42
32:BN:111:PRO:HA	32:BN:114:ARG:HH12	1.79	0.42
32:BN:134:ARG:CG	32:BN:134:ARG:O	2.67	0.42
34:BP:8:PRO:HB3	58:BA:1242:A:C2	2.55	0.42
34:BP:41:ARG:HE	34:BP:45:LEU:HD13	1.84	0.42
34:BP:109:GLY:O	34:BP:111:ARG:N	2.52	0.42
38:BT:33:LYS:N	38:BT:42:ILE:HA	2.33	0.42
42:BX:44:GLU:CD	42:BX:50:LYS:HA	2.44	0.42
45:B0:67:VAL:HG12	45:B0:68:GLU:H	1.85	0.42
52:B9:8:LYS:O	52:B9:25:VAL:HG11	2.19	0.42
56:B1:12:PRO:CA	56:B1:43:TYR:HB2	2.47	0.42
58:BA:1120:G:H2'	58:BA:1121:C:C6	2.55	0.42
58:BA:1290:C:C2	58:BA:1291:C:C5	3.07	0.42
58:BA:1354:A:N6	58:BA:1377:G:N2	2.34	0.42
58:BA:2015:A:P	58:BA:2015:A:H8	2.42	0.42
58:BA:2080:G:N2	58:BA:2240:C:N3	2.55	0.42
58:BA:2095:C:H2'	58:BA:2096:U:C6	2.54	0.42
58:BA:2557:G:H2'	58:BA:2558:C:H6	1.83	0.42
59:BB:101:A:H2'	59:BB:102:G:O4'	2.19	0.42
1:CB:76:GLN:HB2	1:CB:77:ALA:H	1.73	0.42
2:CC:176:HIS:HB2	20:CA:1108:G:P	2.58	0.42
3:CD:142:PRO:HG3	3:CD:188:LEU:HD11	2.00	0.42
7:CH:14:ARG:HD3	7:CH:82:HIS:CE1	2.54	0.42
9:CJ:6:ILE:HG13	9:CJ:72:VAL:HB	2.01	0.42
15:CP:34:GLU:OE2	15:CP:59:TRP:NE1	2.49	0.42
20:CA:508:C:H1'	20:CA:509:A:N7	2.35	0.42
20:CA:514:C:H2'	20:CA:515:G:C8	2.54	0.42
20:CA:577:G:O2'	20:CA:816:A:H2'	2.18	0.42
20:CA:687:A:C2	20:CA:704:A:C6	3.06	0.42
20:CA:1028(C):G:H2'	20:CA:1028(E):G:OP2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:106:VAL:HG23	23:CY:132:ARG:HB2	2.01	0.42
23:CY:564:LYS:O	23:CY:565:VAL:C	2.62	0.42
23:CY:580:MET:HA	23:CY:583:LYS:CB	2.48	0.42
24:DC:65:LEU:HB3	24:DC:189:ASN:OD1	2.19	0.42
24:DC:136:GLY:O	24:DC:137:LEU:HD23	2.19	0.42
29:DH:30:LYS:HD2	29:DH:81:GLU:HG2	2.01	0.42
30:DJ:24:UNK:N	30:DJ:111:UNK:C	2.82	0.42
31:DK:120:LEU:C	31:DK:122:ALA:H	2.27	0.42
33:DO:64:ARG:HH22	38:DT:70:VAL:H	1.65	0.42
36:DR:24:GLN:OE1	58:DA:1277:G:O2'	2.37	0.42
37:DS:48:LEU:HD12	37:DS:48:LEU:HA	1.89	0.42
38:DT:65:LYS:NZ	38:DT:66:VAL:H	2.17	0.42
40:DV:57:VAL:HG23	40:DV:98:GLU:O	2.18	0.42
44:DZ:19:ARG:HD3	44:DZ:84:GLU:OE2	2.19	0.42
45:D0:23:VAL:HG12	45:D0:38:VAL:HG13	2.01	0.42
46:D2:52:ASP:O	46:D2:55:ARG:HB2	2.19	0.42
50:D7:40:TRP:CE3	58:DA:459:U:H3'	2.54	0.42
58:DA:671:C:H42	58:DA:809:G:H1	1.67	0.42
58:DA:1005:C:H5"	58:DA:1012:U:H5"	2.00	0.42
58:DA:1658:C:H2'	58:DA:1659:U:C6	2.54	0.42
58:DA:2037:G:H2'	58:DA:2038:G:O4'	2.19	0.42
58:DA:2211:G:H2'	58:DA:2212:A:H5"	2.00	0.42
58:DA:2521:C:N4	58:DA:2544:G:H1	2.16	0.42
59:DB:24:G:H4'	59:DB:25:A:C8	2.54	0.42
59:DB:29:A:H2'	59:DB:30:C:H6	1.84	0.42
1:AB:69:LEU:HB2	1:AB:162:ILE:HG22	2.00	0.42
3:AD:28:SER:HB2	3:AD:29:PRO:HD2	2.00	0.42
4:AE:136:MET:O	4:AE:140:ARG:HB2	2.20	0.42
6:AG:116:ALA:O	6:AG:120:ILE:HG12	2.18	0.42
9:AJ:12:ASP:OD1	9:AJ:14:LYS:HE2	2.19	0.42
10:AK:114:VAL:O	20:AA:675:A:O2'	2.29	0.42
11:AL:124:LYS:HA	11:AL:124:LYS:HD2	1.85	0.42
16:AQ:3:LYS:NZ	20:AA:128:G:O2'	2.46	0.42
18:AS:37:ARG:HB2	18:AS:38:SER:H	1.60	0.42
20:AA:510:A:P	20:AA:510:A:H8	2.42	0.42
20:AA:924:C:N3	20:AA:1392:G:O6	2.52	0.42
20:AA:962:C:H2'	20:AA:963:G:H8	1.81	0.42
20:AA:1026:G:O6	20:AA:1035:A:N1	2.52	0.42
20:AA:1048:G:H2'	20:AA:1050:G:H8	1.85	0.42
20:AA:1134:G:C2	20:AA:1135:U:H1'	2.55	0.42
20:AA:1389:C:H2'	20:AA:1390:U:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:598:ASP:HA	23:AY:599:PRO:HD2	1.88	0.42
23:AY:617:MET:HE1	58:BA:1095:A:C6	2.55	0.42
24:BC:63:VAL:HG21	24:BC:196:ALA:HB2	2.01	0.42
25:BD:62:TYR:CE1	58:BA:1816:G:C8	3.08	0.42
25:BD:218:ARG:NH1	58:BA:690:G:O3'	2.52	0.42
26:BE:102:VAL:HA	26:BE:201:THR:HB	2.02	0.42
27:BF:155:LEU:HA	27:BF:176:LEU:CB	2.48	0.42
28:BG:65:GLY:HA2	57:B4:27:THR:HB	2.01	0.42
32:BN:36:GLY:H	32:BN:42:TRP:HE3	1.67	0.42
36:BR:2:ARG:O	36:BR:5:LYS:HB2	2.19	0.42
39:BU:95:LEU:HD23	39:BU:95:LEU:HA	1.83	0.42
40:BV:51:VAL:HG23	40:BV:53:GLU:H	1.85	0.42
45:B0:49:LYS:HB2	45:B0:80:HIS:ND1	2.34	0.42
51:B8:58:ILE:O	51:B8:61:LEU:HD13	2.18	0.42
53:Be:84:LEU:CA	53:Be:87:LYS:HG3	2.48	0.42
56:B1:71:TYR:O	56:B1:74:VAL:HB	2.19	0.42
58:BA:286:C:H2'	58:BA:287:C:C6	2.54	0.42
58:BA:488:G:H1'	58:BA:492:A:H61	1.82	0.42
58:BA:1493:C:C2	58:BA:2210:G:O2'	2.73	0.42
58:BA:1558:A:N7	58:BA:1560:G:C8	2.87	0.42
58:BA:1845:G:H2'	58:BA:1846:G:H8	1.83	0.42
58:BA:2084:C:H2'	58:BA:2085:C:H6	1.83	0.42
59:BB:116:G:H2'	59:BB:117:G:H8	1.84	0.42
3:CD:31:CYS:C	3:CD:33:MET:N	2.75	0.42
3:CD:126:ILE:HG23	3:CD:146:ILE:HG23	2.00	0.42
7:CH:1:MET:HE1	20:CA:823:G:H21	1.83	0.42
7:CH:31:PHE:O	7:CH:35:ILE:HG12	2.19	0.42
16:CQ:43:LEU:CB	16:CQ:69:LYS:HE3	2.44	0.42
17:CR:26:LEU:HD13	17:CR:39:VAL:HG13	2.02	0.42
19:CT:38:LYS:O	19:CT:41:ILE:HG12	2.19	0.42
19:CT:58:LYS:O	19:CT:62:LEU:HG	2.18	0.42
20:CA:722:A:H2'	20:CA:724:G:C8	2.54	0.42
20:CA:834:C:C4	20:CA:835:U:C4	3.07	0.42
20:CA:948:C:H2'	20:CA:949:A:C8	2.54	0.42
23:CY:151:ARG:C	23:CY:153:MET:H	2.28	0.42
23:CY:350:GLU:OE2	23:CY:380:LEU:HA	2.19	0.42
23:CY:406:GLU:HG3	23:CY:407:PRO:HD2	2.01	0.42
23:CY:634:MET:O	23:CY:641:GLN:NE2	2.49	0.42
23:CY:657:THR:OG1	23:CY:658:ASP:N	2.52	0.42
25:DD:163:ALA:HB1	25:DD:175:LEU:HD11	2.01	0.42
25:DD:242:ARG:NH1	58:DA:1902:C:OP1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:29:TRP:HB3	59:DB:57:A:C2	2.54	0.42
28:DG:171:ALA:O	28:DG:175:LEU:HG	2.20	0.42
29:DH:175:LYS:O	29:DH:177:GLY:N	2.52	0.42
31:DK:59:ILE:HG12	31:DK:60:TYR:O	2.19	0.42
32:DN:27:ALA:O	32:DN:28:THR:C	2.61	0.42
32:DN:38:HIS:CG	32:DN:39:ARG:N	2.88	0.42
34:DP:45:LEU:CG	34:DP:46:LYS:H	2.32	0.42
34:DP:46:LYS:HG2	34:DP:51:PHE:CE1	2.54	0.42
35:DQ:51:ARG:O	35:DQ:55:VAL:HG12	2.18	0.42
38:DT:27:THR:HG23	38:DT:28:VAL:H	1.84	0.42
38:DT:48:ILE:HD11	38:DT:65:LYS:HZ2	1.84	0.42
38:DT:128:GLU:O	38:DT:129:ARG:NE	2.52	0.42
39:DU:94:ASN:C	39:DU:94:ASN:HD22	2.26	0.42
40:DV:68:LYS:HE2	40:DV:69:LYS:H	1.84	0.42
45:D0:27:GLU:H	45:D0:69:PHE:HE1	1.68	0.42
45:D0:41:ARG:HA	45:D0:41:ARG:NE	2.33	0.42
45:D0:48:GLY:H	45:D0:51:VAL:HB	1.84	0.42
48:D5:52:TYR:O	48:D5:54:GLY:N	2.49	0.42
56:D1:64:ALA:HB1	58:DA:398:G:P	2.59	0.42
56:D1:76:ARG:NH2	56:D1:95:LEU:HB2	2.34	0.42
56:D1:88:LYS:HE2	56:D1:88:LYS:HB3	1.84	0.42
58:DA:644:A:C2	58:DA:2369:A:H1'	2.55	0.42
58:DA:729:G:H4'	58:DA:763:G:H5'	2.01	0.42
58:DA:972:G:OP2	58:DA:974(A):G:H5"	2.18	0.42
58:DA:1039:G:H2'	58:DA:1040:C:C6	2.55	0.42
58:DA:1149:G:H2'	58:DA:1150:C:C6	2.54	0.42
58:DA:1464:C:H2'	58:DA:1465:G:O4'	2.20	0.42
58:DA:1589:C:H2'	58:DA:1590:U:C6	2.54	0.42
58:DA:2074:U:H2'	58:DA:2075:U:C6	2.54	0.42
58:DA:2096:U:H2'	58:DA:2097:C:H6	1.84	0.42
1:AB:101:MET:HB3	1:AB:152:PHE:HE1	1.84	0.42
2:AC:36:ASP:HA	2:AC:39:ILE:HD12	2.00	0.42
3:AD:134:ASP:HB2	3:AD:135:LEU:H	1.60	0.42
8:AI:111:ARG:HG3	20:AA:1369:C:OP2	2.20	0.42
11:AL:5:PRO:HB2	11:AL:10:LEU:HG	2.01	0.42
16:AQ:87:LYS:HA	16:AQ:90:ILE:HD12	2.01	0.42
20:AA:17:U:H2'	20:AA:18:C:H6	1.83	0.42
20:AA:302:G:H2'	20:AA:303:A:O4'	2.19	0.42
20:AA:381:C:H2'	20:AA:382:A:C8	2.55	0.42
23:AY:20:HIS:HB3	23:AY:117:GLN:C	2.45	0.42
24:BC:28:ARG:HG3	24:BC:183:PRO:HG3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:86:PRO:HG2	25:BD:87:ASN:OD1	2.18	0.42
26:BE:60:ASN:ND2	58:BA:2811:G:OP1	2.41	0.42
27:BF:129:PHE:HE1	27:BF:193:VAL:HG12	1.85	0.42
29:BH:29:PRO:HD2	29:BH:79:VAL:O	2.19	0.42
35:BQ:1:MET:N	35:BQ:48:GLU:HB2	2.34	0.42
38:BT:120:ARG:H	38:BT:120:ARG:HG2	1.63	0.42
40:BV:5:VAL:HG12	40:BV:14:VAL:CG2	2.49	0.42
41:BW:14:PRO:HG2	41:BW:78:GLU:OE1	2.20	0.42
43:BY:38:ILE:HD13	43:BY:65:ALA:C	2.44	0.42
50:B7:7:PRO:HA	58:BA:686:G:C8	2.53	0.42
50:B7:21:ARG:HD3	50:B7:21:ARG:HA	1.86	0.42
53:Be:60:PHE:HB3	53:Be:62:VAL:HG22	2.01	0.42
53:Be:105:LYS:C	53:Be:107:GLU:H	2.26	0.42
58:BA:601:C:H2'	58:BA:602:G:O4'	2.19	0.42
58:BA:813:U:H2'	58:BA:814:C:C6	2.53	0.42
58:BA:1334:G:H2'	58:BA:1335:U:C6	2.54	0.42
58:BA:1336:A:H2'	58:BA:1337:G:H8	1.83	0.42
58:BA:1886:C:H2'	58:BA:1887:C:C6	2.53	0.42
58:BA:2215:G:H2'	58:BA:2216:G:H8	1.84	0.42
58:BA:2780:G:O2'	58:BA:2781:A:P	2.77	0.42
59:BB:9:G:H2'	59:BB:10:C:C6	2.54	0.42
59:BB:24:G:C6	59:BB:56:G:C2	3.07	0.42
59:BB:66:A:N6	59:BB:107:U:H2'	2.29	0.42
2:CC:115:LEU:HD12	2:CC:115:LEU:H	1.82	0.42
3:CD:13:ARG:HA	3:CD:33:MET:HE1	2.01	0.42
3:CD:23:GLY:O	3:CD:26:CYS:N	2.52	0.42
3:CD:25:ARG:C	3:CD:27:TYR:N	2.77	0.42
8:CI:4:TYR:HD1	8:CI:19:LEU:O	2.02	0.42
9:CJ:49:VAL:O	9:CJ:60:ARG:HB3	2.20	0.42
11:CL:7:ILE:O	11:CL:11:VAL:HG23	2.19	0.42
16:CQ:12:SER:O	16:CQ:19:VAL:HB	2.18	0.42
19:CT:30:LYS:O	19:CT:34:LYS:HG3	2.19	0.42
20:CA:6:G:H4'	20:CA:298:A:H4'	2.00	0.42
20:CA:515:G:H2'	20:CA:516:U:O4'	2.19	0.42
20:CA:571:U:H5"	20:CA:819:A:C6	2.54	0.42
20:CA:918:A:H2'	20:CA:919:A:C8	2.53	0.42
20:CA:947:G:N2	20:CA:1234:C:N3	2.57	0.42
20:CA:1097:C:H2'	20:CA:1098:C:H6	1.84	0.42
20:CA:1416:G:H2'	20:CA:1417:G:O4'	2.20	0.42
20:CA:1476:G:H2'	20:CA:1477:C:C6	2.55	0.42
21:CW:8:U:H5'	21:CW:49:A:H5"	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:107:VAL:HA	23:CY:135:PHE:HB3	2.01	0.42
23:CY:471:LYS:HB3	23:CY:471:LYS:HE2	1.85	0.42
23:CY:555:LEU:H	23:CY:555:LEU:HG	1.37	0.42
24:DC:150:ILE:HA	24:DC:153:ILE:HG13	2.01	0.42
25:DD:13:ARG:HD2	58:DA:729:G:OP2	2.19	0.42
25:DD:59:LYS:HA	25:DD:59:LYS:HD2	1.89	0.42
25:DD:177:LEU:C	25:DD:179:SER:H	2.27	0.42
27:DF:41:LEU:HD22	27:DF:44:ARG:NH2	2.31	0.42
28:DG:73:ALA:HA	58:DA:2312:U:C5'	2.49	0.42
28:DG:169:ALA:O	28:DG:173:LEU:HG	2.18	0.42
29:DH:41:MET:O	29:DH:42:ARG:HB2	2.19	0.42
31:DK:78:ILE:HG21	31:DK:134:MET:SD	2.59	0.42
32:DN:43:THR:O	32:DN:46:VAL:HG12	2.19	0.42
32:DN:46:VAL:O	32:DN:47:ALA:CB	2.67	0.42
32:DN:112:LEU:HD23	32:DN:113:GLY:H	1.79	0.42
35:DQ:13:GLN:HB3	58:DA:954:G:H5"	2.00	0.42
35:DQ:82:ARG:HA	58:DA:2495:G:H5"	2.02	0.42
36:DR:28:LEU:O	36:DR:31:HIS:N	2.52	0.42
36:DR:96:ARG:HG3	58:DA:2882:A:H5'	2.01	0.42
37:DS:26:LEU:HD13	37:DS:106:ARG:NH1	2.35	0.42
37:DS:26:LEU:C	37:DS:88:ASP:HB3	2.45	0.42
37:DS:70:GLY:CA	37:DS:99:LYS:HG3	2.42	0.42
38:DT:60:THR:HB	38:DT:76:PHE:O	2.19	0.42
40:DV:89:GLN:OE1	58:DA:993:G:H1'	2.19	0.42
41:DW:74:ALA:HA	41:DW:104:THR:C	2.43	0.42
42:DX:72:LYS:HD2	42:DX:72:LYS:N	2.34	0.42
43:DY:96:ILE:O	43:DY:98:VAL:N	2.52	0.42
46:D2:14:ARG:HG2	46:D2:63:VAL:HG13	2.01	0.42
51:D8:23:VAL:HG12	51:D8:46:ARG:NH1	2.34	0.42
58:DA:513:A:H2	58:DA:582:G:H4'	1.84	0.42
58:DA:1070:A:H2'	58:DA:1097:U:OP1	2.18	0.42
58:DA:1199:U:H2'	58:DA:1200:C:H6	1.85	0.42
58:DA:1826:G:H8	58:DA:1826:G:O5'	2.02	0.42
58:DA:1889:A:O2'	58:DA:2087:G:H5'	2.18	0.42
58:DA:2111:C:H5"	58:DA:2112:G:OP1	2.20	0.42
58:DA:2853:C:H2'	58:DA:2854:G:H8	1.82	0.42
7:AH:77:GLU:HG2	7:AH:78:GLN:H	1.84	0.42
11:AL:92:ASP:OD2	20:AA:523:A:N6	2.35	0.42
12:AM:114:ARG:HD3	20:AA:1229:A:OP2	2.19	0.42
16:AQ:85:VAL:O	16:AQ:88:TYR:HB3	2.20	0.42
19:AT:21:LYS:NZ	20:AA:103:C:H5"	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:889:A:H5'	20:AA:891:U:O4'	2.20	0.42
20:AA:1213:A:C8	20:AA:1215:G:C5	3.07	0.42
20:AA:1343:G:H2'	20:AA:1344:C:C6	2.54	0.42
20:AA:1440(K):G:N2	20:AA:1440(L):G:C5	2.88	0.42
23:AY:179:ASP:OD1	23:AY:181:LEU:HB3	2.19	0.42
23:AY:286:ILE:HA	23:AY:287:PRO:HD3	1.83	0.42
23:AY:489:LYS:HA	23:AY:490:PRO:HD3	1.84	0.42
23:AY:590:ILE:HD13	23:AY:590:ILE:HA	1.87	0.42
24:BC:20:VAL:HG13	24:BC:226:ASN:N	2.34	0.42
26:BE:203:LYS:HA	58:BA:2733:A:N1	2.34	0.42
27:BF:34:TRP:CE3	27:BF:35:GLU:HG3	2.54	0.42
27:BF:110:LEU:HD23	27:BF:110:LEU:HA	1.91	0.42
28:BG:36:LYS:HG2	28:BG:160:VAL:HB	2.02	0.42
31:BK:5:VAL:HA	31:BK:59:ILE:O	2.19	0.42
32:BN:17:ASP:CG	32:BN:18:ALA:N	2.77	0.42
33:BO:88:ASN:ND2	33:BO:92:GLU:HB2	2.33	0.42
34:BP:27:HIS:CG	58:BA:814:C:C5	3.08	0.42
34:BP:49:ARG:CD	51:B8:59:LYS:HE2	2.50	0.42
37:BS:52:SER:O	37:BS:69:VAL:HG21	2.19	0.42
38:BT:25:GLY:O	38:BT:49:VAL:HG12	2.20	0.42
38:BT:53:ARG:NH1	38:BT:53:ARG:HB3	2.34	0.42
44:BZ:176:PRO:HA	44:BZ:177:PRO:HD3	1.76	0.42
48:B5:42:PRO:HB2	58:BA:2815:C:O2'	2.20	0.42
56:B1:53:VAL:HG21	56:B1:74:VAL:HG22	2.01	0.42
57:B4:8:LYS:HB3	57:B4:9:LEU:H	1.64	0.42
58:BA:247:G:O2'	58:BA:250:G:O6	2.37	0.42
58:BA:442:G:H5"	58:BA:615:G:H1	1.84	0.42
58:BA:453:C:O2	58:BA:457:A:O2'	2.28	0.42
58:BA:799:G:C3'	58:BA:800:A:H5"	2.50	0.42
58:BA:1290:C:H2'	58:BA:1291:C:H6	1.84	0.42
58:BA:1295:C:H2'	58:BA:1296:G:C8	2.54	0.42
58:BA:1312:U:H5'	58:BA:1313:U:C6	2.54	0.42
58:BA:1557:C:H5"	58:BA:1558:A:OP2	2.19	0.42
58:BA:1771:C:H2'	58:BA:1772:G:H8	1.84	0.42
58:BA:1914:C:H6	58:BA:1915:U:C1'	2.32	0.42
58:BA:2078:C:C4	58:BA:2079:U:C4	3.07	0.42
58:BA:2210:G:H22	58:BA:2212:A:P	2.41	0.42
58:BA:2746:U:H2'	58:BA:2747:G:H5'	2.00	0.42
58:BA:2795:G:O2'	58:BA:2801:A:N6	2.47	0.42
1:CB:19:HIS:HA	1:CB:39:ILE:HG23	2.01	0.42
1:CB:92:TYR:HE1	1:CB:94:ASN:HD22	1.64	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:182:ILE:HD13	1:CB:182:ILE:HA	1.89	0.42
5:CF:50:TYR:HE2	5:CF:87:ARG:HH21	1.67	0.42
9:CJ:55:LYS:H	9:CJ:55:LYS:HD2	1.84	0.42
11:CL:87:GLY:N	11:CL:99:HIS:H	2.18	0.42
14:CO:39:LEU:O	14:CO:39:LEU:HD13	2.20	0.42
17:CR:53:ARG:NH2	20:CA:834:C:OP1	2.52	0.42
20:CA:507:C:P	20:CA:508:C:H3'	2.59	0.42
20:CA:971:G:N9	20:CA:1365:G:H4'	2.35	0.42
20:CA:1091:U:H2'	20:CA:1093:A:OP2	2.18	0.42
20:CA:1238:A:C2	20:CA:1241:G:N3	2.87	0.42
20:CA:1261:A:H2'	20:CA:1262:C:O4'	2.19	0.42
23:CY:92:ILE:HG23	23:CY:93:GLU:N	2.32	0.42
23:CY:207:ASP:HA	23:CY:210:ARG:CG	2.49	0.42
23:CY:217:VAL:HG21	23:CY:237:PRO:HG2	2.00	0.42
23:CY:252:ASP:N	23:CY:252:ASP:OD2	2.52	0.42
23:CY:259:PHE:CD1	23:CY:272:LEU:HD13	2.55	0.42
23:CY:335:LEU:O	23:CY:368:GLU:HB2	2.20	0.42
24:DC:118:PRO:HD3	24:DC:147:GLY:CA	2.49	0.42
24:DC:154:ILE:HG22	24:DC:158:LYS:HD3	2.02	0.42
25:DD:157:ARG:HH22	58:DA:1817:G:H3'	1.81	0.42
25:DD:247:ALA:HA	25:DD:254:THR:H	1.84	0.42
27:DF:62:ARG:NH2	27:DF:64:ILE:HA	2.33	0.42
27:DF:169:ASN:HB2	58:DA:322:A:P	2.59	0.42
28:DG:46:ALA:HA	28:DG:53:LEU:HD23	2.02	0.42
29:DH:124:GLU:HB3	29:DH:132:ARG:HG2	2.02	0.42
30:DJ:54:UNK:HA	30:DJ:78:UNK:O	2.19	0.42
36:DR:42:LYS:O	36:DR:45:ARG:NE	2.52	0.42
36:DR:49:ASP:OD1	36:DR:94:TYR:N	2.51	0.42
36:DR:68:ARG:HG3	58:DA:2708:G:H5'	2.02	0.42
39:DU:28:ARG:HA	39:DU:34:LYS:HB2	2.02	0.42
39:DU:96:ALA:O	39:DU:98:LEU:N	2.53	0.42
40:DV:25:LEU:N	40:DV:92:THR:OG1	2.52	0.42
51:D8:17:THR:OG1	51:D8:19:SER:OG	2.30	0.42
58:DA:922:U:C2	58:DA:923:C:C5	3.07	0.42
58:DA:1136:G:N2	58:DA:2039:C:OP1	2.46	0.42
58:DA:1411:C:N3	58:DA:1591:G:N2	2.57	0.42
58:DA:1524:G:H2'	58:DA:1525:G:O4'	2.19	0.42
58:DA:1927:A:H2'	58:DA:1928:A:C8	2.54	0.42
1:AB:20:GLU:HG3	1:AB:191:ASP:N	2.33	0.42
3:AD:8:VAL:C	3:AD:10:ARG:N	2.77	0.42
6:AG:76:ARG:HH21	6:AG:95:ARG:CZ	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:87:GLY:N	11:AL:98:TYR:HA	2.34	0.42
12:AM:117:VAL:HG23	20:AA:1228:C:H1'	2.01	0.42
12:AM:121:LYS:HD3	12:AM:121:LYS:N	2.35	0.42
16:AQ:13:ASP:HA	16:AQ:19:VAL:HG12	2.02	0.42
16:AQ:45:HIS:H	16:AQ:72:ARG:CA	2.33	0.42
20:AA:367:U:H4'	23:AY:351:ARG:HH11	1.85	0.42
20:AA:604:G:H2'	20:AA:605:U:O4'	2.20	0.42
20:AA:605:U:H2'	20:AA:606:G:O4'	2.20	0.42
20:AA:696:A:H2'	20:AA:697:U:H6	1.83	0.42
23:AY:166:LEU:HB2	23:AY:178:ILE:HG22	2.00	0.42
23:AY:187:THR:HG21	23:AY:199:ILE:HD13	2.01	0.42
23:AY:201:ILE:HG21	23:AY:206:LEU:HB2	2.01	0.42
23:AY:538:TYR:O	23:AY:542:VAL:HG12	2.20	0.42
23:AY:565:VAL:HG12	23:AY:566:THR:O	2.19	0.42
23:AY:655:TYR:CE2	23:AY:659:LEU:HB2	2.53	0.42
24:BC:121:MET:O	24:BC:122:GLY:C	2.62	0.42
27:BF:65:TRP:CZ3	27:BF:73:ALA:HB3	2.55	0.42
28:BG:30:GLU:HB2	59:BB:57:A:H1'	2.01	0.42
29:BH:89:ILE:O	29:BH:89:ILE:HG13	2.18	0.42
30:BJ:58:UNK:HA	58:BA:1106:G:O3'	2.19	0.42
32:BN:112:LEU:HD23	32:BN:113:GLY:H	1.80	0.42
33:BO:77:ILE:HD11	38:BT:72:VAL:HG22	2.01	0.42
34:BP:5:ASP:OD2	34:BP:9:ASN:HB3	2.19	0.42
34:BP:70:GLN:HB3	34:BP:71:VAL:H	1.66	0.42
35:BQ:116:GLU:O	35:BQ:119:ARG:HB3	2.19	0.42
38:BT:28:VAL:HG13	38:BT:46:GLU:HB2	2.02	0.42
39:BU:52:ARG:HD3	58:BA:559:G:H21	1.84	0.42
39:BU:104:GLN:HG2	39:BU:105:VAL:H	1.85	0.42
42:BX:65:ARG:NH2	58:BA:1334:G:H5"	2.34	0.42
51:B8:42:ARG:HD2	51:B8:42:ARG:H	1.85	0.42
58:BA:270(J):G:H1	58:BA:270(R):C:N4	2.16	0.42
58:BA:323:G:H1'	58:BA:1205:U:O2	2.19	0.42
58:BA:676:A:H8	58:BA:2069:G:H21	1.65	0.42
58:BA:705:A:C2	58:BA:727:A:H1'	2.54	0.42
58:BA:792:G:N2	58:BA:2072:G:N3	2.64	0.42
58:BA:1288:U:O4	58:BA:1327:C:H1'	2.19	0.42
58:BA:1471:A:OP2	58:BA:1521:G:N1	2.36	0.42
58:BA:1829:A:C8	58:BA:1830:C:C5	3.08	0.42
58:BA:2284:C:O2'	58:BA:2288:A:N6	2.53	0.42
2:CC:188:LEU:HD13	2:CC:188:LEU:HA	1.89	0.42
2:CC:204:LEU:HB3	2:CC:205:GLY:H	1.76	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:49:ARG:O	3:CD:51:PRO:HD3	2.20	0.42
5:CF:33:TYR:HA	5:CF:71:ARG:HH21	1.85	0.42
6:CG:99:LEU:HD23	6:CG:102:ARG:NH2	2.34	0.42
8:CI:28:VAL:HA	8:CI:63:ILE:O	2.19	0.42
9:CJ:14:LYS:H	9:CJ:14:LYS:HG2	1.58	0.42
9:CJ:87:THR:O	9:CJ:89:ASP:N	2.53	0.42
10:CK:18:ARG:HD3	10:CK:81:ASP:HB2	2.02	0.42
10:CK:27:ASN:ND2	10:CK:55:LYS:O	2.53	0.42
11:CL:45:PRO:HB2	11:CL:49:ASN:OD1	2.19	0.42
12:CM:108:ARG:N	12:CM:108:ARG:HH11	2.17	0.42
16:CQ:37:LYS:HB3	20:CA:585:G:OP1	2.19	0.42
20:CA:586:C:N3	20:CA:755:G:O6	2.53	0.42
20:CA:603:U:H2'	20:CA:604:G:H8	1.79	0.42
20:CA:1304:G:C6	20:CA:1305:G:N1	2.87	0.42
20:CA:1422:G:H5"	33:DO:48:PRO:HB3	2.01	0.42
21:CW:56:C:C4	58:DA:2169:A:C4	3.08	0.42
22:CV:21:A:H2'	22:CV:22:A:O4'	2.20	0.42
23:CY:312:LEU:HD21	23:CY:386:GLY:HA2	2.02	0.42
24:DC:8:TYR:O	24:DC:12:LEU:HB2	2.20	0.42
24:DC:104:ILE:HG23	24:DC:111:PHE:HZ	1.82	0.42
25:DD:274:ARG:HH22	58:DA:1797:C:H3'	1.83	0.42
32:DN:76:SER:HB3	58:DA:2641:G:C4'	2.49	0.42
33:DO:3:GLN:O	33:DO:5:GLN:N	2.51	0.42
34:DP:71:VAL:H	34:DP:72:PRO:CD	2.33	0.42
36:DR:25:ALA:HB2	36:DR:48:VAL:HG22	2.00	0.42
37:DS:26:LEU:HD23	37:DS:28:VAL:HG13	2.02	0.42
38:DT:25:GLY:O	38:DT:48:ILE:O	2.37	0.42
39:DU:25:TRP:CE2	58:DA:17:G:H4'	2.54	0.42
39:DU:74:LEU:HB2	39:DU:75:ASN:H	1.64	0.42
42:DX:64:LYS:HE2	42:DX:64:LYS:HB3	1.84	0.42
48:D5:4:HIS:HB3	58:DA:2577:A:H1'	2.01	0.42
48:D5:33:CYS:HB2	48:D5:49:CYS:HB3	1.95	0.42
57:D4:8:LYS:HB3	57:D4:9:LEU:H	1.62	0.42
58:DA:31:C:H2'	58:DA:32:C:O4'	2.20	0.42
58:DA:138:G:H3'	58:DA:139:G:C8	2.55	0.42
58:DA:209:C:H2'	58:DA:210:C:O4'	2.20	0.42
58:DA:267:C:H2'	58:DA:268:C:C6	2.55	0.42
58:DA:1290:C:H2'	58:DA:1291:C:C6	2.54	0.42
58:DA:1514:U:H2'	58:DA:1515:C:C5	2.55	0.42
58:DA:1784:A:H4'	58:DA:1785:A:O5'	2.20	0.42
58:DA:2022:U:O2'	58:DA:2617:C:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:4:LYS:HE2	2:AC:4:LYS:HA	2.00	0.42
3:AD:21:LEU:O	3:AD:113:SER:HB3	2.20	0.42
3:AD:175:SER:O	3:AD:183:GLY:HA2	2.20	0.42
4:AE:91:LEU:HD13	4:AE:118:ILE:HG12	2.01	0.42
4:AE:107:ARG:O	4:AE:111:GLU:HB2	2.19	0.42
6:AG:12:LEU:HB2	6:AG:13:GLN:H	1.57	0.42
7:AH:95:VAL:HG12	7:AH:100:ILE:H	1.85	0.42
8:AI:93:ARG:HD2	8:AI:102:LEU:HD11	2.01	0.42
8:AI:121:ARG:CZ	20:AA:1343:G:H1'	2.49	0.42
11:AL:20:LYS:HB2	11:AL:21:LYS:H	1.59	0.42
13:AN:32:SER:OG	20:AA:976:G:OP1	2.30	0.42
14:AO:38:ARG:CA	14:AO:38:ARG:HH11	2.32	0.42
15:AP:27:LYS:HB2	15:AP:27:LYS:HE3	1.81	0.42
19:AT:12:ALA:O	19:AT:15:ARG:HB2	2.19	0.42
20:AA:33:A:H5"	20:AA:364:A:H1'	2.01	0.42
20:AA:68(H):G:H2'	20:AA:68(I):G:C8	2.54	0.42
20:AA:114:U:C4	20:AA:313:A:N1	2.88	0.42
20:AA:149:A:H2'	20:AA:150:C:H6	1.82	0.42
20:AA:186(G):C:H2'	20:AA:186(H):U:O4'	2.19	0.42
20:AA:196:A:O3'	20:AA:197:A:H2'	2.19	0.42
20:AA:196:A:H1'	20:AA:222:U:H1'	2.00	0.42
20:AA:279:A:H4'	20:AA:280:C:H5'	2.02	0.42
20:AA:374:A:OP1	20:AA:452:A:N6	2.51	0.42
20:AA:645:C:C2	20:AA:646:U:C5	3.06	0.42
20:AA:794:A:H4'	20:AA:1521:G:HO2'	1.83	0.42
20:AA:943:U:O4	20:AA:1340:A:N1	2.53	0.42
20:AA:1005:A:H4'	20:AA:1037:C:H1'	2.02	0.42
20:AA:1360:A:H2'	20:AA:1361:G:O4'	2.19	0.42
23:AY:18:ALA:HB1	23:AY:86:GLY:H	1.85	0.42
23:AY:115:GLU:N	23:AY:116:PRO:HD3	2.34	0.42
23:AY:617:MET:SD	23:AY:618:GLY:N	2.93	0.42
24:BC:37:LYS:HD2	24:BC:219:MET:HE3	2.01	0.42
27:BF:108:LYS:HB3	27:BF:112:MET:HE2	2.02	0.42
32:BN:43:THR:O	32:BN:46:VAL:HG12	2.19	0.42
33:BO:30:ALA:CB	58:BA:2674:G:H4'	2.50	0.42
38:BT:2:ASN:O	38:BT:4:GLY:N	2.52	0.42
38:BT:38:ASN:O	38:BT:40:THR:HG23	2.20	0.42
39:BU:49:HIS:HD2	58:BA:559:G:H22	1.63	0.42
40:BV:59:ALA:HB1	40:BV:96:ILE:HA	2.01	0.42
40:BV:76:LYS:HG3	40:BV:81:TYR:CD1	2.55	0.42
42:BX:36:LYS:HA	42:BX:39:ILE:HB	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BY:51:VAL:HG12	43:BY:53:PRO:HD2	2.02	0.42
44:BZ:29:TYR:CD2	44:BZ:29:TYR:N	2.87	0.42
44:BZ:48:PHE:CZ	44:BZ:52:SER:HA	2.55	0.42
56:B1:7:ILE:CD1	56:B1:62:VAL:HA	2.49	0.42
58:BA:416:C:H2'	58:BA:417:C:C6	2.55	0.42
58:BA:579:G:H2'	58:BA:580:C:C6	2.55	0.42
58:BA:1200:C:H2'	58:BA:1201:C:H6	1.84	0.42
58:BA:1322:A:C5	58:BA:1323:U:C5	3.08	0.42
58:BA:1361:G:H2'	58:BA:1362:C:O4'	2.20	0.42
58:BA:1750:G:N3	58:BA:2860:A:H2	2.17	0.42
58:BA:1897:G:H2'	58:BA:1898:U:O4'	2.20	0.42
58:BA:2050:C:H2'	58:BA:2051:A:C8	2.55	0.42
58:BA:2646:C:H2'	58:BA:2647:U:O4'	2.19	0.42
58:BA:2827:C:H2'	58:BA:2828:C:H6	1.84	0.42
59:BB:15:A:H1'	59:BB:109:G:C5	2.55	0.42
2:CC:20:SER:OG	13:CN:54:PRO:HG3	2.19	0.42
2:CC:199:LYS:NZ	20:CA:1059:C:OP2	2.49	0.42
7:CH:41:ARG:HE	7:CH:41:ARG:HB3	1.72	0.42
8:CI:117:HIS:HB2	8:CI:121:ARG:HD2	2.02	0.42
9:CJ:35:SER:OG	20:CA:1124:G:H5"	2.19	0.42
10:CK:63:LEU:HA	10:CK:66:LEU:HB2	2.01	0.42
11:CL:79:GLU:OE1	11:CL:80:HIS:NE2	2.53	0.42
18:CS:42:PRO:C	18:CS:44:MET:H	2.28	0.42
20:CA:1201:A:H4'	20:CA:1202:G:H5"	2.00	0.42
23:CY:75:LYS:C	23:CY:77:HIS:H	2.27	0.42
23:CY:84:THR:N	23:CY:85:PRO:HD3	2.35	0.42
23:CY:96:ARG:O	23:CY:100:VAL:HG12	2.19	0.42
23:CY:219:VAL:O	23:CY:221:ALA:N	2.53	0.42
23:CY:543:GLN:O	23:CY:547:GLU:HG3	2.19	0.42
24:DC:37:LYS:NZ	24:DC:219:MET:HE2	2.34	0.42
24:DC:51:ASP:C	24:DC:53:ARG:H	2.16	0.42
24:DC:83:LYS:H	24:DC:83:LYS:HG2	1.44	0.42
25:DD:54:ARG:HA	25:DD:216:GLY:O	2.19	0.42
28:DG:45:GLU:C	28:DG:47:LYS:H	2.27	0.42
28:DG:129:GLY:O	28:DG:161:THR:OG1	2.31	0.42
29:DH:143:GLN:O	29:DH:147:ASN:HB2	2.20	0.42
29:DH:176:ALA:HB1	58:DA:2529:G:C5'	2.49	0.42
30:DJ:72:UNK:O	30:DJ:73:UNK:C	2.68	0.42
32:DN:13:TRP:CD1	32:DN:13:TRP:N	2.88	0.42
34:DP:5:ASP:OD2	34:DP:10:PRO:HD3	2.20	0.42
36:DR:38:VAL:HG12	36:DR:42:LYS:HE2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DR:59:ASP:OD1	36:DR:60:LEU:N	2.52	0.42
39:DU:12:ARG:NH2	58:DA:1215:G:H5'	2.34	0.42
42:DX:12:VAL:HG12	42:DX:27:THR:OG1	2.20	0.42
50:D7:25:PRO:O	50:D7:29:LYS:HG2	2.20	0.42
52:D9:9:ARG:NH1	52:D9:16:VAL:H	2.17	0.42
52:D9:15:LYS:O	52:D9:25:VAL:HA	2.19	0.42
58:DA:180:G:N2	58:DA:214:G:O6	2.53	0.42
58:DA:194:G:H1	58:DA:201:C:H42	1.67	0.42
58:DA:211:A:H2'	58:DA:212:G:O4'	2.19	0.42
58:DA:448:U:N3	58:DA:583:G:N3	2.55	0.42
58:DA:821:A:H3'	58:DA:946:G:H8	1.85	0.42
58:DA:1003:G:HO2'	58:DA:1010:A:H61	1.50	0.42
58:DA:1130:U:O2'	58:DA:1131:G:H2'	2.20	0.42
58:DA:1447:G:H1	58:DA:1464:C:H42	1.66	0.42
58:DA:2211:G:H2'	58:DA:2211:G:N3	2.35	0.42
58:DA:2815:C:H2'	58:DA:2816:C:O4'	2.19	0.42
1:AB:61:LEU:O	1:AB:65:GLY:N	2.53	0.42
1:AB:103:THR:HG21	20:AA:1101:A:H61	1.84	0.42
1:AB:111:ARG:HH12	20:AA:1104:G:H4'	1.85	0.42
1:AB:130:ARG:HA	1:AB:131:PRO:HD3	1.90	0.42
6:AG:102:ARG:O	6:AG:105:VAL:HB	2.19	0.42
10:AK:21:ILE:HB	10:AK:84:VAL:HA	2.02	0.42
11:AL:85:ILE:HD12	11:AL:98:TYR:HB3	2.02	0.42
13:AN:3:ARG:HB2	20:AA:1049:U:C5	2.54	0.42
15:AP:66:PRO:HG3	15:AP:71:ARG:HH22	1.85	0.42
18:AS:49:ILE:HB	18:AS:60:VAL:HG13	2.01	0.42
19:AT:22:ARG:HE	20:AA:324:G:P	2.43	0.42
20:AA:476:G:H2'	20:AA:477:G:C8	2.55	0.42
20:AA:524:G:H2'	20:AA:525:C:H6	1.84	0.42
20:AA:784:C:H2'	20:AA:785:G:C8	2.52	0.42
20:AA:937:A:C5	20:AA:938:A:C5	3.08	0.42
20:AA:971:G:C1'	20:AA:1365:G:H4'	2.50	0.42
20:AA:1065:U:C4'	20:AA:1066:C:H5"	2.41	0.42
20:AA:1155:G:H2'	20:AA:1156:G:O4'	2.19	0.42
20:AA:1253:G:H1'	20:AA:1355:G:O2'	2.20	0.42
20:AA:1387:G:H2'	20:AA:1388:C:H6	1.82	0.42
20:AA:1420:C:H42	20:AA:1480:G:H1	1.67	0.42
23:AY:614:GLU:O	23:AY:617:MET:HB3	2.20	0.42
25:BD:38:LYS:HE2	58:BA:1569:A:O2'	2.20	0.42
25:BD:63:ARG:HD2	25:BD:85:ASP:OD2	2.20	0.42
28:BG:57:ALA:HB1	28:BG:90:LEU:HD13	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BN:131:GLN:NE2	32:BN:132:ALA:CB	2.83	0.42
38:BT:4:GLY:O	38:BT:7:ILE:HB	2.20	0.42
39:BU:59:ARG:CZ	39:BU:59:ARG:HB2	2.49	0.42
39:BU:65:ILE:HD11	39:BU:97:ASP:HA	2.02	0.42
43:BY:46:LYS:N	43:BY:62:GLU:HB2	2.35	0.42
45:B0:39:ARG:NH2	58:BA:2363:C:O2'	2.52	0.42
46:B2:48:HIS:CG	46:B2:49:LYS:H	2.38	0.42
47:B3:9:VAL:HG22	47:B3:53:LEU:C	2.44	0.42
58:BA:1747:G:H2'	58:BA:1748:G:C8	2.55	0.42
58:BA:2234:G:H2'	58:BA:2235:G:C8	2.54	0.42
58:BA:2641:G:H2'	58:BA:2642:G:C8	2.53	0.42
2:CC:138:VAL:HG22	2:CC:151:VAL:HG23	2.00	0.42
5:CF:50:TYR:HA	5:CF:51:PRO:HD2	1.90	0.42
5:CF:86:ARG:H	5:CF:86:ARG:HG2	1.45	0.42
8:CI:21:PRO:HA	8:CI:58:HIS:O	2.20	0.42
9:CJ:40:LEU:HD12	9:CJ:69:ASN:CB	2.50	0.42
9:CJ:40:LEU:HD12	9:CJ:69:ASN:HB3	2.00	0.42
11:CL:10:LEU:HD21	11:CL:15:ARG:NE	2.35	0.42
11:CL:47:LYS:HE3	20:CA:1492:A:H5"	2.02	0.42
19:CT:58:LYS:O	19:CT:61:SER:HB3	2.19	0.42
20:CA:817:C:H42	20:CA:1529:G:H1	1.68	0.42
20:CA:1151:A:O2'	20:CA:1152:A:H8	2.02	0.42
20:CA:1303:C:H42	20:CA:1334:G:H1	1.67	0.42
21:CW:4:U:H2'	21:CW:5:A:C8	2.54	0.42
21:CW:38:A:C4	22:CV:16:A:C2	3.07	0.42
23:CY:190:ASN:ND2	23:CY:195:ASP:H	2.04	0.42
23:CY:309:LEU:HD21	23:CY:335:LEU:HD13	2.01	0.42
23:CY:358:MET:HA	23:CY:363:ARG:HG2	2.01	0.42
24:DC:113:ALA:N	24:DC:137:LEU:HD22	2.35	0.42
25:DD:208:LYS:HE3	25:DD:210:GLY:HA3	2.02	0.42
27:DF:74:ARG:NH2	58:DA:674:G:N3	2.68	0.42
29:DH:65:HIS:CG	29:DH:66:GLY:N	2.87	0.42
30:DJ:130:UNK:C	30:DJ:132:UNK:H	2.31	0.42
32:DN:110:GLY:C	58:DA:558:G:OP1	2.62	0.42
33:DO:22:ILE:O	33:DO:40:VAL:HB	2.19	0.42
33:DO:34:THR:H	33:DO:37:ASP:CG	2.28	0.42
34:DP:24:GLY:HA2	34:DP:29:LYS:O	2.19	0.42
34:DP:35:HIS:HB3	58:DA:942:G:OP1	2.20	0.42
34:DP:50:ARG:NH2	51:D8:59:LYS:HD2	2.35	0.42
37:DS:13:ARG:C	37:DS:15:ARG:H	2.28	0.42
39:DU:76:TYR:CE1	39:DU:80:ILE:HD11	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D5:3:LYS:H	48:D5:3:LYS:HD3	1.85	0.42
58:DA:354:G:H2'	58:DA:355:G:C8	2.55	0.42
58:DA:530:G:N3	58:DA:2021:C:H1'	2.35	0.42
58:DA:1782:C:H1'	58:DA:2609:U:C5'	2.50	0.42
58:DA:2742:C:H2'	58:DA:2743:C:H6	1.84	0.42
58:DA:2838:G:C6	58:DA:2839:G:C5	3.08	0.42
1:AB:15:VAL:HG23	1:AB:16:HIS:CE1	2.55	0.42
3:AD:8:VAL:HG23	3:AD:9:CYS:H	1.85	0.42
12:AM:61:GLU:H	12:AM:61:GLU:HG3	1.55	0.42
13:AN:43:CYS:O	13:AN:46:GLU:HG2	2.19	0.42
16:AQ:61:GLU:HA	16:AQ:71:PHE:HA	2.00	0.42
20:AA:19:C:H2'	20:AA:20:U:H6	1.85	0.42
20:AA:48:C:H2'	20:AA:365:U:O4	2.19	0.42
20:AA:996:A:H2'	20:AA:997:U:C6	2.55	0.42
20:AA:1077:G:N2	20:AA:1079:G:H3'	2.34	0.42
20:AA:1157:A:C2	20:AA:1181:G:C5	3.08	0.42
21:AW:72:C:H3'	21:AW:73:A:C8	2.55	0.42
25:BD:259:THR:HB	25:BD:260:ARG:H	1.46	0.42
26:BE:3:GLY:HA2	26:BE:96:PHE:HZ	1.85	0.42
26:BE:169:ASN:HB3	58:BA:2730:C:O3'	2.19	0.42
29:BH:17:VAL:HA	29:BH:26:VAL:HG22	2.01	0.42
31:BK:30:HIS:HE1	31:BK:57:ILE:HG22	1.83	0.42
32:BN:38:HIS:CG	32:BN:39:ARG:N	2.88	0.42
37:BS:34:HIS:ND1	37:BS:55:ALA:HB2	2.34	0.42
37:BS:49:VAL:HG13	37:BS:76:LYS:HB2	2.02	0.42
38:BT:3:ARG:HG2	58:BA:2875:C:O2'	2.20	0.42
41:BW:16:LYS:O	41:BW:19:LEU:HB2	2.20	0.42
44:BZ:175:VAL:HA	44:BZ:176:PRO:HD3	1.89	0.42
47:B3:17:LYS:HD3	47:B3:17:LYS:HA	1.87	0.42
49:B6:39:TYR:HE2	58:BA:2347:C:H4'	1.85	0.42
58:BA:242:G:O2'	58:BA:254:G:O6	2.23	0.42
58:BA:392:C:H2'	58:BA:393:C:C6	2.52	0.42
58:BA:1527:G:H1'	58:BA:1546:A:H61	1.84	0.42
58:BA:1669:A:O3'	58:BA:2549:G:H5'	2.20	0.42
58:BA:1765:C:H2'	58:BA:1766:U:C6	2.55	0.42
58:BA:2111:C:H1'	58:BA:2118:U:H4'	2.01	0.42
58:BA:2194:G:H2'	58:BA:2195:C:C6	2.54	0.42
58:BA:2320:A:N3	58:BA:2320:A:H2'	2.34	0.42
58:BA:2552:U:C2	58:BA:2554:U:H5'	2.54	0.42
4:CE:126:ARG:HA	4:CE:131:ILE:HD11	2.02	0.42
5:CF:48:LEU:HB3	17:CR:77:GLY:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:55:LYS:HE3	20:CA:973:G:N3	2.34	0.42
16:CQ:68:ARG:HH22	20:CA:277:C:C5'	2.33	0.42
17:CR:26:LEU:HD11	17:CR:42:ARG:HD2	2.01	0.42
17:CR:74:ARG:NH1	20:CA:719:C:N3	2.64	0.42
20:CA:201:C:N3	20:CA:216:G:O6	2.53	0.42
20:CA:349:A:H2'	20:CA:350:G:H8	1.84	0.42
20:CA:367:U:OP1	23:CY:340:TYR:OH	2.30	0.42
20:CA:777:A:H2'	20:CA:778:G:C8	2.54	0.42
20:CA:1071:C:H2'	20:CA:1072:G:C8	2.49	0.42
20:CA:1503:A:H61	22:CV:14:A:H2'	1.85	0.42
23:CY:164:MET:SD	23:CY:257:PRO:HA	2.60	0.42
23:CY:201:ILE:C	23:CY:203:GLU:H	2.21	0.42
24:DC:14:LYS:HD3	24:DC:33:LEU:CD2	2.47	0.42
24:DC:37:LYS:HB2	24:DC:38:PHE:HD1	1.85	0.42
24:DC:48:LEU:HD22	24:DC:209:PHE:CE1	2.54	0.42
28:DG:8:LYS:NZ	28:DG:97:ASP:OD1	2.30	0.42
28:DG:107:LEU:HG	28:DG:107:LEU:H	1.72	0.42
29:DH:52:VAL:HG21	29:DH:69:ARG:HA	2.01	0.42
29:DH:116:GLU:HA	29:DH:117:PRO:HD2	1.68	0.42
29:DH:156:ALA:O	29:DH:157:TYR:HB2	2.19	0.42
31:DK:125:ARG:HD2	31:DK:125:ARG:N	2.31	0.42
32:DN:7:LYS:HZ3	32:DN:7:LYS:CA	2.32	0.42
32:DN:36:GLY:H	32:DN:42:TRP:HE3	1.67	0.42
33:DO:8:LEU:HD21	33:DO:21:CYS:HB2	2.01	0.42
34:DP:39:LYS:C	34:DP:41:ARG:H	2.28	0.42
36:DR:107:ASP:O	58:DA:2009:G:H1'	2.19	0.42
37:DS:66:ALA:O	37:DS:67:ARG:C	2.63	0.42
41:DW:49:LYS:HD3	58:DA:488:G:O2'	2.19	0.42
41:DW:69:LEU:HA	41:DW:108:GLY:O	2.20	0.42
48:D5:55:ARG:HD2	48:D5:56:LYS:HD2	2.00	0.42
49:D6:8:LYS:HE3	49:D6:25:LYS:HE2	2.02	0.42
56:D1:13:ILE:O	56:D1:42:GLN:O	2.38	0.42
58:DA:273(A):G:C2	58:DA:273(B):G:C8	3.07	0.42
58:DA:1006:C:C2	58:DA:1138:G:N2	2.88	0.42
58:DA:1007:C:C4	58:DA:1008:C:C4	3.08	0.42
58:DA:1027:A:HO2'	58:DA:1028:A:H8	1.67	0.42
58:DA:1806:C:H2'	58:DA:1807:G:C8	2.55	0.42
58:DA:1854:A:H1'	58:DA:2233:U:H4'	2.01	0.42
58:DA:2783:G:H2'	58:DA:2784:C:H6	1.85	0.42
59:DB:24:G:N2	59:DB:28:C:O2	2.53	0.42
1:AB:133:LYS:HD3	20:AA:1158:C:H5"	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:196:LEU:H	3:AD:196:LEU:HD12	1.84	0.42
4:AE:96:PRO:HA	4:AE:117:ASP:CG	2.45	0.42
5:AF:86:ARG:H	5:AF:86:ARG:HG2	1.63	0.42
7:AH:69:ARG:H	7:AH:69:ARG:HG3	1.53	0.42
11:AL:13:LYS:HB3	11:AL:14:GLY:H	1.70	0.42
13:AN:43:CYS:HA	13:AN:46:GLU:OE2	2.19	0.42
14:AO:38:ARG:HH11	14:AO:38:ARG:HA	1.84	0.42
20:AA:68(G):G:C5	20:AA:68(H):G:H1'	2.53	0.42
20:AA:259:G:H1	20:AA:267:C:N4	2.17	0.42
20:AA:510:A:N3	20:AA:543:C:H1'	2.34	0.42
20:AA:564:C:O5'	20:AA:564:C:H6	2.03	0.42
20:AA:609:A:H2'	20:AA:610:G:H8	1.84	0.42
20:AA:1028:C:N3	20:AA:1033:G:N2	2.66	0.42
20:AA:1051:C:H2'	20:AA:1052:U:C6	2.55	0.42
23:AY:178:ILE:HD13	23:AY:179:ASP:N	2.35	0.42
23:AY:327:PHE:HD1	23:AY:376:ALA:HB2	1.85	0.42
26:BE:84:PHE:CZ	26:BE:86:PRO:HB3	2.54	0.42
27:BF:40:GLN:O	27:BF:44:ARG:HG3	2.20	0.42
27:BF:53:THR:OG1	27:BF:54:ARG:N	2.52	0.42
27:BF:63:LYS:HA	27:BF:76:GLY:HA2	2.01	0.42
32:BN:78:TYR:CE2	58:BA:2642:G:H4'	2.54	0.42
33:BO:6:THR:OG1	58:BA:1666:G:O2'	2.23	0.42
38:BT:132:LYS:HA	38:BT:135:ALA:HB3	2.01	0.42
39:BU:51:LYS:H	39:BU:51:LYS:HD2	1.84	0.42
41:BW:41:LYS:HD3	58:BA:2010:G:OP1	2.20	0.42
43:BY:76:CYS:O	43:BY:78:ALA:N	2.46	0.42
44:BZ:119:GLU:H	44:BZ:119:GLU:CD	2.28	0.42
44:BZ:162:GLU:H	44:BZ:162:GLU:HG2	1.70	0.42
56:B1:25:LYS:HB3	58:BA:388:G:OP2	2.19	0.42
58:BA:118:A:N3	58:BA:178:G:H1'	2.35	0.42
58:BA:152:G:H2'	58:BA:153:C:O4'	2.20	0.42
58:BA:451:C:N4	58:BA:454:A:OP2	2.27	0.42
58:BA:870:A:H2'	58:BA:871:U:O4'	2.20	0.42
58:BA:1332:G:C5	58:BA:1609:A:C6	3.08	0.42
58:BA:1653:G:H4'	58:BA:1654:A:O5'	2.20	0.42
58:BA:1727:U:H2'	58:BA:1728:G:C8	2.54	0.42
58:BA:1810:A:H8	58:BA:1810:A:O5'	2.02	0.42
58:BA:2066:C:H2'	58:BA:2067:G:C8	2.55	0.42
58:BA:2469:A:H2'	58:BA:2470:G:O4'	2.20	0.42
58:BA:2502:G:C5'	58:BA:2503:A:H5"	2.42	0.42
1:CB:16:HIS:CG	1:CB:210:SER:HA	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:106:PRO:O	4:CE:110:LEU:HG	2.20	0.42
5:CF:11:ASN:ND2	5:CF:13:ASN:O	2.53	0.42
5:CF:42:GLU:HG2	5:CF:61:LEU:HB3	2.02	0.42
6:CG:15:ASP:HB2	6:CG:20:ASP:H	1.84	0.42
9:CJ:8:LEU:HD22	9:CJ:16:LEU:CD2	2.50	0.42
10:CK:43:SER:HB2	10:CK:71:LYS:NZ	2.33	0.42
11:CL:52:LEU:HD12	11:CL:54:LYS:HZ3	1.85	0.42
11:CL:58:VAL:HG21	11:CL:85:ILE:CD1	2.50	0.42
12:CM:120:LYS:C	12:CM:121:LYS:HZ2	2.28	0.42
13:CN:4:LYS:O	13:CN:7:ILE:HG12	2.20	0.42
14:CO:49:ASP:OD1	20:CA:667:G:O2'	2.37	0.42
16:CQ:26:GLN:HG3	16:CQ:36:ILE:O	2.20	0.42
20:CA:68(I):G:N2	20:CA:68(R):C:H1'	2.34	0.42
20:CA:552:U:H2'	20:CA:553:A:H8	1.85	0.42
20:CA:945:G:C2	20:CA:946:A:C8	3.08	0.42
20:CA:1504:G:H4'	20:CA:1505:G:O5'	2.20	0.42
23:CY:243:VAL:HA	23:CY:279:TYR:HE1	1.84	0.42
23:CY:316:ILE:H	23:CY:316:ILE:HG12	1.40	0.42
23:CY:493:VAL:HG23	23:CY:512:ILE:HD11	2.02	0.42
24:DC:54:ARG:HA	24:DC:54:ARG:HD2	1.69	0.42
24:DC:174:ALA:HA	24:DC:175:PRO:HD3	1.58	0.42
25:DD:79:VAL:HG12	25:DD:80:ALA:N	2.35	0.42
25:DD:79:VAL:C	25:DD:96:HIS:H	2.27	0.42
25:DD:147:LEU:HB2	25:DD:155:LEU:CD1	2.50	0.42
27:DF:57:VAL:O	27:DF:59:TYR:N	2.47	0.42
28:DG:59:GLU:HA	28:DG:62:LEU:HB2	2.02	0.42
28:DG:135:LEU:O	58:DA:2305:A:H1'	2.19	0.42
29:DH:123:PHE:HB3	29:DH:124:GLU:H	1.64	0.42
29:DH:157:TYR:CZ	58:DA:2531:A:H5"	2.55	0.42
32:DN:131:GLN:NE2	32:DN:132:ALA:CB	2.83	0.42
34:DP:64:LYS:HD3	51:D8:25:MET:HE3	2.01	0.42
36:DR:86:ARG:HB2	36:DR:87:TYR:CD2	2.55	0.42
37:DS:26:LEU:HD21	37:DS:101:LEU:HD11	2.02	0.42
39:DU:114:LYS:HE3	39:DU:114:LYS:HB3	1.70	0.42
43:DY:6:HIS:NE2	43:DY:30:VAL:HG11	2.34	0.42
49:D6:15:GLU:HA	49:D6:49:HIS:HA	2.02	0.42
49:D6:16:CYS:H	49:D6:48:VAL:HG23	1.85	0.42
51:D8:6:THR:HG22	51:D8:8:LYS:HE2	2.02	0.42
56:D1:88:LYS:HA	56:D1:91:LYS:HD3	2.02	0.42
58:DA:484:C:H42	58:DA:496:G:H1	1.66	0.42
58:DA:1009:A:H2'	58:DA:1010:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1151:G:H2'	58:DA:1152:C:H6	1.85	0.42
58:DA:1426:G:H1'	58:DA:1572:A:N6	2.35	0.42
58:DA:2056:G:N2	58:DA:2057:A:C4	2.88	0.42
58:DA:2074:U:H4'	58:DA:2598:A:O4'	2.20	0.42
58:DA:2211:G:C2'	58:DA:2212:A:H5"	2.50	0.42
58:DA:2329:G:C6	58:DA:2330:G:C6	3.08	0.42
58:DA:2441:C:H2'	58:DA:2442:C:H6	1.84	0.42
58:DA:2821:A:H2'	58:DA:2822:G:H8	1.84	0.42
2:AC:68:VAL:HG12	2:AC:70:VAL:HG22	2.01	0.41
3:AD:22:LYS:HB3	3:AD:26:CYS:CB	2.50	0.41
3:AD:93:PHE:CE2	3:AD:97:LEU:HD21	2.55	0.41
4:AE:102:ALA:HB3	4:AE:107:ARG:HB2	2.00	0.41
4:AE:110:LEU:HB3	4:AE:115:VAL:CG2	2.50	0.41
5:AF:18:GLN:HG2	5:CF:17:SER:CB	2.50	0.41
6:AG:47:CYS:O	6:AG:50:ILE:HB	2.20	0.41
18:AS:40:ILE:HA	18:AS:44:MET:SD	2.60	0.41
20:AA:644:G:H2'	20:AA:645:C:O4'	2.20	0.41
20:AA:790:A:H2'	20:AA:791:G:C8	2.54	0.41
20:AA:802:A:H2'	20:AA:803:G:O4'	2.20	0.41
20:AA:831:U:H2'	20:AA:832:C:H6	1.85	0.41
20:AA:1260:C:OP1	20:AA:1284:C:H4'	2.20	0.41
21:AW:15:G:N1	21:AW:48:C:N3	2.53	0.41
23:AY:33:LEU:HD22	23:AY:65:ILE:HG22	2.01	0.41
23:AY:156:ARG:HA	23:AY:156:ARG:HD2	1.78	0.41
24:BC:33:LEU:O	24:BC:217:THR:OG1	2.28	0.41
24:BC:228:HIS:HB3	24:BC:229:SER:H	1.74	0.41
25:BD:78:LYS:HE3	25:BD:78:LYS:HB3	1.76	0.41
28:BG:72:ARG:HB3	28:BG:73:ALA:H	1.65	0.41
31:BK:106:GLU:O	31:BK:110:GLN:HG2	2.20	0.41
37:BS:26:LEU:C	37:BS:88:ASP:HB3	2.45	0.41
37:BS:42:ASP:HB2	37:BS:43:GLU:H	1.64	0.41
39:BU:34:LYS:NZ	58:BA:2018:G:N3	2.68	0.41
39:BU:65:ILE:HD11	39:BU:96:ALA:C	2.45	0.41
39:BU:92:ARG:HD2	40:BV:11:GLN:CB	2.45	0.41
40:BV:19:LYS:HE2	40:BV:19:LYS:HB2	1.73	0.41
43:BY:44:ILE:HG22	43:BY:45:VAL:N	2.35	0.41
50:B7:40:TRP:CH2	58:BA:458:G:H1'	2.55	0.41
56:B1:58:ILE:HG12	56:B1:59:THR:N	2.34	0.41
58:BA:119:A:H4'	58:BA:120:U:H5'	2.02	0.41
58:BA:299:A:N1	58:BA:322:A:O2'	2.33	0.41
58:BA:352:G:O2'	58:BA:353:G:C8	2.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:572:A:H2'	58:BA:573:G:O4'	2.20	0.41
58:BA:582:G:H2'	58:BA:583:G:H8	1.82	0.41
58:BA:729:G:H5'	58:BA:730:C:H5"	2.02	0.41
58:BA:1019:U:H5'	58:BA:1120:G:N2	2.36	0.41
58:BA:1264:G:O3'	58:BA:2615:U:H5'	2.20	0.41
58:BA:1356:G:H2'	58:BA:1357:U:C6	2.55	0.41
58:BA:1366:A:H2'	58:BA:1367:A:H8	1.85	0.41
58:BA:1429:G:N2	58:BA:1564:C:N3	2.56	0.41
58:BA:1769:G:O2'	58:BA:1958:C:H5"	2.20	0.41
58:BA:2134:A:H61	58:BA:2157:G:C2'	2.33	0.41
58:BA:2700:C:H2'	58:BA:2701:C:H6	1.81	0.41
58:BA:2851:A:H2'	58:BA:2852:G:O4'	2.20	0.41
1:CB:87:ARG:HH12	1:CB:232:PRO:HA	1.85	0.41
6:CG:15:ASP:CB	6:CG:20:ASP:H	2.32	0.41
11:CL:30:ALA:HA	11:CL:31:PRO:HD3	1.90	0.41
11:CL:76:ASN:C	11:CL:77:LEU:HG	2.45	0.41
11:CL:113:ARG:HH21	11:CL:115:LYS:HB3	1.85	0.41
12:CM:14:ARG:NH1	20:CA:1295:G:O2'	2.53	0.41
20:CA:1134:G:H2'	20:CA:1135:U:O4'	2.20	0.41
23:CY:215:LYS:HA	23:CY:215:LYS:HD3	1.82	0.41
23:CY:232:LEU:HD13	23:CY:232:LEU:HA	1.90	0.41
60:CY:701:FUA:H212	60:CY:701:FUA:H72	1.91	0.41
24:DC:26:ALA:HA	24:DC:30:VAL:HG23	2.01	0.41
25:DD:208:LYS:NZ	58:DA:729:G:O4'	2.47	0.41
25:DD:209:ALA:HB2	58:DA:1790:C:H4'	2.02	0.41
26:DE:5:LEU:HD23	26:DE:5:LEU:HA	1.89	0.41
26:DE:56:PRO:HB2	26:DE:57:LYS:H	1.59	0.41
27:DF:167:ALA:HA	27:DF:170:LEU:HB2	2.02	0.41
28:DG:59:GLU:O	28:DG:62:LEU:HB2	2.19	0.41
29:DH:121:ILE:HG22	29:DH:136:ILE:H	1.85	0.41
32:DN:69:GLN:NE2	58:DA:1022:G:C8	2.84	0.41
34:DP:74:GLU:OE1	34:DP:74:GLU:HA	2.20	0.41
35:DQ:3:MET:HB2	35:DQ:93:TYR:HD2	1.84	0.41
35:DQ:12:GLN:HA	58:DA:910:A:H62	1.84	0.41
35:DQ:101:ARG:NH2	58:DA:907:U:H4'	2.35	0.41
38:DT:13:ARG:NH1	38:DT:13:ARG:O	2.52	0.41
38:DT:74:ARG:HB3	38:DT:76:PHE:CE1	2.55	0.41
41:DW:12:ILE:HD13	41:DW:46:PHE:CE2	2.55	0.41
42:DX:88:LYS:H	42:DX:88:LYS:HG2	1.72	0.41
44:DZ:99:TYR:HB3	44:DZ:123:ASP:HB2	2.01	0.41
45:D0:69:PHE:CD1	58:DA:856:C:H4'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D6:19:ARG:N	49:D6:19:ARG:HD2	2.34	0.41
58:DA:240:G:O2'	58:DA:257:A:N6	2.42	0.41
58:DA:296:C:H2'	58:DA:297:C:C6	2.55	0.41
58:DA:310:A:O2'	58:DA:311:A:C8	2.73	0.41
58:DA:737:C:H5'	58:DA:738:G:OP2	2.20	0.41
58:DA:792:G:O2'	58:DA:2440:C:N3	2.50	0.41
58:DA:1076:C:N3	58:DA:1077:A:H1'	2.35	0.41
58:DA:1418:G:H1'	58:DA:1580:A:H61	1.83	0.41
58:DA:1638:C:H1'	58:DA:2698:U:H1'	2.02	0.41
58:DA:1704:G:H2'	58:DA:1705:G:O4'	2.20	0.41
58:DA:1855:G:N2	58:DA:1887:C:N3	2.56	0.41
58:DA:2647:U:H2'	58:DA:2648:C:H6	1.83	0.41
58:DA:2657:A:H2'	58:DA:2658:C:O4'	2.20	0.41
58:DA:2695:C:N3	58:DA:2714:G:O6	2.53	0.41
58:DA:2699:C:C2	58:DA:2708:G:N2	2.77	0.41
58:DA:2833:G:O2'	58:DA:2834:G:OP1	2.34	0.41
1:AB:71:VAL:HG22	1:AB:93:VAL:CG2	2.50	0.41
1:AB:158:LEU:HA	1:AB:159:PRO:HD3	1.86	0.41
1:AB:200:ILE:H	1:AB:200:ILE:HG13	1.72	0.41
5:AF:18:GLN:HG2	5:CF:17:SER:HB3	2.02	0.41
6:AG:17:VAL:HG21	6:AG:44:TYR:HE1	1.85	0.41
6:AG:97:GLN:HE21	6:AG:97:GLN:HB3	1.47	0.41
6:AG:137:LYS:O	6:AG:141:VAL:HG23	2.20	0.41
7:AH:44:PHE:CE2	7:AH:80:ILE:HA	2.55	0.41
7:AH:88:LYS:C	7:AH:90:GLY:H	2.27	0.41
7:AH:134:ILE:HB	7:AH:135:CYS:H	1.63	0.41
8:AI:5:TYR:HA	8:AI:17:VAL:O	2.20	0.41
10:AK:82:VAL:HB	10:AK:107:SER:O	2.20	0.41
11:AL:73:GLU:HA	20:AA:521:G:OP1	2.19	0.41
13:AN:53:LEU:HA	13:AN:53:LEU:HD23	1.93	0.41
14:AO:12:ILE:HG13	14:AO:12:ILE:H	1.65	0.41
14:AO:54:ARG:HE	20:AA:579:G:HO2'	1.65	0.41
20:AA:148:G:N2	20:AA:174:C:N3	2.55	0.41
20:AA:303:A:H2'	20:AA:304:U:O4'	2.20	0.41
20:AA:891:U:H2'	20:AA:892:A:C8	2.55	0.41
20:AA:1137:C:H5'	20:AA:1138:G:C6	2.55	0.41
20:AA:1196:U:O2	20:AA:1196:U:H2'	2.19	0.41
20:AA:1362:C:C2'	20:AA:1362(A):C:H5"	2.50	0.41
20:AA:1384:C:H2'	20:AA:1385:G:C8	2.55	0.41
21:AW:1:G:N2	21:AW:73:A:O2'	2.54	0.41
23:AY:17:ILE:CG2	23:AY:25:LYS:HA	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:29:THR:O	23:AY:33:LEU:HB2	2.20	0.41
23:AY:212:TYR:O	23:AY:215:LYS:HB2	2.20	0.41
23:AY:491:VAL:HG21	23:AY:596:LYS:O	2.20	0.41
25:BD:115:GLN:OE1	25:BD:117:VAL:HG13	2.20	0.41
25:BD:165:ILE:HG23	25:BD:175:LEU:HD23	2.01	0.41
25:BD:249:PRO:HG2	25:BD:250:TRP:CE3	2.55	0.41
26:BE:13:ARG:NH1	58:BA:2683:C:O2'	2.53	0.41
26:BE:122:PHE:CZ	58:BA:2512:C:H4'	2.55	0.41
28:BG:105:LYS:HD2	57:B4:26:SER:CB	2.50	0.41
35:BQ:44:ALA:HA	35:BQ:47:ILE:HD12	2.02	0.41
35:BQ:66:ILE:HG12	35:BQ:66:ILE:O	2.21	0.41
35:BQ:75:THR:C	35:BQ:88:GLY:HA3	2.46	0.41
35:BQ:85:LYS:HE3	45:B0:8:GLY:O	2.20	0.41
36:BR:28:LEU:HD22	36:BR:29:LEU:HD22	2.02	0.41
36:BR:97:VAL:HG12	36:BR:112:ALA:HB1	2.01	0.41
37:BS:15:ARG:C	37:BS:17:ARG:N	2.77	0.41
38:BT:24:PRO:HG3	38:BT:52:ILE:CG1	2.50	0.41
38:BT:49:VAL:HG22	38:BT:50:ILE:H	1.85	0.41
39:BU:76:TYR:O	39:BU:79:PHE:HB3	2.19	0.41
44:BZ:81:ARG:HE	44:BZ:81:ARG:HB2	1.47	0.41
44:BZ:99:TYR:HE2	44:BZ:125:LEU:HD13	1.85	0.41
44:BZ:103:ARG:HD3	44:BZ:136:PHE:CD2	2.54	0.41
49:B6:26:ASN:O	49:B6:27:LYS:HB2	2.19	0.41
56:B1:41:ARG:HE	56:B1:41:ARG:HB3	1.30	0.41
58:BA:493:G:H2'	58:BA:494:G:O4'	2.19	0.41
58:BA:709:U:H2'	58:BA:710:G:C8	2.55	0.41
58:BA:1312:U:H1'	58:BA:1314:C:N4	2.30	0.41
58:BA:1336:A:C4	58:BA:1337:G:C8	3.08	0.41
58:BA:1588:C:H2'	58:BA:1589:C:C6	2.55	0.41
58:BA:1928:A:H2'	58:BA:1929:G:O4'	2.21	0.41
58:BA:2111:C:O2	58:BA:2118:U:O2'	2.37	0.41
58:BA:2266:A:H4'	58:BA:2267:A:O5'	2.20	0.41
58:BA:2373:G:H2'	58:BA:2374:C:O4'	2.19	0.41
58:BA:2720:U:H2'	58:BA:2721:A:O4'	2.20	0.41
58:BA:2895:U:H2'	58:BA:2896:C:O4'	2.20	0.41
59:BB:116:G:H2'	59:BB:117:G:C8	2.55	0.41
1:CB:235:SER:O	1:CB:237:ALA:N	2.53	0.41
7:CH:19:VAL:HG21	20:CA:827:U:O2'	2.21	0.41
12:CM:66:LEU:HB3	12:CM:67:GLU:H	1.67	0.41
15:CP:72:ARG:HH11	20:CA:453:A:H1'	1.84	0.41
18:CS:71:LEU:C	18:CS:73:GLU:N	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:123:C:OP1	20:CA:312:C:H5'	2.20	0.41
20:CA:323:U:H2'	20:CA:324:G:O4'	2.20	0.41
20:CA:692:U:H5'	20:CA:797:C:H4'	2.01	0.41
20:CA:953:G:H2'	20:CA:954:G:O4'	2.19	0.41
20:CA:1066:C:H3'	20:CA:1067:A:H8	1.83	0.41
20:CA:1440(M):G:H2'	20:CA:1440(N):C:C6	2.55	0.41
23:CY:25:LYS:HB2	23:CY:25:LYS:HE2	1.77	0.41
23:CY:252:ASP:O	23:CY:253:LEU:HB2	2.20	0.41
23:CY:256:THR:O	23:CY:258:VAL:N	2.53	0.41
23:CY:259:PHE:CE1	23:CY:275:ALA:HB1	2.54	0.41
23:CY:309:LEU:O	23:CY:390:VAL:HB	2.20	0.41
25:DD:219:PRO:HB2	58:DA:1789:A:O3'	2.19	0.41
25:DD:245:PRO:O	25:DD:247:ALA:N	2.52	0.41
27:DF:3:GLU:HA	27:DF:24:LEU:H	1.85	0.41
30:DJ:58:UNK:HA	58:DA:1107:G:OP1	2.20	0.41
30:DJ:86:UNK:O	30:DJ:87:UNK:C	2.68	0.41
32:DN:69:GLN:NE2	58:DA:1022:G:H8	2.17	0.41
33:DO:19:ILE:HD13	33:DO:41:ALA:CB	2.50	0.41
34:DP:38:GLN:O	34:DP:39:LYS:HB2	2.20	0.41
34:DP:51:PHE:CD1	34:DP:52:GLU:HB2	2.54	0.41
35:DQ:58:PHE:HZ	35:DQ:64:ILE:HD11	1.85	0.41
37:DS:39:ILE:HD13	37:DS:73:LEU:HD21	2.01	0.41
46:D2:2:LYS:O	46:D2:6:VAL:N	2.52	0.41
47:D3:41:PRO:O	47:D3:44:ARG:HB2	2.20	0.41
53:De:87:LYS:C	53:De:89:ALA:H	2.28	0.41
56:D1:20:ARG:HG3	58:DA:380:U:OP1	2.19	0.41
58:DA:20:C:C2	58:DA:21:A:C8	3.08	0.41
58:DA:568:U:H3'	58:DA:570:G:OP2	2.20	0.41
58:DA:813:U:H2'	58:DA:814:C:H6	1.85	0.41
58:DA:879:G:C4	58:DA:880:G:C8	3.07	0.41
58:DA:954:G:O2'	58:DA:2274:A:N1	2.46	0.41
58:DA:1028:A:OP2	58:DA:1126:A:N6	2.37	0.41
58:DA:1308:A:H2'	58:DA:1309:G:O4'	2.20	0.41
58:DA:1631:A:C6	58:DA:1683:C:H5'	2.55	0.41
58:DA:1638:C:O2	58:DA:2698:U:O2'	2.32	0.41
58:DA:1664:A:H3'	58:DA:1665:A:C8	2.54	0.41
58:DA:2082:A:H2'	58:DA:2083:G:O4'	2.20	0.41
58:DA:2086:U:H2'	58:DA:2087:G:H8	1.84	0.41
58:DA:2743:C:P	58:DA:2755:C:H42	2.43	0.41
4:AE:60:TYR:OH	20:AA:1074:G:OP1	2.30	0.41
5:AF:33:TYR:N	5:AF:33:TYR:CD1	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:118:SER:HB3	20:AA:35:G:H21	1.85	0.41
14:AO:61:GLY:O	14:AO:65:ARG:HG3	2.20	0.41
15:AP:40:ASP:HA	15:AP:41:PRO:HD2	1.88	0.41
20:AA:447:G:O6	20:AA:485:G:O2'	2.32	0.41
20:AA:700:G:H4'	20:AA:704:A:H1'	2.03	0.41
20:AA:985:C:H2'	20:AA:986:A:H8	1.84	0.41
20:AA:1014:A:O2'	20:AA:1219:U:H4'	2.20	0.41
20:AA:1090:U:H2'	20:AA:1091:U:O4'	2.20	0.41
20:AA:1517:G:N3	58:BA:1919:A:O2'	2.52	0.41
21:AW:18:G:N2	21:AW:58:A:O4'	2.53	0.41
23:AY:72:CYS:SG	23:AY:79:ILE:HB	2.60	0.41
23:AY:96:ARG:NH2	23:AY:385:THR:OG1	2.53	0.41
23:AY:109:ASP:OD1	23:AY:110:SER:N	2.53	0.41
24:BC:14:LYS:HD3	24:BC:33:LEU:CD2	2.51	0.41
24:BC:83:LYS:HD2	24:BC:148:PHE:CD1	2.55	0.41
26:BE:42:ASP:HB3	26:BE:44:TYR:CZ	2.55	0.41
26:BE:159:HIS:HE1	26:BE:162:ALA:N	2.18	0.41
41:BW:102:HIS:CD2	58:BA:24:G:H4'	2.56	0.41
43:BY:9:LYS:HD2	43:BY:94:LYS:NZ	2.32	0.41
43:BY:29:GLU:HB2	43:BY:38:ILE:HG23	2.02	0.41
45:B0:25:ARG:HG3	45:B0:31:VAL:CG1	2.51	0.41
48:B5:43:HIS:NE2	58:BA:2883:A:O3'	2.42	0.41
48:B5:52:TYR:C	48:B5:54:GLY:H	2.28	0.41
58:BA:8:A:C2	58:BA:9:U:C2	3.08	0.41
58:BA:38:A:H2'	58:BA:39:C:C6	2.55	0.41
58:BA:236:C:H2'	58:BA:237:C:H6	1.84	0.41
58:BA:319:C:H2'	58:BA:320:A:O4'	2.21	0.41
58:BA:936:C:H2'	58:BA:937:U:C6	2.55	0.41
58:BA:956:G:H1'	58:BA:960:A:N6	2.35	0.41
58:BA:960:A:H1'	58:BA:2495:G:N2	2.35	0.41
58:BA:1005:C:C4	58:BA:1143:A:C4	3.08	0.41
58:BA:1153:C:H2'	58:BA:1154:G:O4'	2.20	0.41
58:BA:1215:G:H3'	58:BA:1216:G:H8	1.85	0.41
58:BA:1537:C:C4	58:BA:1538:G:H1'	2.53	0.41
58:BA:2545:G:O2'	58:BA:2565:A:N1	2.44	0.41
58:BA:2591:C:H2'	58:BA:2592:G:C8	2.55	0.41
1:CB:174:VAL:HG11	1:CB:196:LEU:HD13	2.02	0.41
2:CC:130:VAL:O	2:CC:134:ILE:HB	2.20	0.41
5:CF:48:LEU:HD22	17:CR:77:GLY:C	2.45	0.41
5:CF:94:GLN:HB2	17:CR:32:ARG:HE	1.85	0.41
6:CG:140:ASP:O	6:CG:144:MET:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:58:ASP:O	9:CJ:59:SER:HB2	2.20	0.41
14:CO:23:GLY:HA3	20:CA:750:G:H1'	2.02	0.41
14:CO:39:LEU:HB3	14:CO:56:LEU:HD22	2.01	0.41
14:CO:69:TYR:OH	20:CA:753:A:OP1	2.37	0.41
15:CP:68:ASP:O	15:CP:71:ARG:HB3	2.20	0.41
16:CQ:68:ARG:HH12	20:CA:277:C:H5'	1.86	0.41
20:CA:174:C:H2'	20:CA:175:C:C6	2.55	0.41
20:CA:266:G:H4'	20:CA:267:C:C5	2.55	0.41
20:CA:303:A:H2'	20:CA:304:U:O4'	2.20	0.41
20:CA:510:A:N3	20:CA:543:C:H1'	2.35	0.41
20:CA:605:U:H2'	20:CA:606:G:C8	2.55	0.41
20:CA:1074:G:H2'	20:CA:1075:C:C6	2.54	0.41
20:CA:1140:C:H2'	20:CA:1141:C:H6	1.85	0.41
23:CY:244:ALA:O	23:CY:248:LYS:HB2	2.20	0.41
23:CY:357:ARG:HG3	23:CY:366:VAL:HG11	2.02	0.41
23:CY:612:THR:HA	23:CY:613:PRO:HD3	1.88	0.41
24:DC:178:LYS:C	24:DC:180:SER:H	2.27	0.41
24:DC:201:LYS:NZ	24:DC:205:ALA:HB3	2.36	0.41
25:DD:63:ARG:HB2	25:DD:85:ASP:OD2	2.20	0.41
25:DD:255:LYS:HD3	25:DD:255:LYS:HA	1.79	0.41
26:DE:8:LYS:HD3	26:DE:191:PRO:O	2.20	0.41
27:DF:54:ARG:HG3	58:DA:801:G:C8	2.56	0.41
27:DF:108:LYS:NZ	58:DA:601:C:H5'	2.35	0.41
28:DG:62:LEU:HG	57:D4:7:PRO:HB3	2.02	0.41
29:DH:26:VAL:C	29:DH:32:GLU:HG3	2.45	0.41
29:DH:92:ILE:C	29:DH:94:TYR:H	2.28	0.41
31:DK:34:ILE:HG13	31:DK:34:ILE:H	1.57	0.41
32:DN:17:ASP:CG	32:DN:18:ALA:H	2.27	0.41
32:DN:46:VAL:HG13	32:DN:47:ALA:H	1.83	0.41
32:DN:64:GLY:HA3	58:DA:1141:U:H5	1.84	0.41
33:DO:21:CYS:O	33:DO:22:ILE:HD13	2.20	0.41
34:DP:11:GLY:HA3	58:DA:1244:G:H4'	2.02	0.41
35:DQ:14:ARG:NH2	58:DA:957:A:H3'	2.34	0.41
36:DR:34:ILE:O	36:DR:113:LEU:HA	2.20	0.41
36:DR:86:ARG:C	36:DR:88:ARG:H	2.27	0.41
37:DS:26:LEU:HB3	37:DS:86:ALA:O	2.20	0.41
37:DS:92:TYR:CE2	37:DS:94:TYR:HB2	2.54	0.41
38:DT:29:ARG:HB3	38:DT:86:ILE:O	2.20	0.41
42:DX:8:ILE:O	46:D2:37:PHE:HE1	2.03	0.41
50:D7:24:THR:HG23	50:D7:27:GLY:HA3	2.02	0.41
51:D8:30:ARG:HD3	58:DA:2420:C:N4	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:199:A:H61	58:DA:2433:A:H2'	1.85	0.41
58:DA:629:G:H5"	58:DA:650:C:O2'	2.20	0.41
58:DA:836:G:H2'	58:DA:837:C:H6	1.81	0.41
58:DA:1144:G:H2'	58:DA:1145:C:C6	2.53	0.41
58:DA:1188:U:H2'	58:DA:1189:A:H8	1.85	0.41
58:DA:1344:G:H4'	58:DA:1384:A:C6	2.55	0.41
58:DA:1437:C:O2'	58:DA:1518:C:O2'	2.28	0.41
58:DA:1551:C:H2'	58:DA:1552:G:O4'	2.21	0.41
58:DA:2514:U:H2'	58:DA:2515:C:H6	1.85	0.41
1:AB:157:ARG:NH2	1:AB:158:LEU:HG	2.36	0.41
4:AE:121:LYS:HD2	4:AE:121:LYS:HA	1.77	0.41
8:AI:48:GLU:N	8:AI:49:PRO:HD2	2.35	0.41
9:AJ:12:ASP:OD2	9:AJ:14:LYS:HG3	2.20	0.41
12:AM:107:ALA:O	12:AM:111:LYS:HB3	2.20	0.41
15:AP:11:SER:HB2	15:AP:12:LYS:H	1.66	0.41
16:AQ:3:LYS:HG2	20:AA:128:G:H4'	2.02	0.41
20:AA:131:C:H2'	20:AA:132:C:H6	1.82	0.41
20:AA:193:C:H2'	20:AA:194:C:H6	1.84	0.41
20:AA:687:A:N3	20:AA:688:G:H1'	2.35	0.41
20:AA:687:A:C2	20:AA:704:A:C6	3.08	0.41
20:AA:745:C:H2'	20:AA:746:A:H8	1.85	0.41
23:AY:29:THR:HG22	23:AY:33:LEU:HD13	2.01	0.41
23:AY:206:LEU:CA	23:AY:210:ARG:HH21	2.28	0.41
27:BF:36:VAL:O	27:BF:39:TRP:HB3	2.20	0.41
29:BH:13:LYS:C	29:BH:15:VAL:H	2.28	0.41
29:BH:96:ALA:HA	29:BH:105:LEU:HA	2.03	0.41
31:BK:92:GLY:O	44:BZ:112:ARG:NH2	2.53	0.41
32:BN:66:LYS:O	32:BN:68:GLU:N	2.53	0.41
33:BO:67:LYS:HD2	33:BO:67:LYS:HA	1.78	0.41
34:BP:95:VAL:CG2	34:BP:125:VAL:HA	2.50	0.41
35:BQ:120:ILE:O	35:BQ:124:LYS:HG2	2.21	0.41
38:BT:50:ILE:N	38:BT:62:THR:O	2.52	0.41
38:BT:55:ASN:OD1	38:BT:58:ASN:ND2	2.54	0.41
50:B7:34:ARG:HE	50:B7:39:ARG:NE	2.18	0.41
56:B1:18:ILE:HG21	58:BA:380:U:C4'	2.47	0.41
56:B1:43:TYR:C	56:B1:43:TYR:CD2	2.98	0.41
56:B1:64:ALA:HB1	58:BA:398:G:OP2	2.20	0.41
58:BA:262:A:H2'	58:BA:263:C:O4'	2.20	0.41
58:BA:429:A:H8	58:BA:429:A:O5'	2.02	0.41
58:BA:460:A:H3'	58:BA:461:C:H6	1.86	0.41
58:BA:750:A:H4'	58:BA:1617:C:O2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:767:U:H2'	58:BA:768:G:C8	2.54	0.41
58:BA:1136:G:C5	58:BA:1137:G:N7	2.88	0.41
58:BA:1427:A:H4'	58:BA:1428:C:O5'	2.21	0.41
58:BA:1906:G:H2'	58:BA:1907:G:O4'	2.21	0.41
58:BA:2531:A:H3'	58:BA:2532:G:C8	2.55	0.41
58:BA:2747:G:N2	58:BA:2757:A:N6	2.26	0.41
2:CC:157:ILE:HD11	2:CC:164:ARG:N	2.34	0.41
3:CD:114:ARG:H	3:CD:114:ARG:HD2	1.85	0.41
5:CF:89:MET:HA	5:CF:89:MET:HE3	2.02	0.41
6:CG:89:MET:HE3	6:CG:89:MET:HB2	1.84	0.41
8:CI:69:GLY:HA3	20:CA:1371:G:H4'	2.02	0.41
10:CK:90:GLY:O	10:CK:94:ALA:N	2.36	0.41
11:CL:7:ILE:CD1	16:CQ:34:LYS:HB2	2.50	0.41
12:CM:13:LYS:HD3	12:CM:17:VAL:HB	2.02	0.41
14:CO:24:SER:OG	14:CO:25:THR:N	2.53	0.41
16:CQ:40:LYS:HG2	16:CQ:42:TYR:HE1	1.86	0.41
18:CS:33:THR:OG1	18:CS:51:VAL:HG12	2.20	0.41
20:CA:668:G:N2	20:CA:738:C:N3	2.60	0.41
20:CA:755:G:H2'	20:CA:756:C:C6	2.56	0.41
20:CA:1492:A:C2	20:CA:1493:A:H8	2.38	0.41
23:CY:7:TYR:CE1	23:CY:12:LEU:HD21	2.56	0.41
23:CY:117:GLN:HE22	23:CY:664:GLN:CB	2.34	0.41
23:CY:197:ARG:HH21	23:CY:198:GLU:HG2	1.85	0.41
23:CY:311:ALA:HA	23:CY:330:VAL:O	2.20	0.41
23:CY:581:ALA:O	23:CY:584:ILE:HG22	2.20	0.41
24:DC:20:VAL:CG1	24:DC:226:ASN:HB2	2.49	0.41
25:DD:45:ASN:OD1	25:DD:50:THR:HG23	2.20	0.41
25:DD:79:VAL:CG1	25:DD:80:ALA:N	2.83	0.41
26:DE:136:ARG:NH2	58:DA:1998:G:OP2	2.53	0.41
27:DF:155:LEU:HA	27:DF:176:LEU:CB	2.51	0.41
32:DN:134:ARG:CG	32:DN:134:ARG:O	2.67	0.41
34:DP:41:ARG:HA	34:DP:41:ARG:HD3	1.79	0.41
35:DQ:56:ARG:HD3	58:DA:2469:A:O2'	2.21	0.41
35:DQ:135:ASP:H	35:DQ:137:TYR:HD1	1.63	0.41
36:DR:100:LEU:HB3	36:DR:111:LEU:HB2	2.02	0.41
37:DS:99:LYS:HG2	37:DS:100:ALA:N	2.35	0.41
42:DX:63:LYS:HD2	58:DA:1312:U:OP1	2.21	0.41
43:DY:81:LYS:O	43:DY:96:ILE:HG23	2.21	0.41
44:DZ:129:SER:HB3	44:DZ:131:ARG:HG3	2.01	0.41
44:DZ:158:PRO:HD2	44:DZ:161:VAL:HB	2.02	0.41
49:D6:5:VAL:HG13	49:D6:6:ARG:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D7:40:TRP:HE3	58:DA:459:U:H3'	1.85	0.41
56:D1:66:HIS:NE2	58:DA:372:G:H3'	2.35	0.41
58:DA:190:A:H5"	58:DA:204:A:N1	2.35	0.41
58:DA:453:C:H1'	58:DA:457:A:O2'	2.20	0.41
58:DA:601:C:H42	58:DA:656:G:H1	1.68	0.41
58:DA:878:A:H3'	58:DA:879:G:C8	2.55	0.41
58:DA:901:A:H2'	58:DA:902:C:H6	1.85	0.41
58:DA:956:G:H1'	58:DA:960:A:N6	2.36	0.41
58:DA:1047:G:HO2'	58:DA:1109:C:N4	2.17	0.41
58:DA:2266:A:H4'	58:DA:2267:A:N3	2.36	0.41
58:DA:2355:C:N3	58:DA:2362:G:N2	2.55	0.41
58:DA:2423:U:OP1	58:DA:2423:U:H3'	2.20	0.41
58:DA:2652:C:H2'	58:DA:2653:U:O4'	2.21	0.41
58:DA:2867:G:O2'	58:DA:2868:A:OP2	2.38	0.41
59:DB:29:A:H2'	59:DB:30:C:C6	2.56	0.41
59:DB:74:U:H2'	59:DB:75:G:C8	2.56	0.41
1:AB:118:LEU:HD22	1:AB:141:GLU:OE2	2.20	0.41
3:AD:193:ASP:O	3:AD:194:LEU:HD13	2.21	0.41
4:AE:100:VAL:O	4:AE:107:ARG:HG3	2.21	0.41
6:AG:41:ARG:HB3	6:AG:41:ARG:NH1	2.36	0.41
7:AH:94:TYR:CD2	20:AA:598:U:H4'	2.56	0.41
8:AI:85:LEU:H	8:AI:85:LEU:HG	1.65	0.41
10:AK:34:ASP:OD2	10:AK:38:ASN:N	2.51	0.41
11:AL:86:ARG:HE	11:AL:99:HIS:HB2	1.84	0.41
11:AL:95:GLY:O	11:AL:97:ARG:N	2.53	0.41
12:AM:65:LYS:C	12:AM:66:LEU:HD12	2.46	0.41
12:AM:81:LEU:O	12:AM:89:GLY:HA3	2.20	0.41
14:AO:18:PHE:CE1	14:AO:21:ASP:HA	2.55	0.41
16:AQ:67:LYS:C	16:AQ:69:LYS:N	2.78	0.41
19:AT:87:LYS:HD2	19:AT:87:LYS:HA	1.87	0.41
20:AA:120:A:H2'	20:AA:122:G:C8	2.56	0.41
20:AA:426:G:H2'	20:AA:427:U:O4'	2.20	0.41
20:AA:483:C:O5'	20:AA:483:C:H6	2.04	0.41
20:AA:537:G:H2'	20:AA:538:G:H8	1.84	0.41
20:AA:609:A:H2'	20:AA:610:G:O4'	2.19	0.41
20:AA:693:G:H2'	20:AA:694:A:C8	2.55	0.41
20:AA:726:C:H2'	20:AA:727:G:O4'	2.20	0.41
23:AY:13:ARG:NH1	23:AY:282:SER:HB2	2.35	0.41
23:AY:271:LEU:H	23:AY:271:LEU:HG	1.70	0.41
24:BC:53:ARG:HG2	24:BC:54:ARG:N	2.35	0.41
24:BC:73:VAL:HG22	24:BC:75:VAL:H	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:161:ARG:O	24:BC:161:ARG:HD3	2.21	0.41
25:BD:28:GLU:H	25:BD:29:PRO:HD2	1.85	0.41
27:BF:129:PHE:CD2	27:BF:163:VAL:HG21	2.55	0.41
28:BG:43:LEU:HB2	28:BG:88:ILE:HD13	2.02	0.41
28:BG:101:ILE:O	28:BG:104:GLU:HB3	2.20	0.41
30:BJ:25:UNK:O	30:BJ:111:UNK:HA	2.21	0.41
31:BK:27:LEU:C	31:BK:30:HIS:HB3	2.46	0.41
32:BN:43:THR:CG2	32:BN:44:PRO:HD2	2.50	0.41
34:BP:76:LYS:HE2	58:BA:227:A:H3'	2.01	0.41
36:BR:53:HIS:O	36:BR:56:LYS:HB3	2.20	0.41
37:BS:27:SER:O	37:BS:38:GLN:HB2	2.19	0.41
37:BS:35:ILE:O	37:BS:52:SER:HA	2.20	0.41
43:BY:31:LEU:HA	43:BY:32:PRO:HA	1.89	0.41
43:BY:32:PRO:HD2	43:BY:34:LYS:HB2	2.02	0.41
43:BY:76:CYS:HB2	43:BY:77:PRO:HD2	2.02	0.41
44:BZ:108:PRO:CB	44:BZ:144:LEU:H	2.33	0.41
45:B0:10:THR:HB	45:B0:11:ARG:H	1.54	0.41
50:B7:5:TRP:HZ3	58:BA:464:U:H1'	1.85	0.41
56:B1:76:ARG:HH22	56:B1:95:LEU:HD13	1.84	0.41
58:BA:273(G):C:H42	58:BA:363(A):G:H1	1.68	0.41
58:BA:479:A:N3	58:BA:480:A:C8	2.89	0.41
58:BA:479:A:H4'	58:BA:480:A:OP1	2.19	0.41
58:BA:981:A:C1'	58:BA:2037:G:H1'	2.49	0.41
58:BA:1529:A:H2'	58:BA:1530:G:O4'	2.20	0.41
58:BA:1814:G:H3'	58:BA:1815:A:H2'	2.02	0.41
58:BA:1922:G:H2'	58:BA:1923:U:O4'	2.20	0.41
58:BA:2523:G:C6	58:BA:2524:G:C5	3.08	0.41
58:BA:2835:A:N6	58:BA:2879:C:O5'	2.53	0.41
59:BB:15:A:H1'	59:BB:109:G:C6	2.55	0.41
59:BB:32:C:H2'	59:BB:33:G:C8	2.55	0.41
1:CB:94:ASN:OD1	1:CB:95:GLN:HG2	2.20	0.41
1:CB:103:THR:HG23	1:CB:176:GLU:OE2	2.21	0.41
1:CB:124:SER:O	1:CB:126:GLU:N	2.47	0.41
2:CC:134:ILE:HG23	2:CC:168:ALA:HB2	2.03	0.41
3:CD:14:ARG:NE	3:CD:40:PRO:HD2	2.36	0.41
9:CJ:3:LYS:HG2	9:CJ:4:ILE:HD12	2.02	0.41
11:CL:68:ALA:HB2	11:CL:85:ILE:HD11	2.02	0.41
12:CM:111:LYS:HE3	12:CM:112:GLY:O	2.20	0.41
16:CQ:95:TYR:HD1	16:CQ:95:TYR:HA	1.77	0.41
20:CA:341:C:N3	20:CA:348:G:N2	2.50	0.41
20:CA:362:G:H2'	20:CA:364:A:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:618:C:H42	20:CA:622:A:H62	1.67	0.41
20:CA:1200:C:O2'	20:CA:1201:A:OP2	2.35	0.41
20:CA:1316:G:H22	20:CA:1319:A:P	2.43	0.41
20:CA:1437:C:H2'	20:CA:1438:G:H8	1.85	0.41
21:CW:70:G:H4'	58:DA:1893:C:O2'	2.21	0.41
23:CY:130:VAL:HA	23:CY:131:PRO:HD3	1.73	0.41
23:CY:145:ASP:CG	23:CY:146:LEU:H	2.29	0.41
23:CY:272:LEU:HD12	23:CY:272:LEU:O	2.19	0.41
24:DC:25:GLU:HB3	24:DC:29:LEU:HD13	2.02	0.41
24:DC:84:ILE:HD11	24:DC:97:GLY:N	2.35	0.41
25:DD:119:ALA:C	25:DD:123:ALA:HB2	2.45	0.41
25:DD:165:ILE:HA	25:DD:175:LEU:HD22	2.02	0.41
26:DE:128:SER:OG	58:DA:1993:U:H4'	2.20	0.41
31:DK:99:ILE:HG13	31:DK:136:VAL:HG21	2.02	0.41
33:DO:77:ILE:HD13	38:DT:74:ARG:HG2	2.03	0.41
34:DP:131:SER:O	34:DP:135:LEU:HB2	2.20	0.41
39:DU:70:ARG:HH22	58:DA:1012:U:P	2.43	0.41
40:DV:66:ARG:NH2	58:DA:1223:G:OP2	2.50	0.41
44:DZ:59:LEU:HG	44:DZ:67:LEU:O	2.20	0.41
45:D0:26:TYR:O	45:D0:29:GLN:HB2	2.20	0.41
46:D2:31:GLU:O	46:D2:35:LEU:HB2	2.21	0.41
47:D3:3:ARG:O	47:D3:59:VAL:N	2.53	0.41
47:D3:10:LYS:HB3	47:D3:53:LEU:HD23	2.03	0.41
48:D5:9:LYS:HA	58:DA:2017:U:H4'	2.02	0.41
58:DA:391:G:C2	58:DA:411:G:C6	3.08	0.41
58:DA:986:C:H2'	58:DA:987:G:O4'	2.20	0.41
58:DA:1057:A:H62	58:DA:1087:G:P	2.41	0.41
58:DA:1403:C:H2'	58:DA:1404:C:O4'	2.20	0.41
58:DA:1479:G:H2'	58:DA:1480:G:C8	2.53	0.41
58:DA:1707:G:H2'	58:DA:1708:C:C6	2.56	0.41
58:DA:1914:C:C5	58:DA:1915:U:C4	3.08	0.41
58:DA:1930:G:N2	58:DA:1968:G:H2'	2.35	0.41
58:DA:2418:A:H2'	58:DA:2419:U:O4'	2.20	0.41
58:DA:2431:U:N3	58:DA:2434:A:OP2	2.53	0.41
58:DA:2500:U:H5"	58:DA:2501:C:OP2	2.20	0.41
58:DA:2711:A:C4	58:DA:2714:G:H1'	2.56	0.41
58:DA:2839:G:H1	58:DA:2878:U:H3	1.68	0.41
2:AC:14:ILE:HD12	2:AC:14:ILE:HA	1.98	0.41
2:AC:161:GLU:O	2:AC:163:ALA:N	2.53	0.41
3:AD:31:CYS:C	3:AD:33:MET:N	2.78	0.41
3:AD:57:ARG:HH12	3:AD:205:GLU:HB3	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:2:ARG:CZ	5:AF:69:GLU:HB3	2.50	0.41
11:AL:114:LYS:O	11:AL:115:LYS:HB2	2.21	0.41
14:AO:55:GLY:O	14:AO:59:MET:HG3	2.20	0.41
20:AA:1266:G:N2	20:AA:1269:A:OP2	2.51	0.41
23:AY:232:LEU:HD13	23:AY:232:LEU:HA	1.96	0.41
23:AY:591:LYS:HD3	23:AY:591:LYS:HA	1.90	0.41
23:AY:620:VAL:O	23:AY:624:LEU:HD13	2.20	0.41
23:AY:664:GLN:HG2	58:BA:2660:A:OP1	2.21	0.41
60:AY:701:FUA:H72	60:AY:701:FUA:H212	1.81	0.41
25:BD:72:LYS:HB3	25:BD:75:ILE:CG1	2.51	0.41
25:BD:205:VAL:HG12	25:BD:207:GLY:H	1.85	0.41
25:BD:208:LYS:HD2	58:BA:729:G:C5	2.55	0.41
26:BE:61:ARG:CD	26:BE:62:PRO:HD3	2.50	0.41
28:BG:115:ARG:H	28:BG:115:ARG:HG2	1.62	0.41
31:BK:6:ALA:H	31:BK:59:ILE:HG23	1.84	0.41
32:BN:69:GLN:O	32:BN:70:LYS:C	2.63	0.41
32:BN:103:VAL:O	32:BN:104:LYS:C	2.61	0.41
34:BP:46:LYS:HG2	34:BP:51:PHE:CG	2.55	0.41
34:BP:121:LYS:HA	34:BP:122:PRO:HD3	1.90	0.41
35:BQ:84:GLY:C	35:BQ:86:GLY:H	2.28	0.41
38:BT:76:PHE:HA	38:BT:77:PRO:HD3	1.71	0.41
43:BY:31:LEU:HA	43:BY:31:LEU:HD13	1.93	0.41
44:BZ:7:ALA:CB	44:BZ:59:LEU:HB2	2.51	0.41
44:BZ:116:VAL:HB	44:BZ:175:VAL:HG23	2.01	0.41
45:B0:24:LYS:NZ	58:BA:2355:C:O3'	2.44	0.41
51:B8:25:MET:C	51:B8:47:LYS:HB2	2.45	0.41
58:BA:139:G:H4'	58:BA:140:A:C2	2.55	0.41
58:BA:253:C:H2'	58:BA:254:G:O4'	2.21	0.41
58:BA:278:A:O2'	58:BA:279:C:O4'	2.39	0.41
58:BA:565:C:H4'	58:BA:1253:A:C6	2.55	0.41
58:BA:571:A:O2'	58:BA:572:A:OP2	2.35	0.41
58:BA:901:A:H2'	58:BA:902:C:H6	1.86	0.41
58:BA:1285:G:N2	58:BA:1328:G:H5"	2.31	0.41
58:BA:1513:C:H2'	58:BA:1514:U:O4'	2.20	0.41
58:BA:1518:C:H2'	58:BA:1519:G:H8	1.86	0.41
58:BA:1657:C:H2'	58:BA:1658:C:C6	2.56	0.41
58:BA:2418:A:H2'	58:BA:2419:U:O4'	2.21	0.41
59:BB:85:G:H2'	59:BB:86:G:H8	1.85	0.41
1:CB:162:ILE:O	1:CB:162:ILE:HG12	2.20	0.41
3:CD:96:LEU:HA	3:CD:139:ARG:NH2	2.35	0.41
3:CD:175:SER:O	3:CD:183:GLY:HA2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:5:ARG:HH22	20:CA:1091:U:H5”	1.84	0.41
11:CL:71:PRO:HG2	11:CL:102:ARG:HG2	2.02	0.41
12:CM:54:VAL:O	12:CM:58:GLU:HG2	2.20	0.41
12:CM:83:ASP:OD2	12:CM:84:ILE:N	2.53	0.41
14:CO:38:ARG:HA	14:CO:38:ARG:HD3	1.62	0.41
15:CP:33:ILE:HD13	20:CA:229:U:H5”	2.02	0.41
20:CA:68(D):C:H2’	20:CA:68(E):G:H5’	2.03	0.41
20:CA:181:G:C6	20:CA:195:A:C8	3.09	0.41
20:CA:301:G:H2’	20:CA:302:G:C8	2.56	0.41
20:CA:358:U:H5”	23:CY:381:LYS:NZ	2.35	0.41
20:CA:444:C:H2’	20:CA:445:G:H8	1.86	0.41
20:CA:530:G:O6	22:CV:24:A:H4’	2.20	0.41
20:CA:594:G:H2’	20:CA:595:G:O4’	2.21	0.41
20:CA:1095:U:H5’	20:CA:1109:C:O2	2.20	0.41
20:CA:1250:A:C6	20:CA:1251:A:C6	3.08	0.41
20:CA:1366:C:H2’	20:CA:1367:C:C6	2.56	0.41
23:CY:456:GLU:HG2	23:CY:657:THR:HG22	2.03	0.41
23:CY:610:VAL:HG23	23:CY:612:THR:HG22	2.01	0.41
24:DC:28:ARG:NH2	24:DC:187:ALA:HB2	2.35	0.41
24:DC:63:VAL:N	24:DC:161:ARG:O	2.54	0.41
24:DC:214:TYR:CB	24:DC:222:SER:HB2	2.48	0.41
25:DD:78:LYS:NZ	58:DA:1502:C:H5’	2.35	0.41
26:DE:67:PHE:CG	26:DE:68:ALA:N	2.87	0.41
26:DE:109:LYS:HB3	58:DA:2821:A:OP1	2.20	0.41
29:DH:94:TYR:OH	29:DH:152:ARG:NH2	2.45	0.41
31:DK:134:MET:HE3	31:DK:134:MET:HB2	1.77	0.41
36:DR:13:HIS:CD2	36:DR:13:HIS:H	2.38	0.41
38:DT:30:VAL:HA	38:DT:45:PHE:H	1.86	0.41
40:DV:72:VAL:HG11	58:DA:992:C:O3’	2.20	0.41
44:DZ:111:VAL:HG12	44:DZ:112:ARG:H	1.86	0.41
45:D0:40:GLN:O	45:D0:41:ARG:NH1	2.54	0.41
49:D6:39:TYR:HB3	49:D6:40:CYS:H	1.52	0.41
56:D1:45:ASN:CB	58:DA:397:G:H5”	2.50	0.41
58:DA:385:C:O3’	58:DA:388:G:N2	2.49	0.41
58:DA:485:C:H2’	58:DA:486:C:H6	1.86	0.41
58:DA:816:C:O2’	58:DA:932:G:O6	2.38	0.41
58:DA:1076:C:C2	58:DA:1077:A:H1’	2.56	0.41
58:DA:1130:U:O5’	58:DA:1130:U:H6	2.04	0.41
58:DA:1424:G:C2	58:DA:1425:G:H1’	2.56	0.41
58:DA:1522:G:H2’	58:DA:1523:U:O4’	2.19	0.41
58:DA:2070:G:H2’	58:DA:2071:A:O4’	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:2104:G:H2'	58:DA:2105:C:O4'	2.20	0.41
58:DA:2131:G:O4'	58:DA:2133:G:H1'	2.19	0.41
58:DA:2514:U:H2'	58:DA:2515:C:C6	2.55	0.41
58:DA:2538:C:H2'	58:DA:2539:C:H6	1.84	0.41
58:DA:2700:C:H2'	58:DA:2701:C:H6	1.85	0.41
59:DB:70:C:H42	59:DB:106:G:H1	1.68	0.41
3:AD:105:VAL:CG2	3:AD:126:ILE:HG13	2.51	0.41
5:AF:8:ILE:HG12	5:AF:88:VAL:HG13	2.03	0.41
8:AI:43:ALA:HA	8:AI:74:ILE:HD13	2.03	0.41
11:AL:39:VAL:HG12	11:AL:40:VAL:N	2.33	0.41
11:AL:86:ARG:NE	11:AL:99:HIS:HB2	2.36	0.41
12:AM:78:ILE:HD13	12:AM:81:LEU:HD22	2.02	0.41
15:AP:46:PRO:C	15:AP:48:TRP:H	2.29	0.41
20:AA:891:U:H2'	20:AA:892:A:H8	1.86	0.41
20:AA:1118:C:H2'	20:AA:1119:C:C6	2.55	0.41
20:AA:1285:A:H5'	20:AA:1286:A:C8	2.55	0.41
20:AA:1399:C:C2	20:AA:1502:A:N6	2.89	0.41
20:AA:1501:C:OP1	20:AA:1508:G:H4'	2.20	0.41
20:AA:1509:C:H2'	20:AA:1510:U:O4'	2.20	0.41
21:AW:14:A:H2'	21:AW:15:G:C8	2.55	0.41
23:AY:160:ARG:HB3	23:AY:254:LYS:O	2.19	0.41
23:AY:160:ARG:HH21	23:AY:219:VAL:HG13	1.86	0.41
23:AY:319:ASP:O	23:AY:323:GLY:HA2	2.20	0.41
60:AY:701:FUA:H322	60:AY:701:FUA:H16	1.75	0.41
24:BC:37:LYS:HG3	24:BC:38:PHE:H	1.86	0.41
25:BD:25:THR:HG22	25:BD:26:LYS:H	1.85	0.41
25:BD:133:LEU:N	25:BD:187:GLY:O	2.54	0.41
26:BE:78:LEU:HD12	58:BA:2635:C:H5'	2.01	0.41
27:BF:2:LYS:HE3	27:BF:26:ALA:HA	2.03	0.41
28:BG:105:LYS:HE3	28:BG:142:PRO:HG2	2.02	0.41
29:BH:27:LYS:HA	29:BH:32:GLU:HA	2.03	0.41
29:BH:154:PRO:C	29:BH:156:ALA:H	2.29	0.41
32:BN:26:LEU:HD23	32:BN:99:LEU:CD2	2.51	0.41
32:BN:99:LEU:HD13	32:BN:99:LEU:C	2.46	0.41
36:BR:82:GLU:O	36:BR:86:ARG:HG3	2.21	0.41
39:BU:75:ASN:HB2	58:BA:1011:G:OP1	2.21	0.41
56:B1:3:LYS:HA	58:BA:1365:A:OP2	2.21	0.41
56:B1:23:LYS:HD2	56:B1:23:LYS:HA	1.91	0.41
58:BA:221:A:N9	58:BA:233:A:H1'	2.36	0.41
58:BA:239:U:H2'	58:BA:240:G:O4'	2.20	0.41
58:BA:460:A:H2'	58:BA:461:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:489:G:H2'	58:BA:491:G:O4'	2.20	0.41
58:BA:569:U:O2'	58:BA:946:G:N2	2.36	0.41
58:BA:684:G:H5'	58:BA:685:A:OP2	2.20	0.41
58:BA:742:G:H2'	58:BA:743:G:H8	1.84	0.41
58:BA:1001:A:H3'	58:BA:1002:G:H8	1.86	0.41
58:BA:1366:A:H2'	58:BA:1367:A:O4'	2.21	0.41
58:BA:1993:U:H2'	58:BA:1994:C:O4'	2.21	0.41
58:BA:2023:G:N3	58:BA:2023:G:H2'	2.36	0.41
58:BA:2570:G:H2'	58:BA:2571:C:O4'	2.21	0.41
58:BA:2734:A:H62	58:BA:2770:G:N2	2.14	0.41
58:BA:2780:G:HO2'	58:BA:2781:A:P	2.38	0.41
59:BB:24:G:C5	59:BB:56:G:C4	3.08	0.41
2:CC:8:ILE:C	2:CC:10:PHE:H	2.29	0.41
3:CD:12:CYS:HB3	3:CD:33:MET:SD	2.61	0.41
4:CE:100:VAL:HG12	4:CE:115:VAL:HB	2.02	0.41
8:CI:128:ARG:HG3	21:CW:32:C:OP2	2.19	0.41
10:CK:62:GLN:HB2	10:CK:93:GLN:HB3	2.02	0.41
11:CL:104:VAL:HG12	11:CL:105:TYR:HD1	1.86	0.41
15:CP:66:PRO:HB2	15:CP:67:THR:H	1.64	0.41
16:CQ:45:HIS:CB	16:CQ:69:LYS:HZ3	2.34	0.41
16:CQ:63:ARG:NH1	20:CA:186(I):U:O2	2.53	0.41
17:CR:47:THR:HG23	17:CR:49:LYS:H	1.85	0.41
20:CA:6:G:O2'	20:CA:7:G:H5"	2.21	0.41
20:CA:539:A:H2'	20:CA:540:G:C8	2.56	0.41
20:CA:769:G:H1	20:CA:810:C:H42	1.68	0.41
20:CA:1537:U:HO2'	20:CA:1538:C:P	2.41	0.41
23:CY:122:TRP:O	23:CY:125:ALA:HB3	2.20	0.41
23:CY:163:VAL:HG12	23:CY:164:MET:N	2.35	0.41
23:CY:309:LEU:HD11	23:CY:335:LEU:HB2	2.03	0.41
24:DC:29:LEU:O	24:DC:33:LEU:HG	2.20	0.41
24:DC:77:ALA:HB3	24:DC:95:VAL:HG13	2.03	0.41
24:DC:96:GLY:HA3	24:DC:100:ILE:HG12	2.02	0.41
25:DD:92:ILE:C	25:DD:107:ALA:HB2	2.46	0.41
26:DE:12:THR:O	26:DE:13:ARG:HB3	2.20	0.41
27:DF:57:VAL:C	27:DF:59:TYR:N	2.78	0.41
27:DF:95:ARG:CZ	58:DA:589:C:H4'	2.50	0.41
28:DG:105:LYS:O	28:DG:110:ALA:N	2.48	0.41
29:DH:142:GLY:C	58:DA:2745:C:H4'	2.45	0.41
29:DH:152:ARG:HB3	29:DH:162:ILE:HD11	2.02	0.41
31:DK:122:ALA:HA	31:DK:125:ARG:HD3	2.03	0.41
32:DN:69:GLN:O	32:DN:70:LYS:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DQ:63:LYS:HG2	35:DQ:64:ILE:N	2.36	0.41
37:DS:15:ARG:HA	37:DS:15:ARG:HD3	1.83	0.41
37:DS:63:THR:HG22	37:DS:97:ARG:HG3	2.03	0.41
37:DS:89:ARG:HD3	37:DS:92:TYR:HA	2.03	0.41
38:DT:33:LYS:HD3	38:DT:34:VAL:N	2.33	0.41
40:DV:66:ARG:HG2	40:DV:88:ARG:HB3	2.02	0.41
44:DZ:99:TYR:HB3	44:DZ:123:ASP:C	2.46	0.41
50:D7:30:VAL:HA	50:D7:33:ARG:NH1	2.36	0.41
58:DA:56:A:N1	58:DA:114:U:O4	2.54	0.41
58:DA:144:C:H2'	58:DA:145:G:H8	1.84	0.41
58:DA:303:U:H2'	58:DA:304:G:C8	2.56	0.41
58:DA:831:G:H2'	58:DA:832:G:O4'	2.21	0.41
58:DA:1675:C:C5	58:DA:1676:A:N7	2.89	0.41
58:DA:1904:G:H1'	58:DA:1927:A:N1	2.35	0.41
58:DA:2030:A:N3	58:DA:2499:C:H5"	2.36	0.41
58:DA:2043:C:H2'	58:DA:2044:C:C6	2.56	0.41
58:DA:2368:C:H2'	58:DA:2369:A:C8	2.55	0.41
58:DA:2843:G:H2'	58:DA:2844:G:O4'	2.20	0.41
1:AB:162:ILE:C	1:AB:185:ILE:O	2.64	0.41
3:AD:15:GLU:OE2	3:AD:63:LYS:HG3	2.21	0.41
3:AD:166:LYS:HE2	3:AD:178:VAL:HG11	2.03	0.41
9:AJ:55:LYS:HG3	20:AA:973:G:O4'	2.21	0.41
11:AL:119:LYS:C	11:AL:121:GLY:H	2.28	0.41
13:AN:23:ARG:HA	13:AN:29:ARG:O	2.20	0.41
17:AR:66:LEU:O	17:AR:70:ILE:HG13	2.21	0.41
20:AA:120:A:H2'	20:AA:122:G:N7	2.36	0.41
20:AA:499:A:N3	20:AA:500:G:H1'	2.36	0.41
20:AA:570:G:O6	20:AA:865:A:N6	2.54	0.41
20:AA:858:G:O2'	20:AA:859:A:H5"	2.20	0.41
20:AA:956:U:H2'	20:AA:957:U:O4'	2.21	0.41
20:AA:1229:A:H5"	21:AW:29:U:O2'	2.21	0.41
21:AW:18:G:N3	21:AW:57:G:N2	2.69	0.41
23:AY:208:GLN:O	23:AY:211:GLU:HG2	2.21	0.41
24:BC:185:LYS:O	24:BC:189:ASN:HB2	2.21	0.41
25:BD:51:VAL:O	25:BD:52:ARG:HB2	2.19	0.41
26:BE:4:ILE:HG23	26:BE:5:LEU:O	2.20	0.41
26:BE:16:ARG:HE	26:BE:16:ARG:HB3	1.68	0.41
27:BF:33:LEU:HD13	27:BF:33:LEU:HA	1.86	0.41
27:BF:176:LEU:HG	27:BF:177:ALA:N	2.35	0.41
30:BJ:129:UNK:O	30:BJ:131:UNK:N	2.53	0.41
32:BN:13:TRP:N	32:BN:13:TRP:CD1	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BN:27:ALA:HA	32:BN:30:ILE:HD12	2.03	0.41
32:BN:62:VAL:CG2	32:BN:66:LYS:HG3	2.38	0.41
38:BT:93:ARG:O	38:BT:95:ARG:NH1	2.54	0.41
39:BU:15:LYS:HE2	58:BA:1217:C:OP1	2.20	0.41
42:BX:51:VAL:HA	42:BX:83:VAL:HA	2.03	0.41
46:B2:49:LYS:HD2	46:B2:49:LYS:HA	1.94	0.41
56:B1:14:VAL:N	56:B1:17:SER:HB3	2.36	0.41
58:BA:104:U:H3'	58:BA:105:C:H6	1.85	0.41
58:BA:284:U:H3	58:BA:357:A:H61	1.68	0.41
58:BA:363(G):A:O5'	58:BA:363(G):A:H8	2.03	0.41
58:BA:959:A:N3	58:BA:2457:U:O2'	2.54	0.41
58:BA:1041:C:H2'	58:BA:1042:G:H8	1.86	0.41
58:BA:1139:G:H1'	58:BA:1143:A:C2	2.54	0.41
58:BA:1299:G:H1'	58:BA:1641:A:N6	2.36	0.41
58:BA:1558:A:N7	58:BA:1560:G:H8	2.19	0.41
58:BA:1633:G:C6	58:BA:1635:G:C6	3.09	0.41
58:BA:1710:C:H1'	58:BA:2859:G:N2	2.36	0.41
58:BA:1806:C:H42	58:BA:1811:G:H1	1.68	0.41
58:BA:2291:U:H3	58:BA:2341:G:H1	1.69	0.41
58:BA:2793:G:C6	58:BA:2794:C:N4	2.89	0.41
1:CB:71:VAL:H	1:CB:164:VAL:HA	1.85	0.41
1:CB:87:ARG:HE	1:CB:87:ARG:HB2	1.57	0.41
2:CC:30:ARG:HB2	13:CN:36:PHE:O	2.21	0.41
3:CD:135:LEU:HD22	3:CD:135:LEU:H	1.85	0.41
6:CG:109:ASN:C	6:CG:111:ARG:H	2.29	0.41
8:CI:57:GLY:C	8:CI:59:PHE:H	2.28	0.41
8:CI:97:LYS:HB2	8:CI:102:LEU:HD12	2.03	0.41
11:CL:35:GLY:CA	11:CL:58:VAL:HG13	2.44	0.41
11:CL:71:PRO:HB2	11:CL:102:ARG:HH11	1.86	0.41
12:CM:5:ALA:O	12:CM:7:VAL:N	2.53	0.41
12:CM:82:MET:SD	12:CM:93:ARG:HG2	2.61	0.41
20:CA:126:G:H2'	20:CA:127:G:O4'	2.20	0.41
20:CA:324:G:N2	20:CA:327:A:OP2	2.52	0.41
20:CA:848:C:H2'	20:CA:849:C:C6	2.55	0.41
21:CW:8:U:H5'	21:CW:49:A:C5'	2.51	0.41
23:CY:98:MET:O	23:CY:101:LEU:HB2	2.21	0.41
23:CY:229:LEU:HD13	23:CY:229:LEU:HA	1.91	0.41
23:CY:456:GLU:HB3	23:CY:457:LEU:H	1.73	0.41
23:CY:515:GLU:O	23:CY:564:LYS:N	2.54	0.41
23:CY:608:VAL:O	23:CY:645:ALA:HB3	2.21	0.41
23:CY:647:VAL:HA	23:CY:648:PRO:HD3	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:45:ASN:HB2	25:DD:46:GLN:H	1.55	0.41
25:DD:147:LEU:HD23	25:DD:148:GLU:H	1.84	0.41
26:DE:1:MET:N	26:DE:200:GLU:HG2	2.36	0.41
27:DF:130:ALA:C	27:DF:132:VAL:H	2.29	0.41
29:DH:170:ARG:O	29:DH:171:LEU:HB2	2.21	0.41
32:DN:66:LYS:O	32:DN:68:GLU:N	2.54	0.41
34:DP:49:ARG:NE	51:D8:59:LYS:HE2	2.35	0.41
35:DQ:52:VAL:O	35:DQ:54:MET:N	2.54	0.41
36:DR:13:HIS:O	36:DR:16:HIS:N	2.53	0.41
36:DR:24:GLN:HG3	36:DR:44:LEU:HD21	2.01	0.41
37:DS:26:LEU:O	37:DS:26:LEU:HD23	2.20	0.41
39:DU:13:LYS:NZ	58:DA:812:C:H4'	2.35	0.41
39:DU:57:PHE:HB3	39:DU:61:TRP:CZ2	2.55	0.41
46:D2:62:THR:HA	46:D2:65:ASN:HB2	2.03	0.41
52:D9:30:PRO:O	58:DA:2527:C:H4'	2.21	0.41
58:DA:65:C:O2	58:DA:456:C:N4	2.53	0.41
58:DA:67:U:H2'	58:DA:68:G:C8	2.56	0.41
58:DA:111:A:H2'	58:DA:112:U:H6	1.85	0.41
58:DA:162:U:H2'	58:DA:163:U:C6	2.56	0.41
58:DA:270(B):A:H2'	58:DA:270(C):A:O4'	2.21	0.41
58:DA:290:G:H2'	58:DA:291:C:H5'	2.03	0.41
58:DA:742:G:H2'	58:DA:743:G:C8	2.56	0.41
58:DA:846:C:H4'	58:DA:847:U:H5"	2.02	0.41
58:DA:1011:G:C6	58:DA:1151:G:C6	3.09	0.41
58:DA:1441:G:H4'	58:DA:1628:G:OP1	2.21	0.41
58:DA:1588:C:H2'	58:DA:1589:C:C6	2.55	0.41
1:AB:7:VAL:HG12	1:AB:8:LYS:H	1.86	0.41
1:AB:12:GLU:OE1	1:AB:12:GLU:N	2.54	0.41
1:AB:17:PHE:CD2	1:AB:17:PHE:N	2.89	0.41
2:AC:11:ARG:HB3	2:AC:15:THR:HB	2.03	0.41
2:AC:18:TRP:C	2:AC:20:SER:H	2.28	0.41
2:AC:30:ARG:O	2:AC:34:LEU:HG	2.21	0.41
2:AC:134:ILE:O	2:AC:138:VAL:HG23	2.20	0.41
3:AD:49:ARG:O	3:AD:51:PRO:HD3	2.21	0.41
3:AD:172:PRO:HB2	3:AD:187:ARG:NH1	2.27	0.41
6:AG:4:ARG:NH1	20:AA:932:C:OP1	2.54	0.41
9:AJ:70:ARG:NH2	20:AA:1151:A:O3'	2.53	0.41
11:AL:97:ARG:H	11:AL:97:ARG:HG2	1.58	0.41
11:AL:113:ARG:NH2	11:AL:115:LYS:HB3	2.34	0.41
13:AN:13:THR:HA	13:AN:14:PRO:HD2	1.94	0.41
13:AN:27:CYS:HB2	20:AA:1202:G:H21	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:8:LYS:HE3	14:AO:31:LEU:HD21	2.02	0.41
14:AO:55:GLY:HA3	20:AA:741:G:O2'	2.21	0.41
14:AO:82:ILE:CG1	14:AO:87:ILE:H	2.32	0.41
15:AP:8:ARG:HB2	15:AP:17:TYR:CD2	2.56	0.41
16:AQ:39:SER:N	20:AA:280:C:O2	2.34	0.41
17:AR:64:ARG:HH22	20:AA:835:U:H5'	1.86	0.41
19:AT:13:LEU:H	19:AT:13:LEU:HG	1.72	0.41
20:AA:65:U:H5'	20:AA:200:G:H4'	2.02	0.41
20:AA:68(C):C:H2'	20:AA:68(D):C:C6	2.55	0.41
20:AA:318:G:H2'	20:AA:319:G:H8	1.85	0.41
20:AA:339:C:O5'	33:BO:97:ARG:NH1	2.54	0.41
20:AA:545:C:O2'	20:AA:549:C:OP1	2.38	0.41
20:AA:715:A:H1'	20:AA:777:A:C6	2.56	0.41
20:AA:766:A:H61	20:AA:1511:G:H1'	1.86	0.41
20:AA:983:A:H3'	20:AA:983:A:N3	2.36	0.41
20:AA:1347:G:N1	20:AA:1374:A:OP2	2.49	0.41
20:AA:1476:G:H2'	20:AA:1477:C:H6	1.86	0.41
20:AA:1517:G:H1'	58:BA:1919:A:O3'	2.21	0.41
23:AY:112:GLN:O	23:AY:114:VAL:N	2.46	0.41
23:AY:171:GLU:C	23:AY:173:THR:H	2.29	0.41
23:AY:219:VAL:HG11	23:AY:255:ILE:HD11	2.03	0.41
23:AY:485:GLU:OE2	23:AY:558:PHE:HB2	2.20	0.41
23:AY:496:LYS:HA	23:AY:509:HIS:HA	2.01	0.41
23:AY:534:ILE:HG23	23:AY:538:TYR:CD2	2.56	0.41
60:AY:701:FUA:H201	60:AY:701:FUA:H13	1.88	0.41
24:BC:59:VAL:HB	24:BC:60:ARG:H	1.78	0.41
24:BC:78:ILE:HB	24:BC:120:VAL:HG21	2.03	0.41
24:BC:180:SER:C	24:BC:182:PRO:HD2	2.46	0.41
25:BD:37:LEU:HD12	25:BD:64:ILE:HG12	2.02	0.41
25:BD:183:ARG:HA	25:BD:183:ARG:HD2	1.93	0.41
25:BD:211:ARG:O	25:BD:215:LEU:HG	2.21	0.41
25:BD:222:ARG:HG2	58:BA:1789:A:OP1	2.21	0.41
26:BE:35:GLN:HE22	58:BA:2785:C:H4'	1.85	0.41
26:BE:82:ARG:HG3	26:BE:83:ASP:N	2.35	0.41
26:BE:119:ARG:NH2	26:BE:159:HIS:O	2.53	0.41
28:BG:23:PHE:N	28:BG:23:PHE:HD1	2.18	0.41
30:BJ:58:UNK:C	30:BJ:60:UNK:N	2.83	0.41
31:BK:58:THR:HG22	31:BK:59:ILE:N	2.36	0.41
31:BK:115:LEU:HD12	31:BK:123:ALA:HB1	2.03	0.41
31:BK:127:ILE:O	31:BK:131:ALA:N	2.52	0.41
32:BN:1:MET:HB2	32:BN:2:LYS:H	1.65	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BO:39:ILE:HG13	33:BO:40:VAL:N	2.32	0.41
34:BP:30:THR:HG22	34:BP:31:ALA:N	2.35	0.41
34:BP:61:ARG:HA	51:B8:27:THR:CG2	2.50	0.41
34:BP:76:LYS:HE3	34:BP:76:LYS:HB3	1.90	0.41
36:BR:81:ASP:C	36:BR:85:PRO:HG2	2.46	0.41
38:BT:27:THR:HG22	38:BT:49:VAL:HB	2.03	0.41
38:BT:36:GLU:HG2	38:BT:37:GLY:H	1.86	0.41
38:BT:58:ASN:N	38:BT:58:ASN:ND2	2.69	0.41
41:BW:47:VAL:HA	41:BW:50:VAL:HG12	2.03	0.41
41:BW:99:ARG:NH1	58:BA:1262:A:OP1	2.53	0.41
42:BX:40:LYS:HE2	42:BX:44:GLU:OE1	2.21	0.41
46:B2:2:LYS:O	46:B2:6:VAL:HG23	2.21	0.41
46:B2:35:LEU:CD2	46:B2:50:ILE:HG12	2.51	0.41
49:B6:38:LYS:O	58:BA:2344:U:H3’	2.19	0.41
50:B7:48:LYS:HE3	58:BA:125:G:H22	1.86	0.41
51:B8:18:ALA:CB	58:BA:628:G:H5”	2.51	0.41
53:Be:74:VAL:HG12	53:Be:82:THR:HG22	2.03	0.41
53:Be:100:LYS:CB	53:Be:104:SER:HB2	2.51	0.41
58:BA:67:U:C2	58:BA:68:G:C8	3.09	0.41
58:BA:101:G:H2’	58:BA:101:G:N3	2.36	0.41
58:BA:176:G:H3’	58:BA:177:G:C2	2.55	0.41
58:BA:388:G:H2’	58:BA:390:A:N7	2.36	0.41
58:BA:811:U:H1’	58:BA:1251:C:H5’	2.03	0.41
58:BA:814:C:H42	58:BA:1193:G:H1	1.69	0.41
58:BA:1006:C:C2	58:BA:1138:G:N2	2.89	0.41
58:BA:1069:A:H4’	58:BA:1070:A:H5”	2.03	0.41
58:BA:1077:A:N1	58:BA:1088:A:H2’	2.36	0.41
58:BA:1327:C:H3’	58:BA:1328:G:C8	2.56	0.41
58:BA:1387:C:H42	58:BA:1400:G:H1	1.68	0.41
58:BA:1424:G:C2	58:BA:1575:C:C2	3.09	0.41
58:BA:1472:A:H2’	58:BA:1473:G:O4’	2.21	0.41
58:BA:1480:G:C6	58:BA:1481:U:C4	3.09	0.41
58:BA:1565:C:H1’	58:BA:1566:A:C8	2.55	0.41
58:BA:1708:C:H2’	58:BA:1709:U:C6	2.55	0.41
58:BA:1949:G:C6	58:BA:1950:G:C6	3.09	0.41
58:BA:2154:G:H2’	58:BA:2155:G:H8	1.86	0.41
58:BA:2392:A:H2’	58:BA:2393:A:O4’	2.21	0.41
58:BA:2422:A:OP1	58:BA:2422:A:H4’	2.20	0.41
58:BA:2593:U:H2’	58:BA:2594:C:H6	1.86	0.41
58:BA:2595:G:N2	58:BA:2597:G:H3’	2.36	0.41
58:BA:2667:C:H2’	58:BA:2668:G:O4’	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BB:40:U:N3	59:BB:44:G:OP2	2.40	0.41
1:CB:19:HIS:HB2	1:CB:204:ASN:HB2	2.02	0.41
1:CB:97:TRP:CZ2	1:CB:176:GLU:HG3	2.56	0.41
2:CC:68:VAL:HG12	2:CC:70:VAL:HG22	2.03	0.41
3:CD:14:ARG:NH1	3:CD:39:PRO:HB3	2.35	0.41
3:CD:54:TYR:CE2	20:CA:508:C:H4'	2.56	0.41
3:CD:59:ARG:HD2	3:CD:59:ARG:HA	1.86	0.41
4:CE:10:MET:HA	4:CE:32:VAL:HA	2.03	0.41
4:CE:48:ALA:HB3	4:CE:54:ALA:HB2	2.01	0.41
4:CE:80:ILE:HG22	7:CH:104:ARG:HH21	1.86	0.41
7:CH:20:TYR:HA	7:CH:65:TYR:OH	2.20	0.41
8:CI:111:ARG:O	8:CI:113:LYS:HD2	2.21	0.41
12:CM:108:ARG:HD2	12:CM:108:ARG:N	2.31	0.41
16:CQ:21:VAL:O	16:CQ:41:LYS:HA	2.21	0.41
16:CQ:29:HIS:HB3	16:CQ:32:TYR:C	2.44	0.41
17:CR:43:PHE:HD2	17:CR:43:PHE:HA	1.67	0.41
17:CR:70:ILE:HG23	17:CR:79:LEU:CD1	2.49	0.41
19:CT:49:ALA:O	19:CT:53:LEU:HG	2.21	0.41
20:CA:32:A:H1'	20:CA:48:C:N4	2.36	0.41
20:CA:137:C:N3	20:CA:226:G:N2	2.52	0.41
20:CA:140:A:H2'	20:CA:141:A:H8	1.85	0.41
20:CA:160:A:H2'	20:CA:161:A:O4'	2.20	0.41
20:CA:174:C:H2'	20:CA:175:C:H6	1.86	0.41
20:CA:236:G:H2'	20:CA:237:C:H6	1.85	0.41
20:CA:348:G:H2'	20:CA:349:A:H8	1.86	0.41
20:CA:401:C:H1'	20:CA:622:A:H1'	2.02	0.41
20:CA:522:C:H1'	20:CA:536:C:C5'	2.51	0.41
20:CA:1066:C:N4	20:CA:1191:A:H62	2.13	0.41
20:CA:1096:C:H2'	20:CA:1097:C:C6	2.56	0.41
20:CA:1475:G:H5'	58:DA:1689:A:H4'	2.02	0.41
23:CY:67:ALA:N	23:CY:358:MET:HE2	2.35	0.41
23:CY:147:TRP:O	23:CY:151:ARG:HG3	2.21	0.41
23:CY:243:VAL:HA	23:CY:279:TYR:CE1	2.55	0.41
23:CY:259:PHE:HZ	23:CY:279:TYR:CD2	2.39	0.41
23:CY:289:ILE:H	23:CY:289:ILE:HD12	1.85	0.41
23:CY:424:LEU:O	23:CY:427:ALA:HB3	2.20	0.41
25:DD:42:GLY:C	25:DD:44:ASN:H	2.29	0.41
25:DD:199:ALA:C	25:DD:201:HIS:N	2.79	0.41
25:DD:220:HIS:CE1	58:DA:1825:A:OP2	2.73	0.41
25:DD:226:MET:HG2	58:DA:782:A:C2	2.55	0.41
25:DD:236:GLY:O	25:DD:238:GLY:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:259:THR:HG21	58:DA:1803:A:O3'	2.21	0.41
26:DE:36:ARG:HG3	26:DE:47:VAL:HG22	2.01	0.41
26:DE:39:PRO:HA	26:DE:43:GLY:H	1.85	0.41
26:DE:171:GLU:HG2	26:DE:173:VAL:HG22	2.03	0.41
27:DF:24:LEU:HB3	27:DF:25:PRO:HD2	2.02	0.41
27:DF:32:LEU:O	27:DF:36:VAL:HG23	2.20	0.41
31:DK:127:ILE:HG23	31:DK:130:SER:HB2	2.03	0.41
32:DN:26:LEU:HD23	32:DN:99:LEU:CD2	2.51	0.41
32:DN:27:ALA:HA	32:DN:30:ILE:HD12	2.03	0.41
32:DN:33:LEU:C	32:DN:35:ARG:N	2.78	0.41
32:DN:43:THR:CG2	32:DN:44:PRO:HD2	2.50	0.41
32:DN:46:VAL:HG13	32:DN:48:MET:HG3	2.03	0.41
34:DP:23:PRO:HB2	34:DP:29:LYS:HB2	2.03	0.41
34:DP:30:THR:O	34:DP:32:THR:N	2.54	0.41
35:DQ:41:TRP:NE1	35:DQ:72:LYS:HE2	2.36	0.41
35:DQ:106:VAL:HG13	35:DQ:118:LEU:HD21	2.03	0.41
35:DQ:122:GLY:O	35:DQ:125:LEU:HB2	2.21	0.41
37:DS:65:VAL:O	37:DS:66:ALA:C	2.64	0.41
38:DT:26:ASP:HB3	38:DT:90:GLN:C	2.45	0.41
39:DU:49:HIS:CD2	58:DA:559:G:N2	2.87	0.41
39:DU:55:ARG:HA	39:DU:58:ARG:HD2	2.03	0.41
39:DU:85:LYS:HD2	39:DU:117:GLN:HG2	2.02	0.41
39:DU:112:ARG:HD2	39:DU:112:ARG:HA	1.89	0.41
41:DW:16:LYS:O	41:DW:20:VAL:HG23	2.21	0.41
42:DX:70:LEU:HD23	42:DX:70:LEU:HA	1.91	0.41
42:DX:82:GLN:HE21	42:DX:83:VAL:N	2.15	0.41
43:DY:42:VAL:O	43:DY:44:ILE:HG13	2.21	0.41
43:DY:75:ILE:HG12	43:DY:76:CYS:N	2.35	0.41
46:D2:10:LEU:HD11	58:DA:77:C:H5"	2.03	0.41
48:D5:55:ARG:HA	48:D5:55:ARG:HD3	1.84	0.41
49:D6:16:CYS:HB2	49:D6:17:LYS:HD2	2.03	0.41
58:DA:263:C:H2'	58:DA:264:C:O4'	2.21	0.41
58:DA:483:A:N7	58:DA:497:A:H2	2.19	0.41
58:DA:904:C:H2'	58:DA:905:U:H6	1.86	0.41
58:DA:1024:G:C3'	58:DA:1025:G:H5"	2.49	0.41
58:DA:1053:C:H2'	58:DA:1054:A:O4'	2.21	0.41
58:DA:1058:G:H2'	58:DA:1059:G:C8	2.56	0.41
58:DA:1088:A:H2'	58:DA:1088:A:N3	2.35	0.41
58:DA:1416:G:H2'	58:DA:1417:C:C6	2.56	0.41
58:DA:1494:A:O2'	58:DA:1495:A:H5"	2.21	0.41
58:DA:1537:C:H2'	58:DA:1538:G:H4'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:1556:C:H2'	58:DA:1557:C:C6	2.56	0.41
58:DA:1626:G:O3'	58:DA:1627:G:H8	2.03	0.41
58:DA:1930:G:H22	58:DA:1968:G:H2'	1.86	0.41
58:DA:2711:A:H3'	58:DA:2712:U:H5'	2.03	0.41
58:DA:2837:G:H2'	58:DA:2838:G:C8	2.56	0.41
59:DB:74:U:H2'	59:DB:75:G:H8	1.86	0.41
1:AB:15:VAL:CG1	1:AB:209:ARG:HE	2.34	0.41
1:AB:207:ALA:O	1:AB:211:ILE:HG12	2.21	0.41
3:AD:100:ARG:HG2	3:AD:137:SER:HA	2.02	0.41
3:AD:106:TYR:HB2	3:AD:117:ALA:HB2	2.03	0.41
5:AF:78:GLU:HG3	5:AF:81:ILE:HD12	2.04	0.41
18:AS:49:ILE:O	18:AS:59:PRO:HA	2.20	0.41
20:AA:110:C:H2'	20:AA:111:G:O4'	2.21	0.41
20:AA:322:C:H2'	20:AA:323:U:C6	2.56	0.41
20:AA:423:G:H3'	20:AA:423:G:N3	2.36	0.41
20:AA:1127:G:H1'	20:AA:1148:U:C4	2.56	0.41
20:AA:1426:C:H2'	20:AA:1427:U:C6	2.57	0.41
20:AA:1494:G:C4	20:AA:1495:U:C5	3.09	0.41
20:AA:1523:G:H2'	20:AA:1524:C:C6	2.56	0.41
23:AY:301:ILE:HG22	23:AY:332:SER:HB2	2.02	0.41
27:BF:66:PRO:HB2	27:BF:67:GLN:H	1.62	0.41
27:BF:94:PRO:HB3	58:BA:38:A:O2'	2.21	0.41
32:BN:69:GLN:NE2	58:BA:1022:G:C8	2.84	0.41
33:BO:23:ARG:HA	33:BO:23:ARG:HD2	1.85	0.41
34:BP:62:LEU:HD21	51:B8:25:MET:HB3	2.02	0.41
35:BQ:103:MET:HE2	35:BQ:103:MET:HB3	1.76	0.41
36:BR:18:LEU:O	36:BR:22:ARG:HG3	2.21	0.41
37:BS:65:VAL:O	37:BS:66:ALA:C	2.64	0.41
37:BS:67:ARG:O	37:BS:71:ARG:HD3	2.21	0.41
37:BS:67:ARG:CA	37:BS:99:LYS:HB2	2.51	0.41
39:BU:8:VAL:HB	39:BU:11:ARG:HE	1.86	0.41
43:BY:84:ARG:O	43:BY:94:LYS:HA	2.21	0.41
43:BY:97:ARG:NH2	58:BA:300:A:OP1	2.53	0.41
44:BZ:82:ARG:HB3	44:BZ:82:ARG:CZ	2.51	0.41
44:BZ:97:GLU:HA	44:BZ:126:VAL:O	2.20	0.41
44:BZ:107:THR:HG22	44:BZ:111:VAL:HG11	2.03	0.41
44:BZ:151:HIS:HB2	44:BZ:152:ALA:H	1.65	0.41
45:B0:69:PHE:CZ	58:BA:857:C:H5'	2.55	0.41
51:B8:25:MET:SD	51:B8:46:ARG:HA	2.61	0.41
51:B8:34:TRP:CG	51:B8:35:GLN:N	2.89	0.41
53:Be:114:LYS:HB2	53:Be:116:GLU:CD	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:B4:28:LYS:HA	57:B4:29:PRO:HD3	1.84	0.41
58:BA:16:G:H1	58:BA:524:U:H3	1.68	0.41
58:BA:127:A:H5"	58:BA:128:C:O4'	2.20	0.41
58:BA:374:A:H62	58:BA:400:G:N2	2.13	0.41
58:BA:478:A:C6	58:BA:480:A:C6	3.09	0.41
58:BA:1006:C:N3	58:BA:1138:G:C2	2.89	0.41
58:BA:1019:U:H2'	58:BA:1020:A:H8	1.82	0.41
58:BA:1096:A:H8	58:BA:1096:A:O5'	2.04	0.41
58:BA:1113:U:H2'	58:BA:1114:G:H8	1.86	0.41
58:BA:1131:G:C8	58:BA:2025:C:H4'	2.55	0.41
58:BA:1165:U:H2'	58:BA:1166:C:H6	1.84	0.41
58:BA:1288:U:C2	58:BA:1327:C:C2	3.09	0.41
58:BA:1328:G:O2'	58:BA:1329:U:H5"	2.21	0.41
58:BA:1442:G:H5'	58:BA:1628:G:H5"	2.03	0.41
58:BA:1717:G:H2'	58:BA:1718:G:C8	2.56	0.41
58:BA:1787:A:H1'	58:BA:2589:A:H4'	2.03	0.41
58:BA:1936:A:C8	58:BA:1945:G:C8	3.09	0.41
58:BA:2004:G:C6	58:BA:2005:A:C4	3.09	0.41
58:BA:2061:G:O2'	58:BA:2064:C:N4	2.54	0.41
58:BA:2577:A:H5"	58:BA:2578:G:H5'	2.03	0.41
3:CD:61:LYS:HD3	3:CD:207:TYR:OH	2.21	0.41
4:CE:126:ARG:NE	20:CA:9:G:H5"	2.36	0.41
5:CF:21:LEU:O	5:CF:25:ILE:HG12	2.21	0.41
8:CI:57:GLY:O	8:CI:59:PHE:N	2.53	0.41
12:CM:117:VAL:HB	12:CM:118:ALA:H	1.63	0.41
13:CN:61:TRP:CZ2	20:CA:1368:G:H4'	2.56	0.41
17:CR:33:ASP:HB3	17:CR:36:ASN:HD22	1.86	0.41
18:CS:55:LYS:HB2	20:CA:958:A:C2	2.56	0.41
20:CA:389:A:C6	20:CA:390:C:H1'	2.56	0.41
20:CA:537:G:H2'	20:CA:538:G:H8	1.81	0.41
20:CA:946:A:H2'	20:CA:947:G:H8	1.85	0.41
20:CA:994:A:N3	20:CA:994:A:H2'	2.35	0.41
20:CA:1068:G:H1	20:CA:1107:C:H42	1.67	0.41
20:CA:1251:A:H2'	20:CA:1252:A:C8	2.56	0.41
21:CW:49:A:N6	21:CW:50:C:N4	2.69	0.41
23:CY:306:ASN:N	23:CY:306:ASN:OD1	2.54	0.41
23:CY:310:ALA:HA	23:CY:390:VAL:HG12	2.03	0.41
23:CY:311:ALA:CB	23:CY:330:VAL:HA	2.51	0.41
23:CY:647:VAL:HG11	23:CY:652:MET:SD	2.61	0.41
24:DC:7:ARG:NH1	58:DA:2128:C:OP1	2.53	0.41
24:DC:121:MET:O	24:DC:122:GLY:C	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:66:ASP:CG	25:DD:103:ARG:HE	2.29	0.41
27:DF:164:ARG:O	27:DF:168:ARG:HB2	2.20	0.41
30:DJ:54:UNK:CA	30:DJ:79:UNK:HA	2.50	0.41
32:DN:63:THR:HB	32:DN:64:GLY:H	1.55	0.41
36:DR:16:HIS:O	36:DR:20:LEU:HB2	2.21	0.41
37:DS:102:ALA:HA	37:DS:108:GLY:HA3	2.02	0.41
40:DV:29:PRO:HB2	40:DV:30:GLY:H	1.68	0.41
57:D4:13:ARG:HA	57:D4:13:ARG:HD2	1.88	0.41
58:DA:686:G:H21	58:DA:788:A:H61	1.68	0.41
58:DA:1179:C:H2'	58:DA:1180:C:C6	2.54	0.41
58:DA:1198:U:C2	58:DA:1199:U:C5	3.09	0.41
58:DA:1680:U:H2'	58:DA:1763:G:N7	2.36	0.41
58:DA:1800:C:H42	58:DA:1817:G:H22	1.69	0.41
58:DA:2090:G:C6	58:DA:2091:U:C4	3.08	0.41
58:DA:2175:C:H2'	58:DA:2176:A:H8	1.86	0.41
58:DA:2762:G:H2'	58:DA:2763:G:O4'	2.20	0.41
59:DB:28:C:H2'	59:DB:29:A:H8	1.85	0.41
1:AB:70:PHE:O	1:AB:93:VAL:N	2.53	0.40
1:AB:111:ARG:NH1	20:AA:1104:G:H4'	2.36	0.40
1:AB:171:ALA:HA	1:AB:174:VAL:CB	2.48	0.40
2:AC:110:ASN:HB3	2:AC:141:VAL:HA	2.02	0.40
2:AC:140:ARG:O	2:AC:143:GLU:HB2	2.21	0.40
3:AD:15:GLU:CD	3:AD:19:LEU:HD11	2.46	0.40
5:AF:63:TYR:N	5:AF:63:TYR:CD2	2.89	0.40
7:AH:52:ASP:OD2	7:AH:53:VAL:N	2.54	0.40
11:AL:17:LYS:NZ	20:AA:303:A:H5'	2.36	0.40
12:AM:91:ARG:HA	12:AM:94:ARG:HG2	2.03	0.40
15:AP:25:ARG:HH12	20:AA:134:A:N6	2.16	0.40
20:AA:21:G:N2	20:AA:914:A:H62	2.17	0.40
20:AA:505:G:P	20:AA:535:A:H5'	2.61	0.40
20:AA:1237:C:O2'	20:AA:1300:G:N2	2.37	0.40
20:AA:1461:G:H2'	20:AA:1462:G:C8	2.56	0.40
21:AW:74:C:H2'	21:AW:75:C:O4'	2.21	0.40
23:AY:169:GLY:HA3	23:AY:173:THR:O	2.21	0.40
23:AY:607:ARG:CG	23:AY:674:ASP:HB2	2.51	0.40
25:BD:75:ILE:C	25:BD:118:VAL:HG23	2.46	0.40
25:BD:86:PRO:HB3	58:BA:1567:A:OP2	2.21	0.40
25:BD:181:GLU:HG3	25:BD:273:ARG:HA	2.02	0.40
25:BD:261:LYS:NZ	58:BA:2227:A:H5"	2.36	0.40
26:BE:188:VAL:HA	26:BE:189:PRO:HD2	1.98	0.40
27:BF:124:LEU:HD11	27:BF:126:VAL:HG22	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BN:31:ALA:C	32:BN:33:LEU:N	2.79	0.40
35:BQ:52:VAL:O	35:BQ:53:ALA:C	2.64	0.40
36:BR:12:ARG:NH2	58:BA:1276:A:O2'	2.54	0.40
37:BS:70:GLY:HA3	37:BS:99:LYS:HG3	2.03	0.40
39:BU:51:LYS:HD2	39:BU:51:LYS:N	2.35	0.40
40:BV:66:ARG:HG3	40:BV:90:PRO:HG3	2.02	0.40
43:BY:87:LYS:O	43:BY:89:PHE:N	2.54	0.40
44:BZ:48:PHE:HA	44:BZ:51:ALA:HB3	2.02	0.40
46:B2:67:LYS:HD3	46:B2:67:LYS:HA	1.80	0.40
52:B9:5:ALA:HB3	58:BA:2465:C:O3'	2.20	0.40
58:BA:1525:G:H2'	58:BA:1526:G:C8	2.56	0.40
58:BA:1794:U:H2'	58:BA:1795:C:O4'	2.20	0.40
1:CB:12:GLU:C	1:CB:14:GLY:H	2.29	0.40
2:CC:131:ARG:HB2	2:CC:166:GLU:OE2	2.21	0.40
7:CH:104:ARG:HD3	7:CH:138:TRP:CD1	2.56	0.40
8:CI:17:VAL:HG11	8:CI:81:ILE:HA	2.04	0.40
16:CQ:60:ILE:O	16:CQ:71:PHE:HA	2.21	0.40
20:CA:169:C:H2'	20:CA:170:U:H6	1.85	0.40
20:CA:324:G:N1	20:CA:327:A:OP2	2.52	0.40
20:CA:338:A:H3'	33:DO:97:ARG:NH2	2.36	0.40
20:CA:546:G:H4'	20:CA:548:G:H4'	2.03	0.40
20:CA:671:G:H2'	20:CA:672:U:H6	1.86	0.40
20:CA:1195:C:H5"	20:CA:1196:U:OP2	2.21	0.40
21:CW:4:U:H2'	21:CW:5:A:H8	1.85	0.40
23:CY:8:ASP:HB3	23:CY:10:LYS:H	1.87	0.40
23:CY:163:VAL:HA	23:CY:258:VAL:H	1.87	0.40
23:CY:165:GLN:OE1	23:CY:271:LEU:HB3	2.22	0.40
23:CY:256:THR:O	23:CY:258:VAL:HG23	2.22	0.40
23:CY:515:GLU:HG2	23:CY:516:PRO:HD2	2.03	0.40
23:CY:539:ILE:HB	23:CY:540:PRO:HD3	2.03	0.40
23:CY:614:GLU:C	23:CY:617:MET:HB3	2.45	0.40
26:DE:156:MET:HE3	26:DE:156:MET:HB3	1.76	0.40
26:DE:176:ILE:HA	26:DE:177:PRO:HD2	1.80	0.40
30:DJ:51:UNK:HA	30:DJ:56:UNK:CB	2.51	0.40
32:DN:70:LYS:HZ2	58:DA:1139:G:P	2.17	0.40
32:DN:99:LEU:HD13	32:DN:99:LEU:C	2.46	0.40
34:DP:39:LYS:HA	34:DP:39:LYS:HD3	1.83	0.40
34:DP:55:ARG:NH1	58:DA:2358:G:H1	2.18	0.40
37:DS:71:ARG:HE	37:DS:103:GLU:HB3	1.86	0.40
43:DY:13:VAL:HG13	43:DY:73:ARG:O	2.20	0.40
44:DZ:4:ARG:HA	44:DZ:58:VAL:HB	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DA:274:G:H2'	58:DA:275:G:C1'	2.50	0.40
58:DA:405:U:H3'	58:DA:406:G:H5'	2.03	0.40
58:DA:878:A:H2'	58:DA:879:G:O4'	2.21	0.40
58:DA:928:G:H2'	58:DA:929:G:O4'	2.21	0.40
58:DA:1006:C:H42	58:DA:1137:G:H1	1.68	0.40
58:DA:1655:A:C2	58:DA:1656:C:H1'	2.56	0.40
58:DA:2053:G:H2'	58:DA:2054:A:O4'	2.21	0.40
58:DA:2167:U:C4	58:DA:2168:G:C6	3.09	0.40
58:DA:2649:U:H2'	58:DA:2650:U:C6	2.54	0.40
58:DA:2747:G:N2	58:DA:2757:A:N6	2.25	0.40
1:AB:11:LEU:HA	1:AB:11:LEU:HD23	1.86	0.40
1:AB:33:TYR:O	1:AB:41:ILE:HB	2.22	0.40
2:AC:188:LEU:HD13	2:AC:188:LEU:HA	1.86	0.40
5:AF:21:LEU:O	5:AF:25:ILE:HG12	2.21	0.40
5:AF:50:TYR:HA	5:AF:51:PRO:HD2	1.63	0.40
10:AK:18:ARG:HB2	10:AK:33:THR:OG1	2.20	0.40
11:AL:81:SER:OG	11:AL:106:ASP:OD2	2.28	0.40
12:AM:91:ARG:NH2	20:AA:1226:C:OP2	2.55	0.40
13:AN:24:CYS:O	13:AN:28:GLY:N	2.53	0.40
19:AT:74:LYS:CG	19:AT:75:ASN:H	2.34	0.40
20:AA:375:U:H3	20:AA:389:A:H61	1.69	0.40
20:AA:826:C:H42	20:AA:874:G:H1	1.70	0.40
20:AA:983:A:O2'	20:AA:1049:U:O3'	2.39	0.40
20:AA:1081:G:H8	20:AA:1081:G:O5'	2.03	0.40
20:AA:1083:U:H3'	20:AA:1084:G:C8	2.56	0.40
20:AA:1478:C:H2'	20:AA:1479:C:C6	2.56	0.40
21:AW:18:G:O2'	21:AW:57:G:N2	2.55	0.40
23:AY:13:ARG:HH12	23:AY:282:SER:HB2	1.87	0.40
23:AY:147:TRP:HZ3	23:AY:212:TYR:CE2	2.40	0.40
23:AY:163:VAL:HG12	23:AY:164:MET:N	2.36	0.40
23:AY:163:VAL:HG22	23:AY:258:VAL:HB	2.04	0.40
24:BC:173:HIS:CE1	58:BA:2176:A:C2	3.09	0.40
24:BC:187:ALA:HB1	24:BC:191:ARG:NH1	2.36	0.40
25:BD:37:LEU:HD23	25:BD:37:LEU:HA	1.78	0.40
25:BD:42:GLY:O	25:BD:43:ARG:HG3	2.21	0.40
25:BD:45:ASN:OD1	25:BD:45:ASN:N	2.53	0.40
25:BD:263:ARG:HD2	58:BA:2226:C:O2'	2.21	0.40
26:BE:36:ARG:HG3	26:BE:47:VAL:HG22	2.04	0.40
27:BF:167:ALA:HB1	27:BF:175:THR:HB	2.03	0.40
30:BJ:149:UNK:O	30:BJ:151:UNK:N	2.47	0.40
33:BO:57:VAL:HG21	58:BA:1952:A:H4'	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BQ:26:TYR:HB2	35:BQ:27:VAL:H	1.73	0.40
36:BR:24:GLN:O	36:BR:28:LEU:HB2	2.21	0.40
36:BR:44:LEU:HA	36:BR:44:LEU:HD13	1.91	0.40
39:BU:78:THR:O	39:BU:79:PHE:C	2.64	0.40
44:BZ:44:PHE:CZ	44:BZ:86:VAL:HG21	2.56	0.40
45:B0:12:ASN:O	45:B0:14:ARG:N	2.44	0.40
45:B0:53:MET:HE2	45:B0:53:MET:HB3	1.96	0.40
46:B2:47:ASN:O	46:B2:48:HIS:C	2.64	0.40
58:BA:40:C:H2'	58:BA:41:C:O4'	2.22	0.40
58:BA:192:C:O2'	58:BA:802:A:N3	2.51	0.40
58:BA:479:A:C2	58:BA:480:A:H2'	2.57	0.40
58:BA:532:A:H2'	58:BA:532:A:N3	2.36	0.40
58:BA:1025:G:N2	58:BA:1139:G:O6	2.51	0.40
58:BA:1120:G:H2'	58:BA:1121:C:H6	1.85	0.40
58:BA:1231:G:C4	58:BA:1232:G:C8	3.10	0.40
58:BA:1477:A:H2'	58:BA:1478:G:O4'	2.21	0.40
58:BA:1943:U:O4'	58:BA:1945:G:H5'	2.21	0.40
58:BA:2212:A:H1'	58:BA:2215:G:C4	2.57	0.40
58:BA:2212:A:O2'	58:BA:2215:G:C8	2.74	0.40
59:BB:66:A:HO2'	59:BB:67:G:P	2.43	0.40
59:BB:81:G:O6	59:BB:95:U:C2	2.74	0.40
2:CC:72:LYS:HD2	2:CC:73:PRO:HD2	2.04	0.40
3:CD:93:PHE:CZ	3:CD:97:LEU:HD11	2.56	0.40
4:CE:24:ARG:NH2	20:CA:15:G:H4'	2.37	0.40
4:CE:78:HIS:H	4:CE:78:HIS:CD2	2.38	0.40
6:CG:42:ILE:HD13	6:CG:42:ILE:HA	1.92	0.40
8:CI:120:ARG:HH12	20:CA:1346:A:C5'	2.34	0.40
10:CK:62:GLN:O	10:CK:65:ALA:HB3	2.21	0.40
11:CL:51:ALA:C	11:CL:52:LEU:HD23	2.47	0.40
18:CS:4:SER:OG	18:CS:5:LEU:N	2.54	0.40
18:CS:66:MET:H	18:CS:66:MET:HG2	1.48	0.40
20:CA:452:A:O2'	20:CA:453:A:OP2	2.39	0.40
20:CA:577:G:H1'	20:CA:816:A:N3	2.36	0.40
20:CA:721:G:N2	20:CA:733:A:C5	2.89	0.40
20:CA:987:G:H2'	20:CA:988:G:C8	2.57	0.40
20:CA:1243:C:H2'	20:CA:1244:C:C6	2.56	0.40
22:CV:17:U:H2'	22:CV:18:G:C8	2.56	0.40
23:CY:19:ALA:HB3	23:CY:23:ALA:CB	2.51	0.40
23:CY:117:GLN:NE2	23:CY:664:GLN:HB3	2.36	0.40
23:CY:210:ARG:HD3	23:CY:210:ARG:HA	1.80	0.40
23:CY:223:PHE:HB2	23:CY:224:ASP:H	1.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:424:LEU:HD23	23:CY:472:VAL:HG11	2.03	0.40
25:DD:8:PRO:O	58:DA:1695:G:H1'	2.21	0.40
25:DD:45:ASN:N	25:DD:45:ASN:OD1	2.48	0.40
26:DE:51:PHE:HB3	26:DE:52:LEU:H	1.73	0.40
27:DF:34:TRP:CE2	34:DP:11:GLY:HA2	2.56	0.40
29:DH:154:PRO:HA	29:DH:161:GLY:HA3	2.03	0.40
29:DH:174:GLY:HA2	58:DA:2531:A:C8	2.56	0.40
31:DK:126:MET:HG3	58:DA:1080:C:O2	2.22	0.40
34:DP:61:ARG:NH1	51:D8:13:ARG:HD2	2.36	0.40
36:DR:107:ASP:HA	58:DA:2009:G:N3	2.36	0.40
37:DS:39:ILE:HD13	37:DS:73:LEU:CD2	2.52	0.40
38:DT:55:ASN:N	38:DT:59:THR:HB	2.34	0.40
38:DT:84:GLN:C	38:DT:86:ILE:N	2.79	0.40
39:DU:69:CYS:SG	39:DU:79:PHE:HB2	2.61	0.40
40:DV:47:VAL:HB	40:DV:50:PRO:O	2.22	0.40
42:DX:51:VAL:H	42:DX:51:VAL:HG23	1.63	0.40
43:DY:46:LYS:H	43:DY:62:GLU:HB2	1.87	0.40
44:DZ:48:PHE:CZ	44:DZ:71:VAL:HG11	2.56	0.40
44:DZ:156:LYS:O	44:DZ:158:PRO:HD3	2.20	0.40
48:D5:25:LEU:HD23	48:D5:25:LEU:HA	1.92	0.40
50:D7:34:ARG:CD	50:D7:42:LEU:HD22	2.51	0.40
51:D8:27:THR:HB	58:DA:2392:A:O2'	2.21	0.40
56:D1:21:ARG:C	56:D1:21:ARG:HD2	2.46	0.40
57:D4:16:CYS:SG	57:D4:20:ASN:HB3	2.62	0.40
58:DA:204:A:O3'	58:DA:205:G:H4'	2.22	0.40
58:DA:329:G:H8	58:DA:329:G:OP2	2.03	0.40
58:DA:529:A:N7	58:DA:2041:U:C4	2.89	0.40
58:DA:689:A:C2	58:DA:779:U:H4'	2.56	0.40
58:DA:830:G:H22	58:DA:2446:G:H5'	1.87	0.40
58:DA:1268:A:H2'	58:DA:1269:A:O4'	2.21	0.40
58:DA:1381:G:C6	58:DA:1382:G:C6	3.10	0.40
58:DA:1604:C:H2'	58:DA:1605:C:H6	1.81	0.40
58:DA:1810:A:H2'	58:DA:1811:G:O4'	2.21	0.40
58:DA:1967:C:H2'	58:DA:1968:G:O4'	2.21	0.40
58:DA:2181:G:H2'	58:DA:2182:G:O4'	2.20	0.40
58:DA:2564:A:C8	58:DA:2648:C:H4'	2.56	0.40
58:DA:2630:G:H2'	58:DA:2631:G:H8	1.86	0.40
58:DA:2773:C:H2'	58:DA:2774:C:H6	1.86	0.40
58:DA:2792:G:O6	58:DA:2893:G:O2'	2.31	0.40
4:AE:61:TYR:OH	20:AA:1075:C:OP2	2.37	0.40
11:AL:70:ILE:CG2	11:AL:100:ILE:HD12	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:21:TYR:N	13:AN:21:TYR:CD1	2.88	0.40
13:AN:37:PHE:CD2	13:AN:37:PHE:N	2.88	0.40
14:AO:32:LEU:O	14:AO:36:ILE:HG13	2.22	0.40
16:AQ:12:SER:HA	16:AQ:14:LYS:NZ	2.37	0.40
16:AQ:21:VAL:HG23	16:AQ:44:ALA:HB2	2.03	0.40
17:AR:74:ARG:HA	17:AR:79:LEU:O	2.21	0.40
20:AA:410:G:N1	20:AA:431:A:OP2	2.48	0.40
20:AA:945:G:C2	20:AA:946:A:C8	3.09	0.40
20:AA:1346:A:N1	20:AA:1374:A:H5"	2.35	0.40
20:AA:1394:A:N6	20:AA:1501:C:H5'	2.36	0.40
21:AW:4:U:H2'	21:AW:5:A:C8	2.56	0.40
21:AW:35:A:H2'	21:AW:36:U:C6	2.56	0.40
23:AY:25:LYS:CE	23:AY:86:GLY:HA3	2.51	0.40
23:AY:90:PHE:HZ	60:AY:701:FUA:H122	1.86	0.40
23:AY:120:THR:O	23:AY:124:GLN:HB2	2.21	0.40
23:AY:353:ALA:HB3	23:AY:378:VAL:HB	2.03	0.40
23:AY:614:GLU:HA	23:AY:617:MET:HE3	2.03	0.40
24:BC:104:ILE:HG22	24:BC:128:LEU:HD22	2.03	0.40
25:BD:133:LEU:O	25:BD:136:ILE:HB	2.21	0.40
26:BE:29:GLY:HA2	26:BE:180:ASN:CB	2.51	0.40
27:BF:149:ASP:OD1	27:BF:150:GLY:N	2.51	0.40
28:BG:10:LYS:HD2	28:BG:10:LYS:HA	1.86	0.40
28:BG:71:THR:HG21	28:BG:91:ARG:NH2	2.37	0.40
28:BG:135:LEU:O	58:BA:2305:A:H1'	2.21	0.40
29:BH:159:GLU:HG2	29:BH:163:TYR:OH	2.21	0.40
30:BJ:97:UNK:O	30:BJ:101:UNK:N	2.54	0.40
30:BJ:134:UNK:O	30:BJ:136:UNK:N	2.55	0.40
31:BK:9:LYS:HB2	31:BK:55:VAL:O	2.21	0.40
32:BN:27:ALA:CB	32:BN:103:VAL:HG22	2.52	0.40
34:BP:39:LYS:HB3	34:BP:40:SER:H	1.67	0.40
34:BP:47:ASP:O	58:BA:666:G:H5'	2.20	0.40
34:BP:71:VAL:H	34:BP:72:PRO:HD3	1.85	0.40
35:BQ:13:GLN:HG3	58:BA:910:A:N6	2.36	0.40
35:BQ:19:GLY:O	35:BQ:20:ALA:HB2	2.22	0.40
36:BR:26:LYS:HZ3	58:BA:1294:U:C5'	2.29	0.40
37:BS:40:ILE:HG13	37:BS:47:THR:H	1.86	0.40
38:BT:4:GLY:O	38:BT:8:LYS:HG3	2.21	0.40
39:BU:20:LEU:HD12	39:BU:39:LEU:HD21	2.03	0.40
39:BU:74:LEU:HB2	39:BU:75:ASN:H	1.59	0.40
39:BU:88:ILE:C	39:BU:90:VAL:N	2.80	0.40
44:BZ:129:SER:HB3	44:BZ:131:ARG:HG3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BZ:167:PRO:O	44:BZ:169:GLU:N	2.54	0.40
45:B0:20:ARG:NE	58:BA:2357:U:OP1	2.55	0.40
50:B7:17:GLY:O	50:B7:20:ALA:N	2.45	0.40
52:B9:35:ARG:HD2	58:BA:2742:C:OP1	2.21	0.40
53:Be:114:LYS:O	53:Be:116:GLU:HG3	2.22	0.40
58:BA:197:A:C6	58:BA:2430:A:H2'	2.57	0.40
58:BA:725:G:O5'	58:BA:725:G:H8	2.05	0.40
58:BA:764:A:O2'	58:BA:765:G:H5'	2.21	0.40
58:BA:836:G:H2'	58:BA:837:C:H6	1.86	0.40
58:BA:966:G:H1'	58:BA:2267:A:H62	1.87	0.40
58:BA:972:G:OP2	58:BA:974(A):G:H5"	2.22	0.40
58:BA:1299:G:H1'	58:BA:1641:A:H61	1.86	0.40
58:BA:1494:A:H1'	58:BA:1496:A:OP2	2.22	0.40
58:BA:1508:A:H2'	58:BA:1509:A:O4'	2.21	0.40
58:BA:1639:U:O2'	58:BA:2699:C:H4'	2.21	0.40
58:BA:1861:G:H2'	58:BA:1862:G:O4'	2.21	0.40
58:BA:1923:U:H2'	58:BA:1924:C:C5	2.56	0.40
59:BB:111:U:H2'	59:BB:112:G:C8	2.57	0.40
7:CH:12:ARG:NH2	20:CA:825:G:O2'	2.51	0.40
7:CH:71:GLY:O	7:CH:73:ASP:N	2.54	0.40
9:CJ:51:ARG:HB3	20:CA:1060:C:H5"	2.02	0.40
11:CL:35:GLY:HA2	11:CL:58:VAL:HG22	2.03	0.40
11:CL:100:ILE:HG22	11:CL:101:VAL:N	2.32	0.40
12:CM:61:GLU:H	12:CM:61:GLU:HG3	1.66	0.40
12:CM:121:LYS:HD3	12:CM:121:LYS:N	2.36	0.40
17:CR:52:PRO:O	17:CR:56:THR:HG23	2.21	0.40
20:CA:68(P):C:H2'	20:CA:68(Q):U:H6	1.86	0.40
20:CA:105:G:H2'	20:CA:106:C:C6	2.56	0.40
20:CA:112:G:H2'	20:CA:113:G:C8	2.56	0.40
20:CA:186(E):C:H2'	20:CA:186(F):C:C6	2.54	0.40
20:CA:236:G:H2'	20:CA:237:C:C6	2.56	0.40
20:CA:551:U:H2'	20:CA:552:U:C6	2.56	0.40
20:CA:673:G:H2'	20:CA:674:G:H8	1.80	0.40
20:CA:909:A:H2	20:CA:1413:A:N3	2.19	0.40
20:CA:957:U:O2	20:CA:960:U:H5"	2.22	0.40
20:CA:1535:C:N3	22:CV:10:G:O6	2.54	0.40
21:CW:20(A):U:O2'	21:CW:21:A:P	2.79	0.40
21:CW:51:A:N6	21:CW:63:C:H42	2.05	0.40
23:CY:399:LEU:HD23	23:CY:399:LEU:HA	1.86	0.40
24:DC:169:THR:C	24:DC:171:ALA:N	2.79	0.40
24:DC:201:LYS:HE2	24:DC:209:PHE:CD2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:34:VAL:C	25:DD:36:PRO:HD2	2.47	0.40
25:DD:85:ASP:HA	25:DD:86:PRO:HD2	1.83	0.40
25:DD:228:PRO:O	25:DD:232:PRO:HA	2.22	0.40
27:DF:185:ASP:HA	27:DF:188:ARG:HG2	2.04	0.40
29:DH:96:ALA:H	29:DH:128:PRO:HB3	1.86	0.40
34:DP:113:LYS:HA	34:DP:129:ALA:O	2.21	0.40
38:DT:128:GLU:C	38:DT:129:ARG:HE	2.28	0.40
39:DU:33:ARG:HG3	58:DA:581:C:OP1	2.22	0.40
40:DV:5:VAL:HG23	40:DV:37:VAL:O	2.21	0.40
44:DZ:118:GLN:HB3	44:DZ:173:ALA:H	1.86	0.40
44:DZ:141:VAL:HA	44:DZ:144:LEU:HD23	2.04	0.40
47:D3:59:VAL:HG22	47:D3:60:GLU:H	1.86	0.40
49:D6:36:LEU:HD12	49:D6:49:HIS:O	2.21	0.40
58:DA:181:A:H3'	58:DA:181:A:OP2	2.22	0.40
58:DA:489:G:H3'	58:DA:491:G:H8	1.86	0.40
58:DA:1442:G:H2'	58:DA:1443:G:H8	1.86	0.40
58:DA:1558:A:H1'	58:DA:1559:G:O5'	2.21	0.40
58:DA:1650:G:N2	58:DA:2007:C:N3	2.57	0.40
58:DA:1710:C:H2'	58:DA:1711:C:C6	2.56	0.40
58:DA:1999:C:O2	58:DA:2687:U:O2'	2.38	0.40
58:DA:2036:C:H2'	58:DA:2037:G:C8	2.56	0.40
58:DA:2254:C:H2'	58:DA:2255:G:H8	1.85	0.40
59:DB:13:A:H2'	59:DB:14:U:H5"	2.03	0.40
3:AD:5:ILE:HD13	20:AA:406:G:H4'	2.04	0.40
3:AD:190:ASP:H	3:AD:193:ASP:CG	2.29	0.40
5:AF:72:VAL:O	5:AF:75:LEU:HB3	2.21	0.40
11:AL:83:VAL:CG1	11:AL:100:ILE:HD13	2.52	0.40
12:AM:121:LYS:HB3	12:AM:122:LYS:H	1.72	0.40
13:AN:3:ARG:HB2	20:AA:1049:U:H5	1.87	0.40
13:AN:48:ALA:HA	13:AN:53:LEU:HB2	2.03	0.40
19:AT:54:LYS:HG2	19:AT:55:ILE:N	2.37	0.40
20:AA:68(V):G:H2'	20:AA:68(W):G:O4'	2.21	0.40
20:AA:576:G:OP2	20:AA:576:G:H3'	2.21	0.40
20:AA:752:G:H1'	20:AA:754:C:N4	2.36	0.40
20:AA:769:G:H4'	20:AA:1513:A:H4'	2.04	0.40
20:AA:944:G:H21	20:AA:1339:A:H62	1.68	0.40
20:AA:1184:G:H2'	20:AA:1185:G:H8	1.86	0.40
20:AA:1305:G:C5	20:AA:1331:G:C2	3.10	0.40
20:AA:1494:G:C6	20:AA:1495:U:C4	3.09	0.40
23:AY:118:SER:C	23:AY:120:THR:N	2.79	0.40
23:AY:128:TYR:CG	23:AY:129:LYS:N	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:345:THR:HB	23:AY:346:LYS:H	1.71	0.40
23:AY:543:GLN:O	23:AY:547:GLU:HG3	2.22	0.40
24:BC:194:ILE:HD13	24:BC:197:LEU:HD12	2.03	0.40
24:BC:218:THR:O	58:BA:2175:C:H1'	2.21	0.40
24:BC:220:GLY:HA3	24:BC:221:PRO:HD2	1.71	0.40
25:BD:109:ASP:H	25:BD:197:GLY:HA2	1.86	0.40
25:BD:208:LYS:HB2	58:BA:729:G:C6	2.56	0.40
27:BF:102:PRO:HG3	58:BA:658:C:O2'	2.22	0.40
28:BG:7:LEU:HD13	28:BG:103:LEU:HD12	2.03	0.40
28:BG:47:LYS:HA	28:BG:82:LEU:HG	2.02	0.40
28:BG:105:LYS:HD2	57:B4:26:SER:HB3	2.02	0.40
31:BK:7:VAL:HB	31:BK:58:THR:HG23	2.02	0.40
32:BN:115:ARG:HG2	32:BN:115:ARG:NH1	2.36	0.40
34:BP:67:MET:SD	58:BA:2414:G:H1'	2.61	0.40
39:BU:54:LYS:HZ1	58:BA:994:C:H2'	1.87	0.40
39:BU:84:LYS:HE3	58:BA:1152:C:OP1	2.22	0.40
40:BV:5:VAL:HG12	40:BV:14:VAL:HG22	2.04	0.40
41:BW:3:ALA:HB3	41:BW:107:LEU:HD13	2.03	0.40
48:B5:46:CYS:HB3	48:B5:49:CYS:H	1.86	0.40
51:B8:52:LYS:O	51:B8:55:ALA:N	2.55	0.40
58:BA:308:G:H2'	58:BA:309:G:O4'	2.22	0.40
58:BA:737:C:H5'	58:BA:738:G:OP2	2.20	0.40
58:BA:1059:G:H2'	58:BA:1060:U:C5	2.57	0.40
58:BA:1517:G:O4'	58:BA:1557:C:H4'	2.21	0.40
58:BA:1679:U:H2'	58:BA:1680:U:O4'	2.21	0.40
58:BA:1839:G:C2	58:BA:1840:G:C8	3.09	0.40
58:BA:1930:G:O2'	58:BA:1931:U:OP2	2.40	0.40
58:BA:2145:C:H2'	58:BA:2147:G:H21	1.86	0.40
58:BA:2173:A:P	58:BA:2173:A:H8	2.44	0.40
58:BA:2245:U:H6	58:BA:2245:U:OP2	2.04	0.40
58:BA:2588:G:H2'	58:BA:2589:A:O4'	2.22	0.40
1:CB:81:VAL:HG12	1:CB:215:LEU:HD11	2.04	0.40
2:CC:119:ARG:HD3	2:CC:140:ARG:HH22	1.85	0.40
13:CN:27:CYS:SG	13:CN:28:GLY:N	2.94	0.40
17:CR:37:VAL:HG23	17:CR:38:GLU:H	1.85	0.40
17:CR:74:ARG:HG3	17:CR:79:LEU:HB3	2.03	0.40
18:CS:37:ARG:NH1	20:CA:1220:G:OP1	2.50	0.40
19:CT:76:ALA:HA	19:CT:79:ARG:HH12	1.85	0.40
19:CT:88:VAL:O	19:CT:92:LEU:HG	2.22	0.40
20:CA:310:G:H2'	20:CA:311:C:H6	1.86	0.40
20:CA:975:A:C8	20:CA:1365:G:N2	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1015:A:C6	20:CA:1016:A:C6	3.10	0.40
20:CA:1127:G:H1'	20:CA:1148:U:C4	2.56	0.40
20:CA:1388:C:H2'	20:CA:1389:C:H6	1.85	0.40
23:CY:207:ASP:O	23:CY:210:ARG:HB2	2.21	0.40
23:CY:322:VAL:HB	23:CY:378:VAL:HG11	2.04	0.40
23:CY:661:SER:HA	58:DA:2660:A:N7	2.35	0.40
24:DC:192:ALA:HA	24:DC:195:ARG:CZ	2.52	0.40
25:DD:80:ALA:N	25:DD:94:LEU:O	2.54	0.40
27:DF:5:ALA:HB1	27:DF:123:LEU:HD21	2.03	0.40
27:DF:149:ASP:OD1	27:DF:150:GLY:N	2.53	0.40
27:DF:158:THR:OG1	27:DF:195:ASP:HB2	2.21	0.40
28:DG:173:LEU:HD12	28:DG:180:PHE:HZ	1.85	0.40
32:DN:51:PHE:CZ	32:DN:119:ARG:HD2	2.57	0.40
33:DO:78:ARG:HG2	33:DO:79:PHE:N	2.36	0.40
34:DP:36:LYS:O	58:DA:942:G:H5"	2.21	0.40
34:DP:81:GLN:HG2	34:DP:106:LEU:HD23	2.03	0.40
34:DP:99:LEU:HD12	34:DP:102:ARG:HH12	1.87	0.40
36:DR:104:ARG:NH2	58:DA:1287:A:H1'	2.35	0.40
42:DX:29:TRP:H	42:DX:29:TRP:CD1	2.40	0.40
44:DZ:29:TYR:O	44:DZ:90:VAL:HG23	2.21	0.40
48:D5:9:LYS:HD3	58:DA:2017:U:H4'	2.03	0.40
50:D7:27:GLY:O	50:D7:31:LEU:HG	2.21	0.40
56:D1:43:TYR:HB2	56:D1:44:PRO:HD2	2.04	0.40
56:D1:76:ARG:O	58:DA:270(S):G:O2'	2.40	0.40
58:DA:104:U:H3'	58:DA:105:C:H6	1.87	0.40
58:DA:190:A:N3	58:DA:679:C:O2'	2.48	0.40
58:DA:270(K):G:H2'	58:DA:270(L):C:O4'	2.21	0.40
58:DA:465:G:N2	58:DA:794:G:N2	2.70	0.40
58:DA:648:G:H2'	58:DA:649:G:H8	1.86	0.40
58:DA:875:G:H2'	58:DA:876:C:C6	2.56	0.40
58:DA:971:C:H3'	58:DA:972:G:C8	2.57	0.40
58:DA:1077:A:H3'	58:DA:1078:U:O4'	2.20	0.40
58:DA:1486:A:H2'	58:DA:1487:G:H8	1.86	0.40
58:DA:1633:G:O6	58:DA:1635:G:C2	2.75	0.40
58:DA:2610:C:H6	58:DA:2610:C:H2'	1.72	0.40
58:DA:2712:U:H6	58:DA:712(B):A:C4	2.39	0.40
59:DB:30:C:H1'	59:DB:57:A:H61	1.85	0.40
1:AB:44:LEU:HA	1:AB:47:THR:HB	2.02	0.40
1:AB:69:LEU:HD23	1:AB:159:PRO:CG	2.52	0.40
1:AB:139:LYS:O	1:AB:143:GLU:HG2	2.22	0.40
3:AD:22:LYS:HE3	3:AD:115:ARG:HH21	1.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:100:ARG:O	3:AD:104:VAL:HG23	2.21	0.40
3:AD:155:LEU:HD23	3:AD:155:LEU:HA	1.94	0.40
4:AE:10:MET:SD	4:AE:10:MET:N	2.89	0.40
5:AF:33:TYR:N	5:AF:33:TYR:HD1	2.19	0.40
12:AM:113:PRO:HB2	12:AM:114:ARG:H	1.58	0.40
14:AO:88:ARG:O	14:AO:88:ARG:HD3	2.22	0.40
20:AA:186(G):C:H1'	20:AA:186(K):G:N1	2.37	0.40
20:AA:186(J):G:H4'	20:AA:186(K):G:OP2	2.22	0.40
20:AA:201(B):U:H5"	20:AA:201(C):U:OP1	2.22	0.40
20:AA:279:A:OP1	20:AA:280:C:H2'	2.22	0.40
20:AA:838:G:H2'	20:AA:838(A):U:H5'	2.03	0.40
20:AA:1198:G:H2'	20:AA:1199:U:H6	1.84	0.40
20:AA:1362:C:O2'	20:AA:1362(A):C:O4'	2.31	0.40
20:AA:1525:G:H2'	20:AA:1526:G:C8	2.56	0.40
20:AA:1534:A:H2'	20:AA:1535:C:C6	2.57	0.40
23:AY:72:CYS:O	23:AY:78:ARG:HA	2.21	0.40
23:AY:544:LYS:O	23:AY:548:GLU:N	2.25	0.40
23:AY:660:ARG:O	23:AY:661:SER:OG	2.33	0.40
24:BC:11:LEU:HA	24:BC:14:LYS:CG	2.52	0.40
24:BC:37:LYS:HB2	24:BC:38:PHE:CD1	2.57	0.40
25:BD:85:ASP:HA	25:BD:86:PRO:HD2	1.74	0.40
25:BD:202:LYS:HD3	58:BA:1820:U:C5	2.57	0.40
26:BE:21:VAL:HA	26:BE:22:PRO:HD3	1.97	0.40
27:BF:7:TYR:OH	27:BF:10:PRO:HD3	2.22	0.40
27:BF:188:ARG:HG3	27:BF:189:THR:HG23	2.04	0.40
28:BG:4:ASP:OD2	28:BG:9:ARG:HB2	2.21	0.40
31:BK:134:MET:HG2	58:BA:1063:G:H5'	2.04	0.40
32:BN:51:PHE:CZ	32:BN:119:ARG:HD2	2.57	0.40
33:BO:8:LEU:O	33:BO:19:ILE:HG13	2.21	0.40
36:BR:105:ARG:HA	36:BR:105:ARG:HD3	1.92	0.40
39:BU:25:TRP:HA	58:BA:18:C:H5"	2.04	0.40
41:BW:13:SER:HA	41:BW:14:PRO:HD3	1.92	0.40
42:BX:11:PRO:HA	42:BX:28:PHE:HD1	1.87	0.40
47:B3:22:ALA:O	47:B3:26:LEU:HG	2.21	0.40
49:B6:37:ARG:NH1	58:BA:2286:A:N7	2.69	0.40
52:B9:30:PRO:O	58:BA:2527:C:H4'	2.22	0.40
56:B1:39:LYS:HG2	56:B1:40:ARG:N	2.36	0.40
56:B1:86:SER:HG	56:B1:90:ILE:HG13	1.86	0.40
58:BA:39:C:H2'	58:BA:40:C:C6	2.56	0.40
58:BA:516:C:H2'	58:BA:517:C:C6	2.57	0.40
58:BA:783:A:C2	58:BA:785:G:H1'	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:841:A:H2'	58:BA:842:G:H8	1.86	0.40
58:BA:848:G:N3	58:BA:933:A:H1'	2.37	0.40
58:BA:878:A:H3'	58:BA:879:G:C8	2.57	0.40
58:BA:950:G:H1	58:BA:967:C:H42	1.69	0.40
58:BA:1025:G:O6	58:BA:1139:G:N2	2.46	0.40
58:BA:1221:C:H42	58:BA:1229:G:H1	1.69	0.40
58:BA:1528:A:N7	58:BA:1543:A:H2	2.20	0.40
58:BA:1638:C:H1'	58:BA:2698:U:O2'	2.21	0.40
58:BA:1960:A:H2'	58:BA:1961:C:C6	2.56	0.40
58:BA:2306:C:H5"	58:BA:2307:G:N7	2.37	0.40
58:BA:2430:A:H5'	58:BA:2431:U:OP2	2.21	0.40
58:BA:2447:G:O2'	58:BA:2499:C:OP2	2.30	0.40
2:CC:197:GLY:HA3	20:CA:1057:G:O3'	2.21	0.40
3:CD:3:ARG:HB2	3:CD:3:ARG:NH2	2.36	0.40
3:CD:26:CYS:HA	3:CD:30:LYS:O	2.22	0.40
4:CE:69:VAL:HA	4:CE:70:PRO:HD2	1.91	0.40
5:CF:16:GLN:O	5:CF:19:LEU:HB3	2.22	0.40
7:CH:4:ASP:OD2	7:CH:6:ILE:HB	2.22	0.40
8:CI:104:ARG:HD2	20:CA:1118:C:H5'	2.03	0.40
11:CL:113:ARG:HD2	20:CA:538:G:OP1	2.21	0.40
14:CO:77:ARG:HA	14:CO:80:ALA:HB3	2.02	0.40
16:CQ:45:HIS:N	16:CQ:72:ARG:HA	2.34	0.40
20:CA:120:A:H2'	20:CA:122:G:C8	2.57	0.40
20:CA:127:G:H2'	20:CA:128:G:H8	1.86	0.40
20:CA:484:G:OP1	20:CA:486:U:H1'	2.22	0.40
20:CA:712:A:H2'	20:CA:713:G:C8	2.56	0.40
20:CA:838(C):U:H3'	20:CA:838(C):U:OP1	2.21	0.40
20:CA:1003:G:N2	20:CA:1005:A:H5'	2.36	0.40
20:CA:1238:A:N3	20:CA:1238:A:H2'	2.37	0.40
23:CY:19:ALA:HB2	23:CY:107:VAL:O	2.21	0.40
23:CY:95:GLU:O	23:CY:99:ARG:HB2	2.22	0.40
23:CY:197:ARG:NE	23:CY:197:ARG:HA	2.35	0.40
23:CY:427:ALA:O	23:CY:431:LEU:HD13	2.21	0.40
23:CY:512:ILE:HD13	23:CY:512:ILE:N	2.32	0.40
26:DE:51:PHE:H	26:DE:74:PRO:HG3	1.86	0.40
26:DE:55:ASN:HB2	26:DE:74:PRO:O	2.21	0.40
26:DE:65:GLY:HA2	26:DE:70:ALA:CA	2.45	0.40
27:DF:102:PRO:HG3	58:DA:606:U:H5"	2.03	0.40
28:DG:109:VAL:HA	28:DG:112:PRO:HG2	2.03	0.40
33:DO:20:MET:HG2	33:DO:21:CYS:N	2.37	0.40
34:DP:105:LEU:HG	58:DA:626:U:O2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DS:66:ALA:HB1	37:DS:97:ARG:HB3	2.04	0.40
38:DT:25:GLY:O	38:DT:49:VAL:HG12	2.22	0.40
43:DY:73:ARG:NH2	43:DY:81:LYS:H	2.19	0.40
44:DZ:98:MET:HE1	44:DZ:100:VAL:HG23	2.04	0.40
45:D0:46:LYS:HA	45:D0:47:PRO:HD3	1.96	0.40
49:D6:37:ARG:HB3	49:D6:38:LYS:H	1.76	0.40
51:D8:38:GLY:HA2	51:D8:41:ILE:HD12	2.03	0.40
58:DA:700:G:H2'	58:DA:701:G:O4'	2.22	0.40
58:DA:735:A:C5	58:DA:736:C:C5	3.09	0.40
58:DA:787:U:H5"	58:DA:788:A:H5'	2.03	0.40
58:DA:917:A:H2	59:DB:79:C:O2	2.05	0.40
58:DA:917:A:N1	59:DB:79:C:O2'	2.47	0.40
58:DA:1071:G:H1'	58:DA:1089:G:C5	2.56	0.40
58:DA:1354:A:N6	58:DA:1377:G:N2	2.25	0.40
58:DA:1773:A:H2'	58:DA:1774:C:O4'	2.21	0.40
58:DA:2471:C:H2'	58:DA:2472:G:O4'	2.20	0.40
58:DA:2861:G:H2'	58:DA:2862:G:C8	2.56	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BA:1015:G:O2'	39:DU:118:GLY:O[3_545]	2.10	0.10

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%)	155 (66%)	52 (22%)	26 (11%)	0 6
1	CB	233/235 (99%)	152 (65%)	55 (24%)	26 (11%)	0 6
2	AC	205/207 (99%)	156 (76%)	33 (16%)	16 (8%)	1 12

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	CC	205/207 (99%)	148 (72%)	41 (20%)	16 (8%)	1 12
3	AD	206/208 (99%)	145 (70%)	37 (18%)	24 (12%)	0 5
3	CD	206/208 (99%)	150 (73%)	32 (16%)	24 (12%)	0 5
4	AE	149/151 (99%)	124 (83%)	17 (11%)	8 (5%)	1 18
4	CE	149/151 (99%)	116 (78%)	25 (17%)	8 (5%)	1 18
5	AF	99/101 (98%)	73 (74%)	20 (20%)	6 (6%)	1 15
5	CF	99/101 (98%)	75 (76%)	18 (18%)	6 (6%)	1 15
6	AG	153/155 (99%)	122 (80%)	23 (15%)	8 (5%)	1 18
6	CG	153/155 (99%)	116 (76%)	28 (18%)	9 (6%)	1 16
7	AH	136/138 (99%)	93 (68%)	29 (21%)	14 (10%)	0 7
7	CH	136/138 (99%)	101 (74%)	22 (16%)	13 (10%)	0 9
8	AI	125/127 (98%)	93 (74%)	28 (22%)	4 (3%)	3 25
8	CI	125/127 (98%)	97 (78%)	22 (18%)	6 (5%)	2 19
9	AJ	97/99 (98%)	73 (75%)	14 (14%)	10 (10%)	0 7
9	CJ	97/99 (98%)	78 (80%)	13 (13%)	6 (6%)	1 15
10	AK	117/119 (98%)	85 (73%)	16 (14%)	16 (14%)	0 3
10	CK	117/119 (98%)	79 (68%)	21 (18%)	17 (14%)	0 3
11	AL	123/125 (98%)	42 (34%)	45 (37%)	36 (29%)	0 0
11	CL	123/125 (98%)	43 (35%)	41 (33%)	39 (32%)	0 0
12	AM	123/125 (98%)	88 (72%)	24 (20%)	11 (9%)	0 10
12	CM	123/125 (98%)	90 (73%)	24 (20%)	9 (7%)	1 13
13	AN	58/60 (97%)	43 (74%)	8 (14%)	7 (12%)	0 4
13	CN	58/60 (97%)	44 (76%)	8 (14%)	6 (10%)	0 7
14	AO	86/88 (98%)	62 (72%)	15 (17%)	9 (10%)	0 7
14	CO	86/88 (98%)	62 (72%)	20 (23%)	4 (5%)	2 19
15	AP	82/84 (98%)	64 (78%)	14 (17%)	4 (5%)	1 19
15	CP	82/84 (98%)	62 (76%)	16 (20%)	4 (5%)	1 19
16	AQ	98/100 (98%)	70 (71%)	18 (18%)	10 (10%)	0 8
16	CQ	98/100 (98%)	68 (69%)	21 (21%)	9 (9%)	0 10
17	AR	68/70 (97%)	52 (76%)	11 (16%)	5 (7%)	1 13
17	CR	68/70 (97%)	47 (69%)	19 (28%)	2 (3%)	3 26

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
18	AS	77/79 (98%)	41 (53%)	24 (31%)	12 (16%)	0 3
18	CS	77/79 (98%)	50 (65%)	11 (14%)	16 (21%)	0 1
19	AT	97/99 (98%)	81 (84%)	10 (10%)	6 (6%)	1 15
19	CT	97/99 (98%)	76 (78%)	17 (18%)	4 (4%)	2 21
23	AY	663/687 (96%)	436 (66%)	147 (22%)	80 (12%)	0 4
23	CY	663/687 (96%)	454 (68%)	139 (21%)	70 (11%)	0 7
24	BC	226/228 (99%)	106 (47%)	70 (31%)	50 (22%)	0 1
24	DC	226/228 (99%)	114 (50%)	68 (30%)	44 (20%)	0 2
25	BD	273/275 (99%)	177 (65%)	52 (19%)	44 (16%)	0 3
25	DD	273/275 (99%)	171 (63%)	56 (20%)	46 (17%)	0 2
26	BE	203/205 (99%)	127 (63%)	45 (22%)	31 (15%)	0 3
26	DE	203/205 (99%)	128 (63%)	40 (20%)	35 (17%)	0 2
27	BF	206/208 (99%)	132 (64%)	53 (26%)	21 (10%)	0 8
27	DF	206/208 (99%)	131 (64%)	42 (20%)	33 (16%)	0 3
28	BG	179/181 (99%)	126 (70%)	40 (22%)	13 (7%)	1 13
28	DG	179/181 (99%)	131 (73%)	35 (20%)	13 (7%)	1 13
29	BH	165/167 (99%)	113 (68%)	32 (19%)	20 (12%)	0 4
29	DH	165/167 (99%)	102 (62%)	42 (26%)	21 (13%)	0 4
31	BK	138/140 (99%)	98 (71%)	30 (22%)	10 (7%)	1 13
31	DK	138/140 (99%)	100 (72%)	31 (22%)	7 (5%)	1 18
32	BN	136/138 (99%)	95 (70%)	25 (18%)	16 (12%)	0 5
32	DN	136/138 (99%)	95 (70%)	25 (18%)	16 (12%)	0 5
33	BO	120/122 (98%)	84 (70%)	20 (17%)	16 (13%)	0 3
33	DO	120/122 (98%)	86 (72%)	24 (20%)	10 (8%)	0 11
34	BP	144/146 (99%)	82 (57%)	36 (25%)	26 (18%)	0 2
34	DP	144/146 (99%)	81 (56%)	35 (24%)	28 (19%)	0 2
35	BQ	139/141 (99%)	94 (68%)	33 (24%)	12 (9%)	0 10
35	DQ	139/141 (99%)	99 (71%)	30 (22%)	10 (7%)	1 13
36	BR	115/117 (98%)	80 (70%)	21 (18%)	14 (12%)	0 4
36	DR	115/117 (98%)	81 (70%)	22 (19%)	12 (10%)	0 7
37	BS	97/99 (98%)	57 (59%)	18 (19%)	22 (23%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
37	DS	97/99 (98%)	48 (50%)	26 (27%)	23 (24%)	0 1
38	BT	136/138 (99%)	85 (62%)	22 (16%)	29 (21%)	0 1
38	DT	136/138 (99%)	90 (66%)	22 (16%)	24 (18%)	0 2
39	BU	115/117 (98%)	91 (79%)	18 (16%)	6 (5%)	1 18
39	DU	115/117 (98%)	90 (78%)	21 (18%)	4 (4%)	3 23
40	BV	99/101 (98%)	65 (66%)	16 (16%)	18 (18%)	0 2
40	DV	99/101 (98%)	63 (64%)	22 (22%)	14 (14%)	0 3
41	BW	111/113 (98%)	84 (76%)	17 (15%)	10 (9%)	0 10
41	DW	111/113 (98%)	85 (77%)	14 (13%)	12 (11%)	0 7
42	BX	91/93 (98%)	66 (72%)	19 (21%)	6 (7%)	1 15
42	DX	91/93 (98%)	70 (77%)	15 (16%)	6 (7%)	1 15
43	BY	105/107 (98%)	44 (42%)	38 (36%)	23 (22%)	0 1
43	DY	105/107 (98%)	47 (45%)	28 (27%)	30 (29%)	0 0
44	BZ	183/185 (99%)	129 (70%)	34 (19%)	20 (11%)	0 7
44	DZ	183/185 (99%)	121 (66%)	44 (24%)	18 (10%)	0 9
45	B0	82/84 (98%)	58 (71%)	17 (21%)	7 (8%)	0 11
45	D0	82/84 (98%)	51 (62%)	24 (29%)	7 (8%)	0 11
46	B2	69/71 (97%)	50 (72%)	13 (19%)	6 (9%)	0 10
46	D2	69/71 (97%)	50 (72%)	16 (23%)	3 (4%)	2 20
47	B3	58/60 (97%)	45 (78%)	10 (17%)	3 (5%)	1 18
47	D3	58/60 (97%)	46 (79%)	9 (16%)	3 (5%)	1 18
48	B5	57/59 (97%)	41 (72%)	12 (21%)	4 (7%)	1 14
48	D5	57/59 (97%)	36 (63%)	18 (32%)	3 (5%)	1 18
49	B6	48/50 (96%)	27 (56%)	13 (27%)	8 (17%)	0 3
49	D6	48/50 (96%)	28 (58%)	11 (23%)	9 (19%)	0 2
50	B7	47/49 (96%)	31 (66%)	14 (30%)	2 (4%)	2 20
50	D7	47/49 (96%)	36 (77%)	6 (13%)	5 (11%)	0 7
51	B8	62/64 (97%)	32 (52%)	22 (36%)	8 (13%)	0 4
51	D8	62/64 (97%)	38 (61%)	14 (23%)	10 (16%)	0 3
52	B9	35/37 (95%)	23 (66%)	7 (20%)	5 (14%)	0 3
52	D9	35/37 (95%)	26 (74%)	8 (23%)	1 (3%)	3 26

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
53	Be	70/102 (69%)	35 (50%)	28 (40%)	7 (10%)	0 8
53	De	70/102 (69%)	39 (56%)	24 (34%)	7 (10%)	0 8
56	B1	91/93 (98%)	53 (58%)	19 (21%)	19 (21%)	0 1
56	D1	91/93 (98%)	57 (63%)	15 (16%)	19 (21%)	0 1
57	B4	33/35 (94%)	17 (52%)	11 (33%)	5 (15%)	0 3
57	D4	33/35 (94%)	15 (46%)	9 (27%)	9 (27%)	0 0
All	All	13256/13564 (98%)	8908 (67%)	2779 (21%)	1569 (12%)	0 5

All (1569) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	AB	76	GLN
1	AB	94	ASN
1	AB	95	GLN
1	AB	165	VAL
1	AB	194	PRO
1	AB	195	ASP
2	AC	4	LYS
2	AC	49	SER
2	AC	60	ALA
2	AC	73	PRO
3	AD	4	TYR
3	AD	5	ILE
3	AD	24	GLU
3	AD	28	SER
3	AD	34	GLU
3	AD	38	TYR
3	AD	63	LYS
3	AD	69	GLY
3	AD	89	THR
3	AD	156	GLU
5	AF	69	GLU
5	AF	70	ASP
6	AG	15	ASP
6	AG	33	ASP
7	AH	22	GLU
7	AH	27	PRO
7	AH	99	GLU
7	AH	115	SER
7	AH	134	ILE

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Mol	Chain	Res	Type
8	AI	58	HIS
9	AJ	51	ARG
9	AJ	55	LYS
10	AK	109	VAL
11	AL	7	ILE
11	AL	35	GLY
11	AL	39	VAL
11	AL	43	VAL
11	AL	48	PRO
11	AL	66	VAL
11	AL	78	GLN
11	AL	104	VAL
11	AL	115	LYS
11	AL	123	LYS
11	AL	125	PRO
12	AM	101	GLN
12	AM	113	PRO
13	AN	14	PRO
14	AO	17	ARG
16	AQ	34	LYS
16	AQ	55	ASP
17	AR	37	VAL
18	AS	38	SER
18	AS	70	LYS
19	AT	71	THR
19	AT	74	LYS
23	AY	6	GLU
23	AY	25	LYS
23	AY	84	THR
23	AY	87	HIS
23	AY	92	ILE
23	AY	102	ASP
23	AY	171	GLU
23	AY	244	ALA
23	AY	257	PRO
23	AY	266	ASN
23	AY	330	VAL
23	AY	331	TYR
23	AY	384	ILE
23	AY	395	PRO
23	AY	436	PRO
23	AY	448	GLN

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Mol	Chain	Res	Type
23	AY	476	VAL
23	AY	501	THR
23	AY	518	PRO
23	AY	555	LEU
23	AY	565	VAL
23	AY	566	THR
23	AY	649	LEU
23	AY	680	PRO
23	AY	681	LYS
24	BC	42	VAL
24	BC	52	PRO
24	BC	66	PRO
24	BC	109	MET
24	BC	114	VAL
24	BC	115	VAL
24	BC	119	ASP
24	BC	139	PRO
24	BC	141	PRO
24	BC	142	LYS
24	BC	162	ILE
24	BC	167	ASP
24	BC	176	VAL
24	BC	182	PRO
24	BC	210	LEU
24	BC	212	SER
24	BC	223	VAL
24	BC	227	PRO
25	BD	24	ILE
25	BD	36	PRO
25	BD	51	VAL
25	BD	52	ARG
25	BD	79	VAL
25	BD	89	SER
25	BD	99	ASP
25	BD	118	VAL
25	BD	123	ALA
25	BD	166	GLN
25	BD	178	PRO
25	BD	223	GLY
25	BD	239	ARG
25	BD	252	TRP
25	BD	273	ARG

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Mol	Chain	Res	Type
26	BE	12	THR
26	BE	13	ARG
26	BE	18	ASP
26	BE	56	PRO
26	BE	61	ARG
26	BE	66	HIS
26	BE	67	PHE
26	BE	68	ALA
26	BE	72	VAL
26	BE	74	PRO
26	BE	121	ASN
26	BE	144	ARG
26	BE	162	ALA
27	BF	3	GLU
27	BF	10	PRO
27	BF	11	VAL
27	BF	66	PRO
27	BF	67	GLN
27	BF	84	VAL
27	BF	103	LYS
27	BF	149	ASP
28	BG	87	PRO
28	BG	113	ARG
28	BG	114	ILE
29	BH	41	MET
29	BH	42	ARG
29	BH	84	SER
29	BH	124	GLU
29	BH	156	ALA
29	BH	165	ALA
29	BH	171	LEU
29	BH	173	PRO
31	BK	5	VAL
32	BN	17	ASP
32	BN	18	ALA
32	BN	50	ASP
32	BN	56	ASN
32	BN	63	THR
32	BN	64	GLY
32	BN	130	HIS
32	BN	133	GLN
33	BO	28	SER

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Mol	Chain	Res	Type
33	BO	48	PRO
33	BO	80	ASP
34	BP	9	ASN
34	BP	13	ASN
34	BP	29	LYS
34	BP	57	THR
35	BQ	20	ALA
35	BQ	52	VAL
35	BQ	90	VAL
35	BQ	127	ILE
35	BQ	140	ALA
36	BR	93	GLY
37	BS	13	ARG
37	BS	14	VAL
37	BS	20	ARG
37	BS	32	LEU
37	BS	48	LEU
37	BS	106	ARG
38	BT	3	ARG
38	BT	27	THR
38	BT	28	VAL
38	BT	29	ARG
38	BT	30	VAL
38	BT	36	GLU
38	BT	49	VAL
38	BT	50	ILE
38	BT	68	TYR
38	BT	78	LEU
38	BT	86	ILE
38	BT	90	GLN
38	BT	96	ARG
39	BU	90	VAL
40	BV	29	PRO
40	BV	46	VAL
40	BV	49	THR
40	BV	78	LYS
40	BV	96	ILE
40	BV	97	LYS
41	BW	61	ASN
41	BW	73	ALA
43	BY	32	PRO
43	BY	53	PRO

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Mol	Chain	Res	Type
43	BY	56	PRO
43	BY	66	PRO
43	BY	70	SER
43	BY	74	PRO
43	BY	76	CYS
43	BY	78	ALA
43	BY	80	GLY
43	BY	97	ARG
44	BZ	71	VAL
44	BZ	72	ARG
44	BZ	73	GLN
44	BZ	81	ARG
44	BZ	95	PRO
45	B0	49	LYS
46	B2	47	ASN
46	B2	48	HIS
49	B6	7	ILE
49	B6	27	LYS
49	B6	31	PRO
49	B6	48	VAL
51	B8	49	VAL
51	B8	62	LEU
52	B9	12	ASP
52	B9	20	HIS
53	Be	62	VAL
53	Be	67	ALA
56	B1	18	ILE
56	B1	20	ARG
56	B1	21	ARG
56	B1	35	THR
56	B1	44	PRO
56	B1	64	ALA
1	CB	35	GLU
1	CB	153	ARG
1	CB	239	VAL
2	CC	12	LEU
2	CC	49	SER
2	CC	56	ASP
2	CC	96	GLY
2	CC	161	GLU
3	CD	3	ARG
3	CD	5	ILE

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Mol	Chain	Res	Type
3	CD	21	LEU
3	CD	34	GLU
3	CD	43	HIS
3	CD	113	SER
5	CF	34	GLY
5	CF	70	ASP
6	CG	12	LEU
6	CG	114	ARG
7	CH	22	GLU
7	CH	27	PRO
7	CH	103	VAL
9	CJ	88	LEU
10	CK	43	SER
10	CK	109	VAL
10	CK	111	ASP
11	CL	7	ILE
11	CL	35	GLY
11	CL	37	CYS
11	CL	39	VAL
11	CL	43	VAL
11	CL	66	VAL
11	CL	81	SER
11	CL	94	PRO
11	CL	96	VAL
11	CL	104	VAL
11	CL	108	ALA
11	CL	115	LYS
11	CL	122	THR
11	CL	123	LYS
11	CL	128	ALA
12	CM	12	ASN
12	CM	107	ALA
12	CM	113	PRO
13	CN	24	CYS
15	CP	66	PRO
16	CQ	14	LYS
16	CQ	49	GLU
16	CQ	53	LEU
16	CQ	55	ASP
17	CR	37	VAL
18	CS	29	ARG
18	CS	38	SER

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Mol	Chain	Res	Type
18	CS	41	VAL
18	CS	70	LYS
19	CT	46	GLU
19	CT	95	ALA
23	CY	9	LEU
23	CY	84	THR
23	CY	87	HIS
23	CY	92	ILE
23	CY	129	LYS
23	CY	148	LEU
23	CY	171	GLU
23	CY	301	ILE
23	CY	320	PRO
23	CY	330	VAL
23	CY	331	TYR
23	CY	384	ILE
23	CY	393	ASP
23	CY	395	PRO
23	CY	448	GLN
23	CY	498	ILE
23	CY	506	GLN
23	CY	533	VAL
23	CY	565	VAL
23	CY	568	TYR
23	CY	600	VAL
23	CY	614	GLU
23	CY	649	LEU
24	DC	17	PRO
24	DC	43	GLU
24	DC	52	PRO
24	DC	54	ARG
24	DC	59	VAL
24	DC	66	PRO
24	DC	80	LYS
24	DC	96	GLY
24	DC	109	MET
24	DC	114	VAL
24	DC	115	VAL
24	DC	139	PRO
24	DC	141	PRO
24	DC	142	LYS
24	DC	162	ILE

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Mol	Chain	Res	Type
24	DC	167	ASP
24	DC	177	GLY
24	DC	182	PRO
24	DC	212	SER
24	DC	223	VAL
24	DC	227	PRO
25	DD	9	TYR
25	DD	36	PRO
25	DD	43	ARG
25	DD	79	VAL
25	DD	89	SER
25	DD	99	ASP
25	DD	118	VAL
25	DD	166	GLN
25	DD	197	GLY
25	DD	237	GLU
25	DD	246	PRO
26	DE	12	THR
26	DE	13	ARG
26	DE	18	ASP
26	DE	56	PRO
26	DE	60	ASN
26	DE	61	ARG
26	DE	66	HIS
26	DE	68	ALA
26	DE	72	VAL
26	DE	75	VAL
26	DE	90	THR
26	DE	126	PRO
27	DF	3	GLU
27	DF	7	TYR
27	DF	9	ILE
27	DF	10	PRO
27	DF	11	VAL
27	DF	66	PRO
27	DF	67	GLN
27	DF	84	VAL
27	DF	149	ASP
27	DF	153	SER
28	DG	43	LEU
28	DG	50	ALA
28	DG	96	ARG

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Mol	Chain	Res	Type
28	DG	113	ARG
28	DG	114	ILE
28	DG	117	PHE
29	DH	42	ARG
29	DH	176	ALA
32	DN	17	ASP
32	DN	18	ALA
32	DN	50	ASP
32	DN	56	ASN
32	DN	63	THR
32	DN	64	GLY
32	DN	130	HIS
32	DN	133	GLN
33	DO	28	SER
34	DP	13	ASN
34	DP	50	ARG
34	DP	65	ARG
34	DP	70	GLN
34	DP	71	VAL
34	DP	149	GLU
35	DQ	14	ARG
35	DQ	52	VAL
35	DQ	90	VAL
35	DQ	127	ILE
35	DQ	135	ASP
36	DR	8	ARG
36	DR	11	ASN
36	DR	12	ARG
36	DR	88	ARG
37	DS	14	VAL
37	DS	47	THR
37	DS	48	LEU
37	DS	62	LYS
37	DS	100	ALA
37	DS	101	LEU
37	DS	106	ARG
38	DT	28	VAL
38	DT	30	VAL
38	DT	36	GLU
38	DT	49	VAL
38	DT	50	ILE
38	DT	78	LEU

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Mol	Chain	Res	Type
38	DT	86	ILE
38	DT	91	ARG
39	DU	90	VAL
39	DU	97	ASP
40	DV	16	PRO
40	DV	29	PRO
40	DV	46	VAL
40	DV	50	PRO
40	DV	78	LYS
40	DV	96	ILE
41	DW	11	ARG
41	DW	12	ILE
41	DW	15	ARG
41	DW	73	ALA
41	DW	77	ASP
43	DY	32	PRO
43	DY	49	VAL
43	DY	53	PRO
43	DY	56	PRO
43	DY	60	PHE
43	DY	66	PRO
43	DY	70	SER
43	DY	74	PRO
43	DY	77	PRO
43	DY	78	ALA
43	DY	97	ARG
44	DZ	21	ALA
44	DZ	73	GLN
44	DZ	81	ARG
44	DZ	108	PRO
44	DZ	152	ALA
45	D0	11	ARG
45	D0	56	ASP
46	D2	47	ASN
46	D2	48	HIS
48	D5	23	HIS
49	D6	31	PRO
50	D7	18	PHE
51	D8	19	SER
51	D8	49	VAL
51	D8	62	LEU
53	De	62	VAL

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Mol	Chain	Res	Type
53	De	65	LYS
56	D1	12	PRO
56	D1	21	ARG
56	D1	26	ARG
56	D1	35	THR
56	D1	52	ARG
56	D1	94	LEU
1	AB	9	GLU
1	AB	17	PHE
1	AB	20	GLU
1	AB	34	ALA
1	AB	54	THR
1	AB	237	ALA
2	AC	96	GLY
2	AC	130	VAL
2	AC	161	GLU
2	AC	162	GLN
3	AD	27	TYR
3	AD	33	MET
3	AD	47	ARG
3	AD	62	GLN
3	AD	113	SER
4	AE	36	ASP
4	AE	39	GLY
4	AE	85	GLY
5	AF	13	ASN
5	AF	16	GLN
5	AF	34	GLY
6	AG	12	LEU
6	AG	80	VAL
7	AH	103	VAL
7	AH	108	GLY
9	AJ	20	ALA
9	AJ	57	LYS
9	AJ	88	LEU
10	AK	36	ASP
10	AK	43	SER
10	AK	91	ARG
10	AK	111	ASP
11	AL	6	THR
11	AL	21	LYS
11	AL	22	SER

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Mol	Chain	Res	Type
11	AL	55	VAL
11	AL	77	LEU
11	AL	94	PRO
11	AL	102	ARG
11	AL	107	ALA
12	AM	3	ARG
12	AM	39	ILE
12	AM	99	ARG
12	AM	117	VAL
13	AN	58	LYS
14	AO	47	LYS
14	AO	88	ARG
15	AP	28	ARG
15	AP	66	PRO
16	AQ	12	SER
16	AQ	49	GLU
18	AS	37	ARG
18	AS	45	VAL
18	AS	53	ASN
18	AS	66	MET
18	AS	80	TYR
19	AT	94	ALA
23	AY	22	ASP
23	AY	85	PRO
23	AY	111	SER
23	AY	128	TYR
23	AY	129	LYS
23	AY	203	GLU
23	AY	205	TYR
23	AY	224	ASP
23	AY	297	GLU
23	AY	347	GLY
23	AY	401	SER
23	AY	437	THR
23	AY	475	ASN
23	AY	505	GLY
23	AY	521	SER
23	AY	531	GLY
23	AY	533	VAL
23	AY	567	LEU
23	AY	568	TYR
23	AY	615	GLU

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Mol	Chain	Res	Type
23	AY	660	ARG
23	AY	661	SER
23	AY	668	SER
24	BC	3	LYS
24	BC	17	PRO
24	BC	43	GLU
24	BC	59	VAL
24	BC	60	ARG
24	BC	61	GLY
24	BC	81	GLY
24	BC	96	GLY
24	BC	179	ALA
24	BC	214	TYR
24	BC	228	HIS
25	BD	3	VAL
25	BD	42	GLY
25	BD	43	ARG
25	BD	98	VAL
25	BD	127	VAL
25	BD	165	ILE
25	BD	197	GLY
25	BD	207	GLY
25	BD	222	ARG
25	BD	224	ALA
25	BD	226	MET
25	BD	242	ARG
25	BD	272	ALA
26	BE	14	ILE
26	BE	45	THR
26	BE	54	GLN
26	BE	60	ASN
26	BE	77	ILE
26	BE	126	PRO
26	BE	135	HIS
27	BF	8	GLN
27	BF	14	PRO
27	BF	90	PHE
27	BF	134	GLY
27	BF	206	ILE
28	BG	96	ARG
28	BG	181	ARG
31	BK	61	ALA

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Mol	Chain	Res	Type
31	BK	89	HIS
31	BK	116	ASN
32	BN	2	LYS
33	BO	14	THR
33	BO	26	LYS
33	BO	29	ASN
33	BO	81	ASP
33	BO	96	THR
33	BO	116	SER
34	BP	21	ARG
34	BP	50	ARG
34	BP	54	GLY
35	BQ	14	ARG
36	BR	83	ILE
36	BR	108	GLY
37	BS	15	ARG
37	BS	43	GLU
37	BS	98	VAL
37	BS	100	ALA
37	BS	101	LEU
37	BS	104	GLY
37	BS	108	GLY
38	BT	46	GLU
38	BT	82	LEU
38	BT	91	ARG
40	BV	16	PRO
40	BV	50	PRO
40	BV	80	GLN
41	BW	12	ILE
41	BW	75	TYR
41	BW	77	ASP
42	BX	12	VAL
43	BY	38	ILE
43	BY	51	VAL
43	BY	60	PHE
43	BY	100	ALA
43	BY	102	CYS
44	BZ	21	ALA
44	BZ	78	LYS
44	BZ	108	PRO
44	BZ	142	SER
44	BZ	152	ALA

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Mol	Chain	Res	Type
44	BZ	168	GLU
45	B0	11	ARG
45	B0	83	PRO
46	B2	50	ILE
48	B5	23	HIS
49	B6	9	LEU
49	B6	33	LYS
49	B6	49	HIS
50	B7	18	PHE
51	B8	30	ARG
51	B8	31	HIS
51	B8	64	TYR
52	B9	10	ILE
53	Be	65	LYS
56	B1	12	PRO
56	B1	17	SER
56	B1	23	LYS
56	B1	26	ARG
56	B1	34	THR
56	B1	53	VAL
56	B1	87	PRO
56	B1	94	LEU
1	CB	51	LEU
1	CB	76	GLN
1	CB	94	ASN
1	CB	95	GLN
1	CB	128	GLU
1	CB	165	VAL
1	CB	194	PRO
1	CB	235	SER
2	CC	51	GLY
3	CD	4	TYR
3	CD	24	GLU
3	CD	28	SER
3	CD	30	LYS
3	CD	44	GLY
3	CD	84	LYS
3	CD	88	VAL
3	CD	186	LEU
4	CE	85	GLY
5	CF	38	GLU
6	CG	3	ARG

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Mol	Chain	Res	Type
6	CG	15	ASP
6	CG	80	VAL
7	CH	97	VAL
7	CH	134	ILE
8	CI	54	ASP
8	CI	58	HIS
10	CK	14	VAL
10	CK	36	ASP
10	CK	42	TRP
11	CL	6	THR
11	CL	34	ARG
11	CL	55	VAL
11	CL	69	TYR
11	CL	116	SER
11	CL	126	LYS
12	CM	6	GLY
12	CM	99	ARG
12	CM	117	VAL
13	CN	14	PRO
14	CO	15	PHE
14	CO	44	LYS
15	CP	48	TRP
16	CQ	33	GLY
16	CQ	69	LYS
18	CS	45	VAL
18	CS	63	THR
18	CS	71	LEU
18	CS	72	GLY
18	CS	80	TYR
19	CT	71	THR
23	CY	6	GLU
23	CY	39	ILE
23	CY	111	SER
23	CY	205	TYR
23	CY	206	LEU
23	CY	220	ALA
23	CY	309	LEU
23	CY	333	GLY
23	CY	371	ALA
23	CY	436	PRO
23	CY	447	GLY
23	CY	458	HIS

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Mol	Chain	Res	Type
23	CY	504	ARG
23	CY	527	ASN
23	CY	631	ILE
23	CY	652	MET
23	CY	664	GLN
23	CY	668	SER
24	DC	20	VAL
24	DC	79	ALA
24	DC	81	GLY
24	DC	119	ASP
24	DC	136	GLY
24	DC	176	VAL
24	DC	210	LEU
24	DC	214	TYR
24	DC	218	THR
24	DC	228	HIS
25	DD	3	VAL
25	DD	123	ALA
25	DD	127	VAL
25	DD	165	ILE
25	DD	200	ASP
25	DD	225	ALA
25	DD	260	ARG
25	DD	272	ALA
25	DD	273	ARG
26	DE	14	ILE
26	DE	67	PHE
26	DE	74	PRO
26	DE	77	ILE
26	DE	119	ARG
26	DE	122	PHE
26	DE	130	GLY
27	DF	5	ALA
27	DF	16	GLY
27	DF	46	ARG
27	DF	73	ALA
27	DF	132	VAL
27	DF	134	GLY
27	DF	192	LEU
28	DG	84	LYS
29	DH	13	LYS
29	DH	40	GLU

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Mol	Chain	Res	Type
29	DH	48	GLY
29	DH	108	GLY
29	DH	124	GLU
29	DH	170	ARG
29	DH	173	PRO
31	DK	89	HIS
32	DN	2	LYS
33	DO	5	GLN
33	DO	23	ARG
33	DO	29	ASN
34	DP	17	LYS
34	DP	31	ALA
34	DP	39	LYS
34	DP	46	LYS
34	DP	54	GLY
35	DQ	20	ALA
36	DR	5	LYS
36	DR	107	ASP
37	DS	87	PHE
37	DS	98	VAL
37	DS	104	GLY
37	DS	108	GLY
38	DT	12	SER
38	DT	31	SER
38	DT	35	LYS
38	DT	70	VAL
38	DT	90	GLN
38	DT	107	ASP
38	DT	128	GLU
39	DU	88	ILE
39	DU	102	GLU
40	DV	48	GLY
40	DV	67	GLY
41	DW	61	ASN
42	DX	12	VAL
42	DX	13	LEU
43	DY	17	SER
43	DY	39	VAL
43	DY	41	GLY
43	DY	48	ALA
43	DY	80	GLY
43	DY	101	LYS

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Mol	Chain	Res	Type
43	DY	102	CYS
47	D3	52	HIS
48	D5	38	ALA
49	D6	7	ILE
49	D6	9	LEU
51	D8	64	TYR
53	De	81	ILE
56	D1	20	ARG
56	D1	23	LYS
56	D1	53	VAL
56	D1	87	PRO
1	AB	15	VAL
1	AB	129	GLU
1	AB	150	SER
1	AB	215	LEU
1	AB	229	VAL
1	AB	235	SER
2	AC	48	TYR
2	AC	66	VAL
3	AD	21	LEU
3	AD	186	LEU
3	AD	187	ARG
4	AE	6	PHE
4	AE	73	ASN
4	AE	78	HIS
6	AG	7	ALA
6	AG	10	ARG
7	AH	97	VAL
8	AI	24	GLY
9	AJ	59	SER
10	AK	42	TRP
10	AK	113	PRO
10	AK	116	HIS
11	AL	31	PRO
11	AL	34	ARG
11	AL	50	SER
11	AL	93	LEU
11	AL	96	VAL
11	AL	116	SER
12	AM	124	PRO
13	AN	24	CYS
13	AN	27	CYS

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Mol	Chain	Res	Type
14	AO	16	ALA
14	AO	19	PRO
14	AO	24	SER
16	AQ	69	LYS
17	AR	28	GLU
17	AR	55	ARG
18	AS	27	GLU
18	AS	40	ILE
18	AS	77	THR
23	AY	40	HIS
23	AY	91	THR
23	AY	198	GLU
23	AY	245	ALA
23	AY	361	ASN
23	AY	381	LYS
23	AY	400	GLU
23	AY	444	PRO
23	AY	498	ILE
23	AY	527	ASN
23	AY	631	ILE
23	AY	664	GLN
24	BC	53	ARG
24	BC	71	LYS
24	BC	80	LYS
24	BC	94	TYR
24	BC	175	PRO
24	BC	177	GLY
24	BC	178	LYS
24	BC	218	THR
24	BC	222	SER
25	BD	26	LYS
25	BD	198	ASN
25	BD	232	PRO
25	BD	246	PRO
25	BD	260	ARG
26	BE	51	PHE
26	BE	86	PRO
26	BE	123	ALA
27	BF	73	ALA
27	BF	105	VAL
27	BF	150	GLY
27	BF	192	LEU

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Mol	Chain	Res	Type
28	BG	17	PRO
28	BG	43	LEU
28	BG	84	LYS
29	BH	15	VAL
29	BH	126	PRO
29	BH	137	ASP
29	BH	170	ARG
31	BK	30	HIS
32	BN	67	LEU
33	BO	23	ARG
33	BO	30	ALA
33	BO	115	VAL
34	BP	17	LYS
34	BP	20	GLY
34	BP	45	LEU
34	BP	51	PHE
34	BP	55	ARG
34	BP	106	LEU
34	BP	110	TYR
35	BQ	27	VAL
35	BQ	109	VAL
36	BR	5	LYS
36	BR	12	ARG
36	BR	63	ARG
36	BR	104	ARG
37	BS	24	LEU
37	BS	42	ASP
37	BS	105	ALA
38	BT	31	SER
38	BT	38	ASN
38	BT	80	SER
38	BT	87	ASP
38	BT	97	ALA
38	BT	104	ASN
39	BU	79	PHE
40	BV	40	LEU
40	BV	48	GLY
40	BV	53	GLU
40	BV	55	ALA
41	BW	89	ALA
42	BX	24	GLY
42	BX	62	LYS

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Mol	Chain	Res	Type
43	BY	39	VAL
43	BY	67	LEU
45	B0	3	HIS
45	B0	33	ALA
45	B0	47	PRO
47	B3	29	ARG
47	B3	52	HIS
48	B5	56	LYS
51	B8	48	PHE
51	B8	53	PRO
51	B8	60	LEU
52	B9	2	LYS
56	B1	40	ARG
56	B1	52	ARG
57	B4	4	GLY
57	B4	14	ILE
1	CB	215	LEU
1	CB	230	VAL
2	CC	44	GLU
2	CC	112	SER
2	CC	207	VAL
3	CD	20	TYR
3	CD	197	PRO
3	CD	206	PHE
4	CE	6	PHE
5	CF	69	GLU
7	CH	2	LEU
8	CI	104	ARG
8	CI	119	ALA
9	CJ	32	ALA
9	CJ	51	ARG
9	CJ	82	ILE
9	CJ	91	PRO
10	CK	88	GLY
10	CK	107	SER
10	CK	116	HIS
11	CL	19	ARG
11	CL	22	SER
11	CL	36	VAL
11	CL	102	ARG
11	CL	125	PRO
12	CM	108	ARG

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Mol	Chain	Res	Type
13	CN	3	ARG
13	CN	27	CYS
14	CO	23	GLY
15	CP	16	HIS
16	CQ	28	PRO
16	CQ	71	PHE
18	CS	37	ARG
18	CS	67	VAL
18	CS	77	THR
23	CY	40	HIS
23	CY	71	THR
23	CY	85	PRO
23	CY	157	LEU
23	CY	158	GLY
23	CY	257	PRO
23	CY	401	SER
23	CY	554	PRO
23	CY	555	LEU
23	CY	598	ASP
23	CY	615	GLU
23	CY	640	ALA
23	CY	641	GLN
23	CY	681	LYS
24	DC	42	VAL
24	DC	60	ARG
24	DC	67	HIS
24	DC	175	PRO
24	DC	211	ARG
25	DD	25	THR
25	DD	28	GLU
25	DD	44	ASN
25	DD	100	GLY
25	DD	222	ARG
25	DD	226	MET
25	DD	238	GLY
25	DD	259	THR
26	DE	17	ASP
26	DE	54	GLN
26	DE	86	PRO
26	DE	143	ASN
26	DE	154	LYS
26	DE	155	LYS

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Mol	Chain	Res	Type
26	DE	187	ALA
27	DF	14	PRO
27	DF	22	ALA
27	DF	58	ALA
27	DF	89	VAL
27	DF	104	LYS
27	DF	150	GLY
27	DF	159	GLY
27	DF	172	TRP
28	DG	85	GLY
28	DG	142	PRO
29	DH	47	GLU
29	DH	100	GLY
29	DH	155	SER
29	DH	160	LYS
29	DH	165	ALA
31	DK	13	PRO
31	DK	30	HIS
32	DN	67	LEU
32	DN	127	ASP
33	DO	14	THR
33	DO	26	LYS
33	DO	34	THR
33	DO	96	THR
34	DP	9	ASN
34	DP	23	PRO
34	DP	29	LYS
34	DP	49	ARG
34	DP	57	THR
34	DP	106	LEU
34	DP	107	LYS
34	DP	110	TYR
35	DQ	53	ALA
36	DR	41	ALA
37	DS	13	ARG
37	DS	24	LEU
37	DS	32	LEU
37	DS	66	ALA
37	DS	81	GLY
38	DT	29	ARG
38	DT	80	SER
38	DT	83	ILE

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Mol	Chain	Res	Type
38	DT	85	LYS
40	DV	27	ALA
40	DV	53	GLU
40	DV	80	GLN
40	DV	97	LYS
42	DX	4	ALA
42	DX	24	GLY
43	DY	18	GLY
43	DY	26	LYS
43	DY	81	LYS
43	DY	92	ASN
44	DZ	78	LYS
45	D0	3	HIS
45	D0	33	ALA
45	D0	49	LYS
48	D5	13	LYS
49	D6	16	CYS
49	D6	20	ASN
49	D6	33	LYS
49	D6	37	ARG
51	D8	10	ALA
51	D8	30	ARG
51	D8	51	ALA
51	D8	53	PRO
51	D8	60	LEU
53	De	53	PRO
56	D1	34	THR
56	D1	40	ARG
56	D1	65	SER
57	D4	16	CYS
1	AB	175	ARG
2	AC	51	GLY
2	AC	76	VAL
3	AD	30	LYS
3	AD	43	HIS
3	AD	140	VAL
3	AD	197	PRO
4	AE	104	ALA
5	AF	96	PRO
7	AH	2	LEU
7	AH	90	GLY
7	AH	100	ILE

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Mol	Chain	Res	Type
8	AI	90	PRO
8	AI	101	PHE
9	AJ	14	LYS
9	AJ	91	PRO
10	AK	105	VAL
10	AK	117	ASN
10	AK	120	ARG
11	AL	19	ARG
11	AL	64	TYR
12	AM	6	GLY
12	AM	107	ALA
13	AN	34	TYR
13	AN	35	ARG
16	AQ	53	LEU
17	AR	59	SER
18	AS	65	ASN
19	AT	49	ALA
19	AT	50	GLU
23	AY	66	THR
23	AY	148	LEU
23	AY	360	ALA
23	AY	471	LYS
23	AY	532	GLY
24	BC	136	GLY
24	BC	224	ARG
25	BD	28	GLU
25	BD	48	ARG
25	BD	87	ASN
25	BD	119	ALA
25	BD	225	ALA
25	BD	233	HIS
26	BE	44	TYR
26	BE	92	THR
29	BH	13	LYS
29	BH	123	PHE
29	BH	157	TYR
31	BK	90	LYS
31	BK	102	GLU
31	BK	121	GLU
32	BN	23	LEU
32	BN	127	ASP
33	BO	34	THR

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Mol	Chain	Res	Type
33	BO	72	PRO
34	BP	31	ALA
34	BP	48	PRO
34	BP	104	GLY
34	BP	107	LYS
35	BQ	53	ALA
36	BR	57	ARG
36	BR	62	ALA
36	BR	101	ALA
37	BS	47	THR
37	BS	67	ARG
38	BT	35	LYS
38	BT	107	ASP
38	BT	128	GLU
38	BT	136	GLN
39	BU	89	GLU
40	BV	18	LEU
40	BV	68	LYS
41	BW	11	ARG
41	BW	65	LEU
41	BW	80	PRO
42	BX	13	LEU
44	BZ	32	HIS
44	BZ	166	SER
49	B6	16	CYS
53	Be	81	ILE
53	Be	100	LYS
57	B4	33	VAL
1	CB	20	GLU
1	CB	34	ALA
1	CB	129	GLU
1	CB	152	PHE
1	CB	186	ALA
1	CB	191	ASP
1	CB	195	ASP
2	CC	48	TYR
2	CC	60	ALA
2	CC	118	GLN
2	CC	130	VAL
3	CD	47	ARG
3	CD	114	ARG
3	CD	170	VAL

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Mol	Chain	Res	Type
4	CE	27	ARG
4	CE	104	ALA
6	CG	10	ARG
7	CH	51	VAL
7	CH	89	PRO
8	CI	121	ARG
10	CK	15	ALA
10	CK	119	CYS
11	CL	31	PRO
11	CL	46	LYS
11	CL	47	LYS
11	CL	70	ILE
11	CL	79	GLU
12	CM	67	GLU
12	CM	118	ALA
13	CN	13	THR
14	CO	43	LEU
17	CR	78	LEU
23	CY	8	ASP
23	CY	24	GLY
23	CY	562	ASP
23	CY	674	ASP
24	DC	18	ASN
24	DC	169	THR
24	DC	215	VAL
25	DD	42	GLY
25	DD	137	PRO
25	DD	163	ALA
25	DD	178	PRO
25	DD	232	PRO
25	DD	245	PRO
26	DE	35	GLN
26	DE	193	GLY
27	DF	53	THR
27	DF	61	GLY
27	DF	70	THR
27	DF	103	LYS
27	DF	105	VAL
27	DF	133	ASN
27	DF	158	THR
28	DG	27	ASN
28	DG	82	LEU

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Mol	Chain	Res	Type
29	DH	41	MET
29	DH	164	TYR
29	DH	171	LEU
31	DK	63	ARG
32	DN	23	LEU
34	DP	48	PRO
34	DP	55	ARG
34	DP	104	GLY
34	DP	141	ALA
34	DP	145	PRO
35	DQ	18	LYS
36	DR	4	LEU
36	DR	6	SER
36	DR	40	LYS
36	DR	101	ALA
37	DS	43	GLU
37	DS	93	LYS
37	DS	96	GLY
38	DT	34	VAL
38	DT	55	ASN
41	DW	14	PRO
41	DW	63	ASP
41	DW	65	LEU
42	DX	23	GLU
43	DY	29	GLU
43	DY	50	ARG
43	DY	79	CYS
44	DZ	35	ARG
44	DZ	53	ILE
44	DZ	159	PRO
44	DZ	165	VAL
50	D7	23	ARG
50	D7	38	GLY
50	D7	39	ARG
53	De	113	LYS
53	De	120	ALA
57	D4	18	CYS
57	D4	29	PRO
57	D4	33	VAL
1	AB	75	LYS
1	AB	186	ALA
2	AC	85	ARG

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Mol	Chain	Res	Type
3	AD	7	PRO
6	AG	81	GLY
6	AG	100	ALA
7	AH	72	PRO
9	AJ	32	ALA
10	AK	15	ALA
10	AK	35	PRO
11	AL	47	LYS
11	AL	56	ALA
12	AM	10	PRO
12	AM	70	LEU
13	AN	13	THR
14	AO	5	LYS
15	AP	11	SER
15	AP	43	LYS
16	AQ	71	PHE
17	AR	87	ARG
23	AY	20	HIS
23	AY	137	ASN
23	AY	159	ALA
23	AY	447	GLY
24	BC	33	LEU
24	BC	35	THR
24	BC	67	HIS
24	BC	77	ALA
24	BC	184	GLU
26	BE	75	VAL
26	BE	119	ARG
27	BF	22	ALA
27	BF	58	ALA
31	BK	51	ALA
32	BN	3	THR
34	BP	23	PRO
34	BP	28	GLY
34	BP	60	MET
34	BP	71	VAL
34	BP	103	ALA
35	BQ	139	GLU
36	BR	103	ARG
37	BS	66	ALA
37	BS	85	VAL
37	BS	93	LYS

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Mol	Chain	Res	Type
38	BT	34	VAL
38	BT	83	ILE
38	BT	85	LYS
39	BU	92	ARG
39	BU	97	ASP
39	BU	102	GLU
40	BV	15	GLU
41	BW	63	ASP
42	BX	4	ALA
43	BY	26	LYS
43	BY	79	CYS
43	BY	81	LYS
43	BY	101	LYS
44	BZ	22	GLY
44	BZ	92	SER
44	BZ	112	ARG
44	BZ	179	ASP
45	B0	5	LYS
46	B2	17	SER
50	B7	23	ARG
52	B9	3	VAL
53	Be	53	PRO
53	Be	110	GLU
1	CB	17	PHE
1	CB	113	HIS
1	CB	236	TYR
2	CC	20	SER
2	CC	73	PRO
3	CD	40	PRO
3	CD	156	GLU
4	CE	126	ARG
5	CF	16	GLN
5	CF	96	PRO
6	CG	130	GLY
7	CH	74	PRO
7	CH	105	ARG
8	CI	24	GLY
10	CK	35	PRO
10	CK	37	GLY
10	CK	41	THR
10	CK	90	GLY
11	CL	16	GLU

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Mol	Chain	Res	Type
11	CL	56	ALA
11	CL	77	LEU
11	CL	83	VAL
15	CP	22	THR
16	CQ	12	SER
18	CS	28	LYS
18	CS	35	SER
18	CS	64	GLU
19	CT	47	GLY
23	CY	21	ILE
23	CY	253	LEU
23	CY	415	PRO
23	CY	501	THR
23	CY	566	THR
23	CY	653	PHE
24	DC	24	ASP
25	DD	39	LYS
25	DD	119	ALA
25	DD	126	GLN
26	DE	30	PRO
26	DE	123	ALA
26	DE	144	ARG
28	DG	87	PRO
29	DH	154	PRO
31	DK	51	ALA
31	DK	91	PRO
32	DN	3	THR
33	DO	4	PRO
34	DP	25	SER
34	DP	33	ARG
34	DP	36	LYS
37	DS	53	SER
37	DS	58	LEU
37	DS	85	VAL
41	DW	44	ALA
41	DW	46	PHE
41	DW	109	GLU
43	DY	10	GLY
44	DZ	62	PRO
44	DZ	82	ARG
44	DZ	85	HIS
44	DZ	95	PRO

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Mol	Chain	Res	Type
44	DZ	151	HIS
44	DZ	179	ASP
45	D0	83	PRO
46	D2	17	SER
49	D6	49	HIS
50	D7	42	LEU
51	D8	45	GLY
52	D9	3	VAL
56	D1	36	GLY
57	D4	2	LYS
9	AJ	37	PRO
11	AL	23	LYS
11	AL	37	CYS
11	AL	69	TYR
11	AL	79	GLU
11	AL	122	THR
14	AO	20	GLY
14	AO	23	GLY
16	AQ	30	PRO
16	AQ	66	SER
19	AT	46	GLU
23	AY	39	ILE
23	AY	89	ASP
23	AY	208	GLN
23	AY	405	PRO
24	BC	104	ILE
25	BD	30	GLU
28	BG	48	GLU
29	BH	16	SER
29	BH	21	PRO
29	BH	160	LYS
32	BN	110	GLY
33	BO	114	ILE
34	BP	12	ALA
34	BP	145	PRO
35	BQ	81	VAL
35	BQ	85	LYS
36	BR	8	ARG
36	BR	31	HIS
40	BV	79	VAL
43	BY	77	PRO
44	BZ	93	ASP

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Mol	Chain	Res	Type
44	BZ	159	PRO
46	B2	13	ALA
46	B2	39	ALA
47	B3	50	VAL
56	B1	24	ALA
56	B1	36	GLY
57	B4	7	PRO
1	CB	229	VAL
2	CC	80	GLY
3	CD	142	PRO
4	CE	114	GLY
6	CG	121	ALA
9	CJ	41	PRO
11	CL	23	LYS
23	CY	638	GLY
24	DC	34	ALA
25	DD	12	SER
25	DD	24	ILE
25	DD	51	VAL
26	DE	9	VAL
26	DE	10	GLY
29	DH	123	PHE
32	DN	110	GLY
34	DP	20	GLY
35	DQ	25	ASP
37	DS	15	ARG
38	DT	3	ARG
38	DT	57	PHE
43	DY	28	LYS
43	DY	75	ILE
43	DY	88	LYS
45	D0	47	PRO
49	D6	18	ARG
56	D1	10	LYS
56	D1	15	ALA
1	AB	65	GLY
4	AE	74	GLY
11	AL	70	ILE
16	AQ	28	PRO
24	BC	215	VAL
25	BD	243	GLY
32	BN	77	GLY

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Mol	Chain	Res	Type
33	BO	119	PRO
34	BP	43	GLY
48	B5	7	PRO
48	B5	54	GLY
3	CD	140	VAL
4	CE	39	GLY
6	CG	14	PRO
7	CH	72	PRO
7	CH	93	VAL
11	CL	88	GLY
18	CS	46	GLY
23	CY	202	PRO
23	CY	559	PRO
28	DG	68	PRO
32	DN	77	GLY
33	DO	102	VAL
35	DQ	27	VAL
56	D1	22	GLY
57	D4	5	ILE
1	AB	130	ARG
10	AK	14	VAL
10	AK	76	GLY
24	BC	49	GLY
26	BE	130	GLY
28	BG	44	GLY
29	BH	107	VAL
36	BR	58	GLY
42	BX	7	VAL
1	CB	65	GLY
4	CE	52	PRO
7	CH	90	GLY
11	CL	82	VAL
11	CL	95	GLY
13	CN	18	VAL
24	DC	49	GLY
25	DD	107	ALA
25	DD	219	PRO
25	DD	271	ILE
29	DH	15	VAL
31	DK	90	LYS
40	DV	54	GLY
43	DY	51	VAL

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Mol	Chain	Res	Type
47	D3	41	PRO
2	AC	109	PRO
2	AC	174	PRO
7	AH	51	VAL
7	AH	73	ASP
10	AK	108	ILE
11	AL	95	GLY
18	AS	46	GLY
23	AY	21	ILE
23	AY	24	GLY
23	AY	116	PRO
23	AY	665	GLY
24	BC	170	GLY
25	BD	219	PRO
25	BD	244	ARG
25	BD	270	ILE
28	BG	24	GLY
28	BG	68	PRO
28	BG	85	GLY
29	BH	92	ILE
31	BK	96	VAL
37	BS	65	VAL
44	BZ	115	GLY
1	CB	14	GLY
10	CK	115	PRO
24	DC	172	ILE
24	DC	181	PHE
25	DD	106	ILE
25	DD	270	ILE
27	DF	91	GLY
38	DT	24	PRO
40	DV	22	VAL
44	DZ	39	VAL
56	D1	44	PRO
57	D4	4	GLY
57	D4	10	VAL
1	AB	174	VAL
2	AC	13	GLY
3	AD	44	GLY
23	AY	113	GLY
23	AY	516	PRO
24	BC	181	PHE

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Mol	Chain	Res	Type
26	BE	32	PRO
26	BE	116	VAL
27	BF	61	GLY
40	BV	51	VAL
43	BY	18	GLY
10	CK	113	PRO
26	DE	53	PRO
26	DE	142	GLY
29	DH	136	ILE
36	DR	108	GLY
42	DX	7	VAL
44	DZ	166	SER
47	D3	2	PRO
53	De	63	ILE
56	D1	37	ILE
57	D4	14	ILE
1	AB	167	PRO
1	AB	230	VAL
23	AY	296	GLY
26	BE	161	GLY
27	BF	178	PRO
56	B1	29	GLY
57	B4	10	VAL
23	CY	531	GLY
23	CY	665	GLY
25	DD	256	GLY
32	BN	126	PRO
32	DN	126	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%)	159 (78%)	44 (22%)	1 6
1	CB	203/203 (100%)	164 (81%)	39 (19%)	1 10
2	AC	161/161 (100%)	136 (84%)	25 (16%)	2 15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	CC	161/161 (100%)	134 (83%)	27 (17%)	2 13
3	AD	180/180 (100%)	147 (82%)	33 (18%)	2 12
3	CD	180/180 (100%)	146 (81%)	34 (19%)	1 11
4	AE	116/116 (100%)	96 (83%)	20 (17%)	2 13
4	CE	116/116 (100%)	92 (79%)	24 (21%)	1 7
5	AF	90/90 (100%)	83 (92%)	7 (8%)	11 35
5	CF	90/90 (100%)	78 (87%)	12 (13%)	4 18
6	AG	126/126 (100%)	111 (88%)	15 (12%)	5 21
6	CG	126/126 (100%)	115 (91%)	11 (9%)	9 32
7	AH	119/119 (100%)	101 (85%)	18 (15%)	3 16
7	CH	119/119 (100%)	104 (87%)	15 (13%)	4 20
8	AI	98/98 (100%)	85 (87%)	13 (13%)	4 18
8	CI	98/98 (100%)	86 (88%)	12 (12%)	5 21
9	AJ	89/89 (100%)	69 (78%)	20 (22%)	1 6
9	CJ	89/89 (100%)	69 (78%)	20 (22%)	1 6
10	AK	90/90 (100%)	72 (80%)	18 (20%)	1 9
10	CK	90/90 (100%)	68 (76%)	22 (24%)	1 5
11	AL	104/104 (100%)	77 (74%)	27 (26%)	0 4
11	CL	104/104 (100%)	73 (70%)	31 (30%)	0 3
12	AM	100/100 (100%)	79 (79%)	21 (21%)	1 7
12	CM	100/100 (100%)	83 (83%)	17 (17%)	2 13
13	AN	49/49 (100%)	40 (82%)	9 (18%)	1 11
13	CN	49/49 (100%)	42 (86%)	7 (14%)	3 17
14	AO	79/79 (100%)	68 (86%)	11 (14%)	3 17
14	CO	79/79 (100%)	70 (89%)	9 (11%)	5 22
15	AP	72/72 (100%)	63 (88%)	9 (12%)	4 20
15	CP	72/72 (100%)	69 (96%)	3 (4%)	26 49
16	AQ	95/95 (100%)	78 (82%)	17 (18%)	2 12
16	CQ	95/95 (100%)	80 (84%)	15 (16%)	2 15
17	AR	61/61 (100%)	52 (85%)	9 (15%)	3 16
17	CR	61/61 (100%)	49 (80%)	12 (20%)	1 9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
18	AS	69/69 (100%)	54 (78%)	15 (22%)	1 6
18	CS	69/69 (100%)	51 (74%)	18 (26%)	0 4
19	AT	76/76 (100%)	65 (86%)	11 (14%)	3 16
19	CT	76/76 (100%)	67 (88%)	9 (12%)	5 21
23	AY	563/579 (97%)	459 (82%)	104 (18%)	1 11
23	CY	563/579 (97%)	448 (80%)	115 (20%)	1 8
24	BC	180/180 (100%)	133 (74%)	47 (26%)	0 4
24	DC	180/180 (100%)	138 (77%)	42 (23%)	1 5
25	BD	217/217 (100%)	174 (80%)	43 (20%)	1 9
25	DD	217/217 (100%)	175 (81%)	42 (19%)	1 10
26	BE	165/165 (100%)	134 (81%)	31 (19%)	1 11
26	DE	165/165 (100%)	131 (79%)	34 (21%)	1 8
27	BF	165/165 (100%)	129 (78%)	36 (22%)	1 6
27	DF	165/165 (100%)	139 (84%)	26 (16%)	2 15
28	BG	155/155 (100%)	127 (82%)	28 (18%)	2 12
28	DG	155/155 (100%)	129 (83%)	26 (17%)	2 13
29	BH	136/136 (100%)	108 (79%)	28 (21%)	1 8
29	DH	136/136 (100%)	113 (83%)	23 (17%)	2 13
31	BK	105/105 (100%)	86 (82%)	19 (18%)	2 12
31	DK	105/105 (100%)	90 (86%)	15 (14%)	3 17
32	BN	117/117 (100%)	101 (86%)	16 (14%)	3 17
32	DN	117/117 (100%)	101 (86%)	16 (14%)	3 17
33	BO	100/100 (100%)	80 (80%)	20 (20%)	1 9
33	DO	100/100 (100%)	82 (82%)	18 (18%)	2 12
34	BP	112/112 (100%)	91 (81%)	21 (19%)	1 11
34	DP	112/112 (100%)	89 (80%)	23 (20%)	1 8
35	BQ	111/111 (100%)	87 (78%)	24 (22%)	1 6
35	DQ	111/111 (100%)	86 (78%)	25 (22%)	1 6
36	BR	100/100 (100%)	83 (83%)	17 (17%)	2 13
36	DR	100/100 (100%)	81 (81%)	19 (19%)	1 10
37	BS	77/77 (100%)	61 (79%)	16 (21%)	1 7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
37	DS	77/77 (100%)	61 (79%)	16 (21%)	1 7
38	BT	120/120 (100%)	91 (76%)	29 (24%)	1 5
38	DT	120/120 (100%)	91 (76%)	29 (24%)	1 5
39	BU	93/93 (100%)	73 (78%)	20 (22%)	1 6
39	DU	93/93 (100%)	78 (84%)	15 (16%)	2 14
40	BV	82/82 (100%)	64 (78%)	18 (22%)	1 6
40	DV	82/82 (100%)	63 (77%)	19 (23%)	1 5
41	BW	92/92 (100%)	71 (77%)	21 (23%)	1 6
41	DW	92/92 (100%)	77 (84%)	15 (16%)	2 14
42	BX	75/75 (100%)	65 (87%)	10 (13%)	4 18
42	DX	75/75 (100%)	60 (80%)	15 (20%)	1 9
43	BY	88/88 (100%)	63 (72%)	25 (28%)	0 3
43	DY	88/88 (100%)	69 (78%)	19 (22%)	1 6
44	BZ	162/162 (100%)	126 (78%)	36 (22%)	1 6
44	DZ	162/162 (100%)	134 (83%)	28 (17%)	2 13
45	B0	66/66 (100%)	51 (77%)	15 (23%)	1 6
45	D0	66/66 (100%)	54 (82%)	12 (18%)	2 12
46	B2	66/66 (100%)	58 (88%)	8 (12%)	5 21
46	D2	66/66 (100%)	59 (89%)	7 (11%)	6 24
47	B3	52/52 (100%)	44 (85%)	8 (15%)	2 15
47	D3	52/52 (100%)	46 (88%)	6 (12%)	5 22
48	B5	51/51 (100%)	40 (78%)	11 (22%)	1 6
48	D5	51/51 (100%)	42 (82%)	9 (18%)	2 12
49	B6	49/49 (100%)	42 (86%)	7 (14%)	3 17
49	D6	49/49 (100%)	40 (82%)	9 (18%)	1 11
50	B7	42/42 (100%)	35 (83%)	7 (17%)	2 13
50	D7	42/42 (100%)	35 (83%)	7 (17%)	2 13
51	B8	54/54 (100%)	40 (74%)	14 (26%)	0 4
51	D8	54/54 (100%)	39 (72%)	15 (28%)	0 3
52	B9	34/34 (100%)	31 (91%)	3 (9%)	9 32
52	D9	34/34 (100%)	32 (94%)	2 (6%)	18 42

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
53	Be	54/54 (100%)	46 (85%)	8 (15%)	3 16
53	De	54/54 (100%)	44 (82%)	10 (18%)	1 11
56	B1	78/78 (100%)	62 (80%)	16 (20%)	1 8
56	D1	78/78 (100%)	62 (80%)	16 (20%)	1 8
57	B4	31/31 (100%)	24 (77%)	7 (23%)	1 6
57	D4	31/31 (100%)	26 (84%)	5 (16%)	2 14
All	All	11138/11170 (100%)	9068 (81%)	2070 (19%)	1 11

All (2070) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AB	7	VAL
1	AB	9	GLU
1	AB	15	VAL
1	AB	17	PHE
1	AB	21	ARG
1	AB	31	TYR
1	AB	32	ILE
1	AB	36	ARG
1	AB	42	ILE
1	AB	49	GLU
1	AB	52	GLU
1	AB	64	ARG
1	AB	69	LEU
1	AB	74	LYS
1	AB	96	ARG
1	AB	103	THR
1	AB	104	ASN
1	AB	106	LYS
1	AB	115	LEU
1	AB	117	GLU
1	AB	128	GLU
1	AB	137	ARG
1	AB	141	GLU
1	AB	142	LEU
1	AB	144	ARG
1	AB	145	LEU
1	AB	149	LEU
1	AB	155	LEU
1	AB	157	ARG

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Mol	Chain	Res	Type
1	AB	162	ILE
1	AB	163	PHE
1	AB	164	VAL
1	AB	168	THR
1	AB	172	ILE
1	AB	180	LEU
1	AB	185	ILE
1	AB	187	LEU
1	AB	191	ASP
1	AB	197	VAL
1	AB	213	LEU
1	AB	226	ARG
1	AB	230	VAL
1	AB	233	SER
1	AB	239	VAL
2	AC	4	LYS
2	AC	5	ILE
2	AC	17	ASP
2	AC	22	TRP
2	AC	52	LEU
2	AC	55	VAL
2	AC	56	ASP
2	AC	67	THR
2	AC	69	HIS
2	AC	70	VAL
2	AC	76	VAL
2	AC	84	ILE
2	AC	103	VAL
2	AC	124	ILE
2	AC	125	GLU
2	AC	134	ILE
2	AC	144	SER
2	AC	153	VAL
2	AC	154	SER
2	AC	167	TRP
2	AC	176	HIS
2	AC	188	LEU
2	AC	196	LEU
2	AC	204	LEU
2	AC	208	ILE
3	AD	3	ARG
3	AD	5	ILE

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Mol	Chain	Res	Type
3	AD	8	VAL
3	AD	9	CYS
3	AD	12	CYS
3	AD	19	LEU
3	AD	30	LYS
3	AD	49	ARG
3	AD	52	SER
3	AD	53	ASP
3	AD	54	TYR
3	AD	57	ARG
3	AD	66	ARG
3	AD	86	LYS
3	AD	89	THR
3	AD	96	LEU
3	AD	102	ASP
3	AD	108	LEU
3	AD	127	THR
3	AD	134	ASP
3	AD	135	LEU
3	AD	140	VAL
3	AD	141	ARG
3	AD	150	GLU
3	AD	170	VAL
3	AD	173	TRP
3	AD	177	ASP
3	AD	178	VAL
3	AD	182	LYS
3	AD	187	ARG
3	AD	196	LEU
3	AD	200	GLU
3	AD	207	TYR
4	AE	5	ASP
4	AE	12	LEU
4	AE	26	PHE
4	AE	31	LEU
4	AE	32	VAL
4	AE	41	VAL
4	AE	47	LYS
4	AE	51	VAL
4	AE	64	ARG
4	AE	71	LEU
4	AE	72	GLN

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Mol	Chain	Res	Type
4	AE	75	THR
4	AE	76	ILE
4	AE	78	HIS
4	AE	80	ILE
4	AE	100	VAL
4	AE	107	ARG
4	AE	111	GLU
4	AE	137	GLU
4	AE	139	LEU
5	AF	5	GLU
5	AF	22	GLU
5	AF	31	GLU
5	AF	61	LEU
5	AF	63	TYR
5	AF	80	ARG
5	AF	86	ARG
6	AG	11	GLN
6	AG	13	GLN
6	AG	24	THR
6	AG	33	ASP
6	AG	35	LYS
6	AG	37	ASN
6	AG	56	GLN
6	AG	74	GLU
6	AG	79	ARG
6	AG	80	VAL
6	AG	94	ARG
6	AG	97	GLN
6	AG	104	LEU
6	AG	122	HIS
6	AG	149	ARG
7	AH	4	ASP
7	AH	37	ARG
7	AH	49	GLU
7	AH	60	ARG
7	AH	62	TYR
7	AH	63	LEU
7	AH	69	ARG
7	AH	73	ASP
7	AH	83	ILE
7	AH	95	VAL
7	AH	107	LEU

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Mol	Chain	Res	Type
7	AH	109	ILE
7	AH	111	ILE
7	AH	113	SER
7	AH	120	THR
7	AH	121	ASP
7	AH	135	CYS
7	AH	138	TRP
8	AI	25	LYS
8	AI	27	THR
8	AI	28	VAL
8	AI	40	LEU
8	AI	41	VAL
8	AI	58	HIS
8	AI	66	ARG
8	AI	79	LEU
8	AI	85	LEU
8	AI	95	LYS
8	AI	97	LYS
8	AI	99	LEU
8	AI	121	ARG
9	AJ	6	ILE
9	AJ	8	LEU
9	AJ	11	PHE
9	AJ	16	LEU
9	AJ	30	SER
9	AJ	35	SER
9	AJ	38	ILE
9	AJ	42	THR
9	AJ	43	ARG
9	AJ	75	ILE
9	AJ	78	ASN
9	AJ	79	ARG
9	AJ	81	THR
9	AJ	86	MET
9	AJ	89	ASP
9	AJ	92	THR
9	AJ	95	GLU
9	AJ	96	ILE
9	AJ	99	LYS
9	AJ	101	VAL
10	AK	25	TYR
10	AK	29	ILE

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Mol	Chain	Res	Type
10	AK	31	THR
10	AK	34	ASP
10	AK	40	ILE
10	AK	41	THR
10	AK	48	ILE
10	AK	67	ASP
10	AK	79	SER
10	AK	80	VAL
10	AK	81	ASP
10	AK	84	VAL
10	AK	103	LEU
10	AK	104	GLN
10	AK	109	VAL
10	AK	114	VAL
10	AK	124	LYS
10	AK	129	SER
11	AL	20	LYS
11	AL	22	SER
11	AL	33	ARG
11	AL	34	ARG
11	AL	37	CYS
11	AL	38	THR
11	AL	39	VAL
11	AL	42	THR
11	AL	44	THR
11	AL	49	ASN
11	AL	53	ARG
11	AL	54	LYS
11	AL	55	VAL
11	AL	59	ARG
11	AL	60	LEU
11	AL	61	THR
11	AL	70	ILE
11	AL	75	HIS
11	AL	77	LEU
11	AL	79	GLU
11	AL	85	ILE
11	AL	92	ASP
11	AL	96	VAL
11	AL	101	VAL
11	AL	104	VAL
11	AL	119	LYS

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Mol	Chain	Res	Type
11	AL	127	GLU
12	AM	7	VAL
12	AM	8	GLU
12	AM	19	LEU
12	AM	21	TYR
12	AM	27	LYS
12	AM	48	LEU
12	AM	56	LEU
12	AM	57	ARG
12	AM	61	GLU
12	AM	65	LYS
12	AM	67	GLU
12	AM	71	ARG
12	AM	82	MET
12	AM	83	ASP
12	AM	92	HIS
12	AM	103	THR
12	AM	108	ARG
12	AM	110	ARG
12	AM	115	LYS
12	AM	117	VAL
12	AM	121	LYS
13	AN	7	ILE
13	AN	21	TYR
13	AN	22	THR
13	AN	35	ARG
13	AN	40	CYS
13	AN	44	LEU
13	AN	49	HIS
13	AN	56	VAL
13	AN	61	TRP
14	AO	5	LYS
14	AO	12	ILE
14	AO	17	ARG
14	AO	26	GLU
14	AO	31	LEU
14	AO	37	ASN
14	AO	38	ARG
14	AO	41	GLU
14	AO	82	ILE
14	AO	85	LEU
14	AO	88	ARG

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Mol	Chain	Res	Type
15	AP	2	VAL
15	AP	23	ASP
15	AP	29	ASP
15	AP	33	ILE
15	AP	45	THR
15	AP	67	THR
15	AP	69	THR
15	AP	71	ARG
15	AP	72	ARG
16	AQ	6	LEU
16	AQ	7	THR
16	AQ	10	VAL
16	AQ	16	GLN
16	AQ	18	THR
16	AQ	20	THR
16	AQ	36	ILE
16	AQ	52	LYS
16	AQ	59	ILE
16	AQ	63	ARG
16	AQ	69	LYS
16	AQ	74	LEU
16	AQ	76	LEU
16	AQ	89	LEU
16	AQ	91	ARG
16	AQ	93	GLN
16	AQ	100	LYS
17	AR	28	GLU
17	AR	29	PHE
17	AR	34	TYR
17	AR	37	VAL
17	AR	55	ARG
17	AR	59	SER
17	AR	69	THR
17	AR	83	GLU
17	AR	85	LEU
18	AS	5	LEU
18	AS	14	HIS
18	AS	23	ASN
18	AS	31	ILE
18	AS	32	LYS
18	AS	37	ARG
18	AS	43	GLU

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Mol	Chain	Res	Type
18	AS	47	HIS
18	AS	51	VAL
18	AS	58	VAL
18	AS	60	VAL
18	AS	61	TYR
18	AS	62	ILE
18	AS	79	THR
18	AS	81	ARG
19	AT	13	LEU
19	AT	23	ARG
19	AT	26	ASN
19	AT	41	ILE
19	AT	50	GLU
19	AT	54	LYS
19	AT	56	MET
19	AT	63	ILE
19	AT	71	THR
19	AT	74	LYS
19	AT	80	ARG
23	AY	15	ILE
23	AY	20	HIS
23	AY	29	THR
23	AY	32	ILE
23	AY	36	THR
23	AY	38	ARG
23	AY	72	CYS
23	AY	80	ASN
23	AY	92	ILE
23	AY	98	MET
23	AY	121	VAL
23	AY	124	GLN
23	AY	126	GLU
23	AY	132	ARG
23	AY	133	ILE
23	AY	147	TRP
23	AY	157	LEU
23	AY	162	VAL
23	AY	171	GLU
23	AY	172	ASP
23	AY	177	ILE
23	AY	178	ILE
23	AY	186	TYR

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Mol	Chain	Res	Type
23	AY	188	TYR
23	AY	197	ARG
23	AY	198	GLU
23	AY	199	ILE
23	AY	201	ILE
23	AY	210	ARG
23	AY	211	GLU
23	AY	217	VAL
23	AY	225	GLU
23	AY	227	ILE
23	AY	229	LEU
23	AY	230	LYS
23	AY	240	GLU
23	AY	255	ILE
23	AY	260	LEU
23	AY	264	LEU
23	AY	266	ASN
23	AY	270	GLN
23	AY	271	LEU
23	AY	273	LEU
23	AY	278	ASP
23	AY	285	ASP
23	AY	299	VAL
23	AY	312	LEU
23	AY	314	PHE
23	AY	316	ILE
23	AY	328	ILE
23	AY	336	THR
23	AY	341	VAL
23	AY	344	THR
23	AY	352	VAL
23	AY	358	MET
23	AY	364	GLU
23	AY	393	ASP
23	AY	404	VAL
23	AY	424	LEU
23	AY	428	LEU
23	AY	431	LEU
23	AY	440	VAL
23	AY	449	THR
23	AY	454	MET
23	AY	456	GLU

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Mol	Chain	Res	Type
23	AY	458	HIS
23	AY	460	GLU
23	AY	461	ILE
23	AY	462	ILE
23	AY	471	LYS
23	AY	485	GLU
23	AY	487	ILE
23	AY	498	ILE
23	AY	499	ARG
23	AY	501	THR
23	AY	506	GLN
23	AY	507	TYR
23	AY	510	VAL
23	AY	512	ILE
23	AY	517	LEU
23	AY	525	PHE
23	AY	527	ASN
23	AY	529	ILE
23	AY	534	ILE
23	AY	555	LEU
23	AY	556	ILE
23	AY	563	ILE
23	AY	572	TYR
23	AY	580	MET
23	AY	596	LYS
23	AY	600	VAL
23	AY	603	GLU
23	AY	605	ILE
23	AY	608	VAL
23	AY	610	VAL
23	AY	615	GLU
23	AY	617	MET
23	AY	621	ILE
23	AY	624	LEU
23	AY	635	GLU
23	AY	641	GLN
23	AY	646	PHE
23	AY	647	VAL
23	AY	672	PHE
24	BC	15	VAL
24	BC	16	ASP
24	BC	19	LYS

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Mol	Chain	Res	Type
24	BC	28	ARG
24	BC	31	LYS
24	BC	32	GLU
24	BC	42	VAL
24	BC	47	LYS
24	BC	48	LEU
24	BC	50	ILE
24	BC	54	ARG
24	BC	59	VAL
24	BC	60	ARG
24	BC	63	VAL
24	BC	69	LEU
24	BC	73	VAL
24	BC	74	ARG
24	BC	82	GLU
24	BC	85	LYS
24	BC	94	TYR
24	BC	101	ILE
24	BC	106	ASP
24	BC	112	ASP
24	BC	114	VAL
24	BC	115	VAL
24	BC	117	THR
24	BC	120	VAL
24	BC	130	ARG
24	BC	131	ILE
24	BC	138	LEU
24	BC	139	PRO
24	BC	145	THR
24	BC	148	PHE
24	BC	150	ILE
24	BC	161	ARG
24	BC	164	PHE
24	BC	166	ASN
24	BC	172	ILE
24	BC	176	VAL
24	BC	183	PRO
24	BC	185	LYS
24	BC	188	ASP
24	BC	198	GLU
24	BC	201	LYS
24	BC	213	VAL

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Mol	Chain	Res	Type
24	BC	215	VAL
24	BC	217	THR
25	BD	4	LYS
25	BD	5	LYS
25	BD	10	THR
25	BD	25	THR
25	BD	26	LYS
25	BD	28	GLU
25	BD	30	GLU
25	BD	33	LEU
25	BD	34	VAL
25	BD	40	THR
25	BD	54	ARG
25	BD	64	ILE
25	BD	65	ILE
25	BD	67	PHE
25	BD	78	LYS
25	BD	82	ILE
25	BD	87	ASN
25	BD	92	ILE
25	BD	96	HIS
25	BD	97	TYR
25	BD	105	ILE
25	BD	106	ILE
25	BD	109	ASP
25	BD	111	LEU
25	BD	112	GLN
25	BD	113	VAL
25	BD	117	VAL
25	BD	122	ASP
25	BD	136	ILE
25	BD	140	THR
25	BD	142	VAL
25	BD	146	GLU
25	BD	150	LYS
25	BD	165	ILE
25	BD	201	HIS
25	BD	221	VAL
25	BD	230	ASP
25	BD	233	HIS
25	BD	239	ARG
25	BD	242	ARG

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Mol	Chain	Res	Type
25	BD	244	ARG
25	BD	257	LEU
25	BD	259	THR
26	BE	4	ILE
26	BE	7	VAL
26	BE	14	ILE
26	BE	16	ARG
26	BE	26	ILE
26	BE	27	LEU
26	BE	33	VAL
26	BE	38	THR
26	BE	49	LEU
26	BE	59	VAL
26	BE	61	ARG
26	BE	63	LEU
26	BE	78	LEU
26	BE	81	ILE
26	BE	95	ILE
26	BE	121	ASN
26	BE	127	ASP
26	BE	132	HIS
26	BE	134	ILE
26	BE	140	SER
26	BE	145	LYS
26	BE	154	LYS
26	BE	164	ARG
26	BE	165	VAL
26	BE	172	VAL
26	BE	173	VAL
26	BE	174	ASP
26	BE	175	VAL
26	BE	196	VAL
26	BE	197	ILE
26	BE	200	GLU
27	BF	6	VAL
27	BF	12	LEU
27	BF	17	ARG
27	BF	18	ARG
27	BF	19	GLU
27	BF	24	LEU
27	BF	28	ILE
27	BF	33	LEU

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Mol	Chain	Res	Type
27	BF	38	ARG
27	BF	40	GLN
27	BF	43	LYS
27	BF	45	ARG
27	BF	51	THR
27	BF	53	THR
27	BF	54	ARG
27	BF	64	ILE
27	BF	68	LYS
27	BF	74	ARG
27	BF	82	ILE
27	BF	90	PHE
27	BF	110	LEU
27	BF	124	LEU
27	BF	126	VAL
27	BF	127	GLU
27	BF	136	THR
27	BF	139	PHE
27	BF	149	ASP
27	BF	152	GLU
27	BF	154	VAL
27	BF	155	LEU
27	BF	170	LEU
27	BF	175	THR
27	BF	176	LEU
27	BF	183	VAL
27	BF	186	ILE
27	BF	194	MET
28	BG	5	VAL
28	BG	9	ARG
28	BG	15	VAL
28	BG	16	ARG
28	BG	23	PHE
28	BG	31	VAL
28	BG	33	ARG
28	BG	35	GLU
28	BG	48	GLU
28	BG	54	GLU
28	BG	55	LYS
28	BG	67	LYS
28	BG	78	SER
28	BG	80	PHE

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Mol	Chain	Res	Type
28	BG	86	MET
28	BG	103	LEU
28	BG	107	LEU
28	BG	109	VAL
28	BG	113	ARG
28	BG	120	LEU
28	BG	126	ASP
28	BG	139	LEU
28	BG	143	GLU
28	BG	145	THR
28	BG	153	ARG
28	BG	155	MET
28	BG	166	ASP
28	BG	167	GLU
29	BH	13	LYS
29	BH	17	VAL
29	BH	23	ARG
29	BH	27	LYS
29	BH	34	GLU
29	BH	37	VAL
29	BH	41	MET
29	BH	42	ARG
29	BH	43	VAL
29	BH	44	VAL
29	BH	51	ARG
29	BH	52	VAL
29	BH	59	ARG
29	BH	65	HIS
29	BH	71	LEU
29	BH	72	ILE
29	BH	85	LYS
29	BH	103	LEU
29	BH	106	THR
29	BH	115	VAL
29	BH	116	GLU
29	BH	121	ILE
29	BH	141	VAL
29	BH	143	GLN
29	BH	147	ASN
29	BH	157	TYR
29	BH	159	GLU
29	BH	171	LEU

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Mol	Chain	Res	Type
31	BK	2	LYS
31	BK	7	VAL
31	BK	9	LYS
31	BK	34	ILE
31	BK	37	PHE
31	BK	41	PHE
31	BK	57	ILE
31	BK	59	ILE
31	BK	60	TYR
31	BK	66	THR
31	BK	69	THR
31	BK	78	ILE
31	BK	86	LYS
31	BK	105	LEU
31	BK	118	THR
31	BK	119	ASP
31	BK	125	ARG
31	BK	132	ARG
31	BK	136	VAL
32	BN	1	MET
32	BN	7	LYS
32	BN	32	THR
32	BN	42	TRP
32	BN	45	ASN
32	BN	48	MET
32	BN	50	ASP
32	BN	71	ILE
32	BN	87	LEU
32	BN	89	LYS
32	BN	99	LEU
32	BN	111	PRO
32	BN	112	LEU
32	BN	131	GLN
32	BN	137	LYS
32	BN	138	LEU
33	BO	3	GLN
33	BO	8	LEU
33	BO	9	GLU
33	BO	10	VAL
33	BO	14	THR
33	BO	17	ARG
33	BO	19	ILE

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Mol	Chain	Res	Type
33	BO	38	VAL
33	BO	39	ILE
33	BO	52	VAL
33	BO	54	GLU
33	BO	58	VAL
33	BO	69	ILE
33	BO	79	PHE
33	BO	80	ASP
33	BO	86	ILE
33	BO	91	LEU
33	BO	98	VAL
33	BO	107	ARG
33	BO	113	LYS
34	BP	16	ARG
34	BP	18	ARG
34	BP	27	HIS
34	BP	29	LYS
34	BP	32	THR
34	BP	39	LYS
34	BP	46	LYS
34	BP	52	GLU
34	BP	55	ARG
34	BP	58	THR
34	BP	60	MET
34	BP	61	ARG
34	BP	79	ARG
34	BP	85	LEU
34	BP	100	LEU
34	BP	106	LEU
34	BP	107	LYS
34	BP	115	LEU
34	BP	125	VAL
34	BP	135	LEU
34	BP	149	GLU
35	BQ	1	MET
35	BQ	3	MET
35	BQ	7	MET
35	BQ	17	LEU
35	BQ	25	ASP
35	BQ	29	PHE
35	BQ	35	VAL
35	BQ	42	ILE

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Mol	Chain	Res	Type
35	BQ	54	MET
35	BQ	60	ARG
35	BQ	65	PHE
35	BQ	66	ILE
35	BQ	68	ILE
35	BQ	75	THR
35	BQ	79	LEU
35	BQ	90	VAL
35	BQ	93	TYR
35	BQ	116	GLU
35	BQ	125	LEU
35	BQ	127	ILE
35	BQ	128	LYS
35	BQ	129	THR
35	BQ	131	ILE
35	BQ	135	ASP
36	BR	3	HIS
36	BR	4	LEU
36	BR	23	ASN
36	BR	27	SER
36	BR	29	LEU
36	BR	43	GLU
36	BR	44	LEU
36	BR	45	ARG
36	BR	68	ARG
36	BR	72	ASP
36	BR	79	LEU
36	BR	82	GLU
36	BR	89	ASP
36	BR	99	LYS
36	BR	113	LEU
36	BR	115	GLU
36	BR	117	VAL
37	BS	12	PHE
37	BS	13	ARG
37	BS	18	ILE
37	BS	19	LYS
37	BS	30	ARG
37	BS	35	ILE
37	BS	47	THR
37	BS	53	SER
37	BS	54	LEU

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Mol	Chain	Res	Type
37	BS	64	GLU
37	BS	69	VAL
37	BS	98	VAL
37	BS	99	LYS
37	BS	101	LEU
37	BS	106	ARG
37	BS	107	GLU
38	BT	11	GLU
38	BT	13	ARG
38	BT	23	ARG
38	BT	30	VAL
38	BT	33	LYS
38	BT	44	ASP
38	BT	48	ILE
38	BT	49	VAL
38	BT	50	ILE
38	BT	51	ARG
38	BT	58	ASN
38	BT	59	THR
38	BT	65	LYS
38	BT	70	VAL
38	BT	72	VAL
38	BT	74	ARG
38	BT	75	ILE
38	BT	78	LEU
38	BT	80	SER
38	BT	82	LEU
38	BT	84	GLN
38	BT	85	LYS
38	BT	95	ARG
38	BT	96	ARG
38	BT	101	PHE
38	BT	102	ILE
38	BT	115	ARG
38	BT	123	GLN
38	BT	124	ASP
39	BU	11	ARG
39	BU	14	HIS
39	BU	16	LYS
39	BU	18	LEU
39	BU	29	SER
39	BU	53	ARG

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Mol	Chain	Res	Type
39	BU	54	LYS
39	BU	55	ARG
39	BU	60	LEU
39	BU	64	ARG
39	BU	65	ILE
39	BU	74	LEU
39	BU	80	ILE
39	BU	90	VAL
39	BU	91	ASP
39	BU	97	ASP
39	BU	98	LEU
39	BU	101	ARG
39	BU	108	GLU
39	BU	117	GLN
40	BV	5	VAL
40	BV	7	THR
40	BV	14	VAL
40	BV	18	LEU
40	BV	19	LYS
40	BV	37	VAL
40	BV	40	LEU
40	BV	57	VAL
40	BV	61	VAL
40	BV	70	ILE
40	BV	74	LYS
40	BV	78	LYS
40	BV	93	GLU
40	BV	95	LEU
40	BV	96	ILE
40	BV	97	LYS
40	BV	98	GLU
40	BV	99	ILE
41	BW	8	ARG
41	BW	9	TYR
41	BW	17	VAL
41	BW	19	LEU
41	BW	27	LYS
41	BW	28	SER
41	BW	30	GLU
41	BW	51	LEU
41	BW	60	ASN
41	BW	66	GLU

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Mol	Chain	Res	Type
41	BW	72	LYS
41	BW	88	ARG
41	BW	95	ILE
41	BW	96	ILE
41	BW	99	ARG
41	BW	100	THR
41	BW	105	VAL
41	BW	106	ILE
41	BW	107	LEU
41	BW	109	GLU
41	BW	113	LYS
42	BX	5	TYR
42	BX	8	ILE
42	BX	35	THR
42	BX	36	LYS
42	BX	54	VAL
42	BX	57	LEU
42	BX	58	HIS
42	BX	59	VAL
42	BX	76	ARG
42	BX	78	LYS
43	BY	2	ARG
43	BY	3	VAL
43	BY	5	MET
43	BY	6	HIS
43	BY	9	LYS
43	BY	13	VAL
43	BY	27	VAL
43	BY	28	LYS
43	BY	31	LEU
43	BY	33	LYS
43	BY	35	TYR
43	BY	38	ILE
43	BY	39	VAL
43	BY	44	ILE
43	BY	47	LYS
43	BY	49	VAL
43	BY	50	ARG
43	BY	72	VAL
43	BY	75	ILE
43	BY	84	ARG
43	BY	85	VAL

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Mol	Chain	Res	Type
43	BY	89	PHE
43	BY	90	LEU
43	BY	94	LYS
43	BY	97	ARG
44	BZ	5	LEU
44	BZ	8	TYR
44	BZ	11	GLU
44	BZ	28	MET
44	BZ	29	TYR
44	BZ	32	HIS
44	BZ	34	ASN
44	BZ	42	VAL
44	BZ	45	ASP
44	BZ	46	LYS
44	BZ	56	VAL
44	BZ	57	ILE
44	BZ	59	LEU
44	BZ	71	VAL
44	BZ	76	LEU
44	BZ	81	ARG
44	BZ	84	GLU
44	BZ	86	VAL
44	BZ	97	GLU
44	BZ	98	MET
44	BZ	112	ARG
44	BZ	120	ILE
44	BZ	122	ARG
44	BZ	123	ASP
44	BZ	124	ILE
44	BZ	127	LYS
44	BZ	128	VAL
44	BZ	136	PHE
44	BZ	150	LEU
44	BZ	154	ASP
44	BZ	155	LEU
44	BZ	162	GLU
44	BZ	165	VAL
44	BZ	166	SER
44	BZ	174	VAL
44	BZ	186	GLU
45	B0	3	HIS
45	B0	10	THR

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Mol	Chain	Res	Type
45	B0	15	ASP
45	B0	27	GLU
45	B0	31	VAL
45	B0	32	ARG
45	B0	35	ASN
45	B0	36	ILE
45	B0	41	ARG
45	B0	43	THR
45	B0	55	ARG
45	B0	62	LEU
45	B0	63	VAL
45	B0	67	VAL
45	B0	84	LEU
46	B2	8	LYS
46	B2	14	ARG
46	B2	33	MET
46	B2	35	LEU
46	B2	46	GLN
46	B2	47	ASN
46	B2	51	ARG
46	B2	65	ASN
47	B3	28	LEU
47	B3	31	LEU
47	B3	37	LEU
47	B3	40	THR
47	B3	52	HIS
47	B3	53	LEU
47	B3	57	GLU
47	B3	59	VAL
48	B5	3	LYS
48	B5	6	VAL
48	B5	13	LYS
48	B5	16	ARG
48	B5	25	LEU
48	B5	29	THR
48	B5	44	THR
48	B5	46	CYS
48	B5	55	ARG
48	B5	56	LYS
48	B5	58	LEU
49	B6	7	ILE
49	B6	9	LEU

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Mol	Chain	Res	Type
49	B6	11	LEU
49	B6	18	ARG
49	B6	30	THR
49	B6	39	TYR
49	B6	48	VAL
50	B7	15	THR
50	B7	24	THR
50	B7	40	TRP
50	B7	41	ARG
50	B7	47	ARG
50	B7	48	LYS
50	B7	49	ARG
51	B8	15	LYS
51	B8	16	ILE
51	B8	30	ARG
51	B8	32	LEU
51	B8	36	LYS
51	B8	40	GLU
51	B8	42	ARG
51	B8	46	ARG
51	B8	49	VAL
51	B8	50	LEU
51	B8	53	PRO
51	B8	54	GLU
51	B8	59	LYS
51	B8	61	LEU
52	B9	2	LYS
52	B9	10	ILE
52	B9	17	ILE
53	Be	64	LEU
53	Be	78	LEU
53	Be	81	ILE
53	Be	86	LEU
53	Be	90	LYS
53	Be	94	GLU
53	Be	106	GLN
53	Be	118	VAL
56	B1	4	VAL
56	B1	13	ILE
56	B1	18	ILE
56	B1	32	LYS
56	B1	37	ILE

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Mol	Chain	Res	Type
56	B1	39	LYS
56	B1	41	ARG
56	B1	43	TYR
56	B1	46	LEU
56	B1	47	GLN
56	B1	50	ARG
56	B1	58	ILE
56	B1	67	ILE
56	B1	73	LEU
56	B1	82	LEU
56	B1	88	LYS
57	B4	6	HIS
57	B4	9	LEU
57	B4	10	VAL
57	B4	23	GLU
57	B4	31	ILE
57	B4	33	VAL
57	B4	34	GLU
1	CB	7	VAL
1	CB	9	GLU
1	CB	12	GLU
1	CB	17	PHE
1	CB	36	ARG
1	CB	37	ASN
1	CB	42	ILE
1	CB	49	GLU
1	CB	67	THR
1	CB	69	LEU
1	CB	70	PHE
1	CB	74	LYS
1	CB	76	GLN
1	CB	96	ARG
1	CB	103	THR
1	CB	106	LYS
1	CB	113	HIS
1	CB	128	GLU
1	CB	134	GLU
1	CB	141	GLU
1	CB	146	GLN
1	CB	155	LEU
1	CB	157	ARG
1	CB	158	LEU

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Mol	Chain	Res	Type
1	CB	163	PHE
1	CB	168	THR
1	CB	169	LYS
1	CB	172	ILE
1	CB	185	ILE
1	CB	187	LEU
1	CB	189	ASP
1	CB	193	ASP
1	CB	201	ILE
1	CB	204	ASN
1	CB	208	ILE
1	CB	210	SER
1	CB	213	LEU
1	CB	226	ARG
1	CB	230	VAL
2	CC	4	LYS
2	CC	5	ILE
2	CC	15	THR
2	CC	17	ASP
2	CC	22	TRP
2	CC	26	LYS
2	CC	33	LEU
2	CC	55	VAL
2	CC	67	THR
2	CC	84	ILE
2	CC	85	ARG
2	CC	89	GLU
2	CC	101	LEU
2	CC	118	GLN
2	CC	124	ILE
2	CC	125	GLU
2	CC	128	PHE
2	CC	134	ILE
2	CC	152	ILE
2	CC	157	ILE
2	CC	176	HIS
2	CC	188	LEU
2	CC	193	TYR
2	CC	201	TYR
2	CC	204	LEU
2	CC	206	GLU
2	CC	208	ILE

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Mol	Chain	Res	Type
3	CD	3	ARG
3	CD	5	ILE
3	CD	8	VAL
3	CD	9	CYS
3	CD	12	CYS
3	CD	18	LYS
3	CD	19	LEU
3	CD	30	LYS
3	CD	50	ARG
3	CD	53	ASP
3	CD	54	TYR
3	CD	56	VAL
3	CD	57	ARG
3	CD	67	ILE
3	CD	84	LYS
3	CD	86	LYS
3	CD	92	VAL
3	CD	101	LEU
3	CD	127	THR
3	CD	131	ARG
3	CD	134	ASP
3	CD	135	LEU
3	CD	140	VAL
3	CD	141	ARG
3	CD	148	VAL
3	CD	150	GLU
3	CD	157	LEU
3	CD	159	ARG
3	CD	160	GLN
3	CD	170	VAL
3	CD	192	GLU
3	CD	194	LEU
3	CD	196	LEU
3	CD	198	VAL
4	CE	10	MET
4	CE	11	ILE
4	CE	12	LEU
4	CE	31	LEU
4	CE	32	VAL
4	CE	41	VAL
4	CE	45	PHE
4	CE	47	LYS

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Mol	Chain	Res	Type
4	CE	51	VAL
4	CE	53	LEU
4	CE	57	LYS
4	CE	64	ARG
4	CE	65	ASN
4	CE	78	HIS
4	CE	100	VAL
4	CE	107	ARG
4	CE	111	GLU
4	CE	120	THR
4	CE	123	LEU
4	CE	126	ARG
4	CE	139	LEU
4	CE	141	GLN
4	CE	144	THR
4	CE	145	LYS
5	CF	2	ARG
5	CF	14	LEU
5	CF	31	GLU
5	CF	36	ARG
5	CF	37	VAL
5	CF	40	VAL
5	CF	61	LEU
5	CF	67	MET
5	CF	69	GLU
5	CF	72	VAL
5	CF	81	ILE
5	CF	86	ARG
6	CG	24	THR
6	CG	32	ARG
6	CG	35	LYS
6	CG	68	ASN
6	CG	80	VAL
6	CG	92	SER
6	CG	104	LEU
6	CG	106	GLN
6	CG	118	VAL
6	CG	126	ASP
6	CG	149	ARG
7	CH	29	SER
7	CH	31	PHE
7	CH	37	ARG

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Mol	Chain	Res	Type
7	CH	49	GLU
7	CH	51	VAL
7	CH	54	ASP
7	CH	63	LEU
7	CH	69	ARG
7	CH	73	ASP
7	CH	83	ILE
7	CH	102	ARG
7	CH	107	LEU
7	CH	111	ILE
7	CH	121	ASP
7	CH	138	TRP
8	CI	34	ASN
8	CI	40	LEU
8	CI	77	ILE
8	CI	79	LEU
8	CI	85	LEU
8	CI	88	TYR
8	CI	89	ASN
8	CI	91	ASP
8	CI	95	LYS
8	CI	97	LYS
8	CI	99	LEU
8	CI	104	ARG
9	CJ	3	LYS
9	CJ	8	LEU
9	CJ	16	LEU
9	CJ	25	GLU
9	CJ	29	ARG
9	CJ	33	GLN
9	CJ	35	SER
9	CJ	38	ILE
9	CJ	46	ARG
9	CJ	50	ILE
9	CJ	57	LYS
9	CJ	65	LEU
9	CJ	69	ASN
9	CJ	74	ILE
9	CJ	75	ILE
9	CJ	79	ARG
9	CJ	81	THR
9	CJ	89	ASP

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Mol	Chain	Res	Type
9	CJ	96	ILE
9	CJ	101	VAL
10	CK	14	VAL
10	CK	29	ILE
10	CK	31	THR
10	CK	33	THR
10	CK	34	ASP
10	CK	40	ILE
10	CK	41	THR
10	CK	48	ILE
10	CK	57	THR
10	CK	66	LEU
10	CK	75	TYR
10	CK	80	VAL
10	CK	84	VAL
10	CK	105	VAL
10	CK	114	VAL
10	CK	117	ASN
10	CK	119	CYS
10	CK	120	ARG
10	CK	122	LYS
10	CK	124	LYS
10	CK	126	ARG
10	CK	127	LYS
11	CL	9	GLN
11	CL	10	LEU
11	CL	20	LYS
11	CL	33	ARG
11	CL	34	ARG
11	CL	39	VAL
11	CL	43	VAL
11	CL	46	LYS
11	CL	49	ASN
11	CL	50	SER
11	CL	52	LEU
11	CL	54	LYS
11	CL	55	VAL
11	CL	61	THR
11	CL	70	ILE
11	CL	75	HIS
11	CL	76	ASN
11	CL	77	LEU

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Mol	Chain	Res	Type
11	CL	78	GLN
11	CL	79	GLU
11	CL	84	LEU
11	CL	85	ILE
11	CL	91	LYS
11	CL	92	ASP
11	CL	96	VAL
11	CL	97	ARG
11	CL	100	ILE
11	CL	104	VAL
11	CL	119	LYS
11	CL	126	LYS
11	CL	127	GLU
12	CM	7	VAL
12	CM	8	GLU
12	CM	17	VAL
12	CM	21	TYR
12	CM	27	LYS
12	CM	36	LYS
12	CM	47	ASP
12	CM	48	LEU
12	CM	56	LEU
12	CM	61	GLU
12	CM	65	LYS
12	CM	86	CYS
12	CM	92	HIS
12	CM	108	ARG
12	CM	110	ARG
12	CM	115	LYS
12	CM	121	LYS
13	CN	7	ILE
13	CN	21	TYR
13	CN	22	THR
13	CN	32	SER
13	CN	35	ARG
13	CN	40	CYS
13	CN	61	TRP
14	CO	5	LYS
14	CO	6	GLU
14	CO	15	PHE
14	CO	26	GLU
14	CO	38	ARG

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Mol	Chain	Res	Type
14	CO	43	LEU
14	CO	47	LYS
14	CO	66	LEU
14	CO	82	ILE
15	CP	2	VAL
15	CP	36	ILE
15	CP	54	GLU
16	CQ	6	LEU
16	CQ	9	VAL
16	CQ	19	VAL
16	CQ	48	GLU
16	CQ	52	LYS
16	CQ	59	ILE
16	CQ	63	ARG
16	CQ	68	ARG
16	CQ	69	LYS
16	CQ	70	ARG
16	CQ	74	LEU
16	CQ	76	LEU
16	CQ	89	LEU
16	CQ	93	GLN
16	CQ	98	LEU
17	CR	22	VAL
17	CR	34	TYR
17	CR	36	ASN
17	CR	37	VAL
17	CR	41	LYS
17	CR	43	PHE
17	CR	51	LEU
17	CR	58	LEU
17	CR	72	ARG
17	CR	76	LEU
17	CR	79	LEU
17	CR	83	GLU
18	CS	5	LEU
18	CS	6	LYS
18	CS	11	VAL
18	CS	14	HIS
18	CS	15	LEU
18	CS	19	VAL
18	CS	25	LYS
18	CS	38	SER

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Mol	Chain	Res	Type
18	CS	39	THR
18	CS	40	ILE
18	CS	47	HIS
18	CS	51	VAL
18	CS	58	VAL
18	CS	60	VAL
18	CS	61	TYR
18	CS	62	ILE
18	CS	66	MET
18	CS	79	THR
19	CT	13	LEU
19	CT	23	ARG
19	CT	33	ILE
19	CT	46	GLU
19	CT	54	LYS
19	CT	57	ARG
19	CT	73	HIS
19	CT	74	LYS
19	CT	82	SER
23	CY	8	ASP
23	CY	9	LEU
23	CY	14	ASN
23	CY	15	ILE
23	CY	20	HIS
23	CY	27	THR
23	CY	36	THR
23	CY	84	THR
23	CY	91	THR
23	CY	92	ILE
23	CY	93	GLU
23	CY	117	GLN
23	CY	119	GLU
23	CY	126	GLU
23	CY	132	ARG
23	CY	133	ILE
23	CY	137	ASN
23	CY	139	MET
23	CY	140	ASP
23	CY	141	LYS
23	CY	146	LEU
23	CY	147	TRP
23	CY	157	LEU

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Mol	Chain	Res	Type
23	CY	164	MET
23	CY	170	ARG
23	CY	171	GLU
23	CY	178	ILE
23	CY	181	LEU
23	CY	191	ASP
23	CY	197	ARG
23	CY	199	ILE
23	CY	204	GLU
23	CY	210	ARG
23	CY	211	GLU
23	CY	215	LYS
23	CY	224	ASP
23	CY	225	GLU
23	CY	226	ASN
23	CY	227	ILE
23	CY	229	LEU
23	CY	230	LYS
23	CY	232	LEU
23	CY	240	GLU
23	CY	248	LYS
23	CY	260	LEU
23	CY	270	GLN
23	CY	273	LEU
23	CY	297	GLU
23	CY	299	VAL
23	CY	302	HIS
23	CY	312	LEU
23	CY	314	PHE
23	CY	316	ILE
23	CY	328	ILE
23	CY	336	THR
23	CY	340	TYR
23	CY	341	VAL
23	CY	345	THR
23	CY	352	VAL
23	CY	355	LEU
23	CY	364	GLU
23	CY	382	GLU
23	CY	384	ILE
23	CY	389	LEU
23	CY	390	VAL

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Mol	Chain	Res	Type
23	CY	393	ASP
23	CY	404	VAL
23	CY	406	GLU
23	CY	420	ASP
23	CY	422	GLU
23	CY	428	LEU
23	CY	440	VAL
23	CY	451	ILE
23	CY	454	MET
23	CY	468	ARG
23	CY	471	LYS
23	CY	480	GLN
23	CY	485	GLU
23	CY	487	ILE
23	CY	488	THR
23	CY	492	ASP
23	CY	498	ILE
23	CY	501	THR
23	CY	504	ARG
23	CY	506	GLN
23	CY	512	ILE
23	CY	513	LYS
23	CY	514	VAL
23	CY	529	ILE
23	CY	536	LYS
23	CY	555	LEU
23	CY	556	ILE
23	CY	563	ILE
23	CY	572	TYR
23	CY	580	MET
23	CY	595	GLN
23	CY	600	VAL
23	CY	603	GLU
23	CY	605	ILE
23	CY	610	VAL
23	CY	614	GLU
23	CY	615	GLU
23	CY	617	MET
23	CY	621	ILE
23	CY	624	LEU
23	CY	630	GLN
23	CY	632	LEU

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Mol	Chain	Res	Type
23	CY	639	ASN
23	CY	641	GLN
23	CY	647	VAL
23	CY	651	GLU
23	CY	658	ASP
23	CY	670	VAL
23	CY	676	TYR
23	CY	679	VAL
24	DC	9	ARG
24	DC	15	VAL
24	DC	19	LYS
24	DC	20	VAL
24	DC	28	ARG
24	DC	39	ASP
24	DC	41	THR
24	DC	42	VAL
24	DC	47	LYS
24	DC	48	LEU
24	DC	54	ARG
24	DC	60	ARG
24	DC	64	SER
24	DC	73	VAL
24	DC	94	TYR
24	DC	95	VAL
24	DC	98	GLU
24	DC	102	GLN
24	DC	104	ILE
24	DC	114	VAL
24	DC	115	VAL
24	DC	119	ASP
24	DC	131	ILE
24	DC	138	LEU
24	DC	139	PRO
24	DC	145	THR
24	DC	161	ARG
24	DC	162	ILE
24	DC	164	PHE
24	DC	166	ASN
24	DC	167	ASP
24	DC	169	THR
24	DC	172	ILE
24	DC	176	VAL

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Mol	Chain	Res	Type
24	DC	185	LYS
24	DC	198	GLU
24	DC	201	LYS
24	DC	208	THR
24	DC	211	ARG
24	DC	213	VAL
24	DC	215	VAL
24	DC	224	ARG
25	DD	4	LYS
25	DD	5	LYS
25	DD	25	THR
25	DD	26	LYS
25	DD	30	GLU
25	DD	34	VAL
25	DD	40	THR
25	DD	43	ARG
25	DD	44	ASN
25	DD	64	ILE
25	DD	65	ILE
25	DD	67	PHE
25	DD	71	ASP
25	DD	78	LYS
25	DD	82	ILE
25	DD	87	ASN
25	DD	94	LEU
25	DD	97	TYR
25	DD	98	VAL
25	DD	105	ILE
25	DD	106	ILE
25	DD	113	VAL
25	DD	117	VAL
25	DD	133	LEU
25	DD	136	ILE
25	DD	140	THR
25	DD	142	VAL
25	DD	147	LEU
25	DD	148	GLU
25	DD	150	LYS
25	DD	161	THR
25	DD	164	GLN
25	DD	165	ILE
25	DD	173	VAL

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Mol	Chain	Res	Type
25	DD	175	LEU
25	DD	230	ASP
25	DD	233	HIS
25	DD	242	ARG
25	DD	244	ARG
25	DD	254	THR
25	DD	259	THR
25	DD	260	ARG
26	DE	4	ILE
26	DE	21	VAL
26	DE	27	LEU
26	DE	33	VAL
26	DE	34	VAL
26	DE	35	GLN
26	DE	47	VAL
26	DE	49	LEU
26	DE	54	GLN
26	DE	58	ARG
26	DE	61	ARG
26	DE	72	VAL
26	DE	87	GLU
26	DE	93	VAL
26	DE	94	GLU
26	DE	109	LYS
26	DE	111	ARG
26	DE	119	ARG
26	DE	132	HIS
26	DE	134	ILE
26	DE	143	ASN
26	DE	144	ARG
26	DE	145	LYS
26	DE	154	LYS
26	DE	164	ARG
26	DE	172	VAL
26	DE	173	VAL
26	DE	175	VAL
26	DE	184	VAL
26	DE	195	LEU
26	DE	196	VAL
26	DE	197	ILE
26	DE	200	GLU
26	DE	202	LYS

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Mol	Chain	Res	Type
27	DF	8	GLN
27	DF	9	ILE
27	DF	12	LEU
27	DF	19	GLU
27	DF	28	ILE
27	DF	33	LEU
27	DF	40	GLN
27	DF	45	ARG
27	DF	46	ARG
27	DF	51	THR
27	DF	68	LYS
27	DF	74	ARG
27	DF	75	HIS
27	DF	82	ILE
27	DF	84	VAL
27	DF	100	THR
27	DF	124	LEU
27	DF	136	THR
27	DF	140	LEU
27	DF	149	ASP
27	DF	152	GLU
27	DF	154	VAL
27	DF	170	LEU
27	DF	175	THR
27	DF	186	ILE
27	DF	190	GLU
28	DG	5	VAL
28	DG	11	TYR
28	DG	16	ARG
28	DG	31	VAL
28	DG	33	ARG
28	DG	34	LEU
28	DG	35	GLU
28	DG	53	LEU
28	DG	54	GLU
28	DG	55	LYS
28	DG	63	ILE
28	DG	67	LYS
28	DG	72	ARG
28	DG	86	MET
28	DG	95	ARG
28	DG	99	MET

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Mol	Chain	Res	Type
28	DG	109	VAL
28	DG	113	ARG
28	DG	120	LEU
28	DG	121	ASN
28	DG	130	ASN
28	DG	143	GLU
28	DG	144	ILE
28	DG	152	LEU
28	DG	166	ASP
28	DG	168	GLU
29	DH	17	VAL
29	DH	18	GLU
29	DH	34	GLU
29	DH	37	VAL
29	DH	43	VAL
29	DH	52	VAL
29	DH	63	SER
29	DH	65	HIS
29	DH	70	THR
29	DH	71	LEU
29	DH	106	THR
29	DH	110	SER
29	DH	115	VAL
29	DH	122	THR
29	DH	129	THR
29	DH	132	ARG
29	DH	133	VAL
29	DH	136	ILE
29	DH	141	VAL
29	DH	143	GLN
29	DH	158	HIS
29	DH	169	VAL
29	DH	171	LEU
31	DK	2	LYS
31	DK	11	GLN
31	DK	29	GLN
31	DK	34	ILE
31	DK	37	PHE
31	DK	41	PHE
31	DK	42	ASN
31	DK	57	ILE
31	DK	59	ILE

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Mol	Chain	Res	Type
31	DK	66	THR
31	DK	78	ILE
31	DK	90	LYS
31	DK	105	LEU
31	DK	117	THR
31	DK	120	LEU
32	DN	1	MET
32	DN	7	LYS
32	DN	32	THR
32	DN	42	TRP
32	DN	45	ASN
32	DN	48	MET
32	DN	50	ASP
32	DN	71	ILE
32	DN	87	LEU
32	DN	89	LYS
32	DN	99	LEU
32	DN	111	PRO
32	DN	112	LEU
32	DN	131	GLN
32	DN	137	LYS
32	DN	138	LEU
33	DO	8	LEU
33	DO	9	GLU
33	DO	14	THR
33	DO	23	ARG
33	DO	25	LEU
33	DO	28	SER
33	DO	31	LYS
33	DO	35	VAL
33	DO	38	VAL
33	DO	39	ILE
33	DO	52	VAL
33	DO	57	VAL
33	DO	69	ILE
33	DO	79	PHE
33	DO	87	ILE
33	DO	91	LEU
33	DO	98	VAL
33	DO	108	GLU
34	DP	7	ARG
34	DP	13	ASN

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Mol	Chain	Res	Type
34	DP	15	ARG
34	DP	29	LYS
34	DP	32	THR
34	DP	39	LYS
34	DP	40	SER
34	DP	42	SER
34	DP	58	THR
34	DP	60	MET
34	DP	62	LEU
34	DP	74	GLU
34	DP	85	LEU
34	DP	100	LEU
34	DP	102	ARG
34	DP	106	LEU
34	DP	107	LYS
34	DP	123	LEU
34	DP	135	LEU
34	DP	138	LEU
34	DP	144	GLU
34	DP	146	VAL
34	DP	148	LEU
35	DQ	1	MET
35	DQ	2	LEU
35	DQ	3	MET
35	DQ	7	MET
35	DQ	10	ARG
35	DQ	18	LYS
35	DQ	25	ASP
35	DQ	42	ILE
35	DQ	43	THR
35	DQ	46	GLN
35	DQ	66	ILE
35	DQ	68	ILE
35	DQ	85	LYS
35	DQ	90	VAL
35	DQ	91	GLU
35	DQ	93	TYR
35	DQ	105	GLU
35	DQ	111	GLU
35	DQ	125	LEU
35	DQ	127	ILE
35	DQ	128	LYS

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Mol	Chain	Res	Type
35	DQ	129	THR
35	DQ	131	ILE
35	DQ	135	ASP
35	DQ	137	TYR
36	DR	3	HIS
36	DR	4	LEU
36	DR	14	SER
36	DR	21	TYR
36	DR	27	SER
36	DR	29	LEU
36	DR	34	ILE
36	DR	43	GLU
36	DR	44	LEU
36	DR	45	ARG
36	DR	56	LYS
36	DR	71	GLN
36	DR	72	ASP
36	DR	79	LEU
36	DR	87	TYR
36	DR	88	ARG
36	DR	99	LYS
36	DR	100	LEU
36	DR	102	GLU
37	DS	12	PHE
37	DS	13	ARG
37	DS	15	ARG
37	DS	18	ILE
37	DS	28	VAL
37	DS	40	ILE
37	DS	47	THR
37	DS	54	LEU
37	DS	64	GLU
37	DS	69	VAL
37	DS	73	LEU
37	DS	84	GLN
37	DS	98	VAL
37	DS	99	LYS
37	DS	101	LEU
37	DS	106	ARG
38	DT	1	MET
38	DT	6	LEU
38	DT	11	GLU

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Mol	Chain	Res	Type
38	DT	13	ARG
38	DT	15	VAL
38	DT	27	THR
38	DT	30	VAL
38	DT	33	LYS
38	DT	42	ILE
38	DT	48	ILE
38	DT	50	ILE
38	DT	53	ARG
38	DT	59	THR
38	DT	62	THR
38	DT	65	LYS
38	DT	70	VAL
38	DT	74	ARG
38	DT	75	ILE
38	DT	80	SER
38	DT	82	LEU
38	DT	83	ILE
38	DT	84	GLN
38	DT	85	LYS
38	DT	90	GLN
38	DT	95	ARG
38	DT	102	ILE
38	DT	105	LEU
38	DT	115	ARG
38	DT	124	ASP
39	DU	14	HIS
39	DU	18	LEU
39	DU	51	LYS
39	DU	52	ARG
39	DU	55	ARG
39	DU	60	LEU
39	DU	64	ARG
39	DU	74	LEU
39	DU	76	TYR
39	DU	90	VAL
39	DU	94	ASN
39	DU	95	LEU
39	DU	98	LEU
39	DU	101	ARG
39	DU	114	LYS
40	DV	7	THR

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Mol	Chain	Res	Type
40	DV	10	LYS
40	DV	14	VAL
40	DV	19	LYS
40	DV	20	LEU
40	DV	24	LYS
40	DV	33	VAL
40	DV	35	LEU
40	DV	37	VAL
40	DV	40	LEU
40	DV	49	THR
40	DV	57	VAL
40	DV	62	LEU
40	DV	64	HIS
40	DV	74	LYS
40	DV	78	LYS
40	DV	80	GLN
40	DV	92	THR
40	DV	99	ILE
41	DW	9	TYR
41	DW	11	ARG
41	DW	17	VAL
41	DW	19	LEU
41	DW	28	SER
41	DW	30	GLU
41	DW	37	ARG
41	DW	51	LEU
41	DW	66	GLU
41	DW	88	ARG
41	DW	94	ASP
41	DW	95	ILE
41	DW	106	ILE
41	DW	107	LEU
41	DW	113	LYS
42	DX	6	ASP
42	DX	8	ILE
42	DX	15	GLU
42	DX	35	THR
42	DX	41	ASN
42	DX	51	VAL
42	DX	53	LYS
42	DX	54	VAL
42	DX	57	LEU

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Mol	Chain	Res	Type
42	DX	58	HIS
42	DX	59	VAL
42	DX	63	LYS
42	DX	80	ILE
42	DX	87	GLN
42	DX	93	GLU
43	DY	5	MET
43	DY	7	VAL
43	DY	9	LYS
43	DY	13	VAL
43	DY	19	LYS
43	DY	35	TYR
43	DY	39	VAL
43	DY	42	VAL
43	DY	45	VAL
43	DY	47	LYS
43	DY	49	VAL
43	DY	50	ARG
43	DY	64	GLU
43	DY	76	CYS
43	DY	84	ARG
43	DY	85	VAL
43	DY	89	PHE
43	DY	90	LEU
43	DY	99	CYS
44	DZ	9	TYR
44	DZ	27	VAL
44	DZ	28	MET
44	DZ	29	TYR
44	DZ	42	VAL
44	DZ	46	LYS
44	DZ	59	LEU
44	DZ	70	LEU
44	DZ	73	GLN
44	DZ	75	ASN
44	DZ	81	ARG
44	DZ	82	ARG
44	DZ	87	ASP
44	DZ	90	VAL
44	DZ	96	VAL
44	DZ	98	MET
44	DZ	123	ASP

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Mol	Chain	Res	Type
44	DZ	124	ILE
44	DZ	127	LYS
44	DZ	131	ARG
44	DZ	133	ILE
44	DZ	150	LEU
44	DZ	151	HIS
44	DZ	154	ASP
44	DZ	162	GLU
44	DZ	165	VAL
44	DZ	175	VAL
44	DZ	185	GLU
45	D0	3	HIS
45	D0	20	ARG
45	D0	27	GLU
45	D0	29	GLN
45	D0	31	VAL
45	D0	36	ILE
45	D0	37	LEU
45	D0	41	ARG
45	D0	43	THR
45	D0	67	VAL
45	D0	75	LEU
45	D0	84	LEU
46	D2	8	LYS
46	D2	31	GLU
46	D2	35	LEU
46	D2	37	PHE
46	D2	47	ASN
46	D2	64	LEU
46	D2	70	GLN
47	D3	7	LYS
47	D3	32	GLN
47	D3	37	LEU
47	D3	52	HIS
47	D3	54	VAL
47	D3	59	VAL
48	D5	6	VAL
48	D5	13	LYS
48	D5	23	HIS
48	D5	26	THR
48	D5	29	THR
48	D5	30	LEU

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Mol	Chain	Res	Type
48	D5	44	THR
48	D5	55	ARG
48	D5	58	LEU
49	D6	9	LEU
49	D6	10	LEU
49	D6	11	LEU
49	D6	13	CYS
49	D6	18	ARG
49	D6	19	ARG
49	D6	27	LYS
49	D6	30	THR
49	D6	48	VAL
50	D7	22	MET
50	D7	33	ARG
50	D7	40	TRP
50	D7	41	ARG
50	D7	42	LEU
50	D7	46	VAL
50	D7	48	LYS
51	D8	6	THR
51	D8	15	LYS
51	D8	16	ILE
51	D8	17	THR
51	D8	30	ARG
51	D8	32	LEU
51	D8	34	TRP
51	D8	36	LYS
51	D8	42	ARG
51	D8	49	VAL
51	D8	50	LEU
51	D8	53	PRO
51	D8	56	GLU
51	D8	59	LYS
51	D8	61	LEU
52	D9	2	LYS
52	D9	22	ARG
53	De	62	VAL
53	De	64	LEU
53	De	73	GLU
53	De	75	ILE
53	De	78	LEU
53	De	81	ILE

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Mol	Chain	Res	Type
53	De	86	LEU
53	De	94	GLU
53	De	101	GLU
53	De	118	VAL
56	D1	5	CYS
56	D1	18	ILE
56	D1	20	ARG
56	D1	26	ARG
56	D1	32	LYS
56	D1	37	ILE
56	D1	39	LYS
56	D1	41	ARG
56	D1	43	TYR
56	D1	46	LEU
56	D1	51	VAL
56	D1	58	ILE
56	D1	65	SER
56	D1	67	ILE
56	D1	82	LEU
56	D1	94	LEU
57	D4	1	MET
57	D4	9	LEU
57	D4	10	VAL
57	D4	30	GLU
57	D4	31	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (147) such sidechains are listed below:

Mol	Chain	Res	Type
1	AB	16	HIS
1	AB	78	GLN
1	AB	240	GLN
2	AC	31	HIS
2	AC	170	GLN
4	AE	56	GLN
5	AF	57	GLN
5	AF	94	GLN
6	AG	11	GLN
6	AG	28	ASN
6	AG	51	GLN
9	AJ	76	ASN
10	AK	116	HIS

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Mol	Chain	Res	Type
11	AL	8	ASN
14	AO	9	GLN
14	AO	13	GLN
15	AP	16	HIS
16	AQ	16	GLN
18	AS	69	HIS
19	AT	26	ASN
23	AY	20	HIS
23	AY	80	ASN
23	AY	137	ASN
23	AY	270	GLN
23	AY	302	HIS
23	AY	306	ASN
23	AY	443	HIS
23	AY	506	GLN
23	AY	527	ASN
24	BC	58	ASN
24	BC	166	ASN
25	BD	115	GLN
25	BD	231	HIS
26	BE	35	GLN
26	BE	159	HIS
26	BE	180	ASN
27	BF	40	GLN
28	BG	41	GLN
28	BG	58	GLN
29	BH	61	HIS
29	BH	143	GLN
31	BK	33	ASN
31	BK	103	GLN
31	BK	116	ASN
32	BN	45	ASN
32	BN	69	GLN
32	BN	94	HIS
32	BN	131	GLN
32	BN	133	GLN
33	BO	3	GLN
33	BO	5	GLN
34	BP	128	HIS
36	BR	13	HIS
36	BR	61	HIS
36	BR	91	GLN

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Mol	Chain	Res	Type
38	BT	38	ASN
38	BT	58	ASN
38	BT	84	GLN
42	BX	31	HIS
42	BX	41	ASN
42	BX	55	ASN
42	BX	58	HIS
44	BZ	30	ASN
47	B3	32	GLN
49	B6	32	ASN
53	Be	106	GLN
56	B1	19	GLN
1	CB	16	HIS
1	CB	135	GLN
2	CC	136	GLN
2	CC	170	GLN
3	CD	62	GLN
3	CD	116	GLN
4	CE	127	ASN
4	CE	130	ASN
5	CF	27	GLN
5	CF	84	ASN
6	CG	11	GLN
6	CG	13	GLN
7	CH	15	ASN
7	CH	78	GLN
7	CH	82	HIS
8	CI	29	ASN
8	CI	124	GLN
10	CK	26	ASN
11	CL	8	ASN
12	CM	62	ASN
14	CO	62	GLN
14	CO	71	GLN
16	CQ	45	HIS
17	CR	36	ASN
18	CS	53	ASN
18	CS	56	GLN
18	CS	57	HIS
18	CS	65	ASN
19	CT	16	HIS
23	CY	14	ASN

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Mol	Chain	Res	Type
23	CY	77	HIS
23	CY	80	ASN
23	CY	117	GLN
23	CY	137	ASN
23	CY	190	ASN
23	CY	443	HIS
23	CY	625	ASN
23	CY	684	GLN
24	DC	140	ASN
24	DC	226	ASN
25	DD	115	GLN
26	DE	121	ASN
26	DE	143	ASN
26	DE	159	HIS
26	DE	192	ASN
28	DG	108	ASN
28	DG	121	ASN
28	DG	130	ASN
31	DK	29	GLN
31	DK	30	HIS
31	DK	103	GLN
32	DN	45	ASN
32	DN	69	GLN
32	DN	94	HIS
32	DN	131	GLN
32	DN	133	GLN
33	DO	5	GLN
34	DP	128	HIS
36	DR	23	ASN
37	DS	61	ASN
37	DS	68	GLN
38	DT	104	ASN
39	DU	49	HIS
39	DU	75	ASN
39	DU	94	ASN
39	DU	104	GLN
40	DV	64	HIS
42	DX	58	HIS
44	DZ	73	GLN
46	D2	38	GLN
46	D2	46	GLN
46	D2	48	HIS

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Mol	Chain	Res	Type
46	D2	71	ASN
47	D3	33	GLN
47	D3	46	ASN
49	D6	20	ASN
49	D6	49	HIS
52	D9	29	ASN
56	D1	42	GLN
56	D1	66	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
20	AA	1510/1511 (99%)	291 (19%)	17 (1%)
20	CA	1510/1511 (99%)	294 (19%)	16 (1%)
21	AW	76/77 (98%)	21 (27%)	2 (2%)
21	CW	76/77 (98%)	24 (31%)	2 (2%)
22	AV	22/23 (95%)	11 (50%)	1 (4%)
22	CV	22/23 (95%)	8 (36%)	2 (9%)
58	BA	2878/2879 (99%)	666 (23%)	22 (0%)
58	DA	2878/2879 (99%)	658 (22%)	23 (0%)
59	BB	118/119 (99%)	17 (14%)	2 (1%)
59	DB	118/119 (99%)	14 (11%)	1 (0%)
All	All	9208/9218 (99%)	2004 (21%)	88 (0%)

All (2004) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
20	AA	9	G
20	AA	13	U
20	AA	32	A
20	AA	39	G
20	AA	47	C
20	AA	48	C
20	AA	50	A
20	AA	51	A
20	AA	60	A
20	AA	68(H)	G
20	AA	68(L)	U
20	AA	68(M)	U
20	AA	68(P)	C
20	AA	68(Q)	U

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Mol	Chain	Res	Type
20	AA	68(W)	G
20	AA	106	C
20	AA	109	A
20	AA	116	A
20	AA	121	C
20	AA	127	G
20	AA	129(A)	G
20	AA	131	C
20	AA	163	C
20	AA	175	C
20	AA	179	A
20	AA	186(H)	U
20	AA	186(L)	G
20	AA	195	A
20	AA	201(C)	U
20	AA	216	G
20	AA	231	G
20	AA	233	C
20	AA	247	G
20	AA	251	G
20	AA	267	C
20	AA	279	A
20	AA	280	C
20	AA	281	G
20	AA	289	G
20	AA	290	C
20	AA	297	G
20	AA	306	G
20	AA	309	G
20	AA	315	A
20	AA	316	G
20	AA	321	A
20	AA	328	C
20	AA	329	A
20	AA	332	G
20	AA	345	C
20	AA	346	G
20	AA	347	G
20	AA	352	C
20	AA	353	A
20	AA	354	G
20	AA	356	A

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Mol	Chain	Res	Type
20	AA	363	A
20	AA	367	U
20	AA	372	C
20	AA	384	G
20	AA	390	C
20	AA	396	G
20	AA	397	A
20	AA	398	C
20	AA	405	U
20	AA	407	G
20	AA	412	A
20	AA	413	G
20	AA	414	A
20	AA	422	C
20	AA	424	G
20	AA	429	U
20	AA	430	A
20	AA	440	A
20	AA	452	A
20	AA	453	A
20	AA	458	C
20	AA	458(B)	A
20	AA	458(D)	G
20	AA	481	G
20	AA	485	G
20	AA	492	G
20	AA	497	A
20	AA	498	U
20	AA	505	G
20	AA	511	C
20	AA	514	C
20	AA	518	C
20	AA	521	G
20	AA	522	C
20	AA	524	G
20	AA	527	G
20	AA	531	U
20	AA	532	A
20	AA	533	A
20	AA	547	A
20	AA	559	A
20	AA	562	C

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Mol	Chain	Res	Type
20	AA	564	C
20	AA	567	G
20	AA	568	G
20	AA	572	A
20	AA	573	A
20	AA	574	A
20	AA	575	G
20	AA	576	G
20	AA	579	G
20	AA	587	G
20	AA	588	G
20	AA	653	A
20	AA	665	A
20	AA	666	G
20	AA	667	G
20	AA	688	G
20	AA	692	U
20	AA	702	A
20	AA	710	G
20	AA	718	G
20	AA	730	G
20	AA	733	A
20	AA	734	G
20	AA	737	A
20	AA	740	U
20	AA	747	C
20	AA	749	C
20	AA	755	G
20	AA	771	G
20	AA	789	U
20	AA	793	U
20	AA	794	A
20	AA	796	C
20	AA	804	U
20	AA	807	A
20	AA	811	C
20	AA	816	A
20	AA	817	C
20	AA	819	A
20	AA	821	G
20	AA	827	U
20	AA	828	A

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Mol	Chain	Res	Type
20	AA	834	C
20	AA	838(A)	U
20	AA	838(B)	C
20	AA	838(C)	U
20	AA	848	C
20	AA	858	G
20	AA	859	A
20	AA	867	G
20	AA	869	G
20	AA	870	U
20	AA	873	A
20	AA	879	C
20	AA	885	G
20	AA	902	G
20	AA	907	A
20	AA	926	G
20	AA	927	G
20	AA	931	C
20	AA	933	G
20	AA	934	C
20	AA	935	A
20	AA	960	U
20	AA	961	U
20	AA	968	A
20	AA	969	A
20	AA	971	G
20	AA	972	C
20	AA	973	G
20	AA	974	A
20	AA	976	G
20	AA	977	A
20	AA	978	A
20	AA	980	C
20	AA	983	A
20	AA	984	C
20	AA	992	U
20	AA	993	G
20	AA	998	G
20	AA	998(A)	C
20	AA	1004	A
20	AA	1013	G
20	AA	1017	G

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Mol	Chain	Res	Type
20	AA	1025	U
20	AA	1028(B)	C
20	AA	1045	C
20	AA	1046	A
20	AA	1047	G
20	AA	1053	G
20	AA	1054	C
20	AA	1055	A
20	AA	1062	U
20	AA	1065	U
20	AA	1066	C
20	AA	1086	U
20	AA	1094	G
20	AA	1095	U
20	AA	1101	A
20	AA	1102	A
20	AA	1113	C
20	AA	1125	U
20	AA	1126	U
20	AA	1129	C
20	AA	1130	A
20	AA	1137	C
20	AA	1138	G
20	AA	1139	G
20	AA	1140	C
20	AA	1146	A
20	AA	1158	C
20	AA	1159	U
20	AA	1160	G
20	AA	1181	G
20	AA	1182	G
20	AA	1191	A
20	AA	1196	U
20	AA	1197	G
20	AA	1198	G
20	AA	1200	C
20	AA	1201	A
20	AA	1204	A
20	AA	1212	U
20	AA	1213	A
20	AA	1214	C
20	AA	1220	G

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Mol	Chain	Res	Type
20	AA	1225	A
20	AA	1227	A
20	AA	1228	C
20	AA	1238	A
20	AA	1241	G
20	AA	1247	U
20	AA	1257	U
20	AA	1260	C
20	AA	1275	A
20	AA	1279	A
20	AA	1280	A
20	AA	1281	U
20	AA	1287	A
20	AA	1291	G
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
20	AA	1338	G
20	AA	1339	A
20	AA	1346	A
20	AA	1347	G
20	AA	1357	A
20	AA	1362(A)	C
20	AA	1364	U
20	AA	1365	G
20	AA	1370	G
20	AA	1377	A
20	AA	1381	U
20	AA	1397	C
20	AA	1398	A
20	AA	1413	A
20	AA	1419	G
20	AA	1431	C
20	AA	1440(C)	G
20	AA	1440(D)	A
20	AA	1440(E)	G
20	AA	1440(I)	A

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Mol	Chain	Res	Type
20	AA	1440(J)	C
20	AA	1440(K)	G
20	AA	1440(L)	G
20	AA	1463	C
20	AA	1491	G
20	AA	1492	A
20	AA	1493	A
20	AA	1494	G
20	AA	1497	G
20	AA	1499	A
20	AA	1502	A
20	AA	1504	G
20	AA	1505	G
20	AA	1506	U
20	AA	1507	A
20	AA	1517	G
20	AA	1520	G
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	AW	8	U
21	AW	16	U
21	AW	17	U
21	AW	18	G
21	AW	19	G
21	AW	20	U
21	AW	20(A)	U
21	AW	21	A
21	AW	22	G
21	AW	25	C
21	AW	30	C
21	AW	36	U
21	AW	42	U
21	AW	46	G
21	AW	47	U
21	AW	48	C
21	AW	50	C

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Mol	Chain	Res	Type
21	AW	51	A
21	AW	58	A
21	AW	60	U
21	AW	61	C
22	AV	5	A
22	AV	10	G
22	AV	12	A
22	AV	14	A
22	AV	15	A
22	AV	16	A
22	AV	18	G
22	AV	19	G
22	AV	21	A
22	AV	23	A
22	AV	24	A
58	BA	10	G
58	BA	12	U
58	BA	15	G
58	BA	17	G
58	BA	27	G
58	BA	34	C
58	BA	35	G
58	BA	36	G
58	BA	43	G
58	BA	46	C
58	BA	48	G
58	BA	49	A
58	BA	51	G
58	BA	58	G
58	BA	61	G
58	BA	73	A
58	BA	75	G
58	BA	84	A
58	BA	87	C
58	BA	98	G
58	BA	101	G
58	BA	102	G
58	BA	104	U
58	BA	113	G
58	BA	118	A
58	BA	119	A
58	BA	120	U

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Mol	Chain	Res	Type
58	BA	131	G
58	BA	137(A)	C
58	BA	149	A
58	BA	155	C
58	BA	171	G
58	BA	181	A
58	BA	188	G
58	BA	193	U
58	BA	196	A
58	BA	197	A
58	BA	199	A
58	BA	201	C
58	BA	204	A
58	BA	205	G
58	BA	216	A
58	BA	221	A
58	BA	222	A
58	BA	227	A
58	BA	228	A
58	BA	229	A
58	BA	230	U
58	BA	233	A
58	BA	248	G
58	BA	252	G
58	BA	256	A
58	BA	265	A
58	BA	270(M)	U
58	BA	270(N)	U
58	BA	270(O)	G
58	BA	270(P)	U
58	BA	270(Q)	C
58	BA	270(R)	C
58	BA	271(D)	U
58	BA	271	G
58	BA	274	G
58	BA	275	G
58	BA	277	C
58	BA	279	C
58	BA	294	A
58	BA	299	A
58	BA	302	C
58	BA	310	A

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Mol	Chain	Res	Type
58	BA	312	G
58	BA	321	G
58	BA	322	A
58	BA	323	G
58	BA	329	G
58	BA	330	A
58	BA	331	A
58	BA	345	A
58	BA	349	G
58	BA	352	G
58	BA	363(A)	G
58	BA	364	C
58	BA	381	G
58	BA	384	U
58	BA	386	G
58	BA	387	U
58	BA	388	G
58	BA	389	G
58	BA	390	A
58	BA	391	G
58	BA	396	G
58	BA	405	U
58	BA	406	G
58	BA	407	G
58	BA	408	G
58	BA	411	G
58	BA	434	U
58	BA	435	C
58	BA	444	C
58	BA	448	U
58	BA	449	A
58	BA	451	C
58	BA	457	A
58	BA	458	G
58	BA	459	U
58	BA	464	U
58	BA	470	A
58	BA	475	U
58	BA	480	A
58	BA	481	G
58	BA	505	A
58	BA	508	G

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Mol	Chain	Res	Type
58	BA	509	C
58	BA	514	A
58	BA	522	G
58	BA	527	C
58	BA	528	A
58	BA	529	A
58	BA	530	G
58	BA	531	C
58	BA	532	A
58	BA	533	G
58	BA	549	G
58	BA	556	G
58	BA	563	G
58	BA	572	A
58	BA	573	G
58	BA	574	C
58	BA	575	A
58	BA	579	G
58	BA	586	A
58	BA	587	C
58	BA	596	G
58	BA	603	A
58	BA	614	U
58	BA	616	A
58	BA	617	G
58	BA	618(B)	C
58	BA	620	G
58	BA	621	A
58	BA	627	A
58	BA	637	A
58	BA	640	C
58	BA	642	G
58	BA	645	C
58	BA	646	A
58	BA	652	U
58	BA	654	U
58	BA	668	G
58	BA	671	C
58	BA	685	A
58	BA	686	G
58	BA	694	U
58	BA	695	G

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Mol	Chain	Res	Type
58	BA	717	G
58	BA	730	C
58	BA	738	G
58	BA	741	G
58	BA	742	G
58	BA	753	C
58	BA	755	C
58	BA	763	G
58	BA	764	A
58	BA	765	G
58	BA	776	G
58	BA	779	U
58	BA	782	A
58	BA	784	A
58	BA	785	G
58	BA	788	A
58	BA	792	G
58	BA	794	G
58	BA	800	A
58	BA	805	G
58	BA	812	C
58	BA	819	A
58	BA	821	A
58	BA	822	U
58	BA	827	U
58	BA	829	A
58	BA	831	G
58	BA	845	G
58	BA	846	C
58	BA	847	U
58	BA	856	C
58	BA	866	A
58	BA	870	A
58	BA	880	G
58	BA	890	A
58	BA	896	A
58	BA	897	C
58	BA	906	G
58	BA	910	A
58	BA	917	A
58	BA	919	G
58	BA	929	G

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Mol	Chain	Res	Type
58	BA	932	G
58	BA	935	C
58	BA	941	A
58	BA	946	G
58	BA	959	A
58	BA	961	C
58	BA	973	A
58	BA	974(A)	G
58	BA	974(B)	C
58	BA	980	A
58	BA	983	A
58	BA	990	A
58	BA	996	A
58	BA	999	U
58	BA	1007	C
58	BA	1009	A
58	BA	1010	A
58	BA	1012	U
58	BA	1013	C
58	BA	1022	G
58	BA	1023	U
58	BA	1025	G
58	BA	1026	U
58	BA	1027	A
58	BA	1032	A
58	BA	1033	U
58	BA	1034	G
58	BA	1041	C
58	BA	1042	G
58	BA	1045	A
58	BA	1046	A
58	BA	1047	G
58	BA	1048	A
58	BA	1058	G
58	BA	1061	U
58	BA	1069	A
58	BA	1070	A
58	BA	1072	C
58	BA	1073	A
58	BA	1075	C
58	BA	1079	C
58	BA	1085	A

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Mol	Chain	Res	Type
58	BA	1086	A
58	BA	1088	A
58	BA	1090	U
58	BA	1103	A
58	BA	1106	G
58	BA	1110	G
58	BA	1112	G
58	BA	1113	U
58	BA	1127	A
58	BA	1130	U
58	BA	1132	A
58	BA	1135	C
58	BA	1136	G
58	BA	1137	G
58	BA	1138	G
58	BA	1139	G
58	BA	1141	U
58	BA	1147	C
58	BA	1157	G
58	BA	1175	U
58	BA	1176	G
58	BA	1186	G
58	BA	1192	G
58	BA	1199	U
58	BA	1201	C
58	BA	1204	A
58	BA	1206	G
58	BA	1210	A
58	BA	1212	G
58	BA	1215	G
58	BA	1221	C
58	BA	1226	A
58	BA	1231	G
58	BA	1236	G
58	BA	1237	A
58	BA	1241	A
58	BA	1242	A
58	BA	1244	G
58	BA	1247	A
58	BA	1248	G
58	BA	1249	U
58	BA	1253	A

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Mol	Chain	Res	Type
58	BA	1256	G
58	BA	1265	A
58	BA	1271	G
58	BA	1272	A
58	BA	1273	U
58	BA	1274	A
58	BA	1275	A
58	BA	1286	A
58	BA	1288	U
58	BA	1297	C
58	BA	1300	U
58	BA	1301	A
58	BA	1302	A
58	BA	1307	A
58	BA	1312	U
58	BA	1314	C
58	BA	1321	A
58	BA	1325	G
58	BA	1326	U
58	BA	1328	G
58	BA	1329	U
58	BA	1332	G
58	BA	1341	U
58	BA	1349	A
58	BA	1352	U
58	BA	1359	A
58	BA	1360	A
58	BA	1365	A
58	BA	1379	A
58	BA	1380	G
58	BA	1384	A
58	BA	1385	G
58	BA	1387	C
58	BA	1388	G
58	BA	1395	A
58	BA	1396	U
58	BA	1399	C
58	BA	1416	G
58	BA	1420	U
58	BA	1421	G
58	BA	1428	C
58	BA	1429	G

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Mol	Chain	Res	Type
58	BA	1438	U
58	BA	144(B)	A
58	BA	1451	C
58	BA	1453	A
58	BA	1454	U
58	BA	1455	G
58	BA	1458	C
58	BA	1460	A
58	BA	1461	G
58	BA	1467	C
58	BA	1483	G
58	BA	1490	A
58	BA	1491	G
58	BA	1493	C
58	BA	1494	A
58	BA	1495	A
58	BA	1497	U
58	BA	1498	C
58	BA	1510	A
58	BA	1525	G
58	BA	1535	U
58	BA	1536	A
58	BA	1538	G
58	BA	1542	G
58	BA	1543	A
58	BA	1544	C
58	BA	1545	A
58	BA	1547	C
58	BA	1554	A
58	BA	1558	A
58	BA	1559	G
58	BA	1569	A
58	BA	1572	A
58	BA	1578	U
58	BA	1583	A
58	BA	1585	C
58	BA	1598	C
58	BA	1602	U
58	BA	1603	A
58	BA	1607	C
58	BA	1608	A
58	BA	1612	C

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Mol	Chain	Res	Type
58	BA	1614	A
58	BA	1615	C
58	BA	1616	A
58	BA	1617	C
58	BA	1631	A
58	BA	1634	A
58	BA	1640	C
58	BA	1646	C
58	BA	1648	C
58	BA	1651	G
58	BA	1652	A
58	BA	1654	A
58	BA	1664	A
58	BA	1668	A
58	BA	1674	G
58	BA	1675	C
58	BA	1677	A
58	BA	1681	G
58	BA	1690	A
58	BA	1694	C
58	BA	1696	G
58	BA	1698	A
58	BA	1699	G
58	BA	1703	G
58	BA	1729	A
58	BA	1731	G
58	BA	1732	A
58	BA	1743	G
58	BA	1762	A
58	BA	1763	G
58	BA	1764	G
58	BA	1773	A
58	BA	1780	A
58	BA	1781	C
58	BA	1782	C
58	BA	1783	A
58	BA	1784	A
58	BA	1786	A
58	BA	1787	A
58	BA	1791	A
58	BA	1800	C
58	BA	1802	A

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Mol	Chain	Res	Type
58	BA	1803	A
58	BA	1810	A
58	BA	1815	A
58	BA	1816	G
58	BA	1820	U
58	BA	1821	A
58	BA	1829	A
58	BA	1838	C
58	BA	1840	G
58	BA	1847	A
58	BA	1860	G
58	BA	1888	G
58	BA	1889	A
58	BA	1896	G
58	BA	1900	A
58	BA	1903	G
58	BA	1905	C
58	BA	1906	G
58	BA	1913	A
58	BA	1914	C
58	BA	1929	G
58	BA	1936	A
58	BA	1937	A
58	BA	1938	A
58	BA	1939	U
58	BA	1940	U
58	BA	1951	U
58	BA	1955	U
58	BA	1962	C
58	BA	1963	U
58	BA	1967	C
58	BA	1970	A
58	BA	1971	A
58	BA	1972	A
58	BA	1976	U
58	BA	1977	A
58	BA	1978	A
58	BA	1981	A
58	BA	1982	C
58	BA	1991	U
58	BA	1992	G
58	BA	1999	C

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Mol	Chain	Res	Type
58	BA	2002	G
58	BA	2013	A
58	BA	2020	A
58	BA	2021	C
58	BA	2022	U
58	BA	2023	G
58	BA	2030	A
58	BA	2031	A
58	BA	2032	G
58	BA	2033	A
58	BA	2034	U
58	BA	2036	C
58	BA	2039	C
58	BA	2040	C
58	BA	2041	U
58	BA	2042	A
58	BA	2043	C
58	BA	2044	C
58	BA	2052	G
58	BA	2055	C
58	BA	2056	G
58	BA	2060	A
58	BA	2061	G
58	BA	2062	A
58	BA	2067	G
58	BA	2068	U
58	BA	2069	G
58	BA	2080	G
58	BA	2092	U
58	BA	2093	G
58	BA	2115	G
58	BA	2116	G
58	BA	2117	A
58	BA	2118	U
58	BA	2119	A
58	BA	2120	G
58	BA	2130	U
58	BA	2132	U
58	BA	2133	G
58	BA	2136	C
58	BA	2144	U
58	BA	2148	G

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Mol	Chain	Res	Type
58	BA	2154	G
58	BA	2159	G
58	BA	2166	G
58	BA	2171	A
58	BA	2173	A
58	BA	2198	A
58	BA	2210	G
58	BA	2211	G
58	BA	2212	A
58	BA	2213	U
58	BA	2225	A
58	BA	2226	C
58	BA	2234	G
58	BA	2238	G
58	BA	2239	G
58	BA	2243	U
58	BA	2245	U
58	BA	2264	C
58	BA	2266	A
58	BA	2268	A
58	BA	2269	A
58	BA	2275	C
58	BA	2282	G
58	BA	2283	C
58	BA	2287	A
58	BA	2305	A
58	BA	2308	G
58	BA	2309	A
58	BA	2310	A
58	BA	2311	A
58	BA	2319	G
58	BA	2320	A
58	BA	2325	G
58	BA	2327	A
58	BA	2334	G
58	BA	2335	A
58	BA	2336	A
58	BA	2343	C
58	BA	2345	G
58	BA	2346	A
58	BA	2347	C
58	BA	2350	C

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Mol	Chain	Res	Type
58	BA	2361	A
58	BA	2377	A
58	BA	2379	G
58	BA	2383	G
58	BA	2385	C
58	BA	2389	G
58	BA	2402	C
58	BA	2406	U
58	BA	2417	C
58	BA	2422	A
58	BA	2423	U
58	BA	2425	A
58	BA	2427	C
58	BA	2428	G
58	BA	2429	G
58	BA	2430	A
58	BA	2431	U
58	BA	2435	A
58	BA	2436	G
58	BA	2439	A
58	BA	2441	C
58	BA	2447	G
58	BA	2448	A
58	BA	2449	U
58	BA	2450	A
58	BA	2460	U
58	BA	2469	A
58	BA	2470	G
58	BA	2475	C
58	BA	2476	A
58	BA	2477	C
58	BA	2478	A
58	BA	2479	G
58	BA	2480	C
58	BA	2481	G
58	BA	2483	C
58	BA	2487	G
58	BA	2502	G
58	BA	2505	G
58	BA	2507	C
58	BA	2509	G
58	BA	2518	A

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Mol	Chain	Res	Type
58	BA	2519	U
58	BA	2529	G
58	BA	2530	A
58	BA	2542	A
58	BA	2554	U
58	BA	2561	A
58	BA	2562	U
58	BA	2566	A
58	BA	2567	G
58	BA	2568	C
58	BA	2572	A
58	BA	2573	C
58	BA	2574	G
58	BA	2577	A
58	BA	2578	G
58	BA	2583	G
58	BA	2584	U
58	BA	2586	C
58	BA	2602	A
58	BA	2603	G
58	BA	2609	U
58	BA	2610	C
58	BA	2611	U
58	BA	2612	C
58	BA	2615	U
58	BA	2621	A
58	BA	2630	G
58	BA	2645	G
58	BA	2646	C
58	BA	2657	A
58	BA	2663	G
58	BA	2664	G
58	BA	2665	A
58	BA	2667	C
58	BA	2672	G
58	BA	2687	U
58	BA	2689	U
58	BA	2690	C
58	BA	2702	U
58	BA	2703	C
58	BA	2711	A
58	BA	2712	U

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Mol	Chain	Res	Type
58	BA	712(B)	A
58	BA	2713	A
58	BA	2714	G
58	BA	2715	C
58	BA	2718	G
58	BA	2726	U
58	BA	2727	G
58	BA	2730	C
58	BA	2732	G
58	BA	2733	A
58	BA	2746	U
58	BA	2748	A
58	BA	2751	G
58	BA	2755	C
58	BA	2757	A
58	BA	2758	A
58	BA	2764	A
58	BA	2765	A
58	BA	2768	C
58	BA	2777	G
58	BA	2778	A
58	BA	2779	U
58	BA	2780	G
58	BA	2781	A
58	BA	2782	G
58	BA	2789	C
58	BA	2790	A
58	BA	2791	C
58	BA	2792	G
58	BA	2797	U
58	BA	2799	A
58	BA	2801	A
58	BA	2805	G
58	BA	2809	A
58	BA	2811	G
58	BA	2818	G
58	BA	2820	A
58	BA	2821	A
58	BA	2823	A
58	BA	2827	C
58	BA	2834	G
58	BA	2835	A

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Mol	Chain	Res	Type
58	BA	2849	U
58	BA	2851	A
58	BA	2866	U
58	BA	2872	G
58	BA	2879	C
58	BA	2880	C
58	BA	2886	G
58	BA	2892	A
58	BA	2894	G
59	BB	13	A
59	BB	15	A
59	BB	16	G
59	BB	25	A
59	BB	27	C
59	BB	41	U
59	BB	42	C
59	BB	48	A
59	BB	52	A
59	BB	67	G
59	BB	72	G
59	BB	73	A
59	BB	74	U
59	BB	85	G
59	BB	99	A
59	BB	106	G
59	BB	108	C
20	CA	6	G
20	CA	7	G
20	CA	9	G
20	CA	13	U
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(P)	C
20	CA	68(R)	C
20	CA	68(U)	U

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Mol	Chain	Res	Type
20	CA	68(V)	G
20	CA	68(W)	G
20	CA	101	A
20	CA	104	G
20	CA	109	A
20	CA	115	G
20	CA	116	A
20	CA	120	A
20	CA	121	C
20	CA	129(A)	G
20	CA	131	C
20	CA	134	A
20	CA	144	G
20	CA	151	A
20	CA	163	C
20	CA	179	A
20	CA	186(E)	C
20	CA	186(G)	C
20	CA	186(H)	U
20	CA	186(I)	U
20	CA	186(K)	G
20	CA	195	A
20	CA	197	A
20	CA	199	G
20	CA	201	C
20	CA	201(C)	U
20	CA	233	C
20	CA	244	U
20	CA	247	G
20	CA	251	G
20	CA	255	G
20	CA	267	C
20	CA	272	C
20	CA	279	A
20	CA	280	C
20	CA	281	G
20	CA	289	G
20	CA	301	G
20	CA	309	G
20	CA	321	A
20	CA	328	C
20	CA	329	A

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Mol	Chain	Res	Type
20	CA	332	G
20	CA	345	C
20	CA	347	G
20	CA	352	C
20	CA	353	A
20	CA	354	G
20	CA	363	A
20	CA	366	C
20	CA	367	U
20	CA	372	C
20	CA	373	A
20	CA	384	G
20	CA	390	C
20	CA	392	G
20	CA	397	A
20	CA	398	C
20	CA	407	G
20	CA	408	A
20	CA	409	G
20	CA	412	A
20	CA	413	G
20	CA	414	A
20	CA	422	C
20	CA	423	G
20	CA	424	G
20	CA	429	U
20	CA	430	A
20	CA	440	A
20	CA	452	A
20	CA	453	A
20	CA	458(B)	A
20	CA	485	G
20	CA	492	G
20	CA	497	A
20	CA	498	U
20	CA	505	G
20	CA	508	C
20	CA	509	A
20	CA	511	C
20	CA	512	U
20	CA	517	G
20	CA	518	C

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Mol	Chain	Res	Type
20	CA	521	G
20	CA	524	G
20	CA	527	G
20	CA	531	U
20	CA	532	A
20	CA	533	A
20	CA	547	A
20	CA	559	A
20	CA	561	U
20	CA	562	C
20	CA	564	C
20	CA	568	G
20	CA	572	A
20	CA	574	A
20	CA	575	G
20	CA	576	G
20	CA	577	G
20	CA	586	C
20	CA	633	G
20	CA	653	A
20	CA	665	A
20	CA	666	G
20	CA	667	G
20	CA	668	G
20	CA	672	U
20	CA	673	G
20	CA	678	U
20	CA	688	G
20	CA	690	G
20	CA	695	A
20	CA	701	C
20	CA	703	G
20	CA	714	G
20	CA	748	C
20	CA	749	C
20	CA	753	A
20	CA	761	G
20	CA	778	G
20	CA	780	A
20	CA	787	A
20	CA	793	U
20	CA	794	A

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Mol	Chain	Res	Type
20	CA	796	C
20	CA	805	C
20	CA	816	A
20	CA	817	C
20	CA	818	G
20	CA	819	A
20	CA	821	G
20	CA	828	A
20	CA	838(A)	U
20	CA	838(B)	C
20	CA	848	C
20	CA	858	G
20	CA	859	A
20	CA	867	G
20	CA	873	A
20	CA	875	C
20	CA	888	G
20	CA	902	G
20	CA	923	A
20	CA	926	G
20	CA	927	G
20	CA	932	C
20	CA	934	C
20	CA	935	A
20	CA	946	A
20	CA	960	U
20	CA	961	U
20	CA	966	G
20	CA	969	A
20	CA	971	G
20	CA	972	C
20	CA	974	A
20	CA	976	G
20	CA	977	A
20	CA	978	A
20	CA	979	C
20	CA	980	C
20	CA	983	A
20	CA	992	U
20	CA	993	G
20	CA	1004	A
20	CA	1013	G

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Mol	Chain	Res	Type
20	CA	1028(B)	C
20	CA	1028(E)	G
20	CA	1045	C
20	CA	1053	G
20	CA	1054	C
20	CA	1055	A
20	CA	1061	G
20	CA	1064	G
20	CA	1067	A
20	CA	1070	U
20	CA	1084	G
20	CA	1085	U
20	CA	1094	G
20	CA	1095	U
20	CA	1101	A
20	CA	1102	A
20	CA	1108	G
20	CA	1113	C
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	1140	C
20	CA	1146	A
20	CA	1154	G
20	CA	1159	U
20	CA	1171	G
20	CA	1181	G
20	CA	1182	G
20	CA	1184	G
20	CA	1189	C
20	CA	1190	G
20	CA	1191	A
20	CA	1193	G
20	CA	1196	U
20	CA	1197	G
20	CA	1200	C
20	CA	1201	A
20	CA	1204	A

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Mol	Chain	Res	Type
20	CA	1212	U
20	CA	1213	A
20	CA	1220	G
20	CA	1225	A
20	CA	1227	A
20	CA	1236	A
20	CA	1238	A
20	CA	1256	A
20	CA	1257	U
20	CA	1260	C
20	CA	1273	G
20	CA	1278	U
20	CA	1279	A
20	CA	1280	A
20	CA	1281	U
20	CA	1283	G
20	CA	1287	A
20	CA	1298	C
20	CA	1300	G
20	CA	1301	U
20	CA	1302	U
20	CA	1305	G
20	CA	1311	G
20	CA	1317	C
20	CA	1322	C
20	CA	1331	G
20	CA	1346	A
20	CA	1347	G
20	CA	1353	G
20	CA	1359	C
20	CA	1362(A)	C
20	CA	1364	U
20	CA	1377	A
20	CA	1397	C
20	CA	1398	A
20	CA	1413	A
20	CA	1419	G
20	CA	1433	A
20	CA	1440(B)	G
20	CA	1440(C)	G
20	CA	1440(D)	A
20	CA	1440(E)	G

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Mol	Chain	Res	Type
20	CA	1440(I)	A
20	CA	1440(J)	C
20	CA	1440(K)	G
20	CA	1440(L)	G
20	CA	1475	G
20	CA	1484	C
20	CA	1487	G
20	CA	1492	A
20	CA	1494	G
20	CA	1497	G
20	CA	1502	A
20	CA	1503	A
20	CA	1504	G
20	CA	1505	G
20	CA	1506	U
20	CA	1517	G
20	CA	1520	G
20	CA	1528	U
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	1538	C
21	CW	7	G
21	CW	8	U
21	CW	9	A
21	CW	16	U
21	CW	17	U
21	CW	18	G
21	CW	19	G
21	CW	20	U
21	CW	20(A)	U
21	CW	21	A
21	CW	22	G
21	CW	25	C
21	CW	30	C
21	CW	36	U
21	CW	42	U
21	CW	46	G

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Mol	Chain	Res	Type
21	CW	47	U
21	CW	48	C
21	CW	50	C
21	CW	51	A
21	CW	58	A
21	CW	60	U
21	CW	61	C
21	CW	76	A
22	CV	9	G
22	CV	12	A
22	CV	16	A
22	CV	18	G
22	CV	19	G
22	CV	21	A
22	CV	23	A
22	CV	24	A
58	DA	11	G
58	DA	12	U
58	DA	13	A
58	DA	15	G
58	DA	23	G
58	DA	34	C
58	DA	35	G
58	DA	36	G
58	DA	46	C
58	DA	49	A
58	DA	55	G
58	DA	58	G
58	DA	61	G
58	DA	63	U
58	DA	72	U
58	DA	73	A
58	DA	75	G
58	DA	84	A
58	DA	90	U
58	DA	98	G
58	DA	99	U
58	DA	101	G
58	DA	102	G
58	DA	104	U
58	DA	113	G
58	DA	117	G

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Mol	Chain	Res	Type
58	DA	118	A
58	DA	119	A
58	DA	120	U
58	DA	138	G
58	DA	151	C
58	DA	152	G
58	DA	154	G
58	DA	181	A
58	DA	193	U
58	DA	196	A
58	DA	197	A
58	DA	199	A
58	DA	205	G
58	DA	206	U
58	DA	215	G
58	DA	216	A
58	DA	221	A
58	DA	222	A
58	DA	227	A
58	DA	228	A
58	DA	229	A
58	DA	230	U
58	DA	233	A
58	DA	247	G
58	DA	248	G
58	DA	249	C
58	DA	250	G
58	DA	252	G
58	DA	256	A
58	DA	264	C
58	DA	265	A
58	DA	270(M)	U
58	DA	270(N)	U
58	DA	270(O)	G
58	DA	270(Q)	C
58	DA	270(R)	C
58	DA	271(C)	G
58	DA	271(D)	U
58	DA	271	G
58	DA	274	G
58	DA	275	G
58	DA	277	C

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Mol	Chain	Res	Type
58	DA	279	C
58	DA	299	A
58	DA	300	A
58	DA	302	C
58	DA	310	A
58	DA	321	G
58	DA	322	A
58	DA	323	G
58	DA	324	A
58	DA	329	G
58	DA	330	A
58	DA	352	G
58	DA	353	G
58	DA	363(A)	G
58	DA	363(D)	G
58	DA	364	C
58	DA	380	U
58	DA	386	G
58	DA	387	U
58	DA	388	G
58	DA	389	G
58	DA	390	A
58	DA	391	G
58	DA	392	C
58	DA	396	G
58	DA	404	C
58	DA	405	U
58	DA	406	G
58	DA	407	G
58	DA	411	G
58	DA	412	A
58	DA	434	U
58	DA	444	C
58	DA	446	G
58	DA	448	U
58	DA	449	A
58	DA	451	C
58	DA	456	C
58	DA	457	A
58	DA	459	U
58	DA	464	U
58	DA	465	G

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Mol	Chain	Res	Type
58	DA	470	A
58	DA	475	U
58	DA	480	A
58	DA	481	G
58	DA	505	A
58	DA	508	G
58	DA	509	C
58	DA	527	C
58	DA	530	G
58	DA	531	C
58	DA	532	A
58	DA	533	G
58	DA	546	C
58	DA	556	G
58	DA	559	G
58	DA	563	G
58	DA	572	A
58	DA	573	G
58	DA	575	A
58	DA	579	G
58	DA	586	A
58	DA	587	C
58	DA	588	U
58	DA	595	C
58	DA	599	G
58	DA	603	A
58	DA	616	A
58	DA	617	G
58	DA	620	G
58	DA	621	A
58	DA	625	G
58	DA	627	A
58	DA	634	C
58	DA	637	A
58	DA	645	C
58	DA	646	A
58	DA	647	G
58	DA	652	U
58	DA	654	U
58	DA	655	A
58	DA	666	G
58	DA	667	U

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Mol	Chain	Res	Type
58	DA	671	C
58	DA	672	C
58	DA	685	A
58	DA	686	G
58	DA	688	U
58	DA	695	G
58	DA	717	G
58	DA	730	C
58	DA	735	A
58	DA	738	G
58	DA	742	G
58	DA	747	U
58	DA	753	C
58	DA	762	U
58	DA	765	G
58	DA	770	G
58	DA	776	G
58	DA	779	U
58	DA	782	A
58	DA	783	A
58	DA	784	A
58	DA	785	G
58	DA	788	A
58	DA	789	A
58	DA	790	C
58	DA	791	C
58	DA	792	G
58	DA	794	G
58	DA	800	A
58	DA	805	G
58	DA	812	C
58	DA	814	C
58	DA	819	A
58	DA	821	A
58	DA	827	U
58	DA	829	A
58	DA	833	U
58	DA	845	G
58	DA	846	C
58	DA	847	U
58	DA	852	G
58	DA	859	G

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Mol	Chain	Res	Type
58	DA	866	A
58	DA	870	A
58	DA	889	C
58	DA	890	A
58	DA	896	A
58	DA	897	C
58	DA	910	A
58	DA	917	A
58	DA	919	G
58	DA	932	G
58	DA	933	A
58	DA	941	A
58	DA	945	A
58	DA	946	G
58	DA	959	A
58	DA	961	C
58	DA	962	G
58	DA	972	G
58	DA	974(A)	G
58	DA	974(B)	C
58	DA	975	G
58	DA	980	A
58	DA	983	A
58	DA	990	A
58	DA	991	C
58	DA	996	A
58	DA	1005	C
58	DA	1009	A
58	DA	1012	U
58	DA	1013	C
58	DA	1022	G
58	DA	1023	U
58	DA	1024	G
58	DA	1025	G
58	DA	1026	U
58	DA	1033	U
58	DA	1034	G
58	DA	1039	G
58	DA	1042	G
58	DA	1045	A
58	DA	1046	A
58	DA	1047	G

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Mol	Chain	Res	Type
58	DA	1048	A
58	DA	1056	G
58	DA	1058	G
58	DA	1062	G
58	DA	1070	A
58	DA	1072	C
58	DA	1074	G
58	DA	1075	C
58	DA	1077	A
58	DA	1078	U
58	DA	1079	C
58	DA	1082	U
58	DA	1085	A
58	DA	1088	A
58	DA	1090	U
58	DA	1112	G
58	DA	1125	G
58	DA	1130	U
58	DA	1132	A
58	DA	1135	C
58	DA	1136	G
58	DA	1137	G
58	DA	1139	G
58	DA	1148	A
58	DA	1149	G
58	DA	1153	C
58	DA	1157	G
58	DA	1175	U
58	DA	1176	G
58	DA	1186	G
58	DA	1187	G
58	DA	1199	U
58	DA	1204	A
58	DA	1206	G
58	DA	1210	A
58	DA	1212	G
58	DA	1214	A
58	DA	1215	G
58	DA	1221	C
58	DA	1226	A
58	DA	1241	A
58	DA	1242	A

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Mol	Chain	Res	Type
58	DA	1244	G
58	DA	1248	G
58	DA	1249	U
58	DA	1253	A
58	DA	1255	U
58	DA	1256	G
58	DA	1265	A
58	DA	1271	G
58	DA	1272	A
58	DA	1273	U
58	DA	1286	A
58	DA	1289	C
58	DA	1297	C
58	DA	1300	U
58	DA	1301	A
58	DA	1302	A
58	DA	1307	A
58	DA	1311	G
58	DA	1312	U
58	DA	1313	U
58	DA	1314	C
58	DA	1325	G
58	DA	1329	U
58	DA	1332	G
58	DA	1341	U
58	DA	1343	G
58	DA	1345	C
58	DA	1349	A
58	DA	1352	U
58	DA	1355	G
58	DA	1359	A
58	DA	1360	A
58	DA	1365	A
58	DA	1384	A
58	DA	1385	G
58	DA	1388	G
58	DA	1391	U
58	DA	1396	U
58	DA	1398	C
58	DA	1416	G
58	DA	1420	U
58	DA	1421	G

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Mol	Chain	Res	Type
58	DA	1426	G
58	DA	1428	C
58	DA	144(B)	A
58	DA	1451	C
58	DA	1453	A
58	DA	1454	U
58	DA	1455	G
58	DA	1458	C
58	DA	1460	A
58	DA	1461	G
58	DA	1467	C
58	DA	1483	G
58	DA	1490	A
58	DA	1491	G
58	DA	1493	C
58	DA	1494	A
58	DA	1495	A
58	DA	1497	U
58	DA	1498	C
58	DA	1510	A
58	DA	1529	A
58	DA	1535	U
58	DA	1536	A
58	DA	1538	G
58	DA	1540	G
58	DA	1542	G
58	DA	1543	A
58	DA	1544	C
58	DA	1545	A
58	DA	1547	C
58	DA	1548	C
58	DA	1555	G
58	DA	1557	C
58	DA	1558	A
58	DA	1559	G
58	DA	1568	G
58	DA	1569	A
58	DA	1578	U
58	DA	1579	A
58	DA	1583	A
58	DA	1585	C
58	DA	1602	U

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Mol	Chain	Res	Type
58	DA	1603	A
58	DA	1610	A
58	DA	1614	A
58	DA	1615	C
58	DA	1616	A
58	DA	1617	C
58	DA	1618	A
58	DA	1630	G
58	DA	1634	A
58	DA	1639	U
58	DA	1640	C
58	DA	1646	C
58	DA	1648	C
58	DA	1651	G
58	DA	1654	A
58	DA	1661	G
58	DA	1664	A
58	DA	1667	G
58	DA	1668	A
58	DA	1669	A
58	DA	1674	G
58	DA	1678	G
58	DA	1681	G
58	DA	1694	C
58	DA	1696	G
58	DA	1698	A
58	DA	1699	G
58	DA	1705	G
58	DA	1707	G
58	DA	1729	A
58	DA	1731	G
58	DA	1732	A
58	DA	1750	G
58	DA	1762	A
58	DA	1763	G
58	DA	1764	G
58	DA	1773	A
58	DA	1779	U
58	DA	1780	A
58	DA	1781	C
58	DA	1783	A
58	DA	1786	A

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Mol	Chain	Res	Type
58	DA	1787	A
58	DA	1791	A
58	DA	1796	U
58	DA	1799	G
58	DA	1800	C
58	DA	1802	A
58	DA	1816	G
58	DA	1820	U
58	DA	1821	A
58	DA	1826	G
58	DA	1829	A
58	DA	1833	U
58	DA	1847	A
58	DA	1860	G
58	DA	1878	G
58	DA	1888	G
58	DA	1889	A
58	DA	1900	A
58	DA	1901	A
58	DA	1905	C
58	DA	1906	G
58	DA	1913	A
58	DA	1914	C
58	DA	1929	G
58	DA	1931	U
58	DA	1936	A
58	DA	1937	A
58	DA	1938	A
58	DA	1939	U
58	DA	1940	U
58	DA	1952	A
58	DA	1955	U
58	DA	1963	U
58	DA	1965	C
58	DA	1967	C
58	DA	1970	A
58	DA	1971	A
58	DA	1972	A
58	DA	1976	U
58	DA	1977	A
58	DA	1981	A
58	DA	1982	C

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Mol	Chain	Res	Type
58	DA	1992	G
58	DA	1993	U
58	DA	1999	C
58	DA	2007	C
58	DA	2013	A
58	DA	2020	A
58	DA	2021	C
58	DA	2023	G
58	DA	2030	A
58	DA	2031	A
58	DA	2032	G
58	DA	2033	A
58	DA	2034	U
58	DA	2036	C
58	DA	2039	C
58	DA	2040	C
58	DA	2041	U
58	DA	2043	C
58	DA	2044	C
58	DA	2052	G
58	DA	2054	A
58	DA	2055	C
58	DA	2056	G
58	DA	2060	A
58	DA	2061	G
58	DA	2062	A
58	DA	2065	C
58	DA	2067	G
58	DA	2069	G
58	DA	2093	G
58	DA	2095	C
58	DA	2108	C
58	DA	2115	G
58	DA	2117	A
58	DA	2118	U
58	DA	2120	G
58	DA	2132	U
58	DA	2133	G
58	DA	2136	C
58	DA	2144	U
58	DA	2148	G
58	DA	2154	G

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Mol	Chain	Res	Type
58	DA	2158	A
58	DA	2159	G
58	DA	2170	A
58	DA	2171	A
58	DA	2173	A
58	DA	2190	G
58	DA	2192	G
58	DA	2198	A
58	DA	2208	U
58	DA	2210	G
58	DA	2211	G
58	DA	2212	A
58	DA	2213	U
58	DA	2225	A
58	DA	2234	G
58	DA	2238	G
58	DA	2239	G
58	DA	2241	A
58	DA	2259	G
58	DA	2266	A
58	DA	2268	A
58	DA	2269	A
58	DA	2275	C
58	DA	2278	A
58	DA	2282	G
58	DA	2283	C
58	DA	2287	A
58	DA	2305	A
58	DA	2307	G
58	DA	2308	G
58	DA	2309	A
58	DA	2311	A
58	DA	2319	G
58	DA	2320	A
58	DA	2322	A
58	DA	2325	G
58	DA	2327	A
58	DA	2334	G
58	DA	2336	A
58	DA	2345	G
58	DA	2346	A
58	DA	2347	C

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Mol	Chain	Res	Type
58	DA	2350	C
58	DA	2358	G
58	DA	2376	A
58	DA	2377	A
58	DA	2383	G
58	DA	2385	C
58	DA	2390	U
58	DA	2402	C
58	DA	2403	C
58	DA	2405	G
58	DA	2411	A
58	DA	2422	A
58	DA	2423	U
58	DA	2425	A
58	DA	2427	C
58	DA	2428	G
58	DA	2429	G
58	DA	2430	A
58	DA	2435	A
58	DA	2436	G
58	DA	2439	A
58	DA	2441	C
58	DA	2448	A
58	DA	2450	A
58	DA	2468	G
58	DA	2469	A
58	DA	2470	G
58	DA	2476	A
58	DA	2477	C
58	DA	2478	A
58	DA	2479	G
58	DA	2482	G
58	DA	2483	C
58	DA	2487	G
58	DA	2498	C
58	DA	2502	G
58	DA	2505	G
58	DA	2508	G
58	DA	2509	G
58	DA	2518	A
58	DA	2519	U
58	DA	2529	G

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Mol	Chain	Res	Type
58	DA	2530	A
58	DA	2531	A
58	DA	2532	G
58	DA	2534	A
58	DA	2540	C
58	DA	2542	A
58	DA	2543	G
58	DA	2554	U
58	DA	2566	A
58	DA	2567	G
58	DA	2572	A
58	DA	2573	C
58	DA	2574	G
58	DA	2576	G
58	DA	2577	A
58	DA	2584	U
58	DA	2585	U
58	DA	2586	C
58	DA	2595	G
58	DA	2602	A
58	DA	2609	U
58	DA	2610	C
58	DA	2611	U
58	DA	2612	C
58	DA	2630	G
58	DA	2638	G
58	DA	2646	C
58	DA	2663	G
58	DA	2665	A
58	DA	2667	C
58	DA	2681	C
58	DA	2682	U
58	DA	2689	U
58	DA	2690	C
58	DA	2702	U
58	DA	2703	C
58	DA	2711	A
58	DA	2712	U
58	DA	712(B)	A
58	DA	2713	A
58	DA	2714	G
58	DA	2715	C

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Mol	Chain	Res	Type
58	DA	2718	G
58	DA	2725	A
58	DA	2726	U
58	DA	2727	G
58	DA	2729	G
58	DA	2730	C
58	DA	2732	G
58	DA	2733	A
58	DA	2755	C
58	DA	2757	A
58	DA	2758	A
58	DA	2764	A
58	DA	2765	A
58	DA	2768	C
58	DA	2777	G
58	DA	2778	A
58	DA	2779	U
58	DA	2780	G
58	DA	2781	A
58	DA	2782	G
58	DA	2783	G
58	DA	2786	U
58	DA	2790	A
58	DA	2791	C
58	DA	2792	G
58	DA	2797	U
58	DA	2799	A
58	DA	2815	C
58	DA	2820	A
58	DA	2821	A
58	DA	2830	G
58	DA	2833	G
58	DA	2834	G
58	DA	2835	A
58	DA	2841	C
58	DA	2849	U
58	DA	2851	A
58	DA	2856	C
58	DA	2866	U
58	DA	2872	G
58	DA	2874	C
58	DA	2880	C

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Mol	Chain	Res	Type
58	DA	2886	G
58	DA	2892	A
59	DB	2	C
59	DB	13	A
59	DB	15	A
59	DB	16	G
59	DB	25	A
59	DB	27	C
59	DB	35	U
59	DB	41	U
59	DB	45	A
59	DB	52	A
59	DB	56	G
59	DB	67	G
59	DB	73	A
59	DB	74	U

All (88) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
20	AA	115	G
20	AA	266	G
20	AA	328	C
20	AA	429	U
20	AA	484	G
20	AA	687	A
20	AA	739	C
20	AA	748	C
20	AA	992	U
20	AA	1064	G
20	AA	1101	A
20	AA	1145	C
20	AA	1492	A
20	AA	1504	G
20	AA	1532	U
20	AA	1535	C
20	AA	1537	U
21	AW	20(A)	U
21	AW	41	A
22	AV	18	G
58	BA	221	A
58	BA	271(C)	G

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Mol	Chain	Res	Type
58	BA	278	A
58	BA	363(G)	A
58	BA	474	G
58	BA	479	A
58	BA	586	A
58	BA	1022	G
58	BA	1026	U
58	BA	1060	U
58	BA	1240	U
58	BA	1542	G
58	BA	1558	A
58	BA	1786	A
58	BA	1937	A
58	BA	2039	C
58	BA	2092	U
58	BA	2447	G
58	BA	2688	U
58	BA	2750	A
58	BA	2780	G
58	BA	2791	C
59	BB	66	A
59	BB	98	G
20	CA	115	G
20	CA	243	A
20	CA	266	G
20	CA	328	C
20	CA	352	C
20	CA	484	G
20	CA	687	A
20	CA	748	C
20	CA	992	U
20	CA	1101	A
20	CA	1145	C
20	CA	1200	C
20	CA	1504	G
20	CA	1532	U
20	CA	1535	C
20	CA	1537	U
21	CW	20(A)	U
21	CW	41	A
22	CV	8	A
22	CV	18	G

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Mol	Chain	Res	Type
58	DA	221	A
58	DA	271(C)	G
58	DA	363(G)	A
58	DA	464	U
58	DA	474	G
58	DA	479	A
58	DA	586	A
58	DA	971	C
58	DA	1022	G
58	DA	1240	U
58	DA	1542	G
58	DA	1558	A
58	DA	1786	A
58	DA	1913	A
58	DA	1937	A
58	DA	2039	C
58	DA	2092	U
58	DA	2212	A
58	DA	2447	G
58	DA	2481	G
58	DA	2518	A
58	DA	2780	G
58	DA	2791	C
59	DB	66	A

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

4 ligands 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	$\#\|Z\| > 2$
61	GDP	AY	702	-	29,30,30	1.05	1 (3%)	45,47,47	1.71	9 (20%)
60	FUA	AY	701	-	39,40,40	1.67	7 (17%)	50,64,64	2.20	13 (26%)
61	GDP	CY	702	-	29,30,30	1.05	1 (3%)	45,47,47	1.71	9 (20%)
60	FUA	CY	701	-	39,40,40	1.70	6 (15%)	50,64,64	2.30	13 (26%)

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	GDP	AY	702	-	-	2/16/32/32	0/3/3/3
60	FUA	AY	701	-	-	9/16/92/92	0/4/4/4
61	GDP	CY	702	-	-	2/16/32/32	0/3/3/3
60	FUA	CY	701	-	-	10/16/92/92	0/4/4/4

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
60	CY	701	FUA	C23-C22	-4.46	1.39	1.51
60	CY	701	FUA	C23-C24	-4.45	1.39	1.53
60	AY	701	FUA	C23-C24	-4.39	1.39	1.53
60	AY	701	FUA	C23-C22	-4.36	1.40	1.51
60	CY	701	FUA	C29-C22	4.29	1.53	1.47
60	AY	701	FUA	C29-C22	4.08	1.53	1.47
60	AY	701	FUA	C24-C25	-3.48	1.39	1.50
60	CY	701	FUA	C24-C25	-3.16	1.40	1.50
60	AY	701	FUA	C14-C8	-2.97	1.54	1.59
61	CY	702	GDP	C5-N7	-2.82	1.33	1.39
61	AY	702	GDP	C5-N7	-2.80	1.33	1.39
60	CY	701	FUA	C25-C26	2.78	1.40	1.32
60	AY	701	FUA	C10-C9	-2.34	1.53	1.57
60	AY	701	FUA	C25-C26	2.21	1.39	1.32
60	CY	701	FUA	C14-C8	-2.02	1.55	1.59

All (44) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
60	CY	701	FUA	C13-C12-C11	-7.49	101.03	111.90
60	AY	701	FUA	C13-C12-C11	-7.45	101.09	111.90
60	AY	701	FUA	C24-C23-C22	6.26	126.06	112.72
60	CY	701	FUA	C24-C23-C22	5.75	124.96	112.72
61	AY	702	GDP	C2-N3-C4	5.33	121.47	112.30
61	CY	702	GDP	C2-N3-C4	5.31	121.45	112.30
60	CY	701	FUA	C1-C10-C5	5.10	114.44	107.77
60	CY	701	FUA	C16-O2-C31	-4.98	109.60	117.00
61	AY	702	GDP	C5-C4-N3	-4.77	120.80	128.39
61	CY	702	GDP	C5-C4-N3	-4.75	120.83	128.39
60	AY	701	FUA	C1-C10-C5	4.67	113.88	107.77
60	CY	701	FUA	C2-C1-C10	4.45	120.25	112.74
60	AY	701	FUA	O2-C31-C32	3.58	117.48	111.09
60	AY	701	FUA	C21-C14-C8	-3.49	109.34	112.23
60	CY	701	FUA	C21-C14-C8	-3.41	109.41	112.23
60	CY	701	FUA	C20-C8-C14	-3.29	106.26	110.83
60	CY	701	FUA	C19-C10-C5	-3.24	106.82	111.18
61	AY	702	GDP	C2-N1-C6	-3.21	119.28	125.11
61	CY	702	GDP	C2-N1-C6	-3.20	119.31	125.11
60	AY	701	FUA	C1-C2-C3	-3.18	105.61	111.59
60	AY	701	FUA	C16-O2-C31	-3.15	112.32	117.00
61	AY	702	GDP	N9-C4-N3	3.07	132.09	125.95
61	CY	702	GDP	N9-C4-N3	3.06	132.07	125.95
60	AY	701	FUA	C20-C8-C14	-3.06	106.58	110.83
60	CY	701	FUA	C8-C9-C10	2.84	119.46	116.42
60	CY	701	FUA	O2-C31-C32	2.54	115.61	111.09
60	AY	701	FUA	C10-C9-C11	2.49	120.10	114.94
61	AY	702	GDP	O6-C6-C5	-2.36	120.29	126.53
61	CY	702	GDP	O6-C6-C5	-2.36	120.30	126.53
60	CY	701	FUA	C18-C4-C5	-2.33	109.19	112.95
61	CY	702	GDP	C8-N7-C5	2.31	108.37	104.26
60	CY	701	FUA	O5-C29-O4	-2.30	118.42	123.90
60	CY	701	FUA	C14-C8-C9	-2.29	105.27	109.30
61	AY	702	GDP	C8-N7-C5	2.29	108.34	104.26
61	CY	702	GDP	N9-C8-N7	-2.24	109.25	113.40
60	AY	701	FUA	C7-C8-C14	-2.23	108.85	110.78
61	AY	702	GDP	N9-C8-N7	-2.22	109.29	113.40
61	CY	702	GDP	C4-C5-N7	-2.21	107.17	110.67
61	AY	702	GDP	C4-C5-N7	-2.20	107.19	110.67
60	AY	701	FUA	C28-C26-C27	2.12	119.47	114.59
60	AY	701	FUA	C14-C8-C9	-2.11	105.60	109.30
61	AY	702	GDP	C5-C6-N1	2.10	118.59	113.25
61	CY	702	GDP	C5-C6-N1	2.09	118.56	113.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
60	AY	701	FUA	O5-C29-O4	-2.04	119.04	123.90

There are no chirality outliers.

All (23) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
60	AY	701	FUA	C13-C17-C22-C23
60	AY	701	FUA	C13-C17-C22-C29
60	AY	701	FUA	C29-C22-C23-C24
60	CY	701	FUA	C13-C17-C22-C23
60	CY	701	FUA	C13-C17-C22-C29
60	CY	701	FUA	C29-C22-C23-C24
60	CY	701	FUA	O3-C31-O2-C16
61	AY	702	GDP	C5'-O5'-PA-O3A
61	AY	702	GDP	C5'-O5'-PA-O1A
61	CY	702	GDP	C5'-O5'-PA-O3A
61	CY	702	GDP	C5'-O5'-PA-O1A
60	CY	701	FUA	C32-C31-O2-C16
60	AY	701	FUA	C24-C25-C26-C27
60	AY	701	FUA	C24-C25-C26-C28
60	CY	701	FUA	C24-C25-C26-C27
60	AY	701	FUA	C32-C31-O2-C16
60	AY	701	FUA	O3-C31-O2-C16
60	AY	701	FUA	C22-C23-C24-C25
60	CY	701	FUA	C24-C25-C26-C28
60	AY	701	FUA	C17-C22-C23-C24
60	CY	701	FUA	C17-C22-C23-C24
60	CY	701	FUA	C23-C22-C29-O4
60	CY	701	FUA	C23-C22-C29-O5

There are no ring outliers.

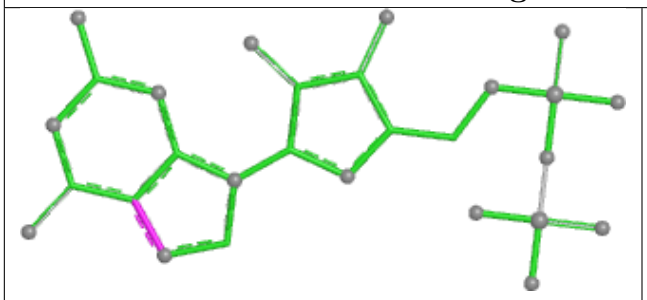
4 monomers are involved in 34 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
61	AY	702	GDP	6	0
60	AY	701	FUA	13	0
61	CY	702	GDP	5	0
60	CY	701	FUA	10	0

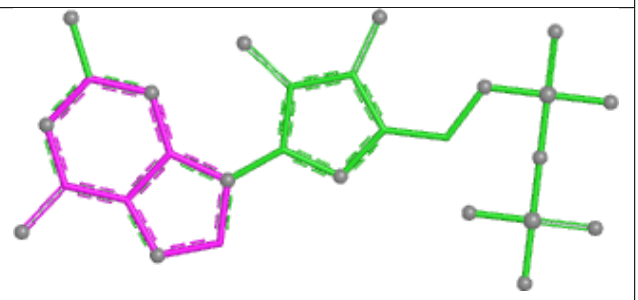
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In

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

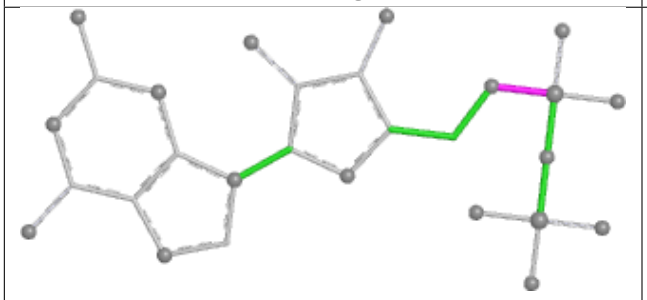
Ligand GDP AY 702



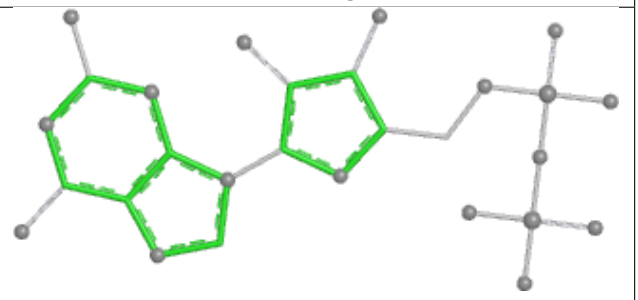
Bond lengths



Bond angles

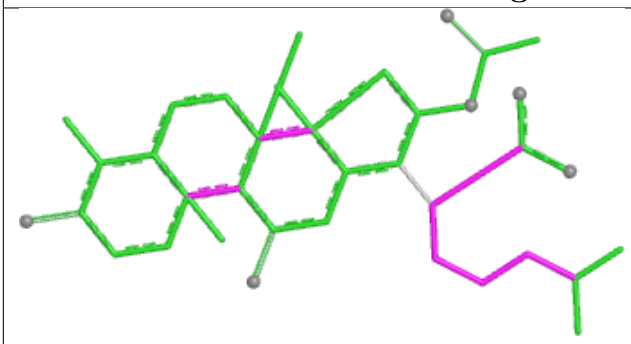


Torsions

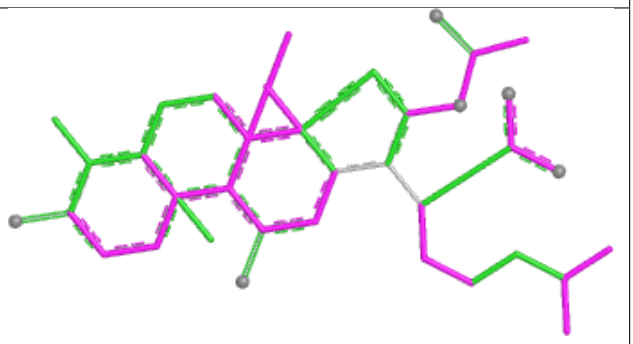


Rings

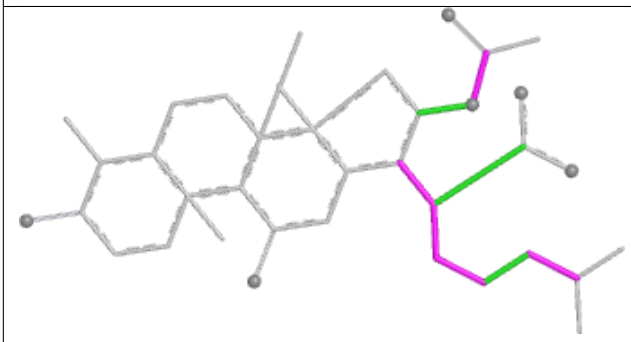
Ligand FUA AY 701



Bond lengths



Bond angles



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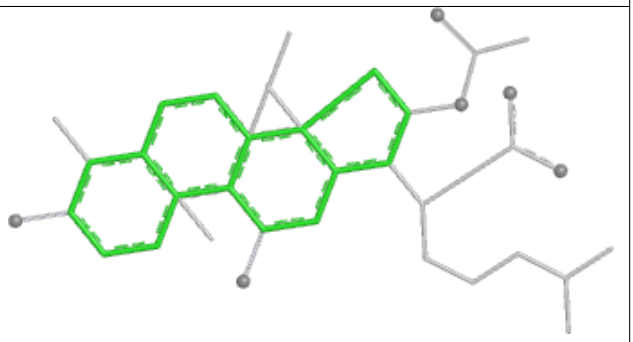
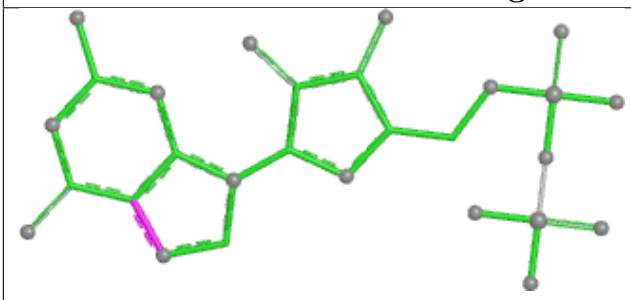
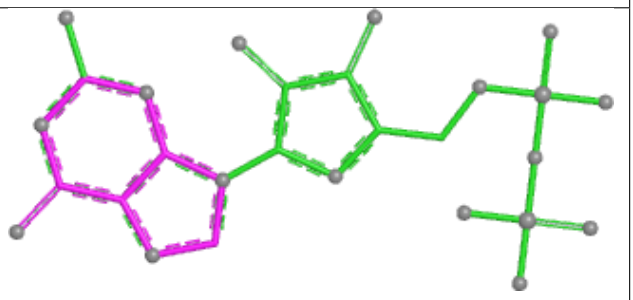


Rings

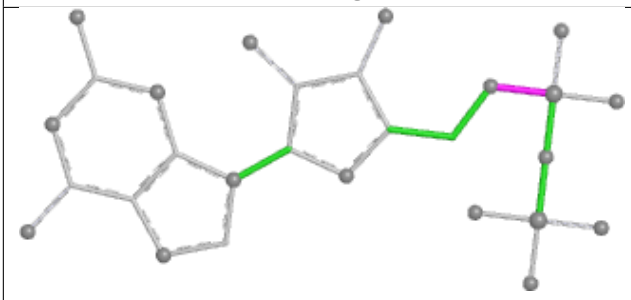
Ligand GDP CY 702



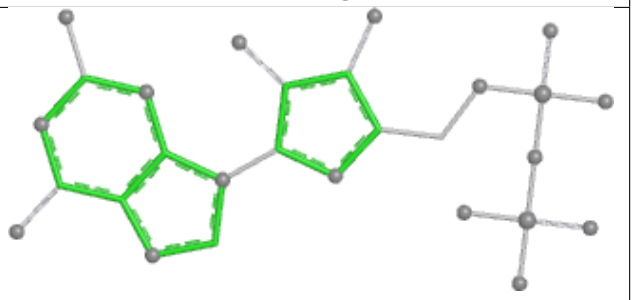
Bond lengths



Bond angles

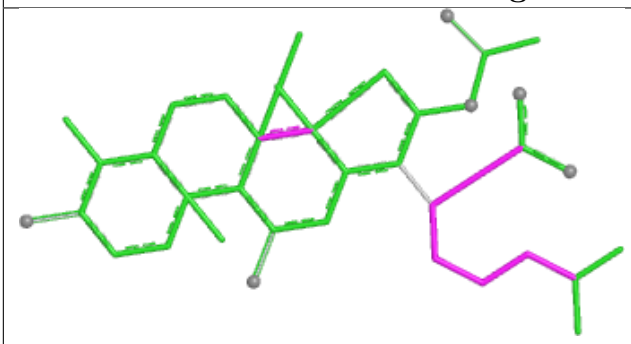


Torsions

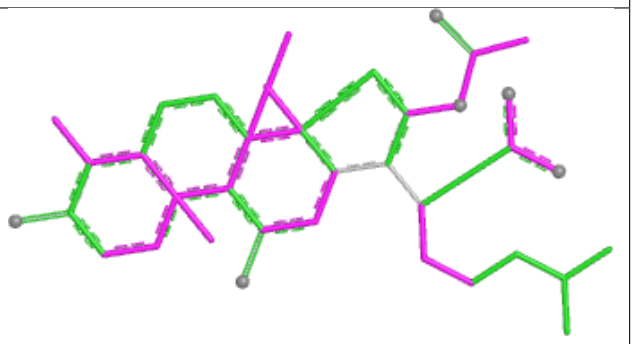


Rings

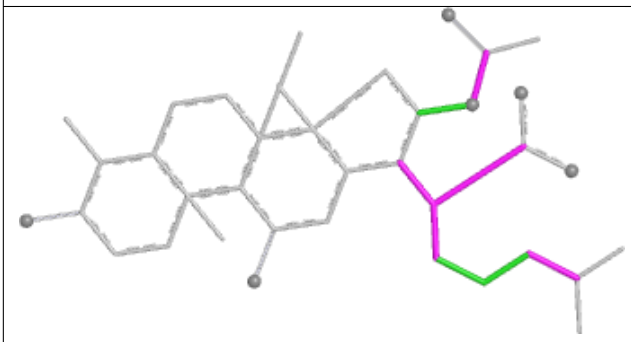
Ligand FUA CY 701



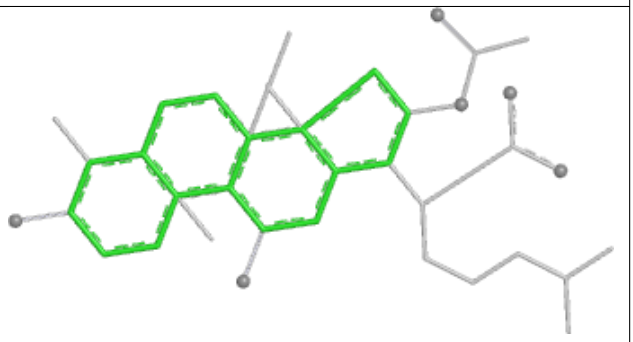
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
53	De	1
53	Be	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	De	30:UNK	C	51:ALA	N	37.61
1	Be	30:UNK	C	51:ALA	N	36.82

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%)	-1.10	0	100	100	41, 81, 119, 159	0
1	CB	235/235 (100%)	-0.99	0	100	100	38, 80, 117, 178	0
2	AC	207/207 (100%)	-0.61	5 (2%)	59	44	34, 76, 116, 152	0
2	CC	207/207 (100%)	-0.59	5 (2%)	59	44	44, 78, 121, 158	0
3	AD	208/208 (100%)	-0.45	4 (1%)	66	49	37, 71, 125, 178	0
3	CD	208/208 (100%)	-0.37	5 (2%)	59	44	51, 83, 120, 165	0
4	AE	151/151 (100%)	-0.31	4 (2%)	57	42	30, 57, 93, 133	0
4	CE	151/151 (100%)	-0.20	4 (2%)	57	42	31, 61, 99, 185	0
5	AF	101/101 (100%)	-1.05	0	100	100	31, 52, 87, 115	0
5	CF	101/101 (100%)	-1.06	1 (0%)	79	61	25, 52, 78, 129	0
6	AG	155/155 (100%)	-0.81	1 (0%)	85	71	54, 100, 147, 204	0
6	CG	155/155 (100%)	-0.78	0	100	100	57, 99, 155, 218	0
7	AH	138/138 (100%)	-1.16	0	100	100	28, 49, 83, 117	0
7	CH	138/138 (100%)	-0.98	0	100	100	29, 57, 101, 142	0
8	AI	127/127 (100%)	-0.85	0	100	100	48, 87, 128, 163	0
8	CI	127/127 (100%)	-0.56	3 (2%)	59	44	51, 91, 136, 195	0
9	AJ	99/99 (100%)	-0.51	2 (2%)	65	48	46, 74, 108, 114	0
9	CJ	99/99 (100%)	-0.49	7 (7%)	22	21	37, 82, 121, 145	0
10	AK	119/119 (100%)	-0.83	2 (1%)	69	51	41, 71, 114, 157	0
10	CK	119/119 (100%)	-0.81	2 (1%)	69	51	22, 59, 106, 135	0
11	AL	125/125 (100%)	-0.43	5 (4%)	42	33	31, 63, 97, 178	0
11	CL	125/125 (100%)	-0.39	10 (8%)	18	19	29, 68, 109, 136	0
12	AM	125/125 (100%)	-0.50	3 (2%)	59	44	61, 101, 139, 150	0
12	CM	125/125 (100%)	-0.59	2 (1%)	70	52	52, 106, 160, 199	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AN	60/60 (100%)	-0.73	1 (1%) 69 51	42, 64, 97, 106	0
13	CN	60/60 (100%)	-0.94	0 100 100	47, 67, 112, 156	0
14	AO	88/88 (100%)	-0.93	1 (1%) 78 60	32, 61, 102, 172	0
14	CO	88/88 (100%)	-0.83	2 (2%) 61 45	29, 61, 108, 215	0
15	AP	84/84 (100%)	-0.61	1 (1%) 76 59	47, 80, 118, 187	0
15	CP	84/84 (100%)	-0.60	1 (1%) 76 59	53, 81, 118, 174	0
16	AQ	100/100 (100%)	-0.38	2 (2%) 65 48	33, 56, 100, 124	0
16	CQ	100/100 (100%)	-0.42	2 (2%) 65 48	30, 58, 89, 139	0
17	AR	70/70 (100%)	-1.05	0 100 100	30, 55, 101, 156	0
17	CR	70/70 (100%)	-0.93	0 100 100	32, 46, 123, 186	0
18	AS	79/79 (100%)	-0.71	0 100 100	68, 90, 148, 159	0
18	CS	79/79 (100%)	-0.68	0 100 100	59, 92, 146, 215	0
19	AT	99/99 (100%)	-0.75	0 100 100	58, 86, 116, 146	0
19	CT	99/99 (100%)	-0.58	1 (1%) 79 61	42, 81, 114, 147	0
20	AA	1511/1511 (100%)	-0.77	10 (0%) 84 68	25, 78, 180, 324	0
20	CA	1511/1511 (100%)	-0.79	7 (0%) 87 73	19, 82, 182, 332	0
21	AW	77/77 (100%)	-0.88	0 100 100	55, 121, 189, 218	0
21	CW	77/77 (100%)	-1.04	0 100 100	58, 118, 230, 278	0
22	AV	23/23 (100%)	-0.62	0 100 100	70, 138, 188, 222	0
22	CV	23/23 (100%)	-0.14	1 (4%) 40 31	88, 142, 211, 231	0
23	AY	667/687 (97%)	-0.54	10 (1%) 72 54	29, 79, 132, 191	0
23	CY	667/687 (97%)	-0.59	16 (2%) 59 44	32, 84, 131, 188	0
24	BC	228/228 (100%)	-0.71	3 (1%) 75 57	91, 147, 211, 238	0
24	DC	228/228 (100%)	-0.85	4 (1%) 67 50	89, 175, 227, 263	0
25	BD	275/275 (100%)	-0.65	3 (1%) 78 60	24, 52, 90, 160	0
25	DD	275/275 (100%)	-0.76	2 (0%) 84 68	23, 50, 94, 155	0
26	BE	205/205 (100%)	-0.92	0 100 100	25, 52, 97, 202	0
26	DE	205/205 (100%)	-0.85	0 100 100	28, 60, 135, 173	0
27	BF	208/208 (100%)	-0.58	9 (4%) 40 31	32, 67, 126, 195	0
27	DF	208/208 (100%)	-0.26	13 (6%) 26 23	34, 86, 165, 230	0
28	BG	181/181 (100%)	-0.62	3 (1%) 69 51	52, 103, 150, 206	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DG	181/181 (100%)	-0.87	0 100 100	73, 110, 158, 205	0
29	BH	167/167 (100%)	-0.95	0 100 100	38, 64, 111, 161	0
29	DH	167/167 (100%)	-0.91	0 100 100	40, 74, 130, 167	0
30	BJ	0/170	-	-	-	-
30	DJ	0/170	-	-	-	-
31	BK	140/140 (100%)	-0.57	2 (1%) 73 55	67, 118, 175, 206	0
31	DK	140/140 (100%)	-0.80	2 (1%) 73 55	66, 132, 200, 220	0
32	BN	138/138 (100%)	-0.56	3 (2%) 62 46	58, 85, 106, 118	0
32	DN	138/138 (100%)	-0.57	1 (0%) 84 68	63, 87, 111, 121	0
33	BO	122/122 (100%)	-0.82	0 100 100	24, 49, 67, 114	0
33	DO	122/122 (100%)	-0.72	0 100 100	30, 56, 88, 124	0
34	BP	146/146 (100%)	-0.23	6 (4%) 41 32	28, 73, 113, 171	0
34	DP	146/146 (100%)	-0.26	5 (3%) 48 35	31, 84, 130, 202	0
35	BQ	141/141 (100%)	-0.62	2 (1%) 73 55	40, 66, 100, 164	0
35	DQ	141/141 (100%)	-0.50	2 (1%) 73 55	36, 64, 104, 161	0
36	BR	117/117 (100%)	-0.91	0 100 100	29, 53, 85, 105	0
36	DR	117/117 (100%)	-0.94	0 100 100	21, 53, 88, 156	0
37	BS	99/99 (100%)	-0.68	0 100 100	60, 111, 172, 189	0
37	DS	99/99 (100%)	-0.71	0 100 100	38, 128, 194, 220	0
38	BT	138/138 (100%)	-0.71	0 100 100	36, 64, 106, 201	0
38	DT	138/138 (100%)	-0.66	0 100 100	32, 71, 115, 216	0
39	BU	117/117 (100%)	-0.83	1 (0%) 81 64	26, 44, 83, 132	0
39	DU	117/117 (100%)	-0.63	1 (0%) 81 64	6, 45, 90, 155	0
40	BV	101/101 (100%)	-0.59	0 100 100	31, 51, 79, 104	0
40	DV	101/101 (100%)	-0.70	1 (0%) 79 61	38, 70, 111, 124	0
41	BW	113/113 (100%)	-0.78	4 (3%) 47 35	22, 51, 104, 120	0
41	DW	113/113 (100%)	-0.71	1 (0%) 81 64	30, 49, 105, 202	0
42	BX	93/93 (100%)	-0.68	0 100 100	31, 59, 93, 113	0
42	DX	93/93 (100%)	-0.86	0 100 100	29, 63, 111, 175	0
43	BY	107/107 (100%)	-0.68	3 (2%) 55 40	35, 71, 133, 156	0
43	DY	107/107 (100%)	-0.72	5 (4%) 36 29	55, 87, 133, 209	0
44	BZ	185/185 (100%)	-0.84	1 (0%) 87 73	42, 78, 126, 158	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	DZ	185/185 (100%)	-0.78	0 100 100	36, 75, 123, 161	0
45	B0	84/84 (100%)	-0.46	1 (1%) 76 59	38, 70, 99, 162	0
45	D0	84/84 (100%)	-0.33	5 (5%) 27 24	33, 67, 139, 212	0
46	B2	71/71 (100%)	-0.88	0 100 100	44, 71, 114, 167	0
46	D2	71/71 (100%)	-0.82	0 100 100	53, 76, 129, 183	0
47	B3	60/60 (100%)	-0.85	0 100 100	26, 43, 74, 113	0
47	D3	60/60 (100%)	-0.76	0 100 100	27, 57, 99, 111	0
48	B5	59/59 (100%)	-0.74	0 100 100	22, 56, 142, 156	0
48	D5	59/59 (100%)	-0.53	0 100 100	18, 67, 175, 198	0
49	B6	50/50 (100%)	-0.73	0 100 100	65, 91, 124, 176	0
49	D6	50/50 (100%)	-0.54	0 100 100	66, 106, 136, 139	0
50	B7	49/49 (100%)	-0.85	0 100 100	30, 48, 107, 132	0
50	D7	49/49 (100%)	-0.87	0 100 100	38, 51, 125, 168	0
51	B8	64/64 (100%)	-0.67	0 100 100	30, 62, 80, 89	0
51	D8	64/64 (100%)	-0.55	0 100 100	38, 70, 114, 148	0
52	B9	37/37 (100%)	-0.11	0 100 100	41, 63, 116, 166	0
52	D9	37/37 (100%)	-0.57	0 100 100	36, 55, 111, 148	0
53	Be	72/102 (70%)	-0.71	2 (2%) 55 40	69, 117, 170, 201	0
53	De	72/102 (70%)	-1.08	0 100 100	82, 121, 212, 249	0
54	Bf	0/31	-	-	-	-
54	Bg	0/31	-	-	-	-
54	Df	0/31	-	-	-	-
54	Dg	0/31	-	-	-	-
55	Bh	0/30	-	-	-	-
55	Dh	0/30	-	-	-	-
56	B1	93/93 (100%)	-0.18	7 (7%) 20 20	40, 87, 151, 208	0
56	D1	93/93 (100%)	-0.24	3 (3%) 50 37	42, 84, 174, 216	0
57	B4	35/35 (100%)	-1.10	0 100 100	96, 160, 227, 248	0
57	D4	35/35 (100%)	-0.93	0 100 100	116, 170, 265, 282	0
58	BA	2879/2879 (100%)	-0.90	3 (0%) 92 87	17, 60, 166, 304	0
58	DA	2879/2879 (100%)	-0.92	1 (0%) 100 100	17, 62, 182, 341	0
59	BB	119/119 (100%)	-1.05	0 100 100	32, 114, 187, 214	0
59	DB	119/119 (100%)	-0.98	0 100 100	53, 104, 162, 246	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
All	All	22682/23306 (97%)	-0.75	219 (0%)	79	61	6, 73, 161, 341	0

All (219) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
34	DP	5	ASP	8.2
28	BG	26	GLN	6.1
45	D0	3	HIS	6.0
24	DC	203	GLU	5.9
56	D1	28	GLY	5.5
43	BY	107	ASP	5.2
39	DU	14	HIS	5.0
24	BC	203	GLU	4.6
11	CL	19	ARG	4.6
23	AY	383	THR	4.5
35	DQ	19	GLY	4.5
2	CC	166	GLU	4.4
9	AJ	58	ASP	4.4
9	CJ	59	SER	4.3
9	CJ	60	ARG	4.3
23	AY	368	GLU	4.3
3	CD	51	PRO	4.2
45	D0	4	LYS	4.2
2	CC	165	THR	4.1
35	BQ	140	ALA	4.0
4	CE	81	GLU	4.0
24	DC	227	PRO	3.9
23	AY	5	VAL	3.8
6	AG	109	ASN	3.8
3	CD	50	ARG	3.8
2	AC	169	ALA	3.8
8	CI	117	HIS	3.8
53	Be	58	THR	3.7
3	AD	84	LYS	3.7
2	CC	164	ARG	3.7
12	AM	125	ARG	3.7
9	CJ	58	ASP	3.7
45	D0	7	LEU	3.6
56	D1	29	GLY	3.6
56	B1	17	SER	3.6
10	AK	128	ALA	3.5
9	CJ	57	LYS	3.5

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Mol	Chain	Res	Type	RSRZ
58	BA	2502	G	3.4
23	AY	690	GLY	3.4
11	AL	16	GLU	3.4
28	BG	35	GLU	3.4
35	DQ	141	GLN	3.3
11	AL	19	ARG	3.3
43	DY	107	ASP	3.3
27	DF	56	GLU	3.3
16	CQ	26	GLN	3.3
24	DC	226	ASN	3.3
11	CL	22	SER	3.2
34	BP	19	VAL	3.2
23	CY	383	THR	3.2
31	DK	61	ALA	3.2
4	CE	88	LYS	3.2
20	AA	1235	U	3.2
27	DF	96	ASP	3.2
9	CJ	61	GLU	3.1
27	DF	52	LYS	3.1
10	CK	128	ALA	3.1
23	CY	368	GLU	3.1
27	DF	87	GLY	3.1
10	AK	127	LYS	3.1
3	CD	137	SER	3.1
4	CE	83	GLU	3.0
23	AY	367	GLU	3.0
23	AY	382	GLU	3.0
27	BF	56	GLU	3.0
41	BW	91	GLY	3.0
25	DD	237	GLU	3.0
56	B1	21	ARG	3.0
12	AM	123	ALA	2.9
45	D0	6	GLY	2.9
41	BW	94	ASP	2.9
20	AA	112	G	2.9
27	DF	58	ALA	2.9
16	AQ	26	GLN	2.9
9	CJ	49	VAL	2.9
34	BP	47	ASP	2.9
20	CA	916	G	2.9
2	AC	201	TYR	2.9
11	CL	18	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
41	BW	92	ARG	2.9
56	B1	18	ILE	2.9
23	CY	382	GLU	2.9
43	BY	108	THR	2.9
20	AA	113	G	2.9
58	DA	2612	C	2.8
34	DP	57	THR	2.8
27	DF	71	GLY	2.8
43	BY	106	LEU	2.8
44	BZ	166	SER	2.8
15	CP	54	GLU	2.8
23	CY	389	LEU	2.8
2	AC	166	GLU	2.8
4	AE	135	THR	2.8
23	CY	336	THR	2.8
31	DK	62	ASP	2.8
27	BF	65	TRP	2.8
10	CK	129	SER	2.8
23	CY	690	GLY	2.7
56	B1	22	GLY	2.7
11	CL	16	GLU	2.7
43	DY	34	LYS	2.7
11	CL	23	LYS	2.7
27	BF	93	LYS	2.7
32	DN	72	TYR	2.7
3	CD	84	LYS	2.7
23	CY	350	GLU	2.7
34	BP	50	ARG	2.7
43	DY	33	LYS	2.7
20	AA	916	G	2.7
12	AM	83	ASP	2.6
27	DF	65	TRP	2.6
3	AD	85	LYS	2.6
20	CA	974	A	2.6
3	AD	122	ARG	2.6
2	AC	200	ALA	2.6
27	BF	70	THR	2.6
25	BD	236	GLY	2.6
20	CA	1392	G	2.6
27	DF	51	THR	2.6
32	BN	76	SER	2.6
14	CO	64	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
45	B0	4	LYS	2.6
15	AP	54	GLU	2.6
23	CY	367	GLU	2.6
2	CC	149	ALA	2.6
27	DF	83	PHE	2.5
31	BK	2	LYS	2.5
16	AQ	38	ARG	2.5
11	CL	21	LYS	2.5
53	Be	121	VAL	2.5
11	AL	17	LYS	2.5
23	CY	369	LEU	2.5
20	AA	818	G	2.5
41	BW	93	ALA	2.5
9	CJ	55	LYS	2.5
23	CY	349	LYS	2.5
56	B1	38	SER	2.5
16	CQ	13	ASP	2.5
25	BD	235	GLY	2.5
23	AY	336	THR	2.4
28	BG	34	LEU	2.4
27	DF	50	SER	2.4
3	CD	85	LYS	2.4
27	BF	80	ALA	2.4
34	DP	61	ARG	2.4
4	AE	29	GLY	2.4
34	DP	6	LEU	2.4
14	AO	88	ARG	2.4
58	BA	2060	A	2.4
20	CA	305	G	2.4
23	AY	355	LEU	2.4
11	CL	14	GLY	2.3
20	CA	239	U	2.3
39	BU	14	HIS	2.3
34	BP	22	GLY	2.3
20	AA	824	C	2.3
23	AY	337	SER	2.3
2	CC	201	TYR	2.3
4	AE	81	GLU	2.3
32	BN	73	THR	2.3
4	CE	87	SER	2.3
43	DY	32	PRO	2.3
31	BK	61	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
20	AA	823	G	2.3
23	CY	330	VAL	2.3
24	BC	60	ARG	2.3
8	CI	116	LYS	2.3
20	AA	241	C	2.3
27	BF	69	HIS	2.3
11	CL	17	LYS	2.3
11	CL	20	LYS	2.3
40	DV	77	ALA	2.3
11	AL	10	LEU	2.3
27	BF	66	PRO	2.3
4	AE	5	ASP	2.3
11	AL	21	LYS	2.2
8	CI	122	ALA	2.2
27	DF	46	ARG	2.2
25	BD	4	LYS	2.2
27	DF	53	THR	2.2
56	B1	15	ALA	2.2
23	CY	16	GLY	2.2
5	CF	42	GLU	2.2
12	CM	85	GLY	2.2
11	CL	13	LYS	2.2
27	DF	86	GLY	2.2
27	BF	52	LYS	2.2
43	DY	3	VAL	2.2
13	AN	2	ALA	2.2
23	CY	312	LEU	2.2
12	CM	86	CYS	2.2
25	DD	236	GLY	2.1
34	DP	58	THR	2.1
24	BC	49	GLY	2.1
34	BP	24	GLY	2.1
45	D0	2	ALA	2.1
32	BN	84	LYS	2.1
56	D1	17	SER	2.1
20	CA	1394	A	2.1
41	DW	91	GLY	2.1
24	DC	225	ILE	2.1
9	AJ	49	VAL	2.1
20	AA	390	C	2.1
3	AD	118	ARG	2.1
27	BF	79	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
35	BQ	34	LEU	2.1
20	AA	942	G	2.1
2	AC	167	TRP	2.1
23	AY	378	VAL	2.1
23	CY	341	VAL	2.1
56	B1	20	ARG	2.0
22	CV	7	G	2.0
23	CY	311	ALA	2.0
34	BP	57	THR	2.0
58	BA	1883	G	2.0
23	CY	392	GLU	2.0
14	CO	61	GLY	2.0
19	CT	106	ALA	2.0
20	CA	1534	A	2.0

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

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

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

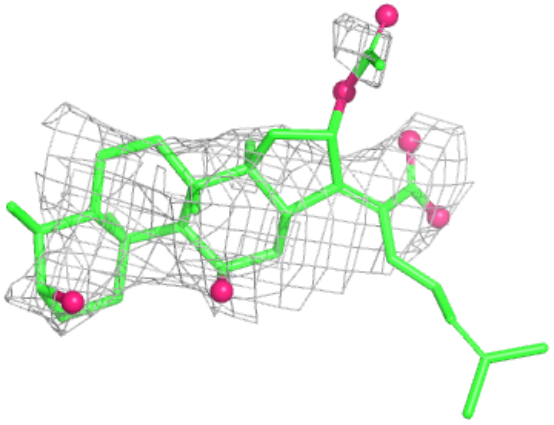
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9'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

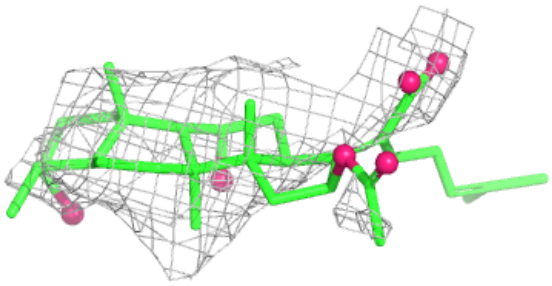
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	FUA	AY	701	37/37	0.96	0.12	119,146,161,162	0
60	FUA	CY	701	37/37	0.98	0.07	125,150,161,166	0
61	GDP	AY	702	28/28	0.99	0.04	58,89,106,121	0
61	GDP	CY	702	28/28	0.99	0.03	58,90,102,118	0

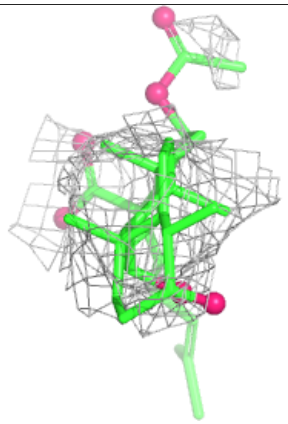
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around FUA 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)

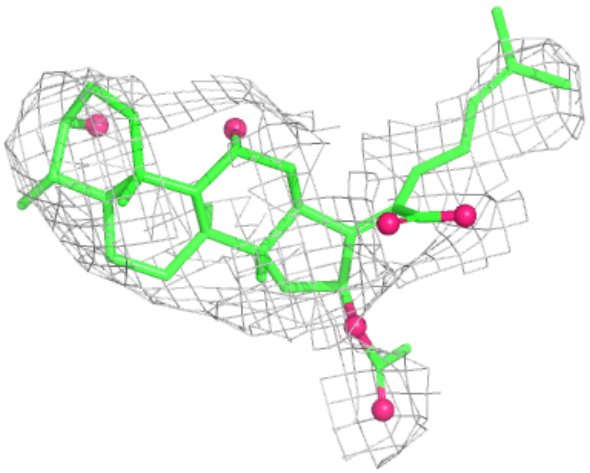


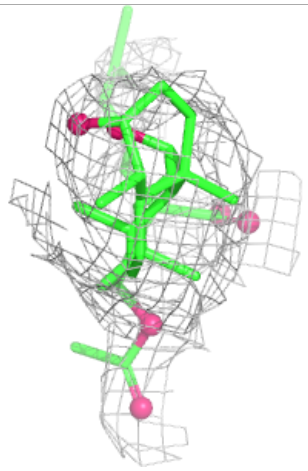




Electron density around FUA CY 701:

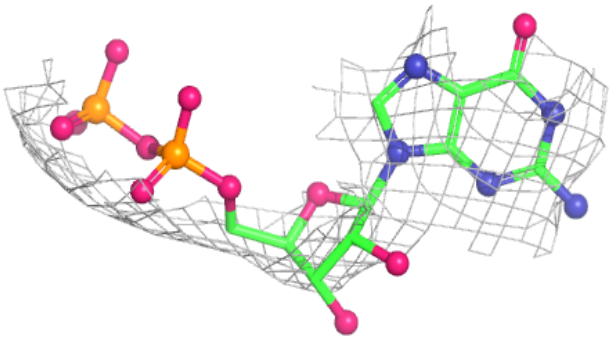
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

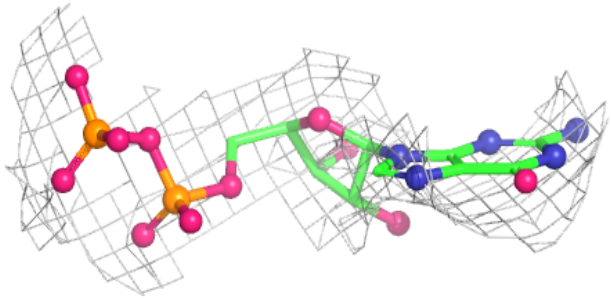


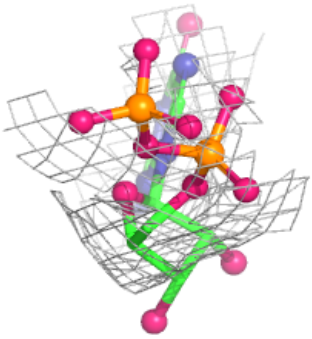


Electron density around GDP AY 702:

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

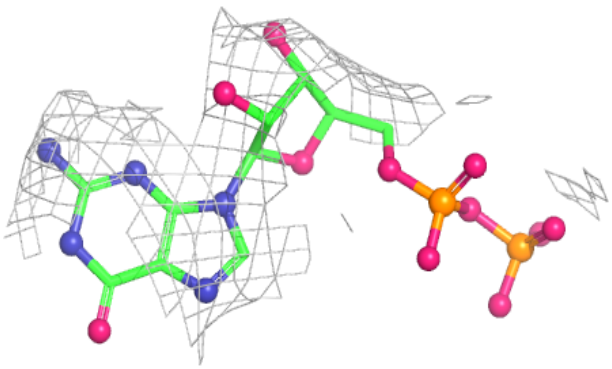


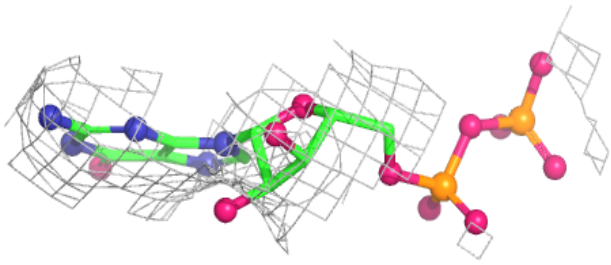


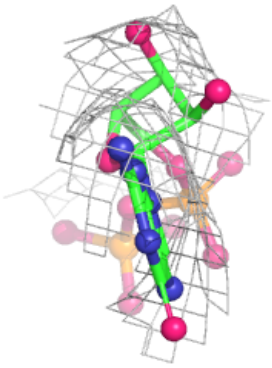


Electron density around GDP CY 702:

$2mF_o$-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.